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Client: Anchor QEA, LLC.

Project: 120891-01.01 City of Kenmore Sediment

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BC  
Signature

November-27-2012  
Date





**Analytical Resources, Incorporated**  
Analytical Chemists and Consultants

December 12, 2012

Cindy Fields  
Anchor QEA  
720 Olive Way, Suite 1900  
Seattle, WA 98101

**RE: Client Project: City of Kenmore Sediment, 120891-01.01**  
**ARI Job No.: VR58**

Dear Cindy:

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 these analyses are discussed in the Case Narrative.

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

Sincerely,

ANALYTICAL RESOURCES, INC.

A handwritten signature in black ink, appearing to read "Cheronne Oreiro".

Cheronne Oreiro  
Project Manager  
(206) 695-6214  
[cheronneo@arilabs.com](mailto:cheronneo@arilabs.com)  
[www.arilabs.com](http://www.arilabs.com)

cc: eFile: VR58

Enclosures

## Chain of Custody Documentation

ARI Job ID: VR58

# Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: VR54  
 Turn-around Requested: std.  
 ARI Client Company: Anchor QEA  
 Phone: 206 2879130  
 Client Contact: David Gillingham / Cindy Fields  
 Client Project Name: City of Kenmore Sediment  
 Client Project #: 120891-0101  
 Samplers: PG KH

Page: 1 of 1  
 Date: 11/8/12  
 No. of Coolers: 4  
 Ice Present? Y  
 Cooler Temps: 2.8, 3.6, 1.4, 3.1

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



Sample ID	Date	Time	Matrix	No Containers	Analysis Requested						Notes/Comments			
					Grain size	TS/VS/TOC	metals	SVC	PAH(Sim)	PCB		D/F	TBT Bulk	Archive
SG-10-S-E-121107	11/7/12	0858	sed	7	X	X	X	X	X	X	X	X	X	
SG-11-S-E-121107	11/7/12	0942	sed	7	X	X	X	X	X	X	X	X	X	
SG-12-S-E-121107	11/7/12	1007	sed	7	X	X	X	X	X	X	X	X	X	
SG-13-S-E-121107	11/7/12	1036	sed	7	X	X	X	X	X	X	X	X	X	
SG-13-S-E-dup-121107	11/7/12	1036	sed	7	X	X	X	X	X	X	X	X	X	
SG-14-S-E-121107	11/7/12	1114	sed	7	X	X	X	X	X	X	X	X	X	
SG-15-S-E-121107	11/7/12	1155	sed	7	X	X	X	X	X	X	X	X	X	
SG-16-S-E-121107	11/7/12	1310	sed	6	X	X	X	X	X	X	X	X	X	
SG-17-S-E-121107	11/7/12	1337	sed	6	X	X	X	X	X	X	X	X	X	
SG-01-S-C-121107	11/7/12	1417	sed	6	X	X	X	X	X	X	X	X	X	
Comments/Special Instructions	Requested by: <u>David Gillingham</u> (Signature) Printed Name: <u>David Gillingham</u> Company: <u>Anchor QEA</u> Date & Time: <u>11/8/12 0600</u>				Requested by: <u>David Gillingham</u> (Signature) Printed Name: <u>David Gillingham</u> Company: <u>Anchor QEA</u> Date & Time: <u>11/8/12 0735</u>				Requested by: <u>David Gillingham</u> (Signature) Printed Name: <u>David Gillingham</u> Company: <u>Anchor QEA</u> Date & Time: <u>11/8/12 0735</u>					

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

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



# Cooler Receipt Form

ARI Client Anelcor  
 COC No(s). \_\_\_\_\_ (NA)  
 Assigned ARI Job No VR58

Project Name City of Kenmore  
 Delivered by Fed-Ex UPS Counter  Hand Delivered  Other \_\_\_\_\_  
 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). 2.4 3.6 1.4 3.1  
 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 9087225  
 Cooler Accepted by A Date 11-8-12 Time 09:35  
**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 \_\_\_\_\_  
 Was Sample Split by ARI:  NA YES Date/Time \_\_\_\_\_ Equipment \_\_\_\_\_ Split by \_\_\_\_\_  
 Samples Logged by JM Date: 11/8/12 Time 1158  
**\*\* 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:**  
SG-16-S-E-121107 has 7 containers, an extra 8oz jar (untabeled)  
SG-14-S-E-121107 has 9 containers, 2-32 oz jars (Porewater)  
 By JM Date: 11/8/12

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



RE: City of Kenmore Pore Water Sample?

**Subject:** RE: City of Kenmore Pore Water Sample?  
**From:** Cindy Fields <cfields@anchorqea.com>  
**Date:** 11/8/2012 3:29 PM  
**To:** Cheronne Oreiro <cheronneo@arilabs.com>  
**CC:** David Gillingham <dgillingham@anchorqea.com>

According to the SAP Table 1, we want porewater TBT on this sample. Please archive the extra jar for bulk TBT.

Thanks, Cheronne!

Cindy Fields  
Scientist  
ANCHOR QEA, LLC  
[cfields@anchorqea.com](mailto:cfields@anchorqea.com)  
D 206.903.3394

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-----Original Message-----

From: Cheronne Oreiro [<mailto:cheronneo@arilabs.com>]  
Sent: Thursday, November 08, 2012 2:57 PM  
To: Cindy Fields  
Cc: David Gillingham  
Subject: City of Kenmore Pore Water Sample?

Hi Cindy,

One sample was received this morning, SG-14-S-E-121107, that had two 32oz pore water jars. The jars were included in the jar count on the COC and the COC was not marked for pore water TBT (but is was marked for bulk). Should we just archive these jars?

Thanks,  
-Cheronne

--  
Cheronne Oreiro  
Project Manager  
Analytical Resources, Inc.  
4611 S. 134th Place, Suite 100  
Tukwila, WA 98168-3240  
[cheronneo@arilabs.com](mailto:cheronneo@arilabs.com)  
(206)-695-6214

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If you have received this correspondence in error, please notify sender immediately. Thank you.

## Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: VR58



## Case Narrative

**Client: Anchor QEA**

**Project: City of Kenmore Sediment, 120891-01.01**

**ARI Job No.: VR58**

### Sample receipt

Ten sediment samples were received on November 8, 2012 under ARI job VR58. Select sample containers were archived upon receipt. The cooler temperatures measured by IR thermometer following ARI SOP were between 1.4 and 3.6°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

### Semivolatiles by SW8270

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

Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 12/4/12 fell outside the 20% control limit low for 1,2-Dichlorobenzene and Hexachlorobutadiene, and was out high for Phenol and 4-Methylphenol. All detected results associated with this CCAL have been flagged with a “Q” qualifier. No further corrective action was taken.

The CCAL on 12/5/12 fell outside the 20% control limit low for Hexachlorobutadiene, and was out high for Phenol, 4-Methylphenol, and 1,2,4-Trichlorobenzene. All detected results associated with this CCAL have been flagged with a “Q” qualifier. No further corrective action was taken.

The CCAL on 12/6/12 was outside the 20% control limit high for 4-Methylphenol and 1,2,4-Trichlorobenzene, and fell out low for Benzoic Acid, Hexachlorobutadiene, and Pentachlorophenol. All detected results associated with this CCAL have been flagged with a “Q” qualifier. No further corrective action was taken.

The internal standard areas of Chrysene-d12, Perylene-d12, and Di-n-octylphthalate-d4 fell outside the control limits low for sample **SG-10-S-E-121107**. The sample was re-analyzed at a dilution and all internal standard areas were within control limits. No further corrective action was taken.

The internal standard areas of 1,4-Dichlorobenzene-d4 and Naphthalene-d8 fell outside the control limits low for sample **SG-11-S-E-121107**. The sample was re-analyzed at a dilution and all internal standard areas were within control limits. No further corrective action was taken.



The surrogate percent recoveries were within control limits.

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

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

### **PAHs by SW8270-SIM**

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

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

The surrogate percent recoveries were within control limits.

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

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

### **Tributyl Tin by Krone 1988 SIM**

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

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

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS percent recovery was within control limits.

### **Dioxins/Furans by 1613B**

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 cleanup surrogates had recoveries 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 recoveries were within control limits. SRM PSR was analyzed as a reference material.

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 the method recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration (CCAL) on 11/21/12 at 01:37 was outside the 20% control limit high for Hexachlorobenzene on the second column, but was within the control limit on the first column. The DDT break down on 11/21/12 at 06:58 was outside the 20% control limit. The associated CCAL on 11/21/12 at 07:16 was outside the 20% control limit for several compounds on both columns. The samples were analyzed twice and both runs had similar QC failure. Only the initial analysis data have been reported. No further corrective action was taken.

The internal standard Hexabromobiphenyl fell outside the control limits low for sample **SG-13-S-E-DUP-121107** on the second column, but was within control limits on the first column. No corrective action was taken.

The surrogate percent recoveries were within control limits.

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



Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits for sample **SG-15-S-E-121107**. No corrective action is required for matrix QC.

### **Aroclor PCBs by SW8082**

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

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

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limit. The LCS percent recoveries were within control limits. SRM PSR was analyzed as a reference material.

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

### **Metals and Mercury by SW6010C/6020/7471A**

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

The third continuing calibration verification (CCV) for mercury fell outside the control limits low. No sample results were associated with this CCV, no corrective action was taken.

The fourth, fifth, and sixth CCVs for antimony were outside the control limits high. No sample results were associated with these CCVs. No corrective action was taken.

The seventh and eighth CCV for chromium, nickel, and zinc were outside the control limits. No sample results were associated with these CCVs. No corrective action was taken.

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

The matrix spike percent recovery of antimony fell outside the control limits low for sample **SG-10-S-E-121107**. A post digestion spike was performed and the recovery was within control limits. All relevant data have been flagged with an "N" qualifier on the Form V. No further corrective action was taken.

The duplicate RPD of antimony, arsenic, copper, lead, and zinc were outside the 20% control limit for sample **SG-10-S-E-121107**. All relevant data have been flagged with a "\*" qualifier on the Form VI. No further corrective action was taken.



### **General Chemistry Parameters**

The samples and associated laboratory QC were prepared and analyzed within the 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 RSDs were within control limits.

### **Geotechnical Parameters**

A laboratory-specific case narrative follows this page.



**Client:** Anchor QEA, LLC.

**ARI Job No.:** VR58

**Client Project:** City of Kenmore Sediment

**Client Project No.:** 120891-01.01

### Case Narrative

1. Ten samples were submitted for testing on November 8, 2012 and were in good condition.
2. One sample was submitted for pore water extraction by the United States Army Corp of Engineers draft interim guidelines. MS/MSD was chosen on one sample from another job. The sediment for pore water extraction was placed in the nitrogen chamber along with centrifuge bottles, spoons and a balance. The chamber was sealed and filled with nitrogen. The centrifuge jars were opened to allow them to come to equilibrium with the chamber. The oxygen level in the chamber was less than 1%. All centrifuge bottles were decontaminated, pre-rinsed with hexane and allowed to dry completely. All spoons were decontaminated, pre-rinsed with dichloromethane and allowed to air dry completely. All samples were centrifuged in a pre-cooled centrifuge (4°C) at 3,000 x g for 30 minutes, decanted in the nitrogen chamber, and then placed in another pre-cooled centrifuge (4°C) and spun at 7,000-x g for 30 minutes.
3. The samples were submitted for grain size analysis by Puget Sound Estuary Protocol (PSEP) methodology. The samples were run in a single batch and one sample from this job, SG-12-S-E-121107, was chosen for triplicate analysis. The triplicate data is reported on the QA Summary. Three samples did not contain the required 5 grams of fines for the pipette portion of the analysis. The analytical balance has a capacity of about 200 grams (by 0.0001 grams) and a sample that would yield 5 grams of fines could not be split and stay within the capacity of the balance. The samples have been qualified on the QA summary.
4. The data is provided in summary tables and plots.
5. There were no other anomalies in the samples or methods on this project.

Released by: *Suzanna Curtis*  
Title: Geotechnical Laboratory Manager

Date: 11/29/12

Reviewed by: *Qabett Woble*  
Title: Lead Technician

Date: November 29, 2012

# Sample ID Cross Reference Report



ARI Job No: VR58  
Client: Anchor QEA, LLC.  
Project Event: 120891-01.01  
Project Name: City of Kenmore Sediment

Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1. SG-10-S-E-121107	VR58A	12-22329	Sediment	11/07/12 08:58	11/08/12 09:35
2. SG-11-S-E-121107	VR58B	12-22330	Sediment	11/07/12 09:42	11/08/12 09:35
3. SG-12-S-E-121107	VR58C	12-22331	Sediment	11/07/12 10:07	11/08/12 09:35
4. SG-13-S-E-121107	VR58D	12-22332	Sediment	11/07/12 10:36	11/08/12 09:35
5. SG-13-S-E-dup-121107	VR58E	12-22333	Sediment	11/07/12 10:36	11/08/12 09:35
6. SG-14-S-E-121107	VR58F	12-22334	Sediment	11/07/12 11:14	11/08/12 09:35
7. SG-15-S-E-121107	VR58G	12-22335	Sediment	11/07/12 11:55	11/08/12 09:35
8. SG-16-S-E-121107	VR58H	12-22336	Sediment	11/07/12 13:10	11/08/12 09:35
9. SG-17-S-E-121107	VR58I	12-22337	Sediment	11/07/12 13:37	11/08/12 09:35
10. SG-01-S-C-121107	VR58J	12-22338	Sediment	11/07/12 14:17	11/08/12 09:35



## 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  $\geq$  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  $\leq 5$  times the Reporting Limit and the replicate control limit defaults to  $\pm 1$  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  $\geq 40\%$  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<sup>1</sup> LOD<sup>1</sup>, LOQ<sup>1</sup> 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			SIM Analysis			LCS, MS Control Limits (%)	RPD <sup>2</sup>
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)		
Phenol	8.65	10	20	2.56	5	5	30 – 160	≤ 40
bis-(2-Chloroethyl)ether	3.35	10	20	--	--	--	30 – 160	≤ 40
2-Chlorophenol	2.39	10	20	--	--	--	30 – 160	≤ 40
1,3-Dichlorobenzene	2.63	10	20	1.31	2.5	5	30 – 160	≤ 40
1,4-Dichlorobenzene	2.86	10	20	1.19	2.5	5	30 – 160	≤ 40
1,2-Dichlorobenzene	2.50	10	20	1.10	2.5	5	30 – 160	≤ 40
Benzyl alcohol	6.09	10	20	7.04	10	20 <sup>3</sup>	30 – 160	≤ 40
2,2'-oxy-bis-(1-Chloropropane)	3.76	10	20	--	--	--	30 – 160	≤ 40
2-Methylphenol	5.25	10	20	1.81	2.5	5	30 – 160	≤ 40
Hexachloroethane	2.94	10	20	--	--	--	30 – 160	≤ 40
N-Nitroso-di-n-propylamine	3.36	10	20	9.48	10	12 <sup>3</sup>	30 – 160	≤ 40
4-Methylphenol <sup>6</sup>	6.63	10	20	2.52	5	10	30 – 160	≤ 40
Nitrobenzene	4.06	10	20	--	--	--	30 – 160	≤ 40
Isophorone	2.86	10	20	--	--	--	30 – 160	≤ 40
2-Nitrophenol	38.7	50	100	--	--	--	30 – 160	≤ 40
2,4-Dimethylphenol	3.46	20	40	2.89	10	20	30 – 160	≤ 40
bis-(2-Chloroethoxy)methane	2.00	10	20	--	--	--	30 – 160	≤ 40
2,4-Dichlorophenol	21.5	100	200	--	--	--	30 – 160	≤ 40
1,2,4-Trichlorobenzene	3.48	10	20	1.86	2.5	5	30 – 160	≤ 40
Naphthalene	2.76	10	20	--	--	--	30 – 160	≤ 40
Benzoic acid	101	200	400 <sup>5</sup>	--	--	--	30 – 160	≤ 40
4-Chloroaniline	22.3	135	270 <sup>4</sup>	--	--	--	30 – 160	≤ 40
Hexachlorobutadiene	4.57	10	20	0.96	2.5	5	30 – 160	≤ 40
4-Chloro-3-methylphenol	15.1	50	100	--	--	--	30 – 160	≤ 40
2-Methylnaphthalene	3.06	10	20	--	--	--	30 – 160	≤ 40
Hexachlorocyclopentadiene	66.4	200	400 <sup>4</sup>	--	--	--	30 – 160	≤ 40
2,4,6-Trichlorophenol	22.4	50	100	--	--	--	30 – 160	≤ 40
2,4,5-Trichlorophenol	21.4	50	100	--	--	--	30 – 160	≤ 40
2-Chloronaphthalene	2.64	10	20	--	--	--	30 – 160	≤ 40
2-Nitroaniline	18.4	50	100	--	--	--	30 – 160	≤ 40
Acenaphthylene	5.71	10	20	--	--	--	30 – 160	≤ 40
Dimethylphthalate	2.90	10	20	1.34	2.5	5	30 – 160	≤ 40
2,6-Dinitrotoluene	30.6	50	100	--	--	--	30 – 160	≤ 40
Acenaphthene	3.28	10	20	--	--	--	30 – 160	≤ 40
3-Nitroaniline	22.5	50	100	--	--	--	30 – 160	≤ 40



**DL<sup>1</sup> LOD<sup>1</sup>, LOQ<sup>1</sup> 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			SIM Analysis			LCS,MS Control Limits (%)	RPD <sup>2</sup>
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)		
2,4-Dinitrophenol	111	425	850 <sup>4</sup>	--	--	--	30 – 160	≤ 40
Dibenzofuran	4.10	10	20	--	--	--	30 – 160	≤ 40
4-Nitrophenol	34.7	50	100	--	--	--	30 – 160	≤ 40
2,4-Dinitrotoluene	19.5	50	100	--	--	--	30 – 160	≤ 40
Fluorene	4.35	10	20	--	--	--	30 – 160	≤ 40
4-Chlorophenyl-phenylether	5.29	10	20	--	--	--	30 – 160	≤ 40
Diethylphthalate	36.6	50	50 <sup>3</sup>	3.26	5.0	5.0	30 – 160	≤ 40
4-Nitroaniline	37.9	50	100	--	--	--	30 – 160	≤ 40
4,6-Dinitro-2-methylphenol	21.2	100	200	--	--	--	30 – 160	≤ 40
N-Nitrosodiphenylamine	5.39	10	20	1.38	10	20	30 – 160	≤ 40
4-Bromophenyl-phenylether	5.03	10	20	--	--	--	30 – 160	≤ 40
Hexachlorobenzene	4.29	10	20	1.26	2.5	5	30 – 160	≤ 40
Pentachlorophenol	48.5	100	200 <sup>4</sup>	14.3	25	50	30 – 160	≤ 40
Phenanthrene	3.64	10	20	--	--	--	30 – 160	≤ 40
Anthracene	4.50	10	20	--	--	--	30 – 160	≤ 40
Carbazole	2.69	10	20	--	--	--	30 – 160	≤ 40
Di-n-butylphthalate	8.16	10	20	--	--	--	30 – 160	≤ 40
Fluoranthene	2.91	10	20	--	--	--	30 – 160	≤ 40
Pyrene	1.94	10	20	--	--	--	30 – 160	≤ 40
Butylbenzylphthalate	6.14	10	20	2.89	5.0	5	30 – 160	≤ 40
Benzo(a)anthracene	3.29	10	20	--	--	--	30 – 160	≤ 40
3,3'-Dichlorobenzidine	17.8	75	150 <sup>4</sup>	--	--	--	30 – 160	≤ 40
Chrysene	3.75	10	20	--	--	--	30 – 160	≤ 40
bis-(2-Ethylhexyl)phthalate	14.6	20	25 <sup>3</sup>	--	--	--	30 – 160	≤ 40
Di-n-octylphthalate	5.84	10	20	--	--	--	30 – 160	≤ 40
Benzo(b)fluoranthene <sup>7</sup>	3.47	10	20	--	--	--	30 – 160	≤ 40
Benzo(k)fluoranthene <sup>7</sup>	4.18	10	20	--	--	--	30 – 160	≤ 40
Benzofluoranthene-Total <sup>8</sup>	6.67	20	40	--	--	--	30 – 160	≤ 40
Benzo(a)pyrene	5.45	10	20	--	--	--	30 – 160	≤ 40
Indeno(1,2,3-cd)pyrene	4.68	10	20	--	--	--	30 – 160	≤ 40
Dibenzo(a,h)anthracene	4.31	10	20	2.02	2.5	5	30 – 160	≤ 40
Benzo(g,h,i)perylene	4.40	10	20	--	--	--	30 – 160	≤ 40
N-Nitrosodimethylamine	14.1	50	100	3.15	13	25	30 – 160	≤ 40
Aniline	40.0	270	540 <sup>4</sup>	--	--	--	30 – 160	≤ 40
Pyridine	32.7	75	150 <sup>4</sup>	--	--	--	30 – 160	≤ 40
1-Methylnaphthalene	2.68	10	20	--	--	--	30 – 160	≤ 40



**DL<sup>1</sup> LOD<sup>1</sup>, LOQ<sup>1</sup> 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			SIM Analysis			LCS, MS Control Limits (%)	RPD <sup>2</sup>	
	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	DL (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)			
Azobenzene (1,2-DP-Hydrazine)	2.98	10	20	--	--	--	30 - 160	≤ 40	
<b>Surrogate Standards</b>							<b>MB / LCS</b>	<b>Samples</b>	<b>RPD</b>
2-Fluorophenol							30 - 160	30 - 160	≤ 40
Phenol-d <sub>5</sub>							30 - 160	30 - 160	≤ 40
2-Chlorophenol-d <sub>4</sub>							30 - 160	30 - 160	≤ 40
1,2-Dichlorobenzene-d <sub>4</sub>							30 - 160	30 - 160	≤ 40
Nitrobenzene-d <sub>5</sub>							30 - 160	30 - 160	≤ 40
2-Fluorobiphenyl							30 - 160	30 - 160	≤ 40
2,4,6-Tribromophenol							30 - 160	30 - 160	≤ 40
p-Terphenyl-d <sub>14</sub>							30 - 160	30 - 160	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD), Limit of Quantitation (LOQ) are defined in ARI SOP 1018S  
(2) Relative Percent Difference between analytes in replicate analyzes. If C<sub>o</sub> and C<sub>D</sub> are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_o - C_D|}{\frac{C_o + C_D}{2}} \times 100$$

- (3) Spiked at 5 ppb
- (4) Spiked at 100 ppb
- (5) Spiked at 200 ppb
- (6) 3-Methylphenol (not calibrated) co-elutes with 4-Methylphenol (calibrated)
- (7) 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 50% of the average of the two peak heights, otherwise total Benzofluoranthenes are reported.
- (8) Benzo(b)fluoranthene + Benzo(j)fluoranthene + Benzo(k)fluoranthene (only the b & k isomers are calibrated)



## DL, LOD, LOQ and Control Limits Summary

### Analysis of Solid Samples for PNA EPA Method 8270 – SIM

Microwave (EPA 3546) or Sonication (EPA 3550C) Extraction using 10 g sample with extract with 0.5 mL final volume. ARI Bench Sheet 3060F or 3051F ARI Analyses: PNSSMI & PNSSCI

Analyte	DL <sup>1</sup> µg/kg	LOD <sup>1</sup> µg/kg	LOQ <sup>1</sup> µg/kg	LCS Control Limit <sup>3,4</sup>	Replicate RPD <sup>5</sup>
Naphthalene	2.63	5.0	5.0	37 – 100	≤ 40
1-Methylnaphthalene	1.71	2.5	5.0	30 – 160 <sup>6</sup>	≤ 40
2-Methylnaphthalene	1.52	2.5	5.0	37 – 100	≤ 40
Biphenyl	1.44	2.5	5.0	30 – 160 <sup>6</sup>	≤ 40
2,6-Dimethylnaphthalene	0.75	2.5	5.0	30 – 160 <sup>6</sup>	≤ 40
Acenaphthylene	1.26	2.5	5.0	35 – 100	≤ 40
Acenaphthene	1.32	2.5	5.0	39 – 100	≤ 40
Dibenzofuran	1.51	2.5	5.0	39 – 100	≤ 40
1,6,7-Trimethylnaphthalene	0.42	2.5	5.0	30 – 160 <sup>6</sup>	≤ 40
Fluorene	1.29	2.5	5.0	42 – 100	≤ 40
Benzothiophene	0.43	2.5	5.0	30 – 160 <sup>6</sup>	≤ 40
Phenanthrene	1.98	2.5	5.0	47 – 100	≤ 40
Anthracene	1.46	2.5	5.0	41 – 106	≤ 40
Carbazole	0.62	2.5	5.0	30 – 160 <sup>6</sup>	≤ 40
1-Methylphenanthrene	0.70	2.5	5.0	30 – 160 <sup>6</sup>	≤ 40
Fluoranthene	1.77	4.0	5.0	52 – 109	≤ 40
Pyrene	2.22	4.0	5.0	47 – 111	≤ 40
Benzo(a)anthracene	1.60	2.5	5.0	47 – 114	≤ 40
Chrysene	1.88	2.5	5.0	51 – 106	≤ 40
Benzo(b)fluoranthene	1.90	2.5	5.0	30 – 160 <sup>6</sup>	≤ 40
Benzo(k)fluoranthene	2.05	2.5	5.0	30 – 160 <sup>6</sup>	≤ 40
Benzo(j)fluoranthene	1.98 <sup>7</sup>	2.5	5.0	30 – 160 <sup>6</sup>	≤ 40
Benzo(e)pyrene	0.65	2.5	5.0	30 – 160 <sup>6</sup>	≤ 40
Benzo(a)pyrene	1.75	2.5	5.0	44 – 111	≤ 40
Indeno(1,2,3-cd)pyrene	3.47	4.0	5.0	41 – 114	≤ 40
Dibenz(a,h)anthracene	2.38	4.0	5.0	42 – 116	≤ 40
Benzo(g,h,i)perylene	3.05	4.0	5.0	37 – 115	≤ 40
Perylene	2.99	4.0	5.0	30 – 160 <sup>6</sup>	≤ 40
<b>Surrogate Recovery</b>					
2-Methylnaphthalene-d <sub>10</sub>			<b>MB / LCS</b>	<b>Samples</b>	<b>RPD</b>
Dibenzo(a,h)anthracene-d <sub>14</sub>			35 – 100	34 – 100	≤ 40
			37 – 120	10 – 117	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD), Limit of Quantitation (LOQ) as defined in ARI SOP 1018S  
 (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 1/1/08 through 12/31/08.  
 (5) Relative Percent Difference between analytes in replicate analyzes. If C<sub>o</sub> and C<sub>d</sub> are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_o - C_d|}{\frac{C_o + C_d}{2}} \times 100$$

(6) Default limits pending generation of historic limits.  
 (7) Average of the (b) and (k) isomers used until sufficient data is available to calculate a DL.



### Quality Control Summary for Butyl Tin Compounds EPA Methods 8270D – SIM

Analyte	DL <sup>1</sup>	LOD <sup>1</sup>	LOQ <sup>1</sup>	Spike Recovery Limits (%) <sup>2,3</sup>			RPD <sup>4</sup>
				LCS	MB/LCS Surrogate	Sample Surrogate	
<b>TBTWSI – Aqueous Samples (Separatory Funnel Extraction – 100 to 0.5 mL)</b> EPA Method 3510C – ARI Benchsheet TBT#1 – 3043F							
Tributyl Tin Ion <sup>5</sup>	0.043 µg/L	0.096 µg/L	0.193 µg/L	30-160	--	--	≤ 40
Dibutyl Tin Ion <sup>5</sup>	0.096 µg/L	0.216 µg/L	0.433 µg/L	30-160	--	--	≤ 40
Butyl Tin Ion <sup>5</sup>	0.108 µg/L	0.153 µg/L	0.306 µg/L	30-160	--	--	≤ 40
Tripentyl Tin	--	--	--	--	30-160	30-160	≤ 40
Tripropyl Tin	--	--	--	--	30-160	30-160	≤ 40
<b>TBTWSI – Pore Water Samples (Separatory Funnel Extraction – 150 to 0.5 mL)</b> EPA Method 3510C – ARI Benchsheet TBT #3 – 3047F							
Tributyl Tin Ion <sup>6</sup>	--	--	0.0052 µg/L	30-160	--	--	≤ 40
Dibutyl Tin Ion <sup>6</sup>	--	--	0.0077 µg/L	30-160	--	--	≤ 40
Butyl Tin Ion <sup>6</sup>	--	--	0.0054 µg/L	30-160	--	--	≤ 40
Tripentyl Tin	--	--	--	--	30-160	30-160	≤ 40
Tripropyl Tin	--	--	--	--	30-160	30-160	≤ 40
<b>TBTSMI – Soil / Sediment Samples (Microwave Extraction – 5g dry wt to 0.5mL)</b> EPA Method 3546 – ARI Benchsheet TBT#4 – 3054F							
Tributyl Tin Ion	1.52 µg/kg	1.93 µg/kg	3.86 µg/kg	40 – 144	--	--	≤ 40
Dibutyl Tin Ion	3.72 µg/kg	4.33 µg/kg	5.78 µg/kg	34 – 115	--	--	≤ 40
Butyl Tin Ion	2.95 µg/kg	3.06 µg/kg	4.08 µg/kg	<b>10 – 111</b>	--	--	≤ 40
Tripentyl Tin	--	--	--	--	35 – 130	25 – 140	≤ 40
Tripropyl Tin	--	--	--	--	28 – 106	32 – 104	≤ 40

- (1) Detection Limit (DL), limit of detection (LOD) and limit of quantation (LOQ) as 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, advisory control limits used when there is insufficient data to calculate historic control limits. These limits are not used as the sole reason to reject data from a batch of analytes.
- (4) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C<sub>o</sub> and C<sub>d</sub> are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_o - C_d|}{\frac{C_o + C_d}{2}} \times 100$$

- (5) DL from ARI MDL study QD32
- (6) ARI does not report concentrations below the LOQ (low calibration standard concentration) and does not, therefore, determine a DL or LOD for butyl tin analysis in interstitial (pore) water.



**DL<sup>1</sup>, LOD<sup>1</sup>, LOQ<sup>1</sup> 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 <sup>1</sup> pg/g	LOD <sup>1</sup> pg/g	LOQ <sup>1</sup> pg/g	OPR Control Limit <sup>2,3</sup>	Sample Replicate RPD <sup>3,4</sup>
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<sub>O</sub> and C<sub>D</sub> are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_o - C_D|}{\frac{C_o + C_D}{2}} \times 100$$



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### DL<sup>1</sup>, LOD<sup>1</sup>, LOQ<sup>1</sup> 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 <sup>1,2</sup> µg/kg	LOD <sup>1</sup> µg/kg	LOQ <sup>1</sup> µg/kg	LCS Control Limit <sup>3,4</sup>	Replicate RPD <sup>5</sup>
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
<b>Surrogate Standard Recovery</b>			<b>MB / LCS</b>	<b>Samples</b>	<b>RPD</b>
Tetrachloro- <i>m</i> -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<sub>O</sub> and C<sub>D</sub> are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_o - C_D|}{\frac{C_o + C_D}{2}} \times 100$$



Quality Control Criteria for Analysis of Solid Matrix Samples for Aroclors (Polychlorinated Biphenyls – PCB) EPA Method 8082B

Analysis Code	Extraction	DL <sup>1</sup> (ppb)	LOD <sup>1</sup> (ppb)	LOQ <sup>1</sup> (ppb)	Analyte	Spike Recovery Control Limits (%) <sup>2,3,8</sup>			RPD <sup>4</sup>
						LCS	MB/LCS Surrogate	Sample Surrogate	
<b>Soil / Sediment Samples (Microwave Extraction – EPA Method 3546)</b>									
PCBSMI 15-3067F	12g to 4 mL	9.83	17	33	Aroclor 1016	55 – 109	--	--	≤ 40
		7.06	17	33	Aroclor 1260	50 – 125	--	--	
PCBSCI 08-3025F	12g to 4 mL	--	--	--	TCMX	--	53 – 108	39 – 122	
		--	--	--	DCBP	--	49 – 126	31 – 140	
PCBDMP20 05-3017F	12.5 g to 2.5 mL <sup>6</sup>	9.33	10	20 <sup>6</sup>	Aroclor 1016	46 – 110	--	--	≤ 40
		10.82	15	20 <sup>6</sup>	Aroclor 1260	47 – 124	--	--	
PCBDMP20 06-3026F	12.5 g to 2.5 mL <sup>6</sup>	--	--	--	TCMX	--	43 – 107	34 – 109	
		--	--	--	DCBP	--	48 – 123	24 – 127	
PCBDMP10 05-3017F	12.5 g to 2.5 mL <sup>6</sup>	0.759	5	10 <sup>6</sup>	Aroclor 1016	46 – 110	--	--	≤ 40
		1.066	5	10 <sup>6</sup>	Aroclor 1260	47 – 124	--	--	
PCBDMP10 06-3026F	12.5 g to 2.5 mL <sup>6</sup>	--	--	--	TCMX	--	43 – 107	34 – 109	
		--	--	--	DCBP	--	48 – 123	24 – 127	
PCBDMP4 05-3017F	12.5 g to 2.5 mL <sup>6</sup>	0.577	2	4 <sup>6</sup>	Aroclor 1016	46 – 110	--	--	≤ 40
		0.610	2	4 <sup>6</sup>	Aroclor 1260	47 – 124	--	--	
PCBDMP4 06-3026F	12.5 g to 2.5 mL <sup>6</sup>	--	--	--	TCMX	--	43 – 107	34 – 109	
		--	--	--	DCBP	--	48 – 123	24 – 127	
<b>Soil / Sediment Samples Medium Level (Vortex Extraction – EPA Method 3546)</b>									
PCBSVX 12-3019F	5 g to 40 mL	109 <sup>7</sup>	400	800	Aroclor 1016	30 – 160	--	--	≤ 40
		192 <sup>7</sup>	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<sub>o</sub> and C<sub>d</sub> are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_o - C_d|}{\frac{C_o + C_d}{2}} \times 100$$

(6) LOQ determined by lowest concentration used to calibrate the GC-ECD instrument.

(7) MDL Study PC66 6/24/09

(8) Control Limits calculated using all data generated between 1/1/11 and 11/30/11





Quality Control Parameters for Mercury Analysis using CVAA						
	Aqueous Samples <sup>2</sup>			Spike Recovery		RPD <sup>5</sup>
	DL <sup>1</sup> µg/L	LOD <sup>1</sup> µg/L	LOQ <sup>1</sup> µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	0.10 <sup>2</sup>	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	0.02 <sup>2</sup>	75 – 125	80 – 120	≤ 20
	Soil / Sediment Samples			Spike Recovery		RPD <sup>5</sup>
	DL <sup>1</sup> mg/kg	LOD <sup>1</sup> mg/kg	LOQ <sup>1</sup> mg/kg	Matrix Spike	LCS	
Mercury	0.0021	0.0125	0.025 <sup>3</sup>	75 – 125	80 – 120	≤ 20
	Tissue Samples			Spike Recovery		RPD <sup>5</sup>
	DL <sup>1</sup> mg/kg	LOD <sup>1</sup> mg/kg	LOQ <sup>1</sup> mg/kg	Matrix Spike	LCS	
Mercury	0.0021	0.0125	0.005 <sup>4</sup>	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<sub>O</sub> and C<sub>D</sub> are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_o - C_D|}{\frac{C_o + C_D}{2}} \times 100$$



### Quality Control Parameters for Metals Analysis-ICP-OES 200.7/6010C

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

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

(2) 50 mL sample and 50 mL final volume

(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.

(4) Tissue is reported on an "as received" (wet weight) basis using 2.5 g sample with 50 mL final volume.

(5) Relative Percent Difference between analytes in replicate analyzes. If C<sub>O</sub> and C<sub>D</sub> are the concentrations of the

original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} \times 100$$

(6) ARI does not analyze for Silicon in solids or tissue samples



Quality Control Parameters for Metals Analysis ICP-MS 200.8/6020A								
Analyte	Mass	Aqueous Samples <sup>2</sup>			Spike Recovery		RPD <sup>4</sup>	Solids <sup>3</sup>
		DL <sup>1</sup> µg/L	LOD <sup>1</sup> µg/L	LOQ <sup>1</sup> µg/L	Matrix Spike	LCS		LOQ <sup>1</sup> 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 <sup>5</sup>	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 <sup>5</sup>	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

(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.

(4) Relative Percent Difference between analytes in replicate analyzes. If C<sub>O</sub> and C<sub>D</sub> are the concentrations of the

original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} \times 100$$



(5) ARI has no accreditation for these elements.



**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>

Sample Matrix:	ARI's Control Limits	
	Water	Soil / Sediment
<b>Matrix Spike Recoveries</b>	% 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
<b>Duplicate RPDs</b>		
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: VR58**

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-10-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58A  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Data Release Authorized: *AS*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 17:08  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.1 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 40.6%

CAS Number	Analyte	MDL	RL	Result
<b>108-95-2</b>	<b>Phenol</b>	<b>8.6</b>	<b>20</b>	<b>55 Q</b>
541-73-1	1,3-Dichlorobenzene	2.6	20	< 20 U
106-46-7	1,4-Dichlorobenzene	2.8	20	< 20 U
<b>100-51-6</b>	<b>Benzyl Alcohol</b>	<b>6.0</b>	<b>20</b>	<b>200</b>
95-50-1	1,2-Dichlorobenzene	2.5	20	< 20 U
95-48-7	2-Methylphenol	5.2	20	< 20 U
<b>106-44-5</b>	<b>4-Methylphenol</b>	<b>6.6</b>	<b>40</b>	<b>160 Q</b>
67-72-1	Hexachloroethane	2.9	20	< 20 U
105-67-9	2,4-Dimethylphenol	3.4	20	< 20 UJ
<b>65-85-0</b>	<b>Benzoic Acid</b>	<b>100</b>	<b>400</b>	<b>520</b>
120-82-1	1,2,4-Trichlorobenzene	3.4	20	< 20 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>2.7</b>	<b>20</b>	<b>38</b>
87-68-3	Hexachlorobutadiene	4.5	10	< 10 UJ
91-57-6	2-Methylnaphthalene	3.0	20	< 20 U
131-11-3	Dimethylphthalate	2.9	20	< 20 U
208-96-8	Acenaphthylene	5.7	20	< 20 U
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>3.2</b>	<b>20</b>	<b>16 J</b>
132-64-9	Dibenzofuran	4.1	40	< 40 Y
84-66-2	Diethylphthalate	36	50	< 50 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>4.3</b>	<b>20</b>	<b>28</b>
86-30-6	N-Nitrosodiphenylamine	5.3	20	< 20 U
118-74-1	Hexachlorobenzene	4.2	20	< 20 U
87-86-5	Pentachlorophenol	48	200	< 200 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>3.6</b>	<b>20</b>	<b>250</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>4.5</b>	<b>20</b>	<b>48</b>
84-74-2	Di-n-Butylphthalate	8.1	20	< 20 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>2.9</b>	<b>20</b>	<b>480</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>1.9</b>	<b>20</b>	<b>800</b>
85-68-7	Butylbenzylphthalate	6.1	20	< 20 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>3.3</b>	<b>20</b>	<b>150</b>
<b>117-81-7</b>	<b>bis (2-Ethylhexyl) phthalate</b>	<b>14</b>	<b>25</b>	<b>480</b>
<b>218-01-9</b>	<b>Chrysene</b>	<b>3.7</b>	<b>20</b>	<b>240</b>
117-84-0	Di-n-Octyl phthalate	5.8	20	< 20 U
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>5.4</b>	<b>20</b>	<b>150</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>4.6</b>	<b>20</b>	<b>110</b>
<b>53-70-3</b>	<b>Dibenz (a,h) anthracene</b>	<b>4.3</b>	<b>20</b>	<b>34</b>
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>4.4</b>	<b>20</b>	<b>140</b>
90-12-0	1-Methylnaphthalene	2.7	20	< 20 U
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>2.7</b>	<b>40</b>	<b>330</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	75.4%	2-Fluorobiphenyl	95.0%
d14-p-Terphenyl	83.8%	d4-1,2-Dichlorobenzene	58.0%
d5-Phenol	77.2%	2-Fluorophenol	64.7%
2,4,6-Tribromophenol	74.3%	d4-2-Chlorophenol	69.7%

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-10-S-E-121107**  
**DILUTION**

Lab Sample ID: VR58A  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Data Release Authorized: *AS*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/05/12 20:42  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.1 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 3.00  
 Percent Moisture: 40.6%

CAS Number	Analyte	MDL	RL	Result
<b>108-95-2</b>	<b>Phenol</b>	<b>26</b>	<b>59</b>	<b>39 JQ</b>
541-73-1	1,3-Dichlorobenzene	7.8	59	< 59 U
106-46-7	1,4-Dichlorobenzene	8.5	59	< 59 U
<b>100-51-6</b>	<b>Benzyl Alcohol</b>	<b>18</b>	<b>59</b>	<b>130</b>
95-50-1	1,2-Dichlorobenzene	7.4	59	< 59 U
95-48-7	2-Methylphenol	16	59	< 59 U
<b>106-44-5</b>	<b>4-Methylphenol</b>	<b>20</b>	<b>120</b>	<b>120 Q</b>
67-72-1	Hexachloroethane	8.7	59	< 59 U
105-67-9	2,4-Dimethylphenol	10	120	< 120 U
<b>65-85-0</b>	<b>Benzoic Acid</b>	<b>300</b>	<b>1,200</b>	<b>380 J</b>
120-82-1	1,2,4-Trichlorobenzene	10	59	< 59 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>8.2</b>	<b>59</b>	<b>33 J</b>
87-68-3	Hexachlorobutadiene	14	59	< 59 U
91-57-6	2-Methylnaphthalene	9.1	59	< 59 U
131-11-3	Dimethylphthalate	8.6	59	< 59 U
208-96-8	Acenaphthylene	17	59	< 59 U
83-32-9	Acenaphthene	9.7	59	< 59 U
132-64-9	Dibenzofuran	12	59	< 59 U
84-66-2	Diethylphthalate	110	150	< 150 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>13</b>	<b>59</b>	<b>33 J</b>
86-30-6	N-Nitrosodiphenylamine	16	59	< 59 U
118-74-1	Hexachlorobenzene	13	59	< 59 U
87-86-5	Pentachlorophenol	140	590	< 590 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>11</b>	<b>59</b>	<b>220</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>13</b>	<b>59</b>	<b>42 J</b>
84-74-2	Di-n-Butylphthalate	24	59	< 59 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>8.6</b>	<b>59</b>	<b>430</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>5.8</b>	<b>59</b>	<b>370</b>
<b>85-68-7</b>	<b>Butylbenzylphthalate</b>	<b>18</b>	<b>59</b>	<b>39 J</b>
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>9.8</b>	<b>59</b>	<b>150</b>
<b>117-81-7</b>	<b>bis (2-Ethylhexyl) phthalate</b>	<b>43</b>	<b>74</b>	<b>460</b>
<b>218-01-9</b>	<b>Chrysene</b>	<b>11</b>	<b>59</b>	<b>230</b>
117-84-0	Di-n-Octyl phthalate	17	59	< 59 U
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>16</b>	<b>59</b>	<b>140</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>14</b>	<b>59</b>	<b>83</b>
53-70-3	Dibenz (a,h) anthracene	13	59	< 59 U
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>13</b>	<b>59</b>	<b>83</b>
90-12-0	1-Methylnaphthalene	8.0	59	< 59 U
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>8.2</b>	<b>120</b>	<b>310</b>

Reported in µg/kg (ppb)


**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	46.2%	2-Fluorobiphenyl	56.4%
d14-p-Terphenyl	75.0%	d4-1,2-Dichlorobenzene	52.2%
d5-Phenol	47.6%	2-Fluorophenol	51.6%
2,4,6-Tribromophenol	82.8%	d4-2-Chlorophenol	52.0%



**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-11-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58B  
 LIMS ID: 12-22330  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 17:44  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 80.1%

CAS Number	Analyte	MDL	RL	Result
108-95-2	Phenol	8.5	20	140 Q
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	6.0	20	530
95-50-1	1,2-Dichlorobenzene	2.5	20	< 20 U
95-48-7	2-Methylphenol	5.1	20	11 J
106-44-5	4-Methylphenol	6.5	39	150 Q
67-72-1	Hexachloroethane	2.9	20	< 20 U
105-67-9	2,4-Dimethylphenol	3.4	20	< 20 UJ
65-85-0	Benzoic Acid	99	390	1,400
120-82-1	1,2,4-Trichlorobenzene	3.4	20	< 20 U
91-20-3	Naphthalene	2.7	20	39
87-68-3	Hexachlorobutadiene	4.5	10	< 10 UJ
91-57-6	2-Methylnaphthalene	3.0	20	19 J
131-11-3	Dimethylphthalate	2.8	20	< 20 U
208-96-8	Acenaphthylene	5.6	20	19 J
83-32-9	Acenaphthene	3.2	20	18 J
132-64-9	Dibenzofuran	4.0	20	38 M
84-66-2	Diethylphthalate	36	49	44 J
86-73-7	Fluorene	4.3	20	34
86-30-6	N-Nitrosodiphenylamine	5.3	20	< 20 U
118-74-1	Hexachlorobenzene	4.2	20	< 20 U
87-86-5	Pentachlorophenol	48	200	55 J
85-01-8	Phenanthrene	3.6	20	190
120-12-7	Anthracene	4.4	20	66
84-74-2	Di-n-Butylphthalate	8.0	20	< 20 U
206-44-0	Fluoranthene	2.9	20	420
129-00-0	Pyrene	1.9	20	280
85-68-7	Butylbenzylphthalate	6.0	20	24
56-55-3	Benzo (a) anthracene	3.2	20	150
117-81-7	bis (2-Ethylhexyl) phthalate	14	24	740
218-01-9	Chrysene	3.7	20	280
117-84-0	Di-n-Octyl phthalate	5.7	20	87
50-32-8	Benzo (a) pyrene	5.3	20	150
193-39-5	Indeno (1,2,3-cd) pyrene	4.6	20	90
53-70-3	Dibenz (a, h) anthracene	4.2	20	45
191-24-2	Benzo (g, h, i) perylene	4.3	20	110
90-12-0	1-Methylnaphthalene	2.6	20	13 J
TOTBFA	Total Benzofluoranthenes	2.7	39	390

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	67.4%	2-Fluorobiphenyl	42.0%
d14-p-Terphenyl	39.8%	d4-1,2-Dichlorobenzene	47.4%
d5-Phenol	77.5%	2-Fluorophenol	55.9%
2,4,6-Tribromophenol	116%	d4-2-Chlorophenol	57.6%

FORM I

UPPER: 00000

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-11-S-E-121107**  
**DILUTION**

Lab Sample ID: VR58B  
 LIMS ID: 12-22330  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/05/12 21:19  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 3.00  
 Percent Moisture: 80.1%

CAS Number	Analyte	MDL	RL	Result
<b>108-95-2</b>	<b>Phenol</b>	<b>25</b>	<b>59</b>	<b>140 Q</b>
541-73-1	1,3-Dichlorobenzene	7.7	59	< 59 U
106-46-7	1,4-Dichlorobenzene	8.4	59	< 59 U
<b>100-51-6</b>	<b>Benzyl Alcohol</b>	<b>18</b>	<b>59</b>	<b>480</b>
95-50-1	1,2-Dichlorobenzene	7.4	59	< 59 U
95-48-7	2-Methylphenol	15	59	< 59 U
<b>106-44-5</b>	<b>4-Methylphenol</b>	<b>20</b>	<b>120</b>	<b>140 Q</b>
67-72-1	Hexachloroethane	8.6	59	< 59 U
105-67-9	2,4-Dimethylphenol	10	120	< 120 U
<b>65-85-0</b>	<b>Benzoic Acid</b>	<b>300</b>	<b>1,200</b>	<b>1,300</b>
120-82-1	1,2,4-Trichlorobenzene	10	59	< 59 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>8.1</b>	<b>59</b>	<b>59</b>
87-68-3	Hexachlorobutadiene	13	59	< 59 U
91-57-6	2-Methylnaphthalene	9.0	59	< 59 U
131-11-3	Dimethylphthalate	8.5	59	< 59 U
208-96-8	Acenaphthylene	17	59	< 59 U
83-32-9	Acenaphthene	9.6	59	< 59 U
132-64-9	Dibenzofuran	12	59	< 59 U
84-66-2	Diethylphthalate	110	150	< 150 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>13</b>	<b>59</b>	<b>29 J</b>
86-30-6	N-Nitrosodiphenylamine	16	59	< 59 U
118-74-1	Hexachlorobenzene	13	59	< 59 U
87-86-5	Pentachlorophenol	140	590	< 590 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>11</b>	<b>59</b>	<b>200</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>13</b>	<b>59</b>	<b>68</b>
84-74-2	Di-n-Butylphthalate	24	59	< 59 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>8.6</b>	<b>59</b>	<b>450</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>5.7</b>	<b>59</b>	<b>420</b>
85-68-7	Butylbenzylphthalate	18	59	< 59 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>9.7</b>	<b>59</b>	<b>160</b>
<b>117-81-7</b>	<b>bis (2-Ethylhexyl) phthalate</b>	<b>43</b>	<b>74</b>	<b>1,300</b>
<b>218-01-9</b>	<b>Chrysene</b>	<b>11</b>	<b>59</b>	<b>320</b>
<b>117-84-0</b>	<b>Di-n-Octyl phthalate</b>	<b>17</b>	<b>59</b>	<b>76</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>16</b>	<b>59</b>	<b>150</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>14</b>	<b>59</b>	<b>97</b>
<b>53-70-3</b>	<b>Dibenz (a,h) anthracene</b>	<b>13</b>	<b>59</b>	<b>35 J</b>
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>13</b>	<b>59</b>	<b>110</b>
90-12-0	1-Methylnaphthalene	7.9	59	< 59 U
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>8.1</b>	<b>120</b>	<b>410</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	46.8%	2-Fluorobiphenyl	58.2%
d14-p-Terphenyl	73.2%	d4-1,2-Dichlorobenzene	52.8%
d5-Phenol	52.0%	2-Fluorophenol	53.6%
2,4,6-Tribromophenol	74.8%	d4-2-Chlorophenol	54.4%

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-12-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58C  
 LIMS ID: 12-22331  
 Matrix: Sediment  
 Data Release Authorized: *AS*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 18:21  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 70.0%

CAS Number	Analyte	MDL	RL	Result
108-95-2	Phenol	8.4	20	300 Q
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	300
95-50-1	1,2-Dichlorobenzene	2.4	20	< 20 U
95-48-7	2-Methylphenol	5.1	20	12 J
106-44-5	4-Methylphenol	6.5	39	74 Q
67-72-1	Hexachloroethane	2.9	20	< 20 U
105-67-9	2,4-Dimethylphenol	3.4	20	< 20 UJ
65-85-0	Benzoic Acid	99	390	1,500
120-82-1	1,2,4-Trichlorobenzene	3.4	20	< 20 U
91-20-3	Naphthalene	2.7	20	39
87-68-3	Hexachlorobutadiene	4.5	10	< 10 UJ
91-57-6	2-Methylnaphthalene	3.0	20	12 J
131-11-3	Dimethylphthalate	2.8	20	< 20 U
208-96-8	Acenaphthylene	5.6	20	< 20 U
83-32-9	Acenaphthene	3.2	20	18 J
132-64-9	Dibenzofuran	4.0	20	35 M
84-66-2	Diethylphthalate	36	49	100
86-73-7	Fluorene	4.2	20	59
86-30-6	N-Nitrosodiphenylamine	5.3	20	< 20 U
118-74-1	Hexachlorobenzene	4.2	20	< 20 U
87-86-5	Pentachlorophenol	47	200	< 200 U
85-01-8	Phenanthrene	3.6	20	170
120-12-7	Anthracene	4.4	20	41
84-74-2	Di-n-Butylphthalate	8.0	20	26
206-44-0	Fluoranthene	2.8	20	300
129-00-0	Pyrene	1.9	20	230
85-68-7	Butylbenzylphthalate	6.0	20	71
56-55-3	Benzo (a) anthracene	3.2	20	120
117-81-7	bis (2-Ethylhexyl) phthalate	14	24	360
218-01-9	Chrysene	3.7	20	210
117-84-0	Di-n-Octyl phthalate	5.7	20	< 20 U
50-32-8	Benzo (a) pyrene	5.3	20	100
193-39-5	Indeno (1,2,3-cd) pyrene	4.6	20	77
53-70-3	Dibenz (a,h) anthracene	4.2	20	36
191-24-2	Benzo (g,h,i) perylene	4.3	20	85
90-12-0	1-Methylnaphthalene	2.6	20	< 20 U
TOTBFA	Total Benzofluoranthenes	2.7	39	280

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	88.0%	2-Fluorobiphenyl	57.8%
d14-p-Terphenyl	46.0%	d4-1,2-Dichlorobenzene	55.6%
d5-Phenol	99.5%	2-Fluorophenol	80.3%
2,4,6-Tribromophenol	122%	d4-2-Chlorophenol	68.0%

FORM I

UPSE: 00035

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-13-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58D  
 LIMS ID: 12-22332  
 Matrix: Sediment  
 Data Release Authorized: *B*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 18:58  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.2 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 76.0%

CAS Number	Analyte	MDL	RL	Result
<b>108-95-2</b>	<b>Phenol</b>	<b>8.5</b>	<b>20</b>	<b>200 Q</b>
541-73-1	1,3-Dichlorobenzene	2.6	20	< 20 U
106-46-7	1,4-Dichlorobenzene	2.8	20	< 20 U
<b>100-51-6</b>	<b>Benzyl Alcohol</b>	<b>6.0</b>	<b>20</b>	<b>360</b>
95-50-1	1,2-Dichlorobenzene	2.5	20	< 20 U
<b>95-48-7</b>	<b>2-Methylphenol</b>	<b>5.2</b>	<b>20</b>	<b>12 J</b>
<b>106-44-5</b>	<b>4-Methylphenol</b>	<b>6.5</b>	<b>39</b>	<b>110 Q</b>
67-72-1	Hexachloroethane	2.9	20	< 20 U
105-67-9	2,4-Dimethylphenol	3.4	20	< 20 UJ
<b>65-85-0</b>	<b>Benzoic Acid</b>	<b>100</b>	<b>390</b>	<b>1,600</b>
120-82-1	1,2,4-Trichlorobenzene	3.4	20	< 20 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>2.7</b>	<b>20</b>	<b>39</b>
87-68-3	Hexachlorobutadiene	4.5	10	< 10 UJ
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>3.0</b>	<b>20</b>	<b>24</b>
131-11-3	Dimethylphthalate	2.9	20	< 20 U
<b>208-96-8</b>	<b>Acenaphthylene</b>	<b>5.6</b>	<b>20</b>	<b>26</b>
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>3.2</b>	<b>20</b>	<b>17 J</b>
<b>132-64-9</b>	<b>Dibenzofuran</b>	<b>4.0</b>	<b>20</b>	<b>41 M</b>
<b>84-66-2</b>	<b>Diethylphthalate</b>	<b>36</b>	<b>49</b>	<b>55</b>
<b>86-73-7</b>	<b>Fluorene</b>	<b>4.3</b>	<b>20</b>	<b>46</b>
86-30-6	N-Nitrosodiphenylamine	5.3	20	< 20 U
118-74-1	Hexachlorobenzene	4.2	20	< 20 U
<b>87-86-5</b>	<b>Pentachlorophenol</b>	<b>48</b>	<b>200</b>	<b>52 J</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>3.6</b>	<b>20</b>	<b>190</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>4.4</b>	<b>20</b>	<b>48</b>
84-74-2	Di-n-Butylphthalate	8.0	20	< 20 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>2.9</b>	<b>20</b>	<b>260</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>1.9</b>	<b>20</b>	<b>290</b>
<b>85-68-7</b>	<b>Butylbenzylphthalate</b>	<b>6.0</b>	<b>20</b>	<b>82</b>
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>3.2</b>	<b>20</b>	<b>150</b>
<b>117-81-7</b>	<b>bis (2-Ethylhexyl) phthalate</b>	<b>14</b>	<b>25</b>	<b>560</b>
<b>218-01-9</b>	<b>Chrysene</b>	<b>3.7</b>	<b>20</b>	<b>300</b>
<b>117-84-0</b>	<b>Di-n-Octyl phthalate</b>	<b>5.8</b>	<b>20</b>	<b>73 M</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>5.4</b>	<b>20</b>	<b>140</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>4.6</b>	<b>20</b>	<b>100</b>
<b>53-70-3</b>	<b>Dibenz (a,h) anthracene</b>	<b>4.2</b>	<b>20</b>	<b>40</b>
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>4.3</b>	<b>20</b>	<b>120</b>
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>2.6</b>	<b>20</b>	<b>18 J</b>
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>2.7</b>	<b>39</b>	<b>380</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	97.2%	2-Fluorobiphenyl	79.0%
d14-p-Terphenyl	63.4%	d4-1,2-Dichlorobenzene	67.6%
d5-Phenol	135%	2-Fluorophenol	100%
2,4,6-Tribromophenol	122%	d4-2-Chlorophenol	89.3%

FORM I

UPSD: 00036

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-13-S-E-dup-121107**  
**SAMPLE**

Lab Sample ID: VR58E  
 LIMS ID: 12-22333  
 Matrix: Sediment  
 Data Release Authorized: *AS*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 19:35  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.1 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 76.0%

CAS Number	Analyte	MDL	RL	Result
<b>108-95-2</b>	<b>Phenol</b>	<b>8.6</b>	<b>20</b>	<b>350 Q</b>
541-73-1	1,3-Dichlorobenzene	2.6	20	< 20 U
106-46-7	1,4-Dichlorobenzene	2.8	20	< 20 U
<b>100-51-6</b>	<b>Benzyl Alcohol</b>	<b>6.0</b>	<b>20</b>	<b>380</b>
95-50-1	1,2-Dichlorobenzene	2.5	20	< 20 U
<b>95-48-7</b>	<b>2-Methylphenol</b>	<b>5.2</b>	<b>20</b>	<b>14 J</b>
<b>106-44-5</b>	<b>4-Methylphenol</b>	<b>6.6</b>	<b>40</b>	<b>110 Q</b>
67-72-1	Hexachloroethane	2.9	20	< 20 U
105-67-9	2,4-Dimethylphenol	3.4	20	< 20 UJ
<b>65-85-0</b>	<b>Benzoic Acid</b>	<b>100</b>	<b>400</b>	<b>1,700</b>
120-82-1	1,2,4-Trichlorobenzene	3.4	20	< 20 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>2.7</b>	<b>20</b>	<b>40</b>
87-68-3	Hexachlorobutadiene	4.5	10	< 10 UJ
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>3.0</b>	<b>20</b>	<b>15 J</b>
131-11-3	Dimethylphthalate	2.9	20	< 20 U
208-96-8	Acenaphthylene	5.7	20	< 20 U
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>3.3</b>	<b>20</b>	<b>16 J</b>
<b>132-64-9</b>	<b>Dibenzofuran</b>	<b>4.1</b>	<b>20</b>	<b>24 M</b>
84-66-2	Diethylphthalate	3.6	50	< 50 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>4.3</b>	<b>20</b>	<b>32</b>
86-30-6	N-Nitrosodiphenylamine	5.3	20	< 20 U
118-74-1	Hexachlorobenzene	4.3	20	< 20 U
87-86-5	Pentachlorophenol	48	200	< 200 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>3.6</b>	<b>20</b>	<b>160</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>4.5</b>	<b>20</b>	<b>44</b>
84-74-2	Di-n-Butylphthalate	8.1	20	< 20 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>2.9</b>	<b>20</b>	<b>220</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>1.9</b>	<b>20</b>	<b>200</b>
<b>85-68-7</b>	<b>Butylbenzylphthalate</b>	<b>6.1</b>	<b>20</b>	<b>56</b>
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>3.3</b>	<b>20</b>	<b>160</b>
<b>117-81-7</b>	<b>bis (2-Ethylhexyl) phthalate</b>	<b>14</b>	<b>25</b>	<b>430</b>
<b>218-01-9</b>	<b>Chrysene</b>	<b>3.7</b>	<b>20</b>	<b>240</b>
<b>117-84-0</b>	<b>Di-n-Octyl phthalate</b>	<b>5.8</b>	<b>20</b>	<b>42</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>5.4</b>	<b>20</b>	<b>120</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>4.6</b>	<b>20</b>	<b>79</b>
<b>53-70-3</b>	<b>Dibenz (a,h) anthracene</b>	<b>4.3</b>	<b>20</b>	<b>26</b>
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>4.4</b>	<b>20</b>	<b>85</b>
90-12-0	1-Methylnaphthalene	2.7	20	< 20 U
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>2.7</b>	<b>40</b>	<b>320</b>


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	84.4%	2-Fluorobiphenyl	73.4%
d14-p-Terphenyl	48.8%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	94.7%	2-Fluorophenol	75.5%
2,4,6-Tribromophenol	81.1%	d4-2-Chlorophenol	74.3%

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
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**Sample ID: SG-14-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58F  
 LIMS ID: 12-22334  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 20:11  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.5 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 52.7%

CAS Number	Analyte	MDL	RL	Result
108-95-2	Phenol	8.2	19	80 Q
541-73-1	1,3-Dichlorobenzene	2.5	19	< 19 U
106-46-7	1,4-Dichlorobenzene	2.7	19	< 19 U
100-51-6	Benzyl Alcohol	5.8	19	100
95-50-1	1,2-Dichlorobenzene	2.4	19	< 19 U
95-48-7	2-Methylphenol	5.0	19	< 19 U
106-44-5	4-Methylphenol	6.3	38	59 Q
67-72-1	Hexachloroethane	2.8	19	< 19 U
105-67-9	2,4-Dimethylphenol	3.3	19	< 19 UJ
65-85-0	Benzoic Acid	96	380	610
120-82-1	1,2,4-Trichlorobenzene	3.3	19	< 19 U
91-20-3	Naphthalene	2.6	19	170
87-68-3	Hexachlorobutadiene	4.3	10	< 10 UJ
91-57-6	2-Methylnaphthalene	2.9	19	59
131-11-3	Dimethylphthalate	2.8	19	< 19 U
208-96-8	Acenaphthylene	5.4	19	26
83-32-9	Acenaphthene	3.1	19	130
132-64-9	Dibenzofuran	3.9	19	90
84-66-2	Diethylphthalate	35	48	68
86-73-7	Fluorene	4.1	19	150
86-30-6	N-Nitrosodiphenylamine	5.1	19	< 19 U
118-74-1	Hexachlorobenzene	4.1	19	< 19 U
87-86-5	Pentachlorophenol	46	190	< 190 U
85-01-8	Phenanthrene	3.5	19	830
120-12-7	Anthracene	4.3	19	150
84-74-2	Di-n-Butylphthalate	7.8	19	< 19 U
206-44-0	Fluoranthene	2.8	19	1,200 E
129-00-0	Pyrene	1.8	19	920
85-68-7	Butylbenzylphthalate	5.8	19	43
56-55-3	Benzo(a)anthracene	3.1	19	360
117-81-7	bis(2-Ethylhexyl)phthalate	14	24	280
218-01-9	Chrysene	3.6	19	550
117-84-0	Di-n-Octyl phthalate	5.6	19	24
50-32-8	Benzo(a)pyrene	5.2	19	210
193-39-5	Indeno(1,2,3-cd)pyrene	4.4	19	97
53-70-3	Dibenz(a,h)anthracene	4.1	19	42
191-24-2	Benzo(g,h,i)perylene	4.2	19	95
90-12-0	1-Methylnaphthalene	2.5	19	34
TOTBFA	Total Benzofluoranthenes	2.6	38	600

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	57.4%	2-Fluorobiphenyl	62.4%
d14-p-Terphenyl	61.6%	d4-1,2-Dichlorobenzene	54.6%
d5-Phenol	67.5%	2-Fluorophenol	60.8%
2,4,6-Tribromophenol	60.5%	d4-2-Chlorophenol	60.4%

FORM I

UPSA: 00000

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
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**Sample ID: SG-14-S-E-121107**  
**DILUTION**

Lab Sample ID: VR58F  
 LIMS ID: 12-22334  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/06/12 15:11  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.5 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 3.00  
 Percent Moisture: 52.7%

CAS Number	Analyte	MDL	RL	Result
<b>108-95-2</b>	<b>Phenol</b>	<b>25</b>	<b>57</b>	<b>66</b>
541-73-1	1,3-Dichlorobenzene	7.5	57	< 57 U
106-46-7	1,4-Dichlorobenzene	8.2	57	< 57 U
<b>100-51-6</b>	<b>Benzyl Alcohol</b>	<b>17</b>	<b>57</b>	<b>77</b>
95-50-1	1,2-Dichlorobenzene	7.1	57	< 57 U
95-48-7	2-Methylphenol	15	57	< 57 U
<b>106-44-5</b>	<b>4-Methylphenol</b>	<b>19</b>	<b>110</b>	<b>40 JQ</b>
67-72-1	Hexachloroethane	8.4	57	< 57 U
105-67-9	2,4-Dimethylphenol	9.9	110	< 110 U
<b>65-85-0</b>	<b>Benzoic Acid</b>	<b>290</b>	<b>1,100</b>	<b>460 JQ</b>
120-82-1	1,2,4-Trichlorobenzene	9.9	57	< 57 U
<b>91-20-3</b>	<b>Naphthalene</b>	<b>7.9</b>	<b>57</b>	<b>140</b>
87-68-3	Hexachlorobutadiene	13	57	< 57 U
<b>91-57-6</b>	<b>2-Methylnaphthalene</b>	<b>8.7</b>	<b>57</b>	<b>54 J</b>
131-11-3	Dimethylphthalate	8.3	57	< 57 U
208-96-8	Acenaphthylene	16	57	< 57 U
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>9.4</b>	<b>57</b>	<b>120</b>
<b>132-64-9</b>	<b>Dibenzofuran</b>	<b>12</b>	<b>57</b>	<b>74</b>
84-66-2	Diethylphthalate	100	140	< 140 U
<b>86-73-7</b>	<b>Fluorene</b>	<b>12</b>	<b>57</b>	<b>130</b>
86-30-6	N-Nitrosodiphenylamine	15	57	< 57 U
118-74-1	Hexachlorobenzene	12	57	< 57 U
87-86-5	Pentachlorophenol	140	570	< 570 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>10</b>	<b>57</b>	<b>730</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>13</b>	<b>57</b>	<b>130</b>
84-74-2	Di-n-Butylphthalate	23	57	< 57 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>8.3</b>	<b>57</b>	<b>1,200</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>5.5</b>	<b>57</b>	<b>930</b>
85-68-7	Butylbenzylphthalate	18	57	< 57 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>9.4</b>	<b>57</b>	<b>330</b>
<b>117-81-7</b>	<b>bis (2-Ethylhexyl) phthalate</b>	<b>42</b>	<b>71</b>	<b>260</b>
<b>218-01-9</b>	<b>Chrysene</b>	<b>11</b>	<b>57</b>	<b>480</b>
117-84-0	Di-n-Octyl phthalate	17	57	< 57 U
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>16</b>	<b>57</b>	<b>190</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>13</b>	<b>57</b>	<b>120</b>
<b>53-70-3</b>	<b>Dibenz (a,h) anthracene</b>	<b>12</b>	<b>57</b>	<b>46 J</b>
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>13</b>	<b>57</b>	<b>130</b>
<b>90-12-0</b>	<b>1-Methylnaphthalene</b>	<b>7.6</b>	<b>57</b>	<b>31 J</b>
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>7.8</b>	<b>110</b>	<b>540</b>


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	44.4%	2-Fluorobiphenyl	57.6%
d14-p-Terphenyl	65.4%	d4-1,2-Dichlorobenzene	51.6%
d5-Phenol	56.0%	2-Fluorophenol	51.6%
2,4,6-Tribromophenol	59.2%	d4-2-Chlorophenol	56.0%

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
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**Sample ID: SG-15-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58G  
 LIMS ID: 12-22335  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 20:48  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.7 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 24.7%

CAS Number	Analyte	MDL	RL	Result
108-95-2	Phenol	8.1	19	< 19 U
541-73-1	1,3-Dichlorobenzene	2.5	19	< 19 U
106-46-7	1,4-Dichlorobenzene	2.7	19	< 19 U
100-51-6	Benzyl Alcohol	5.7	19	< 19 U
95-50-1	1,2-Dichlorobenzene	2.3	19	< 19 U
95-48-7	2-Methylphenol	4.9	19	< 19 U
<b>106-44-5</b>	<b>4-Methylphenol</b>	<b>6.2</b>	<b>37</b>	<b>10 J</b>
67-72-1	Hexachloroethane	2.7	19	< 19 U
105-67-9	2,4-Dimethylphenol	3.2	19	< 19 UJ
65-85-0	Benzoic Acid	94	370	< 370 U
120-82-1	1,2,4-Trichlorobenzene	3.2	19	< 19 U
91-20-3	Naphthalene	2.6	19	< 19 U
87-68-3	Hexachlorobutadiene	4.3	10	< 10 UJ
91-57-6	2-Methylnaphthalene	2.9	19	< 19 U
131-11-3	Dimethylphthalate	2.7	19	< 19 U
208-96-8	Acenaphthylene	5.3	19	< 19 U
83-32-9	Acenaphthene	3.1	19	< 19 U
132-64-9	Dibenzofuran	3.8	19	< 19 U
84-66-2	Diethylphthalate	34	47	< 47 U
86-73-7	Fluorene	4.1	19	< 19 U
86-30-6	N-Nitrosodiphenylamine	5.0	19	< 19 U
118-74-1	Hexachlorobenzene	4.0	19	< 19 U
87-86-5	Pentachlorophenol	45	190	< 190 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>3.4</b>	<b>19</b>	<b>16 J</b>
120-12-7	Anthracene	4.2	19	< 19 U
84-74-2	Di-n-Butylphthalate	7.6	19	< 19 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>2.7</b>	<b>19</b>	<b>12 J</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>1.8</b>	<b>19</b>	<b>11 J</b>
85-68-7	Butylbenzylphthalate	5.7	19	< 19 U
56-55-3	Benzo(a)anthracene	3.1	19	< 19 U
<b>117-81-7</b>	<b>bis(2-Ethylhexyl)phthalate</b>	<b>14</b>	<b>23</b>	<b>21 J</b>
218-01-9	Chrysene	3.5	19	< 19 U
117-84-0	Di-n-Octyl phthalate	5.4	19	< 19 U
50-32-8	Benzo(a)pyrene	5.1	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.4	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	4.0	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	4.1	19	< 19 U
90-12-0	1-Methylnaphthalene	2.5	19	< 19 U
TOTBFA	Total Benzofluoranthenes	2.6	37	< 37 U

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	64.0%	2-Fluorobiphenyl	62.6%
d14-p-Terphenyl	70.0%	d4-1,2-Dichlorobenzene	63.8%
d5-Phenol	63.7%	2-Fluorophenol	64.7%
2,4,6-Tribromophenol	72.7%	d4-2-Chlorophenol	64.1%



**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
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**Sample ID: SG-16-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58H  
 LIMS ID: 12-22336  
 Matrix: Sediment  
 Data Release Authorized: *JB*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 21:25  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 21.0%

CAS Number	Analyte	MDL	RL	Result
108-95-2	Phenol	8.4	19	< 19 U
541-73-1	1,3-Dichlorobenzene	2.5	19	< 19 U
106-46-7	1,4-Dichlorobenzene	2.8	19	< 19 U
100-51-6	Benzyl Alcohol	5.9	19	< 19 U
95-50-1	1,2-Dichlorobenzene	2.4	19	< 19 U
95-48-7	2-Methylphenol	5.1	19	< 19 U
106-44-5	4-Methylphenol	6.4	39	< 39 U
67-72-1	Hexachloroethane	2.8	19	< 19 U
105-67-9	2,4-Dimethylphenol	3.4	19	< 19 UJ
65-85-0	Benzoic Acid	98	390	< 390 U
120-82-1	1,2,4-Trichlorobenzene	3.4	19	< 19 U
91-20-3	Naphthalene	2.7	19	< 19 U
87-68-3	Hexachlorobutadiene	4.4	10	< 10 UJ
91-57-6	2-Methylnaphthalene	3.0	19	< 19 U
131-11-3	Dimethylphthalate	2.8	19	< 19 U
208-96-8	Acenaphthylene	5.5	19	< 19 U
83-32-9	Acenaphthene	3.2	19	< 19 U
132-64-9	Dibenzofuran	4.0	19	< 19 U
84-66-2	Diethylphthalate	35	48	< 48 U
86-73-7	Fluorene	4.2	19	< 19 U
86-30-6	N-Nitrosodiphenylamine	5.2	19	< 19 U
118-74-1	Hexachlorobenzene	4.2	19	< 19 U
87-86-5	Pentachlorophenol	47	190	< 190 U
85-01-8	Phenanthrene	3.5	19	< 19 U
120-12-7	Anthracene	4.4	19	< 19 U
84-74-2	Di-n-Butylphthalate	7.9	19	< 19 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>2.8</b>	<b>19</b>	<b>11 J</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>1.9</b>	<b>19</b>	<b>9.7 J</b>
85-68-7	Butylbenzylphthalate	5.9	19	< 19 U
56-55-3	Benzo(a)anthracene	3.2	19	< 19 U
<b>117-81-7</b>	<b>bis(2-Ethylhexyl)phthalate</b>	<b>14</b>	<b>24</b>	<b>19 J</b>
218-01-9	Chrysene	3.6	19	< 19 U
117-84-0	Di-n-Octyl phthalate	5.7	19	< 19 U
50-32-8	Benzo(a)pyrene	5.3	19	< 19 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.5	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	4.2	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	4.3	19	< 19 U
90-12-0	1-Methylnaphthalene	2.6	19	< 19 U
TOTBFA	Total Benzofluoranthenes	2.7	39	< 39 U


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	64.4%	2-Fluorobiphenyl	58.4%
d14-p-Terphenyl	79.0%	d4-1,2-Dichlorobenzene	60.6%
d5-Phenol	58.5%	2-Fluorophenol	63.9%
2,4,6-Tribromophenol	70.9%	d4-2-Chlorophenol	60.8%

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
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**Sample ID: SG-17-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58I  
 LIMS ID: 12-22337  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 22:02  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.4 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 53.5%

CAS Number	Analyte	MDL	RL	Result
<b>108-95-2</b>	<b>Phenol</b>	<b>8.4</b>	<b>19</b>	<b>82 Q</b>
541-73-1	1,3-Dichlorobenzene	2.5	19	< 19 U
106-46-7	1,4-Dichlorobenzene	2.8	19	< 19 U
<b>100-51-6</b>	<b>Benzyl Alcohol</b>	<b>5.9</b>	<b>19</b>	<b>62</b>
95-50-1	1,2-Dichlorobenzene	2.4	19	< 19 U
95-48-7	2-Methylphenol	5.1	19	< 19 U
<b>106-44-5</b>	<b>4-Methylphenol</b>	<b>6.4</b>	<b>39</b>	<b>270 Q</b>
67-72-1	Hexachloroethane	2.8	19	< 19 U
105-67-9	2,4-Dimethylphenol	3.3	19	< 19 UJ
<b>65-85-0</b>	<b>Benzoic Acid</b>	<b>98</b>	<b>390</b>	<b>430</b>
120-82-1	1,2,4-Trichlorobenzene	3.4	19	< 19 U
91-20-3	Naphthalene	2.7	19	< 19 U
87-68-3	Hexachlorobutadiene	4.4	10	< 10 UJ
91-57-6	2-Methylnaphthalene	3.0	19	< 19 U
<b>131-11-3</b>	<b>Dimethylphthalate</b>	<b>2.8</b>	<b>19</b>	<b>38</b>
208-96-8	Acenaphthylene	5.5	19	< 19 U
83-32-9	Acenaphthene	3.2	19	< 19 U
132-64-9	Dibenzofuran	4.0	19	< 19 U
84-66-2	Diethylphthalate	35	48	< 48 U
86-73-7	Fluorene	4.2	19	< 19 U
86-30-6	N-Nitrosodiphenylamine	5.2	19	< 19 U
118-74-1	Hexachlorobenzene	4.1	19	< 19 U
87-86-5	Pentachlorophenol	47	190	< 190 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>3.5</b>	<b>19</b>	<b>93</b>
<b>120-12-7</b>	<b>Anthracene</b>	<b>4.3</b>	<b>19</b>	<b>11 J</b>
84-74-2	Di-n-Butylphthalate	7.9	19	< 19 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>2.8</b>	<b>19</b>	<b>130</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>1.9</b>	<b>19</b>	<b>120</b>
85-68-7	Butylbenzylphthalate	5.9	19	< 19 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>3.2</b>	<b>19</b>	<b>42</b>
<b>117-81-7</b>	<b>bis (2-Ethylhexyl) phthalate</b>	<b>14</b>	<b>24</b>	<b>150</b>
<b>218-01-9</b>	<b>Chrysene</b>	<b>3.6</b>	<b>19</b>	<b>64</b>
<b>117-84-0</b>	<b>Di-n-Octyl phthalate</b>	<b>5.6</b>	<b>19</b>	<b>11 J</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>5.3</b>	<b>19</b>	<b>41</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>4.5</b>	<b>19</b>	<b>24</b>
53-70-3	Dibenz (a,h) anthracene	4.2	19	< 19 U
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>4.3</b>	<b>19</b>	<b>27</b>
90-12-0	1-Methylnaphthalene	2.6	19	< 19 U
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>2.7</b>	<b>39</b>	<b>91</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	61.4%	2-Fluorobiphenyl	63.0%
d14-p-Terphenyl	74.6%	d4-1,2-Dichlorobenzene	58.4%
d5-Phenol	66.3%	2-Fluorophenol	64.9%
2,4,6-Tribromophenol	72.0%	d4-2-Chlorophenol	62.4%

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-01-S-C-121107**  
**SAMPLE**

Lab Sample ID: VR58J  
 LIMS ID: 12-22338  
 Matrix: Sediment  
 Data Release Authorized: *AS*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 22:38  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.5 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 20.5%

CAS Number	Analyte	MDL	RL	Result
108-95-2	Phenol	8.3	19	< 19 U
541-73-1	1,3-Dichlorobenzene	2.5	19	< 19 U
106-46-7	1,4-Dichlorobenzene	2.7	19	< 19 U
100-51-6	Benzyl Alcohol	5.8	19	< 19 U
95-50-1	1,2-Dichlorobenzene	2.4	19	< 19 U
95-48-7	2-Methylphenol	5.0	19	< 19 U
106-44-5	4-Methylphenol	6.3	38	< 38 U
67-72-1	Hexachloroethane	2.8	19	< 19 U
105-67-9	2,4-Dimethylphenol	3.3	19	< 19 UJ
65-85-0	Benzoic Acid	97	380	< 380 U
120-82-1	1,2,4-Trichlorobenzene	3.3	19	< 19 U
91-20-3	Naphthalene	2.6	19	< 19 U
87-68-3	Hexachlorobutadiene	4.4	10	< 10 UJ
91-57-6	2-Methylnaphthalene	2.9	19	< 19 U
131-11-3	Dimethylphthalate	2.8	19	< 19 U
208-96-8	Acenaphthylene	5.5	19	< 19 U
83-32-9	Acenaphthene	3.1	19	< 19 U
132-64-9	Dibenzofuran	3.9	19	< 19 U
84-66-2	Diethylphthalate	35	48	< 48 U
86-73-7	Fluorene	4.2	19	< 19 U
86-30-6	N-Nitrosodiphenylamine	5.2	19	< 19 U
118-74-1	Hexachlorobenzene	4.1	19	< 19 U
87-86-5	Pentachlorophenol	46	190	< 190 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>3.5</b>	<b>19</b>	<b>26</b>
120-12-7	Anthracene	4.3	19	< 19 U
84-74-2	Di-n-Butylphthalate	7.8	19	< 19 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>2.8</b>	<b>19</b>	<b>51</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>1.9</b>	<b>19</b>	<b>39</b>
85-68-7	Butylbenzylphthalate	5.9	19	< 19 U
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>3.1</b>	<b>19</b>	<b>15 J</b>
<b>117-81-7</b>	<b>bis (2-Ethylhexyl) phthalate</b>	<b>14</b>	<b>24</b>	<b>28</b>
<b>218-01-9</b>	<b>Chrysene</b>	<b>3.6</b>	<b>19</b>	<b>20</b>
117-84-0	Di-n-Octyl phthalate	5.6	19	< 19 U
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>5.2</b>	<b>19</b>	<b>15 J</b>
193-39-5	Indeno(1,2,3-cd)pyrene	4.5	19	< 19 U
53-70-3	Dibenz(a,h)anthracene	4.1	19	< 19 U
191-24-2	Benzo(g,h,i)perylene	4.2	19	< 19 U
90-12-0	1-Methylnaphthalene	2.6	19	< 19 U
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>2.6</b>	<b>38</b>	<b>35 J</b>

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	61.2%	2-Fluorobiphenyl	61.2%
d14-p-Terphenyl	79.8%	d4-1,2-Dichlorobenzene	61.4%
d5-Phenol	58.1%	2-Fluorophenol	64.1%
2,4,6-Tribromophenol	76.7%	d4-2-Chlorophenol	61.3%

**SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY**

Matrix: Sediment

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT	OUT
MB-111312	69.6%	61.4%	82.0%	61.2%	70.9%	65.7%	48.4%	65.2%	0	
LCS-111312	67.8%	53.2%	87.2%	66.2%	94.8%	85.6%	66.5%	83.9%	0	
SG-10-S-E-121107	75.4%	95.0%	83.8%	58.0%	77.2%	64.7%	74.3%	69.7%	0	
SG-10-S-E-121107 DL	46.2%	56.4%	75.0%	52.2%	47.6%	51.6%	82.8%	52.0%	0	
SG-11-S-E-121107	67.4%	42.0%	39.8%	47.4%	77.5%	55.9%	116%	57.6%	0	
SG-11-S-E-121107 DL	46.8%	58.2%	73.2%	52.8%	52.0%	53.6%	74.8%	54.4%	0	
SG-12-S-E-121107	88.0%	57.8%	46.0%	55.6%	99.5%	80.3%	122%	68.0%	0	
SG-13-S-E-121107	97.2%	79.0%	63.4%	67.6%	135%	100%	122%	82.3%	0	
SG-13-S-E-dup-1211	84.4%	73.4%	48.8%	62.8%	94.7%	75.5%	81.1%	74.3%	0	
SG-14-S-E-121107	57.4%	62.4%	61.6%	54.6%	67.5%	60.8%	60.5%	60.4%	0	
SG-14-S-E-121107 DL	44.4%	57.6%	65.4%	51.6%	56.0%	51.6%	59.2%	56.0%	0	
SG-15-S-E-121107	64.0%	62.6%	70.0%	63.8%	63.7%	64.7%	72.7%	64.1%	0	
SG-16-S-E-121107	64.4%	58.4%	79.0%	60.6%	58.5%	63.9%	70.9%	60.8%	0	
SG-17-S-E-121107	61.4%	63.0%	74.6%	58.4%	66.3%	64.9%	72.0%	62.4%	0	
SG-01-S-C-121107	61.2%	61.2%	79.8%	61.4%	58.1%	64.1%	76.7%	61.3%	0	
SG-01-S-C-121107 MS	61.8%	67.8%	79.8%	65.0%	67.9%	68.8%	76.7%	65.6%	0	
SG-01-S-C-121107 MSD	58.4%	62.8%	77.8%	59.8%	63.2%	62.5%	74.1%	60.8%	0	

**LCS/MB LIMITS**

**QC LIMITS**

(NBZ) = d5-Nitrobenzene	(30-160)	(30-160)
(FBP) = 2-Fluorobiphenyl	(30-160)	(30-160)
(TPH) = d14-p-Terphenyl	(30-160)	(30-160)
(DCB) = d4-1,2-Dichlorobenzene	(30-160)	(30-160)
(PHL) = d5-Phenol	(30-160)	(30-160)
(2FP) = 2-Fluorophenol	(30-160)	(30-160)
(TBP) = 2,4,6-Tribromophenol	(30-160)	(30-160)
(2CP) = d4-2-Chlorophenol	(30-160)	(30-160)

Prep Method: SW3546  
Log Number Range: 12-22329 to 12-22338

**ORGANICS ANALYSIS DATA SHEET**

**PSDDA Semivolatiles by SW8270D GC/MS**

Page 1 of 1


**Sample ID: SG-01-S-C-121107**

**MS/MSD**

Lab Sample ID: VR58J

LIMS ID: 12-22338

Matrix: Sediment

Data Release Authorized: 

Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: 11/07/12

Date Received: 11/08/12

Date Extracted MS/MSD: 11/13/12

Sample Amount MS: 10.39 g-dry-wt

MSD: 10.40 g-dry-wt

Date Analyzed MS: 12/04/12 23:15

Final Extract Volume MS: 1.0 mL

MSD: 12/04/12 23:52

MSD: 1.0 mL

Instrument/Analyst MS: NT10/VTS

Dilution Factor MS: 1.00

MSD: NT10/VTS

MSD: 1.00

GPC Cleanup: Yes

Percent Moisture: 20.5 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	< 19 U	342 Q	481	71.1%	323 Q	481	67.2%	5.7%
1,3-Dichlorobenzene	< 19 U	307	481	63.8%	283	481	58.8%	8.1%
1,4-Dichlorobenzene	< 19 U	318	481	66.1%	294	481	61.1%	7.8%
Benzyl Alcohol	< 19 U	320	481	66.5%	311	481	64.7%	2.9%
1,2-Dichlorobenzene	< 19 U	326 Q	481	67.8%	302 Q	481	62.8%	7.6%
2-Methylphenol	< 19 U	248	481	51.6%	230	481	47.8%	7.5%
4-Methylphenol	< 38 U	1010 Q	962	105%	922 Q	962	95.8%	9.1%
Hexachloroethane	< 19 U	304	481	63.2%	277	481	57.6%	9.3%
2,4-Dimethylphenol	< 19 UJ	820	1440	56.9%	794	1440	55.1%	3.2%
Benzoic Acid	< 380 U	2040	2650	77.0%	1880	2640	71.2%	8.2%
1,2,4-Trichlorobenzene	< 19 U	310	481	64.4%	271	481	56.3%	13.4%
Naphthalene	< 19 U	335	481	69.6%	320	481	66.5%	4.6%
Hexachlorobutadiene	< 10 UJ	252 Q	481	52.4%	237 Q	481	49.3%	6.1%
2-Methylnaphthalene	< 19 U	324	481	67.4%	310	481	64.4%	4.4%
Dimethylphthalate	< 19 U	372	481	77.3%	362	481	75.3%	2.7%
Acenaphthylene	< 19 U	322	481	66.9%	307	481	63.8%	4.8%
Acenaphthene	< 19 U	355	481	73.8%	334	481	69.4%	6.1%
Dibenzofuran	< 19 U	334	481	69.4%	319	481	66.3%	4.6%
Diethylphthalate	< 48 U	370	481	76.9%	356	481	74.0%	3.9%
Fluorene	< 19 U	373	481	77.5%	365	481	75.9%	2.2%
N-Nitrosodiphenylamine	< 19 U	385	481	80.0%	373	481	77.5%	3.2%
Hexachlorobenzene	< 19 U	342	481	71.1%	336	481	69.9%	1.8%
Pentachlorophenol	< 190 U	915	1440	63.5%	883	1440	61.3%	3.6%
Phenanthrene	26	412	481	80.2%	403	481	78.4%	2.2%
Anthracene	< 19 U	359	481	74.6%	357	481	74.2%	0.6%
Di-n-Butylphthalate	< 19 U	440	481	91.5%	432	481	89.8%	1.8%
Fluoranthene	51	436	481	80.0%	416	481	75.9%	4.7%
Pyrene	39	416	481	78.4%	411	481	77.3%	1.2%
Butylbenzylphthalate	< 19 U	452	481	94.0%	450	481	93.6%	0.4%
Benzo(a)anthracene	15 J	375	481	74.8%	374	481	74.6%	0.3%
bis(2-Ethylhexyl)phthalate	28	395	481	76.3%	369	481	70.9%	6.8%
Chrysene	20	382	481	75.3%	379	481	74.6%	0.8%
Di-n-Octyl phthalate	< 19 U	381	481	79.2%	345	481	71.7%	9.9%
Benzo(a)pyrene	15 J	340	481	67.6%	332	481	65.9%	2.4%
Indeno(1,2,3-cd)pyrene	< 19 U	294	481	61.1%	294	481	61.1%	0.0%
Dibenz(a,h)anthracene	< 19 U	320	481	66.5%	323	481	67.2%	0.9%
Benzo(g,h,i)perylene	< 19 U	268	481	55.7%	279	481	58.0%	4.0%
1-Methylnaphthalene	< 19 U	341	481	70.9%	323	481	67.2%	5.4%
Total Benzofluoranthenes	35 J	787	962	78.2%	766	962	76.0%	2.7%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-01-S-C-121107**  
**MATRIX SPIKE**

Lab Sample ID: VR58J  
 LIMS ID: 12-22338  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 23:15  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.4 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 20.5%

CAS Number	Analyte	MDL	RL	Result
108-95-2	Phenol	8.3	19	---
541-73-1	1,3-Dichlorobenzene	2.5	19	---
106-46-7	1,4-Dichlorobenzene	2.8	19	---
100-51-6	Benzyl Alcohol	5.9	19	---
95-50-1	1,2-Dichlorobenzene	2.4	19	---
95-48-7	2-Methylphenol	5.1	19	---
106-44-5	4-Methylphenol	6.4	38	---
67-72-1	Hexachloroethane	2.8	19	---
105-67-9	2,4-Dimethylphenol	3.3	38	---
65-85-0	Benzoic Acid	97	380	---
120-82-1	1,2,4-Trichlorobenzene	3.3	19	---
91-20-3	Naphthalene	2.7	19	---
87-68-3	Hexachlorobutadiene	4.4	19	---
91-57-6	2-Methylnaphthalene	2.9	19	---
131-11-3	Dimethylphthalate	2.8	19	---
208-96-8	Acenaphthylene	5.5	19	---
83-32-9	Acenaphthene	3.2	19	---
132-64-9	Dibenzofuran	3.9	19	---
84-66-2	Diethylphthalate	35	48	---
86-73-7	Fluorene	4.2	19	---
86-30-6	N-Nitrosodiphenylamine	5.2	19	---
118-74-1	Hexachlorobenzene	4.1	19	---
87-86-5	Pentachlorophenol	47	190	---
85-01-8	Phenanthrene	3.5	19	---
120-12-7	Anthracene	4.3	19	---
84-74-2	Di-n-Butylphthalate	7.9	19	---
206-44-0	Fluoranthene	2.8	19	---
129-00-0	Pyrene	1.9	19	---
85-68-7	Butylbenzylphthalate	5.9	19	---
56-55-3	Benzo(a)anthracene	3.2	19	---
117-81-7	bis(2-Ethylhexyl)phthalate	14	24	---
218-01-9	Chrysene	3.6	19	---
117-84-0	Di-n-Octyl phthalate	5.6	19	---
50-32-8	Benzo(a)pyrene	5.2	19	---
193-39-5	Indeno(1,2,3-cd)pyrene	4.5	19	---
53-70-3	Dibenz(a,h)anthracene	4.1	19	---
191-24-2	Benzo(g,h,i)perylene	4.2	19	---
90-12-0	1-Methylnaphthalene	2.6	19	---
TOTBFA	Total Benzofluoranthenes	2.6	38	---


Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	61.8%	2-Fluorobiphenyl	67.8%
d14-p-Terphenyl	79.8%	d4-1,2-Dichlorobenzene	65.0%
d5-Phenol	67.9%	2-Fluorophenol	68.8%
2,4,6-Tribromophenol	76.7%	d4-2-Chlorophenol	65.6%

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-01-S-C-121107**  
**MATRIX SPIKE DUPLICATE**

Lab Sample ID: VR58J  
 LIMS ID: 12-22338  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 23:52  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.4 g-dry-wt  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 20.5%

CAS Number	Analyte	MDL	RL	Result
108-95-2	Phenol	8.3	19	---
541-73-1	1,3-Dichlorobenzene	2.5	19	---
106-46-7	1,4-Dichlorobenzene	2.8	19	---
100-51-6	Benzyl Alcohol	5.9	19	---
95-50-1	1,2-Dichlorobenzene	2.4	19	---
95-48-7	2-Methylphenol	5.0	19	---
106-44-5	4-Methylphenol	6.4	38	---
67-72-1	Hexachloroethane	2.8	19	---
105-67-9	2,4-Dimethylphenol	3.3	38	---
65-85-0	Benzoic Acid	97	380	---
120-82-1	1,2,4-Trichlorobenzene	3.3	19	---
91-20-3	Naphthalene	2.7	19	---
87-68-3	Hexachlorobutadiene	4.4	19	---
91-57-6	2-Methylnaphthalene	2.9	19	---
131-11-3	Dimethylphthalate	2.8	19	---
208-96-8	Acenaphthylene	5.5	19	---
83-32-9	Acenaphthene	3.2	19	---
132-64-9	Dibenzofuran	3.9	19	---
84-66-2	Diethylphthalate	35	48	---
86-73-7	Fluorene	4.2	19	---
86-30-6	N-Nitrosodiphenylamine	5.2	19	---
118-74-1	Hexachlorobenzene	4.1	19	---
87-86-5	Pentachlorophenol	47	190	---
85-01-8	Phenanthrene	3.5	19	---
120-12-7	Anthracene	4.3	19	---
84-74-2	Di-n-Butylphthalate	7.8	19	---
206-44-0	Fluoranthene	2.8	19	---
129-00-0	Pyrene	1.9	19	---
85-68-7	Butylbenzylphthalate	5.9	19	---
56-55-3	Benzo(a)anthracene	3.2	19	---
117-81-7	bis(2-Ethylhexyl)phthalate	14	24	---
218-01-9	Chrysene	3.6	19	---
117-84-0	Di-n-Octyl phthalate	5.6	19	---
50-32-8	Benzo(a)pyrene	5.2	19	---
193-39-5	Indeno(1,2,3-cd)pyrene	4.5	19	---
53-70-3	Dibenz(a,h)anthracene	4.1	19	---
191-24-2	Benzo(g,h,i)perylene	4.2	19	---
90-12-0	1-Methylnaphthalene	2.6	19	---
TOTBFA	Total Benzofluoranthenes	2.6	38	---

Reported in µg/kg (ppb)

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	58.4%	2-Fluorobiphenyl	62.8%
d14-p-Terphenyl	77.8%	d4-1,2-Dichlorobenzene	59.8%
d5-Phenol	63.2%	2-Fluorophenol	62.5%
2,4,6-Tribromophenol	74.1%	d4-2-Chlorophenol	60.8%

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
 Page 1 of 2

**Sample ID: LCS-111312**  
**LAB CONTROL**

Lab Sample ID: LCS-111312  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 16:31  
 Instrument/Analyst: NT10/VTS  
 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	577 Q	500	115%
1,3-Dichlorobenzene	351	500	70.2%
1,4-Dichlorobenzene	322	500	64.4%
Benzyl Alcohol	372	500	74.4%
1,2-Dichlorobenzene	318 Q	500	63.6%
2-Methylphenol	275	500	55.0%
4-Methylphenol	903 Q	1000	90.3%
Hexachloroethane	317	500	63.4%
2,4-Dimethylphenol	514	1500	34.3%
Benzoic Acid	2140	2750	77.8%
1,2,4-Trichlorobenzene	440	500	88.0%
Naphthalene	376	500	75.2%
Hexachlorobutadiene	269 Q	500	53.8%
2-Methylnaphthalene	376	500	75.2%
Dimethylphthalate	377	500	75.4%
Acenaphthylene	332	500	66.4%
Acenaphthene	366	500	73.2%
Dibenzofuran	371	500	74.2%
Diethylphthalate	367	500	73.4%
Fluorene	341	500	68.2%
N-Nitrosodiphenylamine	445	500	89.0%
Hexachlorobenzene	366	500	73.2%
Pentachlorophenol	1030	1500	68.7%
Phenanthrene	433	500	86.6%
Anthracene	393	500	78.6%
Di-n-Butylphthalate	493	500	98.6%
Fluoranthene	461	500	92.2%
Pyrene	441	500	88.2%
Butylbenzylphthalate	474	500	94.8%
Benzo(a)anthracene	406	500	81.2%
bis(2-Ethylhexyl)phthalate	427	500	85.4%
Chrysene	409	500	81.8%
Di-n-Octyl phthalate	433	500	86.6%
Benzo(a)pyrene	332	500	66.4%



**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
 Page 2 of 2

Sample ID: LCS-111312  
**LAB CONTROL**

Lab Sample ID: LCS-111312  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Date Analyzed: 12/04/12 16:31

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01

Analyte	Lab Control	Spike Added	Recovery
Indeno(1,2,3-cd)pyrene	378	500	75.6%
Dibenz(a,h)anthracene	395	500	79.0%
Benzo(g,h,i)perylene	406	500	81.2%
1-Methylnaphthalene	405	500	81.0%
Total Benzofluoranthenes	826	1000	82.6%

**Semivolatile Surrogate Recovery**

d5-Nitrobenzene	67.8%
2-Fluorobiphenyl	53.2%
d14-p-Terphenyl	87.2%
d4-1,2-Dichlorobenzene	66.2%
d5-Phenol	94.8%
2-Fluorophenol	85.6%
2,4,6-Tribromophenol	66.5%
d4-2-Chlorophenol	83.9%

Reported in µg/kg (ppb)

4B  
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

VR58MBS1
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Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDI

Lab File ID: VR58MB

Date Extracted: 11/13/12

Instrument ID: NT10

Date Analyzed: 12/04/12

Matrix: SOLID

Time Analyzed: 1554

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	=====	=====	=====	=====
01	VR58LCSS1	VR58LCSS1	VR58SB	12/04/12
02	SG-10-S-E-121107	VR58A	VR58A	12/04/12
03	SG-11-S-E-121107	VR58B	VR58B	12/04/12
04	SG-12-S-E-121107	VR58C	VR58C	12/04/12
05	SG-13-S-E-121107	VR58D	VR58D	12/04/12
06	SG-13-S-E-DUP-12	VR58E	VR58E	12/04/12
07	SG-14-S-E-121107	VR58F	VR58F	12/04/12
08	SG-15-S-E-121107	VR58G	VR58G	12/04/12
09	SG-16-S-E-121107	VR58H	VR58H	12/04/12
10	SG-17-S-E-121107	VR58I	VR58I	12/04/12
11	SG-01-S-C-121107	VR58J	VR58J	12/04/12
12	SG-01-S-C-12110	VR58JMS	VR58JMS	12/04/12
13	SG-01-S-C-12110	VR58JMSD	VR58JMSD	12/04/12
14	SG-10-S-E-121107	VR58A	VR58A3	12/05/12
15	SG-11-S-E-121107	VR58B	VR58B3	12/05/12
16	SG-14-S-E-121107	VR58F	VR58F	12/06/12
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**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA Semivolatiles by SW8270D GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: MB-111312**  
**METHOD BLANK**

Lab Sample ID: MB-111312  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Data Release Authorized: *AB*  
 Reported: 12/06/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: NA  
 Date Received: NA

Date Extracted: 11/13/12  
 Date Analyzed: 12/04/12 15:54  
 Instrument/Analyst: NT10/VTS  
 GPC Cleanup: Yes

Sample Amount: 10.0 g  
 Final Extract Volume: 1.0 mL  
 Dilution Factor: 1.00  
 Percent Moisture: NA

CAS Number	Analyte	MDL	RL	Result
108-95-2	Phenol	8.6	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
106-44-5	4-Methylphenol	6.6	40	< 40 U
67-72-1	Hexachloroethane	2.9	20	< 20 U
105-67-9	2,4-Dimethylphenol	3.5	20	< 20 UJ
65-85-0	Benzoic Acid	100	400	< 400 U
120-82-1	1,2,4-Trichlorobenzene	3.5	20	< 20 U
91-20-3	Naphthalene	2.8	20	< 20 U
87-68-3	Hexachlorobutadiene	4.6	10	< 10 UJ
91-57-6	2-Methylnaphthalene	3.1	20	< 20 U
131-11-3	Dimethylphthalate	2.9	20	< 20 U
208-96-8	Acenaphthylene	5.7	20	< 20 U
83-32-9	Acenaphthene	3.3	20	< 20 U
132-64-9	Dibenzofuran	4.1	20	< 20 U
84-66-2	Diethylphthalate	37	50	< 50 U
86-73-7	Fluorene	4.4	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	5.4	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
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
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
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	69.6%	2-Fluorobiphenyl	61.4%
d14-p-Terphenyl	82.0%	d4-1,2-Dichlorobenzene	61.2%
d5-Phenol	70.9%	2-Fluorophenol	65.7%
2,4,6-Tribromophenol	48.4%	d4-2-Chlorophenol	65.2%

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

Instrument ID: NT10

Project: CITY OF KENMORE SEDIMENTS

DFTPP Injection Date: 11/29/12

DFTPP Injection Time: 0938

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	21.7
68	Less than 2.0% of mass 69	0.5 ( 1.5)1
69	Mass 69 relative abundance	33.7
70	Less than 2.0% of mass 69	0.1 ( 0.3)1
127	10.0 - 80.0% of mass 198	45.7
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	28.4
365	Greater than 1.0% of mass 198	4.10
441	0.0 - 24.0% of mass 442	16.1 ( 15.7)2
442	50.0 - 200.0% of mass 198	102.5
443	15.0 - 24.0% of mass 442	20.5 ( 20.0)2

1-Value is % mass 69

2-Value is % mass 442

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

CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	ABN 5	IC1129A	11/29/12	0954
02	ABN0.2	IC1129C	11/29/12	1110
03	ABN1	IC1129D	11/29/12	1224
04	ABN10	IC1129E	11/29/12	1302
05	ABN2.5	IC1129G	11/29/12	1416
06	ABN0.5	IC1129I	11/29/12	1530
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5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC  
Instrument ID: NT10  
DFTPP Injection Date: 12/04/12

Client: ANCHOR QEA, LLC.  
Project: CITY OF KENMORE SEDIMENTS  
DFTPP Injection Time: 1449

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	19.2
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	22.7
70	Less than 2.0% of mass 69	0.1 ( 0.3)1
127	10.0 - 80.0% of mass 198	37.8
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	6.7
275	10.0 - 60.0% of mass 198	34.0
365	Greater than 1.0% of mass 198	5.67
441	0.0 - 24.0% of mass 442	25.8 ( 15.4)2
442	50.0 - 200.0% of mass 198	168.0
443	15.0 - 24.0% of mass 442	33.4 ( 19.9)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		CC1204A1	CC1204A1	12/04/12	1505
02	VR58MBS1	VR58MBS1	VR58MB	12/04/12	1554
03	VR58LCSS1	VR58LCSS1	VR58SB	12/04/12	1631
04	SG-10-S-E-121107	VR58A	VR58A	12/04/12	1708
05	SG-11-S-E-121107	VR58B	VR58B	12/04/12	1744
06	SG-12-S-E-121107	VR58C	VR58C	12/04/12	1821
07	SG-13-S-E-121107	VR58D	VR58D	12/04/12	1858
08	SG-13-S-E-DUP-12	VR58E	VR58E	12/04/12	1935
09	SG-14-S-E-121107	VR58F	VR58F	12/04/12	2011
10	SG-15-S-E-121107	VR58G	VR58G	12/04/12	2048
11	SG-16-S-E-121107	VR58H	VR58H	12/04/12	2125
12	SG-17-S-E-121107	VR58I	VR58I	12/04/12	2202
13	SG-01-S-C-121107	VR58J	VR58J	12/04/12	2238
14	SG-01-S-C-12110	VR58JMS	VR58JMS	12/04/12	2315
15	SG-01-S-C-12110	VR58JMSD	VR58JMSD	12/04/12	2352
16					
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5B  
 SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
 DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC  
 Instrument ID: NT10  
 DFTPP Injection Date: 12/05/12

Client: ANCHOR QEA, LLC.  
 Project: CITY OF KENMORE SEDIMENTS  
 DFTPP Injection Time: 1134

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	19.5
68	Less than 2.0% of mass 69	0.5 ( 2.0)1
69	Mass 69 relative abundance	27.0
70	Less than 2.0% of mass 69	0.1 ( 0.4)1
127	10.0 - 80.0% of mass 198	41.5
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	6.9
275	10.0 - 60.0% of mass 198	30.8
365	Greater than 1.0% of mass 198	5.02
441	0.0 - 24.0% of mass 442	19.1 ( 15.0)2
442	50.0 - 200.0% of mass 198	127.7
443	15.0 - 24.0% of mass 442	25.5 ( 20.0)2

1-Value is % mass 69

2-Value is % mass 442

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		CC1205	CC1205	12/05/12	1149
02	SG-10-S-E-121107	VR58A	VR58A3	12/05/12	2042
03	SG-11-S-E-121107	VR58B	VR58B3	12/05/12	2119
04					
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5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

Instrument ID: NT10

Project: CITY OF KENMORE SEDIMENTS

DFTPP Injection Date: 12/06/12

DFTPP Injection Time: 1337

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.6
68	Less than 2.0% of mass 69	0.2 ( 0.9)1
69	Mass 69 relative abundance	23.2
70	Less than 2.0% of mass 69	0.2 ( 0.8)1
127	10.0 - 80.0% of mass 198	38.4
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	6.9
275	10.0 - 60.0% of mass 198	33.5
365	Greater than 1.0% of mass 198	5.24
441	0.0 - 24.0% of mass 442	24.7 ( 15.1)2
442	50.0 - 200.0% of mass 198	164.0
443	15.0 - 24.0% of mass 442	32.1 ( 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	CC1206	12/06/12	1352
02	SG-14-S-E-121107	VR58F	VR58F	12/06/12	1511
03					
04					
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6B  
SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENT

Instrument ID: NT10

Calibration Date: 11/29/12

LAB FILE ID:	RRF0.2=IC1129C	RRF0.5=IC1129I	RRF1 =IC1129D	RRF2.5=IC1129G	RRF5 =IC1129A	RRF10 =IC1129E	RRF20 =		
COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	RRF	%RSD /R^2
Phenol	1.825	1.894	1.881	1.752	1.430	1.226		1.668	16.5
1,3-Dichlorobenzene	1.716	1.749	1.686	1.659	1.498	1.353		1.610	9.5
1,4-Dichlorobenzene	1.638	1.616	1.568	1.581	1.426	1.234		1.510	10.2
1,2-Dichlorobenzene	1.698	1.658	1.564	1.480	1.274	1.022		1.449	17.8
Benzyl alcohol	0.754	0.730	0.843	0.789	0.906	0.709		0.788	9.4
2-Methylphenol	1.518	1.541	1.565	1.530	1.316	1.131		1.434	12.1
Hexachloroethane	0.675	0.689	0.636	0.619	0.572	0.532		0.620	9.7
4-Methylphenol	0.998	0.824	0.869	0.766	0.782	0.863		0.850	9.8
2,4-Dimethylphenol	0.407	0.421	0.413	0.376	0.330	0.336		0.380	10.5
1,2,4-Trichlorobenzene	0.230	0.230	0.226	0.210	0.222	0.217		0.222	3.5
Naphthalene	1.101	1.058	1.029	0.955	0.838	0.858		0.973	11.1
Benzoic acid	0.098	0.150	0.215	0.272	0.241	0.295		0.212	0.997
Hexachlorobutadiene	0.234	0.239	0.224	0.275	0.259	0.265		0.249	8.0
2-Methylnaphthalene	0.760	0.762	0.761	0.738	0.670	0.658		0.725	6.7
Acenaphthylene	2.059	2.056	1.934	1.873	1.698	1.724		1.891	8.3
Dimethylphthalate	1.284	1.298	1.296	1.311	1.248	1.316		1.292	1.9
Acenaphthene	1.160	1.153	1.127	1.062	0.971	1.010		1.080	7.3
Dibenzofuran	1.673	1.719	1.651	1.600	1.507	1.473		1.604	6.0
Fluorene	1.409	1.430	1.382	1.339	1.205	1.218		1.330	7.3
Diethylphthalate	1.481	1.300	1.287	1.251	1.374	1.421		1.352	6.5
N-Nitrosodiphenylamine (1)	0.511	0.532	0.530	0.506	0.463	0.406		0.491	9.9
Hexachlorobenzene	0.310	0.296	0.292	0.282	0.282	0.259		0.287	5.9
Pentachlorophenol		0.144	0.167	0.196	0.204	0.205		0.183	14.6
Phenanthrene	1.075	1.049	1.060	0.996	0.926	0.838		0.991	9.3
Anthracene	1.164	1.115	1.141	1.110	0.985	0.872		1.064	10.6
Di-n-butylphthalate	1.340	1.177	1.264	1.275	1.287	1.213		1.259	4.5
Fluoranthene	1.290	1.255	1.305	1.284	1.226	1.130		1.248	5.1
Pyrene	1.225	1.223	1.220	1.252	1.173	0.938		1.172	10.0
Butylbenzylphthalate	0.518	0.458	0.491	0.488	0.497	0.404		0.476	8.5
Benzo(a)anthracene	1.247	1.206	1.195	1.177	1.020	0.977		1.137	9.7
Chrysene	1.039	1.026	1.006	0.965	1.091	0.933		1.010	5.5
bis(2-Ethylhexyl)phthalate	0.670	0.547	0.538	0.494	0.507	0.556		0.552	11.3
Di-n-octylphthalate	0.993	0.942	0.927	0.904	0.846	0.829		0.907	6.8
Benzo(a)pyrene	1.267	1.041	1.205	1.063	1.166	1.106		1.141	7.6
Indeno(1,2,3-cd)pyrene	1.362	1.302	1.309	1.298	1.252	1.240		1.294	3.4
Dibenzo(a,h)anthracene	1.088	1.043	1.053	1.031	0.964	0.981		1.027	4.5
Benzo(g,h,i)perylene	1.158	1.134	1.104	1.097	1.090	1.061		1.107	3.1

(1) Cannot be separated from Diphenylamine

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

FORM VI SV-1

UPSA : 00055



6B  
SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENT

Instrument ID: NT10

Calibration Date: 11/29/12

LAB FILE ID: RRF0.2=IC1129C      RRF0.5=IC1129I      RRF1 =IC1129D  
                   RRF2.5=IC1129G      RRF5 =IC1129A      RRF10 =IC1129E  
                   RRF20 =

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	RRF	%RSD /R^2
1-methylnaphthalene	0.705	0.713	0.684	0.674	0.606	0.610		0.665	7.0
Total Benzofluoranthenes	1.311	1.188	1.184	1.156	1.088	1.136		1.177	6.4
2-Fluorophenol	1.315	1.302	1.347	1.336	1.229	1.148		1.280	6.0
Phenol-d5	1.538	1.596	1.680	1.666	1.631	1.389		1.583	6.8
2-Chlorophenol-d4	1.439	1.452	1.470	1.432	1.256	1.170		1.370	9.1
1,2-Dichlorobenzene-d4	1.107	1.115	1.061	1.022	0.913	0.775		0.999	13.2
Nitrobenzene-d5	0.370	0.396	0.381	0.385	0.353	0.363		0.375	4.2
2-Fluorobiphenyl	1.488	1.516	1.451	1.439	1.308	1.291		1.416	6.7
2,4,6-Tribromophenol	0.215	0.216	0.227	0.238	0.250	0.267		0.236	8.6
Terphenyl-d14	0.805	0.791	0.790	0.811	0.850	0.652		0.783	8.6

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

VR58 : 00057

## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Instrument ID: NT10

Cont. Calib. Date: 12/04/12

Init. Calib. Date: 11/29/12

Cont. Calib. Time: 1505

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
=====	=====	=====	=====	=====	=====	
Phenol	1.668	2.413	0.800	AVRG	44.7	<-
1,3-Dichlorobenzene	1.610	1.614	0.010	AVRG	0.2	
1,4-Dichlorobenzene	1.510	1.329	0.010	AVRG	-12.0	
1,2-Dichlorobenzene	1.449	1.151	0.010	AVRG	-20.6	<-
Benzyl alcohol	0.788	0.802	0.010	AVRG	1.8	
2-Methylphenol	1.434	1.382	0.700	AVRG	-3.6	
Hexachloroethane	0.620	0.534	0.300	AVRG	-13.9	
4-Methylphenol	0.850	1.026	0.600	AVRG	20.7	<-
2,4-Dimethylphenol	0.380	0.386	0.200	AVRG	1.6	
1,2,4-Trichlorobenzene	0.222	0.242	0.010	AVRG	9.0	
Naphthalene	0.973	1.032	0.700	AVRG	6.1	
Benzoic acid	20.00	23.97	0.010	2ORDR	19.8	
Hexachlorobutadiene	0.249	0.182	0.010	AVRG	-26.9	<-
2-Methylnaphthalene	0.725	0.748	0.400	AVRG	3.2	
Acenaphthylene	1.891	1.778	0.900	AVRG	-6.0	
Dimethylphthalate	1.292	1.128	0.010	AVRG	-12.7	
Acenaphthene	1.080	1.062	0.900	AVRG	-1.7	
Dibenzofuran	1.604	1.480	0.800	AVRG	-7.7	
Fluorene	1.330	1.223	0.900	AVRG	-8.0	
Diethylphthalate	1.352	1.090	0.010	AVRG	-19.4	
N-Nitrosodiphenylamine (1)	0.491	0.517	0.010	AVRG	5.3	
Hexachlorobenzene	0.287	0.256	0.100	AVRG	-10.8	
Pentachlorophenol	0.183	0.172	0.050	AVRG	-6.0	
Phenanthrene	0.991	1.027	0.700	AVRG	3.6	
Anthracene	1.064	1.112	0.700	AVRG	4.5	
Di-n-butylphthalate	1.259	1.311	0.010	AVRG	4.1	
Fluoranthene	1.248	1.241	0.600	AVRG	-0.6	
Pyrene	1.172	1.151	0.600	AVRG	-1.8	
Butylbenzylphthalate	0.476	0.437	0.010	AVRG	-8.2	
Benzo(a)anthracene	1.137	1.079	0.800	AVRG	-5.1	
Chrysene	1.010	1.000	0.700	AVRG	-1.0	
bis(2-Ethylhexyl)phthalate	0.552	0.541	0.010	AVRG	-2.0	
Di-n-octylphthalate	0.907	0.900	0.010	AVRG	-0.8	
Benzo(a)pyrene	1.141	0.986	0.700	AVRG	-13.6	
Indeno(1,2,3-cd)pyrene	1.294	1.094	0.500	AVRG	-15.4	
Dibenzo(a,h)anthracene	1.027	0.882	0.400	AVRG	-14.1	
Benzo(g,h,i)perylene	1.107	0.971	0.500	AVRG	-12.3	

(1) Cannot be separated from Diphenylamine

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF

## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Instrument ID: NT10

Cont. Calib. Date: 12/04/12

Init. Calib. Date: 11/29/12

Cont. Calib. Time: 1505

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1-methylnaphthalene	0.665	0.712	0.010	AVRG	7.1
Total Benzofluoranthenes	1.177	1.134	0.010	AVRG	-3.6
2-Fluorophenol	1.280	1.297	0.010	AVRG	1.3
Phenol-d5	1.583	1.685	0.010	AVRG	6.4
2-Chlorophenol-d4	1.370	1.584	0.010	AVRG	15.6
1,2-Dichlorobenzene-d4	0.999	0.908	0.010	AVRG	-9.1
Nitrobenzene-d5	0.375	0.321	0.010	AVRG	-14.4
2-Fluorobiphenyl	1.416	0.981	0.010	AVRG	-30.7
2,4,6-Tribromophenol	0.236	0.192	0.010	AVRG	-18.6
Terphenyl-d14	0.783	0.698	0.010	AVRG	-10.8

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF

## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Instrument ID: NT10

Cont. Calib. Date: 12/05/12

Init. Calib. Date: 11/29/12

Cont. Calib. Time: 1149

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	1.668	2.077	0.800	AVRG	24.5	<-
1,3-Dichlorobenzene	1.610	1.496	0.010	AVRG	-7.1	
1,4-Dichlorobenzene	1.510	1.463	0.010	AVRG	-3.1	
1,2-Dichlorobenzene	1.449	1.409	0.010	AVRG	-2.8	
Benzyl alcohol	0.788	0.849	0.010	AVRG	7.7	
2-Methylphenol	1.434	1.504	0.700	AVRG	4.9	
Hexachloroethane	0.620	0.565	0.300	AVRG	-8.9	
4-Methylphenol	0.850	1.543	0.600	AVRG	81.5	<-
2,4-Dimethylphenol	0.380	0.324	0.200	AVRG	-14.7	
1,2,4-Trichlorobenzene	0.222	0.310	0.010	AVRG	39.6	<-
Naphthalene	0.973	1.001	0.700	AVRG	2.9	
Benzoic acid	20.00	20.35	0.010	2ORDR	1.8	
Hexachlorobutadiene	0.249	0.190	0.010	AVRG	-23.7	<-
2-Methylnaphthalene	0.725	0.690	0.400	AVRG	-4.8	
Acenaphthylene	1.891	1.788	0.900	AVRG	-5.4	
Dimethylphthalate	1.292	1.173	0.010	AVRG	-9.2	
Acenaphthene	1.080	1.053	0.900	AVRG	-2.5	
Dibenzofuran	1.604	1.488	0.800	AVRG	-7.2	
Fluorene	1.330	1.224	0.900	AVRG	-8.0	
Diethylphthalate	1.352	1.095	0.010	AVRG	-19.0	
N-Nitrosodiphenylamine (1)	0.491	0.450	0.010	AVRG	-8.4	
Hexachlorobenzene	0.287	0.232	0.100	AVRG	-19.2	
Pentachlorophenol	0.183	0.181	0.050	AVRG	-1.1	
Phenanthrene	0.991	1.011	0.700	AVRG	2.0	
Anthracene	1.064	1.057	0.700	AVRG	-0.6	
Di-n-butylphthalate	1.259	1.192	0.010	AVRG	-5.3	
Fluoranthene	1.248	1.202	0.600	AVRG	-3.7	
Pyrene	1.172	1.180	0.600	AVRG	0.7	
Butylbenzylphthalate	0.476	0.462	0.010	AVRG	-2.9	
Benzo(a)anthracene	1.137	1.072	0.800	AVRG	-5.7	
Chrysene	1.010	0.976	0.700	AVRG	-3.4	
bis(2-Ethylhexyl)phthalate	0.552	0.537	0.010	AVRG	-2.7	
Di-n-octylphthalate	0.907	0.899	0.010	AVRG	-0.9	
Benzo(a)pyrene	1.141	1.022	0.700	AVRG	-10.4	
Indeno(1,2,3-cd)pyrene	1.294	1.239	0.500	AVRG	-4.2	
Dibenzo(a,h)anthracene	1.027	0.984	0.400	AVRG	-4.2	
Benzo(g,h,i)perylene	1.107	1.060	0.500	AVRG	-4.2	

(1) Cannot be separated from Diphenylamine

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF

## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Instrument ID: NT10

Cont. Calib. Date: 12/05/12

Init. Calib. Date: 11/29/12

Cont. Calib. Time: 1149

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1-methylnaphthalene	0.665	0.617	0.010	AVRG	-7.2
Total Benzofluoranthenes	1.177	1.127	0.010	AVRG	-4.2
2-Fluorophenol	1.280	1.332	0.010	AVRG	4.1
Phenol-d5	1.583	1.684	0.010	AVRG	6.4
2-Chlorophenol-d4	1.370	1.340	0.010	AVRG	-2.2
1,2-Dichlorobenzene-d4	0.999	0.946	0.010	AVRG	-5.3
Nitrobenzene-d5	0.375	0.345	0.010	AVRG	-8.0
2-Fluorobiphenyl	1.416	1.471	0.010	AVRG	3.9
2,4,6-Tribromophenol	0.236	0.225	0.010	AVRG	-4.7
Terphenyl-d14	0.783	0.745	0.010	AVRG	-4.8

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF

## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Instrument ID: NT10

Cont. Calib. Date: 12/06/12

Init. Calib. Date: 11/29/12

Cont. Calib. Time: 1352

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
=====	=====	=====	=====	=====	=====
Phenol	1.668	1.953	0.800	AVRG	17.1
1,3-Dichlorobenzene	1.610	1.445	0.010	AVRG	-10.2
1,4-Dichlorobenzene	1.510	1.511	0.010	AVRG	0.1
1,2-Dichlorobenzene	1.449	1.423	0.010	AVRG	-1.8
Benzyl alcohol	0.788	0.761	0.010	AVRG	-3.4
2-Methylphenol	1.434	1.353	0.700	AVRG	-5.6
Hexachloroethane	0.620	0.553	0.300	AVRG	-10.8
4-Methylphenol	0.850	1.388	0.600	AVRG	63.3 <-
2,4-Dimethylphenol	0.380	0.332	0.200	AVRG	-12.6
1,2,4-Trichlorobenzene	0.222	0.313	0.010	AVRG	41.0 <-
Naphthalene	0.973	0.971	0.700	AVRG	-0.2
Benzoic acid	20.00	15.24	0.010	2ORDR	-23.8 <-
Hexachlorobutadiene	0.249	0.193	0.010	AVRG	-22.5 <-
2-Methylnaphthalene	0.725	0.665	0.400	AVRG	-8.3
Acenaphthylene	1.891	1.787	0.900	AVRG	-5.5
Dimethylphthalate	1.292	1.188	0.010	AVRG	-8.0
Acenaphthene	1.080	1.058	0.900	AVRG	-2.0
Dibenzofuran	1.604	1.492	0.800	AVRG	-7.0
Fluorene	1.330	1.393	0.900	AVRG	4.7
Diethylphthalate	1.352	1.140	0.010	AVRG	-15.7
N-Nitrosodiphenylamine(1)	0.491	0.473	0.010	AVRG	-3.7
Hexachlorobenzene	0.287	0.259	0.100	AVRG	-9.8
Pentachlorophenol	0.183	0.100	0.050	AVRG	-45.4 <-
Phenanthrene	0.991	1.020	0.700	AVRG	2.9
Anthracene	1.064	1.078	0.700	AVRG	1.3
Di-n-butylphthalate	1.259	1.278	0.010	AVRG	1.5
Fluoranthene	1.248	1.276	0.600	AVRG	2.2
Pyrene	1.172	1.176	0.600	AVRG	0.3
Butylbenzylphthalate	0.476	0.477	0.010	AVRG	0.2
Benzo(a)anthracene	1.137	1.062	0.800	AVRG	-6.6
Chrysene	1.010	0.999	0.700	AVRG	-1.1
bis(2-Ethylhexyl)phthalate	0.552	0.541	0.010	AVRG	-2.0
Di-n-octylphthalate	0.907	0.881	0.010	AVRG	-2.9
Benzo(a)pyrene	1.141	1.015	0.700	AVRG	-11.0
Indeno(1,2,3-cd)pyrene	1.294	1.232	0.500	AVRG	-4.8
Dibenzo(a,h)anthracene	1.027	0.983	0.400	AVRG	-4.3
Benzo(g,h,i)perylene	1.107	1.037	0.500	AVRG	-6.3

(1) Cannot be separated from Diphenylamine

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF

## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Instrument ID: NT10

Cont. Calib. Date: 12/06/12

Init. Calib. Date: 11/29/12

Cont. Calib. Time: 1352

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1-methylnaphthalene	0.665	0.604	0.010	AVRG	-9.2
Total Benzofluoranthenes	1.177	1.127	0.010	AVRG	-4.2
2-Fluorophenol	1.280	1.230	0.010	AVRG	-3.9
Phenol-d5	1.583	1.577	0.010	AVRG	-0.4
2-Chlorophenol-d4	1.370	1.334	0.010	AVRG	-2.6
1,2-Dichlorobenzene-d4	0.999	0.911	0.010	AVRG	-8.8
Nitrobenzene-d5	0.375	0.330	0.010	AVRG	-12.0
2-Fluorobiphenyl	1.416	1.441	0.010	AVRG	1.8
2,4,6-Tribromophenol	0.236	0.207	0.010	AVRG	-12.3
Terphenyl-d14	0.783	0.755	0.010	AVRG	-3.6

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Ical Midpoint ID: IC1129A

Ical Date: 11/29/12

Instrument ID: NT10

Cont. Cal Date: 12/04/12

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
ICAL MIDPT	81571	8.94	299399	11.59	178564	15.48
UPPER LIMIT	163142		598798		357128	
LOWER LIMIT	40786		149700		89282	
CCAL	92550	8.83	353076	11.48	236140	15.36
UPPER LIMIT		9.33		11.98		15.86
LOWER LIMIT		8.33		10.98		14.86
01 VR58MBS1	118082	8.84	440128	11.48	225120	15.36
02 VR58LCSS1	97255	8.83	356178	11.48	240244	15.36
03 SG-10-S-E-12	110978	8.83	396195	11.48	98352	15.36
04 SG-11-S-E-12	30871*	8.84	103185*	11.49	93049	15.36
05 SG-12-S-E-12	49454	8.84	165461	11.49	110902	15.36
06 SG-13-S-E-12	47395	8.84	183094	11.49	101036	15.37
07 SG-13-S-E-DU	82331	8.85	318197	11.49	179746	15.37
08 SG-14-S-E-12	112975	8.85	420287	11.50	236184	15.37
09 SG-15-S-E-12	105532	8.84	413324	11.49	253453	15.36
10 SG-16-S-E-12	109336	8.84	390688	11.49	248655	15.36
11 SG-17-S-E-12	107154	8.84	414398	11.49	254478	15.36
12 SG-01-S-C-12	106697	8.84	386086	11.49	233272	15.36
13 SG-01-S-C-12	106105	8.84	404462	11.48	242358	15.36
14 SG-01-S-C-12	112090	8.84	420074	11.49	252286	15.36
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.



## SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Ical Midpoint ID: IC1129A

Ical Date: 11/29/12

Instrument ID: NT10

Cont. Cal Date: 12/04/12

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
ICAL MIDPT	305410	18.75	323853	23.82	305316	26.26
UPPER LIMIT	610820		647706		610632	
LOWER LIMIT	152705		161926		152658	
CCAL	351429	18.62	392831	23.70	357952	26.09
UPPER LIMIT		19.12		24.20		26.59
LOWER LIMIT		18.12		23.20		25.59
01 VR58MBS1	358767	18.62	338529	23.69	306926	26.09
02 VR58LCSS1	353506	18.62	397203	23.69	361894	26.09
03 SG-10-S-E-12	357496	18.62	75458*	23.70	76284*	26.11
04 SG-11-S-E-12	413034	18.63	180448	23.72	194634	26.14
05 SG-12-S-E-12	412878	18.64	180022	23.72	203850	26.13
06 SG-13-S-E-12	303971	18.64	178707	23.72	226693	26.13
07 SG-13-S-E-DU	326351	18.64	285432	23.72	309278	26.14
08 SG-14-S-E-12	382502	18.65	413754	23.73	404612	26.13
09 SG-15-S-E-12	407801	18.63	388205	23.72	377322	26.11
10 SG-16-S-E-12	419457	18.62	437658	23.71	407958	26.10
11 SG-17-S-E-12	429134	18.62	454337	23.72	417440	26.12
12 SG-01-S-C-12	388754	18.62	438726	23.71	393922	26.10
13 SG-01-S-C-12	410891	18.62	466399	23.71	420784	26.10
14 SG-01-S-C-12	422319	18.62	478463	23.71	437316	26.10
15						
16						
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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.

8B  
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC  
ARI Job No: VR58  
Ical Midpoint ID: IC1129A  
Instrument ID: NT10

Client: ANCHOR QEA, LLC.  
Project: CITY OF KENMORE SEDIMENTS  
Ical Date: 11/29/12  
Cont. Cal Date: 12/04/12

	IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
ICAL MIDPT	427845	24.92				
UPPER LIMIT	855690					
LOWER LIMIT	213922					
CCAL	528229	24.80				
UPPER LIMIT		25.30				
LOWER LIMIT		24.30				
01 VR58MBS1	444475	24.80				
02 VR58LCSS1	546163	24.80				
03 SG-10-S-E-12	121794*	24.81				
04 SG-11-S-E-12	512568	24.83				
05 SG-12-S-E-12	456836	24.82				
06 SG-13-S-E-12	469025	24.82				
07 SG-13-S-E-DU	554848	24.82				
08 SG-14-S-E-12	636914	24.82				
09 SG-15-S-E-12	610919	24.81				
10 SG-16-S-E-12	641034	24.80				
11 SG-17-S-E-12	654074	24.81				
12 SG-01-S-C-12	616730	24.80				
13 SG-01-S-C-12	657495	24.80				
14 SG-01-S-C-12	688819	24.80				
15						
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22						
23						
24						
25						

IS7 = Di-n-octylphthalate-d4

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

\* Values outside of QC limits.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Ical Midpoint ID: IC1129A

Ical Date: 11/29/12

Instrument ID: NT10

Cont. Cal Date: 12/05/12

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	81571	8.94	299399	11.59	178564	15.48
UPPER LIMIT	163142		598798		357128	
LOWER LIMIT	40786		149700		89282	
=====	=====	=====	=====	=====	=====	=====
CCAL	103035	8.81	392234	11.47	228483	15.37
UPPER LIMIT		9.31		11.97		15.87
LOWER LIMIT		8.31		10.97		14.87
01 SG-10-S-E-12	75190	8.79	284847	11.44	198575	15.33
02 SG-11-S-E-12	74673	8.79	303062	11.44	211481	15.33
03						
04						
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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.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Ical Midpoint ID: IC1129A

Ical Date: 11/29/12

Instrument ID: NT10

Cont. Cal Date: 12/05/12

	IS4 (PHN)		IS5 (CRY)		IS6 (PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	305410	18.75	323853	23.82	305316	26.26
UPPER LIMIT	610820		647706		610632	
LOWER LIMIT	152705		161926		152658	
=====	=====	=====	=====	=====	=====	=====
CCAL	397408	18.66	420761	23.77	411812	26.21
UPPER LIMIT		19.16		24.27		26.71
LOWER LIMIT		18.16		23.27		25.71
01 SG-10-S-E-12	394579	18.60	414183	23.73	386803	26.16
02 SG-11-S-E-12	387113	18.61	400002	23.73	365130	26.16
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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.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Ical Midpoint ID: IC1129A

Ical Date: 11/29/12

Instrument ID: NT10

Cont. Cal Date: 12/05/12

	IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	427845	24.92				
UPPER LIMIT	855690					
LOWER LIMIT	213922					
=====	=====	=====	=====	=====	=====	=====
CCAL	547636	24.90				
UPPER LIMIT		25.40				
LOWER LIMIT		24.40				
01 SG-10-S-E-12	545234	24.84				
02 SG-11-S-E-12	529472	24.85				
03						
04						
05						
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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.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Ical Midpoint ID: IC1129A

Ical Date: 11/29/12

Instrument ID: NT10

Cont. Cal Date: 12/06/12

	IS1 (DCB) AREA #	RT #	IS2 (NPT) AREA #	RT #	IS3 (ANT) AREA #	RT #
ICAL MIDPT	81571	8.94	299399	11.59	178564	15.48
UPPER LIMIT	163142		598798		357128	
LOWER LIMIT	40786		149700		89282	
CCAL	81662	8.59	308492	11.23	179156	15.10
UPPER LIMIT		9.09		11.73		15.60
LOWER LIMIT		8.09		10.73		14.60
01 SG-14-S-E-12	77778	8.59	304964	11.23	171409	15.10
02						
03						
04						
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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.

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Ical Midpoint ID: IC1129A

Ical Date: 11/29/12

Instrument ID: NT10

Cont. Cal Date: 12/06/12

	IS4 (PHN) AREA #	RT #	IS5 (CRY) AREA #	RT #	IS6 (PRY) AREA #	RT #
ICAL MIDPT	305410	18.75	323853	23.82	305316	26.26
UPPER LIMIT	610820		647706		610632	
LOWER LIMIT	152705		161926		152658	
CCAL	286213	18.36	318563	23.50	311246	25.86
UPPER LIMIT		18.86		24.00		26.36
LOWER LIMIT		17.86		23.00		25.36
01 SG-14-S-E-12	281319	18.36	299428	23.50	302828	25.86
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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.

## SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDIMENTS

Ical Midpoint ID: IC1129A

Ical Date: 11/29/12

Instrument ID: NT10

Cont. Cal Date: 12/06/12

	IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	427845	24.92				
UPPER LIMIT	855690					
LOWER LIMIT	213922					
=====	=====	=====	=====	=====	=====	=====
CCAL	426034	24.63				
UPPER LIMIT		25.13				
LOWER LIMIT		24.13				
01 SG-14-S-E-12	404005	24.63				
02						
03						
04						
05						
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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: VR58**

**ORGANICS ANALYSIS DATA SHEET**  
**PNAs by SIM SW8270D-SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-10-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58A  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 13:12  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.2 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 40.6 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.6	4.9	18
91-57-6	2-Methylnaphthalene	1.5	4.9	12
90-12-0	1-Methylnaphthalene	1.7	4.9	5.5
208-96-8	Acenaphthylene	1.2	4.9	3.5 J
83-32-9	Acenaphthene	1.3	4.9	14
86-73-7	Fluorene	1.3	4.9	28
85-01-8	Phenanthrene	1.9	4.9	260
120-12-7	Anthracene	1.4	4.9	57
206-44-0	Fluoranthene	1.7	4.9	320
129-00-0	Pyrene	2.2	4.9	350
56-55-3	Benzo (a) anthracene	1.6	4.9	200
218-01-9	Chrysene	1.8	4.9	290
205-99-2	Benzo (b) fluoranthene	1.9	4.9	180
207-08-9	Benzo (k) fluoranthene	2.0	4.9	120
50-32-8	Benzo (a) pyrene	1.7	4.9	190
193-39-5	Indeno (1,2,3-cd) pyrene	3.4	4.9	84
53-70-3	Dibenz (a,h) anthracene	2.3	4.9	28
191-24-2	Benzo (g,h,i) perylene	3.0	4.9	89
132-64-9	Dibenzofuran	1.5	4.9	19
TOTBFA	Total Benzofluoranthenes	1.8	4.9	400

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 50.0%  
 d14-Dibenzo(a,h)anthracen 57.7%

ORGANICS ANALYSIS DATA SHEET  
 PNAs by SIM SW8270D-SIM GC/MS  
 Extraction Method: SW3546  
 Page 1 of 1



Sample ID: SG-11-S-E-121107  
 SAMPLE

Lab Sample ID: VR58B  
 LIMS ID: 12-22330  
 Matrix: Sediment  
 Data Release Authorized: *B*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 13:42  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.2 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 3.00  
 Percent Moisture: 80.1 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	7.8	15	38
91-57-6	2-Methylnaphthalene	4.5	15	47
90-12-0	1-Methylnaphthalene	5.0	15	12 J
208-96-8	Acenaphthylene	3.7	15	13 J
83-32-9	Acenaphthene	3.9	15	32
86-73-7	Fluorene	3.8	15	38
85-01-8	Phenanthrene	5.8	15	210
120-12-7	Anthracene	4.3	15	64
206-44-0	Fluoranthene	5.2	15	430
129-00-0	Pyrene	6.6	15	470
56-55-3	Benzo (a) anthracene	4.7	15	200
218-01-9	Chrysene	5.6	15	370
205-99-2	Benzo (b) fluoranthene	5.6	15	280
207-08-9	Benzo (k) fluoranthene	6.1	15	170
50-32-8	Benzo (a) pyrene	5.2	15	210
193-39-5	Indeno (1,2,3-cd) pyrene	10	15	83
53-70-3	Dibenz (a,h) anthracene	7.0	15	29
191-24-2	Benzo (g,h,i) perylene	9.0	15	100
132-64-9	Dibenzofuran	4.5	15	24
TOTBFA	Total Benzofluoranthenes	5.5	15	570

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 63.0%  
 d14-Dibenzo(a,h)anthracen 55.0%

ORGANICS ANALYSIS DATA SHEET  
 PNAs by SIM SW8270D-SIM GC/MS  
 Extraction Method: SW3546  
 Page 1 of 1



Sample ID: SG-12-S-E-121107  
 SAMPLE

Lab Sample ID: VR58C  
 LIMS ID: 12-22331  
 Matrix: Sediment  
 Data Release Authorized:  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 14:12  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.3 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 70.0 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.6	4.9	18
91-57-6	2-Methylnaphthalene	1.5	4.9	13
90-12-0	1-Methylnaphthalene	1.7	4.9	5.2
208-96-8	Acenaphthylene	1.2	4.9	5.7
83-32-9	Acenaphthene	1.3	4.9	17
86-73-7	Fluorene	1.3	4.9	22
85-01-8	Phenanthrene	1.9	4.9	120
120-12-7	Anthracene	1.4	4.9	30
206-44-0	Fluoranthene	1.7	4.9	150
129-00-0	Pyrene	2.2	4.9	180
56-55-3	Benzo (a) anthracene	1.6	4.9	110
218-01-9	Chrysene	1.8	4.9	190
205-99-2	Benzo (b) fluoranthene	1.9	4.9	140
207-08-9	Benzo (k) fluoranthene	2.0	4.9	80
50-32-8	Benzo (a) pyrene	1.7	4.9	110
193-39-5	Indeno (1,2,3-cd) pyrene	3.4	4.9	43
53-70-3	Dibenz (a,h) anthracene	2.3	4.9	14
191-24-2	Benzo (g,h,i) perylene	3.0	4.9	51
132-64-9	Dibenzofuran	1.5	4.9	13
TOTBFA	Total Benzofluoranthenes	1.8	4.9	290

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 49.7%  
 d14-Dibenzo(a,h)anthracen 44.3%

**ORGANICS ANALYSIS DATA SHEET**  
**PNAs by SIM SW8270D-SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-13-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58D  
 LIMS ID: 12-22332  
 Matrix: Sediment  
 Data Release Authorized: *B*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 14:42  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.1 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 76.0 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.6	5.0	18
91-57-6	2-Methylnaphthalene	1.5	5.0	14
90-12-0	1-Methylnaphthalene	1.7	5.0	5.6
208-96-8	Acenaphthylene	1.2	5.0	6.3
83-32-9	Acenaphthene	1.3	5.0	12
86-73-7	Fluorene	1.3	5.0	17
85-01-8	Phenanthrene	2.0	5.0	96
120-12-7	Anthracene	1.4	5.0	21
206-44-0	Fluoranthene	1.8	5.0	140
129-00-0	Pyrene	2.2	5.0	230
56-55-3	Benzo (a) anthracene	1.6	5.0	110
218-01-9	Chrysene	1.9	5.0	180
205-99-2	Benzo (b) fluoranthene	1.9	5.0	160
207-08-9	Benzo (k) fluoranthene	2.0	5.0	100
50-32-8	Benzo (a) pyrene	1.7	5.0	120
193-39-5	Indeno (1,2,3-cd) pyrene	3.4	5.0	54
53-70-3	Dibenz (a, h) anthracene	2.4	5.0	18
191-24-2	Benzo (g, h, i) perylene	3.0	5.0	67
132-64-9	Dibenzofuran	1.5	5.0	12
TOTBFA	Total Benzofluoranthenes	1.8	5.0	340

Reported in µg/kg (ppb)


**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 59.0%  
 d14-Dibenzo(a,h)anthracen 57.3%

ORGANICS ANALYSIS DATA SHEET  
 PNAs by SIM SW8270D-SIM GC/MS  
 Extraction Method: SW3546  
 Page 1 of 1



Sample ID: SG-13-S-E-dup-121107  
 SAMPLE

Lab Sample ID: VR58E  
 LIMS ID: 12-22333  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 15:12  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.1 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 76.0 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.6	5.0	21
91-57-6	2-Methylnaphthalene	1.5	5.0	19
90-12-0	1-Methylnaphthalene	1.7	5.0	7.2
208-96-8	Acenaphthylene	1.2	5.0	7.5
83-32-9	Acenaphthene	1.3	5.0	16
86-73-7	Fluorene	1.3	5.0	21
85-01-8	Phenanthrene	2.0	5.0	110
120-12-7	Anthracene	1.4	5.0	27
206-44-0	Fluoranthene	1.8	5.0	160
129-00-0	Pyrene	2.2	5.0	230
56-55-3	Benzo (a) anthracene	1.6	5.0	100
218-01-9	Chrysene	1.9	5.0	170
205-99-2	Benzo (b) fluoranthene	1.9	5.0	140
207-08-9	Benzo (k) fluoranthene	2.0	5.0	88
50-32-8	Benzo (a) pyrene	1.7	5.0	100
193-39-5	Indeno (1,2,3-cd) pyrene	3.4	5.0	49
53-70-3	Dibenz (a,h) anthracene	2.4	5.0	16
191-24-2	Benzo (g,h,i) perylene	3.0	5.0	56
132-64-9	Dibenzofuran	1.5	5.0	17
TOTBFA	Total Benzofluoranthenes	1.8	5.0	300

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 55.3%  
 d14-Dibenzo(a,h)anthracen 49.7%

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-14-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58F  
 LIMS ID: 12-22334  
 Matrix: Sediment  
 Data Release Authorized: *AB*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 15:42  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.4 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 52.7 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.5	4.8	110
91-57-6	2-Methylnaphthalene	1.5	4.8	51
90-12-0	1-Methylnaphthalene	1.6	4.8	28
208-96-8	Acenaphthylene	1.2	4.8	16
83-32-9	Acenaphthene	1.3	4.8	120
86-73-7	Fluorene	1.2	4.8	150
85-01-8	Phenanthrene	1.9	4.8	630 E
120-12-7	Anthracene	1.4	4.8	140
206-44-0	Fluoranthene	1.7	4.8	870 E
129-00-0	Pyrene	2.1	4.8	780 E
56-55-3	Benzo (a) anthracene	1.5	4.8	350
218-01-9	Chrysene	1.8	4.8	440
205-99-2	Benzo (b) fluoranthene	1.8	4.8	360
207-08-9	Benzo (k) fluoranthene	2.0	4.8	210
50-32-8	Benzo (a) pyrene	1.7	4.8	250
193-39-5	Indeno (1,2,3-cd) pyrene	3.3	4.8	77
53-70-3	Dibenz (a,h) anthracene	2.3	4.8	28
191-24-2	Benzo (g,h,i) perylene	2.9	4.8	84
132-64-9	Dibenzofuran	1.4	4.8	77
TOTBFA	Total Benzofluoranthenes	1.8	4.8	720

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 50.3%  
 d14-Dibenzo(a,h)anthracen 50.7%

ORGANICS ANALYSIS DATA SHEET  
 PNAs by SIM SW8270D-SIM GC/MS  
 Extraction Method: SW3546  
 Page 1 of 1



Sample ID: SG-14-S-E-121107  
 DILUTION

Lab Sample ID: VR58F  
 LIMS ID: 12-22334  
 Matrix: Sediment  
 Data Release Authorized:  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 19:11  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.4 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 3.00  
 Percent Moisture: 52.7 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	7.6	14	110
91-57-6	2-Methylnaphthalene	4.4	14	54
90-12-0	1-Methylnaphthalene	4.9	14	31
208-96-8	Acenaphthylene	3.6	14	17
83-32-9	Acenaphthene	3.8	14	120
86-73-7	Fluorene	3.7	14	160
85-01-8	Phenanthrene	5.7	14	680
120-12-7	Anthracene	4.2	14	150
206-44-0	Fluoranthene	5.1	14	1,000
129-00-0	Pyrene	6.4	14	850
56-55-3	Benzo (a) anthracene	4.6	14	340
218-01-9	Chrysene	5.4	14	430
205-99-2	Benzo (b) fluoranthene	5.5	14	370
207-08-9	Benzo (k) fluoranthene	5.9	14	220
50-32-8	Benzo (a) pyrene	5.0	14	250
193-39-5	Indeno (1,2,3-cd) pyrene	10	14	68
53-70-3	Dibenz (a,h) anthracene	6.8	14	25
191-24-2	Benzo (g,h,i) perylene	8.8	14	81
132-64-9	Dibenzofuran	4.3	14	82
TOTBFA	Total Benzofluoranthenes	5.3	14	750

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 53.0%  
 d14-Dibenzo(a,h)anthracene 45.0%



**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-15-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58G  
 LIMS ID: 12-22335  
 Matrix: Sediment  
 Data Release Authorized: *AS*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 16:12  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.7 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 24.7 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.5	4.7	< 4.7 U
91-57-6	2-Methylnaphthalene	1.4	4.7	< 4.7 U
90-12-0	1-Methylnaphthalene	1.6	4.7	< 4.7 U
208-96-8	Acenaphthylene	1.2	4.7	< 4.7 U
<b>83-32-9</b>	<b>Acenaphthene</b>	<b>1.2</b>	<b>4.7</b>	<b>3.8 J</b>
<b>86-73-7</b>	<b>Fluorene</b>	<b>1.2</b>	<b>4.7</b>	<b>5.5</b>
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>1.9</b>	<b>4.7</b>	<b>6.8</b>
120-12-7	Anthracene	1.4	4.7	< 4.7 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>1.7</b>	<b>4.7</b>	<b>11</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>2.1</b>	<b>4.7</b>	<b>10</b>
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>1.5</b>	<b>4.7</b>	<b>4.6 J</b>
<b>218-01-9</b>	<b>Chrysene</b>	<b>1.8</b>	<b>4.7</b>	<b>4.9</b>
<b>205-99-2</b>	<b>Benzo (b) fluoranthene</b>	<b>1.8</b>	<b>4.7</b>	<b>6.8</b>
<b>207-08-9</b>	<b>Benzo (k) fluoranthene</b>	<b>1.9</b>	<b>4.7</b>	<b>2.7 J</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>1.6</b>	<b>4.7</b>	<b>4.1 J</b>
193-39-5	Indeno(1,2,3-cd)pyrene	3.3	4.7	< 4.7 U
53-70-3	Dibenz(a,h)anthracene	2.2	4.7	< 4.7 U
191-24-2	Benzo(g,h,i)perylene	2.9	4.7	< 4.7 U
<b>132-64-9</b>	<b>Dibenzofuran</b>	<b>1.4</b>	<b>4.7</b>	<b>4.7</b>
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>1.7</b>	<b>4.7</b>	<b>12</b>

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 48.7%  
 d14-Dibenzo(a,h)anthracen 58.0%

ORGANICS ANALYSIS DATA SHEET  
 PNAs by SIM SW8270D-SIM GC/MS  
 Extraction Method: SW3546  
 Page 1 of 1



Sample ID: SG-16-S-E-121107  
 SAMPLE

Lab Sample ID: VR58H  
 LIMS ID: 12-22336  
 Matrix: Sediment  
 Data Release Authorized: *B*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 16:42  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.3 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 21.0 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.5	4.8	< 4.8 U
91-57-6	2-Methylnaphthalene	1.5	4.8	< 4.8 U
90-12-0	1-Methylnaphthalene	1.7	4.8	< 4.8 U
208-96-8	Acenaphthylene	1.2	4.8	< 4.8 U
83-32-9	Acenaphthene	1.3	4.8	< 4.8 U
86-73-7	Fluorene	1.2	4.8	< 4.8 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>1.9</b>	<b>4.8</b>	<b>2.6 J</b>
120-12-7	Anthracene	1.4	4.8	< 4.8 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>1.7</b>	<b>4.8</b>	<b>5.1</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>2.2</b>	<b>4.8</b>	<b>4.5 J</b>
56-55-3	Benzo(a)anthracene	1.6	4.8	< 4.8 U
<b>218-01-9</b>	<b>Chrysene</b>	<b>1.8</b>	<b>4.8</b>	<b>3.0 J</b>
<b>205-99-2</b>	<b>Benzo(b)fluoranthene</b>	<b>1.8</b>	<b>4.8</b>	<b>4.0 J</b>
<b>207-08-9</b>	<b>Benzo(k)fluoranthene</b>	<b>2.0</b>	<b>4.8</b>	<b>2.5 J</b>
<b>50-32-8</b>	<b>Benzo(a)pyrene</b>	<b>1.7</b>	<b>4.8</b>	<b>2.9 J</b>
193-39-5	Indeno(1,2,3-cd)pyrene	3.4	4.8	< 4.8 U
53-70-3	Dibenz(a,h)anthracene	2.3	4.8	< 4.8 U
191-24-2	Benzo(g,h,i)perylene	3.0	4.8	< 4.8 U
132-64-9	Dibenzofuran	1.5	4.8	< 4.8 U
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>1.8</b>	<b>4.8</b>	<b>8.2</b>

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 51.0%  
 d14-Dibenzo(a,h)anthracene 57.0%

**ORGANICS ANALYSIS DATA SHEET**  
**PNAs by SIM SW8270D-SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-17-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58I  
 LIMS ID: 12-22337  
 Matrix: Sediment  
 Data Release Authorized: *B*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 18:11  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.3 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 53.5 %


CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.6	4.9	4.0 J
91-57-6	2-Methylnaphthalene	1.5	4.9	7.4
90-12-0	1-Methylnaphthalene	1.7	4.9	< 4.9 U
208-96-8	Acenaphthylene	1.2	4.9	< 4.9 U
83-32-9	Acenaphthene	1.3	4.9	< 4.9 U
86-73-7	Fluorene	1.3	4.9	2.5 J
85-01-8	Phenanthrene	1.9	4.9	19
120-12-7	Anthracene	1.4	4.9	2.8 J
206-44-0	Fluoranthene	1.7	4.9	37
129-00-0	Pyrene	2.2	4.9	39
56-55-3	Benzo (a) anthracene	1.6	4.9	12
218-01-9	Chrysene	1.8	4.9	25
205-99-2	Benzo (b) fluoranthene	1.9	4.9	23
207-08-9	Benzo (k) fluoranthene	2.0	4.9	12
50-32-8	Benzo (a) pyrene	1.7	4.9	< 4.9 U
193-39-5	Indeno (1,2,3-cd) pyrene	3.4	4.9	7.4
53-70-3	Dibenz (a,h) anthracene	2.3	4.9	< 4.9 U
191-24-2	Benzo (g,h,i) perylene	3.0	4.9	9.0
132-64-9	Dibenzofuran	1.5	4.9	< 4.9 U
TOTBFA	Total Benzofluoranthenes	1.8	4.9	45

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 50.7%  
 d14-Dibenzo(a,h)anthracene 46.7%

Sample ID: SG-01-S-C-121107  
 SAMPLE

Lab Sample ID: VR58J  
 LIMS ID: 12-22338  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 18:41  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.5 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 20.5 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.5	4.8	< 4.8 U
91-57-6	2-Methylnaphthalene	1.5	4.8	< 4.8 U
90-12-0	1-Methylnaphthalene	1.6	4.8	< 4.8 U
208-96-8	Acenaphthylene	1.2	4.8	< 4.8 U
83-32-9	Acenaphthene	1.3	4.8	< 4.8 U
86-73-7	Fluorene	1.2	4.8	< 4.8 U
<b>85-01-8</b>	<b>Phenanthrene</b>	<b>1.9</b>	<b>4.8</b>	<b>6.7</b>
120-12-7	Anthracene	1.4	4.8	< 4.8 U
<b>206-44-0</b>	<b>Fluoranthene</b>	<b>1.7</b>	<b>4.8</b>	<b>18</b>
<b>129-00-0</b>	<b>Pyrene</b>	<b>2.1</b>	<b>4.8</b>	<b>16</b>
<b>56-55-3</b>	<b>Benzo (a) anthracene</b>	<b>1.5</b>	<b>4.8</b>	<b>6.1</b>
<b>218-01-9</b>	<b>Chrysene</b>	<b>1.8</b>	<b>4.8</b>	<b>9.1</b>
<b>205-99-2</b>	<b>Benzo (b) fluoranthene</b>	<b>1.8</b>	<b>4.8</b>	<b>9.1</b>
<b>207-08-9</b>	<b>Benzo (k) fluoranthene</b>	<b>2.0</b>	<b>4.8</b>	<b>5.1</b>
<b>50-32-8</b>	<b>Benzo (a) pyrene</b>	<b>1.7</b>	<b>4.8</b>	<b>7.2</b>
<b>193-39-5</b>	<b>Indeno (1,2,3-cd) pyrene</b>	<b>3.3</b>	<b>4.8</b>	<b>3.6 J</b>
53-70-3	Dibenz(a,h)anthracene	2.3	4.8	< 4.8 U
<b>191-24-2</b>	<b>Benzo (g,h,i) perylene</b>	<b>2.9</b>	<b>4.8</b>	<b>3.2 J</b>
132-64-9	Dibenzofuran	1.4	4.8	< 4.8 U
<b>TOTBFA</b>	<b>Total Benzofluoranthenes</b>	<b>1.8</b>	<b>4.8</b>	<b>18</b>

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 49.3%  
 d14-Dibenzo(a,h)anthracene 49.3%

**SIM SW8270 SURROGATE RECOVERY SUMMARY**

Matrix: Sediment

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01

<u>Client ID</u>	<u>MNP</u>	<u>DBA</u>	<u>TOT OUT</u>
SG-10-S-E-121107	50.0%	57.7%	0
SG-11-S-E-121107	63.0%	55.0%	0
SG-12-S-E-121107	49.7%	44.3%	0
SG-13-S-E-121107	59.0%	57.3%	0
SG-13-S-E-dup-121107	55.3%	49.7%	0
SG-14-S-E-121107	50.3%	50.7%	0
SG-14-S-E-121107 DL	53.0%	45.0%	0
SG-15-S-E-121107	48.7%	58.0%	0
MB-111512	51.3%	103%	0
LCS-111512	51.7%	104%	0
SG-16-S-E-121107	51.0%	57.0%	0
SG-16-S-E-121107 MS	46.0%	52.7%	0
SG-16-S-E-121107 MSD	49.0%	53.3%	0
SG-17-S-E-121107	50.7%	46.7%	0
SG-01-S-C-121107	49.3%	49.3%	0

**LCS/MB LIMITS      QC LIMITS**

(MNP) = d10-2-Methylnaphthalene      (35-100)      (34-100)  
(DBA) = d14-Dibenzo(a,h)anthracene      (37-120)      (10-117)

Prep Method: SW3546  
Log Number Range: 12-22329 to 12-22338

**ORGANICS ANALYSIS DATA SHEET**

**PNA's by SW8270D-SIM GC/MS**

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**Sample ID: SG-16-S-E-121107**

**MATRIX SPIKE**

Lab Sample ID: VR58H

LIMS ID: 12-22336

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

Event: 120891-01.01

Date Sampled: 11/07/12

Date Received: 11/08/12

Date Extracted MS/MSD: 11/15/12

Sample Amount MS: 10.40 g-dry-wt

MSD: 10.33 g-dry-wt

Date Analyzed MS: 11/21/12 17:12

Final Extract Volume MS: 0.50 mL

MSD: 11/21/12 17:41

MSD: 0.50 mL

Instrument/Analyst MS: NT11/JZ

Dilution Factor MS: 1.00

MSD: NT11/JZ

MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Naphthalene	< 4.8 U	70.9	144	49.2%	78.2	145	53.9%	9.8%
2-Methylnaphthalene	< 4.8 U	73.6	144	51.1%	79.3	145	54.7%	7.5%
1-Methylnaphthalene	< 4.8 U	78.7	144	54.7%	86.9	145	59.9%	9.9%
Acenaphthylene	< 4.8 U	89.0	144	61.8%	94.9	145	65.4%	6.4%
Acenaphthene	< 4.8 U	83.4	144	57.9%	92.4	145	63.7%	10.2%
Fluorene	< 4.8 U	97.0	144	67.4%	105	145	72.4%	7.9%
Phenanthrene	2.6 J	109	144	73.9%	114	145	76.8%	4.5%
Anthracene	< 4.8 U	104	144	72.2%	121	145	83.4%	15.1%
Fluoranthene	5.1	117	144	77.7%	125	145	82.7%	6.6%
Pyrene	4.5 J	120	144	80.2%	128	145	85.2%	6.5%
Benzo(a)anthracene	< 4.8 U	114	144	79.2%	121	145	83.4%	6.0%
Chrysene	3.0 J	113	144	76.4%	123	145	82.8%	8.5%
Benzo(b)fluoranthene	4.0 J	138	144	93.1%	150	145	101%	8.3%
Benzo(k)fluoranthene	2.5 J	158	144	108%	171	145	116%	7.9%
Benzo(a)pyrene	2.9 J	111	144	75.1%	117	145	78.7%	5.3%
Indeno(1,2,3-cd)pyrene	< 4.8 U	67.6	144	46.9%	69.1	145	47.7%	2.2%
Dibenz(a,h)anthracene	< 4.8 U	69.1	144	48.0%	72.3	145	49.9%	4.5%
Benzo(g,h,i)perylene	< 4.8 U	59.6	144	41.4%	64.0	145	44.1%	7.1%
Dibenzofuran	< 4.8 U	82.0	144	56.9%	88.3	145	60.9%	7.4%
Total Benzofluoranthenes	8.2	419	433	94.9%	456	436	103%	8.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
**Extraction Method: SW3546**  
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**Sample ID: SG-16-S-E-121107**  
**MATRIX SPIKE**

Lab Sample ID: VR58H  
 LIMS ID: 12-22336  
 Matrix: Sediment  
 Data Release Authorized: *AS*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 17:12  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.4 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 21.0 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.5	4.8	---
91-57-6	2-Methylnaphthalene	1.5	4.8	---
90-12-0	1-Methylnaphthalene	1.6	4.8	---
208-96-8	Acenaphthylene	1.2	4.8	---
83-32-9	Acenaphthene	1.3	4.8	---
86-73-7	Fluorene	1.2	4.8	---
85-01-8	Phenanthrene	1.9	4.8	---
120-12-7	Anthracene	1.4	4.8	---
206-44-0	Fluoranthene	1.7	4.8	---
129-00-0	Pyrene	2.1	4.8	---
56-55-3	Benzo(a)anthracene	1.5	4.8	---
218-01-9	Chrysene	1.8	4.8	---
205-99-2	Benzo(b)fluoranthene	1.8	4.8	---
207-08-9	Benzo(k)fluoranthene	2.0	4.8	---
50-32-8	Benzo(a)pyrene	1.7	4.8	---
193-39-5	Indeno(1,2,3-cd)pyrene	3.3	4.8	---
53-70-3	Dibenz(a,h)anthracene	2.3	4.8	---
191-24-2	Benzo(g,h,i)perylene	2.9	4.8	---
132-64-9	Dibenzofuran	1.5	4.8	---
TOTBFA	Total Benzofluoranthenes	1.8	4.8	---

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 46.0%  
 d14-Dibenzo(a,h)anthracene 52.7%

ORGANICS ANALYSIS DATA SHEET  
 PNAs by SIM SW8270D-SIM GC/MS  
 Extraction Method: SW3546  
 Page 1 of 1



Sample ID: SG-16-S-E-121107  
 MATRIX SPIKE DUP

Lab Sample ID: VR58H  
 LIMS ID: 12-22336  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 17:41  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.3 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: 21.0 %

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.5	4.8	---
91-57-6	2-Methylnaphthalene	1.5	4.8	---
90-12-0	1-Methylnaphthalene	1.7	4.8	---
208-96-8	Acenaphthylene	1.2	4.8	---
83-32-9	Acenaphthene	1.3	4.8	---
86-73-7	Fluorene	1.2	4.8	---
85-01-8	Phenanthrene	1.9	4.8	---
120-12-7	Anthracene	1.4	4.8	---
206-44-0	Fluoranthene	1.7	4.8	---
129-00-0	Pyrene	2.1	4.8	---
56-55-3	Benzo(a)anthracene	1.5	4.8	---
218-01-9	Chrysene	1.8	4.8	---
205-99-2	Benzo(b)fluoranthene	1.8	4.8	---
207-08-9	Benzo(k)fluoranthene	2.0	4.8	---
50-32-8	Benzo(a)pyrene	1.7	4.8	---
193-39-5	Indeno(1,2,3-cd)pyrene	3.4	4.8	---
53-70-3	Dibenz(a,h)anthracene	2.3	4.8	---
191-24-2	Benzo(g,h,i)perylene	3.0	4.8	---
132-64-9	Dibenzofuran	1.5	4.8	---
TOTBFA	Total Benzofluoranthenes	1.8	4.8	---

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 49.0%  
 d14-Dibenzo(a,h)anthracen 53.3%



**ORGANICS ANALYSIS DATA SHEET**

**PNAs by SW8270D-SIM GC/MS**

Page 1 of 1

**Sample ID: LCS-111512**

**LAB CONTROL SAMPLE**

Lab Sample ID: LCS-111512

LIMS ID: 12-22336

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

Event: 120891-01.01

Date Sampled: NA

Date Received: NA

Date Extracted: 11/15/12

Date Analyzed LCS: 11/21/12 12:42

Instrument/Analyst LCS: NT11/JZ

Sample Amount LCS: 10.00 g-dry-wt

Final Extract Volume LCS: 0.50 mL

Dilution Factor LCS: 1.00

Analyte	LCS	Spike Added	Recovery
Naphthalene	83.4	150	55.6%
2-Methylnaphthalene	83.1	150	55.4%
1-Methylnaphthalene	88.7	150	59.1%
Acenaphthylene	89.1	150	59.4%
Acenaphthene	89.3	150	59.5%
Fluorene	99.6	150	66.4%
Phenanthrene	106	150	70.7%
Anthracene	116	150	77.3%
Fluoranthene	124	150	82.7%
Pyrene	122	150	81.3%
Benzo(a)anthracene	125	150	83.3%
Chrysene	127	150	84.7%
Benzo(b)fluoranthene	123	150	82.0%
Benzo(k)fluoranthene	145	150	96.7%
Benzo(a)pyrene	115	150	76.7%
Indeno(1,2,3-cd)pyrene	140	150	93.3%
Dibenz(a,h)anthracene	143	150	95.3%
Benzo(g,h,i)perylene	142	150	94.7%
Dibenzofuran	83.8	150	55.9%
Total Benzofluoranthenes	387	450	86.0%

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene	51.7%
d14-Dibenzo(a,h)anthracen	104%

4B  
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

VR58MBS1
----------

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDI

Lab File ID: 11211203

Date Extracted: 11/15/12

Instrument ID: NT11

Date Analyzed: 11/21/12

Matrix: SOLID

Time Analyzed: 1212

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	=====	=====	=====	=====
01	VR58LCSS1	VR58LCSS1	11211204	11/21/12
02	SG-10-S-E-121107	VR58A	11211205	11/21/12
03	SG-11-S-E-121107	VR58B	11211206	11/21/12
04	SG-12-S-E-121107	VR58C	11211207	11/21/12
05	SG-13-S-E-121107	VR58D	11211208	11/21/12
06	SG-13-S-E-DUP-12	VR58E	11211209	11/21/12
07	SG-14-S-E-121107	VR58F	11211210	11/21/12
08	SG-15-S-E-121107	VR58G	11211211	11/21/12
09	SG-16-S-E-121107	VR58H	11211212	11/21/12
10	SG-16-S-E-12110	VR58HMS	11211213	11/21/12
11	SG-16-S-E-12110	VR58HMSD	11211214	11/21/12
12	SG-17-S-E-121107	VR58I	11211215	11/21/12
13	SG-01-S-C-121107	VR58J	11211216	11/21/12
14	SG-14-S-E-121107	VR58F	11211217	11/21/12
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**ORGANICS ANALYSIS DATA SHEET**  
**PNA's by SIM SW8270D-SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: MB-111512**  
**METHOD BLANK**

Lab Sample ID: MB-111512  
 LIMS ID: 12-22336  
 Matrix: Sediment  
 Data Release Authorized: *AS*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: NA  
 Date Received: NA

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 12:12  
 Instrument/Analyst: NT11/JZ  
 GPC Cleanup: No

Sample Amount: 10.0 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	2.6	5.0	< 5.0 U
91-57-6	2-Methylnaphthalene	1.5	5.0	< 5.0 U
90-12-0	1-Methylnaphthalene	1.7	5.0	< 5.0 U
208-96-8	Acenaphthylene	1.3	5.0	< 5.0 U
83-32-9	Acenaphthene	1.3	5.0	< 5.0 U
86-73-7	Fluorene	1.3	5.0	< 5.0 U
85-01-8	Phenanthrene	2.0	5.0	< 5.0 U
120-12-7	Anthracene	1.5	5.0	< 5.0 U
206-44-0	Fluoranthene	1.8	5.0	< 5.0 U
129-00-0	Pyrene	2.2	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.6	5.0	< 5.0 U
218-01-9	Chrysene	1.9	5.0	< 5.0 U
205-99-2	Benzo(b)fluoranthene	1.9	5.0	< 5.0 U
207-08-9	Benzo(k)fluoranthene	2.0	5.0	< 5.0 U
50-32-8	Benzo(a)pyrene	1.8	5.0	< 5.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	3.5	5.0	< 5.0 U
53-70-3	Dibenz(a,h)anthracene	2.4	5.0	< 5.0 U
191-24-2	Benzo(g,h,i)perylene	3.0	5.0	< 5.0 U
132-64-9	Dibenzofuran	1.5	5.0	< 5.0 U
TOTBFA	Total Benzofluoranthenes	1.8	5.0	< 5.0 U

Reported in µg/kg (ppb)

**SIM Semivolatile Surrogate Recovery**

d10-2-Methylnaphthalene 51.3%  
 d14-Dibenzo(a,h)anthracene 103%

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

Instrument ID: NT11

Project: CITY OF KENMORE

DFTPP Injection Date: 11/15/12

DFTPP Injection Time: 1733

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	45.3
68	Less than 2.0% of mass 69	0.5 ( 1.0)1
69	Mass 69 relative abundance	51.4
70	Less than 2.0% of mass 69	0.4 ( 0.7)1
127	10.0 - 80.0% of mass 198	68.2
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	24.2
365	Greater than 1.0% of mass 198	4.30
441	0.0 - 24.0% of mass 442	23.8 ( 15.5)2
442	50.0 - 200.0% of mass 198	153.9
443	15.0 - 24.0% of mass 442	30.9 ( 20.1)2

1-Value is % mass 69

2-Value is % mass 442

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	IC251115	IC251115	11151202	11/15/12	1853
02	IC011115	IC011115	11151203	11/15/12	1924
03	IC051115	IC051115	11151204	11/15/12	1954
04	IC111115	IC111115	11151205	11/15/12	2024
05	IC511115	IC511115	11151206	11/15/12	2054
06	IC101115	IC101115	11151207	11/15/12	2124
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5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

Instrument ID: NT11

Project: CITY OF KENMORE

DFTPP Injection Date: 11/21/12

DFTPP Injection Time: 1127

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.1
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	47.9
70	Less than 2.0% of mass 69	0.1 ( 0.3)1
127	10.0 - 80.0% of mass 198	66.2
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	24.3
365	Greater than 1.0% of mass 198	4.28
441	0.0 - 24.0% of mass 442	29.3 ( 14.8)2
442	50.0 - 200.0% of mass 198	197.9
443	15.0 - 24.0% of mass 442	39.9 ( 20.2)2

1-Value is % mass 69

2-Value is % mass 442

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC1121	CC1121	11211202	11/21/12	1142
02	VR58MBS1	VR58MBS1	11211203	11/21/12	1212
03	VR58LCSS1	VR58LCSS1	11211204	11/21/12	1242
04	SG-10-S-E-121107	VR58A	11211205	11/21/12	1312
05	SG-11-S-E-121107	VR58B	11211206	11/21/12	1342
06	SG-12-S-E-121107	VR58C	11211207	11/21/12	1412
07	SG-13-S-E-121107	VR58D	11211208	11/21/12	1442
08	SG-13-S-E-DUP-12	VR58E	11211209	11/21/12	1512
09	SG-14-S-E-121107	VR58F	11211210	11/21/12	1542
10	SG-15-S-E-121107	VR58G	11211211	11/21/12	1612
11	SG-16-S-E-121107	VR58H	11211212	11/21/12	1642
12	SG-16-S-E-12110	VR58HMS	11211213	11/21/12	1712
13	SG-16-S-E-12110	VR58HMSD	11211214	11/21/12	1741
14	SG-17-S-E-121107	VR58I	11211215	11/21/12	1811
15	SG-01-S-C-121107	VR58J	11211216	11/21/12	1841
16	SG-14-S-E-121107	VR58F	11211217	11/21/12	1911
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## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

ARI Job No: VR58

Project: CITY OF KENMORE

Instrument ID: NT11

Cont. Calib. Date: 11/21/12

Init. Calib. Date: 11/15/12

Cont. Calib. Time: 1142

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
=====	=====	=====	=====	=====	=====
Naphthalene	1.069	1.019	0.700	AVRG	-4.7
2-Methylnaphthalene	0.602	0.594	0.400	AVRG	-1.3
Acenaphthylene	1.738	1.810	0.900	AVRG	4.1
Acenaphthene	1.105	1.068	0.900	AVRG	-3.3
Dibenzofuran	1.619	1.590	0.800	AVRG	-1.8
Fluorene	1.244	1.279	0.900	AVRG	2.8
Phenanthrene	1.208	1.192	0.700	AVRG	-1.3
Anthracene	1.160	1.249	0.700	AVRG	7.7
Fluoranthene	1.210	1.254	0.600	AVRG	3.6
Pyrene	1.102	1.051	0.600	AVRG	-4.6
Benzo (a) anthracene	1.005	0.972	0.800	AVRG	-3.3
Chrysene	0.975	0.944	0.700	AVRG	-3.2
Benzo (b) fluoranthene	0.926	0.850	0.700	AVRG	-8.2
Benzo (k) fluoranthene	1.005	1.123	0.700	AVRG	11.7
Benzo (j) fluoranthene	1.061	1.151	0.010	AVRG	8.5
Benzo (a) pyrene	0.940	0.989	0.700	AVRG	5.2
Indeno (1, 2, 3-cd) pyrene	1.140	1.210	0.500	AVRG	6.1
Dibenzo (a, h) anthracene	0.928	1.013	0.400	AVRG	9.2
Benzo (g, h, i) perylene	0.970	1.043	0.500	AVRG	7.5
1-methylnaphthalene	0.577	0.555	0.010	AVRG	-3.8
Perylene	0.975	0.953	0.010	AVRG	-2.2
=====	=====	=====	=====	=====	=====
2-Methylnaphthalene-d10	0.684	0.664	0.010	AVRG	-2.9
Dibenzo (a, h) anthracene-d14	0.663	0.749	0.010	AVRG	13.0

&lt;- Exceeds QC limit of 20% D

\* RF less than minimum RF

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

ARI Job No: VR58

Project: CITY OF KENMORE

Ical Midpoint ID: 11151202

Ical Date: 11/15/12

Instrument ID: NT11

Cont. Cal Date: 11/21/12

	IS1 (NPT) AREA #	RT #	IS2 (ANT) AREA #	RT #	IS3 (PHN) AREA #	RT #
ICAL MIDPT	516111	5.47	284255	7.74	410660	9.76
UPPER LIMIT	1032222		568510		821320	
LOWER LIMIT	258056		142128		205330	
CCAL	623990	5.44	341705	7.71	510327	9.74
UPPER LIMIT		5.94		8.21		10.24
LOWER LIMIT		4.94		7.21		9.24
01 VR58MBS1	631972	5.44	349117	7.71	519854	9.73
02 VR58LCSS1	683439	5.44	386137	7.71	569235	9.73
03 SG-10-S-E-12	719541	5.43	400427	7.71	553782	9.74
04 SG-11-S-E-12	668211	5.44	354888	7.71	508936	9.74
05 SG-12-S-E-12	719301	5.44	403550	7.71	537761	9.74
06 SG-13-S-E-12	662371	5.44	362737	7.71	494835	9.74
07 SG-13-S-E-DU	672095	5.44	359541	7.71	481580	9.74
08 SG-14-S-E-12	693272	5.44	384101	7.72	515808	9.74
09 SG-15-S-E-12	744503	5.44	417360	7.71	590569	9.73
10 SG-16-S-E-12	726451	5.44	410219	7.71	603315	9.73
11 SG-16-S-E-12	783444	5.43	447528	7.71	655016	9.73
12 SG-16-S-E-12	792411	5.44	446361	7.71	655829	9.73
13 SG-17-S-E-12	814587	5.43	466527	7.71	652847	9.73
14 SG-01-S-C-12	833752	5.43	475491	7.71	685321	9.73
15 SG-14-S-E-12	755637	5.44	424260	7.71	633560	9.74
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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.



## SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC

ARI Job No: VR58

Project: CITY OF KENMORE

Ical Midpoint ID: 11151202

Ical Date: 11/15/12

Instrument ID: NT11

Cont. Cal Date: 11/21/12

	IS4 (CRY)		IS5 (PRY)			
	AREA #	RT #	AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	467886	14.38	472330	18.14		
UPPER LIMIT	935772		944660			
LOWER LIMIT	233943		236165			
=====	=====	=====	=====	=====	=====	=====
CCAL	629732	14.34	635766	18.10		
UPPER LIMIT		14.84		18.60		
LOWER LIMIT		13.84		17.60		
01 VR58MBS1	593617	14.34	585657	18.09		
02 VR58LCSS1	645376	14.34	647286	18.09		
03 SG-10-S-E-12	566871	14.37	554832	18.15		
04 SG-11-S-E-12	517191	14.37	407786	18.14		
05 SG-12-S-E-12	513773	14.41	380719	18.15		
06 SG-13-S-E-12	424844	14.40	290306	18.16		
07 SG-13-S-E-DU	458848	14.38	268309	18.15		
08 SG-14-S-E-12	523767	14.38	316500	18.15		
09 SG-15-S-E-12	672563	14.34	385411	18.10		
10 SG-16-S-E-12	671490	14.34	372077	18.10		
11 SG-16-S-E-12	715436	14.34	436071	18.10		
12 SG-16-S-E-12	722085	14.34	426384	18.10		
13 SG-17-S-E-12	680189	14.37	386826	18.14		
14 SG-01-S-C-12	743883	14.34	419279	18.10		
15 SG-14-S-E-12	693914	14.35	365510	18.11		
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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.

**Butyl Tin Analysis  
Report and Summary QC Forms**

**ARI Job ID: VR58**

**ORGANICS ANALYSIS DATA SHEET**  
**Tributyl Tins by Krone 1988 SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-10-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58A  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 11/15/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 Event: 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 11/14/12 17:11  
 Instrument/Analyst: NT12/VTS  
 Silica Gel Cleanup: No

Sample Amount: 5.45 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Alumina Cleanup: Yes  
 Moisture: 40.6%

CAS Number	Analyte	LOD	LOQ	Result	Q
36643-28-4	Tributyltin Ion	0.9	3.6	< 3.6	U

Reported in µg/kg (ppb)

**TBT Surrogate Recovery**

Tripropyl Tin Chloride	67.4%
Tripropyl Tin Chloride	73.1%

**ORGANICS ANALYSIS DATA SHEET**  
**Tributyl Tins by Krone 1988 SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-11-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58B  
 LIMS ID: 12-22330  
 Matrix: Sediment  
 Data Release Authorized: *AB*  
 Reported: 11/15/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 Event: 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 11/14/12 17:25  
 Instrument/Analyst: NT12/VTS  
 Silica Gel Cleanup: No

Sample Amount: 5.18 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Alumina Cleanup: Yes  
 Moisture: 80.1%

CAS Number	Analyte	LOD	LOQ	Result	Q
36643-28-4	Tributyltin Ion	1.0	3.7	9.8	


Reported in µg/kg (ppb)

**TBT Surrogate Recovery**

Tripropyl Tin Chloride	63.8%
Tripenyl Tin Chloride	76.3%

**ORGANICS ANALYSIS DATA SHEET**  
**Tributyl Tins by Krone 1988 SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-12-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58C  
 LIMS ID: 12-22331  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 11/15/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 Event: 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 11/14/12 17:39  
 Instrument/Analyst: NT12/VTS  
 Silica Gel Cleanup: No

Sample Amount: 5.16 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Alumina Cleanup: Yes  
 Moisture: 70.0%

CAS Number	Analyte	LOD	LOQ	Result	Q
36643-28-4	Tributyltin Ion	1.0	3.7	6.8	


Reported in µg/kg (ppb)

**TBT Surrogate Recovery**

Tripropyl Tin Chloride	63.6%
Tripenyl Tin Chloride	74.5%

**ORGANICS ANALYSIS DATA SHEET**  
**Tributyl Tins by Krone 1988 SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-13-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58D  
 LIMS ID: 12-22332  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 11/15/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 Event: 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 11/14/12 17:52  
 Instrument/Analyst: NT12/VTS  
 Silica Gel Cleanup: No

Sample Amount: 5.07 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Alumina Cleanup: Yes  
 Moisture: 76.0%

CAS Number	Analyte	LOD	LOQ	Result	Q
36643-28-4	Tributyltin Ion	1.0	3.8	12	

Reported in µg/kg (ppb)

**TBT Surrogate Recovery**

Tripropyl Tin Chloride	57.5%
Tripropyl Tin Chloride	64.7%

**ORGANICS ANALYSIS DATA SHEET**  
**Tributyl Tins by Krone 1988 SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-13-S-E-dup-121107**  
**SAMPLE**

Lab Sample ID: VR58E  
 LIMS ID: 12-22333  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 11/15/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 Event: 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 11/14/12 18:06  
 Instrument/Analyst: NT12/VTS  
 Silica Gel Cleanup: No

Sample Amount: 5.09 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Alumina Cleanup: Yes  
 Moisture: 76.0%

CAS Number	Analyte	LOD	LOQ	Result	Q
36643-28-4	Tributyltin Ion	1.0	3.8	12	


Reported in µg/kg (ppb)

**TBT Surrogate Recovery**

Tripropyl Tin Chloride	59.2%
Tripropyl Tin Chloride	68.2%

**ORGANICS ANALYSIS DATA SHEET**  
**Tributyl Tins by Krone 1988 SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-15-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58G  
 LIMS ID: 12-22335  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 11/15/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 Event: 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/13/12  
 Date Analyzed: 11/14/12 18:20  
 Instrument/Analyst: NT12/VTS  
 Silica Gel Cleanup: No

Sample Amount: 5.44 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Alumina Cleanup: Yes  
 Moisture: 24.7%

CAS Number	Analyte	LOD	LOQ	Result	Q
36643-28-4	Tributyltin Ion	0.9	3.6	< 3.6	U

Reported in µg/kg (ppb)

**TBT Surrogate Recovery**

Tripropyl Tin Chloride	53.1%
Triphenyl Tin Chloride	63.6%



**TBT SURROGATE RECOVERY SUMMARY**

Matrix: Sediment


QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
Event: 120891-01.01

<u>Client ID</u>	<u>TPRT</u>	<u>TPNT</u>	<u>TOT OUT</u>
MB-111312	68.7%	79.5%	0
LCS-111312	74.4%	84.4%	0
SG-10-S-E-121107	67.4%	73.1%	0
SG-11-S-E-121107	63.8%	76.3%	0
SG-12-S-E-121107	63.6%	74.5%	0
SG-13-S-E-121107	57.5%	64.7%	0
SG-13-S-E-dup-121107	59.2%	68.2%	0
SG-15-S-E-121107	53.1%	63.6%	0

	<b>LCS/MB LIMITS</b>	<b>QC LIMITS</b>
(TPRT) = Tripropyl Tin Chloride	(28-106)	(32-104)
(TPNT) = Tripentyl Tin Chloride	(35-130)	(25-140)

Prep Method: SW3546  
Analytical Method: TBT (Hexyl) Krone 1988  
Log Number Range: 12-22329 to 12-22335

Sample ID: LCS-111312  
LAB CONTROL SAMPLE

Lab Sample ID: LCS-111312  
LIMS ID: 12-22329  
Matrix: Sediment  
Data Release Authorized:   
Reported: 11/15/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: NA  
Date Received: NA

Date Extracted LCS: 11/13/12  
Date Analyzed LCS: 11/14/12 16:02  
Instrument/Analyst LCS: NT12/VTS  
Silica Gel Cleanup: No

Sample Amount LCS: 5.00 g-dry-wt  
Final Extract Volume LCS: 0.50 mL  
Dilution Factor LCS: 1.00  
Alumina Cleanup: Yes

Analyte	LCS	Spike Added	Recovery
Tributyltin Ion	39.0	44.6	87.4%

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**TBT Surrogate Recovery**

Tripropyl Tin Chloride	74.4%
Tripenyl Tin Chloride	84.4%

4B  
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

VR38MBS1
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Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE SEDI

Lab File ID: VR38MB

Date Extracted: 11/13/12

Instrument ID: NT12

Date Analyzed: 11/14/12

Matrix: SOLID


Time Analyzed: 1548

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	VR38LCSS1	VR38LCSS1	VR38SB	11/14/12
02	HT-06-S-E-121106	VR38J	VR38J	11/14/12
03	HT-07-S-E-121106	VR38K	VR38K	11/14/12
04	HT-07-S-E-12110	VR38KMS	VR38KMS	11/14/12
05	HT-07-S-E-12110	VR38KMSD	VR38KMSD	11/14/12
06	SG-10-S-E-121107	VR58A	VR58A	11/14/12
07	SG-11-S-E-121107	VR58B	VR58B	11/14/12
08	SG-12-S-E-121107	VR58C	VR58C	11/14/12
09	SG-13-S-E-121107	VR58D	VR58D	11/14/12
10	SG-13-S-E-DUP-12	VR58E	VR58E	11/14/12
11	SG-15-S-E-121107	VR58G	VR58G	11/14/12
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**ORGANICS ANALYSIS DATA SHEET**  
**Tributyl Tins by Krone 1988 SIM GC/MS**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: MB-111312**  
**METHOD BLANK**

Lab Sample ID: MB-111312  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 11/15/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 Event: 120891-01.01  
 Date Sampled: NA  
 Date Received: NA

Date Extracted: 11/13/12  
 Date Analyzed: 11/14/12 15:48  
 Instrument/Analyst: NT12/VTS  
 Silica Gel Cleanup: No

Sample Amount: 5.00 g-dry-wt  
 Final Extract Volume: 0.50 mL  
 Dilution Factor: 1.00  
 Alumina Cleanup: Yes

CAS Number	Analyte	LOD	LOQ	Result	Q
36643-28-4	Tributyltin Ion	1.0	3.9	< 3.9 U	

Reported in µg/kg (ppb)

**TBT Surrogate Recovery**

Tripropyl Tin Chloride	68.7%
Triphenyl Tin Chloride	79.5%

5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

Instrument ID: NT12

Project: CITY OF KENMORE

DFTPP Injection Date: 10/06/12

DFTPP Injection Time: 1351

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	28.8
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	89.8
70	Less than 2.0% of mass 69	0.5 ( 0.6)1
127	10.0 - 80.0% of mass 198	65.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	8.2
275	10.0 - 60.0% of mass 198	33.4
365	Greater than 1.0% of mass 198	4.54
441	0.0 - 24.0% of mass 442	19.8 ( 17.5)2
442	50.0 - 200.0% of mass 198	113.4
443	15.0 - 24.0% of mass 442	26.0 ( 23.0)2

1-Value is % mass 69

2-Value is % mass 442

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01		TBT 1	IC1006A	10/06/12	1405
02		TBT 4	IC1006B	10/06/12	1418
03		TBT .05	IC1006C	10/06/12	1432
04		TBT 2	IC1006D	10/06/12	1446
05		TBT .2	IC1006E	10/06/12	1500
06		TBT .5	IC1006F	10/06/12	1514
07					
08					
09					
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5B  
SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK  
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

Instrument ID: NT12

Project: CITY OF KENMORE

DFTPP Injection Date: 11/14/12

DFTPP Injection Time: 1138

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	27.6
68	Less than 2.0% of mass 69	0.0 ( 0.0)1
69	Mass 69 relative abundance	88.9
70	Less than 2.0% of mass 69	0.5 ( 0.6)1
127	10.0 - 80.0% of mass 198	67.4
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	8.5
275	10.0 - 60.0% of mass 198	33.1
365	Greater than 1.0% of mass 198	5.22
441	0.0 - 24.0% of mass 442	19.4 ( 18.3)2
442	50.0 - 200.0% of mass 198	106.0
443	15.0 - 24.0% of mass 442	24.8 ( 23.4)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		TBT 1	CC1114	11/14/12	1151
02	VR38MBS1	VR38MBS1	VR38MB	11/14/12	1548
03	VR38LCSS1	VR38LCSS1	VR38SB	11/14/12	1602
04	HT-06-S-E-121106	VR38J	VR38J	11/14/12	1616
05	HT-07-S-E-121106	VR38K	VR38K	11/14/12	1630
06	HT-07-S-E-12110	VR38KMS	VR38KMS	11/14/12	1643
07	HT-07-S-E-12110	VR38KMSD	VR38KMSD	11/14/12	1657
08	SG-10-S-E-121107	VR58A	VR58A	11/14/12	1711
09	SG-11-S-E-121107	VR58B	VR58B	11/14/12	1725
10	SG-12-S-E-121107	VR58C	VR58C	11/14/12	1739
11	SG-13-S-E-121107	VR58D	VR58D	11/14/12	1752
12	SG-13-S-E-DUP-12	VR58E	VR58E	11/14/12	1806
13	SG-15-S-E-121107	VR58G	VR58G	11/14/12	1820
14					
15					
16					
17					
18					
19					
20					
21					
22					

6B  
SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE

Instrument ID: NT12

Calibration Date: 10/06/12

LAB FILE ID:	RRF0.05=IC1006C	RRF0.2=IC1006E	RRF0.5=IC1006F	RRF1 =IC1006A	RRF2 =IC1006D	RRF4 =IC1006B		
COMPOUND	RRF 0.05	RRF 0.2	RRF 0.5	RRF 1	RRF 2	RRF 4	RRF	%RSD /R^2
Tributyl Tin (Hexyl)	0.550	0.592	0.667	0.684	0.684	0.664	0.640	8.7
Dibutyl Tin (Hexyl)	0.046	0.049	0.053	0.053	0.052	0.055	0.051	6.5
Butyl Tin (Hexyl)	0.060	0.067	0.081	0.084	0.083	0.090	0.078	14.8
Tetrabutyl Tin	0.652	0.697	0.749	0.791	0.755	0.730	0.729	6.7
Tripropyl Tin (Hexyl)	0.647	0.674	0.712	0.756	0.721	0.690	0.700	5.5
Triptyl Tin (Hexyl)	0.054	0.060	0.072	0.071	0.072	0.079	0.068	13.1

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

## SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE

Instrument ID: NT12

Cont. Calib. Date: 11/14/12

Init. Calib. Date: 10/06/12

Cont. Calib. Time: 1151

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
===== Tributyl Tin (Hexyl) _____	0.640	0.741	0.010	AVRG	15.8
Dibutyl Tin (Hexyl) _____	0.051	0.050	0.010	AVRG	-2.0
Butyl Tin (Hexyl) _____	0.078	0.081	0.010	AVRG	3.8
Tetrabutyl Tin _____	0.729	0.781	0.010	AVRG	7.1
===== Tripropyl Tin (Hexyl) _____	0.700	0.756	0.010	AVRG	8.0
Tripentyl Tin (Hexyl) _____	0.068	0.070	0.010	AVRG	2.9

&lt;- 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: ANCHOR QEA, LLC.

ARI Job No: VR58

Project: CITY OF KENMORE

Ical Midpoint ID: IC1006A

Ical Date: 10/06/12

Instrument ID: NT12

Cont. Cal Date: 11/14/12

	IS1 AREA #	RT #	IS2 AREA #	RT #	AREA #	RT #
=====	=====	=====	=====	=====	=====	=====
ICAL MIDPT	343457	7.80	317005	8.77		
UPPER LIMIT	686914		634010			
LOWER LIMIT	171728		158502			
=====	=====	=====	=====	=====	=====	=====
CCAL	348078	7.81	335859	8.78		
UPPER LIMIT		8.31		9.28		
LOWER LIMIT		7.31		8.28		
01 VR38MBS1	372403	7.80	344209	8.77		
02 VR38LCSS1	363079	7.80	335464	8.77		
03 HT-06-S-E-12	367009	7.80	348335	8.77		
04 HT-07-S-E-12	364472	7.80	340114	8.77		
05 HT-07-S-E-12	377212	7.80	349164	8.77		
06 HT-07-S-E-12	384249	7.80	348526	8.77		
07 SG-10-S-E-12	373082	7.80	352219	8.77		
08 SG-11-S-E-12	390935	7.80	373865	8.78		
09 SG-12-S-E-12	397853	7.80	378443	8.78		
10 SG-13-S-E-12	404376	7.80	410881	8.78		
11 SG-13-S-E-DU	396662	7.80	389934	8.78		
12 SG-15-S-E-12	390399	7.80	371267	8.78		
13						
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IS1 = Tetrapentyl Tin

IS2 = p-Terphenyl-d14

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.

•

Dioxin Analysis  
Report and Summary QC Forms

ARI Job ID: VR58

ORGANICS ANALYSIS DATA SHEET  
 Dioxins/Furans by EPA 1613B  
 Page 1 of 1



Sample ID: SG-10-S-E-121107

Lab Sample ID: VR58A  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Data Release Authorized: *MW*  
 Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/14/12  
 Date Analyzed: 11/28/12 15:06  
 Instrument/Analyst: AS1/PK  
 Acid Cleanup: Yes  
 Silica-Carbon Cleanup: No

Sample Amount: 10.2 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	0.68	0.65-0.89		0.980	0.759	J
2,3,7,8-TCDD	0.36	0.65-0.89		0.980	0.388	JEMPC
1,2,3,7,8-PeCDF	1.33	1.32-1.78		1.96	0.675	JX
2,3,4,7,8-PeCDF	1.67	1.32-1.78		0.980	0.725	J
1,2,3,7,8-PeCDD	1.69	1.32-1.78		0.980	1.47	
1,2,3,4,7,8-HxCDF	1.24	1.05-1.43		1.96	1.49	J
1,2,3,6,7,8-HxCDF	1.29	1.05-1.43		1.96	1.26	J
2,3,4,6,7,8-HxCDF	1.09	1.05-1.43		1.96	1.96	
1,2,3,7,8,9-HxCDF	1.21	1.05-1.43		1.96	0.692	J
1,2,3,4,7,8-HxCDD	1.32	1.05-1.43		1.96	2.26	
1,2,3,6,7,8-HxCDD	1.24	1.05-1.43		1.96	8.32	
1,2,3,7,8,9-HxCDD	1.26	1.05-1.43		1.96	4.73	
1,2,3,4,6,7,8-HpCDF	0.99	0.88-1.20		1.96	22.3	
1,2,3,4,7,8,9-HpCDF	0.90	0.88-1.20		1.96	1.59	J
1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20		1.96	168	
OCDF	0.82	0.76-1.02		4.90	77.5	
OCDD	0.89	0.76-1.02		4.90	1,290	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.980	8.62	11.3
Total TCDD		0.980	2.25	3.27
Total PeCDF		1.96	18.2	19.7
Total PeCDD		0.980	8.29	8.56
Total HxCDF		1.96	39.1	
Total HxCDD		1.96	49.6	50.6
Total HpCDF		1.96	73.3	
Total HpCDD		1.96	332	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 6.57

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 6.57

Reported in pg/g

**ORGANICS ANALYSIS DATA SHEET**  
**Dioxins/Furans by EPA 1613B**  
 Page 1 of 1

**Sample ID: SG-10-S-E-121107**

Lab Sample ID: VR58A  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Data Release Authorized: *MW*  
 Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/14/12  
 Date Analyzed: 11/28/12 15:06  
 Instrument/Analyst: AS1/PK

Sample Amount: 10.2 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	0.78	0.65-0.89	80.8	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	87.8	25-164	
13C-1,2,3,7,8-PeCDF	1.56	1.32-1.78	85.7	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	86.4	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	85.2	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	83.3	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	82.1	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	79.6	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	97.3	29-147	
13C-1,2,3,4,7,8-HxCDD	1.28	1.05-1.43	83.9	32-141	
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	86.7	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	78.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	78.8	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	83.7	23-140	
13C-OCDD	0.89	0.76-1.02	68.2	17-157	
37Cl4-2,3,7,8-TCDD			92.3	35-197	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**  
**Dioxins/Furans by EPA 1613B**  
Page 1 of 1

Sample ID: SG-11-S-E-121107

Lab Sample ID: VR58B  
LIMS ID: 12-22330  
Matrix: Sediment  
Data Release Authorized: *MW*  
Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/14/12  
Date Analyzed: 11/28/12 15:56  
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	EDL	RL	Result
2,3,7,8-TCDF	0.71	0.65-0.89		0.999	3.38
2,3,7,8-TCDD	0.67	0.65-0.89		0.999	1.32
1,2,3,7,8-PeCDF	1.39	1.32-1.78		2.00	5.37 X
2,3,4,7,8-PeCDF	1.45	1.32-1.78		0.999	5.19
1,2,3,7,8-PeCDD	1.54	1.32-1.78		0.999	12.8
1,2,3,4,7,8-HxCDF	1.19	1.05-1.43		2.00	15.3
1,2,3,6,7,8-HxCDF	1.17	1.05-1.43		2.00	13.6
2,3,4,6,7,8-HxCDF	1.18	1.05-1.43		2.00	21.1
1,2,3,7,8,9-HxCDF	1.21	1.05-1.43		2.00	7.11
1,2,3,4,7,8-HxCDD	1.22	1.05-1.43		2.00	25.8
1,2,3,6,7,8-HxCDD	1.26	1.05-1.43		2.00	119
1,2,3,7,8,9-HxCDD	1.26	1.05-1.43		2.00	52.3
1,2,3,4,6,7,8-HpCDF	0.99	0.88-1.20		2.00	282
1,2,3,4,7,8,9-HpCDF	0.96	0.88-1.20		2.00	15.3
1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20		9.99	2,120 #
OCDF	0.85	0.76-1.02		5.00	871
OCDD	0.88	0.76-1.02		25.0	16,500 #

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.999	46.3	51.2
Total TCDD		0.999	13.1	14.7
Total PeCDF		2.00	156	157
Total PeCDD		0.999	60.3	
Total HxCDF		2.00	472	
Total HxCDD		2.00	563	
Total HpCDF		2.00	879	
Total HpCDD		2.00	4,150	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 71.0

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 71.0

#-Result from diluted secondary analysis.

Reported in pg/g

Sample ID: SG-11-S-E-121107

Lab Sample ID: VR58B  
 LIMS ID: 12-22330  
 Matrix: Sediment  
 Data Release Authorized: *MW*  
 Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/14/12  
 Date Analyzed: 11/28/12 15:56  
 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	0.78	0.65-0.89	77.2	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	88.3	25-164	
13C-1,2,3,7,8-PeCDF	1.57	1.32-1.78	83.1	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	87.8	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	90.5	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	76.1	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	76.0	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	75.2	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	77.9	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	79.6	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	82.5	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	71.2	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	73.0	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	82.1	23-140	
13C-OCDD	0.89	0.76-1.02	76.4	17-157	
37C14-2,3,7,8-TCDD			93.6	35-197	

Reported in Percent Recovery

ORGANICS ANALYSIS DATA SHEET  
Dioxins/Furans by EPA 1613B  
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Sample ID: SG-11-S-E-121107  
DILUTION

Lab Sample ID: VR58B  
LIMS ID: 12-22330  
Matrix: Sediment  
Data Release Authorized: *MW*  
Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/14/12  
Date Analyzed: 11/29/12 12:00  
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt  
Final Extract Volume: 20 uL  
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20	85.6	23-140	
13C-OCDD	0.91	0.76-1.02	72.0	17-157	
37Cl4-2,3,7,8-TCDD			95.2	35-197	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**  
**Dioxins/Furans by EPA 1613B**  
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Sample ID: SG-12-S-E-121107

Lab Sample ID: VR58C  
LIMS ID: 12-22331  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/14/12  
Date Analyzed: 11/28/12 16:48  
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	EDL	RL	Result	
2,3,7,8-TCDF	0.68	0.65-0.89		0.997	2.15	
2,3,7,8-TCDD	0.69	0.65-0.89		0.997	0.804	J
1,2,3,7,8-PeCDF	1.39	1.32-1.78		1.99	2.87	
2,3,4,7,8-PeCDF	1.32	1.32-1.78		0.997	2.57	EMPC
1,2,3,7,8-PeCDD	1.52	1.32-1.78		0.997	5.10	
1,2,3,4,7,8-HxCDF	1.19	1.05-1.43		1.99	6.40	
1,2,3,6,7,8-HxCDF	1.15	1.05-1.43		1.99	5.15	
2,3,4,6,7,8-HxCDF	1.16	1.05-1.43		1.99	8.02	
1,2,3,7,8,9-HxCDF	1.15	1.05-1.43		1.99	2.96	
1,2,3,4,7,8-HxCDD	1.26	1.05-1.43		1.99	8.29	
1,2,3,6,7,8-HxCDD	1.23	1.05-1.43		1.99	38.8	
1,2,3,7,8,9-HxCDD	1.20	1.05-1.43		1.99	18.0	
1,2,3,4,6,7,8-HpCDF	0.99	0.88-1.20		1.99	104	
1,2,3,4,7,8,9-HpCDF	0.96	0.88-1.20		1.99	6.00	
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20		1.99	769	
OCDF	0.85	0.76-1.02		4.99	356	
OCDD	0.89	0.76-1.02		24.9	6,410	#

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.997	25.8	29.7
Total TCDD		0.997	7.09	9.33
Total PeCDF		1.99	67.1	75.2
Total PeCDD		0.997	27.8	
Total HxCDF		1.99	192	193
Total HxCDD		1.99	199	
Total HpCDF		1.99	347	
Total HpCDD		1.99	1,470	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 26.6

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 26.6

#-Result from diluted secondary analysis.

Reported in pg/g



**ORGANICS ANALYSIS DATA SHEET**

Dioxins/Furans by EPA 1613B

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Sample ID: SG-12-S-E-121107

Lab Sample ID: VR58C

QC Report No: VR58-Anchor QEA, LLC.

LIMS ID: 12-22331

Project: City of Kenmore Sediment

Matrix: Sediment

120891-01.01

Data Release Authorized: *TWW*

Date Sampled: 11/07/12

Reported: 12/11/12

Date Received: 11/08/12

Date Extracted: 11/14/12

Sample Amount: 10.0 g-dry-wt

Date Analyzed: 11/28/12 16:48

Final Extract Volume: 20 uL

Instrument/Analyst: AS1/PK

Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	65.5	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	68.7	25-164	
13C-1,2,3,7,8-PeCDF	1.57	1.32-1.78	67.6	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	69.1	21-178	
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	69.9	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	57.4	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	56.1	26-123	
13C-2,3,4,6,7,8-HxCDF	0.53	0.43-0.59	57.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	68.2	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	58.7	32-141	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	60.9	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	54.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	58.2	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	62.3	23-140	
13C-OCDD	0.89	0.76-1.02	52.1	17-157	
37C14-2,3,7,8-TCDD			97.7	35-197	

Reported in Percent Recovery

ORGANICS ANALYSIS DATA SHEET  
Dioxins/Furans by EPA 1613B  
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Sample ID: SG-12-S-E-121107  
DILUTION

Lab Sample ID: VR58C  
LIMS ID: 12-22331  
Matrix: Sediment  
Data Release Authorized: *mw*  
Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/14/12  
Date Analyzed: 11/29/12 12:51  
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt  
Final Extract Volume: 20 uL  
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-OCDD	0.90	0.76-1.02	48.1	17-157	
37C14-2,3,7,8-TCDD			94.7	35-197	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**  
**Dioxins/Furans by EPA 1613B**  
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**Sample ID: SG-13-S-E-121107**

Lab Sample ID: VR58D  
 LIMS ID: 12-22332  
 Matrix: Sediment  
 Data Release Authorized: *MW*  
 Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/14/12  
 Date Analyzed: 11/28/12 17:41  
 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-Florisol Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.64	0.65-0.89		0.998	2.84	EMPC
2,3,7,8-TCDD	0.60	0.65-0.89		0.998	0.719	JEMPC
1,2,3,7,8-PeCDF	1.41	1.32-1.78		2.00	5.30	X
2,3,4,7,8-PeCDF	1.41	1.32-1.78		0.998	4.71	
1,2,3,7,8-PeCDD	1.53	1.32-1.78		0.998	5.66	
1,2,3,4,7,8-HxCDF	1.13	1.05-1.43		2.00	13.2	
1,2,3,6,7,8-HxCDF	1.20	1.05-1.43		2.00	8.24	
2,3,4,6,7,8-HxCDF	1.16	1.05-1.43		2.00	15.4	
1,2,3,7,8,9-HxCDF	1.18	1.05-1.43		2.00	7.63	
1,2,3,4,7,8-HxCDD	1.22	1.05-1.43		2.00	11.8	
1,2,3,6,7,8-HxCDD	1.24	1.05-1.43		2.00	97.4	
1,2,3,7,8,9-HxCDD	1.23	1.05-1.43		2.00	25.6	
1,2,3,4,6,7,8-HpCDF	0.99	0.88-1.20		2.00	230	
1,2,3,4,7,8,9-HpCDF	0.96	0.88-1.20		2.00	10.6	
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20		2.00	1,730	
OCDF	0.85	0.76-1.02		4.99	837	
OCDD	0.88	0.76-1.02		25.0	14,400	#

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.998	28.1	32.4
Total TCDD		0.998	8.92	10.5
Total PeCDF		2.00	128	129
Total PeCDD		0.998	31.5	
Total HxCDF		2.00	437	438
Total HxCDD		2.00	353	
Total HpCDF		2.00	809	
Total HpCDD		2.00	3,200	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 50.4

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 50.4

#-Result from diluted secondary analysis.

Reported in pg/g

**ORGANICS ANALYSIS DATA SHEET**  
**Dioxins/Furans by EPA 1613B**  
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Sample ID: SG-13-S-E-121107

Lab Sample ID: VR58D  
 LIMS ID: 12-22332  
 Matrix: Sediment  
 Data Release Authorized: *TW*  
 Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/14/12  
 Date Analyzed: 11/28/12 17:41  
 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	0.77	0.65-0.89	73.4	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	80.5	25-164	
13C-1,2,3,7,8-PeCDF	1.56	1.32-1.78	82.1	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	89.1	21-178	
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	85.9	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	73.5	26-152	
13C-1,2,3,6,7,8-HxCDF	0.53	0.43-0.59	73.1	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	74.1	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	82.2	29-147	
13C-1,2,3,4,7,8-HxCDD	1.25	1.05-1.43	76.9	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	80.1	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	71.7	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.46	0.37-0.51	76.8	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	84.5	23-140	
13C-OCDD	0.89	0.76-1.02	78.4	17-157	
37C14-2,3,7,8-TCDD			88.0	35-197	

Reported in Percent Recovery

Sample ID: SG-13-S-E-121107  
DILUTION

Lab Sample ID: VR58D  
LIMS ID: 12-22332  
Matrix: Sediment  
Data Release Authorized: *WW*  
Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/14/12  
Date Analyzed: 11/29/12 13:43  
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt  
Final Extract Volume: 20 uL  
Dilution Factor: 5.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-OCDD	0.91	0.76-1.02	82.4	17-157	
37C14-2,3,7,8-TCDD			89.5	35-197	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**  
**Dioxins/Furans by EPA 1613B**  
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**Sample ID: SG-13-S-E-dup-121107**

Lab Sample ID: VR58E  
LIMS ID: 12-22333  
Matrix: Sediment  
Data Release Authorized: *mm*  
Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/14/12  
Date Analyzed: 11/28/12 19:33  
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	EDL	RL	Result	
2,3,7,8-TCDF	0.76	0.65-0.89		0.999	1.22	
2,3,7,8-TCDD	0.42	0.65-0.89		0.999	0.521	JEMPC
1,2,3,7,8-PeCDF	1.39	1.32-1.78		2.00	2.06	X
2,3,4,7,8-PeCDF	1.68	1.32-1.78		0.999	1.82	
1,2,3,7,8-PeCDD	1.36	1.32-1.78		0.999	2.51	
1,2,3,4,7,8-HxCDF	1.15	1.05-1.43		2.00	4.94	
1,2,3,6,7,8-HxCDF	1.18	1.05-1.43		2.00	3.39	
2,3,4,6,7,8-HxCDF	1.12	1.05-1.43		2.00	5.77	
1,2,3,7,8,9-HxCDF	1.18	1.05-1.43		2.00	2.82	
1,2,3,4,7,8-HxCDD	1.24	1.05-1.43		2.00	5.28	
1,2,3,6,7,8-HxCDD	1.25	1.05-1.43		2.00	32.5	
1,2,3,7,8,9-HxCDD	1.21	1.05-1.43		2.00	10.8	
1,2,3,4,6,7,8-HpCDF	0.97	0.88-1.20		2.00	93.1	
1,2,3,4,7,8,9-HpCDF	0.96	0.88-1.20		2.00	4.97	
1,2,3,4,6,7,8,9-HpCDD	1.03	0.88-1.20		2.00	600	
OCDF	0.83	0.76-1.02		5.00	379	
OCDD	0.89	0.76-1.02		5.00	4,830	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.999	11.0	15.9
Total TCDD		0.999	3.44	4.89
Total PeCDF		2.00	43.4	51.6
Total PeCDD		0.999	8.27	13.1
Total HxCDF		2.00	161	
Total HxCDD		2.00	136	
Total HpCDF		2.00	312	314
Total HpCDD		2.00	1,120	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 18.9

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 18.9

Reported in pg/g

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 Dioxins/Furans by EPA 1613B  
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Sample ID: SG-13-S-E-dup-121107

Lab Sample ID: VR58E  
 LIMS ID: 12-22333  
 Matrix: Sediment  
 Data Release Authorized: ~~WWW~~  
 Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/14/12  
 Date Analyzed: 11/28/12 19:33  
 Instrument/Analyst: ASI/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	0.77	0.65-0.89	40.4	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	43.1	25-164	
13C-1,2,3,7,8-PeCDF	1.57	1.32-1.78	41.5	24-185	
13C-2,3,4,7,8-PeCDF	1.56	1.32-1.78	42.1	21-178	
13C-1,2,3,7,8-PeCDD	1.56	1.32-1.78	42.5	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	41.6	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	41.6	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	38.8	28-136	
13C-1,2,3,7,8,9-HxCDF	0.53	0.43-0.59	45.5	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	41.8	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	42.8	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	38.8	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	40.1	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	43.4	23-140	
13C-OCDD	0.89	0.76-1.02	36.4	17-157	
37C14-2,3,7,8-TCDD			88.0	35-197	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**

**Dioxins/Furans by EPA 1613B**

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**Sample ID: SG-14-S-E-121107**

Lab Sample ID: VR58F

QC Report No: VR58-Anchor QEA, LLC.

LIMS ID: 12-22334

Project: City of Kenmore Sediment

Matrix: Sediment

120891-01.01

Data Release Authorized: *MW*

Date Sampled: 11/07/12

Reported: 12/11/12

Date Received: 11/08/12

Date Extracted: 11/14/12

Sample Amount: 10.0 g-dry-wt

Date Analyzed: 11/28/12 20:29

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	0.72	0.65-0.89		0.995	1.09	
2,3,7,8-TCDD	0.49	0.65-0.89		0.995	0.404	JEMPC
1,2,3,7,8-PeCDF	1.46	1.32-1.78		1.99	0.796	JX
2,3,4,7,8-PeCDF	1.58	1.32-1.78		0.995	0.957	J
1,2,3,7,8-PeCDD	1.42	1.32-1.78		0.995	1.99	
1,2,3,4,7,8-HxCDF	1.18	1.05-1.43		1.99	2.26	
1,2,3,6,7,8-HxCDF	1.18	1.05-1.43		1.99	2.08	
2,3,4,6,7,8-HxCDF	1.15	1.05-1.43		1.99	2.90	
1,2,3,7,8,9-HxCDF	1.07	1.05-1.43		1.99	0.816	J
1,2,3,4,7,8-HxCDD	1.24	1.05-1.43		1.99	3.06	
1,2,3,6,7,8-HxCDD	1.25	1.05-1.43		1.99	12.5	
1,2,3,7,8,9-HxCDD	1.21	1.05-1.43		1.99	6.86	
1,2,3,4,6,7,8-HpCDF	0.97	0.88-1.20		1.99	36.2	
1,2,3,4,7,8,9-HpCDF	0.89	0.88-1.20		1.99	2.54	EMPC
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20		1.99	304	
OCDF	0.85	0.76-1.02		4.98	106	
OCDD	0.88	0.76-1.02		4.98	2,490	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.995	13.1	15.4
Total TCDD		0.995	4.26	5.27
Total PeCDF		1.99	25.9	28.9
Total PeCDD		0.995	13.0	13.5
Total HxCDF		1.99	63.6	64.1
Total HxCDD		1.99	102	
Total HpCDF		1.99	113	115
Total HpCDD		1.99	877	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 10.1

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 10.1

Reported in pg/g



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Dioxins/Furans by EPA 1613B

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Sample ID: SG-14-S-E-121107

Lab Sample ID: VR58F

QC Report No: VR58-Anchor QEA, LLC.

LIMS ID: 12-22334

Project: City of Kenmore Sediment

Matrix: Sediment

120891-01.01

Data Release Authorized: *MW*

Date Sampled: 11/07/12

Reported: 12/11/12

Date Received: 11/08/12

Date Extracted: 11/14/12

Sample Amount: 10.0 g-dry-wt

Date Analyzed: 11/28/12 20:29

Final Extract Volume: 20 uL

Instrument/Analyst: AS1/PK

Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.77	0.65-0.89	78.3	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	88.5	25-164	
13C-1,2,3,7,8-PeCDF	1.55	1.32-1.78	94.8	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	97.2	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	96.4	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	86.0	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	84.5	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	81.6	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	70.5	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	90.6	32-141	
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	90.1	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	83.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	88.6	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	96.5	23-140	
13C-OCDD	0.89	0.76-1.02	81.0	17-157	
37Cl4-2,3,7,8-TCDD			93.5	35-197	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**  
**Dioxins/Furans by EPA 1613B**  
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Sample ID: SG-15-S-E-121107

Lab Sample ID: VR58G  
LIMS ID: 12-22335  
Matrix: Sediment  
Data Release Authorized: *MW*  
Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/14/12  
Date Analyzed: 11/28/12 21:21  
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	0.59	0.65-0.89		0.990	0.103 JEMPC
2,3,7,8-TCDD	0.20	0.65-0.89		0.990	0.154 JEMPC
1,2,3,7,8-PeCDF	1.49	1.32-1.78		1.98	0.0911 J
2,3,4,7,8-PeCDF	1.14	1.32-1.78		0.990	0.0752 JEMPC
1,2,3,7,8-PeCDD	2.09	1.32-1.78		0.990	0.0891 JEMPC
1,2,3,4,7,8-HxCDF	1.09	1.05-1.43		1.98	0.176 J
1,2,3,6,7,8-HxCDF	1.21	1.05-1.43		1.98	0.103 J
2,3,4,6,7,8-HxCDF	1.16	1.05-1.43		1.98	0.190 J
1,2,3,7,8,9-HxCDF	1.03	1.05-1.43		1.98	0.0653 BJEMPC
1,2,3,4,7,8-HxCDD	1.18	1.05-1.43		1.98	0.143 J
1,2,3,6,7,8-HxCDD	1.12	1.05-1.43		1.98	0.818 J
1,2,3,7,8,9-HxCDD	0.89	1.05-1.43		1.98	0.350 JEMPC
1,2,3,4,6,7,8-HpCDF	0.94	0.88-1.20		1.98	2.05
1,2,3,4,7,8,9-HpCDF	0.85	0.88-1.20		1.98	0.0713 JEMPC
1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20		1.98	13.9
OCDF	0.86	0.76-1.02		4.95	5.88
OCDD	0.88	0.76-1.02		4.95	105

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.990	0.537	1.06
Total TCDD		0.990	0.236	0.446
Total PeCDF		1.98	1.73	3.73
Total PeCDD		0.990	0.0832	0.632
Total HxCDF		1.98	3.79	3.85
Total HxCDD		1.98	3.75	4.11
Total HpCDF		1.98	6.03	6.17
Total HpCDD		1.98	27.3	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.66

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.66

Reported in pg/g

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 Dioxins/Furans by EPA 1613B  
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Sample ID: SG-15-S-E-121107

Lab Sample ID: VR58G  
 LIMS ID: 12-22335  
 Matrix: Sediment  
 Data Release Authorized: *mw*  
 Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/14/12  
 Date Analyzed: 11/28/12 21:21  
 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	0.77	0.65-0.89	76.5	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	85.4	25-164	
13C-1,2,3,7,8-PeCDF	1.56	1.32-1.78	88.2	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	87.3	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	90.7	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	89.0	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	88.9	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	79.8	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	83.3	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	87.0	32-141	
13C-1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	87.6	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	76.6	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	77.2	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	84.9	23-140	
13C-OCDD	0.90	0.76-1.02	66.2	17-157	
37C14-2,3,7,8-TCDD			88.9	35-197	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**

**Dioxins/Furans by EPA 1613B**

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**Sample ID: SG-16-S-E-121107**

Lab Sample ID: VR58H

QC Report No: VR58-Anchor QEA, LLC.

LIMS ID: 12-22336

Project: City of Kenmore Sediment

Matrix: Sediment

120891-01.01

Data Release Authorized: ~~YNN~~

Date Sampled: 11/07/12

Reported: 12/11/12

Date Received: 11/08/12

Date Extracted: 11/14/12

Sample Amount: 10.0 g-dry-wt

Date Analyzed: 11/28/12 22:13

Final Extract Volume: 20 uL

Instrument/Analyst: AS1/PK

Dilution Factor: 1.00

Acid Cleanup: Yes

Silica-Florisoril Cleanup: Yes

Silica-Carbon Cleanup: No

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF		0.65-0.89	0.0220	0.998	< 0.0220	U
2,3,7,8-TCDD	0.11	0.65-0.89		0.998	0.144	JEMPC
1,2,3,7,8-PeCDF	1.40	1.32-1.78		2.00	0.0758	J
2,3,4,7,8-PeCDF		1.32-1.78	0.0439	0.998	< 0.0439	U
1,2,3,7,8-PeCDD	1.27	1.32-1.78		0.998	0.0758	JEMPC
1,2,3,4,7,8-HxCDF	0.89	1.05-1.43		2.00	0.0918	JEMPC
1,2,3,6,7,8-HxCDF	2.17	1.05-1.43		2.00	0.0739	JEMPC
2,3,4,6,7,8-HxCDF	0.79	1.05-1.43		2.00	0.0559	JEMPC
1,2,3,7,8,9-HxCDF	1.28	1.05-1.43		2.00	0.0259	BJ
1,2,3,4,7,8-HxCDD	1.62	1.05-1.43		2.00	0.0679	JEMPC
1,2,3,6,7,8-HxCDD	0.89	1.05-1.43		2.00	0.202	JEMPC
1,2,3,7,8,9-HxCDD	1.15	1.05-1.43		2.00	0.168	J
1,2,3,4,6,7,8-HpCDF	0.97	0.88-1.20		2.00	0.888	J
1,2,3,4,7,8,9-HpCDF	1.03	0.88-1.20		2.00	0.0639	J
1,2,3,4,6,7,8-HpCDD	0.98	0.88-1.20		2.00	4.24	
OCDF	0.92	0.76-1.02		4.99	1.75	J
OCDD	0.90	0.76-1.02		4.99	32.0	

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF	0.0220	0.998	0.164	0.681
Total TCDD		0.998	0.0399	0.481
Total PeCDF		2.00	0.709	0.950
Total PeCDD		0.998	0.140	0.441
Total HxCDF		2.00	0.685	1.56
Total HxCDD		2.00	1.45	1.86
Total HpCDF		2.00	2.38	2.41
Total HpCDD		2.00	8.18	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.35

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.36

Reported in pg/g

**ORGANICS ANALYSIS DATA SHEET**  
**Dioxins/Furans by EPA 1613B**  
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**Sample ID: SG-16-S-E-121107**

Lab Sample ID: VR58H  
 LIMS ID: 12-22336  
 Matrix: Sediment  
 Data Release Authorized: *YMW*  
 Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/14/12  
 Date Analyzed: 11/28/12 22:13  
 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	0.78	0.65-0.89	89.8	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	94.2	25-164	
13C-1,2,3,7,8-PeCDF	1.56	1.32-1.78	100	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	94.2	21-178	
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	97.3	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	93.5	26-152	
13C-1,2,3,6,7,8-HxCDF	0.53	0.43-0.59	96.0	26-123	
13C-2,3,4,6,7,8-HxCDF	0.53	0.43-0.59	86.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	94.1	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	94.5	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	96.1	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	84.7	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	88.6	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	94.6	23-140	
13C-OCDD	0.89	0.76-1.02	76.2	17-157	
37C14-2,3,7,8-TCDD			98.4	35-197	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**  
**Dioxins/Furans by EPA 1613B**  
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**Sample ID: SG-17-S-E-121107**

Lab Sample ID: VR58I  
 LIMS ID: 12-22337  
 Matrix: Sediment  
 Data Release Authorized: *YWW*  
 Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/14/12  
 Date Analyzed: 11/28/12 23:06  
 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	EDL	RL	Result
2,3,7,8-TCDF	0.70	0.65-0.89		0.998	0.136 BJ
2,3,7,8-TCDD	0.13	0.65-0.89		0.998	0.226 JEMPC
1,2,3,7,8-PeCDF	1.18	1.32-1.78		2.00	0.126 JEMPC
2,3,4,7,8-PeCDF	1.32	1.32-1.78		0.998	0.136 J
1,2,3,7,8-PeCDD	1.49	1.32-1.78		0.998	0.491 J
1,2,3,4,7,8-HxCDF	1.39	1.05-1.43		2.00	0.625 J
1,2,3,6,7,8-HxCDF	0.99	1.05-1.43		2.00	0.725 JEMPC
2,3,4,6,7,8-HxCDF	1.26	1.05-1.43		2.00	1.06 J
1,2,3,7,8,9-HxCDF	0.94	1.05-1.43		2.00	0.110 BJEMPC
1,2,3,4,7,8-HxCDD	0.98	1.05-1.43		2.00	1.03 JEMPC
1,2,3,6,7,8-HxCDD	1.21	1.05-1.43		2.00	2.12
1,2,3,7,8,9-HxCDD	1.25	1.05-1.43		2.00	2.33
1,2,3,4,6,7,8-HpCDF	0.94	0.88-1.20		2.00	14.4
1,2,3,4,7,8,9-HpCDF	0.90	0.88-1.20		2.00	0.950 J
1,2,3,4,6,7,8-HpCDD	1.01	0.88-1.20		2.00	50.3
OCDF	0.85	0.76-1.02		4.99	24.5
OCDD	0.88	0.76-1.02		4.99	252

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.998	1.79	2.50
Total TCDD		0.998	0.756	1.11
Total PeCDF		2.00	5.04	5.21
Total PeCDD		0.998	0.701	2.03
Total HxCDF		2.00	16.9	17.8
Total HxCDD		2.00	13.6	14.9
Total HpCDF		2.00	31.5	
Total HpCDD		2.00	82.0	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 2.31

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 2.31

Reported in pg/g

**ORGANICS ANALYSIS DATA SHEET**

**Dioxins/Furans by EPA 1613B**

Page 1 of 1

**Sample ID: SG-17-S-E-121107**

Lab Sample ID: VR58I

QC Report No: VR58-Anchor QEA, LLC.

LIMS ID: 12-22337

Project: City of Kenmore Sediment

Matrix: Sediment

120891-01.01

Data Release Authorized: *mw*

Date Sampled: 11/07/12

Reported: 12/11/12

Date Received: 11/08/12

Date Extracted: 11/14/12

Sample Amount: 10.0 g-dry-wt

Date Analyzed: 11/28/12 23:06

Final Extract Volume: 20 uL

Instrument/Analyst: AS1/PK

Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.78	0.65-0.89	54.4	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	63.3	25-164	
13C-1,2,3,7,8-PeCDF	1.56	1.32-1.78	64.4	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	63.3	21-178	
13C-1,2,3,7,8-PeCDD	1.59	1.32-1.78	64.0	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	62.2	26-152	
13C-1,2,3,6,7,8-HxCDF	0.53	0.43-0.59	62.3	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	56.9	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	67.9	29-147	
13C-1,2,3,4,7,8-HxCDD	1.28	1.05-1.43	60.5	32-141	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	61.8	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	56.5	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	59.3	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	60.6	23-140	
13C-OCDD	0.88	0.76-1.02	49.6	17-157	
37Cl4-2,3,7,8-TCDD			93.5	35-197	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**

Dioxins/Furans by EPA 1613B

Page 1 of 1

Sample ID: SG-01-S-C-121107

Lab Sample ID: VR58J

QC Report No: VR58-Anchor QEA, LLC.

LIMS ID: 12-22338

Project: City of Kenmore Sediment

Matrix: Sediment

120891-01.01

Data Release Authorized: *mmw*

Date Sampled: 11/07/12

Reported: 12/11/12

Date Received: 11/08/12

Date Extracted: 11/14/12

Sample Amount: 10.1 g-dry-wt

Date Analyzed: 11/28/12 23:58

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	0.73	0.65-0.89		0.987	0.0691 BJ
2,3,7,8-TCDD	0.16	0.65-0.89		0.987	0.164 JEMPC
1,2,3,7,8-PeCDF	1.38	1.32-1.78		1.97	0.0770 J
2,3,4,7,8-PeCDF	0.97	1.32-1.78		0.987	0.0592 JEMPC
1,2,3,7,8-PeCDD	1.74	1.32-1.78		0.987	0.107 J
1,2,3,4,7,8-HxCDF	1.01	1.05-1.43		1.97	0.154 JEMPC
1,2,3,6,7,8-HxCDF	1.80	1.05-1.43		1.97	0.0573 JEMPC
2,3,4,6,7,8-HxCDF	0.54	1.05-1.43		1.97	0.0553 JEMPC
1,2,3,7,8,9-HxCDF	1.65	1.05-1.43		1.97	0.0573 BJEMPC
1,2,3,4,7,8-HxCDD	1.63	1.05-1.43		1.97	0.0809 JEMPC
1,2,3,6,7,8-HxCDD	1.33	1.05-1.43		1.97	0.310 J
1,2,3,7,8,9-HxCDD	1.27	1.05-1.43		1.97	0.219 J
1,2,3,4,6,7,8-HpCDF	0.99	0.88-1.20		1.97	1.19 J
1,2,3,4,7,8,9-HpCDF	0.52	0.88-1.20		1.97	0.0454 JEMPC
1,2,3,4,6,7,8-HpCDD	1.10	0.88-1.20		1.97	5.70
OCDF	0.80	0.76-1.02		4.94	2.67 J
OCDD	0.88	0.76-1.02		4.94	40.5

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.987	0.377	0.679
Total TCDD		0.987	0.0454	0.395
Total PeCDF		1.97	0.987	1.28
Total PeCDD		0.987	0.107	0.391
Total HxCDF		1.97	2.12	2.43
Total HxCDD		1.97	1.34	2.07
Total HpCDF		1.97	3.25	3.28
Total HpCDD		1.97	10.9	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.47

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.47

Reported in pg/g



**ORGANICS ANALYSIS DATA SHEET**  
**Dioxins/Furans by EPA 1613B**  
 Page 1 of 1

**Sample ID: SG-01-S-C-121107**

Lab Sample ID: VR58J  
 LIMS ID: 12-22338  
 Matrix: Sediment  
 Data Release Authorized: *WWW*  
 Reported: 12/11/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/14/12  
 Date Analyzed: 11/28/12 23:58  
 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	0.77	0.65-0.89	81.9	24-169	
13C-2,3,7,8-TCDD	0.77	0.65-0.89	86.2	25-164	
13C-1,2,3,7,8-PeCDF	1.55	1.32-1.78	82.9	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	80.9	21-178	
13C-1,2,3,7,8-PeCDD	1.58	1.32-1.78	82.4	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	86.0	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	86.6	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	79.1	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	86.0	29-147	
13C-1,2,3,4,7,8-HxCDD	1.29	1.05-1.43	85.2	32-141	
13C-1,2,3,6,7,8-HxCDD	1.23	1.05-1.43	87.1	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	77.3	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	79.3	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	83.5	23-140	
13C-OCDD	0.89	0.76-1.02	67.0	17-157	
37C14-2,3,7,8-TCDD			89.9	35-197	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**

**Dioxins/Furans by EPA 1613B**

Page 1 of 1

Sample ID: SRM-111412

PSR

Lab Sample ID: SRM-111412

LIMS ID: 12-22481

Matrix: Sediment

Data Release Authorized: *mw*

Reported: 12/11/12

QC Report No: VR82-Anchor QEA, LLC.

Project: City of Kenmore Sediments

120891-01.01

Date Sampled: NA

Date Received: NA

Date Extracted: 11/14/12

Date Analyzed: 11/28/12 13:49

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	EDL	RL	Result
2,3,7,8-TCDF	0.73	0.65-0.89		0.998	0.918 J
2,3,7,8-TCDD	0.72	0.65-0.89		0.998	1.08
1,2,3,7,8-PeCDF	1.23	1.32-1.78		2.00	1.05 JEMPC
2,3,4,7,8-PeCDF	1.34	1.32-1.78		0.998	0.898 J
1,2,3,7,8-PeCDD	1.49	1.32-1.78		0.998	1.22
1,2,3,4,7,8-HxCDF	1.22	1.05-1.43		2.00	3.27
1,2,3,6,7,8-HxCDF	1.27	1.05-1.43		2.00	1.12 J
2,3,4,6,7,8-HxCDF	1.29	1.05-1.43		2.00	2.12
1,2,3,7,8,9-HxCDF	1.14	1.05-1.43		2.00	0.667 J
1,2,3,4,7,8-HxCDD	1.18	1.05-1.43		2.00	1.53 J
1,2,3,6,7,8-HxCDD	1.27	1.05-1.43		2.00	4.15
1,2,3,7,8,9-HxCDD	1.19	1.05-1.43		2.00	2.96
1,2,3,4,6,7,8-HpCDF	0.95	0.88-1.20		2.00	20.0
1,2,3,4,7,8,9-HpCDF	0.92	0.88-1.20		2.00	1.87 J
1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20		2.00	106
OCDF	0.83	0.76-1.02		4.99	58.3
OCDD	0.88	0.76-1.02		4.99	892

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		0.998	10.9	13.3
Total TCDD		0.998	4.60	5.78
Total PeCDF		2.00	15.0	17.1
Total PeCDD		0.998	5.44	7.38
Total HxCDF		2.00	32.9	33.0
Total HxCDD		2.00	36.2	
Total HpCDF		2.00	67.3	
Total HpCDD		2.00	266	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 5.84

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 5.84

Reported in pg/g

**ORGANICS ANALYSIS DATA SHEET**

**Dioxins/Furans by EPA 1613B**

Page 1 of 1

Sample ID: SRM-111412  
PSR

Lab Sample ID: SRM-111412

LIMS ID: 12-22481

Matrix: Sediment

Data Release Authorized: *mmw*

Reported: 12/11/12

QC Report No: VR82-Anchor QEA, LLC.

Project: City of Kenmore Sediments  
120891-01.01

Date Sampled: NA

Date Received: NA

Date Extracted: 11/14/12

Date Analyzed: 11/28/12 13:49

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	0.78	0.65-0.89	78.4	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	85.0	25-164	
13C-1,2,3,7,8-PeCDF	1.56	1.32-1.78	81.8	24-185	
13C-2,3,4,7,8-PeCDF	1.55	1.32-1.78	83.2	21-178	
13C-1,2,3,7,8-PeCDD	1.59	1.32-1.78	81.6	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	81.6	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	81.5	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	76.8	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	99.8	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	84.7	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	83.6	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	73.8	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	78.2	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	78.4	23-140	
13C-OCDD	0.89	0.76-1.02	61.6	17-157	
37C14-2,3,7,8-TCDD			90.6	35-197	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**

**Dioxins/Furans by EPA 1613B**

Page 1 of 1

Sample ID: OPR-111412

Lab Sample ID: OPR-111412

LIMS ID: 12-22481

Matrix: Sediment

Data Release Authorized: *mw*

Reported: 12/11/12

QC Report No: VR82-Anchor QEA, LLC.

Project: City of Kenmore Sediments

120891-01.01

Date Sampled: NA

Date Received: NA

Date Extracted: 11/14/12

Date Analyzed: 11/28/12 12:58

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	0.71	0.65-0.89	1.00	22.1
2,3,7,8-TCDD	0.79	0.65-0.89	1.00	21.2
1,2,3,7,8-PeCDF	1.46	1.32-1.78	2.00	109
2,3,4,7,8-PeCDF	1.44	1.32-1.78	1.00	108
1,2,3,7,8-PeCDD	1.56	1.32-1.78	1.00	107
1,2,3,4,7,8-HxCDF	1.18	1.05-1.43	2.00	108
1,2,3,6,7,8-HxCDF	1.16	1.05-1.43	2.00	109
2,3,4,6,7,8-HxCDF	1.18	1.05-1.43	2.00	119
1,2,3,7,8,9-HxCDF	1.18	1.05-1.43	2.00	109
1,2,3,4,7,8-HxCDD	1.25	1.05-1.43	2.00	111
1,2,3,6,7,8-HxCDD	1.26	1.05-1.43	2.00	107
1,2,3,7,8,9-HxCDD	1.22	1.05-1.43	2.00	107
1,2,3,4,6,7,8-HpCDF	0.98	0.88-1.20	2.00	118
1,2,3,4,7,8,9-HpCDF	0.98	0.88-1.20	2.00	110
1,2,3,4,6,7,8-HpCDD	1.05	0.88-1.20	2.00	105
OCDF	0.85	0.76-1.02	5.00	209
OCDD	0.89	0.76-1.02	5.00	213

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		1.00	22.8	23.4
Total TCDD		1.00	21.7	21.9
Total PeCDF		2.00	222	223
Total PeCDD		1.00	108	
Total HxCDF		2.00	446	
Total HxCDD		2.00	326	
Total HpCDF		2.00	229	
Total HpCDD		2.00	107	

Reported in pg/g

**ORGANICS ANALYSIS DATA SHEET**

Dioxins/Furans by EPA 1613B

Page 1 of 1

Sample ID: OPR-111412

Lab Sample ID: OPR-111412

LIMS ID: 12-22481

Matrix: Sediment

Data Release Authorized: *mm*

Reported: 12/11/12

QC Report No: VR82-Anchor QEA, LLC.

Project: City of Kenmore Sediments  
120891-01.01

Date Sampled: NA

Date Received: NA

Date Extracted: 11/14/12

Date Analyzed: 11/28/12 12:58

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	0.78	0.65-0.89	80.3	22-152	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	85.2	20-175	
13C-1,2,3,7,8-PeCDF	1.57	1.32-1.78	84.2	21-192	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	81.2	13-328	
13C-1,2,3,7,8-PeCDD	1.59	1.32-1.78	83.4	21-227	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	85.2	19-202	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	88.5	21-159	
13C-2,3,4,6,7,8-HxCDF	0.53	0.43-0.59	78.8	22-176	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	82.7	17-205	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	85.6	21-193	
13C-1,2,3,6,7,8-HxCDD	1.24	1.05-1.43	90.0	25-163	
13C-1,2,3,4,6,7,8-HpCDF	0.45	0.37-0.51	76.6	21-158	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	79.0	20-186	
13C-1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20	83.8	26-166	
13C-OCDD	0.90	0.76-1.02	69.2	13-198	
37C14-2,3,7,8-TCDD			90.4	31-191	

Reported in Percent Recovery

**ORGANICS ANALYSIS DATA SHEET**

**Dioxins/Furans by EPA 1613B**

Page 1 of 1

**Sample ID: OPR-111412**

Lab Sample ID: OPR-111412

LIMS ID: 12-22481

Matrix: Sediment

Data Release Authorized: *mw*

Reported: 12/11/12

QC Report No: VR82-Anchor QEA, LLC.

Project: City of Kenmore Sediments  
120891-01.01

Date Sampled: NA

Date Received: NA

Date Extracted: 11/14/12

Date Analyzed: 11/28/12 12:58

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	22.1	20.0	110	75-158
2,3,7,8-TCDD	21.2	20.0	106	67-158
1,2,3,7,8-PeCDF	109	100	109	80-134
2,3,4,7,8-PeCDF	108	100	108	68-160
1,2,3,7,8-PeCDD	107	100	107	70-142
1,2,3,4,7,8-HxCDF	108	100	108	72-134
1,2,3,6,7,8-HxCDF	109	100	109	84-130
2,3,4,6,7,8-HxCDF	119	100	119	70-156
1,2,3,7,8,9-HxCDF	109	100	109	78-130
1,2,3,4,7,8-HxCDD	111	100	111	70-164
1,2,3,6,7,8-HxCDD	107	100	107	76-134
1,2,3,7,8,9-HxCDD	107	100	107	64-162
1,2,3,4,6,7,8-HpCDF	118	100	118	82-132
1,2,3,4,7,8,9-HpCDF	110	100	110	78-138
1,2,3,4,6,7,8-HpCDD	105	100	105	70-140
OCDF	209	200	104	63-170
OCDD	213	200	106	78-144

Reported in pg/g

4DF - FORM IV-HR CDD  
 CDD/CDF METHOD BLANK SUMMARY  
 HIGH RESOLUTION

Blank No.

VR58MB

Lab Name: ANALYTICAL RESOURCES, INC.  
 Lab Code: VR58  
 Matrix: (Soil/Water/Ash/Tissue/Oil) SOIL  
 Sample wt/vol: 10 (g/ml) g  
 Water Sample Prep: (sep/spe)  
 GC Column: RTX-DIOXIN2 ID: 0.25 mm  
 Instrument ID: AUTOSPEC1

Contract: ANCHOR  
 Project: CITY OF KENMORE  
 Lab Sample ID: VR58MBS  
 Lab File ID: 12112804  
 Date Received: 08-NOV-12  
 Date Extracted: 14-NOV-12  
 Date Analyzed: 28-NOV-12

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
VR58OPR	VR58OPR	12112805	11/28/12
VR58SRM	VR58SRM	12112806	11/28/12
SG-10-S-E-121107	VR58A	12112807	11/28/12
SG-11-S-E-121107	VR58B	12112808	11/28/12
SG-12-S-E-121107	VR58C	12112809	11/28/12
SG-13-S-E-121107	VR58D	12112810	11/28/12
SG-13-S-E-DUP-121107	VR58E	12112812	11/28/12
SG-14-S-E-121107	VR58F	12112813	11/28/12
SG-15-S-E-121107	VR58G	12112814	11/28/12
SG-16-S-E-121107	VR58H	12112815	11/28/12
SG-17-S-E-121107	VR58I	12112816	11/28/12
SG-01-S-C-121107	VR58J	12112817	11/28/12
SG-02-S-C-1211	VR82A	12112818	11/29/12
SG-03-S-C-1211	VR82B	12112819	11/29/12
SG-04-S-C-1211	VR82C	12112821	11/29/12
SG-04-S-C-1211	VR82CDUP	12112822	11/29/12
SG-05-S-C-1211	VR82D	12112823	11/29/12
SG-06-S-C-1211	VR82E	12112824	11/29/12
SG-07-S-C-1211	VR82F	12112825	11/29/12
SG-07-S-C-DUP-1211	VR82G	12112826	11/29/12
SG-08-S-C-1211	VR82H	12112827	11/29/12
SG-09-S-C-1211	VR82I	12112828	11/29/12
SG-11-S-E-121107	VR58B 5X	12112830	11/29/12
SG-12-S-E-121107	VR58C 5X	12112831	11/29/12
SG-13-S-E-121107	VR58D 5X	12112832	11/29/12
SG-02-S-C-1211	VR82A 5X	12112833	11/29/12

**ORGANICS ANALYSIS DATA SHEET**

**Dioxins/Furans by EPA 1613B**

Page 1 of 1

Sample ID: MB-111412

Lab Sample ID: MB-111412

QC Report No: VR82-Anchor QEA, LLC.

LIMS ID: 12-22481

Project: City of Kenmore Sediments

Matrix: Sediment

120891-01.01

Data Release Authorized: *MW*

Date Sampled: NA

Reported: 12/11/12

Date Received: NA

Date Extracted: 11/14/12

Sample Amount: 10.0 g-dry-wt

Date Analyzed: 11/28/12 12:05

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	0.71	0.65-0.89		1.00	0.0320 J
2,3,7,8-TCDD		0.65-0.89	0.164	1.00	< 0.164 U
1,2,3,7,8-PeCDF		1.32-1.78	0.0340	2.00	< 0.0340 U
2,3,4,7,8-PeCDF		1.32-1.78	0.0340	1.00	< 0.0340 U
1,2,3,7,8-PeCDD		1.32-1.78	0.0300	1.00	< 0.0300 U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0260	2.00	< 0.0260 U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0240	2.00	< 0.0240 U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0280	2.00	< 0.0280 U
1,2,3,7,8,9-HxCDF	1.14	1.05-1.43		2.00	0.0260 J
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0300	2.00	< 0.0300 U
1,2,3,6,7,8-HxCDD		1.05-1.43	0.0300	2.00	< 0.0300 U
1,2,3,7,8,9-HxCDD		1.05-1.43	0.0300	2.00	< 0.0300 U
1,2,3,4,6,7,8-HpCDF	0.51	0.88-1.20		2.00	0.0640 JEMPC
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.0200	2.00	< 0.0200 U
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20		2.00	0.248 J
OCDF	0.52	0.76-1.02		5.00	0.0560 JEMPC
OCDD	0.86	0.76-1.02		5.00	1.50 J

Homologue Group	EDL	RL	W/O EMPC	WITH EMPC
Total TCDF		1.00	0.0320	0.0440
Total TCDD	0.164	1.00	< 0.164	0.0340 U
Total PeCDF	0.0340	2.00	< 0.0340	U
Total PeCDD	0.0300	1.00	< 0.0300	U
Total HxCDF		2.00	0.0260	
Total HxCDD	0.0300	2.00	0.0340	0.0880
Total HpCDF		2.00	< 0.0200	0.0580 U
Total HpCDD		2.00	0.550	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.01

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.12

Reported in pg/g



**ORGANICS ANALYSIS DATA SHEET**

**Dioxins/Furans by EPA 1613B**

Page 1 of 1

Sample ID: MB-111412

Lab Sample ID: MB-111412

LIMS ID: 12-22481

Matrix: Sediment

Data Release Authorized: *MW*

Reported: 12/11/12

QC Report No: VR82-Anchor QEA, LLC.

Project: City of Kenmore Sediments

120891-01.01

Date Sampled: NA

Date Received: NA

Date Extracted: 11/14/12

Date Analyzed: 11/28/12 12:05

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	0.77	0.65-0.89	89.8	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	96.4	25-164	
13C-1,2,3,7,8-PeCDF	1.57	1.32-1.78	93.9	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	89.8	21-178	
13C-1,2,3,7,8-PeCDD	1.57	1.32-1.78	91.6	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	94.3	26-152	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	101	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	89.8	28-136	
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	91.8	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	98.0	32-141	
13C-1,2,3,6,7,8-HxCDD	1.25	1.05-1.43	103	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	85.3	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	86.5	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	93.8	23-140	
13C-OCDD	0.88	0.76-1.02	80.6	17-157	
37C14-2,3,7,8-TCDD			103	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: ANCHOR  
Lab Code: VR58 Project: CITY OF KENMORE  
GC Column: RTX-DIOXIN2 ID: 0.25 mm Lab File ID: 12112802  
Instrument ID: AUTOSPEC1 Date Analyzed: 28-NOV-12  
Time Analyzed: 10:02

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	23.88	27.32
TCDF	22.60	27.57
PeCDD	29.10	32.22
PeCDF	27.44	32.60
HxCDD	34.31	37.03
HxCDF	33.52	37.48
HpCDD	40.09	41.36
HpCDF	39.54	42.24

5DFB - FORM V-HR CDD-2  
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY  
HIGH RESOLUTION

Standard No.

TETRA ISC

Lab Name: ANALYTICAL RESOURCES, INC.  
Lab Code: VR58  
GC Column: RTX-DIOXIN2 ID: .25 mm  
Instrument ID:  
AUTOSPEC1

Contract: ANCHOR  
Project: CITY OF KENMORE  
Lab File ID: 12112803  
Date Analyzed: 28-NOV-12  
Time Analyzed: 10:52

Percent Valley determination for RTX-DIOXIN2 column -  
For the column performance solution beginning 12-hour period:

1278-TCDD/2378-TCDD: 8.5

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: 8.2

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 ANALYTICAL SEQUENCE SUMMARY  
 HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC.  
 Lab Code: VR58  
 GC Column: RTX-DIOXIN2 ID: 0.25 mm  
 Init. Calib. Date(s): 23-NOV-12  
 Init. Calib. Times: 14:07 to 18:30

Contract: ANCHOR  
 Project: CITY OF KENMORE  
 Instrument ID: AUTOSPEC1

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
I7214	CS3	12112802	11/23/12	1002
1997-2	TETRA ISC	12112803	11/23/12	1052
VR58MB	VR58MBS	12112804	11/23/12	1206
VR58OPR	VR58OPR	12112805	11/28/12	1258
VR58SRM	VR58SRM	12112806	11/28/12	1349
SG-10-S-E-121107	VR58A	12112807	11/28/12	1506
SG-11-S-E-121107	VR58B	12112808	11/28/12	1556
SG-12-S-E-121107	VR58C	12112809	11/28/12	1648
SG-13-S-E-121107	VR58D	12112810	11/28/12	1741
I7214	CS3	12112811	11/28/12	1833
SG-13-S-E-DUP-121107	VR58E	12112812	11/28/12	1933
SG-14-S-E-121107	VR58F	12112813	11/28/12	2029
SG-15-S-E-121107	VR58G	12112814	11/28/12	2121
SG-16-S-E-121107	VR58H	12112815	11/28/12	2213
SG-17-S-E-121107	VR58I	12112816	11/28/12	2306
SG-01-S-C-121107	VR58J	12112817	11/28/12	2358
SG-02-S-C-1211	VR82A	12112818	11/29/12	0050
SG-03-S-C-1211	VR82B	12112819	11/29/12	0143
I7214	CS3	12112820	11/28/12	0236
SG-04-S-C-1211	VR82C	12112821	11/29/12	0335
SG-04-S-C-1211	VR82CDUP	12112822	11/29/12	0431
SG-05-S-C-1211	VR82D	12112823	11/29/12	0523
SG-06-S-C-1211	VR82E	12112824	11/29/12	0615
SG-07-S-C-1211	VR82F	12112825	11/29/12	0707
SG-07-S-C-DUP-1211	VR82G	12112826	11/29/12	0800
SG-08-S-C-1211	VR82H	12112827	11/29/12	0852
SG-09-S-C-1211	VR82I	12112828	11/29/12	0944

5DFB - FORM V-HR CDD-3  
CDD/CDF ANALYTICAL SEQUENCE SUMMARY  
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC.

Contract: ANCHOR

Lab Code: VR58

Project: CITY OF KENMORE

GC Column: RTX-DIOXIN2 ID: 0.25 mm

Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 23-NOV-12

Init: Calib. Times: 14:07 to 18:30

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
I7214	CS3	12112829	11/29/12	1037
SG-11-S-E-121107	VR58B 5X	12112830	11/29/12	1200
SG-12-S-E-121107	VR58C 5X	12112831	11/29/12	1251
SG-13-S-E-121107	VR58D 5X	12112832	11/29/12	1343
SG-02-S-C-1211	VR82A 5X	12112833	11/29/12	1435
I7214	CS3	12112835	11/29/12	1620

**6DFA - Form VI-HR CDD-1**  
**CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY**  
**HIGH RESOLUTION**

Lab Name:	ARI	Contract:	ANCHOR
Lab Code:	VR58	Case No.:	CITY OF KENMORE
TO No :		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init. Calib. Date CSL:	23-Nov-12	Init. Calib. Time CSL:	14:07:24
Init. Calib. Date CS1:	23-Nov-12	Init. Calib. Time CS1:	15:02:34
Init. Calib. Date CS2:	23-Nov-12	Init. Calib. Time CS2:	15:55:02
Init. Calib. Date CS3:	23-Nov-12	Init. Calib. Time CS3:	16:45:35
Init. Calib. Date CS4:	23-Nov-12	Init. Calib. Time CS4:	17:37:45
Init. Calib. Date CS5:	23-Nov-12	Init. Calib. Time CS5:	18:30:06

Target Analytes	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	1.14	1.03	1.01	1.03	1.04	1.05	1.05	4.5	20.0
2378-TCDF	0.97	0.80	0.86	0.86	0.88	0.89	0.88	6.3	20.0
12378-PeCDF	0.90	0.89	0.87	0.89	0.91	0.91	0.90	1.6	20.0
12378-PeCDD	0.99	0.98	0.99	0.99	1.01	1.03	1.00	1.7	20.0
23478-PeCDF	0.97	0.89	0.90	0.92	0.94	0.94	0.93	3.2	20.0
123478-HxCDF	1.06	1.05	1.05	1.05	1.09	1.11	1.07	2.1	20.0
123678-HxCDF	1.02	1.01	1.01	1.04	1.06	1.07	1.03	2.4	20.0
123478-HxCDD	0.91	0.96	0.97	0.98	1.00	1.00	0.97	3.4	20.0
123678-HxCDD	0.89	0.92	0.90	0.92	0.92	0.95	0.92	2.0	20.0
123789-HxCDD <sup>2</sup>	0.95	0.91	0.92	0.95	0.91	0.95	0.93	2.2	20.0
234678-HxCDF	1.02	1.01	1.03	1.03	1.06	1.07	1.04	2.1	20.0
123789-HxCDF	0.97	0.96	0.99	0.98	1.01	1.02	0.99	2.3	20.0
1234678-HpCDF	1.25	1.21	1.20	1.22	1.25	1.25	1.23	1.9	20.0
1234678-HpCDD	1.08	0.98	0.99	1.00	1.02	1.03	1.02	3.4	20.0
1234789-HpCDF	1.19	1.20	1.20	1.21	1.25	1.25	1.22	2.2	20.0
OCDD	1.04	1.01	0.98	0.99	1.01	1.02	1.01	2.3	20.0
OCDF <sup>1</sup>	1.11	1.10	1.12	1.15	1.16	1.18	1.14	2.7	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	0.95	0.91	0.97	0.94	0.89	1.00	0.95	4.1	35.0
13C-12378-PeCDD	0.72	0.68	0.72	0.68	0.67	0.86	0.72	9.7	35.0
13C-123478-HxCDD	0.97	0.99	0.97	0.98	1.02	1.00	0.99	2.0	35.0
13C-123678-HxCDD	1.00	1.02	1.02	1.01	1.06	1.03	1.02	2.0	35.0
13C-1234678-HpCDD	0.85	0.85	0.89	0.86	0.87	0.88	0.87	2.0	35.0
13C-OCDD	0.73	0.73	0.80	0.72	0.80	0.84	0.77	6.4	35.0
13C-2378-TCDF	1.48	1.43	1.54	1.47	1.40	1.52	1.47	3.5	35.0
13C-12378-PeCDF	1.13	1.09	1.15	1.09	1.09	1.33	1.15	8.2	35.0
13C-23478-PeCDF	1.11	1.05	1.13	1.05	1.04	1.30	1.11	8.7	35.0
13C-123478-HxCDF	1.16	1.24	1.20	1.22	1.25	1.18	1.21	3.0	35.0
13C-123678-HxCDF	1.22	1.29	1.25	1.27	1.33	1.25	1.27	3.1	35.0
13C-234678-HxCDF	1.21	1.24	1.23	1.24	1.27	1.22	1.24	1.8	35.0
13C-123789-HxCDF	1.11	1.10	1.13	1.11	1.09	1.10	1.11	1.0	35.0
13C-1234678-HpCDF	1.03	1.04	1.06	1.04	1.08	1.06	1.05	1.7	35.0
13C-1234789-HpCDF	0.80	0.79	0.86	0.81	0.81	0.83	0.81	3.0	35.0

**6DFB - Form VI-HR CDD-2**  
**CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY**  
**HIGH RESOLUTION**

Lab Name:	ARI	Contract:	ANCHOR
Lab Code:	VR58	Case No.:	CITY OF KENMORE
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init. Calib. Date CSL:	23-Nov-12	Init. Calib. Time CSL	14:07:24
Init. Calib. Date CS1:	23-Nov-12	Init. Calib. Time CS1:	15:02:34
Init. Calib. Date CS2:	23-Nov-12	Init. Calib. Time CS2:	15:55:02
Init. Calib. Date CS3:	23-Nov-12	Init. Calib. Time CS3:	16:45:35
Init. Calib. Date CS4:	23-Nov-12	Init. Calib. Time CS4:	17:37:45
Init. Calib. Date CS5:	23-Nov-12	Init. Calib. Time CS5:	18:30:06

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits <sup>#</sup>
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0.77	0.78	0.75	0.77	0.78	0.77		0.65 - 0.89
2378-TCDF	304/306	0.76	0.74	0.72	0.74	0.75	0.75		0.65 - 0.89
12378-PeCDF	340/342	1.47	1.50	1.46	1.48	1.49	1.46		1.32 - 1.78
12378-PeCDD	356/358	1.48	1.57	1.54	1.56	1.55	1.55		1.32 - 1.78
23478-PeCDF	340/342	1.49	1.43	1.45	1.47	1.48	1.45		1.32 - 1.78
123478-HxCDF	374/376	1.23	1.16	1.19	1.19	1.19	1.19		1.05 - 1.43
123678-HxCDF	374/376	1.18	1.15	1.20	1.18	1.19	1.18		1.05 - 1.43
123478-HxCDD	390/392	1.31	1.26	1.26	1.22	1.25	1.25		1.05 - 1.43
123678-HxCDD	390/392	1.37	1.26	1.23	1.24	1.24	1.24		1.05 - 1.43
123789-HxCDD	390/392	1.13	1.21	1.18	1.25	1.24	1.24		1.05 - 1.43
234678-HxCDF	374/376	1.15	1.13	1.19	1.19	1.18	1.19		1.05 - 1.43
123789-HxCDF	374/376	1.24	1.20	1.20	1.20	1.18	1.19		1.05 - 1.43
1234678-HpCDF	408/410	1.05	0.99	0.97	0.98	0.99	1.00		0.89 - 1.21
1234678-HpCDD	424/426	0.90	0.98	1.05	1.04	1.04	1.04		0.89 - 1.21
1234789-HpCDF	408/410	0.96	0.96	0.98	0.98	0.99	1.00		0.89 - 1.21
OCDD	458/460	0.92	0.92	0.89	0.89	0.88	0.89		0.76 - 1.02
OCDF	442/444	0.81	0.88	0.86	0.87	0.87	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	0.78	0.78	0.76	0.78	0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	1.59	1.57	1.57	1.58	1.57	1.57		1.32 - 1.78
13C-123478-HxCDD	402/404	1.27	1.26	1.27	1.28	1.26	1.26		1.05 - 1.43
13C-123678-HxCDD	402/404	1.24	1.24	1.25	1.24	1.25	1.25		1.05 - 1.43
13C-1234678-HpCDD	436/438	1.06	1.05	1.06	1.05	1.03	1.05		0.89 - 1.21
13C-OCDD	470/472	0.89	0.90	0.89	0.89	0.89	0.89		0.76 - 1.02
13C-2378-TCDF	316/318	0.78	0.78	0.79	0.78	0.79	0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.55	1.56	1.57	1.57	1.55	1.56		1.32 - 1.78
13C-23478-PeCDF	352/354	1.56	1.56	1.56	1.55	1.56	1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	0.52	0.52	0.52	0.52	0.51	0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	0.53	0.52	0.52	0.52	0.52	0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	0.52	0.52	0.52	0.52	0.52	0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	0.52	0.52	0.52	0.52	0.53	0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.45	0.45	0.44	0.45	0.45	0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.45	0.45	0.44	0.44	0.45	0.45		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	0.79	0.79	0.79	0.79	0.79	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	1.26	1.25	1.25	1.25	1.23	1.25		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	ARI	Contract.	ANCHOR
Lab Code	VR58	Case No.	CITY OF KENMORE
TO No		SDG No.	
GC Column:	RTX-DIOXIN2	ID (mm).	25
Instrument ID:	AUTOSPEC1	Lab File ID	12112802
Date Analysed	28-Nov-12	Time Analysed	10 02 21
Init Calib Date	23-NOV-12	Init Calib Time	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
2378-TCDD	320/322	1.00	1.05	-4.9		0.78		0.65 - 0.89
2378-TCDF	304/306	0.86	0.88	-1.8		0.73		0.65 - 0.89
12378-PeCDF	340/342	0.89	0.90	-1.2		1.46		1.32 - 1.78
12378-PeCDD	356/358	0.98	1.00	-1.3		1.55		1.32 - 1.78
23478-PeCDF	340/342	0.92	0.93	-1.0		1.49		1.32 - 1.78
123478-HxCDF	374/376	1.06	1.07	-0.5		1.19		1.05 - 1.43
123678-HxCDF	374/376	1.05	1.03	1.2		1.20		1.05 - 1.43
123478-HxCDD	390/392	0.96	0.97	-1.1		1.24		1.05 - 1.43
123678-HxCDD	390/392	0.93	0.92	1.1		1.23		1.05 - 1.43
123789-HxCDD	390/392	0.94	0.93	1.2		1.24		1.05 - 1.43
234678-HxCDF	374/376	1.05	1.04	0.9		1.19		1.05 - 1.43
123789-HxCDF	374/376	0.99	0.99	0.6		1.20		1.05 - 1.43
1234678-HpCDF	408/410	1.21	1.23	-2.1		0.99		0.89 - 1.21
1234678-HpCDD	424/426	1.01	1.02	-0.7		1.03		0.89 - 1.21
1234789-HpCDF	408/410	1.24	1.22	1.6		0.97		0.89 - 1.21
OCDD	458/460	0.99	1.01	-1.8		0.89		0.76 - 1.02
OCDF	442/444	1.15	1.14	0.9		0.85		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
13C-2378-TCDD	332/334	0.95	0.95	0.7		0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	0.69	0.72	-4.6		1.58		1.32 - 1.78
13C-123478-HxCDD	402/404	0.97	0.99	-1.9		1.26		1.05 - 1.43
13C-123678-HxCDD	402/404	1.02	1.02	-0.8		1.25		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.86	0.87	-0.4		1.05		0.89 - 1.21
13C-OCDD	470/472	0.74	0.77	-3.8		0.90		0.76 - 1.02
13C-2378-TCDF	316/318	1.50	1.47	1.6		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.11	1.15	-3.4		1.57		1.32 - 1.78
13C-23478-PeCDF	352/354	1.07	1.11	-3.5		1.57		1.32 - 1.78
13C-123478-HxCDF	384/386	1.17	1.21	-3.2		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1.25	1.27	-1.2		0.51		0.43 - 0.59
13C-234678-HxCDF	384/386	1.21	1.24	-1.8		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	1.11	1.11	0.2		0.53		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.04	1.05	-1.1		0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.82	0.81	0.5		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
37CL-2378-TCDD	328	1.04	1.04	-0.2		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ion Ratio Flag <sup>#</sup>	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	1.25		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:	ARI	Contract:	ANCHOR
Lab Code:	VR58	Case No.:	CITY OF KENMORE
TO No.		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12112802
Date Analysed:	28-Nov-12	Time Analysed:	10:02:21
Init. Calib. Date:	23-NOV-12	Init. Calib. Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	26.74
2378-TCDF	1.00	26.09
12378-PeCDF	1.00	30.23
12378-PeCDD	1.00	31.83
23478-PeCDF	1.00	31.57
123478-HxCDF	1.00	35.24
123678-HxCDF	1.00	35.40
123478-HxCDD	1.00	36.47
123678-HxCDD	1.00	36.60
123789-HxCDD	1.01	37.03
234678-HxCDF	1.00	36.34
123789-HxCDF	1.00	37.48
1234678-HpCDF	1.00	39.54
1234678-HpCDD	1.00	41.36
1234789-HpCDF	1.00	42.24
OCDD	1.00	47.28
OCDF	1.01	47.55

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26.71
13C-12378-PeCDD	1.23	31.81
13C-123478-HxCDD	0.98	36.46
13C-123678-HxCDD	0.99	36.59
13C-1234678-HpCDD	1.12	41.34
13C-OCDD	1.28	47.25
13C-2378-TCDF	1.01	26.08
13C-12378-PeCDF	1.17	30.21
13C-23478-PeCDF	1.22	31.56
13C-123478-HxCDF	0.95	35.23
13C-123678-HxCDF	0.96	35.38
13C-234678-HxCDF	0.98	36.32
13C-123789-HxCDF	1.01	37.46
13C-1234678-HpCDF	1.07	39.53
13C-1234789-HpCDF	1.14	42.23

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	26.74

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25.90
13C-123789-HxCDD	0.00	37.02

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

**7DFA - Form VII-HR CDD-1  
CDD/CDF CONTINUING CALIBRATION SUMMARY  
HIGH RESOLUTION**

Lab Name	ARI	Contract	ANCHOR
Lab Code	VR58	Case No	CITY OF KENMORE
TO No		SDG No.	
GC Column	RTX-DIOXIN2	ID (mm)	25
Instrument ID	AUTOSPEC1	Lab File ID.	12112811
Date Analysed	28-Nov-12	Time Analysed	18:33:14
Init Calib Date	23-NOV-12	Init Calib Time.	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
2378-TCDD	320/322	1.01	1.05	-4.1		0.77		0.65 - 0.89
2378-TCDF	304/306	0.86	0.88	-1.6		0.72		0.65 - 0.89
12378-PeCDF	340/342	0.90	0.90	0.2		1.49		1.32 - 1.78
12378-PeCDD	356/358	0.98	1.00	-2.0		1.57		1.32 - 1.78
23478-PeCDF	340/342	0.91	0.93	-1.6		1.47		1.32 - 1.78
123478-HxCDF	374/376	1.07	1.07	-0.1		1.18		1.05 - 1.43
123678-HxCDF	374/376	1.03	1.03	-0.2		1.17		1.05 - 1.43
123478-HxCDD	390/392	0.97	0.97	-0.3		1.25		1.05 - 1.43
123678-HxCDD	390/392	0.93	0.92	1.7		1.23		1.05 - 1.43
123789-HxCDD	390/392	0.98	0.93	5.6		1.23		1.05 - 1.43
234678-HxCDF	374/376	1.05	1.04	1.2		1.18		1.05 - 1.43
123789-HxCDF	374/376	0.99	0.99	0.2		1.18		1.05 - 1.43
1234678-HpCDF	408/410	1.21	1.23	-1.7		0.99		0.89 - 1.21
1234678-HpCDD	424/426	1.01	1.02	-1.1		1.05		0.89 - 1.21
1234789-HpCDF	408/410	1.22	1.22	0.2		0.97		0.89 - 1.21
OCDD	458/460	1.00	1.01	-1.1		0.90		0.76 - 1.02
OCDF	442/444	1.12	1.14	-1.2		0.86		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
13C-2378-TCDD	332/334	1.00	0.95	5.4		0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	0.81	0.72	12.9		1.57		1.32 - 1.78
13C-123478-HxCDD	402/404	0.95	0.99	-3.8		1.26		1.05 - 1.43
13C-123678-HxCDD	402/404	0.97	1.02	-5.2		1.24		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.86	0.87	-1.2		1.04		0.89 - 1.21
13C-OCDD	470/472	0.72	0.77	-6.9		0.90		0.76 - 1.02
13C-2378-TCDF	316/318	1.55	1.47	5.1		0.79		0.65 - 0.89
13C-12378-PeCDF	352/354	1.24	1.15	7.8		1.57		1.32 - 1.78
13C-23478-PeCDF	352/354	1.22	1.11	9.8		1.57		1.32 - 1.78
13C-123478-HxCDF	384/386	1.15	1.21	-4.8		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1.20	1.27	-5.5		0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	1.18	1.24	-4.9		0.53		0.43 - 0.59
13C-123789-HxCDF	384/386	1.11	1.11	-0.1		0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.00	1.05	-4.5		0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.81	0.81	-0.5		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
37CL-2378-TCDD	328	1.11	1.04	6.6		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ion Ratio Flag <sup>#</sup>	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA		0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA		1.25		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:	ARI	Contract:	ANCHOR
Lab Code:	VR58	Case No.:	CITY OF KENMORE
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12112811
Date Analysed:	28-Nov-12	Time Analysed:	18:33.14
Init. Calib. Date:	23-NOV-12	Init. Calib. Time:	

Target Analytes	RRT <sup>#</sup>	RT
2378-TCDD	1.00	
2378-TCDF	1.00	26.71
12378-PeCDF	1.00	26.06
12378-PeCDD	1.00	30.21
23478-PeCDF	1.00	31.81
123478-HxCDF	1.00	31.56
123678-HxCDF	1.00	35.23
123478-HxCDD	1.00	35.39
123678-HxCDD	1.00	36.46
123789-HxCDD	1.01	36.59
234678-HxCDF	1.00	37.02
123789-HxCDF	1.00	36.33
1234678-HpCDF	1.00	37.47
1234678-HpCDD	1.00	39.53
1234789-HpCDF	1.00	41.35
OCDD	1.00	42.23
OCDF	1.01	47.26
		47.53

Labeled Compounds	RRT <sup>#</sup>	RT
13C-2378-TCDD	1.03	
13C-12378-PeCDD	1.23	26.69
13C-123478-HxCDD	0.99	31.79
13C-123678-HxCDD	0.99	36.45
13C-1234678-HpCDD	1.12	36.58
13C-OCDD	1.28	41.33
13C-2378-TCDF	1.01	47.24
13C-12378-PeCDF	1.17	26.05
13C-23478-PeCDF	1.22	30.19
13C-123478-HxCDF	0.95	31.54
13C-123678-HxCDF	0.96	35.21
13C-234678-HxCDF	0.98	35.36
13C-123789-HxCDF	1.01	36.31
13C-1234678-HpCDF	1.07	37.45
13C-1234789-HpCDF	1.14	39.52
		42.21

Clean up Standard	RRT <sup>#</sup>	RT
37CL-2378-TCDD	1.03	26.71

Internal Standards	RRT <sup>#</sup>	RT
13C-1234-TCDD	0.00	25.88
13C-123789-HxCDD	0.00	37.00

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound).

**7DFA - Form VII-HR CDD-1  
CDD/CDF CONTINUING CALIBRATION SUMMARY  
HIGH RESOLUTION**

Lab Name	ARI	Contract:	ANCHOR
Lab Code	VR58	Case No	CITY OF KENMORE
TO No		SDG No	
GC Column	RTX-DIOXIN2	ID (mm):	.25
Instrument ID	AUTOSPEC1	Lab File ID	12112820
Date Analysed	29-Nov-12	Time Analysed	02 35 10
Init Calib.Date:	23-NOV-12	Init Calib Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
2378-TCDD	320/322	1.03	1.05					
2378-TCDF	304/306	0.86	0.88	-1.5		0.78		0.65 - 0.89
12378-PeCDF	340/342	0.89	0.90	-2.1		0.73		0.65 - 0.89
12378-PeCDD	356/358	0.99	1.00	-0.4		1.49		1.32 - 1.78
23478-PeCDF	340/342	0.91	0.93	-0.9		1.55		1.32 - 1.78
123478-HxCDF	374/376	1.07	1.07	-1.6		1.47		1.32 - 1.78
123678-HxCDF	374/376	1.04	1.03	-0.3		1.19		1.05 - 1.43
123478-HxCDD	390/392	0.98	0.97	0.1		1.17		1.05 - 1.43
123678-HxCDD	390/392	0.91	0.92	1.3		1.25		1.05 - 1.43
123789-HxCDD	390/392	0.94	0.93	-0.5		1.24		1.05 - 1.43
234678-HxCDF	374/376	1.04	1.04	1.1		1.24		1.05 - 1.43
123789-HxCDF	374/376	1.00	0.99	0.0		1.19		1.05 - 1.43
1234678-HpCDF	408/410	1.20	1.23	1.2		1.20		1.05 - 1.43
1234678-HpCDD	424/426	0.99	1.02	-2.3		0.99		0.89 - 1.21
1234789-HpCDF	408/410	1.21	1.22	-2.3		1.04		0.89 - 1.21
OCDD	458/460	1.00	1.01	-0.6		0.99		0.89 - 1.21
OCDF	442/444	1.12	1.14	-1.3		0.89		0.76 - 1.02
						0.86		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
13C-2378-TCDD	332/334	0.97	0.95					
13C-12378-PeCDD	368/370	0.77	0.72	2.6		0.78		0.65 - 0.89
13C-123478-HxCDD	402/404	0.98	0.99	6.4		1.57		1.32 - 1.78
13C-123678-HxCDD	402/404	1.02	1.02	-1.2		1.25		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.84	0.87	-0.9		1.24		1.05 - 1.43
13C-OCDD	470/472	0.71	0.77	-3.1		1.03		0.89 - 1.21
13C-2378-TCDF	316/318	1.55	1.47	-8.3		0.89		0.76 - 1.02
13C-12378-PeCDF	352/354	1.17	1.15	5.6		0.78		0.65 - 0.89
13C-23478-PeCDF	352/354	1.17	1.11	2.3		1.57		1.32 - 1.78
13C-123478-HxCDF	384/386	1.20	1.21	5.3		1.56		1.32 - 1.78
13C-123678-HxCDF	384/386	1.25	1.27	-0.6		0.51		0.43 - 0.59
13C-234678-HxCDF	384/386	1.23	1.24	-1.4		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	1.09	1.11	-0.3		0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.00	1.05	-1.1		0.52		0.43 - 0.59
13C-1234789-HpCDF	418/420	0.80	0.81	-5.2		0.45		0.37 - 0.51
				-2.3		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
37CL-2378-TCDD	328	1.07	1.04	3.0		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ion Ratio Flag <sup>#</sup>	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA		0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA		1.24		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:  
Lab Code:  
TO No..  
GC Column:  
Instrument ID  
Date Analysed  
Init Calib.Date:

ARI  
VR58  
  
RTX-DIOXIN2  
AUTOSPEC1  
29-Nov-12  
23-NOV-12

Contract:  
Case No :  
SDG No :  
ID (mm):  
Lab File ID:  
Time Analysed  
Init.Calib.Time:

ANCHOR  
CITY OF KENMORE  
  
.25  
12112820  
02:35:10

Target Analytes	RRT#	RT
2378-TCDD	1.00	
2378-TCDF	1.00	26.71
12378-PeCDF	1.00	26.06
12378-PeCDD	1.00	30.21
23478-PeCDF	1.00	31.81
123478-HxCDF	1.00	31.55
123678-HxCDF	1.00	35.23
123478-HxCDD	1.00	35.38
123678-HxCDD	1.00	36.46
123789-HxCDD	1.00	36.59
234678-HxCDF	1.01	37.02
123789-HxCDF	1.00	36.32
1234678-HpCDF	1.00	37.47
1234678-HpCDD	1.00	39.53
1234789-HpCDF	1.00	41.34
OCDD	1.00	42.23
OCDF	1.01	47.25
		47.52

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	
13C-12378-PeCDD	1.23	26.69
13C-123478-HxCDD	0.98	31.79
13C-123678-HxCDD	0.99	36.44
13C-1234678-HpCDD	1.12	36.57
13C-OCDD	1.28	41.33
13C-2378-TCDF	1.01	47.23
13C-12378-PeCDF	1.17	26.05
13C-23478-PeCDF	1.22	30.19
13C-123478-HxCDF	0.95	31.54
13C-123678-HxCDF	0.96	35.21
13C-234678-HxCDF	0.98	35.36
13C-123789-HxCDF	1.01	36.31
13C-1234678-HpCDF	1.07	37.45
13C-1234789-HpCDF	1.14	39.51
		42.20

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	26.71

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	
13C-123789-HxCDD	0.00	25.88
		37.00

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

**7DFA - Form VII-HR CDD-1  
CDD/CDF CONTINUING CALIBRATION SUMMARY  
HIGH RESOLUTION**

Lab Name	ARI	Contract	ANCHOR
Lab Code	VR58	Case No.	CITY OF KENMORE
TO No.		SDG No	
GC Column	RTX-DIOXIN2	ID (mm)	25
Instrument ID	AUTOSPEC1	Lab File ID.	12112829
Date Analysed	29-Nov-12	Time Analysed	10.37:05
Init Calib Date	23-NOV-12	Init Calib Time	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
2378-TCDD	320/322	1.03	1.05	-1.8		0.78		0.65 - 0.89
2378-TCDF	304/306	0.85	0.88	-2.7		0.71		0.65 - 0.89
12378-PeCDF	340/342	0.89	0.90	-1.0		1.47		1.32 - 1.78
12378-PeCDD	356/358	0.97	1.00	-2.5		1.55		1.32 - 1.78
23478-PeCDF	340/342	0.91	0.93	-1.6		1.47		1.32 - 1.78
123478-HxCDF	374/376	1.05	1.07	-1.4		1.17		1.05 - 1.43
123678-HxCDF	374/376	1.03	1.03	-0.1		1.20		1.05 - 1.43
123478-HxCDD	390/392	0.98	0.97	1.4		1.25		1.05 - 1.43
123678-HxCDD	390/392	0.92	0.92	0.3		1.24		1.05 - 1.43
123789-HxCDD	390/392	0.93	0.93	0.0		1.21		1.05 - 1.43
234678-HxCDF	374/376	1.03	1.04	-0.5		1.17		1.05 - 1.43
123789-HxCDF	374/376	0.98	0.99	-0.2		1.17		1.05 - 1.43
1234678-HpCDF	408/410	1.22	1.23	-0.8		0.99		0.89 - 1.21
1234678-HpCDD	424/426	1.00	1.02	-1.2		1.05		0.89 - 1.21
1234789-HpCDF	408/410	1.21	1.22	-0.2		0.95		0.89 - 1.21
OCDD	458/460	1.00	1.01	-1.3		0.90		0.76 - 1.02
OCDF	442/444	1.12	1.14	-1.2		0.87		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
13C-2378-TCDD	332/334	0.98	0.95	3.3		0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	0.74	0.72	2.4		1.57		1.32 - 1.78
13C-123478-HxCDD	402/404	0.99	0.99	-0.5		1.28		1.05 - 1.43
13C-123678-HxCDD	402/404	1.02	1.02	-0.1		1.23		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.84	0.87	-3.1		1.05		0.89 - 1.21
13C-OCDD	470/472	0.68	0.77	-11.3		0.89		0.76 - 1.02
13C-2378-TCDF	316/318	1.56	1.47	6.1		0.78		0.65 - 0.89
13C-12378-PeCDF	352/354	1.15	1.15	-0.2		1.56		1.32 - 1.78
13C-23478-PeCDF	352/354	1.13	1.11	1.6		1.59		1.32 - 1.78
13C-123478-HxCDF	384/386	1.23	1.21	1.8		0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	1.29	1.27	1.7		0.53		0.43 - 0.59
13C-234678-HxCDF	384/386	1.24	1.24	0.7		0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	1.10	1.11	-0.3		0.53		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.01	1.05	-4.1		0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.79	0.81	-3.2		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
37CL-2378-TCDD	328	1.09	1.04	4.6		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ion Ratio Flag <sup>#</sup>	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	1.25		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:	ARI	Contract:	ANCHOR
Lab Code:	VR58	Case No.:	CITY OF KENMORE
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	12112829
Date Analysed:	29-Nov-12	Time Analysed:	10:37:05
Init. Calib. Date:	23-NOV-12	Init. Calib. Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	26.71
2378-TCDF	1.00	26.08
12378-PeCDF	1.00	30.21
12378-PeCDD	1.00	31.81
23478-PeCDF	1.00	31.56
123478-HxCDF	1.00	35.23
123678-HxCDF	1.00	35.37
123478-HxCDD	1.00	36.46
123678-HxCDD	1.00	36.59
123789-HxCDD	1.01	37.02
234678-HxCDF	1.00	36.32
123789-HxCDF	1.00	37.47
1234678-HpCDF	1.00	39.53
1234678-HpCDD	1.00	41.34
1234789-HpCDF	1.00	42.23
OCDD	1.00	47.25
OCDF	1.01	47.53

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	26.69
13C-12378-PeCDD	1.23	31.79
13C-123478-HxCDD	0.99	36.45
13C-123678-HxCDD	0.99	36.57
13C-1234678-HpCDD	1.12	41.33
13C-OCDD	1.28	47.23
13C-2378-TCDF	1.01	26.05
13C-12378-PeCDF	1.17	30.20
13C-23478-PeCDF	1.22	31.54
13C-123478-HxCDF	0.95	35.21
13C-123678-HxCDF	0.96	35.36
13C-234678-HxCDF	0.98	36.31
13C-123789-HxCDF	1.01	37.45
13C-1234678-HpCDF	1.07	39.52
13C-1234789-HpCDF	1.14	42.21

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	26.71

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	25.88
13C-123789-HxCDD	0.00	37.00

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

**7DFA - Form VII-HR CDD-1  
CDD/CDF CONTINUING CALIBRATION SUMMARY  
HIGH RESOLUTION**

Lab Name:	ARI	Contract	ANCHOR
Lab Code:	VR58	Case No	CITY OF KENMORE
TO No		SDG No .	
GC Column	RTX-DIOXIN2	ID (mm):	25
Instrument ID:	AUTOSPEC1	Lab File ID:	12112835
Date Analysed	29-Nov-12	Time Analysed	16.20 15
Init Calib Date:	23-NOV-12	Init.Calib Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
2378-TCDD	320/322	1.02	1.05	-3.2		0.79		0.65 - 0.89
2378-TCDF	304/306	0.86	0.88	-2.1		0.76		0.65 - 0.89
12378-PeCDF	340/342	0.89	0.90	-0.2		1.48		1.32 - 1.78
12378-PeCDD	356/358	0.99	1.00	-1.0		1.56		1.32 - 1.78
23478-PeCDF	340/342	0.92	0.93	-0.9		1.45		1.32 - 1.78
123478-HxCDF	374/376	1.07	1.07	0.3		1.18		1.05 - 1.43
123678-HxCDF	374/376	1.05	1.03	1.8		1.20		1.05 - 1.43
123478-HxCDD	390/392	0.96	0.97	-0.9		1.22		1.05 - 1.43
123678-HxCDD	390/392	0.92	0.92	0.4		1.23		1.05 - 1.43
123789-HxCDD	390/392	0.93	0.93	-0.6		1.22		1.05 - 1.43
234678-HxCDF	374/376	1.05	1.04	1.2		1.17		1.05 - 1.43
123789-HxCDF	374/376	0.99	0.99	0.5		1.19		1.05 - 1.43
1234678-HpCDF	408/410	1.22	1.23	-1.2		0.99		0.89 - 1.21
1234678-HpCDD	424/426	1.00	1.02	-1.3		1.04		0.89 - 1.21
1234789-HpCDF	408/410	1.21	1.22	-0.3		0.97		0.89 - 1.21
OCDD	458/460	1.00	1.01	-1.1		0.90		0.76 - 1.02
OCDF	442/444	1.12	1.14	-1.2		0.85		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
13C-2378-TCDD	332/334	0.98	0.95	3.2		0.78		0.65 - 0.89
13C-12378-PeCDD	368/370	0.72	0.72	-0.4		1.58		1.32 - 1.78
13C-123478-HxCDD	402/404	0.98	0.99	-0.7		1.26		1.05 - 1.43
13C-123678-HxCDD	402/404	1.02	1.02	-0.4		1.26		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.83	0.87	-4.3		1.06		0.89 - 1.21
13C-OCDD	470/472	0.69	0.77	-10.3		0.89		0.76 - 1.02
13C-2378-TCDF	316/318	1.55	1.47	5.0		0.77		0.65 - 0.89
13C-12378-PeCDF	352/354	1.14	1.15	-0.8		1.57		1.32 - 1.78
13C-23478-PeCDF	352/354	1.11	1.11	-0.3		1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	1.19	1.21	-1.5		0.52		0.43 - 0.59
13C-123678-HxCDF	384/386	1.27	1.27	0.0		0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	1.22	1.24	-1.2		0.52		0.43 - 0.59
13C-123789-HxCDF	384/386	1.10	1.11	-0.4		0.52		0.43 - 0.59
13C-1234678-HpCDF	418/420	1.01	1.05	-4.2		0.45		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.79	0.81	-3.5		0.45		0.37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ratio Flag <sup>#</sup>	Ratio QC Limits
37CL-2378-TCDD	328	1.08	1.04	3.9		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag <sup>#</sup>	Ion Ratio	Ion Ratio Flag <sup>#</sup>	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	1.24		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:	ARI	Contract:	ANCHOR
Lab Code:	VR58	Case No.:	CITY OF KENMORE
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID	AUTOSPEC1	Lab File ID:	12112835
Date Analysed	29-Nov-12	Time Analysed	16:20:15
Init.Calib Date:	23-NOV-12	Init.Calib.Time:	

Target Analytes	RRT <sup>#</sup>	RT
2378-TCDD	1.00	26.72
2378-TCDF	1.00	26.08
12378-PeCDF	1.00	30.21
12378-PeCDD	1.00	31.81
23478-PeCDF	1.00	31.56
123478-HxCDF	1.00	35.23
123678-HxCDF	1.00	35.38
123478-HxCDD	1.00	36.46
123678-HxCDD	1.00	36.59
123789-HxCDD	1.01	37.02
234678-HxCDF	1.00	36.33
123789-HxCDF	1.00	37.47
1234678-HpCDF	1.00	39.53
1234678-HpCDD	1.00	41.35
1234789-HpCDF	1.00	42.22
OCDD	1.00	47.26
OCDF	1.01	47.53

Labeled Compounds	RRT <sup>#</sup>	RT
13C-2378-TCDD	1.03	26.69
13C-12378-PeCDD	1.23	31.79
13C-123478-HxCDD	0.99	36.45
13C-123678-HxCDD	0.99	36.58
13C-1234678-HpCDD	1.12	41.33
13C-OCDD	1.28	47.23
13C-2378-TCDF	1.01	26.05
13C-12378-PeCDF	1.17	30.20
13C-23478-PeCDF	1.22	31.54
13C-123478-HxCDF	0.95	35.21
13C-123678-HxCDF	0.96	35.36
13C-234678-HxCDF	0.98	36.31
13C-123789-HxCDF	1.01	37.46
13C-1234678-HpCDF	1.07	39.52
13C-1234789-HpCDF	1.14	42.21

Clean up Standard	RRT <sup>#</sup>	RT
37CL-2378-TCDD	1.03	26.71

Internal Standards	RRT <sup>#</sup>	RT
13C-1234-TCDD	0.00	25.88
13C-123789-HxCDD	0.00	37.00


(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

**Pesticide Analysis  
Report and Summary QC Forms**

**ARI Job ID: VR58**

**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-10-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58A  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 04:17  
 Instrument/Analyst: ECD6/YZ  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Florisil Cleanup: No

Sample Amount: 13.2 g-dry-wt  
 Final Extract Volume: 2.5 mL  
 Dilution Factor: 5.00  
 Silica Gel: Yes  
 Percent Moisture: 40.6%

CAS Number	Analyte	MDL	RL	Result
76-44-8	Heptachlor	0.62	4.8	< 4.8 U
309-00-2	Aldrin	0.62	4.8	< 4.8 U
60-57-1	Dieldrin	1.6	9.5	< 9.5 U
72-55-9	4,4'-DDE	1.6	9.5	< 9.5 U
72-54-8	4,4'-DDD	1.6	9.5	< 9.5 U
50-29-3	4,4'-DDT	1.6	9.5	< 9.5 U
5103-74-2	trans-Chlordane	0.75	4.8	< 4.8 U
5103-71-9	cis-Chlordane	0.80	4.8	< 4.8 U
118-74-1	Hexachlorobenzene	1.7	4.8	< 4.8 U
87-68-3	Hexachlorobutadiene	2.3	4.8	< 4.8 U
27304-13-8	oxy Chlordane	2.2	9.5	< 9.5 U
5103-73-1	cis-Nonachlor	1.6	9.5	< 9.5 U
39765-80-5	trans-Nonachlor	4.6	9.5	< 9.5 U

Reported in µg/kg (ppb)

**Pest/PCB Surrogate Recovery**

Decachlorobiphenyl	99.4%
Tetrachlorometaxylene	90.1%

# 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.

**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-11-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58B  
 LIMS ID: 12-22330  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 04:35  
 Instrument/Analyst: ECD6/YZ  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Florisil Cleanup: No

Sample Amount: 15.9 g-dry-wt  
 Final Extract Volume: 2.5 mL  
 Dilution Factor: 5.00  
 Silica Gel: Yes  
 Percent Moisture: 80.1%

CAS Number	Analyte	MDL	RL	Result
76-44-8	Heptachlor	0.51	3.9	< 3.9 U
309-00-2	Aldrin	0.51	3.9	< 3.9 U
60-57-1	Dieldrin	1.3	7.8	< 7.8 U
<b>72-55-9</b>	<b>4,4'-DDE</b>	<b>1.3</b>	<b>7.8</b>	<b>7.2 J</b>
72-54-8	4,4'-DDD	1.3	7.8	< 7.8 U
50-29-3	4,4'-DDT	1.3	7.8	< 7.8 U
5103-74-2	trans-Chlordane	0.62	3.9	< 3.9 U
5103-71-9	cis-Chlordane	0.66	9.3	< 9.3 Y
118-74-1	Hexachlorobenzene	1.4	3.9	< 3.9 U
87-68-3	Hexachlorobutadiene	1.9	3.9	< 3.9 U
27304-13-8	oxy Chlordane	1.8	7.8	< 7.8 U
5103-73-1	cis-Nonachlor	1.3	7.8	< 7.8 U
39765-80-5	trans-Nonachlor	3.8	7.8	< 7.8 U

Reported in µg/kg (ppb)

**Pest/PCB Surrogate Recovery**

Decachlorobiphenyl	64.9%
Tetrachlorometaxylene	135%

# 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.

**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-12-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58C  
 LIMS ID: 12-22331  
 Matrix: Sediment  
 Data Release Authorized: *AB*  
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 04:53  
 Instrument/Analyst: ECD6/YZ  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Florisil Cleanup: No

Sample Amount: 12.7 g-dry-wt  
 Final Extract Volume: 2.5 mL  
 Dilution Factor: 5.00  
 Silica Gel: Yes  
 Percent Moisture: 70.0%

CAS Number	Analyte	MDL	RL	Result
76-44-8	Heptachlor	0.64	4.9	< 4.9 U
309-00-2	Aldrin	0.64	4.9	< 4.9 U
60-57-1	Dieldrin	1.7	9.8	< 9.8 U
<b>72-55-9</b>	<b>4,4'-DDE</b>	<b>1.7</b>	<b>9.8</b>	<b>4.0 J</b>
72-54-8	4,4'-DDD	1.7	9.8	< 9.8 U
50-29-3	4,4'-DDT	1.7	9.8	< 9.8 U
5103-74-2	trans-Chlordane	0.78	4.9	< 4.9 U
5103-71-9	cis-Chlordane	0.83	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	1.8	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	2.4	4.9	< 4.9 U
27304-13-8	oxy Chlordane	2.3	9.8	< 9.8 U
5103-73-1	cis-Nonachlor	1.6	9.8	< 9.8 U
39765-80-5	trans-Nonachlor	4.7	9.8	< 9.8 U

Reported in µg/kg (ppb)

**Pest/PCB Surrogate Recovery**


Decachlorobiphenyl	109%
Tetrachlorometaxylene	113%

# 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.

**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-13-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58D  
 LIMS ID: 12-22332  
 Matrix: Sediment  
 Data Release Authorized:   
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 05:11  
 Instrument/Analyst: ECD6/YZ  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Florisil Cleanup: No

Sample Amount: 12.7 g-dry-wt  
 Final Extract Volume: 2.5 mL  
 Dilution Factor: 5.00  
 Silica Gel: Yes  
 Percent Moisture: 76.0%

CAS Number	Analyte	MDL	RL	Result
76-44-8	Heptachlor	0.64	4.9	< 4.9 U
309-00-2	Aldrin	0.64	4.9	< 4.9 U
60-57-1	Dieldrin	1.7	9.8	< 9.8 U
72-55-9	4,4'-DDE	1.7	9.8	< 9.8 U
72-54-8	4,4'-DDD	1.7	9.8	< 9.8 U
50-29-3	4,4'-DDT	1.7	9.8	< 9.8 U
5103-74-2	trans-Chlordane	0.78	4.9	< 4.9 U
5103-71-9	cis-Chlordane	0.83	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	1.8	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	2.4	4.9	< 4.9 U
27304-13-8	oxy Chlordane	2.3	9.8	< 9.8 U
5103-73-1	cis-Nonachlor	1.6	9.8	< 9.8 U
<b>39765-80-5</b>	<b>trans-Nonachlor</b>	<b>4.7</b>	<b>9.8</b>	<b>4.1 J</b>

Reported in µg/kg (ppb)

**Pest/PCB Surrogate Recovery**

Decachlorobiphenyl	118%
Tetrachlorometaxylene	110%

# 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.

**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-13-S-E-dup-121107**  
**SAMPLE**

Lab Sample ID: VR58E  
 LIMS ID: 12-22333  
 Matrix: Sediment  
 Data Release Authorized: *B*  
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 05:29  
 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: 76.0%

CAS Number	Analyte	MDL	RL	Result
76-44-8	Heptachlor	0.64	4.9	< 4.9 U
309-00-2	Aldrin	0.64	4.9	< 4.9 U
60-57-1	Dieldrin	1.7	9.8	< 9.8 U
<b>72-55-9</b>	<b>4,4'-DDE</b>	<b>1.7</b>	<b>9.8</b>	<b>4.4 J</b>
72-54-8	4,4'-DDD	1.7	9.8	< 9.8 U
50-29-3	4,4'-DDT	1.7	9.8	< 9.8 U
5103-74-2	trans-Chlordane	0.78	4.9	< 4.9 U
5103-71-9	cis-Chlordane	0.83	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	1.8	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	2.4	4.9	< 4.9 U
27304-13-8	oxy Chlordane	2.3	9.8	< 9.8 U
5103-73-1	cis-Nonachlor	1.6	9.8	< 9.8 U
39765-80-5	trans-Nonachlor	4.7	9.8	< 9.8 U

Reported in µg/kg (ppb)

**Pest/PCB Surrogate Recovery**

Decachlorobiphenyl	96.8%
Tetrachlorometaxylene	135%

# 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.

**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-14-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58F  
 LIMS ID: 12-22334  
 Matrix: Sediment  
 Data Release Authorized: *AB*  
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 05:46  
 Instrument/Analyst: ECD6/YZ  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Florisil Cleanup: No

Sample Amount: 12.9 g-dry-wt  
 Final Extract Volume: 2.5 mL  
 Dilution Factor: 5.00  
 Silica Gel: Yes  
 Percent Moisture: 52.7%

CAS Number	Analyte	MDL	RL	Result
76-44-8	Heptachlor	0.64	4.9	< 4.9 U
309-00-2	Aldrin	0.64	4.9	< 4.9 U
60-57-1	Dieldrin	1.6	9.7	< 9.7 U
72-55-9	4,4'-DDE	1.7	9.7	< 9.7 U
72-54-8	4,4'-DDD	1.7	9.7	< 9.7 U
50-29-3	4,4'-DDT	1.7	9.7	< 9.7 U
5103-74-2	trans-Chlordane	0.77	4.9	< 4.9 U
5103-71-9	cis-Chlordane	0.82	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	1.8	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	2.4	4.9	< 4.9 U
27304-13-8	oxy Chlordane	2.3	9.7	< 9.7 U
5103-73-1	cis-Nonachlor	1.6	9.7	< 9.7 U
39765-80-5	trans-Nonachlor	4.7	9.7	< 9.7 U

Reported in µg/kg (ppb)

**Pest/PCB Surrogate Recovery**

Decachlorobiphenyl	106%
Tetrachlorometaxylene	70.0%

# 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.



**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-15-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58G  
 LIMS ID: 12-22335  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 06:04  
 Instrument/Analyst: ECD6/YZ  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Florisil Cleanup: No

Sample Amount: 12.9 g-dry-wt  
 Final Extract Volume: 2.5 mL  
 Dilution Factor: 1.00  
 Silica Gel: Yes  
 Percent Moisture: 24.7%

CAS Number	Analyte	MDL	RL	Result
76-44-8	Heptachlor	0.13	0.97	< 0.97 U
309-00-2	Aldrin	0.13	0.97	< 0.97 U
60-57-1	Dieldrin	0.33	1.9	< 1.9 U
72-55-9	4,4'-DDE	0.33	1.9	< 1.9 U
72-54-8	4,4'-DDD	0.33	1.9	< 1.9 U
50-29-3	4,4'-DDT	0.33	1.9	< 1.9 U
5103-74-2	trans-Chlordane	0.15	0.97	< 0.97 U
5103-71-9	cis-Chlordane	0.16	0.97	< 0.97 U
118-74-1	Hexachlorobenzene	0.36	0.97	< 0.97 U
87-68-3	Hexachlorobutadiene	0.47	0.97	< 0.97 U
27304-13-8	oxy Chlordane	0.45	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	0.32	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	0.94	1.9	< 1.9 U

Reported in µg/kg (ppb)

**Pest/PCB Surrogate Recovery**

Decachlorobiphenyl	106%
Tetrachlorometaxylene	67.5%

# 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.

**SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY**

Matrix: Sediment

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01

<u>Client ID</u>	<u>DCBP</u>	<u>TCMX</u>	<u>TOT OUT</u>
SG-10-S-E-121107	99.4%	90.1%	0
SG-11-S-E-121107	64.9%	135%	0
SG-12-S-E-121107	109%	113%	0
SG-13-S-E-121107	118%	110%	0
SG-13-S-E-dup-121107	96.8%	135%	0
SG-14-S-E-121107	106%	70.0%	0
MB-111512	85.2%	68.8%	0
LCS-111512	78.8%	61.0%	0
SG-15-S-E-121107	106%	67.5%	0
SG-15-S-E-121107 MS	74.5%	67.2%	0
SG-15-S-E-121107 MSD	75.2%	65.0%	0

**LCS/MB LIMITS                      QC LIMITS**

(DCBP) = Decachlorobiphenyl                      (60-149)                      (36-182)  
(TCMX) = Tetrachlorometaxylene                      (47-124)                      (34-169)

Prep Method: SW3546  
Log Number Range: 12-22329 to 12-22335

**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
 Page 1 of 1

**Sample ID: SG-15-S-E-121107**  
**MS/MSD**

Lab Sample ID: VR58G  
 LIMS ID: 12-22335  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted MS/MSD: 11/15/12  
 Date Analyzed MS: 11/21/12 06:22  
 MSD: 11/21/12 06:40  
 Instrument/Analyst MS: ECD6/YZ  
 MSD: ECD6/YZ

Sample Amount MS: 12.9 g-dry-wt  
 MSD: 12.9 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

GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Florisil Cleanup: No  
 Acid Cleanup: No

Percent Moisture: 24.7%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Heptachlor	< 0.970	2.28 P	3.86	59.1%	2.17	3.87	56.1%	4.9%
Aldrin	< 0.970	3.21	3.86	83.2%	3.21	3.87	82.9%	0.0%
Dieldrin	< 1.94	6.63	7.73	85.8%	6.87	7.75	88.6%	3.6%
4,4'-DDE	< 1.94	6.92	7.73	89.5%	7.03	7.75	90.7%	1.6%
4,4'-DDD	< 1.94	10.2	7.73	132%	8.97	7.75	116%	12.8%
4,4'-DDT	< 1.94	4.21	7.73	54.5%	1.96 J	7.75	25.3%	72.9%
trans-Chlordane	< 0.970	3.34	3.86	86.5%	3.35	3.87	86.6%	0.3%
cis-Chlordane	< 0.970	2.90	3.86	75.1%	3.31	3.87	85.5%	13.2%
Hexachlorobenzene	< 0.970	2.70	3.86	69.9%	2.79	3.87	72.1%	3.3%
Hexachlorobutadiene	< 0.970	2.20	3.86	57.0%	2.36	3.87	61.0%	7.0%

Reported in µg/kg (ppb)  
 RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-15-S-E-121107**  
**MATRIX SPIKE**

Lab Sample ID: VR58G  
 LIMS ID: 12-22335  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 06:22  
 Instrument/Analyst: ECD6/YZ  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Florisil Cleanup: No

Sample Amount: 12.9 g-dry-wt  
 Final Extract Volume: 2.5 mL  
 Dilution Factor: 1.00  
 Silica Gel: Yes  
 Percent Moisture: 24.7%

CAS Number	Analyte	MDL	RL	Result
76-44-8	Heptachlor	0.13	0.97	---
309-00-2	Aldrin	0.13	0.97	---
60-57-1	Dieldrin	0.33	1.9	---
72-55-9	4,4'-DDE	0.33	1.9	---
72-54-8	4,4'-DDD	0.33	1.9	---
50-29-3	4,4'-DDT	0.33	1.9	---
5103-74-2	trans-Chlordane	0.15	0.97	---
5103-71-9	cis-Chlordane	0.16	0.97	---
118-74-1	Hexachlorobenzene	0.35	0.97	---
87-68-3	Hexachlorobutadiene	0.47	0.97	---
27304-13-8	oxy Chlordane	0.45	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	0.32	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	0.93	1.9	< 1.9 U

Reported in µg/kg (ppb)

**Pest/PCB Surrogate Recovery**

Decachlorobiphenyl	74.5%
Tetrachlorometaxylene	67.2%

**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-15-S-E-121107**  
**MATRIX SPIKE DUP**

Lab Sample ID: VR58G  
 LIMS ID: 12-22335  
 Matrix: Sediment  
 Data Release Authorized: *AB*  
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 06:40  
 Instrument/Analyst: ECD6/YZ  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Florisil Cleanup: No

Sample Amount: 12.9 g-dry-wt  
 Final Extract Volume: 2.5 mL  
 Dilution Factor: 1.00  
 Silica Gel: Yes  
 Percent Moisture: 24.7%

CAS Number	Analyte	MDL	RL	Result
76-44-8	Heptachlor	0.13	0.97	---
309-00-2	Aldrin	0.13	0.97	---
60-57-1	Dieldrin	0.33	1.9	---
72-55-9	4,4'-DDE	0.33	1.9	---
72-54-8	4,4'-DDD	0.33	1.9	---
50-29-3	4,4'-DDT	0.33	1.9	---
5103-74-2	trans-Chlordane	0.15	0.97	---
5103-71-9	cis-Chlordane	0.16	0.97	---
118-74-1	Hexachlorobenzene	0.35	0.97	---
87-68-3	Hexachlorobutadiene	0.47	0.97	---
27304-13-8	oxy Chlordane	0.45	1.9	< 1.9 U
5103-73-1	cis-Nonachlor	0.32	1.9	< 1.9 U
39765-80-5	trans-Nonachlor	0.93	1.9	< 1.9 U

Reported in µg/kg (ppb)

**Pest/PCB Surrogate Recovery**

Decachlorobiphenyl	75.2%
Tetrachlorometaxylene	65.0%

**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
 Page 1 of 1

**Sample ID: LCS-111512**  
**LAB CONTROL**

Lab Sample ID: LCS-111512  
 LIMS ID: 12-22335  
 Matrix: Sediment  
 Data Release Authorized: *AS*  
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 03:24  
 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
Heptachlor	3.20	4.00	80.0%
Aldrin	3.28	4.00	82.0%
Dieldrin	7.56	8.00	94.5%
4,4'-DDE	7.58	8.00	94.8%
4,4'-DDD	8.38	8.00	105%
4,4'-DDT	7.26	8.00	90.8%
trans-Chlordane	3.60	4.00	90.0%
cis-Chlordane	3.54	4.00	88.5%
Hexachlorobenzene	2.56	4.00	64.0%
Hexachlorobutadiene	2.50	4.00	62.5%

**Pest/PCB Surrogate Recovery**

Decachlorobiphenyl	78.8%
Tetrachlorometaxylene	61.0%

Reported in µg/kg (ppb)

FORM 4  
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

VR38MBS1

Lab Name: ANALYTICAL RESOURCES INC      Client: ANCHOR QEA, LLC.  
ARI Job No.: VR38      Project: CITY OF KENMORE SEDI  
Lab Sample ID: VR38MBS1      Lab File ID: 1120A053  
Date Extracted: 11/15/12      Matrix: SOLID  
Date Analyzed: 11/21/12      Instrument ID: ECD6  
Time Analyzed: 0306      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	VR38LCSS1	VR38LCSS1	11/21/12
02	HT-06-S-E-121106	VR38J	11/21/12
03	HT-07-S-E-121106	VR38K	11/21/12
04	SG-10-S-E-121107	VR58A	11/21/12
05	SG-11-S-E-121107	VR58B	11/21/12
06	SG-12-S-E-121107	VR58C	11/21/12
07	SG-13-S-E-121107	VR58D	11/21/12
08	SG-13-S-E-DUP-12110	VR58E	11/21/12
09	SG-14-S-E-121107	VR58F	11/21/12
10	SG-15-S-E-121107	VR58G	11/21/12
11	SG-15-S-E-12110 MS	VR58GMS	11/21/12
12	SG-15-S-E-12110 MSD	VR58GMSD	11/21/12

ALL RUNS ARE DUAL COLUMN

**ORGANICS ANALYSIS DATA SHEET**  
**Pesticides/PCB by GC/ECD Method SW8081B**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: MB-111512**  
**METHOD BLANK**

Lab Sample ID: MB-111512  
 LIMS ID: 12-22335  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 11/27/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: NA  
 Date Received: NA

Date Extracted: 11/15/12  
 Date Analyzed: 11/21/12 03:06  
 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	MDL	RL	Result
76-44-8	Heptachlor	0.13	1.0	< 1.0 U
309-00-2	Aldrin	0.13	1.0	< 1.0 U
60-57-1	Dieldrin	0.34	2.0	< 2.0 U
72-55-9	4,4'-DDE	0.34	2.0	< 2.0 U
72-54-8	4,4'-DDD	0.34	2.0	< 2.0 U
50-29-3	4,4'-DDT	0.34	2.0	< 2.0 U
5103-74-2	trans-Chlordane	0.16	1.0	< 1.0 U
5103-71-9	cis-Chlordane	0.17	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.37	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.49	1.0	< 1.0 U
27304-13-8	oxy Chlordane	0.46	2.0	< 2.0 U
5103-73-1	cis-Nonachlor	0.33	2.0	< 2.0 U
39765-80-5	trans-Nonachlor	0.96	2.0	< 2.0 U

Reported in µg/kg (ppb)

**Pest/PCB Surrogate Recovery**

Decachlorobiphenyl	85.2%
Tetrachlorometaxylene	68.8%



6D  
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Instrument ID: ECD6

Calibration Date: 10/03/12

COMPOUND	RT OF STANDARDS							MEAN	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.15	4.10	4.20
beta-BHC	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.45	4.55
delta-BHC	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.66	4.61	4.71
gamma-BHC (Lindane)	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.42	4.37	4.47
Heptachlor	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.86	4.81	4.91
Aldrin	5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.15	5.10	5.20
Heptachlor epoxide b	5.72	5.72	5.72	5.72	5.72	5.72	5.72	5.72	5.67	5.77
Endosulfan I	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.05	6.15
Dieldrin	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.32	6.27	6.37
4,4'-DDE	6.03	6.03	6.03	6.03	6.03	6.03	6.03	6.03	5.98	6.08
Endrin	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.54	6.49	6.59
Endosulfan II	6.75	6.75	6.75	6.75	6.75	6.74	6.75	6.75	6.70	6.80
4,4'-DDD	6.58	6.58	6.58	6.58	6.58	6.58	6.58	6.58	6.53	6.63
Endosulfan sulfate	7.51	7.51	7.51	7.51	7.51	7.51	7.51	7.51	7.46	7.56
4,4'-DDT	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.79	6.89
Methoxychlor	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.27	7.22	7.32
Endrin ketone	7.77	7.77	7.77	7.77	7.77	7.77	7.77	7.77	7.72	7.82
Endrin aldehyde	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.12	7.07	7.17
gamma-Chlordane	5.84	5.84	5.84	5.84	5.84	5.84	5.84	5.84	5.79	5.89
alpha-Chlordane	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.97	5.92	6.02
Hexachlorobutadiene	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.21	2.16	2.26
Hexachlorobenzene	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	3.95	4.05
Tetrachloro-m-xylene	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.62	3.72
Decachlorobiphenyl	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.56	8.66

## 8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Instrument ID: ECD6

Calibration Date: 10/03/12

COMPOUND	RT OF STANDARDS							MEAN	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.58	4.58	4.58	4.58	4.58	4.58	4.59	4.58	4.54	4.64
beta-BHC	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	4.96	5.06
delta-BHC	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.26	5.36
gamma-BHC (Lindane)	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.94	4.89	4.99
Heptachlor	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.35	5.45
Aldrin	5.73	5.73	5.73	5.73	5.74	5.74	5.74	5.73	5.69	5.79
Heptachlor epoxide b	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.29	6.24	6.34
Endosulfan I	6.68	6.68	6.68	6.68	6.68	6.68	6.68	6.68	6.63	6.73
Dieldrin	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.89	6.99
4,4'-DDE	6.74	6.74	6.74	6.74	6.74	6.74	6.75	6.74	6.70	6.80
Endrin	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.18	7.28
Endosulfan II	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.37	7.47
4,4'-DDD	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.23	7.33
Endosulfan sulfate	7.96	7.96	7.96	7.96	7.96	7.96	7.96	7.96	7.91	8.01
4,4'-DDT	7.57	7.57	7.57	7.57	7.57	7.57	7.57	7.57	7.52	7.62
Methoxychlor	8.16	8.16	8.16	8.16	8.16	8.16	8.16	8.16	8.11	8.21
Endrin ketone	8.45	8.45	8.45	8.45	8.45	8.45	8.45	8.45	8.40	8.50
Endrin aldehyde	7.71	7.71	7.71	7.71	7.71	7.71	7.71	7.71	7.66	7.76
gamma-Chlordane	6.47	6.47	6.47	6.47	6.47	6.47	6.48	6.47	6.43	6.53
alpha-Chlordane	6.61	6.61	6.61	6.61	6.61	6.61	6.61	6.61	6.56	6.66
Hexachlorobutadiene	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.38	2.33	2.43
Hexachlorobenzene	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.41	4.51
Tetrachloro-m-xylene	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01	3.96	4.06
Decachlorobiphenyl	9.57	9.57	9.57	9.57	9.57	9.57	9.57	9.57	9.52	9.62

6E  
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Instrument ID: ECD6

Calibration Date: 10/03/12

COMPOUND	CALIBRATION FACTORS							MEAN	R <sup>2</sup>	%RSD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7			
alpha-BHC	1.4836	1.4616	1.4938	1.4882	1.4985	1.4906	1.5199	1.4909	1.2	
beta-BHC	0.7515	0.6928	0.6569	0.6074	0.5837	0.5625	0.5568	0.6302	11.6	
delta-BHC	1.2027	1.1705	1.1786	1.1878	1.2088	1.2162	1.2478	1.2018	2.2	
gamma-BHC (Lindane)	1.4203	1.3736	1.3766	1.3565	1.3552	1.3431	1.3628	1.3697	1.8	
Heptachlor	1.3710	1.2938	1.2653	1.2234	1.2040	1.1717	1.1640	1.2419	5.9	
Aldrin	1.3883	1.3094	1.2895	1.2509	1.2369	1.2047	1.1979	1.2682	5.3	
Heptachlor epoxide b	1.4111	1.3113	1.2616	1.1995	1.1708	1.1149	1.0884	1.2225	9.3	
Endosulfan I	1.3006	1.2127	1.1670	1.1114	1.0773	1.0349	1.0155	1.1313	9.0	
Dieldrin	1.2696	1.2204	1.2149	1.1719	1.1402	1.0940	1.0752	1.1694	6.1	
4,4'-DDE	1.1509	1.1089	1.1091	1.0833	1.0630	1.0274	1.0156	1.0797	4.5	
Endrin	1.1855	1.1373	1.1231	1.0879	1.0757	1.0200	1.0221	1.0931	5.6	
Endosulfan II	1.1881	1.1269	1.0957	1.0423	1.0170	0.9634	0.9552	1.0555	8.2	
4,4'-DDD	1.0319	0.9916	0.9750	0.9474	0.9355	0.8986	0.9012	0.9544	5.1	
Endosulfan sulfate	0.9858	0.9374	0.9084	0.8788	0.8558	0.8264	0.8267	0.8885	6.7	
4,4'-DDT	1.0119	0.9801	0.9720	0.9504	0.9467	0.9240	0.9327	0.9597	3.2	
Methoxychlor	0.5578	0.5238	0.4924	0.4554	0.4308	0.4096	0.4145	0.4692	12.2	
Endrin ketone	1.2244	1.1156	1.0606	1.0086	0.9677	0.9416	0.9544	1.0390	9.9	
Endrin aldehyde	0.9849	0.9225	0.8807	0.8346	0.8072	0.7659	0.7630	0.8512	9.7	
gamma-Chlordane	1.3792	1.2811	1.2367	1.1861	1.1606	1.1322	1.1335	1.2156	7.4	
alpha-Chlordane	1.3429	1.2457	1.2000	1.1461	1.1150	1.0849	1.0777	1.1732	8.2	
Hexachlorobutadiene	2.0812	1.9402	1.8804	1.7634	1.7036	1.6425	1.6366	1.8068	9.2	
Hexachlorobenzene	1.5903	1.4533	1.3696	1.2635	1.1969	1.1324	1.1201	1.3037	13.5	
Tetrachloro-m-xylene	1.3460	1.2798	1.2458	1.1734	1.1286	1.0704	1.0536	1.1854	9.3	
Decachlorobiphenyl	1.3890	1.2243	1.1239	1.0205	0.9531	0.8948	0.8784	1.0691	17.6	

6E  
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Instrument ID: ECD6

Calibration Date: 10/03/12

COMPOUND	CALIBRATION FACTORS							MEAN	R <sup>2</sup>
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7		
alpha-BHC	1.7068	1.7328	1.8043	1.7772	1.7612	1.7241	1.7099	1.7452	2.1
beta-BHC	0.7886	0.7507	0.7499	0.7007	0.6746	0.6525	0.6274	0.7063	8.3
delta-BHC	1.3355	1.3664	1.4106	1.3838	1.4129	1.3944	1.3874	1.3844	1.9
gamma-BHC (Lindane)	1.6094	1.6044	1.6375	1.5988	1.5712	1.5315	1.4910	1.5777	3.2
Heptachlor	1.5856	1.5485	1.5510	1.4820	1.4155	1.3165	1.2123	1.4445	9.6
Aldrin	1.5160	1.4979	1.5123	1.4628	1.4083	1.3241	1.2212	1.4204	7.8
Heptachlor epoxide b	1.4476	1.4003	1.3792	1.3046	1.2384	1.1438	1.0491	1.2804	11.3
Endosulfan I	1.2698	1.2439	1.2336	1.1730	1.1176	1.0464	0.9643	1.1498	9.9
Dieldrin	1.3591	1.3384	1.3315	1.2542	1.1663	1.0710	0.9940	1.2164	11.8
4,4'-DDE	1.2998	1.2792	1.2771	1.2008	1.1147	1.0160	0.9308	1.1598	12.4
Endrin	1.5909	1.5373	1.4937	1.4092	1.3284	1.1857	1.1161	1.3802	13.0
Endosulfan II	1.5871	1.5228	1.4855	1.3975	1.3177	1.2030	1.1435	1.3796	12.1
4,4'-DDD	1.4343	1.4084	1.3921	1.3338	1.2712	1.1686	1.1160	1.3035	9.5
Endosulfan sulfate	1.2785	1.2434	1.2172	1.1779	1.1320	1.0535	1.0179	1.1600	8.4
4,4'-DDT	1.3464	1.3100	1.3003	1.2588	1.2128	1.1433	1.1114	1.2404	7.1
Methoxychlor	0.6592	0.6042	0.5527	0.4972	0.4495	0.4126	0.3783	0.5077	17.7
Endrin ketone	1.3456	1.2690	1.2127	1.1525	1.0924	1.0274	1.0120	1.1588	10.8
Endrin aldehyde	1.2587	1.1952	1.1528	1.0937	1.0369	0.9549	0.9102	1.0860	11.7
gamma-Chlordane	1.4955	1.4315	1.4100	1.3398	1.2967	1.2245	1.1522	1.3357	9.1
alpha-Chlordane	1.3740	1.3339	1.3210	1.2563	1.2048	1.1471	1.0808	1.2454	8.6
Hexachlorobutadiene	1.9645	1.8894	1.8576	1.7256	1.6592	1.5549	1.5070	1.7369	10.0
Hexachlorobenzene	1.7774	1.6637	1.6110	1.4932	1.4081	1.3179	1.2412	1.5018	12.9
Tetrachloro-m-xylene	1.6512	1.5834	1.5355	1.4058	1.2945	1.1692	1.0938	1.3905	15.3
Decachlorobiphenyl	1.5427	1.4016	1.2929	1.1902	1.1187	1.0455	1.0196	1.2302	15.7

6D  
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Instrument ID: ECD6

Calibration Date: 10/03/12

COMPOUND	RT OF STANDARDS							MEAN	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
Oxychlorane	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.63	5.58	5.68
2,4-DDE	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.70	5.65	5.75
trans-Nonachlor	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.95	5.90	6.00
2,4-DDD	6.19	6.19	6.19	6.19	6.19	6.19	6.19	6.19	6.14	6.24
2,4-DDT	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.43	6.38	6.48
cis-Nonachlor	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.57	6.52	6.62
Mirex	7.44	7.44	7.44	7.44	7.44	7.44	7.44	7.44	7.39	7.49
Tetrachloro-m-xylene	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.67	3.62	3.72
Decachlorobiphenyl	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.61	8.56	8.66

FORM VI PEST-1

VR38 00181

6D  
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Instrument ID: ECD6

Calibration Date: 10/03/12

COMPOUND	RT OF STANDARDS							MEAN RT	RT WINDOW	
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7		FROM	TO
Oxychlorane	6.20	6.20	6.20	6.20	6.20	6.20	6.20	6.20	6.15	6.25
2,4-DDE	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.45	6.40	6.50
trans-Nonachlor	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.56	6.51	6.61
2,4-DDD	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.94	6.89	6.99
2,4-DDT	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.23	7.18	7.28
cis-Nonachlor	7.29	7.29	7.29	7.29	7.29	7.29	7.29	7.29	7.24	7.34
Mirex	8.43	8.43	8.43	8.43	8.43	8.43	8.43	8.43	8.38	8.48
Tetrachloro-m-xylene	4.01	4.01	4.01	4.01	4.01	4.01	4.01	4.01	3.96	4.06
Decachlorobiphenyl	9.57	9.57	9.57	9.57	9.57	9.57	9.57	9.57	9.52	9.62

FORM VI PEST-1

6E  
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Instrument ID: ECD6

Calibration Date: 10/03/12

COMPOUND	CALIBRATION FACTORS							MEAN	R <sup>2</sup>
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7		
Oxychlorane	1.2075	1.0390	1.0107	0.9691	0.9497	0.9191	0.8679	0.9947	11.0
2,4-DDE	0.8809	0.7598	0.7410	0.7297	0.7047	0.6744	0.6274	0.7311	10.9
trans-Nonachlor	1.3975	1.2236	1.1955	1.1584	1.1389	1.1150	1.0643	1.1847	9.1
2,4-DDD	0.8017	0.6924	0.6634	0.6359	0.6204	0.6009	0.5700	0.6550	11.6
2,4-DDT	0.8939	0.7774	0.7494	0.7225	0.7039	0.6924	0.6502	0.7414	10.6
cis-Nonachlor	1.4493	1.2717	1.2594	1.2276	1.2192	1.2034	1.1538	1.2549	7.5
Mirex	1.0931	0.9043	0.8544	0.7952	0.7622	0.7376	0.7004	0.8353	15.9
Tetrachloro-m-xylene	1.3460	1.2798	1.2458	1.1734	1.1286	1.0704	1.0536	1.1854	9.3
Decachlorobiphenyl	1.3890	1.2243	1.1239	1.0205	0.9531	0.8948	0.8784	1.0691	17.6

FORM VI PEST-2

6E  
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Instrument ID: ECD6

Calibration Date: 10/03/12

COMPOUND	CALIBRATION FACTORS							MEAN	R <sup>2</sup>	%RSD
	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7			
Oxychlorane	1.2276	1.0951	1.0852	1.0203	0.9700	0.9037	0.8394	1.0202	12.8	
2,4-DDE	0.9795	0.8349	0.7999	0.7348	0.6762	0.6053	0.5337	0.7378	20.3	
trans-Nonachlor	2.0049	1.7706	1.7565	1.6845	1.5851	1.4861	1.3560	1.6634	12.7	
2,4-DDD	1.1355	0.9797	0.9448	0.8995	0.8441	0.7771	0.6914	0.8960	16.1	
2,4-DDT	1.2121	1.0533	1.0307	0.9841	0.9224	0.8676	0.7723	0.9775	14.5	
cis-Nonachlor	2.0973	1.8438	1.8172	1.7490	1.6479	1.5661	1.4532	1.7392	12.1	
Mirex	1.2745	1.0584	1.0014	0.9248	0.8611	0.8279	0.7832	0.9616	17.5	
Tetrachloro-m-xylene	1.6512	1.5834	1.5355	1.4058	1.2945	1.1692	1.0938	1.3905	15.3	
Decachlorobiphenyl	1.5427	1.4016	1.2929	1.1902	1.1187	1.0455	1.0196	1.2302	15.7	

FORM VI PEST-2



7E  
8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS

ARI Job No.: VR38

Analysis Date: 21-NOV-2012 01:19

Init. Calib. Date: 03-OCT-2012

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

COMPOUND	RT	AREA
4,4'-DDE	6.020	107198
Endrin	6.522	4579690
4,4'-DDD	6.576	436296
4,4'-DDT	6.830	4169507
Endrin ketone	7.748	585575
Endrin aldehyde	7.106	174856

DDT Percent Breakdown = 11.5 %  
 $((107198+436296) * 100) / (107198+436296+4169507)$

Endrin Percent Breakdown = 14.2 %  
 $((174856+585575) * 100) / (174856+585575+4579690)$

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

COMPOUND	RT	AREA
4,4'-DDE	6.734	662007
Endrin	7.212	20532021
4,4'-DDD	7.273	2086306
4,4'-DDT	7.559	19008478
Endrin ketone	8.432	2470224
Endrin aldehyde	7.700	776131

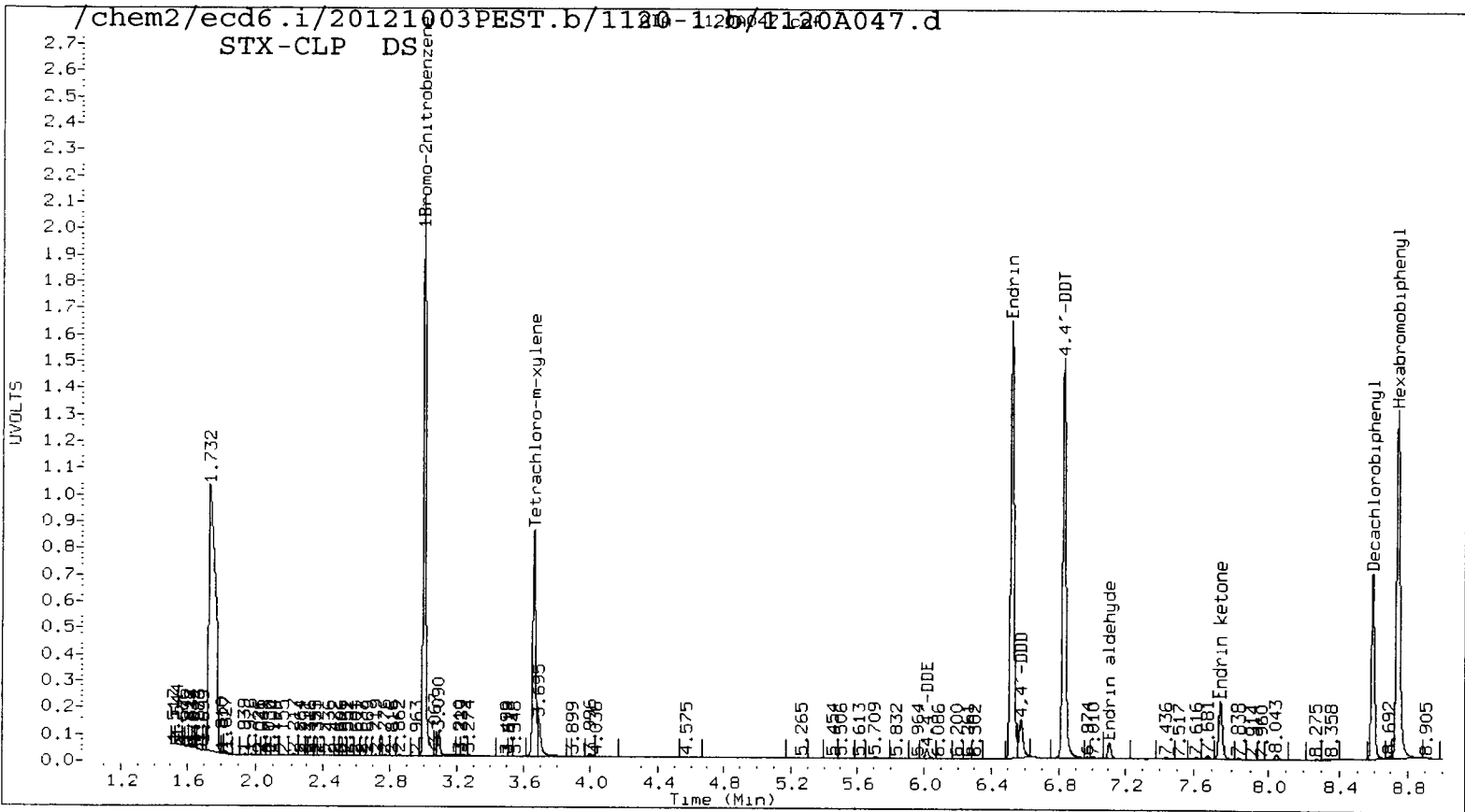
DDT Percent Breakdown = 12.6 %  
 $((662007+2086306) * 100) / (662007+2086306+19008478)$

Endrin Percent Breakdown = 13.7 %  
 $((776131+2470224) * 100) / (776131+2470224+20532021)$

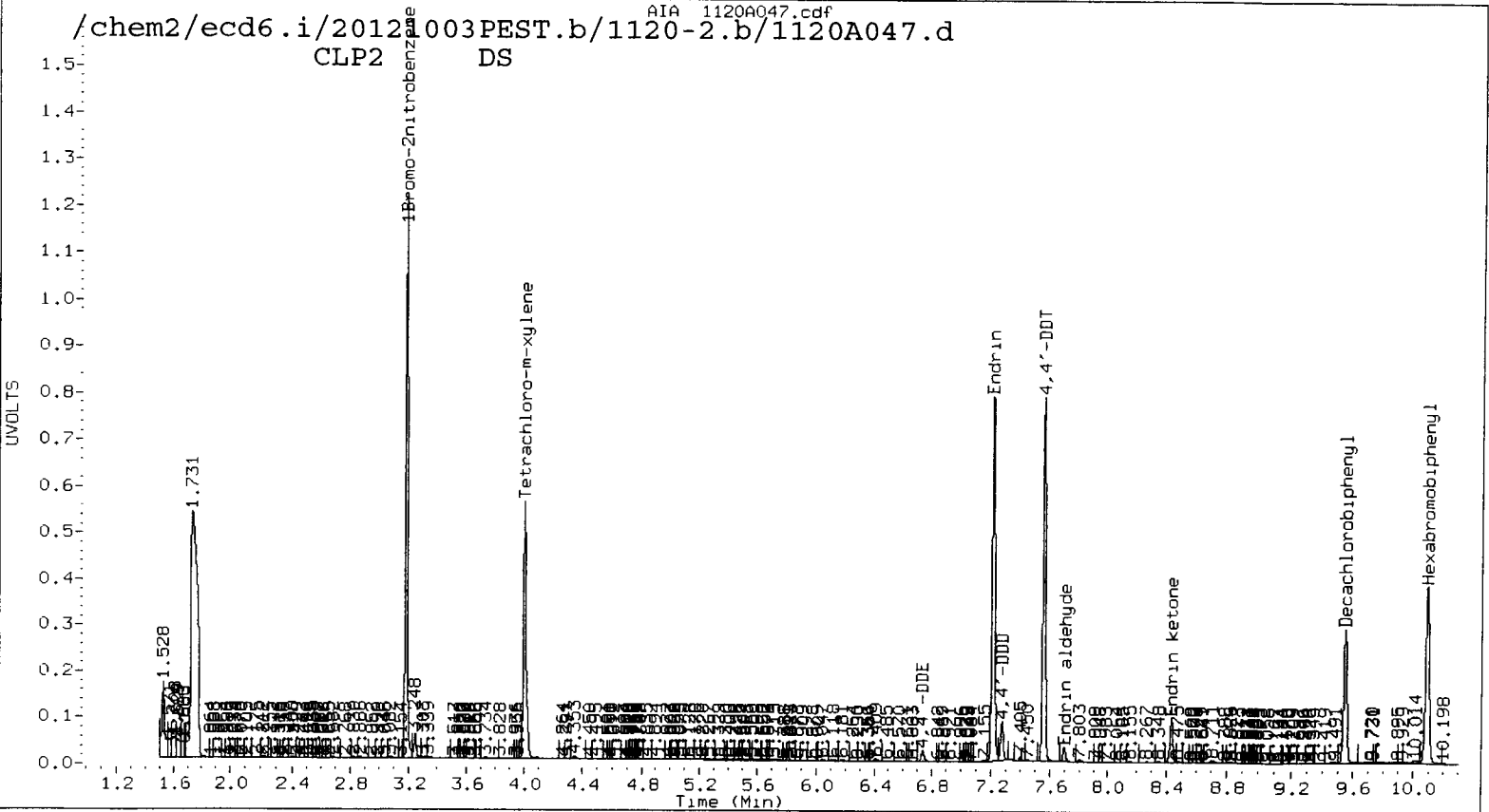
Form VII Pest-1

VR58 : 00185

/chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A047.d  
STX-CLP DS



/chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A047.d  
CLP2 DS



## 8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Init. Calib. Date: 10/03/12

Lab Ccal ID: INDAE

Date/Time Analyzed: 11/21/12,0137

PEST MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
		FROM	TO			
alpha-BHC	4.13	4.10	4.20	21.8	20.0	8.9
beta-BHC	4.50	4.45	4.55	20.3	20.0	1.4
delta-BHC	4.66	4.61	4.71	21.5	20.0	7.5
gamma-BHC (Lindane)	4.41	4.37	4.47	20.7	20.0	3.4
Heptachlor	4.85	4.81	4.91	20.4	20.0	2.0
Aldrin	5.13	5.10	5.20	21.1	20.0	5.4
Heptachlor epoxide b	5.70	5.67	5.77	20.3	20.0	1.5
Endosulfan I	6.08	6.05	6.15	22.0	20.0	10.0
Dieldrin	6.30	6.27	6.37	41.9	40.0	4.8
4,4'-DDE	6.02	5.98	6.08	40.4	40.0	1.0
Endrin	6.52	6.49	6.59	37.1	40.0	-7.1
Endosulfan II	6.73	6.70	6.80	40.8	40.0	2.0
4,4'-DDD	6.57	6.53	6.63	41.9	40.0	4.8
Endosulfan sulfate	7.49	7.46	7.56	39.9	40.0	-0.2
4,4'-DDT	6.83	6.79	6.89	38.2	40.0	-4.6
Methoxychlor	7.26	7.22	7.32	179.2	200.0	-10.4
Endrin ketone	7.75	7.72	7.82	47.7	40.0	19.2
Endrin aldehyde	7.10	7.07	7.17	40.0	40.0	0.1
gamma-Chlordane	5.83	5.79	5.89	20.6	20.0	2.9
alpha-Chlordane	5.95	5.92	6.02	20.1	20.0	0.6
Hexachlorobutadiene	2.20	2.16	2.26	22.3	20.0	11.4
Hexachlorobenzene	4.00	3.95	4.05	21.2	20.0	6.1
Tetrachloro-m-xylene	3.66	3.62	3.72	37.0	40.0	-7.4
Decachlorobiphenyl	8.59	8.56	8.66	39.5	40.0	-1.2

## 8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Init. Calib. Date: 10/03/12

Lab Ccal ID: INDAE

Date/Time Analyzed: 11/21/12, 0137

PEST MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
		FROM	TO				
alpha-BHC	4.57	4.54	4.64	20.3	20.0	1.6	
beta-BHC	5.00	4.96	5.06	18.8	20.0	-6.1	
delta-BHC	5.31	5.26	5.36	19.7	20.0	-1.4	
gamma-BHC (Lindane)	4.92	4.89	4.99	19.7	20.0	-1.7	
Heptachlor	5.38	5.35	5.45	19.1	20.0	-4.3	
Aldrin	5.72	5.69	5.79	19.9	20.0	-0.6	
Heptachlor epoxide b	6.28	6.24	6.34	19.1	20.0	-4.6	
Endosulfan I	6.66	6.63	6.73	19.0	20.0	-5.1	
Dieldrin	6.92	6.89	6.99	37.1	40.0	-7.2	
4,4'-DDE	6.73	6.70	6.80	37.7	40.0	-5.6	
Endrin	7.21	7.18	7.28	40.2	40.0	0.6	
Endosulfan II	7.40	7.37	7.47	44.2	40.0	10.5	
4,4'-DDD	7.27	7.23	7.33	45.2	40.0	13.0	
Endosulfan sulfate	7.94	7.91	8.01	42.2	40.0	5.4	
4,4'-DDT	7.56	7.52	7.62	39.2	40.0	-2.0	
Methoxychlor	8.14	8.11	8.21	180.2	200.0	-9.9	
Endrin ketone	8.43	8.40	8.50	50.5	40.0	26.3	<-
Endrin aldehyde	7.70	7.66	7.76	43.3	40.0	8.2	
gamma-Chlordane	6.46	6.43	6.53	18.3	20.0	-8.5	
alpha-Chlordane	6.60	6.56	6.66	18.2	20.0	-9.0	
Hexachlorobutadiene	2.37	2.33	2.43	19.5	20.0	-2.5	
Hexachlorobenzene	4.45	4.41	4.51	25.2	20.0	26.2	<-
Tetrachloro-m-xylene	4.00	3.96	4.06	40.3	40.0	0.8	
Decachlorobiphenyl	9.55	9.52	9.62	48.6	40.0	21.5	<-

7E  
8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS

ARI Job No.: VR38

Analysis Date: 21-NOV-2012 06:58

Init. Calib. Date: 03-OCT-2012

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

COMPOUND	RT	AREA
4,4'-DDE	6.012	30098
Endrin	6.519	3458250
4,4'-DDD	6.568	1575126
4,4'-DDT	6.824	819680
Endrin ketone	7.745	498279
Endrin aldehyde	7.102	45949

DDT Percent Breakdown = 66.2 %  
 $((30098+1575126) * 100) / (30098+1575126+819680)$

Endrin Percent Breakdown = 13.6 %  
 $((45949+498279) * 100) / (45949+498279+3458250)$

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

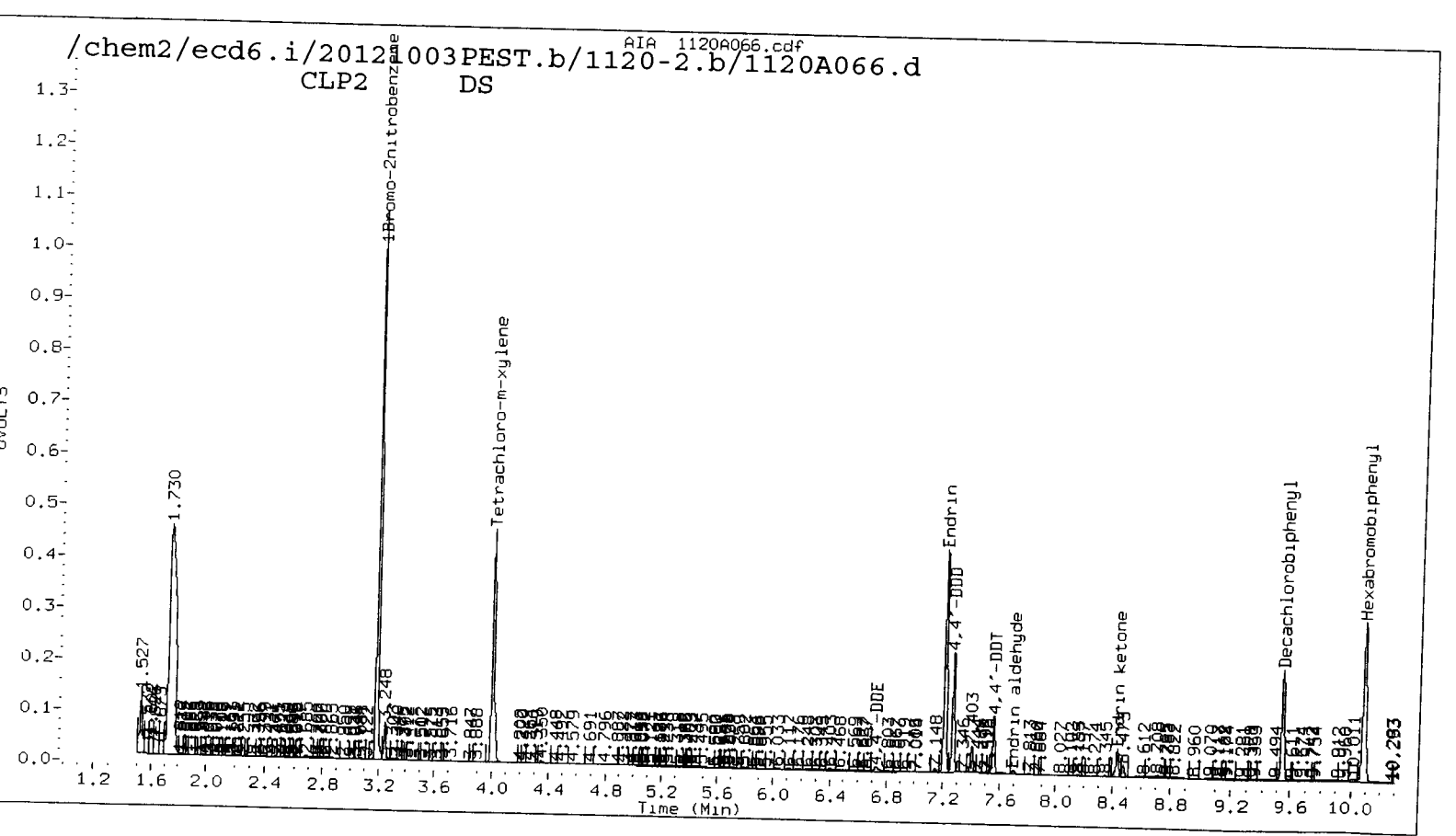
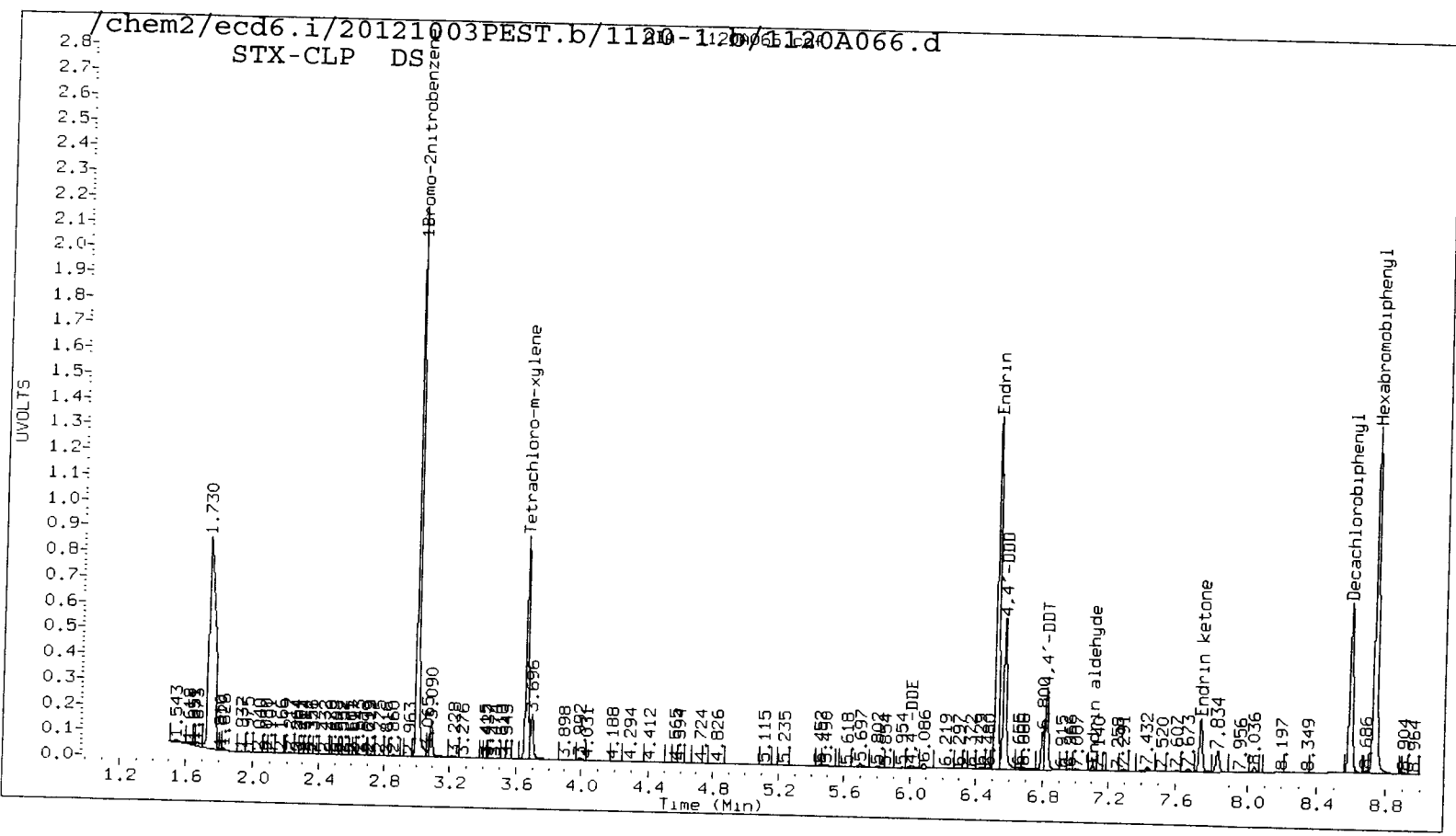
COMPOUND	RT	AREA
4,4'-DDE	6.722	356482
Endrin	7.211	10356187
4,4'-DDD	7.270	5473137
4,4'-DDT	7.556	2616252
Endrin ketone	8.431	1433100
Endrin aldehyde	7.698	238294

DDT Percent Breakdown = 69.0 %  
 $((356482+5473137) * 100) / (356482+5473137+2616252)$

Endrin Percent Breakdown = 13.9 %  
 $((238294+1433100) * 100) / (238294+1433100+10356187)$

Form VII Pest-1

VR58 00189



## 8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Init. Calib. Date: 10/03/12

Lab Ccal ID: INDAE

Date/Time Analyzed: 11/21/12,0716

PEST MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
		FROM	TO				
alpha-BHC	4.57	4.54	4.64	19.6	20.0	-2.1	
beta-BHC	5.00	4.96	5.06	15.8	20.0	-20.9	<-
delta-BHC	5.30	5.26	5.36	18.6	20.0	-6.9	
gamma-BHC (Lindane)	4.92	4.89	4.99	16.0	20.0	-19.8	
Heptachlor	5.38	5.35	5.45	13.1	20.0	-34.6	<-
Aldrin	5.72	5.69	5.79	18.4	20.0	-7.8	
Heptachlor epoxide b	6.28	6.24	6.34	16.8	20.0	-16.0	
Endosulfan I	6.66	6.63	6.73	16.6	20.0	-16.8	
Dieldrin	6.92	6.89	6.99	32.5	40.0	-18.8	
4,4'-DDE	6.73	6.70	6.80	33.1	40.0	-17.4	
Endrin	7.21	7.18	7.28	33.4	40.0	-16.6	
Endosulfan II	7.40	7.37	7.47	50.4	40.0	25.9	<-
4,4'-DDD	7.27	7.23	7.33	53.1	40.0	32.7	<-
Endosulfan sulfate	7.94	7.91	8.01	37.8	40.0	-5.4	
4,4'-DDT	7.56	7.52	7.62	10.0	40.0	-74.9	<-
Methoxychlor	8.14	8.11	8.21	60.5	200.0	-69.8	<-
Endrin ketone	8.43	8.40	8.50	25.6	40.0	-36.0	<-
Endrin aldehyde	7.70	7.66	7.76	41.5	40.0	3.7	
gamma-Chlordane	6.46	6.43	6.53	15.9	20.0	-20.6	<-
alpha-Chlordane	6.60	6.56	6.66	15.5	20.0	-22.4	<-
Hexachlorobutadiene	2.37	2.33	2.43	18.8	20.0	-5.9	
Hexachlorobenzene	4.45	4.41	4.51	24.6	20.0	23.1	<-
Tetrachloro-m-xylene	4.00	3.96	4.06	39.9	40.0	-0.3	
Decachlorobiphenyl	9.54	9.52	9.62	47.0	40.0	17.6	

## 8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Init. Calib. Date: 10/03/12

Lab Ccal ID: INDAE

Date/Time Analyzed: 11/21/12, 0716

PEST MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
		FROM	TO			
alpha-BHC	4.13	4.10	4.20	21.4	20.0	7.2
beta-BHC	4.49	4.45	4.55	16.9	20.0	-15.6
delta-BHC	4.66	4.61	4.71	19.7	20.0	-1.7
gamma-BHC (Lindane)	4.41	4.37	4.47	18.0	20.0	-10.2
Heptachlor	4.84	4.81	4.91	14.7	20.0	-26.5
Aldrin	5.13	5.10	5.20	20.9	20.0	4.5
Heptachlor epoxide b	5.70	5.67	5.77	19.6	20.0	-2.0
Endosulfan I	6.08	6.05	6.15	21.1	20.0	5.6
Dieldrin	6.30	6.27	6.37	42.0	40.0	5.0
4,4'-DDE	6.01	5.98	6.08	41.1	40.0	2.8
Endrin	6.52	6.49	6.59	33.1	40.0	-17.2
Endosulfan II	6.72	6.70	6.80	39.4	40.0	-1.5
4,4'-DDD	6.57	6.53	6.63	53.1	40.0	32.8
Endosulfan sulfate	7.49	7.46	7.56	37.9	40.0	-5.3
4,4'-DDT	6.82	6.79	6.89	11.0	40.0	-72.6
Methoxychlor	7.25	7.22	7.32	60.8	200.0	-69.6
Endrin ketone	7.74	7.72	7.82	25.6	40.0	-36.0
Endrin aldehyde	7.10	7.07	7.17	39.0	40.0	-2.5
gamma-Chlordane	5.82	5.79	5.89	19.4	20.0	-2.8
alpha-Chlordane	5.95	5.92	6.02	19.4	20.0	-3.0
Hexachlorobutadiene	2.20	2.16	2.26	22.1	20.0	10.6
Hexachlorobenzene	3.99	3.95	4.05	21.2	20.0	6.0
Tetrachloro-m-xylene	3.66	3.62	3.72	36.9	40.0	-7.8
Decachlorobiphenyl	8.59	8.56	8.66	38.3	40.0	-4.3



8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Init. Calib. Date: 10/03/12

Lab Ccal ID: WNDE

Date/Time Analyzed: 11/21/12,0213

PEST MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
		FROM	TO			
Hexachloroethane	1.73	1.69	1.79	0.0	20.0	-100.0
Oxychlorane	5.61	5.58	5.68	37.6	40.0	-6.1
2,4-DDE	5.69	5.65	5.75	42.3	40.0	5.8
trans-Nonachlor	5.94	5.90	6.00	40.1	40.0	0.1
2,4-DDD	6.18	6.14	6.24	40.2	40.0	0.6
2,4-DDT	6.42	6.38	6.48	35.4	40.0	-11.4
cis-Nonachlor	6.55	6.52	6.62	40.3	40.0	0.8
Mirex	7.42	7.39	7.49	38.0	40.0	-5.0

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Init. Calib. Date: 10/03/12

Lab Ccal ID: WNDE

Date/Time Analyzed: 11/21/12,0213

PEST MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
		FROM	TO			
Hexachloroethane	1.73	1.68	1.78	0.0	40.0	-100.0
Oxychlorane	6.19	6.15	6.25	35.6	40.0	-11.0
2,4-DDE	6.44	6.40	6.50	37.1	40.0	-7.4
trans-Nonachlor	6.55	6.51	6.61	41.7	40.0	4.3
2,4-DDD	6.93	6.89	6.99	45.4	40.0	13.4
2,4-DDT	7.21	7.18	7.28	37.1	40.0	-7.3
cis-Nonachlor	7.27	7.24	7.34	39.8	40.0	-0.5
Mirex	8.42	8.38	8.48	36.7	40.0	-8.2

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Init. Calib. Date: 10/03/12

Lab Ccal ID: WNDE

Date/Time Analyzed: 11/21/12, 0733

PEST MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
		FROM	TO			
Hexachloroethane	1.73	1.68	1.78	0.0	40.0	-100.0   <-
Oxychlorane	6.19	6.15	6.25	31.4	40.0	-21.6 <-
2,4-DDE	6.44	6.40	6.50	34.4	40.0	-14.0
trans-Nonachlor	6.54	6.51	6.61	41.0	40.0	2.5
2,4-DDD	6.93	6.89	6.99	54.5	40.0	36.3 <-
2,4-DDT	7.21	7.18	7.28	14.9	40.0	-62.6 <-
cis-Nonachlor	7.27	7.24	7.34	38.6	40.0	-3.6
Mirex	8.42	8.38	8.48	27.4	40.0	-31.5 <-

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Init. Calib. Date: 10/03/12

Lab Ccal ID: WNDE

Date/Time Analyzed: 11/21/12,0733

PEST MIX COMPOUND	RT	RT WINDOW		CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
		FROM	TO			
Hexachloroethane	1.73	1.69	1.79	0.0	20.0	-100.0 <-
Oxychlorthane	5.61	5.58	5.68	36.8	40.0	-8.1
2,4-DDE	5.69	5.65	5.75	41.2	40.0	3.1
trans-Nonachlor	5.93	5.90	6.00	38.7	40.0	-3.4
2,4-DDD	6.17	6.14	6.24	48.9	40.0	22.3 <-
2,4-DDT	6.41	6.38	6.48	14.8	40.0	-63.1 <-
cis-Nonachlor	6.55	6.52	6.62	39.5	40.0	-1.3
Mirex	7.42	7.39	7.49	29.3	40.0	-26.8 <-

FORM 8  
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Instrument ID: ECD6

Init. Calib. Date: 10/03/12

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

				IS1	RT	IS2	RT	
				AREA		AREA		
=====				=====	=====	=====	=====	
ICAL MIDPT				4060064	3.015	3748709	8.750	
UPPER LIMIT				8120128	3.065	7497418	8.800	
LOWER LIMIT				2030032	2.965	1874354	8.700	
=====				=====	=====	=====	=====	
CLIENT	LAB	DATE	TIME	IS1	RT	IS2	RT	
SAMPLE NO.	SAMPLE ID	ANALYZED		AREA		AREA		
=====								
01		INDAE	10/03/12	1639	4060064	3.015	3748709	8.750
02		INDAA	10/03/12	1656	4049993	3.015	3734455	8.750
03		INDAB	10/03/12	1714	4090558	3.015	3771845	8.750
04		INDAC	10/03/12	1732	4021073	3.015	3724289	8.750
05		INDAD	10/03/12	1750	4048036	3.015	3782157	8.750
06		INDAF	10/03/12	1808	4083237	3.015	3825703	8.750
07		INDAG	10/03/12	1826	4094375	3.015	3786416	8.750
08		WNDE	10/03/12	1919	4208844	3.015	3949210	8.750
09		WNDA	10/03/12	1937	3929689	3.015	3679733	8.750
10		WNDB	10/03/12	1955	4316718	3.015	4014283	8.750
11		WNDC	10/03/12	2012	4166737	3.015	3931640	8.750
12		WNDD	10/03/12	2030	4291231	3.015	4014232	8.750
13		WNDF	10/03/12	2048	4252342	3.015	3949109	8.750
14		WNDG	10/03/12	2106	4304026	3.015	4056513	8.750
15		DS	11/21/12	0119	4119772	3.003	3880458	8.740
16		INDAE	11/21/12	0137	4398580	3.003	4115604	8.741
17		WNDE	11/21/12	0213	4307713	3.003	4053655	8.741
18	VR38MBS1	VR38MBS1	11/21/12	0306	4041180	3.001	3990867	8.732
19	VR38LCSS1	VR38LCSS1	11/21/12	0324	4278361	3.001	4216194	8.731
20	HT-06-S-E-12	VR38J	11/21/12	0342	4395292	3.002	4011332	8.731
21	HT-07-S-E-12	VR38K	11/21/12	0400	4329370	3.001	3848662	8.731
22	SG-10-S-E-12	VR58A	11/21/12	0417	4379518	3.001	3769713	8.733
23	SG-11-S-E-12	VR58B	11/21/12	0435	4188612	3.000	3513167	8.741
24	SG-12-S-E-12	VR58C	11/21/12	0453	4041498	3.001	3320691	8.734
25	SG-13-S-E-12	VR58D	11/21/12	0511	4391869	3.001	3506059	8.737
26	SG-13-S-E-DU	VR58E	11/21/12	0529	3764319	3.002	3005279	8.738
27	SG-14-S-E-12	VR58F	11/21/12	0546	4102144	3.001	3533449	8.734
28	SG-15-S-E-12	VR58G	11/21/12	0604	4276013	3.001	3665474	8.732
29	SG-15-S-E-12	VR58GMS	11/21/12	0622	4141098	3.001	3743889	8.733
30	SG-15-S-E-12	VR58GMSD	11/21/12	0640	4111009	3.001	3674542	8.733
31		DS	11/21/12	0658	4067662	3.003	3644763	8.734
32		INDAE	11/21/12	0716	4411805	3.003	4003766	8.733
33		WNDE	11/21/12	0733	4363763	3.003	3949527	8.734

IS1 = 1-Bromo-2-Nitrobenzene  
IS2 = Hexabromobiphenyl

RT Window = RT +/- .05 min

FORM 8  
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR38

Project: CITY OF KENMORE SEDIMENT

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

Instrument ID: ECD6

Init. Calib. Date: 10/03/12

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

				IS1 AREA	RT	IS2 AREA	RT	
=====				=====	=====	=====	=====	
ICAL MIDPT				21032891	3.195	14864285	10.105	
UPPER LIMIT				42065782	3.245	29728570	10.155	
LOWER LIMIT				10516446	3.145	7432142	10.055	
=====				=====	=====	=====	=====	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT	
=====								
01	INDAE	10/03/12	1639	21032891	3.195	14864285	10.105	
02	INDAA	10/03/12	1656	21107593	3.195	14677423	10.106	
03	INDAB	10/03/12	1714	21416427	3.195	15039648	10.106	
04	INDAC	10/03/12	1732	21029129	3.195	15016060	10.106	
05	INDAD	10/03/12	1750	21297295	3.195	15199043	10.107	
06	INDAF	10/03/12	1808	21266311	3.195	15407292	10.106	
07	INDAG	10/03/12	1826	21395806	3.195	15257890	10.107	
08	WNDE	10/03/12	1919	22225166	3.195	15958085	10.105	
09	WNDA	10/03/12	1937	20878006	3.195	14804646	10.106	
10	WNDB	10/03/12	1955	22757667	3.195	16320408	10.106	
11	WNDC	10/03/12	2012	22095258	3.195	16032237	10.106	
12	WNDD	10/03/12	2030	22892989	3.195	16280005	10.106	
13	WNDF	10/03/12	2048	22617896	3.195	16310554	10.106	
14	WNDG	10/03/12	2106	22734029	3.195	16771085	10.106	
15	DS	11/21/12	0119	22796918	3.185	13115540	10.087	
16	INDAE	11/21/12	0137	24031979	3.185	13942788	10.087	
17	WNDE	11/21/12	0213	23669772	3.185	14076646	10.087	
18	VR38MBS1	VR38MBS1	11/21/12	0306	18893460	3.183	12242758	10.083
19	VR38LCSS1	VR38LCSS1	11/21/12	0324	20484734	3.183	13140209	10.082
20	HT-06-S-E-12	VR38J	11/21/12	0342	22828780	3.184	12027139	10.082
21	HT-07-S-E-12	VR38K	11/21/12	0400	21197856	3.184	11158606	10.082
22	SG-10-S-E-12	VR58A	11/21/12	0417	20078989	3.184	9434421	10.083
23	SG-11-S-E-12	VR58B	11/21/12	0435	14658009	3.183	7905264	10.090
24	SG-12-S-E-12	VR58C	11/21/12	0453	11761598	3.183	7532577	10.084
25	SG-13-S-E-12	VR58D	11/21/12	0511	15081701	3.183	8005512	10.086
26	SG-13-S-E-DU	VR58E	11/21/12	0529	13166590	3.184	7072899*	10.087
27	SG-14-S-E-12	VR58F	11/21/12	0546	14677208	3.184	8887827	10.083
28	SG-15-S-E-12	VR58G	11/21/12	0604	17778163	3.183	9130901	10.083
29	SG-15-S-E-12	VR58GMS	11/21/12	0622	18288862	3.184	8805618	10.084
30	SG-15-S-E-12	VR58GMSD	11/21/12	0640	17980117	3.184	9058917	10.084
31	DS	11/21/12	0658	19714882	3.185	10419259	10.084	
32	INDAE	11/21/12	0716	23839242	3.185	11839489	10.084	
33	WNDE	11/21/12	0733	23688082	3.185	12186581	10.084	

IS1 = 1-Bromo-2-Nitrobenzene

RT Window = RT +/- .05 min

IS2 = Hexabromobiphenyl

**PCB Analysis  
Report and Summary QC Forms**

**ARI Job ID: VR58**

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA PCB by GC/ECD**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-10-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58A  
 LIMS ID: 12-22329  
 Matrix: Sediment  
 Data Release Authorized:  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/16/12  
 Date Analyzed: 11/24/12 18:45  
 Instrument/Analyst: ECD5/JGR  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Acid Cleanup: Yes

Sample Amount: 5.44 g-dry-wt  
 Final Extract Volume: 5.0 mL  
 Dilution Factor: 1.00  
 Silica Gel: No  
 Percent Moisture: 40.6%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	4.7	18	< 18 U
53469-21-9	Aroclor 1242	6.2	18	< 18 U
12672-29-6	Aroclor 1248	6.2	18	< 18 U
11097-69-1	Aroclor 1254	6.2	32	< 32 Y
11096-82-5	Aroclor 1260	6.2	18	< 18 U
11104-28-2	Aroclor 1221	6.2	18	< 18 U
11141-16-5	Aroclor 1232	6.2	18	< 18 U

Reported in µg/kg (ppb)

**PCB Surrogate Recovery**

Decachlorobiphenyl	90.8%
Tetrachlorometaxylene	90.2%



ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Extraction Method: SW3546  
Page 1 of 1



Sample ID: SG-11-S-E-121107  
SAMPLE

Lab Sample ID: VR58B  
LIMS ID: 12-22330  
Matrix: Sediment  
Data Release Authorized:  
Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/16/12  
Date Analyzed: 11/24/12 19:05  
Instrument/Analyst: ECD5/JGR  
GPC Cleanup: No  
Sulfur Cleanup: Yes  
Acid Cleanup: Yes

Sample Amount: 5.19 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 1.00  
Silica Gel: No  
Percent Moisture: 80.1%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	4.9	19	< 19 U
53469-21-9	Aroclor 1242	6.6	19	< 19 U
12672-29-6	Aroclor 1248	6.6	39	< 39 Y
11097-69-1	Aroclor 1254	6.6	48	< 48 Y
<b>11096-82-5</b>	<b>Aroclor 1260</b>	<b>6.6</b>	<b>19</b>	<b>29 P</b>
11104-28-2	Aroclor 1221	6.6	19	< 19 U
11141-16-5	Aroclor 1232	6.6	19	< 19 U

Reported in µg/kg (ppb)

**PCB Surrogate Recovery**

Decachlorobiphenyl	109%
Tetrachlorometaxylene	88.0%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Extraction Method: SW3546  
Page 1 of 1



Sample ID: SG-12-S-E-121107  
SAMPLE

Lab Sample ID: VR58C  
LIMS ID: 12-22331  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/16/12  
Date Analyzed: 11/24/12 19:25  
Instrument/Analyst: ECD5/JGR  
GPC Cleanup: No  
Sulfur Cleanup: Yes  
Acid Cleanup: Yes

Sample Amount: 5.14 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 1.00  
Silica Gel: No  
Percent Moisture: 70.0%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	5.0	19	< 19 U
53469-21-9	Aroclor 1242	6.6	19	< 19 U
12672-29-6	Aroclor 1248	6.6	24	< 24 Y
11097-69-1	Aroclor 1254	6.6	49	< 49 Y
11096-82-5	Aroclor 1260	6.6	19	< 19 U
11104-28-2	Aroclor 1221	6.6	19	< 19 U
11141-16-5	Aroclor 1232	6.6	19	< 19 U

Reported in µg/kg (ppb)

**PCB Surrogate Recovery**

Decachlorobiphenyl	81.0%
Tetrachlorometaxylene	88.0%



ORGANICS ANALYSIS DATA SHEET  
 PSDDA PCB by GC/ECD  
 Extraction Method: SW3546  
 Page 1 of 1

Sample ID: SG-13-S-E-121107  
 SAMPLE

Lab Sample ID: VR58D  
 LIMS ID: 12-22332  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/16/12  
 Date Analyzed: 11/24/12 19:46  
 Instrument/Analyst: ECD5/JGR  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Acid Cleanup: Yes

Sample Amount: 5.05 g-dry-wt  
 Final Extract Volume: 5.0 mL  
 Dilution Factor: 1.00  
 Silica Gel: No  
 Percent Moisture: 76.0%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	5.0	20	< 20 U
53469-21-9	Aroclor 1242	6.7	20	< 20 U
12672-29-6	Aroclor 1248	6.7	20	< 20 U
11097-69-1	Aroclor 1254	6.7	50	< 50 Y
11096-82-5	Aroclor 1260	6.7	20	< 20 U
11104-28-2	Aroclor 1221	6.7	20	< 20 U
11141-16-5	Aroclor 1232	6.7	25	< 25 Y

Reported in µg/kg (ppb)


**PCB Surrogate Recovery**

Decachlorobiphenyl	89.0%
Tetrachlorometaxylene	82.0%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Extraction Method: SW3546  
Page 1 of 1



Sample ID: SG-13-S-E-dup-121107  
SAMPLE

Lab Sample ID: VR58E  
LIMS ID: 12-22333  
Matrix: Sediment  
Data Release Authorized:   
Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/16/12  
Date Analyzed: 11/24/12 20:06  
Instrument/Analyst: ECD5/JGR  
GPC Cleanup: No  
Sulfur Cleanup: Yes  
Acid Cleanup: Yes

Sample Amount: 5.06 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 1.00  
Silica Gel: No  
Percent Moisture: 76.0%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	5.0	20	< 20 U
53469-21-9	Aroclor 1242	6.7	20	< 20 U
12672-29-6	Aroclor 1248	6.7	20	< 20 U
11097-69-1	Aroclor 1254	6.7	25	< 25 Y
11096-82-5	Aroclor 1260	6.7	20	< 20 U
11104-28-2	Aroclor 1221	6.7	20	< 20 U
11141-16-5	Aroclor 1232	6.7	35	< 35 Y

Reported in µg/kg (ppb)

**PCB Surrogate Recovery**

Decachlorobiphenyl	90.0%
Tetrachlorometaxylene	86.2%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Extraction Method: SW3546  
Page 1 of 1



Sample ID: SG-14-S-E-121107  
SAMPLE

Lab Sample ID: VR58F  
LIMS ID: 12-22334  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/16/12  
Date Analyzed: 11/24/12 20:26  
Instrument/Analyst: ECD5/JGR  
GPC Cleanup: No  
Sulfur Cleanup: Yes  
Acid Cleanup: Yes

Sample Amount: 5.30 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 1.00  
Silica Gel: No  
Percent Moisture: 52.7%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	4.8	19	< 19 U
53469-21-9	Aroclor 1242	6.4	19	< 19 U
12672-29-6	Aroclor 1248	6.4	19	< 19 U
<b>11097-69-1</b>	<b>Aroclor 1254</b>	<b>6.4</b>	<b>19</b>	<b>20</b>
11096-82-5	Aroclor 1260	6.4	19	< 19 U
11104-28-2	Aroclor 1221	6.4	19	< 19 U
11141-16-5	Aroclor 1232	6.4	28	< 28 Y

Reported in µg/kg (ppb)

**PCB Surrogate Recovery**

Decachlorobiphenyl	83.8%
Tetrachlorometaxylene	80.0%

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA PCB by GC/ECD**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-15-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58G  
 LIMS ID: 12-22335  
 Matrix: Sediment  
 Data Release Authorized: *[Signature]*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/16/12  
 Date Analyzed: 11/24/12 21:27  
 Instrument/Analyst: ECD5/JGR  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Acid Cleanup: Yes

Sample Amount: 5.44 g-dry-wt  
 Final Extract Volume: 5.0 mL  
 Dilution Factor: 1.00  
 Silica Gel: No  
 Percent Moisture: 24.7%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	4.7	18	< 18 U
53469-21-9	Aroclor 1242	6.3	18	< 18 U
12672-29-6	Aroclor 1248	6.3	18	< 18 U
11097-69-1	Aroclor 1254	6.3	18	< 18 U
11096-82-5	Aroclor 1260	6.3	18	< 18 U
11104-28-2	Aroclor 1221	6.3	18	< 18 U
11141-16-5	Aroclor 1232	6.3	18	< 18 U

Reported in µg/kg (ppb)

**PCB Surrogate Recovery**

Decachlorobiphenyl	89.2%
Tetrachlorometaxylene	89.2%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Extraction Method: SW3546  
Page 1 of 1



Sample ID: SG-16-S-E-121107  
SAMPLE

Lab Sample ID: VR58H  
LIMS ID: 12-22336  
Matrix: Sediment  
Data Release Authorized: *AB*  
Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/16/12  
Date Analyzed: 11/24/12 21:48  
Instrument/Analyst: ECD5/JGR  
GPC Cleanup: No  
Sulfur Cleanup: Yes  
Acid Cleanup: Yes

Sample Amount: 5.71 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 1.00  
Silica Gel: No  
Percent Moisture: 21.0%


CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	4.5	18	< 18 U
53469-21-9	Aroclor 1242	6.0	18	< 18 U
12672-29-6	Aroclor 1248	6.0	18	< 18 U
11097-69-1	Aroclor 1254	6.0	18	< 18 U
11096-82-5	Aroclor 1260	6.0	18	< 18 U
11104-28-2	Aroclor 1221	6.0	18	< 18 U
11141-16-5	Aroclor 1232	6.0	18	< 18 U


Reported in µg/kg (ppb)

**PCB Surrogate Recovery**

Decachlorobiphenyl	86.5%
Tetrachlorometaxylene	86.5%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Extraction Method: SW3546  
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED   
Sample ID: SG-17-S-E-121107  
SAMPLE

Lab Sample ID: VR58I  
LIMS ID: 12-22337  
Matrix: Sediment  
Data Release Authorized:   
Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/16/12  
Date Analyzed: 11/24/12 22:08  
Instrument/Analyst: ECD5/JGR  
GPC Cleanup: No  
Sulfur Cleanup: Yes  
Acid Cleanup: Yes

Sample Amount: 5.15 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 1.00  
Silica Gel: No  
Percent Moisture: 53.5%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	5.0	19	< 19 U
53469-21-9	Aroclor 1242	6.6	19	< 19 U
12672-29-6	Aroclor 1248	6.6	19	< 19 U
11097-69-1	Aroclor 1254	6.6	19	< 19 U
11096-82-5	Aroclor 1260	6.6	19	< 19 U
11104-28-2	Aroclor 1221	6.6	19	< 19 U
11141-16-5	Aroclor 1232	6.6	19	< 19 U

Reported in µg/kg (ppb)

**PCB Surrogate Recovery**


Decachlorobiphenyl	86.2%
Tetrachlorometaxylene	88.8%



ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Extraction Method: SW3546  
Page 1 of 1



Sample ID: SG-01-S-C-121107  
SAMPLE

Lab Sample ID: VR58J  
LIMS ID: 12-22338  
Matrix: Sediment  
Data Release Authorized:   
Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Date Extracted: 11/16/12  
Date Analyzed: 11/24/12 22:28  
Instrument/Analyst: ECD5/JGR  
GPC Cleanup: No  
Sulfur Cleanup: Yes  
Acid Cleanup: Yes

Sample Amount: 5.76 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 1.00  
Silica Gel: No  
Percent Moisture: 20.5%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	4.4	17	< 17 U
53469-21-9	Aroclor 1242	5.9	17	< 17 U
12672-29-6	Aroclor 1248	5.9	17	< 17 U
11097-69-1	Aroclor 1254	5.9	17	< 17 U
11096-82-5	Aroclor 1260	5.9	17	< 17 U
11104-28-2	Aroclor 1221	5.9	17	< 17 U
11141-16-5	Aroclor 1232	5.9	17	< 17 U

Reported in  $\mu\text{g}/\text{kg}$  (ppb)

**PCB Surrogate Recovery**

Decachlorobiphenyl	85.8%
Tetrachlorometaxylene	86.5%

**SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY**

Matrix: Sediment

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01

<u>Client ID</u>	<u>DCBP % REC</u>	<u>DCBP LCL-UCL</u>	<u>TCMX % REC</u>	<u>TCMX LCL-UCL</u>	<u>TOT</u>	<u>OUT</u>
SG-10-S-E-121107	90.8%	24-127	90.2%	34-109		0
SG-11-S-E-121107	109%	24-127	88.0%	34-109		0
SG-12-S-E-121107	81.0%	24-127	88.0%	34-109		0
SG-13-S-E-121107	89.0%	24-127	82.0%	34-109		0
SG-13-S-E-dup-121107	90.0%	24-127	86.2%	34-109		0
SG-14-S-E-121107	83.8%	24-127	80.0%	34-109		0
SG-15-S-E-121107	89.2%	24-127	89.2%	34-109		0
SG-16-S-E-121107	86.5%	24-127	86.5%	34-109		0
SG-17-S-E-121107	86.2%	24-127	88.8%	34-109		0
MB-111612	104%	48-123	106%	43-107		0
LCS-111612	99.8%	48-123	98.0%	43-107		0
SRM PSR	92.0%	24-127	96.5%	34-109		0
SG-01-S-C-121107	85.8%	24-127	86.5%	34-109		0
SG-01-S-C-121107 MS	86.8%	24-127	88.2%	34-109		0
SG-01-S-C-121107 MSD	87.2%	24-127	87.5%	34-109		0

Microwave (MARS) Control Limits PCBSMM  
Prep Method: SW3546  
Log Number Range: 12-22329 to 12-22338



ORGANICS ANALYSIS DATA SHEET

PSDDA PCB by GC/ECD

Page 1 of 1

Sample ID: SG-01-S-C-121107

MS/MSD

Lab Sample ID: VR58J

LIMS ID: 12-22338

Matrix: Sediment

Data Release Authorized: *[Signature]*

Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: 11/07/12

Date Received: 11/08/12

Date Extracted MS/MSD: 11/16/12

Sample Amount MS: 5.70 g-dry-wt

MSD: 5.70 g-dry-wt

Date Analyzed MS: 11/24/12 22:49

Final Extract Volume MS: 5.0 mL

MSD: 11/24/12 23:09

MSD: 5.0 mL

Instrument/Analyst MS: ECD5/JGR

Dilution Factor MS: 1.00

MSD: ECD5/JGR

MSD: 1.00

GPC Cleanup: No

Silica Gel: No

Sulfur Cleanup: Yes

Percent Moisture: 20.5%

Acid Cleanup: Yes

Florisil Cleanup: No

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Aroclor 1016	< 17 U	368	439	83.8%	367	439	83.6%	0.3%
Aroclor 1260	< 17 U	419	439	95.4%	415	439	94.5%	1.0%

Results reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA PCB by GC/ECD**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-01-S-C-121107**  
**MATRIX SPIKE**

Lab Sample ID: VR58J  
 LIMS ID: 12-22338  
 Matrix: Sediment  
 Data Release Authorized:  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/16/12  
 Date Analyzed: 11/24/12 22:49  
 Instrument/Analyst: ECD5/JGR  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Acid Cleanup: Yes

Sample Amount: 5.70 g-dry-wt  
 Final Extract Volume: 5.0 mL  
 Dilution Factor: 1.00  
 Silica Gel: No  
 Percent Moisture: 20.5%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	4.5	18	---
53469-21-9	Aroclor 1242	6.0	18	< 18 U
12672-29-6	Aroclor 1248	6.0	18	< 18 U
11097-69-1	Aroclor 1254	6.0	18	< 18 U
11096-82-5	Aroclor 1260	6.0	18	---
11104-28-2	Aroclor 1221	6.0	18	< 18 U
11141-16-5	Aroclor 1232	6.0	18	< 18 U

Reported in µg/kg (ppb)

**PCB Surrogate Recovery**

Decachlorobiphenyl	86.8%
Tetrachlorometaxylene	88.2%

**ORGANICS ANALYSIS DATA SHEET**  
**PSDDA PCB by GC/ECD**  
**Extraction Method: SW3546**  
 Page 1 of 1

**Sample ID: SG-01-S-C-121107**  
**MATRIX SPIKE DUP**

Lab Sample ID: VR58J  
 LIMS ID: 12-22338  
 Matrix: Sediment  
 Data Release Authorized: *AB*  
 Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
 Project: City of Kenmore Sediment  
 120891-01.01  
 Date Sampled: 11/07/12  
 Date Received: 11/08/12

Date Extracted: 11/16/12  
 Date Analyzed: 11/24/12 23:09  
 Instrument/Analyst: ECD5/JGR  
 GPC Cleanup: No  
 Sulfur Cleanup: Yes  
 Acid Cleanup: Yes

Sample Amount: 5.70 g-dry-wt  
 Final Extract Volume: 5.0 mL  
 Dilution Factor: 1.00  
 Silica Gel: No  
 Percent Moisture: 20.5%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	4.5	18	---
53469-21-9	Aroclor 1242	6.0	18	< 18 U
12672-29-6	Aroclor 1248	6.0	18	< 18 U
11097-69-1	Aroclor 1254	6.0	18	< 18 U
11096-82-5	Aroclor 1260	6.0	18	---
11104-28-2	Aroclor 1221	6.0	18	< 18 U
11141-16-5	Aroclor 1232	6.0	18	< 18 U

Reported in µg/kg (ppb)


**PCB Surrogate Recovery**

Decachlorobiphenyl	87.2%
Tetrachlorometaxylene	87.5%

ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Extraction Method: SW3546  
Page 1 of 1



Sample ID: SRM PSR  
STANDARD REFERENCE

Lab Sample ID: SRM PSR  
LIMS ID: 12-22338  
Matrix: Sediment  
Data Release Authorized:   
Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: NA  
Date Received: NA

Date Extracted: 11/16/12  
Date Analyzed: 11/24/12 18:24  
Instrument/Analyst: ECD5/JGR  
GPC Cleanup: No  
Sulfur Cleanup: Yes  
Acid Cleanup: Yes

Sample Amount: 5.00 g-dry-wt  
Final Extract Volume: 5.0 mL  
Dilution Factor: 1.00  
Silica Gel: No  
Percent Moisture: 0.0%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	5.1	20	< 20 U
53469-21-9	Aroclor 1242	6.8	20	< 20 U
12672-29-6	Aroclor 1248	6.8	50	< 50 Y
<b>11097-69-1</b>	<b>Aroclor 1254</b>	<b>6.8</b>	<b>20</b>	<b>100</b>
<b>11096-82-5</b>	<b>Aroclor 1260</b>	<b>6.8</b>	<b>20</b>	<b>150</b>
11104-28-2	Aroclor 1221	6.8	20	< 20 U
11141-16-5	Aroclor 1232	6.8	20	< 20 U

Reported in µg/kg (ppb)

**PCB Surrogate Recovery**

Decachlorobiphenyl	92.0%
Tetrachlorometaxylene	96.5%



ORGANICS ANALYSIS DATA SHEET  
PSDDA PCB by GC/ECD  
Page 1 of 1

Sample ID: LCS-111612  
LAB CONTROL

Lab Sample ID: LCS-111612  
LIMS ID: 12-22338  
Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.  
Project: City of Kenmore Sediment  
120891-01.01  
Date Sampled: NA  
Date Received: NA

Date Extracted: 11/16/12  
Date Analyzed: 11/24/12 18:04  
Instrument/Analyst: ECD5/JGR  
GPC Cleanup: No  
Sulfur Cleanup: Yes  
Acid Cleanup: Yes  
Florisil Cleanup: No

Sample Amount: 5.00 g-dry-wt  
Final Extract Volume: 5.00 mL  
Dilution Factor: 1.00  
Silica Gel: No  
Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Aroclor 1016	480	500	96.0%
Aroclor 1260	549	500	110%

PCB Surrogate Recovery

Decachlorobiphenyl	99.8%
Tetrachlorometaxylene	98.0%

Results reported in µg/kg (ppb)

4  
PCB METHOD BLANK SUMMARY

BLANK NO.

VR58MBS1

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA, LLC.

ARI Job No.: VR58

Project: CITY OF KENMORE SEDI

Lab Sample ID: VR58MBS1

Lab File ID: 1124A004

Date Extracted: 11/16/12

Matrix: SOLID

Date Analyzed: 11/24/12

Instrument ID: ECD5

Time Analyzed: 1744

GC Columns: ZB5/ZB35

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	VR58LCSS1	VR58LCSS1	11/24/12
02	PSR	VR58SRM1	11/24/12
03	SG-10-S-E-121107	VR58A	11/24/12
04	SG-11-S-E-121107	VR58B	11/24/12
05	SG-12-S-E-121107	VR58C	11/24/12
06	SG-13-S-E-121107	VR58D	11/24/12
07	SG-13-S-E-DUP-12110	VR58E	11/24/12
08	SG-14-S-E-121107	VR58F	11/24/12
09	SG-15-S-E-121107	VR58G	11/24/12
10	SG-16-S-E-121107	VR58H	11/24/12
11	SG-17-S-E-121107	VR58I	11/24/12
12	SG-01-S-C-121107	VR58J	11/24/12
13	SG-01-S-C-12110 MS	VR58JMS	11/24/12
14	SG-01-S-C-12110 MSD	VR58JMSD	11/24/12
15	SG-02-S-C-121108	VR82A	11/24/12
16	SG-03-S-C-121108	VR82B	11/24/12
17	SG-04-S-C-121108	VR82C	11/25/12
18	SG-05-S-C-121108	VR82D	11/25/12
19	SG-06-S-C-121108	VR82E	11/25/12
20	SG-07-S-C-121108	VR82F	11/25/12
21	SG-07-S-C-DUP-12110	VR82G	11/25/12
22	SG-08-S-C-121108	VR82H	11/25/12
23	SG-09-S-C-121108	VR82I	11/25/12

ALL RUNS ARE DUAL COLUMN



**ORGANICS ANALYSIS DATA SHEET**

**PSDDA PCB by GC/ECD**

**Extraction Method: SW3546**

Page 1 of 1

**Sample ID: MB-111612**

**METHOD BLANK**

Lab Sample ID: MB-111612

LIMS ID: 12-22338

Matrix: Sediment

Data Release Authorized: *AB*

Reported: 11/26/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: NA

Date Received: NA

Date Extracted: 11/16/12

Date Analyzed: 11/24/12 17:44

Instrument/Analyst: ECD5/JGR

GPC Cleanup: No

Sulfur Cleanup: Yes

Acid Cleanup: Yes

Sample Amount: 5.00 g

Final Extract Volume: 5.0 mL

Dilution Factor: 1.00

Silica Gel: No

Percent Moisture: NA

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	5.1	20	< 20 U
53469-21-9	Aroclor 1242	6.8	20	< 20 U
12672-29-6	Aroclor 1248	6.8	20	< 20 U
11097-69-1	Aroclor 1254	6.8	20	< 20 U
11096-82-5	Aroclor 1260	6.8	20	< 20 U
11104-28-2	Aroclor 1221	6.8	20	< 20 U
11141-16-5	Aroclor 1232	6.8	20	< 20 U

Reported in µg/kg (ppb)

**PCB Surrogate Recovery**

Decachlorobiphenyl	104%
Tetrachlorometaxylene	106%

6F  
8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB5

Instrument ID: ECD5

Calibration Date: 11/02/12

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	4.35- 4.55	1.7463	1.7366	1.7919	1.6885	1.5990	1.1618	1.6707	7.3
DCB	12.76-12.96	1.4119	1.3542	1.3255	1.1568	1.0372	0.9164	1.2053	16.9

Aroclor-1016		LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
Peak	RT WIN	.02	0.05	0.1	.25	0.5	1.0		R^2
1	6.00- 6.20	0.0526	0.0492	0.0480	0.0431	0.0399	0.0355	0.0447	14.3
2	6.40- 6.60	0.1677	0.1545	0.1513	0.1334	0.1220	0.1073	0.1394	16.2
3	6.55- 6.75	0.0718	0.0670	0.0652	0.0578	0.0527	0.0464	0.0601	15.9
4	6.66- 6.86	0.0505	0.0471	0.0462	0.0417	0.0385	0.0340	0.0430	14.2

AROCLOR AVERAGE %RSD = 15.1

Aroclor-1260		LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
Peak	RT WIN	.02	0.05	0.1	.25	0.5	1.0		R^2
1	9.90-10.10	0.0536	0.0493	0.0479	0.0428	0.0388	0.0345	0.0445	12.5
2	10.21-10.41	0.0532	0.0494	0.0483	0.0433	0.0394	0.0351	0.0448	11.6
3	10.59-10.79	0.1298	0.1173	0.1141	0.1011	0.0918	0.0821	0.1060	13.3
4	10.99-11.19	0.0754	0.0665	0.0648	0.0581	0.0527	0.0471	0.0608	13.6
5	11.18-11.38	0.0346	0.0319	0.0317	0.0292	0.0269	0.0244	0.0298	9.5

AROCLOR AVERAGE %RSD = 12.1

6F  
8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35

Instrument ID: ECD5

Calibration Date: 11/02/12

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	4.36- 4.56	1.1947	1.1506	1.1889	1.1588	1.1066	1.0428	1.1404	5.0
DCB	13.15-13.35	1.2887	1.1842	1.1439	1.0432	0.9699	0.8923	1.0871	13.5

Aroclor-1016	Peak	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
			.02	0.05	0.1	.25	0.5	1.0		R <sup>2</sup>
	1	6.11- 6.31	0.0541	0.0496	0.0481	0.0428	0.0390	0.0352	0.0448	15.8
	2	6.74- 6.94	0.1119	0.1025	0.1010	0.0916	0.0847	0.0773	0.0948	13.4
	3	7.13- 7.33	0.0277	0.0264	0.0263	0.0242	0.0226	0.0209	0.0247	10.6
	4	7.24- 7.44	0.0325	0.0303	0.0296	0.0268	0.0247	0.0226	0.0277	13.5

AROCLOR AVERAGE %RSD = 13.3

Aroclor-1260	Peak	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
			.02	0.05	0.1	.25	0.5	1.0		R <sup>2</sup>
	1	10.20-10.40	0.0510	0.0463	0.0455	0.0410	0.0379	0.0345	0.0427	14.1
	2	10.65-10.85	0.0605	0.0575	0.0561	0.0509	0.0468	0.0427	0.0524	13.0
	3	10.93-11.13	0.1180	0.1138	0.1111	0.1016	0.0945	0.0868	0.1043	11.6
	4	11.45-11.65	0.0395	0.0332	0.0327	0.0299	0.0279	0.0254	0.0314	15.7

AROCLOR AVERAGE %RSD = 13.6

6G  
8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB5

Instrument ID: ECD5

Calibration Date: 11/03/12

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	4.817	4.72- 4.92	0.01953
2	4.995	4.89- 5.09	0.01337
3	5.101	5.00- 5.20	0.04356
Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.094	5.99- 6.19	0.01822
2	6.497	6.40- 6.60	0.05697
3	6.647	6.55- 6.75	0.02485
4	7.901	7.80- 8.00	0.03114
Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.096	6.00- 6.20	0.03480
2	6.500	6.40- 6.60	0.10781
3	6.650	6.55- 6.75	0.04681
4	7.902	7.80- 8.00	0.05490
Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.497	6.40- 6.60	0.07048
2	7.473	7.37- 7.57	0.07420
3	7.902	7.80- 8.00	0.09369
4	8.137	8.04- 8.24	0.07222

6G  
8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB5

Instrument ID: ECD5

Calibration Date: 11/03/12

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.225	8.12- 8.32	0.09552
2	8.597	8.50- 8.70	0.06279
3	8.731	8.63- 8.83	0.12204
4	9.080	8.98- 9.18	0.13358
5	9.441	9.34- 9.54	0.08400
Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	9.996	9.90-10.10	0.06957
2	10.312	10.21-10.41	0.05282
3	10.687	10.59-10.79	0.13695
4	11.202	11.10-11.30	0.05159
5	11.275	11.18-11.38	0.05664
Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.203	11.10-11.30	0.13880
2	11.275	11.17-11.37	0.13349
3	11.661	11.56-11.76	0.11731
4	12.449	12.35-12.55	0.33525

6G  
8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35

Instrument ID: ECD5

Calibration Date: 11/03/12

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	5.141	5.04- 5.24	0.01355
2	5.393	5.29- 5.49	0.00798
3	5.507	5.41- 5.61	0.02510
4	5.576	5.48- 5.68	0.00433

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	6.210	6.11- 6.31	0.01985
2	6.841	6.74- 6.94	0.03912
3	7.050	6.95- 7.15	0.01635
4	8.276	8.18- 8.38	0.01389

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.210	6.11- 6.31	0.03416
2	6.842	6.74- 6.94	0.07272
3	7.052	6.95- 7.15	0.03022
4	8.276	8.18- 8.38	0.02545

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.840	6.74- 6.94	0.04749
2	7.746	7.65- 7.85	0.03939
3	8.276	8.18- 8.38	0.04070
4	8.622	8.52- 8.72	0.05034

6G  
8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35

Instrument ID: ECD5

Calibration Date: 11/03/12

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.342	8.24- 8.44	0.03474
2	8.516	8.42- 8.62	0.04387
3	9.039	8.94- 9.14	0.03370
4	9.188	9.09- 9.29	0.07393
5	9.972	9.87-10.07	0.04454
Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.302	10.20-10.40	0.06977
2	10.752	10.65-10.85	0.06199
3	11.025	10.92-11.12	0.13603
4	11.547	11.45-11.65	0.05505
5	12.347	12.25-12.45	0.05291
Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.547	11.45-11.65	0.13895
2	11.613	11.51-11.71	0.13513
3	12.011	11.91-12.11	0.11296
4	12.834	12.73-12.93	0.33487

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/24/12

Lab Standard ID: AR1254

Time Analyzed :1703

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1254-1	8.23	8.12	8.32	246.8	250.0	-1.3
Aroclor-1254-2	8.60	8.50	8.70	217.0	250.0	-13.2
Aroclor-1254-3	8.73	8.63	8.83	244.8	250.0	-2.1
Aroclor-1254-4	9.08	8.98	9.18	243.5	250.0	-2.6
Aroclor-1254-5	9.44	9.34	9.54	239.7	250.0	-4.1

AVERAGE %D = 4.7



7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/24/12

Lab Standard ID: AR1254

Time Analyzed :1703

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1254-1	8.34	8.24	8.44	261.5	250.0	4.6
Aroclor-1254-2	8.52	8.42	8.62	261.1	250.0	4.4
Aroclor-1254-3	9.04	8.94	9.14	274.0	250.0	9.6
Aroclor-1254-4	9.19	9.09	9.29	252.6	250.0	1.0
Aroclor-1254-5	9.97	9.87	10.07	259.6	250.0	3.8

AVERAGE %D = 4.7

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/24/12

Lab Standard ID: AR1660

Time Analyzed :1723

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
Aroclor-1016-1	6.10	6.00	6.20	249.9	250.0	-0.0
Aroclor-1016-2	6.50	6.40	6.60	250.8	250.0	0.3
Aroclor-1016-3	6.65	6.55	6.75	248.5	250.0	-0.6
Aroclor-1016-4	6.76	6.66	6.86	256.6	250.0	2.6

AVERAGE %D = 0.9

Date Analyzed :11/24/12

Lab Standard ID: AR1660

Time Analyzed :1723

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
Aroclor-1260-1	10.00	9.90	10.10	248.7	250.0	-0.5
Aroclor-1260-2	10.31	10.21	10.41	251.4	250.0	0.6
Aroclor-1260-3	10.69	10.59	10.79	254.9	250.0	2.0
Aroclor-1260-4	11.09	10.99	11.19	251.2	250.0	0.5
Aroclor-1260-5	11.28	11.18	11.38	251.5	250.0	0.6

AVERAGE %D = 0.8

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/24/12

Lab Standard ID: AR1660

Time Analyzed :1723

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1016-1	6.21	6.11	6.31	244.5	250.0	-2.2
Aroclor-1016-2	6.84	6.74	6.94	245.9	250.0	-1.6
Aroclor-1016-3	7.23	7.13	7.33	254.4	250.0	1.8
Aroclor-1016-4	7.33	7.24	7.44	249.4	250.0	-0.2

AVERAGE %D = 1.5

Date Analyzed :11/24/12

Lab Standard ID: AR1660

Time Analyzed :1723

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1260-1	10.30	10.20	10.40	269.8	250.0	7.9
Aroclor-1260-2	10.75	10.65	10.85	270.9	250.0	8.4
Aroclor-1260-3	11.03	10.93	11.13	271.2	250.0	8.5
Aroclor-1260-4	11.55	11.45	11.65	262.0	250.0	4.8

AVERAGE %D = 7.4

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/24/12

Lab Standard ID: AR1248

Time Analyzed :2047

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1248-1	6.50	6.40	6.60	240.7	250.0	-3.7
Aroclor-1248-2	7.47	7.37	7.57	238.2	250.0	-4.7
Aroclor-1248-3	7.90	7.80	8.00	237.1	250.0	-5.2
Aroclor-1248-4	8.14	8.04	8.24	238.4	250.0	-4.6

AVERAGE %D = 4.6

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/24/12

Lab Standard ID: AR1248

Time Analyzed :2047

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1248-1	6.84	6.74	6.94	237.8	250.0	-4.9
Aroclor-1248-2	7.75	7.65	7.85	261.4	250.0	4.6
Aroclor-1248-3	8.28	8.18	8.38	259.1	250.0	3.6
Aroclor-1248-4	8.62	8.52	8.72	258.7	250.0	3.5

AVERAGE %D = 4.2

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/24/12

Lab Standard ID: AR1660

Time Analyzed :2107

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1016-1	6.10	6.00	6.20	228.0	250.0	-8.8
Aroclor-1016-2	6.50	6.40	6.60	237.0	250.0	-5.2
Aroclor-1016-3	6.65	6.55	6.75	233.6	250.0	-6.6
Aroclor-1016-4	6.76	6.66	6.86	244.0	250.0	-2.4

AVERAGE %D = 5.8

Date Analyzed :11/24/12

Lab Standard ID: AR1660

Time Analyzed :2107

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1260-1	10.00	9.90	10.10	255.7	250.0	2.3
Aroclor-1260-2	10.31	10.21	10.41	250.7	250.0	0.3
Aroclor-1260-3	10.69	10.59	10.79	254.1	250.0	1.6
Aroclor-1260-4	11.09	10.99	11.19	237.9	250.0	-4.8
Aroclor-1260-5	11.28	11.18	11.38	244.7	250.0	-2.1

AVERAGE %D = 2.2

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/24/12

Lab Standard ID: AR1660

Time Analyzed :2107

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1016-1	6.21	6.11	6.31	243.9	250.0	-2.4
Aroclor-1016-2	6.84	6.74	6.94	245.9	250.0	-1.6
Aroclor-1016-3	7.23	7.13	7.33	251.6	250.0	0.6
Aroclor-1016-4	7.33	7.24	7.44	246.5	250.0	-1.4

AVERAGE %D = 1.5

Date Analyzed :11/24/12

Lab Standard ID: AR1660

Time Analyzed :2107

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1260-1	10.30	10.20	10.40	266.6	250.0	6.6
Aroclor-1260-2	10.75	10.65	10.85	270.6	250.0	8.2
Aroclor-1260-3	11.03	10.93	11.13	274.3	250.0	9.7
Aroclor-1260-4	11.55	11.45	11.65	263.3	250.0	5.3

AVERAGE %D = 7.5

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/25/12

Lab Standard ID: AR1242

Time Analyzed :0030

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1242-1	6.10	6.00	6.20	205.1	250.0	-17.9
Aroclor-1242-2	6.50	6.40	6.60	214.3	250.0	-14.3
Aroclor-1242-3	6.65	6.55	6.75	208.5	250.0	-16.6
Aroclor-1242-4	7.90	7.80	8.00	212.5	250.0	-15.0

AVERAGE %D = 16.0



7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/25/12

Lab Standard ID: AR1242

Time Analyzed :0030

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1242-1	6.21	6.11	6.31	249.1	250.0	-0.4
Aroclor-1242-2	6.84	6.74	6.94	253.1	250.0	1.2
Aroclor-1242-3	7.05	6.95	7.15	250.3	250.0	0.1
Aroclor-1242-4	8.28	8.18	8.38	255.8	250.0	2.3

AVERAGE %D = 1.0

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/25/12

Lab Standard ID: AR1660

Time Analyzed :0051

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
Aroclor-1016-1	6.10	6.00	6.20	226.5	250.0	-9.4
Aroclor-1016-2	6.50	6.40	6.60	232.5	250.0	-7.0
Aroclor-1016-3	6.65	6.55	6.75	231.0	250.0	-7.6
Aroclor-1016-4	6.76	6.66	6.86	240.8	250.0	-3.7

AVERAGE %D = 6.9

Date Analyzed :11/25/12

Lab Standard ID: AR1660

Time Analyzed :0051

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
Aroclor-1260-1	10.00	9.90	10.10	261.3	250.0	4.5
Aroclor-1260-2	10.31	10.21	10.41	257.0	250.0	2.8
Aroclor-1260-3	10.69	10.59	10.79	271.4	250.0	8.5
Aroclor-1260-4	11.09	10.99	11.19	246.0	250.0	-1.6
Aroclor-1260-5	11.28	11.18	11.38	259.0	250.0	3.6

AVERAGE %D = 4.2

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/25/12

Lab Standard ID: AR1660

Time Analyzed :0051

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
Aroclor-1016-1	6.21	6.11	6.31	242.1	250.0	-3.1
Aroclor-1016-2	6.84	6.74	6.94	242.6	250.0	-3.0
Aroclor-1016-3	7.23	7.13	7.33	249.6	250.0	-0.1
Aroclor-1016-4	7.34	7.24	7.44	244.7	250.0	-2.1

AVERAGE %D = 2.1

Date Analyzed :11/25/12

Lab Standard ID: AR1660

Time Analyzed :0051

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
Aroclor-1260-1	10.30	10.20	10.40	275.7	250.0	10.3
Aroclor-1260-2	10.75	10.65	10.85	281.7	250.0	12.7
Aroclor-1260-3	11.03	10.93	11.13	283.7	250.0	13.5
Aroclor-1260-4	11.55	11.45	11.65	273.4	250.0	9.3

AVERAGE %D = 11.4

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB5

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/25/12

Lab Standard ID: AR1254

Time Analyzed :0354

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
Aroclor-1254-1	8.22	8.12	8.32	210.6	250.0	-15.8
Aroclor-1254-2	8.60	8.50	8.70	188.3	250.0	-24.7
Aroclor-1254-3	8.73	8.63	8.83	222.3	250.0	-11.1
Aroclor-1254-4	9.08	8.98	9.18	219.5	250.0	-12.2
Aroclor-1254-5	9.44	9.34	9.54	221.3	250.0	-11.5

AVERAGE %D = 15.1

7F  
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35

Intrument: ECD5

Init. Calib. Date: 11/02/12

Date Analyzed :11/25/12

Lab Standard ID: AR1254

Time Analyzed :0354

COMPOUND/PEAK NO.	RT	RT WINDOW		CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
		FROM	TO			
=====	=====	=====	=====	=====	=====	=====
Aroclor-1254-1	8.34	8.24	8.44	252.2	250.0	0.9
Aroclor-1254-2	8.52	8.42	8.62	254.5	250.0	1.8
Aroclor-1254-3	9.04	8.94	9.14	275.3	250.0	10.1
Aroclor-1254-4	9.19	9.09	9.29	243.9	250.0	-2.4
Aroclor-1254-5	9.97	9.87	10.07	250.1	250.0	0.0

AVERAGE %D = 3.0

FORM 8  
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB5

ID: 0.53 (mm)

Instrument ID: ECD5

Init. Calib. Date: 11/02/12

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

					IS1 AREA	RT	IS2 AREA	RT
=====					=====	=====	=====	=====
ICAL MIDPT					31244918	2.274	64198300	13.214
UPPER LIMIT					62489836	2.374	128396600	13.314
LOWER LIMIT					15622459	2.174	32099150	13.114
					IS1 AREA	RT	IS2 AREA	RT
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME		IS1 AREA	RT	IS2 AREA	RT
=====	=====	=====	=====		=====	=====	=====	=====
01	ZZZZZ	ZZZZZ	11/02/12	2017	32121330	2.277	65627042	13.214
02		0.25PPMAR166	11/02/12	2037	31244918	2.274	64198300	13.214
03		0.02PPMAR166	11/02/12	2058	31736267	2.277	66012881	13.214
04		0.05PPMAR166	11/02/12	2118	31079093	2.275	64685135	13.214
05		1PPMAR1660	11/02/12	2138	32560778	2.275	67466235	13.214
06		0.1PPMAR1660	11/02/12	2158	31562437	2.274	66063497	13.214
07		0.5PPMAR1660	11/02/12	2218	32469455	2.273	67388285	13.214
08		AR1242	11/02/12	2238	32779971	2.273	67800793	13.214
09		AR1248	11/02/12	2259	33486089	2.279	68805737	13.214
10		AR1254	11/02/12	2319	32866846	2.276	67839772	13.214
11		AR2162	11/02/12	2340	32037907	2.280	66658077	13.215
12		AR3268	11/03/12	0000	33288564	2.280	69153536	13.215
13	ZZZZZ	ZZZZZ	11/03/12	0020	32275358	2.276	69016020	13.215
14	ZZZZZ	ZZZZZ	11/03/12	0041	34992364	2.279	71027100	13.215
15	ZZZZZ	ZZZZZ	11/03/12	0101	33719935	2.275	69100267	13.214
16	ZZZZZ	ZZZZZ	11/03/12	0121	34274216	2.277	70290566	13.215
17	ZZZZZ	ZZZZZ	11/03/12	0142	33531129	2.274	69260863	13.214
18	ZZZZZ	ZZZZZ	11/03/12	0202	33384825	2.277	69841459	13.214
19	ZZZZZ	ZZZZZ	11/24/12	1643	29390798	2.291	54477555	13.228
20		AR1254	11/24/12	1703	45463451	2.281	80484425	13.219
21		AR1660	11/24/12	1723	32837024	2.280	60613002	13.218
22	VR58MBS1	VR58MBS1	11/24/12	1744	28148612	2.279	56257900	13.217
23	VR58LCSS1	VR58LCSS1	11/24/12	1804	30967556	2.277	58108697	13.216
24	PSR	VR58SPM1	11/24/12	1824	31528912	2.278	58199791	13.216
25	SG-10-S-E-12	VR58A	11/24/12	1845	32305335	2.279	57343458	13.215
26	SG-11-S-E-12	VR58B	11/24/12	1905	31692925	2.279	57970825	13.216
27	SG-12-S-E-12	VR58C	11/24/12	1925	32355475	2.278	56395505	13.216
28	SG-13-S-E-12	VR58D	11/24/12	1946	32098055	2.279	57268908	13.216
29	SG-13-S-E-DU	VR58E	11/24/12	2006	32438437	2.279	57844569	13.217
30	SG-14-S-E-12	VR58F	11/24/12	2026	33468339	2.279	55373451	13.215
31		AR1248	11/24/12	2047	45534261	2.279	74975377	13.215
32		AP1660	11/24/12	2107	35866199	2.279	61427637	13.216

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: ANCHOR QEA  
 ARI Job No.: VR58      Project: CITY OF KENMORE  
 GC Column: ZB5      ID: 0.53(mm)      Instrument ID: ECD5  
 Init Calib. Date 11/02/12

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

				IS1 AREA	RT	IS2 AREA	RT	
=====				=====	=====	=====	=====	
ICAL MIDPT				31244918	2.274	64198300	13.214	
UPPER LIMIT				62489836	2.374	128396600	13.314	
LOWER LIMIT				15622459	2.174	32099150	13.114	
=====				=====	=====	=====	=====	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT	
=====								
33	SG-15-S-E-12	VR58G	11/24/12	2127	35265301	2.278	62207942	13.215
34	SG-16-S-E-12	VR58H	11/24/12	2148	37175336	2.279	66877600	13.215
35	SG-17-S-E-12	VR58I	11/24/12	2208	35966133	2.279	60650954	13.216
36	SG-01-S-C-12	VR58J	11/24/12	2228	36292769	2.277	65416983	13.215
37	SG-01-S-C-12	VR58JMS	11/24/12	2249	36706902	2.278	67566631	13.217
38	SG-01-S-C-12	VR58JMSD	11/24/12	2309	37419688	2.278	69484798	13.216
39	SG-02-S-C-12	VR82A	11/24/12	2329	36443218	2.279	61884515	13.217
40	SG-03-S-C-12	VR82B	11/24/12	2350	35781846	2.279	60235830	13.217
41	SG-04-S-C-12	VR82C	11/25/12	0010	36676802	2.280	63321858	13.216
42		AR1242	11/25/12	0030	38319146	2.278	59353496	13.216
43		AR1660	11/25/12	0051	38570575	2.278	64670405	13.216
44	SG-05-S-C-12	VR82D	11/25/12	0111	36843937	2.278	63064682	13.217
45	SG-06-S-C-12	VR82E	11/25/12	0131	36106017	2.279	59234913	13.217
46	SG-07-S-C-12	VR82F	11/25/12	0152	36832755	2.279	61317779	13.217
47	SG-07-S-C-DU	VR82G	11/25/12	0212	36516007	2.280	59044653	13.217
48	SG-08-S-C-12	VR82H	11/25/12	0233	36262947	2.277	60139329	13.217
49	SG-09-S-C-12	VR82I	11/25/12	0253	35818713	2.279	60086970	13.217
50		AR1254	11/25/12	0354	62493583*	2.279	100245162	13.217
51	ZZZZZ	ZZZZZ	11/25/12	0414	39750643	2.279	66236820	13.217
52	ZZZZZ	ZZZZZ	11/25/12	0435	54920105	2.279	88742277	13.217
53	ZZZZZ	ZZZZZ	11/25/12	0455	47490025	2.279	76439200	13.217

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: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35 ID: 0.53(mm)

Instrument ID: ECD5

Init. Calib. Date: 11/02/12

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

				IS1 AREA	RT	IS2 AREA	RT	
=====				=====	=====	=====	=====	
ICAL MIDPT				14536489	2.761	15789428	14.115	
UPPER LIMIT				29072978	2.861	31578856	14.215	
LOWER LIMIT				7268244	2.661	7894714	14.015	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT	
=====	=====	=====	=====	=====	=====	=====	=====	
01	ZZZZZ	ZZZZZ	11/02/12	2017	14713535	2.764	16088294	14.115
02		0.25PPMAR166	11/02/12	2037	14536489	2.761	15789428	14.115
03		0.02PPMAR166	11/02/12	2058	14662512	2.763	16195930	14.116
04		0.05PPMAR166	11/02/12	2118	14425871	2.761	15804667	14.115
05		1PPMAR1660	11/02/12	2138	14668819	2.761	16259905	14.115
06		0.1PPMAR1660	11/02/12	2158	14552241	2.763	15974909	14.115
07		0.5PPMAR1660	11/02/12	2218	14811515	2.761	16169446	14.114
08		AR1242	11/02/12	2238	14876946	2.761	16149950	14.115
09		AR1248	11/02/12	2259	15137931	2.765	16358718	14.115
10		AR1254	11/02/12	2319	14737446	2.762	15955858	14.116
11		AR2162	11/02/12	2340	14169986	2.766	15683025	14.116
12		AR3268	11/03/12	0000	14704019	2.765	16219252	14.116
13	ZZZZZ	ZZZZZ	11/03/12	0020	14465214	2.762	15841317	14.116
14	ZZZZZ	ZZZZZ	11/03/12	0041	15000485	2.765	16204591	14.116
15	ZZZZZ	ZZZZZ	11/03/12	0101	14278309	2.762	15675954	14.116
16	ZZZZZ	ZZZZZ	11/03/12	0121	14593306	2.764	15921593	14.117
17	ZZZZZ	ZZZZZ	11/03/12	0142	14012549	2.762	15630049	14.116
18	ZZZZZ	ZZZZZ	11/03/12	0202	13930274	2.762	15765289	14.115
19	ZZZZZ	ZZZZZ	11/24/12	1643	12715201	2.752	12257616	14.115
20		AR1254	11/24/12	1703	18490011	2.763	18053345	14.115
21		AR1660	11/24/12	1723	12977204	2.764	13302157	14.115
22	VR58MBS1	VR58MBS1	11/24/12	1744	11838370	2.763	11948908	14.115
23	VR58LCSS1	VR58LCSS1	11/24/12	1804	12766259	2.761	12268470	14.114
24	PSR	VR58SRM1	11/24/12	1824	12656028	2.762	12912350	14.114
25	SG-10-S-E-12	VR58A	11/24/12	1845	12488984	2.763	12758907	14.115
26	SG-11-S-E-12	VR58B	11/24/12	1905	12197488	2.763	12249194	14.115
27	SG-12-S-E-12	VR58C	11/24/12	1925	12389319	2.762	12283962	14.116
28	SG-13-S-E-12	VR58D	11/24/12	1946	12659152	2.762	12089064	14.117
29	SG-13-S-E-DU	VR58E	11/24/12	2006	12514514	2.763	12209536	14.116
30	SG-14-S-E-12	VR58F	11/24/12	2026	12402171	2.762	12443760	14.114
31		AR1248	11/24/12	2047	16671907	2.762	16359032	14.115
32		AR1660	11/24/12	2107	12941087	2.763	13112388	14.115

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: ANCHOR QEA

ARI Job No.: VR58

Project: CITY OF KENMORE

GC Column: ZB35

ID: 0.53 (mm)

Instrument ID: ECD5

Init. Calib. Date: 11/02/12

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

				IS1 AREA	RT	IS2 AREA	RT	
=====				=====	=====	=====	=====	
ICAL MIDPT				14536489	2.761	15789428	14.115	
UPPER LIMIT				29072978	2.861	31578856	14.215	
LOWER LIMIT				7268244	2.661	7894714	14.015	
=====				=====	=====	=====	=====	
CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT	
=====	=====	=====	=====	=====	=====	=====	=====	
33	SG-15-S-E-12	VR58G	11/24/12	2127	13409482	2.761	12978594	14.114
34	SG-16-S-E-12	VR58H	11/24/12	2148	14213105	2.763	13779894	14.115
35	SG-17-S-E-12	VR58I	11/24/12	2208	13194988	2.763	12764772	14.116
36	SG-01-S-C-12	VR58J	11/24/12	2228	13227066	2.762	13546685	14.115
37	SG-01-S-C-12	VR58JMS	11/24/12	2249	13803988	2.762	13832386	14.115
38	SG-01-S-C-12	VR58JMSD	11/24/12	2309	13916028	2.762	14152051	14.117
39	SG-02-S-C-12	VR82A	11/24/12	2329	12824160	2.764	13088622	14.116
40	SG-03-S-C-12	VR82B	11/24/12	2350	12586216	2.762	12867378	14.116
41	SG-04-S-C-12	VR82C	11/25/12	0010	13303582	2.763	13118645	14.115
42		AR1242	11/25/12	0030	12454774	2.761	11955012	14.115
43		AR1660	11/25/12	0051	13458196	2.762	13291576	14.115
44	SG-05-S-C-12	VR82D	11/25/12	0111	13217344	2.763	13442013	14.115
45	SG-06-S-C-12	VR82E	11/25/12	0131	12565471	2.762	12461711	14.116
46	SG-07-S-C-12	VR82F	11/25/12	0152	12807462	2.762	12587430	14.118
47	SG-07-S-C-DU	VR82G	11/25/12	0212	12681890	2.762	12133512	14.116
48	SG-08-S-C-12	VR82H	11/25/12	0233	12842035	2.761	12447395	14.116
49	SG-09-S-C-12	VR82I	11/25/12	0253	12470537	2.763	12703058	14.116
50		AR1254	11/25/12	0354	21438781	2.762	20870192	14.116
51		AR1660	11/25/12	0414	13556875	2.763	13546910	14.117
52	ZZZZZ	ZZZZZ	11/25/12	0435	17798852	2.762	17792115	14.116
53	ZZZZZ	ZZZZZ	11/25/12	0455	15498883	2.763	15269993	14.116

IS1 = 1-Bromo-2-Nitrobenzene  
IS2 = Hexabromobiphenyl

RT Window = RT +/- 0.1 min

\* Indicates value outside QC Limits

**Metals Analysis  
Report and Summary QC Forms**

**ARI Job ID: VR58**

# Cover Page

## INORGANIC ANALYSIS DATA PACKAGE



CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

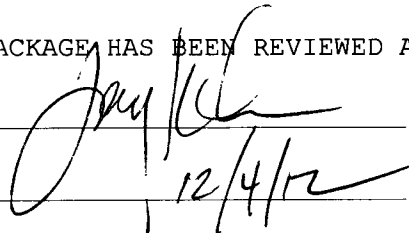
SDG: VR58

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
SG-10-S-E-121107	VR58A	12-22329	
SG-10-S-E-121107D	VR58ADUP	12-22329	
SG-10-S-E-121107S	VR58ASPK	12-22329	
SG-11-S-E-121107	VR58B	12-22330	
PBS	VR58MB1	12-22330	
LCSS	VR58MB1SPK	12-22330	
SG-12-S-E-121107	VR58C	12-22331	
SG-13-S-E-121107	VR58D	12-22332	
SG-13-S-E-dup-1211	VR58E	12-22333	
SG-14-S-E-121107	VR58F	12-22334	
SG-15-S-E-121107	VR58G	12-22335	
SG-16-S-E-121107	VR58H	12-22336	
SG-17-S-E-121107	VR58I	12-22337	
SG-01-S-C-121107	VR58J	12-22338	
SG-02-S-C-121108	VR82A	12-22479	
SG-03-S-C-121108	VR82B	12-22480	
SG-04-S-C-121108	VR82C	12-22481	
SG-05-S-C-121108	VR82D	12-22482	
SG-06-S-C-121108	VR82E	12-22483	
SG-07-S-C-121108	VR82F	12-22484	
SG-07-S-C-dup-1211	VR82G	12-22485	

Were ICP interelement corrections applied ?                      Yes/No    YES  
Were ICP background corrections applied ?                      Yes/No    YES  
If yes - were raw data generated before  
application of background corrections ?                      Yes/No    NO

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature:                       Name: Jay Kuhn

Date: 12/4/12                      Title: Inorganics Director

# Cover Page

## INORGANIC ANALYSIS DATA PACKAGE



CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
SG-08-S-C-121108	VR82H	12-22486	
SG-09-S-C-121108	VR82I	12-22487	

Were ICP interelement corrections applied ?                      Yes/No    YES  
Were ICP background corrections applied ?                      Yes/No    YES  
If yes - were raw data generated before  
application of background corrections ?                      Yes/No    NO

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: \_\_\_\_\_ Name: Jay Kuhn

Date: \_\_\_\_\_ Title: Inorganics Director

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: SG-10-S-E-121107

SAMPLE

Lab Sample ID: VR58A


QC Report No: VR58-Anchor QEA, LLC.

LIMS ID: 12-22329

Project: City of Kenmore Sediment

Matrix: Sediment

120891-01.01

Data Release Authorized: 

Date Sampled: 11/07/12

Reported: 12/12/12

Date Received: 11/08/12

Percent Total Solids: 54.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/16/12	6010C	11/27/12	7440-36-0	Antimony	0.55	9	9	U
3050B	11/16/12	6010C	11/27/12	7440-38-2	Arsenic	0.79	9	9	U
3050B	11/16/12	6010C	11/27/12	<b>7440-43-9</b>	<b>Cadmium</b>	0.19	0.3	<b>0.4</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-47-3</b>	<b>Chromium</b>	0.46	0.9	<b>29.8</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-50-8</b>	<b>Copper</b>	0.085	0.3	<b>18.8</b>	
3050B	11/16/12	6010C	11/27/12	<b>7439-92-1</b>	<b>Lead</b>	0.22	3	<b>19</b>	
CLP	11/16/12	7471A	11/17/12	<b>7439-97-6</b>	<b>Mercury</b>	0.0017	0.03	<b>0.04</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-02-0</b>	<b>Nickel</b>	0.51	2	<b>33</b>	
3050B	11/16/12	6020A	11/27/12	7782-49-2	Selenium	0.17	0.9	0.9	U
3050B	11/16/12	6010C	11/27/12	7440-22-4	Silver	0.051	0.5	0.5	U
3050B	11/16/12	6010C	11/27/12	<b>7440-66-6</b>	<b>Zinc</b>	0.21	2	<b>97</b>	

Reported in mg/kg-dry (ppm).

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: SG-11-S-E-121107

SAMPLE

Lab Sample ID: VR58B

LIMS ID: 12-22330

Matrix: Sediment

Data Release Authorized: *W*

Reported: 12/12/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: 11/07/12

Date Received: 11/08/12

Percent Total Solids: 16.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/16/12	6010C	11/27/12	7440-36-0	Antimony	1.9	30	30	U
3050B	11/16/12	6010C	11/27/12	7440-38-2	Arsenic	2.8	30	30	U
3050B	11/16/12	6010C	11/27/12	7440-43-9	Cadmium	0.66	1	1	U
3050B	11/16/12	6010C	11/27/12	<b>7440-47-3</b>	<b>Chromium</b>	1.6	3	<b>52</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-50-8</b>	<b>Copper</b>	0.30	1	<b>97</b>	
3050B	11/16/12	6010C	11/27/12	<b>7439-92-1</b>	<b>Lead</b>	0.78	10	<b>50</b>	
CLP	11/16/12	7471A	11/17/12	<b>7439-97-6</b>	<b>Mercury</b>	0.0060	0.1	<b>0.1</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-02-0</b>	<b>Nickel</b>	1.8	6	<b>47</b>	
3050B	11/16/12	6020A	11/27/12	7782-49-2	Selenium	0.58	3	3	U
3050B	11/16/12	6010C	11/27/12	7440-22-4	Silver	0.18	2	2	U
3050B	11/16/12	6010C	11/27/12	<b>7440-66-6</b>	<b>Zinc</b>	0.72	6	<b>377</b>	

Reported in mg/kg-dry (ppm).

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: SG-12-S-E-121107  
SAMPLE

Lab Sample ID: VR58C

LIMS ID: 12-22331

Matrix: Sediment

Data Release Authorized: *AW*

Reported: 12/12/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: 11/07/12

Date Received: 11/08/12

Percent Total Solids: 26.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/16/12	6010C	11/27/12	7440-36-0	Antimony	1.2	20	20	U
3050B	11/16/12	6010C	11/27/12	7440-38-2	Arsenic	1.7	20	20	U
3050B	11/16/12	6010C	11/27/12	7440-43-9	Cadmium	0.40	0.7	0.7	U
3050B	11/16/12	6010C	11/27/12	<b>7440-47-3</b>	<b>Chromium</b>	0.97	2	<b>44</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-50-8</b>	<b>Copper</b>	0.18	0.7	<b>47.5</b>	
3050B	11/16/12	6010C	11/27/12	<b>7439-92-1</b>	<b>Lead</b>	0.47	7	<b>27</b>	
CLP	11/16/12	7471A	11/17/12	<b>7439-97-6</b>	<b>Mercury</b>	0.0045	0.09	<b>0.10</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-02-0</b>	<b>Nickel</b>	1.1	4	<b>41</b>	
3050B	11/16/12	6020A	11/27/12	7782-49-2	Selenium	0.34	2	2	U
3050B	11/16/12	6010C	11/27/12	7440-22-4	Silver	0.11	1	1	U
3050B	11/16/12	6010C	11/27/12	<b>7440-66-6</b>	<b>Zinc</b>	0.43	4	<b>185</b>	

Reported in mg/kg-dry (ppm).

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: SG-13-S-E-121107  
SAMPLE

Lab Sample ID: VR58D

LIMS ID: 12-22332

Matrix: Sediment

Data Release Authorized: *W*

Reported: 12/12/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: 11/07/12

Date Received: 11/08/12

Percent Total Solids: 21.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/16/12	6010C	11/27/12	7440-36-0	Antimony	1.5	20	20	U
3050B	11/16/12	6010C	11/27/12	7440-38-2	Arsenic	2.1	20	20	U
3050B	11/16/12	6010C	11/27/12	7440-43-9	Cadmium	0.50	0.9	0.9	U
3050B	11/16/12	6010C	11/27/12	<b>7440-47-3</b>	<b>Chromium</b>	1.2	2	<b>54</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-50-8</b>	<b>Copper</b>	0.23	0.9	<b>62.1</b>	
3050B	11/16/12	6010C	11/27/12	<b>7439-92-1</b>	<b>Lead</b>	0.59	9	<b>32</b>	
CLP	11/16/12	7471A	11/17/12	<b>7439-97-6</b>	<b>Mercury</b>	0.0055	0.1	<b>0.1</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-02-0</b>	<b>Nickel</b>	1.4	5	<b>46</b>	
3050B	11/16/12	6020A	11/27/12	7782-49-2	Selenium	0.44	2	2	U
3050B	11/16/12	6010C	11/27/12	7440-22-4	Silver	0.14	1	1	U
3050B	11/16/12	6010C	11/27/12	<b>7440-66-6</b>	<b>Zinc</b>	0.55	5	<b>205</b>	

Reported in mg/kg-dry (ppm).

U-Analyte undetected at given RL

RL-Reporting Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: SG-13-S-E-dup-121107  
SAMPLE

Lab Sample ID: VR58E

QC Report No: VR58-Anchor QEA, LLC.

LIMS ID: 12-22333

Project: City of Kenmore Sediment

Matrix: Sediment

120891-01.01

Data Release Authorized: *W*

Date Sampled: 11/07/12

Reported: 12/12/12

Date Received: 11/08/12

Percent Total Solids: 21.9%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/16/12	6010C	11/27/12	7440-36-0	Antimony	1.4	20	20	U
3050B	11/16/12	6010C	11/27/12	7440-38-2	Arsenic	2.1	20	20	U
3050B	11/16/12	6010C	11/27/12	7440-43-9	Cadmium	0.50	0.9	0.9	U
3050B	11/16/12	6010C	11/27/12	<b>7440-47-3</b>	<b>Chromium</b>	1.2	2	<b>55</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-50-8</b>	<b>Copper</b>	0.23	0.9	<b>62.8</b>	
3050B	11/16/12	6010C	11/27/12	<b>7439-92-1</b>	<b>Lead</b>	0.59	9	<b>32</b>	
CLP	11/16/12	7471A	11/17/12	<b>7439-97-6</b>	<b>Mercury</b>	0.0051	0.1	<b>0.1</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-02-0</b>	<b>Nickel</b>	1.4	5	<b>45</b>	
3050B	11/16/12	6020A	11/27/12	7782-49-2	Selenium	0.43	2	2	U
3050B	11/16/12	6010C	11/27/12	7440-22-4	Silver	0.14	1	1	U
3050B	11/16/12	6010C	11/27/12	<b>7440-66-6</b>	<b>Zinc</b>	0.54	5	<b>205</b>	

Reported in mg/kg-dry (ppm).

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: SG-14-S-E-121107  
SAMPLE

Lab Sample ID: VR58F

LIMS ID: 12-22334

Matrix: Sediment

Data Release Authorized: *W*

Reported: 12/12/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: 11/07/12

Date Received: 11/08/12

Percent Total Solids: 42.2%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/16/12	6010C	11/27/12	7440-36-0	Antimony	0.73	10	10	U
3050B	11/16/12	6010C	11/27/12	7440-38-2	Arsenic	1.0	10	10	U
3050B	11/16/12	6010C	11/27/12	<b>7440-43-9</b>	<b>Cadmium</b>	0.25	0.5	<b>0.7</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-47-3</b>	<b>Chromium</b>	0.61	1	<b>36</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-50-8</b>	<b>Copper</b>	0.11	0.5	<b>111</b>	
3050B	11/16/12	6010C	11/27/12	<b>7439-92-1</b>	<b>Lead</b>	0.30	5	<b>26</b>	
CLP	11/16/12	7471A	11/17/12	<b>7439-97-6</b>	<b>Mercury</b>	0.0030	0.06	<b>0.24</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-02-0</b>	<b>Nickel</b>	0.68	2	<b>35</b>	
3050B	11/16/12	6020A	11/27/12	7782-49-2	Selenium	0.23	1	1	U
3050B	11/16/12	6010C	11/27/12	7440-22-4	Silver	0.068	0.7	0.7	U
3050B	11/16/12	6010C	11/27/12	<b>7440-66-6</b>	<b>Zinc</b>	0.27	2	<b>182</b>	

Reported in mg/kg-dry (ppm).

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: SG-15-S-E-121107

SAMPLE

Lab Sample ID: VR58G


QC Report No: VR58-Anchor QEA, LLC.

LIMS ID: 12-22335

Project: City of Kenmore Sediment

Matrix: Sediment

120891-01.01

Data Release Authorized: 

Date Sampled: 11/07/12

Reported: 12/12/12

Date Received: 11/08/12

Percent Total Solids: 71.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/16/12	6010C	11/27/12	7440-36-0	Antimony	0.41	6	6	U
3050B	11/16/12	6010C	11/27/12	7440-38-2	Arsenic	0.59	6	6	U
3050B	11/16/12	6010C	11/27/12	7440-43-9	Cadmium	0.14	0.3	0.3	U
3050B	11/16/12	6010C	11/27/12	<b>7440-47-3</b>	<b>Chromium</b>	0.35	0.6	<b>20.9</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-50-8</b>	<b>Copper</b>	0.065	0.3	<b>5.5</b>	
3050B	11/16/12	6010C	11/27/12	<b>7439-92-1</b>	<b>Lead</b>	0.17	3	<b>7</b>	
CLP	11/16/12	7471A	11/17/12	7439-97-6	Mercury	0.0014	0.03	0.03	U
3050B	11/16/12	6010C	11/27/12	<b>7440-02-0</b>	<b>Nickel</b>	0.39	1	<b>20</b>	
3050B	11/16/12	6020A	11/27/12	7782-49-2	Selenium	0.13	0.7	0.7	U
3050B	11/16/12	6010C	11/27/12	7440-22-4	Silver	0.039	0.4	0.4	U
3050B	11/16/12	6010C	11/27/12	<b>7440-66-6</b>	<b>Zinc</b>	0.16	1	<b>57</b>	

Reported in mg/kg-dry (ppm).

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1


Sample ID: SG-16-S-E-121107

**SAMPLE**

Lab Sample ID: VR58H

LIMS ID: 12-22336

Matrix: Sediment

Data Release Authorized: 

Reported: 12/12/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: 11/07/12

Date Received: 11/08/12

Percent Total Solids: 77.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/16/12	6010C	11/27/12	7440-36-0	Antimony	0.39	6	6	U
3050B	11/16/12	6010C	11/27/12	7440-38-2	Arsenic	0.55	6	6	U
3050B	11/16/12	6010C	11/27/12	7440-43-9	Cadmium	0.13	0.2	0.2	U
3050B	11/16/12	6010C	11/27/12	<b>7440-47-3</b>	<b>Chromium</b>	0.32	0.6	<b>29.9</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-50-8</b>	<b>Copper</b>	0.060	0.2	<b>5.4</b>	
3050B	11/16/12	6010C	11/27/12	<b>7439-92-1</b>	<b>Lead</b>	0.16	2	<b>4</b>	
CLP	11/16/12	7471A	11/17/12	7439-97-6	Mercury	0.0014	0.03	0.03	U
3050B	11/16/12	6010C	11/27/12	<b>7440-02-0</b>	<b>Nickel</b>	0.36	1	<b>26</b>	
3050B	11/16/12	6020A	11/27/12	7782-49-2	Selenium	0.12	0.6	0.6	U
3050B	11/16/12	6010C	11/27/12	7440-22-4	Silver	0.036	0.4	0.4	U
3050B	11/16/12	6010C	11/27/12	<b>7440-66-6</b>	<b>Zinc</b>	0.14	1	<b>43</b>	

Reported in mg/kg-dry (ppm).

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**


Page 1 of 1

Sample ID: **SG-17-S-E-121107**  
**SAMPLE**

Lab Sample ID: VR58I

LIMS ID: 12-22337

Matrix: Sediment

Data Release Authorized: 

Reported: 12/12/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: 11/07/12

Date Received: 11/08/12

Percent Total Solids: 45.0%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/16/12	6010C	11/27/12	7440-36-0	Antimony	0.69	10	10	U
3050B	11/16/12	6010C	11/27/12	7440-38-2	Arsenic	0.99	10	10	U
3050B	11/16/12	6010C	11/27/12	7440-43-9	Cadmium	0.24	0.4	0.4	U
3050B	11/16/12	6010C	11/27/12	<b>7440-47-3</b>	<b>Chromium</b>	0.58	1	<b>54</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-50-8</b>	<b>Copper</b>	0.11	0.4	<b>13.5</b>	
3050B	11/16/12	6010C	11/27/12	<b>7439-92-1</b>	<b>Lead</b>	0.28	4	<b>7</b>	
CLP	11/16/12	7471A	11/17/12	<b>7439-97-6</b>	<b>Mercury</b>	0.0023	0.04	<b>0.04</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-02-0</b>	<b>Nickel</b>	0.64	2	<b>34</b>	
3050B	11/16/12	6020A	11/27/12	7782-49-2	Selenium	0.22	1	1	U
3050B	11/16/12	6010C	11/27/12	7440-22-4	Silver	0.064	0.6	0.6	U
3050B	11/16/12	6010C	11/27/12	<b>7440-66-6</b>	<b>Zinc</b>	0.26	2	<b>64</b>	

Reported in mg/kg-dry (ppm).

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: SG-01-S-C-121107  
SAMPLE

Lab Sample ID: VR58J

LIMS ID: 12-22338

Matrix: Sediment

Data Release Authorized: (Signature)

Reported: 12/12/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: 11/07/12

Date Received: 11/08/12

Percent Total Solids: 75.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/16/12	6010C	11/27/12	7440-36-0	Antimony	0.40	6	6	U
3050B	11/16/12	6010C	11/27/12	7440-38-2	Arsenic	0.57	6	6	U
3050B	11/16/12	6010C	11/27/12	7440-43-9	Cadmium	0.14	0.2	0.2	U
3050B	11/16/12	6010C	11/27/12	<b>7440-47-3</b>	<b>Chromium</b>	0.33	0.6	<b>29.3</b>	
3050B	11/16/12	6010C	11/27/12	<b>7440-50-8</b>	<b>Copper</b>	0.062	0.2	<b>5.9</b>	
3050B	11/16/12	6010C	11/27/12	<b>7439-92-1</b>	<b>Lead</b>	0.16	2	<b>4</b>	
CLP	11/16/12	7471A	11/17/12	7439-97-6	Mercury	0.0016	0.03	0.03	U
3050B	11/16/12	6010C	11/27/12	<b>7440-02-0</b>	<b>Nickel</b>	0.37	1	<b>23</b>	
3050B	11/16/12	6020A	11/27/12	7782-49-2	Selenium	0.12	0.6	0.6	U
3050B	11/16/12	6010C	11/27/12	7440-22-4	Silver	0.037	0.4	0.4	U
3050B	11/16/12	6010C	11/27/12	<b>7440-66-6</b>	<b>Zinc</b>	0.15	1	<b>43</b>	

Reported in mg/kg-dry (ppm).

U-Analyte undetected at given RL

RL-Reporting Limit

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: SG-10-S-E-121107  
MATRIX SPIKE

Lab Sample ID: VR58A

QC Report No: VR58-Anchor QEA, LLC.

LIMS ID: 12-22329

Project: City of Kenmore Sediment

Matrix: Sediment

120891-01.01

Data Release Authorized: (U)

Date Sampled: 11/07/12

Reported: 12/12/12

Date Received: 11/08/12

**MATRIX SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	6010C	9 U	131	341	38.4%	N
Arsenic	6010C	9 U	342	341	100%	
Cadmium	6010C	0.4	88.6	85.3	103%	
Chromium	6010C	29.8	109	85.3	92.8%	
Copper	6010C	18.8	103	85.3	98.7%	
Lead	6010C	19	348	341	96.5%	
Mercury	7471A	0.04	0.34	0.318	94.3%	
Nickel	6010C	33	110	85.3	90.3%	
Selenium	6020A	0.9 U	138	138	100%	
Silver	6010C	0.5 U	83.8	85.3	98.2%	
Zinc	6010C	97	179	85.3	96.1%	

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%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

Sample ID: SG-10-S-E-121107

DUPLICATE

Lab Sample ID: VR58A

LIMS ID: 12-22329

Matrix: Sediment

Data Release Authorized: W

Reported: 12/12/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: 11/07/12

Date Received: 11/08/12

**MATRIX DUPLICATE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	6010C	9 U	20	75.9%	+/- 9	L*
Arsenic	6010C	9 U	51	140%	+/- 9	L*
Cadmium	6010C	0.4	0.3 U	28.6%	+/- 0.3	L
Chromium	6010C	29.8	32.2	7.7%	+/- 20%	
Copper	6010C	18.8	41.3	74.9%	+/- 20%	*
Lead	6010C	19	63	107%	+/- 20%	*
Mercury	7471A	0.04	0.03	28.6%	+/- 0.03	L
Nickel	6010C	33	33	0.0%	+/- 20%	
Selenium	6020A	0.9 U	0.9 U	0.0%	+/- 0.9	L
Silver	6010C	0.5 U	0.5 U	0.0%	+/- 0.5	L
Zinc	6010C	97	240	84.9%	+/- 20%	*

Reported in mg/kg-dry

\*-Control Limit Not Met

L-RPD Invalid, Limit = Detection Limit



**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

Page 1 of 1

**Sample ID: LAB CONTROL**

Lab Sample ID: VR58LCS

LIMS ID: 12-22330

Matrix: Sediment

Data Release Authorized: *Q*

Reported: 12/12/12

QC Report No: VR58-Anchor QEA, LLC.

Project: City of Kenmore Sediment

120891-01.01

Date Sampled: NA

Date Received: NA

**BLANK SPIKE QUALITY CONTROL REPORT**

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	6010C	214	200	107%	
Arsenic	6010C	205	200	102%	
Cadmium	6010C	52.0	50.0	104%	
Chromium	6010C	51.2	50.0	102%	
Copper	6010C	49.3	50.0	98.6%	
Lead	6010C	199	200	99.5%	
Mercury	7471A	0.45	0.50	90.0%	
Nickel	6010C	49	50	98.0%	
Selenium	6020A	89.7	80.0	112%	
Silver	6010C	53.2	50.0	106%	
Zinc	6010C	50	50	100%	

Reported in mg/kg-dry

N-Control limit not met

NA-Not Applicable, Analyte Not Spiked

Control Limits: 80-120%

**INORGANICS ANALYSIS DATA SHEET**

**TOTAL METALS**

**Sample ID: METHOD BLANK**

Page 1 of 1

Lab Sample ID: VR58MB

QC Report No: VR58-Anchor QEA, LLC.

LIMS ID: 12-22330

Project: City of Kenmore Sediment

Matrix: Sediment

120891-01.01

Data Release Authorized: *AW*

Date Sampled: NA

Reported: 12/12/12

Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	RL	Result	Q
3050B	11/16/12	6010C	11/27/12	7440-36-0	Antimony	0.32	5	5	U
3050B	11/16/12	6010C	11/27/12	7440-38-2	Arsenic	0.46	5	5	U
3050B	11/16/12	6010C	11/27/12	7440-43-9	Cadmium	0.11	0.2	0.2	U
3050B	11/16/12	6010C	11/27/12	7440-47-3	Chromium	0.27	0.5	0.5	U
3050B	11/16/12	6010C	11/27/12	7440-50-8	Copper	0.050	0.2	0.2	U
3050B	11/16/12	6010C	11/27/12	7439-92-1	Lead	0.13	2	2	U
CLP	11/16/12	7471A	11/17/12	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	11/16/12	6010C	11/27/12	7440-02-0	Nickel	0.30	1	1	U
3050B	11/16/12	6020A	11/27/12	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	11/16/12	6010C	11/27/12	7440-22-4	Silver	0.030	0.3	0.3	U
3050B	11/16/12	6010C	11/27/12	7440-66-6	Zinc	0.12	1	1	U

Reported in mg/kg (ppm).

U-Analyte undetected at given RL

RL-Reporting Limit



# Calibration Verification

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

UNITS:ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	ICP	IP112771	2000.0	2181.15	109.1	2000.0	2158.55	107.9	2157.47	107.9	2184.48	109.2	2249.12	112.5	2239.19	112.0
Arsenic	AS	ICP	IP112771	2000.0	2050.10	102.5	2000.0	2038.51	101.9	2026.76	101.3	2070.16	103.5	2124.72	106.2	2119.84	106.0
Cadmium	CD	ICP	IP112771	1000.0	1022.44	102.2	1000.0	1019.00	101.9	1007.28	100.7	1027.29	102.7	1054.61	105.5	1054.74	105.5
Chromium	CR	ICP	IP112771	1000.0	1000.15	100.0	1000.0	1033.81	103.4	1001.72	100.2	1017.63	101.8	1055.89	105.6	1046.95	104.7
Copper	CU	ICP	IP112771	1000.0	1030.11	103.0	1000.0	1014.85	101.5	1007.78	100.8	1017.90	101.8	1048.58	104.9	1044.31	104.4
Lead	PB	ICP	IP112771	2000.0	1977.76	98.9	2000.0	1983.52	99.2	1956.56	97.8	2007.28	100.4	2055.29	102.8	2052.66	102.6
Mercury	HG	CVA	HG111701	8.0	7.26	90.8	4.0	3.69	92.3	3.65	91.3	1.76	44.0	3.63	90.8	3.59	89.8
Nickel	NI	ICP	IP112771	1000.0	969.45	96.9	1000.0	1004.91	100.5	968.61	96.9	985.13	98.5	1022.56	102.3	1010.29	101.0
Selenium	SE	PMS	MS112711	80.0	78.06	97.6	50.0	50.51	101.0	49.04	98.1	50.09	100.2	51.02	102.0	52.39	104.8
Silver	AG	ICP	IP112771	1000.0	1049.26	104.9	1000.0	1036.76	103.7	1026.29	102.6	1036.26	103.6	1063.28	106.3	1059.96	106.0
Zinc	ZN	ICP	IP112771	1000.0	1002.88	100.3	1000.0	1044.66	104.5	1004.19	100.4	1036.55	103.7	1067.11	106.7	1062.32	106.2

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



# Calibration Verification

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

UNITS: ug/L

ANALYTE	EL	M	RUN	CCVTV	CCV6	CCV7	CCV8	CCV9	CCV10	CCV11						
				%R	%R	%R	%R	%R	%R	%R						
Antimony	SB	ICP	IP112771	2000.0	2214.49	110.7	2131.43	106.6	2070.03	103.5	2130.57	106.5	2119.95	106.0	2118.12	105.9
Arsenic	AS	ICP	IP112771	2000.0	2117.60	105.9	2017.80	100.9	1997.61	99.9	2076.31	103.8	2067.41	103.4	2063.17	103.2
Cadmium	CD	ICP	IP112771	1000.0	1050.23	105.0	1002.20	100.2	1008.81	100.9	1023.76	102.4	1024.57	102.5	1015.44	101.5
Chromium	CR	ICP	IP112771	1000.0	1044.19	104.4	447.32	44.7	4094.48	409.4	1015.74	101.6	1006.32	100.6	1011.00	101.1
Copper	CU	ICP	IP112771	1000.0	1016.80	101.7	989.76	99.0	990.96	99.1	1007.91	100.8	1005.85	100.6	992.31	99.2
Lead	PB	ICP	IP112771	2000.0	2107.93	105.4	1959.18	98.0	1965.94	98.3	1993.07	99.7	2001.40	100.1	1982.95	99.1
Mercury	HG	CVA	HG111701	4.0	3.60	90.0	3.64	91.0	3.61	90.3	3.56	89.0				
Nickel	NI	ICP	IP112771	1000.0	1008.90	100.9	2143.46	214.3	5050.04	505.0	975.29	97.5	970.88	97.1	976.43	97.6
Selenium	SE	PMS	MS112711	50.0	54.89	109.8	54.35	108.7	54.86	109.7	53.95	107.9	53.72	107.4	54.49	109.0
Silver	AG	ICP	IP112771	1000.0	1020.82	102.1	1004.22	100.4	1003.43	100.3	1029.10	102.9	1028.59	102.9	1021.08	102.1
Zinc	ZN	ICP	IP112771	1000.0	1061.03	106.1	3419.81	342.0	6433.90	643.4	1031.63	103.2	1026.54	102.7	1029.09	102.9

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

**Calibration Verification**

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

UNITS: ug/L

SDG: VR58

ANALYTE	EL	M	RUN	CCVTV	CCV12	CCV13	CCV14	CCV15	CCV16	CCV17
				%R	%R	%R	%R	%R	%R	%R
Antimony	SB	ICP	IP112771	2000.0	2096.98	104.8	2095.51	104.8	2117.54	105.9
Arsenic	AS	ICP	IP112771	2000.0	2030.01	101.5	2028.93	101.4	2055.87	102.8
Cadmium	CD	ICP	IP112771	1000.0	1014.08	101.4	1015.93	101.6	1023.64	102.4
Chromium	CR	ICP	IP112771	1000.0	1001.06	100.1	1013.93	101.4	1011.85	101.2
Copper	CU	ICP	IP112771	1000.0	1001.30	100.1	999.40	99.9	1007.92	100.8
Lead	PB	ICP	IP112771	2000.0	1971.34	98.6	1978.43	98.9	1989.58	99.5
Mercury	HG	CVA	HG111701	4.0						
Nickel	NI	ICP	IP112771	1000.0	964.18	96.4	977.40	97.7	977.93	97.8
Selenium	SE	PMS	MS112711	50.0	54.52	109.0				
Silver	AG	ICP	IP112771	1000.0	1030.59	103.1	1027.89	102.8	1036.08	103.6
Zinc	ZN	ICP	IP112771	1000.0	1006.12	100.6	1028.89	102.9	1024.11	102.4

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

**Calibration Verification**

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	ICP	IP112871	2000.0	2138.21	106.9	2000.0	2137.44	106.9	2142.11	107.1	2163.84	108.2	2175.00	108.8	2177.81	108.9
Arsenic	AS	ICP	IP112871	2000.0	2016.39	100.8	2000.0	2016.50	100.8	2022.15	101.1	2050.72	102.5	2055.30	102.8	2067.86	103.4
Cadmium	CD	ICP	IP112871	1000.0	1015.77	101.6	1000.0	1021.32	102.1	1018.84	101.9	1027.95	102.8	1034.20	103.4	1034.27	103.4
Chromium	CR	ICP	IP112871	1000.0	1005.83	100.6	1000.0	1015.42	101.5	1009.15	100.9	1024.92	102.5	1032.94	103.3	1028.43	102.8
Copper	CU	ICP	IP112871	1000.0	1019.94	102.0	1000.0	1021.93	102.2	1029.27	102.9	1025.01	102.5	1039.22	103.9	1030.55	103.1
Lead	PB	ICP	IP112871	2000.0	2068.56	103.4	2000.0	2071.02	103.6	2073.99	103.7	2104.00	105.2	2105.98	105.3	2119.85	106.0
Nickel	NI	ICP	IP112871	1000.0	1012.61	101.3	1000.0	1025.59	102.6	1016.46	101.6	1030.90	103.1	1030.10	103.0	1039.37	103.9
Silver	AG	ICP	IP112871	1000.0	1033.70	103.4	1000.0	1034.67	103.5	1041.82	104.2	1039.63	104.0	1048.90	104.9	1044.82	104.5
Zinc	ZN	ICP	IP112871	1000.0	1048.52	104.9	1000.0	1065.21	106.5	1048.34	104.8	1073.38	107.3	1064.05	106.4	1080.97	108.1

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

**Calibration Verification**

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

UNITS:ug/L

SDG: VR58

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	ICP	IP112871	2000.0	2175.81	108.8	2122.98	106.1	2156.66	107.8						
Arsenic	AS	ICP	IP112871	2000.0	2060.02	103.0	2014.06	100.7	2047.33	102.4						
Cadmium	CD	ICP	IP112871	1000.0	1030.72	103.1	1004.41	100.4	1024.54	102.5						
Chromium	CR	ICP	IP112871	1000.0	1021.05	102.1	996.69	99.7	1013.66	101.4						
Copper	CU	ICP	IP112871	1000.0	1030.07	103.0	1004.08	100.4	1020.56	102.1						
Lead	PB	ICP	IP112871	2000.0	2117.12	105.9	2064.89	103.2	2097.91	104.9						
Nickel	NI	ICP	IP112871	1000.0	1027.66	102.8	1000.33	100.0	1013.68	101.4						
Silver	AG	ICP	IP112871	1000.0	1043.88	104.4	1017.17	101.7	1030.30	103.0						
Zinc	ZN	ICP	IP112871	1000.0	1072.25	107.2	1043.31	104.3	1066.29	106.6						

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



# Calibration Verification

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	ICP	IP112971	2000.0	2114.39	105.7	2000.0	2097.27	104.9	2126.51	106.3						
Arsenic	AS	ICP	IP112971	2000.0	2021.19	101.1	2000.0	2011.69	100.6	2044.37	102.2						
Cadmium	CD	ICP	IP112971	1000.0	1021.55	102.2	1000.0	1010.38	101.0	1025.78	102.6						
Chromium	CR	ICP	IP112971	1000.0	1010.46	101.0	1000.0	1009.73	101.0	1014.04	101.4						
Copper	CU	ICP	IP112971	1000.0	1027.30	102.7	1000.0	1012.23	101.2	1029.21	102.9						
Lead	PB	ICP	IP112971	2000.0	2075.69	103.8	2000.0	2067.84	103.4	2092.60	104.6						
Nickel	NI	ICP	IP112971	1000.0	1011.55	101.2	1000.0	1016.37	101.6	1015.83	101.6						
Silver	AG	ICP	IP112971	1000.0	1041.43	104.1	1000.0	1027.93	102.8	1046.10	104.6						
Zinc	ZN	ICP	IP112971	1000.0	1044.93	104.5	1000.0	1048.35	104.8	1051.14	105.1						

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





# CRDL Standard

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

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	ICP	IP112771	50.0		52.60	105.2	49.21	98.4	50.74	101.5						
Arsenic	AS	ICP	IP112771	50.0		49.42	98.8	50.39	100.8	48.77	97.5						
Cadmium	CD	ICP	IP112771	2.0		1.92	96.0	1.83	91.5	1.85	92.5						
Chromium	CR	ICP	IP112771	5.0		5.26	105.2	5.65	113.0	5.94	118.8						
Copper	CU	ICP	IP112771	2.0		1.63	81.5	-1.63	-81.5	-1.52	-76.0						
Lead	PB	ICP	IP112771	20.0		20.65	103.3	20.71	103.6	20.74	103.7						
Mercury	HG	CVA	HG111701	0.1		0.10	100.0										
Nickel	NI	ICP	IP112771	10.0		11.13	111.3	10.26	102.6	10.90	109.0						
Selenium	SE	PMS	MS112711	0.5		0.51	102.0										
Silver	AG	ICP	IP112771	3.0		2.95	98.3	2.97	99.0	2.97	99.0						
Zinc	ZN	ICP	IP112771	10.0		9.82	98.2	9.73	97.3	9.18	91.8						
Antimony	SB	ICP	IP112871	50.0		53.84	107.7	52.11	104.2	54.28	108.6	51.72	103.4				
Arsenic	AS	ICP	IP112871	50.0		47.88	95.8	49.74	99.5	48.81	97.6	49.76	99.5				
Cadmium	CD	ICP	IP112871	2.0		2.22	111.0	2.21	110.5	2.11	105.5	2.00	100.0				
Chromium	CR	ICP	IP112871	5.0		4.65	93.0	4.69	93.8	5.23	104.6	5.27	105.4				
Copper	CU	ICP	IP112871	2.0		2.03	101.5	2.21	110.5	2.17	108.5	1.86	93.0				
Lead	PB	ICP	IP112871	20.0		20.90	104.5	20.26	101.3	20.81	104.1	19.99	100.0				
Nickel	NI	ICP	IP112871	10.0		9.52	95.2	8.97	89.7	9.23	92.3	9.58	95.8				
Silver	AG	ICP	IP112871	3.0		3.06	102.0	2.91	97.0	3.25	108.3	3.05	101.7				
Zinc	ZN	ICP	IP112871	10.0		9.82	98.2	9.69	96.9	10.02	100.2	9.86	98.6				

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

10/18/2013 10:00 AM



**CRDL Standard**

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

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	ICP	IP112971	50.0	51.51	103.0										
Arsenic	AS	ICP	IP112971	50.0	48.83	97.7										
Cadmium	CD	ICP	IP112971	2.0	2.19	109.5										
Chromium	CR	ICP	IP112971	5.0	5.51	110.2										
Copper	CU	ICP	IP112971	2.0	2.11	105.5										
Lead	PB	ICP	IP112971	20.0	19.99	100.0										
Nickel	NI	ICP	IP112971	10.0	9.76	97.6										
Silver	AG	ICP	IP112971	3.0	3.15	105.0										
Zinc	ZN	ICP	IP112971	10.0	10.49	104.9										

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

# Calibration Blanks

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58



UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	CCB1	CCB2	CCB3	CCB4	CCB5	C
Antimony	SB	ICP	IP112771	60.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	U
Arsenic	AS	ICP	IP112771	10.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	U
Cadmium	CD	ICP	IP112771	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	U
Chromium	CR	ICP	IP112771	10.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	U
Copper	CU	ICP	IP112771	25.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	U
Lead	PB	ICP	IP112771	3.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	U
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	U
Nickel	NI	ICP	IP112771	40.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	U
Selenium	SE	PMS	MS112711	5.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	U
Silver	AG	ICP	IP112771	10.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	U
Zinc	ZN	ICP	IP112771	20.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	U

VR58 - 00267

# Calibration Blanks

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58



UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	CCB7	CCB8	CCB9	CCB10	CCB11	C
Antimony	SB	ICP	IP112771	60.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	U
Arsenic	AS	ICP	IP112771	10.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	U
Cadmium	CD	ICP	IP112771	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	U
Chromium	CR	ICP	IP112771	10.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	U
Copper	CU	ICP	IP112771	25.0	2.0	-3.5	-3.6	-3.3	-3.4	-3.3	-3.4	B
Lead	PB	ICP	IP112771	3.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	U
Mercury	HG	CVA	HG111701	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	U
Nickel	NI	ICP	IP112771	40.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	U
Selenium	SE	PMS	MS112711	5.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	U
Silver	AG	ICP	IP112771	10.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	U
Zinc	ZN	ICP	IP112771	20.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	U

VR58 092008

# Calibration Blanks

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58



UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB12	CCB13	CCB14	CCB15	CCB16	CCB17	C
Antimony	SB	ICP	IP112771	60.0	50.0							
Arsenic	AS	ICP	IP112771	10.0	50.0							
Cadmium	CD	ICP	IP112771	5.0	2.0							
Chromium	CR	ICP	IP112771	10.0	5.0							
Copper	CU	ICP	IP112771	25.0	2.0							
Lead	PB	ICP	IP112771	3.0	20.0							
Mercury	HG	CVA	HG111701	0.2	0.1							
Nickel	NI	ICP	IP112771	40.0	10.0							
Selenium	SE	PMS	MS112711	5.0	0.5	0.5						U
Silver	AG	ICP	IP112771	10.0	3.0							
Zinc	ZN	ICP	IP112771	20.0	10.0							

VR58 09250

# Calibration Blanks

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58



UNITS:ug/L

ANALYTE	EL METH	RUN	CRDL	IDL	ICB	CCB1	CCB2	CCB3	CCB4	CCB5	C
Antimony	SB	ICP	IP112871	60.0	50.0	50.0	50.0	50.0	50.0	50.0	U
Arsenic	AS	ICP	IP112871	10.0	50.0	50.0	50.0	50.0	50.0	50.0	U
Cadmium	CD	ICP	IP112871	5.0	2.0	2.0	2.0	2.0	2.0	2.0	U
Chromium	CR	ICP	IP112871	10.0	5.0	5.0	5.0	5.0	5.0	5.0	U
Copper	CU	ICP	IP112871	25.0	2.0	2.0	2.0	2.0	2.0	2.0	U
Lead	PB	ICP	IP112871	3.0	20.0	20.0	20.0	20.0	20.0	20.0	U
Nickel	NI	ICP	IP112871	40.0	10.0	10.0	10.0	10.0	10.0	10.0	U
Silver	AG	ICP	IP112871	10.0	3.0	3.0	3.0	3.0	3.0	3.0	U
Zinc	ZN	ICP	IP112871	20.0	10.0	10.0	10.0	10.0	10.0	10.0	U

# Calibration Blanks

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58



UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	CCB7	CCB8	CCB9	CCB10	CCB11	C
Antimony	SB	ICP	IP112871	60.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	U
Arsenic	AS	ICP	IP112871	10.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	U
Cadmium	CD	ICP	IP112871	5.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	U
Chromium	CR	ICP	IP112871	10.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	U
Copper	CU	ICP	IP112871	25.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	U
Lead	PB	ICP	IP112871	3.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	U
Nickel	NI	ICP	IP112871	40.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	U
Silver	AG	ICP	IP112871	10.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	U
Zinc	ZN	ICP	IP112871	20.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	U

VR58 : 98271

# Calibration Blanks

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58



UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	CCB1	CCB2	CCB3	CCB4	CCB5	C
Antimony	SB	ICP	IP112971	60.0	50.0	50.0	50.0	50.0				U
Arsenic	AS	ICP	IP112971	10.0	50.0	50.0	50.0	50.0				U
Cadmium	CD	ICP	IP112971	5.0	2.0	2.0	2.0	2.0				U
Chromium	CR	ICP	IP112971	10.0	5.0	5.0	5.0	5.0				U
Copper	CU	ICP	IP112971	25.0	2.0	2.0	2.0	2.0				U
Lead	PB	ICP	IP112971	3.0	20.0	20.0	20.0	20.0				U
Nickel	NI	ICP	IP112971	40.0	10.0	10.0	10.0	10.0				U
Silver	AG	ICP	IP112971	10.0	3.0	3.0	3.0	3.0				U
Zinc	ZN	ICP	IP112971	20.0	10.0	10.0	10.0	10.0				U

VR58 00272



# ICP Interference Check Sample



CLIENT: Anchor QEA, LLC.

ICS SOURCE: I.V.

PROJECT: City of Kenmore Sedi

RUNID: IP112771

SDG: VR58

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	208789.5	201792.0	100.9	195582.1	193989.2	97.0	196310.4	194599.3	97.3
Antimony	1000	1000	13.1	1029.3	102.9	10.2	1001.8	100.2	7.4	1003.5	100.4
Arsenic	1000	1000	15.1	1013.6	101.4	13.9	1022.4	102.2	20.2	1024.2	102.4
Barium	1000	1000	-3.9	1004.1	100.4	-3.4	982.1	98.2	-3.6	981.9	98.2
Beryllium	1000	1000	0.1	971.9	97.2	0.0	985.1	98.5	0.0	981.4	98.1
Boron			-4.7	-2.9		-5.1	-3.3		-2.6	-4.1	
Cadmium	1000	1000	0.2	1000.0	100.0	-0.3	1000.9	100.1	-0.3	1001.2	100.1
Calcium	100000	100000	105151.8	103470.9	103.5	98518.0	98407.1	98.4	98161.0	98765.2	98.8
Chromium	1000	1000	-0.7	1008.7	100.9	0.3	1010.5	101.1	-0.1	1006.4	100.6
Cobalt	1000	1000	-0.9	968.2	96.8	-0.5	940.3	94.0	-0.8	968.7	96.9
Copper	1000	1000	-0.2	1001.7	100.2	-3.9	979.7	98.0	-3.7	975.2	97.5
Iron	200000	200000	206607.2	202956.4	101.5	195551.8	195135.7	97.6	194485.6	194792.0	97.4
Lead	1000	1000	-0.7	966.0	96.6	-4.1	963.8	96.4	-2.8	971.1	97.1
Magnesium	100000	100000	109030.3	102361.5	102.4	101820.0	97376.2	97.4	101628.7	97715.1	97.7
Manganese	1000	1000	1.5	959.6	96.0	1.2	972.2	97.2	1.2	969.6	97.0
Molybdenum			3.2	2.8		1.8	1.6		2.3	2.2	
Nickel	1000	1000	0.3	952.8	95.3	1.2	942.0	94.2	0.5	940.6	94.1
Potassium			19.1	-48.0		-12.9	-66.9		-8.1	-43.7	
Selenium	1000	1000	4.6	990.3	99.0	7.7	976.7	97.7	2.4	982.3	98.2
Silicon			-0.2	-1.8		-1.4	-4.8		-4.3	-2.3	
Silver	1000	1000	-1.2	1009.0	100.9	-1.2	996.7	99.7	-1.3	996.1	99.6
Sodium			12.0	23.1		13.6	26.3		15.5	26.5	
Strontium			4.1	3.9		3.9	3.9		4.0	3.9	
Thallium	1000	1000	3.3	937.3	93.7	5.9	917.2	91.7	4.3	924.1	92.4
Tin			-8.6	-8.0		-7.6	-8.3		-6.6	-6.6	
Titanium			1.1	0.7		0.4	0.7		1.2	1.1	
Vanadium	1000	1000	3.8	961.6	96.2	4.9	934.4	93.4	4.4	934.9	93.5
Zinc	1000	1000	3.0	954.0	95.4	2.7	958.0	95.8	1.8	955.2	95.5

05/18 : 09273

# ICP Interference Check Sample



CLIENT: Anchor QEA, LLC. ICS SOURCE: I.V.  
 PROJECT: City of Kenmore Sedi RUNID: MS112711  
 SDG: VR58 INSTRUMENT ID: NEXION 300D  
 UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSA2	ICSA3	%R	ICSA1	ICSA2	ICSA3	%R	ICSA1	ICSA2	ICSA3	%R
Arsenic		20	0.1			19.9	0.1			99.5				
Cadmium		20	0.1			20.0	0.1			100.0				
Chromium		20	0.5			20.4	0.5			102.0				
Cobalt		20	0.0			19.6	0.0			98.0				
Copper		20	0.9			20.8	0.9			104.0				
Manganese		20	0.1			20.0	0.1			100.0				
Molybdenum	400	400	425.6			444.6	425.6			111.2				
Nickel		20	0.3			20.6	0.3			103.0				
Selenium			-0.2			-0.2	-0.2							
Silver		20	0.0			21.1	0.0			105.5				
Zinc		20	0.9			20.1	0.9			100.5				

VR58 : 00274

# ICP Interference Check Sample



CLIENT: Anchor QEA, LLC.

ICS SOURCE: I. V.

PROJECT: City of Kenmore Sedi

RUNID: IP112871

SDG: VR58

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	200611.9	199598.5	99.8	202877.0	201105.3	100.6	204309.7	204056.0	102.0
Antimony	1000	1000	12.3	1030.6	103.1	11.1	1044.6	104.5	12.9	1059.8	106.0
Arsenic	1000	1000	11.6	1009.9	101.0	13.3	1025.3	102.5	12.1	1036.8	103.7
Barium	1000	1000	-2.6	1011.0	101.1	-3.9	1020.4	102.0	-3.8	1030.8	103.1
Beryllium	1000	1000	0.1	1000.3	100.0	0.1	1009.3	100.9	0.1	1029.1	102.9
Boron			-5.0	-3.7		-5.8	-3.8		-5.1	-4.9	
Cadmium	1000	1000	0.0	1009.5	101.0	0.0	1020.5	102.1	-0.2	1027.6	102.8
Calcium	100000	100000	100626.5	100815.7	100.8	101973.8	101811.2	101.8	102827.9	103446.8	103.4
Chromium	1000	1000	-1.6	1009.9	101.0	-2.2	1017.2	101.7	-1.4	1034.5	103.5
Cobalt	1000	1000	-1.1	939.3	93.9	-0.9	951.5	95.2	-1.0	960.5	96.1
Copper	1000	1000	0.0	1030.0	103.0	0.1	1044.8	104.5	0.1	1050.6	105.1
Iron	200000	200000	198126.1	197483.0	98.7	199699.4	199139.0	99.6	202596.4	203343.7	101.7
Lead	1000	1000	-4.8	988.4	98.8	-4.9	1001.6	100.2	-4.8	1011.1	101.1
Magnesium	100000	100000	99876.0	100211.6	100.2	101185.5	101145.1	101.1	102016.8	102772.8	102.8
Manganese	1000	1000	1.5	955.2	95.5	1.4	963.3	96.3	1.3	982.0	98.2
Molybdenum			2.2	1.8		2.4	2.2		2.2	2.2	
Nickel	1000	1000	-2.7	981.7	98.2	-1.3	989.4	98.9	-1.7	1004.5	100.5
Potassium			10.1	-43.4		-0.8	-31.4		18.5	-24.0	
Selenium	1000	1000	14.4	1001.5	100.2	15.7	1012.0	101.2	11.7	1023.8	102.4
Silicon			-1.7	1.0		-0.2	0.3		0.8	3.4	
Silver	1000	1000	-1.3	1048.1	104.8	-1.4	1062.0	106.2	-1.2	1067.9	106.8
Sodium			13.3	30.0		17.1	29.1		16.5	31.2	
Strontium			4.1	4.1		4.1	4.1		4.2	4.2	
Thallium	1000	1000	-2.3	925.8	92.6	-4.5	939.8	94.0	0.4	949.3	94.9
Tin			-5.5	-6.8		-7.4	-6.5		-6.2	-7.4	
Titanium			1.6	1.1		1.6	1.3		1.1	1.4	
Vanadium	1000	1000	4.9	997.8	99.8	4.7	1011.5	101.2	4.9	1018.6	101.9
Zinc	1000	1000	2.6	979.1	97.9	1.9	987.5	98.8	1.9	1003.7	100.4



# ICP Interference Check Sample

CLIENT: Anchor QEA, LLC.

ICS SOURCE: I.V.

PROJECT: City of Kenmore Sedi

RUNID: IP112971

SDG: VR58

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	197071.5	196571.7	98.3						
Antimony	1000	1000	11.4	1013.1	101.3						
Arsenic	1000	1000	14.8	1009.1	100.9						
Barium	1000	1000	-4.0	990.1	99.0						
Beryllium	1000	1000	0.1	1002.8	100.3						
Boron			-7.1	-3.6							
Cadmium	1000	1000	-0.1	1005.7	100.6						
Calcium	100000	100000	99287.4	99457.6	99.5						
Chromium	1000	1000	-0.9	998.0	99.8						
Cobalt	1000	1000	-0.8	934.7	93.5						
Copper	1000	1000	0.1	1030.4	103.0						
Iron	200000	200000	196614.9	196396.7	98.2						
Lead	1000	1000	-5.0	982.8	98.3						
Magnesium	100000	100000	97792.7	98140.1	98.1						
Manganese	1000	1000	1.2	949.9	95.0						
Molybdenum			2.2	2.1							
Nickel	1000	1000	-0.4	961.9	96.2						
Potassium			3.6	-43.6							
Selenium	1000	1000	10.5	996.9	99.7						
Silicon			-3.4	-2.0							
Silver	1000	1000	-1.1	1048.5	104.9						
Sodium			18.4	29.9							
Strontium			4.0	4.0							
Thallium	1000	1000	0.7	921.2	92.1						
Tin			-5.2	-5.7							
Titanium			2.4	2.1							
Vanadium	1000	1000	4.0	992.0	99.2						
Zinc	1000	1000	11.8	956.8	95.7						

00112971

# Post Digest Spike Sample Recovery



CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

ANALYSIS METHOD: ICP

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT C	SAMPLE RESULT C	SPIKE ADDED	MATRIX	%R
Antimony	SG-10-S-E-121107A	VR58APOST	IP112771	4348.16	100.00 U	4000	Sediment	108.7

# IDLs and ICP Linear Ranges



CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENGTH (nm)	GFA BACK- GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Antimony	SB	ICP	OPTIMA ICP 2	206.84		60	50.0	4/1/2012	30000.0	7/30/2012
Arsenic	AS	ICP	OPTIMA ICP 2	197.20		10	50.0	4/1/2012	30000.0	7/30/2012
Cadmium	CD	ICP	OPTIMA ICP 2	228.80		5	2.0	4/1/2012	20000.0	7/30/2012
Chromium	CR	ICP	OPTIMA ICP 2	267.72		10	5.0	4/1/2012	100000.0	7/30/2012
Copper	CU	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2012	40000.0	7/30/2012
Lead	PB	ICP	OPTIMA ICP 2	220.35		3	20.0	4/1/2012	300000.0	7/30/2012
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	ICP	OPTIMA ICP 2	231.60		40	10.0	4/1/2012	100000.0	7/30/2012
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Silver	AG	ICP	OPTIMA ICP 2	328.07		10	3.0	4/1/2012	5000.0	7/30/2012
Zinc	ZN	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2012	100000.0	7/30/2012

# ICP Interelement Correction Factors



CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

IEC DATE: 11/12/2012

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	EA	BE	CA	CD	CO	CR	CU	FZ
Aluminum	308.22	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Antimony	206.84	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	9.1050360	0.000000	0.000000
Arsenic	188.98	0.000000	0.000000	0.000000	0.000000	0.0581760	0.000000	-0.8953680	1.5607750	0.000000	0.000000
Barium	233.53	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.1763230	0.000000	0.000000	0.1637240
Beryllium	313.04	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Cadmium	228.80	0.000000	6.5458340	0.000000	0.000000	0.000000	0.000000	0.1152580	0.000000	0.000000	0.0095100
Calcium	317.93	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Chromium	267.72	0.000000	0.000000	0.0295099	0.000000	0.0091790	0.000000	-0.0348880	0.000000	0.000000	-0.0392710
Cobalt	228.62	0.000000	0.000000	0.0788170	0.000000	0.000000	0.000000	0.000000	-0.0346500	0.000000	0.0130090
Copper	324.75	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.1608400	0.000000	0.000000	-0.0442360
Iron	273.96	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Lead	220.35	-0.2393490	0.000000	0.000000	0.000000	0.000000	0.000000	-0.1467250	-1.4437390	0.000000	0.0412430
Magnesium	279.08	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-1.4396410	-1.1694080	0.000000	0.5321920
Manganese	257.61	0.0046450	0.000000	0.000000	0.000000	0.0019080	0.000000	0.000000	0.000000	0.000000	-0.0054280
Molybdenum	202.03	0.000000	0.000000	0.000000	0.000000	0.0108090	0.000000	0.000000	0.0540880	0.000000	0.000000
Nickel	231.60	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Potassium	766.49	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Selenium	196.03	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.4883700	0.000000	0.000000	0.000000
Silicon	288.16	0.000000	0.000000	0.000000	0.000000	0.000000	-3.5902270	0.000000	0.000000	0.000000	0.000000
Silver	328.07	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sodium	589.59	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Thallium	190.80	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Tin	189.93	0.000000	0.000000	0.000000	0.000000	-0.1236770	0.000000	0.000000	0.000000	0.000000	-0.1069480
Titanium	334.90	0.000000	0.000000	0.000000	0.000000	0.0477260	0.000000	0.000000	0.1988470	0.000000	0.000000
Vanadium	292.40	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-4.2880510	0.000000	0.0349450
Zinc	206.20	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.0645950	0.000000	0.000000

# ICP Interelement Correction Factors



CLIENT: Anchor QEA, LLC.  
PROJECT: City of Kenmore Sedi  
SDG: VR58

IEC DATE: 11/12/2012  
INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.000000	0.000000	17.26483390	0.000000	0.000000	0.000000	2.1534780	0.000000	14.6676620	0.000000
Antimony	206.84	0.000000	0.000000	0.000000	-0.3171320	0.000000	0.000000	-1.6488050	0.000000	-2.7828430	0.000000
Arsenic	188.98	0.000000	0.000000	3.5824010	0.000000	0.000000	0.000000	-28.6279570	0.000000	0.000000	0.000000
Barium	233.53	0.000000	0.000000	0.000000	0.1006020	0.000000	0.000000	0.000000	0.000000	0.2160840	0.000000
Beryllium	313.04	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.0120420	0.000000	0.1997240	0.000000
Cadmium	228.80	0.000000	0.000000	0.000000	-0.9709640	0.000000	0.000000	0.000000	0.000000	0.6837900	0.000000
Calcium	317.93	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Chromium	267.72	0.0863140	0.0880780	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.3314250	0.0362000
Cobalt	228.62	0.000000	0.000000	-0.1203920	0.1624660	0.000000	0.000000	1.9337740	0.000000	0.000000	0.000000
Copper	324.75	0.0084630	0.000000	0.4010840	0.000000	0.000000	0.000000	0.2064430	0.000000	0.000000	0.000000
Iron	273.96	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	8.4794020	0.000000
Lead	220.35	0.000000	0.000000	-0.4099510	-0.1101090	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Magnesium	279.08	0.000000	0.000000	-5.5537550	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Manganese	257.61	0.000000	0.000000	0.000000	0.000000	-0.2086980	0.000000	0.000000	0.000000	-0.0242310	0.000000
Molybdenum	202.03	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Nickel	231.60	0.000000	0.000000	0.000000	0.000000	0.000000	-0.5468870	0.000000	0.4309940	0.000000	0.000000
Potassium	766.49	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Selenium	196.03	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.5703720	0.000000
Silicon	288.16	-0.1197150	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Silver	328.07	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.0400098	0.000000	-2.8848200	0.000000
Sodium	589.59	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Thallium	190.80	0.000000	-0.8464030	-0.9915990	0.000000	0.000000	0.000000	0.000000	0.000000	3.4340400	0.000000
Tin	189.93	0.000000	0.000000	0.8648230	0.000000	-0.0322750	-0.4551870	-0.1436590	0.000000	0.000000	0.000000
Titanium	334.90	0.000000	0.000000	0.8648230	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Vanadium	292.40	0.000000	-0.1521530	0.5765370	0.000000	0.000000	0.000000	0.5629710	0.000000	0.000000	0.000000
Zinc	206.20	0.000000	0.000000	0.2677330	0.000000	-0.0519400	0.000000	0.000000	0.000000	0.000000	0.000000

5010 890205



# Preparation Log



CLIENT: Anchor QEA, LLC.

ANALYSIS METHOD: CVA

PROJECT: City of Kenmore Sedi

ARI PREP CODE: SMM

SDG: VR58

PREPDATE: 11/16/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SG-10-S-E-121107	VR58A	0.284	0.0	50.0
SG-10-S-E-121107D	VR58ADUP	0.282	0.0	50.0
SG-10-S-E-121107S	VR58ASPK	0.288	0.0	50.0
SG-11-S-E-121107	VR58B	0.271	0.0	50.0
SG-12-S-E-121107	VR58C	0.217	0.0	50.0
SG-13-S-E-121107	VR58D	0.221	0.0	50.0
SG-13-S-E-dup-1211	VR58E	0.231	0.0	50.0
SG-14-S-E-121107	VR58F	0.206	0.0	50.0
SG-15-S-E-121107	VR58G	0.260	0.0	50.0
SG-16-S-E-121107	VR58H	0.238	0.0	50.0
SG-17-S-E-121107	VR58I	0.247	0.0	50.0
SG-01-S-C-121107	VR58J	0.219	0.0	50.0
PBS	VR58MB1	0.200	0.0	50.0
LCSW	VR58MB1SPK	0.200	0.0	50.0
SG-02-S-C-121108	VR82A	0.262	0.0	50.0
SG-03-S-C-121108	VR82B	0.215	0.0	50.0
SG-04-S-C-121108	VR82C	0.271	0.0	50.0
SG-05-S-C-121108	VR82D	0.225	0.0	50.0
SG-06-S-C-121108	VR82E	0.268	0.0	50.0
SG-07-S-C-121108	VR82F	0.218	0.0	50.0
SG-07-S-C-dup-1211	VR82G	0.236	0.0	50.0
SG-08-S-C-121108	VR82H	0.219	0.0	50.0
SG-09-S-C-121108	VR82I	0.217	0.0	50.0

# Preparation Log



CLIENT: Anchor QEA, LLC.

ANALYSIS METHOD: ICP

PROJECT: City of Kenmore Sedi

ARI PREP CODE: SWC

SDG: VR58

PREPDATE: 11/16/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SG-10-S-E-121107	VR58A	1.071	0.0	50.0
SG-10-S-E-121107D	VR58ADUP	1.070	0.0	50.0
SG-10-S-E-121107S	VR58ASPK	1.073	0.0	50.0
SG-11-S-E-121107	VR58B	1.032	0.0	50.0
SG-12-S-E-121107	VR58C	1.043	0.0	50.0
SG-13-S-E-121107	VR58D	1.019	0.0	50.0
SG-13-S-E-dup-1211	VR58E	1.007	0.0	50.0
SG-14-S-E-121107	VR58F	1.043	0.0	50.0
SG-15-S-E-121107	VR58G	1.080	0.0	50.0
SG-16-S-E-121107	VR58H	1.068	0.0	50.0
SG-17-S-E-121107	VR58I	1.034	0.0	50.0
SG-01-S-C-121107	VR58J	1.073	0.0	50.0
PBS	VR58MB1	1.000	0.0	50.0
LCSS	VR58MB1SPK	1.000	0.0	50.0
SG-02-S-C-121108	VR82A	1.044	0.0	50.0
SG-03-S-C-121108	VR82B	1.021	0.0	50.0
SG-04-S-C-121108	VR82C	1.035	0.0	50.0
SG-05-S-C-121108	VR82D	1.082	0.0	50.0
SG-06-S-C-121108	VR82E	1.048	0.0	50.0
SG-07-S-C-121108	VR82F	1.038	0.0	50.0
SG-07-S-C-dup-1211	VR82G	1.042	0.0	50.0
SG-08-S-C-121108	VR82H	1.044	0.0	50.0
SG-09-S-C-121108	VR82I	1.013	0.0	50.0

# Preparation Log



CLIENT: Anchor QEA, LLC.

ANALYSIS METHOD: PMS

PROJECT: City of Kenmore Sedi

ARI PREP CODE: SWN

SDG: VR58

PREPDATE: 11/16/2012

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
SG-10-S-E-121107	VR58A	1.068	0.0	50.0
SG-10-S-E-121107D	VR58ADUP	1.072	0.0	50.0
SG-10-S-E-121107S	VR58ASPK	1.063	0.0	50.0
SG-11-S-E-121107	VR58B	1.071	0.0	50.0
SG-12-S-E-121107	VR58C	1.077	0.0	50.0
SG-13-S-E-121107	VR58D	1.048	0.0	50.0
SG-13-S-E-dup-1211	VR58E	1.055	0.0	50.0
SG-14-S-E-121107	VR58F	1.013	0.0	50.0
SG-15-S-E-121107	VR58G	1.048	0.0	50.0
SG-16-S-E-121107	VR58H	1.077	0.0	50.0
SG-17-S-E-121107	VR58I	1.015	0.0	50.0
SG-01-S-C-121107	VR58J	1.081	0.0	50.0
PBS	VR58MB1	1.000	0.0	50.0
LCSS	VR58MB1SPK	1.000	0.0	50.0
SG-02-S-C-121108	VR82A	1.032	0.0	50.0
SG-03-S-C-121108	VR82B	1.063	0.0	50.0
SG-04-S-C-121108	VR82C	1.076	0.0	50.0
SG-05-S-C-121108	VR82D	1.078	0.0	50.0
SG-06-S-C-121108	VR82E	1.017	0.0	50.0
SG-07-S-C-121108	VR82F	1.096	0.0	50.0
SG-07-S-C-dup-1211	VR82G	1.059	0.0	50.0
SG-08-S-C-121108	VR82H	1.028	0.0	50.0
SG-09-S-C-121108	VR82I	1.030	0.0	50.0

# Analysis Run Log



CLIENT: Anchor QEA, LLC.  
 PROJECT: City of Kenmore Sedi  
 SDG: VR58  
 INSTRUMENT ID: OPTIMA ICP 2  
 METHOD: ICP  
 START DATE: 11/27/2012  
 END DATE: 11/27/2012

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		1.00	10210	X	X																												X	
S2		1.00	10251									X																						X
S3		1.00	10270	X	X																													
S4		1.00	10291																															
S5		1.00	10313																															
ICV		1.00	10343	X	X																													X
ICB		1.00	10383	X	X																													X
CRI		1.00	10425	X	X																													X
ICSA		1.00	10471	X	X																													X
ICSAB		1.00	10512	X	X																													X
CCV		1.00	10561	X	X																													X
CCB		1.00	11012	X	X																													X
PBS		2.00	11081	X	X																													X
VR58MB1		2.00	11123	X	X																													X
VR58B		2.00	11163	X	X																													X
VR58C		2.00	11202	X	X																													X
VR58D		2.00	11242	X	X																													X
VR58E		2.00	11282	X	X																													X
VR58ADUP		2.00	11322	X	X																													X
VR58A		2.00	11362	X	X																													X
VR58ASPK		2.00	11392	X	X																													X
VR58APOST		2.00	11422	X	X																													X
VR58MB1SPK		1.00	11462	X	X																													X
CCV2		1.00	11513	X	X																													X
CCB2		2.00	11554	X	X																													X
VR58F		2.00	11594	X	X																													X
VR58G		2.00	12034	X	X																													X
VR58H		2.00	12074	X	X																													X
VR58I		2.00	12114	X	X																													X
VR58J		2.00	12154	X	X																													X
VR62A		2.00	12194	X	X																													X
VR62B		2.00	12234	X	X																													X
VR62C		2.00	12272	X	X																													X
VR62D		2.00	12312	X	X																													X
VR62E		1.00	12352	X	X																													X
CCV3				X	X																													X

UPPER - 00281



# Analysis Run Log

CLIENT: Anchor QEA, LLC.  
 PROJECT: City of Kenmore Sedi  
 INSTRUMENT ID: OPTIMA ICP 2  
 START DATE: 11/27/2012  
 RUNID: VR58  
 METHOD: ICP  
 END DATE: 11/27/2012

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	12402		X																												X	
SG-07-S-C-121108	VR82F	2.00	12444																															
SG-07-S-C-dup-1211	VR82G	2.00	12484																															
SG-08-S-C-121108	VR82H	2.00	12524																															
SG-09-S-C-121108	VR82I	2.00	12564																															
CCV	CCV4	1.00	13003		X																													X
CCV	CCV5	1.00	13070		X																													X
CCB	CCB4	1.00	13121		X																													X
S4	S4	1.00	13224																															X
S5	S5	1.00	13250																															
CCV	CCV6	1.00	13290		X																													X
CCB	CCB5	1.00	13335		X																													X
ZZZZZ	VS22MB1	2.00	13382																															
ZZZZZ	VS22B	5.00	13424																															
ZZZZZ	VS22C	5.00	13464																															
ZZZZZ	VS22D	5.00	13503																															
ZZZZZ	ZZZZZ	25.00	13544																															
ZZZZZ	VS22A	5.00	13583																															
ZZZZZ	VS22ADUP	5.00	14023																															
ZZZZZ	VS22ASPK	5.00	14063																															
ZZZZZ	ZZZZZ	5.00	14103																															
ZZZZZ	VS22MB1SPK	2.00	14142																															
CCV	CCV7	1.00	14182		X																													X
CCV	CCV8	1.00	14270		X																													X
CCV	CCV9	1.00	14375		X																													X
CCB	CCB6	1.00	14425		X																													X
ZZZZZ	VS22E	5.00	14470																															
ZZZZZ	VS22F	5.00	14510																															
ZZZZZ	VS22G	5.00	14550																															
ZZZZZ	VS22H	5.00	14590																															
ZZZZZ	VS22I	5.00	15030																															
ZZZZZ	VS22J	5.00	15070																															
ZZZZZ	VS22K	5.00	15110																															
ZZZZZ	VS22L	5.00	15150																															
CCV	CCV10	1.00	15191		X																													X

# Analysis Run Log



CLIENT: Anchor QEA, LLC.  
 PROJECT: City of Kenmore Sedi  
 SDG: VR58  
 INSTRUMENT ID: OPTIMA ICP 2  
 METHOD: ICP  
 START DATE: 11/27/2012  
 END DATE: 11/27/2012

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	CCB7		1.00	15233																														X	
CRI	CRIF		1.00	15275	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICSA	ICSAF		1.00	15320	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICSAB	ICSABF		1.00	15362	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCV	CCV11		1.00	15401	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCB	CCB8		1.00	15451	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ZZZZZZ	VS22MB1		2.00	15493																															
ZZZZZZ	VS22B		5.00	15534																															
ZZZZZZ	VS22C		5.00	15574																															
ZZZZZZ	VS22D		5.00	16014																															
ZZZZZZ	VS22A-L		25.00	16054																															
ZZZZZZ	VS22A		5.00	16094																															
ZZZZZZ	VS22ADUP		5.00	16134																															
ZZZZZZ	VS22ASPK		5.00	16174																															
ZZZZZZ	VS22APOST		5.00	16214																															
ZZZZZZ	VS22MB1SPK		2.00	16252																															
CCV	CCV12		1.00	16292	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCB	CCB9		1.00	16343	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CRI	CRIF1		1.00	16384	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICSA	ICSAF1		1.00	16425	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ICSAB	ICSABF1		1.00	16471	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCV	CCV13		1.00	16510	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCB	CCB10		1.00	16560	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
ZZZZZZ	VR80C		1.00	17002																															
SG-07-S-C-121108	VR82F		2.00	17043																															
SG-07-S-C-dup-1211	VR82G		2.00	17083																															
SG-08-S-C-121108	VR82H		2.00	17123																															
SG-09-S-C-121108	VR82I		2.00	17163																															
CCV	CCV14		1.00	17203	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CCB	CCB11		1.00	17254	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	

# Analysis Run Log



CLIENT: Anchor QEA, LLC.  
 PROJECT: City of Kenmore Sedi  
 SDG: VR58  
 INSTRUMENT ID: OPTIMA ICP 2  
 METHOD: ICP  
 START DATE: 11/28/2012  
 END DATE: 11/28/2012

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	09271		X																												X		
S2	S2	1.00	09312																															X	
S3	S3	1.00	09331		X																														
S4	S4	1.00	09354																																
S5	S5	1.00	09380																																
ICV	ICV	1.00	09414		X																													X	
ICB	ICB	1.00	09450		X																													X	
CRI	CRI	1.00	09492		X																													X	
ICSA	ICSAI	1.00	09533		X																													X	
ICSAB	ICSABI	1.00	09574		X																													X	
CCV	CCV1	1.00	10024		X																													X	
CCB	CCB1	1.00	10070		X																													X	
ZZZZZZ	VS61MB1	1.00	10112																																
ZZZZZZ	VS61B	1.00	10154																																
ZZZZZZ	VS61C	1.00	10195																																
ZZZZZZ	VS61A-L	5.00	10241																																
ZZZZZZ	VS61A	1.00	10283																																
ZZZZZZ	VS61ADUP	1.00	10324																																
ZZZZZZ	VS61ASP	1.00	10370																																
ZZZZZZ	ZZZZZZ	1.00	10410																																
ZZZZZZ	VS61MB1SPK	1.00	10451																																
CCV	CCV2	1.00	10491		X																													X	
CCB	CCB2	1.00	10533		X																													X	
CRI	CRI1	1.00	10575		X																													X	
ICSA	ICSAF	1.00	11020		X																													X	
ICSAB	ICSABF	1.00	11061		X																													X	
CCV	CCV3	1.00	11101		X																													X	
CCB	CCB3	1.00	11143		X																													X	
ZZZZZZ	VS80MB1	1.00	11185																																
ZZZZZZ	VS80B	1.00	11230																																
ZZZZZZ	VS80C	1.00	11272																																
ZZZZZZ	VS80A-L	5.00	11314																																
ZZZZZZ	VS80A	1.00	11355																																
ZZZZZZ	VS80ADUP	1.00	11401																																
ZZZZZZ	VS80ASPK	1.00	11443																																

UDJH : 00207





# Analysis Run Log



CLIENT: Anchor QEA, LLC.  
 PROJECT: City of Kenmore Sedi  
 SDG: VR58  
 INSTRUMENT ID: OPTIMA ICP 2  
 METHOD: ICP  
 START DATE: 11/28/2012  
 END DATE: 11/28/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN			
ZZZZZZ	VS82I	10.00	14444																																	
ZZZZZZ	VS82J	10.00	14485																																	
ZZZZZZ	VS82K	10.00	14531																																	
ZZZZZZ	VS82L	10.00	14573																																	
ZZZZZZ	VS82M	10.00	15015																																	
ZZZZZZ	VS82E	5.00	15061																																	
ZZZZZZ	VS82F	5.00	15102																																	
SG-10-S-E-121107D	VR58ADUP	2.00	15144																																	
CCV	CCV8	1.00	15185																																	
CCB	CCB8	1.00	15231																																	

VR58 00289



# Analysis Run Log

CLIENT: Anchor QEA, LLC. INSTRUMENT ID: OPTIMA ICP 2 START DATE: 11/29/2012  
 PROJECT: City of Kenmore Sedi RUNID: IP112971 METHOD: ICP END DATE: 11/29/2012  
 SDG: VR58

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			1.00	10134	X																												X	
S2			1.00	10180																														X
S3			1.00	10195	X																													
S4			1.00	10222																														
S5			1.00	10244																														
ICV			1.00	10275	X																													X
ICB			1.00	10311	X																													X
CRI			1.00	10353	X																													X
ICSA			1.00	10394	X																													X
ICSAB			1.00	10434	X																													X
CCV			1.00	10485	X																													X
CCB			1.00	10531	X																													X
ZZZZZ			2.00	10573																														X
SG-07-S-C-121108			2.00	11014	X																													X
SG-07-S-C-dup-1211			2.00	11054	X																													X
SG-08-S-C-121108			2.00	11094	X																													X
SG-09-S-C-121108			2.00	11134	X																													X
ZZZZZ			5.00	11174																														
ZZZZZ			5.00	11214																														
ZZZZZ			5.00	11254																														
ZZZZZ			2.00	11294																														
CCV			1.00	11334	X																													X
CCB			1.00	11380	X																													X

11/29/2012 11:29:02

# Analysis Run Log



CLIENT: Anchor QEA, LLC.  
 PROJECT: City of Kenmore Sedi  
 INSTRUMENT ID: NEXION 300D MS  
 START DATE: 11/27/2012  
 SDG: VR58  
 RUNID: MS112711  
 METHOD: PMS  
 END DATE: 11/27/2012

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	111110																														X		
S1	S1	1.00	111160																															X	
S2	S2	1.00	11200																															X	
S3	S3	1.00	11240																															X	
S4	S4	1.00	11290																															X	
S5	S5	1.00	11350																															X	
	Rinse sampl																																		
	S0	1.00	11570																															X	
ICV	MICV	1.00	12010																															X	
ICB	ICB	1.00	12080																															X	
CCV	MCCV1	1.00	12180																															X	
CCB	CCB1	1.00	12250																															X	
	ZZZZZZ	1.00	12290																															X	
ICSA	ICSAI	1.00	12330																															X	
ICSAB	ICSABI	1.00	12400																															X	
	LR200	1.00	12460																															X	
	LR300	1.00	12530																															X	
	B1	1.00	13000																															X	
	B2	1.00	13060																																X
	B3	1.00	13120																																X
CCV	MCCV2	1.00	13160																															X	
CCB	CCB2	1.00	13230																															X	
S0	S0	1.00	13310																															X	
CCV	MCCV3	1.00	13360																															X	
CCB	CCB3	1.00	13420																															X	
CRI	MCRI	1.00	14040																															X	
	VS17MB1	2.00	14090																															X	
	VS17MB1SPK	2.00	14130																															X	
	VS17MB2SPK	2.00	14170																															X	
	VS17ADUP	2.00	14210																															X	
	VS17A	2.00	14250																															X	
	VS17ASPK	2.00	14290																															X	
	VS17EDUP	2.00	14330																															X	
	VS17E	2.00	14390																															X	
	VS17ESPK	2.00	14430																															X	

0018 00001



# Analysis Run Log

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

INSTRUMENT ID: NEXION 300D MS

RUNID: MS112711 METHOD: PMS

START DATE: 11/27/2012

END DATE: 11/27/2012

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	14470																															X		
CCB	CCB4	1.00	14540																															X		
ZZZZZZ	VS17MB2	2.00	15060																																	
ZZZZZZ	VS17B	2.00	15100																																	
ZZZZZZ	VS17C	2.00	15140																																	
ZZZZZZ	VS17D	2.00	15180																																	
ZZZZZZ	VS17F	2.00	15220																																	
ZZZZZZ	VS17G	2.00	15260																																	
ZZZZZZ	VS17H	2.00	15320																																	
ZZZZZZ	VT58D	100.00	15360																																	
ZZZZZZ	VT58E	100.00	15400																																	
ZZZZZZ	VT58F	100.00	15440																																	
CCV	MCCV5	1.00	15480																															X		
CCB	CCB5	1.00	15550																															X		
ZZZZZZ	VS20MB1	20.00	16020																																	
ZZZZZZ	VS20MB1SPK	20.00	16070																																	
ZZZZZZ	VS20B	20.00	16110																																	
ZZZZZZ	VS20C	20.00	16150																																	
ZZZZZZ	VS20D	20.00	16190																																	
ZZZZZZ	VS20D	500.00	16230																																	
ZZZZZZ	VS20E	20.00	16270																																	
ZZZZZZ	VS20G	20.00	16310																																	
ZZZZZZ	VS20H	20.00	16360																																	
ZZZZZZ	VS20I	20.00	16410																																	
CCV	MCCV6	1.00	16450																															X		
CCB	CCB6	1.00	16520																															X		
ZZZZZZ	VS21A-L	500.00	17090																																	
ZZZZZZ	VS21A	100.00	17130																																	
ZZZZZZ	VS21ADUP	100.00	17170																																	
ZZZZZZ	VS21ASPK	100.00	17210																																	
ZZZZZZ	ZZZZZZ	100.00	17250																																	
ZZZZZZ	VS21B	200.00	17290																																	
ZZZZZZ	VS21D	100.00	17330																																	
ZZZZZZ	VS21E	100.00	17370																																	
ZZZZZZ	VS21G	50.00	17430																																	

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# Analysis Run Log

CLIENT: Anchor QEA, LLC.  
 PROJECT: City of Kenmore Sedi  
 SDG: VR58

INSTRUMENT ID: NEXION 300D MS  
 RUNID: MS112711 METHOD: PMS

START DATE: 11/27/2012  
 END DATE: 11/27/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN						
ZZZZZZ	VS21H		50.00																																				
CCV	MCCV7		1.00																																		X		
CCB	CCB7		1.00																																			X	
ZZZZZZ	VS21I		100.00																																				
ZZZZZZ	VS21J		50.00																																				
ZZZZZZ	VS21J		100.00																																				
SG-04-S-C-121108	VR82C		20.00																																			X	
SG-05-S-C-121108	VR82D		20.00																																			X	
SG-06-S-C-121108	VR82E		20.00																																			X	
SG-07-S-C-121108	VR82F		20.00																																			X	
SG-07-S-C-dup-1211	VR82G		20.00																																			X	
SG-08-S-C-121108	VR82H		20.00																																			X	
SG-09-S-C-121108	VR82I		20.00																																			X	
CCV	MCCV8		1.00																																			X	
CCB	CCB8		1.00																																				X
ZZZZZZ	VS21MB1		20.00																																				
ZZZZZZ	VS21MB1SPK		20.00																																				
ZZZZZZ	VS21A-L		100.00																																				
ZZZZZZ	VS21A		20.00																																				
ZZZZZZ	VS21ADUP		20.00																																				
ZZZZZZ	VS21ASPK		20.00																																				
ZZZZZZ	VS21APOST		20.00																																				
ZZZZZZ	VS21B		20.00																																				
ZZZZZZ	VS21C		20.00																																				
ZZZZZZ	VS21D		20.00																																				
CCV	MCCV9		1.00																																				X
CCB	CCB9		1.00																																				X
ZZZZZZ	VR88MB2SPK		2.00																																				
ZZZZZZ	VR88J		5.00																																				
ZZZZZZ	VS21E		20.00																																				
ZZZZZZ	VS21F		20.00																																				
ZZZZZZ	VS21G		20.00																																				
ZZZZZZ	VS21H		20.00																																				
ZZZZZZ	VS21I		20.00																																				
ZZZZZZ	VS21J		20.00																																				

VR58 : 00293



**Analysis Run Log**

CLIENT: Anchor QEA, LLC.

PROJECT: City of Kenmore Sedi

SDG: VR58

INSTRUMENT ID: CETAC MERCURY

RUNID: HG111701 METHOD: CVA

START DATE: 11/17/2012

END DATE: 11/17/2012

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	EA	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 06462														X																	
S0.1	S0.1		1.00 06475														X																	
S0.5	S0.5		1.00 06493														X																	
S1	S1		1.00 06511														X																	
S2	S2		1.00 06524														X																	
S5	S5		1.00 06542														X																	
S10	S10		1.00 06560														X																	
ICV	AICV		1.00 07050														X																	
ICB	ICB		1.00 07063														X																	
CCV	ACCV1		1.00 07081														X																	
CCB	CCB1		1.00 07095														X																	
CRA	CRA		1.00 07113														X																	
ZZZZZZ	VS18MB1		1.00 07130														X																	
ZZZZZZ	VS18MB1SPK		1.00 07144														X																	
ZZZZZZ	VS18A		1.00 07161														X																	
ZZZZZZ	VS18ADUP		1.00 07175														X																	
ZZZZZZ	VS18ASPK		1.00 07193														X																	
ZZZZZZ	VS18B		1.00 07210														X																	
ZZZZZZ	VS18C		1.00 07224														X																	
ZZZZZZ	VS18D		1.00 07242														X																	
ZZZZZZ	VS18E		1.00 07260														X																	
CCV	ACCV2		1.00 07274														X																	
CCB	CCB2		1.00 07292														X																	
ZZZZZZ	VS18F		1.00 07310														X																	
ZZZZZZ	VS18G		1.00 07323														X																	
ZZZZZZ	VS18H		1.00 07341														X																	
ZZZZZZ	VS18I		1.00 07354														X																	
ZZZZZZ	VS18J		1.00 07372														X																	
ZZZZZZ	VS18K		1.00 07385														X																	
ZZZZZZ	VS18L		1.00 07403														X																	
ZZZZZZ	VR37MB1		1.00 07421														X																	
ZZZZZZ	VR37MB1SPK		1.00 07434														X																	
ZZZZZZ	VR37A		1.00 07452														X																	
CCV	ACCV3		1.00 07470														X																	
CCV	ACCV4		1.00 07584														X																	



# Analysis Run Log

CLIENT: Anchor QEA, LLC.  
 PROJECT: City of Kenmore Sedi  
 SDG: VR58  
 INSTRUMENT ID: CETAC MERCURY  
 RUNID: HG111701  
 METHOD: CVA  
 START DATE: 11/17/2012  
 END DATE: 11/17/2012

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	08002																																			
ZZZZZZ	VS18F		1.00	08020																																			
ZZZZZZ	VS18G		1.00	08033																																			
ZZZZZZ	VS18H		1.00	08051																																			
ZZZZZZ	VS18I		1.00	08064																																			
ZZZZZZ	VS18J		1.00	08082																																			
ZZZZZZ	VS18K		1.00	08095																																			
ZZZZZZ	VS18L		1.00	08113																																			
ZZZZZZ	VR37MB1		1.00	08131																																			
ZZZZZZ	VR37MB1SPK		1.00	08144																																			
ZZZZZZ	VR37A		1.00	08162																																			
CCV	ACCV5		1.00	08180																																			
CCB	CCB4		1.00	08194																																			
ZZZZZZ	VR37ADUP		1.00	08212																																			
ZZZZZZ	VR37ASPK		1.00	08230																																			
ZZZZZZ	VR37B		1.00	08243																																			
ZZZZZZ	VR37C		1.00	08261																																			
ZZZZZZ	VR37D		1.00	08274																																			
ZZZZZZ	VR37E		1.00	08292																																			
ZZZZZZ	VR37F		1.00	08310																																			
ZZZZZZ	VR37G		1.00	08323																																			
ZZZZZZ	VR37H		1.00	08341																																			
ZZZZZZ	VR37I		1.00	08355																																			
CCV	ACCV6		1.00	08373																																			
CCB	CCB5		1.00	08391																																			
ZZZZZZ	VR37J		1.00	08404																																			
ZZZZZZ	VR37K		1.00	08422																																			
ZZZZZZ	VR37L		1.00	08440																																			
ZZZZZZ	VR37M		1.00	08454																																			
ZZZZZZ	VR37N		1.00	08472																																			
ZZZZZZ	VR37O		1.00	08485																																			
PBW	VR58MB1		1.00	08503																																			
LCSW	VR58MB1SPK		1.00	08520																																			
SG-10-S-E-121107	VR58A		1.00	08534																																			
SG-10-S-E-121107D	VR58ADUP		1.00	08552																																			

VR58 : 08295



**Analysis Run Log**

CLIENT: Anchor OEA, LLC.  
 PROJECT: City of Kenmore Sedi  
 SDG: VR58  
 INSTRUMENT ID: CETAC MERCURY  
 RUNID: HG111701  
 METHOD: CVA  
 START DATE: 11/17/2012  
 END DATE: 11/17/2012

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	ACC7	1.00	08565														X																	
CCB	CCB6	1.00	08584														X																	
SG-10-S-E-121107S	VR58ASPK	1.00	09001														X																	
SG-11-S-E-121107	VR58B	1.00	09015														X																	
SG-12-S-E-121107	VR58C	1.00	09033														X																	
SG-13-S-E-121107	VR58D	1.00	09051														X																	
SG-13-S-E-dup-1211	VR58E	1.00	09065														X																	
SG-14-S-E-121107	VR58F	1.00	09082														X																	
SG-15-S-E-121107	VR58G	1.00	09100														X																	
SG-16-S-E-121107	VR58H	1.00	09114														X																	
SG-17-S-E-121107	VR58I	1.00	09131														X																	
SG-01-S-C-121107	VR58J	1.00	09145														X																	
CCV	ACC7	1.00	09163														X																	
CCB	CCB7	1.00	09181														X																	
SG-02-S-C-121108	VR82A	1.00	09195														X																	
SG-03-S-C-121108	VR82B	1.00	09213														X																	
SG-04-S-C-121108	VR82C	1.00	09230														X																	
SG-05-S-C-121108	VR82D	1.00	09244														X																	
SG-06-S-C-121108	VR82E	1.00	09262														X																	
SG-07-S-C-121108	VR82F	1.00	09280														X																	
SG-07-S-C-dup-1211	VR82G	1.00	09294														X																	
SG-08-S-C-121108	VR82H	1.00	09311														X																	
SG-09-S-C-121108	VR82I	1.00	09325														X																	
CCV	ACC7	1.00	09343														X																	
CCB	CCB8	1.00	09361														X																	

**General Chemistry Analysis  
Report and Summary QC Forms**

**ARI Job ID: VR58**

SAMPLE RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.



Matrix: Sediment  
Data Release Authorized:  
Reported: 11/26/12

A handwritten signature in black ink, appearing to be 'M. J.', written over the 'Data Release Authorized' line.

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

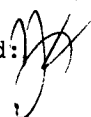
Client ID: SG-10-S-E-121107  
ARI ID: 12-22329 VR58A

Analyte	Date	Method	Units	RL	Sample
Total Solids	11/19/12 111912#1	SM2540B	Percent	0.01	56.10
Total Volatile Solids	11/19/12 111912#1	SM2540E	Percent	0.01	6.51
Total Organic Carbon	11/16/12 111612#1	Plumb, 1981	Percent	0.020	3.14

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.



Matrix: Sediment  
Data Release Authorized:   
Reported: 11/26/12

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Client ID: SG-11-S-E-121107  
ARI ID: 12-22330 VR58B

Analyte	Date	Method	Units	RL	Sample
Total Solids	11/19/12 111912#1	SM2540B	Percent	0.01	16.90
Total Volatile Solids	11/19/12 111912#1	SM2540E	Percent	0.01	24.10
Total Organic Carbon	11/16/12 111612#1	Plumb, 1981	Percent	0.020	10.8

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.



Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 11/26/12

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Client ID: SG-12-S-E-121107  
ARI ID: 12-22331 VR58C

Analyte	Date	Method	Units	RL	Sample
Total Solids	11/19/12 111912#1	SM2540B	Percent	0.01	27.40
Total Volatile Solids	11/19/12 111912#1	SM2540E	Percent	0.01	13.67
Total Organic Carbon	11/16/12 111612#1	Plumb,1981	Percent	0.020	4.65

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.



Matrix: Sediment  
Data Release Authorized:  
Reported: 11/26/12

A handwritten signature in black ink, appearing to be 'M. J. ...', written over the 'Data Release Authorized' line.

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Client ID: SG-13-S-E-121107  
ARI ID: 12-22332 VR58D

Analyte	Date	Method	Units	RL	Sample
Total Solids	11/19/12 111912#1	SM2540B	Percent	0.01	23.20
Total Volatile Solids	11/19/12 111912#1	SM2540E	Percent	0.01	15.02
Total Organic Carbon	11/16/12 111612#1	Plumb,1981	Percent	0.020	5.45

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.



Matrix: Sediment  
Data Release Authorized:  
Reported: 11/26/12

A handwritten signature in black ink, appearing to be a stylized 'J' or 'K' followed by a flourish.

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Client ID: SG-13-S-E-dup-121107  
ARI ID: 12-22333 VR58E

Analyte	Date	Method	Units	RL	Sample
Total Solids	11/19/12 111912#1	SM2540B	Percent	0.01	22.70
Total Volatile Solids	11/19/12 111912#1	SM2540E	Percent	0.01	14.56
Total Organic Carbon	11/16/12 111612#1	Plumb,1981	Percent	0.020	3.82

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.



Matrix: Sediment  
Data Release Authorized:  
Reported: 11/26/12

A handwritten signature in black ink, appearing to be 'M' or 'A', written over the 'Data Release Authorized' line.

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Client ID: SG-14-S-E-121107  
ARI ID: 12-22334 VR58F

Analyte	Date	Method	Units	RL	Sample
Total Solids	11/19/12 111912#1	SM2540B	Percent	0.01	51.00
Total Volatile Solids	11/19/12 111912#1	SM2540E	Percent	0.01	7.61
Total Organic Carbon	11/16/12 111612#1	Plumb, 1981	Percent	0.020	4.33

RL Analytical reporting limit  
U Undetected at reported detection limit



**SAMPLE RESULTS-CONVENTIONALS**  
**VR58-Anchor QEA, LLC.**



Matrix: Sediment  
Data Release Authorized  
Reported: 11/26/12

A handwritten signature in black ink, appearing to be 'J. J. Jones' or similar, written over the 'Data Release Authorized' text.

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

**Client ID: SG-15-S-E-121107**  
**ARI ID: 12-22335 VR58G**

Analyte	Date	Method	Units	RL	Sample
Total Solids	11/19/12 111912#1	SM2540B	Percent	0.01	82.40
Total Volatile Solids	11/19/12 111912#1	SM2540E	Percent	0.01	1.24
Total Organic Carbon	11/16/12 111612#1	Plumb,1981	Percent	0.020	1.87

RL Analytical reporting limit  
U Undetected at reported detection limit

**SAMPLE RESULTS-CONVENTIONALS**  
**VR58-Anchor QEA, LLC.**



Matrix: Sediment  
Data Release Authorized:  
Reported: 11/26/12

A handwritten signature in black ink, appearing to be 'M. J. ...', written over the 'Data Release Authorized' line.

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

**Client ID: SG-16-S-E-121107**  
**ARI ID: 12-22336 VR58H**

<b>Analyte</b>	<b>Date</b>	<b>Method</b>	<b>Units</b>	<b>RL</b>	<b>Sample</b>
Total Solids	11/19/12 111912#1	SM2540B	Percent	0.01	77.70
Total Volatile Solids	11/19/12 111912#1	SM2540E	Percent	0.01	0.98
Total Organic Carbon	11/16/12 111612#1	Plumb,1981	Percent	0.020	0.724

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.



Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 11/26/12

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Client ID: SG-17-S-E-121107  
ARI ID: 12-22337 VR58I

Analyte	Date	Method	Units	RL	Sample
Total Solids	11/19/12 111912#1	SM2540B	Percent	0.01	46.90
Total Volatile Solids	11/19/12 111912#1	SM2540E	Percent	0.01	6.70
Total Organic Carbon	11/16/12 111612#1	Plumb, 1981	Percent	0.020	2.98

RL Analytical reporting limit  
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.



Matrix: Sediment  
Data Release Authorized:  
Reported: 11/26/12

A handwritten signature in black ink, appearing to be 'D' or 'S', written over the 'Data Release Authorized:' line.

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12


Client ID: SG-01-S-C-121107  
ARI ID: 12-22338 VR58J

Analyte	Date	Method	Units	RL	Sample
Total Solids	11/19/12 111912#1	SM2540B	Percent	0.01	72.90
Total Volatile Solids	11/19/12 111912#1	SM2540E	Percent	0.01	1.19
Total Organic Carbon	11/16/12 111612#1	Plumb, 1981	Percent	0.020	1.33

RL Analytical reporting limit  
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.




Matrix: Sediment  
Data Release Authorized:   
Reported: 11/26/12

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: VR58A Client ID: SG-10-S-E-121107						
Total Organic Carbon	11/16/12	Percent	3.14	7.60	3.64	122.5%

REPLICATE RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.




Matrix: Sediment  
Data Release Authorized:   
Reported: 11/26/12

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: 11/07/12  
Date Received: 11/08/12

Analyte	Date	Units	Sample	Replicate (s)	RPD/RSD
<b>ARI ID: VR58A Client ID: SG-10-S-E-121107</b>					
Total Solids	11/19/12	Percent	56.10	56.10 57.10	1.0%
Total Volatile Solids	11/19/12	Percent	6.51	6.32 6.43	1.5%
Total Organic Carbon	11/16/12	Percent	3.14	3.51 3.01	8.1%

LAB CONTROL RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.



Matrix: Sediment  
Data Release Authorized:   
Reported: 11/26/12

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: NA  
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Total Organic Carbon Plumb, 1981	ICVL	11/16/12	Percent	0.097	0.100	97.0%

METHOD BLANK RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.



Matrix: Sediment  
Data Release Authorized: *[Signature]*  
Reported: 11/26/12


Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: NA  
Date Received: NA

Analyte	Date	Units	Blank
Total Solids	11/19/12	Percent	< 0.01 U
Total Volatile Solids	11/19/12	Percent	< 0.01 U
Total Organic Carbon	11/16/12	Percent	< 0.020 U



STANDARD REFERENCE RESULTS-CONVENTIONALS  
VR58-Anchor QEA, LLC.



Matrix: Sediment  
Data Release Authorized:   
Reported: 11/26/12

Project: City of Kenmore Sediment  
Event: 120891-01.01  
Date Sampled: NA  
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	11/16/12	Percent	3.03	2.99	101.3%

**Geotechnical Analysis  
Report and Summary QC Forms**

**ARI Job ID: VR58**

Anchor QEA, LLC  
City of Kenmore Sediment  
120891-01.01

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	
	-3	-2	-1						5	6	7	8	9	10
Phi Size				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
SG-12-S-E-121107	100.0	100.0	99.4	95.2	91.4	87.9	82.7	71.1	48.1	25.2	12.7	6.5	3.1	1.0
	100.0	100.0	100.0	97.4	94.0	90.0	83.8	72.0	48.8	26.3	12.9	6.5	2.7	0.8
	100.0	100.0	100.0	96.8	93.1	89.2	83.8	72.2	48.6	25.4	12.6	6.5	2.8	1.0
SG-10-S-E-121107	100.0	98.5	94.7	91.8	87.9	74.7	48.3	26.4	9.2	5.3	3.4	2.0	1.0	0.5
SG-11-S-E-121107	100.0	100.0	100.0	94.7	90.1	85.7	80.1	72.7	54.2	34.0	19.6	8.8	3.7	1.1
SG-13-S-E-121107	100.0	100.0	100.0	95.7	92.5	89.7	84.6	74.6	63.0	41.8	24.9	11.6	5.2	1.9
SG-13-S-E-dup-121107	100.0	100.0	100.0	96.6	93.5	90.6	86.0	76.7	65.0	42.6	25.3	11.6	5.5	2.5
SG-14-S-E-121107	100.0	87.3	77.4	71.4	63.9	49.3	37.9	30.6	23.1	15.2	9.9	4.9	2.9	1.7
SG-15-S-E-121107	100.0	100.0	99.6	98.2	94.2	71.9	9.2	2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4
SG-16-S-E-121107	100.0	100.0	99.9	99.5	94.0	16.5	1.9	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
SG-17-S-E-121107	100.0	100.0	99.7	96.4	92.4	86.9	80.9	69.1	57.1	39.8	26.8	17.5	11.5	7.2
SG-01-S-C-121107	100.0	100.0	100.0	99.8	97.7	50.4	6.2	2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2

Notes to the Testing:

- 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.

VR58

Anchor QEA, LLC  
City of Kenmore Sediment  
120891-01.01

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
											8 to 9	9 to 10	> 10	
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)
SG-12-S-E-121107	0.6	4.2	3.8	3.5	5.2	11.6	22.9	22.9	12.5	6.2	3.4	2.0	1.0	71.1
	0.0	2.6	3.4	4.0	6.2	11.9	23.1	22.5	13.4	6.4	3.8	1.9	0.8	72.0
	0.0	3.2	3.6	3.9	5.4	11.6	23.5	23.3	12.8	6.1	3.7	1.8	1.0	72.2
SG-10-S-E-121107	5.3	3.0	3.9	13.2	26.5	21.9	17.2	3.9	1.9	1.4	1.0	0.5	0.5	26.4
SG-11-S-E-121107	0.0	5.3	4.6	4.4	5.6	7.4	18.6	20.2	14.3	10.9	5.1	2.6	1.1	72.7
SG-13-S-E-121107	0.0	4.3	3.2	2.8	5.1	10.1	11.5	21.2	16.9	13.3	6.4	3.3	1.9	74.6
SG-13-S-E-dup-121107	0.0	3.4	3.0	2.9	4.6	9.3	11.6	22.4	17.4	13.7	6.1	3.0	2.5	76.7
SG-14-S-E-121107	22.6	6.0	7.6	14.6	11.4	7.3	7.5	7.9	5.3	4.9	2.0	1.2	1.7	30.6
SG-15-S-E-121107	0.4	1.5	3.9	22.3	62.7	6.8	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	2.4
SG-16-S-E-121107	0.1	0.4	5.5	77.5	14.6	1.2	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	0.8
SG-17-S-E-121107	0.3	3.3	3.9	5.5	6.0	11.7	12.0	17.3	13.0	9.2	6.1	4.3	7.2	69.1
SG-01-S-C-121107	0.0	0.2	2.1	47.4	44.2	4.0	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	2.2

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.

QA SUMMARY

Client:	Anchor QEA, LLC	Client Project:	City of Kenmore Sediment
ARI Trip Sample ID:	VR58 C	Client Project No.:	120891-01 01
Client Trip. Sample ID:	SG-12-S-E-121107	Batch No.:	VR58-1

Sample ID	Relative Standard Deviation, By Phi Size													
	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
SG-12-S-E-121107	100.0	100.0	99.4	95.2	91.4	87.9	82.7	71.1	48.1	25.2	12.7	6.5	3.1	1.0
	100.0	100.0	100.0	97.4	94.0	90.0	83.8	72.0	48.8	26.3	12.9	6.5	2.7	0.8
	100.0	100.0	100.0	96.8	93.1	89.2	83.8	72.2	48.6	25.4	12.6	6.5	2.8	1.0
AVE	NA	100.00	99.80	96.45	92.84	89.03	83.44	71.74	48.54	25.65	12.75	6.51	2.86	0.94
STDEV	NA	0.00	0.35	1.13	1.33	1.07	0.63	0.58	0.35	0.60	0.15	0.01	0.18	0.12
%RSD	NA	0.00	0.35	1.18	1.44	1.20	0.75	0.80	0.72	2.34	1.15	0.16	6.18	13.20

The Triplicate Applies To The Following Samples

Client ID	Date Sampled	Date Extracted	Date Complete	QA Ratio (95-105)	Data Qualifiers	Pipette Portion (5.0-25.0g)
SG-12-S-E-121107	11/7/2012	11/21/2012	11/28/2012	99.5		8.8
	11/7/2012	11/21/2012	11/28/2012	100.6		8.8
	11/7/2012	11/21/2012	11/28/2012	101.1		8.8
SG-10-S-E-121107	11/7/2012	11/21/2012	11/28/2012	104.2		14.3
SG-11-S-E-121107	11/7/2012	11/21/2012	11/28/2012	101.5		6.0
SG-13-S-E-121107	11/7/2012	11/21/2012	11/28/2012	100.4		7.2
SG-13-S-E-dup-121107	11/7/2012	11/21/2012	11/28/2012	100.8		7.2
SG-14-S-E-121107	11/7/2012	11/21/2012	11/28/2012	101.9		10.6
SG-15-S-E-121107	11/7/2012	11/21/2012	11/28/2012	100.8	SS	2.7
SG-16-S-E-121107	11/7/2012	11/21/2012	11/28/2012	99.8	SS	0.9
SG-17-S-E-121107	11/7/2012	11/21/2012	11/28/2012	99.4		13.6
SG-01-S-C-121107	11/7/2012	11/21/2012	11/28/2012	99.8	SS	2.6

\* ARI Internal QA limits = 95-105%

Notes to the Testing:

- 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.

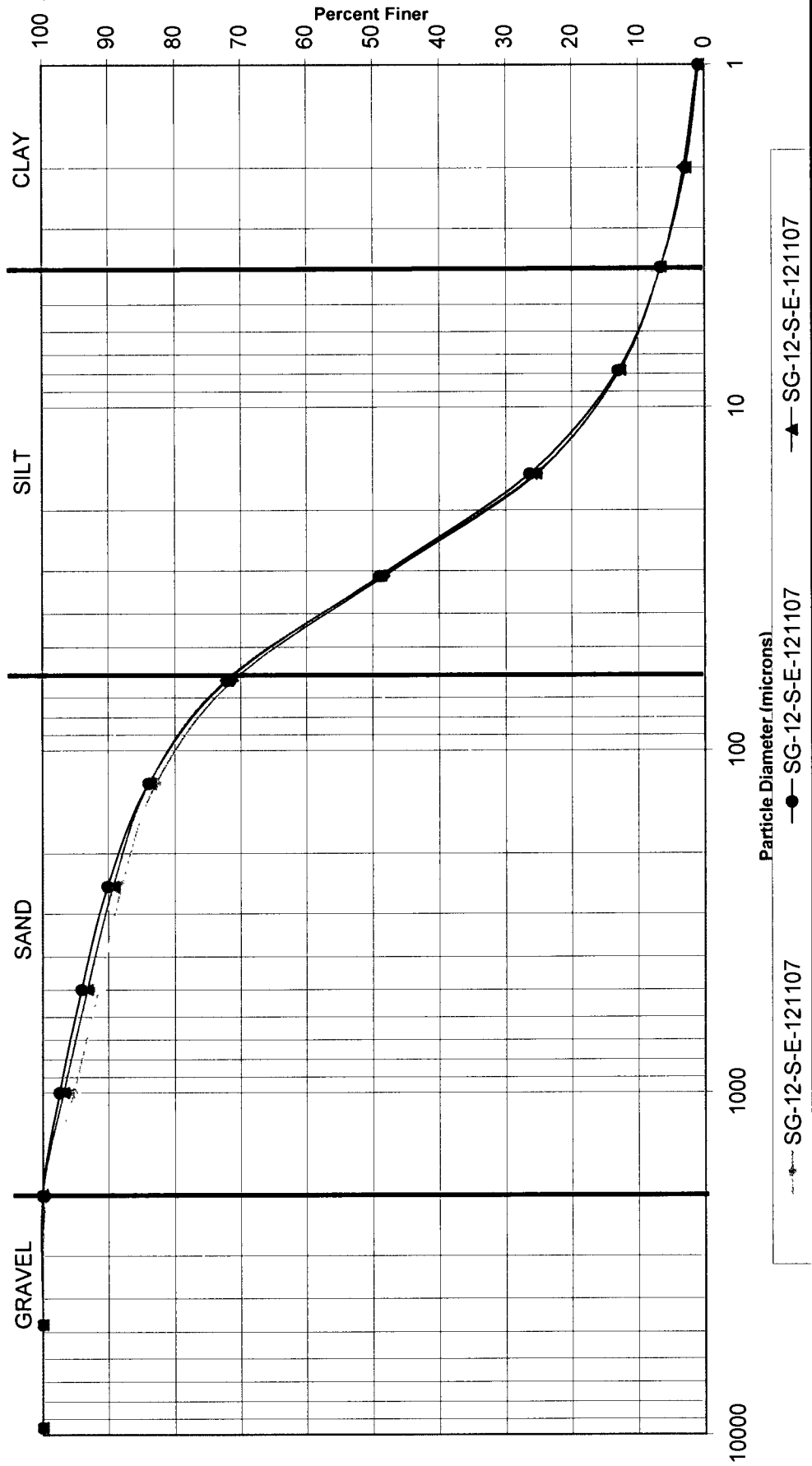
Analytical Resources, Inc.

**Geotechnical Data Qualifiers**  
PSEP Grain Size Analysis

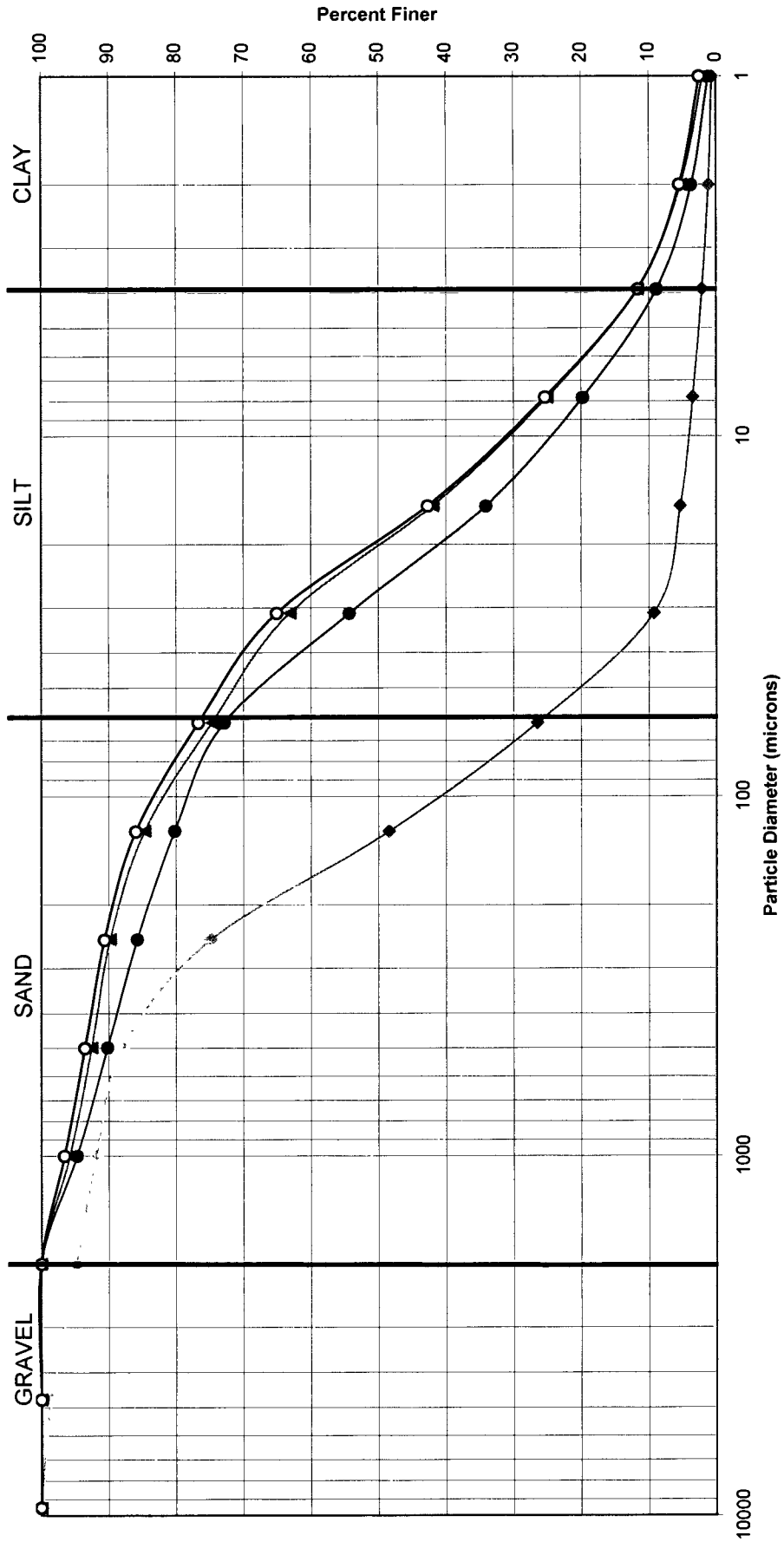
- SM** - The sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations.
- SS** - The sample did not contain the proportion of “fines” required to perform the pipette portion of the grain size analysis.
- W** - The weight of the sample in some pipette aliquots was below the level required for accurate weighing.
- F** - The samples were frozen prior to particle size determination.

# PSEP Grain Size Distribution

Triplicate Sample Plot



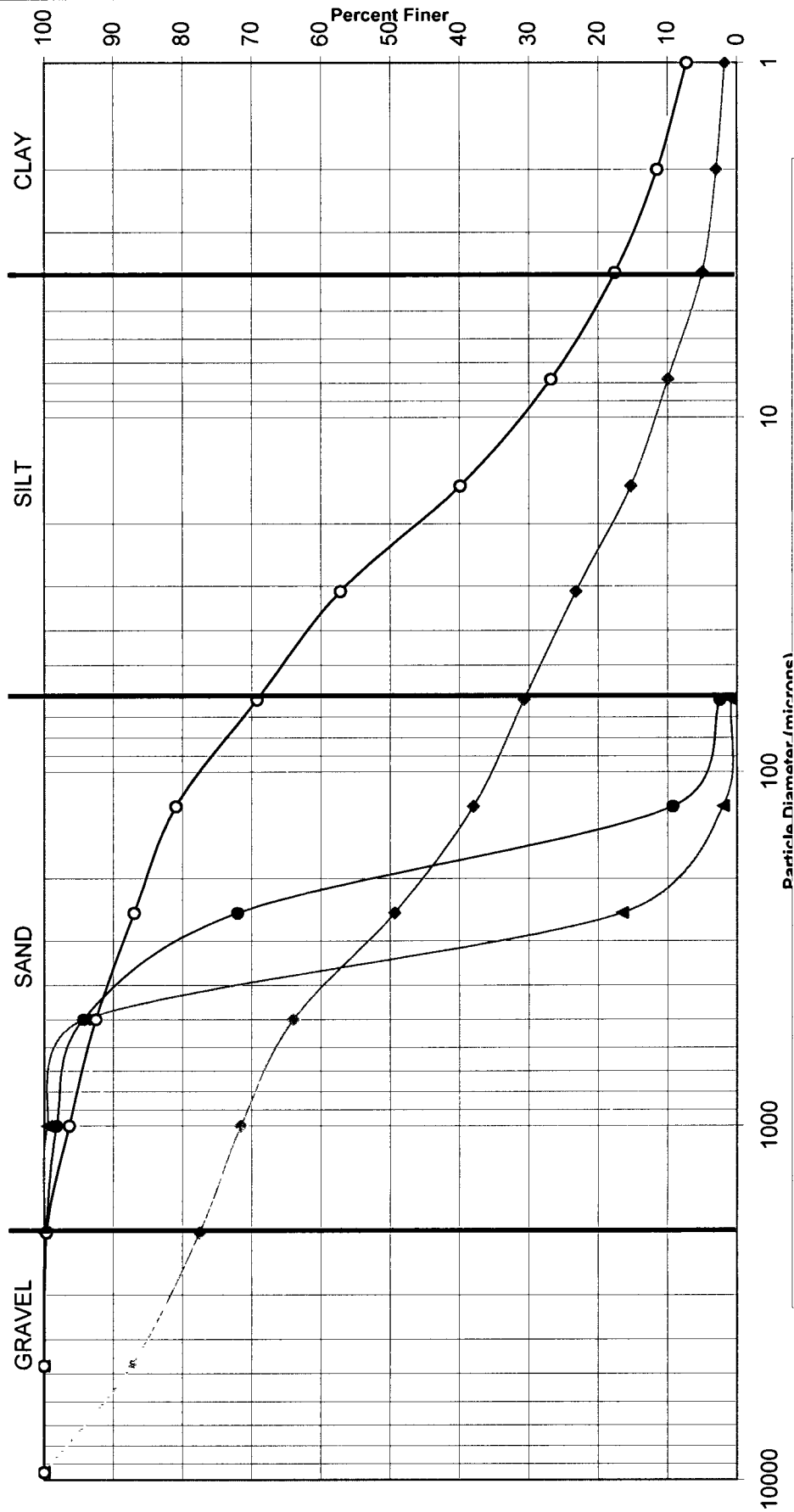
# PSEP Grain Size Distribution



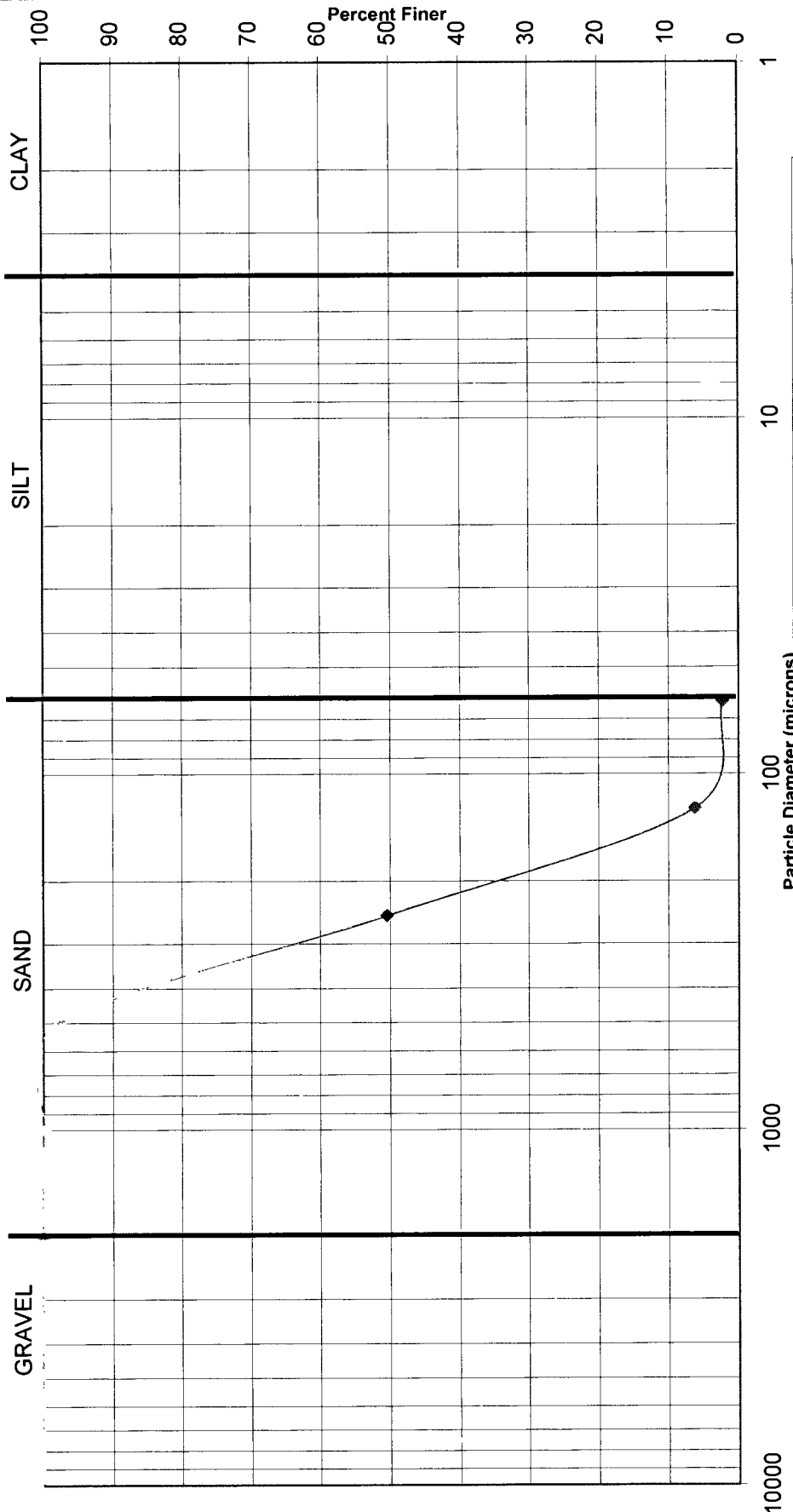
SG-10-S-E-121107   
  SG-11-S-E-121107   
  SG-13-S-E-121107   
  SG-13-S-E-dup-121107



# PSEP Grain Size Distribution



**PSEP Grain Size Distribution**



Particle Diameter (microns)  
 ◆ SG-01-S-C-121107

Total Solids

ARI Job ID: VR58

Extractions Total Solids-exttts  
Data By: Yen Luu  
Created: 11/ 8/12

Worklist: 2574  
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.	VR58A 12-22329 SG-10-S-E-121107	1.16	12.93	8.15	59.4	NR
2.	VR58B 12-22330 SG-11-S-E-121107	1.17	12.70	3.46	19.9	NR
3.	VR58C 12-22331 SG-12-S-E-121107	1.15	12.27	4.49	30.0	NR
4.	VR58D 12-22332 SG-13-S-E-121107	1.15	12.63	3.91	24.0	NR
5.	VR58E 12-22333 SG-13-S-E-dup-121107	1.14	12.16	3.78	24.0	NR
6.	VR58F 12-22334 SG-14-S-E-121107	1.17	12.95	6.74	47.3	NR
7.	VR58G 12-22335 SG-15-S-E-121107	1.17	12.97	10.06	75.3	NR
8.	VR58H 12-22336 SG-16-S-E-121107	1.15	12.65	10.24	79.0	NR
9.	VR58I 12-22337 SG-17-S-E-121107	1.17	12.32	6.36	46.5	NR
10.	VR58J 12-22338 SG-01-S-C-121107	1.16	12.60	10.25	79.5	NR

Extractions Total Solids-exttts  
Data By: Yen Luu  
Created: 11/ 8/12

Worklist: 2574  
Analyst: YL  
Comments:

Oven ID: 015

Balance ID: B14642614.

Samples In: Date: 11/8/12 Time: 15:45 Temp: 109 Analyst: CT

Samples Out: Date: 11/09/12 Time: 06:25 Temp: 104° Analyst: RR

ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1. VR58A 12-22329 SG-10-S-E-121107	1.16	12.93	8.15		NR
2. VR58B 12-22330 SG-11-S-E-121107	1.17	12.70	3.46		NR
3. VR58C 12-22331 SG-12-S-E-121107	1.15	12.27	4.49		NR
4. VR58D 12-22332 SG-13-S-E-121107	1.15	12.63	3.91		NR
5. VR58E 12-22333 SG-13-S-E-dup-121107	1.14	12.16	3.78		NR
6. VR58F 12-22334 SG-14-S-E-121107	1.17	12.95	6.74		NR
7. VR58G 12-22335 SG-15-S-E-121107	1.17	12.97	10.06		NR
8. VR58H 12-22336 SG-16-S-E-121107	1.15	12.65	10.24		NR
9. VR58I 12-22337 SG-17-S-E-121107	1.17	12.32	6.36		NR
10. VR58J 12-22338 SG-01-S-C-121107	1.16	12.60	10.25		NR

Solids Data Entry Report  
Date: 11/17/12

Checked by: CB Date: 11/17/12  
Data Analyst: DM

Solids Determination performed on 11/16/12 by NB

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
VR58	A	SG-10-S-E-121107	0.988	10.806	6.354	54.65
VR58	B	SG-10-S-E-121107	1.011	10.524	2.538	16.05
VR58	C	SG-10-S-E-121107	1.003	10.046	3.415	26.67
VR58	D	SG-10-S-E-121107	0.983	10.092	2.942	21.51
VR58	E	SG-10-S-E-121107	0.989	10.124	2.992	21.93
VR58	F	SG-10-S-E-121107	0.986	10.548	5.026	42.25
VR58	G	SG-10-S-E-121107	0.971	10.471	7.781	71.68
VR58	H	SG-10-S-E-121107	0.971	10.249	8.190	77.81
VR58	I	SG-10-S-E-121107	1.006	10.309	5.193	45.01
VR58	J	SG-10-S-E-121107	0.996	10.179	7.928	75.49



# Total Solids Bench Sheet

Laboratory Section METALS

Oven Identification: 07

Balance ID: 8116132369

Samples in Oven: Date: 11-16-12 Time: 1532 Temp: 108°C Analyst: NB

Removed from Oven: Date: 11-17-12 Time: 0815 Temp: 103°C Analyst: DN

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs <sup>1</sup>
VR58 A	0.988	10.806	6.354	-	✓
" B	1.011	10.524	2.538	-	✓
" C	1.003	10.046	3.415	-	✓
" D	0.983	10.092	2.942	-	✓
" E	0.989	10.124	2.992	-	✓
" F	0.986	10.548	5.026	-	✓
" G	0.971	10.471	7.781	-	✓
" H	0.971	10.249	8.190	-	✓
" I	1.006	10.309	5.193	-	✓
" J	0.996	10.179	7.928	-	✓
VR82 A	0.964	10.220	3.167	-	✓
" B	0.948	10.565	3.149	-	✓
" C	0.988	10.771	8.887	-	✓
" D	0.985	10.790	4.108	-	✓
" E	0.998	10.594	3.735	-	✓
" F	1.010	10.425	4.161	-	✓
" G	0.952	10.018	4.033	-	✓
" H	0.988	10.699	4.860	-	✓
" I	0.954	10.322	4.096	-	✓
		NB			
		11-16-12			

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 2<sup>nd</sup> bench sheet for additional weightings.

Total Solids Targets-Extractions  
Data By: Steve Potter  
Created: 11/13/12

Worklist: 3898  
Analyst: SDP  
Comments:

ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1. VR58A	10.00	59.4	16.84
2. VR58B	10.00	19.9	50.25
3. VR58C	10.00	30.0	33.33
4. VR58D	10.00	24.0	41.67
5. VR58E	10.00	24.0	41.67
6. VR58F	10.00	47.3	21.14
7. VR58G	10.00	75.3	13.28
8. VR58H	10.00	79.0	12.66
9. VR58I	10.00	46.5	21.51
10. VR58J	10.00	79.5	12.58



**Semivolatile Raw Data  
Extraction Bench Sheets and Notes**

**ARI Job ID: VR58**



8270 BAN PSDDA-Soil/ **Sediment**  
Microwave (3546) (SOP # 3304S)

Preparation Test BAN PSDDA # 6 (BANSDMP)

PSDDA (20ppb)

ARI Job No(s) VR58

Page 1 of 2

Batch set up by: SP

Bottle #	Extraction Requirements	Weight Extracted (eq to 10g dry wt)	GPC (1:1) 1 or 2 Y/N	Final Effective Volume	Volume to Lab	Comments	Verify Client ID Analyst/Date
	VR58 MBS	10g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	M 11/13/12 Microwave
	SBS	10g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	NG 11/14/12
	SBS Dup	10g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Analyst/Date
	QLS	10g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C
5	VR58 A	17.00	(1:1) Y/N	1mL	1mL		11/16/12
5	B	51.28	(1:1) Y/N	1mL	1mL	See Analyst note	TurboVap 123
5	C	34.14	(1:1) Y/N	1mL	1mL	See Analyst note	11/19/12
5	D	42.31	(1:1) Y/N	1mL	1mL	See Analyst note	Analyst/Date
5	E	42.06	(1:1) Y/N	1mL	1mL	See Analyst note	GPC Prep Filter (1.1)
5	F	22.25	(1:1) Y/N	1mL	1mL		11/19/12
5	G	14.25	(1:1) Y/N	1mL	1mL		Post GPC KD 80-85°C
4	H	13.06	(1:1) Y/N	1mL	1mL		11/21/12
4	I	22.25	(1:1) Y/N	1mL	1mL		Analyst/Date
4	J	13.16	(1:1) Y/N	1mL	1mL		TurboVap 123
Analyst/Date		M 11/13/12	11/14/12	11/23/12	11/23/12		SP 11/23/12

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2032-1)	100/150µg/mL	50µL	7/2/13	M	SP
Full List Spike (Freezer)	7 (2017-2)	100µg/mL	50µL	3/14/13	M	SP
Base Spike	56 (1978-2)	200µg/mL	50µL	11/17/12	M	SP
Benzidine Spike	39 ( )	500µg/mL	50µL			
Acid Spike	38 (2024-3)	100/200µg/mL	50µL	4/11/13	M	SP
QLS Spike (14 in freezer)	14 ( )	10-100µg/mL	20µL			

Extraction Time: 1515 Balance ID: B114127534

- SPECIAL INSTRUCTIONS: Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3<sup>rd</sup> 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-re-homogenize while hot then let cool 10-15 min in cold water. 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 2<sup>nd</sup> 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/large drying column with pre-deactivated glasswool-Blanks=5g of sulfate) to 5mL at 80- 85°C.  
 12. GPC Optional. 13. TurboVap. 14. IF NO GPC: TurboVap to 3mL add 2mL Hexane. TurboVap to Final Volume and vial in DCM. 15. (After GPC): KD at 80-85°. 16. TurboVap. 17. Vial in DCM.

A. Need Total Solids Y/N  B. Archive/Freeze Y/N

12-22329

VR58 00330



8270 BAN PSDDA-Soil/Sediment  
Microwave (3546) (SOP # 33045)

Preparation Test BAN PSDDA # 6 (BANSNDMP)

PSDDA (20ppb)

ARI Job No(s) VR58

Page 2 of 2

Batch set up by: SP

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	<del>(OP/REQ)</del> GPC (1:1) 1 or 2 Y/N	Final Effective Volume	Volume to Lab	Comments	Verify Client ID M 11/13/12 Analyst/Date Microwave
	<del>MBS</del>	<del>10g</del>	<del>(1:1) Y/N</del>	<del>1mL</del>	<del>1mL</del>	<del>(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)</del>	NG 11/14/12 Analyst/Date KD 80-85°C
	<del>SBS</del>	<del>10g</del>	<del>(1:1) Y/N</del>	<del>1mL</del>	<del>1mL</del>	<del>(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)</del>	
	<del>SBS Dup.</del>	<del>10g</del>	<del>(1:1) Y/N</del>	<del>1mL</del>	<del>1mL</del>	<del>(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)</del>	
	<del>QLS</del>	<del>10g</del>	<del>(1:1) Y/N</del>	<del>1mL</del>	<del>1mL</del>	<del>(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)</del>	RR 11/16/12 Analyst/Date
4	VR58 Jms 13.07		(1:1) Y/N	1mL	1mL		TurboVap 123 CSE 11/19/12 Analyst/Date GPC Prep Filter (1.1) CSE 11/19/12 Analyst/Date Post GPC KD 80-85°C YL 10/11/12 11/21/12 Analyst/Date TurboVap 123 SP 11/23/12 Analyst/Date
4	L JMSD 13.08		(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		
Analyst/Date	M 11/13/12	W 11/15/12	SP 11/23/12	SP 11/23/12	SP 11/23/12	SP 11/23/12	

Standard Surrogate	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Full List Spike (Freezer)	A (2032-1)	100/150µg/mL	50µL	7/2/13	M	SP
Base Spike	7 (2017-2)	100µg/mL	50µL	3/4/13	M	SP
Benzidine Spike	56 (1978-2)	200µg/mL	50µL	11/17/12	M	SP
Acid Spike	39 ( )	500µg/mL	50µL			
QLS Spike (14 in freezer)	38 (2024-3)	100/200µg/mL	50µL	4/11/13	M	SP
	14 ( )	10-100µg/mL	20µL			

Extraction Time: 1515 Balance ID: B114127534

- SPECIAL INSTRUCTIONS: Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3<sup>rd</sup> 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-re-homogenize while hot then let cool 10-15 min in cold water. 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 2<sup>nd</sup> 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/large drying column with pre-deactivated glasswool-Blanks=5g of sulfate) to 5mL at 80- 85°C. 12. GPC Optional. 13. TurboVap. 14. IF NO GPC: TurboVap to 3mL add 2mL Hexane. TurboVap to Final Volume and vial in DCM. 15. (After GPC): KD at 80-85°. 16. TurboVap. 17. Vial in DCM.

A. Need Total Solids Y/N B. Archive/Freeze Y/N

VR58 00331



ARI Job No: VR58

Client ID: Anchorage GEA, LLC

Parameter: BAN PSDDA

Client Project: City of Kenmore Sediment

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
<input checked="" type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)= <u>ABCDEFGHIJ</u>	<u>ET 11/9/12</u>
<input checked="" type="checkbox"/> Standing Water Decanted (Not shared)= <u>ABCDEFGHIJ</u>	<u>ET 11/9/12</u>
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=	
<input checked="" type="checkbox"/> Rocks (%+size)? <u>F<sup>2%</sup> Small Rocks</u>	<u>CT 10/2/12</u>
<input checked="" type="checkbox"/> Organics (Leaves/sticks/grass)= <u>11/8/12</u>	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input checked="" type="checkbox"/> Other (Details)= <u>B-E = samples <math>\frac{1}{2}</math> Surrogates has to be splitted into multi vessels due to heavy weight of samples and will be combine after and then microwave</u>	<u>NL 11/13/12</u>
<b>Aqueous:</b>	
<input type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
<input type="checkbox"/> Emulsions (%)=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Other Notes/Comments= (Note problems, concerns, corrective actions). Centrifuge#1 used for all Centrifugations	

**Semivolatile Raw Data  
Initial Calibration**

**ARI Job ID: VR58**



# 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): 11/29/12 Internal Standard ID 1998-2 Expiration 7/03/13

DFTPP Tune Meets Criteria?	<u>YES</u> / NO	Minimum Response Factors Met/	<u>YES</u> / NO
DDT Breakdown <20%?	<u>YES</u> / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	<u>YES</u> / NO	ICV Exceeding ±30%?	<u>YES</u> / NO
ICal Meets %RSD & r <sup>2</sup> Criteria?	<u>YES</u> / NO	Linear Fits Used?	<u>YES</u> / NO
Q flag applied?	<u>YES</u> / NO	Quadratic Fits Used?	<u>YES</u> / NO
Manual Integrations for ICal?	<u>YES</u> / NO	Calibration Points Dropped?	<u>YES</u> / NO
Spectral Library Updated?	<u>YES</u> / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
<u>Supelco</u>	<u>1949-2</u> <u>1950-1</u>	<u>12/19/12</u>	<u>UCLH9</u>	<u>2001-1</u>	<u>07/05/13</u>
	<u>1996-2</u>	<u>01/26/13</u>		<u>2002-1</u>	<u>01/10/13</u>
	<u>1998-4</u>	<u>01/02/13</u>		<u>2003-1</u>	<u>01/10/13</u>
	<u>2036-2</u>	<u>02/07/13</u>			

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

*Curve cannot use for Benzidine  
6 points curve: 0.2, 0.5, 1.0, 2.5, 5.0, 10.0.*

*Benzoic Acid, 2,4 Dinitrophenol - quadratic fit.*

*ICV - Benzyl AC, 2,2-dxybis, 4-Methylphenol, 2-Nitroanisole,  
3-Nitroaniline, 3,3-Dimethylbenzidine, Pyridine, Aniline  
exceeding ± 20% ID*

Analyst: YG Date: 12/01/12

Reviewer: \_\_\_\_\_ Date: \_\_\_\_\_

# Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.: GC=CN10837018, MS= US83131105

Date: 11/29/12 Analysis: APN Analyst: YZ  
 GC Program: APN2 Column No: 247357 Column Type: 205msl  
 Instrument Tune (.U or .CT): 11/29/12 11:28 EM Voltage: 1729  
 Calibration File: DE 1129 Curve Date: 11/29/12 Injection Vol.: 1.0

IS/SS	Ical/Ccal	LCS/ICV
1999-2	1999-2	
	1986-2	
	1998-4	
	2006-2	

## Document All Maintenance Tasks In StarLIMS

### INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20121129.b

Time	Filename	LabID	ClientID	DF
1 0938	df1129.d	DFTPP	DFTPP	1   NO ISTDs FOUND
2 0954	ic1129a.d	AMN 5		1   0.94 81571 11.59 299399 15.48 178564 18.75 309610 23.82 323853 26.26 305316 24.92 427845
3 1110	ic1129c.d	AMN 2		1   0.95 83295 11.60 309486 15.49 189575 18.76 319025 23.82 350481 26.26 333561 24.92 447487
4 1224	ic1129d.d	AMN1		1   0.95 80400 11.60 298996 15.49 185582 18.76 311330 23.83 347341 26.26 340423 24.92 441093
5 1302	ic1129e.d	AMN10		1   0.95 81024 11.60 268550 15.49 161271 18.76 316450 23.83 375349 26.26 320675 24.92 450764
6 1416	ic1129g.d	AMN2 5		1   0.95 78814 11.60 290366 15.49 280347 18.76 305764 23.84 327280 26.28 330902 24.93 429286
7 1530	ic1129i.d	AMN0.5		1   0.95 81366 11.60 295539 15.49 182776 18.76 317404 23.84 367450 26.28 340812 24.93 421593
8 1607	icv1129.d	ICV1129		1   0.95 77158 11.60 295164 15.49 179902 18.76 312760 23.84 331330 26.29 333901 24.94 438545
9 1644	vs96r.d	VS96R	IM-04-AG017	1   0.95 76110 11.59 292597 15.49 179837 18.76 292542 23.84 322420 26.30 305074 24.94 400844
10 1721	vs96s.d	VS96S	IM-04-AG02	1   0.95 80749 11.59 300258 15.49 181859 18.76 300193 23.84 334490 26.28 320928 24.94 413105
11 1758	vs96t.d	VS96T	IM-04-AG01	1   0.95 74388 11.60 281369 15.49 166716 18.76 276728 23.84 295189 26.28 294504 24.94 377332
12 1835	vs96tms.d	VS96TMS	IM-04-AG01 M	1   0.95 75978 11.60 293811 15.50 169493 18.77 276478 23.84 308022 26.29 297036 24.94 396735
13 1912	vs96tmsd.d	VS96TMSD	IM-04-AG01 M	1   0.95 69512 11.60 269337 15.50 158020 18.76 252330 23.84 283645 26.29 288063 24.94 354417
14 1949	vs96d.d	VS96D	IM-01-CH	3   0.95 75830 11.60 288021 15.50 188446 18.78 200846 23.89 151135 26.34 167470 24.98 176503
15 2026	vs96k.d	VS96K	IM-03-CH	3   0.95 34864 11.60 164201 15.50 156947 18.79 146745 23.89 158028 26.43 152588 25.03 183247
16 2103	vs96l.d	VS96L	IM-03-ISTA	3   0.95 25149 11.60 84874 15.50 51659 18.78 120556 23.87 176696 24.97 212506 26.33 187705
17 2140	vs96q.d	VS96Q	IM-04-CH	3   0.95 23728 11.60 96898 15.50 79292 18.79 110745 23.88 160210 24.97 188865 26.35 175993

YZ 11/24/12

Every line must contain information or be lined out. Make all entries legible.  
 Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20121129.b/ABN.m  
Batch File: /chem1/nt10.i/20121129.b  
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	ic1129a	ic1129c	ic1129d	ic1129e	ic1129g	ic1129i
INJ DATE:	29-NOV-2012	29-NOV-2012	29-NOV-2012	29-NOV-2012	29-NOV-2012	29-NOV-2012
INJ TIME:	09:54	11:10	12:24	13:02	14:16	15:30

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
\$ 1 2-Fluorophenol	6.613	6.621	6.621	6.621	6.621	6.621	6.613	3.613-9.613	6.619	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	+++++	+++++

YZ Date: 12/01/12  
Reviewer 1 Date: \_\_\_\_\_  
Reviewer 2 Date: \_\_\_\_\_



Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/201211129.b/ABN.m  
Batch File: /chem1/nt10.i/201211129.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieltrin	++++	++++	++++	++++	++++	++++	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	24.917	24.917	24.917	24.924	24.932	24.932	24.917	21.917-27.917	24.923	0.008
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/20121129.b/ABN.m  
Batch File: /chem1/nt10.i/20121129.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	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	16.284	++++	++++	16.307	++++	++++	16.284	13.284-19.284	16.295	0.016
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 Phospba	++++	++++	++++	++++	++++	++++	16.761	13.761-19.761	++++	++++
116 Dibutyl Phenyl Phospba	++++	++++	++++	++++	++++	++++	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	17.041	17.041	17.041	17.056	17.049	17.049	17.049	14.049-20.049	17.046	0.006
110 Tetrachloroguaiacol	++++	++++	++++	++++	++++	++++	16.576	13.576-19.576	++++	++++
109 3,4,5-Trichloroguaiaco	++++	++++	++++	++++	++++	++++	14.525	11.525-17.525	++++	++++
181 3,4,6-Trichloroguaiaco	++++	++++	++++	++++	++++	++++	14.852	11.852-17.852	++++	++++
108 4,5,6-Trichloroguaiaco	++++	++++	++++	++++	++++	++++	16.661	13.661-19.661	++++	++++
184 3,4-Dichloroguaiacol	++++	++++	++++	++++	++++	++++	12.870	9.870-15.870	++++	++++
107 4,5-Dichloroguaiacol	++++	++++	++++	++++	++++	++++	13.691	10.691-16.691	++++	++++
182 4,6-Dichloroguaiacol	++++	++++	++++	++++	++++	++++	13.691	10.691-16.691	++++	++++
185 4-Chloroguaiacol	++++	++++	++++	++++	++++	++++	11.093	8.093-14.093	++++	++++

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20121129.b/ABN.m  
Batch File: /chem1/nt10.i/20121129.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
105 1-methylnaphthalene	13.375	13.382	13.383	13.382	13.383	13.383	13.375	10.375-16.375	13.381	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	8.305	8.313	8.313	8.321	8.313	8.313	8.305	5.305-11.305	8.313	0.005
3 Phenol	8.328	8.336	8.336	8.344	8.336	8.336	8.328	5.328-11.328	8.336	0.005
4 Bis (2-Chloroethyl)ethe	8.475	8.491	8.491	8.491	8.491	8.483	8.483	5.483-11.483	8.487	0.006
\$ 5 2-Chlorophenol-d4	8.560	8.568	8.568	8.576	8.568	8.568	8.560	5.560-11.560	8.568	0.005

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20121129.b/ABN.m  
Batch File: /chem1/nt10.i/20121129.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
6 2-Chlorophenol	8.591	8.599	8.599	8.599	8.599	8.591	8.591	5.591-11.591	8.596	0.004
7 1,3-Dichlorobenzene	8.869	8.877	8.877	8.877	8.877	8.877	8.869	5.869-11.869	8.876	0.003
* 8 1,4-Dichlorobenzene-d4	8.939	8.947	8.947	8.947	8.947	8.947	8.939	5.939-11.939	8.946	0.003
9 1,4-Dichlorobenzene	8.970	8.978	8.978	8.986	8.978	8.978	8.970	5.970-11.970	8.978	0.005
§ 10 1,2-Dichlorobenzene-d4	9.319	9.327	9.327	9.335	9.327	9.327	9.319	6.319-12.319	9.327	0.005
11 Benzyl alcohol	9.249	9.257	9.257	9.265	9.257	9.257	9.249	6.249-12.249	9.257	0.005
12 1,2-Dichlorobenzene	9.343	9.358	9.358	9.358	9.358	9.351	9.343	6.343-12.343	9.354	0.007
13 2-Methylphenol	9.506	9.521	9.514	9.521	9.514	9.514	9.506	6.506-12.506	9.515	0.006
14 2,2'-oxybis(1-Chloropr	10.910	10.925	10.925	10.933	10.918	10.918	10.918	7.918-13.918	10.921	0.008
15 4-Methylphenol	9.793	9.816	9.816	9.816	9.816	9.816	9.793	6.793-12.793	9.812	0.010
16 N-Nitroso-di-n-propyla	9.847	9.855	9.855	9.863	9.855	9.855	9.855	6.855-12.855	9.855	0.005
17 Hexachloroethane	9.971	9.979	9.987	9.987	9.979	9.979	9.971	6.971-12.971	9.981	0.006
§ 18 Nitrobenzene-d5	10.103	10.119	10.119	10.119	10.111	10.111	10.103	7.103-13.103	10.114	0.006
19 Nitrobenzene	10.142	10.158	10.150	10.158	10.150	10.150	10.150	7.150-13.150	10.151	0.006
20 Isophorone	10.631	10.647	10.647	10.654	10.639	10.639	10.639	7.639-13.639	10.643	0.008
21 2-Nitrophenol	10.817	10.833	10.825	10.833	10.825	10.825	10.825	7.825-13.825	10.826	0.006
22 2,4-Dimethylphenol	10.910	10.925	10.918	10.933	10.918	10.918	10.910	7.910-13.910	10.920	0.008
23 Bis(2-Chloroethoxy)met	11.118	11.126	11.126	11.133	11.126	11.118	11.118	8.118-14.118	11.124	0.006
24 Benzoic acid	11.187	11.041	11.087	11.280	11.133	11.056	11.187	8.187-14.187	11.131	0.090
25 2,4-Dichlorophenol	11.310	11.326	11.326	11.326	11.318	11.318	11.318	8.318-14.318	11.321	0.006
26 1,2,4-Trichlorobenzene	11.495	11.519	11.519	11.519	11.519	11.519	11.495	8.495-14.495	11.515	0.009
* 27 Naphthalene-d8	11.588	11.596	11.596	11.596	11.596	11.596	11.588	8.588-14.588	11.595	0.003
28 Naphthalene	11.627	11.642	11.642	11.642	11.634	11.634	11.627	8.627-14.627	11.637	0.006
29 4-Chloroaniline	11.789	11.804	11.804	11.812	11.797	11.797	11.797	8.797-14.797	11.800	0.008

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20121129.b/ABN.m  
Batch File: /chem1/nt10.i/20121129.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
30 Hexachlorobutadiene	12.036	12.044	12.044	12.051	12.044	12.044	12.036	9.036-15.036	12.044	0.005
31 4-Chloro-3-methylpheno	12.864	12.872	12.872	12.879	12.872	12.872	12.872	9.872-15.872	12.872	0.005
32 2-Methylnaphthalene	13.135	13.142	13.143	13.150	13.143	13.143	13.135	10.135-16.135	13.143	0.005
33 Hexachlorocyclopentadi	13.646	13.661	13.661	13.661	13.661	13.661	13.661	10.661-16.661	13.658	0.006
34 2,4,6-Trichlorophenol	13.824	13.831	13.831	13.839	13.831	13.831	13.831	10.831-16.831	13.831	0.005
35 2,4,5-Trichlorophenol	13.901	13.909	13.909	13.916	13.909	13.917	13.917	10.917-16.917	13.910	0.006
36 2-Fluorobiphenyl	13.994	14.002	14.002	14.009	14.002	14.009	13.994	10.994-16.994	14.003	0.006
37 2-Chloronaphthalene	14.203	14.210	14.211	14.218	14.211	14.211	14.211	11.211-17.211	14.211	0.005
38 2-Nitroaniline	14.505	14.512	14.505	14.520	14.512	14.512	14.512	11.512-17.512	14.511	0.006
39 Dimethylphthalate	14.992	15.000	15.000	15.008	15.000	15.000	14.992	11.992-17.992	15.000	0.005
40 Acenaphthylene	15.131	15.139	15.139	15.147	15.147	15.147	15.131	12.131-18.131	15.142	0.006
41 2,6-Dinitrotoluene	15.124	15.131	15.132	15.139	15.139	15.139	15.139	12.139-18.139	15.134	0.006
* 42 Acenaphthene-d10	15.480	15.488	15.488	15.488	15.488	15.488	15.480	12.480-18.480	15.486	0.003
43 3-Nitroaniline	15.426	15.433	15.434	15.449	15.434	15.434	15.434	12.434-18.434	15.435	0.008
44 Acenaphthene	15.549	15.557	15.557	15.565	15.557	15.557	15.549	12.549-18.549	15.557	0.005
45 2,4-Dinitrophenol	15.658	15.665	15.658	15.681	15.665	15.665	15.665	12.665-18.665	15.665	0.008
46 Dibenzofuran	15.905	15.913	15.913	15.920	15.921	15.913	15.905	12.905-18.905	15.914	0.006
47 4-Nitrophenol	15.828	15.843	15.828	15.843	15.835	15.836	15.836	12.836-18.836	15.835	0.007
48 2,4-Dinitrotoluene	15.998	15.998	16.006	16.013	16.006	16.006	16.006	13.006-19.006	16.004	0.006
49 Fluorene	16.670	16.678	16.678	16.686	16.686	16.686	16.670	13.670-19.670	16.681	0.006
50 Diethylphthalate	16.577	16.585	16.585	16.601	16.593	16.585	16.577	13.577-19.577	16.588	0.008
51 4-Chlorophenyl-phenyle	16.694	16.701	16.694	16.701	16.701	16.701	16.701	13.701-19.701	16.699	0.004
52 4-Nitroaniline	16.802	16.802	16.802	16.825	16.810	16.802	16.802	13.802-19.802	16.807	0.009
53 4,6-Dinitro-2-methylph	16.902	16.902	16.902	16.925	16.910	16.910	16.910	13.910-19.910	16.909	0.009

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20121129.b/ABN.m  
Batch File: /chem1/nt10.i/20121129.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
54 N-Nitrosodiphenylamine	16.964	16.972	16.972	16.987	16.979	16.979	16.964	13.964-19.964	16.975	0.008
55 2,4,6-Tribromophenol	17.257	17.265	17.257	17.272	17.265	17.265	17.257	14.257-20.257	17.263	0.006
56 4-Bromophenyl-phenylet	17.773	17.781	17.774	17.781	17.781	17.789	17.789	14.789-20.789	17.780	0.006
57 Hexachlorobenzene	18.090	18.098	18.098	18.106	18.106	18.106	18.090	15.090-21.090	18.100	0.006
58 Pentachlorophenol	18.493	18.501	18.501	18.508	18.508	18.508	18.493	15.493-21.493	18.503	0.006
* 59 Phenanthrene-d10	18.748	18.756	18.756	18.764	18.764	18.764	18.748	15.748-21.748	18.759	0.006
60 Phenanthrene	18.802	18.802	18.802	18.810	18.810	18.810	18.802	15.802-21.802	18.808	0.006
61 Anthracene	18.895	18.903	18.903	18.911	18.911	18.911	18.895	15.895-21.895	18.906	0.006
62 Carbazole	19.259	19.266	19.259	19.267	19.274	19.274	19.274	16.274-22.274	19.267	0.007
63 Di-n-butylphthalate	20.118	20.125	20.125	20.125	20.133	20.133	20.118	17.118-23.118	20.127	0.006
64 Fluoranthene	21.216	21.216	21.216	21.224	21.224	21.232	21.216	18.216-24.216	21.221	0.006
65 Pyrene	21.634	21.634	21.634	21.642	21.650	21.650	21.634	18.634-24.634	21.641	0.008
56 Terphenyl-d14	21.951	21.959	21.959	21.959	21.967	21.967	21.951	18.951-24.951	21.960	0.006
67 Butylbenzylphthalate	22.896	22.903	22.904	22.903	22.911	22.919	22.896	19.896-25.896	22.906	0.008
68 Benzo(a)anthracene	23.794	23.794	23.794	23.809	23.810	23.810	23.794	20.794-26.794	23.802	0.009
* 69 Chrysene-d12	23.825	23.825	23.825	23.833	23.841	23.841	23.825	20.825-26.825	23.832	0.008
70 3,3'-Dichlorobenzidine	23.771	23.771	23.771	23.779	23.786	23.786	23.786	20.786-26.786	23.777	0.008
71 Chrysene	23.864	23.864	23.864	23.879	23.879	23.879	23.864	20.864-26.864	23.872	0.009
72 bis(2-Ethylhexyl)phtha	23.941	23.941	23.941	23.941	23.957	23.957	23.941	20.941-26.941	23.946	0.008
73 Di-n-octylphthalate	24.924	24.924	24.924	24.932	24.940	24.940	24.924	21.924-27.924	24.931	0.008
74 Benzo (b) fluoranthene	25.582	25.582	25.582	25.590	25.598	25.598	25.598	22.598-28.598	25.589	0.008
75 Benzo(k)fluoranthene	25.621	25.621	25.621	25.629	25.637	25.637	25.637	22.637-28.637	25.628	0.008
187 Total Benzofluoranthene	25.621	25.582	25.621	25.629	25.637	25.637	25.621	22.621-28.621	25.621	0.020
76 Benzo (a) pyrene	26.155	26.155	26.155	26.163	26.171	26.171	26.155	23.155-29.155	26.162	0.008

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20121129.b/ABN.m  
Batch File: /chem1/nt10.i/20121129.b  
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 77 Perylene-d12	26.256	26.256	26.256	26.264	26.279	26.279	26.256	23.256-29.256	26.265	0.011
78 Indeno(1,2,3-cd)pyrene	28.573	28.573	28.573	28.589	28.605	28.605	28.573	25.573-31.573	28.586	0.015
79 Dibenzo(a,h)anthracene	28.597	28.597	28.589	28.620	28.636	28.636	28.597	25.597-31.597	28.612	0.021
80 Benzo(g,h,i)perylene	29.257	29.249	29.249	29.272	29.288	29.288	29.257	26.257-32.257	29.266	0.017
\$ 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	4.358	4.366	4.366	4.373	4.366	4.374	4.374	1.374-7.374	4.367	0.006
91 Aniline	8.367	8.383	8.383	8.383	8.375	8.375	8.375	5.375-11.375	8.377	0.006
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
93 Benzidine	21.479	21.487	21.479	21.487	21.495	21.495	21.495	18.495-24.495	21.487	0.007
\$ 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	+++++	+++++	+++++	+++++	+++++	+++++	22.044	19.044-25.044	+++++	+++++
99 Perylene	26.310	26.302	26.303	26.318	26.326	26.326	26.326	23.326-29.326	26.314	0.011
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	4.381	4.420	4.397	4.381	4.389	4.405	4.405	1.405-7.405	4.395	0.015

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

*Averaged*

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 29-Nov-2012 16:14 yev  
 Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	RSD
3 Phenol	1.82497	1.89376	1.88119	1.75167	1.42981	1.22632	1.66795	16.525
4 Bis(2-Chloroethyl)ether	1.36921	1.46194	1.29786	1.28203	0.91470	0.94459	1.21173	18.796
6 2-Chlorophenol	1.70365	1.71295	1.70960	1.61650	1.33635	1.35352	1.57211	11.428
7 1,3-Dichlorobenzene	1.71566	1.74913	1.68602	1.65873	1.49770	1.35322	1.61009	9.510
9 1,4-Dichlorobenzene	1.63758	1.61561	1.56761	1.58124	1.42625	1.23442	1.51045	10.204
11 Benzyl alcohol	0.75416	0.73033	0.84264	0.78946	0.90641	0.70926	0.78872	9.432
12 1,2-Dichlorobenzene	1.69788	1.65838	1.56378	1.48022	1.27449	1.02188	1.44945	17.800
13 2-Methylphenol	1.51793	1.54079	1.56488	1.53055	1.31552	1.13062	1.43339	12.123
14 2,2'-oxybis(1-Chloropropane)	1.62436	1.61021	1.61841	1.44015	1.25122	1.15734	1.45029	14.121
15 4-Methylphenol	0.99778	0.82354	0.86910	0.76640	0.78166	0.86342	0.85032	9.803
16 N-Nitroso-di-n-propylamine	0.89014	0.87909	0.89204	0.82692	0.79244	0.50144	0.79702	18.839
17 Hexachloroethane	0.67488	0.68913	0.63587	0.61910	0.57232	0.53229	0.62060	9.672
19 Nitrobenzene	0.35220	0.36598	0.36576	0.34869	0.30528	0.28530	0.33720	10.025
20 Isophorone	0.68455	0.66674	0.67371	0.66636	0.60453	0.60685	0.65046	5.428
21 2-Nitrophenol	0.28525	0.26882	0.28740	0.28145	0.20912	0.30678	0.27314	12.326
22 2,4-Dimethylphenol	0.40706	0.42147	0.41339	0.37571	0.32989	0.33618	0.38062	10.519
23 Bis(2-Chloroethoxy)methane	0.42651	0.42493	0.40877	0.37847	0.34720	0.32459	0.38508	11.020
24 Benzoic acid	0.09758	0.14960	0.21543	0.27199	0.24138	0.29502	0.21183	35.548 <-
25 2,4-Dichlorophenol	0.34166	0.38467	0.37714	0.37140	0.33121	0.37652	0.36377	6.004
26 1,2,4-Trichlorobenzene	0.22980	0.22957	0.22602	0.20987	0.22191	0.21733	0.22242	3.497
28 Naphthalene	1.10092	1.05789	1.02912	0.95510	0.83824	0.85768	0.97316	11.115
29 4-Chloroaniline	0.41892	0.43557	0.43412	0.42784	0.37330	0.36500	0.40913	7.729
30 Hexachlorobutadiene	0.23355	0.23935	0.22419	0.27502	0.25893	0.26485	0.24932	7.970
31 4-Chloro-3-methylphenol	0.32854	0.34699	0.35544	0.34669	0.31403	0.32955	0.33687	4.576
32 2-Methylnaphthalene	0.76049	0.76246	0.76121	0.73809	0.66985	0.65817	0.72505	6.659
33 Hexachlorocyclopentadiene	+++++	0.41811	0.42637	0.45357	0.46166	0.51411	0.45476	8.316
34 2,4,6-Trichlorophenol	0.43835	0.45214	0.46781	0.48759	0.48837	0.50549	0.47330	5.317
35 2,4,5-Trichlorophenol	0.46066	0.48195	0.51780	0.53552	0.52185	0.52069	0.50641	5.662
37 2-Chloronaphthalene	1.15648	1.24099	1.16910	1.17290	1.11167	1.12146	1.16210	3.966



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 29-Nov-2012 16:14 yev  
 Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
38 2-Nitroaniline	0.24940	0.24929	0.27005	0.27492	0.26693	0.27165	0.26371	4.330
39 Dimethylphthalate	1.28382	1.29772	1.29659	1.31098	1.24825	1.31623	1.29227	1.890
40 Acenaphthylene	2.05903	2.05598	1.93407	1.87291	1.69765	1.72390	1.89060	8.294
41 2,6-Dinitrotoluene	0.28195	0.28910	0.29921	0.29859	0.28605	0.28938	0.29071	2.369
43 3-Nitroaniline	0.31571	0.33232	0.34684	0.32239	0.27450	0.34999	0.32363	8.504
44 Acenaphthene	1.16028	1.15324	1.12690	1.06212	0.97110	1.01026	1.08066	7.293
45 2,4-Dinitrophenol	0.03468	0.09590	0.13870	0.20943	0.22606	0.25849	0.16054	53.416 <-
46 Dibenzofuran	1.67290	1.71883	1.65079	1.60028	1.50688	1.47312	1.60380	6.026
47 4-Nitrophenol	0.10144	0.13404	0.15739	0.15762	0.17292	0.18626	0.15161	19.896
48 2,4-Dinitrotoluene	0.33512	0.37003	0.39539	0.40150	0.39076	0.39380	0.38110	6.546
49 Fluorene	1.40894	1.43034	1.38216	1.33911	1.20490	1.21776	1.33054	7.314
50 Diethylphthalate	1.48110	1.30056	1.28717	1.25122	1.37415	1.42108	1.35255	6.524
51 4-Chlorophenyl-phenylether	0.66127	0.67396	0.64129	0.60844	0.52495	0.59181	0.61696	8.871
52 4-Nitroaniline	0.26238	0.28892	0.32810	0.25678	0.24329	0.22771	0.26787	13.399
53 4,6-Dinitro-2-methylphenol	+++++	0.13835	0.16747	0.19285	0.19333	0.19074	0.17655	13.553
54 N-Nitrosodiphenylamine	0.51110	0.53151	0.52977	0.50624	0.46293	0.40565	0.49120	9.912
56 4-Bromophenyl-phenylether	0.22882	0.22757	0.23497	0.23232	0.23113	0.21372	0.22809	3.291
57 Hexachlorobenzene	0.30981	0.29560	0.29215	0.28192	0.28209	0.25922	0.28680	5.922
58 Pentachlorophenol	+++++	0.14406	0.16750	0.19657	0.20406	0.20499	0.18344	14.595
60 Phenanthrene	1.07480	1.04883	1.05954	0.99555	0.92585	0.83774	0.99039	9.344
61 Anthracene	1.16370	1.11530	1.14097	1.11007	0.98548	0.87173	1.06454	10.607
62 Carbazole	0.94253	0.96263	0.95929	0.79905	0.59848	0.66999	0.82200	19.370
63 Di-n-butylphthalate	1.33985	1.17738	1.26371	1.27514	1.28699	1.21346	1.25942	4.538
64 Fluoranthene	1.28976	1.25468	1.30494	1.28367	1.22650	1.13047	1.24834	5.139
65 Pyrene	1.22506	1.22267	1.21954	1.25224	1.17319	0.93829	1.17183	10.003
67 Butylbenzylphthalate	0.51815	0.45815	0.49087	0.48844	0.49672	0.40378	0.47602	8.464
68 Benzo(a)anthracene	1.24697	1.20554	1.19483	1.17718	1.01992	0.97685	1.13688	9.724
70 3,3'-Dichlorobenzidine	0.65464	0.63742	0.66129	0.49015	0.43662	0.37602	0.54269	22.921 <-
71 Chrysene	1.03886	1.02564	1.00616	0.96488	1.09144	0.93296	1.00999	5.547

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 29-Nov-2012 16:14 yev  
 Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
72 bis(2-Ethylhexyl)phthalate	0.66992	0.54701	0.53795	0.49402	0.50705	0.55553	0.55191	11.322
73 Di-n-octylphthalate	0.99328	0.94170	0.92680	0.90358	0.84574	0.82936	0.90675	6.769
74 Benzo(b)fluoranthene	1.29182	1.14779	1.19909	1.13002	1.13702	1.09576	1.16692	5.977
75 Benzo(k)fluoranthene	1.37312	1.37957	1.31602	1.36210	1.17342	1.31900	1.32054	5.831
187 Total Benzofluoranthenes	1.31073	1.18763	1.18403	1.15628	1.08782	1.13618	1.17711	6.368
76 Benzo(a)pyrene	1.26747	1.04123	1.20520	1.06260	1.16645	1.10639	1.14156	7.643
78 Indeno(1,2,3-cd)pyrene	1.36203	1.30157	1.30871	1.29776	1.25209	1.24033	1.29375	3.378
79 Dibenzo(a,h)anthracene	1.08832	1.04264	1.05289	1.03133	0.96404	0.98109	1.02672	4.519
80 Benzo(g,h,i)perylene	1.15757	1.13388	1.10426	1.09720	1.08963	1.06085	1.10723	3.080
90 N-Nitrosodimethylamine	0.86287	0.93636	0.91366	0.91833	1.08772	0.76285	0.91363	11.600
91 Aniline	3.91231	3.98653	3.70925	3.20394	2.36898	2.89737	3.34640	19.083
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
93 Benzidine	0.53501	0.46963	0.45515	0.23905	0.16930	0.30265	0.36180	40.238 <-
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++ <-
99 Perylene	1.21207	1.12724	1.11597	1.08879	1.03498	1.05745	1.10608	5.646
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++ <-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++ <-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
103 Pyridine	0.77626	0.80618	0.79940	0.73961	0.68148	0.50528	0.71804	15.861
=====								
\$ 1 2-Fluorophenol	1.31467	1.30236	1.34687	1.33649	1.22882	1.14819	1.27957	5.988
\$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++ <-
\$ 2 Phenol-d5	1.53811	1.59634	1.67995	1.66600	1.63091	1.38865	1.58333	6.834
\$ 5 2-Chlorophenol-d4	1.43889	1.45230	1.46985	1.43209	1.25657	1.16995	1.36995	9.131
\$ 10 1,2-Dichlorobenzene-d4	1.10733	1.11477	1.06080	1.02228	0.91305	0.77535	0.99893	13.198
\$ 18 Nitrobenzene-d5	0.37029	0.39629	0.38118	0.38508	0.35330	0.36272	0.37481	4.197
\$ 36 2-Fluorobiphenyl	1.48817	1.51648	1.45130	1.43931	1.30792	1.29125	1.41574	6.652

Analytical Resources, Inc.

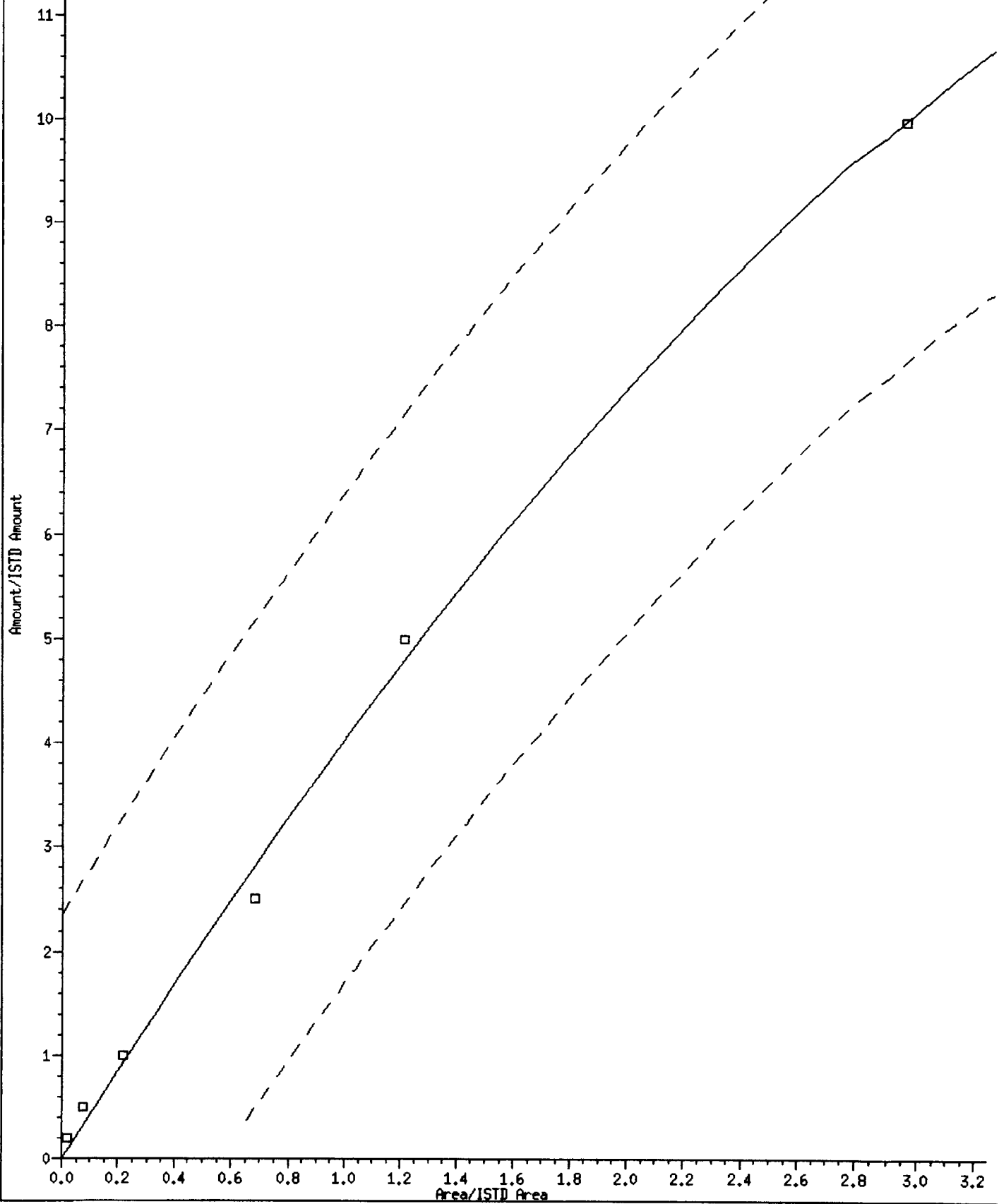
INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 29-Nov-2012 16:14 yev  
 Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
\$ 55 2,4,6-Tribromophenol	0.21543	0.21648	0.22677	0.23790	0.24988	0.26726	0.23562	8.618
\$ 66 Terphenyl-d14	0.80524	0.79132	0.79028	0.81105	0.84958	0.65235	0.78331	8.641
\$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

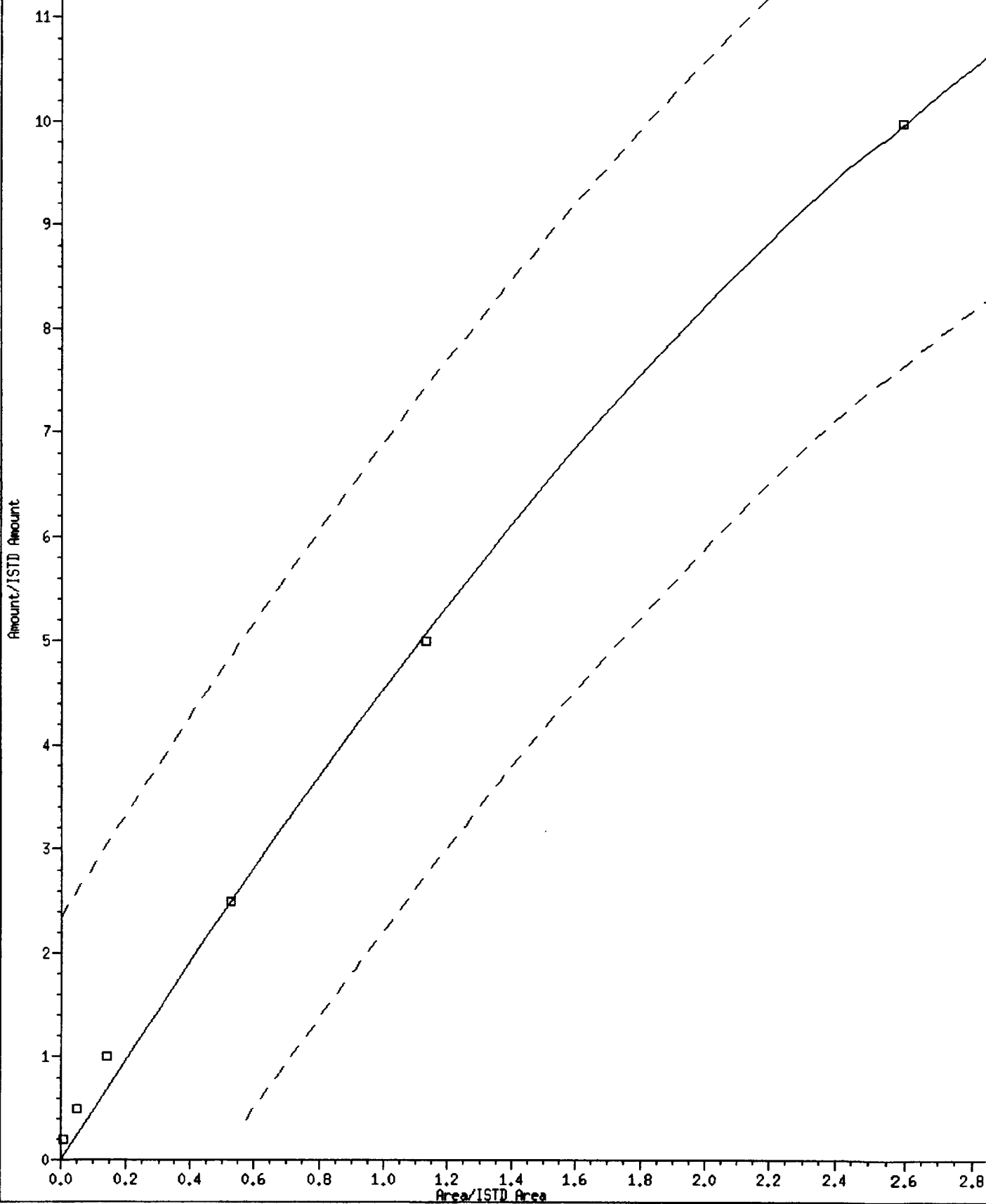
24 Benzoic acid

Curve Type: Quadratic By-Response  
Amt = 0 + 4.382932 \* Rsp + -0.3348146 \* Rsp^2  
R^2: 0.9974728

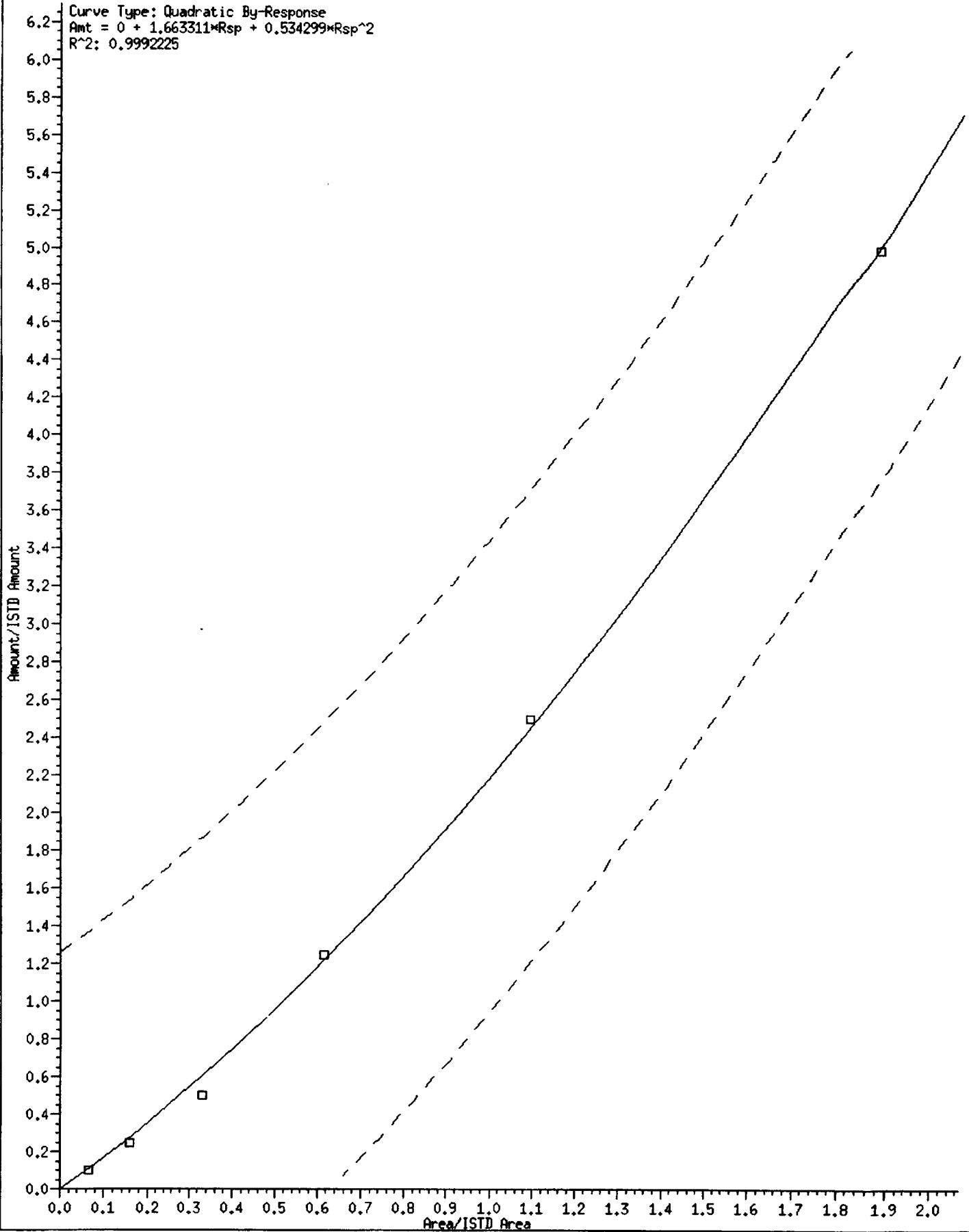


45 2,4-Dinitrophenol

Curve Type: Quadratic By-Response  
Amt = 0 + 4.998597\*Rsp + -0.4394991\*Rsp^2  
R^2: 0.9990124



70 3,3'-Dichlorobenzidine



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 30-NOV-2012 10:49 yev

Calibration File Names:

Level 1: /chem1/nt10.i/20121129.b/ic1129c.d  
 Level 2: /chem1/nt10.i/20121129.b/ic1129i.d  
 Level 3: /chem1/nt10.i/20121129.b/ic1129d.d  
 Level 4: /chem1/nt10.i/20121129.b/ic1129g.d  
 Level 5: /chem1/nt10.i/20121129.b/ic1129a.d  
 Level 6: /chem1/nt10.i/20121129.b/ic1129e.d

Compound	0.2000		0.5000		1		2		5		10		Coefficients		RSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2					
3 Phenol	1.82497	1.89376	1.88119	1.75167	1.42981	1.22632	AVRG	1.66795			16.52518				
4 Bis(2-Chloroethyl)ether	1.36921	1.46194	1.29786	1.28203	0.91470	0.94459	AVRG	1.21173			18.79634				
6 2-Chlorophenol	1.70365	1.71295	1.70960	1.61650	1.33635	1.35352	AVRG	1.57211			11.42832				
7 1,3-Dichlorobenzene	1.71566	1.74913	1.68602	1.65873	1.49770	1.35322	AVRG	1.61009			9.51042				
9 1,4-Dichlorobenzene	1.63758	1.61561	1.56761	1.58124	1.42625	1.23442	AVRG	1.51045			10.20438				
12 1,2-Dichlorobenzene	1.69788	1.65938	1.56378	1.48022	1.27449	1.02188	AVRG	1.44945			17.80002				
11 Benzyl alcohol	0.75416	0.73033	0.84264	0.78946	0.90641	0.70926	AVRG	0.78872			9.43152				
14 2,2'-oxybis(1-Chloropropane)	1.62436	1.61021	1.61841	1.44015	1.25122	1.15734	AVRG	1.45029			14.12111				
13 2-Methylphenol	1.51793	1.54079	1.56488	1.53055	1.31552	1.13062	AVRG	1.43339			12.12332				
17 Hexachloroethane	0.67488	0.68913	0.63587	0.61910	0.57232	0.53229	AVRG	0.62060			9.67177				
16 N-Nitroso-di-n-propylamine	0.89014	0.87909	0.89204	0.82692	0.79244	0.50144	AVRG	0.79702			18.83878				
15 4-Methylphenol	0.99778	0.82354	0.86910	0.76640	0.78166	0.86342	AVRG	0.85032			9.80310				
19 Nitrobenzene	0.35220	0.36598	0.36576	0.34869	0.30528	0.28530	AVRG	0.33720			10.02538				
20 Isophorone	0.68455	0.66674	0.67371	0.66636	0.60453	0.60695	AVRG	0.65046			5.42789				

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 30-Nov-2012 10:49 yev

Compound	0.2000		0.5000		1		2		5		10		Coefficients		WRSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2					
21 2-Nitrophenol	0.28525	0.26882	0.28740	0.28145	0.20912	0.30678	AVRG	0.27314	0.38062	0.38062	12.32568				
22 2,4-Dimethylphenol	0.40706	0.42147	0.41339	0.37571	0.32989	0.33618	AVRG	0.38062	0.38062	0.38062	10.51931				
23 Bis(2-Chloroethoxy)methane	0.42651	0.42493	0.40877	0.37847	0.34720	0.32459	AVRG	0.38508	0.38508	0.38508	11.02009				
24 Benzoic acid	6040	22106	64413	197445	361342	792268	QUND	0.000e+00	4.38293	-0.33481	0.99747				
25 2,4-Dichlorophenol	0.34166	0.38467	0.37714	0.37140	0.33121	0.37652	AVRG	0.36377	0.36377	0.36377	6.00362				
26 1,2,4-Trichlorobenzene	0.22980	0.22957	0.22602	0.20987	0.22191	0.21733	AVRG	0.22242	0.22242	0.22242	3.49692				
28 Naphthalene	1.10092	1.05789	1.02912	0.95510	0.83824	0.85768	AVRG	0.97316	0.97316	0.97316	11.11529				
29 4-Chloroaniline	0.41892	0.43557	0.43412	0.42784	0.37330	0.36500	AVRG	0.40913	0.40913	0.40913	7.72947				
30 Hexachlorobutadiene	0.23355	0.23935	0.22419	0.27502	0.25893	0.26485	AVRG	0.24932	0.24932	0.24932	7.96951				
31 4-Chloro-3-methylphenol	0.32854	0.34699	0.35544	0.34669	0.31403	0.32955	AVRG	0.33687	0.33687	0.33687	4.57605				
32 2-Methylnaphthalene	0.76049	0.76246	0.76121	0.73809	0.66985	0.65817	AVRG	0.72505	0.72505	0.72505	6.65904				
33 Hexachlorocyclopentadiene	++++	0.41811	0.42637	0.45357	0.46166	0.51411	AVRG	0.45476	0.45476	0.45476	8.31556				
34 2,4,6-Trichlorophenol	0.43835	0.45214	0.46781	0.48759	0.48837	0.50549	AVRG	0.47330	0.47330	0.47330	5.31737				
35 2,4,5-Trichlorophenol	0.46066	0.48195	0.51780	0.53552	0.52185	0.52069	AVRG	0.50641	0.50641	0.50641	5.66187				
37 2-Chloronaphthalene	1.15648	1.24098	1.16910	1.17290	1.11167	1.12146	AVRG	1.16210	1.16210	1.16210	3.96573				
38 2-Nitroaniline	0.24940	0.24929	0.27005	0.27492	0.26693	0.27165	AVRG	0.26371	0.26371	0.26371	4.33040				
39 Dimethylphthalate	1.28382	1.29772	1.29659	1.31098	1.24825	1.31623	AVRG	1.29227	1.29227	1.29227	1.88977				
40 Acenaphthylene	2.05903	2.05598	1.93407	1.87291	1.69765	1.72390	AVRG	1.89060	1.89060	1.89060	8.29438				
41 2,6-Dinitrotoluene	0.28195	0.28910	0.29921	0.29859	0.28605	0.28938	AVRG	0.29071	0.29071	0.29071	2.36912				
43 3-Nitroaniline	0.31571	0.33232	0.34684	0.32239	0.27450	0.34999	AVRG	0.32363	0.32363	0.32363	8.50439				
44 Acenaphthene	1.16028	1.15324	1.12690	1.06212	0.97110	1.01026	AVRG	1.08066	1.08066	1.08066	7.29273				
45 2,4-Dinitrophenol	1315	8764	25740	94427	201827	416868	QUND	0.000e+00	4.99860	-0.43950	0.99901				



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 30-Nov-2012 10:49 yev

Compound	0.2000		0.5000		1		2		5		10		Coefficients		WRSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2					
46 Dibenzofuran	1.67290	1.71883	1.65079	1.60028	1.50688	1.47312	AVRG	1.60380	1.60380			1.60380		6.02603	
47 4-Nitrophenol	0.10144	0.13404	0.15739	0.15762	0.17292	0.18626	AVRG	0.15161	0.15161			0.15161		19.89571	
48 2,4-Dinitrotoluene	0.33512	0.37003	0.39539	0.40150	0.39076	0.39380	AVRG	0.38110	0.38110			0.38110		6.54640	
50 Diethylphthalate	1.48110	1.30056	1.28717	1.25122	1.37415	1.42108	AVRG	1.35255	1.35255			1.35255		6.52395	
49 Fluorene	1.40894	1.43034	1.38216	1.33911	1.20490	1.21776	AVRG	1.33054	1.33054			1.33054		7.31395	
51 4-Chlorophenyl-phenylether	0.66127	0.67396	0.64129	0.60844	0.52495	0.59181	AVRG	0.61696	0.61696			0.61696		8.87109	
52 4-Nitroaniline	0.26238	0.28992	0.32810	0.25678	0.24329	0.22771	AVRG	0.26787	0.26787			0.26787		13.39899	
53 4,6-Dinitro-2-methylphenol	++++	0.13835	0.16747	0.19285	0.19333	0.19074	AVRG	0.17655	0.17655			0.17655		13.55286	
54 N-Nitrosodiphenylamine	0.51110	0.53151	0.52977	0.50624	0.46293	0.40565	AVRG	0.49120	0.49120			0.49120		9.91204	
56 4-Bromophenyl-phenylether	0.22882	0.22757	0.23497	0.23232	0.23113	0.21372	AVRG	0.22809	0.22809			0.22809		3.29091	
57 Hexachlorobenzene	0.30981	0.29560	0.29215	0.28192	0.28209	0.25922	AVRG	0.28680	0.28680			0.28680		5.92235	
58 Pentachlorophenol	++++	0.14406	0.16750	0.19657	0.20406	0.20499	AVRG	0.18344	0.18344			0.18344		14.59492	
60 Phenanthrene	1.07480	1.04883	1.05954	0.99555	0.92585	0.83774	AVRG	0.99039	0.99039			0.99039		9.34381	
61 Anthracene	1.16370	1.11530	1.14097	1.11007	0.98548	0.87173	AVRG	1.06454	1.06454			1.06454		10.60730	
62 Carbazole	0.94253	0.96263	0.95929	0.79905	0.59848	0.66999	AVRG	0.82200	0.82200			0.82200		19.36952	
63 Di-n-butylphthalate	1.33985	1.17738	1.26371	1.27514	1.28699	1.21346	AVRG	1.25942	1.25942			1.25942		4.53838	
64 Fluoranthene	1.28976	1.25468	1.30494	1.28367	1.22650	1.13047	AVRG	1.24834	1.24834			1.24834		5.13894	
65 Pyrene	1.22506	1.22267	1.21954	1.25224	1.17319	0.93829	AVRG	1.17183	1.17183			1.17183		10.00342	
67 Butylbenzylphthalate	0.51815	0.45815	0.49087	0.48844	0.49672	0.40378	AVRG	0.47602	0.47602			0.47602		8.46357	
68 Benzo(a)anthracene	1.24697	1.20554	1.19483	1.17718	1.01992	0.97685	AVRG	1.13688	1.13688			1.13688		9.72410	
70 3,3'-Dichlorobenzidine	22944	53368	114847	200521	353502	705688	QUAD	0.000e+00	1.56331	0.53430				0.99922	
71 Chrysene	1.03886	1.02564	1.00616	0.96488	1.09144	0.93296	AVRG	1.00999	1.00999			1.00999		5.54738	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 30-Nov-2012 10:49 yev

Compound	Coefficients										VRSD or R <sup>2</sup>
	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	b	m1	m2	
72 bis(2-Ethylhexyl)phthalate	0.6692	0.54701	0.53795	0.49402	0.50705	0.55553	AVRG		0.55191		11.32167
73 Di-n-octylphthalate	0.9328	0.94170	0.92680	0.90358	0.84574	0.82936	AVRG		0.90675		6.76863
74 Benzo(b)fluoranthene	1.29182	1.14779	1.19909	1.13002	1.13702	1.09576	AVRG		1.16692		5.97652
75 Benzo(k)fluoranthene	1.37312	1.37957	1.31602	1.36210	1.17342	1.31900	AVRG		1.32054		5.83104
76 Benzo(a)pyrene	1.26747	1.04123	1.20520	1.06260	1.16645	1.10639	AVRG		1.14156		7.64282
78 Indeno(1,2,3-cd)pyrene	1.36203	1.30157	1.30871	1.29776	1.25209	1.24033	AVRG		1.29375		3.37846
79 Dibenzo(a,h)anthracene	1.08832	1.04264	1.05289	1.03133	0.96404	0.98109	AVRG		1.02672		4.51944
80 Benzo(g,h,i)perylene	1.15757	1.13388	1.10426	1.09720	1.08772	0.76285	AVRG		1.10723		3.07979
90 N-Nitrosodimethylamine	0.86287	0.93636	0.91366	0.91833	1.08772	0.76285	AVRG		0.91363		11.59966
91 Aniline	3.91231	3.98653	3.70925	3.20394	2.36898	2.89737	AVRG		3.34640		19.08286
93 Benzidine	0.53501	0.46963	0.45515	0.23905	0.16930	0.30265	AVRG		0.32715		40.42474
103 Pyridine	0.77626	0.80618	0.79940	0.73961	0.68148	0.50528	AVRG		0.71804		15.86107
105 1-methylnaphthalene	0.70549	0.71349	0.68385	0.67380	0.60560	0.61048	AVRG		0.66545		7.02449
111 Azobenzene (1,2-DP-Hydrazine)	1.24647	1.25189	1.20249	1.11370	0.94431	1.08874	AVRG		1.14127		10.32065
187 Total Benzofluoranthenes	1.31073	1.18763	1.18403	1.15628	1.08782	1.13618	AVRG		1.17711		6.36821
99 Perylene	1.21207	1.12724	1.11597	1.08879	1.03498	1.05745	AVRG		1.10608		5.64599
98 Retene	++++	++++	++++	++++	++++	++++	AVRG		0.000e+00		0.000e+00
120 2,3,4,6-Tetrachlorophenol	++++	++++	++++	++++	0.00104	++++	AVRG		0.00104		0.000e+00
\$ 1 2-Fluorophenol	1.31467	1.30236	1.34687	1.33649	1.22882	1.14819	AVRG		1.27957		5.98841
\$ 2 Phenol-d5	1.53811	1.59634	1.67995	1.66600	1.63091	1.38865	AVRG		1.58333		6.83443
\$ 5 2-Chlorophenol-d4	1.43889	1.45230	1.46985	1.43209	1.25657	1.16995	AVRG		1.36995		9.13077

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Force  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 30-Nov-2012 10:49 yev

Compound	0.2000		0.5000		1		2		5		10		Coefficients		WRSD or R <sup>2</sup>
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Curve	b	m1	m2					
\$ 10 1,2-Dichlorobenzene-d4	1.10733	1.11477	1.06080	1.02228	0.91305	0.77535	AVRG		0.99893						13.19815
\$ 18 Nitrobenzene-d5	0.37029	0.39629	0.38118	0.38508	0.35330	0.36272	AVRG		0.37481						4.19712
\$ 36 2-Fluorobiphenyl	1.48817	1.51648	1.45130	1.43931	1.30792	1.29125	AVRG		1.41574						6.65217
\$ 55 2,4,6-Tribromophenol	0.21543	0.21648	0.22677	0.23790	0.24988	0.26726	AVRG		0.23562						8.61798
\$ 66 Terphenyl-d14	0.80524	0.79132	0.79028	0.81105	0.84958	0.65235	AVRG		0.78331						8.64102

0000000000000000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
End Cal Date : 29-NOV-2012 15:30  
Quant Method : ISTD  
Origin : Force  
Target Version : 3.50  
Integrator : HP RTE  
Method file : /chem1/nt10.i/20121129.b/ABN.m  
Cal Date : 30-Nov-2012 10:49 yev

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

Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121129.b/ic1129a.d

Lab Smp Id: ABN 5

Inj Date : 29-NOV-2012 09:54

Operator : VTS/YZ

Inst ID: nt10.i

Smp Info : ABN 5

Misc Info :

Comment : 1ul Injection

Method : /chem1/nt10.i/20121129.b/ABN.m

Meth Date : 30-Nov-2012 10:49 yev

Quant Type: ISTD

Cal Date : 29-NOV-2012 15:30

Cal File: ic1129i.d

Als bottle: 2

Calibration Sample, Level: 5

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PSDDAICAL.sub

Target Version: 3.50

*YZ B/d/p*

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	
\$ 1 2-Fluorophenol	112	6.613	6.613 (0.740)	125295	5.00000	4.802	
\$ 2 Phenol-d5	99	8.305	8.305 (0.929)	166294	5.00000	5.150	
3 Phenol	94	8.328	8.328 (0.932)	145789	5.00000	4.286	
\$ 5 2-Chlorophenol-d4	132	8.560	8.560 (0.958)	128125	5.00000	4.586	
4 Bis(2-Chloroethyl)ether	93	8.475	8.483 (0.948)	93266	5.00000	3.774	
6 2-Chlorophenol	128	8.591	8.591 (0.961)	136259	5.00000	4.250	
7 1,3-Dichlorobenzene	146	8.869	8.869 (0.992)	152711	5.00000	4.651	
* 8 1,4-Dichlorobenzene-d4	152	8.939	8.939 (1.000)	81571	4.00000		
9 1,4-Dichlorobenzene	146	8.970	8.970 (1.003)	145426	5.00000	4.721	
\$ 10 1,2-Dichlorobenzene-d4	152	9.319	9.319 (1.043)	93098	5.00000	4.570	
12 1,2-Dichlorobenzene	146	9.343	9.343 (1.045)	129952	5.00000	4.396	
11 Benzyl alcohol	108	9.249	9.249 (1.035)	92421	5.00000	5.746	
14 2,2'-oxybis(1-Chloropropane)	121	10.910	10.918 (1.220)	127579	5.00000	4.314	
13 2-Methylphenol	108	9.506	9.506 (1.063)	134135	5.00000	4.589	
17 Hexachloroethane	117	9.971	9.971 (1.115)	58356	5.00000	4.611	
16 N-Nitroso-di-n-propylamine	70	9.847	9.855 (1.102)	80800	5.00000	4.971	
15 4-Methylphenol	108	9.793	9.793 (1.095)	79701	5.00000	4.596	
\$ 18 Nitrobenzene-d5	82	10.103	10.103 (0.872)	132223	5.00000	4.713	
19 Nitrobenzene	77	10.142	10.150 (0.875)	114252	5.00000	4.527	
20 Isophorone	82	10.631	10.639 (0.917)	226244	5.00000	4.647	
21 2-Nitrophenol	139	10.817	10.825 (0.933)	78264	5.00000	3.828	
22 2,4-Dimethylphenol	107	10.910	10.910 (0.941)	246919	10.0000	8.667	
23 Bis(2-Chloroethoxy)methane	93	11.118	11.118 (0.959)	129940	5.00000	4.508	
24 Benzoic acid	105	11.187	11.187 (0.965)	361342	20.0000	19.21	
25 2,4-Dichlorophenol	162	11.310	11.318 (0.976)	247912	10.0000	9.105	
26 1,2,4-Trichlorobenzene	180	11.495	11.495 (0.992)	83051	5.00000	4.989	
* 27 Naphthalene-d8	136	11.588	11.588 (1.000)	299399	4.00000		

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	----	--	=====	=====	=====	-----	
28 Naphthalene	128	11.627	11.627	(1.003)	313711	5.00000	4.307
29 4-Chloroaniline	127	11.789	11.797	(1.017)	279416	10.0000	9.124
30 Hexachlorobutadiene	225	12.036	12.036	(1.039)	96905	5.00000	5.193
31 4-Chloro-3-methylphenol	107	12.864	12.872	(1.110)	235050	10.0000	9.322
32 2-Methylnaphthalene	142	13.135	13.135	(1.133)	250689	5.00000	4.619
33 Hexachlorocyclopentadiene	237	13.646	13.661	(0.882)	206089	10.0000	10.15
34 2,4,6-Trichlorophenol	196	13.824	13.831	(0.893)	218015	10.0000	10.32
35 2,4,5-Trichlorophenol	196	13.901	13.917	(0.898)	232960	10.0000	10.30
\$ 36 2-Fluorobiphenyl	172	13.994	13.994	(0.904)	291934	5.00000	4.619
37 2-Chloronaphthalene	162	14.203	14.211	(0.918)	248130	5.00000	4.783
38 2-Nitroaniline	65	14.505	14.512	(0.937)	119160	10.0000	10.12
39 Dimethylphthalate	163	14.992	14.992	(0.968)	278616	5.00000	4.830
40 Acenaphthylene	152	15.131	15.131	(0.977)	378925	5.00000	4.490
41 2,6-Dinitrotoluene	165	15.124	15.139	(0.977)	127696	10.0000	9.840
* 42 Acenaphthene-d10	164	15.480	15.480	(1.000)	178564	4.00000	
43 3-Nitroaniline	138	15.426	15.434	(0.996)	122539	10.0000	8.482
44 Acenaphthene	153	15.549	15.549	(1.004)	216754	5.00000	4.493
45 2,4-Dinitrophenol	184	15.658	15.665	(1.011)	201827	20.0000	20.35
46 Dibenzofuran	168	15.905	15.905	(1.027)	336343	5.00000	4.698
47 4-Nitrophenol	109	15.828	15.836	(1.022)	77195	10.0000	11.41
48 2,4-Dinitrotoluene	165	15.998	16.006	(1.033)	174441	10.0000	10.25
50 Diethylphthalate	149	16.577	16.577	(1.071)	306718	5.00000	5.080
49 Fluorene	166	16.670	16.670	(1.077)	268940	5.00000	4.528
51 4-Chlorophenyl-phenylether	204	16.694	16.701	(1.078)	117171	5.00000	4.254
52 4-Nitroaniline	138	16.802	16.802	(1.085)	108609	10.0000	9.083
53 4,6-Dinitro-2-methylphenol	198	16.902	16.910	(0.902)	295225	20.0000	21.90
54 N-Nitrosodiphenylamine	169	16.964	16.964	(0.905)	176731	5.00000	4.712
\$ 55 2,4,6-Tribromophenol	330	17.257	17.257	(1.115)	55774	5.00000	5.303
56 4-Bromophenyl-phenylether	248	17.773	17.789	(0.948)	88235	5.00000	5.067
57 Hexachlorobenzene	284	18.090	18.090	(0.965)	107691	5.00000	4.918
58 Pentachlorophenol	266	18.493	18.493	(0.986)	155807	10.0000	11.12
* 59 Phenanthrene-d10	188	18.748	18.748	(1.000)	305410	4.00000	
60 Phenanthrene	178	18.802	18.802	(1.003)	353455	5.00000	4.674
61 Anthracene	178	18.895	18.895	(1.008)	376218	5.00000	4.629
62 Carbazole	167	19.259	19.274	(1.027)	228477	5.00000	3.640
63 Di-n-butylphthalate	149	20.118	20.118	(1.073)	491323	5.00000	5.109
64 Fluoranthene	202	21.216	21.216	(1.132)	468233	5.00000	4.913
65 Pyrene	202	21.634	21.634	(0.908)	474927	5.00000	5.006
\$ 66 Terphenyl-d14	244	21.951	21.951	(0.921)	343924	5.00000	5.423
67 Butylbenzylphthalate	149	22.896	22.896	(0.961)	201080	5.00000	5.217
68 Benzo(a)anthracene	228	23.794	23.794	(0.999)	412879	5.00000	4.486
* 69 Chrysene-d12	240	23.825	23.825	(1.000)	323853	4.00000	
70 3,3'-Dichlorobenzidine	252	23.771	23.786	(0.998)	353502	10.0000	9.809
71 Chrysene	228	23.864	23.864	(1.002)	441832	5.00000	5.403
72 bis(2-Ethylhexyl)phthalate	149	23.941	23.941	(0.961)	271172	5.00000	4.594
* 134 Di-n-octylphthalate-d4	153	24.917	24.917	(1.000)	427845	4.00000	
73 Di-n-octylphthalate	149	24.924	24.924	(1.000)	452306	5.00000	4.664

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	====	==	=====	=====	=====	=====	=====
74 Benzo(b)fluoranthene	252	25.582	25.598	(0.974)	433937	5.00000	4.872
75 Benzo(k)fluoranthene	252	25.621	25.637	(0.976)	447828	5.00000	4.443
76 Benzo(a)pyrene	252	26.155	26.155	(0.996)	445171	5.00000	5.109
* 77 Perylene-d12	264	26.256	26.256	(1.000)	305316	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.573	28.573	(1.088)	477855	5.00000	4.839
79 Dibenzo(a,h)anthracene	278	28.597	28.597	(1.089)	367920	5.00000	4.695
80 Benzo(g,h,i)perylene	276	29.257	29.257	(1.114)	415852	5.00000	4.921
90 N-Nitrosodimethylamine	74	4.358	4.374	(0.488)	221816	10.0000	11.91
91 Aniline	93	8.367	8.375	(0.936)	241550	5.00000	3.540
93 Benzidine	184	21.479	21.495	(0.902)	137073	10.0000	5.175
103 Pyridine	79	4.381	4.405	(0.490)	138972	10.0000	9.491
105 1-methylnaphthalene	142	13.375	13.375	(1.154)	226644	5.00000	4.550
111 Azobenzene (1,2-DP-Hydrazine)	77	17.041	17.049	(1.101)	210774	5.00000	4.137
187 Total Benzofluoranthenes	252	25.621	25.621	(0.976)	830324	10.0000	9.241
99 Perylene	252	26.310	26.326	(1.002)	394994	5.00000	4.679
98 Retene	219	Compound Not Detected.					
120 2,3,4,6-Tetrachlorophenol	232	16.284	16.284	(1.052)	233	5.00000	5.000

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: ic1129a.d  
 Lab Smp Id: ABN 5  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121129.b/ABN.m  
 Misc Info:

Calibration Date: 29-NOV-2012  
 Calibration Time: 09:54

Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	81571	0.00
27 Naphthalene-d8	299399	149700	598798	299399	0.00
42 Acenaphthene-d10	178564	89282	357128	178564	0.00
59 Phenanthrene-d10	305410	152705	610820	305410	0.00
69 Chrysene-d12	323853	161926	647706	323853	0.00
134 Di-n-octylphthala	427845	213922	855690	427845	0.00
77 Perylene-d12	305316	152658	610632	305316	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.94	8.44	9.44	8.94	0.00
27 Naphthalene-d8	11.59	11.09	12.09	11.59	0.00
42 Acenaphthene-d10	15.48	14.98	15.98	15.48	0.00
59 Phenanthrene-d10	18.75	18.25	19.25	18.75	0.00
69 Chrysene-d12	23.82	23.32	24.32	23.82	0.00
134 Di-n-octylphthala	24.92	24.42	25.42	24.92	0.00
77 Perylene-d12	26.26	25.76	26.76	26.26	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/20121129.b/1c1129a.d  
Date: 29-NOV-2012 09:54

Client ID:

Sample Info: ABN 5

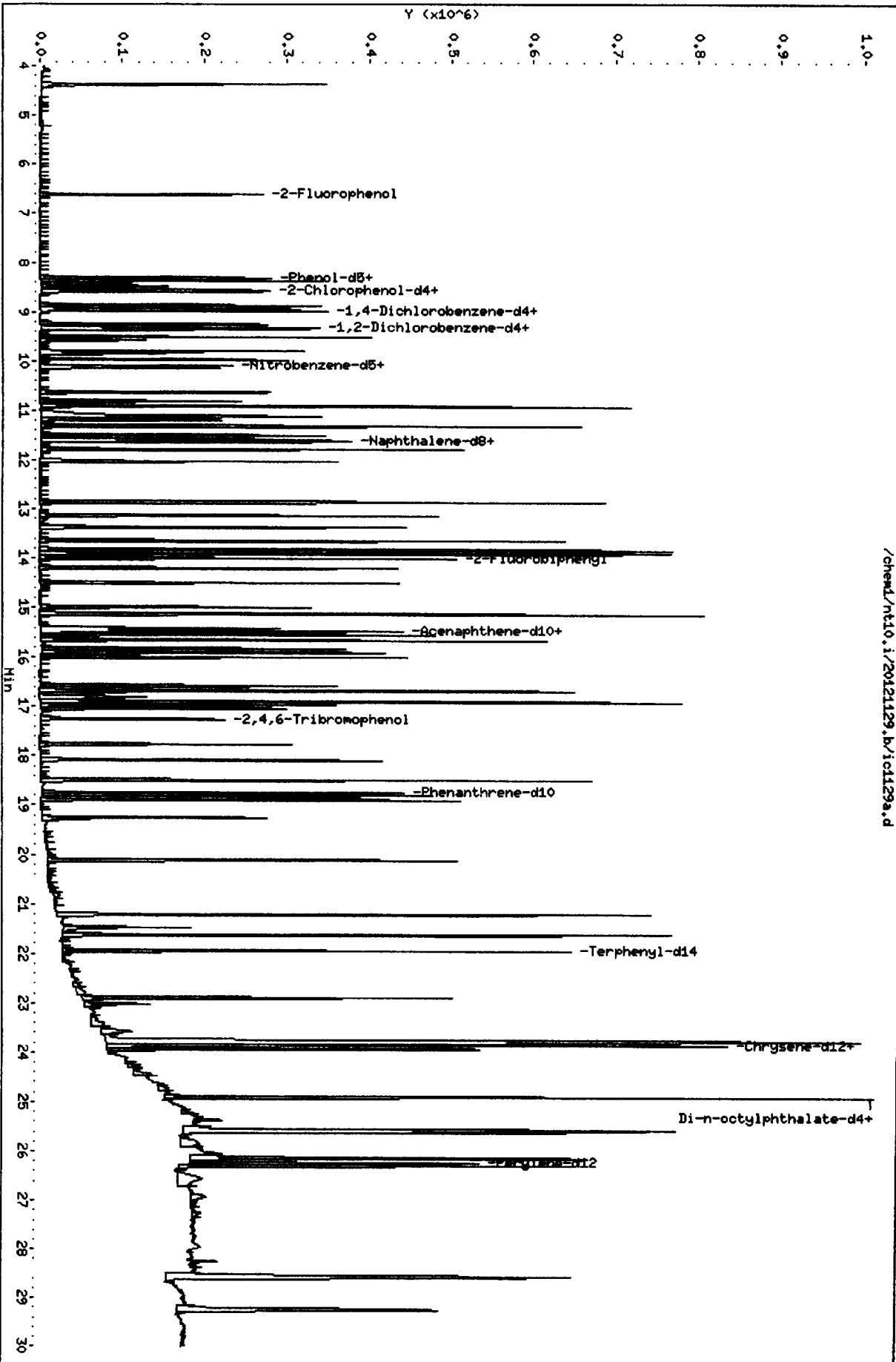
Column phase: ZB-Sms1

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25

/chem1/nt10.i/20121129.b/1c1129a.d



CO-ELUTION SUMMARY FOR FILE - ic1129a.d

Lab ID: ABN 5, Method: ABN.m, Instrument: nt10.i, Date: 29-NOV-2012

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D  
 Data file : /chem1/nt10.i/20121129.b/ic1129c.d  
 Lab Smp Id: ABN0.2  
 Inj Date : 29-NOV-2012 11:10  
 Operator : VTS/YZ  
 Smp Info : ABN0.2  
 Misc Info :  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121129.b/ABN.m  
 Meth Date : 30-Nov-2012 10:49 yev  
 Cal Date : 29-NOV-2012 11:10  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50

Inst ID: nt10.i

Quant Type: ISTD  
 Cal File: ic1129c.d  
 Calibration Sample, Level: 1

Compound Sublist: PSDDAICAL.sub

*YZ 12/01/12*

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
								CAL-AMT	ON-COL
								(ug/mL)	(ug/mL)
\$ 1 2-Fluorophenol	112			6.621	6.613	(0.740)	5472	0.20000	0.2068
\$ 2 Phenol-d5	99			8.313	8.305	(0.929)	6402	0.20000	0.1941
3 Phenol	94			8.336	8.328	(0.932)	7596	0.20000	0.2243
\$ 5 2-Chlorophenol-d4	132			8.568	8.560	(0.958)	5989	0.20000	0.2135
4 Bis(2-Chloroethyl)ether	93			8.491	8.483	(0.949)	5699	0.20000	0.2398
6 2-Chlorophenol	128			8.599	8.591	(0.961)	7091	0.20000	0.2242
7 1,3-Dichlorobenzene	146			8.877	8.869	(0.992)	7141	0.20000	0.2136
* 8 1,4-Dichlorobenzene-d4	152			8.947	8.939	(1.000)	83245	4.00000	
9 1,4-Dichlorobenzene	146			8.978	8.970	(1.003)	6816	0.20000	0.2138
\$ 10 1,2-Dichlorobenzene-d4	152			9.327	9.319	(1.042)	4609	0.20000	0.2192
12 1,2-Dichlorobenzene	146			9.358	9.343	(1.046)	7067	0.20000	0.2285
11 Benzyl alcohol	108			9.257	9.249	(1.035)	3139	0.20000	0.1817
14 2,2'-oxybis(1-Chloropropane)	121			10.925	10.918	(1.221)	6761	0.20000	0.2260
13 2-Methylphenol	108			9.521	9.506	(1.064)	6318	0.20000	0.2143
17 Hexachloroethane	117			9.979	9.971	(1.115)	2809	0.20000	0.2164
16 N-Nitroso-di-n-propylamine	70			9.855	9.855	(1.101)	3705	0.20000	0.2116
15 4-Methylphenol	108			9.816	9.793	(1.097)	4153	0.20000	0.2243
\$ 18 Nitrobenzene-d5	82			10.119	10.103	(0.873)	5730	0.20000	0.2047
19 Nitrobenzene	77			10.158	10.150	(0.876)	5450	0.20000	0.2143
20 Isophorone	82			10.647	10.639	(0.918)	10593	0.20000	0.2124
21 2-Nitrophenol	139			10.833	10.825	(0.934)	4414	0.20000	0.2308
22 2,4-Dimethylphenol	107			10.925	10.910	(0.942)	12598	0.40000	0.4419
23 Bis(2-Chloroethoxy)methane	93			11.126	11.118	(0.959)	6600	0.20000	0.2205
24 Benzoic acid	105			11.041	11.187	(0.952)	6040	0.80000	0.4606 (M)
25 2,4-Dichlorophenol	162			11.326	11.318	(0.977)	10574	0.40000	0.4062
26 1,2,4-Trichlorobenzene	180			11.519	11.495	(0.993)	3556	0.20000	0.2035
* 27 Naphthalene-d8	136			11.596	11.588	(1.000)	309486	4.00000	

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
*****	****	**	*****	*****	*****	*****	*****
28 Naphthalene	128	11.642	11.627	(1.004)	17036	0.20000	0.2271
29 4-Chloroaniline	127	11.804	11.797	(1.018)	12965	0.40000	0.4230
30 Hexachlorobutadiene	225	12.044	12.036	(1.039)	3614	0.20000	0.1897
31 4-Chloro-3-methylphenol	107	12.872	12.872	(1.110)	10168	0.40000	0.4090
32 2-Methylnaphthalene	142	13.142	13.135	(1.133)	11768	0.20000	0.2127
33 Hexachlorocyclopentadiene	237	13.661	13.661	(0.882)	7208	0.40000	0.3294
34 2,4,6-Trichlorophenol	196	13.831	13.831	(0.893)	8310	0.40000	0.3784
35 2,4,5-Trichlorophenol	196	13.909	13.917	(0.898)	8733	0.40000	0.3751
\$ 36 2-Fluorobiphenyl	172	14.002	13.994	(0.904)	14106	0.20000	0.2129
37 2-Chloronaphthalene	162	14.210	14.211	(0.918)	10962	0.20000	0.2040
38 2-Nitroaniline	65	14.512	14.512	(0.937)	4728	0.40000	0.3864
39 Dimethylphthalate	163	15.000	14.992	(0.968)	12169	0.20000	0.2028
40 Acenaphthylene	152	15.139	15.131	(0.978)	19517	0.20000	0.2192
41 2,6-Dinitrotoluene	165	15.131	15.139	(0.977)	5345	0.40000	0.3971
* 42 Acenaphthene-d10	164	15.488	15.480	(1.000)	189575	4.00000	
43 3-Nitroaniline	138	15.433	15.434	(0.996)	5985	0.40000	0.4279
44 Acenaphthene	153	15.557	15.549	(1.004)	10998	0.20000	0.2178
45 2,4-Dinitrophenol	184	15.665	15.665	(1.011)	1315	0.80000	0.1227
46 Dibenzofuran	168	15.913	15.905	(1.027)	15857	0.20000	0.2104
47 4-Nitrophenol	109	15.843	15.836	(1.023)	1923	0.40000	0.2958
48 2,4-Dinitrotoluene	165	15.998	16.006	(1.033)	6353	0.40000	0.3693
50 Diethylphthalate	149	16.585	16.577	(1.071)	14039	0.20000	0.2075
49 Fluorene	166	16.678	16.670	(1.077)	13355	0.20000	0.2156
51 4-Chlorophenyl-phenylether	204	16.701	16.701	(1.078)	6268	0.20000	0.2230
52 4-Nitroaniline	138	16.802	16.802	(1.085)	4974	0.40000	0.4151
53 4,6-Dinitro-2-methylphenol	198	16.902	16.910	(0.901)	5036	0.80000	0.3266
54 N-Nitrosodiphenylamine	169	16.972	16.964	(0.905)	8153	0.20000	0.2099
\$ 55 2,4,6-Tribromophenol	330	17.265	17.257	(1.115)	2042	0.20000	0.1852
56 4-Bromophenyl-phenylether	248	17.781	17.789	(0.948)	3650	0.20000	0.1990
57 Hexachlorobenzene	284	18.098	18.090	(0.965)	4942	0.20000	0.2094
58 Pentachlorophenol	266	18.501	18.493	(0.986)	3173	0.40000	0.1950
* 59 Phenanthrene-d10	188	18.756	18.748	(1.000)	319035	4.00000	
60 Phenanthrene	178	18.802	18.802	(1.002)	17145	0.20000	0.2149
61 Anthracene	178	18.903	18.895	(1.008)	18563	0.20000	0.2166
62 Carbazole	167	19.266	19.274	(1.027)	15035	0.20000	0.2447
63 Di-n-butylphthalate	149	20.125	20.118	(1.073)	21373	0.20000	0.2040
64 Fluoranthene	202	21.216	21.216	(1.131)	20574	0.20000	0.2050
65 Pyrene	202	21.634	21.634	(0.908)	21468	0.20000	0.2043
\$ 66 Terphenyl-d14	244	21.959	21.951	(0.922)	14111	0.20000	0.1946
67 Butylbenzylphthalate	149	22.903	22.896	(0.961)	9080	0.20000	0.2042
68 Benzo(a)anthracene	228	23.794	23.794	(0.999)	21852	0.20000	0.2200
* 69 Chrysene-d12	240	23.825	23.825	(1.000)	350481	4.00000	
70 3,3'-Dichlorobenzidine	252	23.771	23.786	(0.998)	22944	0.40000	0.5997
71 Chrysene	228	23.864	23.864	(1.002)	18205	0.20000	0.1951
72 bis(2-Ethylhexyl)phthalate	149	23.941	23.941	(0.961)	14989	0.20000	0.2277
* 134 Di-n-octylphthalate-d4	153	24.917	24.917	(1.000)	447487	4.00000	
73 Di-n-octylphthalate	149	24.924	24.924	(1.000)	22224	0.20000	0.2160

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (ug/mL)	ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.582	25.598	(0.974)	21545	0.20000	0.2127
75 Benzo(k)fluoranthene	252	25.621	25.637	(0.976)	22901	0.20000	0.2157
76 Benzo(a)pyrene	252	26.155	26.155	(0.996)	21139	0.20000	0.2083
* 77 Perylene-d12	264	26.256	26.256	(1.000)	333561	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.573	28.573	(1.088)	22716	0.20000	0.2084
79 Dibenzo(a,h)anthracene	278	28.597	28.597	(1.089)	18151	0.20000	0.2121
80 Benzo(g,h,i)perylene	276	29.249	29.257	(1.114)	19306	0.20000	0.2060
90 N-Nitrosodimethylamine	74	4.366	4.374	(0.488)	7183	0.40000	0.3539
91 Aniline	93	8.383	8.375	(0.937)	16284	0.20000	0.2491
93 Benzidine	184	21.487	21.495	(0.902)	18751	0.40000	0.6077
103 Pyridine	79	4.420	4.405	(0.494)	6462	0.40000	0.4260
105 1-methylnaphthalene	142	13.382	13.375	(1.154)	10917	0.20000	0.2152
111 Azobenzene (1,2-DP-Hydrazine)	77	17.041	17.049	(1.100)	11815	0.20000	0.2276
187 Total Benzofluoranthenes	252	25.582	25.621	(0.974)	43721	0.40000	0.4372
99 Perylene	252	26.302	26.326	(1.002)	20215	0.20000	0.2158
98 Retene	219	Compound Not Detected.					
120 2,3,4,6-Tetrachlorophenol	232	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: ic1129c.d  
 Lab Smp Id: ABN0.2  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121129.b/ABN.m  
 Misc Info:

Calibration Date: 29-NOV-2012  
 Calibration Time: 09:54

Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	83245	2.05
27 Naphthalene-d8	299399	149700	598798	309486	3.37
42 Acenaphthene-d10	178564	89282	357128	189575	6.17
59 Phenanthrene-d10	305410	152705	610820	319035	4.46
69 Chrysene-d12	323853	161926	647706	350481	8.22
134 Di-n-octylphthala	427845	213922	855690	447487	4.59
77 Perylene-d12	305316	152658	610632	333561	9.25

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.94	8.44	9.44	8.95	0.09
27 Naphthalene-d8	11.59	11.09	12.09	11.60	0.07
42 Acenaphthene-d10	15.48	14.98	15.98	15.49	0.05
59 Phenanthrene-d10	18.75	18.25	19.25	18.76	0.04
69 Chrysene-d12	23.82	23.32	24.32	23.82	0.00
134 Di-n-octylphthala	24.92	24.42	25.42	24.92	0.00
77 Perylene-d12	26.26	25.76	26.76	26.26	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.

Date File: /chem1/nt10.1/20121129.b/1c1129c.d

Date: 29-NOV-2012 11:10

Client ID:

Sample Info: ABNO.2

Column phase: ZB-Buss1

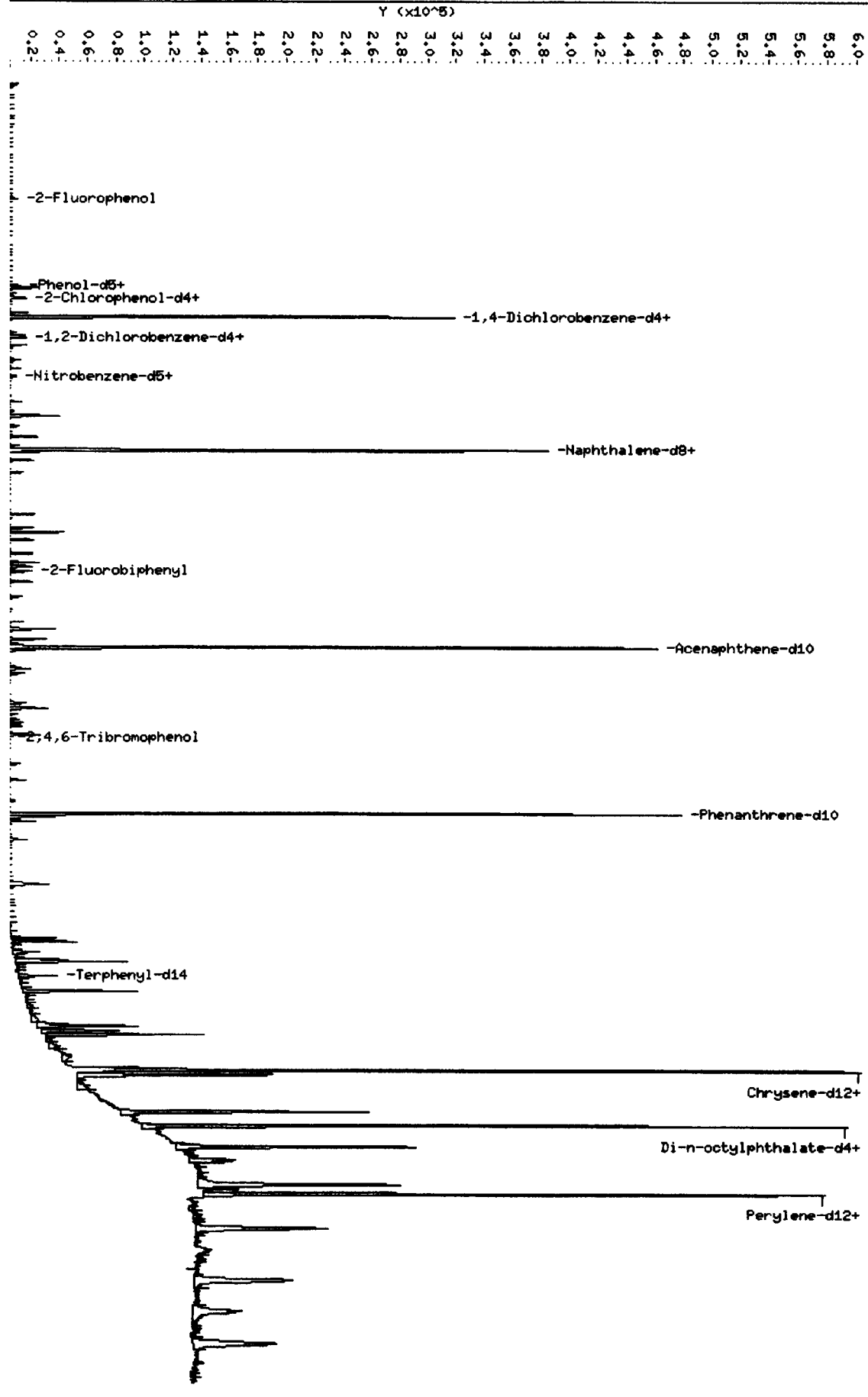
Instrument: nt10.i

Operator: VHS/VZ

Column diameter: 0.25

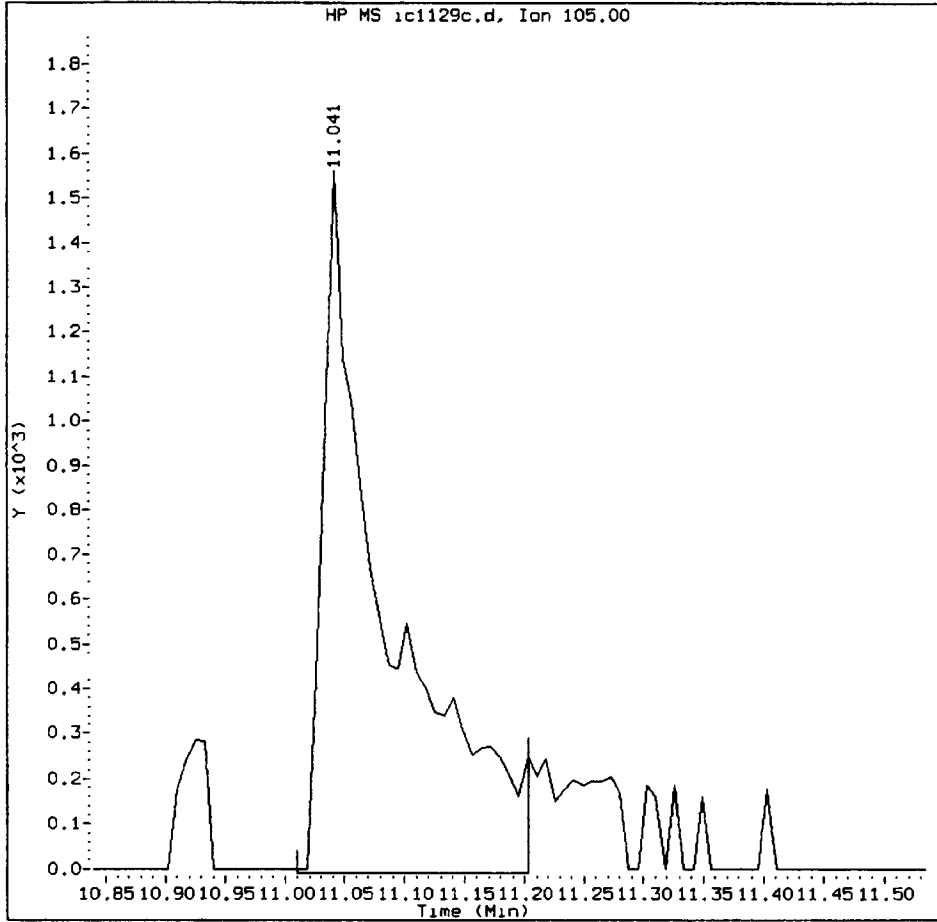
Page 11

/chem1/nt10.1/20121129.b/1c1129c.d



ABN0.2, /chem1/nt10.i/20121129.b/ic1129c.d

Benzoic acid Amount: 0.46 Area: 6040



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation
5. Other \_\_\_\_\_

Analyst: YB

Date: 12/24/12



CO-ELUTION SUMMARY FOR FILE - ic1129c.d

Lab ID: ABN0.2, Method: ABN.m, Instrument: nt10.i, Date: 29-NOV-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121129.b/ic1129d.d  
 Lab Smp Id: ABN1  
 Inj Date : 29-NOV-2012 12:24  
 Operator : VTS/YZ  
 Smp Info : ABN1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121129.b/ABN.m  
 Meth Date : 30-Nov-2012 10:49 yev  
 Cal Date : 29-NOV-2012 12:24  
 Als bottle: 5  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: ic1129d.d  
 Calibration Sample, Level: 3  
 Compound Sublist: PSDDAICAL.sub

*YZ 12/04/12*

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
								CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112			6.621	6.613	(0.740)	27072	1.00000	1.039
\$ 2 Phenol-d5	99			8.313	8.305	(0.929)	33767	1.00000	1.039
3 Phenol	94			8.336	8.328	(0.932)	37812	1.00000	1.099
\$ 5 2-Chlorophenol-d4	132			8.568	8.560	(0.958)	29544	1.00000	1.059
4 Bis(2-Chloroethyl)ether	93			8.491	8.483	(0.949)	26087	1.00000	1.087
6 2-Chlorophenol	128			8.599	8.591	(0.961)	34363	1.00000	1.080
7 1,3-Dichlorobenzene	146			8.877	8.869	(0.992)	33889	1.00000	1.032
* 8 1,4-Dichlorobenzene-d4	152			8.947	8.939	(1.000)	80400	4.00000	
9 1,4-Dichlorobenzene	146			8.978	8.970	(1.003)	31509	1.00000	1.015
\$ 10 1,2-Dichlorobenzene-d4	152			9.327	9.319	(1.042)	21322	1.00000	1.033
12 1,2-Dichlorobenzene	146			9.358	9.343	(1.046)	31432	1.00000	1.034
11 Benzyl alcohol	108			9.257	9.249	(1.035)	16937	1.00000	1.010
14 2,2'-oxybis(1-Chloropropane)	121			10.925	10.918	(1.221)	32530	1.00000	1.080
13 2-Methylphenol	108			9.514	9.506	(1.063)	31454	1.00000	1.067
17 Hexachloroethane	117			9.987	9.971	(1.116)	12781	1.00000	1.013
16 N-Nitroso-di-n-propylamine	70			9.855	9.855	(1.101)	17930	1.00000	1.039
15 4-Methylphenol	108			9.816	9.793	(1.097)	17469	1.00000	0.9844
\$ 18 Nitrobenzene-d5	82			10.119	10.103	(0.873)	28493	1.00000	1.035
19 Nitrobenzene	77			10.150	10.150	(0.875)	27340	1.00000	1.072
20 Isophorone	82			10.647	10.639	(0.918)	50359	1.00000	1.030
21 2-Nitrophenol	139			10.825	10.825	(0.934)	21483	1.00000	1.103
22 2,4-Dimethylphenol	107			10.918	10.910	(0.942)	61801	2.00000	2.156
23 Bis(2-Chloroethoxy)methane	93			11.126	11.118	(0.959)	30555	1.00000	1.037
24 Benzoic acid	105			11.087	11.187	(0.956)	64413	4.00000	4.663
25 2,4-Dichlorophenol	162			11.326	11.318	(0.977)	56381	2.00000	2.155
26 1,2,4-Trichlorobenzene	180			11.519	11.495	(0.993)	16895	1.00000	1.000
* 27 Naphthalene-d8	136			11.596	11.588	(1.000)	298996	4.00000	

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
28 Naphthalene	128	11.642	11.627	(1.004)	76926	1.00000	1.040
29 4-Chloroaniline	127	11.804	11.797	(1.018)	64900	2.00000	2.124
30 Hexachlorobutadiene	225	12.044	12.036	(1.039)	16758	1.00000	0.9385
31 4-Chloro-3-methylphenol	107	12.872	12.872	(1.110)	53137	2.00000	2.137
32 2-Methylnaphthalene	142	13.143	13.135	(1.133)	56900	1.00000	1.042
33 Hexachlorocyclopentadiene	237	13.661	13.661	(0.882)	39563	2.00000	1.921
34 2,4,6-Trichlorophenol	196	13.831	13.831	(0.893)	43409	2.00000	2.013
35 2,4,5-Trichlorophenol	196	13.909	13.917	(0.898)	48047	2.00000	2.071
\$ 36 2-Fluorobiphenyl	172	14.002	13.994	(0.904)	67334	1.00000	1.025
37 2-Chloronaphthalene	162	14.211	14.211	(0.918)	54241	1.00000	1.020
38 2-Nitroaniline	65	14.505	14.512	(0.937)	25058	2.00000	2.060
39 Dimethylphthalate	163	15.000	14.992	(0.968)	60156	1.00000	1.016
40 Acenaphthylene	152	15.139	15.131	(0.978)	89732	1.00000	1.020
41 2,6-Dinitrotoluene	165	15.132	15.139	(0.977)	27764	2.00000	2.070
* 42 Acenaphthene-d10	164	15.488	15.480	(1.000)	185582	4.00000	
43 3-Nitroaniline	138	15.434	15.434	(0.996)	32184	2.00000	2.221
44 Acenaphthene	153	15.557	15.549	(1.004)	52283	1.00000	1.038
45 2,4-Dinitrophenol	184	15.658	15.665	(1.011)	25740	4.00000	3.042
46 Dibenzofuran	168	15.913	15.905	(1.027)	76589	1.00000	1.025
47 4-Nitrophenol	109	15.828	15.836	(1.022)	14604	2.00000	2.187
48 2,4-Dinitrotoluene	165	16.006	16.006	(1.033)	36689	2.00000	2.116
50 Diethylphthalate	149	16.585	16.577	(1.071)	59719	1.00000	0.9322
49 Fluorene	166	16.678	16.670	(1.077)	64126	1.00000	1.038
51 4-Chlorophenyl-phenylether	204	16.694	16.701	(1.078)	29753	1.00000	1.053
52 4-Nitroaniline	138	16.802	16.802	(1.085)	30445	2.00000	2.361
53 4,6-Dinitro-2-methylphenol	198	16.902	16.910	(0.901)	52140	4.00000	3.713
54 N-Nitrosodiphenylamine	169	16.972	16.964	(0.905)	41234	1.00000	1.057
\$ 55 2,4,6-Tribromophenol	330	17.257	17.257	(1.114)	10521	1.00000	0.9830
56 4-Bromophenyl-phenylether	248	17.774	17.789	(0.948)	18289	1.00000	1.014
57 Hexachlorobenzene	284	18.098	18.090	(0.965)	22739	1.00000	0.9914
58 Pentachlorophenol	266	18.501	18.493	(0.986)	26074	2.00000	1.803
* 59 Phenanthrene-d10	188	18.756	18.748	(1.000)	311338	4.00000	
60 Phenanthrene	178	18.802	18.802	(1.002)	82469	1.00000	1.039
61 Anthracene	178	18.903	18.895	(1.008)	88807	1.00000	1.040
62 Carbazole	167	19.259	19.274	(1.027)	74666	1.00000	1.151
63 Di-n-butylphthalate	149	20.125	20.118	(1.073)	98360	1.00000	0.9744
64 Fluoranthene	202	21.216	21.216	(1.131)	101569	1.00000	1.024
65 Pyrene	202	21.634	21.634	(0.908)	105899	1.00000	1.011
\$ 66 Terphenyl-d14	244	21.959	21.951	(0.922)	68624	1.00000	0.9696
67 Butylbenzylphthalate	149	22.904	22.896	(0.961)	42625	1.00000	0.9780
68 Benzo (a) anthracene	228	23.794	23.794	(0.999)	103753	1.00000	1.035
* 69 Chrysene-d12	240	23.825	23.825	(1.000)	347341	4.00000	
70 3,3'-Dichlorobenzidine	252	23.771	23.786	(0.998)	114847	2.00000	2.409
71 Chrysene	228	23.864	23.864	(1.002)	87370	1.00000	0.9624
72 bis(2-Ethylhexyl)phthalate	149	23.941	23.941	(0.961)	59321	1.00000	0.9411
* 134 Di-n-octylphthalate-d4	153	24.917	24.917	(1.000)	441093	4.00000	
73 Di-n-octylphthalate	149	24.924	24.924	(1.000)	102201	1.00000	1.005

Compounds	QUANT SIG			AMOUNTS		
	MASS	RT	EXP RT REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.582	25.598 (0.974)	102047	1.00000	0.9915
75 Benzo(k)fluoranthene	252	25.621	25.637 (0.976)	111998	1.00000	1.022
76 Benzo(a)pyrene	252	26.155	26.155 (0.996)	102567	1.00000	0.9935
* 77 Perylene-d12	264	26.256	26.256 (1.000)	340415	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.573	28.573 (1.088)	111376	1.00000	1.001
79 Dibenzo(a,h)anthracene	278	28.589	28.597 (1.089)	89605	1.00000	1.017
80 Benzo(g,h,i)perylene	276	29.249	29.257 (1.114)	93977	1.00000	0.9885
90 N-Nitrosodimethylamine	74	4.366	4.374 (0.488)	36729	2.00000	1.914
91 Aniline	93	8.383	8.375 (0.937)	74556	1.00000	1.114
93 Benzidine	184	21.479	21.495 (0.902)	79046	2.00000	2.355
103 Pyridine	79	4.397	4.405 (0.491)	32136	2.00000	2.125
105 1-methylnaphthalene	142	13.383	13.375 (1.154)	51117	1.00000	1.028
111 Azobenzene (1,2-DP-Hydrazine)	77	17.041	17.049 (1.100)	55790	1.00000	1.063
187 Total Benzofluoranthenes	252	25.621	25.621 (0.976)	201530	2.00000	1.983
99 Perylene	252	26.303	26.326 (1.002)	94973	1.00000	0.9955
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: ic1129d.d  
 Lab Smp Id: ABN1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121129.b/ABN.m  
 Misc Info:

Calibration Date: 29-NOV-2012  
 Calibration Time: 09:54

Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	80400	-1.44
27 Naphthalene-d8	299399	149700	598798	298996	-0.13
42 Acenaphthene-d10	178564	89282	357128	185582	3.93
59 Phenanthrene-d10	305410	152705	610820	311338	1.94
69 Chrysene-d12	323853	161926	647706	347341	7.25
134 Di-n-octylphthala	427845	213922	855690	441093	3.10
77 Perylene-d12	305316	152658	610632	340415	11.50

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.94	8.44	9.44	8.95	0.09
27 Naphthalene-d8	11.59	11.09	12.09	11.60	0.07
42 Acenaphthene-d10	15.48	14.98	15.98	15.49	0.05
59 Phenanthrene-d10	18.75	18.25	19.25	18.76	0.04
69 Chrysene-d12	23.82	23.32	24.32	23.83	0.00
134 Di-n-octylphthala	24.92	24.42	25.42	24.92	0.00
77 Perylene-d12	26.26	25.76	26.76	26.26	0.00

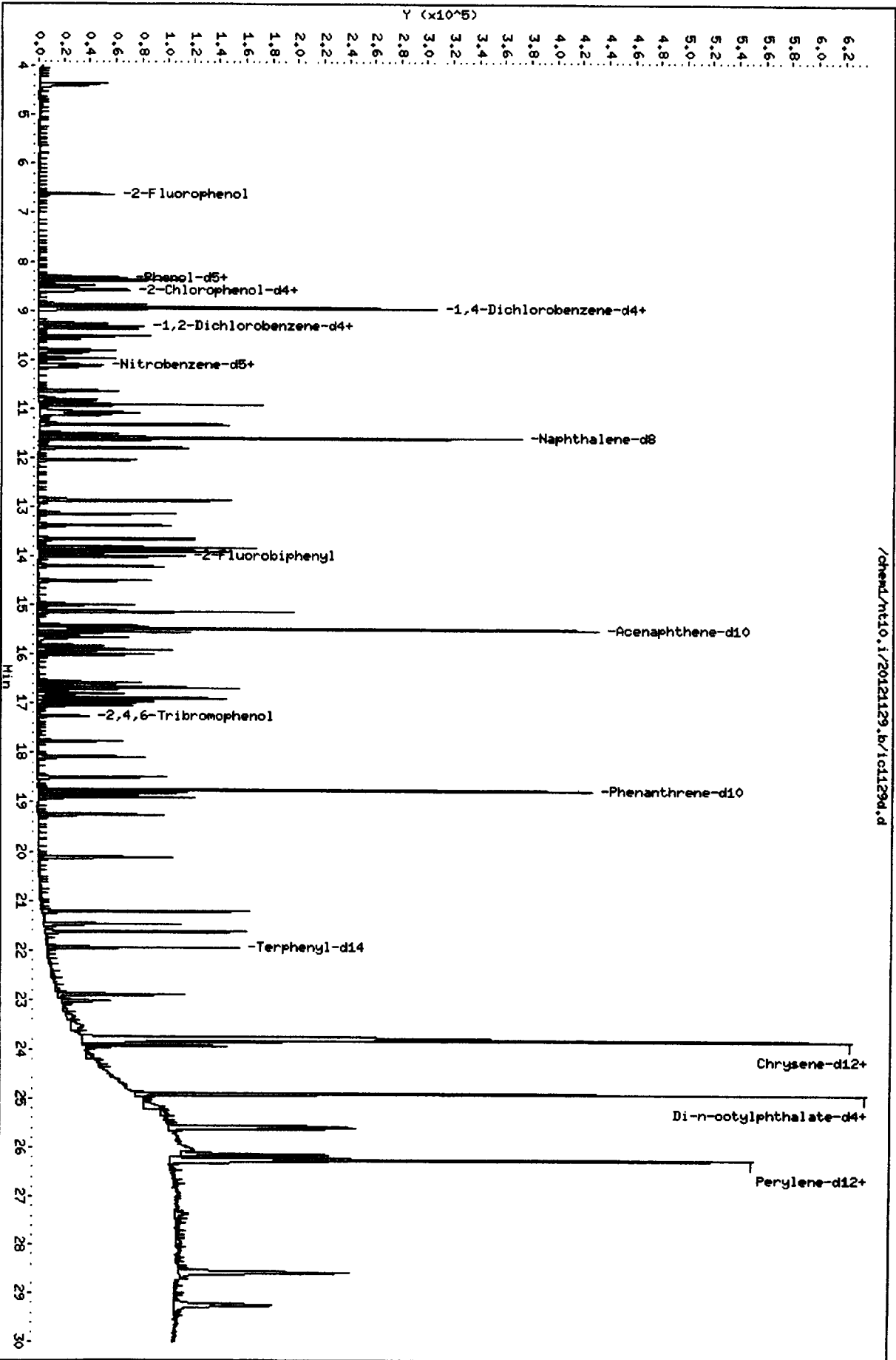
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20121129.b/1c1129d.d  
Date : 29-NOV-2012 12:24

Client ID:  
Sample Info: ABN1

Column phase: ZB-Smsi

Instrument: nt10.i  
Operator: VTS/VZ  
Column diameter: 0.25



/chem1/nt10.i/20121129.b/1c1129d.d

CO-ELUTION SUMMARY FOR FILE - ic1129d.d

Lab ID: ABN1, Method: ABN.m, Instrument: nt10.i, Date: 29-NOV-2012

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121129.b/ic1129e.d

Lab Smp Id: ABN10

Inj Date : 29-NOV-2012 13:02

Operator : VTS/YZ

Inst ID: nt10.i

Smp Info : ABN10

Misc Info :

Comment : 1ul Injection

Method : /chem1/nt10.i/20121129.b/ABN.m

Meth Date : 30-Nov-2012 10:49 yev

Quant Type: ISTD

Cal Date : 29-NOV-2012 13:02

Cal File: ic1129e.d

Als bottle: 6

Calibration Sample, Level: 6

Dil Factor: 1.00000

Integrator: HP RTE

Compound Sublist: PSDDAICAL.sub

Target Version: 3.50

*YZ 12/1/12*

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
								CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112			6.621	6.613	(0.740)	232577	10.0000	9.115
\$ 2 Phenol-d5	99			8.321	8.305	(0.930)	281285	10.0000	8.905
3 Phenol	94			8.344	8.328	(0.933)	248404	10.0000	7.710
\$ 5 2-Chlorophenol-d4	132			8.576	8.560	(0.958)	236986	10.0000	8.771
4 Bis(2-Chloroethyl)ether	93			8.491	8.483	(0.949)	191337	10.0000	8.347
6 2-Chlorophenol	128			8.599	8.591	(0.961)	274169	10.0000	8.871
7 1,3-Dichlorobenzene	146			8.877	8.869	(0.992)	274109	10.0000	8.657
* 8 1,4-Dichlorobenzene-d4	152			8.947	8.939	(1.000)	81024	4.00000	
9 1,4-Dichlorobenzene	146			8.986	8.970	(1.004)	250044	10.0000	8.418
\$ 10 1,2-Dichlorobenzene-d4	152			9.335	9.319	(1.043)	157055	10.0000	8.042
12 1,2-Dichlorobenzene	146			9.358	9.343	(1.046)	206993	10.0000	7.354
11 Benzyl alcohol	108			9.265	9.249	(1.036)	143668	10.0000	8.831
14 2,2'-oxybis(1-Chloropropane)	121			10.933	10.918	(1.222)	234431	10.0000	8.192
13 2-Methylphenol	108			9.521	9.506	(1.064)	229019	10.0000	8.180
17 Hexachloroethane	117			9.987	9.971	(1.116)	107820	10.0000	8.815
16 N-Nitroso-di-n-propylamine	70			9.863	9.855	(1.102)	101572	10.0000	6.521
15 4-Methylphenol	108			9.816	9.793	(1.097)	174894	10.0000	9.834
\$ 18 Nitrobenzene-d5	82			10.119	10.103	(0.873)	243518	10.0000	9.887
19 Nitrobenzene	77			10.158	10.150	(0.876)	191540	10.0000	8.721
20 Isophorone	82			10.654	10.639	(0.919)	407425	10.0000	9.446
21 2-Nitrophenol	139			10.833	10.825	(0.934)	205962	10.0000	11.27
22 2,4-Dimethylphenol	107			10.933	10.910	(0.943)	451403	20.0000	18.09
23 Bis(2-Chloroethoxy)methane	93			11.133	11.118	(0.960)	217923	10.0000	8.615
24 Benzoic acid	105			11.280	11.187	(0.973)	792268	40.0000	55.57
25 2,4-Dichlorophenol	162			11.326	11.318	(0.977)	505574	20.0000	21.12
26 1,2,4-Trichlorobenzene	180			11.519	11.495	(0.993)	145909	10.0000	9.712
* 27 Naphthalene-d8	136			11.596	11.588	(1.000)	268550	4.00000	



Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (ug/mL)	ON-COL (ug/mL)
*****	****	**	*****	*****	*****	*****	*****
28 Naphthalene	128	11.642	11.627	(1.004)	575823	10.0000	8.967
29 4-Chloroaniline	127	11.812	11.797	(1.019)	490108	20.0000	18.35
30 Hexachlorobutadiene	225	12.051	12.036	(1.039)	177814	10.0000	10.79
31 4-Chloro-3-methylphenol	107	12.879	12.872	(1.111)	442499	20.0000	19.86
32 2-Methylnaphthalene	142	13.150	13.135	(1.134)	441877	10.0000	9.238
33 Hexachlorocyclopentadiene	237	13.661	13.661	(0.882)	414555	20.0000	22.00
34 2,4,6-Trichlorophenol	196	13.839	13.831	(0.894)	407608	20.0000	21.28
35 2,4,5-Trichlorophenol	196	13.916	13.917	(0.899)	419858	20.0000	20.61
§ 36 2-Fluorobiphenyl	172	14.009	13.994	(0.905)	520601	10.0000	9.325
37 2-Chloronaphthalene	162	14.218	14.211	(0.918)	452146	10.0000	9.840
38 2-Nitroaniline	65	14.520	14.512	(0.938)	219049	20.0000	20.54
39 Dimethylphthalate	163	15.008	14.992	(0.969)	530675	10.0000	10.23
40 Acenaphthylene	152	15.147	15.131	(0.978)	695037	10.0000	9.300
41 2,6-Dinitrotoluene	165	15.139	15.139	(0.978)	233343	20.0000	20.02
* 42 Acenaphthene-d10	164	15.488	15.480	(1.000)	161271	4.00000	
43 3-Nitroaniline	138	15.449	15.434	(0.998)	282213	20.0000	21.75
44 Acenaphthene	153	15.565	15.549	(1.005)	407313	10.0000	9.467
45 2,4-Dinitrophenol	184	15.681	15.665	(1.012)	416868	40.0000	49.77
46 Dibenzofuran	168	15.920	15.905	(1.028)	593929	10.0000	9.348
47 4-Nitrophenol	109	15.843	15.836	(1.023)	150190	20.0000	24.11
48 2,4-Dinitrotoluene	165	16.013	16.006	(1.034)	317542	20.0000	20.79
50 Diethylphthalate	149	16.601	16.577	(1.072)	572948	10.0000	10.22
49 Fluorene	166	16.686	16.670	(1.077)	490974	10.0000	9.343
51 4-Chlorophenyl-phenylether	204	16.701	16.701	(1.078)	238606	10.0000	9.785
52 4-Nitroaniline	138	16.825	16.802	(1.086)	183618	20.0000	17.16
53 4,6-Dinitro-2-methylphenol	198	16.925	16.910	(0.902)	603603	40.0000	41.50
54 N-Nitrosodiphenylamine	169	16.987	16.964	(0.905)	320921	10.0000	8.498
§ 55 2,4,6-Tribromophenol	330	17.272	17.257	(1.115)	107755	10.0000	11.14
56 4-Bromophenyl-phenylether	248	17.781	17.789	(0.948)	169079	10.0000	9.408
57 Hexachlorobenzene	284	18.106	18.090	(0.965)	205074	10.0000	9.069
58 Pentachlorophenol	266	18.508	18.493	(0.986)	324348	20.0000	21.33
* 59 Phenanthrene-d10	188	18.764	18.748	(1.000)	316450	4.00000	
60 Phenanthrene	178	18.810	18.802	(1.002)	662755	10.0000	8.597
61 Anthracene	178	18.911	18.895	(1.008)	689644	10.0000	8.378
62 Carbazole	167	19.267	19.274	(1.027)	530049	10.0000	8.453
63 Di-n-butylphthalate	149	20.125	20.118	(1.073)	960002	10.0000	9.510
64 Fluoranthene	202	21.224	21.216	(1.131)	894345	10.0000	9.132
65 Pyrene	202	21.642	21.634	(0.908)	880462	10.0000	8.238
§ 66 Terphenyl-d14	244	21.959	21.951	(0.921)	612144	10.0000	8.424
67 Butylbenzylphthalate	149	22.903	22.896	(0.961)	378896	10.0000	8.458
68 Benzo(a)anthracene	228	23.809	23.794	(0.999)	916647	10.0000	8.803
* 69 Chrysene-d12	240	23.833	23.825	(1.000)	375349	4.00000	
70 3,3'-Dichlorobenzidine	252	23.779	23.786	(0.998)	705688	20.0000	15.31
71 Chrysene	228	23.879	23.864	(1.002)	875465	10.0000	9.170
72 bis(2-Ethylhexyl)phthalate	149	23.941	23.941	(0.961)	626035	10.0000	9.787
* 134 Di-n-octylphthalate-d4	153	24.924	24.917	(1.000)	450764	4.00000	
73 Di-n-octylphthalate	149	24.932	24.924	(1.000)	934613	10.0000	9.227

Compounds	QUANT SIG		AMOUNTS					
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	
74 Benzo(b)fluoranthene	252	25.590	25.598	(0.974)	878456	10.0000	9.279	
75 Benzo(k)fluoranthene	252	25.629	25.637	(0.976)	1057427	10.0000	10.18	
76 Benzo(a)pyrene	252	26.163	26.155	(0.996)	886981	10.0000	9.326	
* 77 Perylene-d12	264	26.264	26.256	(1.000)	320675	4.00000		
78 Indeno(1,2,3-cd)pyrene	276	28.589	28.573	(1.089)	994357	10.0000	9.609	
79 Dibenzo(a,h)anthracene	278	28.620	28.597	(1.090)	786525	10.0000	9.604	
80 Benzo(g,h,i)perylene	276	29.272	29.257	(1.115)	850474	10.0000	9.617	
90 N-Nitrosodimethylamine	74	4.373	4.374	(0.489)	309046	20.0000	16.83	
91 Aniline	93	8.383	8.375	(0.937)	586891	10.0000	8.993	
93 Benzidine	184	21.487	21.495	(0.902)	567994	20.0000	16.56	
103 Pyridine	79	4.381	4.405	(0.490)	204698	20.0000	14.63	
105 1-methylnaphthalene	142	13.382	13.375	(1.154)	409862	10.0000	9.372	
111 Azobenzene (1,2-DP-Hydrazine)	77	17.056	17.049	(1.101)	438954	10.0000	9.717	
187 Total Benzofluoranthenes	252	25.629	25.621	(0.976)	1821720	20.0000	19.26	
99 Perylene	252	26.318	26.326	(1.002)	847744	10.0000	9.569	
98 Retene	219	Compound Not Detected.						
120 2,3,4,6-Tetrachlorophenol	232	16.307	16.284	(1.053)	793	10.0000	18.84	

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: ic1129e.d  
 Lab Smp Id: ABN10  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121129.b/ABN.m  
 Misc Info:

Calibration Date: 29-NOV-2012  
 Calibration Time: 09:54

Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	81024	-0.67
27 Naphthalene-d8	299399	149700	598798	268550	-10.30
42 Acenaphthene-d10	178564	89282	357128	161271	-9.68
59 Phenanthrene-d10	305410	152705	610820	316450	3.61
69 Chrysene-d12	323853	161926	647706	375349	15.90
134 Di-n-octylphthala	427845	213922	855690	450764	5.36
77 Perylene-d12	305316	152658	610632	320675	5.03

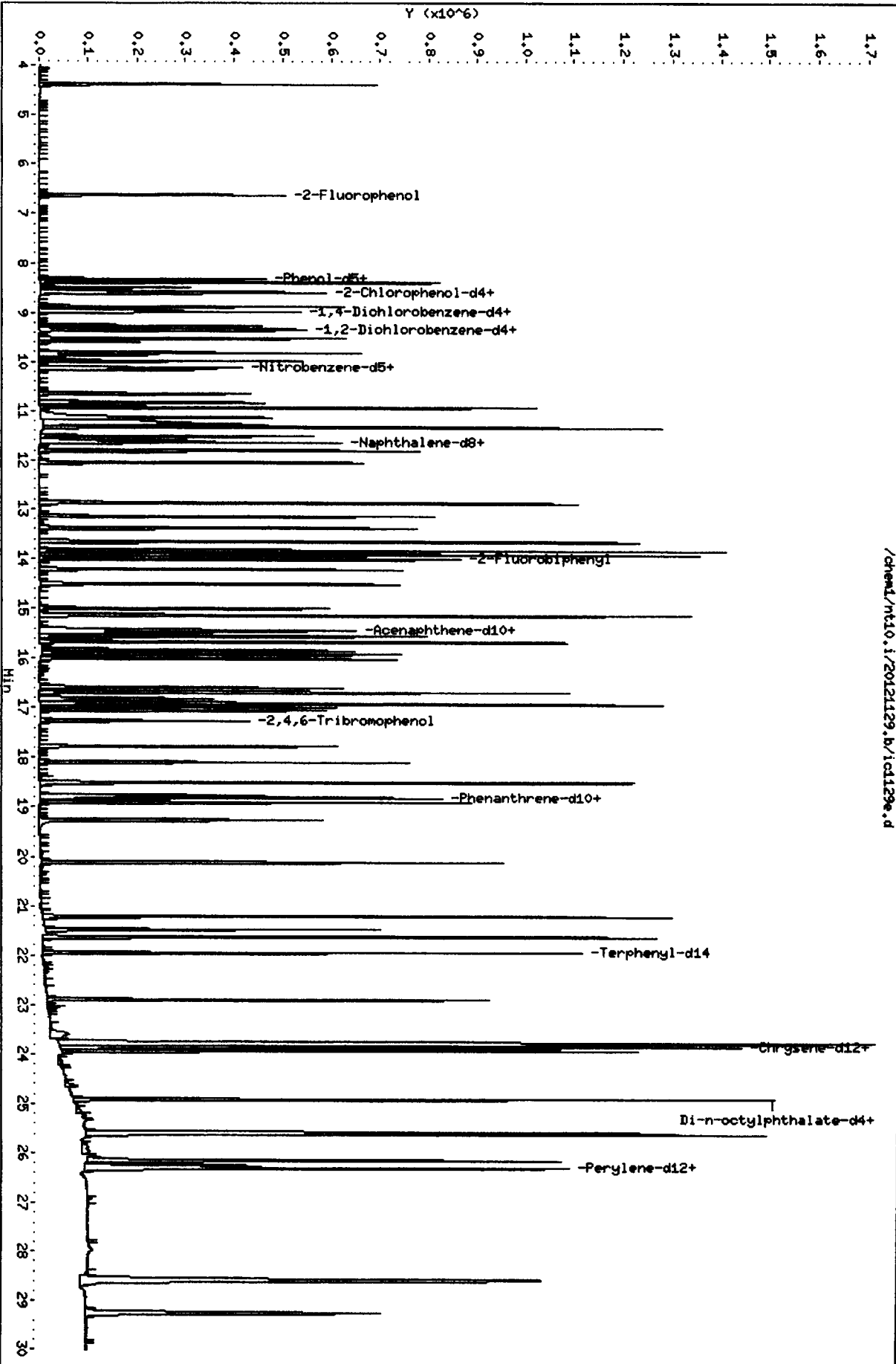
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.94	8.44	9.44	8.95	0.09
27 Naphthalene-d8	11.59	11.09	12.09	11.60	0.07
42 Acenaphthene-d10	15.48	14.98	15.98	15.49	0.05
59 Phenanthrene-d10	18.75	18.25	19.25	18.76	0.08
69 Chrysene-d12	23.82	23.32	24.32	23.83	0.03
134 Di-n-octylphthala	24.92	24.42	25.42	24.92	0.03
77 Perylene-d12	26.26	25.76	26.76	26.26	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/20121129.b/1c1129e.d  
Date : 29-NOV-2012 13:02  
Client ID:  
Sample Info: ABN10  
Column phase: ZB-Smsi

Instrument: nt10.i  
Operator: VTS/VZ  
Column diameter: 0.25

/chem1/nt10.i/20121129.b/1c1129e.d



CO-ELUTION SUMMARY FOR FILE - ic1129e.d

Lab ID: ABN10, Method: ABN.m, Instrument: nt10.i, Date: 29-NOV-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121129.b/ic1129g.d

Lab Smp Id: ABN2.5

Inj Date : 29-NOV-2012 14:16

Operator : VTS/YZ

Inst ID: nt10.i

Smp Info : ABN2.5

Misc Info :

Comment : 1ul Injection

Method : /chem1/nt10.i/20121129.b/ABN.m

Meth Date : 30-Nov-2012 10:49 yev

Cal Date : 29-NOV-2012 14:16

Als bottle: 8

Dil Factor: 1.00000

Integrator: HP RTE

Target Version: 3.50

Quant Type: ISTD

Cal File: ic1129g.d

Calibration Sample, Level: 4

Compound Sublist: PSSDAICAL.sub

*Y2 12/01/12*

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 2-Fluorophenol	112	6.621	6.613	(0.740)	65834	2.50000	2.621
2 Phenol-d5	99	8.313	8.305	(0.929)	82065	2.50000	2.635
3 Phenol	94	8.336	8.328	(0.932)	86285	2.50000	2.699
5 2-Chlorophenol-d4	132	8.568	8.560	(0.958)	70543	2.50000	2.645
4 Bis(2-Chloroethyl)ether	93	8.491	8.483	(0.949)	63151	2.50000	2.759
6 2-Chlorophenol	128	8.599	8.591	(0.961)	79627	2.50000	2.618
7 1,3-Dichlorobenzene	146	8.877	8.869	(0.992)	81707	2.50000	2.621
* 8 1,4-Dichlorobenzene-d4	152	8.947	8.939	(1.000)	78814	4.00000	
9 1,4-Dichlorobenzene	146	8.978	8.970	(1.003)	77890	2.50000	2.654
\$ 10 1,2-Dichlorobenzene-d4	152	9.327	9.319	(1.042)	50356	2.50000	2.619
12 1,2-Dichlorobenzene	146	9.358	9.343	(1.046)	72914	2.50000	2.629
11 Benzyl alcohol	108	9.257	9.249	(1.035)	38888	2.50000	2.466
14 2,2'-oxybis(1-Chloropropane)	121	10.918	10.918	(1.220)	70940	2.50000	2.539
13 2-Methylphenol	108	9.514	9.506	(1.063)	75393	2.50000	2.710
17 Hexachloroethane	117	9.979	9.971	(1.115)	30496	2.50000	2.550
16 N-Nitroso-di-n-propylamine	70	9.855	9.855	(1.101)	40733	2.50000	2.648
15 4-Methylphenol	108	9.816	9.793	(1.097)	37752	2.50000	2.239
\$ 18 Nitrobenzene-d5	82	10.111	10.103	(0.872)	69883	2.50000	2.598
19 Nitrobenzene	77	10.150	10.150	(0.875)	63279	2.50000	2.630
20 Isophorone	82	10.639	10.639	(0.917)	120930	2.50000	2.574
21 2-Nitrophenol	139	10.825	10.825	(0.934)	51078	2.50000	2.568
22 2,4-Dimethylphenol	107	10.918	10.910	(0.942)	136365	5.00000	5.044
23 Bis(2-Chloroethoxy)methane	93	11.126	11.118	(0.959)	68685	2.50000	2.509
24 Benzoic acid	105	11.133	11.187	(0.960)	197445	10.00000	12.13
25 2,4-Dichlorophenol	162	11.318	11.318	(0.976)	134801	5.00000	5.164
26 1,2,4-Trichlorobenzene	180	11.519	11.495	(0.993)	38087	2.50000	2.374
* 27 Naphthalene-d8	136	11.596	11.588	(1.000)	290366	4.00000	

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
28 Naphthalene	128	11.634	11.627	(1.003)	173330	2.50000	2.497
29 4-Chloroaniline	127	11.797	11.797	(1.017)	155287	5.00000	5.297
30 Hexachlorobutadiene	225	12.044	12.036	(1.039)	49911	2.50000	2.736
31 4-Chloro-3-methylphenol	107	12.872	12.872	(1.110)	125834	5.00000	5.177
32 2-Methylnaphthalene	142	13.143	13.135	(1.133)	133948	2.50000	2.572
33 Hexachlorocyclopentadiene	237	13.661	13.661	(0.882)	102250	5.00000	4.888
34 2,4,6-Trichlorophenol	196	13.831	13.831	(0.893)	109920	5.00000	5.105
35 2,4,5-Trichlorophenol	196	13.909	13.917	(0.898)	120725	5.00000	5.237
\$ 36 2-Fluorobiphenyl	172	14.002	13.994	(0.904)	162234	2.50000	2.578
37 2-Chloronaphthalene	162	14.211	14.211	(0.918)	132206	2.50000	2.558
38 2-Nitroaniline	65	14.512	14.512	(0.937)	61977	5.00000	5.156
39 Dimethylphthalate	163	15.000	14.992	(0.968)	147770	2.50000	2.538
40 Acenaphthylene	152	15.147	15.131	(0.978)	211108	2.50000	2.521
41 2,6-Dinitrotoluene	165	15.139	15.139	(0.978)	67312	5.00000	5.130
* 42 Acenaphthene-d10	164	15.488	15.480	(1.000)	180347	4.00000	
43 3-Nitroaniline	138	15.434	15.434	(0.996)	72677	5.00000	5.008
44 Acenaphthene	153	15.557	15.549	(1.004)	119719	2.50000	2.491
45 2,4-Dinitrophenol	184	15.665	15.665	(1.011)	94427	10.00000	10.06
46 Dibenzofuran	168	15.921	15.905	(1.028)	180378	2.50000	2.531
47 4-Nitrophenol	109	15.835	15.836	(1.022)	35532	5.00000	5.080
48 2,4-Dinitrotoluene	165	16.006	16.006	(1.033)	90512	5.00000	5.237
50 Diethylphthalate	149	16.593	16.577	(1.071)	141034	2.50000	2.295
49 Fluorene	166	16.686	16.670	(1.077)	150940	2.50000	2.554
51 4-Chlorophenyl-phenylether	204	16.701	16.701	(1.078)	68582	2.50000	2.512
52 4-Nitroaniline	138	16.810	16.802	(1.085)	57888	5.00000	4.870
53 4,6-Dinitro-2-methylphenol	198	16.910	16.910	(0.901)	147413	10.00000	10.36
54 N-Nitrosodiphenylamine	169	16.979	16.964	(0.905)	96743	2.50000	2.620
\$ 55 2,4,6-Tribromophenol	330	17.265	17.257	(1.115)	26815	2.50000	2.484
56 4-Bromophenyl-phenylether	248	17.781	17.789	(0.948)	44396	2.50000	2.545
57 Hexachlorobenzene	284	18.106	18.090	(0.965)	53875	2.50000	2.473
58 Pentachlorophenol	266	18.508	18.493	(0.986)	75129	5.00000	5.085
* 59 Phenanthrene-d10	188	18.764	18.748	(1.000)	305764	4.00000	
60 Phenanthrene	178	18.818	18.802	(1.003)	190253	2.50000	2.543
61 Anthracene	178	18.911	18.895	(1.008)	212138	2.50000	2.632
62 Carbazole	167	19.274	19.274	(1.027)	152701	2.50000	2.516
63 Di-n-butylphthalate	149	20.133	20.118	(1.073)	243682	2.50000	2.499
64 Fluoranthene	202	21.224	21.216	(1.131)	245312	2.50000	2.573
65 Pyrene	202	21.650	21.634	(0.908)	256146	2.50000	2.695
\$ 66 Terphenyl-d14	244	21.967	21.951	(0.921)	165901	2.50000	2.594
67 Butylbenzylphthalate	149	22.911	22.896	(0.961)	99911	2.50000	2.546
68 Benzo(a)anthracene	228	23.810	23.794	(0.999)	240793	2.50000	2.620
* 69 Chrysene-d12	240	23.841	23.825	(1.000)	327280	4.00000	
70 3,3'-Dichlorobenzidine	252	23.786	23.786	(0.998)	200521	5.00000	4.991
71 Chrysene	228	23.879	23.864	(1.002)	197366	2.50000	2.396
72 bis(2-Ethylhexyl)phthalate	149	23.957	23.941	(0.961)	132547	2.50000	2.234
* 134 Di-n-octylphthalate-d4	153	24.932	24.917	(1.000)	429286	4.00000	
73 Di-n-octylphthalate	149	24.940	24.924	(1.000)	242435	2.50000	2.511

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.598	25.598	(0.974)	233704	2.50000	2.413
75 Benzo(k)fluoranthene	252	25.637	25.637	(0.976)	281700	2.50000	2.602
76 Benzo(a)pyrene	252	26.171	26.155	(0.996)	219761	2.50000	2.287
* 77 Perylene-d12	264	26.279	26.256	(1.000)	330902	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.605	28.573	(1.088)	268395	2.50000	2.511
79 Dibenzo(a,h)anthracene	278	28.636	28.597	(1.090)	213294	2.50000	2.519
80 Benzo(g,h,i)perylene	276	29.288	29.257	(1.114)	226917	2.50000	2.489
90 N-Nitrosodimethylamine	74	4.366	4.374	(0.488)	90472	5.00000	5.051
91 Aniline	93	8.375	8.375	(0.936)	157822	2.50000	2.489
93 Benzidine	184	21.495	21.495	(0.902)	97794	5.00000	3.513
103 Pyridine	79	4.389	4.405	(0.491)	72865	5.00000	5.280
105 1-methylnaphthalene	142	13.383	13.375	(1.154)	122280	2.50000	2.568
111 Azobenzene (1,2-DP-Hydrazine)	77	17.049	17.049	(1.101)	125533	2.50000	2.488
187 Total Benzofluoranthenes	252	25.637	25.621	(0.976)	478269	5.00000	4.920
99 Perylene	252	26.326	26.326	(1.002)	225177	2.50000	2.470
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: ic1129g.d  
 Lab Smp Id: ABN2.5  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121129.b/ABN.m  
 Misc Info:

Calibration Date: 29-NOV-2012  
 Calibration Time: 09:54

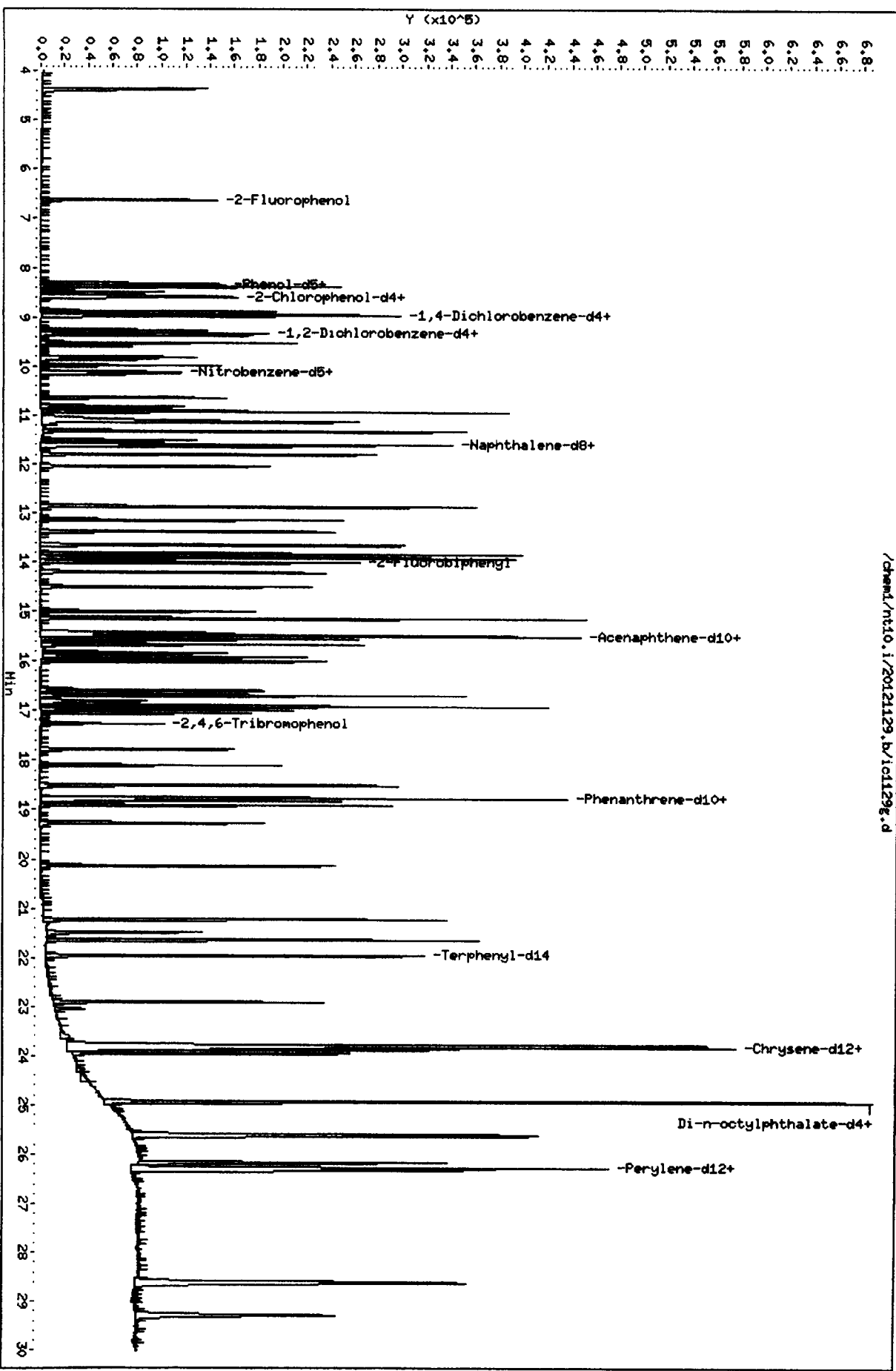
Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	78814	-3.38
27 Naphthalene-d8	299399	149700	598798	290366	-3.02
42 Acenaphthene-d10	178564	89282	357128	180347	1.00
59 Phenanthrene-d10	305410	152705	610820	305764	0.12
69 Chrysene-d12	323853	161926	647706	327280	1.06
134 Di-n-octylphthala	427845	213922	855690	429286	0.34
77 Perylene-d12	305316	152658	610632	330902	8.38

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.94	8.44	9.44	8.95	0.09
27 Naphthalene-d8	11.59	11.09	12.09	11.60	0.07
42 Acenaphthene-d10	15.48	14.98	15.98	15.49	0.05
59 Phenanthrene-d10	18.75	18.25	19.25	18.76	0.08
69 Chrysene-d12	23.82	23.32	24.32	23.84	0.07
134 Di-n-octylphthala	24.92	24.42	25.42	24.93	0.06
77 Perylene-d12	26.26	25.76	26.76	26.28	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.



CO-ELUTION SUMMARY FOR FILE - ic1129g.d

Lab ID: ABN2.5, Method: ABN.m, Instrument: nt10.i, Date: 29-NOV-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

*YZ 12/1/12*

Data file : /chem1/nt10.i/20121129.b/ic1129i.d  
 Lab Smp Id: ABN0.5  
 Inj Date : 29-NOV-2012 15:30  
 Operator : VTS/YZ  
 Smp Info : ABN0.5  
 Misc Info :  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121129.b/ABN.m  
 Meth Date : 30-Nov-2012 10:49 yev  
 Cal Date : 29-NOV-2012 15:30  
 Als bottle: 10  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: ic1129i.d  
 Calibration Sample, Level: 2  
 Compound Sublist: PSDDAICAL.sub

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112	6.621	6.613	(0.740)	13246	0.50000	0.5089
\$ 2 Phenol-d5	99	8.313	8.305	(0.929)	16236	0.50000	0.5041
3 Phenol	94	8.336	8.328	(0.932)	19261	0.50000	0.5677
\$ 5 2-Chlorophenol-d4	132	8.568	8.560	(0.958)	14771	0.50000	0.5301
4 Bis(2-Chloroethyl)ether	93	8.483	8.483	(0.948)	14869	0.50000	0.6033
6 2-Chlorophenol	128	8.591	8.591	(0.960)	17422	0.50000	0.5448
7 1,3-Dichlorobenzene	146	8.877	8.869	(0.992)	17790	0.50000	0.5432
* 8 1,4-Dichlorobenzene-d4	152	8.947	8.939	(1.000)	81366	4.00000	
9 1,4-Dichlorobenzene	146	8.978	8.970	(1.003)	16432	0.50000	0.5348
\$ 10 1,2-Dichlorobenzene-d4	152	9.327	9.319	(1.042)	11338	0.50000	0.5580
12 1,2-Dichlorobenzene	146	9.351	9.343	(1.045)	16867	0.50000	0.5721
11 Benzyl alcohol	108	9.257	9.249	(1.035)	7428	0.50000	0.4630
14 2,2'-oxybis(1-Chloropropane)	121	10.918	10.918	(1.220)	16377	0.50000	0.5552
13 2-Methylphenol	108	9.514	9.506	(1.063)	15671	0.50000	0.5375
17 Hexachloroethane	117	9.979	9.971	(1.115)	7009	0.50000	0.5552
16 N-Nitroso-di-n-propylamine	70	9.855	9.855	(1.101)	8941	0.50000	0.5515
15 4-Methylphenol	108	9.816	9.793	(1.097)	8376	0.50000	0.4843
\$ 18 Nitrobenzene-d5	82	10.111	10.103	(0.872)	14640	0.50000	0.5287
19 Nitrobenzene	77	10.150	10.150	(0.875)	13520	0.50000	0.5427
20 Isophorone	82	10.639	10.639	(0.917)	24631	0.50000	0.5125
21 2-Nitrophenol	139	10.825	10.825	(0.934)	9931	0.50000	0.4921
22 2,4-Dimethylphenol	107	10.918	10.910	(0.942)	31140	1.00000	1.107
23 Bis(2-Chloroethoxy)methane	93	11.118	11.118	(0.959)	15698	0.50000	0.5518
24 Benzoic acid	105	11.056	11.187	(0.953)	22106	2.00000	1.412
25 2,4-Dichlorophenol	162	11.318	11.318	(0.976)	28421	1.00000	1.057
26 1,2,4-Trichlorobenzene	180	11.519	11.495	(0.993)	8481	0.50000	0.5161
* 27 Naphthalene-d8	136	11.596	11.588	(1.000)	295539	4.00000	

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
28 Naphthalene	128	11.634	11.627	(1.003)	39081	0.50000	0.5435
29 4-Chloroaniline	127	11.797	11.797	(1.017)	32182	1.00000	1.065
30 Hexachlorobutadiene	225	12.044	12.036	(1.039)	8842	0.50000	0.4800
31 4-Chloro-3-methylphenol	107	12.872	12.872	(1.110)	25637	1.00000	1.030
32 2-Methylnaphthalene	142	13.143	13.135	(1.133)	28167	0.50000	0.5258
33 Hexachlorocyclopentadiene	237	13.661	13.661	(0.882)	19105	1.00000	0.9194
34 2,4,6-Trichlorophenol	196	13.831	13.831	(0.893)	20660	1.00000	0.9553
35 2,4,5-Trichlorophenol	196	13.917	13.917	(0.899)	22022	1.00000	0.9517
\$ 36 2-Fluorobiphenyl	172	14.009	13.994	(0.905)	34647	0.50000	0.5356
37 2-Chloronaphthalene	162	14.211	14.211	(0.918)	28353	0.50000	0.5340
38 2-Nitroaniline	65	14.512	14.512	(0.937)	11391	1.00000	0.9453
39 Dimethylphthalate	163	15.000	14.992	(0.968)	29649	0.50000	0.5021
40 Acenaphthylene	152	15.147	15.131	(0.978)	46973	0.50000	0.5437
41 2,6-Dinitrotoluene	165	15.139	15.139	(0.978)	13210	1.00000	0.9945
* 42 Acenaphthene-d10	164	15.488	15.480	(1.000)	182776	4.00000	
43 3-Nitroaniline	138	15.434	15.434	(0.996)	15185	1.00000	1.027
44 Acenaphthene	153	15.557	15.549	(1.004)	26348	0.50000	0.5336
45 2,4-Dinitrophenol	184	15.665	15.665	(1.011)	8764	2.00000	1.195
46 Dibenzofuran	168	15.913	15.905	(1.027)	39270	0.50000	0.5359
47 4-Nitrophenol	109	15.836	15.836	(1.022)	6125	1.00000	0.8842
48 2,4-Dinitrotoluene	165	16.006	16.006	(1.033)	16908	1.00000	0.9709
50 Diethylphthalate	149	16.585	16.577	(1.071)	29714	0.50000	0.4808
49 Fluorene	166	16.686	16.670	(1.077)	32679	0.50000	0.5375
51 4-Chlorophenyl-phenylether	204	16.701	16.701	(1.078)	15398	0.50000	0.5462
52 4-Nitroaniline	138	16.802	16.802	(1.085)	13202	1.00000	1.079
53 4,6-Dinitro-2-methylphenol	198	16.910	16.910	(0.901)	21956	2.00000	1.567
54 N-Nitrosodiphenylamine	169	16.979	16.964	(0.905)	21088	0.50000	0.5410
\$ 55 2,4,6-Tribromophenol	330	17.265	17.257	(1.115)	4946	0.50000	0.4594
56 4-Bromophenyl-phenylether	248	17.789	17.789	(0.948)	9029	0.50000	0.4989
57 Hexachlorobenzene	284	18.106	18.090	(0.965)	11728	0.50000	0.5154
58 Pentachlorophenol	266	18.508	18.493	(0.986)	11431	1.00000	0.7853
* 59 Phenanthrene-d10	188	18.764	18.748	(1.000)	317404	4.00000	
60 Phenanthrene	178	18.810	18.802	(1.002)	41613	0.50000	0.5295
61 Anthracene	178	18.911	18.895	(1.008)	44250	0.50000	0.5238
62 Carbazole	167	19.274	19.274	(1.027)	38193	0.50000	0.5855
63 Di-n-butylphthalate	149	20.133	20.118	(1.073)	46713	0.50000	0.4674
64 Fluoranthene	202	21.232	21.216	(1.132)	49780	0.50000	0.5025
65 Pyrene	202	21.650	21.634	(0.908)	53102	0.50000	0.5217
\$ 66 Terphenyl-d14	244	21.967	21.951	(0.921)	34368	0.50000	0.5051
67 Butylbenzylphthalate	149	22.919	22.896	(0.961)	19898	0.50000	0.4812
68 Benzo(a)anthracene	228	23.810	23.794	(0.999)	52358	0.50000	0.5302
* 69 Chrysene-d12	240	23.841	23.825	(1.000)	347450	4.00000	
70 3,3'-Dichlorobenzidine	252	23.786	23.786	(0.998)	55368	1.00000	1.175
71 Chrysene	228	23.879	23.864	(1.002)	44545	0.50000	0.5078
72 bis(2-Ethylhexyl)phthalate	149	23.957	23.941	(0.961)	28827	0.50000	0.4956
* 134 Di-n-octylphthalate-d4	153	24.932	24.917	(1.000)	421593	4.00000	
73 Di-n-octylphthalate	149	24.940	24.924	(1.000)	49627	0.50000	0.5193

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (ug/mL)	ON-COL (ug/mL)
74 Benzo(b)fluoranthene	252	25.598	25.598	(0.974)	48912	0.50000	0.4918
75 Benzo(k)fluoranthene	252	25.637	25.637	(0.976)	58789	0.50000	0.5224
76 Benzo(a)pyrene	252	26.171	26.155	(0.996)	44371	0.50000	0.4561
* 77 Perylene-d12	264	26.279	26.256	(1.000)	340912	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.605	28.573	(1.088)	55465	0.50000	0.5030
79 Dibenzo(a,h)anthracene	278	28.636	28.597	(1.090)	44431	0.50000	0.5078
80 Benzo(g,h,i)perylene	276	29.280	29.257	(1.114)	48319	0.50000	0.5120
90 N-Nitrosodimethylamine	74	4.374	4.374	(0.489)	19047	1.00000	1.025
91 Aniline	93	8.375	8.375	(0.936)	40546	0.50000	0.5956
93 Benzidine	184	21.495	21.495	(0.902)	40793	1.00000	1.298
103 Pyridine	79	4.405	4.405	(0.492)	16399	1.00000	1.123
105 1-methylnaphthalene	142	13.383	13.375	(1.154)	26358	0.50000	0.5361
111 Azobenzene (1,2-DP-Hydrazine)	77	17.049	17.049	(1.101)	28602	0.50000	0.5485
187 Total Benzofluoranthenes	252	25.637	25.621	(0.976)	101219	1.00000	1.009
99 Perylene	252	26.326	26.326	(1.002)	48036	0.50000	0.5096
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: ic1129i.d  
 Lab Smp Id: ABN0.5  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121129.b/ABN.m  
 Misc Info:

Calibration Date: 29-NOV-2012  
 Calibration Time: 09:54

Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	81366	-0.25
27 Naphthalene-d8	299399	149700	598798	295539	-1.29
42 Acenaphthene-d10	178564	89282	357128	182776	2.36
59 Phenanthrene-d10	305410	152705	610820	317404	3.93
69 Chrysene-d12	323853	161926	647706	347450	7.29
134 Di-n-octylphthala	427845	213922	855690	421593	-1.46
77 Perylene-d12	305316	152658	610632	340912	11.66

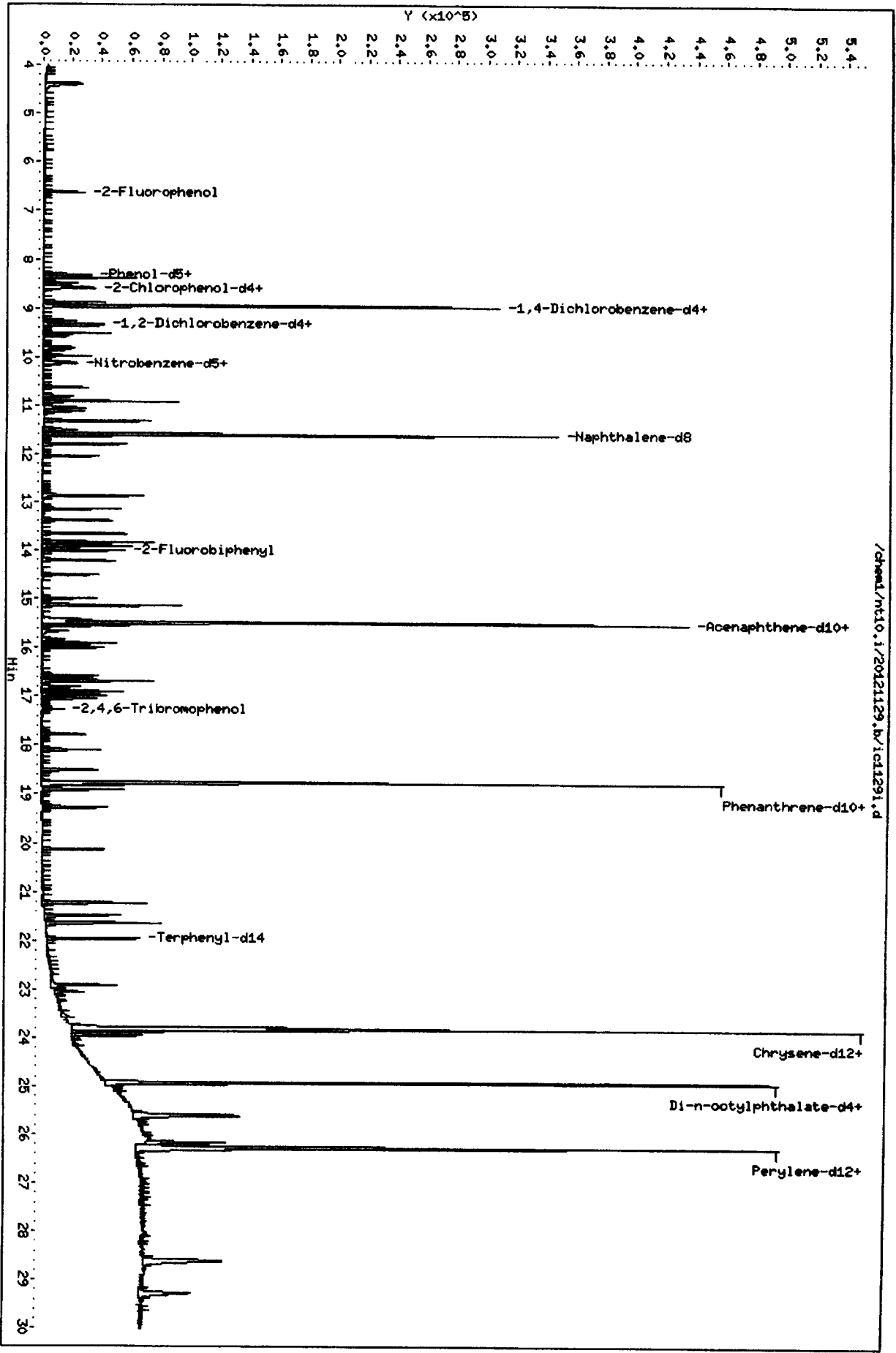
COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.94	8.44	9.44	8.95	0.09
27 Naphthalene-d8	11.59	11.09	12.09	11.60	0.07
42 Acenaphthene-d10	15.48	14.98	15.98	15.49	0.05
59 Phenanthrene-d10	18.75	18.25	19.25	18.76	0.08
69 Chrysene-d12	23.82	23.32	24.32	23.84	0.07
134 Di-n-octylphthala	24.92	24.42	25.42	24.93	0.06
77 Perylene-d12	26.26	25.76	26.76	26.28	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: /chem/nt10.i/20121129.b/1c11291.d  
Date: 29-NOV-2012 15:30  
Client ID:  
Sample Info: ABW0.5

Column Phase: ZB-Gms1

Instrument: nt10.i  
Operator: VTS/ATZ  
Column diameter: 0.25



11/29/2012 15:30:00



CO-ELUTION SUMMARY FOR FILE - ic1129i.d

Lab ID: ABN0.5, Method: ABN.m, Instrument: nt10.i, Date: 29-NOV-2012

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Data File: /chem1/nt10.i/20121129,b/df1129.d

Page 1

Date : 29-NOV-2012 09:38

Client ID: DF1TPP

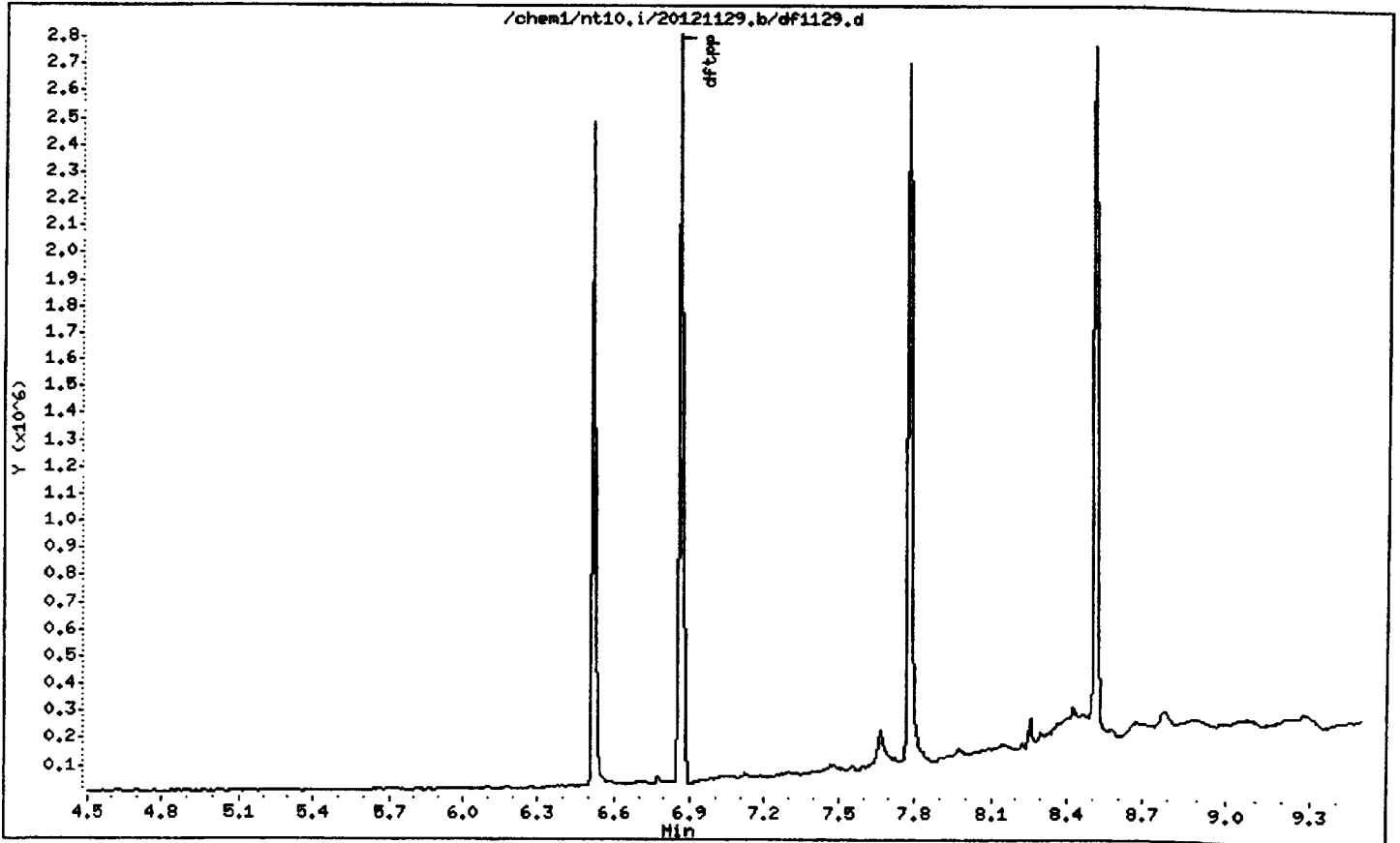
Instrument: nt10.i

Sample Info: DF1TPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Date : 29-NOV-2012 09:38

Client ID: DFTPP

Instrument: nt10.i

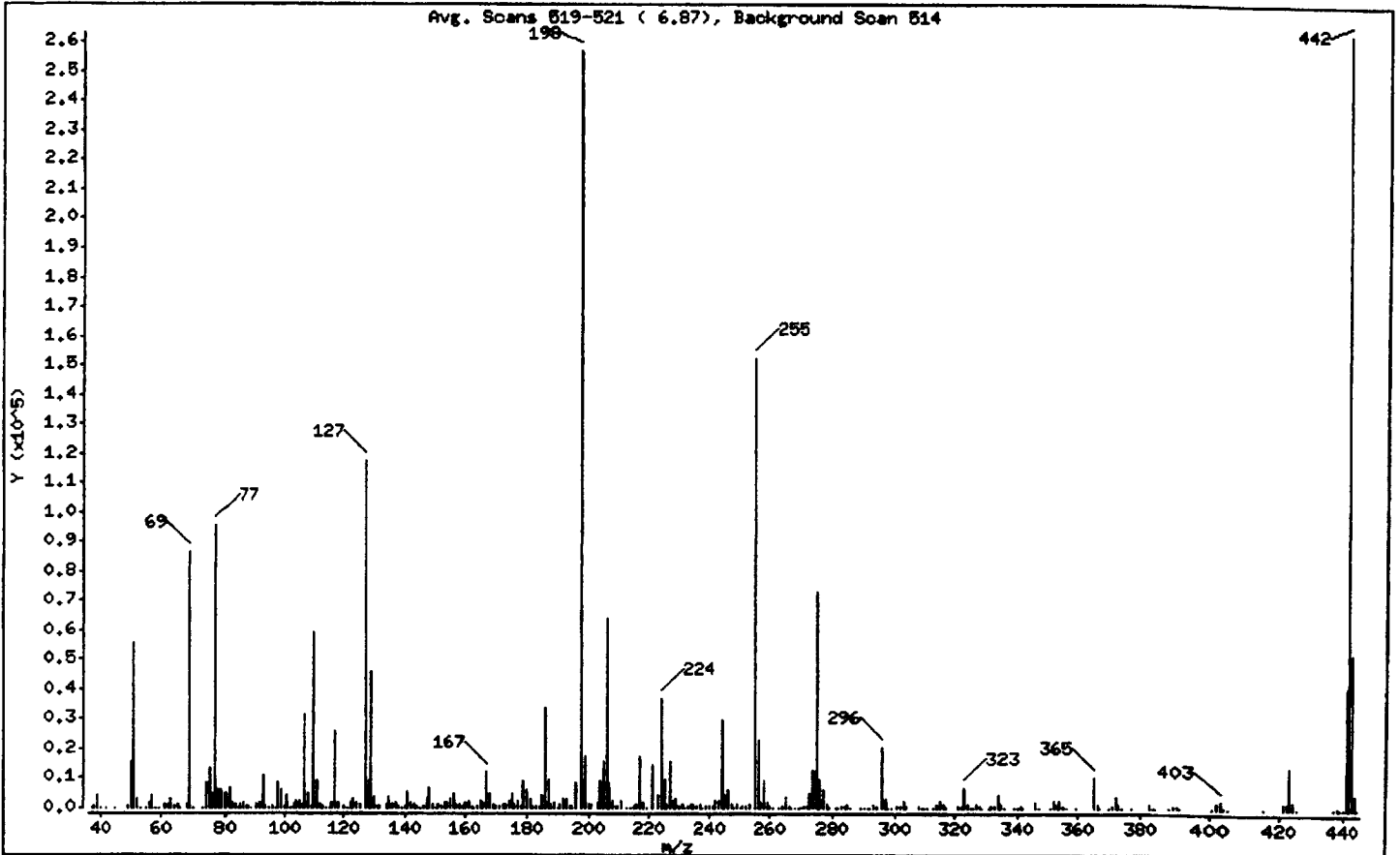
Sample Info: DFTPP

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	21.74
68	Less than 2.00% of mass 69	0.82 ( 1.54)
69	Mass 69 relative abundance	33.66
70	Less than 2.00% of mass 69	0.09 ( 0.27)
127	10.00 - 80.00% of mass 198	45.71
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.82
278	10.00 - 60.00% of mass 198	28.39
365	Greater than 1.00% of mass 198	4.10
441	0.01 - 24.00% of mass 442	16.07 ( 15.69)
442	50.00 - 200.00% of mass 198	102.47
443	15.00 - 24.00% of mass 442	20.48 ( 19.99)

Date : 29-NOV-2012 09:38

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1129.d

Spectrum: Avg. Scans 519-521 ( 6.87), Background Scan 514

Location of Maximum: 442.00

Number of points: 314

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	271	130.00	3791	213.00	208	301.00	326
38.00	786	131.00	690	214.00	73	302.00	488
39.00	4128	132.00	488	215.00	816	303.00	2441
40.00	164	134.00	1296	216.00	1461	304.00	606
42.00	60	135.00	3877	217.00	17496	308.00	368
45.00	219	136.00	1439	218.00	2020	309.00	212
49.00	523	137.00	1736	219.00	119	310.00	268
50.00	15520	138.00	479	221.00	14738	311.00	103
51.00	55840	139.00	206	223.00	4148	313.00	216
52.00	2899	140.00	588	224.00	36688	314.00	1138
53.00	200	141.00	5740	225.00	9428	315.00	2398
55.00	113	142.00	2001	226.00	1044	316.00	1460
56.00	1803	143.00	1276	227.00	15654	317.00	315
57.00	4321	144.00	410	228.00	2225	321.00	719
58.00	279	145.00	137	229.00	3281	322.00	368
59.00	195	146.00	907	230.00	477	323.00	6822
61.00	944	147.00	2776	231.00	1400	324.00	1215
62.00	1051	148.00	6529	232.00	258	325.00	151
63.00	2987	149.00	1212	233.00	342	326.00	74
64.00	440	150.00	253	234.00	1013	327.00	1359
65.00	1436	151.00	1014	235.00	1236	328.00	753
66.00	50	152.00	384	236.00	793	329.00	111
68.00	1329	153.00	1804	237.00	1361	331.00	130
69.00	86472	154.00	1597	238.00	184	332.00	610
70.00	236	155.00	3317	239.00	615	333.00	740
73.00	298	156.00	4896	240.00	599	334.00	4504
74.00	8401	157.00	960	241.00	855	335.00	1118
75.00	13500	158.00	1230	242.00	2270	336.00	112
76.00	4610	159.00	838	243.00	2291	339.00	54
77.00	95384	160.00	1857	244.00	29568	340.00	125
78.00	6300	161.00	2618	245.00	4095	341.00	874
79.00	5910	162.00	875	246.00	5806	342.00	242
80.00	5021	163.00	95	247.00	1196	346.00	1563
81.00	6740	164.00	404	248.00	299	347.00	270
82.00	1725	165.00	2184	249.00	1269	351.00	152

Date : 29-NOV-2012 09:38

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1129.d

Spectrum: Avg. Scans 519-521 ( 6.87), Background Scan 514

Location of Maximum: 442.00

Number of points: 314

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	1380	166.00	1799	250.00	272	352.00	2209
84.00	107	167.00	12065	251.00	394	353.00	1500
85.00	1117	168.00	4955	252.00	394	354.00	2151
86.00	1913	169.00	1080	253.00	954	355.00	479
87.00	833	170.00	403	255.00	152576	356.00	50
88.00	357	171.00	725	256.00	22872	359.00	156
89.00	290	172.00	1050	257.00	1765	365.00	10532
91.00	1435	173.00	1278	258.00	9127	366.00	1424
92.00	1626	174.00	2594	259.00	1662	367.00	53
93.00	10982	175.00	4634	260.00	316	370.00	199
94.00	695	176.00	1442	261.00	232	371.00	600
95.00	25	177.00	2159	263.00	57	372.00	3692
96.00	317	178.00	860	264.00	375	373.00	1038
97.00	126	179.00	8839	265.00	3914	374.00	63
98.00	8623	180.00	6058	266.00	472	377.00	156
99.00	6347	181.00	2946	267.00	110	383.00	1027
100.00	562	182.00	509	268.00	41	384.00	261
101.00	4092	183.00	370	269.00	43	385.00	56
102.00	239	184.00	739	270.00	166	389.00	54
103.00	1434	185.00	4235	271.00	433	390.00	533
104.00	2556	186.00	33632	272.00	545	391.00	378
105.00	2197	187.00	9498	273.00	4988	392.00	282
106.00	962	188.00	1013	274.00	12919	401.00	215
107.00	31208	189.00	2007	275.00	72944	402.00	1572
108.00	4825	190.00	287	276.00	9779	403.00	2222
109.00	691	191.00	1108	277.00	6019	404.00	791
110.00	59400	192.00	2913	278.00	1065	405.00	132
111.00	8815	193.00	3166	279.00	263	415.00	115
112.00	1140	194.00	549	281.00	10	421.00	2048
113.00	450	195.00	484	282.00	90	422.00	1839
114.00	54	196.00	8220	283.00	875	423.00	14030
115.00	115	198.00	256896	284.00	573	424.00	2663
116.00	1861	199.00	17520	285.00	1248	425.00	203
117.00	25784	200.00	1363	286.00	249	437.00	62
118.00	1774	201.00	1171	289.00	221	438.00	326

Date : 29-NOV-2012 09:38

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1129.d

Spectrum: Avg. Scans 519-521 ( 6.87), Background Scan 514

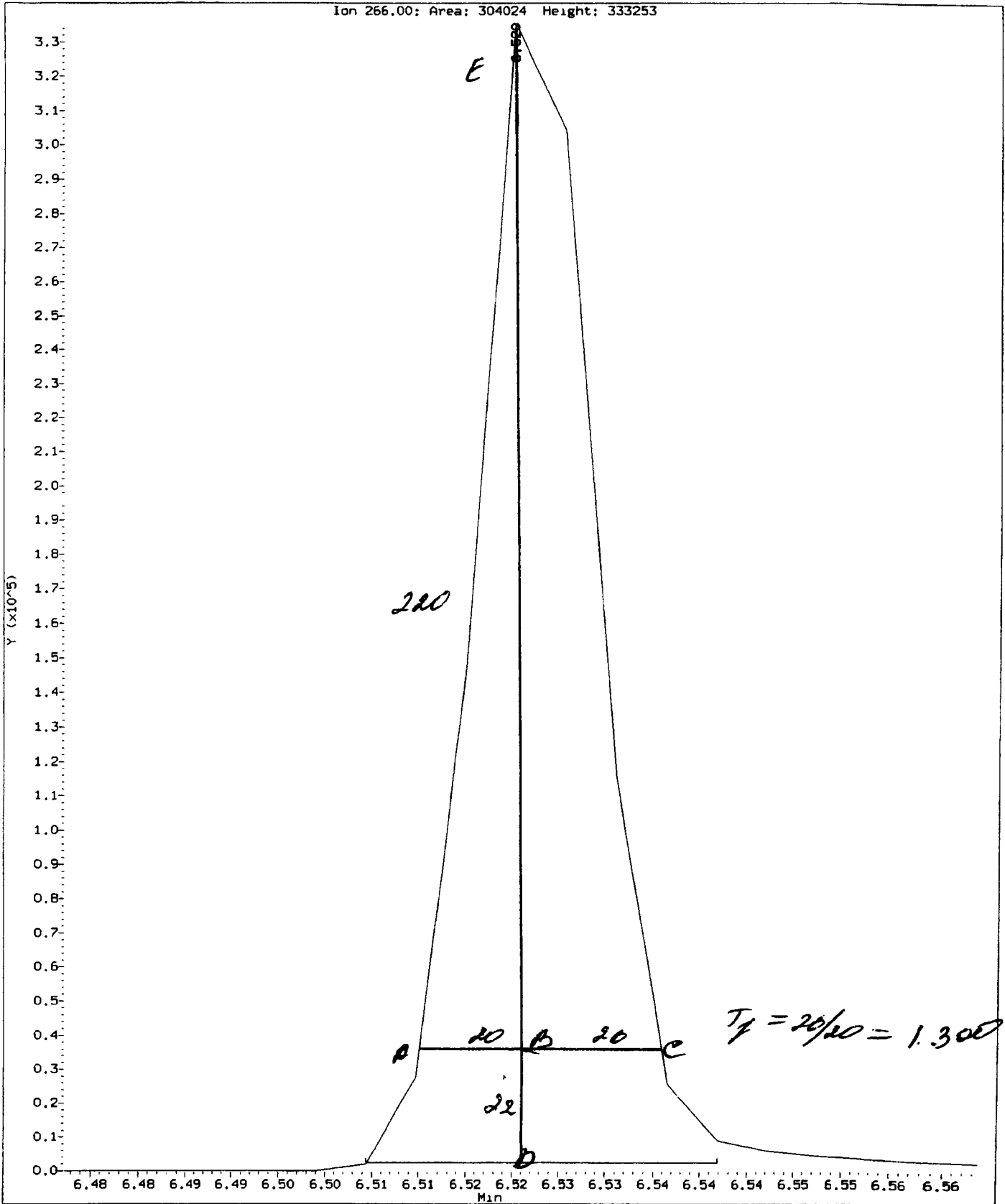
Location of Maximum: 442.00

Number of points: 314

m/z	Y	m/z	Y	m/z	Y	m/z	Y
120.00	311	203.00	1678	290.00	196	439.00	183
121.00	23	204.00	9267	291.00	134	440.00	286
122.00	2018	205.00	15828	292.00	278	441.00	41288
123.00	3284	206.00	64384	293.00	1428	442.00	263232
124.00	1565	207.00	8350	294.00	344	443.00	52608
125.00	1398	208.00	2248	296.00	20784	444.00	4700
127.00	117424	209.00	657	297.00	3037	445.00	234
128.00	8930	210.00	781	298.00	201		
129.00	45776	211.00	2601	299.00	51		

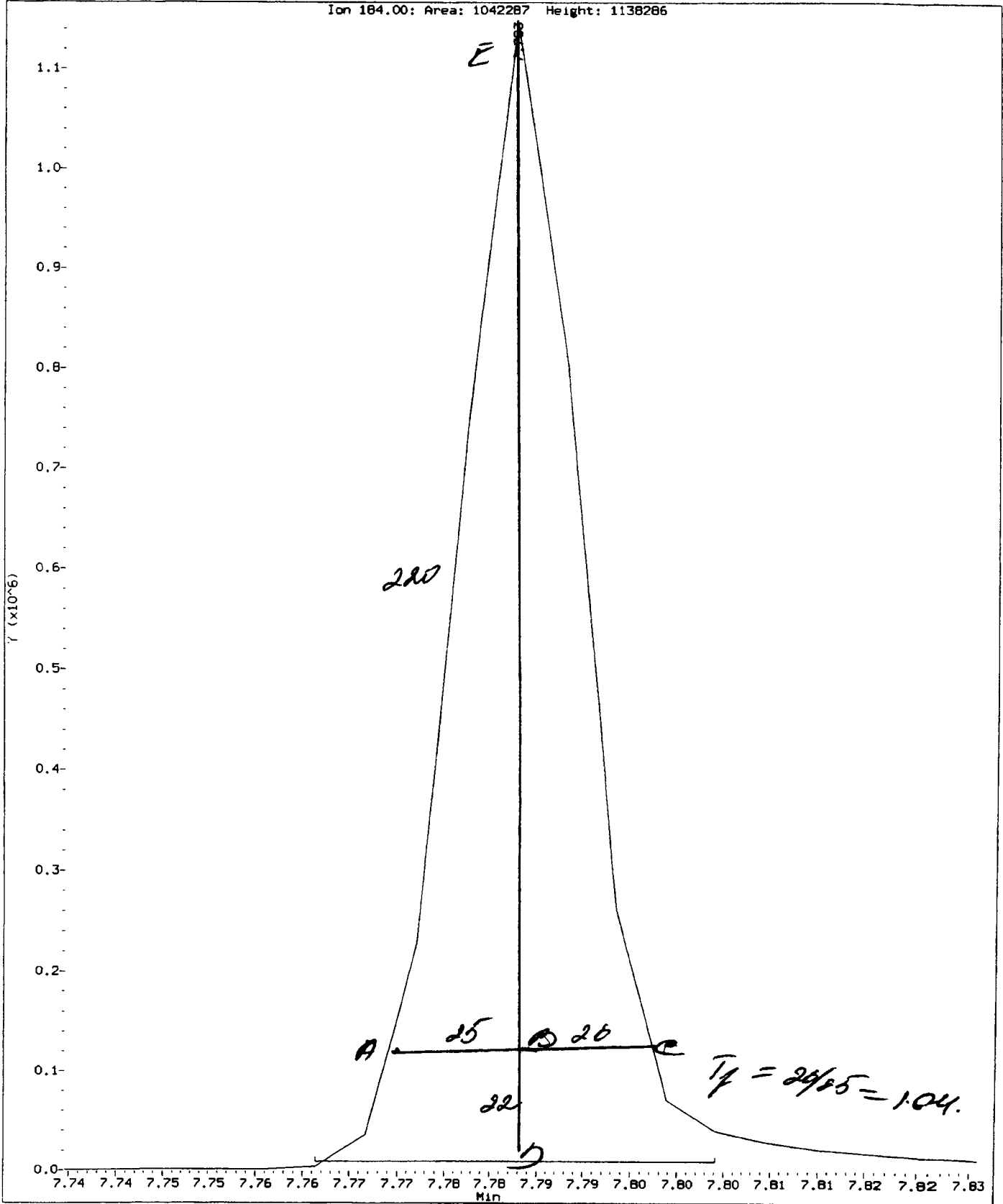
Data File: /chem1/nt10.1/20121129.b/ddt.b/df1129.d  
Injection Date: 29-NOV-2012 09:38  
Instrument: nt10.1  
Client Sample ID: DFTPP

Compound: Pentachlorophenol  
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20121129.b/ddt.b/df1129.d  
Injection Date: 29-NOV-2012 09:38  
Instrument: nt10.1  
Client Sample ID: DF1PP

Compound: Benzidine  
CAS Number:





Analytical Resources Inc.

ABN by sw846 8270C

DDT Breakdown Report

Data file: /chem1/nt10.i/20121129.b/ddt.b/df1129.d

ARI ID: DFTPP

Method: /chem1/nt10.i/20121129.b/ddt.b/sw846ddt.m

Misc: 11-

Analysis Date: 29-NOV-2012 09:38

Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.520	304023
Benzidine	7.783	1042286
4,4'-DDE	7.970	2896
4,4'-DDD	8.259	21339
4,4'-DDT	8.515	511497

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

$$\text{DDT Percent Breakdown} = \frac{(2896 + 21339) * 100}{(2896 + 21339 + 511497)}$$

$$\text{DDT Percent Breakdown} = 4.5 \%$$

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 29-Nov-2012 16:14 yev  
 Curve Type : Average

Calibration File Names:

Level 1: /chem1/nt10.i/20121129.b/ic1129c.d  
 Level 2: /chem1/nt10.i/20121129.b/ic1129i.d  
 Level 3: /chem1/nt10.i/20121129.b/ic1129d.d  
 Level 4: /chem1/nt10.i/20121129.b/ic1129g.d  
 Level 5: /chem1/nt10.i/20121129.b/ic1129a.d  
 Level 6: /chem1/nt10.i/20121129.b/ic1129e.d

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD	
186 Carbaryl	++++	++++	++++	++++	++++	++++	++++	++++	<-
179 n-Decane	++++	++++	++++	++++	++++	++++	++++	++++	<-
180 n-Octadecane	++++	++++	++++	++++	++++	++++	++++	++++	<-
169 4-tert-Butylphenol	++++	++++	++++	++++	++++	++++	++++	++++	
170 N,N-Dimethylaniline	++++	++++	++++	++++	++++	++++	++++	++++	
171 2,3-Dimethylaniline	++++	++++	++++	++++	++++	++++	++++	++++	
172 2,4-Dimethylaniline	++++	++++	++++	++++	++++	++++	++++	++++	
173 2,5-Dimethylaniline	++++	++++	++++	++++	++++	++++	++++	++++	
174 2,6-Dimethylaniline	++++	++++	++++	++++	++++	++++	++++	++++	
175 3,4-Dimethylaniline	++++	++++	++++	++++	++++	++++	++++	++++	
176 3,5-Dimethylaniline	++++	++++	++++	++++	++++	++++	++++	++++	
177 p-Benzoquinone	++++	++++	++++	++++	++++	++++	++++	++++	<-
168 Pentachlorobenzene	++++	++++	++++	++++	++++	++++	++++	++++	<-
145 4,4'-DDE	++++	++++	++++	++++	++++	++++	++++	++++	
146 4,4'-DDD	++++	++++	++++	++++	++++	++++	++++	++++	
147 4,4'-DDT	++++	++++	++++	++++	++++	++++	++++	++++	
148 Dieldrin	++++	++++	++++	++++	++++	++++	++++	++++	
149 TCMX	++++	++++	++++	++++	++++	++++	++++	++++	
150 DCBP	++++	++++	++++	++++	++++	++++	++++	++++	
138 Chlorobenzilate	++++	++++	++++	++++	++++	++++	++++	++++	
139 Isodrin	++++	++++	++++	++++	++++	++++	++++	++++	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 29-Nov-2012 16:14 yev  
 Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
140 Diallate A	++++	++++	++++	++++	++++	++++	++++	++++
141 Diallate B	++++	++++	++++	++++	++++	++++	++++	++++
142 1,2-Dibromo-3-Chloropropane	++++	++++	++++	++++	++++	++++	++++	++++
135 2,3,5,6-Tetrachlorophenol	++++	++++	++++	++++	++++	++++	++++	++++
136 2,3,4,5-tetrachlorophenol	++++	++++	++++	++++	++++	++++	++++	++++
133 Butylatedhydroxytoluene	++++	++++	++++	++++	++++	++++	++++	++++
132 3,6-Dimethylphenanthrene	++++	++++	++++	++++	++++	++++	++++	++++
131 1-Methylphenanthrene	++++	++++	++++	++++	++++	++++	++++	++++
130 Dibenzothiophene	++++	++++	++++	++++	++++	++++	++++	++++
129 1-Methylfluorene	++++	++++	++++	++++	++++	++++	++++	++++
128 N-Hexadecane	++++	++++	++++	++++	++++	++++	++++	++++
127 2-Isopropyl naphthalene	++++	++++	++++	++++	++++	++++	++++	++++
126 N-Tetradecane	++++	++++	++++	++++	++++	++++	++++	++++
144 alpha-Terpineol	++++	++++	++++	++++	++++	++++	++++	++++
125 Safrole	++++	++++	++++	++++	++++	++++	++++	++++
124 3,4-Dimethylphenol	++++	++++	++++	++++	++++	++++	++++	++++
123 Acetophenone	++++	++++	++++	++++	++++	++++	++++	++++
122 Furfuraldehyde	++++	++++	++++	++++	++++	++++	++++	++++
143 1,4-Dioxane	++++	++++	++++	++++	++++	++++	++++	++++
121 Quinoline	++++	++++	++++	++++	++++	++++	++++	++++
120 2,3,4,6-Tetrachlorophenol	++++	++++	++++	++++	0.00104	++++	0.00104	0.000
178 2-Benzyl-4-Chlorophenol	++++	++++	++++	++++	++++	++++	++++	++++
119 7,12-Dimethylbenz(a)anthracen	++++	++++	++++	++++	++++	++++	++++	++++
118 Triphenyl Phosphate	++++	++++	++++	++++	++++	++++	++++	++++
117 Butyl Diphenyl Phosphate	++++	++++	++++	++++	++++	++++	++++	++++
116 Dibutyl Phenyl Phosphate	++++	++++	++++	++++	++++	++++	++++	++++
115 Tributyl Phosphate	++++	++++	++++	++++	++++	++++	++++	++++
114 Beta-Pinene	++++	++++	++++	++++	++++	++++	++++	++++
113 Diphenyl Oxide	++++	++++	++++	++++	++++	++++	++++	++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 29-NOV-2012 09:54  
 End Cal Date : 29-NOV-2012 15:30  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt10.i/20121129.b/ABN.m  
 Cal Date : 29-Nov-2012 16:14 yev  
 Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
111 Azobenzene (1,2-DP-Hydrazine)	1.24647	1.25189	1.20249	1.11370	0.94431	1.08874	1.14127	10.321
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
105 1-methylnaphthalene	0.70549	0.71349	0.68385	0.67380	0.60560	0.61048	0.66545	7.024
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
158 Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
159 4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
160 Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
161 1,2,3-Trichloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
162 1,2,3,4-Tetrachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121129.b/icv1129.d  
 Lab Smp Id: ICV1129  
 Inj Date : 29-NOV-2012 16:07  
 Operator : VTS/YZ  
 Smp Info : ICV1129  
 Misc Info :  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121129.b/ABN.m  
 Meth Date : 01-Dec-2012 13:47 yev  
 Cal Date : 29-NOV-2012 15:30  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: ic1129i.d  
 QC Sample: LCS  
 Compound Sublist: PSDDAICAL.sub

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						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/Kg)
\$ 1 2-Fluorophenol	112								
\$ 2 Phenol-d5	99								
3 Phenol	94		8.336	8.328	(0.932)	153337	4.76588	476.6	
\$ 5 2-Chlorophenol-d4	132								
4 Bis(2-Chloroethyl) ether	93		8.491	8.483	(0.949)	122179	5.22720	522.7	
6 2-Chlorophenol	128		8.599	8.591	(0.961)	135603	4.47165	447.2	
7 1,3-Dichlorobenzene	146		8.877	8.869	(0.992)	163452	5.26284	526.3	
* 8 1,4-Dichlorobenzene-d4	152		8.947	8.939	(1.000)	77158	4.00000		
9 1,4-Dichlorobenzene	146		8.978	8.970	(1.003)	144976	4.97587	497.6	
\$ 10 1,2-Dichlorobenzene-d4	152								
12 1,2-Dichlorobenzene	146		9.358	9.343	(1.046)	145725	5.21206	521.2	
11 Benzyl alcohol	108		9.257	9.249	(1.035)	101100	6.64516	664.5 (R)	
14 2,2'-oxybis(1-Chloropropane)	121		10.918	10.918	(1.220)	61830	2.21015	221.0 (R)	
13 2-Methylphenol	108		9.514	9.506	(1.063)	112501	4.06885	406.9	
17 Hexachloroethane	117		9.979	9.971	(1.115)	59529	4.97271	497.3	

Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/Kg)	
16 N-Nitroso-di-n-propylamine	70	9.855	9.855	(1.101)	61212	3.98151	398.2	
15 4-Methylphenol	108	9.816	9.793	(1.097)	48661	2.96679	296.7 (R)	
\$ 18 Nitrobenzene-d5	82	Compound Not Detected.						
19 Nitrobenzene	77	10.150	10.150	(0.875)	130896	5.26060	526.1	
20 Isophorone	82	10.639	10.639	(0.917)	218337	4.54888	454.9	
21 2-Nitrophenol	139	10.825	10.825	(0.934)	90737	4.50188	450.2	
22 2,4-Dimethylphenol	107	10.918	10.910	(0.942)	117296	4.17633	417.6	
23 Bis(2-Chloroethoxy)methane	93	11.126	11.118	(0.959)	155058	5.45679	545.7	
24 Benzoic acid	105	11.126	11.187	(0.959)	160918	9.15992	916.0	
25 2,4-Dichlorophenol	162	11.318	11.318	(0.976)	118711	4.42249	442.2	
26 1,2,4-Trichlorobenzene	180	11.519	11.495	(0.993)	79763	4.85989	486.0	
* 27 Naphthalene-d8	136	11.596	11.588	(1.000)	295164	4.00000		
28 Naphthalene	128	11.634	11.627	(1.003)	321273	4.47389	447.4	
29 4-Chloroaniline	127	11.804	11.797	(1.018)	189165	6.26588	626.6	
30 Hexachlorobutadiene	225	12.044	12.036	(1.039)	101695	5.52777	552.8	
31 4-Chloro-3-methylphenol	107	12.872	12.872	(1.110)	111248	4.47533	447.5	
32 2-Methylnaphthalene	142	13.143	13.135	(1.133)	324287	6.06122	606.1	
33 Hexachlorocyclopentadiene	237	13.661	13.661	(0.882)	104476	5.10803	510.8	
34 2,4,6-Trichlorophenol	196	13.831	13.831	(0.893)	96978	4.55582	455.6	
35 2,4,5-Trichlorophenol	196	13.917	13.917	(0.899)	103342	4.53732	453.7	
\$ 36 2-Fluorobiphenyl	172	Compound Not Detected.						
37 2-Chloronaphthalene	162	14.211	14.211	(0.918)	235704	4.50969	451.0	
38 2-Nitroaniline	65	14.512	14.512	(0.937)	81731	6.89111	689.1 (R)	
39 Dimethylphthalate	163	15.008	14.992	(0.969)	308696	5.31131	531.1	
40 Acenaphthylene	152	15.147	15.131	(0.978)	426882	5.02033	502.0	
41 2,6-Dinitrotoluene	165	15.139	15.139	(0.978)	68291	5.22303	522.3	
* 42 Acenaphthene-d10	164	15.488	15.480	(1.000)	179902	4.00000		
43 3-Nitroaniline	138	15.441	15.434	(0.997)	99792	6.85611	685.6 (R)	
44 Acenaphthene	153	15.557	15.549	(1.004)	244539	5.03136	503.1	
45 2,4-Dinitrophenol	184	15.665	15.665	(1.011)	69963	7.50985	751.0	
46 Dibenzofuran	168	15.921	15.905	(1.028)	448263	6.21448	621.4	
47 4-Nitrophenol	109	15.835	15.836	(1.022)	30798	4.51656	451.7	
48 2,4-Dinitrotoluene	165	16.013	16.006	(1.034)	88164	5.14372	514.4	
50 Diethylphthalate	149	16.593	16.577	(1.071)	294739	4.84515	484.5	
49 Fluorene	166	16.686	16.670	(1.077)	305052	5.09765	509.8	
51 4-Chlorophenyl-phenylether	204	16.709	16.701	(1.079)	133566	4.81356	481.4	
52 4-Nitroaniline	138	16.810	16.802	(1.085)	69277	5.75041	575.0	
53 4,6-Dinitro-2-methylphenol	198	16.918	16.910	(0.902)	117954	8.54478	854.5	
54 N-Nitrosodiphenylamine	169	16.979	16.964	(0.905)	204685	5.32935	532.9	
\$ 55 2,4,6-Tribromophenol	330	Compound Not Detected.						
56 4-Bromophenyl-phenylether	248	17.789	17.789	(0.948)	99012	5.55175	555.2	
57 Hexachlorobenzene	284	18.106	18.090	(0.965)	115235	5.13876	513.9	
58 Pentachlorophenol	266	18.508	18.493	(0.986)	62454	4.35443	435.4	
* 59 Phenanthrene-d10	188	18.764	18.748	(1.000)	312760	4.00000		
60 Phenanthrene	178	18.818	18.802	(1.003)	404188	5.21948	521.9	
61 Anthracene	178	18.911	18.895	(1.008)	413304	4.96541	496.5	
62 Carbazole	167	19.274	19.274	(1.027)	336218	5.23117	523.1	

Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/Kg)	
63 Di-n-butylphthalate	149	20.141	20.118	(1.073)	545902	5.54360	554.4	
64 Fluoranthene	202	21.232	21.216	(1.132)	534700	5.47805	547.8	
65 Pyrene	202	21.650	21.634	(0.908)	546466	5.62984	563.0	
\$ 66 Terphenyl-d14	244	Compound Not Detected.						
67 Butylbenzylphthalate	149	22.919	22.896	(0.961)	222857	5.65200	565.2	
68 Benzo(a)anthracene	228	23.817	23.794	(0.999)	523913	5.56343	556.3	
* 69 Chrysene-d12	240	23.841	23.825	(1.000)	331330	4.00000		
70 3,3'-Dichlorobenzidine	252	23.794	23.786	(0.998)	136811	3.11163	311.2 (R)	
71 Chrysene	228	23.887	23.864	(1.002)	446310	5.33480	533.5	
72 bis(2-Ethylhexyl)phthalate	149	23.964	23.941	(0.961)	264503	4.37127	437.1	
* 134 Di-n-octylphthalate-d4	153	24.940	24.917	(1.000)	438545	4.00000		
73 Di-n-octylphthalate	149	24.948	24.924	(1.000)	548950	5.52196	552.2	
74 Benzo(b)fluoranthene	252	25.644	25.598	(0.976)	576583	5.91920	591.9	
75 Benzo(k)fluoranthene	252	25.644	25.637	(0.976)	576583	5.23061	523.1	
76 Benzo(a)pyrene	252	26.179	26.155	(0.996)	477464	5.01054	501.1	
* 77 Perylene-d12	264	26.287	26.256	(1.000)	333901	4.00000		
78 Indeno(1,2,3-cd)pyrene	276	28.620	28.573	(1.089)	596567	5.52396	552.4	
79 Dibenzo(a,h)anthracene	278	28.651	28.597	(1.090)	465150	5.42729	542.7	
80 Benzo(g,h,i)perylene	276	29.304	29.257	(1.115)	510519	5.52350	552.3	
90 N-Nitrosodimethylamine	74	4.366	4.374	(0.488)	93149	5.28549	528.5	
91 Aniline	93	8.375	8.375	(0.936)	177549	2.75054	275.1 (R)	
93 Benzidine	184	21.495	21.495	(0.902)	40545	1.49620	149.6 (R)	
103 Pyridine	79	4.389	4.405	(0.491)	141293	10.2012	1020	
105 1-methylnaphthalene	142	13.383	13.375	(1.154)	222060	4.52218	452.2	
111 Azobenzene (1,2-DP-Hydrazine)	77	17.057	17.049	(1.101)	223367	4.35167	435.2	
187 Total Benzofluoranthenes	252	25.606	25.621	(0.974)	1036649	10.5501	1055	
99 Perylene	252	26.179	26.326	(0.996)	477464	5.17124	517.1	
98 Retene	219	Compound Not Detected.						
120 2,3,4,6-Tetrachlorophenol	232	16.299	16.284	(1.052)	85553	1822.24	182200 (R)	

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: icv1129.d  
 Lab Smp Id: ICV1129  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121129.b/ABN.m  
 Misc Info:

Calibration Date: 29-NOV-2012  
 Calibration Time: 09:54

Level: LOW  
 Sample Type: SOIL

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	77158	-5.41
27 Naphthalene-d8	299399	149700	598798	295164	-1.41
42 Acenaphthene-d10	178564	89282	357128	179902	0.75
59 Phenanthrene-d10	305410	152705	610820	312760	2.41
69 Chrysene-d12	323853	161926	647706	331330	2.31
134 Di-n-octylphthala	427845	213922	855690	438545	2.50
77 Perylene-d12	305316	152658	610632	333901	9.36

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.94	8.44	9.44	8.95	0.09
27 Naphthalene-d8	11.59	11.09	12.09	11.60	0.07
42 Acenaphthene-d10	15.48	14.98	15.98	15.49	0.05
59 Phenanthrene-d10	18.75	18.25	19.25	18.76	0.08
69 Chrysene-d12	23.82	23.32	24.32	23.84	0.07
134 Di-n-octylphthala	24.92	24.42	25.42	24.94	0.09
77 Perylene-d12	26.26	25.76	26.76	26.29	0.12

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: SOLID Fraction: SV  
 Lab Smp Id: ICV1129  
 Level: LOW Operator: VTS/YZ  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: ICV.spk Quant Type: ISTD  
 Sublist File: PSDDAICAL.sub  
 Method File: /chem1/nt10.i/20121129.b/ABN.m  
 Misc Info:

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
3 Phenol	500.0	476.6	95.32	70-130
4 Bis (2-Chloroethyl)	500.0	522.7	104.54	70-130
6 2-Chlorophenol	500.0	447.2	89.43	70-130
7 1,3-Dichlorobenzen	500.0	526.3	105.26	70-130
9 1,4-Dichlorobenzen	500.0	497.6	99.52	70-130
11 Benzyl alcohol	500.0	664.5	132.90*	70-130
12 1,2-Dichlorobenzen	500.0	521.2	104.24	70-130
13 2-Methylphenol	500.0	406.9	81.38	70-130
14 2,2'-oxybis(1-Chlo	500.0	221.0	44.20*	70-130
15 4-Methylphenol	500.0	296.7	59.34*	70-130
16 N-Nitroso-di-n-pro	500.0	398.2	79.63	70-130
17 Hexachloroethane	500.0	497.3	99.45	70-130
19 Nitrobenzene	500.0	526.1	105.21	70-130
20 Isophorone	500.0	454.9	90.98	70-130
21 2-Nitrophenol	500.0	450.2	90.04	70-130
22 2,4-Dimethylphenol	500.0	417.6	83.53	70-130
23 Bis (2-Chloroethoxy	500.0	545.7	109.14	70-130
24 Benzoic acid	1000	916.0	91.60	70-130
25 2,4-Dichlorophenol	500.0	442.2	88.45	70-130
26 1,2,4-Trichloroben	500.0	486.0	97.20	70-130
28 Naphthalene	500.0	447.4	89.48	70-130
29 4-Chloroaniline	500.0	626.6	125.32	70-130
30 Hexachlorobutadien	500.0	552.8	110.56	70-130
31 4-Chloro-3-methylp	500.0	447.5	89.51	70-130
32 2-Methylnaphthalen	500.0	606.1	121.22	70-130
33 Hexachlorocyclopen	500.0	510.8	102.16	70-130
34 2,4,6-Trichlorophe	500.0	455.6	91.12	70-130
35 2,4,5-Trichlorophe	500.0	453.7	90.75	70-130
37 2-Chloronaphthalen	500.0	451.0	90.19	70-130
38 2-Nitroaniline	500.0	689.1	137.82*	70-130
39 Dimethylphthalate	500.0	531.1	106.23	70-130
40 Acenaphthylene	500.0	502.0	100.41	70-130
41 2,6-Dinitrotoluene	500.0	522.3	104.46	70-130

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
43 3-Nitroaniline	500.0	685.6	137.12*	70-130
44 Acenaphthene	500.0	503.1	100.63	70-130
45 2,4-Dinitrophenol	1000	751.0	75.10	70-130
46 Dibenzofuran	500.0	621.4	124.29	70-130
47 4-Nitrophenol	500.0	451.7	90.33	70-130
48 2,4-Dinitrotoluene	500.0	514.4	102.87	70-130
49 Fluorene	500.0	509.8	101.95	70-130
50 Diethylphthalate	500.0	484.5	96.90	70-130
51 4-Chlorophenyl-phe	500.0	481.4	96.27	70-130
52 4-Nitroaniline	500.0	575.0	115.01	70-130
53 4,6-Dinitro-2-meth	1000	854.5	85.45	70-130
54 N-Nitrosodiphenyla	500.0	532.9	106.59	70-130
56 4-Bromophenyl-phen	500.0	555.2	111.03	70-130
57 Hexachlorobenzene	500.0	513.9	102.78	70-130
58 Pentachlorophenol	500.0	435.4	87.09	70-130
60 Phenanthrene	500.0	521.9	104.39	70-130
61 Anthracene	500.0	496.5	99.31	70-130
62 Carbazole	500.0	523.1	104.62	70-130
63 Di-n-butylphthalat	500.0	554.4	110.87	70-130
64 Fluoranthene	500.0	547.8	109.56	70-130
65 Pyrene	500.0	563.0	112.60	70-130
67 Butylbenzylphthala	500.0	565.2	113.04	70-130
68 Benzo(a)anthracene	500.0	556.3	111.27	70-130
70 3,3'-Dichlorobenzi	500.0	311.2	62.23*	70-130
71 Chrysene	500.0	533.5	106.70	70-130
72 bis(2-Ethylhexyl)p	500.0	437.1	87.43	70-130
73 Di-n-octylphthalat	500.0	552.2	110.44	70-130
74 Benzo(b)fluoranthe	500.0	591.9	118.38	70-130
75 Benzo(k)fluoranthe	500.0	523.1	104.61	70-130
187 Total Benzofluoran	1000	1055	105.50	70-130
76 Benzo(a)pyrene	500.0	501.1	100.21	70-130
78 Indeno(1,2,3-cd)py	500.0	552.4	110.48	70-130
79 Dibenzo(a,h) anthra	500.0	542.7	108.55	70-130
80 Benzo(g,h,i)peryle	500.0	552.3	110.47	70-130
90 N-Nitrosodimethyla	500.0	528.5	105.71	70-130
103 Pyridine	1000	1020	102.01	70-130
91 Aniline	500.0	275.1	55.01*	70-130
105 1-methylnaphthalen	500.0	452.2	90.44	70-130
93 Benzidine	500.0	149.6	29.92*	70-130
111 Azobenzene (1,2-DP	500.0	435.2	87.03	70-130
143 1,4-Dioxane	500.0	0.000	*	70-130
144 alpha-Terpineol	500.0	0.000	*	70-130
177 p-Benzoquinone	500.0	0.000	*	70-130
98 Retene	500.0	0.000	*	70-130
133 Butylatedhydroxyt	500.0	0.000	*	70-130
115 Tributyl Phosphate	500.0	0.000	*	70-130
116 Dibutyl Phenyl Ph	500.0	0.000	*	70-130

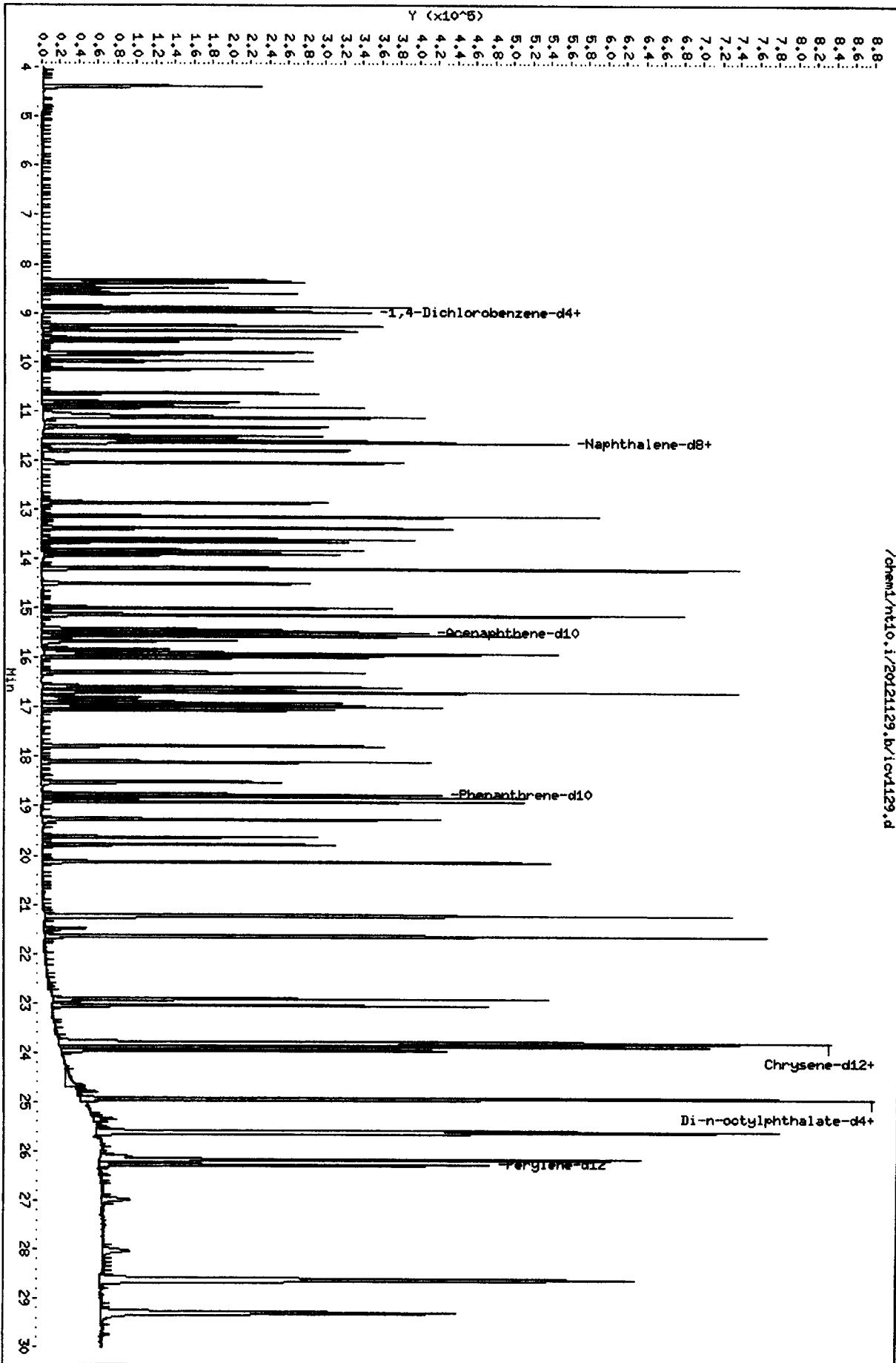
SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
117 Butyl Diphenyl Ph	500.0	0.000	*	70-130
118 Triphenyl Phospha	500.0	0.000	*	70-130
123 Acetophenone	500.0	0.000	*	70-130
179 n-Decane	500.0	0.000	*	70-130
180 n-Octadecane	500.0	0.000	*	70-130
168 Pentachlorobenzene	500.0	0.000	*	70-130
113 Diphenyl Oxide	500.0	0.000	*	70-130
112 Biphenyl	500.0	0.000	*	70-130
120 2,3,4,6-Tetrachlor	500.0	182200	36444.84*	70-130
151 1,2,4,5-Tetrachlo	500.0	0.000	*	70-130
110 Tetrachloroguaiac	500.0	0.000	*	70-130
109 3,4,5-Trichlorogu	500.0	0.000	*	70-130
181 3,4,6-Trichlorogu	500.0	0.000	*	70-130
108 4,5,6-Trichlorogu	500.0	0.000	*	70-130
184 3,4-Dichloroguaia	500.0	0.000	*	70-130
107 4,5-Dichloroguaia	500.0	0.000	*	70-130
182 4,6-Dichloroguaia	500.0	0.000	*	70-130
185 4-Chloroguaiacol	500.0	0.000	*	70-130
106 Guaiacol	500.0	0.000	*	70-130
186 Carbaryl	500.0	0.000	*	70-130
178 2-Benzyl-4-Chloro	500.0	0.000	*	70-130
99 Perylene	500.0	517.1	103.42	70-130
100 3-beta-Coprostanol	500.0	0.000	*	70-130
101 Cholesterol	500.0	0.000	*	70-130

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	750.0	0.000	*	30-160
\$ 2 Phenol-d5	750.0	0.000	*	30-160
\$ 5 2-Chlorophenol-d4	750.0	0.000	*	30-160
\$ 10 1,2-Dichlorobenze	500.0	0.000	*	30-160
\$ 18 Nitrobenzene-d5	500.0	0.000	*	30-160
\$ 36 2-Fluorobiphenyl	500.0	0.000	*	30-160
\$ 55 2,4,6-Tribromophe	750.0	0.000	*	30-160
\$ 66 Terphenyl-d14	500.0	0.000	*	30-160

Data File: /chem1/nt10.i/20121129.b/1cvt1129.d  
Date: 29-NOV-2012 16:07  
Client ID:  
Sample Info: ICV1129  
Volume Injected (uL): 1.0  
Column phase: ZB-SnSi

Instrument: nt10.i  
Operator: VTS/VZ  
Column diameter: 0.25

/chem1/nt10.i/20121129.b/1cvt1129.d



5058 : 00110

CO-ELUTION SUMMARY FOR FILE - icv1129.d

Lab ID: ICV1129, Method: ABN.m, Instrument: nt10.i, Date: 29-NOV-2012

RT	CO-ELUTION COMPOUNDS
25.644	Benzo(k)fluoranthene and Benzo(b)fluoranthene
26.179	Perylene and Benzo(a)pyrene

**Semivolatile Raw Data  
Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: VR58**



### GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: URS8 Client ID: City of Kenmare

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Parameter(s): ABN'S

Instrument: NT-4 NT-6 NT-8 **NT-10** NT11 NT12

Curve Date: 11.29.12 Analysis Start Date: 12.4.12

DFTPP Tune Meets Criteria?	<input checked="" type="radio"/> YES / NO	Internal Standard Meets Criteria?	<input checked="" type="radio"/> YES / NO
DDT Breakdown <20%?	<input checked="" type="radio"/> YES / NO / NA	Method Blank In Control?	<input checked="" type="radio"/> YES / NO
Peak Tailing Factor ≤2?	<input checked="" type="radio"/> YES / NO / NA	<input checked="" type="radio"/> LCS / LCSD Recovery In Control?	<input checked="" type="radio"/> YES / NO
ICal acceptable?	<input checked="" type="radio"/> YES / NO	CCal acceptable?	<input checked="" type="radio"/> YES / NO
Q flag applied?	YES <input checked="" type="radio"/> NO	Q flag applied?	YES <input checked="" type="radio"/> NO
Surrogate Recovery in Control?	<input checked="" type="radio"/> YES / NO	Special Analysis Criteria Met?	<input checked="" type="radio"/> YES / NO / NA
Manual Integrations for ICal?	<input checked="" type="radio"/> YES / NO	Manual Integrations for Samples?	<input checked="" type="radio"/> Yes / NO

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

- Samples A, B, F run @ 3X  
 - original A, B showed I.S. areas < 50%  
 F showed a R value

**Additional Details on Reverse: Yes / No**

Analyst: VT Date: 12.6.12

Reviewer: [Signature] Date: [Signature]

# Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.: GC=CN10837018, MS= US83131105

Date: 12.4.12 Analysis: psdDA ABN Analyst: VD  
 GC Program: ABN2 Column No: 247357 Column Type: ZB.5MS.  
 Instrument Tune (.U or .CT.): 121204.U EM Voltage: 1600  
 Calibration File: df1204A Curve Date: 11-29-12 Injection Vol.: 1.2

IS/SS	Ical/Ccal	LCS/ICV
<u>1998-2</u>	<u>1947-2</u>	
	<u>1986-2</u>	
	<u>1998-4</u>	
	<u>2036-2</u>	

## INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20121204.b

Time	Filename	LabID	ClientId	DP																	
1	1449	df1204a1.d	DFTPP	DFTPP	1	NO ISTDs FOUND															
2	1505	cc1204a1.d	CC1204A1		1	8.83	92550	11.48	353076	15.36	236140	18.62	351429	23.70	392831	24.80	528229	26.09	357952		
3	1554	vr58mb.d	VR58MBS1	VR58MBS1	1	8.84	118082	11.48	440128	15.36	225120	18.62	358767	23.69	338529	26.09	306926	24.80	444475		
4	1631	vr58eb.d	VR58LCSS1	VR58LCSS1	1	8.83	97255	11.48	356178	15.36	240244	18.62	353506	23.69	397203	26.09	361894	24.80	546163		
5	1708	vr58a.d	VR58A	SG-10-S-E-12	1	8.83	110978	11.48	396195	15.36	98352	18.62	357496	23.70	75458	26.11	76284	24.81	121794		
6	1744	vr58b.d	VR58B	SG-11-S-E-12	1	8.84	30871	11.49	103185	15.36	93049	18.63	413034	23.72	180448	26.14	194634	24.83	512568		
7	1821	vr58c.d	VR58C	SG-12-S-E-12	1	8.84	49454	11.49	165461	15.36	110902	18.64	412878	23.72	180022	26.13	203850	24.82	456836		
8	1858	vr58d.d	VR58D	SG-13-S-E-12	1	8.84	47395	11.49	183094	15.37	101036	18.64	303971	23.72	178707	26.13	226693	24.82	469025		
9	1935	vr58e.d	VR58E	SG-13-S-E-du	1	8.85	82331	11.49	318197	15.37	179746	18.64	326351	23.72	285432	26.14	309278	24.82	554848		
10	2011	vr58f.d	VR58F	SG-14-S-E-12	1	8.85	112975	11.50	420287	15.37	236184	18.65	382502	23.73	413754	26.13	404612	24.82	636914		
11	2048	vr58g.d	VR58G	SG-15-S-E-12	1	8.84	105532	11.49	413324	15.36	253453	18.63	407801	23.72	388205	26.11	377322	24.81	610919		
12	2125	vr58h.d	VR58H	SG-16-S-E-12	1	8.84	109336	11.49	390688	15.36	248655	18.62	419457	23.71	437658	26.10	407958	24.80	641034		
13	2202	vr58i.d	VR58I	SG-17-S-E-12	1	8.84	107154	11.49	414398	15.36	254478	18.62	429134	23.72	454337	26.12	417440	24.81	654074		
14	2238	vr58j.d	VR58J	SG-01-S-C-12	1	8.84	106697	11.49	386086	15.36	233272	18.62	388754	23.71	438726	26.10	393922	24.80	616730		
15	2315	vr58jms.d	VR58JMS	SG-01-S-C-12	1	8.84	106105	11.48	404462	15.36	242358	18.62	410891	23.71	466399	26.10	420784	24.80	657495		
16	2352	vr58jmsd.d	VR58JMSD	SG-01-S-C-12	1	8.84	112090	11.49	420074	15.36	252286	18.62	422319	23.71	478463	26.10	437316	24.80	688819		


VD  
 12.4.12

Every line must contain information or be lined out. Make all entries legible.  
 Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS



MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20121204.b

ARI Job No.: CC12 Method: ABN.m Instrument: nt10.i Date: 04-DEC-2012

Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
1505	cc1204a1.d	CC1204A1		1	NO MANUAL INTEGRATION
1449	df1204a1.d	DFTPP	DFTPP	1	NO MANUAL INTEGRATION
1708	vt58a.d	VR58A	SG-10-S-E	1	Benzoic acid, Dibenzo(a,h)anthracene,
1744	vt58b.d	VR58B	SG-11-S-E	1	2-Methylphenol, Benzoic acid, Acenaphthylene, Butylbenzylphthalate, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene,
1821	vt58c.d	VR58C	SG-12-S-E	1	2-Methylphenol, Benzoic acid, Butylbenzylphthalate, Dibenzo(a,h)anthracene,
1858	vt58d.d	VR58D	SG-13-S-E	1	2-Methylphenol, Benzoic acid, Acenaphthylene, Di-n-octylphthalate, Dibenzo(a,h)anthracene,
1935	vt58e.d	VR58E	SG-13-S-E	1	2-Methylphenol, Benzoic acid, Dibenzo(a,h)anthracene,
2011	vt58f.d	VR58F	SG-14-S-E	1	Acenaphthylene, Di-n-octylphthalate, Dibenzo(a,h)anthracene,
2048	vt58g.d	VR58G	SG-15-S-E	1	NO MANUAL INTEGRATION
2125	vt58h.d	VR58H	SG-16-S-E	1	NO MANUAL INTEGRATION
2202	vt58i.d	VR58I	SG-17-S-E	1	Benzo(a)pyrene,
2238	vt58j.d	VR58J	SG-01-S-C	1	Benzoic acid,
2315	vt58jms.d	VR58JMS	SG-01-S-C	1	NO MANUAL INTEGRATION
2352	vt58jmsd.d	VR58JMSD	SG-01-S-C	1	NO MANUAL INTEGRATION
2154	vt58mb.d	VR58MBS1	VR58MBS1	1	NO MANUAL INTEGRATION
21631	vt58sb.d	VR58LCSS1	VR58LCSS1	1	NO MANUAL INTEGRATION

11 09 05 14 14

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20121204.b

Instrument: nt10.i Date: 04-DEC-2012 Method: ABN.m

INITIAL CAL: 29-NOV-2012

Compound	%RSD or R <sup>2</sup>
-----	
NO Q-FLAGS	
-----	

CONTINUING CAL: 04-DEC-2012

Compound	%D
-----	
Phenol	44.7
1,2-Dichlorobenzene	-20.6
4-Methylphenol	20.7
Hexachlorobutadiene	-27.2
2-Fluorobiphenyl	-30.7
-----	

Date : 04-DEC-2012 14:49

Client ID: DFTPP

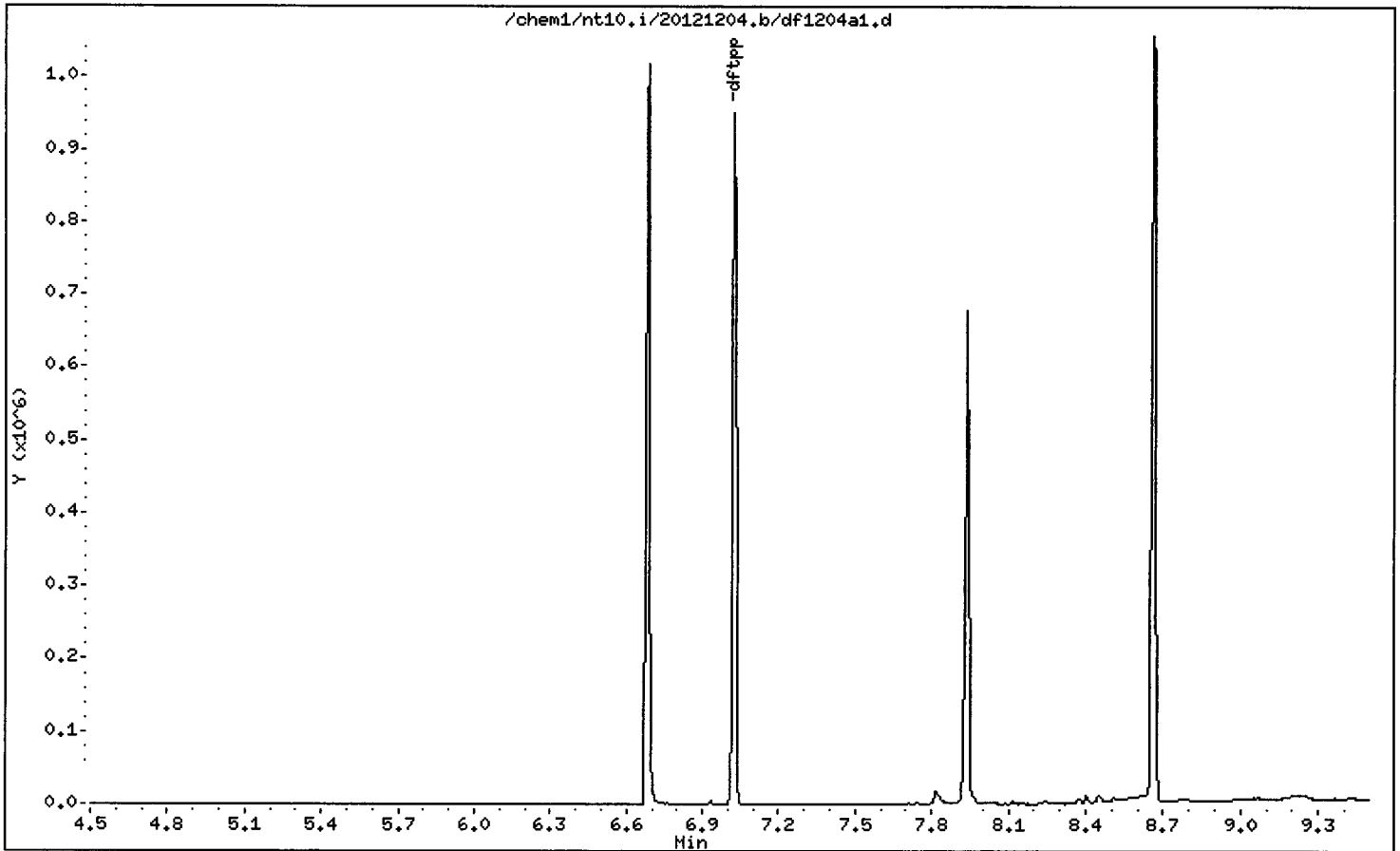
Instrument: nt10.1

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Date : 04-DEC-2012 14:49

Client ID: DFTPP

Instrument: nt10.i

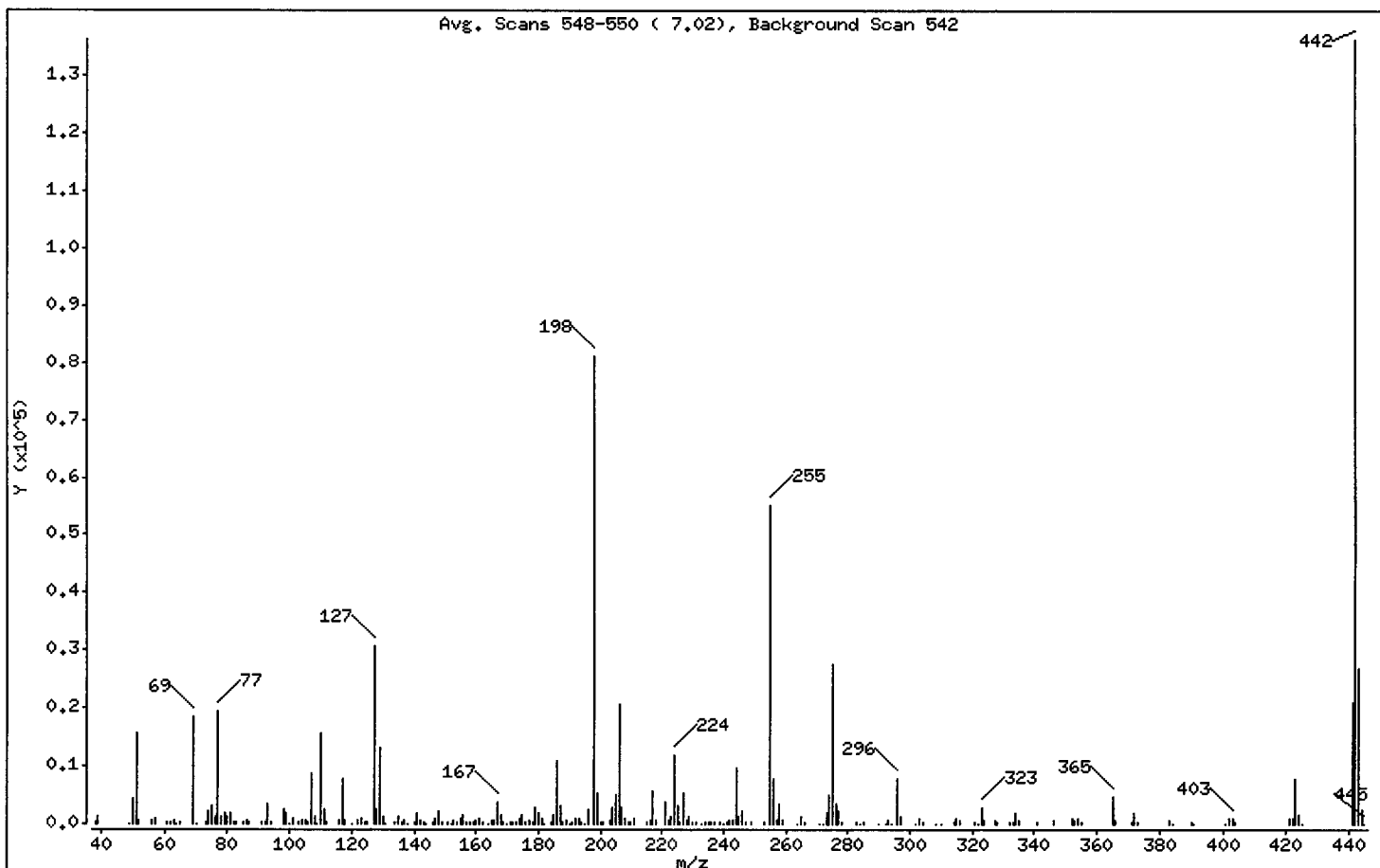
Sample Info: DFTPP

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	19,18
68	Less than 2,00% of mass 69	0,00 ( 0,00)
69	Mass 69 relative abundance	22,65
70	Less than 2,00% of mass 69	0,07 ( 0,29)
127	10,00 - 80,00% of mass 198	37,84
197	Less than 2,00% of mass 198	0,00
199	5,00 - 9,00% of mass 198	6,72
275	10,00 - 60,00% of mass 198	33,98
365	Greater than 1,00% of mass 198	5,67
441	0,01 - 24,00% of mass 442	25,79 ( 15,35)
442	50,00 - 200,00% of mass 198	167,96
443	15,00 - 24,00% of mass 442	33,37 ( 19,87)

Date : 04-DEC-2012 14:49

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1204a1.d

Spectrum: Avg. Scans 548-550 ( 7.02), Background Scan 542

Location of Maximum: 442.00

Number of points: 234

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	263	131.00	149	198.00	81160	278.00	370
39.00	1118	134.00	425	199.00	5452	283.00	255
49.00	79	135.00	1101	200.00	456	284.00	120
50.00	4537	136.00	447	201.00	401	285.00	435
51.00	15567	137.00	543	203.00	614	290.00	52
52.00	752	138.00	63	204.00	2974	292.00	104
56.00	500	140.00	213	205.00	5134	293.00	524
57.00	1096	141.00	1956	206.00	20808	294.00	59
61.00	212	142.00	557	207.00	2685	296.00	7747
62.00	247	143.00	359	208.00	838	297.00	1122
63.00	737	144.00	53	209.00	258	302.00	140
64.00	60	146.00	328	210.00	309	303.00	972
65.00	352	147.00	992	211.00	858	304.00	301
69.00	18384	148.00	2093	215.00	239	308.00	54
70.00	53	149.00	375	216.00	513	310.00	52
73.00	231	151.00	273	217.00	5717	314.00	458
74.00	2148	152.00	73	218.00	695	315.00	945
75.00	3244	153.00	589	221.00	3796	316.00	572
76.00	1142	154.00	425	222.00	571	321.00	299
77.00	19376	155.00	1054	223.00	1347	322.00	141
78.00	1341	156.00	1425	224.00	12017	323.00	2894
79.00	1736	157.00	316	225.00	3151	324.00	534
80.00	1215	158.00	329	226.00	396	327.00	558
81.00	1843	159.00	261	227.00	5412	328.00	281
82.00	412	160.00	575	228.00	767	332.00	241
83.00	370	161.00	849	229.00	1098	333.00	267
85.00	339	162.00	254	230.00	180	334.00	2023
86.00	559	164.00	61	231.00	377	335.00	531
87.00	246	165.00	713	233.00	54	341.00	377
91.00	436	166.00	644	234.00	337	346.00	572
92.00	447	167.00	3637	235.00	411	352.00	955
93.00	3311	168.00	1419	236.00	282	353.00	716
94.00	225	169.00	281	237.00	430	354.00	1032
98.00	2629	170.00	55	239.00	176	355.00	194
99.00	1818	171.00	206	240.00	146	365.00	4604

Date : 04-DEC-2012 14:49

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0,25

Data File: df1204a1.d

Spectrum: Avg. Scans 548-550 ( 7.02), Background Scan 542

Location of Maximum: 442.00

Number of points: 234

m/z	Y	m/z	Y	m/z	Y	m/z	Y
100,00	72	172,00	333	241,00	278	366,00	634
101,00	1043	173,00	421	242,00	671	371,00	283
103,00	387	174,00	829	243,00	758	372,00	1848
104,00	781	175,00	1574	244,00	9654	373,00	452
105,00	660	176,00	402	245,00	1308	383,00	496
106,00	230	177,00	667	246,00	2189	384,00	107
107,00	8925	178,00	272	247,00	404	390,00	271
108,00	1328	179,00	2808	249,00	408	391,00	151
109,00	131	180,00	1937	253,00	278	401,00	108
110,00	15764	181,00	873	255,00	55104	402,00	786
111,00	2526	182,00	128	256,00	7930	403,00	1071
112,00	312	184,00	295	257,00	647	404,00	422
116,00	619	185,00	1555	258,00	3410	421,00	971
117,00	7904	186,00	11094	259,00	572	422,00	1041
118,00	577	187,00	3154	264,00	56	423,00	7732
120,00	67	188,00	336	265,00	1378	424,00	1624
122,00	672	189,00	744	266,00	284	425,00	114
123,00	993	190,00	61	271,00	56	441,00	20928
124,00	463	191,00	396	272,00	86	442,00	136320
125,00	455	192,00	858	273,00	1770	443,00	27080
127,00	30712	193,00	969	274,00	4942	444,00	2543
128,00	2579	194,00	212	275,00	27576	445,00	142
129,00	13292	195,00	76	276,00	3551		
130,00	1098	196,00	2403	277,00	2347		

Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/cc1204a1.d  
 Lab Smp Id: CC1204A1  
 Inj Date : 04-DEC-2012 15:05  
 Operator : VTS/YZ  
 Smp Info : CC1204A1  
 Misc Info :  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van  
 Cal Date : 29-NOV-2012 15:30  
 Als bottle: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: ic1129i.d  
 Continuing Calibration Sample  
 Compound Sublist: SHORTPSDDA.sub

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112	6.505	6.505	(0.737)	150016	5.00000	5.067
\$ 2 Phenol-d5	99	8.220	8.220	(0.931)	194983	5.00000	5.322
3 Phenol	94	8.243	8.243	(0.933)	279157	5.00000	7.233
\$ 5 2-Chlorophenol-d4	132	8.452	8.452	(0.957)	183244	5.00000	5.781
7 1,3-Dichlorobenzene	146	8.762	8.762	(0.992)	186746	5.00000	5.013
* 8 1,4-Dichlorobenzene-d4	152	8.831	8.831	(1.000)	92550	4.00000	
9 1,4-Dichlorobenzene	146	8.862	8.862	(1.004)	153747	5.00000	4.399
\$ 10 1,2-Dichlorobenzene-d4	152	9.212	9.212	(1.043)	105072	5.00000	4.546
12 1,2-Dichlorobenzene	146	9.235	9.235	(1.046)	133140	5.00000	3.970
11 Benzyl alcohol	108	9.150	9.150	(1.036)	92832	5.00000	5.087
13 2-Methylphenol	108	9.421	9.421	(1.067)	159828	5.00000	4.819
17 Hexachloroethane	117	9.864	9.864	(1.117)	61804	5.00000	4.304
15 4-Methylphenol	108	9.716	9.716	(1.100)	118721	5.00000	6.034
\$ 18 Nitrobenzene-d5	82	10.003	10.003	(0.871)	141565	5.00000	4.279
22 2,4-Dimethylphenol	107	10.825	10.825	(0.943)	340918	10.0000	10.15
24 Benzoic acid	105	11.110	11.110	(0.968)	547750	20.0000	23.97
26 1,2,4-Trichlorobenzene	180	11.395	11.395	(0.993)	106616	5.00000	5.430
* 27 Naphthalene-d8	136	11.480	11.480	(1.000)	353076	4.00000	
28 Naphthalene	128	11.526	11.526	(1.004)	455253	5.00000	5.300
30 Hexachlorobutadiene	225	11.936	11.936	(1.040)	80145	5.00000	3.642
32 2-Methylnaphthalene	142	13.027	13.027	(1.135)	330298	5.00000	5.161
\$ 36 2-Fluorobiphenyl	172	13.886	13.886	(0.904)	289585	5.00000	3.465
39 Dimethylphthalate	163	14.876	14.876	(0.969)	332995	5.00000	4.365
40 Acenaphthylene	152	15.016	15.016	(0.978)	524714	5.00000	4.701
* 42 Acenaphthene-d10	164	15.356	15.356	(1.000)	236140	4.00000	
44 Acenaphthene	153	15.426	15.426	(1.005)	313639	5.00000	4.916
46 Dibenzofuran	168	15.781	15.781	(1.028)	437000	5.00000	4.616

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====	==	=====	=====	=====	=====	=====
50 Diethylphthalate	149	16.462	16.462	(1.072)	321613	5.00000	4.028
49 Fluorene	166	16.547	16.547	(1.078)	360973	5.00000	4.596
54 N-Nitrosodiphenylamine	169	16.840	16.840	(0.905)	227097	5.00000	5.262
\$ 55 2,4,6-Tribromophenol	330	17.125	17.125	(1.115)	56754	5.00000	4.080
57 Hexachlorobenzene	284	17.959	17.959	(0.965)	112242	5.00000	4.455
58 Pentachlorophenol	266	18.362	18.362	(0.986)	150815	10.0000	9.358
* 59 Phenanthrene-d10	188	18.617	18.617	(1.000)	351429	4.00000	
60 Phenanthrene	178	18.671	18.671	(1.003)	450982	5.00000	5.183
61 Anthracene	178	18.764	18.764	(1.008)	488395	5.00000	5.222
63 Di-n-butylphthalate	149	20.002	20.002	(1.074)	575776	5.00000	5.204
64 Fluoranthene	202	21.093	21.093	(1.133)	545155	5.00000	4.971
65 Pyrene	202	21.510	21.510	(0.908)	565093	5.00000	4.910
\$ 66 Terphenyl-d14	244	21.835	21.835	(0.921)	342613	5.00000	4.454
67 Butylbenzylphthalate	149	22.788	22.788	(0.961)	214555	5.00000	4.590
68 Benzo(a)anthracene	228	23.670	23.670	(0.999)	529990	5.00000	4.747
* 69 Chrysene-d12	240	23.701	23.701	(1.000)	392831	4.00000	
71 Chrysene	228	23.740	23.740	(1.002)	491287	5.00000	4.953
72 bis(2-Ethylhexyl)phthalate	149	23.825	23.825	(0.961)	357267	5.00000	4.902
* 134 Di-n-octylphthalate-d4	153	24.801	24.801	(1.000)	528229	4.00000	
73 Di-n-octylphthalate	149	24.808	24.808	(1.000)	594475	5.00000	4.965
76 Benzo(a)pyrene	252	25.985	25.985	(0.996)	441407	5.00000	4.321
* 77 Perylene-d12	264	26.086	26.086	(1.000)	357952	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.294	28.294	(1.085)	489301	5.00000	4.226
79 Dibenzo(a,h)anthracene	278	28.310	28.310	(1.085)	394655	5.00000	4.295
80 Benzo(g,h,i)perylene	276	28.931	28.931	(1.109)	434287	5.00000	4.383
105 1-methylnaphthalene	142	13.259	13.259	(1.155)	314170	5.00000	5.349
187 Total Benzofluoranthenes	252	25.474	25.474	(0.977)	1014579	10.0000	9.632
98 Retene	219				Compound Not Detected.		
120 2,3,4,6-Tetrachlorophenol	232				Compound Not Detected.		

(1)  
12.5.12



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: cc1204a1.d  
 Lab Smp Id: CC1204A1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info:

Calibration Date: 04-DEC-2012  
 Calibration Time: 14:15  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	92550	13.46
27 Naphthalene-d8	299399	149700	598798	353076	17.93
42 Acenaphthene-d10	178564	89282	357128	236140	32.24
59 Phenanthrene-d10	305410	152705	610820	351429	15.07
69 Chrysene-d12	323853	161926	647706	392831	21.30
134 Di-n-octylphthala	427845	213922	855690	528229	23.46
77 Perylene-d12	305316	152658	610632	357952	17.24

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.83	0.00
27 Naphthalene-d8	11.48	10.98	11.98	11.48	0.00
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.00
59 Phenanthrene-d10	18.62	18.12	19.12	18.62	0.00
69 Chrysene-d12	23.70	23.20	24.20	23.70	0.00
134 Di-n-octylphthala	24.80	24.30	25.30	24.80	0.00
77 Perylene-d12	26.09	25.59	26.59	26.09	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: nt10.i                      Injection Date: 04-DEC-2012 15:05  
 Lab File ID: cc1204a1.d                  Init. Cal. Date(s): 29-NOV-2012 29-NOV-2012  
 Analysis Type:                              Init. Cal. Times: 09:54                      15:30  
 Lab Sample ID: CC1204A1                  Quant Type: ISTD  
 Method: /chem1/nt10.i/20121204.b/ABN.m

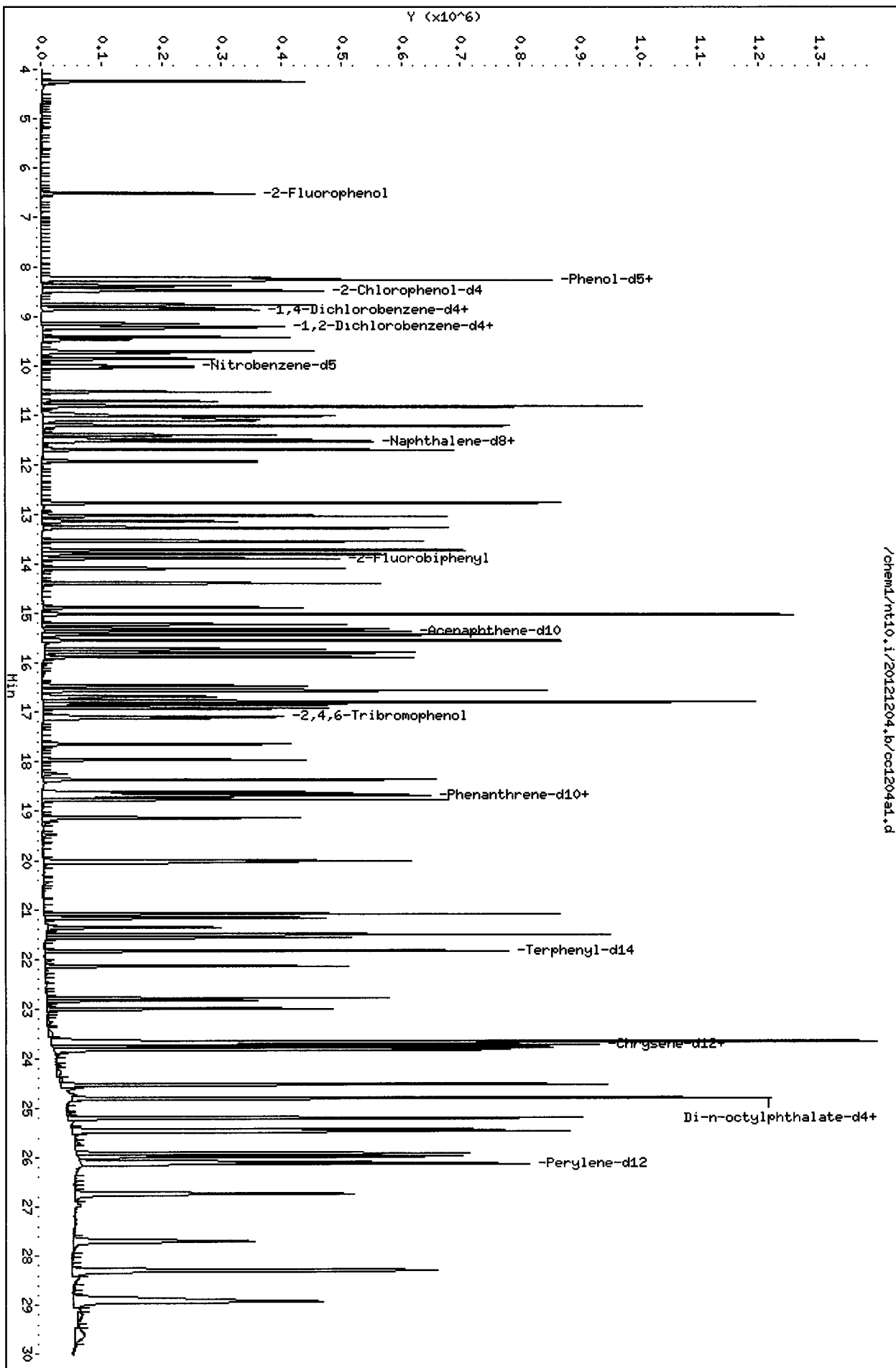
COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
\$ 1 2-Fluorophenol	1.27957	1.29673	1.29673	0.010	1.34171	20.00000	Averaged
\$ 2 Phenol-d5	1.58333	1.68543	1.68543	0.010	6.44804	20.00000	Averaged
3 Phenol	1.66795	2.41303	2.41303	0.100	44.66995	20.00000	Averaged <-
\$ 5 2-Chlorophenol-d4	1.36995	1.58396	1.58396	0.010	15.62160	20.00000	Averaged
7 1,3-Dichlorobenzene	1.61009	1.61423	1.61423	0.010	0.25714	20.00000	Averaged
9 1,4-Dichlorobenzene	1.51045	1.32899	1.32899	0.010	-12.01421	20.00000	Averaged
\$ 10 1,2-Dichlorobenzene-d4	0.99893	0.90824	0.90824	0.010	-9.07890	20.00000	Averaged
12 1,2-Dichlorobenzene	1.44945	1.15086	1.15086	0.010	-20.60008	20.00000	Averaged <-
11 Benzyl alcohol	0.78872	0.80244	0.80244	0.010	1.73902	20.00000	Averaged
13 2-Methylphenol	1.43339	1.38155	1.38155	0.700	-3.61688	20.00000	Averaged
17 Hexachloroethane	0.62060	0.53423	0.53423	0.300	-13.91746	20.00000	Averaged
15 4-Methylphenol	0.85032	1.02622	1.02622	0.600	20.68712	20.00000	Averaged <-
\$ 18 Nitrobenzene-d5	0.37481	0.32076	0.32076	0.010	-14.42166	20.00000	Averaged
22 2,4-Dimethylphenol	0.38062	0.38623	0.38623	0.200	1.47400	20.00000	Averaged
24 Benzoic acid	23.97488	20.00000	0.31027	0.010	19.87441	20.00000	Quadratic
26 1,2,4-Trichlorobenzene	0.22242	0.24157	0.24157	0.010	8.60995	20.00000	Averaged
28 Naphthalene	0.97316	1.03151	1.03151	0.100	5.99591	20.00000	Averaged
30 Hexachlorobutadiene	0.24932	0.18159	0.18159	0.010	-27.16361	20.00000	Averaged <-
32 2-Methylnaphthalene	0.72505	0.74839	0.74839	0.300	3.21941	20.00000	Averaged
\$ 36 2-Fluorobiphenyl	1.41574	0.98106	0.98106	0.010	-30.70342	20.00000	Averaged <-
39 Dimethylphthalate	1.29227	1.12813	1.12813	0.010	-12.70174	20.00000	Averaged
40 Acenaphthylene	1.89060	1.77764	1.77764	0.900	-5.97476	20.00000	Averaged
44 Acenaphthene	1.08066	1.06255	1.06255	0.100	-1.67515	20.00000	Averaged
46 Dibenzofuran	1.60380	1.48048	1.48048	0.800	-7.68946	20.00000	Averaged
50 Diethylphthalate	1.35255	1.08957	1.08957	0.010	-19.44360	20.00000	Averaged
49 Fluorene	1.33054	1.22291	1.22291	0.100	-8.08884	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.49120	0.51697	0.51697	0.010	5.24559	20.00000	Averaged
\$ 55 2,4,6-Tribromophenol	0.23562	0.19227	0.19227	0.010	-18.39790	20.00000	Averaged
57 Hexachlorobenzene	0.28680	0.25551	0.25551	0.100	-10.90971	20.00000	Averaged
58 Pentachlorophenol	0.18344	0.17166	0.17166	0.010	-6.42002	20.00000	Averaged
60 Phenanthrene	0.99039	1.02662	1.02662	0.700	3.65892	20.00000	Averaged
61 Anthracene	1.06454	1.11179	1.11179	0.700	4.43840	20.00000	Averaged
63 Di-n-butylphthalate	1.25942	1.31071	1.31071	0.010	4.07204	20.00000	Averaged
64 Fluoranthene	1.24834	1.24100	1.24100	0.600	-0.58779	20.00000	Averaged
65 Pyrene	1.17183	1.15081	1.15081	0.600	-1.79405	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i                      Injection Date: 04-DEC-2012 15:05  
 Lab File ID: cc1204a1.d                  Init. Cal. Date(s): 29-NOV-2012 29-NOV-2012  
 Analysis Type:                            Init. Cal. Times: 09:54                      15:30  
 Lab Sample ID: CC1204A1                  Quant Type: ISTD  
 Method: /chem1/nt10.i/20121204.b/ABN.m

COMPOUND	CCAL		MIN		MAX		CURVE TYPE
	RRF / AMOUNT	RF5	RRF5	RRF	%D / %DRIFT	%D / %DRIFT	
\$ 66 Terphenyl-d14	0.78331	0.69773	0.69773	0.010	-10.92478	20.00000	Averaged
67 Butylbenzylphthalate	0.47602	0.43694	0.43694	0.010	-8.20931	20.00000	Averaged
68 Benzo(a)anthracene	1.13688	1.07932	1.07932	0.700	-5.06280	20.00000	Averaged
71 Chrysene	1.00999	1.00051	1.00051	0.700	-0.93923	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.55191	0.54108	0.54108	0.010	-1.96291	20.00000	Averaged
73 Di-n-octylphthalate	0.90675	0.90033	0.90033	0.010	-0.70769	20.00000	Averaged
76 Benzo(a)pyrene	1.14156	0.98652	0.98652	0.700	-13.58166	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.29375	1.09356	1.09356	0.500	-15.47394	20.00000	Averaged
79 Dibenzo(a,h)anthracene	1.02672	0.88203	0.88203	0.400	-14.09252	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.10723	0.97060	0.97060	0.500	-12.33981	20.00000	Averaged
105 1-methylnaphthalene	0.66545	0.71185	0.71185	0.010	6.97146	20.00000	Averaged
187 Total Benzofluoranthenes	1.17711	1.13376	1.13376	0.010	-3.68299	20.00000	Averaged
98 Retene	++++	0.00137	0.00137	0.010	++++	20.00000	Averaged <-
120 2,3,4,6-Tetrachlorophenol	0.00104	0.00094	0.00094	0.010	-9.77784	20.00000	Averaged <-



CO-ELUTION SUMMARY FOR FILE - cc1204a1.d

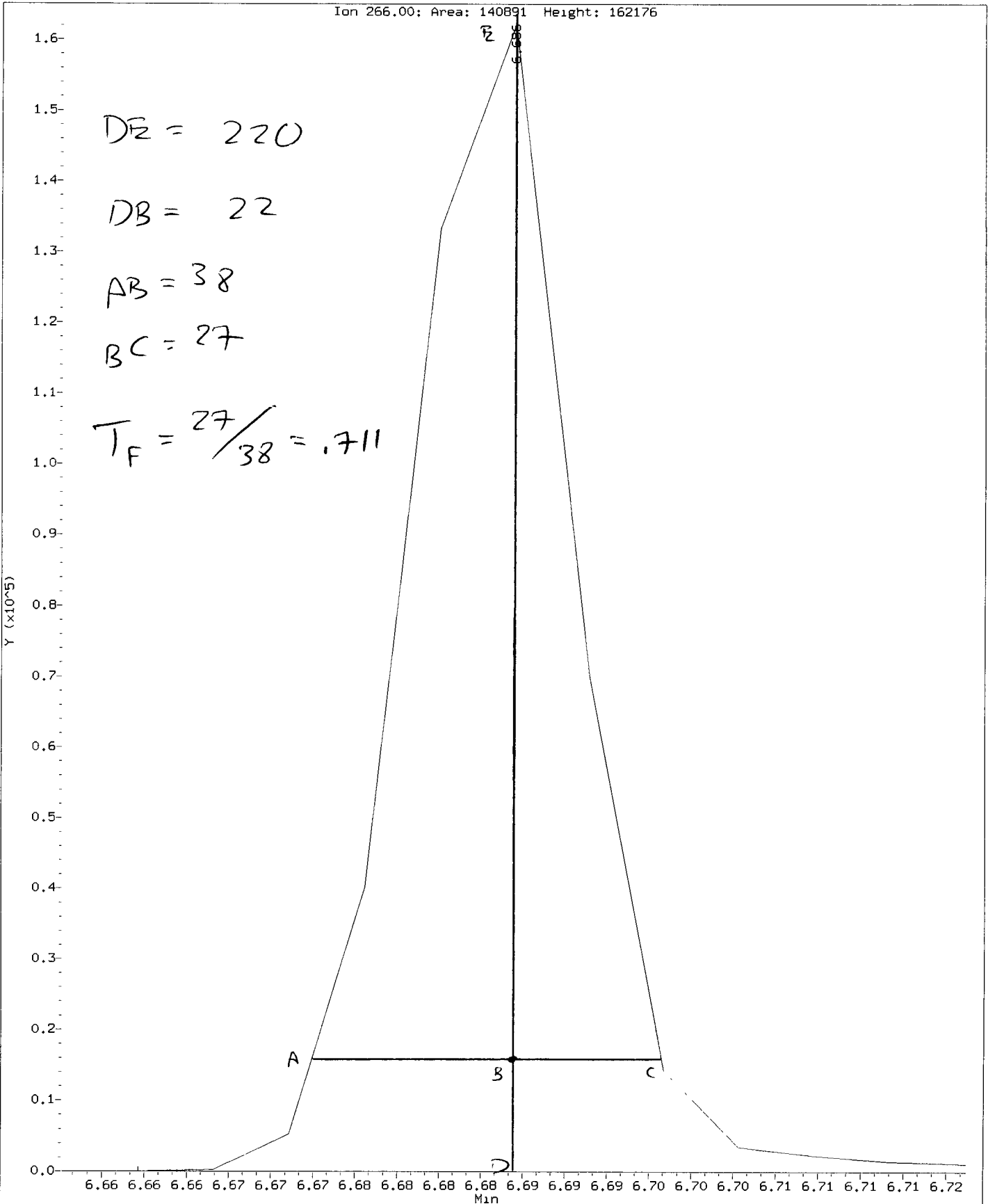
Lab ID: CC1204A1, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

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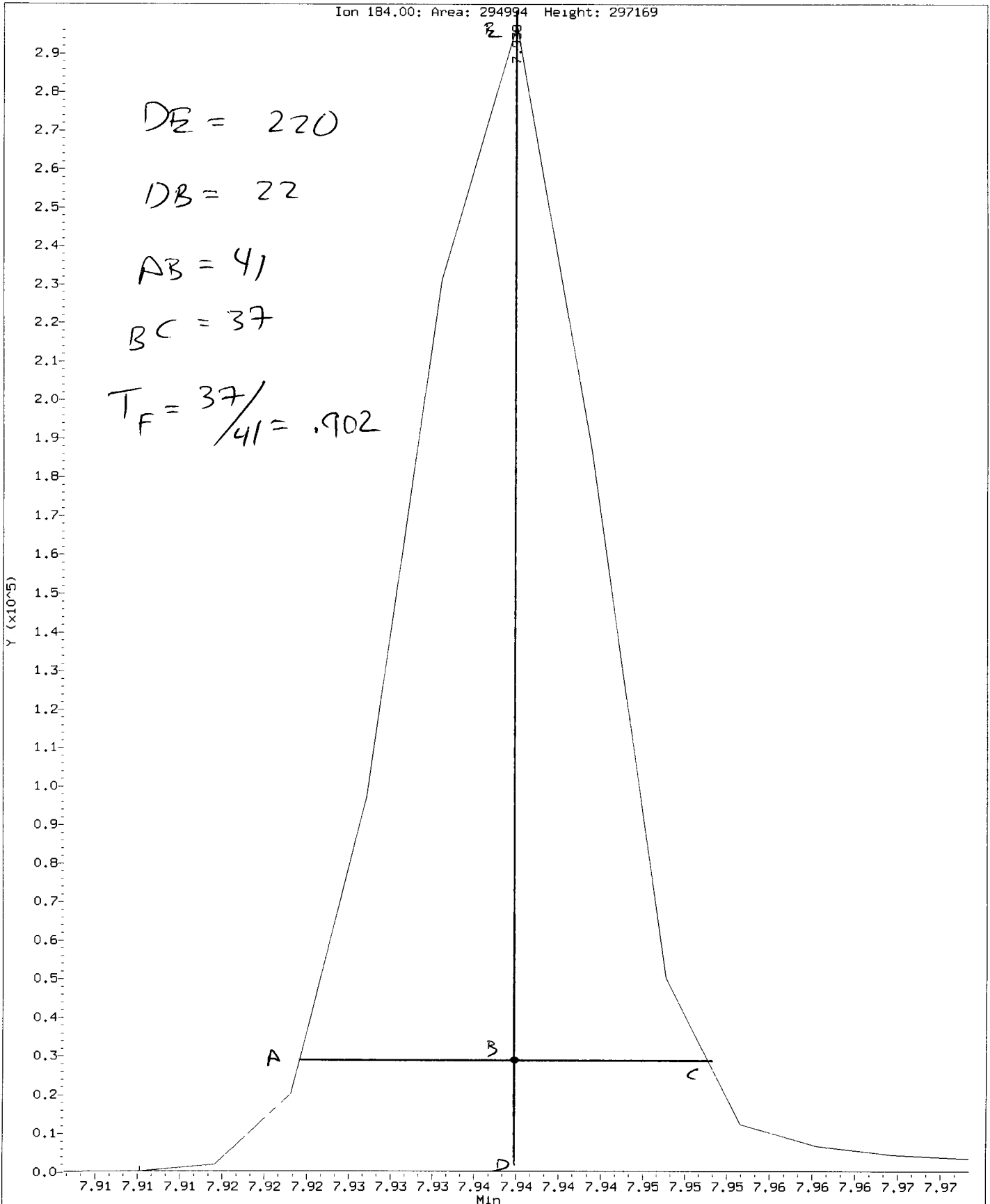
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Injection Date: 04-DEC-2012 14:49  
Instrument: nt10.1  
Client Sample ID: DFTPP

Compound: Pentachlorophenol  
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20121204.b/ddt.b/df1204a1.d  
Injection Date: 04-DEC-2012 14:49  
Instrument: nt10.1  
Client Sample ID: DFTPP

Compound: Benzidine  
CAS Number:



Analytical Resources Inc.  
ABN by sw846 8270C  
DDT Breakdown Report

Data file: /chem1/nt10.i/20121204.b/ddt.b/df1204a1.d ARI ID: DFTPP  
Method: /chem1/nt10.i/20121204.b/ddt.b/sw846ddt.m Misc: 11-  
Analysis Date: 04-DEC-2012 14:49 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.686	140891
Benzidine	7.938	294993
4,4'-DDE	8.120	561
4,4'-DDD	8.403	2500
4,4'-DDT	8.665	221262

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

$$\text{DDT Percent Breakdown} = \frac{(561 + 2500) * 100}{(561 + 2500 + 221262)}$$

$$\text{DDT Percent Breakdown} = 1.4 \%$$



Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58mb.d  
 Lab Smp Id: VR58MBS1 Client Smp ID: VR58MBS1  
 Inj Date : 04-DEC-2012 15:54  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58MBS1  
 Misc Info : 12-22329  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 1 QC Sample: BLANK  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.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	6.543	6.505	(0.740)	186396	4.93458	493.5	
\$ 2 Phenol-d5	99	8.228	8.220	(0.931)	248474	5.31600	531.6	
3 Phenol	94				Compound Not Detected.			
\$ 5 2-Chlorophenol-d4	132	8.467	8.452	(0.958)	197854	4.89234	489.2	
7 1,3-Dichlorobenzene	146				Compound Not Detected.			
* 8 1,4-Dichlorobenzene-d4	152	8.839	8.831	(1.000)	118082	4.00000		
9 1,4-Dichlorobenzene	146				Compound Not Detected.			
\$ 10 1,2-Dichlorobenzene-d4	152	9.219	9.212	(1.043)	90095	3.05521	305.5	
12 1,2-Dichlorobenzene	146				Compound Not Detected.			
11 Benzyl alcohol	108				Compound Not Detected.			
13 2-Methylphenol	108				Compound Not Detected.			
17 Hexachloroethane	117				Compound Not Detected.			
15 4-Methylphenol	108				Compound Not Detected.			
\$ 18 Nitrobenzene-d5	82	10.011	10.003	(0.872)	143494	3.47937	347.9	
22 2,4-Dimethylphenol	107				Compound Not Detected.			

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
24 Benzoic acid	105				Compound Not Detected.		
26 1,2,4-Trichlorobenzene	180				Compound Not Detected.		
* 27 Naphthalene-d8	136	11.480	11.480	(1.000)	440128	4.00000	
28 Naphthalene	128				Compound Not Detected.		
30 Hexachlorobutadiene	225				Compound Not Detected.		
32 2-Methylnaphthalene	142				Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172	13.886	13.886	(0.904)	244572	3.06950	307.0
39 Dimethylphthalate	163				Compound Not Detected.		
40 Acenaphthylene	152				Compound Not Detected.		
* 42 Acenaphthene-d10	164	15.356	15.356	(1.000)	225120	4.00000	
44 Acenaphthene	153				Compound Not Detected.		
46 Dibenzofuran	168				Compound Not Detected.		
50 Diethylphthalate	149	16.454	16.462	(1.071)	14838	0.19492	19.49 <100 ug/mL
49 Fluorene	166				Compound Not Detected.		
54 N-Nitrosodiphenylamine	169				Compound Not Detected.		
\$ 55 2,4,6-Tribromophenol	330	17.125	17.125	(1.115)	48077	3.62550	362.5
57 Hexachlorobenzene	284				Compound Not Detected.		
58 Pentachlorophenol	266				Compound Not Detected.		
* 59 Phenanthrene-d10	188	18.617	18.617	(1.000)	358767	4.00000	
60 Phenanthrene	178				Compound Not Detected.		
61 Anthracene	178				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	21.835	21.835	(0.922)	271704	4.09854	409.9
67 Butylbenzylphthalate	149				Compound Not Detected.		
68 Benzo(a)anthracene	228				Compound Not Detected.		
* 69 Chrysene-d12	240	23.694	23.701	(1.000)	338529	4.00000	
71 Chrysene	228				Compound Not Detected.		
72 bis(2-Ethylhexyl)phthalate	149	23.825	23.825	(0.961)	7662	0.12494	12.49 <100 ug/mL
* 134 Di-n-octylphthalate-d4	153	24.801	24.801	(1.000)	444475	4.00000	
73 Di-n-octylphthalate	149				Compound Not Detected.		
76 Benzo(a)pyrene	252				Compound Not Detected.		
* 77 Perylene-d12	264	26.086	26.086	(1.000)	306926	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.		
105 1-methylnaphthalene	142				Compound Not Detected.		
187 Total Benzofluoranthenes	252				Compound Not Detected.		
98 Retene	219				Compound Not Detected.		
120 2,3,4,6-Tetrachlorophenol	232				Compound Not Detected.		

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 12-5-12  
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Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt10.i  
Lab File ID: vr58mb.d  
Lab Smp Id: VR58MBS1  
Analysis Type: SV  
Quant Type: ISTD  
Operator: VTS/YZ  
Method File: /chem1/nt10.i/20121204.b/ABN.m  
Misc Info: 12-22329

Calibration Date: 04-DEC-2012  
Calibration Time: 15:05  
Client Smp ID: VR58MBS1  
Level: LOW  
Sample Type: Solid

Test Mode:  
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	118082	44.76
27 Naphthalene-d8	299399	149700	598798	440128	47.00
42 Acenaphthene-d10	178564	89282	357128	225120	26.07
59 Phenanthrene-d10	305410	152705	610820	358767	17.47
69 Chrysene-d12	323853	161926	647706	338529	4.53
134 Di-n-octylphthala	427845	213922	855690	444475	3.89
77 Perylene-d12	305316	152658	610632	306926	0.53

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.84	0.09
27 Naphthalene-d8	11.48	10.98	11.98	11.48	0.00
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.00
59 Phenanthrene-d10	18.62	18.12	19.12	18.62	0.00
69 Chrysene-d12	23.70	23.20	24.20	23.69	-0.03
134 Di-n-octylphthala	24.80	24.30	25.30	24.80	0.00
77 Perylene-d12	26.09	25.59	26.59	26.09	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.

Client SDG: VR58

Sample Matrix: SOLID

Fraction: SV

Lab Smp Id: VR58MBS1

Client Smp ID: VR58MBS1

Level: LOW

Operator: VTS/YZ

Data Type: MS DATA

SampleType: BLANK

SpikeList File: SHORTPSDDA.spk

Quant Type: ISTD

Sublist File: SHORTPSDDA.sub

Method File: /chem1/nt10.i/20121204.b/ABN.m

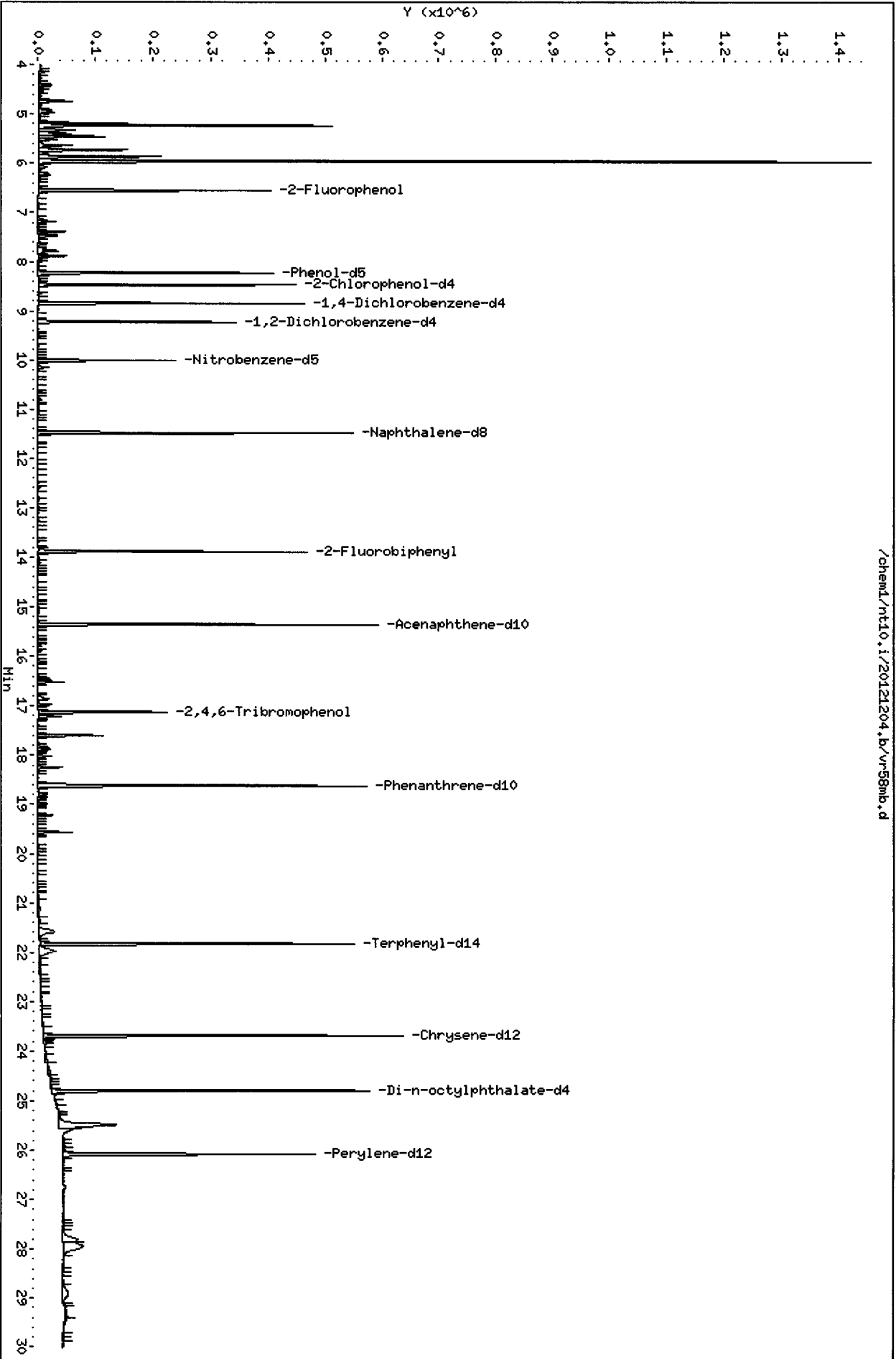
Misc Info: 12-22329

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	750.0	493.5	65.79	30-160
\$ 2 Phenol-d5	750.0	531.6	70.88	30-160
\$ 5 2-Chlorophenol-d4	750.0	489.2	65.23	30-160
\$ 10 1,2-Dichlorobenzen	500.0	305.5	61.10	30-160
\$ 18 Nitrobenzene-d5	500.0	347.9	69.59	30-160
\$ 36 2-Fluorobiphenyl	500.0	307.0	61.39	30-160
\$ 55 2,4,6-Tribromophen	750.0	362.5	48.34	30-160
\$ 66 Terphenyl-d14	500.0	409.9	81.97	30-160

Data File: /chem1/nt10.i/20121204.b/vr58mb.d  
Date : 04-DEC-2012 15:54  
Client ID: VR58MB01  
Sample Info: VR58MB01  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.i  
Operator: VTS/YZ  
Column diameter: 0.25

/chem1/nt10.i/20121204.b/vr58mb.d



CO-ELUTION SUMMARY FOR FILE - vr58mb.d

Lab ID: VR58MBS1, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

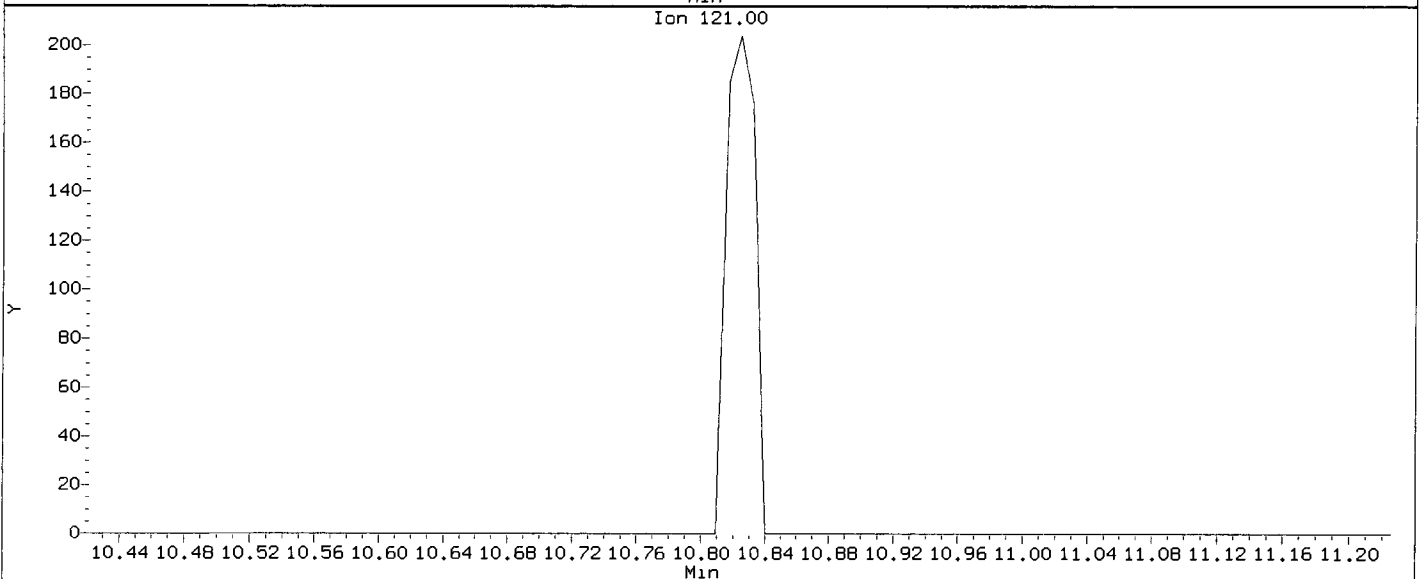
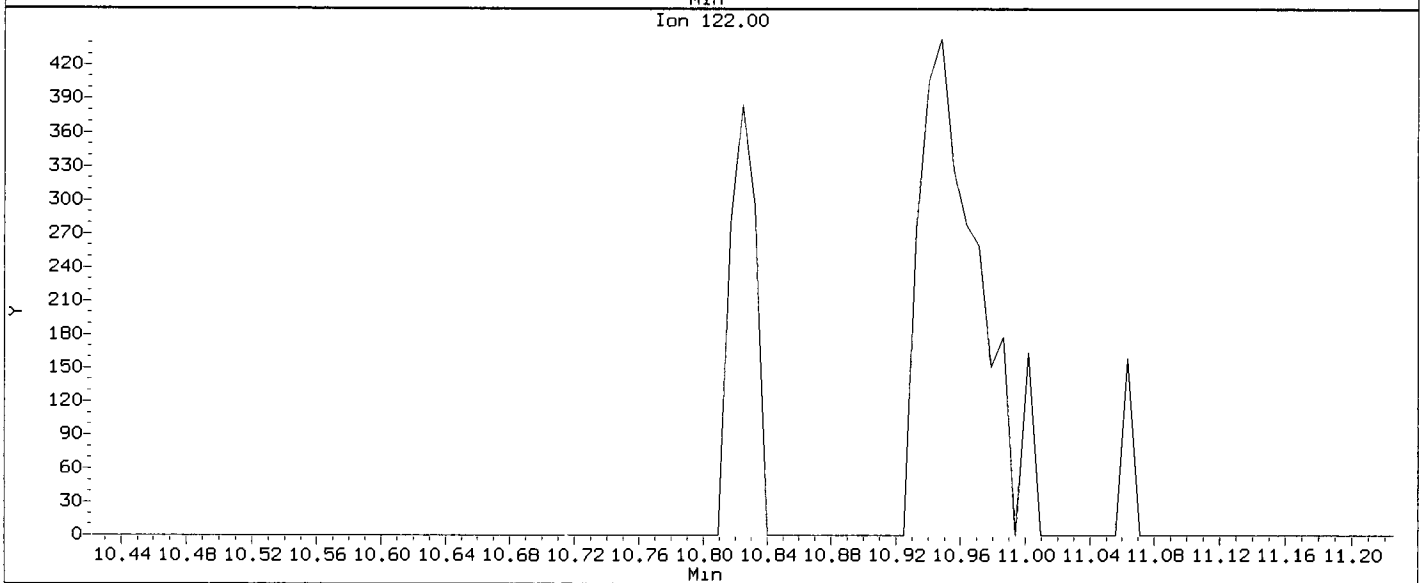
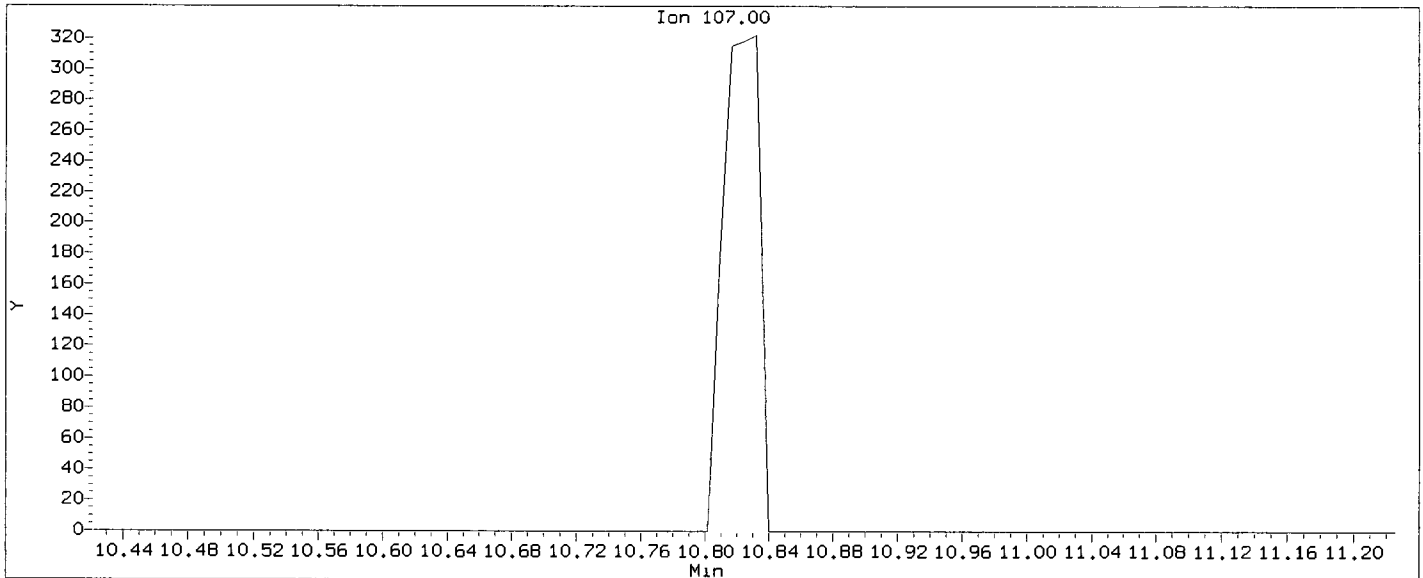
RT            CO-ELUTION COMPOUNDS

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Data File: /chem1/nt10.1/20121204.b/vr58mb.d  
Injection Date: 04-DEC-2012 15:54  
Instrument: nt10.1  
Client Sample ID: VR58MBS1

< 1/2 PL < 20 ug/PL

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58sb.d  
 Lab Smp Id: VR58LCSS1 Client Smp ID: VR58LCSS1  
 Inj Date : 04-DEC-2012 16:31  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58LCSS1  
 Misc Info : 12-22329  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 2 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.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	6.520	6.505	(0.738)	199841	6.42347	642.3
\$ 2 Phenol-d5		99	8.220	8.220	(0.931)	273901	7.11490	711.5
3 Phenol		94	8.243	8.243	(0.933)	234026	5.77070	577.1
\$ 5 2-Chlorophenol-d4		132	8.452	8.452	(0.957)	209583	6.29216	629.2
7 1,3-Dichlorobenzene		146	8.762	8.762	(0.992)	137494	3.51222	351.2
* 8 1,4-Dichlorobenzene-d4		152	8.831	8.831	(1.000)	97255	4.00000	
9 1,4-Dichlorobenzene		146	8.862	8.862	(1.004)	118395	3.22384	322.4
\$ 10 1,2-Dichlorobenzene-d4		152	9.212	9.212	(1.043)	80418	3.31105	331.1
12 1,2-Dichlorobenzene		146	9.235	9.235	(1.046)	112115	3.18134	318.1
11 Benzyl alcohol		108	9.149	9.150	(1.036)	71373	3.72184	372.2
13 2-Methylphenol		108	9.421	9.421	(1.067)	95818	2.74935	274.9
17 Hexachloroethane		117	9.864	9.864	(1.117)	47847	3.17094	317.1
15 4-Methylphenol		108	9.716	9.716	(1.100)	186783	9.03452	903.5
\$ 18 Nitrobenzene-d5		82	10.003	10.003	(0.871)	113043	3.38706	338.7



Compounds	QUANT SIG				CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	=====	==	=====	=====	=====	=====	=====
22 2,4-Dimethylphenol	107	10.817	10.825	(0.942)	174033	5.13497	513.5
24 Benzoic acid	105	11.094	11.110	(0.966)	484081	21.3535	2135
26 1,2,4-Trichlorobenzene	180	11.395	11.395	(0.993)	87077	4.39665	439.7
* 27 Naphthalene-d8	136	11.480	11.480	(1.000)	356178	4.00000	
28 Naphthalene	128	11.518	11.526	(1.003)	325395	3.75507	375.5
30 Hexachlorobutadiene	225	11.935	11.936	(1.040)	59622	2.68565	268.6
32 2-Methylnaphthalene	142	13.019	13.027	(1.134)	243014	3.76407	376.4
\$ 36 2-Fluorobiphenyl	172	13.886	13.886	(0.904)	226524	2.66402	266.4
39 Dimethylphthalate	163	14.876	14.876	(0.969)	292693	3.77109	377.1
40 Acenaphthylene	152	15.008	15.016	(0.977)	376627	3.31681	331.7
* 42 Acenaphthene-d10	164	15.356	15.356	(1.000)	240244	4.00000	
44 Acenaphthene	153	15.426	15.426	(1.005)	237426	3.65804	365.8
46 Dibenzofuran	168	15.781	15.781	(1.028)	357054	3.70673	370.7
50 Diethylphthalate	149	16.462	16.462	(1.072)	298416	3.67346	367.3
49 Fluorene	166	16.547	16.547	(1.078)	272196	3.40614	340.6
54 N-Nitrosodiphenylamine	169	16.840	16.840	(0.905)	193343	4.45381	445.4
\$ 55 2,4,6-Tribromophenol	330	17.125	17.125	(1.115)	70626	4.99064	499.1
57 Hexachlorobenzene	284	17.959	17.959	(0.965)	92659	3.65572	365.6
58 Pentachlorophenol	266	18.361	18.362	(0.986)	167478	10.3309	1033
* 59 Phenanthrene-d10	188	18.617	18.617	(1.000)	353506	4.00000	
60 Phenanthrene	178	18.671	18.671	(1.003)	378708	4.32676	432.7
61 Anthracene	178	18.764	18.764	(1.008)	369925	3.93200	393.2
63 Di-n-butylphthalate	149	20.002	20.002	(1.074)	548894	4.93151	493.2
64 Fluoranthene	202	21.093	21.093	(1.133)	508200	4.60644	460.6
65 Pyrene	202	21.510	21.510	(0.908)	512898	4.40770	440.8
\$ 66 Terphenyl-d14	244	21.835	21.835	(0.922)	339279	4.36188	436.2
67 Butylbenzylphthalate	149	22.780	22.788	(0.961)	224236	4.74382	474.4
68 Benzo(a)anthracene	228	23.670	23.670	(0.999)	458090	4.05773	405.8
* 69 Chrysene-d12	240	23.694	23.701	(1.000)	397203	4.00000	
71 Chrysene	228	23.740	23.740	(1.002)	410658	4.09459	409.5
72 bis(2-Ethylhexyl)phthalate	149	23.825	23.825	(0.961)	321767	4.26981	427.0
* 134 Di-n-octylphthalate-d4	153	24.801	24.801	(1.000)	546163	4.00000	
73 Di-n-octylphthalate	149	24.808	24.808	(1.000)	535783	4.32754	432.8
76 Benzo(a)pyrene	252	25.985	25.985	(0.996)	342767	3.31879	331.9
* 77 Perylene-d12	264	26.086	26.086	(1.000)	361894	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.286	28.294	(1.084)	442912	3.78395	378.4
79 Dibenzo(a,h)anthracene	278	28.310	28.310	(1.085)	367225	3.95329	395.3
80 Benzo(g,h,i)perylene	276	28.931	28.931	(1.109)	406728	4.06016	406.0
105 1-methylnaphthalene	142	13.259	13.259	(1.155)	240245	4.05442	405.4
187 Total Benzofluoranthenes	252	25.435	25.474	(0.975)	879875	8.26193	826.2
98 Retene	219	Compound Not Detected.					
120 2,3,4,6-Tetrachlorophenol	232	16.168	16.160	(1.053)	71695	<del>1143.52</del>	114400

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Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58sb.d  
 Lab Smp Id: VR58LCSS1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22329

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: VR58LCSS1  
 Level: LOW  
 Sample Type: Solid

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	97255	19.23
27 Naphthalene-d8	299399	149700	598798	356178	18.96
42 Acenaphthene-d10	178564	89282	357128	240244	34.54
59 Phenanthrene-d10	305410	152705	610820	353506	15.75
69 Chrysene-d12	323853	161926	647706	397203	22.65
134 Di-n-octylphthala	427845	213922	855690	546163	27.65
77 Perylene-d12	305316	152658	610632	361894	18.53

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.83	0.00
27 Naphthalene-d8	11.48	10.98	11.98	11.48	0.00
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.00
59 Phenanthrene-d10	18.62	18.12	19.12	18.62	0.00
69 Chrysene-d12	23.70	23.20	24.20	23.69	-0.03
134 Di-n-octylphthala	24.80	24.30	25.30	24.80	0.00
77 Perylene-d12	26.09	25.59	26.59	26.09	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC. Client SDG: VR58  
 Sample Matrix: SOLID Fraction: SV  
 Lab Smp Id: VR58LCSS1 Client Smp ID: VR58LCSS1  
 Level: LOW Operator: VTS/YZ  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: SHORTPSDDA.spk Quant Type: ISTD  
 Sublist File: SHORTPSDDA.sub  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22329

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	577.1	115.41	30-160
7 1,3-Dichlorobenzen	500.0	351.2	70.24	30-160
9 1,4-Dichlorobenzen	500.0	322.4	64.48	30-160
11 Benzyl alcohol	500.0	372.2	74.44	30-160
12 1,2-Dichlorobenzen	500.0	318.1	63.63	30-160
13 2-Methylphenol	500.0	274.9	54.99	30-160
15 4-Methylphenol	1000	903.5	90.35	30-160
17 Hexachloroethane	500.0	317.1	63.42	30-160
22 2,4-Dimethylphenol	1500	513.5	34.23	30-160
24 Benzoic acid	2750	2135	77.65	30-160
26 1,2,4-Trichloroben	500.0	439.7	87.93	30-160
28 Naphthalene	500.0	375.5	75.10	30-160
30 Hexachlorobutadien	500.0	268.6	53.71	30-160
32 2-Methylnaphthalen	500.0	376.4	75.28	30-160
39 Dimethylphthalate	500.0	377.1	75.42	30-160
40 Acenaphthylene	500.0	331.7	66.34	30-160
44 Acenaphthene	500.0	365.8	73.16	30-160
46 Dibenzofuran	500.0	370.7	74.13	30-160
49 Fluorene	500.0	340.6	68.12	30-160
50 Diethylphthalate	500.0	367.3	73.47	30-160
54 N-Nitrosodiphenyla	500.0	445.4	89.08	30-160
57 Hexachlorobenzene	500.0	365.6	73.11	30-160
58 Pentachlorophenol	1500	1033	68.87	30-160
60 Phenanthrene	500.0	432.7	86.54	30-160
61 Anthracene	500.0	393.2	78.64	30-160
63 Di-n-butylphthalat	500.0	493.2	98.63	30-160
64 Fluoranthene	500.0	460.6	92.13	30-160
65 Pyrene	500.0	440.8	88.15	30-160
67 Butylbenzylphthala	500.0	474.4	94.88	30-160
68 Benzo(a)anthracene	500.0	405.8	81.15	30-160
71 Chrysene	500.0	409.5	81.89	30-160
72 bis(2-Ethylhexyl)p	500.0	427.0	85.40	30-160
73 Di-n-octylphthalat	500.0	432.8	86.55	30-160

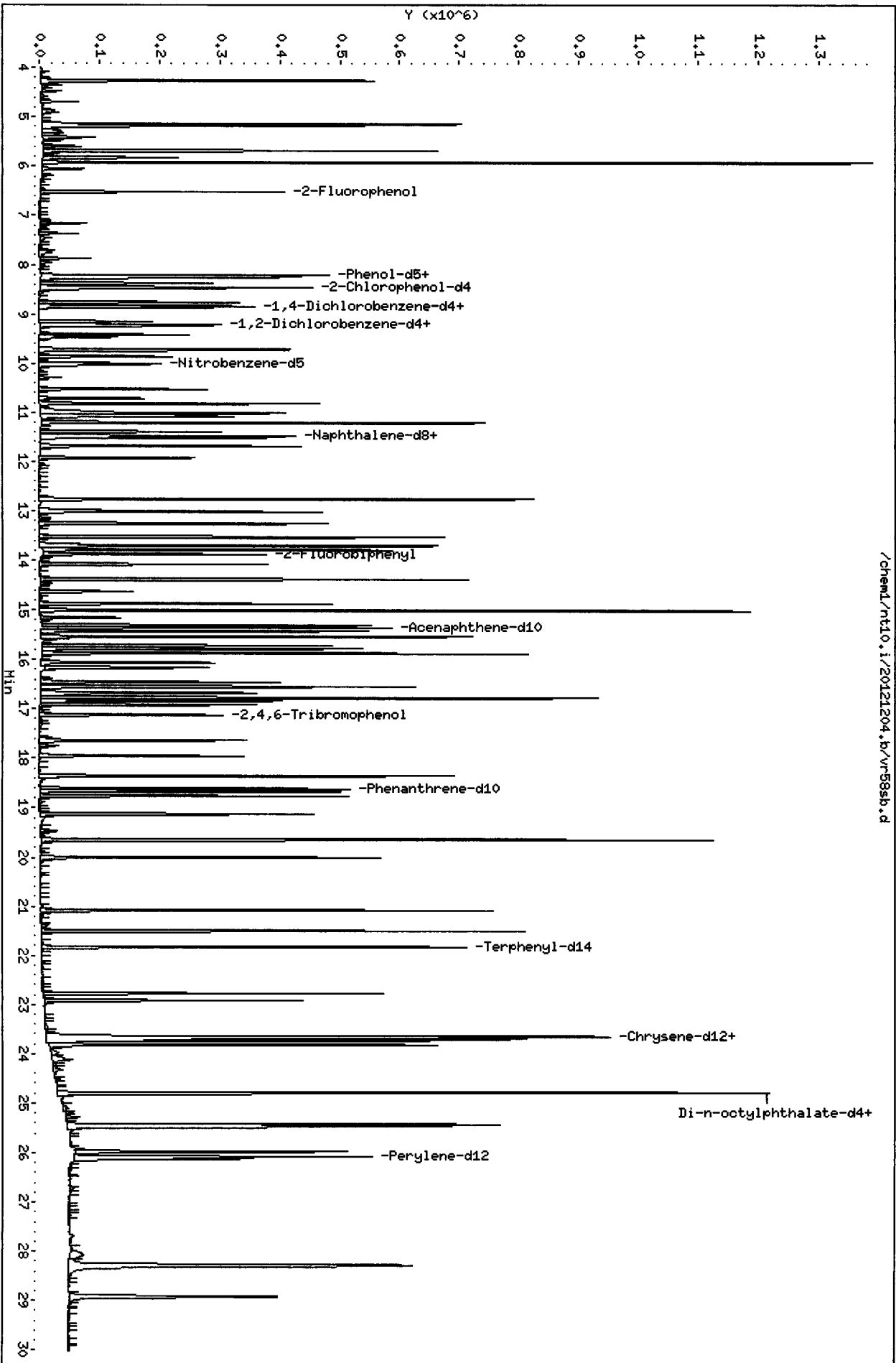
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	500.0	331.9	66.38	30-160
78 Indeno(1,2,3-cd)py	500.0	378.4	75.68	30-160
79 Dibenzo(a,h)anthra	500.0	395.3	79.07	30-160
80 Benzo(g,h,i)peryle	500.0	406.0	81.20	30-160
105 1-methylnaphthalen	500.0	405.4	81.09	30-160
187 Total Benzofluoran	1000	826.2	82.62	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	750.0	642.3	85.65	30-160
\$ 2 Phenol-d5	750.0	711.5	94.87	30-160
\$ 5 2-Chlorophenol-d4	750.0	629.2	83.90	30-160
\$ 10 1,2-Dichlorobenzen	500.0	331.1	66.22	30-160
\$ 18 Nitrobenzene-d5	500.0	338.7	67.74	30-160
\$ 36 2-Fluorobiphenyl	500.0	266.4	53.28	30-160
\$ 55 2,4,6-Tribromophen	750.0	499.1	66.54	30-160
\$ 66 Terphenyl-d14	500.0	436.2	87.24	30-160

Data File: /chem1/nt10.i/20121204.b/vr58sb.d  
Date: 04-DEC-2012 16:31  
Client ID: VR58LCSS1  
Sample Info: VR58LCSS1  
Volume Injected (uL): 1.0  
Column phase: ZB-5ms1

Instrument: nt10.i  
Operator: VTS/YZ  
Column diameter: 0.25

/chem1/nt10.i/20121204.b/vr58sb.d



CO-ELUTION SUMMARY FOR FILE - vr58sb.d

Lab ID: VR58LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

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Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58a.d  
 Lab Smp Id: VR58A Client Smp ID: SG-10-S-E-121107  
 Inj Date : 04-DEC-2012 17:08  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58A  
 Misc Info : 12-22329  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 3  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.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	17.00000	Weight of sample extracted (g)
M	40.60000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN	FINAL
								(ug/mL)	(ug/kg)
\$ 1 2-Fluorophenol	112			6.528	6.505	(0.739)	172024	4.84562	479.9
\$ 2 Phenol-d5	99			8.228	8.220	(0.932)	254202	5.78668	573.1
3 Phenol	94			8.251	8.243	(0.934)	25684	0.55501	54.96
\$ 5 2-Chlorophenol-d4	132			8.460	8.452	(0.958)	198610	5.22540	517.5
7 1,3-Dichlorobenzene	146			Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152			8.831	8.831	(1.000)	110978	4.00000	
9 1,4-Dichlorobenzene	146			Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152			9.212	9.212	(1.043)	80427	2.90194	287.4
12 1,2-Dichlorobenzene	146			Compound Not Detected.					
11 Benzyl alcohol	108			9.157	9.150	(1.037)	44714	2.04335	202.4
13 2-Methylphenol	108			Compound Not Detected.					
17 Hexachloroethane	117			Compound Not Detected.					
15 4-Methylphenol	108			9.716	9.716	(1.100)	37480	1.58870	157.3
\$ 18 Nitrobenzene-d5	82			10.004	10.003	(0.871)	140137	3.77477	373.8
22 2,4-Dimethylphenol	107			Compound Not Detected.					

Compounds	QUANT		SIG			RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	ON-COLUMN (ug/mL)		FINAL (ug/kg)	
24 Benzoic acid	105	11.025	11.110	(0.960)	120409	5.20446	515.4 (M)	
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
* 27 Naphthalene-d8	136	11.480	11.480	(1.000)	396195	4.00000		
28 Naphthalene	128	11.518	11.526	(1.003)	36368	0.37730	37.36	
30 Hexachlorobutadiene	225	Compound Not Detected.						
32 2-Methylnaphthalene	142	Compound Not Detected.						
\$ 36 2-Fluorobiphenyl	172	13.886	13.886	(0.904)	165195	4.74558	470.0	
39 Dimethylphthalate	163	Compound Not Detected.						
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	15.356	15.356	(1.000)	98352	4.00000		
44 Acenaphthene	153	15.426	15.426	(1.005)	4311	0.16224	16.07	
46 Dibenzofuran	168	15.781	15.781	(1.028)	15581	0.39511	39.13	
50 Diethylphthalate	149	16.454	16.462	(1.071)	7992	0.24031	23.80	
49 Fluorene	166	16.547	16.547	(1.078)	9079	0.27752	27.48	
54 N-Nitrosodiphenylamine	169	Compound Not Detected.						
\$ 55 2,4,6-Tribromophenol	330	17.125	17.125	(1.115)	32262	5.56868	551.5	
57 Hexachlorobenzene	284	Compound Not Detected.						
58 Pentachlorophenol	266	Compound Not Detected.						
* 59 Phenanthrene-d10	188	18.625	18.617	(1.000)	357496	4.00000		
60 Phenanthrene	178	18.671	18.671	(1.002)	222679	2.51572	249.1	
61 Anthracene	178	18.772	18.764	(1.008)	45336	0.47651	47.19	
63 Di-n-butylphthalate	149	Compound Not Detected.						
64 Fluoranthene	202	21.108	21.093	(1.133)	539585	4.83633	478.9	
65 Pyrene	202	21.518	21.510	(0.908)	178849	8.09049	801.2	
\$ 66 Terphenyl-d14	244	21.843	21.835	(0.922)	61972	4.19391	415.3	
67 Butylbenzylphthalate	149	Compound Not Detected.						
68 Benzo(a)anthracene	228	23.678	23.670	(0.999)	33431	1.55879	154.4	
* 69 Chrysene-d12	240	23.701	23.701	(1.000)	75458	4.00000		
71 Chrysene	228	23.748	23.740	(1.002)	46958	2.46460	244.1	
72 bis(2-Ethylhexyl)phthalate	149	23.833	23.825	(0.961)	81800	4.86763	482.0	
* 134 Di-n-octylphthalate-d4	153	24.808	24.801	(1.000)	121794	4.00000		
73 Di-n-octylphthalate	149	Compound Not Detected.						
76 Benzo(a)pyrene	252	26.009	25.985	(0.996)	32432	1.48971	147.5	
* 77 Perylene-d12	264	26.109	26.086	(1.000)	76284	4.00000		
78 Indeno(1,2,3-cd)pyrene	276	28.333	28.294	(1.085)	27352	1.10857	109.8	
79 Dibenzo(a,h)anthracene	278	28.356	28.310	(1.086)	6690	0.34171	33.84 (M)	
80 Benzo(g,h,i)perylene	276	28.985	28.931	(1.110)	30039	1.42257	140.9	
105 1-methylnaphthalene	142	Compound Not Detected.						
187 Total Benzofluoranthenes	252	25.451	25.474	(0.975)	74015	3.29707	326.5	
98 Retene	219	22.130	22.137	(0.934)	43246			
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.						

Y

(out ↓)

(out ↓)

(out ↓)

QC Flag Legend

M - Compound response manually integrated.

12-5-12



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58a.d  
 Lab Smp Id: VR58A  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22329

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-10-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	110978	36.05
27 Naphthalene-d8	299399	149700	598798	396195	32.33
42 Acenaphthene-d10	178564	89282	357128	98352	-44.92
59 Phenanthrene-d10	305410	152705	610820	357496	17.05
69 Chrysene-d12	323853	161926	647706	75458	-76.70
134 Di-n-octylphthala	427845	213922	855690	121794	-71.53
77 Perylene-d12	305316	152658	610632	76284	-75.01

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COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.83	0.00
27 Naphthalene-d8	11.48	10.98	11.98	11.48	0.00
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.00
59 Phenanthrene-d10	18.62	18.12	19.12	18.62	0.04
69 Chrysene-d12	23.70	23.20	24.20	23.70	0.00
134 Di-n-octylphthala	24.80	24.30	25.30	24.81	0.03
77 Perylene-d12	26.09	25.59	26.59	26.11	0.09

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.

Client SDG: VR58

Sample Matrix: SOLID

Fraction: SV

Lab Smp Id: VR58A

Client Smp ID: SG-10-S-E-121107

Level: LOW

Operator: VTS/YZ

Data Type: MS DATA

SampleType: SAMPLE

SpikeList File: SHORTPSDDA.spk

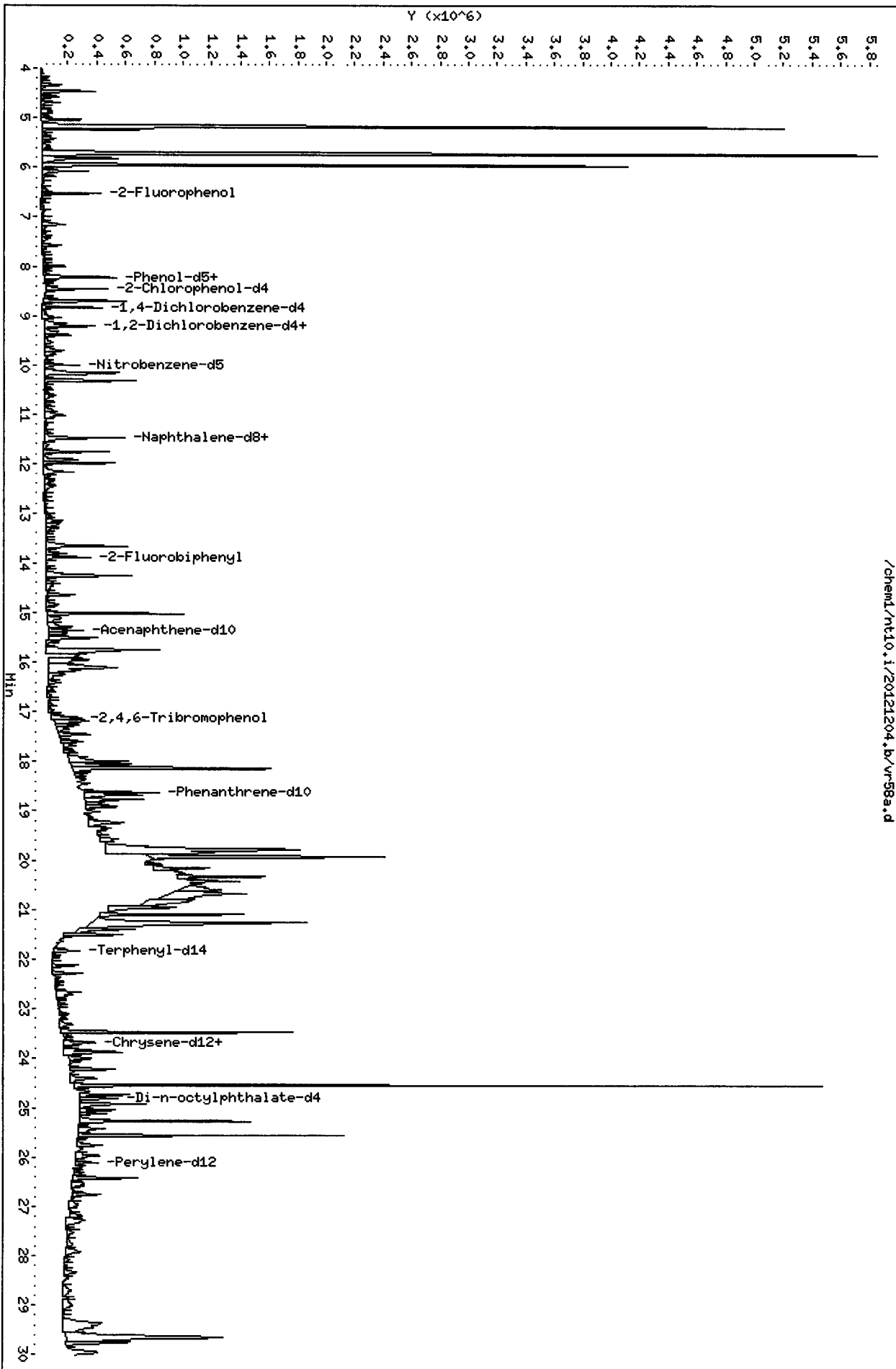
Quant Type: ISTD

Sublist File: SHORTPSDDA.sub

Method File: /chem1/nt10.i/20121204.b/ABN.m

Misc Info: 12-22329

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	742.7	479.9	64.61	30-160
\$ 2 Phenol-d5	742.7	573.1	77.16	30-160
\$ 5 2-Chlorophenol-d4	742.7	517.5	69.67	30-160
\$ 10 1,2-Dichlorobenzen	495.1	287.4	58.04	30-160
\$ 18 Nitrobenzene-d5	495.1	373.8	75.50	30-160
\$ 36 2-Fluorobiphenyl	495.1	470.0	94.91	30-160
\$ 55 2,4,6-Tribromophen	742.7	551.5	74.25	30-160
\$ 66 Terphenyl-d14	495.1	415.3	83.88	30-160



04-DEC-2012 17:08

Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

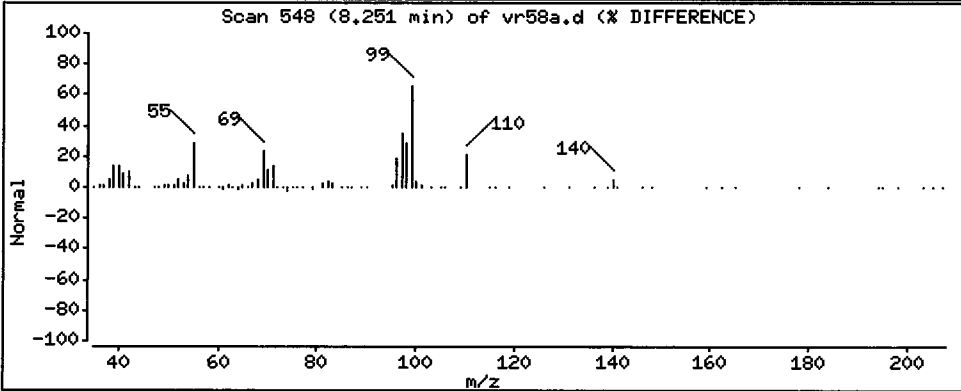
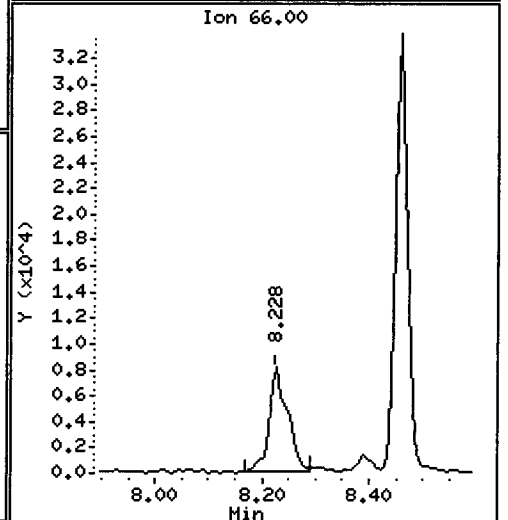
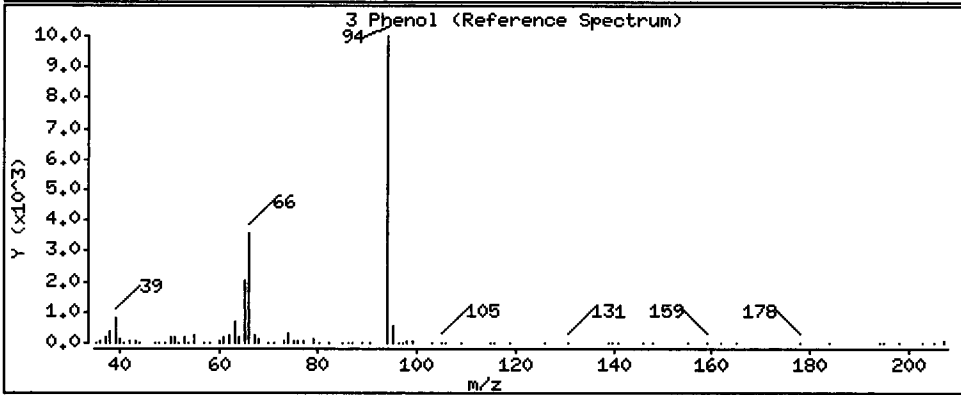
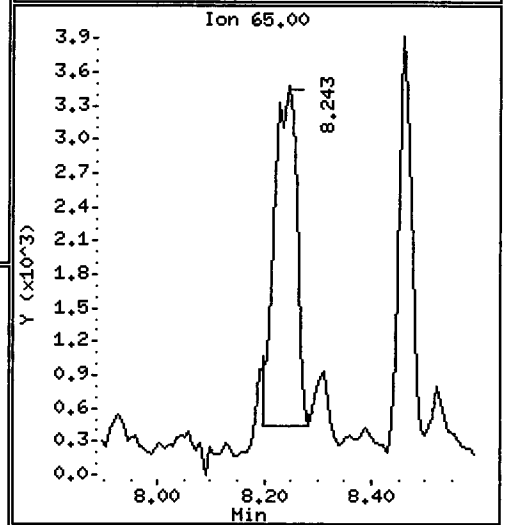
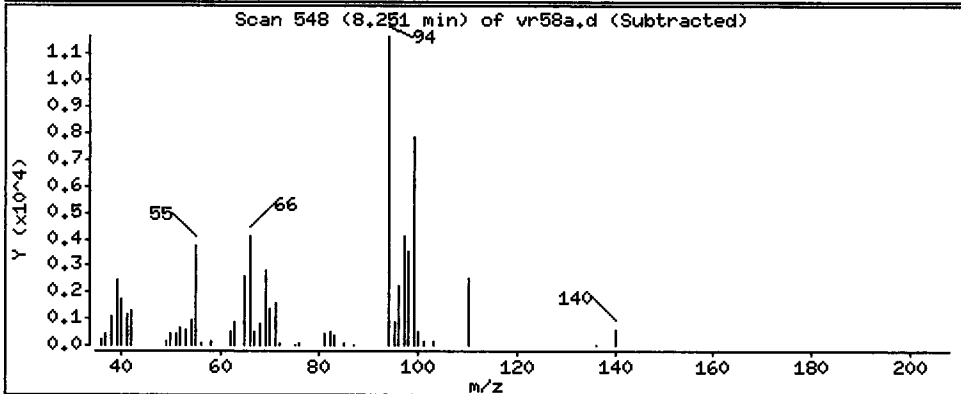
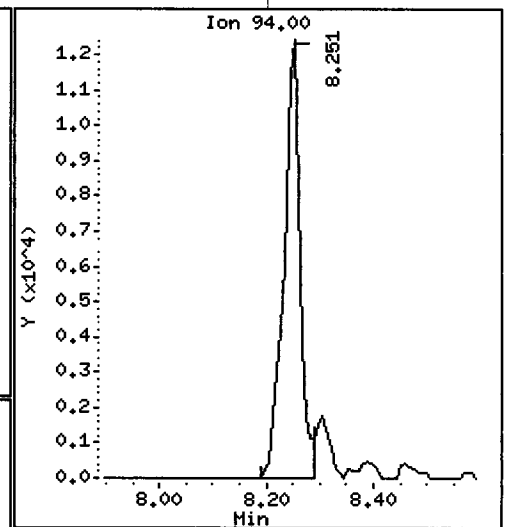
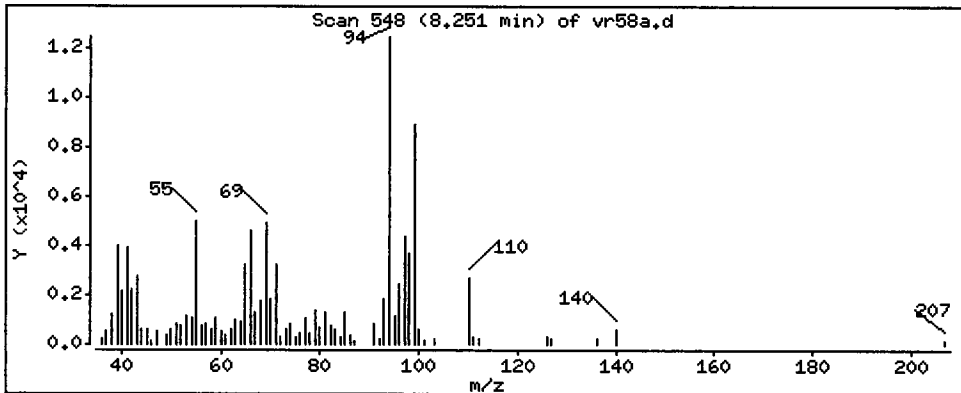
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 54.96 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

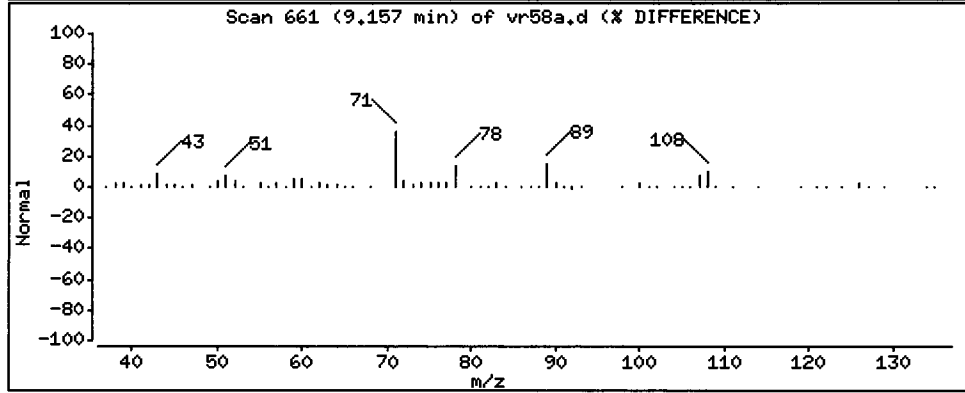
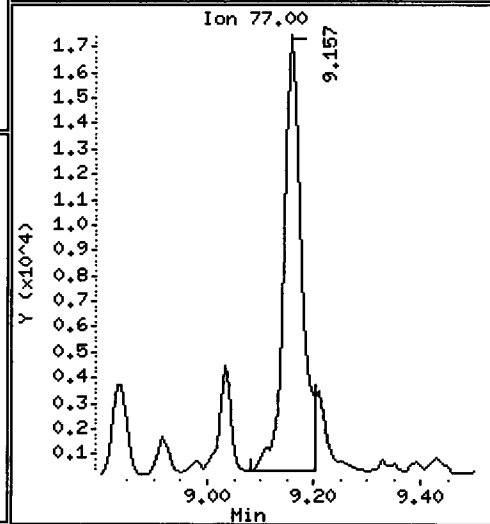
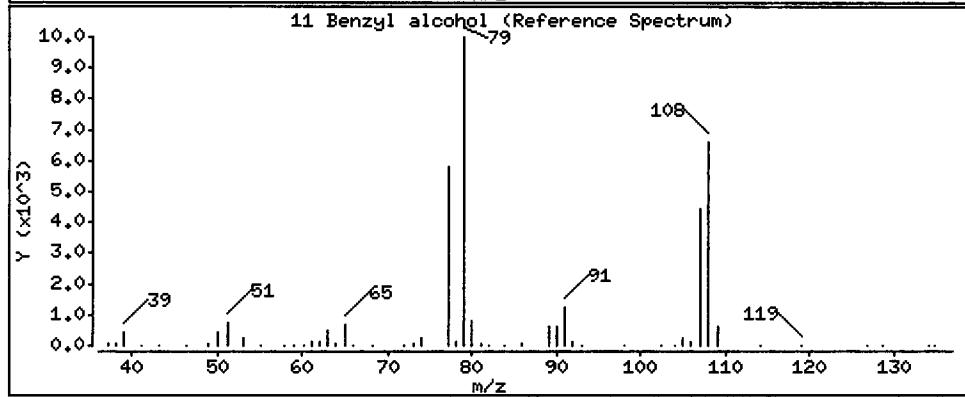
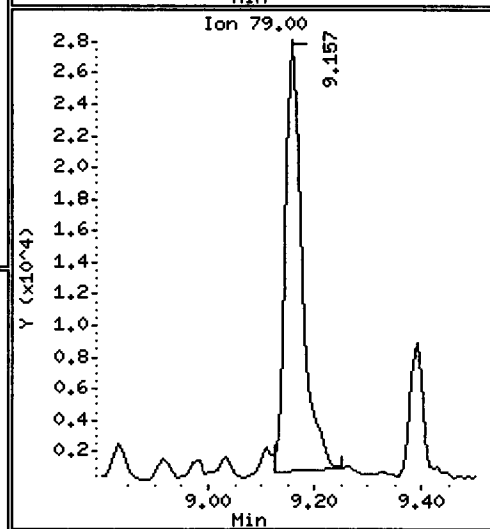
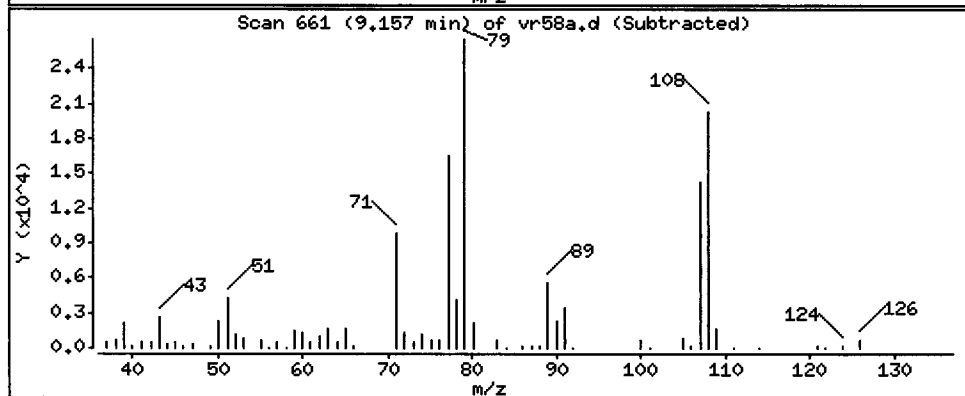
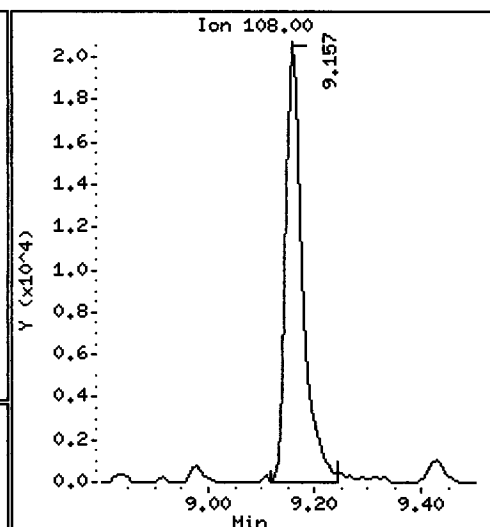
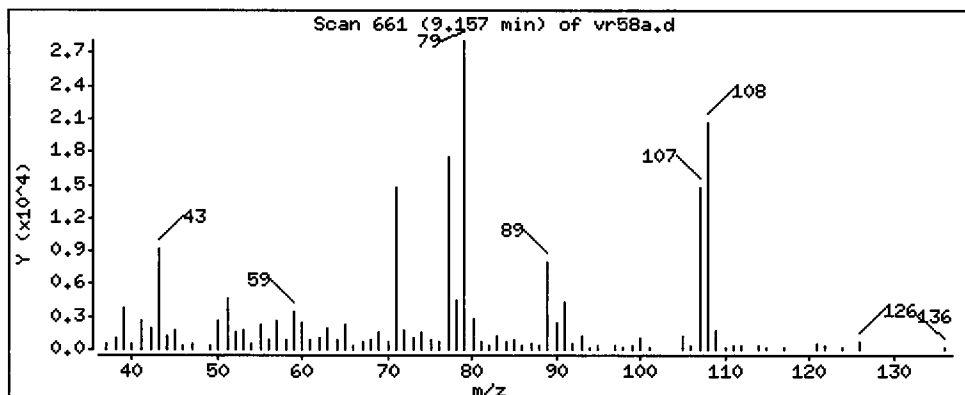
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 202.4 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

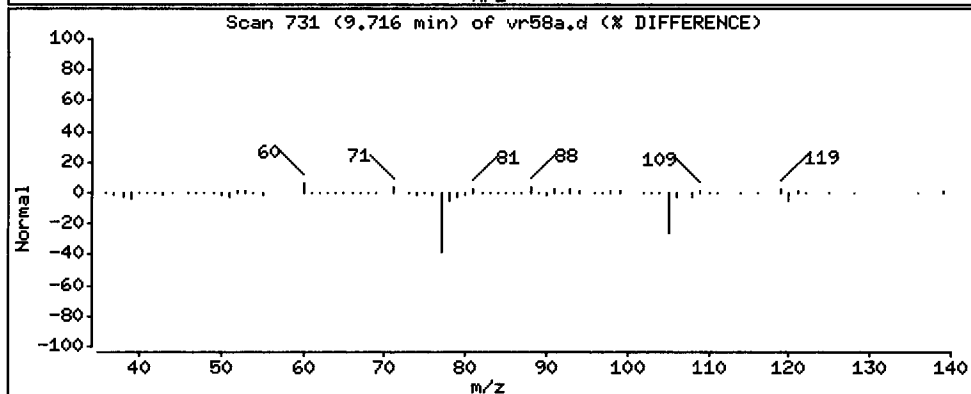
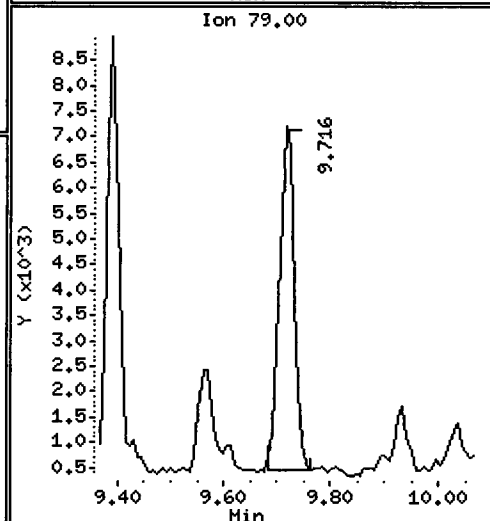
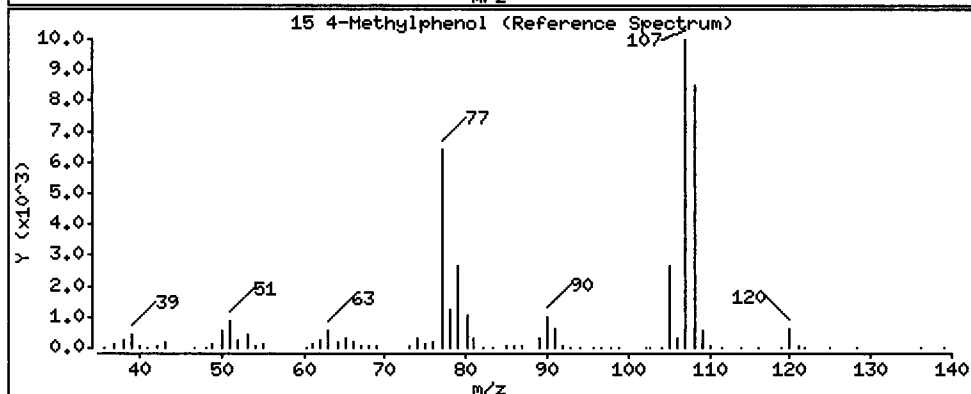
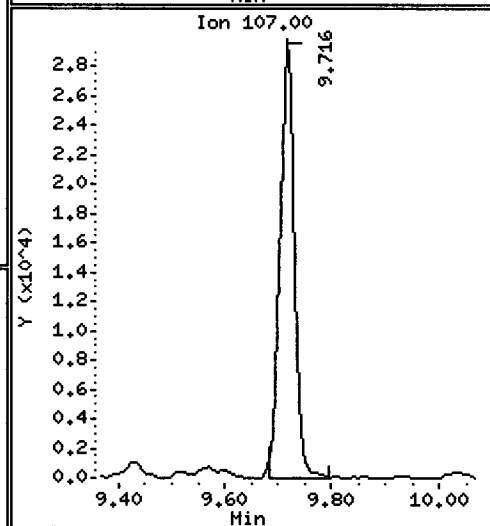
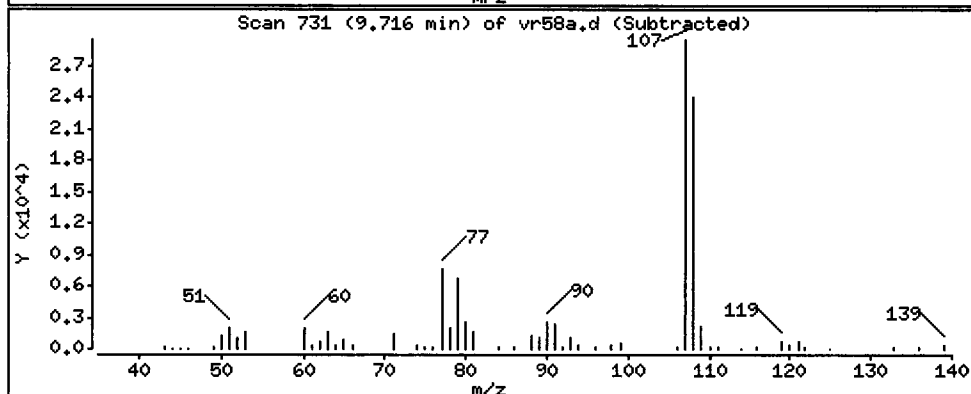
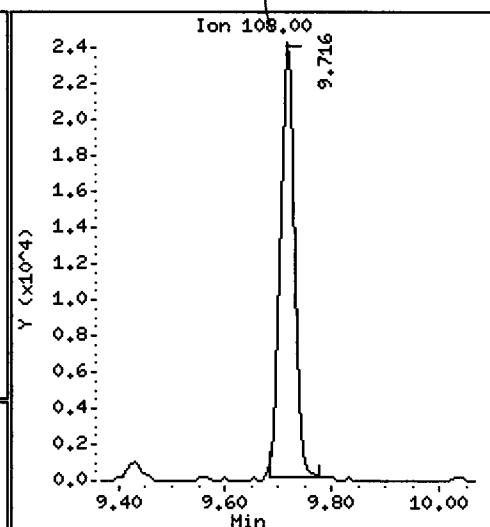
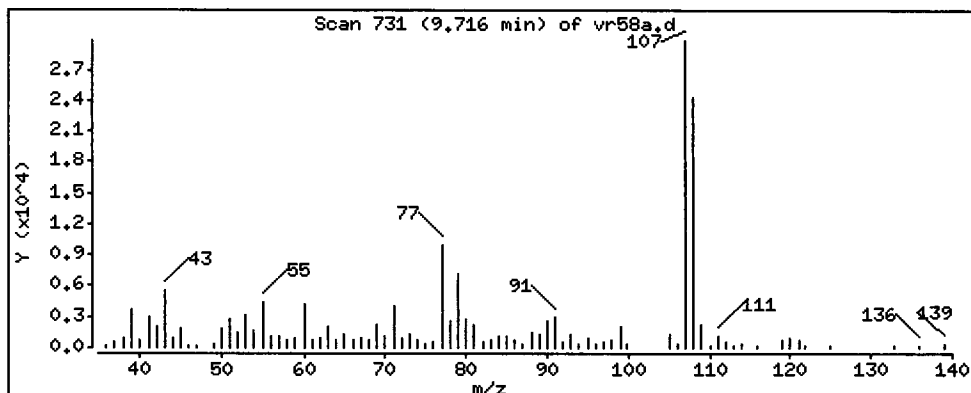
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 157.3 ug/kg



Date : 04-DEC-2012 17:08

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Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

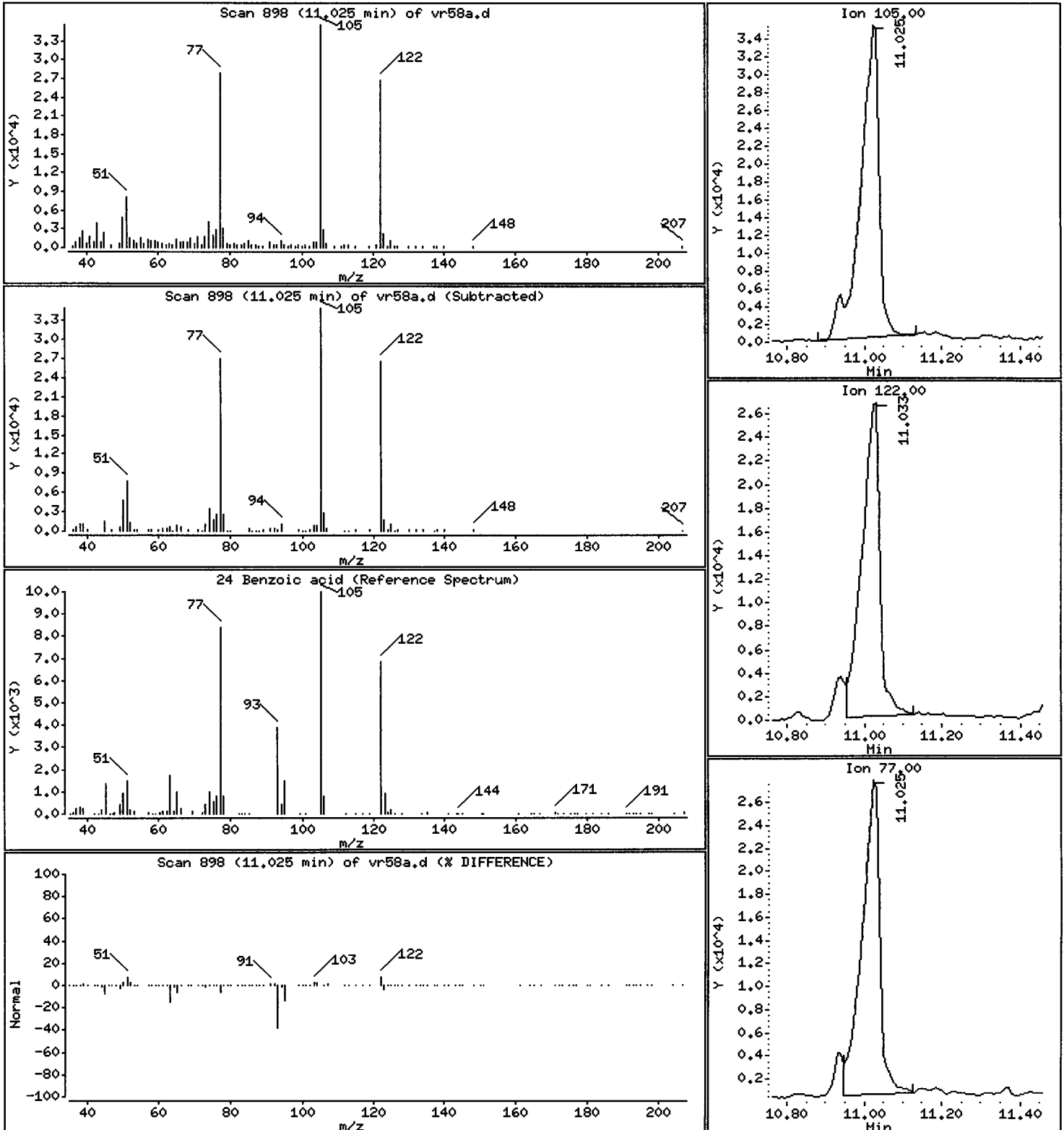
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 515.4 ug/kg



Date : 04-DEC-2012 17:08

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Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

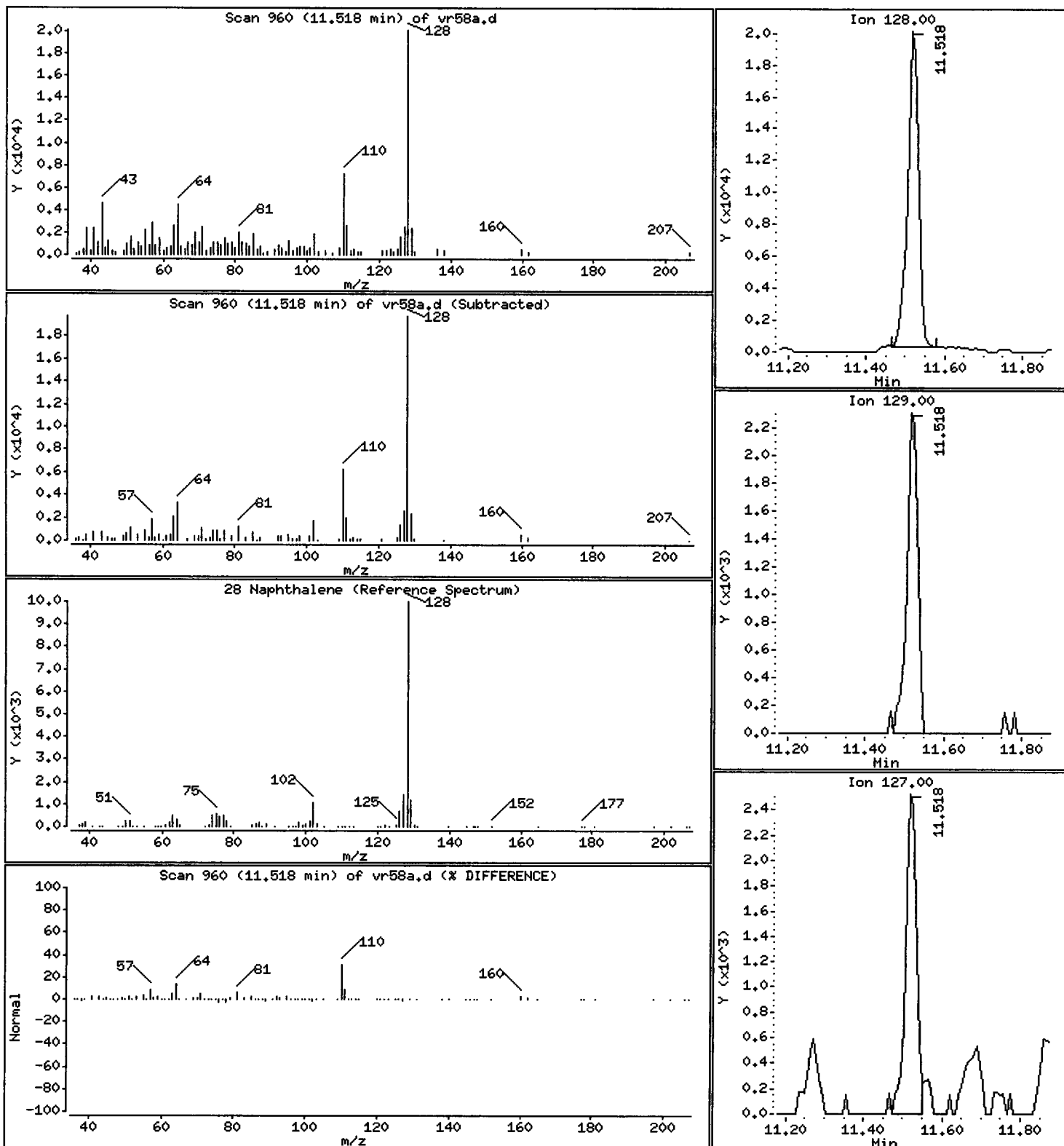
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 37.36 ug/kg





Date : 04-DEC-2012 17:08

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Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

Operator: VTS/YZ

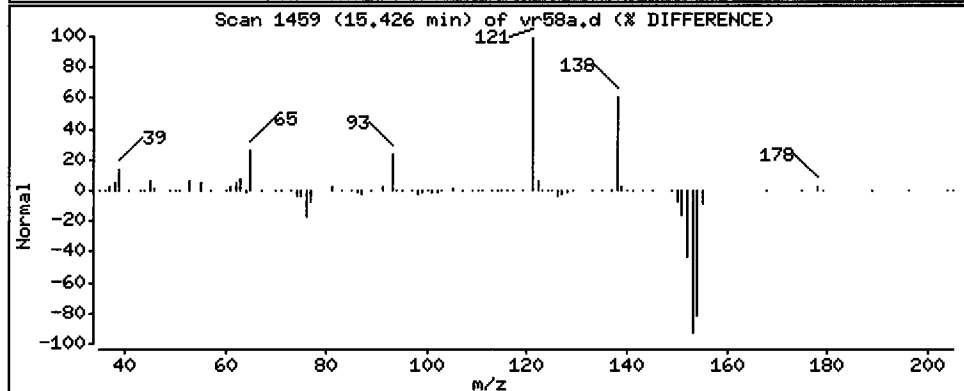
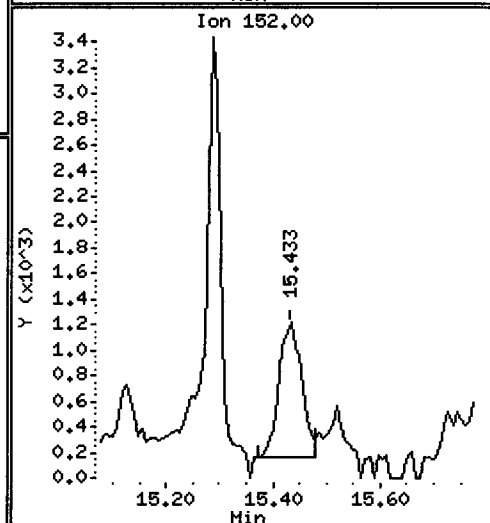
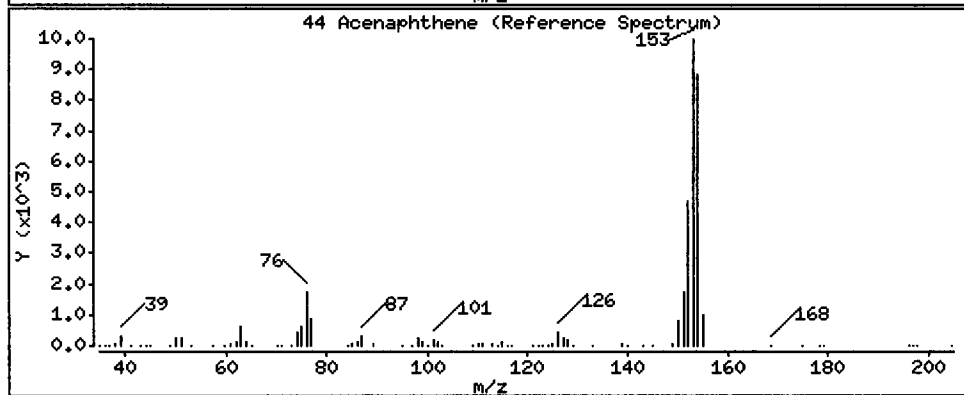
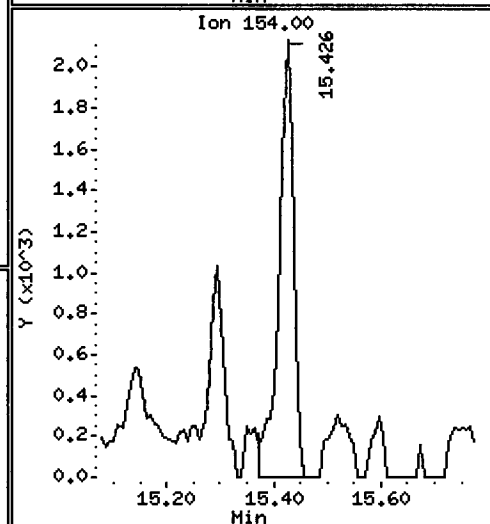
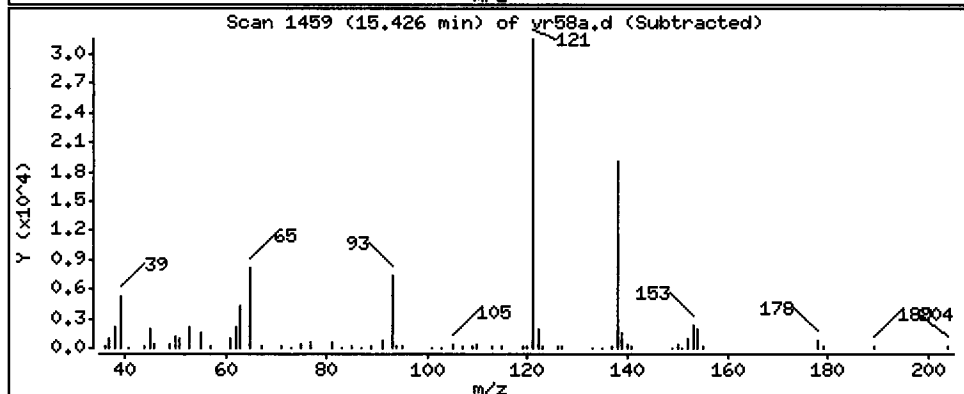
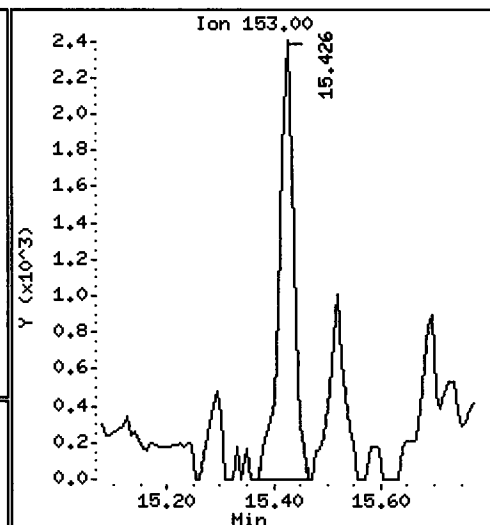
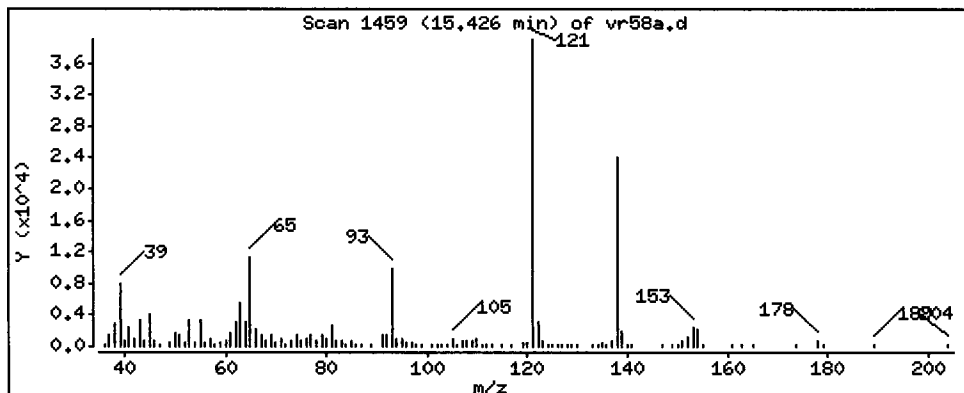
Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 16.07 ug/kg

*Handwritten:* (T) 121



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

Operator: VTS/YZ

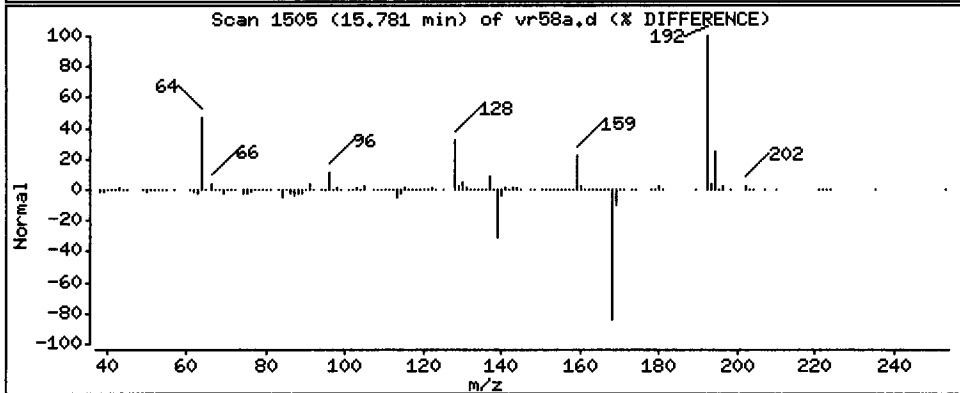
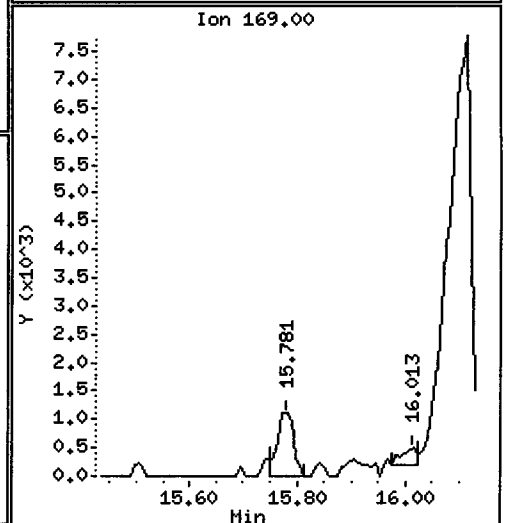
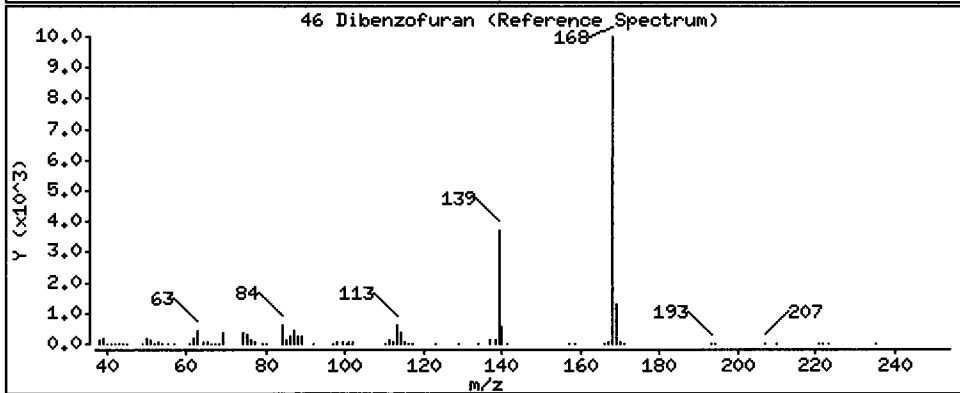
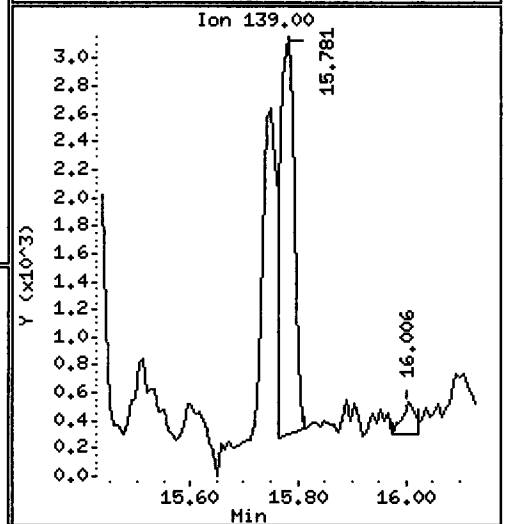
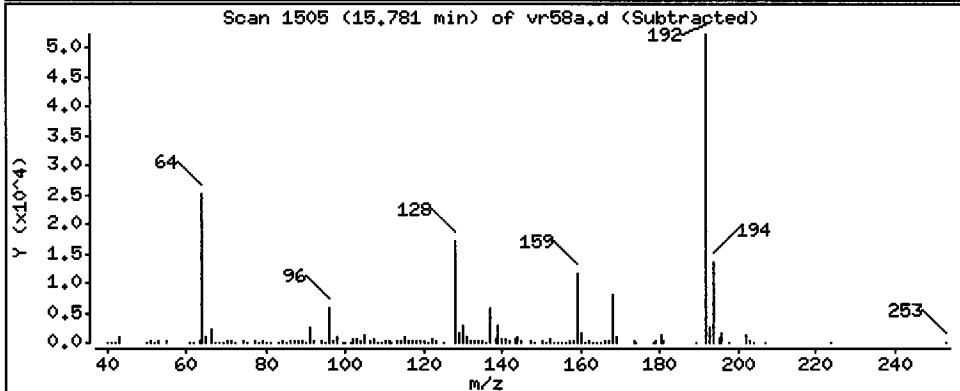
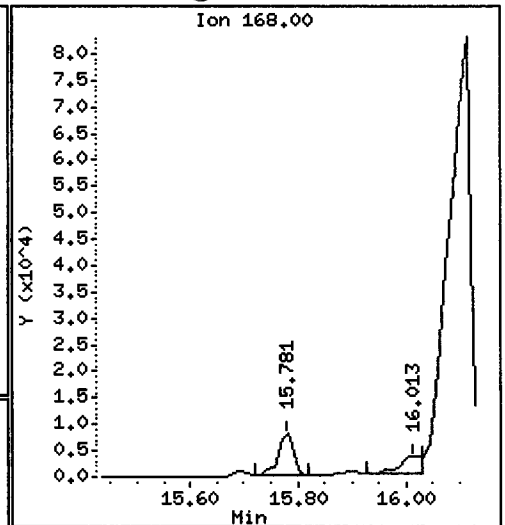
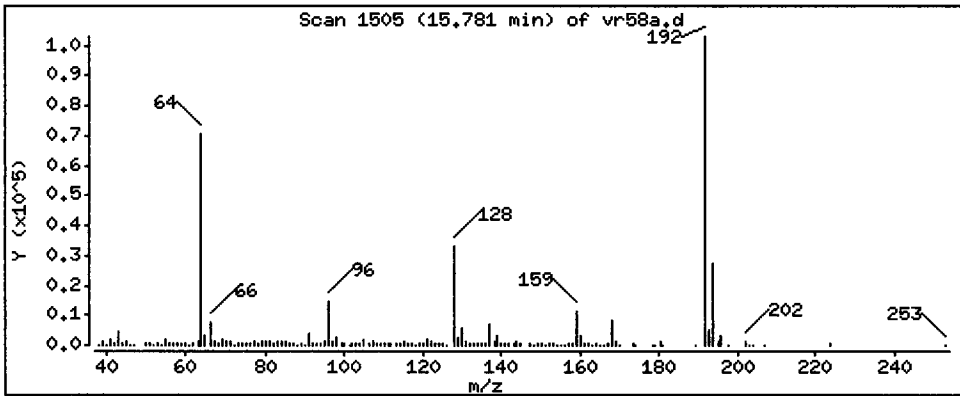
Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 39.13 ug/kg

Y



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

Operator: VTS/YZ

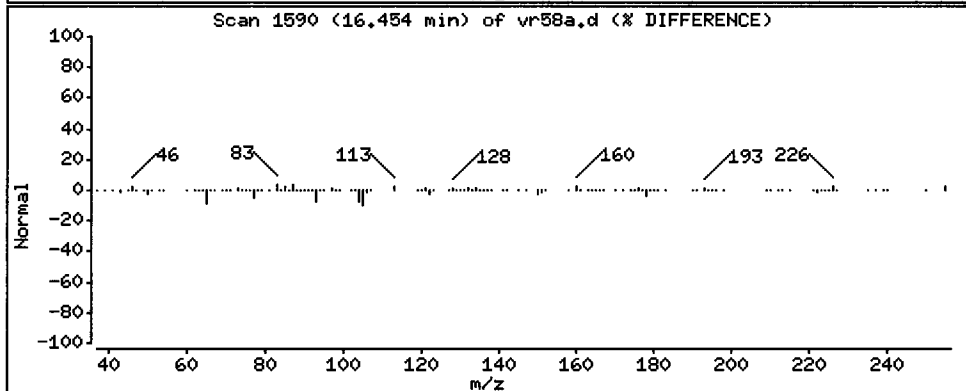
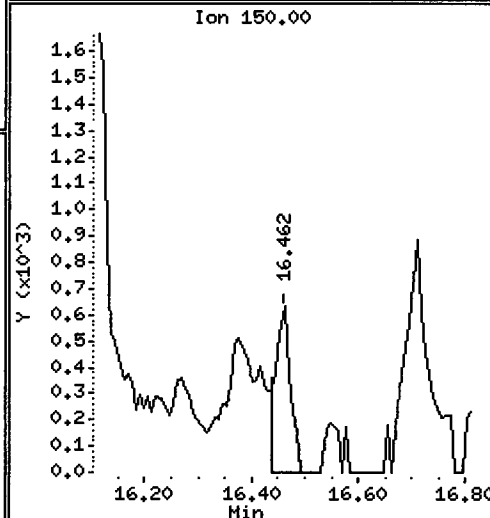
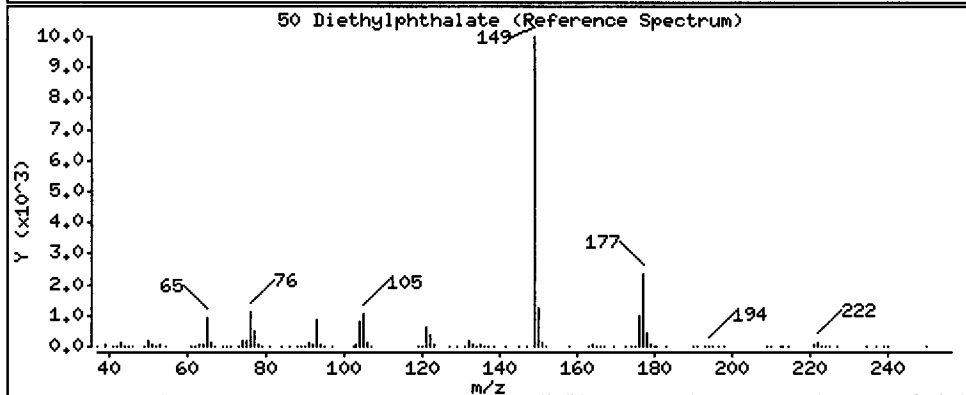
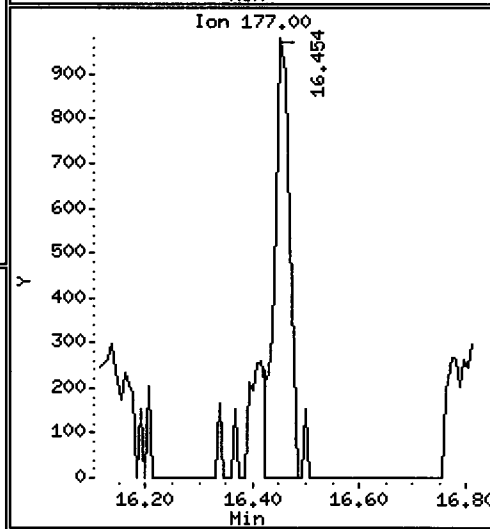
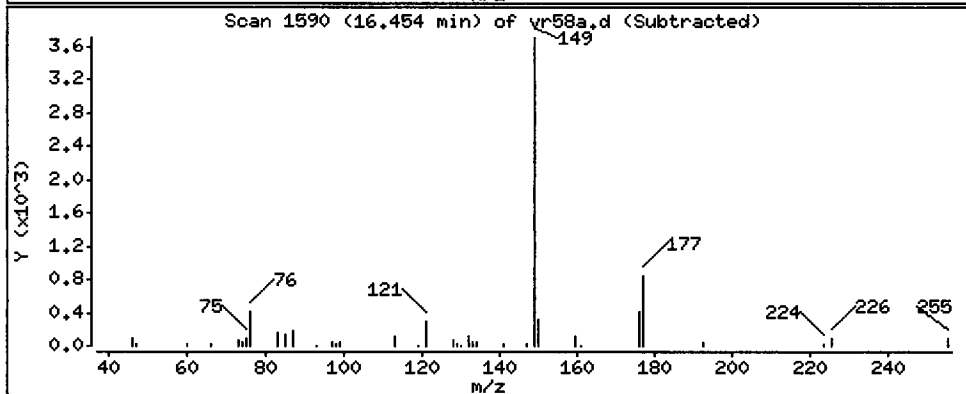
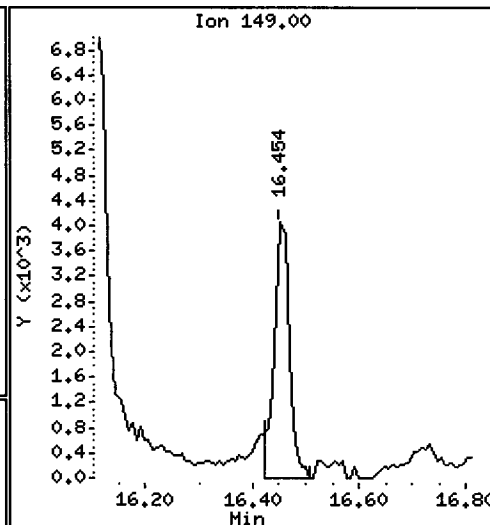
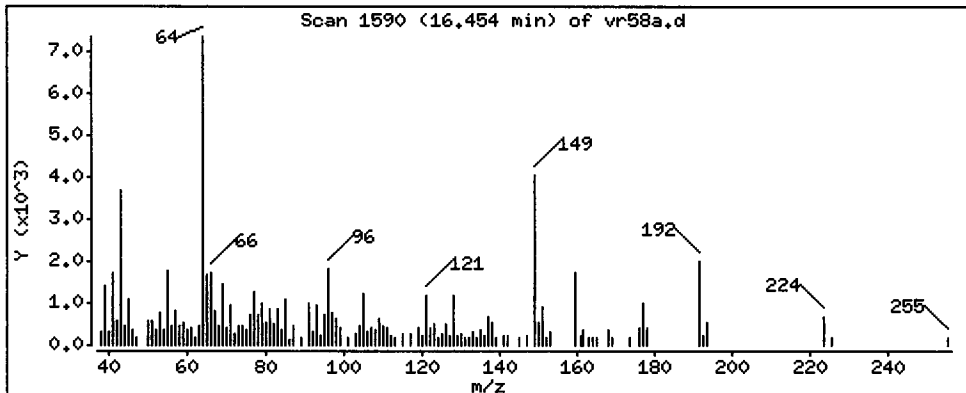
Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 23.80 ug/kg

*CMA*



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

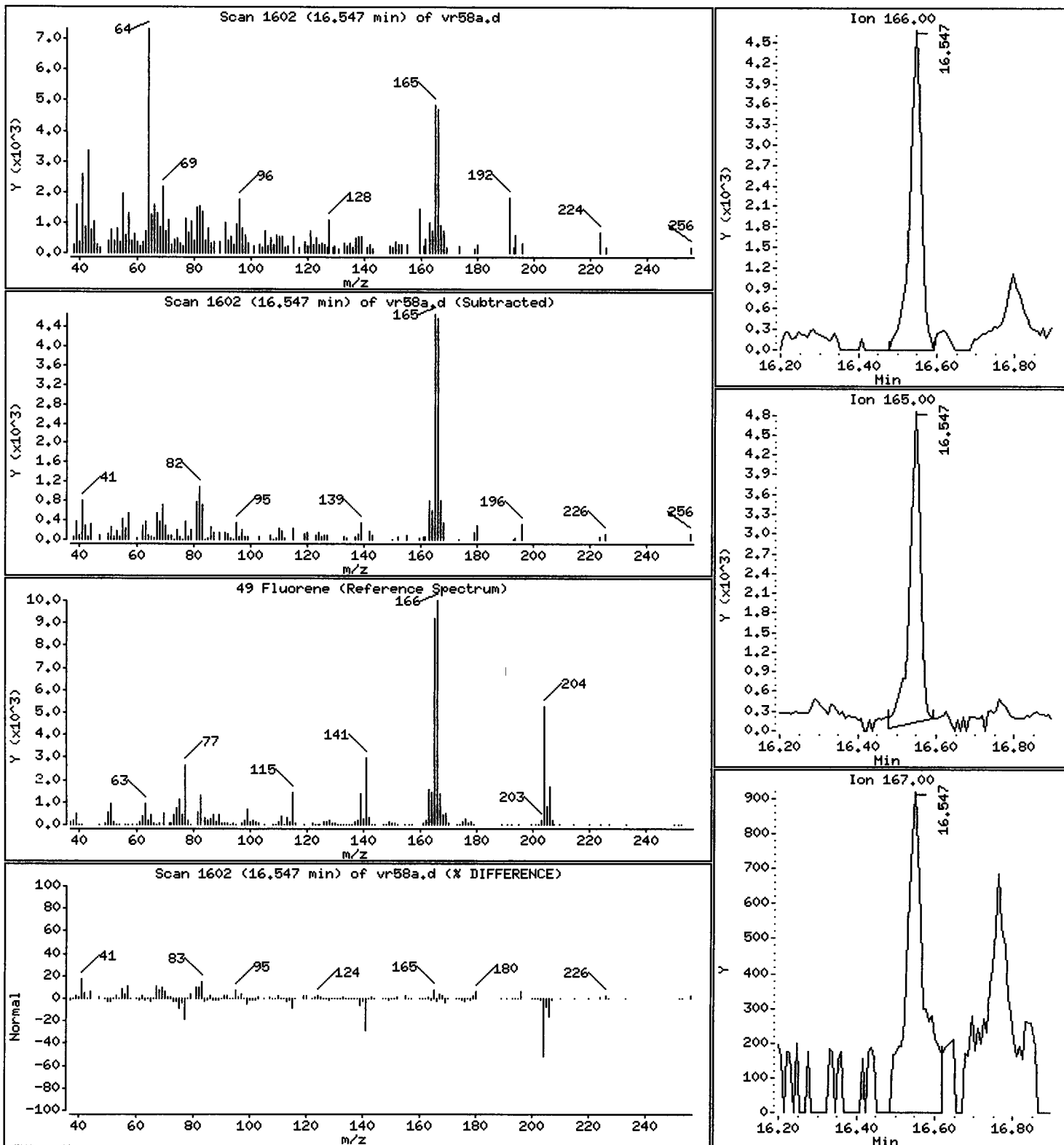
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 27.48 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

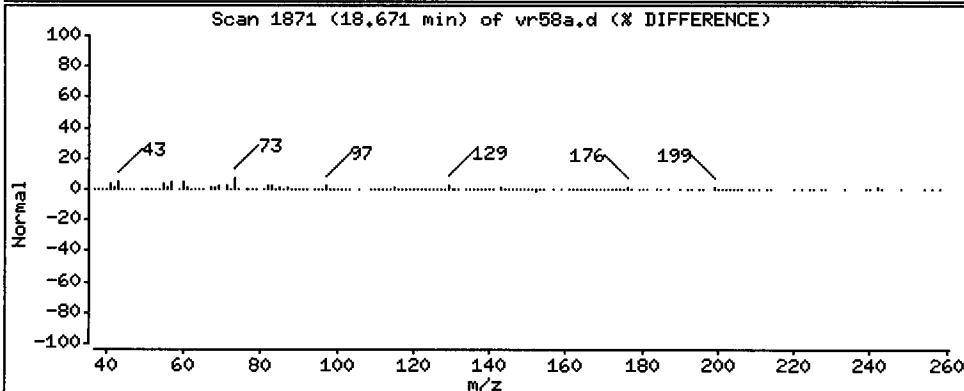
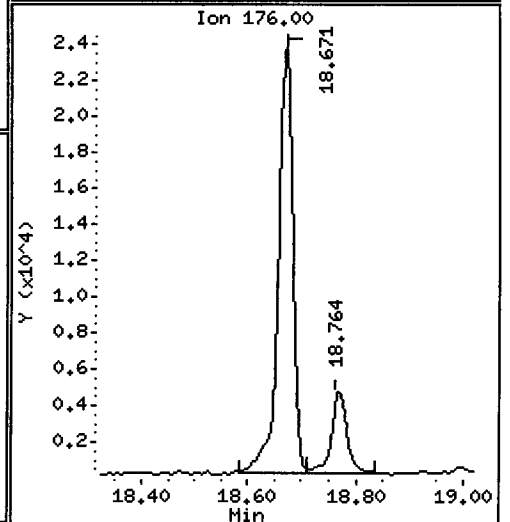
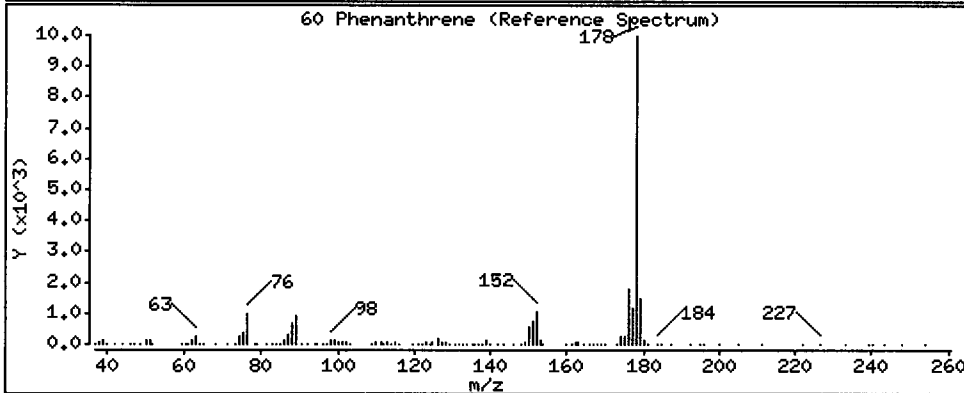
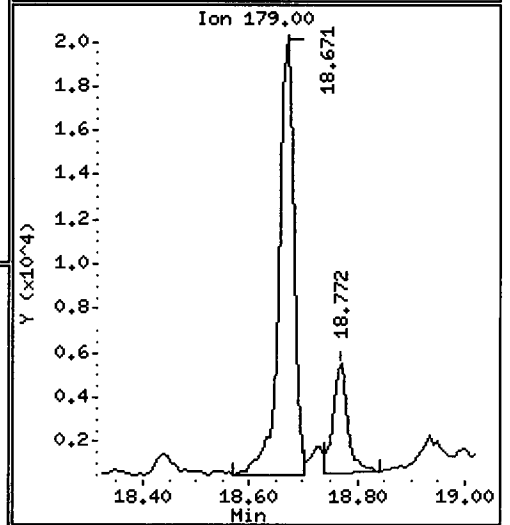
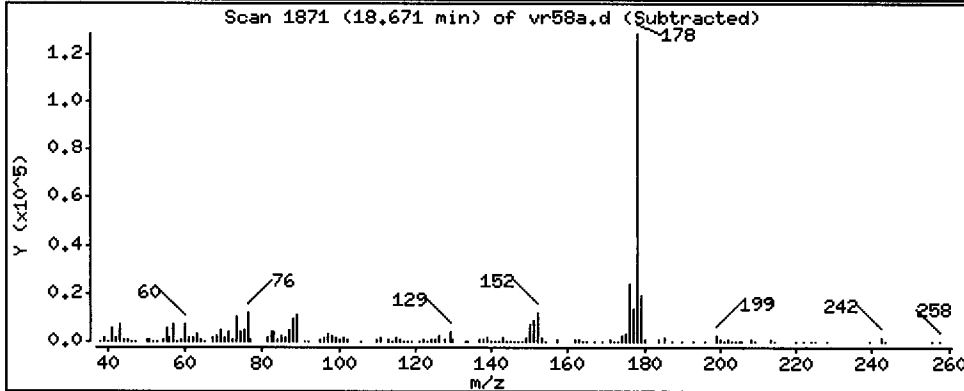
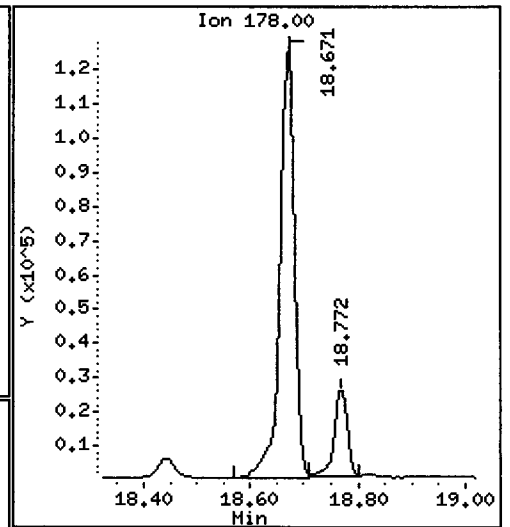
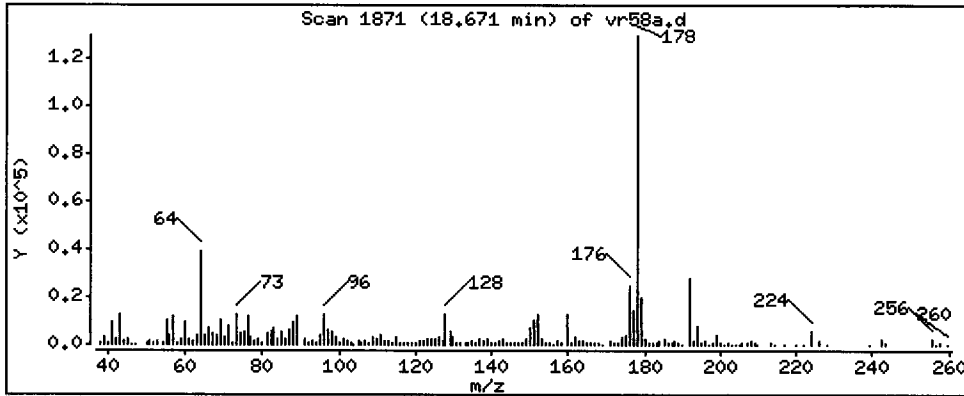
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 249.1 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

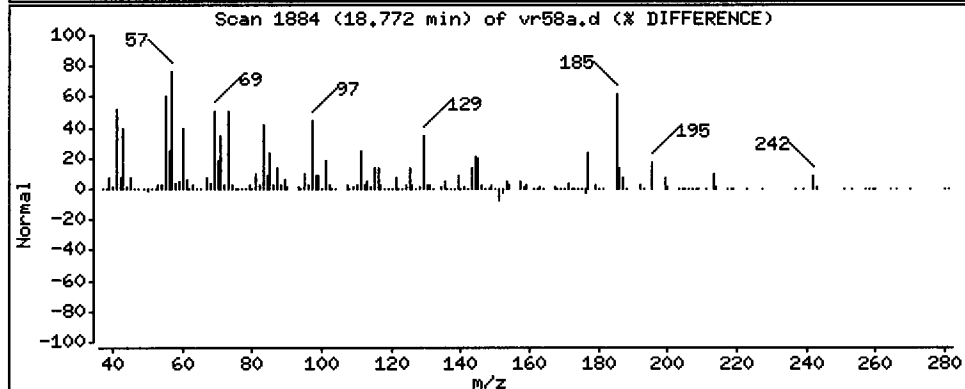
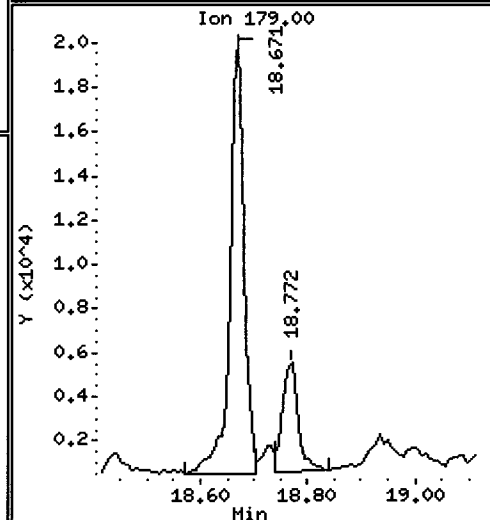
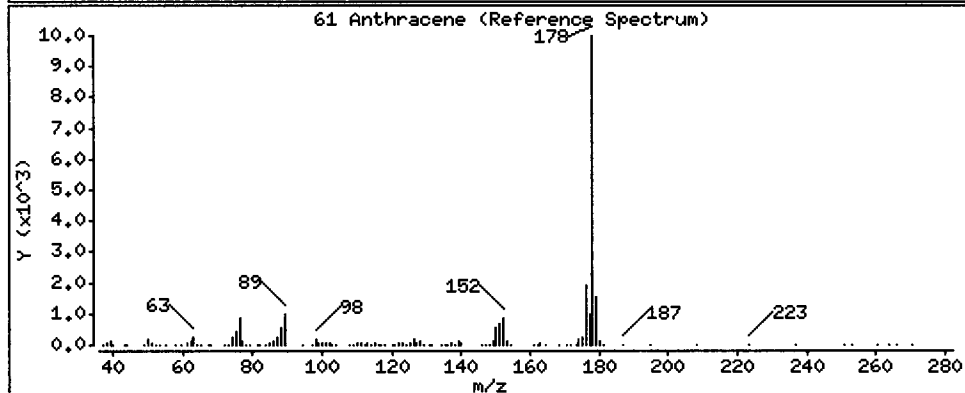
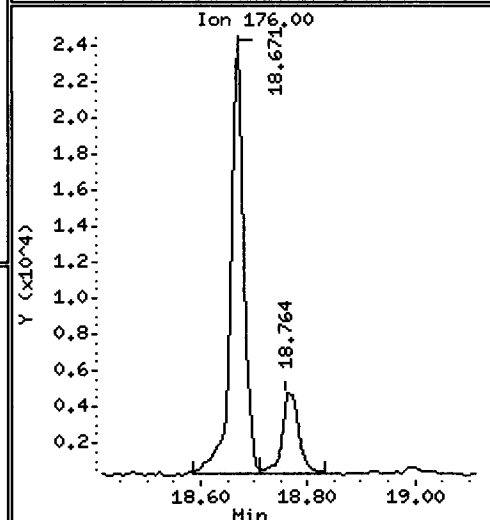
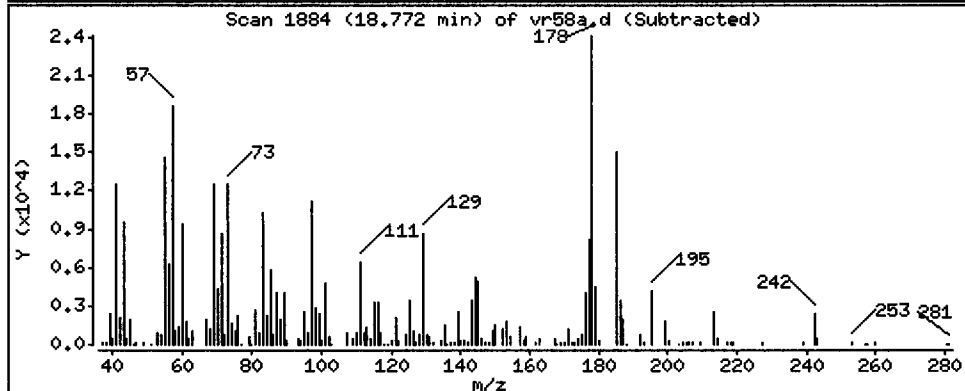
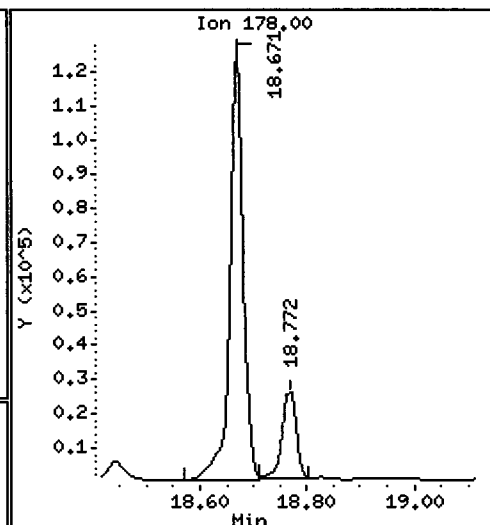
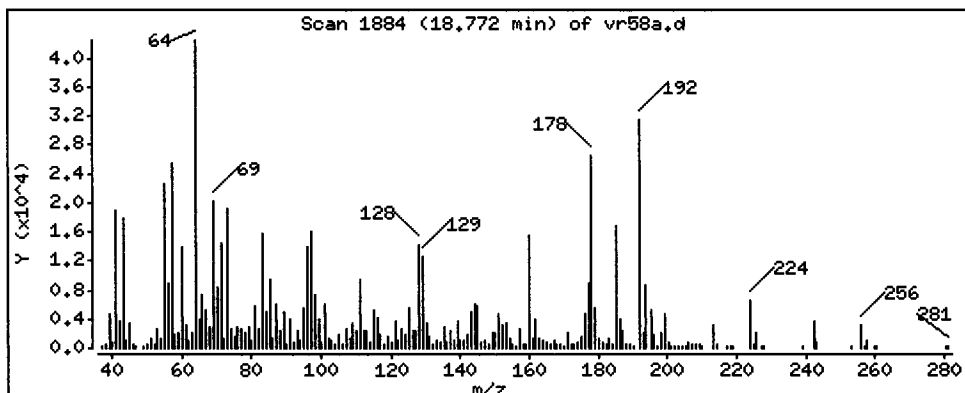
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 47.19 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

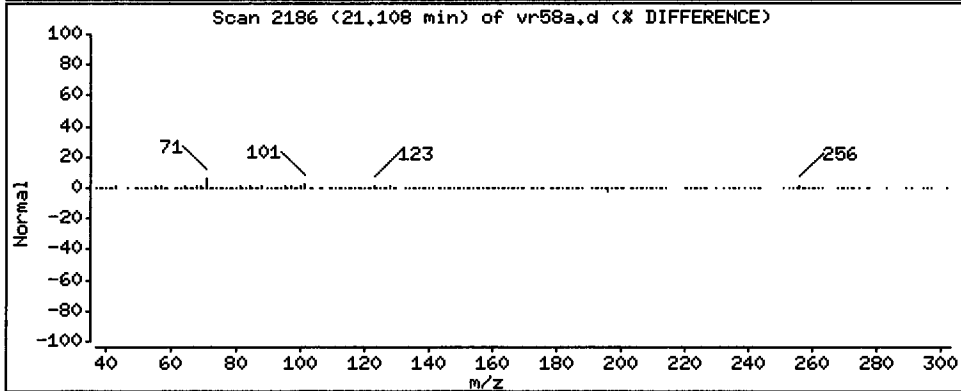
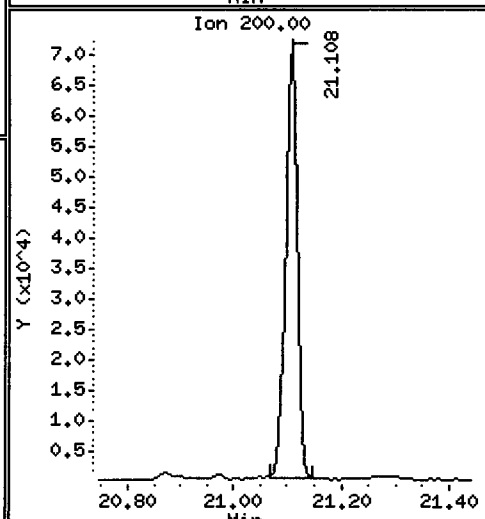
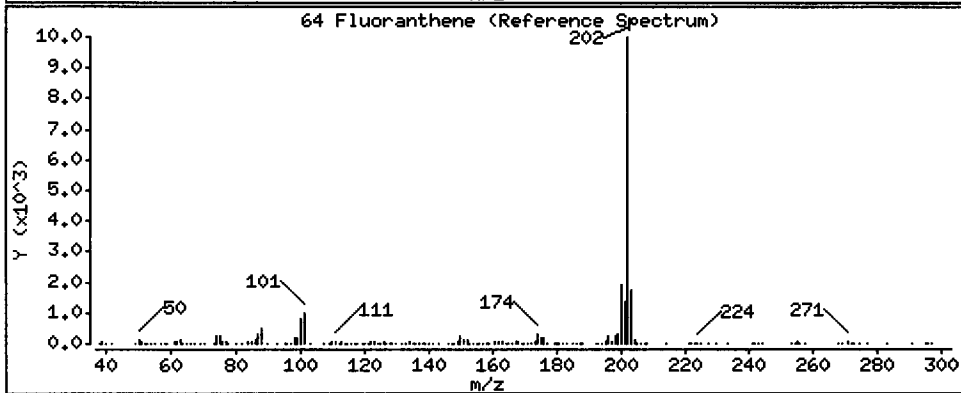
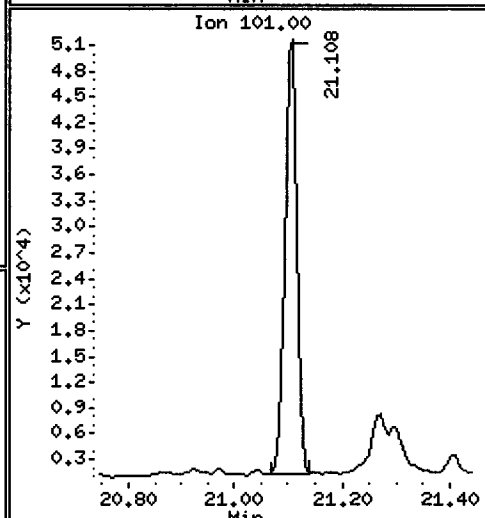
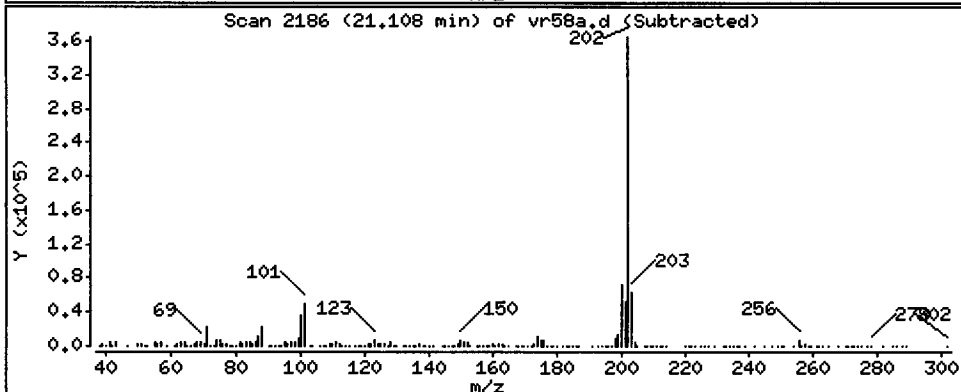
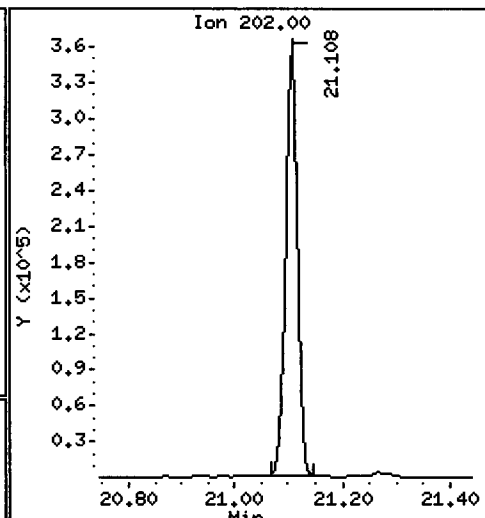
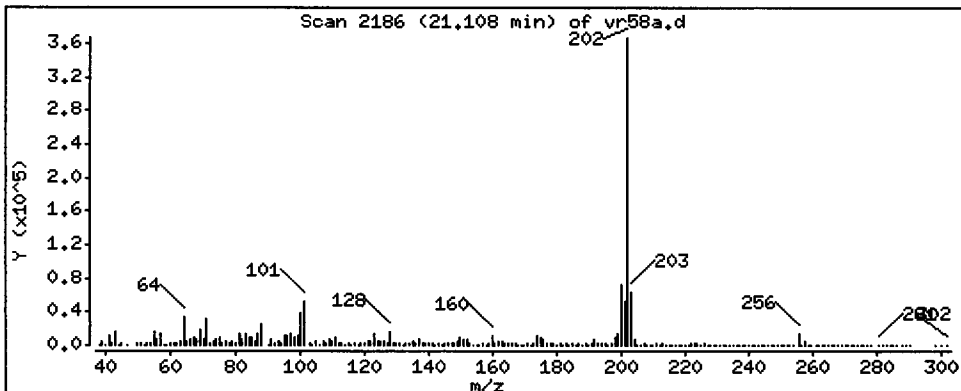
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 478.9 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

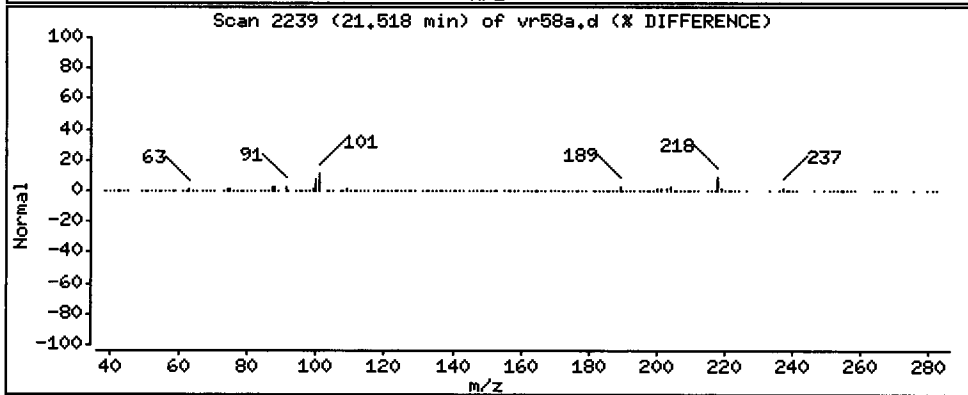
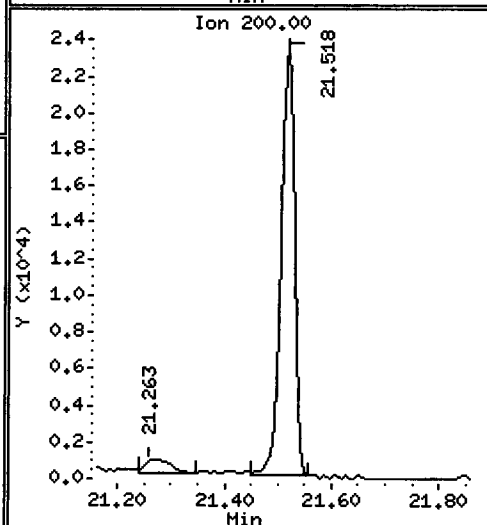
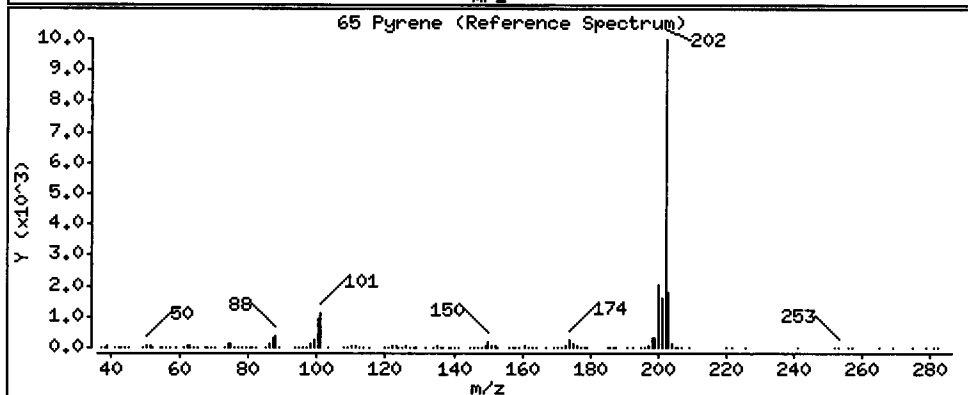
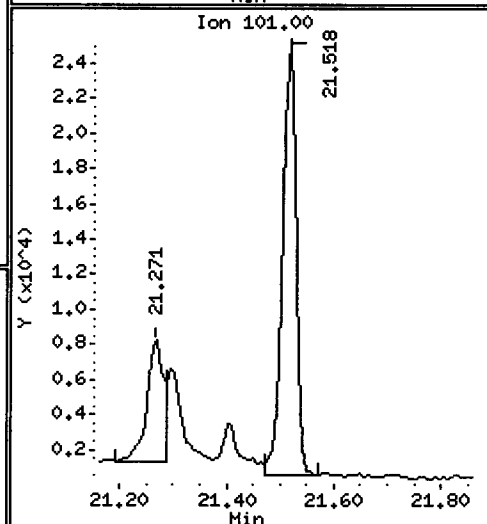
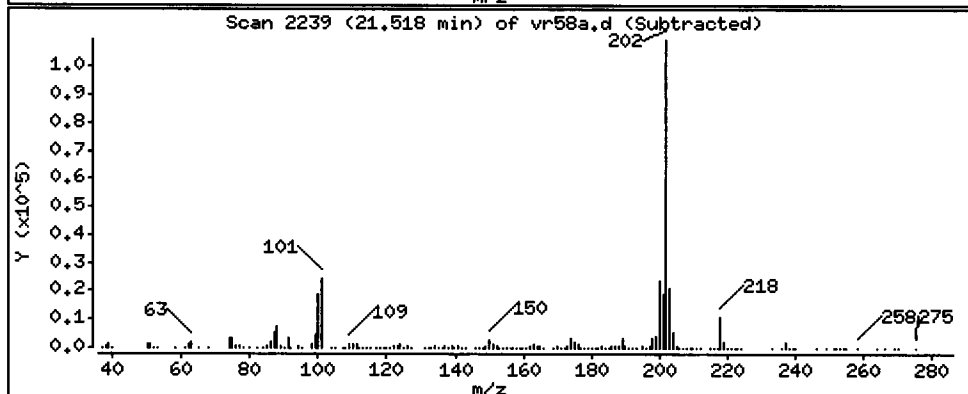
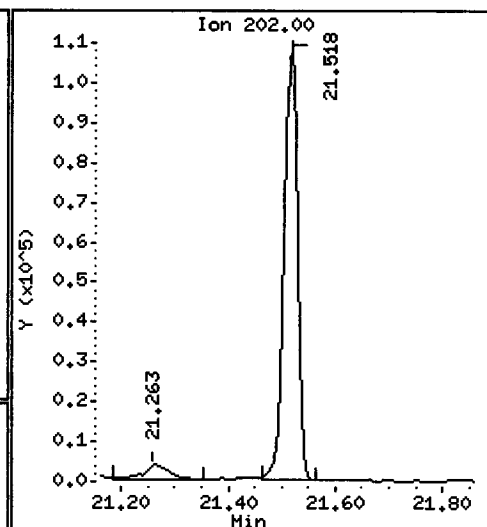
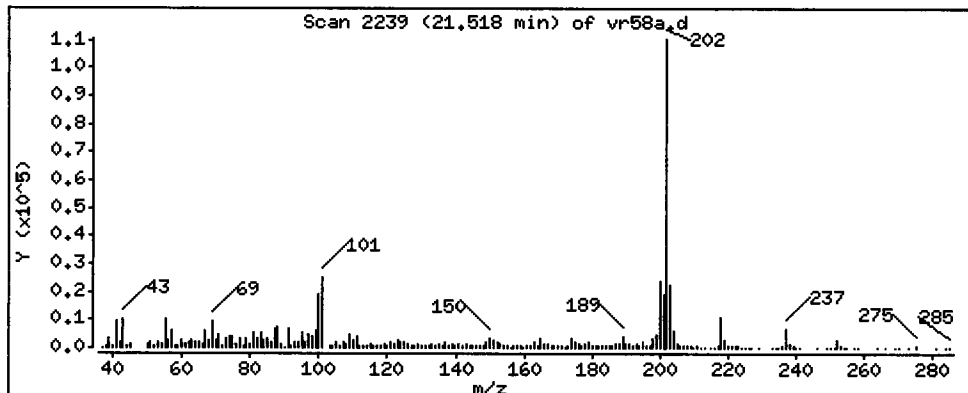
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 801.2 ug/kg







Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

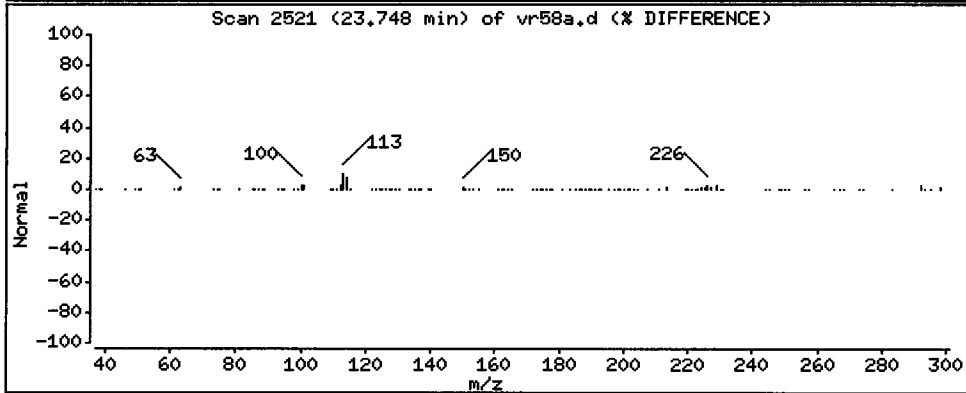
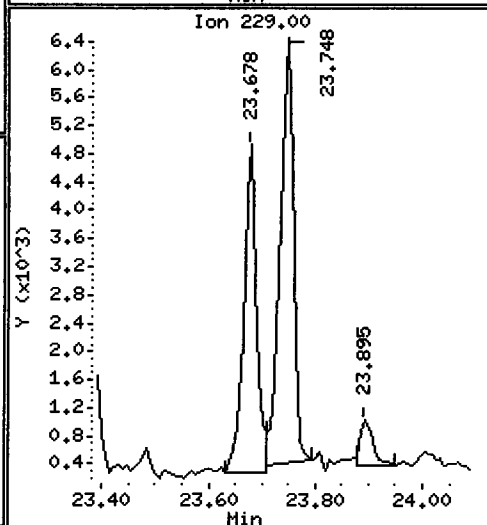
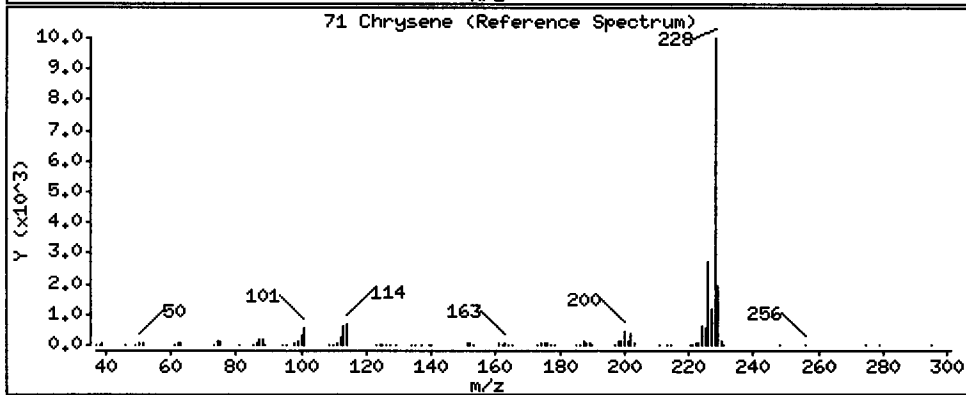
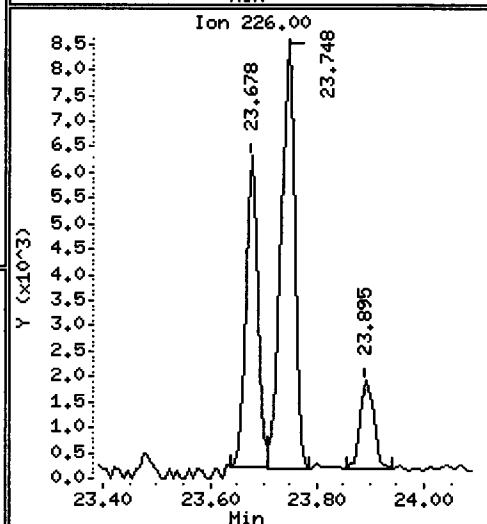
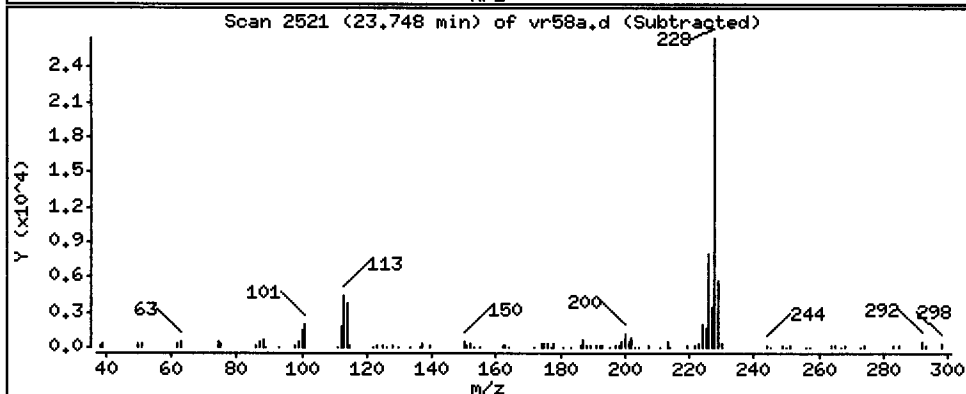
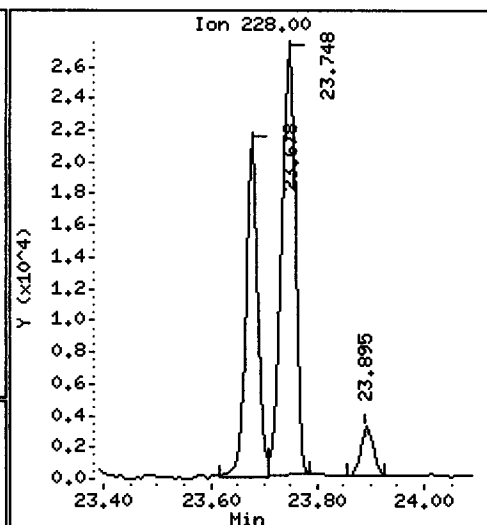
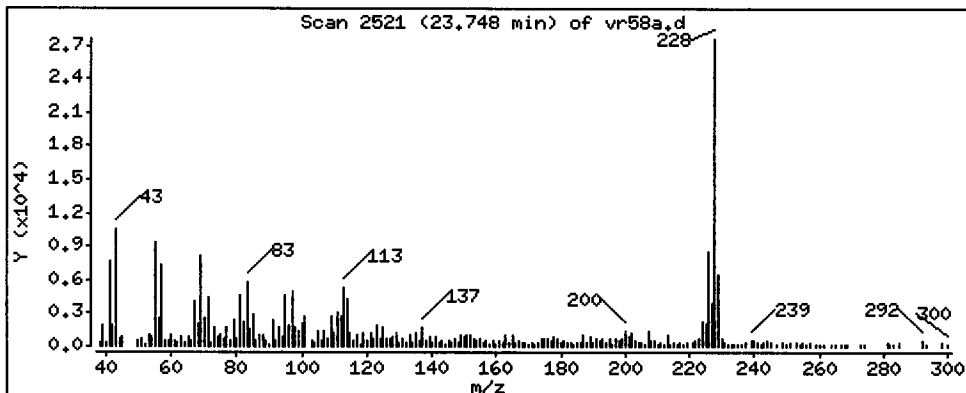
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

71 Chrysene

Concentration: 244.1 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

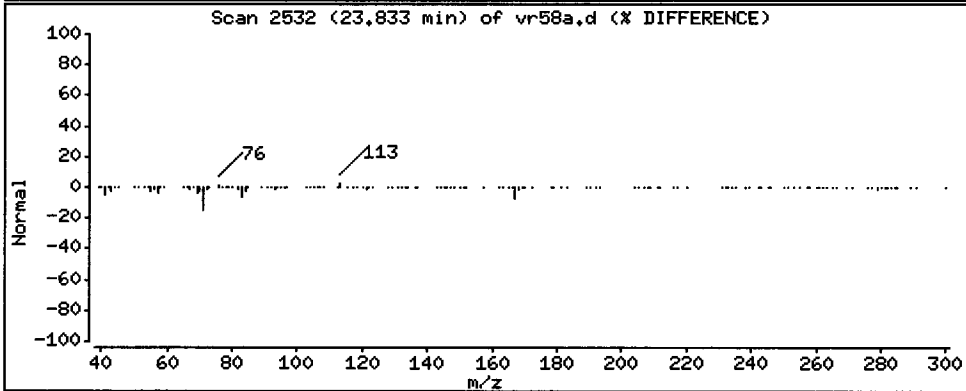
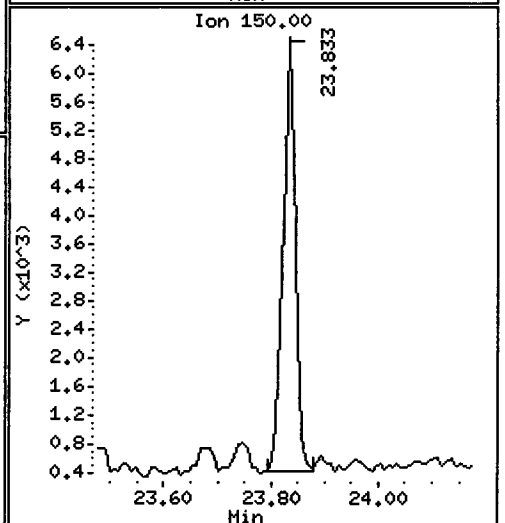
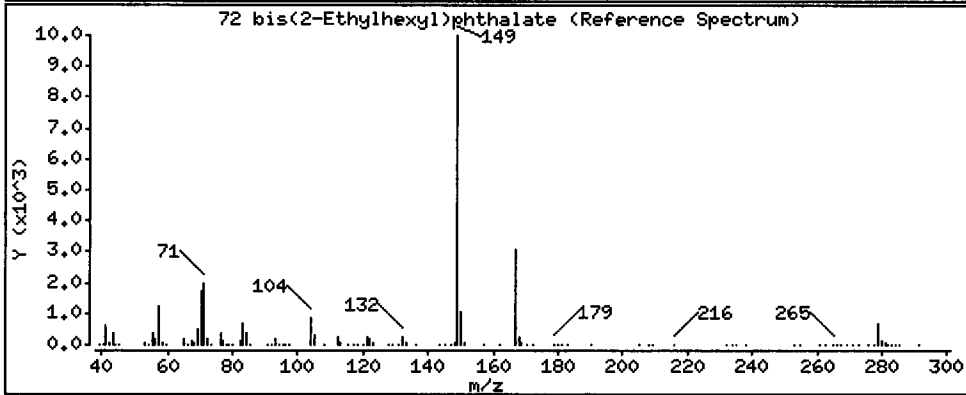
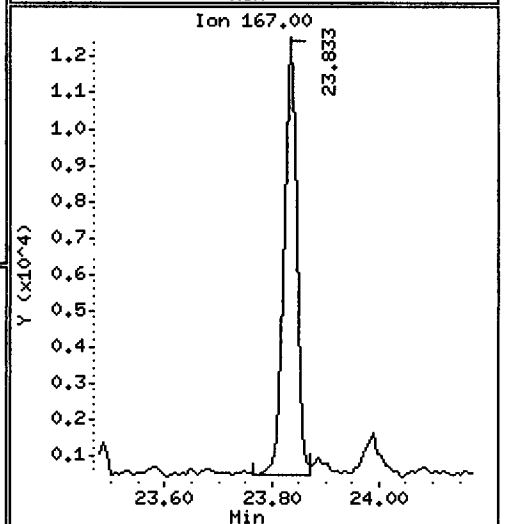
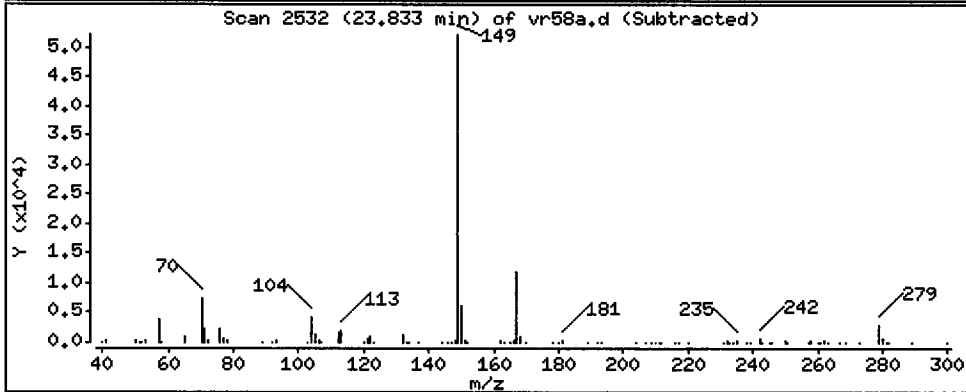
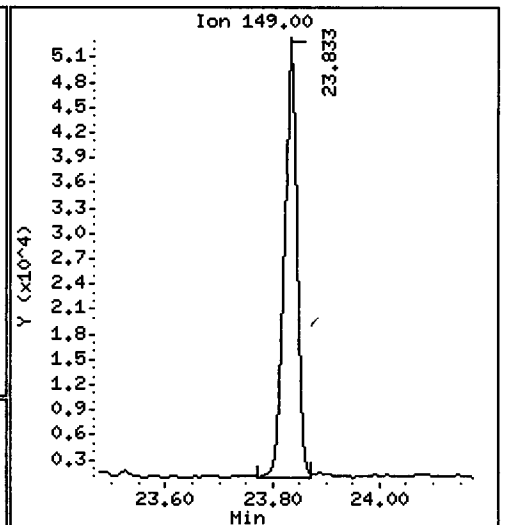
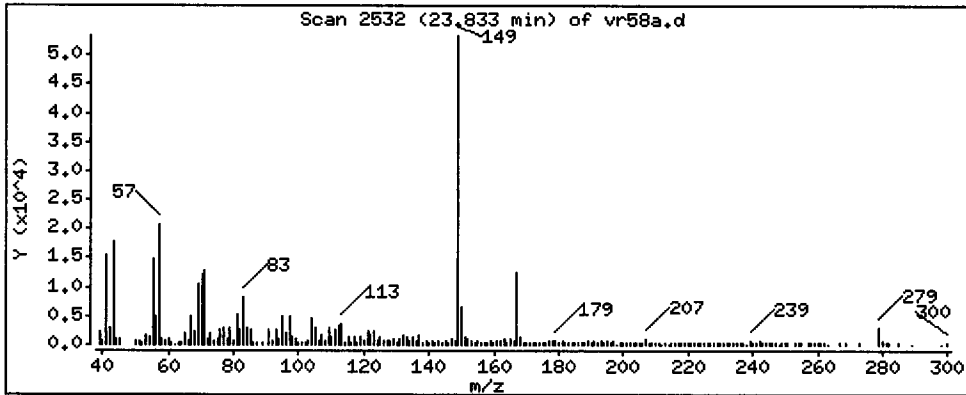
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 482.0 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

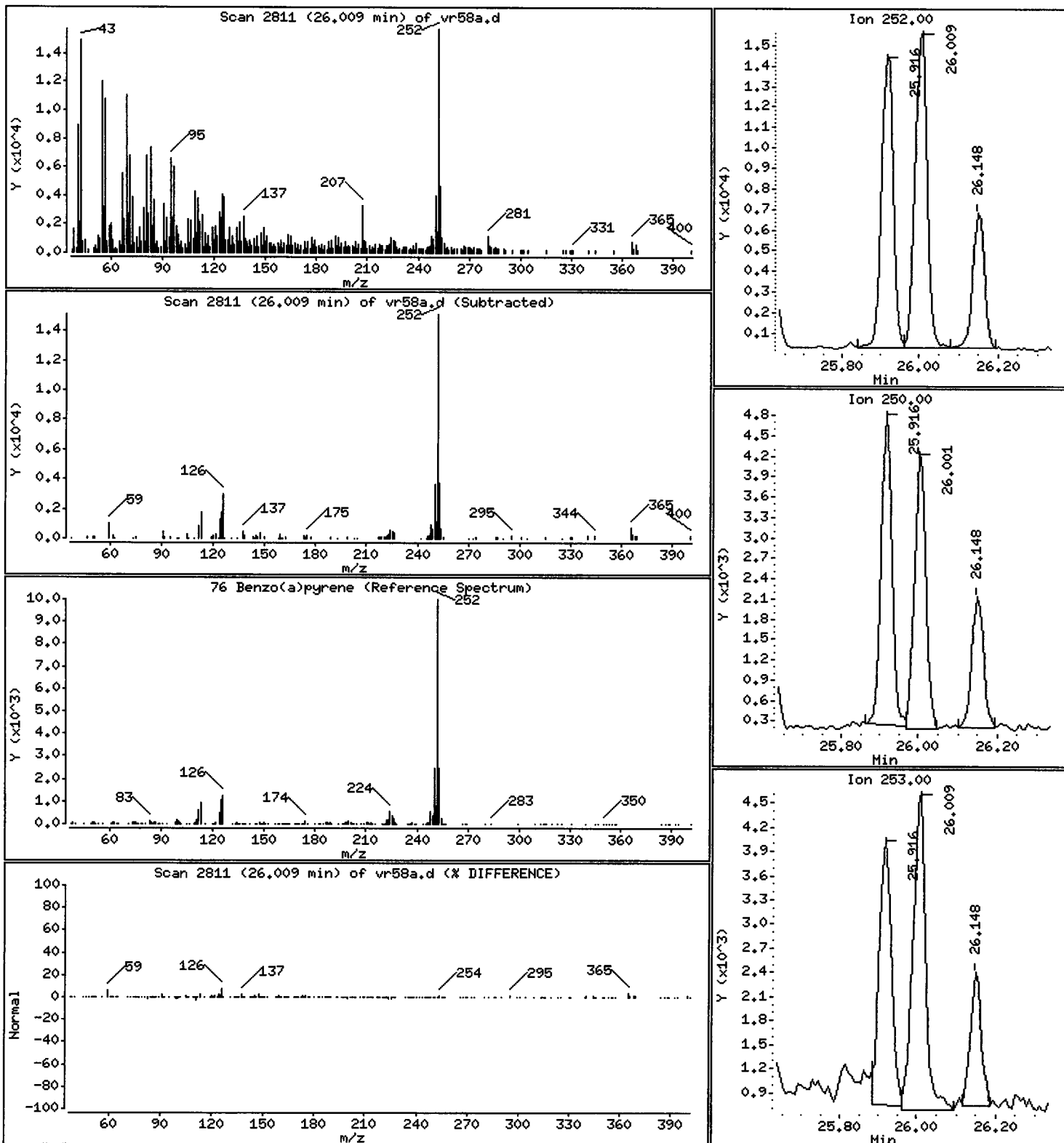
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

76 Benzo(a)pyrene

Concentration: 147.5 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

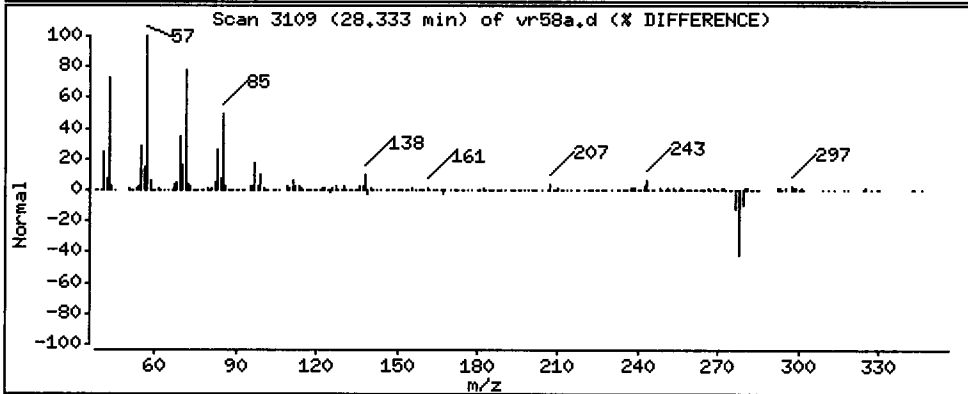
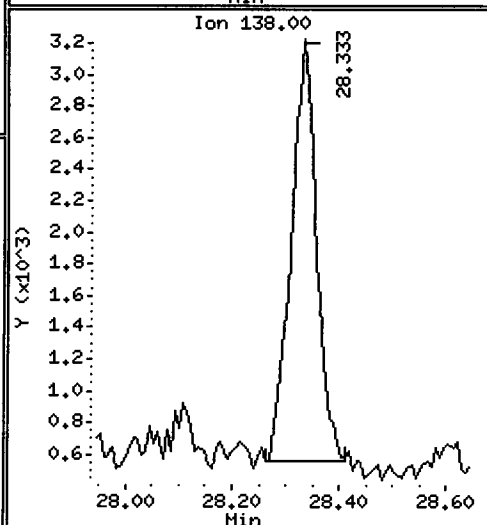
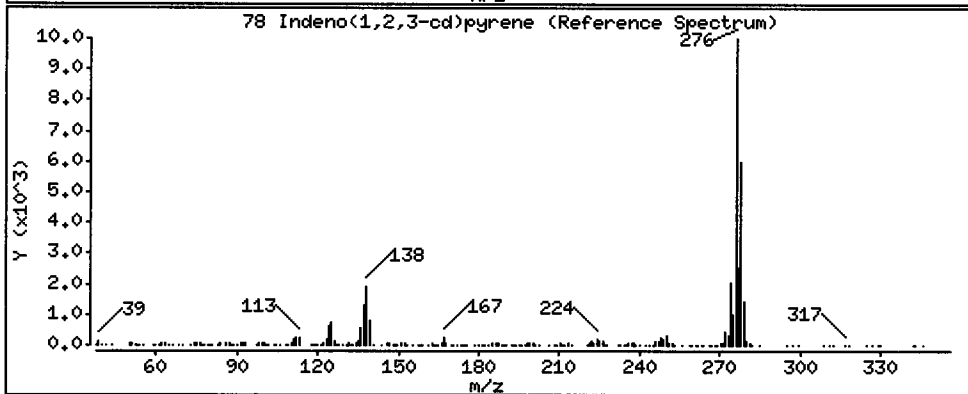
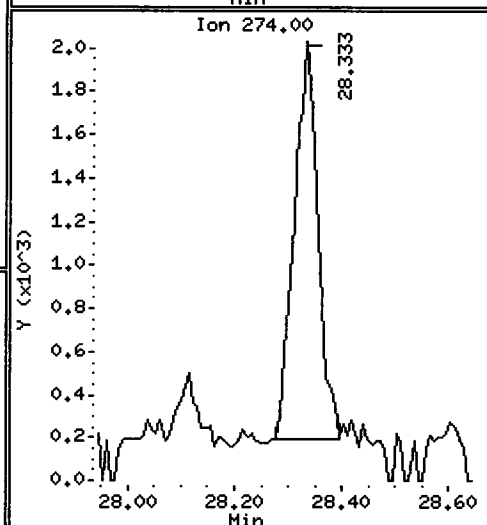
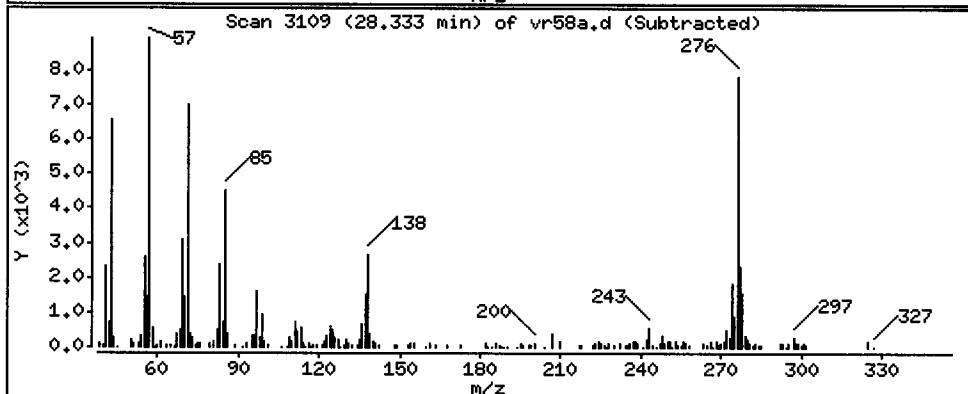
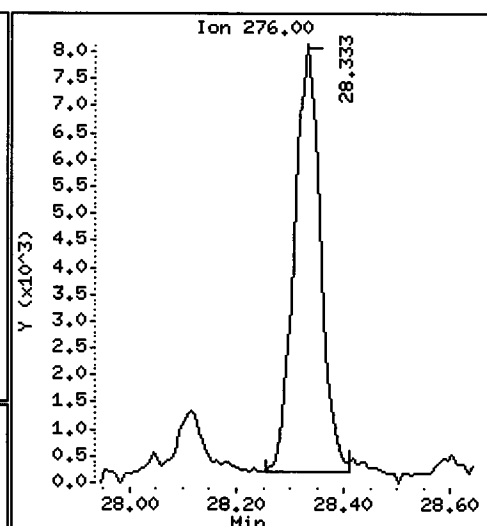
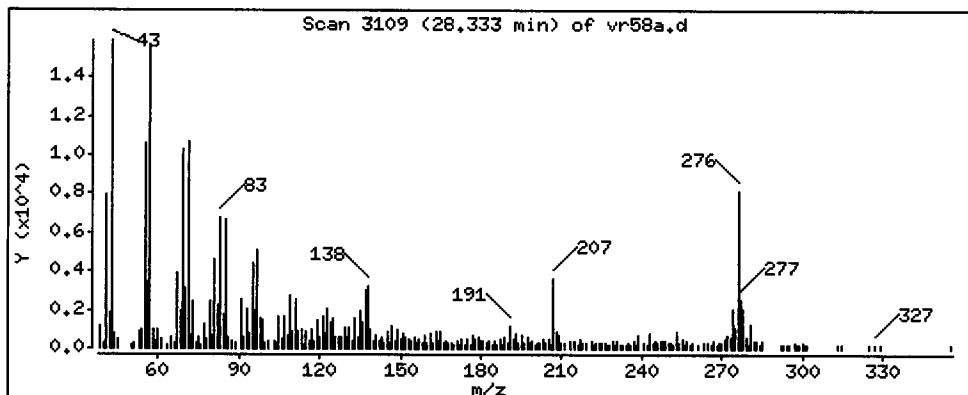
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

78 Indeno(1,2,3-cd)pyrene

Concentration: 109.8 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10,i

Sample Info: VR58A

Volume Injected (uL): 1.0

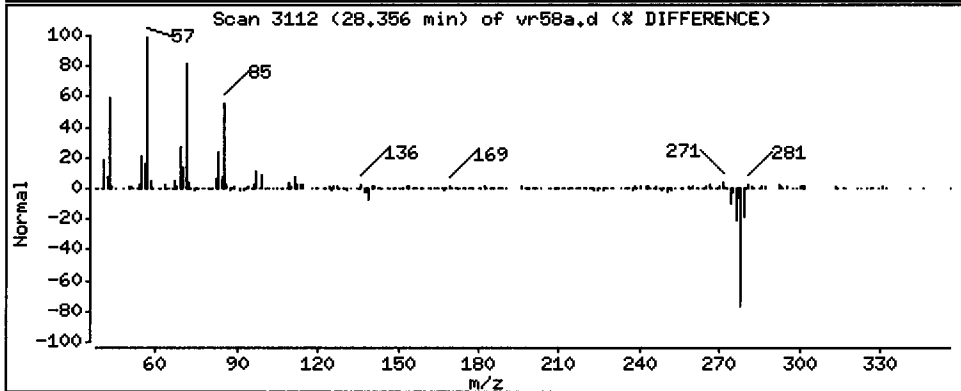
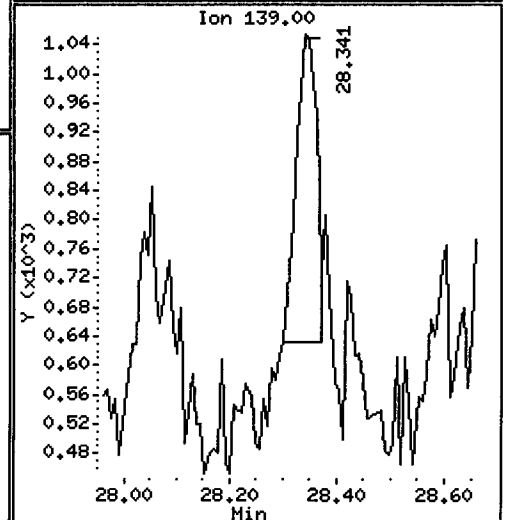
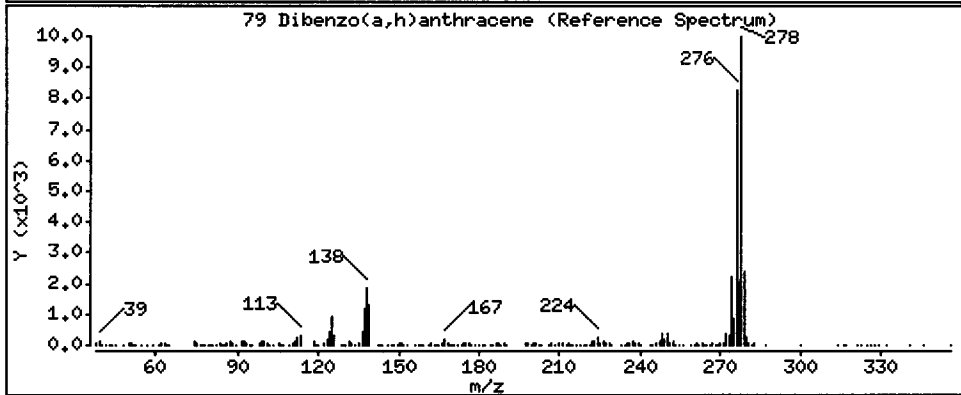
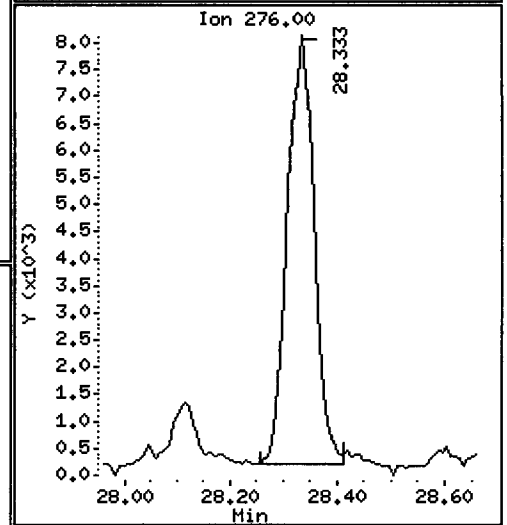
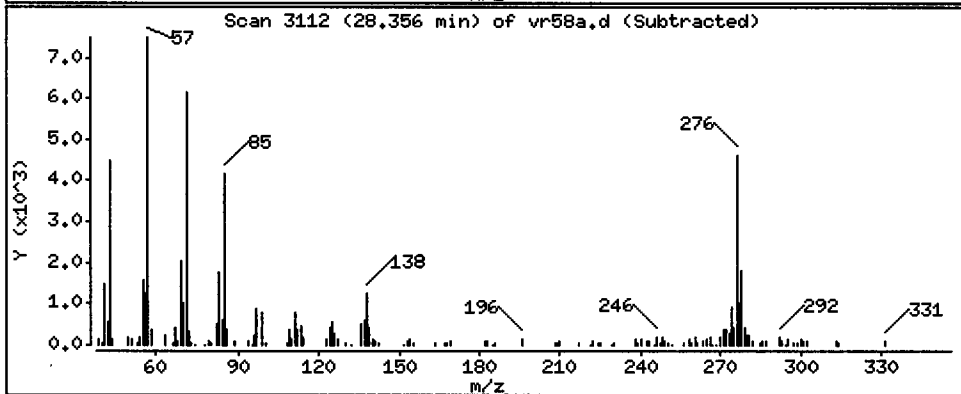
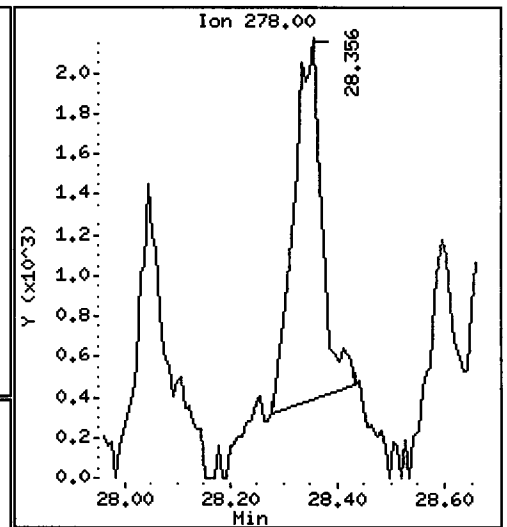
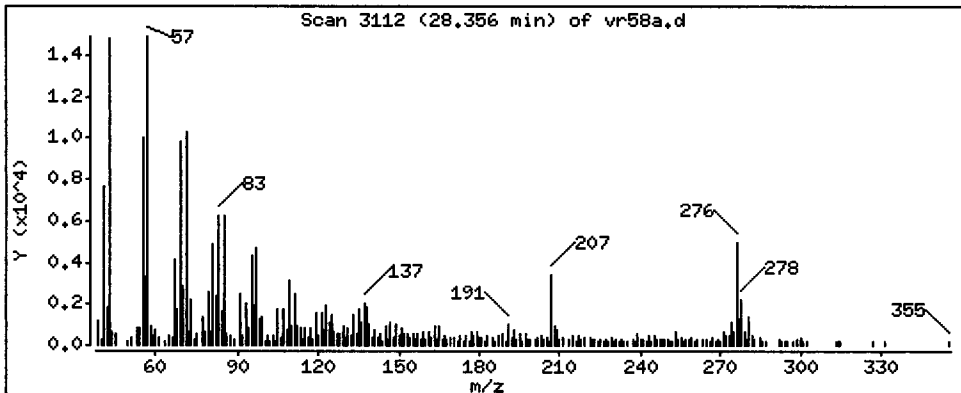
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 33.84 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.1

Sample Info: VR58A

Volume Injected (uL): 1.0

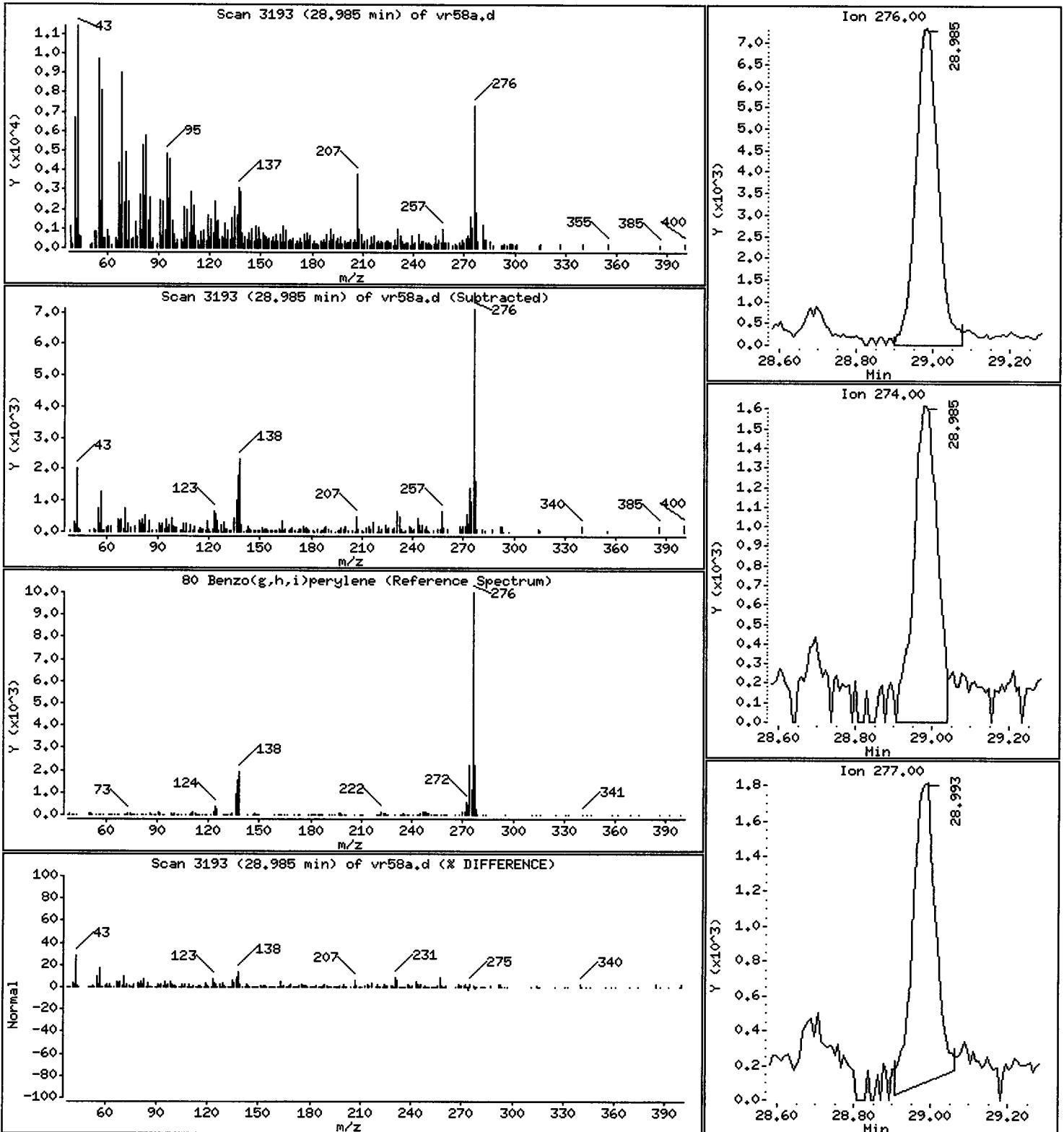
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

80 Benzo(g,h,i)perylene

Concentration: 140.9 ug/kg



Date : 04-DEC-2012 17:08

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A

Volume Injected (uL): 1.0

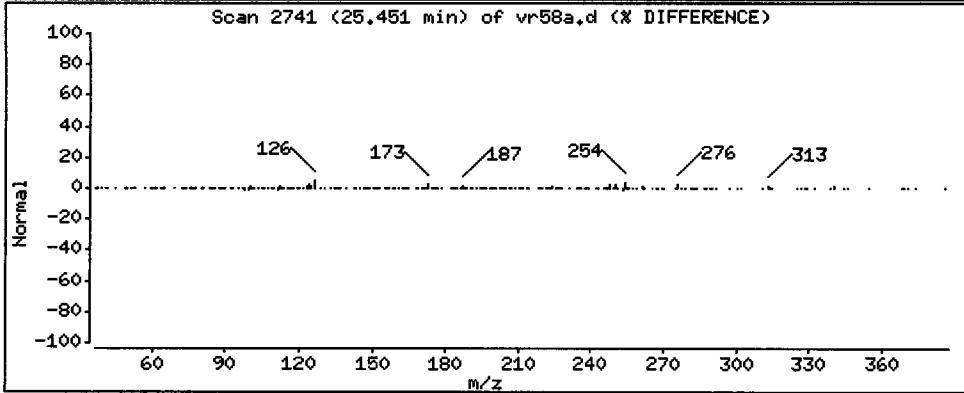
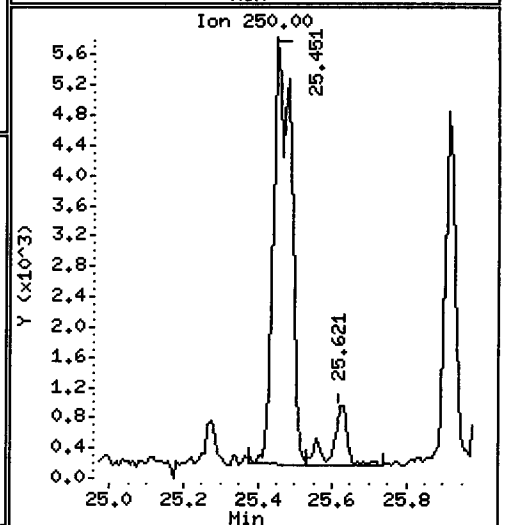
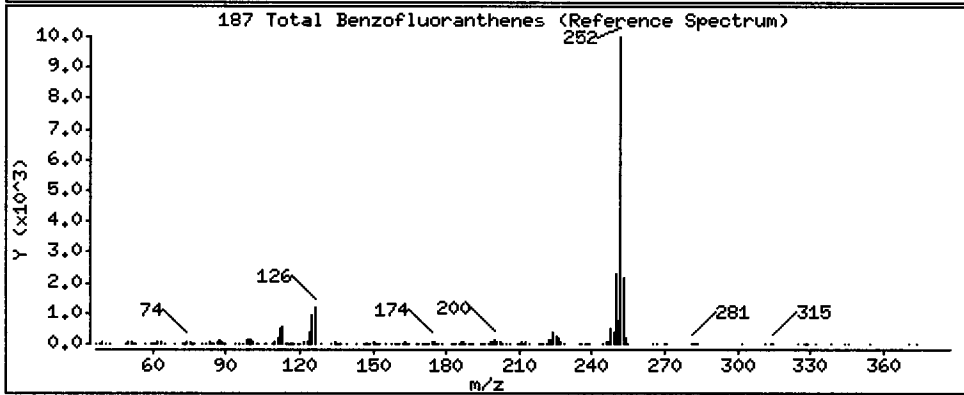
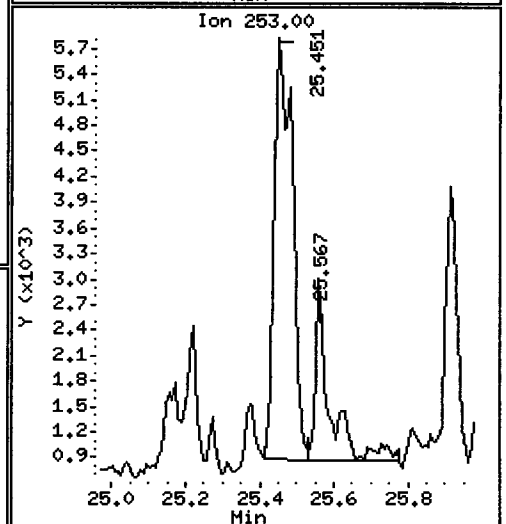
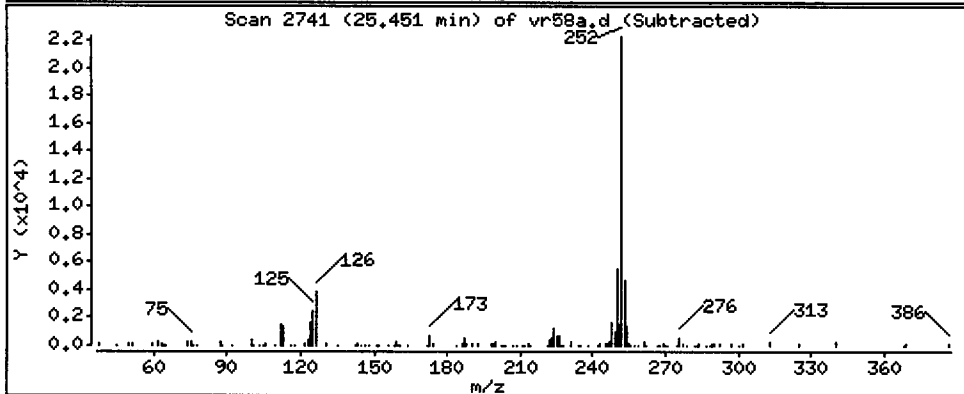
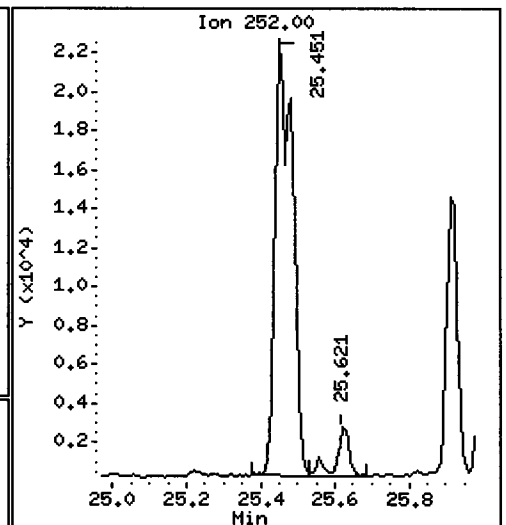
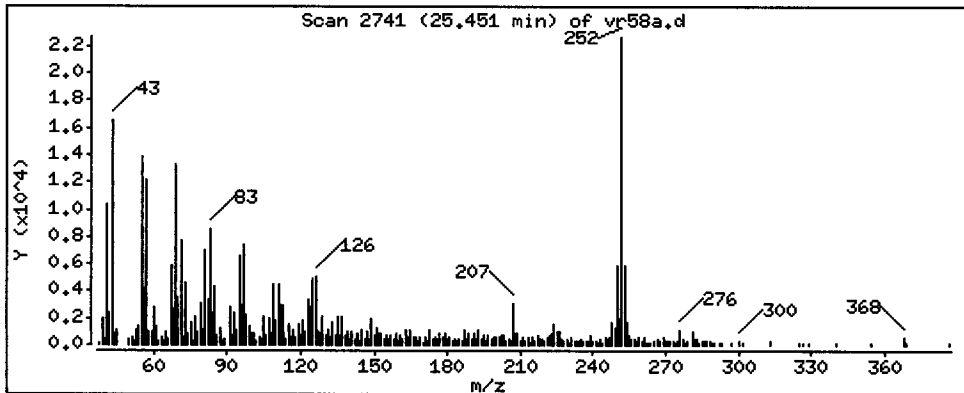
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

187 Total Benzofluoranthenes

Concentration: 326.5 ug/kg

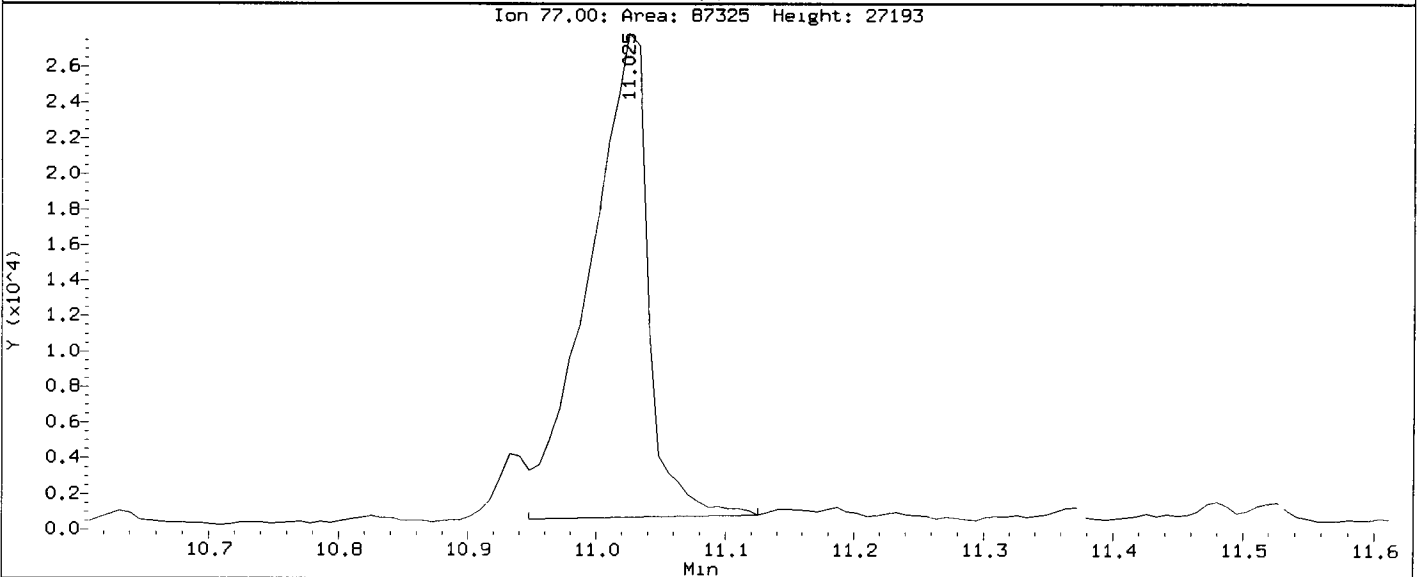
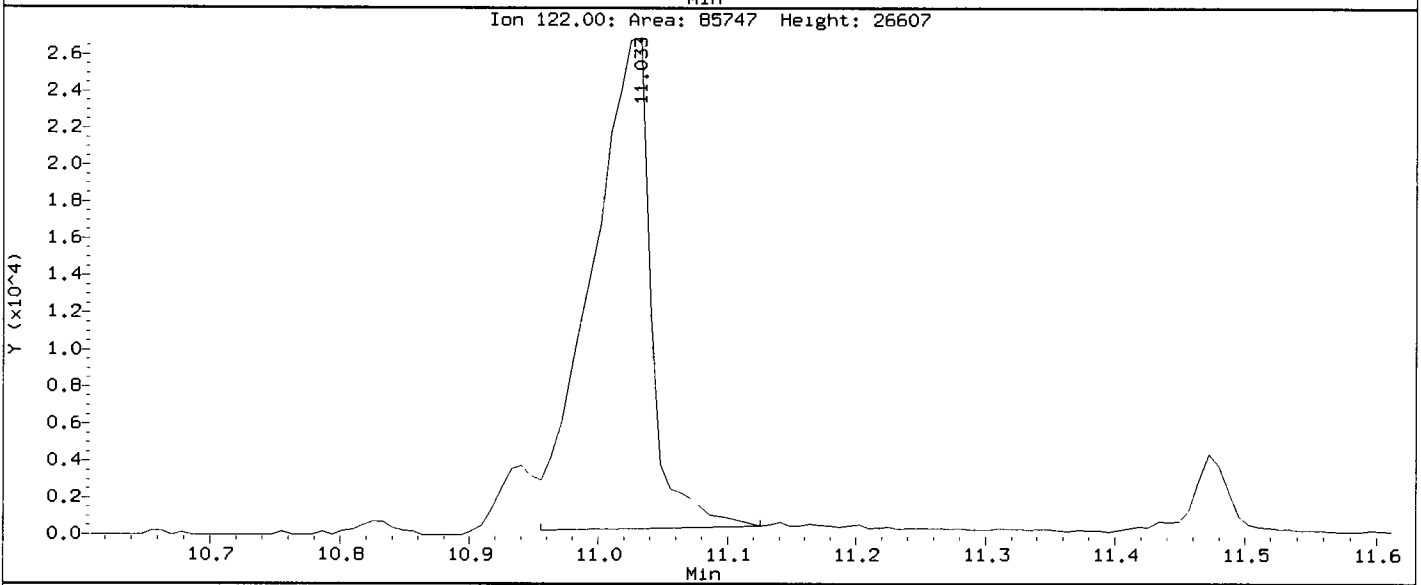
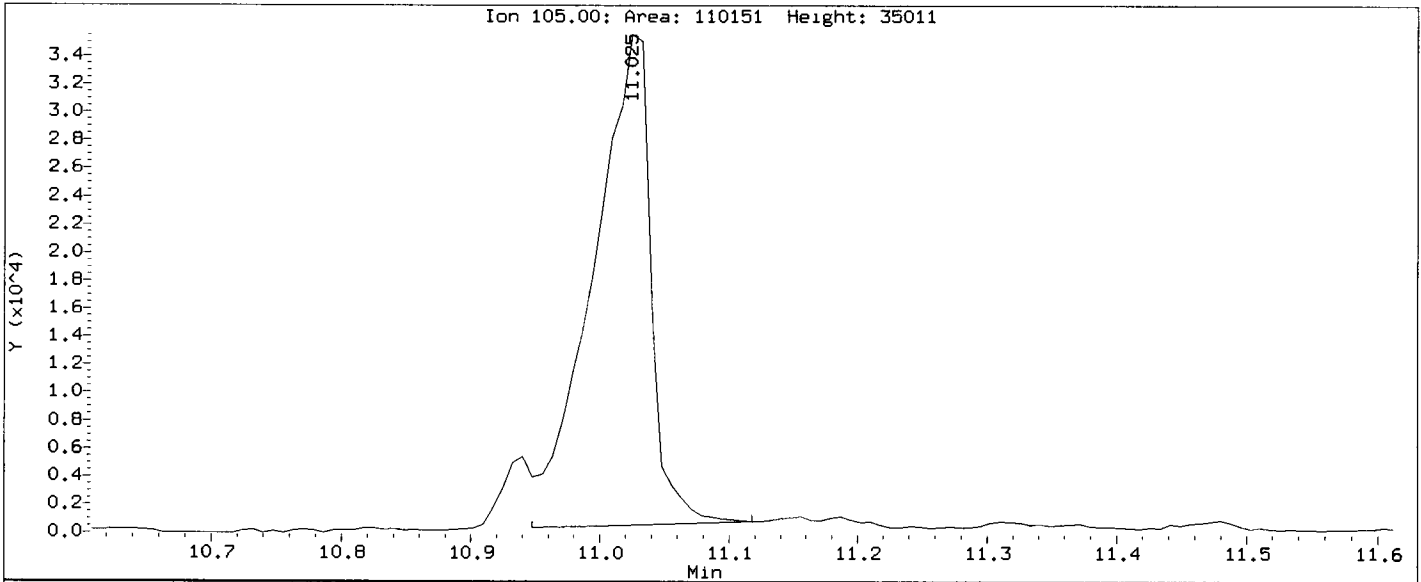




Data File: /chem1/nt10.1/20121204.b/vr58a.d  
Injection Date: 04-DEC-2012 17:08  
Instrument: nt10.1  
Client Sample ID: SG-10-S-E-121107

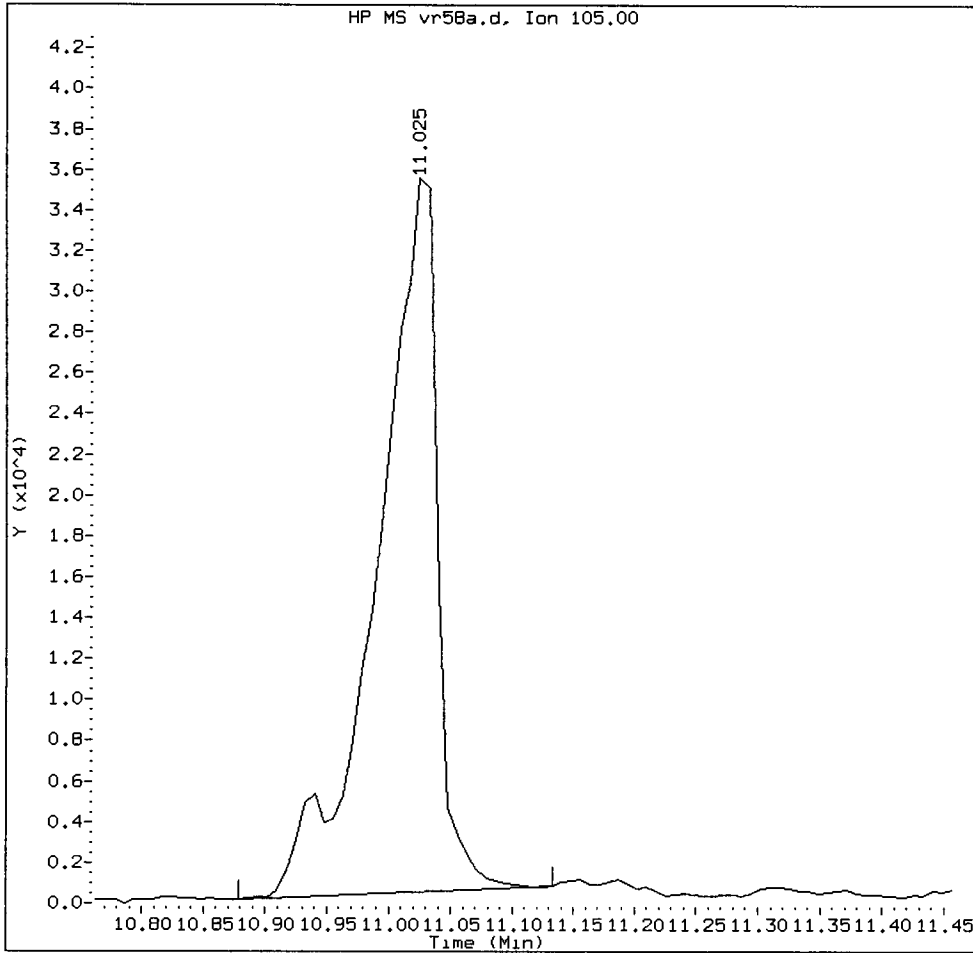
VT  
12.5.12

Compound: Benzoic acid  
CAS Number: 65-85-0



VR58A, /chem1/nt10.i/20121204.b/vr58a.d

Benzoic acid Amount: 5.20 Area: 120409



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other \_\_\_\_\_

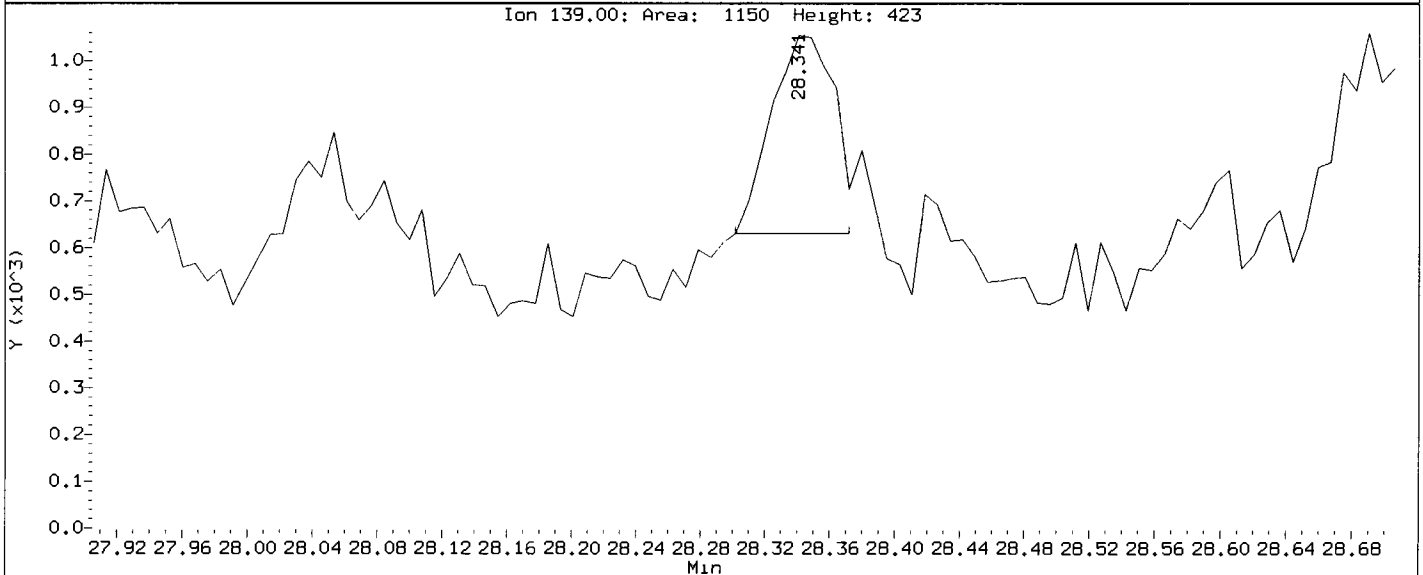
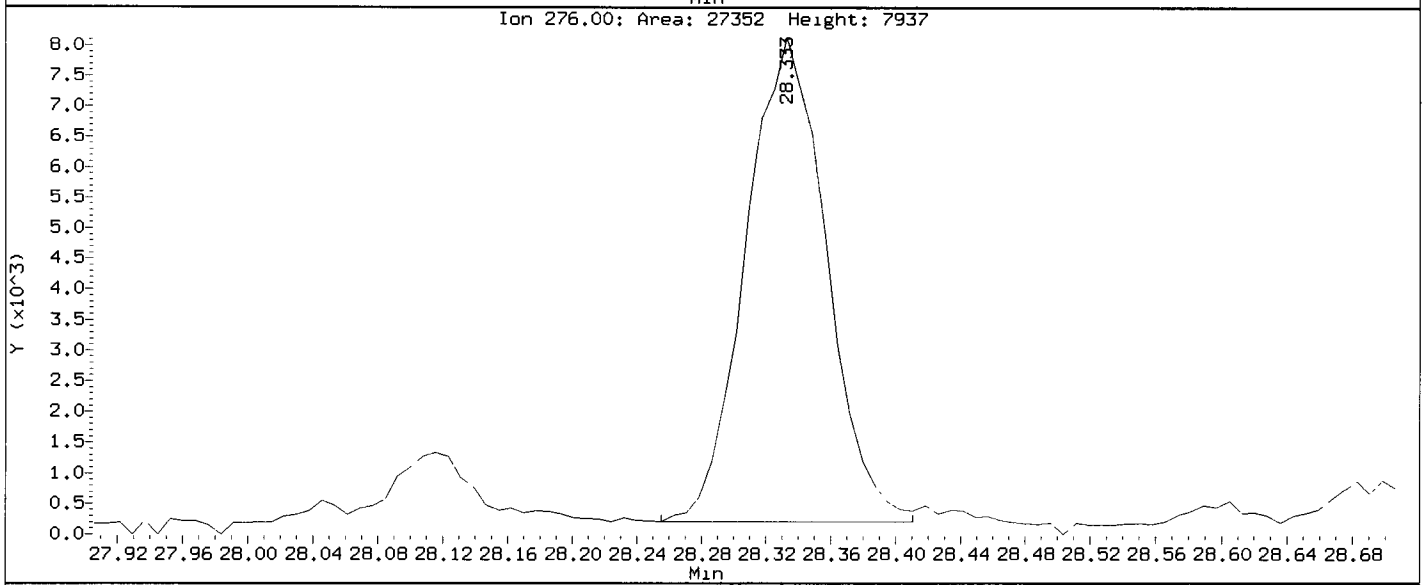
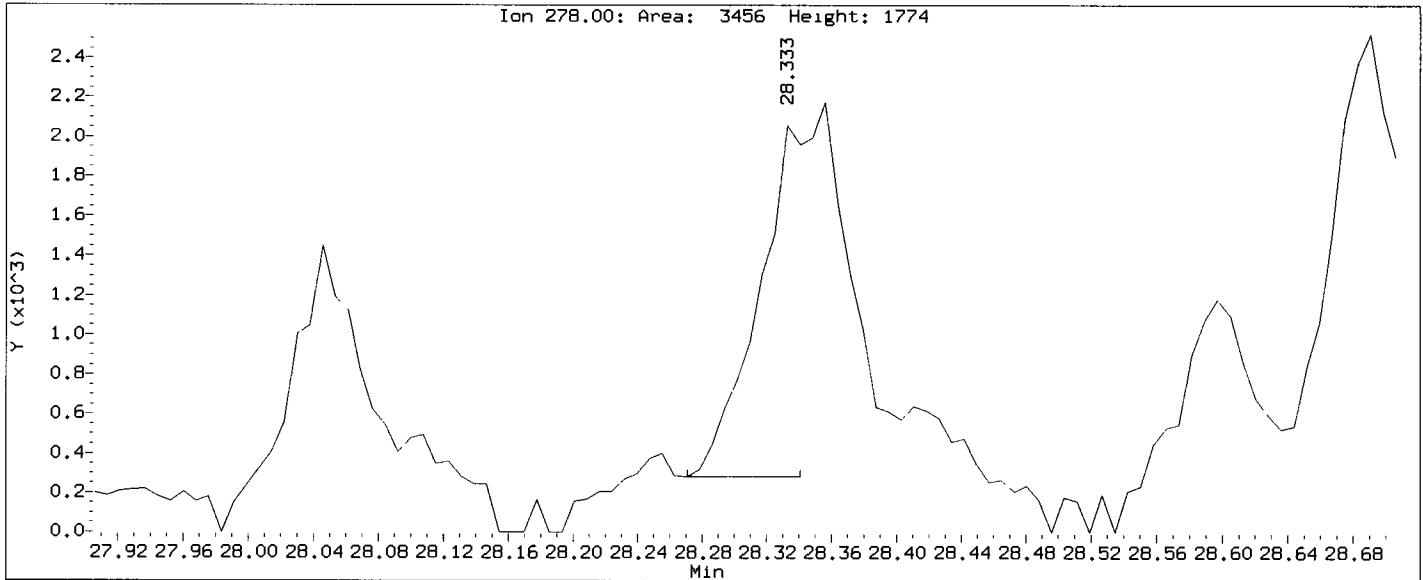
Analyst: VD

Date: 12.5.12

Data File: /chem1/nt10.1/20121204.b/vr58a.d  
Injection Date: 04-DEC-2012 17:08  
Instrument: nt10.1  
Client Sample ID: SG-10-S-E-121107

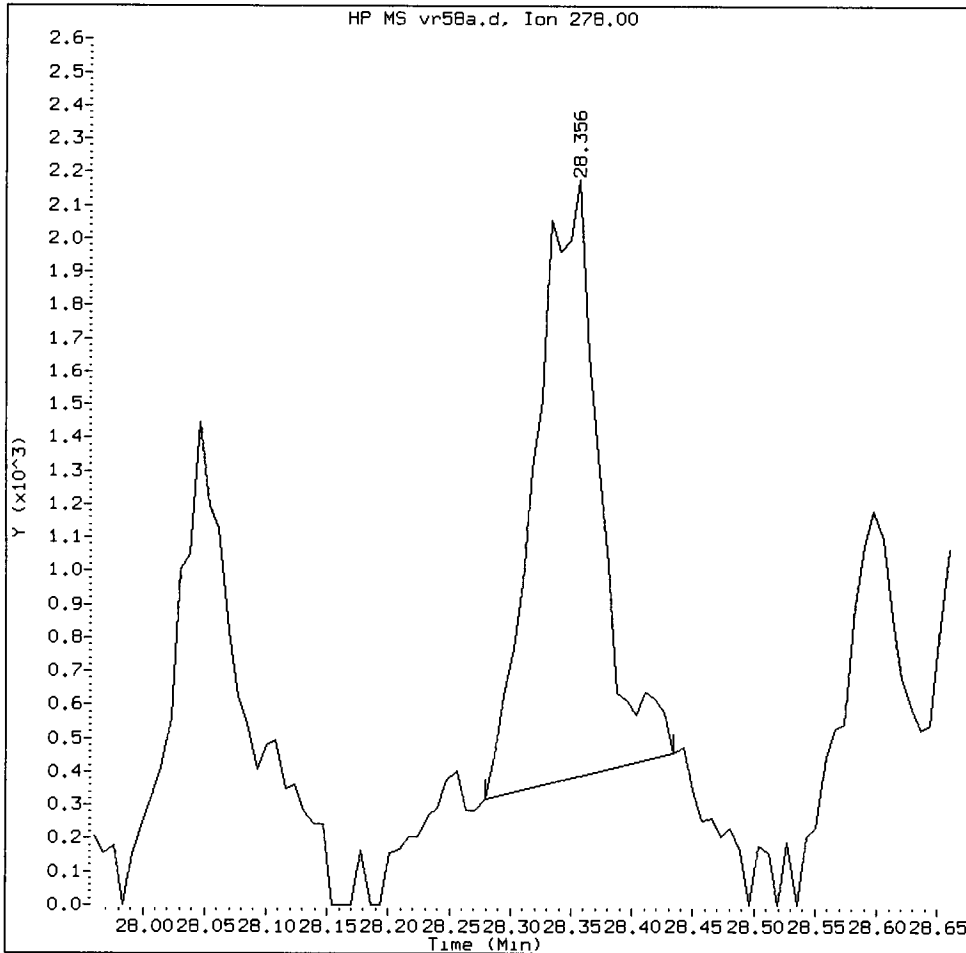
12.5.12

Compound: Dibenzo(a,h)anthracene  
CAS Number: 53-70-3



VR58A, /chem1/nt10.i/20121204.b/vr58a.d

Dibenzo(a,h)anthracene Amount: 0.34 Area: 6690



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

- 1) Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: VD

Date: 12.5.12

CO-ELUTION SUMMARY FOR FILE - vr58a.d

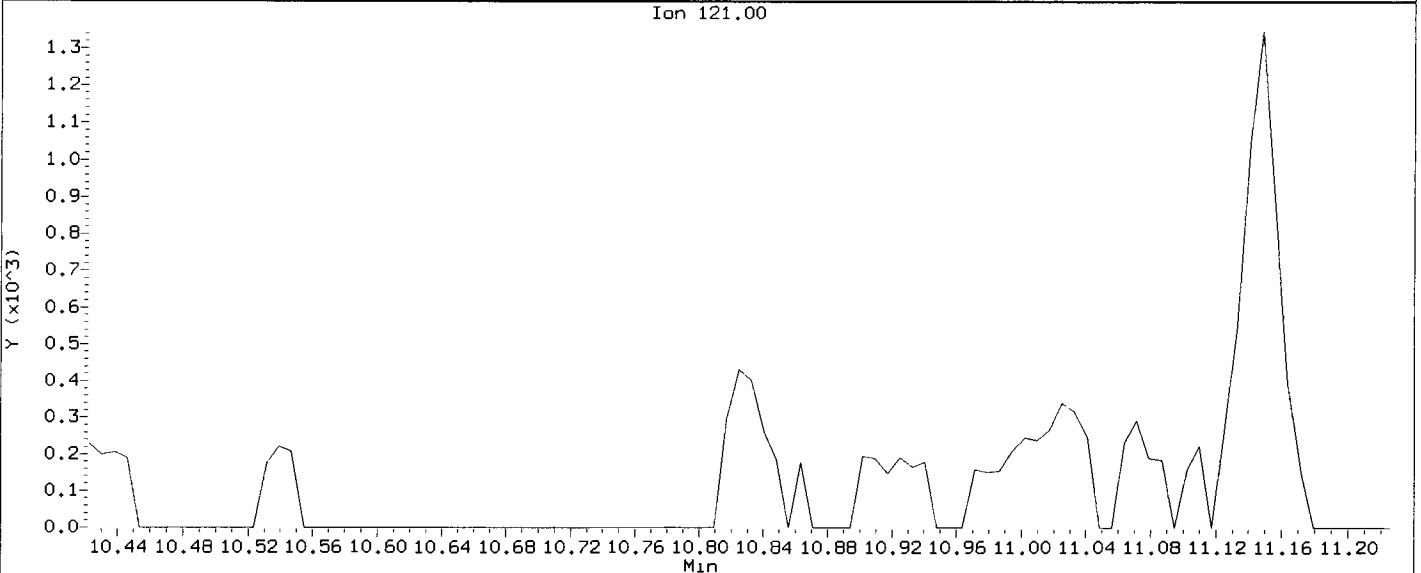
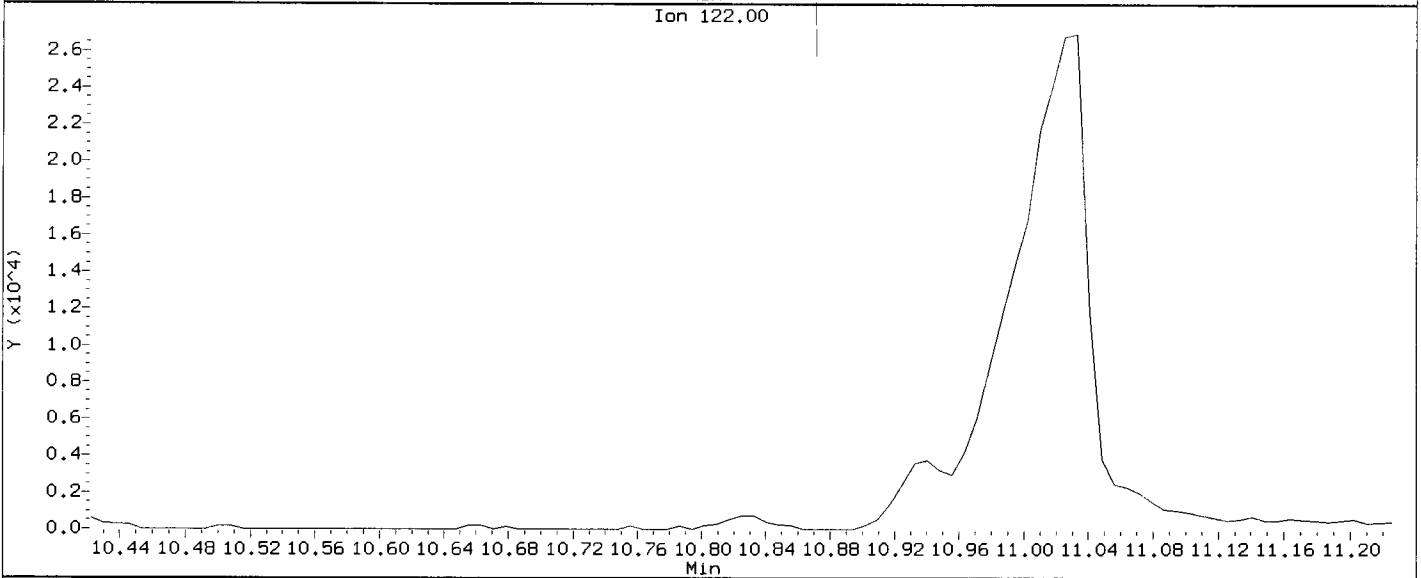
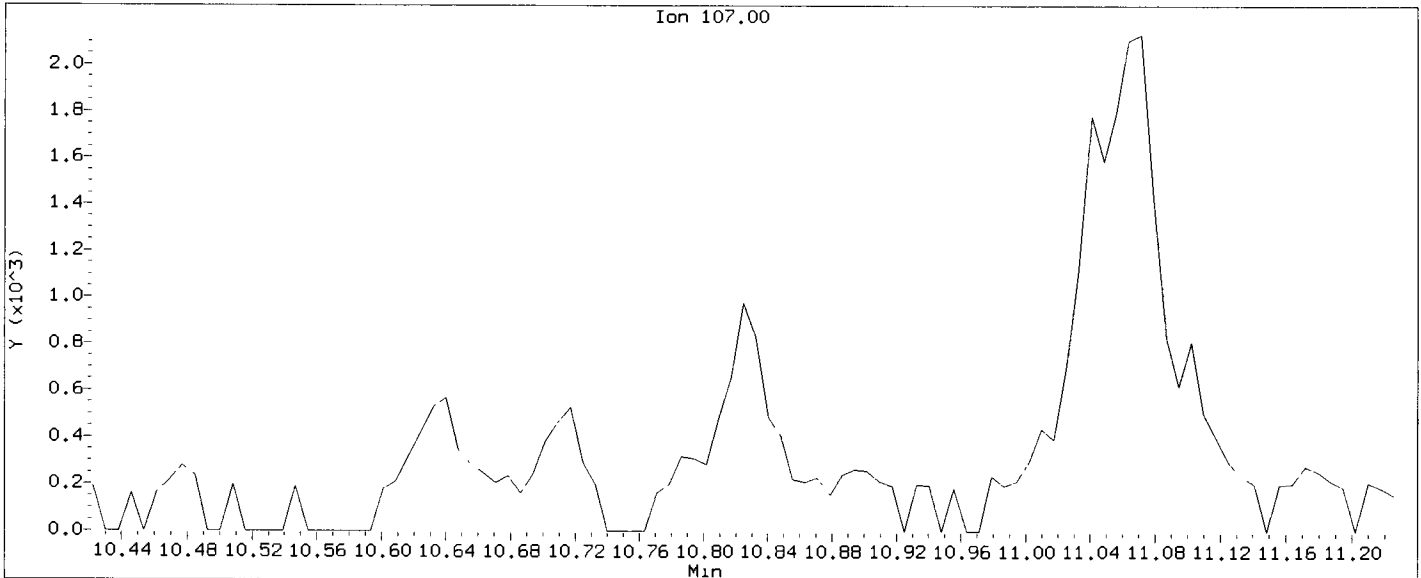
Lab ID: VR58A, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

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Data File: /chem1/nt10.1/20121204.b/vr5Ba.d  
Injection Date: 04-DEC-2012 17:08  
Instrument: nt10.1  
Client Sample ID: SG-10-S-E-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58b.d  
 Lab Smp Id: VR58B Client Smp ID: SG-11-S-E-121107  
 Inj Date : 04-DEC-2012 17:44  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58B  
 Misc Info : 12-22330  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.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	51.30000	Weight of sample extracted (g)
M	80.10000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN	FINAL
								(ug/mL)	(ug/kg)
\$ 1 2-Fluorophenol			112	6.551	6.505	(0.741)	41408	4.19306	410.7
\$ 2 Phenol-d5			99	8.244	8.220	(0.933)	71039	5.81344	569.5
3 Phenol			94	8.267	8.243	(0.935)	17866	1.38788	136.0
\$ 5 2-Chlorophenol-d4			132	8.475	8.452	(0.959)	45714	4.32369	423.5
7 1,3-Dichlorobenzene			146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4			152	8.839	8.831	(1.000)	30871	4.00000	
9 1,4-Dichlorobenzene			146	Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4			152	9.219	9.212	(1.043)	18308	2.37473	232.6
12 1,2-Dichlorobenzene			146	Compound Not Detected.					
11 Benzyl alcohol			108	9.173	9.150	(1.038)	32893	5.40367	529.3
13 2-Methylphenol			108	9.445	9.421	(1.068)	1233	0.11149	10.92 (M)
17 Hexachloroethane			117	Compound Not Detected.					
15 4-Methylphenol			108	9.740	9.716	(1.102)	9899	1.50841	147.8
\$ 18 Nitrobenzene-d5			82	10.011	10.003	(0.871)	32550	3.36652	329.8
22 2,4-Dimethylphenol			107	Compound Not Detected.					

(cont)

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ug/mL)	(ug/kg)
24 Benzoic acid		105	11.141	11.110	(0.970)	91559	14.5020	1421 (M)
26 1,2,4-Trichlorobenzene		180	Compound Not Detected.					
* 27 Naphthalene-d8		136	11.488	11.480	(1.000)	103185	4.00000	
28 Naphthalene		128	11.526	11.526	(1.003)	9986	0.39779	38.97
30 Hexachlorobutadiene		225	Compound Not Detected.					
32 2-Methylnaphthalene		142	13.027	13.027	(1.134)	3508	0.18756	18.37
\$ 36 2-Fluorobiphenyl		172	13.886	13.886	(0.904)	69079	2.09754	205.5
39 Dimethylphthalate		163	Compound Not Detected.					
40 Acenaphthylene		152	15.024	15.016	(0.978)	8467	0.19253	18.86 (M)
* 42 Acenaphthene-d10		164	15.364	15.356	(1.000)	93049	4.00000	
44 Acenaphthene		153	15.434	15.426	(1.005)	4614	0.18354	17.98
46 Dibenzofuran		168	15.789	15.781	(1.028)	14383	0.38552	37.76
50 Diethylphthalate		149	16.469	16.462	(1.072)	14271	0.45357	44.43
49 Fluorene		166	16.555	16.547	(1.077)	10854	0.35068	34.35
54 N-Nitrosodiphenylamine		169	Compound Not Detected.					
\$ 55 2,4,6-Tribromophenol		330	17.141	17.125	(1.116)	47830	8.72636	854.8
57 Hexachlorobenzene		284	Compound Not Detected.					
58 Pentachlorophenol		266	18.377	18.362	(0.986)	10684	0.56406	55.25
* 59 Phenanthrene-d10		188	18.632	18.617	(1.000)	413034	4.00000	
60 Phenanthrene		178	18.679	18.671	(1.002)	201947	1.97473	193.4
61 Anthracene		178	18.779	18.764	(1.008)	73756	0.67098	65.73
63 Di-n-butylphthalate		149	Compound Not Detected.					
64 Fluoranthene		202	21.124	21.093	(1.134)	545010	4.22811	414.2
65 Pyrene		202	21.534	21.510	(0.908)	148849	2.81571	275.8
\$ 66 Terphenyl-d14		244	21.859	21.835	(0.921)	70272	1.98865	194.8
67 Butylbenzylphthalate		149	22.803	22.788	(0.961)	5257	0.24482	23.98 (M)
68 Benzo(a)anthracene		228	23.701	23.670	(0.999)	77495	1.51101	148.0
* 69 Chrysene-d12		240	23.725	23.701	(1.000)	180448	4.00000	
71 Chrysene		228	23.763	23.740	(1.002)	127981	2.80890	275.1
72 bis(2-Ethylhexyl)phthalate		149	23.849	23.825	(0.960)	533033	7.53689	738.3
* 134 Di-n-octylphthalate-d4		153	24.832	24.801	(1.000)	512568	4.00000	
73 Di-n-octylphthalate		149	24.832	24.808	(1.000)	103081	0.88716	86.90
76 Benzo(a)pyrene		252	26.032	25.985	(0.996)	82859	1.49170	146.1
* 77 Perylene-d12		264	26.140	26.086	(1.000)	194634	4.00000	
78 Indeno(1,2,3-cd)pyrene		276	28.411	28.294	(1.087)	58041	0.92199	90.31
79 Dibenzo(a,h)anthracene		278	28.403	28.310	(1.087)	23155	0.46349	45.40 (M)
80 Benzo(g,h,i)perylene		276	29.087	28.931	(1.113)	59104	1.09703	107.5 (M)
105 1-methylnaphthalene		142	13.267	13.259	(1.155)	2220	0.12932	12.67
187 Total Benzofluoranthenes		252	25.482	25.474	(0.975)	228100	3.98243	390.1
98 Retene		219	22.153	22.137	(0.934)	122179		
120 2,3,4,6-Tetrachlorophenol		232	Compound Not Detected.					

(out ↓)

QC Flag Legend

M - Compound response manually integrated.

12-5-12



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58b.d  
 Lab Smp Id: VR58B  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22330

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-11-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	30871	-62.15 <-
27 Naphthalene-d8	299399	149700	598798	103185	-65.54 <-
42 Acenaphthene-d10	178564	89282	357128	93049	-47.89
59 Phenanthrene-d10	305410	152705	610820	413034	35.24
69 Chrysene-d12	323853	161926	647706	180448	-44.28
134 Di-n-octylphthala	427845	213922	855690	512568	19.80
77 Perylene-d12	305316	152658	610632	194634	-36.25

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.84	0.09
27 Naphthalene-d8	11.48	10.98	11.98	11.49	0.07
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.05
59 Phenanthrene-d10	18.62	18.12	19.12	18.63	0.08
69 Chrysene-d12	23.70	23.20	24.20	23.72	0.10
134 Di-n-octylphthala	24.80	24.30	25.30	24.83	0.13
77 Perylene-d12	26.09	25.59	26.59	26.14	0.21

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.

Client SDG: VR58

Sample Matrix: SOLID

Fraction: SV

Lab Smp Id: VR58B

Client Smp ID: SG-11-S-E-121107

Level: LOW

Operator: VTS/YZ

Data Type: MS DATA

SampleType: SAMPLE

SpikeList File: SHORTPSDDA.spk

Quant Type: ISTD

Sublist File: SHORTPSDDA.sub

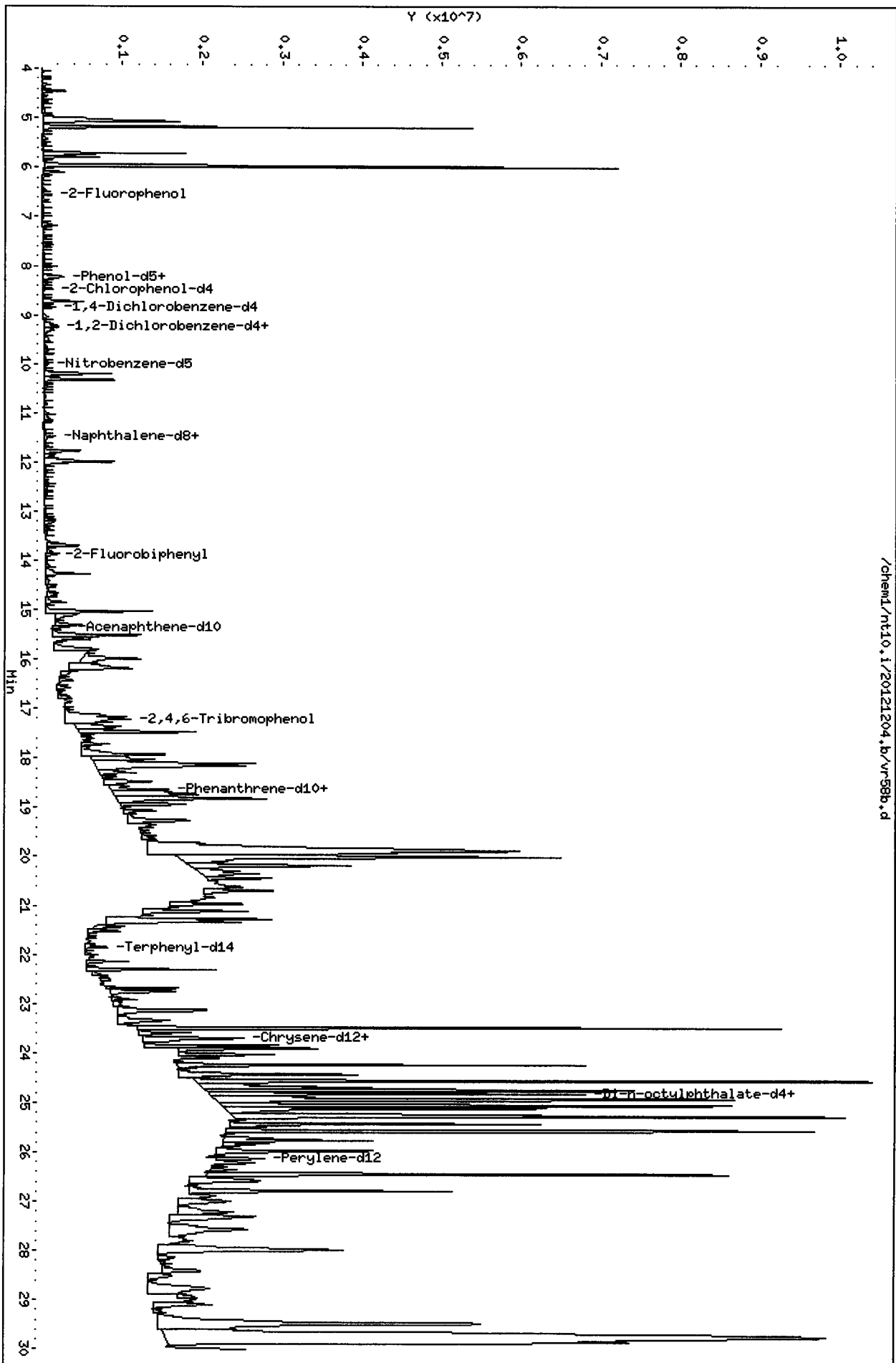
Method File: /chem1/nt10.i/20121204.b/ABN.m

Misc Info: 12-22330

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	734.7	410.7	55.91	30-160
\$ 2 Phenol-d5	734.7	569.5	77.51	30-160
\$ 5 2-Chlorophenol-d4	734.7	423.5	57.65	30-160
\$ 10 1,2-Dichlorobenzen	489.8	232.6	47.49	30-160
\$ 18 Nitrobenzene-d5	489.8	329.8	67.33	30-160
\$ 36 2-Fluorobiphenyl	489.8	205.5	41.95	30-160
\$ 55 2,4,6-Tribromophen	734.7	854.8	116.35	30-160
\$ 66 Terphenyl-d14	489.8	194.8	39.77	30-160

Data File: /chem1/nt10.1/20121204.b/vr588.d  
Date : 04-DEC-2012 17:44  
Client ID: SG-11-S-E-121107  
Sample Info: VR588  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.1  
Operator: VTS/YZ  
Column diameter: 0.25



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

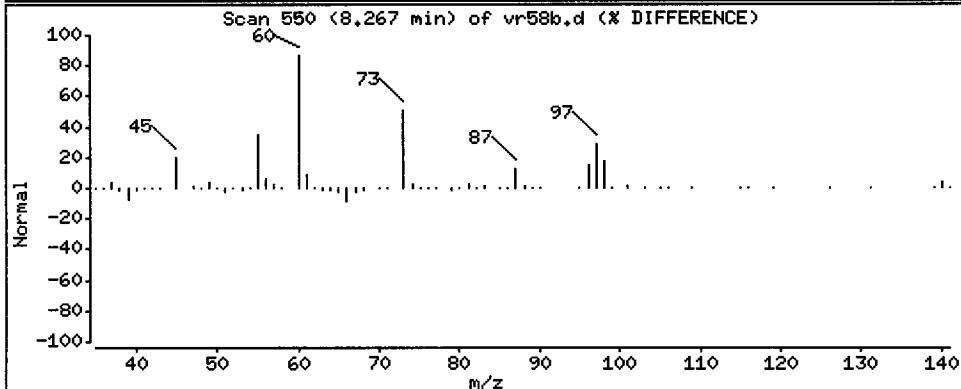
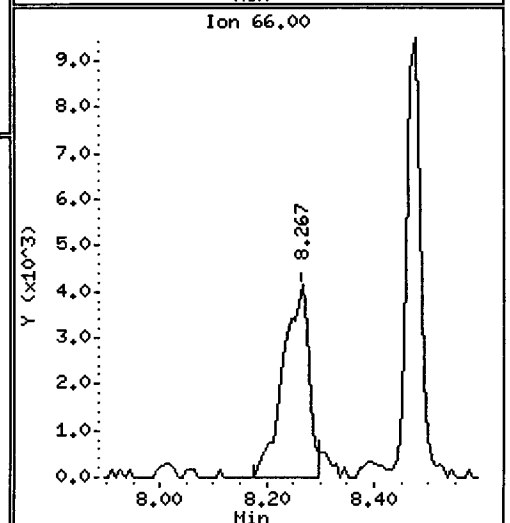
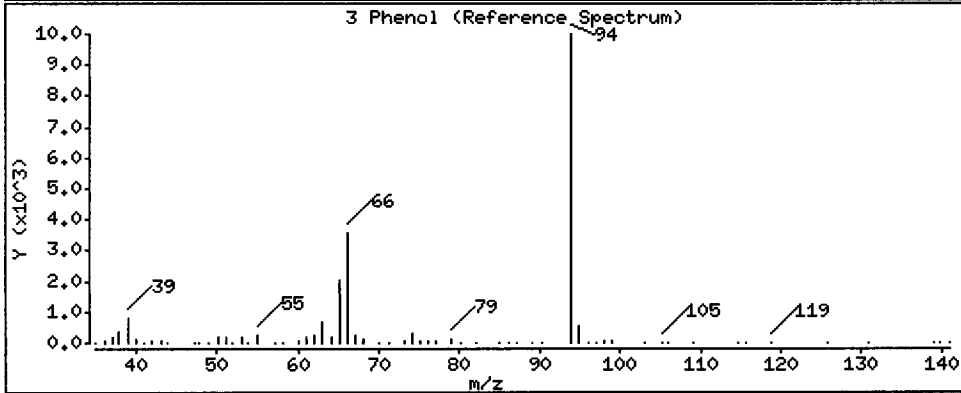
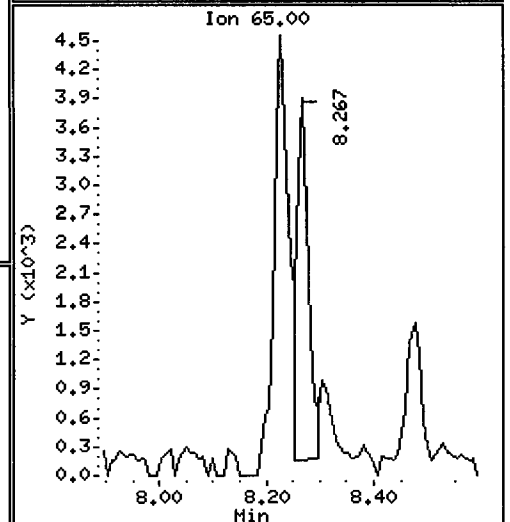
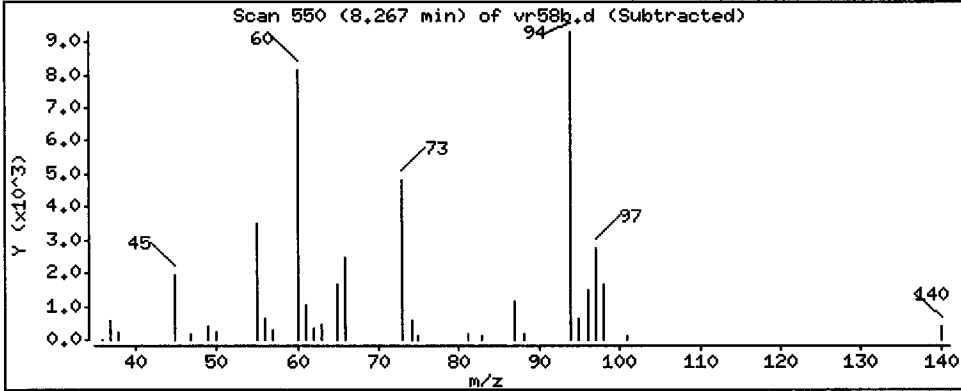
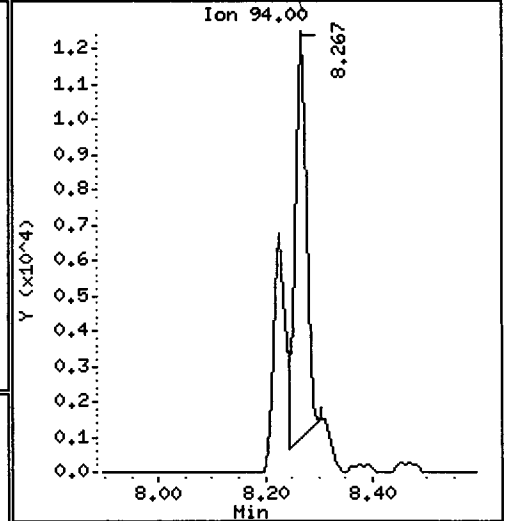
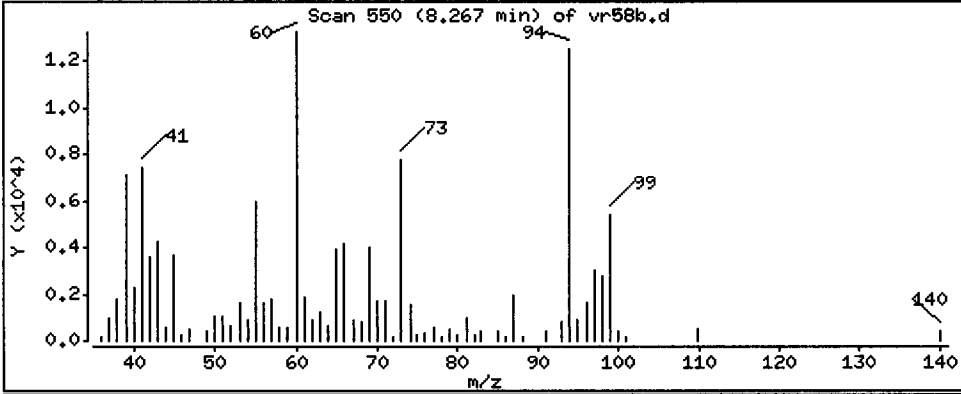
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 136.0 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

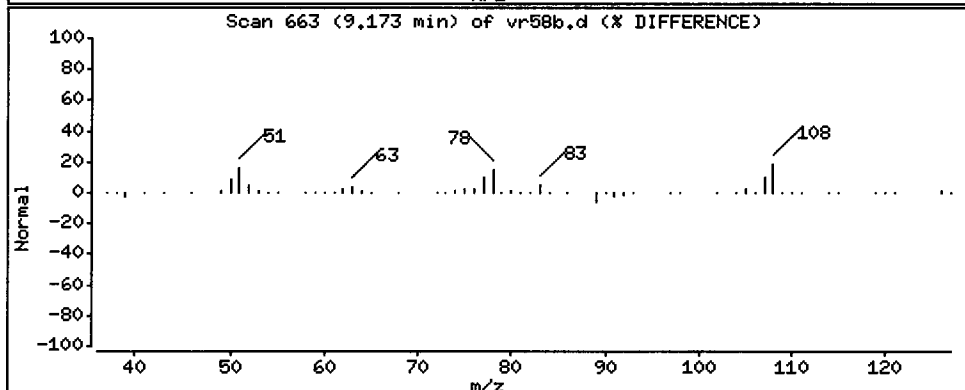
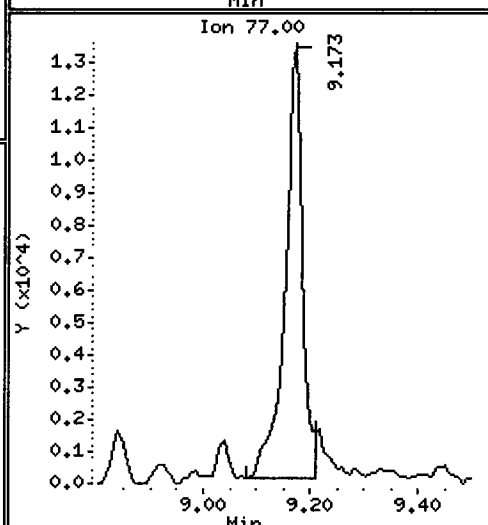
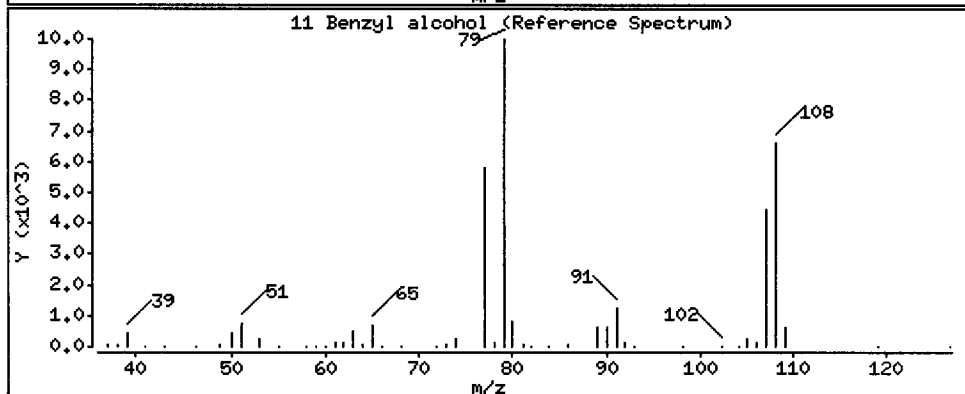
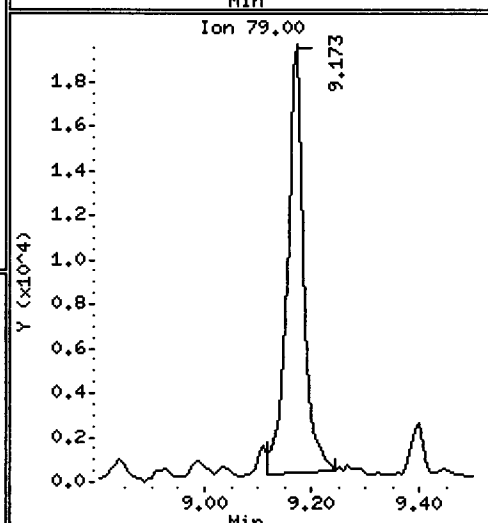
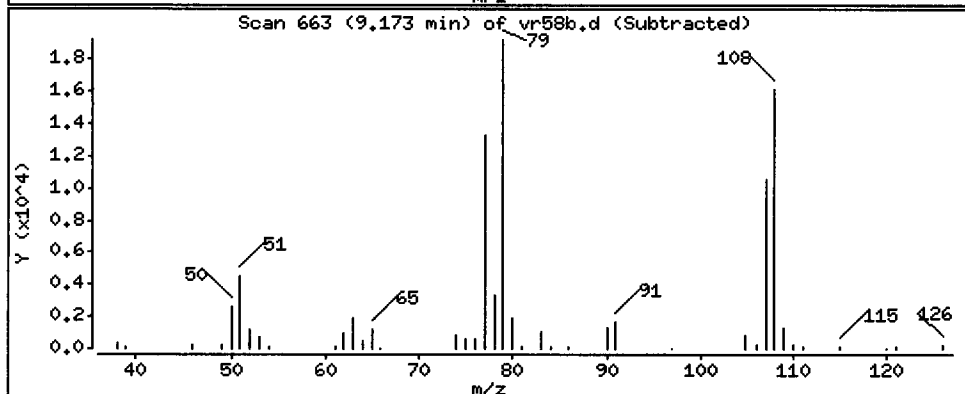
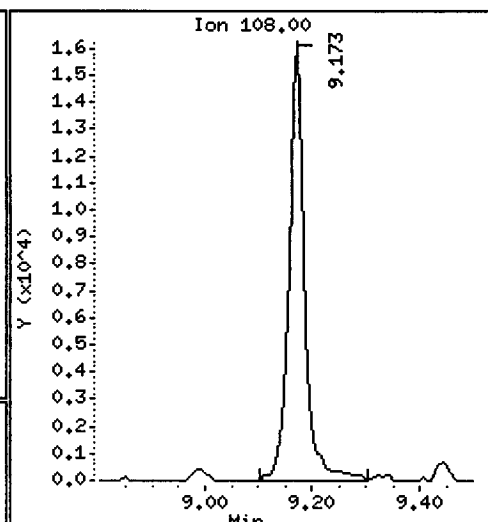
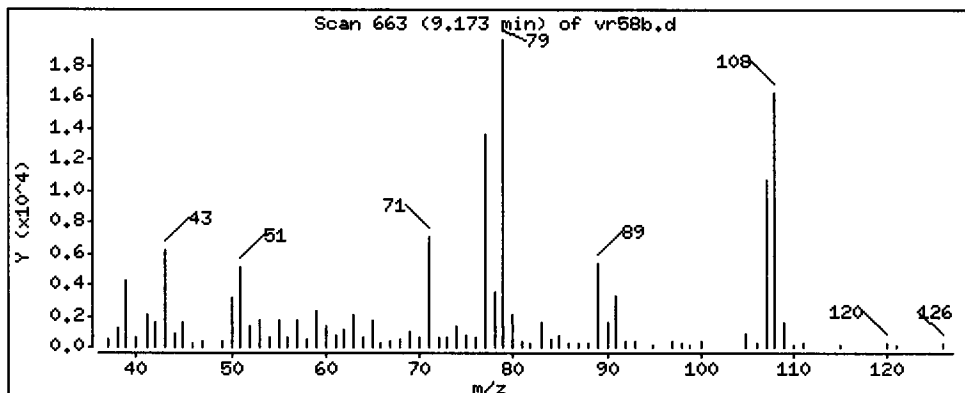
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 529.3 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

Operator: VTS/YZ

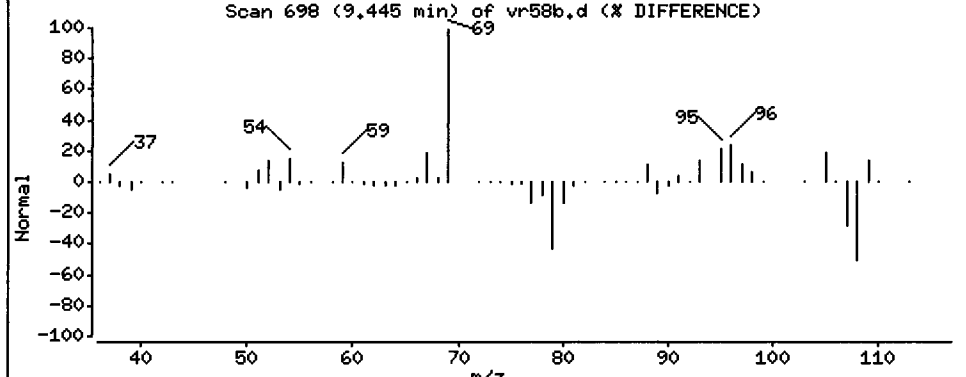
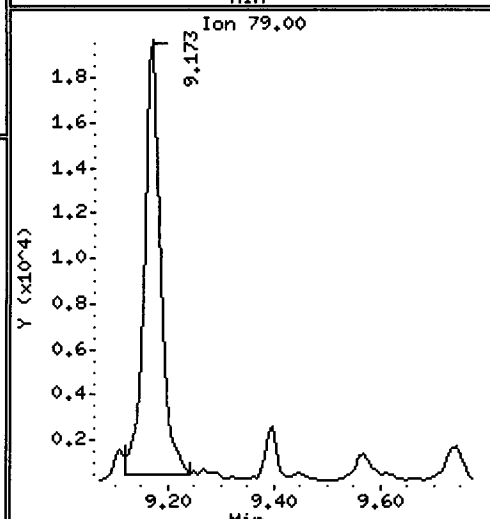
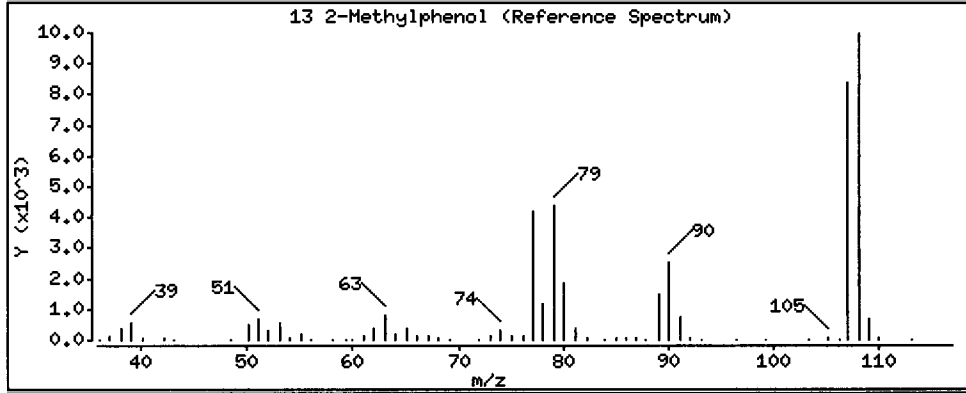
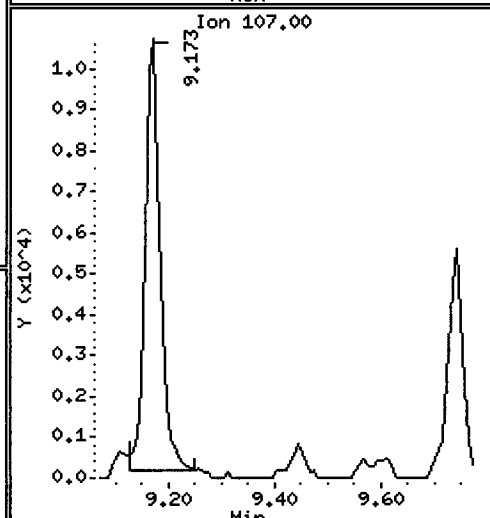
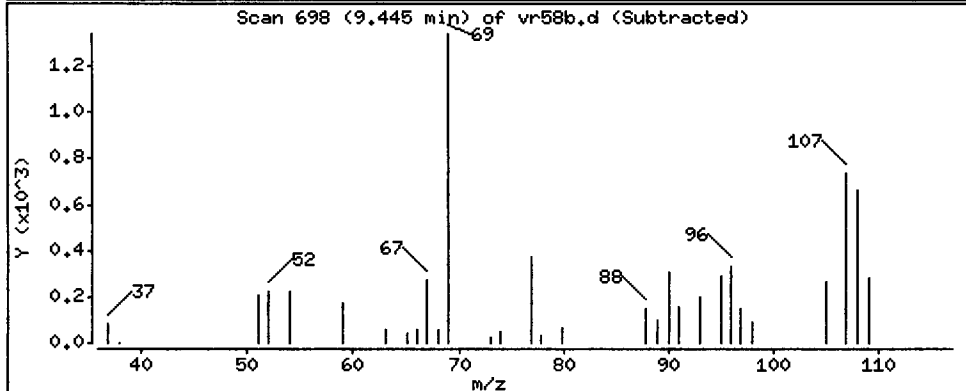
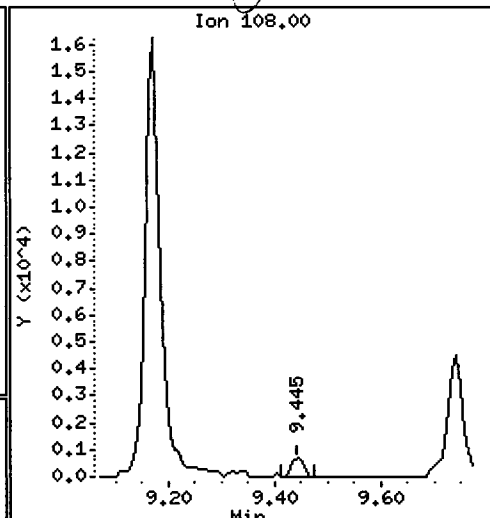
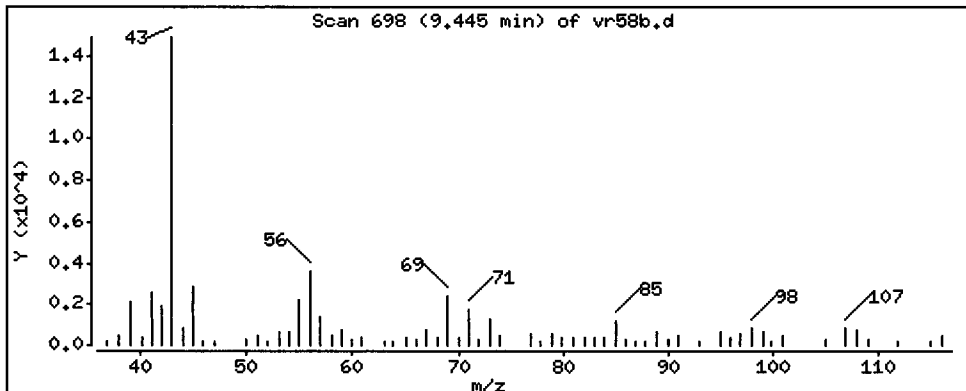
Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 10.92 ug/kg

*JYR*



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

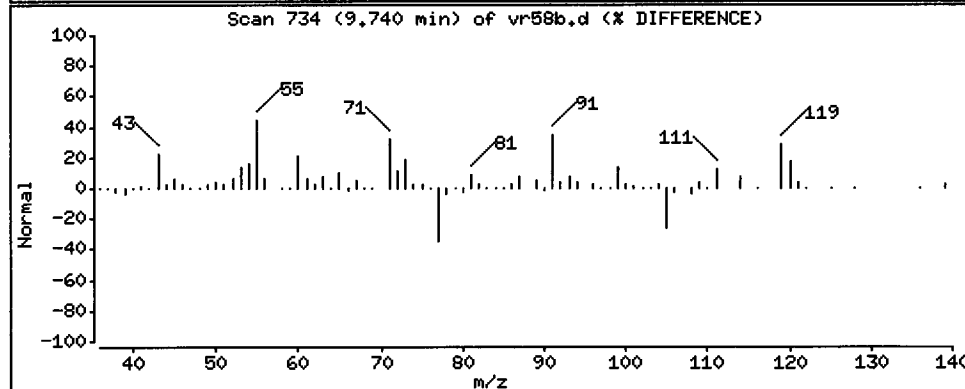
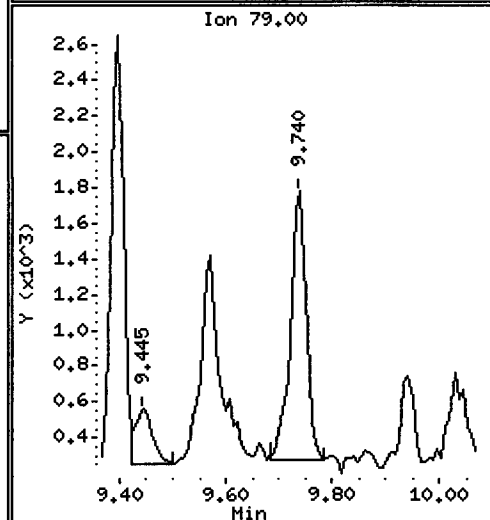
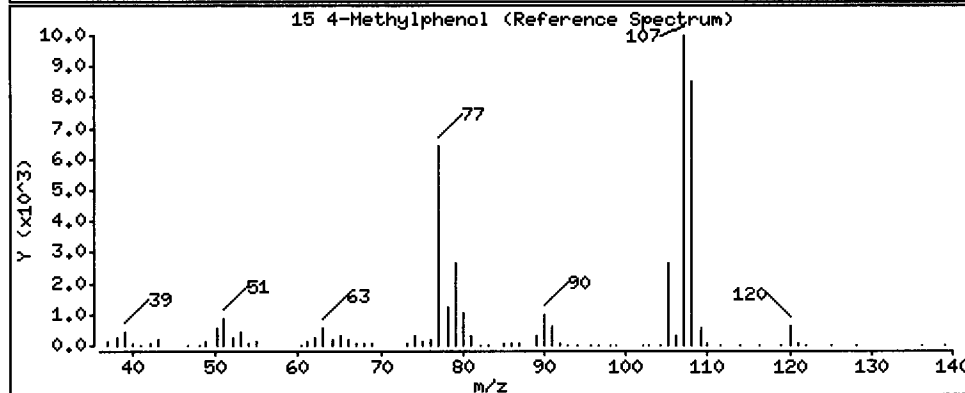
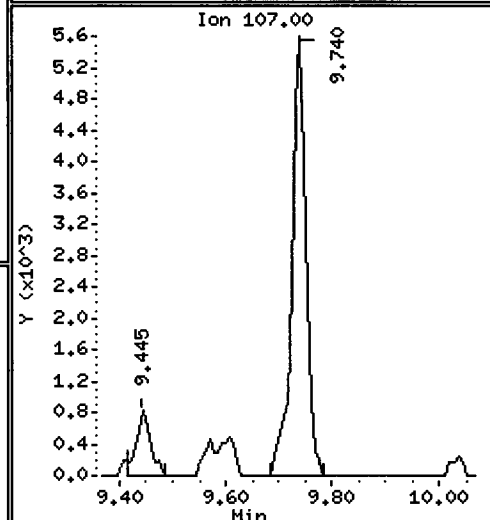
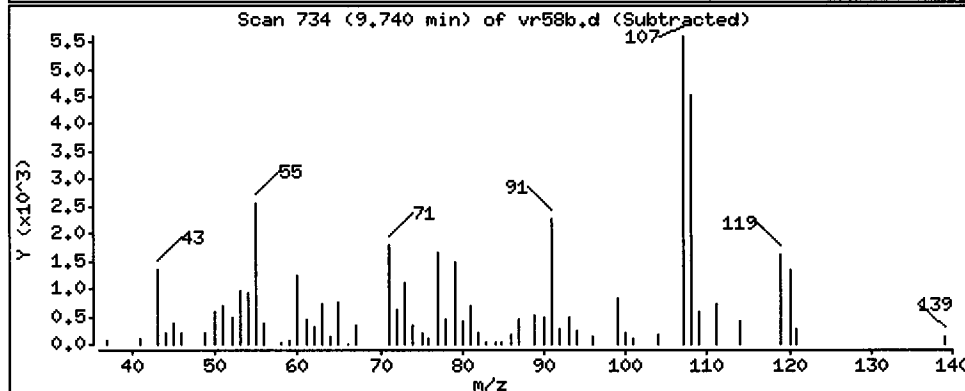
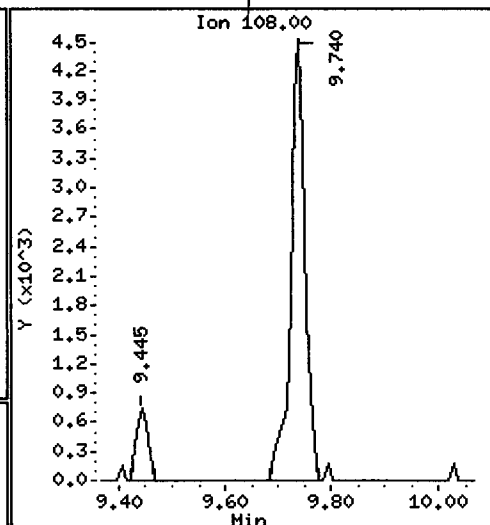
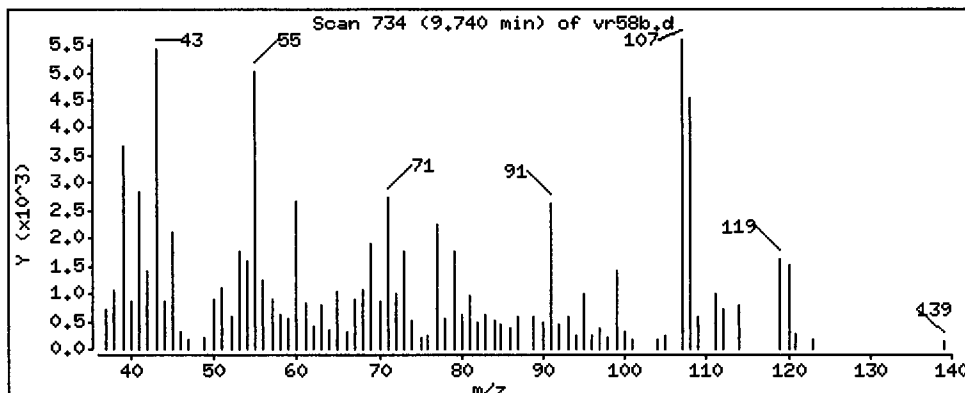
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 147.8 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10,i

Sample Info: VR58B

Volume Injected (uL): 1.0

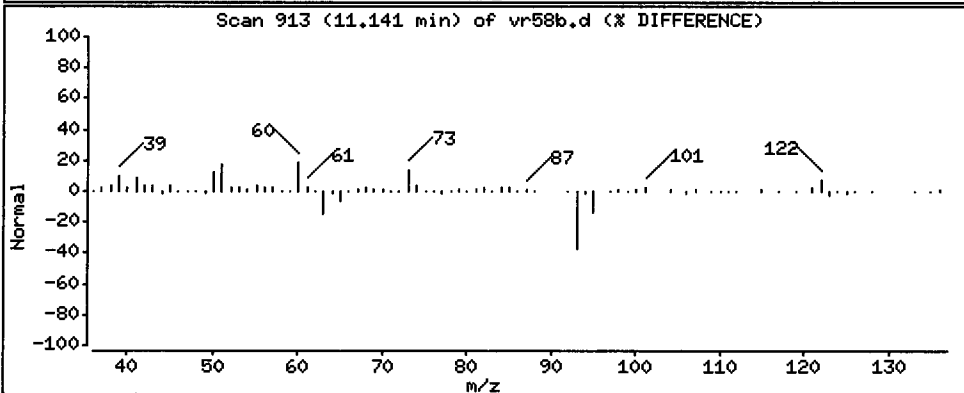
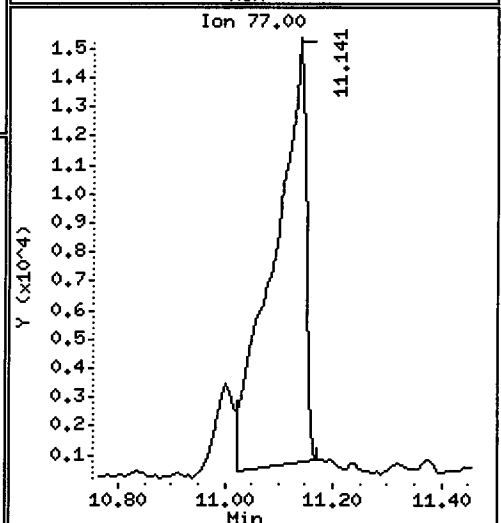
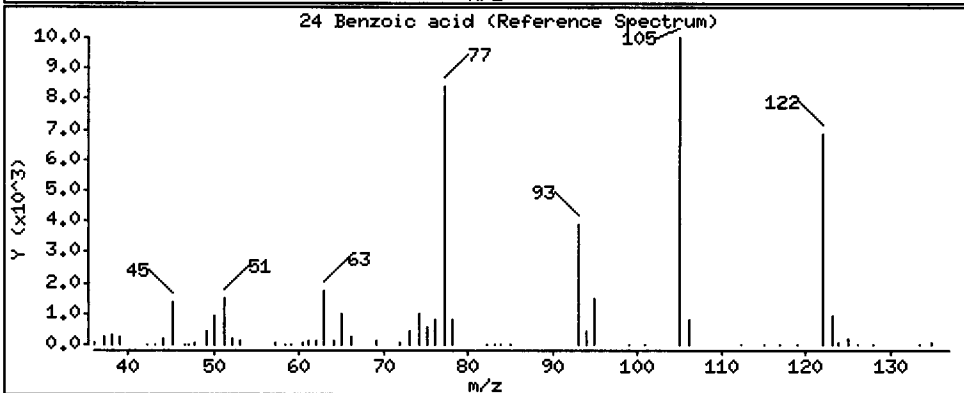
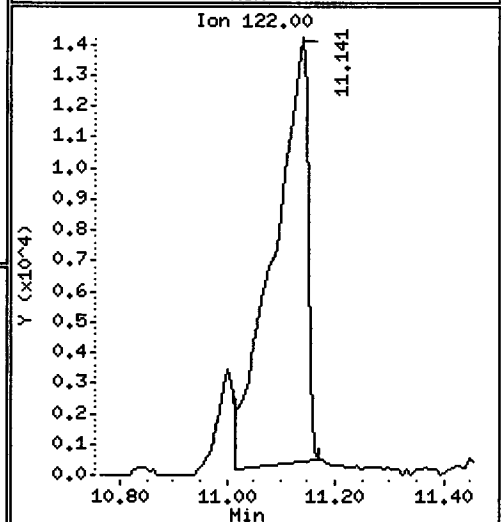
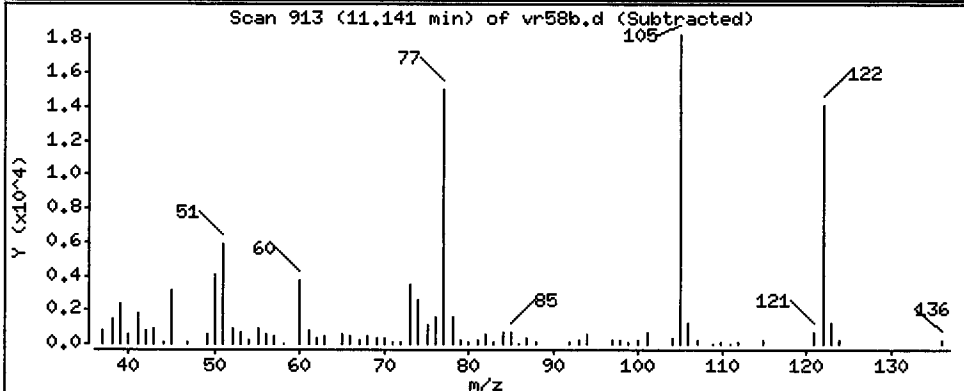
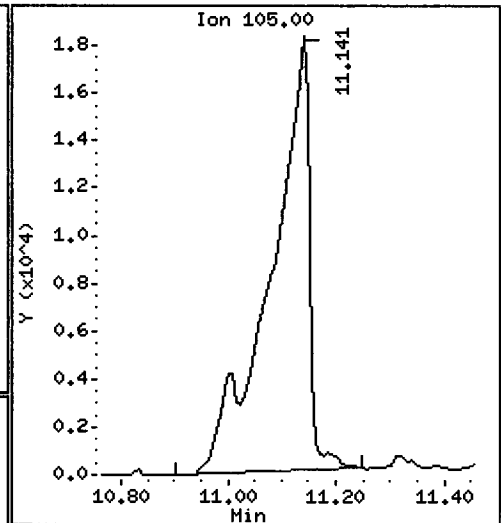
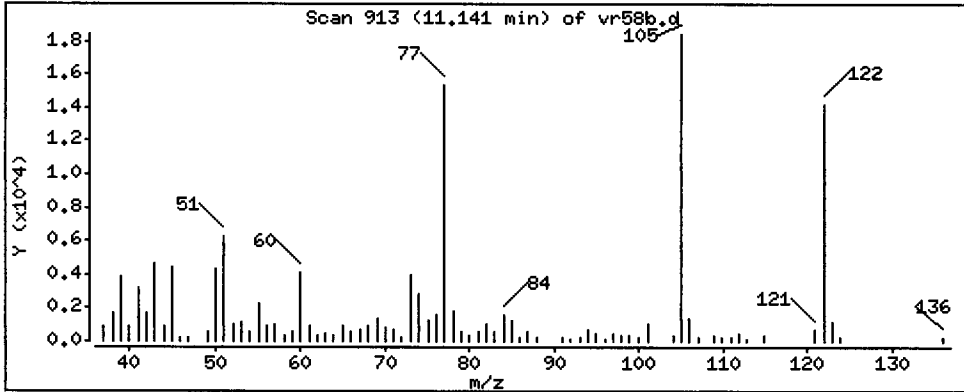
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 1421 ug/kg





Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

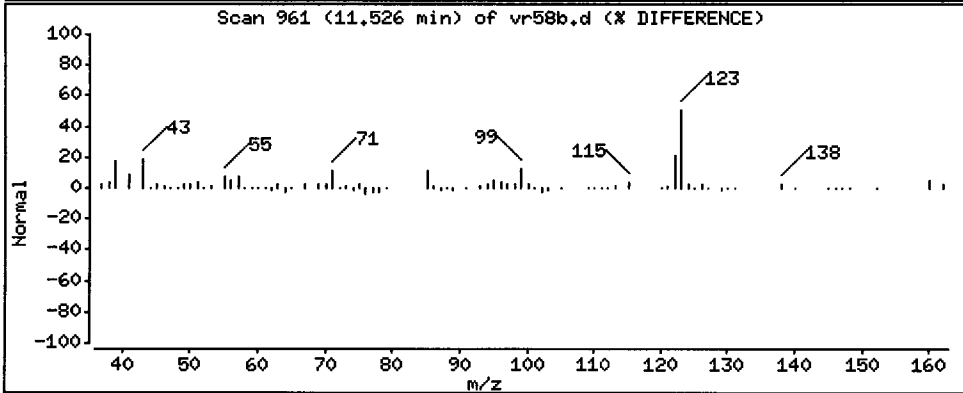
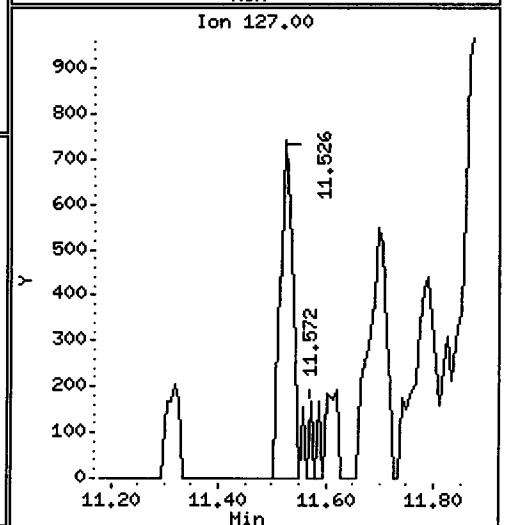
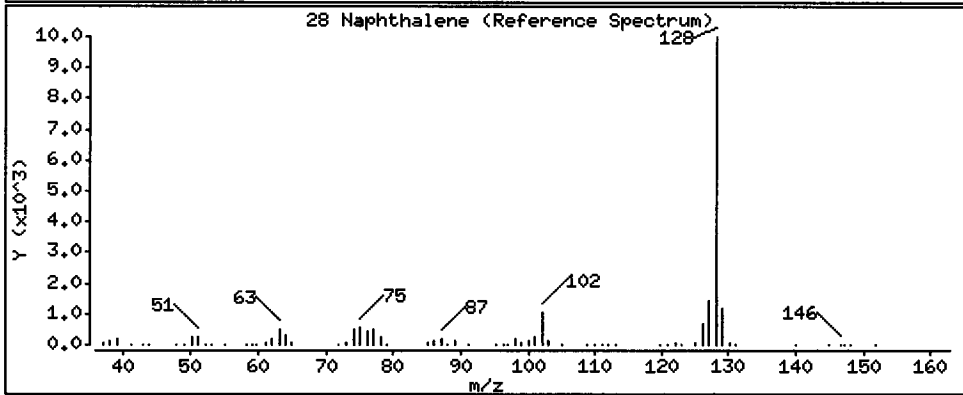
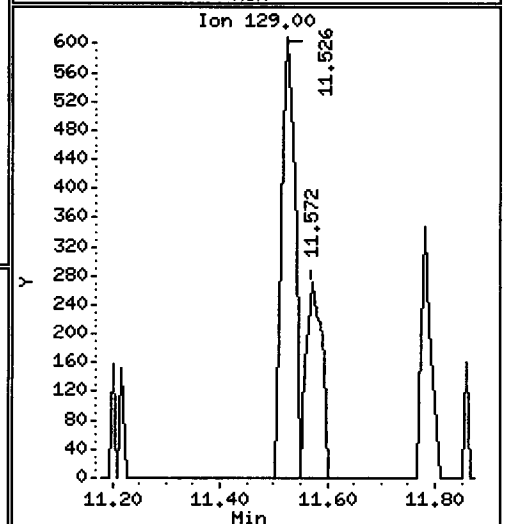
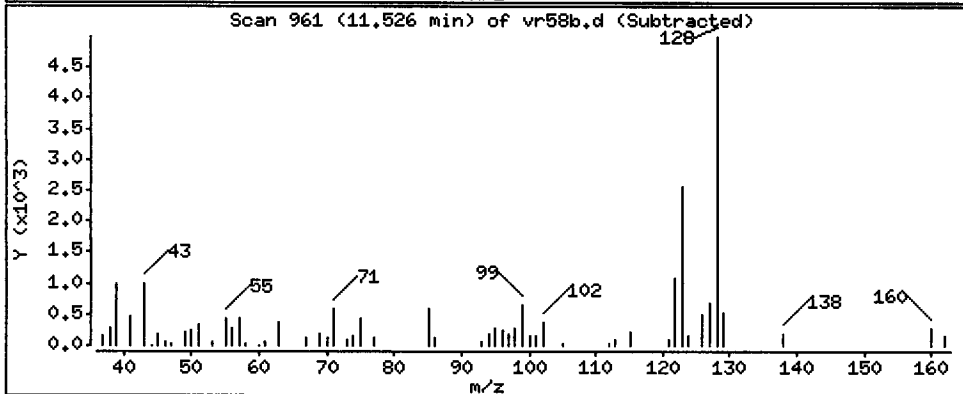
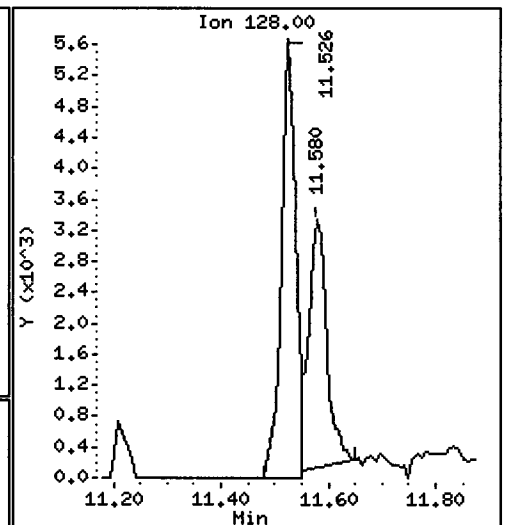
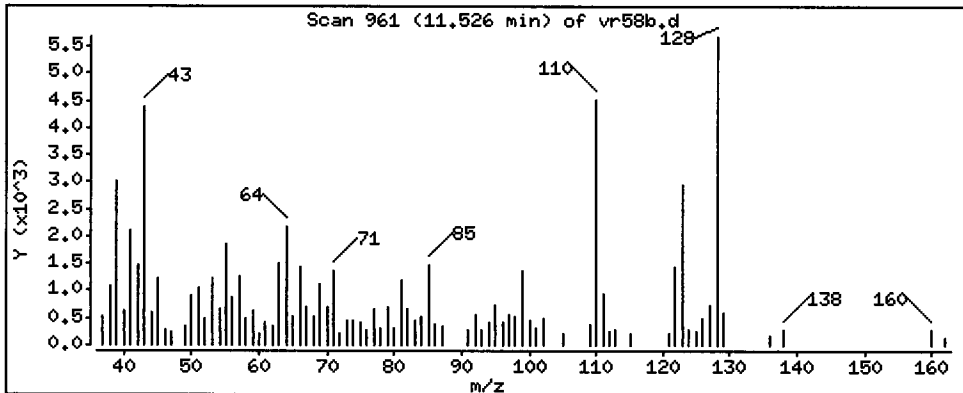
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 38.97 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

Operator: VTS/YZ

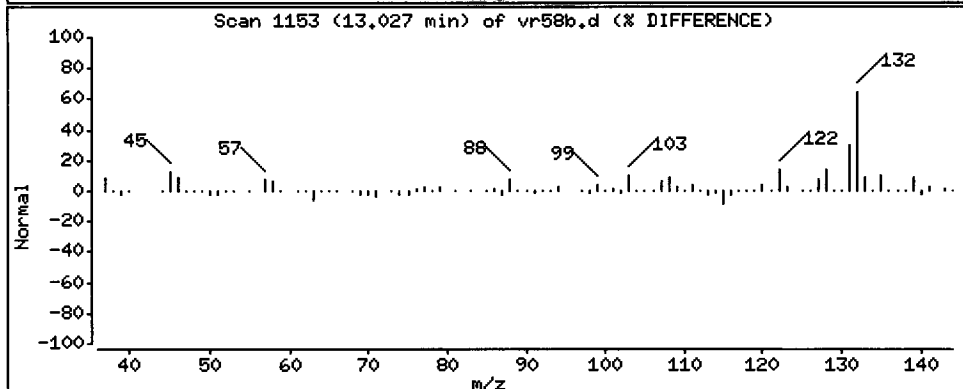
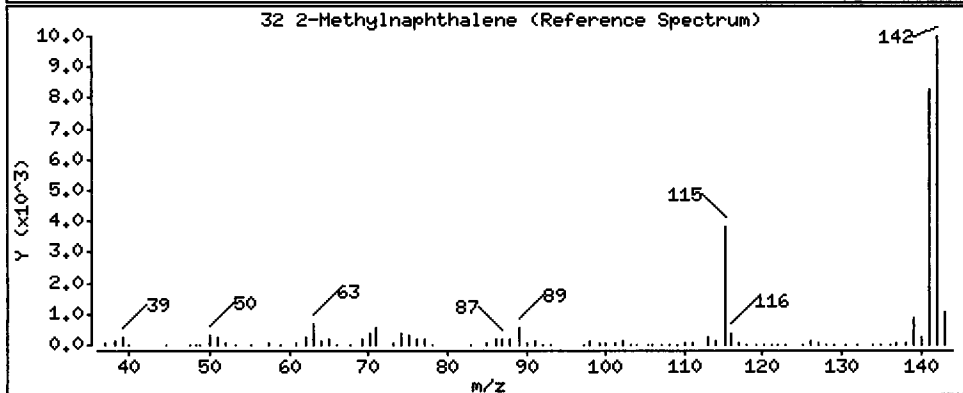
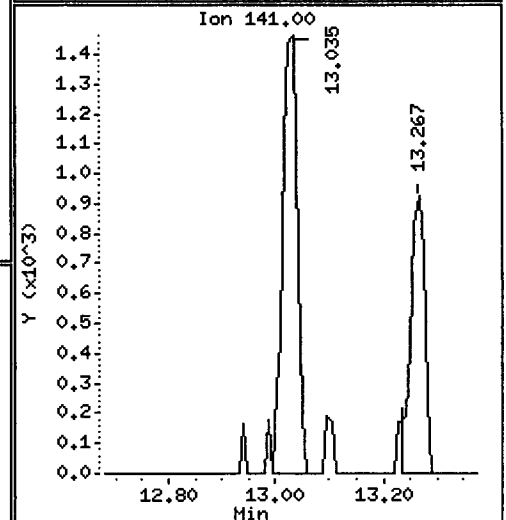
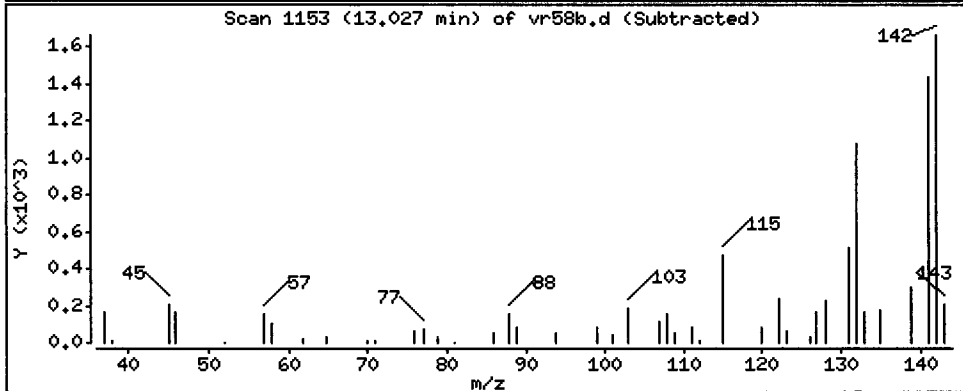
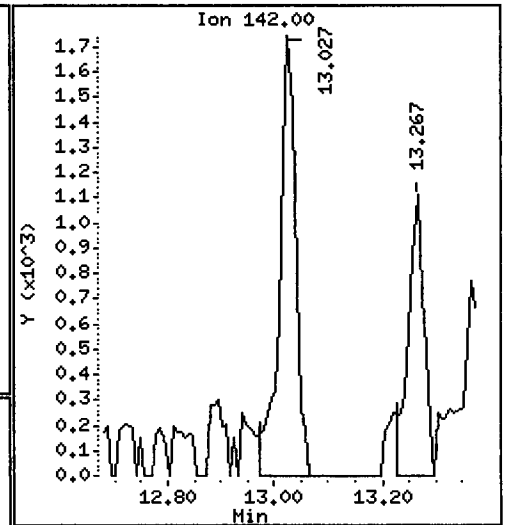
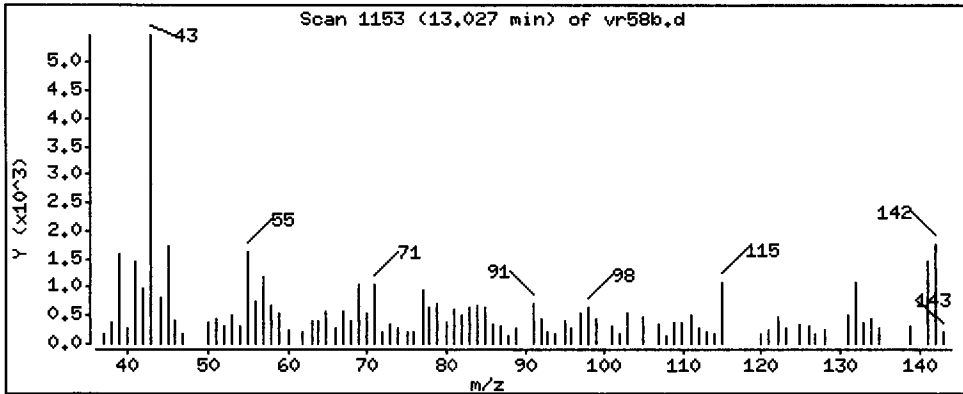
Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 18.37 ug/kg

*TCUR*



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

Operator: VTS/YZ

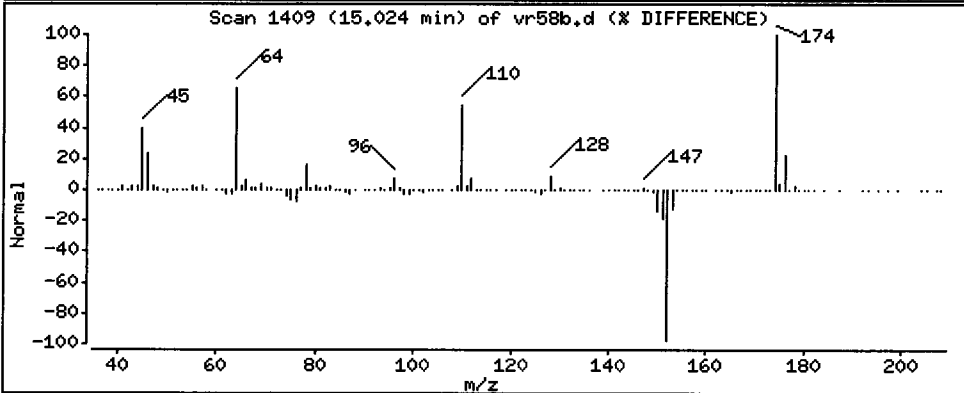
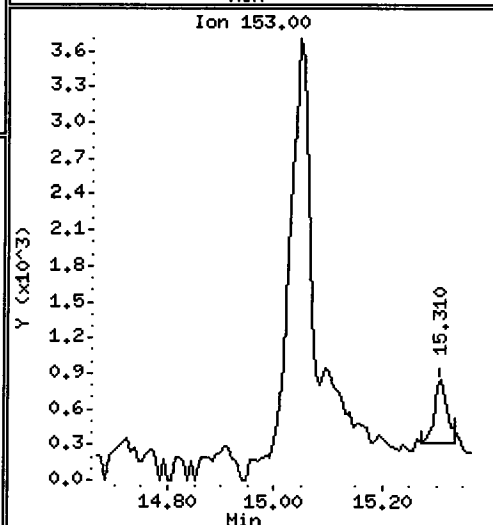
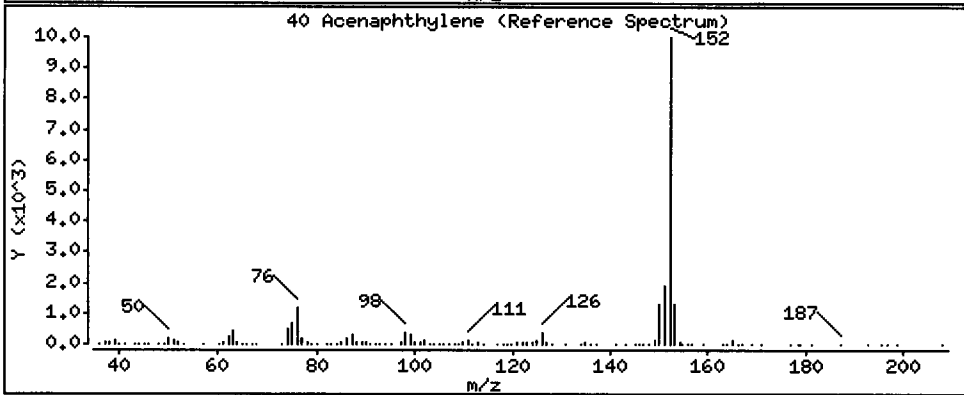
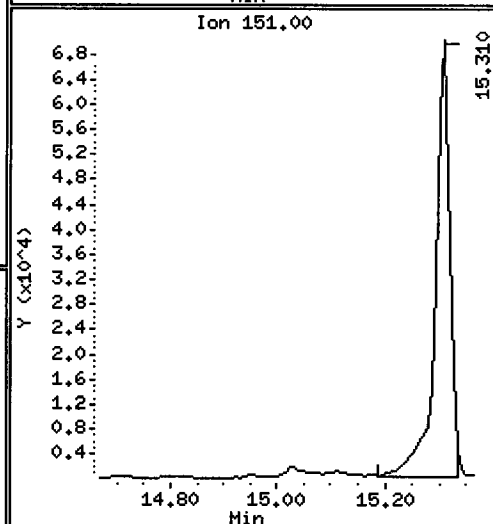
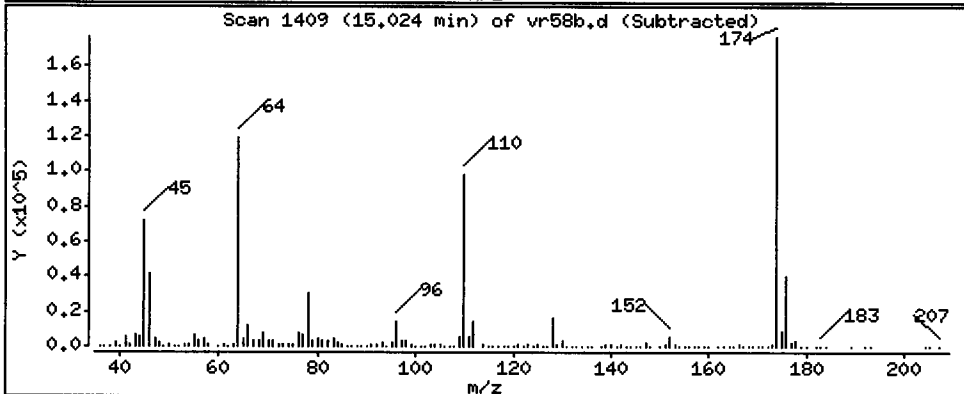
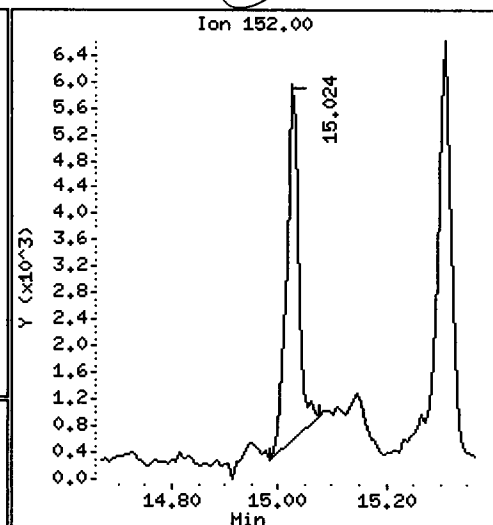
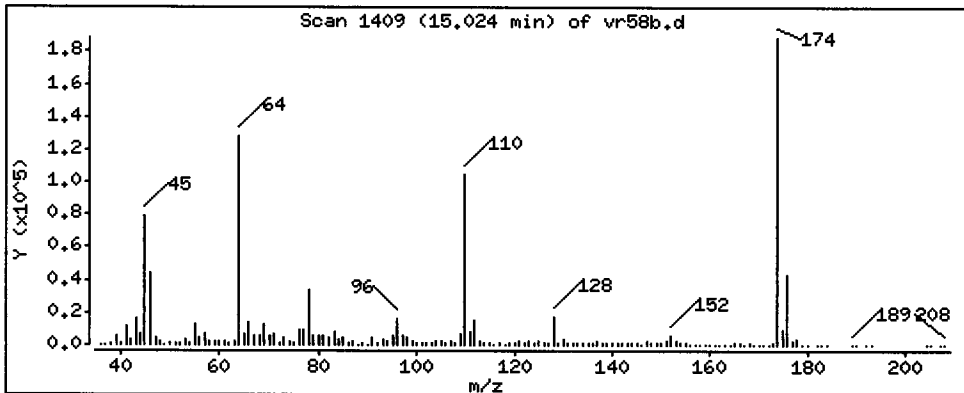
Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 18.86 ug/kg

*YZ*



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

Operator: VTS/YZ

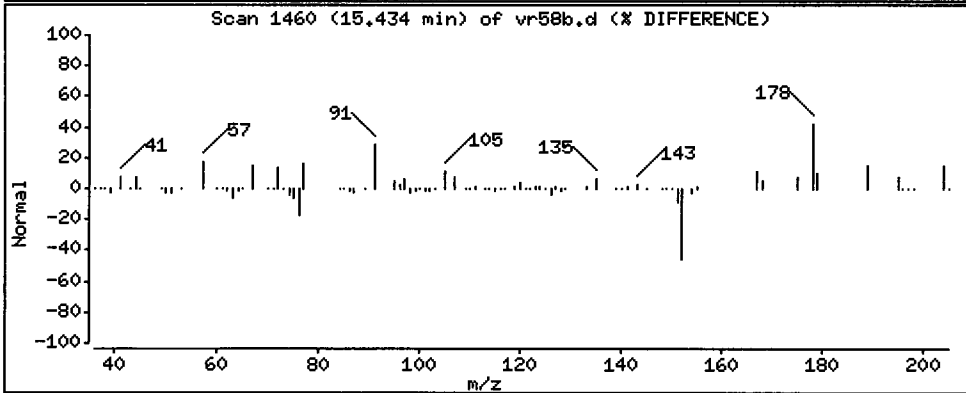
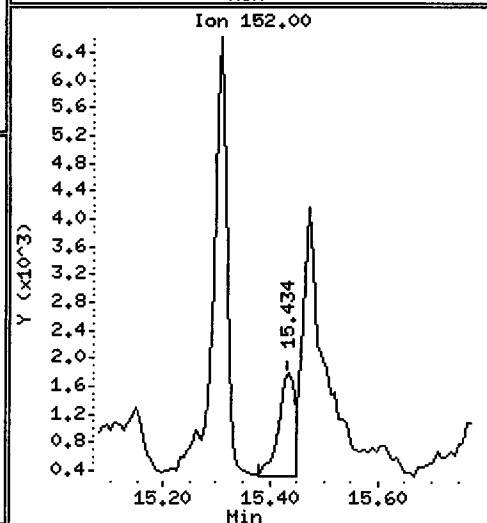
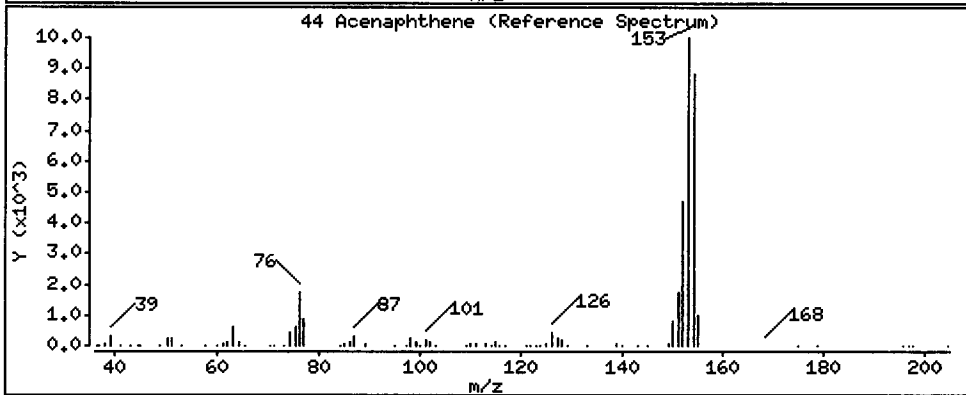
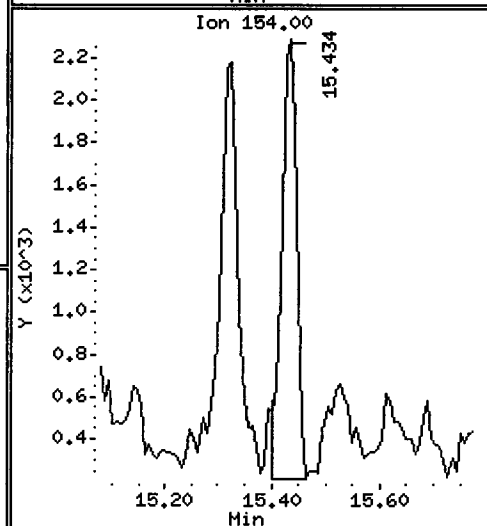
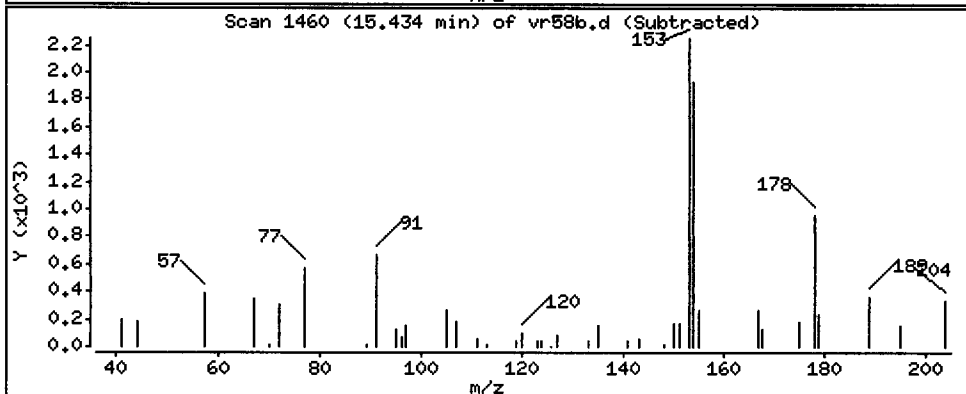
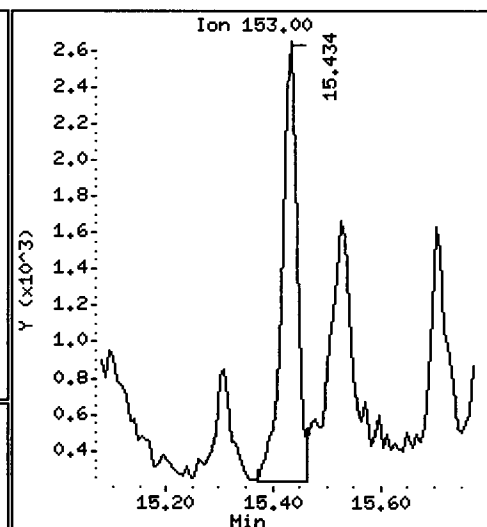
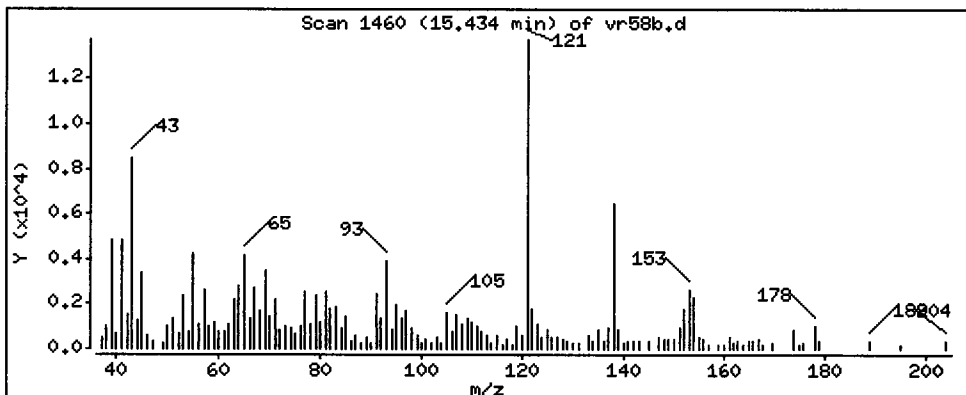
Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 17.98 ug/kg

*OK*



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10,i

Sample Info: VR58B

Volume Injected (uL): 1.0

Operator: VTS/YZ

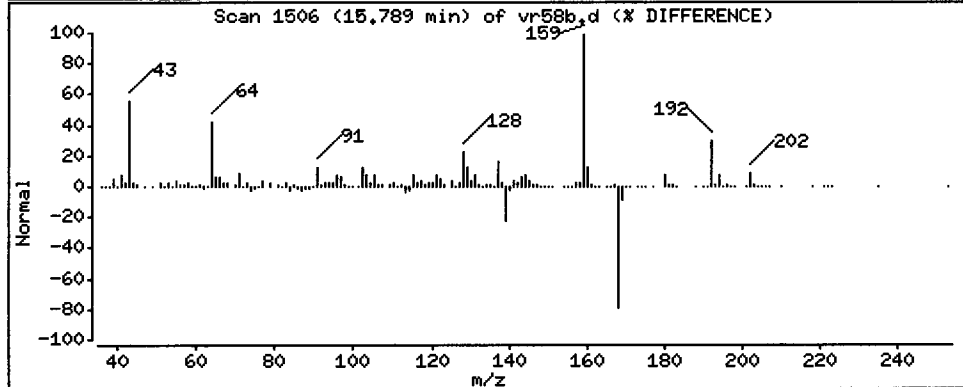
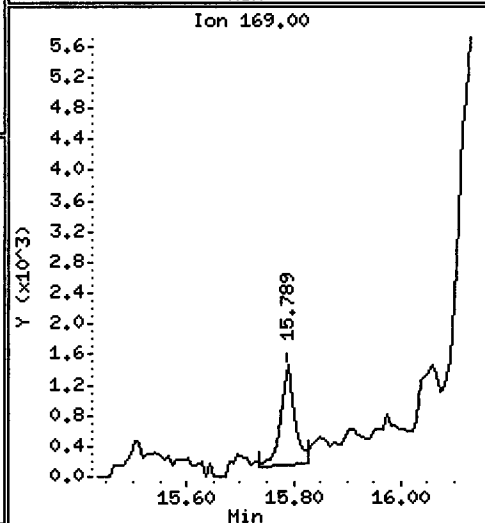
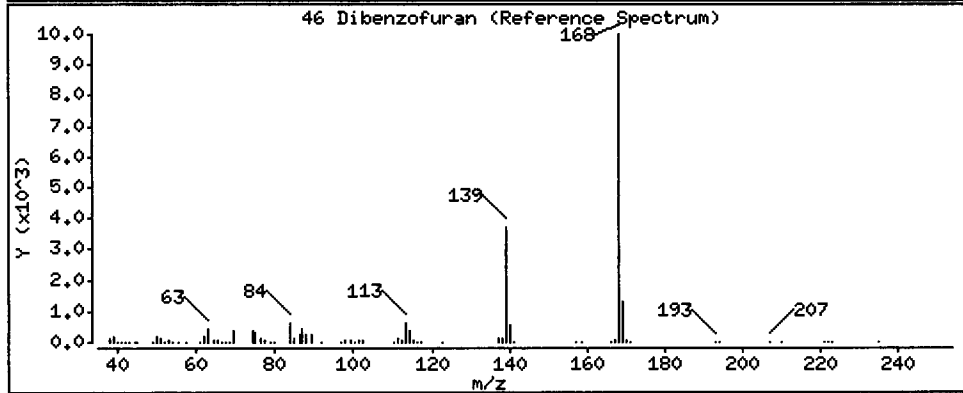
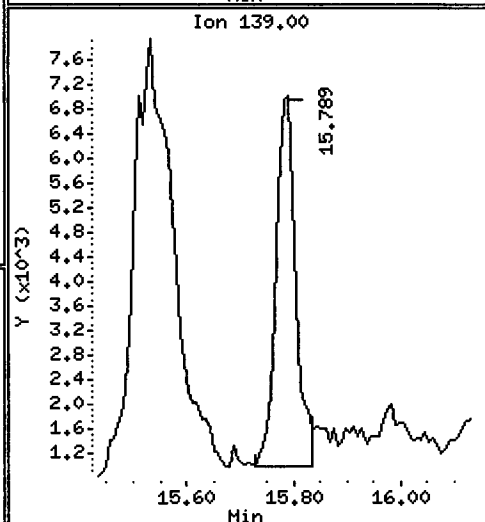
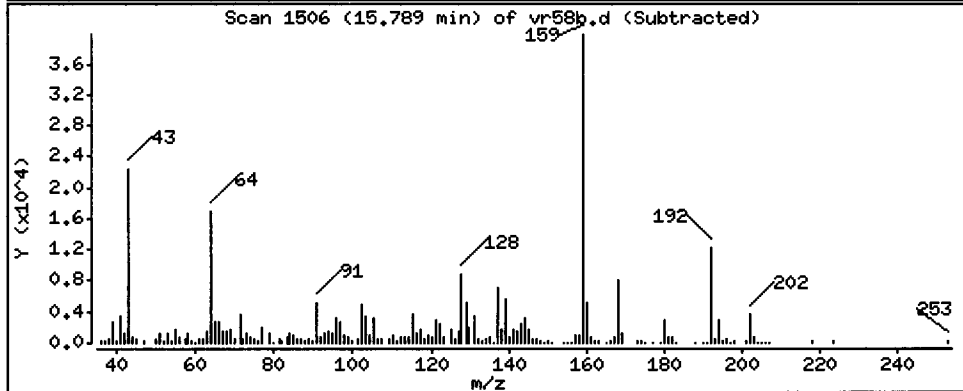
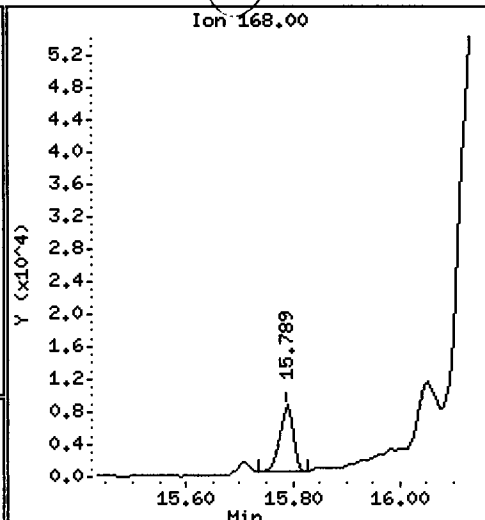
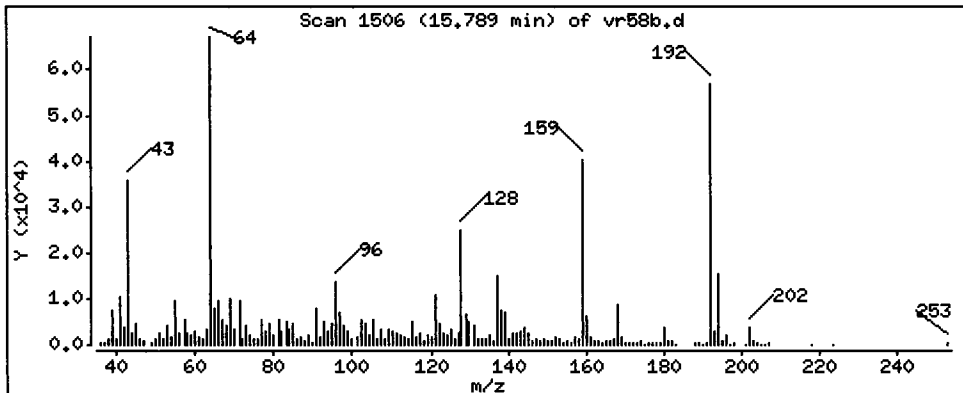
Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 37.76 ug/kg

(B)



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

Operator: VTS/YZ

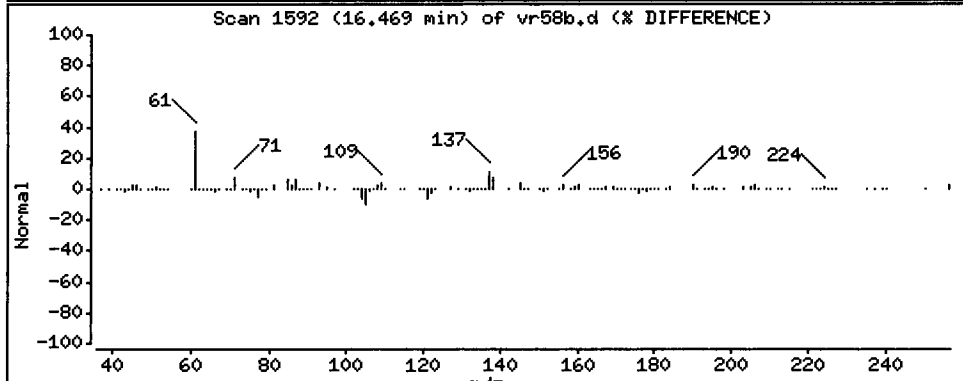
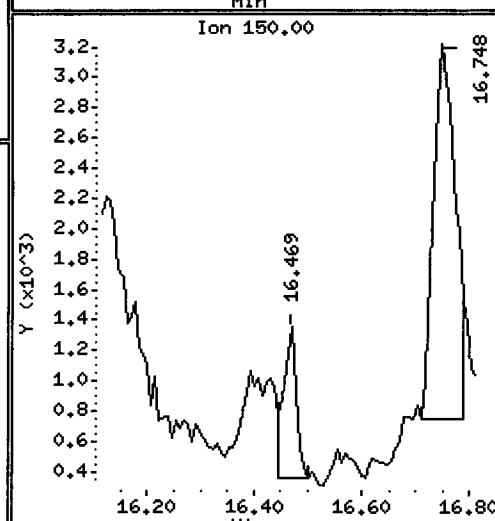
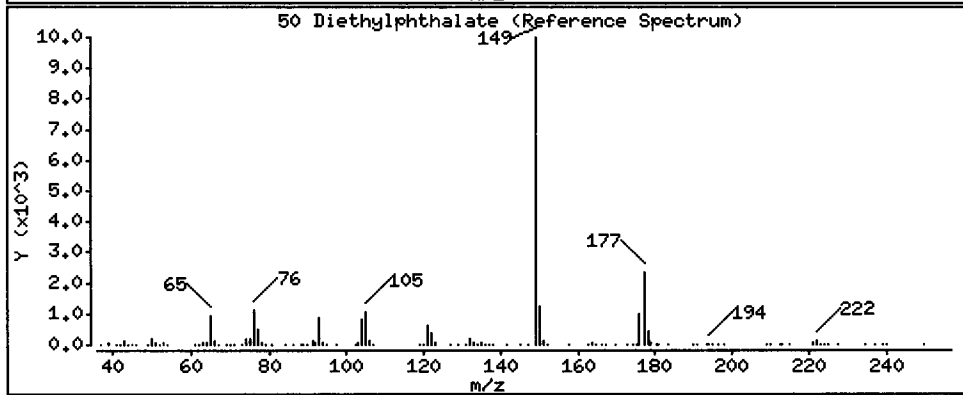
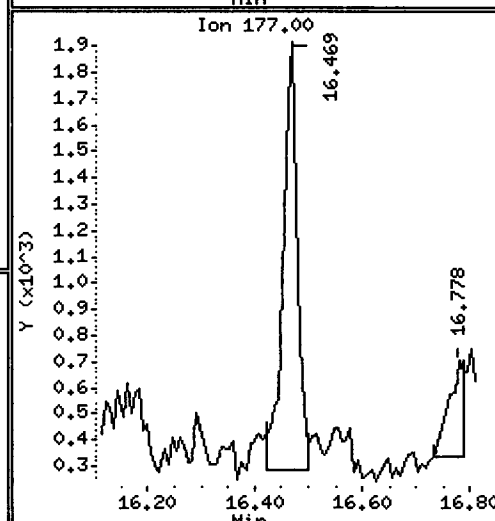
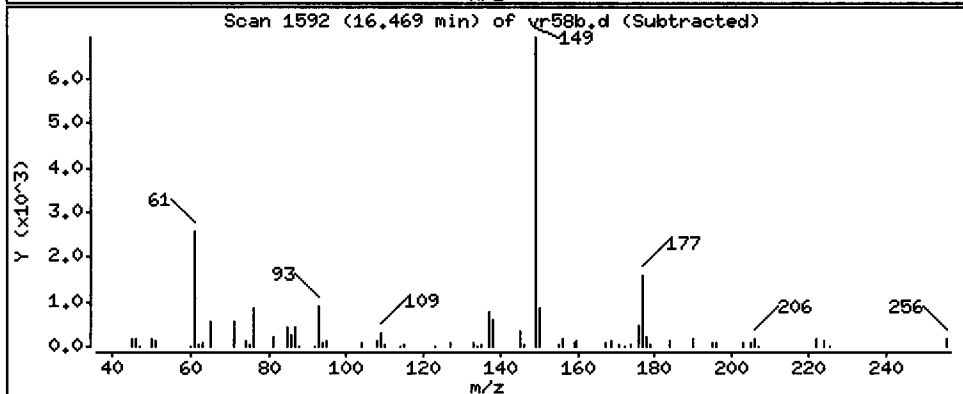
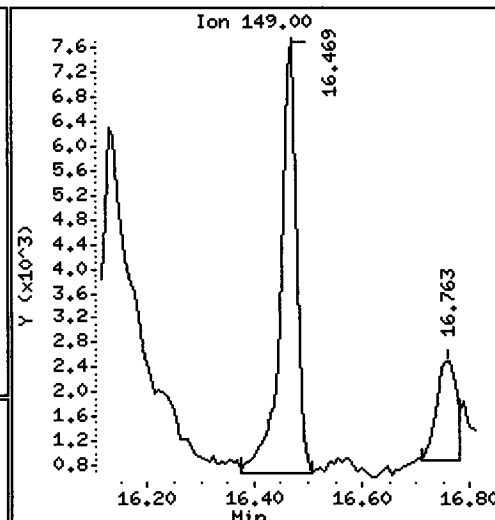
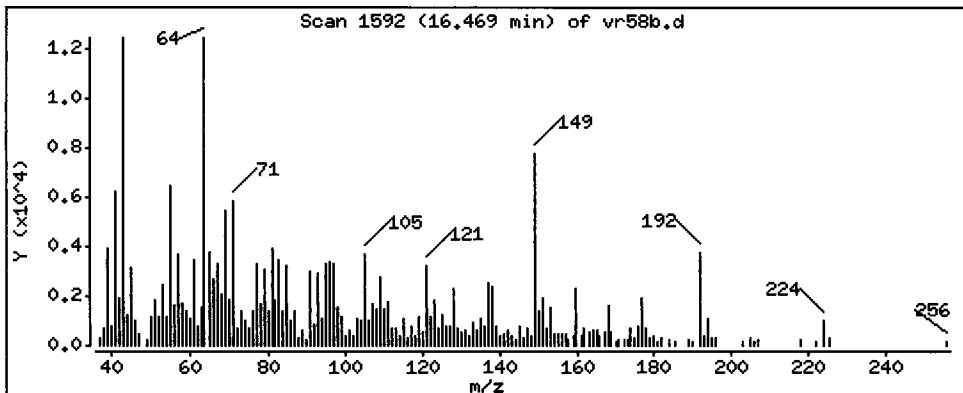
Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 44.43 ug/kg

*0.42*



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

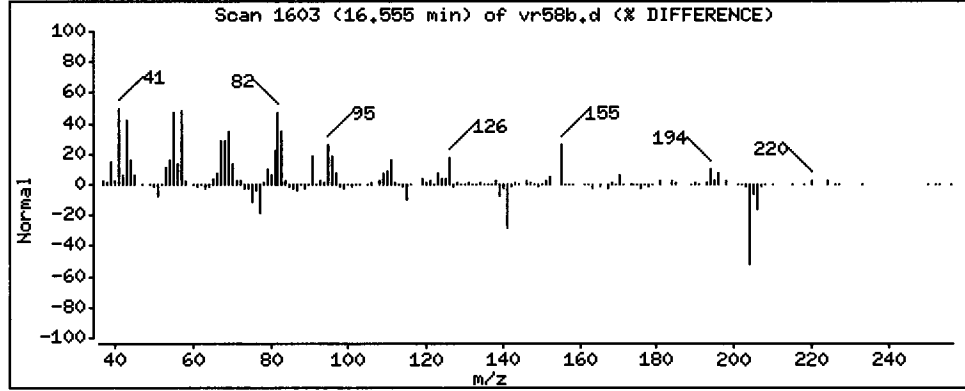
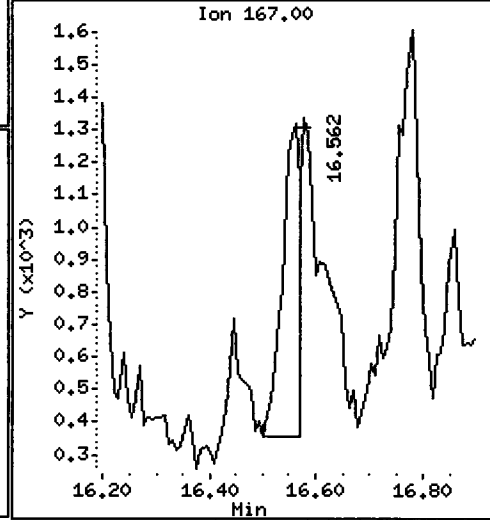
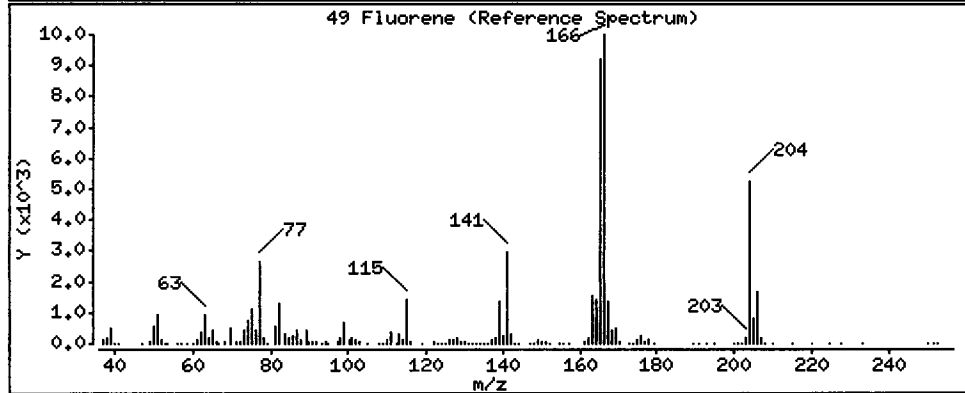
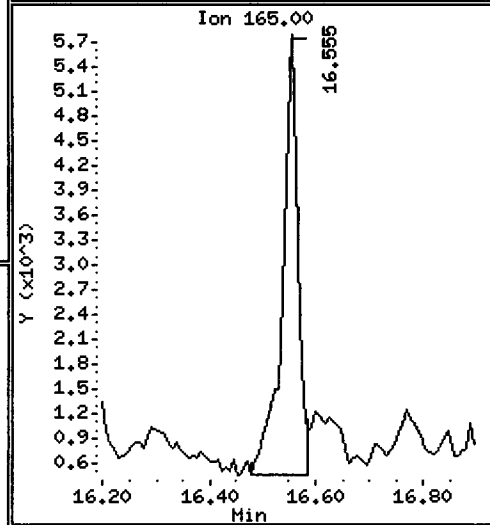
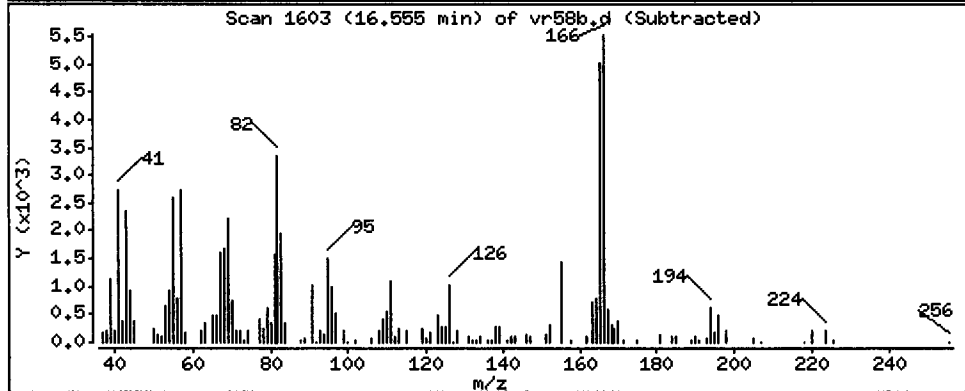
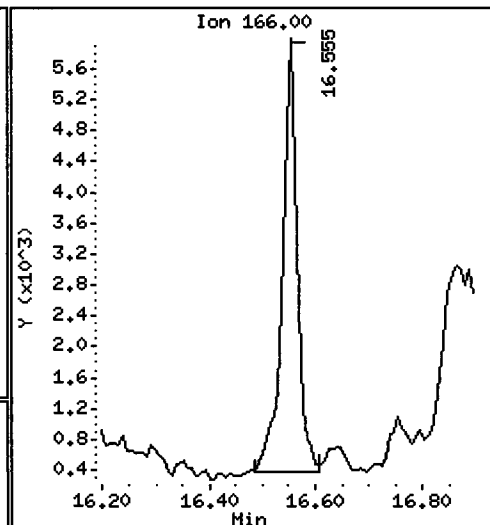
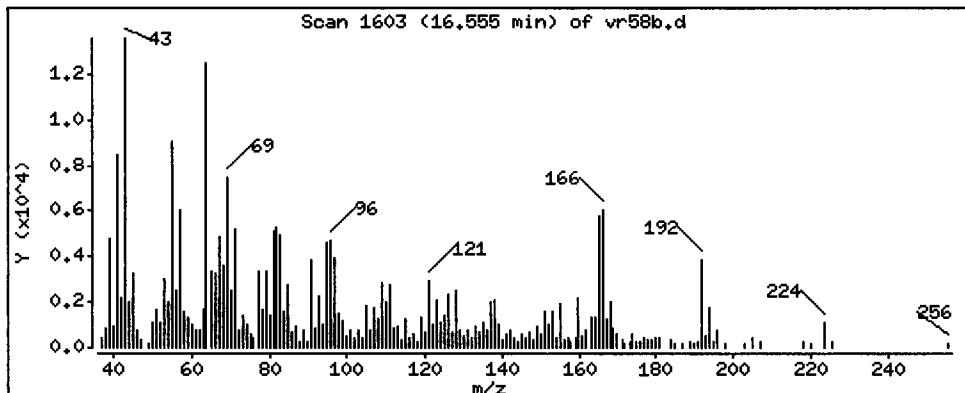
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 34.35 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

Operator: VTS/YZ

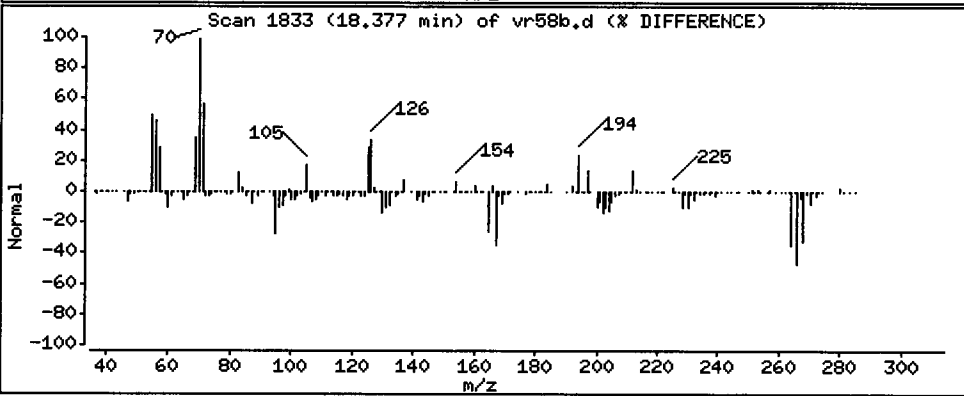
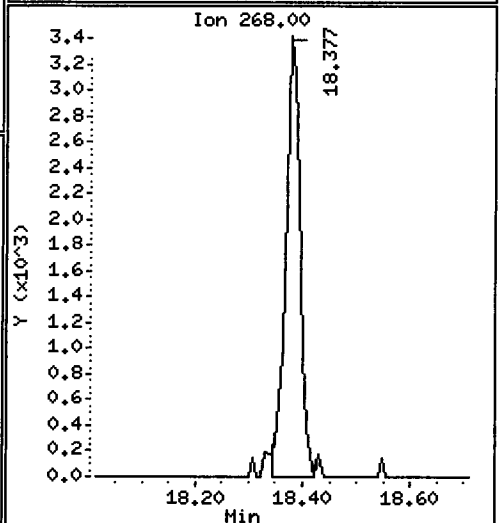
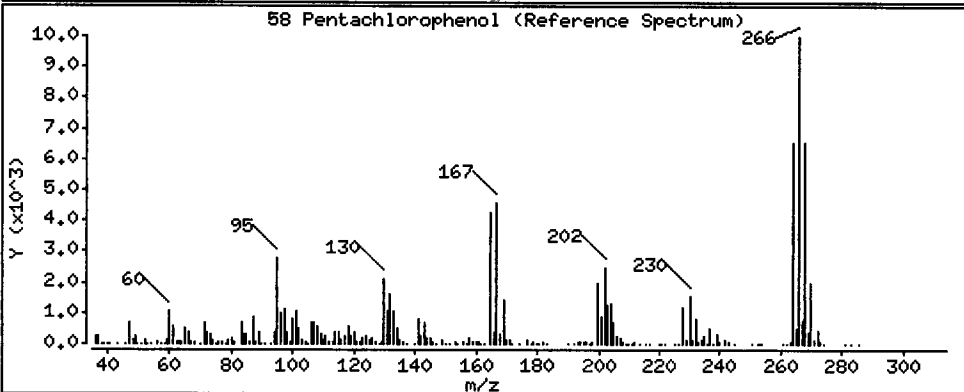
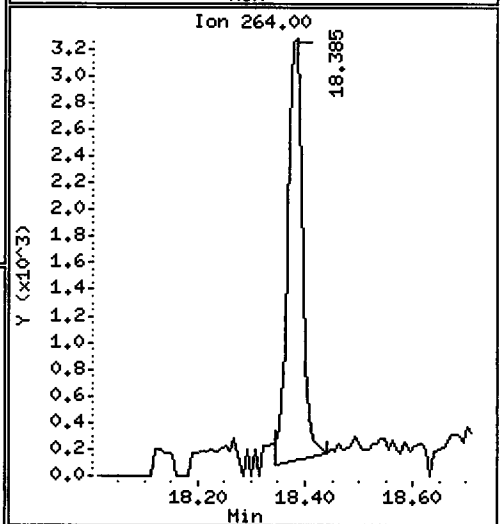
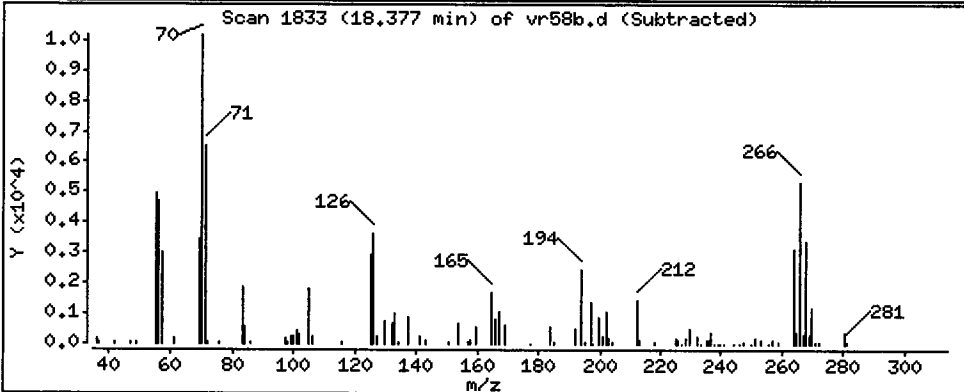
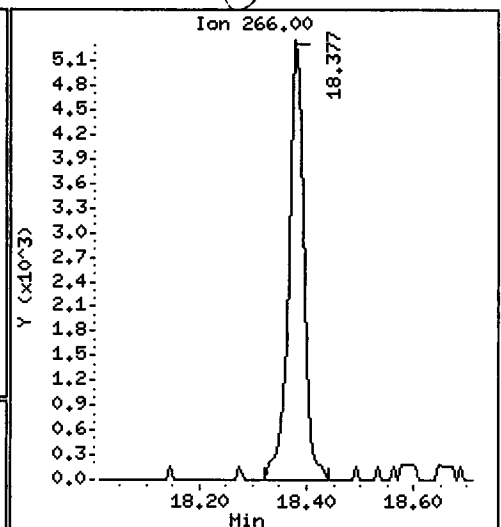
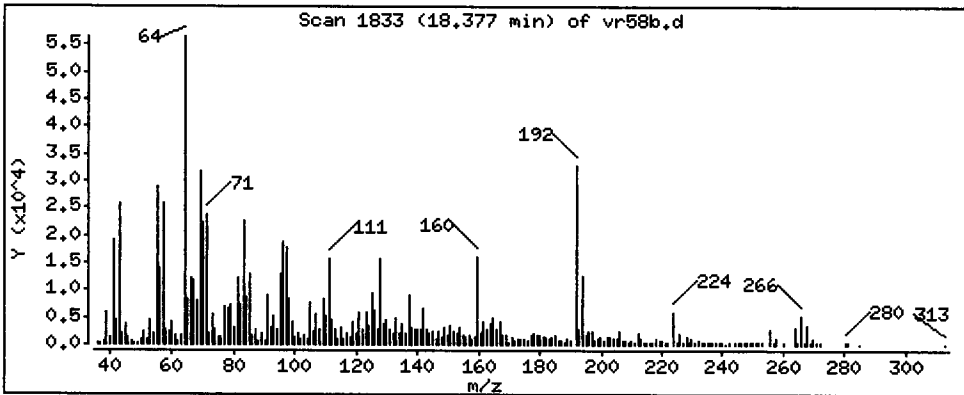
Column phase: ZB-5ms1

Column diameter: 0.25

58 Pentachlorophenol

Concentration: 55.25 ug/kg

*Handwritten signature*





Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

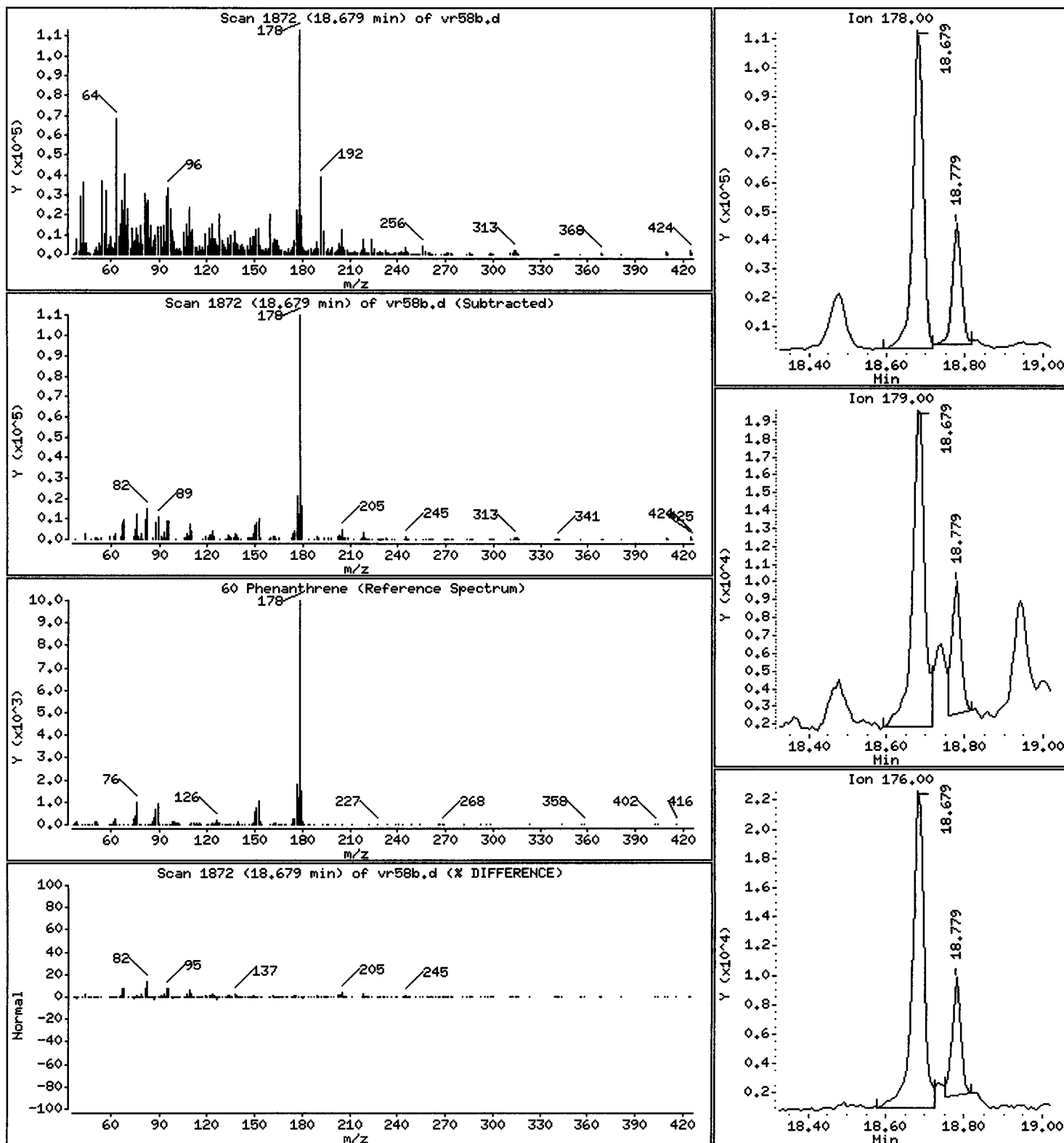
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 193.4 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

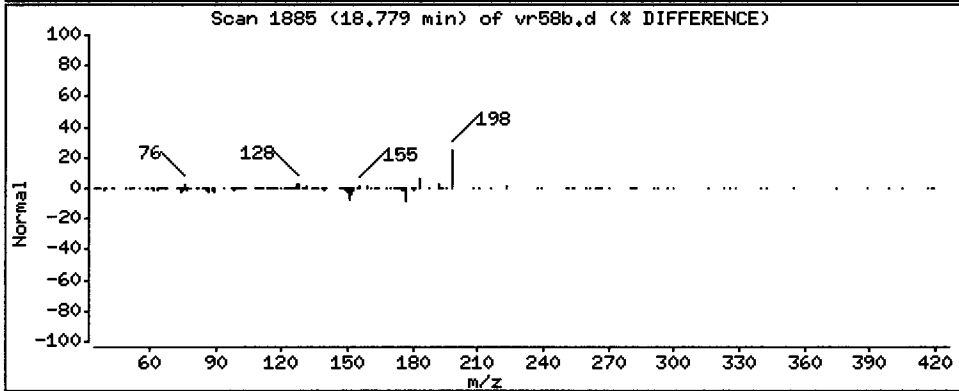
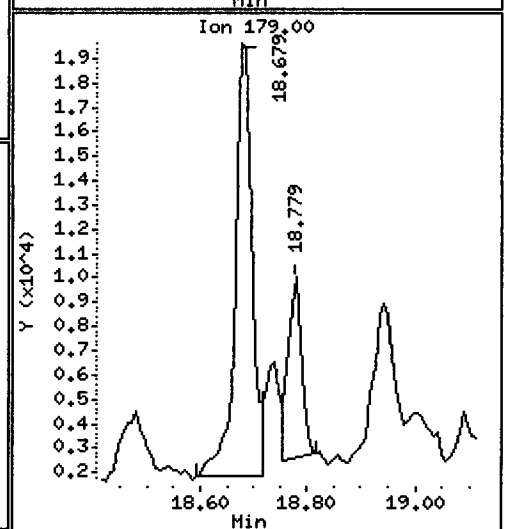
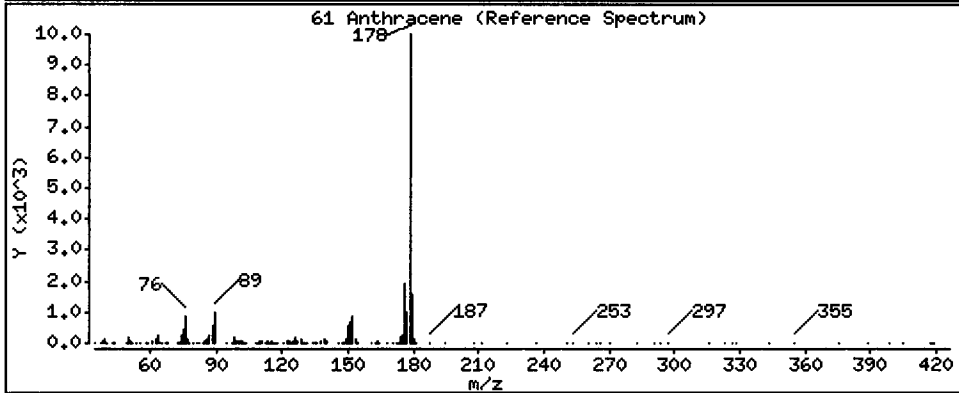
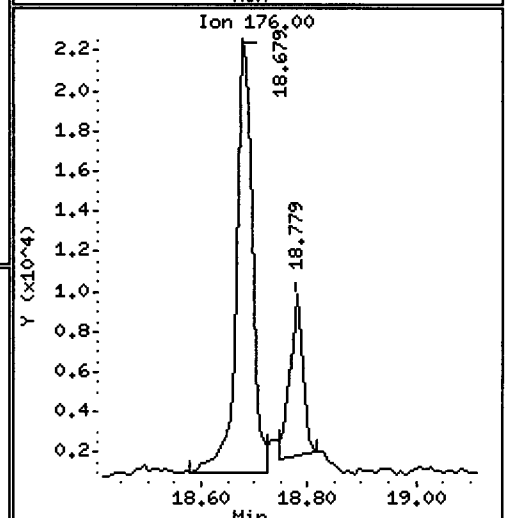
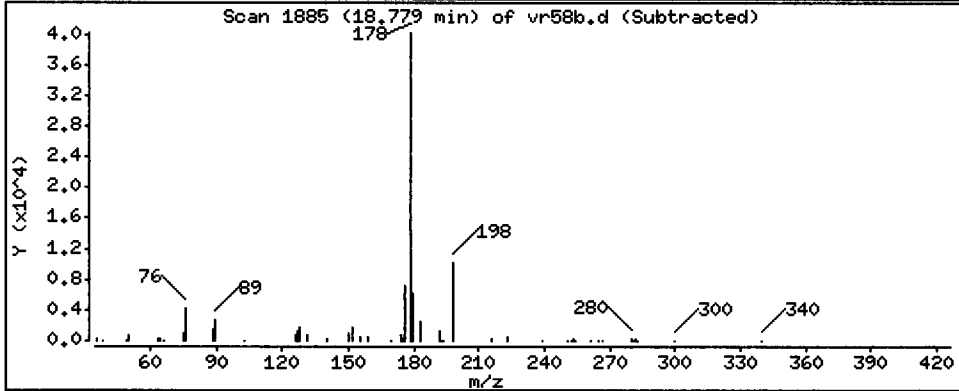
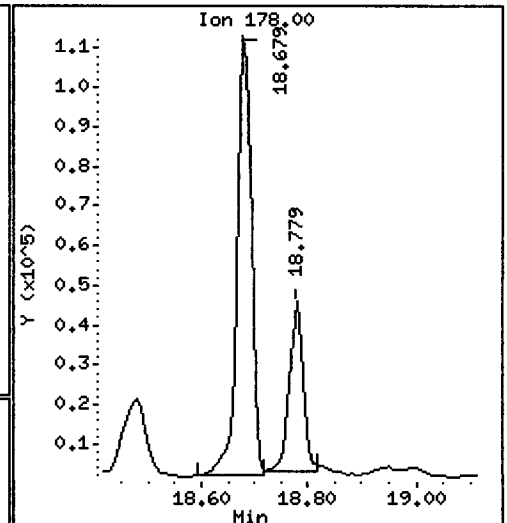
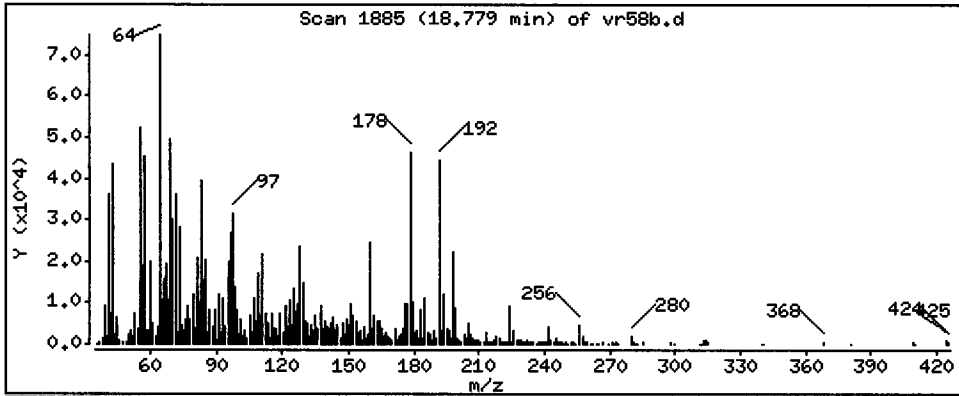
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 65.73 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

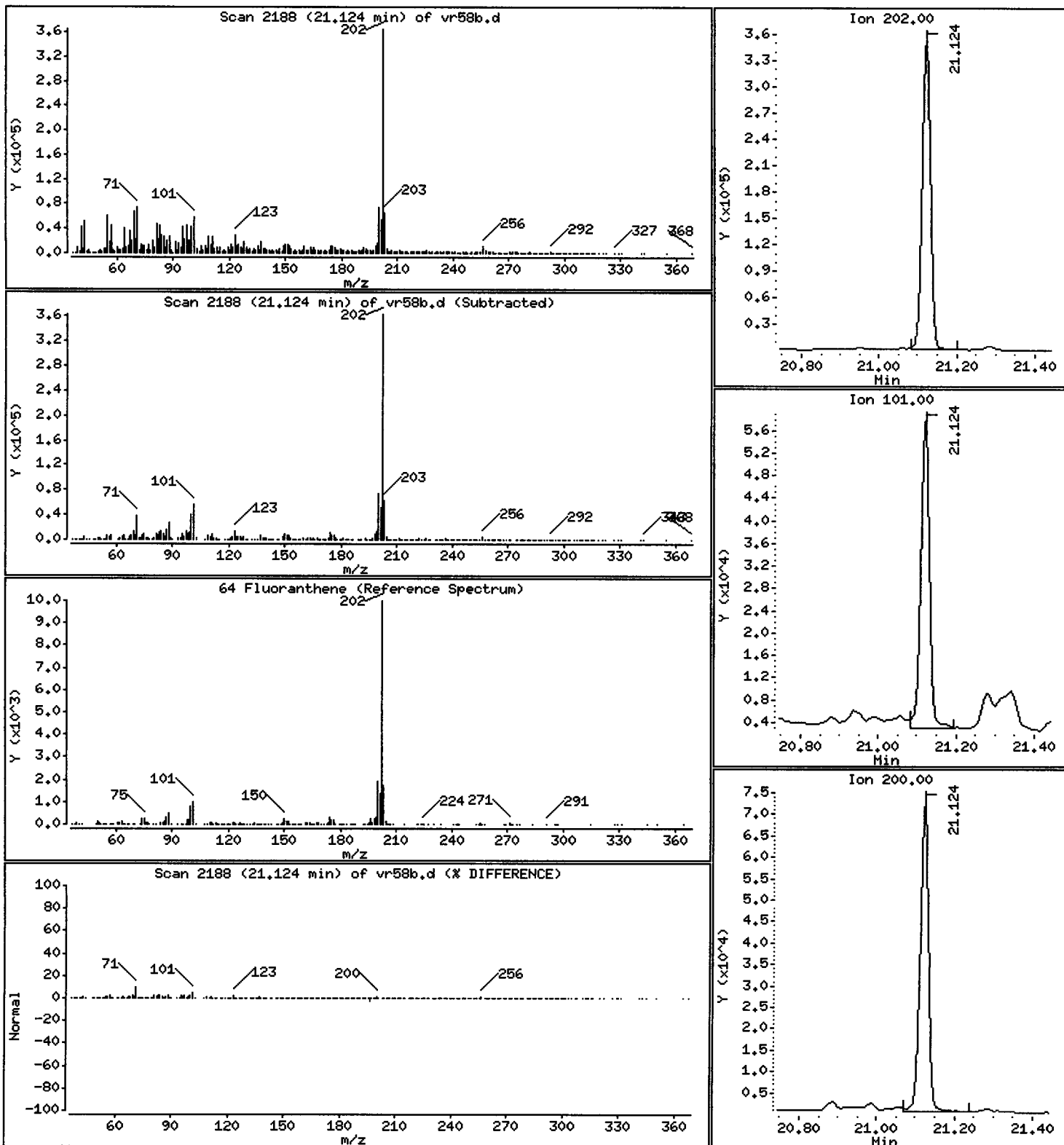
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 414.2 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

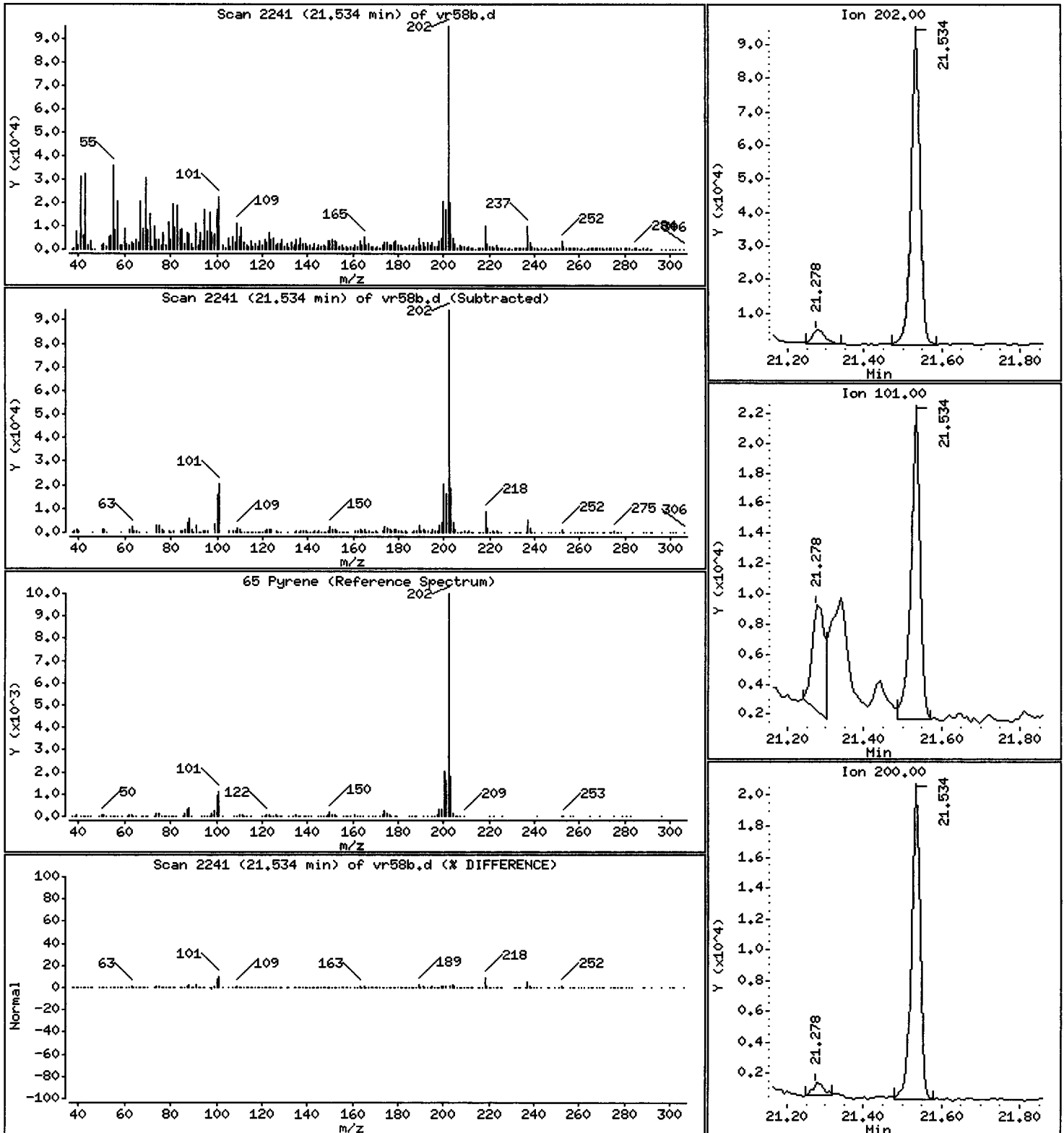
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 275.8 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

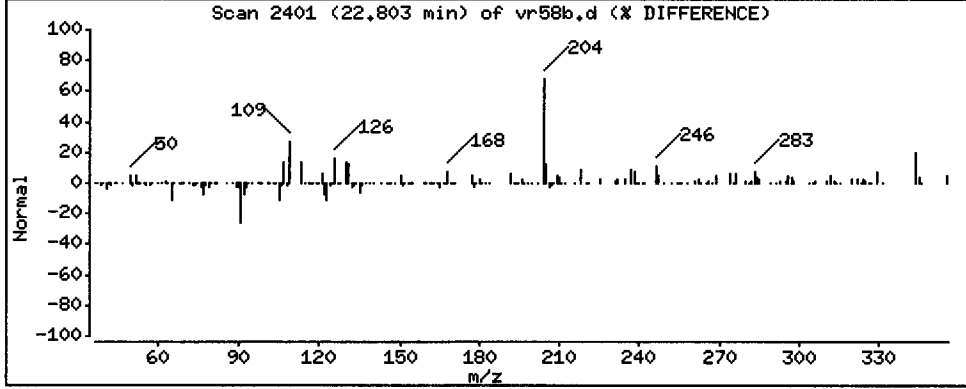
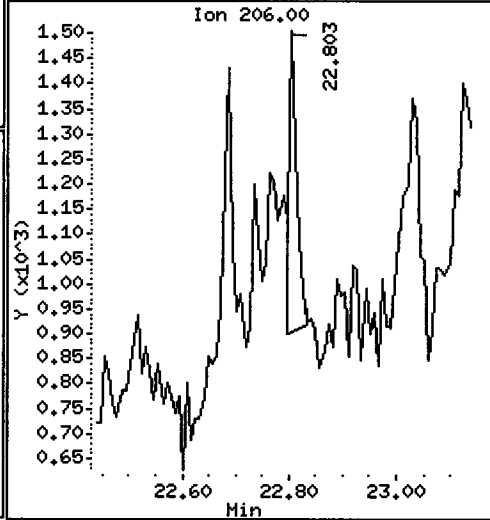
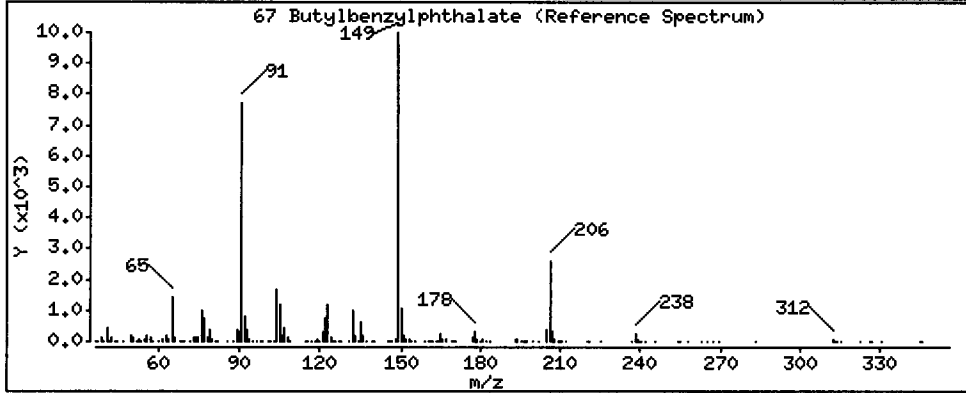
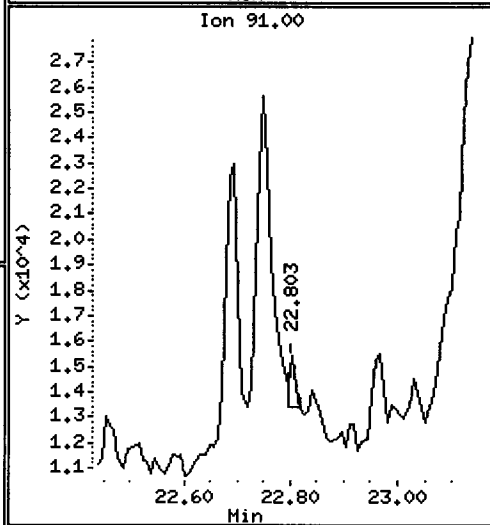
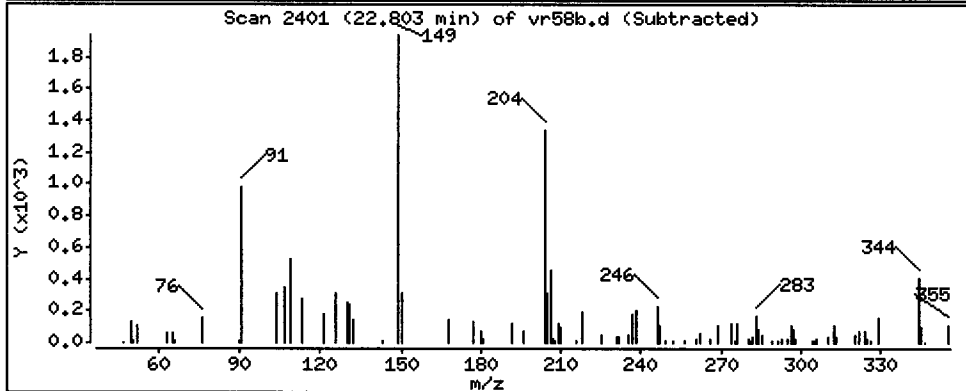
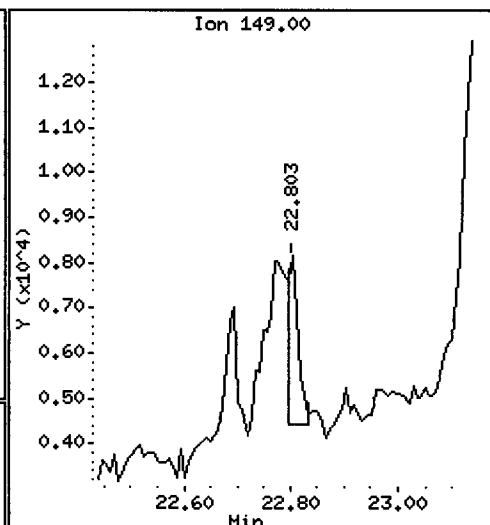
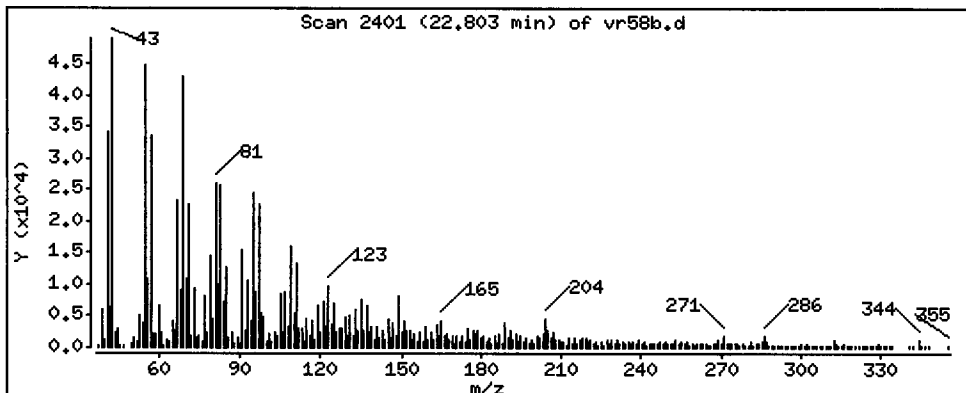
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 23.98 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

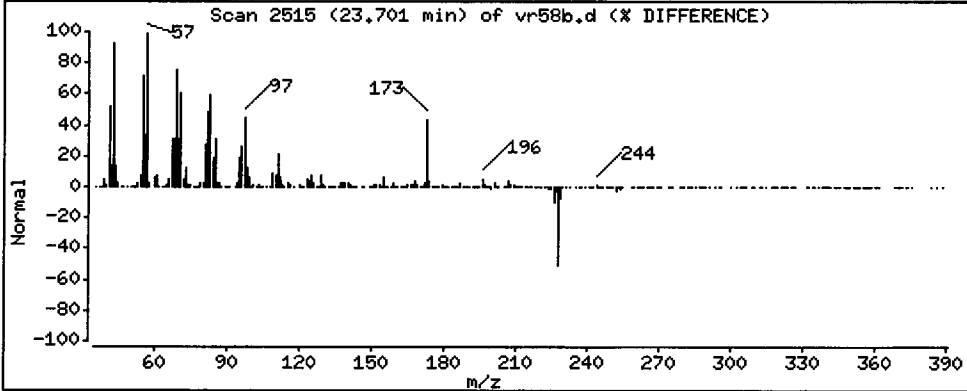
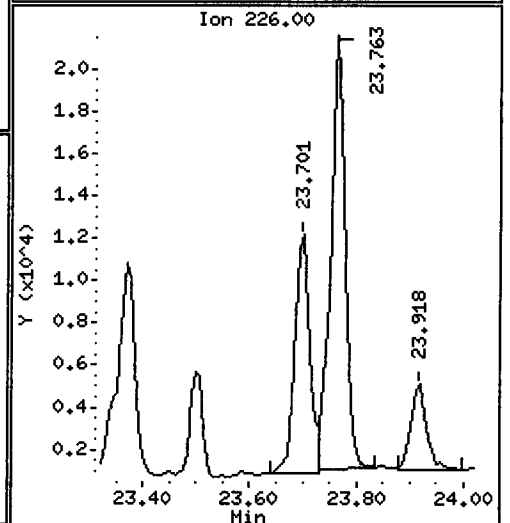
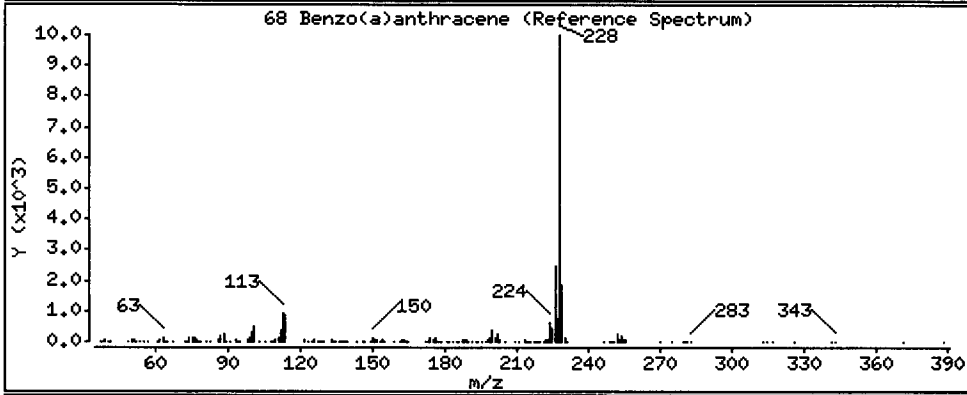
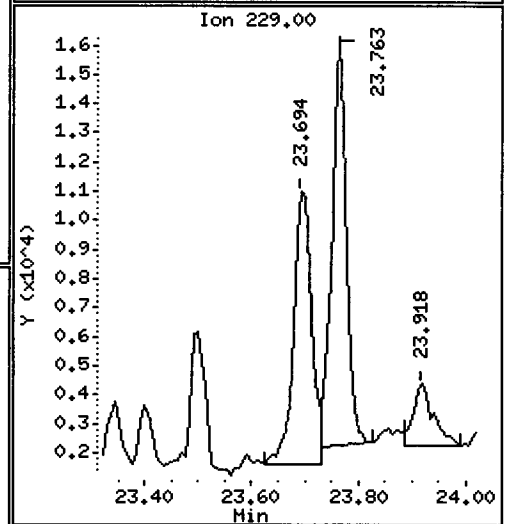
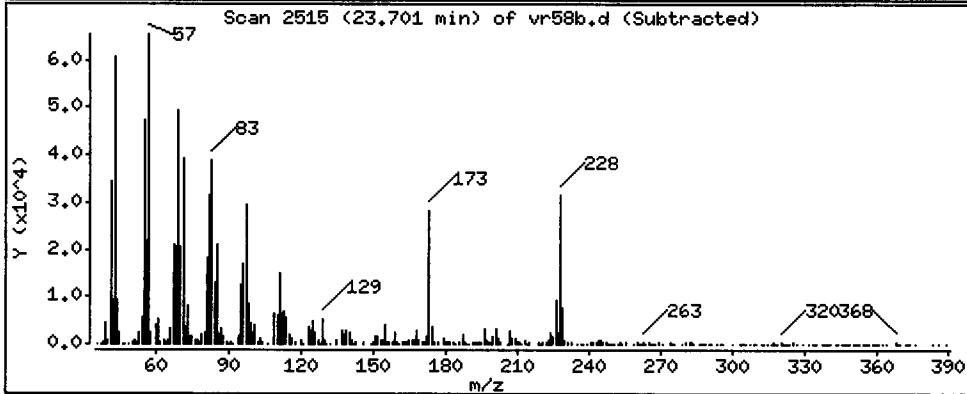
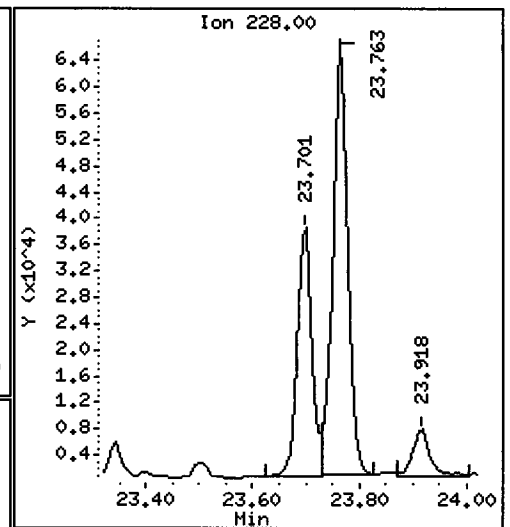
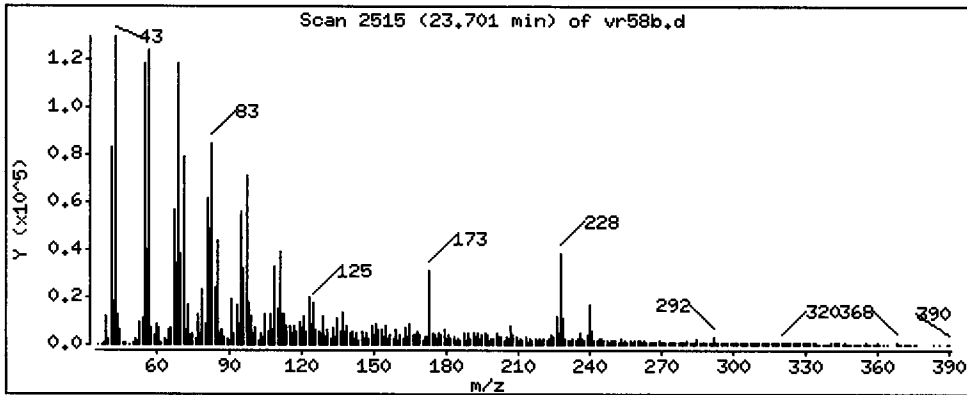
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

68 Benzo(a)anthracene

Concentration: 148.0 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

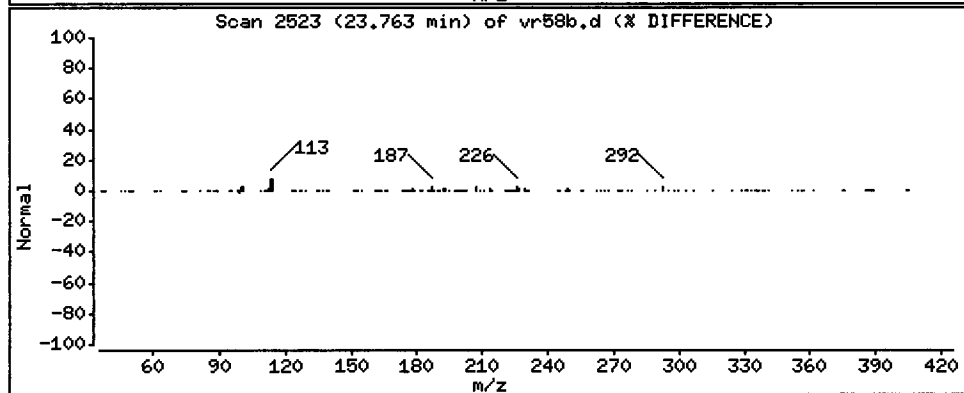
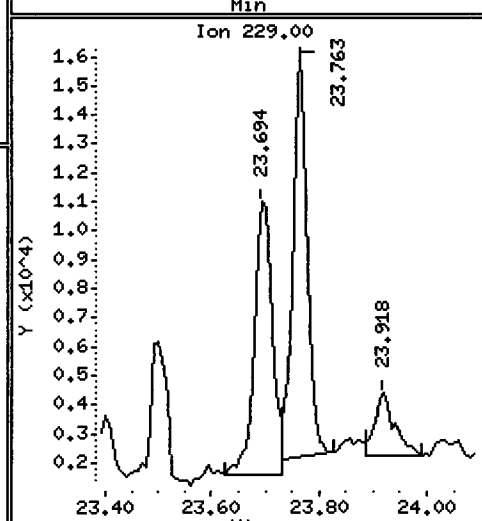
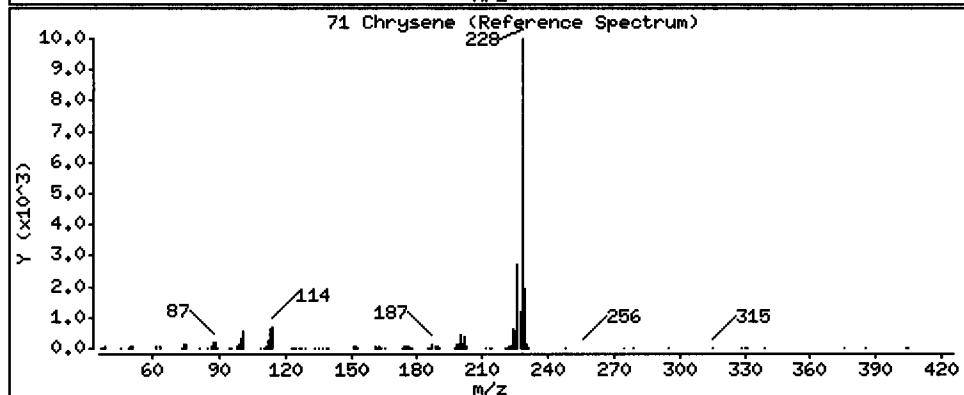
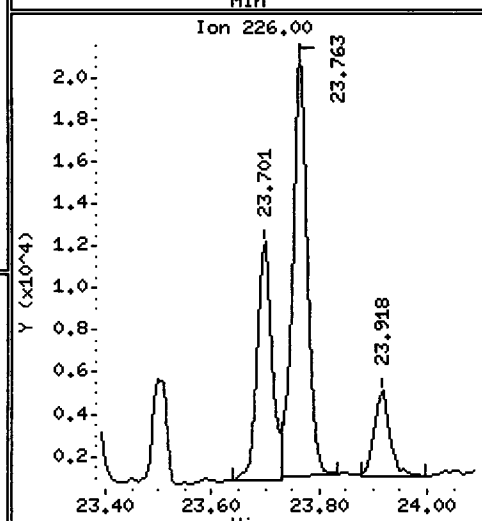
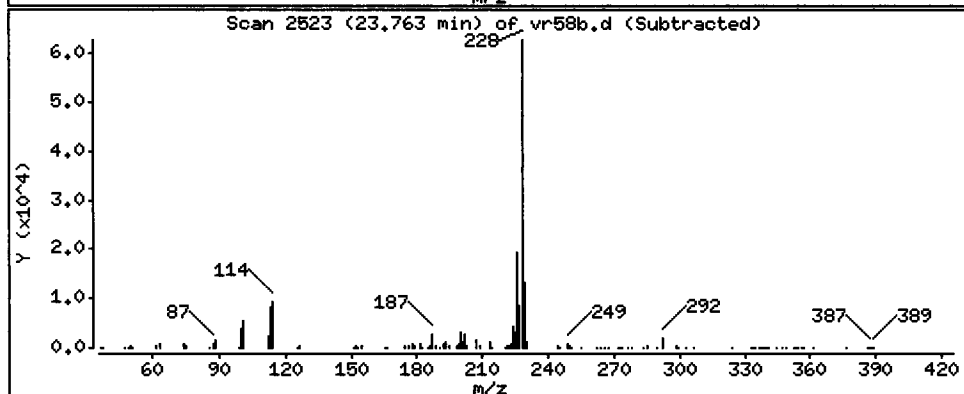
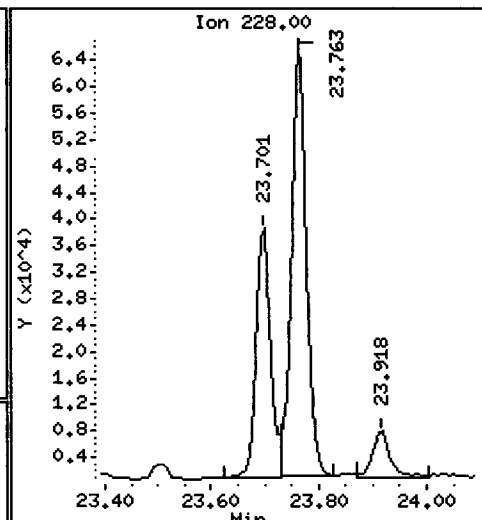
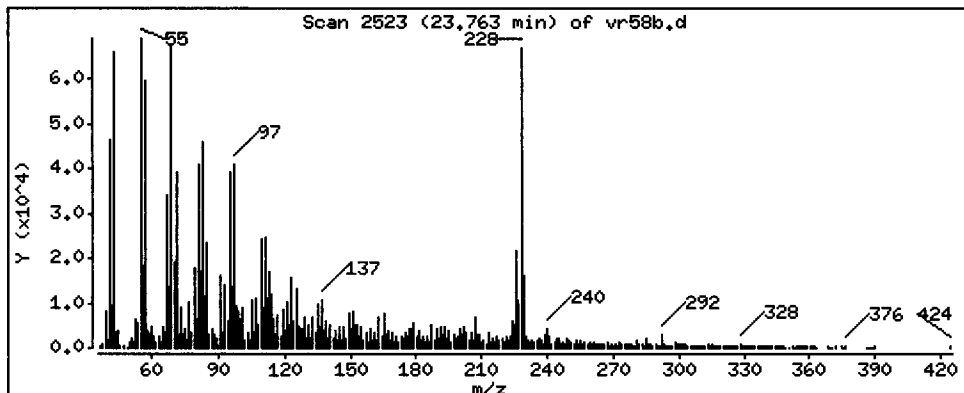
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

71 Chrysene

Concentration: 275.1 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

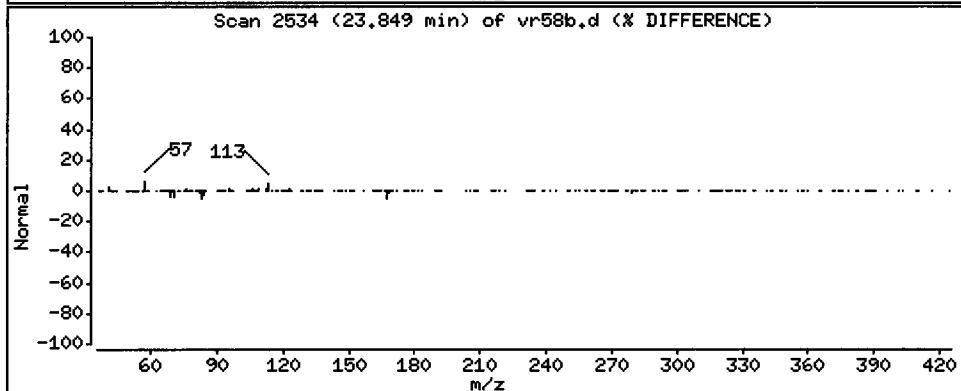
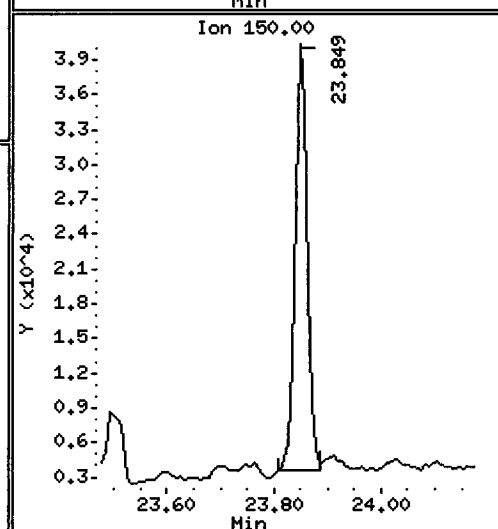
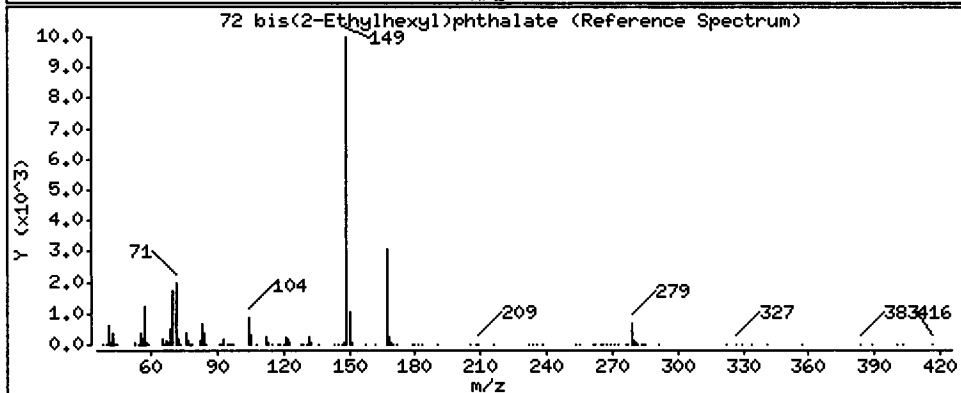
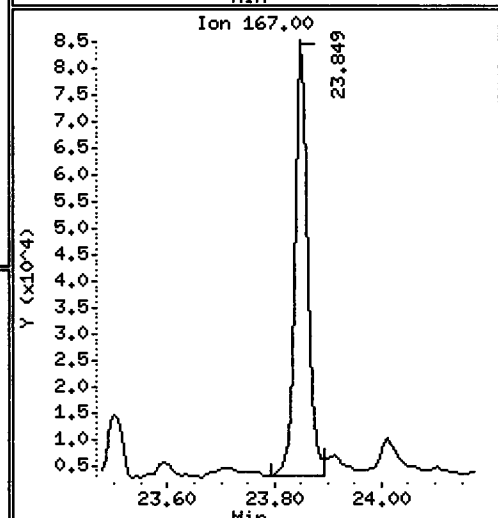
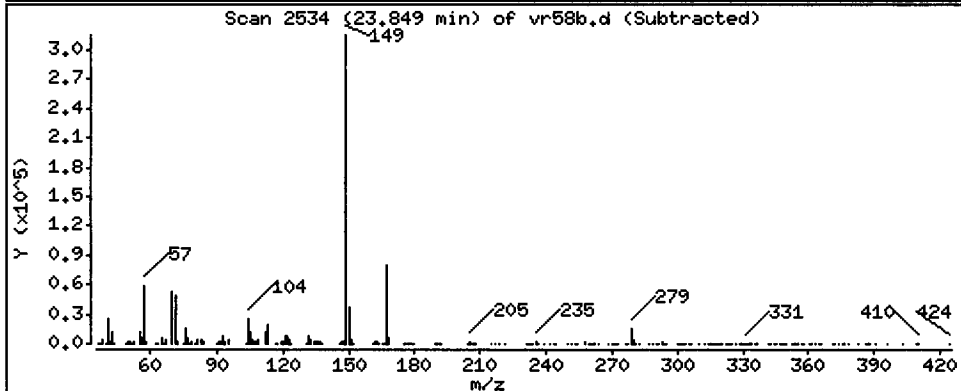
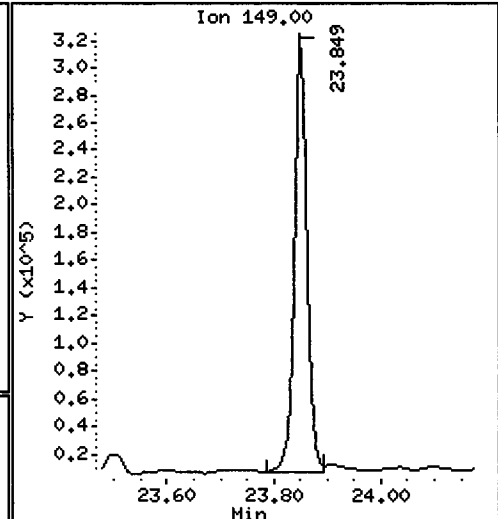
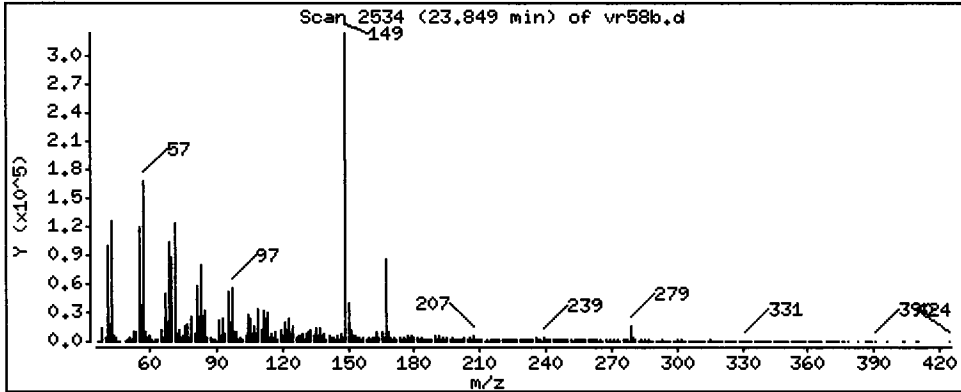
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 738.3 ug/kg





Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

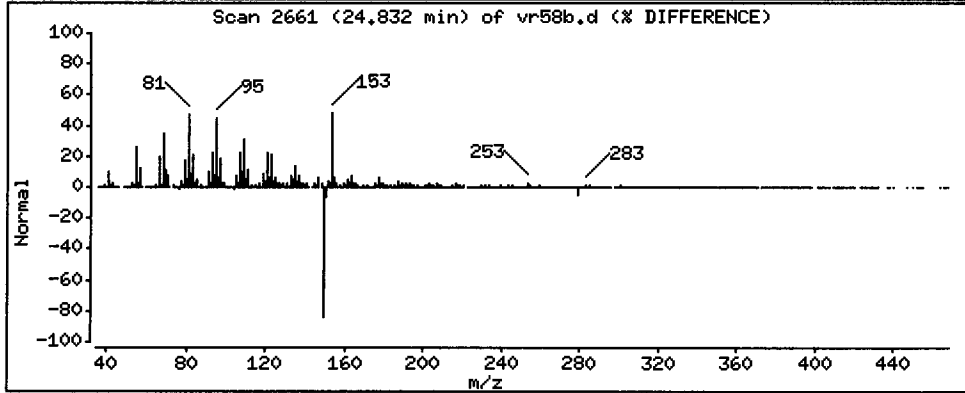
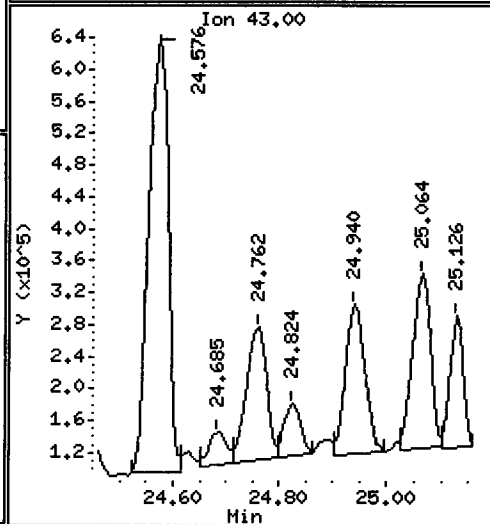
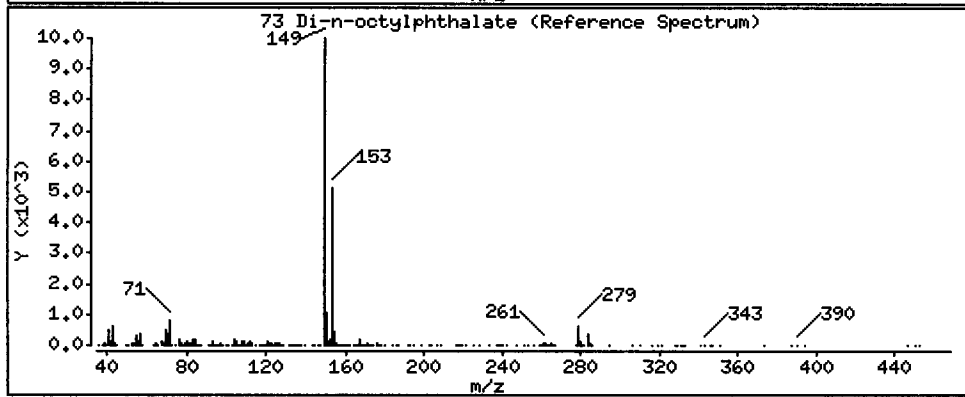
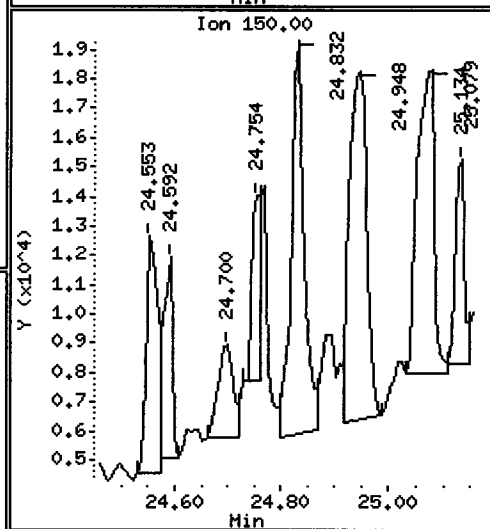
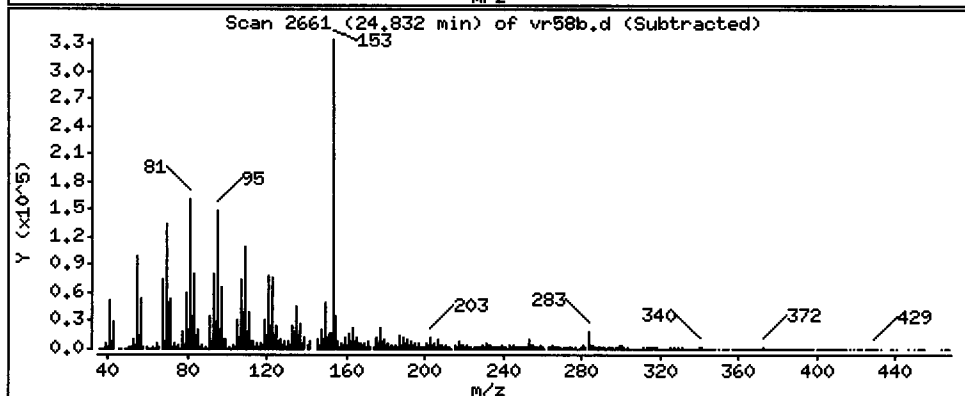
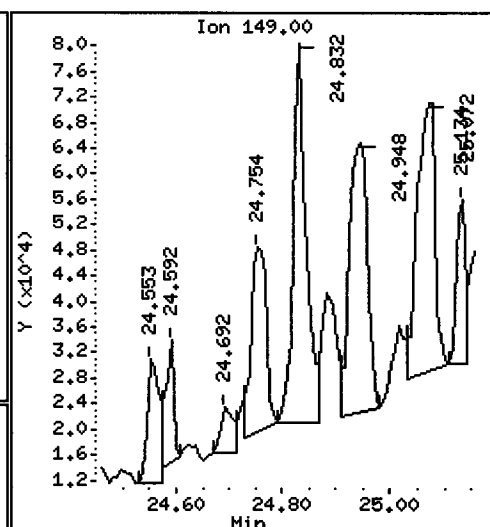
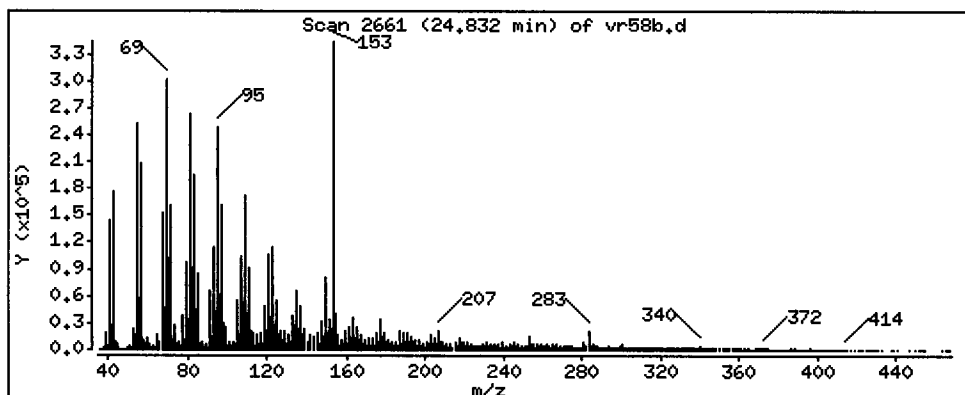
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

73 Di-n-octylphthalate

Concentration: 86.90 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

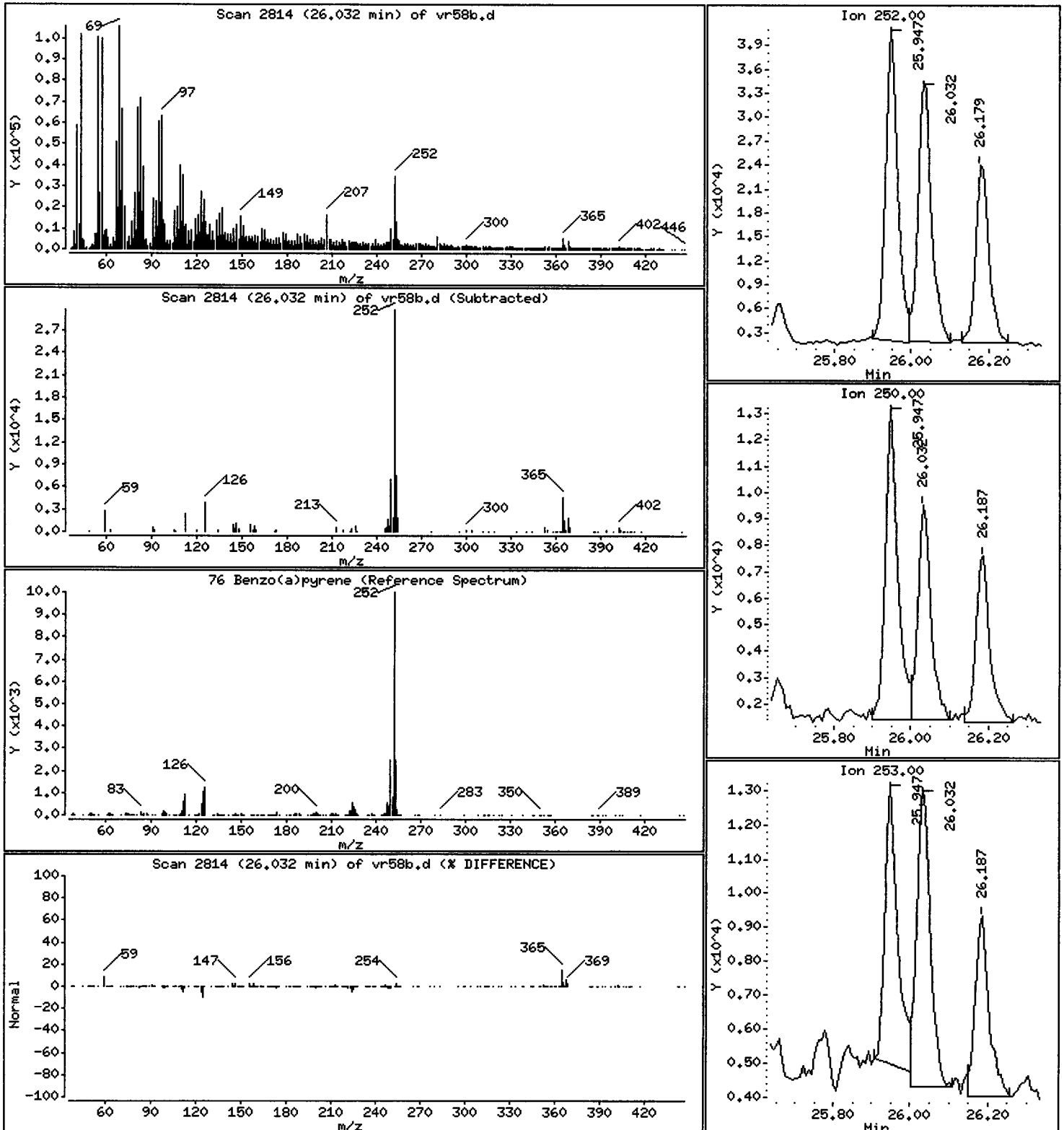
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

76 Benzo(a)pyrene

Concentration: 146.1 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

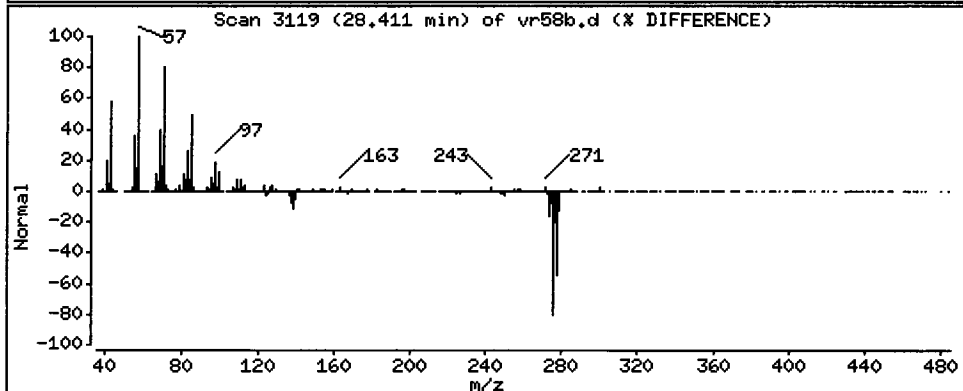
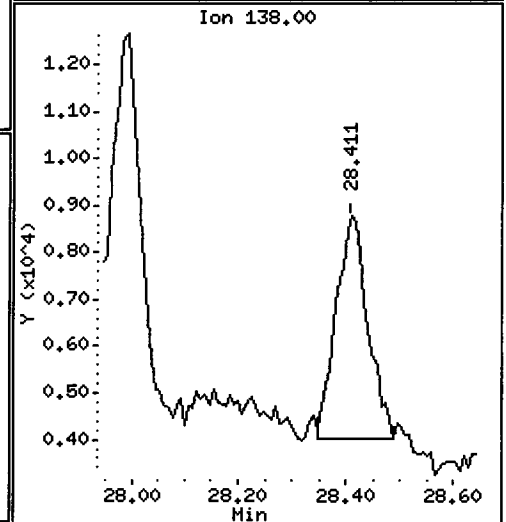
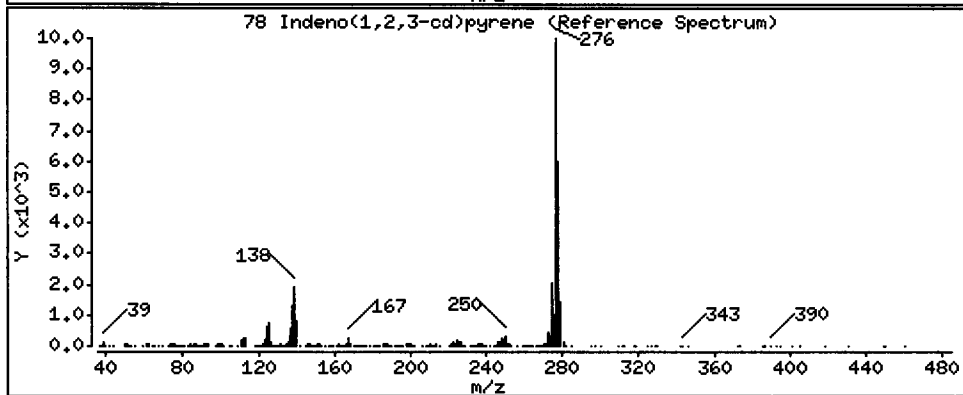
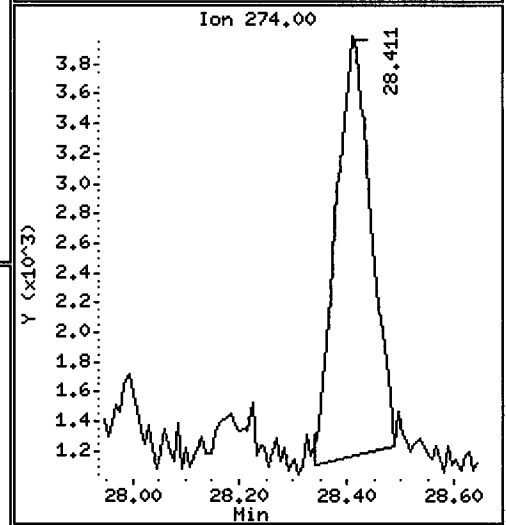
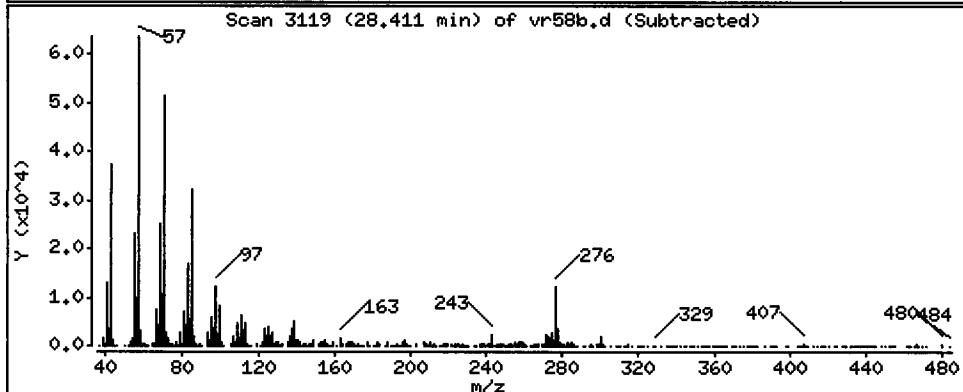
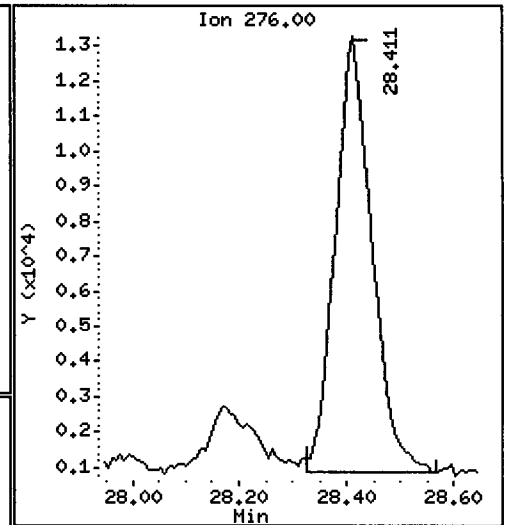
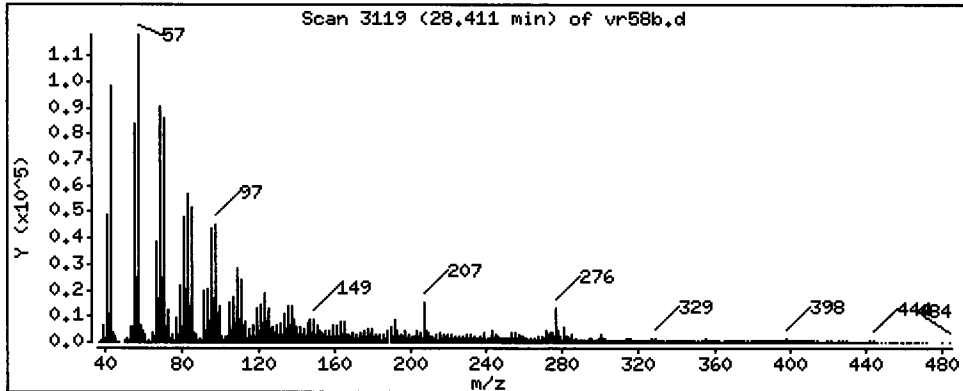
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

78 Indeno(1,2,3-cd)pyrene

Concentration: 90.31 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

Operator: VTS/YZ

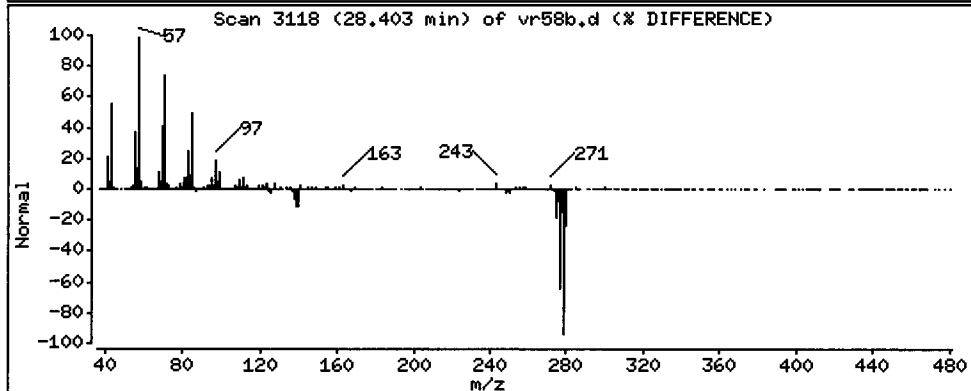
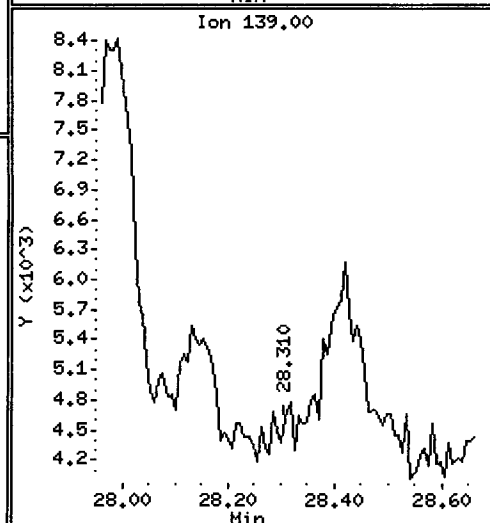
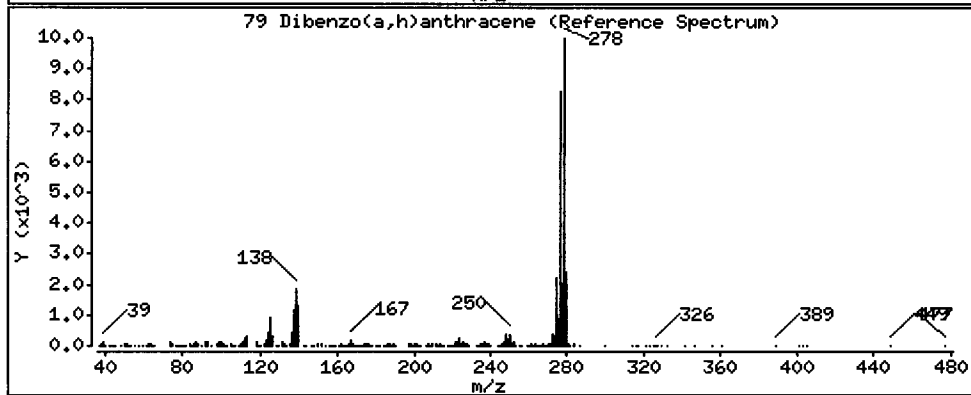
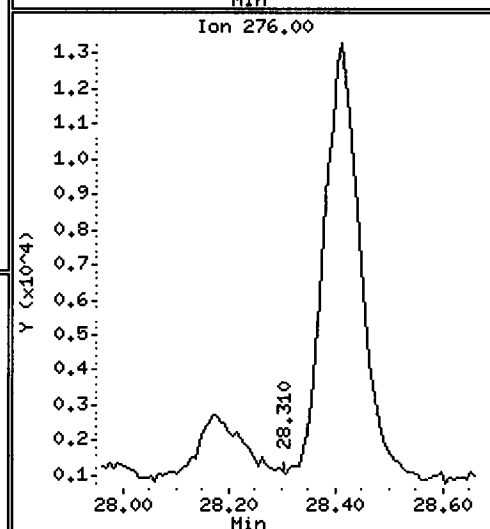
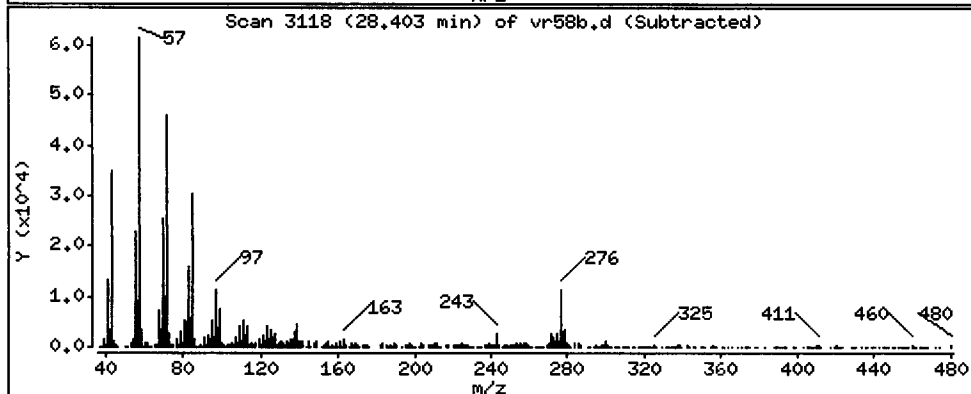
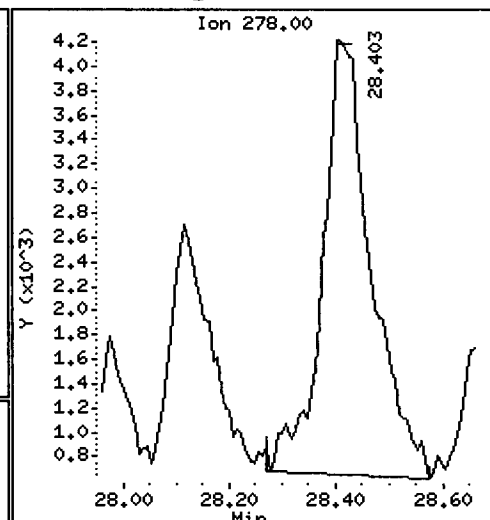
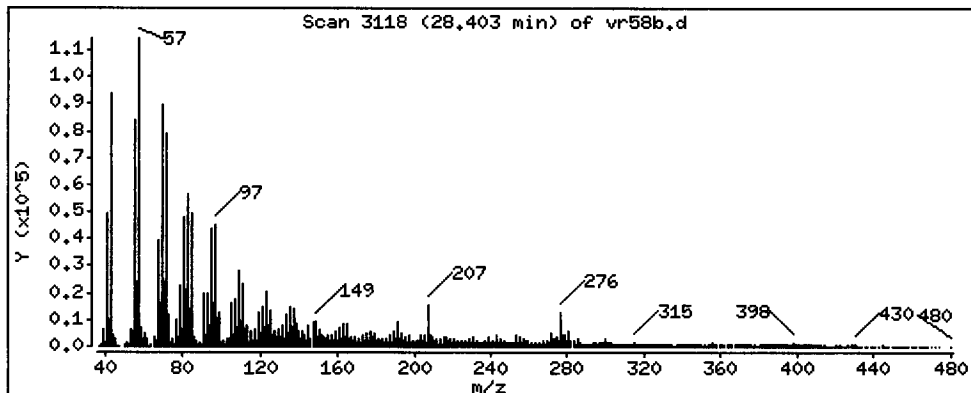
Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 45.40 ug/kg

*TCML*



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

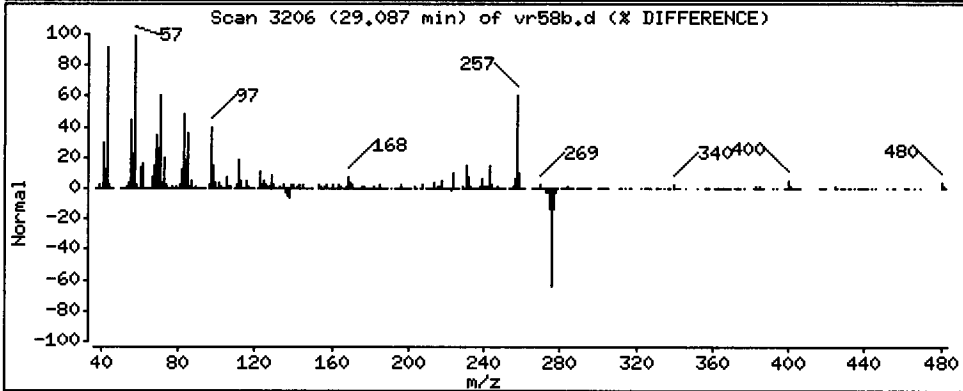
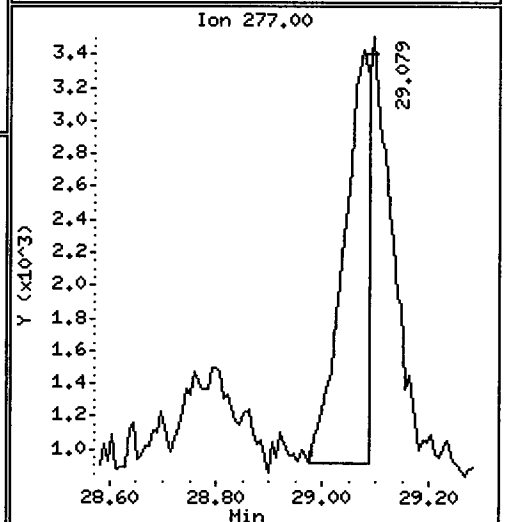
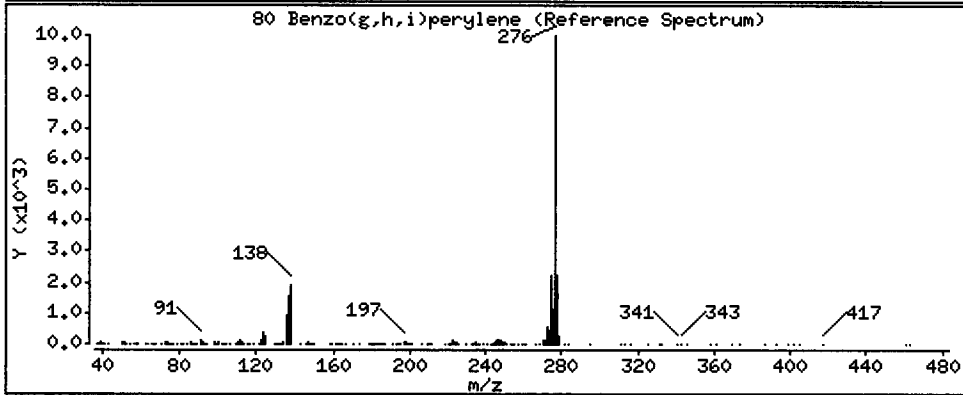
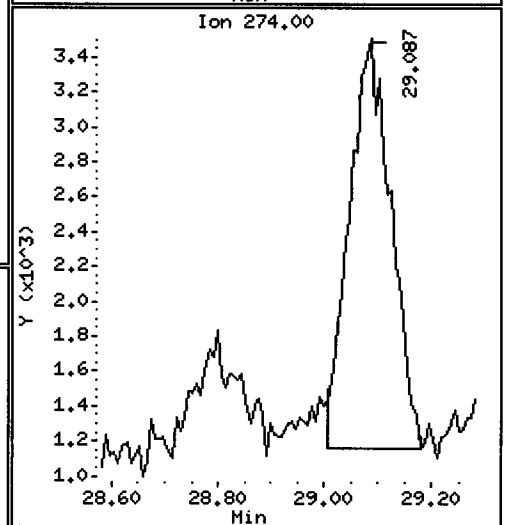
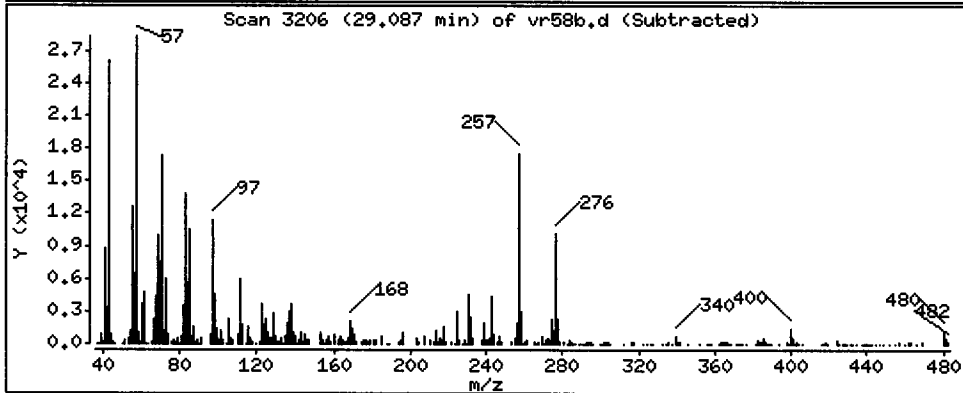
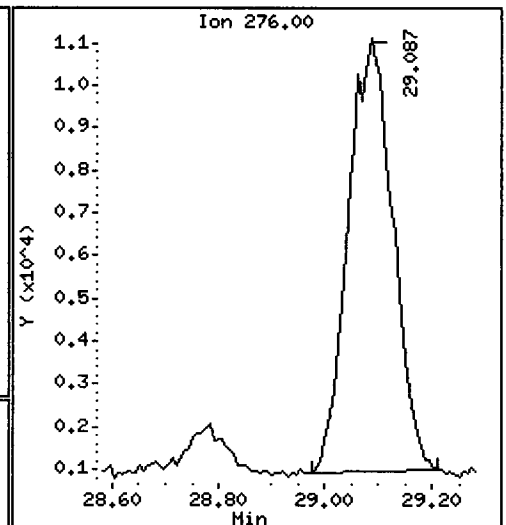
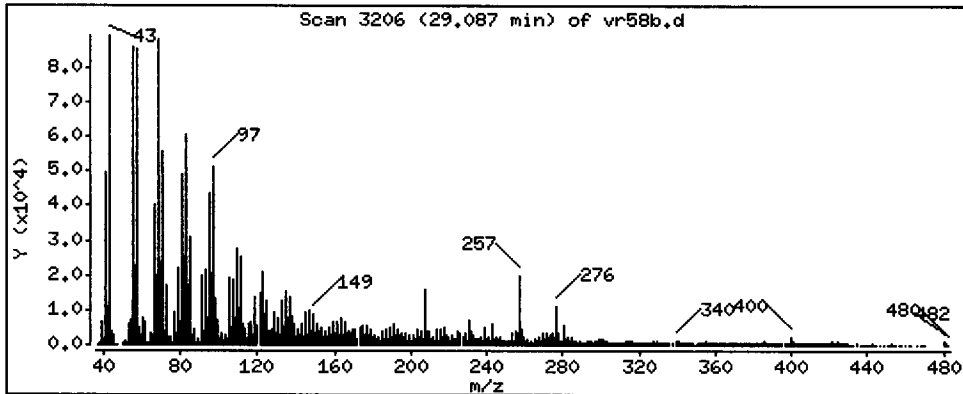
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

80 Benzo(g,h,i)perylene

Concentration: 107.5 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

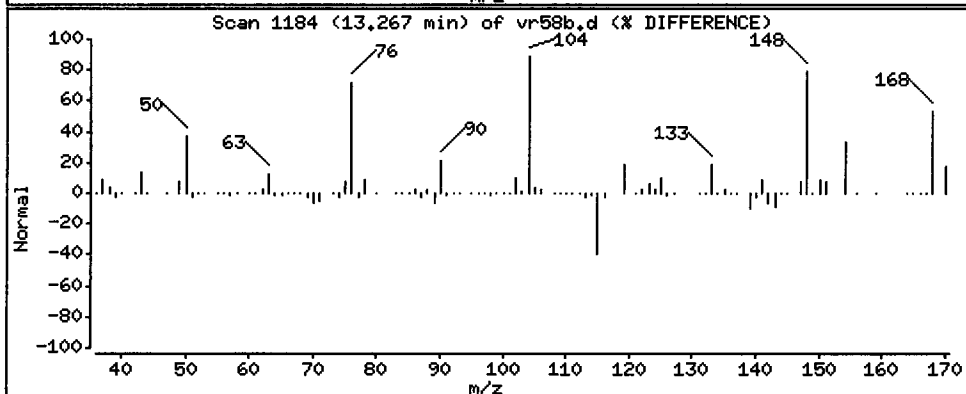
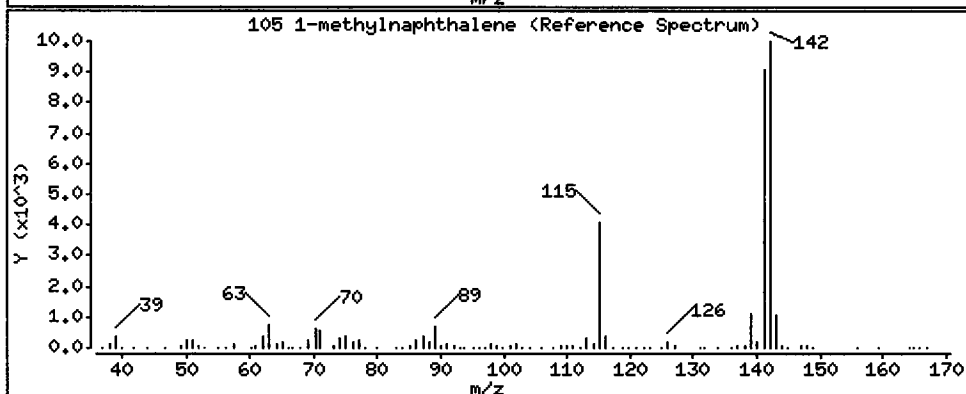
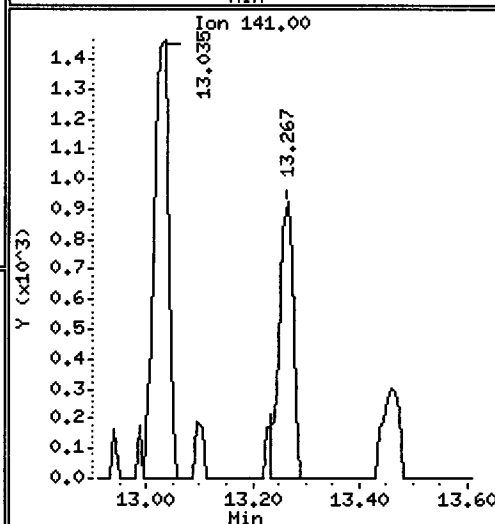
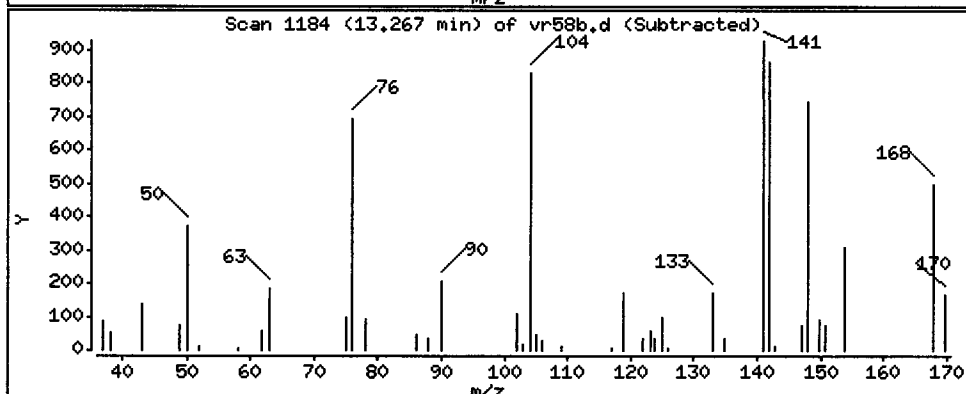
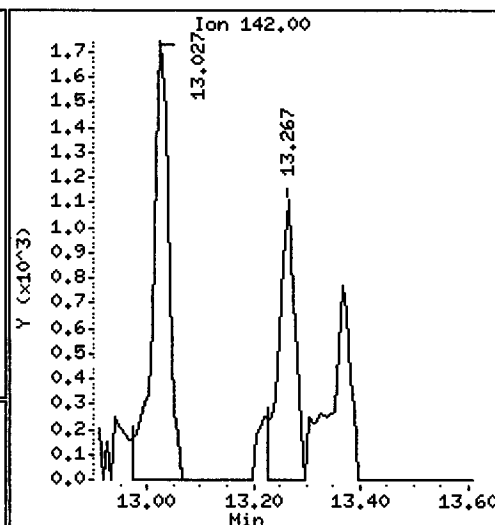
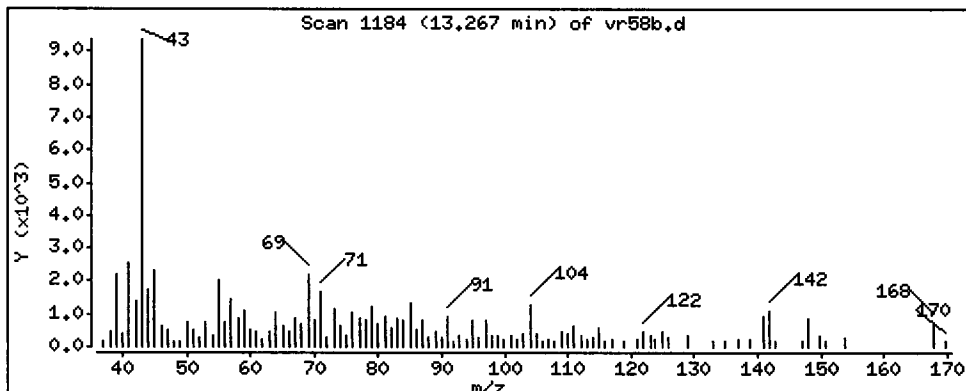
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

105 1-methylnaphthalene

Concentration: 12.67 ug/kg



Date : 04-DEC-2012 17:44

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B

Volume Injected (uL): 1.0

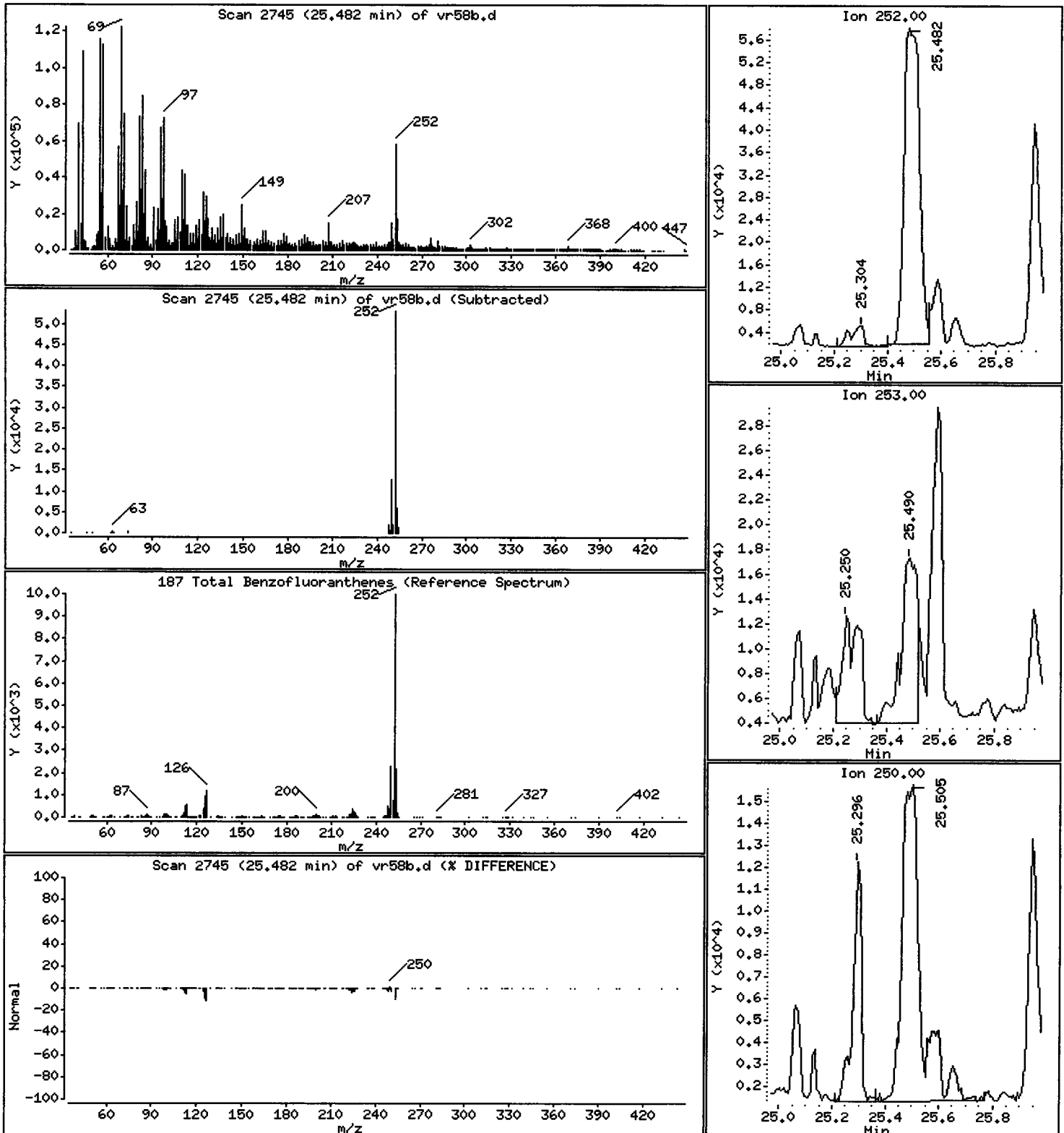
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

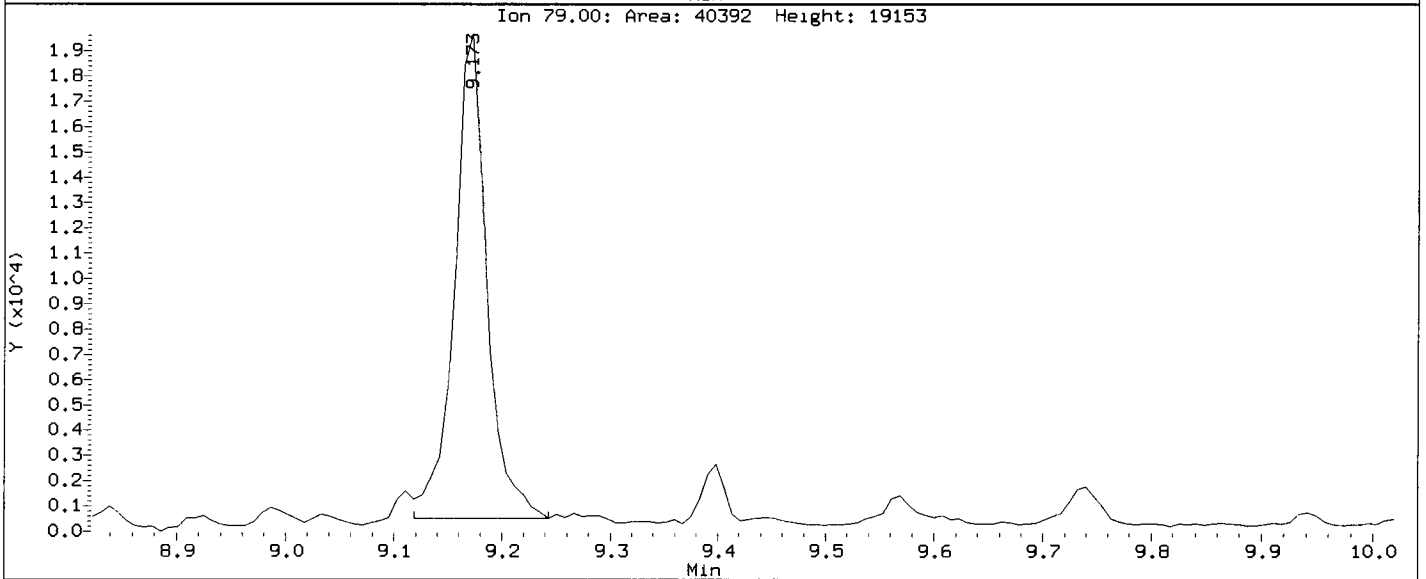
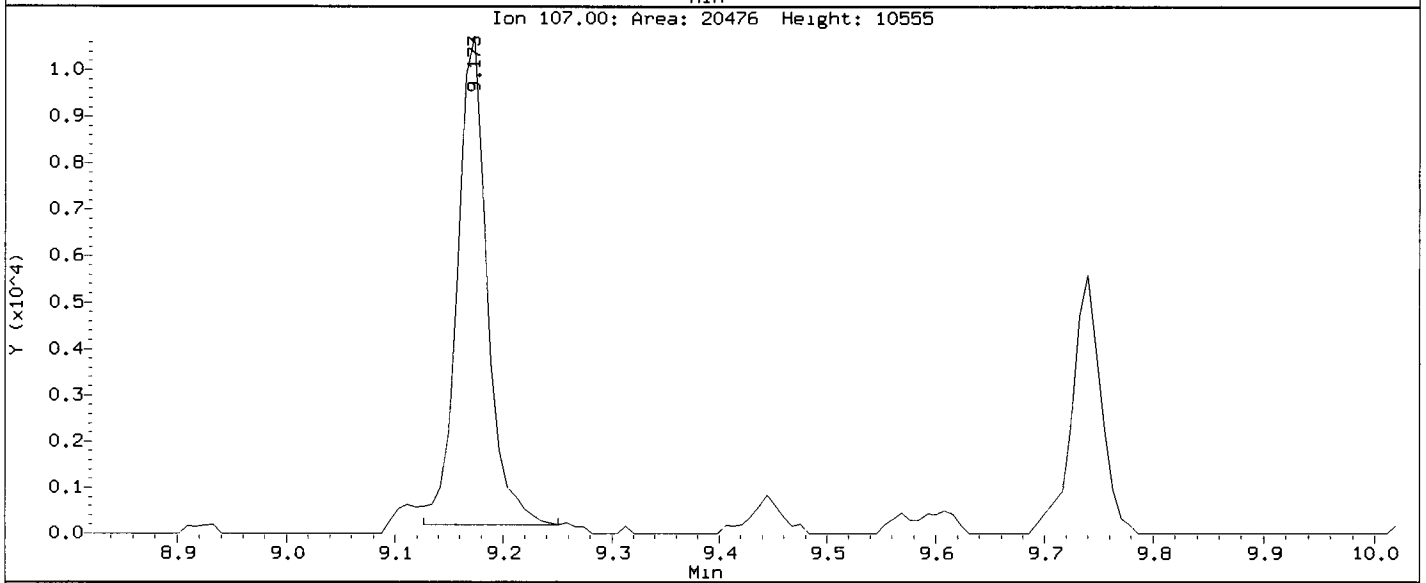
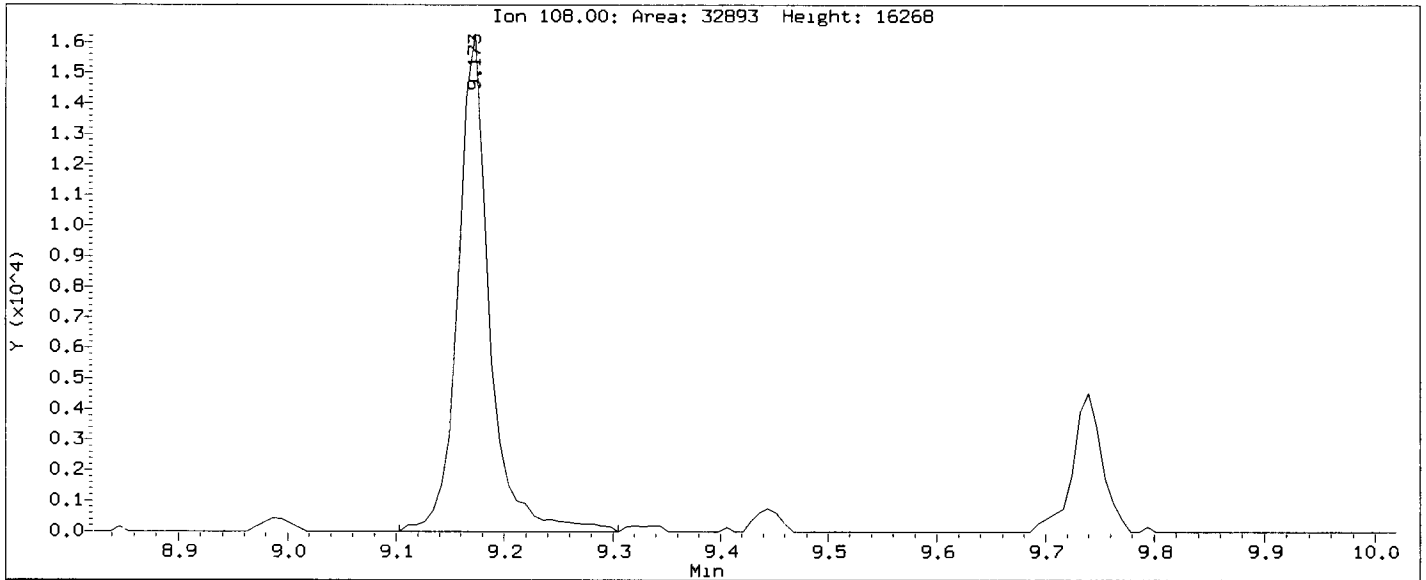
187 Total Benzofluoranthenes

Concentration: 390.1 ug/kg



Data File: /chem1/nt10.1/20121204.b/vr58b.d  
Injection Date: 04-DEC-2012 17:44  
Instrument: nt10.1  
Client Sample ID: SG-11-S-E-121107  
Compound: 2-Methylphenol  
CAS Number: 95-48-7

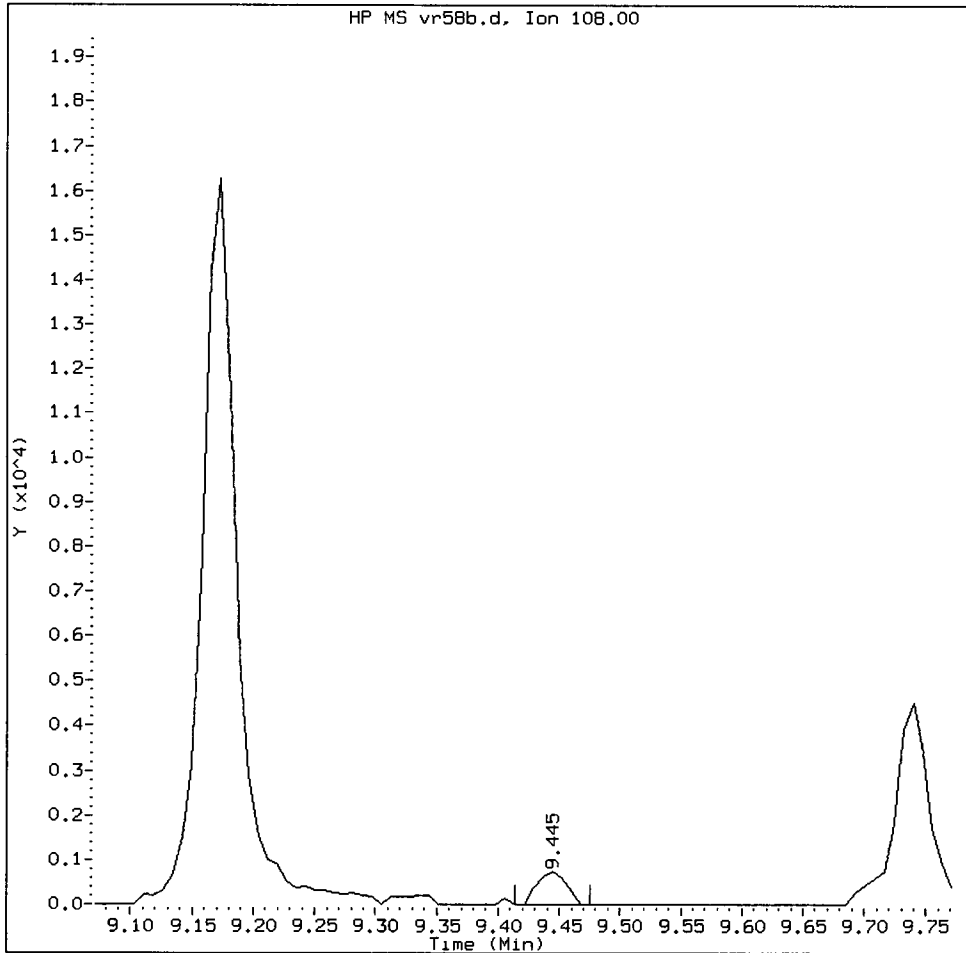
VP  
12-6-12





VR58B, /chem1/nt10.i/20121204.b/vr58b.d

2-Methylphenol Amount: 0.11 Area: 1233



MANUAL INTEGRATION for 2-Methylphenol

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

5. Other \_\_\_\_\_

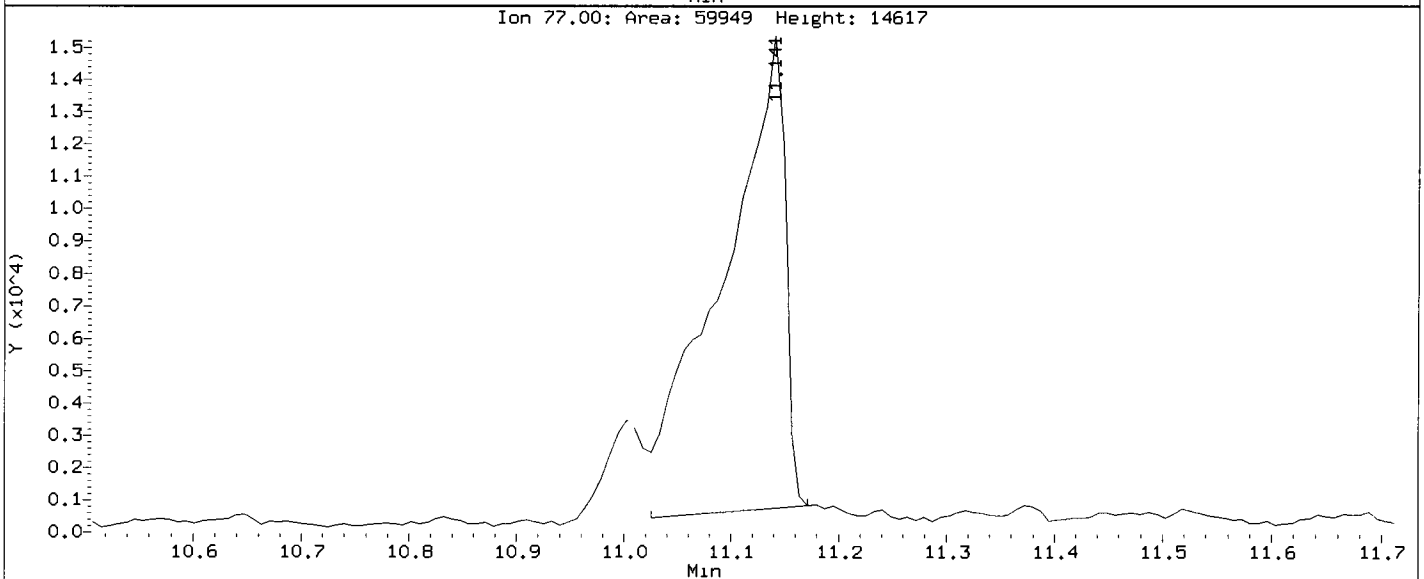
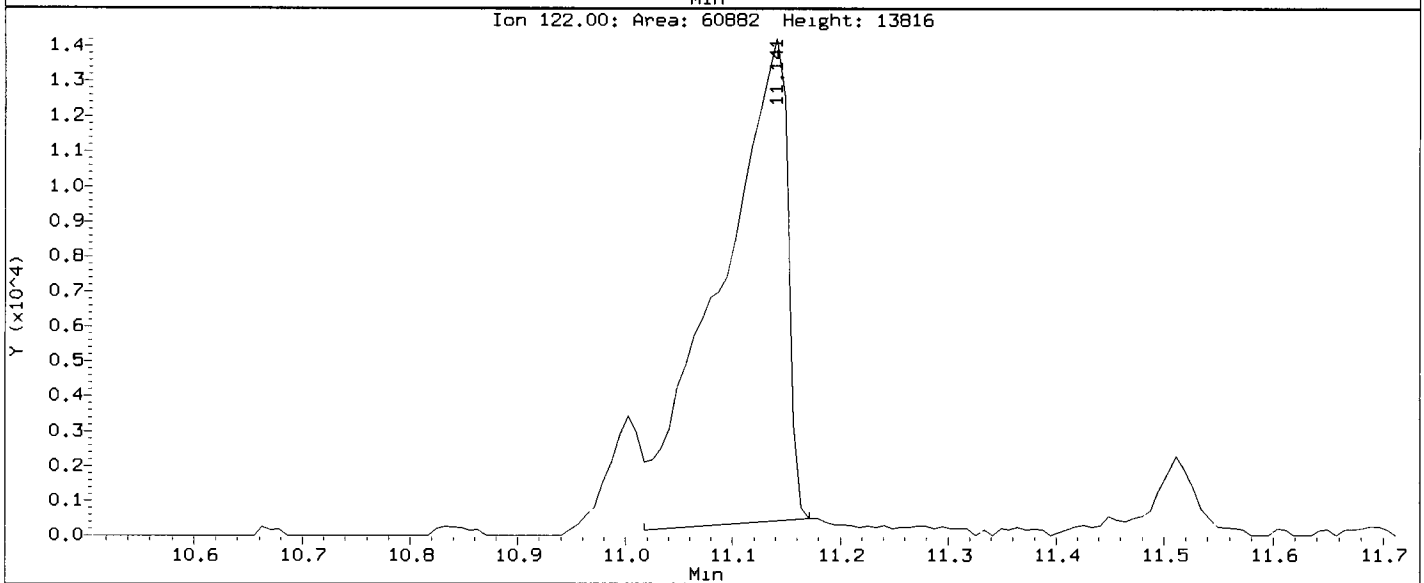
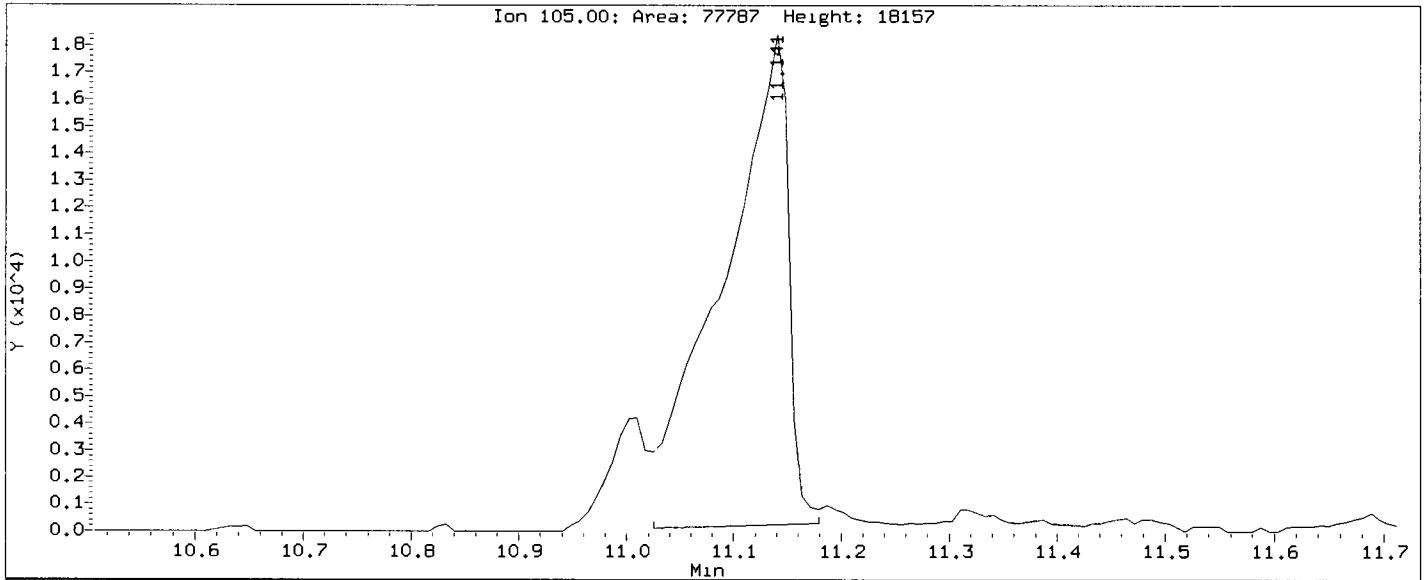
Analyst: VD

Date: 12-5-12

Data File: /chem1/nt10.1/20121204.b/vr58b.d  
Injection Date: 04-DEC-2012 17:44  
Instrument: nt10.1  
Client Sample ID: SG-11-S-E-121107

UD  
12.5.12

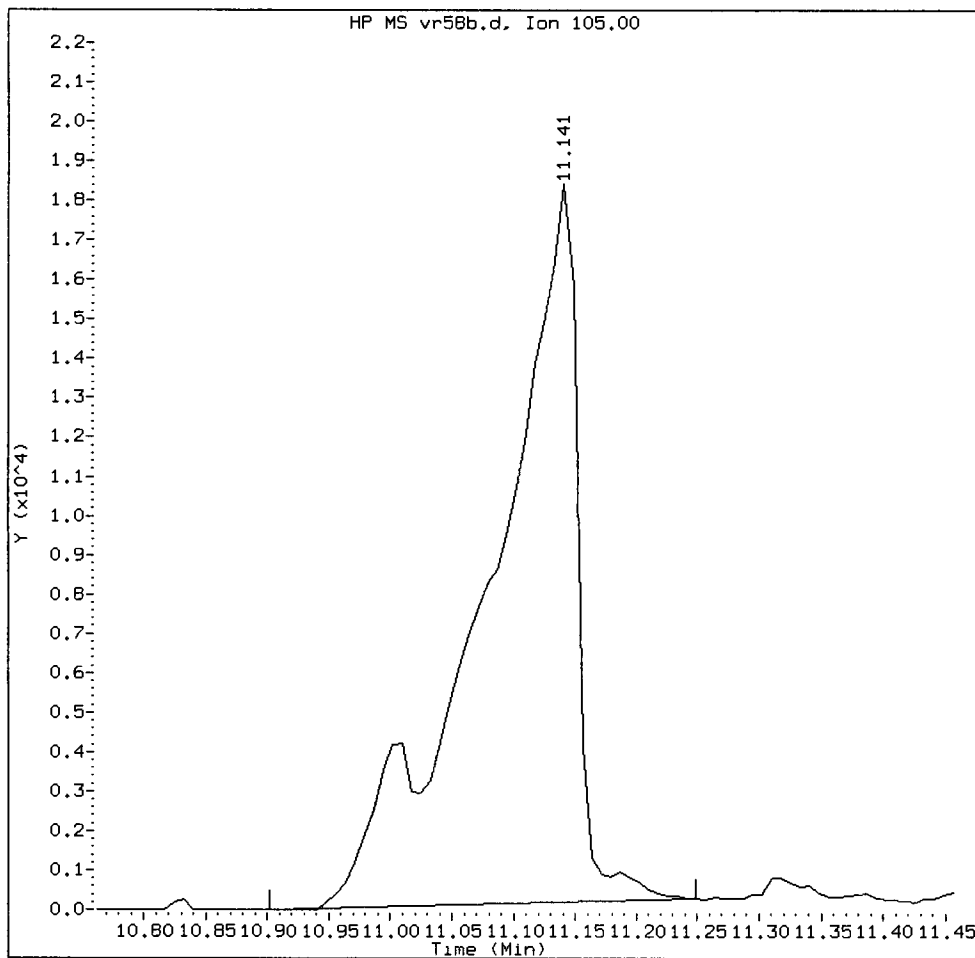
Compound: Benzoic acid  
CAS Number: 65-85-0



VR58: 00514

VR58B, /chem1/nt10.i/20121204.b/vr58b.d

Benzoic acid Amount: 14.50 Area: 91559



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other \_\_\_\_\_

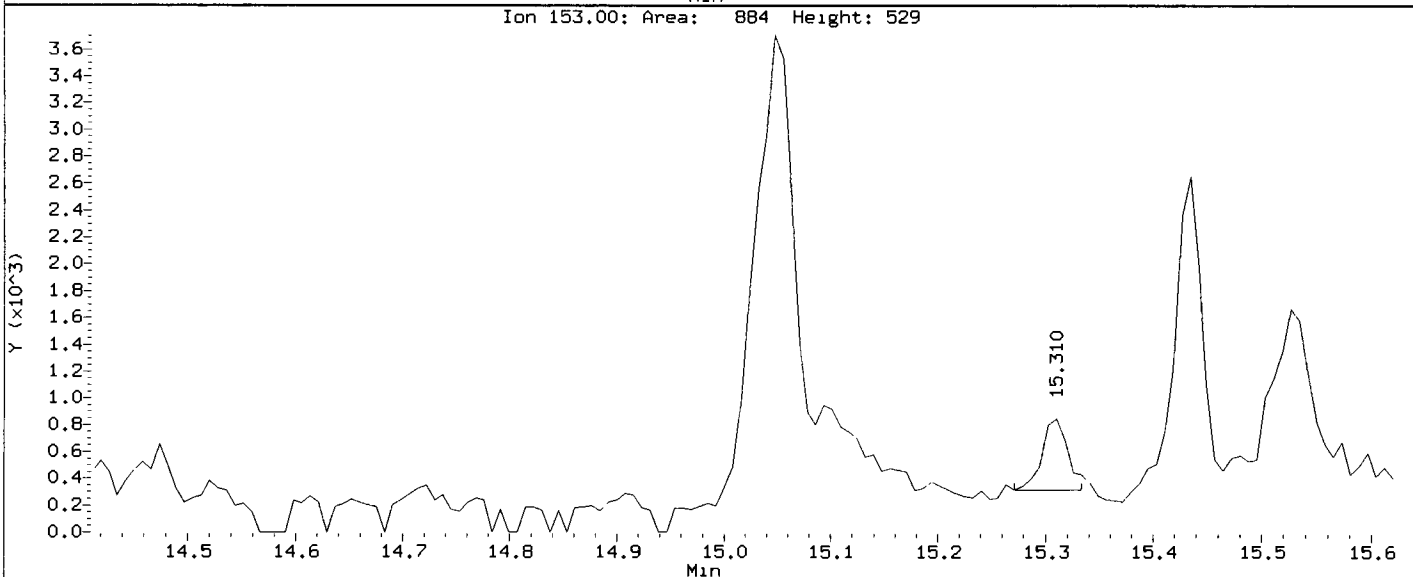
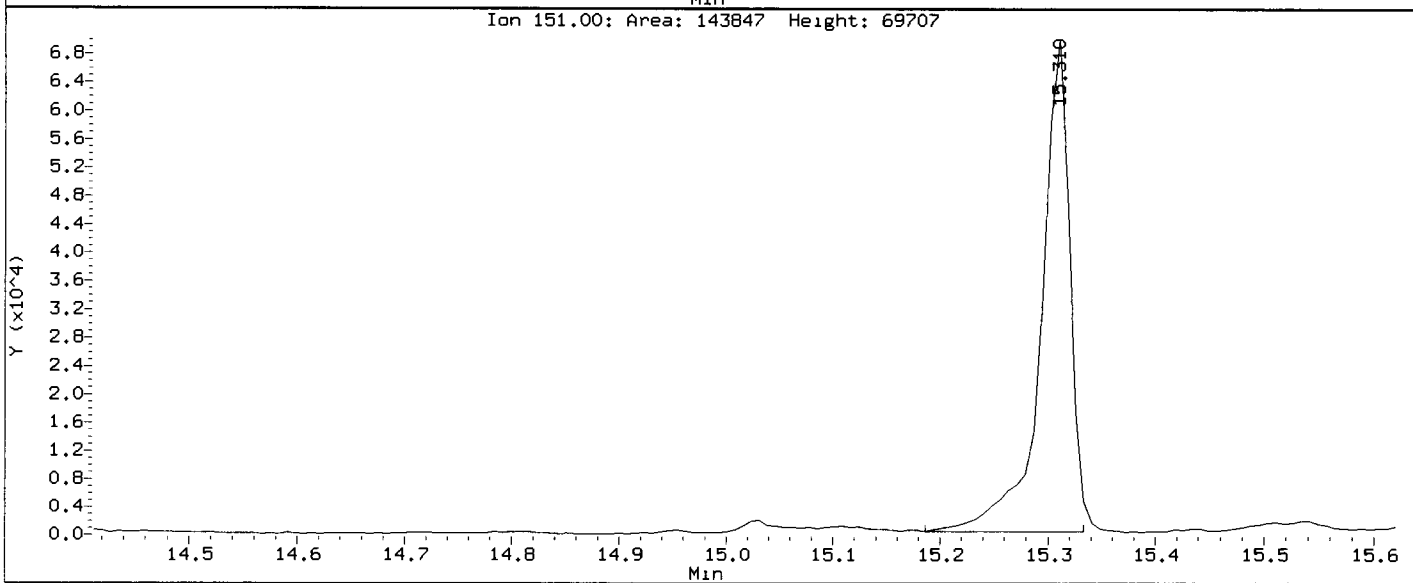
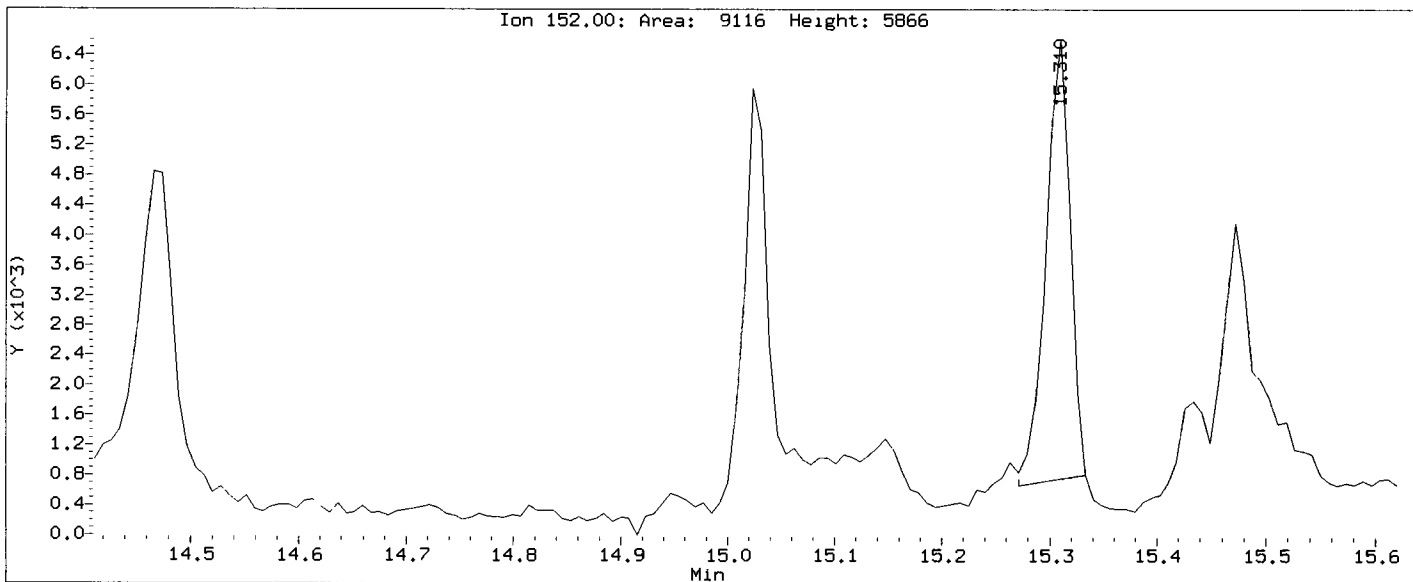
Analyst: VD

Date: 12-5-12

Data File: /chem1/nt10.1/20121204.b/vr58b.d  
Injection Date: 04-DEC-2012 17:44  
Instrument: nt10.1  
Client Sample ID: SG-11-S-E-121107

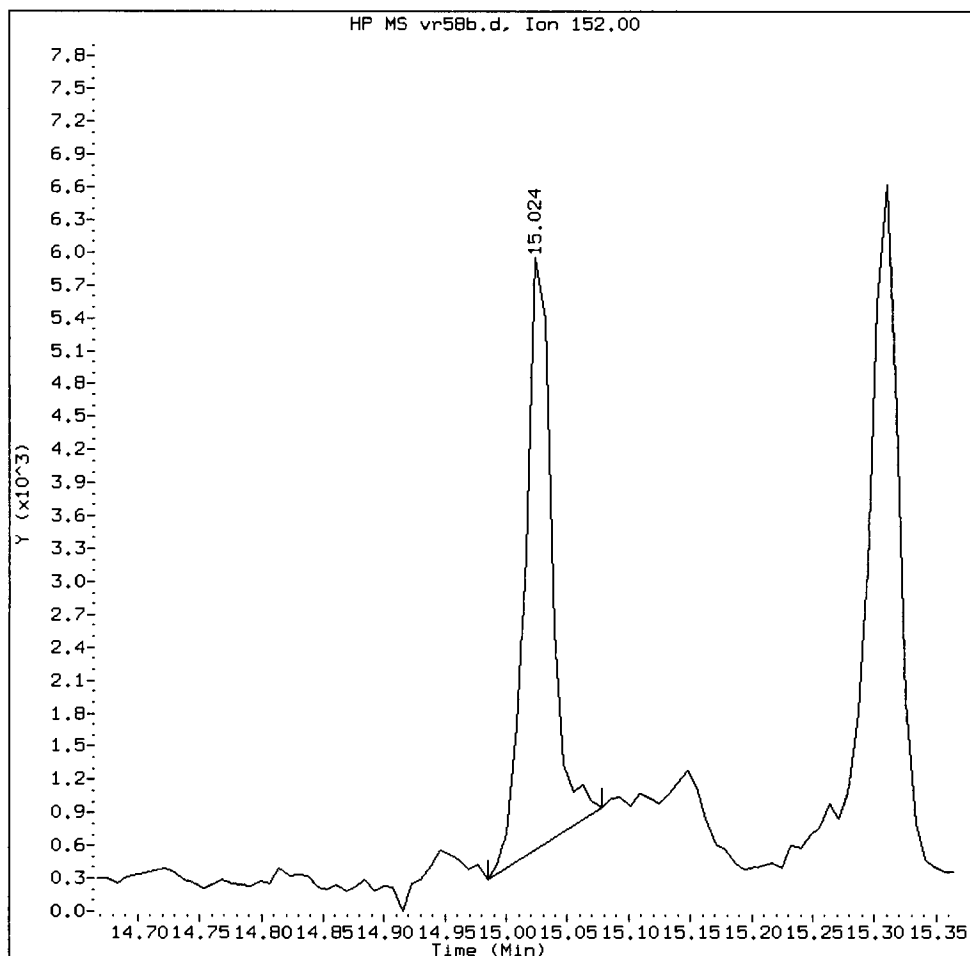
VP  
12.5.12

Compound: Acenaphthylene  
CAS Number: 208-96-8



VR58B, /chem1/nt10.i/20121204.b/vr58b.d

Acenaphthylene Amount: 0.19 Area: 8467



### MANUAL INTEGRATION for Acenaphthylene

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

5. Other \_\_\_\_\_

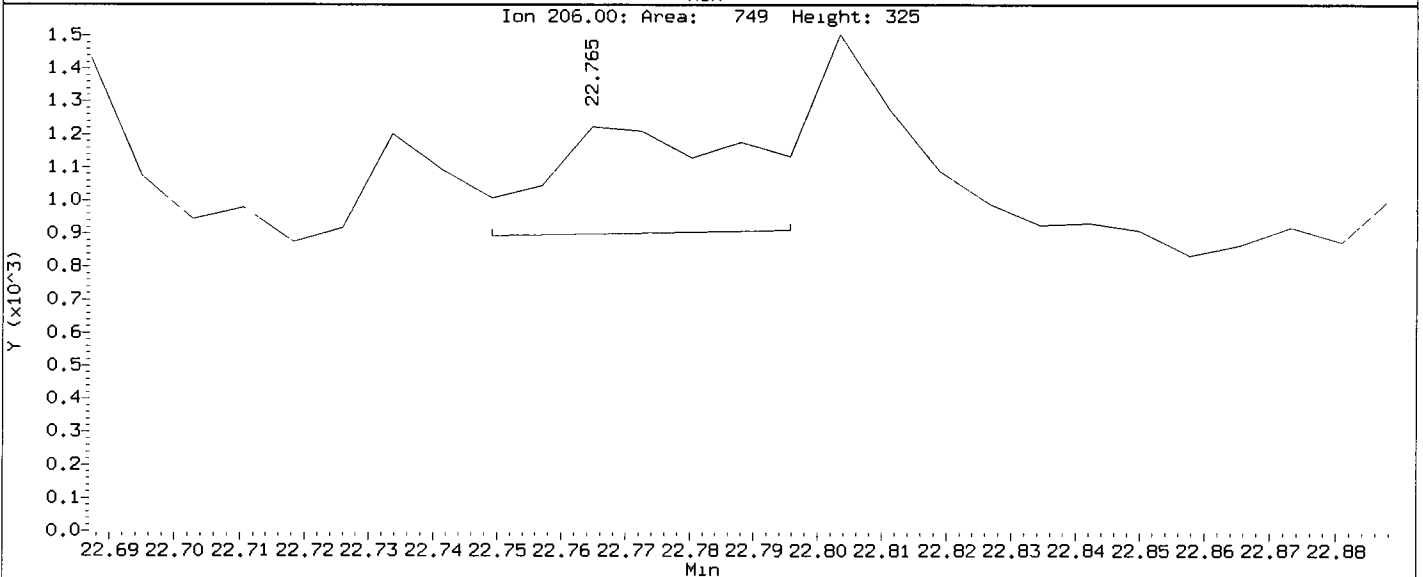
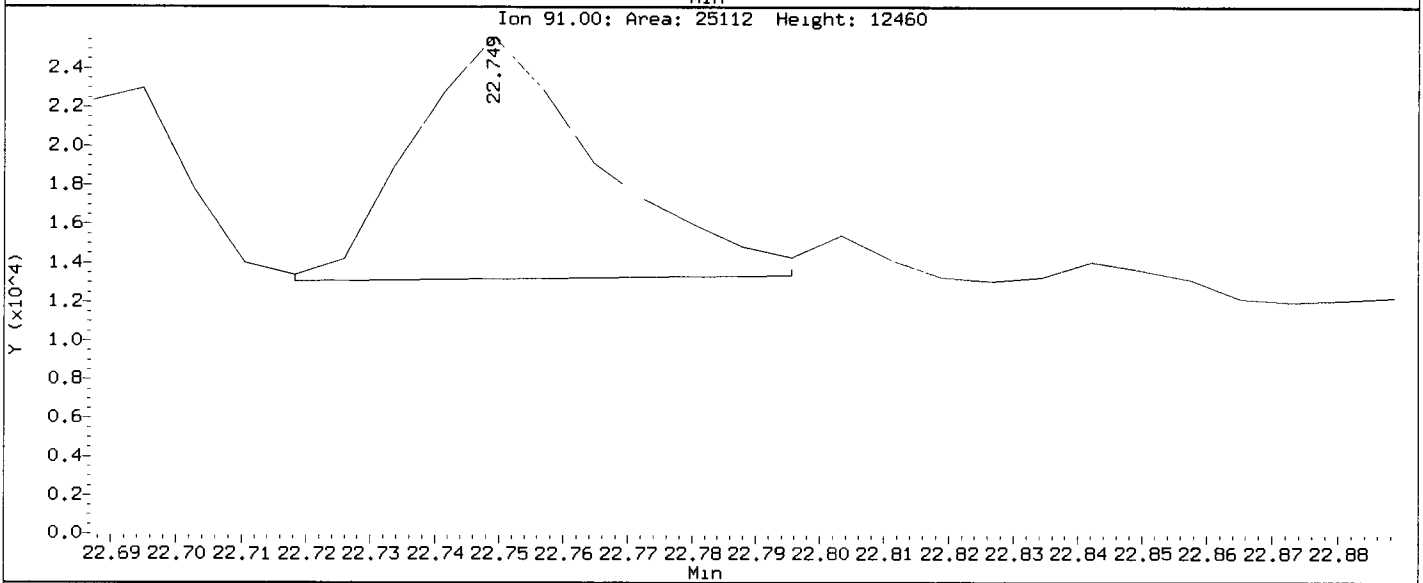
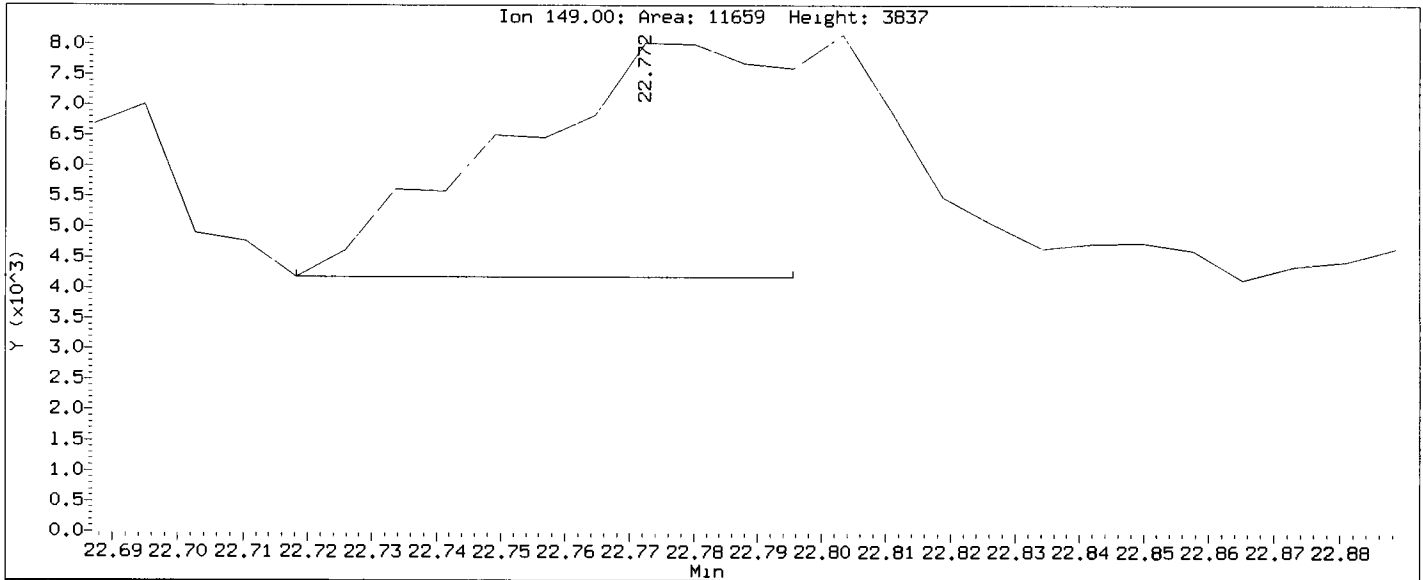
Analyst: VTS

Date: 12.5.12

Data File: /chem1/nt10.1/20121204.b/vr58b.d  
Injection Date: 04-DEC-2012 17:44  
Instrument: nt10.1  
Client Sample ID: SG-11-S-E-121107

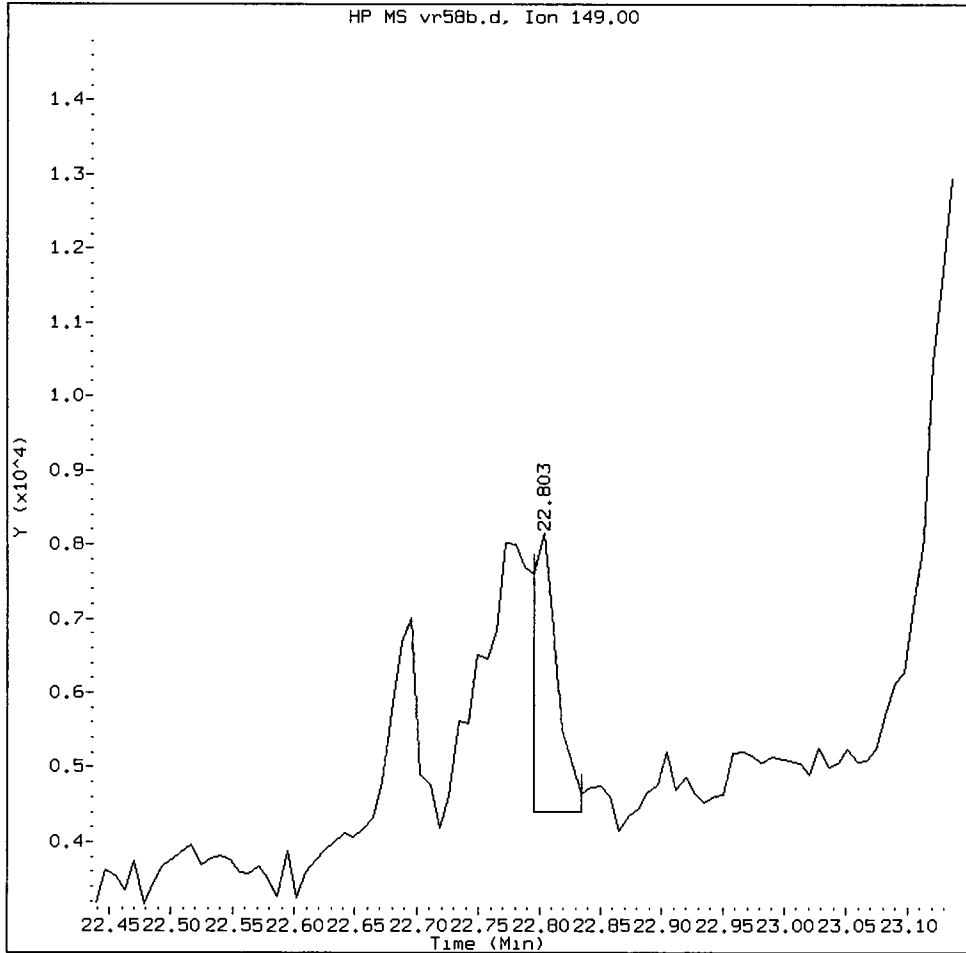
UP  
12.5.12

Compound: Butylbenzylphthalate  
CAS Number: 85-68-7



VR58B, /chem1/nt10.i/20121204.b/vr58b.d

Butylbenzylphthalate Amount: 0.24 Area: 5257



MANUAL INTEGRATION for Butylbenzylphthalate

- 1) Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

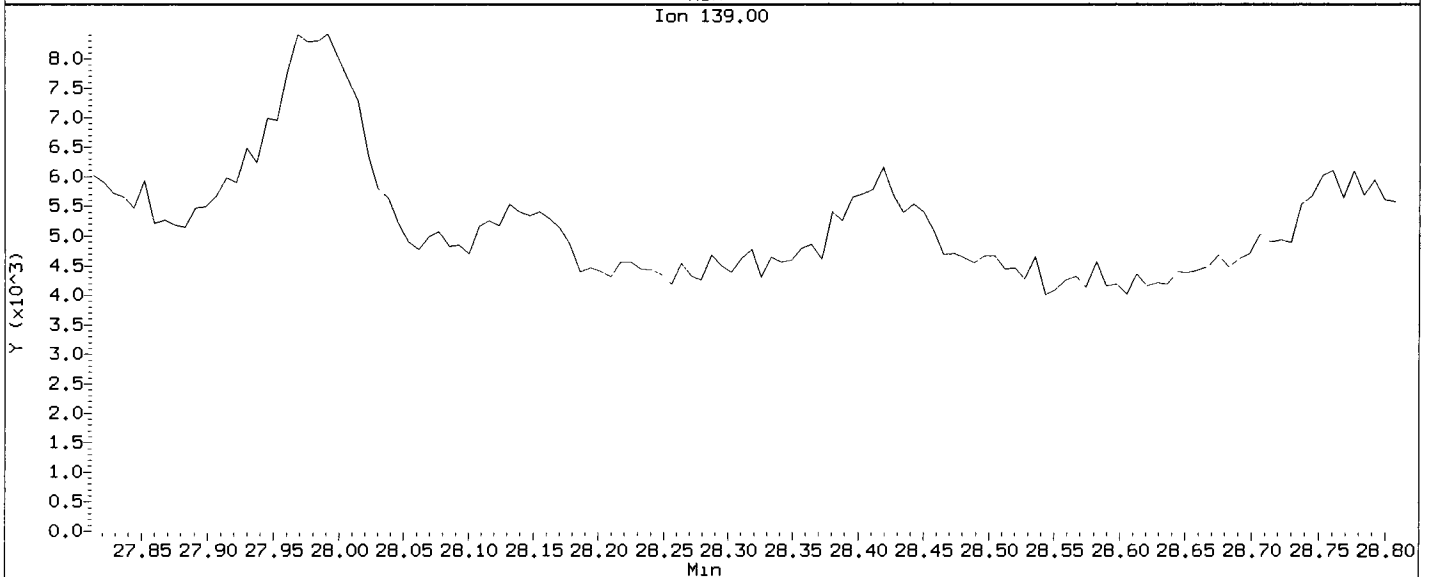
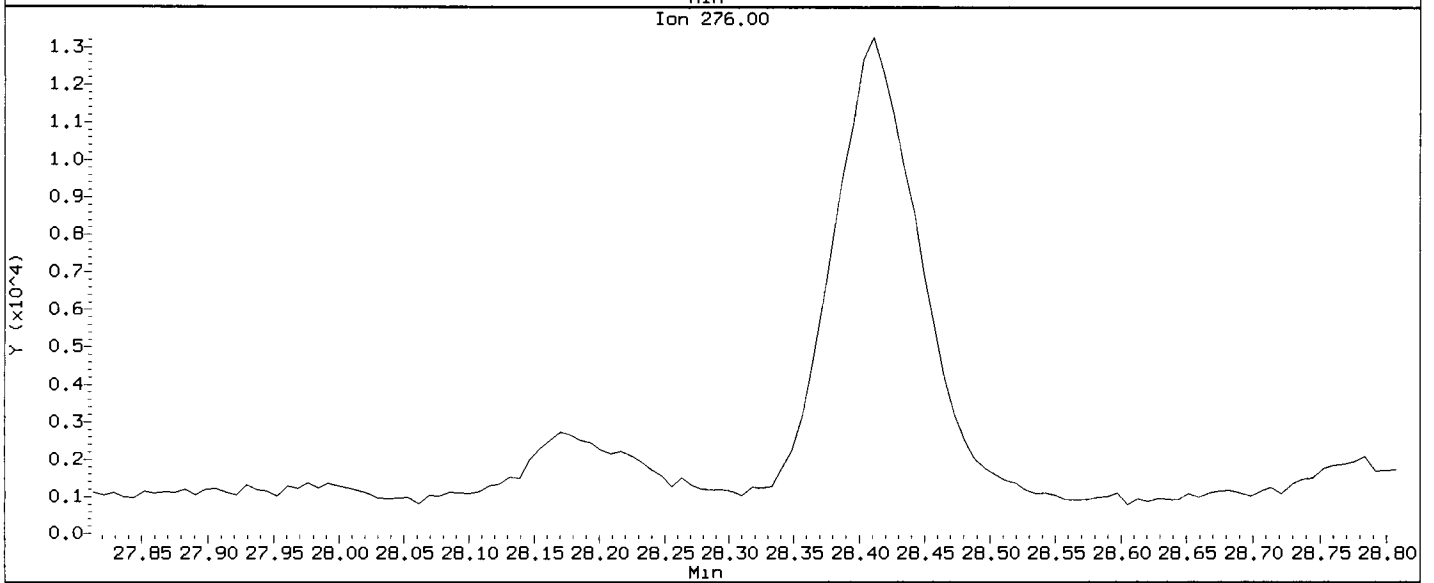
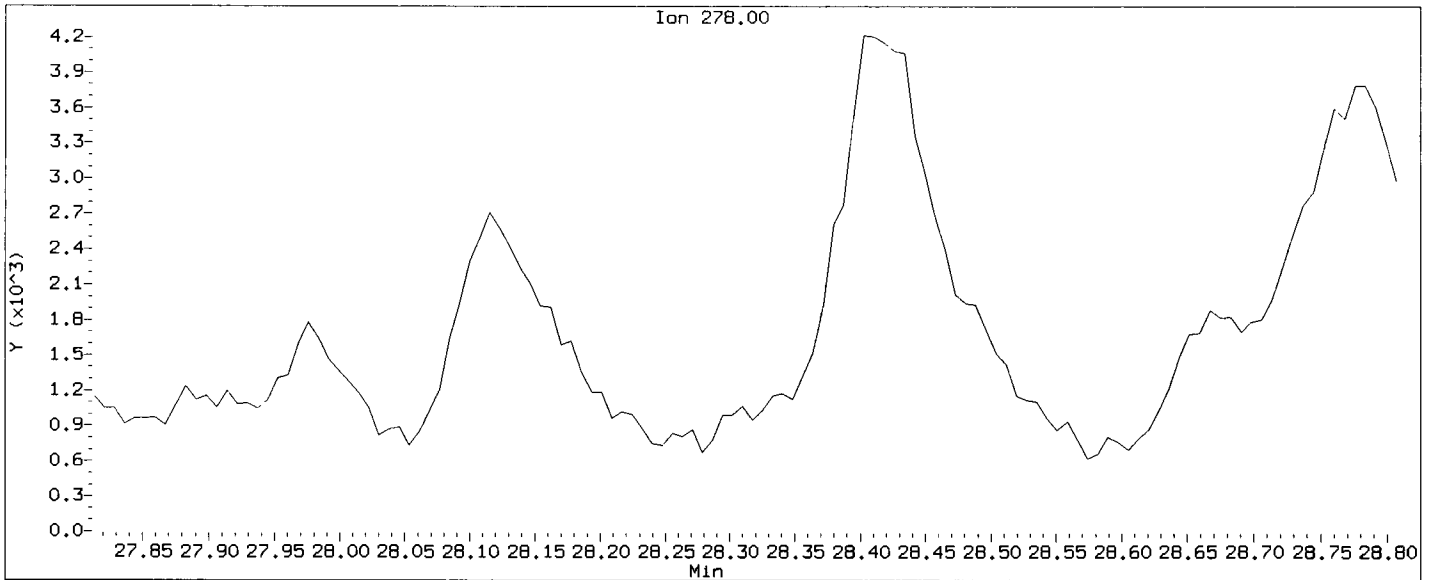
Analyst: JS

Date: 12-5-12

Data File: /chem1/nt10.1/20121204.b/vr58b.d  
Injection Date: 04-DEC-2012 17:44  
Instrument: nt10.1  
Client Sample ID: SG-11-S-E-121107

Compound: Dibenzo(a,h)anthracene  
CAS Number: 53-70-3

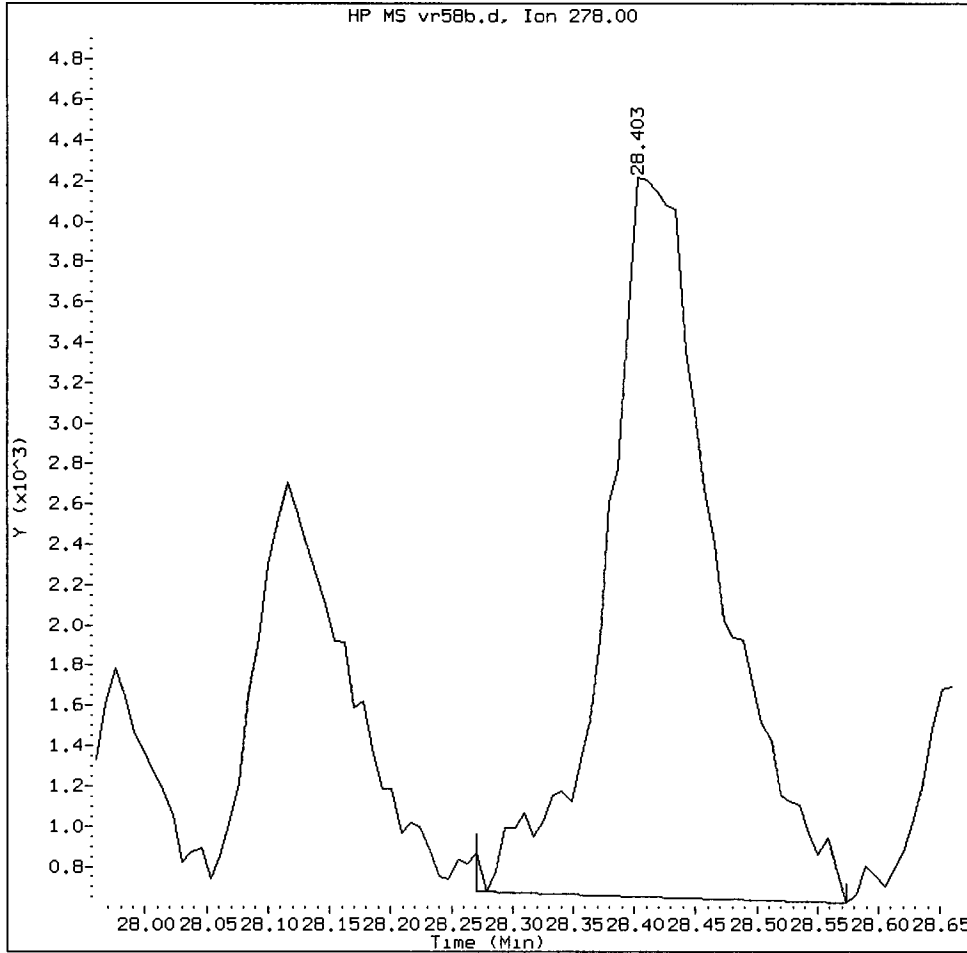
UP  
12-5-12





VR58B, /chem1/nt10.i/20121204.b/vr58b.d

Dibenzo(a,h)anthracene Amount: 0.46 Area: 23155



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other \_\_\_\_\_

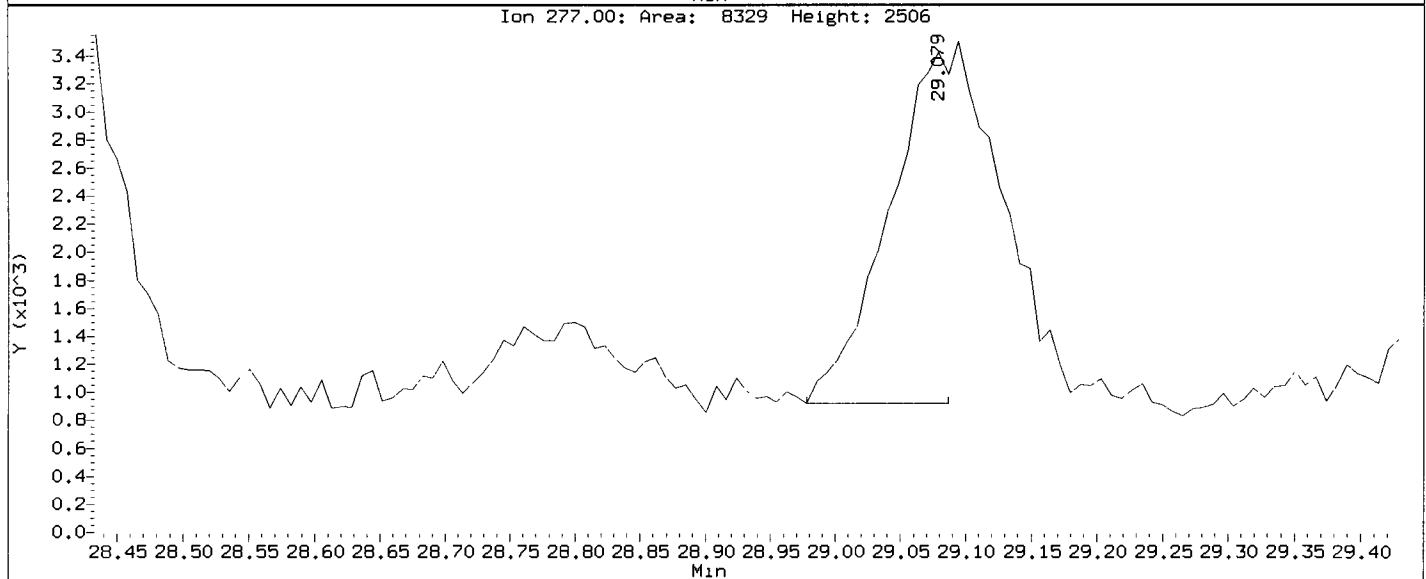
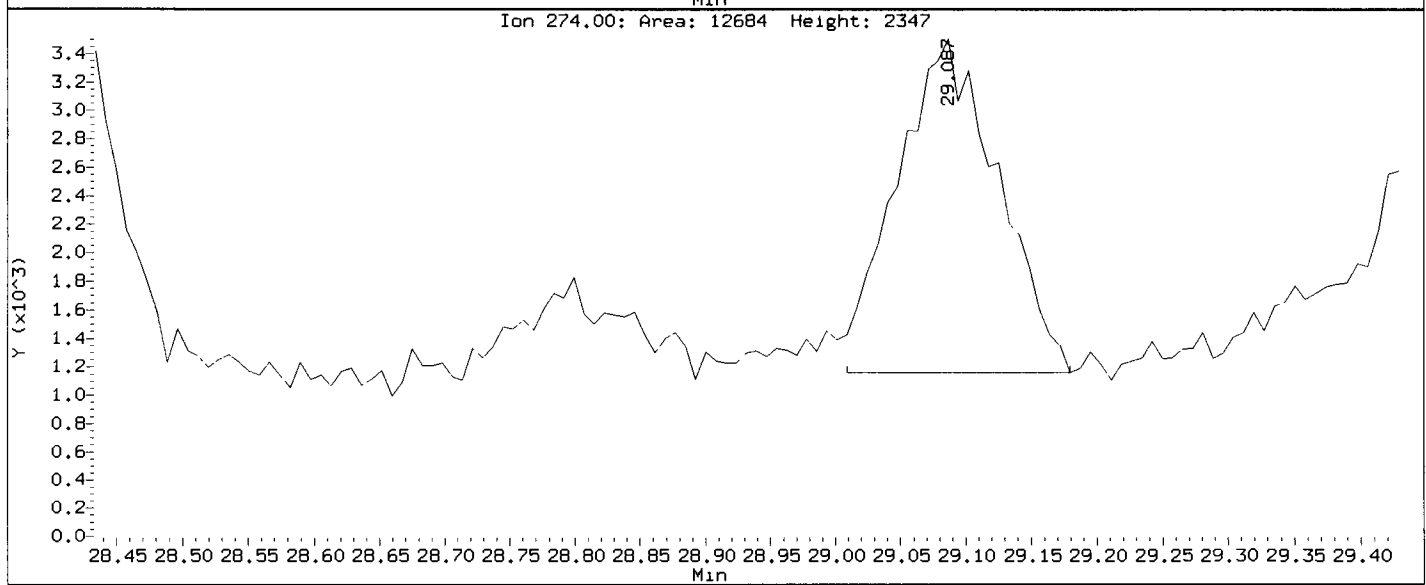
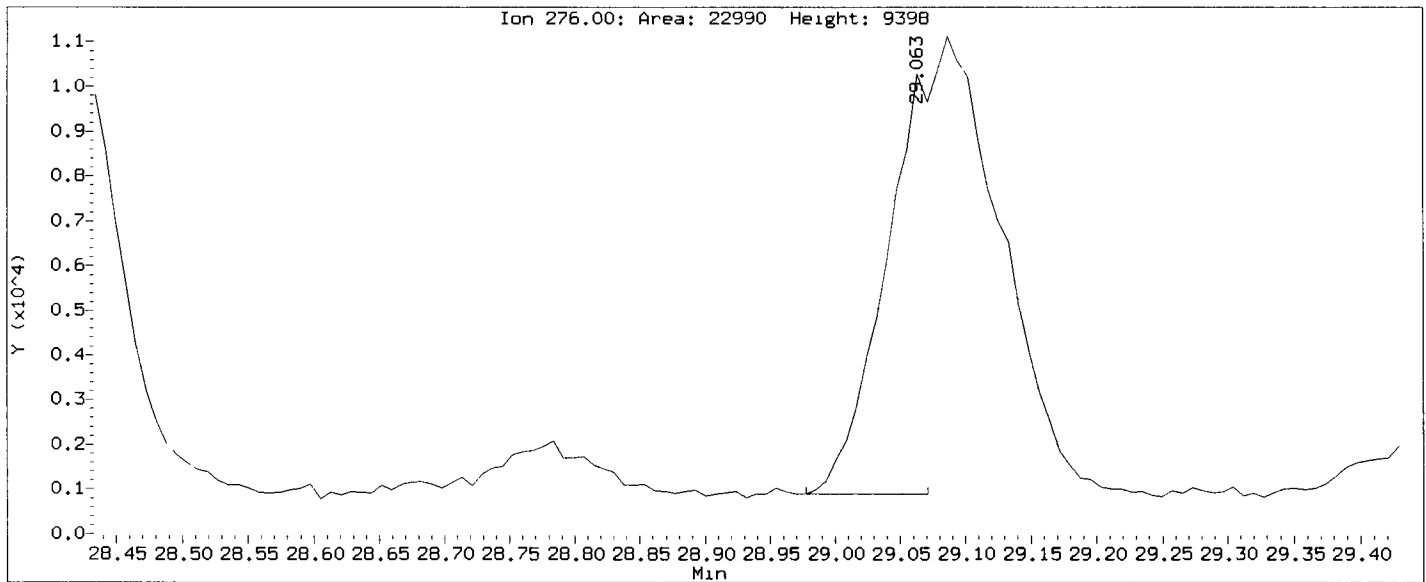
Analyst: VJ

Date: 12-5-12

Data File: /chem1/nt10.1/20121204.b/vr58b.d  
Injection Date: 04-DEC-2012 17:44  
Instrument: nt10.1  
Client Sample ID: SG-11-S-E-121107

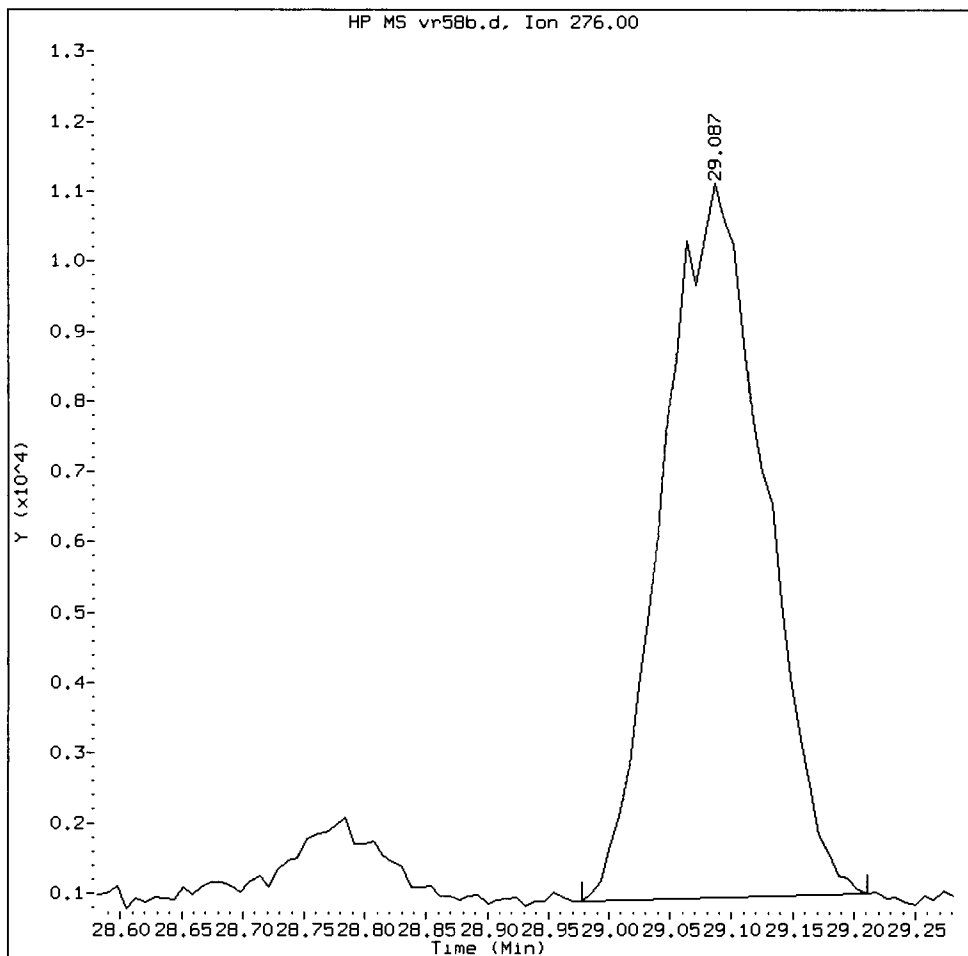
U1  
12.3.12

Compound: Benzo(g,h,i)perylene  
CAS Number: 191-24-2



VR58B, /chem1/nt10.i/20121204.b/vr58b.d

Benzo(g,h,i)perylene Amount: 1.10 Area: 59104



MANUAL INTEGRATION for Benzo(g,h,i)perylene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other \_\_\_\_\_

Analyst: VD

Date: 12-5-12

CO-ELUTION SUMMARY FOR FILE - vr58b.d

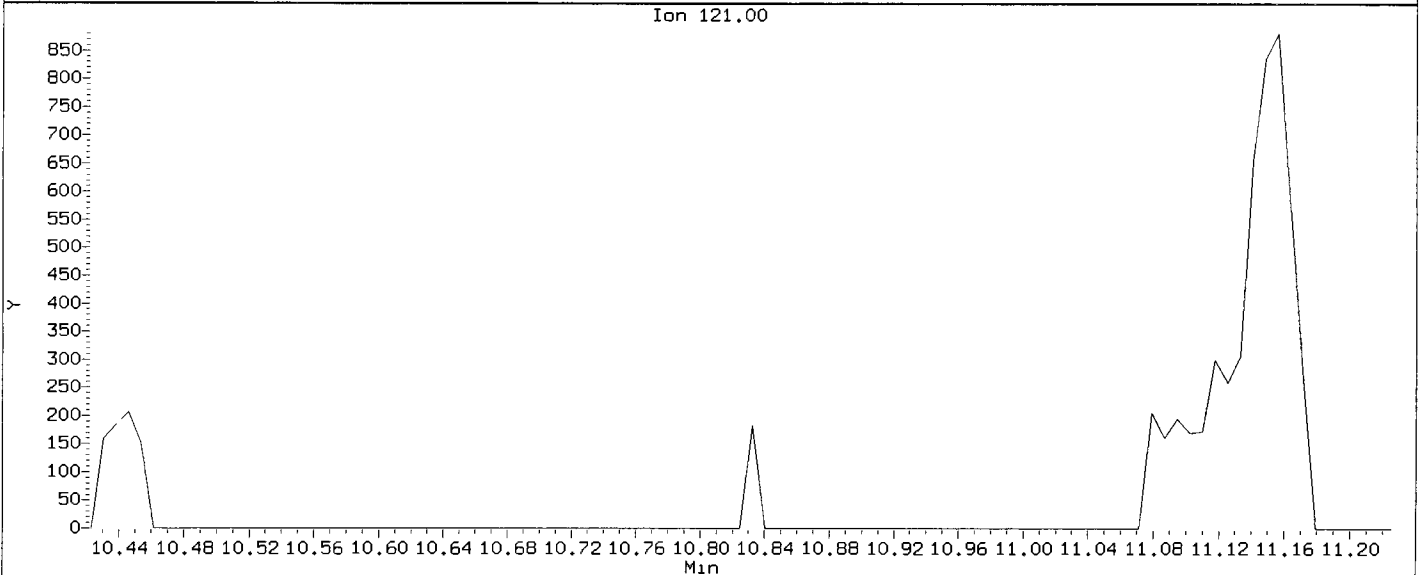
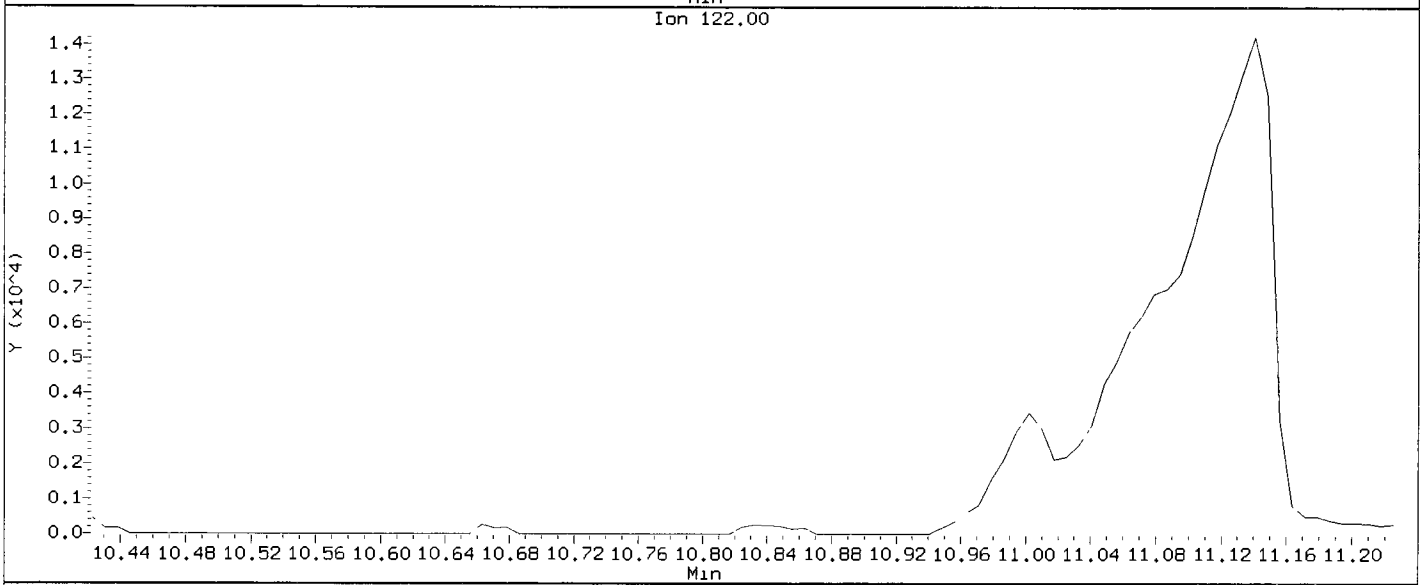
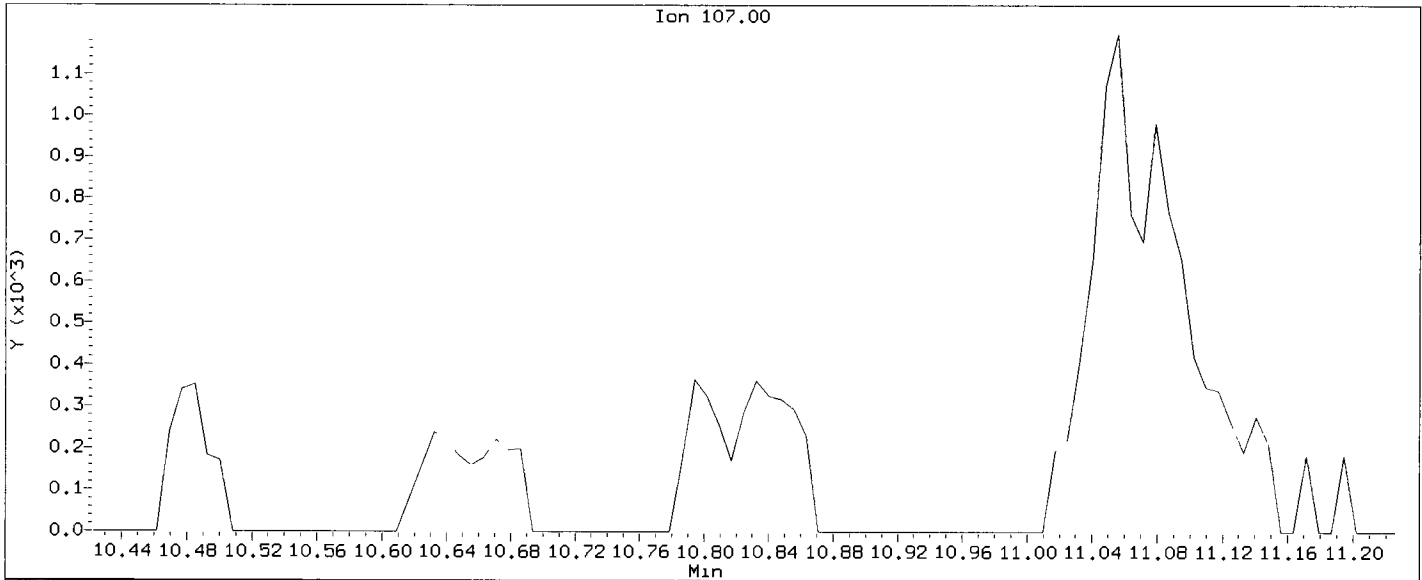
Lab ID: VR58B, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

---

Data File: /chem1/nt10.1/20121204.b/vr58b.d  
Injection Date: 04-DEC-2012 17:44  
Instrument: nt10.1  
Client Sample ID: S6-11-S-E-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



Analytical Resources, Inc.

Semivolatible Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58c.d  
 Lab Smp Id: VR58C Client Smp ID: SG-12-S-E-121107  
 Inj Date : 04-DEC-2012 18:21  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58C  
 Misc Info : 12-22331  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 5  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.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	34.10000	Weight of sample extracted (g)
M	70.00000	% 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	6.559	6.505	(0.742)	95263	6.02171	588.6	
\$ 2 Phenol-d5	99	8.251	8.220	(0.933)	146102	7.46349	729.6	
3 Phenol	94	8.274	8.243	(0.936)	62737	3.04228	297.4	
\$ 5 2-Chlorophenol-d4	132	8.475	8.452	(0.959)	86409	5.10168	498.7	
7 1,3-Dichlorobenzene	146	Compound Not Detected.						
* 8 1,4-Dichlorobenzene-d4	152	8.839	8.831	(1.000)	49454	4.00000		
9 1,4-Dichlorobenzene	146	Compound Not Detected.						
\$ 10 1,2-Dichlorobenzene-d4	152	9.219	9.212	(1.043)	34373	2.78317	272.1	
12 1,2-Dichlorobenzene	146	Compound Not Detected.						
11 Benzyl alcohol	108	9.173	9.150	(1.038)	30277	3.10490	303.5	
13 2-Methylphenol	108	9.444	9.421	(1.068)	2143	0.12098	11.83 (M)	
17 Hexachloroethane	117	Compound Not Detected.						
15 4-Methylphenol	108	9.740	9.716	(1.102)	7976	0.75869	74.16	
\$ 18 Nitrobenzene-d5	82	10.011	10.003	(0.871)	68253	4.40223	430.3	
22 2,4-Dimethylphenol	107	Compound Not Detected.						

Compounds	QUANT		SIG				CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
24 Benzoic acid	105	11.133	11.110	(0.969)	160543	15.7499	1540 (M)	
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
* 27 Naphthalene-d8	136	11.487	11.480	(1.000)	165461	4.00000		
28 Naphthalene	128	11.526	11.526	(1.003)	16294	0.40477	39.57	
30 Hexachlorobutadiene	225	Compound Not Detected.						
32 2-Methylnaphthalene	142	13.034	13.027	(1.135)	3746	0.12490	12.21	
\$ 36 2-Fluorobiphenyl	172	13.893	13.886	(0.904)	113629	2.89484	283.0	
39 Dimethylphthalate	163	Compound Not Detected.						
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	15.364	15.356	(1.000)	110902	4.00000		
44 Acenaphthene	153	15.433	15.426	(1.005)	5252	0.17529	17.13	
46 Dibenzofuran	168	15.789	15.781	(1.028)	16183	0.36394	35.58 M	
50 Diethylphthalate	149	16.469	16.462	(1.072)	39677	1.05805	103.4	
49 Fluorene	166	16.554	16.547	(1.077)	22032	0.59724	58.38	
54 N-Nitrosodiphenylamine	169	Compound Not Detected.						
\$ 55 2,4,6-Tribromophenol	330	17.148	17.125	(1.116)	59694	9.13768	893.2	
57 Hexachlorobenzene	284	Compound Not Detected.						
58 Pentachlorophenol	266	18.385	18.362	(0.986)	3549	0.18744	18.32	
* 59 Phenanthrene-d10	188	18.640	18.617	(1.000)	412878	4.00000		
60 Phenanthrene	178	18.686	18.671	(1.002)	178804	1.74908	171.0	
61 Anthracene	178	18.787	18.764	(1.008)	45752	0.41638	40.70	
63 Di-n-butylphthalate	149	20.033	20.002	(1.075)	35132	0.27025	26.42	
64 Fluoranthene	202	21.154	21.093	(1.135)	388899	3.01816	295.0	
65 Pyrene	202	21.541	21.510	(0.908)	124641	2.36336	231.0	
\$ 66 Terphenyl-d14	244	21.859	21.835	(0.921)	81119	2.30105	224.9	
67 Butylbenzylphthalate	149	22.803	22.788	(0.961)	15714	0.73350	71.70 (M)	
68 Benzo(a)anthracene	228	23.694	23.670	(0.999)	63211	1.23541	120.8	
* 69 Chrysene-d12	240	23.724	23.701	(1.000)	180022	4.00000		
71 Chrysene	228	23.763	23.740	(1.002)	98751	2.17249	212.4	
72 bis(2-Ethylhexyl)phthalate	149	23.848	23.825	(0.961)	233672	3.70712	362.4	
* 134 Di-n-octylphthalate-d4	153	24.824	24.801	(1.000)	456836	4.00000		
73 Di-n-octylphthalate	149	Compound Not Detected.						
76 Benzo(a)pyrene	252	26.032	25.985	(0.996)	61117	1.05054	102.7	
* 77 Perylene-d12	264	26.132	26.086	(1.000)	203850	4.00000		
78 Indeno(1,2,3-cd)pyrene	276	28.372	28.294	(1.086)	51836	0.78619	76.85	
79 Dibenzo(a,h)anthracene	278	28.395	28.310	(1.087)	19321	0.36926	36.10 (M)	
80 Benzo(g,h,i)perylene	276	29.032	28.931	(1.111)	49245	0.87271	85.31	
105 1-methylnaphthalene	142	Compound Not Detected.						
187 Total Benzofluoranthenes	252	25.474	25.474	(0.975)	175327	2.92267	285.7	
98 Retene	219	22.153	22.137	(0.934)	111632			
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

*(Handwritten)*  
 V1  
 12-5-12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58c.d  
 Lab Smp Id: VR58C  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22331

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-12-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	49454	-39.37
27 Naphthalene-d8	299399	149700	598798	165461	-44.74
42 Acenaphthene-d10	178564	89282	357128	110902	-37.89
59 Phenanthrene-d10	305410	152705	610820	412878	35.19
69 Chrysene-d12	323853	161926	647706	180022	-44.41
134 Di-n-octylphthala	427845	213922	855690	456836	6.78
77 Perylene-d12	305316	152658	610632	203850	-33.23

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.84	0.09
27 Naphthalene-d8	11.48	10.98	11.98	11.49	0.07
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.05
59 Phenanthrene-d10	18.62	18.12	19.12	18.64	0.12
69 Chrysene-d12	23.70	23.20	24.20	23.72	0.10
134 Di-n-octylphthala	24.80	24.30	25.30	24.82	0.09
77 Perylene-d12	26.09	25.59	26.59	26.13	0.18

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



Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.

Client SDG: VR58

Sample Matrix: SOLID

Fraction: SV

Lab Smp Id: VR58C

Client Smp ID: SG-12-S-E-121107

Level: LOW

Operator: VTS/YZ

Data Type: MS DATA

SampleType: SAMPLE

SpikeList File: SHORTPSDDA.spk

Quant Type: ISTD

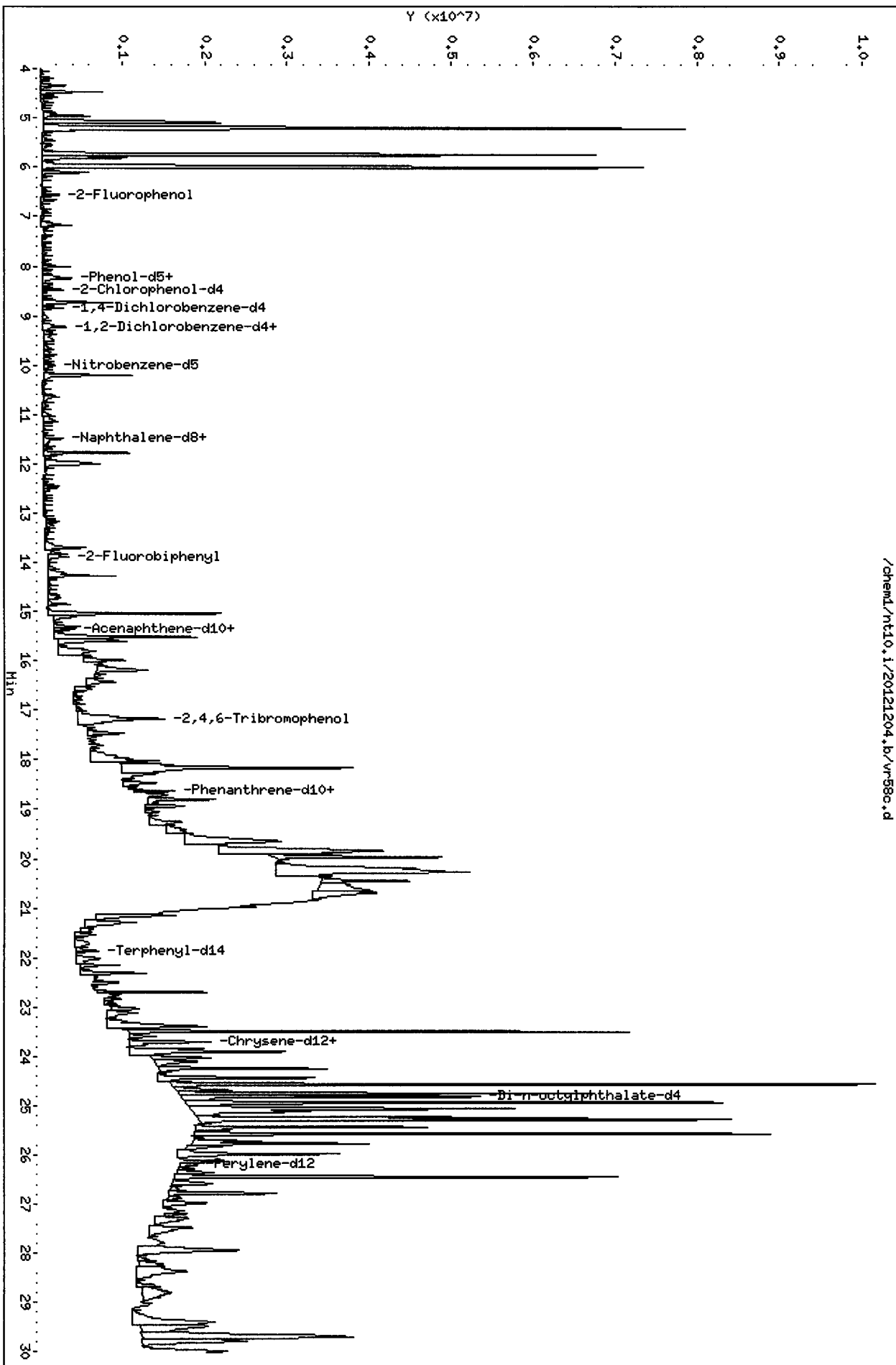
Sublist File: SHORTPSDDA.sub

Method File: /chem1/nt10.i/20121204.b/ABN.m

Misc Info: 12-22331

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	733.1	588.6	80.29	30-160
\$ 2 Phenol-d5	733.1	729.6	99.51	30-160
\$ 5 2-Chlorophenol-d4	733.1	498.7	68.02	30-160
\$ 10 1,2-Dichlorobenzen	488.8	272.1	55.66	30-160
\$ 18 Nitrobenzene-d5	488.8	430.3	88.04	30-160
\$ 36 2-Fluorobiphenyl	488.8	283.0	57.90	30-160
\$ 55 2,4,6-Tribromophen	733.1	893.2	121.84	30-160
\$ 66 Terphenyl-d14	488.8	224.9	46.02	30-160

/chem1/nt10.i/20121204.b/vr58c.d



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

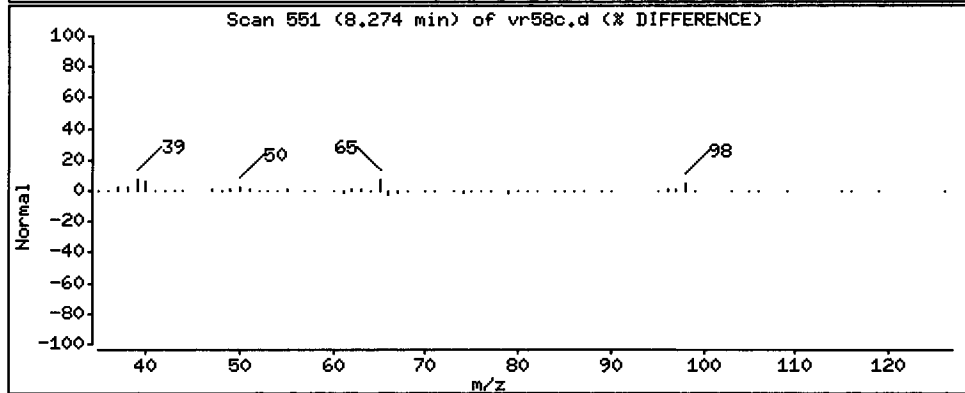
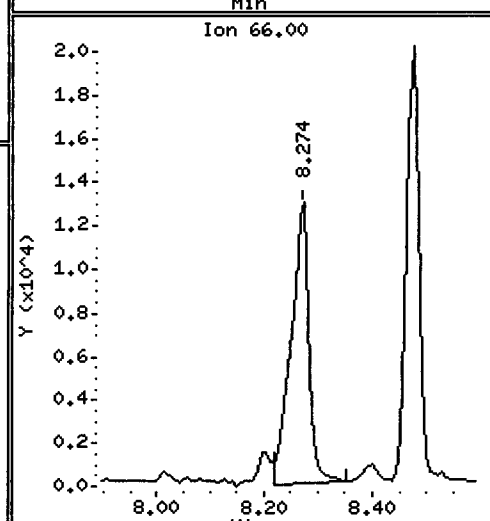
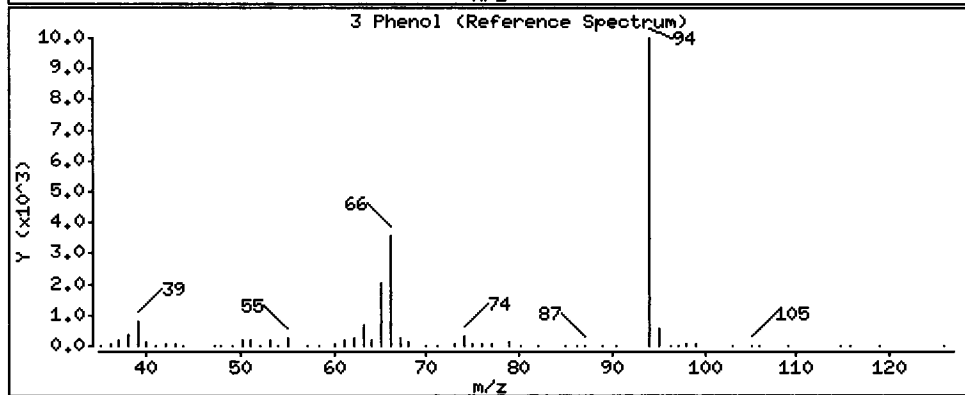
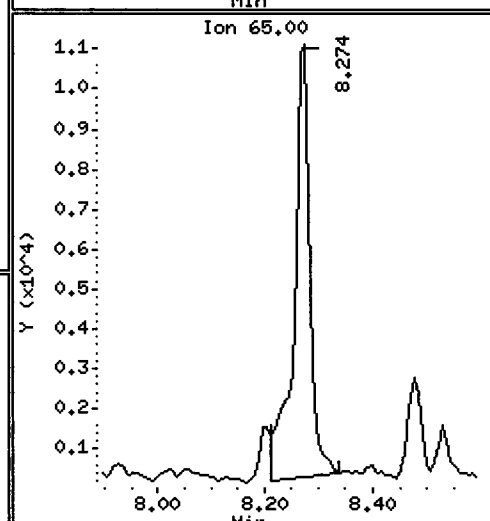
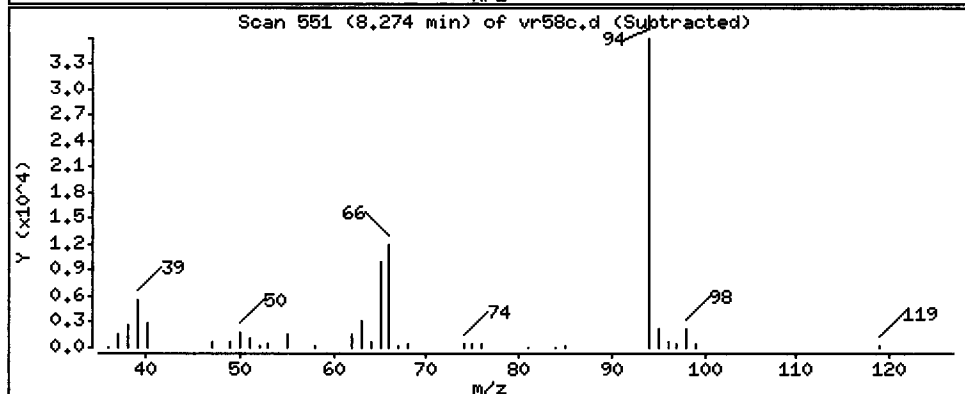
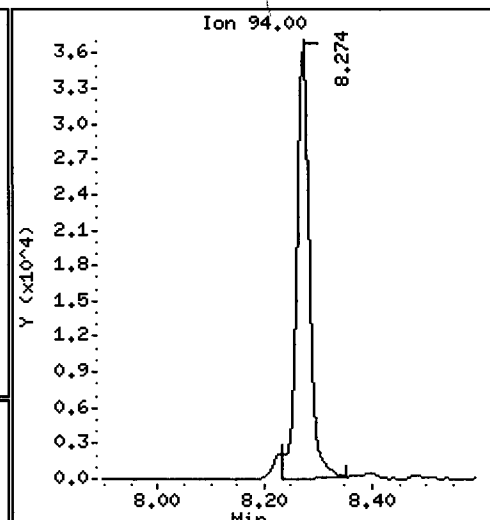
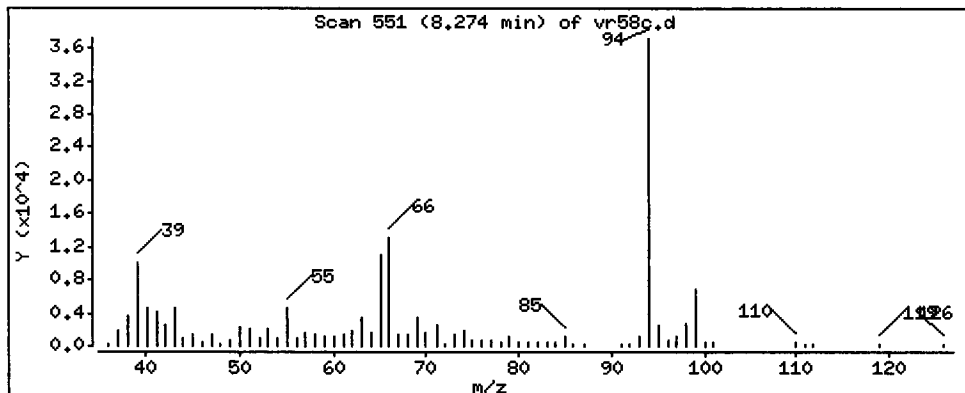
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 297.4 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

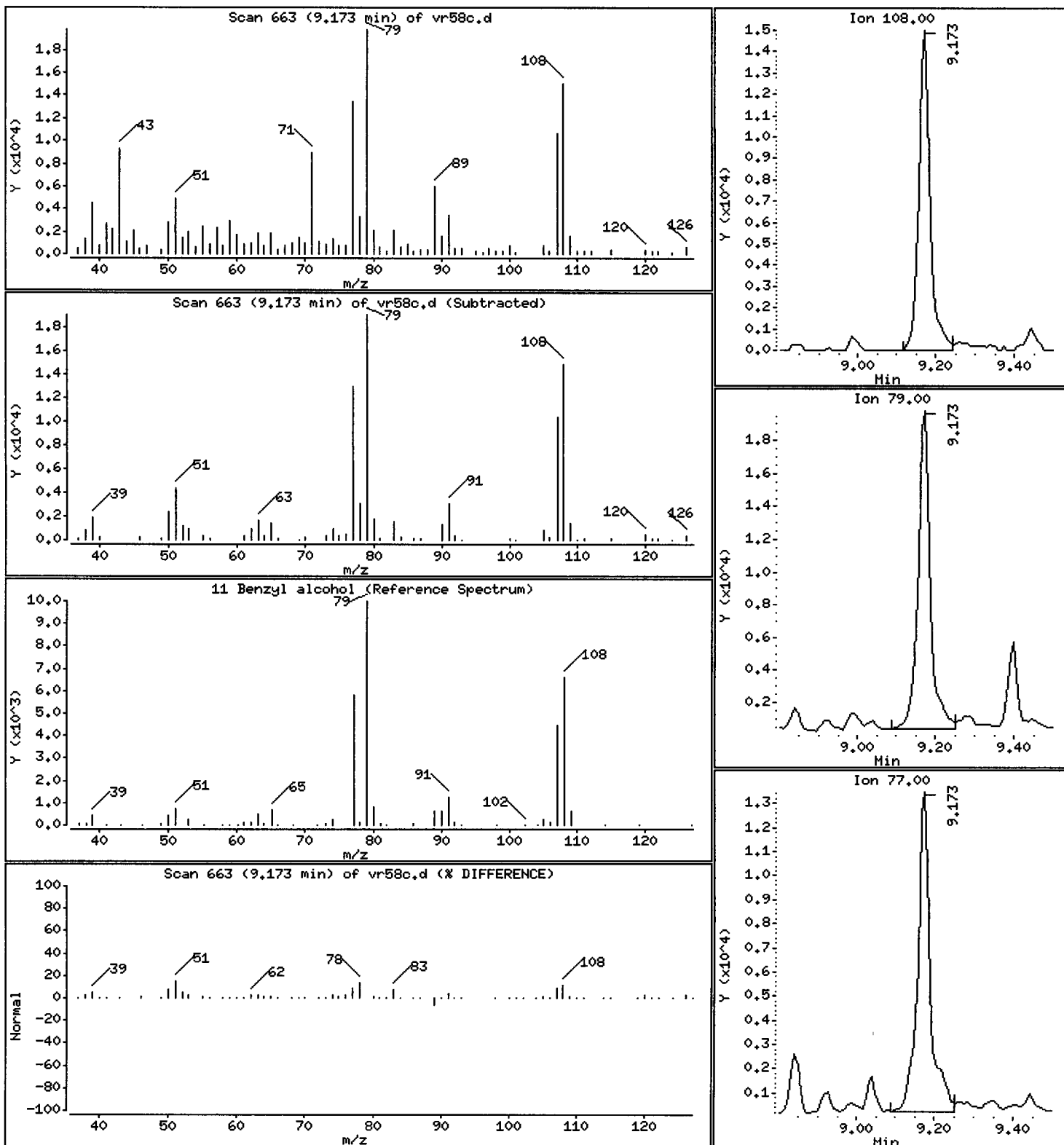
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 303.5 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

Operator: VTS/YZ

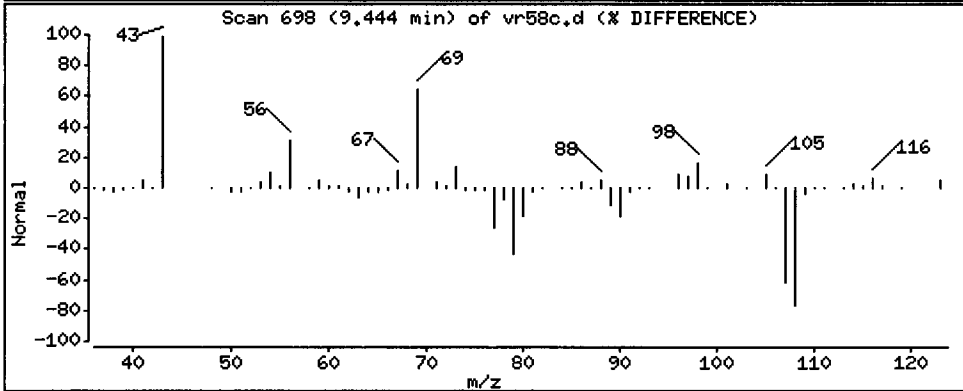
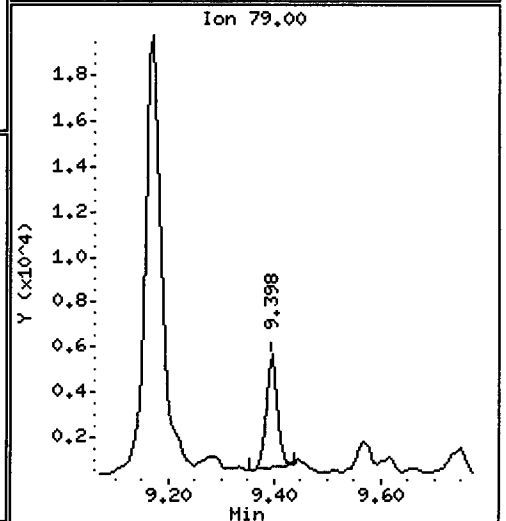
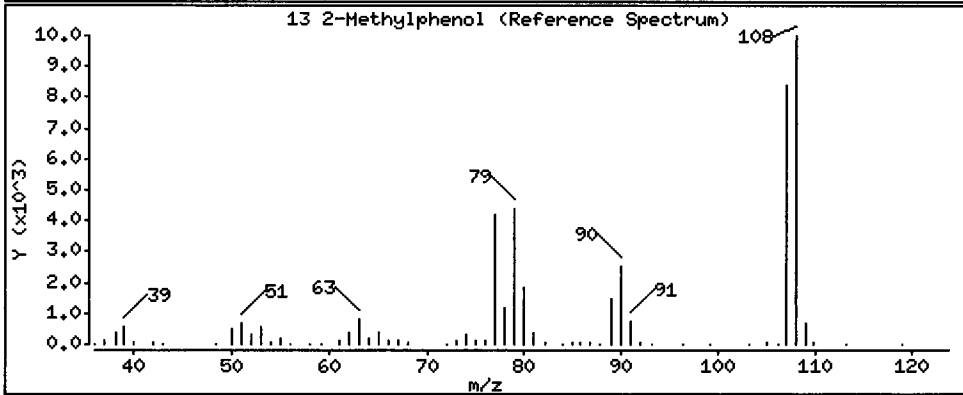
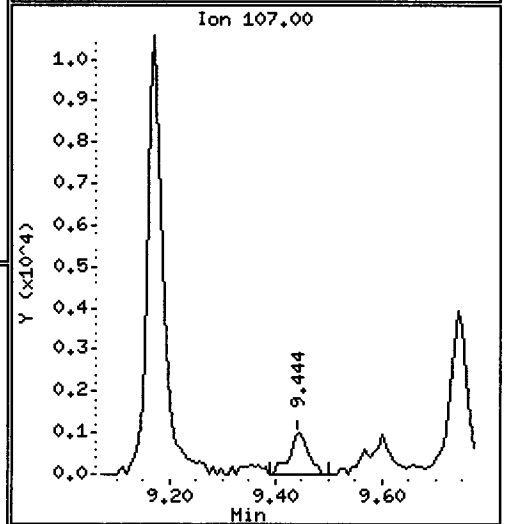
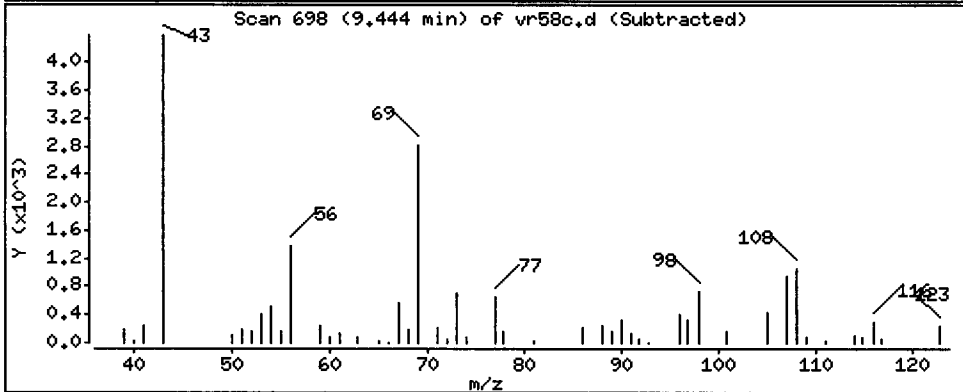
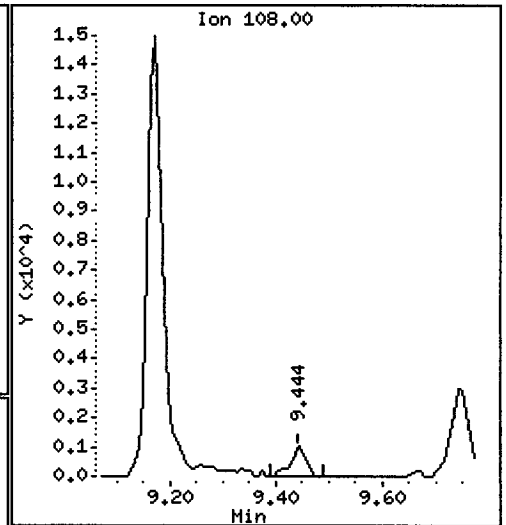
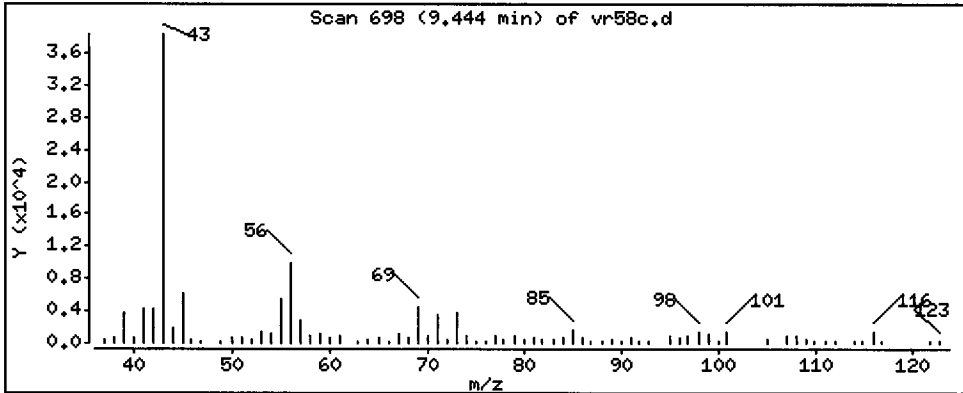
Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 11.83 ug/kg

*O.C.R*



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

Operator: VTS/YZ

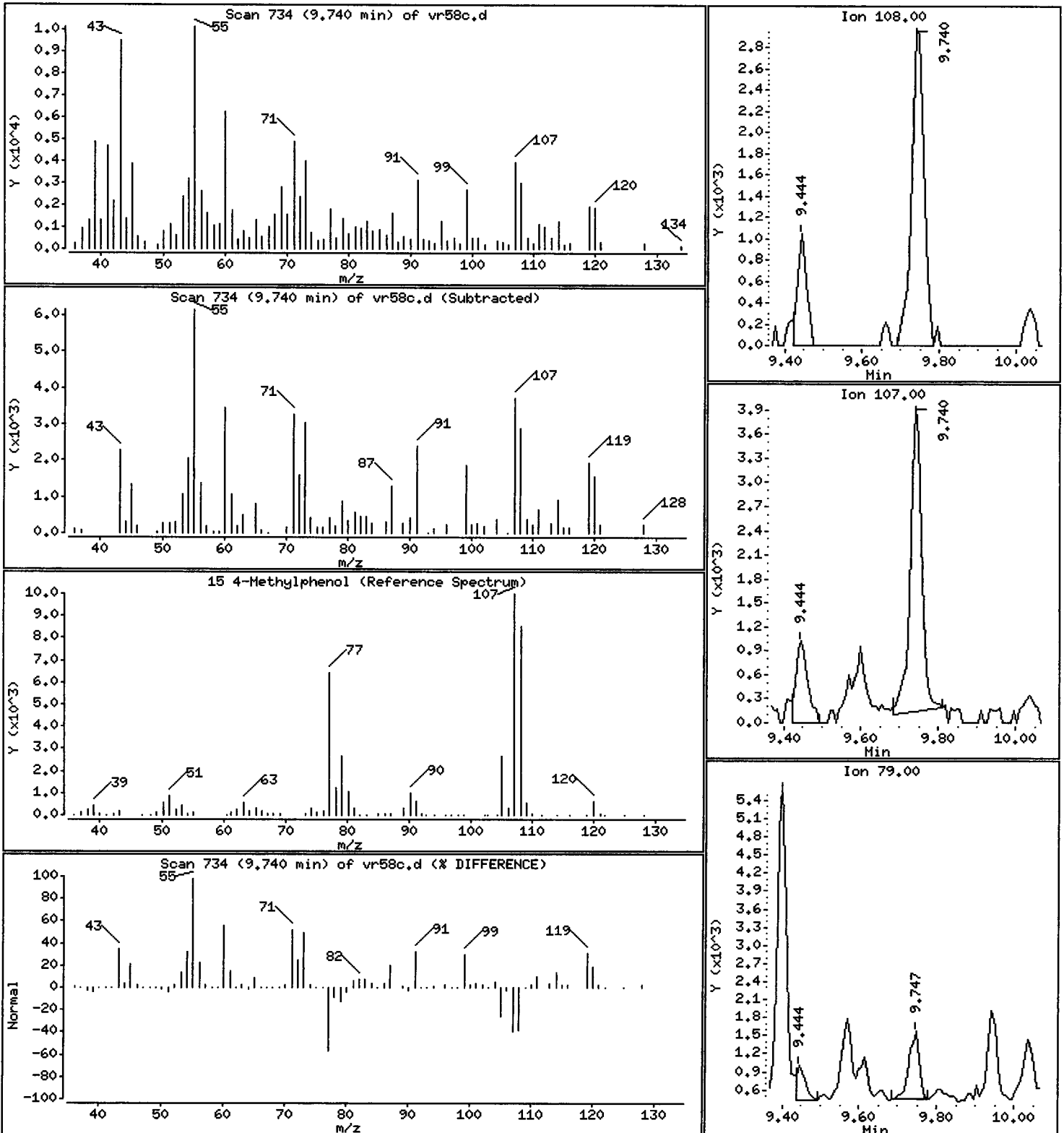
Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 74.16 ug/kg

Q



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

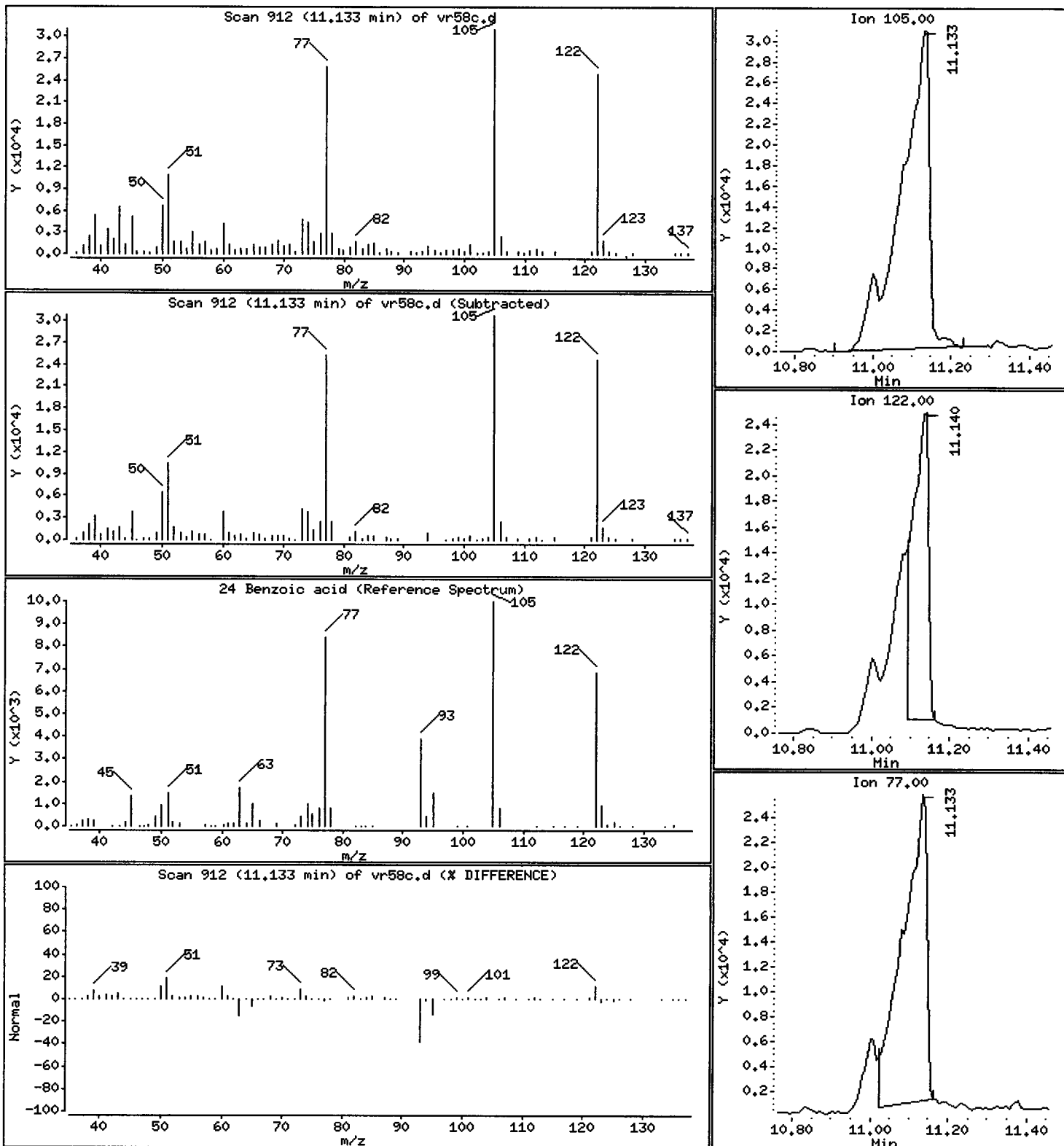
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 1540 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

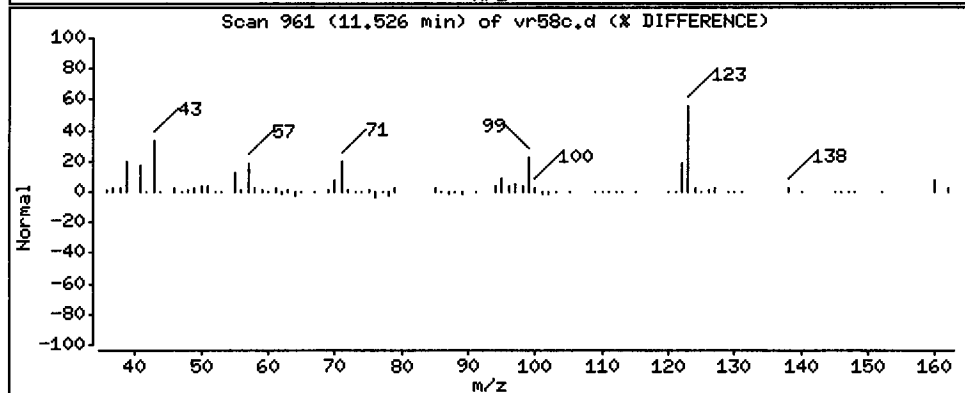
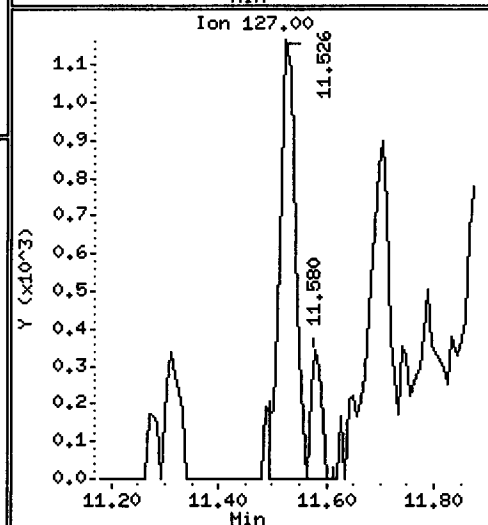
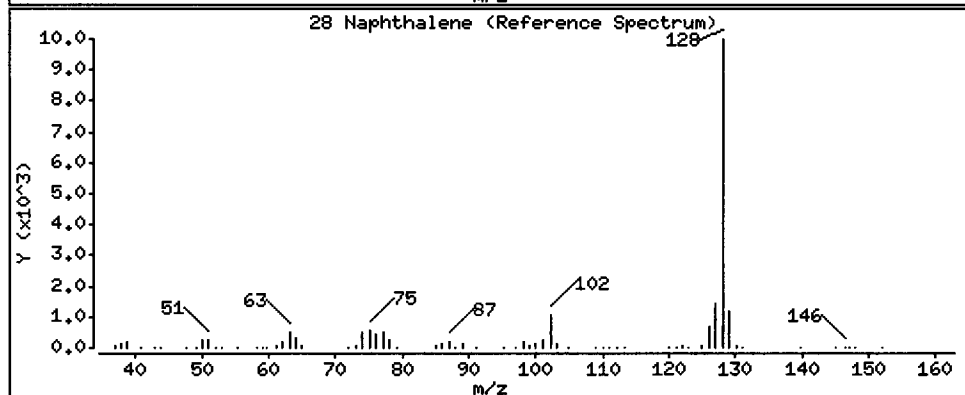
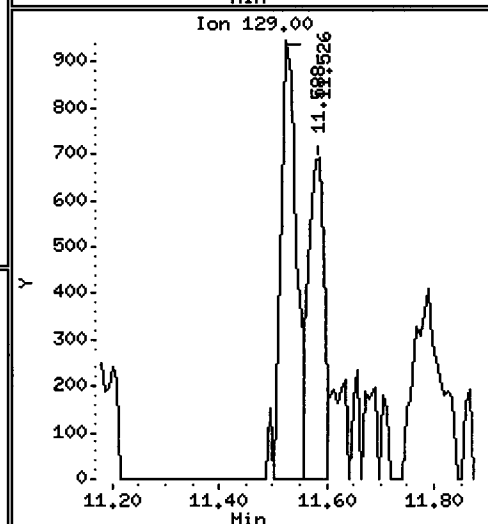
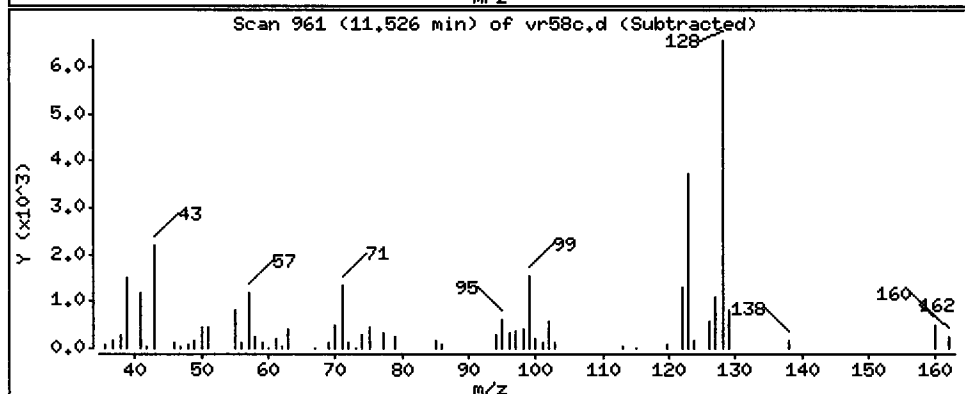
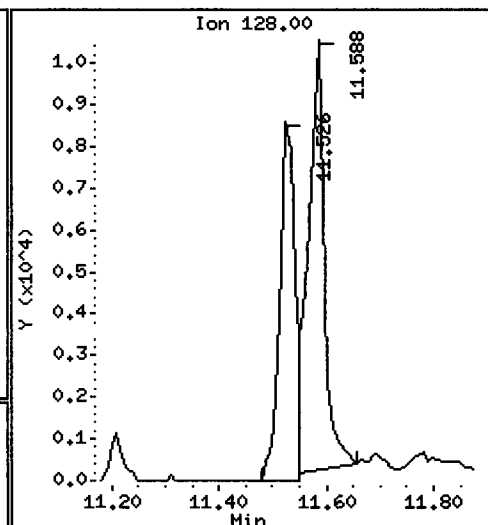
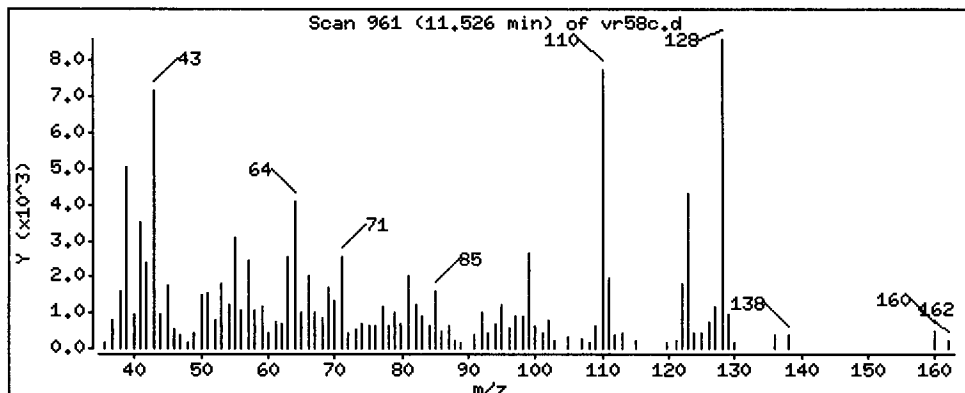
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 39,57 ug/kg





Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

Operator: VTS/YZ

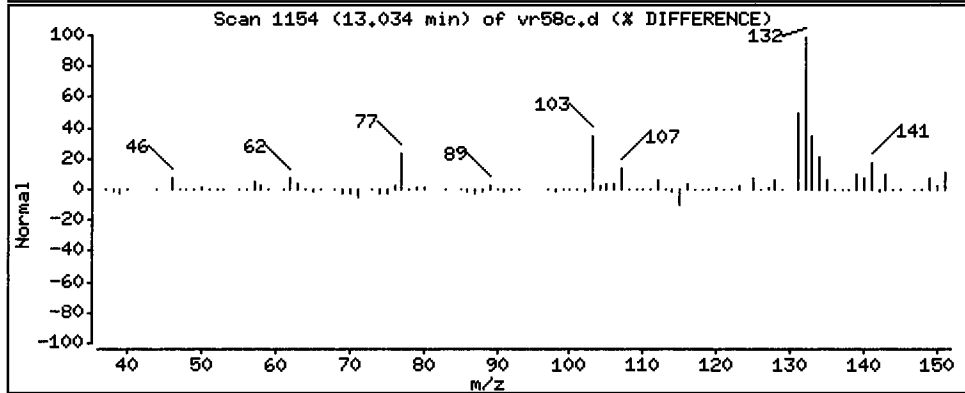
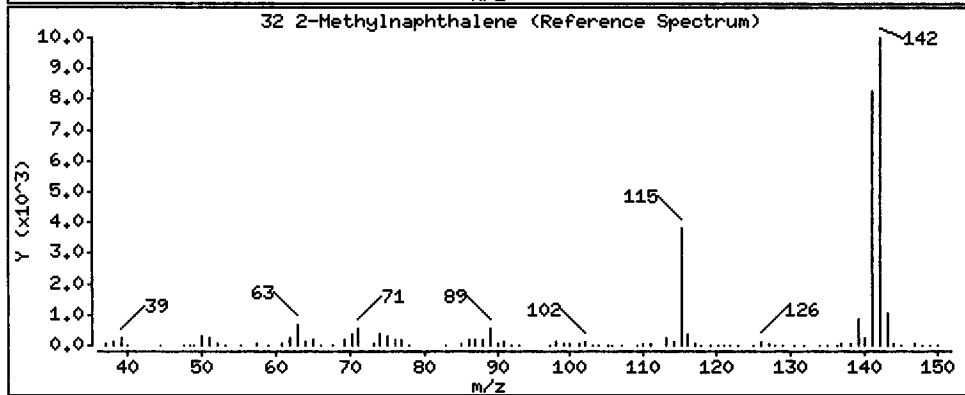
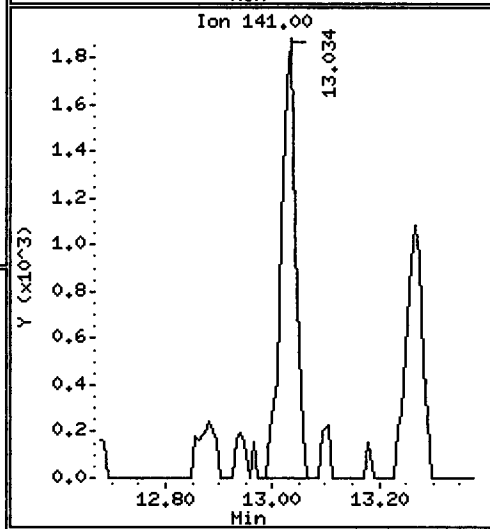
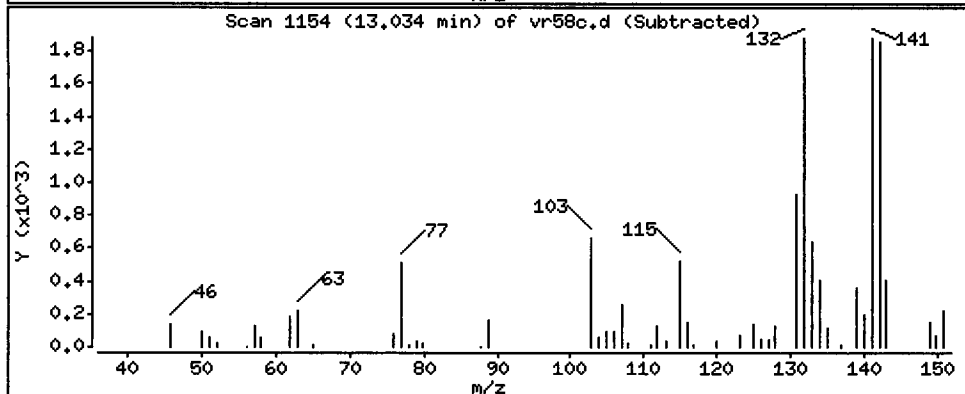
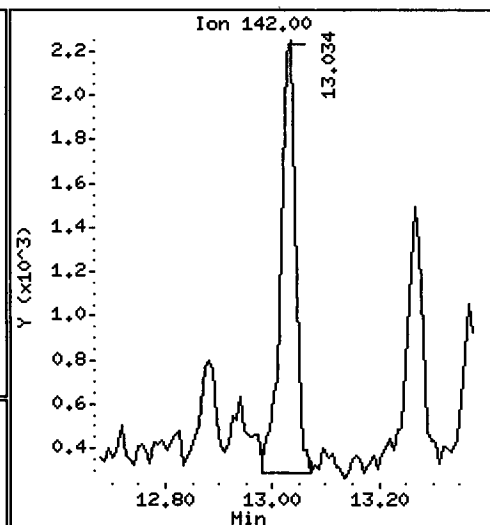
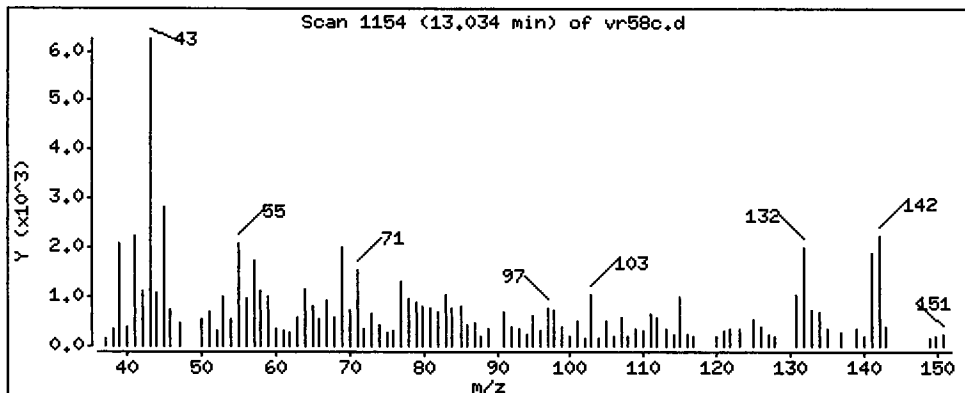
Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 12.21 ug/kg

*TJ, CRL*



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

Operator: VTS/YZ

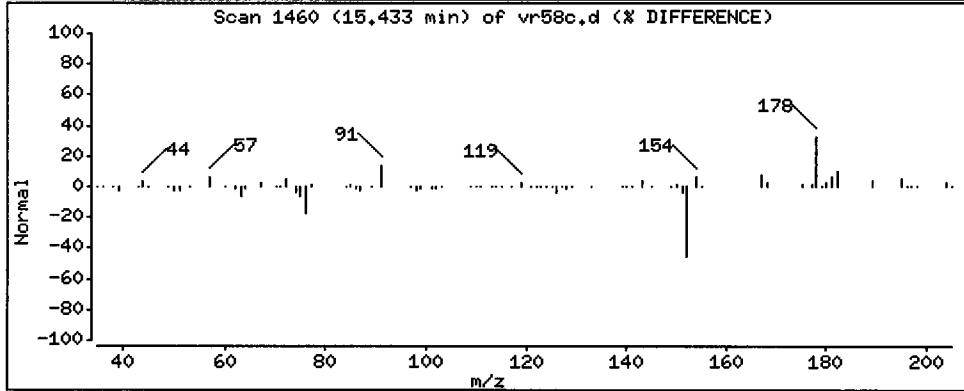
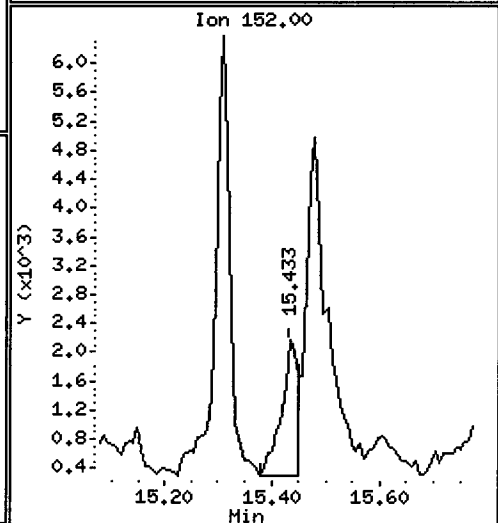
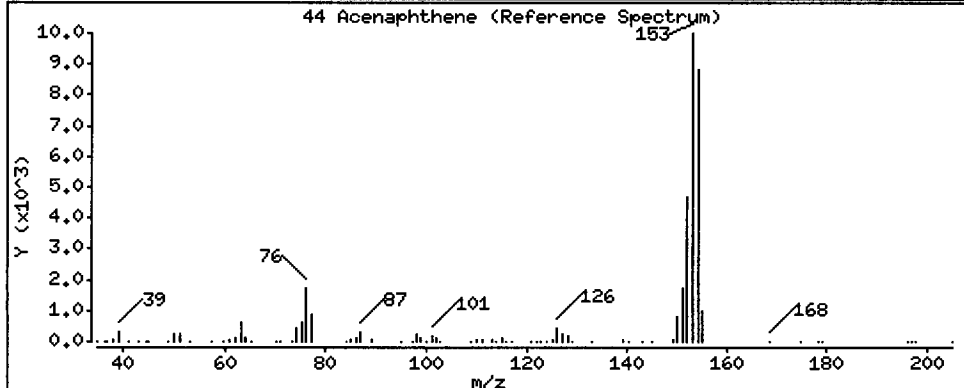
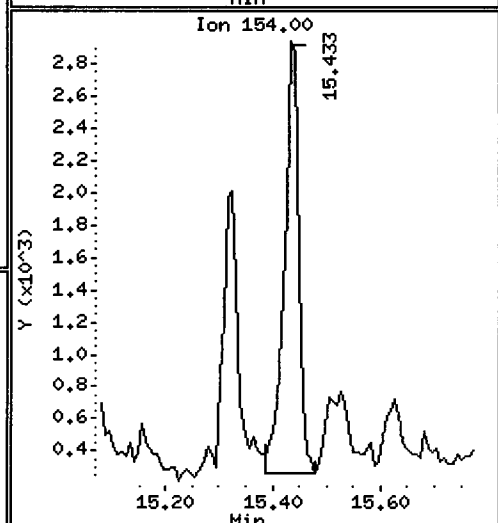
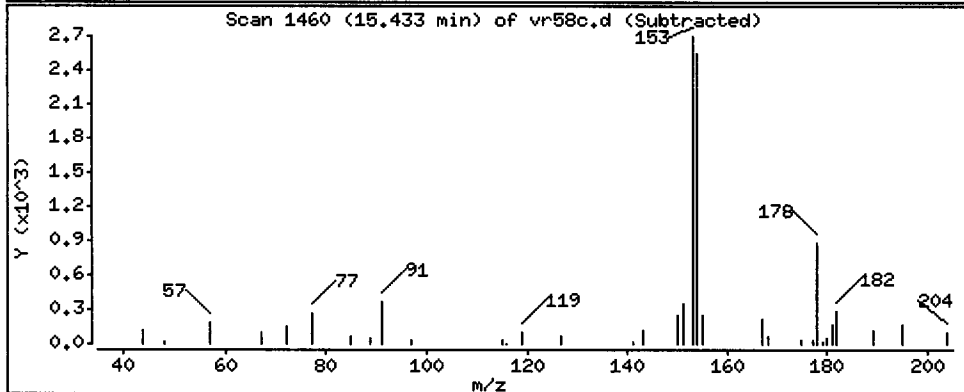
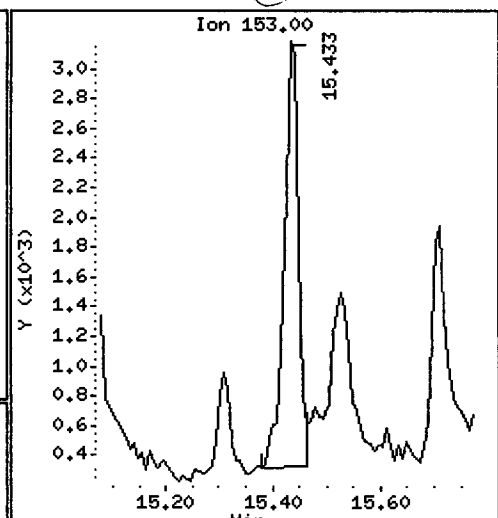
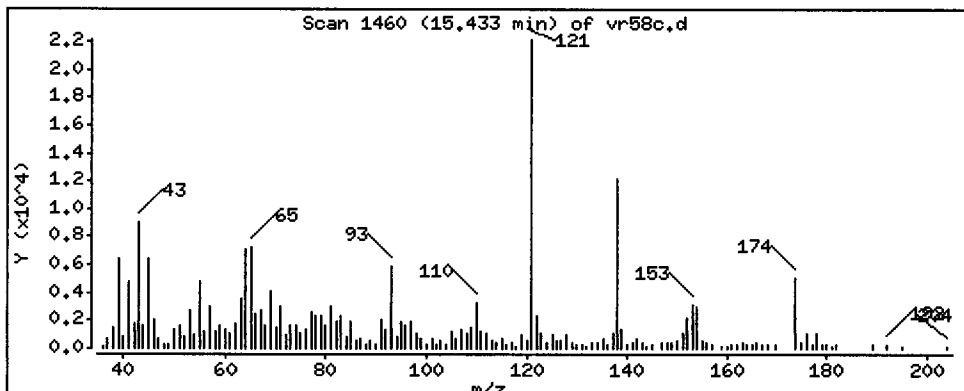
Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 17.13 ug/kg

*OCRI*



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

Operator: VTS/YZ

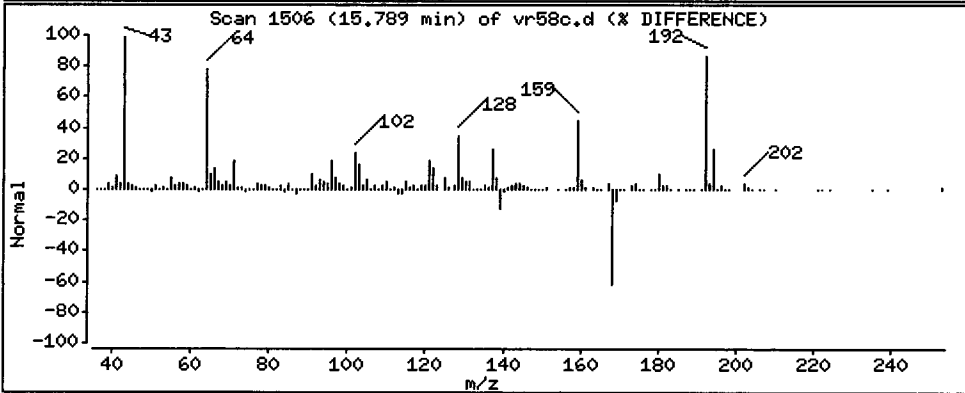
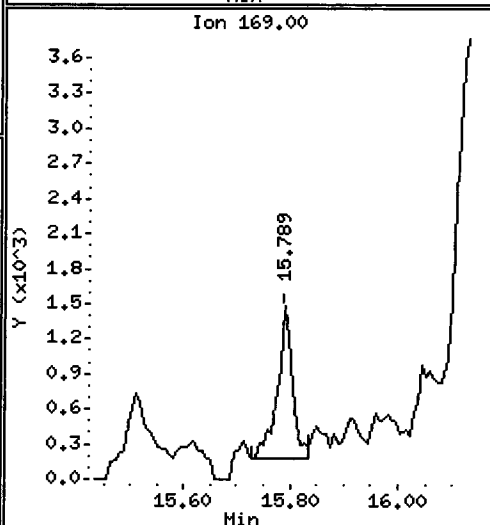
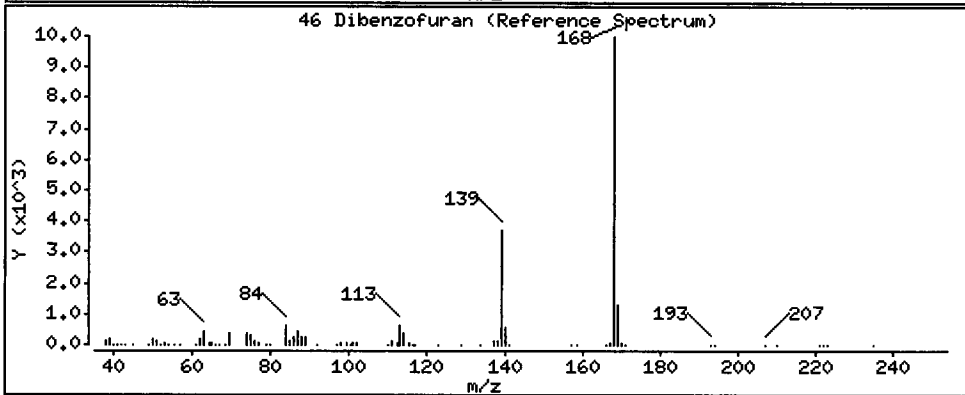
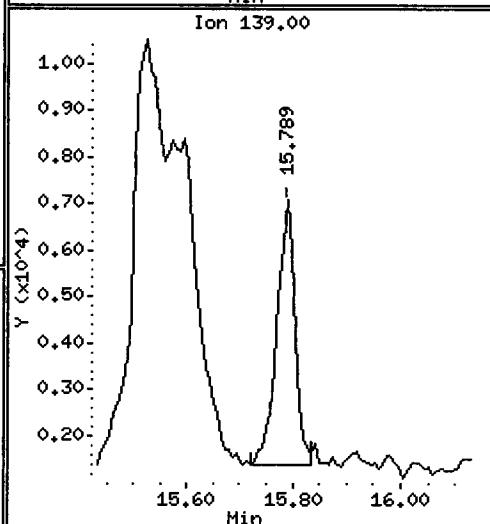
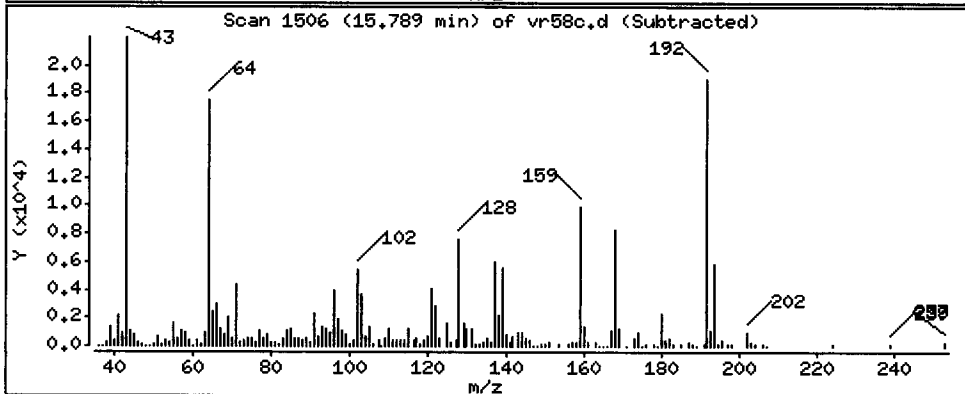
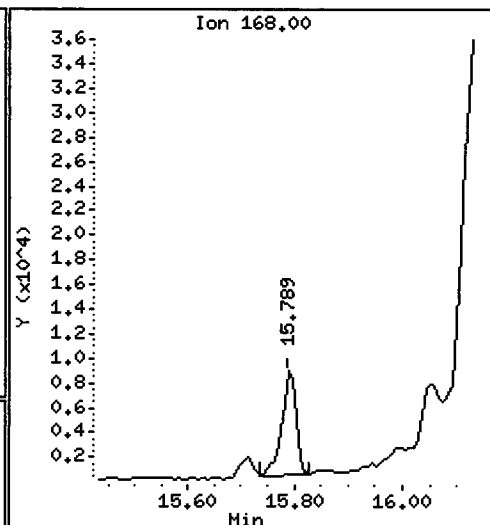
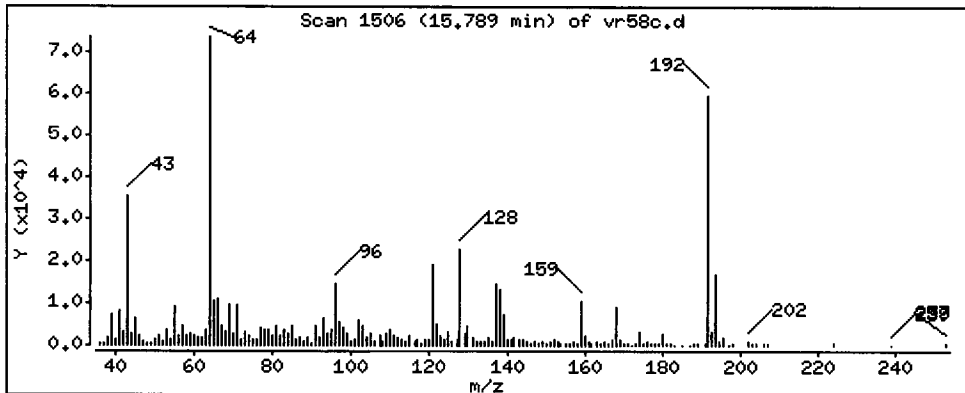
Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 35.58 ug/kg

3



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

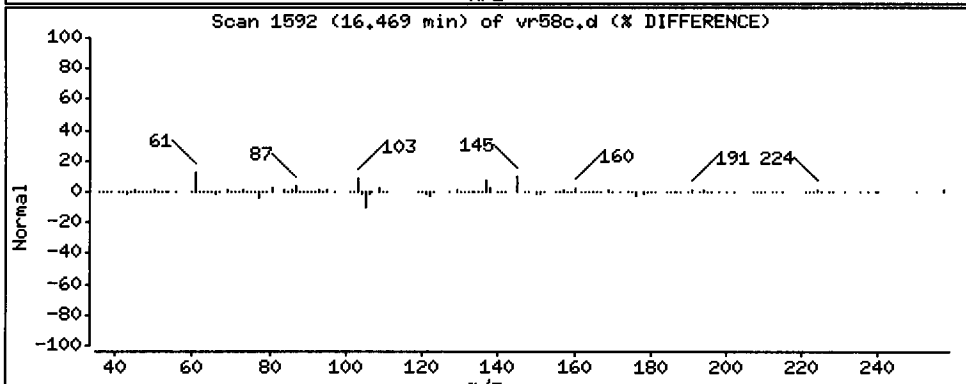
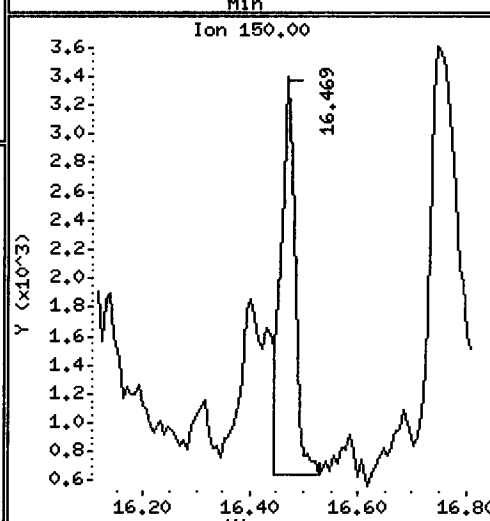
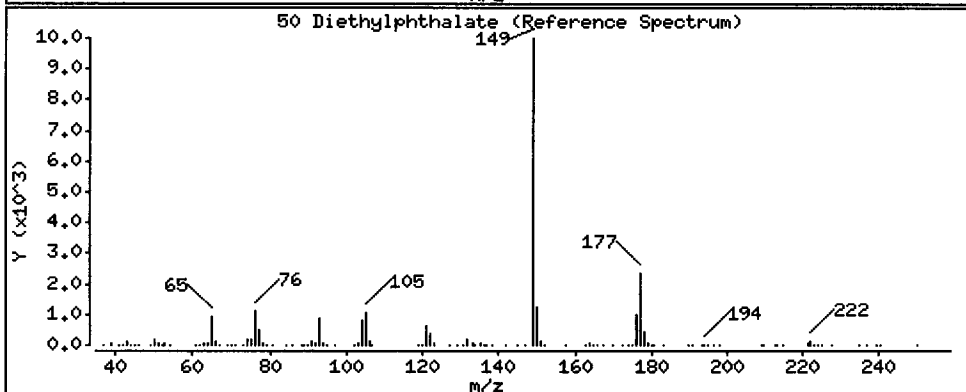
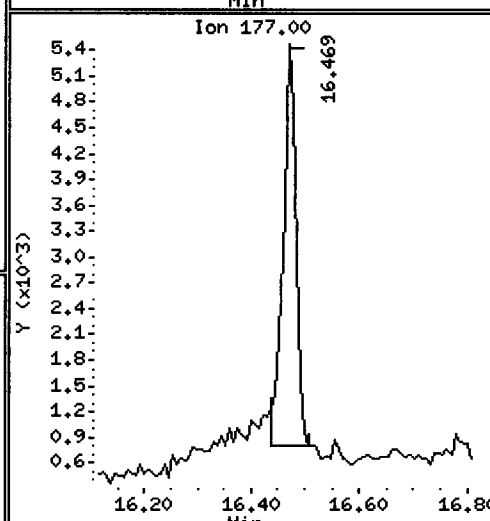
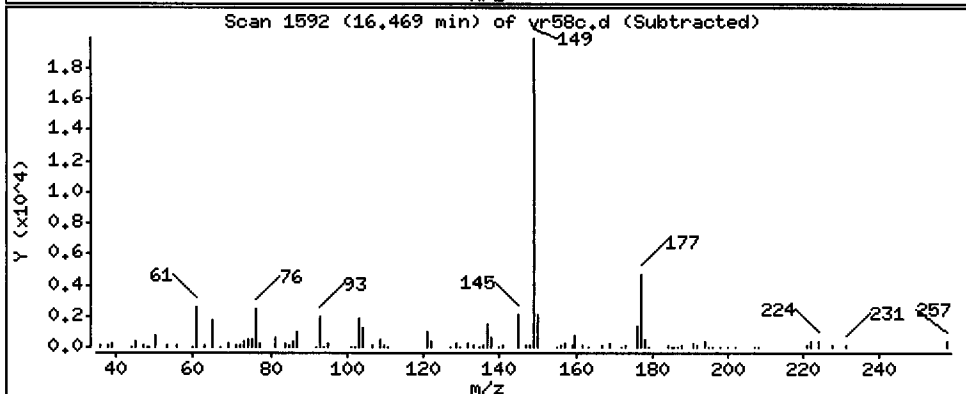
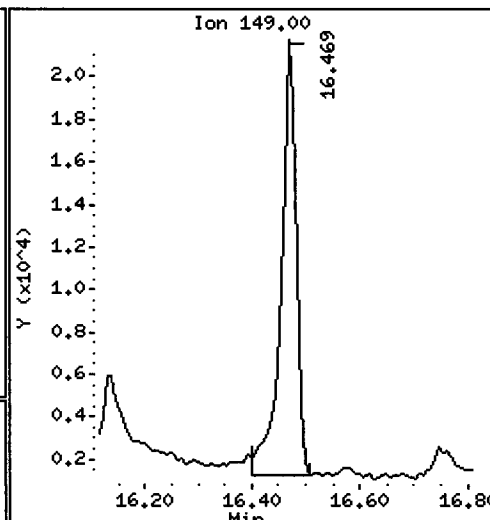
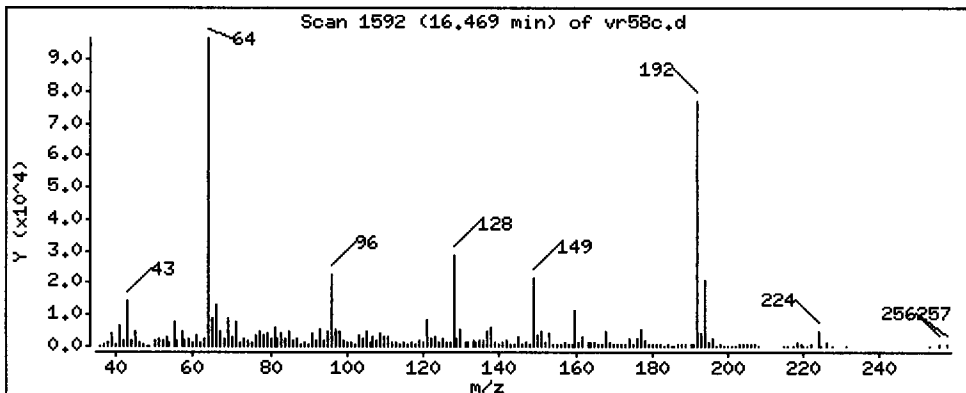
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 103.4 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

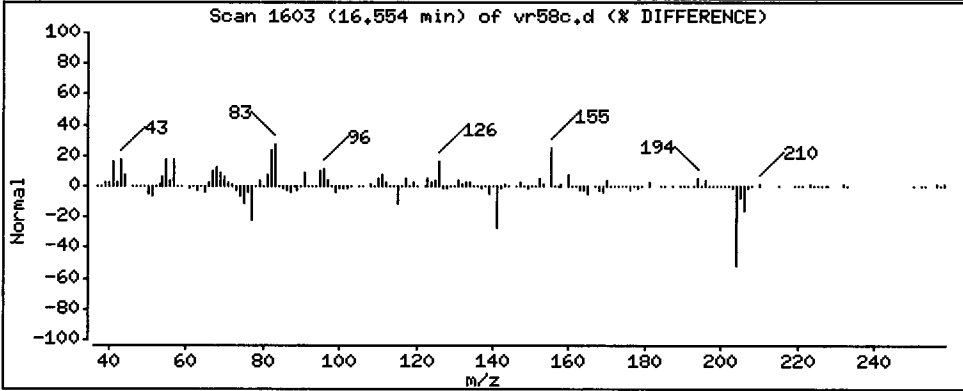
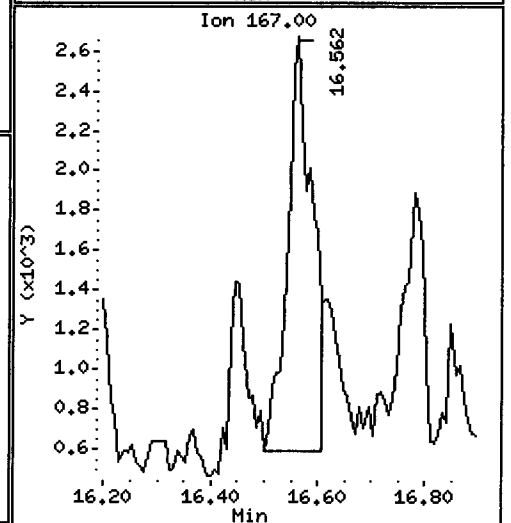
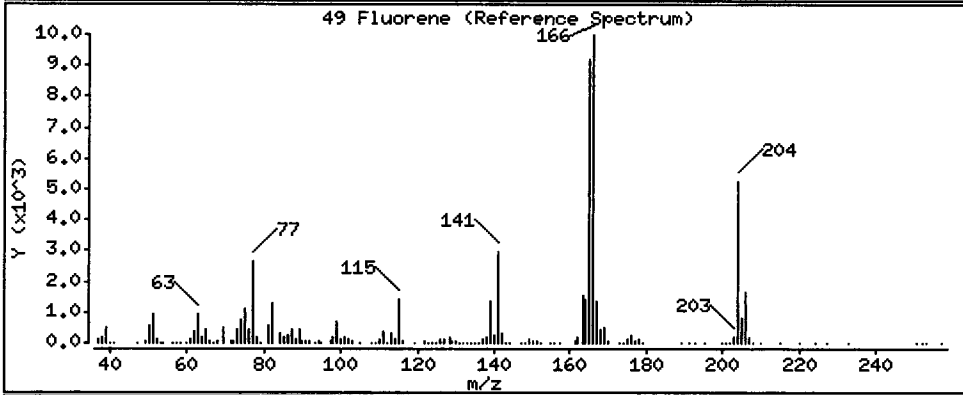
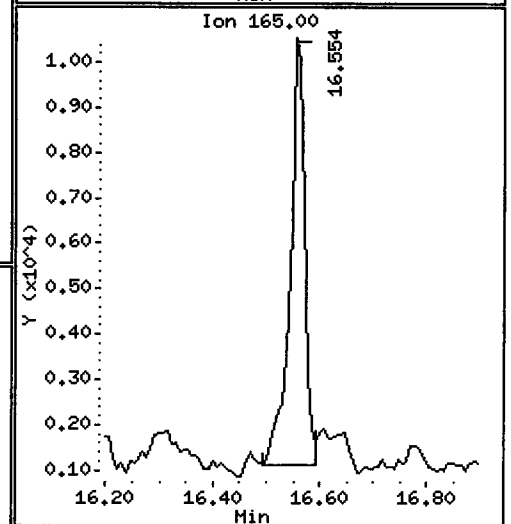
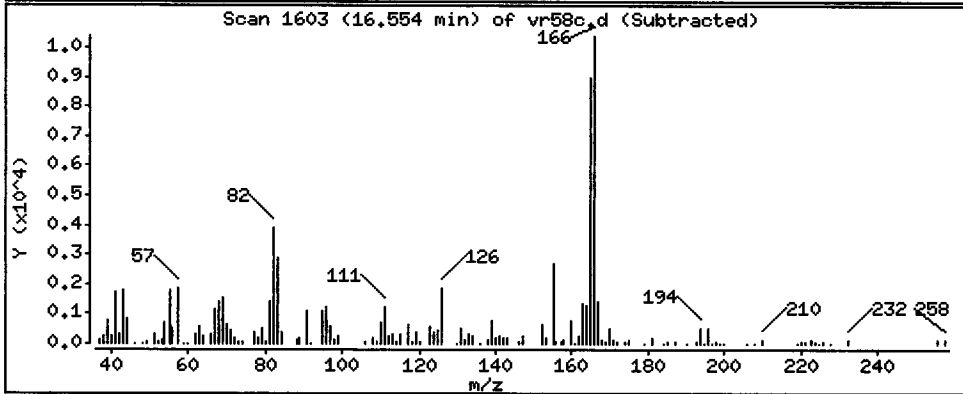
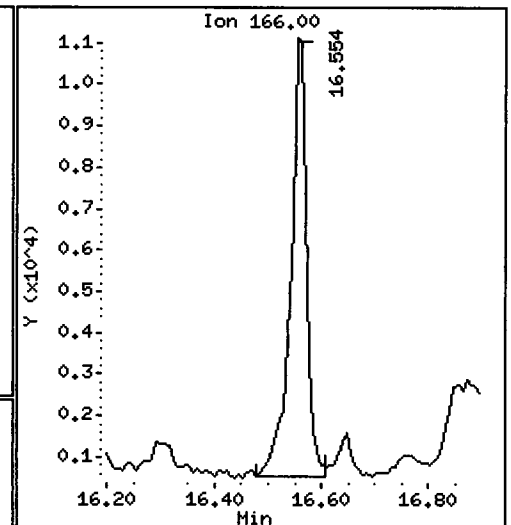
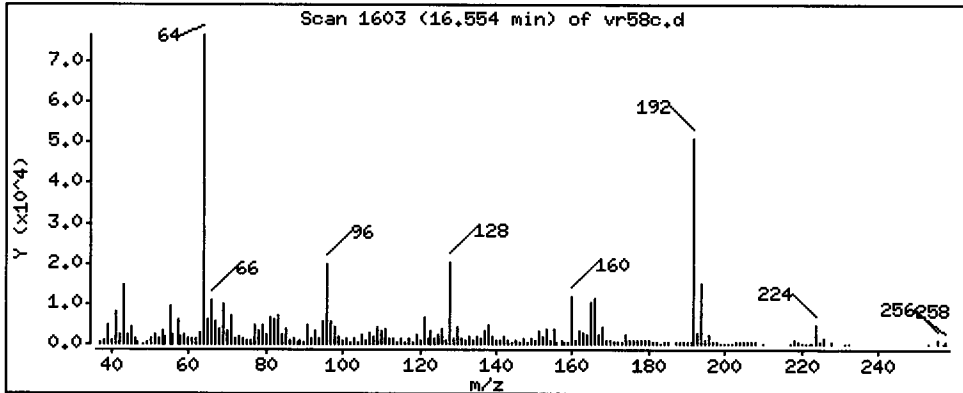
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 58.38 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

Operator: VTS/YZ

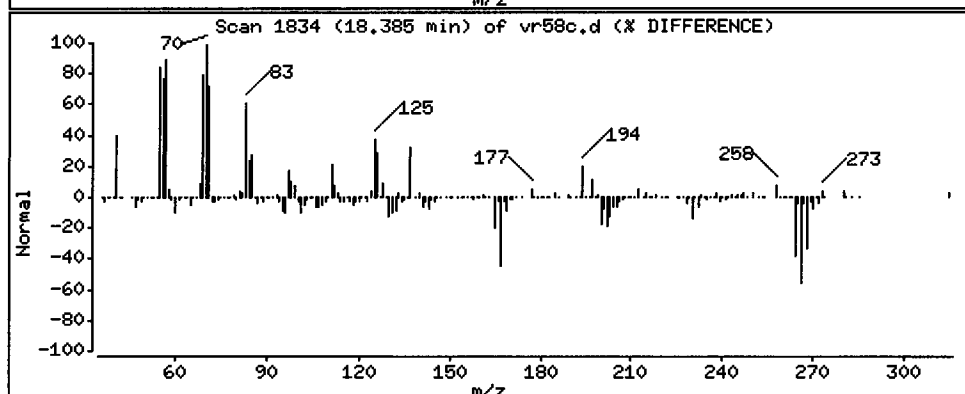
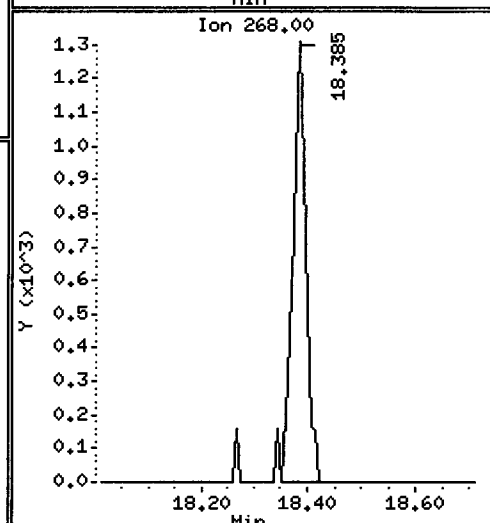
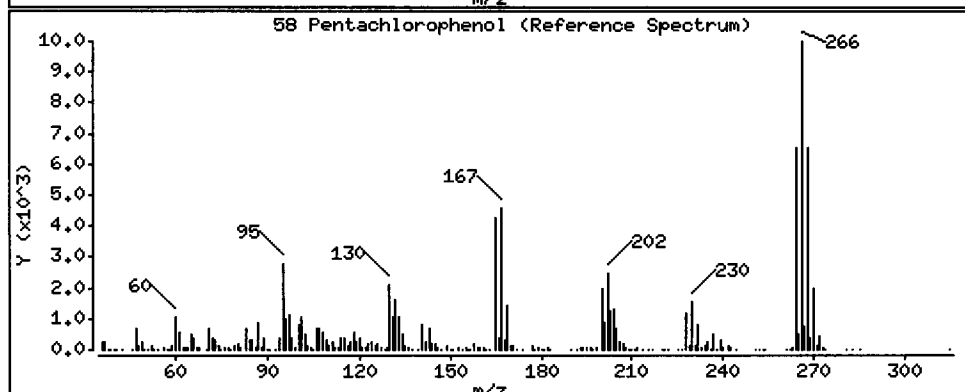
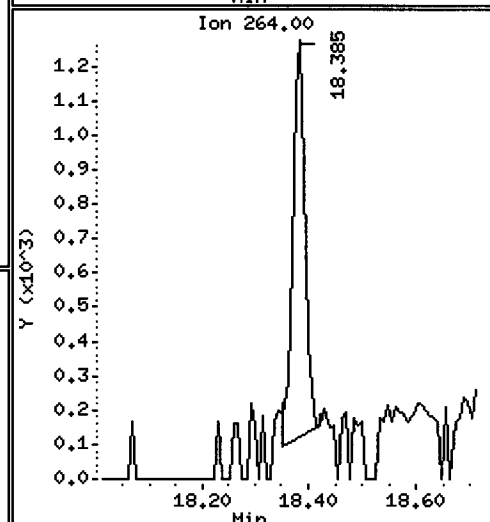
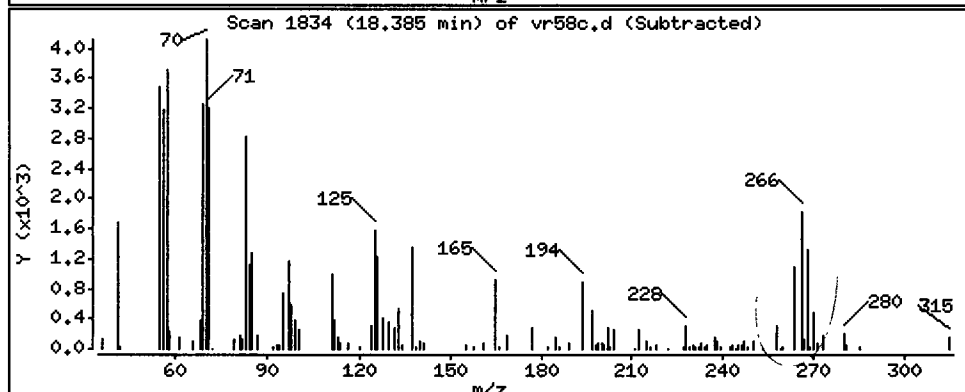
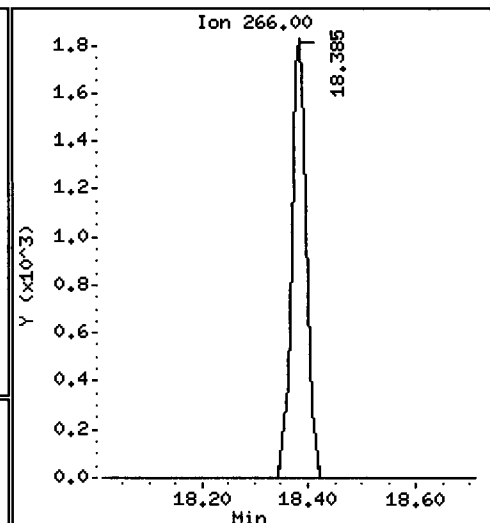
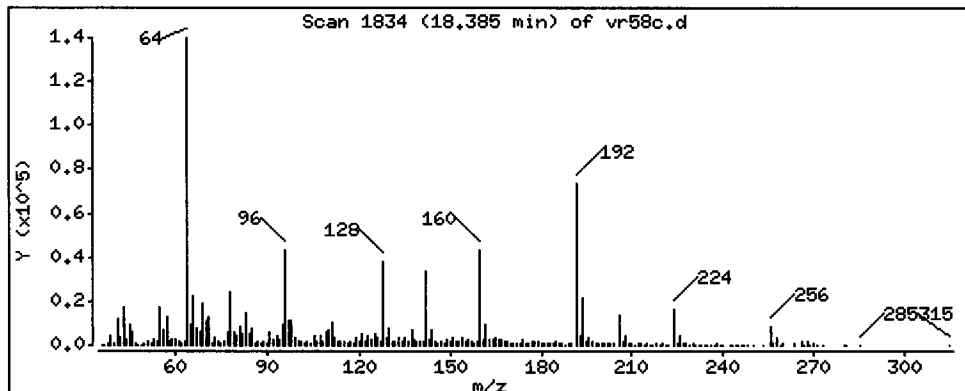
Column phase: ZB-5msi

Column diameter: 0.25

58 Pentachlorophenol

Concentration: 18.32 ug/kg

*LMPL*



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

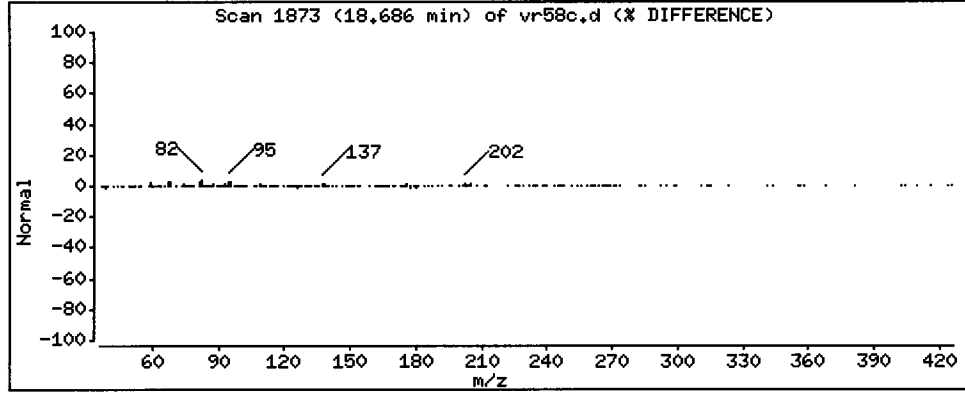
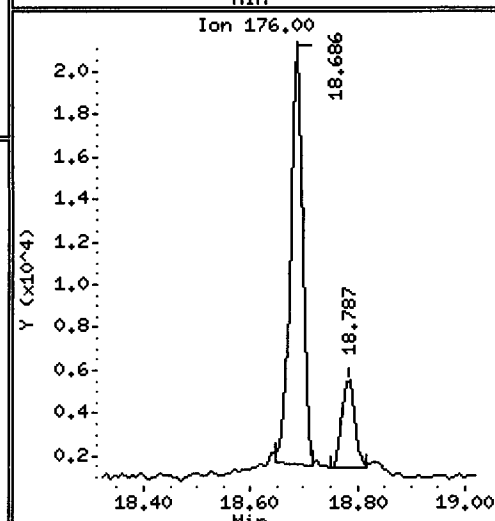
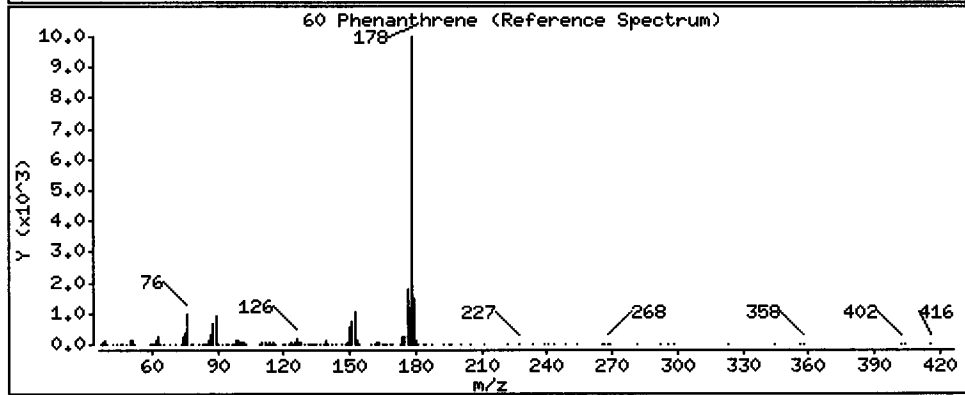
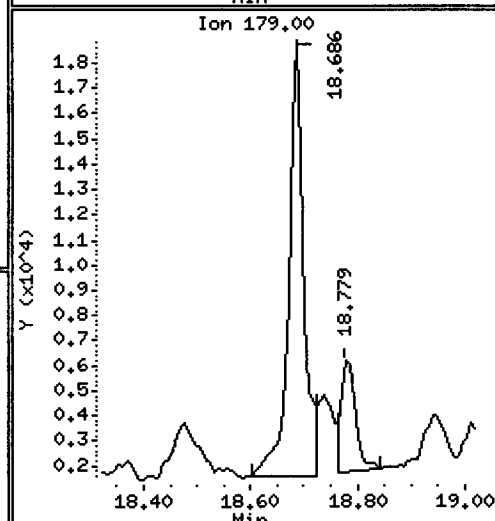
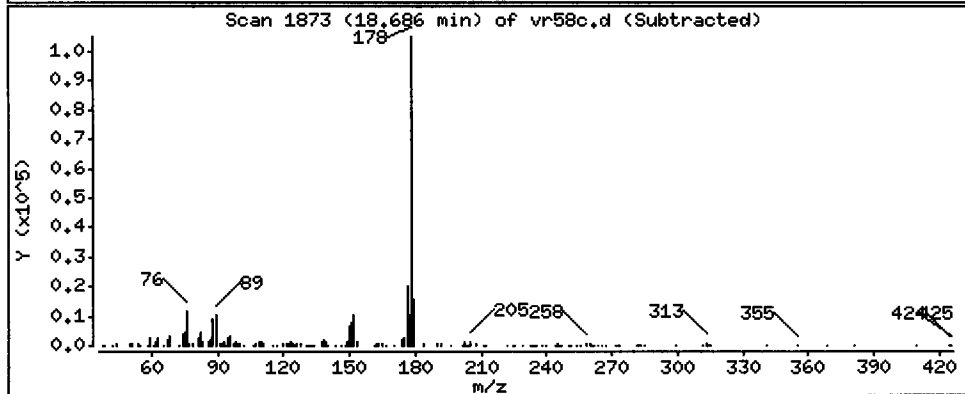
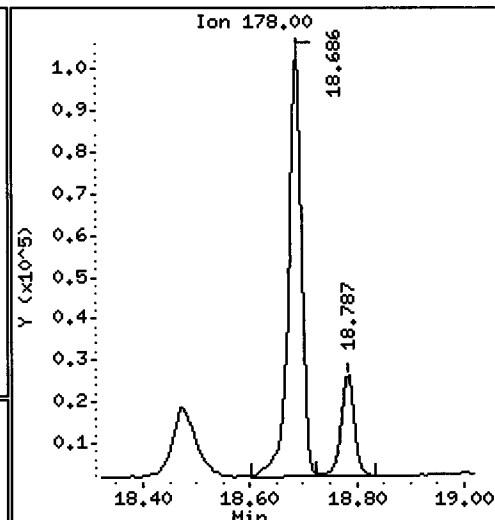
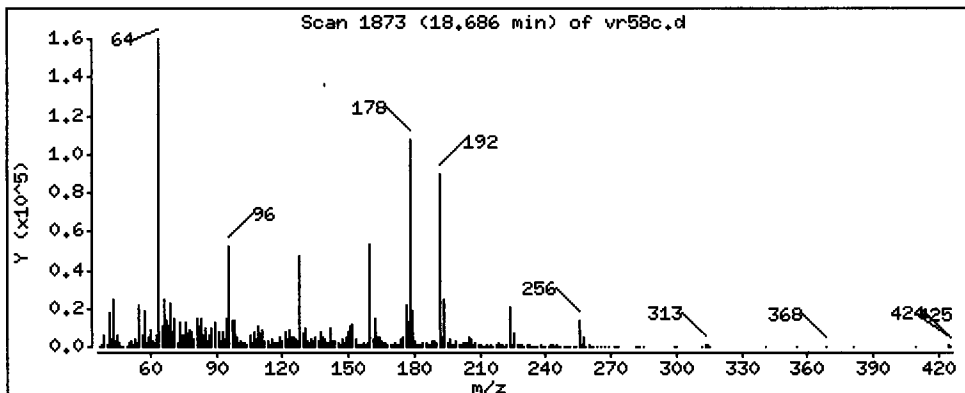
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 171.0 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

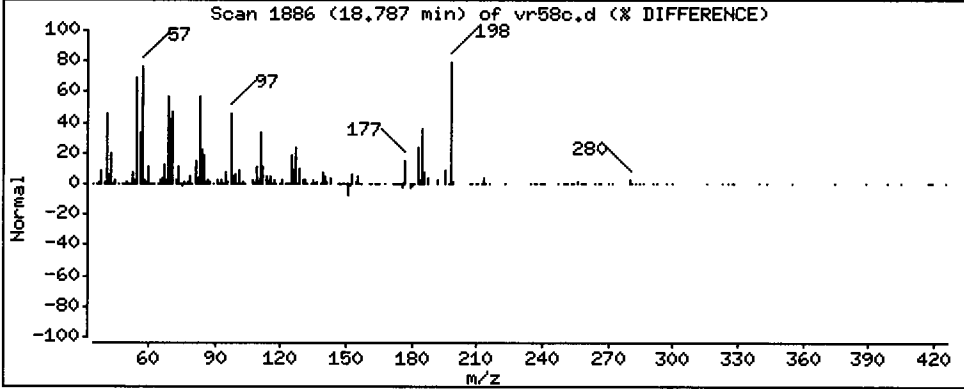
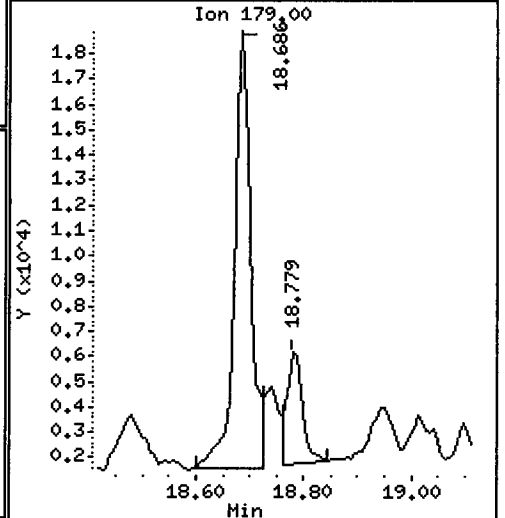
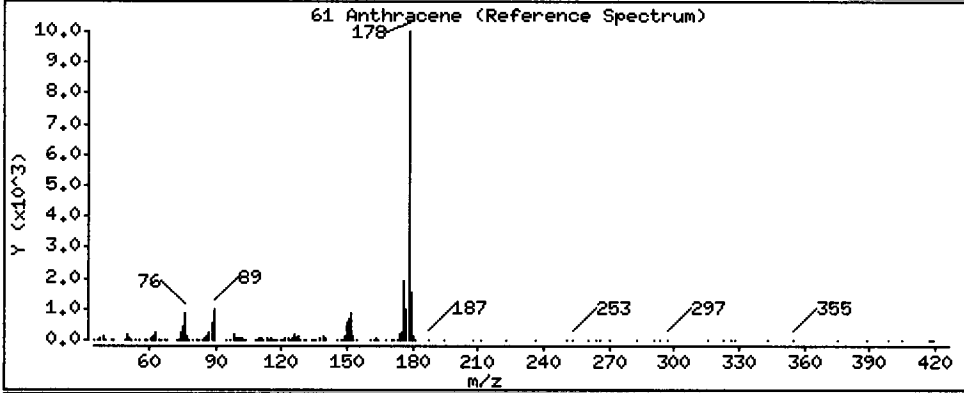
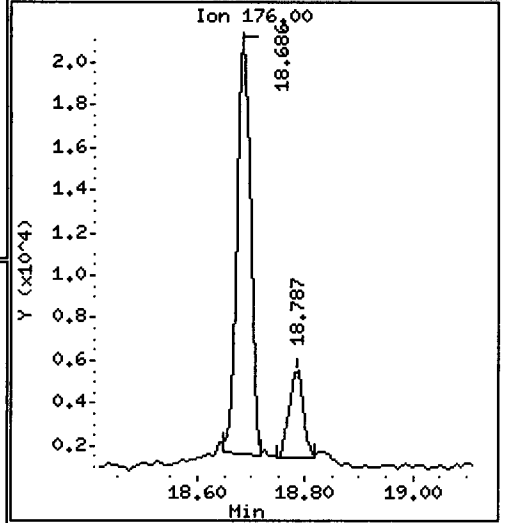
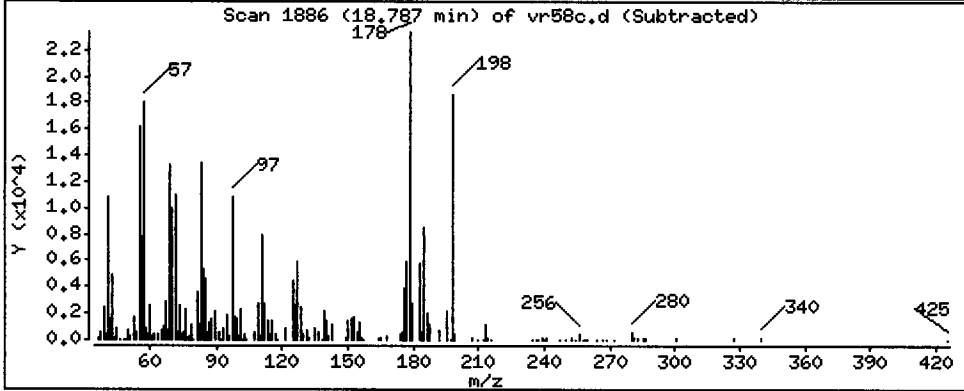
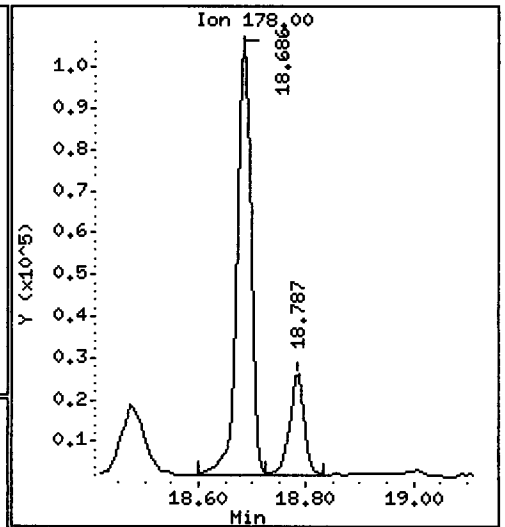
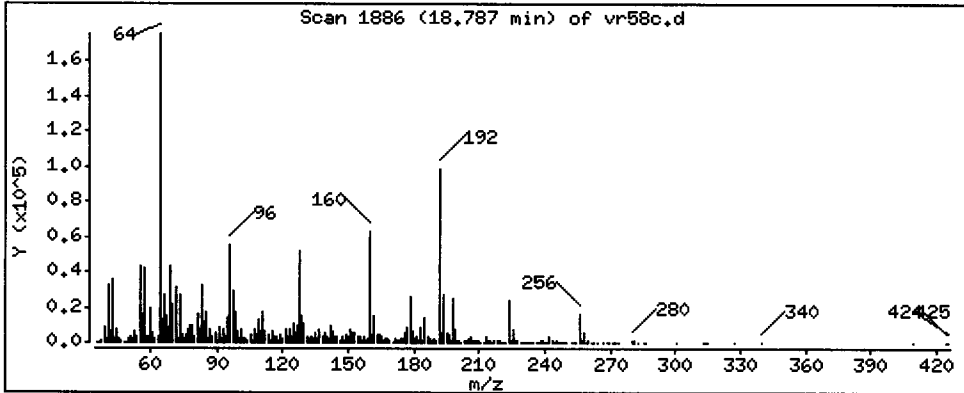
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 40.70 ug/kg





Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

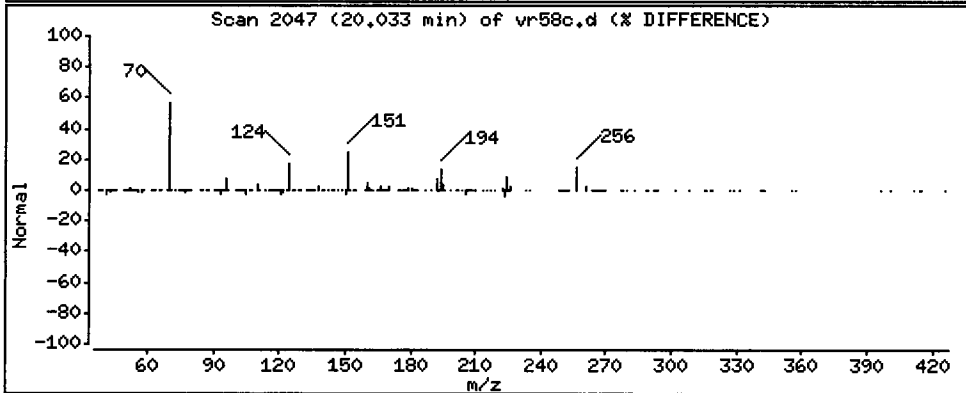
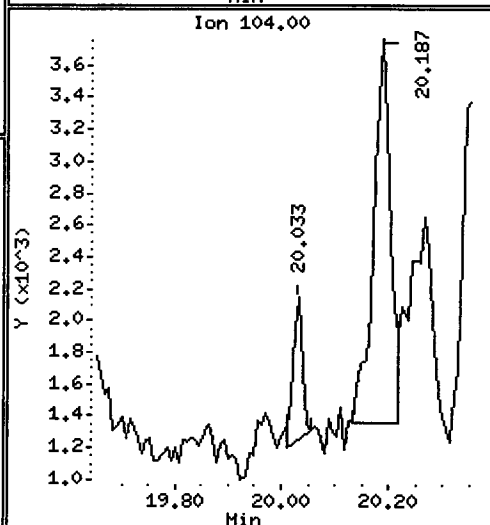
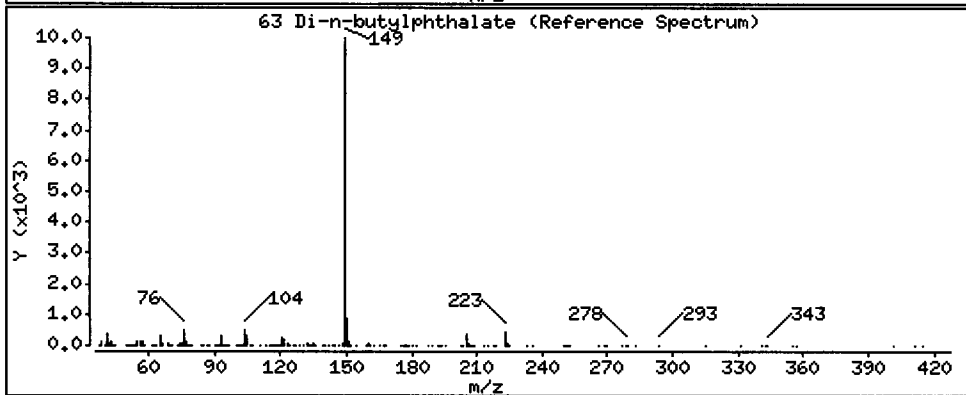
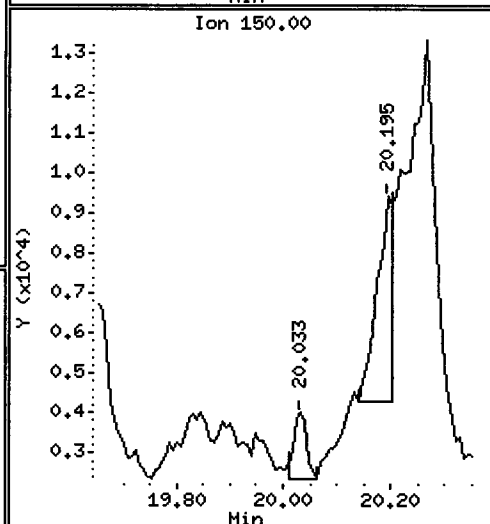
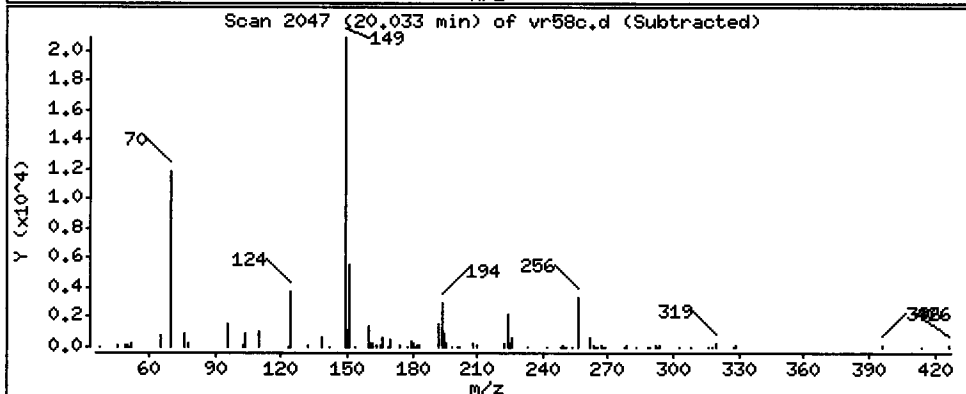
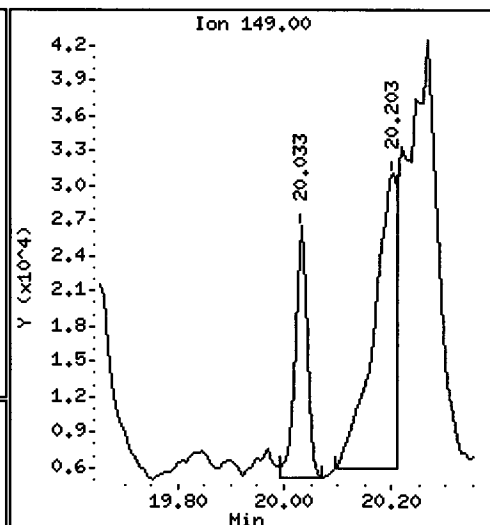
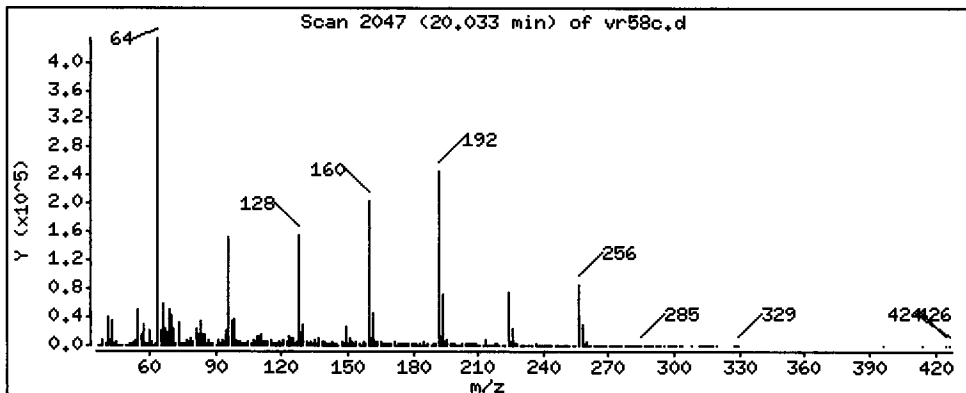
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

63 Di-n-butylphthalate

Concentration: 26.42 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

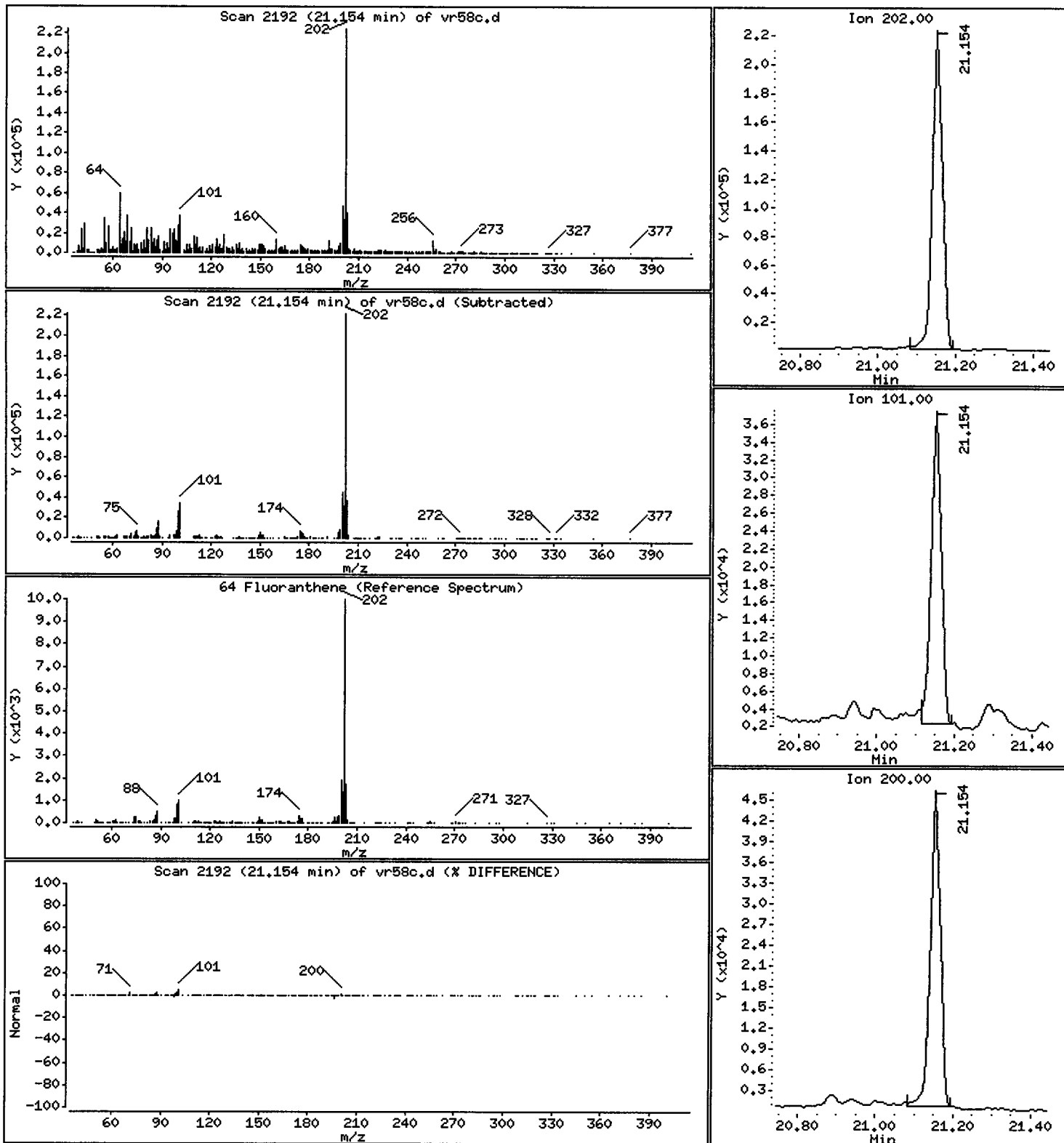
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 295.0 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

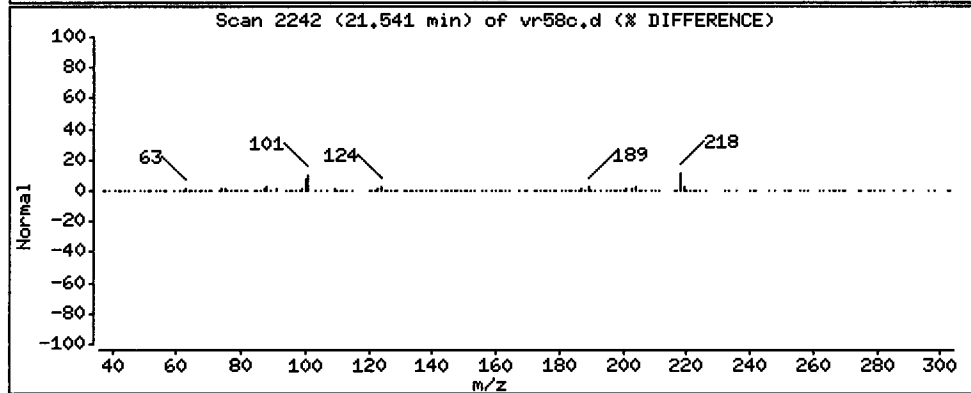
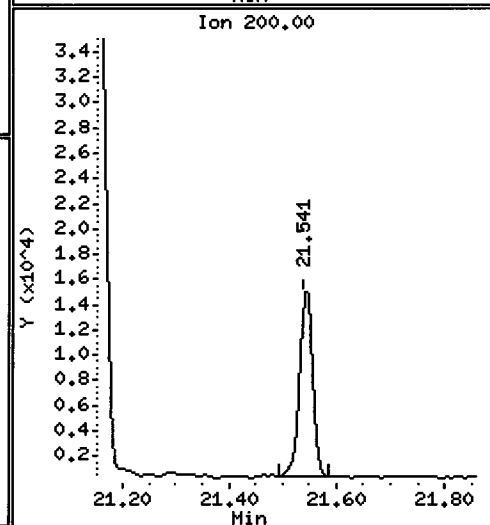
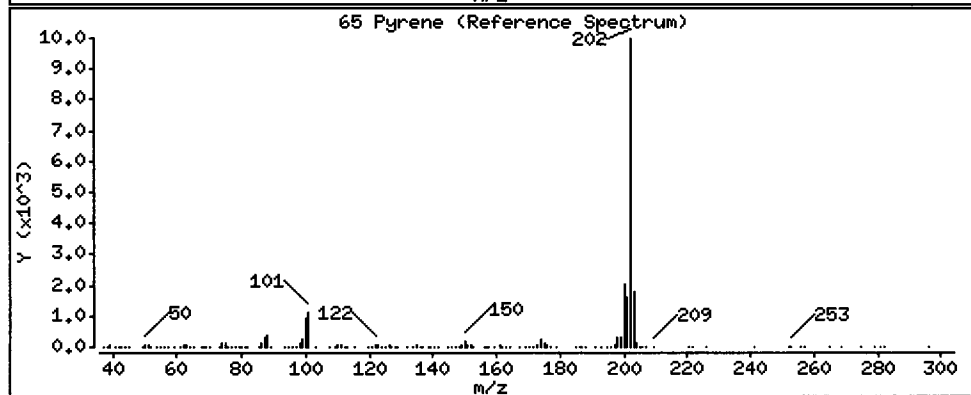
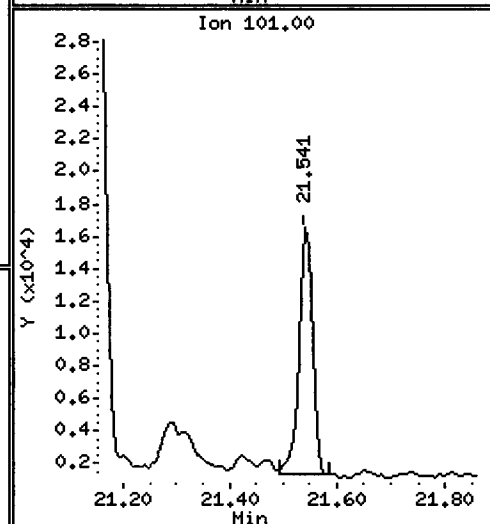
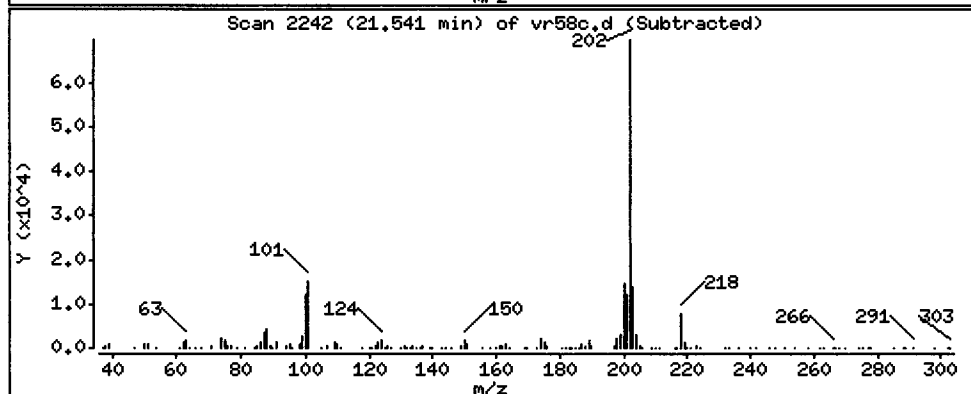
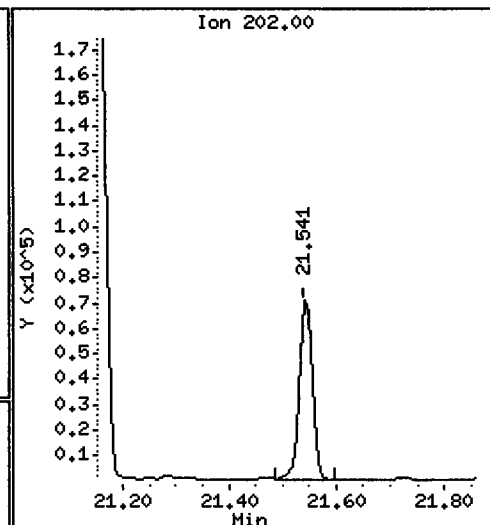
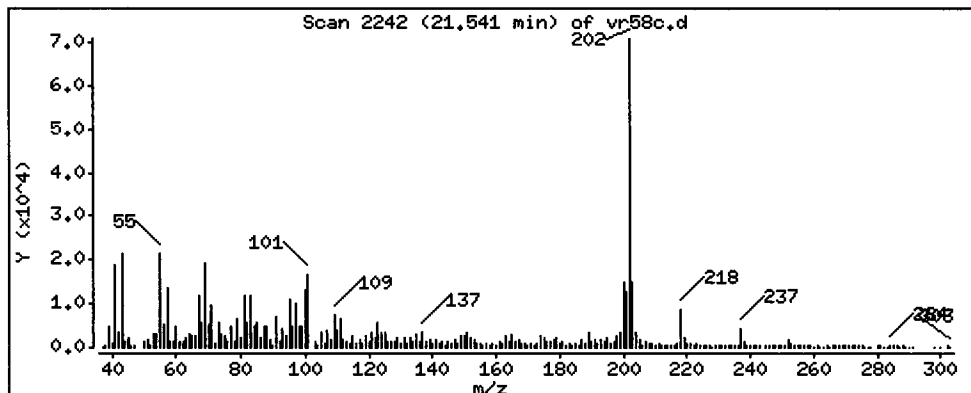
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 231.0 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

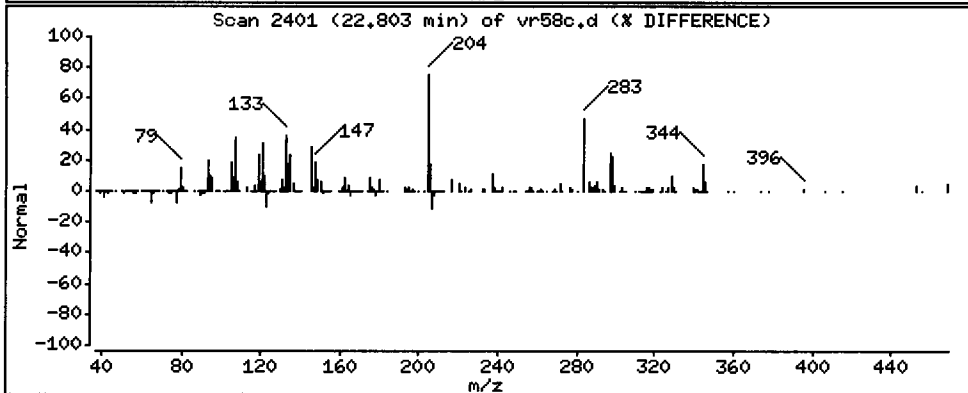
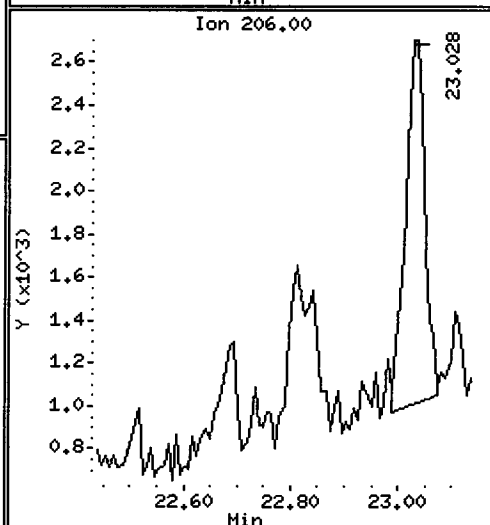
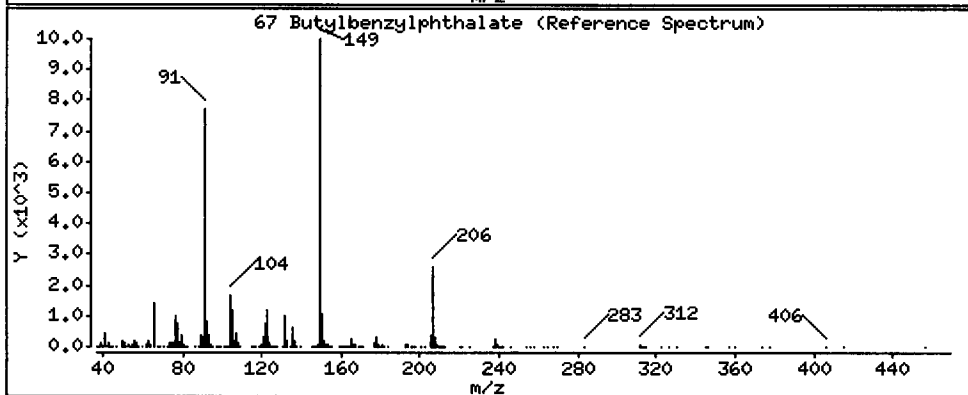
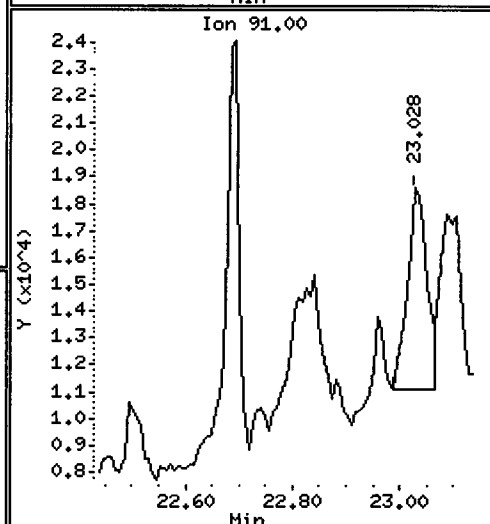
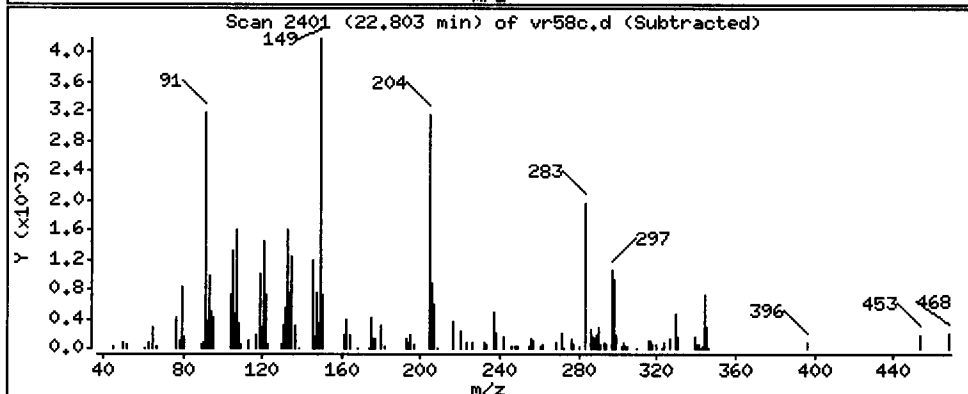
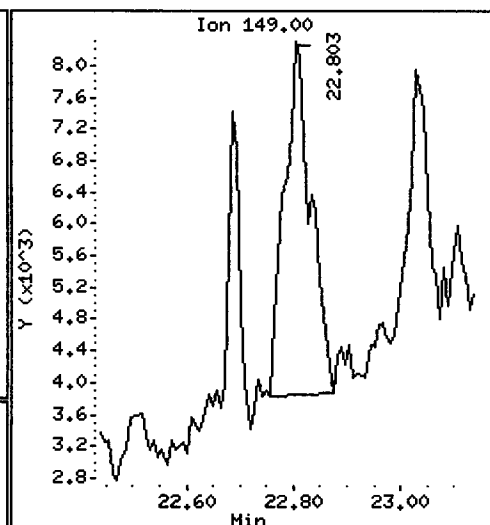
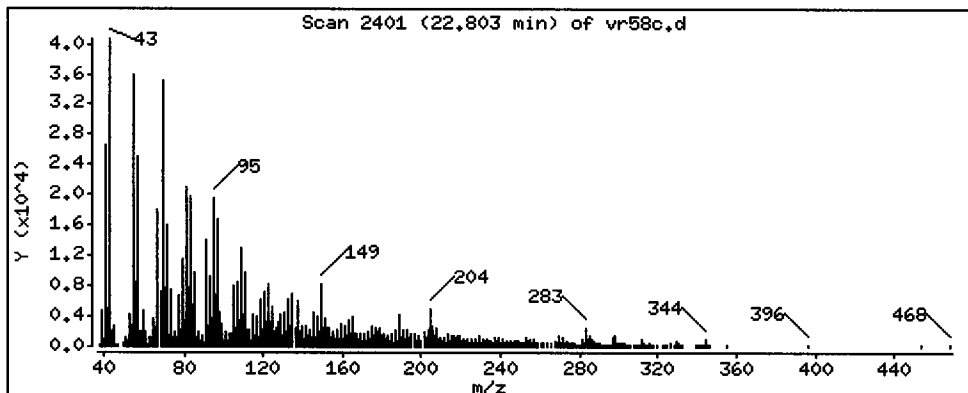
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 71.70 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

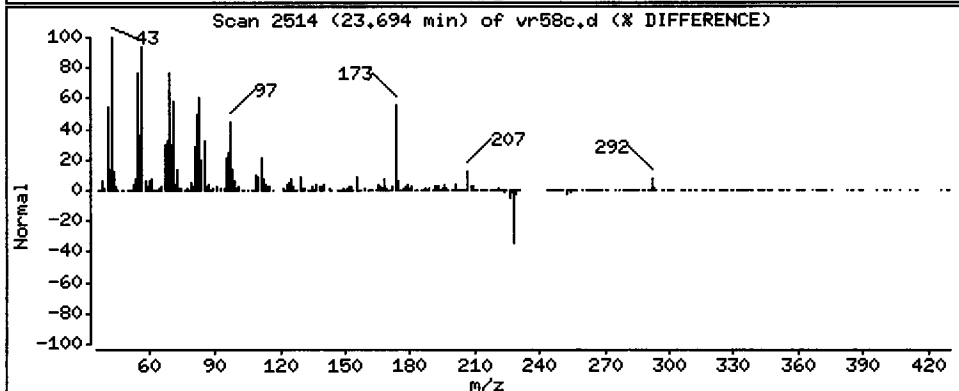
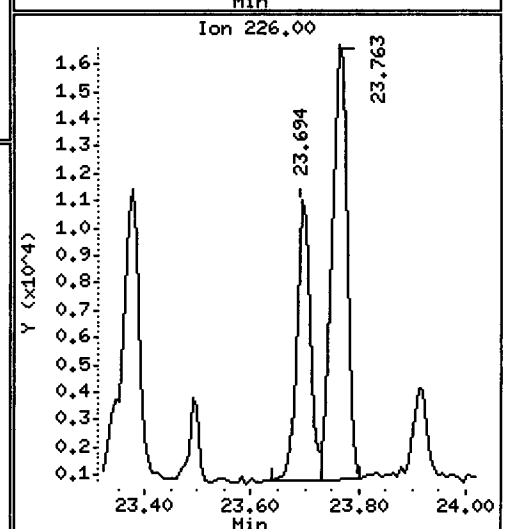
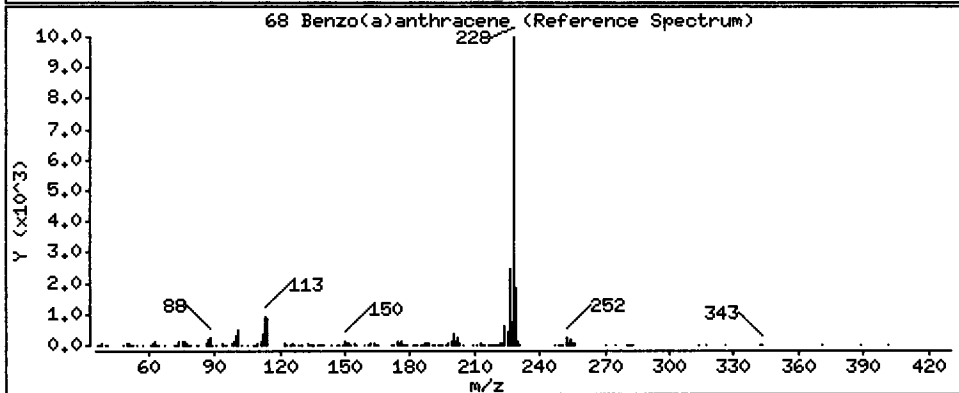
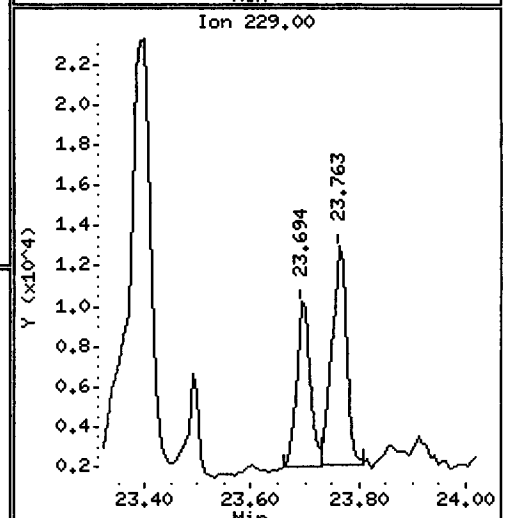
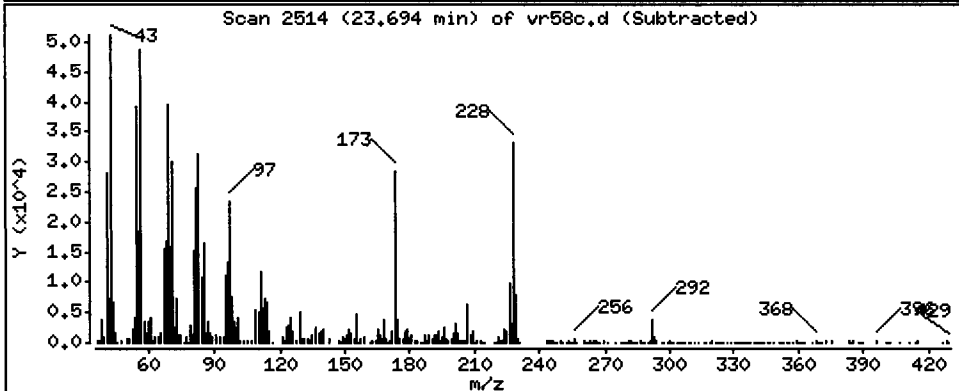
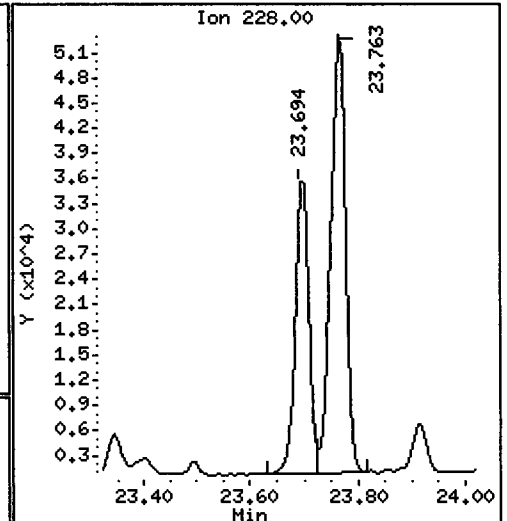
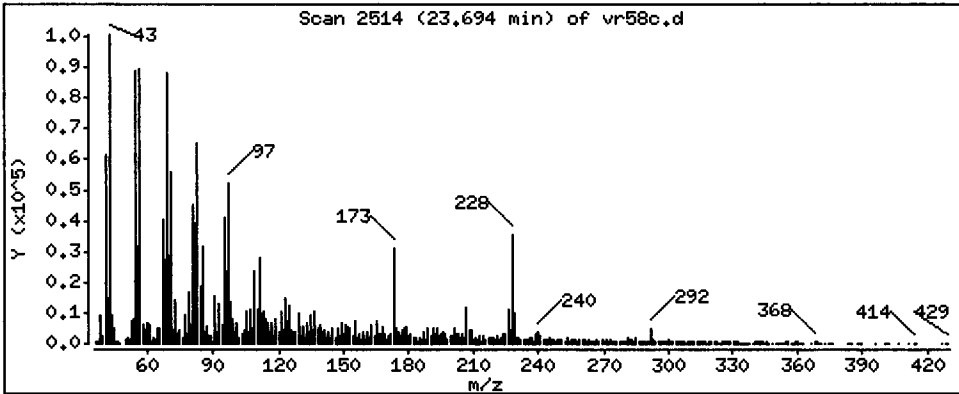
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

68 Benzo(a)anthracene

Concentration: 120.8 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

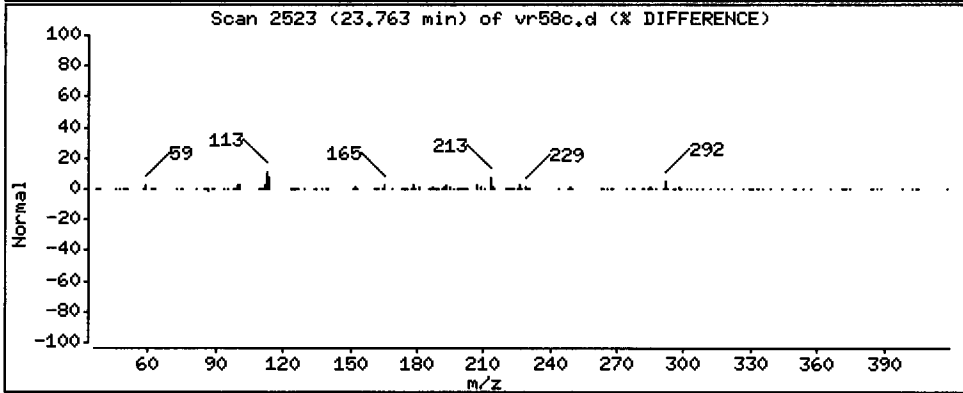
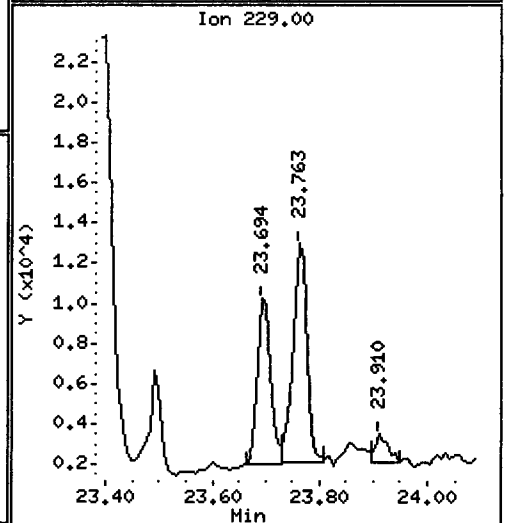
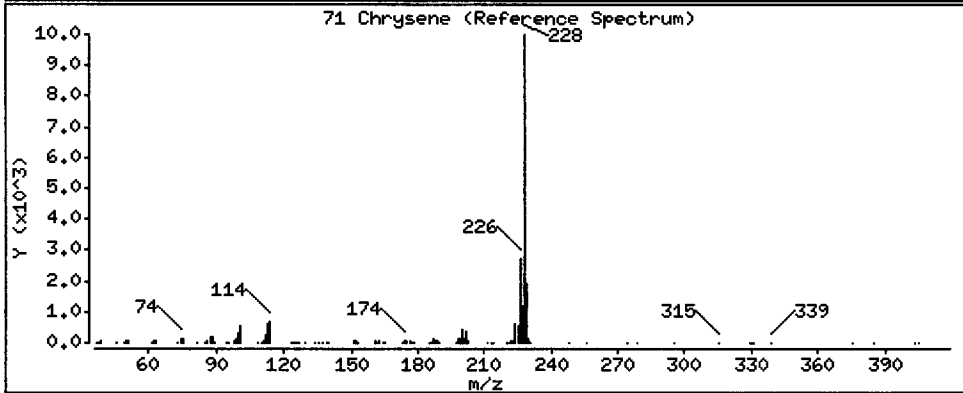
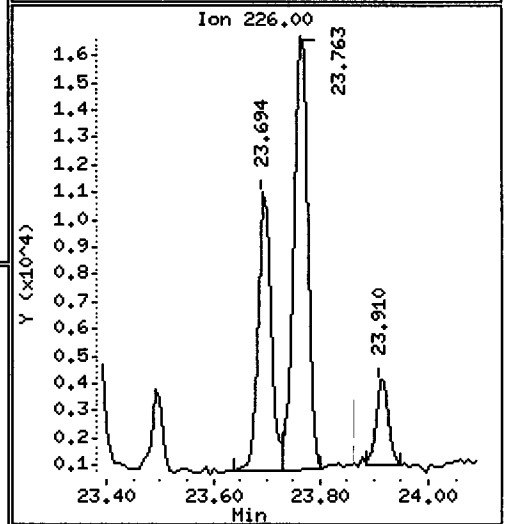
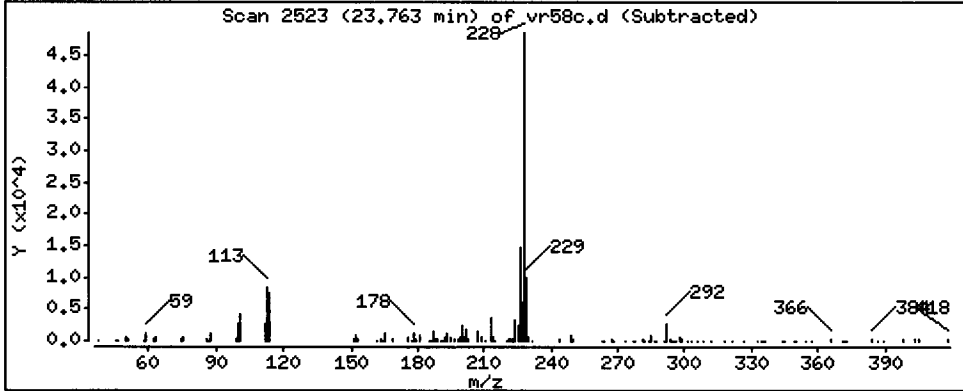
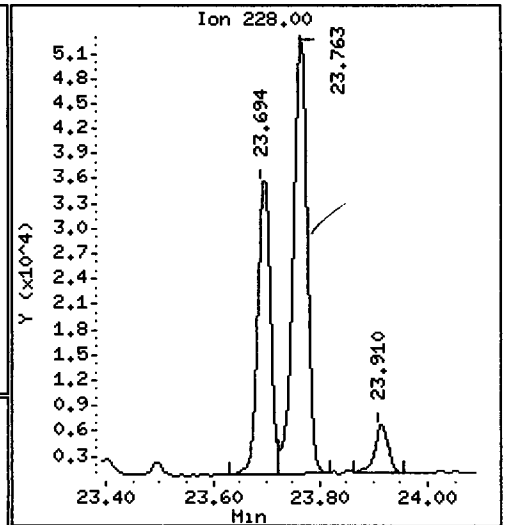
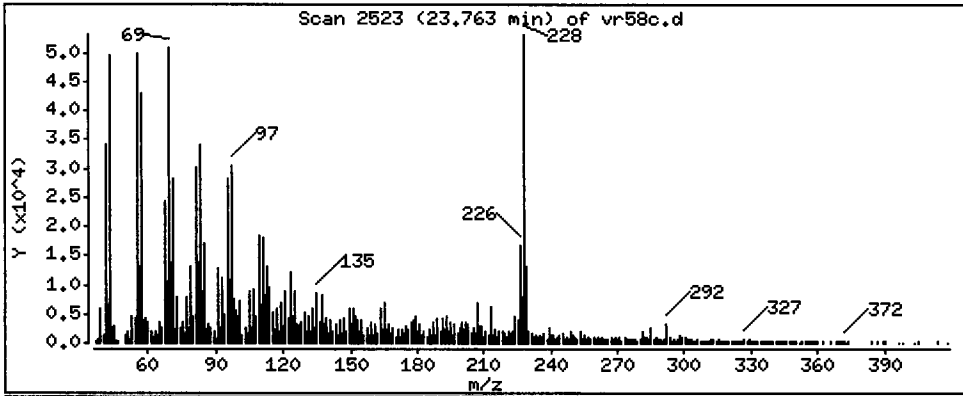
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

71 Chrysene

Concentration: 212.4 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

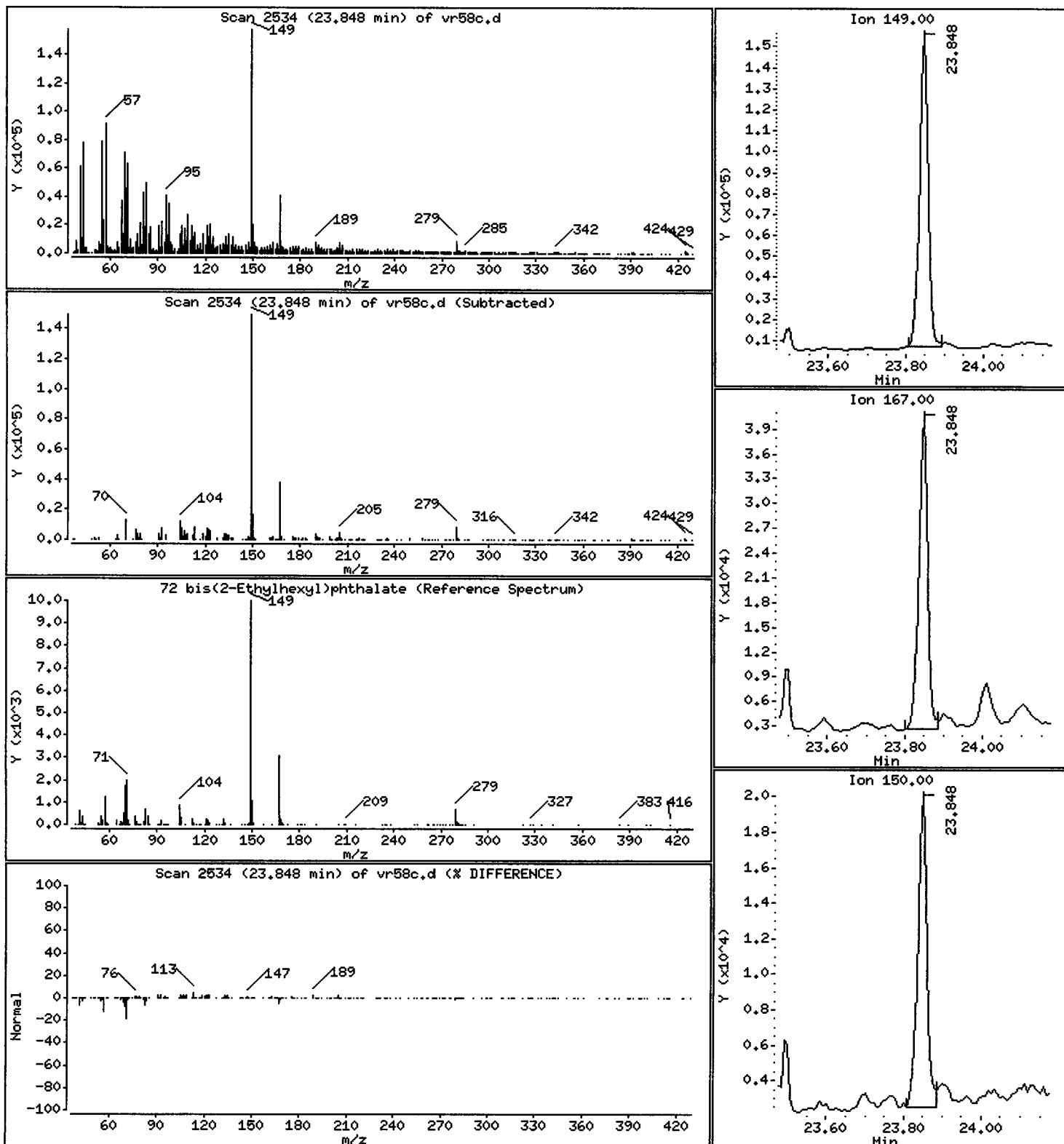
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 362.4 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

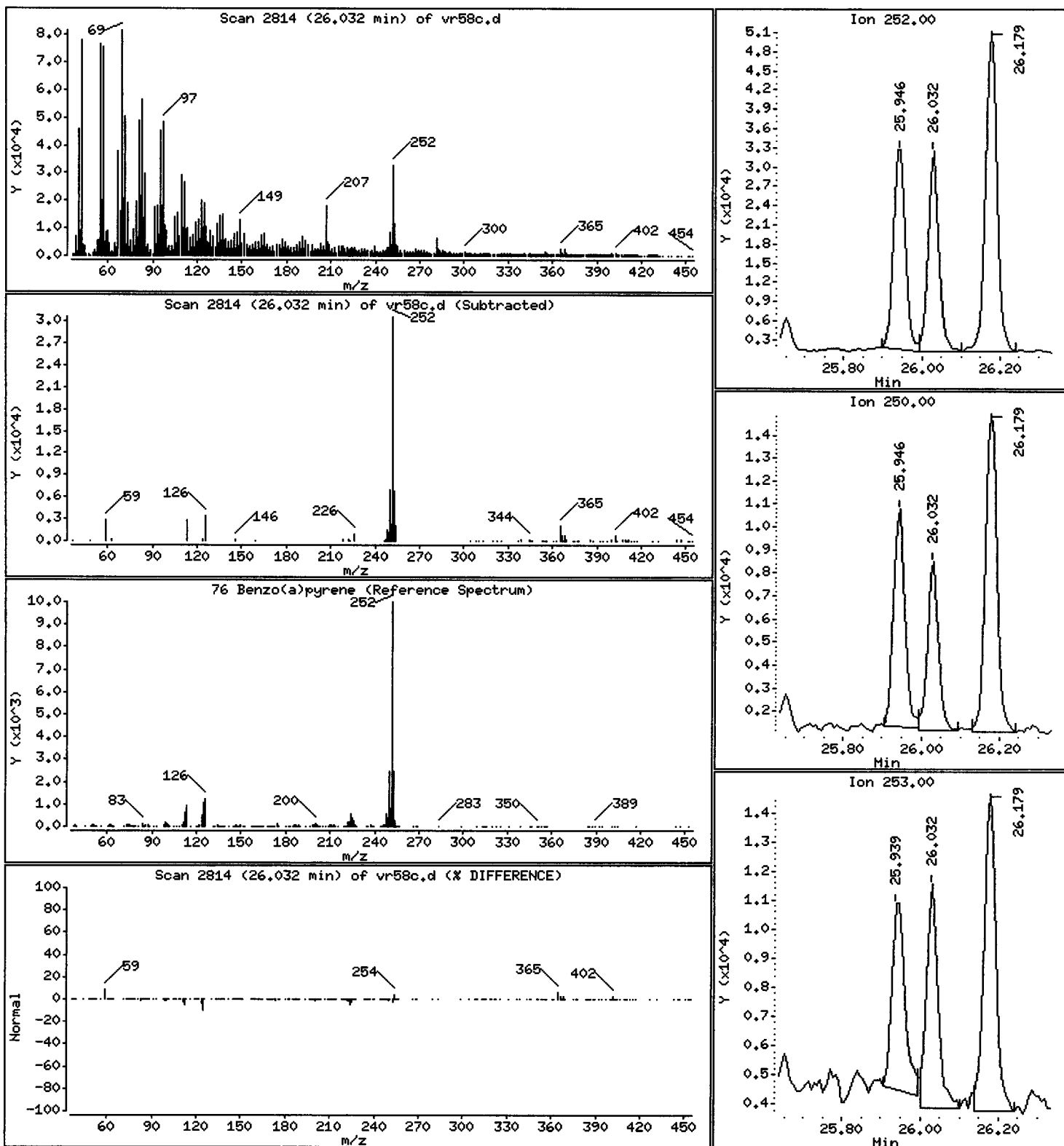
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

76 Benzo(a)pyrene

Concentration: 102.7 ug/kg





Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

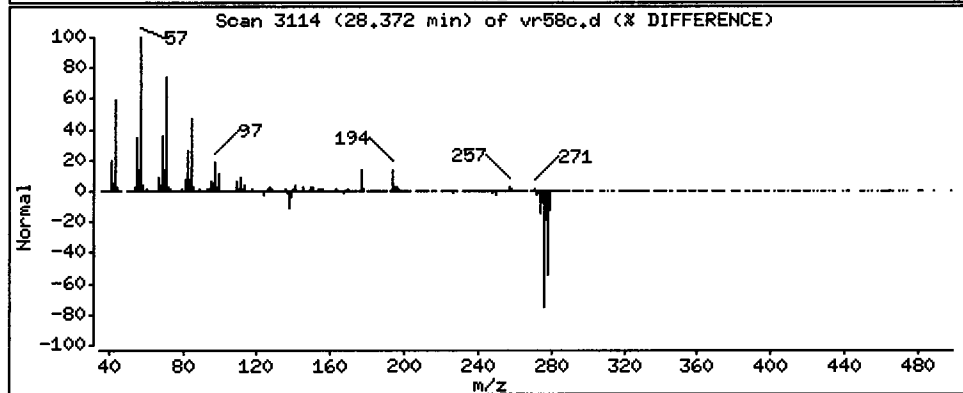
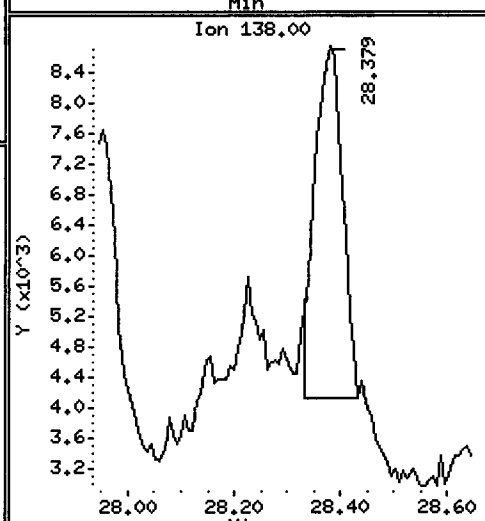
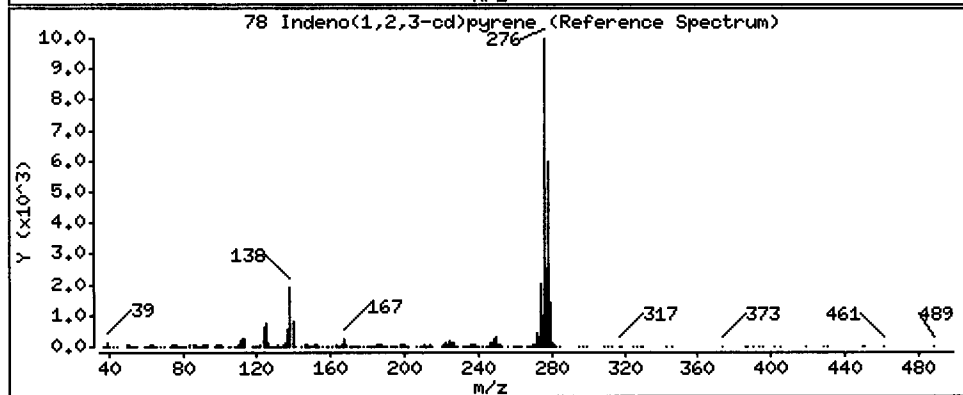
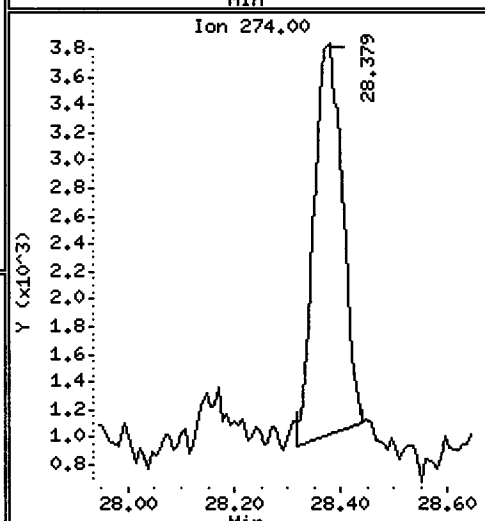
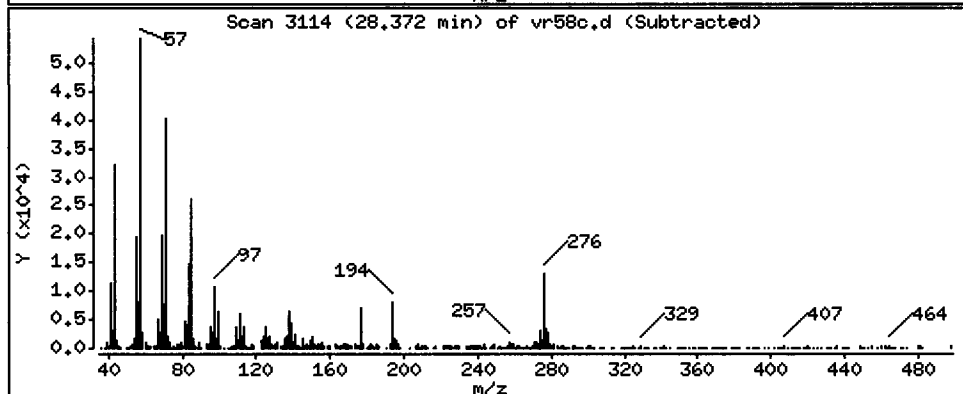
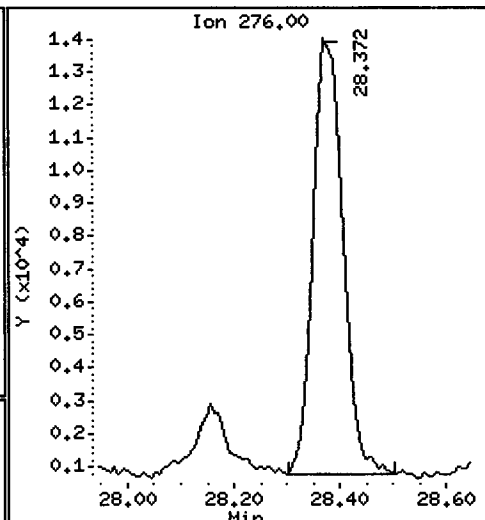
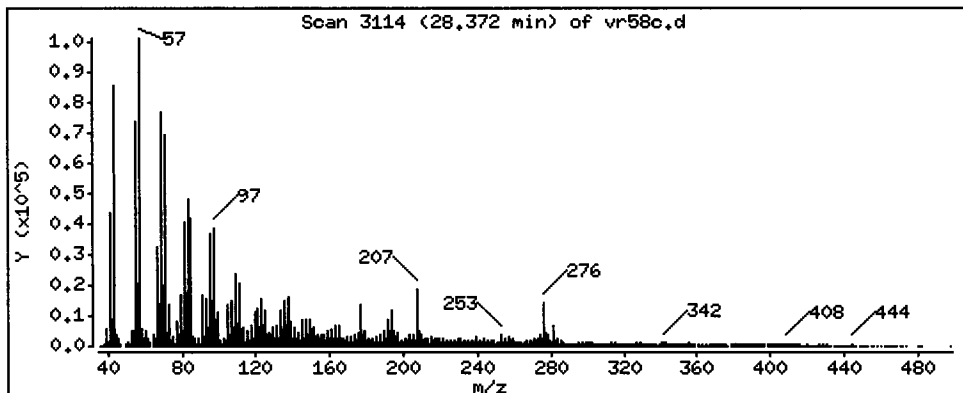
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

78 Indeno(1,2,3-cd)pyrene

Concentration: 76.85 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

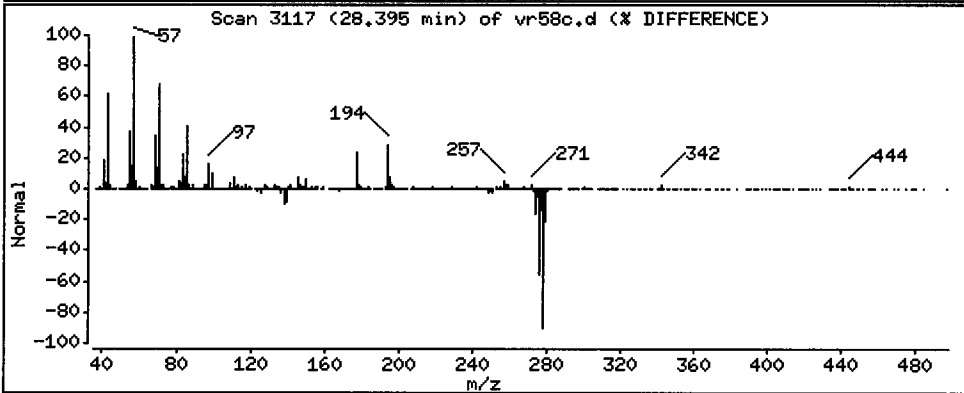
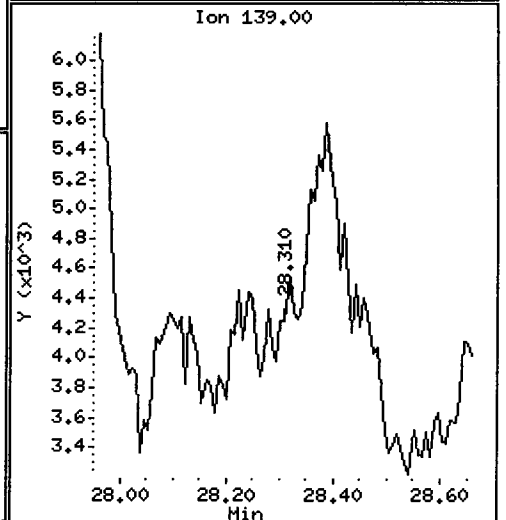
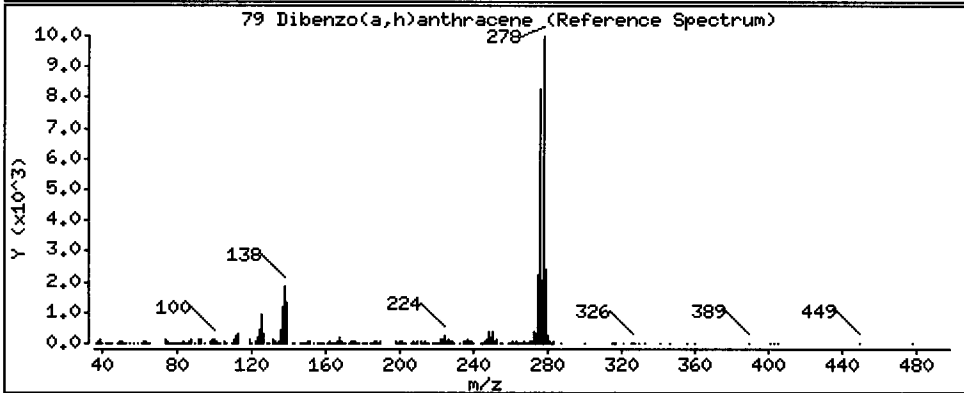
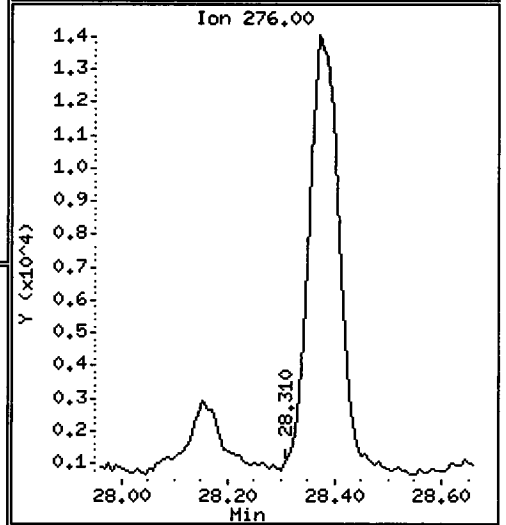
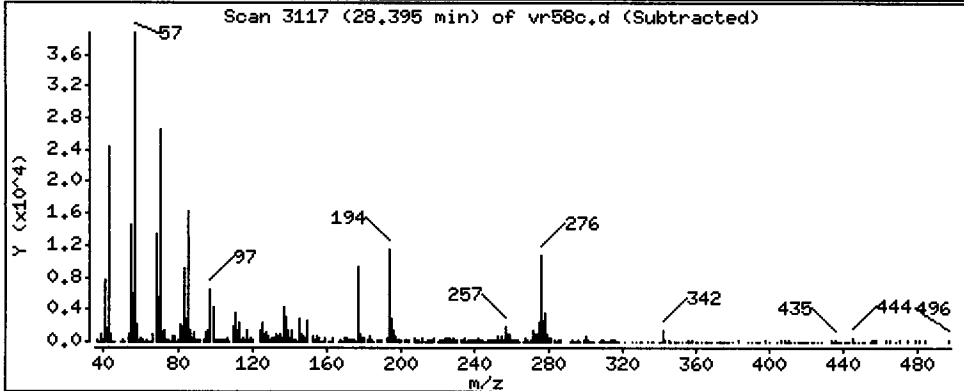
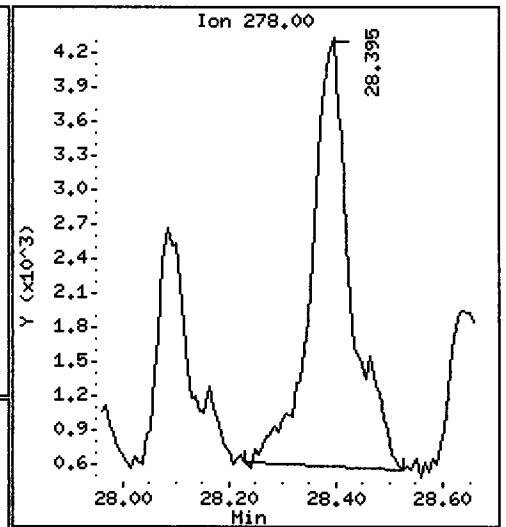
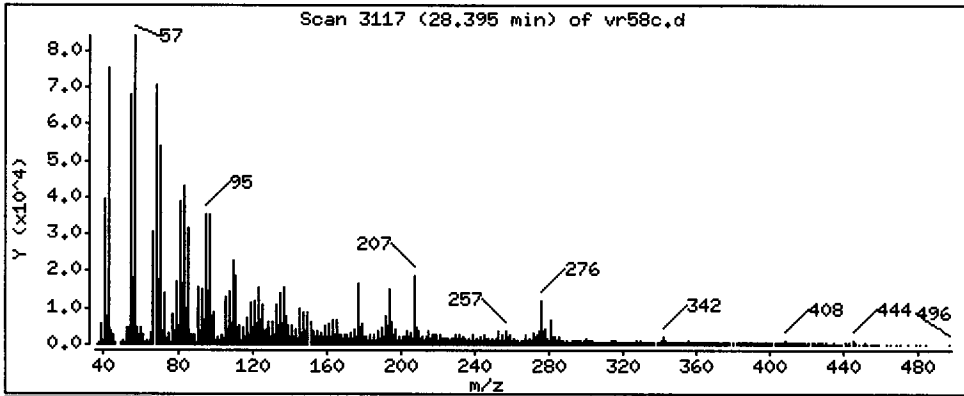
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 36.10 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

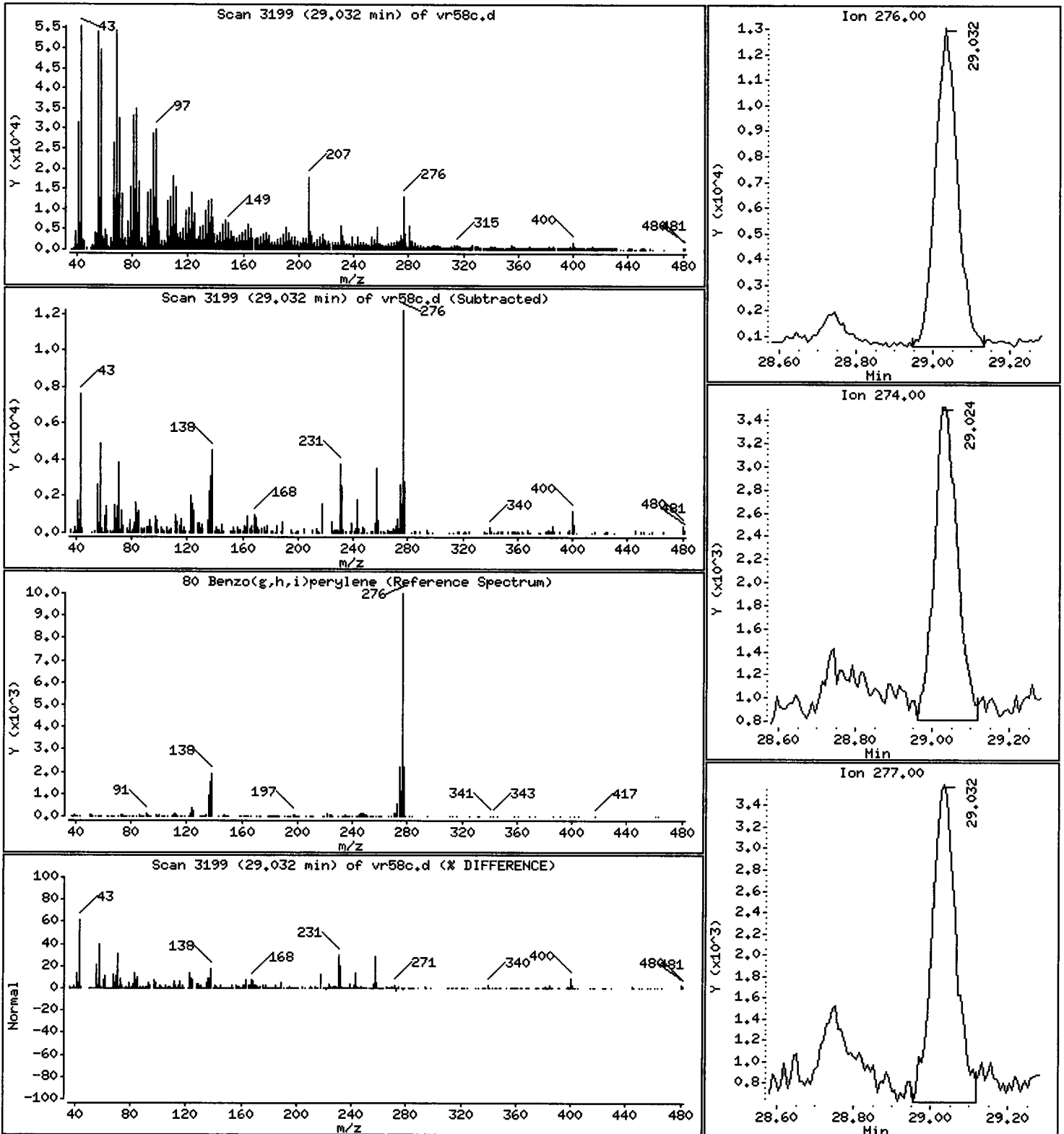
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

80 Benzo(g,h,i)perylene

Concentration: 85.31 ug/kg



Date : 04-DEC-2012 18:21

Client ID: SG-12-S-E-121107

Instrument: nt10,i

Sample Info: VR58C

Volume Injected (uL): 1.0

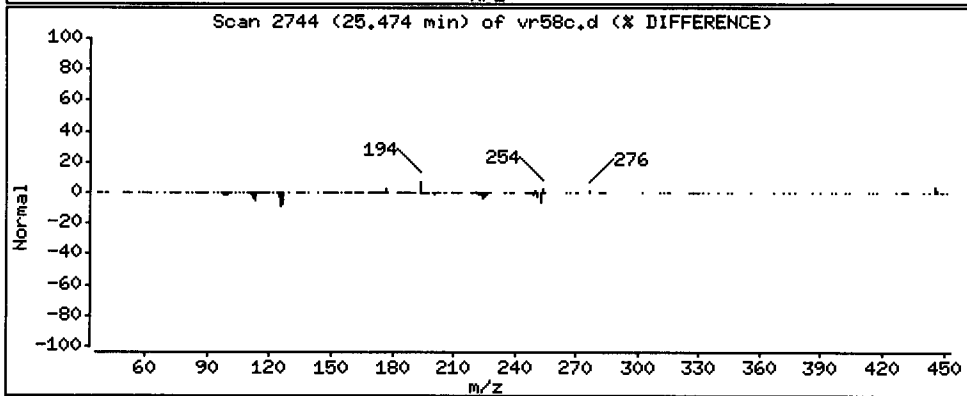
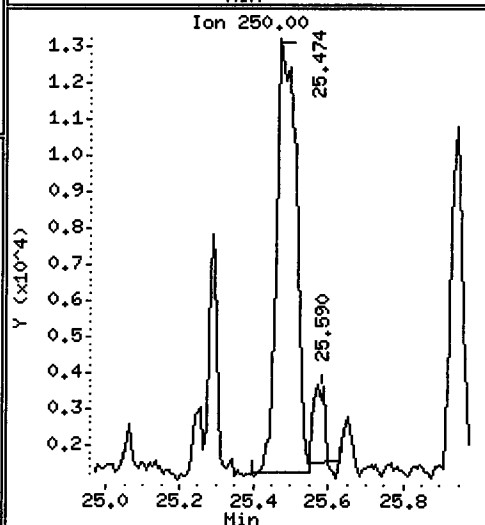
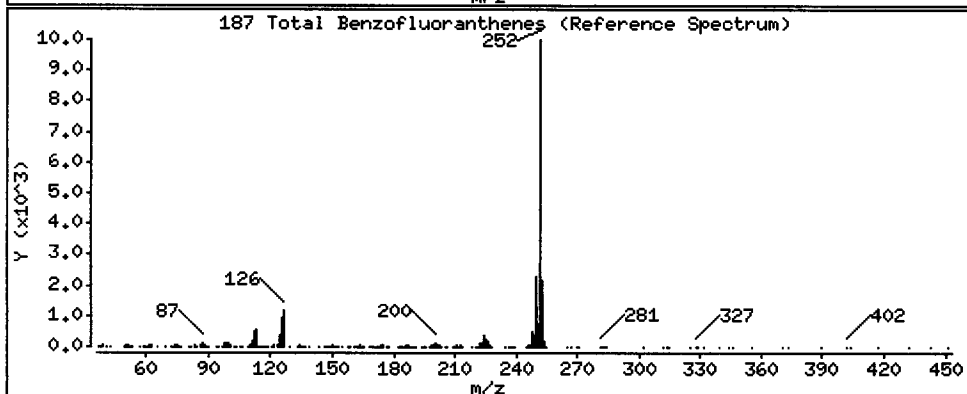
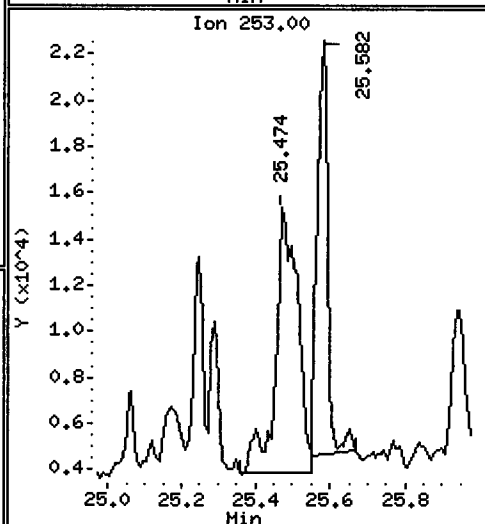
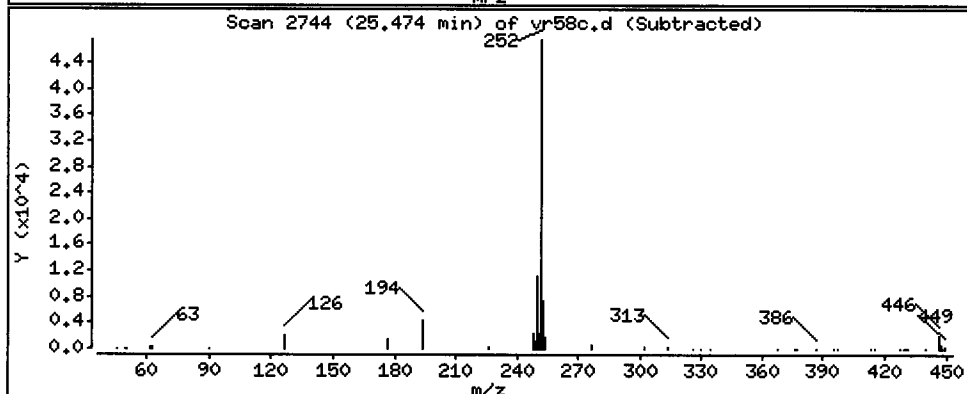
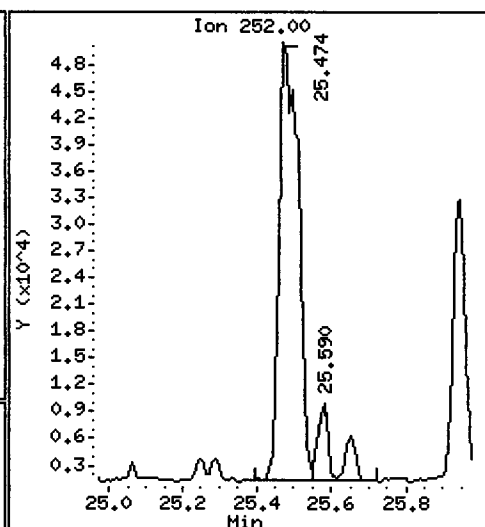
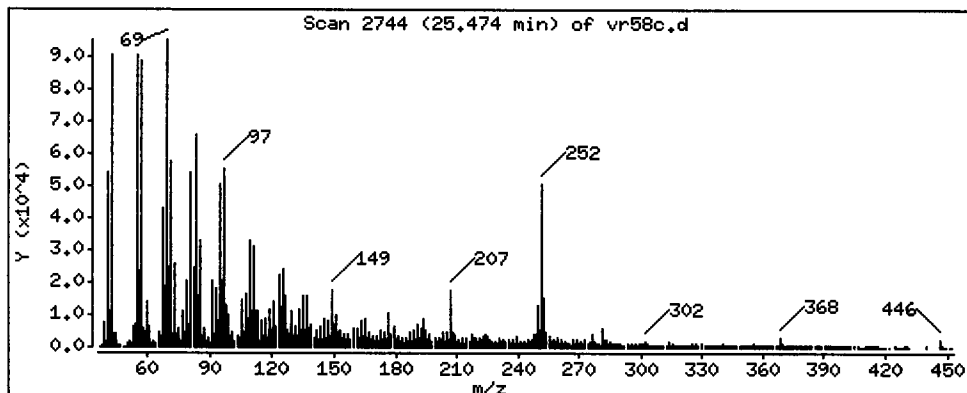
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

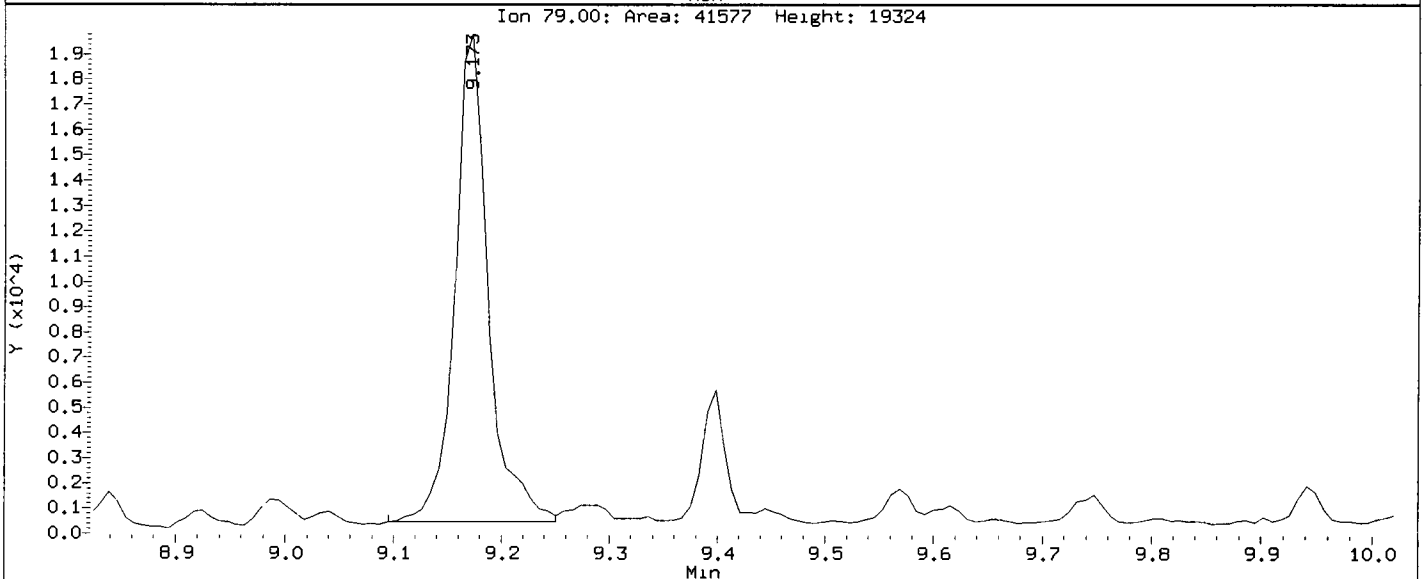
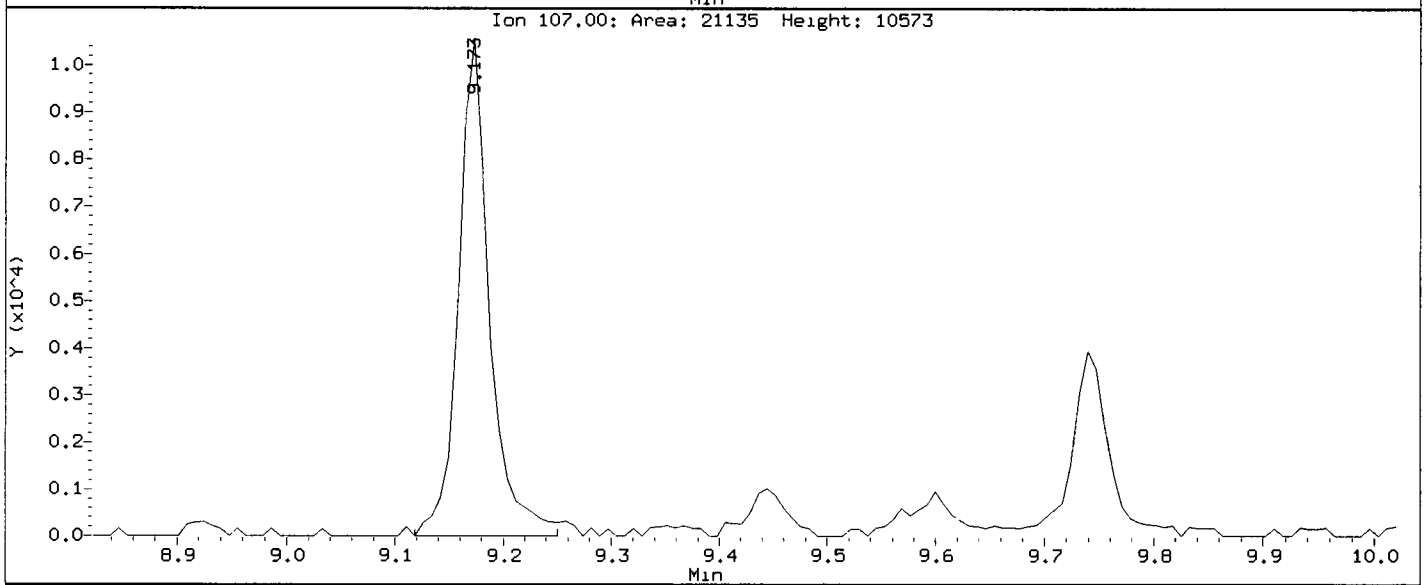
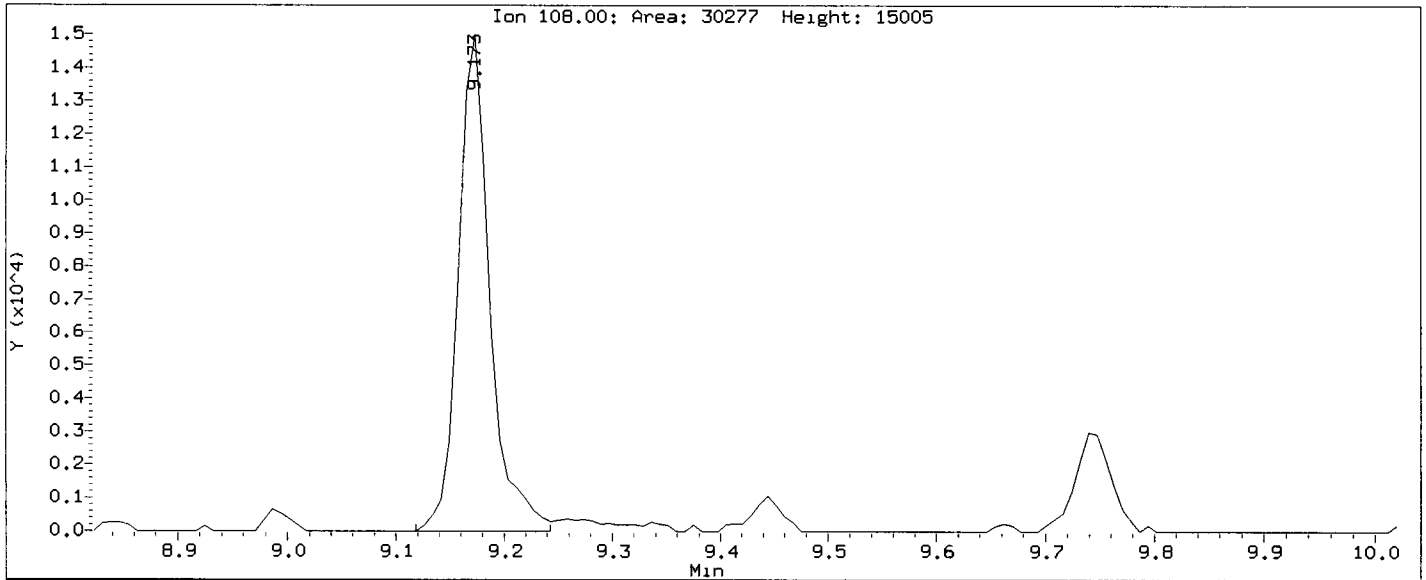
187 Total Benzofluoranthenes

Concentration: 285.7 ug/kg



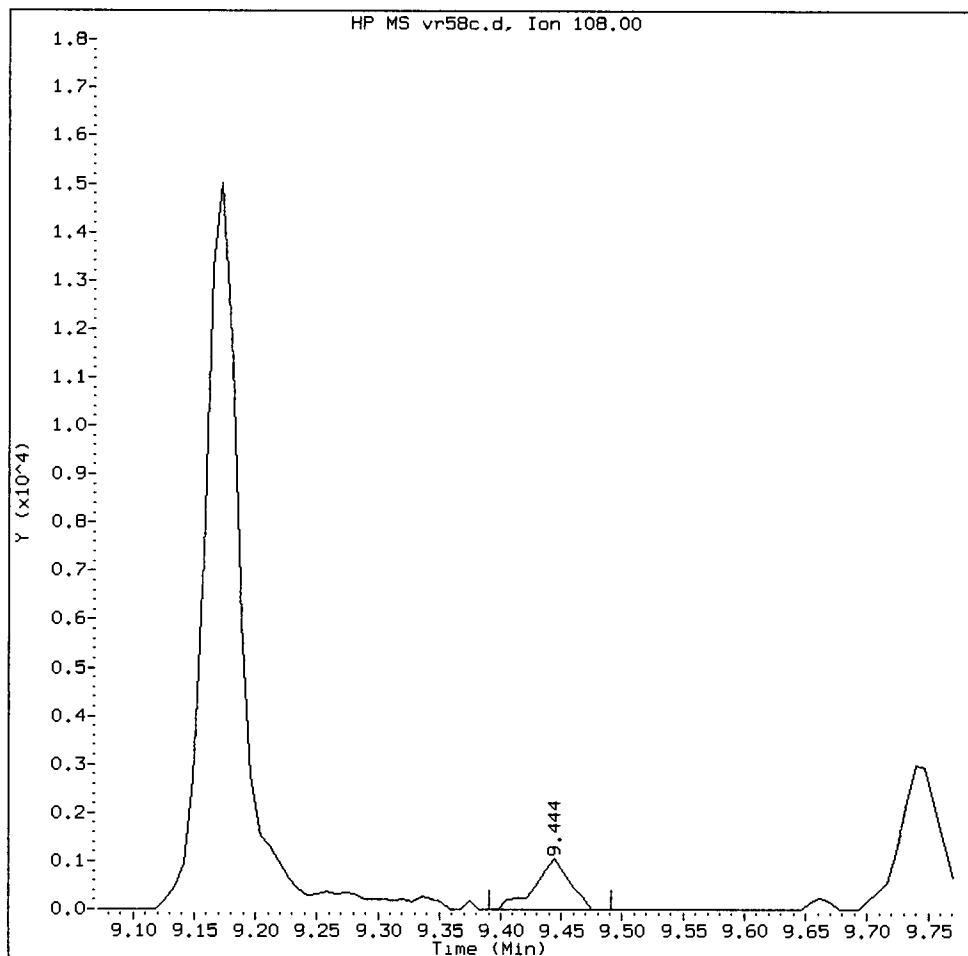
Data File: /chem1/nt10.1/20121204.b/vr58c.d  
Injection Date: 04-DEC-2012 18:21  
Instrument: nt10.1  
Client Sample ID: SG-12-5-E-121107  
Compound: 2-Methylphenol  
CAS Number: 95-48-7

1D  
12.5.12



VR58C, /chem1/nt10.i/20121204.b/vr58c.d

2-Methylphenol Amount: 0.12 Area: 2143



MANUAL INTEGRATION for 2-Methylphenol

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other \_\_\_\_\_

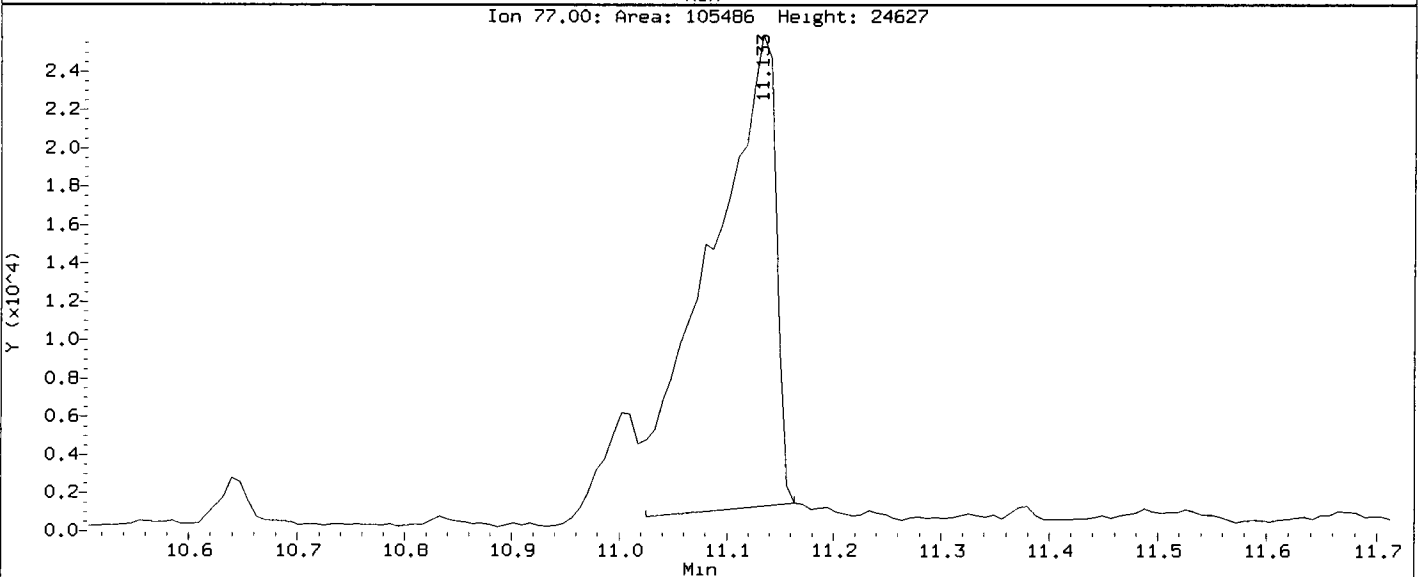
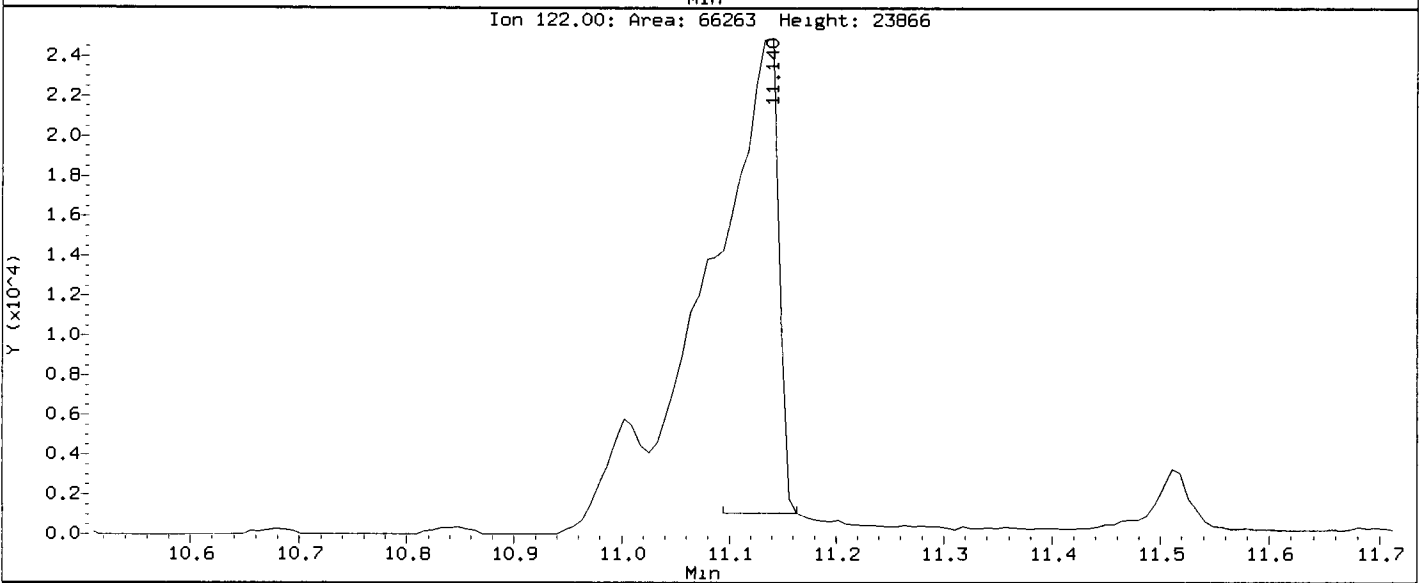
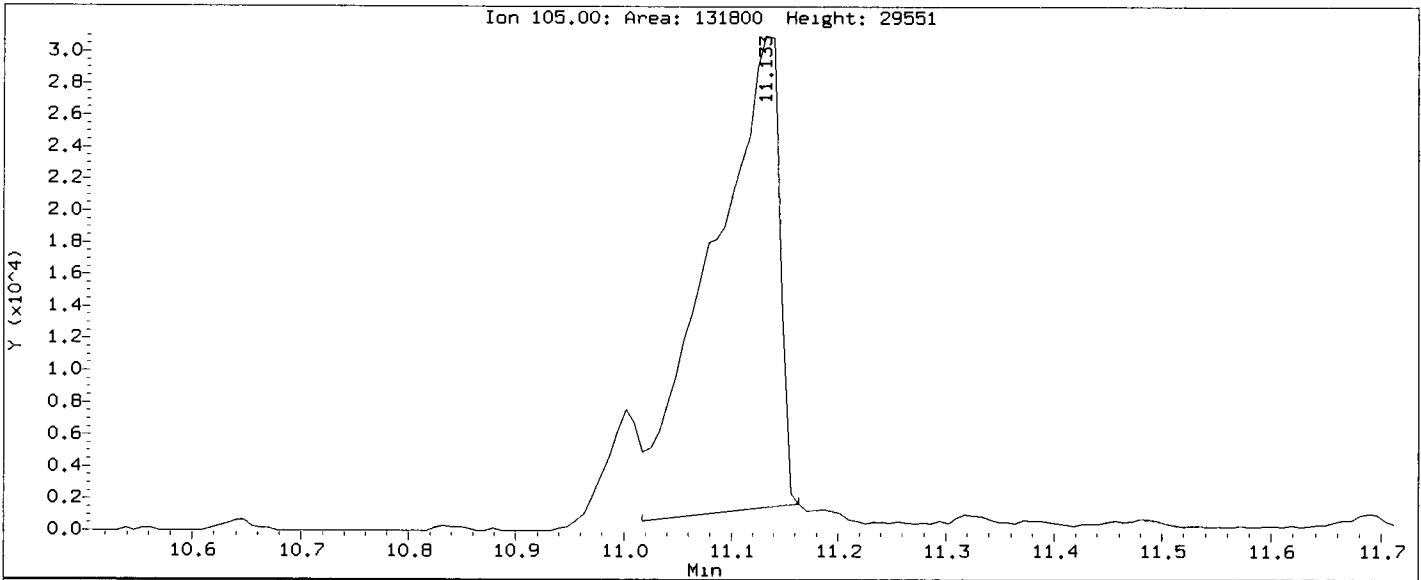
Analyst: UD

Date: 12.5.12

Data File: /chem1/nt10.1/20121204.b/vr58c.d  
Injection Date: 04-DEC-2012 18:21  
Instrument: nt10.1  
Client Sample ID: SG-12-S-E-121107

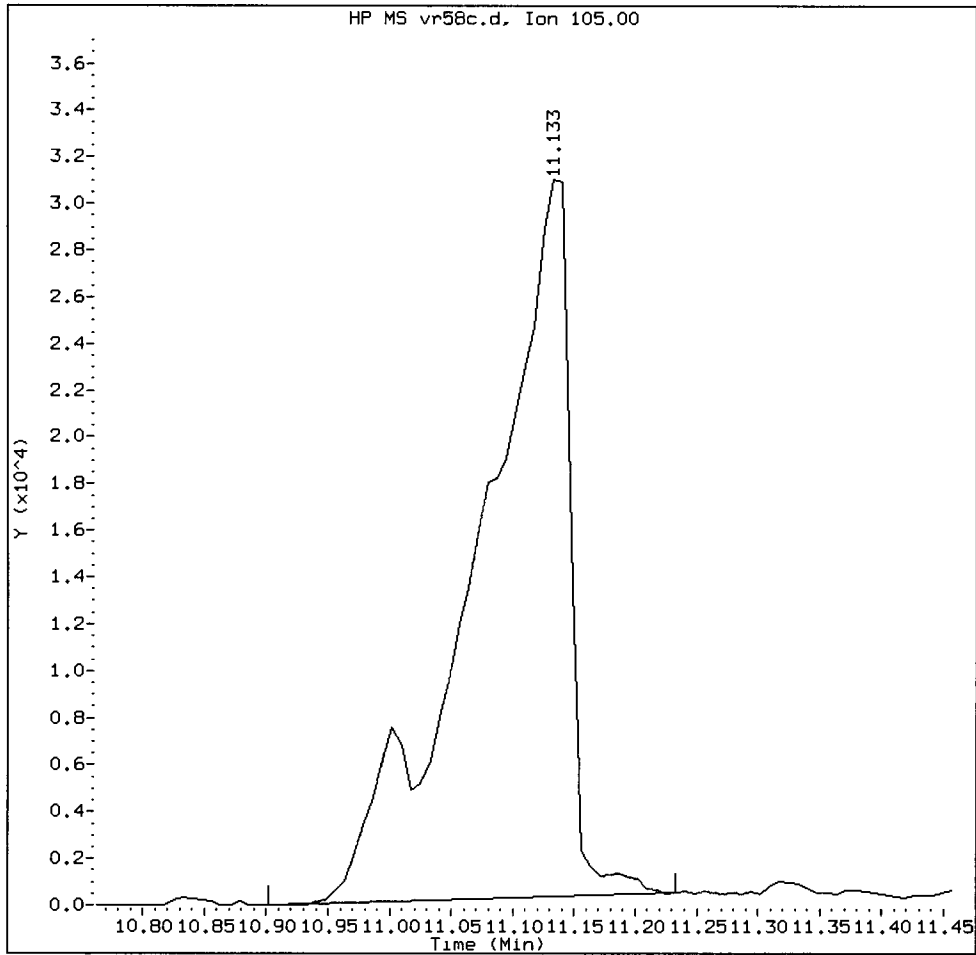
LD  
12.5.12

Compound: Benzoic acid  
CAS Number: 65-85-0



VR58C, /chem1/nt10.i/20121204.b/vr58c.d

Benzoic acid Amount: 15.75 Area: 160543



MANUAL INTEGRATION for Benzoic acid

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: VD

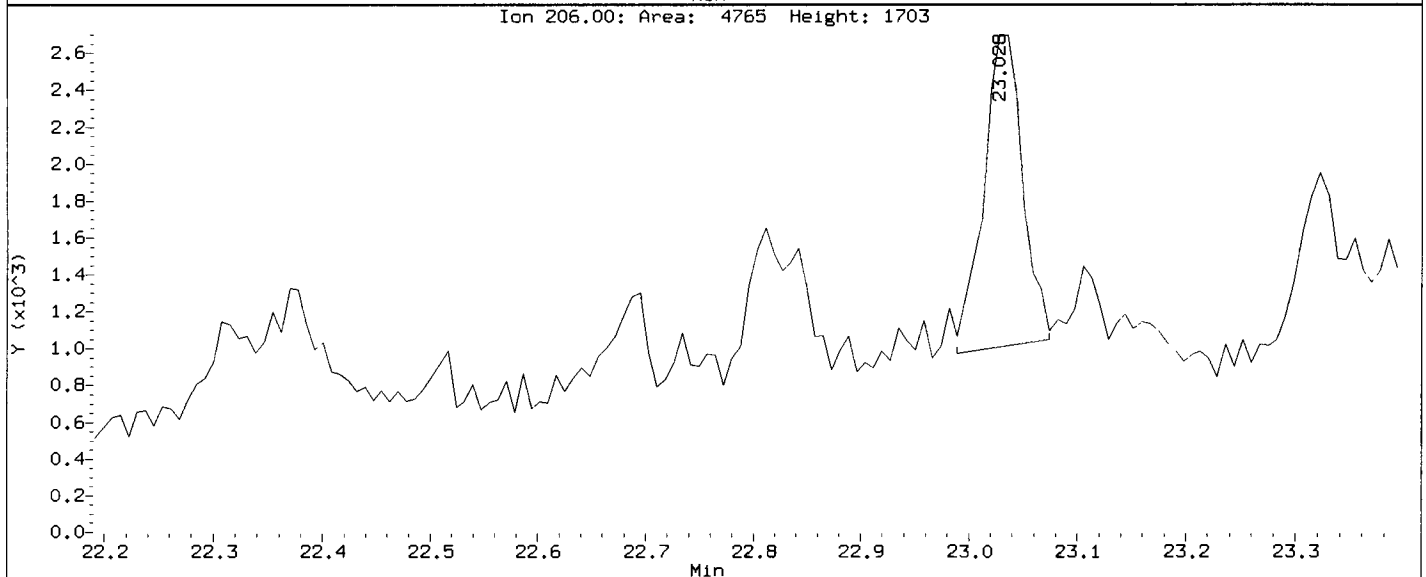
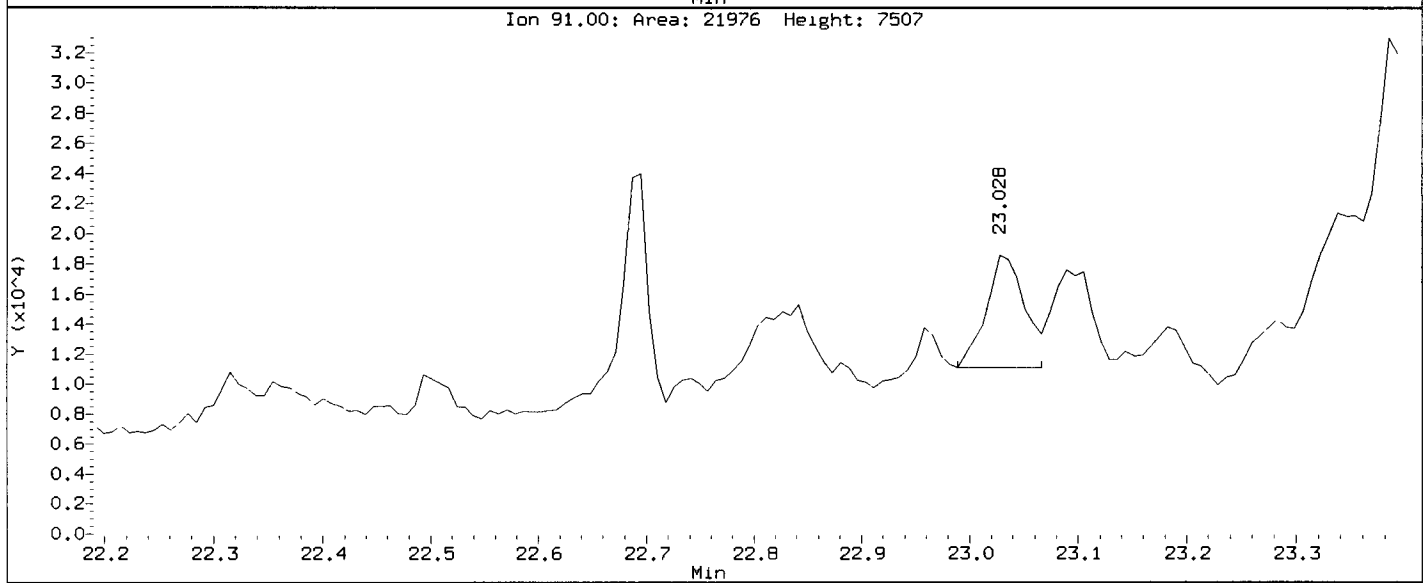
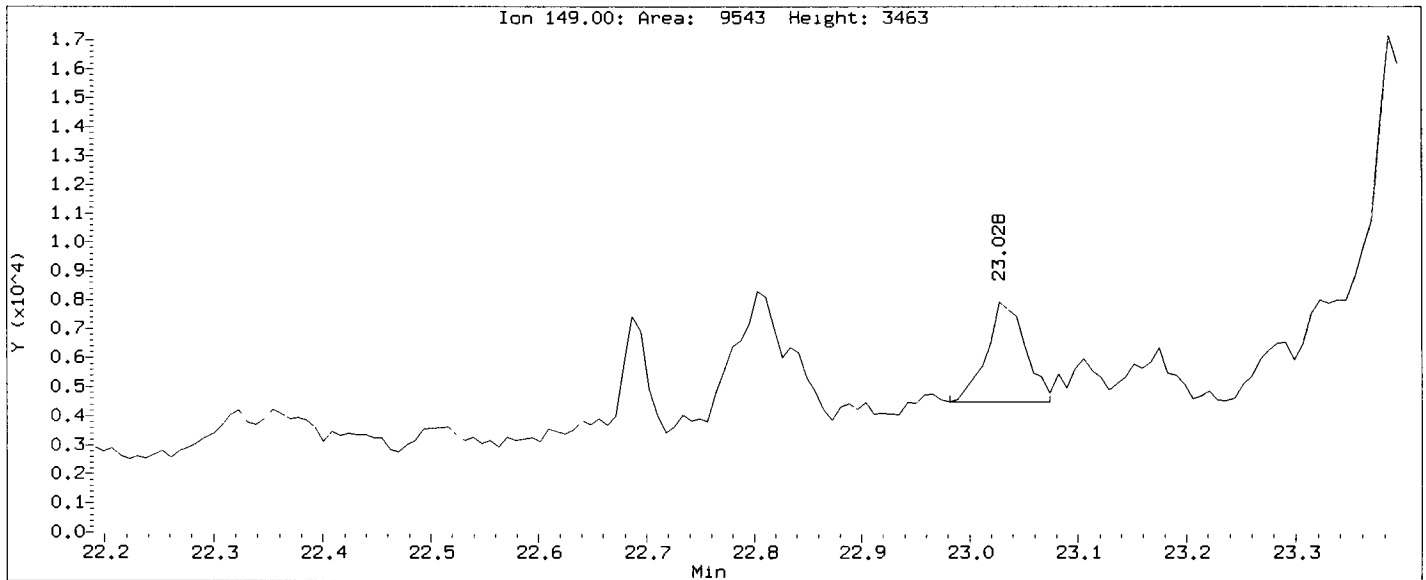
Date: 12.5.12



Data File: /chem1/nt10.1/20121204.b/vr58c.d  
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Instrument: nt10.1  
Client Sample ID: SG-12-S-E-121107

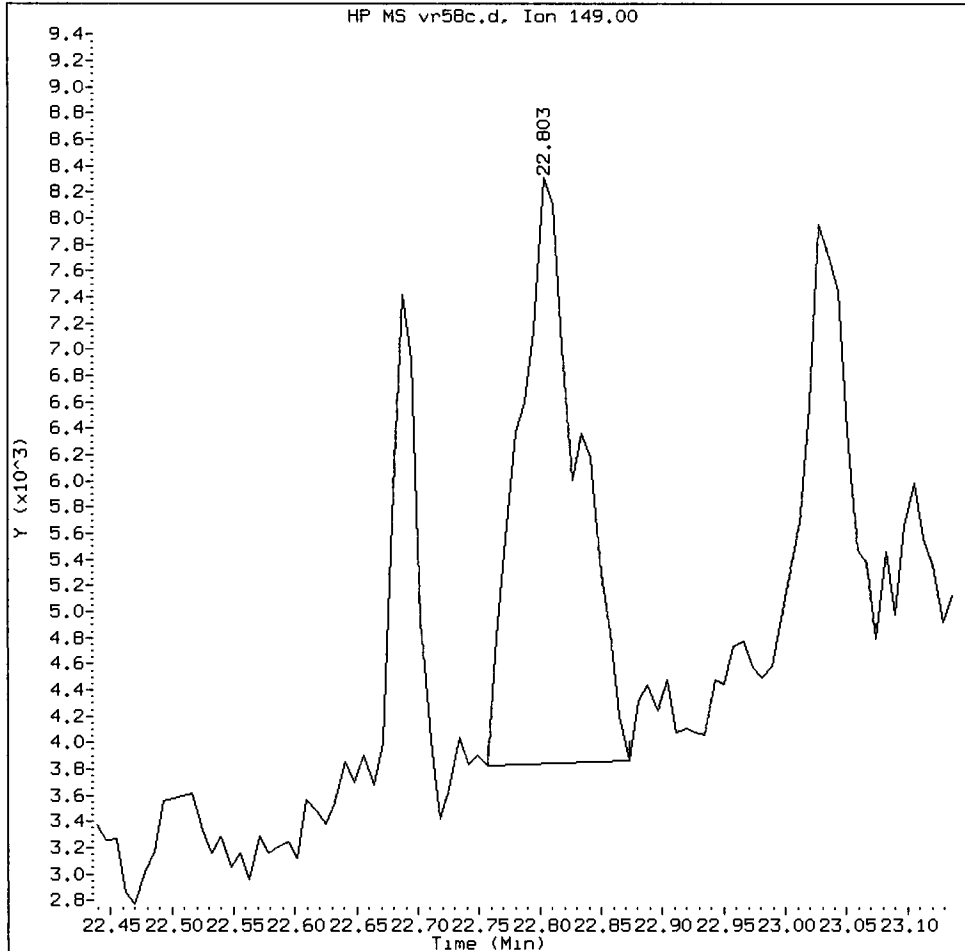
V17  
12-5-12

Compound: Butylbenzylphthalate  
CAS Number: 85-68-7



VR58C, /chem1/nt10.i/20121204.b/vr58c.d

Butylbenzylphthalate Amount: 0.73 Area: 15714



MANUAL INTEGRATION for Butylbenzylphthalate

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

5. Other \_\_\_\_\_

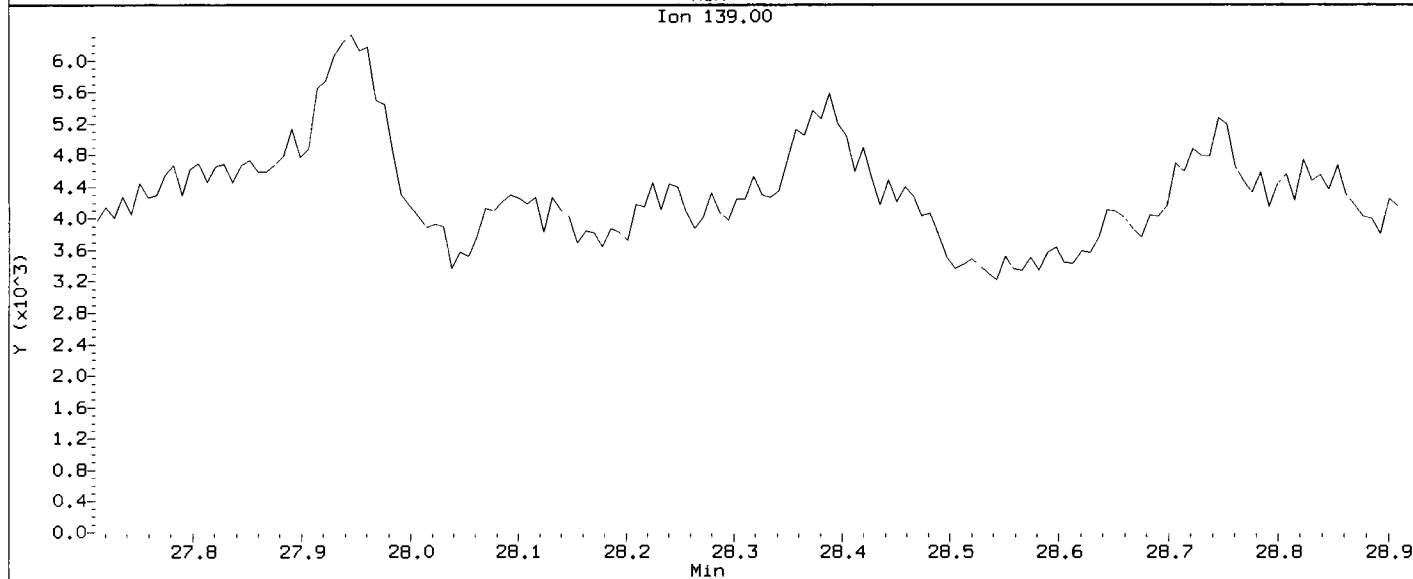
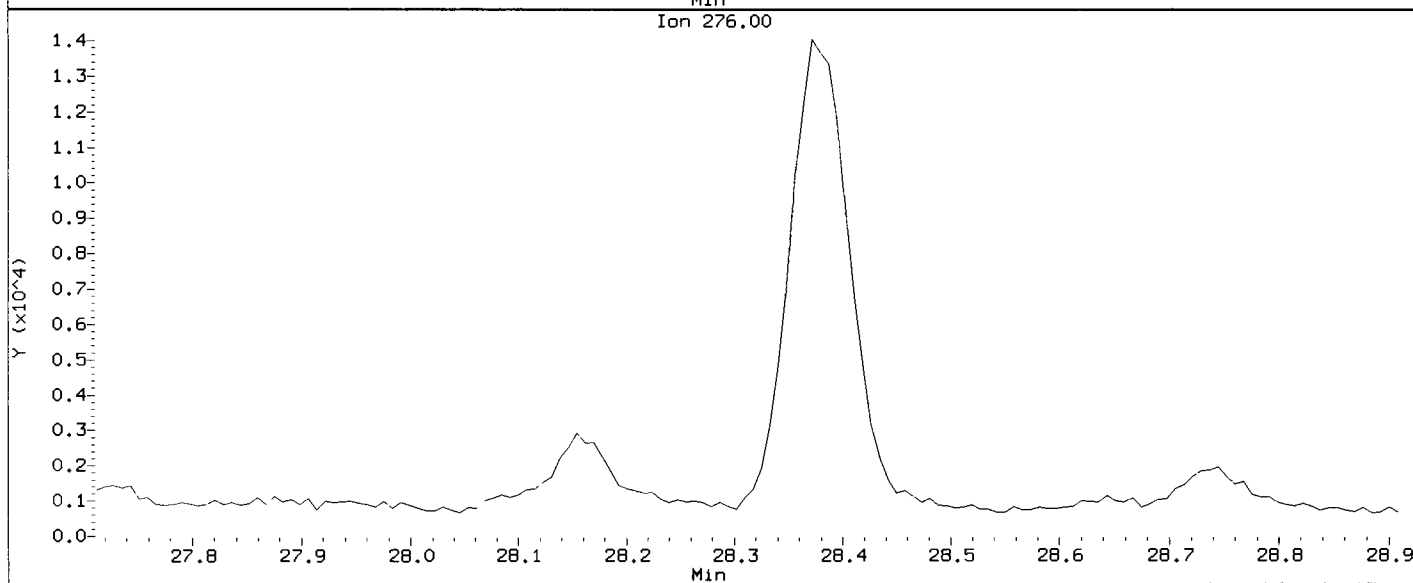
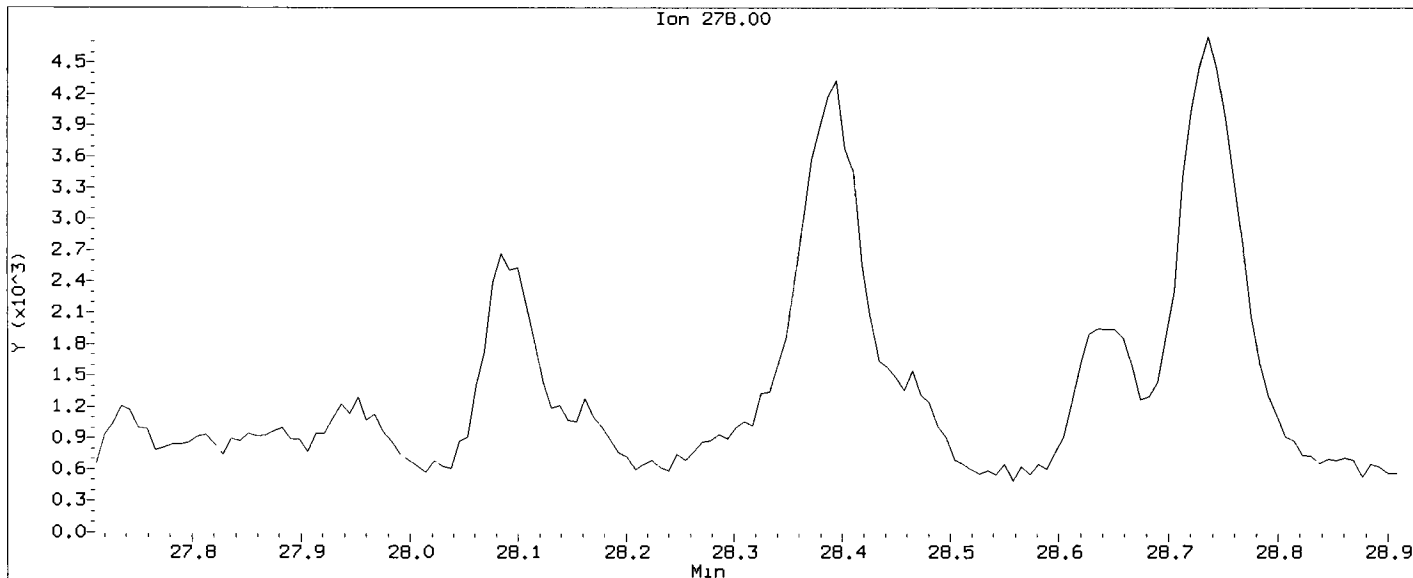
Analyst: VO

Date: 12.5.12

Data File: /chem1/nt10.1/20121204.b/vr58c.d  
Injection Date: 04-DEC-2012 18:21  
Instrument: nt10.1  
Client Sample ID: SG-12-S-E-121107

12-5-12

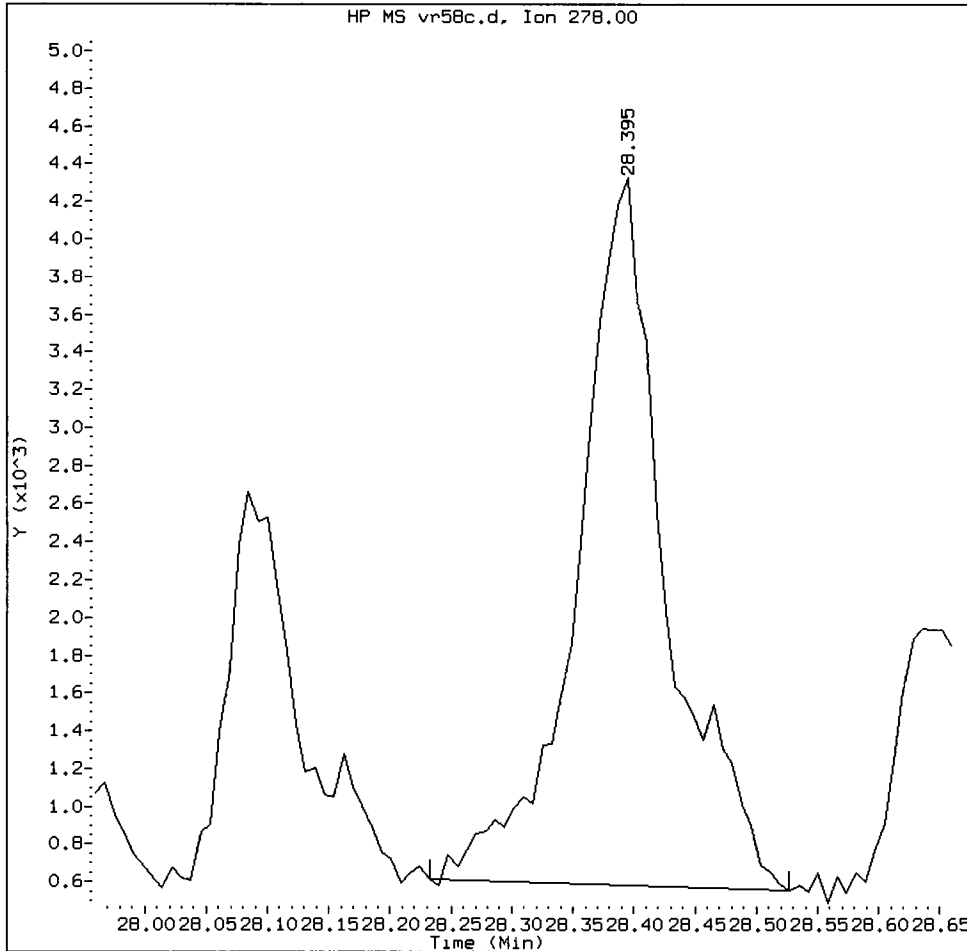
Compound: Dibenzo(a,h)anthracene  
CAS Number: 53-70-3



VR58:00562

VR58C, /chem1/nt10.i/20121204.b/vr58c.d

Dibenzo(a,h)anthracene Amount: 0.37 Area: 19321



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other \_\_\_\_\_

Analyst: VD

Date: 12.5.12

CO-ELUTION SUMMARY FOR FILE - vr58c.d

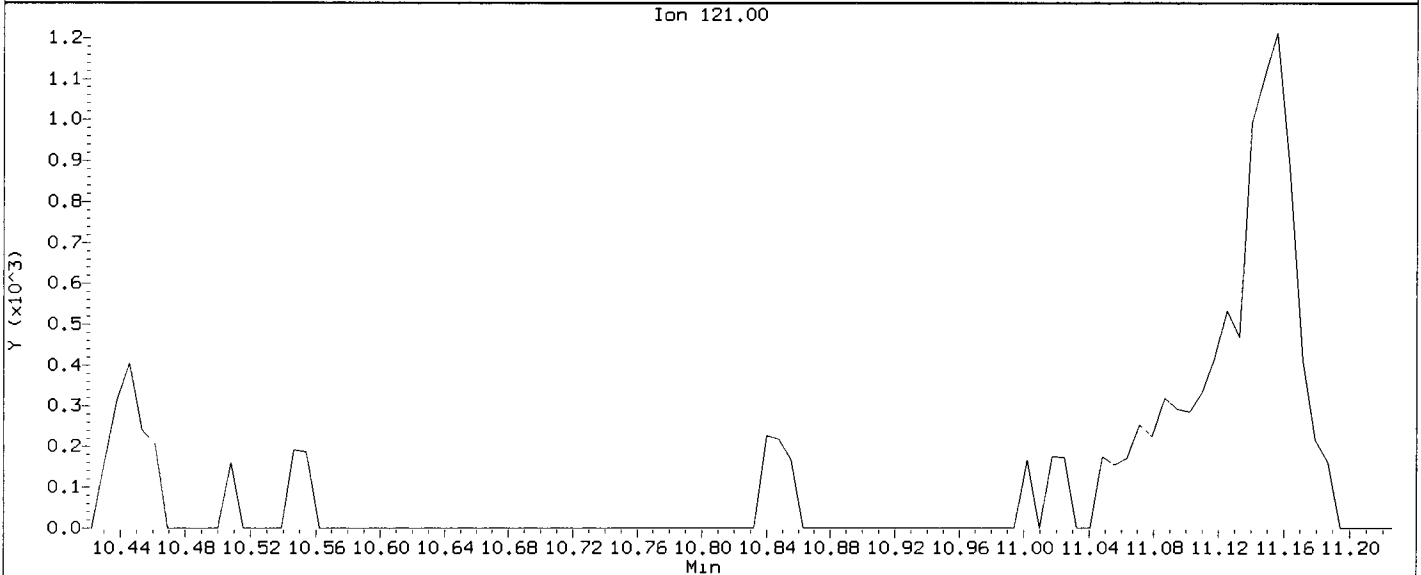
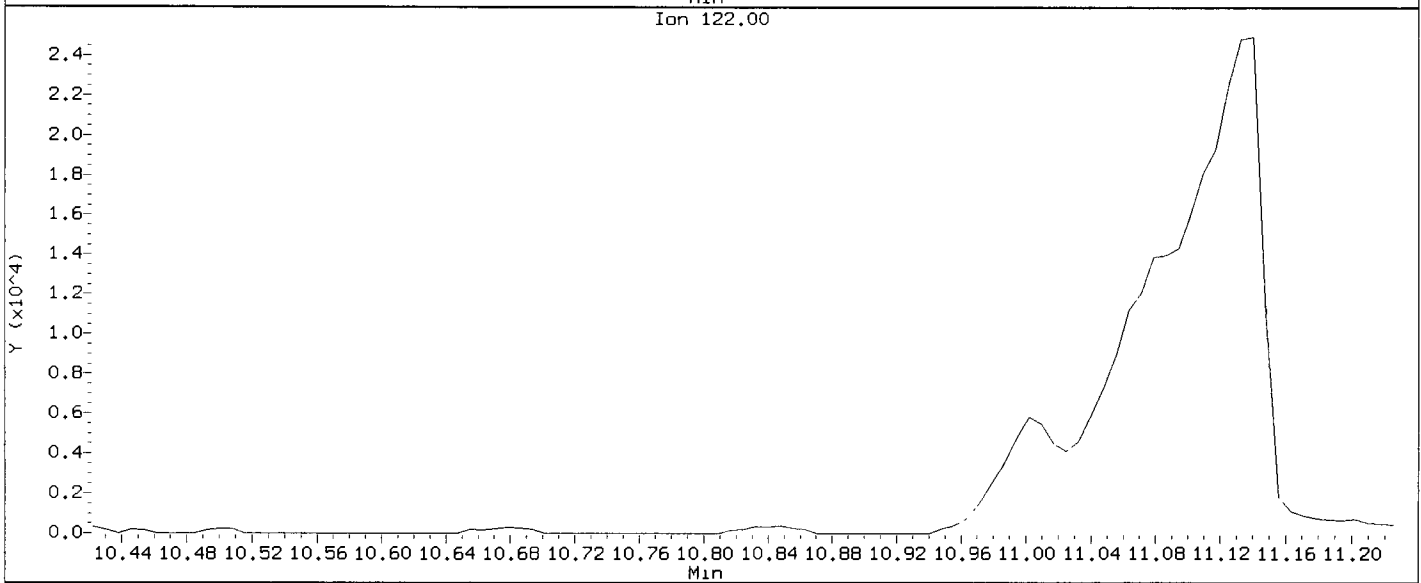
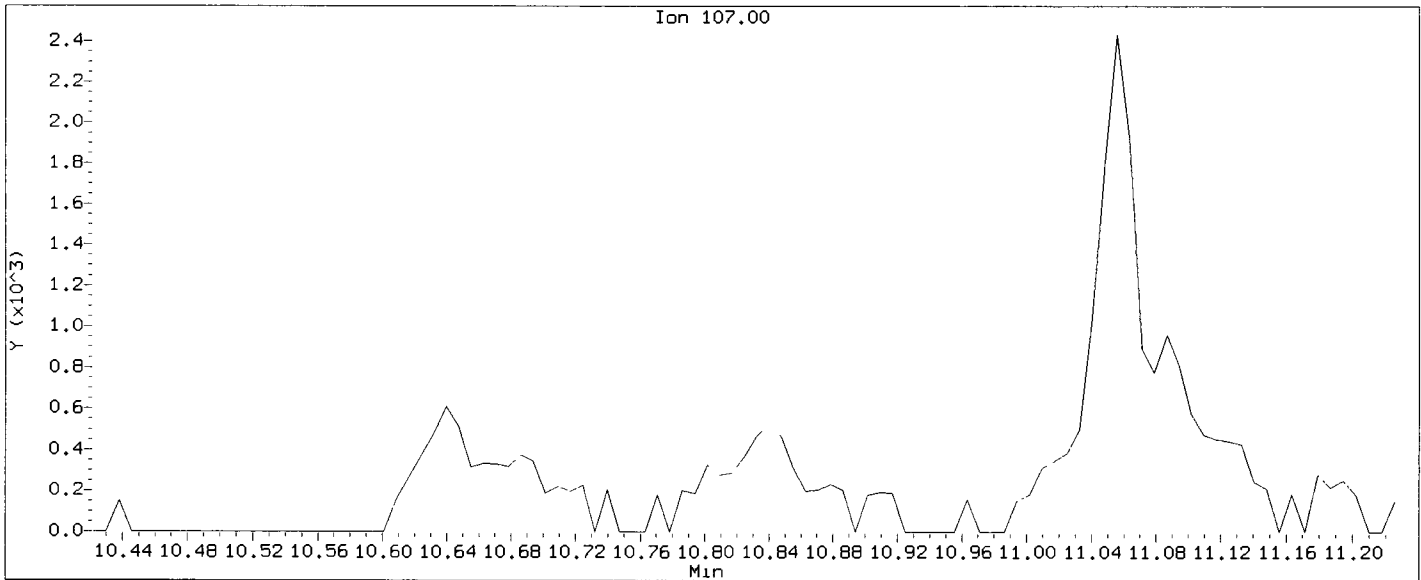
Lab ID: VR58C, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

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Data File: /chem1/nt10.1/20121204.b/vr58c.d  
Injection Date: 04-DEC-2012 18:21  
Instrument: nt10.1  
Client Sample ID: SG-12-S-E-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58d.d  
 Lab Smp Id: VR58D Client Smp ID: SG-13-S-E-121107  
 Inj Date : 04-DEC-2012 18:58  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58D  
 Misc Info : 12-22332  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 6  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub  
 Target Version: 3.50  
 Processing Host: cserv3

Concentration Formula: Amt \* DF \* Vt/(Ws \* (100 - M)/100) \* CpdnVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	42.30000	Weight of sample extracted (g)
M	76.00000	% Moisture

Cpdn Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
							(ug/mL)	(ug/kg)
\$ 1 2-Fluorophenol	112	6.582	6.505	(0.745)	114158	7.52958	741.7	
\$ 2 Phenol-d5	99	8.267	8.220	(0.935)	189441	10.0978	994.7	
3 Phenol	94	8.290	8.243	(0.938)	41062	2.07770	204.7	
\$ 5 2-Chlorophenol-d4	132	8.483	8.452	(0.960)	100149	6.16978	607.7	
7 1,3-Dichlorobenzene	146	Compound Not Detected.						
* 8 1,4-Dichlorobenzene-d4	152	8.839	8.831	(1.000)	47395	4.00000		
9 1,4-Dichlorobenzene	146	Compound Not Detected.						
\$ 10 1,2-Dichlorobenzene-d4	152	9.219	9.212	(1.043)	40030	3.38203	333.1	
12 1,2-Dichlorobenzene	146	Compound Not Detected.						
11 Benzyl alcohol	108	9.181	9.150	(1.039)	33823	3.61923	356.5	
13 2-Methylphenol	108	9.452	9.421	(1.069)	2002	0.11793	11.62 (M)	
17 Hexachloroethane	117	Compound Not Detected.						
15 4-Methylphenol	108	9.755	9.716	(1.104)	11620	1.15333	113.6	
\$ 18 Nitrobenzene-d5	82	10.011	10.003	(0.871)	83296	4.85508	478.2	
22 2,4-Dimethylphenol	107	Compound Not Detected.						

Compounds	QUANT		SIG			RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	ON-COLUMN (ug/mL)		FINAL (ug/kg)	
24 Benzoic acid	105	11.148	11.110	(0.970)	181130	16.0330	1579 (M)	
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
* 27 Naphthalene-d8	136	11.488	11.480	(1.000)	183094	4.00000		
28 Naphthalene	128	11.534	11.526	(1.004)	17703	0.39742	39.15	
30 Hexachlorobutadiene	225	Compound Not Detected.						
32 2-Methylnaphthalene	142	13.034	13.027	(1.135)	8105	0.24422	24.06	
\$ 36 2-Fluorobiphenyl	172	13.893	13.886	(0.904)	141100	3.94572	388.7	
39 Dimethylphthalate	163	Compound Not Detected.						
40 Acenaphthylene	152	15.031	15.016	(0.978)	12496	0.26169	25.78 (M) Y	
* 42 Acenaphthene-d10	164	15.372	15.356	(1.000)	101036	4.00000		
44 Acenaphthene	153	15.441	15.426	(1.005)	4533	0.16607	16.36 M	
46 Dibenzofuran	168	15.797	15.781	(1.028)	17173	0.42392	41.76	
50 Diethylphthalate	149	16.477	16.462	(1.072)	18993	0.55593	54.76	
49 Fluorene	166	16.562	16.547	(1.077)	15912	0.47346	46.64	
54 N-Nitrosodiphenylamine	169	Compound Not Detected.						
\$ 55 2,4,6-Tribromophenol	330	17.149	17.125	(1.116)	54197	9.10633	897.0	
57 Hexachlorobenzene	284	Compound Not Detected.						
58 Pentachlorophenol	266	18.392	18.362	(0.987)	7349	0.52720	51.93	
* 59 Phenanthrene-d10	188	18.640	18.617	(1.000)	303971	4.00000		
60 Phenanthrene	178	18.686	18.671	(1.002)	142787	1.89719	186.9	
61 Anthracene	178	18.787	18.764	(1.008)	39490	0.48815	48.08	
63 Di-n-butylphthalate	149	Compound Not Detected.						
64 Fluoranthene	202	21.147	21.093	(1.134)	249790	2.63312	259.4	
65 Pyrene	202	21.541	21.510	(0.908)	152234	2.90779	286.4	
\$ 66 Terphenyl-d14	244	21.859	21.835	(0.921)	110925	3.16969	312.2	
67 Butylbenzylphthalate	149	22.803	22.788	(0.961)	17621	0.82856	81.62	
68 Benzo(a)anthracene	228	23.694	23.670	(0.999)	79478	1.56477	154.1	
* 69 Chrysene-d12	240	23.725	23.701	(1.000)	178707	4.00000		
71 Chrysene	228	23.763	23.740	(1.002)	134750	2.98627	294.2	
72 bis(2-Ethylhexyl)phthalate	149	23.848	23.825	(0.961)	370235	5.72099	563.5	
* 134 Di-n-octylphthalate-d4	153	24.824	24.801	(1.000)	469025	4.00000		
73 Di-n-octylphthalate	149	24.824	24.808	(1.000)	79181	0.74474	73.36 (M) M	
76 Benzo(a)pyrene	252	26.032	25.985	(0.996)	93937	1.45198	143.0	
* 77 Perylene-d12	264	26.132	26.086	(1.000)	226693	4.00000		
78 Indeno(1,2,3-cd)pyrene	276	28.387	28.294	(1.086)	77176	1.05258	103.7	
79 Dibenzo(a,h)anthracene	278	28.411	28.310	(1.087)	24094	0.41409	40.79 (M)	
80 Benzo(g,h,i)perylene	276	29.040	28.931	(1.111)	76171	1.21387	119.6	
105 1-methylnaphthalene	142	13.267	13.259	(1.155)	5391	0.17699	17.43	
187 Total Benzofluoranthenes	252	25.474	25.474	(0.975)	258038	3.86801	381.0	
98 Retene	219	22.153	22.137	(0.934)	145104			
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

12-5-12



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58d.d  
 Lab Smp Id: VR58D  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22332

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-13-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	47395	-41.90
27 Naphthalene-d8	299399	149700	598798	183094	-38.85
42 Acenaphthene-d10	178564	89282	357128	101036	-43.42
59 Phenanthrene-d10	305410	152705	610820	303971	-0.47
69 Chrysene-d12	323853	161926	647706	178707	-44.82
134 Di-n-octylphthala	427845	213922	855690	469025	9.62
77 Perylene-d12	305316	152658	610632	226693	-25.75

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.84	0.09
27 Naphthalene-d8	11.48	10.98	11.98	11.49	0.07
42 Acenaphthene-d10	15.36	14.86	15.86	15.37	0.10
59 Phenanthrene-d10	18.62	18.12	19.12	18.64	0.12
69 Chrysene-d12	23.70	23.20	24.20	23.72	0.10
134 Di-n-octylphthala	24.80	24.30	25.30	24.82	0.09
77 Perylene-d12	26.09	25.59	26.59	26.13	0.18

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.

Client SDG: VR58

Sample Matrix: SOLID

Fraction: SV

Lab Smp Id: VR58D

Client Smp ID: SG-13-S-E-121107

Level: LOW

Operator: VTS/YZ

Data Type: MS DATA

SampleType: SAMPLE

SpikeList File: SHORTPSDDA.spk

Quant Type: ISTD

Sublist File: SHORTPSDDA.sub

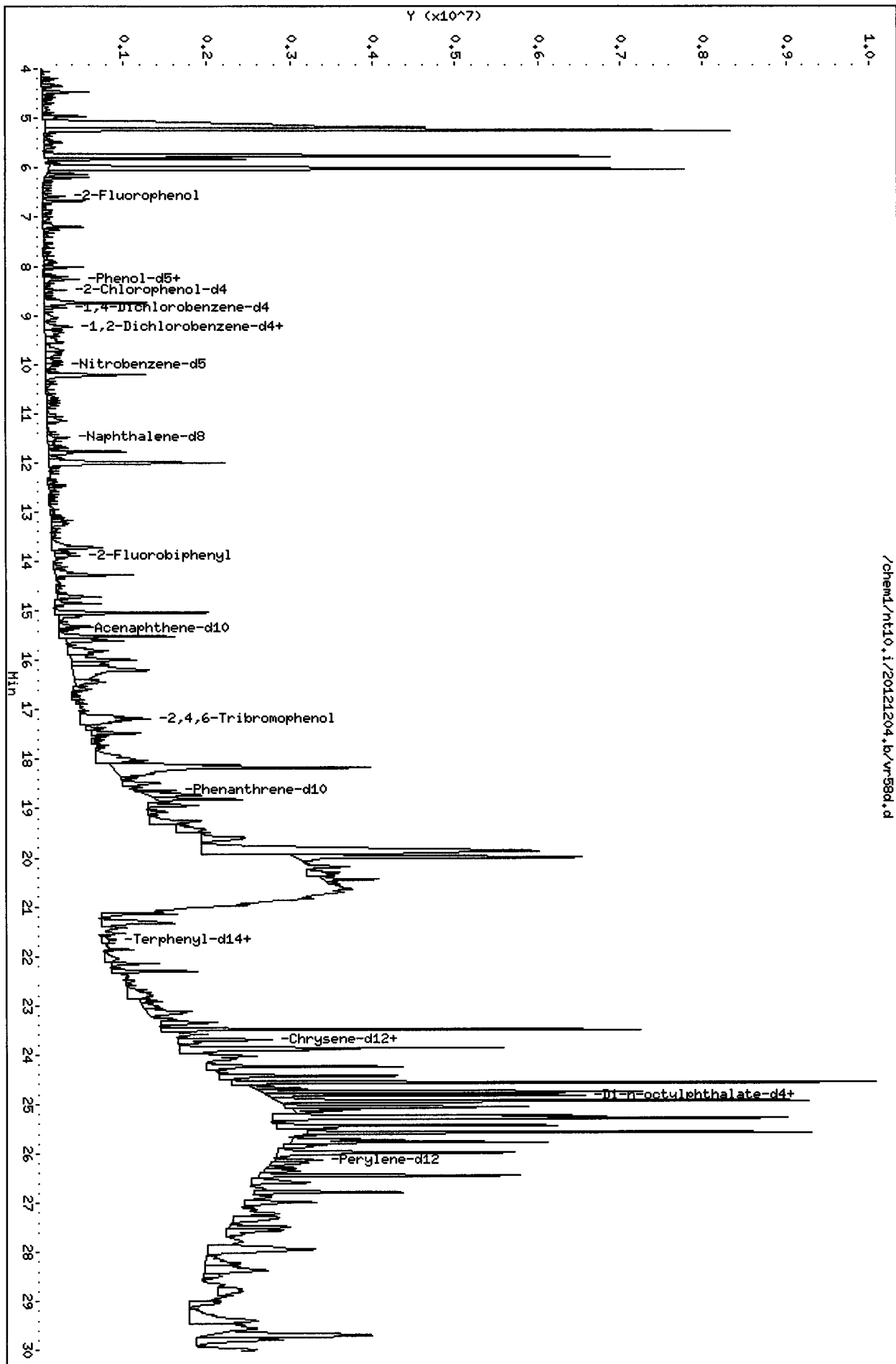
Method File: /chem1/nt10.i/20121204.b/ABN.m

Misc Info: 12-22332

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	738.8	741.7	100.39	30-160
\$ 2 Phenol-d5	738.8	994.7	134.64	30-160
\$ 5 2-Chlorophenol-d4	738.8	607.7	82.26	30-160
\$ 10 1,2-Dichlorobenzen	492.5	333.1	67.64	30-160
\$ 18 Nitrobenzene-d5	492.5	478.2	97.10	30-160
\$ 36 2-Fluorobiphenyl	492.5	388.7	78.91	30-160
\$ 55 2,4,6-Tribromophen	738.8	897.0	121.42	30-160
\$ 66 Terphenyl-d14	492.5	312.2	63.39	30-160

Data File: /chem1/nt10.i/20121204.b/vr58d.d  
Date: 04-DEC-2012 18:58  
Client ID: SG-13-S-E-121107  
Sample Info: VR58D  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.i  
Operator: VTS/YZ  
Column diameter: 0.25



/chem1/nt10.i/20121204.b/vr58d.d

Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

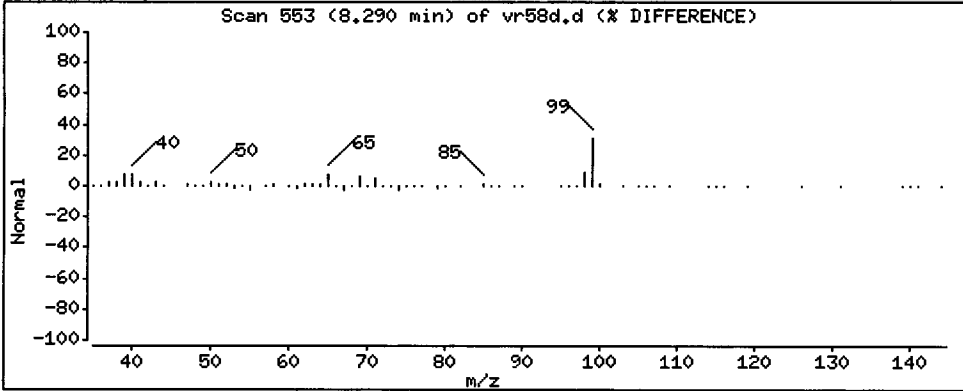
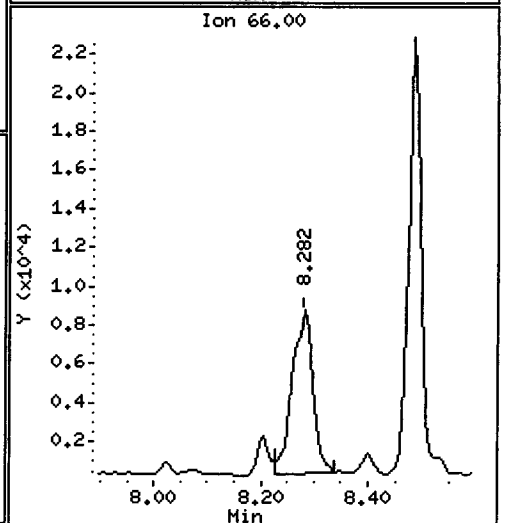
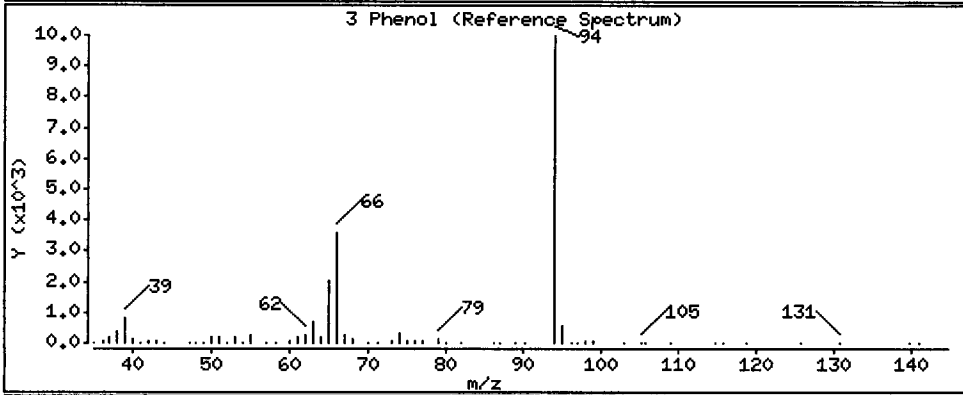
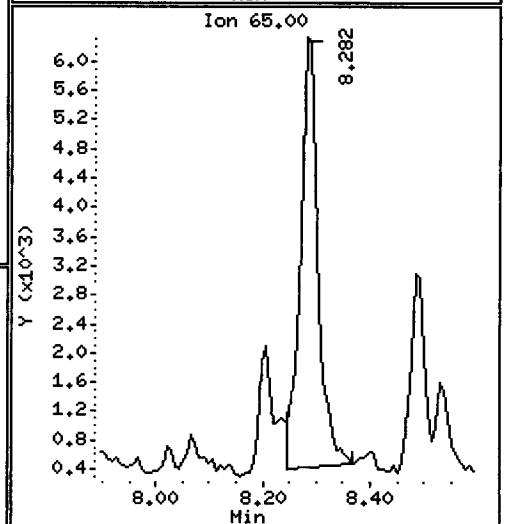
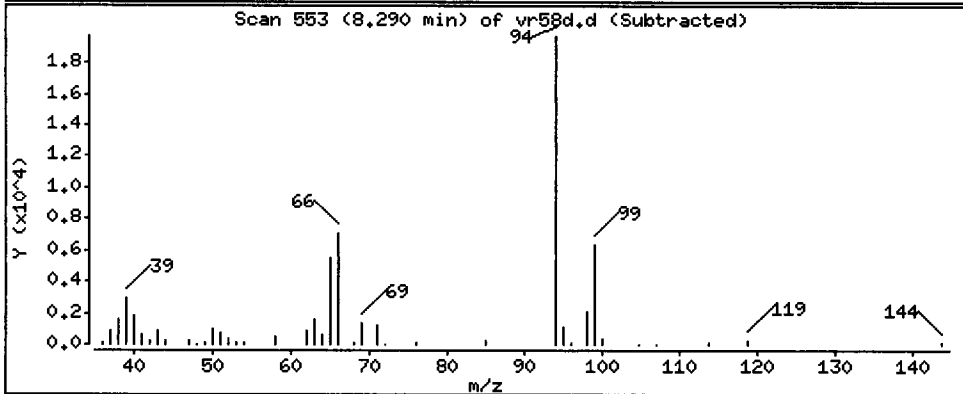
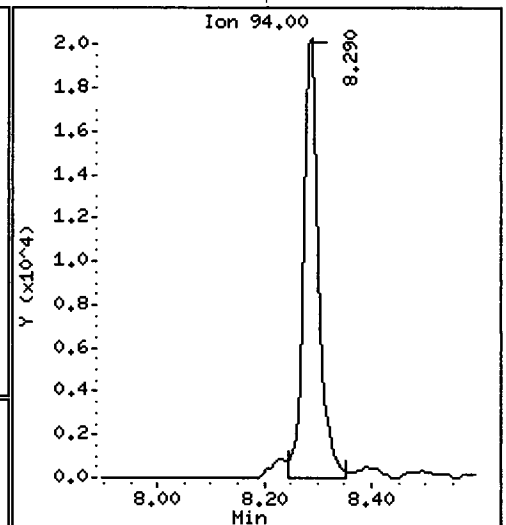
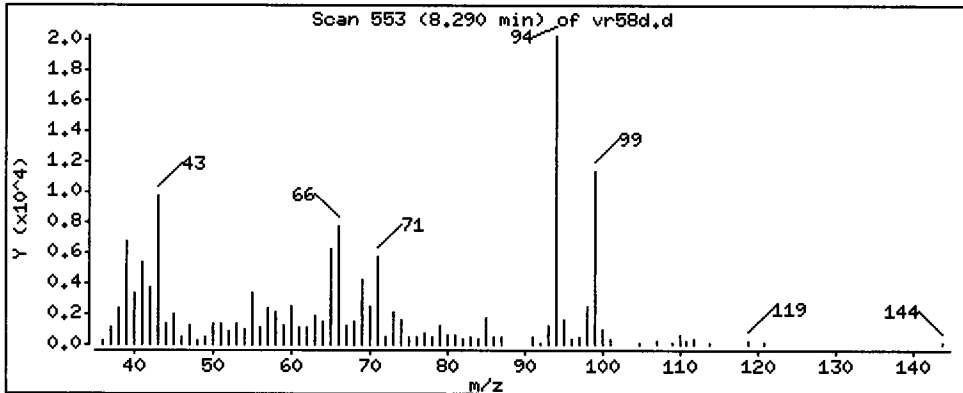
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 204.7 ug/kg



Date: 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

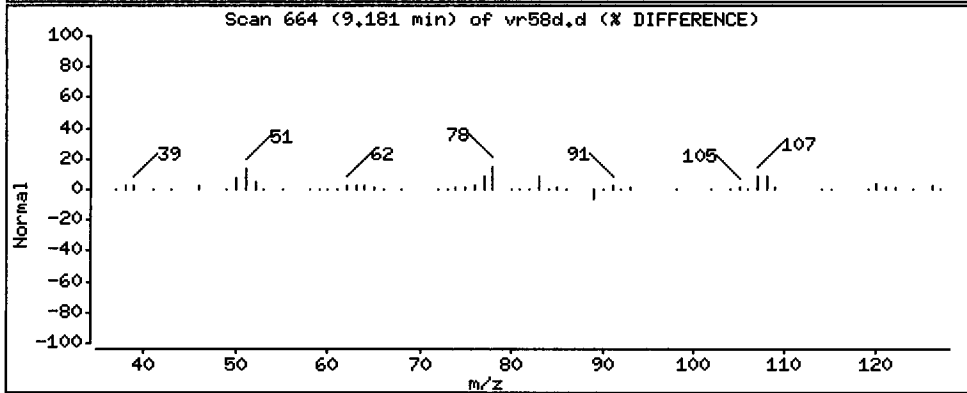
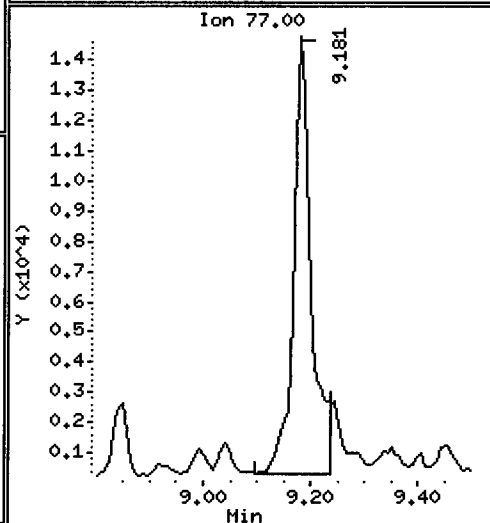
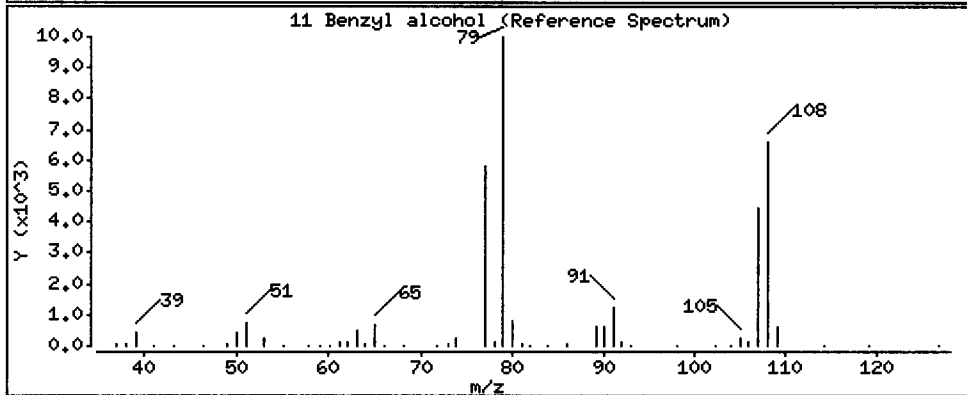
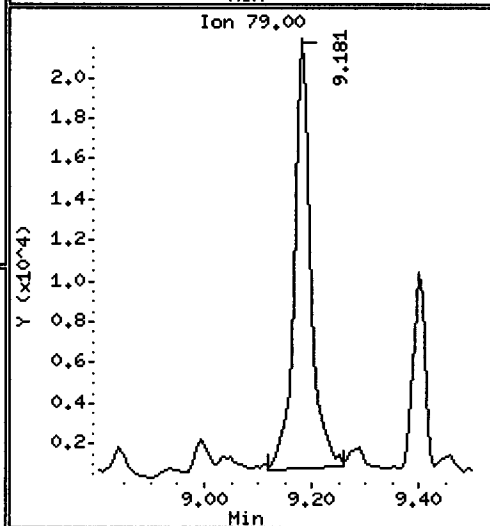
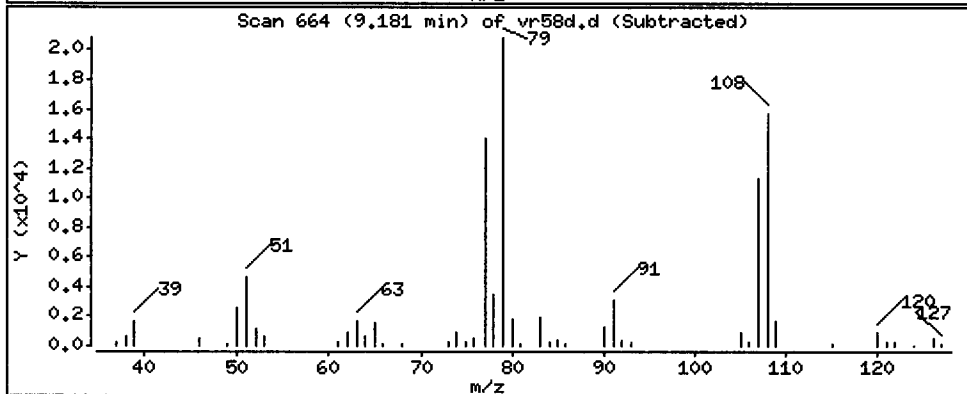
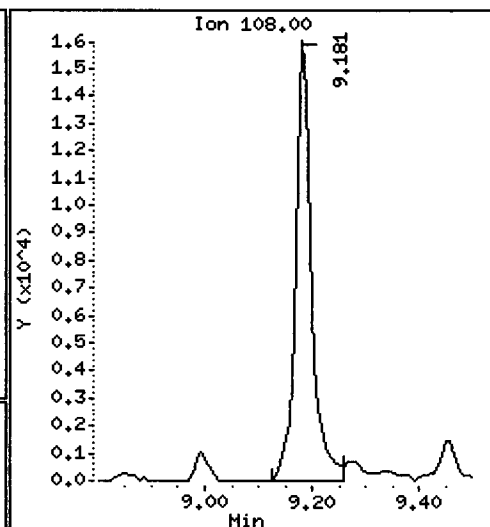
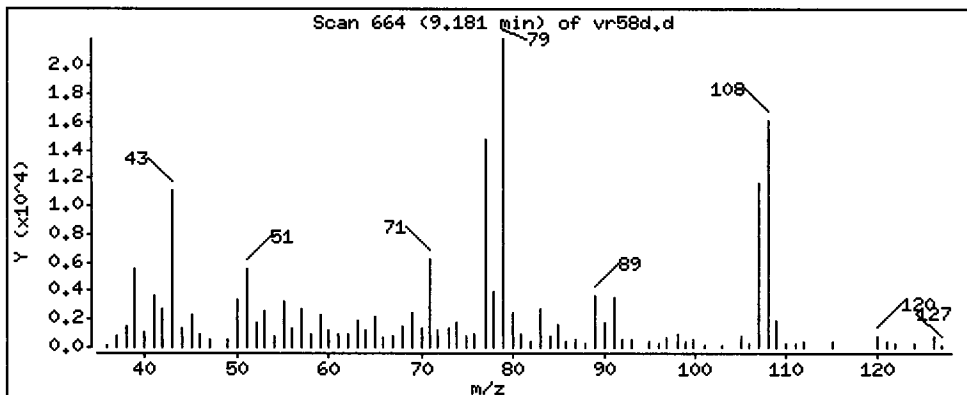
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 356.5 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

Operator: VTS/YZ

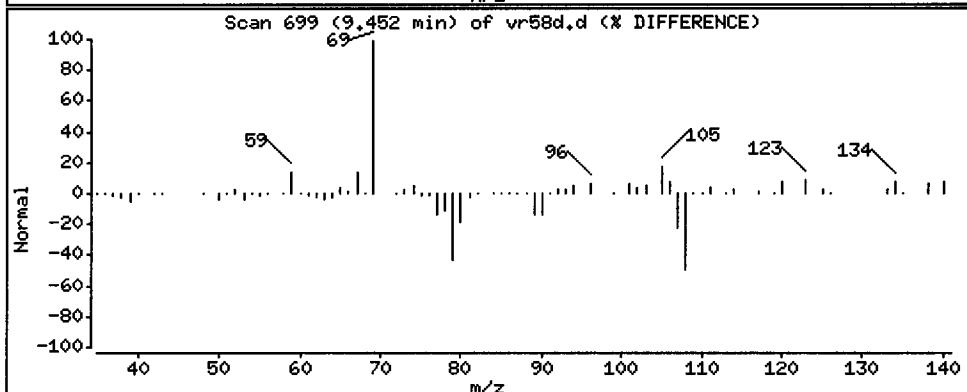
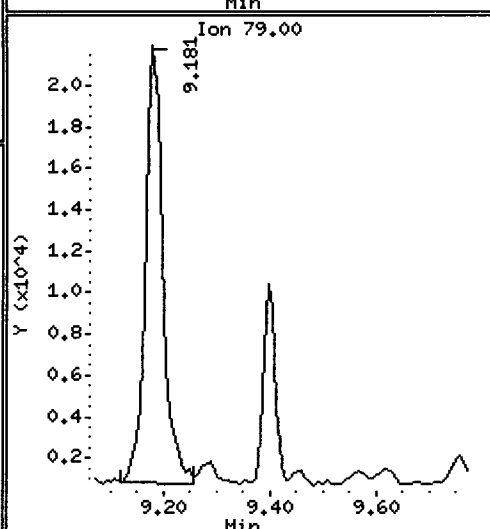
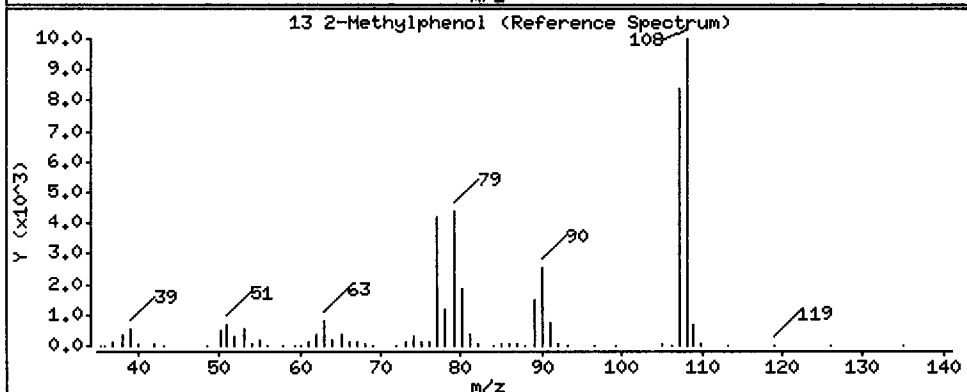
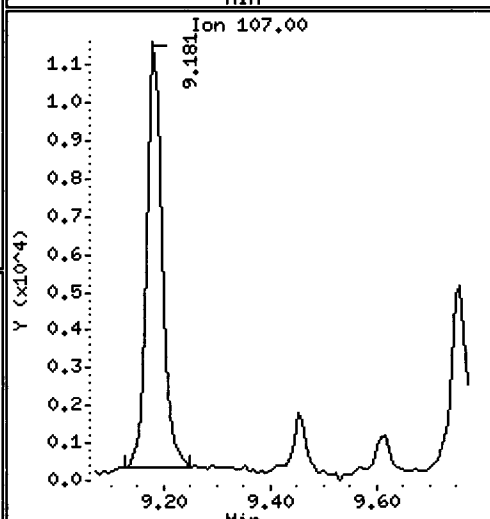
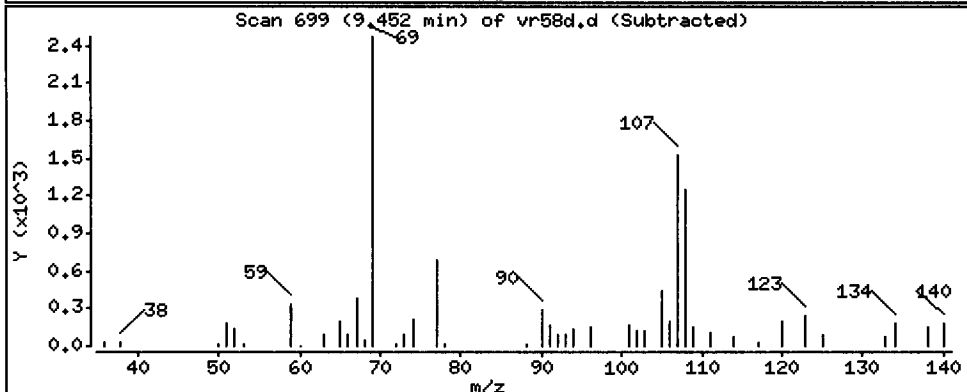
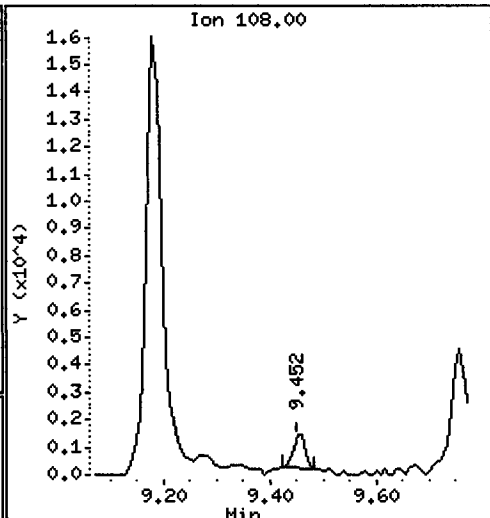
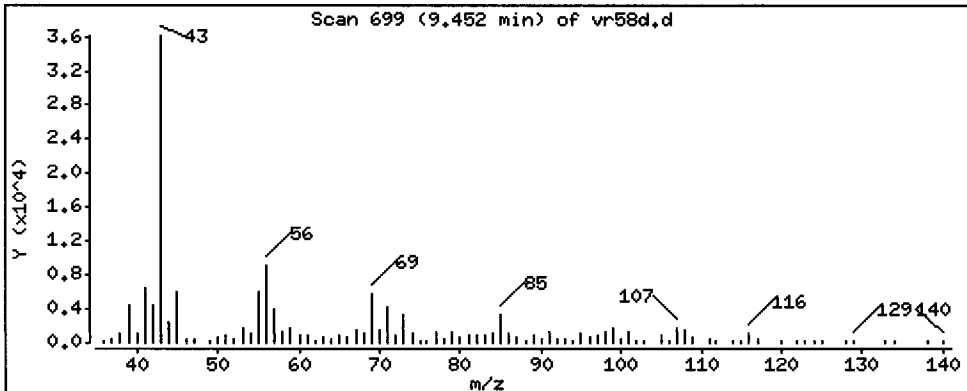
Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 11.62 ug/kg

*Full*



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

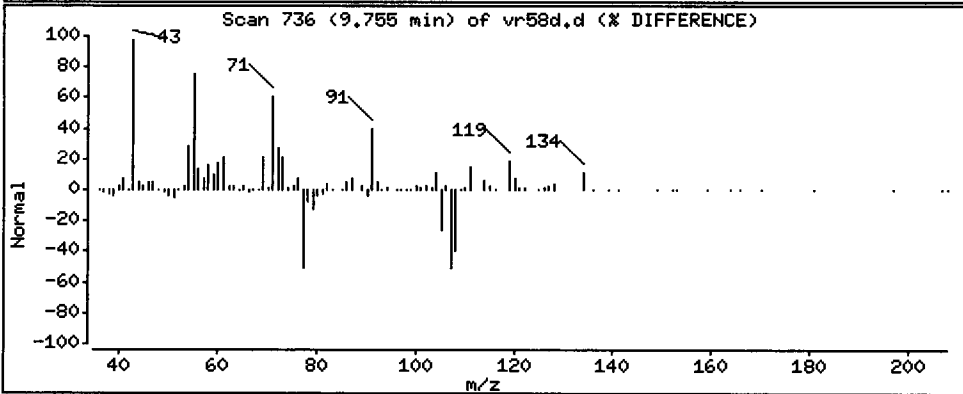
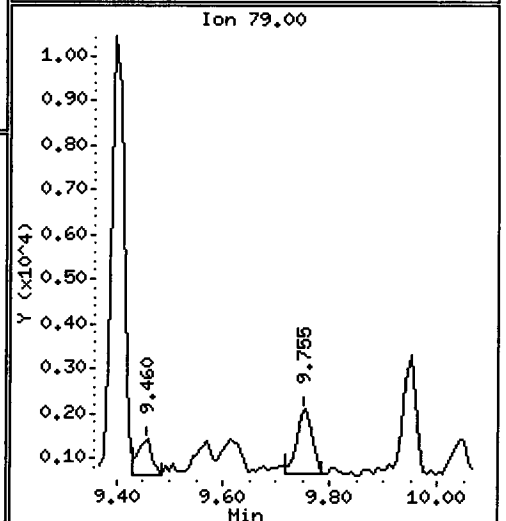
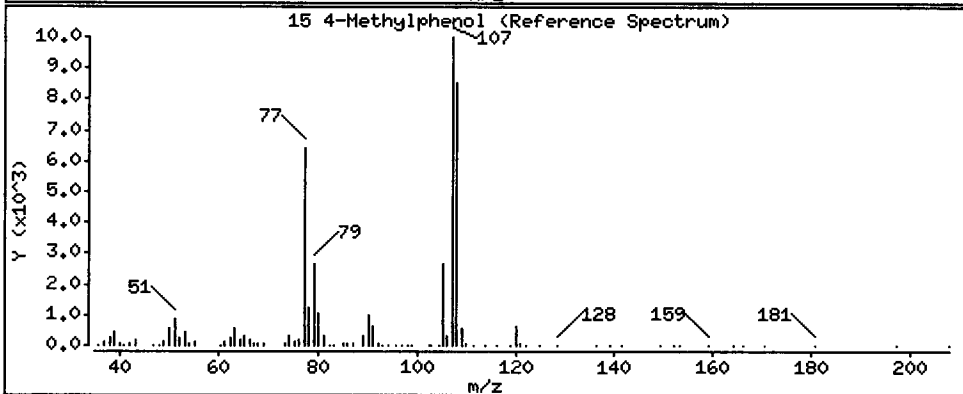
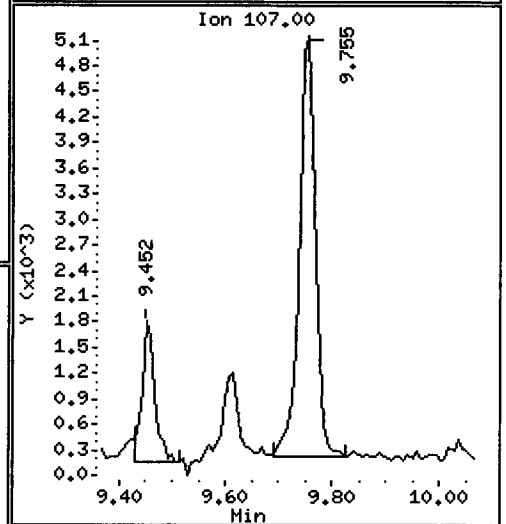
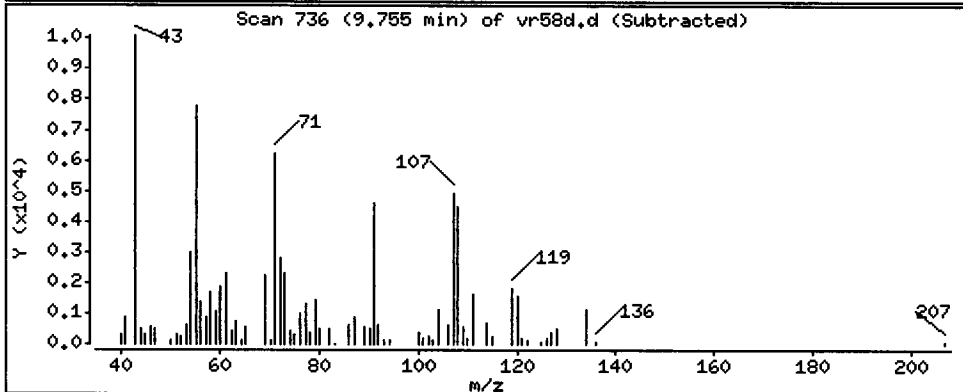
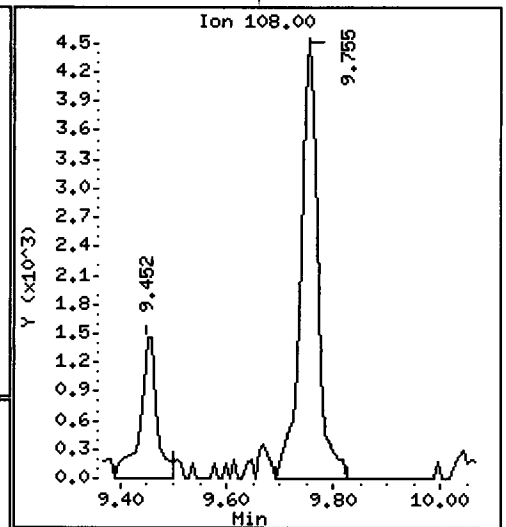
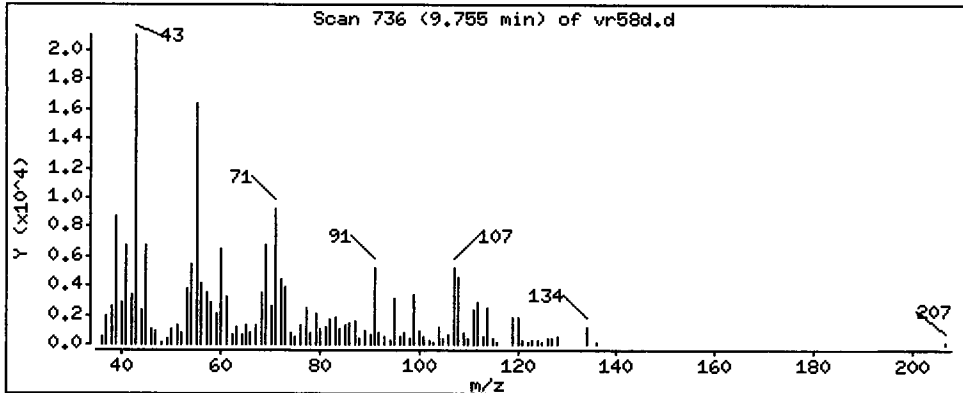
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 113.6 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

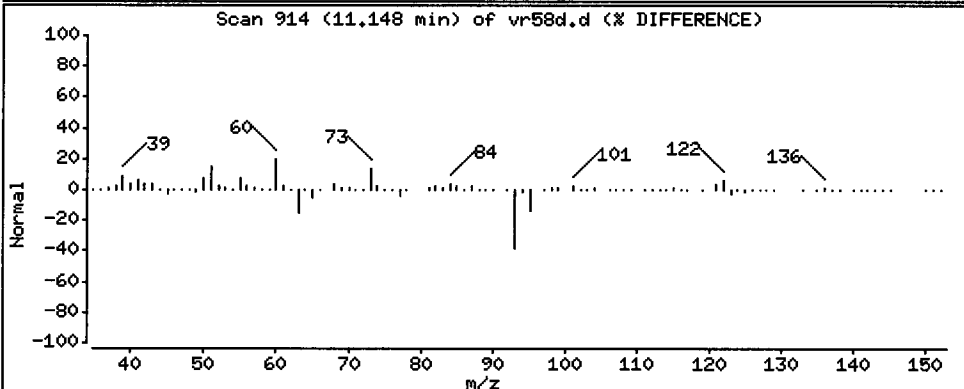
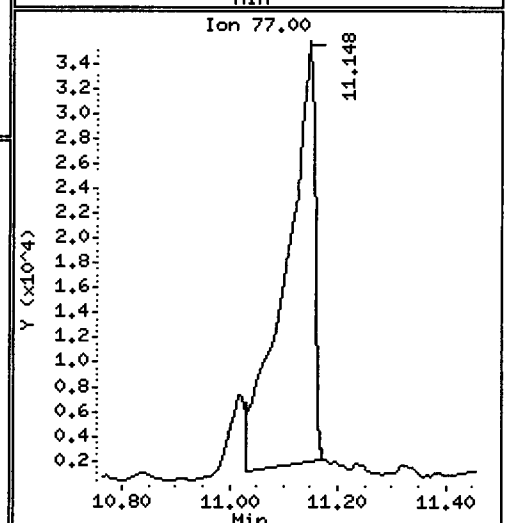
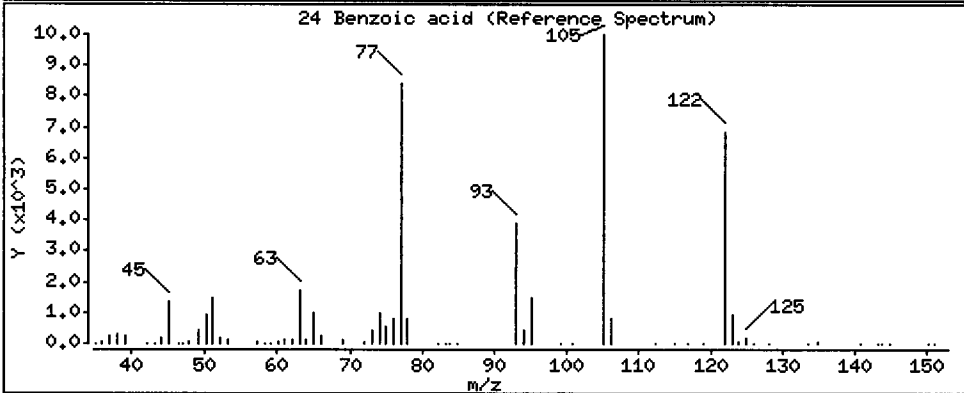
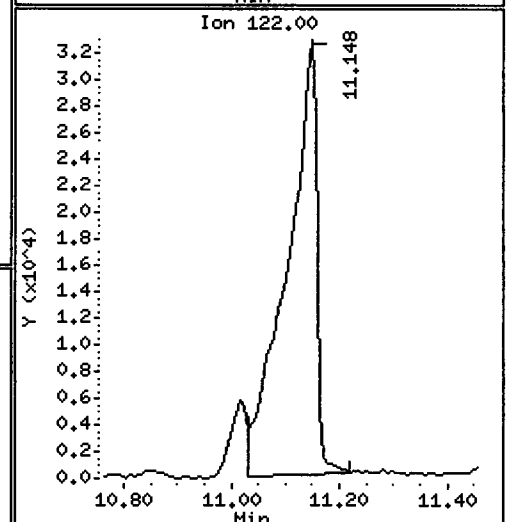
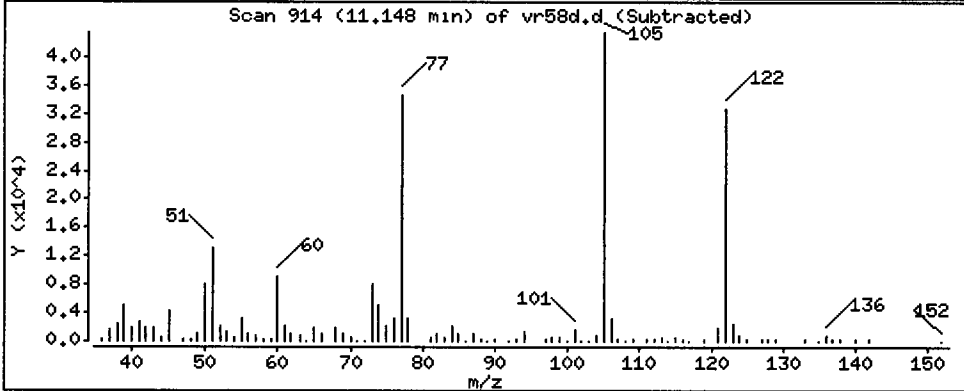
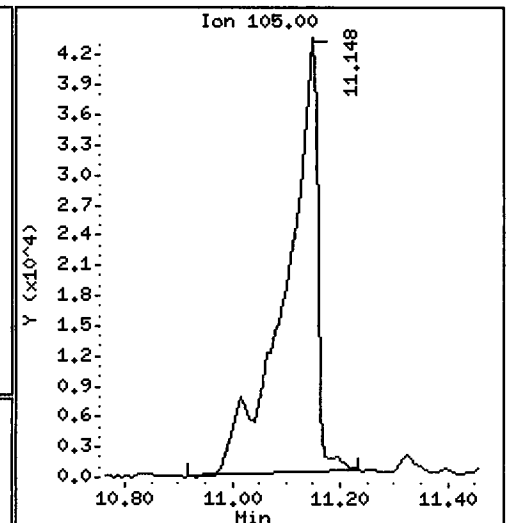
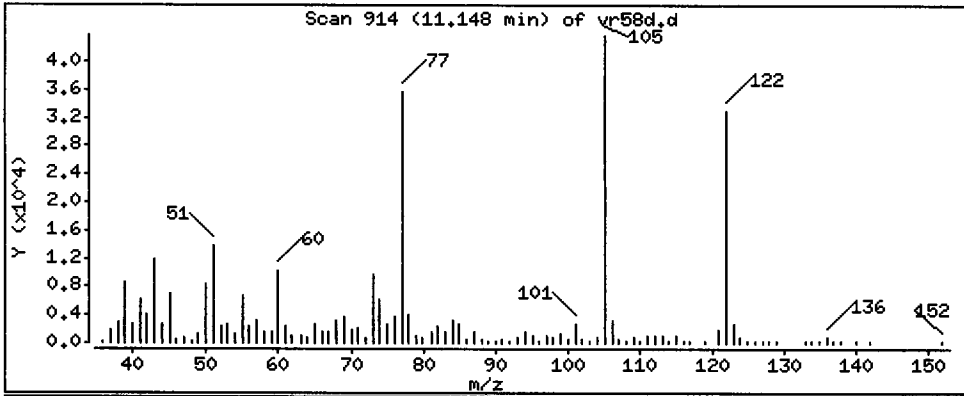
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 1579 ug/kg





Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

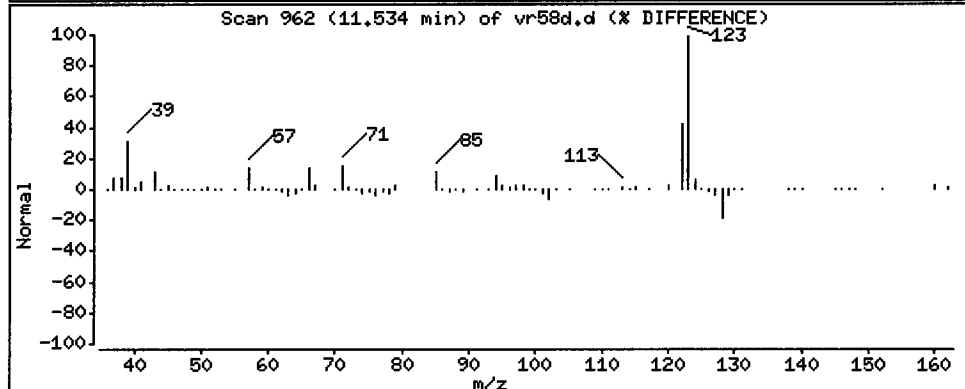
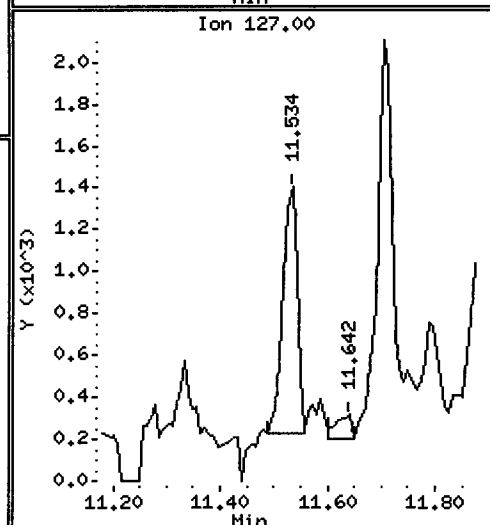
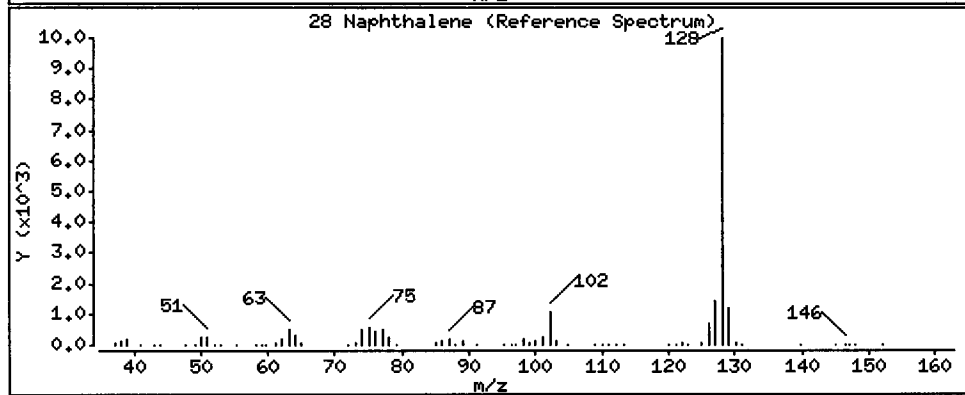
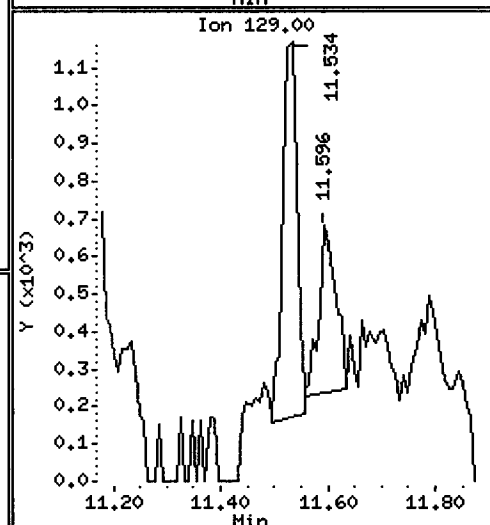
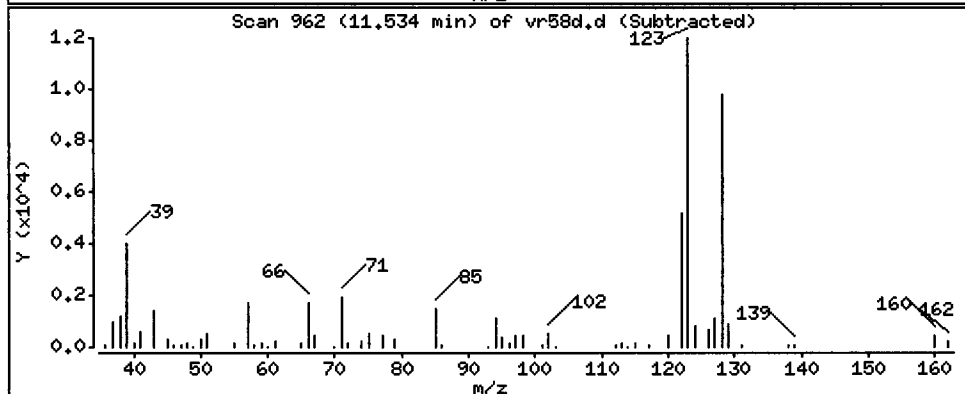
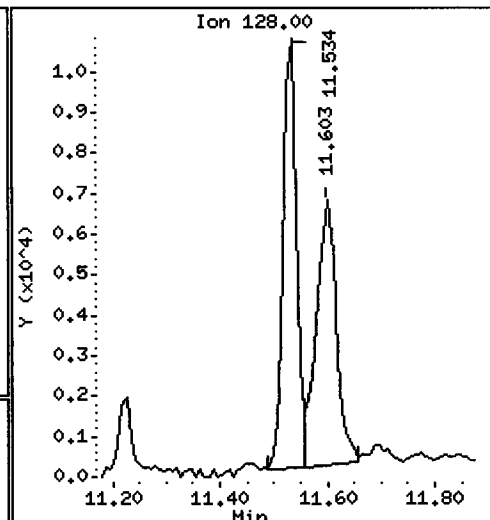
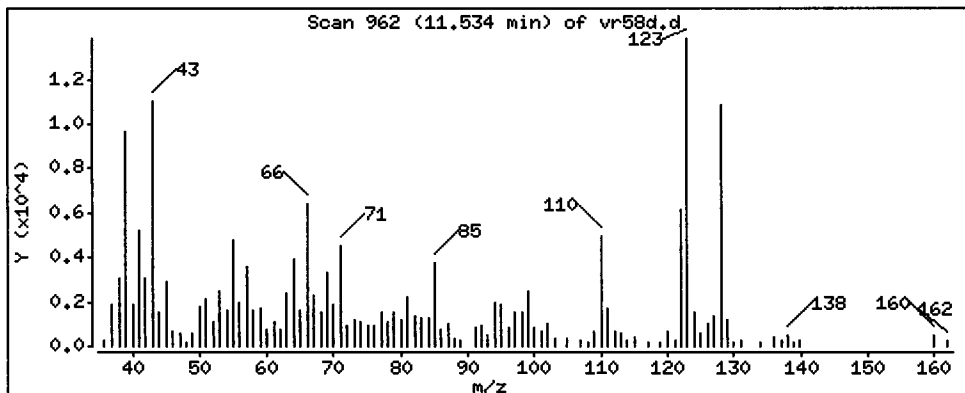
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 39.15 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

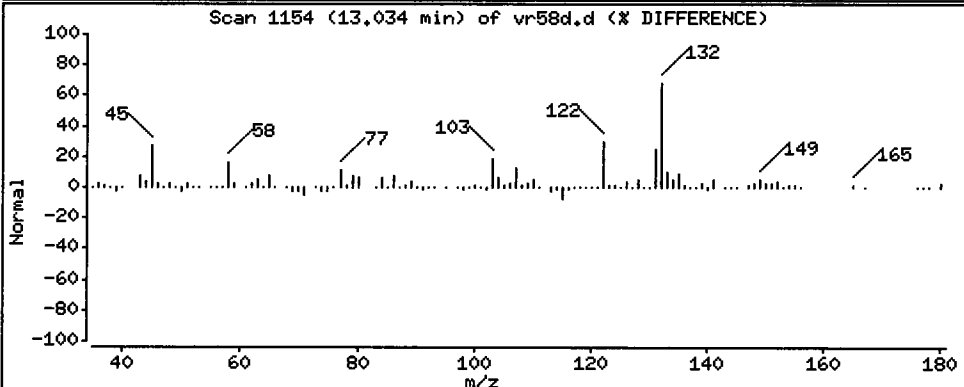
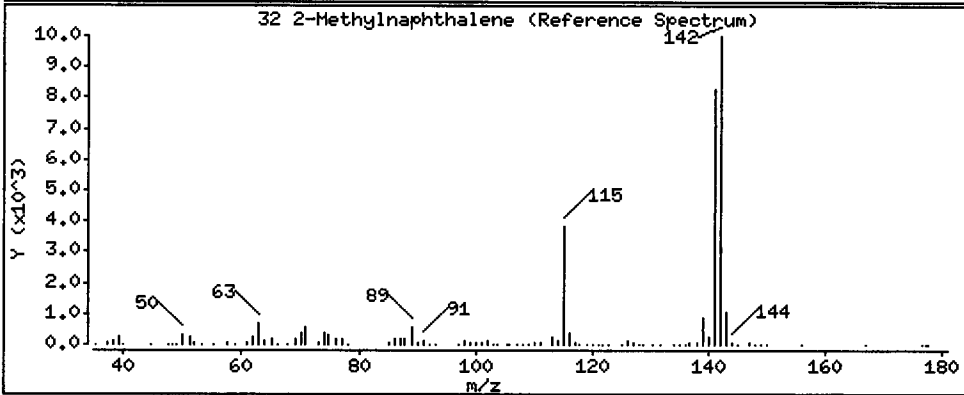
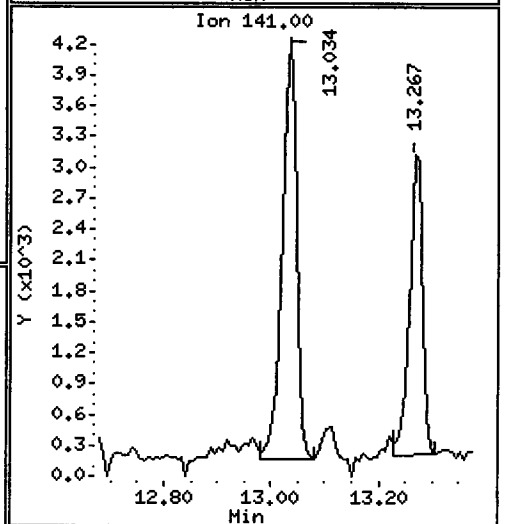
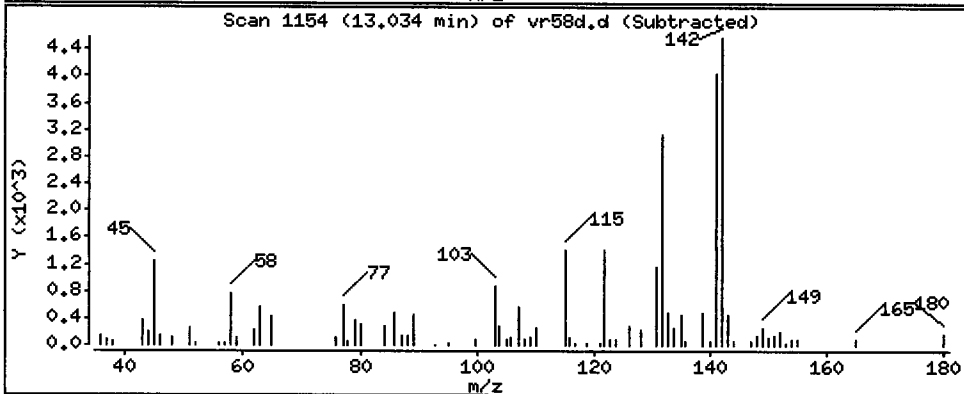
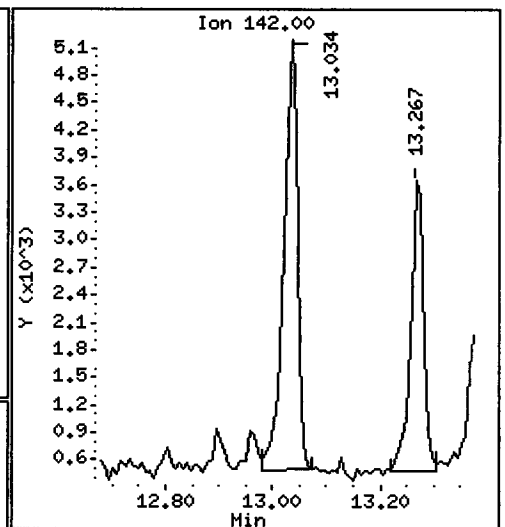
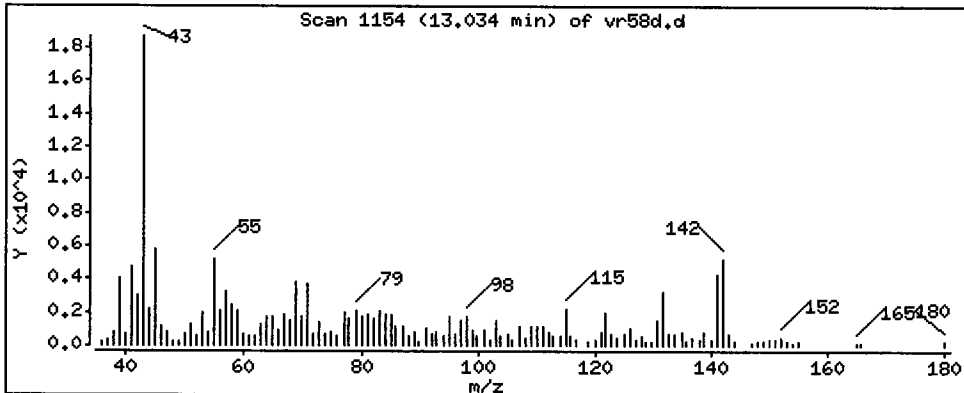
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 24.06 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

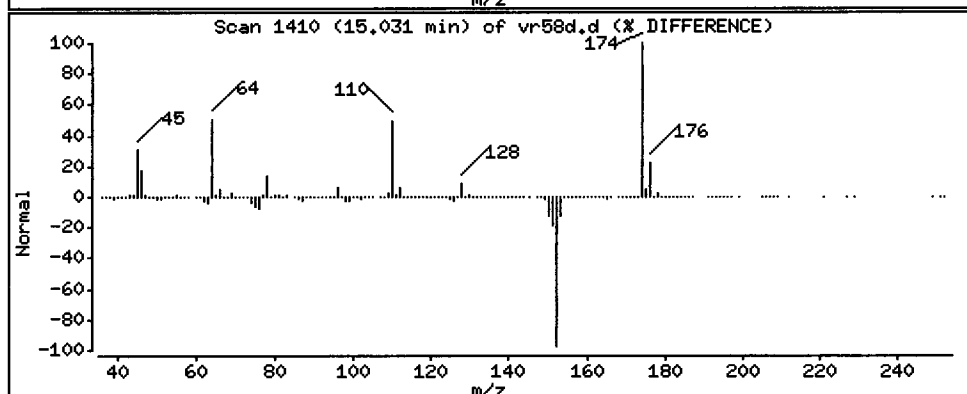
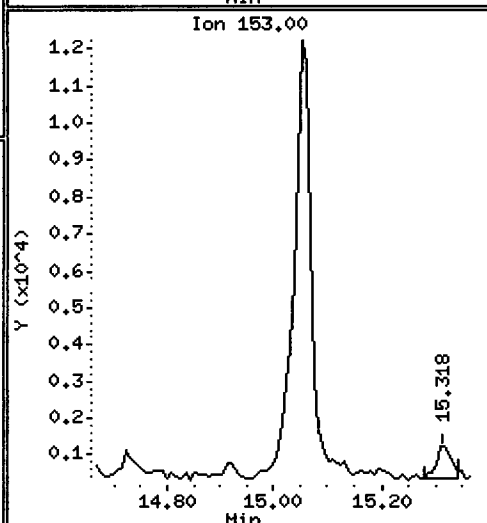
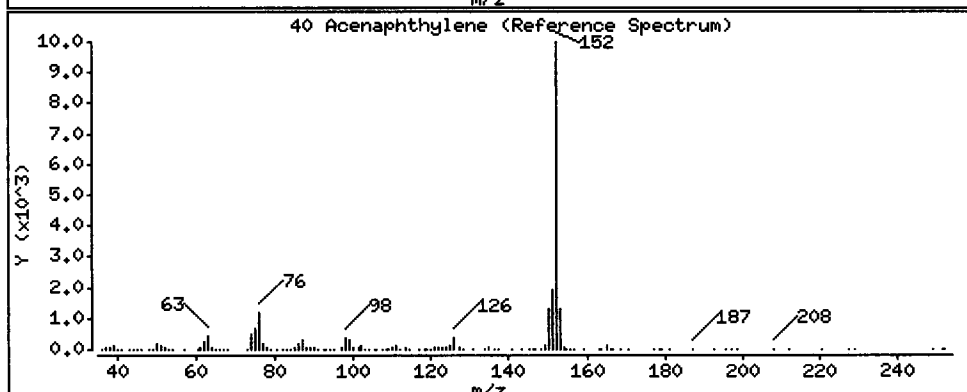
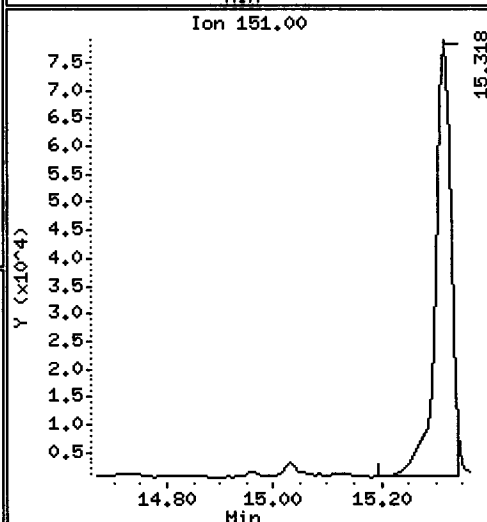
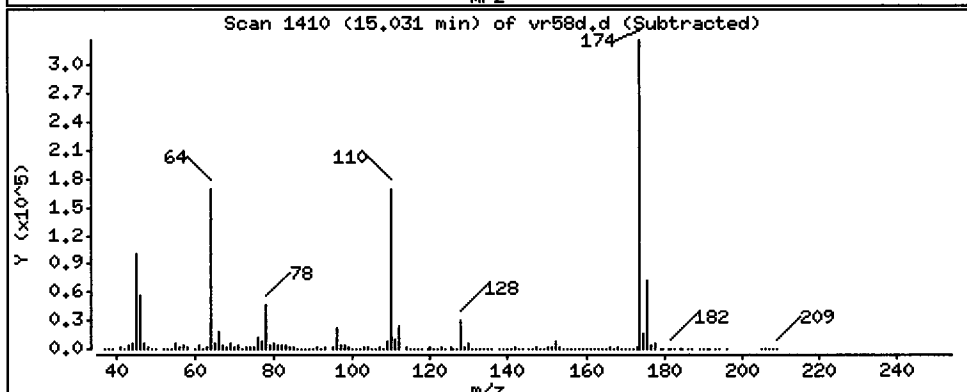
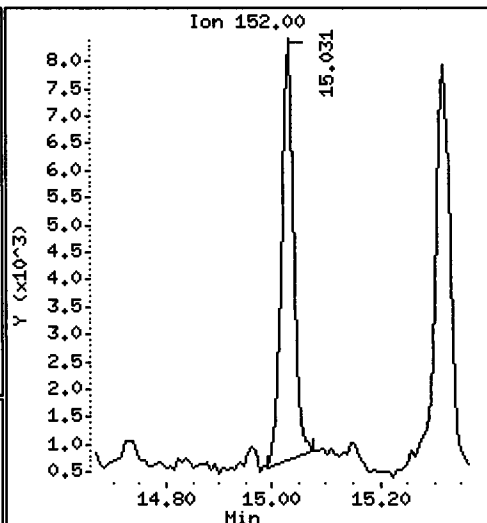
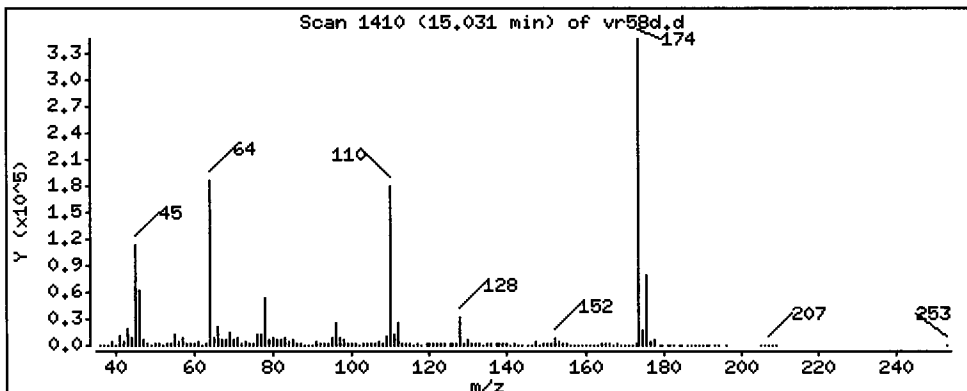
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 25.78 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

Operator: VTS/YZ

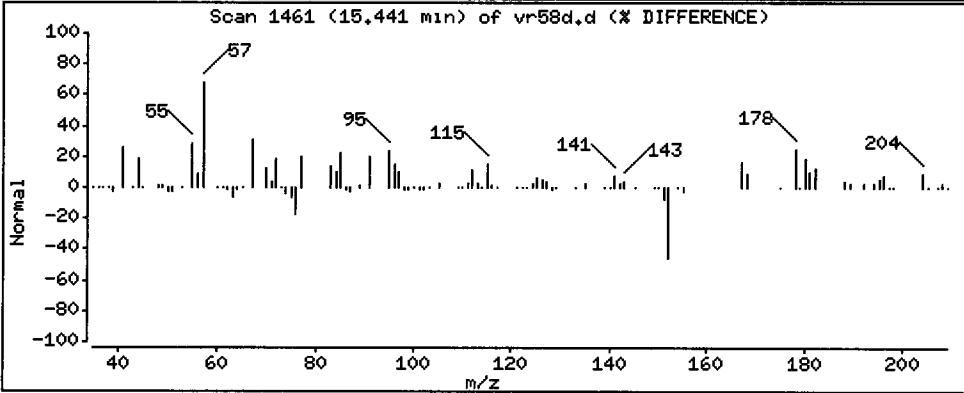
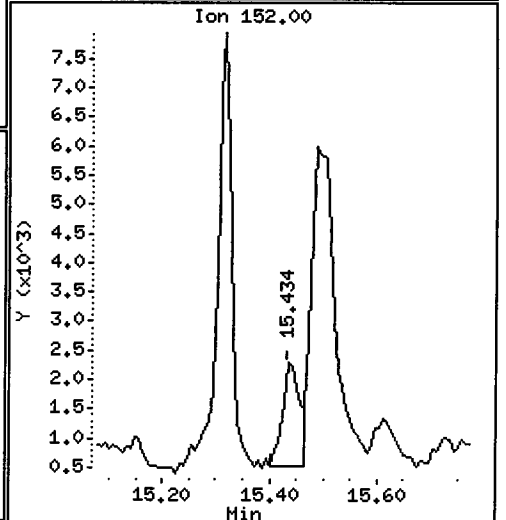
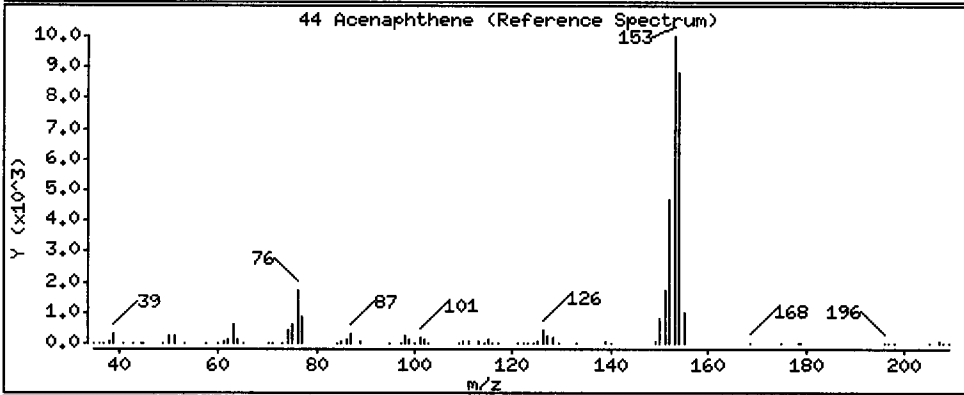
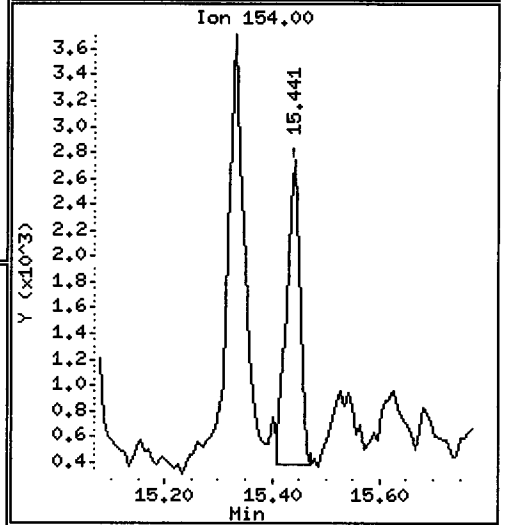
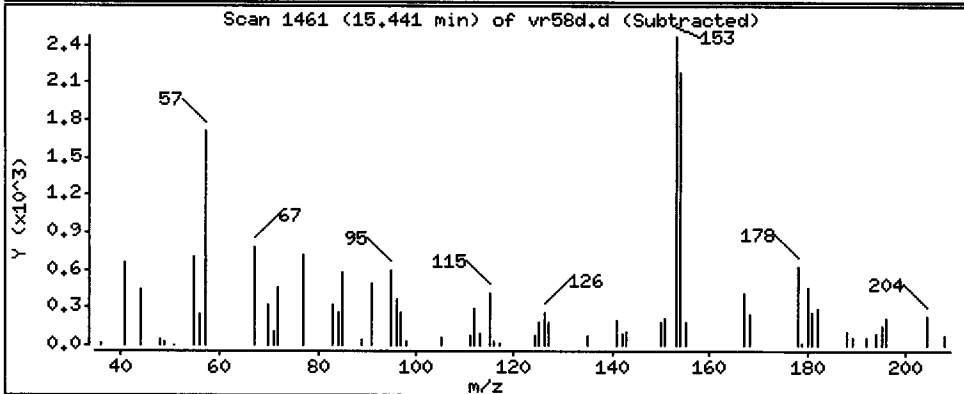
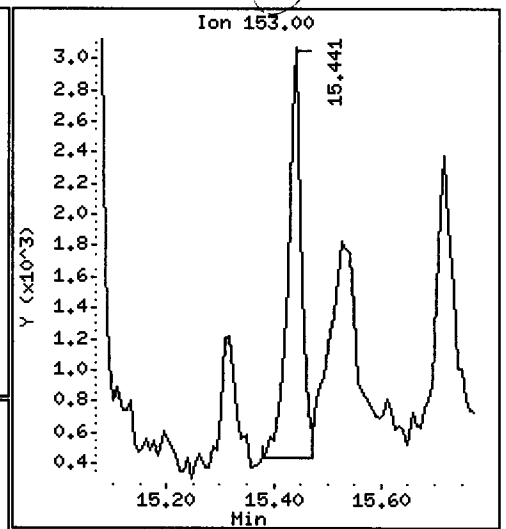
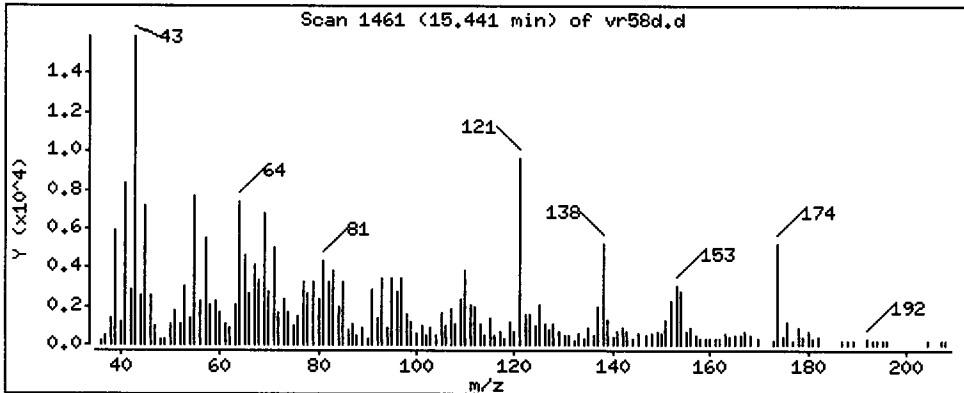
Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 16.36 ug/kg

*YZ*



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

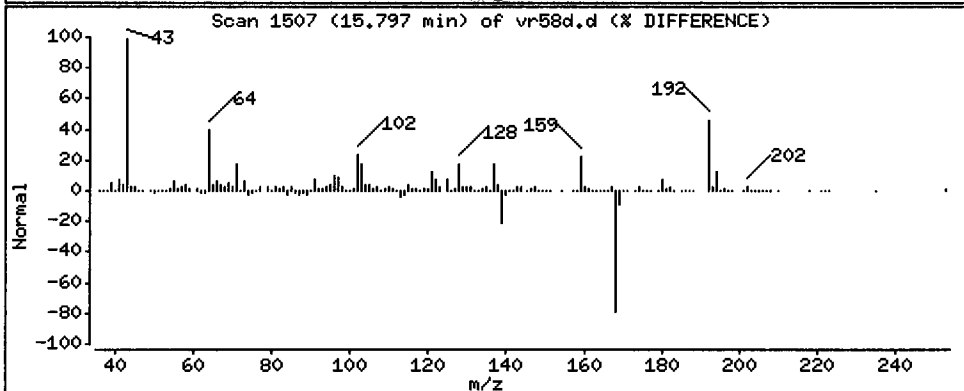
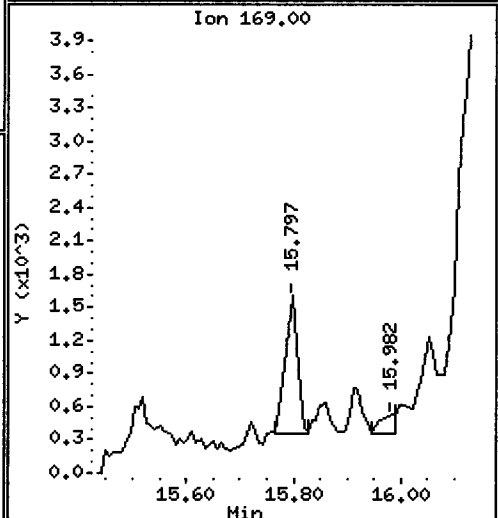
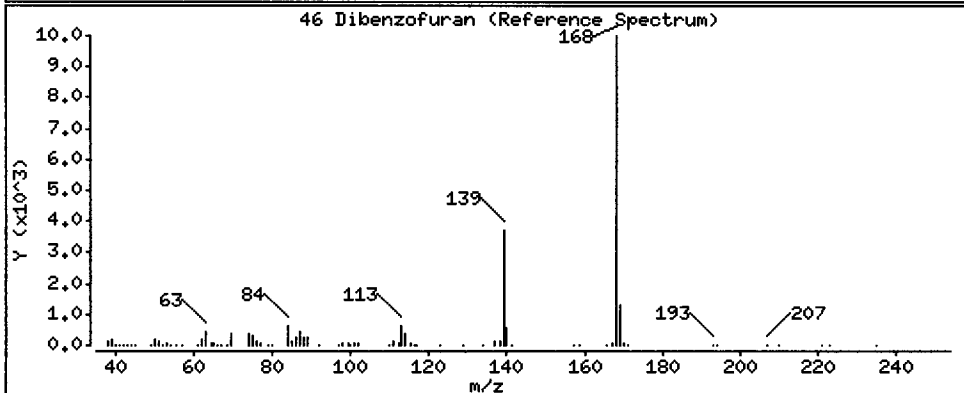
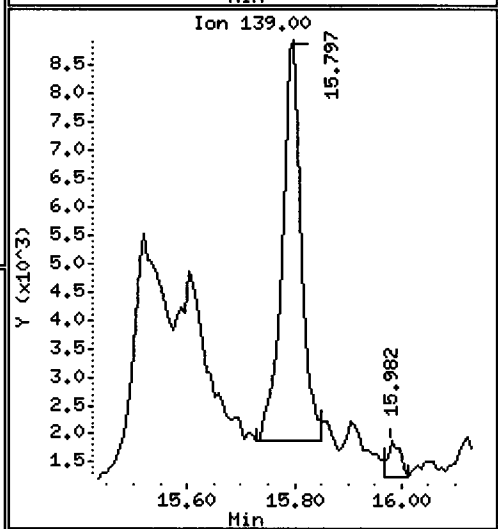
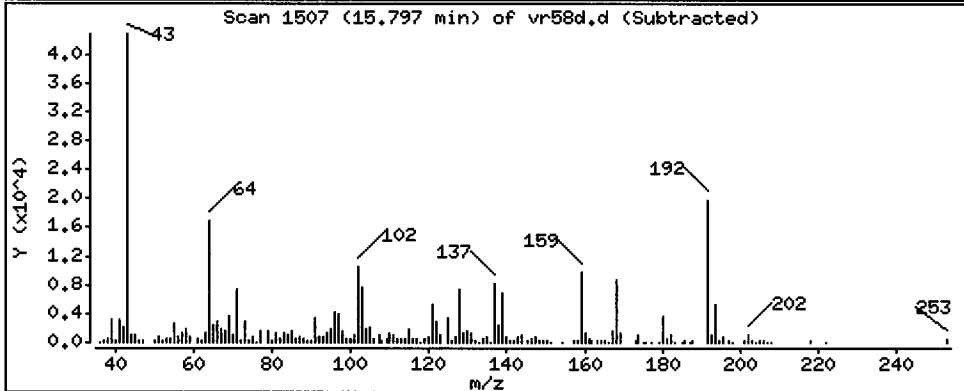
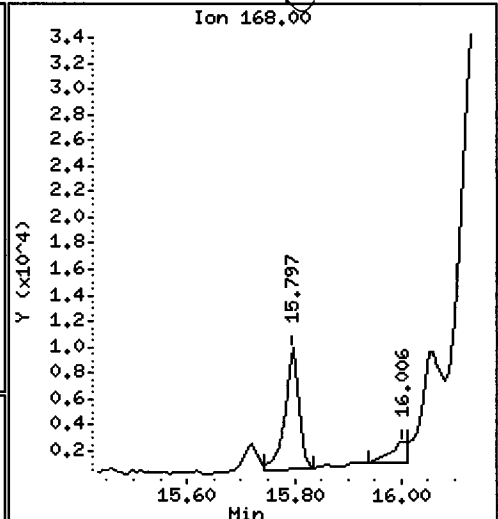
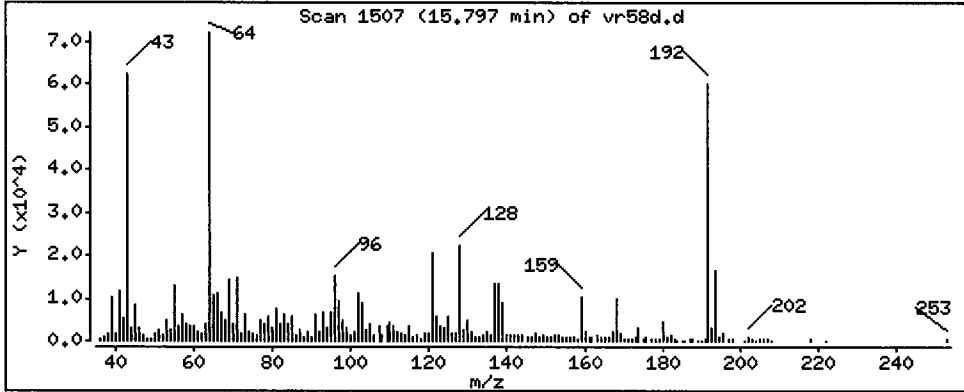
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 41.76 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

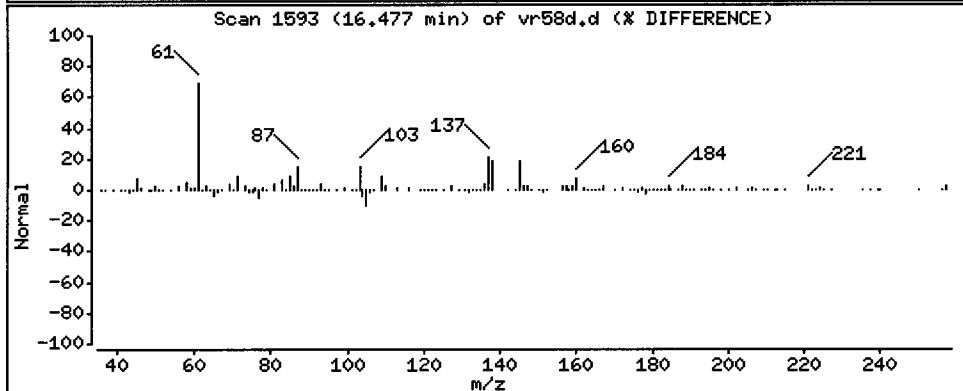
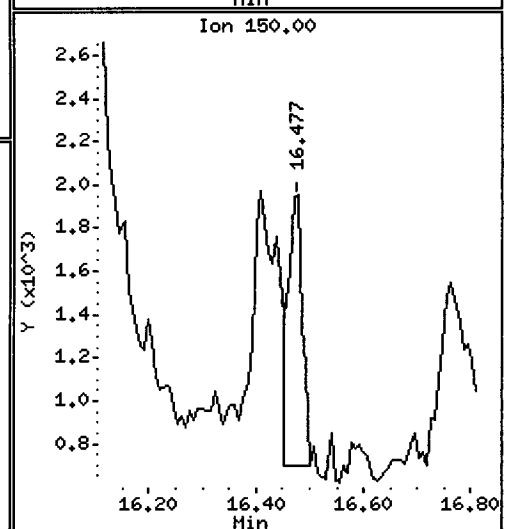
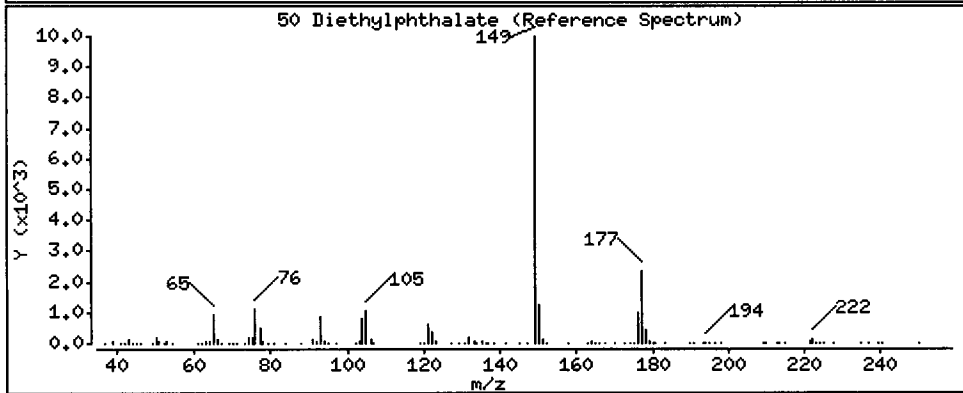
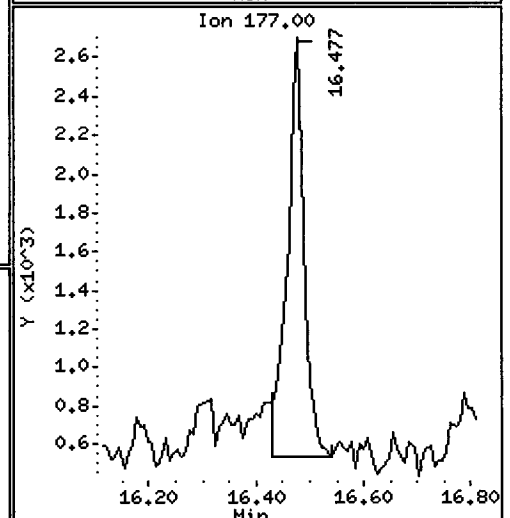
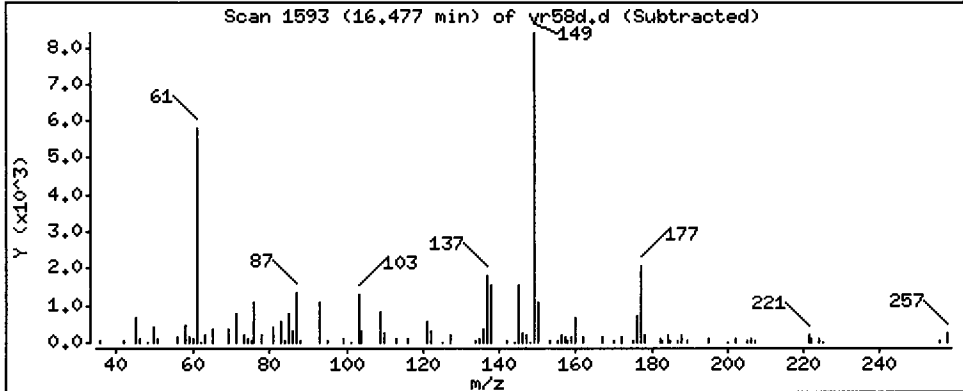
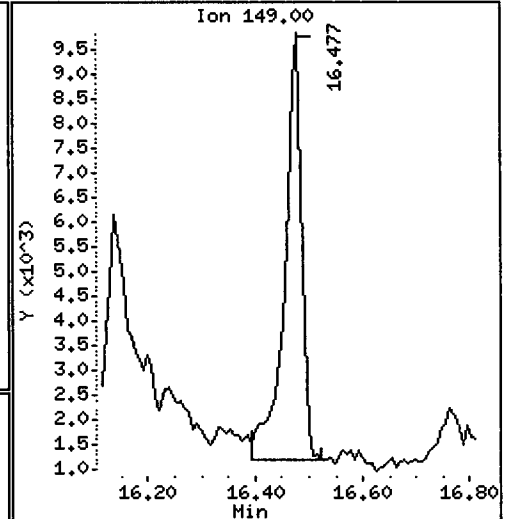
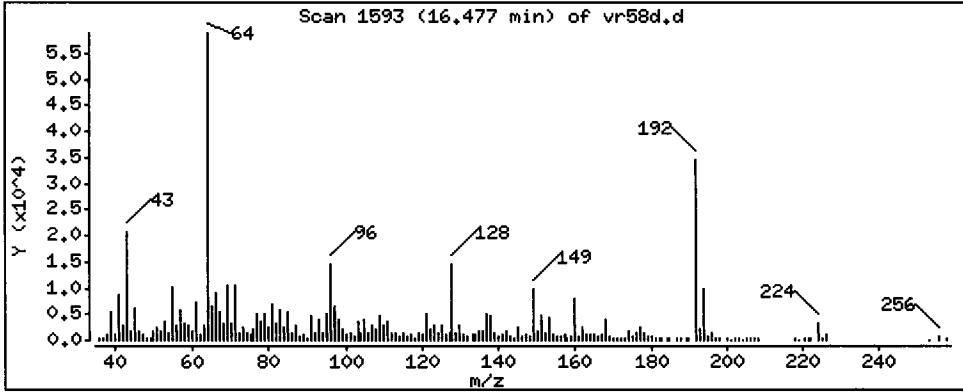
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 54.76 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

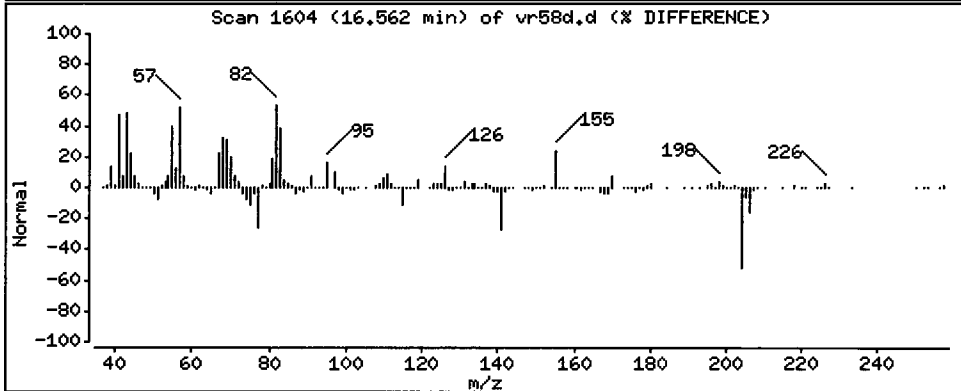
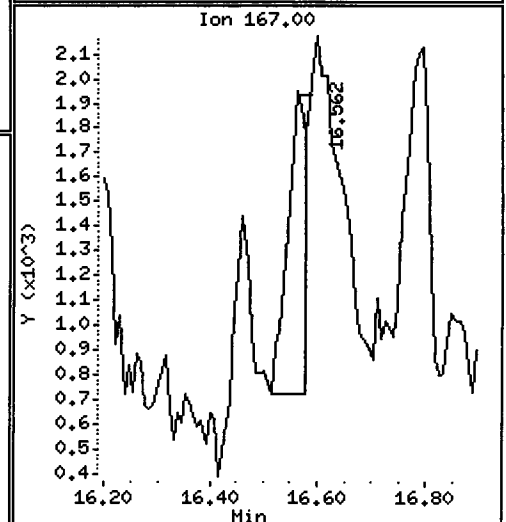
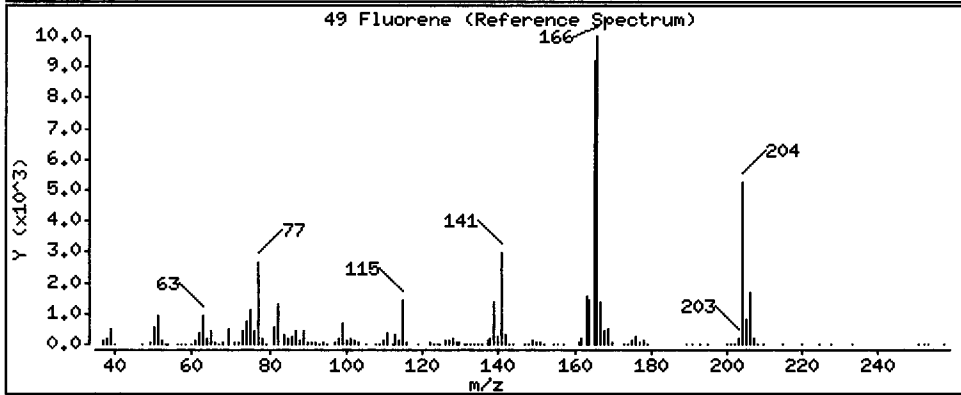
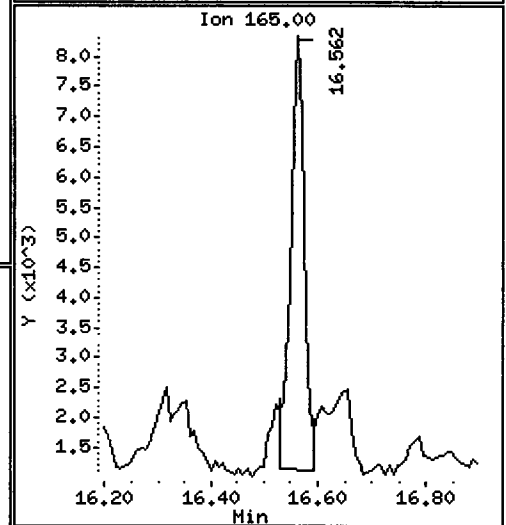
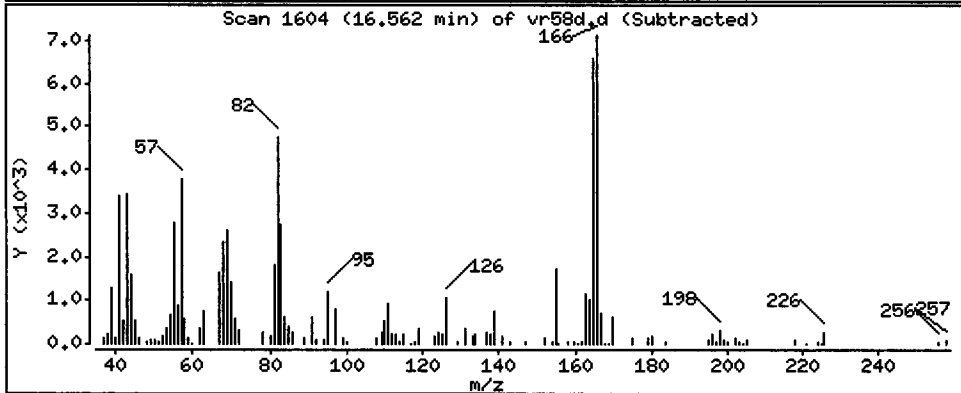
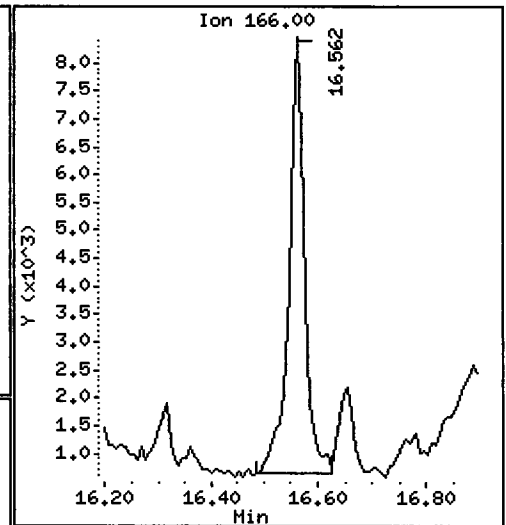
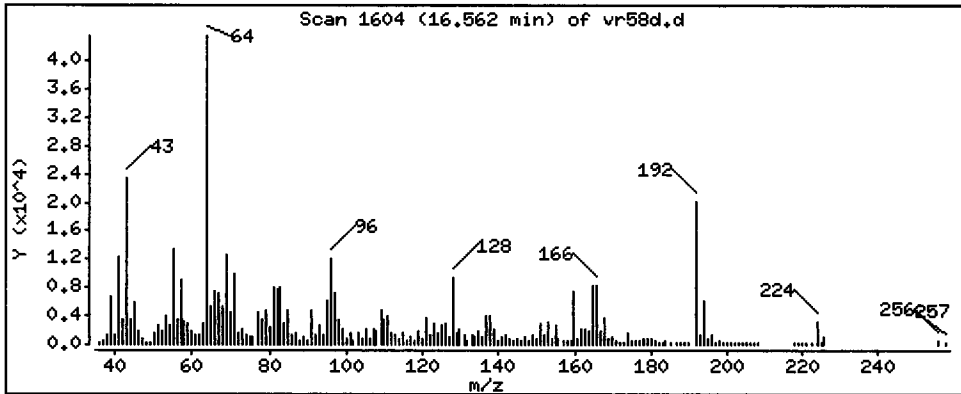
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 46.64 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

Operator: VTS/YZ

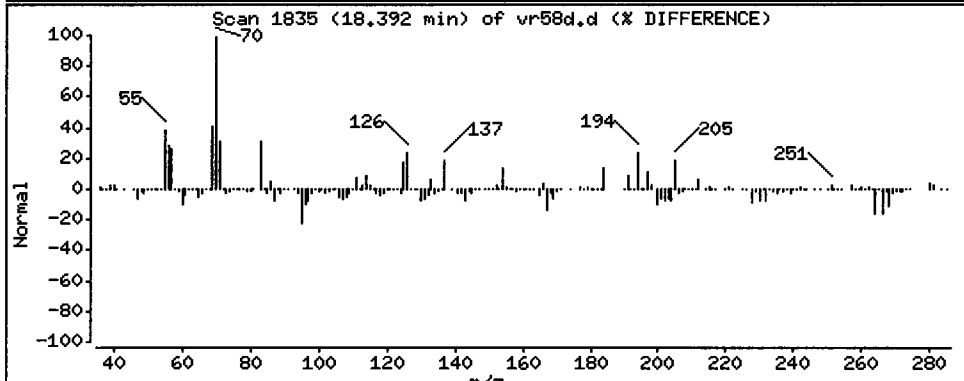
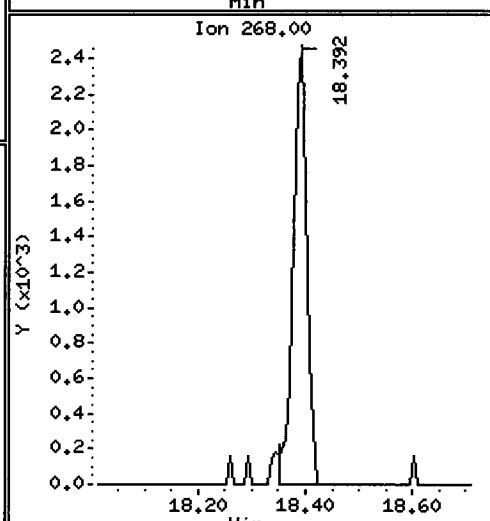
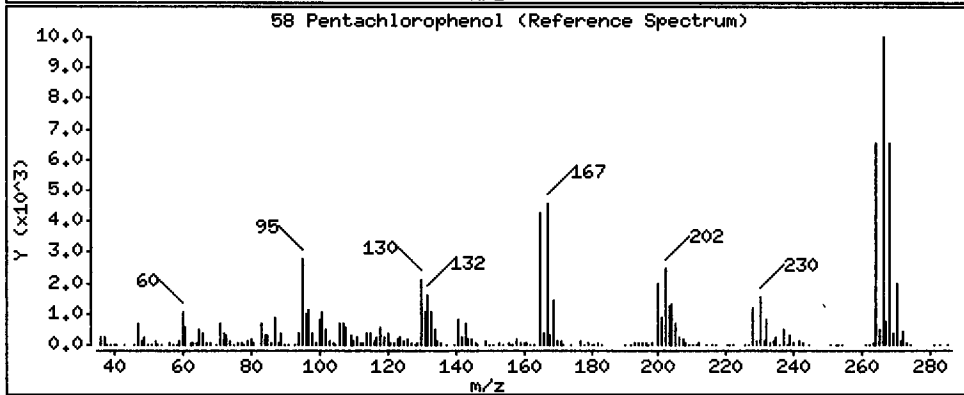
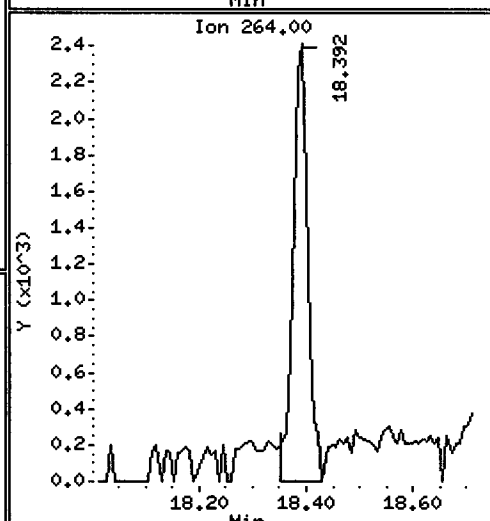
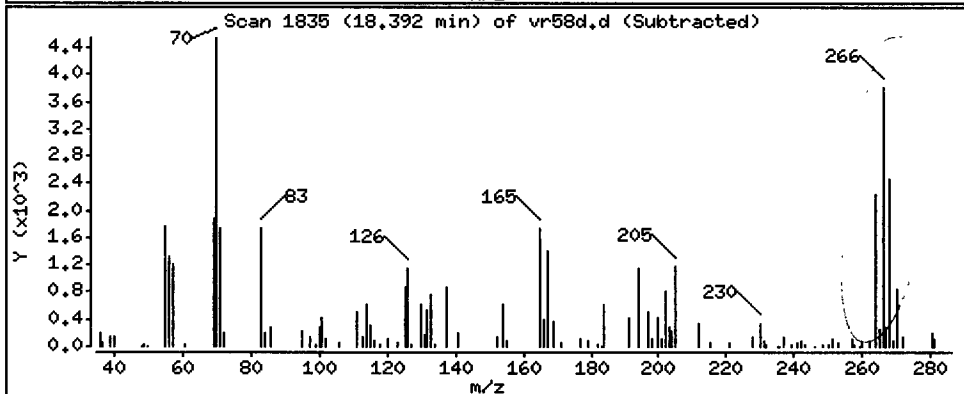
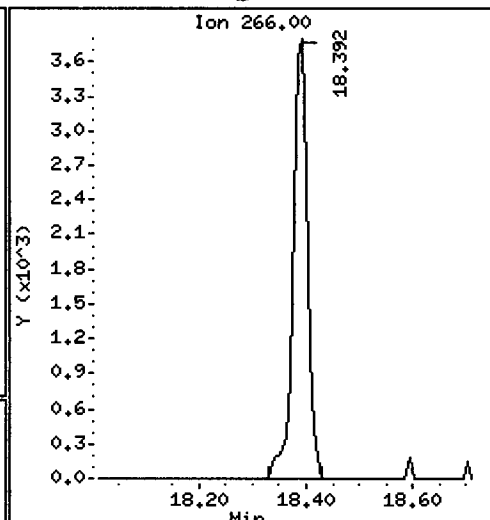
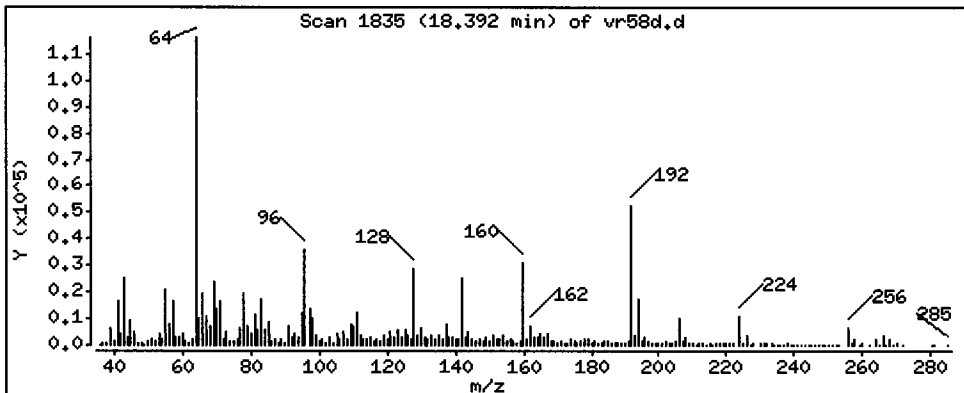
Column phase: ZB-5msi

Column diameter: 0.25

58 Pentachlorophenol

Concentration: 51.93 ug/kg

*Handwritten initials: JLA*





Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

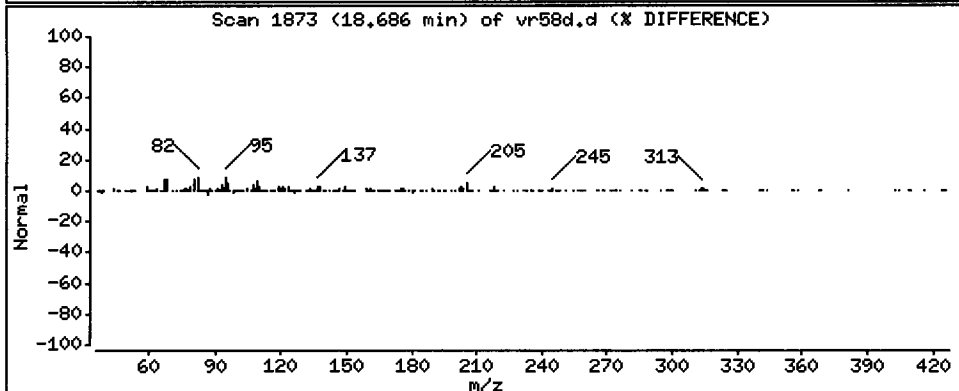
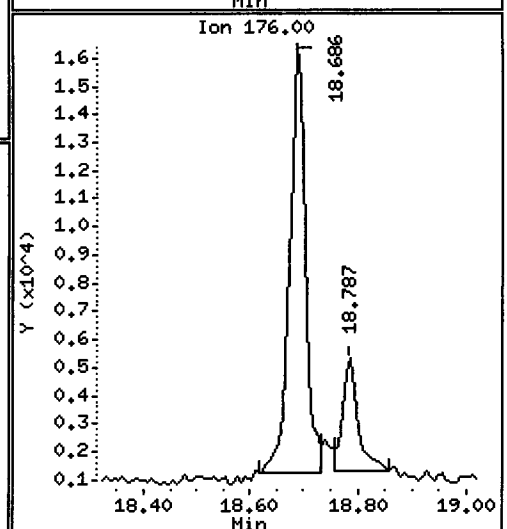
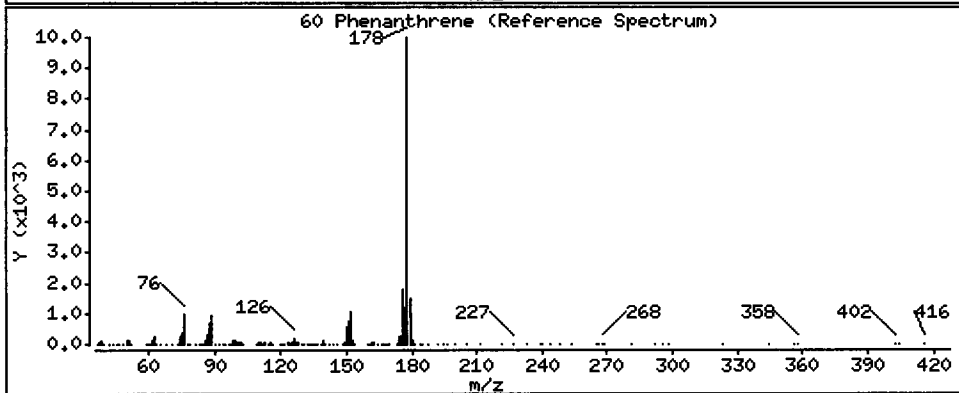
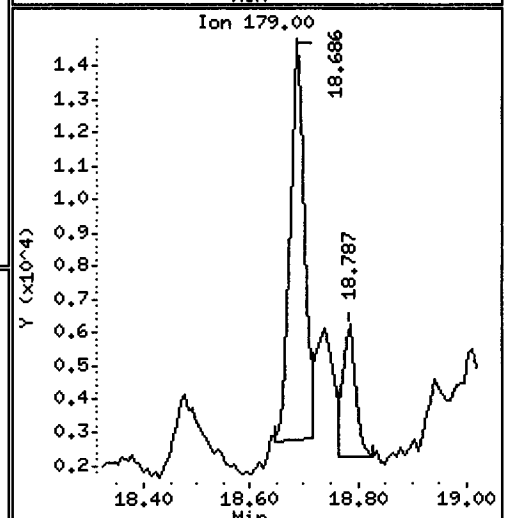
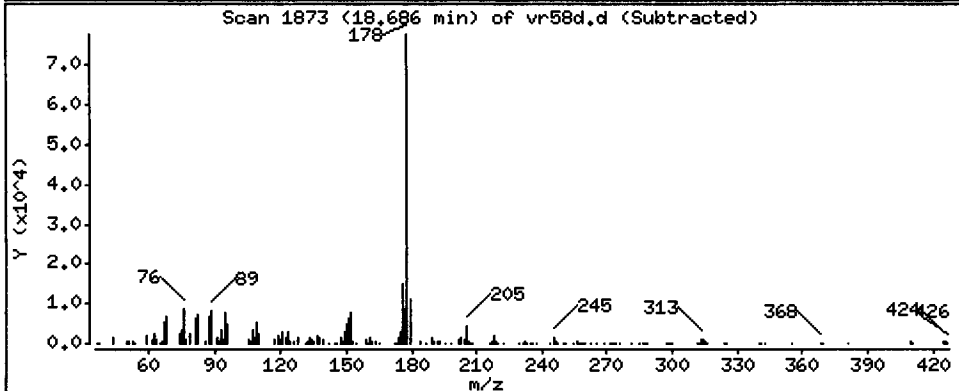
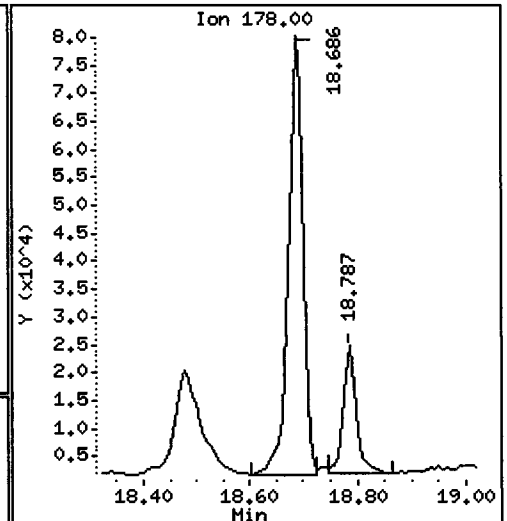
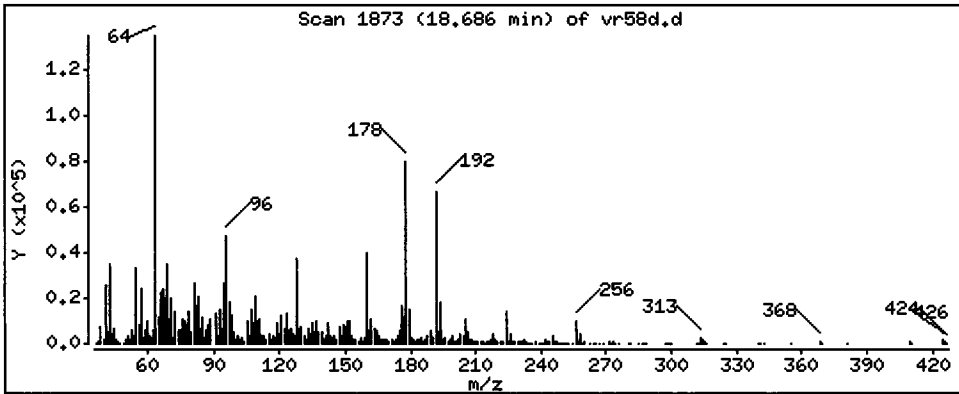
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 186.9 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

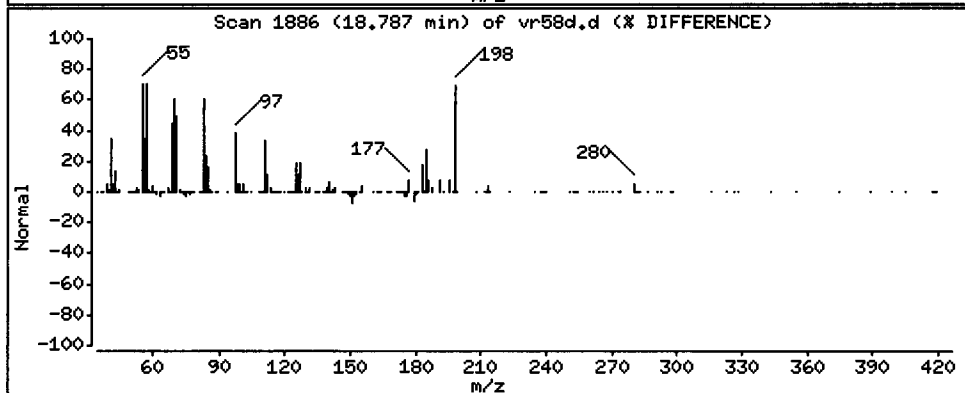
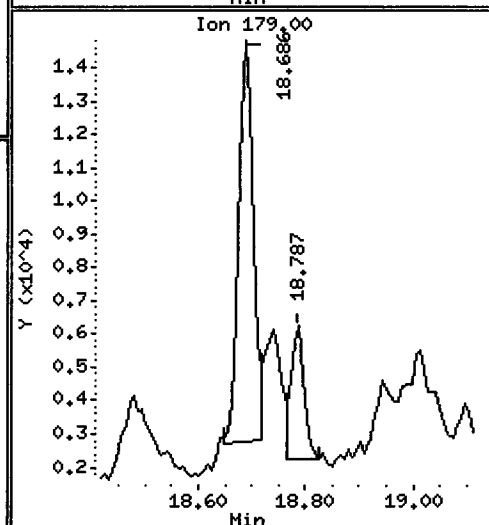
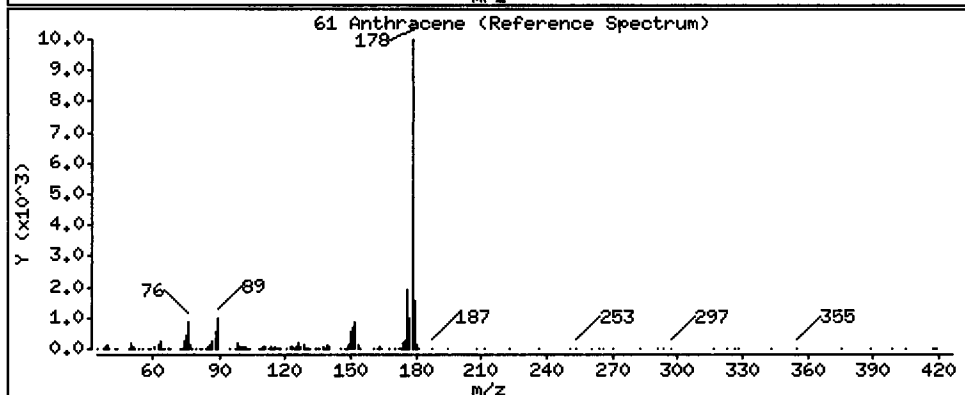
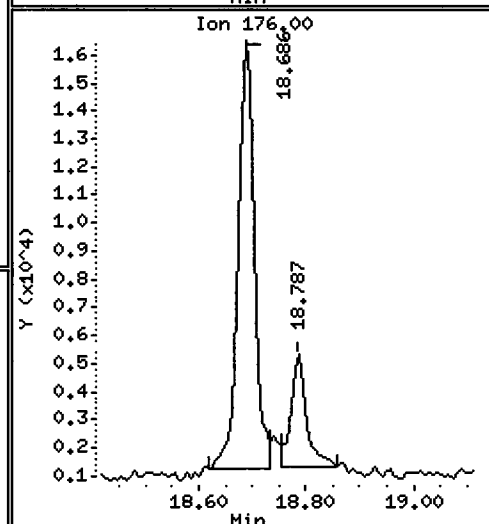
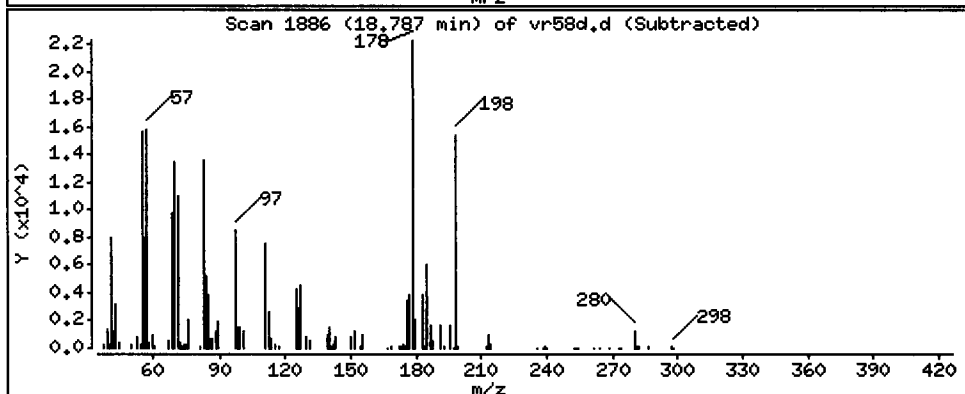
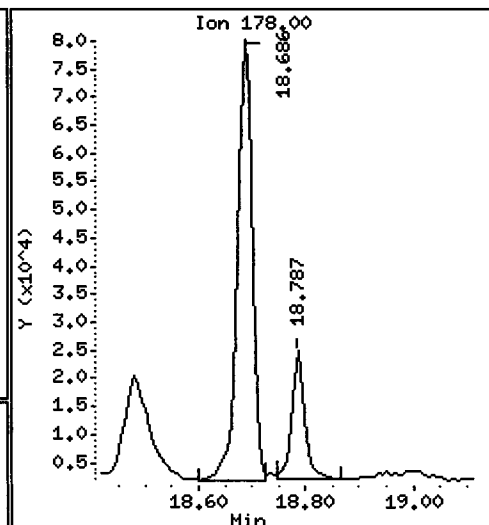
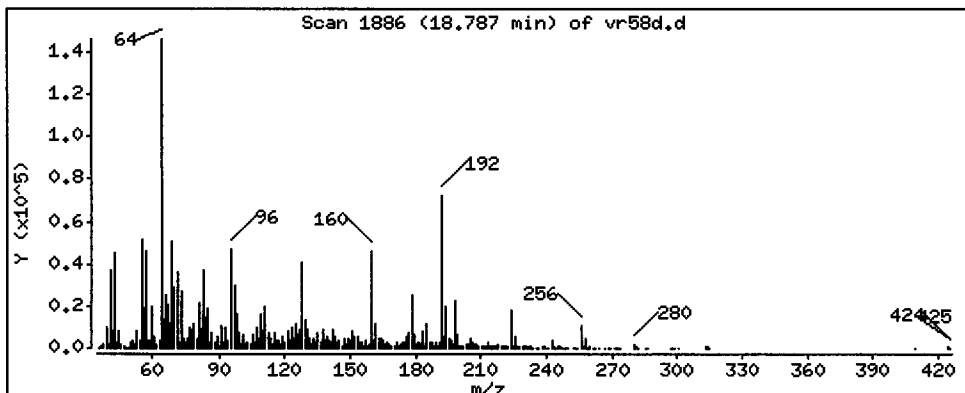
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 48.08 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

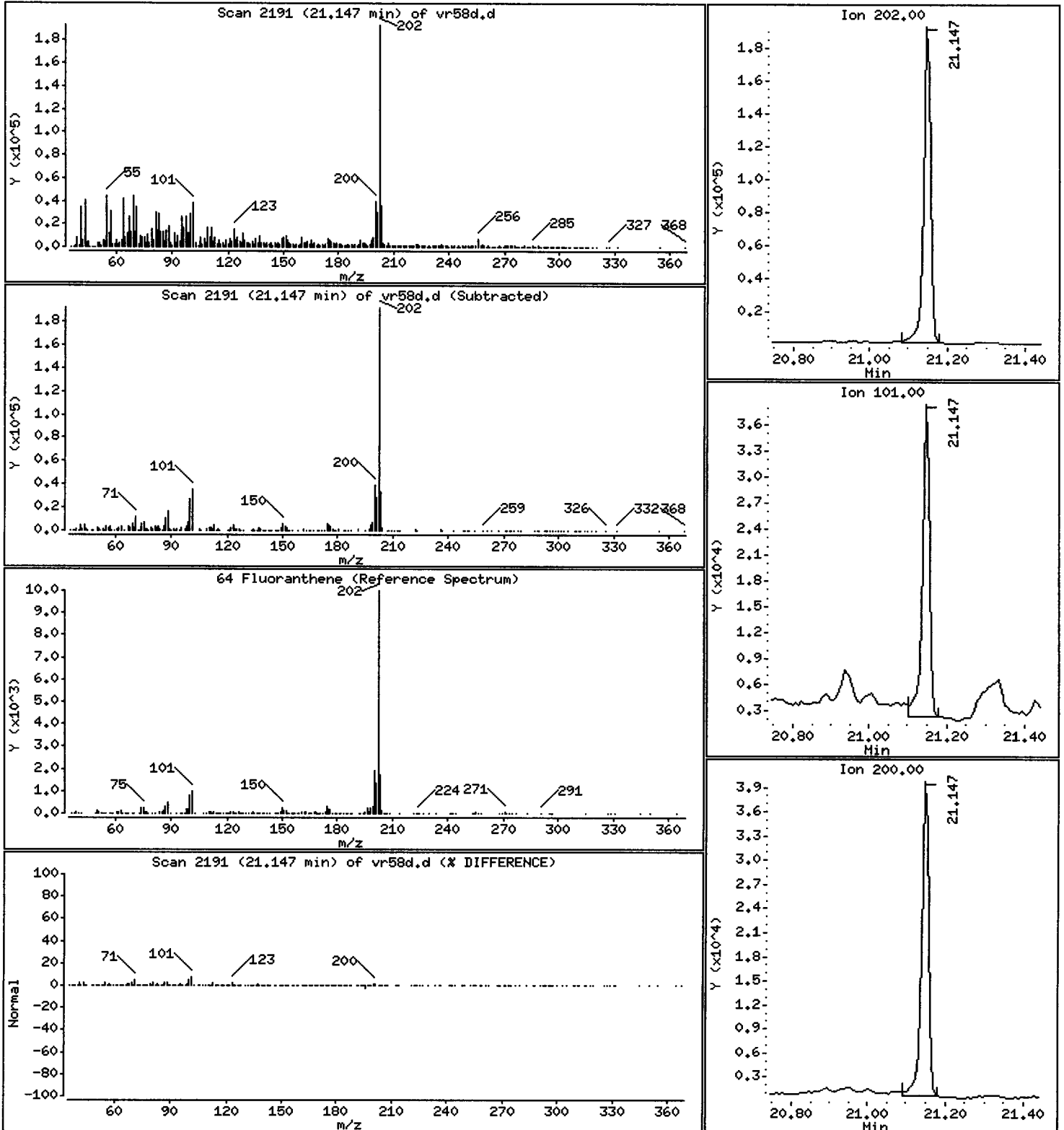
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0,25

64 Fluoranthene

Concentration: 259,4 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

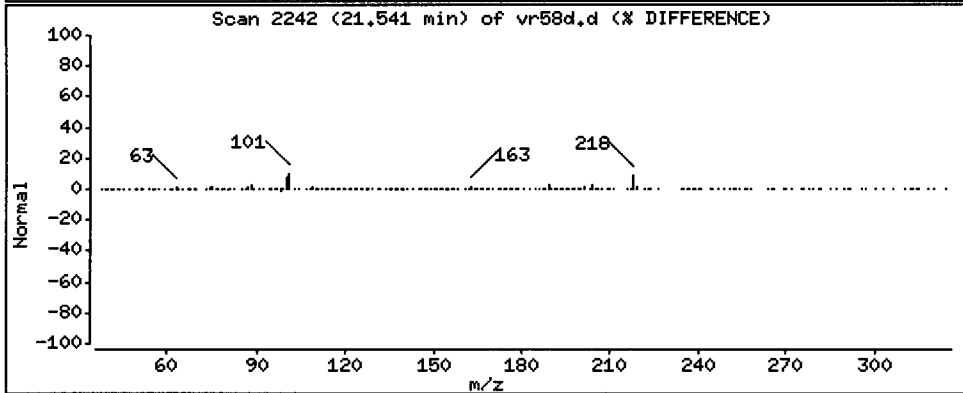
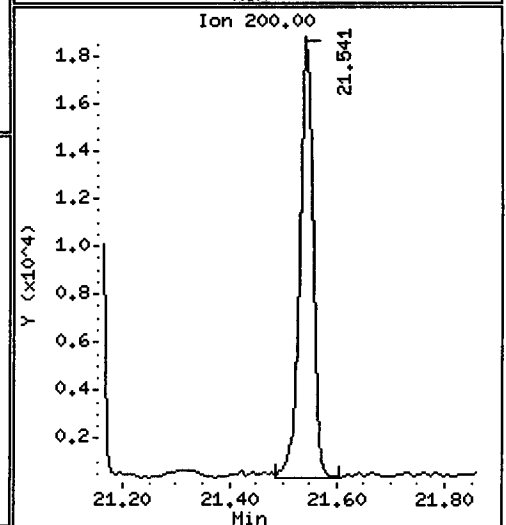
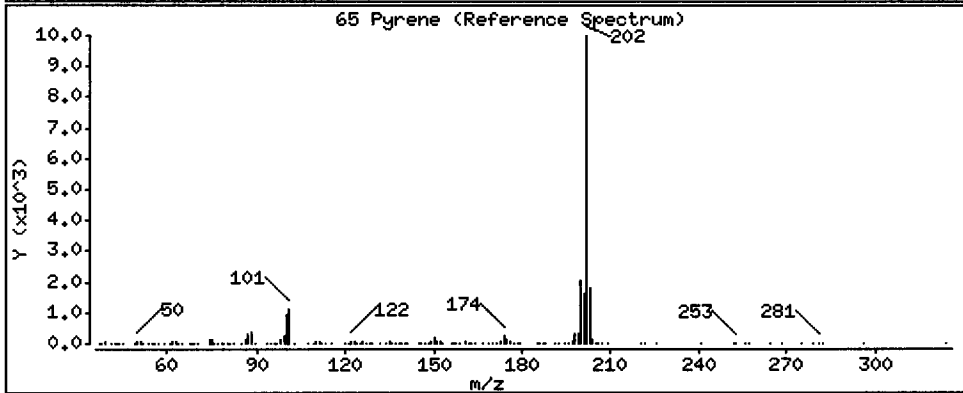
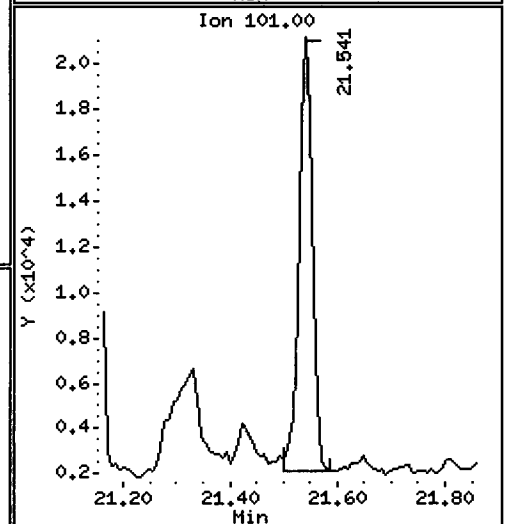
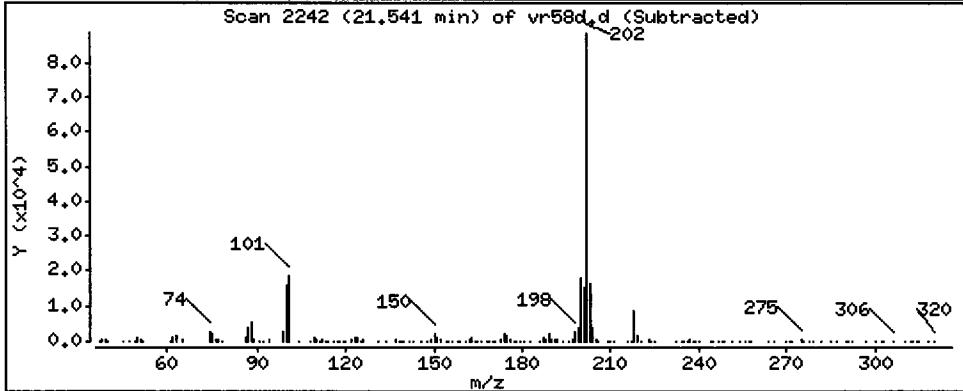
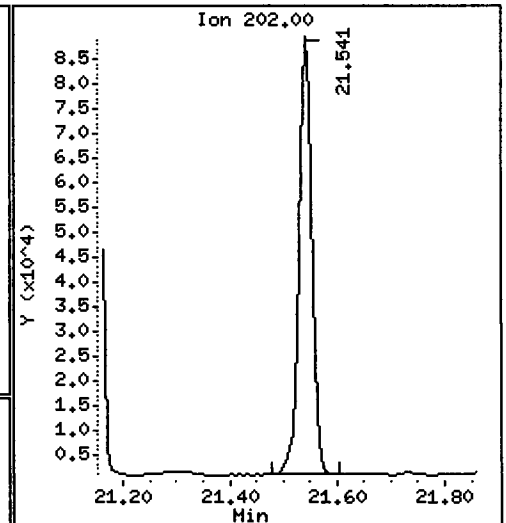
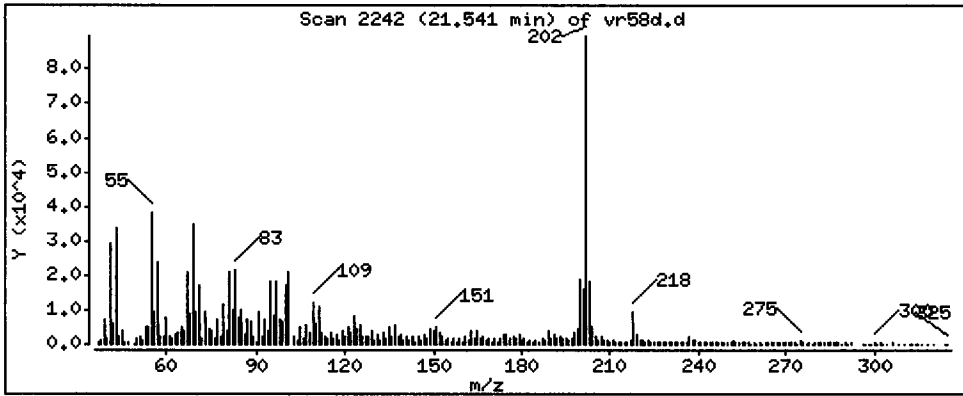
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 286.4 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

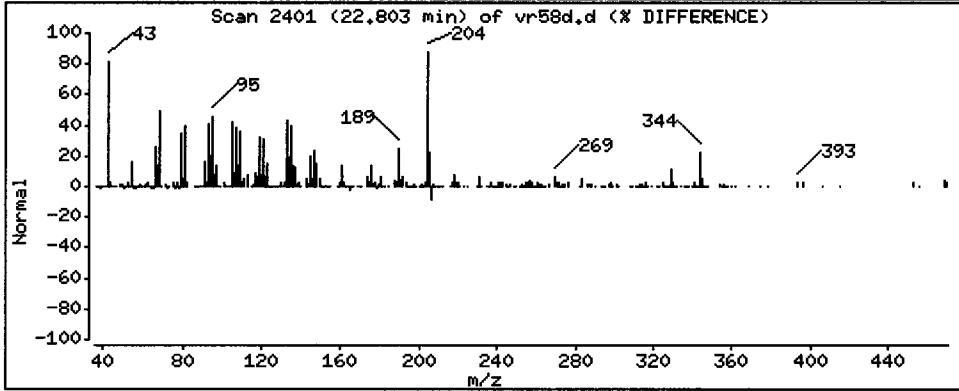
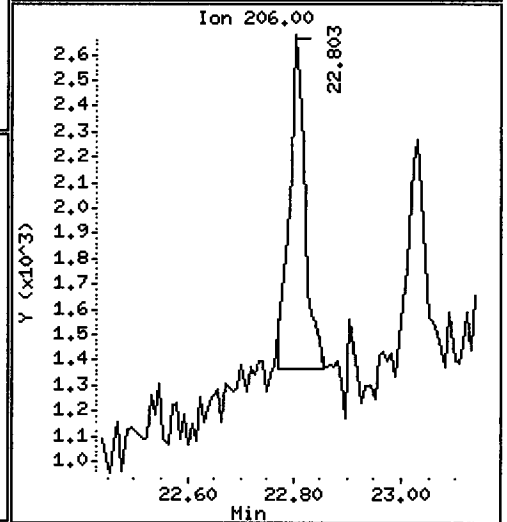
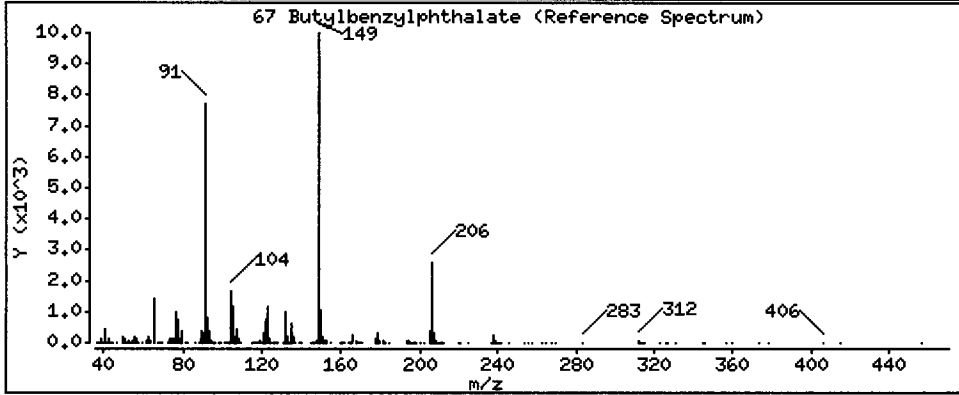
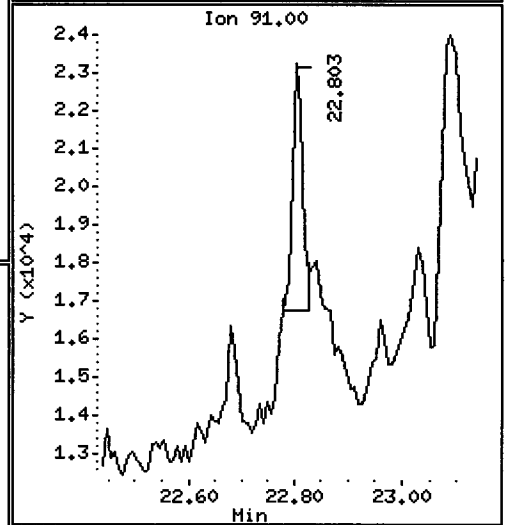
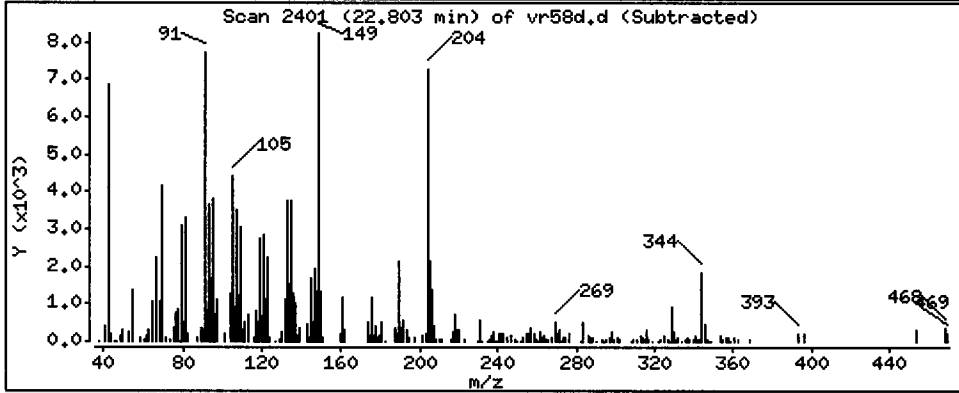
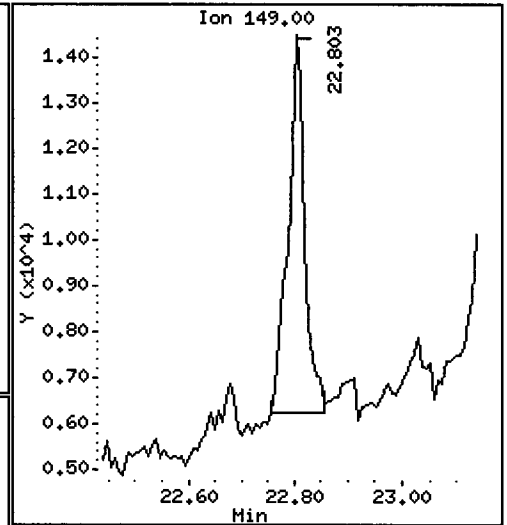
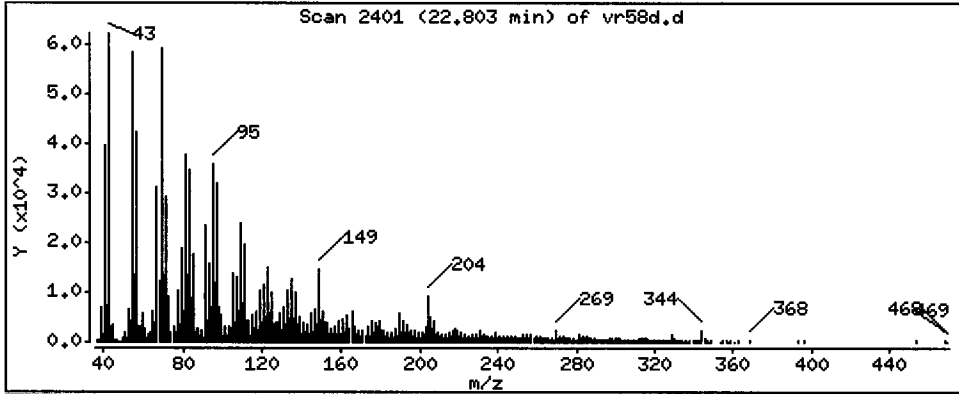
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 81.62 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

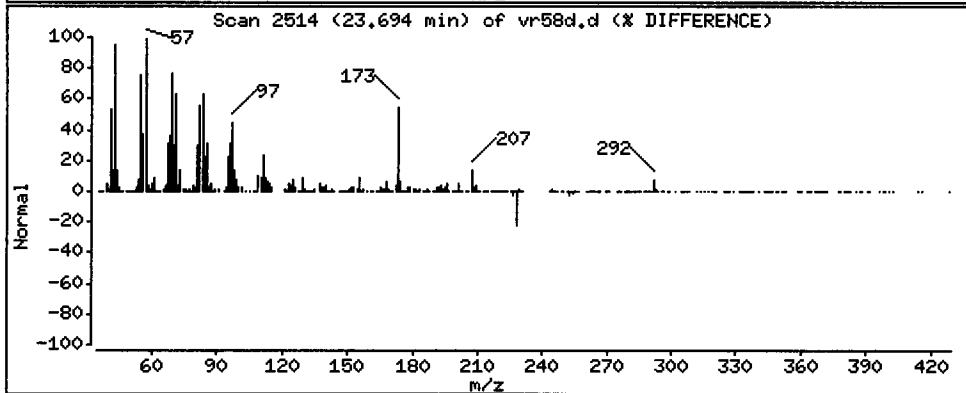
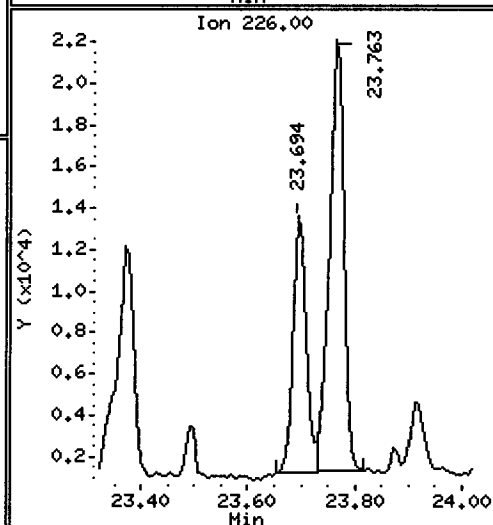
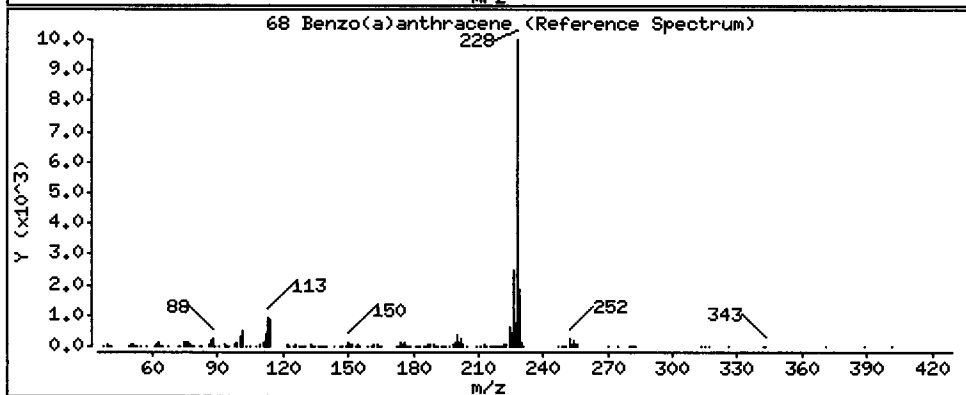
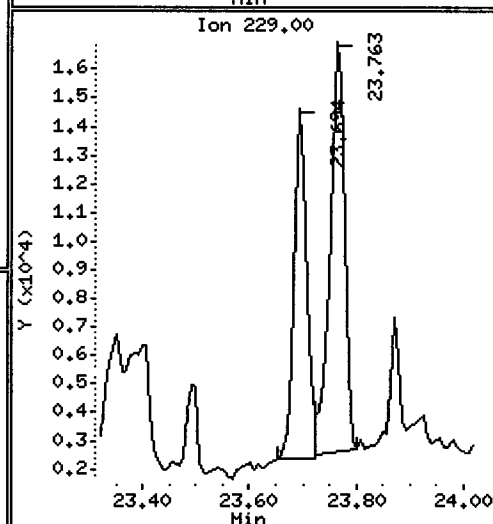
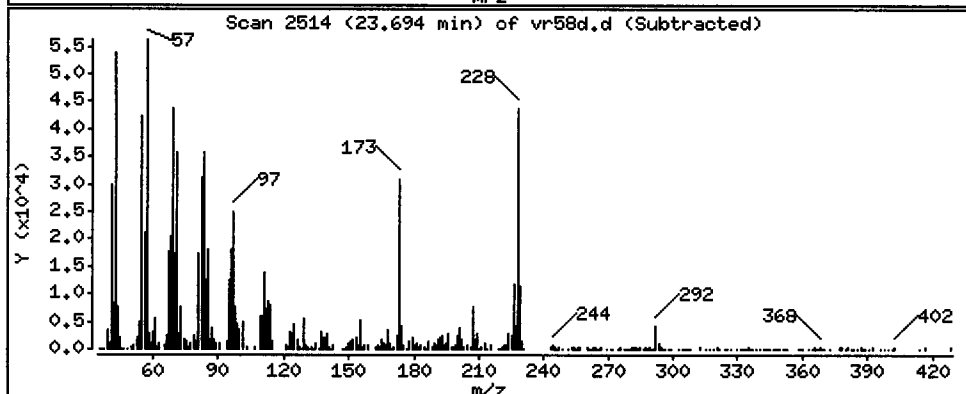
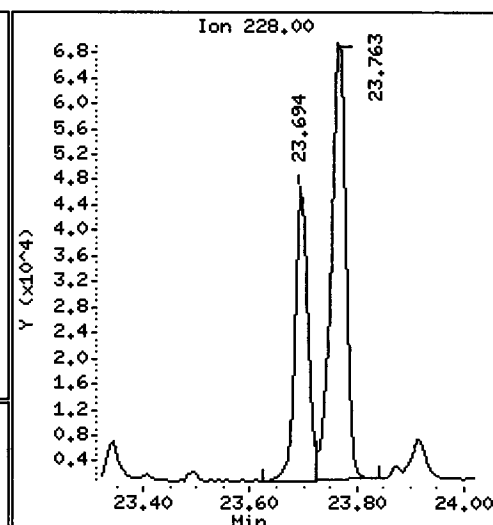
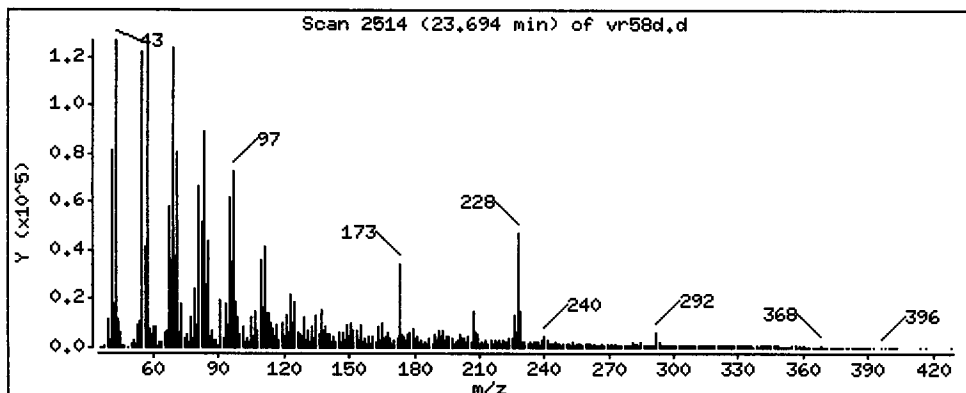
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

68 Benzo(a)anthracene

Concentration: 154.1 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

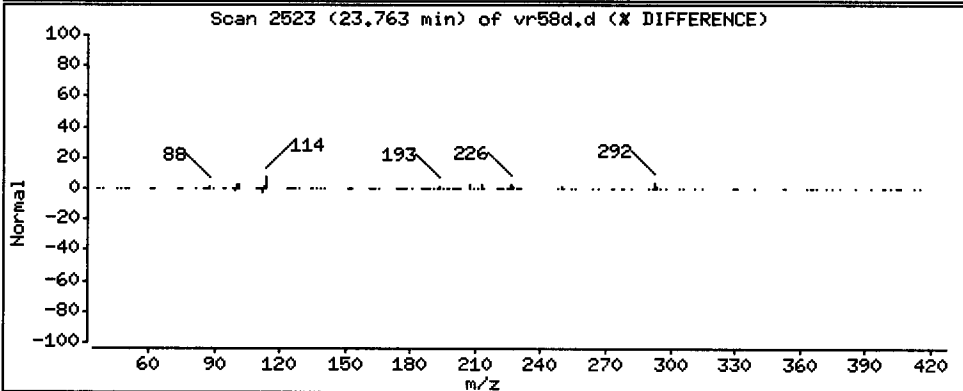
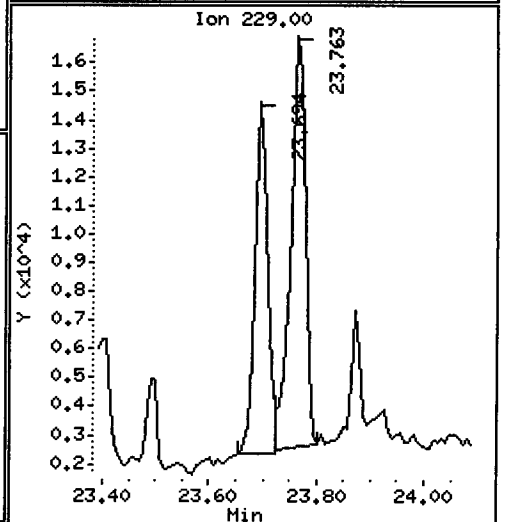
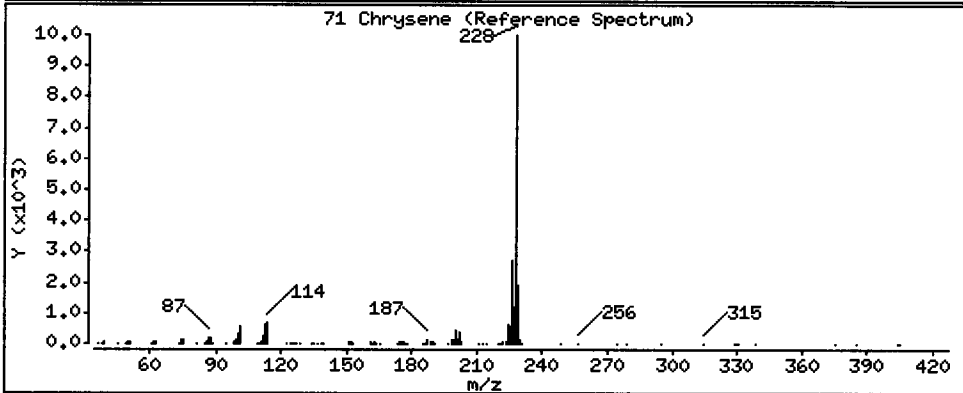
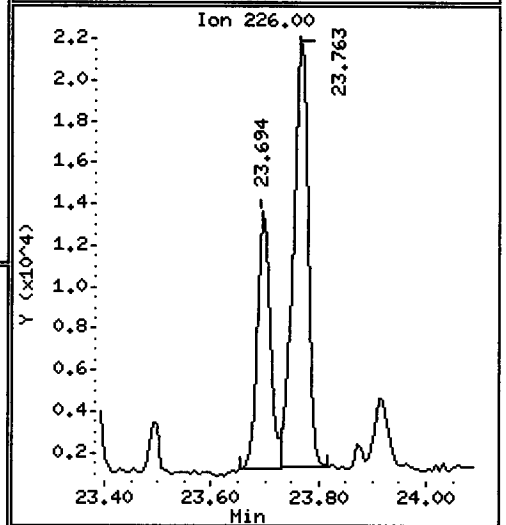
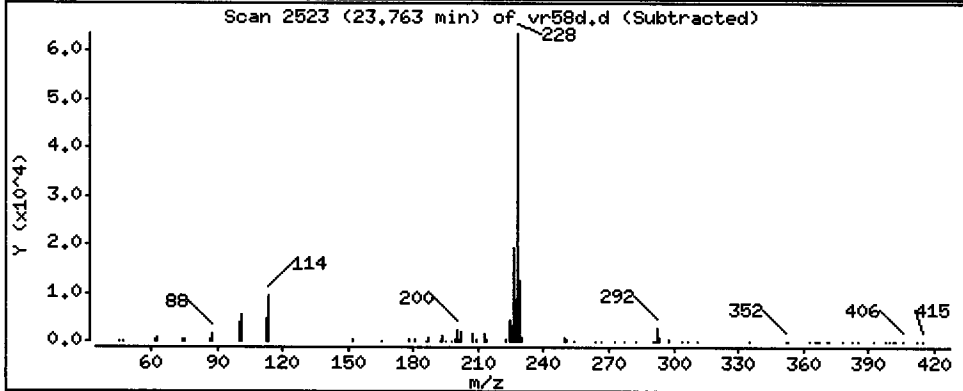
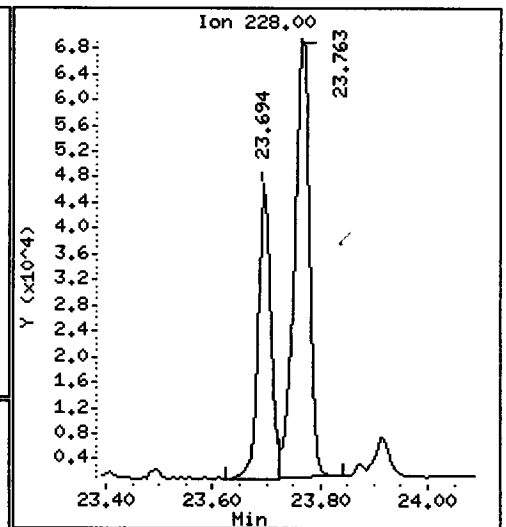
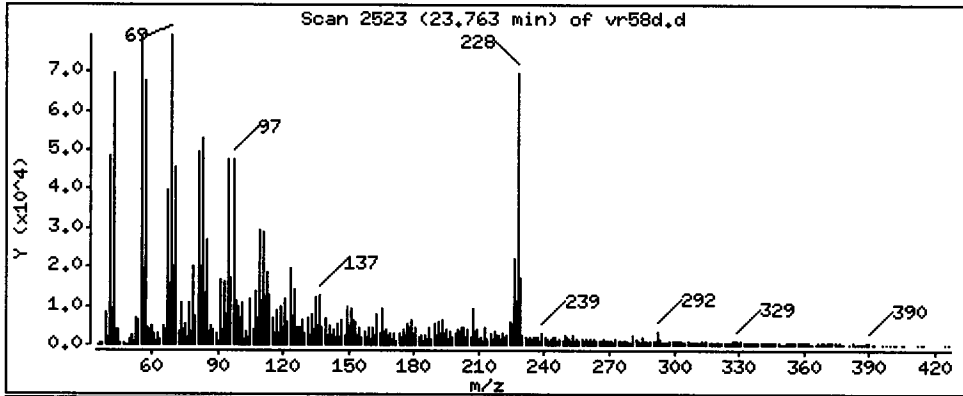
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

71 Chrysene

Concentration: 294.2 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

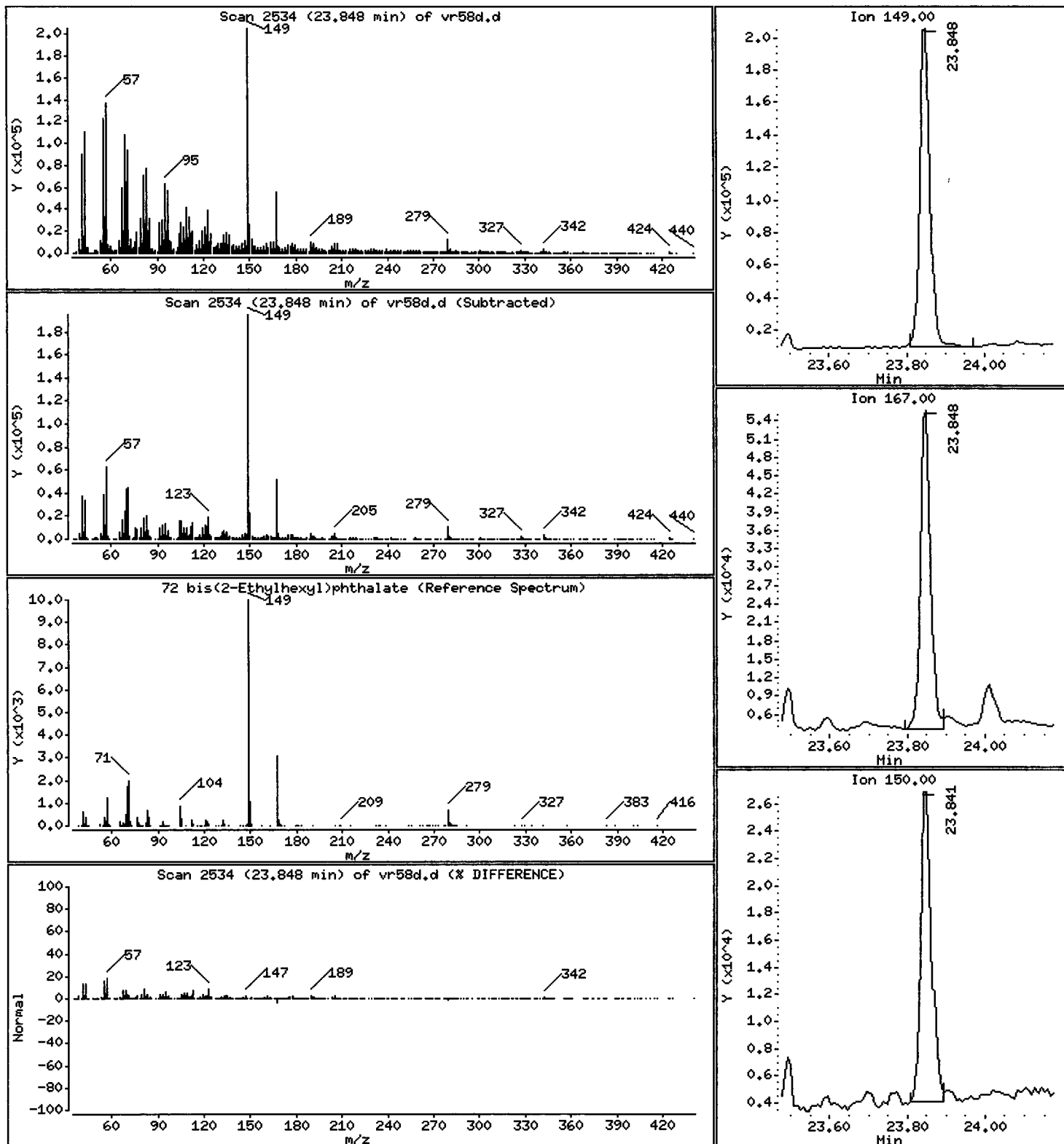
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 563.5 ug/kg





Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

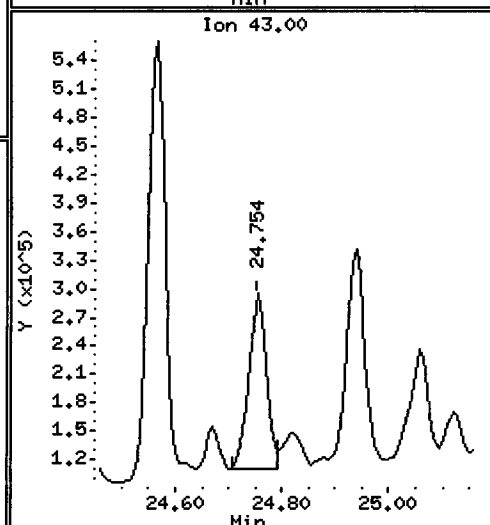
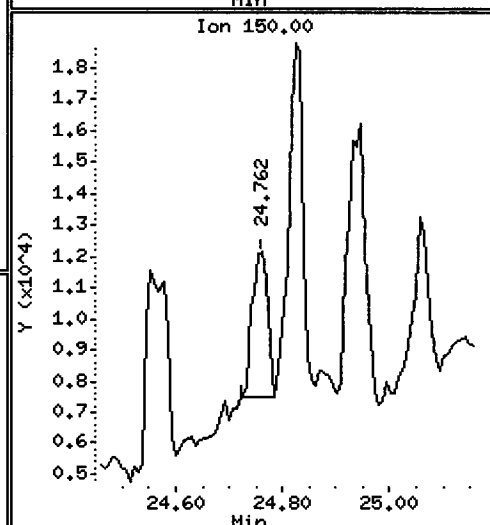
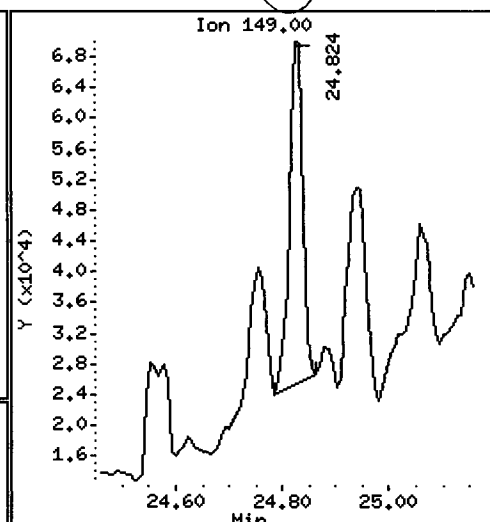
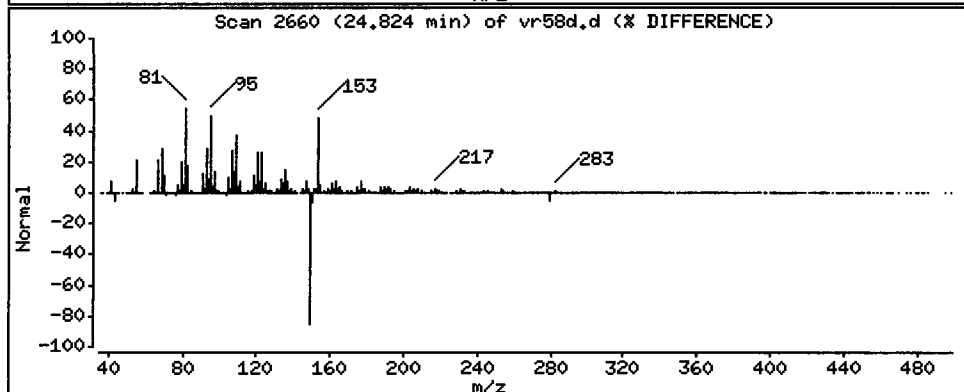
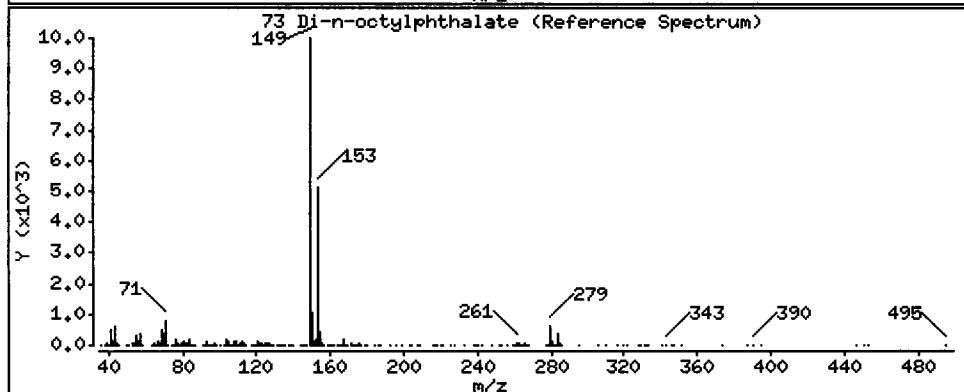
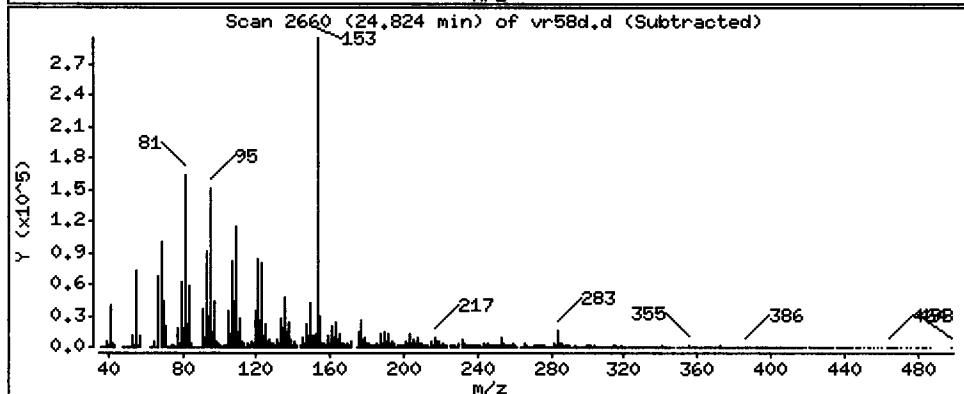
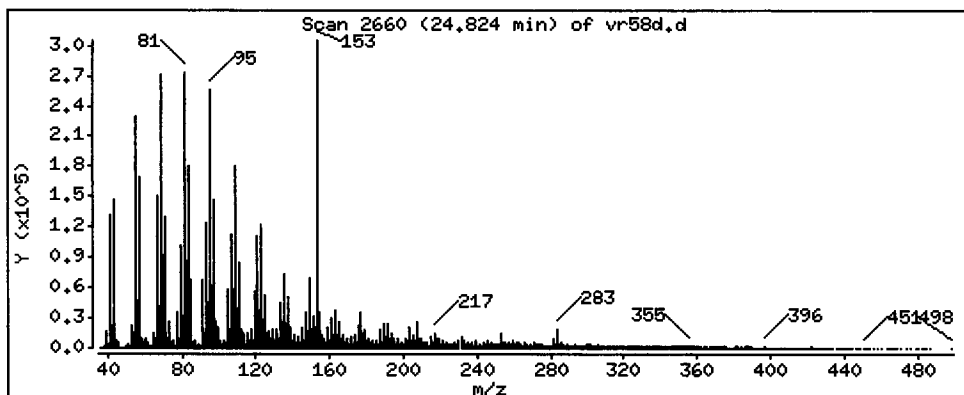
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

73 Di-n-octylphthalate

Concentration: 73.36 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

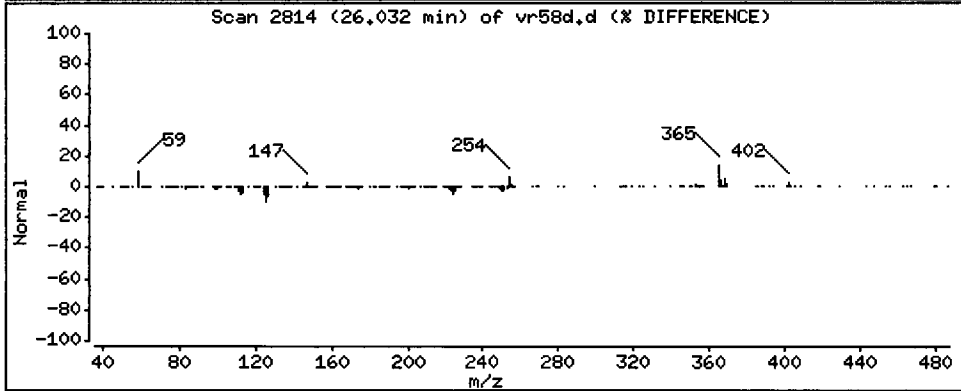
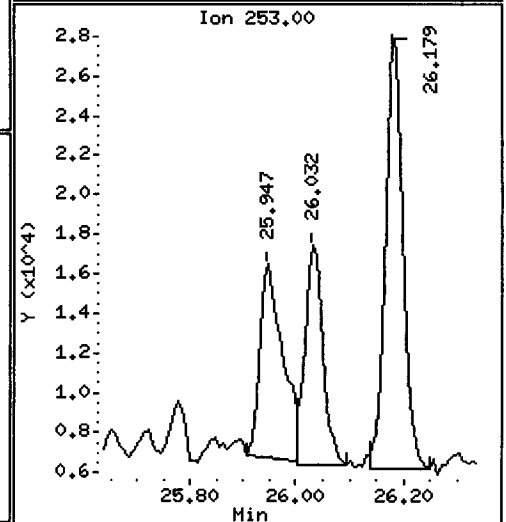
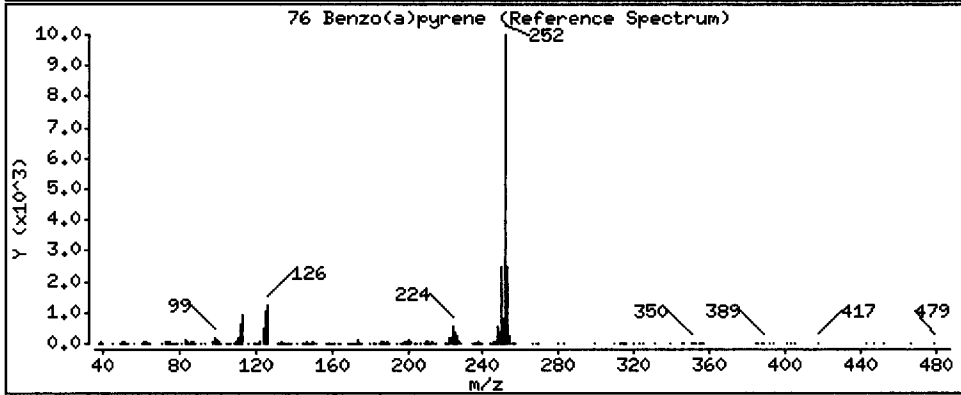
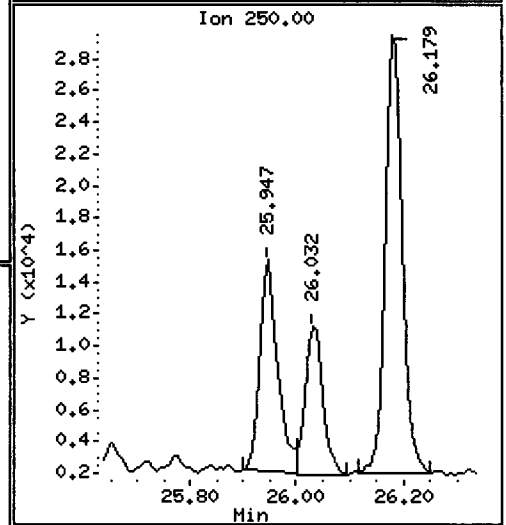
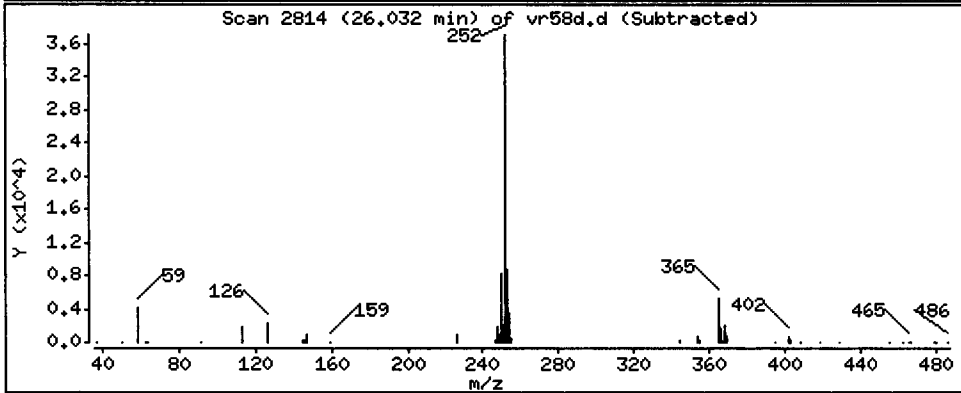
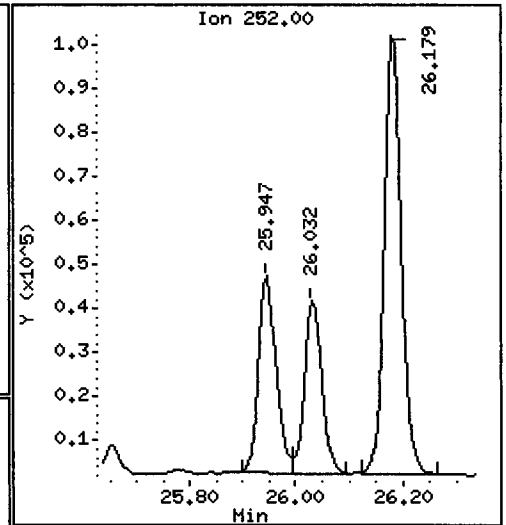
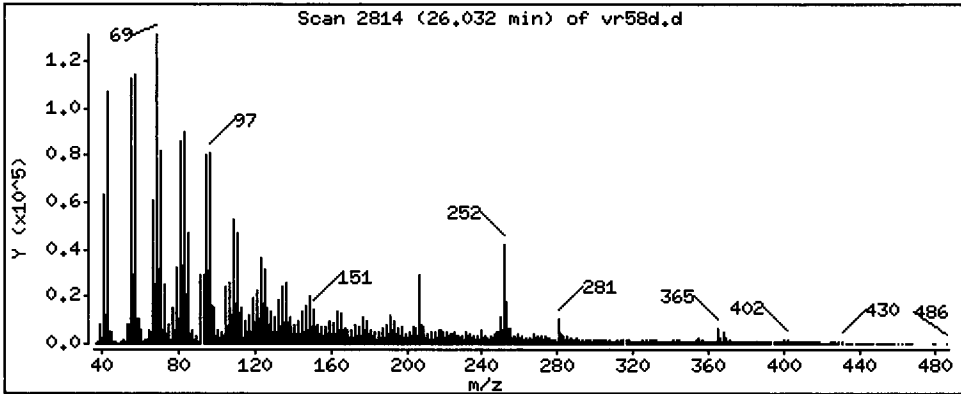
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

76 Benzo(a)pyrene

Concentration: 143.0 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

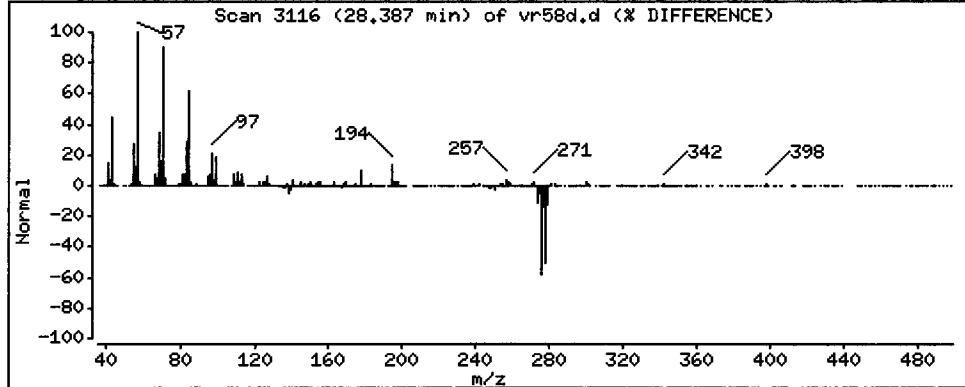
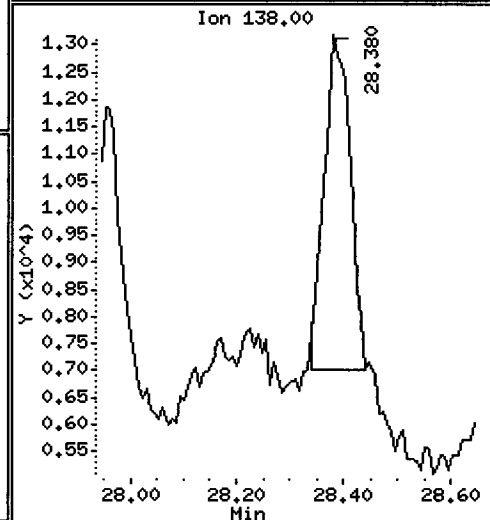
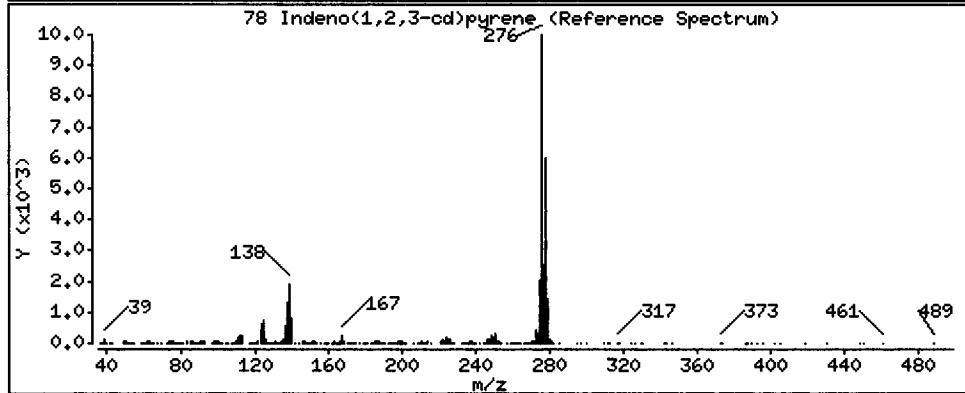
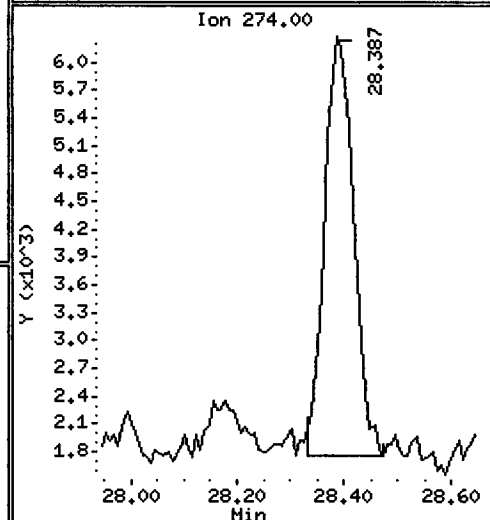
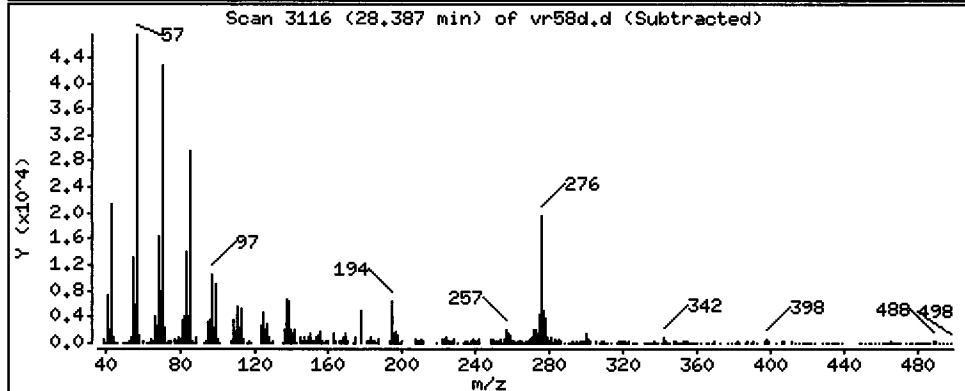
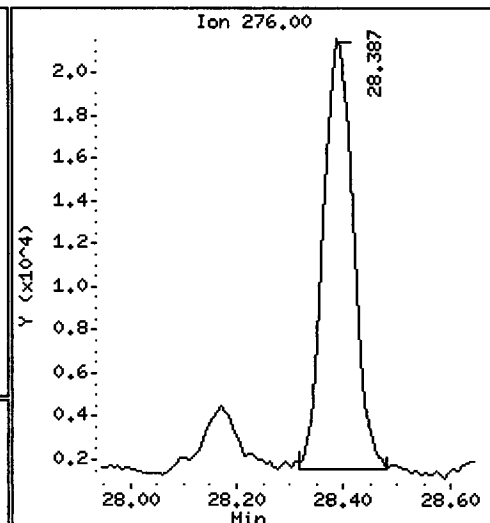
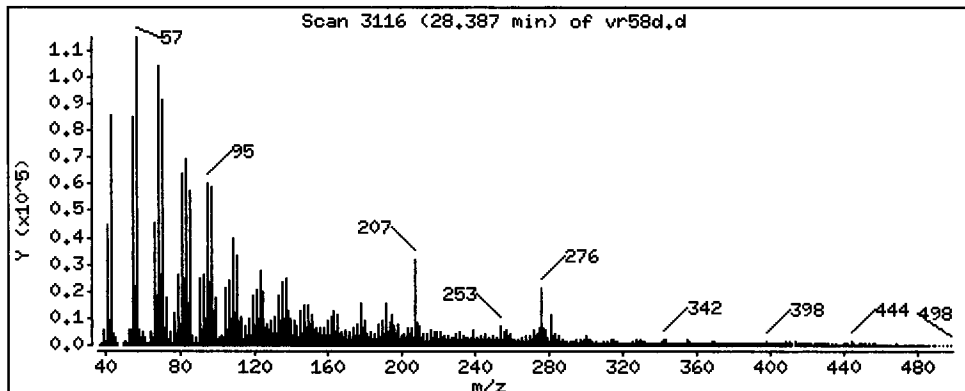
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

78 Indeno(1,2,3-cd)pyrene

Concentration: 103.7 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

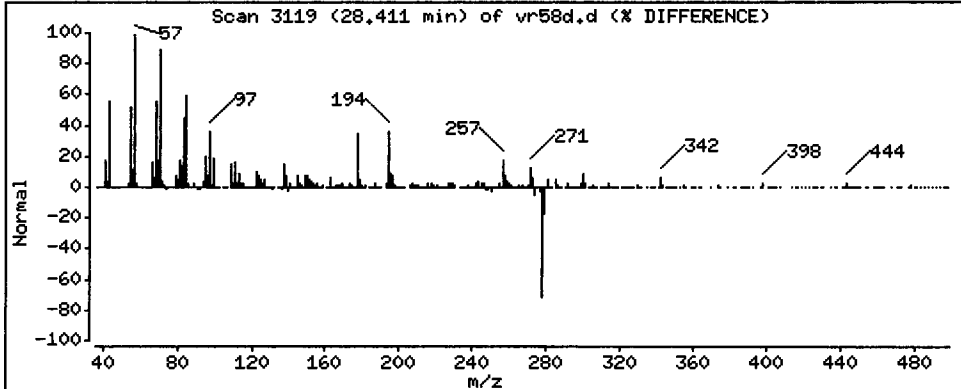
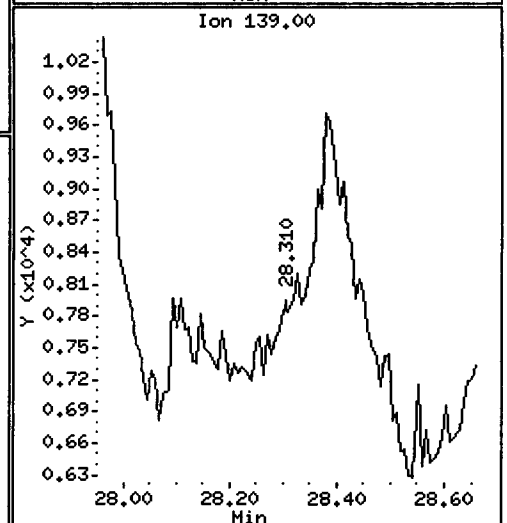
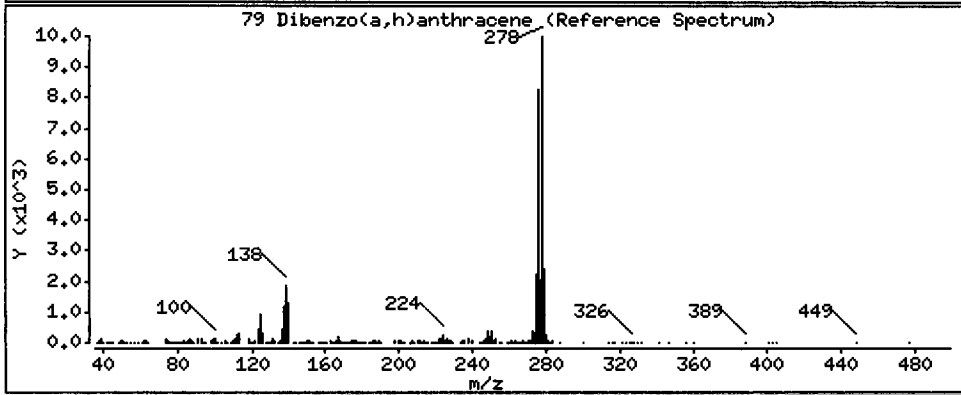
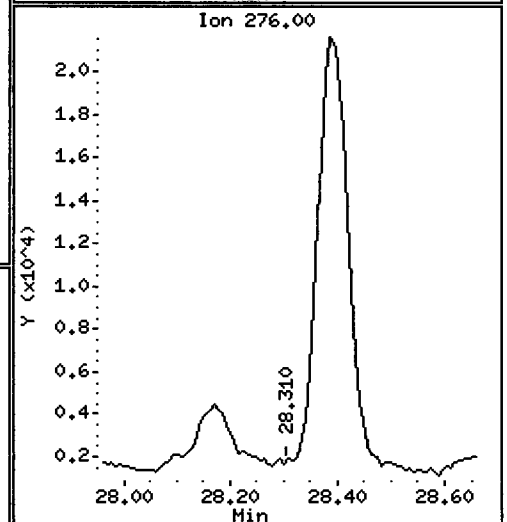
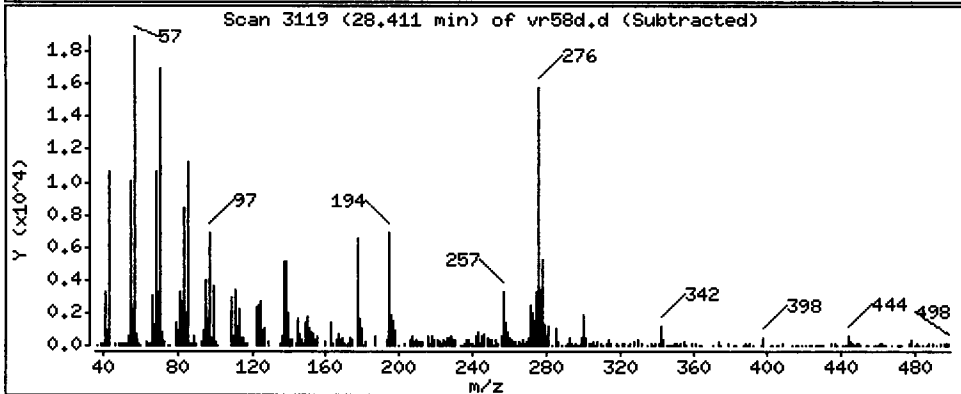
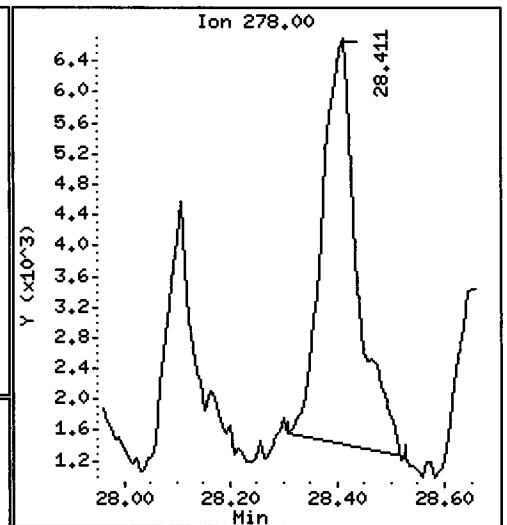
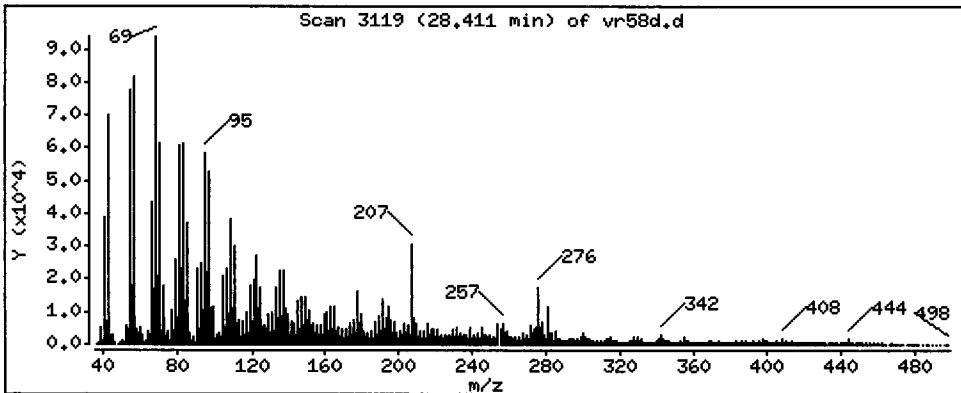
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 40.79 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

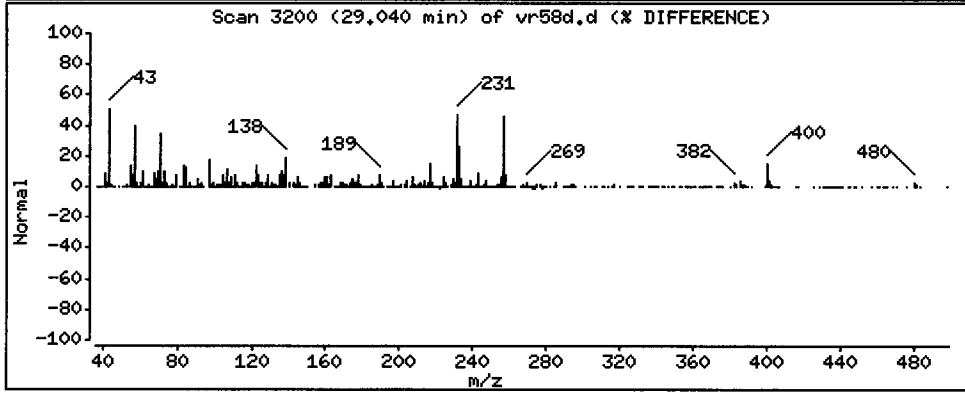
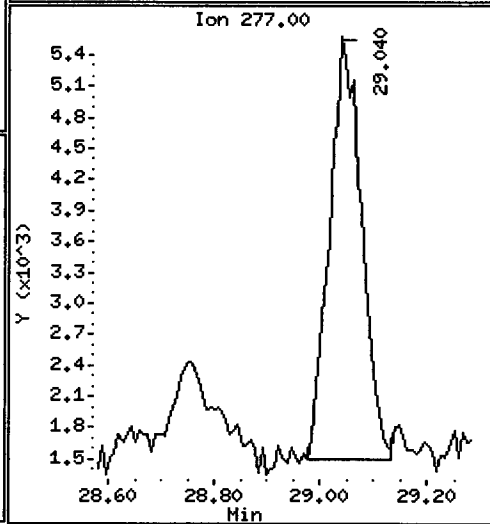
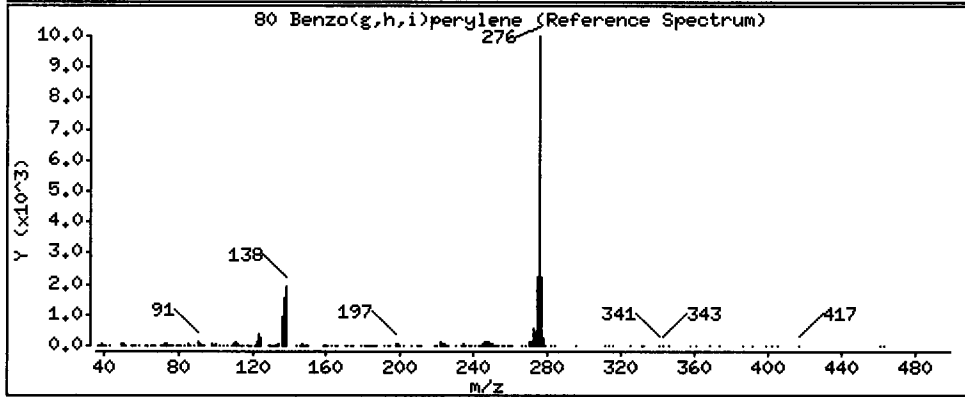
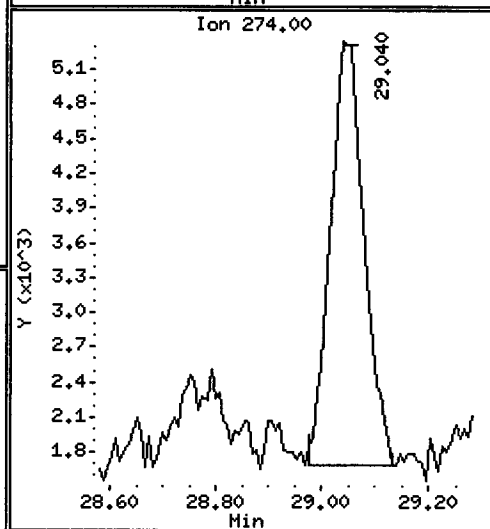
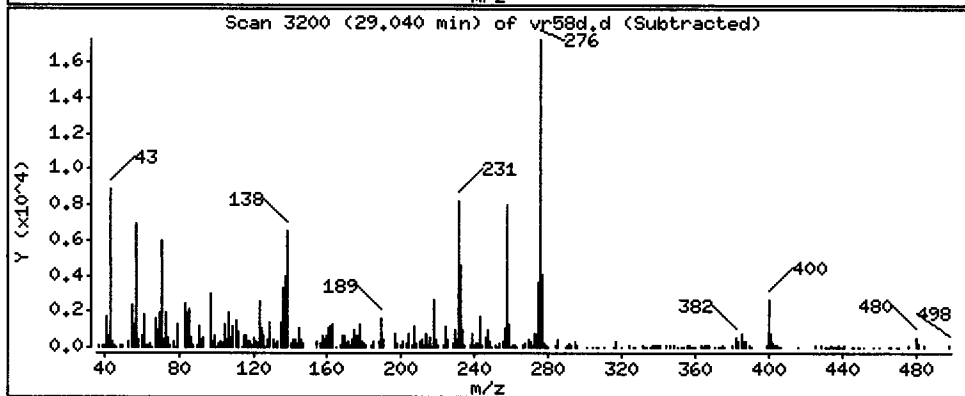
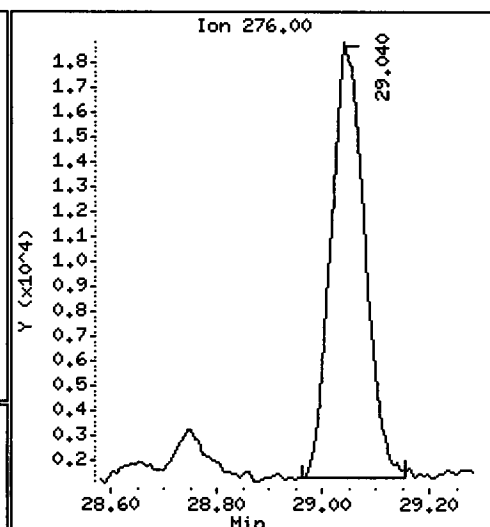
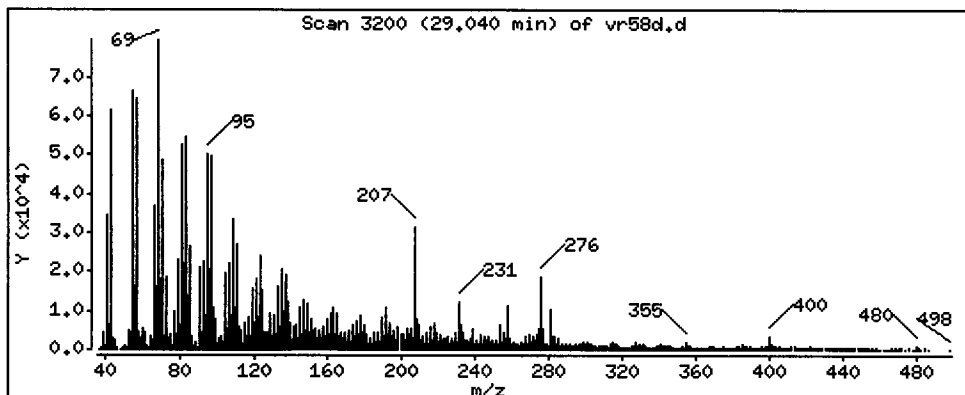
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

80 Benzo(g,h,i)perylene

Concentration: 119.6 ug/kg



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

Operator: VTS/YZ

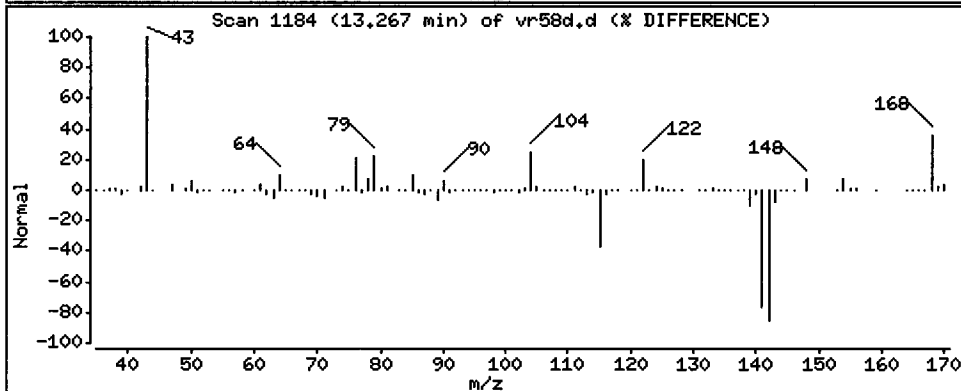
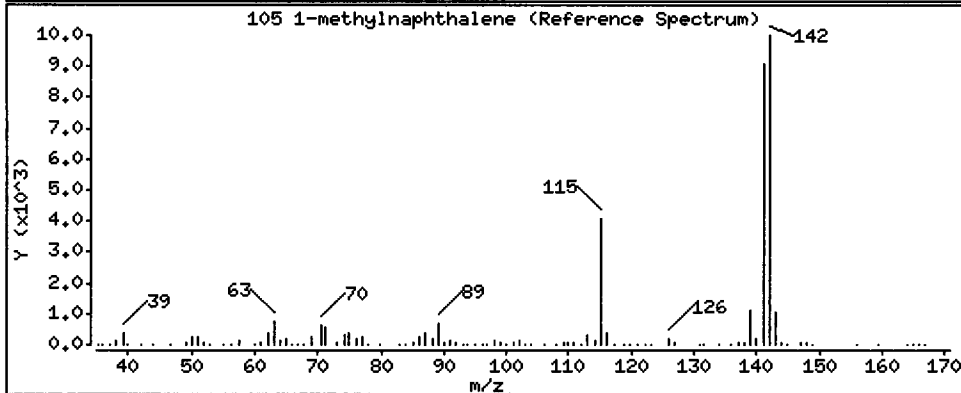
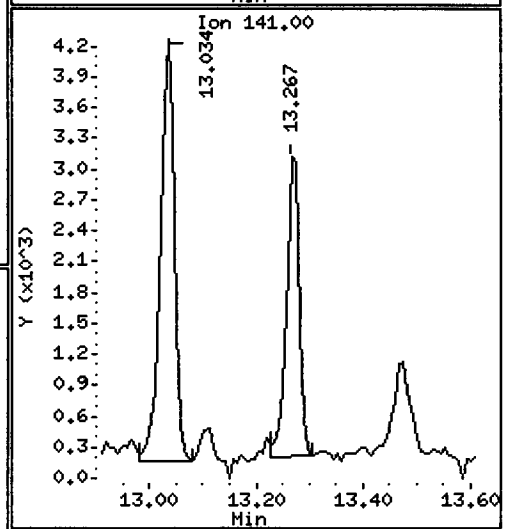
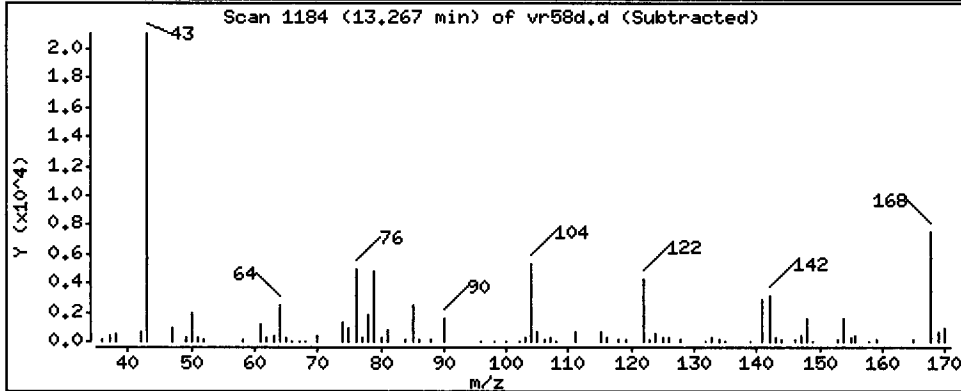
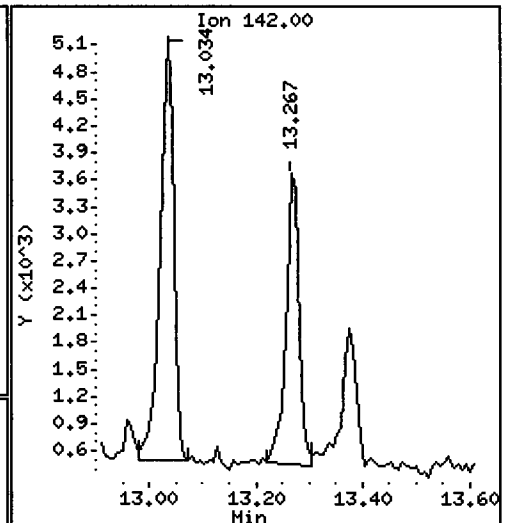
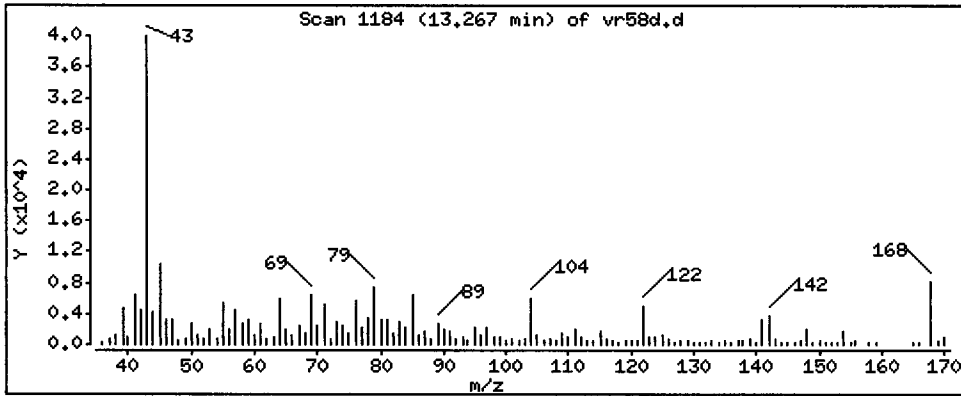
Column phase: ZB-5msi

Column diameter: 0.25

105 1-methylnaphthalene

Concentration: 17.43 ug/kg

*Handwritten signature*



Date : 04-DEC-2012 18:58

Client ID: SG-13-S-E-121107

Instrument: nt10.i

Sample Info: VR58D

Volume Injected (uL): 1.0

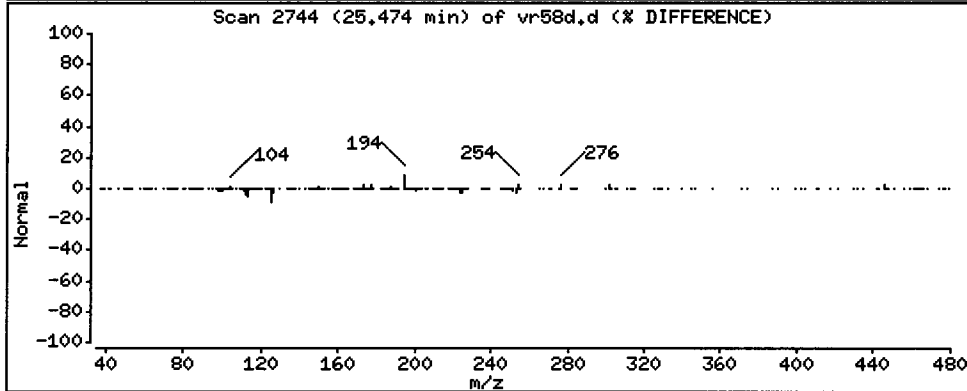
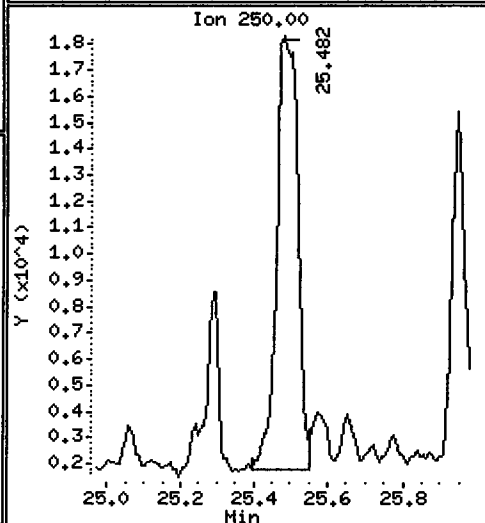
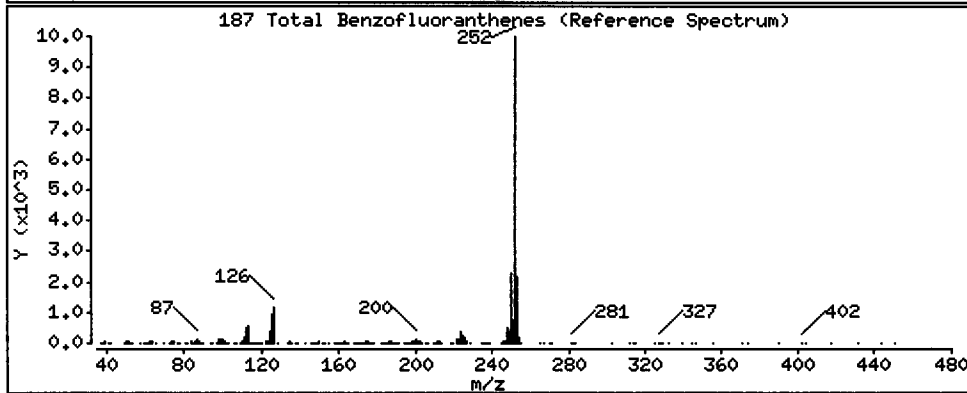
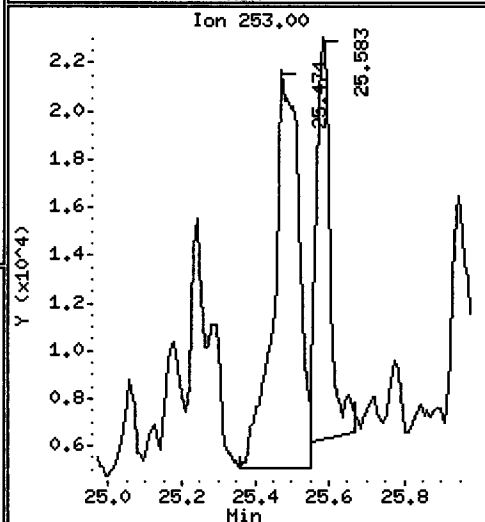
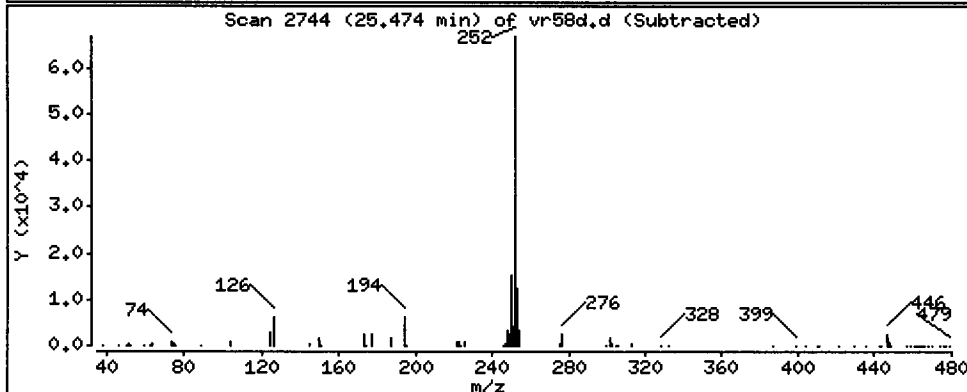
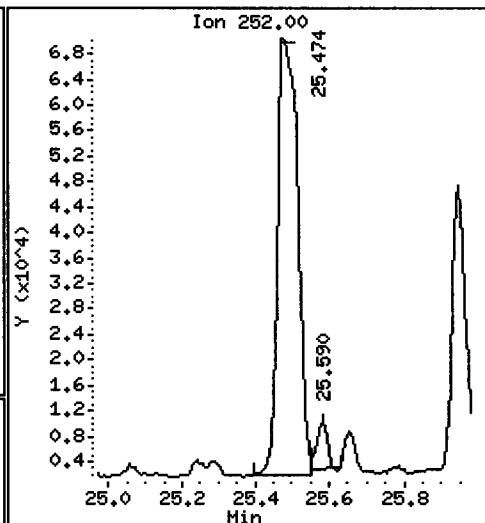
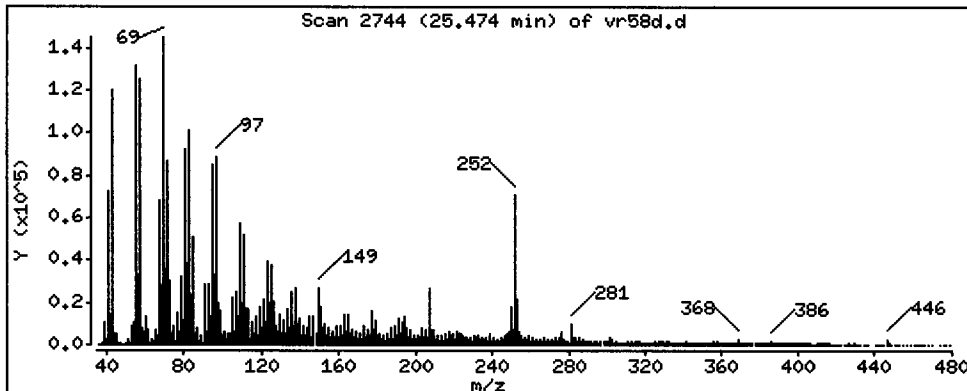
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

187 Total Benzofluoranthenes

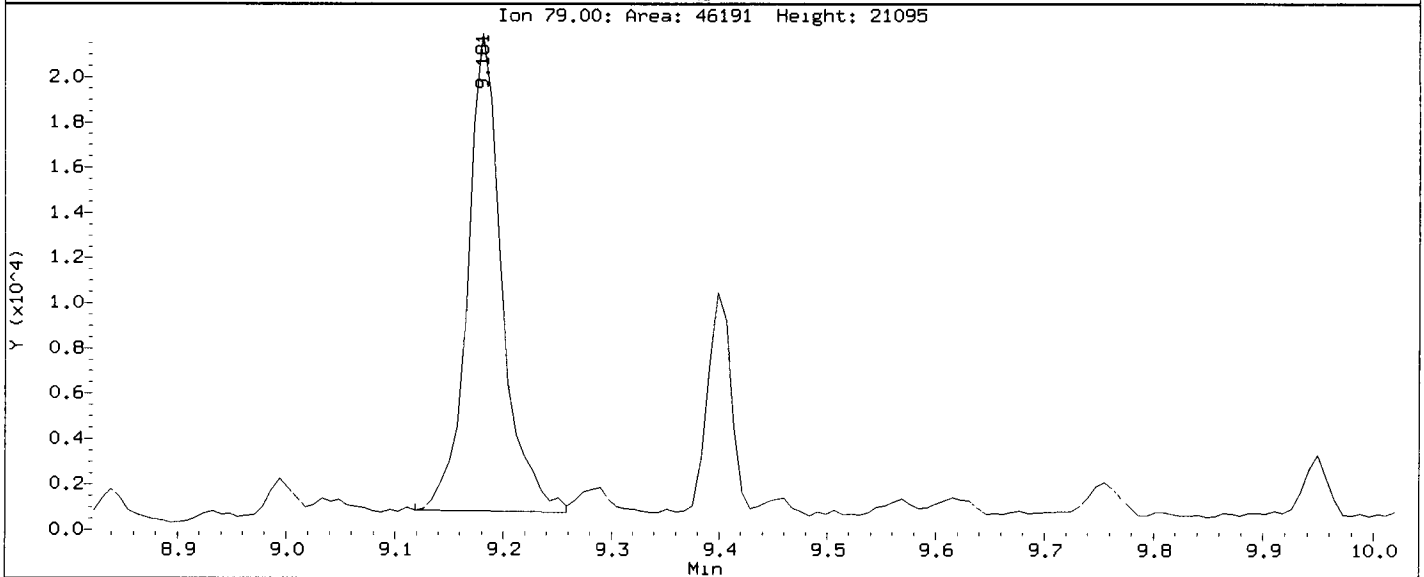
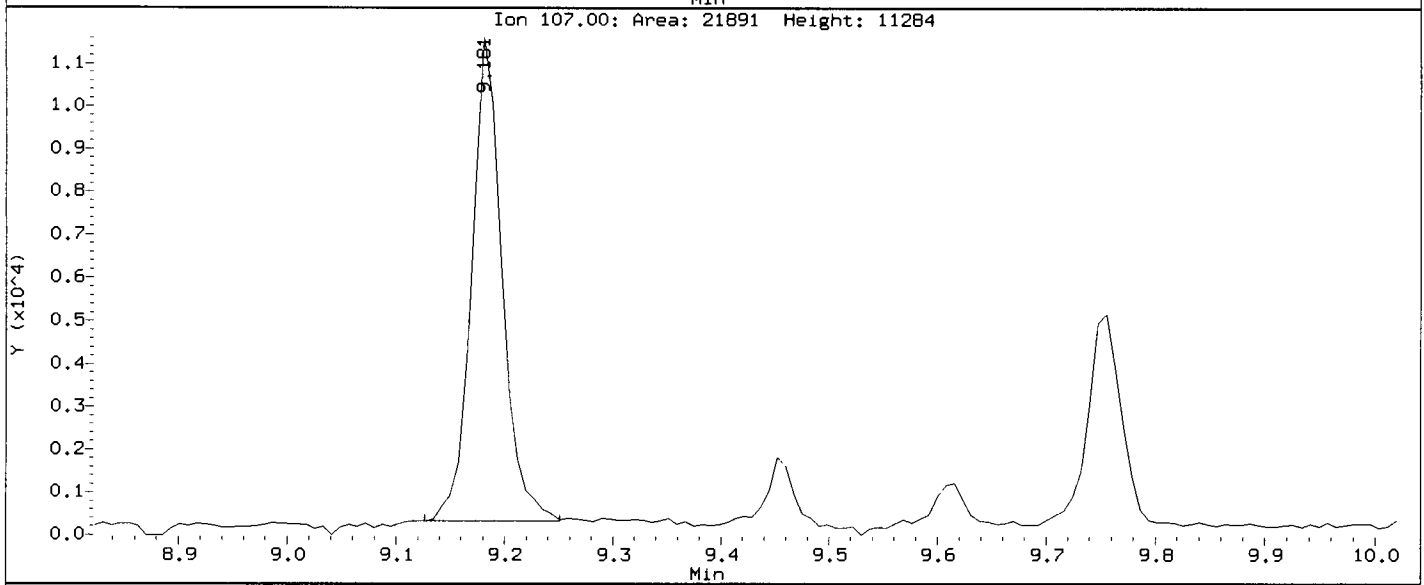
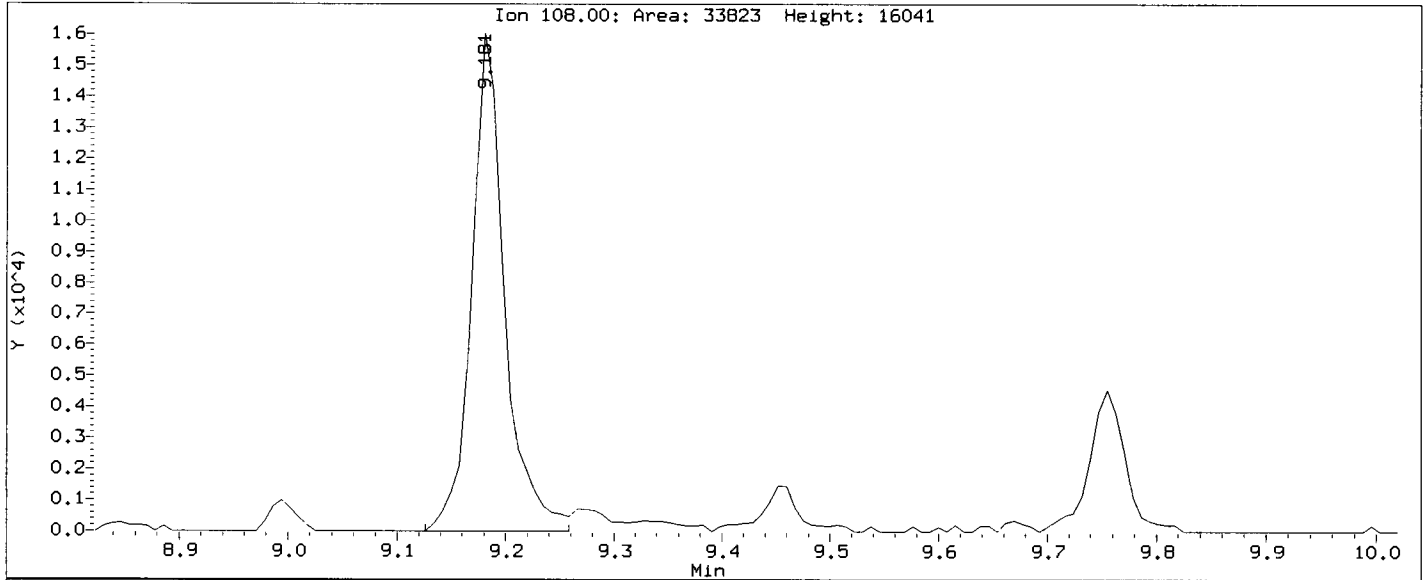
Concentration: 381.0 ug/kg



Data File: /chem1/nt10.1/20121204.b/vr58d.d  
Injection Date: 04-DEC-2012 18:58  
Instrument: nt10.1  
Client Sample ID: SG-13-S-E-121107

VP  
12.5.12

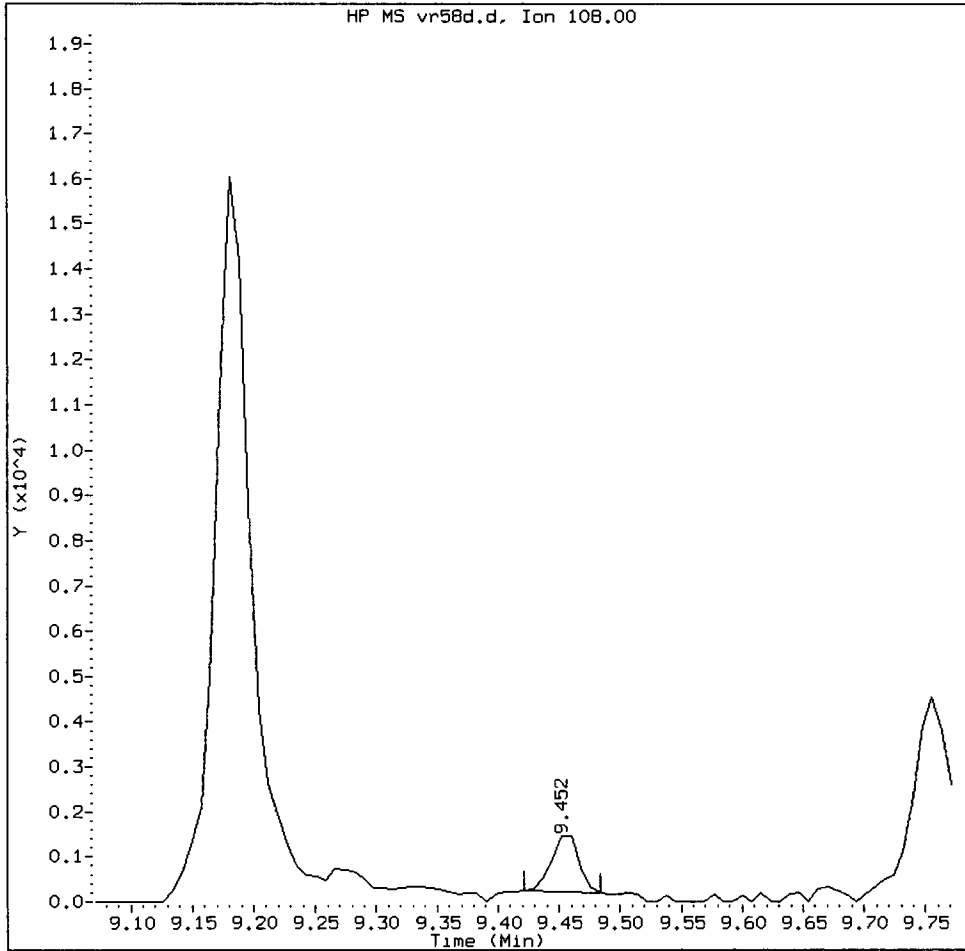
Compound: 2-Methylphenol  
CAS Number: 95-48-7





VR58D, /chem1/nt10.i/20121204.b/vr58d.d

2-Methylphenol Amount: 0.12 Area: 2002



MANUAL INTEGRATION for 2-Methylphenol

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

5. Other \_\_\_\_\_

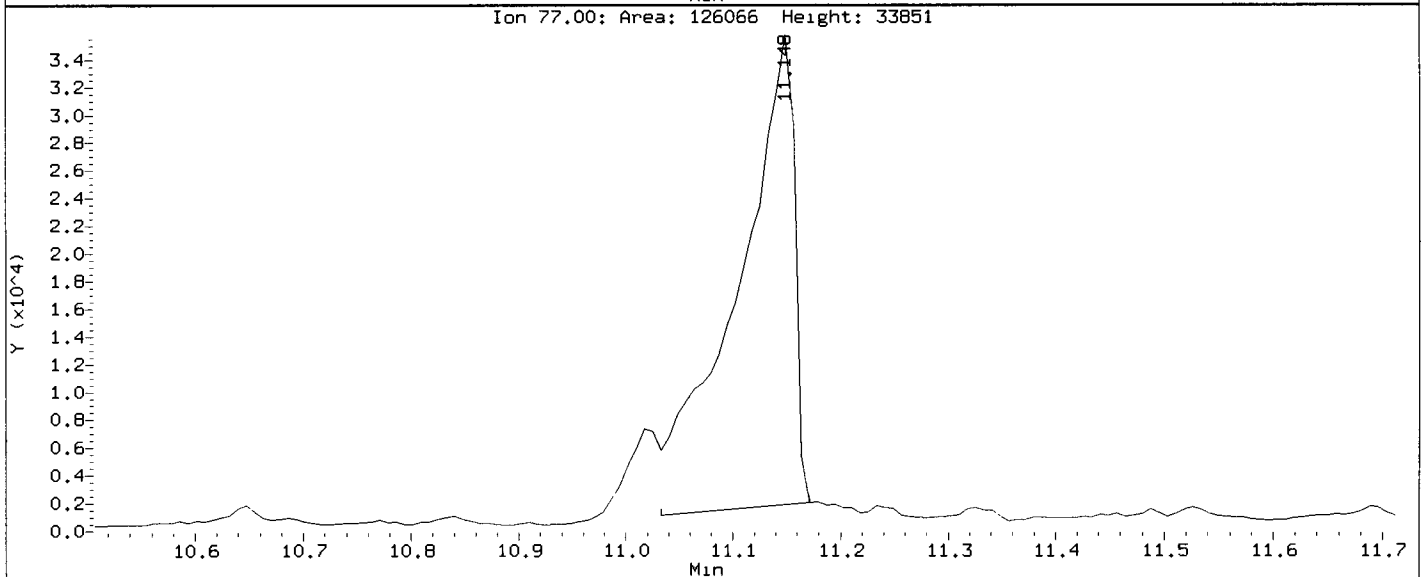
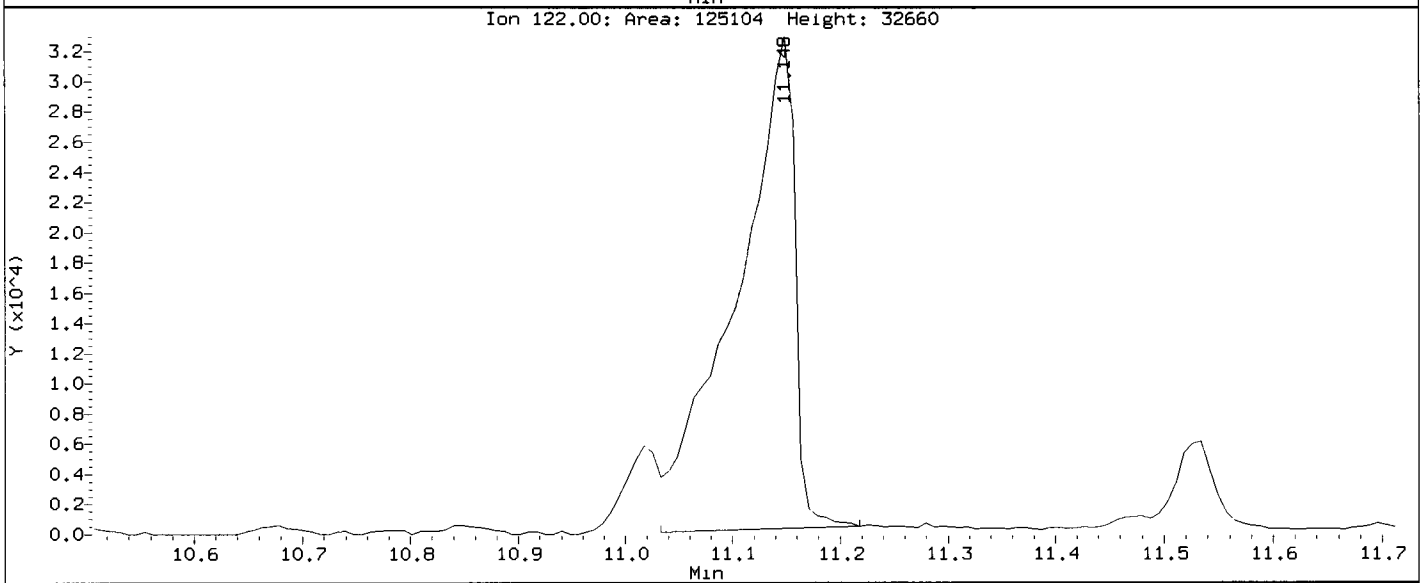
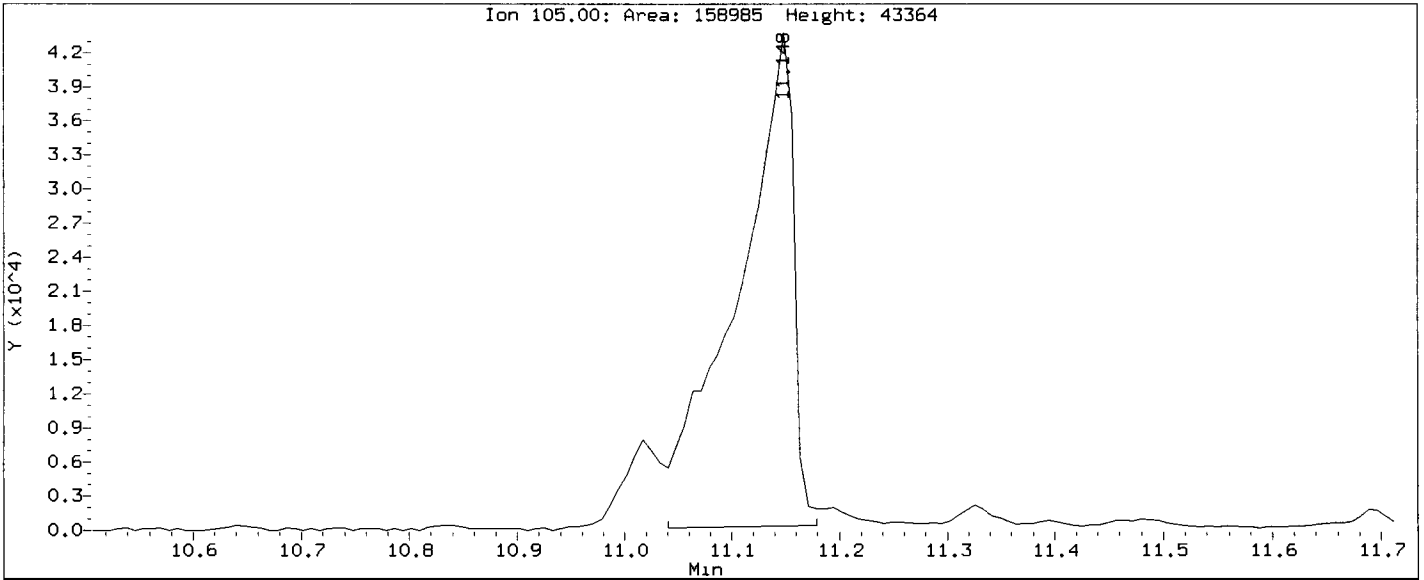
Analyst: VD

Date: 12.5.12

Data File: /chem1/nt10.1/20121204.b/vr58d.d  
Injection Date: 04-DEC-2012 18:58  
Instrument: nt10.1  
Client Sample ID: SG-13-S-E-121107

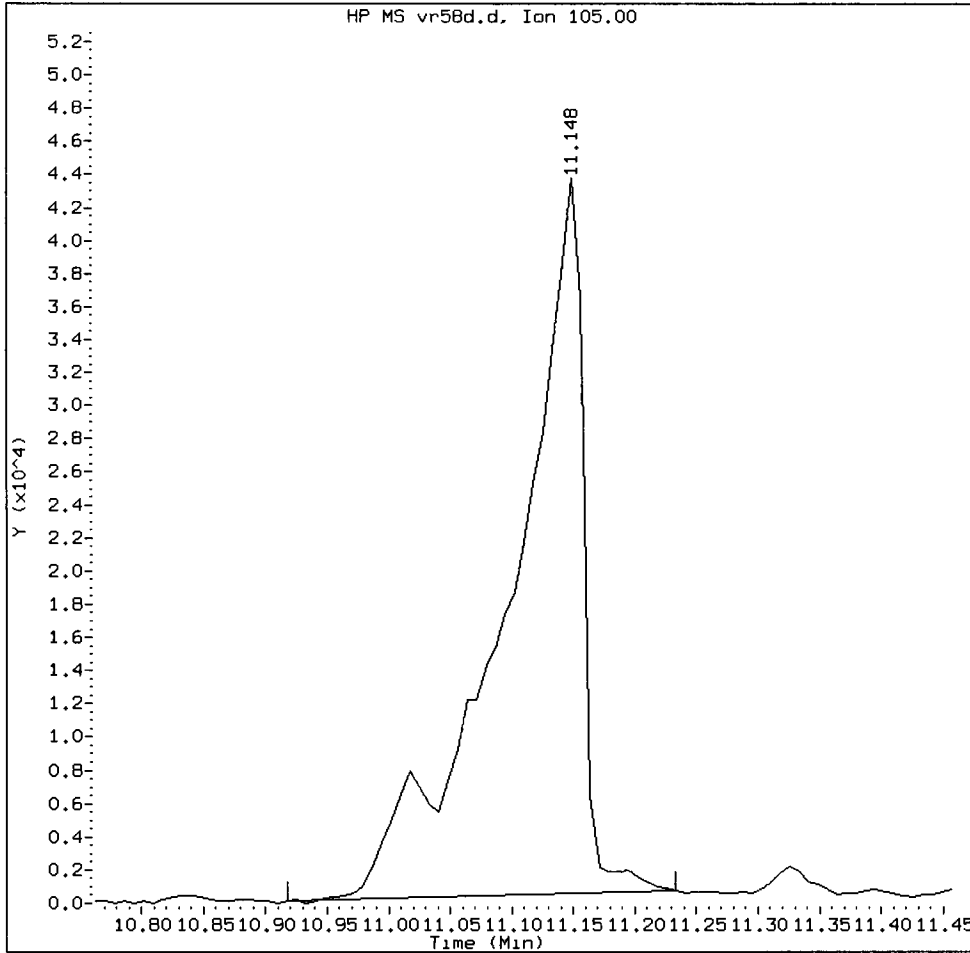
20  
12.5.12

Compound: Benzoic acid  
CAS Number: 65-85-0



VR58D, /chem1/nt10.i/20121204.b/vr58d.d

Benzoic acid Amount: 16.03 Area: 181130



MANUAL INTEGRATION for Benzoic acid

- 1) Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other \_\_\_\_\_

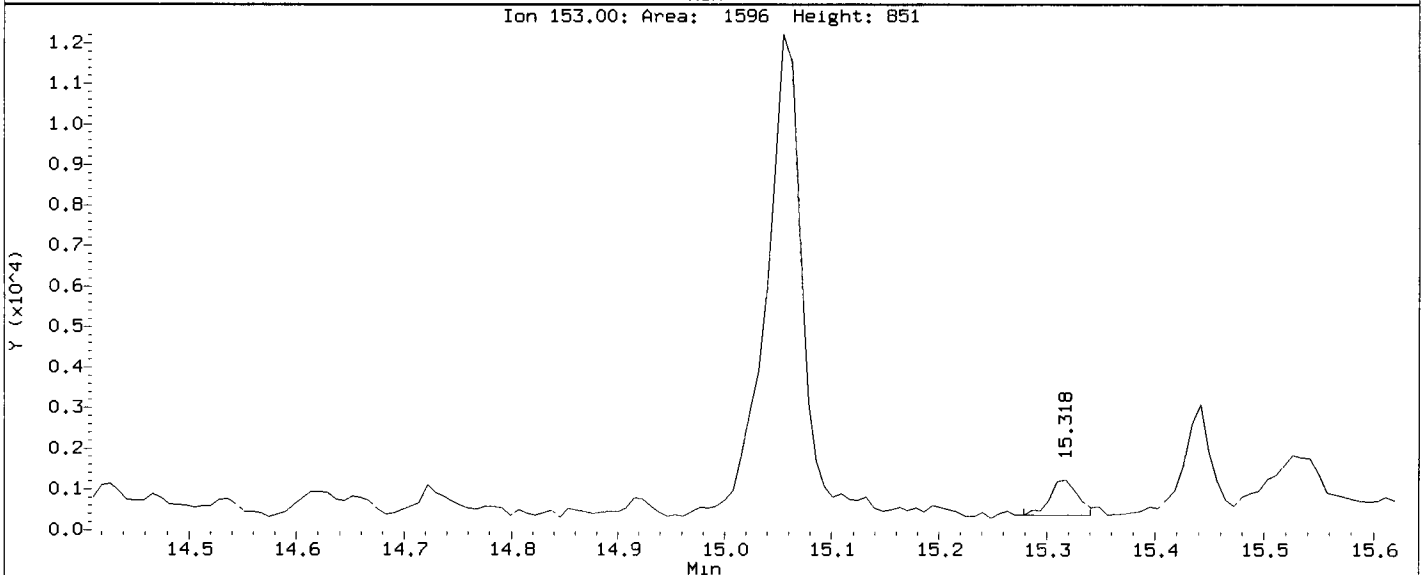
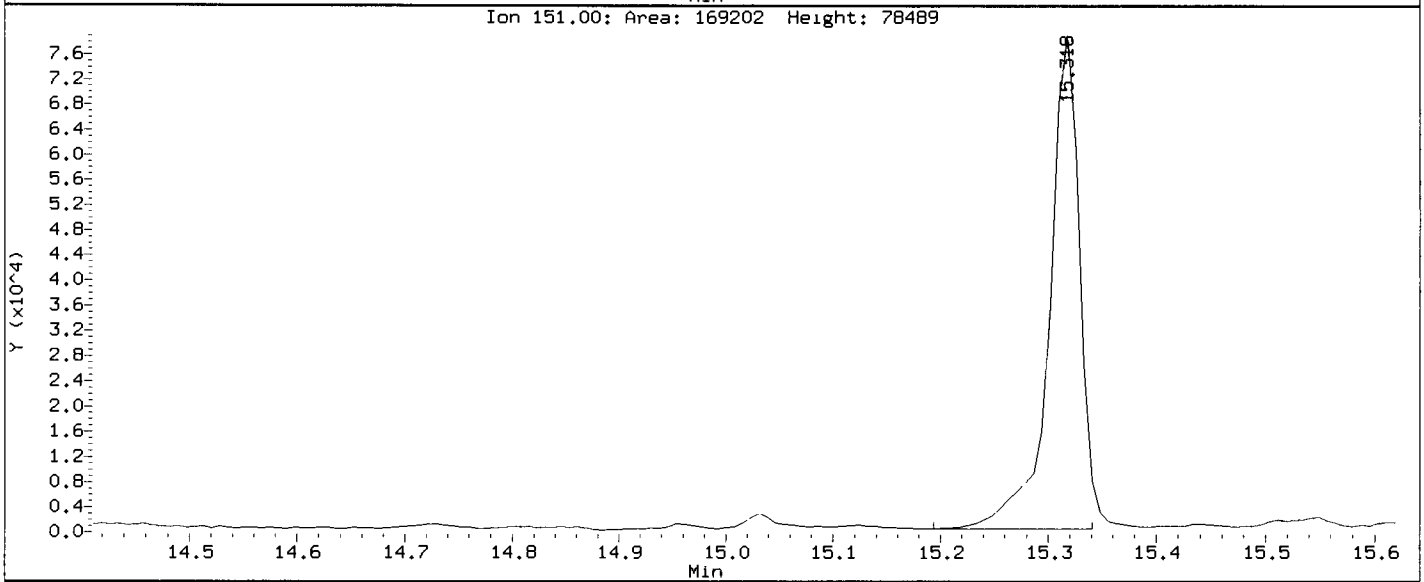
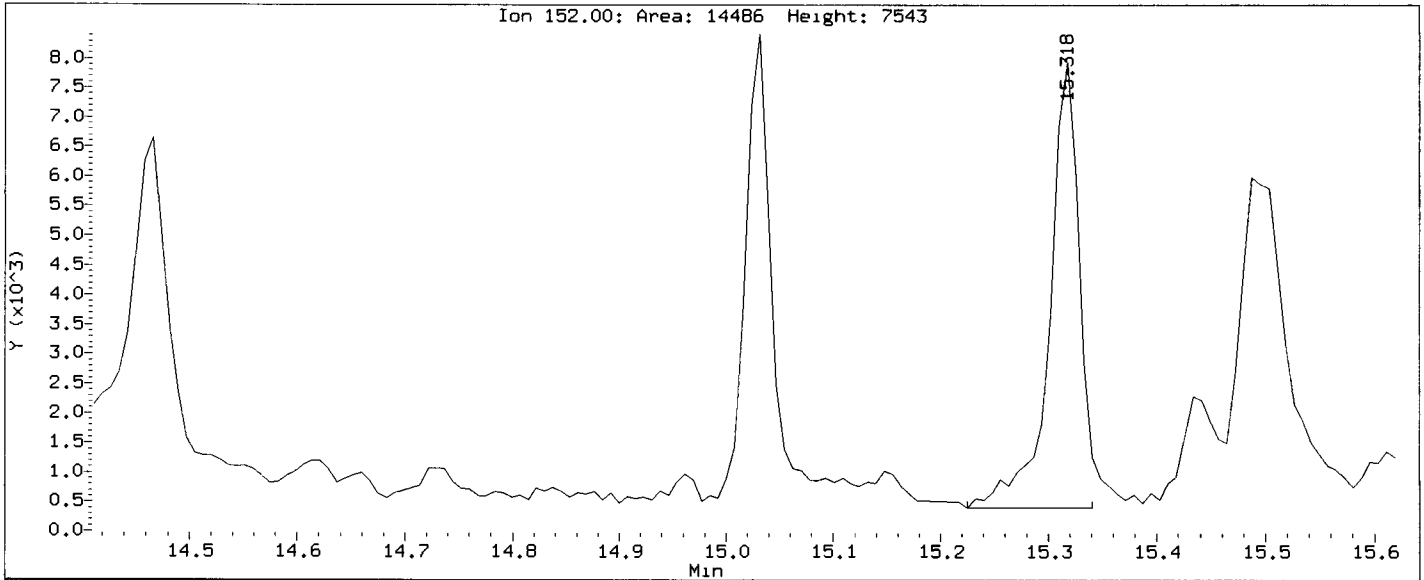
Analyst: VD

Date: 12.5.12

Data File: /chem1/nt10.1/20121204.b/vr58d.d  
Injection Date: 04-DEC-2012 18:58  
Instrument: nt10.1  
Client Sample ID: SG-13-S-E-121107

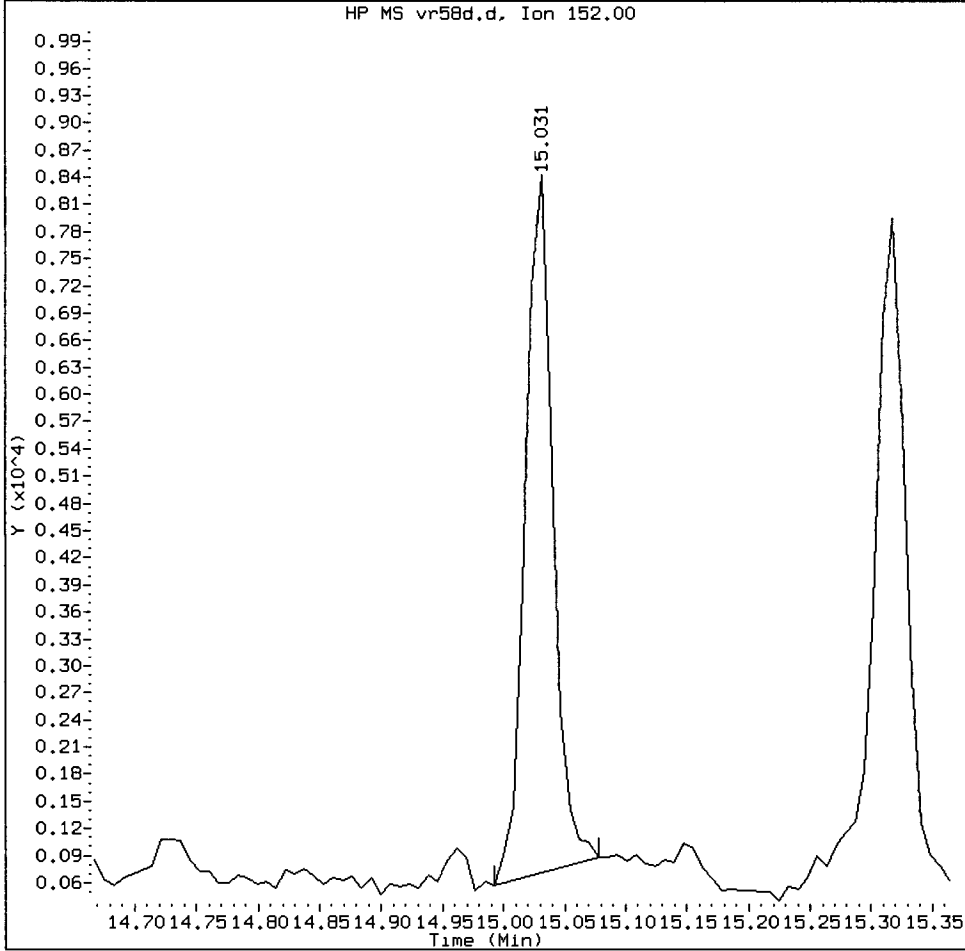
VD  
12.5.12

Compound: Acenaphthylene  
CAS Number: 208-96-8



VR58D, /chem1/nt10.i/20121204.b/vr58d.d

Acenaphthylene Amount: 0.26 Area: 12496



MANUAL INTEGRATION for Acenaphthylene

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

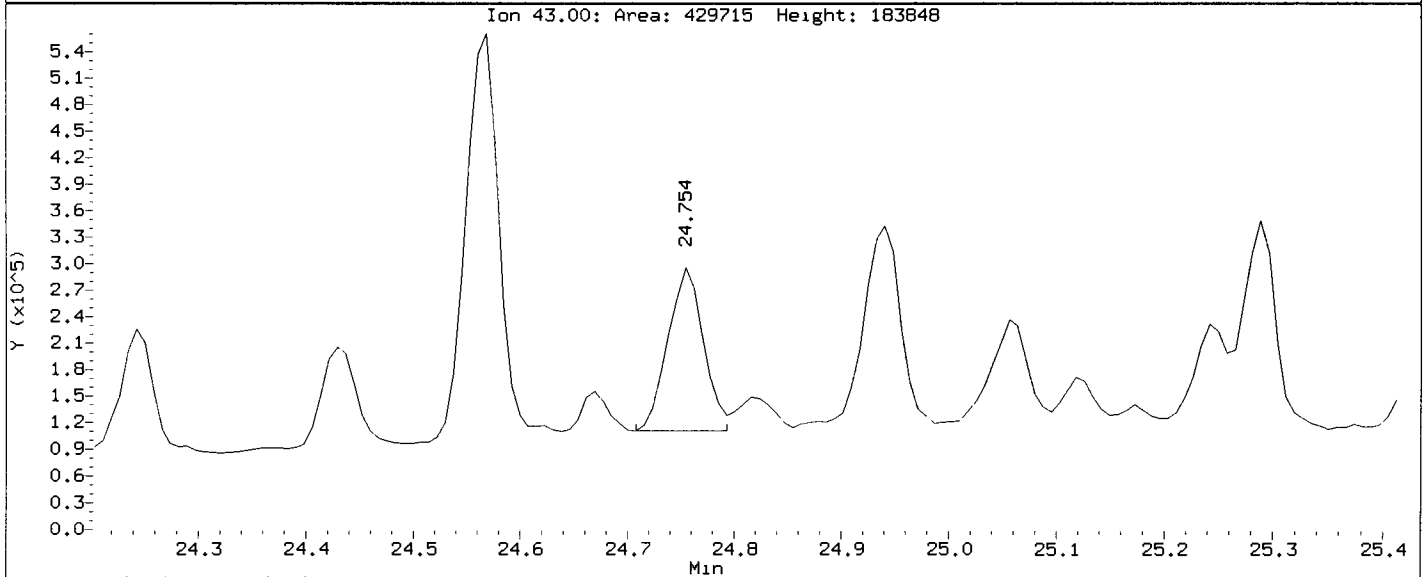
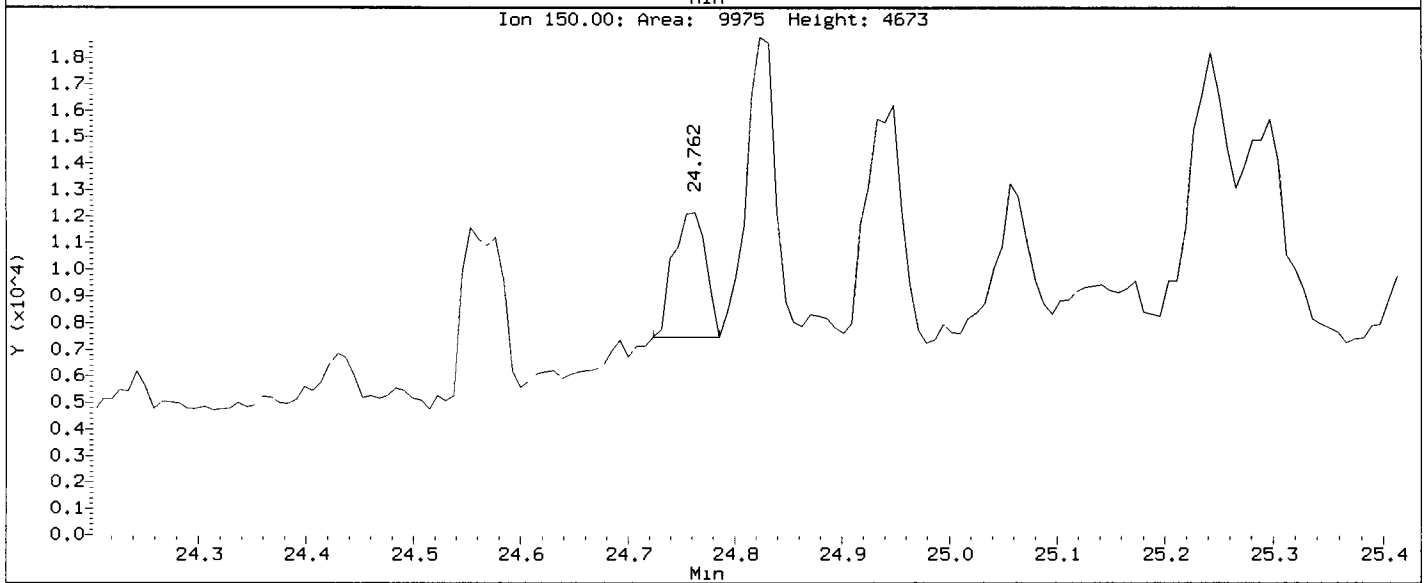
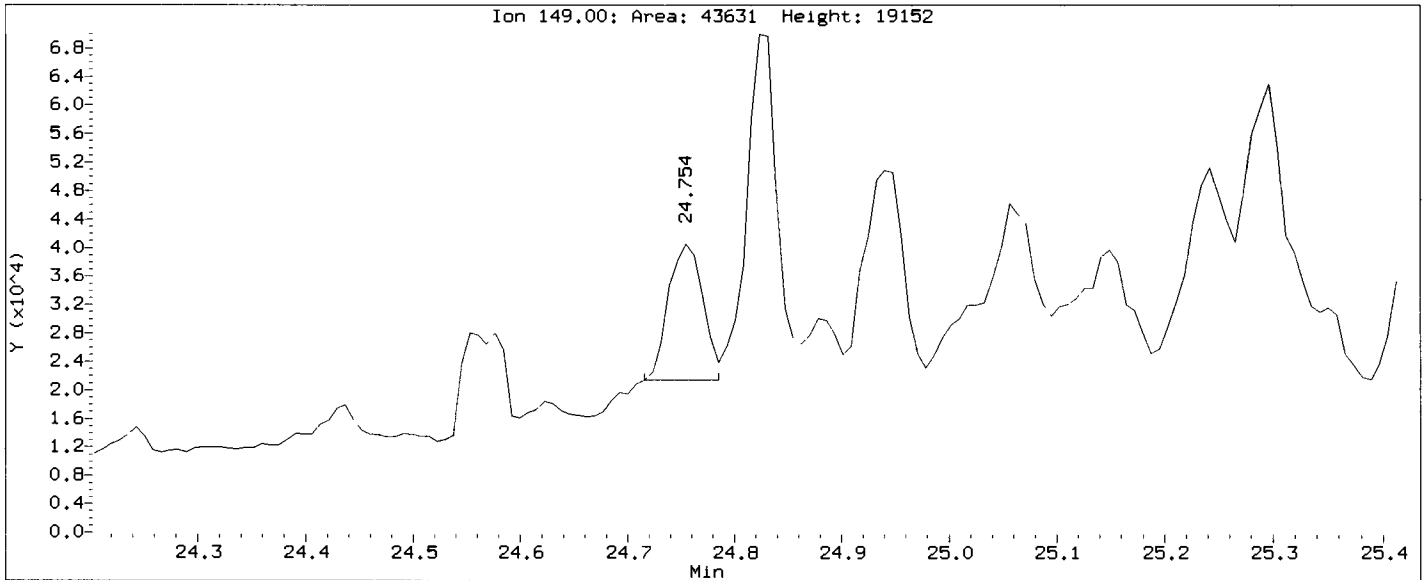
Analyst: VD

Date: 12.5.12

Data File: /chem1/nt10.1/20121204.b/vr58d.d  
Injection Date: 04-DEC-2012 18:58  
Instrument: nt10.1  
Client Sample ID: SG-13-S-E-121107

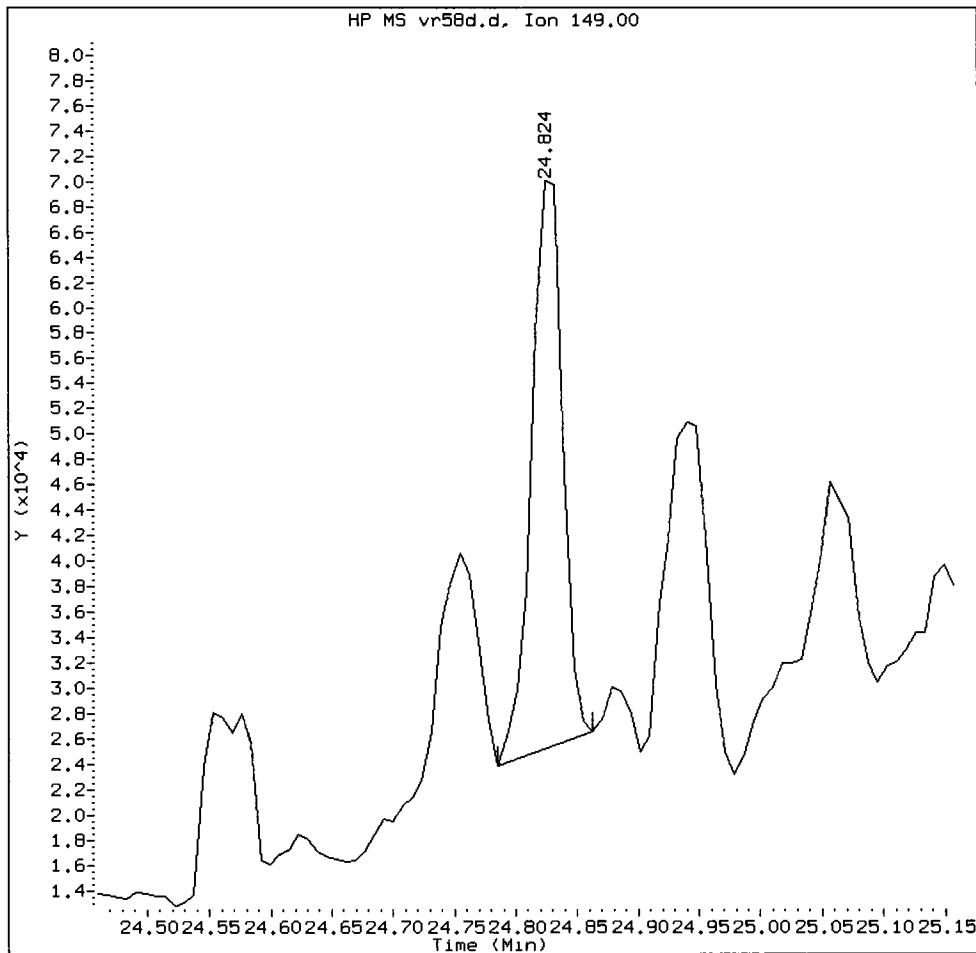
VD  
12-5-12

Compound: Di-n-octylphthalate  
CAS Number: 117-84-0



VR58D, /chem1/nt10.i/20121204.b/vr58d.d

Di-n-octylphthalate Amount: 0.74 Area: 79181



MANUAL INTEGRATION for Di-n-octylphthalate

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

5. Other \_\_\_\_\_

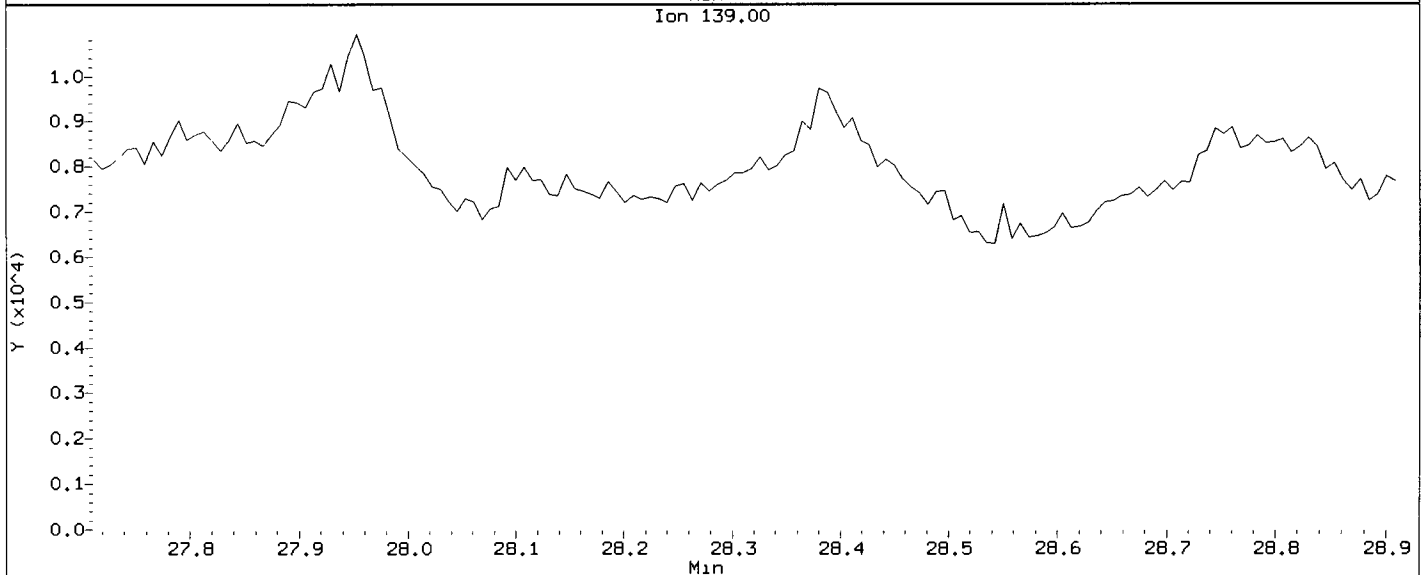
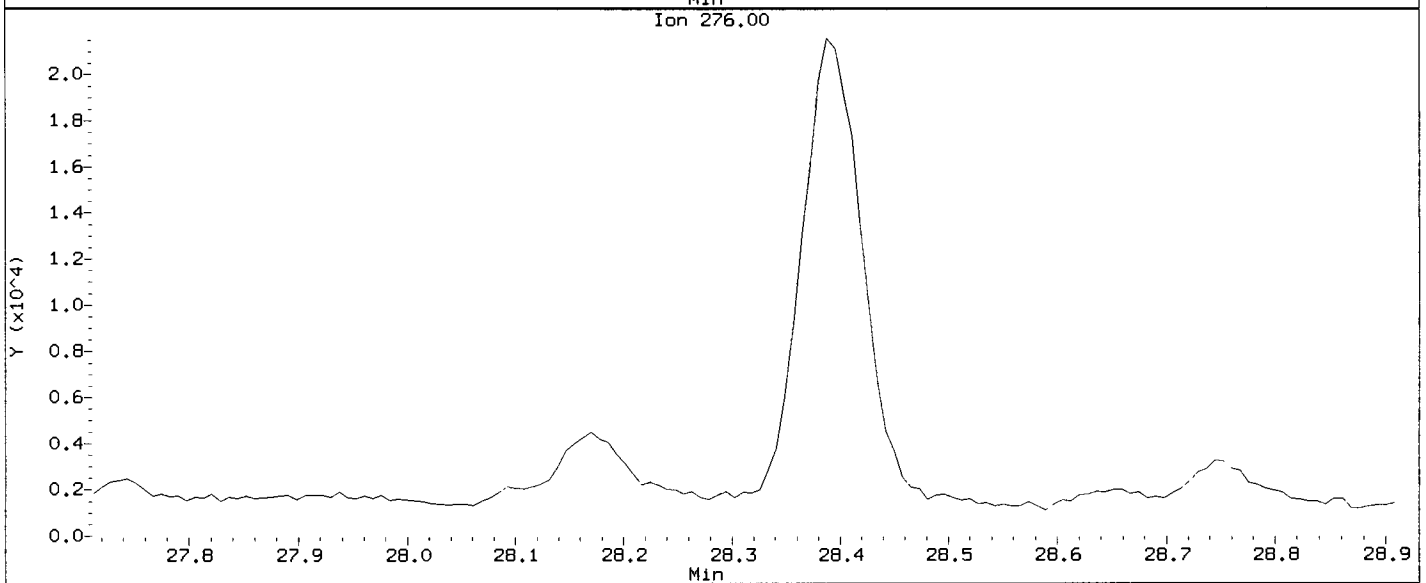
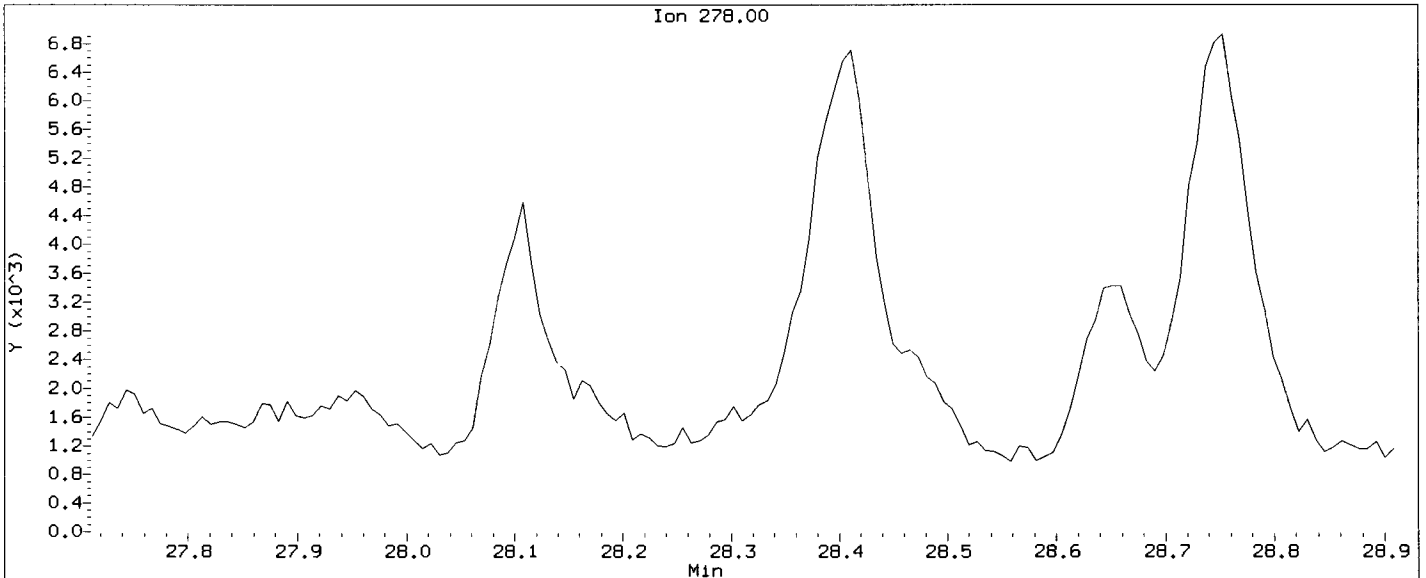
Analyst: VM

Date: 12-5-12

Data File: /chem1/nt10.1/20121204.b/vr58d.d  
Injection Date: 04-DEC-2012 18:58  
Instrument: nt10.1  
Client Sample ID: SG-13-S-E-121107

Compound: Dibenzo(a,h)anthracene  
CAS Number: 53-70-3

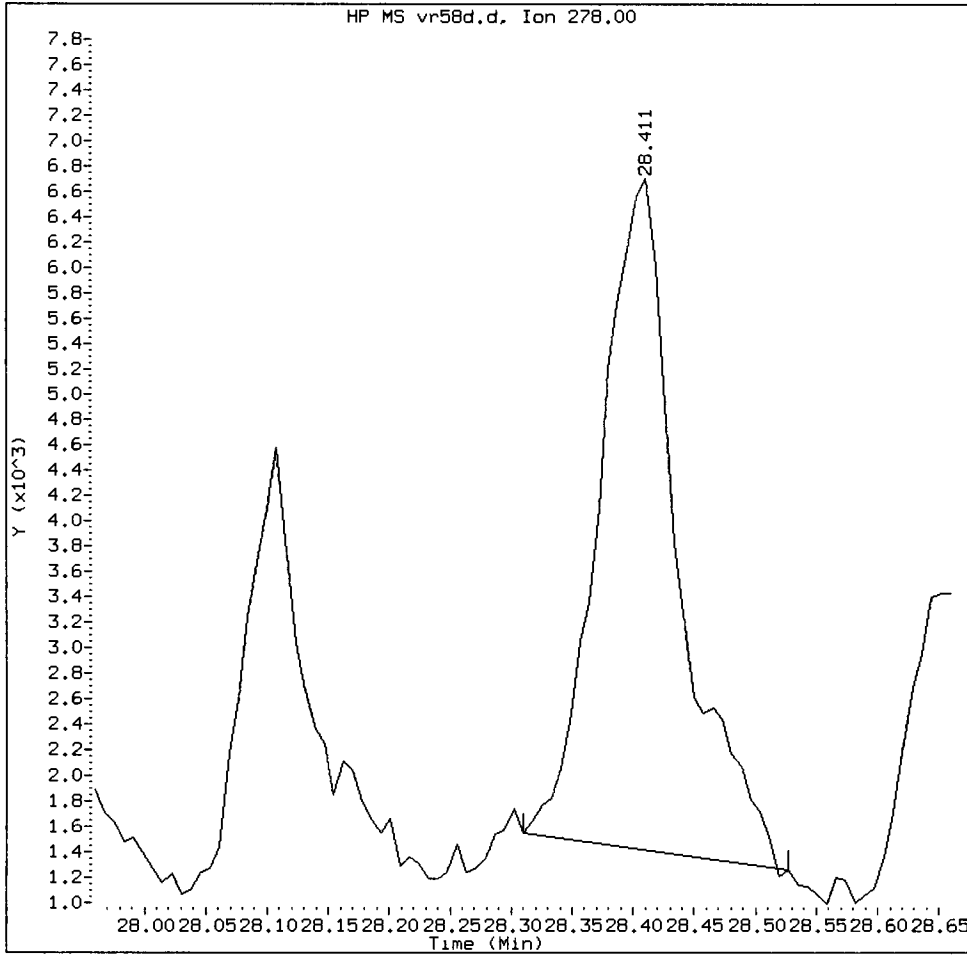
UPD  
12-5-12





VR58D, /chem1/nt10.i/20121204.b/vr58d.d

Dibenzo(a,h)anthracene Amount: 0.41 Area: 24094



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other \_\_\_\_\_

Analyst: WJ

Date: 12-5-12

CO-ELUTION SUMMARY FOR FILE - vr58d.d

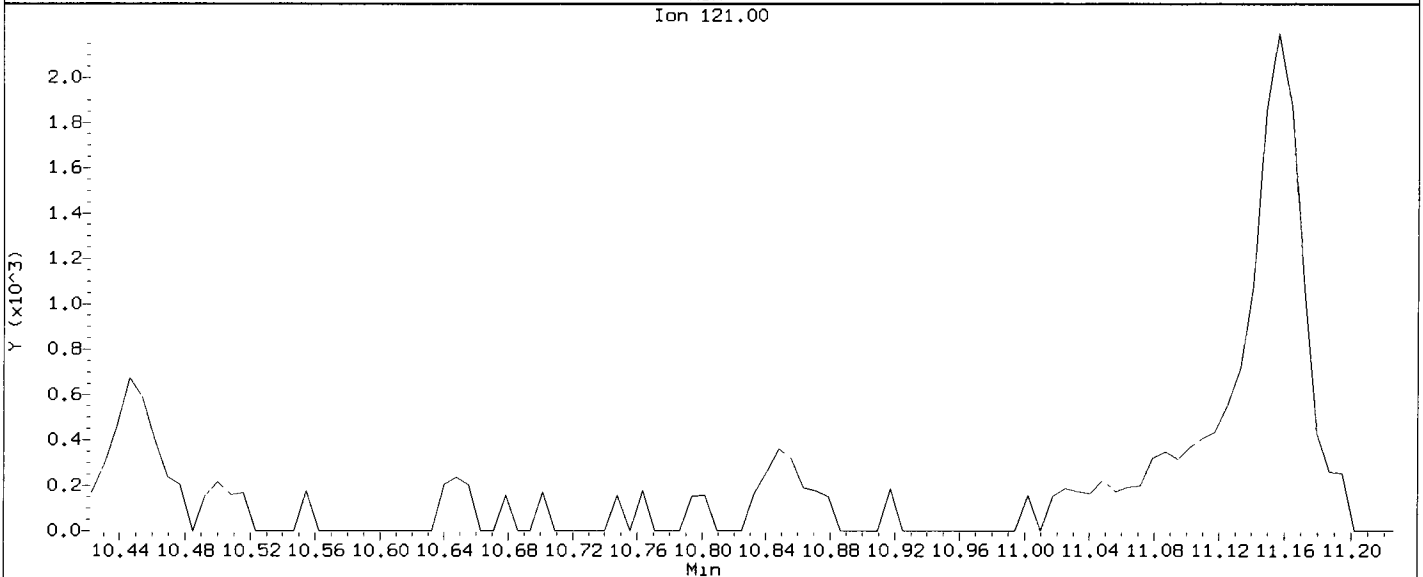
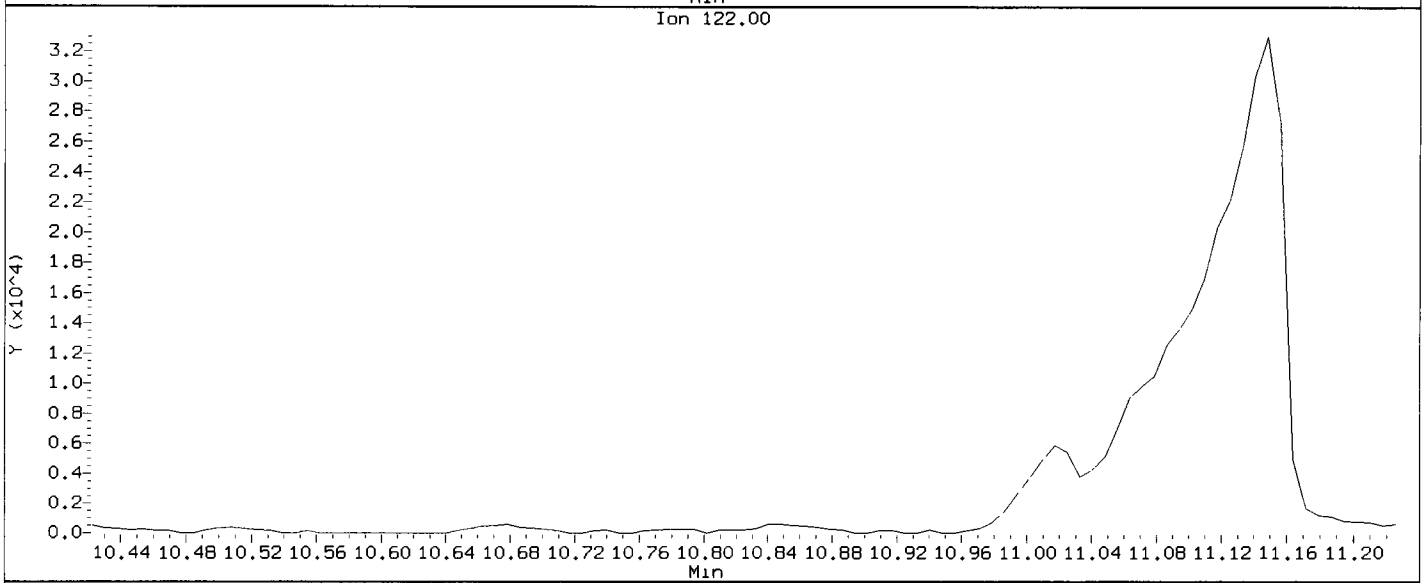
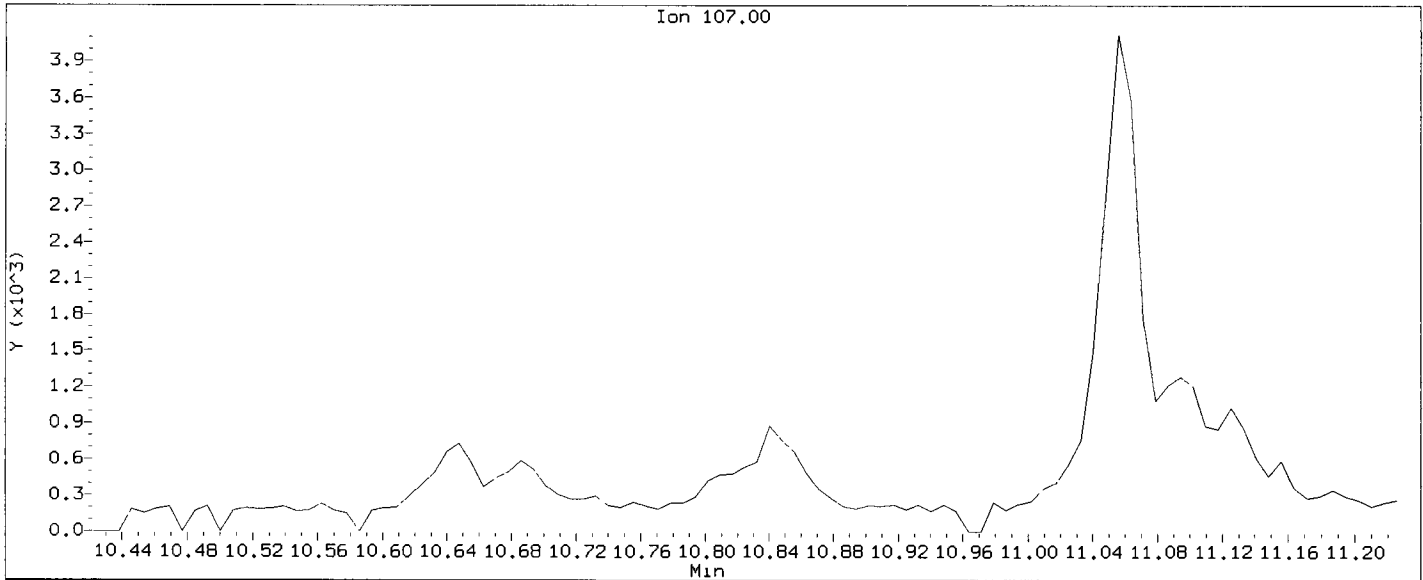
Lab ID: VR58D, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

---

Data File: /chem1/nt10.1/20121204.b/vr58d.d  
Injection Date: 04-DEC-2012 18:58  
Instrument: nt10.1  
Client Sample ID: SG-13-S-E-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58e.d  
 Lab Smp Id: VR58E Client Smp ID: SG-13-S-E-dup-12110  
 Inj Date : 04-DEC-2012 19:35  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58E  
 Misc Info : 12-22333  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 7  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub  
 Target Version: 3.50

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	42.00000	Weight of sample extracted (g)
M	76.00000	% 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	6.597	6.505	(0.746)	148975	5.65649	561.2
\$ 2 Phenol-d5		99	8.274	8.220	(0.935)	231325	7.09817	704.2
3 Phenol		94	8.297	8.243	(0.938)	119909	3.49273	346.5
\$ 5 2-Chlorophenol-d4		132	8.498	8.452	(0.961)	157033	5.56908	552.5
7 1,3-Dichlorobenzene		146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4		152	8.847	8.831	(1.000)	82331	4.00000	
9 1,4-Dichlorobenzene		146	Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4		152	9.219	9.212	(1.042)	64483	3.13622	311.1
12 1,2-Dichlorobenzene		146	Compound Not Detected.					
11 Benzyl alcohol		108	9.188	9.150	(1.039)	61642	3.79708	376.7
13 2-Methylphenol		108	9.460	9.421	(1.069)	4212	0.14279	14.17(M)
17 Hexachloroethane		117	Compound Not Detected.					
15 4-Methylphenol		108	9.755	9.716	(1.103)	19468	1.11234	110.4
\$ 18 Nitrobenzene-d5		82	10.019	10.003	(0.872)	125849	4.22085	418.7
22 2,4-Dimethylphenol		107	Compound Not Detected.					

Compounds	QUANT		SIG				CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
24 Benzoic acid	105	11.179	11.110	(0.973)	346900	17.5215	1738 (MH)	
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
* 27 Naphthalene-d8	136	11.487	11.480	(1.000)	318197	4.00000		
28 Naphthalene	128	11.534	11.526	(1.004)	30870	0.39876	39.56	
30 Hexachlorobutadiene	225	Compound Not Detected.						
32 2-Methylnaphthalene	142	13.034	13.027	(1.135)	8424	0.14605	14.49	
\$ 36 2-Fluorobiphenyl	172	13.893	13.886	(0.904)	233454	3.66959	364.0	
39 Dimethylphthalate	163	Compound Not Detected.						
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	15.371	15.356	(1.000)	179746	4.00000		
44 Acenaphthene	153	15.441	15.426	(1.005)	7583	0.15615	15.49	
46 Dibenzofuran	168	15.797	15.781	(1.028)	17382	0.24118	23.93	
50 Diethylphthalate	149	16.477	16.462	(1.072)	16448	0.27062	26.85	
49 Fluorene	166	16.562	16.547	(1.077)	18914	0.31634	31.38	
54 N-Nitrosodiphenylamine	169	Compound Not Detected.						
\$ 55 2,4,6-Tribromophenol	330	17.148	17.125	(1.116)	64342	6.07687	602.9	
57 Hexachlorobenzene	284	Compound Not Detected.						
58 Pentachlorophenol	266	18.392	18.362	(0.987)	6236	0.41667	41.34	
* 59 Phenanthrene-d10	188	18.640	18.617	(1.000)	326351	4.00000		
60 Phenanthrene	178	18.686	18.671	(1.002)	127623	1.57943	156.7	
61 Anthracene	178	18.787	18.764	(1.008)	38635	0.44483	44.13	
63 Di-n-butylphthalate	149	Compound Not Detected.						
64 Fluoranthene	202	21.123	21.093	(1.133)	222979	2.18931	217.2	
65 Pyrene	202	21.541	21.510	(0.908)	168667	2.01707	200.1	
\$ 66 Terphenyl-d14	244	21.858	21.835	(0.921)	136513	2.44231	242.3	
67 Butylbenzylphthalate	149	22.811	22.788	(0.961)	19171	0.56439	55.99	
68 Benzo(a)anthracene	228	23.701	23.670	(0.999)	134022	1.65203	163.9	
* 69 Chrysene-d12	240	23.724	23.701	(1.000)	285432	4.00000		
71 Chrysene	228	23.771	23.740	(1.002)	177780	2.46673	244.7	
72 bis(2-Ethylhexyl)phthalate	149	23.848	23.825	(0.961)	328873	4.29580	426.2	
* 134 Di-n-octylphthalate-d4	153	24.824	24.801	(1.000)	554848	4.00000		
73 Di-n-octylphthalate	149	24.831	24.808	(1.000)	52566	0.41793	41.46	
76 Benzo(a)pyrene	252	26.032	25.985	(0.996)	104833	1.18771	117.8	
* 77 Perylene-d12	264	26.140	26.086	(1.000)	309278	4.00000		
78 Indeno(1,2,3-cd)pyrene	276	28.387	28.294	(1.086)	79812	0.79786	79.15	
79 Dibenzo(a,h)anthracene	278	28.403	28.310	(1.087)	20566	0.25907	25.70 (M)	
80 Benzo(g,h,i)perylene	276	29.040	28.931	(1.111)	73804	0.86209	85.52	
105 1-methylnaphthalene	142	Compound Not Detected.						
187 Total Benzofluoranthenes	252	25.482	25.474	(0.975)	296774	3.26076	323.5	
98 Retene	219	22.153	22.137	(0.934)	40851			
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.

*(Handwritten mark)*  
 12.5.12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58e.d  
 Lab Smp Id: VR58E  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22333

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-13-S-E-dup-12  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	82331	0.93
27 Naphthalene-d8	299399	149700	598798	318197	6.28
42 Acenaphthene-d10	178564	89282	357128	179746	0.66
59 Phenanthrene-d10	305410	152705	610820	326351	6.86
69 Chrysene-d12	323853	161926	647706	285432	-11.86
134 Di-n-octylphthala	427845	213922	855690	554848	29.68
77 Perylene-d12	305316	152658	610632	309278	1.30

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.85	0.17
27 Naphthalene-d8	11.48	10.98	11.98	11.49	0.07
42 Acenaphthene-d10	15.36	14.86	15.86	15.37	0.10
59 Phenanthrene-d10	18.62	18.12	19.12	18.64	0.12
69 Chrysene-d12	23.70	23.20	24.20	23.72	0.10
134 Di-n-octylphthala	24.80	24.30	25.30	24.82	0.09
77 Perylene-d12	26.09	25.59	26.59	26.14	0.21

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.

Sample Matrix: SOLID

Lab Smp Id: VR58E

Level: LOW

Data Type: MS DATA

SpikeList File: SHORTPSDDA.spk

Sublist File: SHORTPSDDA.sub

Method File: /chem1/nt10.i/20121204.b/ABN.m

Misc Info: 12-22333

Client SDG: VR58

Fraction: SV

Client Smp ID: SG-13-S-E-dup-12110

Operator: VTS/YZ

SampleType: SAMPLE

Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	744.0	561.2	75.42	30-160
\$ 2 Phenol-d5	744.0	704.2	94.64	30-160
\$ 5 2-Chlorophenol-d4	744.0	552.5	74.25	30-160
\$ 10 1,2-Dichlorobenzen	496.0	311.1	62.72	30-160
\$ 18 Nitrobenzene-d5	496.0	418.7	84.42	30-160
\$ 36 2-Fluorobiphenyl	496.0	364.0	73.39	30-160
\$ 55 2,4,6-Tribromophen	744.0	602.9	81.02	30-160
\$ 66 Terphenyl-d14	496.0	242.3	48.85	30-160

Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Sample Infol: VR58E

Volume Injected (uL): 1.0

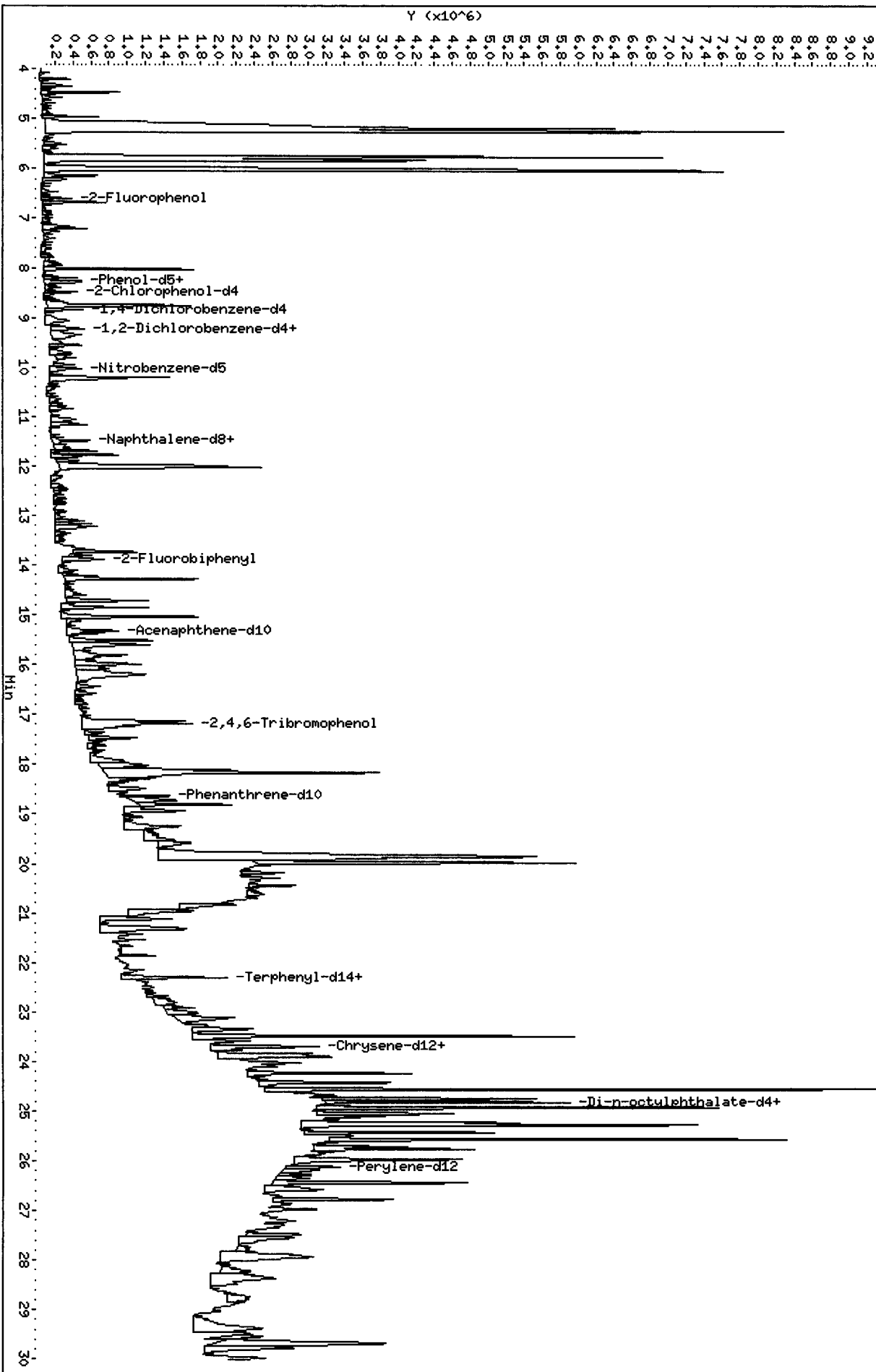
Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25

/chem1/nt10.i/20121204.br/vr58e.d



VR58E : 20121204



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

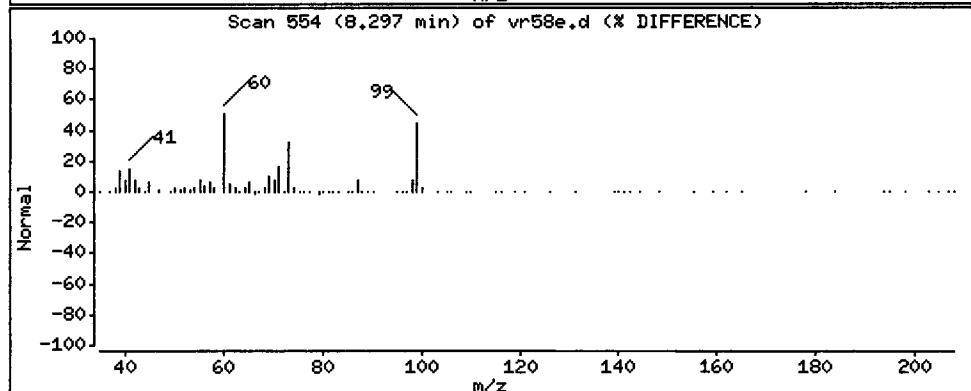
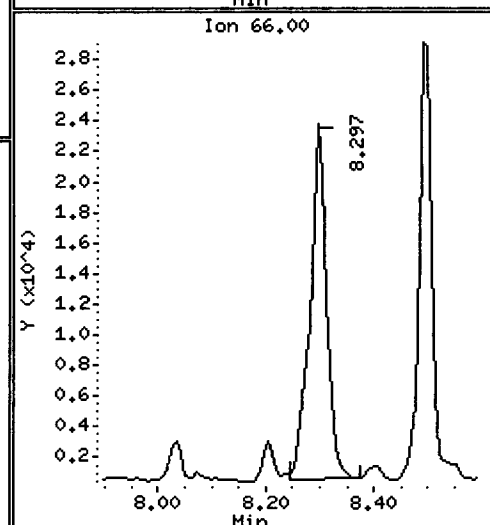
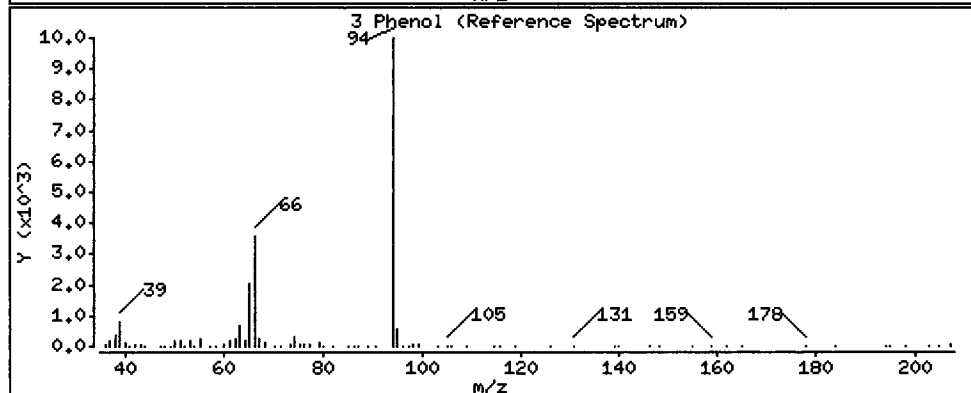
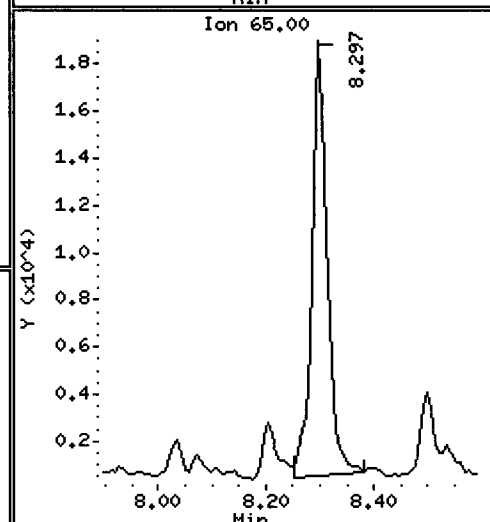
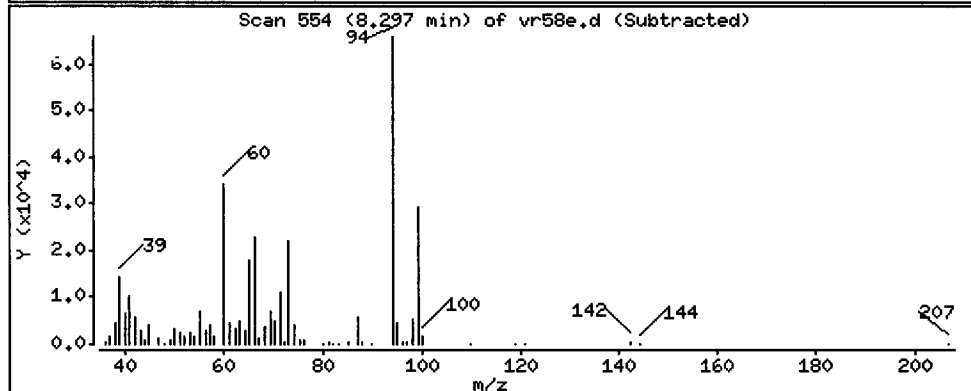
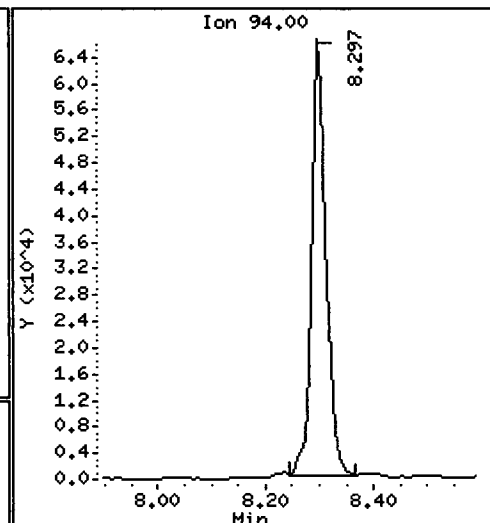
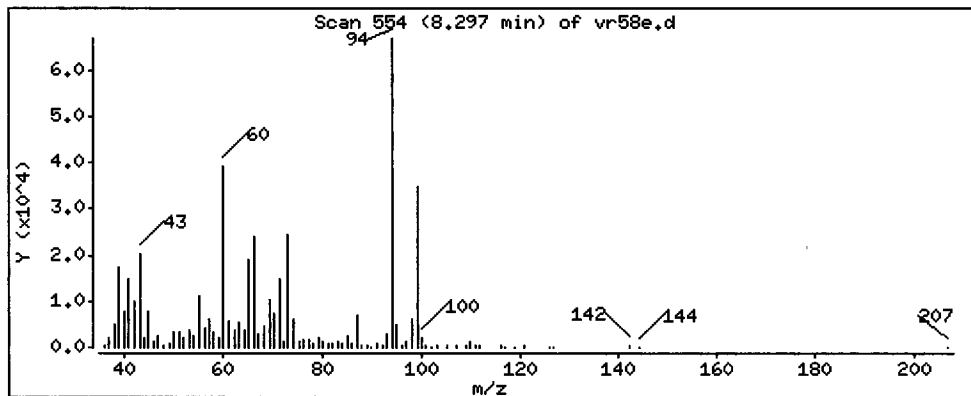
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 346.5 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10,i

Sample Info: VR58E

Volume Injected (uL): 1.0

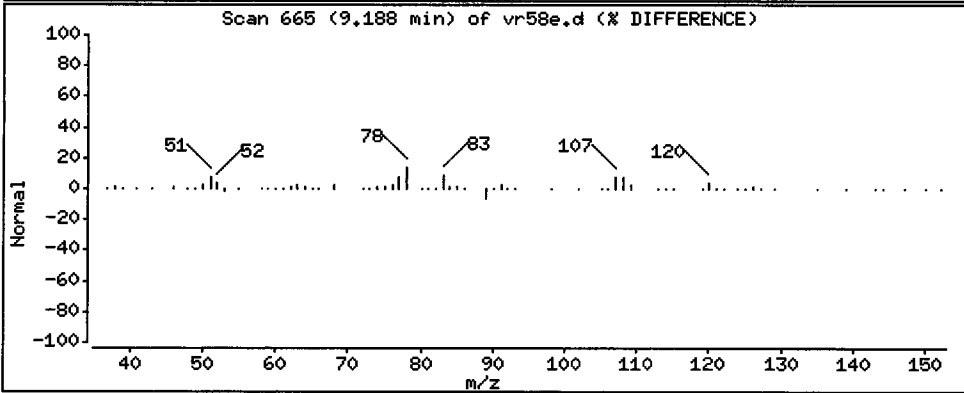
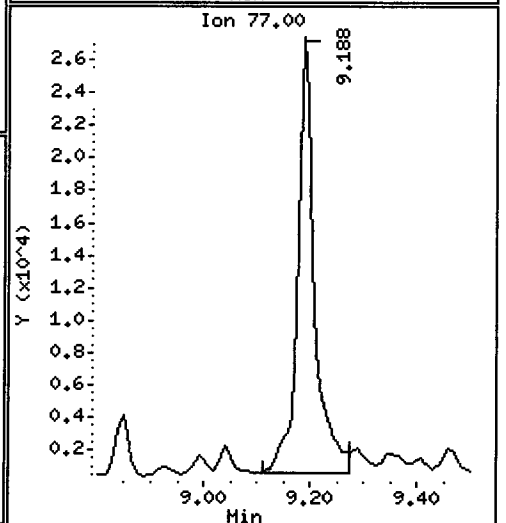
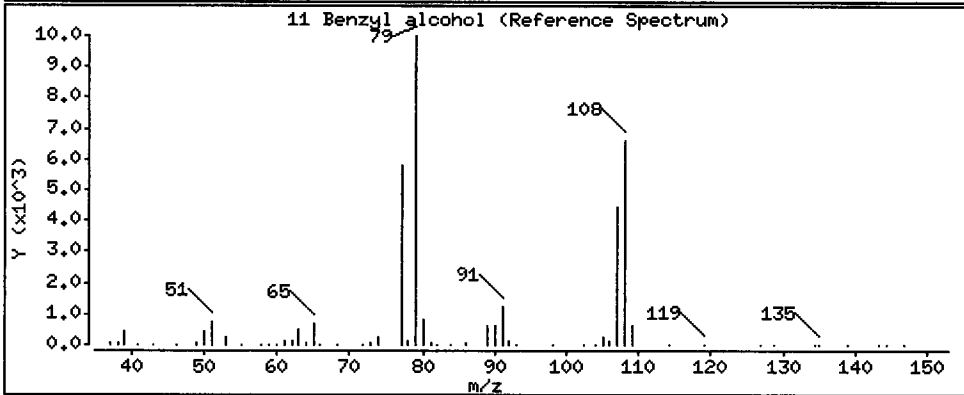
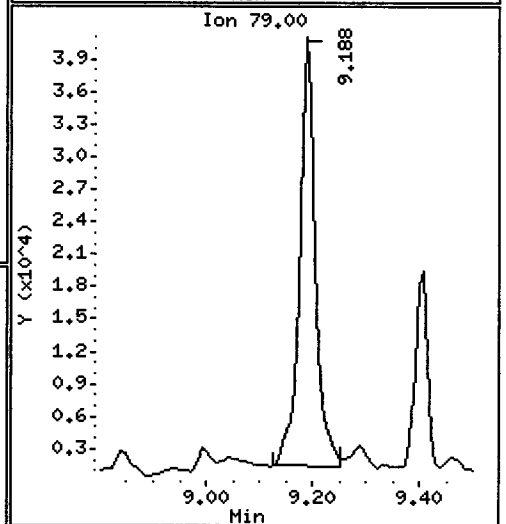
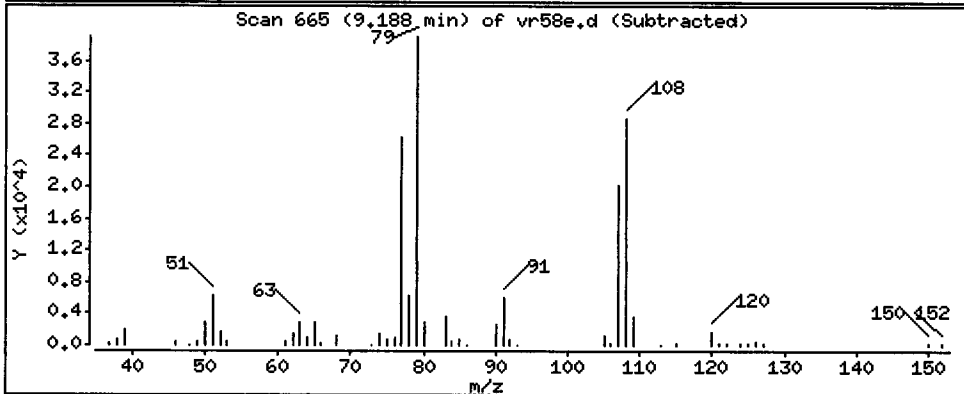
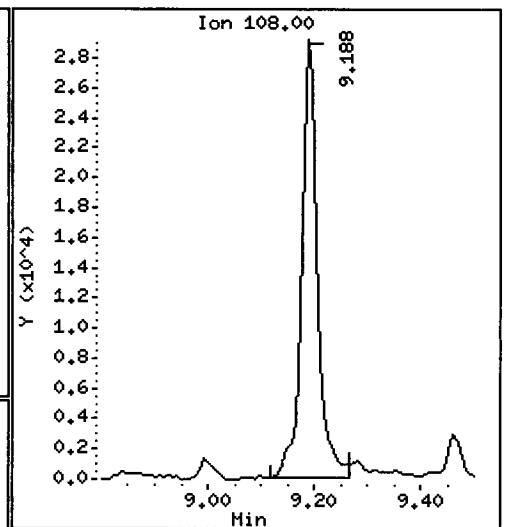
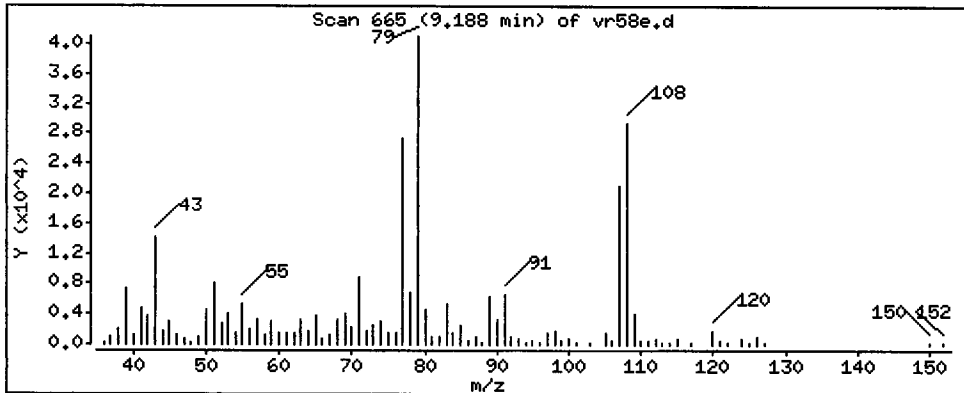
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 376.7 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

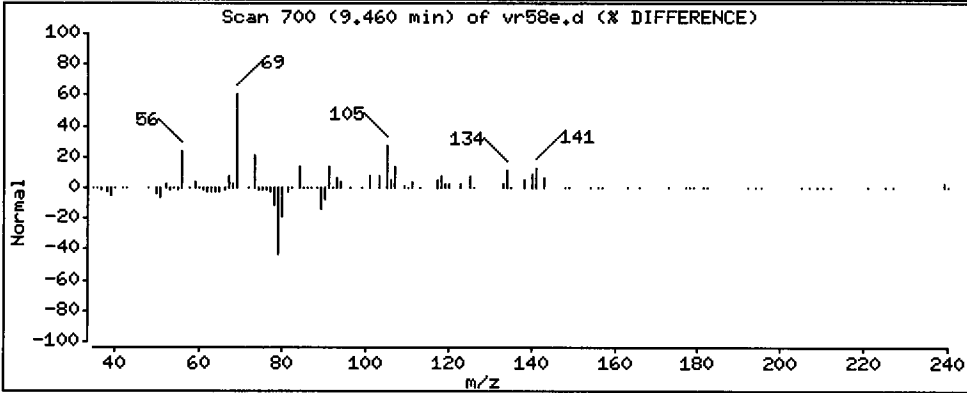
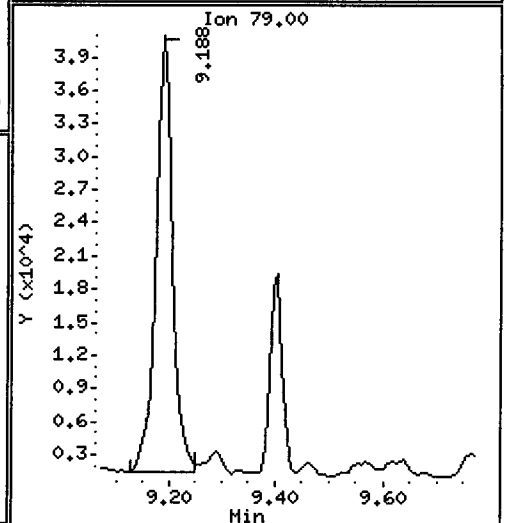
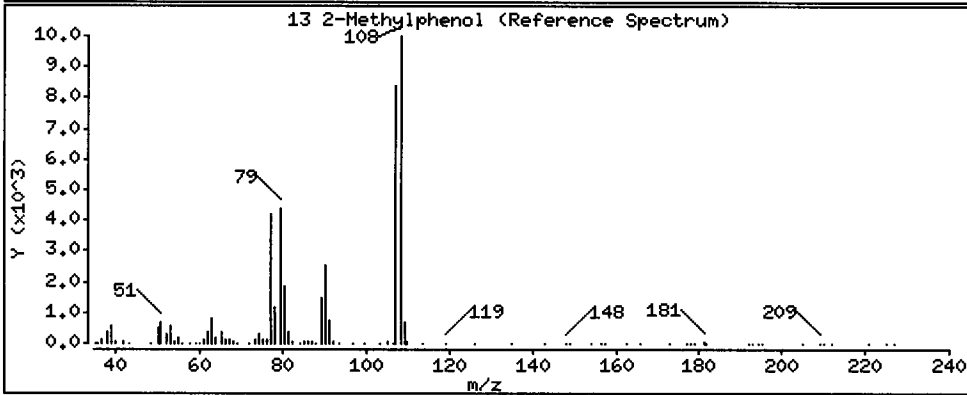
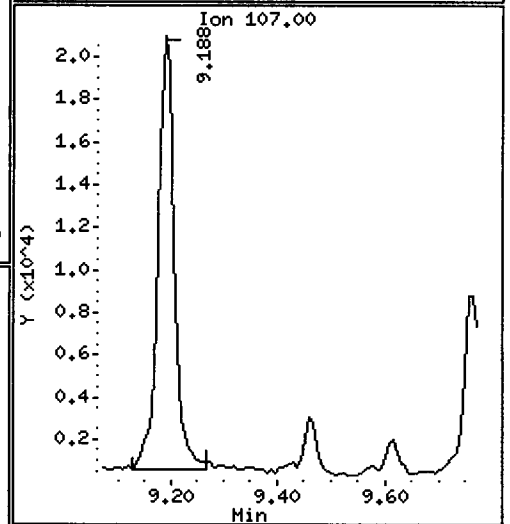
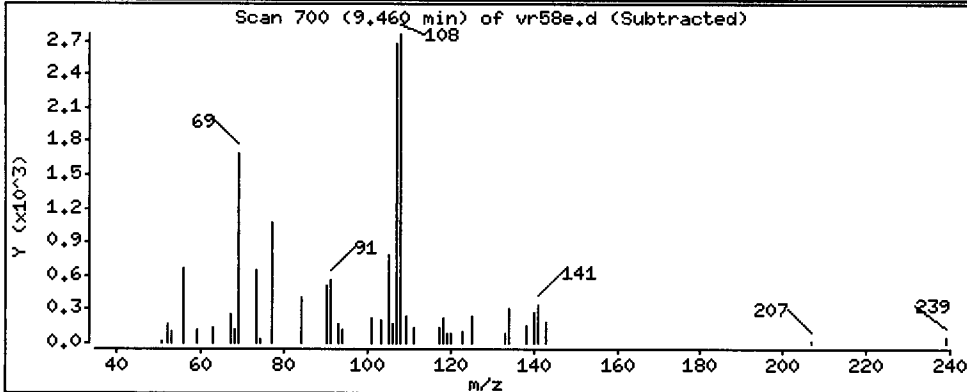
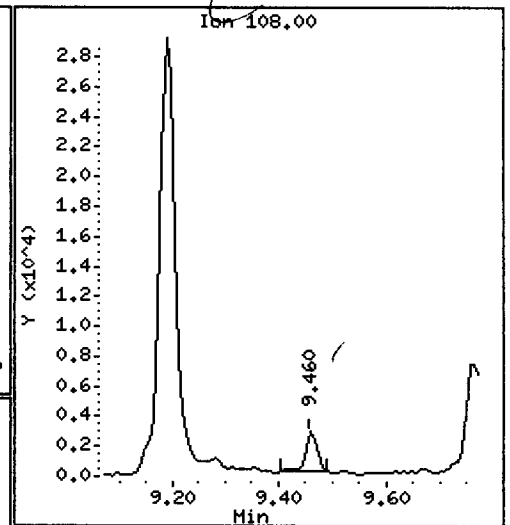
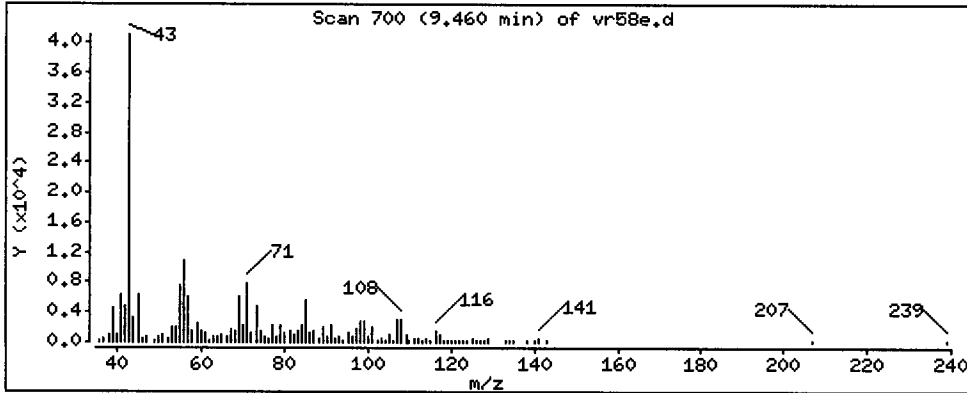
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

13 2-Methylphenol

Concentration: 14.17 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

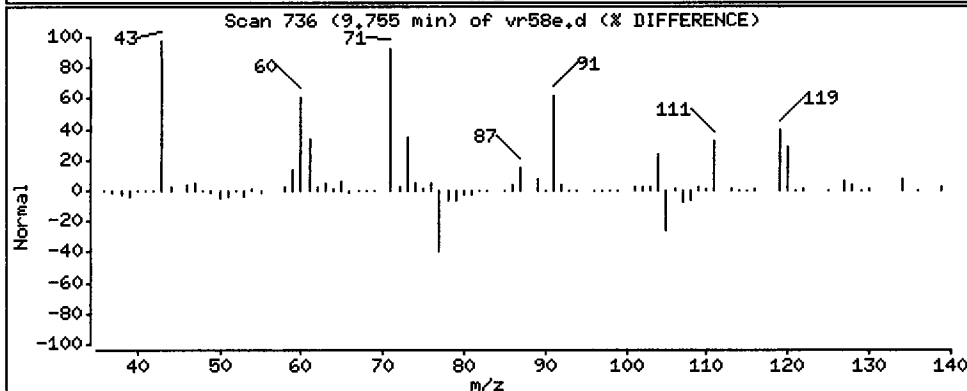
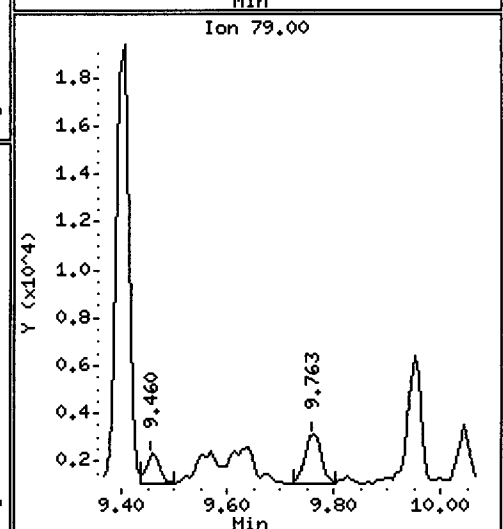
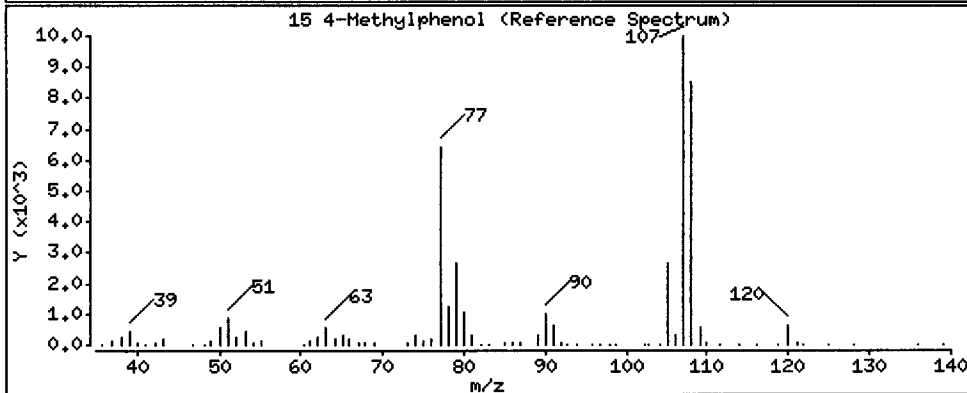
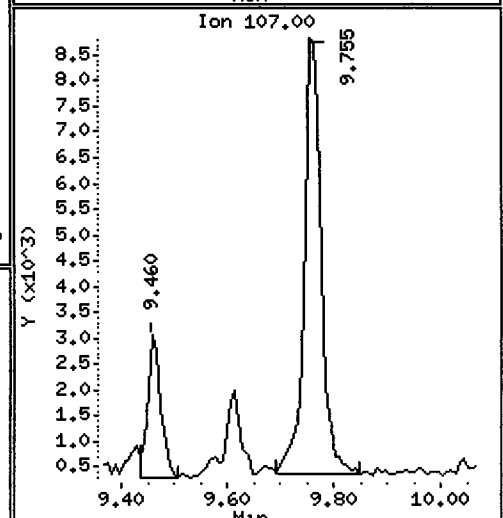
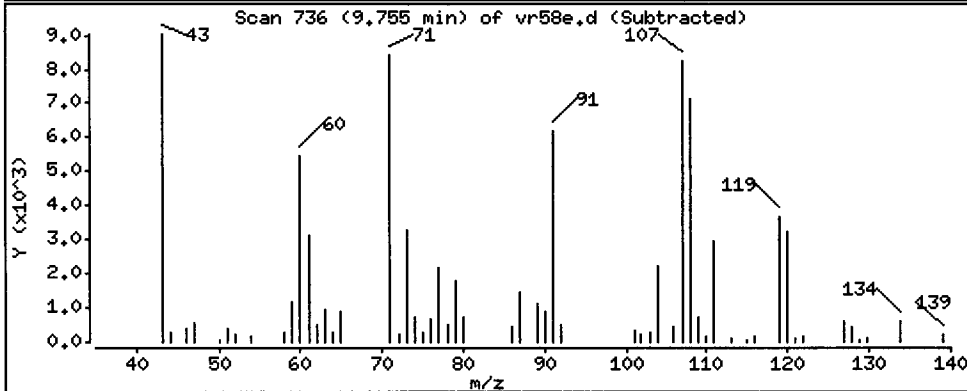
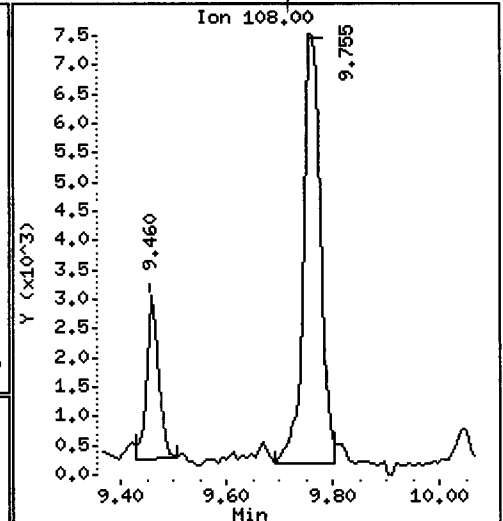
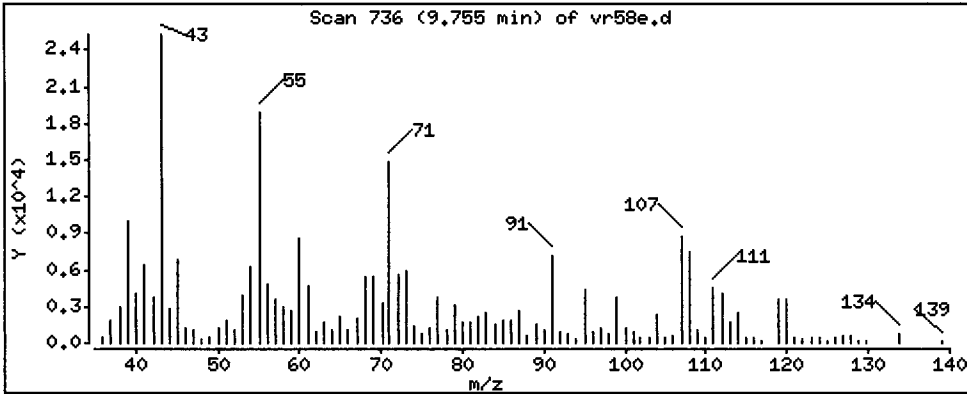
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 110.4 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

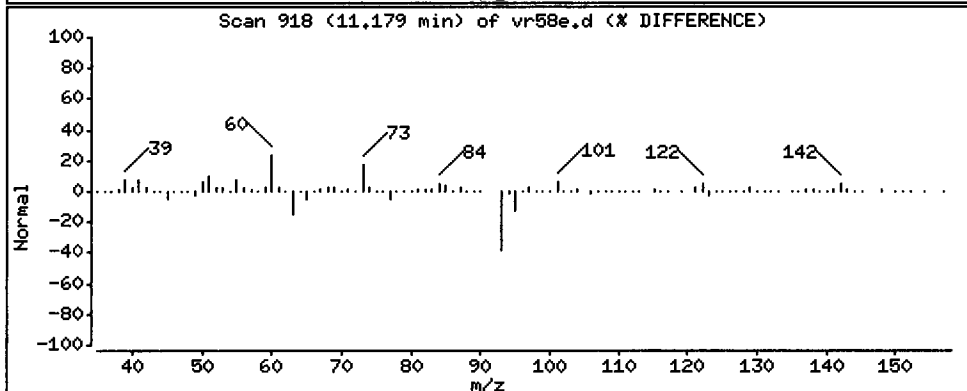
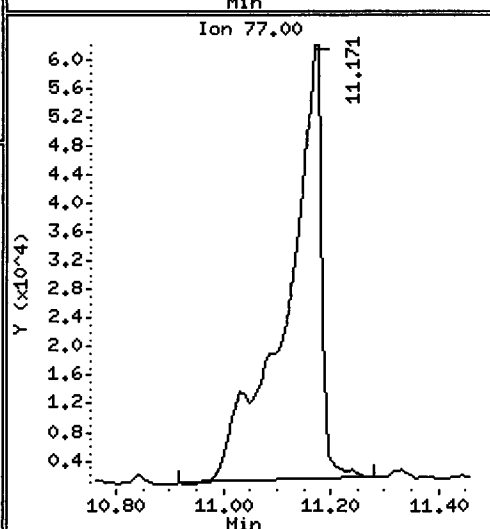
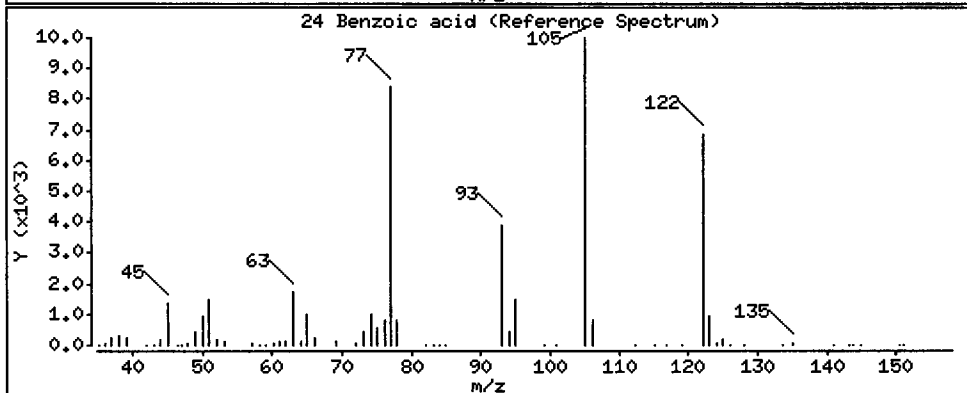
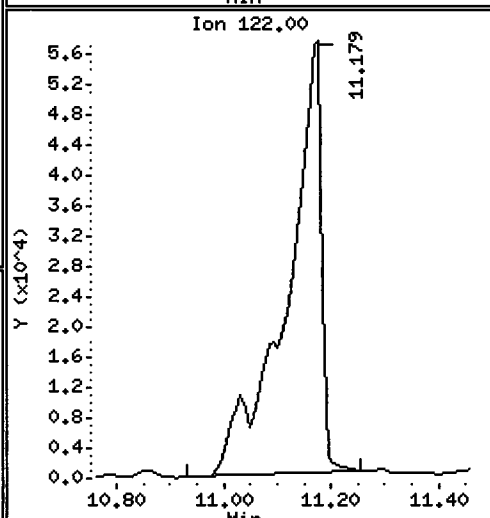
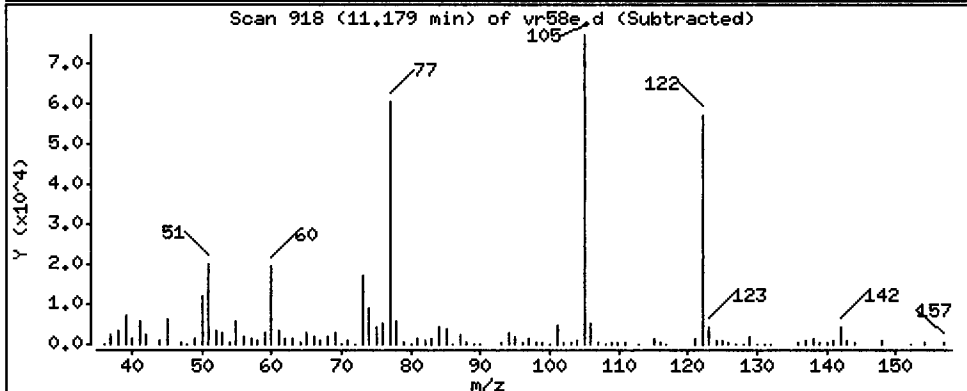
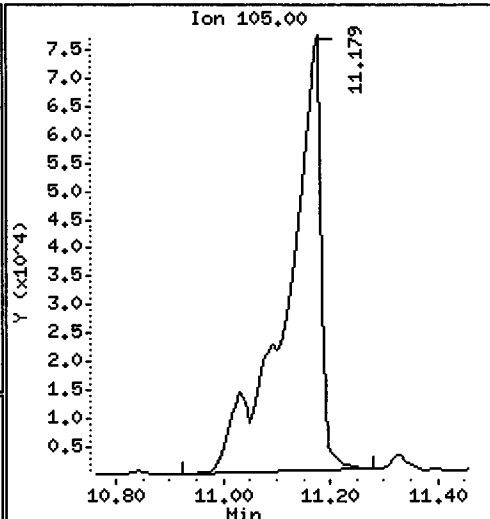
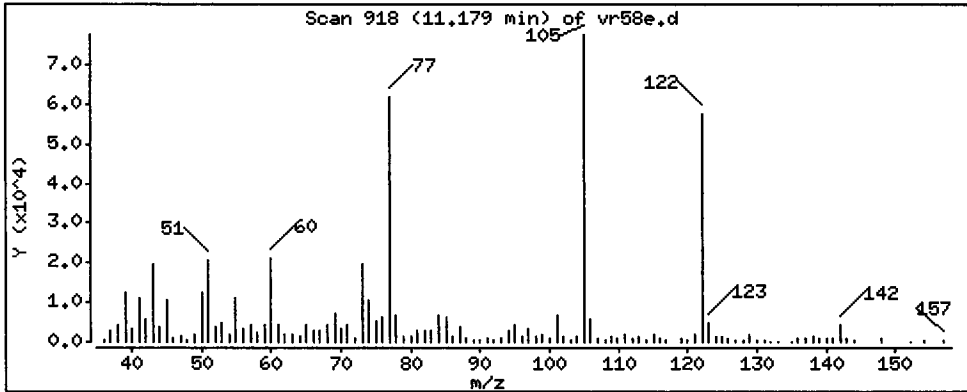
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 1738 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

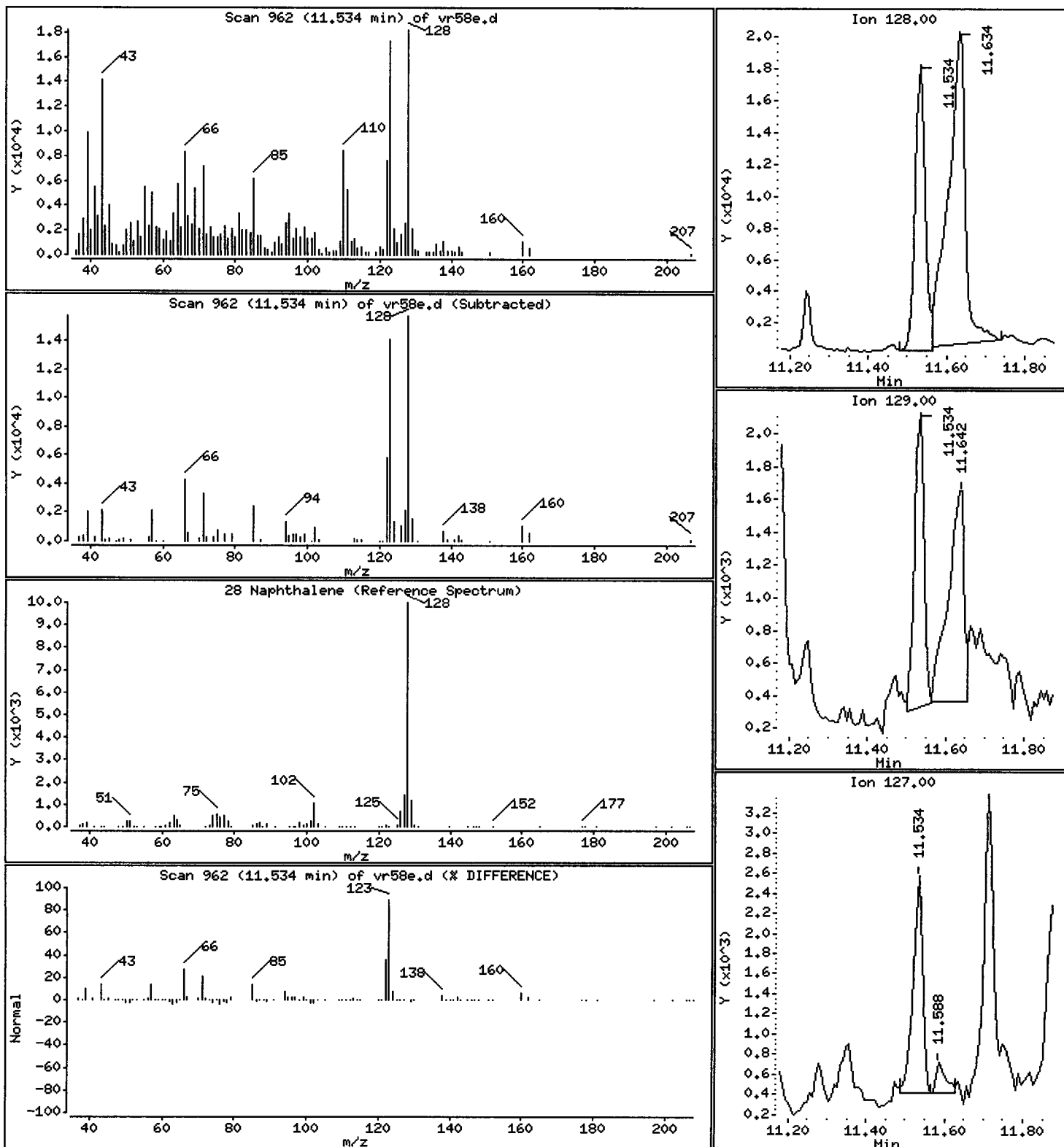
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 39.56 ug/kg



Date : 04-DEC-2012 19:35

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Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

Operator: VTS/YZ

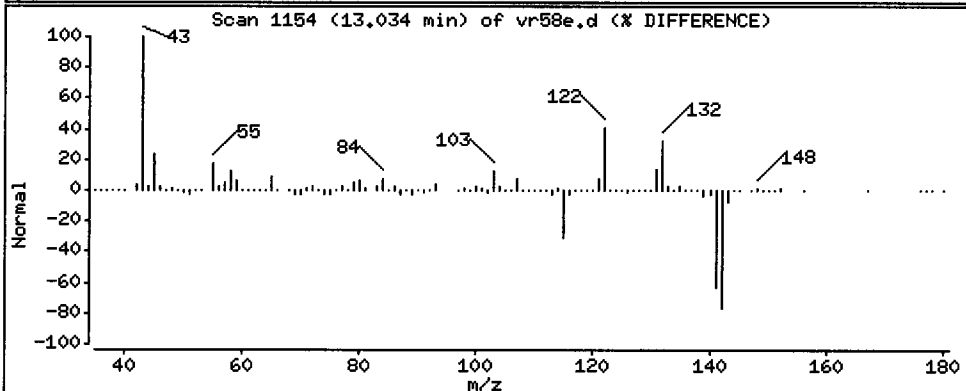
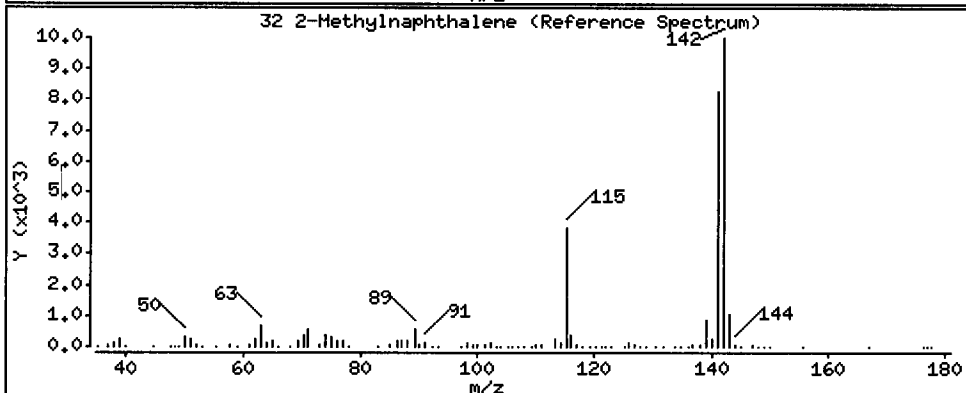
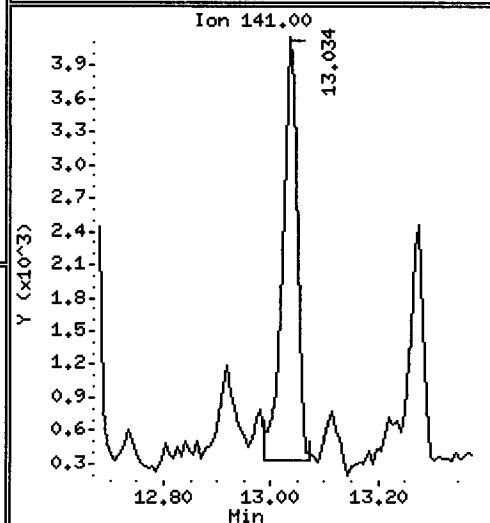
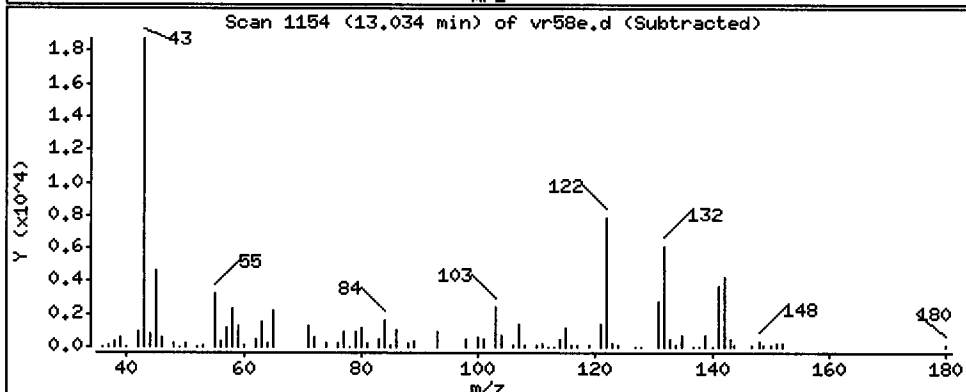
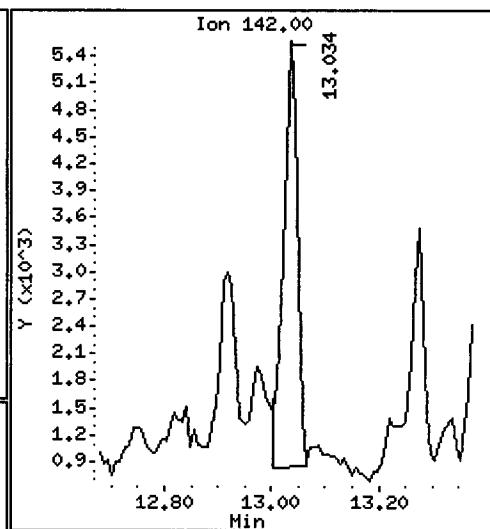
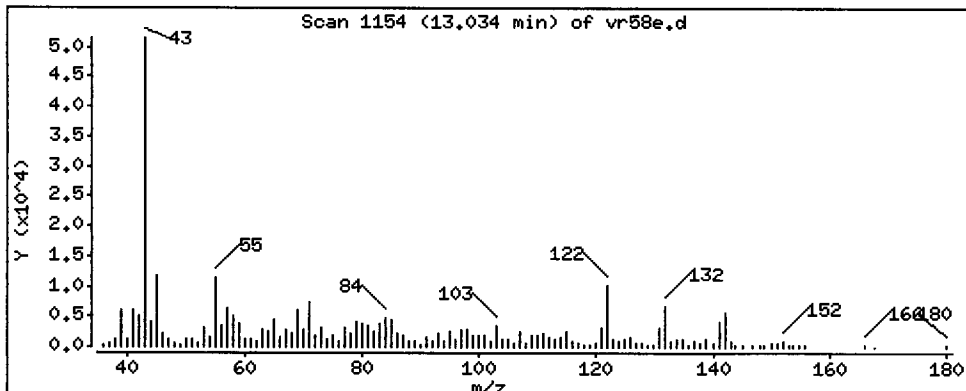
Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 14.49 ug/kg

5.034



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

Operator: VTS/YZ

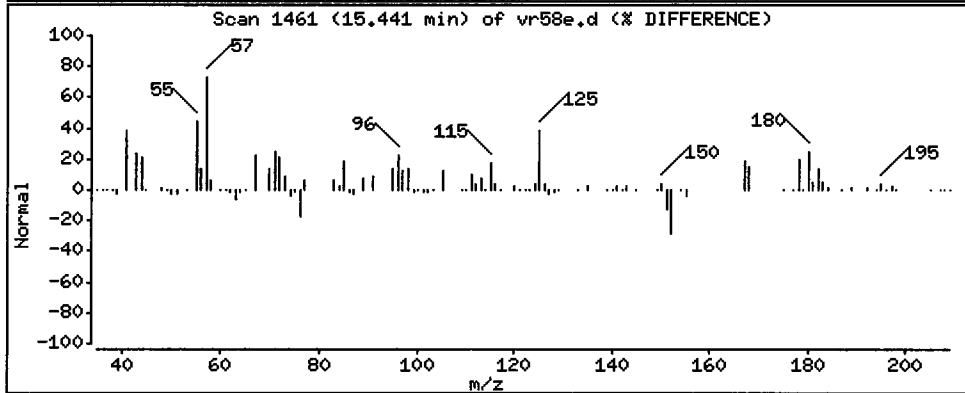
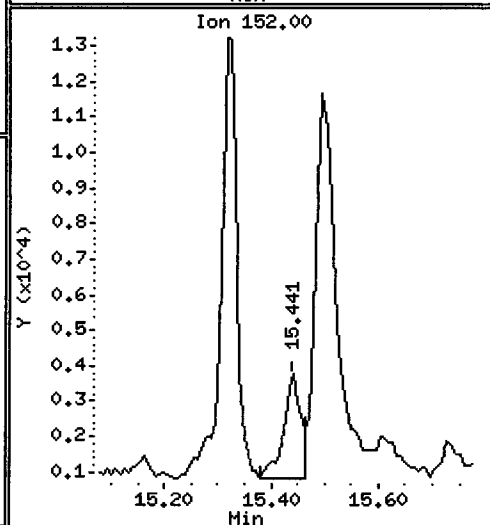
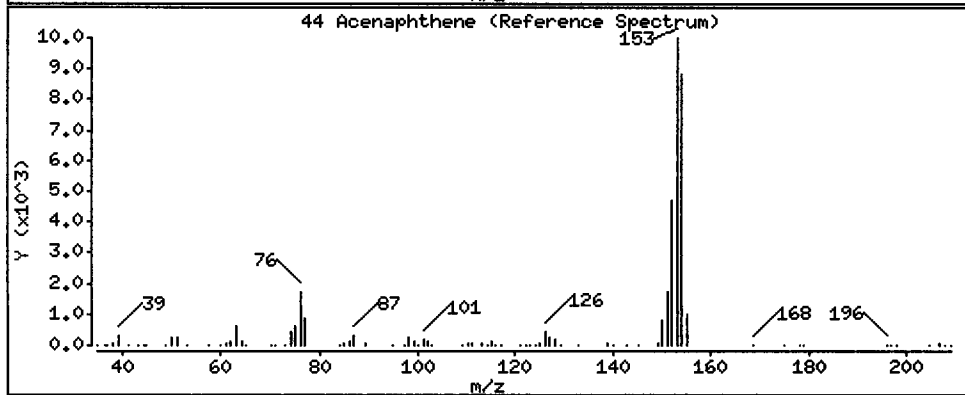
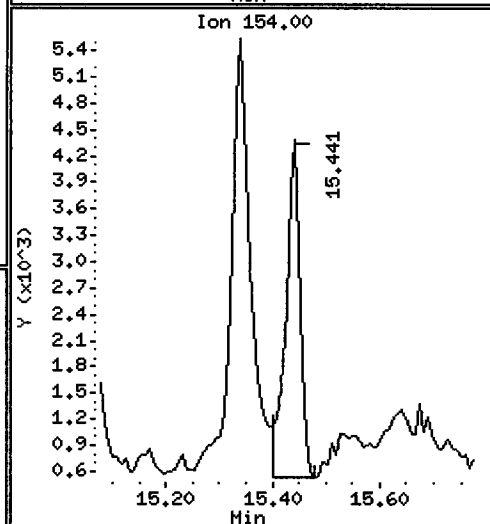
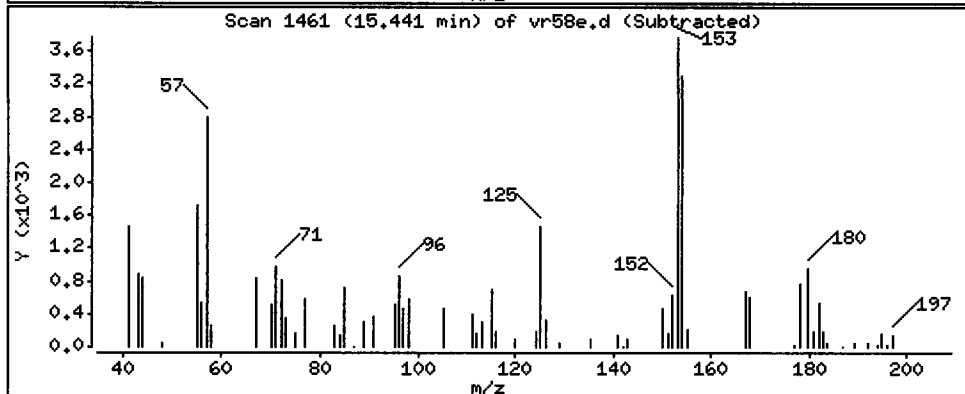
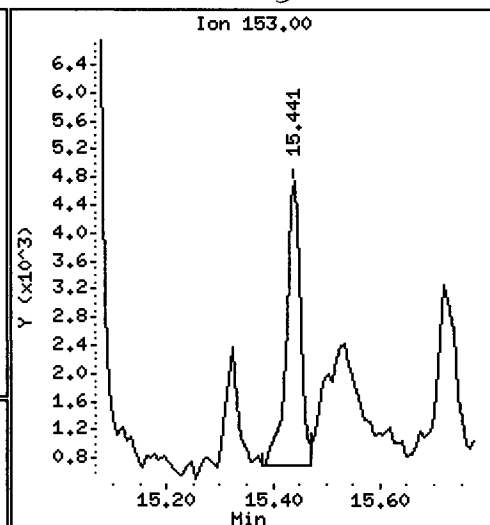
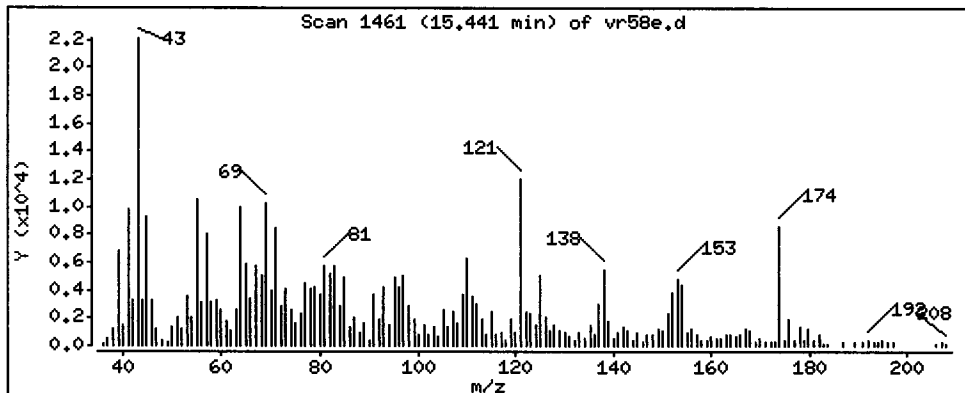
Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 15.49 ug/kg

*JCAR*





Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

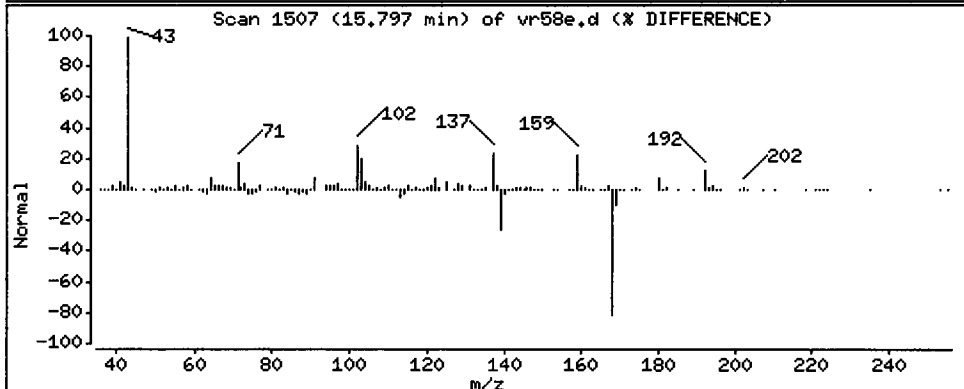
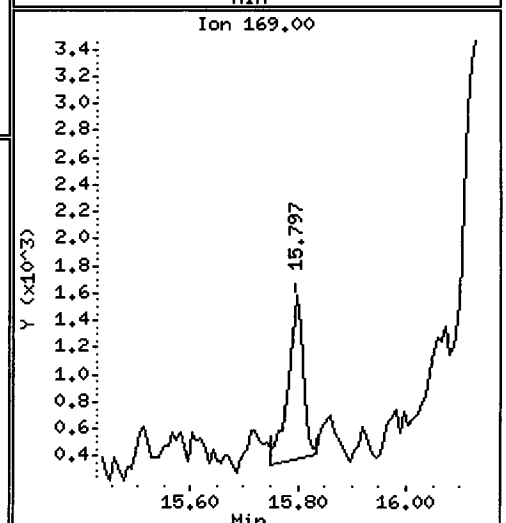
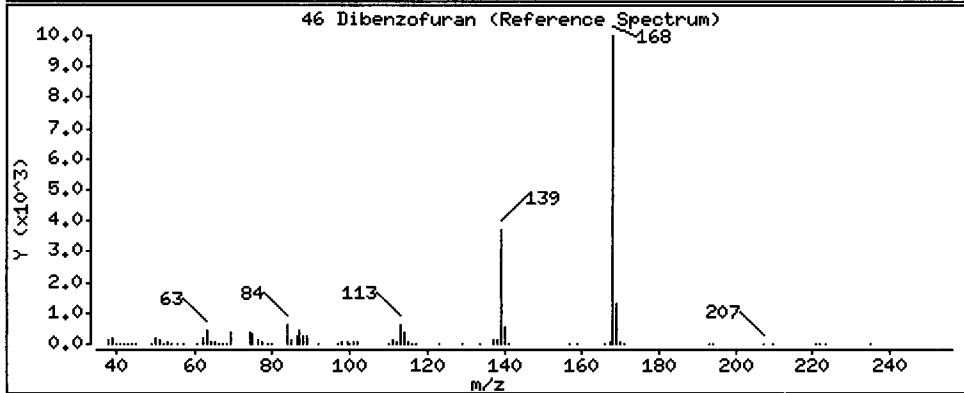
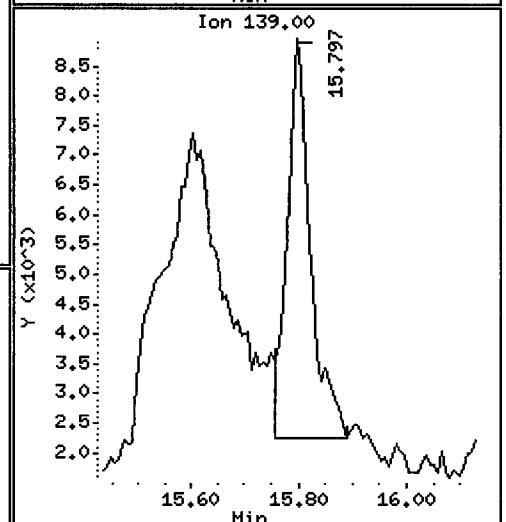
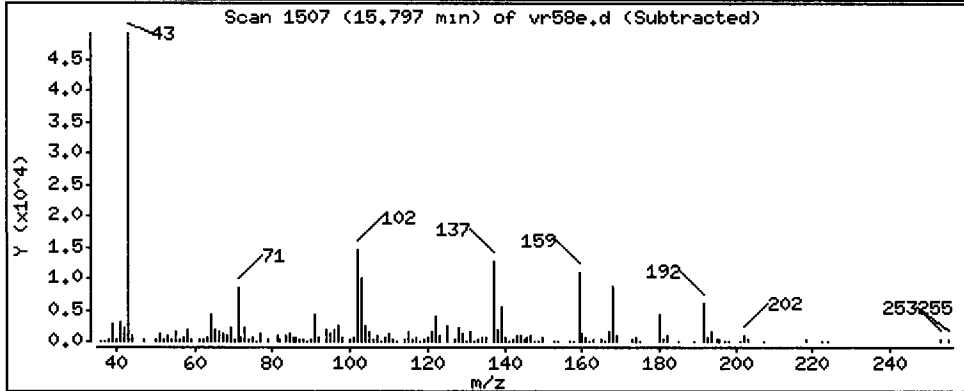
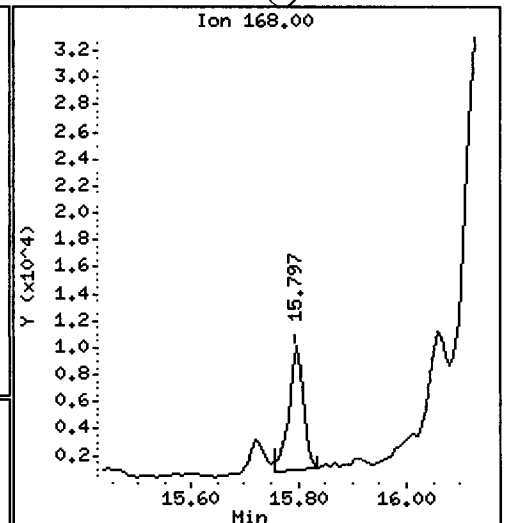
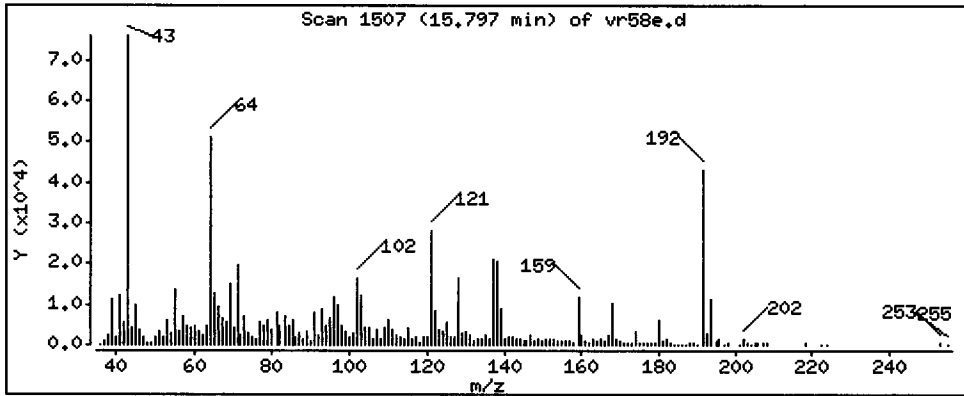
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 23.93 ug/kg



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Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

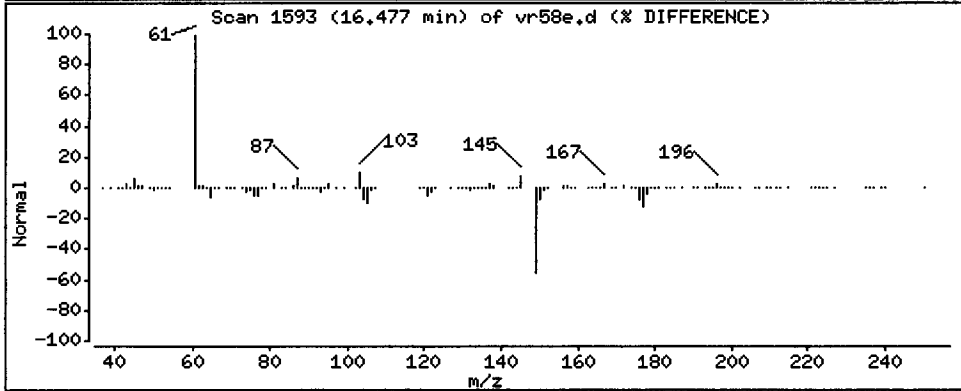
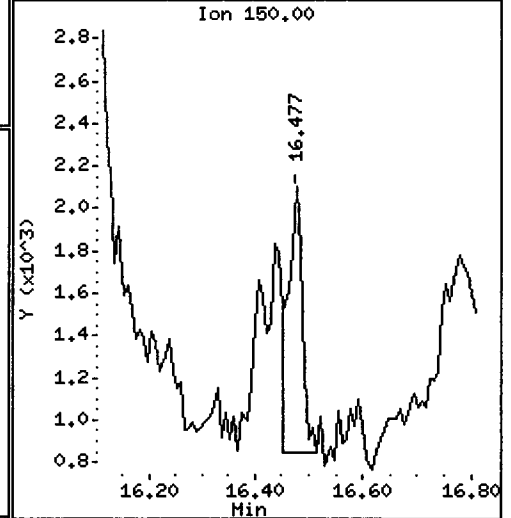
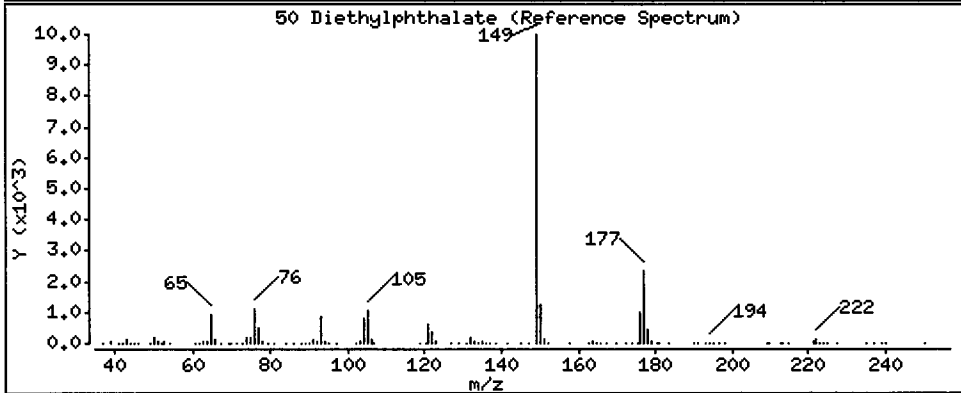
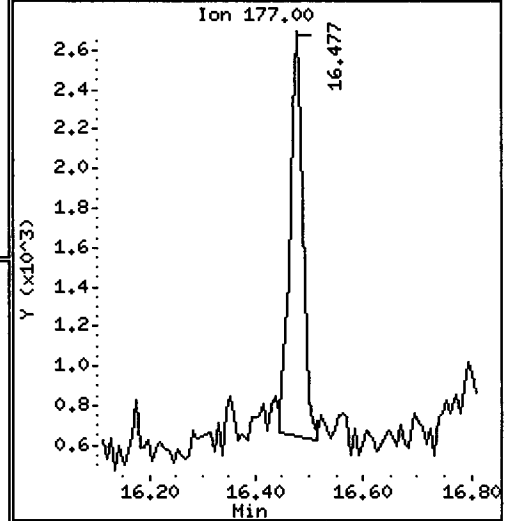
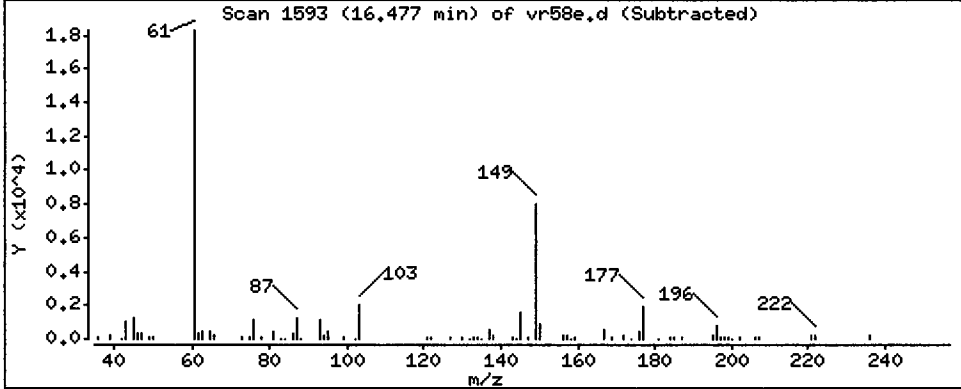
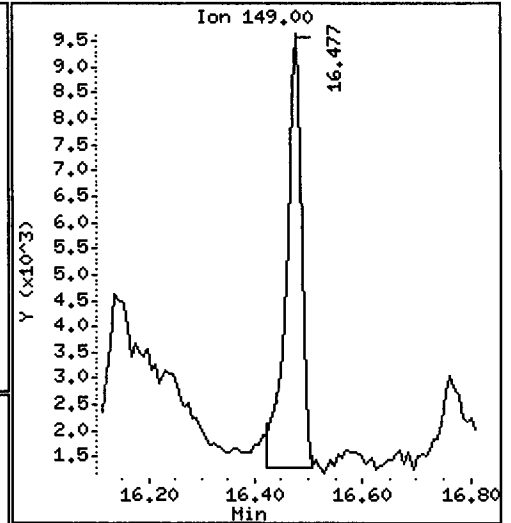
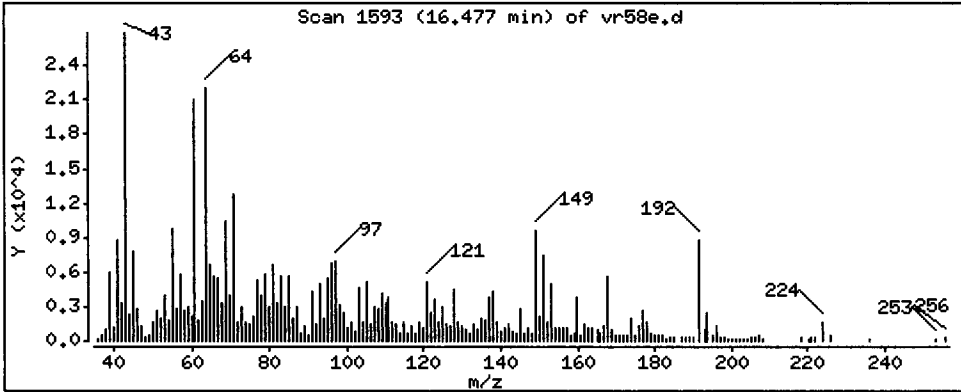
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 26.85 ug/kg



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Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

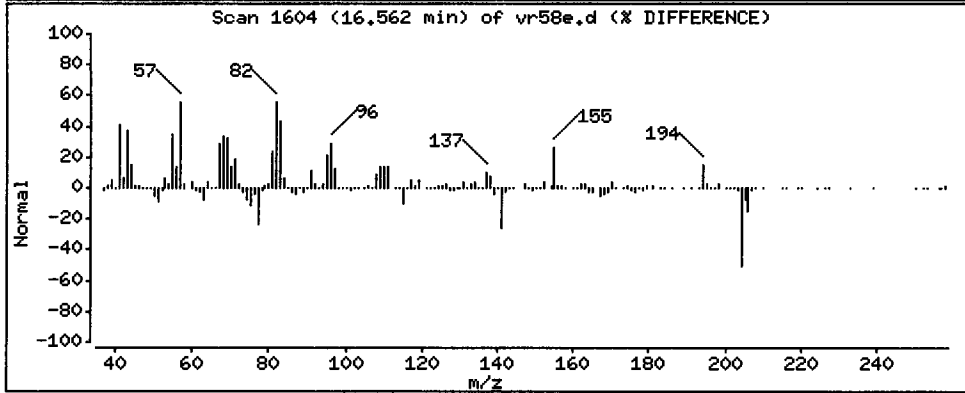
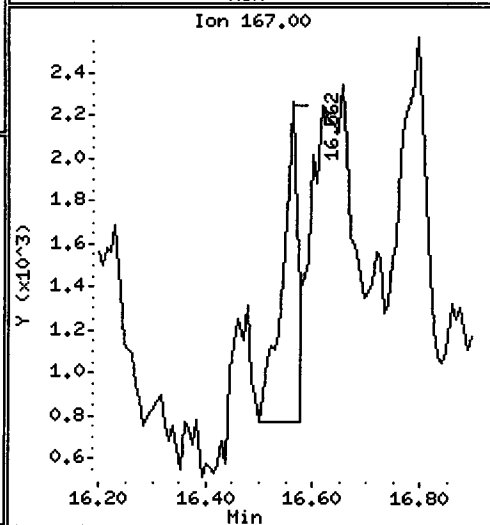
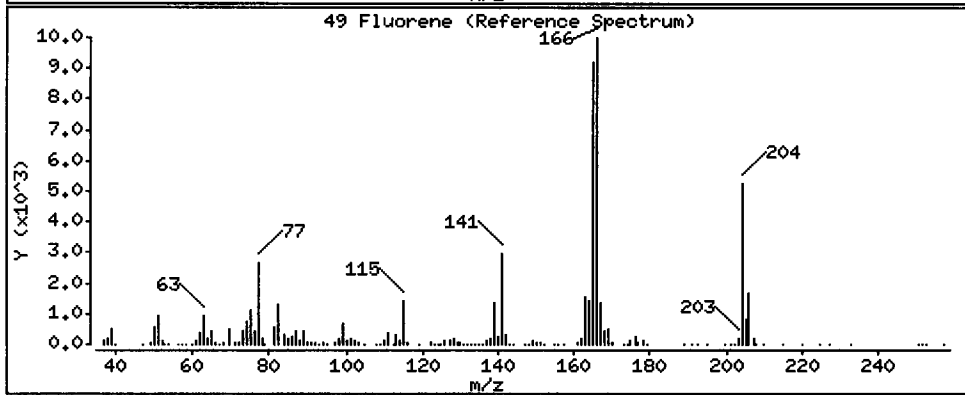
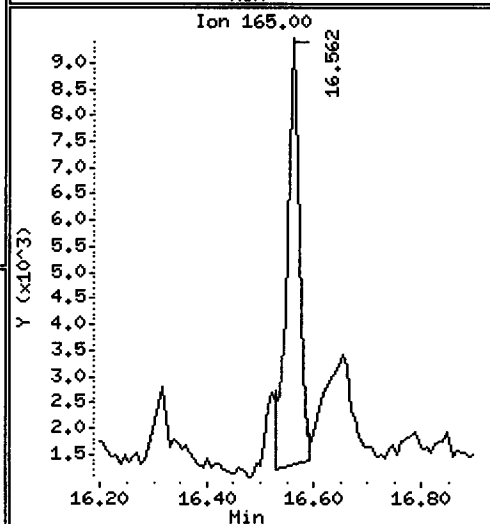
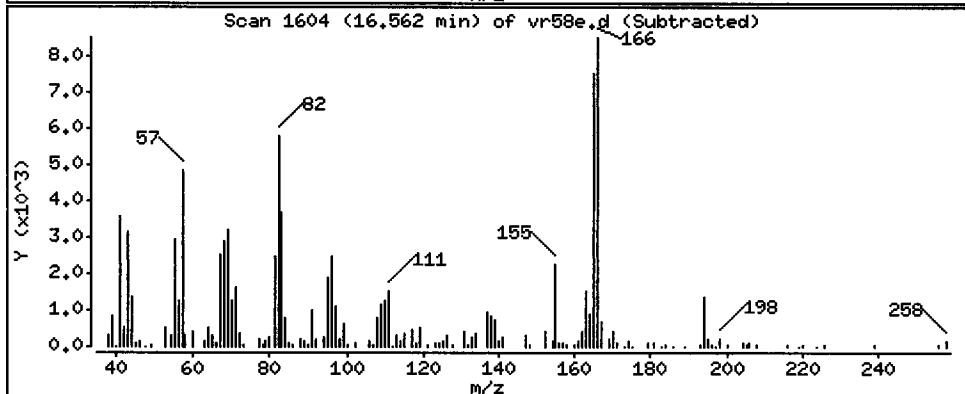
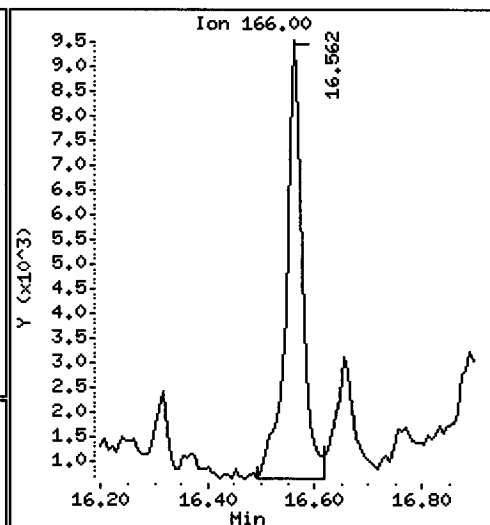
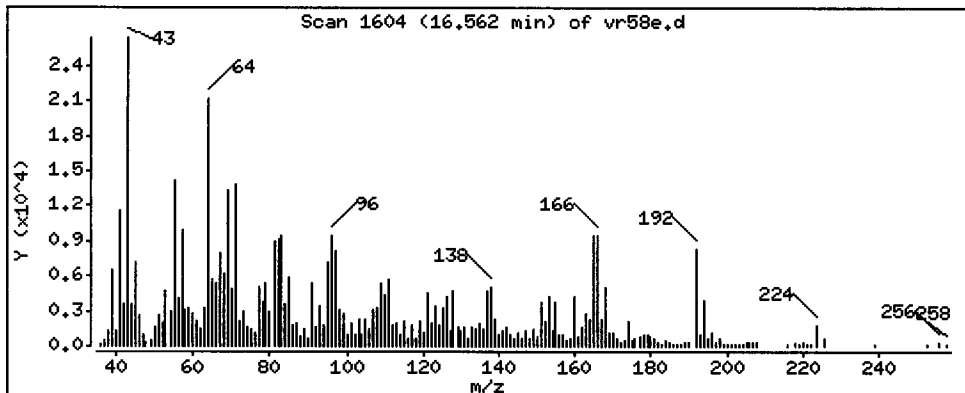
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 31.38 ug/kg



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Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

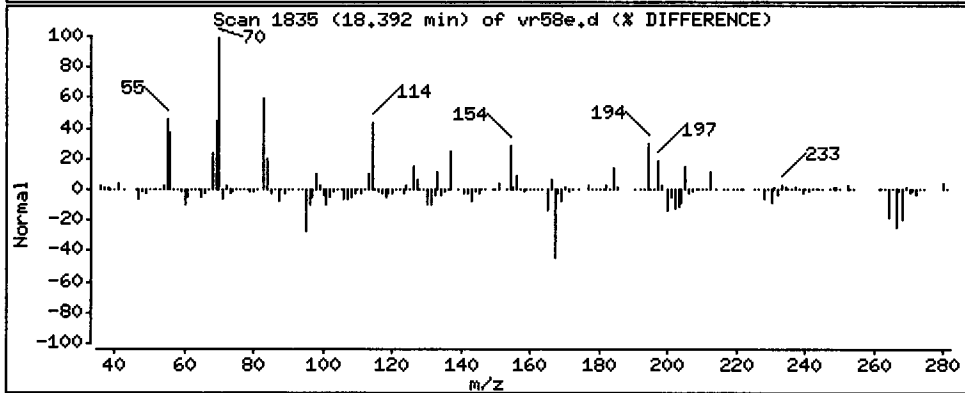
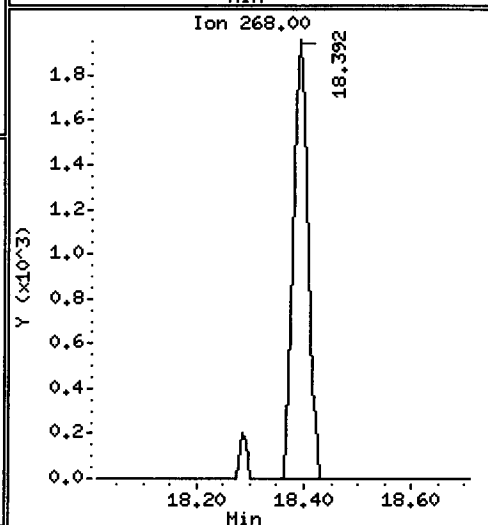
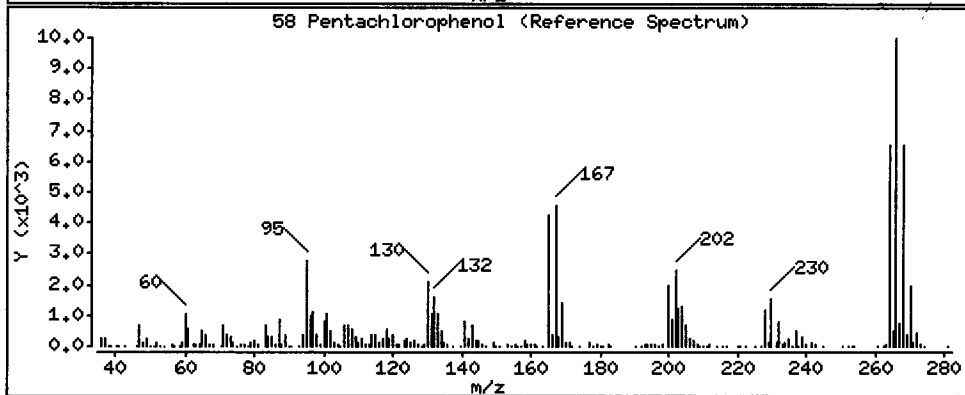
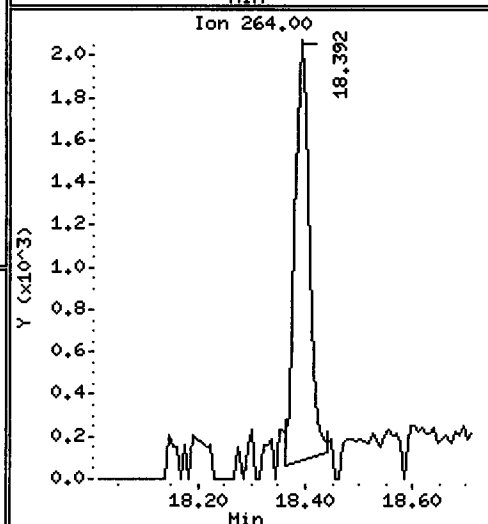
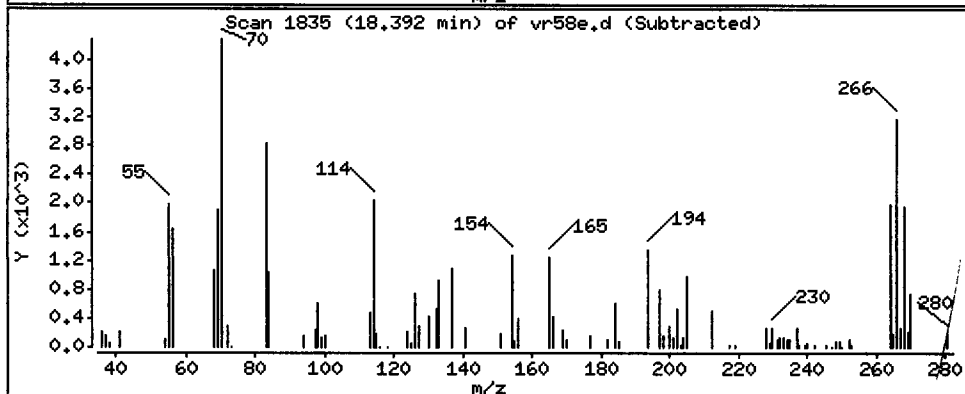
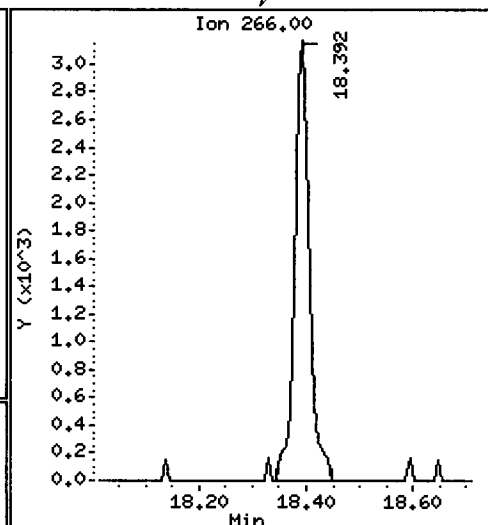
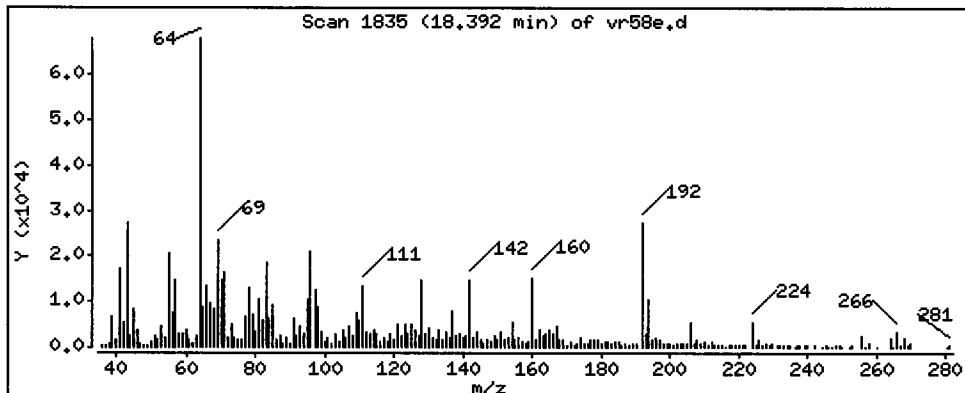
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

58 Pentachlorophenol

Concentration: 41.34 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

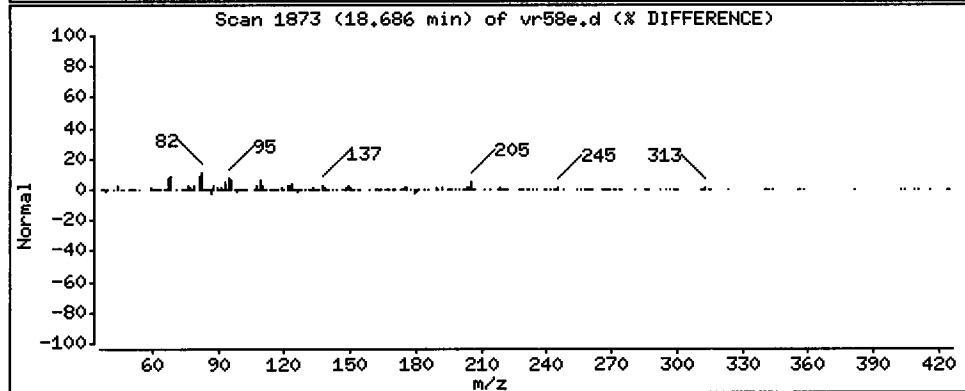
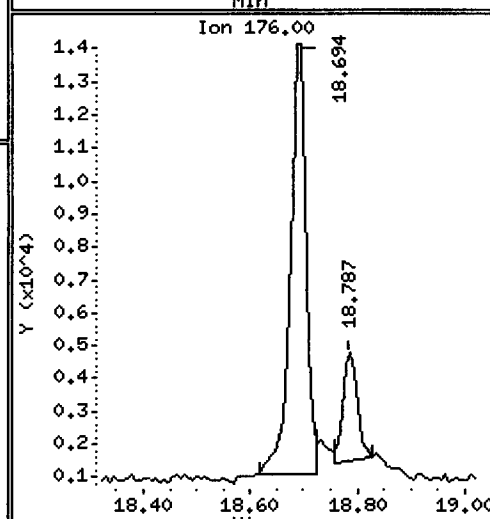
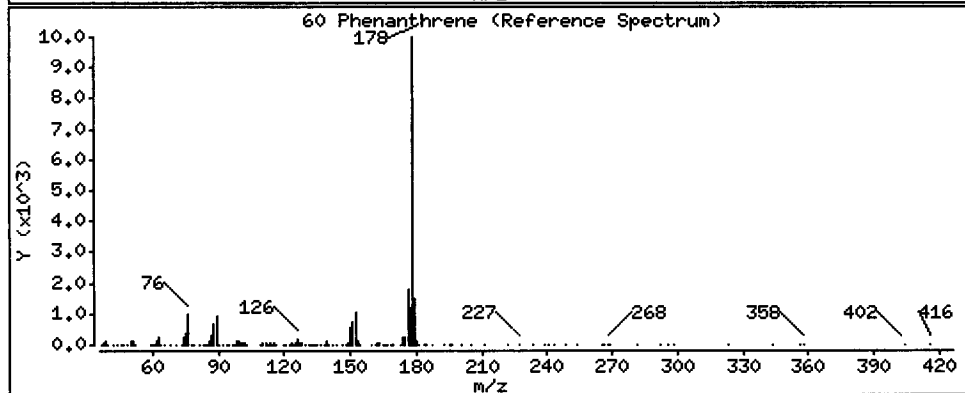
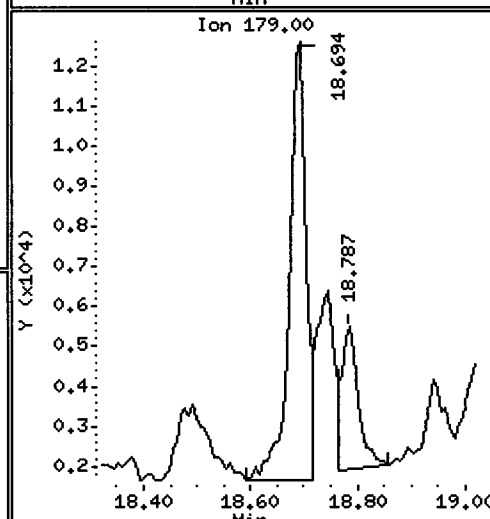
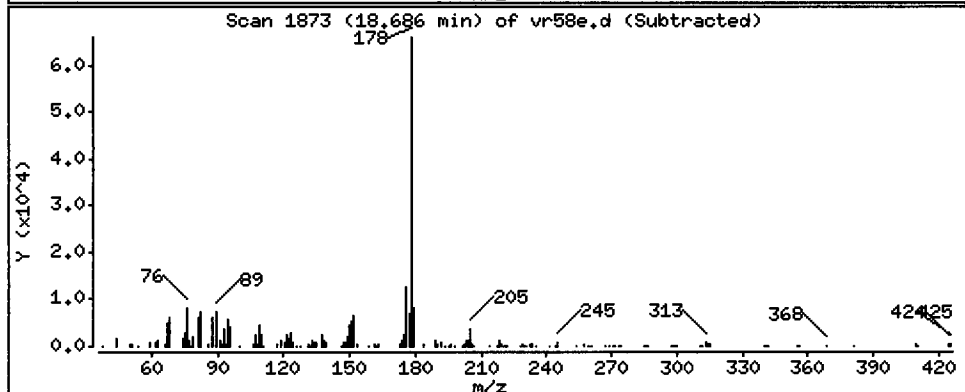
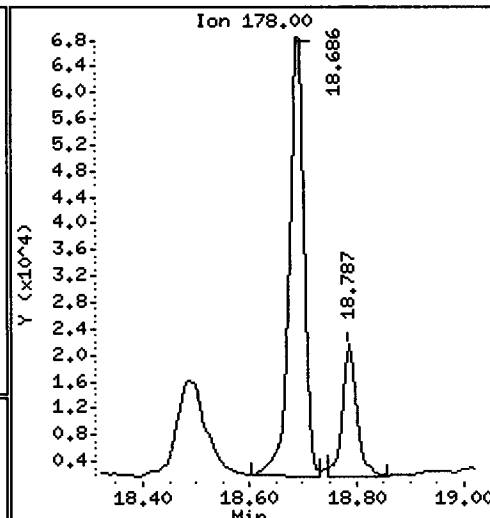
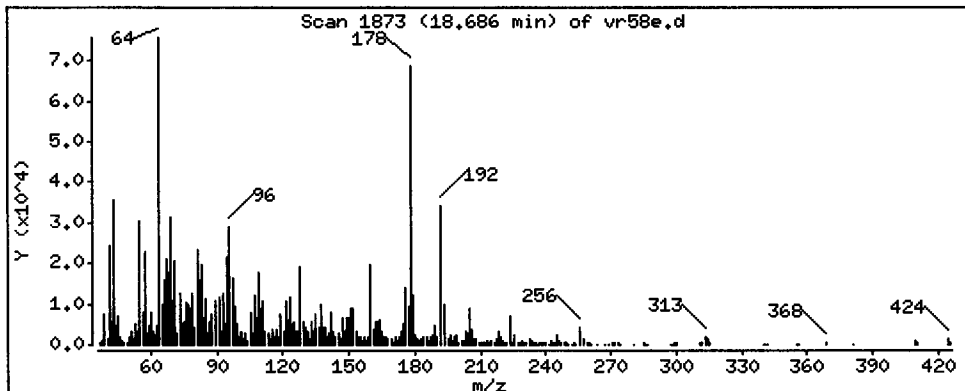
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 156.7 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

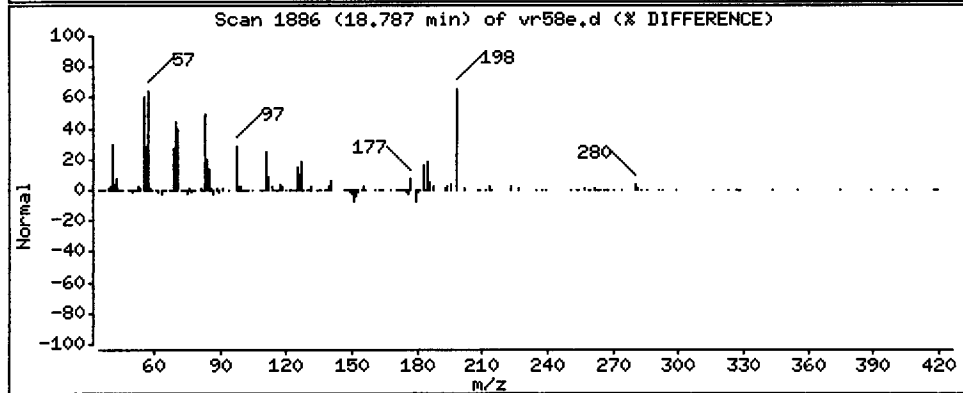
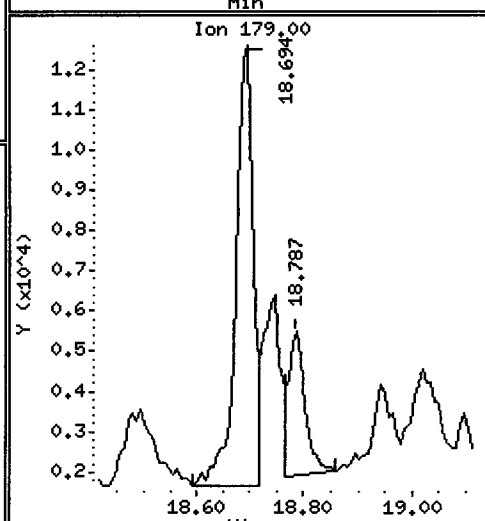
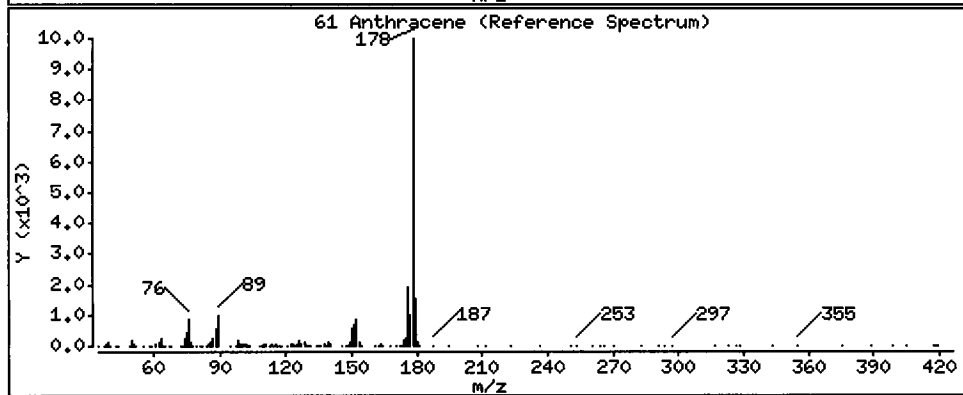
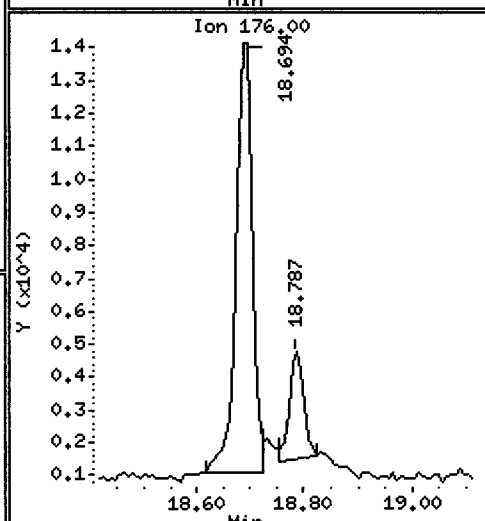
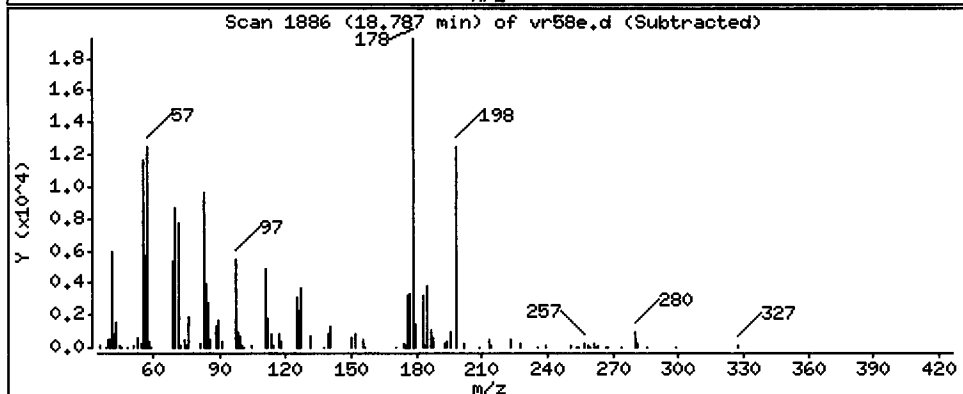
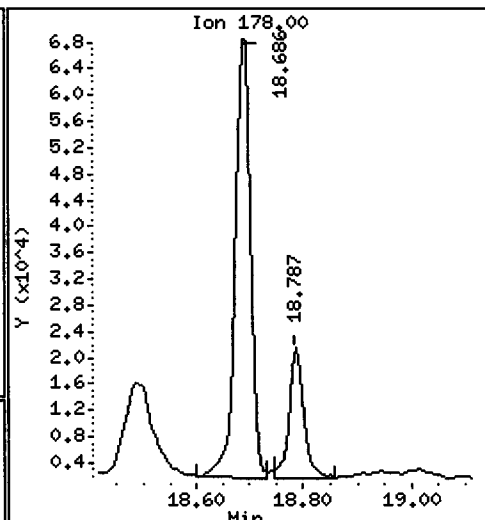
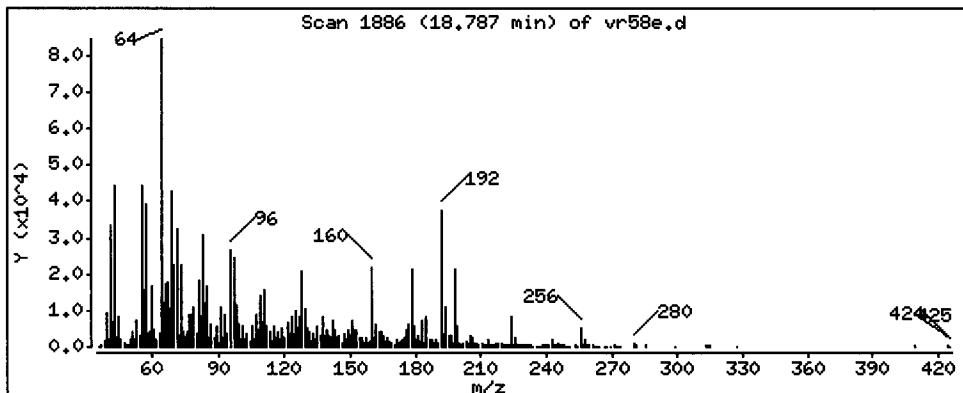
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 44.13 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

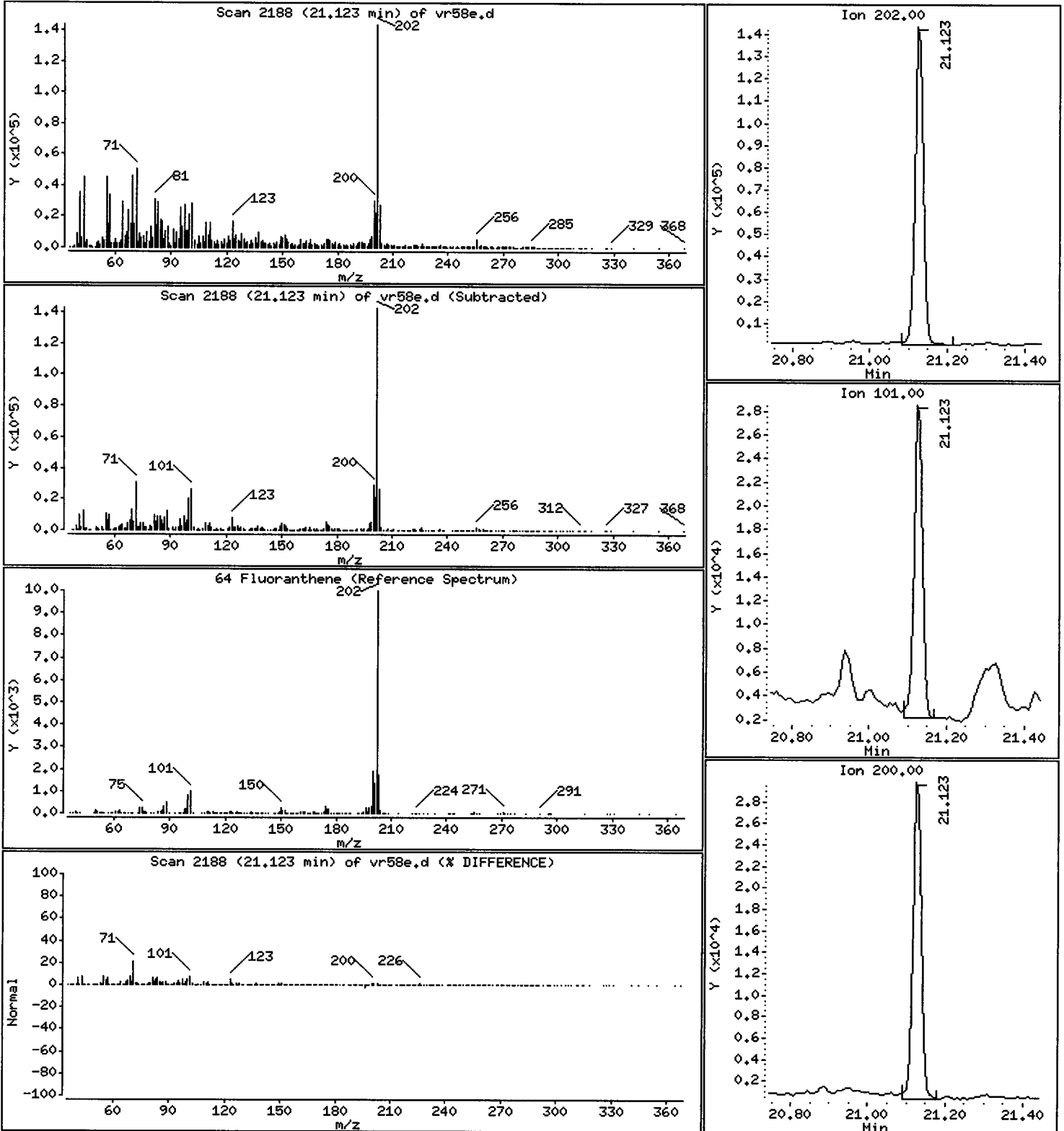
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 217.2 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

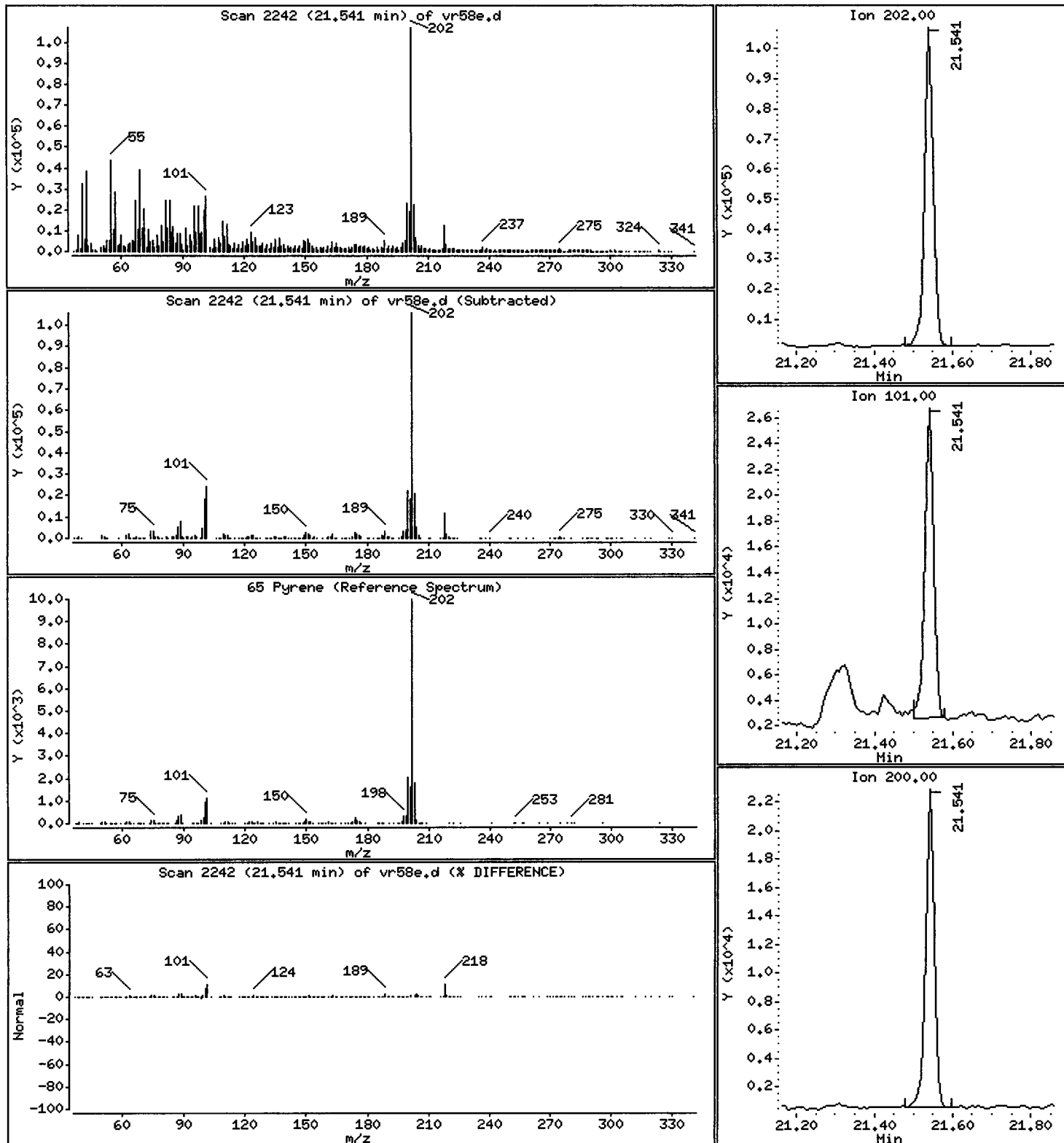
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 200.1 ug/kg





Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

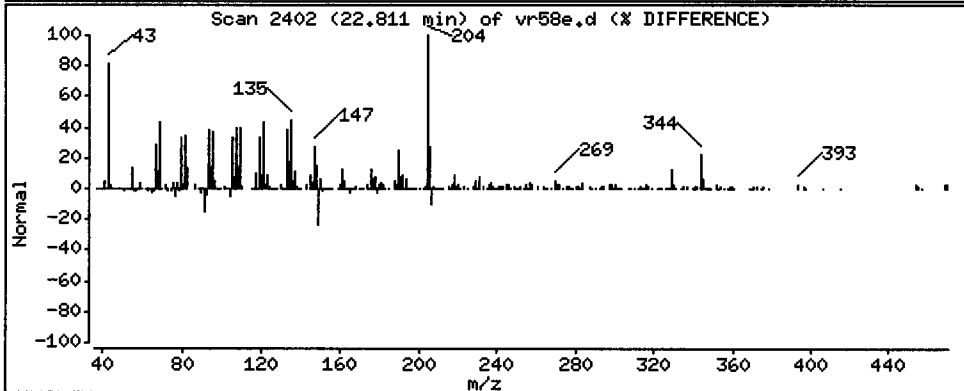
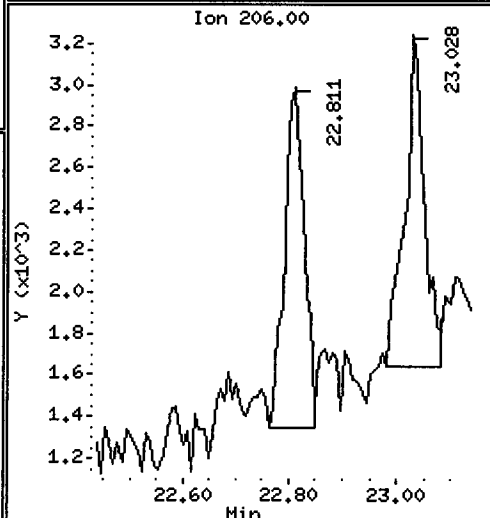
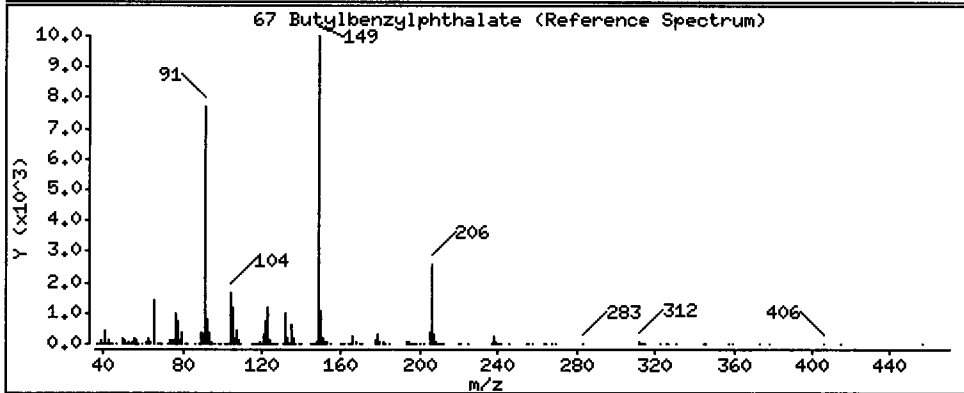
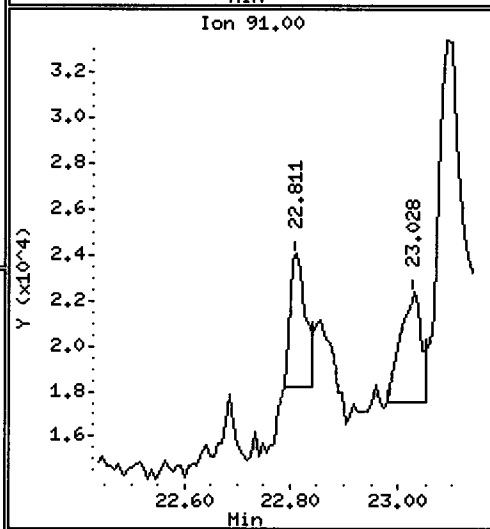
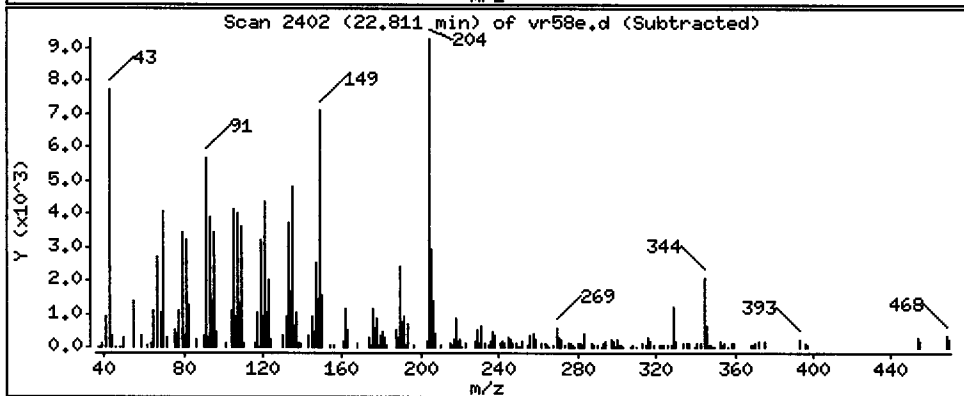
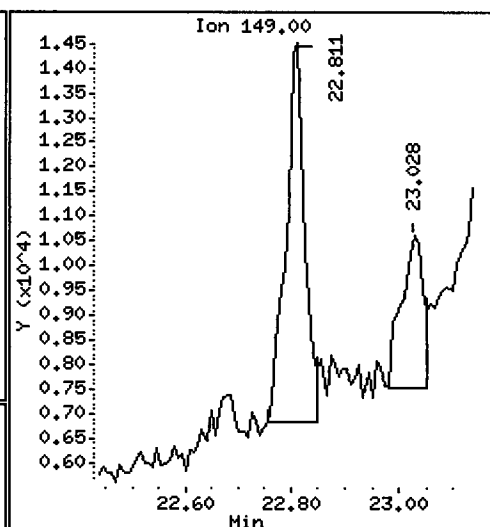
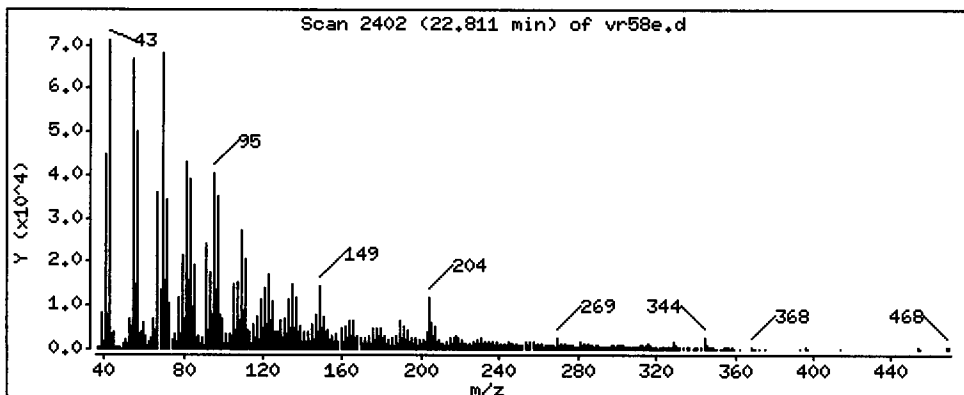
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 55.99 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

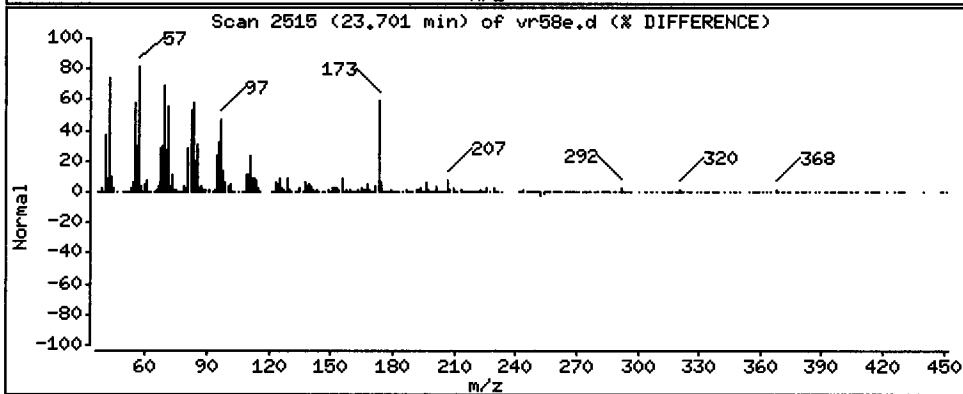
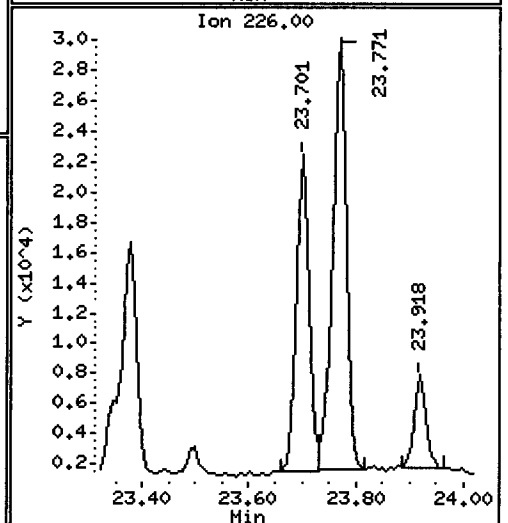
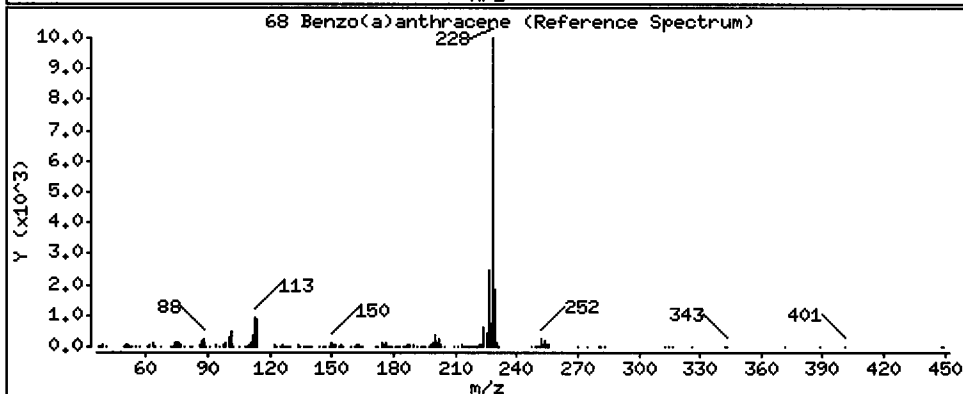
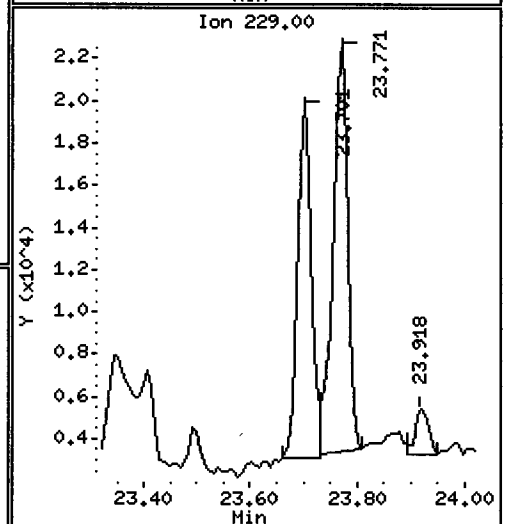
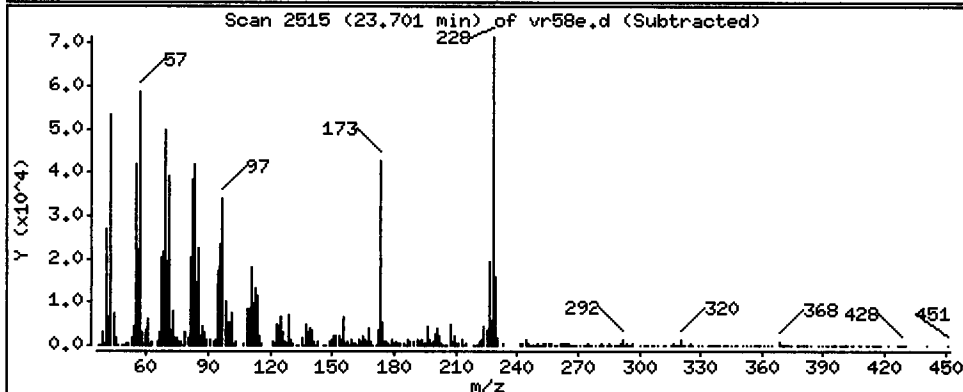
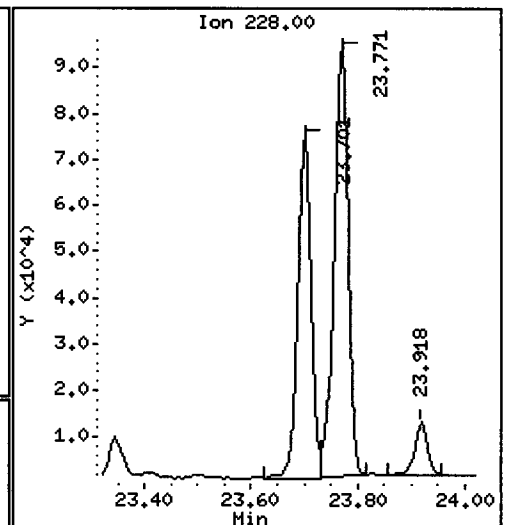
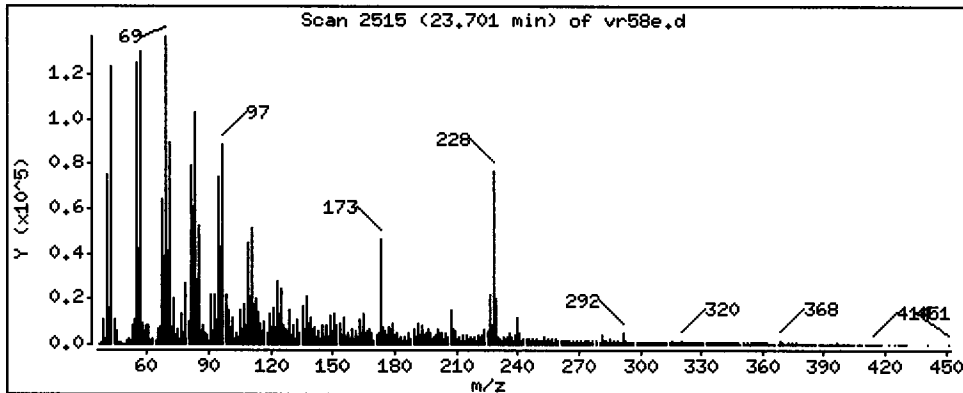
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

68 Benzo(a)anthracene

Concentration: 163.9 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

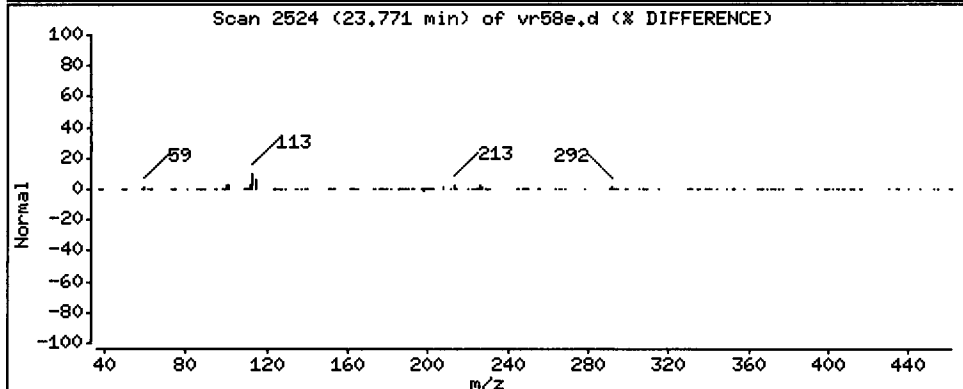
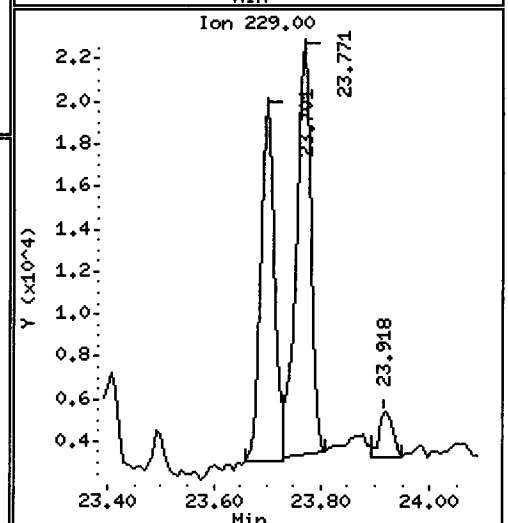
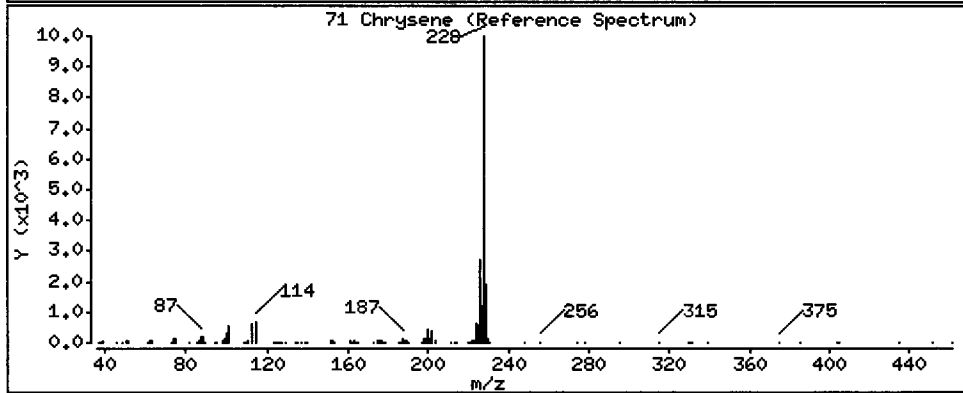
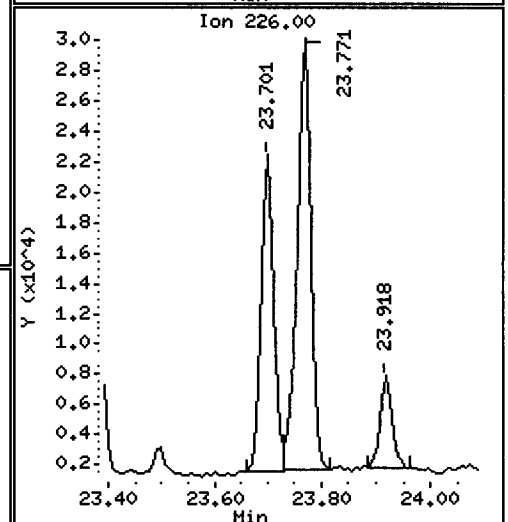
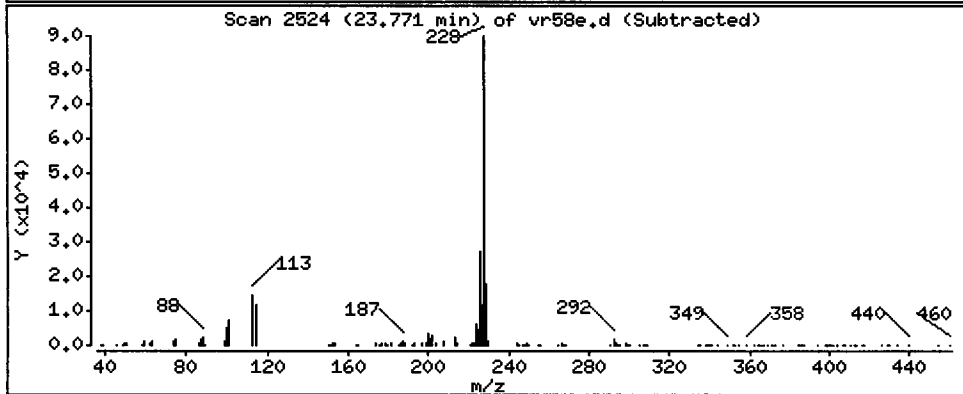
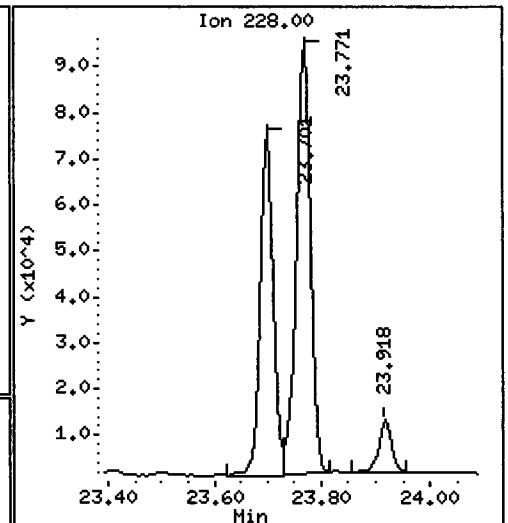
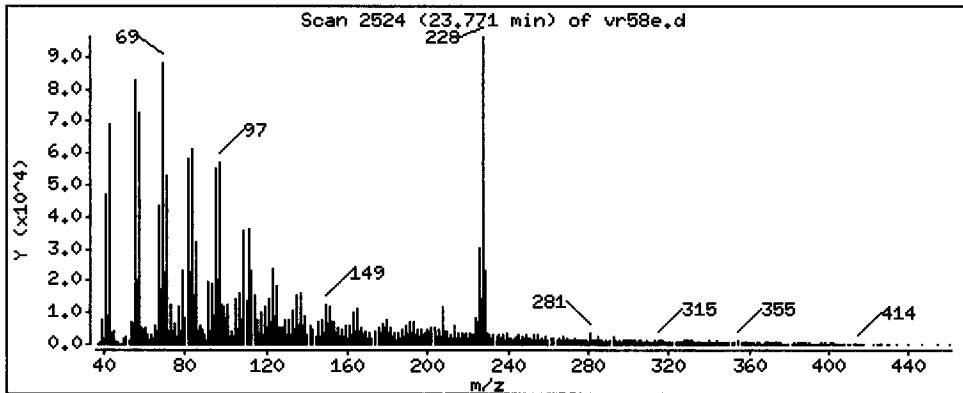
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

71 Chrysene

Concentration: 244.7 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

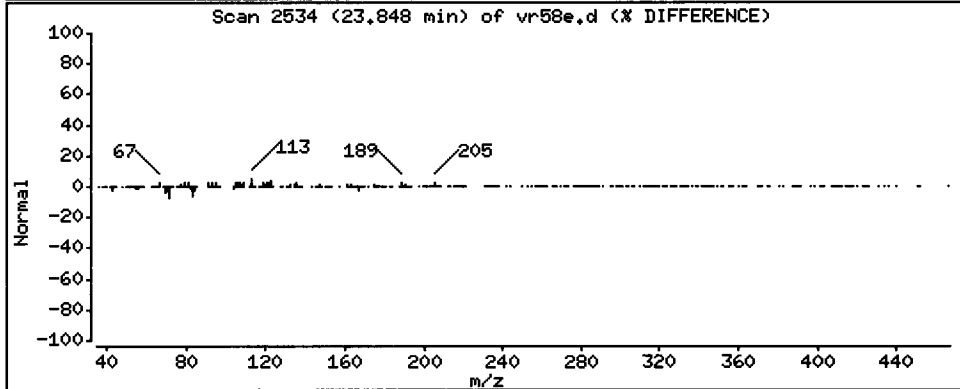
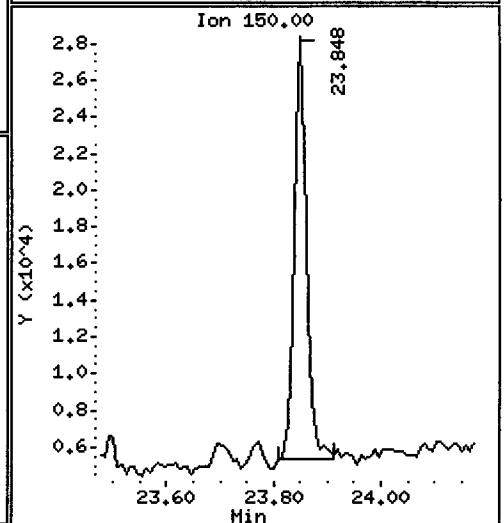
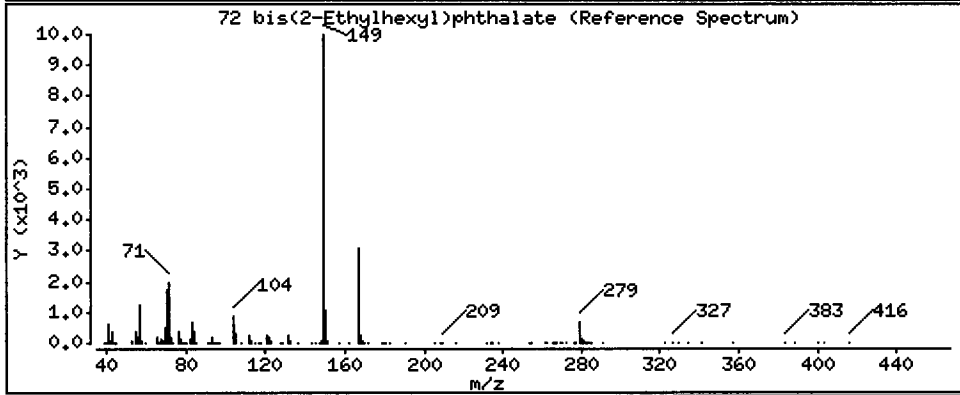
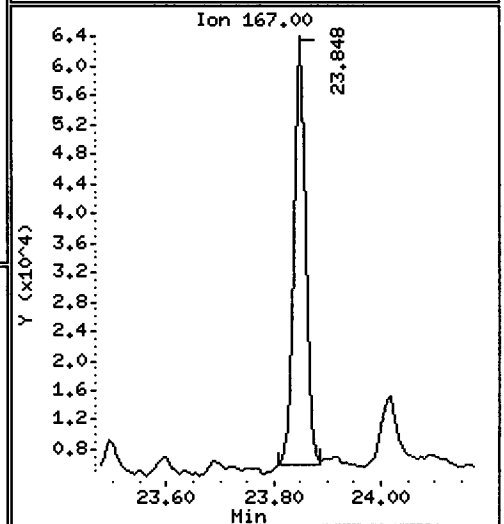
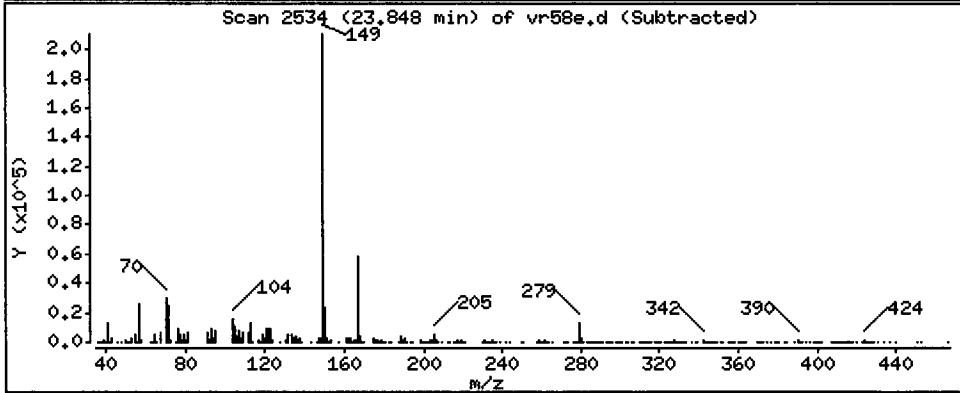
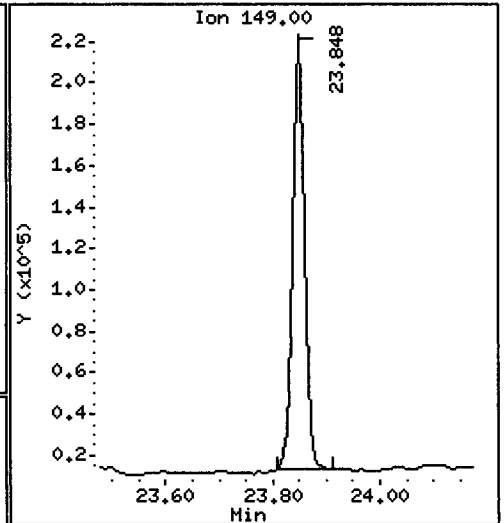
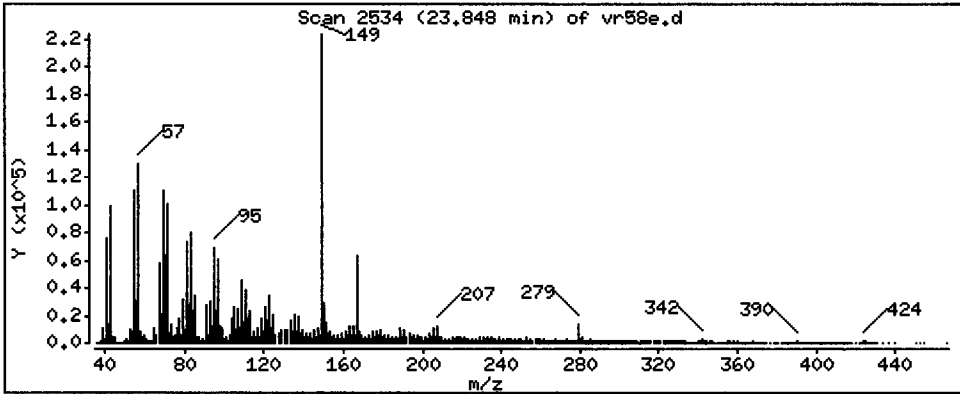
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 426.2 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

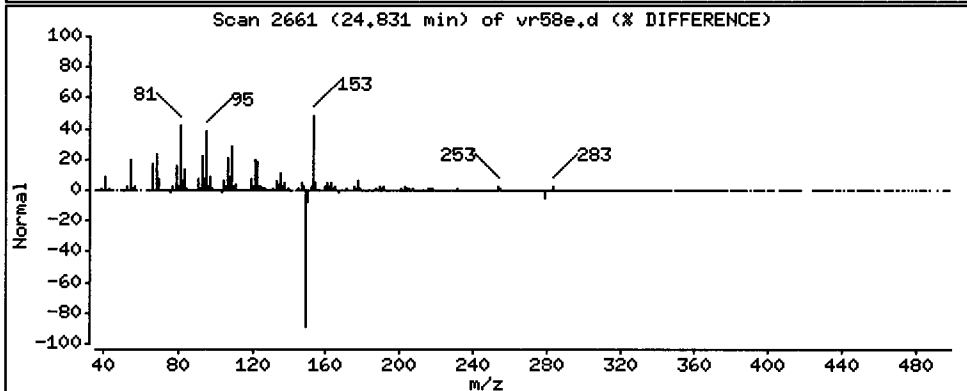
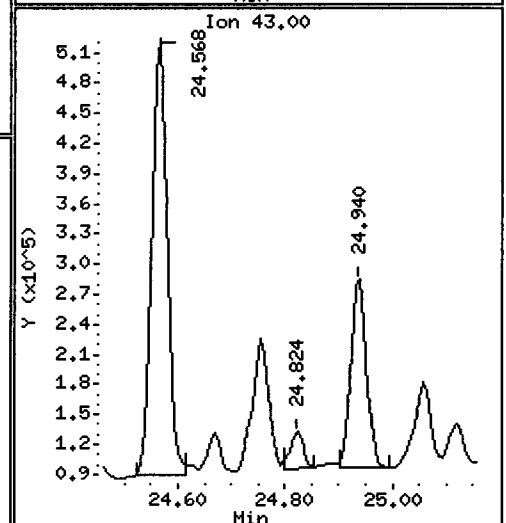
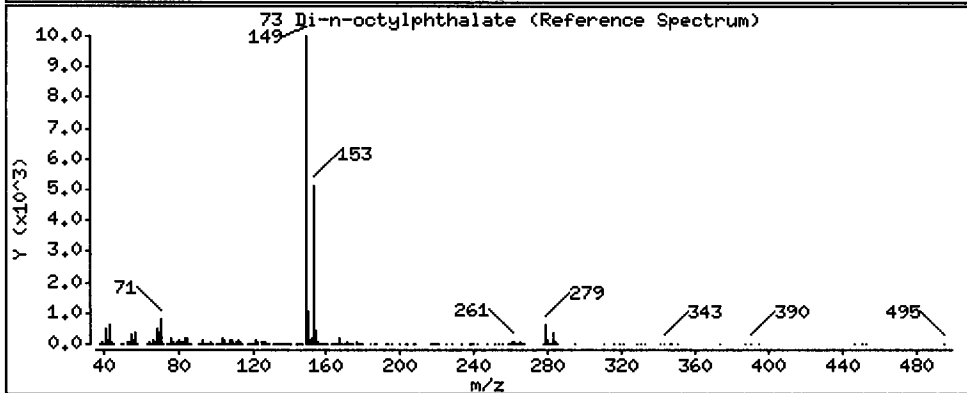
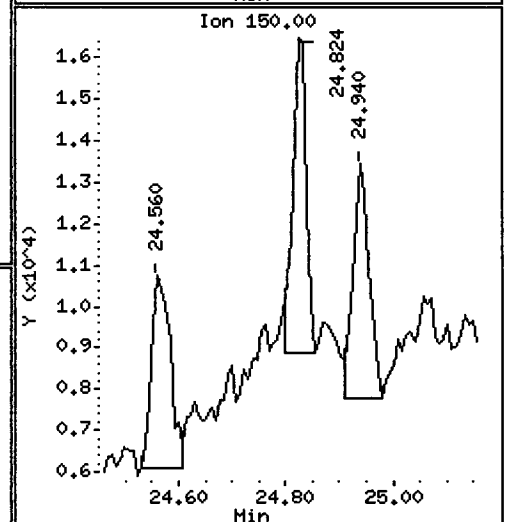
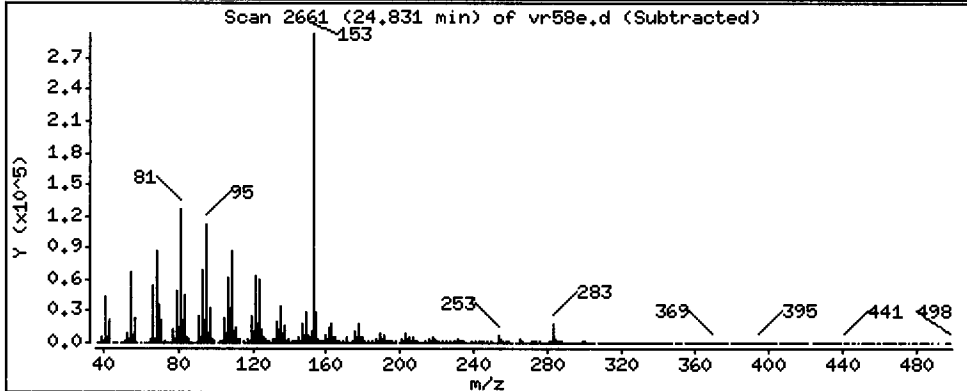
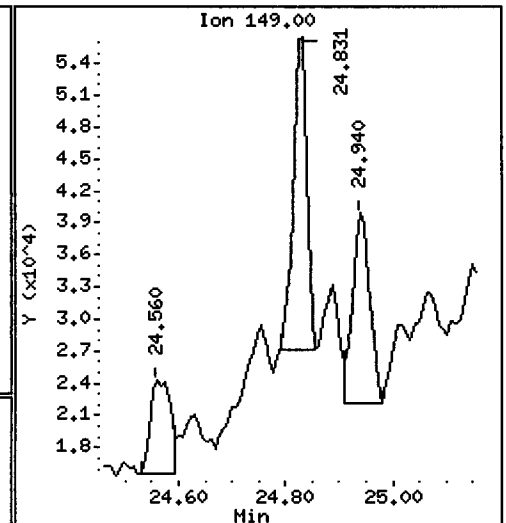
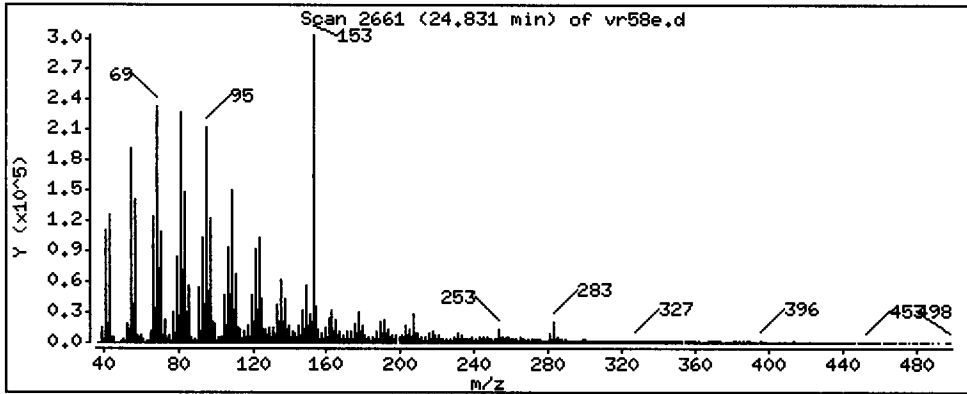
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0,25

73 Di-n-octylphthalate

Concentration: 41.46 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

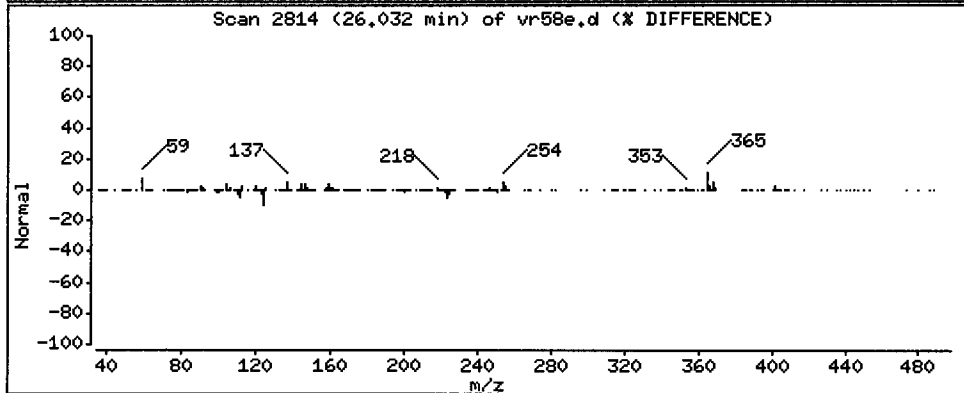
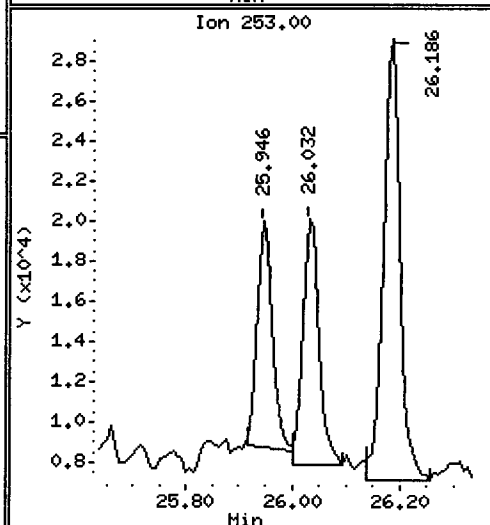
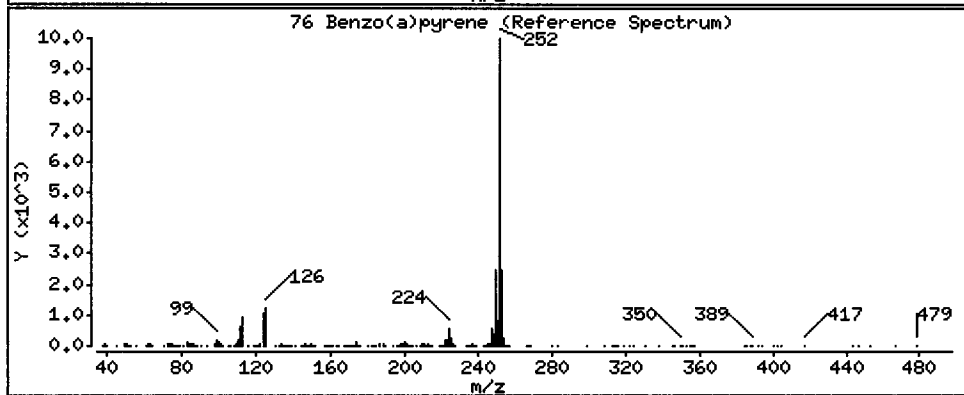
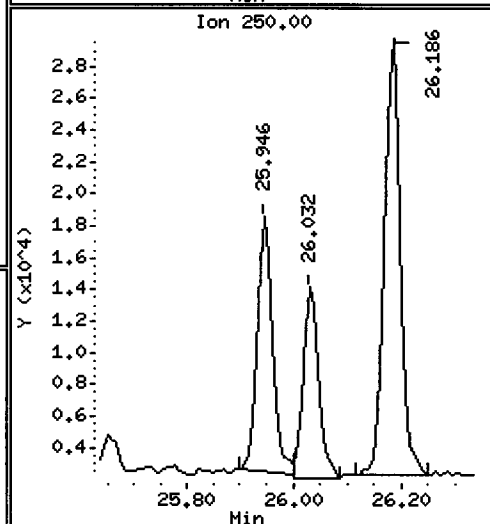
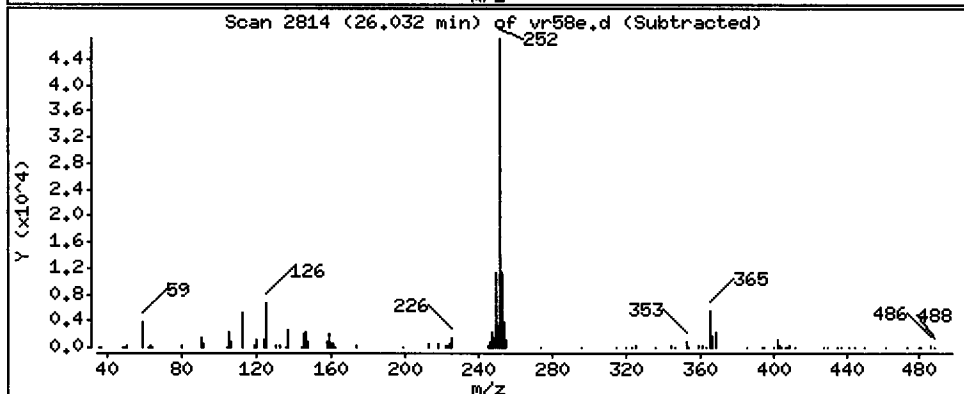
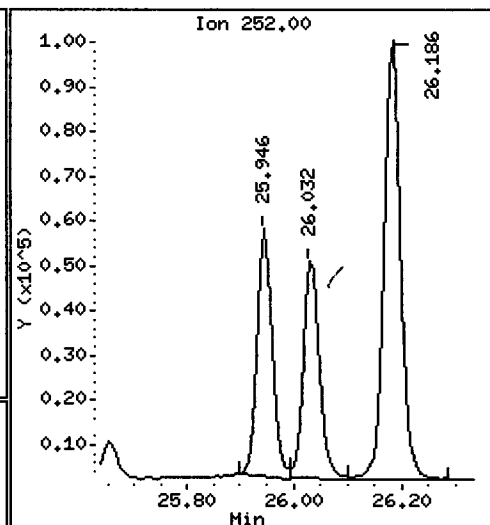
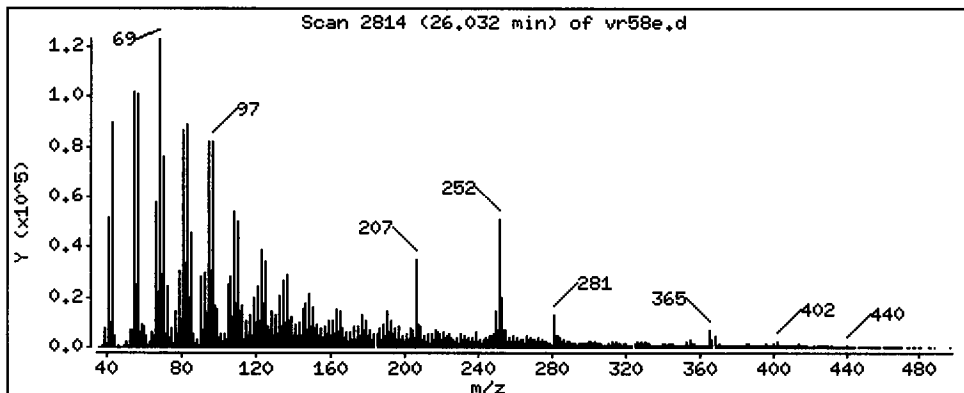
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

76 Benzo(a)pyrene

Concentration: 117.8 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

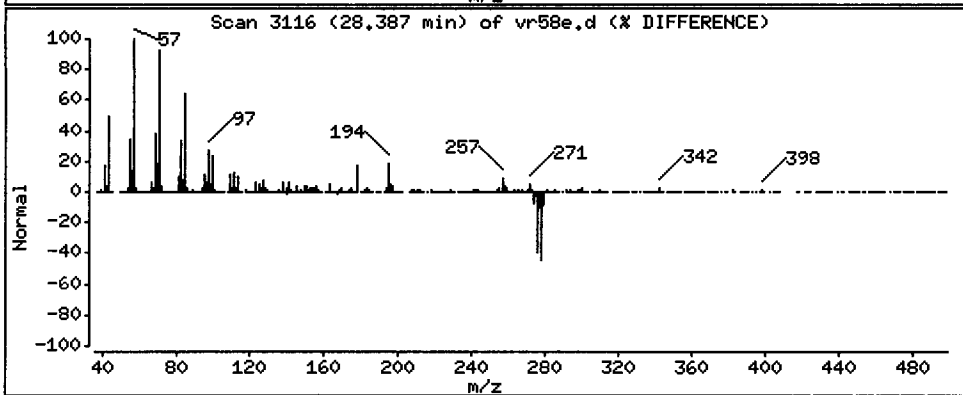
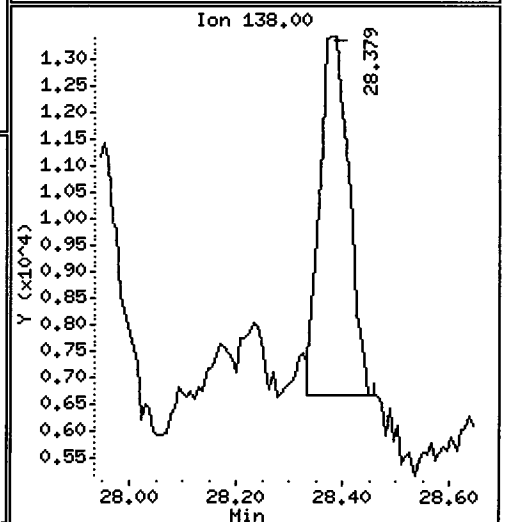
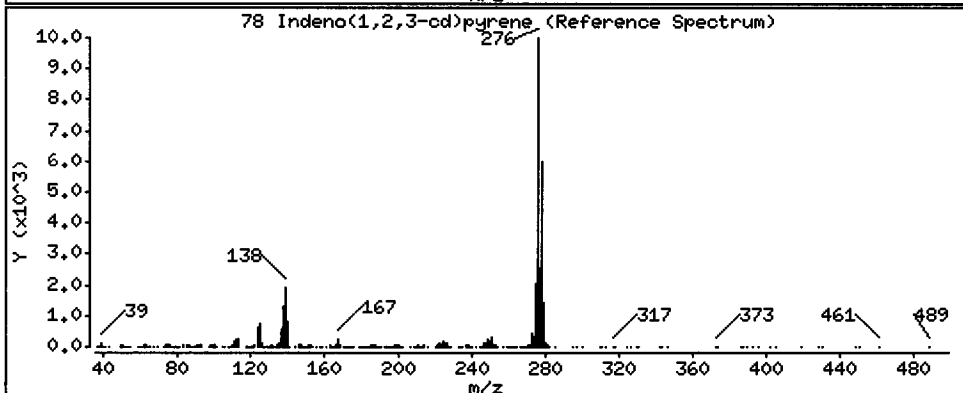
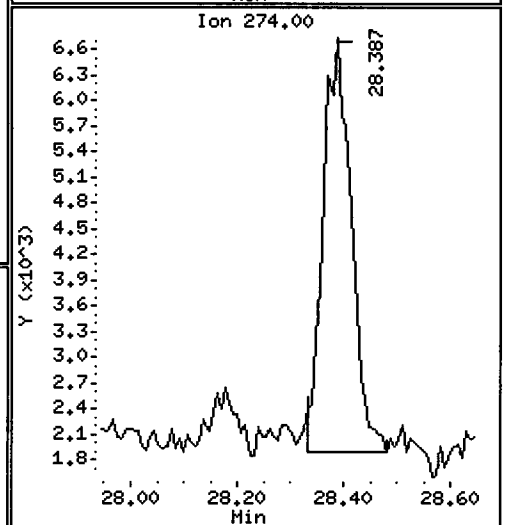
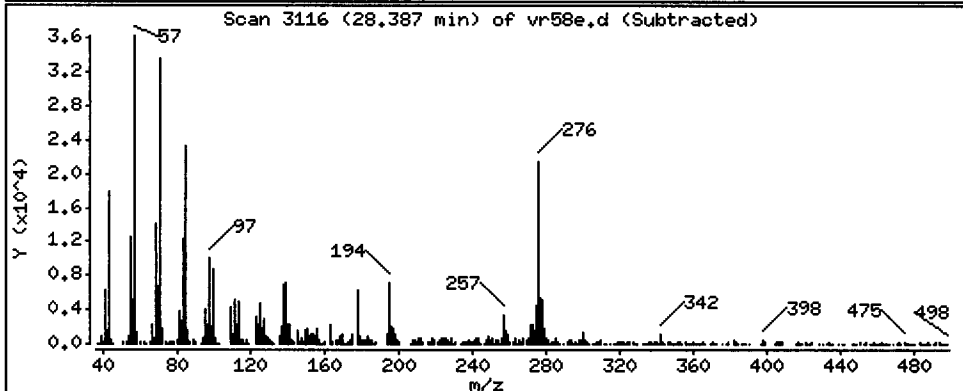
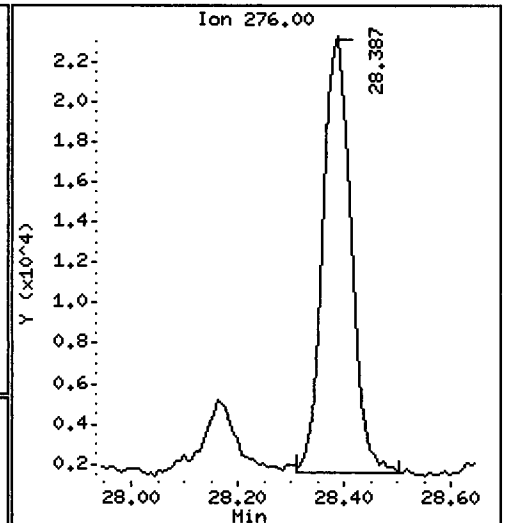
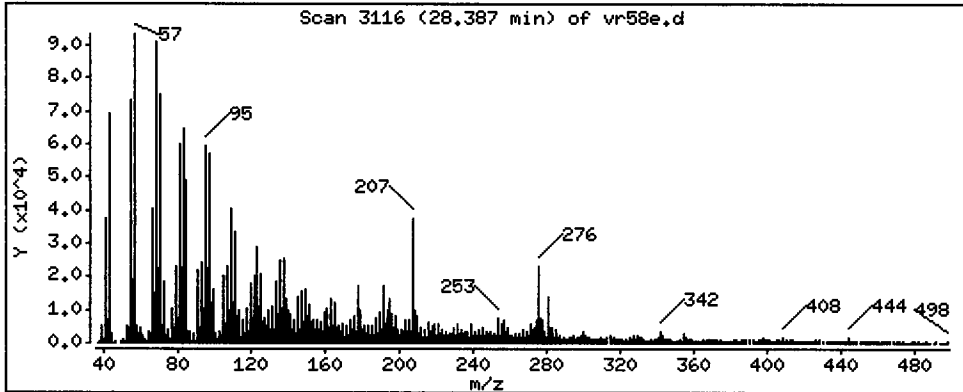
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

78 Indeno(1,2,3-cd)pyrene

Concentration: 79.15 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

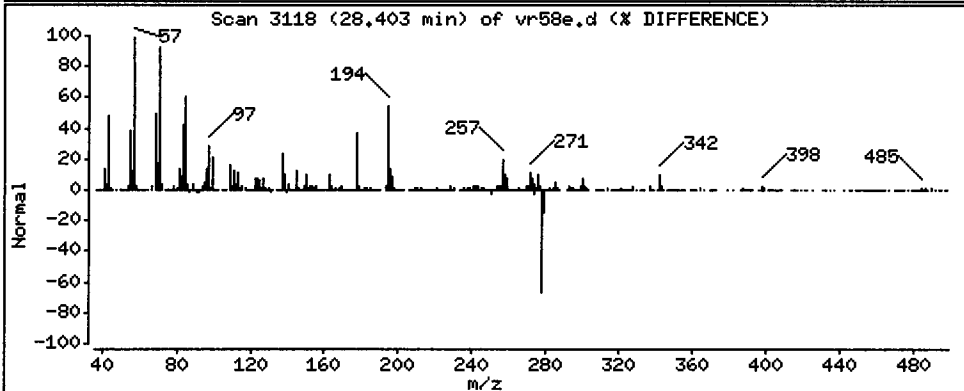
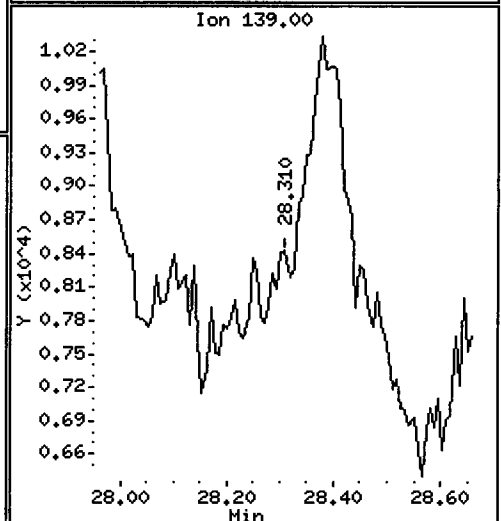
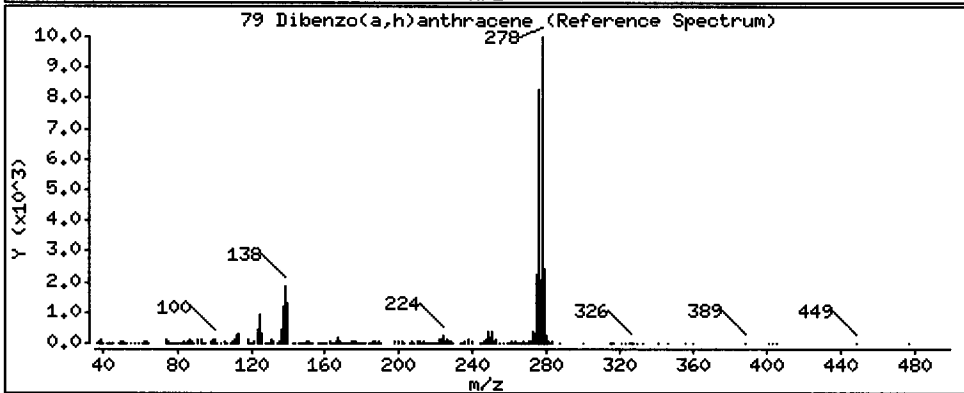
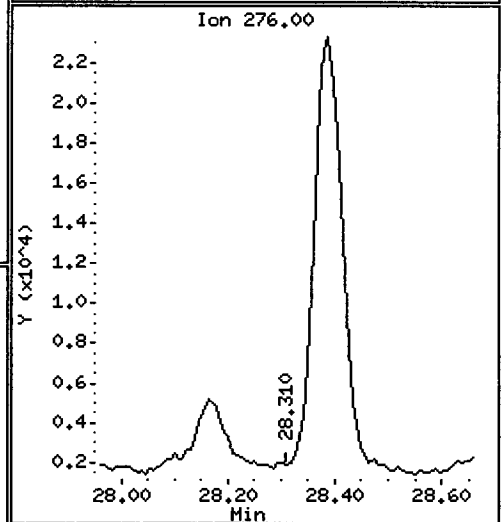
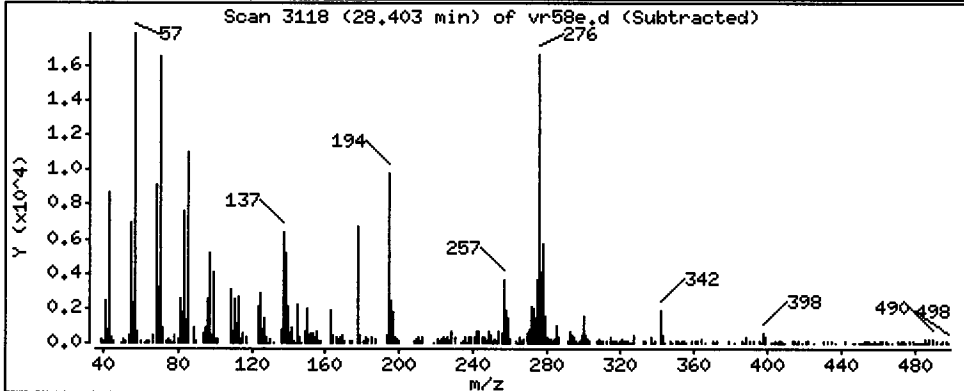
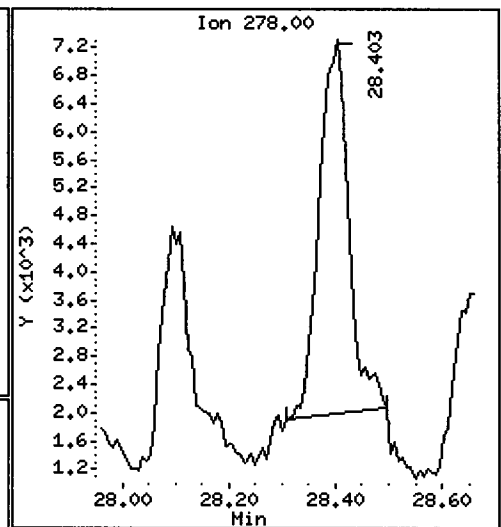
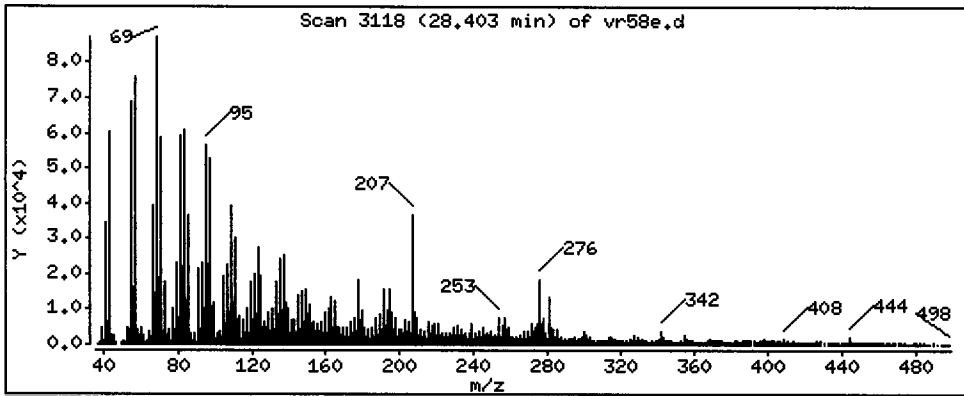
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 25.70 ug/kg





Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

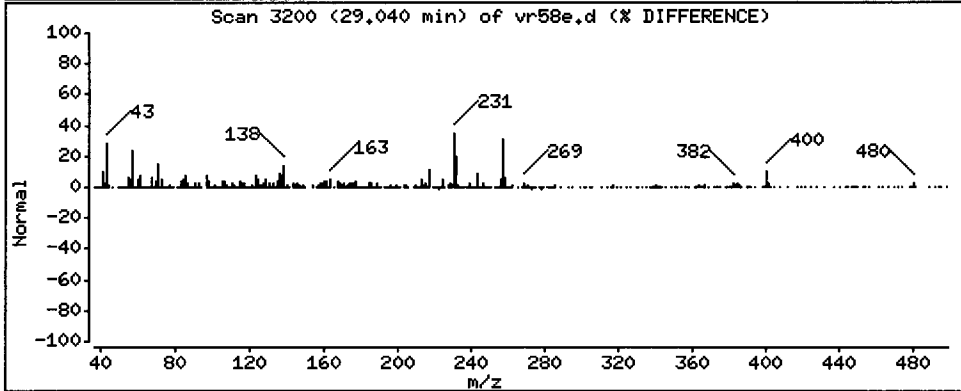
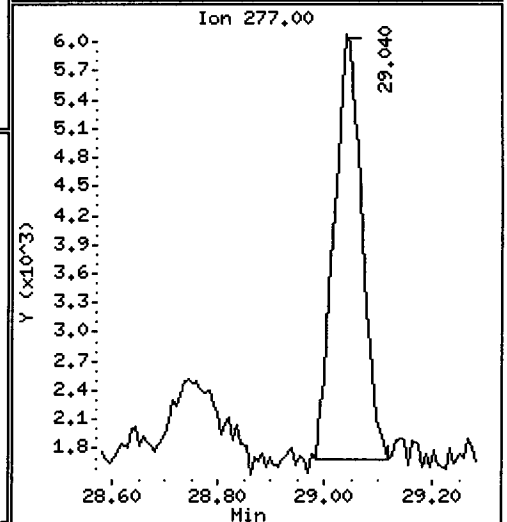
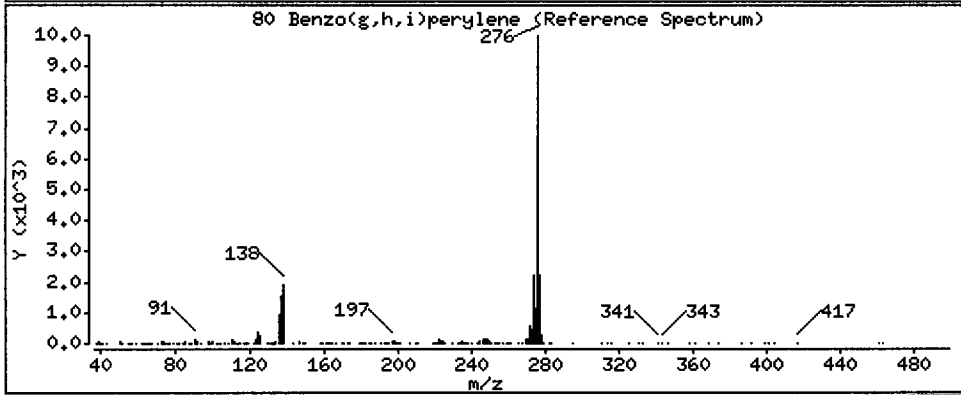
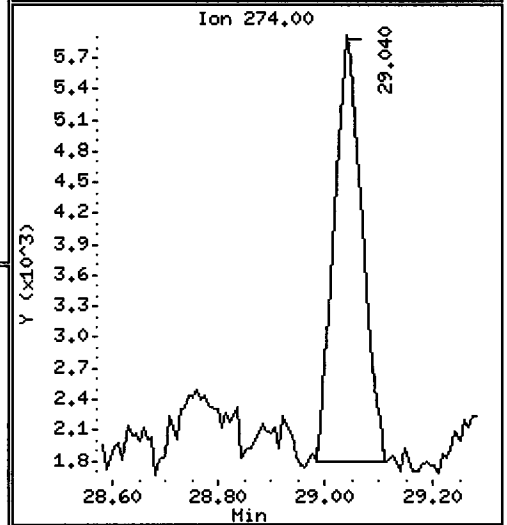
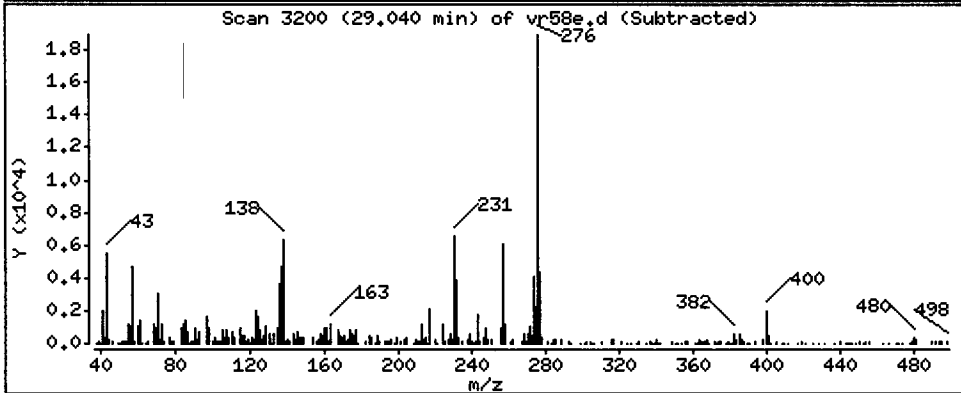
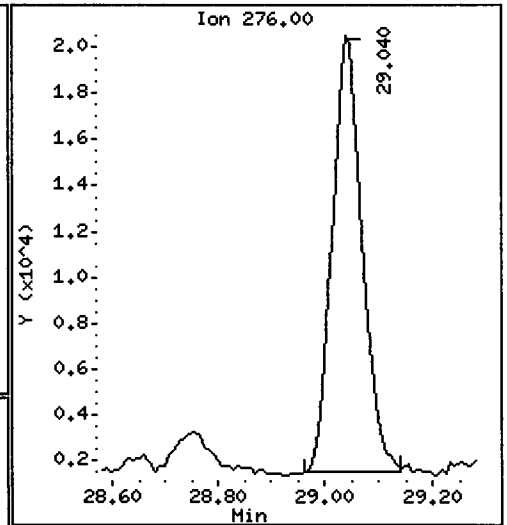
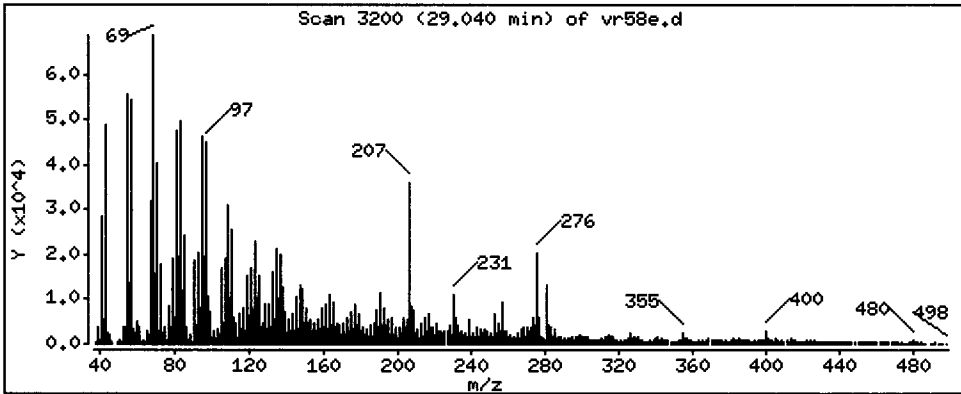
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

80 Benzo(g,h,i)perylene

Concentration: 85.52 ug/kg



Date : 04-DEC-2012 19:35

Client ID: SG-13-S-E-dup-12110

Instrument: nt10.i

Sample Info: VR58E

Volume Injected (uL): 1.0

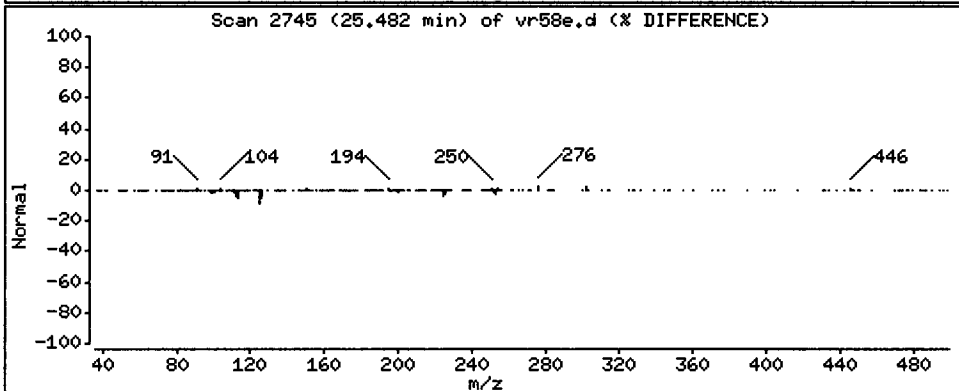
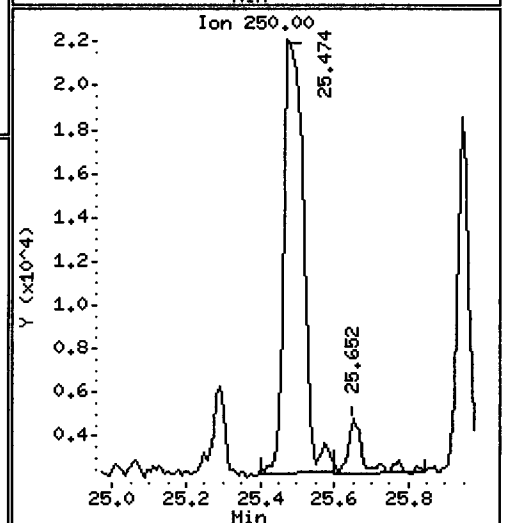
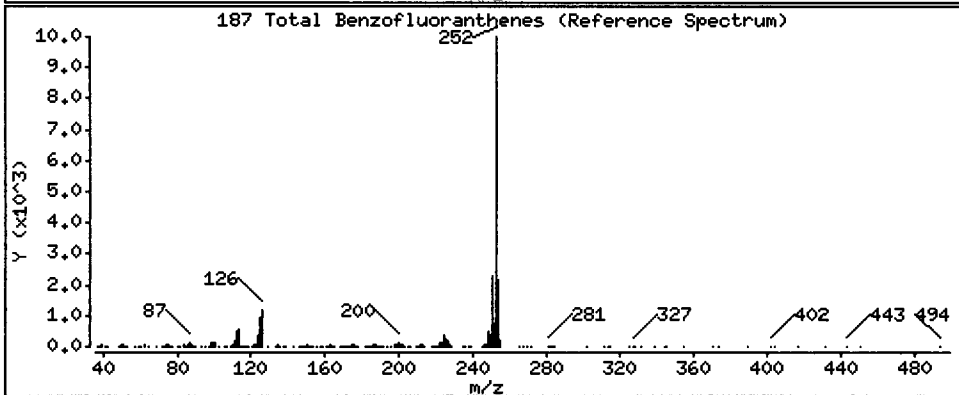
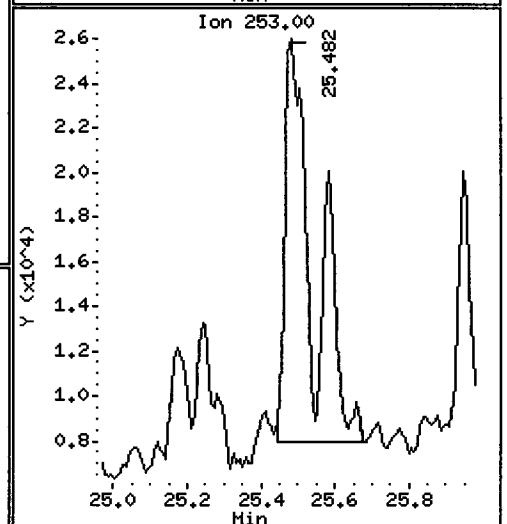
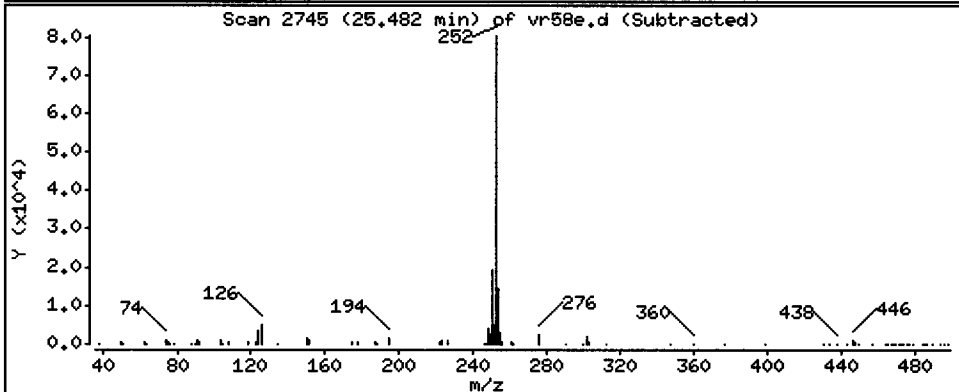
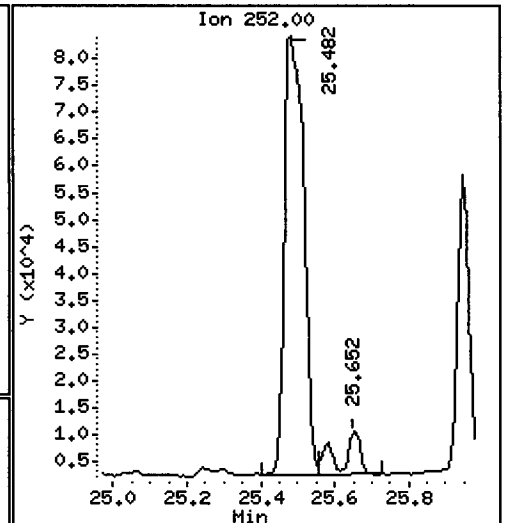
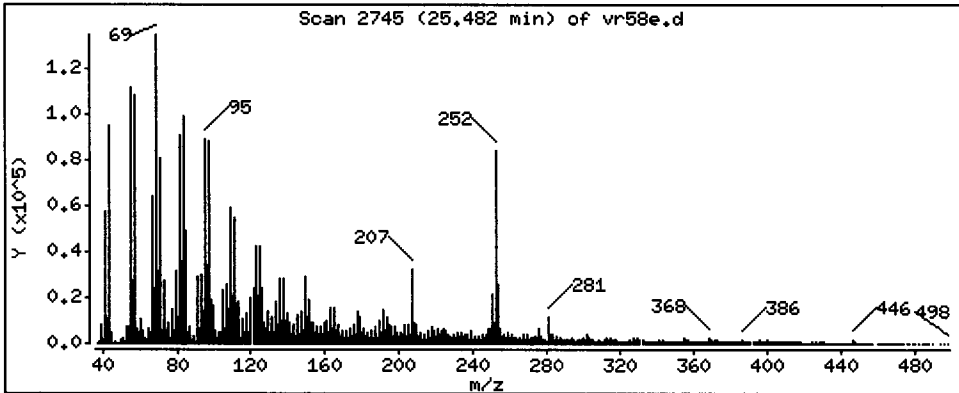
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

187 Total Benzofluoranthenes

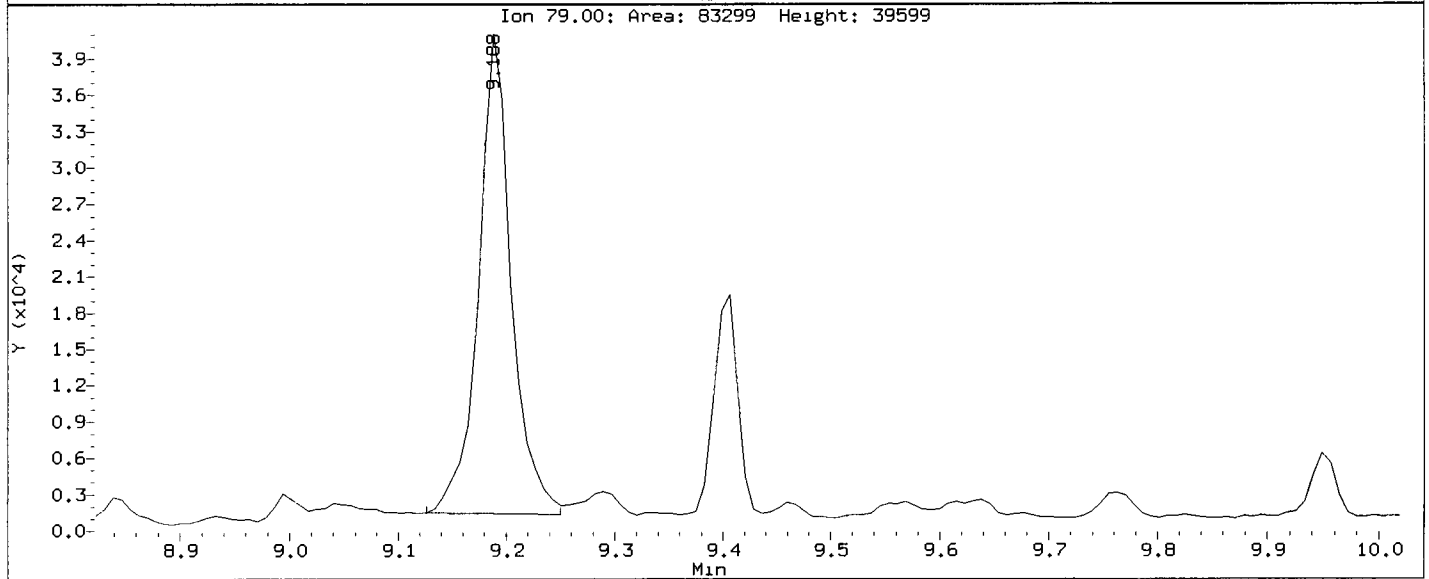
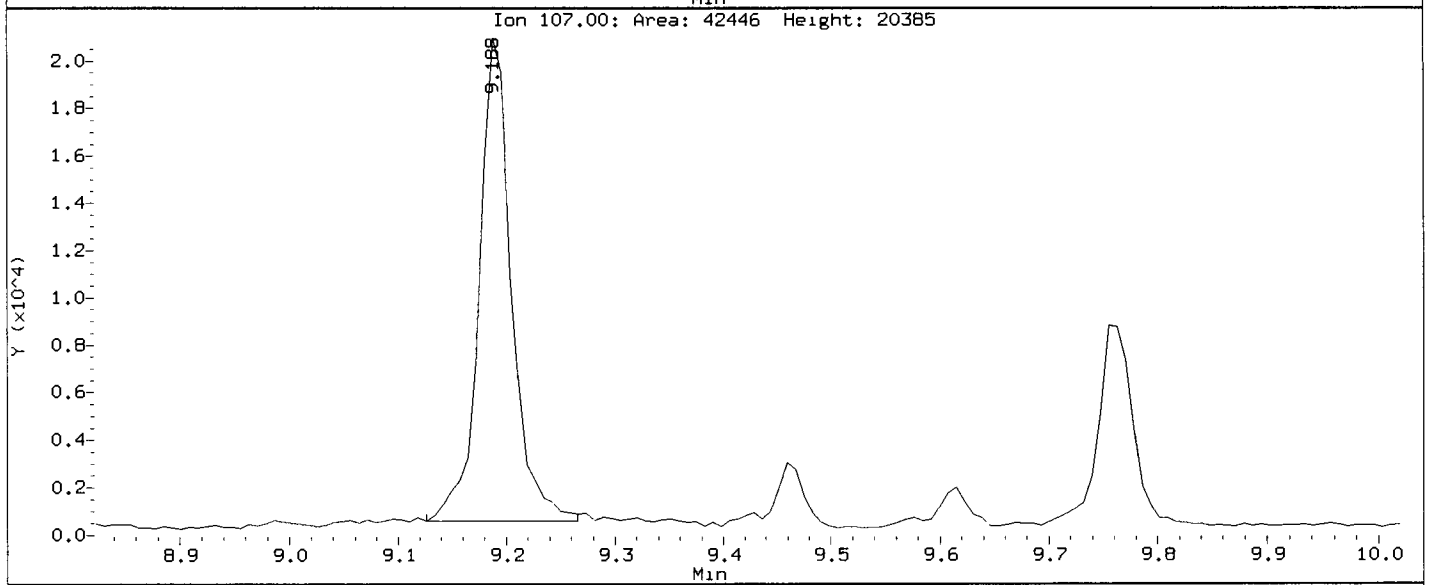
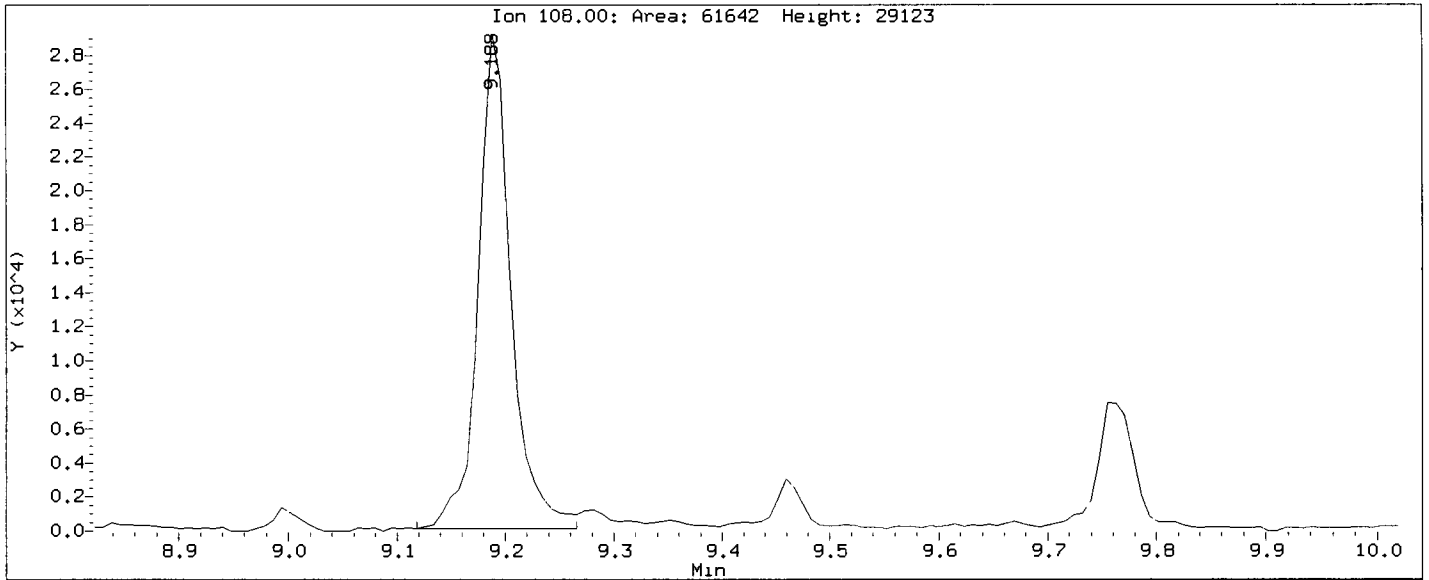
Concentration: 323.5 ug/kg



Data File: /chem1/nt10.1/20121204.b/vr58e.d  
Injection Date: 04-DEC-2012 19:35  
Instrument: nt10.1  
Client Sample ID: SG-13-S-E-dup-12110

12.5.12

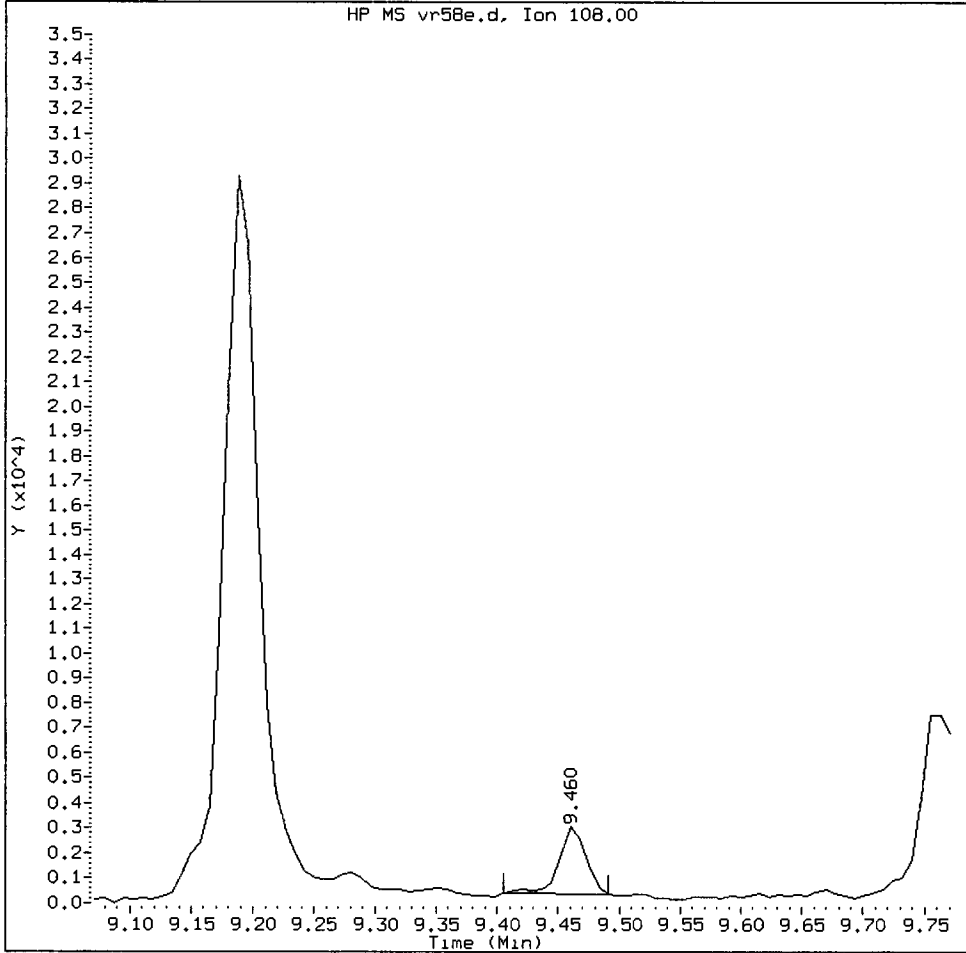
Compound: 2-Methylphenol  
CAS Number: 95-48-7



VR58 : 00642

VR58E, /chem1/nt10.i/20121204.b/vr58e.d

2-Methylphenol Amount: 0.14 Area: 4212



MANUAL INTEGRATION for 2-Methylphenol

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

5. Other \_\_\_\_\_

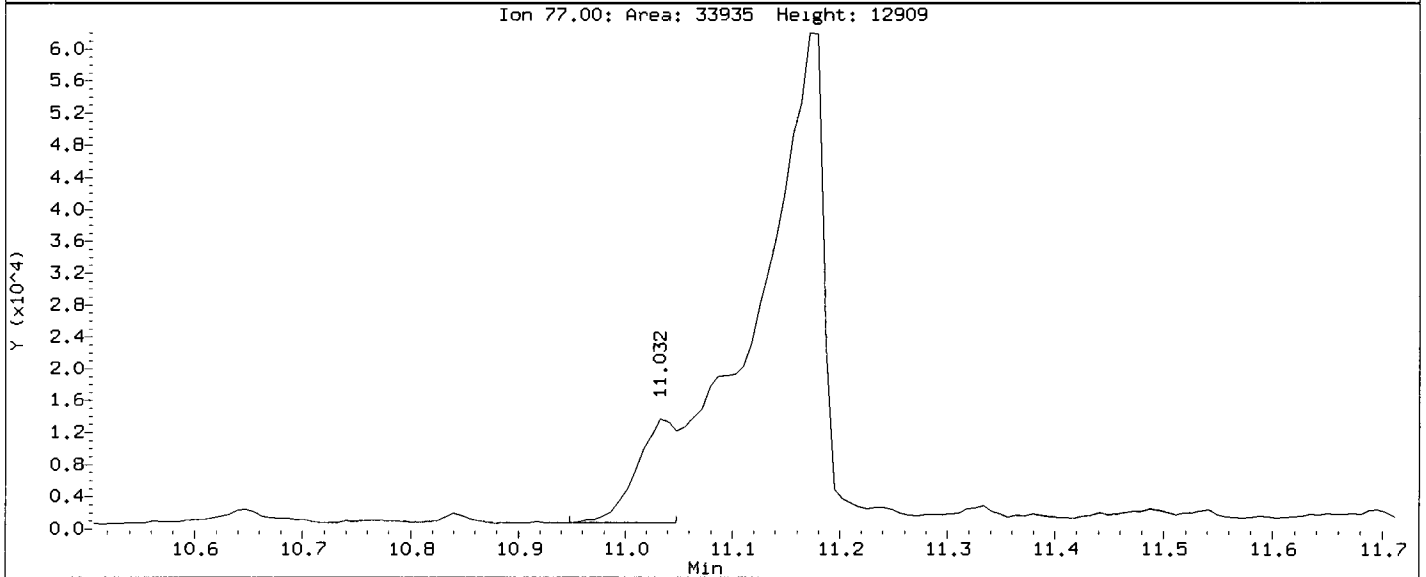
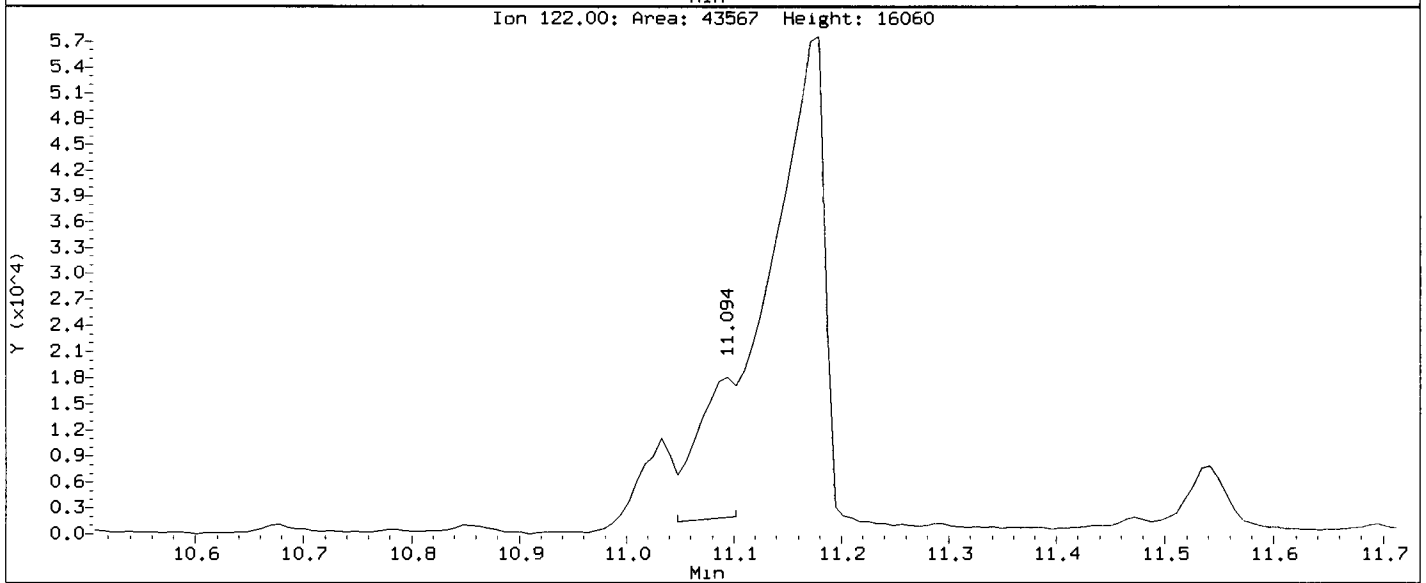
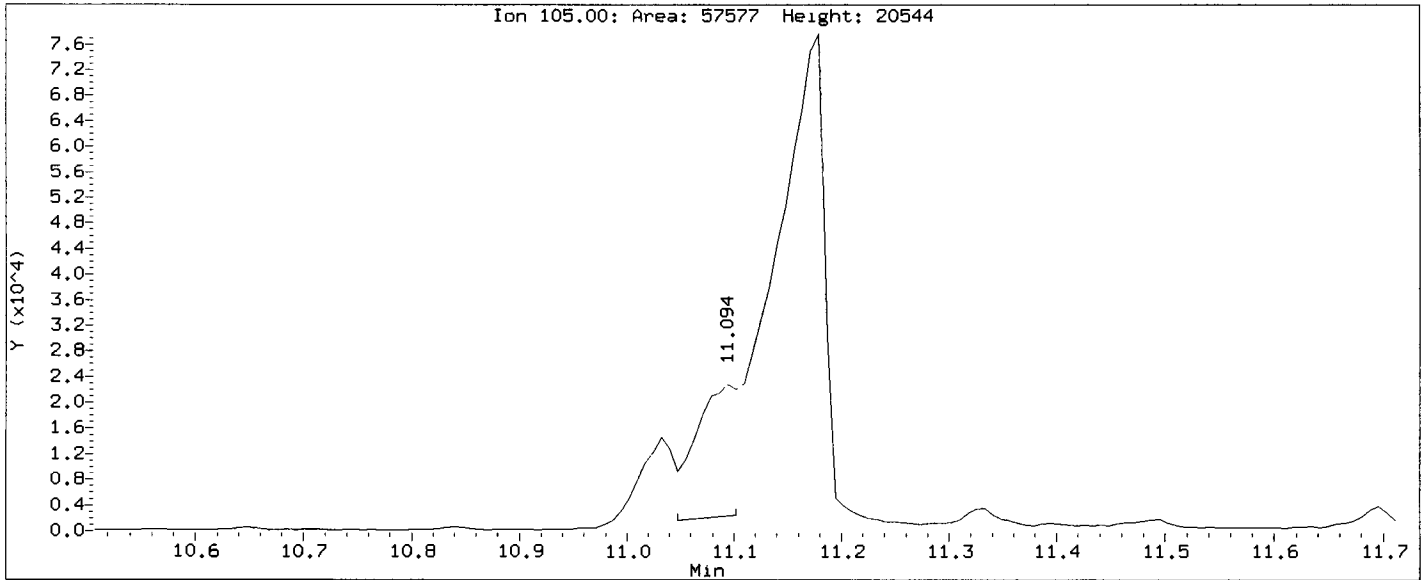
Analyst: VD

Date: 12.5.12

Data File: /chem1/nt10.1/20121204.b/vr58e.d  
Injection Date: 04-DEC-2012 19:35  
Instrument: nt10.1  
Client Sample ID: SG-13-5-E-dup-12110

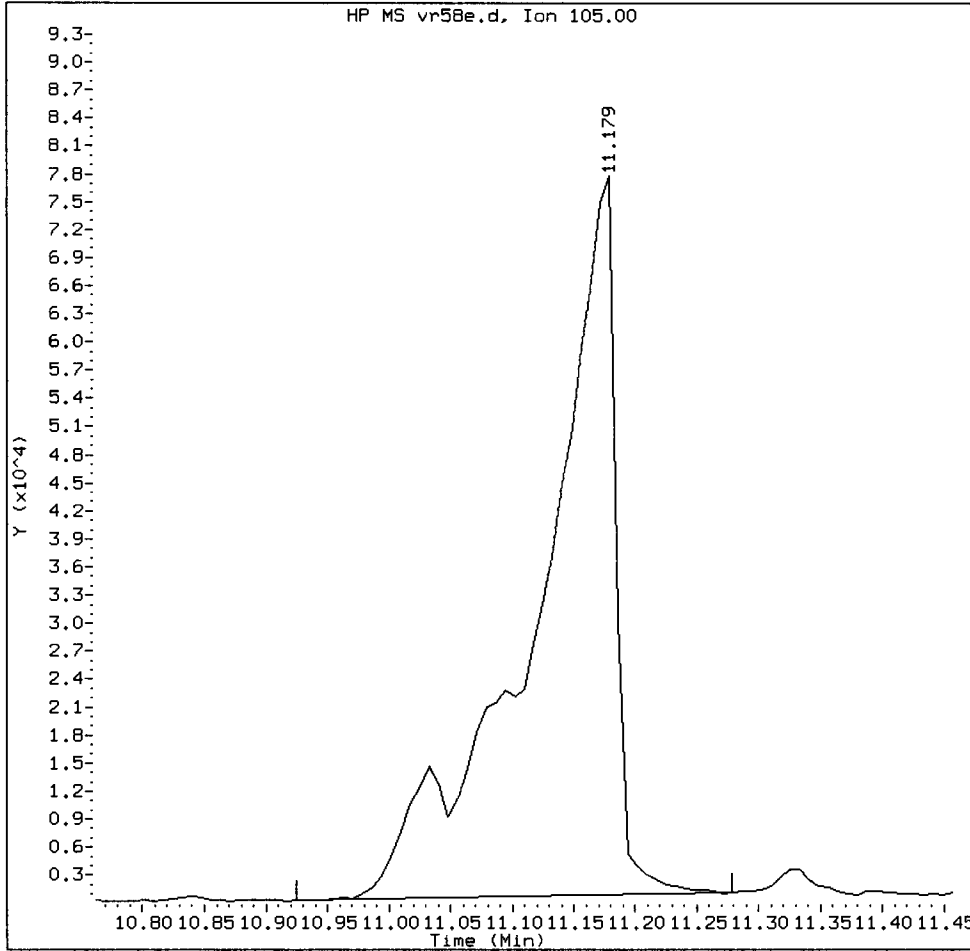
VD  
12.5.12

Compound: Benzoic acid  
CAS Number: 65-85-0



VR58E, /chem1/nt10.i/20121204.b/vr58e.d

Benzoic acid Amount: 17.52 Area: 346900



MANUAL INTEGRATION for Benzoic acid

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

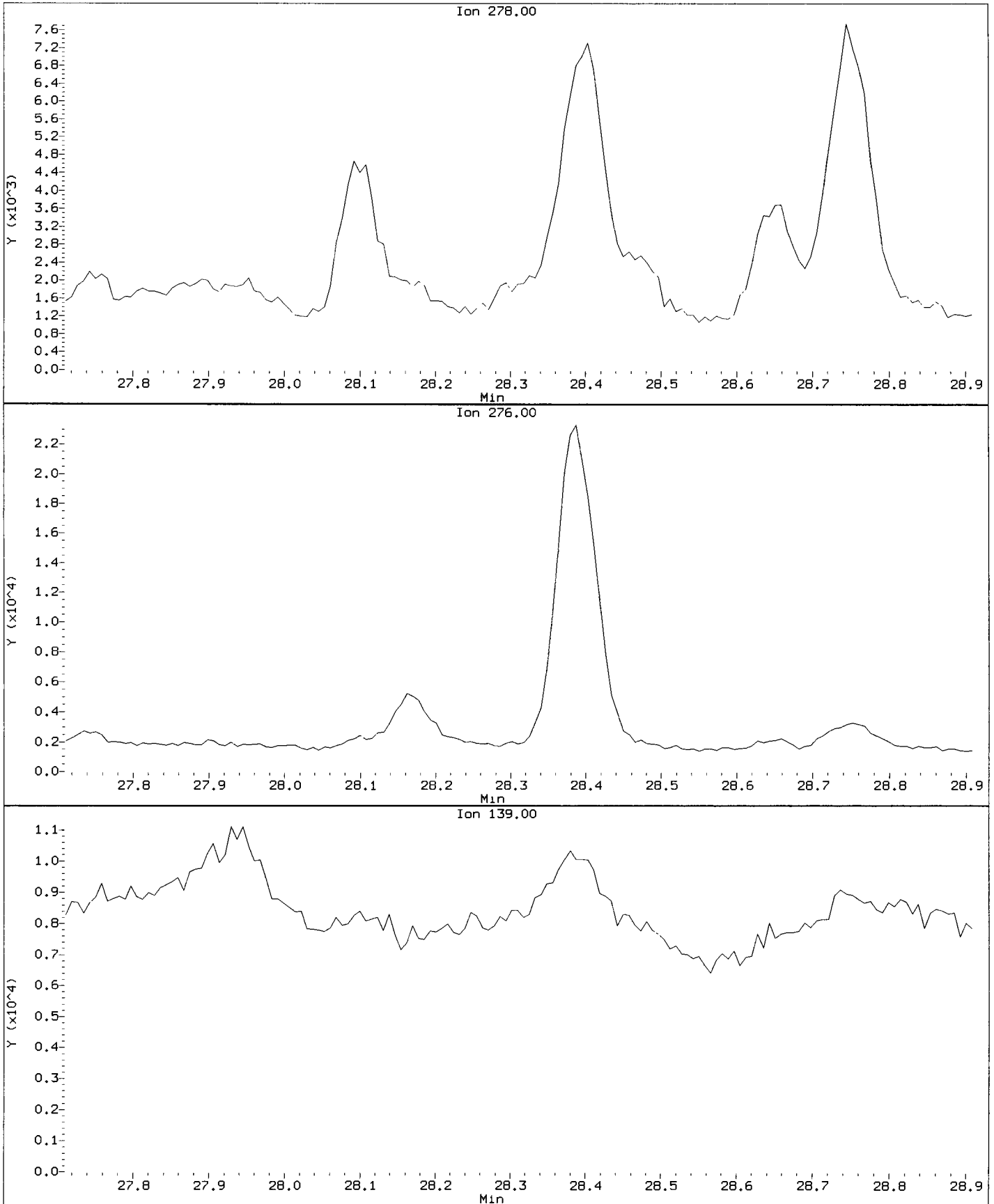
Analyst: VD

Date: 12.5.12

VB  
12-5-12

Data File: /chem1/nt10.1/20121204.b/vr58e.d  
Injection Date: 04-DEC-2012 19:35  
Instrument: nt10.1  
Client Sample ID: SG-13-S-E-dup-12110

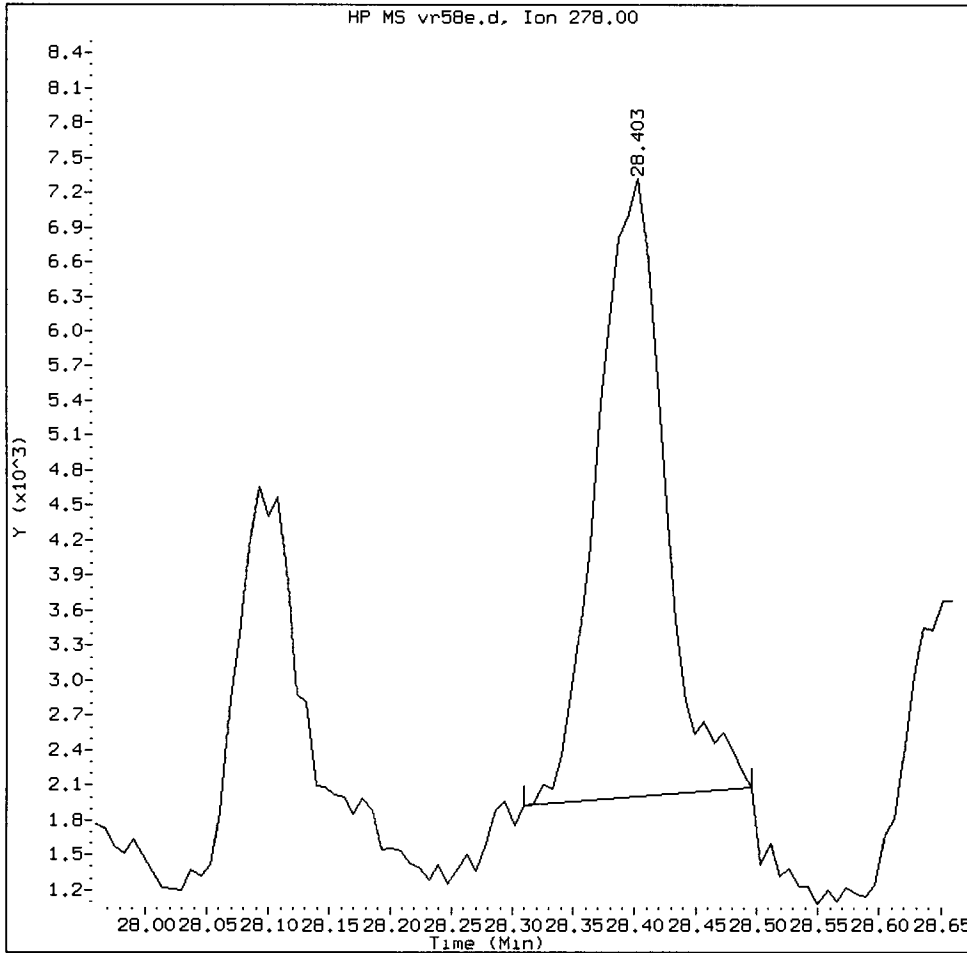
Compound: Dibenzo(a,h)anthracene  
CAS Number: 53-70-3



VR58:00647

VR58E, /chem1/nt10.i/20121204.b/vr58e.d

Dibenzo(a,h)anthracene Amount: 0.26 Area: 20566



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other \_\_\_\_\_

Analyst: VA

Date: 12.5.12



CO-ELUTION SUMMARY FOR FILE - vr58e.d

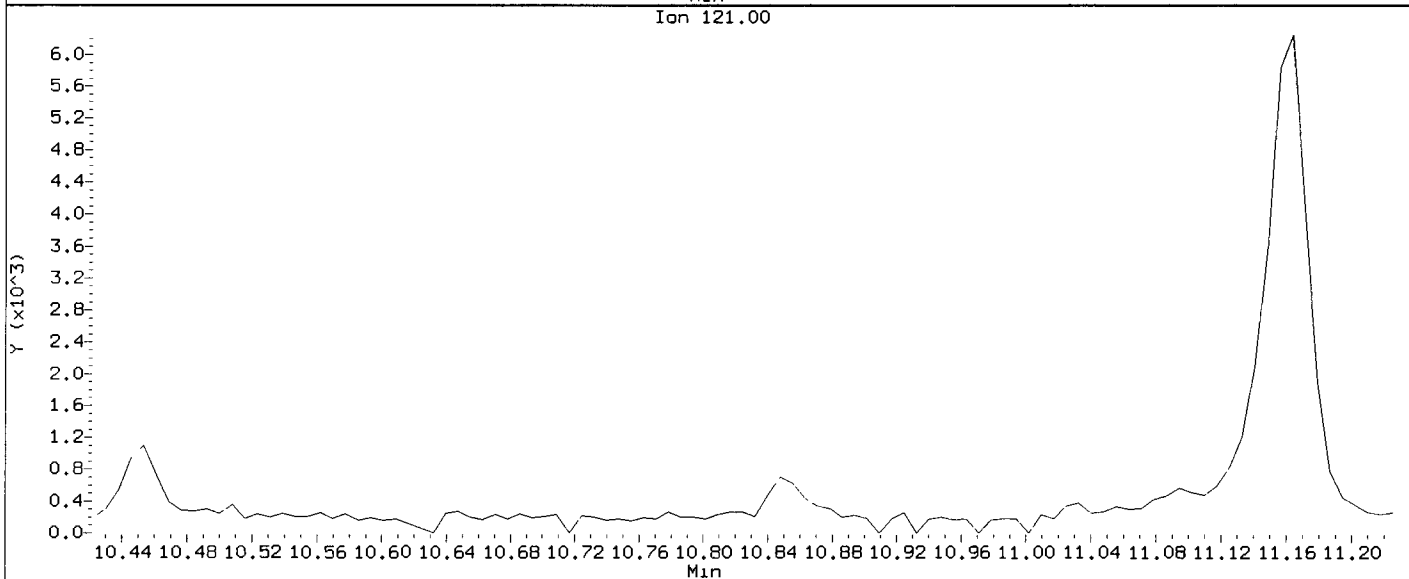
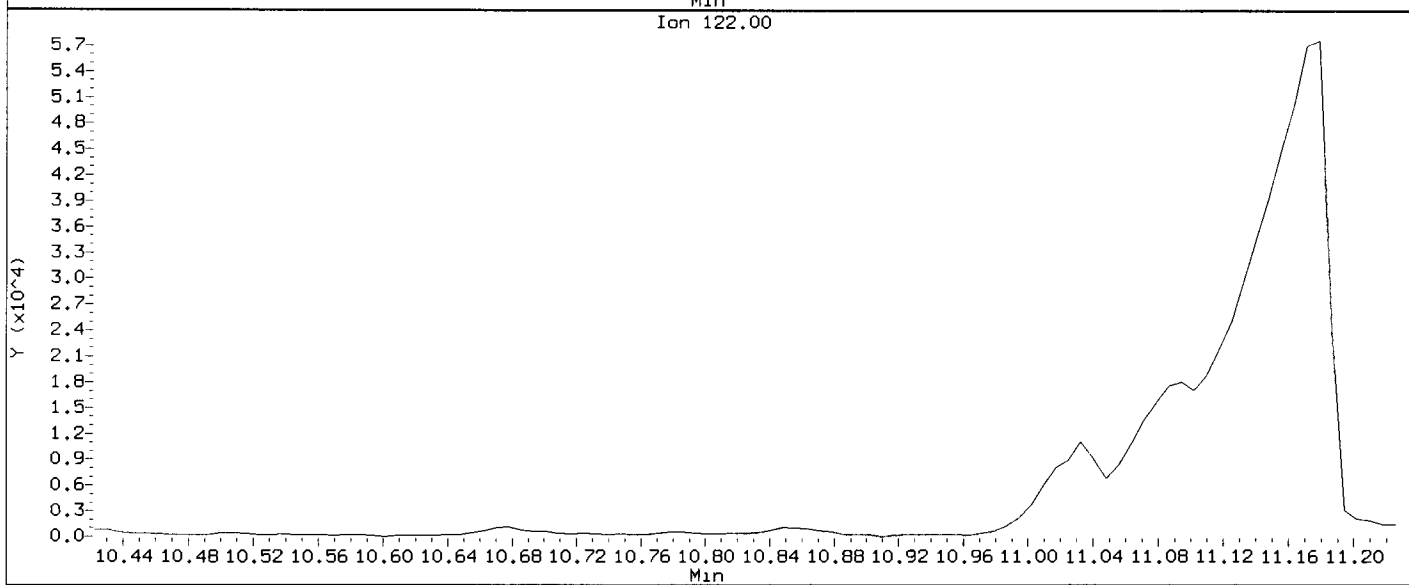
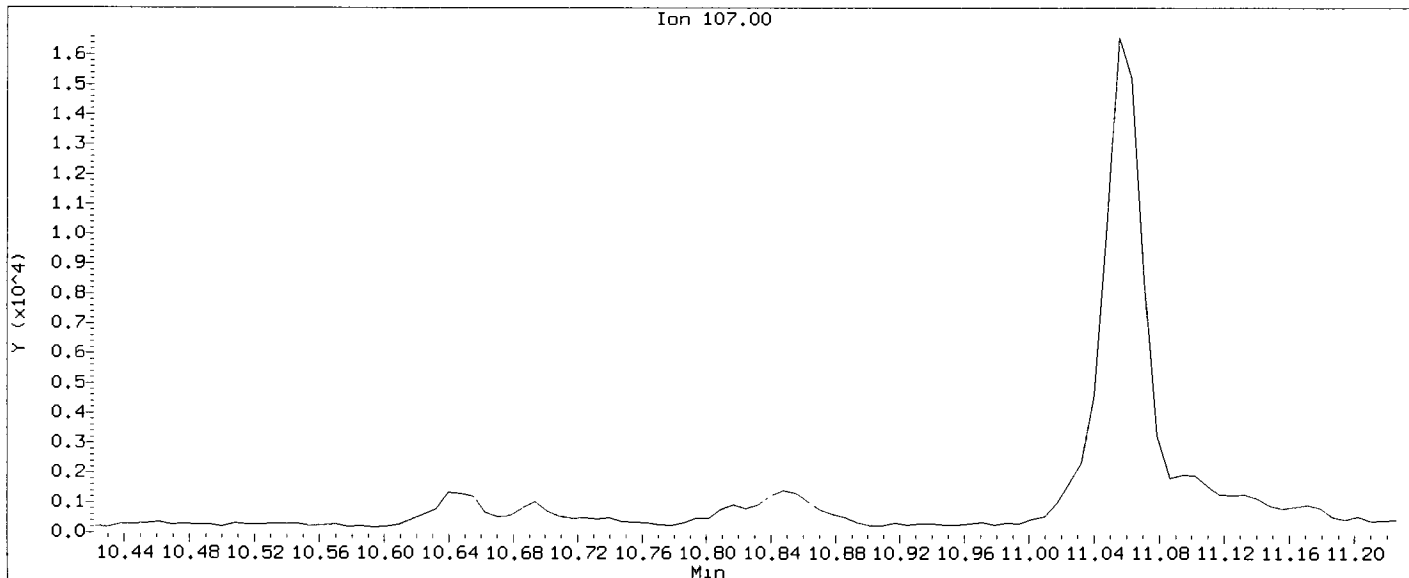
Lab ID: VR58E, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

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Data File: /chem1/nt10.1/20121204.b/vr58e.d  
Injection Date: 04-DEC-2012 19:35  
Instrument: nt10.1  
Client Sample ID: SG-13-S-E-dup-12110

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58f.d  
 Lab Smp Id: VR58F Client Smp ID: SG-14-S-E-121107  
 Inj Date : 04-DEC-2012 20:11  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58F  
 Misc Info : 12-22334  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 8  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub  
 Target Version: 3.50

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	22.20000	Weight of sample extracted (g)
M	52.70000	% 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	6.559	6.505	(0.741)	164619	4.55507	433.8	
\$ 2 Phenol-d5	99	8.251	8.220	(0.933)	226080	5.05554	481.5	
3 Phenol	94	8.274	8.243	(0.935)	39711	0.84296	80.28	
\$ 5 2-Chlorophenol-d4	132	8.483	8.452	(0.959)	175235	4.52891	431.3	
7 1,3-Dichlorobenzene	146	Compound Not Detected.						
* 8 1,4-Dichlorobenzene-d4	152	8.847	8.831	(1.000)	112975	4.00000		
9 1,4-Dichlorobenzene	146	Compound Not Detected.						
\$ 10 1,2-Dichlorobenzene-d4	152	9.227	9.212	(1.043)	77138	2.73407	260.4	
12 1,2-Dichlorobenzene	146	Compound Not Detected.						
11 Benzyl alcohol	108	9.173	9.150	(1.037)	23310	1.04640	99.65	
13 2-Methylphenol	108	Compound Not Detected.						
17 Hexachloroethane	117	Compound Not Detected.						
15 4-Methylphenol	108	9.747	9.716	(1.102)	14860	0.61875	58.93	
\$ 18 Nitrobenzene-d5	82	10.019	10.003	(0.872)	112911	2.86706	273.0	
22 2,4-Dimethylphenol	107	Compound Not Detected.						

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
24 Benzoic acid	105		11.087	11.110	(0.964)	157243	6.37173	606.8	
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.						
* 27 Naphthalene-d8	136		11.495	11.480	(1.000)	420287	4.00000		
28 Naphthalene	128		11.534	11.526	(1.003)	178477	1.74546	166.2	
30 Hexachlorobutadiene	225		Compound Not Detected.						
32 2-Methylnaphthalene	142		13.042	13.027	(1.135)	47296	0.62083	59.12	
\$ 36 2-Fluorobiphenyl	172		13.901	13.886	(0.904)	260660	3.11817	297.0	
39 Dimethylphthalate	163		Compound Not Detected.						
40 Acenaphthylene	152		15.031	15.016	(0.978)	30687	0.27489	26.18 (M)	
* 42 Acenaphthene-d10	164		15.372	15.356	(1.000)	236184	4.00000		
44 Acenaphthene	153		15.441	15.426	(1.005)	88907	1.39334	132.7	
46 Dibenzofuran	168		15.797	15.781	(1.028)	89618	0.94636	90.12	
50 Diethylphthalate	149		16.469	16.462	(1.071)	56988	0.71357	67.96	
49 Fluorene	166		16.570	16.547	(1.078)	124341	1.58269	150.7	
54 N-Nitrosodiphenylamine	169		Compound Not Detected.						
\$ 55 2,4,6-Tribromophenol	330		17.156	17.125	(1.116)	63169	4.54044	432.4	
57 Hexachlorobenzene	284		Compound Not Detected.						
58 Pentachlorophenol	266		Compound Not Detected.						
* 59 Phenanthrene-d10	188		18.648	18.617	(1.000)	382502	4.00000		
60 Phenanthrene	178		18.694	18.671	(1.002)	830751	8.77187	835.4	
61 Anthracene	178		18.787	18.764	(1.007)	163576	1.60688	153.0	
63 Di-n-butylphthalate	149		Compound Not Detected.						
64 Fluoranthene	202		21.124	21.093	(1.133)	1495991	12.5321	1193	
65 Pyrene	202		21.541	21.510	(0.908)	1177711	9.71606	925.3	
\$ 66 Terphenyl-d14	244		21.859	21.835	(0.921)	249774	3.08272	293.6	
67 Butylbenzylphthalate	149		22.811	22.788	(0.961)	22051	0.44784	42.65	
68 Benzo(a)anthracene	228		23.701	23.670	(0.999)	450026	3.82684	364.4	
* 69 Chrysene-d12	240		23.732	23.701	(1.000)	413754	4.00000		
71 Chrysene	228		23.771	23.740	(1.002)	602342	5.76558	549.1	
72 bis(2-Ethylhexyl)phthalate	149		23.848	23.825	(0.961)	260684	2.96636	282.5	
* 134 Di-n-octylphthalate-d4	153		24.824	24.801	(1.000)	636914	4.00000		
73 Di-n-octylphthalate	149		24.832	24.808	(1.000)	36309	0.25148	23.95 (M)	
76 Benzo(a)pyrene	252		26.032	25.985	(0.996)	254703	2.20575	210.1	
* 77 Perylene-d12	264		26.132	26.086	(1.000)	404612	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.372	28.294	(1.086)	133614	1.02099	97.23	
79 Dibenzo(a,h)anthracene	278		28.380	28.310	(1.086)	45854	0.44152	42.05 (M)	
80 Benzo(g,h,i)perylene	276		29.016	28.931	(1.110)	112013	1.00012	95.24	
105 1-methylnaphthalene	142		13.274	13.259	(1.155)	25445	0.36391	34.66	
187 Total Benzofluoranthenes	252		25.482	25.474	(0.975)	755015	6.34101	603.9	
98 Retene	219		22.153	22.137	(0.933)	50093			
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

10  
12.5.12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58f.d  
 Lab Smp Id: VR58F  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22334

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-14-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	112975	38.50
27 Naphthalene-d8	299399	149700	598798	420287	40.38
42 Acenaphthene-d10	178564	89282	357128	236184	32.27
59 Phenanthrene-d10	305410	152705	610820	382502	25.24
69 Chrysene-d12	323853	161926	647706	413754	27.76
134 Di-n-octylphthala	427845	213922	855690	636914	48.87
77 Perylene-d12	305316	152658	610632	404612	32.52

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.85	0.17
27 Naphthalene-d8	11.48	10.98	11.98	11.50	0.13
42 Acenaphthene-d10	15.36	14.86	15.86	15.37	0.10
59 Phenanthrene-d10	18.62	18.12	19.12	18.65	0.17
69 Chrysene-d12	23.70	23.20	24.20	23.73	0.13
134 Di-n-octylphthala	24.80	24.30	25.30	24.82	0.09
77 Perylene-d12	26.09	25.59	26.59	26.13	0.18

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.

Client SDG: VR58

Sample Matrix: SOLID

Fraction: SV

Lab Smp Id: VR58F

Client Smp ID: SG-14-S-E-121107

Level: LOW

Operator: VTS/YZ

Data Type: MS DATA

SampleType: SAMPLE

SpikeList File: SHORTPSDDA.spk

Quant Type: ISTD

Sublist File: SHORTPSDDA.sub

Method File: /chem1/nt10.i/20121204.b/ABN.m

Misc Info: 12-22334

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	714.2	433.8	60.73	30-160
\$ 2 Phenol-d5	714.2	481.5	67.41	30-160
\$ 5 2-Chlorophenol-d4	714.2	431.3	60.39	30-160
\$ 10 1,2-Dichlorobenzen	476.2	260.4	54.68	30-160
\$ 18 Nitrobenzene-d5	476.2	273.0	57.34	30-160
\$ 36 2-Fluorobiphenyl	476.2	297.0	62.36	30-160
\$ 55 2,4,6-Tribromophen	714.2	432.4	60.54	30-160
\$ 66 Terphenyl-d14	476.2	293.6	61.65	30-160

Date : 04-DEC-2012 20:11

Client ID: SC-14-S-E-121107

Sample Info: VR58F

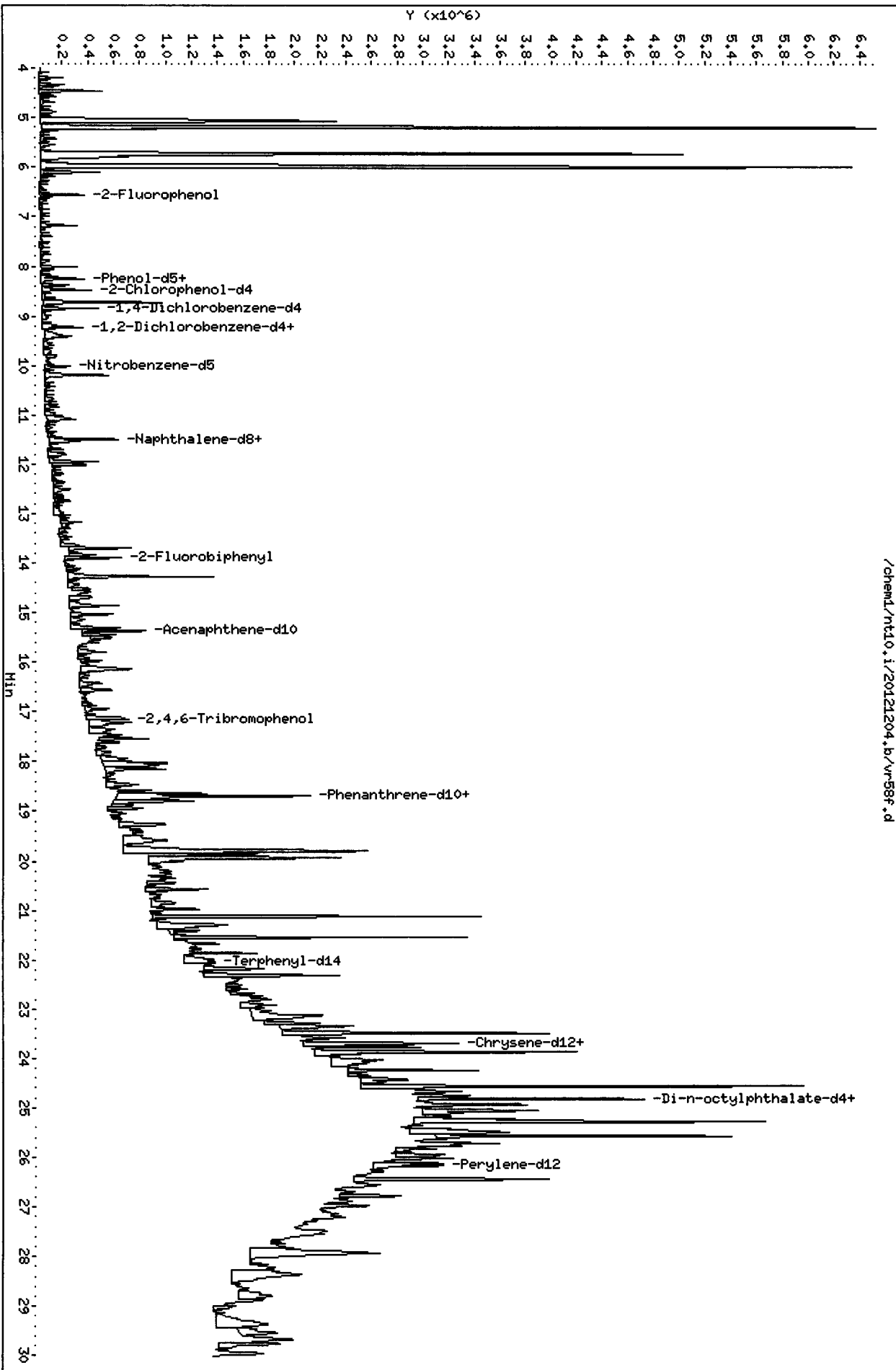
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25



VR58F : 000000

Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

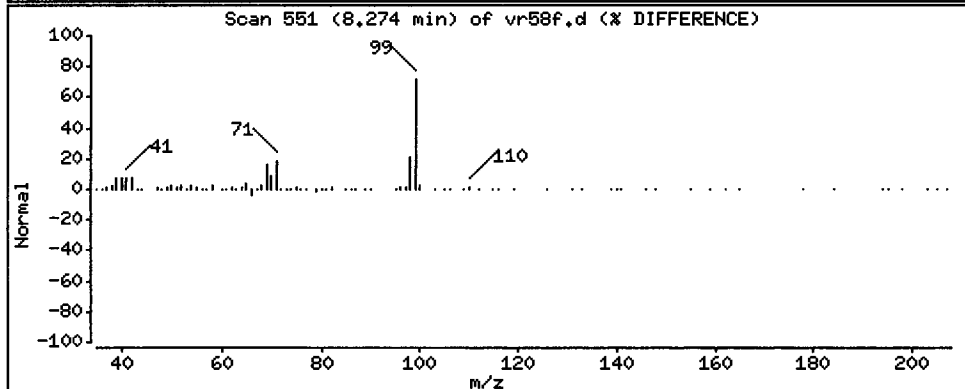
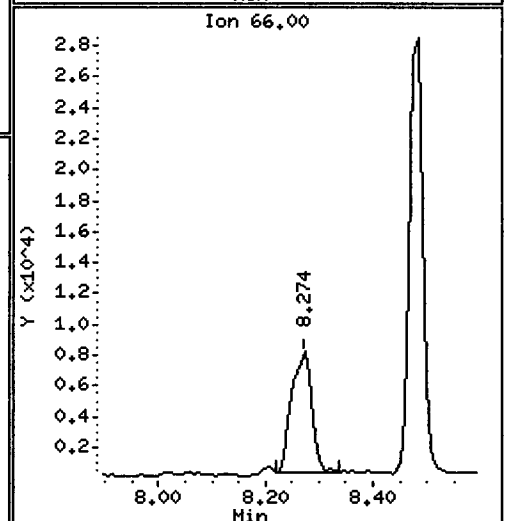
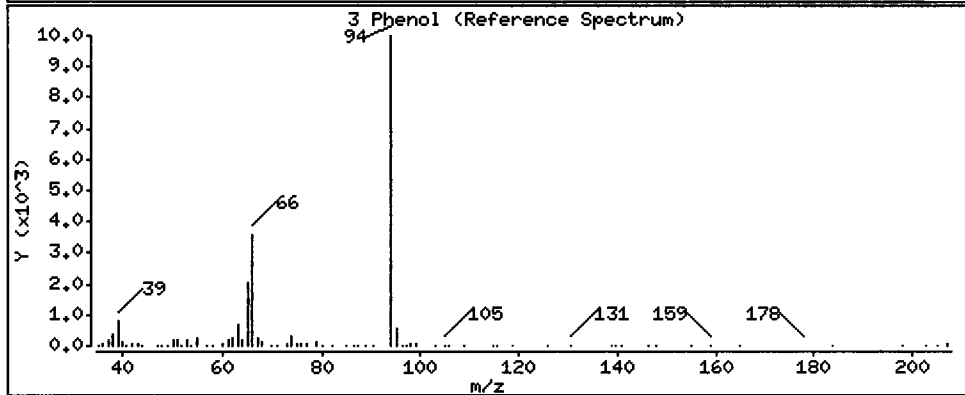
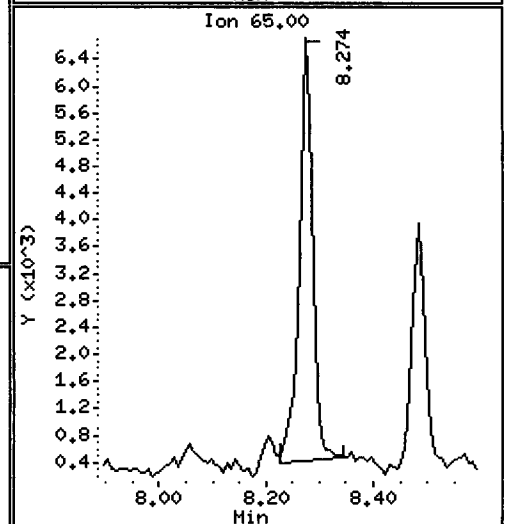
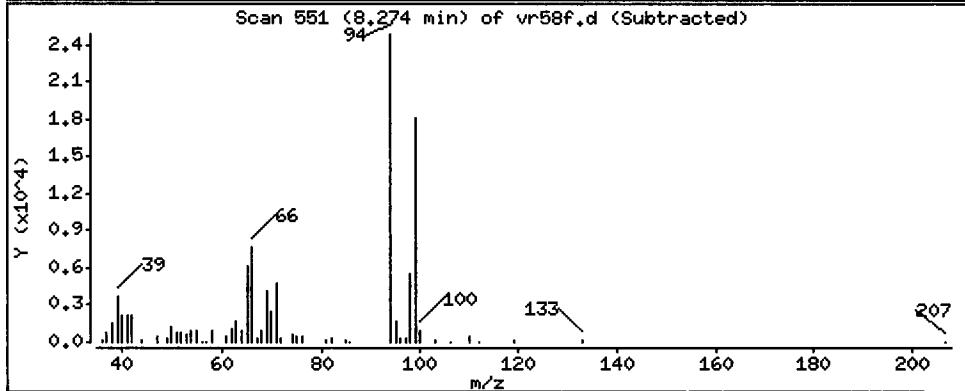
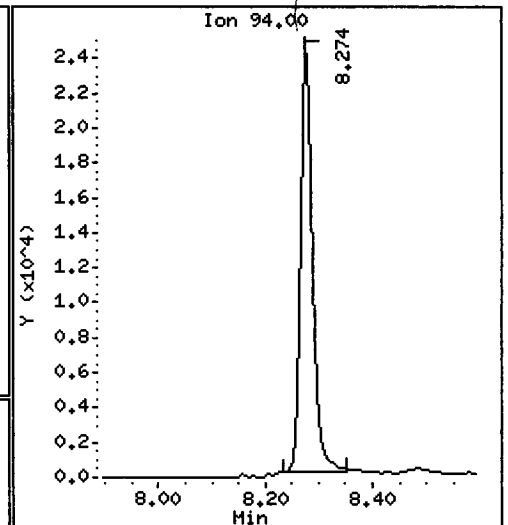
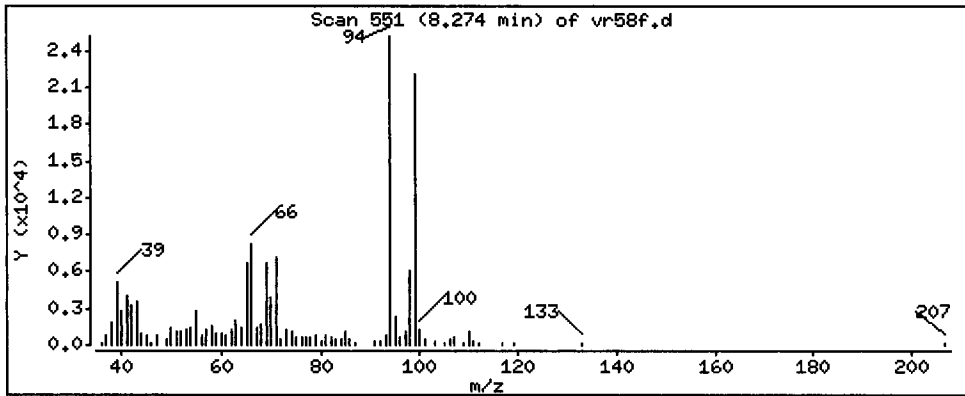
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 80.28 ug/kg





Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

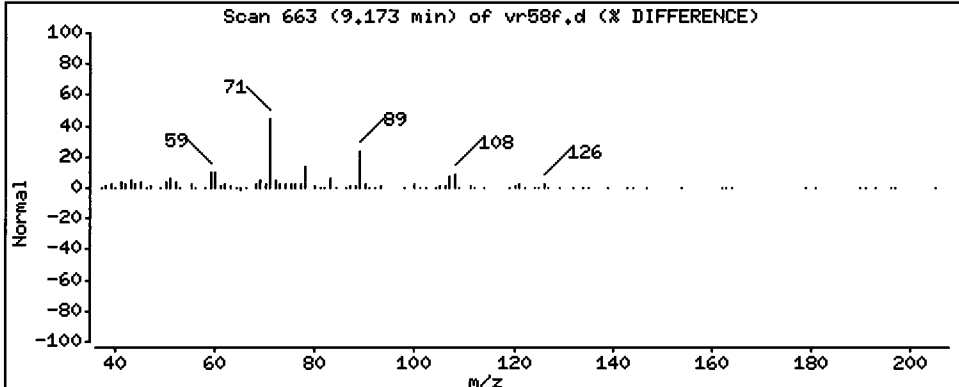
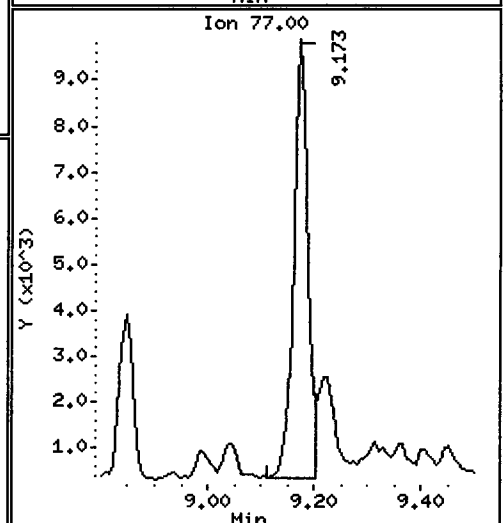
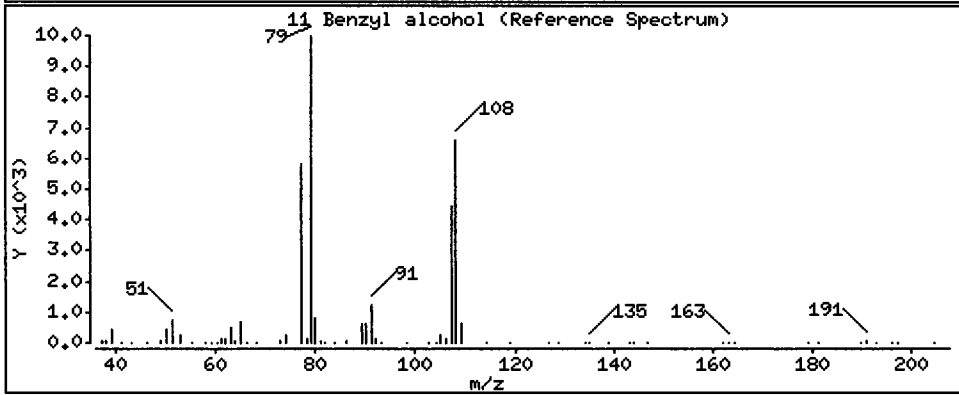
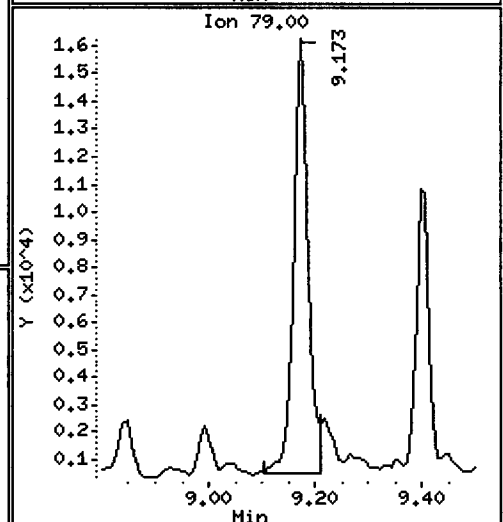
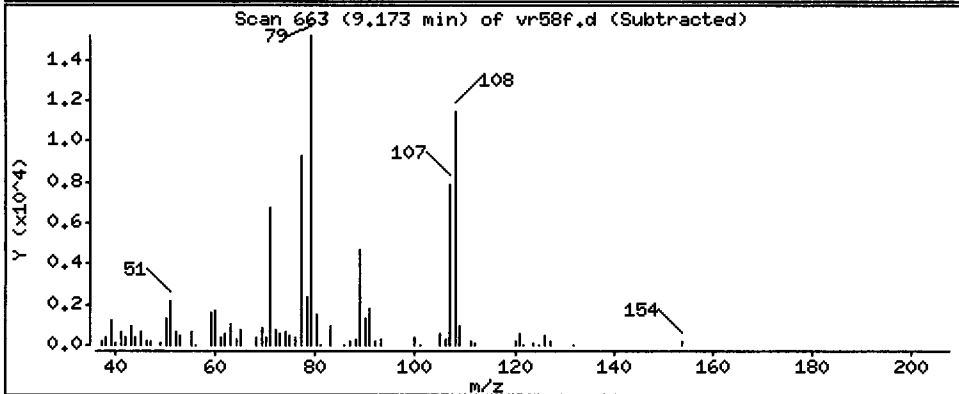
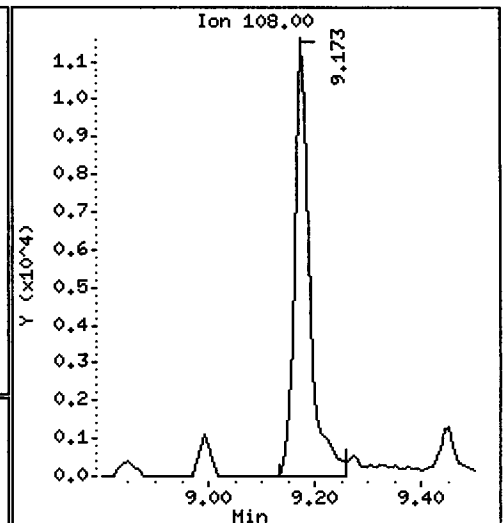
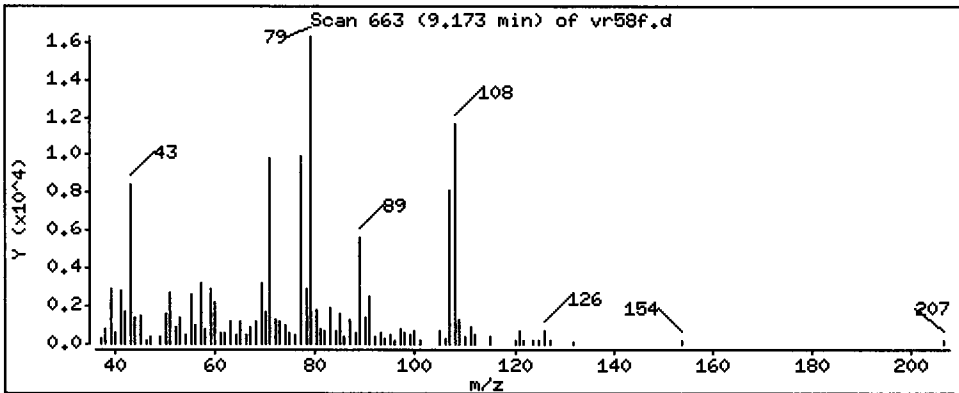
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 99.65 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

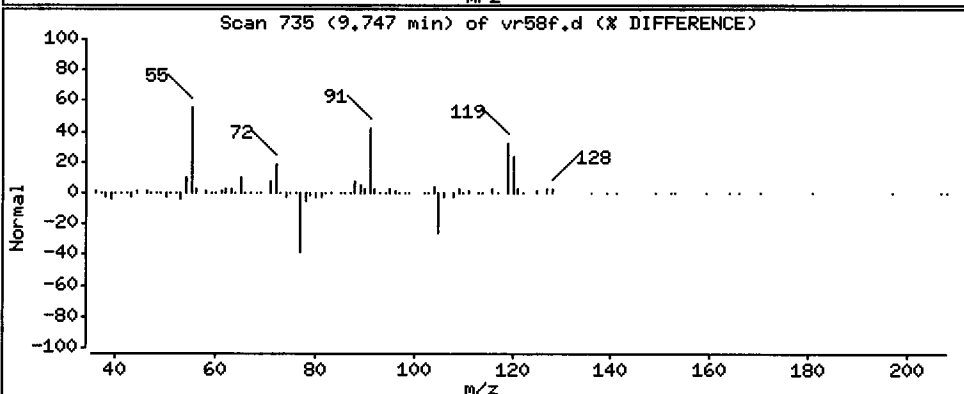
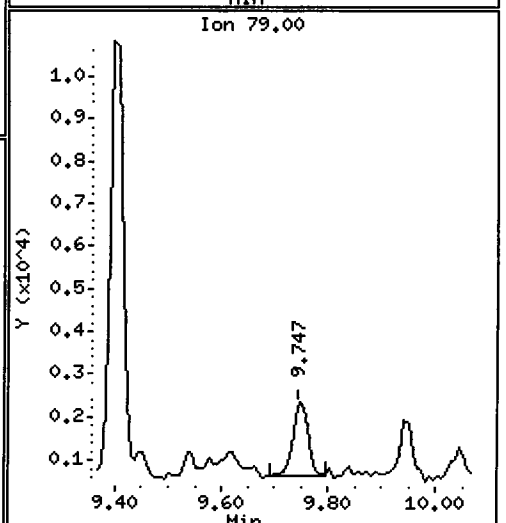
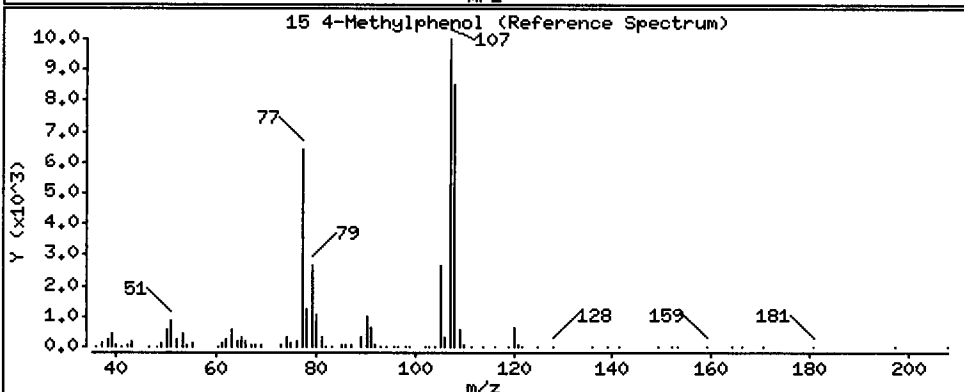
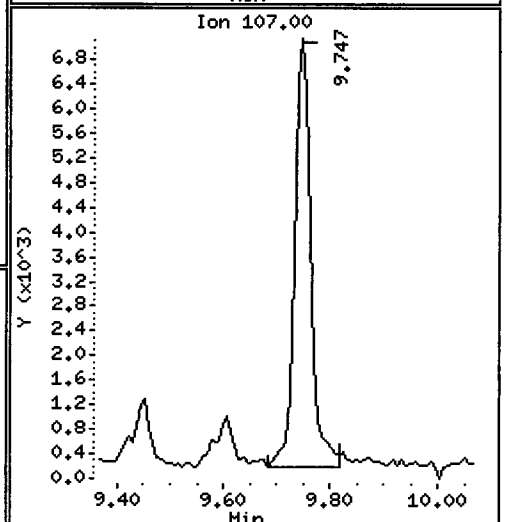
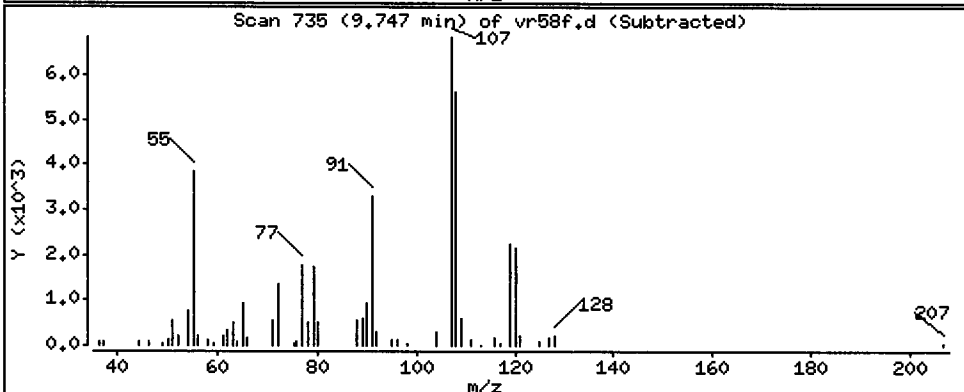
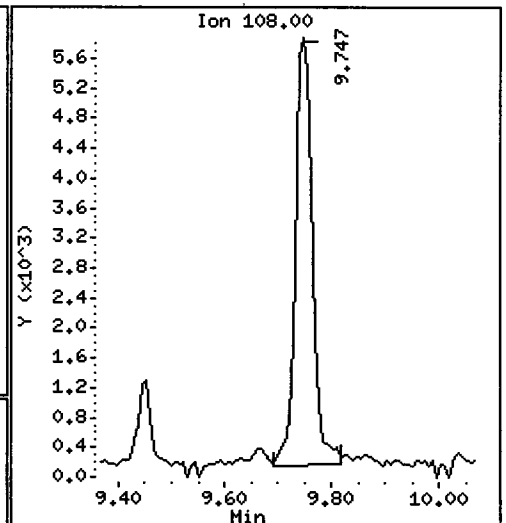
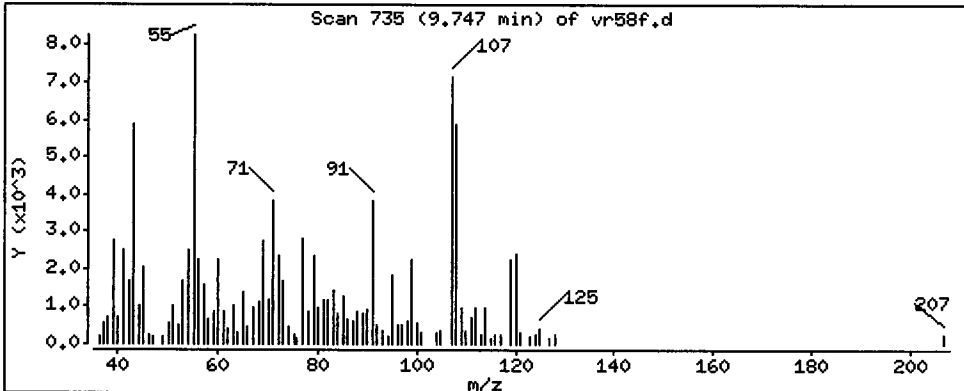
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 58.93 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.1

Sample Info: VR58F

Volume Injected (uL): 1.0

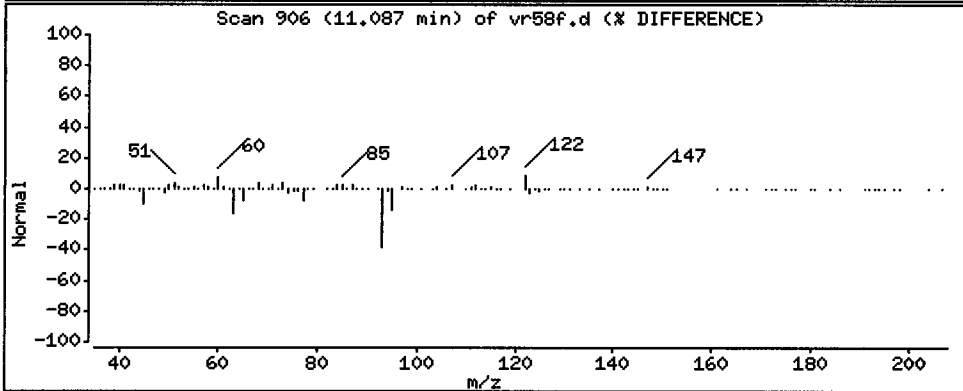
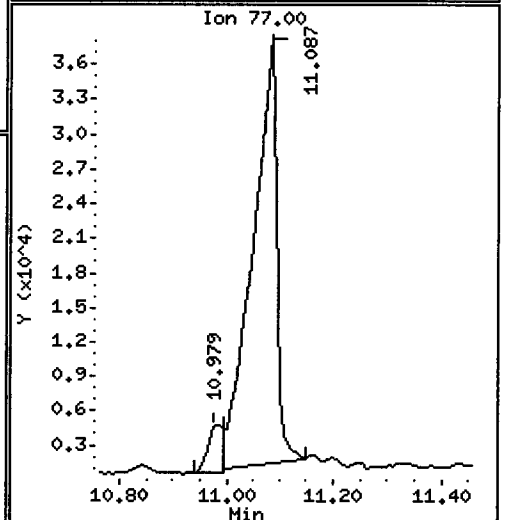
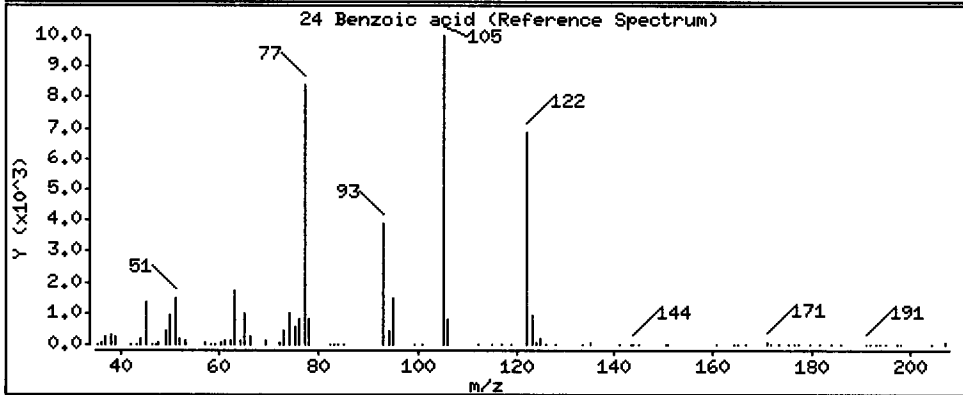
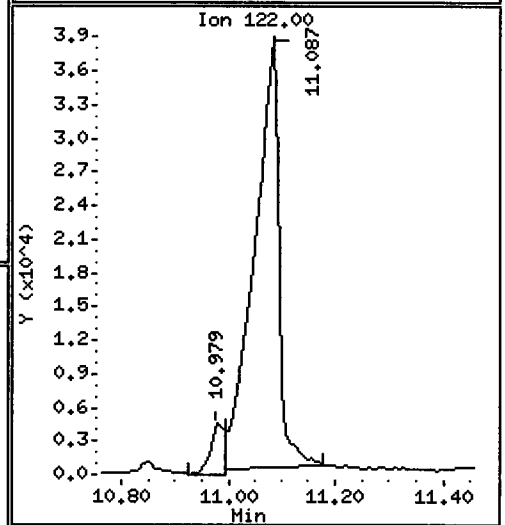
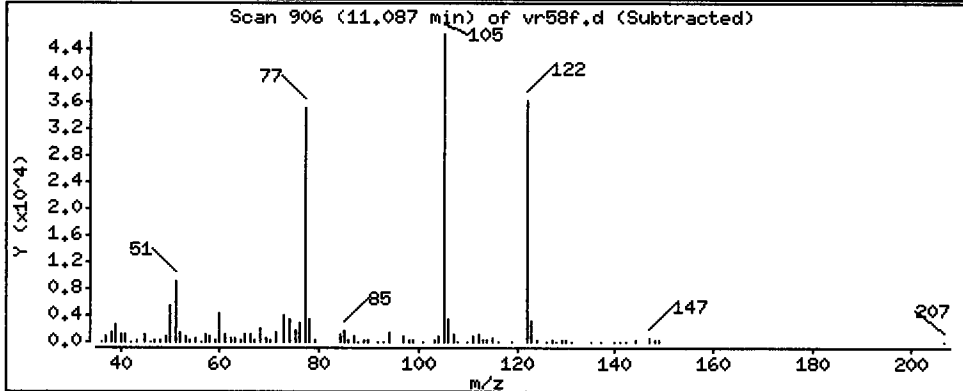
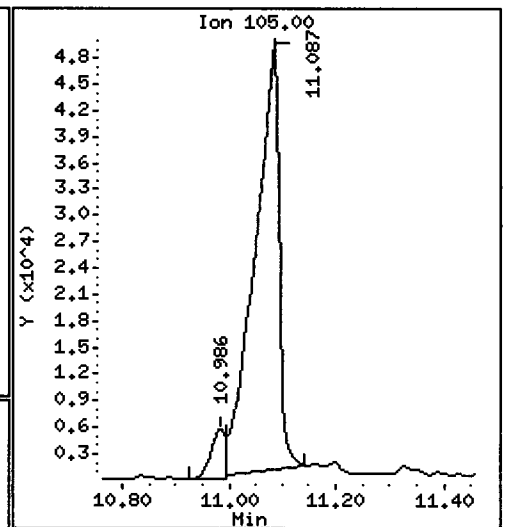
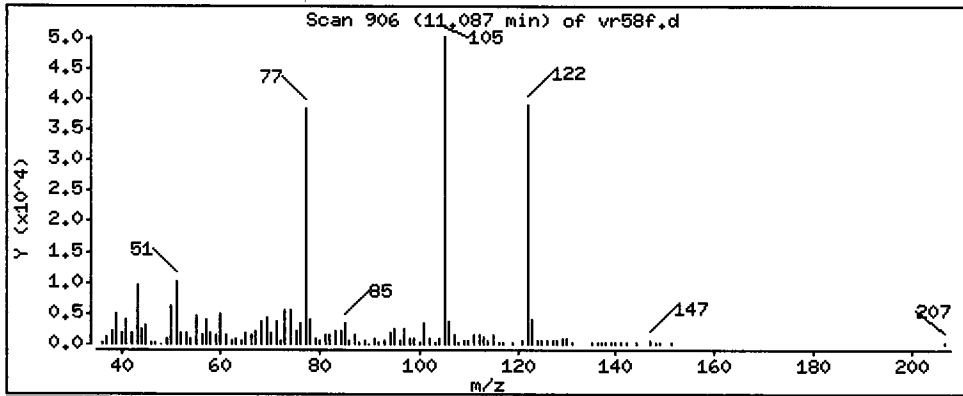
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 606.8 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

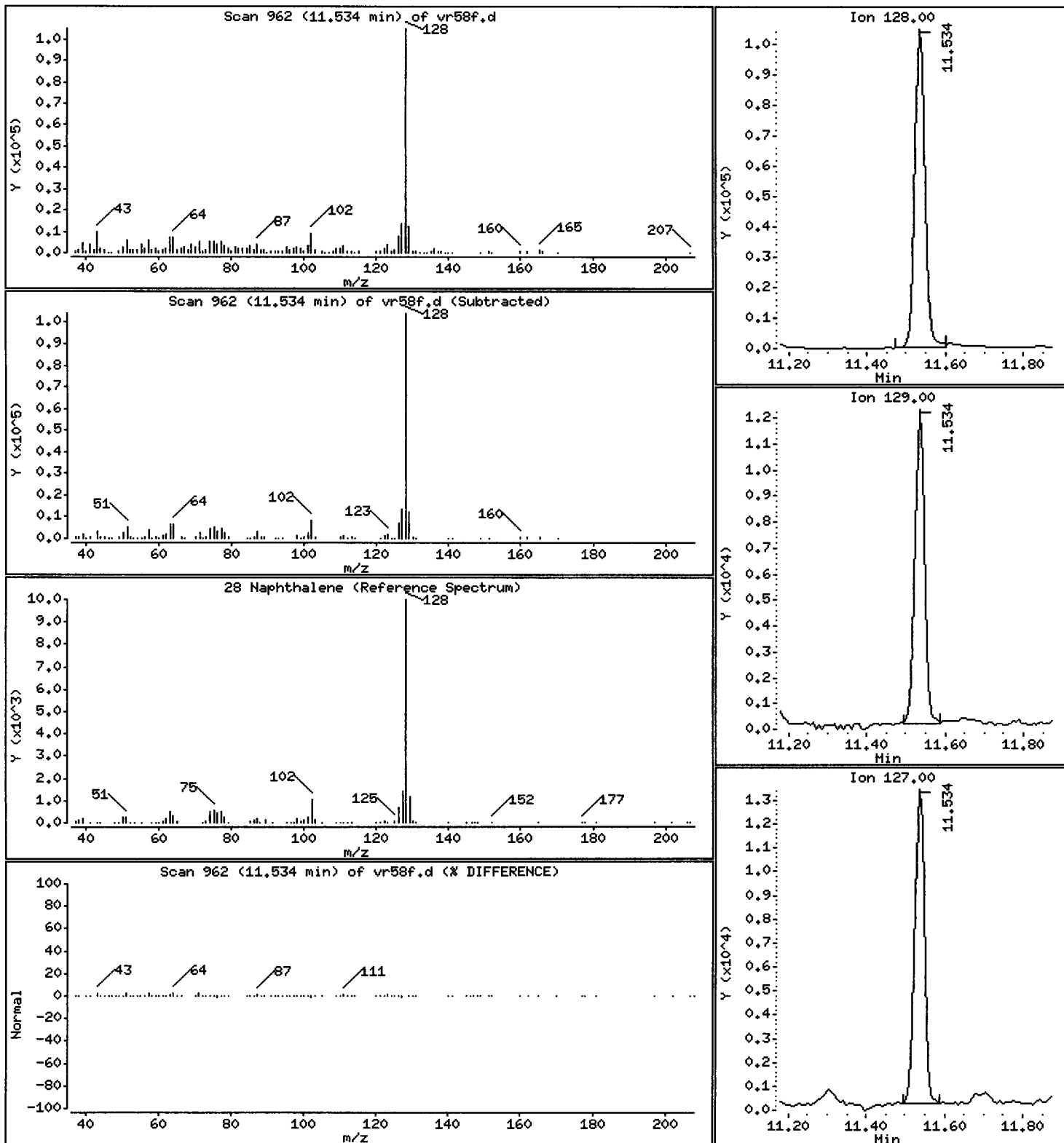
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 166.2 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

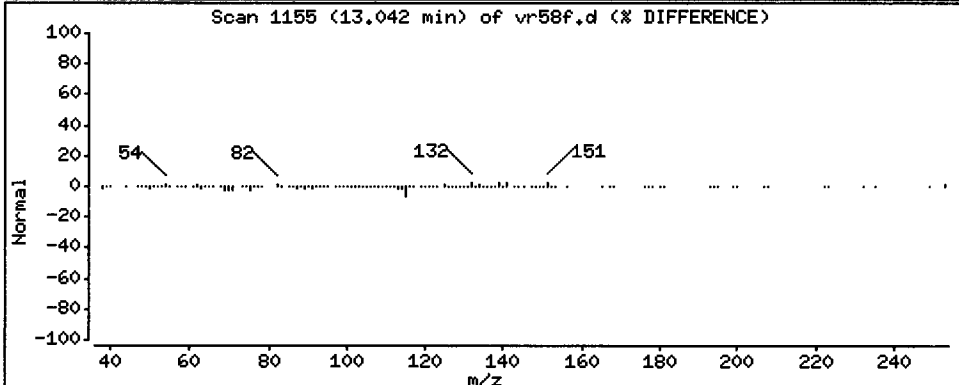
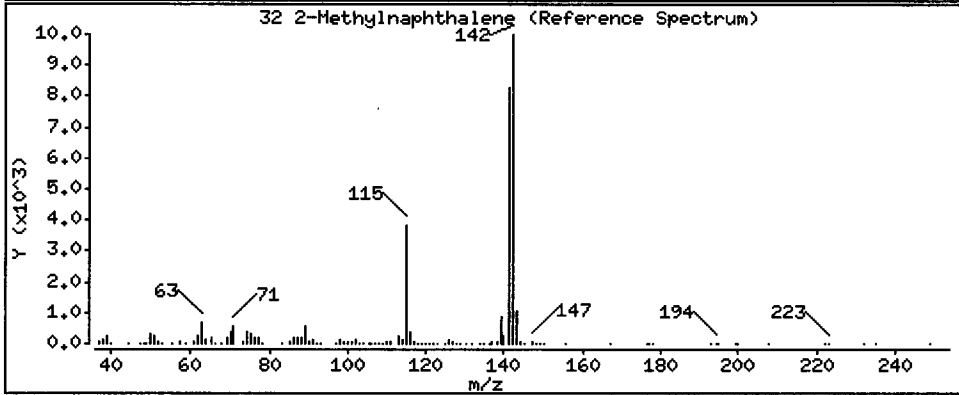
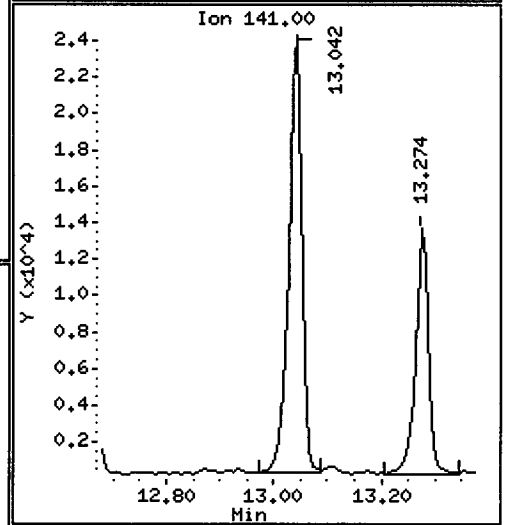
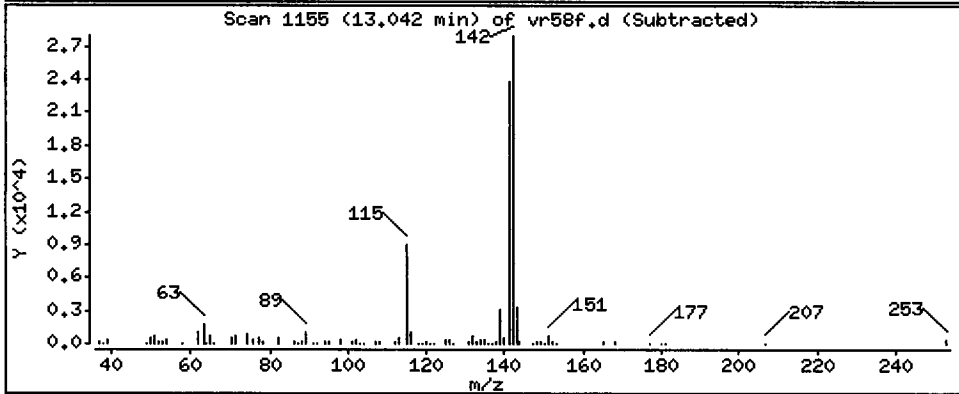
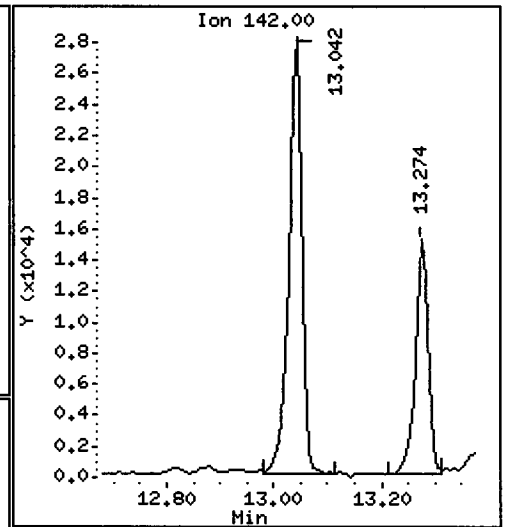
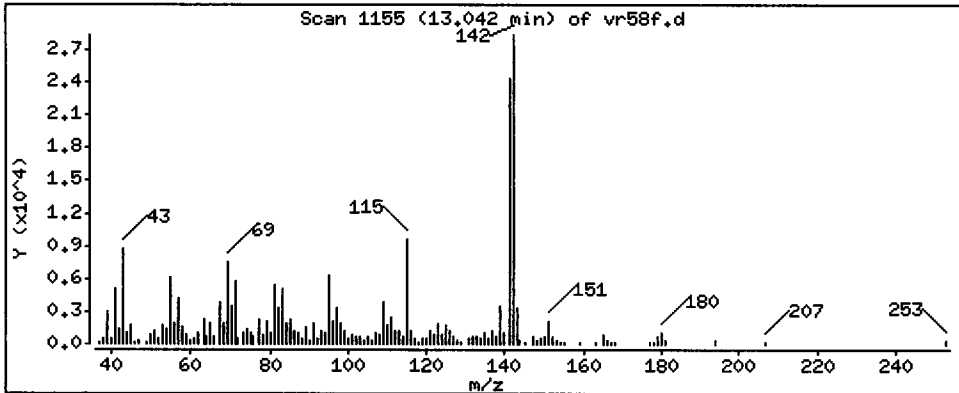
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 59.12 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

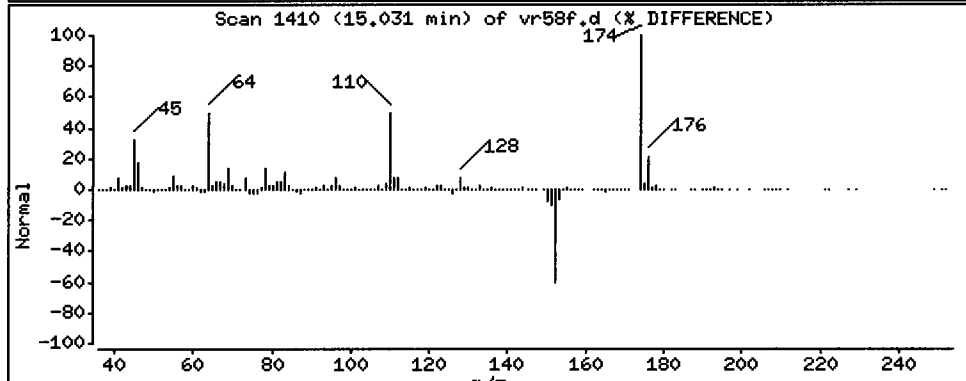
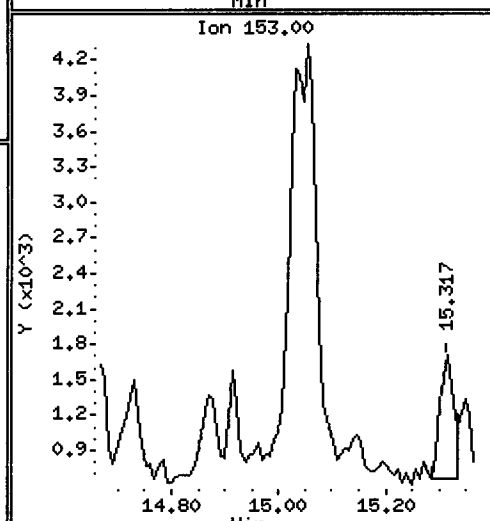
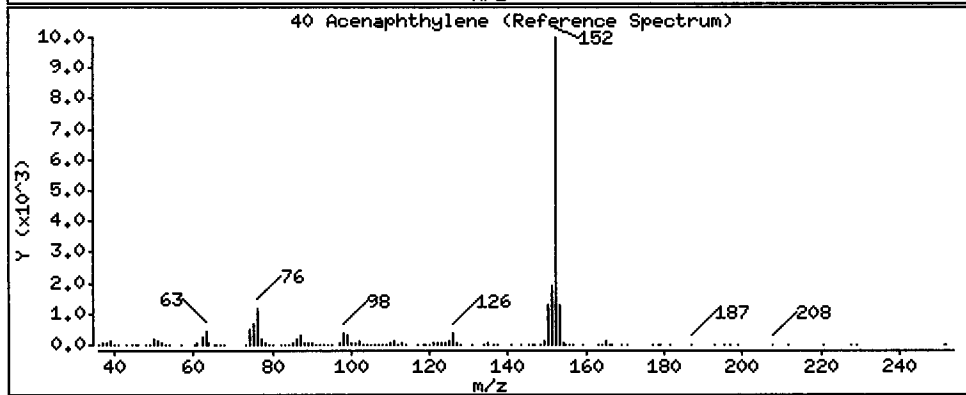
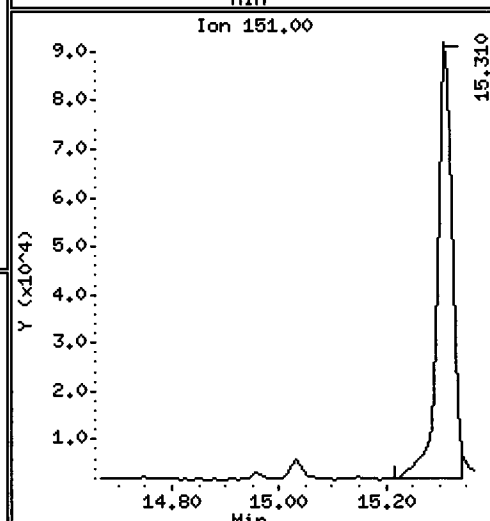
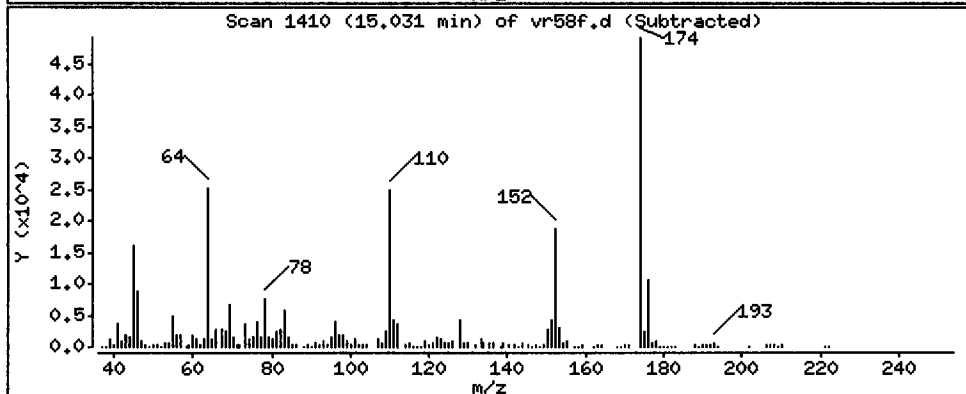
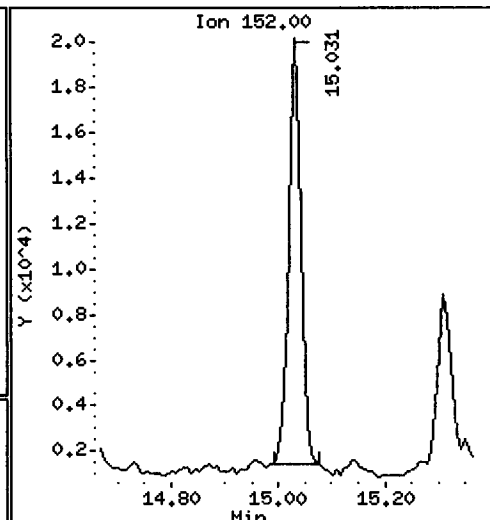
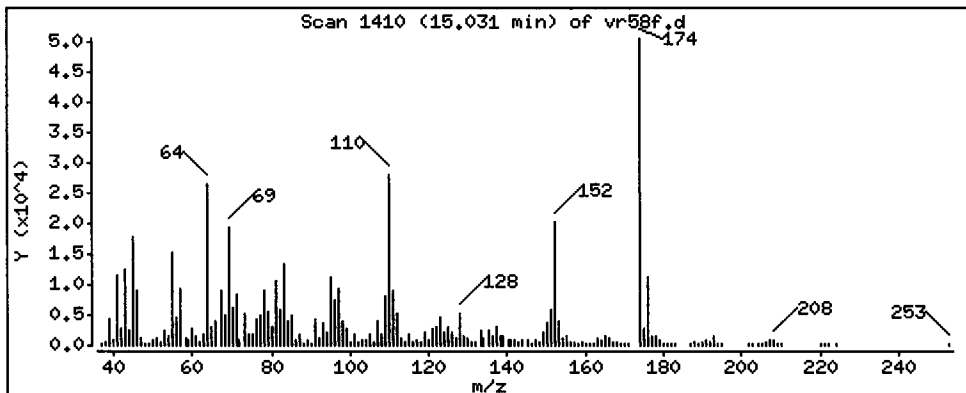
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

40 Acenaphthylene

Concentration: 26.18 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

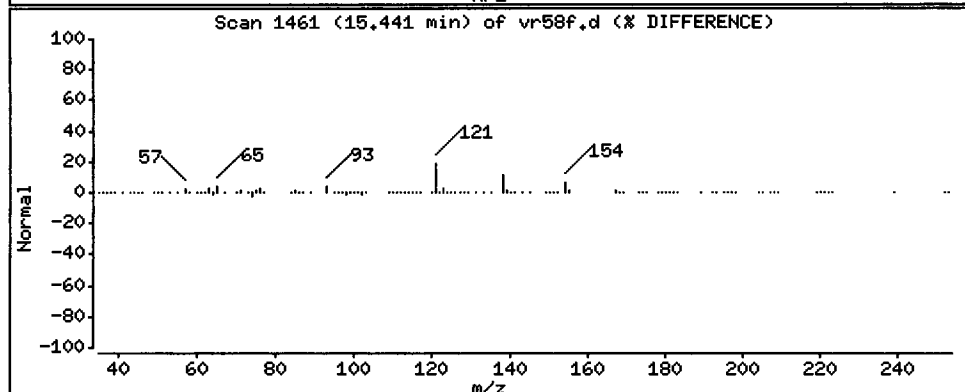
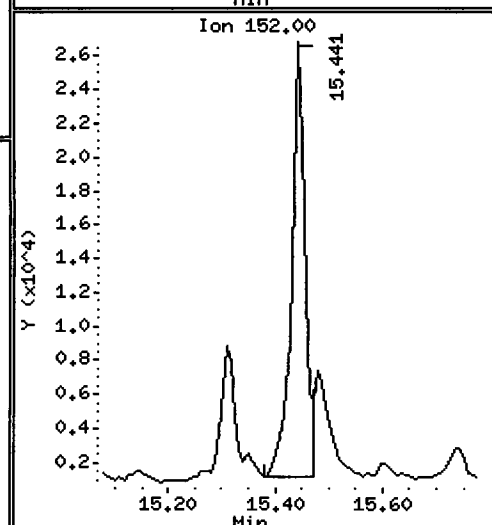
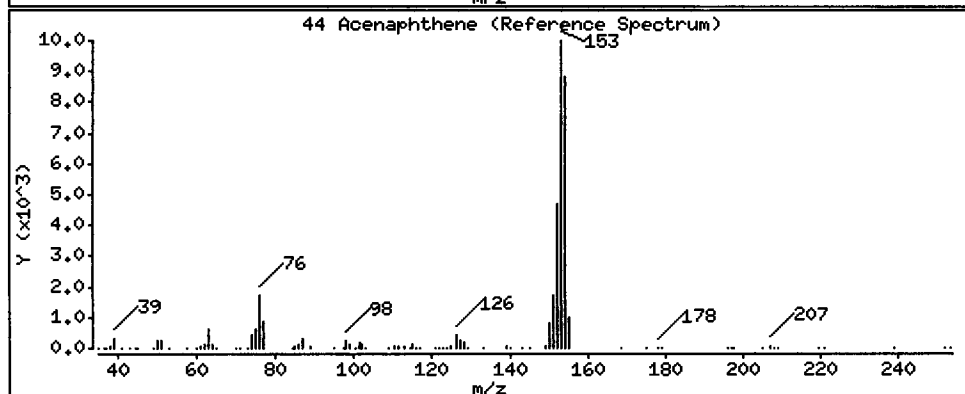
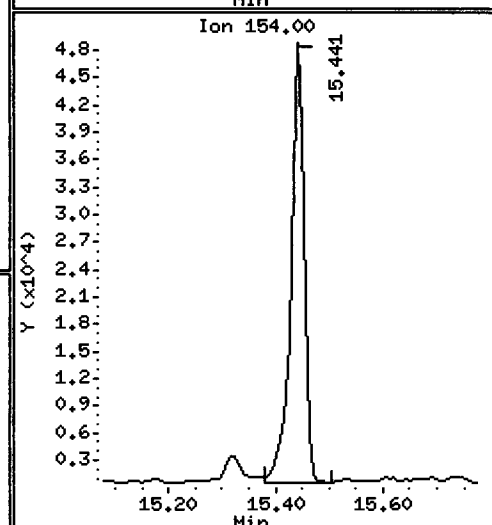
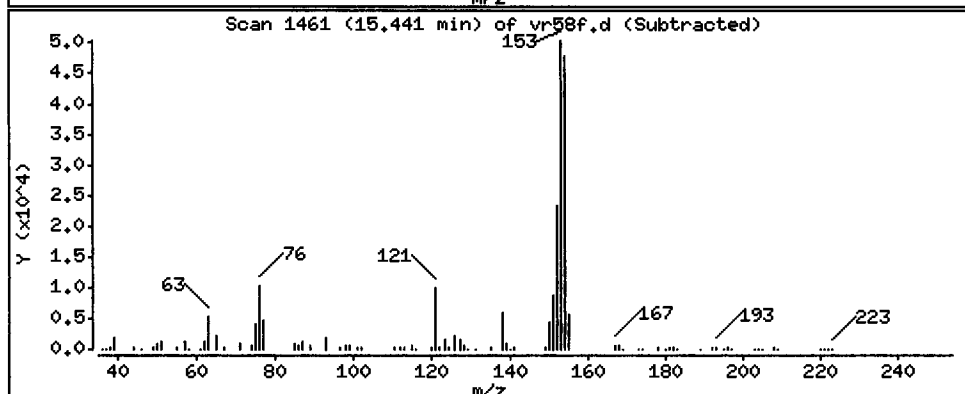
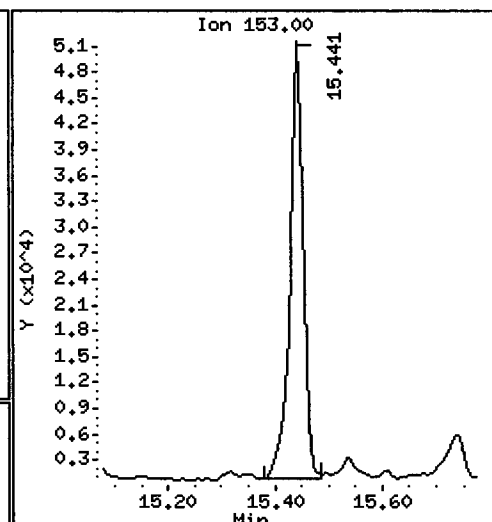
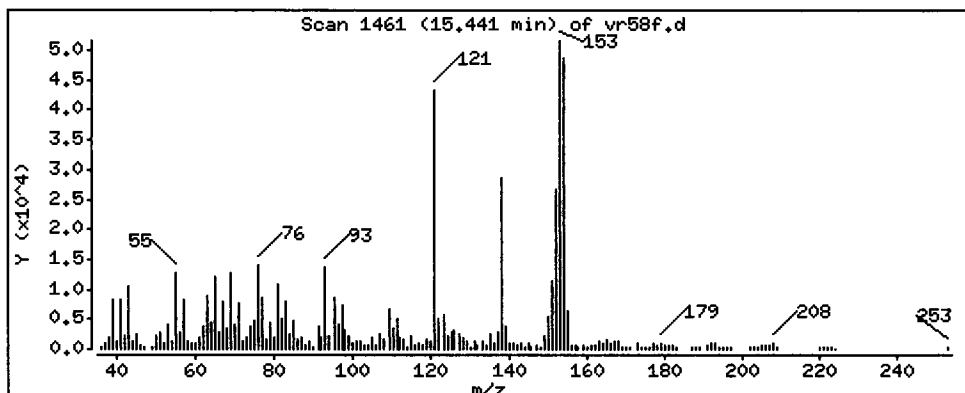
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 132.7 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

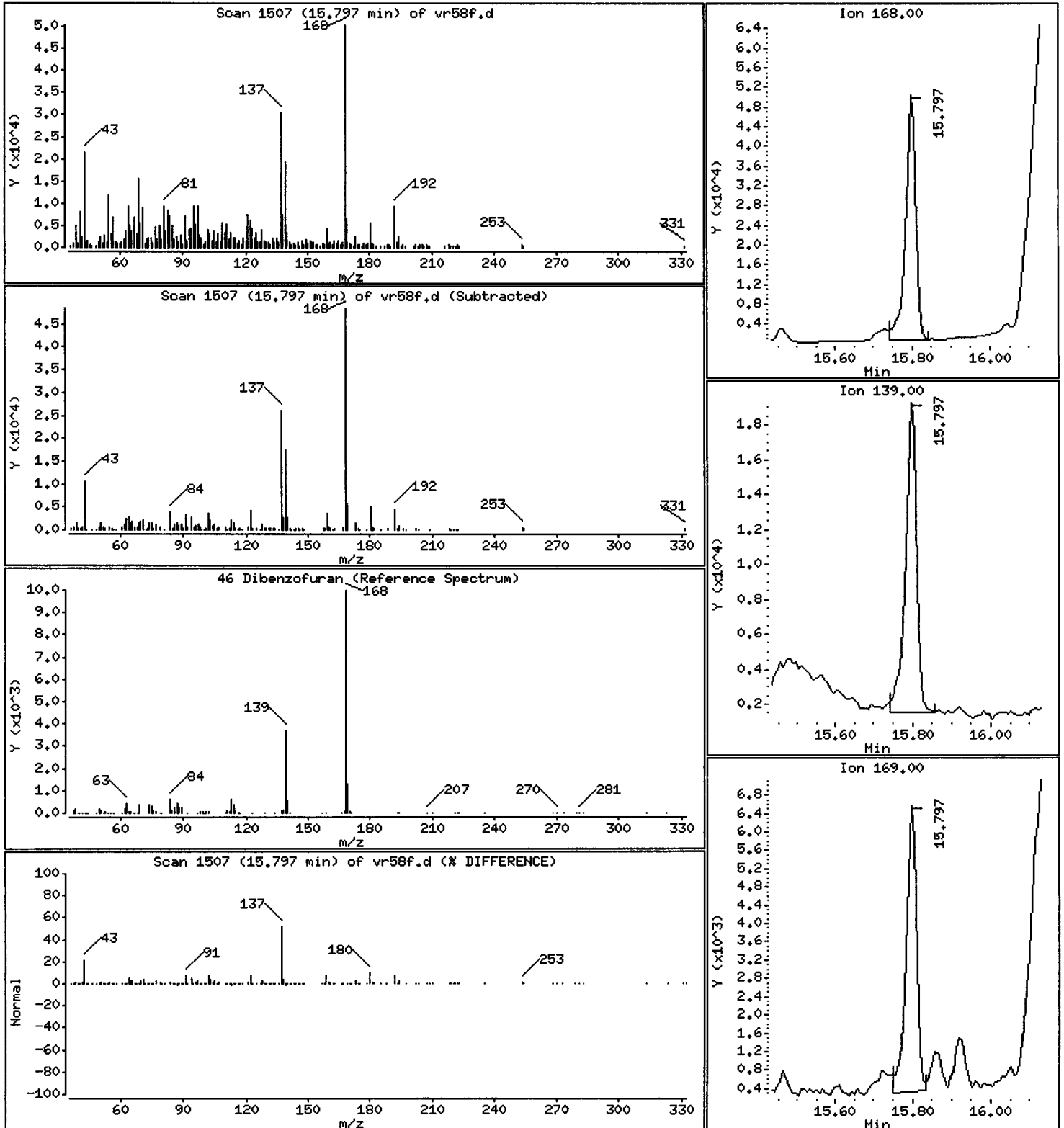
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 90.12 ug/kg





Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

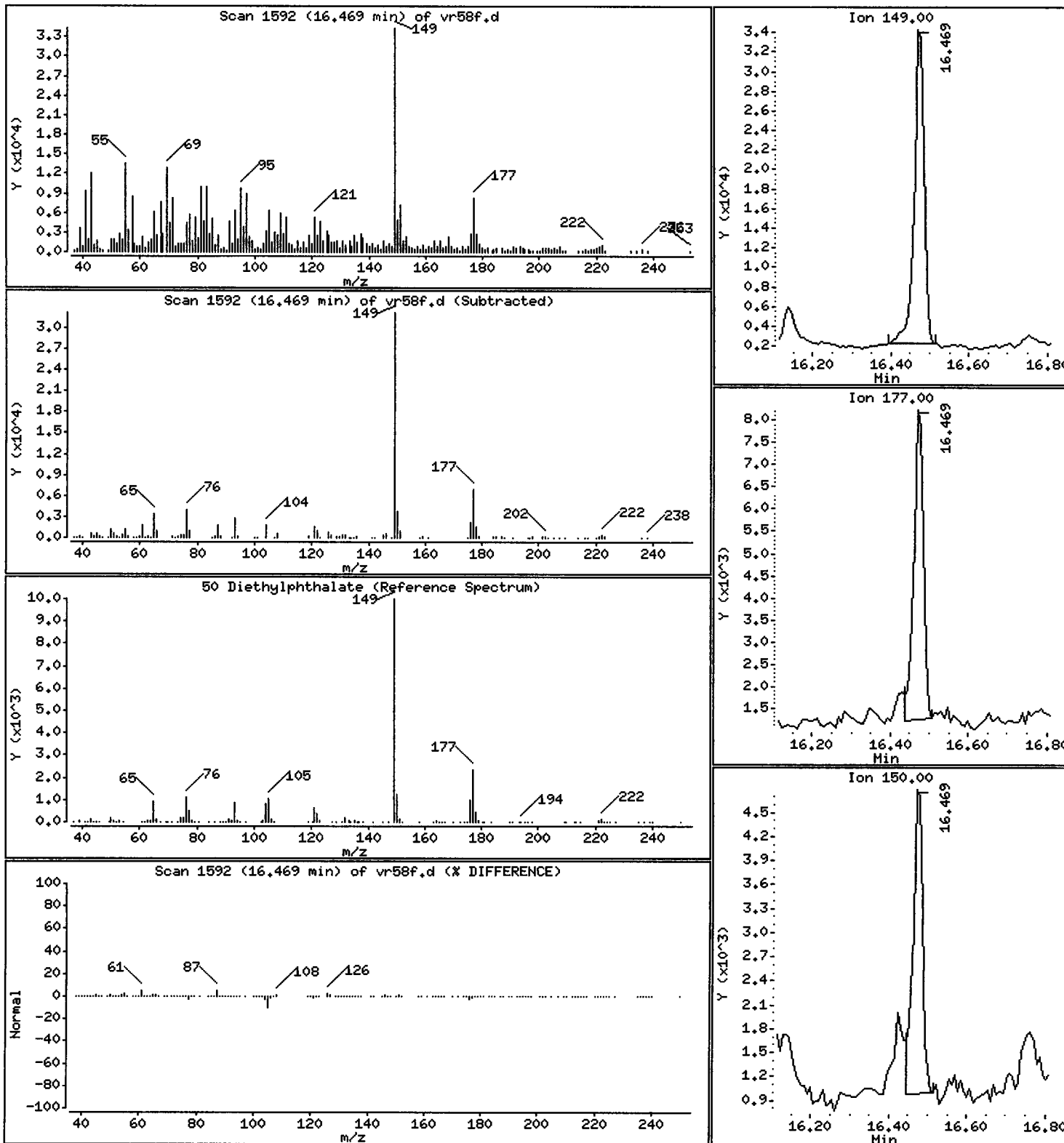
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 67.96 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

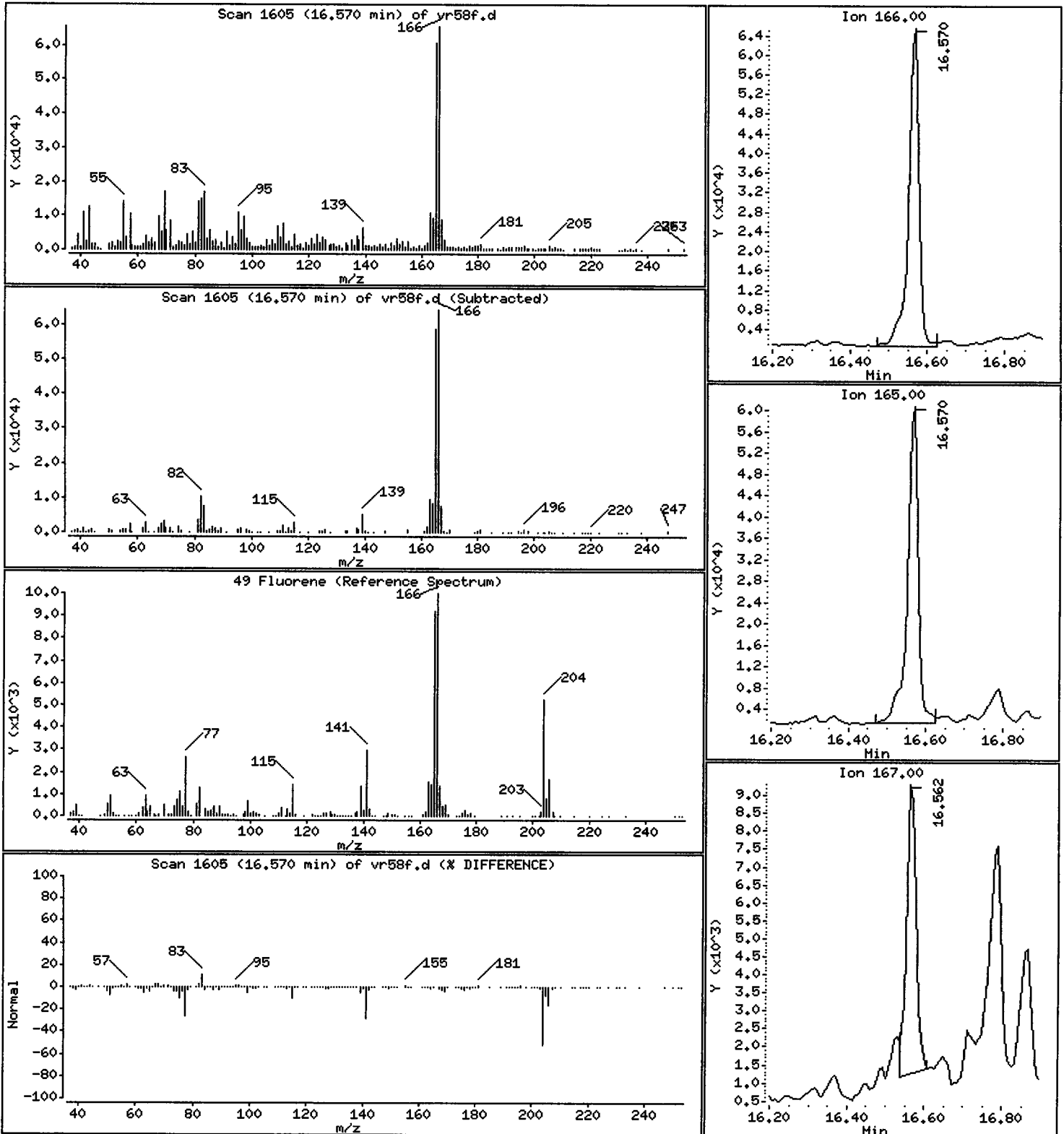
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 150.7 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10,i

Sample Info: VR58F

Volume Injected (uL): 1.0

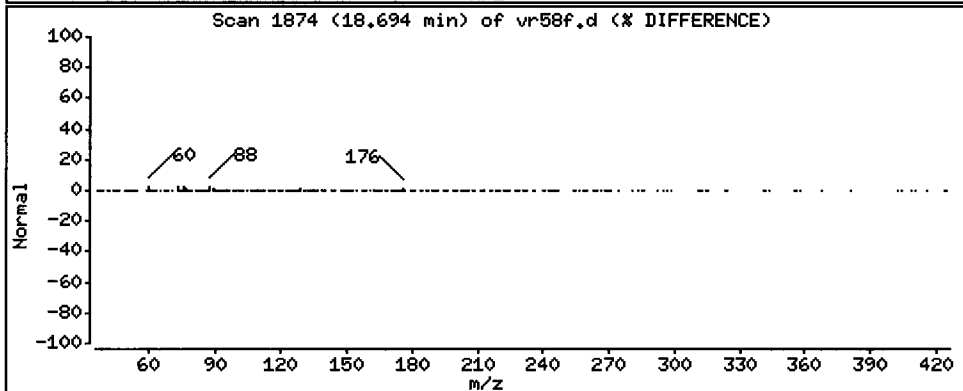
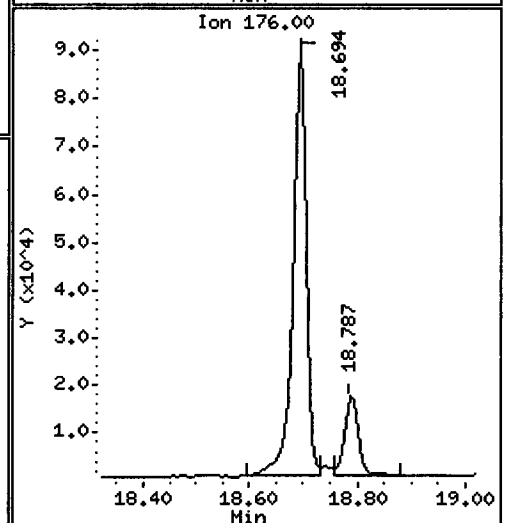
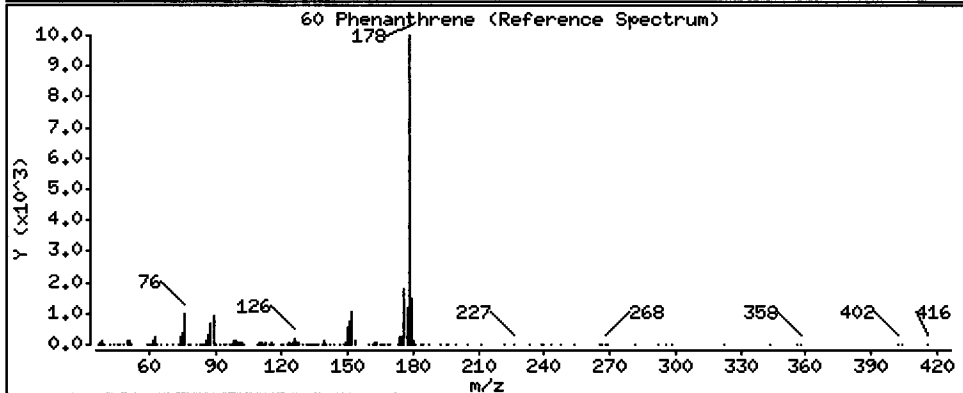
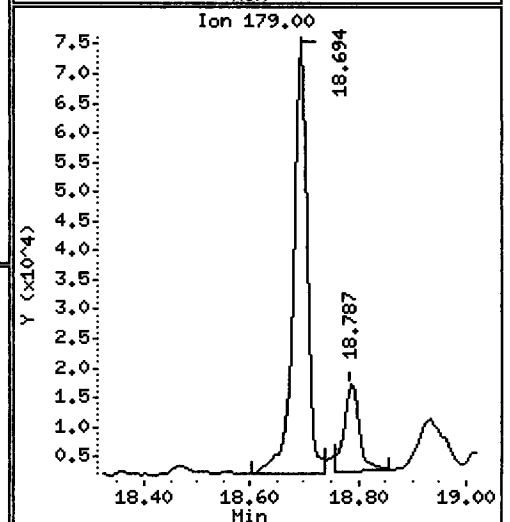
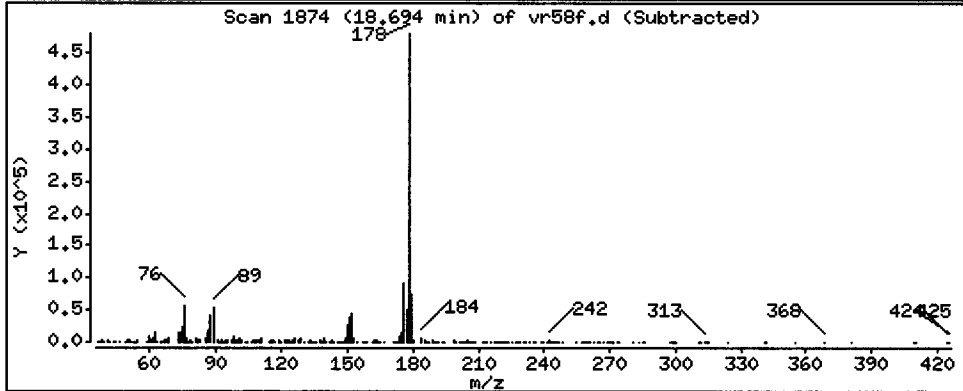
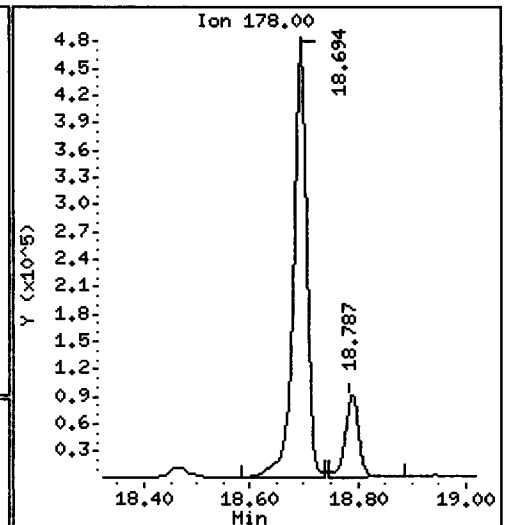
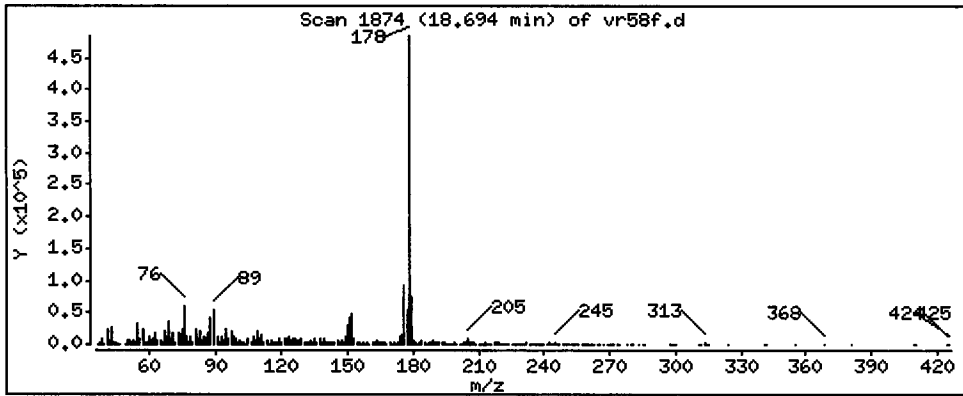
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 835.4 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

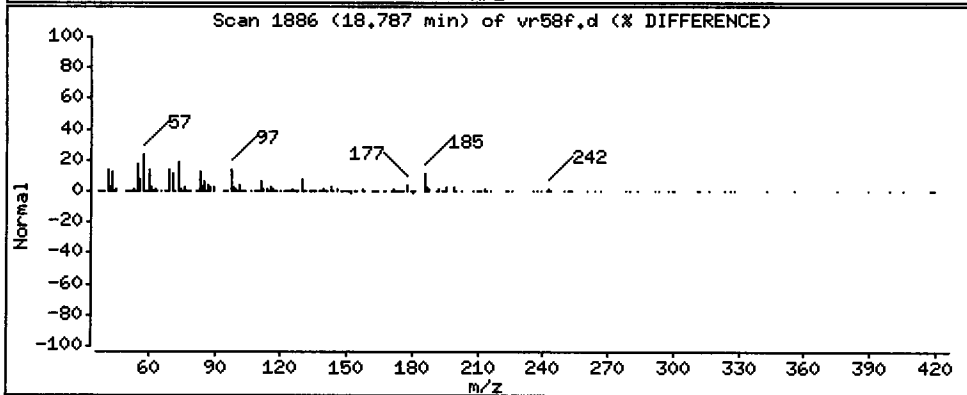
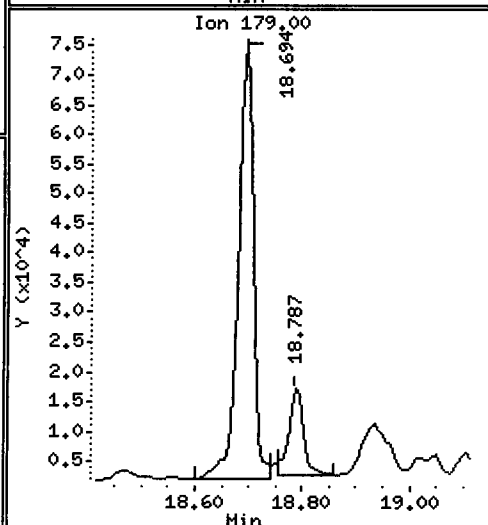
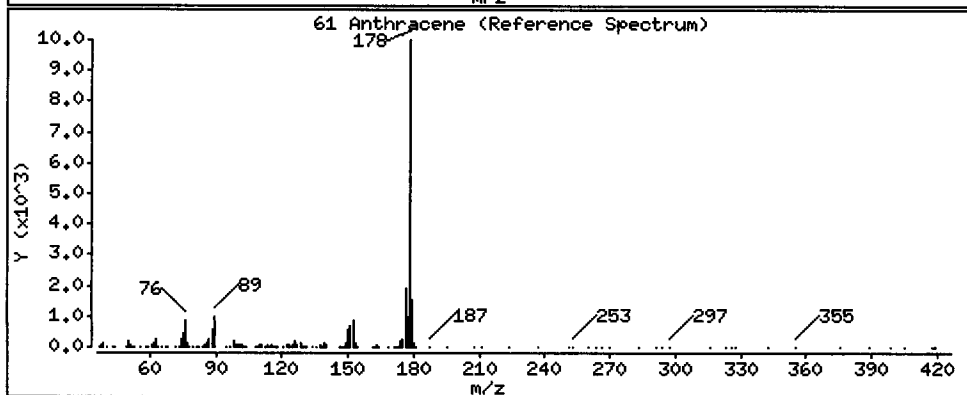
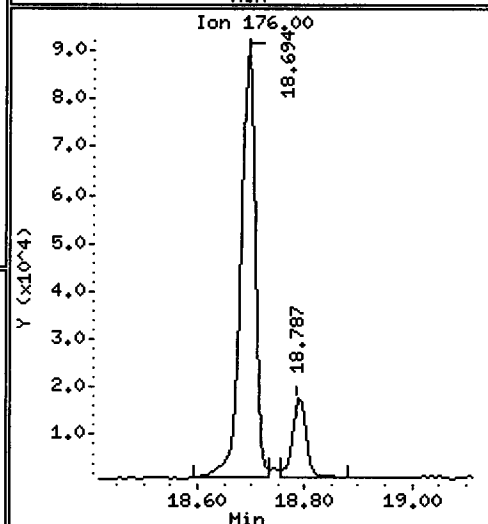
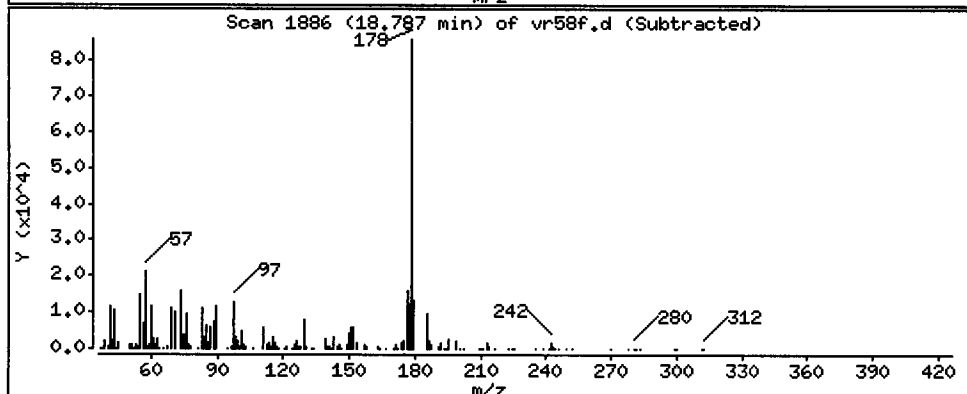
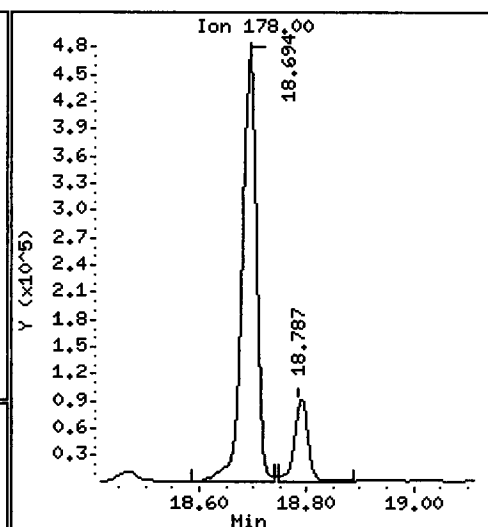
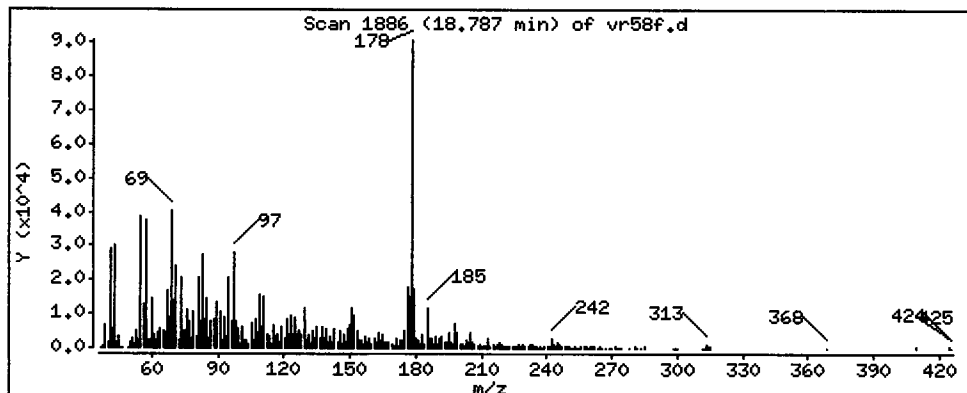
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 153.0 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

Operator: VTS/YZ

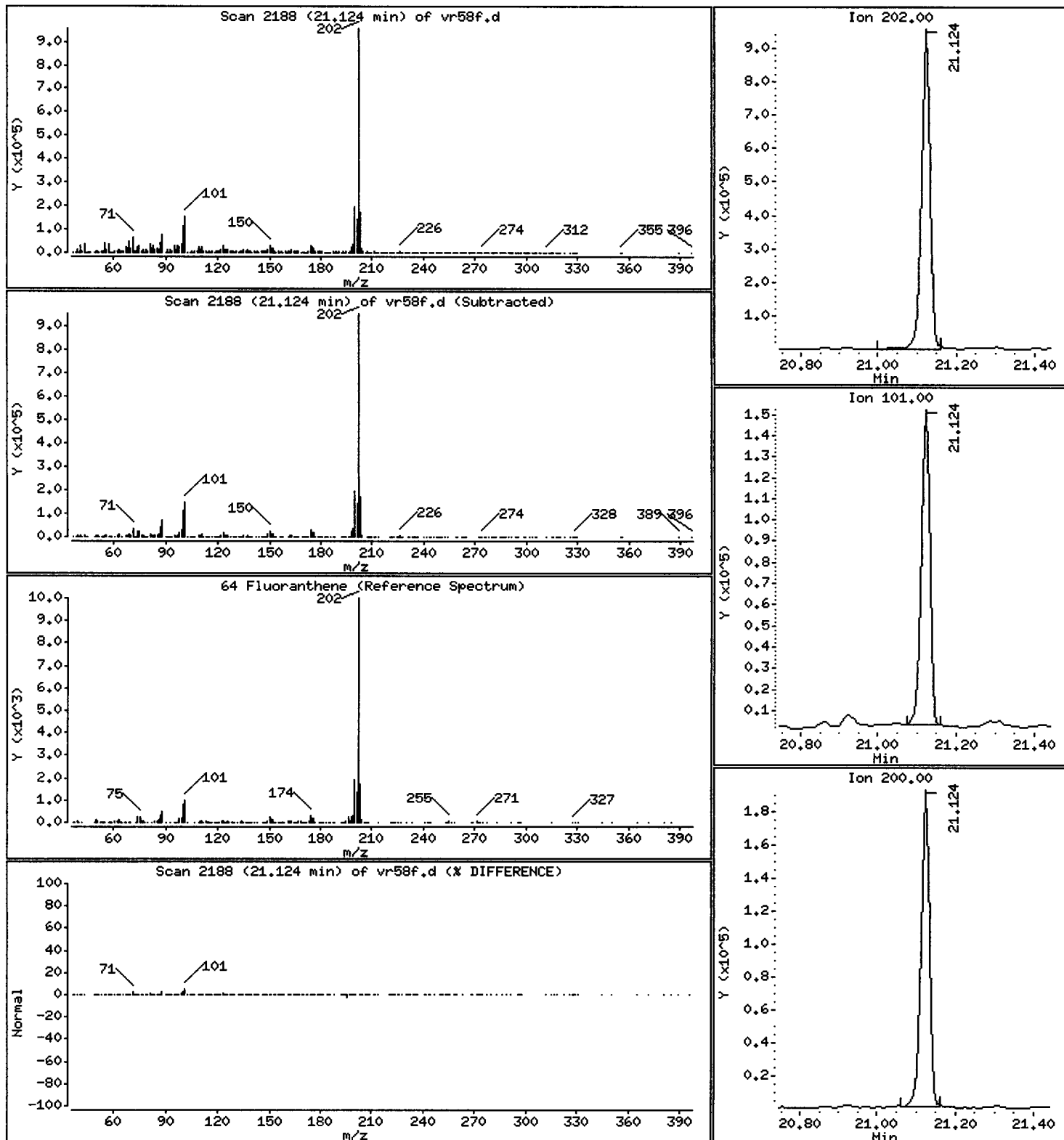
Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 1193 ug/kg

F



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

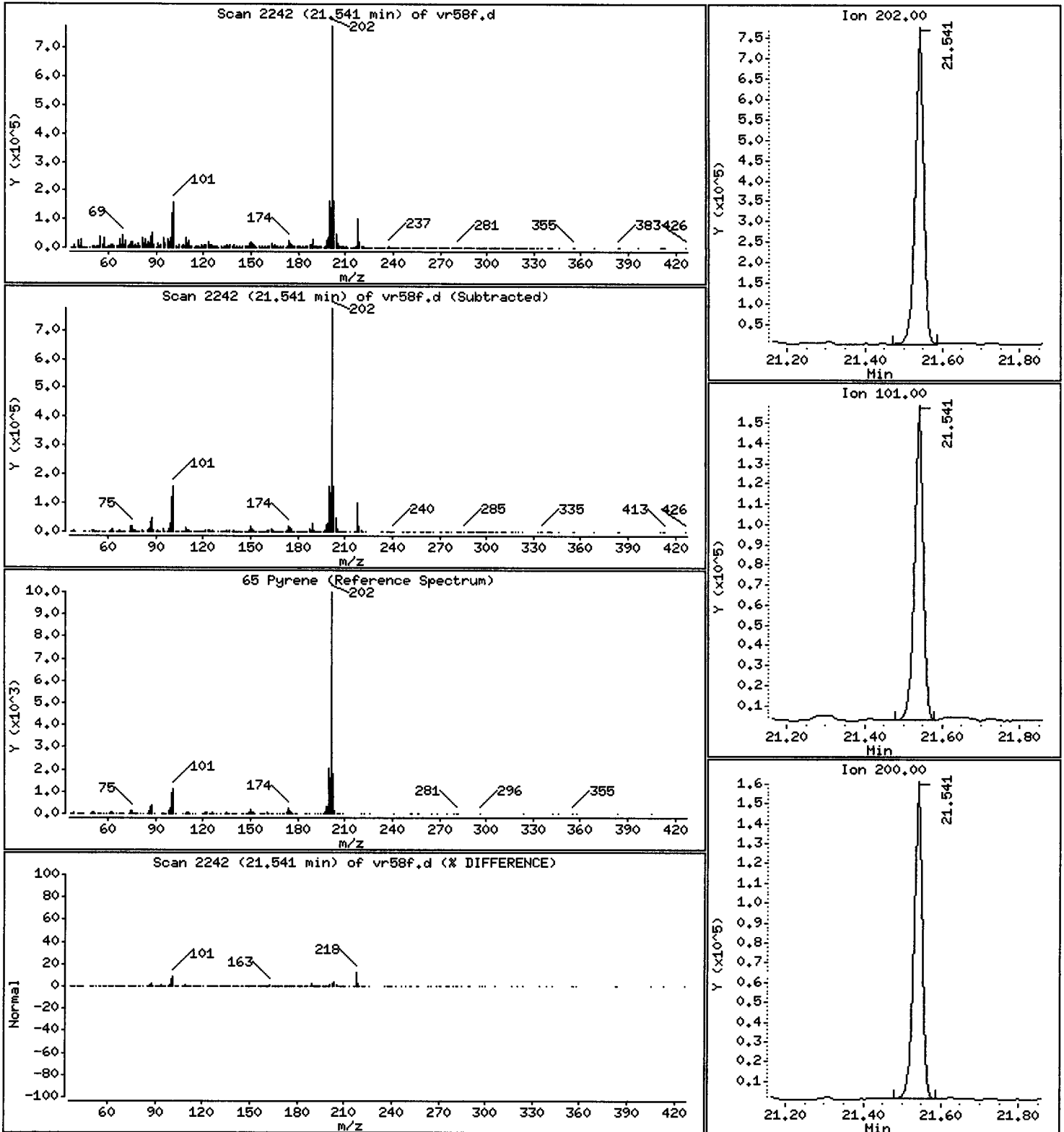
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 925.3 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

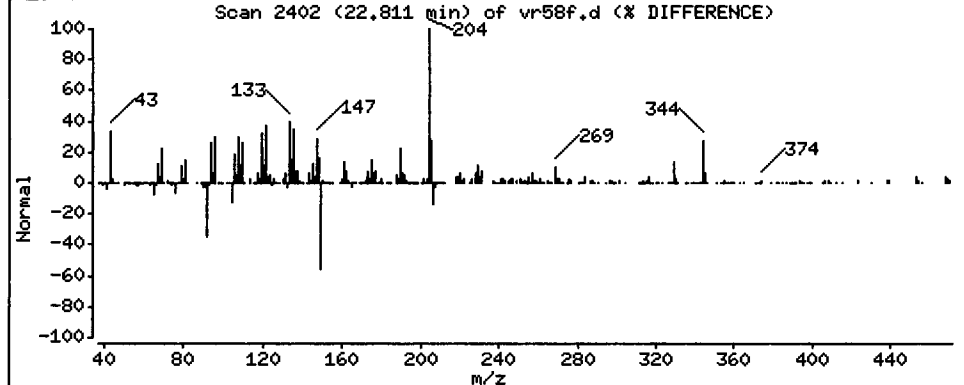
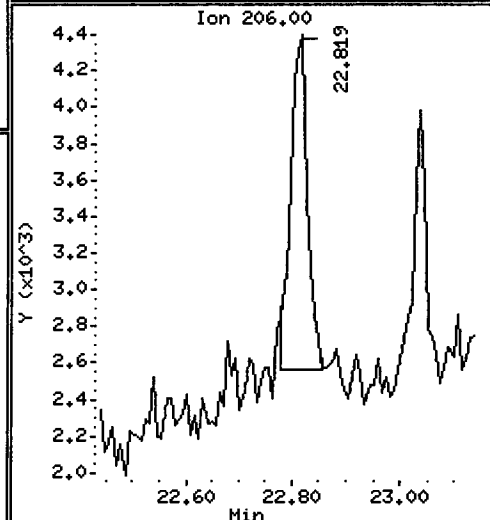
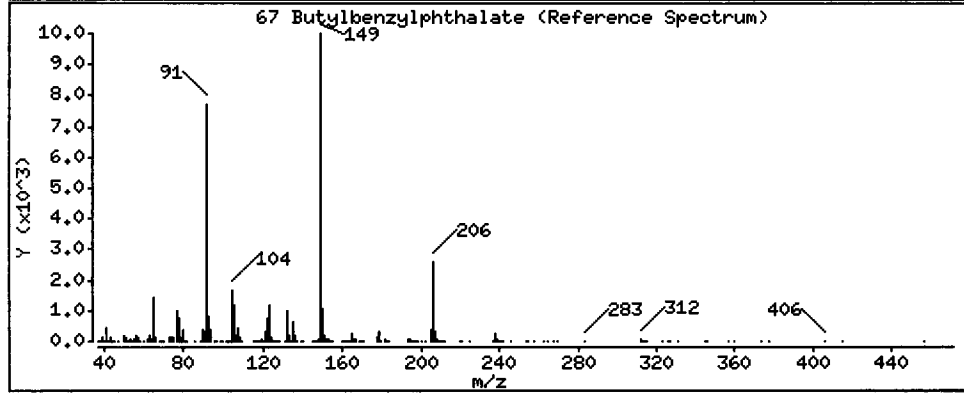
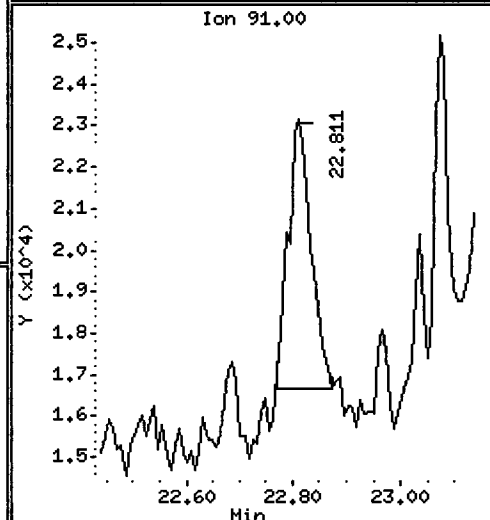
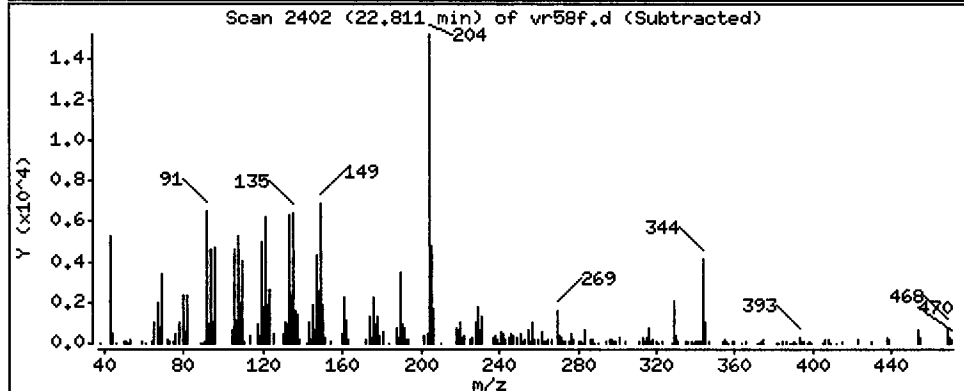
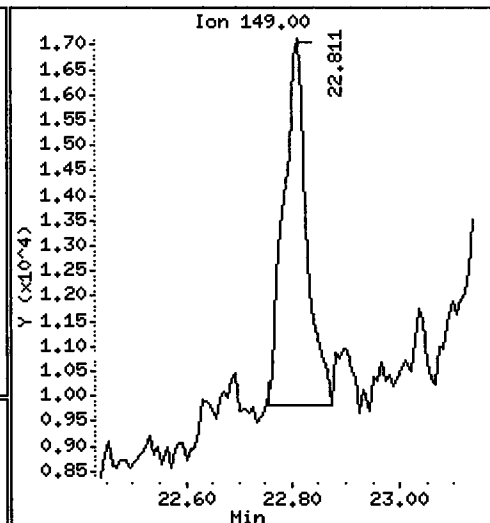
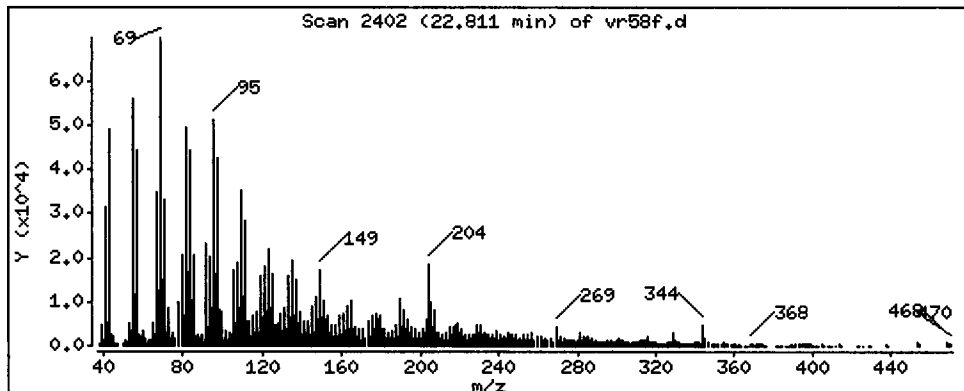
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 42.65 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

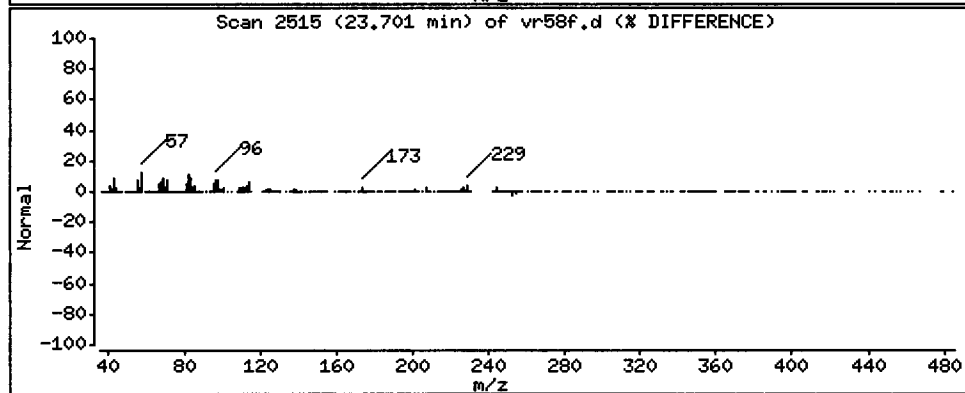
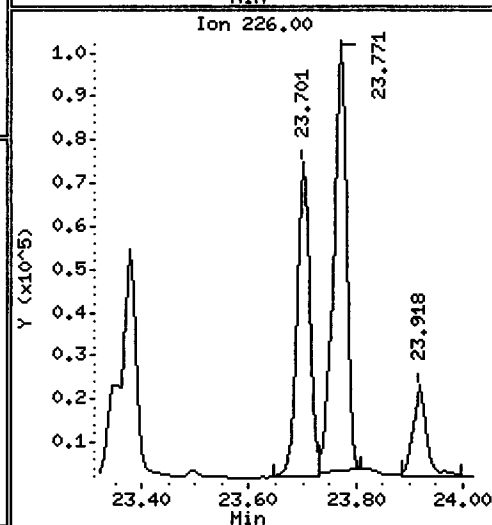
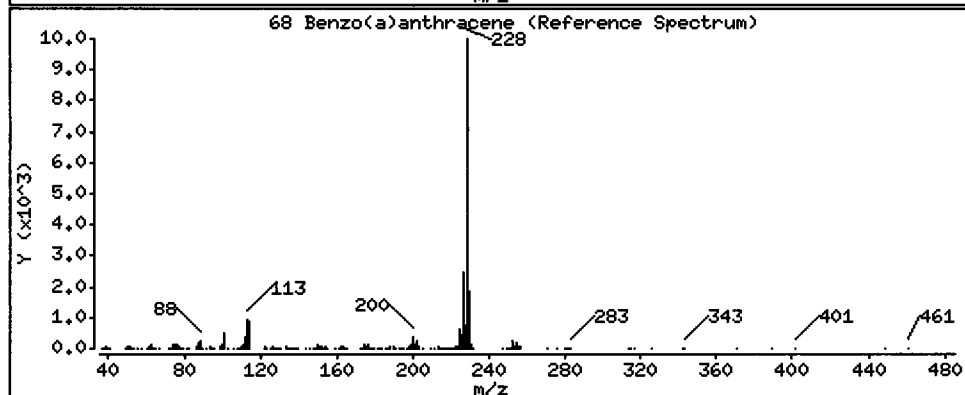
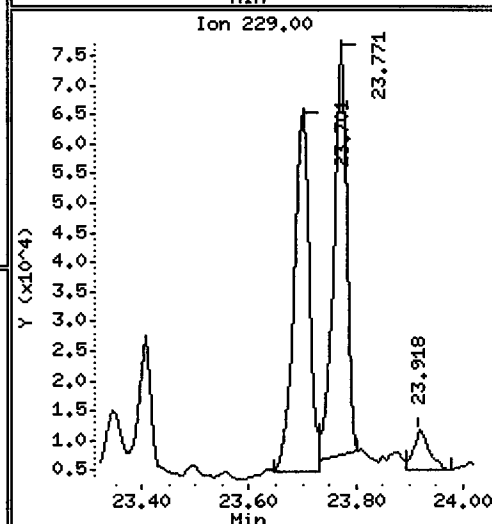
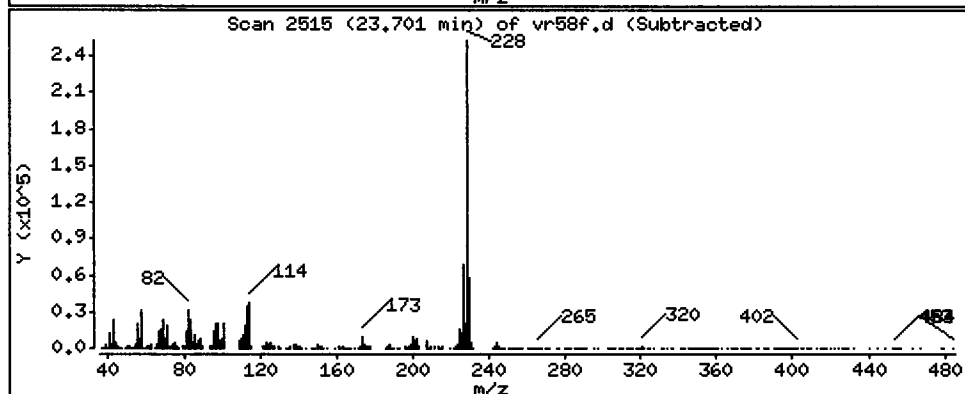
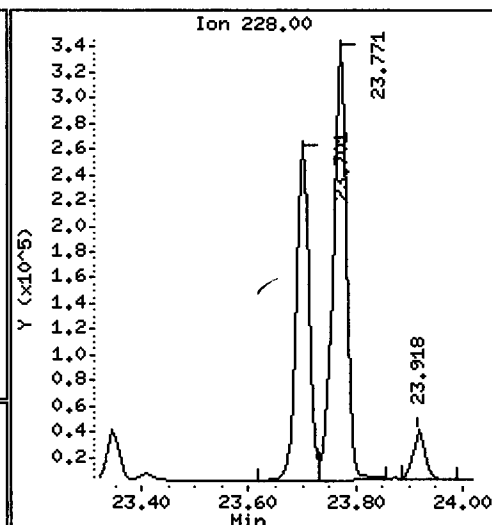
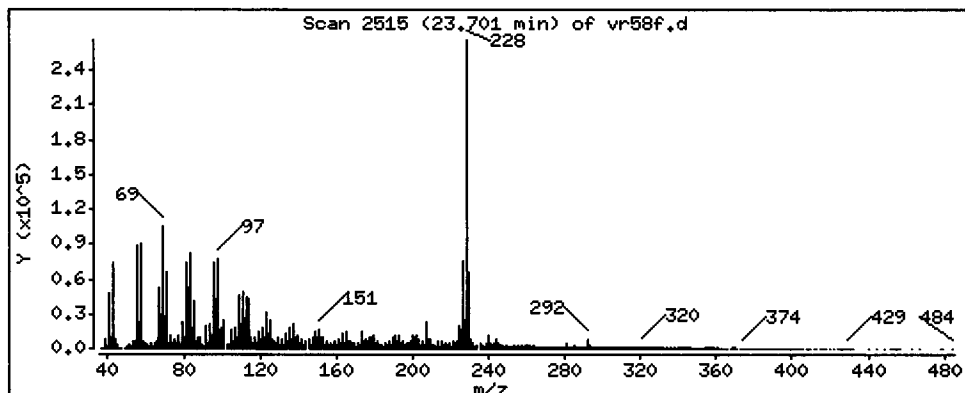
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

68 Benzo(a)anthracene

Concentration: 364.4 ug/kg





Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

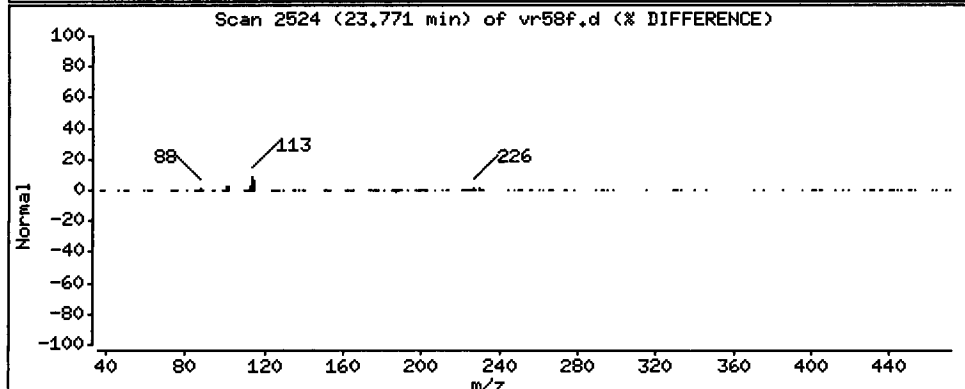
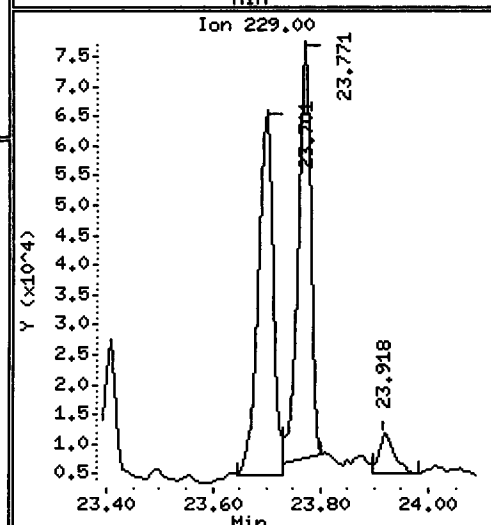
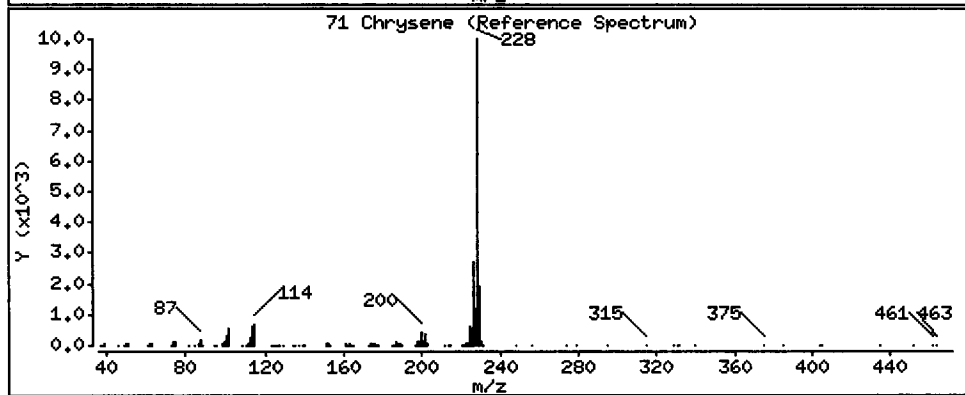
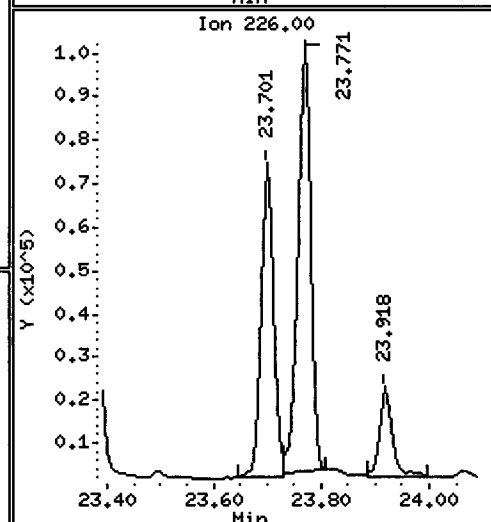
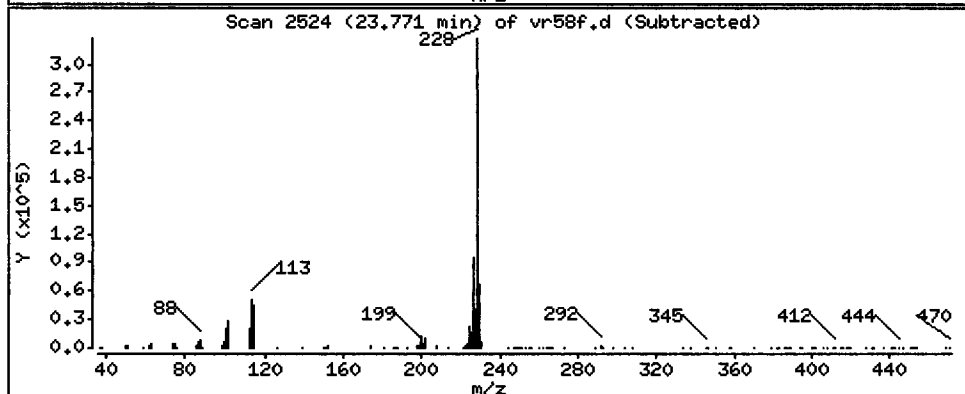
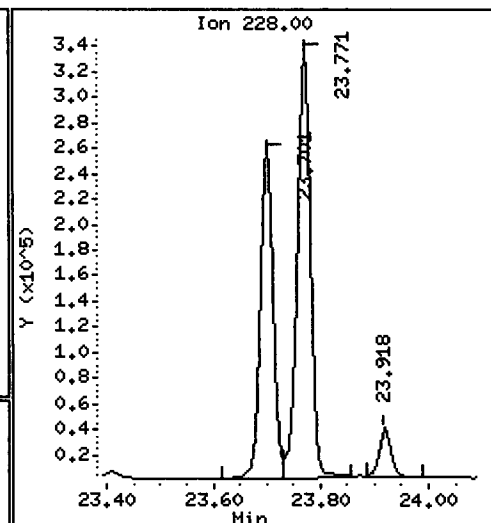
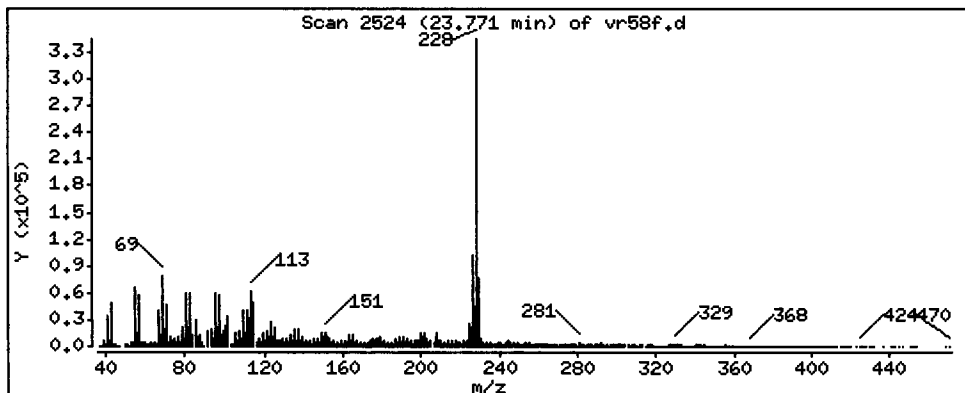
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

71 Chrysene

Concentration: 549.1 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

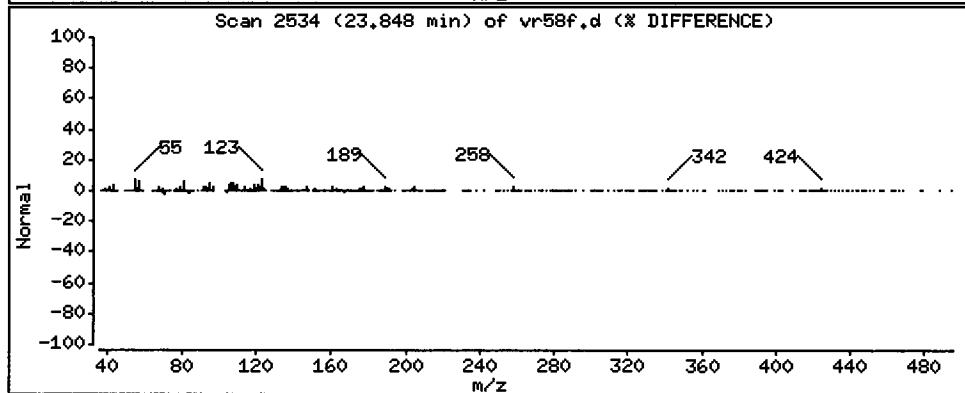
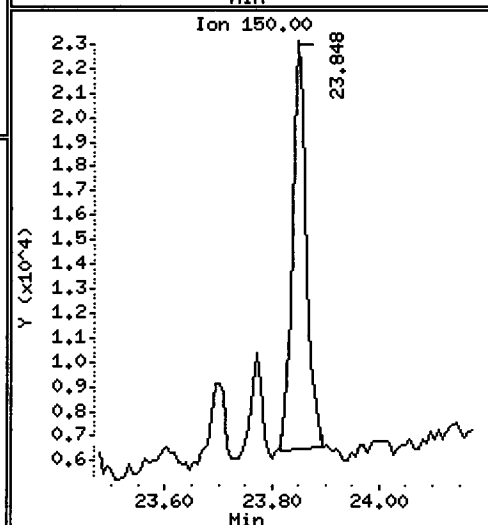
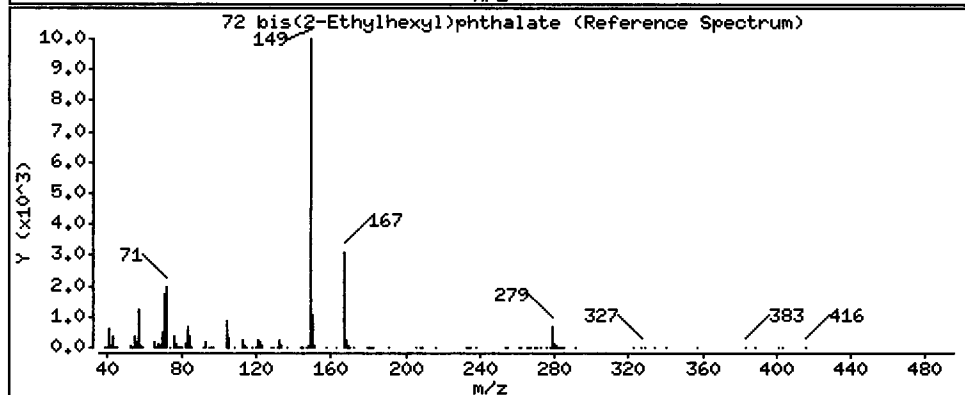
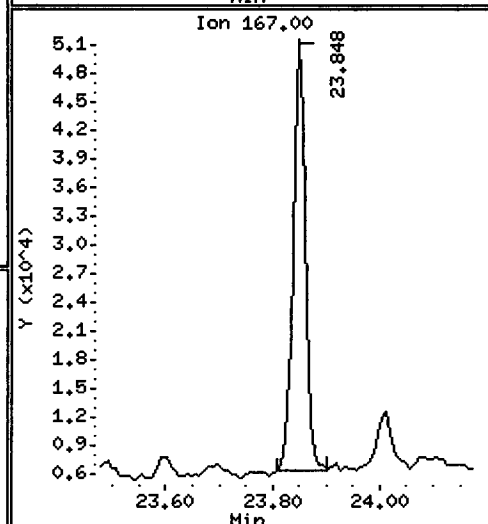
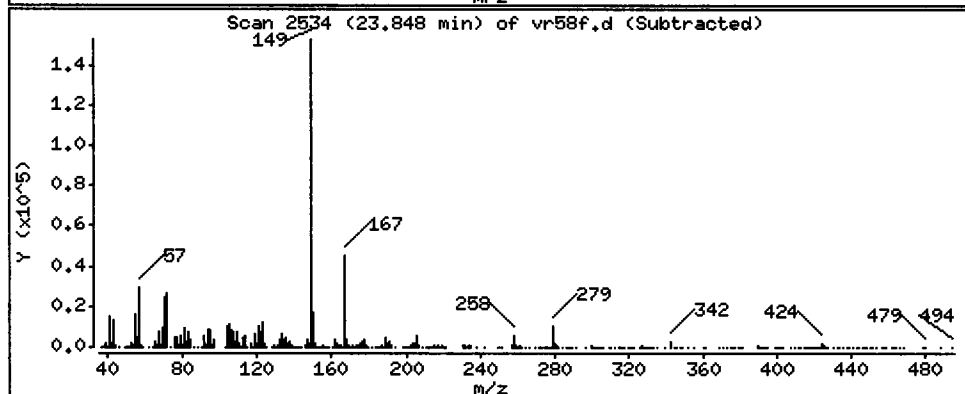
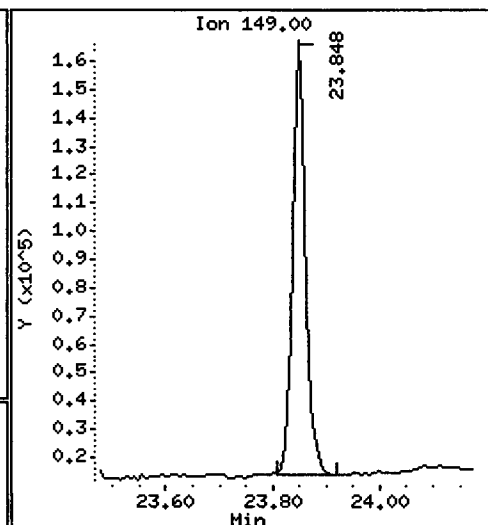
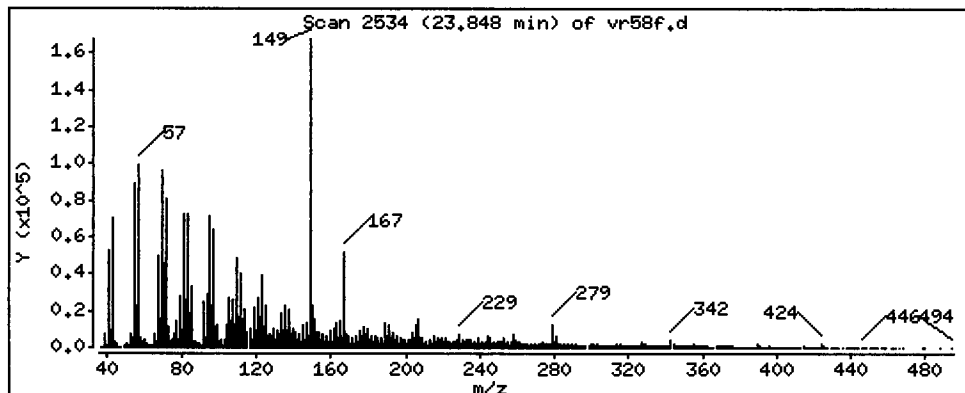
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 282.5 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

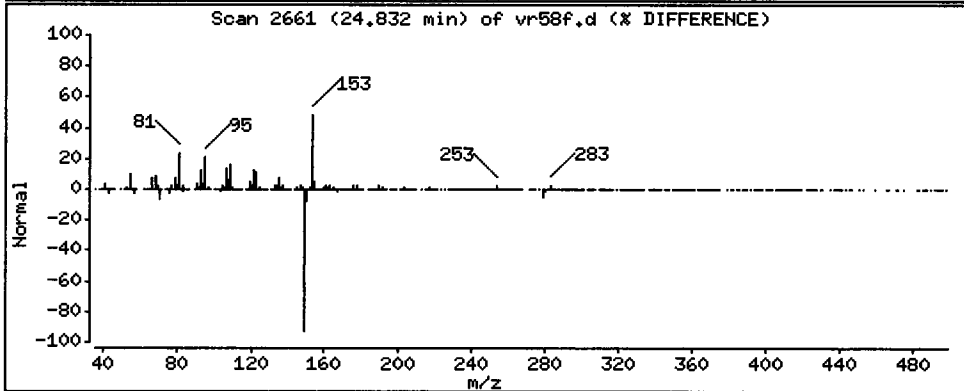
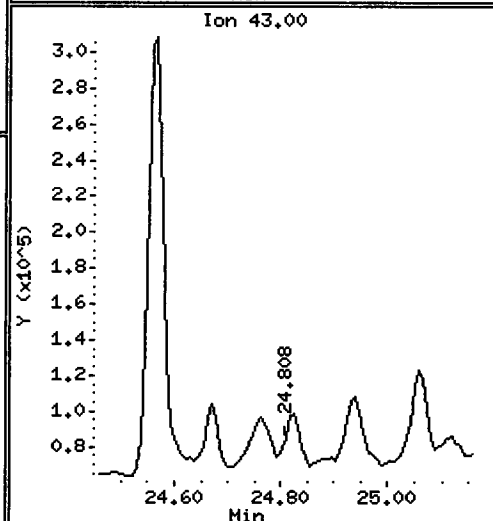
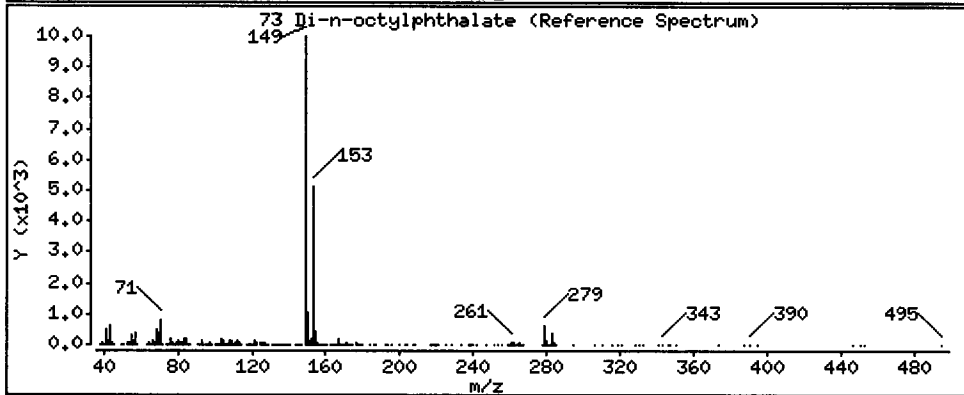
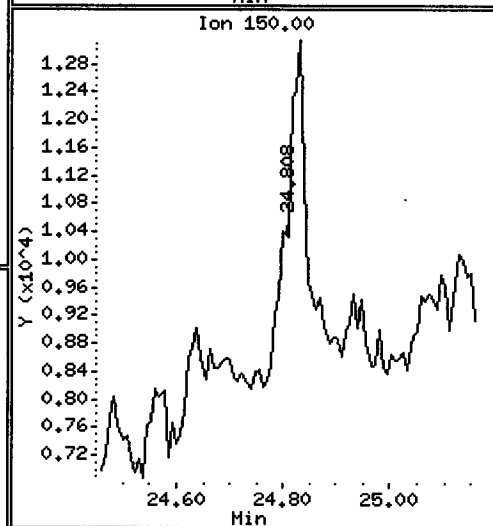
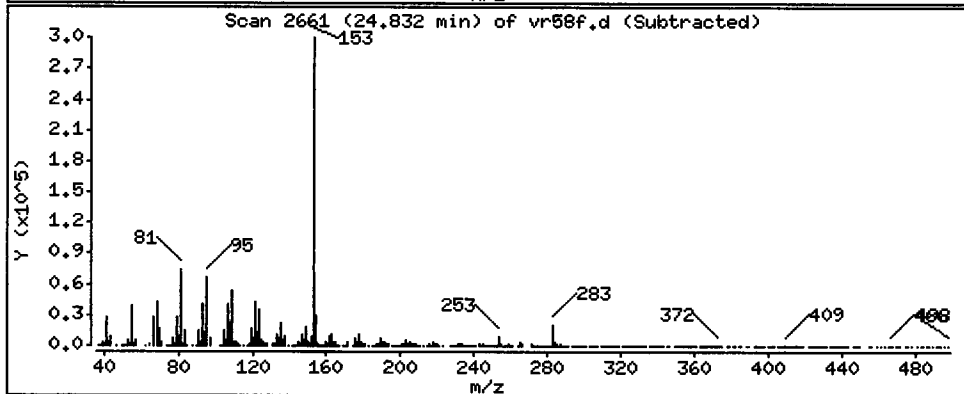
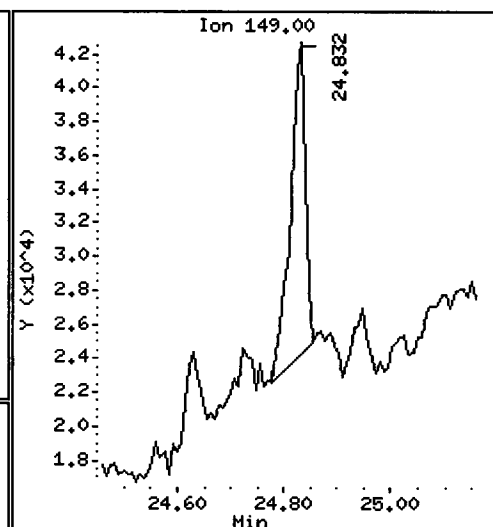
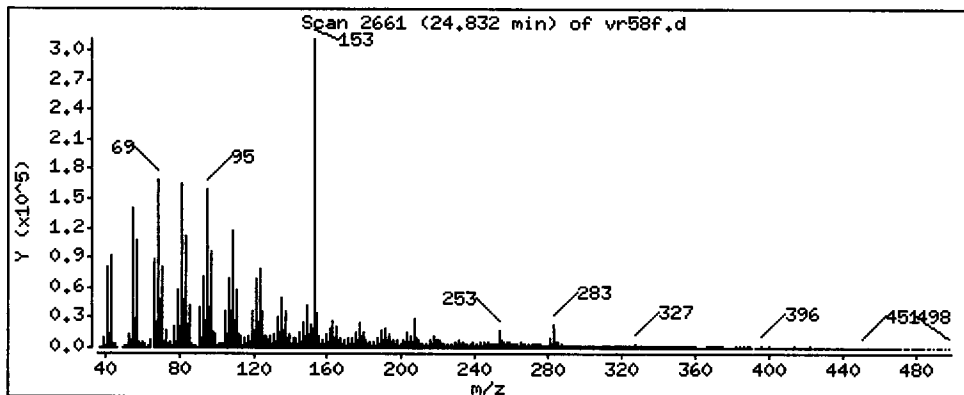
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

73 Di-n-octylphthalate

Concentration: 23.95 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

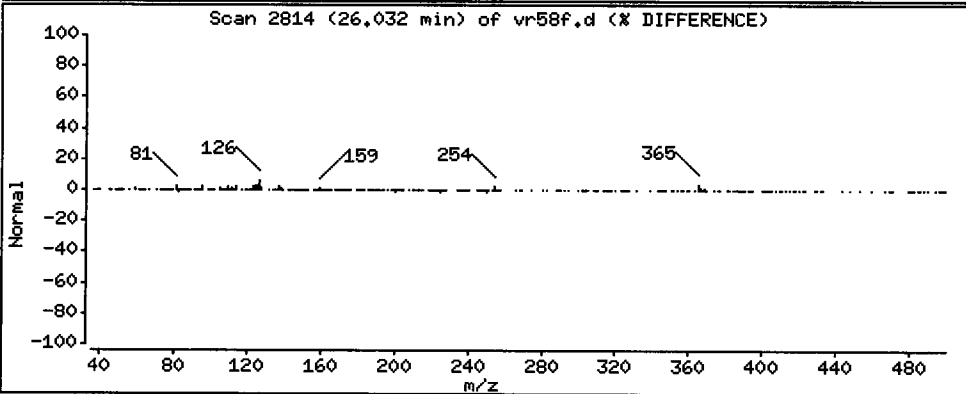
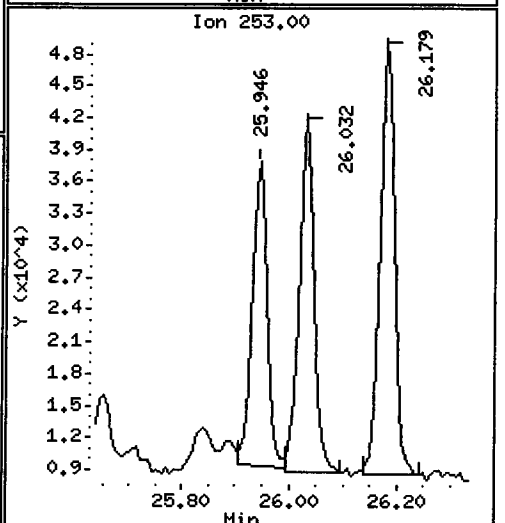
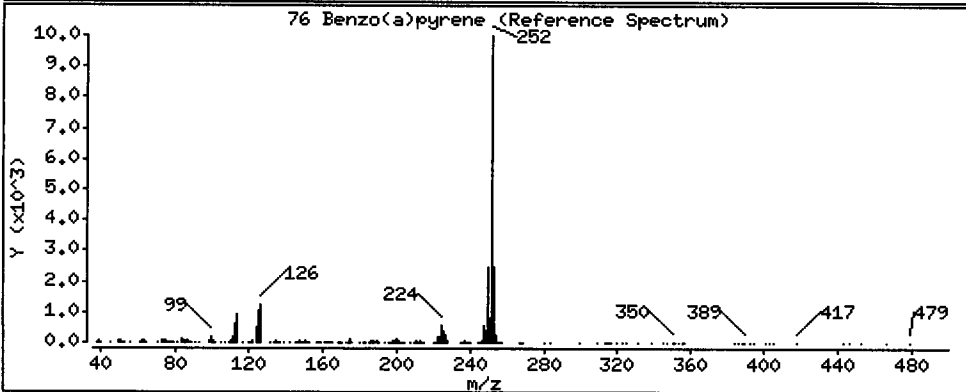
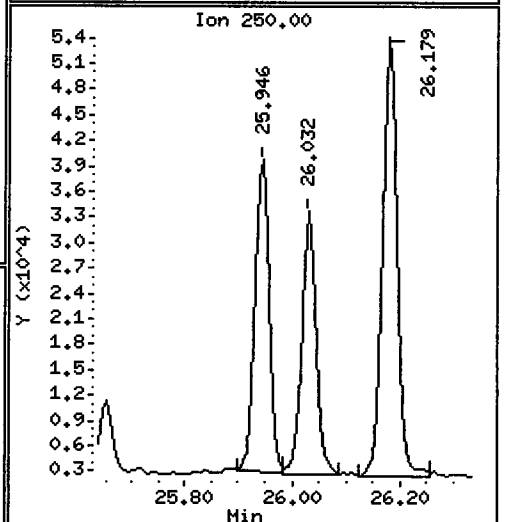
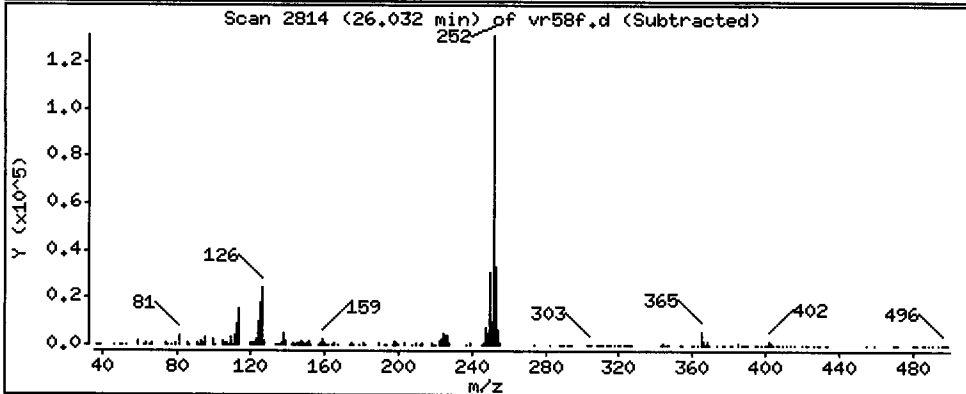
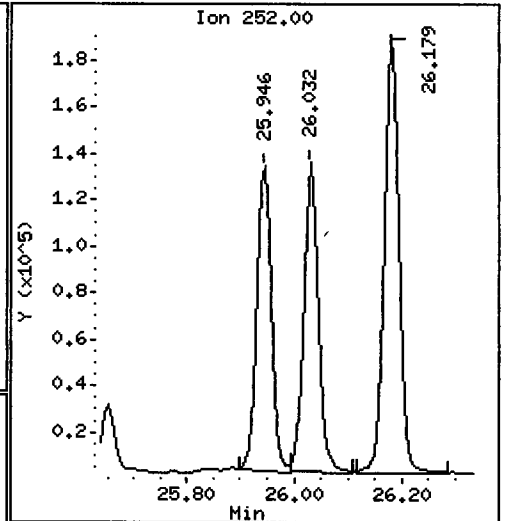
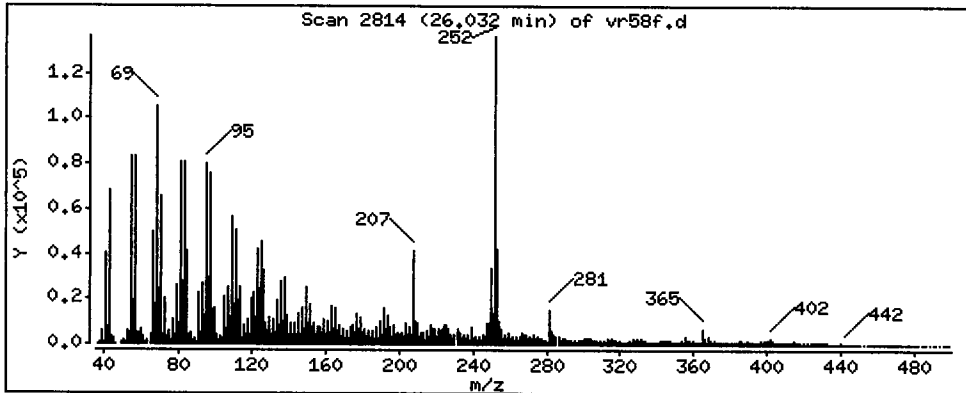
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

76 Benzo(a)pyrene

Concentration: 210.1 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

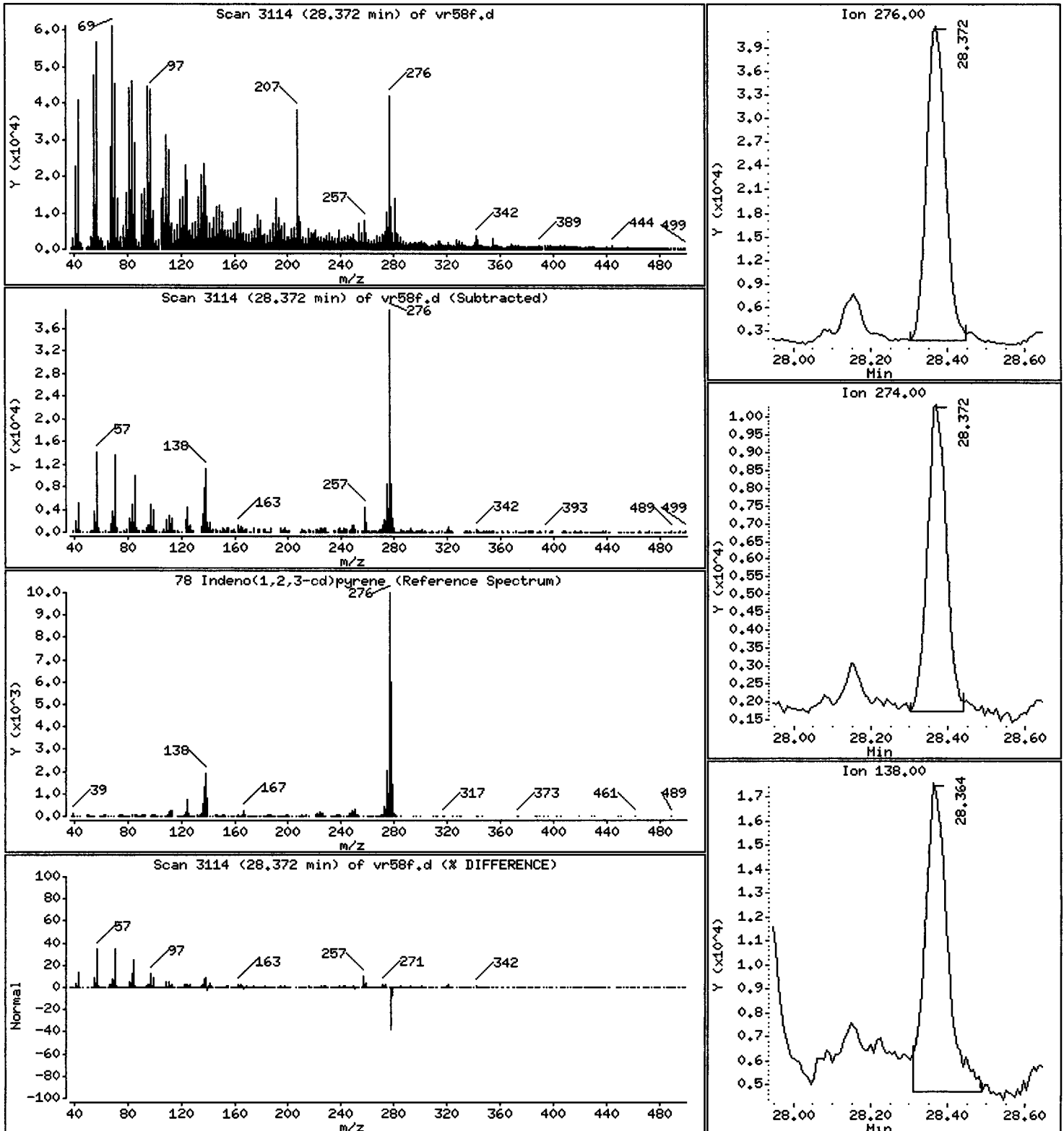
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

78 Indeno(1,2,3-cd)pyrene

Concentration: 97.23 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

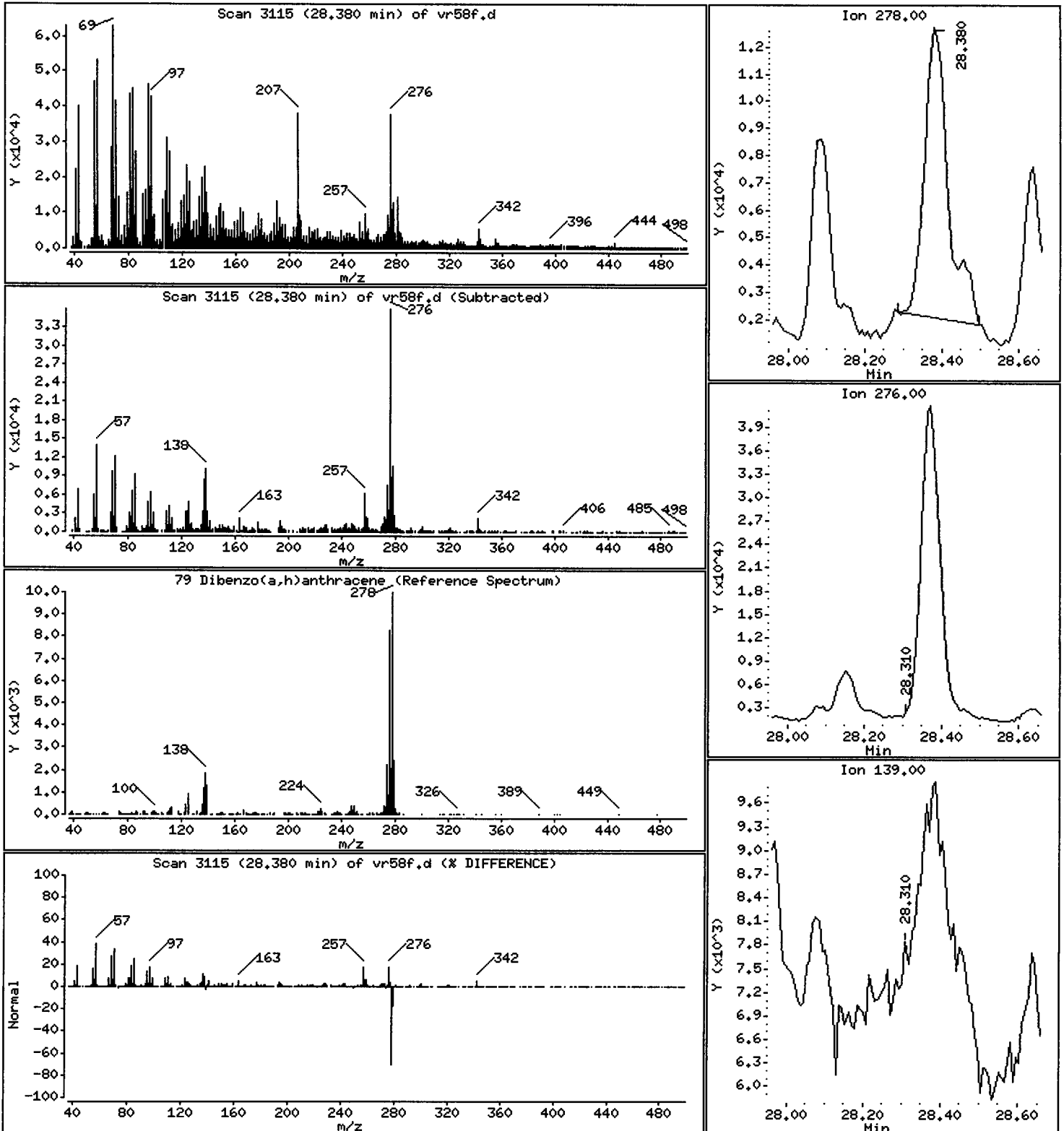
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 42.05 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

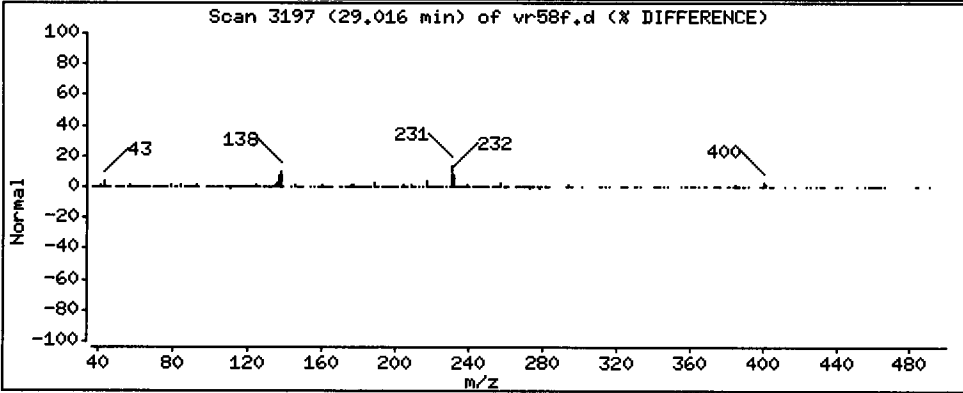
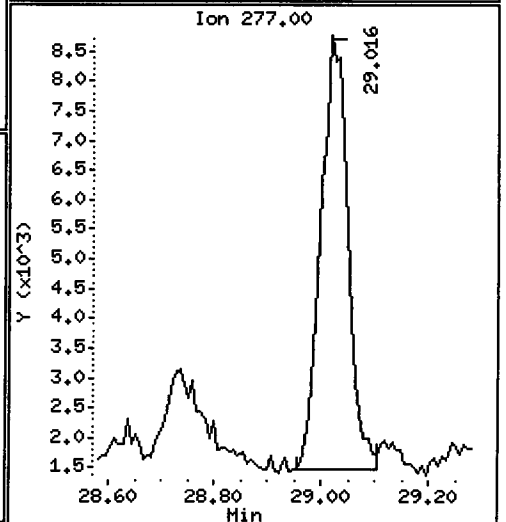
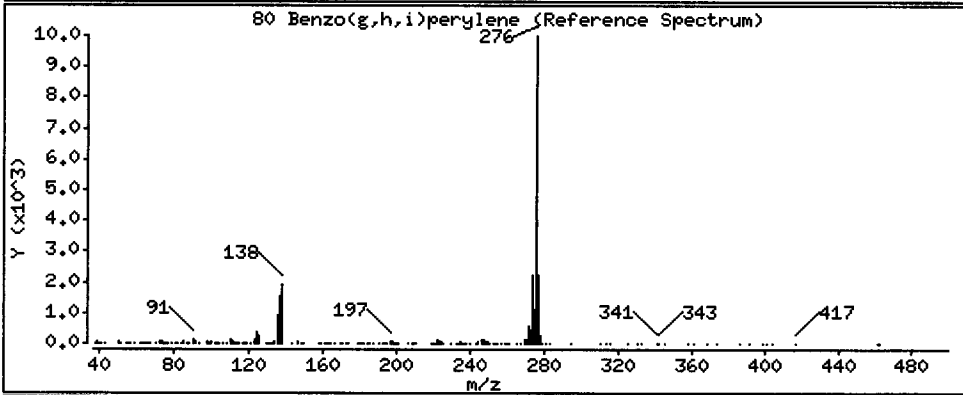
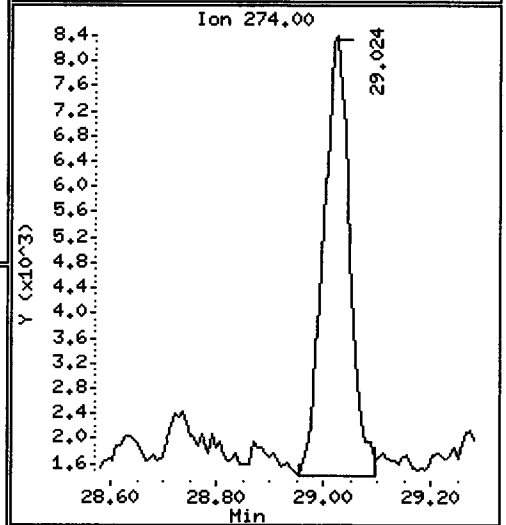
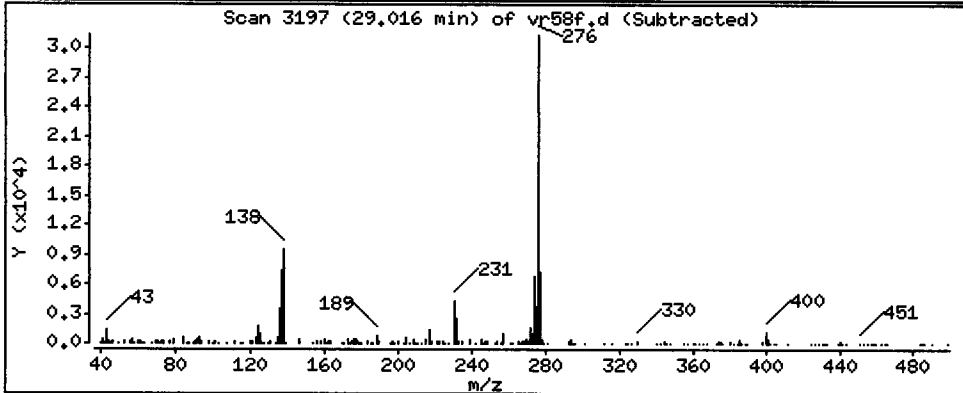
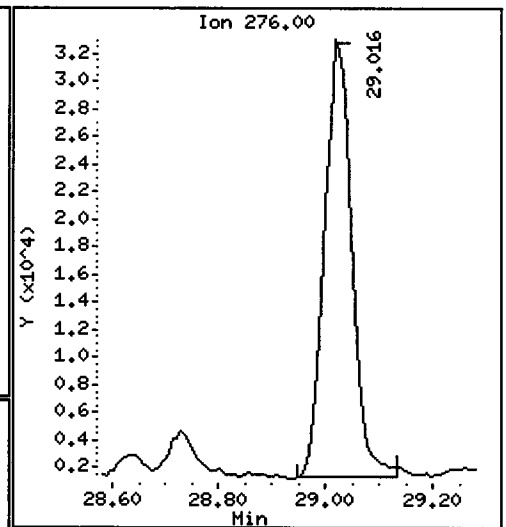
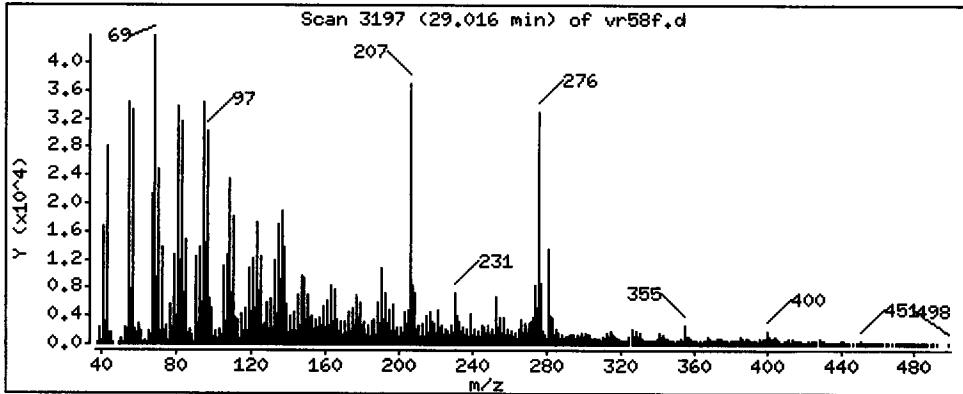
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

80 Benzo(g,h,i)perylene

Concentration: 95.24 ug/kg



Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

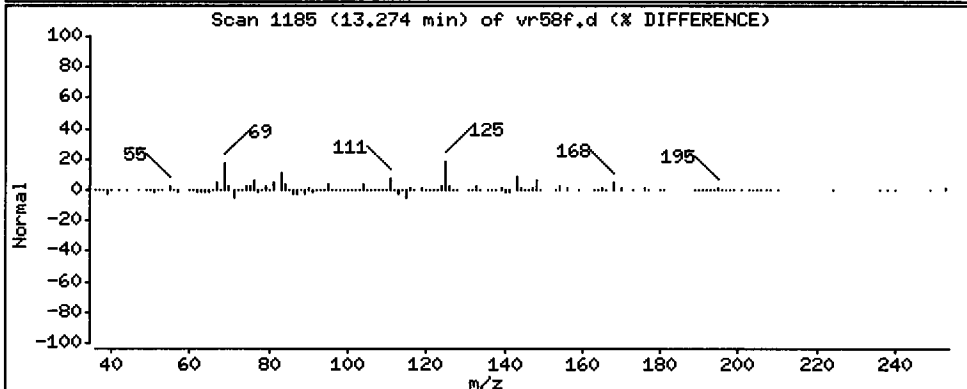
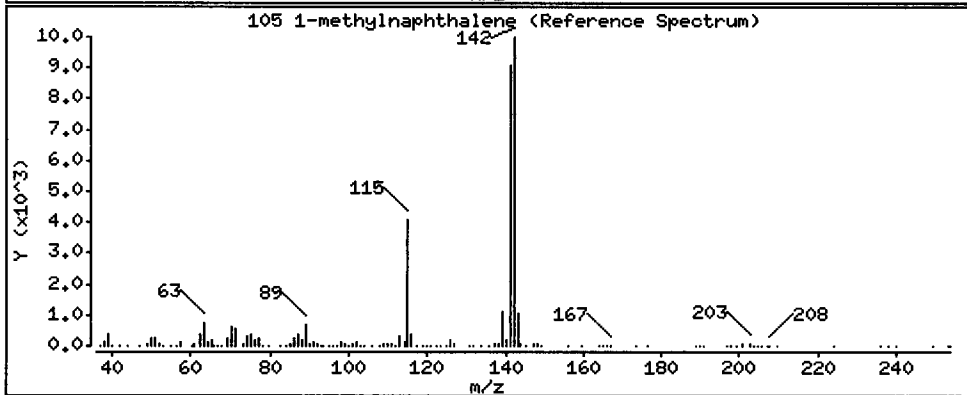
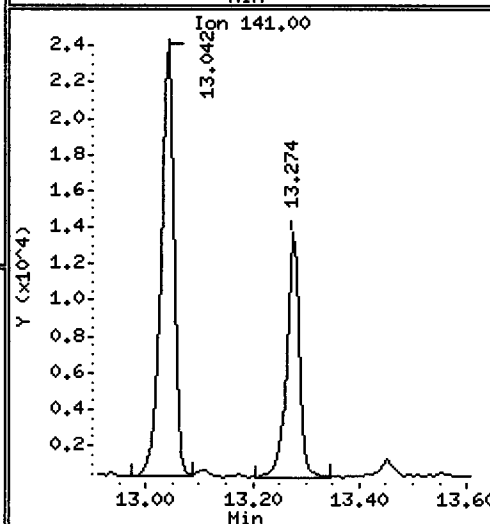
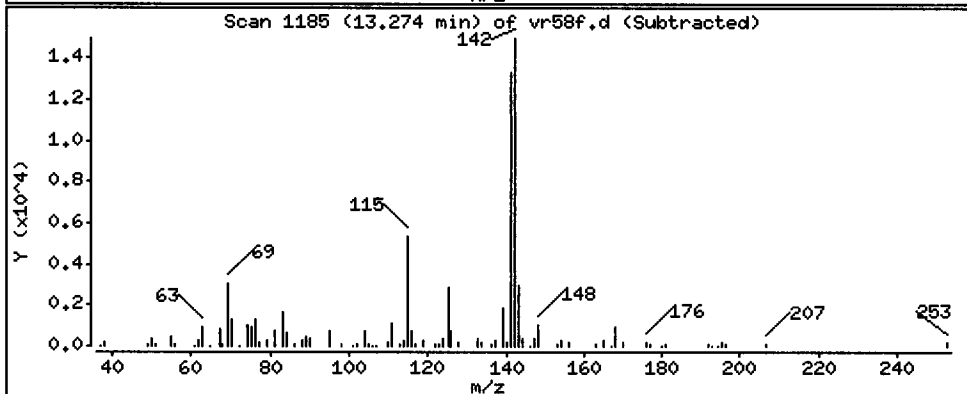
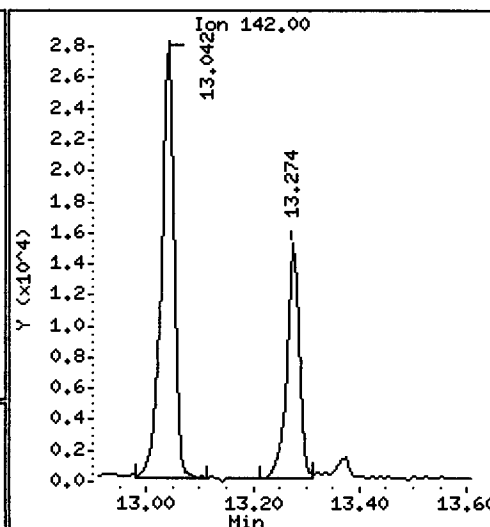
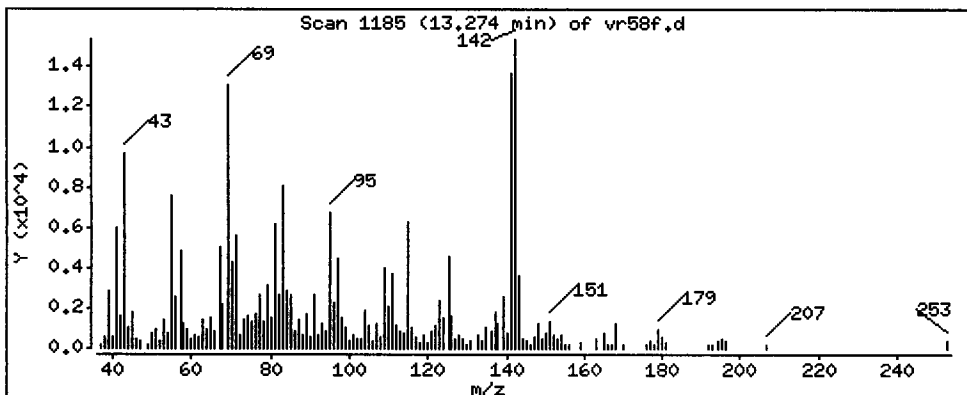
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

105 1-methylnaphthalene

Concentration: 34.66 ug/kg





Date : 04-DEC-2012 20:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F

Volume Injected (uL): 1.0

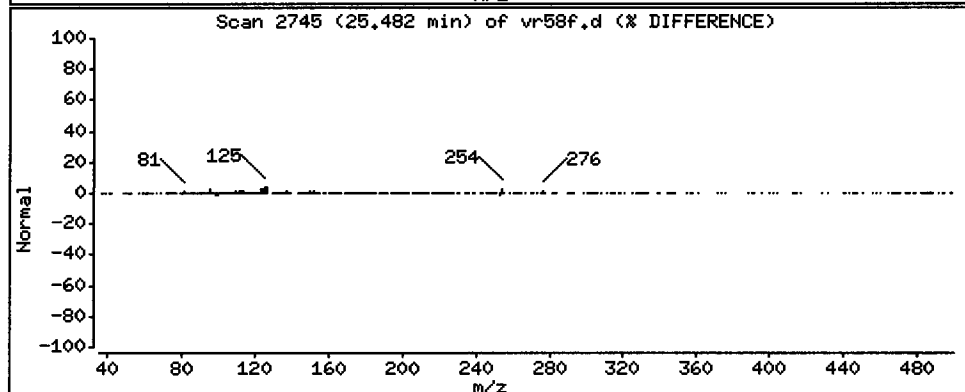
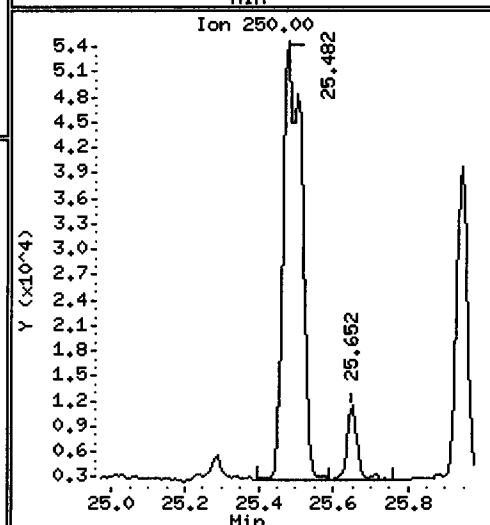
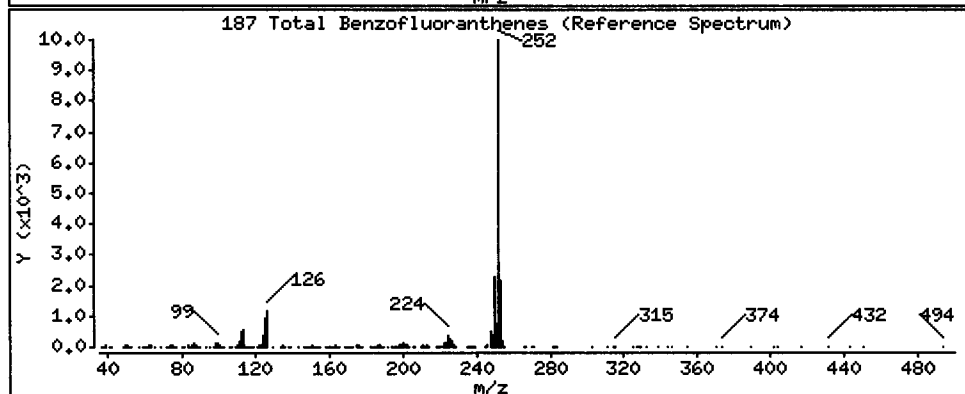
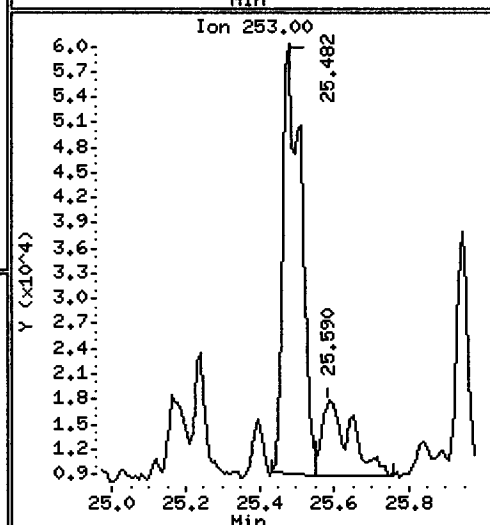
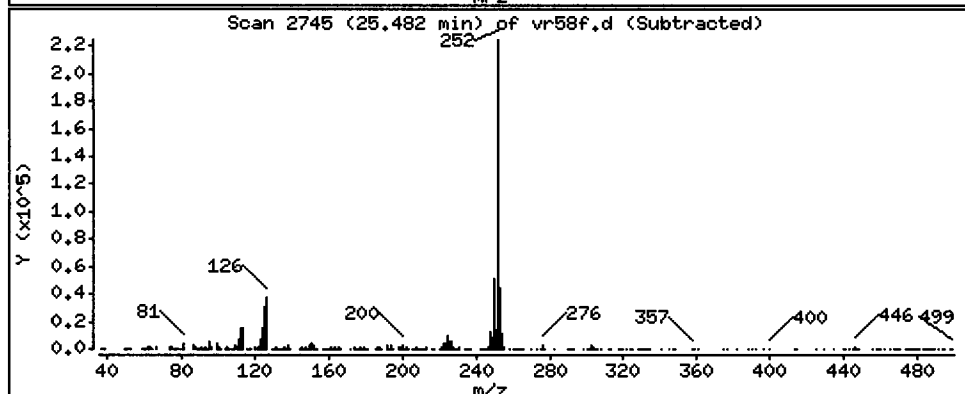
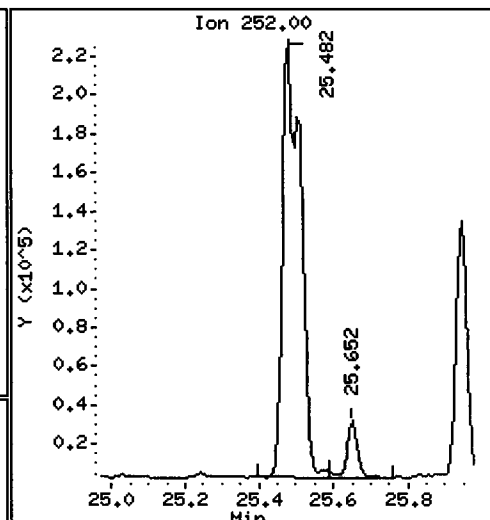
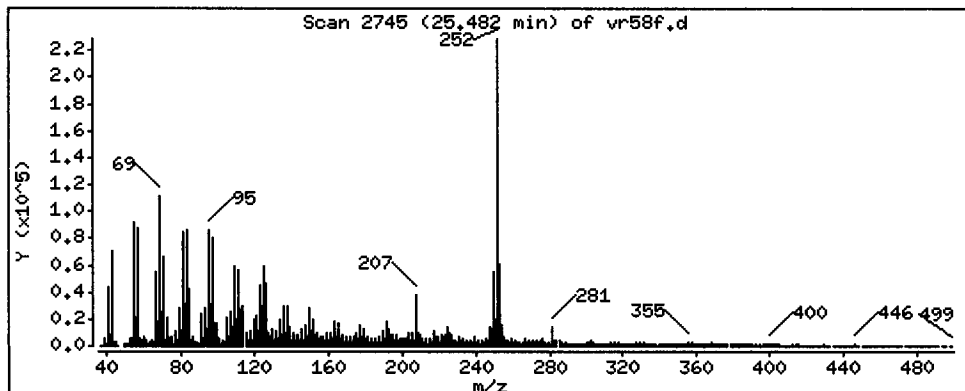
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

187 Total Benzofluoranthenes

Concentration: 603.9 ug/kg



CO-ELUTION SUMMARY FOR FILE - vr58f.d

Lab ID: VR58F, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

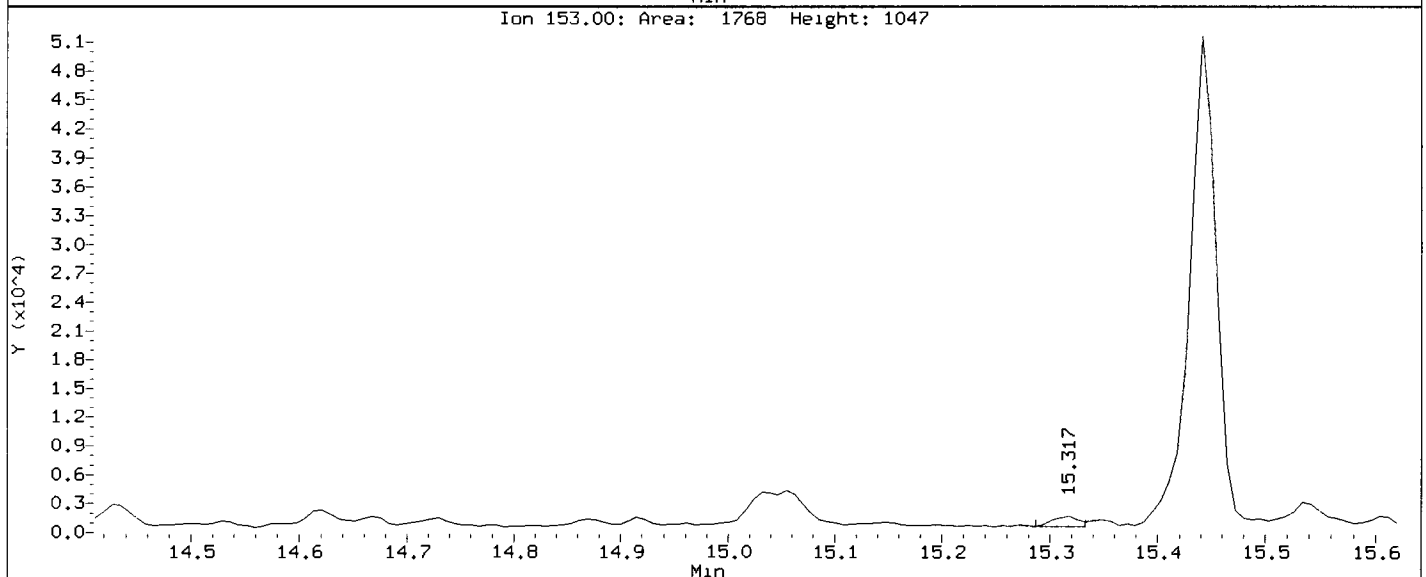
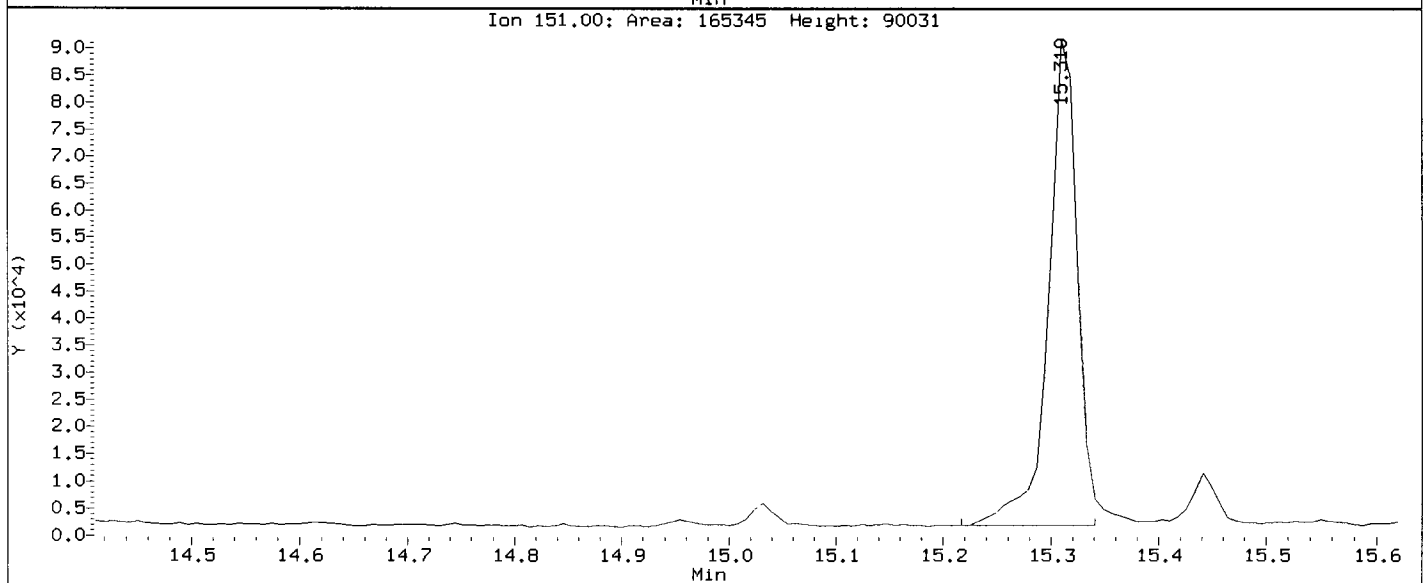
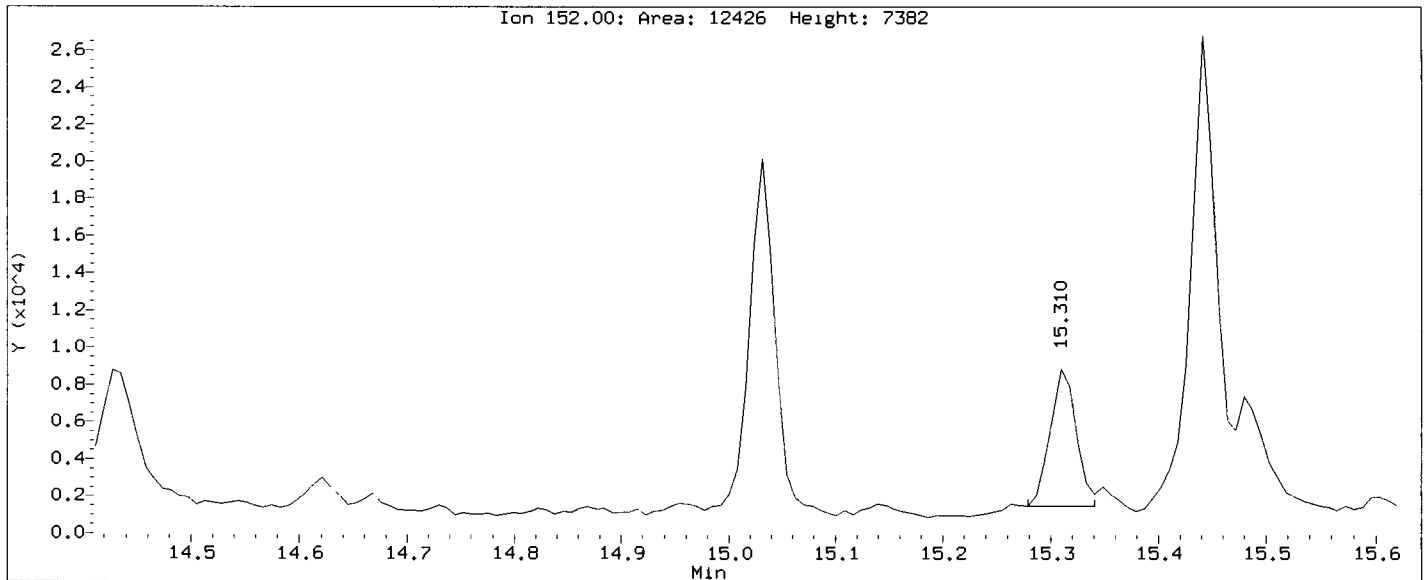
RT            CO-ELUTION COMPOUNDS

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Data File: /chem1/nt10.1/20121204.b/vr58f.d  
Injection Date: 04-DEC-2012 20:11  
Instrument: nt10.1  
Client Sample ID: SG-14-S-E-121107

VD  
12.5.12

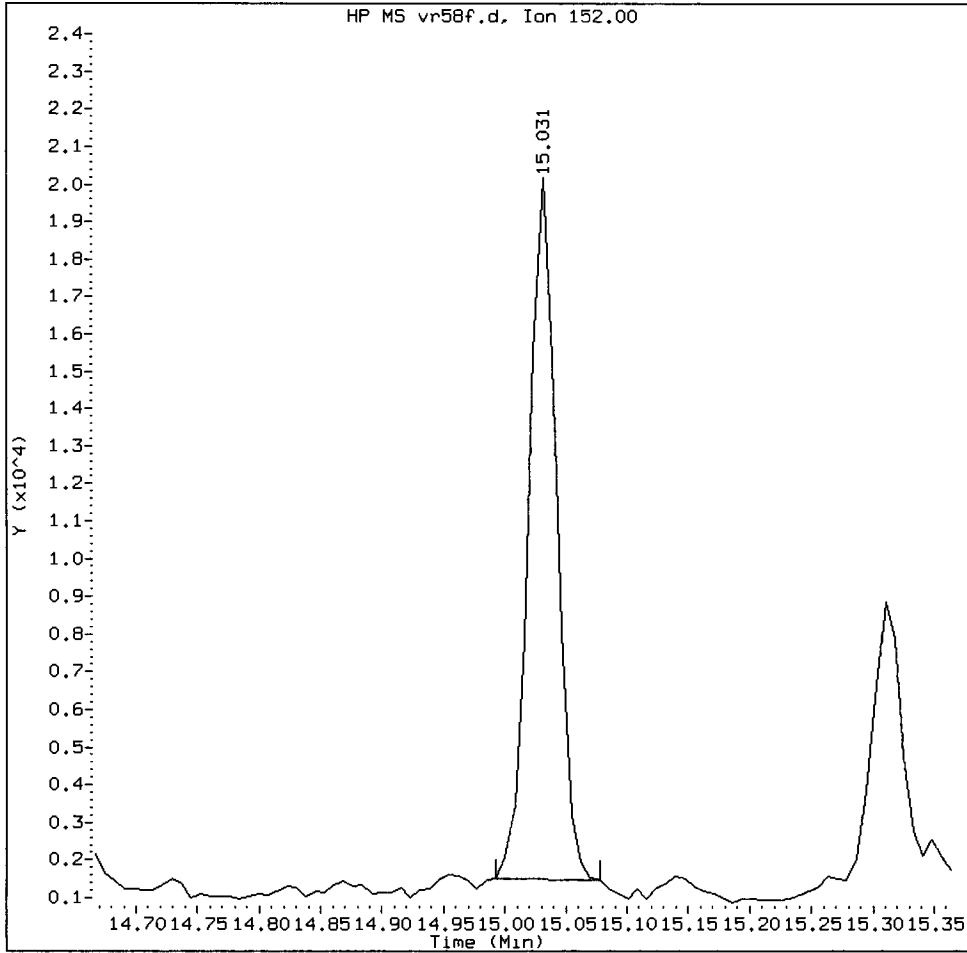
Compound: Acenaphthylene  
CAS Number: 208-96-8



VR58-20080

VR58F, /chem1/nt10.i/20121204.b/vr58f.d

Acenaphthylene Amount: 0.27 Area: 30687



MANUAL INTEGRATION for Acenaphthylene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other \_\_\_\_\_

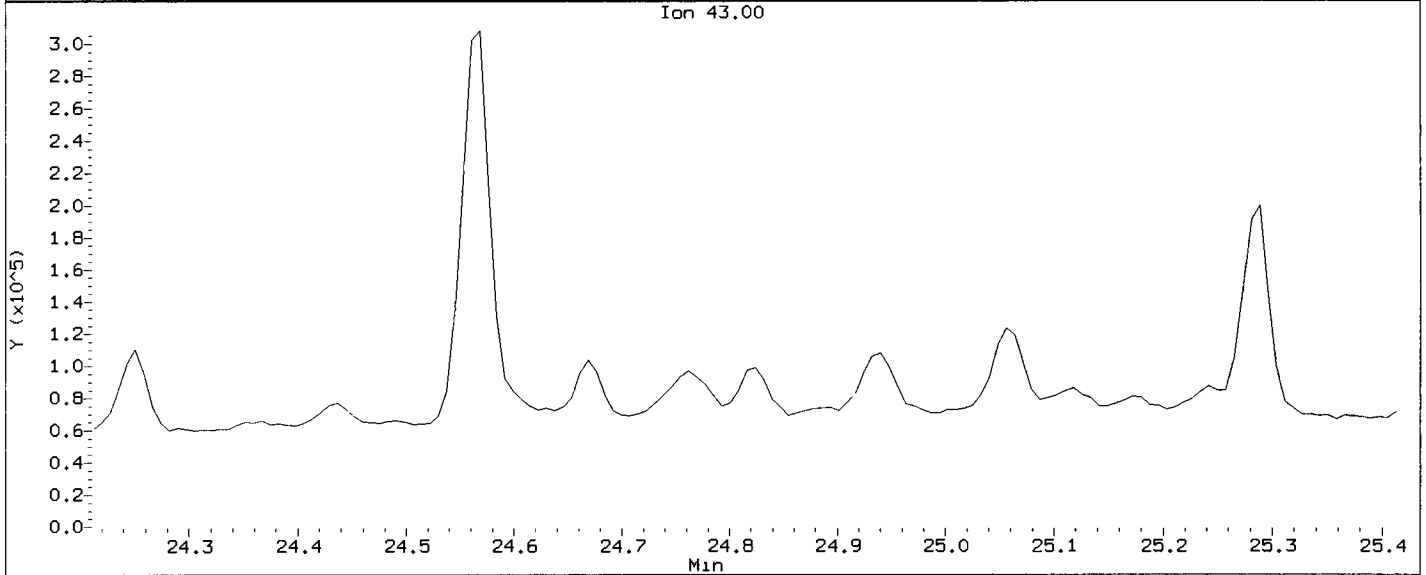
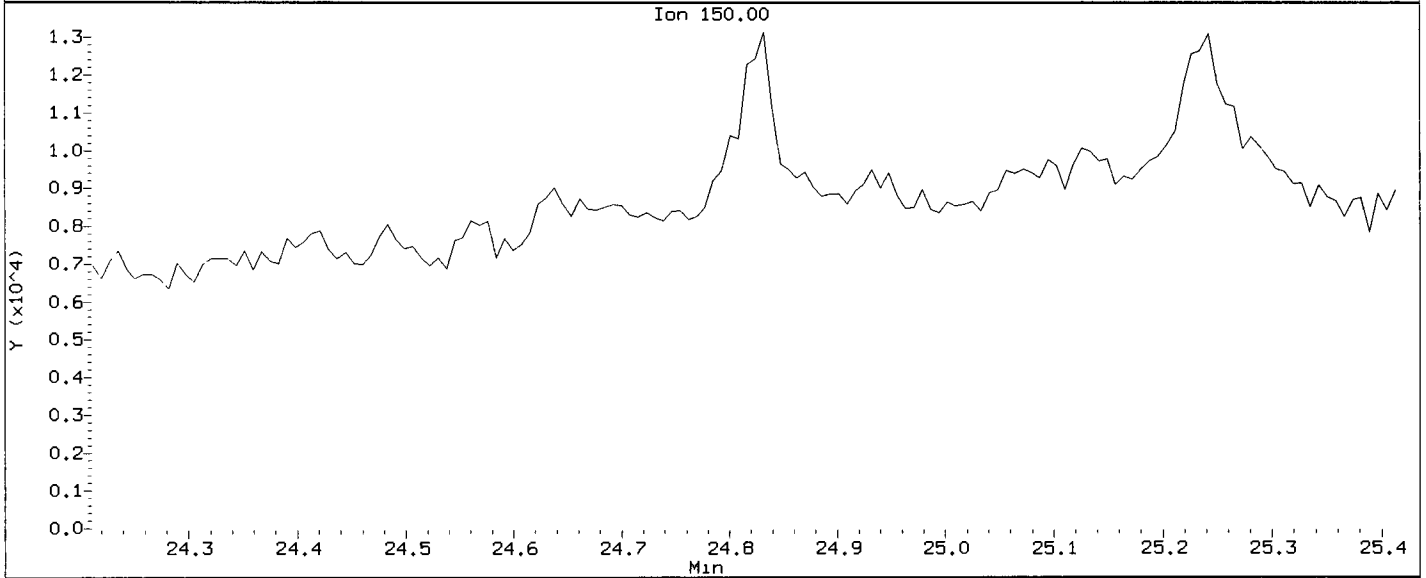
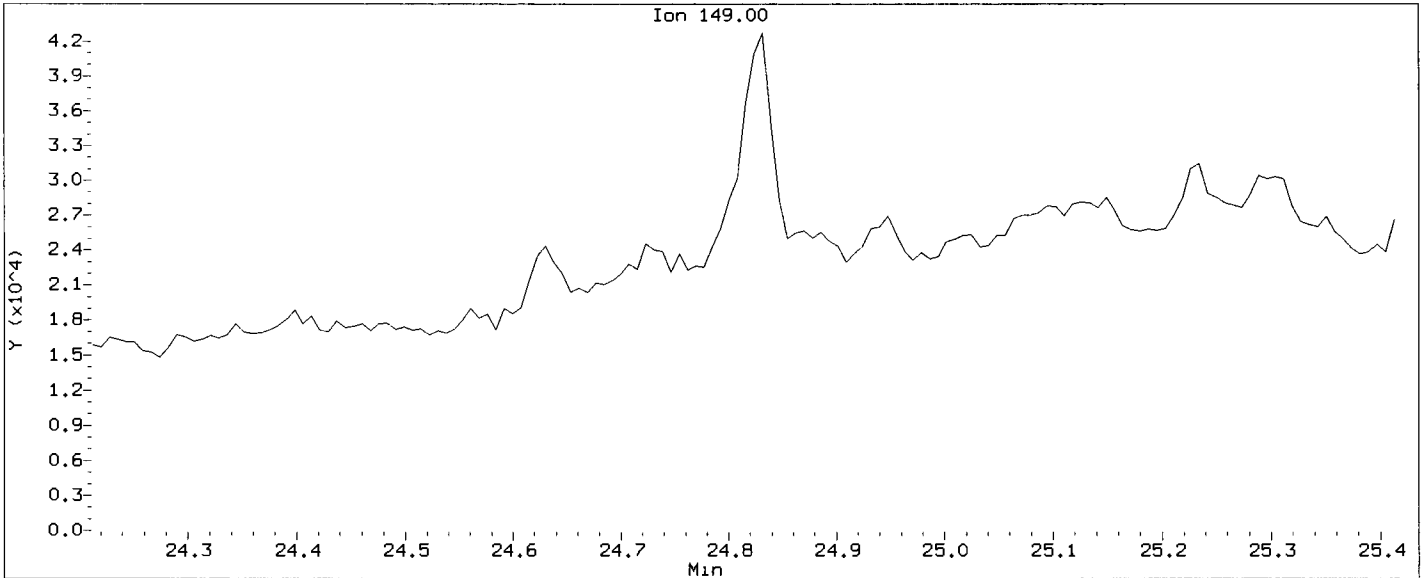
Analyst: VD

Date: 12.5.12

Data File: /chem1/nt10.1/20121204.b/vr58f.d  
Injection Date: 04-DEC-2012 20:11  
Instrument: nt10.1  
Client Sample ID: SG-14-S-E-121107

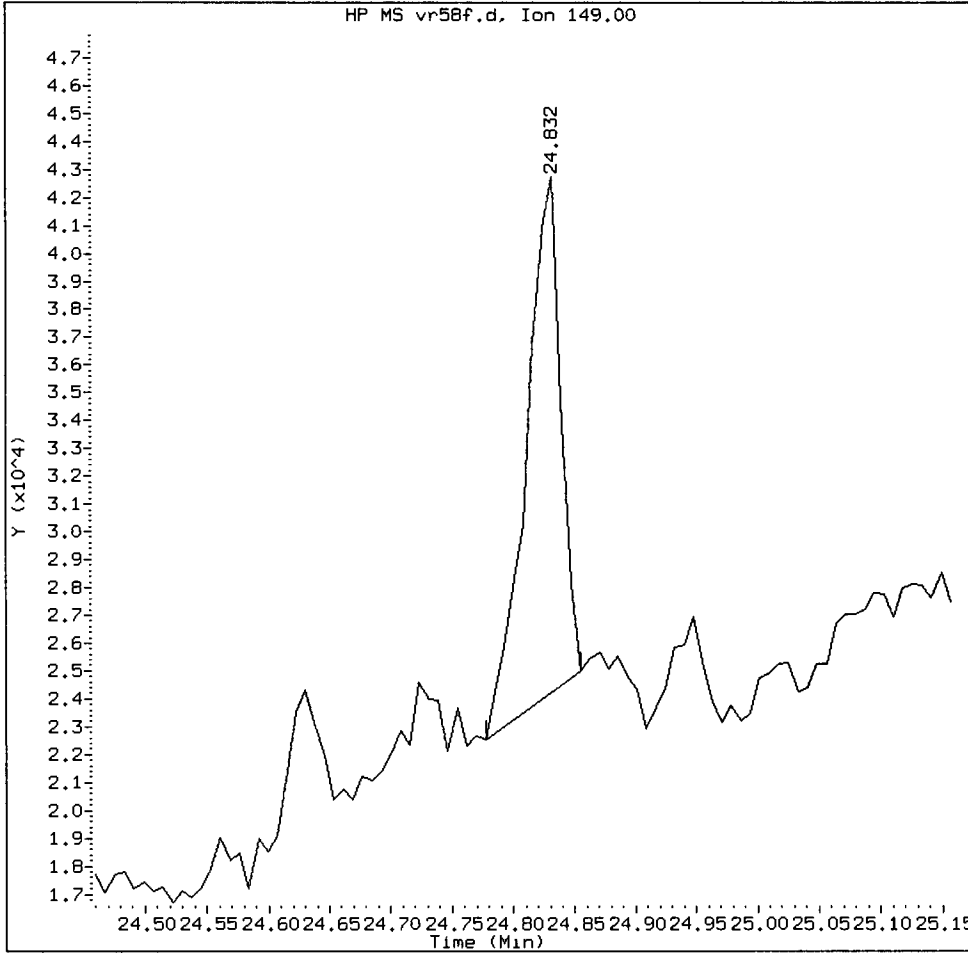
UT  
12.5.12

Compound: Di-n-octylphthalate  
CAS Number: 117-84-0



VR58F, /chem1/nt10.i/20121204.b/vr58f.d

Di-n-octylphthalate Amount: 0.25 Area: 36309



MANUAL INTEGRATION for Di-n-octylphthalate

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

5. Other \_\_\_\_\_

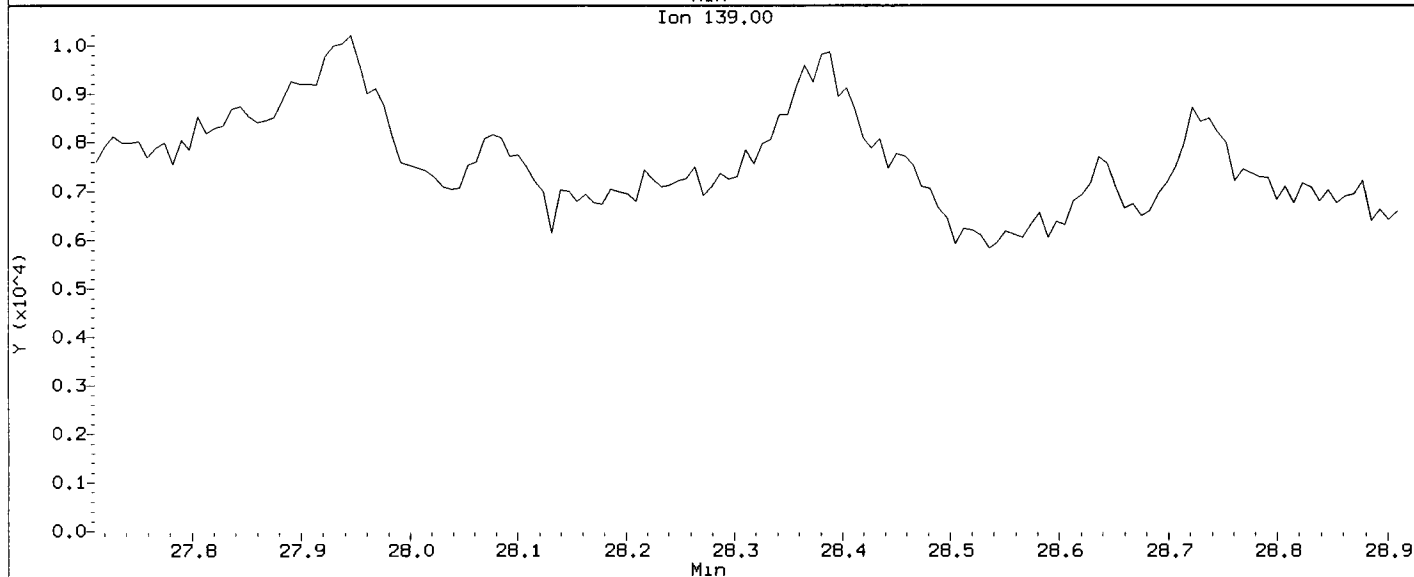
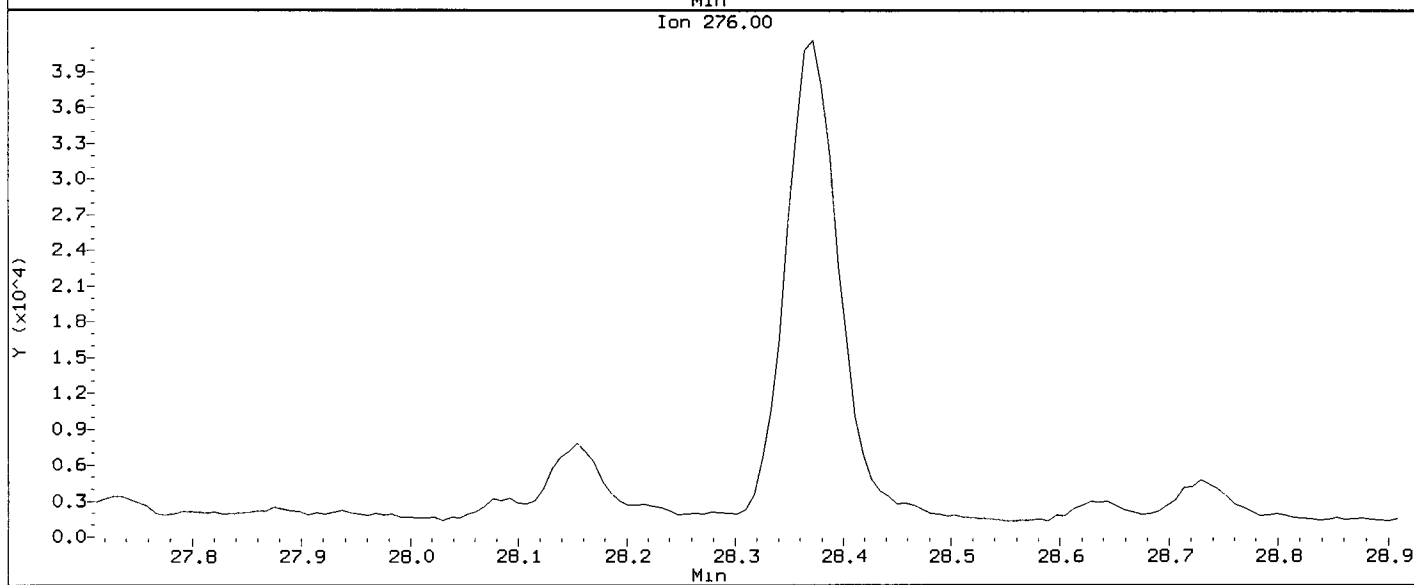
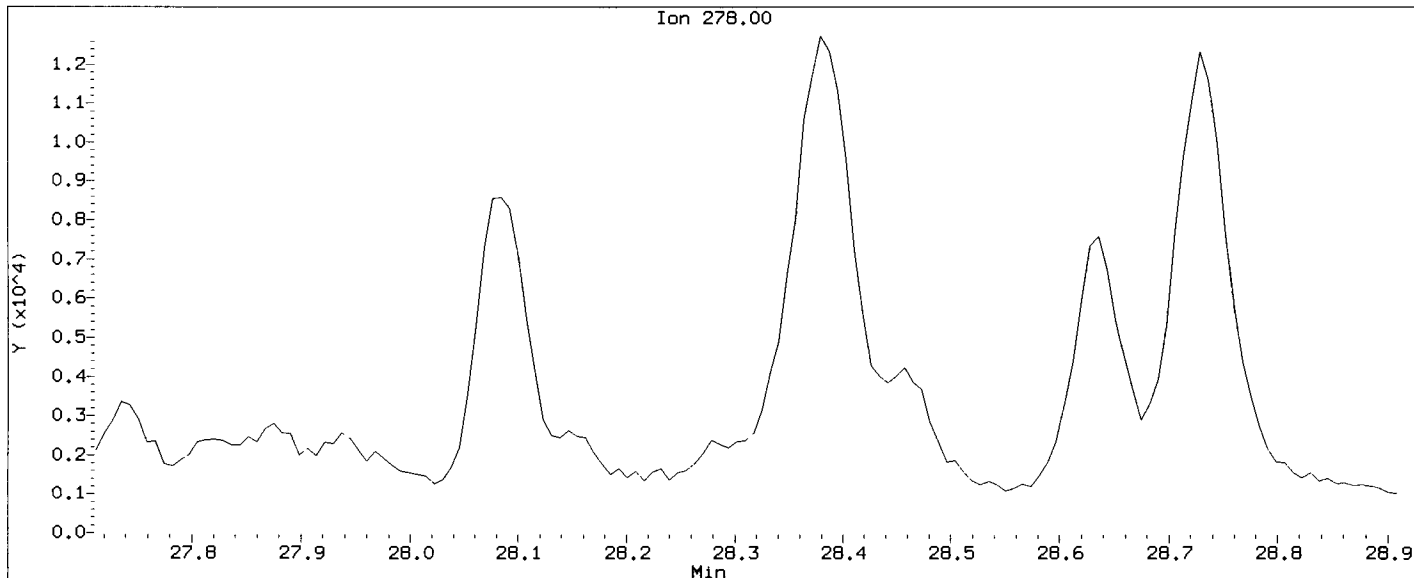
Analyst: VD

Date: 12.5.12

Data File: /chem1/nt10.1/20121204.b/vr58f.d  
Injection Date: 04-DEC-2012 20:11  
Instrument: nt10.1  
Client Sample ID: SG-14-S-E-121107

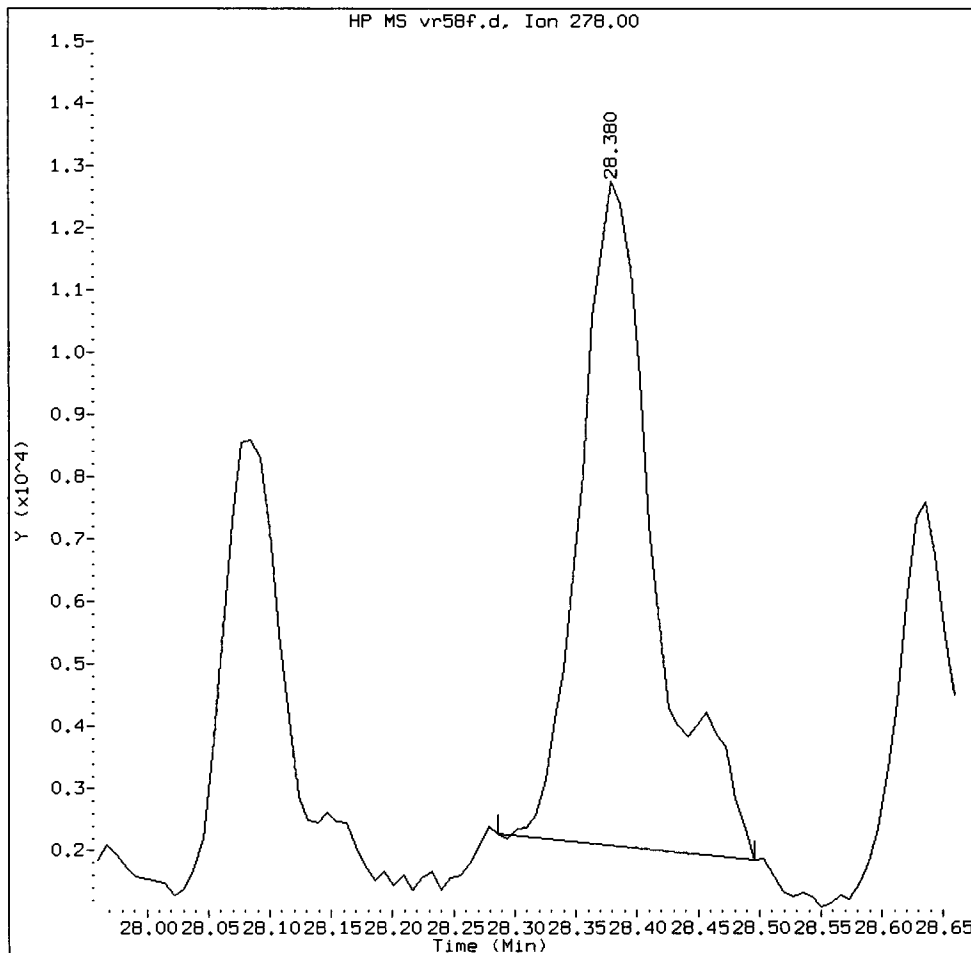
VP  
12.5.12

Compound: Dibenzo(a,h)anthracene  
CAS Number: 53-70-3



VR58F, /chem1/nt10.i/20121204.b/vr58f.d

Dibenzo(a,h)anthracene Amount: 0.44 Area: 45854



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other \_\_\_\_\_

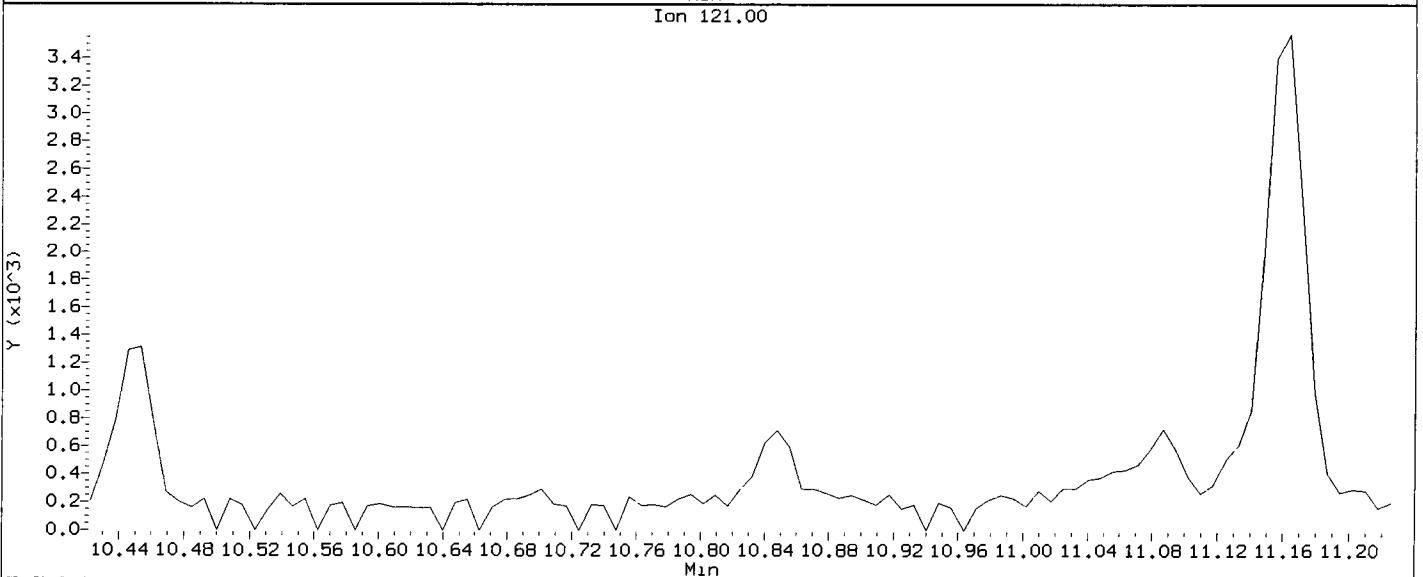
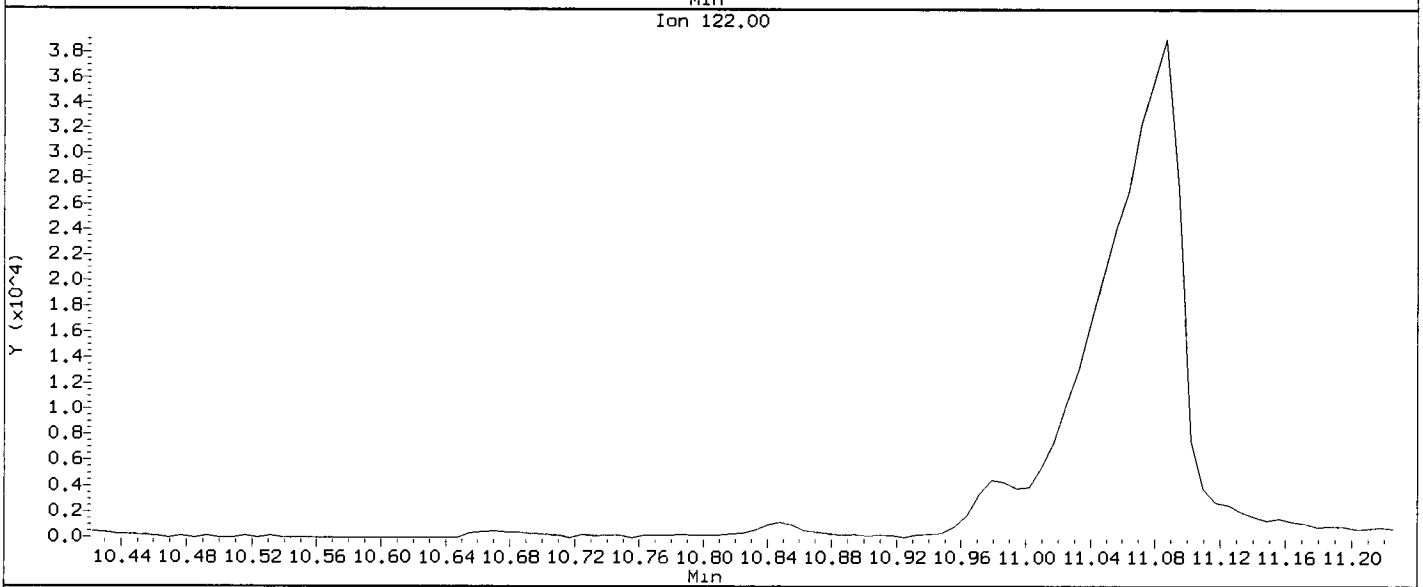
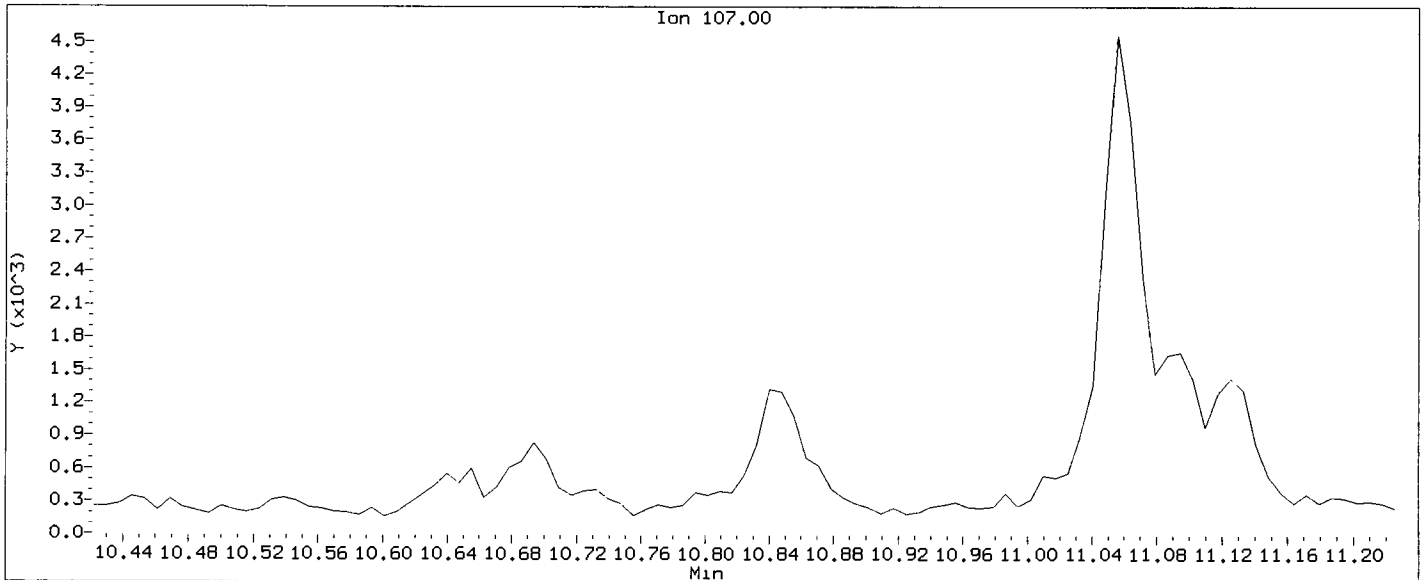
Analyst: VID

Date: 12.5.12



Data File: /chem1/nt10.1/20121204.b/vr58f.d  
Injection Date: 04-DEC-2012 20:11  
Instrument: nt10.1  
Client Sample ID: SG-14-S-E-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58g.d  
 Lab Smp Id: VR58G Client Smp ID: SG-15-S-E-121107  
 Inj Date : 04-DEC-2012 20:48  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58G  
 Misc Info : 12-22335  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 9  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub  
 Target Version: 3.50

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	14.20000	Weight of sample extracted (g)
M	24.70000	% 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	6.543	6.505	(0.740)	163657	4.84783	453.4
\$ 2 Phenol-d5	====	99	8.243	8.220	(0.933)	199748	4.78174	447.2
3 Phenol	====	94	Compound Not Detected.					
\$ 5 2-Chlorophenol-d4	====	132	8.467	8.452	(0.958)	173901	4.81142	450.0
7 1,3-Dichlorobenzene	====	146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	====	152	8.839	8.831	(1.000)	105532	4.00000	
9 1,4-Dichlorobenzene	====	146	Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	====	152	9.219	9.212	(1.043)	84088	3.19061	298.4
12 1,2-Dichlorobenzene	====	146	Compound Not Detected.					
11 Benzyl alcohol	====	108	Compound Not Detected.					
13 2-Methylphenol	====	108	Compound Not Detected.					
17 Hexachloroethane	====	117	Compound Not Detected.					
15 4-Methylphenol	====	108	9.739	9.716	(1.102)	2448	0.10912	10.21
\$ 18 Nitrobenzene-d5	====	82	10.011	10.003	(0.871)	124100	3.20426	299.7
22 2,4-Dimethylphenol	====	107	Compound Not Detected.					

Compounds	QUANT SIG				CONCENTRATIONS			
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
24 Benzoic acid	105	10.994	11.110	(0.957)	15349	0.64920	60.72	
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
* 27 Naphthalene-d8	136	11.487	11.480	(1.000)	413324	4.00000		
28 Naphthalene	128	Compound Not Detected.						
30 Hexachlorobutadiene	225	Compound Not Detected.						
32 2-Methylnaphthalene	142	Compound Not Detected.						
\$ 36 2-Fluorobiphenyl	172	13.893	13.886	(0.904)	280908	3.13142	292.9	
39 Dimethylphthalate	163	Compound Not Detected.						
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	15.364	15.356	(1.000)	253453	4.00000		
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
50 Diethylphthalate	149	16.461	16.462	(1.071)	11172	0.13036	12.19	
49 Fluorene	166	Compound Not Detected.						
54 N-Nitrosodiphenylamine	169	Compound Not Detected.						
\$ 55 2,4,6-Tribromophenol	330	17.140	17.125	(1.116)	81363	5.44972	509.7	
57 Hexachlorobenzene	284	Compound Not Detected.						
58 Pentachlorophenol	266	Compound Not Detected.						
* 59 Phenanthrene-d10	188	18.632	18.617	(1.000)	407801	4.00000		
60 Phenanthrene	178	18.678	18.671	(1.002)	16806	0.16645	15.57	
61 Anthracene	178	Compound Not Detected.						
63 Di-n-butylphthalate	149	Compound Not Detected.						
64 Fluoranthene	202	21.108	21.093	(1.133)	16727	0.13143	12.29	
65 Pyrene	202	21.526	21.510	(0.908)	14202	0.12488	11.68	
\$ 66 Terphenyl-d14	244	21.851	21.835	(0.921)	266178	3.50138	327.5	
67 Butylbenzylphthalate	149	Compound Not Detected.						
68 Benzo(a)anthracene	228	Compound Not Detected.						
* 69 Chrysene-d12	240	23.716	23.701	(1.000)	388205	4.00000		
71 Chrysene	228	Compound Not Detected.						
72 bis(2-Ethylhexyl)phthalate	149	23.833	23.825	(0.961)	19300	0.22896	21.41	
* 134 Di-n-octylphthalate-d4	153	24.808	24.801	(1.000)	610919	4.00000		
73 Di-n-octylphthalate	149	Compound Not Detected.						
76 Benzo(a)pyrene	252	Compound Not Detected.						
* 77 Perylene-d12	264	26.109	26.086	(1.000)	377322	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.						
105 1-methylnaphthalene	142	Compound Not Detected.						
187 Total Benzofluoranthenes	252	Compound Not Detected.						
98 Retene	219	22.137	22.137	(0.933)	2739			
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.						

12.5.12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58g.d  
 Lab Smp Id: VR58G  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22335

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-15-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	105532	29.37
27 Naphthalene-d8	299399	149700	598798	413324	38.05
42 Acenaphthene-d10	178564	89282	357128	253453	41.94
59 Phenanthrene-d10	305410	152705	610820	407801	33.53
69 Chrysene-d12	323853	161926	647706	388205	19.87
134 Di-n-octylphthala	427845	213922	855690	610919	42.79
77 Perylene-d12	305316	152658	610632	377322	23.58

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.84	0.08
27 Naphthalene-d8	11.48	10.98	11.98	11.49	0.06
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.05
59 Phenanthrene-d10	18.62	18.12	19.12	18.63	0.08
69 Chrysene-d12	23.70	23.20	24.20	23.72	0.06
134 Di-n-octylphthala	24.80	24.30	25.30	24.81	0.03
77 Perylene-d12	26.09	25.59	26.59	26.11	0.09

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.

Sample Matrix: SOLID

Lab Smp Id: VR58G

Level: LOW

Data Type: MS DATA

SpikeList File: SHORTPSDDA.spk

Sublist File: SHORTPSDDA.sub

Method File: /chem1/nt10.i/20121204.b/ABN.m

Misc Info: 12-22335

Client SDG: VR58

Fraction: SV

Client Smp ID: SG-15-S-E-121107

Operator: VTS/YZ

SampleType: SAMPLE

Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	701.4	453.4	64.64	30-160
\$ 2 Phenol-d5	701.4	447.2	63.76	30-160
\$ 5 2-Chlorophenol-d4	701.4	450.0	64.15	30-160
\$ 10 1,2-Dichlorobenzen	467.6	298.4	63.81	30-160
\$ 18 Nitrobenzene-d5	467.6	299.7	64.09	30-160
\$ 36 2-Fluorobiphenyl	467.6	292.9	62.63	30-160
\$ 55 2,4,6-Tribromophen	701.4	509.7	72.66	30-160
\$ 66 Terphenyl-d14	467.6	327.5	70.03	30-160

Date: 04-DEC-2012 20:48

Client ID: SC-15-S-E-121107

Instrument: nt10.i

Sample Info: VR58G

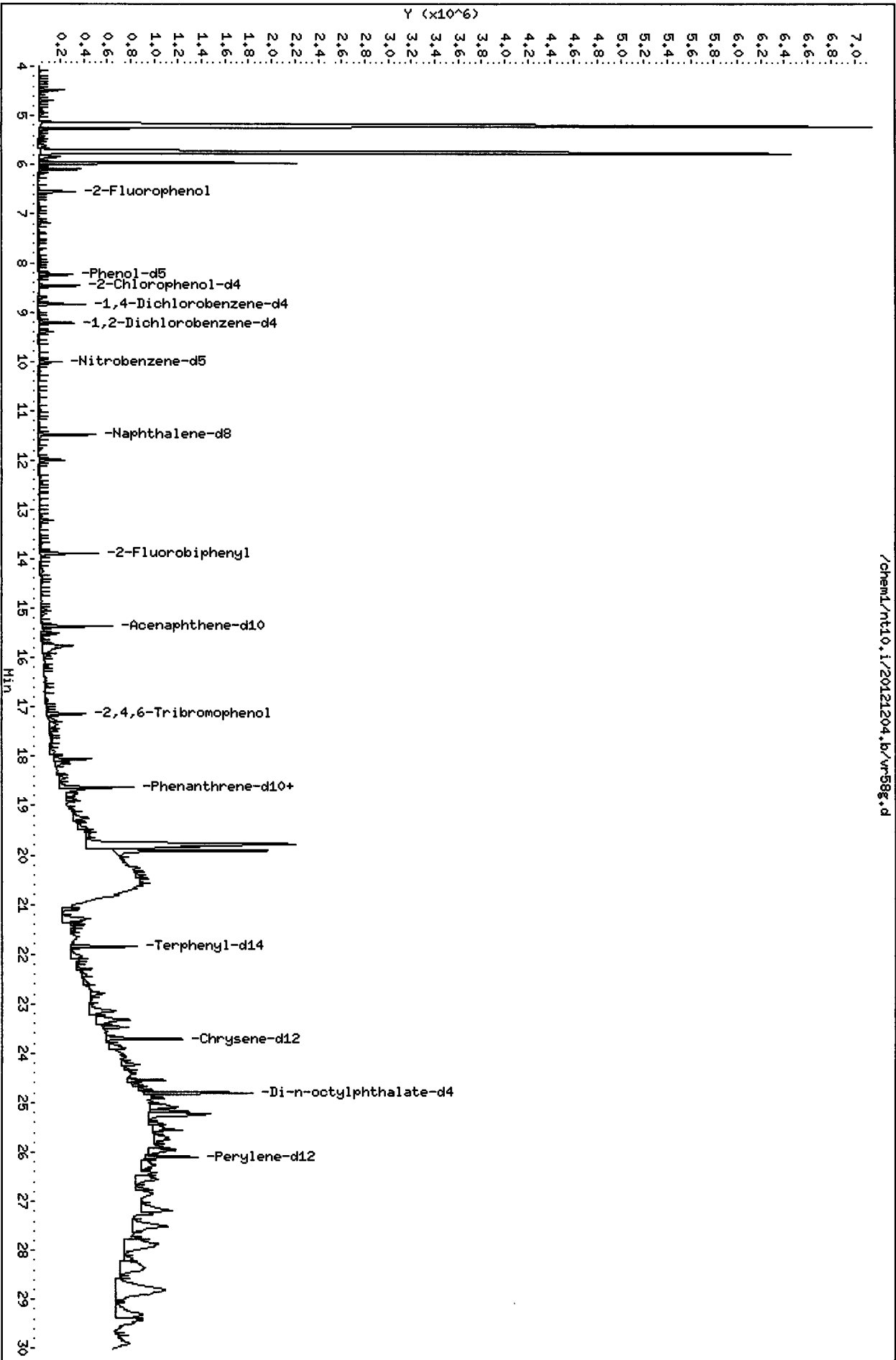
Volume Injected (ul): 1.0

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

/chem1/nt10.i/20121204\_b/vr58g.d



Date : 04-DEC-2012 20:48

Client ID: SG-15-S-E-121107

Instrument: nt10.i

Sample Info: VR58G

Volume Injected (uL): 1.0

Operator: VTS/YZ

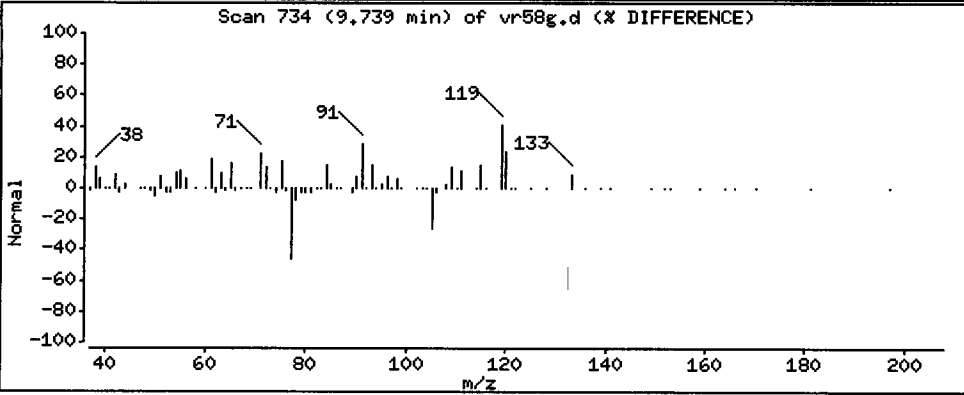
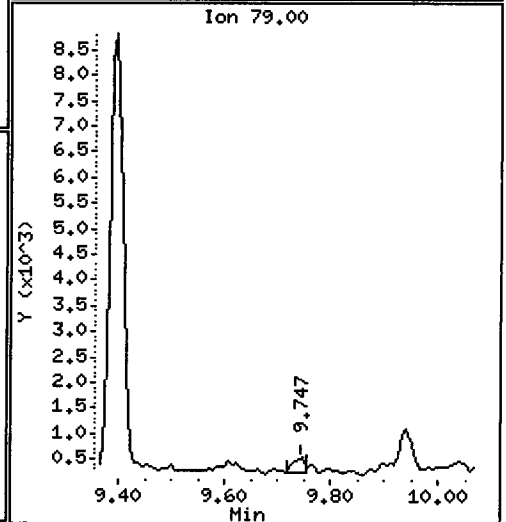
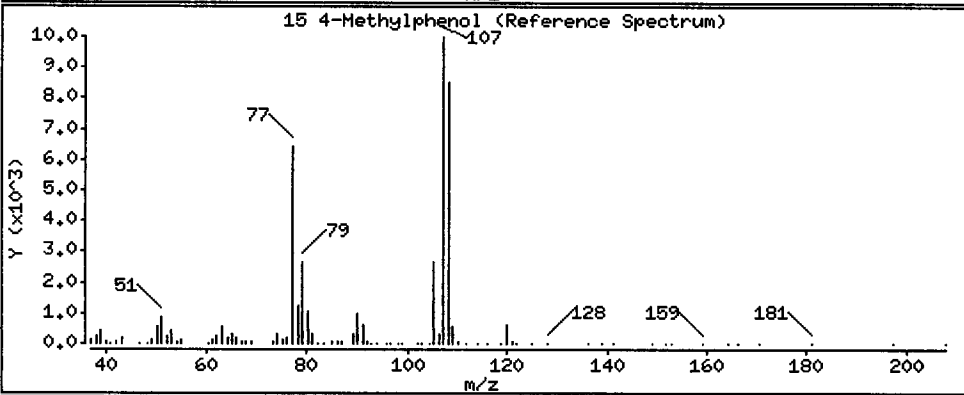
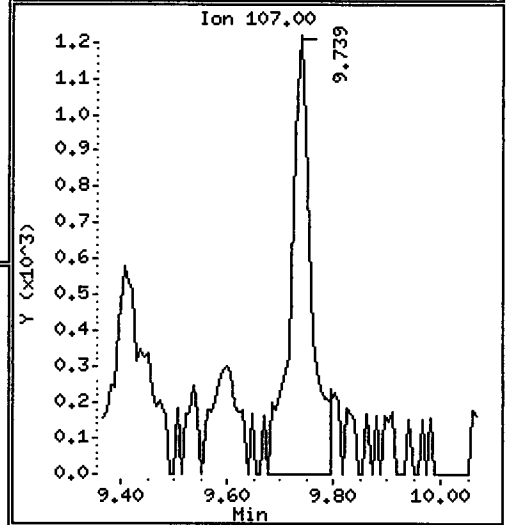
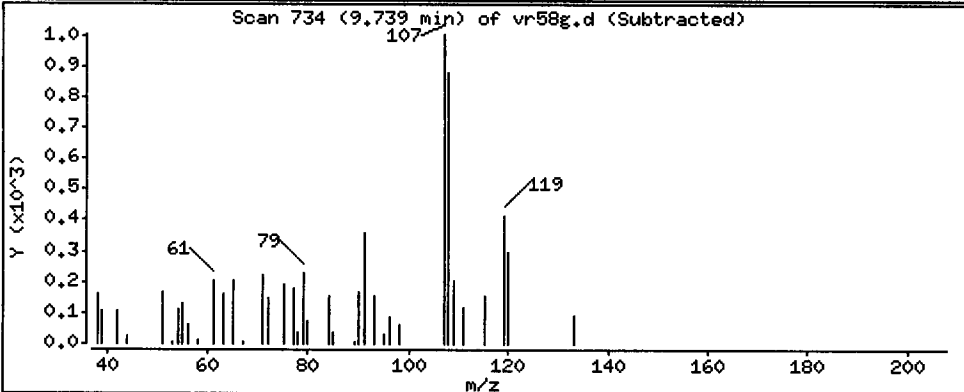
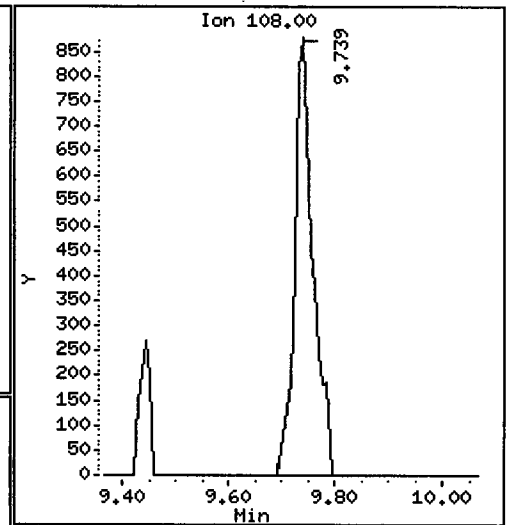
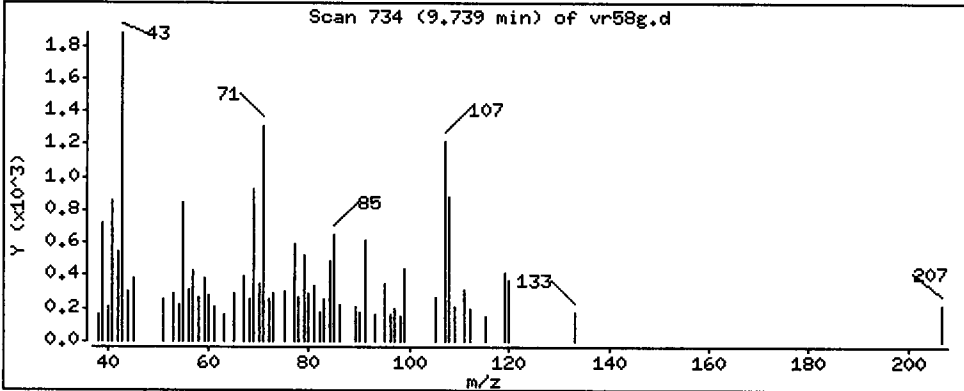
Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 10.21 ug/kg

14



Date : 04-DEC-2012 20:48

Client ID: SG-15-S-E-121107

Instrument: nt10.i

Sample Info: VR58G

Volume Injected (uL): 1.0

Operator: VTS/YZ

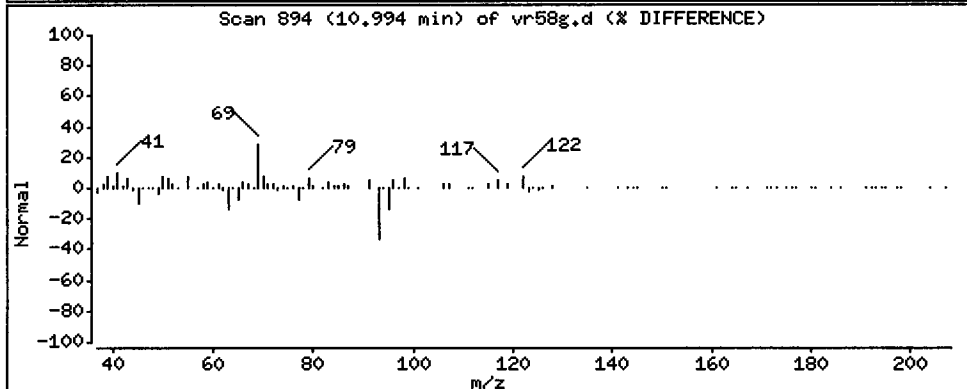
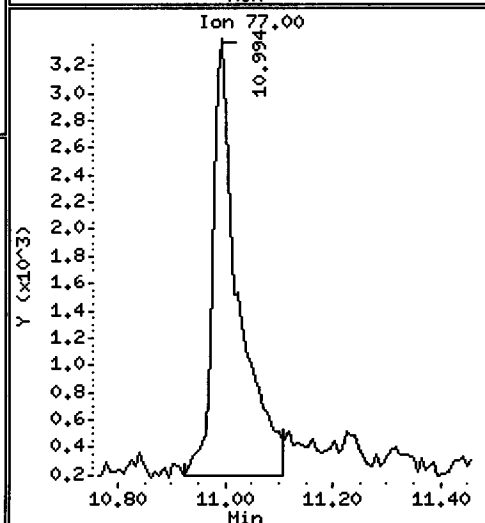
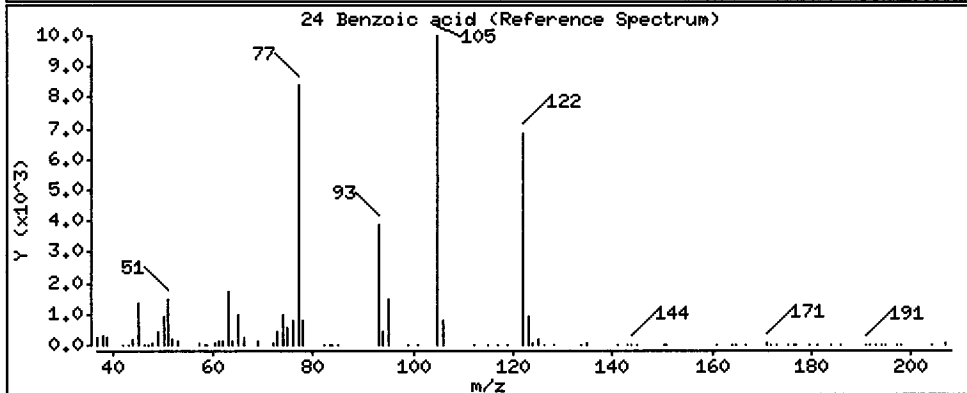
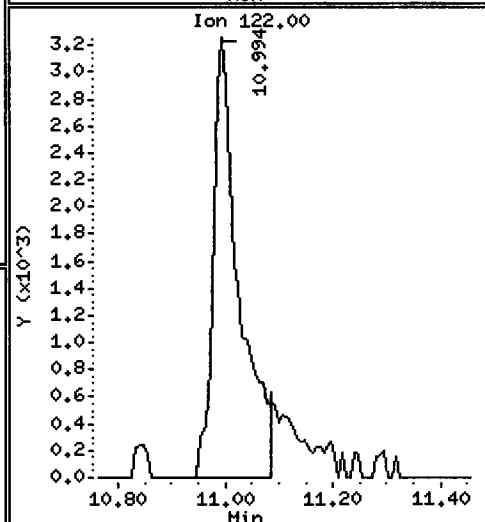
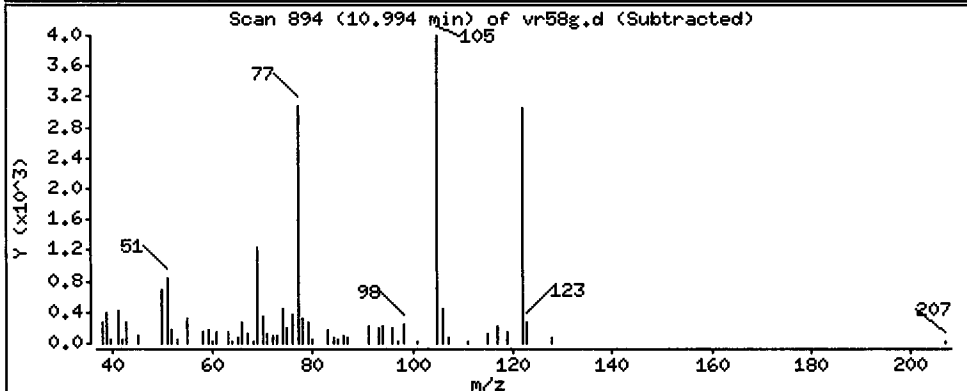
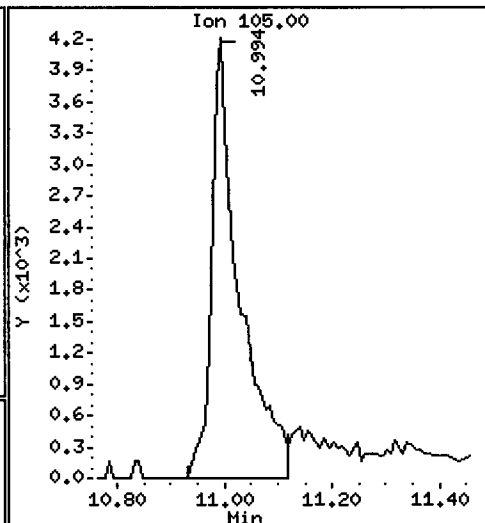
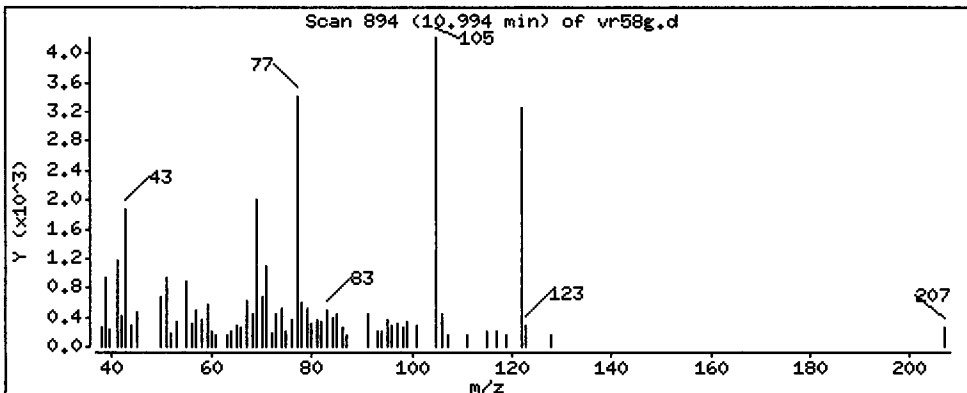
Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 60.72 ug/kg

*Handwritten signature*





Date : 04-DEC-2012 20:48

Client ID: SG-15-S-E-121107

Instrument: nt10.i

Sample Info: VR58G

Volume Injected (uL): 1.0

Operator: VTS/YZ

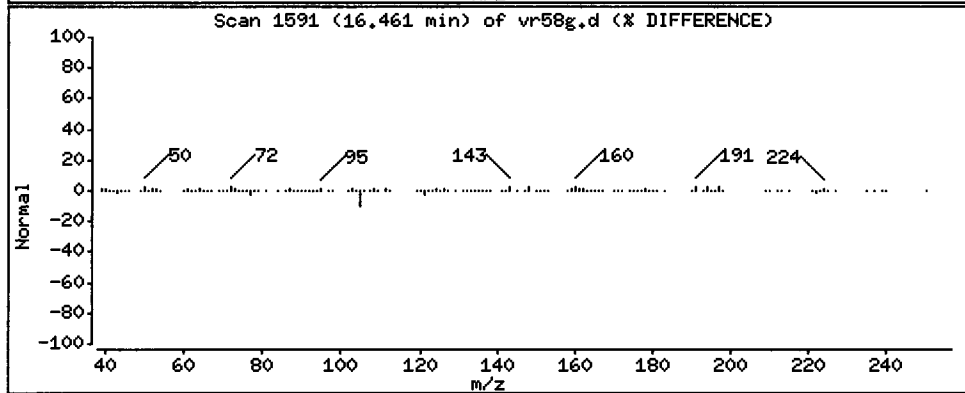
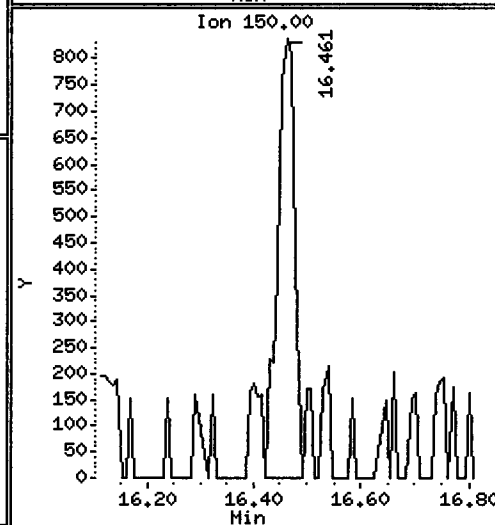
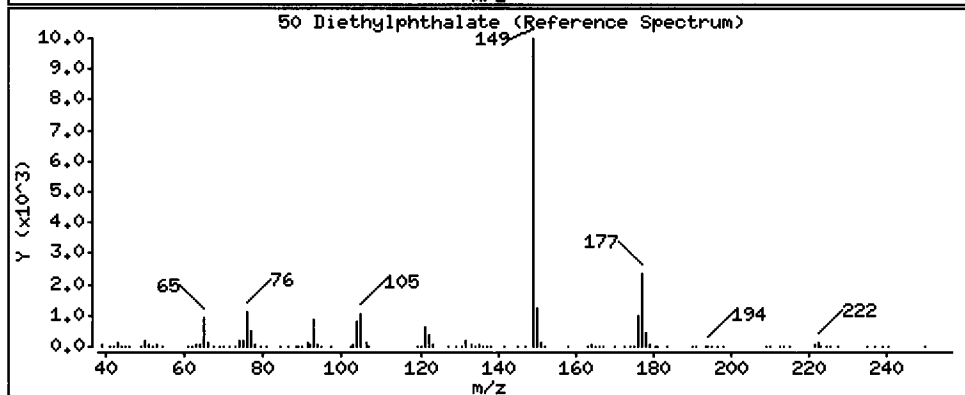
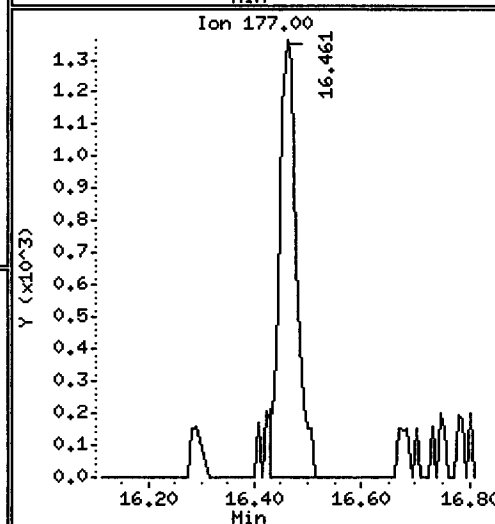
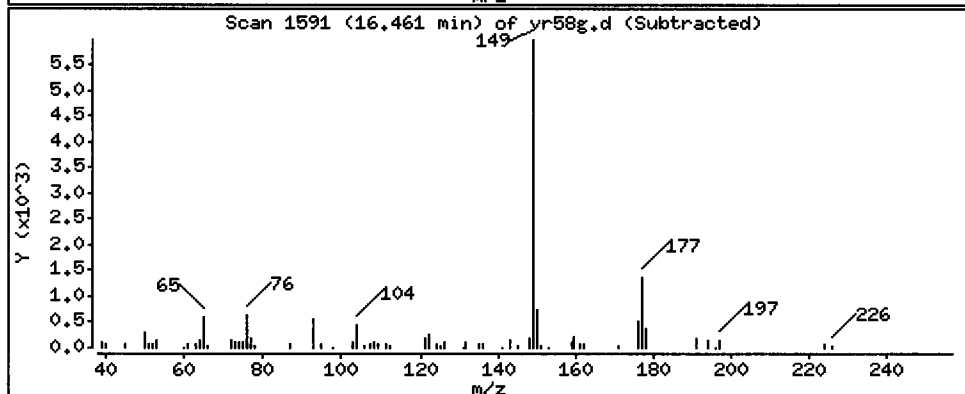
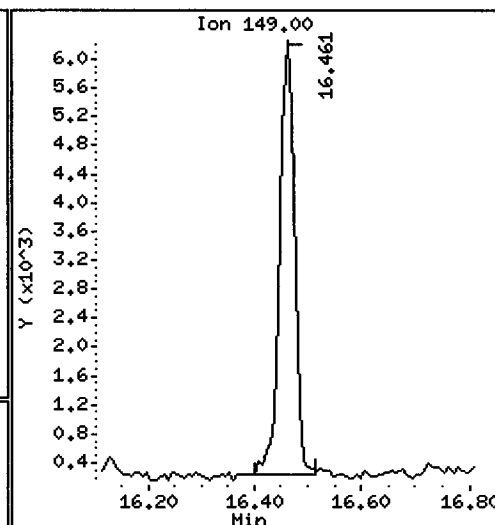
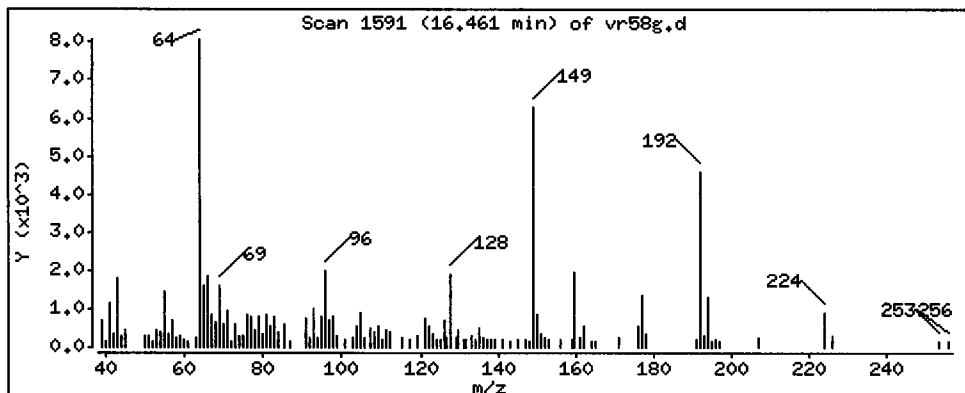
Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 12.19 ug/kg

*Liame*



Date : 04-DEC-2012 20:48

Client ID: SG-15-S-E-121107

Instrument: nt10.i

Sample Info: VR58G

Volume Injected (uL): 1.0

Operator: VTS/YZ

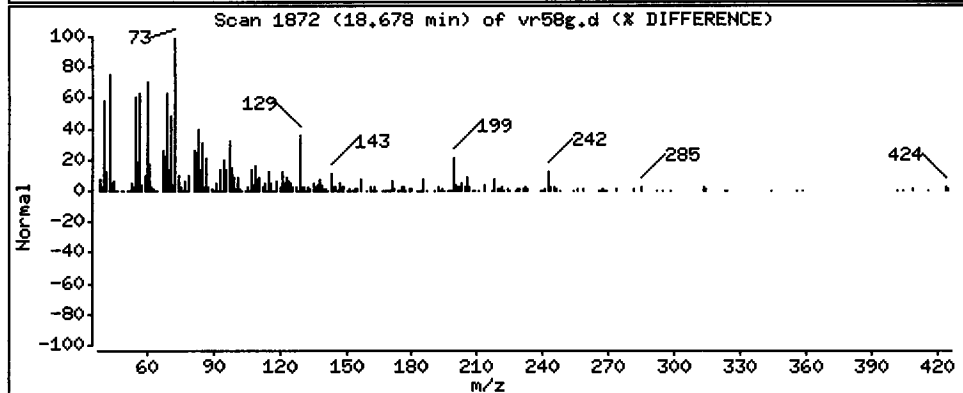
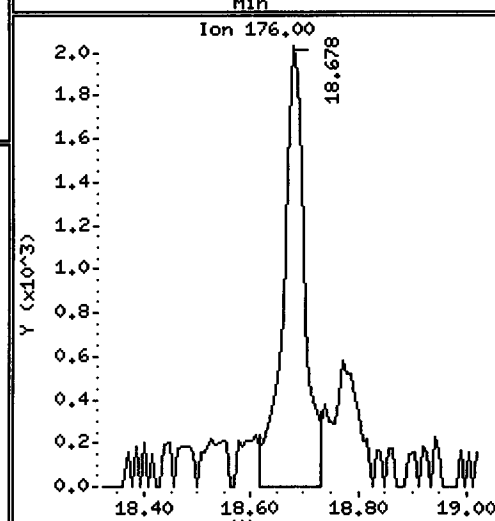
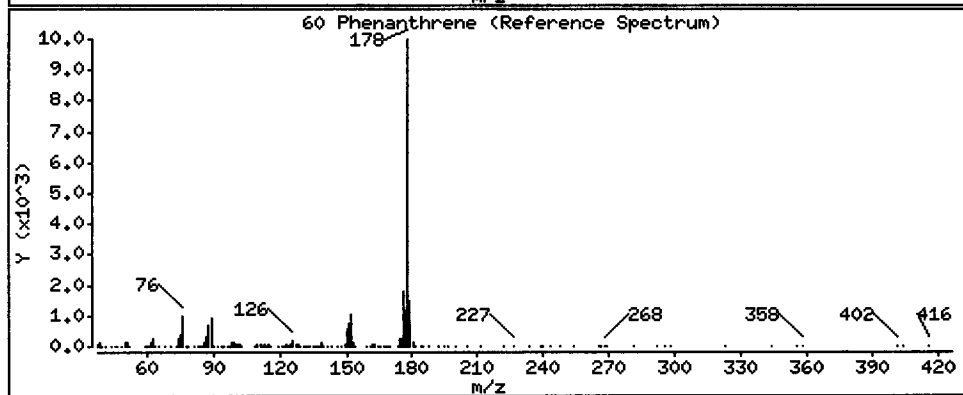
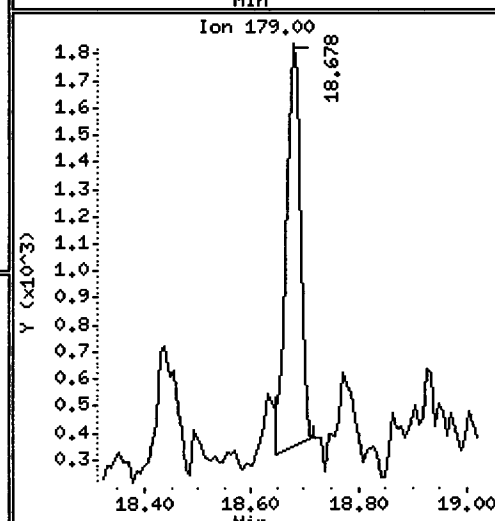
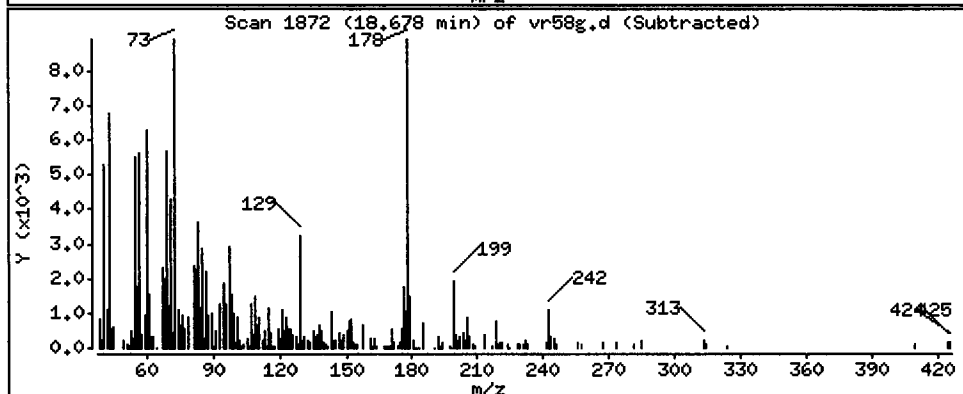
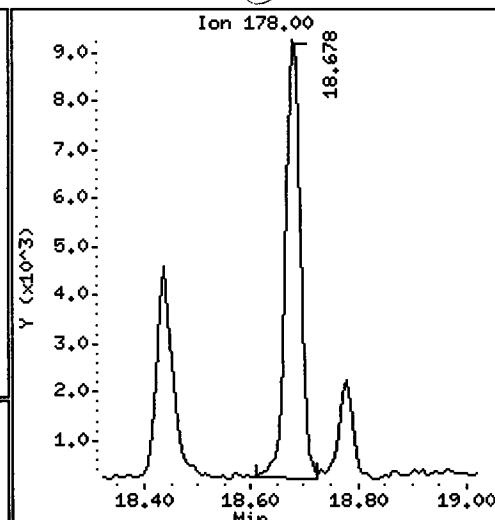
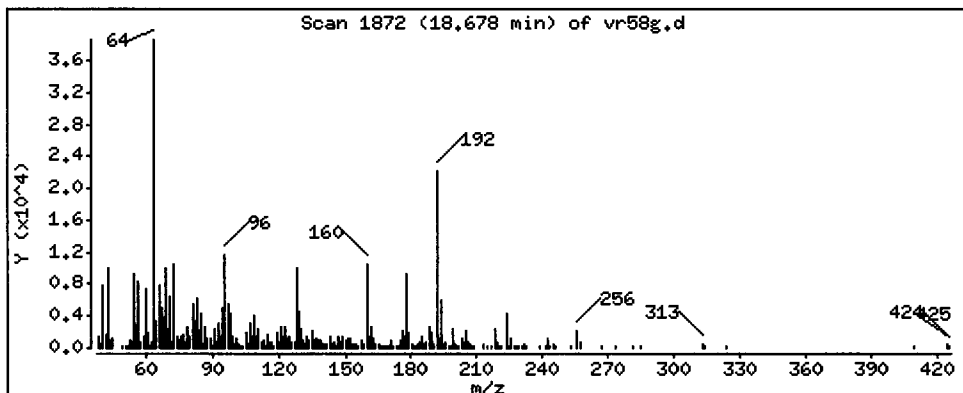
Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 15.57 ug/kg

*OK*



Date : 04-DEC-2012 20:48

Client ID: SG-15-S-E-121107

Instrument: nt10.i

Sample Info: VR58G

Volume Injected (uL): 1.0

Operator: VTS/YZ

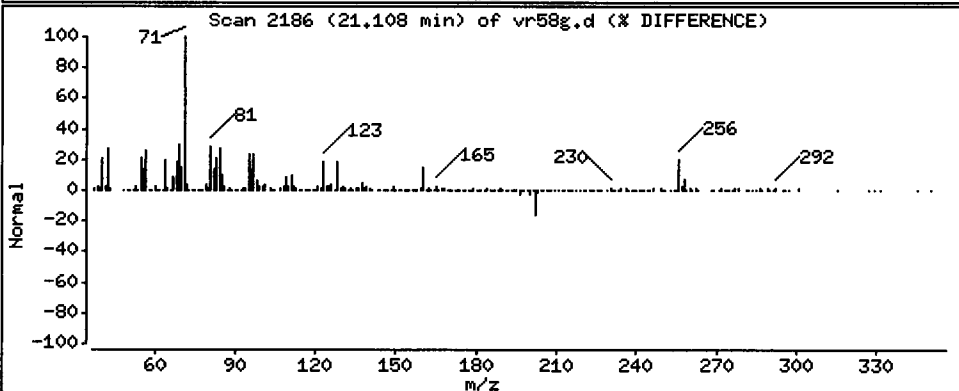
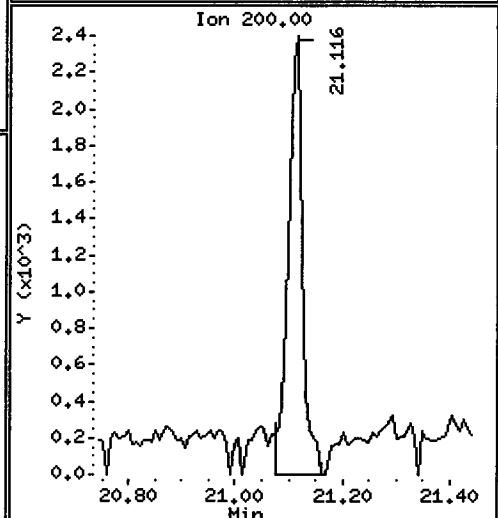
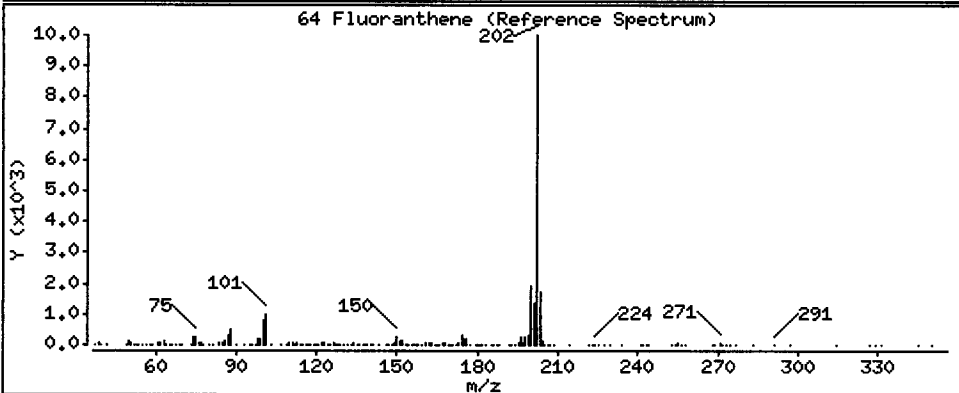
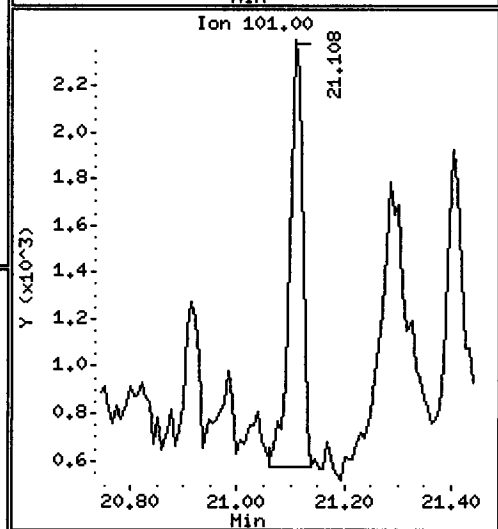
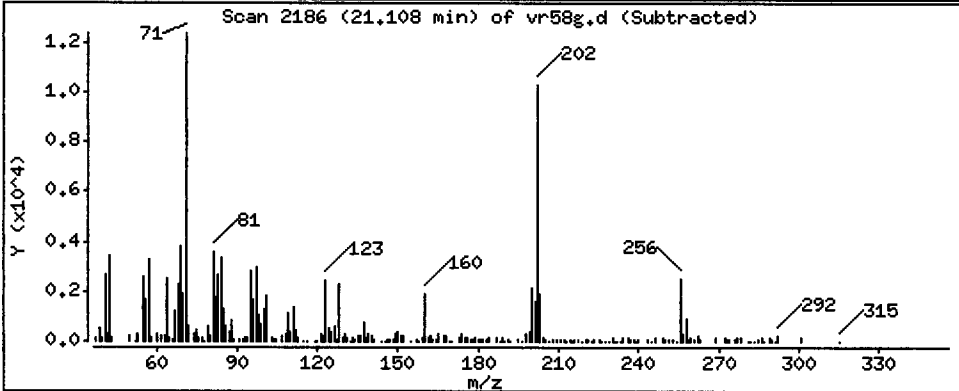
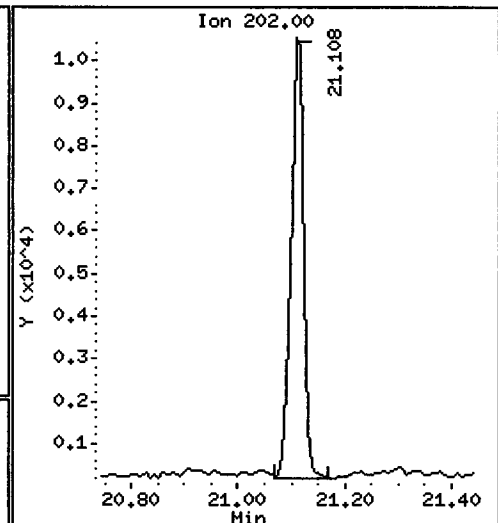
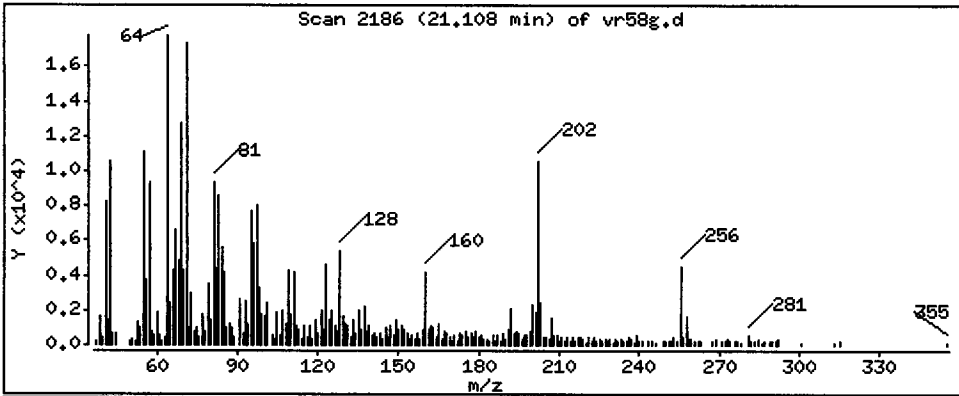
Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 12.29 ug/kg

*Sup*



Date : 04-DEC-2012 20:48

Client ID: SG-15-S-E-121107

Instrument: nt10.i

Sample Info: VR58G

Volume Injected (uL): 1.0

Operator: VTS/YZ

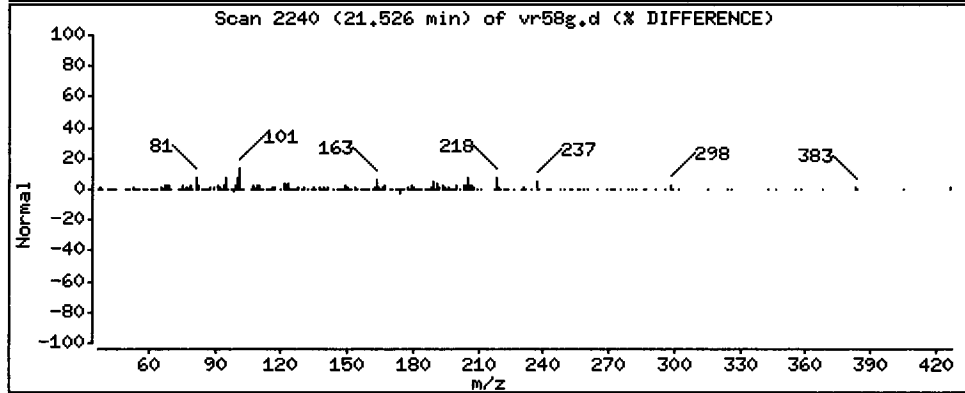
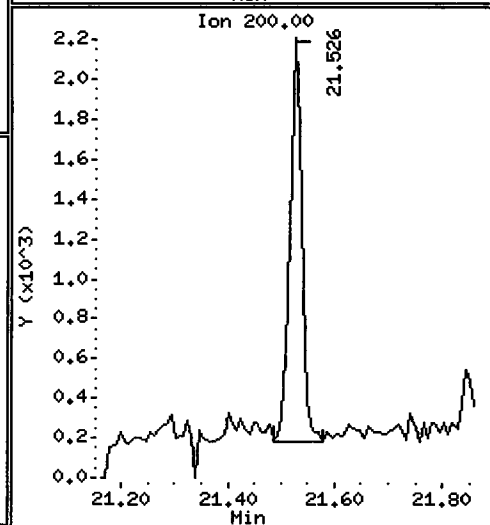
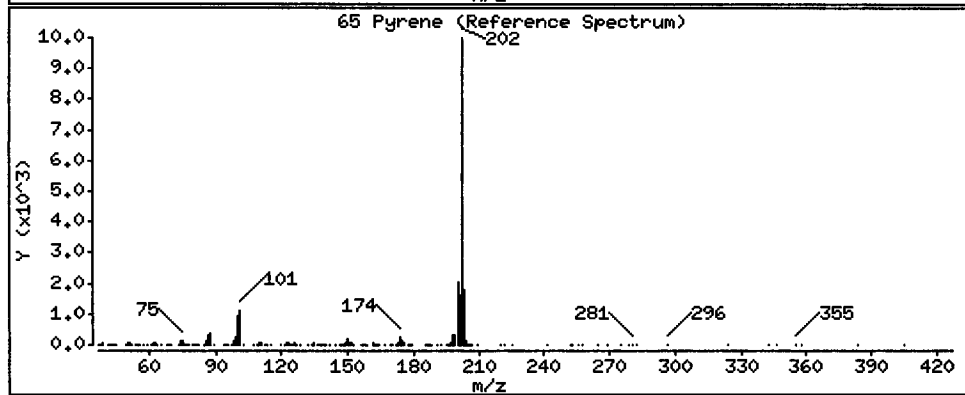
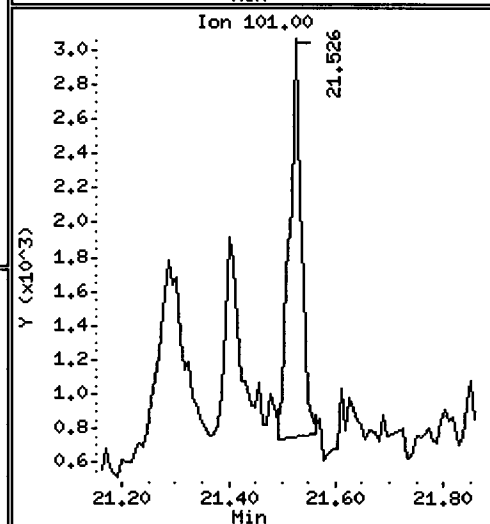
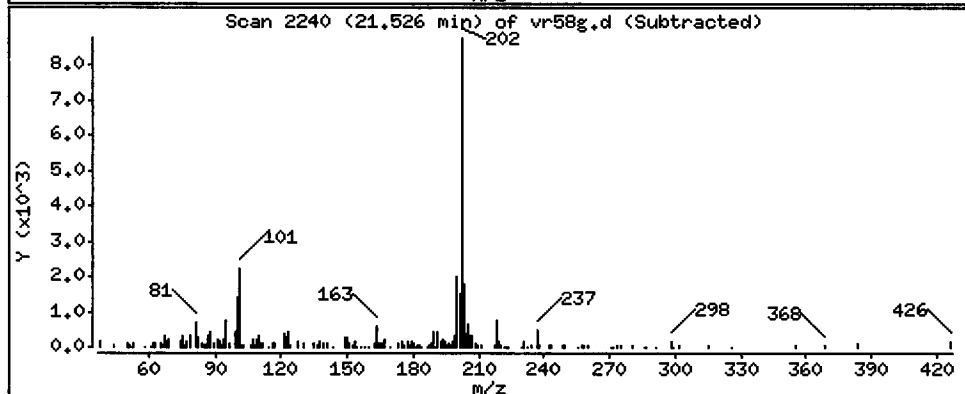
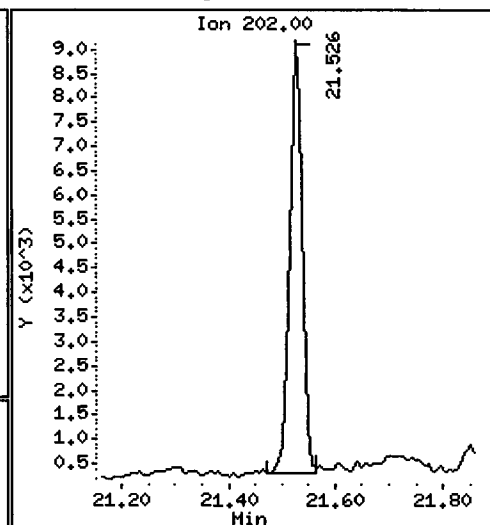
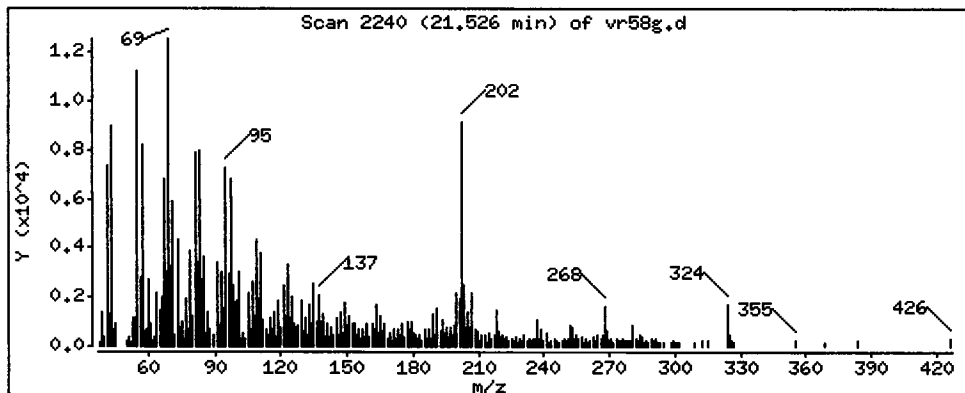
Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 11.68 ug/kg

542



Date : 04-DEC-2012 20:48

Client ID: SG-15-S-E-121107

Instrument: nt10.i

Sample Info: VR58C

Volume Injected (uL): 1.0

Operator: VTS/YZ

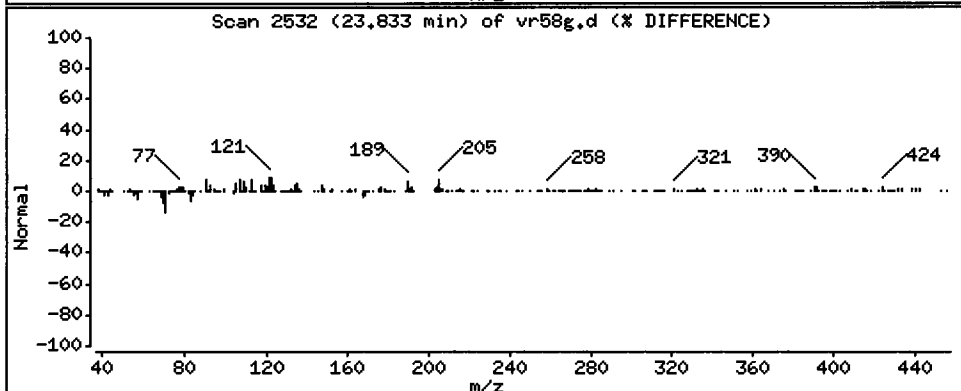
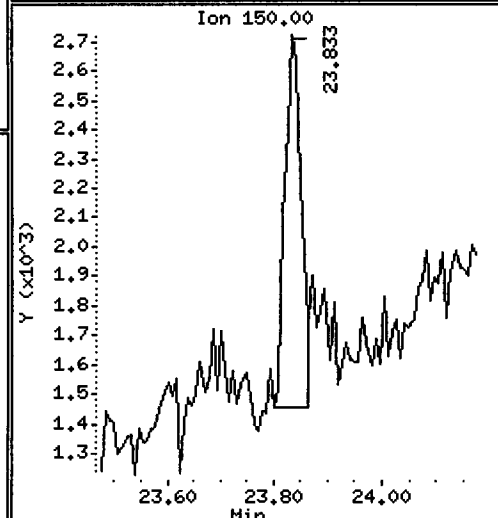
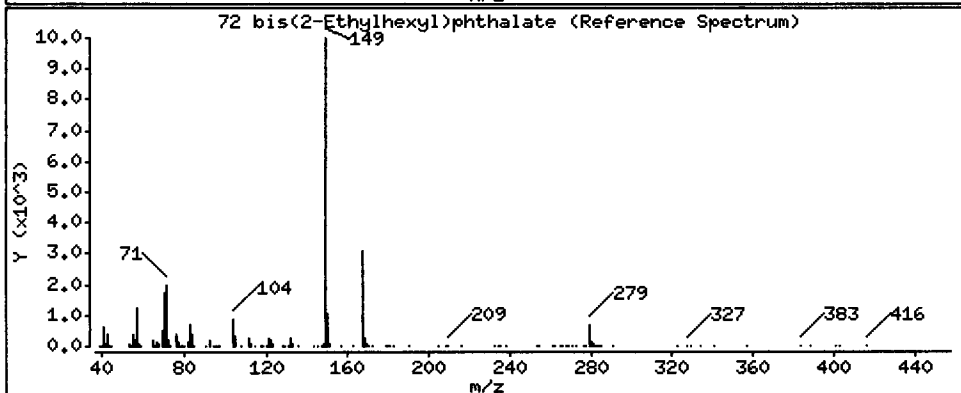
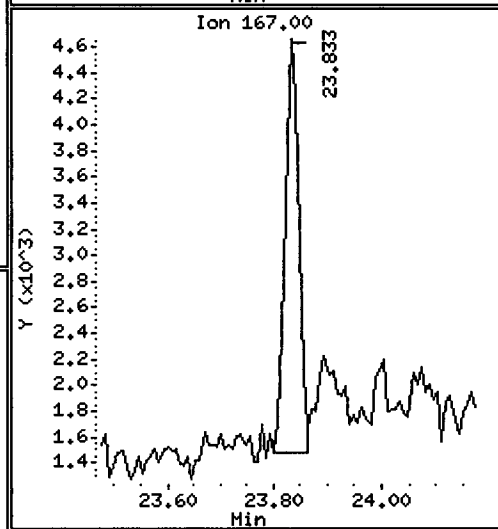
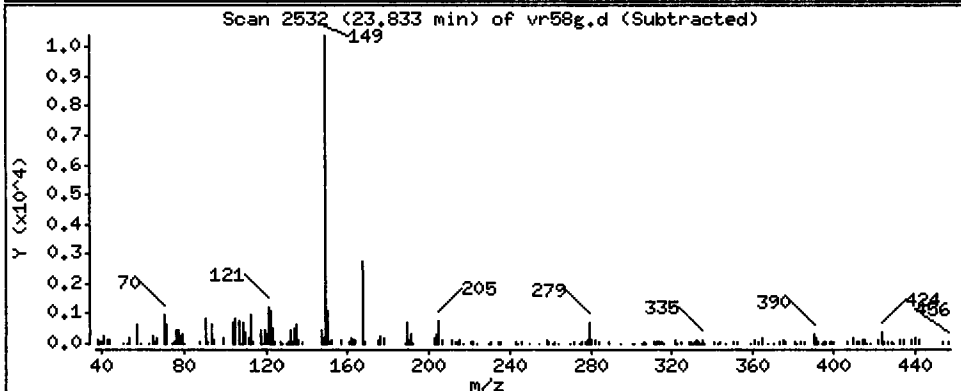
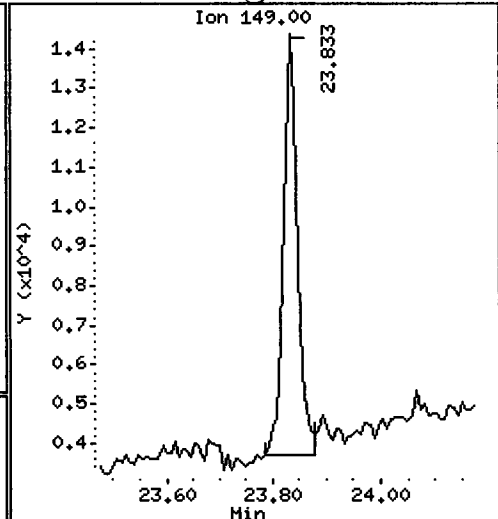
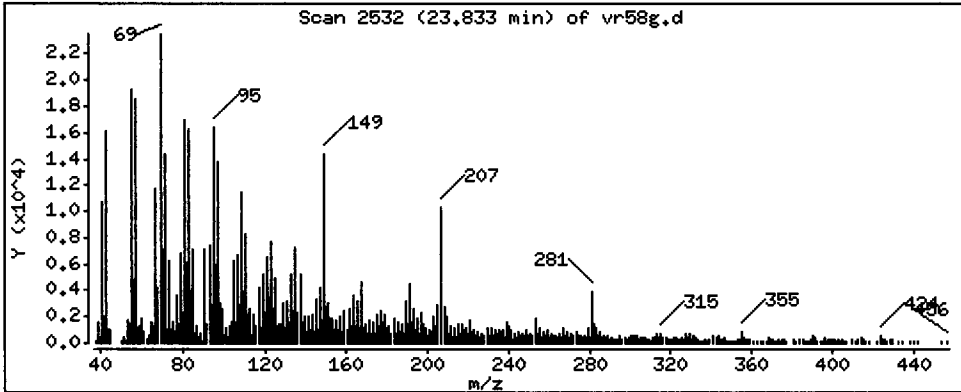
Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 21.41 ug/kg

(XLR)



CO-ELUTION SUMMARY FOR FILE - vr58g.d

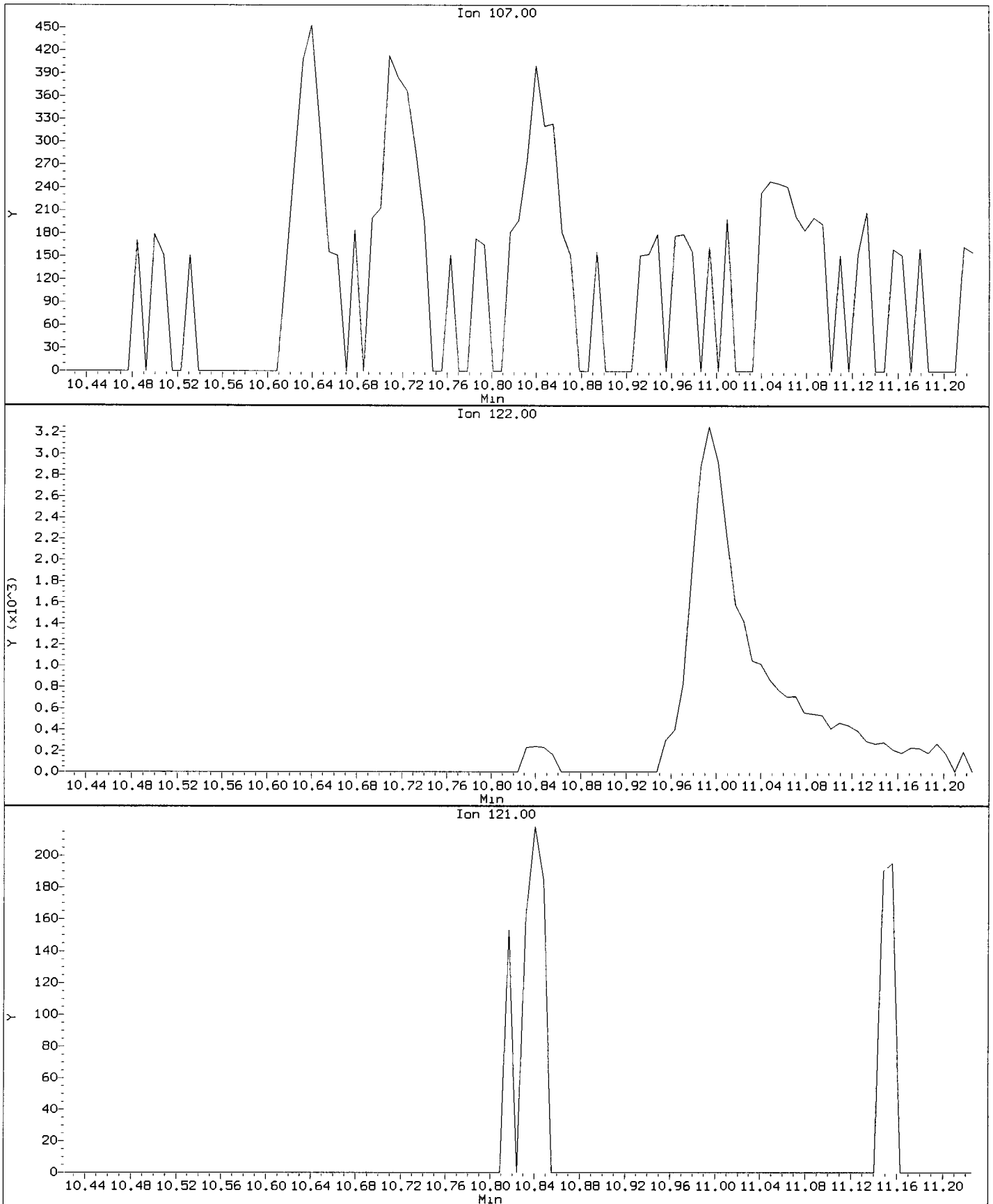
Lab ID: VR58G, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

---

Data File: /chem1/nt10.1/20121204.b/vr58g.d  
Injection Date: 04-DEC-2012 20:48  
Instrument: nt10.1  
Client Sample ID: SG-15-S-E-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



VD5A : 00703

Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58h.d  
 Lab Smp Id: VR58H Client Smp ID: SG-16-S-E-121107  
 Inj Date : 04-DEC-2012 21:25  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58H  
 Misc Info : 12-22336  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 10  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub  
 Target Version: 3.50

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	13.10000	Weight of sample extracted (g)
M	21.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
\$ 1 2-Fluorophenol	112	6.536	6.505	(0.739)	167616	4.79236	463.1	
\$ 2 Phenol-d5	99	8.243	8.220	(0.933)	190133	4.39321	424.5	
3 Phenol	94	Compound Not Detected.						
\$ 5 2-Chlorophenol-d4	132	8.467	8.452	(0.958)	170709	4.55878	440.5	
7 1,3-Dichlorobenzene	146	Compound Not Detected.						
* 8 1,4-Dichlorobenzene-d4	152	8.839	8.831	(1.000)	109336	4.00000		
9 1,4-Dichlorobenzene	146	Compound Not Detected.						
\$ 10 1,2-Dichlorobenzene-d4	152	9.219	9.212	(1.043)	82847	3.03415	293.2	
12 1,2-Dichlorobenzene	146	Compound Not Detected.						
11 Benzyl alcohol	108	Compound Not Detected.						
13 2-Methylphenol	108	Compound Not Detected.						
17 Hexachloroethane	117	Compound Not Detected.						
15 4-Methylphenol	108	Compound Not Detected.						
\$ 18 Nitrobenzene-d5	82	10.011	10.003	(0.871)	118008	3.22350	311.5	
22 2,4-Dimethylphenol	107	Compound Not Detected.						



Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
24 Benzoic acid	105				Compound Not Detected.		
26 1,2,4-Trichlorobenzene	180				Compound Not Detected.		
* 27 Naphthalene-d8	136	11.488	11.480	(1.000)	390688	4.00000	
28 Naphthalene	128				Compound Not Detected.		
30 Hexachlorobutadiene	225				Compound Not Detected.		
32 2-Methylnaphthalene	142				Compound Not Detected.		
\$ 36 2-Fluorobiphenyl	172	13.886	13.886	(0.904)	256745	2.91729	281.9
39 Dimethylphthalate	163				Compound Not Detected.		
40 Acenaphthylene	152				Compound Not Detected.		
* 42 Acenaphthene-d10	164	15.364	15.356	(1.000)	248655	4.00000	
44 Acenaphthene	153				Compound Not Detected.		
46 Dibenzofuran	168				Compound Not Detected.		
50 Diethylphthalate	149	16.462	16.462	(1.071)	17021	0.20244	19.56
49 Fluorene	166				Compound Not Detected.		
54 N-Nitrosodiphenylamine	169				Compound Not Detected.		
\$ 55 2,4,6-Tribromophenol	330	17.141	17.125	(1.116)	77891	5.31783	513.8
57 Hexachlorobenzene	284				Compound Not Detected.		
58 Pentachlorophenol	266				Compound Not Detected.		
* 59 Phenanthrene-d10	188	18.625	18.617	(1.000)	419457	4.00000	
60 Phenanthrene	178				Compound Not Detected.		
61 Anthracene	178				Compound Not Detected.		
63 Di-n-butylphthalate	149				Compound Not Detected.		
64 Fluoranthene	202	21.100	21.093	(1.133)	14584	0.11141	10.77
65 Pyrene	202	21.518	21.510	(0.908)	13343	0.10407	10.06
\$ 66 Terphenyl-d14	244	21.843	21.835	(0.921)	338184	3.94591	381.3
67 Butylbenzylphthalate	149				Compound Not Detected.		
68 Benzo(a)anthracene	228				Compound Not Detected.		
* 69 Chrysene-d12	240	23.709	23.701	(1.000)	437658	4.00000	
71 Chrysene	228				Compound Not Detected.		
72 bis(2-Ethylhexyl)phthalate	149	23.833	23.825	(0.961)	17684	0.19994	19.32
* 134 Di-n-octylphthalate-d4	153	24.801	24.801	(1.000)	641034	4.00000	
73 Di-n-octylphthalate	149				Compound Not Detected.		
76 Benzo(a)pyrene	252				Compound Not Detected.		
* 77 Perylene-d12	264	26.101	26.086	(1.000)	407958	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.		
105 1-methylnaphthalene	142				Compound Not Detected.		
187 Total Benzofluoranthenes	252				Compound Not Detected.		
98 Retene	219				Compound Not Detected.		
120 2,3,4,6-Tetrachlorophenol	232				Compound Not Detected.		

U1  
12.5.12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58h.d  
 Lab Smp Id: VR58H  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22336

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-16-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	109336	34.04
27 Naphthalene-d8	299399	149700	598798	390688	30.49
42 Acenaphthene-d10	178564	89282	357128	248655	39.25
59 Phenanthrene-d10	305410	152705	610820	419457	37.34
69 Chrysene-d12	323853	161926	647706	437658	35.14
134 Di-n-octylphthala	427845	213922	855690	641034	49.83
77 Perylene-d12	305316	152658	610632	407958	33.62

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.84	0.09
27 Naphthalene-d8	11.48	10.98	11.98	11.49	0.07
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.05
59 Phenanthrene-d10	18.62	18.12	19.12	18.62	0.04
69 Chrysene-d12	23.70	23.20	24.20	23.71	0.03
134 Di-n-octylphthala	24.80	24.30	25.30	24.80	0.00
77 Perylene-d12	26.09	25.59	26.59	26.10	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: Anchor QEA, LLC.

Client SDG: VR58

Sample Matrix: SOLID

Fraction: SV

Lab Smp Id: VR58H

Client Smp ID: SG-16-S-E-121107

Level: LOW

Operator: VTS/YZ

Data Type: MS DATA

SampleType: SAMPLE

SpikeList File: SHORTPSDDA.spk

Quant Type: ISTD

Sublist File: SHORTPSDDA.sub

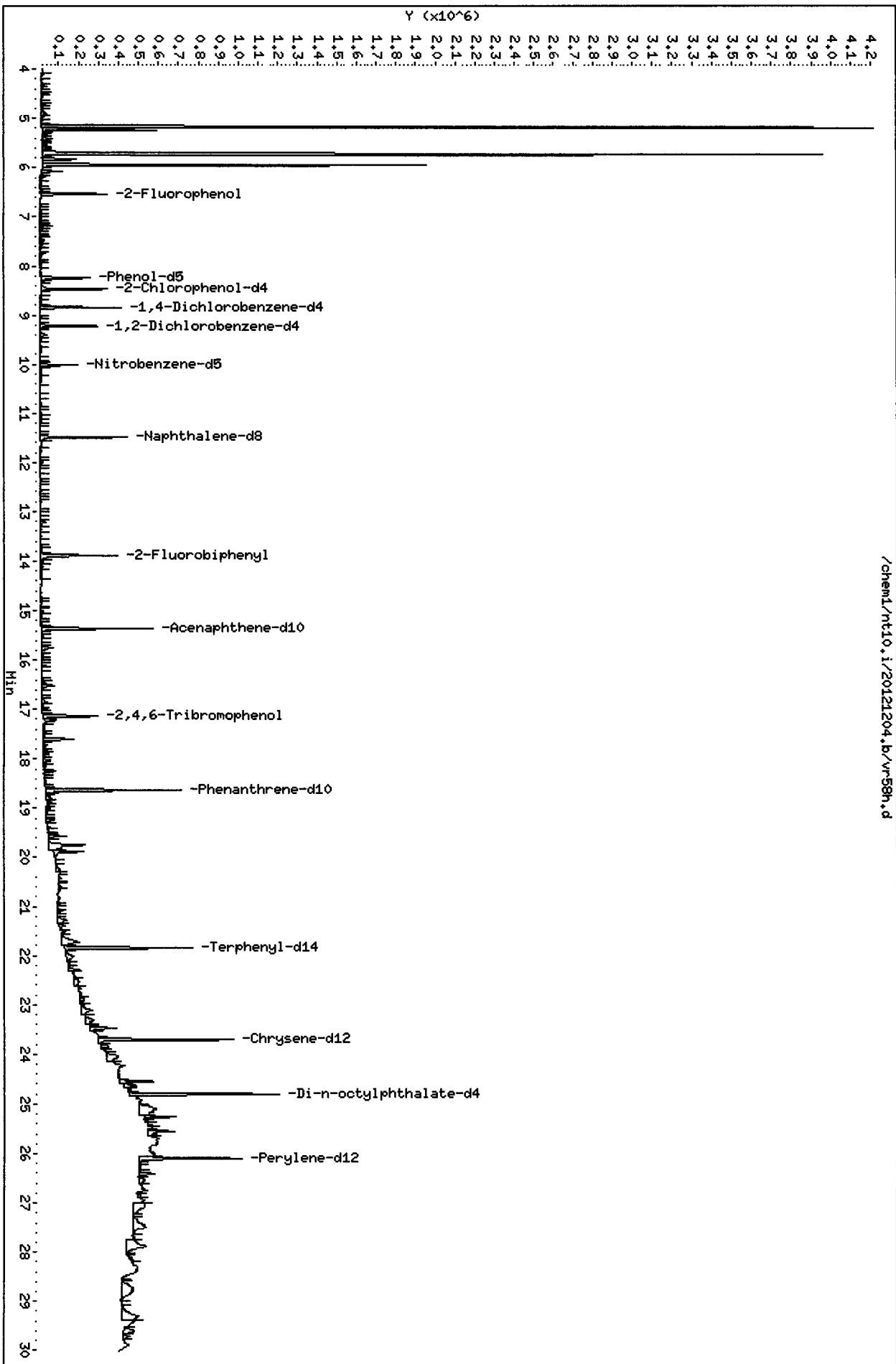
Method File: /chem1/nt10.i/20121204.b/ABN.m

Misc Info: 12-22336

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	724.7	463.1	63.90	30-160
\$ 2 Phenol-d5	724.7	424.5	58.58	30-160
\$ 5 2-Chlorophenol-d4	724.7	440.5	60.78	30-160
\$ 10 1,2-Dichlorobenzen	483.1	293.2	60.68	30-160
\$ 18 Nitrobenzene-d5	483.1	311.5	64.47	30-160
\$ 36 2-Fluorobiphenyl	483.1	281.9	58.35	30-160
\$ 55 2,4,6-Tribromophen	724.7	513.8	70.90	30-160
\$ 66 Terphenyl-d14	483.1	381.3	78.92	30-160

Data File: /chem1/nt10.i/20121204.b/vr58h.d  
Date: 04-DEC-2012 21:25  
Client ID: SG-16-S-E-121107  
Sample Info: VR58H  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.i  
Operator: VTS/VZ  
Column diameter: 0.25



20121204

Date : 04-DEC-2012 21:25

Client ID: SG-16-S-E-121107

Instrument: nt10.i

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: VTS/YZ

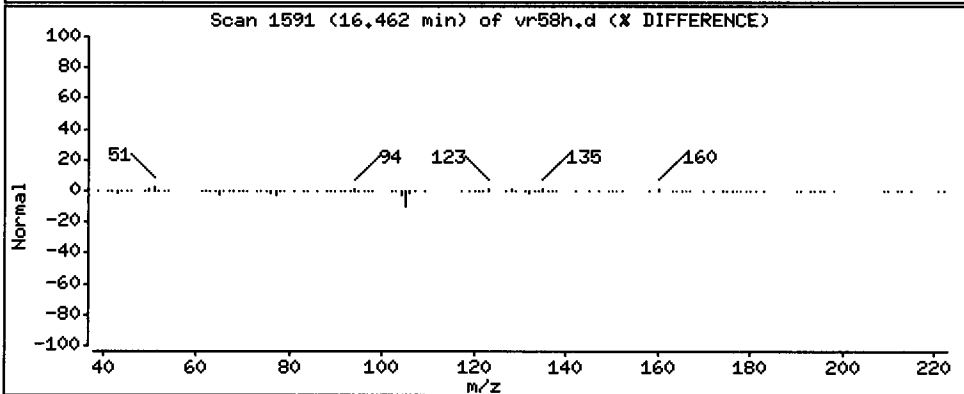
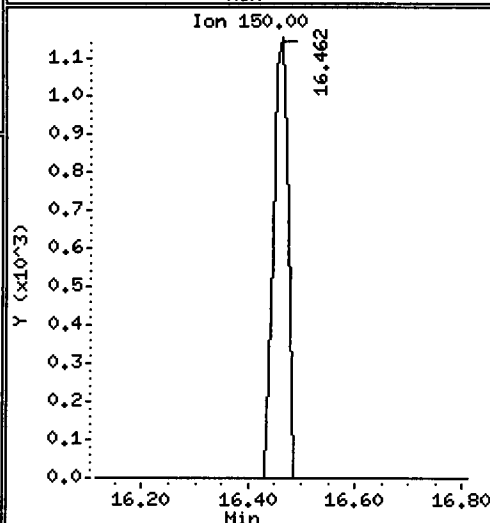
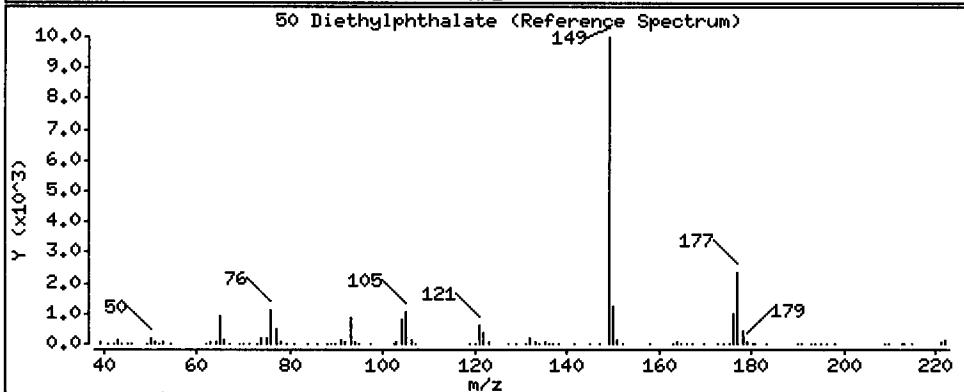
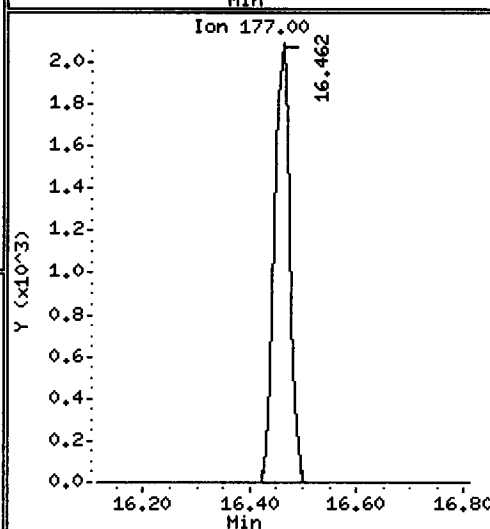
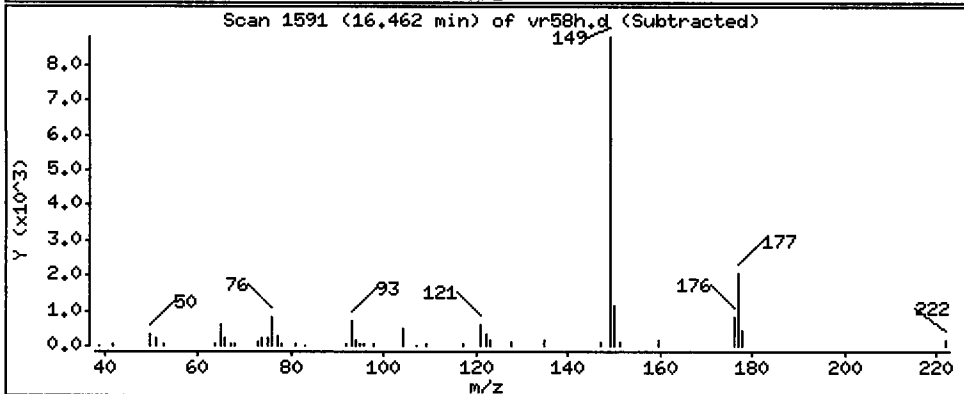
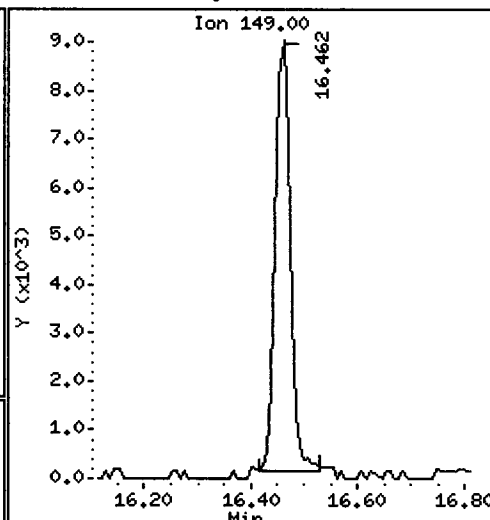
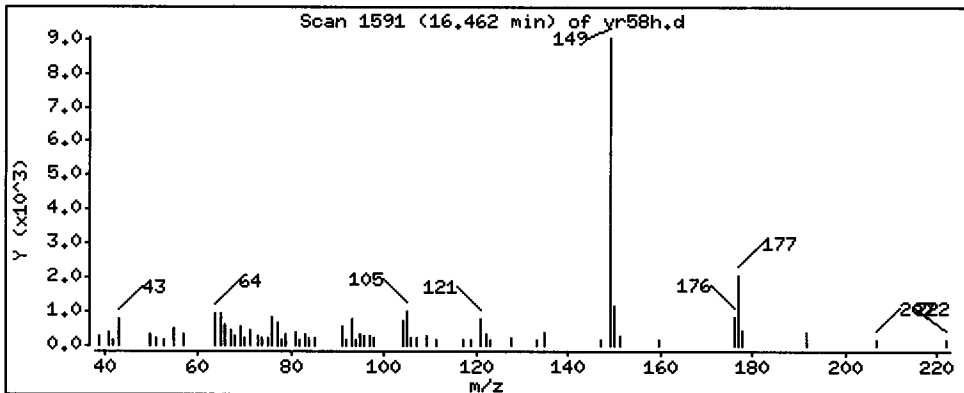
Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 19.56 ug/kg

*Handwritten signature*



Date : 04-DEC-2012 21:25

Client ID: SG-16-S-E-121107

Instrument: nt10.i

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: VTS/YZ

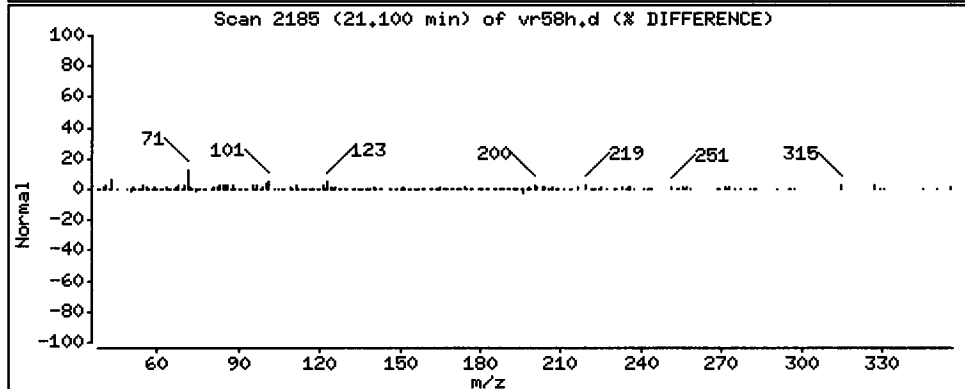
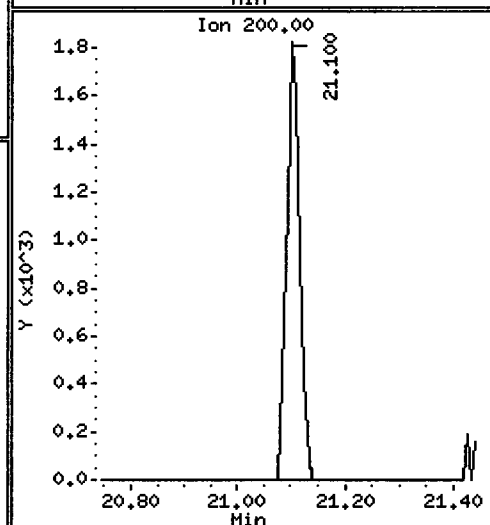
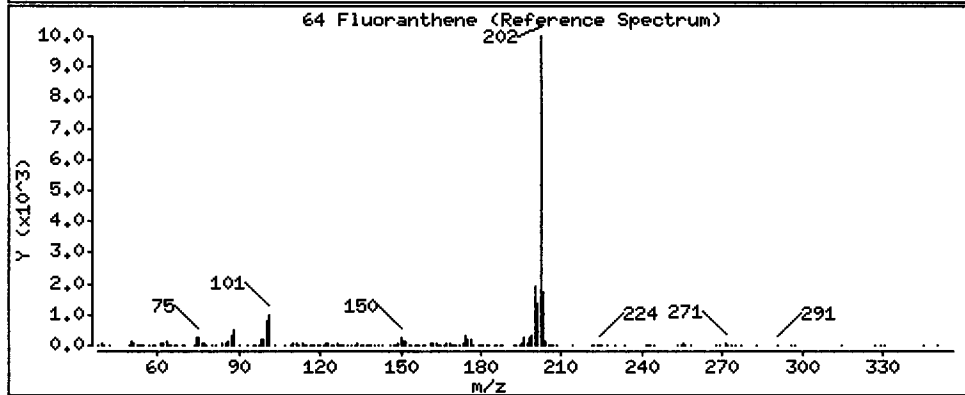
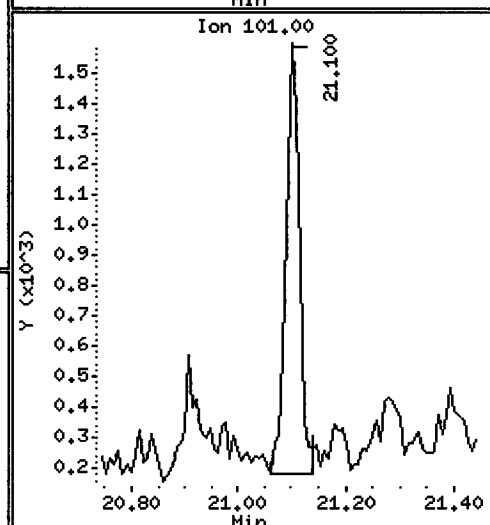
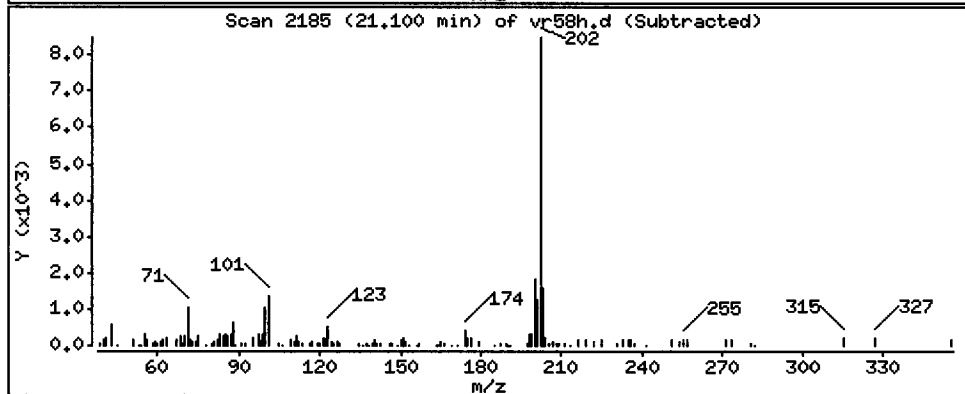
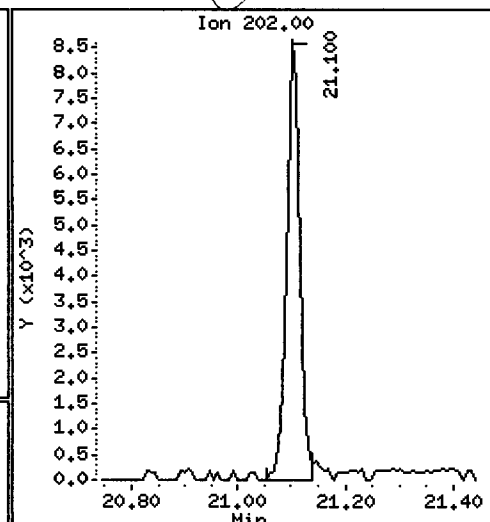
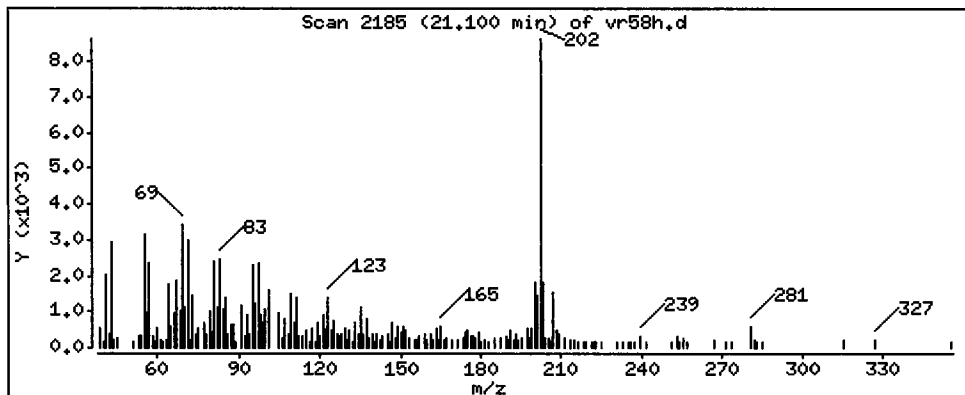
Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 10.77 ug/kg

*JLR*



Date : 04-DEC-2012 21:25

Client ID: SG-16-S-E-121107

Instrument: nt10,i

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: VTS/YZ

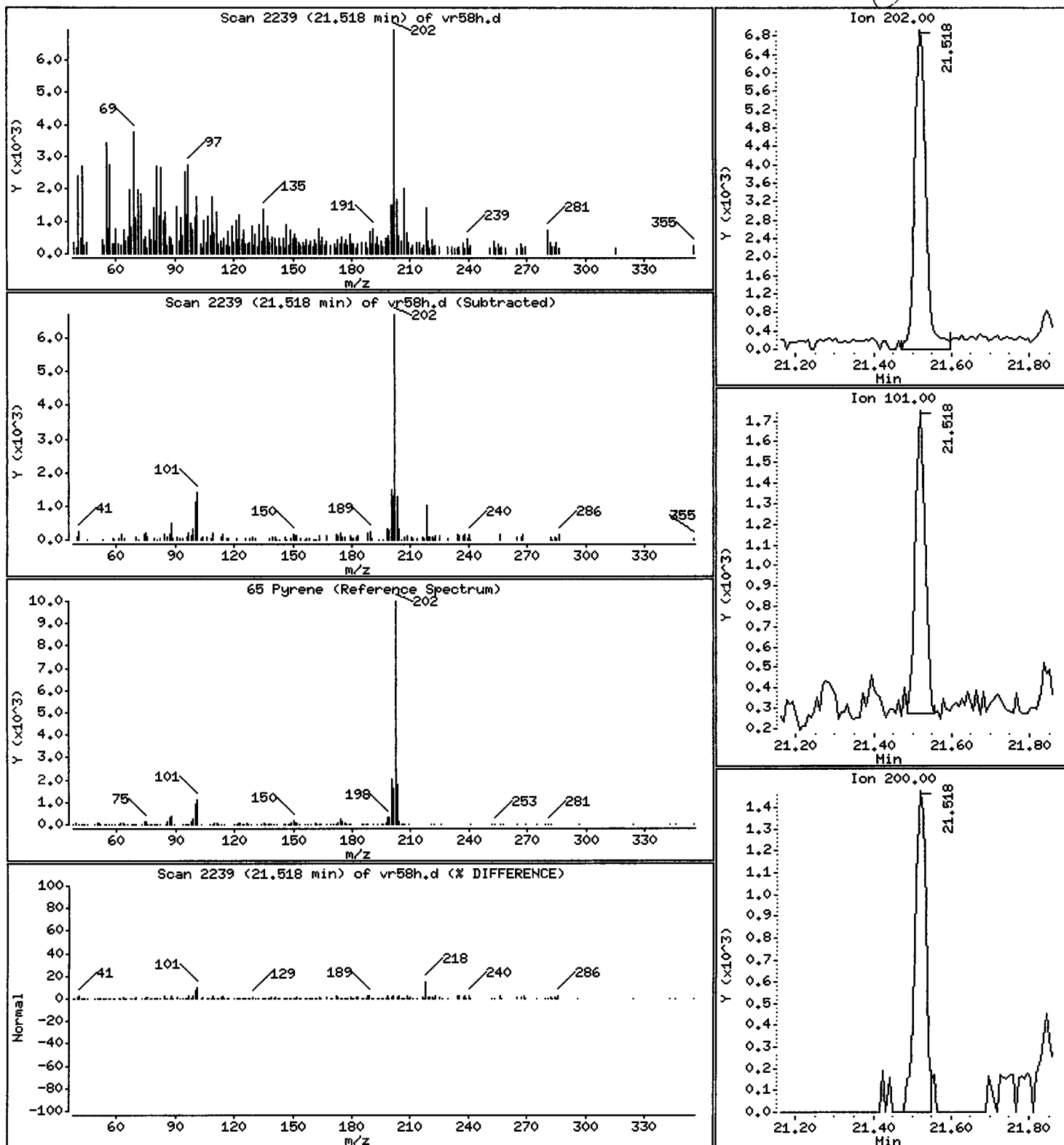
Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 10.06 ug/kg

*OK*



Date : 04-DEC-2012 21:25

Client ID: SG-16-S-E-121107

Instrument: nt10.i

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: VTS/YZ

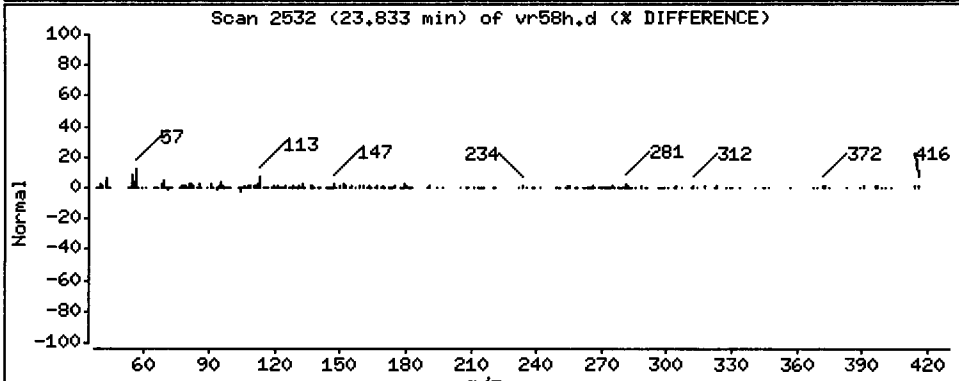
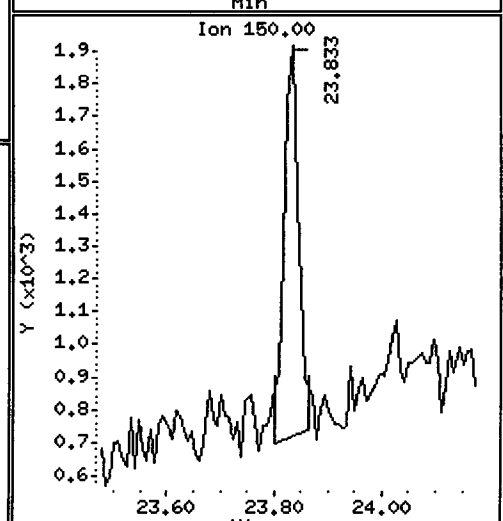
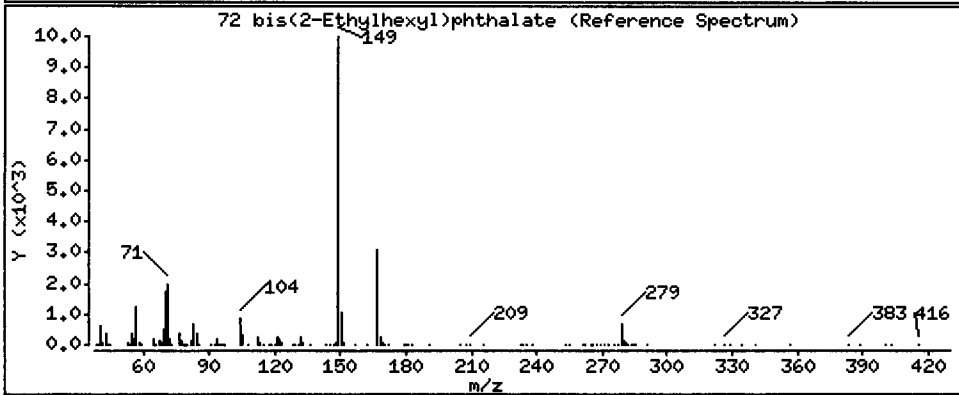
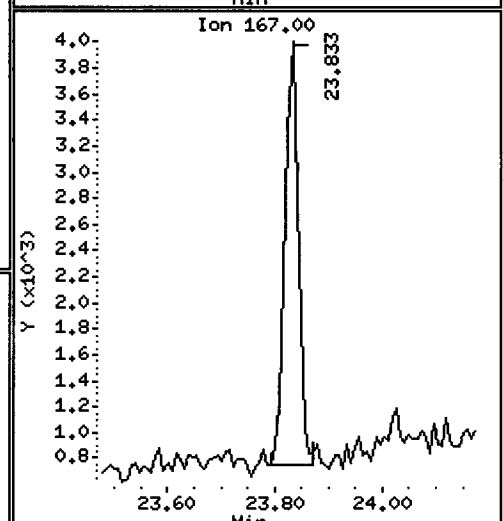
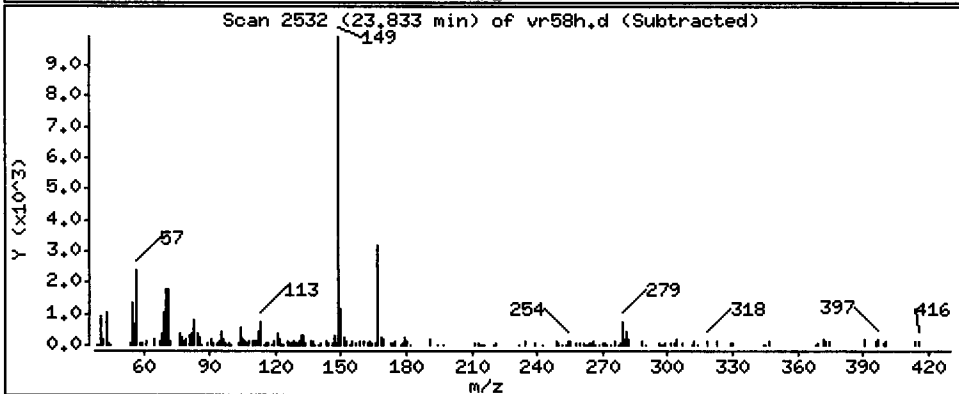
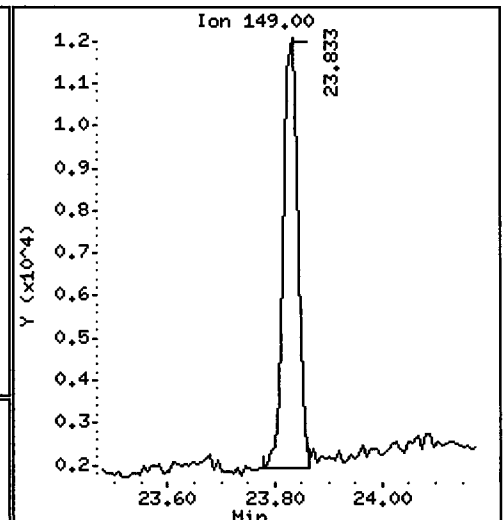
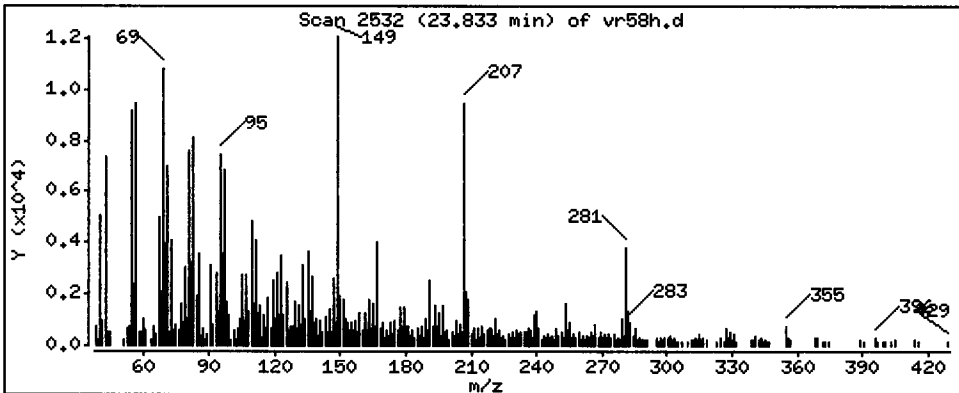
Column phase: ZB-5msi

Column diameter: 0,25

72 bis(2-Ethylhexyl)phthalate

Concentration: 19,32 ug/kg

*FLR*





CO-ELUTION SUMMARY FOR FILE - vr58h.d

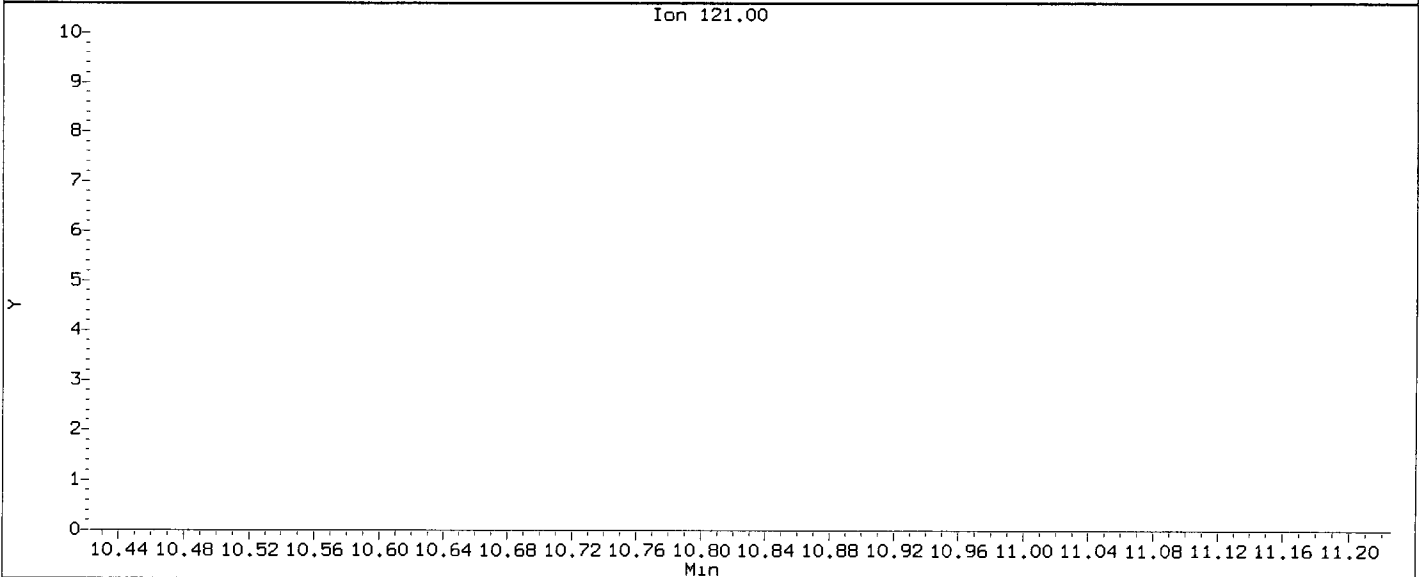
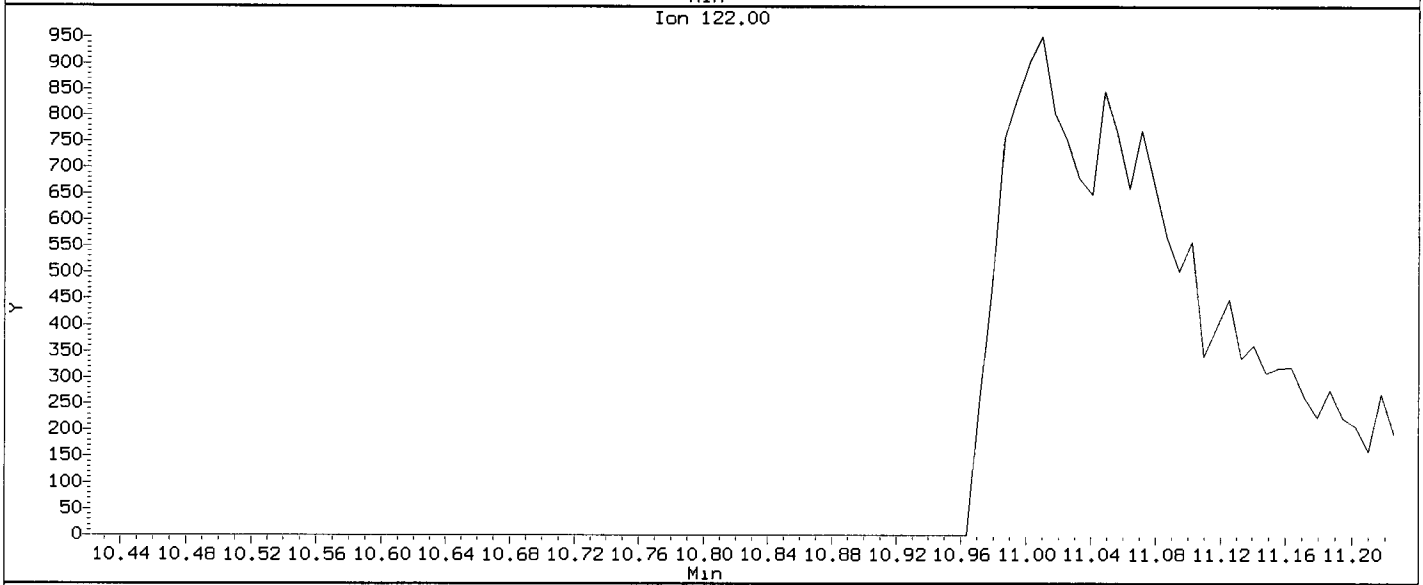
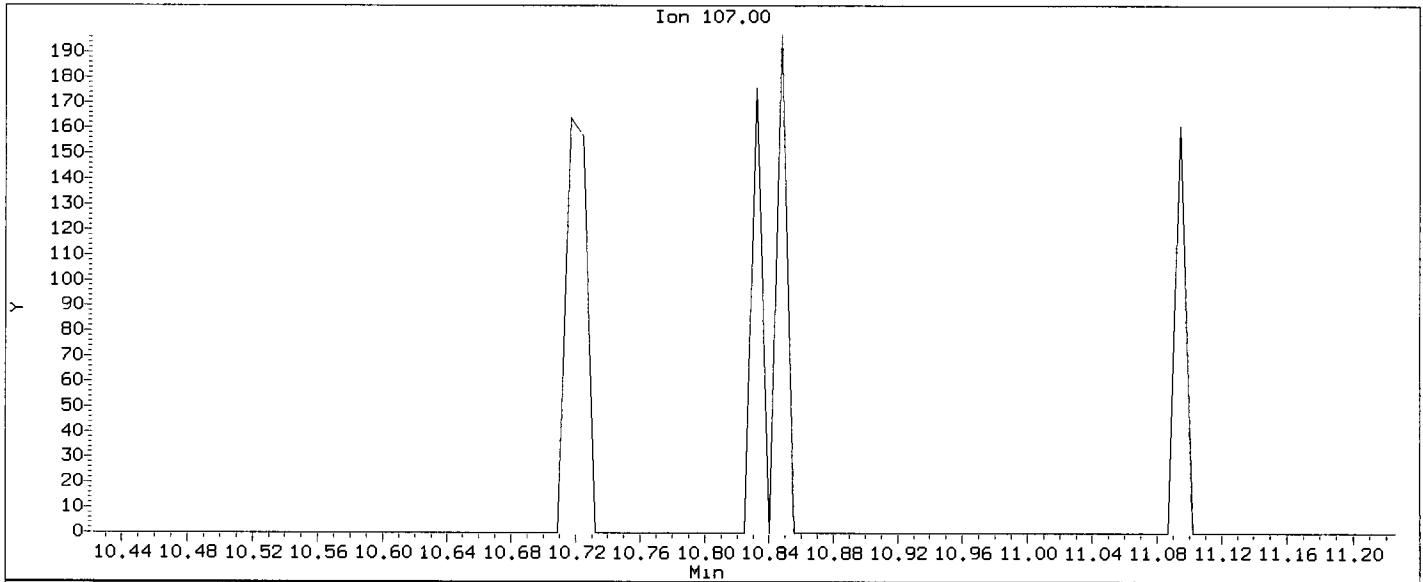
Lab ID: VR58H, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT CO-ELUTION COMPOUNDS

---

Data File: /chem1/nt10.1/20121204.b/vr58h.d  
Injection Date: 04-DEC-2012 21:25  
Instrument: nt10.1  
Client Sample ID: SG-16-S-E-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58i.d  
 Lab Smp Id: VR58I Client Smp ID: SG-17-S-E-121107  
 Inj Date : 04-DEC-2012 22:02  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58I  
 Misc Info : 12-22337  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub  
 Target Version: 3.50

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	22.30000	Weight of sample extracted (g)
M	53.50000	% 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	6.544	6.505	(0.740)	166927	4.86985	469.6
\$ 2 Phenol-d5		99	8.244	8.220	(0.933)	210754	4.96884	479.2
3 Phenol		94	8.267	8.243	(0.935)	37886	0.84790	81.77
\$ 5 2-Chlorophenol-d4		132	8.468	8.452	(0.958)	171922	4.68467	451.8
7 1,3-Dichlorobenzene		146	Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4		152	8.839	8.831	(1.000)	107154	4.00000	
9 1,4-Dichlorobenzene		146	Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4		152	9.220	9.212	(1.043)	78219	2.92299	281.9
12 1,2-Dichlorobenzene		146	Compound Not Detected.					
11 Benzyl alcohol		108	9.165	9.150	(1.037)	13443	0.63624	61.36
13 2-Methylphenol		108	Compound Not Detected.					
17 Hexachloroethane		117	Compound Not Detected.					
15 4-Methylphenol		108	9.732	9.716	(1.101)	63968	2.80824	270.8
\$ 18 Nitrobenzene-d5		82	10.011	10.003	(0.871)	119329	3.07308	296.4
22 2,4-Dimethylphenol		107	Compound Not Detected.					

MA

Compounds	QUANT		SIG				CONCENTRATIONS		
	MASS	RT	EXP	RT	REL	RT	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
24 Benzoic acid	105	11.048	11.110	(0.962)			4.44246	428.4	
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.							
* 27 Naphthalene-d8	136	11.488	11.480	(1.000)			4.00000		
28 Naphthalene	128	Compound Not Detected.							
30 Hexachlorobutadiene	225	Compound Not Detected.							
32 2-Methylnaphthalene	142	Compound Not Detected.							
\$ 36 2-Fluorobiphenyl	172	13.886	13.886	(0.904)			3.14645	303.4	
39 Dimethylphthalate	163	14.877	14.876	(0.968)			0.38735	37.35	
40 Acenaphthylene	152	Compound Not Detected.							
* 42 Acenaphthene-d10	164	15.364	15.356	(1.000)			4.00000		
44 Acenaphthene	153	Compound Not Detected.							
46 Dibenzofuran	168	Compound Not Detected.							
50 Diethylphthalate	149	16.462	16.462	(1.071)			0.23752	22.91	
49 Fluorene	166	Compound Not Detected.							
54 N-Nitrosodiphenylamine	169	Compound Not Detected.							
\$ 55 2,4,6-Tribromophenol	330	17.141	17.125	(1.116)			5.40108	520.9	
57 Hexachlorobenzene	284	Compound Not Detected.							
58 Pentachlorophenol	266	Compound Not Detected.							
* 59 Phenanthrene-d10	188	18.625	18.617	(1.000)			4.00000		
60 Phenanthrene	178	18.671	18.671	(1.002)			0.96281	92.85	
61 Anthracene	178	18.772	18.764	(1.008)			0.10582	10.20 <i>M</i>	
63 Di-n-butylphthalate	149	Compound Not Detected.							
64 Fluoranthene	202	21.108	21.093	(1.133)			1.33252	128.5	
65 Pyrene	202	21.526	21.510	(0.908)			1.21457	117.1	
\$ 66 Terphenyl-d14	244	21.851	21.835	(0.921)			3.72961	359.7	
67 Butylbenzylphthalate	149	Compound Not Detected.							
68 Benzo(a)anthracene	228	23.686	23.670	(0.999)			0.42916	41.39	
* 69 Chrysene-d12	240	23.717	23.701	(1.000)			4.00000		
71 Chrysene	228	23.756	23.740	(1.002)			0.66153	63.80	
72 bis(2-Ethylhexyl)phthalate	149	23.841	23.825	(0.961)			1.52704	147.3	
* 134 Di-n-octylphthalate-d4	153	24.809	24.801	(1.000)			4.00000		
73 Di-n-octylphthalate	149	24.816	24.808	(1.000)			0.10683	10.30	
76 Benzo(a)pyrene	252	26.016	25.985	(0.996)			0.42236	40.73 (M)	
* 77 Perylene-d12	264	26.117	26.086	(1.000)			4.00000		
78 Indeno(1,2,3-cd)pyrene	276	28.341	28.294	(1.085)			0.25203	24.30	
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.							
80 Benzo(g,h,i)perylene	276	28.993	28.931	(1.110)			0.28470	27.46	
105 1-methylnaphthalene	142	Compound Not Detected.							
187 Total Benzofluoranthenes	252	25.459	25.474	(0.975)			0.94066	90.71	
98 Retene	219	22.138	22.137	(0.933)			11275		
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.							

QC Flag Legend

M - Compound response manually integrated.

*60*  
*12-5-12*

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58i.d  
 Lab Smp Id: VR58I  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22337

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-17-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	107154	31.36
27 Naphthalene-d8	299399	149700	598798	414398	38.41
42 Acenaphthene-d10	178564	89282	357128	254478	42.51
59 Phenanthrene-d10	305410	152705	610820	429134	40.51
69 Chrysene-d12	323853	161926	647706	454337	40.29
134 Di-n-octylphthala	427845	213922	855690	654074	52.88
77 Perylene-d12	305316	152658	610632	417440	36.72

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.84	0.09
27 Naphthalene-d8	11.48	10.98	11.98	11.49	0.07
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.05
59 Phenanthrene-d10	18.62	18.12	19.12	18.62	0.04
69 Chrysene-d12	23.70	23.20	24.20	23.72	0.07
134 Di-n-octylphthala	24.80	24.30	25.30	24.81	0.03
77 Perylene-d12	26.09	25.59	26.59	26.12	0.12

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.

Client SDG: VR58

Sample Matrix: SOLID

Fraction: SV

Lab Smp Id: VR58I

Client Smp ID: SG-17-S-E-121107

Level: LOW

Operator: VTS/YZ

Data Type: MS DATA

SampleType: SAMPLE

SpikeList File: SHORTPSDDA.spk

Quant Type: ISTD

Sublist File: SHORTPSDDA.sub

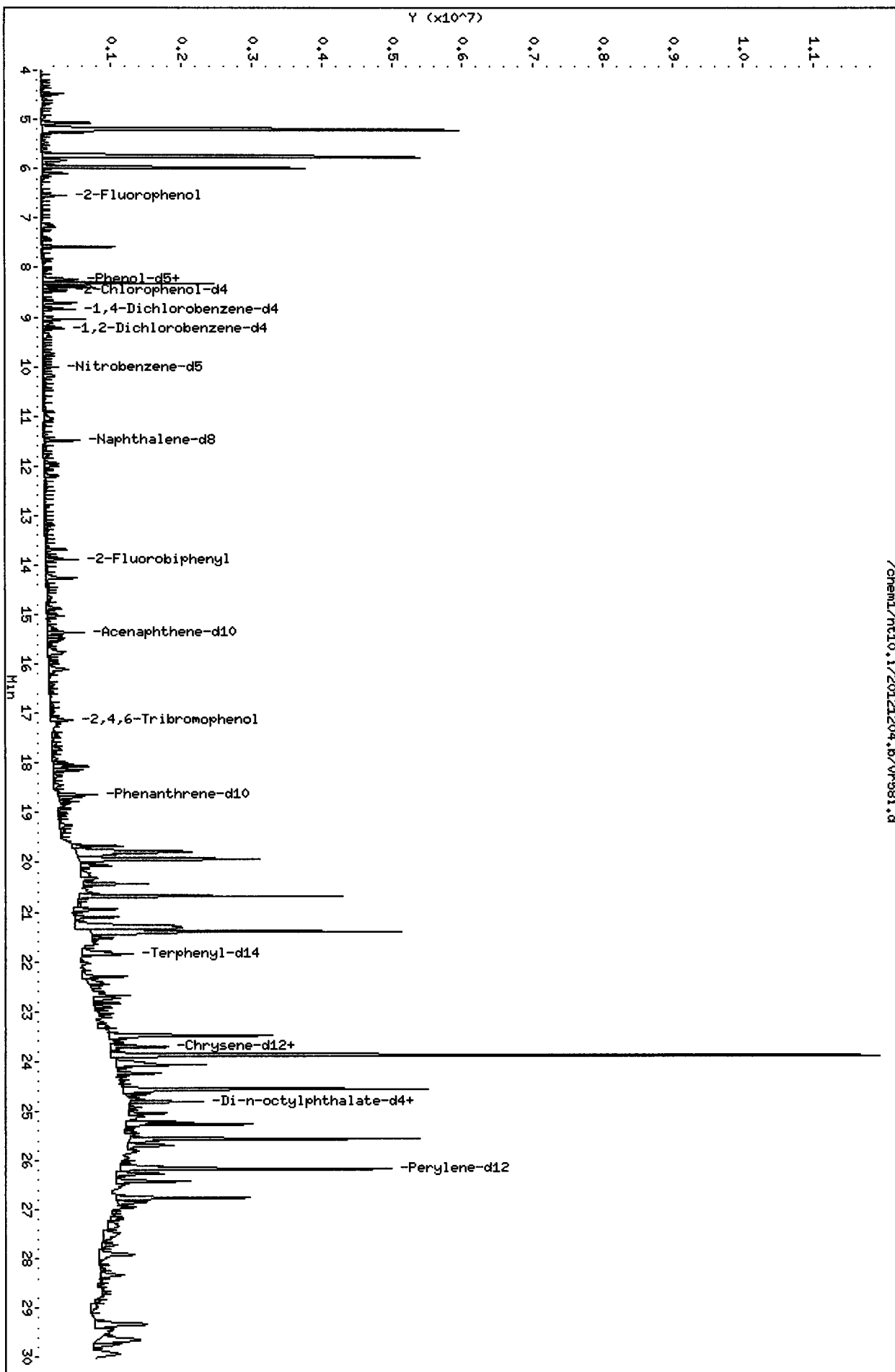
Method File: /chem1/nt10.i/20121204.b/ABN.m

Misc Info: 12-22337

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	723.3	469.6	64.93	30-160
\$ 2 Phenol-d5	723.3	479.2	66.25	30-160
\$ 5 2-Chlorophenol-d4	723.3	451.8	62.46	30-160
\$ 10 1,2-Dichlorobenzen	482.2	281.9	58.46	30-160
\$ 18 Nitrobenzene-d5	482.2	296.4	61.46	30-160
\$ 36 2-Fluorobiphenyl	482.2	303.4	62.93	30-160
\$ 55 2,4,6-Tribromophen	723.3	520.9	72.01	30-160
\$ 66 Terphenyl-d14	482.2	359.7	74.59	30-160

Data File: /chem1/nt10.i/20121204.b/vr581.d  
Date : 04-DEC-2012 22:02  
Client ID: SG-17-S-E-121107  
Sample Info: VR581  
Volume Injected (uL): 1.0  
Column phases: ZB-Smsi

Instrument: nt10.i  
Operator: VTS/VZ  
Column diameter: 0.25



/chem1/nt10.i/20121204.b/vr581.d

Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR581

Volume Injected (uL): 1.0

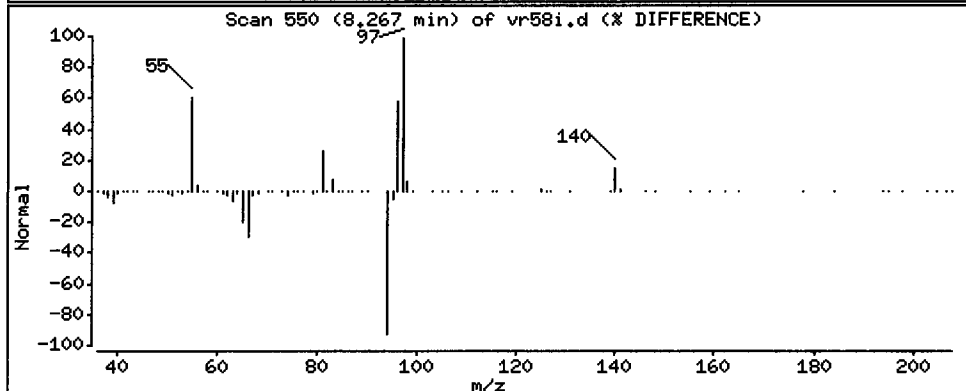
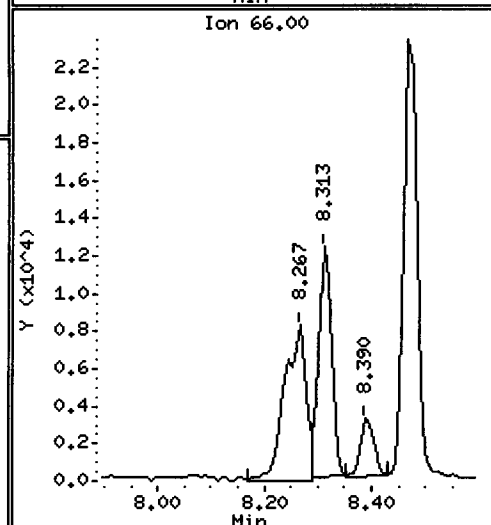
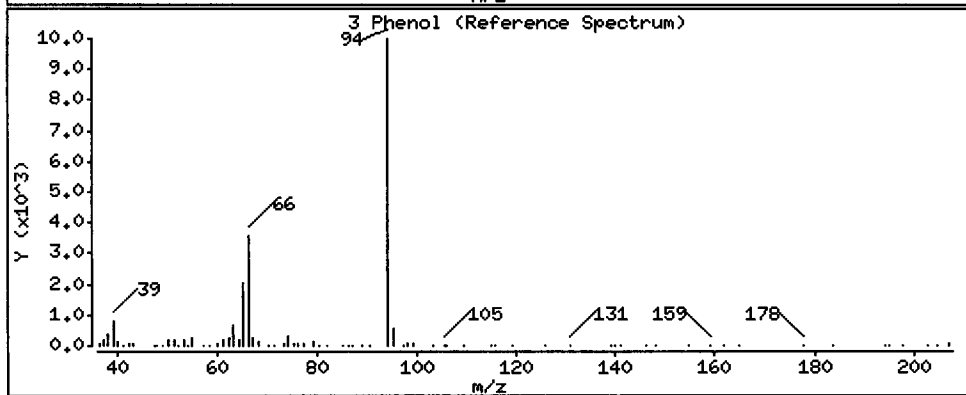
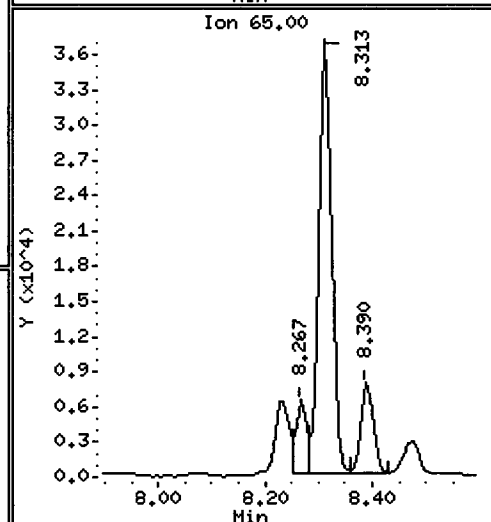
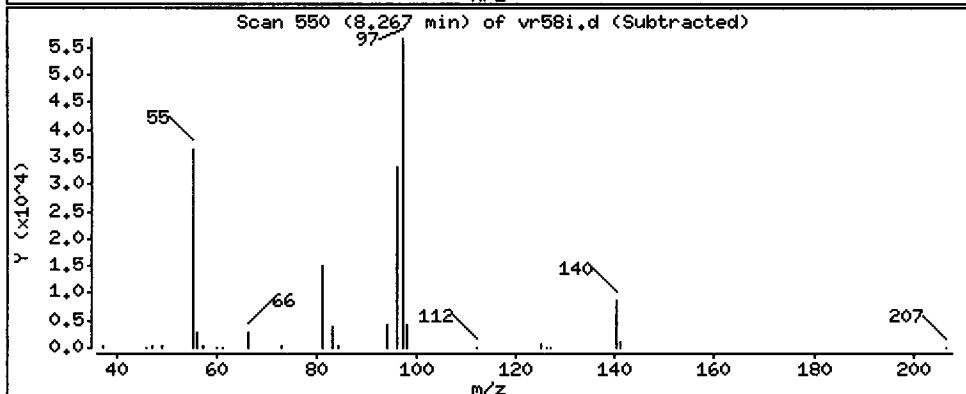
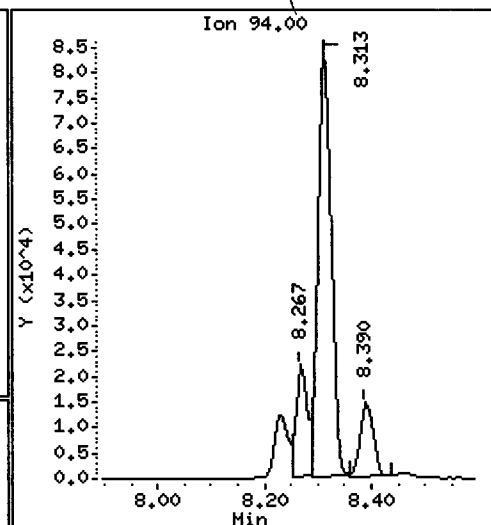
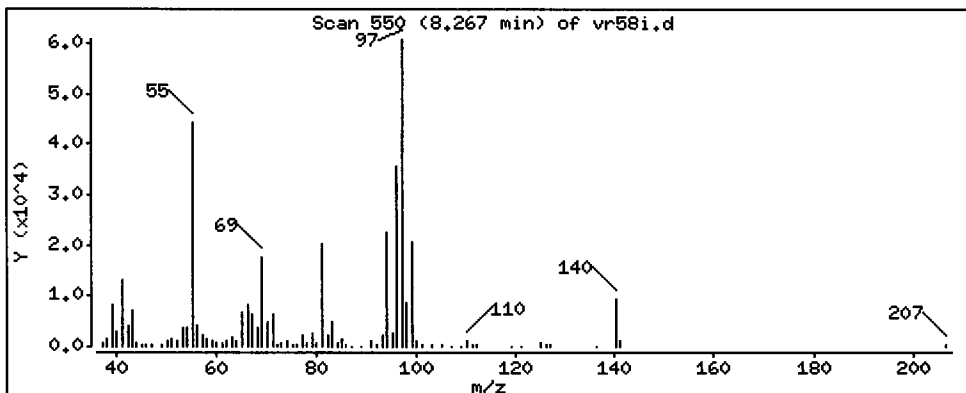
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 81.77 ug/kg





Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR581

Volume Injected (uL): 1.0

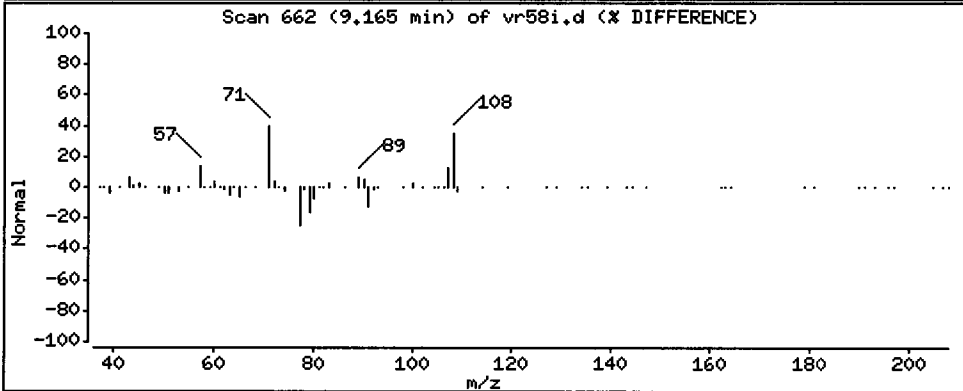
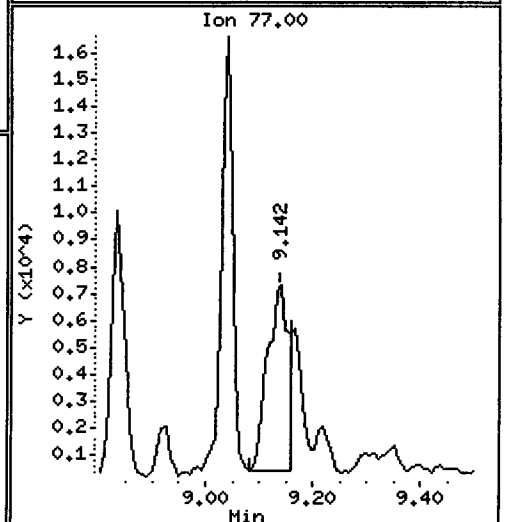
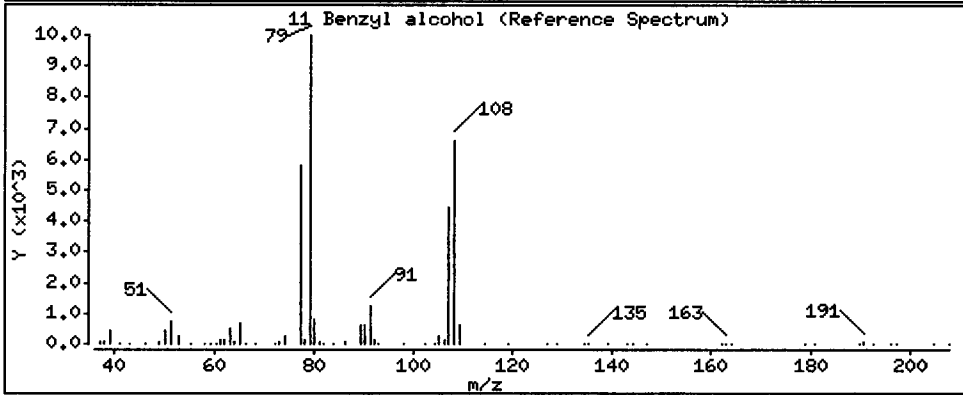
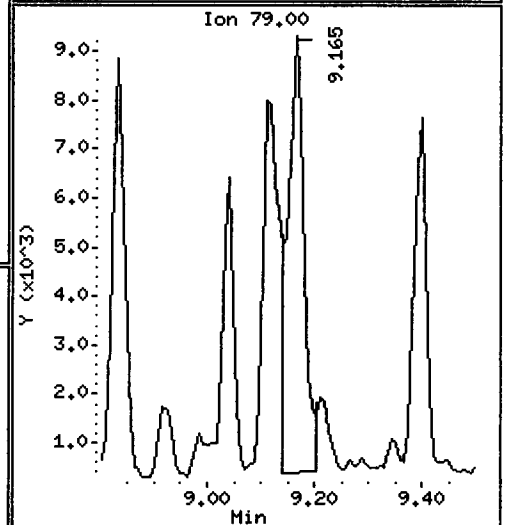
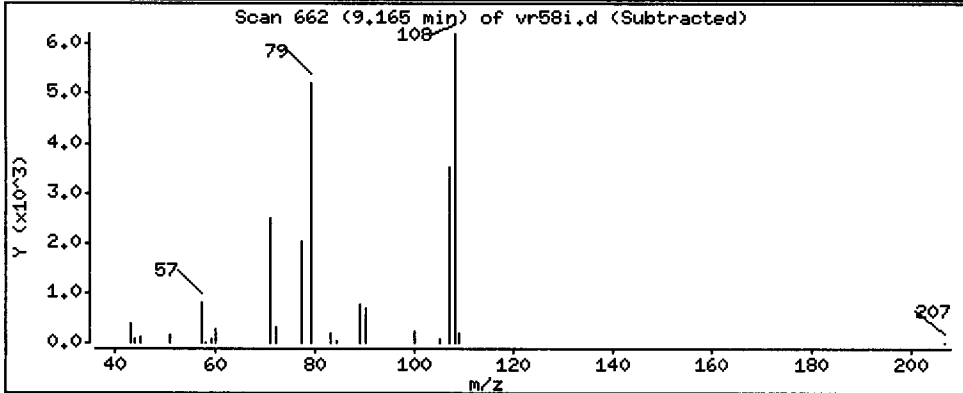
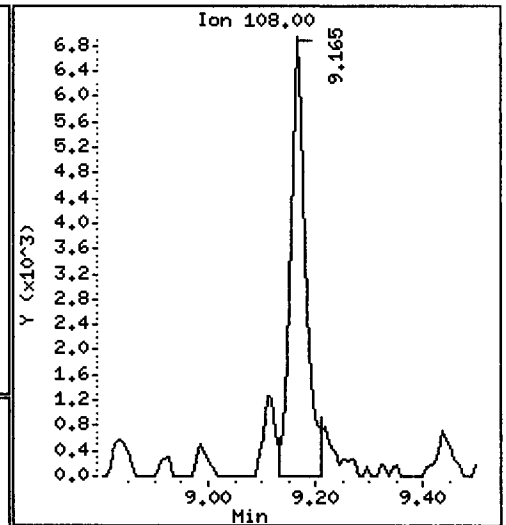
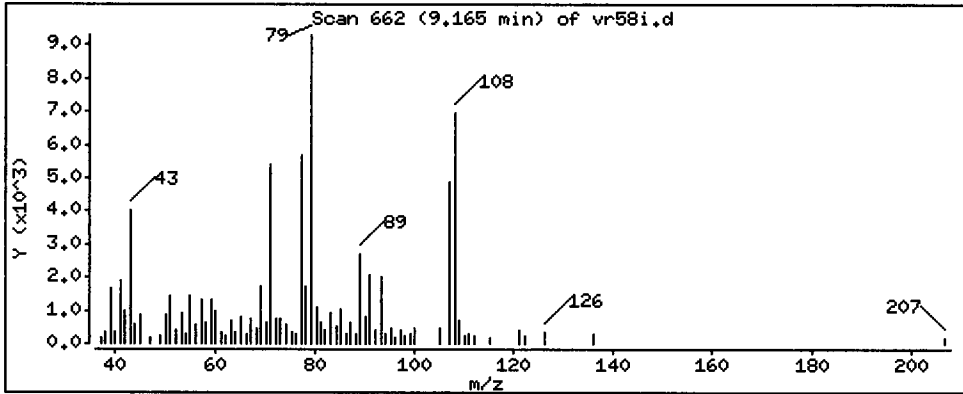
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 61.36 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR58I

Volume Injected (uL): 1.0

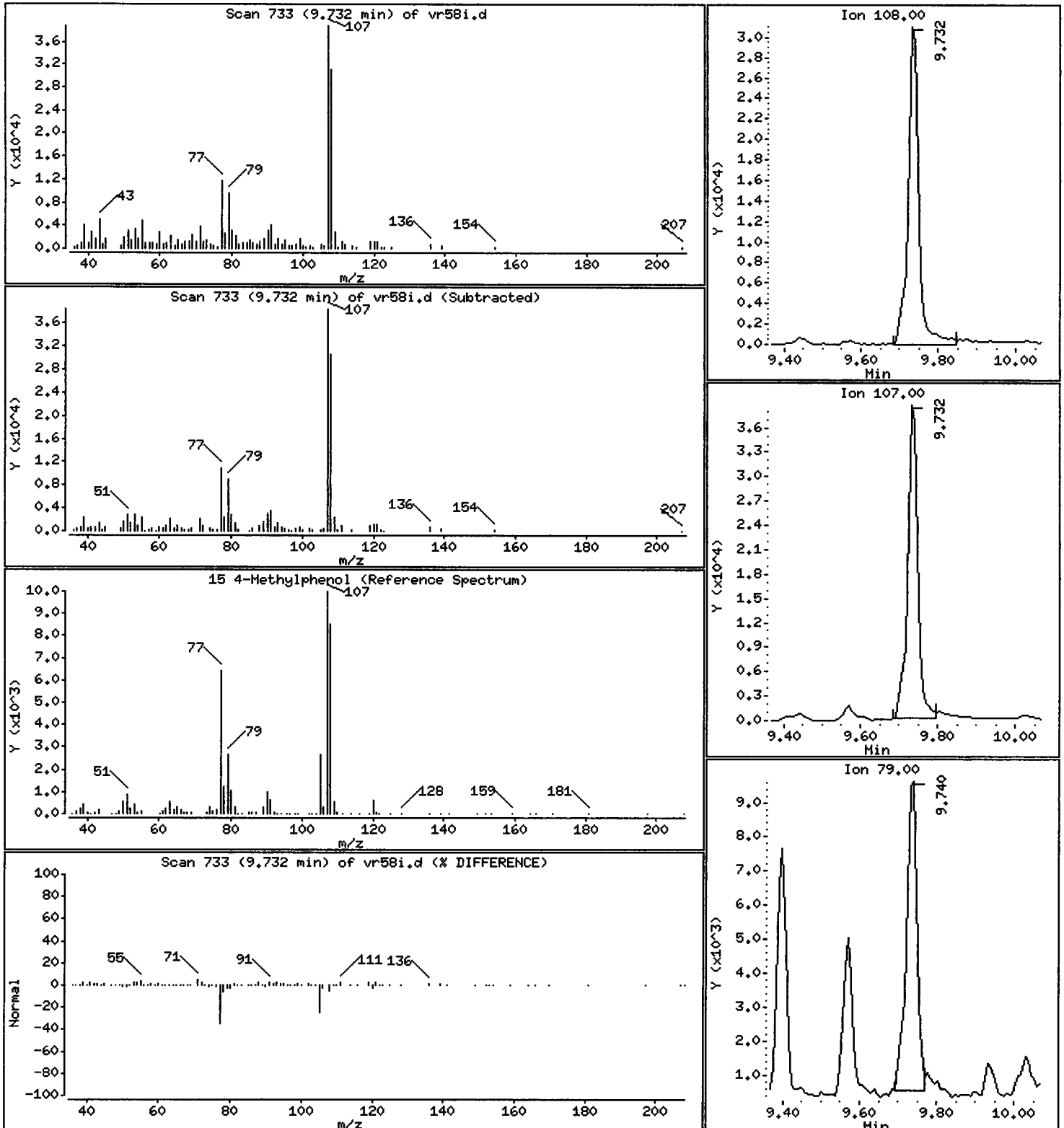
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 270.8 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR58I

Volume Injected (uL): 1.0

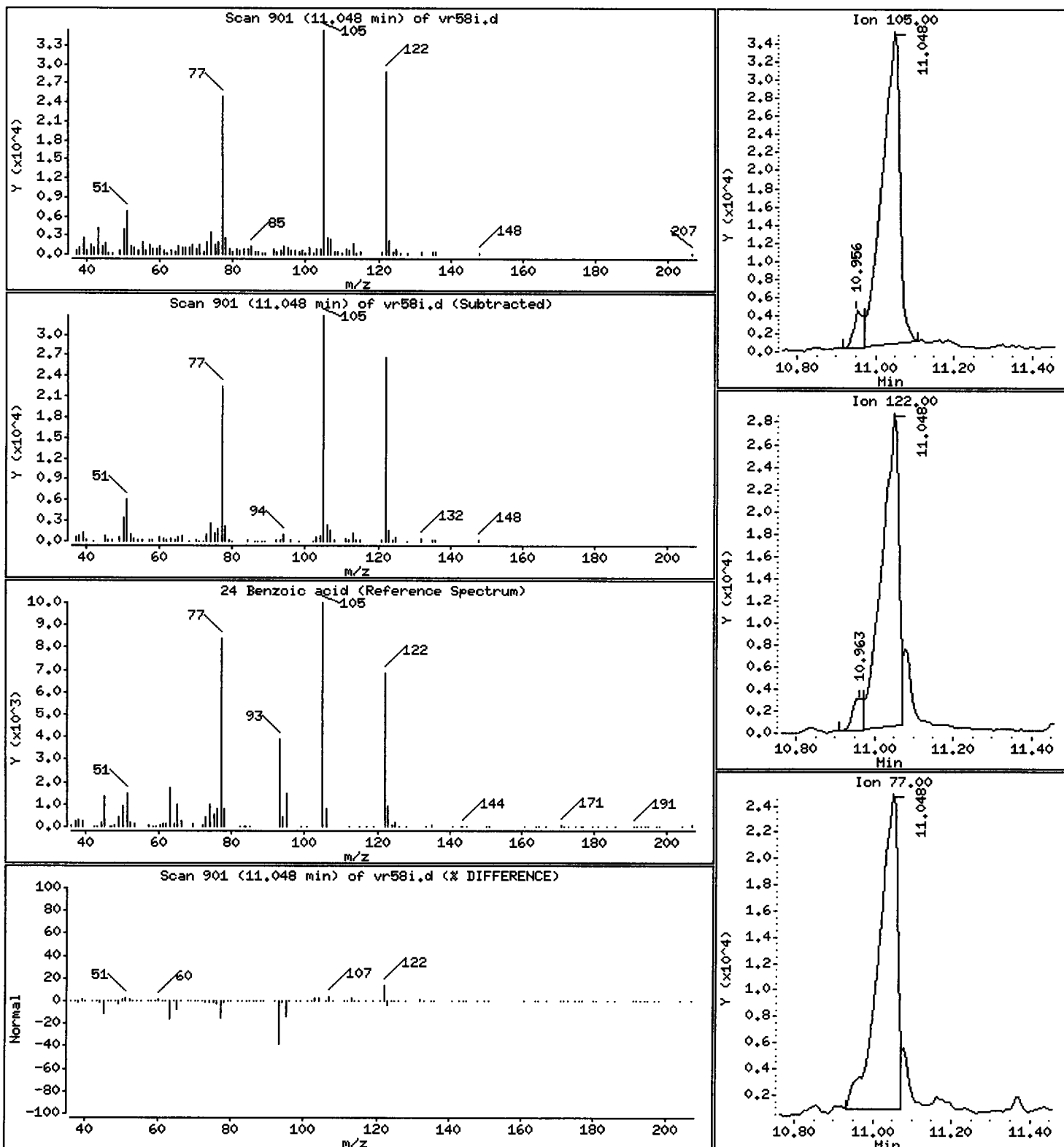
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 428.4 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR58I

Volume Injected (uL): 1.0

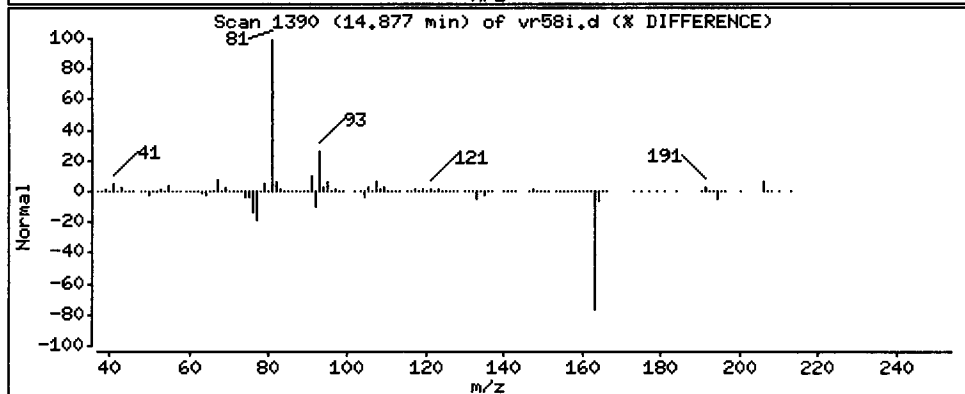
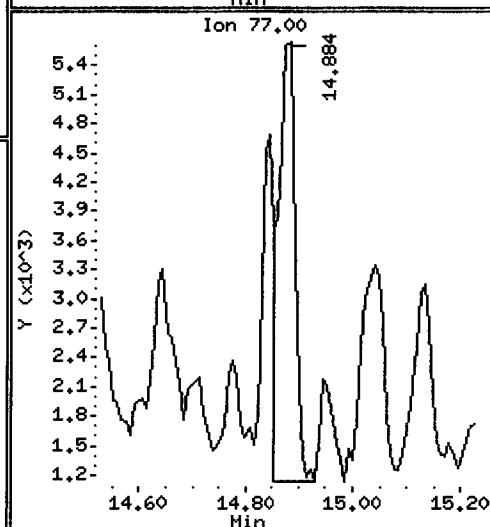
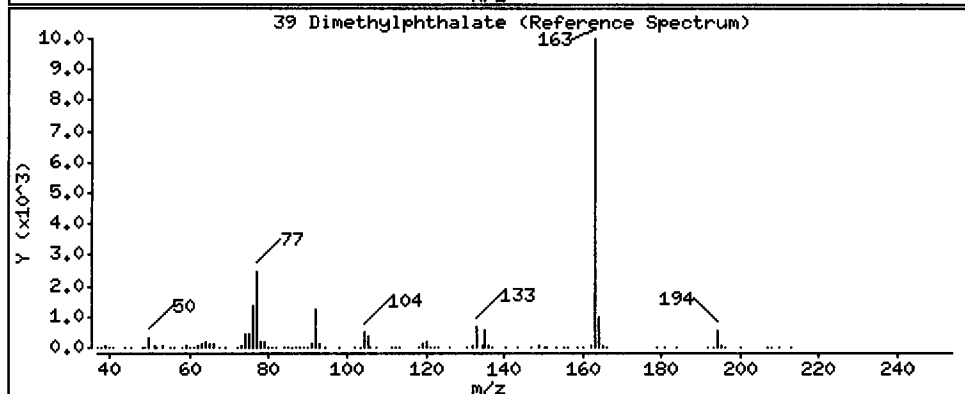
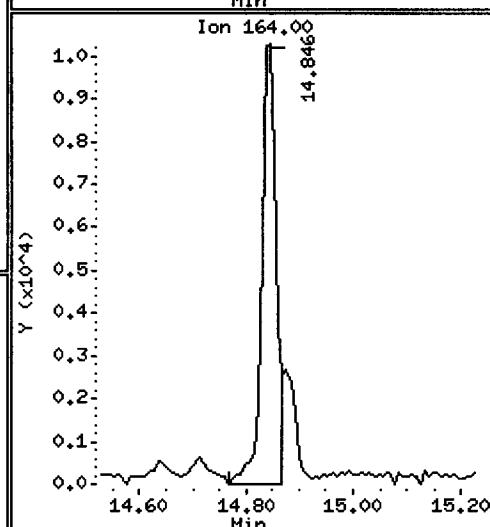
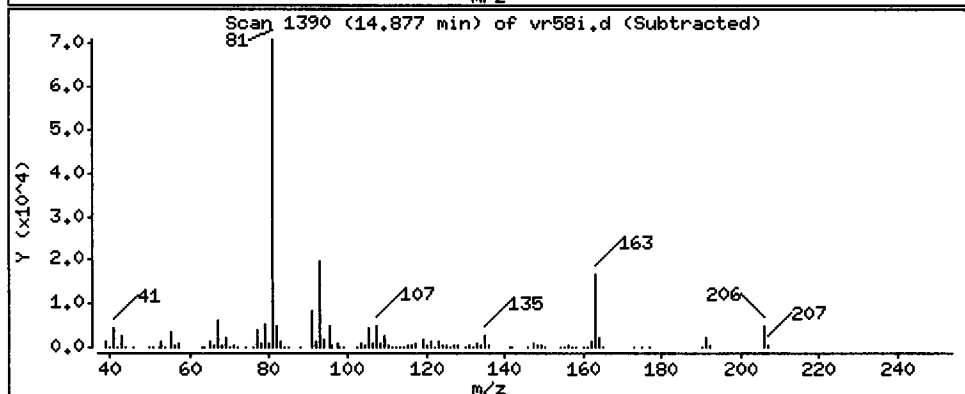
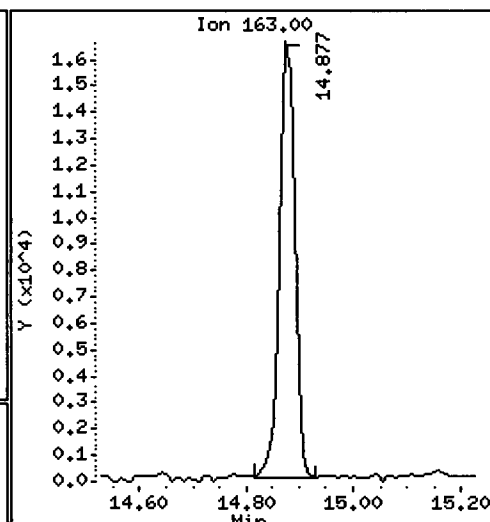
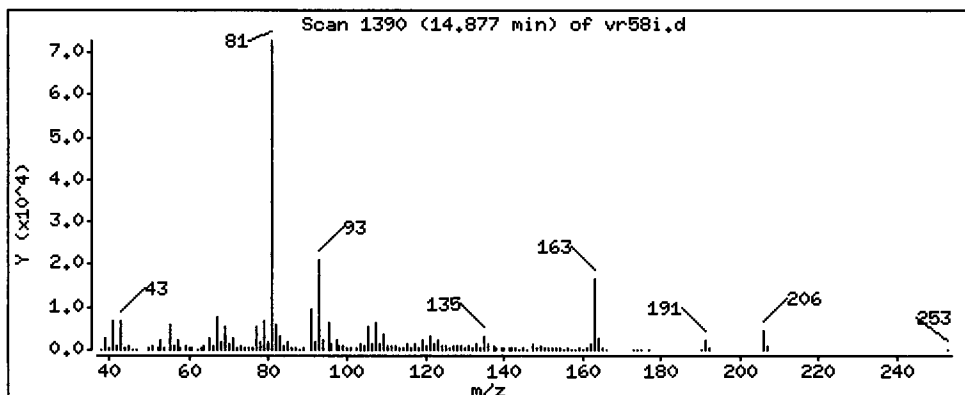
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

39 Dimethylphthalate

Concentration: 37.35 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR58I

Volume Injected (uL): 1.0

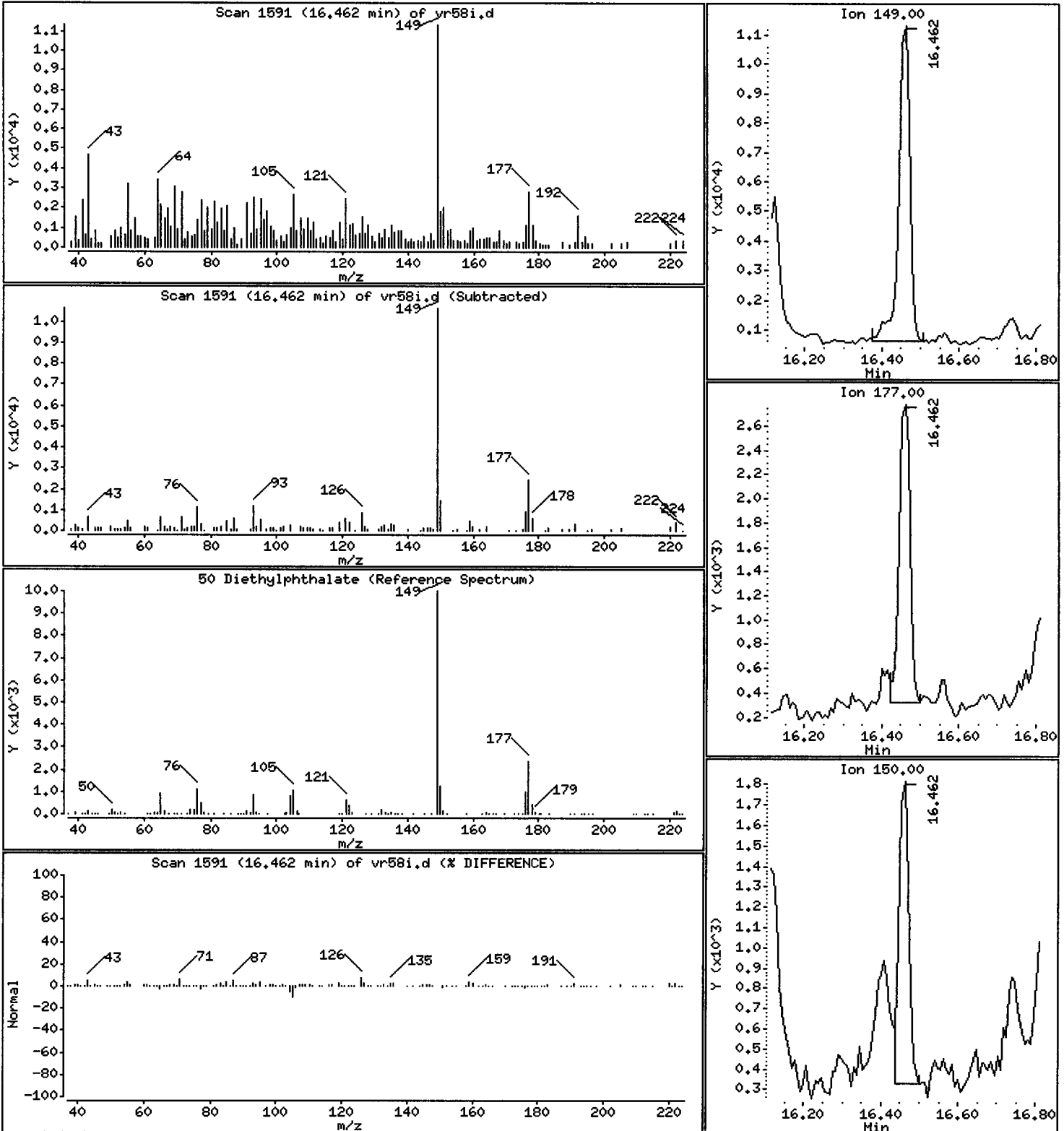
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 22.91 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR581

Volume Injected (uL): 1.0

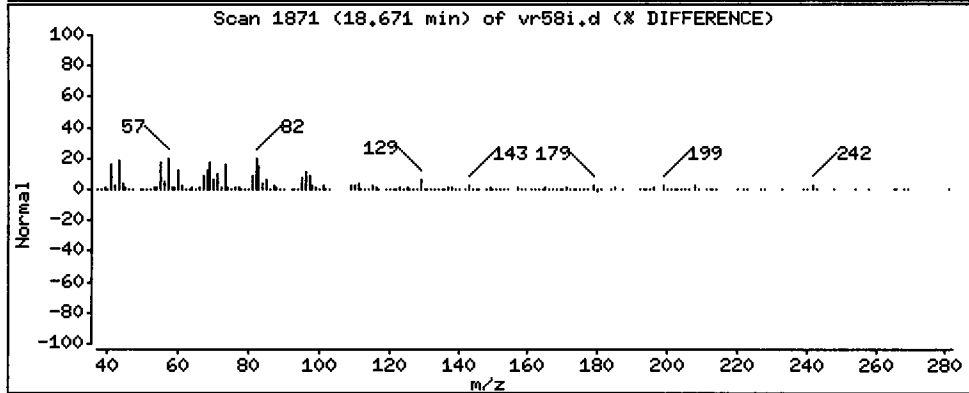
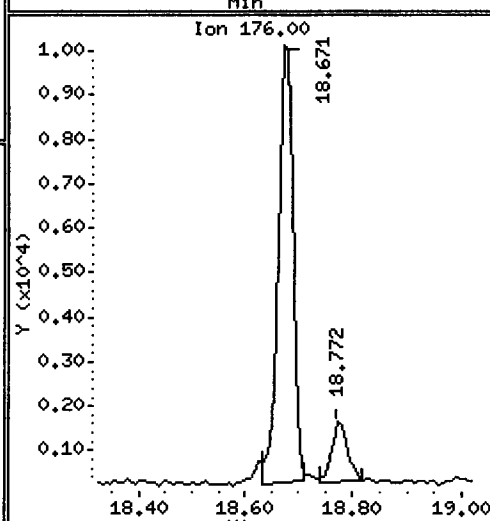
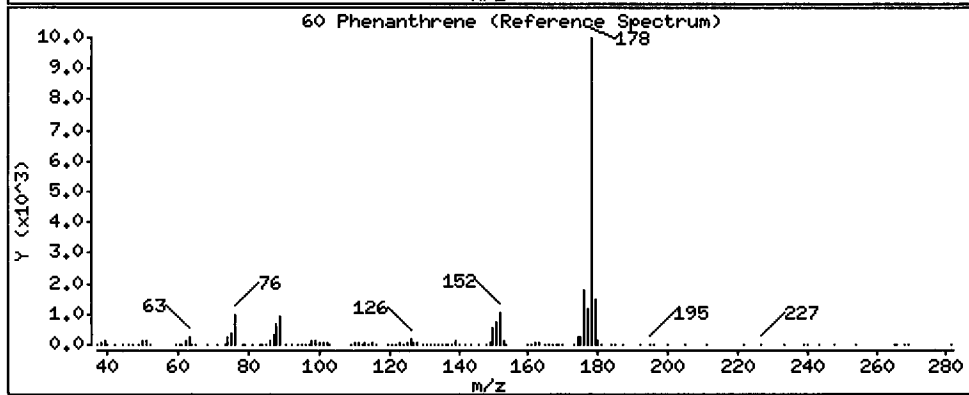
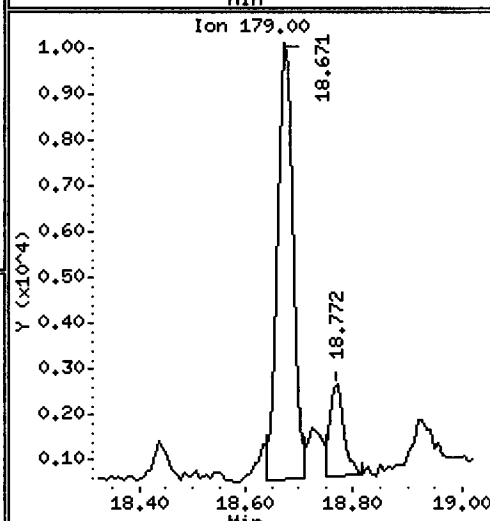
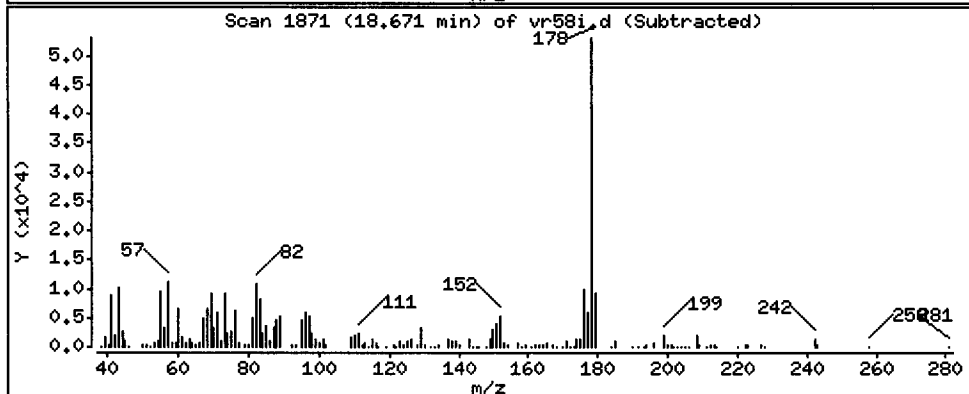
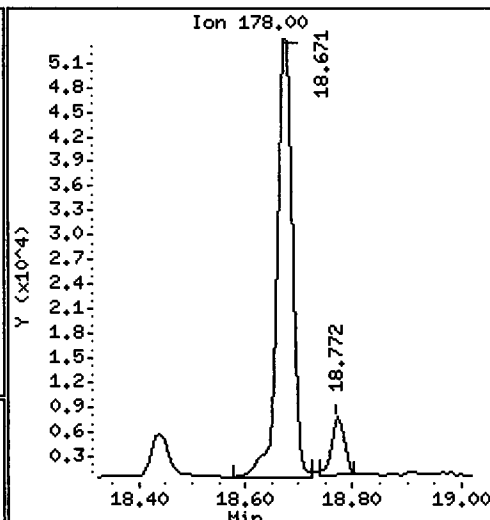
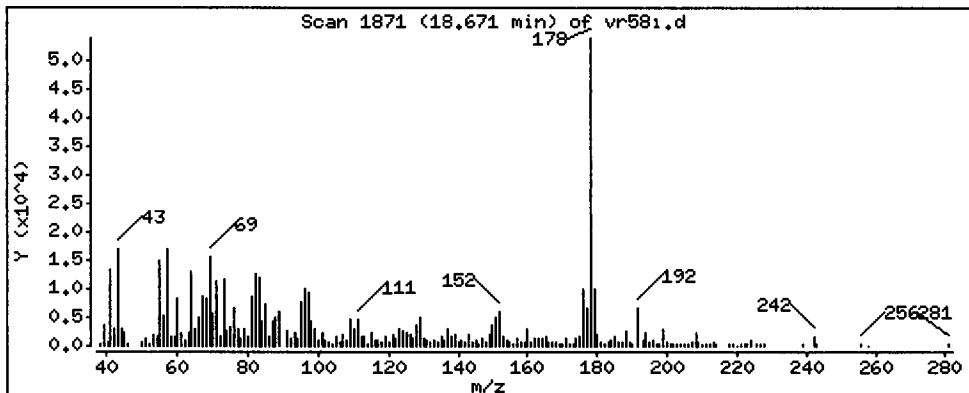
Operator: VTS/YZ

Column phase: ZB-5ms1

Column diameter: 0.25

60 Phenanthrene

Concentration: 92.85 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR58I

Volume Injected (uL): 1.0

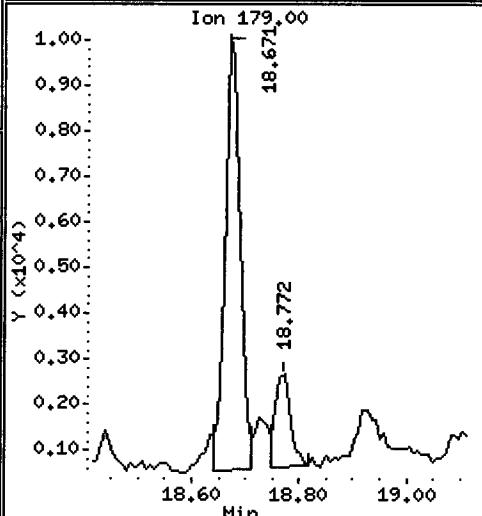
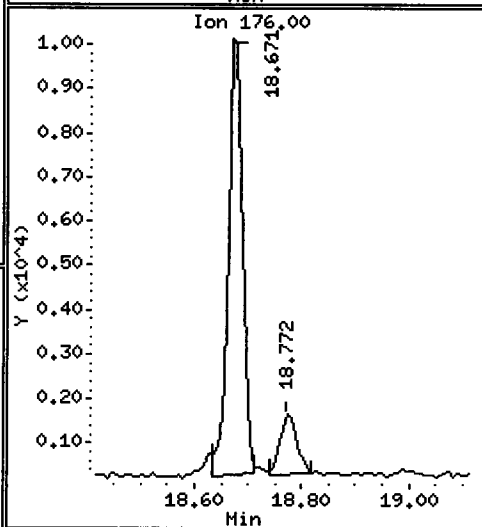
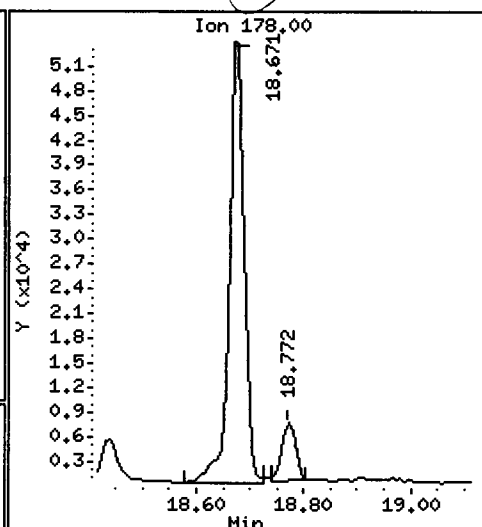
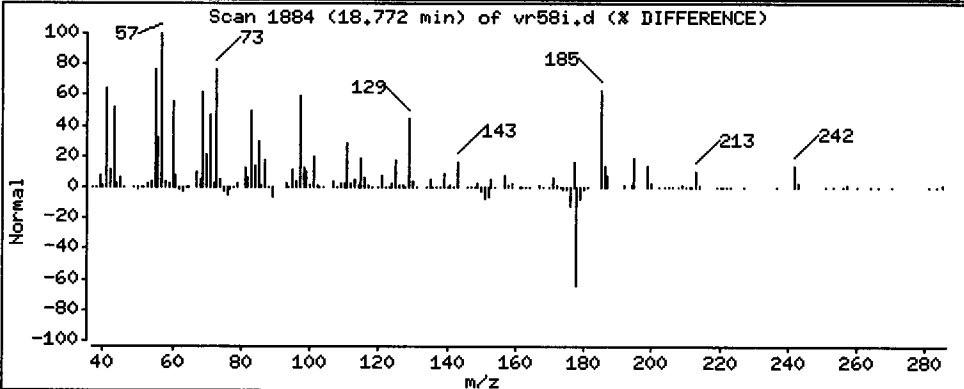
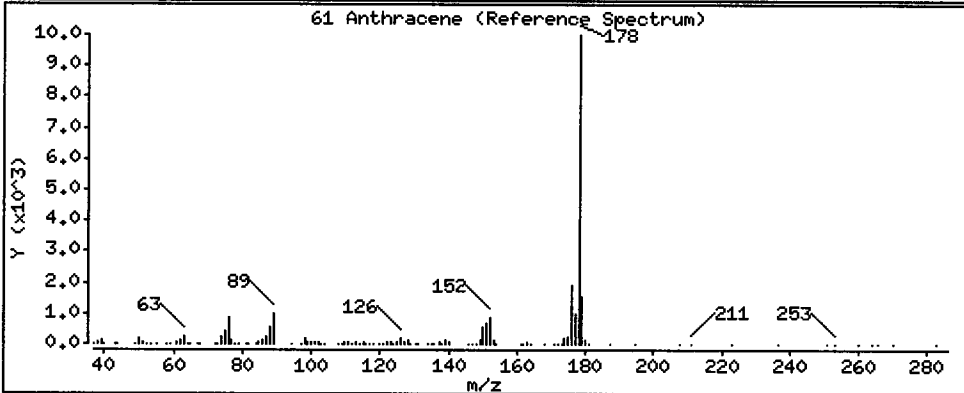
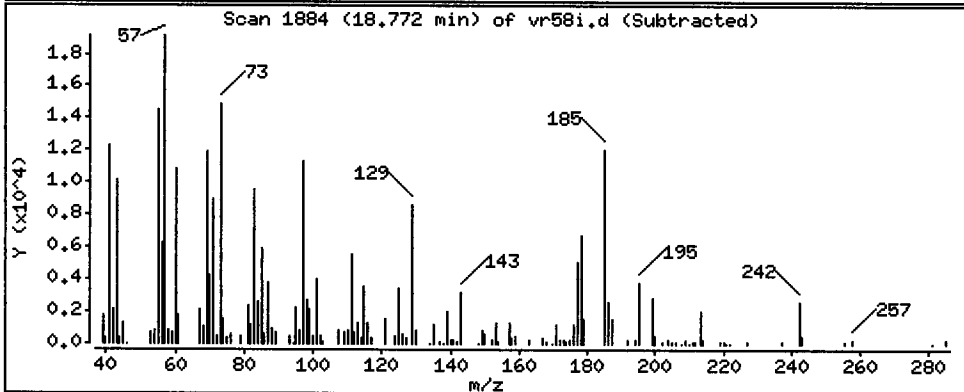
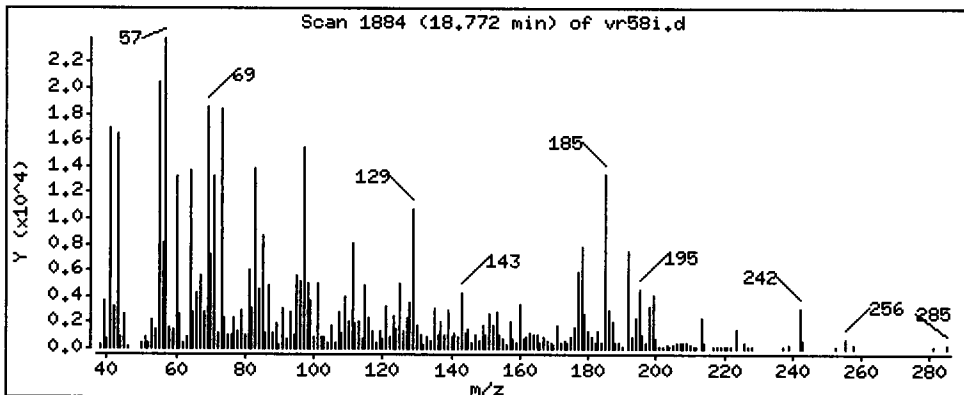
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 10.20 ug/kg



*OK*

Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10,i

Sample Info: VR58I

Volume Injected (uL): 1.0

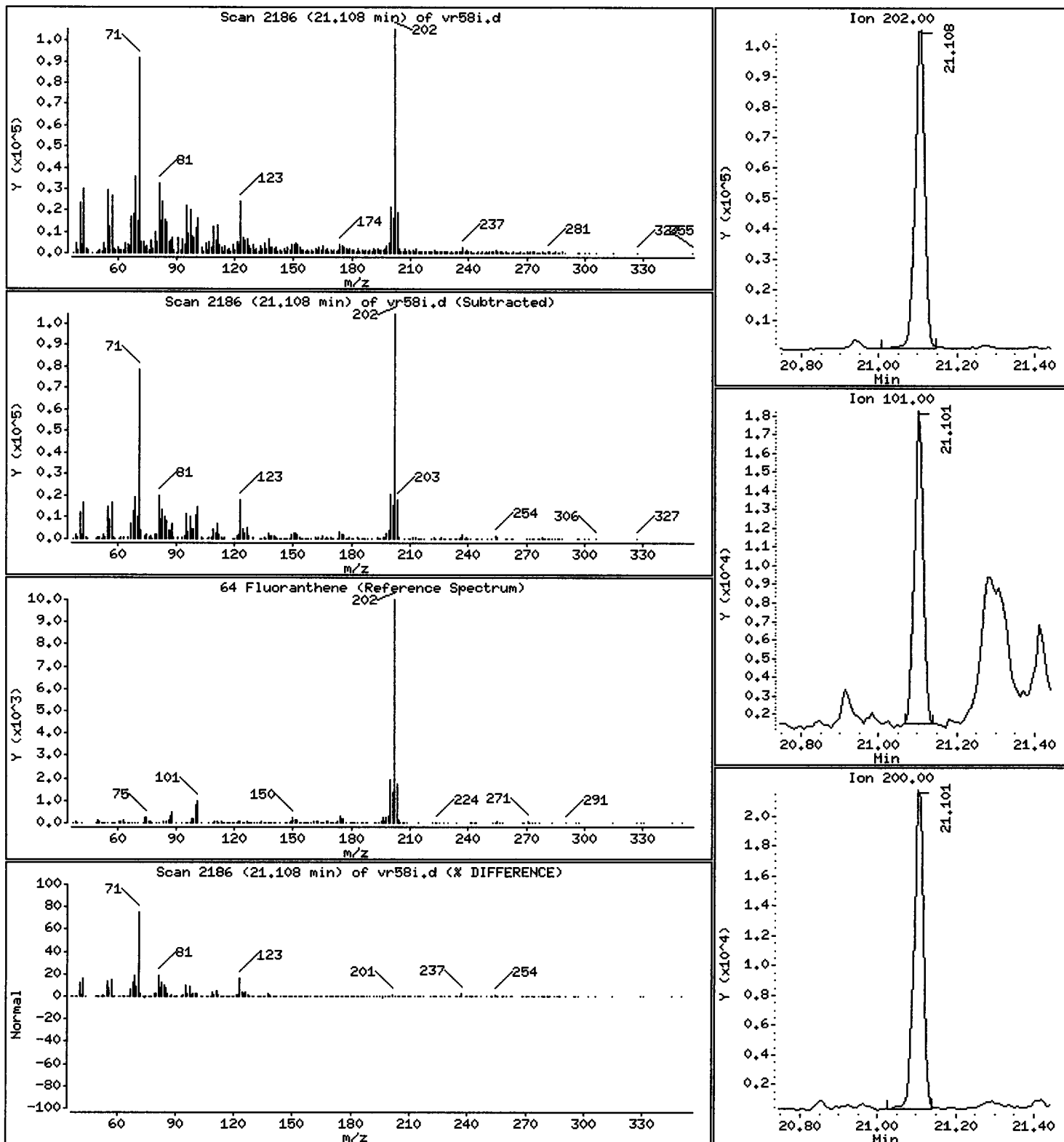
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 128.5 ug/kg





Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR581

Volume Injected (uL): 1.0

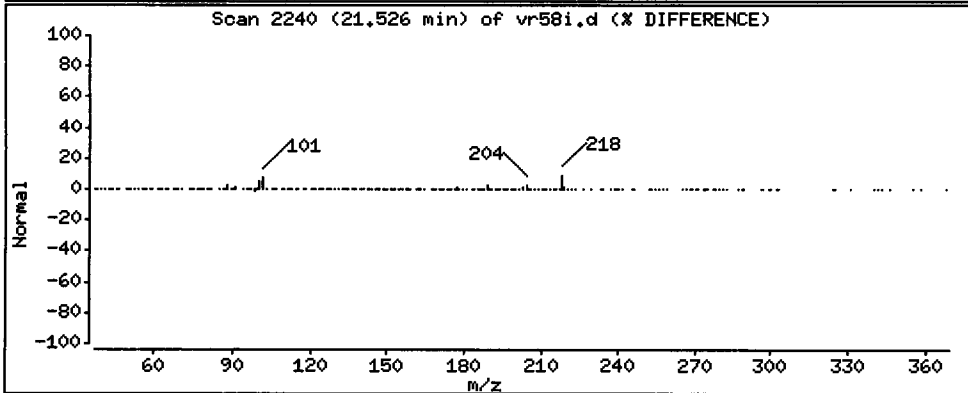
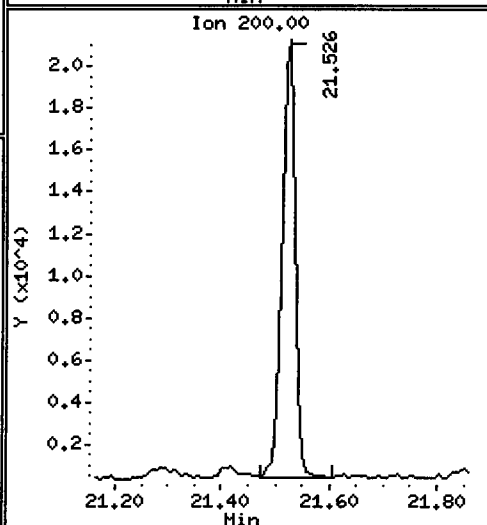
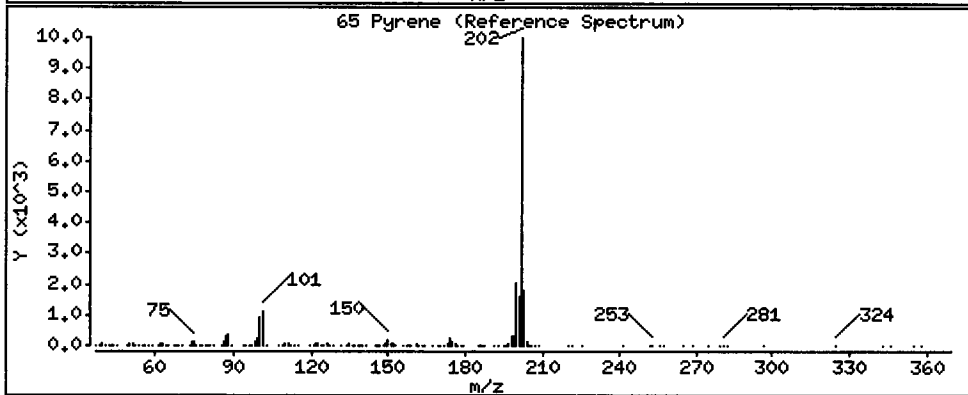
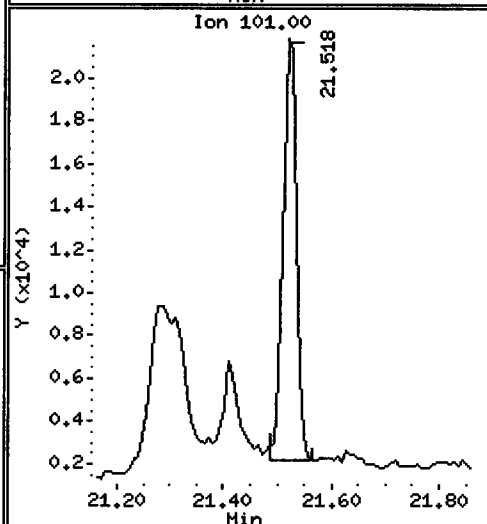
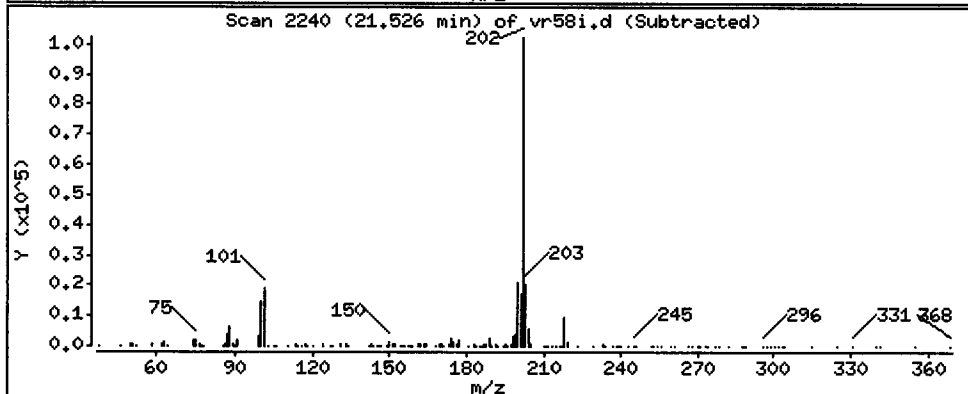
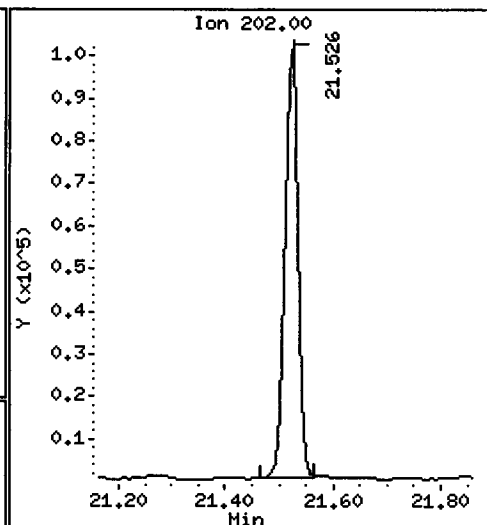
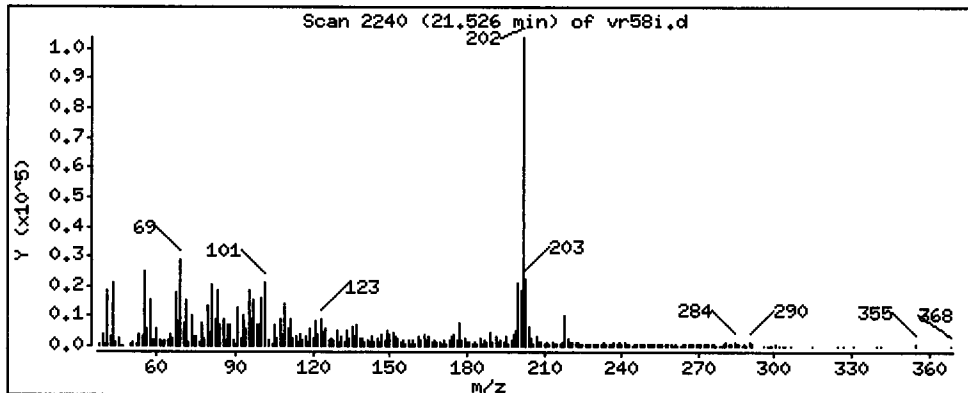
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 117.1 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10,i

Sample Info: VR58I

Volume Injected (uL): 1.0

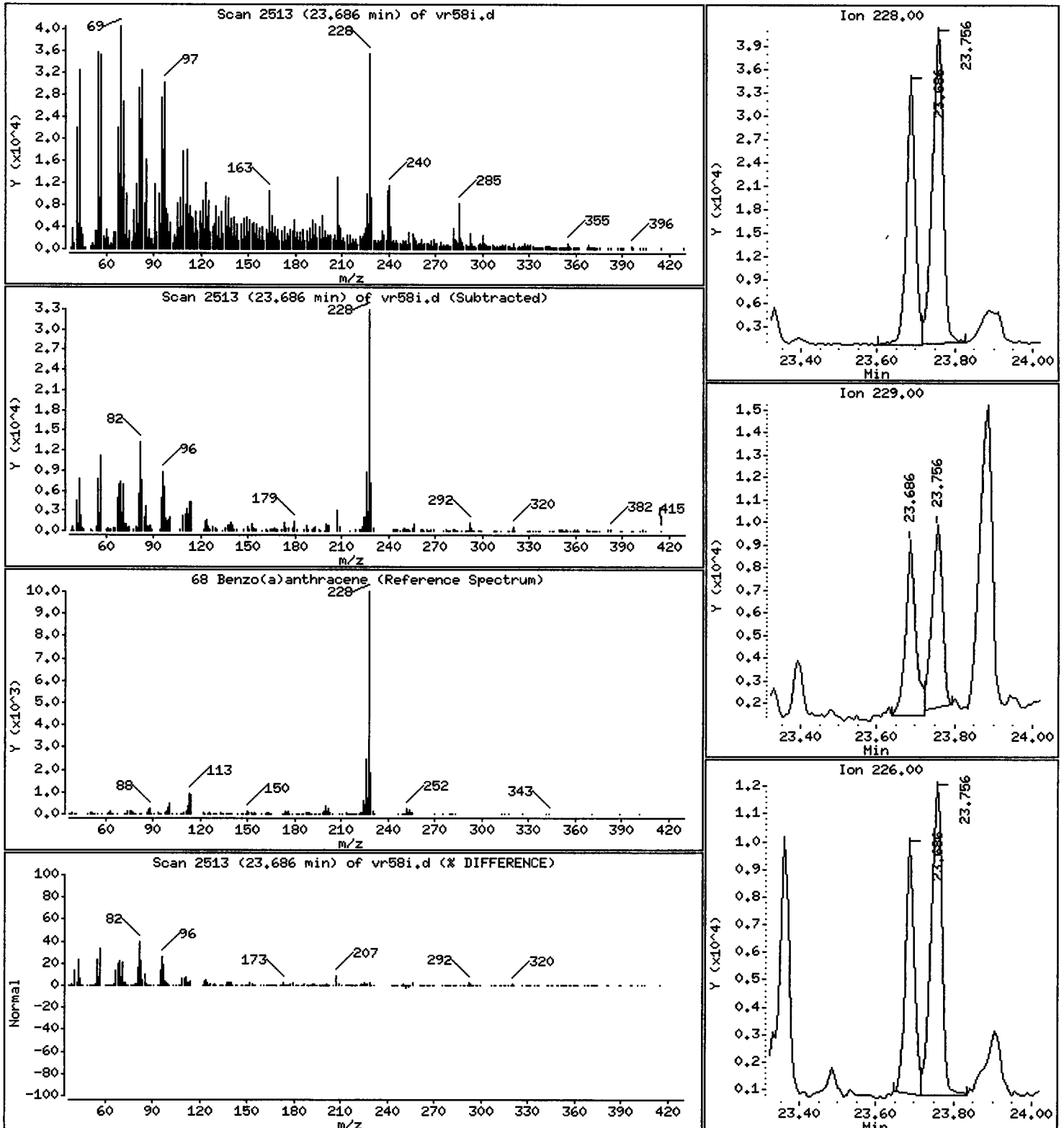
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

68 Benzo(a)anthracene

Concentration: 41.39 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR58I

Volume Injected (uL): 1.0

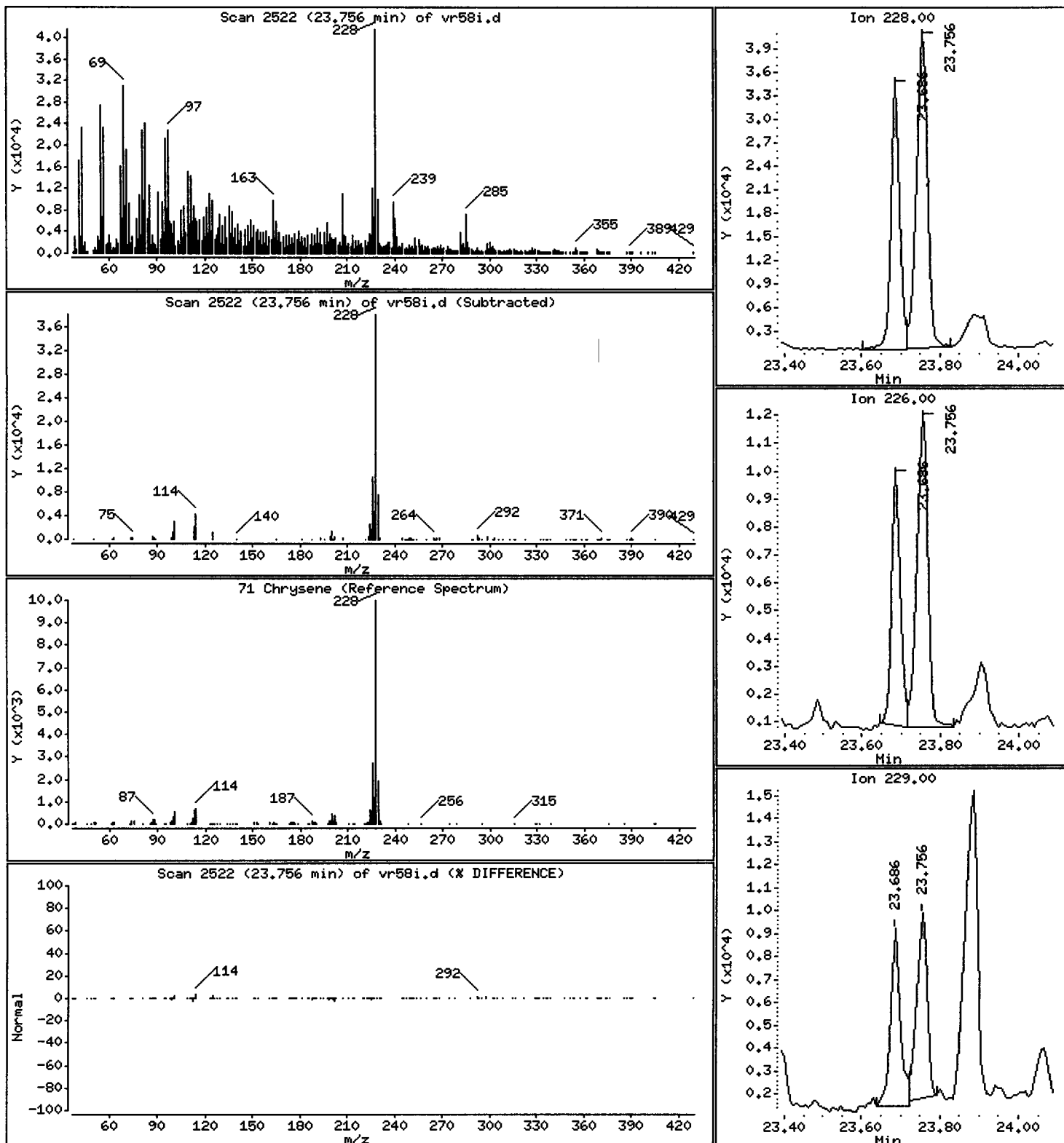
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

71 Chrysene

Concentration: 63.80 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR58I

Volume Injected (uL): 1.0

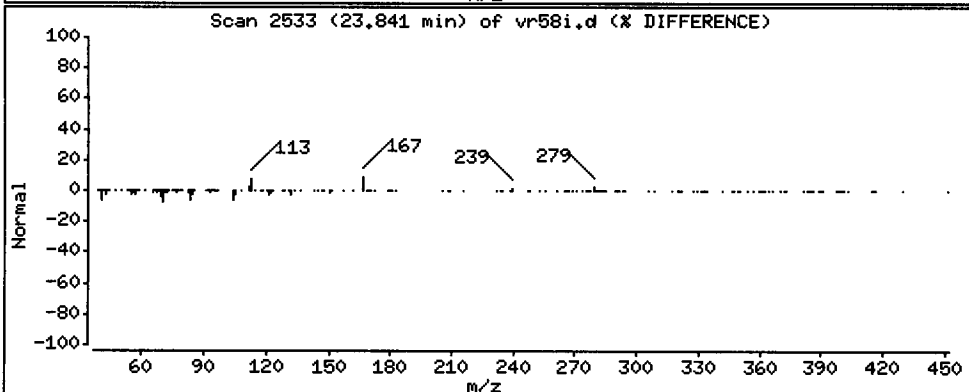
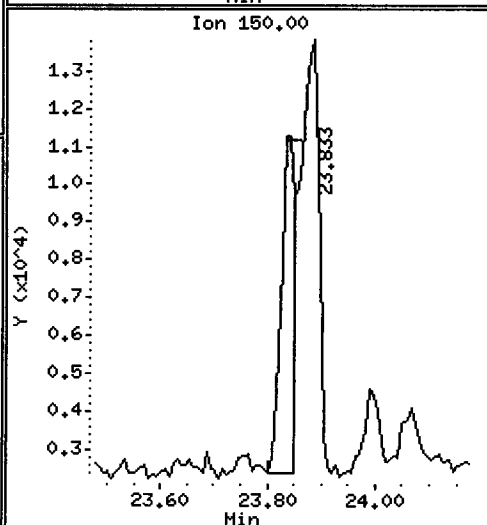
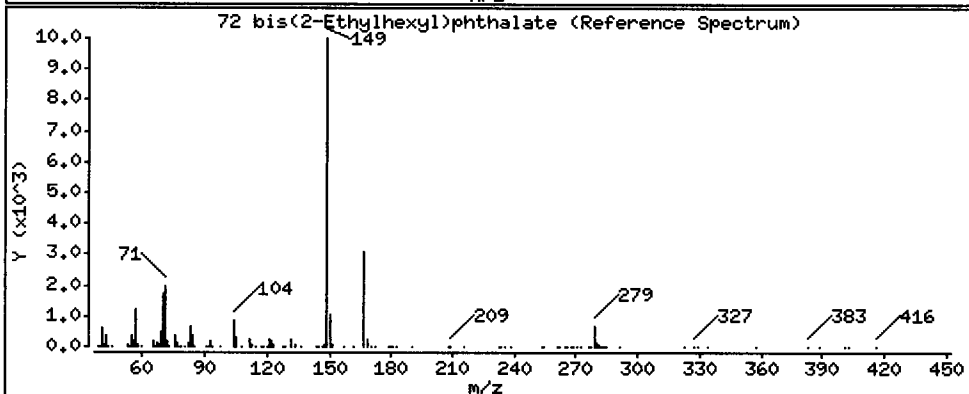
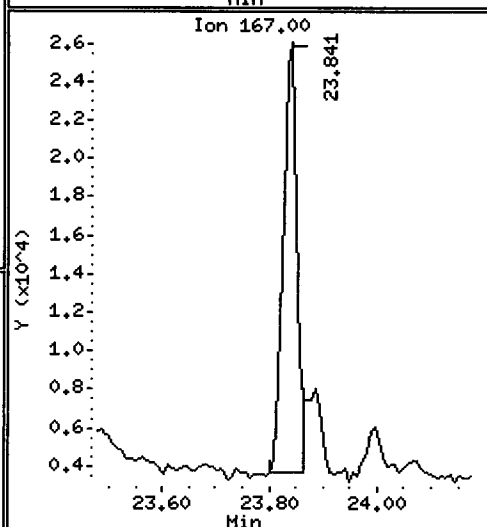
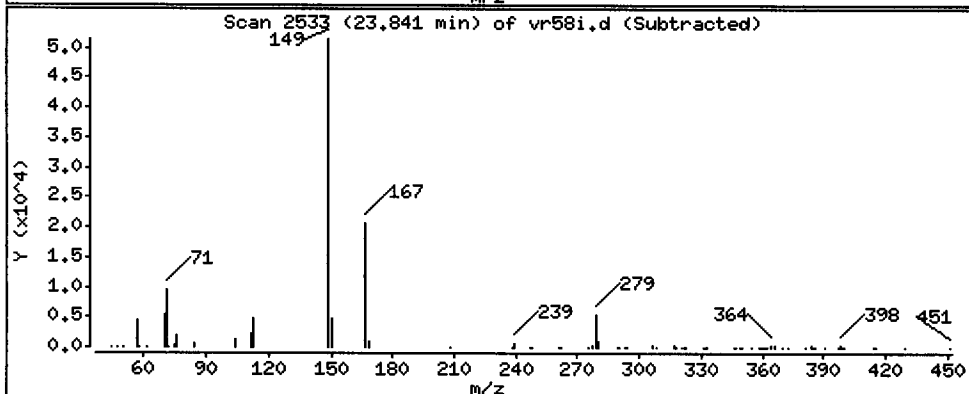
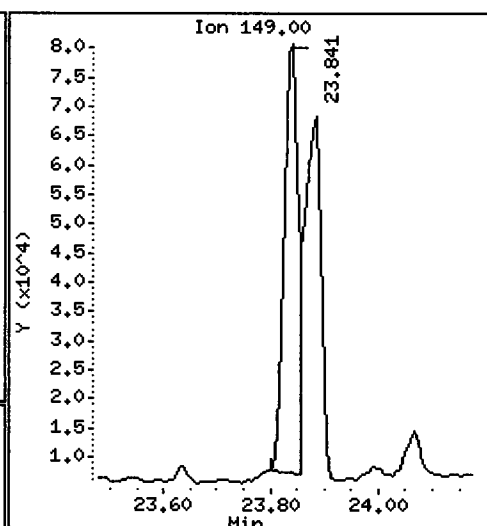
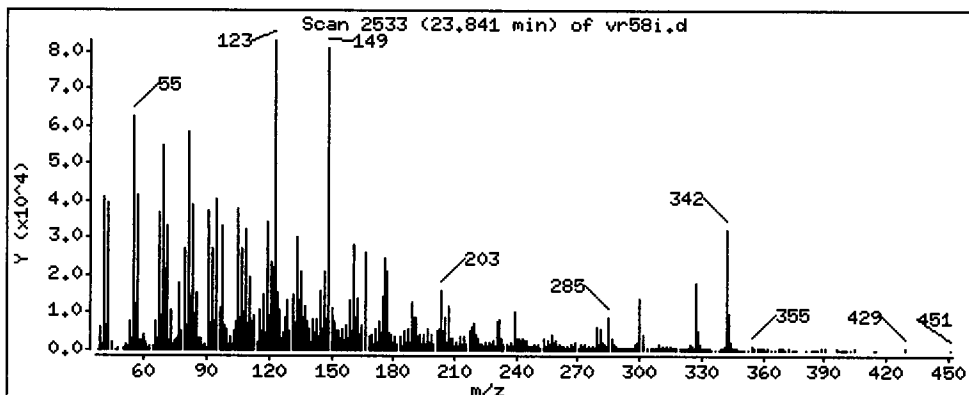
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 147.3 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR581

Volume Injected (uL): 1.0

Operator: VTS/YZ

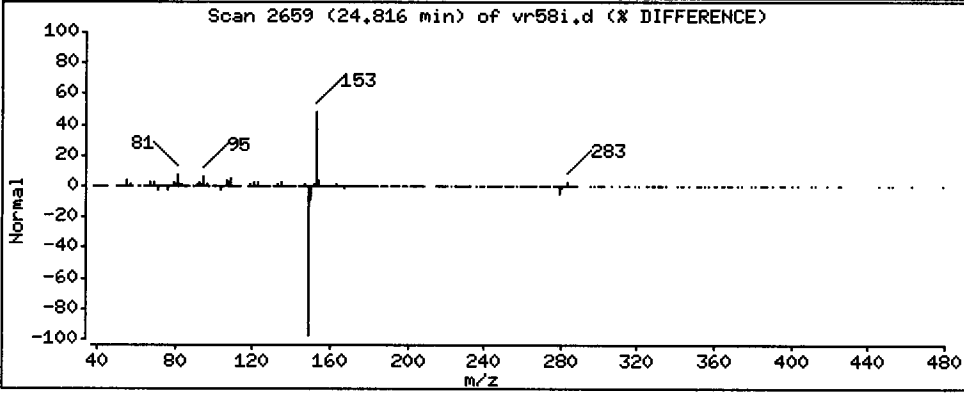
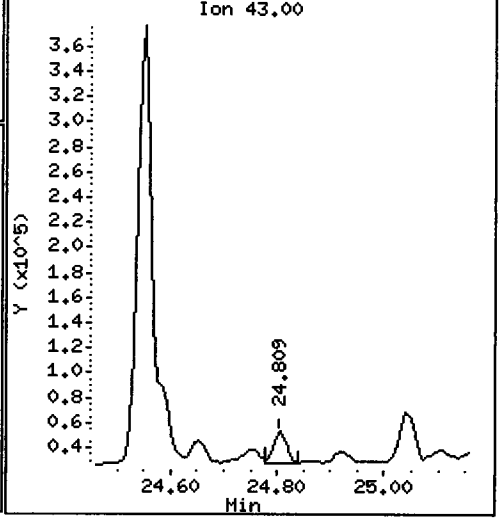
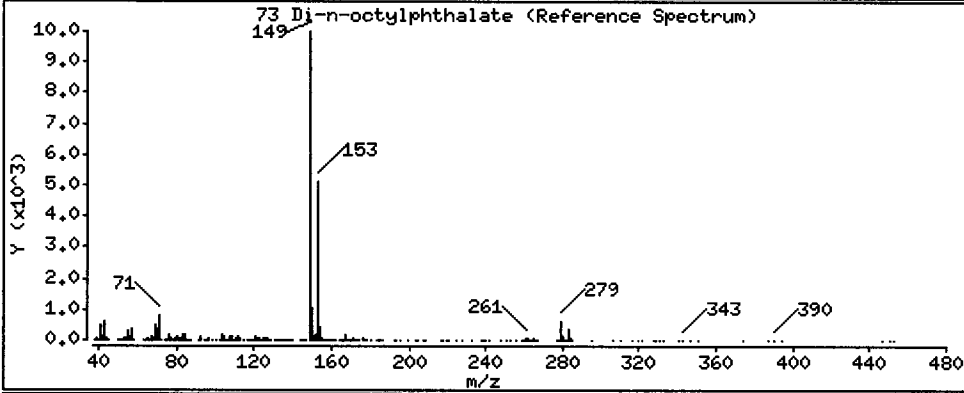
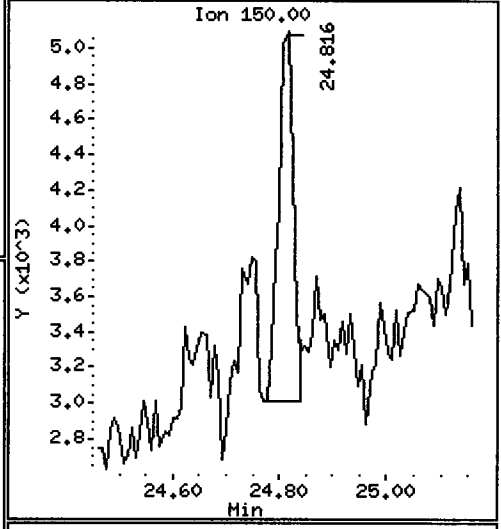
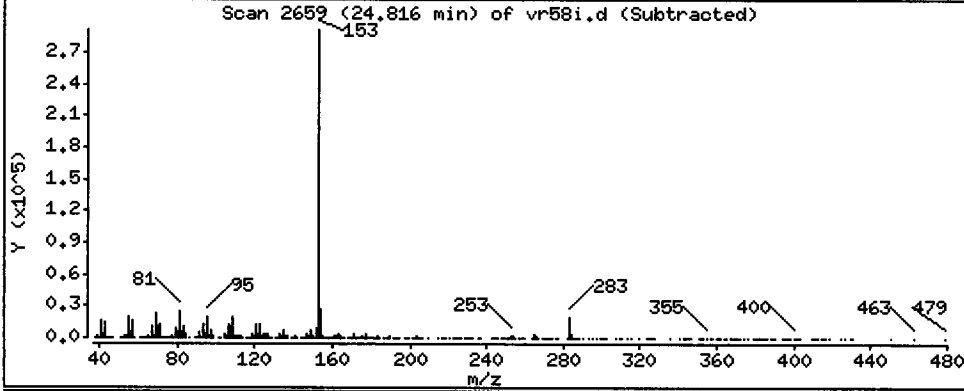
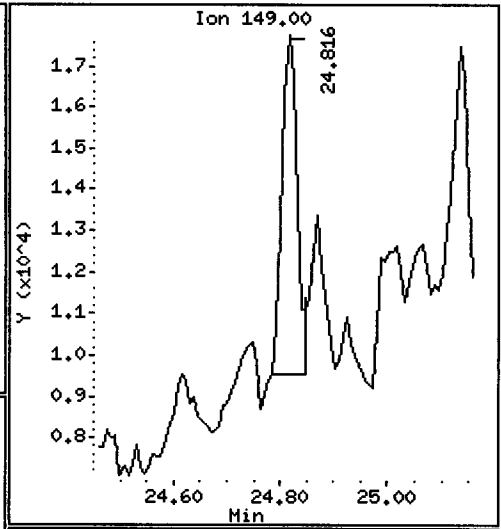
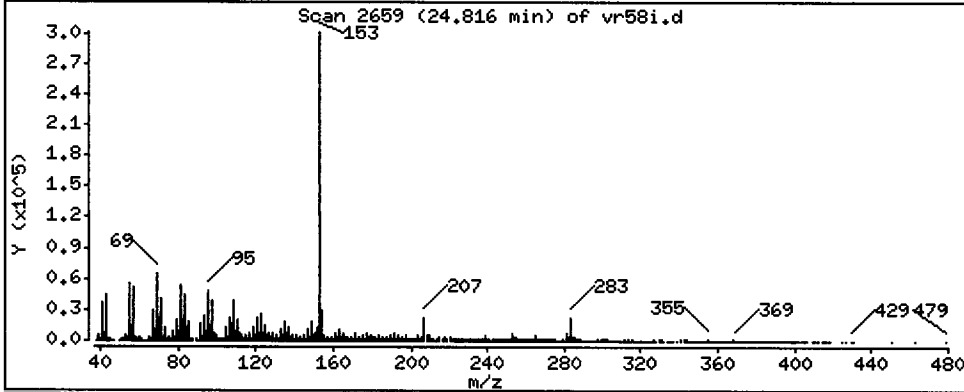
Column phase: ZB-5msi

Column diameter: 0.25

73 Di-n-octylphthalate

Concentration: 10.30 ug/kg

*YZ*



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR58I

Volume Injected (uL): 1.0

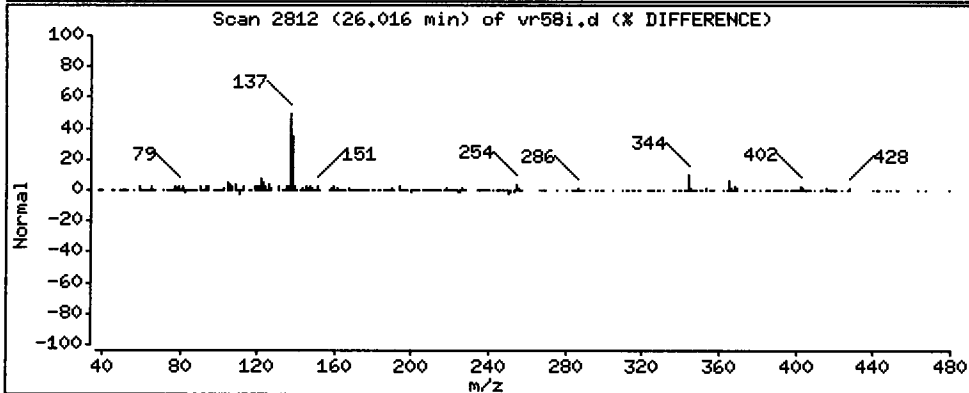
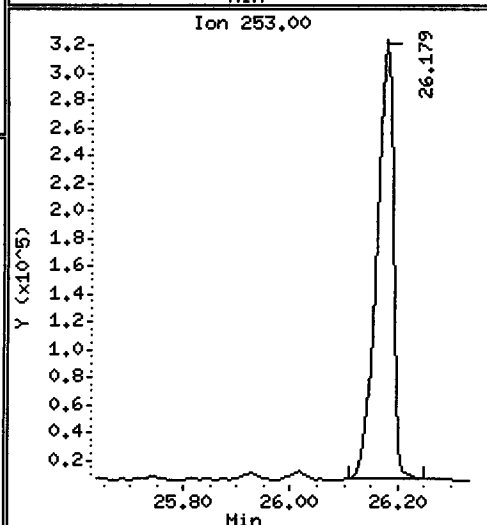
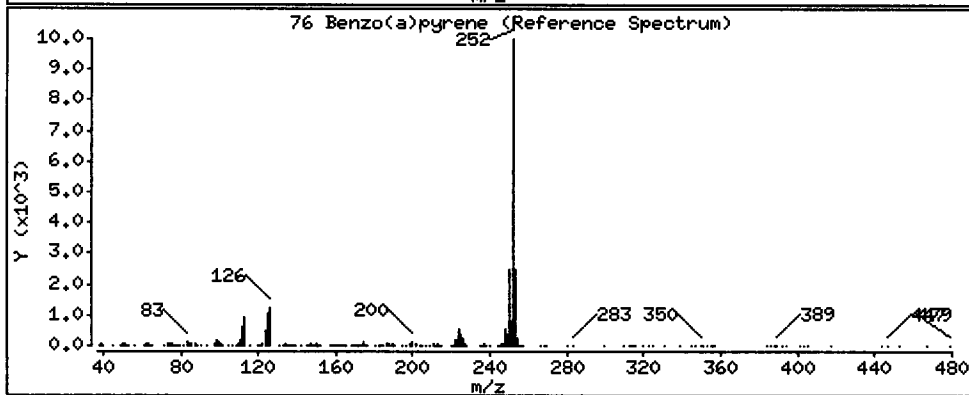
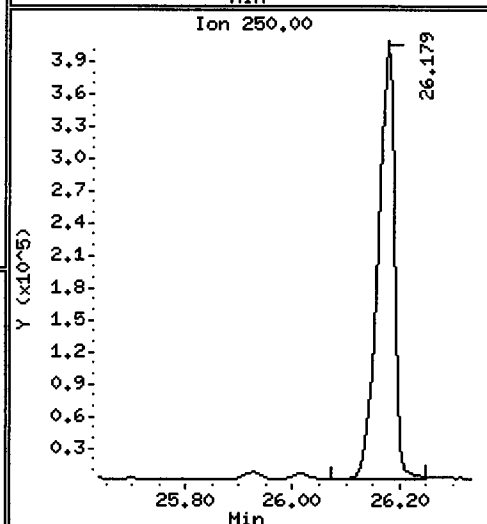
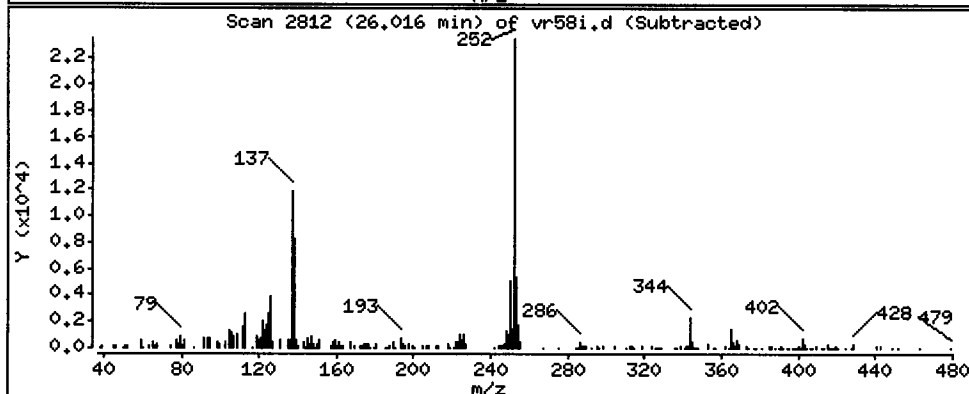
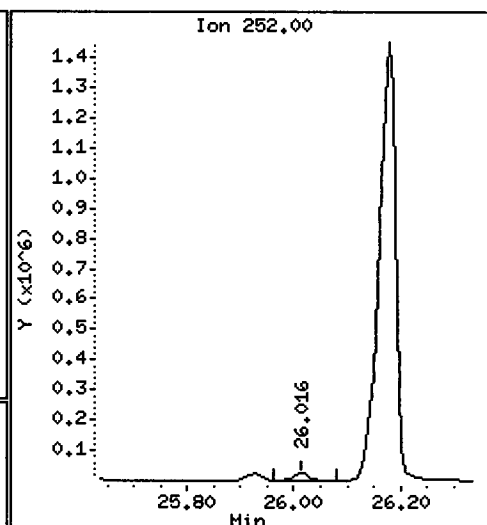
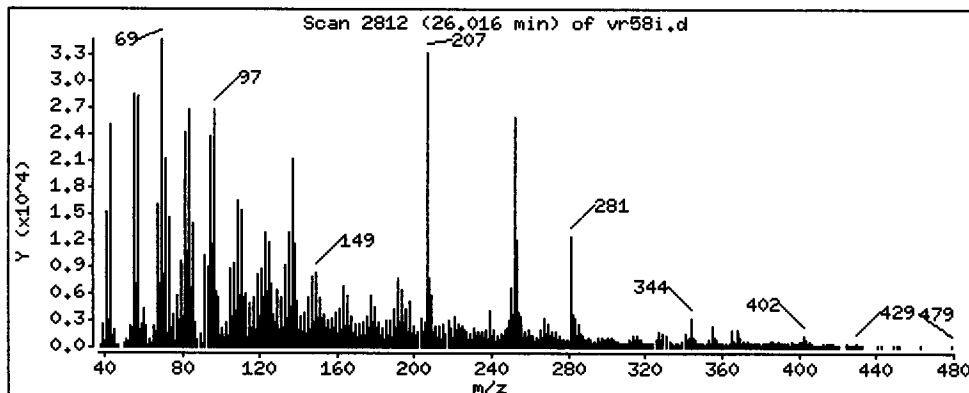
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

76 Benzo(a)pyrene

Concentration: 40.73 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR58I

Volume Injected (uL): 1.0

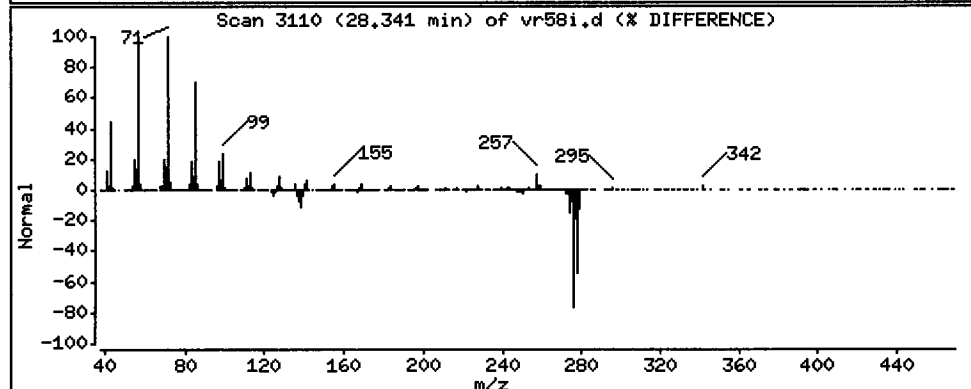
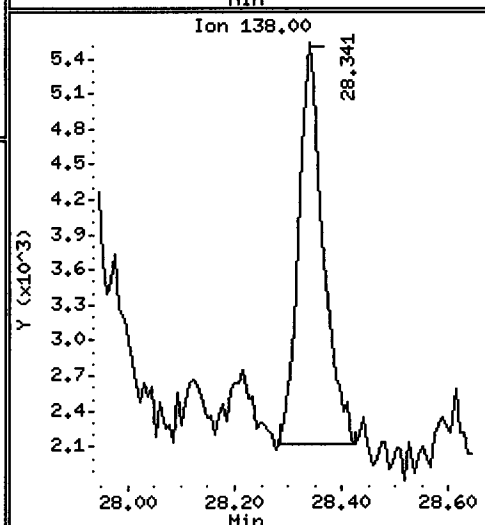
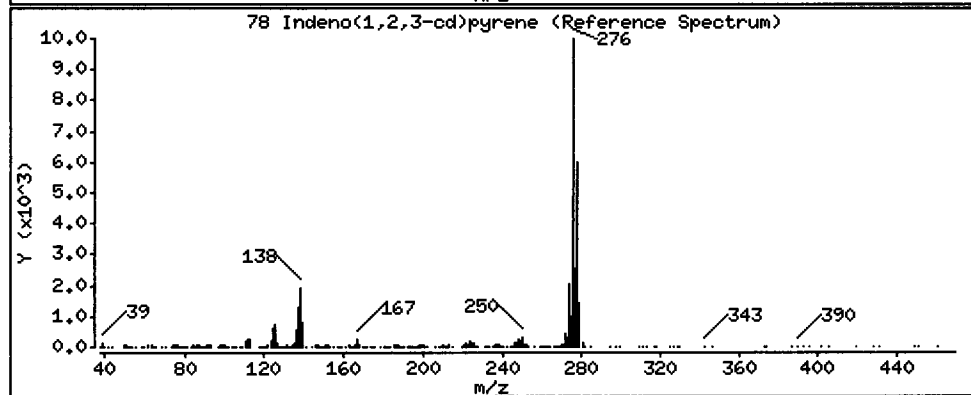
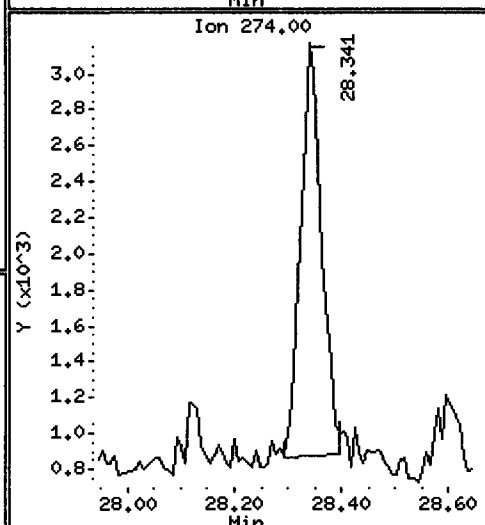
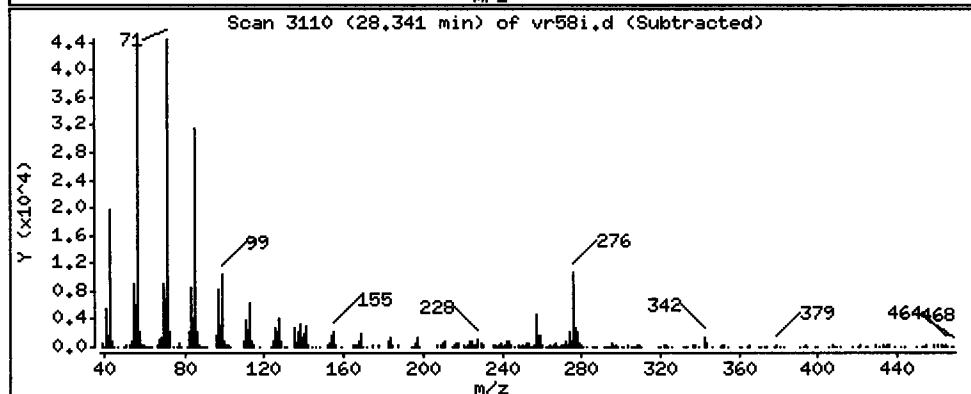
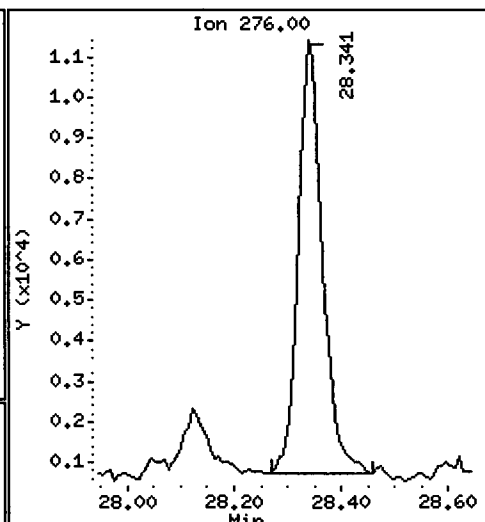
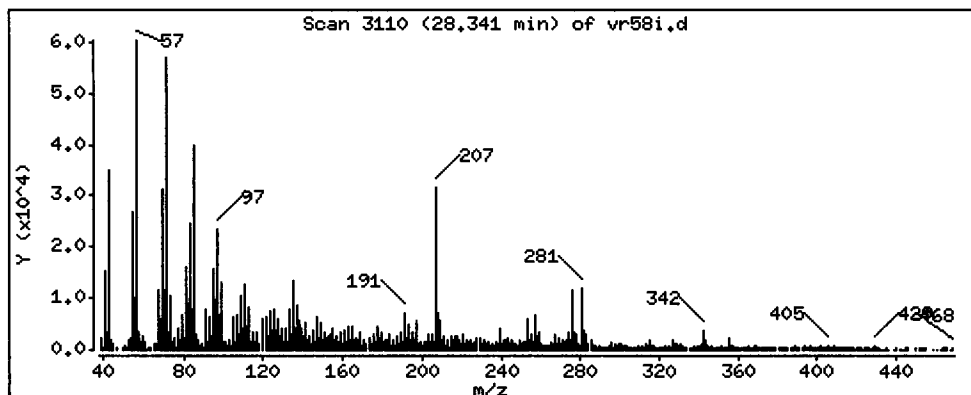
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

78 Indeno(1,2,3-cd)pyrene

Concentration: 24,30 ug/kg



Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10.i

Sample Info: VR58I

Volume Injected (uL): 1.0

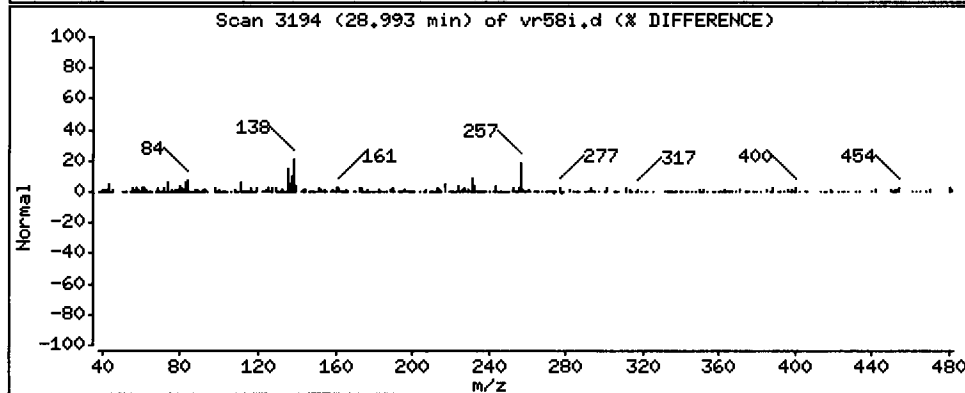
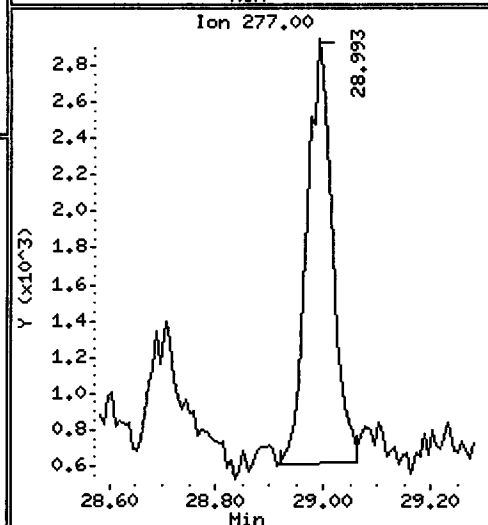
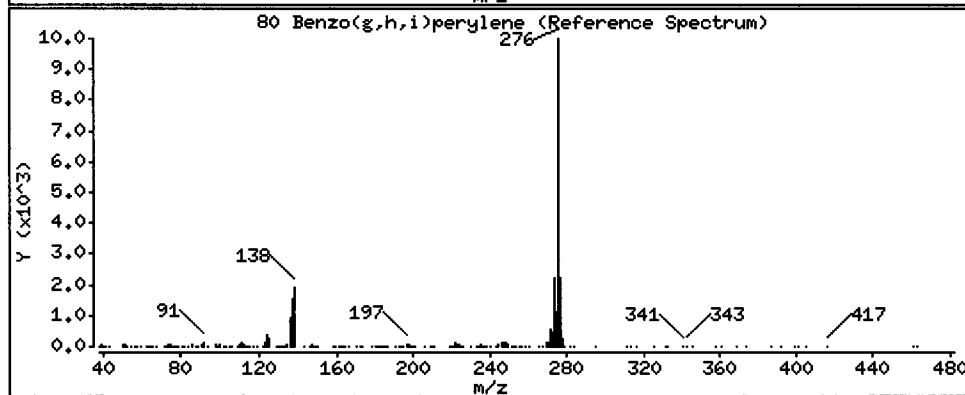
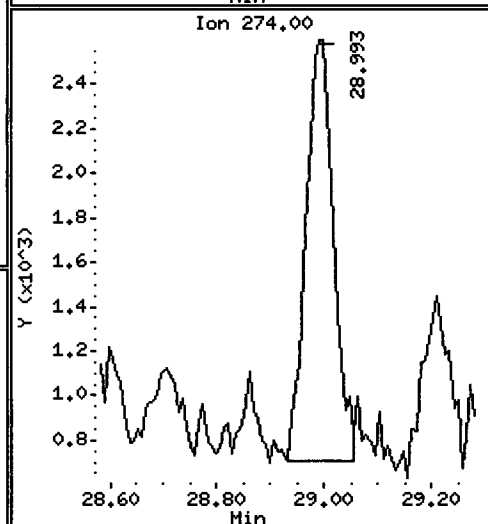
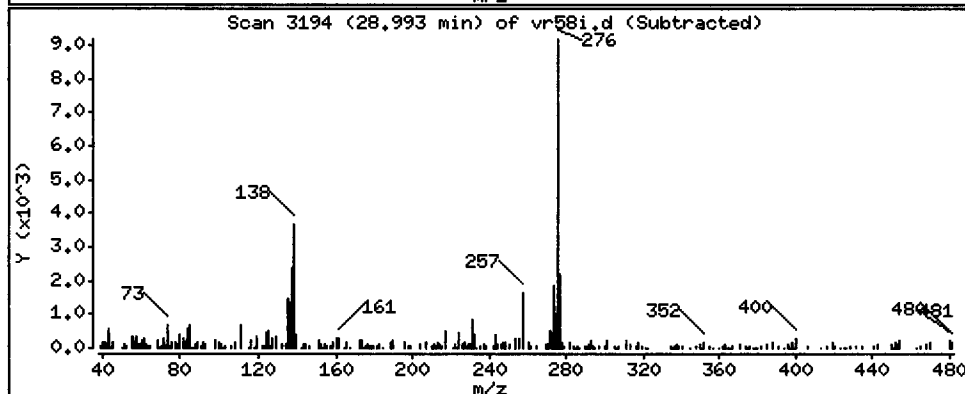
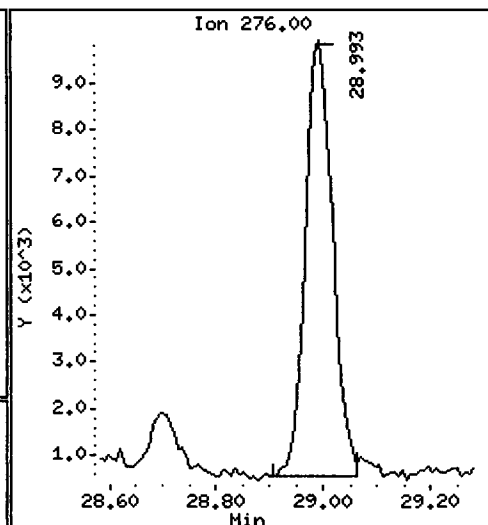
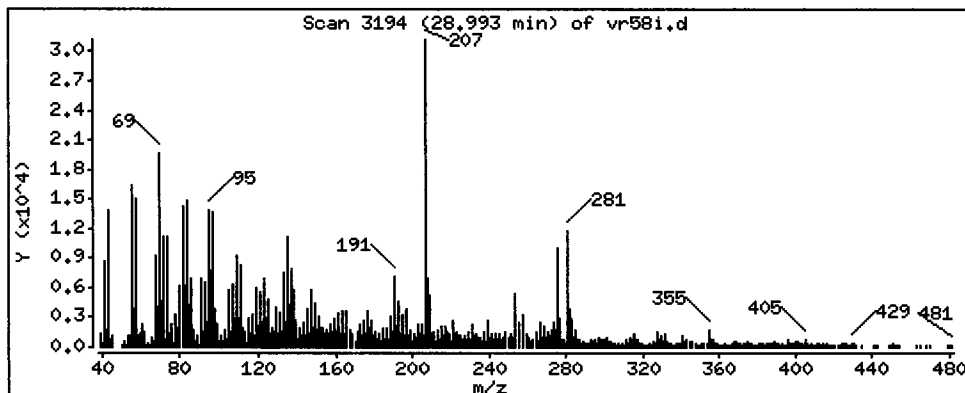
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

80 Benzo(g,h,i)perylene

Concentration: 27.46 ug/kg





Date : 04-DEC-2012 22:02

Client ID: SG-17-S-E-121107

Instrument: nt10,i

Sample Info: VR58I

Volume Injected (uL): 1.0

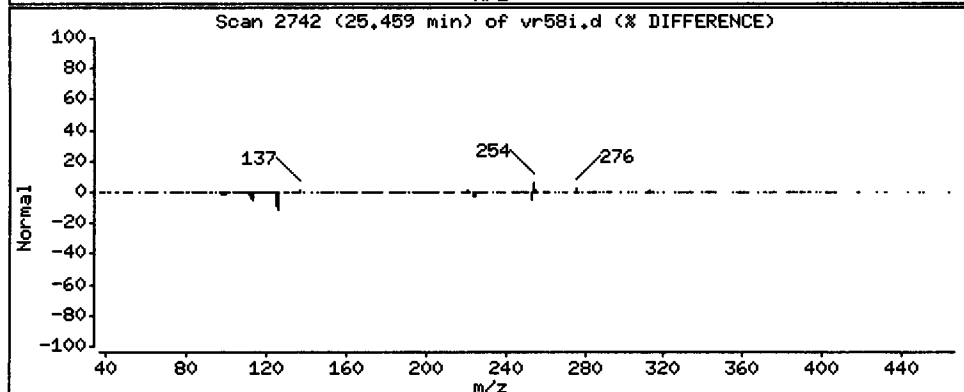
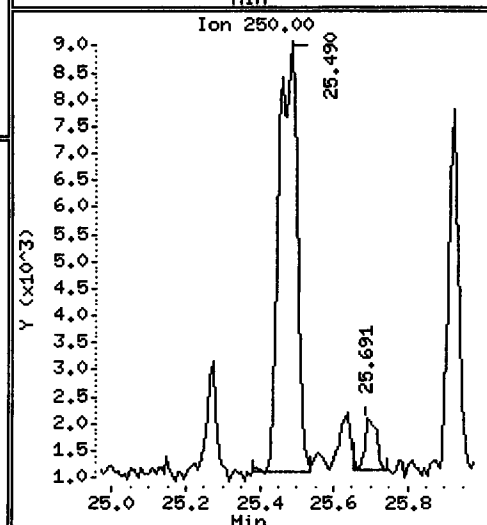
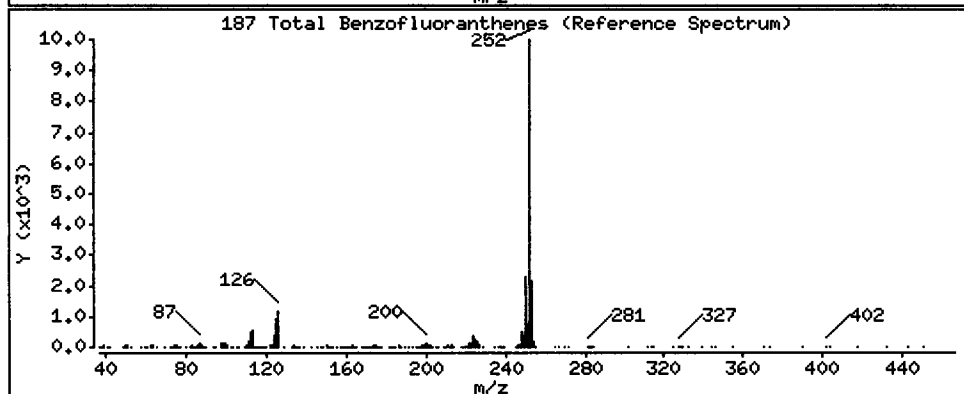
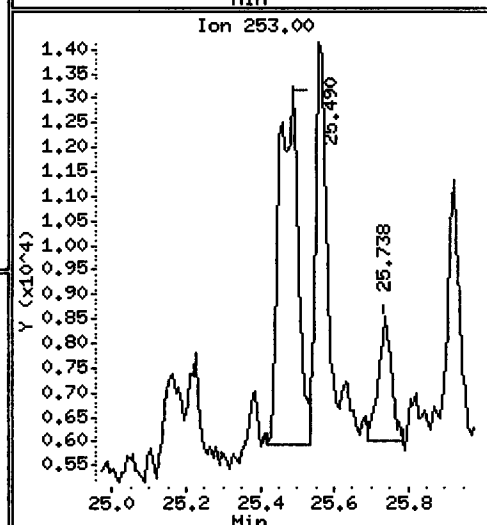
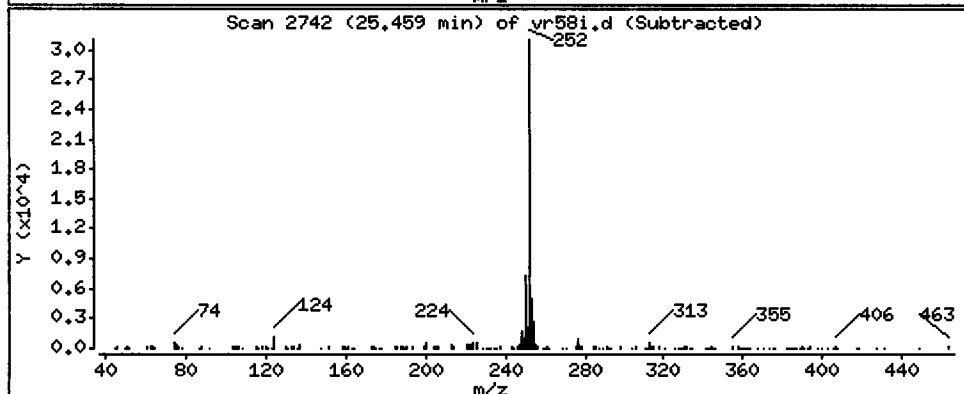
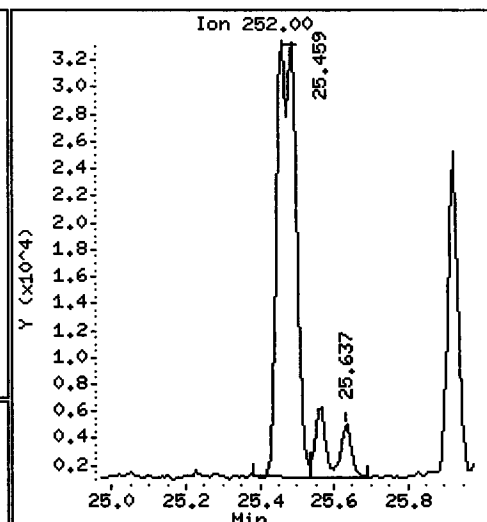
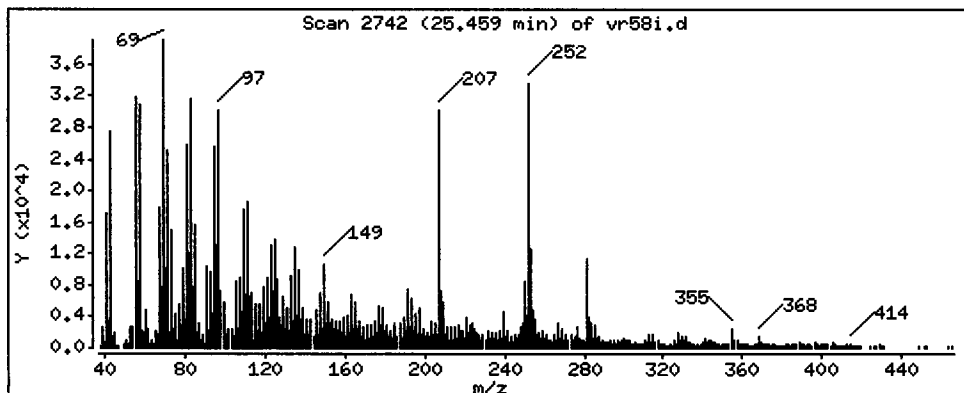
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

187 Total Benzofluoranthenes

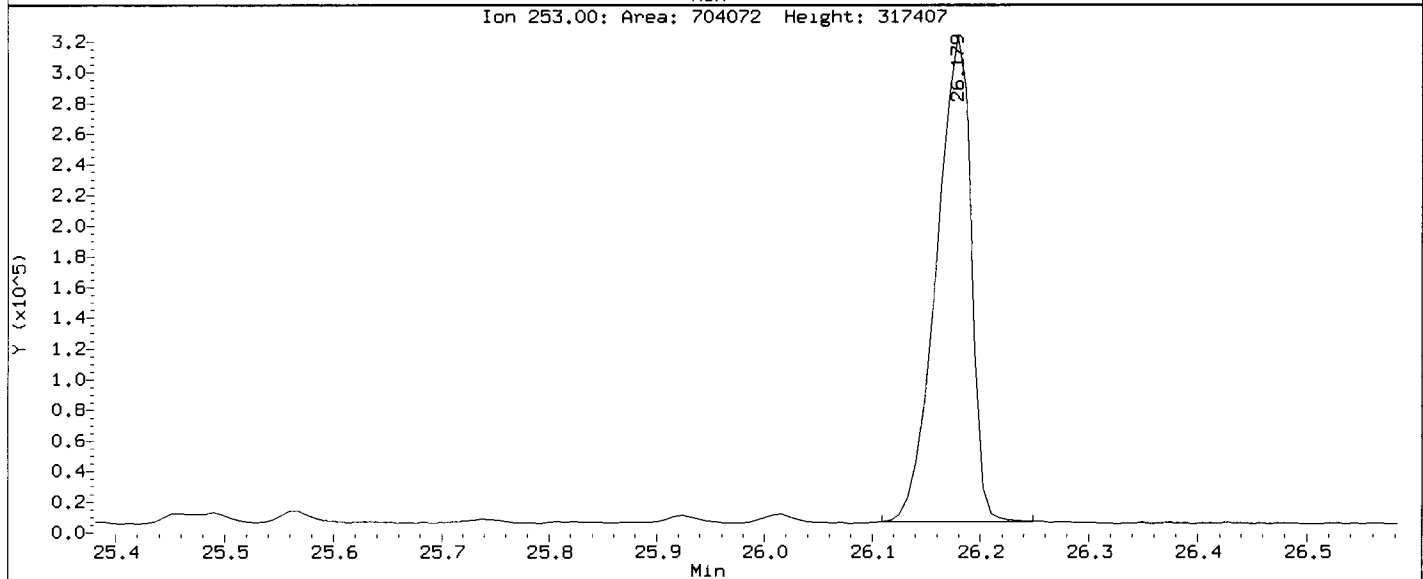
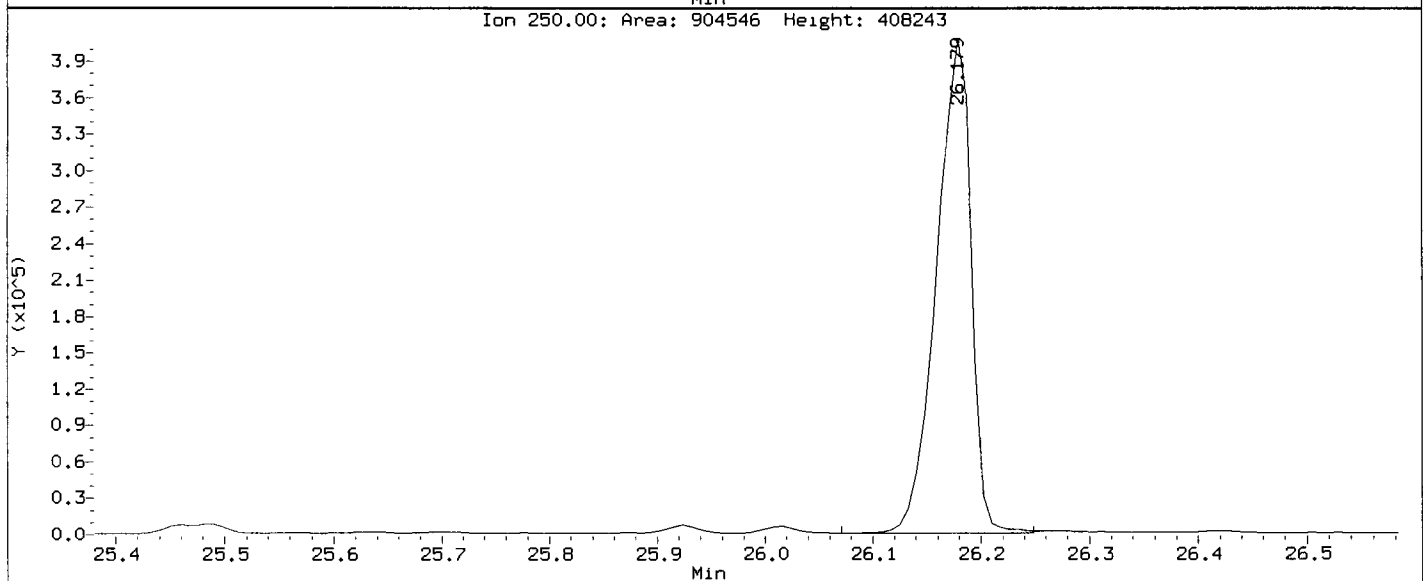
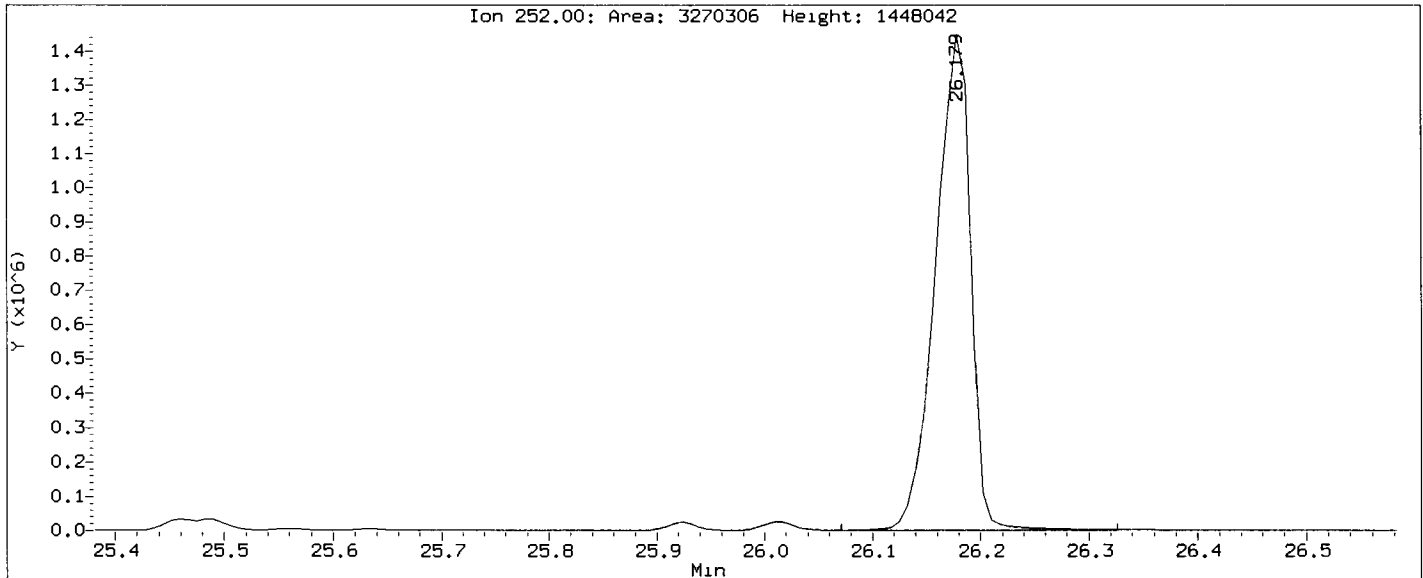
Concentration: 90.71 ug/kg



Data File: /chem1/nt10.1/20121204.b/vr581.d  
Injection Date: 04-DEC-2012 22:02  
Instrument: nt10.1  
Client Sample ID: SG-17-S-E-121107

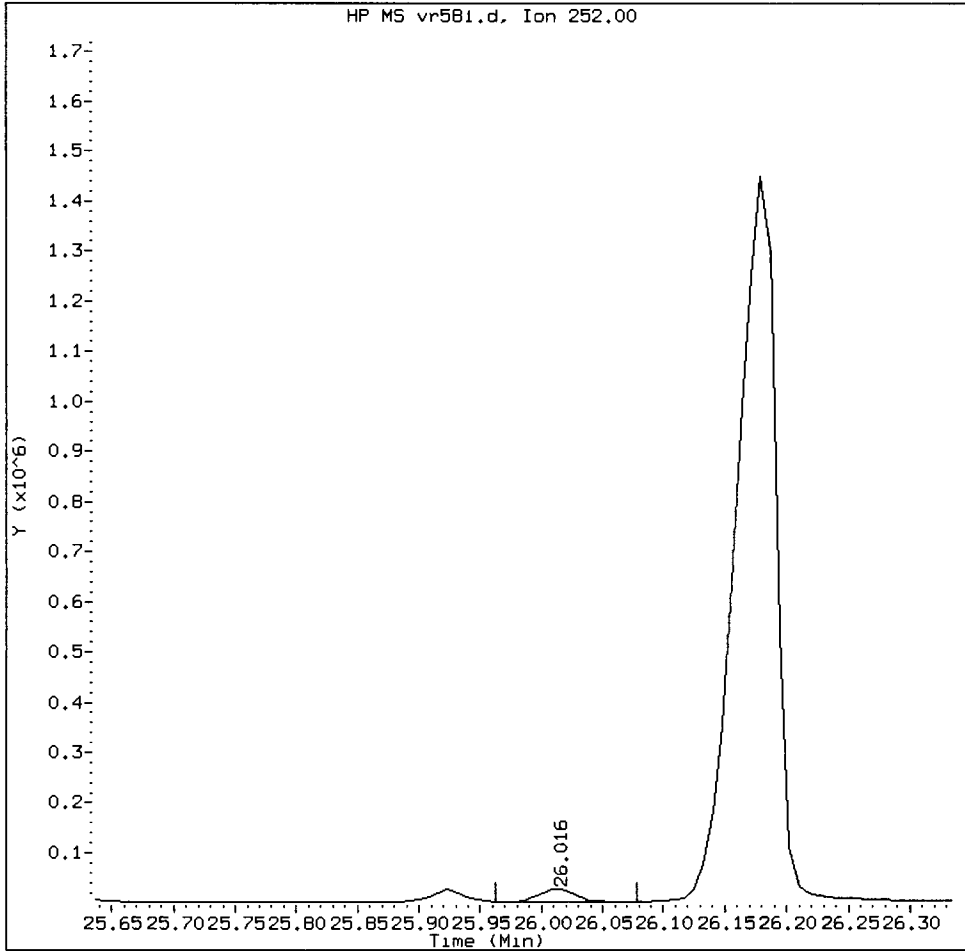
12.5.12

Compound: Benzo(a)pyrene  
CAS Number: 50-32-8



VR58I, /chem1/nt10.i/20121204.b/vr58i.d

Benzo(a)pyrene Amount: 0.42 Area: 50317



MANUAL INTEGRATION for Benzo(a)pyrene

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

5. Other \_\_\_\_\_

Analyst: VD

Date: 12.5.12

CO-ELUTION SUMMARY FOR FILE - vr58i.d

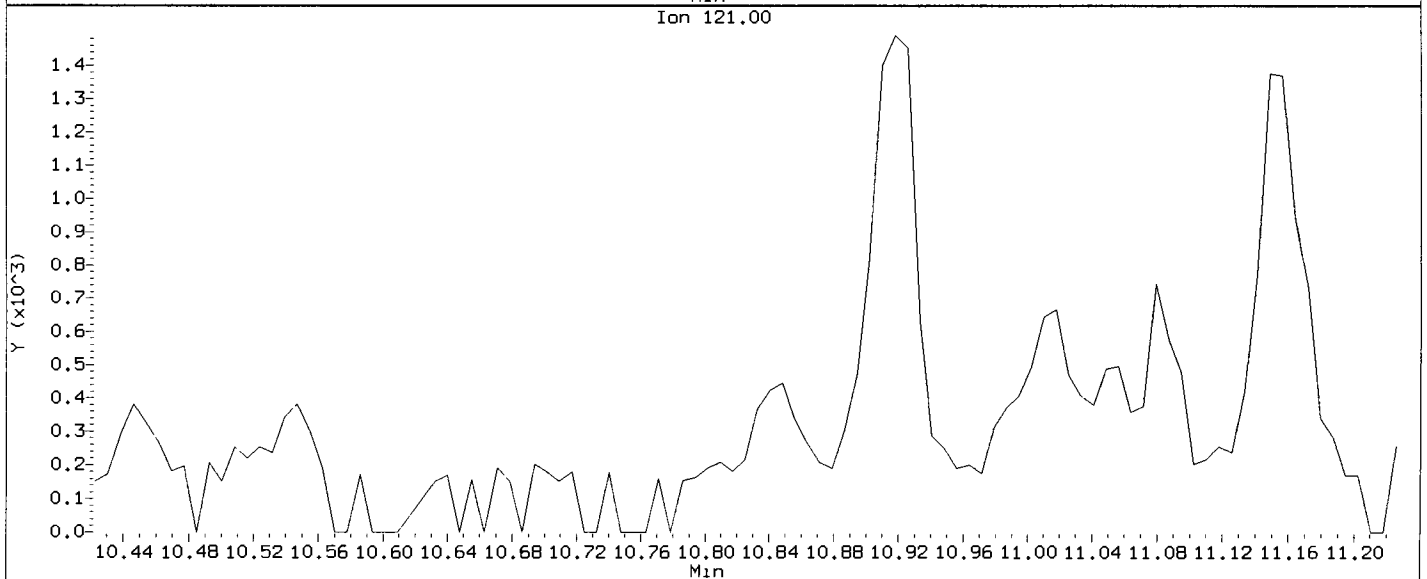
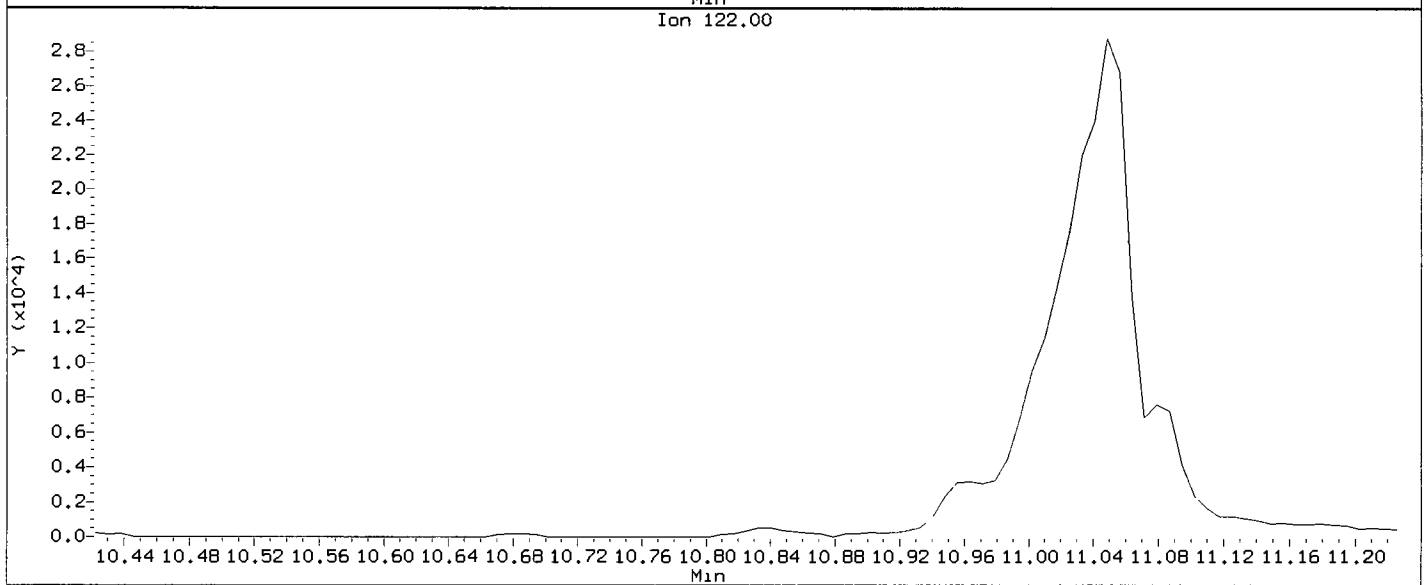
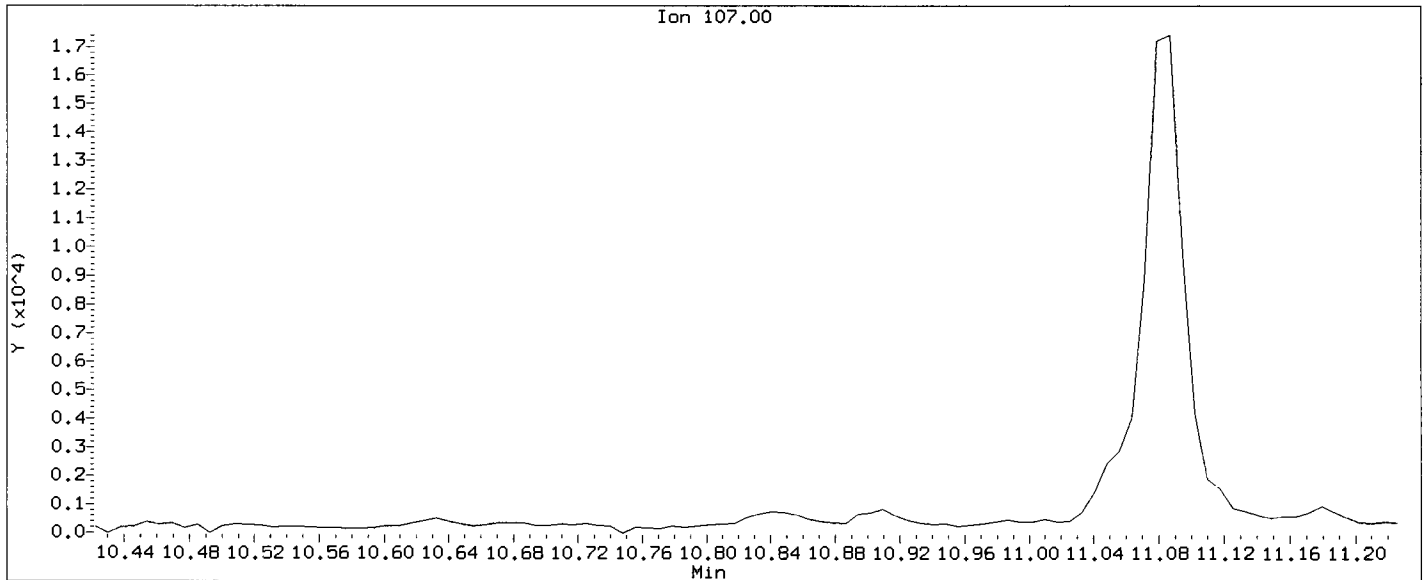
Lab ID: VR58I, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

---

Data File: /chem1/nt10.1/20121204.b/vr581.d  
Injection Date: 04-DEC-2012 22:02  
Instrument: nt10.1  
Client Sample ID: SG-17-S-E-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



VR58:00741

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58j.d  
 Lab Smp Id: VR58J Client Smp ID: SG-01-S-C-121107  
 Inj Date : 04-DEC-2012 22:38  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58J  
 Misc Info : 12-22338  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub  
 Target Version: 3.50

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	13.20000	Weight of sample extracted (g)
M	20.50000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN	FINAL
								(ug/mL)	(ug/kg)
\$ 1 2-Fluorophenol	112			6.543	6.505	(0.740)	164262	4.81262	458.6
\$ 2 Phenol-d5	99			8.243	8.220	(0.933)	184095	4.35890	415.4
3 Phenol	94			Compound Not Detected.					
\$ 5 2-Chlorophenol-d4	132			8.467	8.452	(0.958)	168142	4.60129	438.5
7 1,3-Dichlorobenzene	146			Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152			8.839	8.831	(1.000)	106697	4.00000	
9 1,4-Dichlorobenzene	146			Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152			9.219	9.212	(1.043)	81887	3.07317	292.9
12 1,2-Dichlorobenzene	146			Compound Not Detected.					
11 Benzyl alcohol	108			Compound Not Detected.					
13 2-Methylphenol	108			Compound Not Detected.					
17 Hexachloroethane	117			Compound Not Detected.					
15 4-Methylphenol	108			Compound Not Detected.					
\$ 18 Nitrobenzene-d5	82			10.011	10.003	(0.871)	110780	3.06213	291.8
22 2,4-Dimethylphenol	107			Compound Not Detected.					

Compounds	QUANT	SIG	CONCENTRATIONS					
			ON-COLUMN	FINAL				
	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/kg)	
=====	====	==	=====	=====	=====	=====	=====	
24 Benzoic acid	105	10.994	11.110	(0.957)	12012	0.54418	51.86 (M)	
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
* 27 Naphthalene-d8	136	11.487	11.480	(1.000)	386086	4.00000		
28 Naphthalene	128	Compound Not Detected.						
30 Hexachlorobutadiene	225	Compound Not Detected.						
32 2-Methylnaphthalene	142	Compound Not Detected.						
\$ 36 2-Fluorobiphenyl	172	13.886	13.886	(0.904)	252962	3.06385	292.0	
39 Dimethylphthalate	163	Compound Not Detected.						
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	15.364	15.356	(1.000)	233272	4.00000		
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
50 Diethylphthalate	149	16.454	16.462	(1.071)	15589	0.19763	18.83	
49 Fluorene	166	Compound Not Detected.						
54 N-Nitrosodiphenylamine	169	Compound Not Detected.						
\$ 55 2,4,6-Tribromophenol	330	17.141	17.125	(1.116)	78979	5.74769	547.7	
57 Hexachlorobenzene	284	Compound Not Detected.						
58 Pentachlorophenol	266	Compound Not Detected.						
* 59 Phenanthrene-d10	188	18.624	18.617	(1.000)	388754	4.00000		
60 Phenanthrene	178	18.678	18.671	(1.003)	26147	0.27165	25.89	
61 Anthracene	178	Compound Not Detected.						
63 Di-n-butylphthalate	149	Compound Not Detected.						
64 Fluoranthene	202	21.100	21.093	(1.133)	64397	0.53078	50.58	
65 Pyrene	202	21.518	21.510	(0.908)	52486	0.40836	38.91	
\$ 66 Terphenyl-d14	244	21.843	21.835	(0.921)	342593	3.98762	380.0	
67 Butylbenzylphthalate	149	Compound Not Detected.						
68 Benzo(a)anthracene	228	23.678	23.670	(0.999)	20133	0.16146	15.39	
* 69 Chrysene-d12	240	23.709	23.701	(1.000)	438726	4.00000		
71 Chrysene	228	23.748	23.740	(1.002)	22798	0.20580	19.61	
72 bis(2-Ethylhexyl)phthalate	149	23.833	23.825	(0.961)	24651	0.28969	27.61	
* 134 Di-n-octylphthalate-d4	153	24.800	24.801	(1.000)	616730	4.00000		
73 Di-n-octylphthalate	149	Compound Not Detected.						
76 Benzo(a)pyrene	252	26.001	25.985	(0.996)	17637	0.15688	14.95	
* 77 Perylene-d12	264	26.101	26.086	(1.000)	393922	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.						
105 1-methylnaphthalene	142	Compound Not Detected.						
187 Total Benzofluoranthenes	252	25.451	25.474	(0.975)	43243	1.17303	35.55	
98 Retene	219	22.129	22.137	(0.933)	2438			
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

*Handwritten:* 49  
12-5-12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58j.d  
 Lab Smp Id: VR58J  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22338

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-01-S-C-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	106697	30.80
27 Naphthalene-d8	299399	149700	598798	386086	28.95
42 Acenaphthene-d10	178564	89282	357128	233272	30.64
59 Phenanthrene-d10	305410	152705	610820	388754	27.29
69 Chrysene-d12	323853	161926	647706	438726	35.47
134 Di-n-octylphthala	427845	213922	855690	616730	44.15
77 Perylene-d12	305316	152658	610632	393922	29.02

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.84	0.09
27 Naphthalene-d8	11.48	10.98	11.98	11.49	0.07
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.05
59 Phenanthrene-d10	18.62	18.12	19.12	18.62	0.04
69 Chrysene-d12	23.70	23.20	24.20	23.71	0.03
134 Di-n-octylphthala	24.80	24.30	25.30	24.80	0.00
77 Perylene-d12	26.09	25.59	26.59	26.10	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: Anchor QEA, LLC.

Client SDG: VR58

Sample Matrix: SOLID

Fraction: SV

Lab Smp Id: VR58J

Client Smp ID: SG-01-S-C-121107

Level: LOW

Operator: VTS/YZ

Data Type: MS DATA

SampleType: SAMPLE

SpikeList File: SHORTPSDDA.spk

Quant Type: ISTD

Sublist File: SHORTPSDDA.sub

Method File: /chem1/nt10.i/20121204.b/ABN.m

Misc Info: 12-22338

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	714.7	458.6	64.17	30-160
\$ 2 Phenol-d5	714.7	415.4	58.12	30-160
\$ 5 2-Chlorophenol-d4	714.7	438.5	61.35	30-160
\$ 10 1,2-Dichlorobenzen	476.5	292.9	61.46	30-160
\$ 18 Nitrobenzene-d5	476.5	291.8	61.24	30-160
\$ 36 2-Fluorobiphenyl	476.5	292.0	61.28	30-160
\$ 55 2,4,6-Tribromophen	714.7	547.7	76.64	30-160
\$ 66 Terphenyl-d14	476.5	380.0	79.75	30-160

Date : 04-DEC-2012 22:38

Client ID: SG-01-S-C-121107

Instrument: nt10.i

Sample Info: VR58J

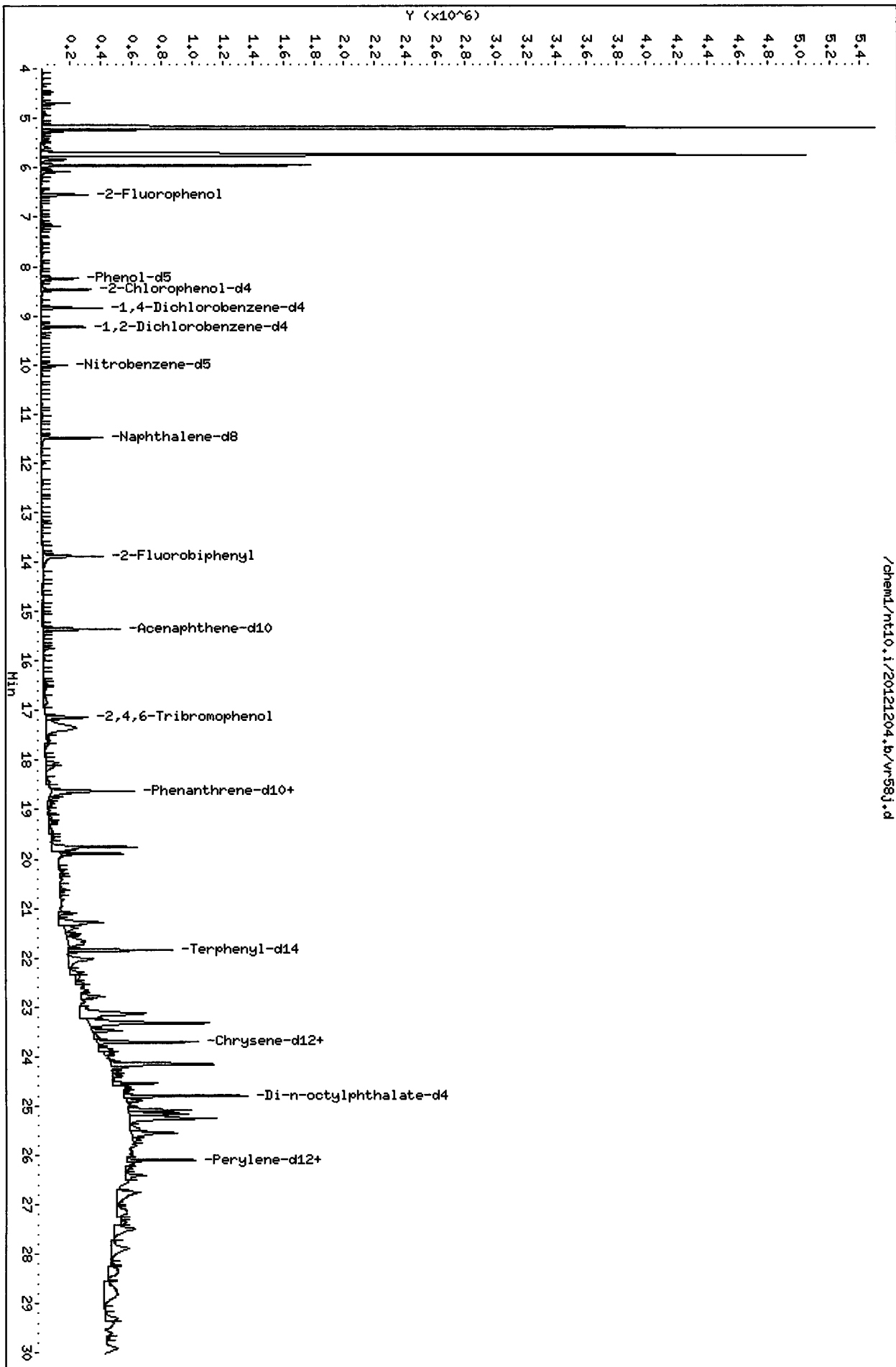
Volume Injected (uL): 1.0

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

/chem1/nt10.i/20121204.b/vr58j.d



VR58 : 607110

Date : 04-DEC-2012 22:38

Client ID: SG-01-S-C-121107

Instrument: nt10.i

Sample Info: VR58J

Volume Injected (uL): 1.0

Operator: VTS/YZ

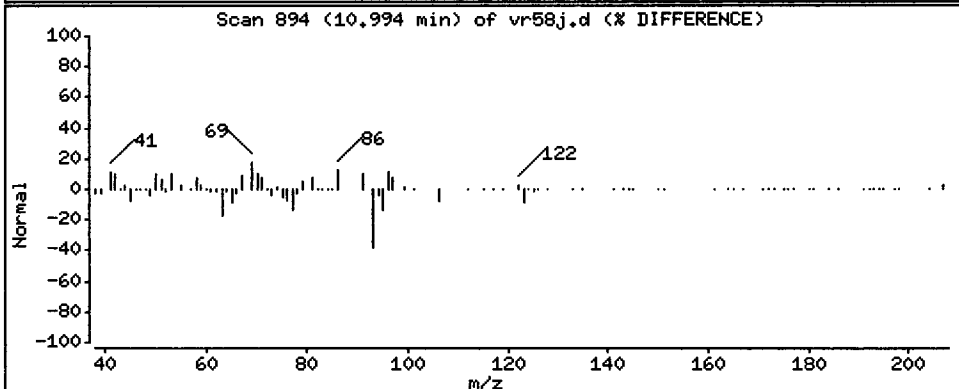
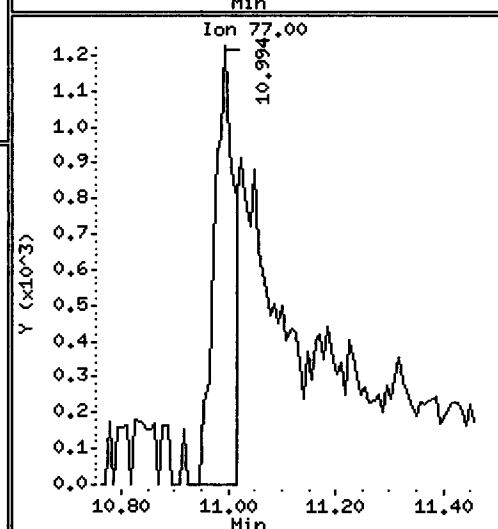
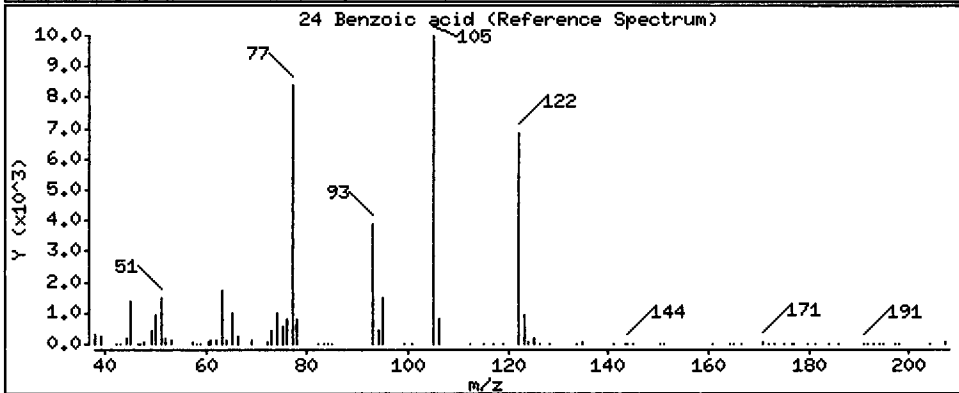
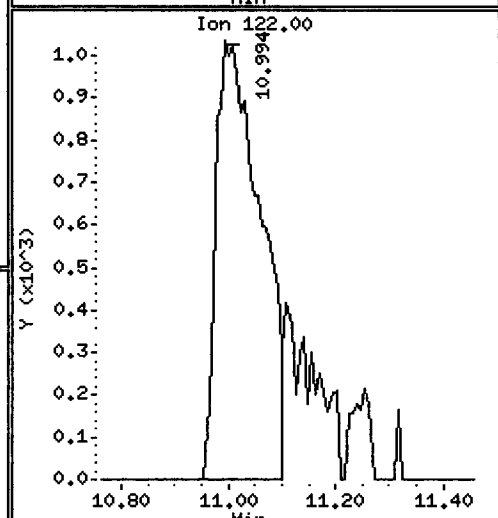
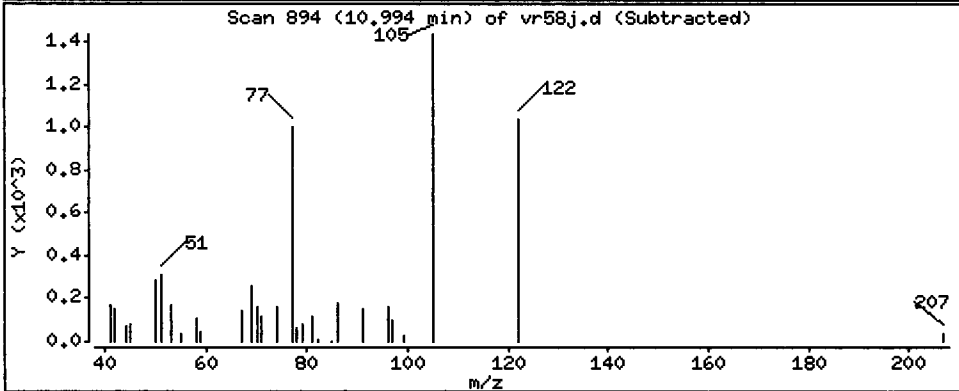
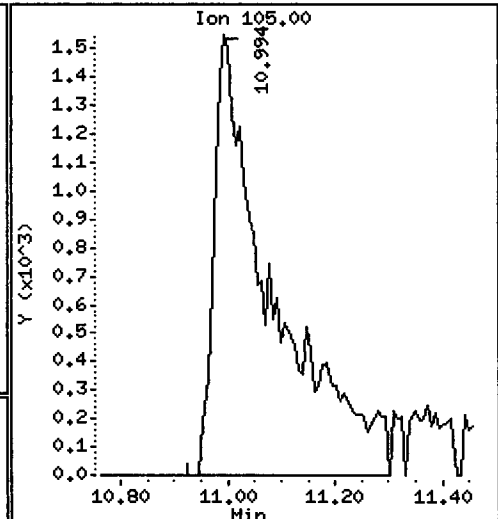
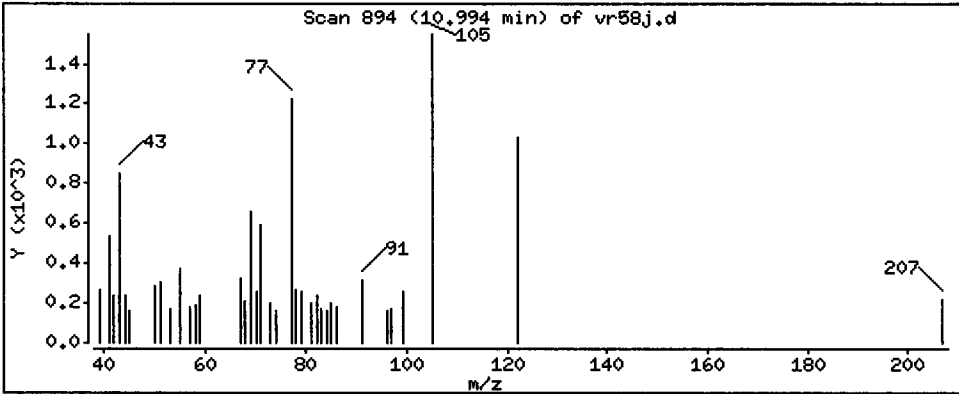
Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 51.86 ug/kg

*ima*



Date : 04-DEC-2012 22:38

Client ID: SG-01-S-C-121107

Instrument: nt10.i

Sample Info: VR58J

Volume Injected (uL): 1.0

Operator: VTS/YZ

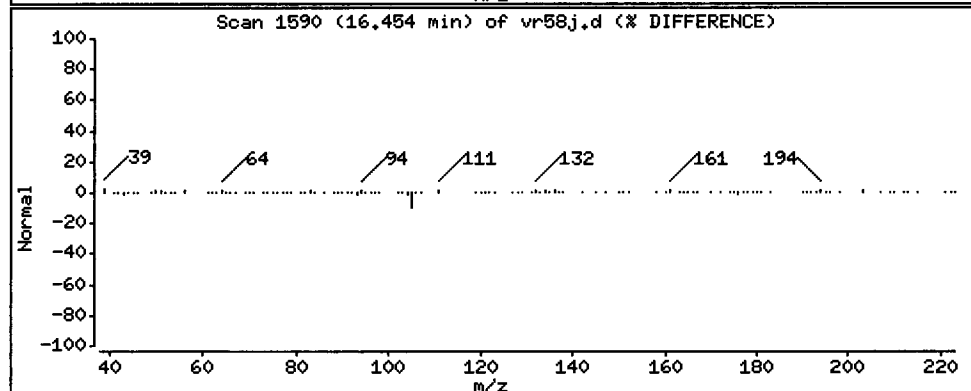
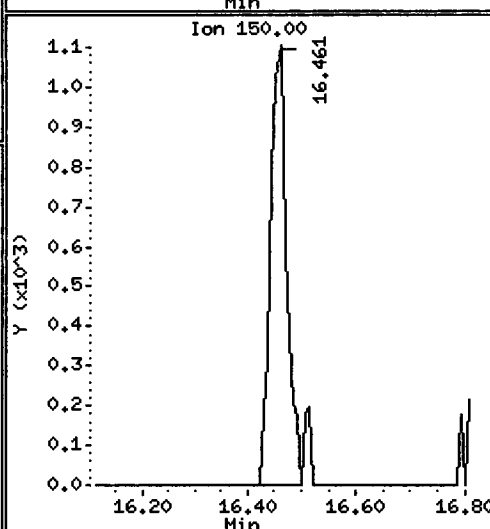
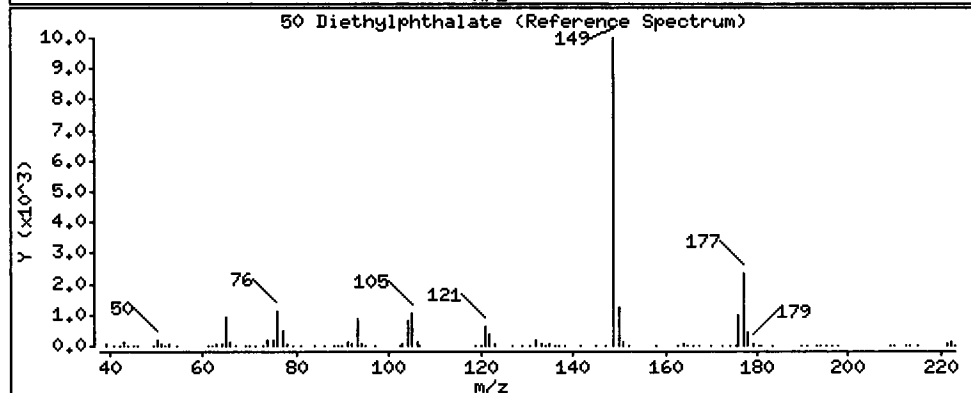
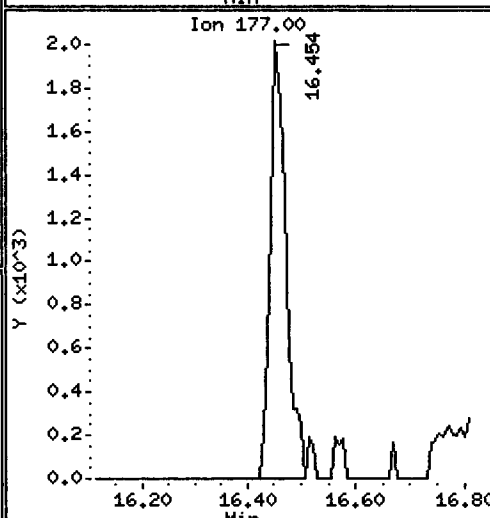
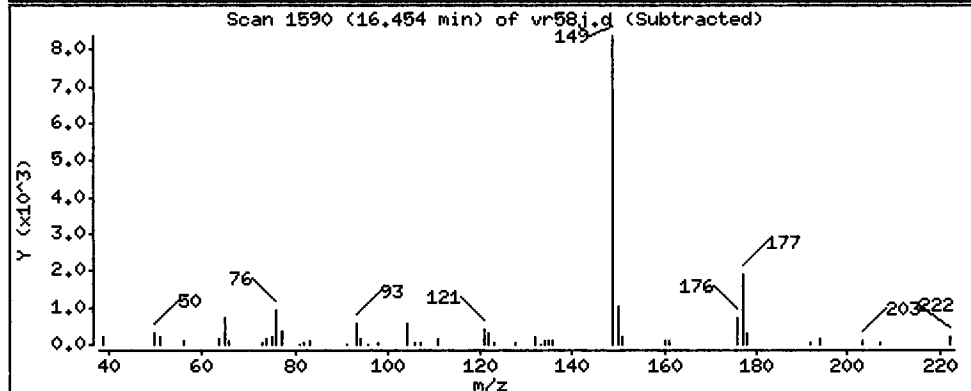
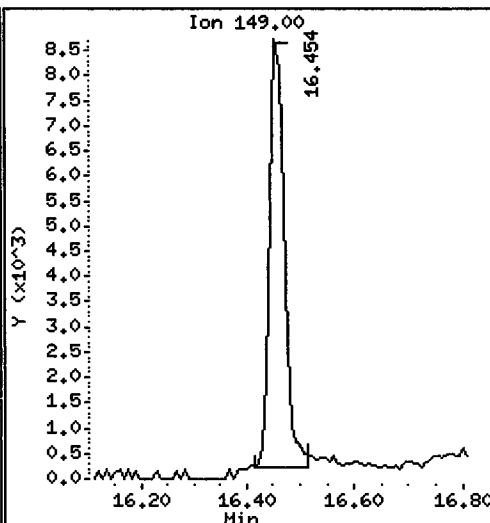
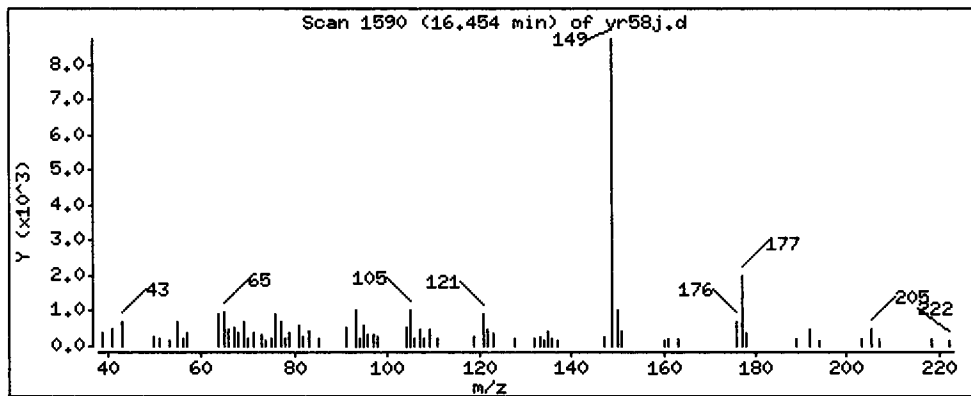
Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 18.83 ug/kg

*CMC*



Date : 04-DEC-2012 22:38

Client ID: SG-01-S-C-121107

Instrument: nt10,i

Sample Info: VR58J

Volume Injected (uL): 1.0

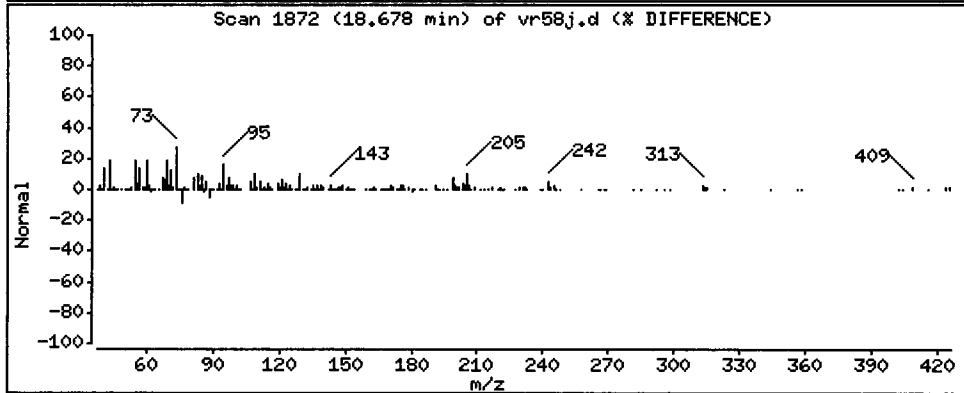
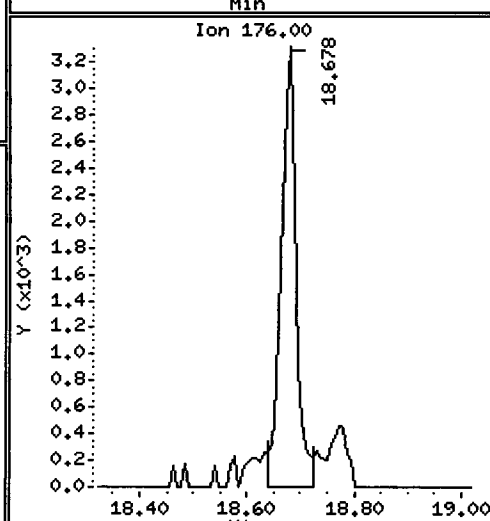
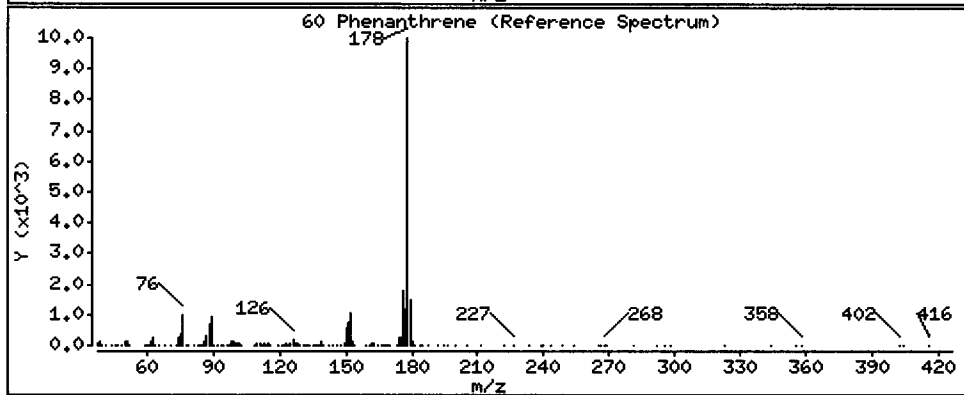
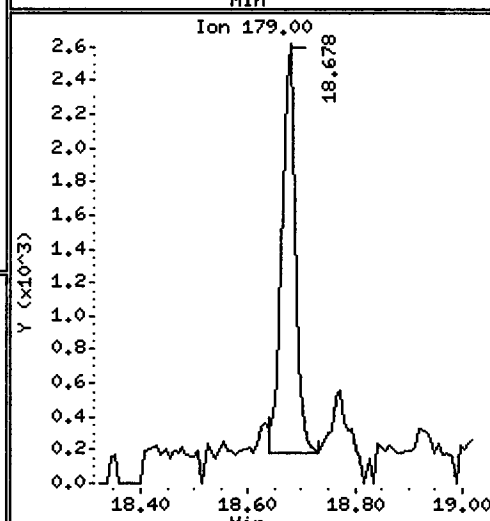
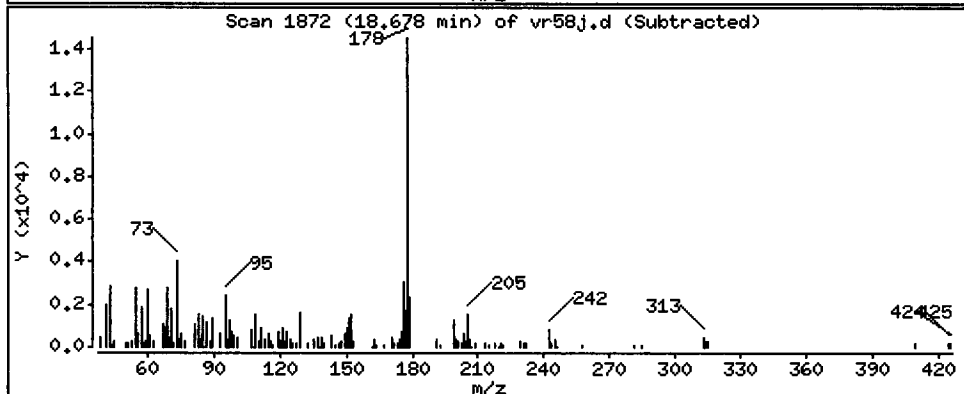
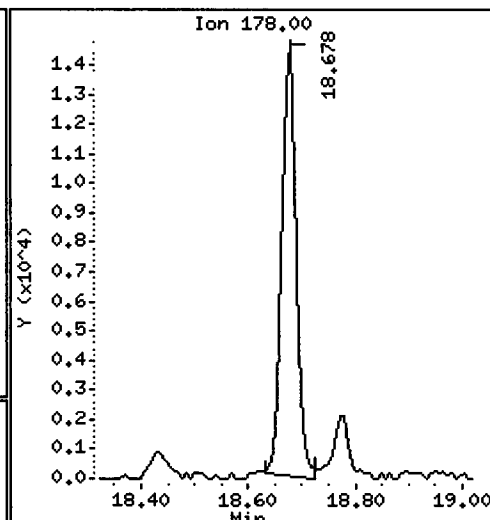
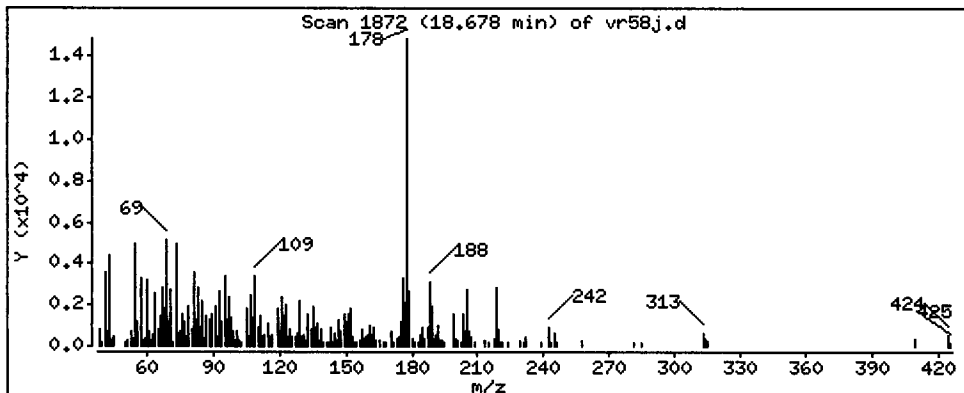
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 25.89 ug/kg



Date : 04-DEC-2012 22:38

Client ID: SG-01-S-C-121107

Instrument: nt10.i

Sample Info: VR58J

Volume Injected (uL): 1.0

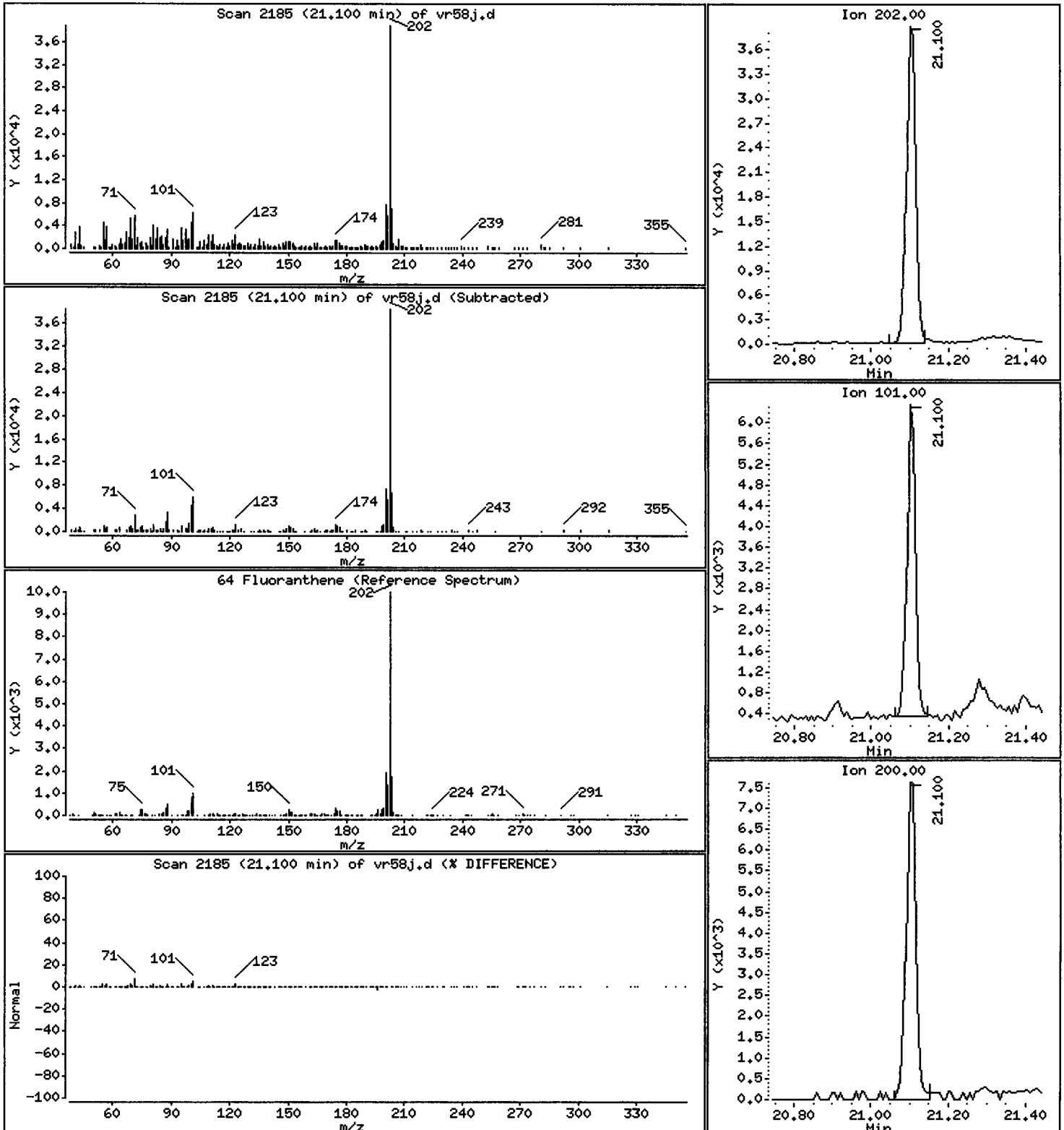
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 50.58 ug/kg



Date : 04-DEC-2012 22:38

Client ID: SG-01-S-C-121107

Instrument: nt10.i

Sample Info: VR58J

Volume Injected (uL): 1.0

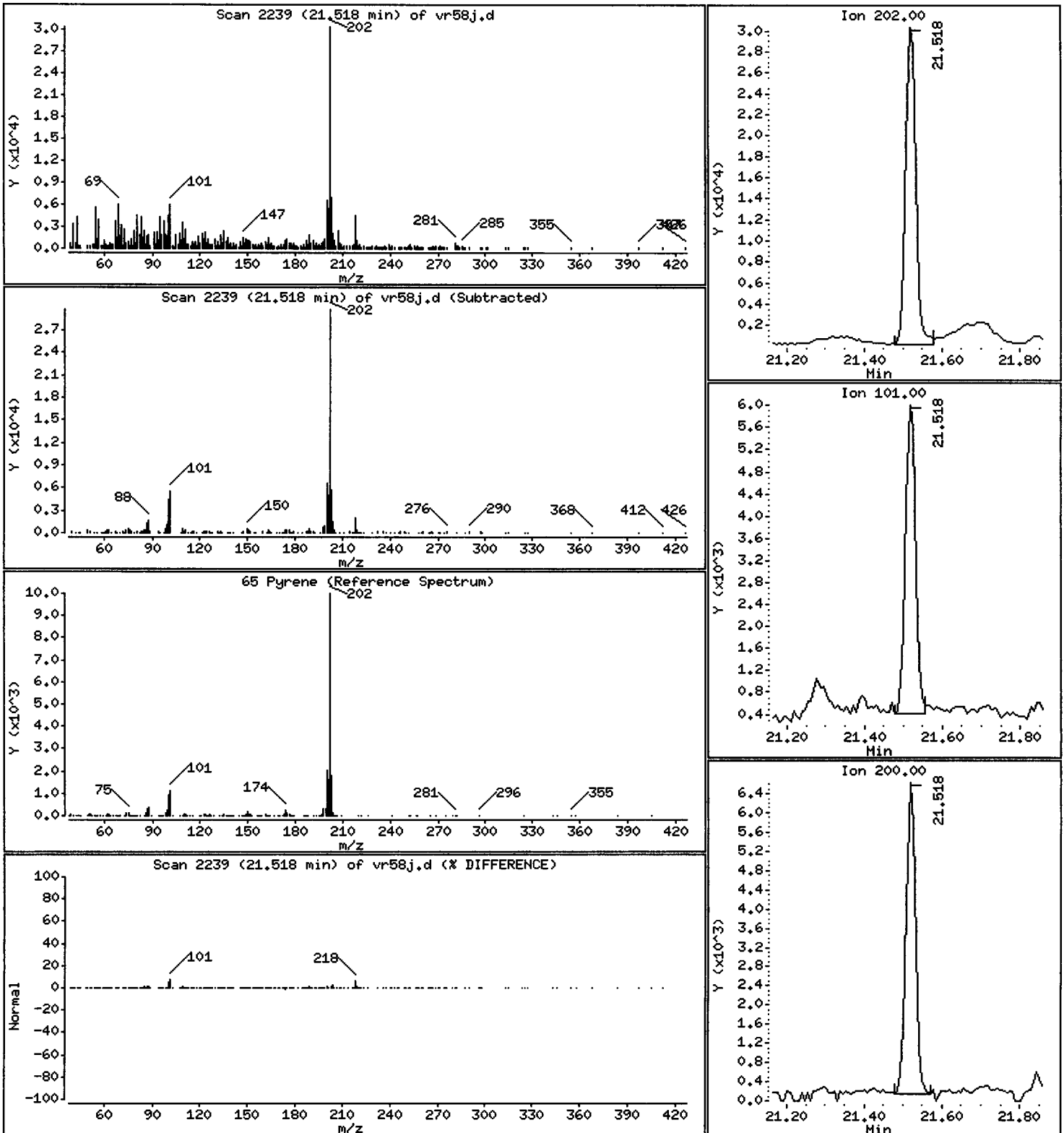
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 38.91 ug/kg



Date : 04-DEC-2012 22:38

Client ID: SG-01-S-C-121107

Instrument: nt10.i

Sample Info: VR58J

Volume Injected (uL): 1.0

Operator: VTS/YZ

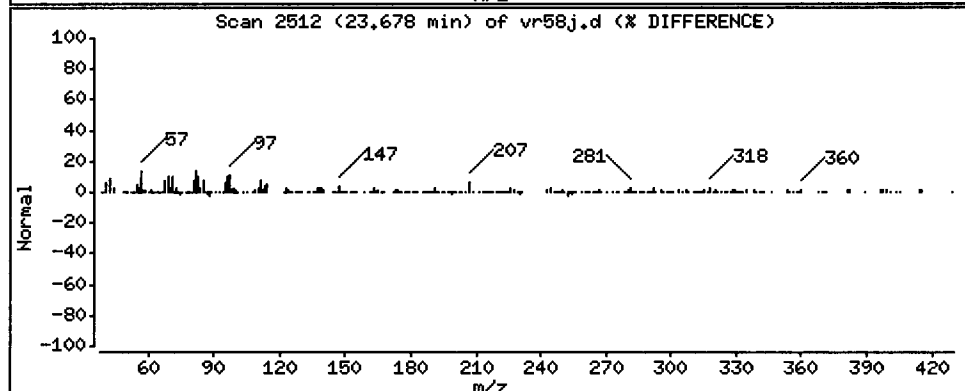
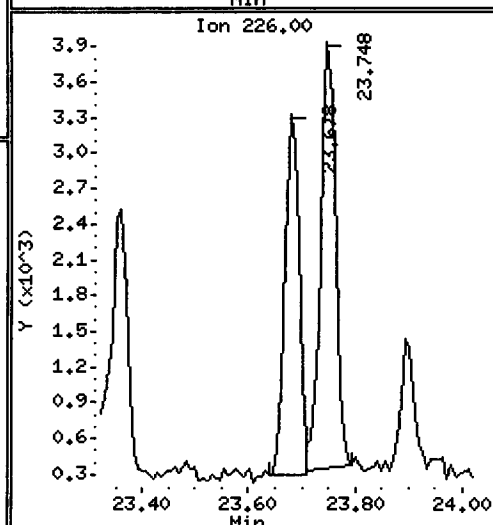
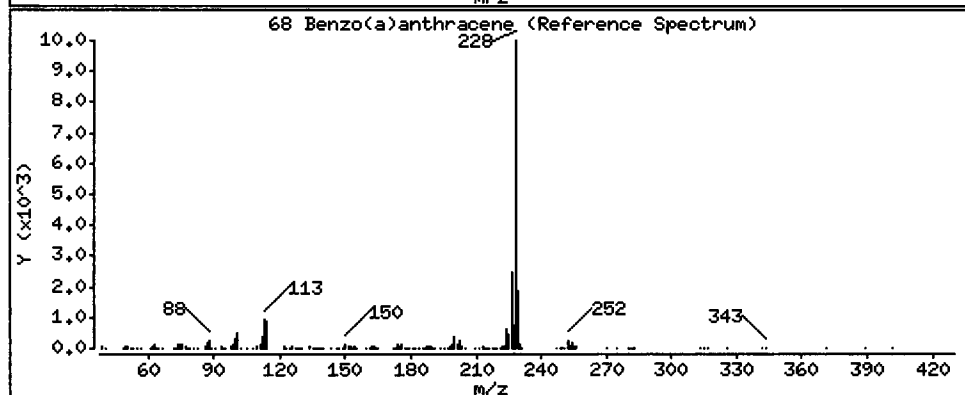
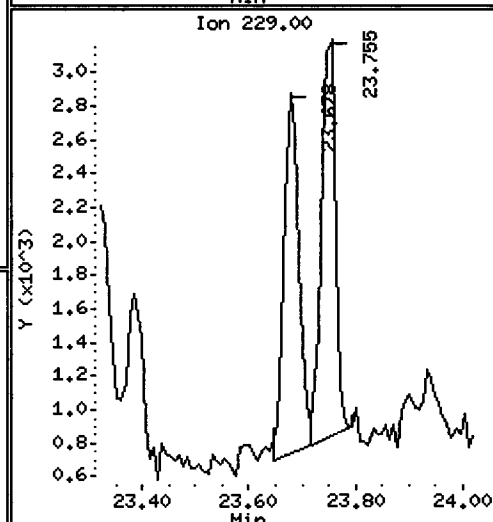
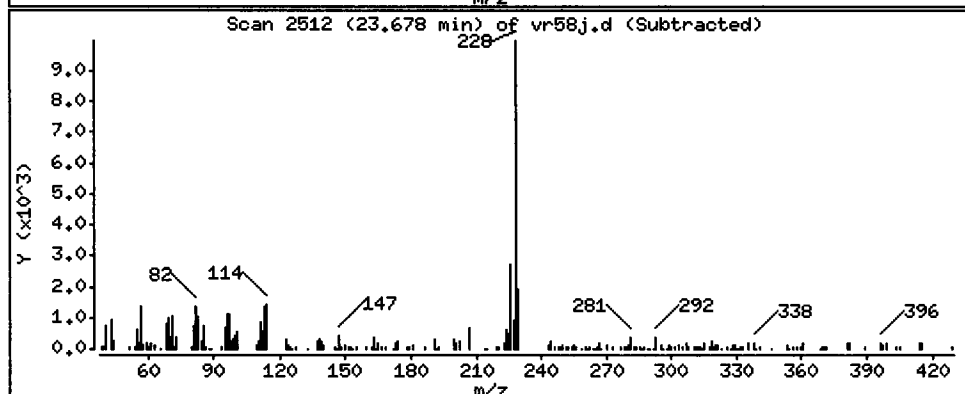
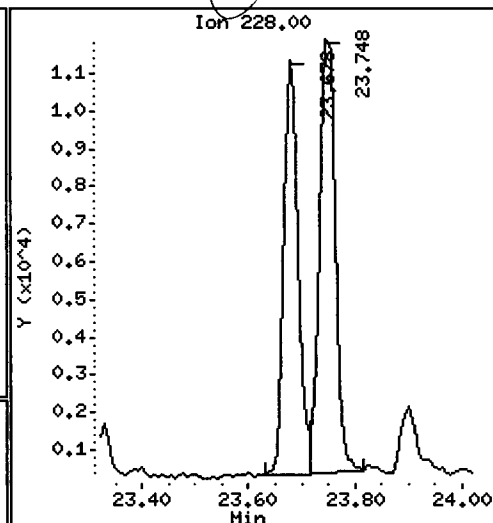
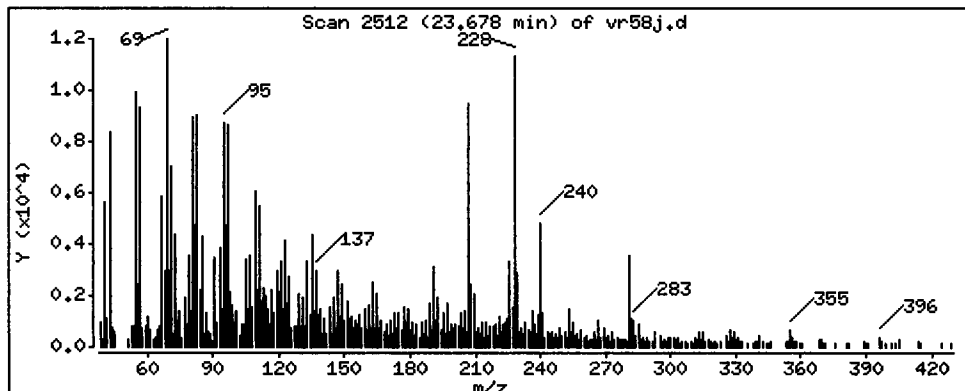
Column phase: ZB-5msi

Column diameter: 0.25

68 Benzo(a)anthracene

Concentration: 15.39 ug/kg

*OK*





Date : 04-DEC-2012 22:38

Client ID: SG-01-S-C-121107

Instrument: nt10.i

Sample Info: VR58J

Volume Injected (uL): 1.0

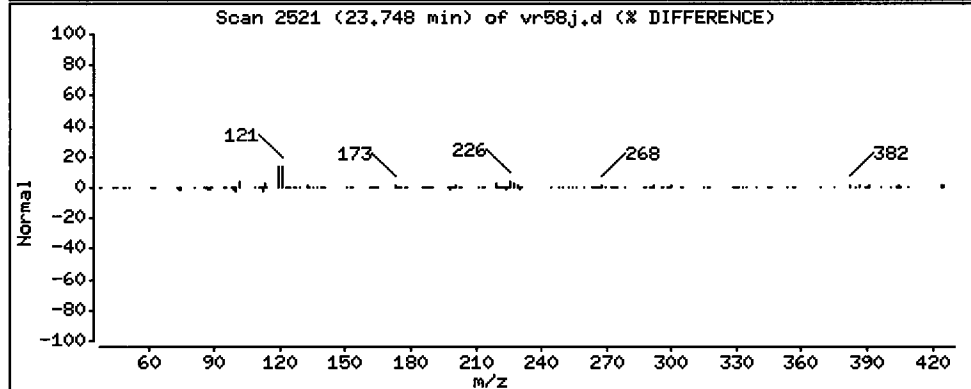
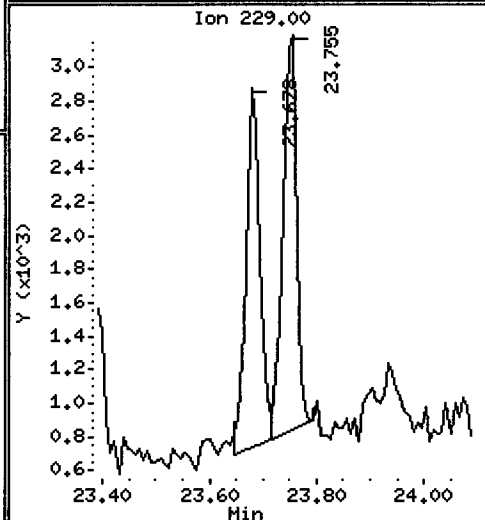
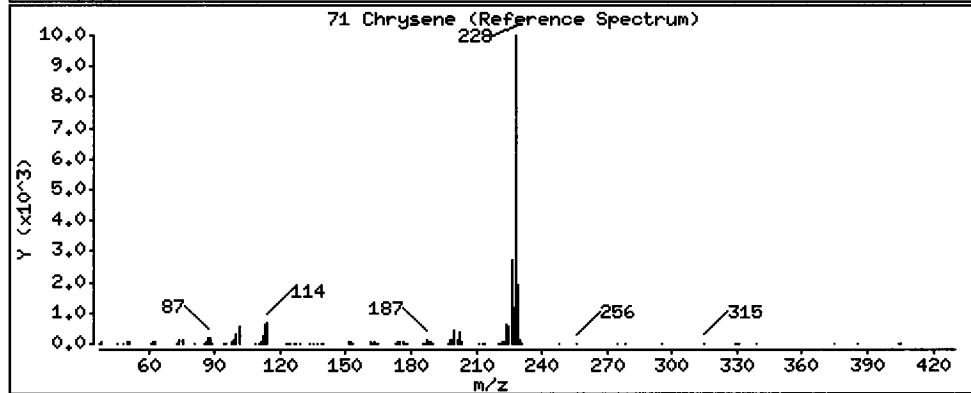
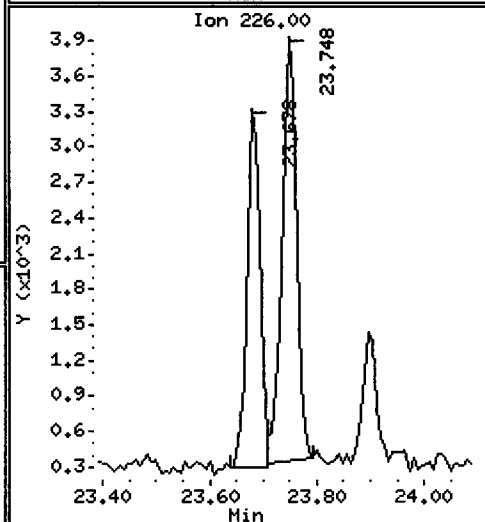
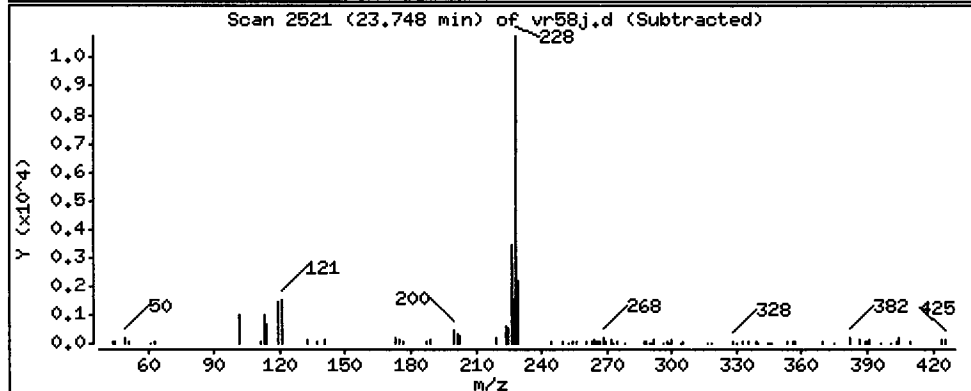
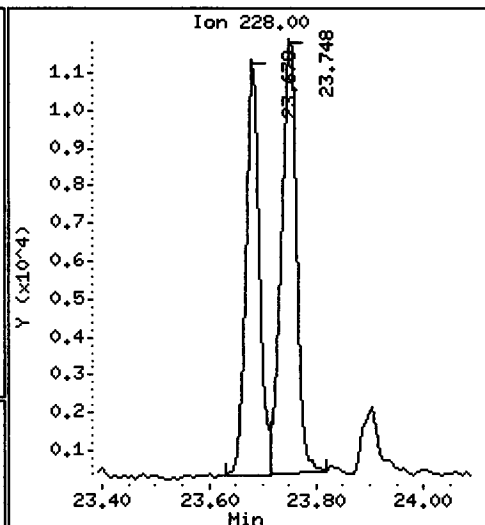
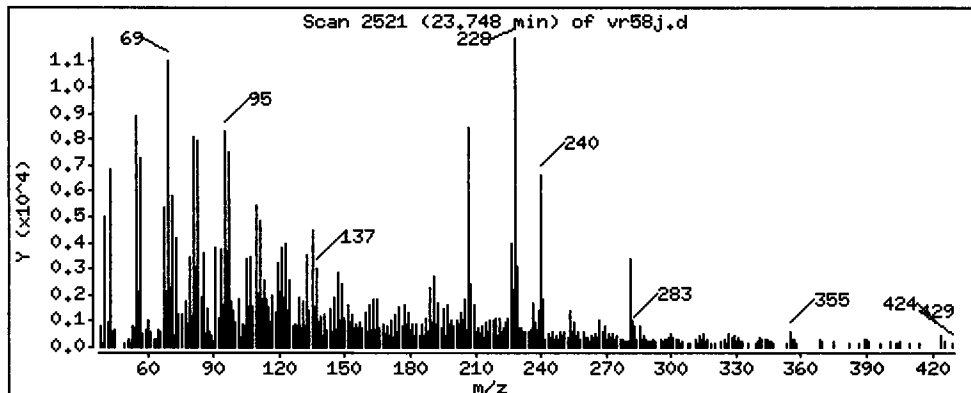
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

71 Chrysene

Concentration: 19.61 ug/kg



Date : 04-DEC-2012 22:38

Client ID: SG-01-S-C-121107

Instrument: nt10.i

Sample Info: VR58J

Volume Injected (uL): 1.0

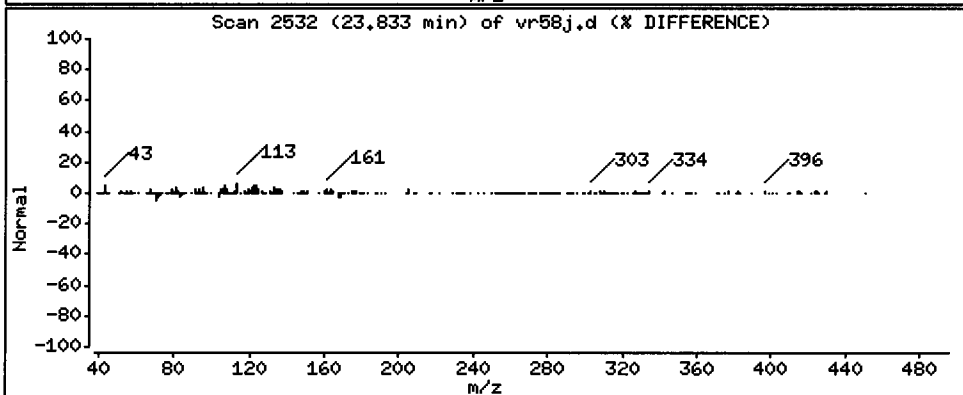
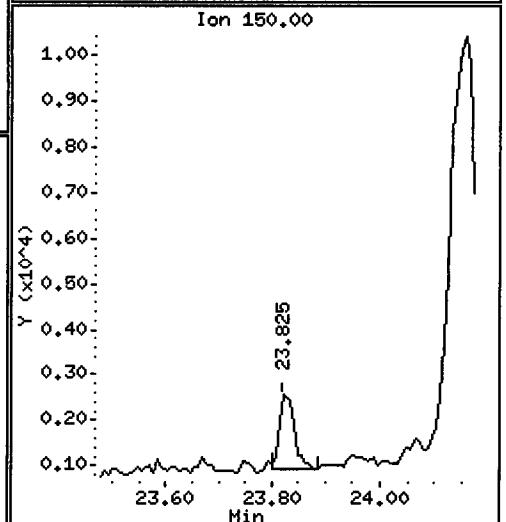
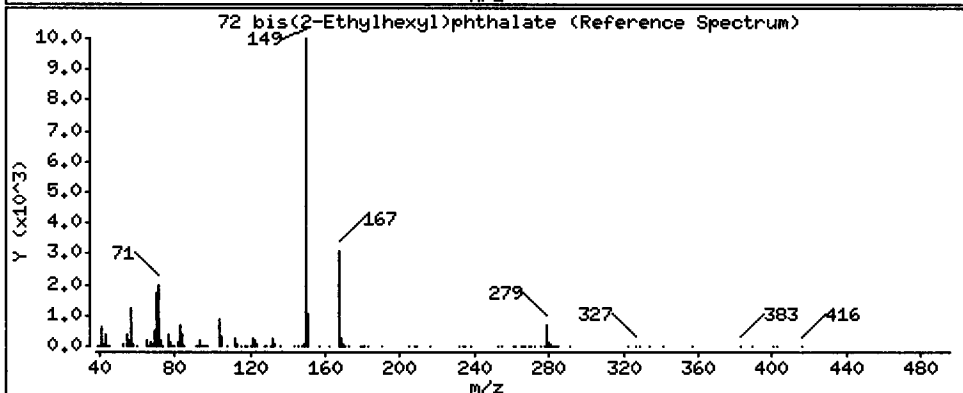
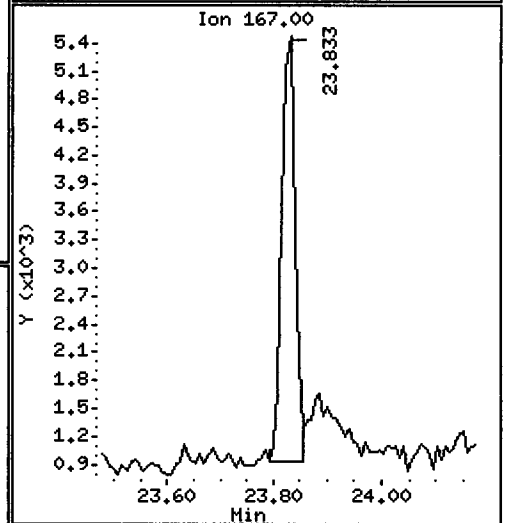
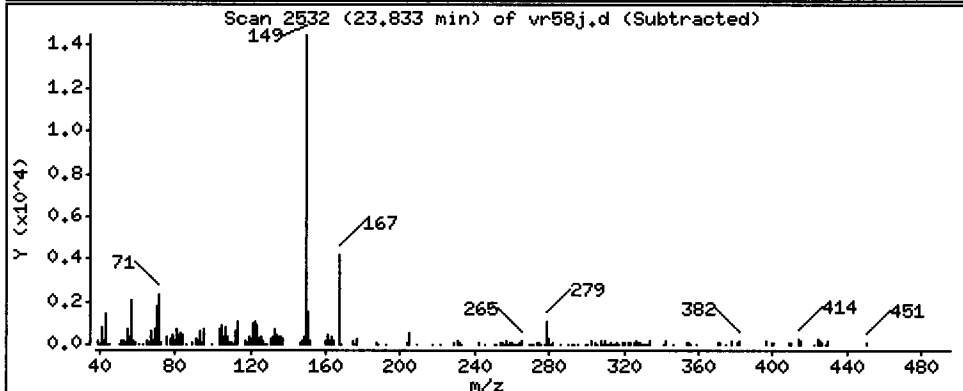
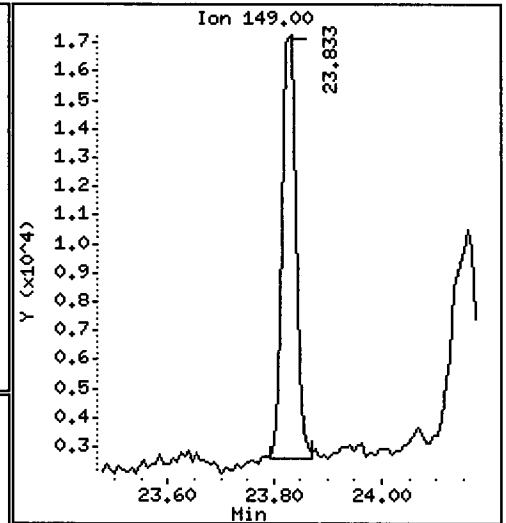
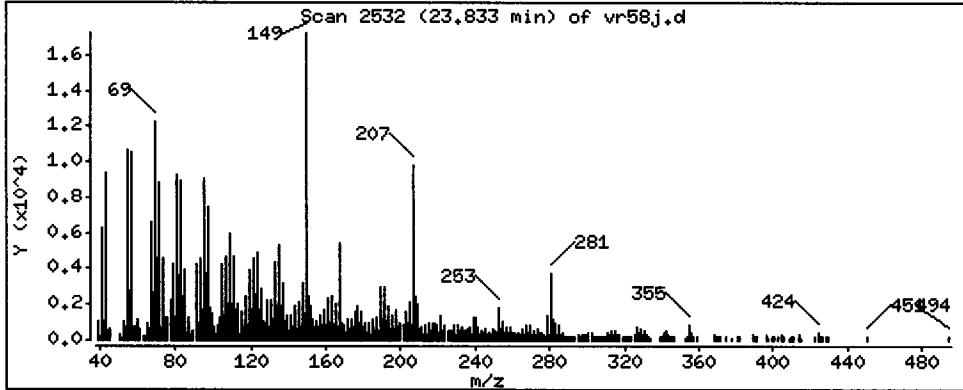
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 27.61 ug/kg



Date : 04-DEC-2012 22:38

Client ID: SG-01-S-C-121107

Instrument: nt10.i

Sample Info: VR58J

Volume Injected (uL): 1.0

Operator: VTS/YZ

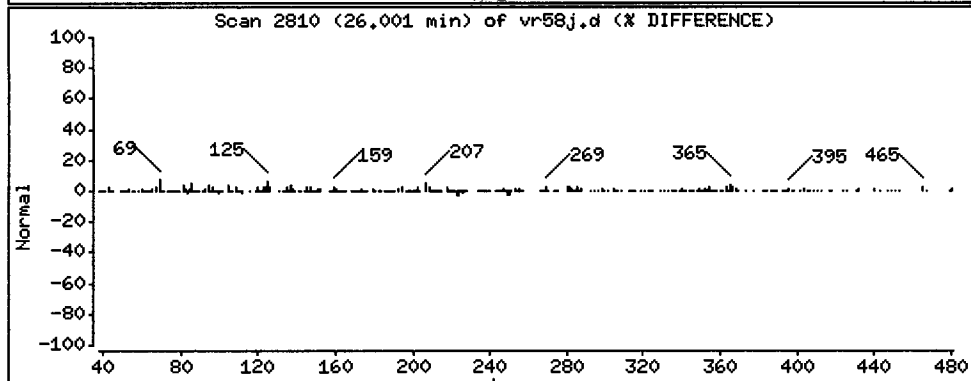
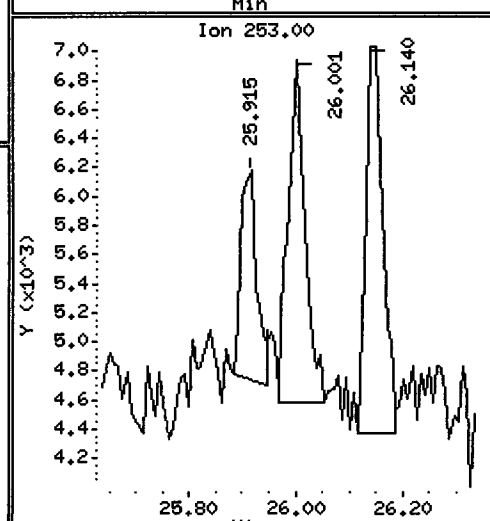
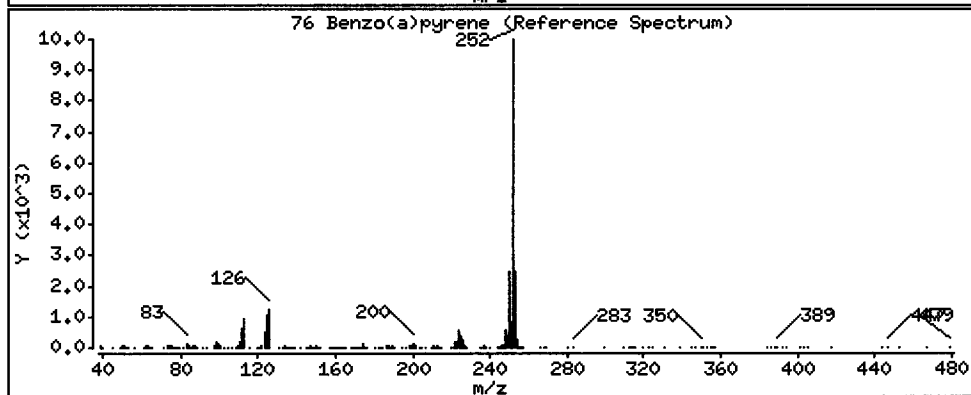
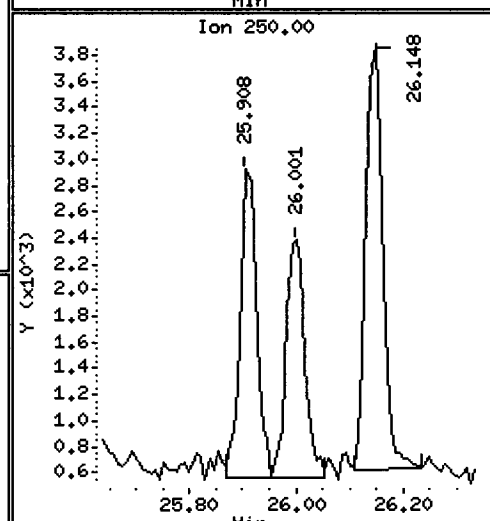
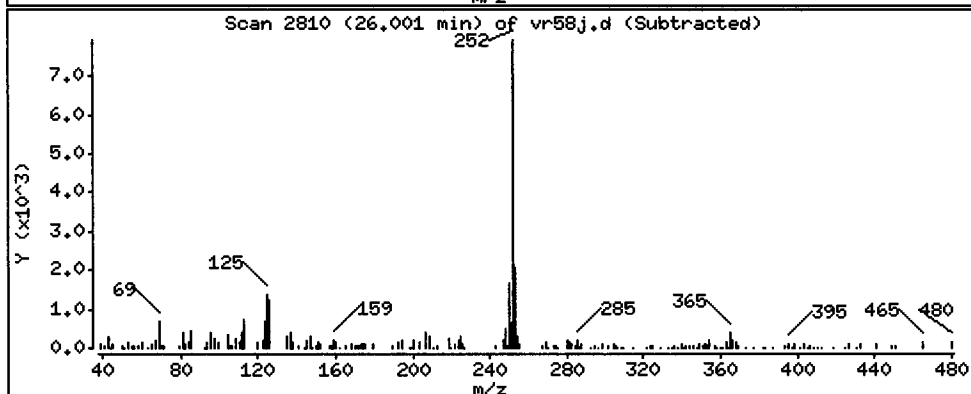
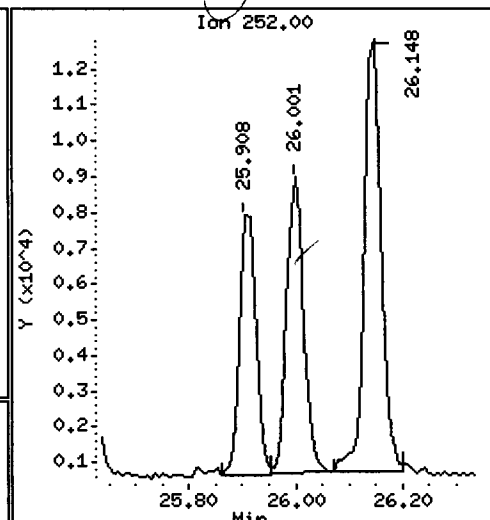
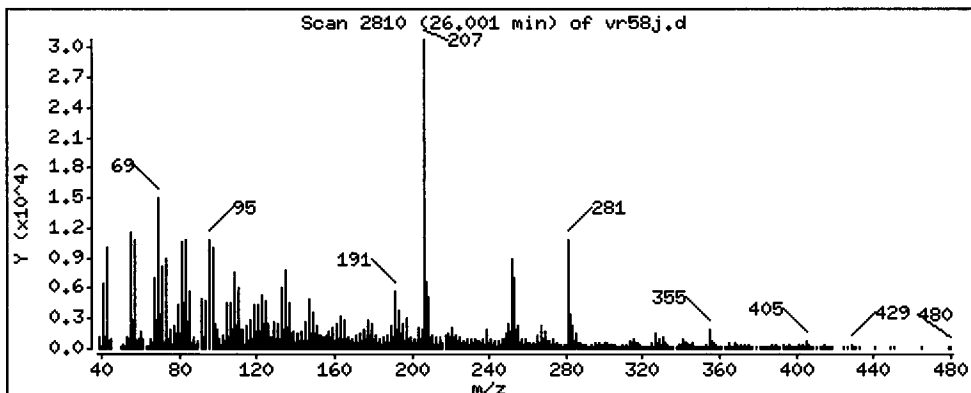
Column phase: ZB-5msi

Column diameter: 0.25

76 Benzo(a)pyrene

Concentration: 14.95 ug/kg

*DLR*



Date : 04-DEC-2012 22:38

Client ID: SG-01-S-C-121107

Instrument: nt10.i

Sample Info: VR58J

Volume Injected (uL): 1.0

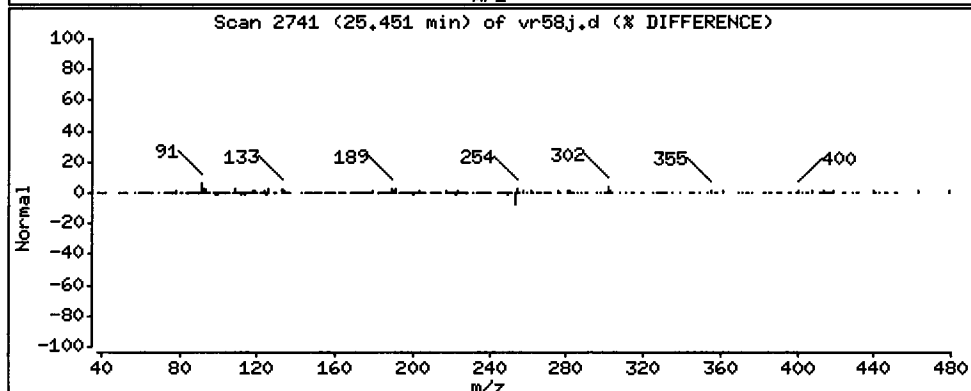
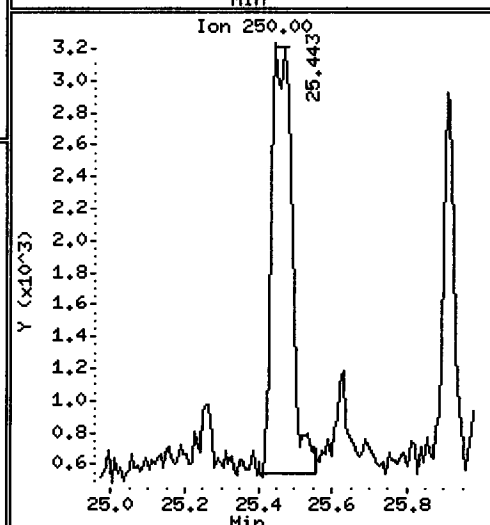
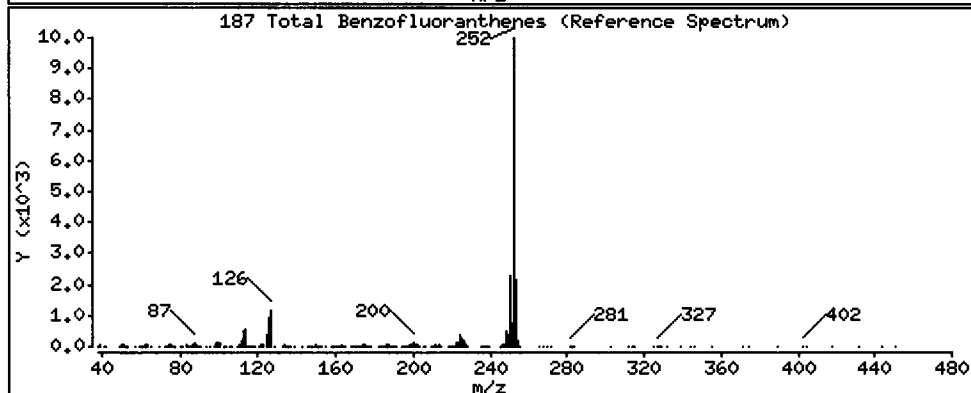
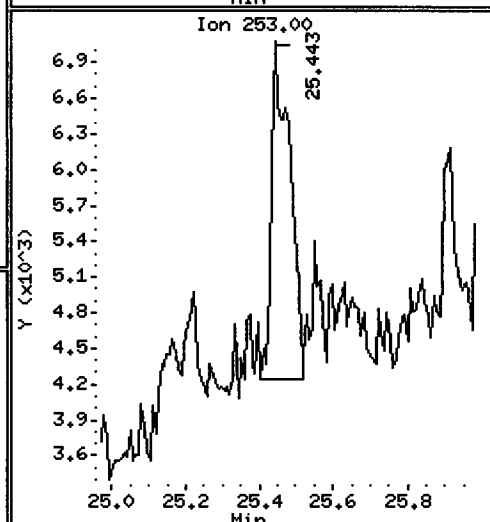
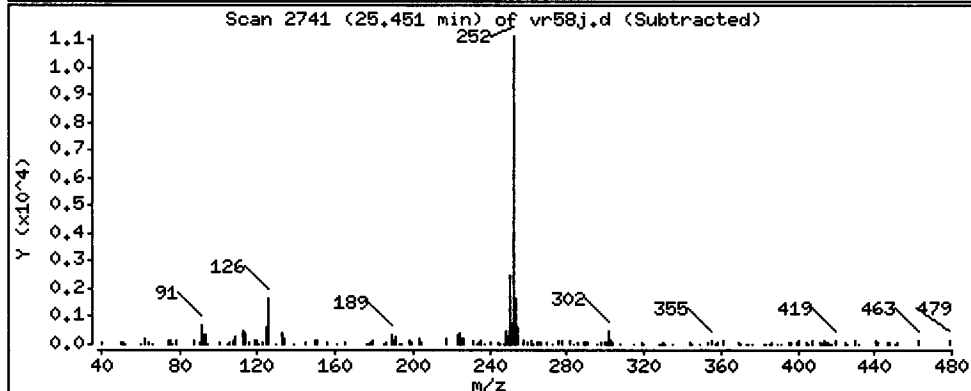
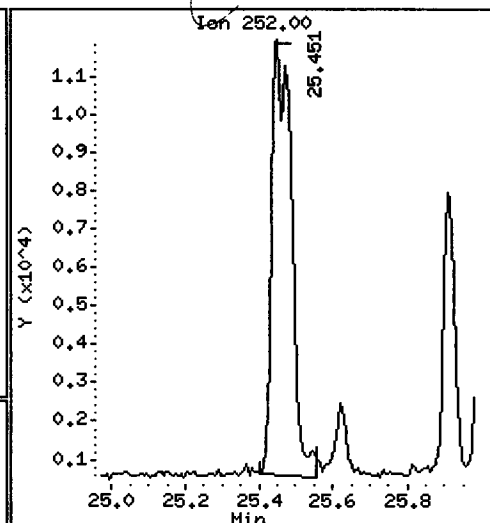
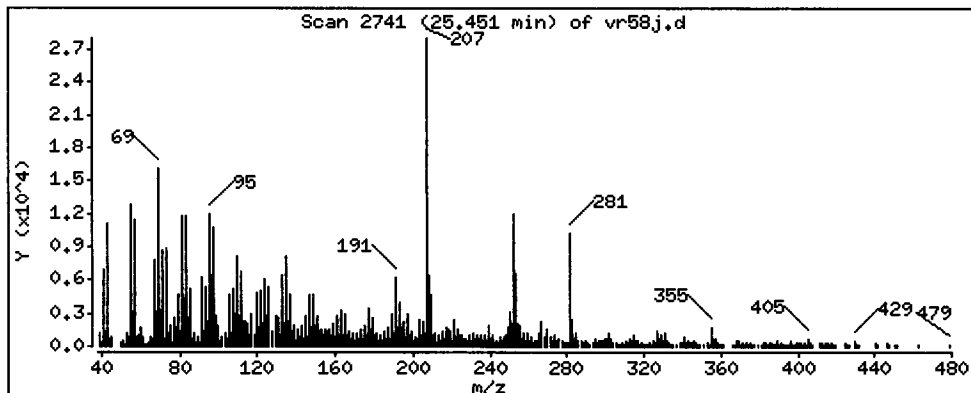
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

187 Total Benzofluoranthenes

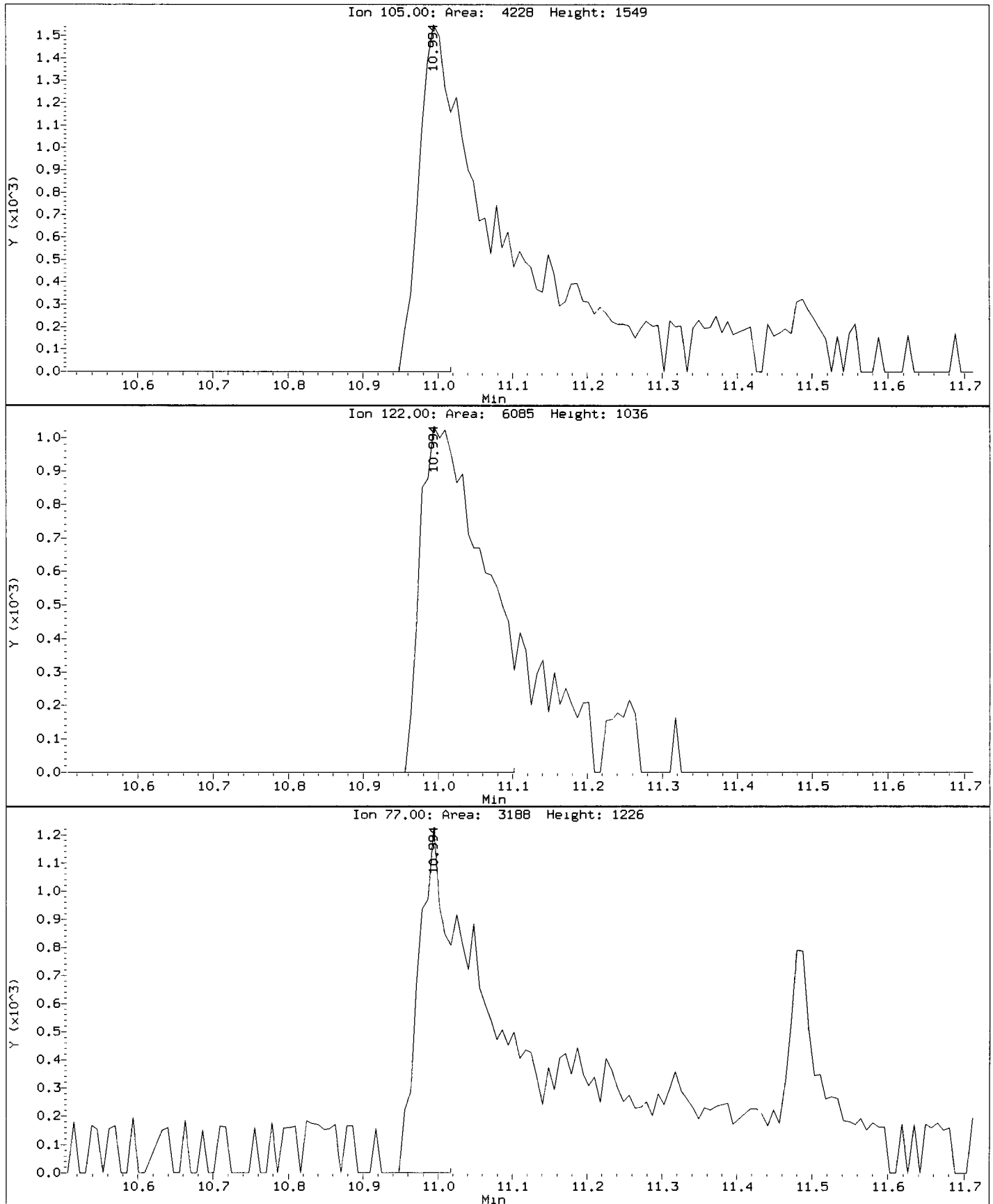
Concentration: 35.55 ug/kg



Data File: /chem1/nt10.1/20121204.b/vr58j.d  
Injection Date: 04-DEC-2012 22:38  
Instrument: nt10.1  
Client Sample ID: SG-01-S-C-121107

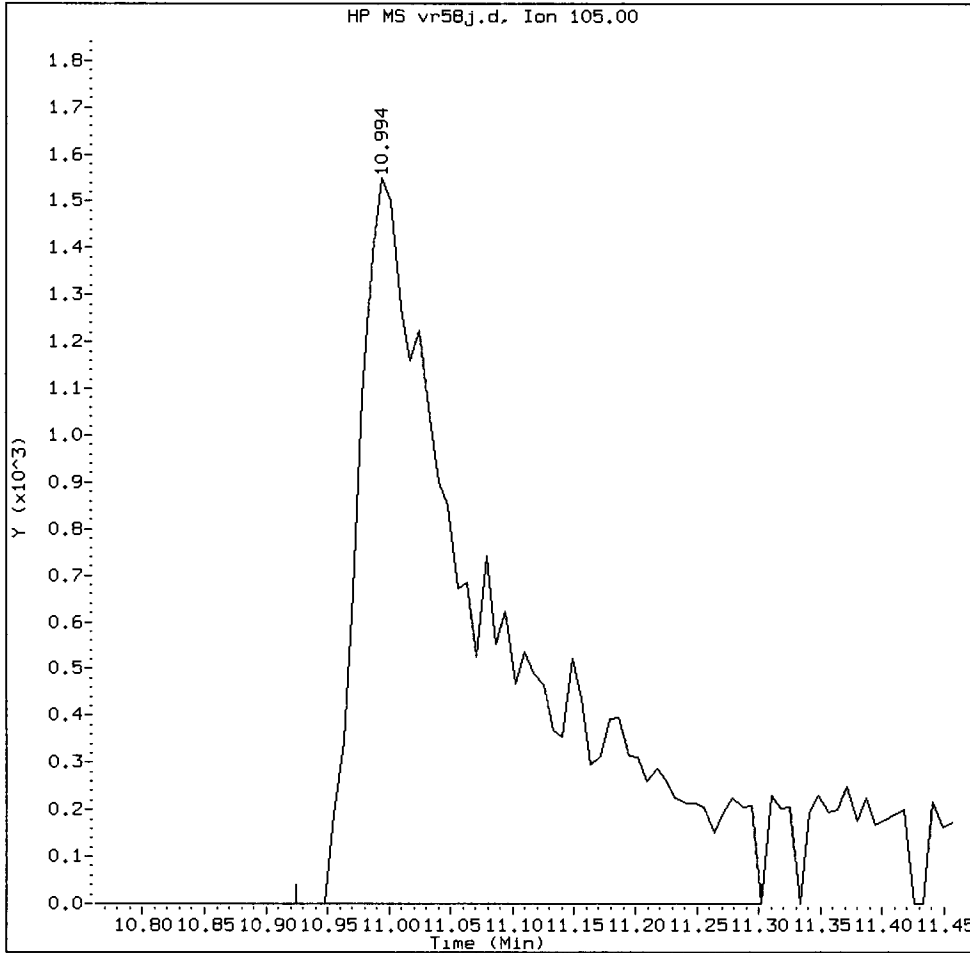
5  
2  
12  
12

Compound: Benzoic acid  
CAS Number: 65-85-0



VR58J, /chem1/nt10.i/20121204.b/vr58j.d

Benzoic acid Amount: 0.54 Area: 12012



MANUAL INTEGRATION for Benzoic acid

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: W

Date: 12.5.12

CO-ELUTION SUMMARY FOR FILE - vr58j.d

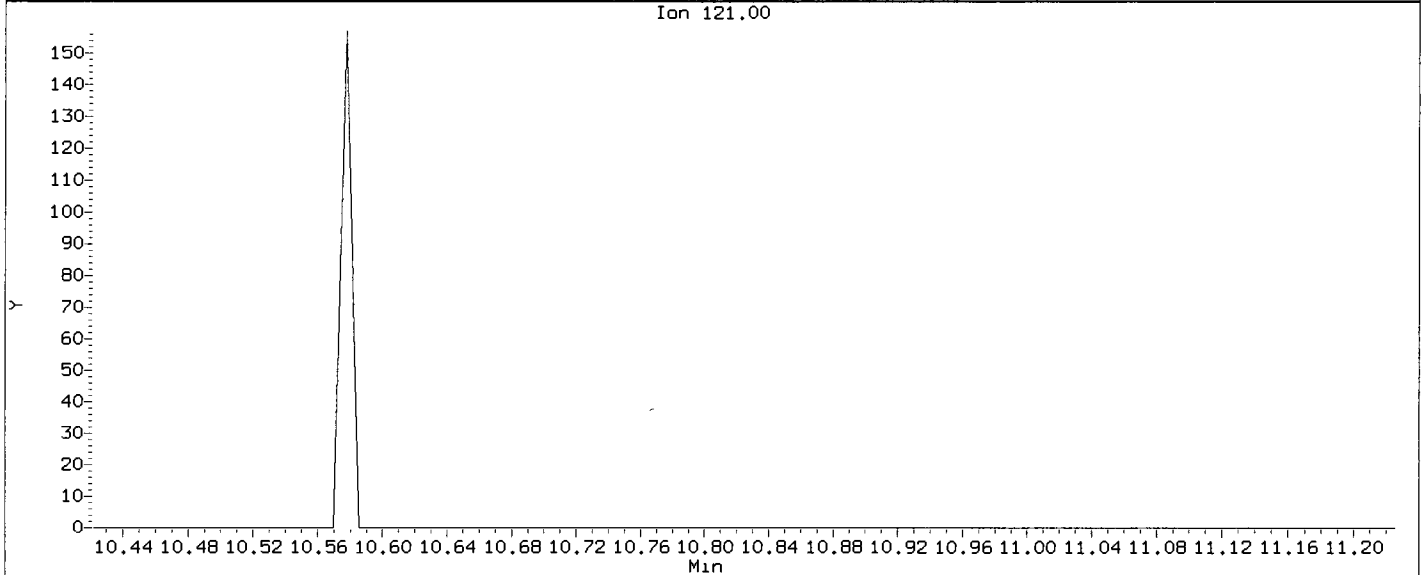
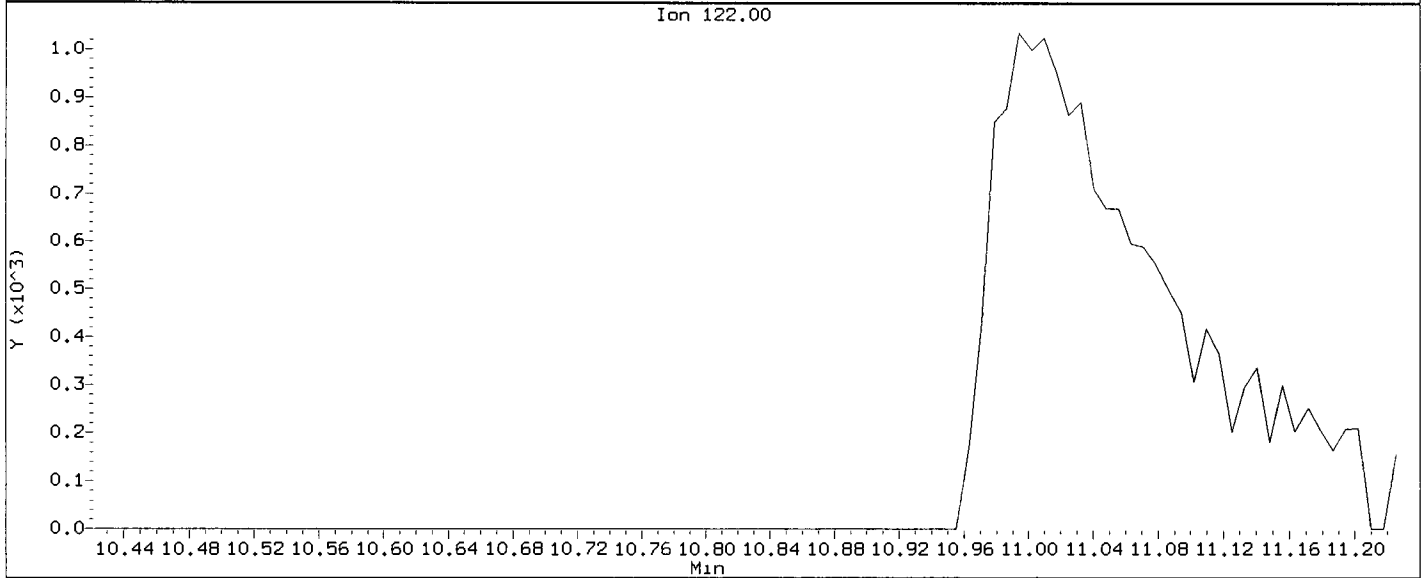
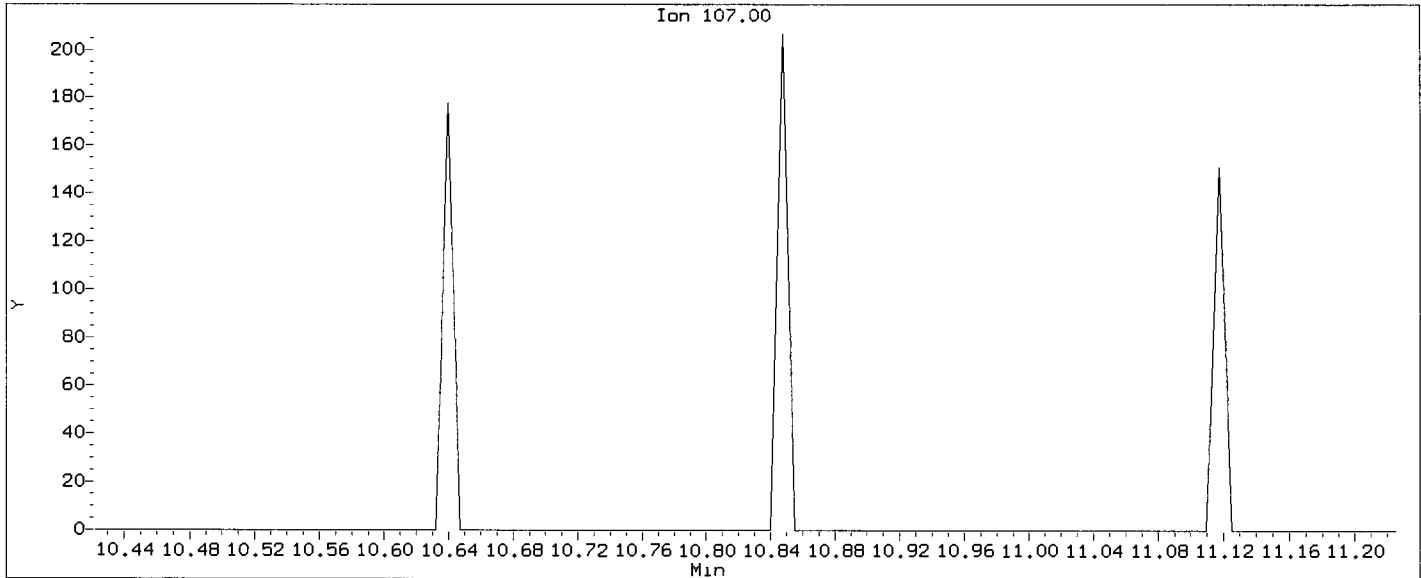
Lab ID: VR58J, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

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Data File: /chem1/nt10.1/20121204.b/vr58j.d  
Injection Date: 04-DEC-2012 22:38  
Instrument: nt10.1  
Client Sample ID: SG-01-S-C-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9





Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58jms.d  
 Lab Smp Id: VR58JMS Client Smp ID: SG-01-S-C-12110 MS  
 Inj Date : 04-DEC-2012 23:15  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58JMS  
 Misc Info : 12-22338  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 09:17 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 13 QC Sample: MS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub  
 Target Version: 3.50  
 Processing Host: cserv3

Concentration Formula: Amt \* DF \* Vt / (Ws \* (100 - M) / 100) \* CpdnVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.10000	Weight of sample extracted (g)
M	20.50000	% Moisture

Cpdn 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	6.535	6.505	(0.739)	175301	5.16471	495.9
\$ 2 Phenol-d5	====	99	8.235	8.220	(0.932)	213768	5.08972	488.7
3 Phenol	====	94	8.259	8.243	(0.934)	157235	3.55377	341.2
\$ 5 2-Chlorophenol-d4	====	132	8.467	8.452	(0.958)	178918	4.92350	472.8
7 1,3-Dichlorobenzene	====	146	8.761	8.762	(0.991)	136290	3.19109	306.4
* 8 1,4-Dichlorobenzene-d4	====	152	8.839	8.831	(1.000)	106105	4.00000	
9 1,4-Dichlorobenzene	====	146	8.870	8.862	(1.004)	132156	3.29840	316.7
\$ 10 1,2-Dichlorobenzene-d4	====	152	9.211	9.212	(1.042)	86039	3.24701	311.8
12 1,2-Dichlorobenzene	====	146	9.242	9.235	(1.046)	130453	3.39294	325.8
11 Benzyl alcohol	====	108	9.157	9.150	(1.036)	69701	3.33150	319.9
13 2-Methylphenol	====	108	9.437	9.421	(1.068)	98197	2.58260	248.0
17 Hexachloroethane	====	117	9.863	9.864	(1.116)	51945	3.15539	303.0
15 4-Methylphenol	====	108	9.739	9.716	(1.102)	235748	10.4518	1004
\$ 18 Nitrobenzene-d5	====	82	10.003	10.003	(0.871)	117226	3.09309	297.0

Compounds	QUANT SIG				CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	=====	==	=====	=====	=====	=====	=====
22 2,4-Dimethylphenol	107	10.832	10.825	(0.944)	328024	8.52317	818.4
24 Benzoic acid	105	11.109	11.110	(0.968)	543759	21.1491	2031
26 1,2,4-Trichlorobenzene	180	11.395	11.395	(0.993)	72363	3.21754	308.9
* 27 Naphthalene-d8	136	11.479	11.480	(1.000)	404462	4.00000	
28 Naphthalene	128	11.526	11.526	(1.004)	342617	3.48182	334.3
30 Hexachlorobutadiene	225	11.927	11.936	(1.039)	65962	2.61653	251.2
32 2-Methylnaphthalene	142	13.026	13.027	(1.135)	247183	3.37159	323.7
\$ 36 2-Fluorobiphenyl	172	13.885	13.886	(0.904)	290458	3.38611	325.1
39 Dimethylphthalate	163	14.884	14.876	(0.969)	303011	3.86998	371.6
40 Acenaphthylene	152	15.015	15.016	(0.977)	383807	3.35056	321.7
* 42 Acenaphthene-d10	164	15.364	15.356	(1.000)	242358	4.00000	
44 Acenaphthene	153	15.425	15.426	(1.004)	241578	3.68955	354.3
46 Dibenzofuran	168	15.789	15.781	(1.028)	337453	3.47268	333.4
50 Diethylphthalate	149	16.461	16.462	(1.071)	314463	3.83723	368.5
49 Fluorene	166	16.554	16.547	(1.077)	312410	3.87526	372.1
54 N-Nitrosodiphenylamine	169	16.847	16.840	(0.905)	201996	4.00328	384.4
\$ 55 2,4,6-Tribromophenol	330	17.133	17.125	(1.115)	82112	5.75167	552.3
57 Hexachlorobenzene	284	17.959	17.959	(0.964)	104665	3.55269	341.1
58 Pentachlorophenol	266	18.369	18.362	(0.986)	179111	9.50543	912.7
* 59 Phenanthrene-d10	188	18.624	18.617	(1.000)	410891	4.00000	
60 Phenanthrene	178	18.678	18.671	(1.003)	434997	4.27577	410.6
61 Anthracene	178	18.771	18.764	(1.008)	408371	3.73443	358.6
63 Di-n-butylphthalate	149	20.009	20.002	(1.074)	590644	4.56549	438.4
64 Fluoranthene	202	21.100	21.093	(1.133)	580944	4.53038	435.0
65 Pyrene	202	21.518	21.510	(0.908)	589842	4.31690	414.5
\$ 66 Terphenyl-d14	244	21.843	21.835	(0.921)	364837	3.99457	383.6
67 Butylbenzylphthalate	149	22.787	22.788	(0.961)	260613	4.69542	450.9
68 Benzo(a)anthracene	228	23.678	23.670	(0.999)	517164	3.90135	374.6
* 69 Chrysene-d12	240	23.709	23.701	(1.000)	466399	4.00000	
71 Chrysene	228	23.747	23.740	(1.002)	467307	3.96814	381.0
72 bis(2-Ethylhexyl)phthalate	149	23.825	23.825	(0.961)	372270	4.10351	394.0
* 134 Di-n-octylphthalate-d4	153	24.800	24.801	(1.000)	657495	4.00000	
73 Di-n-octylphthalate	149	24.808	24.808	(1.000)	590940	3.96484	380.7
76 Benzo(a)pyrene	252	26.000	25.985	(0.996)	423597	3.52740	338.7
* 77 Perylene-d12	264	26.101	26.086	(1.000)	420784	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.325	28.294	(1.085)	414540	3.04591	292.5
79 Dibenzo(a,h)anthracene	278	28.340	28.310	(1.086)	359627	3.32967	319.7
80 Benzo(g,h,i)perylene	276	28.970	28.931	(1.110)	324010	2.78176	267.1
105 1-methylnaphthalene	142	13.266	13.259	(1.156)	238220	3.54032	339.9
187 Total Benzofluoranthenes	252	25.489	25.474	(0.977)	1012997	8.18071	785.5
98 Retene	219	22.129	22.137	(0.933)	2736		
120 2,3,4,6-Tetrachlorophenol	232	16.175	16.160	(1.053)	82556	1305.27	125300

LD  
12-4-10

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58jms.d  
 Lab Smp Id: VR58JMS  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22338

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-01-S-C-12110  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	106105	30.08
27 Naphthalene-d8	299399	149700	598798	404462	35.09
42 Acenaphthene-d10	178564	89282	357128	242358	35.73
59 Phenanthrene-d10	305410	152705	610820	410891	34.54
69 Chrysene-d12	323853	161926	647706	466399	44.02
134 Di-n-octylphthala	427845	213922	855690	657495	53.68
77 Perylene-d12	305316	152658	610632	420784	37.82

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.84	0.08
27 Naphthalene-d8	11.48	10.98	11.98	11.48	0.00
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.05
59 Phenanthrene-d10	18.62	18.12	19.12	18.62	0.04
69 Chrysene-d12	23.70	23.20	24.20	23.71	0.03
134 Di-n-octylphthala	24.80	24.30	25.30	24.80	0.00
77 Perylene-d12	26.09	25.59	26.59	26.10	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: Anchor QEA

Sample Matrix: SOLID

Lab Smp Id: VR58JMS

Level: LOW

Data Type: MS DATA

SpikeList File: SHORTPSDDA.spk

Sublist File: SHORTPSDDA.sub

Method File: /chem1/nt10.i/20121204.b/ABN.m

Misc Info: 12-22338

Client SDG: VR58

Fraction: SV

Client Smp ID: SG-01-S-C-12110 MS

Operator: VTS/YZ

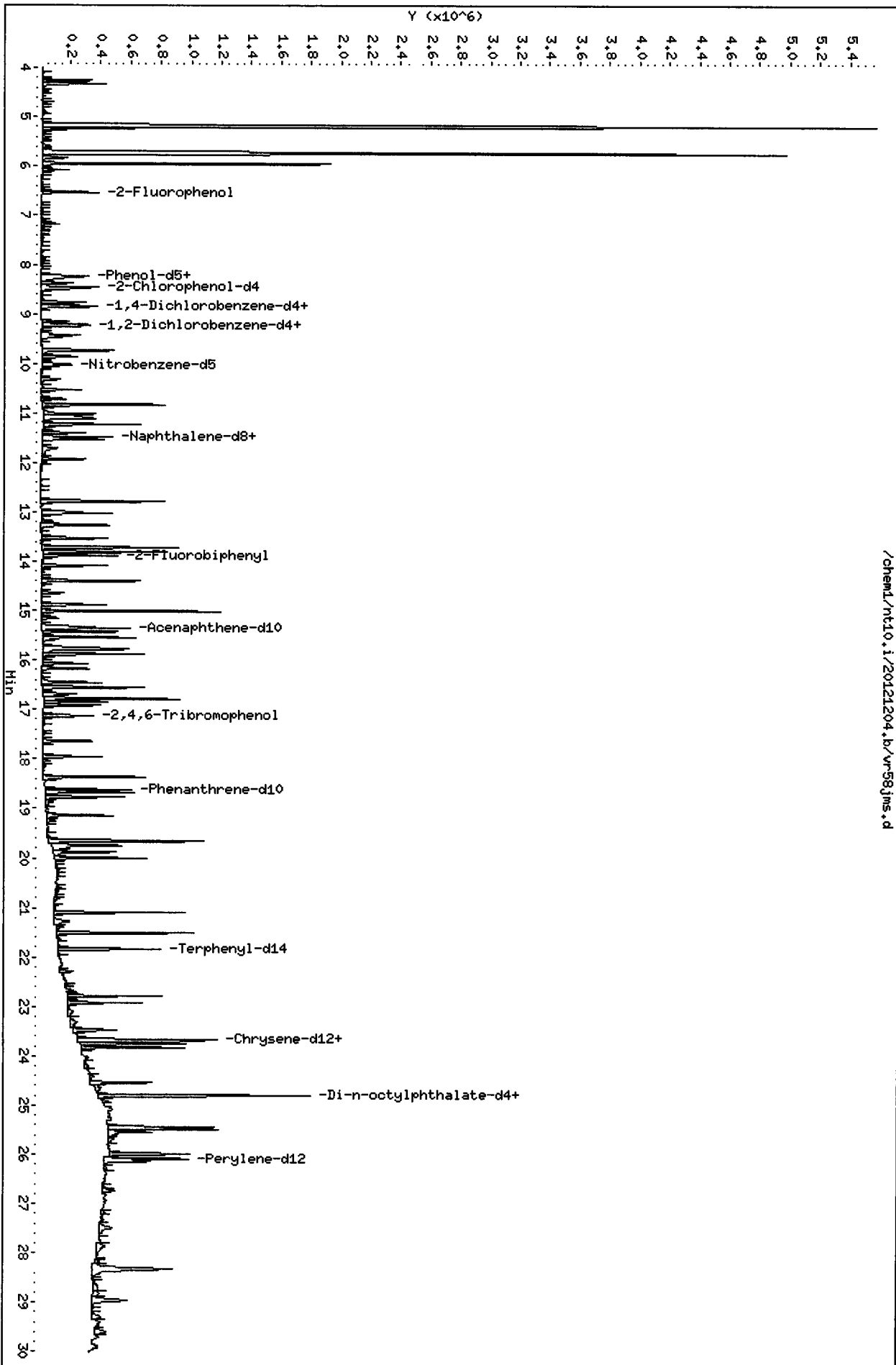
SampleType: MS

Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	480.1	341.2	71.08	30-160
7 1,3-Dichlorobenzen	480.1	306.4	63.82	30-160
9 1,4-Dichlorobenzen	480.1	316.7	65.97	30-160
11 Benzyl alcohol	480.1	319.9	66.63	30-160
12 1,2-Dichlorobenzen	480.1	325.8	67.86	30-160
13 2-Methylphenol	480.1	248.0	51.65	30-160
15 4-Methylphenol	960.2	1004	104.52	30-160
17 Hexachloroethane	480.1	303.0	63.11	30-160
22 2,4-Dimethylphenol	1440	818.4	56.82	30-160
24 Benzoic acid	2641	2031	76.91	30-160
26 1,2,4-Trichloroben	480.1	308.9	64.35	30-160
28 Naphthalene	480.1	334.3	69.64	30-160
30 Hexachlorobutadien	480.1	251.2	52.33	30-160
32 2-Methylnaphthalen	480.1	323.7	67.43	30-160
39 Dimethylphthalate	480.1	371.6	77.40	30-160
40 Acenaphthylene	480.1	321.7	67.01	30-160
44 Acenaphthene	480.1	354.3	73.79	30-160
46 Dibenzofuran	480.1	333.4	69.45	30-160
49 Fluorene	480.1	372.1	77.51	30-160
50 Diethylphthalate	480.1	368.5	76.74	30-160
54 N-Nitrosodiphenyla	480.1	384.4	80.07	30-160
57 Hexachlorobenzene	480.1	341.1	71.05	30-160
58 Pentachlorophenol	1440	912.7	63.37	30-160
60 Phenanthrene	480.1	410.6	85.52	30-160
61 Anthracene	480.1	358.6	74.69	30-160
63 Di-n-butylphthalat	480.1	438.4	91.31	30-160
64 Fluoranthene	480.1	435.0	90.61	30-160
65 Pyrene	480.1	414.5	86.34	30-160
67 Butylbenzylphthala	480.1	450.9	93.91	30-160
68 Benzo(a)anthracene	480.1	374.6	78.03	30-160
71 Chrysene	480.1	381.0	79.36	30-160
72 bis(2-Ethylhexyl)p	480.1	394.0	82.07	30-160
73 Di-n-octylphthalat	480.1	380.7	79.30	30-160

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	480.1	338.7	70.55	30-160
78 Indeno(1,2,3-cd)py	480.1	292.5	60.92	30-160
79 Dibenzo(a,h)anthra	480.1	319.7	66.59	30-160
80 Benzo(g,h,i)peryle	480.1	267.1	55.64	30-160
105 1-methylnaphthalen	480.1	339.9	70.81	30-160
187 Total Benzofluoran	960.2	785.5	81.81	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	720.1	495.9	68.86	30-160
\$ 2 Phenol-d5	720.1	488.7	67.86	30-160
\$ 5 2-Chlorophenol-d4	720.1	472.8	65.65	30-160
\$ 10 1,2-Dichlorobenzen	480.1	311.8	64.94	30-160
\$ 18 Nitrobenzene-d5	480.1	297.0	61.86	30-160
\$ 36 2-Fluorobiphenyl	480.1	325.1	67.72	30-160
\$ 55 2,4,6-Tribromophen	720.1	552.3	76.69	30-160
\$ 66 Terphenyl-d14	480.1	383.6	79.89	30-160



CO-ELUTION SUMMARY FOR FILE - vr58jms.d

Lab ID: VR58JMS, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

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Analytical Resources, Inc.

Semivolatible Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121204.b/vr58jmsd.d  
 Lab Smp Id: VR58JMSD Client Smp ID: SG-01-S-C-12110 MSD  
 Inj Date : 04-DEC-2012 23:52  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58JMSD  
 Misc Info : 12-22338  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121204.b/ABN.m  
 Meth Date : 05-Dec-2012 10:58 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 14 QC Sample: MSD  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.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	13.10000	Weight of sample extracted (g)
M	20.50000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
\$ 1 2-Fluorophenol	112	6.535	6.505	(0.739)	168216	4.69135	450.5
\$ 2 Phenol-d5	99	8.235	8.220	(0.932)	210456	4.74331	455.5
3 Phenol	94	8.259	8.243	(0.934)	156950	3.35792	322.4
\$ 5 2-Chlorophenol-d4	132	8.467	8.452	(0.958)	174938	4.55694	437.6
7 1,3-Dichlorobenzene	146	8.769	8.762	(0.992)	132533	2.93743	282.1
* 8 1,4-Dichlorobenzene-d4	152	8.839	8.831	(1.000)	112090	4.00000	
9 1,4-Dichlorobenzene	146	8.870	8.862	(1.004)	129520	3.06001	293.8
\$ 10 1,2-Dichlorobenzene-d4	152	9.211	9.212	(1.042)	83830	2.99472	287.6
12 1,2-Dichlorobenzene	146	9.242	9.235	(1.046)	127445	3.13772	301.3
11 Benzyl alcohol	108	9.157	9.150	(1.036)	71310	3.22641	309.8
13 2-Methylphenol	108	9.437	9.421	(1.068)	96134	2.39334	229.8
17 Hexachloroethane	117	9.871	9.864	(1.117)	50124	2.88220	276.7
15 4-Methylphenol	108	9.739	9.716	(1.102)	228471	9.58835	920.7
\$ 18 Nitrobenzene-d5	82	10.011	10.003	(0.871)	115128	2.92483	280.8



Compounds	QUANT SIG				CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	=====	==	=====	=====	=====	=====	=====
22 2,4-Dimethylphenol	107	10.832	10.825	(0.943)	330277	8.26277	793.4
24 Benzoic acid	105	11.109	11.110	(0.967)	517906	19.5790	1880
26 1,2,4-Trichlorobenzene	180	11.395	11.395	(0.992)	65912	2.82179	270.9
* 27 Naphthalene-d8	136	11.487	11.480	(1.000)	420074	4.00000	
28 Naphthalene	128	11.526	11.526	(1.003)	340109	3.32787	319.5
30 Hexachlorobutadiene	225	11.935	11.936	(1.039)	64471	2.46234	236.4
32 2-Methylnaphthalene	142	13.026	13.027	(1.134)	245559	3.22496	309.7
\$ 36 2-Fluorobiphenyl	172	13.885	13.886	(0.904)	280807	3.14478	302.0
39 Dimethylphthalate	163	14.884	14.876	(0.969)	306490	3.76037	361.1
40 Acenaphthylene	152	15.015	15.016	(0.977)	379818	3.18525	305.8
* 42 Acenaphthene-d10	164	15.364	15.356	(1.000)	252286	4.00000	
44 Acenaphthene	153	15.425	15.426	(1.004)	236663	3.47224	333.4
46 Dibenzofuran	168	15.781	15.781	(1.027)	335660	3.31830	318.6
50 Diethylphthalate	149	16.461	16.462	(1.071)	315757	3.70140	355.4
49 Fluorene	166	16.554	16.547	(1.077)	318701	3.79772	364.7
54 N-Nitrosodiphenylamine	169	16.847	16.840	(0.905)	201305	3.88163	372.7
\$ 55 2,4,6-Tribromophenol	330	17.133	17.125	(1.115)	82553	5.55500	533.4
57 Hexachlorobenzene	284	17.959	17.959	(0.964)	105712	3.49113	335.2
58 Pentachlorophenol	266	18.369	18.362	(0.986)	177746	9.17773	881.2
* 59 Phenanthrene-d10	188	18.624	18.617	(1.000)	422319	4.00000	
60 Phenanthrene	178	18.678	18.671	(1.003)	438563	4.19417	402.7
61 Anthracene	178	18.771	18.764	(1.008)	416549	3.70614	355.9
63 Di-n-butylphthalate	149	20.009	20.002	(1.074)	597355	4.49242	431.4
64 Fluoranthene	202	21.100	21.093	(1.133)	570980	4.33219	416.0
65 Pyrene	202	21.518	21.510	(0.908)	598121	4.26711	409.7
\$ 66 Terphenyl-d14	244	21.843	21.835	(0.921)	364186	3.88690	373.2
67 Butylbenzylphthalate	149	22.787	22.788	(0.961)	266425	4.67910	449.3
68 Benzo(a)anthracene	228	23.678	23.670	(0.999)	528620	3.88723	373.3
* 69 Chrysene-d12	240	23.709	23.701	(1.000)	478463	4.00000	
71 Chrysene	228	23.748	23.740	(1.002)	475505	3.93594	377.9
72 bis(2-Ethylhexyl)phthalate	149	23.825	23.825	(0.961)	364818	3.83849	368.6
* 134 Di-n-octylphthalate-d4	153	24.800	24.801	(1.000)	688819	4.00000	
73 Di-n-octylphthalate	149	24.808	24.808	(1.000)	560566	3.59001	344.7
76 Benzo(a)pyrene	252	26.000	25.985	(0.996)	430033	3.44562	330.8
* 77 Perylene-d12	264	26.101	26.086	(1.000)	437316	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.325	28.294	(1.085)	432430	3.05724	293.6
79 Dibenzo(a,h)anthracene	278	28.340	28.310	(1.086)	377220	3.36053	322.7
80 Benzo(g,h,i)perylene	276	28.962	28.931	(1.110)	351192	2.90115	278.6
105 1-methylnaphthalene	142	13.266	13.259	(1.155)	234520	3.35580	322.2
187 Total Benzofluoranthenes	252	25.451	25.474	(0.975)	1025872	7.97149	765.4
98 Retene	219	22.129	22.137	(0.933)	1960		
120 2,3,4,6-Tetrachlorophenol	232	16.175	16.160	(1.053)	80229	1218.56	117000

(V)  
12-5-12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58jmsd.d  
 Lab Smp Id: VR58JMSD  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22338

Calibration Date: 04-DEC-2012  
 Calibration Time: 15:05  
 Client Smp ID: SG-01-S-C-12110  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	112090	37.41
27 Naphthalene-d8	299399	149700	598798	420074	40.31
42 Acenaphthene-d10	178564	89282	357128	252286	41.29
59 Phenanthrene-d10	305410	152705	610820	422319	38.28
69 Chrysene-d12	323853	161926	647706	478463	47.74
134 Di-n-octylphthala	427845	213922	855690	688819	61.00
77 Perylene-d12	305316	152658	610632	437316	43.23

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.83	8.33	9.33	8.84	0.08
27 Naphthalene-d8	11.48	10.98	11.98	11.49	0.06
42 Acenaphthene-d10	15.36	14.86	15.86	15.36	0.05
59 Phenanthrene-d10	18.62	18.12	19.12	18.62	0.04
69 Chrysene-d12	23.70	23.20	24.20	23.71	0.03
134 Di-n-octylphthala	24.80	24.30	25.30	24.80	0.00
77 Perylene-d12	26.09	25.59	26.59	26.10	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: Anchor QEA Client SDG: VR58  
 Sample Matrix: SOLID Fraction: SV  
 Lab Smp Id: VR58JMSD Client Smp ID: SG-01-S-C-12110 MSD  
 Level: LOW Operator: VTS/YZ  
 Data Type: MS DATA SampleType: MSD  
 SpikeList File: SHORTPSDDA.spk Quant Type: ISTD  
 Sublist File: SHORTPSDDA.sub  
 Method File: /chem1/nt10.i/20121204.b/ABN.m  
 Misc Info: 12-22338

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	480.1	322.4	67.16	30-160
7 1,3-Dichlorobenzen	480.1	282.1	58.75	30-160
9 1,4-Dichlorobenzen	480.1	293.8	61.20	30-160
11 Benzyl alcohol	480.1	309.8	64.53	30-160
12 1,2-Dichlorobenzen	480.1	301.3	62.75	30-160
13 2-Methylphenol	480.1	229.8	47.87	30-160
15 4-Methylphenol	960.2	920.7	95.88	30-160
17 Hexachloroethane	480.1	276.7	57.64	30-160
22 2,4-Dimethylphenol	1440	793.4	55.09	30-160
24 Benzoic acid	2641	1880	71.20	30-160
26 1,2,4-Trichloroben	480.1	270.9	56.44	30-160
28 Naphthalene	480.1	319.5	66.56	30-160
30 Hexachlorobutadien	480.1	236.4	49.25	30-160
32 2-Methylnaphthalen	480.1	309.7	64.50	30-160
39 Dimethylphthalate	480.1	361.1	75.21	30-160
40 Acenaphthylene	480.1	305.8	63.71	30-160
44 Acenaphthene	480.1	333.4	69.44	30-160
46 Dibenzofuran	480.1	318.6	66.37	30-160
49 Fluorene	480.1	364.7	75.95	30-160
50 Diethylphthalate	480.1	355.4	74.03	30-160
54 N-Nitrosodiphenyla	480.1	372.7	77.63	30-160
57 Hexachlorobenzene	480.1	335.2	69.82	30-160
58 Pentachlorophenol	1440	881.2	61.18	30-160
60 Phenanthrene	480.1	402.7	83.88	30-160
61 Anthracene	480.1	355.9	74.12	30-160
63 Di-n-butylphthalat	480.1	431.4	89.85	30-160
64 Fluoranthene	480.1	416.0	86.64	30-160
65 Pyrene	480.1	409.7	85.34	30-160
67 Butylbenzylphthala	480.1	449.3	93.58	30-160
68 Benzo(a)anthracene	480.1	373.3	77.74	30-160
71 Chrysene	480.1	377.9	78.72	30-160
72 bis(2-Ethylhexyl)p	480.1	368.6	76.77	30-160
73 Di-n-octylphthalat	480.1	344.7	71.80	30-160

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
76 Benzo(a)pyrene	480.1	330.8	68.91	30-160
78 Indeno(1,2,3-cd)py	480.1	293.6	61.14	30-160
79 Dibenzo(a,h)anthra	480.1	322.7	67.21	30-160
80 Benzo(g,h,i)peryle	480.1	278.6	58.02	30-160
105 1-methylnaphthalen	480.1	322.2	67.12	30-160
187 Total Benzofluoran	960.2	765.4	79.71	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	720.1	450.5	62.55	30-160
\$ 2 Phenol-d5	720.1	455.5	63.24	30-160
\$ 5 2-Chlorophenol-d4	720.1	437.6	60.76	30-160
\$ 10 1,2-Dichlorobenzen	480.1	287.6	59.89	30-160
\$ 18 Nitrobenzene-d5	480.1	280.8	58.50	30-160
\$ 36 2-Fluorobiphenyl	480.1	302.0	62.90	30-160
\$ 55 2,4,6-Tribromophen	720.1	533.4	74.07	30-160
\$ 66 Terphenyl-d14	480.1	373.2	77.74	30-160

Date: 04-DEC-2012 23:52

Client ID: SG-01-S-C-12110 MSD

Sample Info: VR58JMSD

Volume Injected (uL): 1.0

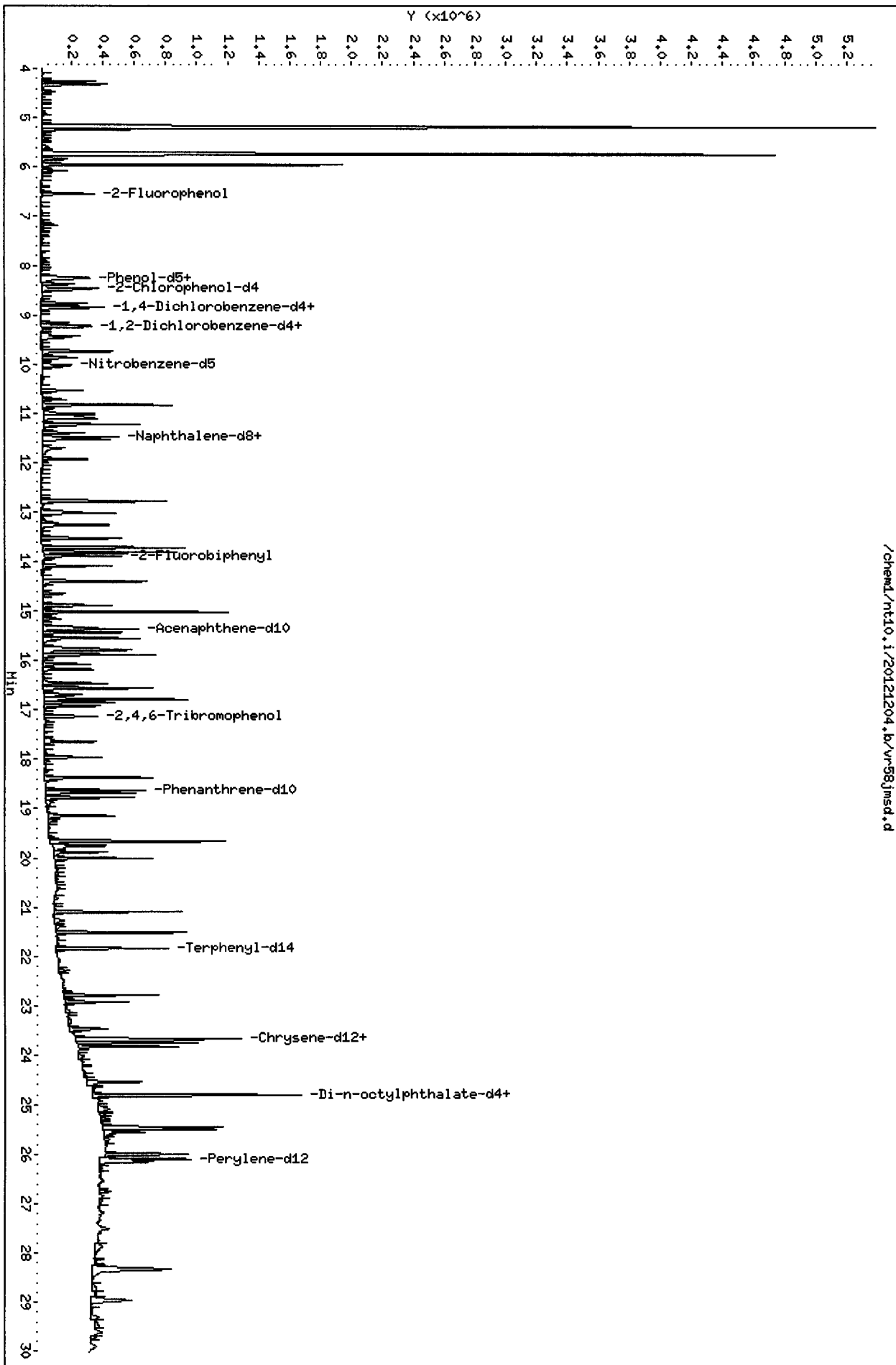
Column phase: ZB-5msi

Instrument: nt10.i

Operator: VTS/YZ

Column diameter: 0.25

/chem1/nt10.i/20121204.b/vr58jmsd.d



CO-ELUTION SUMMARY FOR FILE - vr58jmsd.d

Lab ID: VR58JMSD, Method: ABN.m, Instrument: nt10.i, Date: 04-DEC-2012

RT            CO-ELUTION COMPOUNDS

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# Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.: GC=CN10837018, MS= US83131105

Date: 12.5.12 Analysis: psdpp ABN'S Analyst: VP  
 GC Program: ABN2 Column No: 247357 Column Type: ZB-Sms;  
 Instrument Tune (.U or .CT.): 121204.U EM Voltage: 1600  
 Calibration File: AF1205 Curve Date: 11.29.12 Injection Vol.: 1 ul

IS/SS	Ical/Ccal	LCS/ICV
<u>1998-2</u>	<u>1949-2</u> <u>2036-2</u>	
	<u>1986-2</u>	
	<u>1998-4</u>	

## INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20121205.b

Time	Filename	LabID	ClientId	DF																	
1	1134	df1205.d	DFTPP	DFTPP	1	NO ISTDs FOUND															
2	1149	cc1205.d	CC1205		1	8.81	103035	11.47	392234	15.37	228483	18.66	397408	23.77	420761	24.90	547636	26.21	411812		
3	1246	vr82mb.d	VR82MBS1	VR82MBS1	1	8.82	88332	11.49	340344	15.39	199155	18.67	335355	23.79	384953	24.91	488712	26.23	373822		
4	1323	vr82ab.d	VR82LCSS1	VR82LCSS1	1	8.79	85250	11.43	333748	15.32	193732	18.59	335600	23.72	370226	24.83	480967	26.13	364867		
5	1400	vr82a.d	VR82A	SG-02-S-C-12	1	8.79	102932	11.44	431981	15.33	260122	18.62	424513	23.75	474788	24.87	628575	26.19	451840		
6	1436	vr82b.d	VR82B	SG-03-S-C-12	1	8.79	117864	11.45	453422	15.33	253139	18.62	432994	23.75	471733	24.87	624583	26.19	462197		
7	1513	vr82c.d	VR82C	SG-04-S-C-12	1	8.79	111644	11.44	428605	15.33	246698	18.61	414547	23.73	443708	24.85	604196	26.16	426125		
8	1550	vr82cms.d	VR82CMS	SG-04-S-C-12	1	8.79	105814	11.44	398767	15.33	236242	18.61	403337	23.73	458185	24.85	623711	26.16	440765		
9	1626	vr82cmsd.d	VR82CMSD	SG-04-S-C-12	1	8.79	103900	11.44	383920	15.33	228071	18.60	387255	23.72	446183	24.85	592231	26.15	423286		
10	1703	vr82d.d	VR82D	SG-05-S-C-12	1	8.79	100582	11.44	395685	15.33	244510	18.61	410498	23.73	436356	24.86	577941	26.17	409766		
11	1739	vr82e.d	VR82E	SG-06-S-C-12	1	8.79	96723	11.44	367009	15.33	216552	18.61	363874	23.73	408338	24.86	541756	26.18	394922		
12	1816	vr82f.d	VR82F	SG-07-S-C-12	1	8.79	98819	11.44	386787	15.33	232274	18.60	395582	23.73	434811	24.86	584812	26.17	405769		
13	1853	vr82g.d	VR82G	SG-07-S-C-du	1	8.79	87186	11.44	345919	15.33	224624	18.61	392203	23.73	420805	24.86	541765	26.16	387423		
14	1929	vr82h.d	VR82H	SG-08-S-C-12	1	8.79	78871	11.44	316573	15.33	222544	18.60	392074	23.73	422254	24.85	557173	26.16	391355		
15	2006	vr82i.d	VR82I	SG-09-S-C-12	1	8.79	75488	11.44	309344	15.33	212175	18.60	370798	23.73	400110	24.85	520126	26.16	370845		
16	2042	vr58a3.d	VR58A	SG-10-S-E-12	3	8.79	75190	11.44	284847	15.33	198575	18.60	394579	23.73	414183	26.16	386803	24.84	545234		
17	2119	vr58b3.d	VR58B	SG-11-S-E-12	3	8.79	74673	11.44	303062	15.33	211481	18.61	387113	23.73	400002	26.16	365130	24.85	529472		


VP  
12.6.12

Every line must contain information or be lined out. Make all entries legible.  
 Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20121205.b

ARI Job No.: DFTP Method: DF8270.m Instrument: nt10.i Date: 05-DEC-2012

Time Filename LabID ClientID DF Manually Integrated Compounds

1134 df1205.d DFTPP DFTPP 1 NO MANUAL INTEGRATION

1149 cc1205.d CC1205 1 NO MANUAL INTEGRATION

2042 vt58a3.d VR58A SG-10-S-E- 3 NO MANUAL INTEGRATION

2119 vt58b3.d VR58B SG-11-S-E- 3 Dibenzo(a,h)anthracene,



Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20121205.b

Instrument: nt10.i Date: 05-DEC-2012 Method: ABN.m

INITIAL CAL: 29-NOV-2012

Compound	%RSD or R <sup>2</sup>
-----	
NO Q-FLAGS	
-----	

CONTINUING CAL: 05-DEC-2012

Compound	%D
-----	
Phenol	24.5
4-Methylphenol	81.5
1,2,4-Trichlorobenzene	39.5
Hexachlorobutadiene	-23.9
-----	

Date : 05-DEC-2012 11:34

Client ID: DFTPP

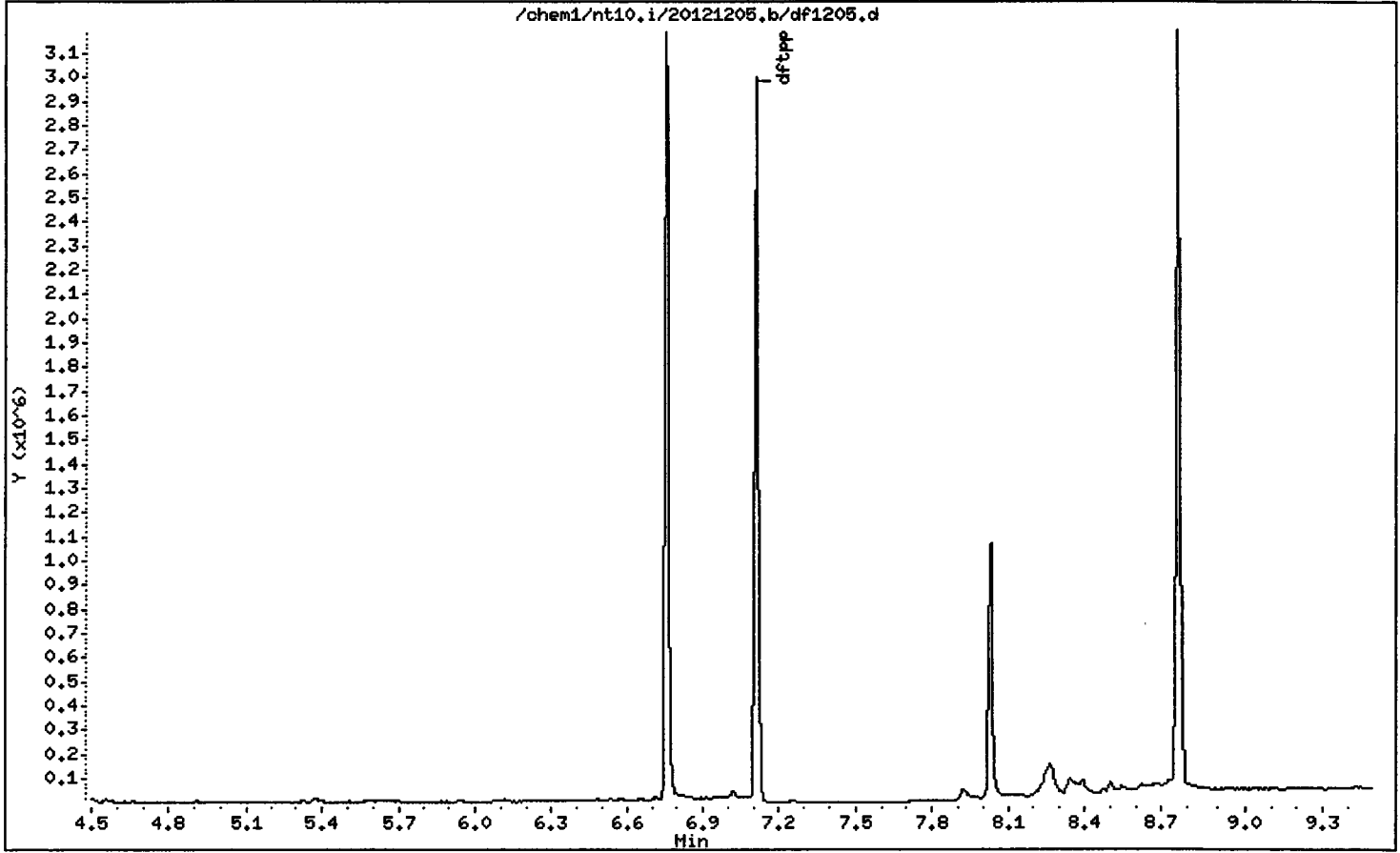
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Date : 05-DEC-2012 11:34

Client ID: DFTPP

Instrument: nt10.i

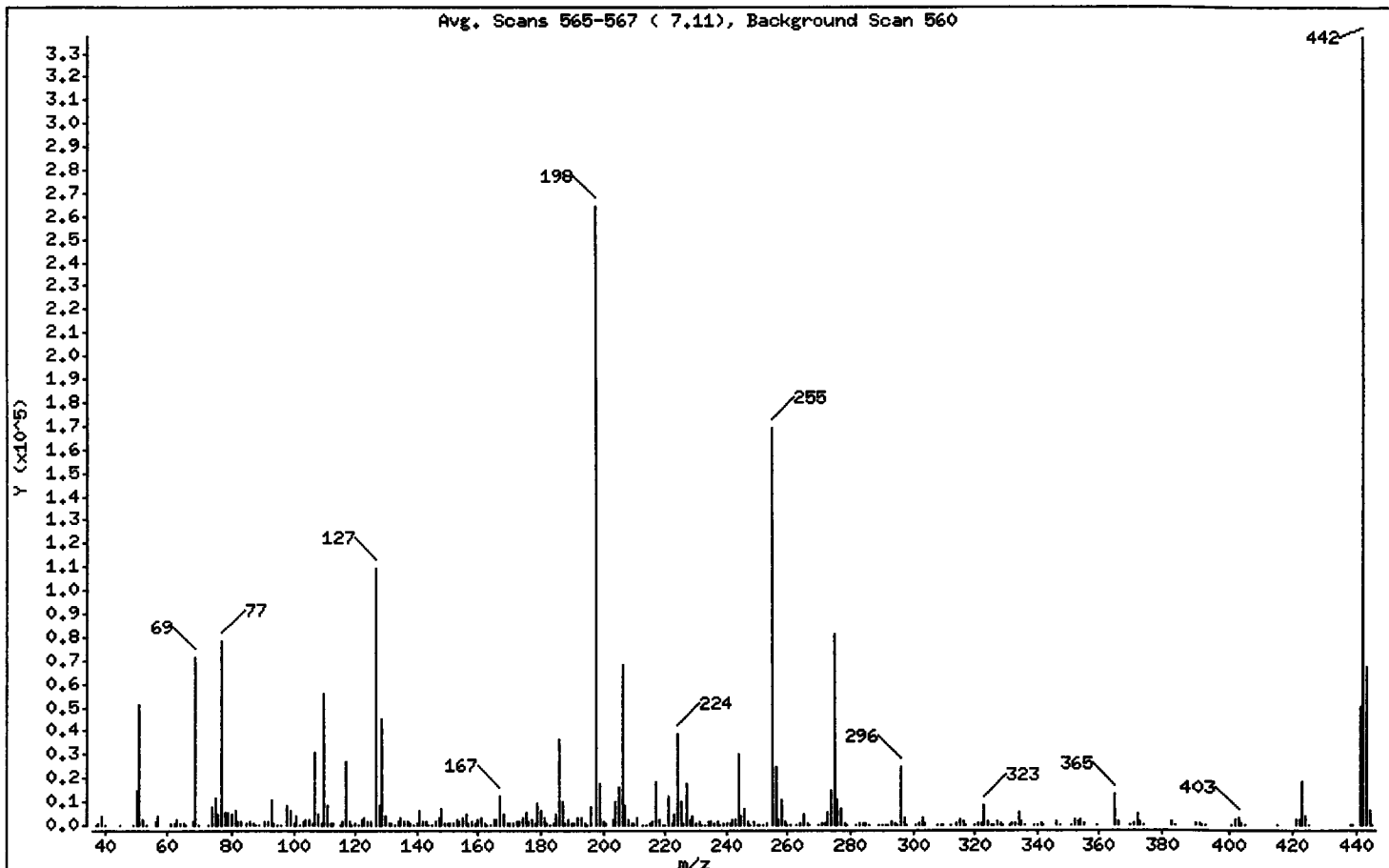
Sample Info: DFTPP

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	19.47
68	Less than 2.00% of mass 69	0.53 ( 1.96)
69	Mass 69 relative abundance	26.99
70	Less than 2.00% of mass 69	0.11 ( 0.40)
127	10.00 - 80.00% of mass 198	41.47
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.88
275	10.00 - 60.00% of mass 198	30.80
365	Greater than 1.00% of mass 198	5.02
441	0.01 - 24.00% of mass 442	19.09 ( 14.95)
442	50.00 - 200.00% of mass 198	127.64
443	15.00 - 24.00% of mass 442	25.50 ( 19.98)

Date : 05-DEC-2012 11:34

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1205.d

Spectrum: Avg. Scans 565-567 ( 7.11), Background Scan 560

Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	231	133.00	102	211.00	2847	296.00	24808
38.00	764	134.00	1460	213.00	263	297.00	3484
39.00	3694	135.00	3396	214.00	55	298.00	269
40.00	138	136.00	1579	215.00	862	301.00	375
45.00	58	137.00	1583	216.00	1641	302.00	480
49.00	152	138.00	458	217.00	18976	303.00	3002
50.00	14532	139.00	278	218.00	2362	304.00	780
51.00	51472	140.00	634	219.00	255	308.00	362
52.00	2640	141.00	6195	220.00	91	309.00	282
53.00	147	142.00	1747	221.00	12545	310.00	301
56.00	1816	143.00	1372	222.00	1115	312.00	60
57.00	3661	144.00	387	223.00	4289	314.00	730
61.00	829	145.00	240	224.00	38864	315.00	2693
62.00	980	146.00	1188	225.00	10350	316.00	1477
63.00	2658	147.00	2864	226.00	1140	317.00	321
64.00	402	148.00	6976	227.00	17536	320.00	54
65.00	1140	149.00	1126	228.00	2585	321.00	792
66.00	116	150.00	409	229.00	3585	322.00	437
68.00	1397	151.00	805	230.00	512	323.00	8265
69.00	71344	152.00	519	231.00	1470	324.00	1527
70.00	285	153.00	2074	232.00	247	325.00	168
73.00	194	154.00	1555	233.00	360	326.00	214
74.00	7785	155.00	3473	234.00	1172	327.00	1478
75.00	11715	156.00	4844	235.00	1258	328.00	852
76.00	4269	157.00	1015	236.00	863	329.00	245
77.00	77976	158.00	1208	237.00	1499	331.00	51
78.00	5332	159.00	898	238.00	212	332.00	641
79.00	5687	160.00	2024	239.00	569	333.00	914
80.00	4417	161.00	3063	240.00	614	334.00	5545
81.00	6171	162.00	807	241.00	809	335.00	1399
82.00	1389	163.00	123	242.00	2145	336.00	139
83.00	1185	164.00	368	243.00	2309	339.00	120
85.00	930	165.00	2315	244.00	30568	340.00	112
86.00	1883	166.00	2083	245.00	4218	341.00	1050
87.00	854	167.00	12545	246.00	6959	342.00	290

Date : 05-DEC-2012 11:34

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1205.d

Spectrum: Avg. Scans 565-567 ( 7.11), Background Scan 560

Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
88.00	335	168.00	4990	247.00	1360	346.00	1809
89.00	219	169.00	1063	248.00	296	347.00	337
91.00	1289	170.00	488	249.00	1175	351.00	62
92.00	1661	171.00	644	250.00	253	352.00	2705
93.00	10715	172.00	1170	251.00	387	353.00	1847
94.00	798	173.00	1475	252.00	380	354.00	2656
95.00	19	174.00	2790	253.00	435	355.00	456
96.00	141	175.00	5104	255.00	169344	359.00	176
98.00	8569	176.00	1552	256.00	24904	365.00	13270
99.00	6333	177.00	2382	257.00	2057	366.00	1729
100.00	571	178.00	949	258.00	10793	370.00	335
101.00	3811	179.00	9568	259.00	1731	371.00	809
102.00	173	180.00	6533	260.00	281	372.00	4908
103.00	1222	181.00	3087	261.00	276	373.00	1254
104.00	2678	182.00	458	263.00	55	374.00	142
105.00	2255	183.00	355	264.00	406	383.00	1346
106.00	893	184.00	826	265.00	4328	384.00	358
107.00	31008	185.00	4832	266.00	515	390.00	714
108.00	4724	186.00	36320	267.00	28	391.00	474
109.00	893	187.00	10351	270.00	279	392.00	347
110.00	56048	188.00	1130	271.00	428	393.00	56
111.00	8160	189.00	2426	272.00	591	401.00	354
112.00	1073	190.00	474	273.00	5275	402.00	2171
113.00	400	191.00	1052	274.00	14445	403.00	3038
115.00	36	192.00	3119	275.00	81432	404.00	972
116.00	1892	193.00	3295	276.00	10770	405.00	133
117.00	26768	194.00	765	277.00	7220	415.00	78
118.00	1929	195.00	91	278.00	1159	421.00	2590
119.00	44	196.00	7767	279.00	275	422.00	2302
120.00	407	198.00	264320	282.00	139	423.00	18880
121.00	75	199.00	18176	283.00	680	424.00	3858
122.00	2222	200.00	1387	284.00	561	425.00	368
123.00	3397	201.00	1055	285.00	1137	438.00	115
124.00	1469	203.00	1968	286.00	250	439.00	75
125.00	1428	204.00	9887	289.00	305	441.00	50456

Date : 05-DEC-2012 11:34

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms1

Column diameter: 0.25

Data File: df1205.d

Spectrum: Avg. Scans 565-567 ( 7.11), Background Scan 560

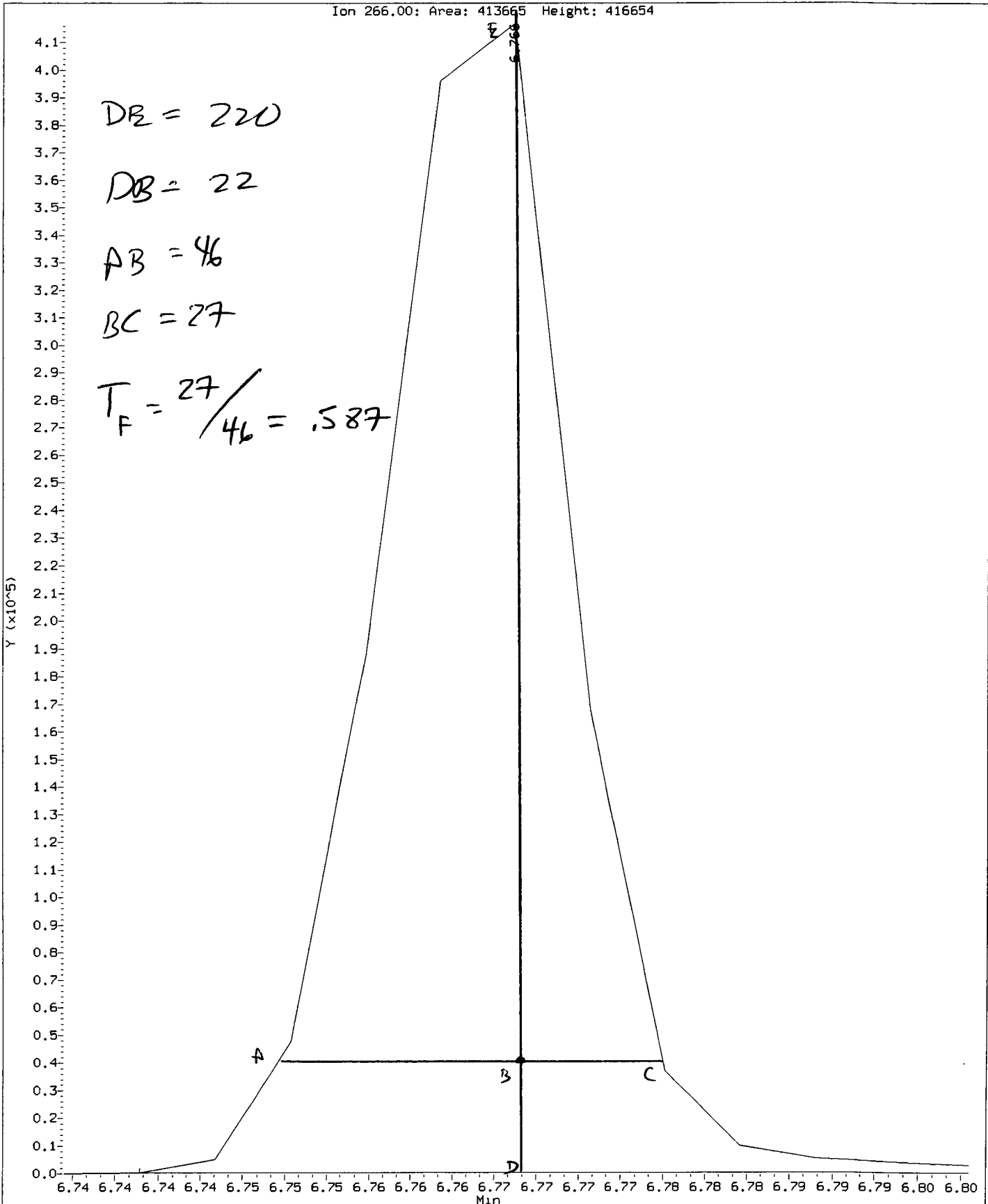
Location of Maximum: 442.00

Number of points: 302

m/z	Y	m/z	Y	m/z	Y	m/z	Y
127.00	109632	205.00	16464	290.00	160	442.00	337408
128.00	8418	206.00	68288	291.00	183	443.00	67400
129.00	44784	207.00	8279	292.00	351	444.00	6285
130.00	3816	208.00	2392	293.00	1569	445.00	338
131.00	763	209.00	676	294.00	397		
132.00	422	210.00	1147	295.00	252		

Data File: /chem1/nt10.1/20121205.b/ddt.b/df1205.d  
Injection Date: 05-DEC-2012 11:34  
Instrument: nt10.1  
Client Sample ID: DFTPP

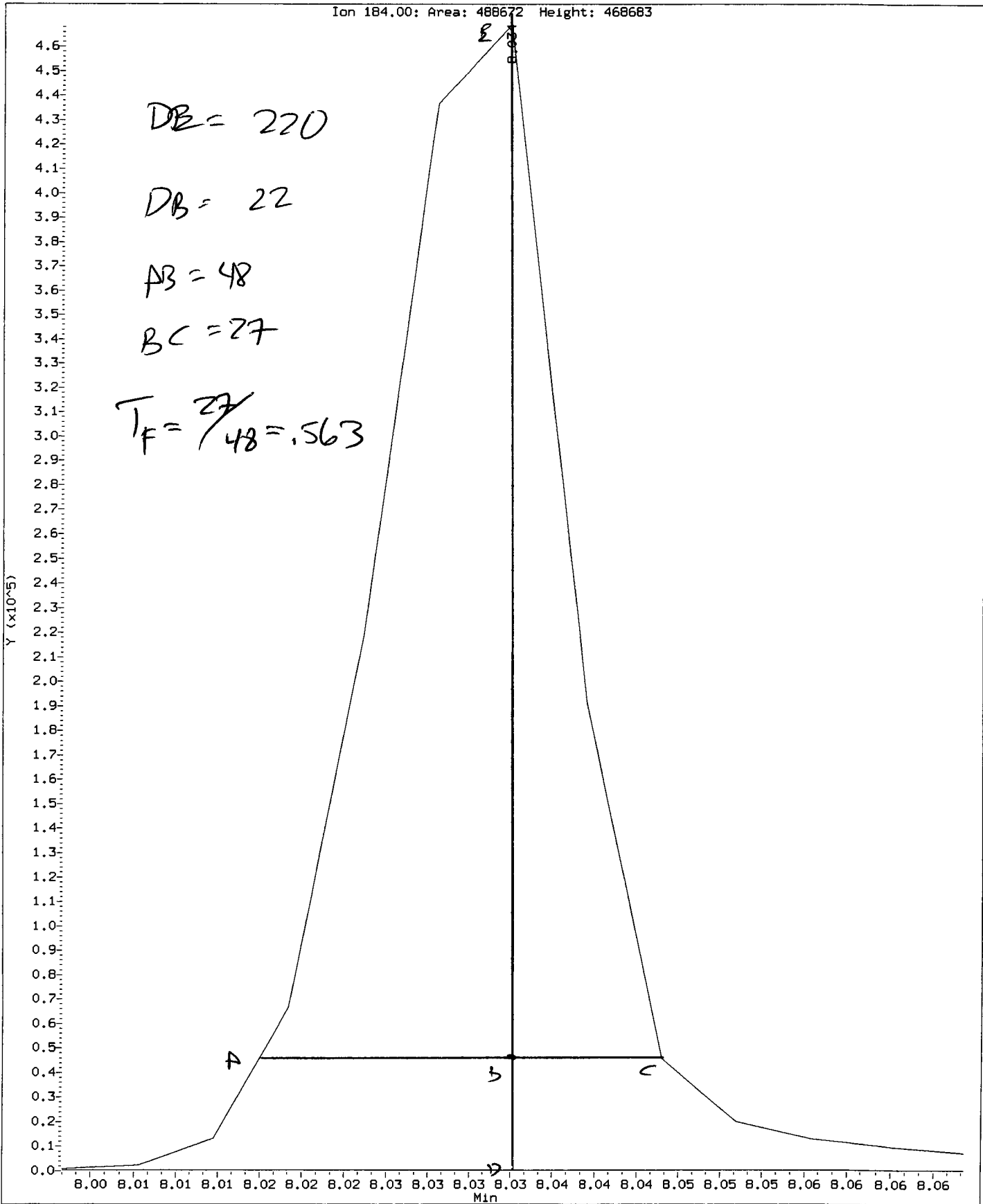
Compound: Pentachlorophenol  
CAS Number: 87-86-5



4958:00780

Data File: /chem1/nt10.1/20121205.b/ddt.b/df1205.d  
Injection Date: 05-DEC-2012 11:34  
Instrument: nt10.1  
Client Sample ID: DFTPP

Compound: Benzidine  
CAS Number:





Analytical Resources Inc.  
ABN by sw846 8270C  
DDT Breakdown Report

Data file: /chem1/nt10.i/20121205.b/ddt.b/df1205.d      ARI ID: DFTPP  
Method: /chem1/nt10.i/20121205.b/ddt.b/sw846ddt.m      Misc: 11-  
Analysis Date: 05-DEC-2012 11:34      Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.766	413664
Benzidine	8.034	488672
4,4'-DDE	8.211	1456
4,4'-DDD	8.505	10443
4,4'-DDT	8.772	618974

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

$$\text{DDT Percent Breakdown} = \frac{(1456 + 10443) * 100}{(1456 + 10443 + 618974)}$$

$$\text{DDT Percent Breakdown} = 1.9 \%$$

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121205.b/cc1205.d  
Lab Smp Id: CC1205  
Inj Date : 05-DEC-2012 11:49  
Operator : VTS/YZ  
Smp Info : CC1205  
Misc Info :  
Comment : 1ul Injection  
Method : /chem1/nt10.i/20121205.b/ABN.m  
Meth Date : 05-Dec-2012 12:41 van  
Cal Date : 29-NOV-2012 15:30  
Als bottle: 2  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50

Inst ID: nt10.i  
Quant Type: ISTD  
Cal File: ic1129i.d  
Continuing Calibration Sample  
Compound Sublist: SHORTPSDDA.sub

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
1 2-Fluorophenol	112	6.474	6.474	(0.735)	171568	5.00000	5.205
2 Phenol-d5	99	8.205	8.205	(0.932)	216853	5.00000	5.317
3 Phenol	94	8.228	8.228	(0.934)	267458	5.00000	6.225
5 2-Chlorophenol-d4	132	8.429	8.429	(0.957)	172586	5.00000	4.891
7 1,3-Dichlorobenzene	146	8.731	8.731	(0.991)	192735	5.00000	4.647
* 8 1,4-Dichlorobenzene-d4	152	8.808	8.808	(1.000)	103035	4.00000	
9 1,4-Dichlorobenzene	146	8.839	8.839	(1.004)	188453	5.00000	4.844
\$ 10 1,2-Dichlorobenzene-d4	152	9.189	9.189	(1.043)	121837	5.00000	4.735
12 1,2-Dichlorobenzene	146	9.212	9.212	(1.046)	181440	5.00000	4.860
11 Benzyl alcohol	108	9.134	9.134	(1.037)	109308	5.00000	5.380
13 2-Methylphenol	108	9.414	9.414	(1.069)	193764	5.00000	5.248
17 Hexachloroethane	117	9.841	9.841	(1.117)	72718	5.00000	4.549
15 4-Methylphenol	108	9.709	9.709	(1.102)	198756	5.00000	9.074
\$ 18 Nitrobenzene-d5	82	9.988	9.988	(0.871)	169104	5.00000	4.601
22 2,4-Dimethylphenol	107	10.825	10.825	(0.944)	317709	10.00000	8.513
24 Benzoic acid	105	11.118	11.118	(0.969)	504845	20.00000	20.35
26 1,2,4-Trichlorobenzene	180	11.395	11.395	(0.993)	152124	5.00000	6.975
* 27 Naphthalene-d8	136	11.472	11.472	(1.000)	392234	4.00000	
28 Naphthalene	128	11.519	11.519	(1.004)	490774	5.00000	5.143
30 Hexachlorobutadiene	225	11.928	11.928	(1.040)	92995	5.00000	3.804
32 2-Methylnaphthalene	142	13.027	13.027	(1.135)	338100	5.00000	4.755
\$ 36 2-Fluorobiphenyl	172	13.894	13.894	(0.904)	420046	5.00000	5.194
39 Dimethylphthalate	163	14.892	14.892	(0.969)	335092	5.00000	4.540
40 Acenaphthylene	152	15.024	15.024	(0.977)	510702	5.00000	4.729
* 42 Acenaphthene-d10	164	15.372	15.372	(1.000)	228483	4.00000	
44 Acenaphthene	153	15.441	15.441	(1.005)	300880	5.00000	4.874
46 Dibenzofuran	168	15.797	15.797	(1.028)	424928	5.00000	4.638

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====	==	=====	=====	=====	=====	=====
50 Diethylphthalate	149	16.493	16.493	(1.073)	312665	5.00000	4.047
49 Fluorene	166	16.570	16.570	(1.078)	349448	5.00000	4.598
54 N-Nitrosodiphenylamine	169	16.871	16.871	(0.904)	223383	5.00000	4.577
\$ 55 2,4,6-Tribromophenol	330	17.156	17.156	(1.116)	64316	5.00000	4.779
57 Hexachlorobenzene	284	17.990	17.990	(0.964)	115085	5.00000	4.039
58 Pentachlorophenol	266	18.400	18.400	(0.986)	179552	10.0000	9.852
* 59 Phenanthrene-d10	188	18.656	18.656	(1.000)	397408	4.00000	
60 Phenanthrene	178	18.702	18.702	(1.002)	502209	5.00000	5.104
61 Anthracene	178	18.803	18.803	(1.008)	524937	5.00000	4.963
63 Di-n-butylphthalate	149	20.056	20.056	(1.075)	592387	5.00000	4.734
64 Fluoranthene	202	21.139	21.139	(1.133)	597339	5.00000	4.816
65 Pyrene	202	21.565	21.565	(0.907)	620526	5.00000	5.034
\$ 66 Terphenyl-d14	244	21.898	21.898	(0.921)	391980	5.00000	4.757
67 Butylbenzylphthalate	149	22.858	22.858	(0.962)	242918	5.00000	4.851
68 Benzo(a)anthracene	228	23.748	23.748	(0.999)	563598	5.00000	4.713
* 69 Chrysene-d12	240	23.771	23.771	(1.000)	420761	4.00000	
71 Chrysene	228	23.818	23.818	(1.002)	513383	5.00000	4.832
72 bis(2-Ethylhexyl)phthalate	149	23.918	23.918	(0.961)	367441	5.00000	4.863
* 134 Di-n-octylphthalate-d4	153	24.902	24.902	(1.000)	547636	4.00000	
73 Di-n-octylphthalate	149	24.909	24.909	(1.000)	615615	5.00000	4.959
76 Benzo(a)pyrene	252	26.102	26.102	(0.996)	525974	5.00000	4.475
* 77 Perylene-d12	264	26.210	26.210	(1.000)	411812	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	28.489	28.489	(1.087)	637650	5.00000	4.787
79 Dibenzo(a,h)anthracene	278	28.512	28.512	(1.088)	506674	5.00000	4.793
80 Benzo(g,h,i)perylene	276	29.149	29.149	(1.112)	545897	5.00000	4.789
105 1-methylnaphthalene	142	13.259	13.259	(1.156)	302374	5.00000	4.634
187 Total Benzofluoranthenes	252	25.575	25.575	(0.976)	1160420	10.0000	9.575
98 Retene	219		Compound Not Detected.				
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.				

W  
12-6-12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: cc1205.d  
 Lab Smp Id: CC1205  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121205.b/ABN.m  
 Misc Info:

Calibration Date: 05-DEC-2012  
 Calibration Time: 10:24

Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	103035	26.31
27 Naphthalene-d8	299399	149700	598798	392234	31.01
42 Acenaphthene-d10	178564	89282	357128	228483	27.96
59 Phenanthrene-d10	305410	152705	610820	397408	30.12
69 Chrysene-d12	323853	161926	647706	420761	29.92
134 Di-n-octylphthala	427845	213922	855690	547636	28.00
77 Perylene-d12	305316	152658	610632	411812	34.88

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.81	8.31	9.31	8.81	0.00
27 Naphthalene-d8	11.47	10.97	11.97	11.47	0.00
42 Acenaphthene-d10	15.37	14.87	15.87	15.37	0.00
59 Phenanthrene-d10	18.66	18.16	19.16	18.66	0.00
69 Chrysene-d12	23.77	23.27	24.27	23.77	0.00
134 Di-n-octylphthala	24.90	24.40	25.40	24.90	0.00
77 Perylene-d12	26.21	25.71	26.71	26.21	0.00

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

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i                      Injection Date: 05-DEC-2012 11:49  
 Lab File ID: cc1205.d                    Init. Cal. Date(s): 29-NOV-2012 29-NOV-2012  
 Analysis Type:                            Init. Cal. Times: 09:54                    15:30  
 Lab Sample ID: CC1205                    Quant Type: ISTD  
 Method: /chem1/nt10.i/20121205.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
\$ 1 2-Fluorophenol	1.27957	1.33211	1.33211	0.010	4.10668	20.00000	Averaged
\$ 2 Phenol-d5	1.58333	1.68372	1.68372	0.010	6.34033	20.00000	Averaged
3 Phenol	1.66795	2.07664	2.07664	0.100	24.50221	20.00000	Averaged <-
\$ 5 2-Chlorophenol-d4	1.36995	1.34002	1.34002	0.010	-2.18478	20.00000	Averaged
7 1,3-Dichlorobenzene	1.61009	1.49646	1.49646	0.010	-7.05709	20.00000	Averaged
9 1,4-Dichlorobenzene	1.51045	1.46322	1.46322	0.010	-3.12748	20.00000	Averaged
\$ 10 1,2-Dichlorobenzene-d4	0.99893	0.94599	0.94599	0.010	-5.30032	20.00000	Averaged
12 1,2-Dichlorobenzene	1.44945	1.40876	1.40876	0.010	-2.80673	20.00000	Averaged
11 Benzyl alcohol	0.78872	0.84871	0.84871	0.010	7.60524	20.00000	Averaged
13 2-Methylphenol	1.43339	1.50445	1.50445	0.700	4.95735	20.00000	Averaged
17 Hexachloroethane	0.62060	0.56461	0.56461	0.300	-9.02290	20.00000	Averaged
15 4-Methylphenol	0.85032	1.54321	1.54321	0.600	81.48690	20.00000	Averaged <-
\$ 18 Nitrobenzene-d5	0.37481	0.34490	0.34490	0.010	-7.97946	20.00000	Averaged
22 2,4-Dimethylphenol	0.38062	0.32400	0.32400	0.200	-14.87496	20.00000	Averaged
24 Benzoic acid	20.34646	20.00000	0.25742	0.010	1.73230	20.00000	Quadratic
26 1,2,4-Trichlorobenzene	0.22242	0.31027	0.31027	0.010	39.49799	20.00000	Averaged <-
28 Naphthalene	0.97316	1.00098	1.00098	0.100	2.85865	20.00000	Averaged
30 Hexachlorobutadiene	0.24932	0.18967	0.18967	0.010	-23.92280	20.00000	Averaged <-
32 2-Methylnaphthalene	0.72505	0.68959	0.68959	0.300	-4.89058	20.00000	Averaged
\$ 36 2-Fluorobiphenyl	1.41574	1.47073	1.47073	0.010	3.88390	20.00000	Averaged
39 Dimethylphthalate	1.29227	1.17328	1.17328	0.010	-9.20799	20.00000	Averaged
40 Acenaphthylene	1.89060	1.78815	1.78815	0.900	-5.41876	20.00000	Averaged
44 Acenaphthene	1.08066	1.05349	1.05349	0.100	-2.51401	20.00000	Averaged
46 Dibenzofuran	1.60380	1.48782	1.48782	0.800	-7.23143	20.00000	Averaged
50 Diethylphthalate	1.35255	1.09475	1.09475	0.010	-19.06033	20.00000	Averaged
49 Fluorene	1.33054	1.22354	1.22354	0.100	-8.04152	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.49120	0.44968	0.44968	0.010	-8.45311	20.00000	Averaged
\$ 55 2,4,6-Tribromophenol	0.23562	0.22519	0.22519	0.010	-4.42605	20.00000	Averaged
57 Hexachlorobenzene	0.28680	0.23167	0.23167	0.100	-19.22171	20.00000	Averaged
58 Pentachlorophenol	0.18344	0.18072	0.18072	0.010	-1.47881	20.00000	Averaged
60 Phenanthrene	0.99039	1.01097	1.01097	0.700	2.07819	20.00000	Averaged
61 Anthracene	1.06454	1.05672	1.05672	0.700	-0.73477	20.00000	Averaged
63 Di-n-butylphthalate	1.25942	1.19250	1.19250	0.010	-5.31373	20.00000	Averaged
64 Fluoranthene	1.24834	1.20247	1.20247	0.600	-3.67443	20.00000	Averaged
65 Pyrene	1.17183	1.17982	1.17982	0.600	0.68115	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i                      Injection Date: 05-DEC-2012 11:49  
 Lab File ID: cc1205.d                    Init. Cal. Date(s): 29-NOV-2012 29-NOV-2012  
 Analysis Type:                            Init. Cal. Times: 09:54 15:30  
 Lab Sample ID: CC1205                    Quant Type: ISTD  
 Method: /chem1/nt10.i/20121205.b/ABN.m

COMPOUND	___		CCAL	MIN	MAX		CURVE TYPE
	RRF / AMOUNT	RF5	RRF5	RRF	%D / %DRIFT	%D / %DRIFT	
\$ 66 Terphenyl-d14	0.78331	0.74528	0.74528	0.010	-4.85472	20.00000	Averaged
67 Butylbenzylphthalate	0.47602	0.46186	0.46186	0.010	-2.97359	20.00000	Averaged
68 Benzo(a)anthracene	1.13688	1.07158	1.07158	0.700	-5.74412	20.00000	Averaged
71 Chrysene	1.00999	0.97610	0.97610	0.700	-3.35527	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.55191	0.53677	0.53677	0.010	-2.74423	20.00000	Averaged
73 Di-n-octylphthalate	0.90675	0.89931	0.89931	0.010	-0.82061	20.00000	Averaged
76 Benzo(a)pyrene	1.14156	1.02177	1.02177	0.700	-10.49304	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.29375	1.23872	1.23872	0.500	-4.25355	20.00000	Averaged
79 Dibenzo(a,h)anthracene	1.02672	0.98428	0.98428	0.400	-4.13329	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.10723	1.06048	1.06048	0.500	-4.22281	20.00000	Averaged
105 1-methylnaphthalene	0.66545	0.61672	0.61672	0.010	-7.32329	20.00000	Averaged
187 Total Benzofluoranthenes	1.17711	1.12714	1.12714	0.010	-4.24573	20.00000	Averaged
98 Retene	++++	0.00208	0.00208	0.010	++++	20.00000	Averaged <-
120 2,3,4,6-Tetrachlorophenol	0.00104	0.00112	0.00112	0.010	7.33320	20.00000	Averaged <-

Data File: /chem1/nt10.1/20121205.b/ccl205.d  
Date: 05-DEC-2012 11:49

Client ID:

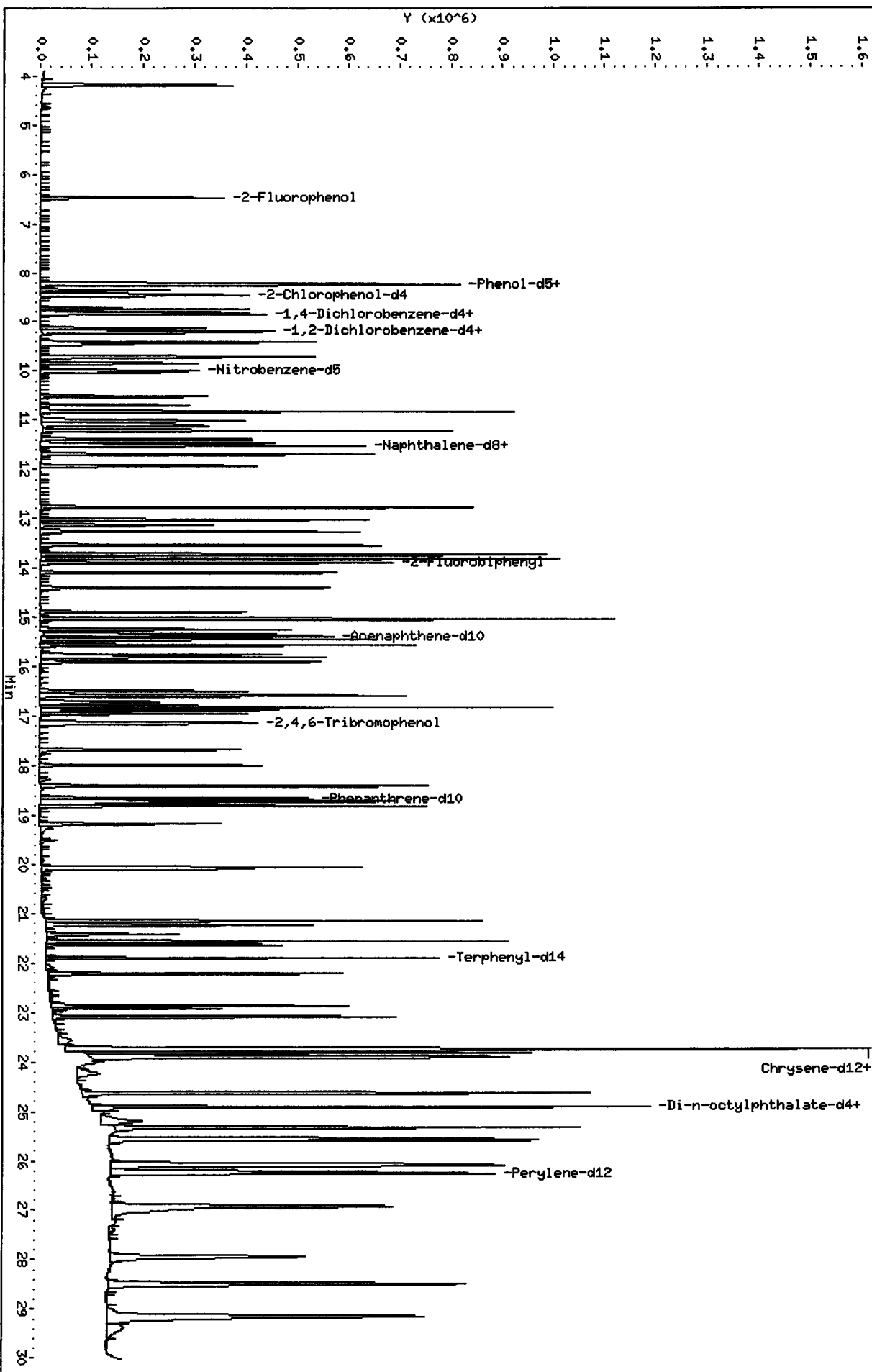
Sample Info: CCL205

Column phase: ZB-Smsi

Instrument: nt10.1

Operator: VTS/YZ  
Column diameter: 0.25

/chem1/nt10.1/20121205.b/ccl205.d



CO-ELUTION SUMMARY FOR FILE - cc1205.d

Lab ID: CC1205, Method: ABN.m, Instrument: nt10.i, Date: 05-DEC-2012

RT CO-ELUTION COMPOUNDS

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Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121205.b/vr58a3.d  
 Lab Smp Id: VR58A Client Smp ID: SG-10-S-E-121107  
 Inj Date : 05-DEC-2012 20:42  
 Operator : VTS Inst ID: nt10.i  
 Smp Info : VR58A,3  
 Misc Info : 12-22329  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121205.b/ABN.m  
 Meth Date : 05-Dec-2012 12:41 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 16  
 Dil Factor: 3.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	17.00000	Weight of sample extracted (g)
M	40.60000	% 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	6.490	6.474	(0.739)	31004	1.28901	382.9	
\$ 2 Phenol-d5	99	8.198	8.205	(0.933)	35496	1.19263	354.3	
3 Phenol	94	8.229	8.228	(0.937)	3954	0.12611	37.47	
\$ 5 2-Chlorophenol-d4	132	8.422	8.429	(0.959)	33375	1.29604	385.0	
7 1,3-Dichlorobenzene	146	Compound Not Detected.						
* 8 1,4-Dichlorobenzene-d4	152	8.785	8.808	(1.000)	75190	4.00000		
9 1,4-Dichlorobenzene	146	Compound Not Detected.						
\$ 10 1,2-Dichlorobenzene-d4	152	9.166	9.189	(1.043)	16297	0.86790	257.8	
12 1,2-Dichlorobenzene	146	Compound Not Detected.						
11 Benzyl alcohol	108	9.119	9.134	(1.038)	6512	0.43923	130.5	
13 2-Methylphenol	108	Compound Not Detected.						
17 Hexachloroethane	117	Compound Not Detected.						
15 4-Methylphenol	108	9.694	9.709	(1.103)	6425	0.40197	119.4	
\$ 18 Nitrobenzene-d5	82	9.965	9.988	(0.871)	20447	0.76606	227.6	
22 2,4-Dimethylphenol	107	Compound Not Detected.						

Compounds	QUANT	SIG	CONCENTRATIONS					
			ON-COLUMN	FINAL				
	MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/kg)	
=====	=====	==	=====	=====	=====	=====	=====	
24 Benzoic acid	105	10.971	11.118	(0.959)	20969	1.28334	381.3	
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
* 27 Naphthalene-d8	136	11.442	11.472	(1.000)	284847	4.00000		
28 Naphthalene	128	11.480	11.519	(1.003)	7751	0.11185	33.23	
30 Hexachlorobutadiene	225	Compound Not Detected.						
32 2-Methylnaphthalene	142	Compound Not Detected.						
\$ 36 2-Fluorobiphenyl	172	13.848	13.894	(0.904)	65715	0.93501	277.8	
39 Dimethylphthalate	163	Compound Not Detected.						
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	15.326	15.372	(1.000)	198575	4.00000		
44 Acenaphthene	153	Compound Not Detected.						
46 Dibenzofuran	168	Compound Not Detected.						
50 Diethylphthalate	149	Compound Not Detected.						
49 Fluorene	166	16.516	16.570	(1.078)	7185	0.10878	32.32	
54 N-Nitrosodiphenylamine	169	Compound Not Detected.						
\$ 55 2,4,6-Tribromophenol	330	17.110	17.156	(1.116)	24243	2.07256	615.7	
57 Hexachlorobenzene	284	Compound Not Detected.						
58 Pentachlorophenol	266	Compound Not Detected.						
* 59 Phenanthrene-d10	188	18.602	18.656	(1.000)	394579	4.00000		
60 Phenanthrene	178	18.656	18.702	(1.003)	72838	0.74555	221.5	
61 Anthracene	178	18.749	18.803	(1.008)	14916	0.14204	42.20	
63 Di-n-butylphthalate	149	Compound Not Detected.						
64 Fluoranthene	202	21.101	21.139	(1.134)	179502	1.45768	433.1	
65 Pyrene	202	21.519	21.565	(0.907)	151179	1.24593	370.2	
\$ 66 Terphenyl-d14	244	21.844	21.898	(0.921)	101060	1.24599	370.2	
67 Butylbenzylphthalate	149	22.804	22.858	(0.961)	6618	0.13427	39.89	
68 Benzo(a)anthracene	228	23.694	23.748	(0.999)	57303	0.48678	144.6 (H)	
* 69 Chrysene-d12	240	23.725	23.771	(1.000)	414183	4.00000		
71 Chrysene	228	23.764	23.818	(1.002)	79332	0.75857	225.4	
72 bis(2-Ethylhexyl)phthalate	149	23.857	23.918	(0.960)	115981	1.54168	458.0	
* 134 Di-n-octylphthalate-d4	153	24.840	24.902	(1.000)	545234	4.00000		
73 Di-n-octylphthalate	149	Compound Not Detected.						
76 Benzo(a)pyrene	252	26.048	26.102	(0.996)	50743	0.45967	136.6	
* 77 Perylene-d12	264	26.156	26.210	(1.000)	386803	4.00000		
78 Indeno(1,2,3-cd)pyrene	276	28.411	28.489	(1.086)	35181	0.28121	83.54	
79 Dibenzo(a,h)anthracene	278	Compound Not Detected.						
80 Benzo(g,h,i)perylene	276	29.072	29.149	(1.111)	30222	0.28226	83.86	
105 1-methylnaphthalene	142	Compound Not Detected.						
187 Total Benzofluoranthenes	252	25.490	25.575	(0.975)	117840	1.03525	307.6	
98 Retene	219	Compound Not Detected.						
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.						

QC Flag Legend

H - Operator selected an alternate compound hit.

*M*  
*12-6-12*

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58a3.d  
 Lab Smp Id: VR58A  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem1/nt10.i/20121205.b/ABN.m  
 Misc Info: 12-22329

Calibration Date: 05-DEC-2012  
 Calibration Time: 11:49  
 Client Smp ID: SG-10-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	75190	-7.82
27 Naphthalene-d8	299399	149700	598798	284847	-4.86
42 Acenaphthene-d10	178564	89282	357128	198575	11.21
59 Phenanthrene-d10	305410	152705	610820	394579	29.20
69 Chrysene-d12	323853	161926	647706	414183	27.89
134 Di-n-octylphthala	427845	213922	855690	545234	27.44
77 Perylene-d12	305316	152658	610632	386803	26.69

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.81	8.31	9.31	8.79	-0.26
27 Naphthalene-d8	11.47	10.97	11.97	11.44	-0.27
42 Acenaphthene-d10	15.37	14.87	15.87	15.33	-0.30
59 Phenanthrene-d10	18.66	18.16	19.16	18.60	-0.29
69 Chrysene-d12	23.77	23.27	24.27	23.73	-0.19
134 Di-n-octylphthala	24.90	24.40	25.40	24.84	-0.25
77 Perylene-d12	26.21	25.71	26.71	26.16	-0.21

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58A  
Level: LOW  
Data Type: MS DATA  
SpikeList File: SINSB.spk  
Sublist File: SHORTPSDDA.sub  
Method File: /chem1/nt10.i/20121205.b/ABN.m  
Misc Info: 12-22329

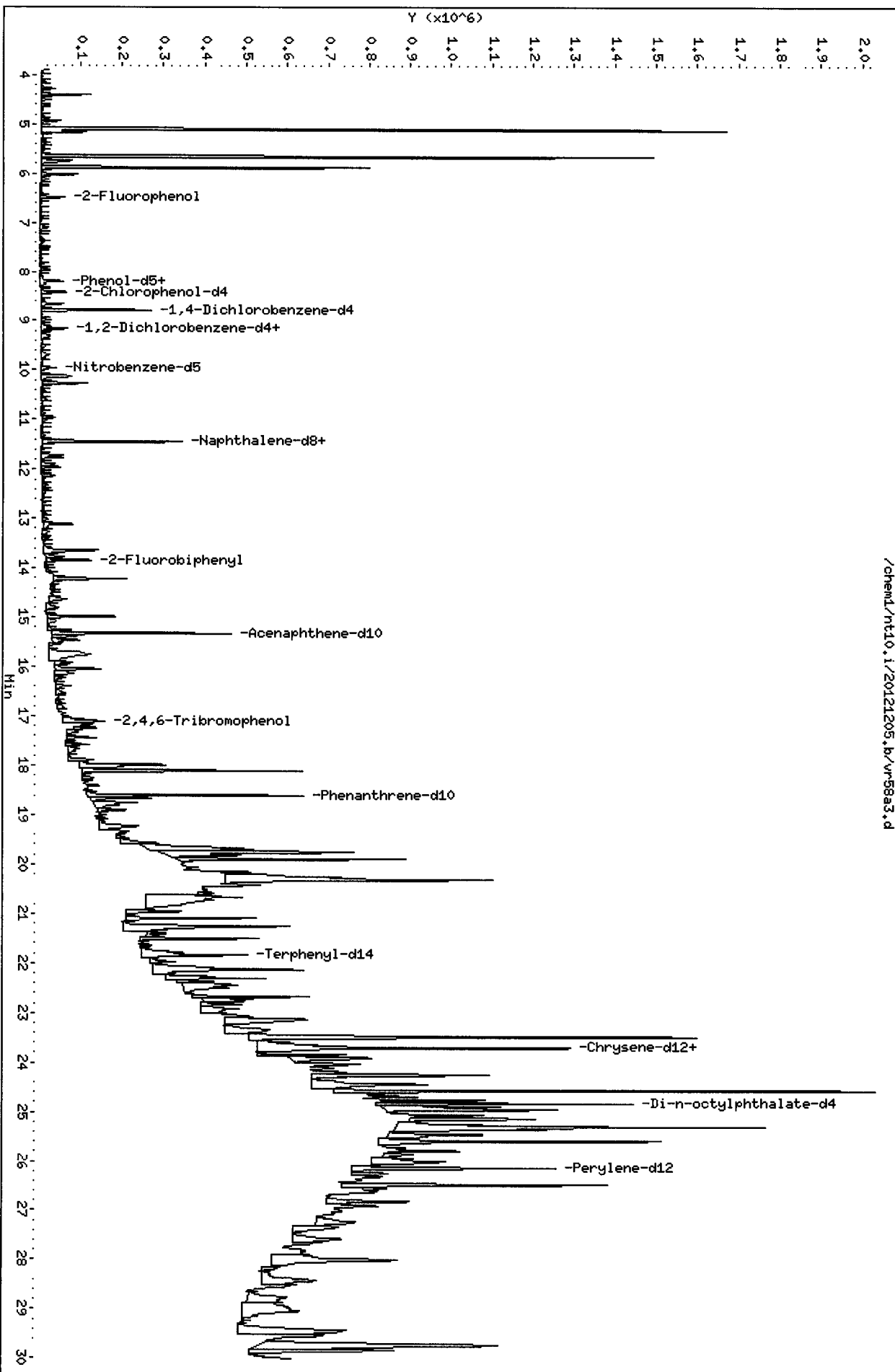
Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-10-S-E-121107  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	742.7	382.9	51.56	30-160
\$ 2 Phenol-d5	742.7	354.3	47.71	30-160
\$ 5 2-Chlorophenol-d4	742.7	385.0	51.84	30-160
\$ 10 1,2-Dichlorobenzen	495.1	257.8	52.07	30-160
\$ 18 Nitrobenzene-d5	495.1	227.6	45.96	30-160
\$ 36 2-Fluorobiphenyl	495.1	277.8	56.10	30-160
\$ 55 2,4,6-Tribromophen	742.7	615.7	82.90	30-160
\$ 66 Terphenyl-d14	495.1	370.2	74.76	30-160

Data File: /chem1/nt10.i/20121205.b/vr58a3.d  
Date: 05-DEC-2012 20:42  
Client ID: SG-10-S-E-121107  
Sample Info: VR58A,3  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.i  
Operator: VTS  
Column diameter: 0.25

/chem1/nt10.i/20121205.b/vr58a3.d



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

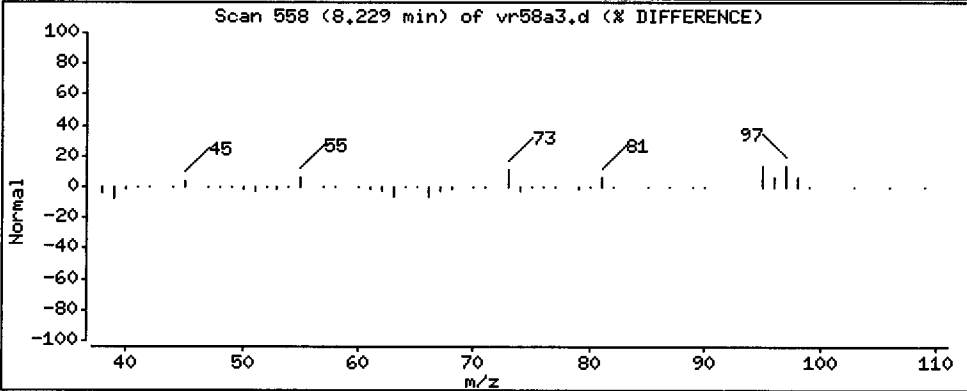
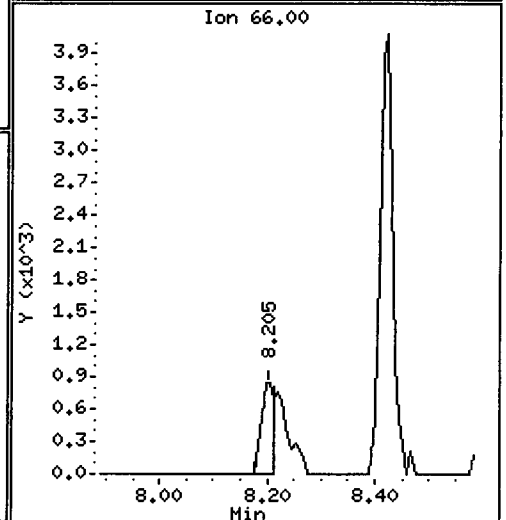
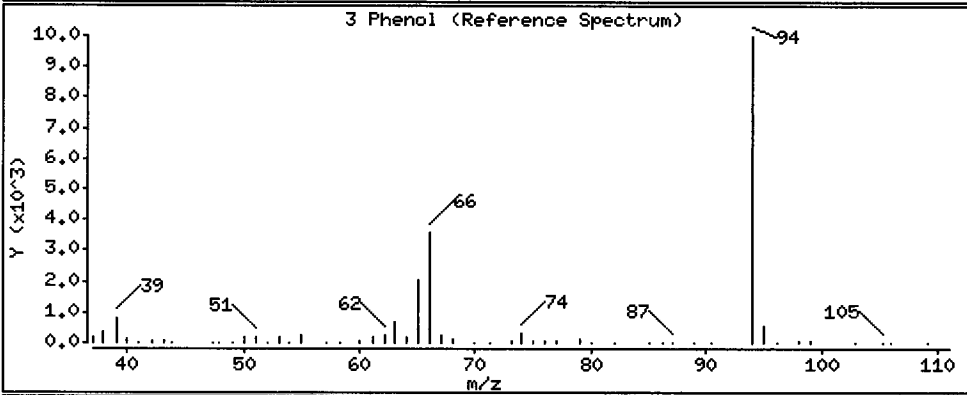
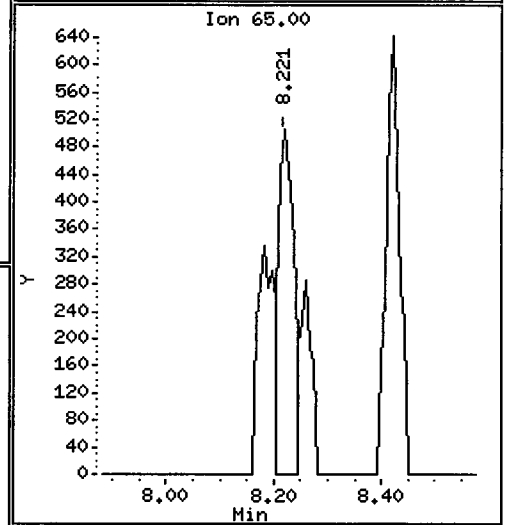
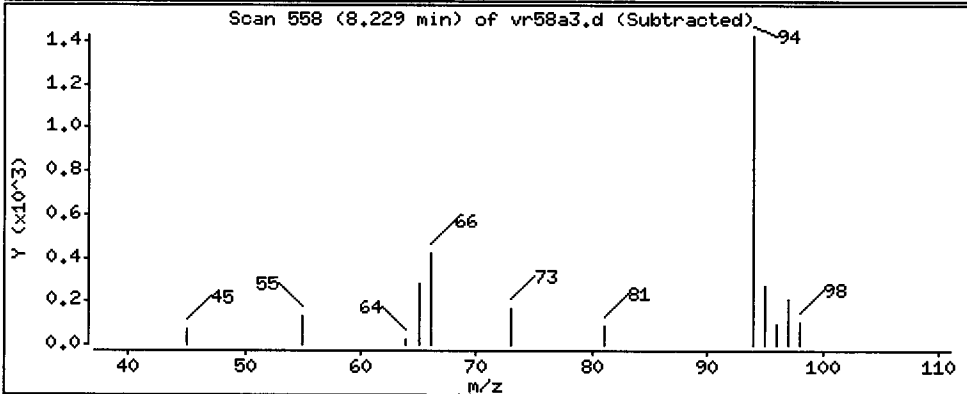
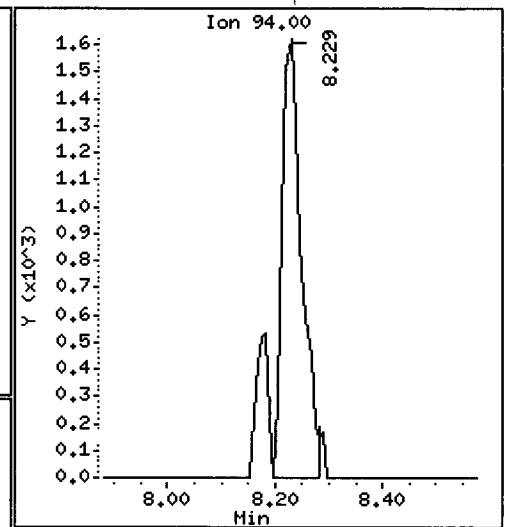
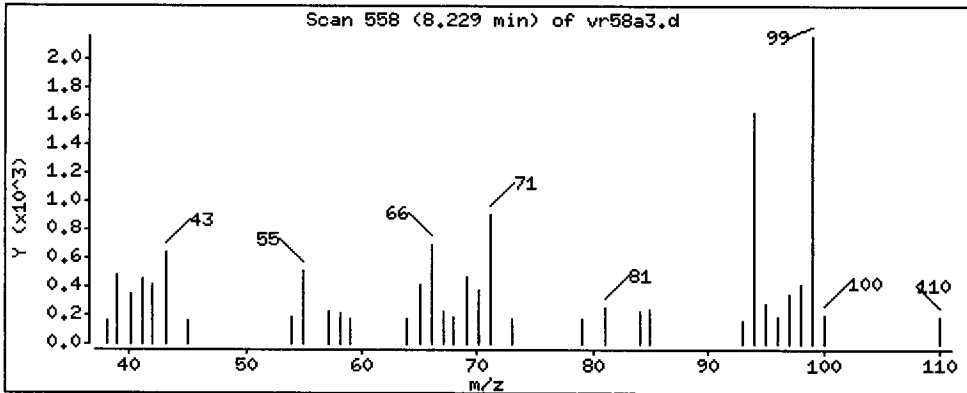
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

3 Phenol

Concentration: 37.47 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

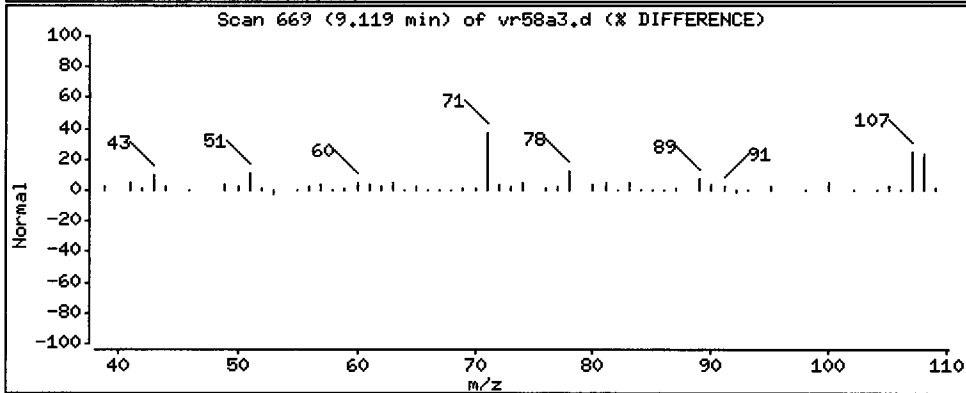
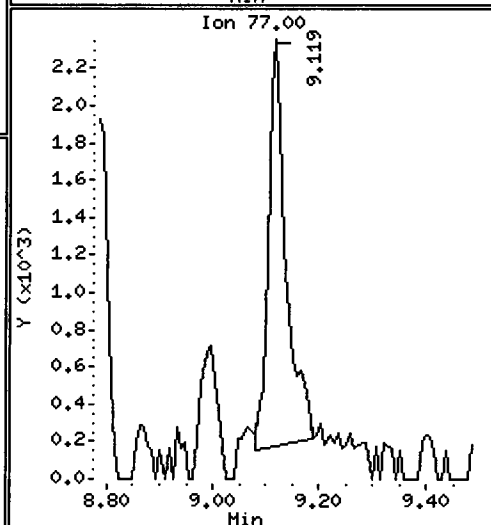
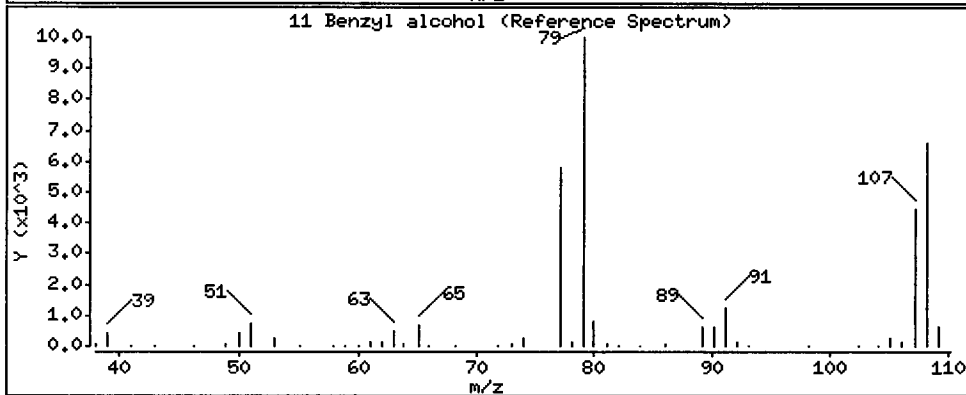
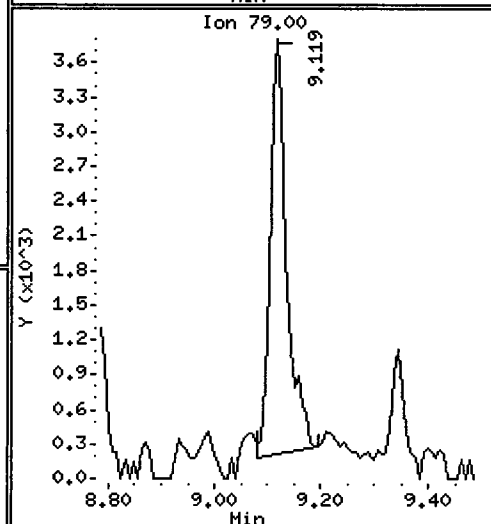
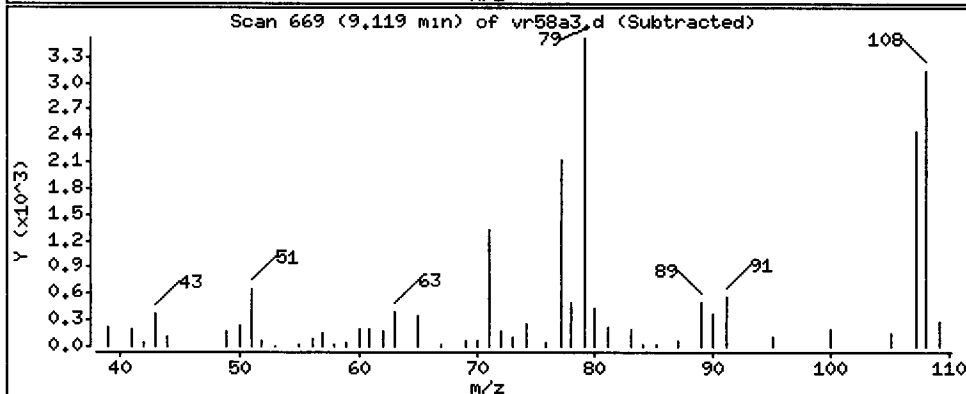
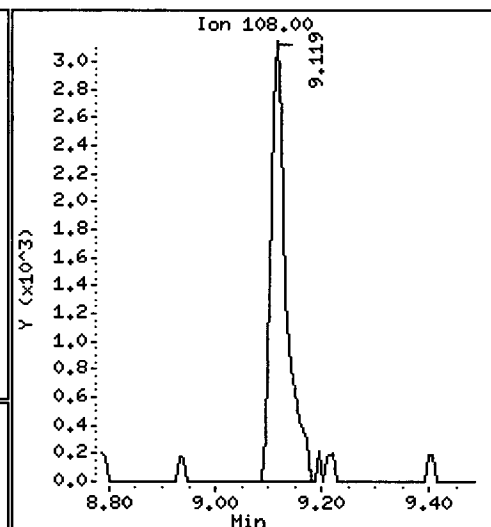
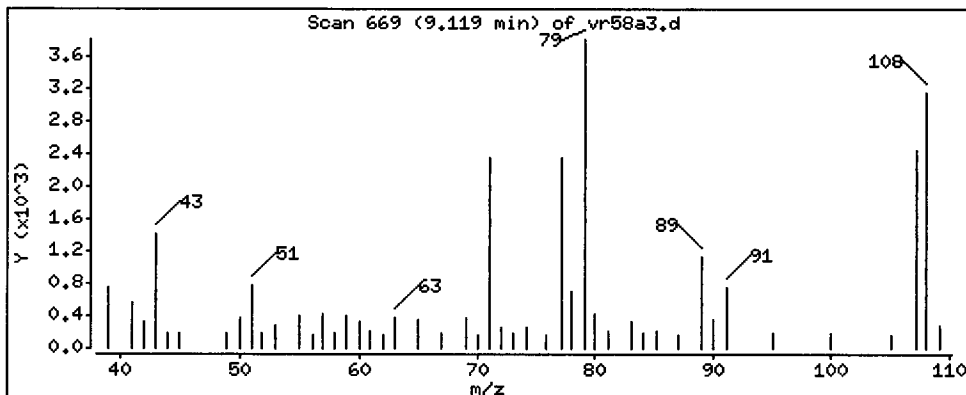
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 130.5 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

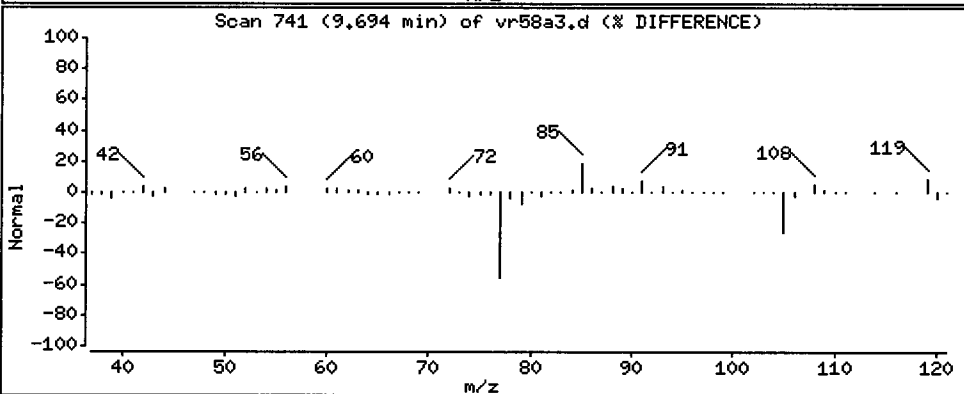
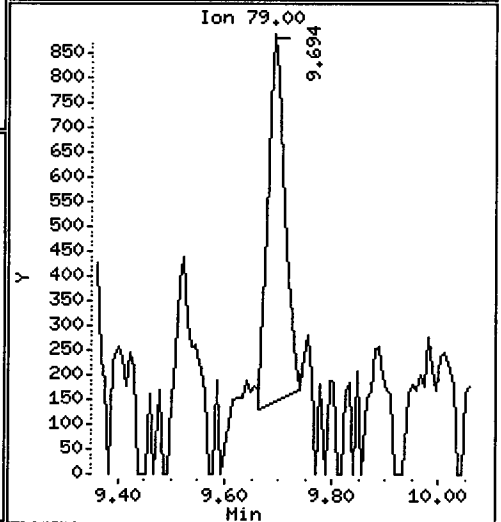
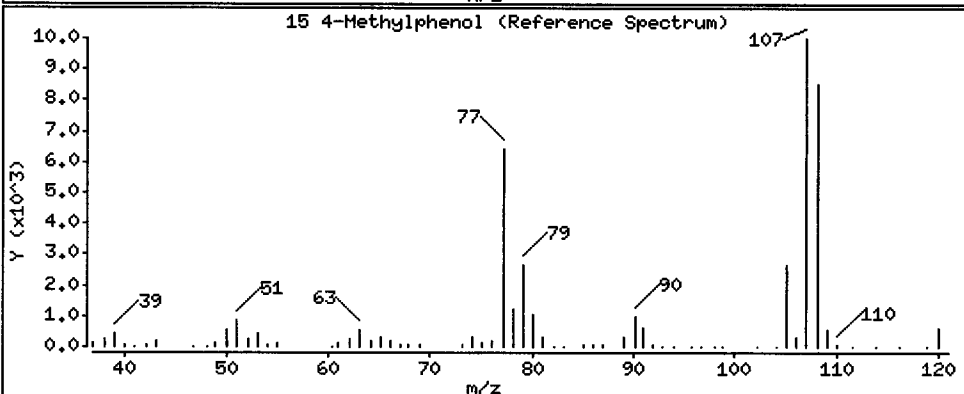
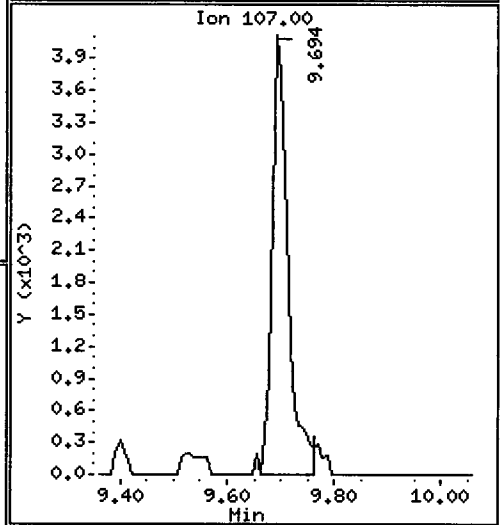
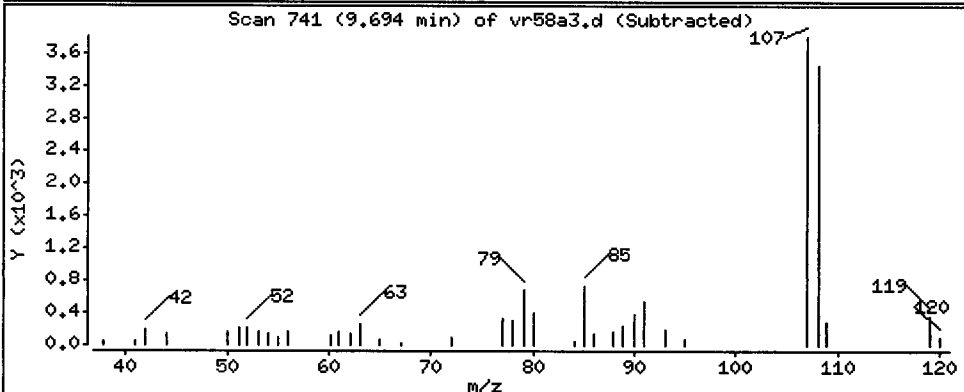
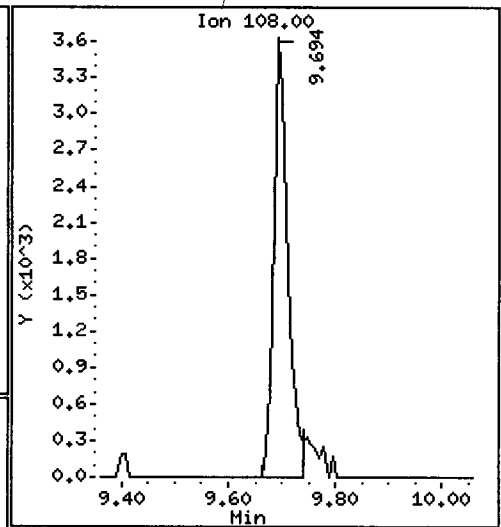
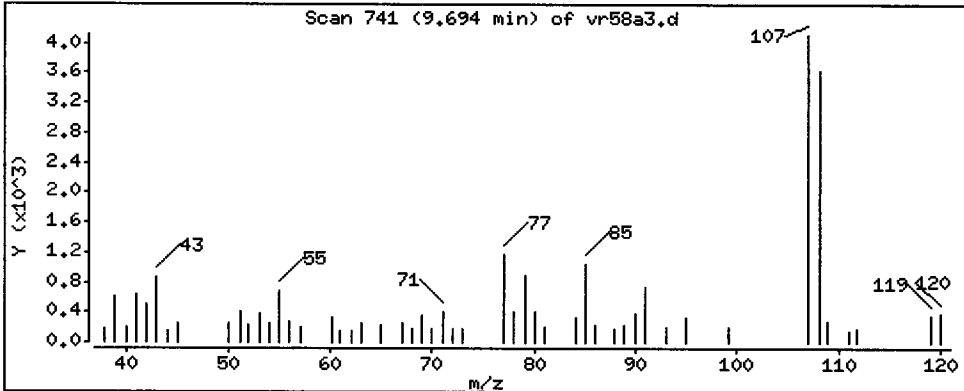
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 119.4 ug/kg





Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

Operator: VTS

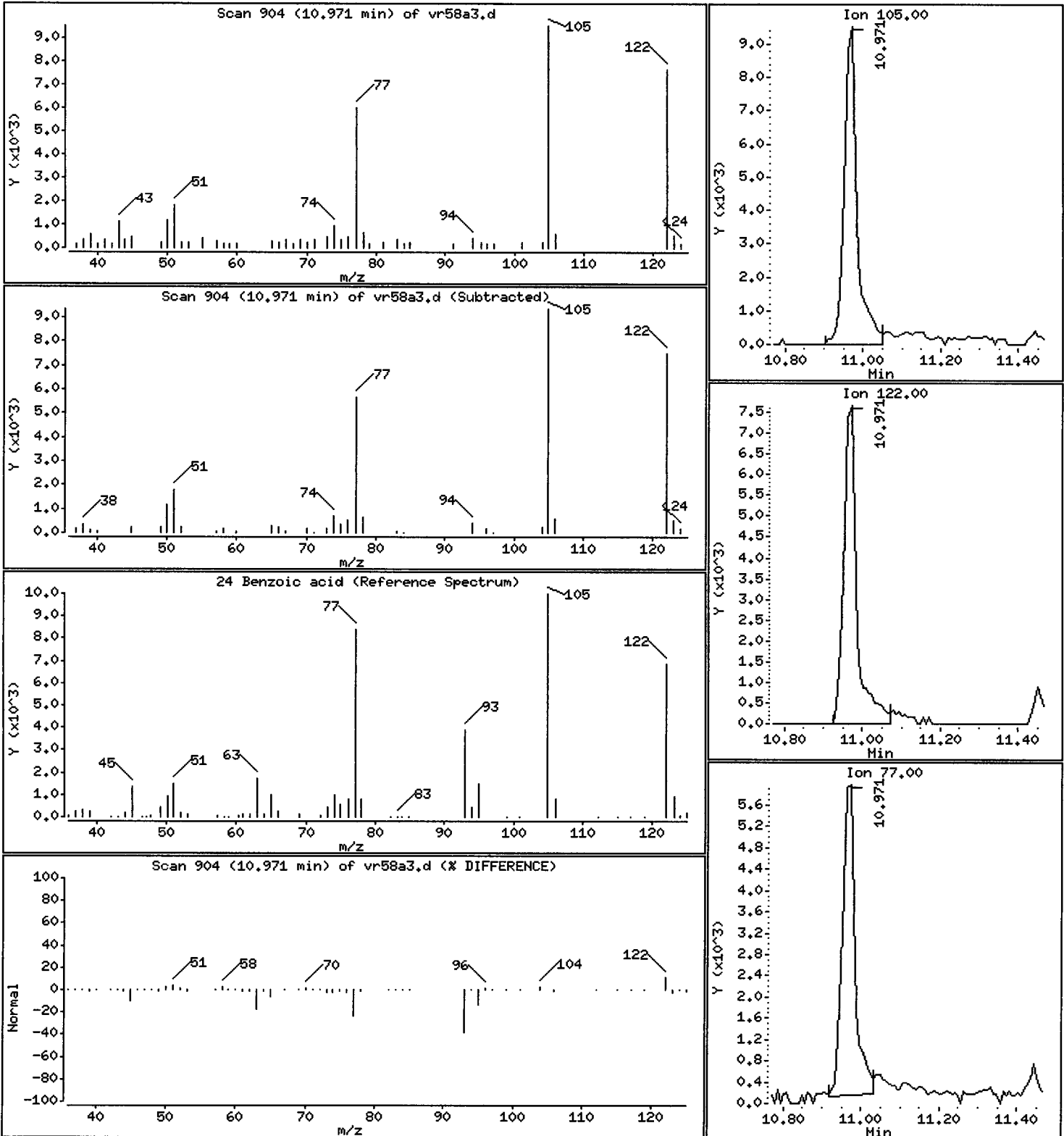
Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 381.3 ug/kg

*DLR*



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

Operator: VTS

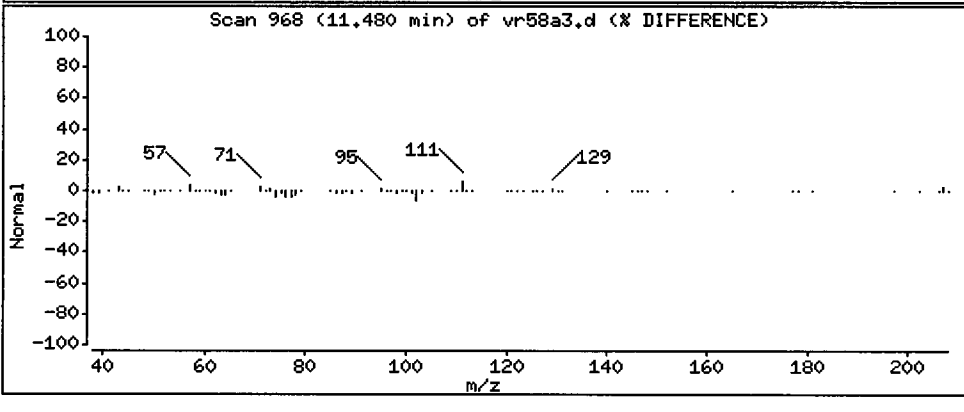
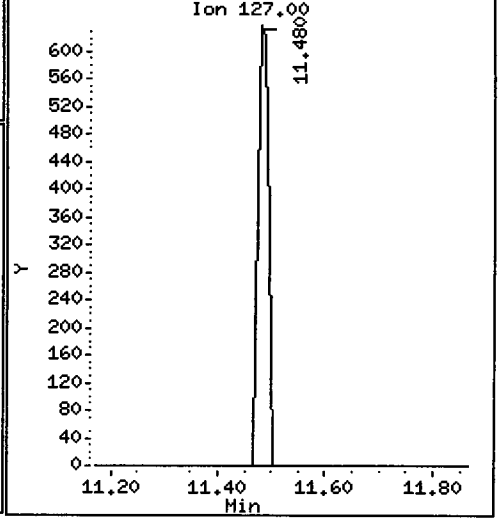
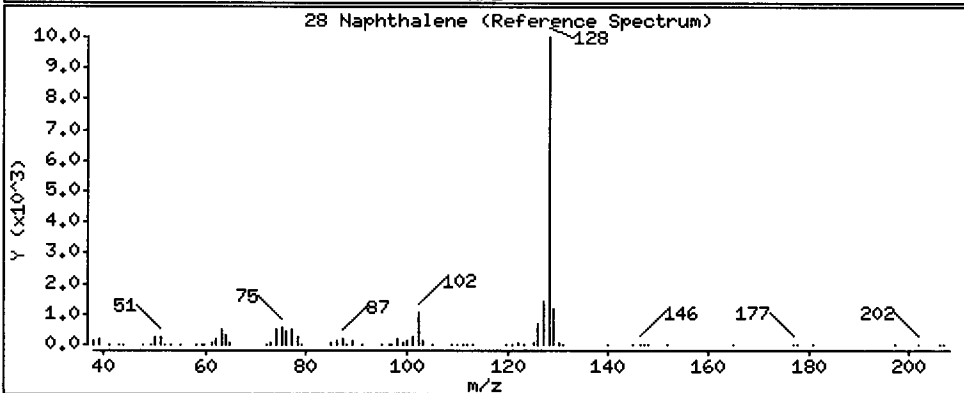
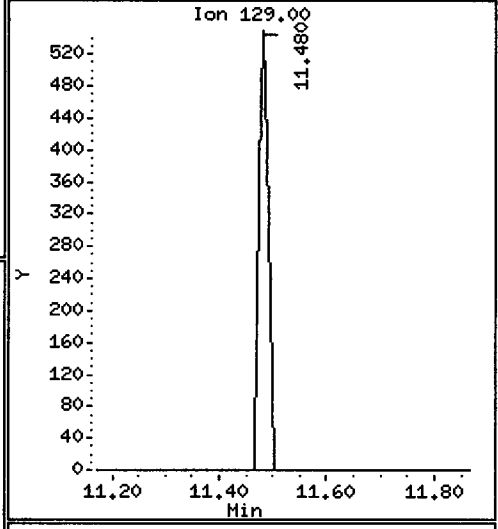
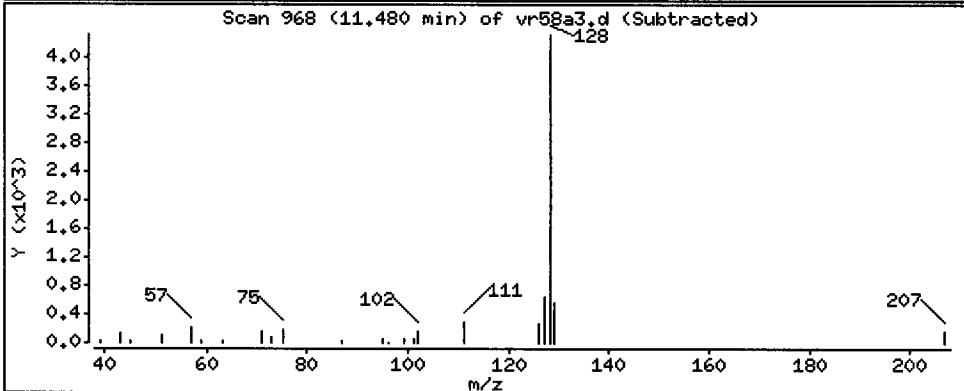
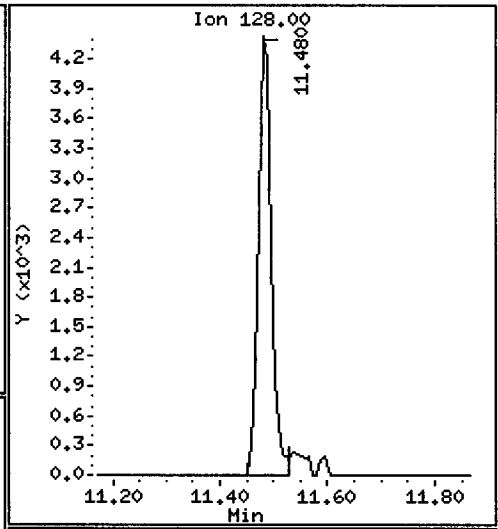
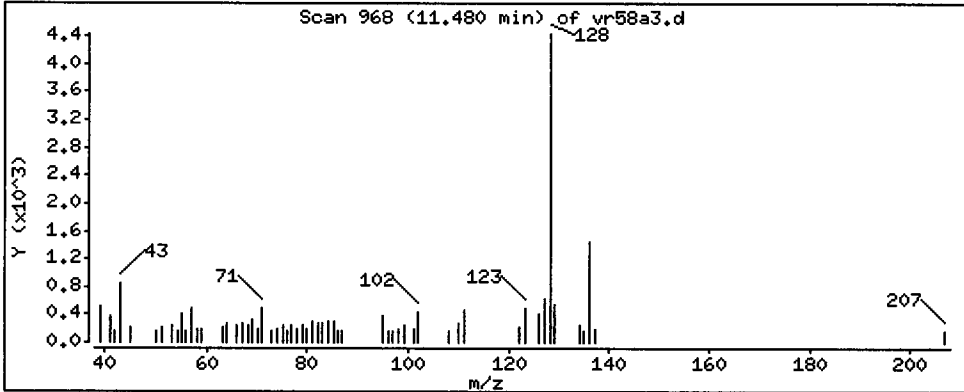
Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 33.23 ug/kg

*Tue*



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

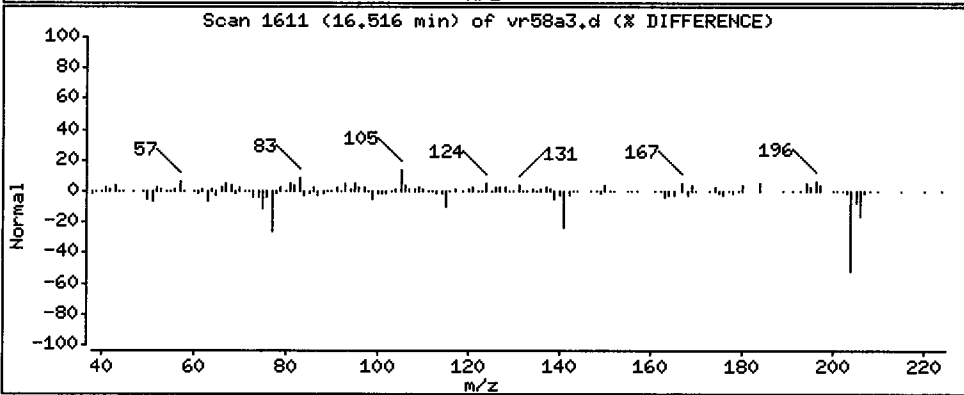
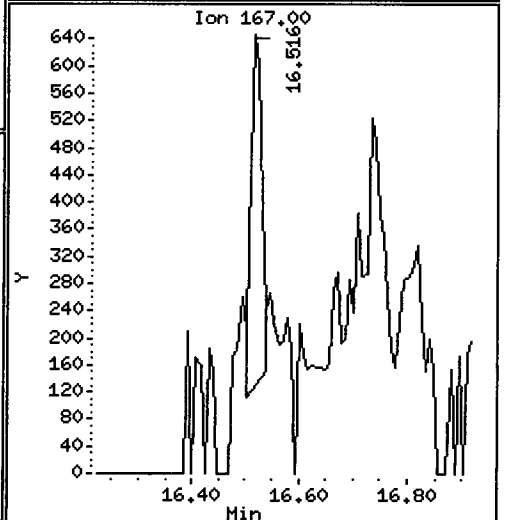
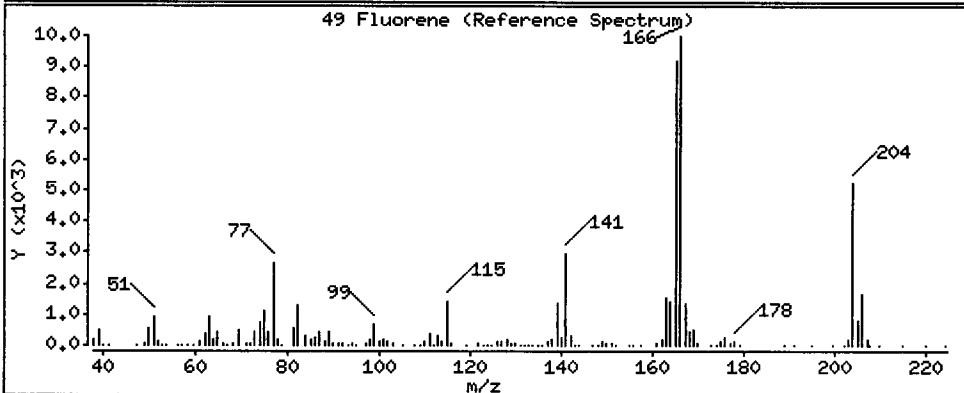
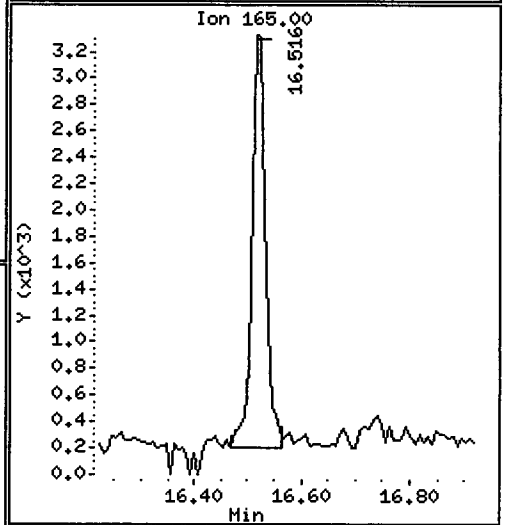
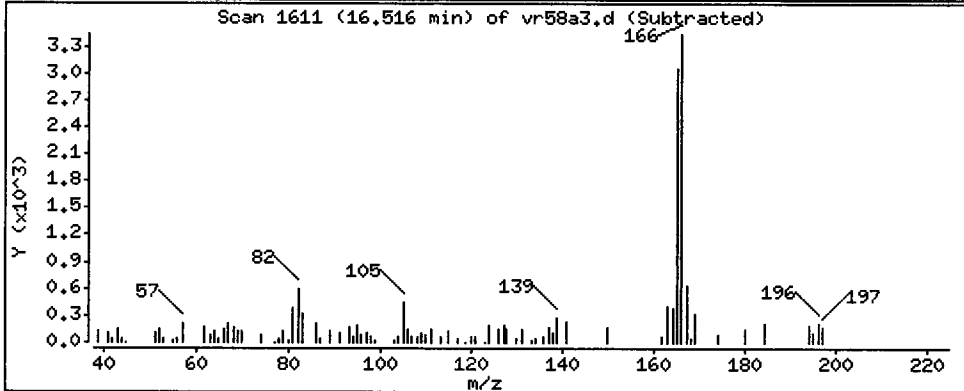
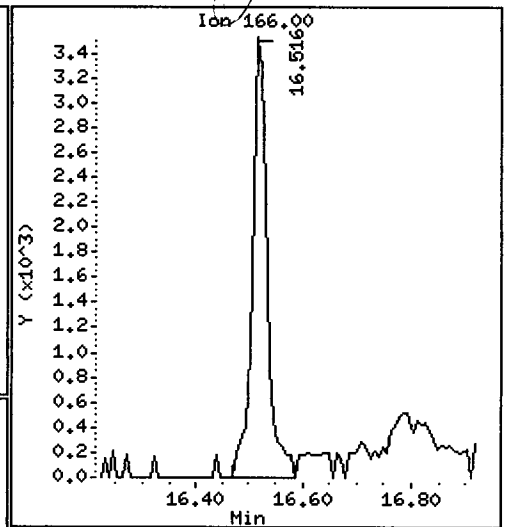
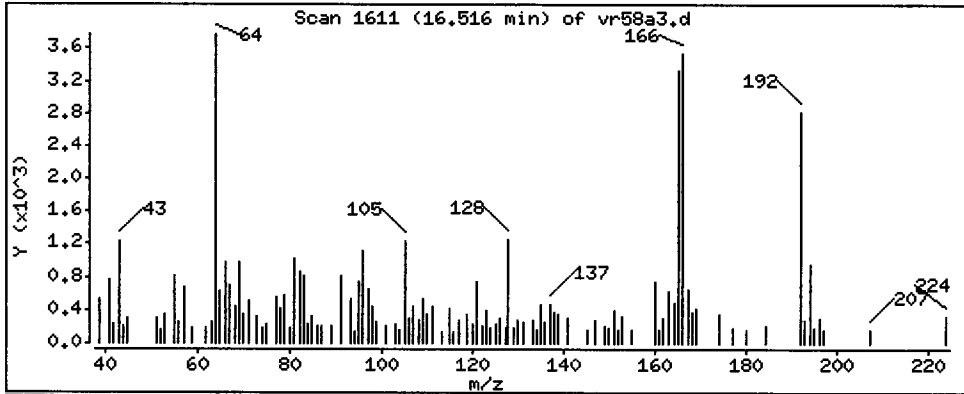
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 32.32 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

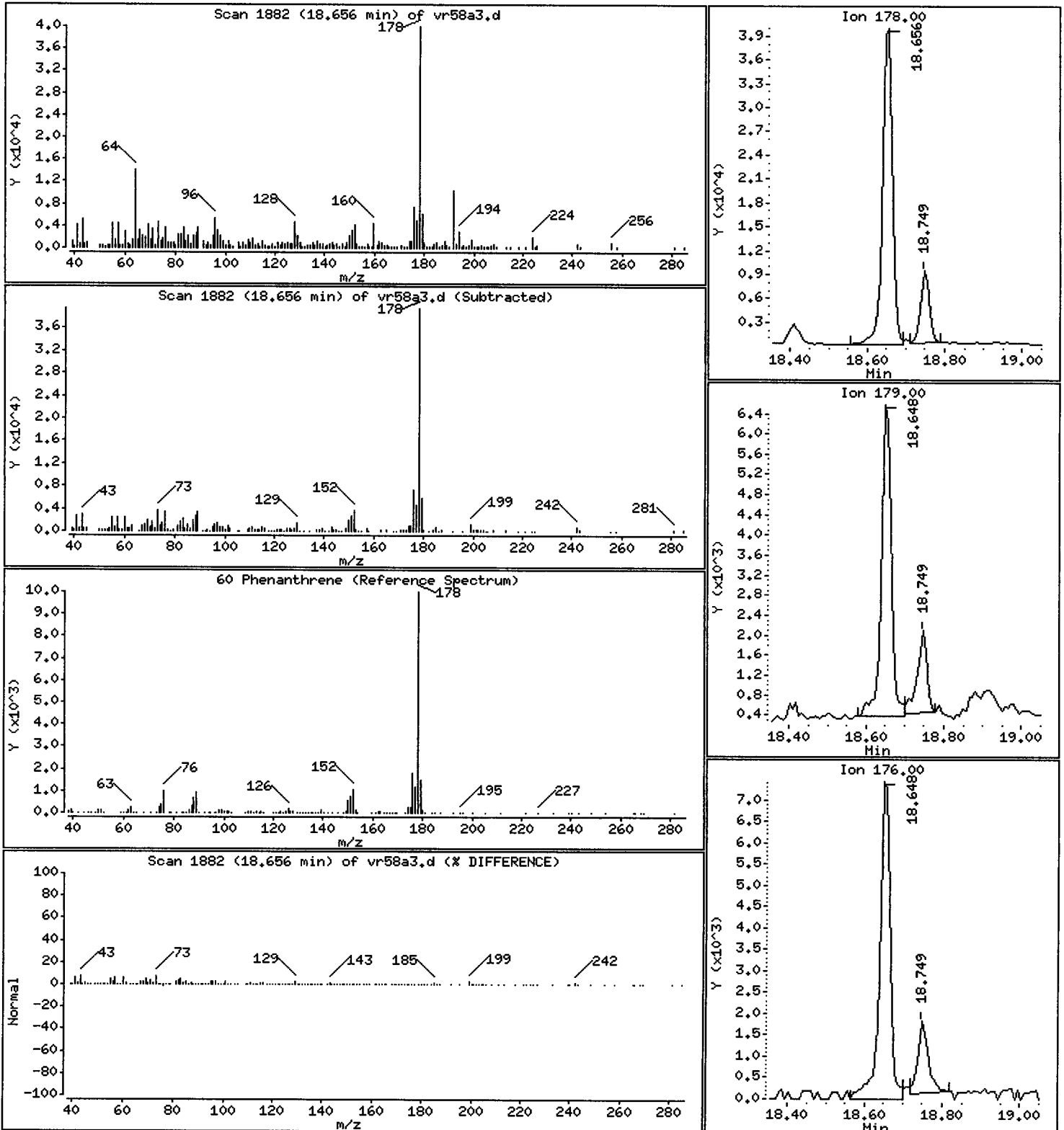
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 221.5 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

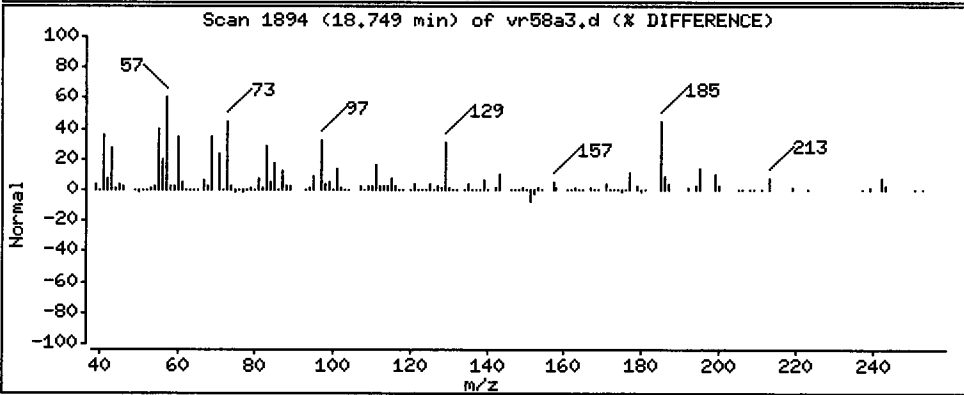
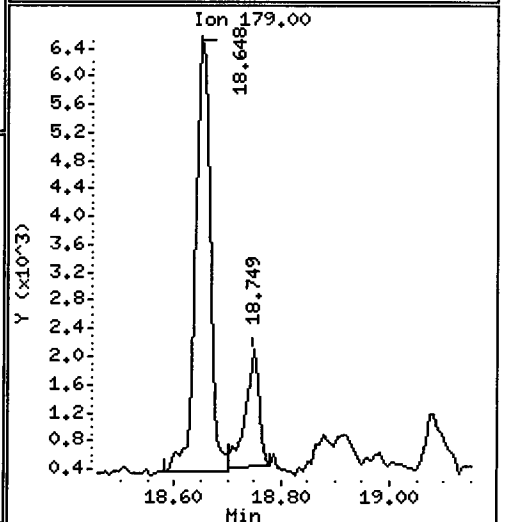
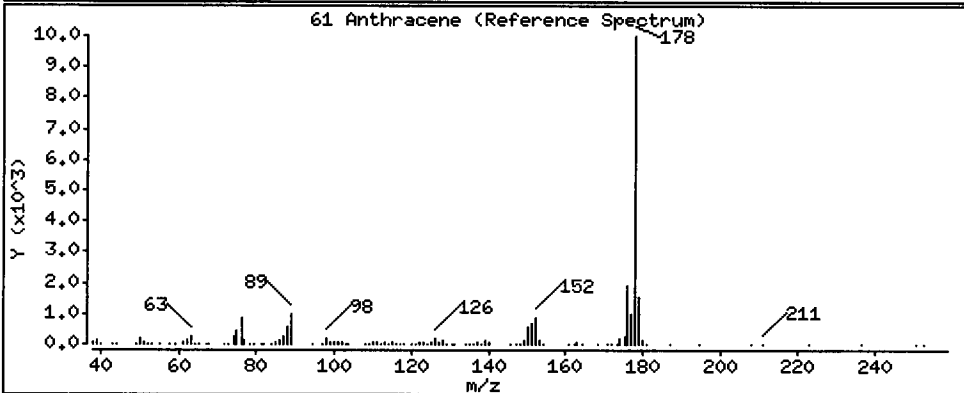
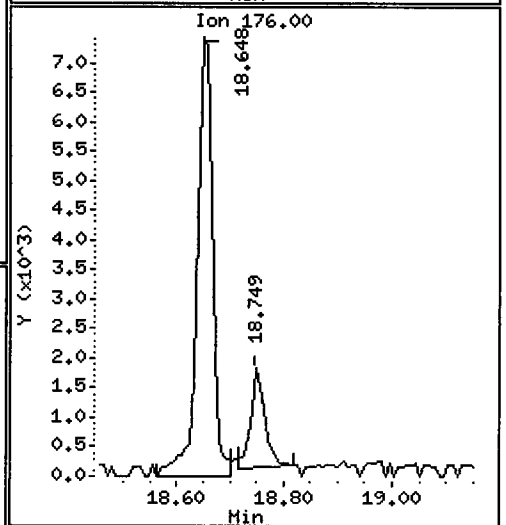
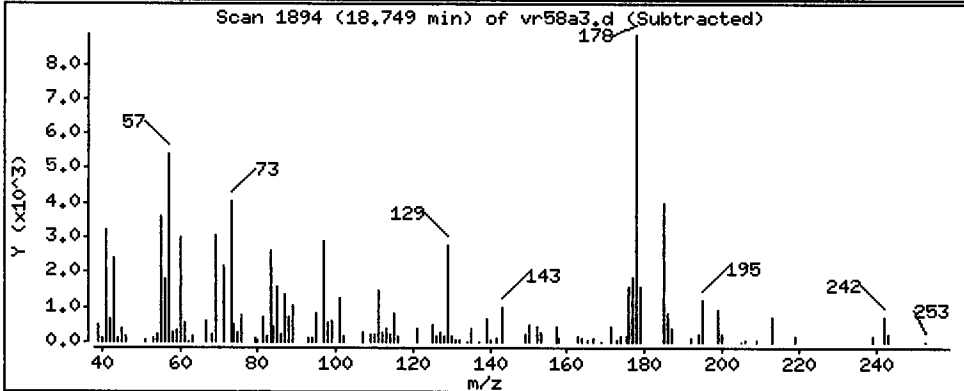
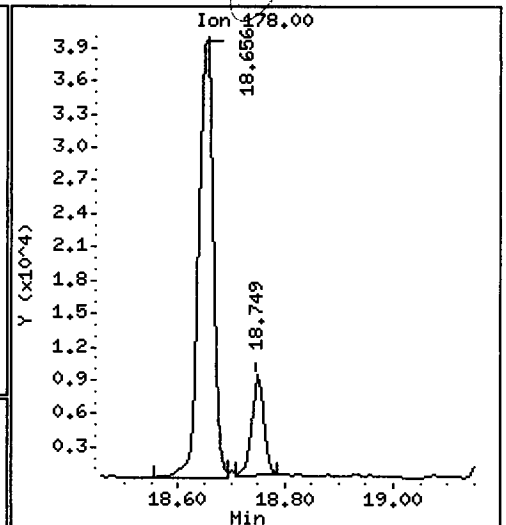
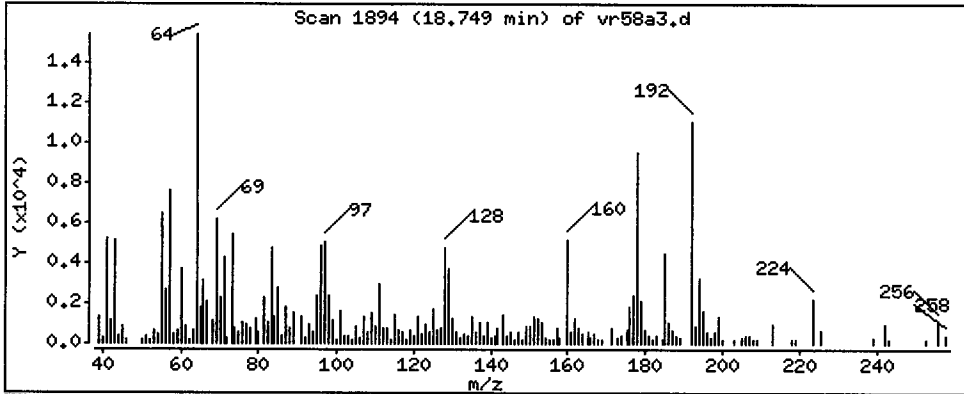
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 42.20 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

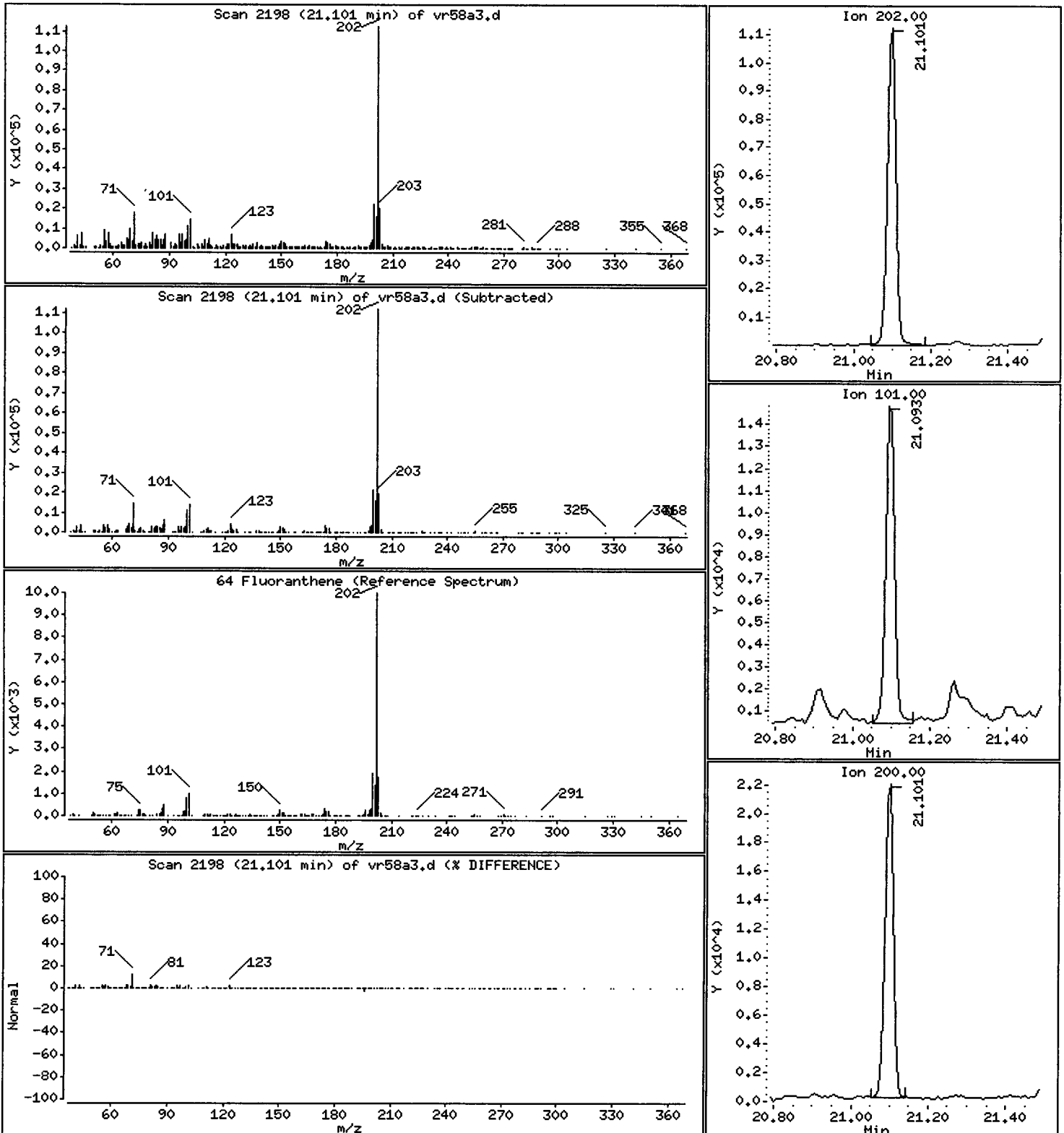
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 433.1 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

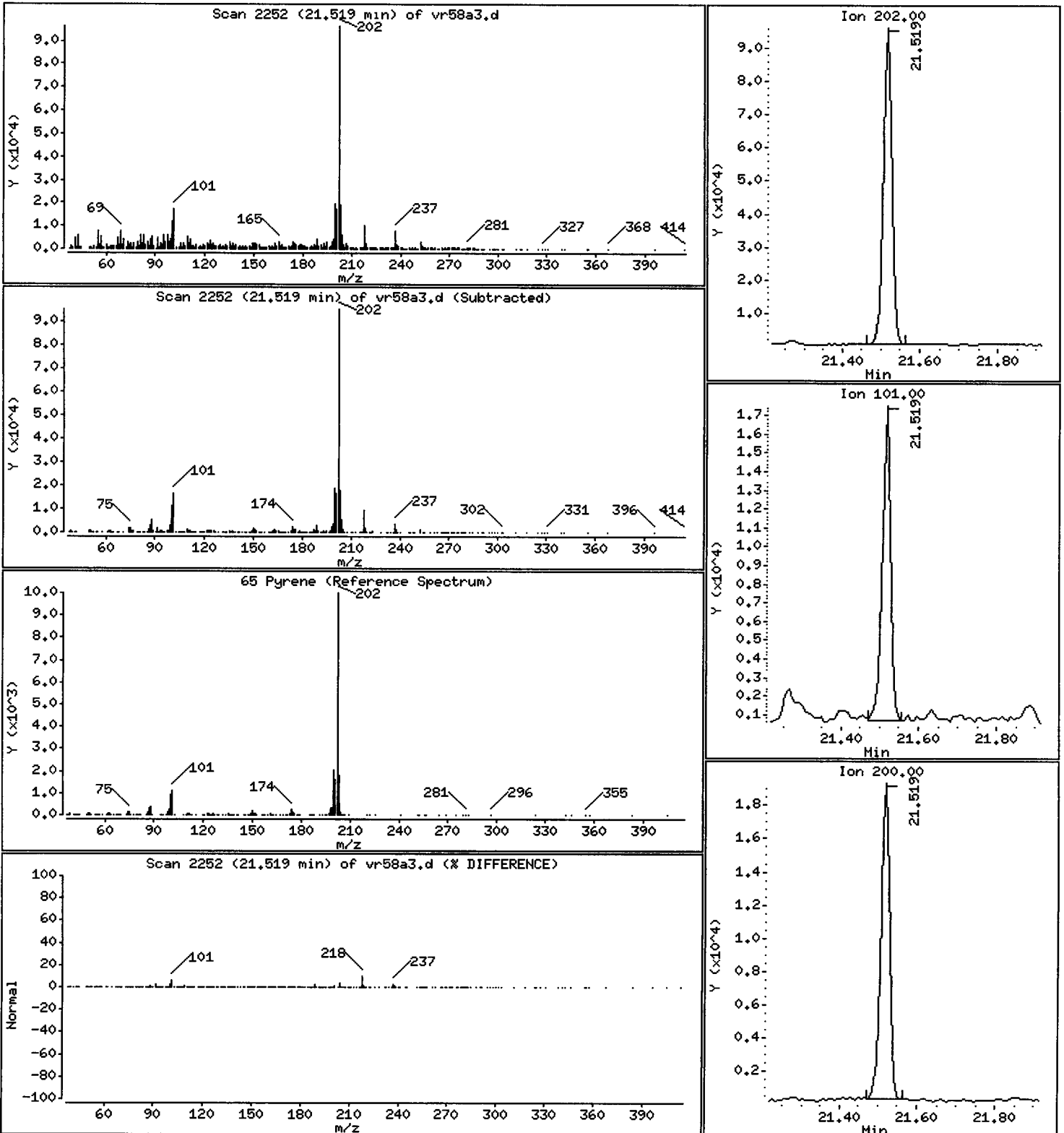
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 370.2 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10,i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

Operator: VTS

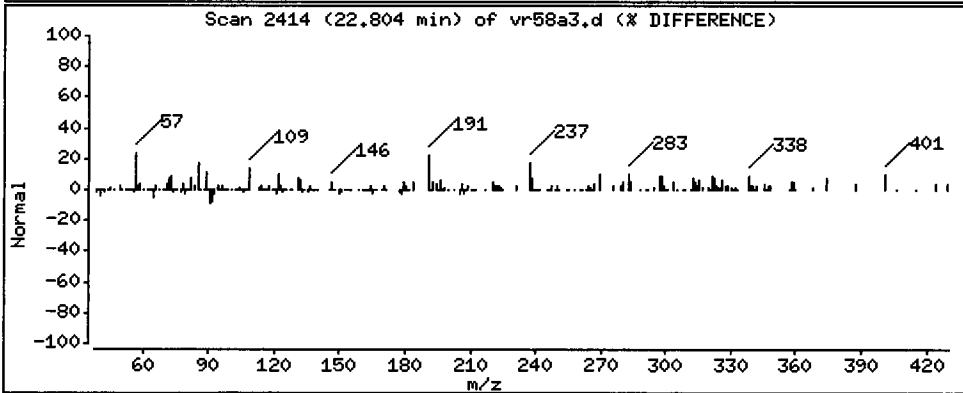
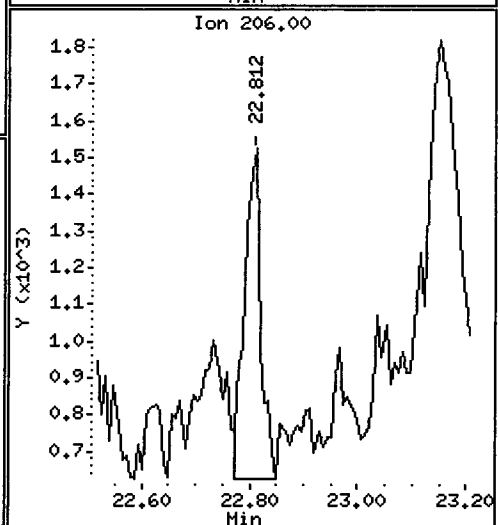
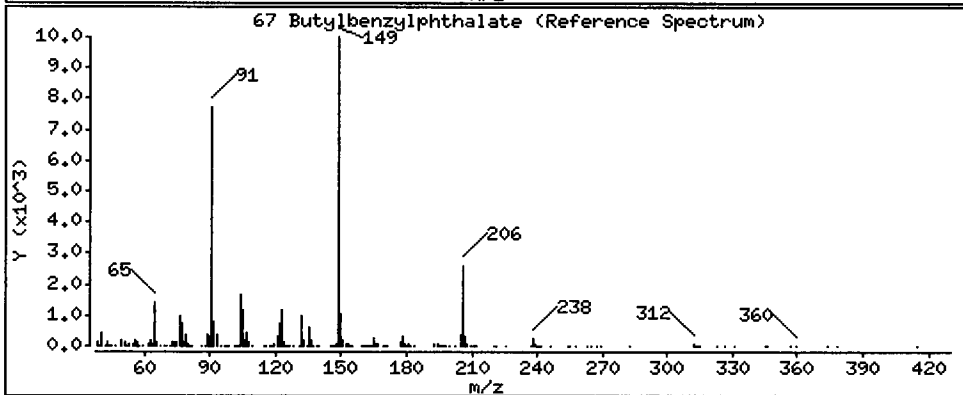
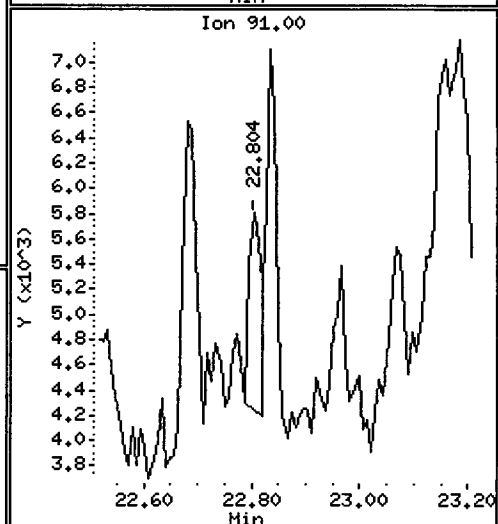
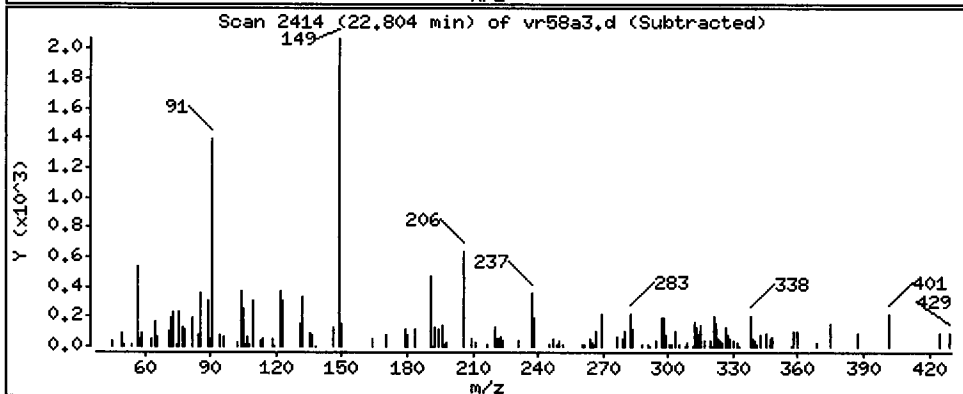
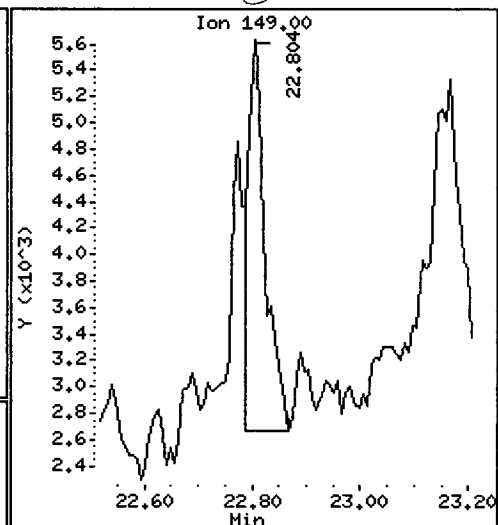
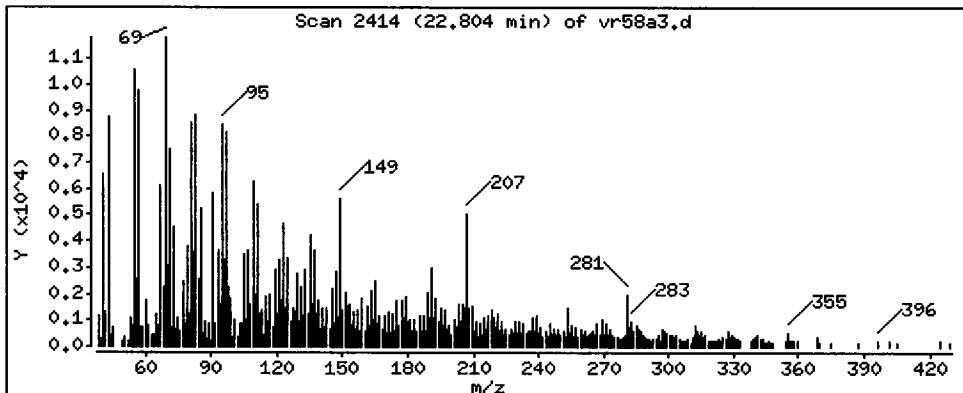
Column phase: ZB-5msi

Column diameter: 0.25

67 Butylbenzylphthalate

Concentration: 39.89 ug/kg

*Handwritten signature*





Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

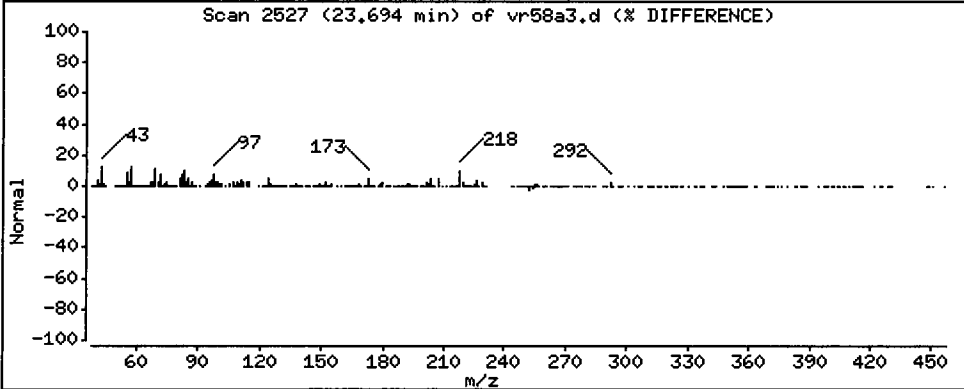
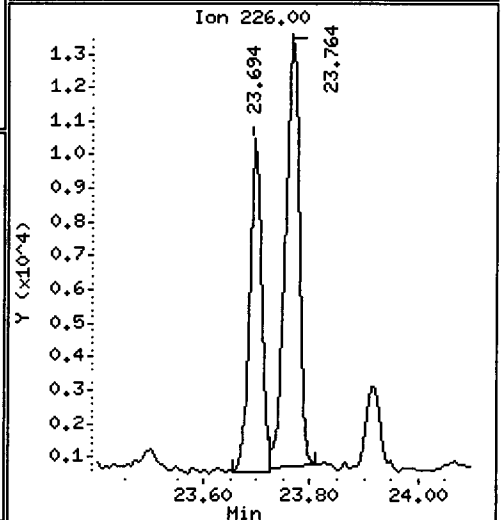
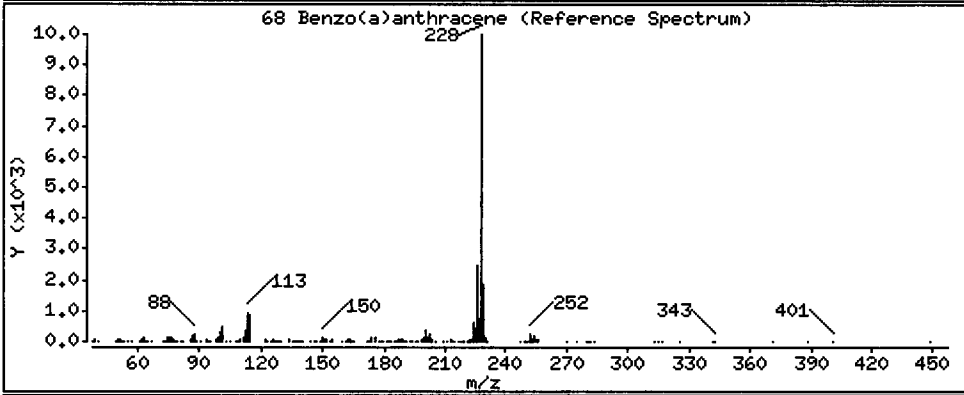
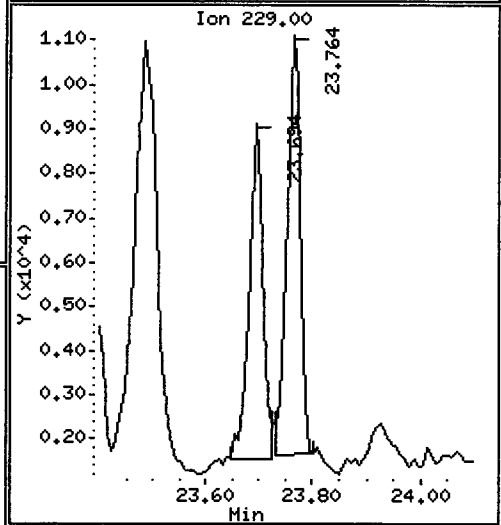
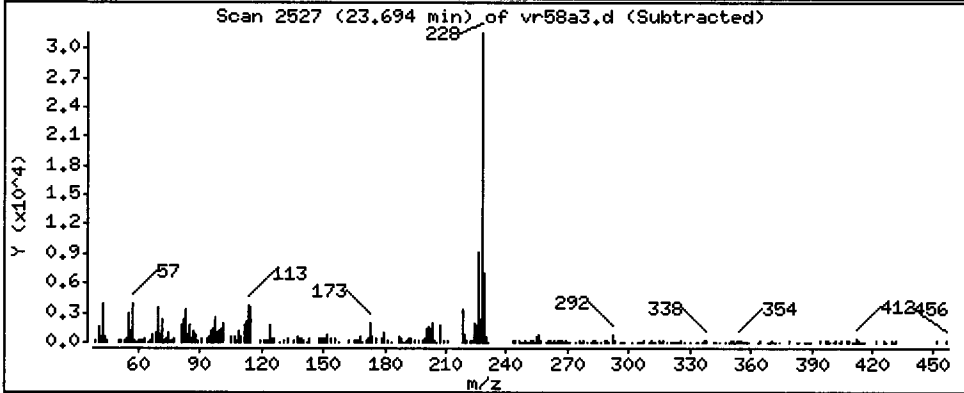
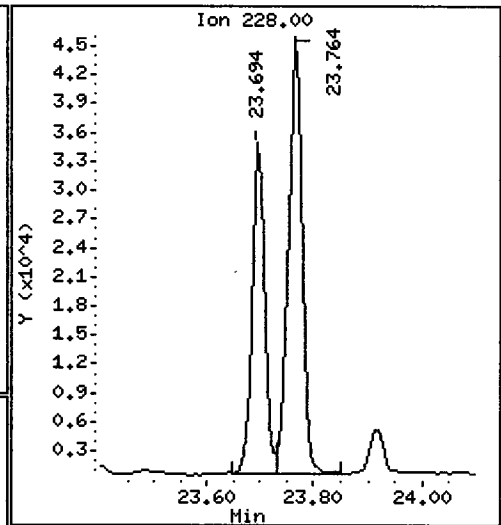
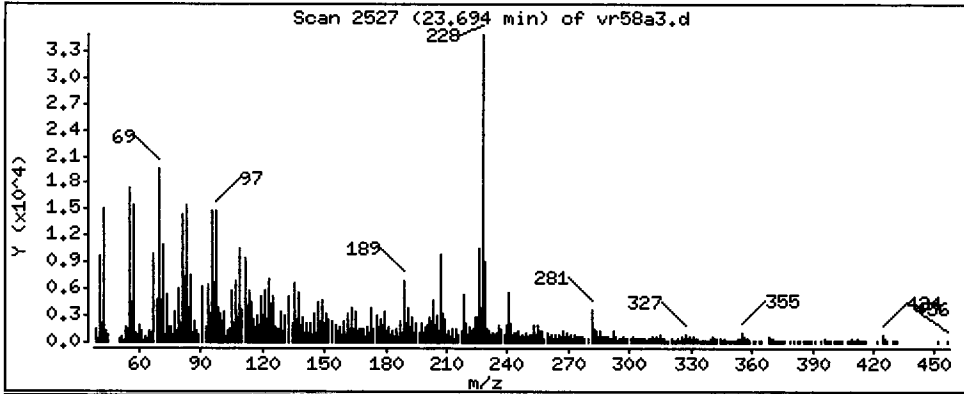
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

68 Benzo(a)anthracene

Concentration: 144.6 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

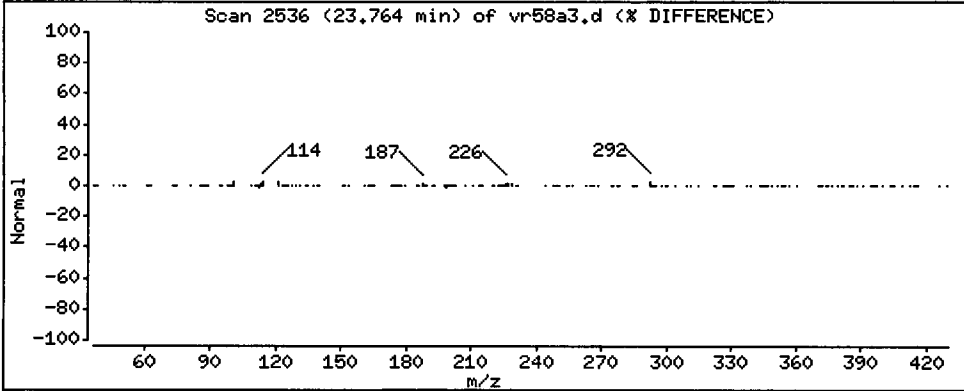
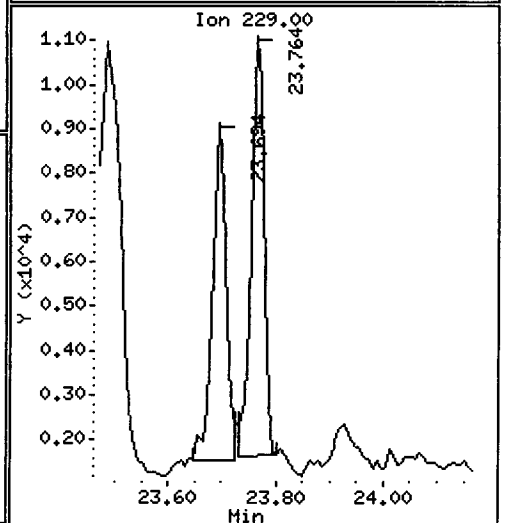
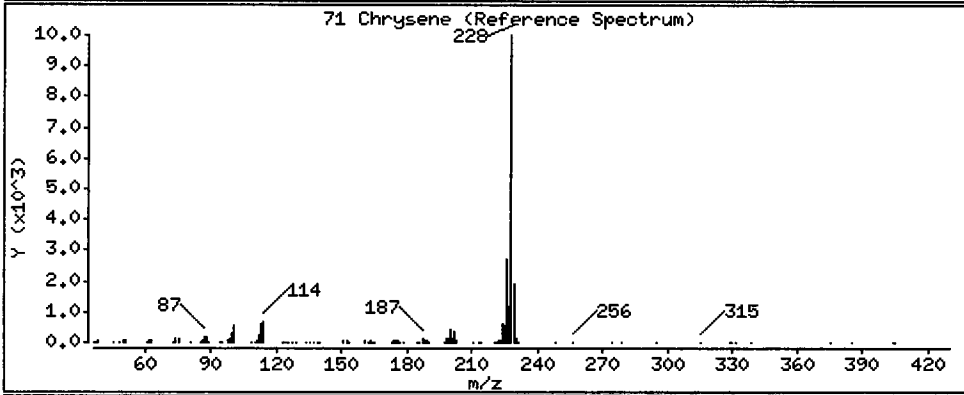
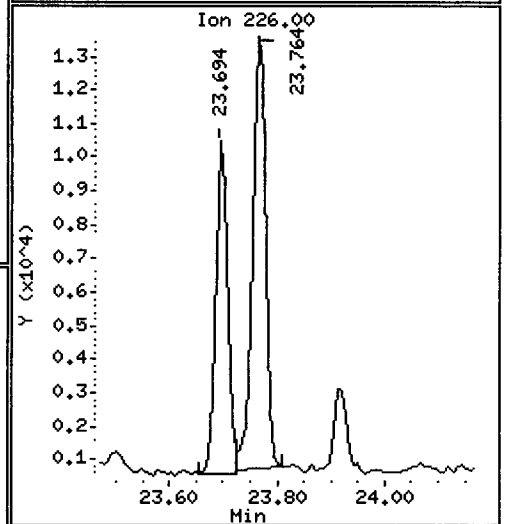
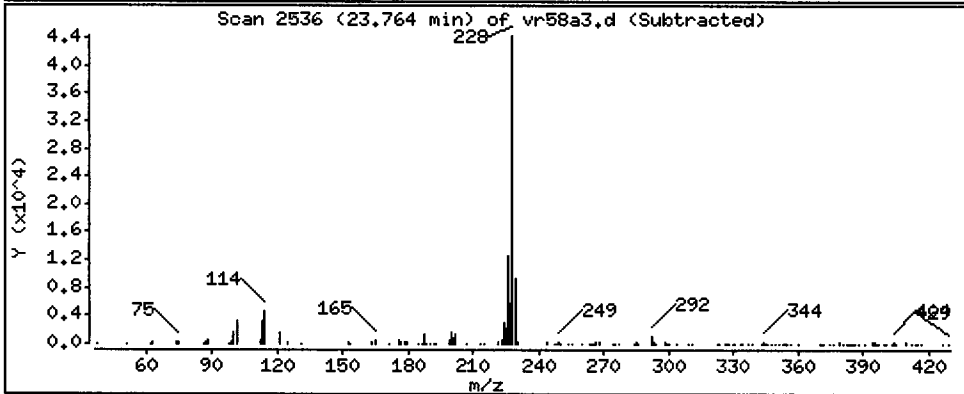
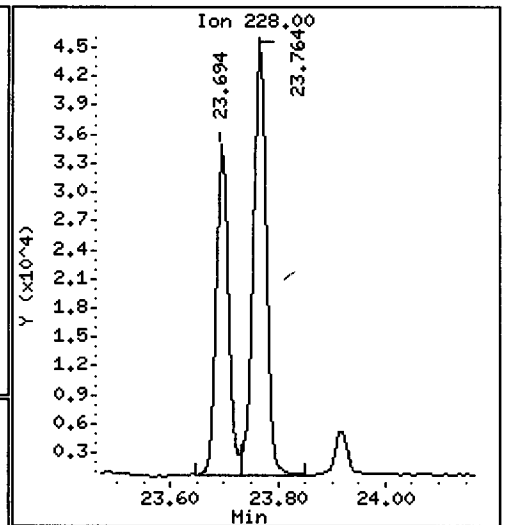
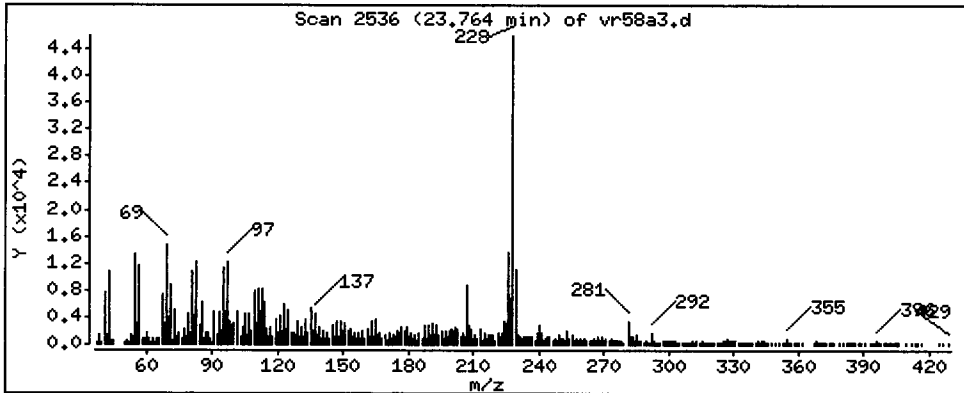
Operator: VTS

Column phase: ZB-5ms1

Column diameter: 0.25

71 Chrysene

Concentration: 225.4 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

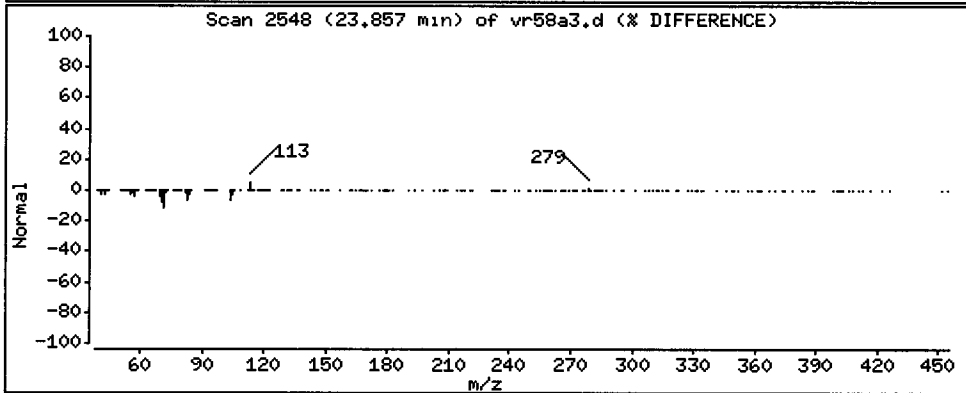
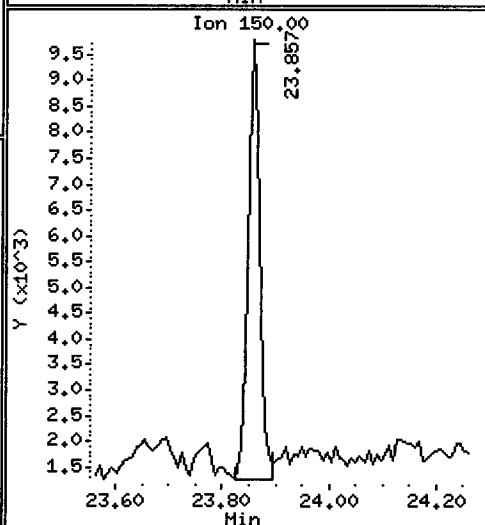
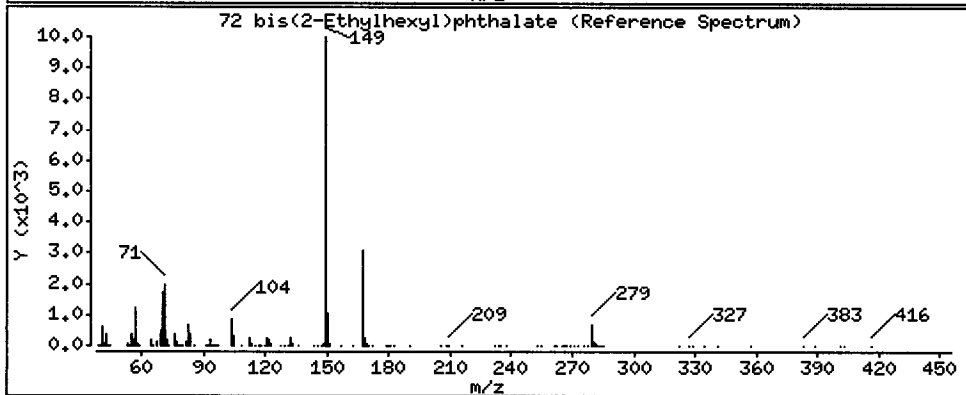
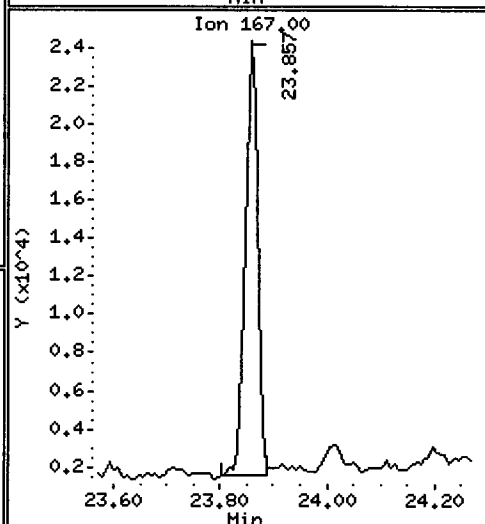
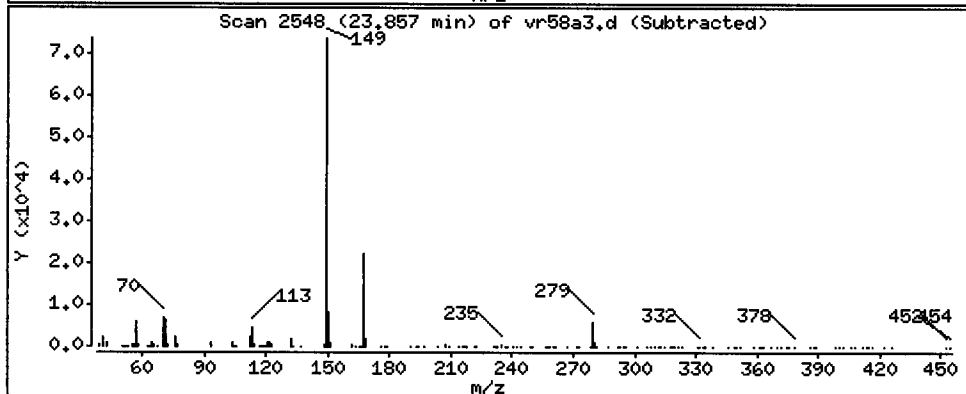
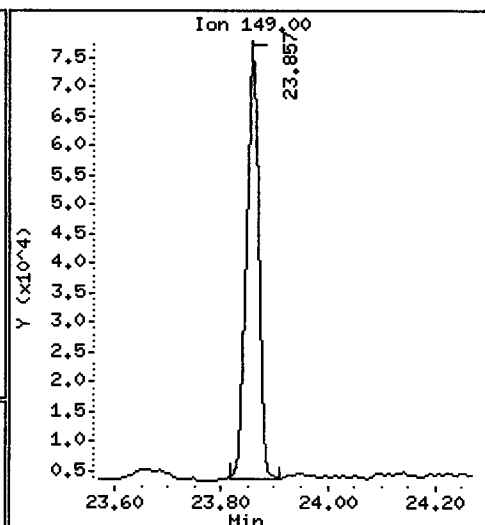
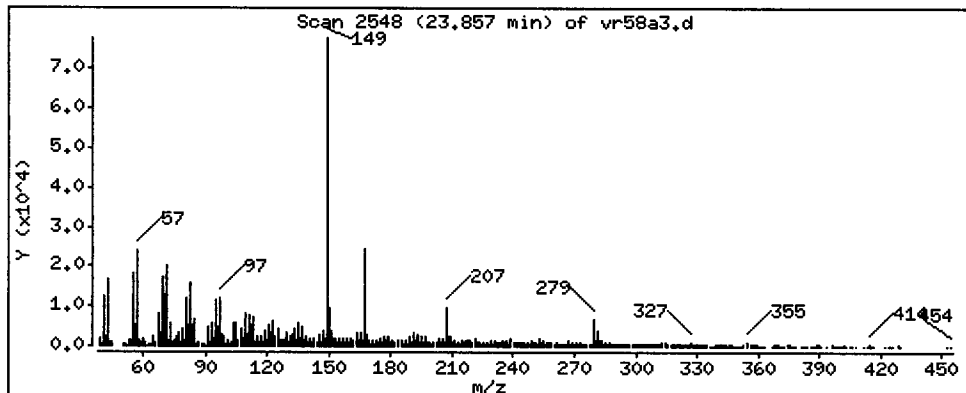
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 458.0 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

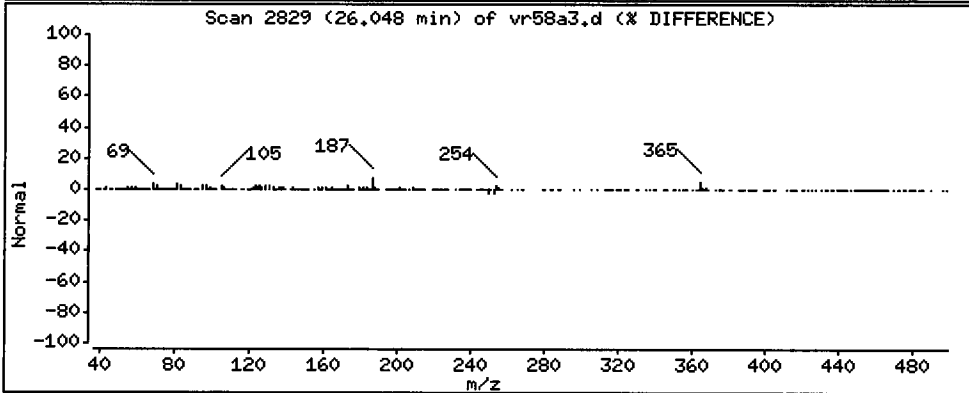
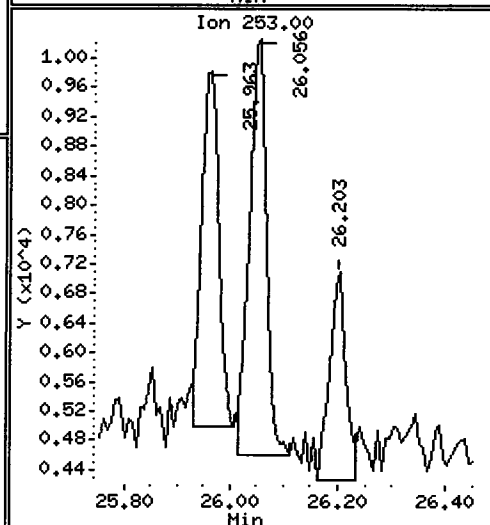
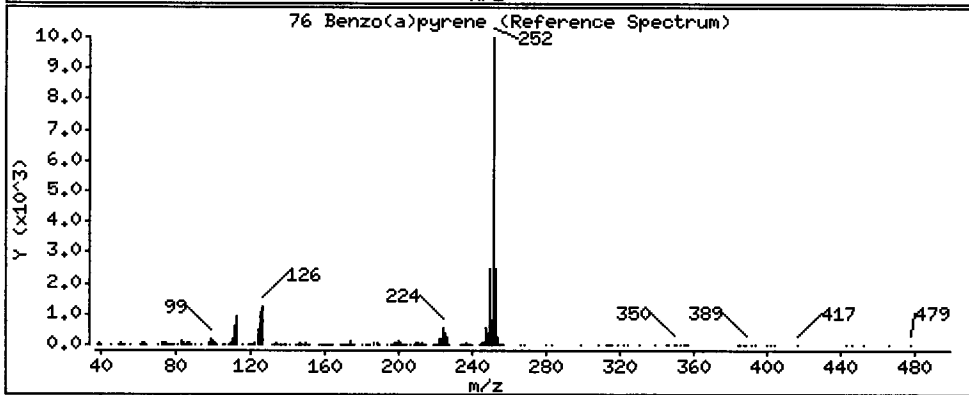
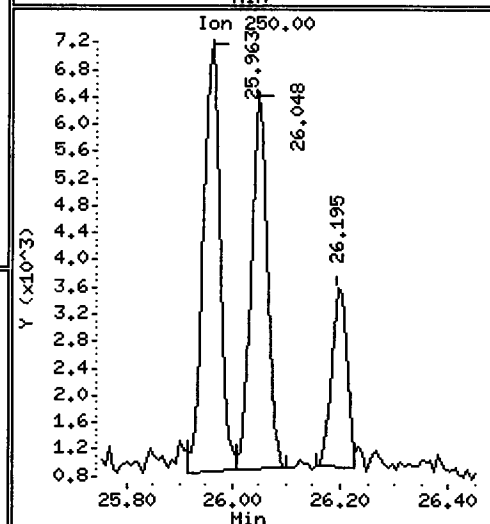
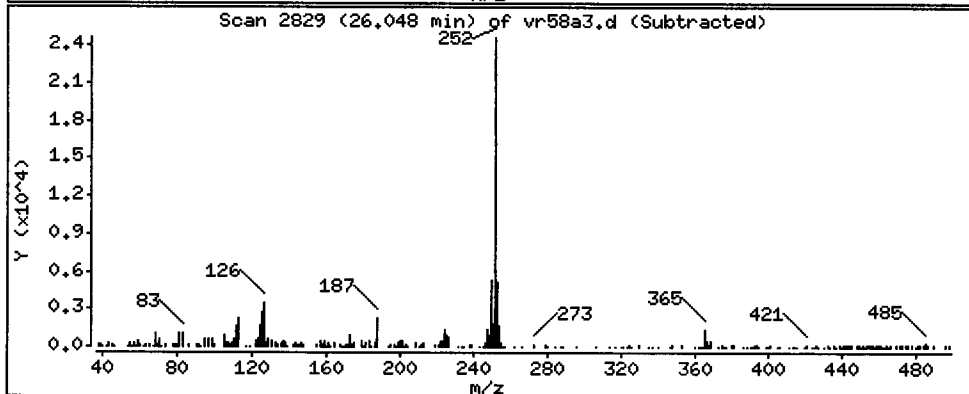
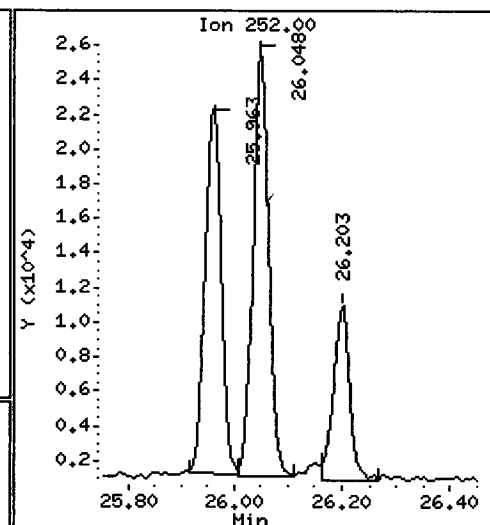
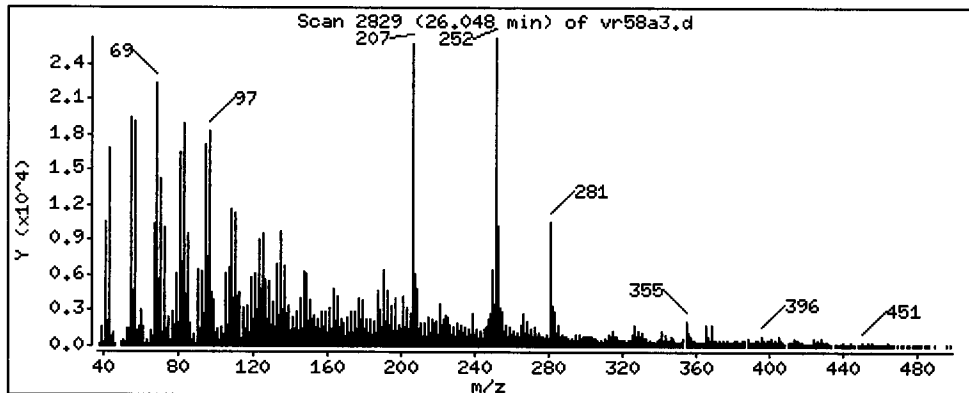
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

76 Benzo(a)pyrene

Concentration: 136.6 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

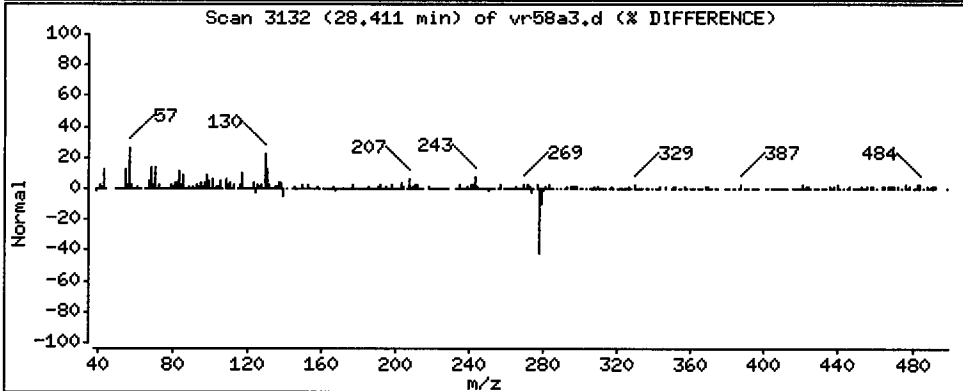
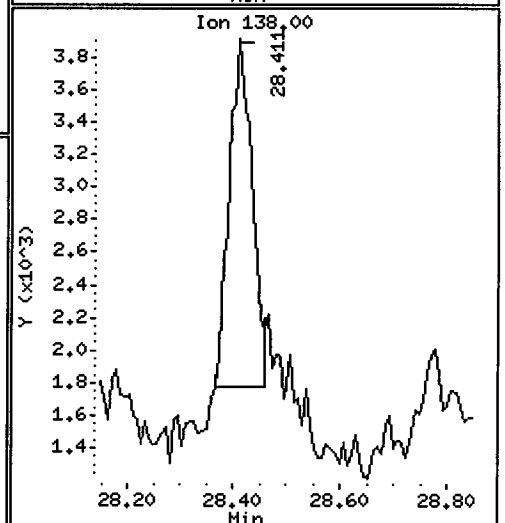
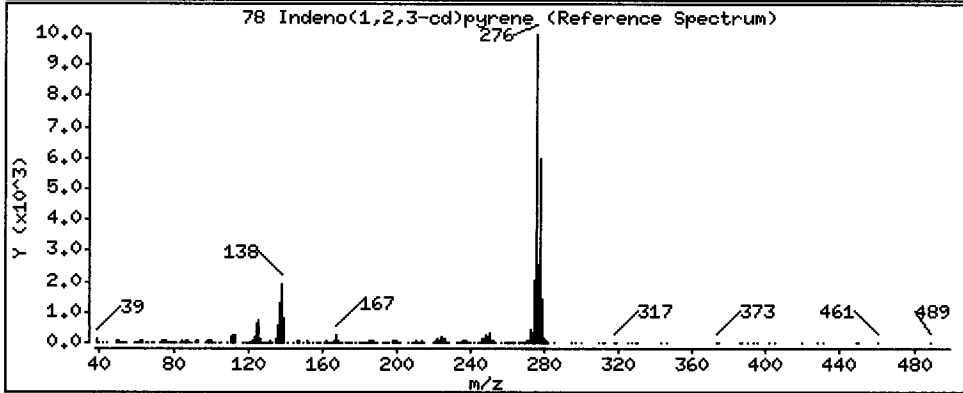
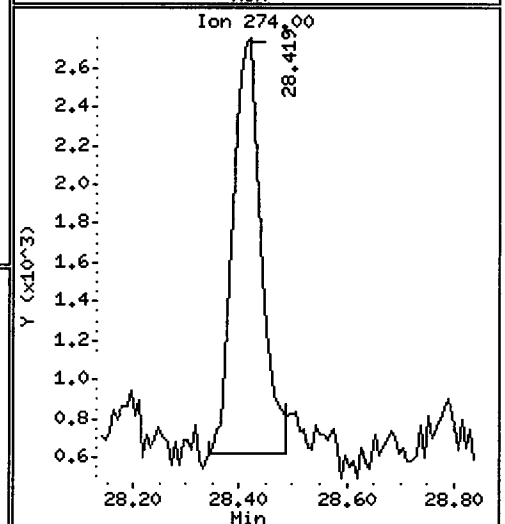
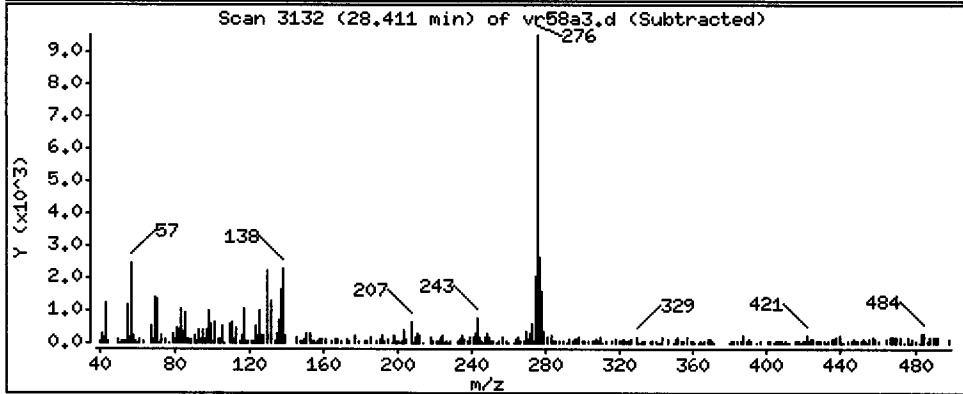
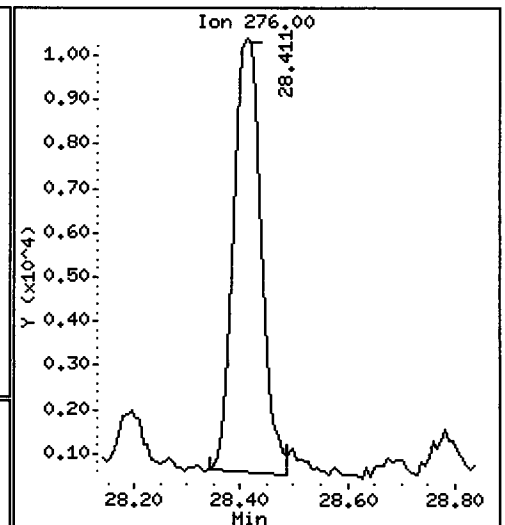
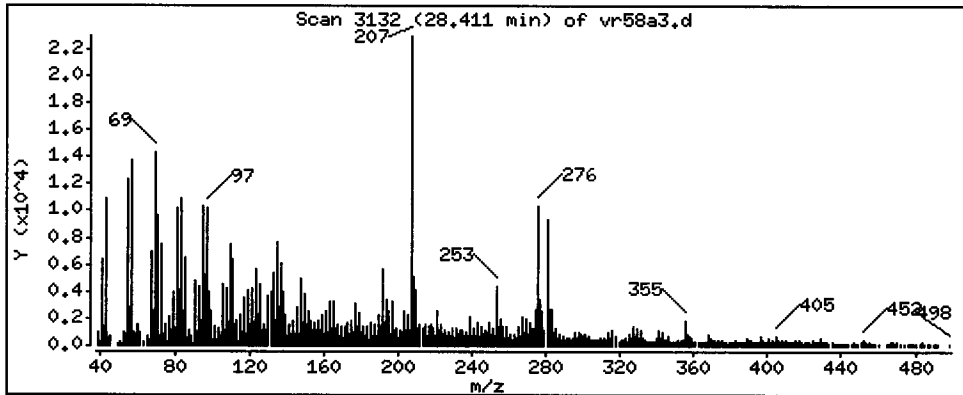
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

78 Indeno(1,2,3-cd)pyrene

Concentration: 83.54 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

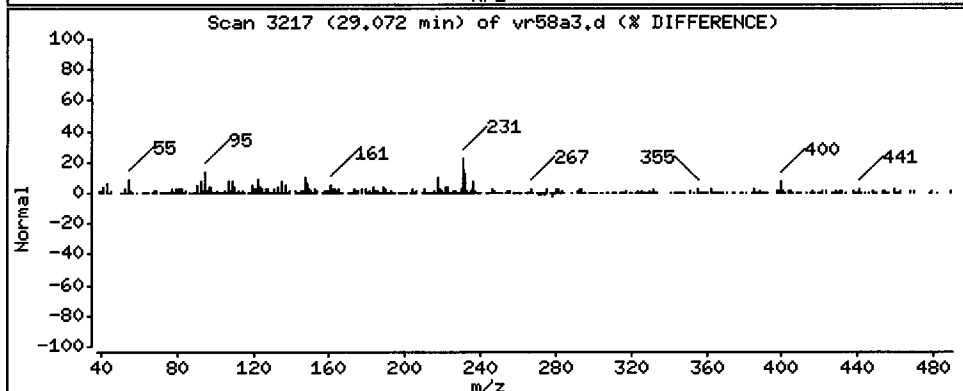
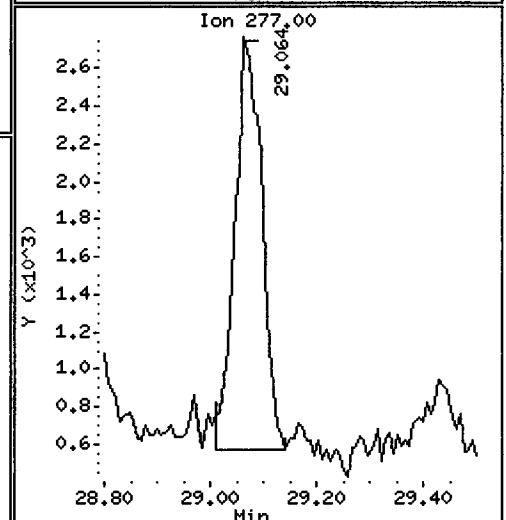
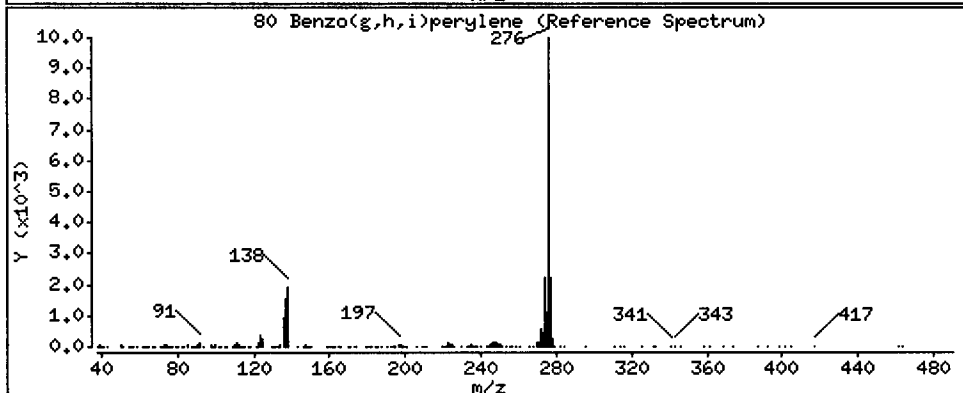
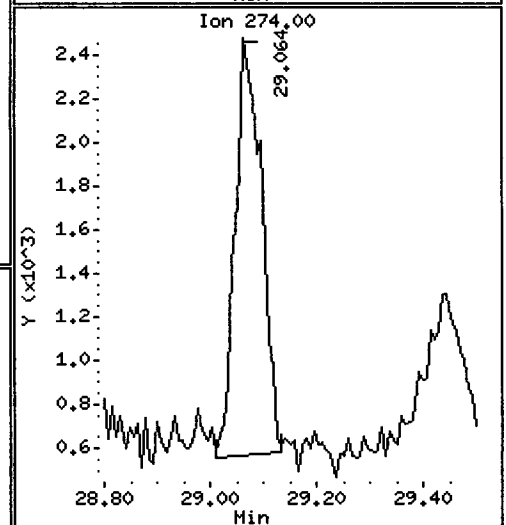
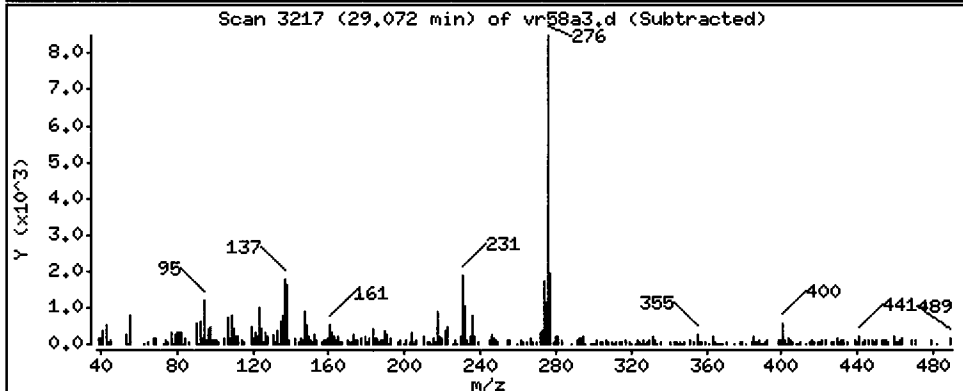
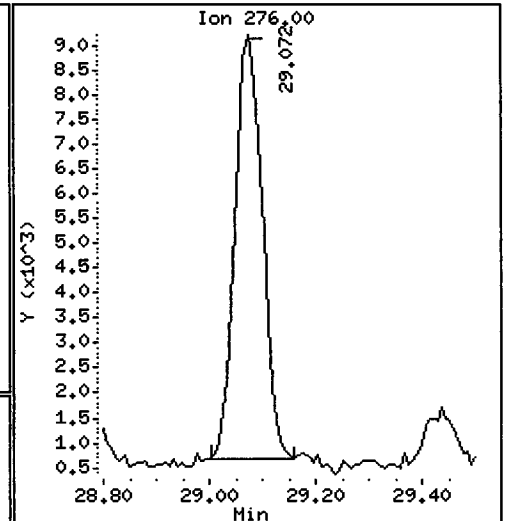
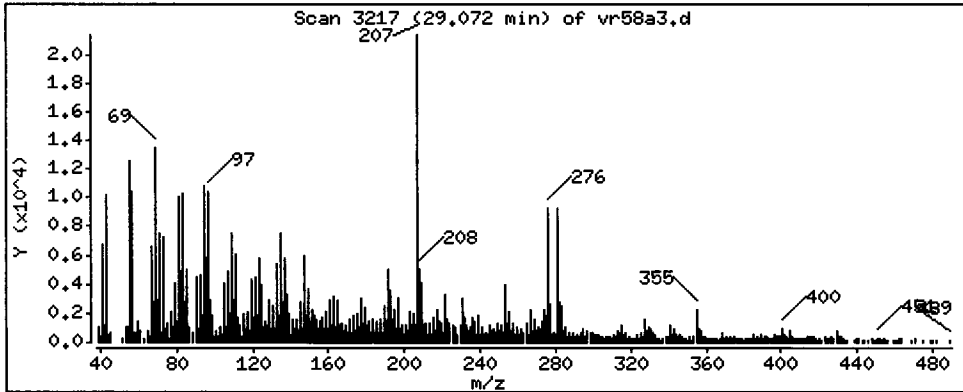
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

80 Benzo(g,h,i)perylene

Concentration: 83.86 ug/kg



Date : 05-DEC-2012 20:42

Client ID: SG-10-S-E-121107

Instrument: nt10.i

Sample Info: VR58A,3

Volume Injected (uL): 1.0

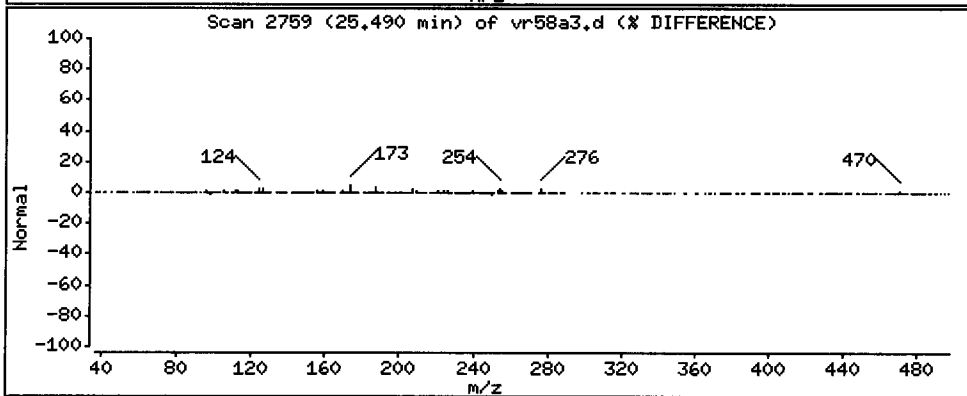
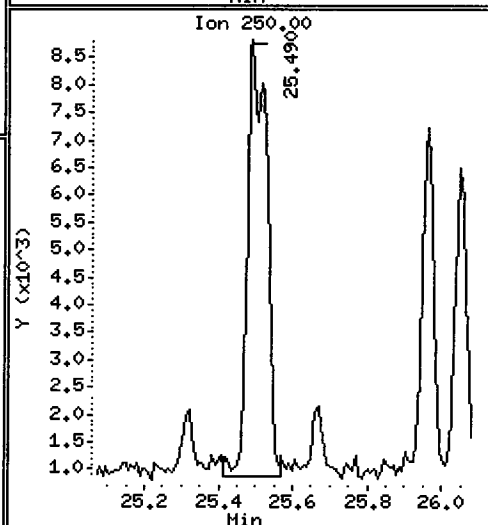
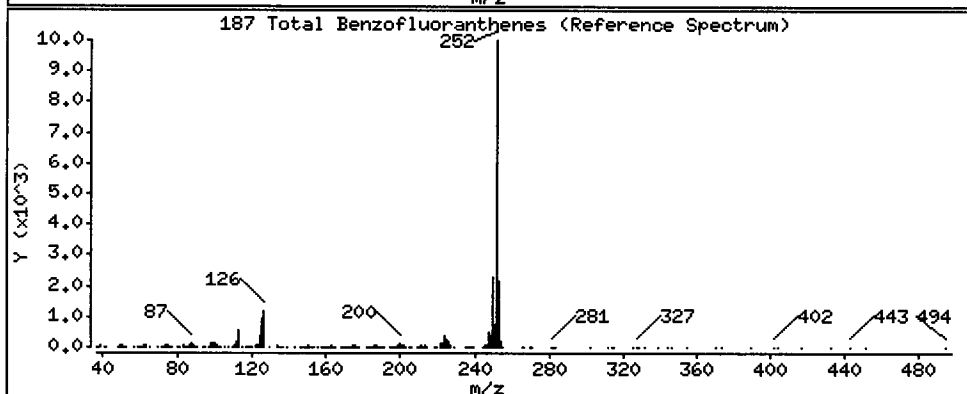
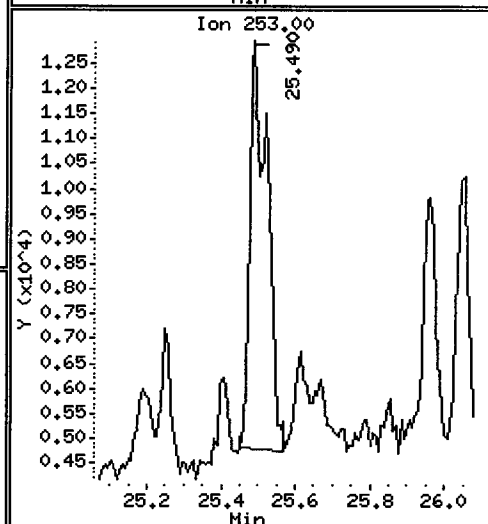
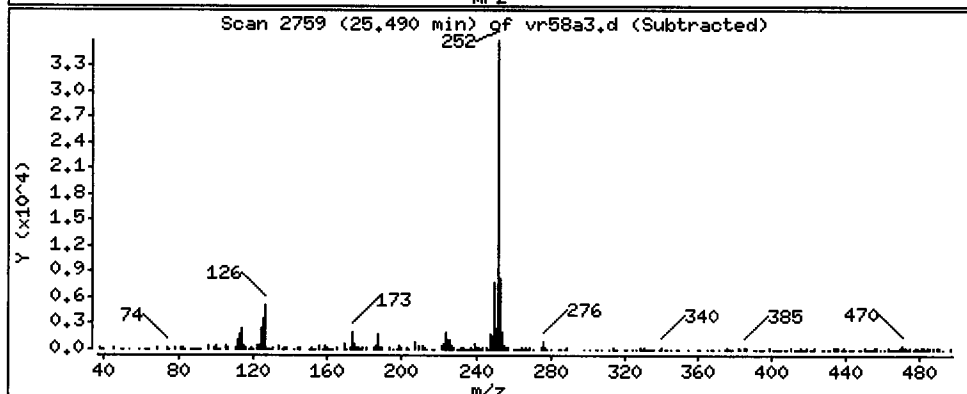
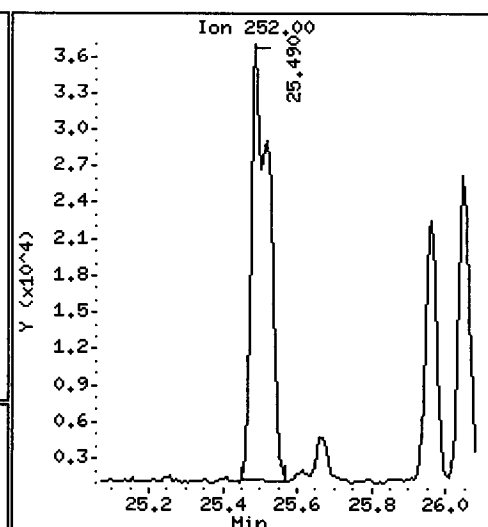
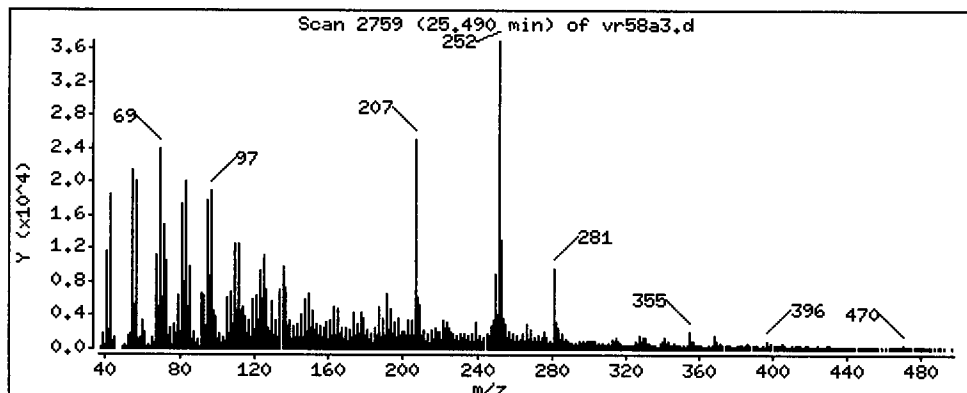
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

187 Total Benzofluoranthenes

Concentration: 307.6 ug/kg



CO-ELUTION SUMMARY FOR FILE - vr58a3.d

Lab ID: VR58A, Method: ABN.m, Instrument: nt10.i, Date: 05-DEC-2012

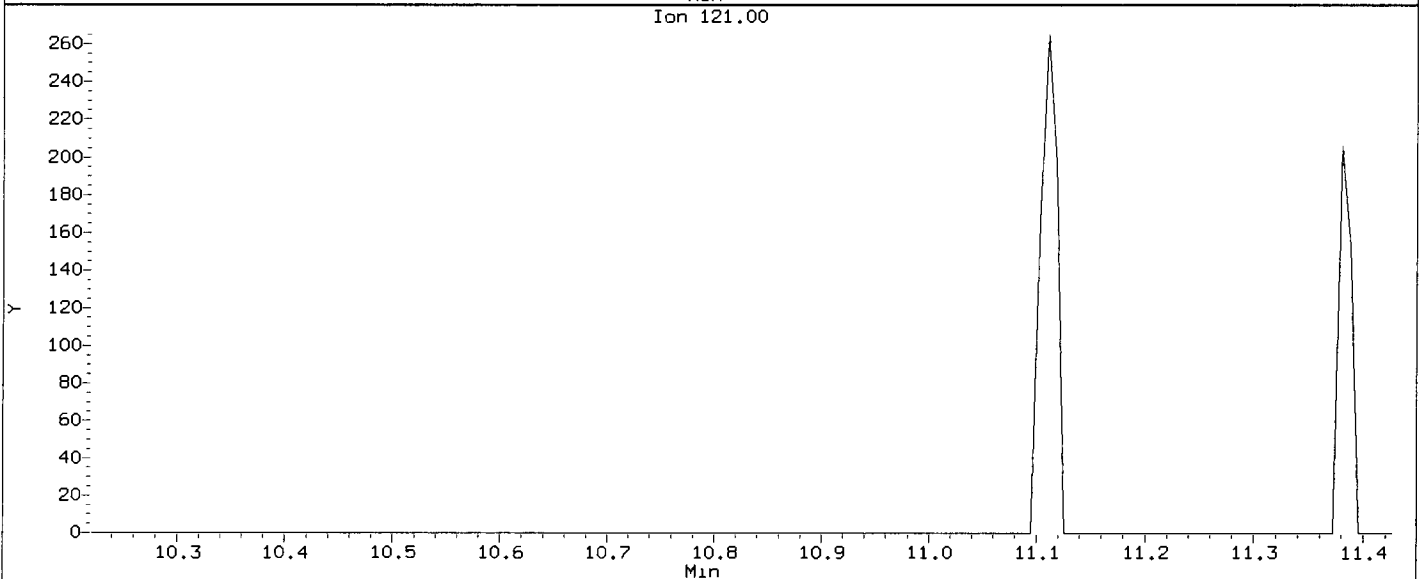
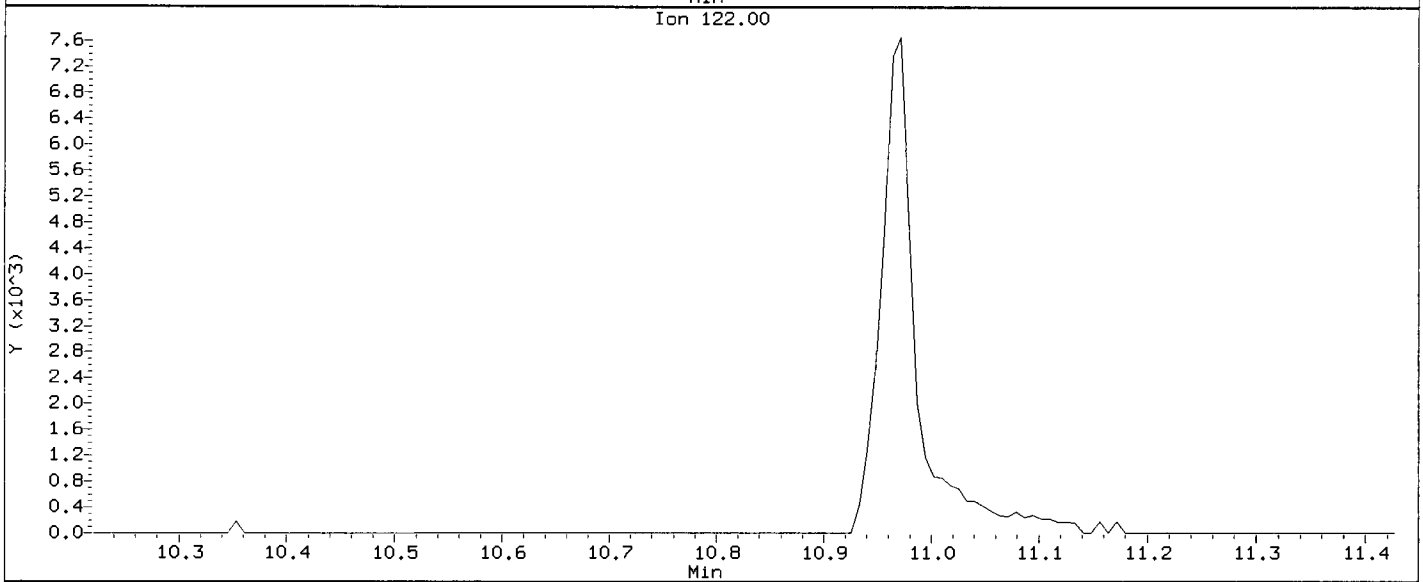
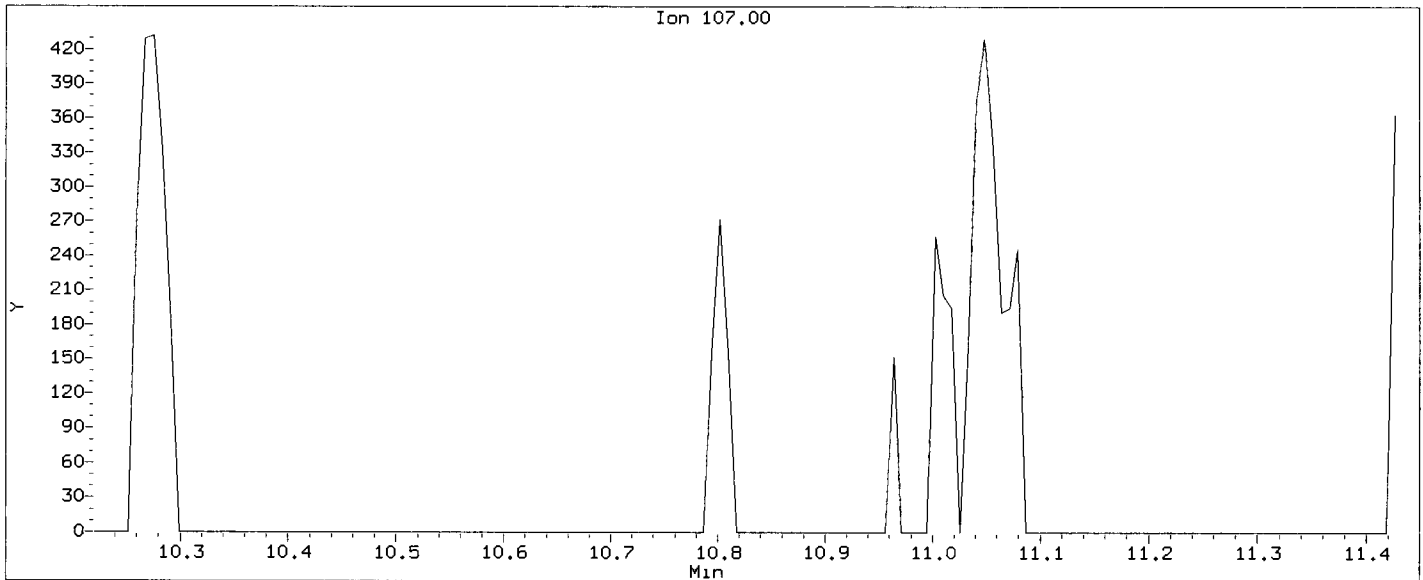
RT            CO-ELUTION COMPOUNDS

---



Data File: /chem1/nt10.1/20121205.b/vr58a3.d  
Injection Date: 05-DEC-2012 20:42  
Instrument: nt10.1  
Client Sample ID: SG-10-S-E-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121205.b/vr58b3.d  
 Lab Smp Id: VR58B Client Smp ID: SG-11-S-E-121107  
 Inj Date : 05-DEC-2012 21:19  
 Operator : VTS Inst ID: nt10.i  
 Smp Info : VR58B,3  
 Misc Info : 12-22330  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121205.b/ABN.m  
 Meth Date : 05-Dec-2012 12:41 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 17  
 Dil Factor: 3.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub  
 Target Version: 3.50  
 Processing Host: eserv3

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

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	51.30000	Weight of sample extracted (g)
M	80.10000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN	FINAL
								(ug/mL)	(ug/kg)
\$ 1 2-Fluorophenol	112			6.497	6.474	(0.740)	32063	1.34226	394.4
\$ 2 Phenol-d5	99			8.205	8.205	(0.934)	38326	1.29663	381.0
3 Phenol	94			8.228	8.228	(0.937)	15088	0.48456	142.4
\$ 5 2-Chlorophenol-d4	132			8.422	8.429	(0.959)	34787	1.36022	399.7
7 1,3-Dichlorobenzene	146			Compound Not Detected.					
* 8 1,4-Dichlorobenzene-d4	152			8.785	8.808	(1.000)	74673	4.00000	
9 1,4-Dichlorobenzene	146			Compound Not Detected.					
\$ 10 1,2-Dichlorobenzene-d4	152			9.165	9.189	(1.043)	16489	0.88421	259.8
12 1,2-Dichlorobenzene	146			Compound Not Detected.					
11 Benzyl alcohol	108			9.119	9.134	(1.038)	24170	1.64153	482.4
13 2-Methylphenol	108			Compound Not Detected.					
17 Hexachloroethane	117			Compound Not Detected.					
15 4-Methylphenol	108			9.701	9.709	(1.104)	7632	0.48079	141.3
\$ 18 Nitrobenzene-d5	82			9.965	9.988	(0.871)	22272	0.78428	230.5
22 2,4-Dimethylphenol	107			Compound Not Detected.					

Compounds	QUANT	SIG						CONCENTRATIONS	
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
24 Benzoic acid	105		11.025	11.118	(0.964)	75858	4.30438	1265	
26 1,2,4-Trichlorobenzene	180		Compound Not Detected.						
* 27 Naphthalene-d8	136		11.442	11.472	(1.000)	303062	4.00000		
28 Naphthalene	128		11.488	11.519	(1.004)	15071	0.20440	60.07	
30 Hexachlorobutadiene	225		Compound Not Detected.						
32 2-Methylnaphthalene	142		Compound Not Detected.						
\$ 36 2-Fluorobiphenyl	172		13.847	13.894	(0.904)	72253	0.96529	283.7	
39 Dimethylphthalate	163		Compound Not Detected.						
40 Acenaphthylene	152		Compound Not Detected.						
* 42 Acenaphthene-d10	164		15.326	15.372	(1.000)	211481	4.00000		
44 Acenaphthene	153		Compound Not Detected.						
46 Dibenzofuran	168		Compound Not Detected.						
50 Diethylphthalate	149		16.431	16.493	(1.072)	8953	0.12520	36.79	
49 Fluorene	166		16.516	16.570	(1.078)	7320	0.10406	30.58	
54 N-Nitrosodiphenylamine	169		Compound Not Detected.						
\$ 55 2,4,6-Tribromophenol	330		17.110	17.156	(1.116)	23264	1.86749	548.8	
57 Hexachlorobenzene	284		Compound Not Detected.						
58 Pentachlorophenol	266		Compound Not Detected.						
* 59 Phenanthrene-d10	188		18.609	18.656	(1.000)	387113	4.00000		
60 Phenanthrene	178		18.656	18.702	(1.002)	66178	0.69045	202.9	
61 Anthracene	178		18.756	18.803	(1.008)	23530	0.22839	67.12	
63 Di-n-butylphthalate	149		Compound Not Detected.						
64 Fluoranthene	202		21.101	21.139	(1.134)	185050	1.53172	450.1	
65 Pyrene	202		21.526	21.565	(0.907)	168387	1.43694	422.3	
\$ 66 Terphenyl-d14	244		21.851	21.898	(0.921)	95833	1.22344	359.5	
67 Butylbenzylphthalate	149		Compound Not Detected.						
68 Benzo(a)anthracene	228		23.702	23.748	(0.999)	59808	0.52607	154.6	
* 69 Chrysene-d12	240		23.733	23.771	(1.000)	400002	4.00000		
71 Chrysene	228		23.771	23.818	(1.002)	108877	1.07799	316.8	
72 bis(2-Ethylhexyl)phthalate	149		23.864	23.918	(0.960)	314541	4.30550	1265	
* 134 Di-n-octylphthalate-d4	153		24.848	24.902	(1.000)	529472	4.00000		
73 Di-n-octylphthalate	149		24.863	24.909	(1.001)	31070	0.25886	76.07	
76 Benzo(a)pyrene	252		26.063	26.102	(0.996)	52341	0.50229	147.6	
* 77 Perylene-d12	264		26.164	26.210	(1.000)	365130	4.00000		
78 Indeno(1,2,3-cd)pyrene	276		28.442	28.489	(1.087)	39406	0.33368	98.06	
79 Dibenzo(a,h)anthracene	278		28.450	28.512	(1.087)	11694	0.12478	36.67 (M)	
80 Benzo(g,h,i)perylene	276		29.126	29.149	(1.113)	36692	0.36303	106.7	
105 1-methylnaphthalene	142		Compound Not Detected.						
187 Total Benzofluoranthenes	252		25.498	25.575	(0.975)	149467	1.39104	408.8	
98 Retene	219		Compound Not Detected.						
120 2,3,4,6-Tetrachlorophenol	232		Compound Not Detected.						

QC Flag Legend

M - Compound response manually integrated.

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12.9.12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58b3.d  
 Lab Smp Id: VR58B  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem1/nt10.i/20121205.b/ABN.m  
 Misc Info: 12-22330

Calibration Date: 05-DEC-2012  
 Calibration Time: 11:49  
 Client Smp ID: SG-11-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	74673	-8.46
27 Naphthalene-d8	299399	149700	598798	303062	1.22
42 Acenaphthene-d10	178564	89282	357128	211481	18.43
59 Phenanthrene-d10	305410	152705	610820	387113	26.75
69 Chrysene-d12	323853	161926	647706	400002	23.51
134 Di-n-octylphthala	427845	213922	855690	529472	23.75
77 Perylene-d12	305316	152658	610632	365130	19.59

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.81	8.31	9.31	8.79	-0.26
27 Naphthalene-d8	11.47	10.97	11.97	11.44	-0.27
42 Acenaphthene-d10	15.37	14.87	15.87	15.33	-0.30
59 Phenanthrene-d10	18.66	18.16	19.16	18.61	-0.25
69 Chrysene-d12	23.77	23.27	24.27	23.73	-0.16
134 Di-n-octylphthala	24.90	24.40	25.40	24.85	-0.22
77 Perylene-d12	26.21	25.71	26.71	26.16	-0.18

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58B  
Level: LOW  
Data Type: MS DATA  
SpikeList File: SINSB.spk  
Sublist File: SHORTPSDDA.sub  
Method File: /chem1/nt10.i/20121205.b/ABN.m  
Misc Info: 12-22330

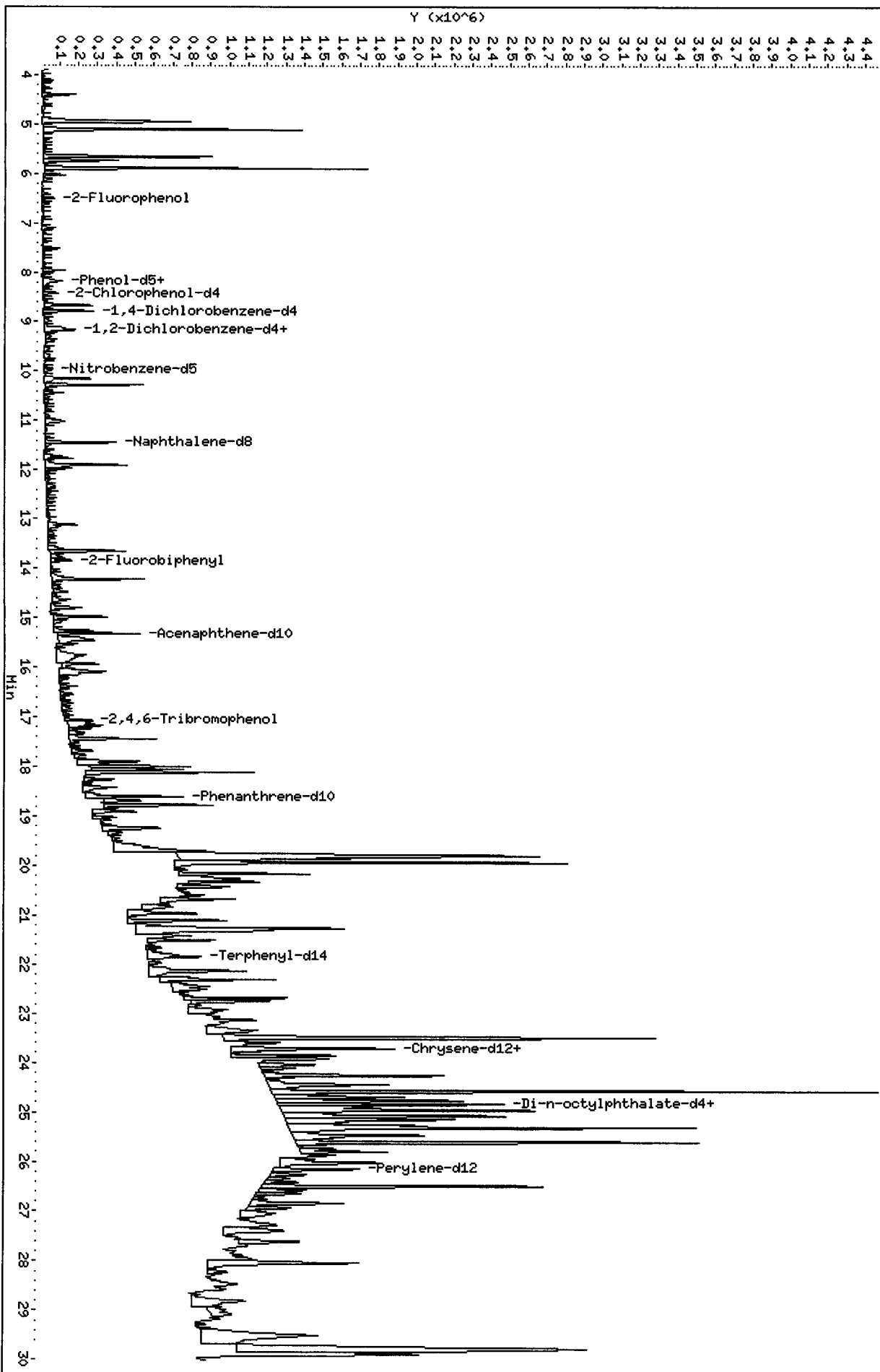
Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-11-S-E-121107  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	734.7	394.4	53.69	30-160
\$ 2 Phenol-d5	734.7	381.0	51.87	30-160
\$ 5 2-Chlorophenol-d4	734.7	399.7	54.41	30-160
\$ 10 1,2-Dichlorobenzen	489.8	259.8	53.05	30-160
\$ 18 Nitrobenzene-d5	489.8	230.5	47.06	30-160
\$ 36 2-Fluorobiphenyl	489.8	283.7	57.92	30-160
\$ 55 2,4,6-Tribromophen	734.7	548.8	74.70	30-160
\$ 66 Terphenyl-d14	489.8	359.5	73.41	30-160

Data File: /chem1/nt10.i/20121205.b/vr58b3.d  
Date : 05-DEC-2012 21:19  
Client ID: SG-11-S-E-121107  
Sample Info: VR58B,3  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.i  
Operator: VTS  
Column diameter: 0.25

/chem1/nt10.i/20121205.b/vr58b3.d



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

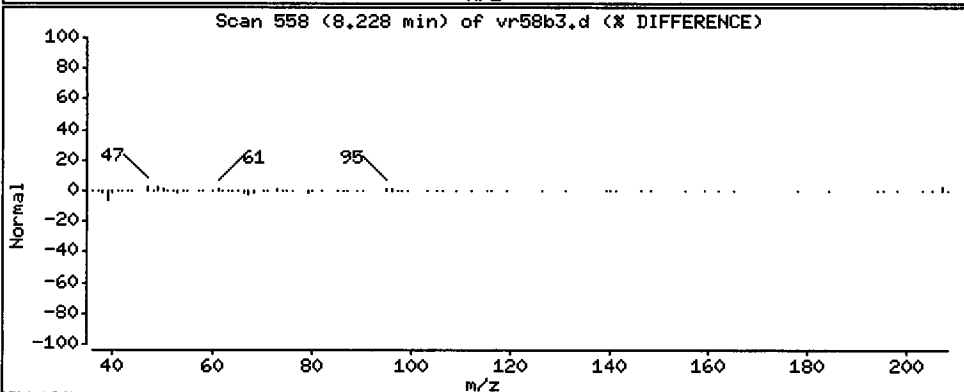
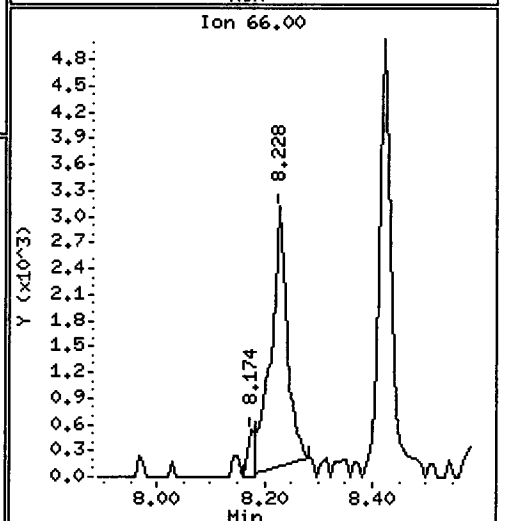
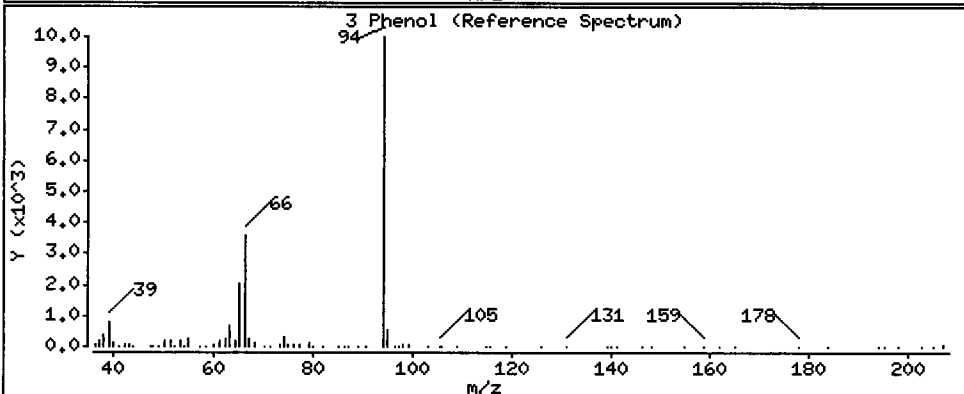
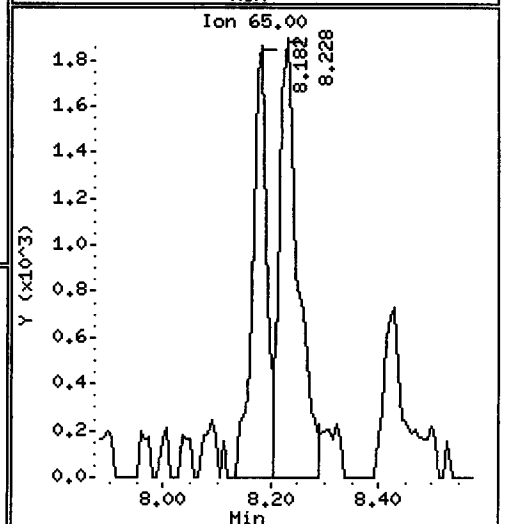
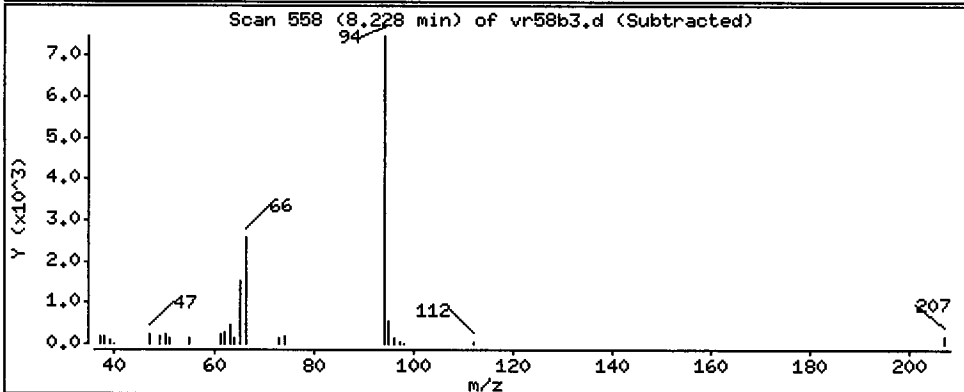
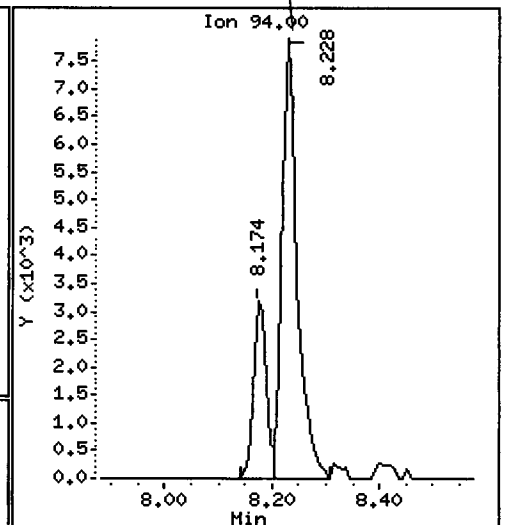
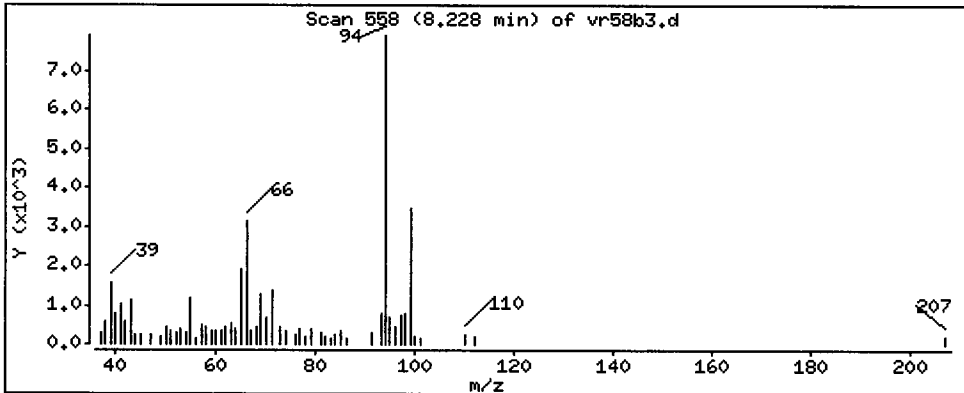
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 142.4 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

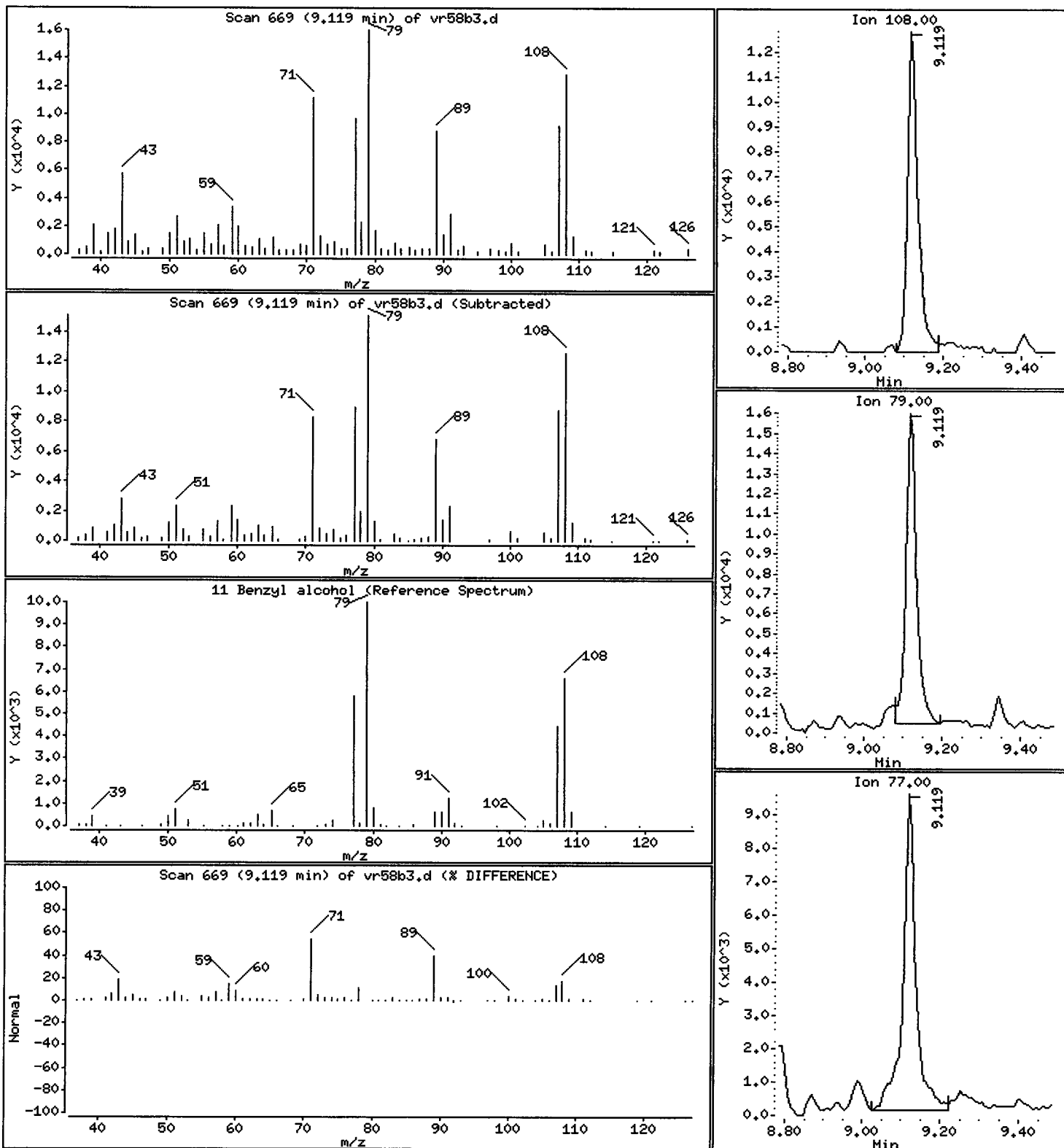
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 482.4 ug/kg





Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

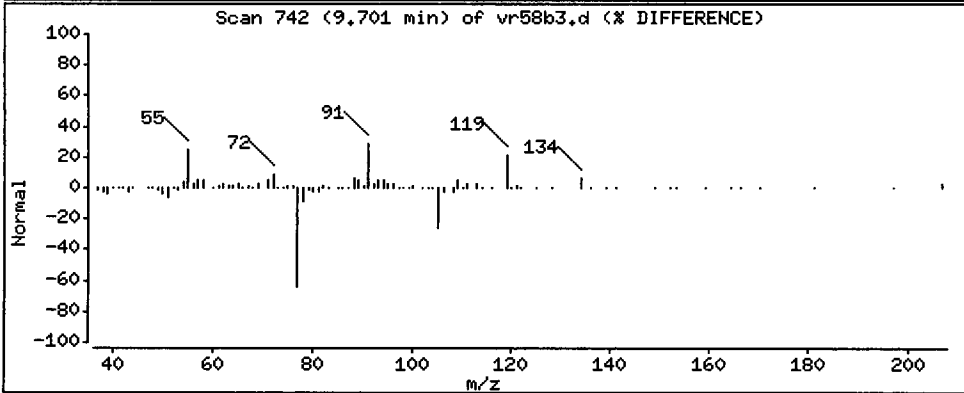
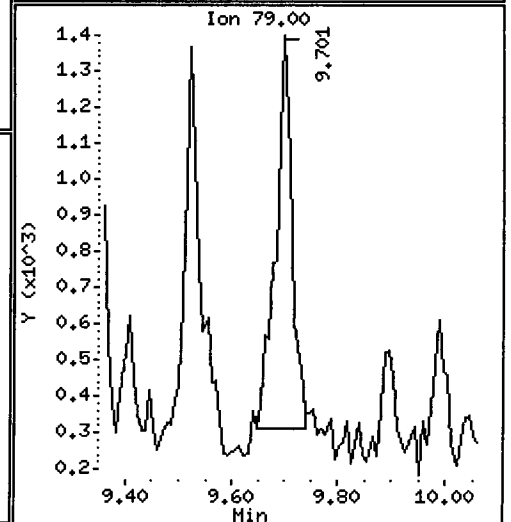
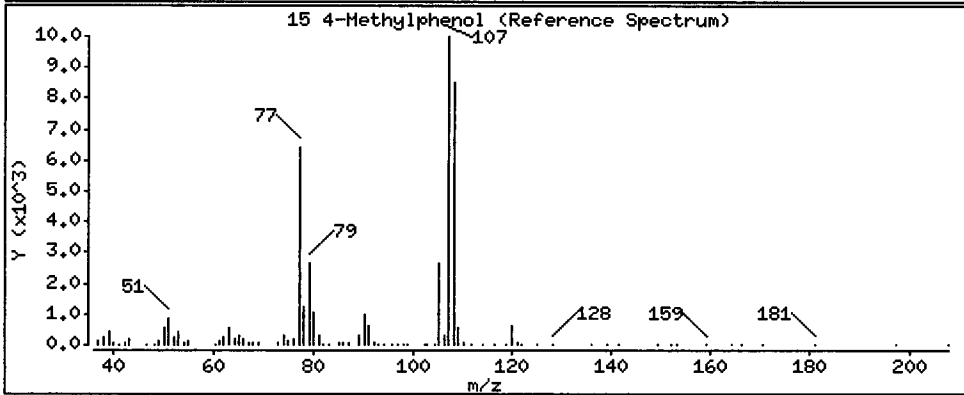
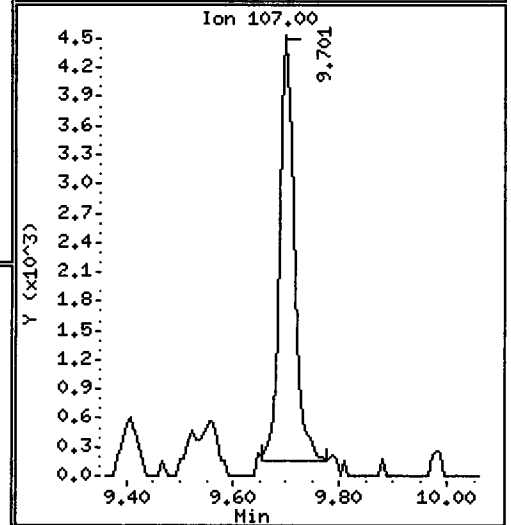
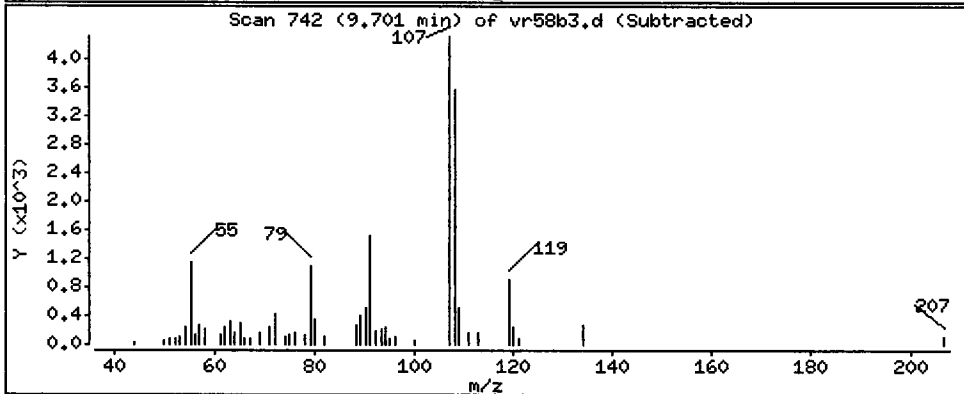
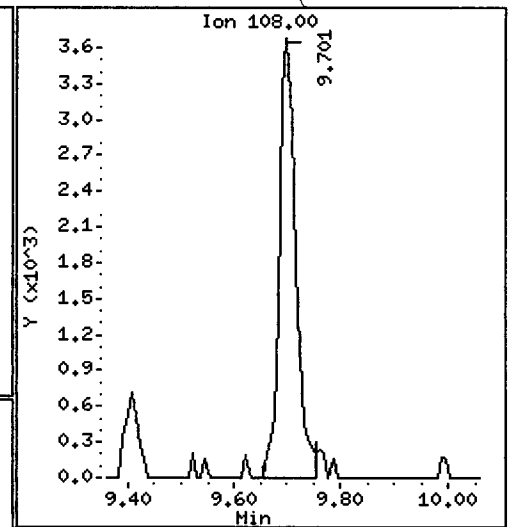
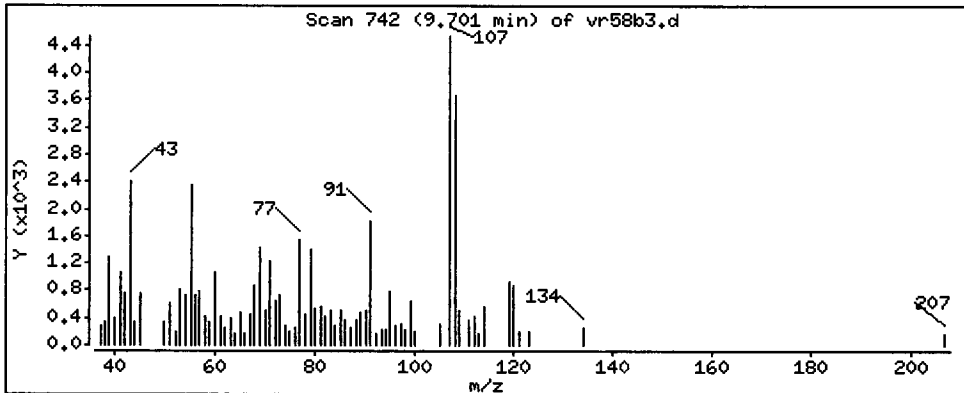
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 141.3 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

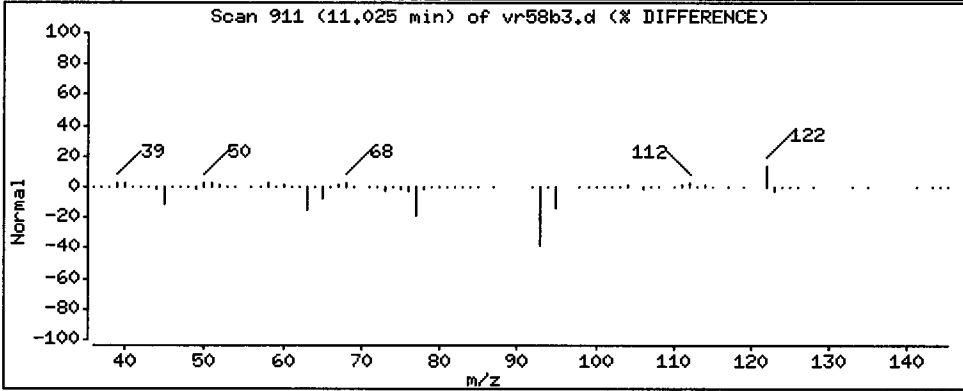
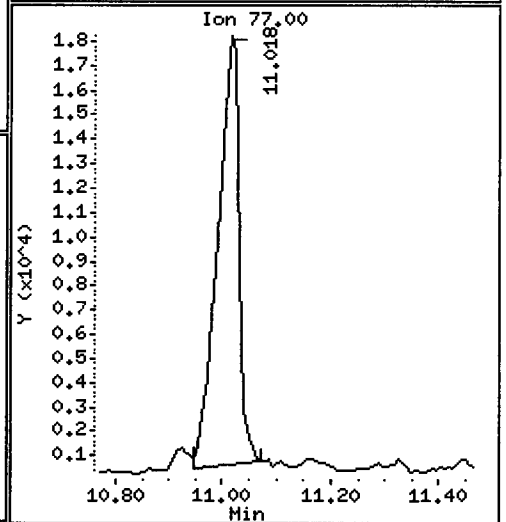
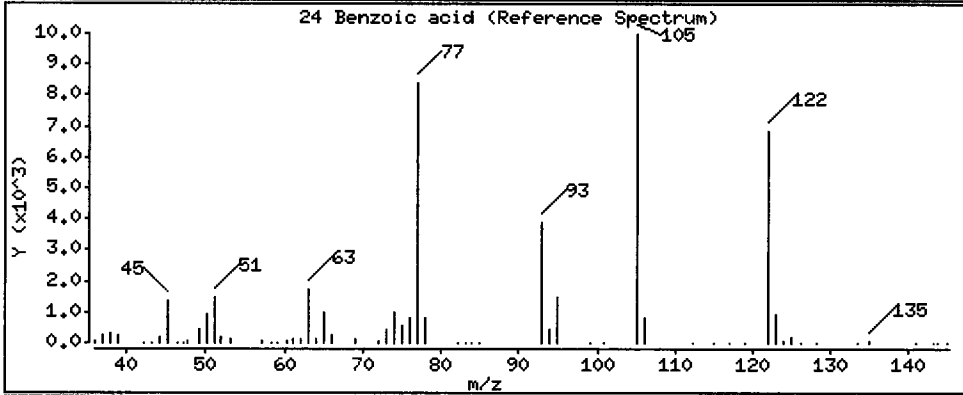
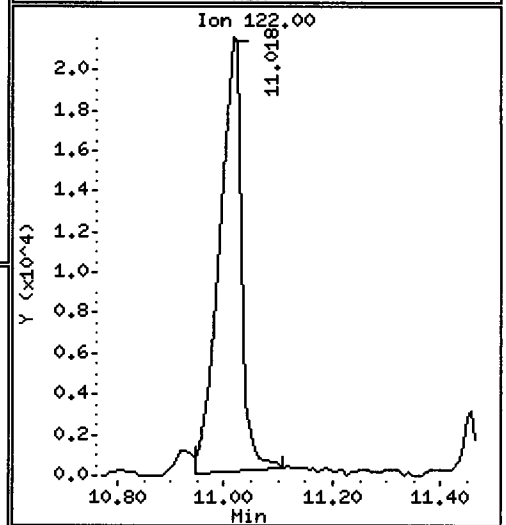
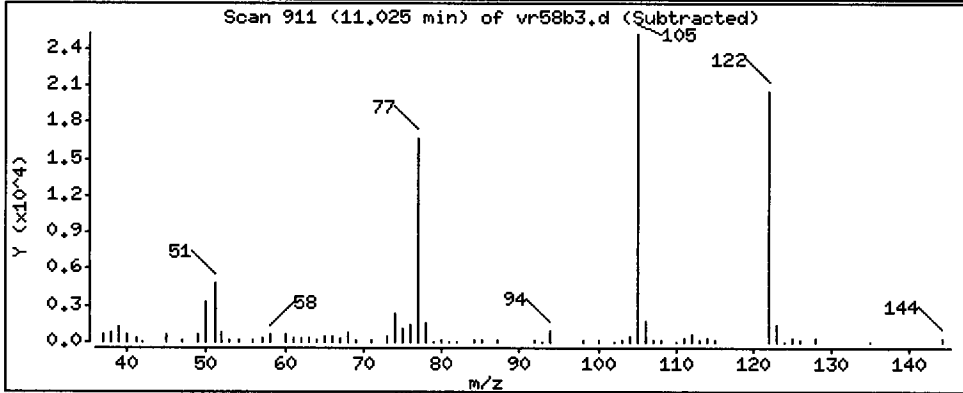
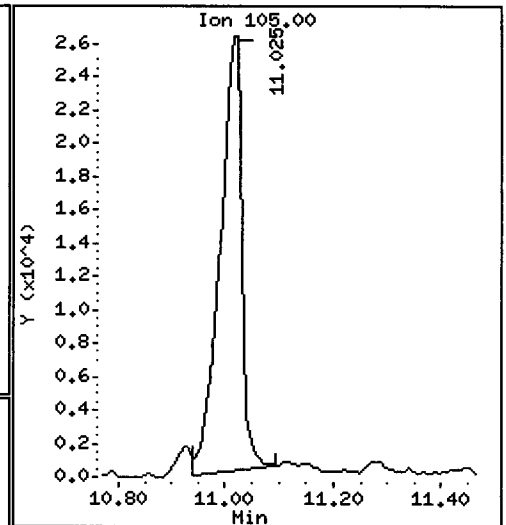
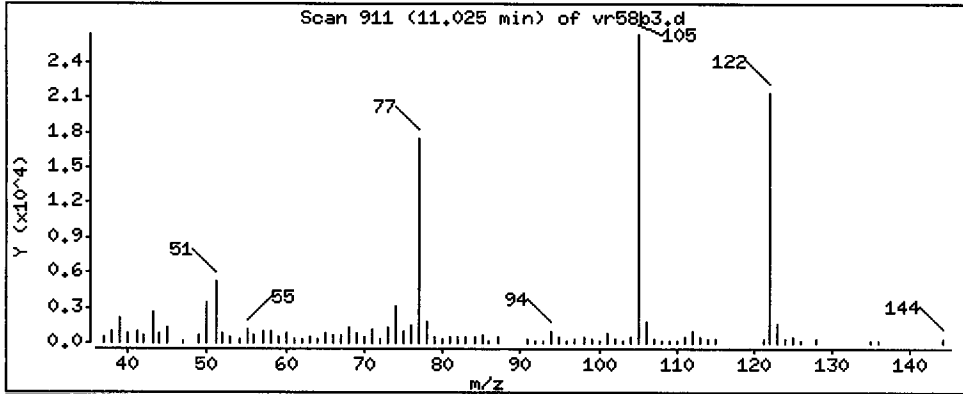
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

24 Benzoic acid

Concentration: 1265 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

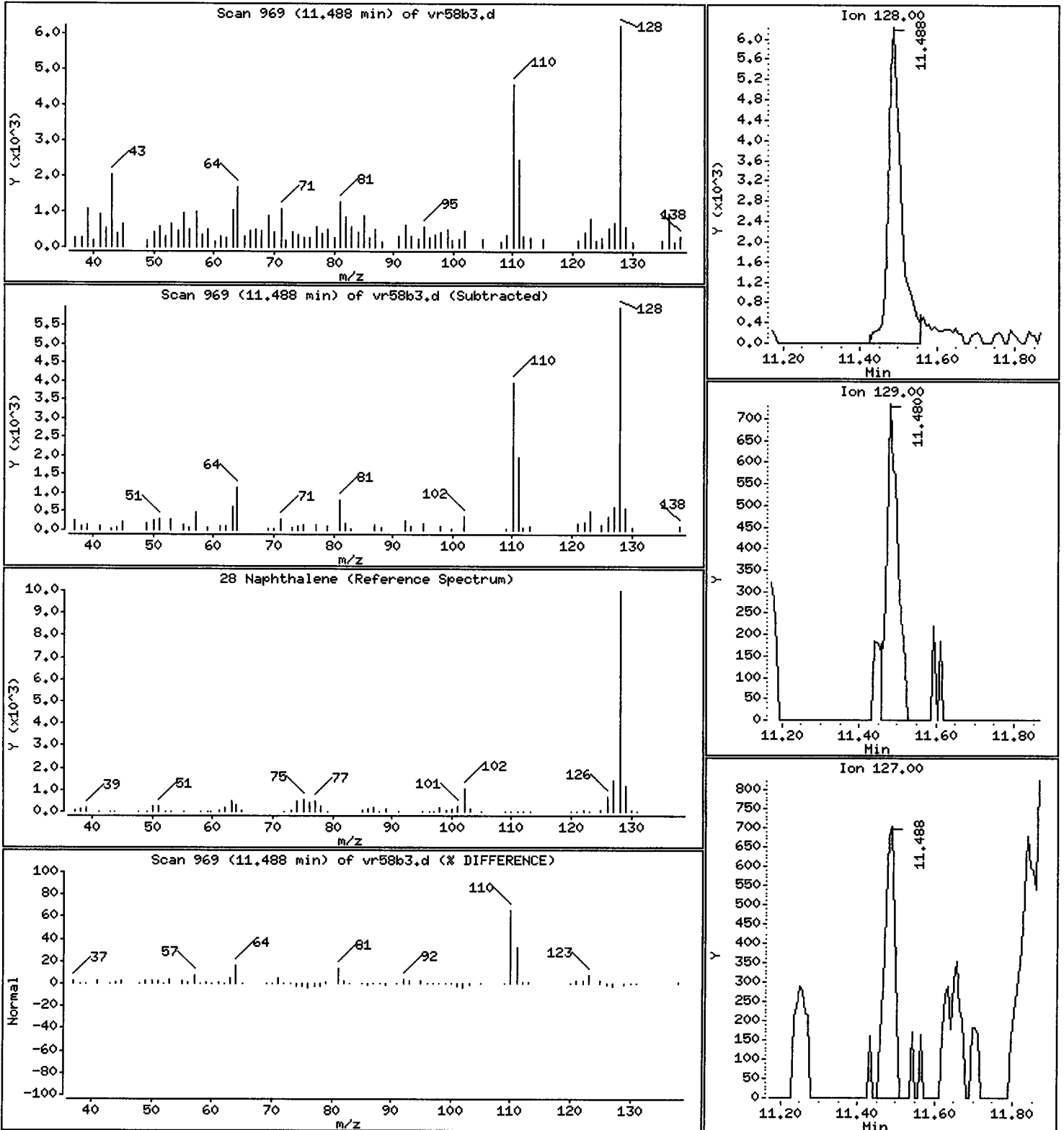
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 60.07 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

Operator: VTS

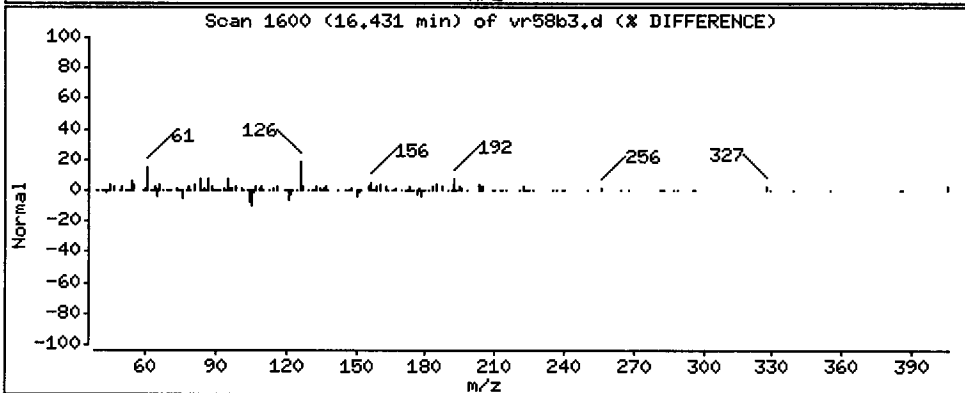
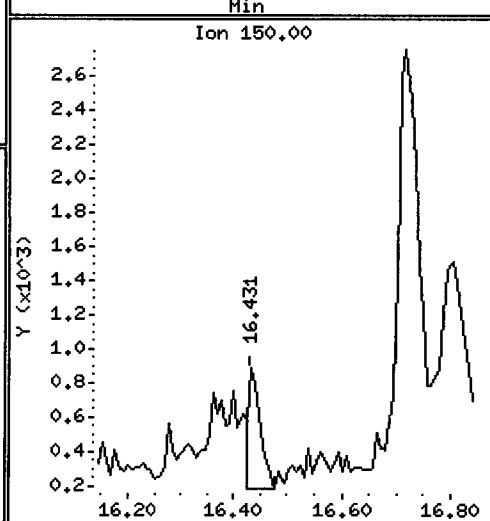
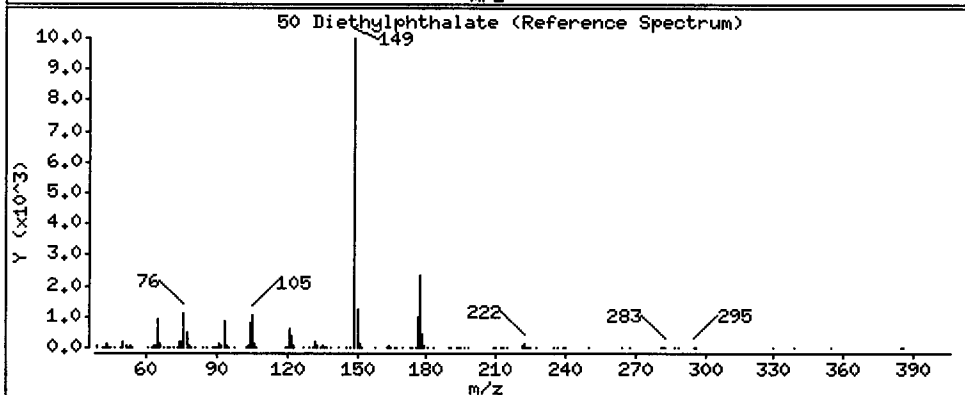
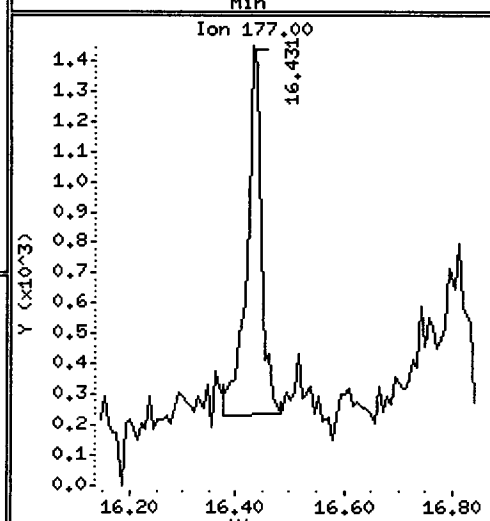
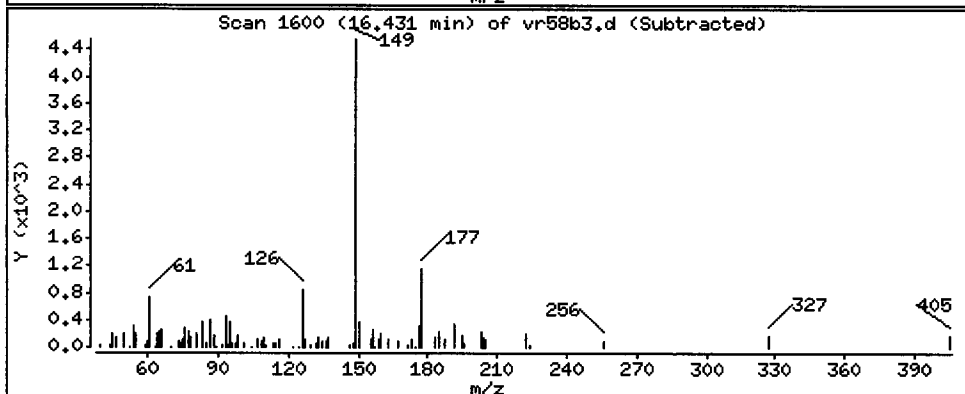
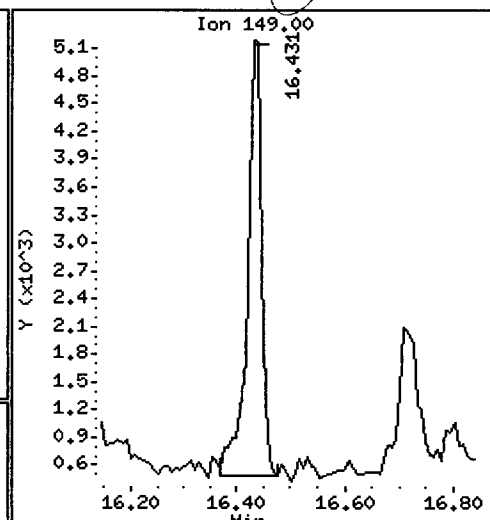
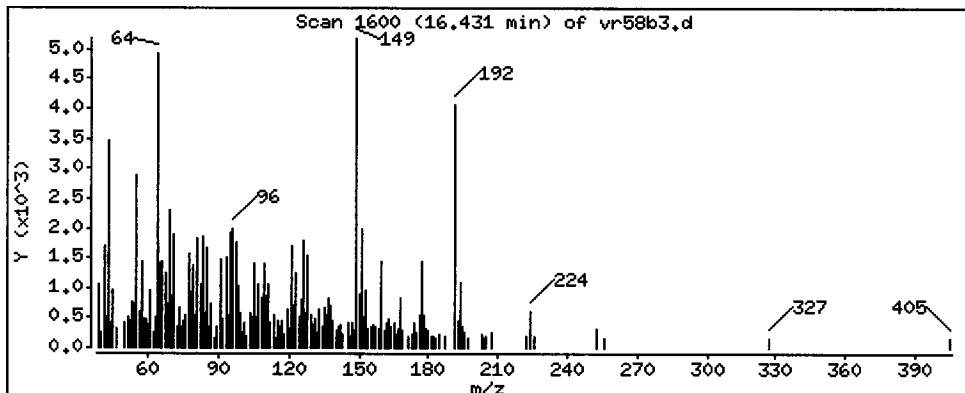
Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 36.79 ug/kg

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12/5/12



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

Operator: VTS

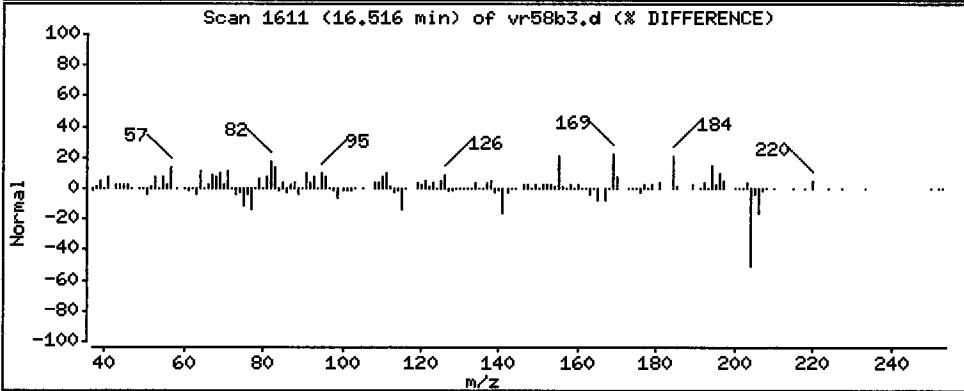
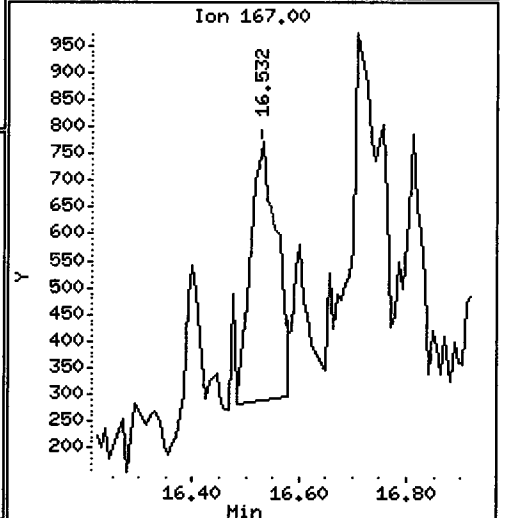
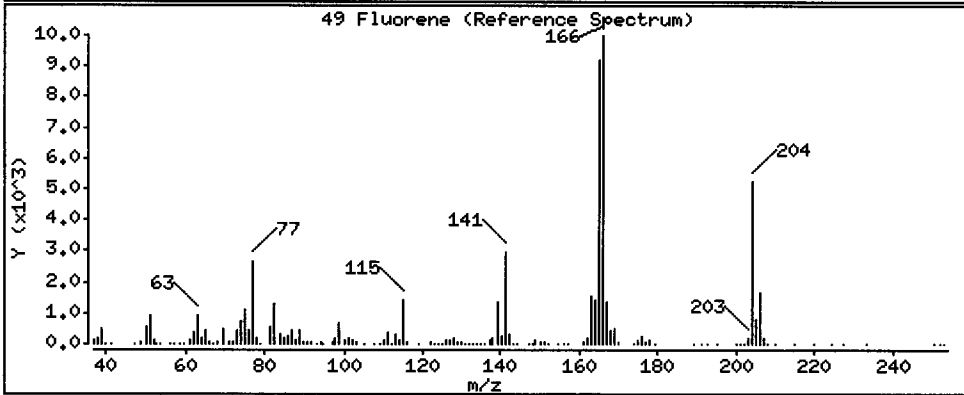
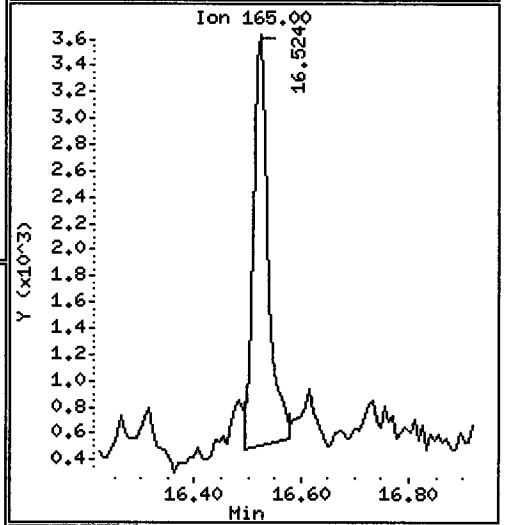
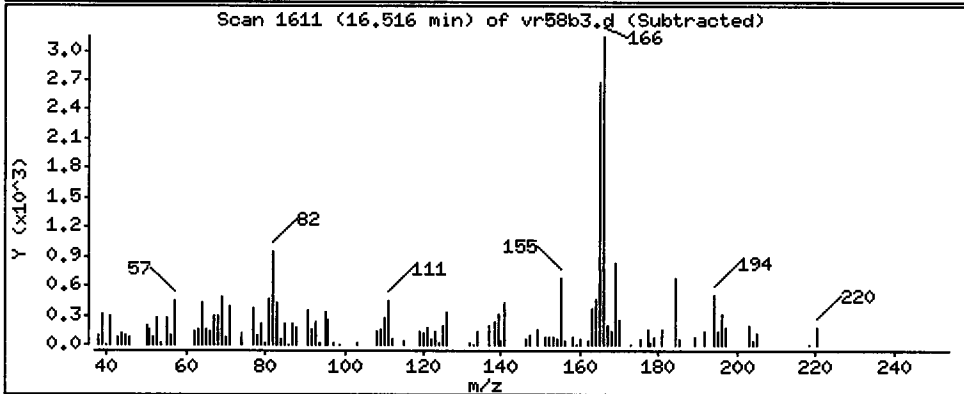
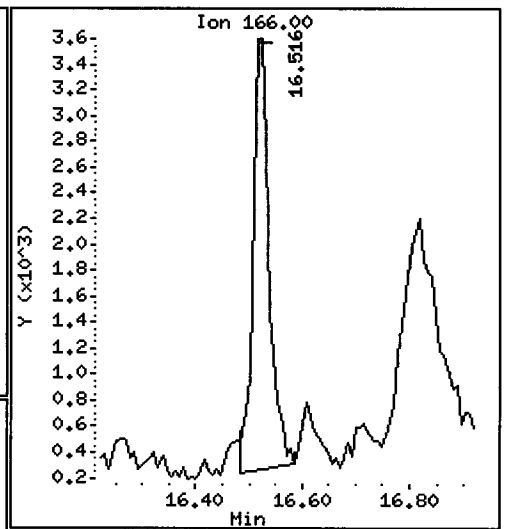
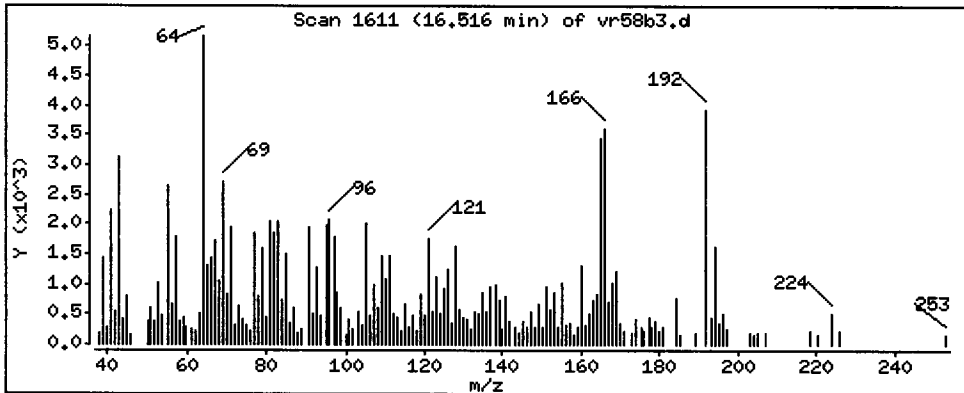
Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 30.58 ug/kg

*Just*



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

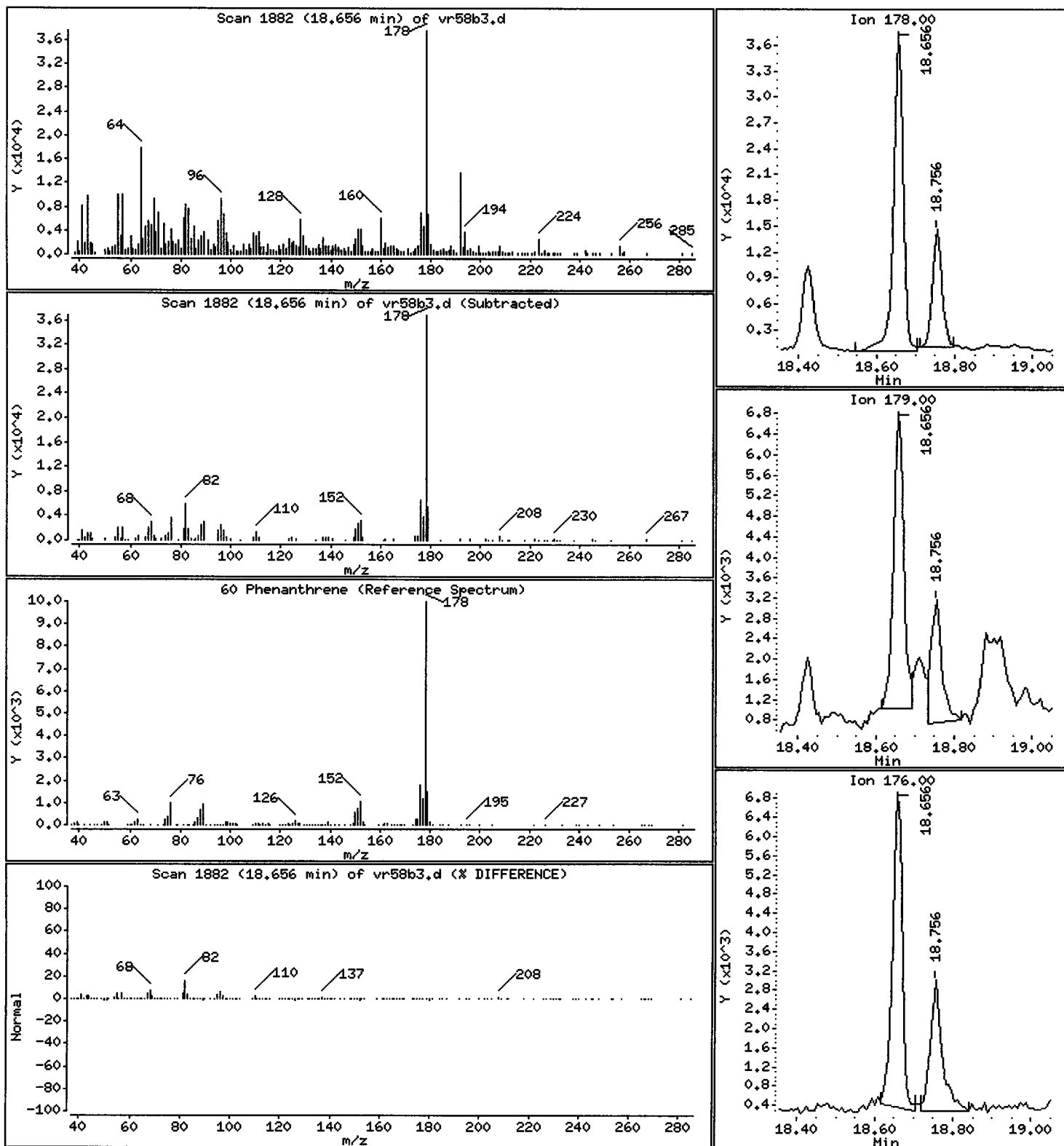
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 202.9 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

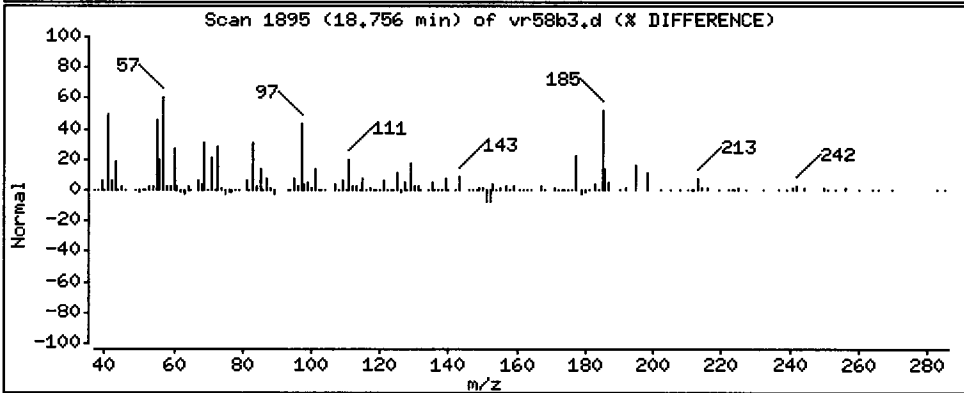
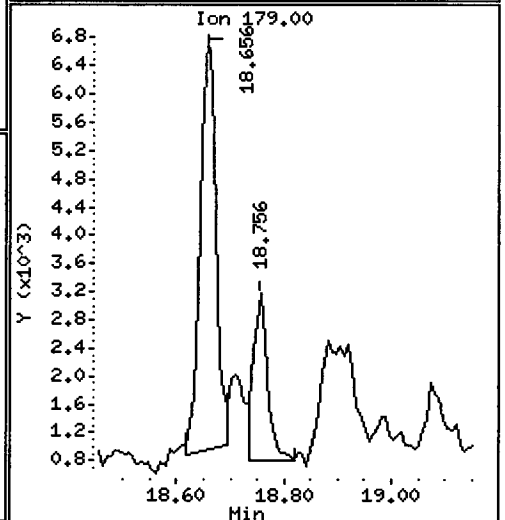
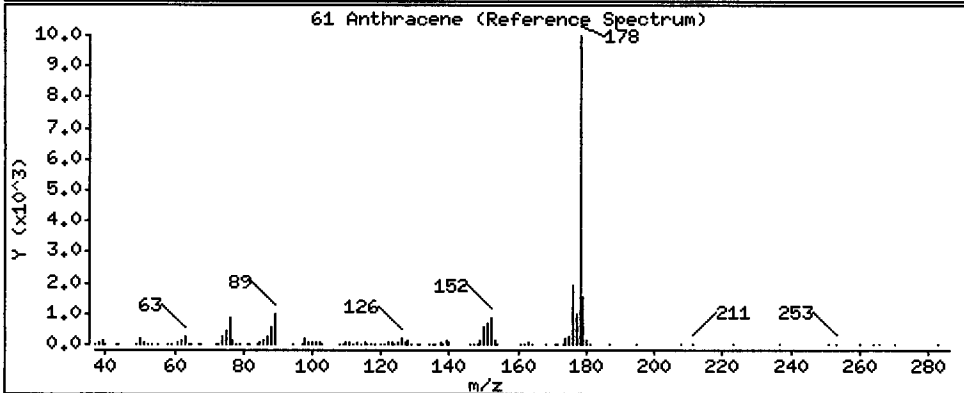
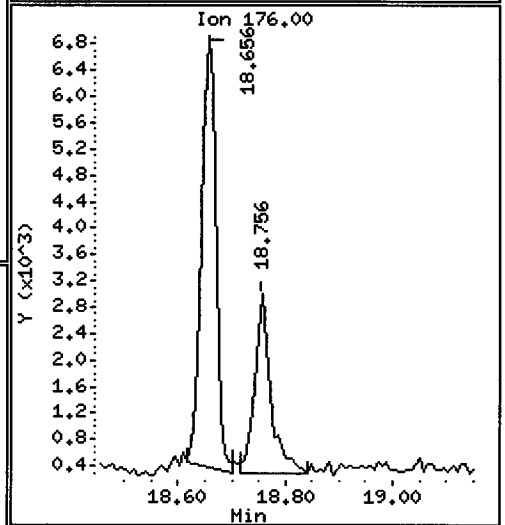
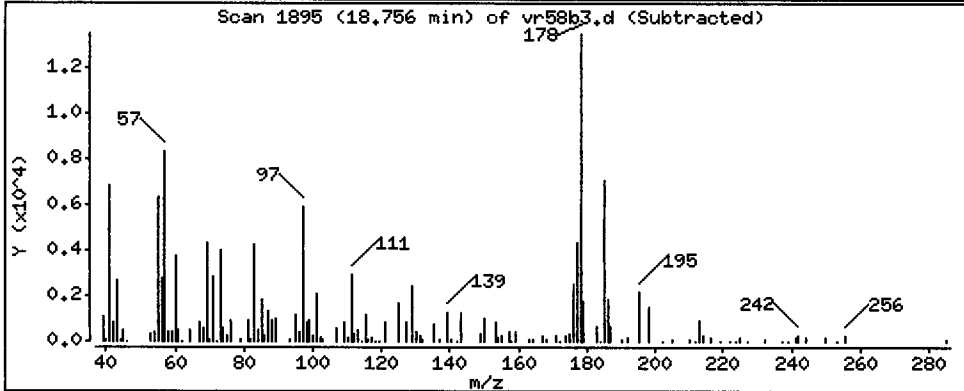
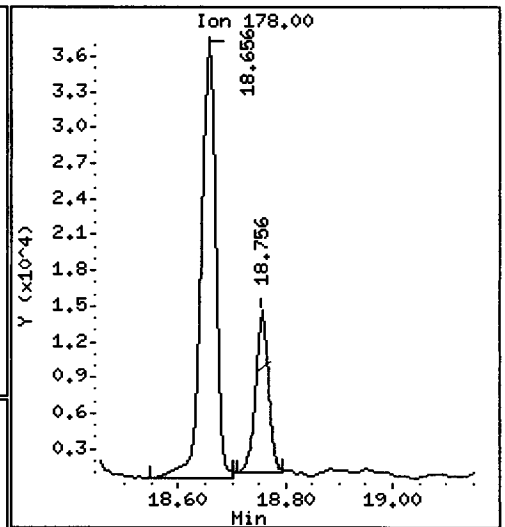
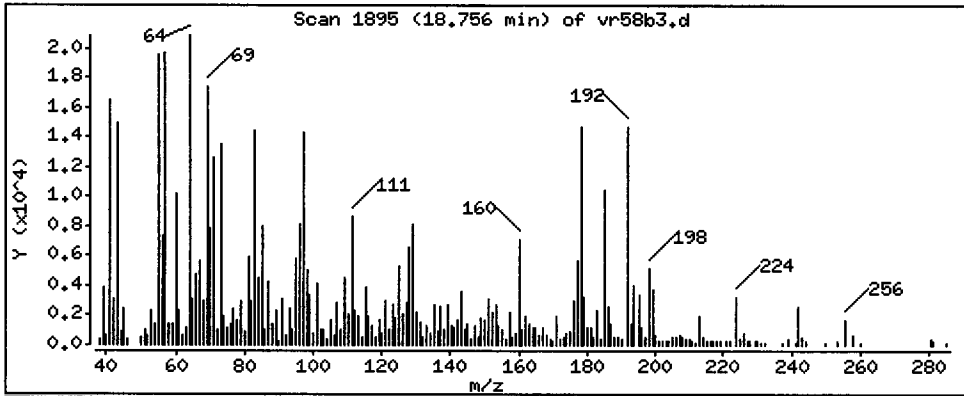
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 67.12 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

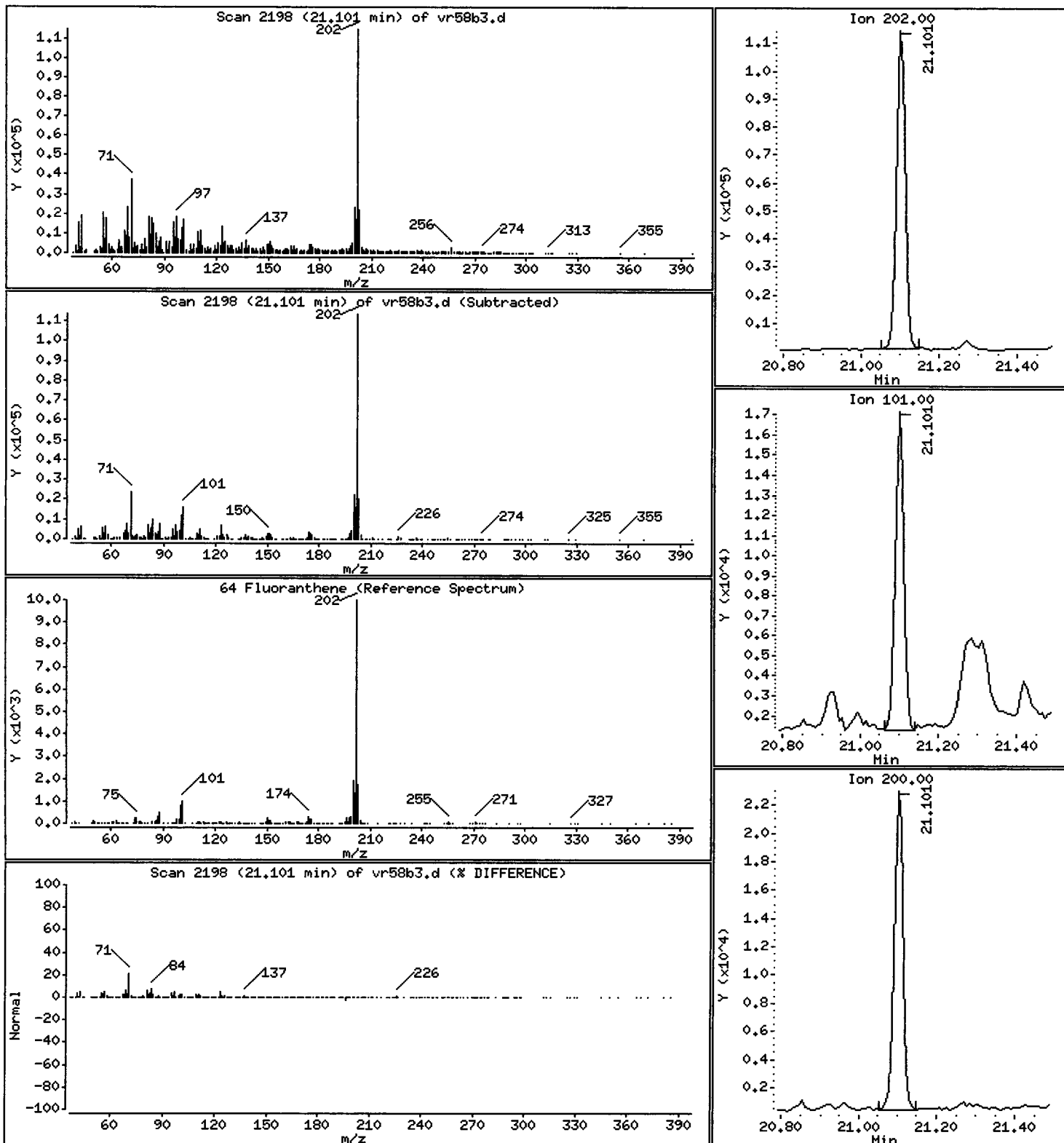
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 450.1 ug/kg





Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

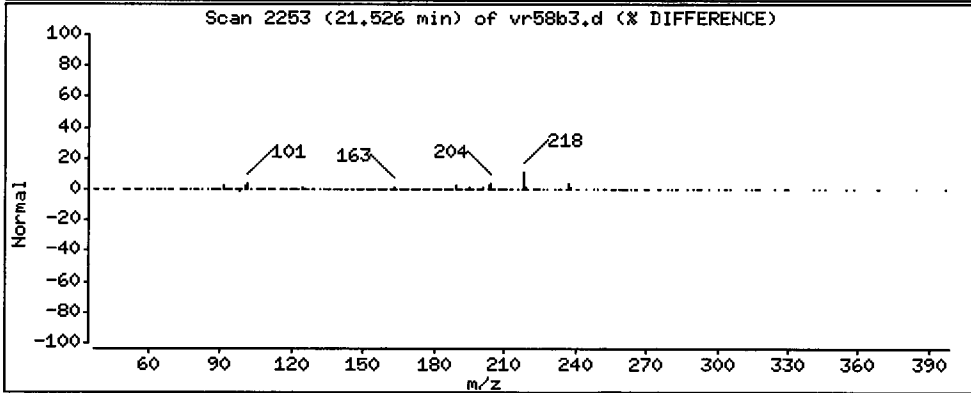
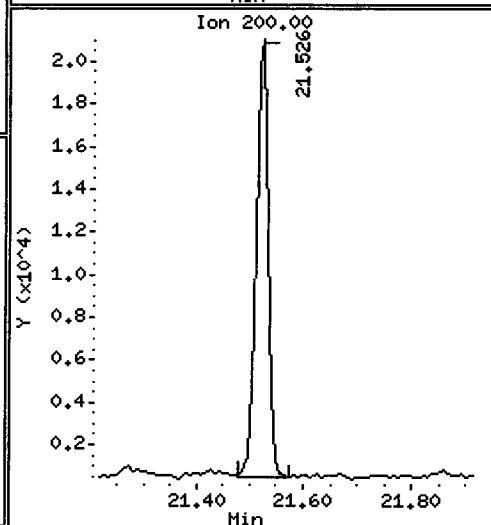
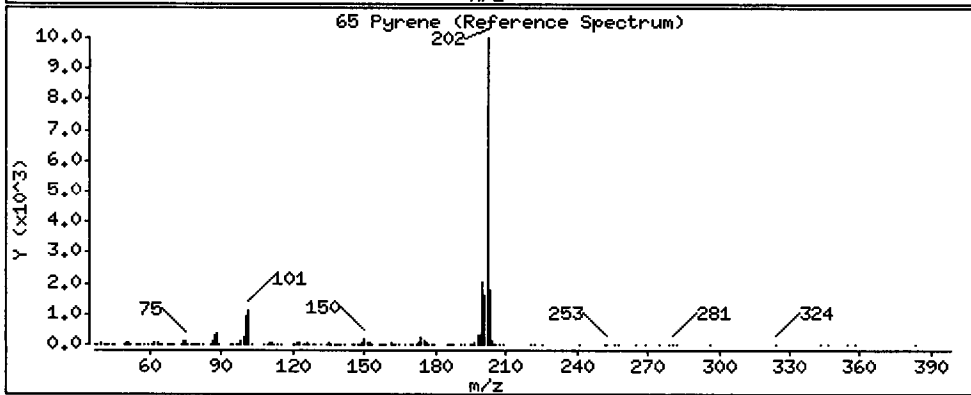
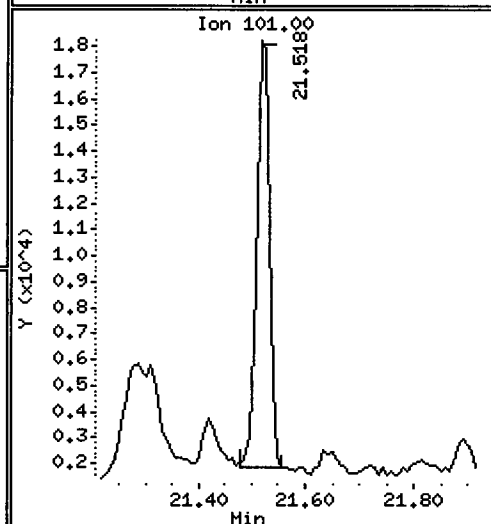
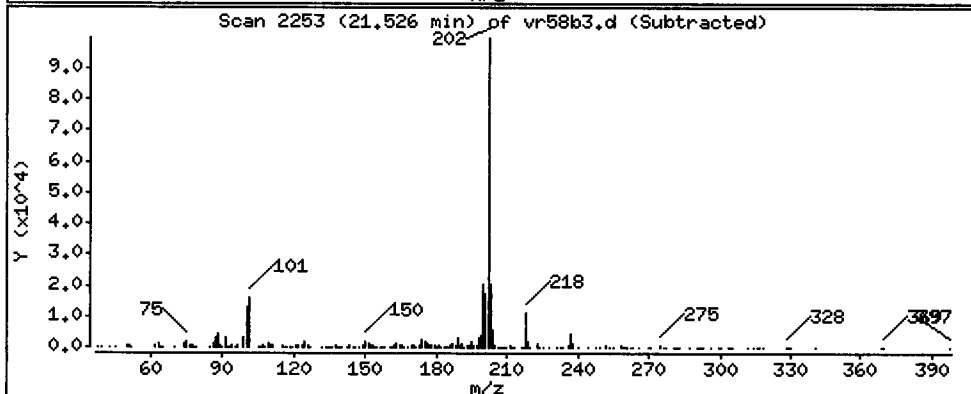
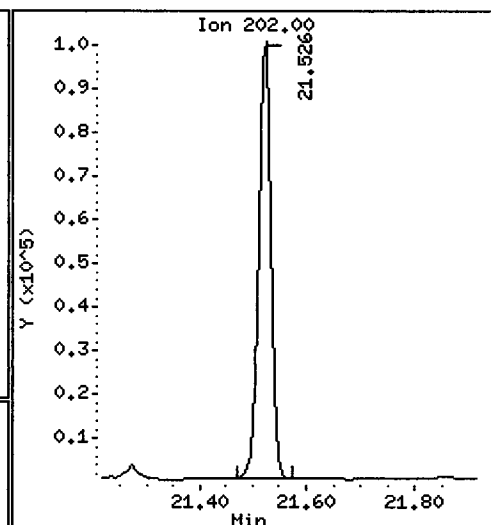
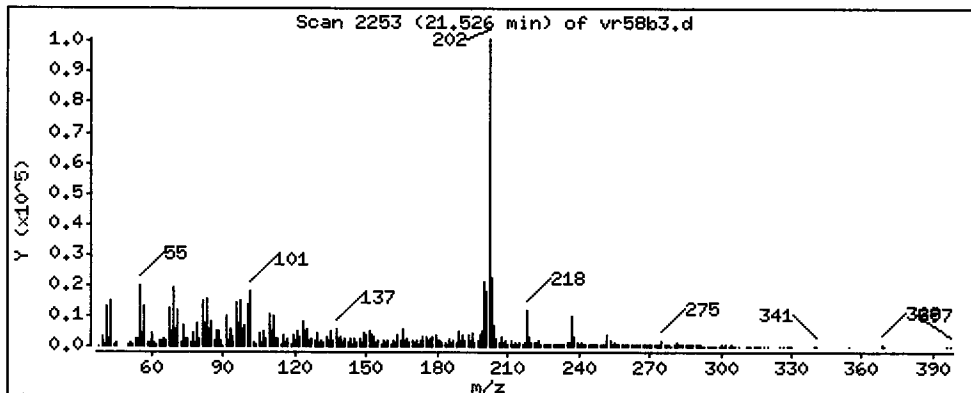
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

65 Pyrene

Concentration: 422.3 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

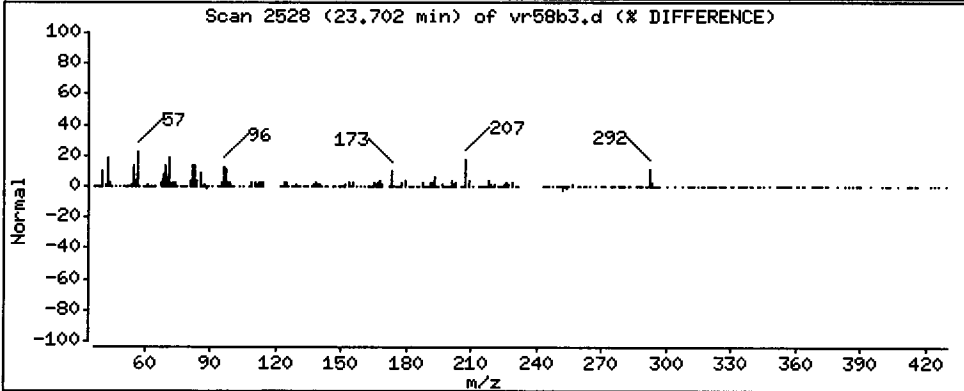
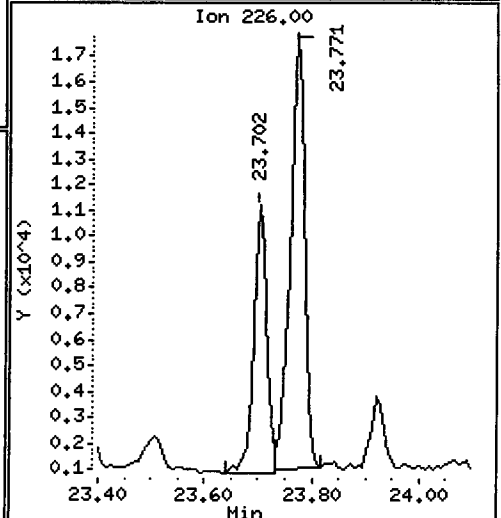
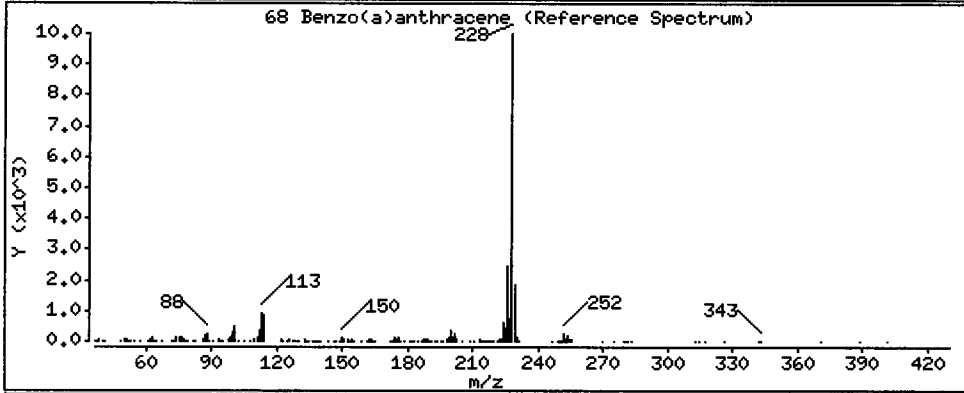
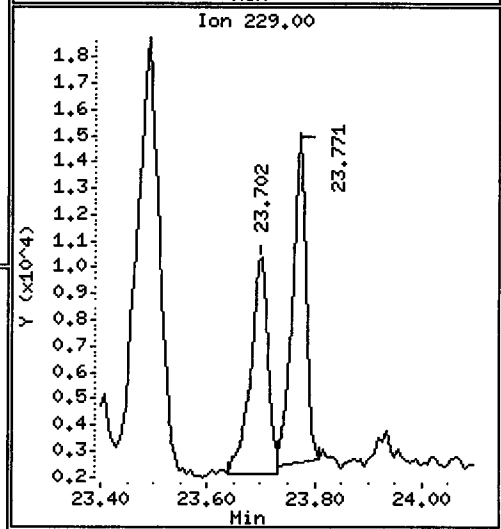
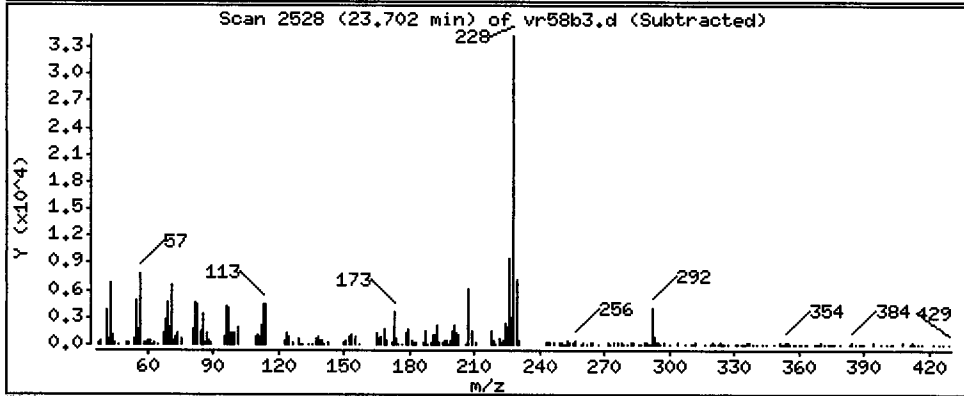
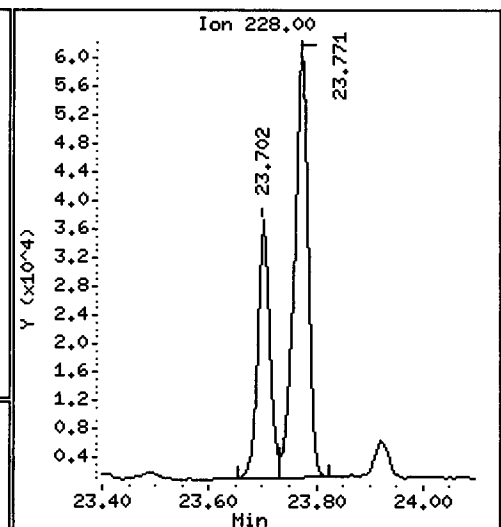
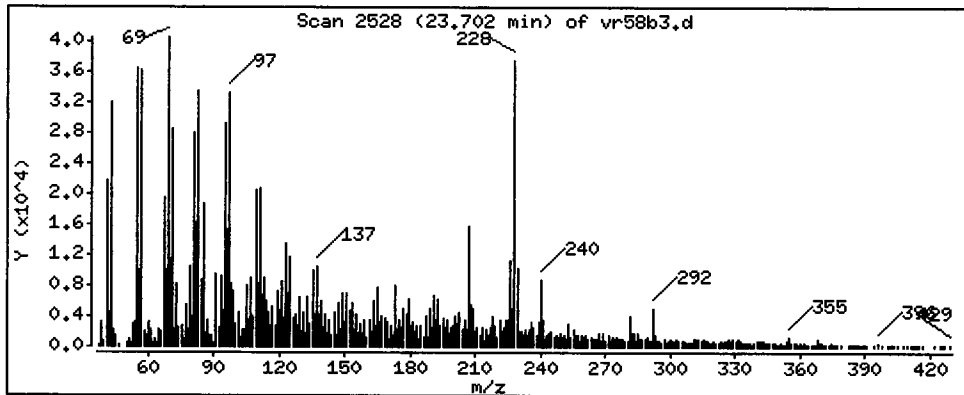
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

68 Benzo(a)anthracene

Concentration: 154.6 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

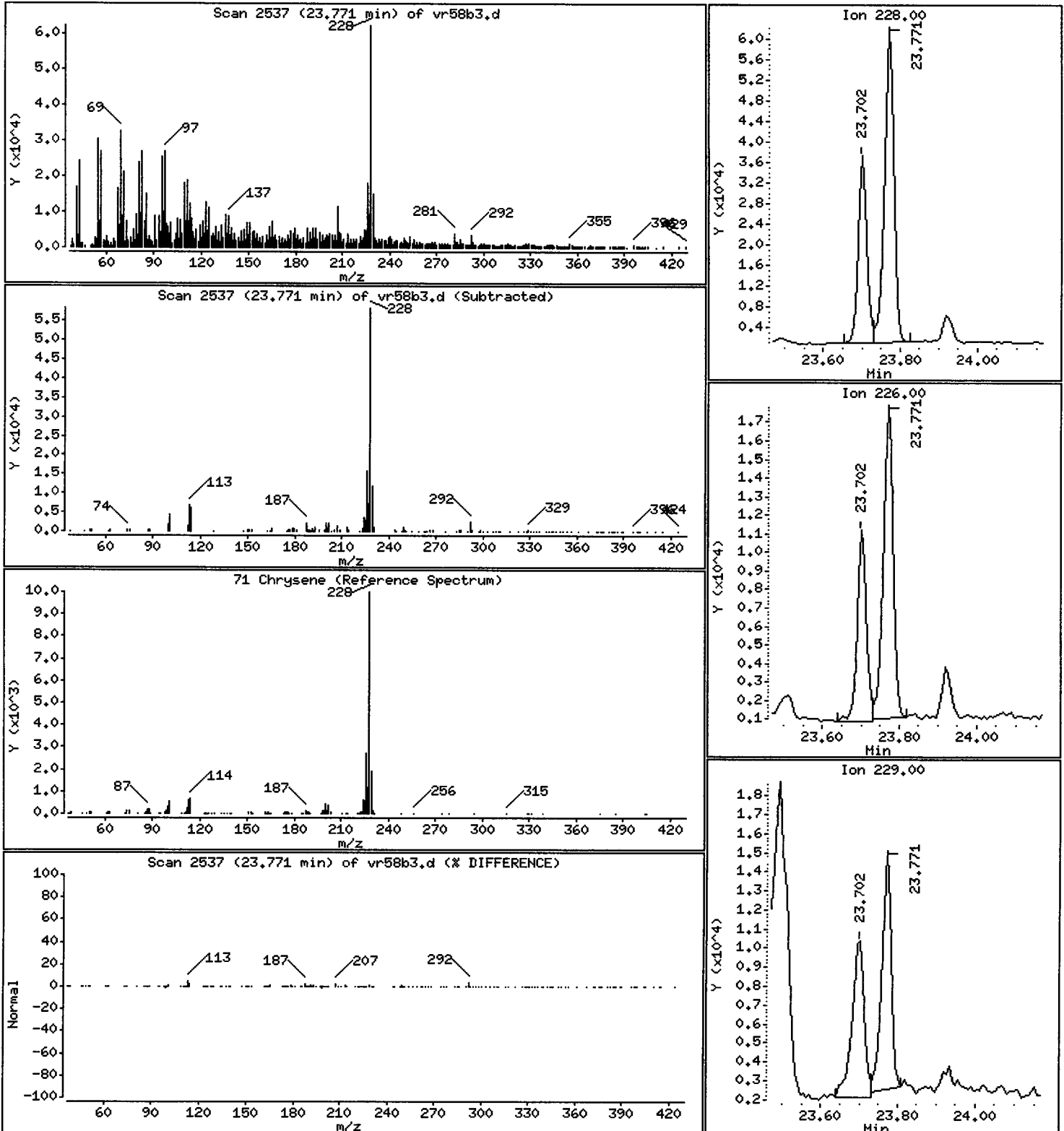
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

71 Chrysene

Concentration: 316.8 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10,i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

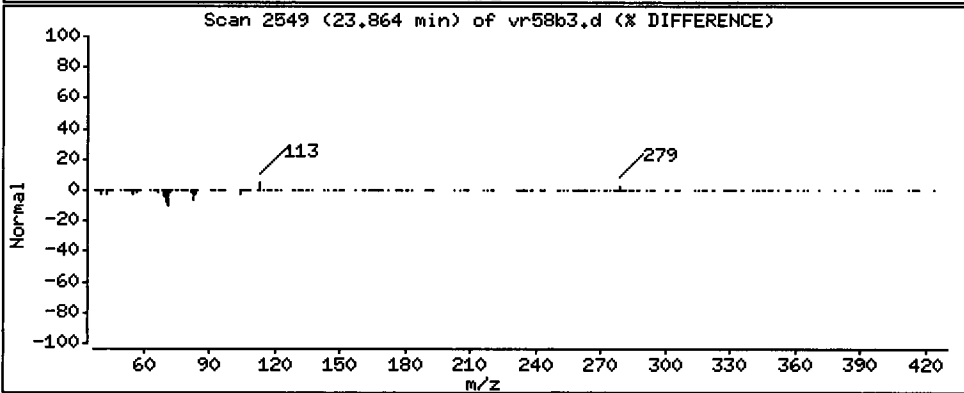
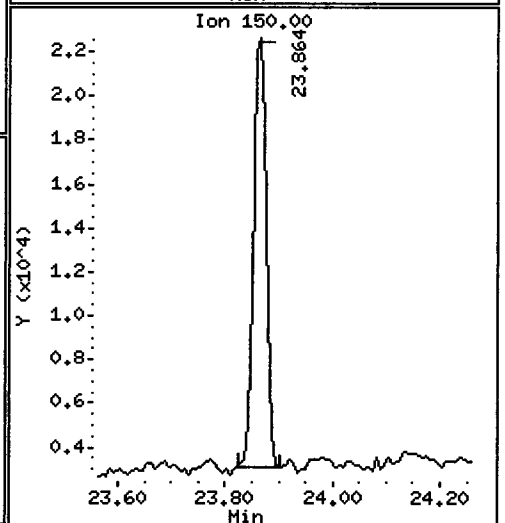
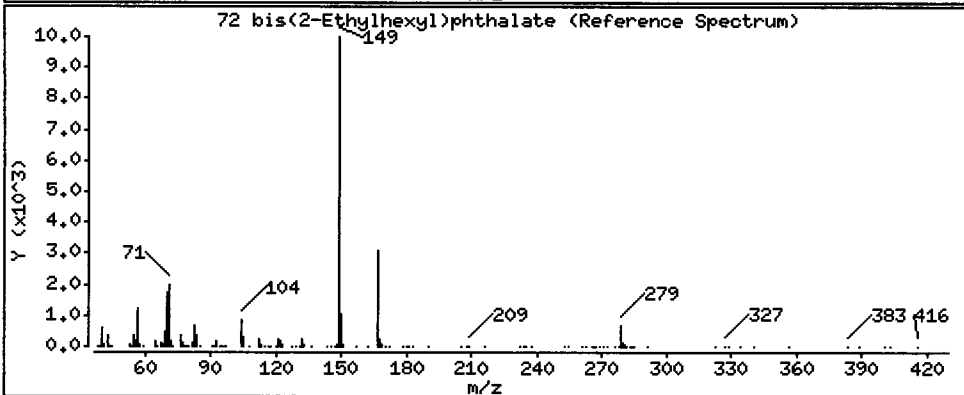
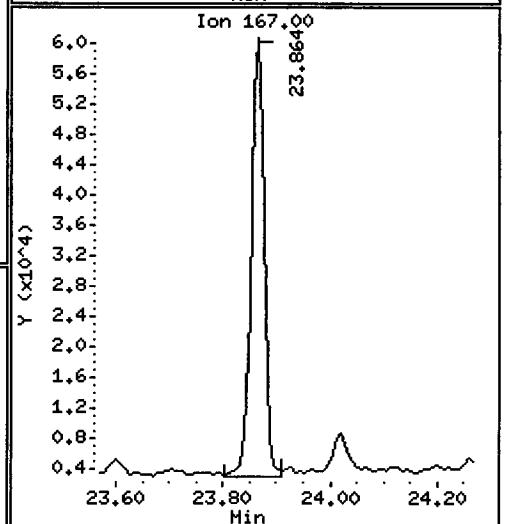
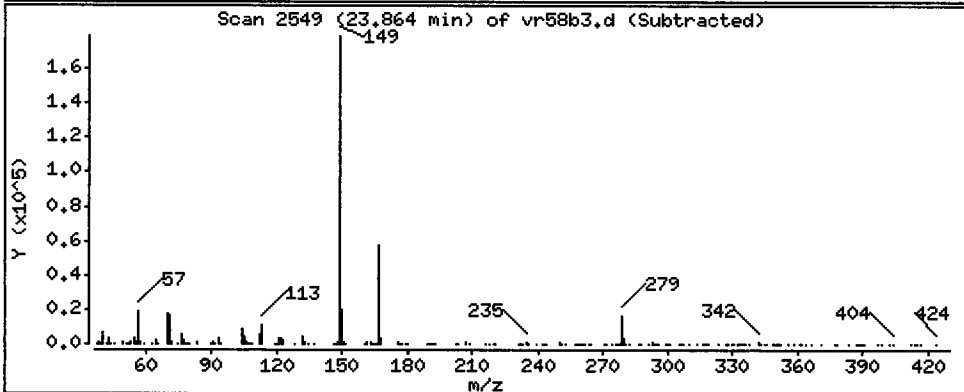
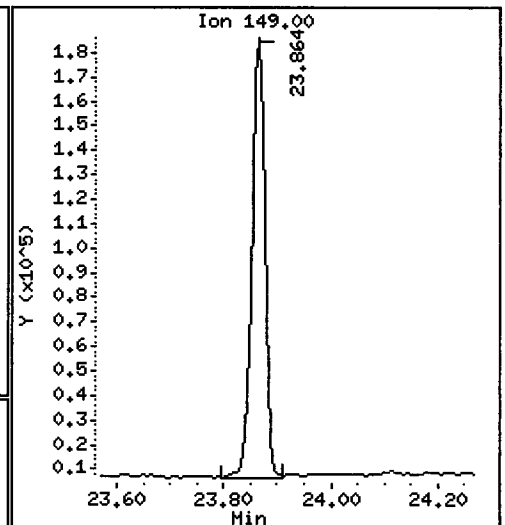
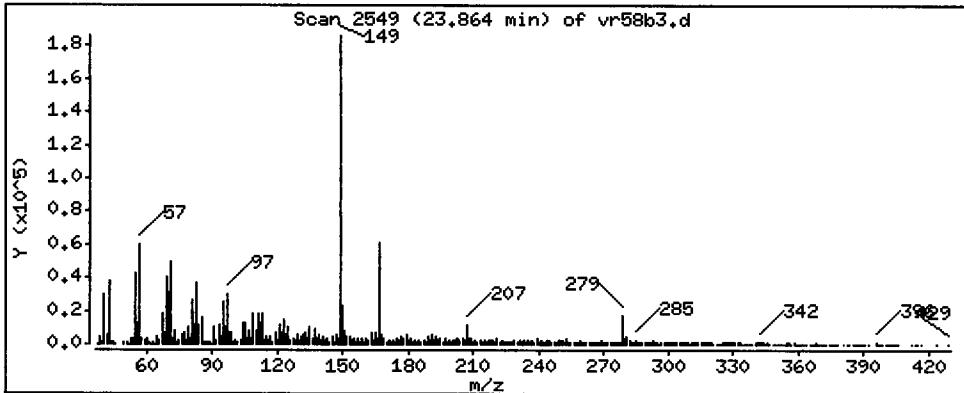
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 1265 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

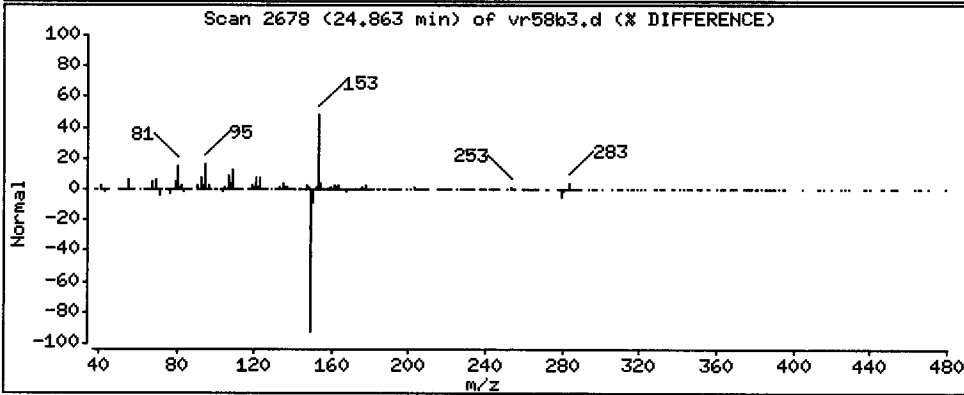
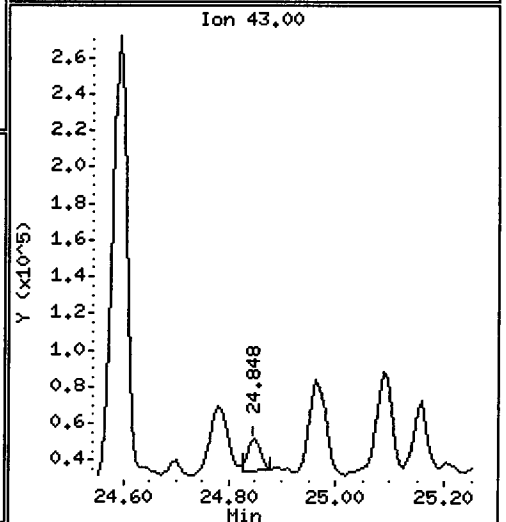
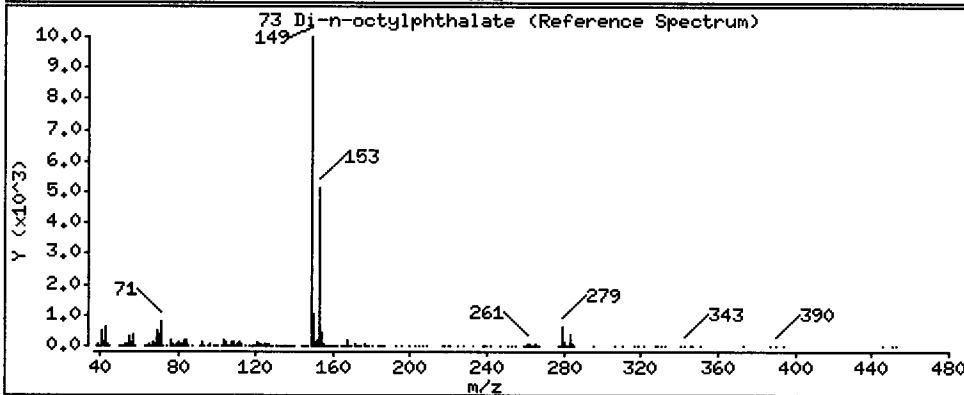
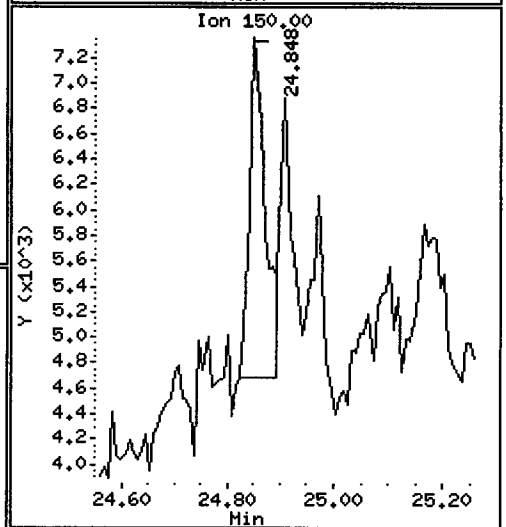
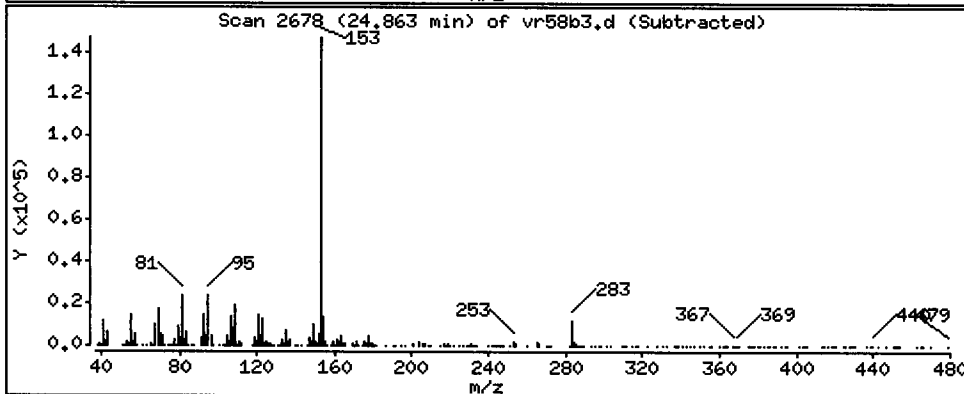
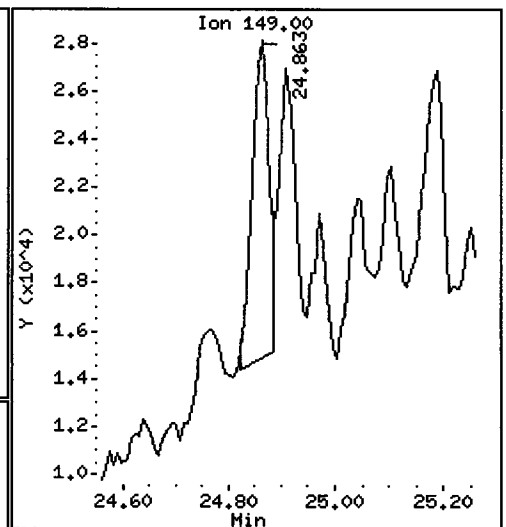
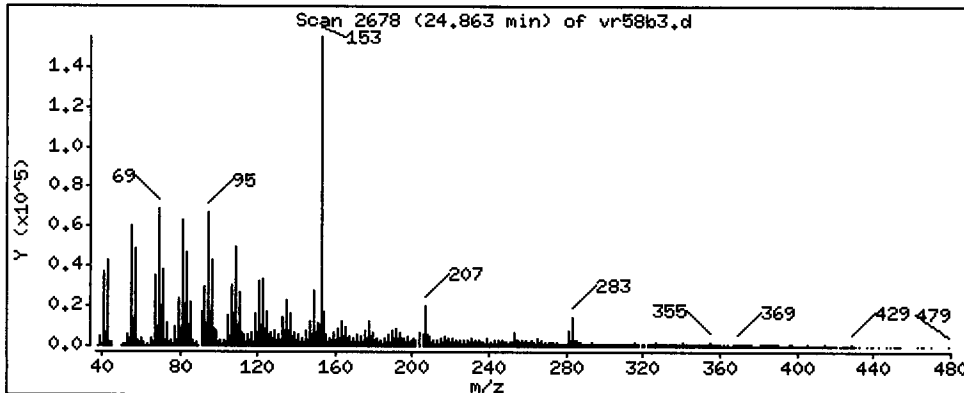
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

73 Di-n-octylphthalate

Concentration: 76.07 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

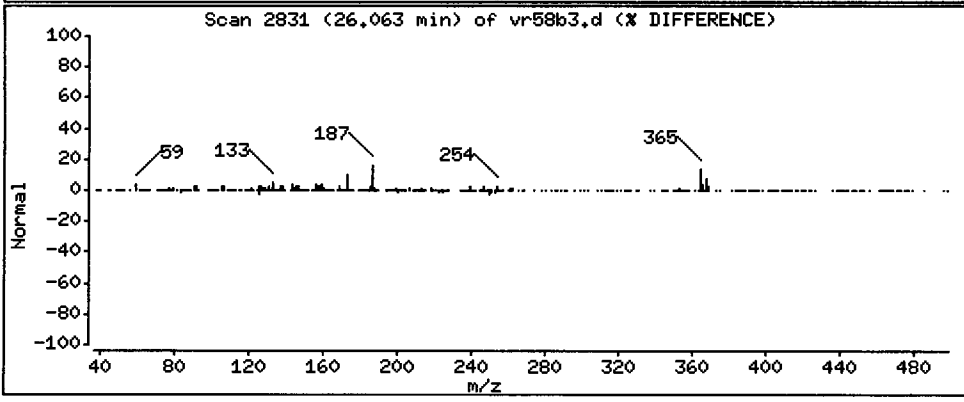
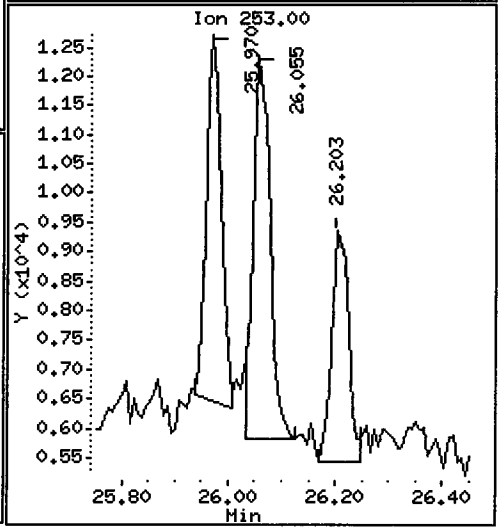
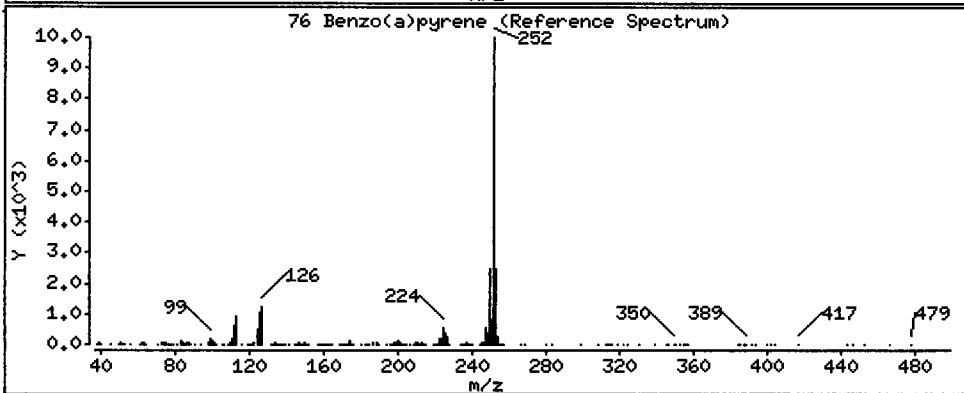
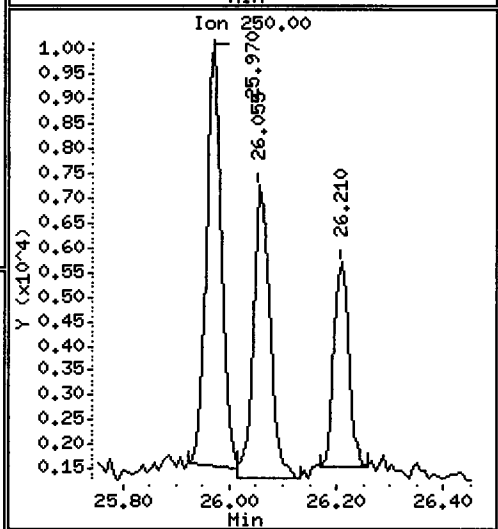
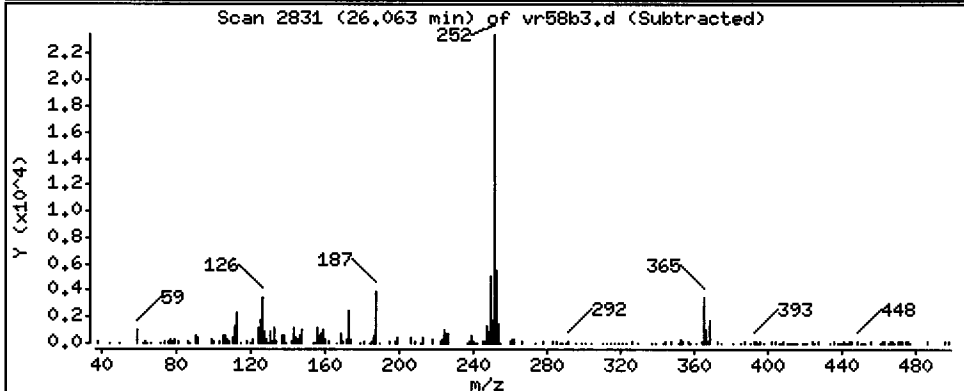
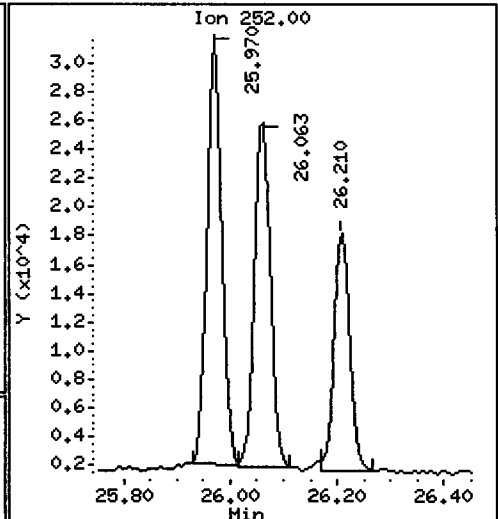
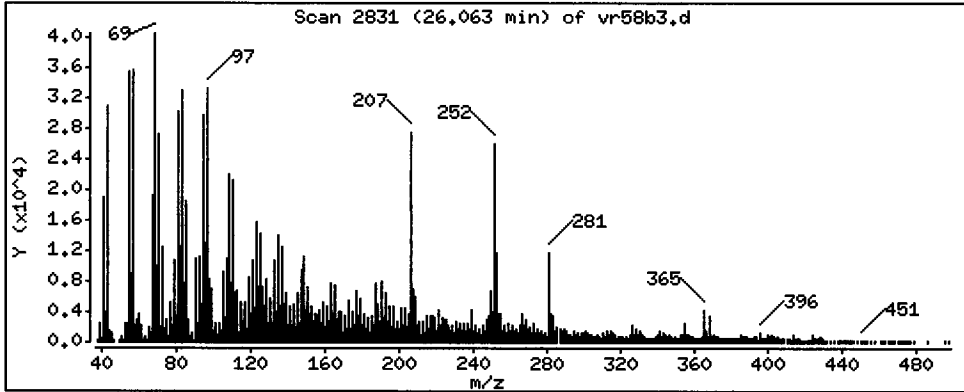
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

76 Benzo(a)pyrene

Concentration: 147.6 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

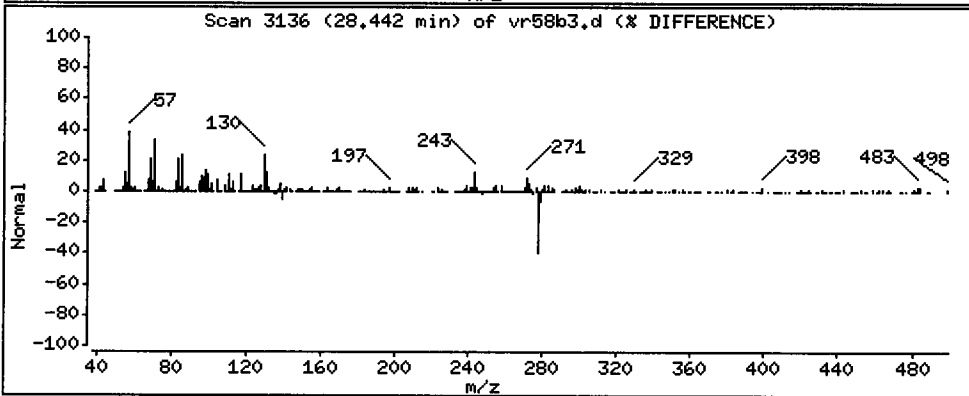
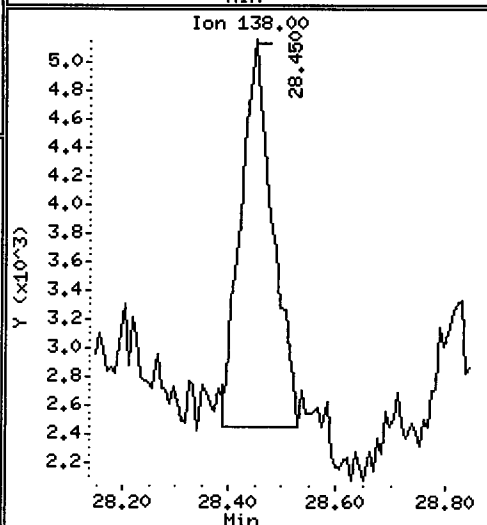
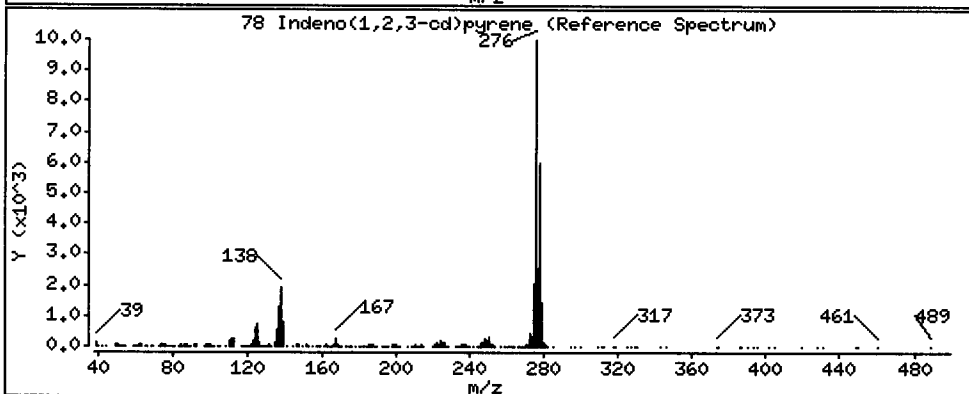
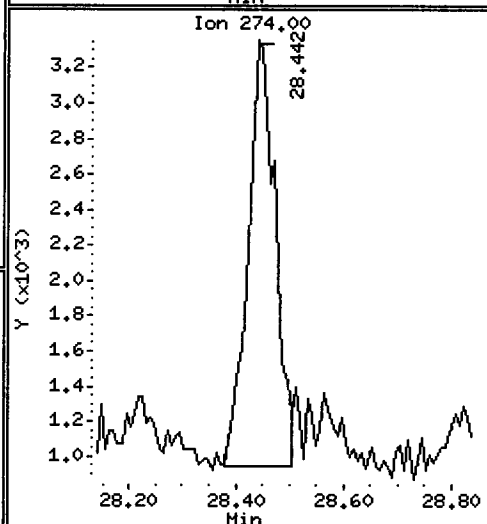
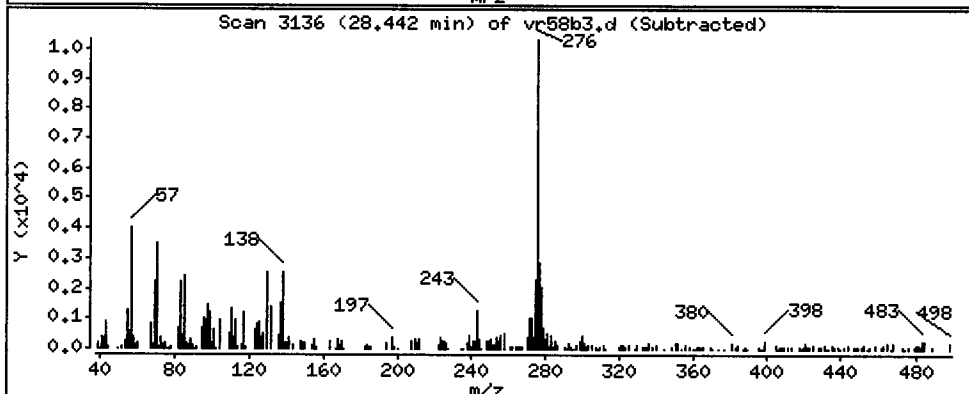
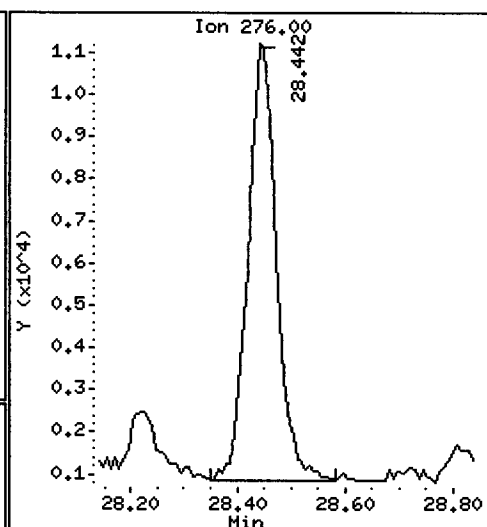
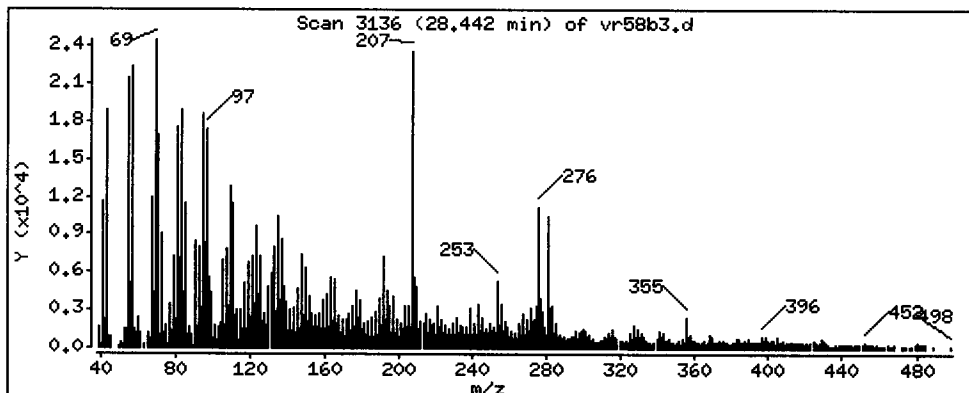
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

78 Indeno(1,2,3-cd)pyrene

Concentration: 98,06 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

Operator: VTS

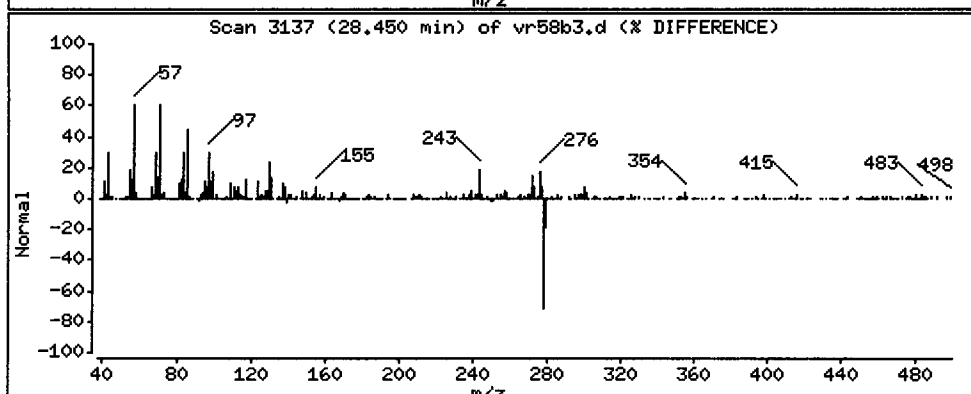
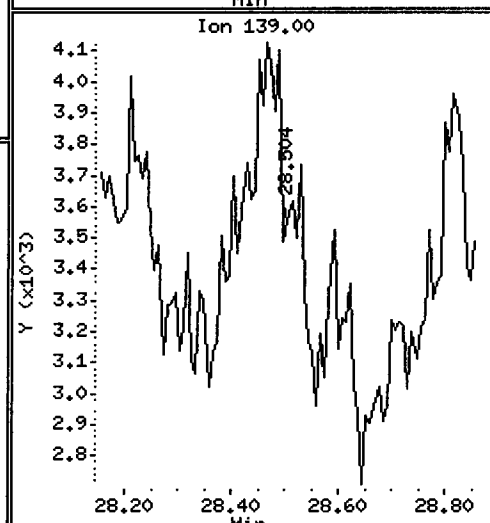
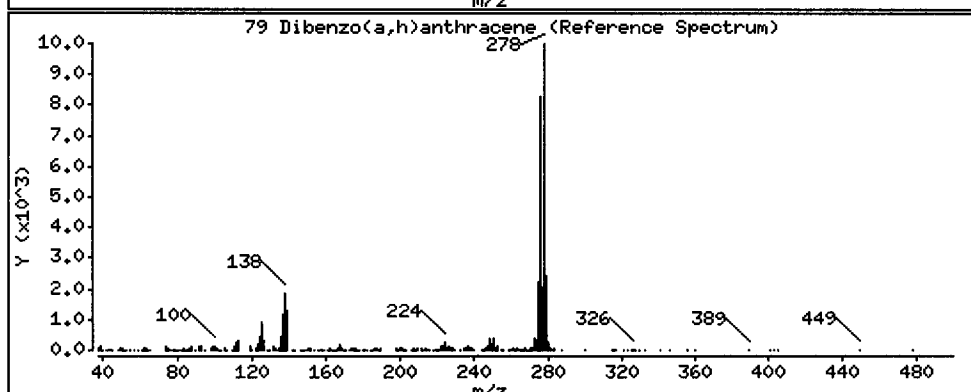
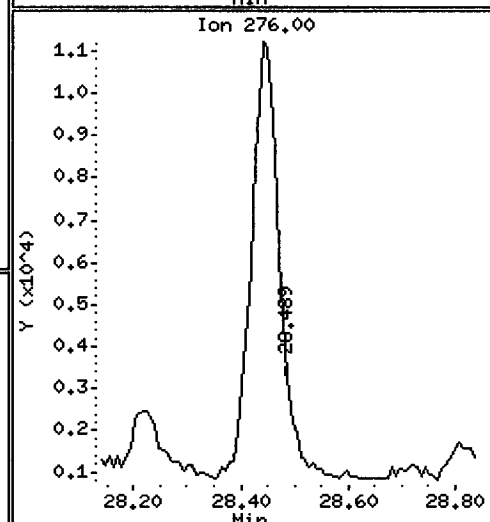
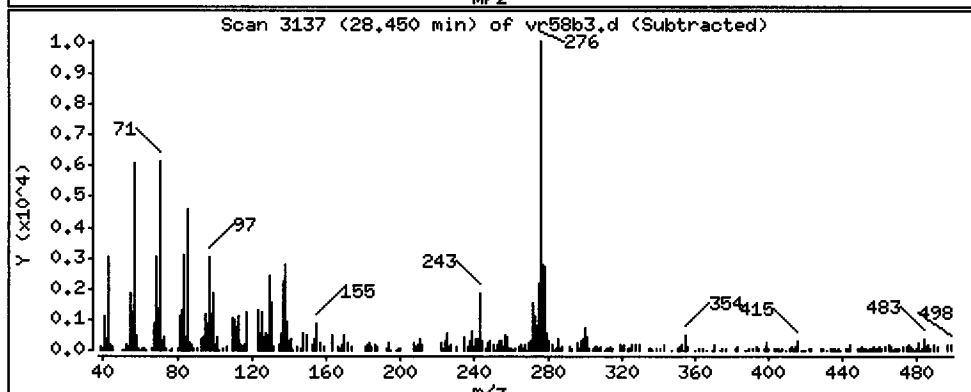
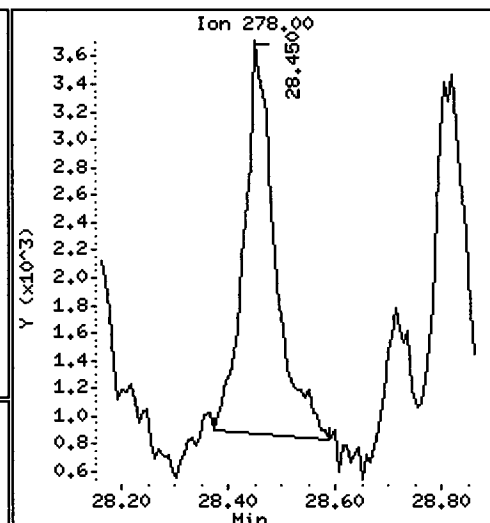
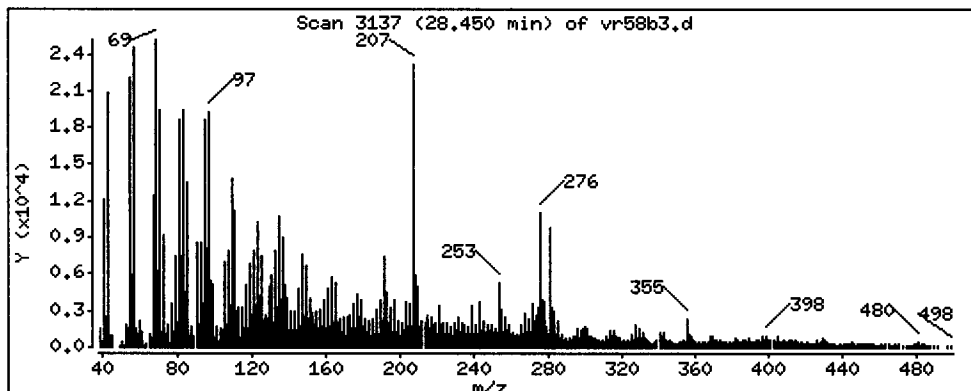
Column phase: ZB-5msi

Column diameter: 0.25

*Cur*

79 Dibenzo(a,h)anthracene

Concentration: 36.67 ug/kg





Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

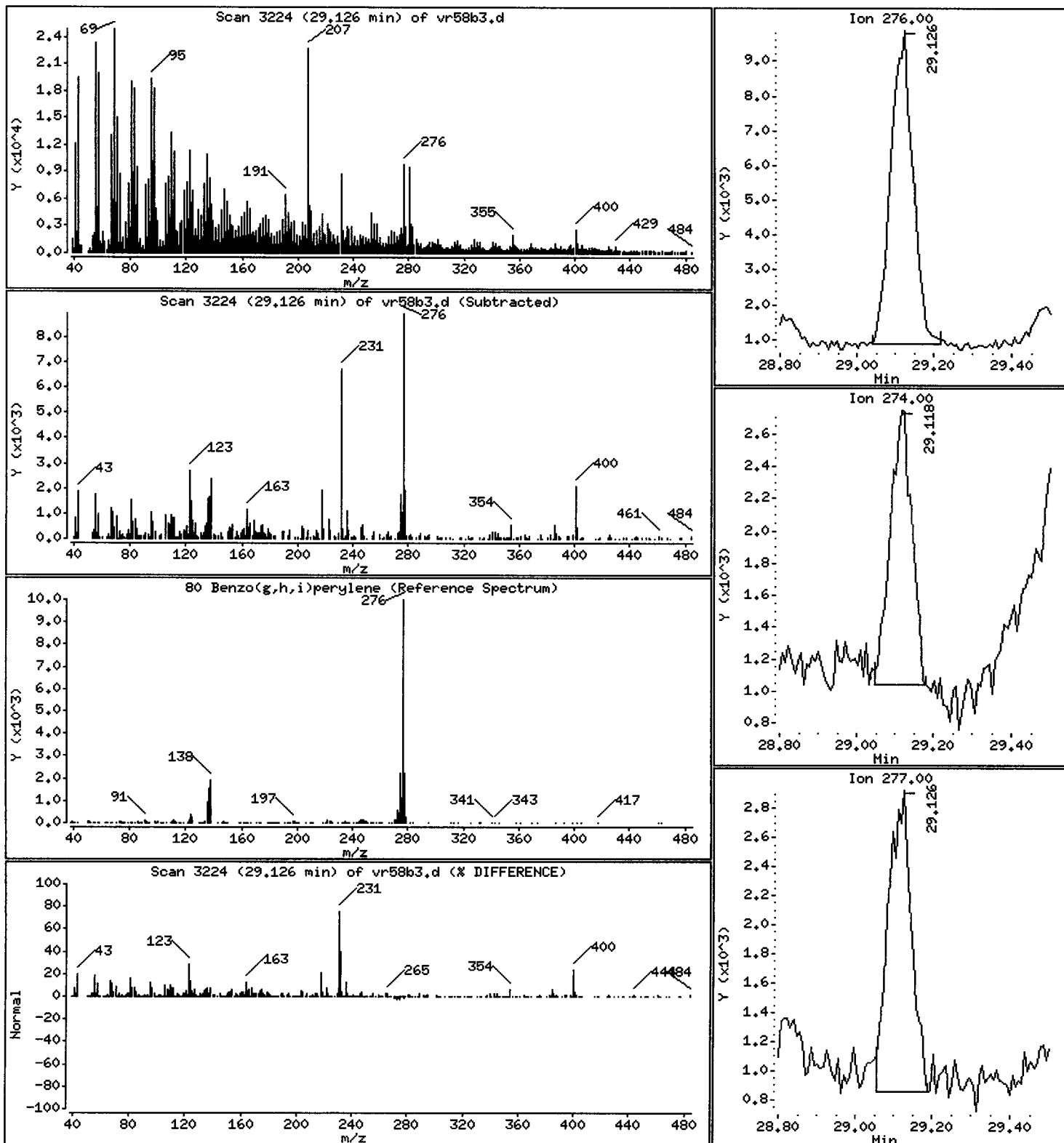
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

80 Benzo(g,h,i)perylene

Concentration: 106.7 ug/kg



Date : 05-DEC-2012 21:19

Client ID: SG-11-S-E-121107

Instrument: nt10.i

Sample Info: VR58B,3

Volume Injected (uL): 1.0

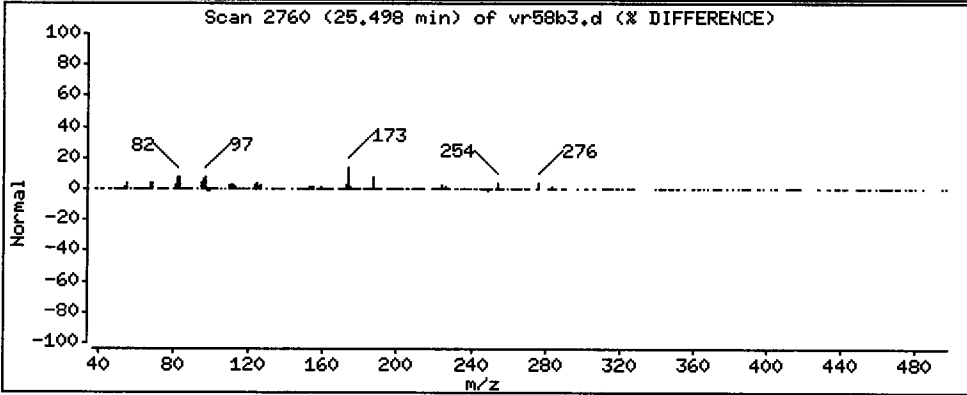
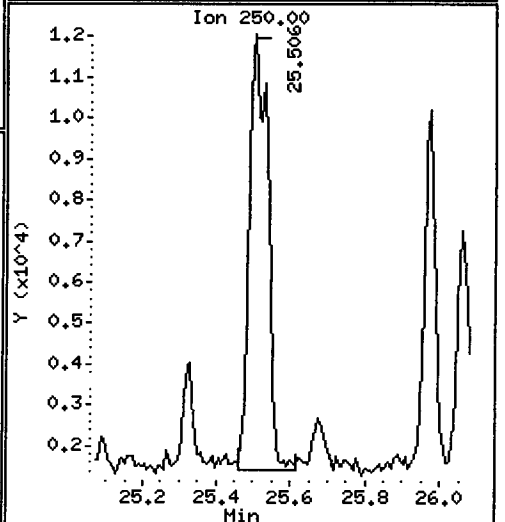
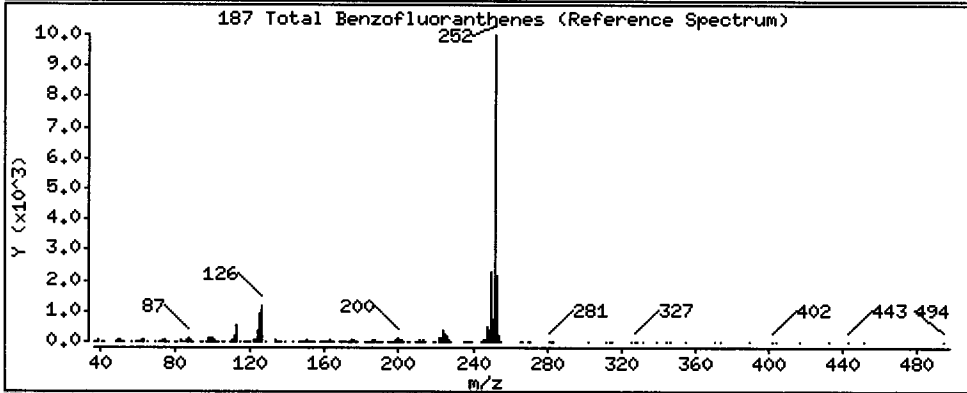
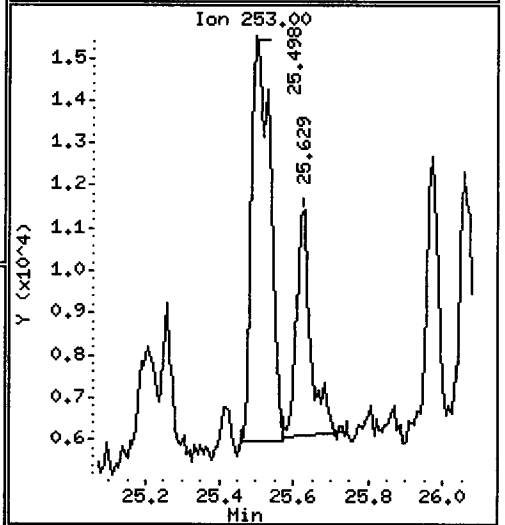
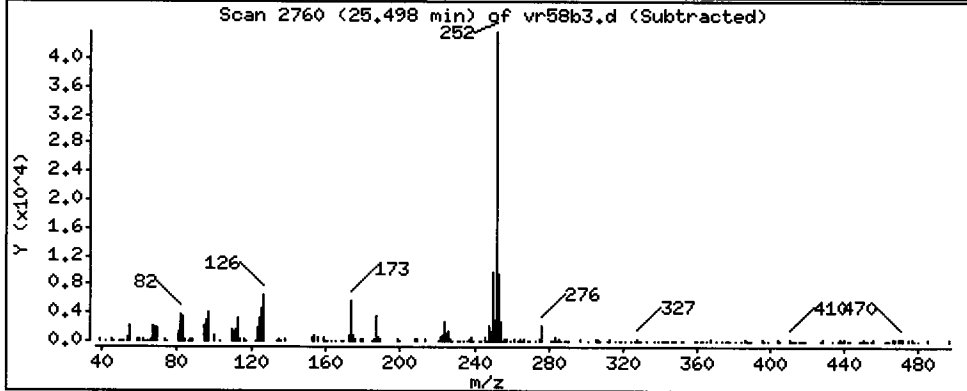
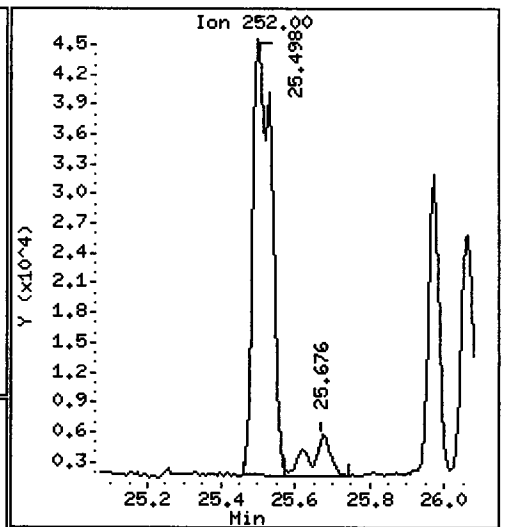
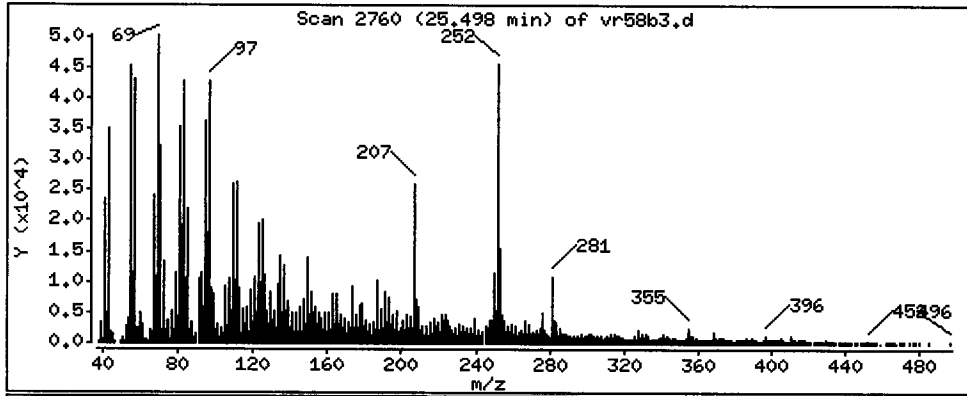
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

187 Total Benzofluoranthenes

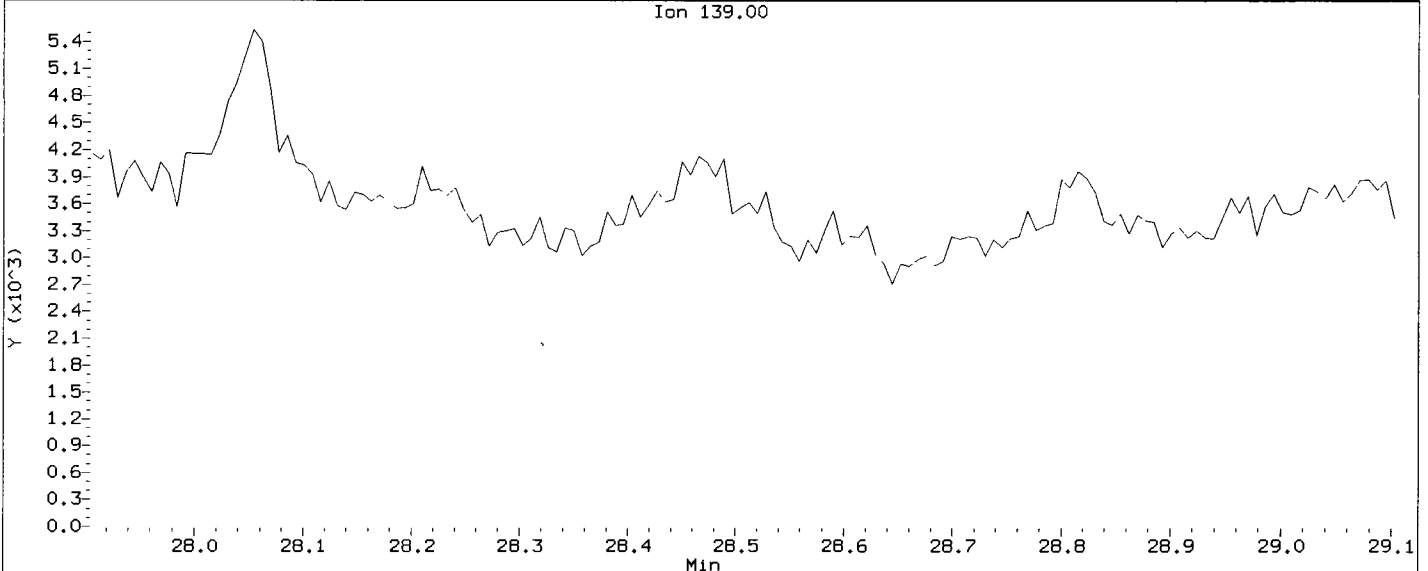
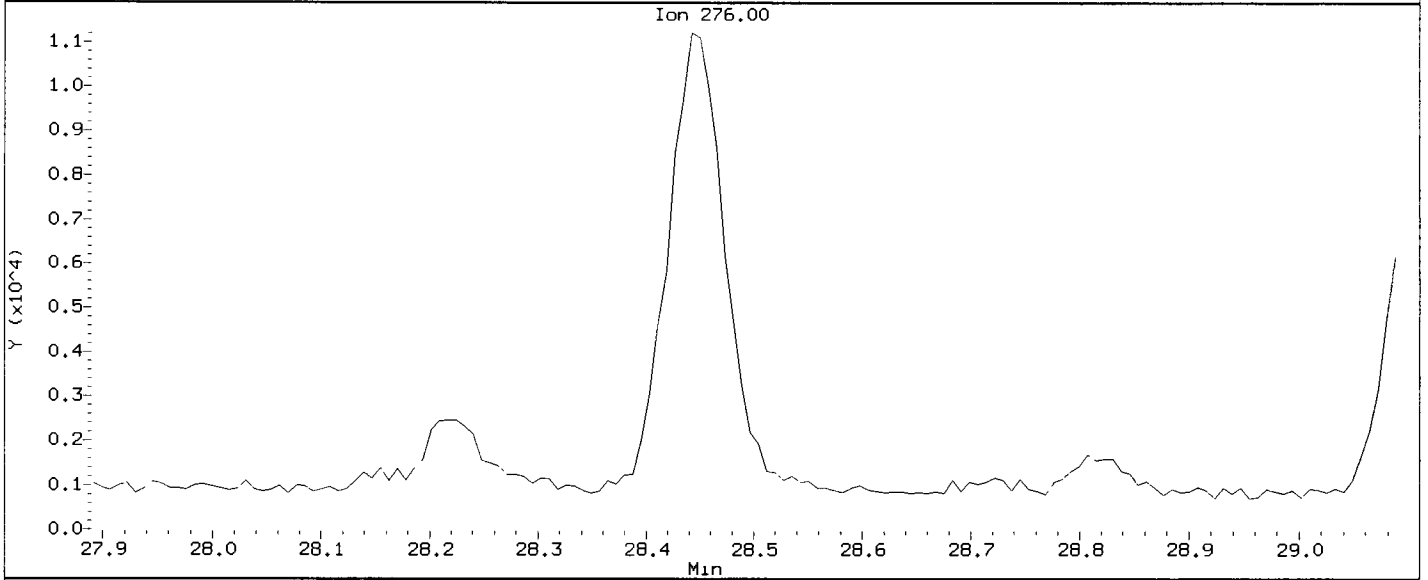
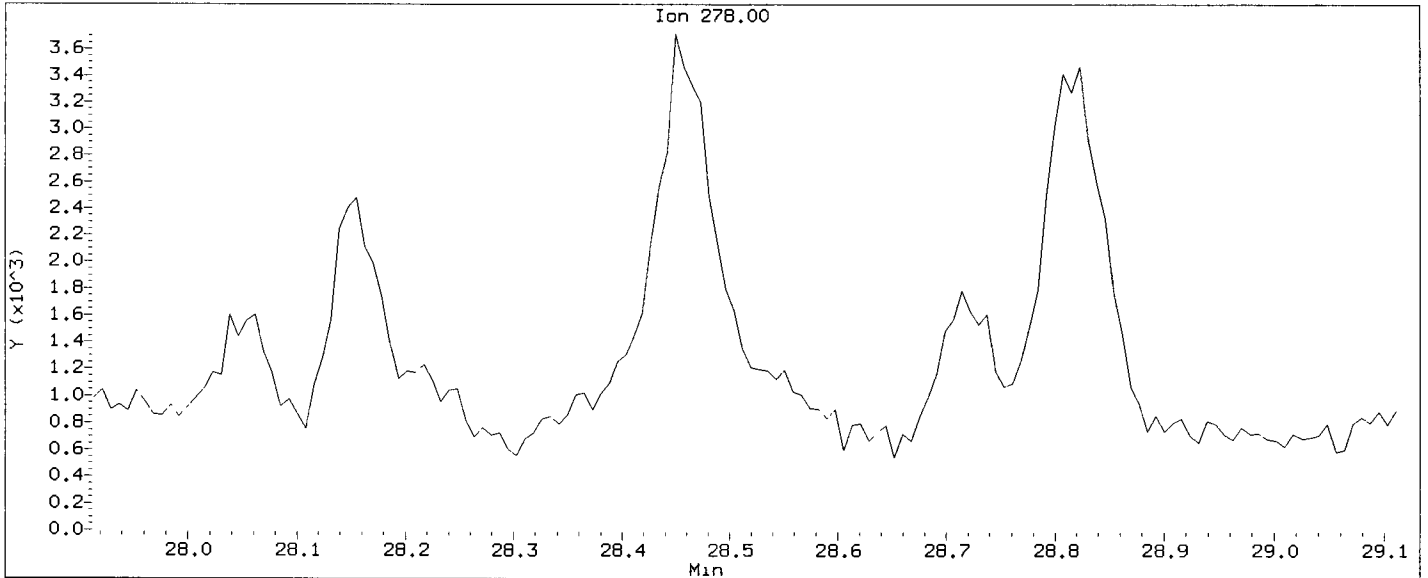
Concentration: 408.8 ug/kg



Data File: /chem1/nt10.1/20121205.b/vr58b3.d  
Injection Date: 05-DEC-2012 21:19  
Instrument: nt10.1  
Client Sample ID: SG-11-S-E-121107

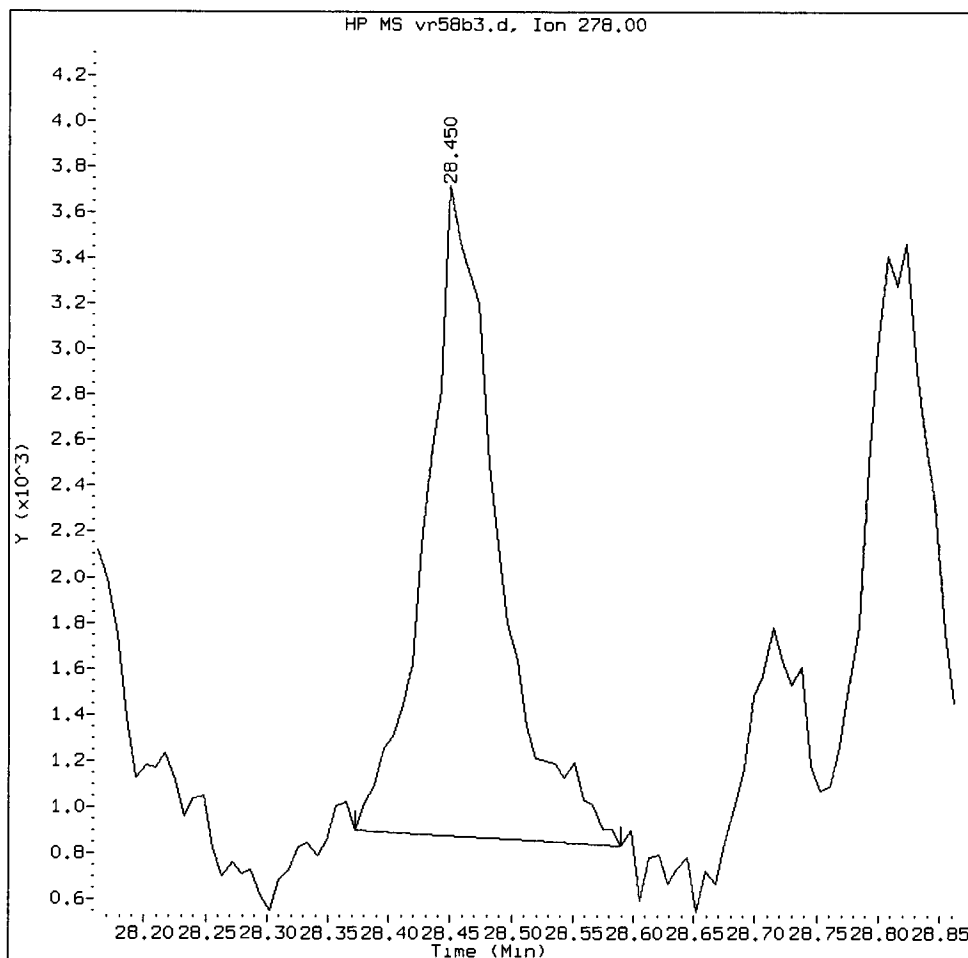
12.6.12

Compound: Dibenzo(a,h)anthracene  
CAS Number: 53-70-3



VR58B, /chem1/nt10.i/20121205.b/vr58b3.d

Dibenzo(a,h)anthracene Amount: 0.12 Area: 11694



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

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

5. Other \_\_\_\_\_

Analyst: VP

Date: 12.6.12

CO-ELUTION SUMMARY FOR FILE - vr58b3.d

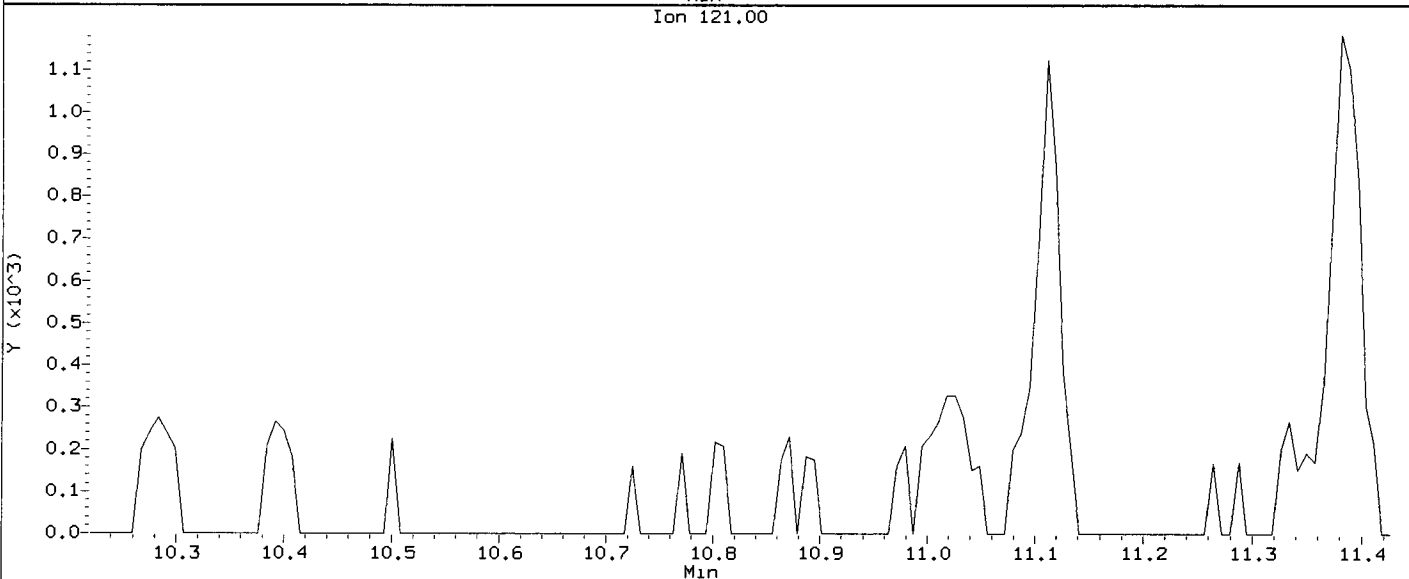
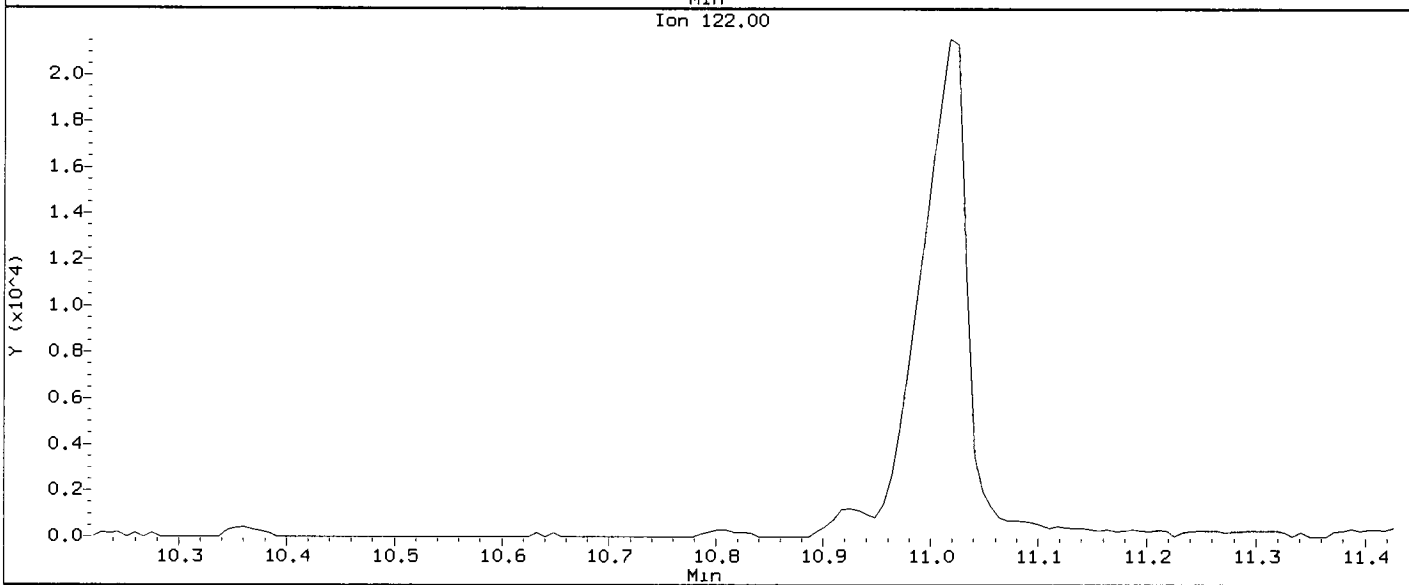
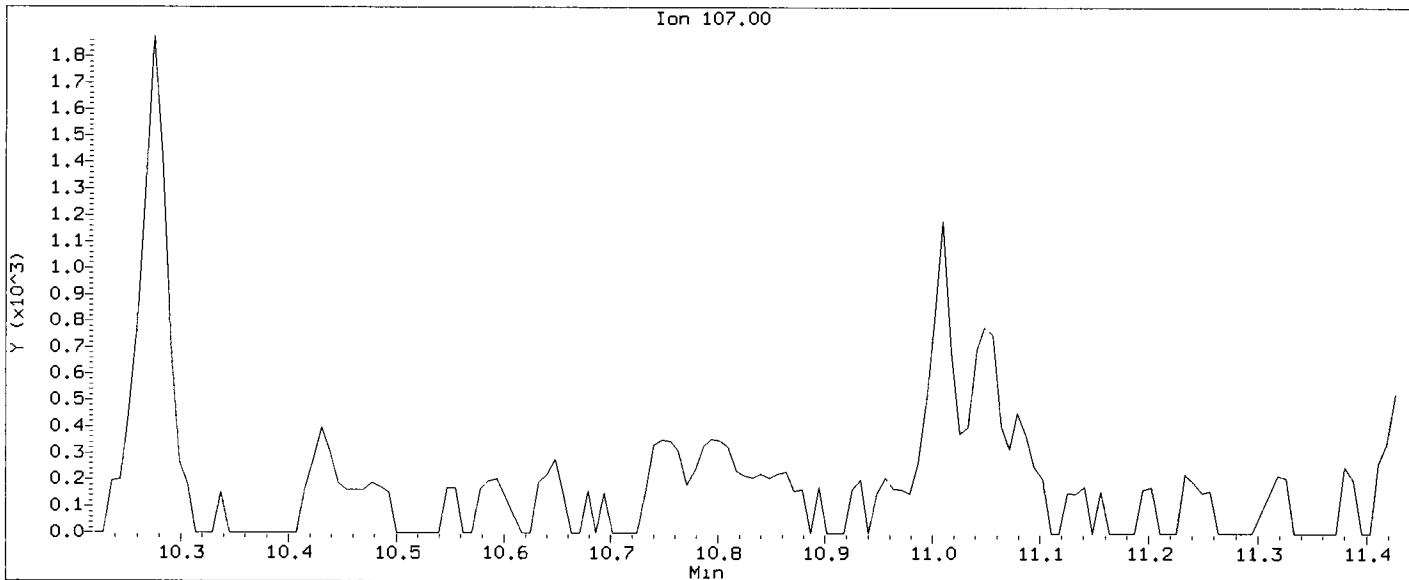
Lab ID: VR58B, Method: ABN.m, Instrument: nt10.i, Date: 05-DEC-2012

RT            CO-ELUTION COMPOUNDS

---

Data File: /chem1/nt10.1/20121205.b/vr58b3.d  
Injection Date: 05-DEC-2012 21:19  
Instrument: nt10.1  
Client Sample ID: SG-11-S-E-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9



# Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.: GC=CN10837018, MS= US83131105

Date: 12/6/12 Analysis: ABN Analyst: YE  
 GC Program: ABN2 Column No: 247357 Column Type: ZB5-MSI  
 Instrument Tune (.U or .CT.): 12.12.04 EM Voltage: 1600  
 Calibration File: DE1206 Curve Date: 11/29/12 Injection Vol.: 1ul

IS/SS	Ical/Ccal	LCS/ICV
<u>1989-2</u>	<u>1949-2</u>	
	<u>1986-2</u>	
	<u>1998-4</u>	
	<u>2036-2</u>	

## Document All Maintenance Tasks In StarLIMS

### INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20121206.b

Time	Filename	LabID	ClientID	DP																	
1	1337	df1206.d	DFTPP	DFTPP	1	NO ISTD FOUND															
2	1352	cc1206.d	ABN 5		1	8.59	81662	11.23	308492	15.10	179156	18.36	286213	23.50	318563	25.86	311246	24.63	426034		
3	1511	vr58f.d	VR58F	SG-14-S-B-12	3	8.59	77778	11.23	304964	15.10	171409	18.36	281319	23.50	299428	25.86	302828	24.63	404005		
4	1600	vt86mb.d	VT86MBS1		1	8.59	72433	11.23	293684	15.10	172398	18.36	282169	23.50	305377	24.63	401210	25.86	297200		
5	1750	vt86qls1.d	VT86QLS1		1	8.59	68898	11.22	281558	15.10	164935	18.36	261949	23.50	287307	24.63	369525	25.86	284286		
6	1636	vt86ab.d	VT86LCS1		1	8.59	65004	11.22	238310	15.10	159755	18.36	243392	23.50	289349	24.63	391076	25.86	293904		
7	1713	vt86abd.d	VT86LCS1		1	8.59	62514	11.22	236477	15.10	158912	18.36	240046	23.50	286108	24.63	391582	25.86	289950		
8	1827	vt86a.d	VT86A		1	8.59	60147	11.22	224937	15.10	157154	18.36	301856	23.50	298399	24.63	415025	25.86	291699		
9	1903	vt96mb.d	VT96MBS1	VT96MBS1	1	8.59	67287	11.22	257407	15.09	137503	18.35	239713	23.50	243242	25.86	101779	24.63	326625		
10	1940	vt96ab.d	VT96LCS1	VT96LCS1	1	8.59	60295	11.22	213009	15.10	138374	18.36	206862	23.50	255860	25.86	232658	24.63	328995		
11	2017	vt96qls1.d	VT96QLS1		1	8.59	64745	11.22	251759	15.09	141907	18.36	222860	23.50	245709	24.63	317466	25.86	218268		
12	2054	vt96a.d	VT96A	CS-112712	5	8.59	62284	11.23	238023	15.10	134769	18.36	226149	23.50	267850	25.86	284838	24.64	376528		
13	2130	vt96b.d	VT96B	HL-112712	5	8.59	66618	11.23	265564	15.10	157886	18.36	259116	23.50	283690	25.88	277705	24.65	390354		

YE 12/12/12

Every line must contain information or be lined out. Make all entries legible.  
 Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20121206.b

ARI Job No.: DF8270.m Method: DF8270.m Instrument: nt10.i Date: 06-DEC-2012

Time Filename LabID ClientID DF Manually Integrated Compounds

1337 df1206.d DF8270 1 NO MANUAL INTEGRATION

1352 cc1206.d ABN 5 1 NO MANUAL INTEGRATION

1511 vt58f.d VR58F SG-14-S-E- 3 NO MANUAL INTEGRATION



Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20121206.b

Instrument: nt10.i Date: 06-DEC-2012 Method: ABN.m

INITIAL CAL: 29-NOV-2012

Compound	%RSD or R <sup>2</sup>
Benzidine	40.4

CONTINUING CAL: 06-DEC-2012

Compound	%D
4-Methylphenol	63.2
1,2,4-Trichlorobenzene	40.8
Benzoic acid	-23.8
Hexachlorobutadiene	-22.7
Pentachlorophenol	-45.2
Benzidine	-67.9
2,3,4,6-Tetrachlorophenol	<del>-100.0</del>

*NOT IN CAL / NR of 12/6/12*

Date : 06-DEC-2012 13:37

Client ID: DFTPP

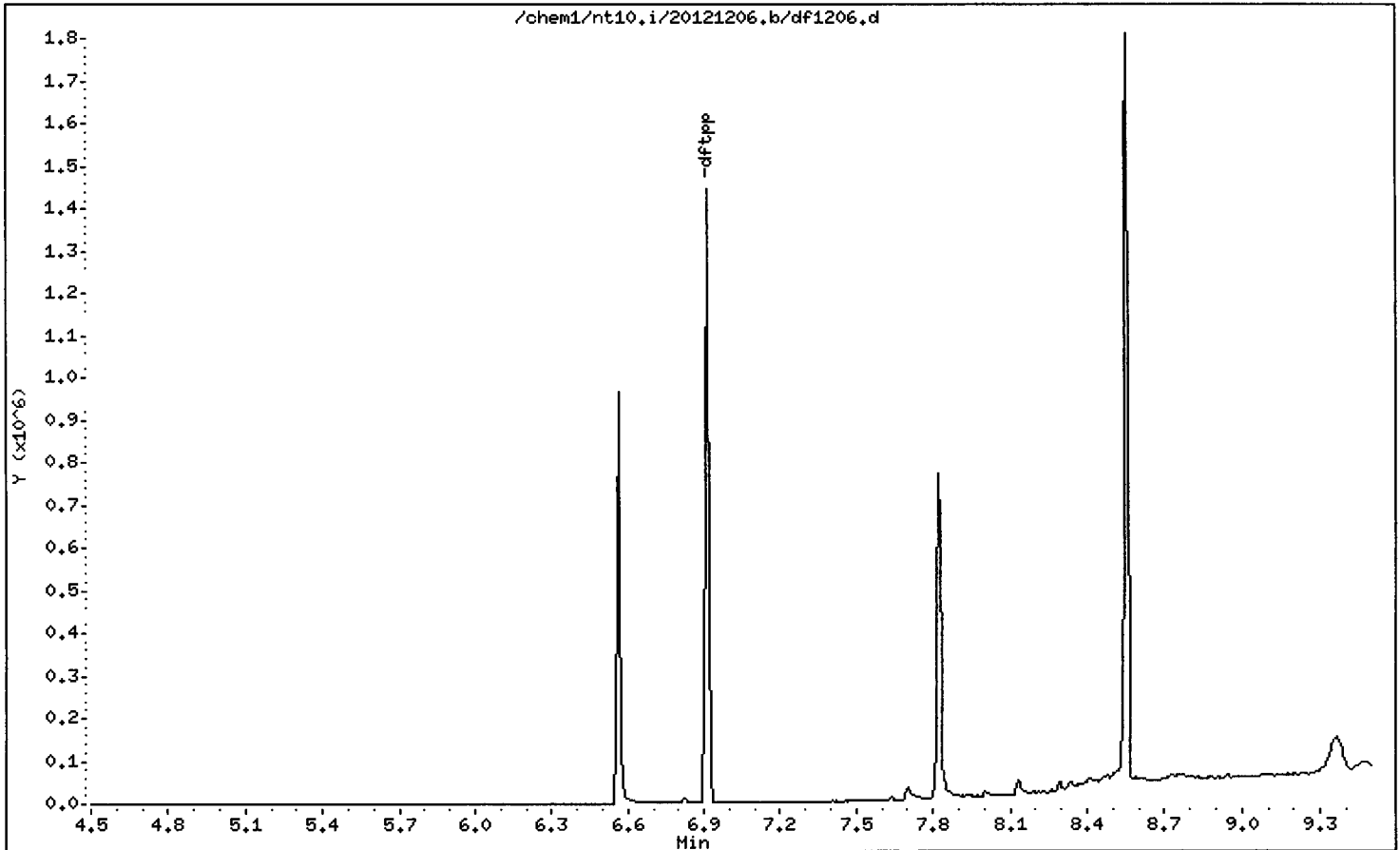
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Date : 06-DEC-2012 13:37

Client ID: DFTPP

Instrument: nt10.i

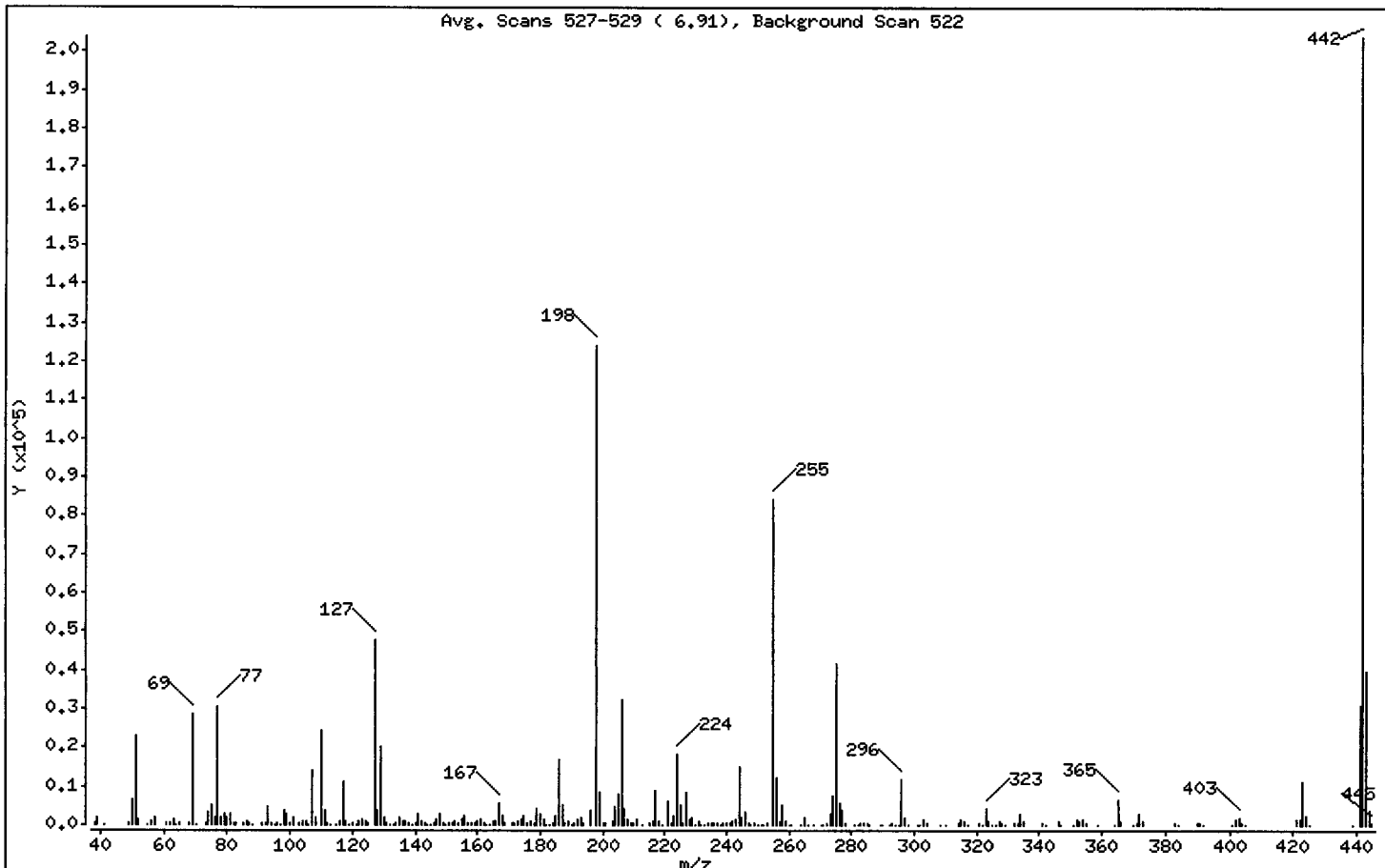
Sample Info: DFTPP

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	18.56
68	Less than 2.00% of mass 69	0.22 ( 0.94)
69	Mass 69 relative abundance	23.17
70	Less than 2.00% of mass 69	0.18 ( 0.79)
127	10.00 - 80.00% of mass 198	38.37
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.90
275	10.00 - 60.00% of mass 198	33.53
365	Greater than 1.00% of mass 198	5.24
441	0.01 - 24.00% of mass 442	24.70 ( 15.06)
442	50.00 - 200.00% of mass 198	164.00
443	15.00 - 24.00% of mass 442	32.10 ( 19.57)

Date : 06-DEC-2012 13:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1206.d

Spectrum: Avg. Scans 527-529 ( 6.91), Background Scan 522

Location of Maximum: 442.00

Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
38.00	306	133.00	57	207.00	4383	290.00	52
39.00	1678	134.00	702	208.00	1316	292.00	143
41.00	59	135.00	1843	209.00	514	293.00	700
49.00	254	136.00	794	210.00	587	294.00	174
50.00	6563	137.00	825	211.00	1405	295.00	180
51.00	23080	138.00	252	213.00	66	296.00	11940
52.00	1196	139.00	63	215.00	428	297.00	1691
55.00	99	140.00	355	216.00	709	298.00	113
56.00	850	141.00	2852	217.00	8850	301.00	169
57.00	1719	142.00	804	218.00	1071	302.00	164
61.00	371	143.00	684	219.00	65	303.00	1607
62.00	414	144.00	158	221.00	6059	304.00	362
63.00	1272	145.00	129	222.00	378	308.00	134
64.00	129	146.00	496	223.00	2123	310.00	135
65.00	492	147.00	1412	224.00	18384	314.00	670
68.00	270	148.00	2979	225.00	4926	315.00	1297
69.00	28816	149.00	685	226.00	591	316.00	868
70.00	228	150.00	150	227.00	8307	317.00	147
73.00	326	151.00	468	228.00	1195	321.00	444
74.00	3411	152.00	273	229.00	1716	322.00	217
75.00	4976	153.00	949	230.00	234	323.00	4202
76.00	1662	154.00	699	231.00	766	324.00	867
77.00	30656	155.00	1533	232.00	70	325.00	52
78.00	2068	156.00	2149	233.00	140	326.00	55
79.00	2636	157.00	467	234.00	529	327.00	803
80.00	1995	158.00	492	235.00	594	328.00	486
81.00	2841	159.00	432	236.00	389	329.00	51
82.00	697	160.00	963	237.00	635	332.00	436
83.00	649	161.00	1411	238.00	53	333.00	428
85.00	541	162.00	339	239.00	368	334.00	2777
86.00	815	163.00	112	240.00	275	335.00	716
87.00	415	164.00	70	241.00	497	341.00	537
88.00	67	165.00	971	242.00	1067	342.00	121
91.00	581	166.00	931	243.00	1219	346.00	988
92.00	690	167.00	5665	244.00	14830	347.00	109

Date : 06-DEC-2012 13:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1206.d

Spectrum: Avg. Scans 527-529 ( 6.91), Background Scan 522

Location of Maximum: 442.00

Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
93.00	4788	168.00	2197	245.00	2104	351.00	64
94.00	367	169.00	467	246.00	3096	352.00	1429
95.00	197	170.00	174	247.00	646	353.00	1014
96.00	251	171.00	299	248.00	69	354.00	1508
97.00	223	172.00	507	249.00	598	355.00	391
98.00	3948	173.00	719	250.00	76	359.00	58
99.00	2719	174.00	1202	251.00	185	364.00	85
100.00	255	175.00	2201	252.00	197	365.00	6517
101.00	1658	176.00	643	253.00	250	366.00	946
103.00	554	177.00	1158	255.00	84344	370.00	129
104.00	1141	178.00	428	256.00	12367	371.00	452
105.00	1105	179.00	4368	257.00	1024	372.00	2760
106.00	140	180.00	3007	258.00	5037	373.00	767
107.00	14154	181.00	1509	259.00	802	383.00	693
108.00	1986	182.00	222	260.00	106	384.00	154
110.00	24168	183.00	117	261.00	115	390.00	414
111.00	3798	184.00	407	264.00	227	391.00	309
112.00	478	185.00	2156	265.00	2000	392.00	137
113.00	66	186.00	16776	266.00	182	401.00	147
115.00	57	187.00	4992	268.00	124	402.00	1317
116.00	959	188.00	487	270.00	123	403.00	1726
117.00	11457	189.00	1141	271.00	220	404.00	644
118.00	854	190.00	208	272.00	248	405.00	110
119.00	188	191.00	625	273.00	2778	421.00	1455
120.00	252	192.00	1453	274.00	7279	422.00	1516
121.00	67	193.00	1656	275.00	41696	423.00	11214
122.00	906	194.00	414	276.00	5571	424.00	2261
123.00	1523	196.00	3691	277.00	3550	425.00	173
124.00	747	198.00	124360	278.00	491	439.00	196
125.00	700	199.00	8575	281.00	33	441.00	30720
127.00	47720	200.00	662	282.00	186	442.00	203904
128.00	3777	201.00	617	283.00	543	443.00	39920
129.00	20248	203.00	895	284.00	347	444.00	3859
130.00	1867	204.00	4476	285.00	642	445.00	241
131.00	396	205.00	7772	286.00	50		

Date : 06-DEC-2012 13:37

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1206.d

Spectrum: Avg. Scans 527-529 ( 6.91), Background Scan 522

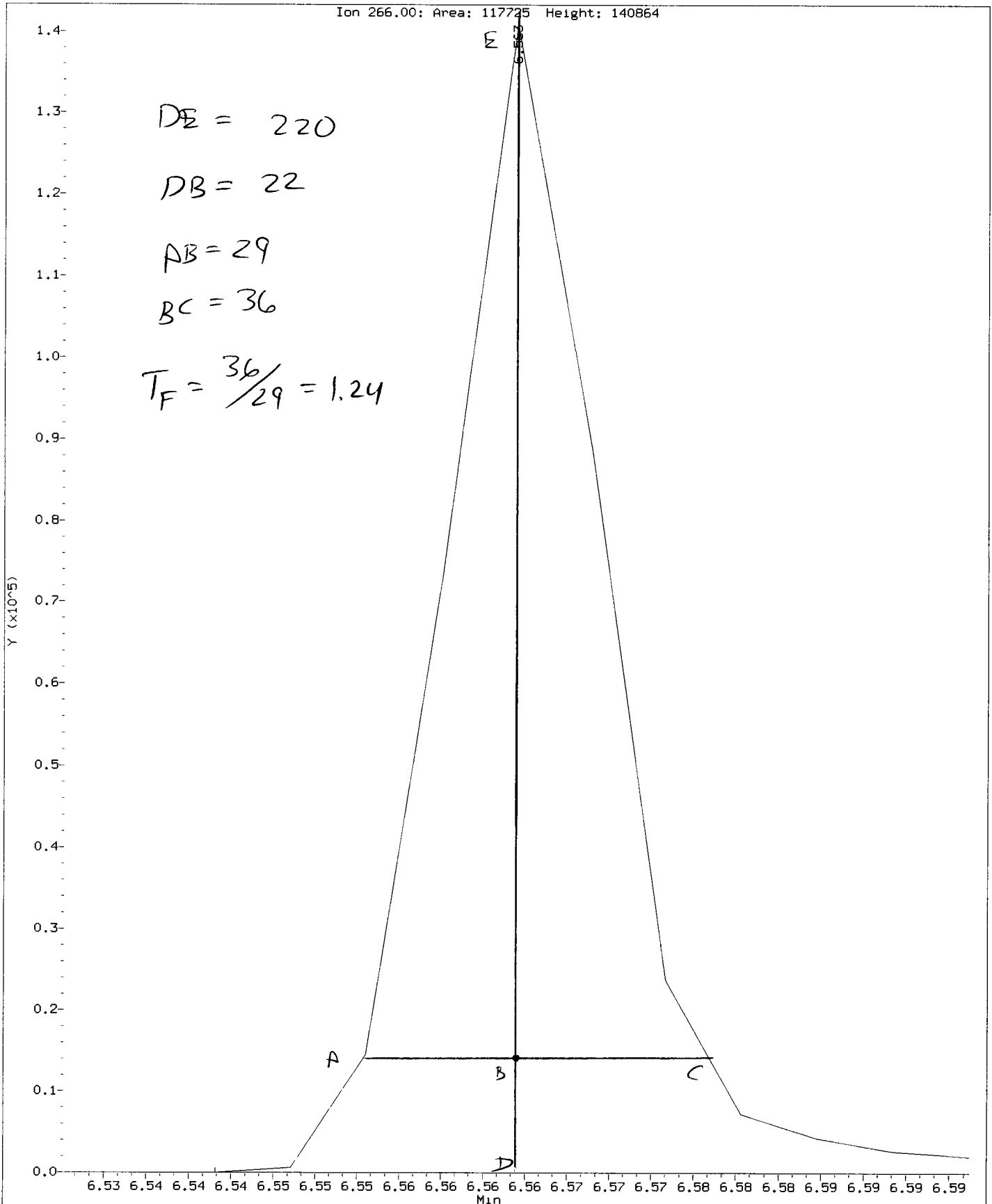
Location of Maximum: 442.00

Number of points: 282

m/z	Y	m/z	Y	m/z	Y	m/z	Y
132.00	216	206.00	32280	289.00	64		

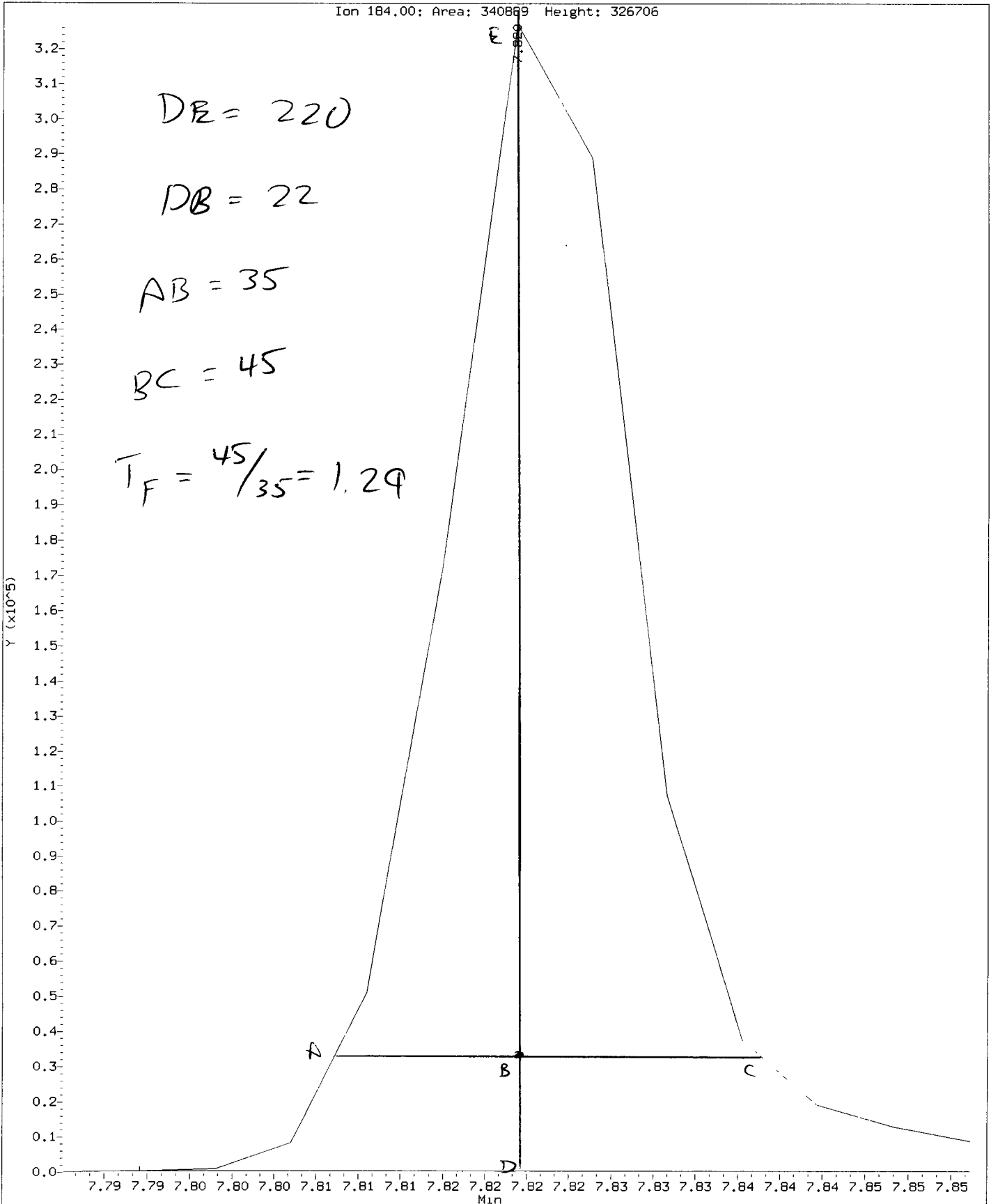
Data File: /chem1/nt10.1/20121206.b/DDT.b/df1206.d  
Injection Date: 06-DEC-2012 13:37  
Instrument: nt10.1  
Client Sample ID: DFTPP

Compound: Pentachlorophenol  
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20121206.b/DDT.b/df1206.d  
Injection Date: 06-DEC-2012 13:37  
Instrument: nt10.1  
Client Sample ID: DFTPP

Compound: Benzidine  
CAS Number:





Analytical Resources Inc.  
 ABN by sw846 8270C  
 DDT Breakdown Report

Data file: /chem1/nt10.i/20121206.b/DDT.b/df1206.d      ARI ID: DFTPP  
 Method: /chem1/nt10.i/20121206.b/DDT.b/sw846ddt.m      Misc: 11-  
 Analysis Date: 06-DEC-2012 13:37      Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.563	117725
Benzidine	7.820	340888
4,4'-DDE	8.002	1066
4,4'-DDD	8.296	4014
4,4'-DDT	8.553	330687

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

$$\text{DDT Percent Breakdown} = \frac{(1066 + 4014) * 100}{(1066 + 4014 + 330687)}$$

$$\text{DDT Percent Breakdown} = 1.5 \%$$

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121206.b/cc1206.d  
 Lab Smp Id: ABN 5  
 Inj Date : 06-DEC-2012 13:52  
 Operator : VTS/YZ  
 Smp Info : ABN 5  
 Misc Info :  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121206.b/ABN.m  
 Meth Date : 06-Dec-2012 15:05 van  
 Cal Date : 29-NOV-2012 15:30  
 Als bottle: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50  
 Processing Host: cserv3

Inst ID: nt10.i  
 Quant Type: ISTD  
 Cal File: ic1129i.d  
 Continuing Calibration Sample  
 Compound Sublist: PSDDAICAL.sub

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
\$ 1 2-Fluorophenol	112	6.290	6.290	(0.733)	125528	5.00000	4.805
\$ 2 Phenol-d5	99	8.005	8.005	(0.932)	160987	5.00000	4.980
3 Phenol	94	8.021	8.021	(0.934)	199366	5.00000	5.855
\$ 5 2-Chlorophenol-d4	132	8.214	8.214	(0.957)	136127	5.00000	4.867
4 Bis(2-Chloroethyl) ether	93	8.137	8.137	(0.948)	113444	5.00000	4.586
6 2-Chlorophenol	128	8.245	8.245	(0.960)	157429	5.00000	4.905
7 1,3-Dichlorobenzene	146	8.515	8.515	(0.992)	147489	5.00000	4.487
* 8 1,4-Dichlorobenzene-d4	152	8.585	8.585	(1.000)	81662	4.00000	
9 1,4-Dichlorobenzene	146	8.616	8.616	(1.004)	154265	5.00000	5.003
\$ 10 1,2-Dichlorobenzene-d4	152	8.965	8.965	(1.044)	92953	5.00000	4.558
12 1,2-Dichlorobenzene	146	8.989	8.989	(1.047)	145296	5.00000	4.910
11 Benzyl alcohol	108	8.911	8.911	(1.038)	77642	5.00000	4.822
14 2,2'-oxybis(1-Chloropropane)	121	10.587	10.587	(1.233)	130076	5.00000	4.393
13 2-Methylphenol	108	9.191	9.191	(1.070)	138103	5.00000	4.719
17 Hexachloroethane	117	9.610	9.610	(1.119)	56439	5.00000	4.455
16 N-Nitroso-di-n-propylamine	70	9.509	9.509	(1.108)	75592	5.00000	4.646
15 4-Methylphenol	108	9.486	9.486	(1.105)	141651	5.00000	8.160
\$ 18 Nitrobenzene-d5	82	9.757	9.757	(0.869)	127218	5.00000	4.401
19 Nitrobenzene	77	9.788	9.788	(0.872)	116029	5.00000	4.462
20 Isophorone	82	10.285	10.285	(0.916)	220392	5.00000	4.393
21 2-Nitrophenol	139	10.463	10.463	(0.932)	96248	5.00000	4.569
22 2,4-Dimethylphenol	107	10.587	10.587	(0.943)	256470	10.00000	8.737
23 Bis(2-Chloroethoxy)methane	93	10.780	10.780	(0.960)	127721	5.00000	4.301
24 Benzoic acid	105	10.888	10.888	(0.970)	288806	20.00000	15.24
25 2,4-Dichlorophenol	162	10.972	10.972	(0.977)	271402	10.00000	9.674
26 1,2,4-Trichlorobenzene	180	11.142	11.142	(0.992)	120800	5.00000	7.042

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
*****	====	==	*****	*****	*****	*****	*****
* 27 Naphthalene-d8	136	11.227	11.227	(1.000)	308492	4.00000	
28 Naphthalene	128	11.265	11.265	(1.003)	374502	5.00000	4.990
29 4-Chloroaniline	127	11.443	11.443	(1.019)	275419	10.0000	8.729
30 Hexachlorobutadiene	225	11.683	11.683	(1.041)	74350	5.00000	3.867
31 4-Chloro-3-methylphenol	107	12.542	12.542	(1.117)	238340	10.0000	9.174
32 2-Methylnaphthalene	142	12.774	12.774	(1.138)	256472	5.00000	4.587
33 Hexachlorocyclopentadiene	237	13.277	13.277	(0.880)	162949	10.0000	8.000
34 2,4,6-Trichlorophenol	196	13.470	13.470	(0.892)	196630	10.0000	9.276
35 2,4,5-Trichlorophenol	196	13.548	13.548	(0.897)	234558	10.0000	10.34
\$ 36 2-Fluorobiphenyl	172	13.633	13.633	(0.903)	322804	5.00000	5.091
37 2-Chloronaphthalene	162	13.826	13.826	(0.916)	237993	5.00000	4.572
38 2-Nitroaniline	65	14.136	14.136	(0.936)	109506	10.0000	9.271
39 Dimethylphthalate	163	14.631	14.631	(0.969)	266071	5.00000	4.597
40 Acenaphthylene	152	14.755	14.755	(0.977)	400254	5.00000	4.727
41 2,6-Dinitrotoluene	165	14.763	14.763	(0.978)	125811	10.0000	9.662
* 42 Acenaphthene-d10	164	15.095	15.095	(1.000)	179156	4.00000	
43 3-Nitroaniline	138	15.064	15.064	(0.998)	118525	10.0000	8.177
44 Acenaphthene	153	15.165	15.165	(1.005)	237035	5.00000	4.897
45 2,4-Dinitrophenol	184	15.289	15.289	(1.013)	171850	20.0000	17.56
46 Dibenzofuran	168	15.521	15.521	(1.028)	334197	5.00000	4.652
47 4-Nitrophenol	109	15.497	15.497	(1.027)	64085	10.0000	9.437
48 2,4-Dinitrotoluene	165	15.629	15.629	(1.035)	169314	10.0000	9.919
50 Diethylphthalate	149	16.216	16.216	(1.074)	255360	5.00000	4.215
49 Fluorene	166	16.286	16.286	(1.079)	312021	5.00000	5.236
51 4-Chlorophenyl-phenylether	204	16.309	16.309	(1.080)	146836	5.00000	5.314
52 4-Nitroaniline	138	16.425	16.425	(1.088)	122197	10.0000	10.19
53 4,6-Dinitro-2-methylphenol	198	16.533	16.533	(0.901)	247557	20.0000	19.60
54 N-Nitrosodiphenylamine	169	16.595	16.595	(0.904)	169298	5.00000	4.817
\$ 55 2,4,6-Tribromophenol	330	16.865	16.865	(1.117)	46405	5.00000	4.397
56 4-Bromophenyl-phenylether	248	17.389	17.389	(0.947)	81751	5.00000	5.009
57 Hexachlorobenzene	284	17.698	17.698	(0.964)	92543	5.00000	4.510
58 Pentachlorophenol	266	18.109	18.109	(0.986)	71911	10.0000	5.479
* 59 Phenanthrene-d10	188	18.356	18.356	(1.000)	286213	4.00000	
60 Phenanthrene	178	18.410	18.410	(1.003)	365068	5.00000	5.152
61 Anthracene	178	18.511	18.511	(1.008)	385776	5.00000	5.065
62 Carbazole	167	18.890	18.890	(1.029)	246639	5.00000	4.193
63 Di-n-butylphthalate	149	19.788	19.788	(1.078)	457171	5.00000	5.073
64 Fluoranthene	202	20.863	20.863	(1.137)	456665	5.00000	5.113
65 Pyrene	202	21.289	21.289	(0.906)	468480	5.00000	5.020
\$ 66 Terphenyl-d14	244	21.629	21.629	(0.921)	300705	5.00000	4.820
67 Butylbenzylphthalate	149	22.589	22.589	(0.961)	190076	5.00000	5.014
68 Benzo(a)anthracene	228	23.472	23.472	(0.999)	422820	5.00000	4.670
* 69 Chrysene-d12	240	23.495	23.495	(1.000)	318563	4.00000	
70 3,3'-Dichlorobenzidine	252	23.464	23.464	(0.999)	297685	10.0000	8.083
71 Chrysene	228	23.542	23.542	(1.002)	397780	5.00000	4.945
72 bis(2-Ethylhexyl)phthalate	149	23.650	23.650	(0.960)	288320	5.00000	4.905
* 134 Di-n-octylphthalate-d4	153	24.633	24.633	(1.000)	426034	4.00000	

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	=====	==	=====	=====	=====	=====	=====
73 Di-n-octylphthalate	149	24.641	24.641	(1.000)	469050	5.00000	4.857
74 Benzo(b)fluoranthene	252	25.237	25.237	(0.976)	446151	5.00000	4.914
75 Benzo(k)fluoranthene	252	25.268	25.268	(0.977)	494658	5.00000	4.814
76 Benzo(a)pyrene	252	25.764	25.764	(0.996)	395014	5.00000	4.447
* 77 Perylene-d12	264	25.856	25.856	(1.000)	311246	4.00000	
78 Indeno(1,2,3-cd)pyrene	276	27.971	27.971	(1.082)	479368	5.00000	4.762
79 Dibenzo(a,h)anthracene	278	27.987	27.987	(1.082)	382292	5.00000	4.785
80 Benzo(g,h,i)perylene	276	28.577	28.577	(1.105)	403586	5.00000	4.684
90 N-Nitrosodimethylamine	74	4.004	4.004	(0.466)	171658	10.0000	9.203
91 Aniline	93	8.028	8.028	(0.935)	365044	5.00000	5.343
93 Benzidine	184	21.149	21.149	(0.900)	83541	10.0000	3.206
103 Pyridine	79	4.012	4.012	(0.467)	142662	10.0000	9.732
105 1-methylnaphthalene	142	13.006	13.006	(1.158)	232803	5.00000	4.536
111 Azobenzene (1,2-DP-Hydrazine)	77	16.664	16.664	(1.104)	221155	5.00000	4.327
187 Total Benzofluoranthenes	252	25.268	25.268	(0.977)	877267	10.0000	9.578
99 Perylene	252	25.903	25.903	(1.002)	428140	5.00000	4.975
98 Retene	219				Compound Not Detected.		
120 2,3,4,6-Tetrachlorophenol	232				Compound Not Detected.		

11D  
12.6.12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: cc1206.d  
 Lab Smp Id: ABN 5  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121206.b/ABN.m  
 Misc Info:

Calibration Date: 06-DEC-2012  
 Calibration Time: 12:49  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	81662	0.11
27 Naphthalene-d8	299399	149700	598798	308492	3.04
42 Acenaphthene-d10	178564	89282	357128	179156	0.33
59 Phenanthrene-d10	305410	152705	610820	286213	-6.29
69 Chrysene-d12	323853	161926	647706	318563	-1.63
134 Di-n-octylphthala	427845	213922	855690	426034	-0.42
77 Perylene-d12	305316	152658	610632	311246	1.94

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.59	0.00
27 Naphthalene-d8	11.23	10.73	11.73	11.23	0.00
42 Acenaphthene-d10	15.10	14.60	15.60	15.10	0.00
59 Phenanthrene-d10	18.36	17.86	18.86	18.36	0.00
69 Chrysene-d12	23.50	23.00	24.00	23.50	0.00
134 Di-n-octylphthala	24.63	24.13	25.13	24.63	0.00
77 Perylene-d12	25.86	25.36	26.36	25.86	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: nt10.i                      Injection Date: 06-DEC-2012 13:52  
 Lab File ID: cc1206.d                    Init. Cal. Date(s): 29-NOV-2012    29-NOV-2012  
 Analysis Type:                            Init. Cal. Times:    09:54                    15:30  
 Lab Sample ID: ABN 5                    Quant Type:    ISTD  
 Method: /chem1/nt10.i/20121206.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
\$ 1 2-Fluorophenol	1.27957	1.22973	1.22973	0.010	-3.89463	20.00000	Averaged
\$ 2 Phenol-d5	1.58333	1.57711	1.57711	0.010	-0.39340	20.00000	Averaged
3 Phenol	1.66795	1.95308	1.95308	0.100	17.09472	20.00000	Averaged
\$ 5 2-Chlorophenol-d4	1.36995	1.33357	1.33357	0.010	-2.65584	20.00000	Averaged
4 Bis(2-Chloroethyl)ether	1.21173	1.11135	1.11135	0.700	-8.28373	20.00000	Averaged
6 2-Chlorophenol	1.57211	1.54225	1.54225	0.800	-1.89918	20.00000	Averaged
7 1,3-Dichlorobenzene	1.61009	1.44487	1.44487	0.010	-10.26124	20.00000	Averaged
9 1,4-Dichlorobenzene	1.51045	1.51125	1.51125	0.010	0.05291	20.00000	Averaged
\$ 10 1,2-Dichlorobenzene-d4	0.99893	0.91061	0.91061	0.010	-8.84143	20.00000	Averaged
12 1,2-Dichlorobenzene	1.44945	1.42339	1.42339	0.010	-1.79772	20.00000	Averaged
11 Benzyl alcohol	0.78872	0.76062	0.76062	0.010	-3.56316	20.00000	Averaged
14 2,2'-oxybis(1-Chloropropane	1.45029	1.27429	1.27429	0.010	-12.13584	20.00000	Averaged
13 2-Methylphenol	1.43339	1.35292	1.35292	0.700	-5.61398	20.00000	Averaged
17 Hexachloroethane	0.62060	0.55290	0.55290	0.300	-10.90892	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.79702	0.74054	0.74054	0.500	-7.08661	20.00000	Averaged
15 4-Methylphenol	0.85032	1.38768	1.38768	0.600	63.19598	20.00000	Averaged <-
\$ 18 Nitrobenzene-d5	0.37481	0.32991	0.32991	0.010	-11.98011	20.00000	Averaged
19 Nitrobenzene	0.33720	0.30089	0.30089	0.200	-10.76758	20.00000	Averaged
20 Isophorone	0.65046	0.57153	0.57153	0.300	-12.13386	20.00000	Averaged
21 2-Nitrophenol	0.27314	0.24960	0.24960	0.100	-8.62007	20.00000	Averaged
22 2,4-Dimethylphenol	0.38062	0.33255	0.33255	0.200	-12.62932	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.38508	0.33121	0.33121	0.050	-13.98888	20.00000	Averaged
24 Benzoic acid	15.23918	20.00000	0.18724	0.010	-23.80410	20.00000	Quadratic <-
25 2,4-Dichlorophenol	0.36377	0.35191	0.35191	0.100	-3.25978	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.22242	0.31327	0.31327	0.010	40.84404	20.00000	Averaged <-
28 Naphthalene	0.97316	0.97118	0.97118	0.100	-0.20363	20.00000	Averaged
29 4-Chloroaniline	0.40913	0.35712	0.35712	0.010	-12.71222	20.00000	Averaged
30 Hexachlorobutadiene	0.24932	0.19281	0.19281	0.010	-22.66479	20.00000	Averaged <-
31 4-Chloro-3-methylphenol	0.33687	0.30904	0.30904	0.200	-8.26243	20.00000	Averaged
32 2-Methylnaphthalene	0.72505	0.66510	0.66510	0.300	-8.26825	20.00000	Averaged
33 Hexachlorocyclopentadiene	0.45476	0.36381	0.36381	0.001	-19.99930	20.00000	Averaged
34 2,4,6-Trichlorophenol	0.47330	0.43901	0.43901	0.200	-7.24332	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.50641	0.52370	0.52370	0.200	3.41283	20.00000	Averaged
\$ 36 2-Fluorobiphenyl	1.41574	1.44144	1.44144	0.010	1.81525	20.00000	Averaged
37 2-Chloronaphthalene	1.16210	1.06273	1.06273	0.700	-8.55122	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i                      Injection Date: 06-DEC-2012 13:52  
 Lab File ID: cc1206.d                    Init. Cal. Date(s): 29-NOV-2012 29-NOV-2012  
 Analysis Type:                            Init. Cal. Times: 09:54 15:30  
 Lab Sample ID: ABN 5                    Quant Type: ISTD  
 Method: /chem1/nt10.i/20121206.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
38 2-Nitroaniline	0.26371	0.24449	0.24449	0.010	-7.28629	20.00000	Averaged
39 Dimethylphthalate	1.29227	1.18811	1.18811	0.010	-8.06018	20.00000	Averaged
40 Acenaphthylene	1.89060	1.78729	1.78729	0.900	-5.46434	20.00000	Averaged
41 2,6-Dinitrotoluene	0.29071	0.28090	0.28090	0.100	-3.37669	20.00000	Averaged
43 3-Nitroaniline	0.32363	0.26463	0.26463	0.010	-18.22955	20.00000	Averaged
44 Acenaphthene	1.08066	1.05845	1.05845	0.100	-2.05463	20.00000	Averaged
45 2,4-Dinitrophenol	17.56148	20.00000	0.19184	0.030	-12.19262	20.00000	Quadratic
46 Dibenzofuran	1.60380	1.49232	1.49232	0.800	-6.95124	20.00000	Averaged
47 4-Nitrophenol	0.15161	0.14308	0.14308	0.010	-5.62712	20.00000	Averaged
48 2,4-Dinitrotoluene	0.38110	0.37803	0.37803	0.200	-0.80691	20.00000	Averaged
50 Diethylphthalate	1.35255	1.14028	1.14028	0.010	-15.69418	20.00000	Averaged
49 Fluorene	1.33054	1.39329	1.39329	0.100	4.71661	20.00000	Averaged
51 4-Chlorophenyl-phenylether	0.61696	0.65568	0.65568	0.100	6.27622	20.00000	Averaged
52 4-Nitroaniline	0.26787	0.27283	0.27283	0.010	1.85227	20.00000	Averaged
53 4,6-Dinitro-2-methylphenol	0.17655	0.17299	0.17299	0.001	-2.01651	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.49120	0.47321	0.47321	0.010	-3.66312	20.00000	Averaged
55 2,4,6-Tribromophenol	0.23562	0.20722	0.20722	0.010	-12.05567	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.22809	0.22850	0.22850	0.100	0.18144	20.00000	Averaged
57 Hexachlorobenzene	0.28680	0.25867	0.25867	0.100	-9.80826	20.00000	Averaged
58 Pentachlorophenol	0.18344	0.10050	0.10050	0.010	-45.21244	20.00000	Averaged
60 Phenanthrene	0.99039	1.02041	1.02041	0.700	3.03138	20.00000	Averaged
61 Anthracene	1.06454	1.07829	1.07829	0.700	1.29137	20.00000	Averaged
62 Carbazole	0.82200	0.68939	0.68939	0.010	-16.13293	20.00000	Averaged
63 Di-n-butylphthalate	1.25942	1.27785	1.27785	0.010	1.46293	20.00000	Averaged
64 Fluoranthene	1.24834	1.27643	1.27643	0.600	2.25056	20.00000	Averaged
65 Pyrene	1.17183	1.17648	1.17648	0.600	0.39668	20.00000	Averaged
66 Terphenyl-d14	0.78331	0.75515	0.75515	0.010	-3.59399	20.00000	Averaged
67 Butylbenzylphthalate	0.47602	0.47733	0.47733	0.010	0.27616	20.00000	Averaged
68 Benzo(a)anthracene	1.13688	1.06182	1.06182	0.700	-6.60262	20.00000	Averaged
70 3,3'-Dichlorobenzidine	8.08345	10.00000	0.37378	0.010	-19.16555	20.00000	Quadratic
71 Chrysene	1.00999	0.99894	0.99894	0.700	-1.09465	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.55191	0.54140	0.54140	0.010	-1.90423	20.00000	Averaged
73 Di-n-octylphthalate	0.90675	0.88077	0.88077	0.010	-2.86424	20.00000	Averaged
74 Benzo(b)fluoranthene	1.16692	1.14675	1.14675	0.700	-1.72854	20.00000	Averaged
75 Benzo(k)fluoranthene	1.32054	1.27143	1.27143	0.700	-3.71908	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

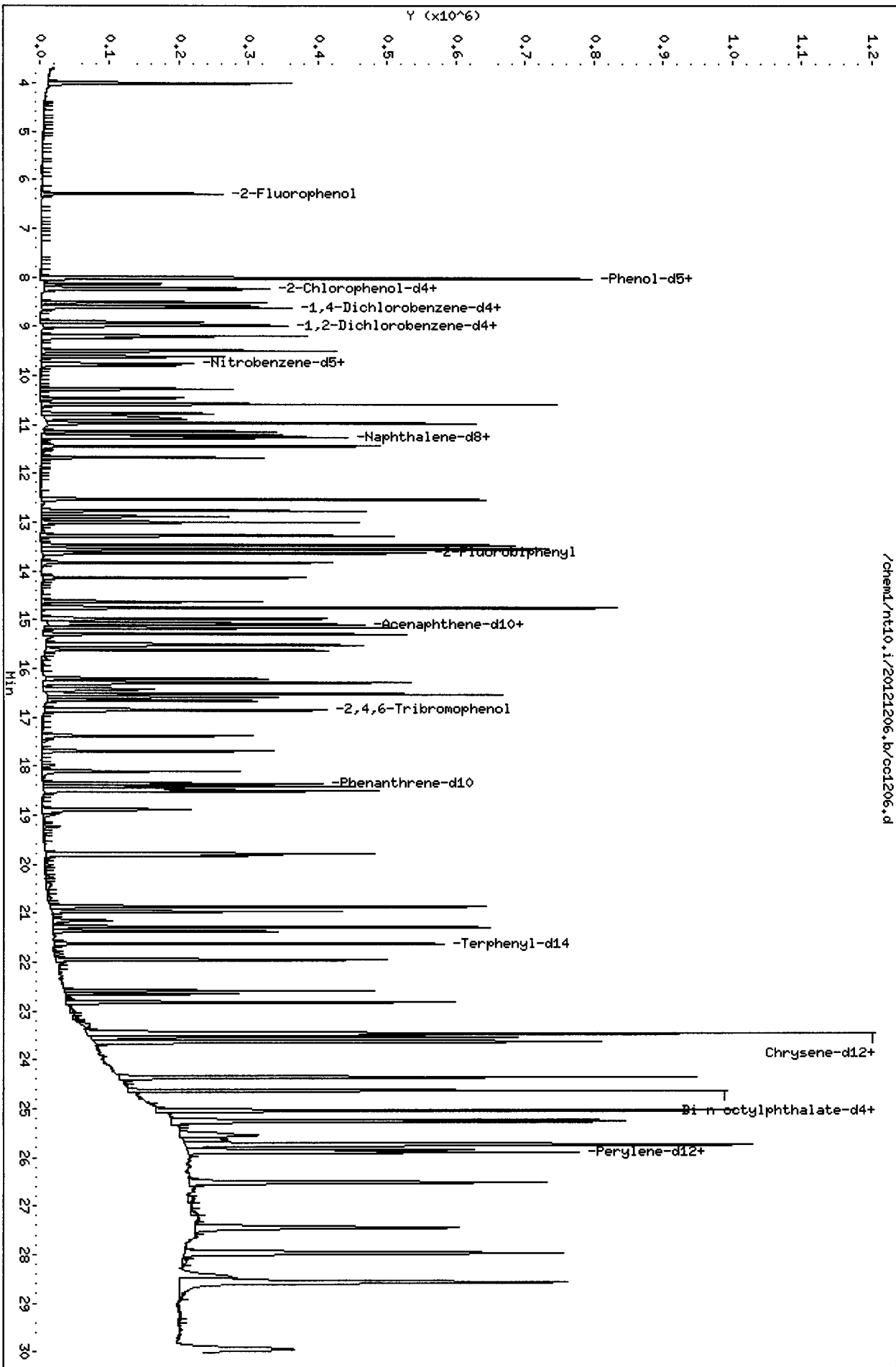
Instrument ID: nt10.i                      Injection Date: 06-DEC-2012 13:52  
 Lab File ID: cc1206.d                    Init. Cal. Date(s): 29-NOV-2012    29-NOV-2012  
 Analysis Type:                            Init. Cal. Times:    09:54            15:30  
 Lab Sample ID: ABN 5                    Quant Type:    ISTD  
 Method: /chem1/nt10.i/20121206.b/ABN.m

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
76 Benzo(a)pyrene	1.14156	1.01531	1.01531	0.700	-11.05937	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.29375	1.23213	1.23213	0.500	-4.76325	20.00000	Averaged
79 Dibenzo(a,h)anthracene	1.02672	0.98261	0.98261	0.400	-4.29610	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.10723	1.03734	1.03734	0.500	-6.31228	20.00000	Averaged
90 N-Nitrosodimethylamine	0.91363	0.84082	0.84082	0.010	-7.96959	20.00000	Averaged
91 Aniline	3.34640	3.57615	3.57615	0.010	6.86549	20.00000	Averaged
93 Benzidine	0.32715	0.10490	0.10490	0.010	-67.93650	20.00000	Averaged <-
103 Pyridine	0.71804	0.69879	0.69879	0.010	-2.68060	20.00000	Averaged
105 1-methylnaphthalene	0.66545	0.60372	0.60372	0.010	-9.27728	20.00000	Averaged
111 Azobenzene (1,2-DP-Hydrazin	1.14127	0.98754	0.98754	0.010	-13.46972	20.00000	Averaged
187 Total Benzofluoranthenes	1.17711	1.12743	1.12743	0.010	-4.22108	20.00000	Averaged
99 Perylene	1.10608	1.10045	1.10045	0.010	-0.50902	20.00000	Averaged
98 Retene	++++	0.00243	0.00243	0.010	++++	20.00000	Averaged <-
120 2,3,4,6-Tetrachlorophenol	0.00104	++++	++++	0.010	++++	20.00000	Averaged <-



Data File: /chem1/nt10.i/20121206.b/cc1206.d  
 Date: 06-DEC-2012 13:52  
 Client ID:  
 Sample Info: ABN 5  
 Column phase: ZB-5msi

Instrument: nt10.i  
 Operator: VTS/YZ  
 Column diameter: 0.25



/chem1/nt10.i/20121206.b/cc1206.d

CO-ELUTION SUMMARY FOR FILE - cc1206.d

Lab ID: ABN 5, Method: ABN.m, Instrument: nt10.i, Date: 06-DEC-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20121206.b/vr58f.d  
 Lab Smp Id: VR58F Client Smp ID: SG-14-S-E-121107  
 Inj Date : 06-DEC-2012 15:11  
 Operator : VTS/YZ Inst ID: nt10.i  
 Smp Info : VR58F,3  
 Misc Info : 12-22334  
 Comment : 1ul Injection  
 Method : /chem1/nt10.i/20121206.b/ABN.m  
 Meth Date : 06-Dec-2012 15:05 van Quant Type: ISTD  
 Cal Date : 29-NOV-2012 15:30 Cal File: ic1129i.d  
 Als bottle: 4  
 Dil Factor: 3.00000  
 Integrator: HP RTE Compound Sublist: SHORTPSDDA.sub  
 Target Version: 3.50  
 Processing Host: cserv3

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

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	22.20000	Weight of sample extracted (g)
M	52.70000	% 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	6.320	6.290	(0.736)	32100	1.29017	368.6	
\$ 2 Phenol-d5	99	8.013	8.005	(0.932)	43116	1.40045	400.1	
3 Phenol	94	8.036	8.021	(0.935)	7335	0.22616	64.61	
\$ 5 2-Chlorophenol-d4	132	8.229	8.214	(0.958)	37360	1.40251	400.7	
7 1,3-Dichlorobenzene	146	Compound Not Detected.						
* 8 1,4-Dichlorobenzene-d4	152	8.593	8.585	(1.000)	77778	4.00000		
9 1,4-Dichlorobenzene	146	Compound Not Detected.						
\$ 10 1,2-Dichlorobenzene-d4	152	8.973	8.965	(1.044)	16775	0.86363	246.7	
12 1,2-Dichlorobenzene	146	Compound Not Detected.						
11 Benzyl alcohol	108	8.919	8.911	(1.038)	4163	0.27145	77.55	
13 2-Methylphenol	108	Compound Not Detected.						
17 Hexachloroethane	117	Compound Not Detected.						
15 4-Methylphenol	108	9.501	9.486	(1.106)	2398	0.14503	41.44	
\$ 18 Nitrobenzene-d5	82	9.757	9.757	(0.869)	21272	0.74440	212.7	
22 2,4-Dimethylphenol	107	Compound Not Detected.						

Compounds	QUANT SIG				CONCENTRATIONS			
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
=====	=====	==	=====	=====	=====	=====	=====	
24 Benzoic acid	105	10.764	10.888	(0.959)	28121	1.60523	458.6	
26 1,2,4-Trichlorobenzene	180	Compound Not Detected.						
* 27 Naphthalene-d8	136	11.227	11.227	(1.000)	304964	4.00000		
28 Naphthalene	128	11.265	11.265	(1.003)	36694	0.49456	141.3	
30 Hexachlorobutadiene	225	Compound Not Detected.						
32 2-Methylnaphthalene	142	12.766	12.774	(1.137)	10332	0.18691	53.40	
\$ 36 2-Fluorobiphenyl	172	13.633	13.633	(0.903)	58199	0.95931	274.1	
39 Dimethylphthalate	163	Compound Not Detected.						
40 Acenaphthylene	152	Compound Not Detected.						
* 42 Acenaphthene-d10	164	15.095	15.095	(1.000)	171409	4.00000		
44 Acenaphthene	153	15.165	15.165	(1.005)	19675	0.42487	121.4	
46 Dibenzofuran	168	15.520	15.521	(1.028)	17862	0.25990	74.25	
50 Diethylphthalate	149	16.209	16.216	(1.074)	16376	0.28254	80.72	
49 Fluorene	166	16.286	16.286	(1.079)	26762	0.46937	134.1	
54 N-Nitrosodiphenylamine	169	Compound Not Detected.						
\$ 55 2,4,6-Tribromophenol	330	16.864	16.865	(1.117)	14913	1.47698	422.0	
57 Hexachlorobenzene	284	Compound Not Detected.						
58 Pentachlorophenol	266	Compound Not Detected.						
* 59 Phenanthrene-d10	188	18.356	18.356	(1.000)	281319	4.00000		
60 Phenanthrene	178	18.410	18.410	(1.003)	178918	2.56868	733.9	
61 Anthracene	178	18.503	18.511	(1.008)	33841	0.45200	129.1	
63 Di-n-butylphthalate	149	Compound Not Detected.						
64 Fluoranthene	202	20.863	20.863	(1.137)	369397	4.20748	1202	
65 Pyrene	202	21.288	21.289	(0.906)	285887	3.25908	931.1	
\$ 66 Terphenyl-d14	244	21.629	21.629	(0.921)	64019	1.09181	311.9	
67 Butylbenzylphthalate	149	Compound Not Detected.						
68 Benzo(a)anthracene	228	23.464	23.472	(0.999)	99744	1.17203	334.8	
* 69 Chrysene-d12	240	23.495	23.495	(1.000)	299428	4.00000		
71 Chrysene	228	23.541	23.542	(1.002)	128165	1.69519	484.3	
72 bis(2-Ethylhexyl)phthalate	149	23.650	23.650	(0.960)	51887	0.93081	265.9	
* 134 Di-n-octylphthalate-d4	153	24.633	24.633	(1.000)	404005	4.00000		
73 Di-n-octylphthalate	149	Compound Not Detected.						
76 Benzo(a)pyrene	252	25.763	25.764	(0.996)	57727	0.66795	190.8	
* 77 Perylene-d12	264	25.864	25.856	(1.000)	302828	4.00000		
78 Indeno(1,2,3-cd)pyrene	276	27.971	27.971	(1.081)	40184	0.41027	117.2	
79 Dibenzo(a,h)anthracene	278	27.987	27.987	(1.082)	12395	0.15946	45.56	
80 Benzo(g,h,i)perylene	276	28.577	28.577	(1.105)	39555	0.47187	134.8	
105 1-methylnaphthalene	142	13.006	13.006	(1.158)	5437	0.10716	30.62	
187 Total Benzofluoranthenes	252	25.237	25.268	(0.976)	169314	1.89994	542.8	
98 Retene	219	Compound Not Detected.						
120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.						

M  
12-6-12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt10.i  
 Lab File ID: vr58f.d  
 Lab Smp Id: VR58F  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS/YZ  
 Method File: /chem1/nt10.i/20121206.b/ABN.m  
 Misc Info: 12-22334

Calibration Date: 06-DEC-2012  
 Calibration Time: 13:52  
 Client Smp ID: SG-14-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	81571	40786	163142	77778	-4.65
27 Naphthalene-d8	299399	149700	598798	304964	1.86
42 Acenaphthene-d10	178564	89282	357128	171409	-4.01
59 Phenanthrene-d10	305410	152705	610820	281319	-7.89
69 Chrysene-d12	323853	161926	647706	299428	-7.54
134 Di-n-octylphthala	427845	213922	855690	404005	-5.57
77 Perylene-d12	305316	152658	610632	302828	-0.81

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
8 1,4-Dichlorobenze	8.59	8.09	9.09	8.59	0.09
27 Naphthalene-d8	11.23	10.73	11.73	11.23	0.00
42 Acenaphthene-d10	15.10	14.60	15.60	15.10	0.00
59 Phenanthrene-d10	18.36	17.86	18.86	18.36	0.00
69 Chrysene-d12	23.50	23.00	24.00	23.50	0.00
134 Di-n-octylphthala	24.63	24.13	25.13	24.63	0.00
77 Perylene-d12	25.86	25.36	26.36	25.86	0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.

Sample Matrix: SOLID

Lab Smp Id: VR58F

Level: LOW

Data Type: MS DATA

SpikeList File: SHORTPSDDA.spk

Sublist File: SHORTPSDDA.sub

Method File: /chem1/nt10.i/20121206.b/ABN.m

Misc Info: 12-22334

Client SDG: VR58

Fraction: SV

Client Smp ID: SG-14-S-E-121107

Operator: VTS/YZ

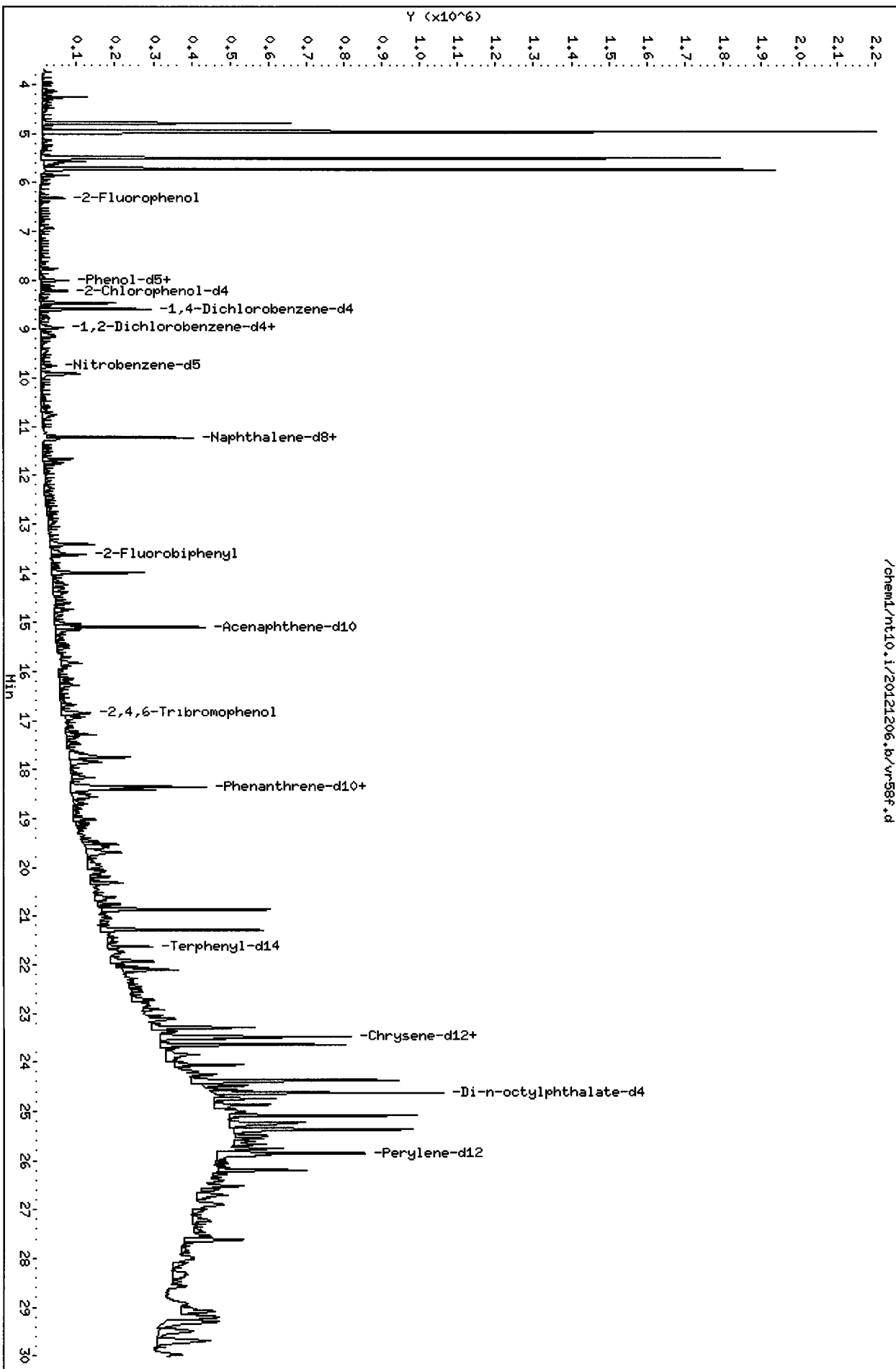
SampleType: SAMPLE

Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 2-Fluorophenol	714.2	368.6	51.61	30-160
\$ 2 Phenol-d5	714.2	400.1	56.02	30-160
\$ 5 2-Chlorophenol-d4	714.2	400.7	56.10	30-160
\$ 10 1,2-Dichlorobenzen	476.2	246.7	51.82	30-160
\$ 18 Nitrobenzene-d5	476.2	212.7	44.66	30-160
\$ 36 2-Fluorobiphenyl	476.2	274.1	57.56	30-160
\$ 55 2,4,6-Tribromophen	714.2	422.0	59.08	30-160
\$ 66 Terphenyl-d14	476.2	311.9	65.51	30-160

Data File: /chem1/nt10.i/20121206.b/vr58f.d  
Date : 06-DEC-2012 15:11  
Client ID: SG-14-S-E-121107  
Sample Info: VR58F.3  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt10.i  
Operator: VTS/VZ  
Column diameter: 0.25



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

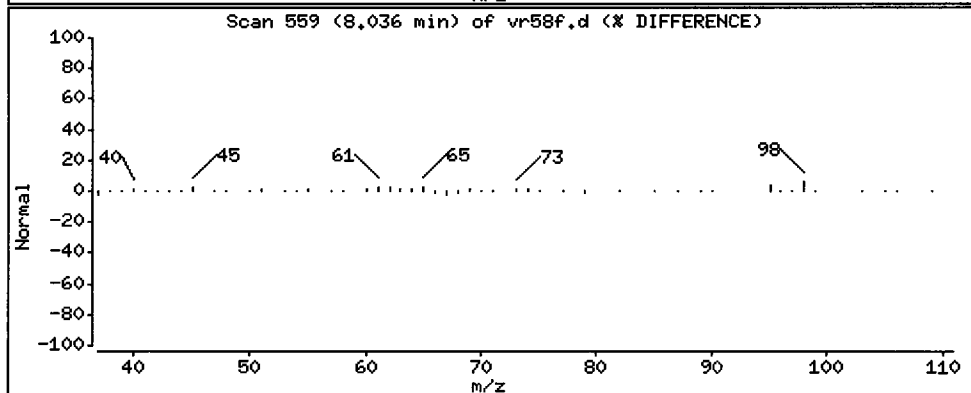
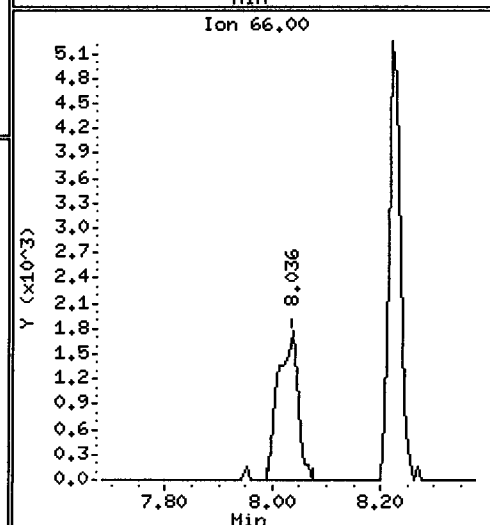
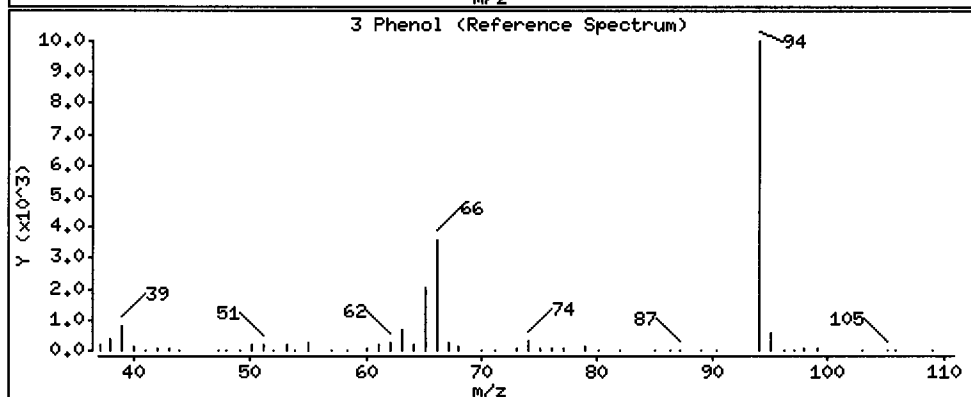
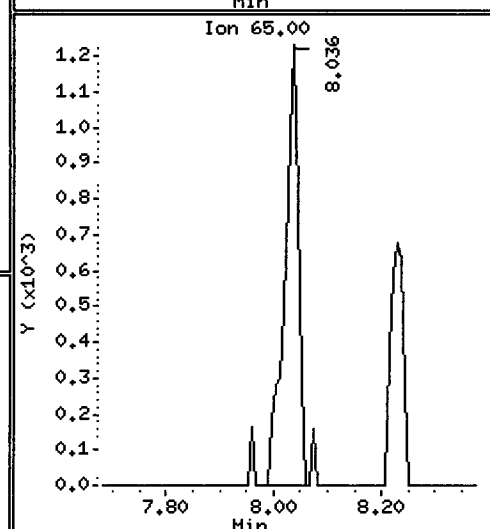
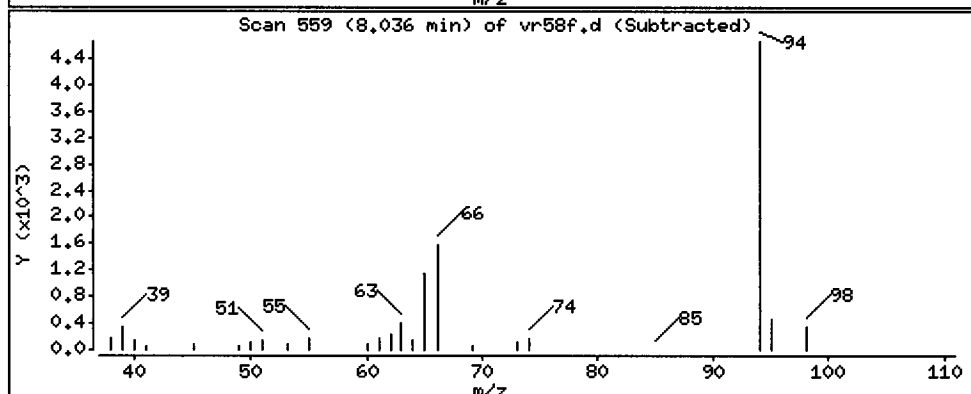
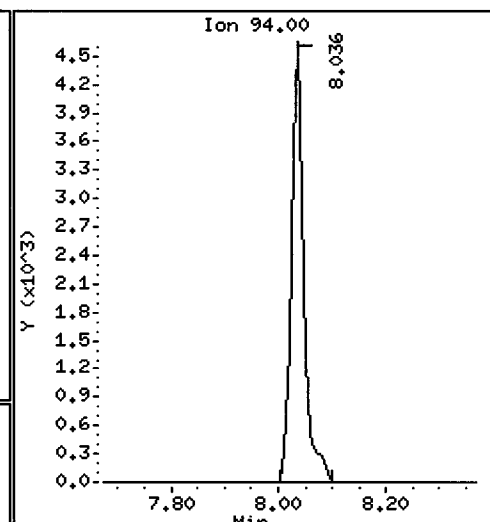
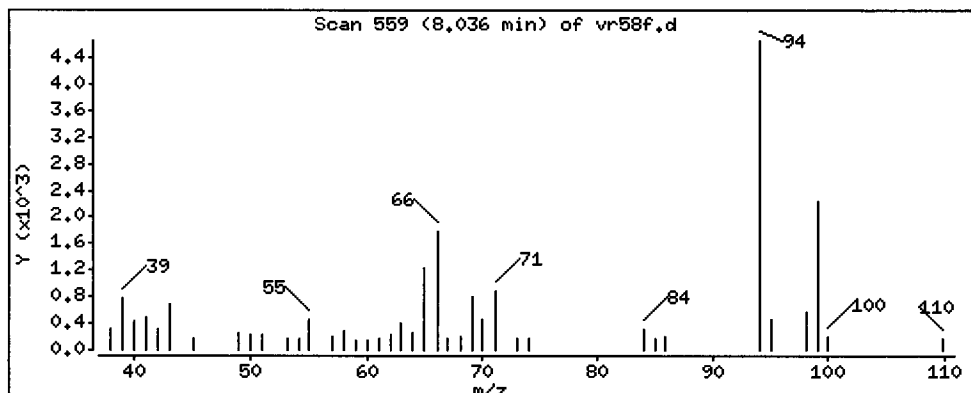
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

3 Phenol

Concentration: 64.61 ug/kg





Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

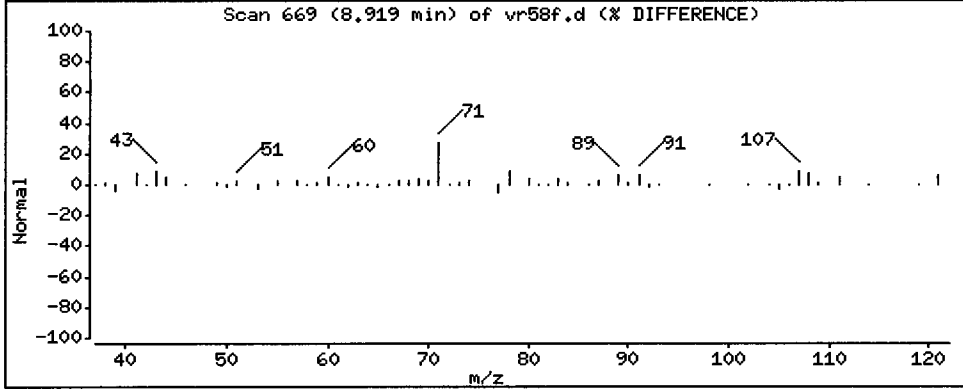
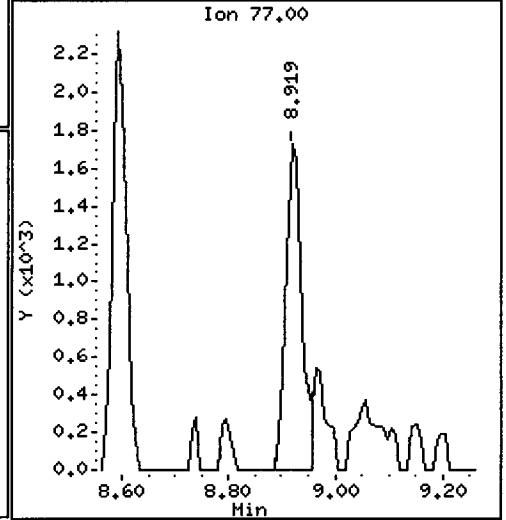
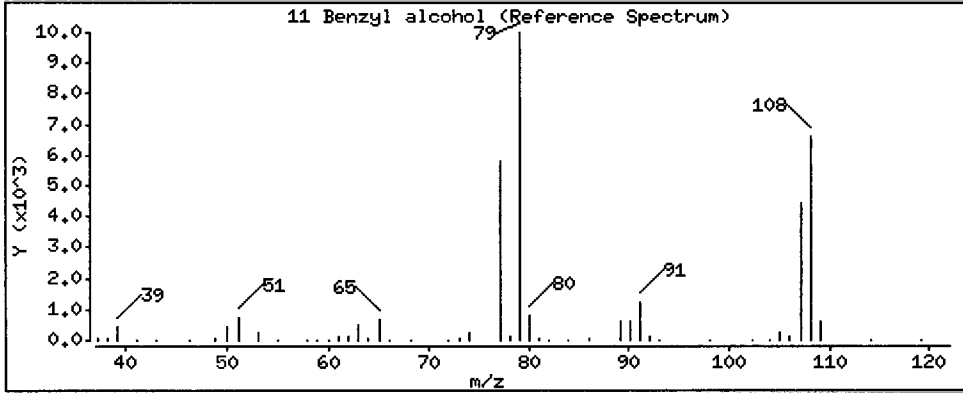
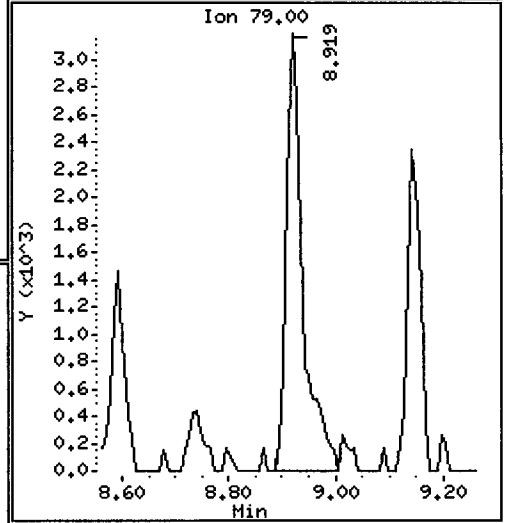
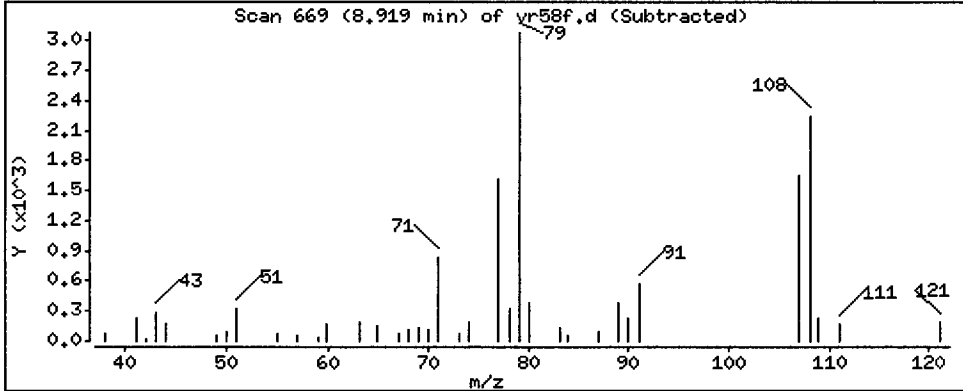
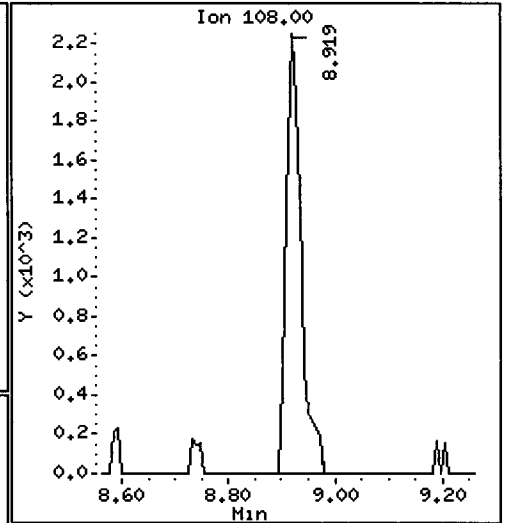
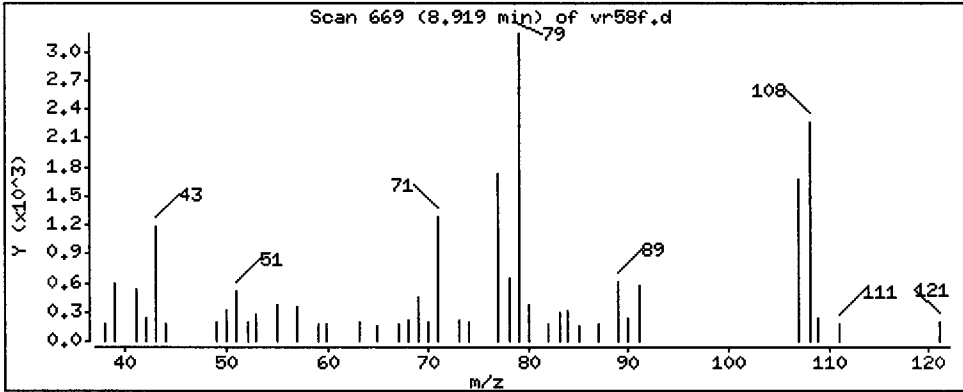
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Benzyl alcohol

Concentration: 77.55 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

Operator: VTS/YZ

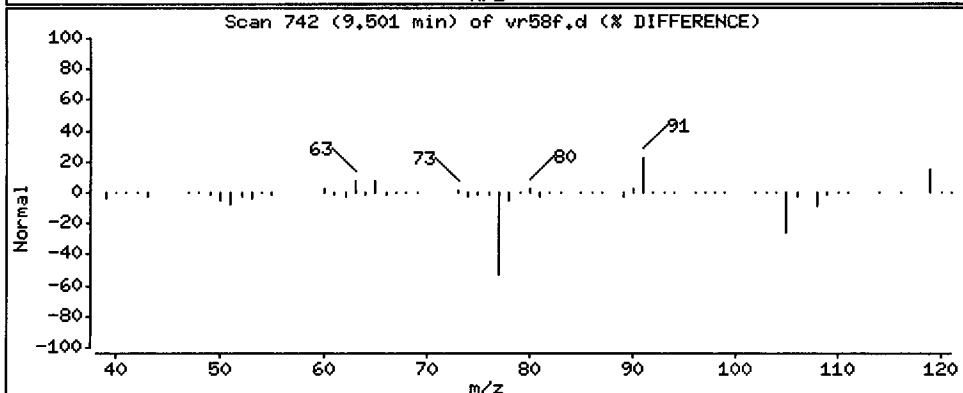
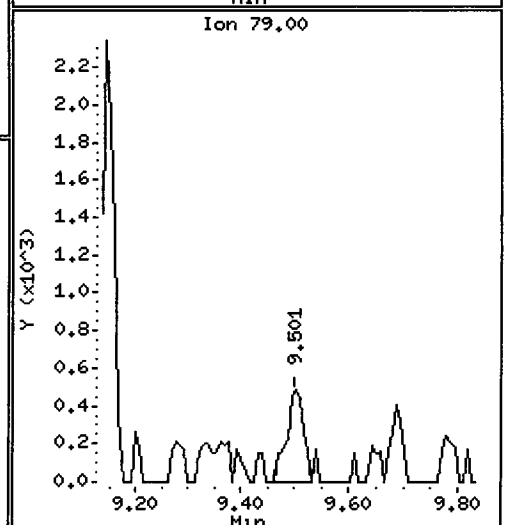
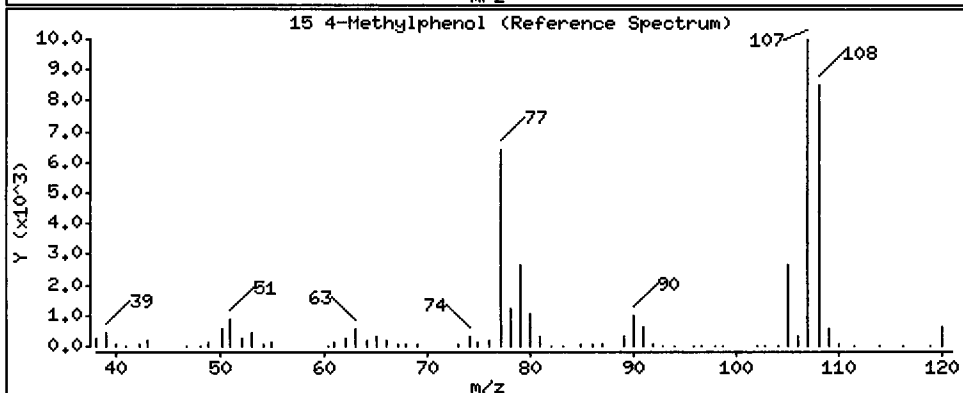
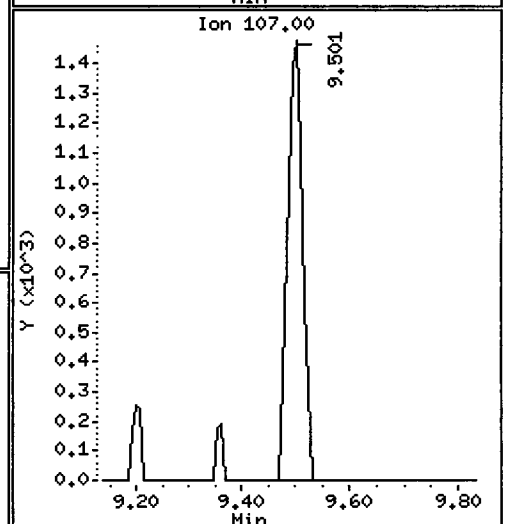
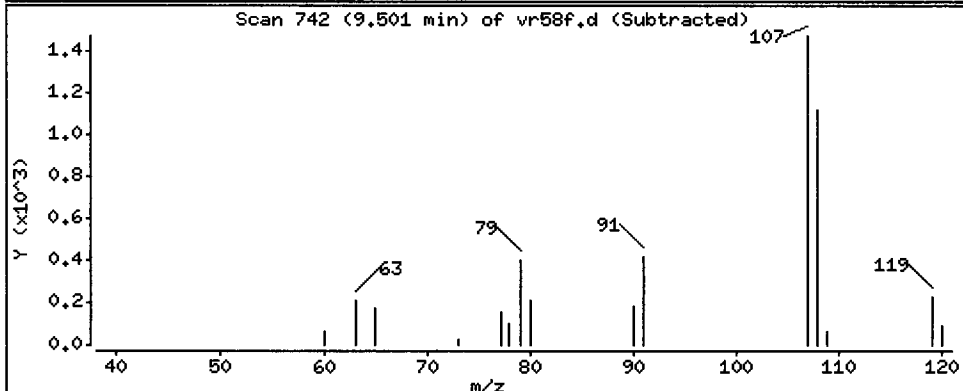
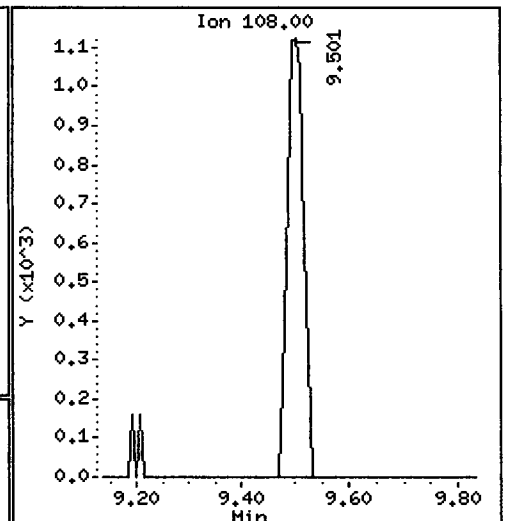
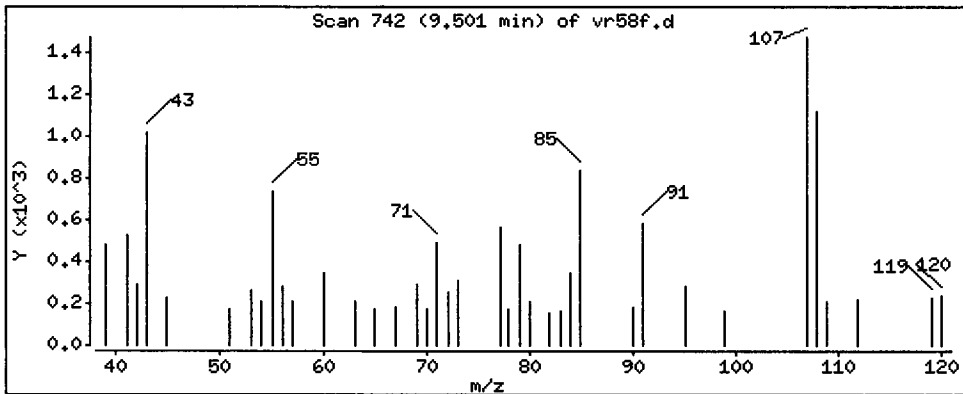
Column phase: ZB-5msi

Column diameter: 0.25

15 4-Methylphenol

Concentration: 41.44 ug/kg

*Handwritten initials: JY*



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

Operator: VTS/YZ

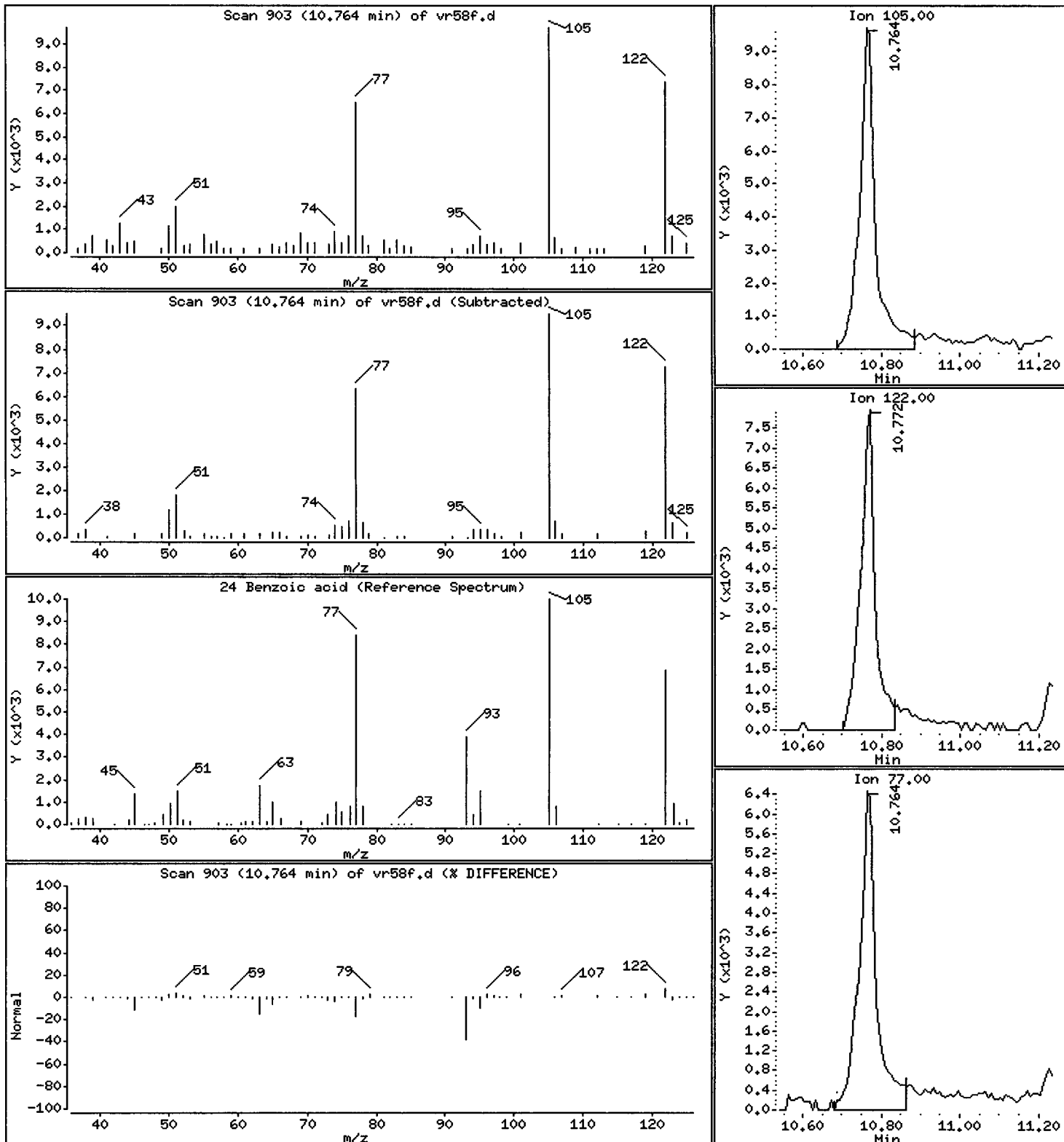
Column phase: ZB-5msi

Column diameter: 0.25

*TY URL*

24 Benzoic acid

Concentration: 458.6 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10,i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

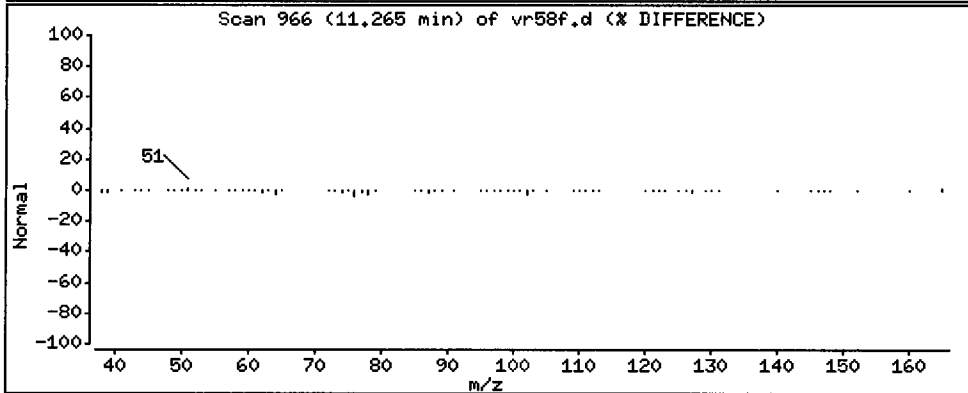
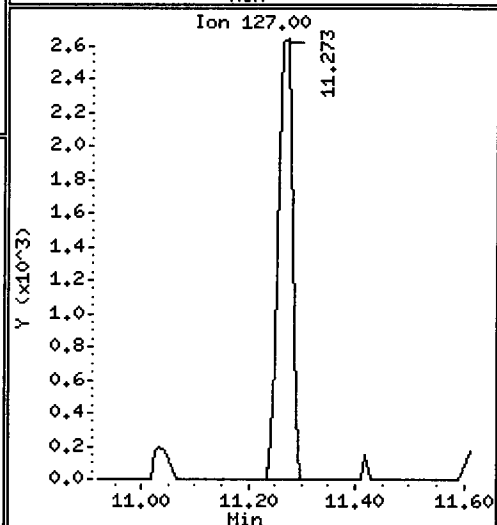
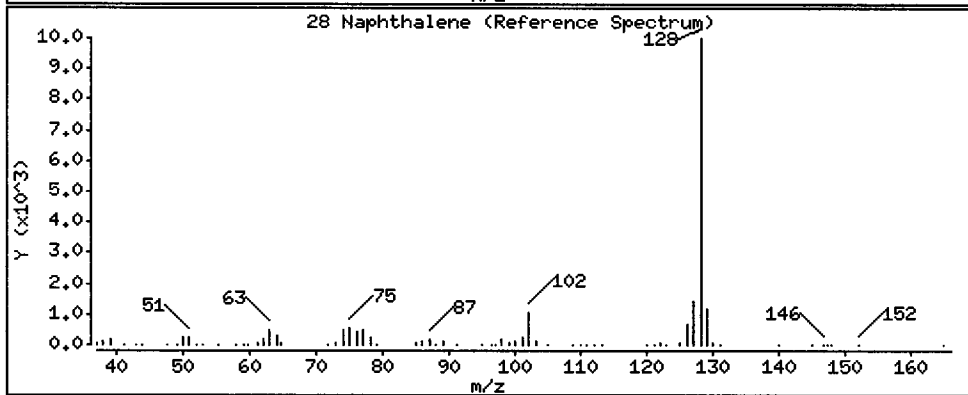
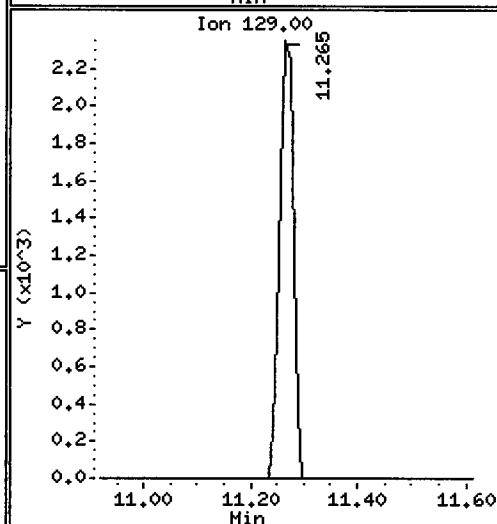
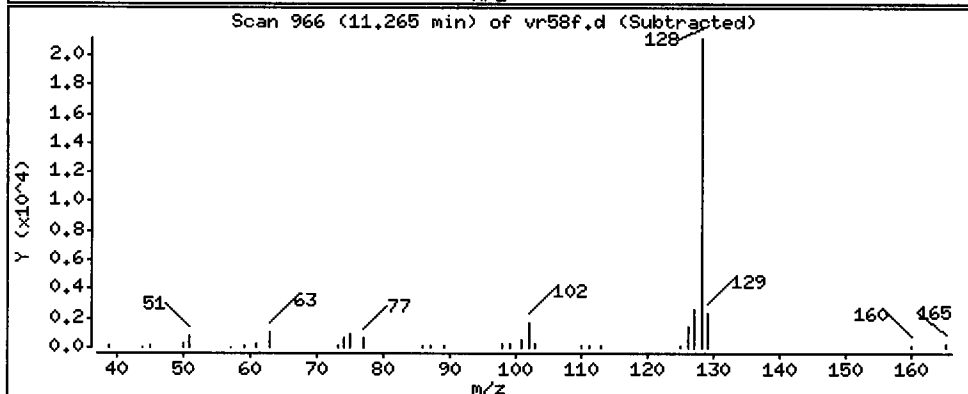
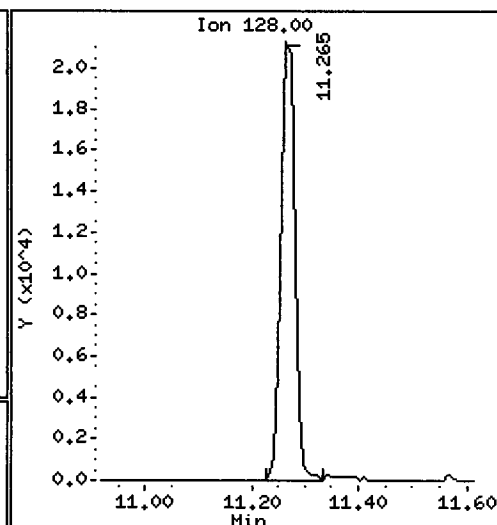
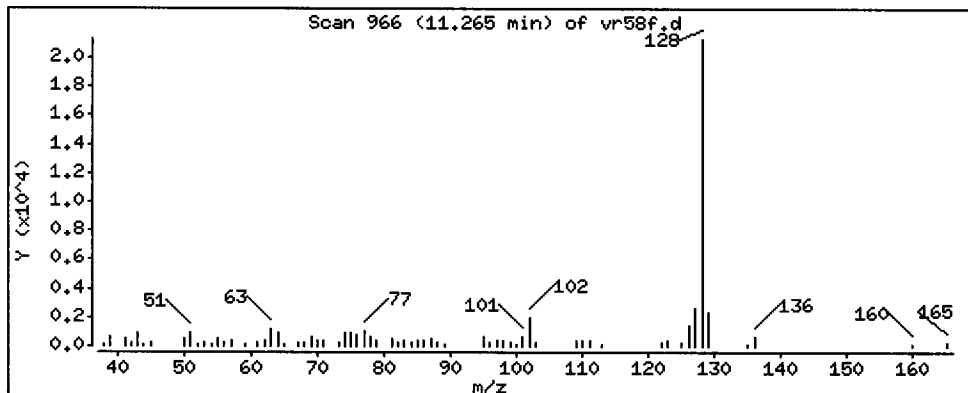
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

28 Naphthalene

Concentration: 141.3 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

Operator: VTS/YZ

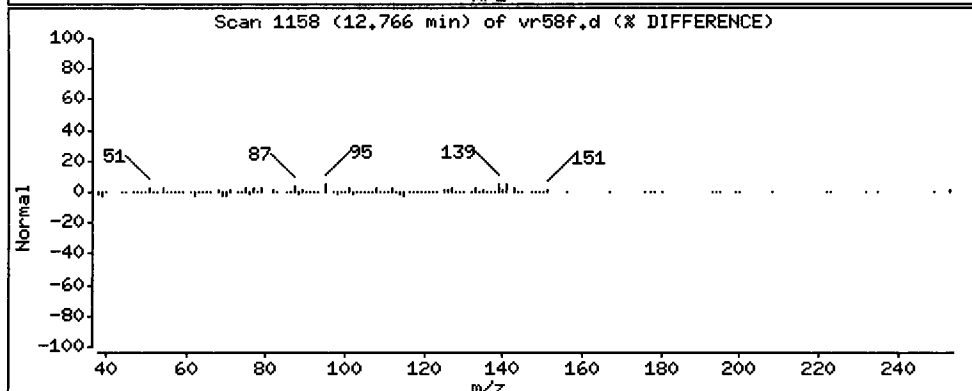
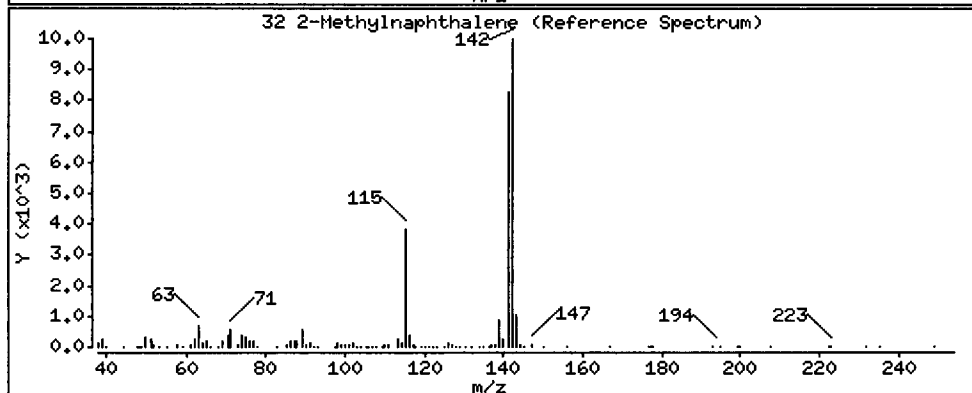
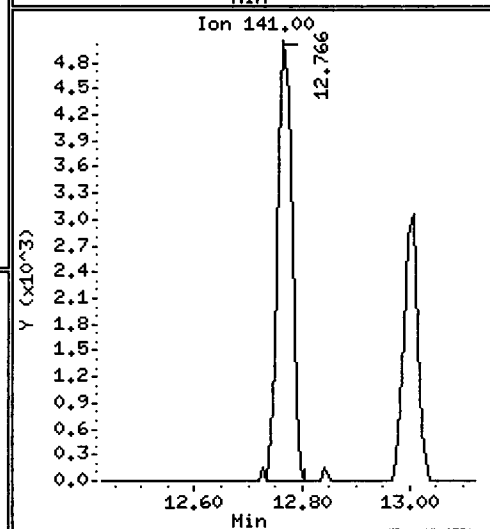
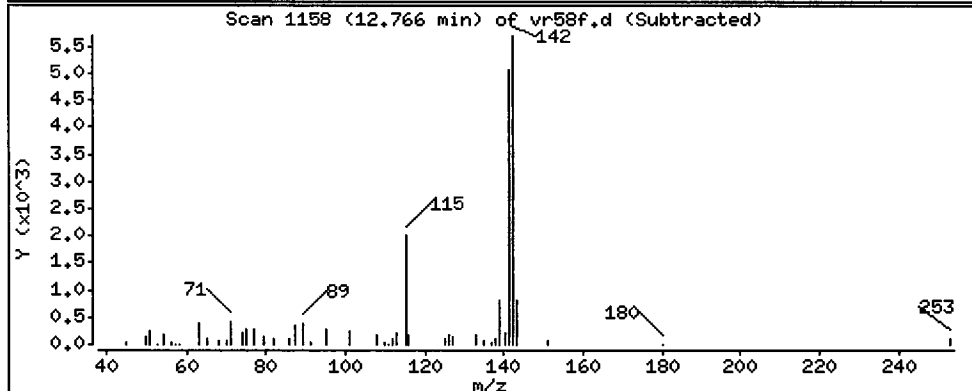
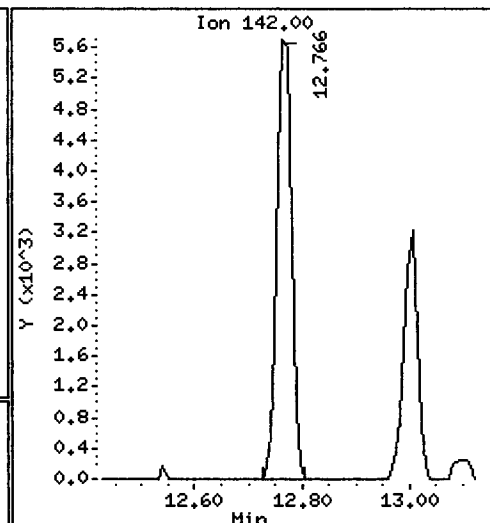
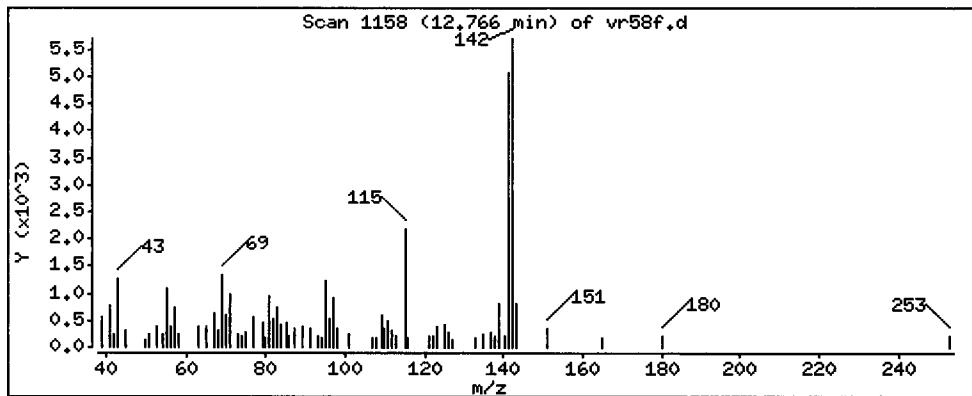
Column phase: ZB-5msi

Column diameter: 0.25

32 2-Methylnaphthalene

Concentration: 53.40 ug/kg

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Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

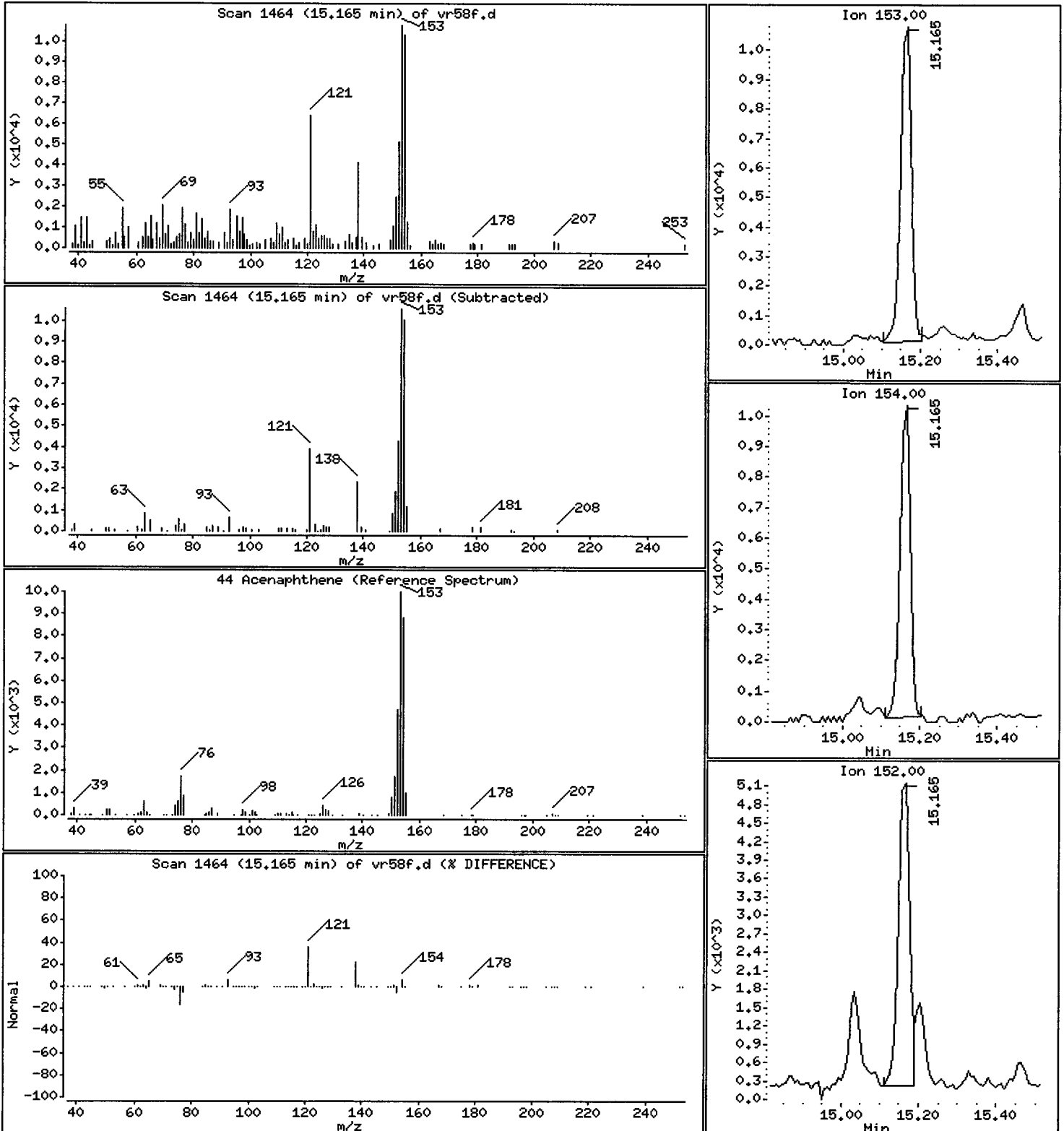
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

44 Acenaphthene

Concentration: 121.4 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

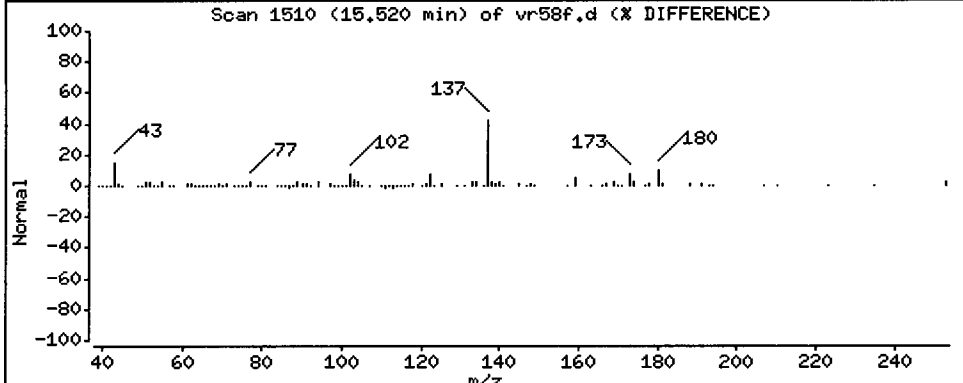
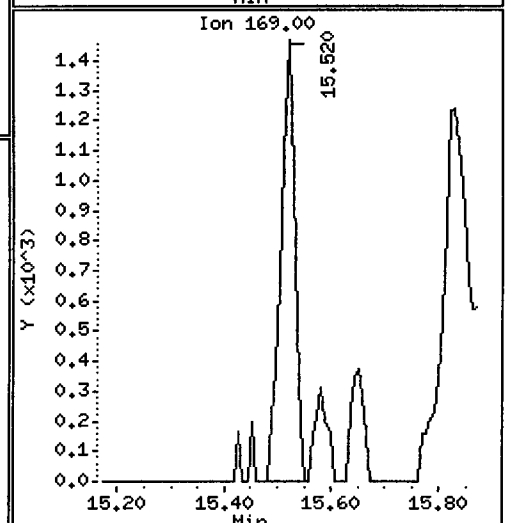
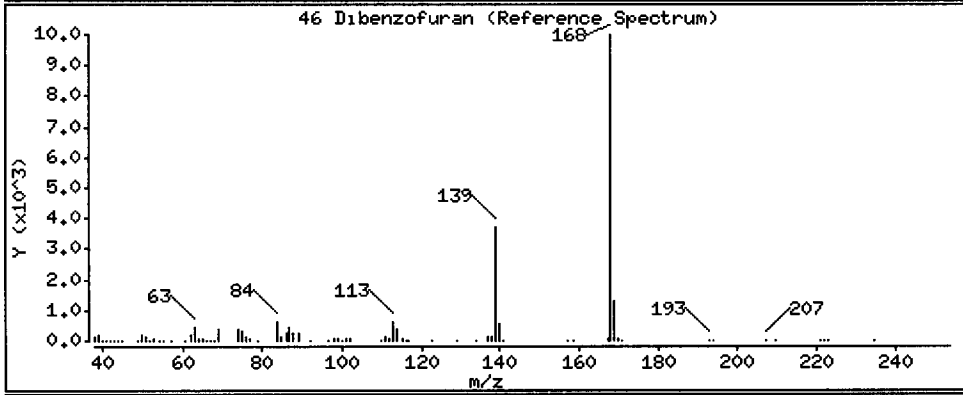
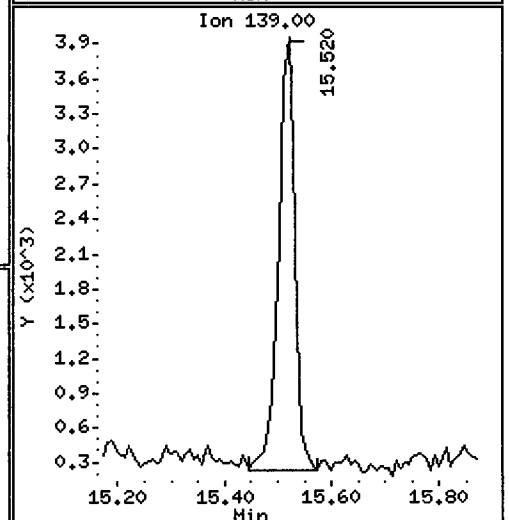
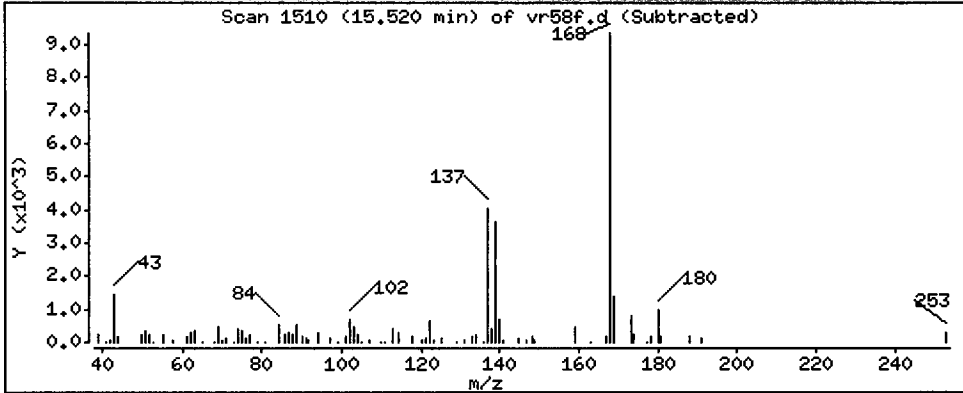
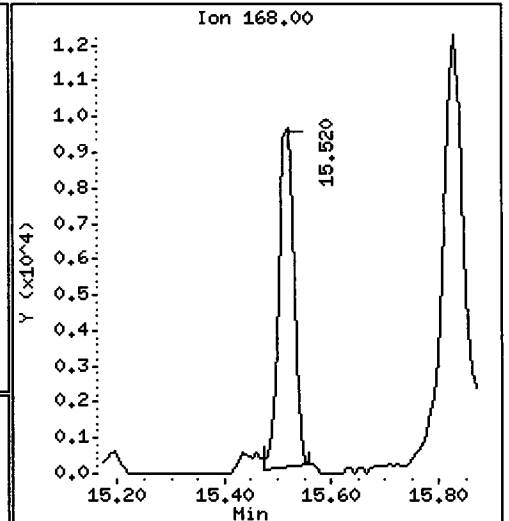
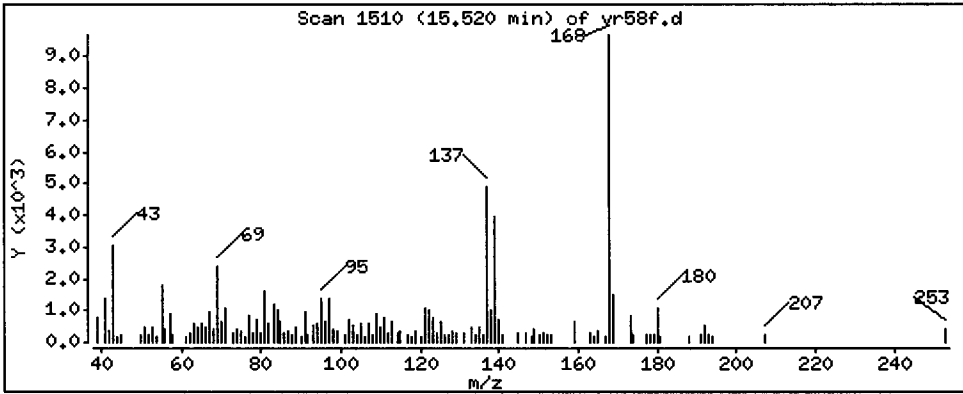
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Dibenzofuran

Concentration: 74.25 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

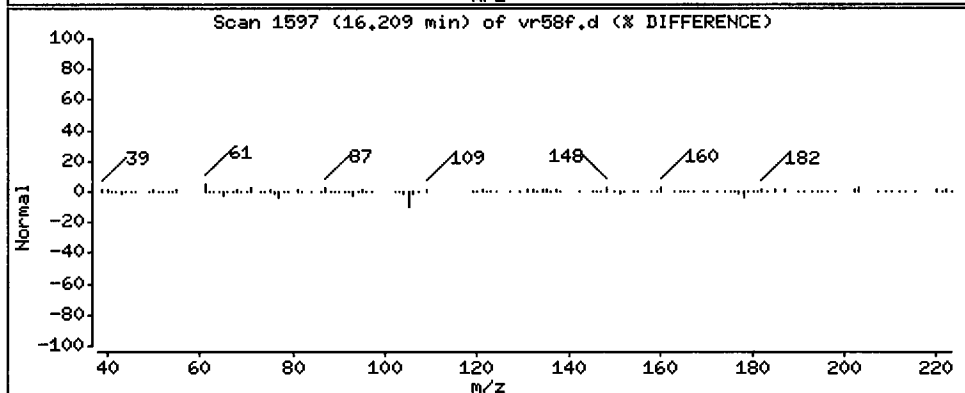
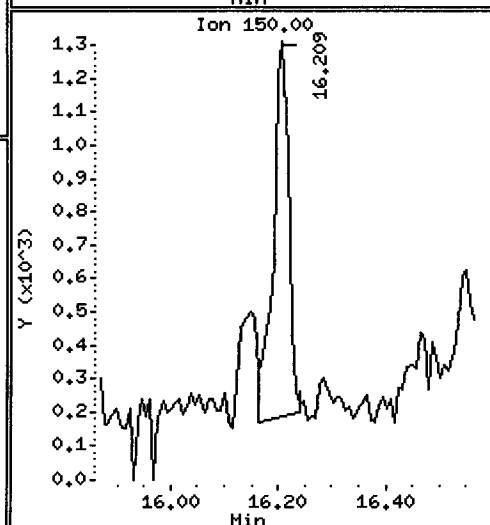
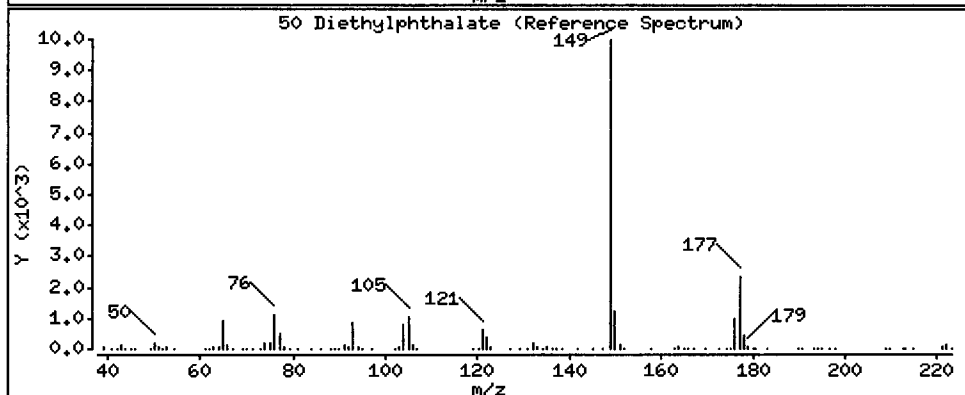
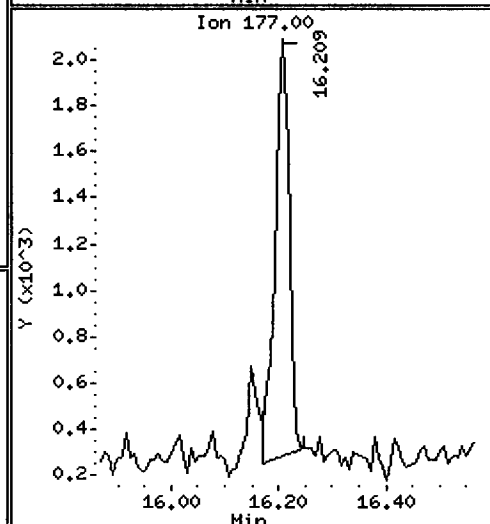
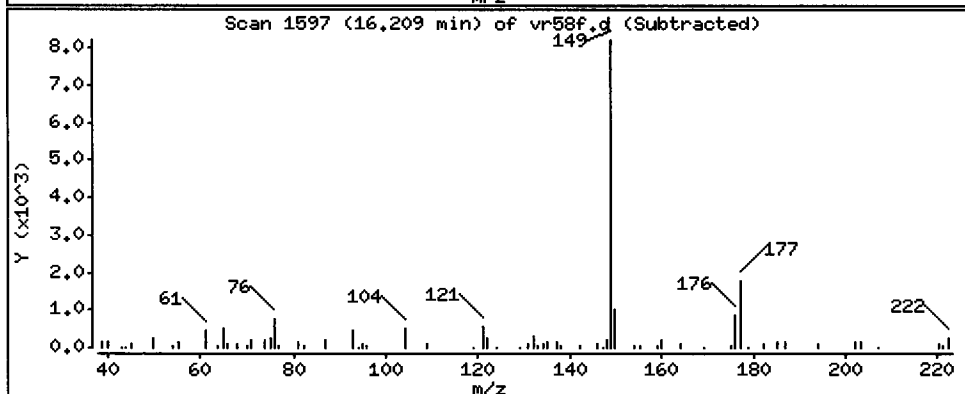
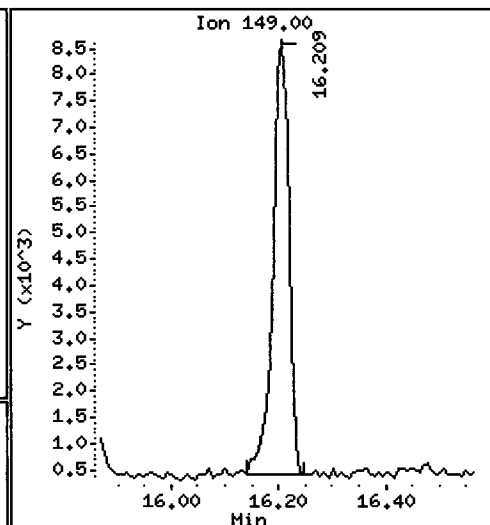
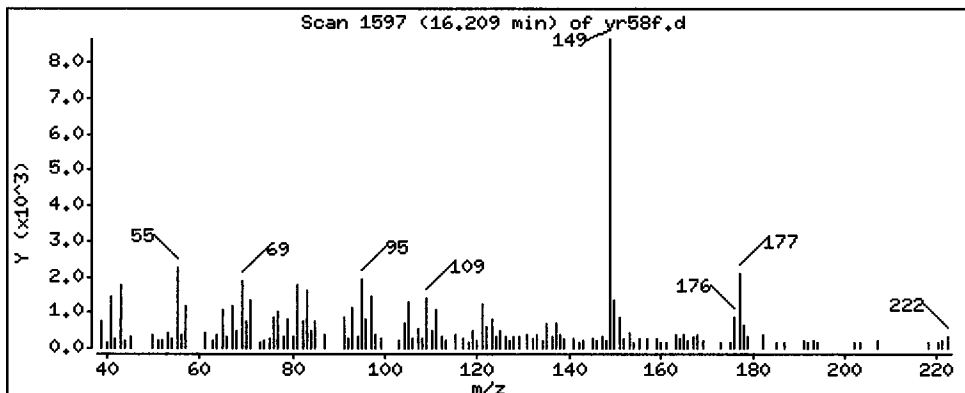
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

50 Diethylphthalate

Concentration: 80.72 ug/kg





Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.1

Sample Info: VR58F,3

Volume Injected (uL): 1.0

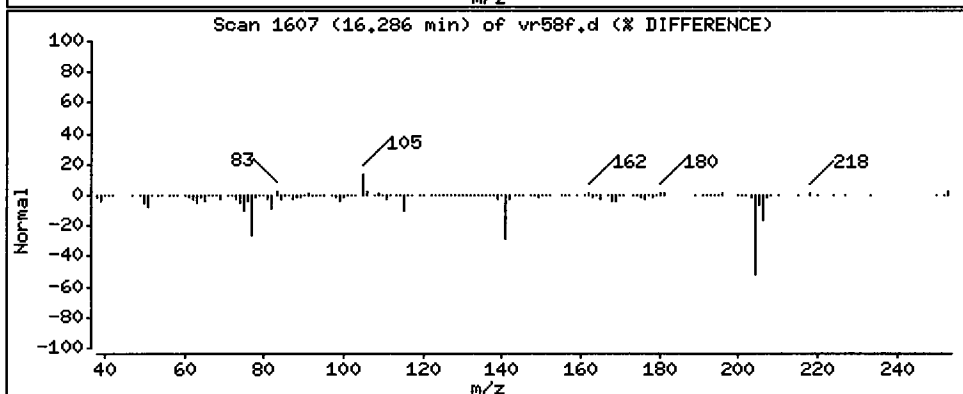
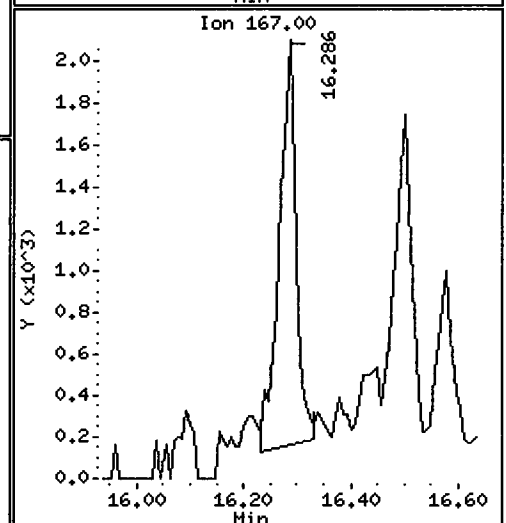
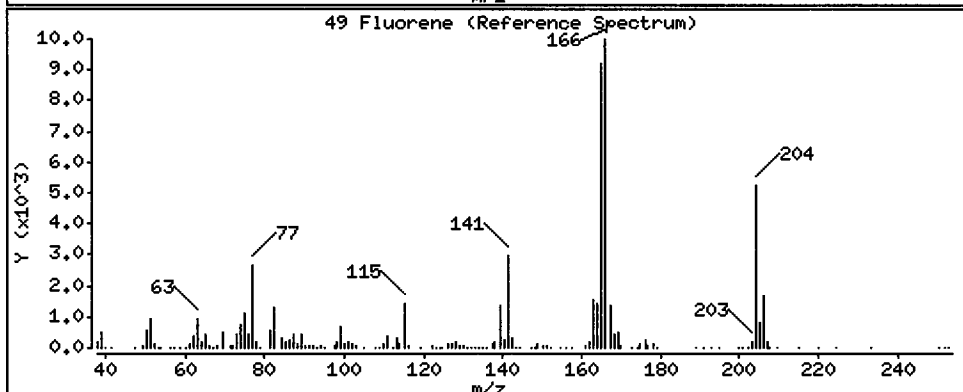
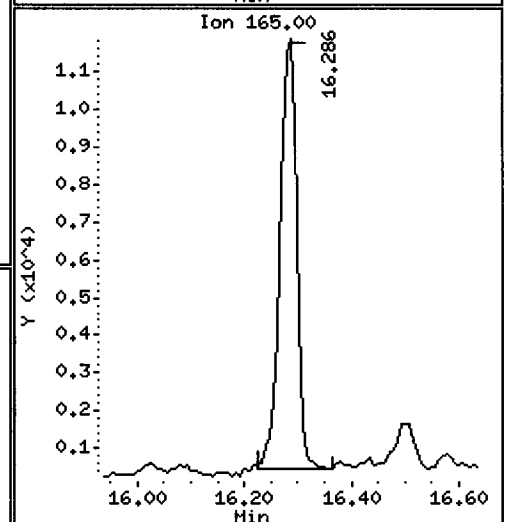
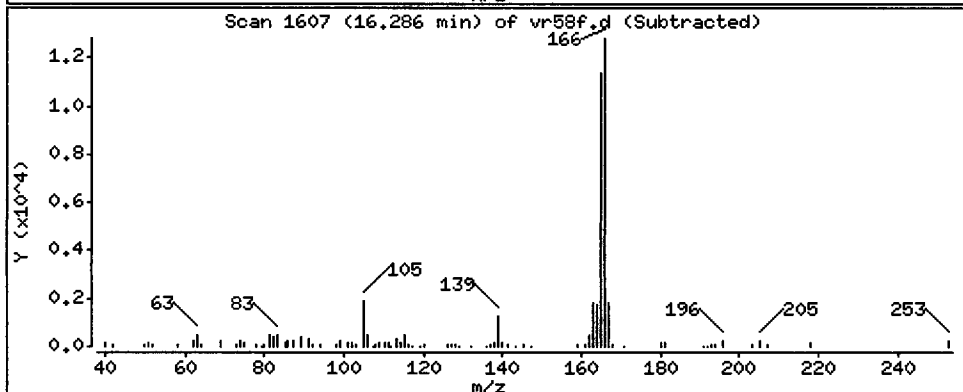
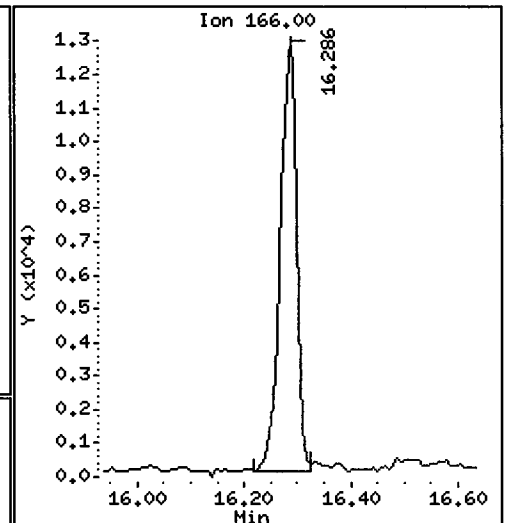
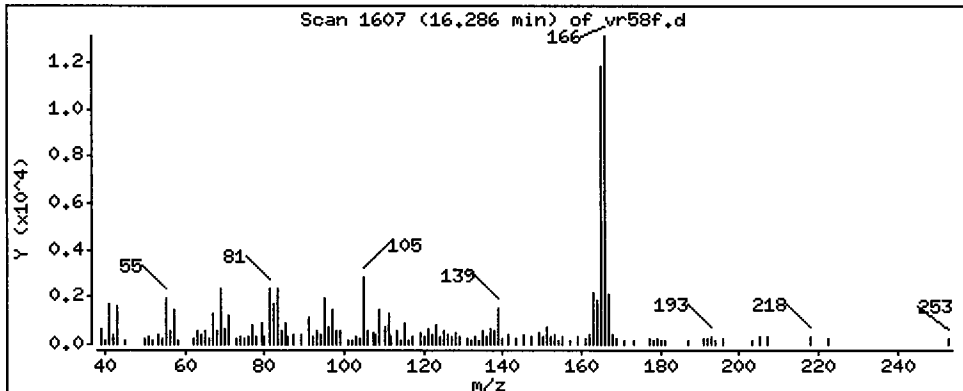
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

49 Fluorene

Concentration: 134.1 ug/kg



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Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

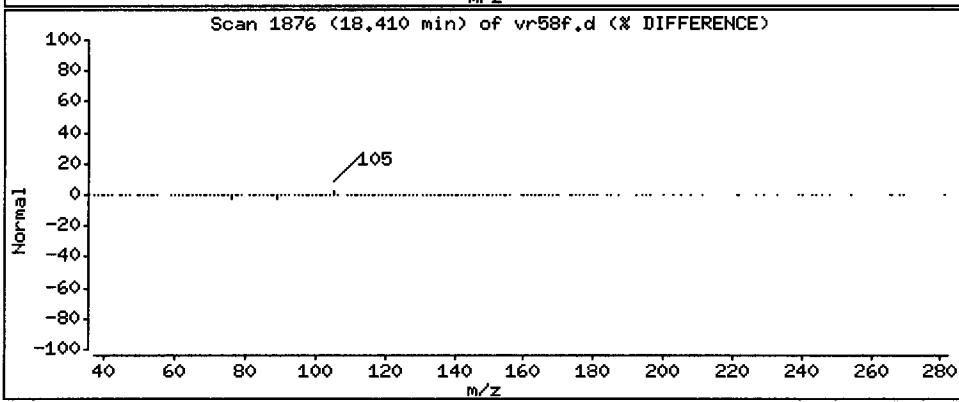
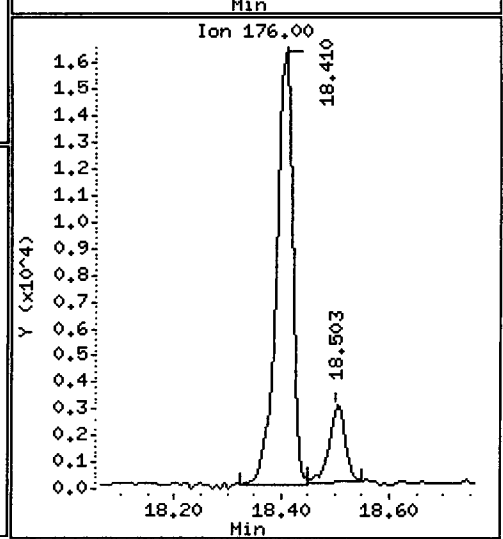
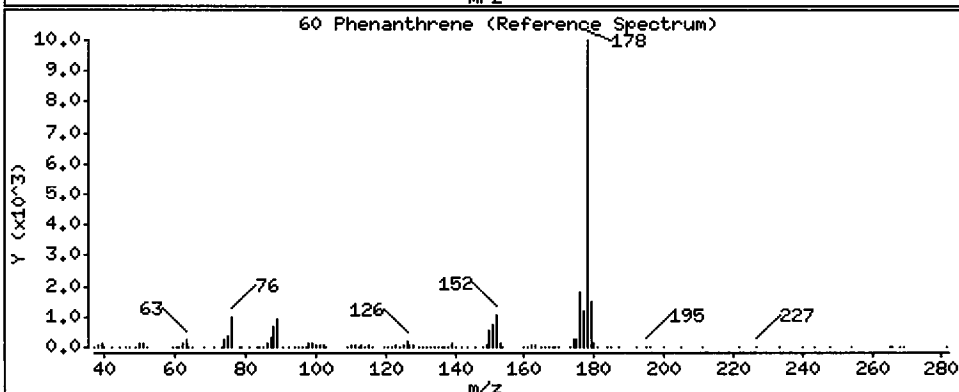
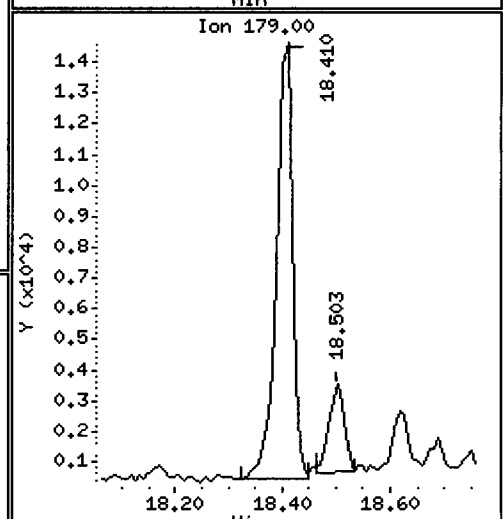
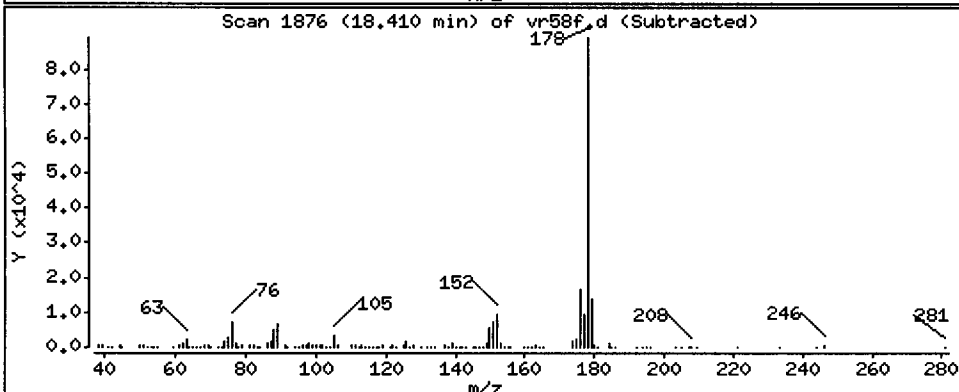
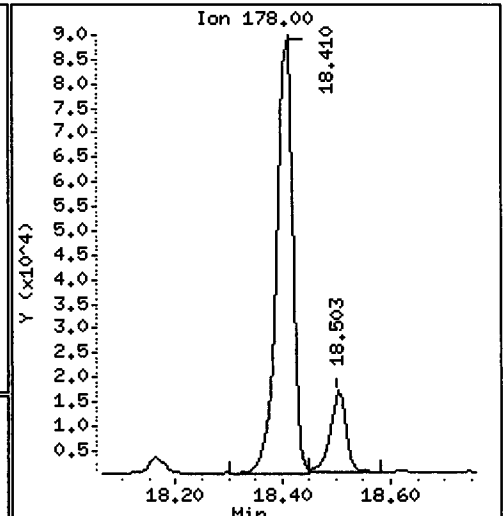
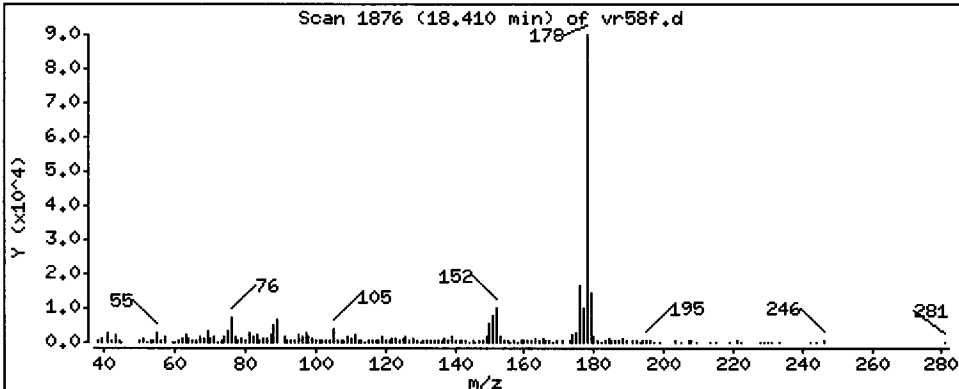
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

60 Phenanthrene

Concentration: 733.9 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

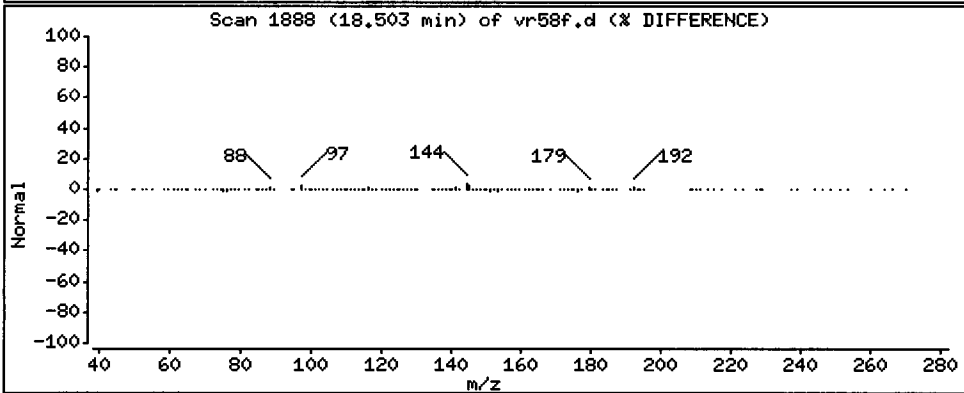
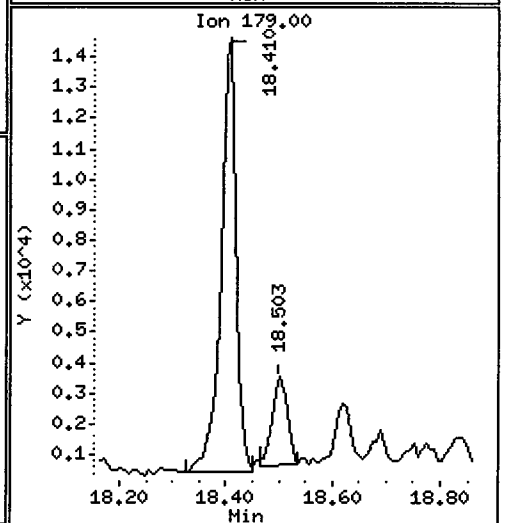
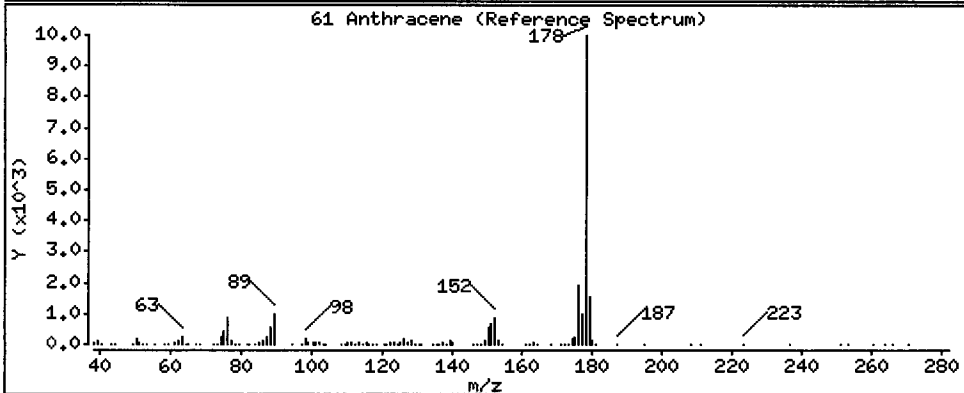
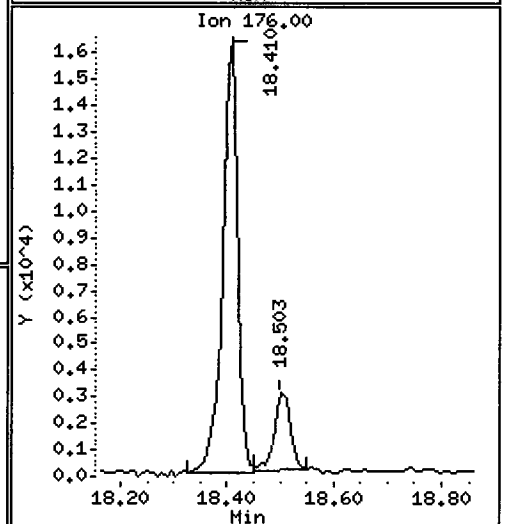
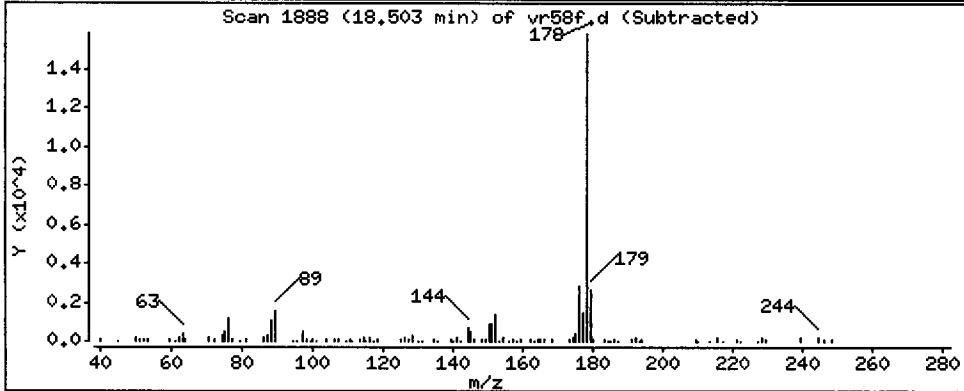
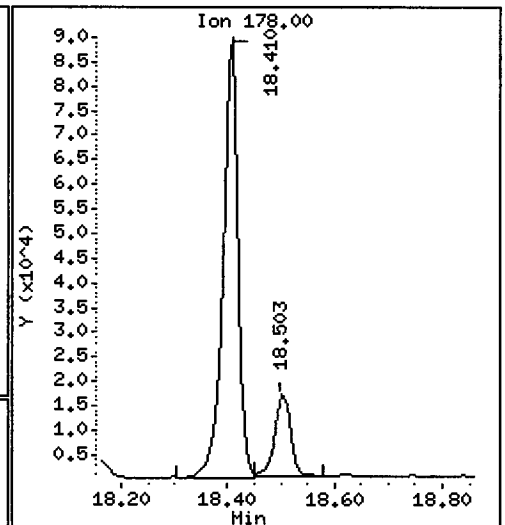
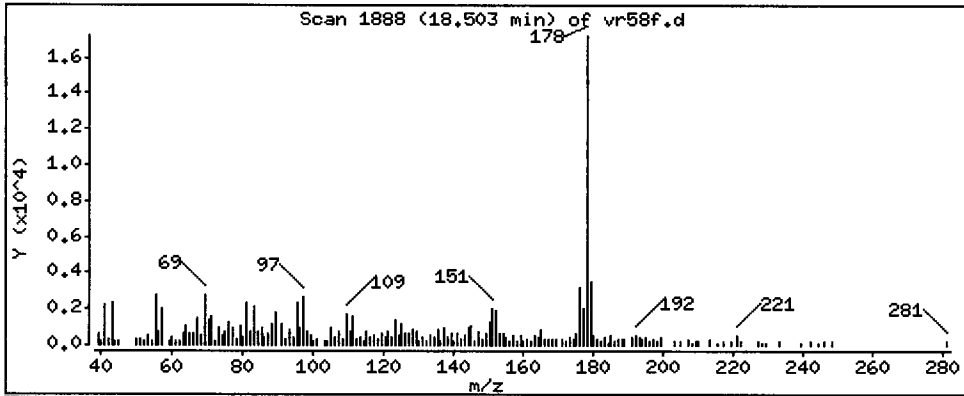
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Anthracene

Concentration: 129.1 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

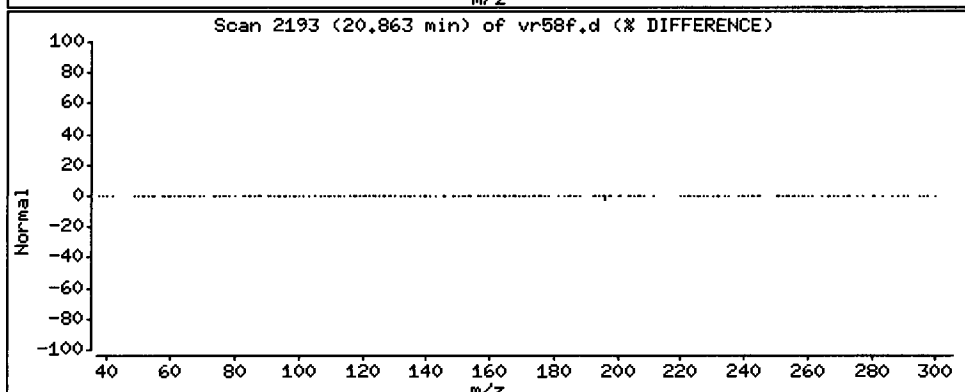
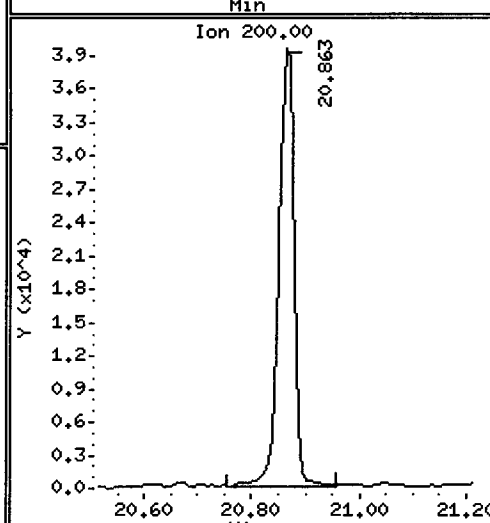
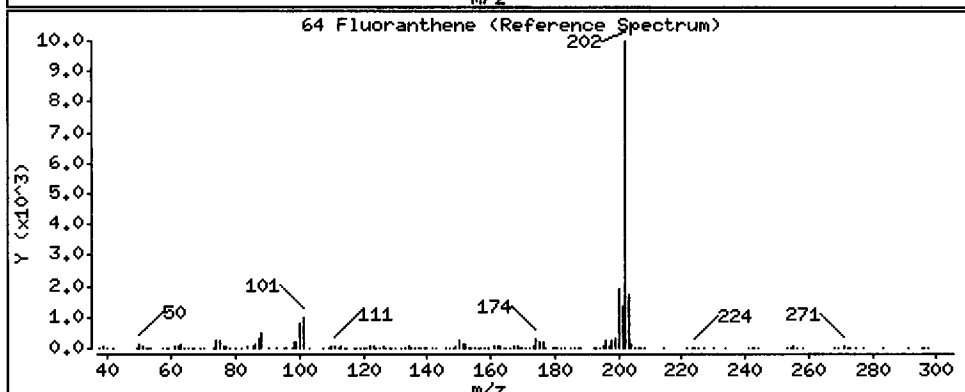
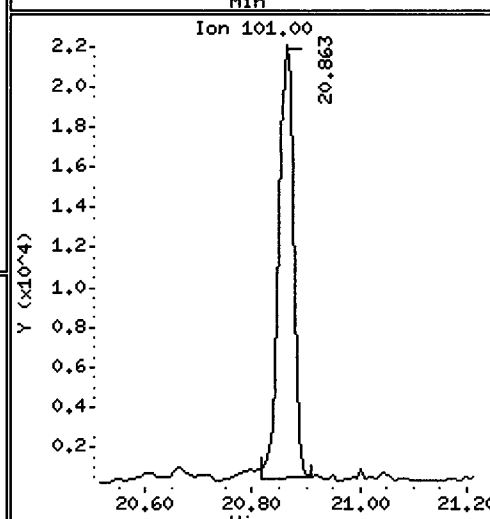
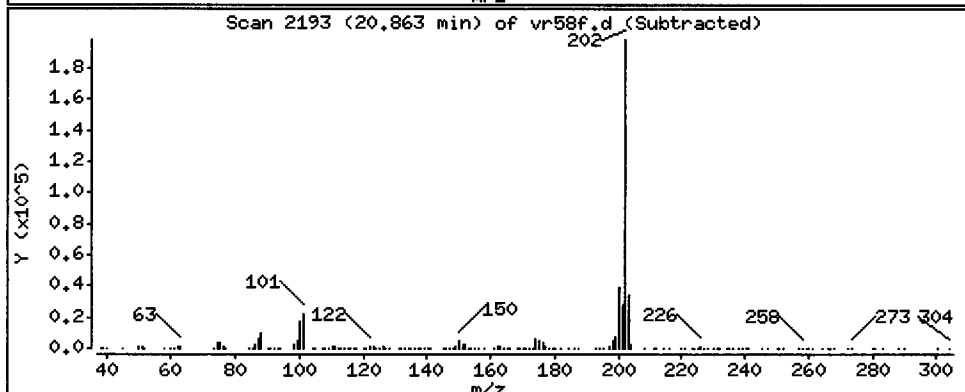
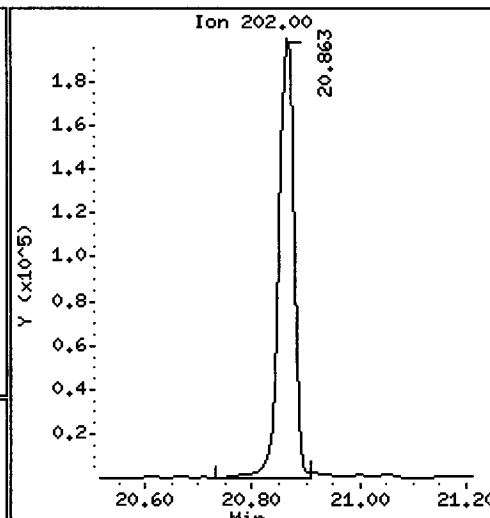
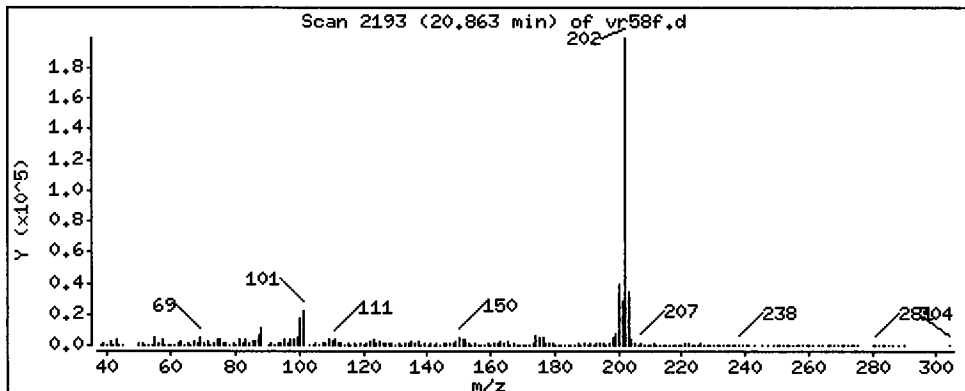
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

64 Fluoranthene

Concentration: 1202 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

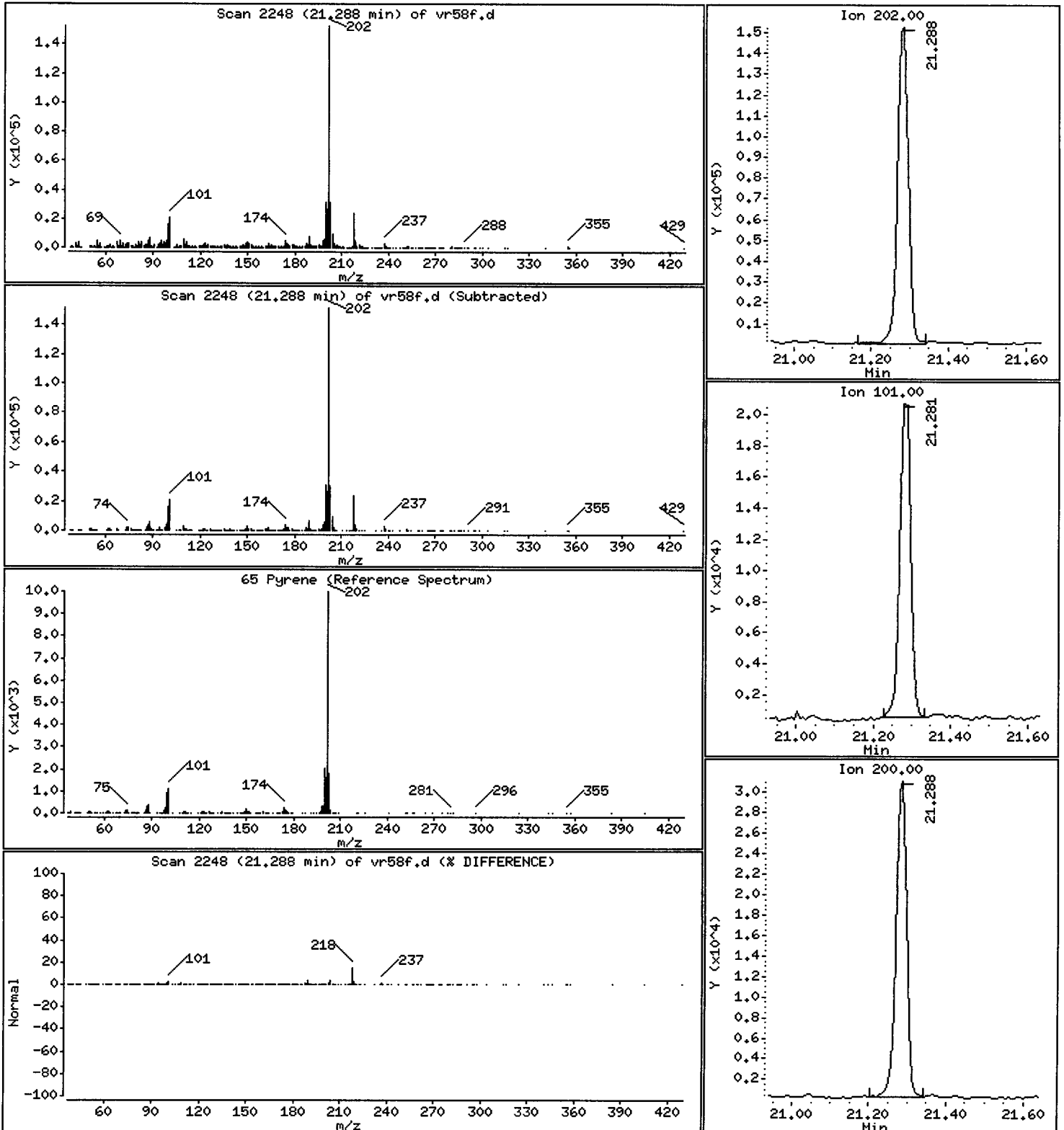
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0,25

65 Pyrene

Concentration: 931.1 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

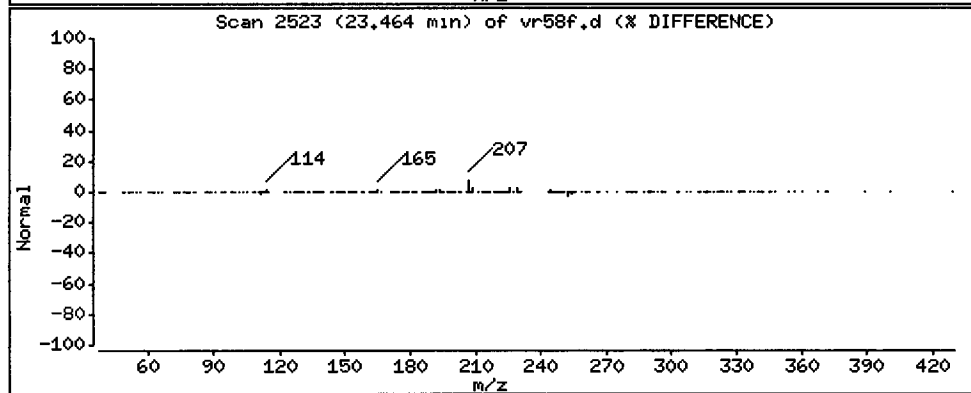
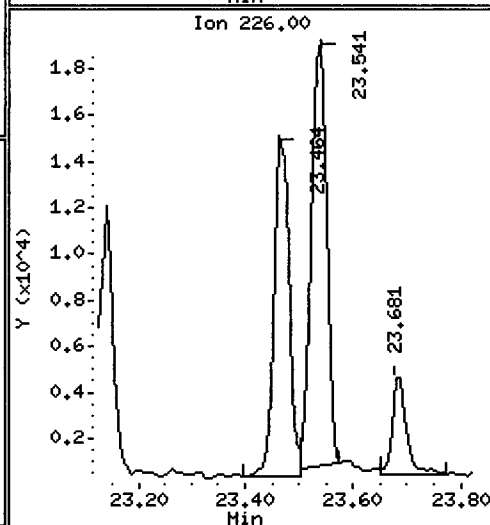
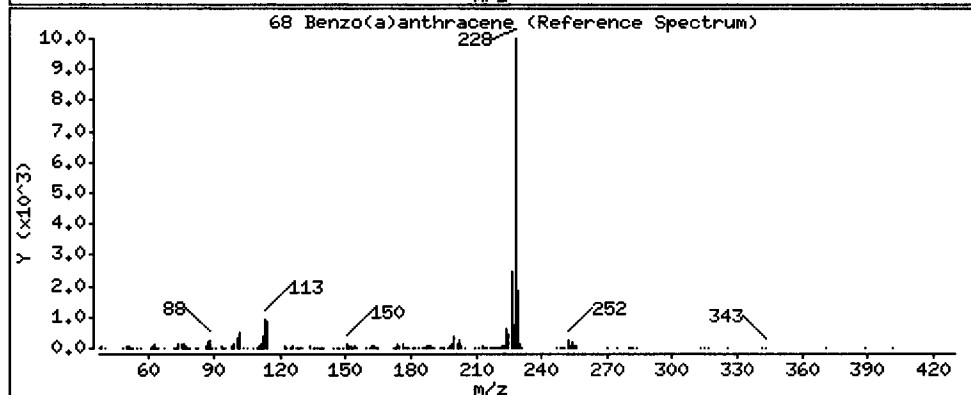
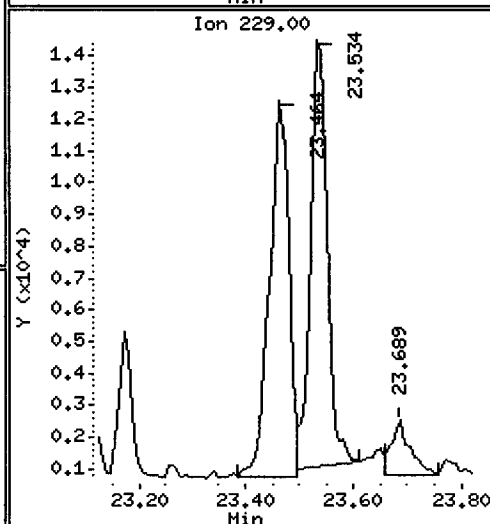
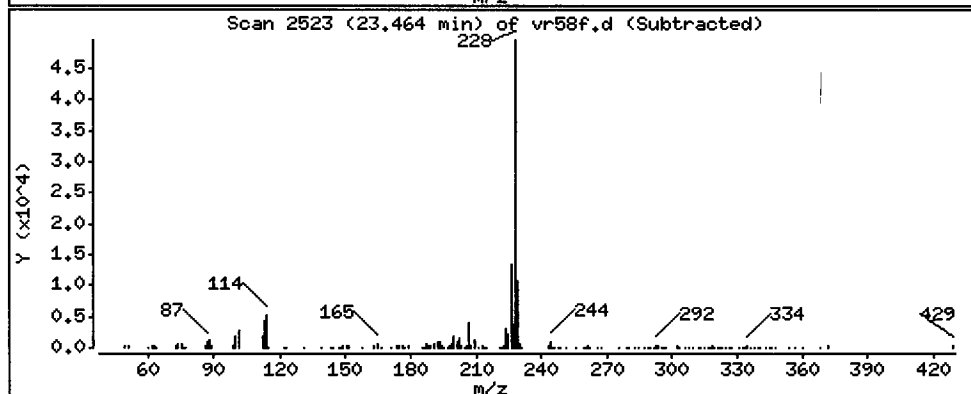
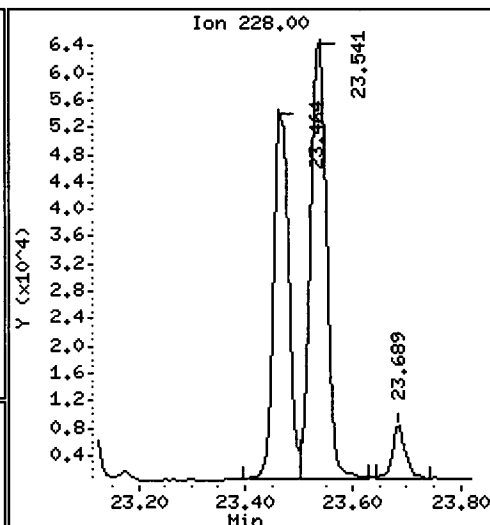
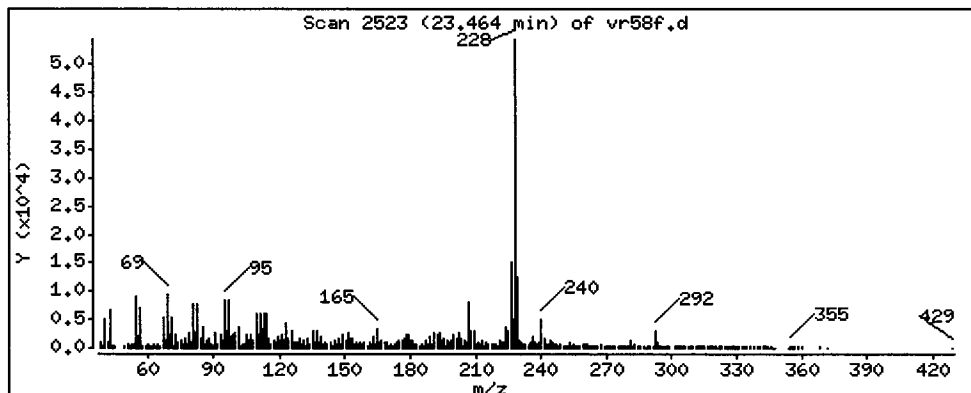
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

68 Benzo(a)anthracene

Concentration: 334.8 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

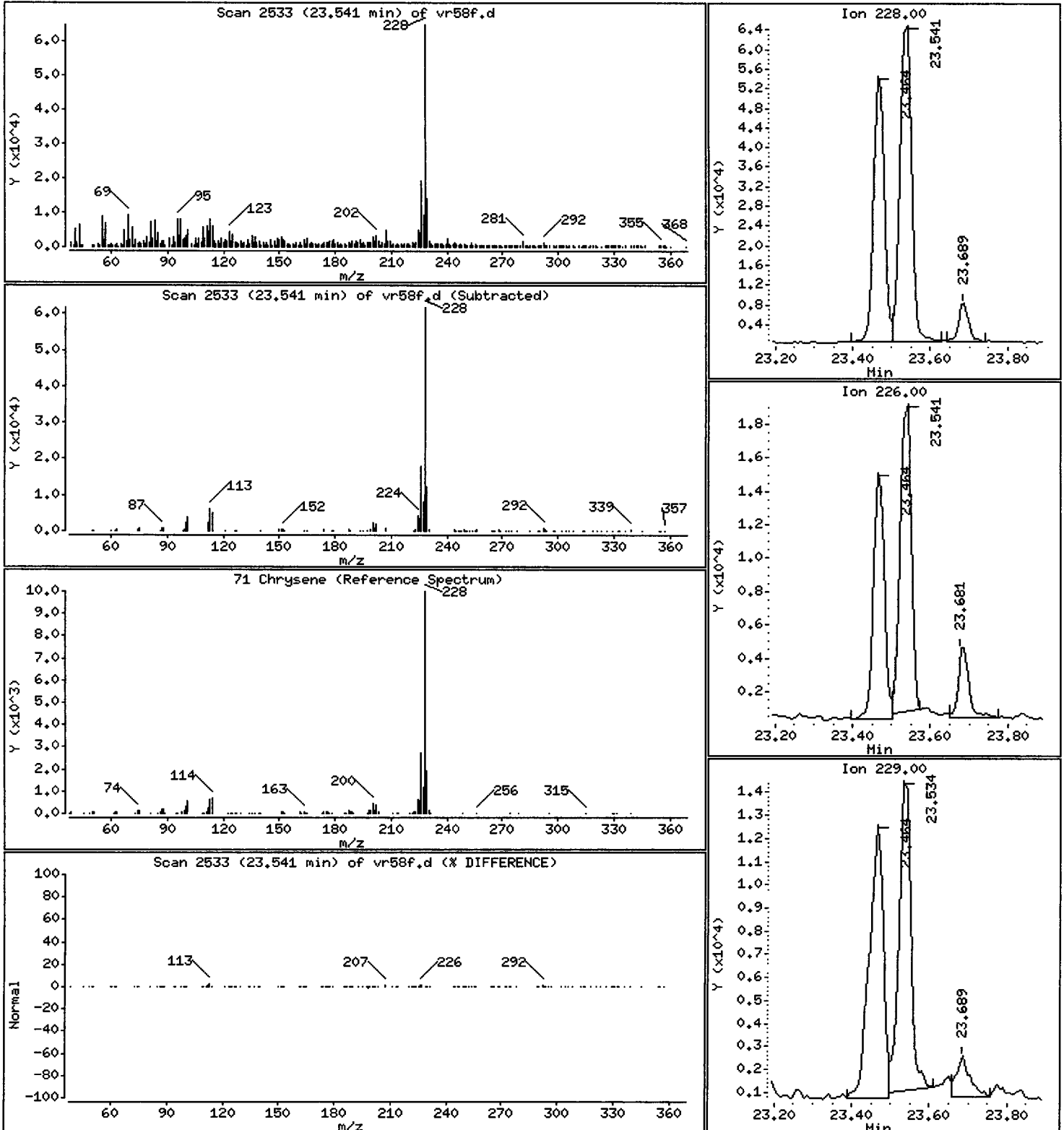
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

71 Chrysene

Concentration: 484.3 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

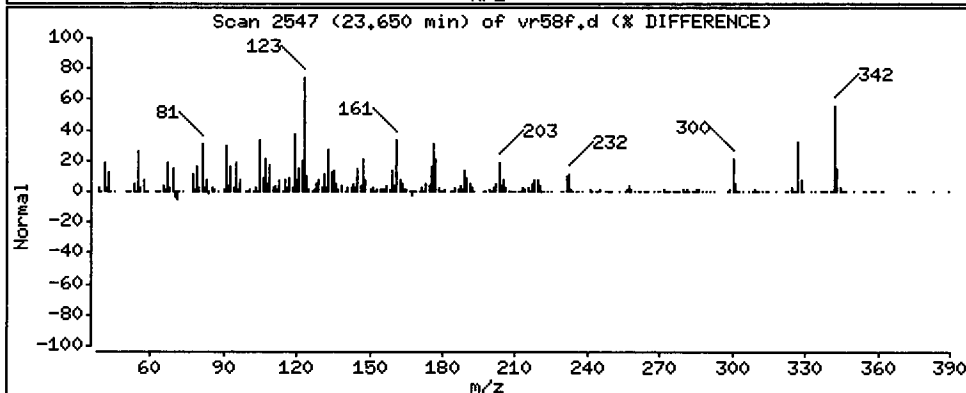
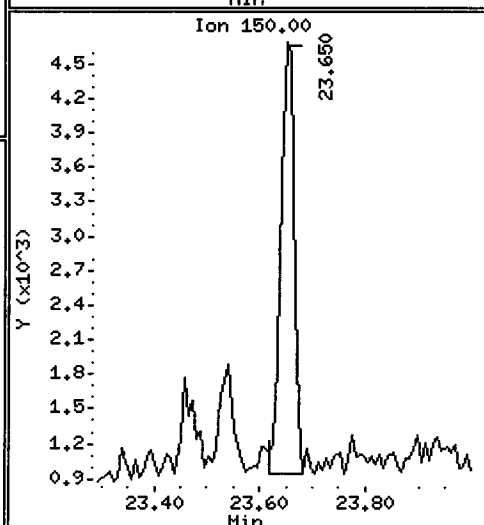
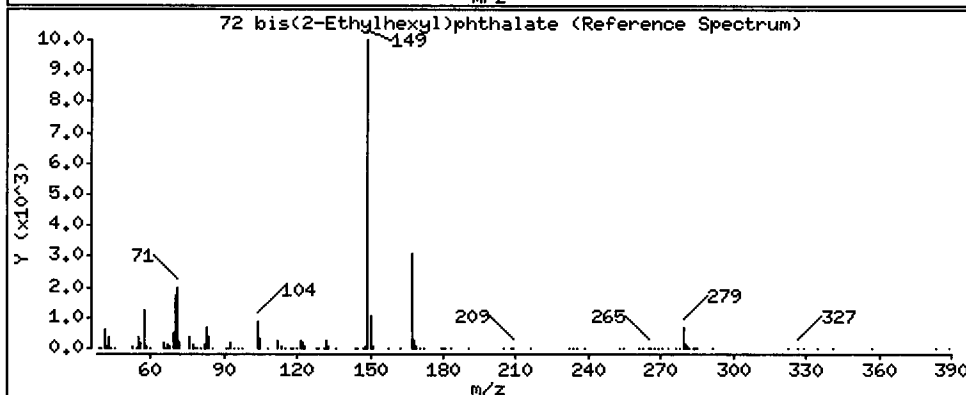
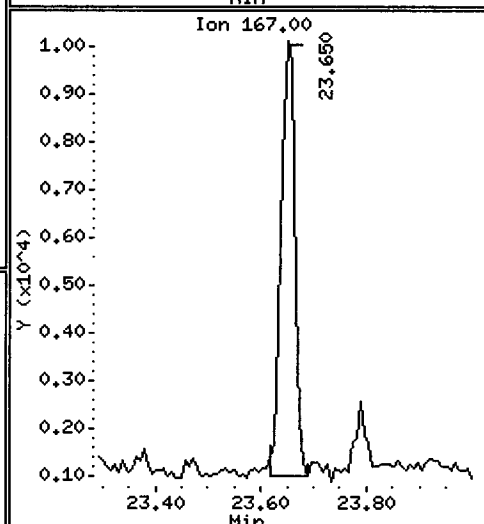
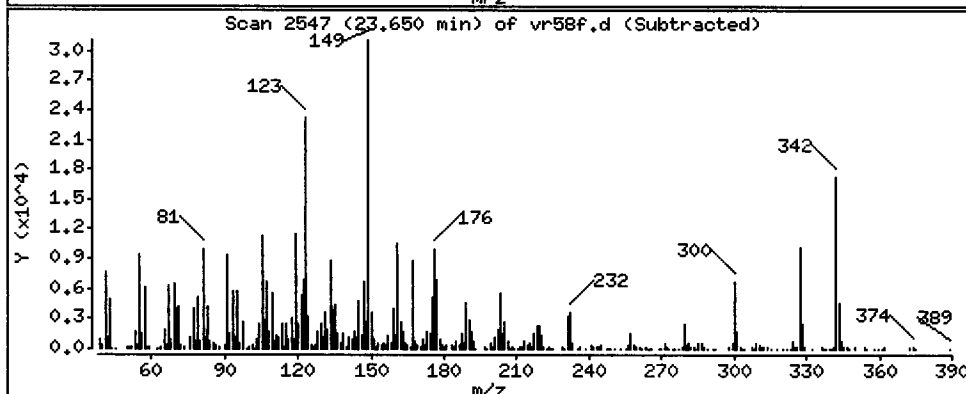
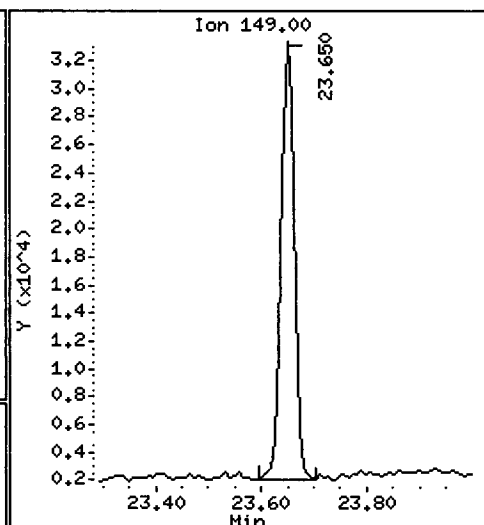
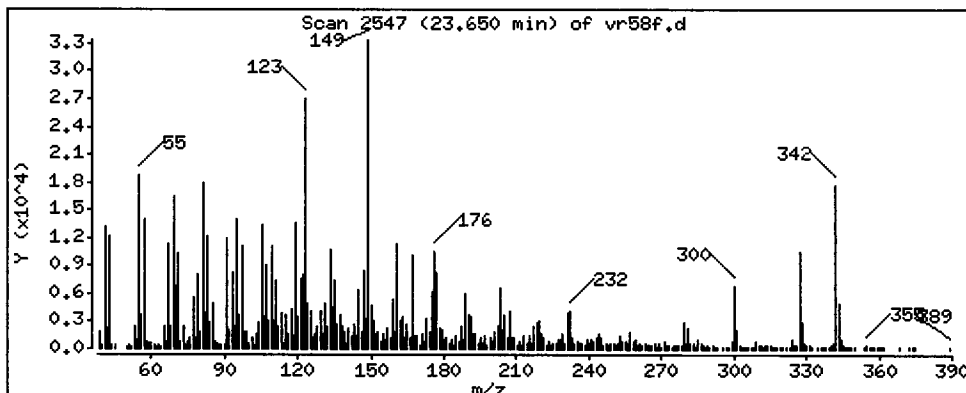
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

72 bis(2-Ethylhexyl)phthalate

Concentration: 265.9 ug/kg





Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

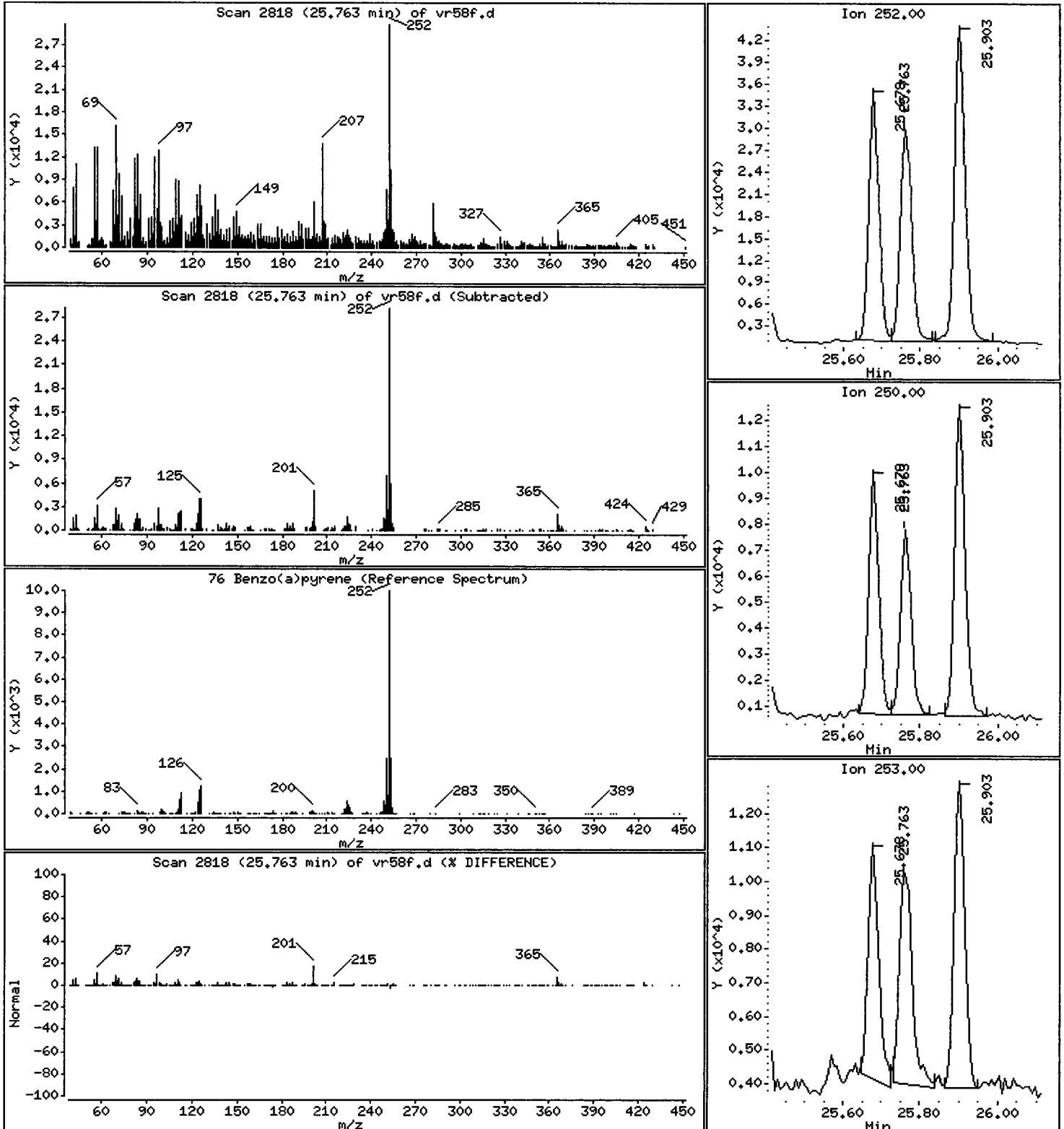
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

76 Benzo(a)pyrene

Concentration: 190.8 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

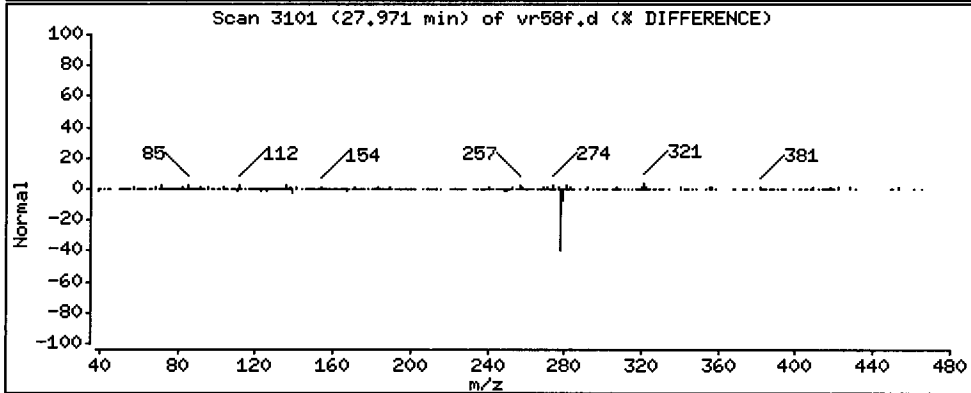
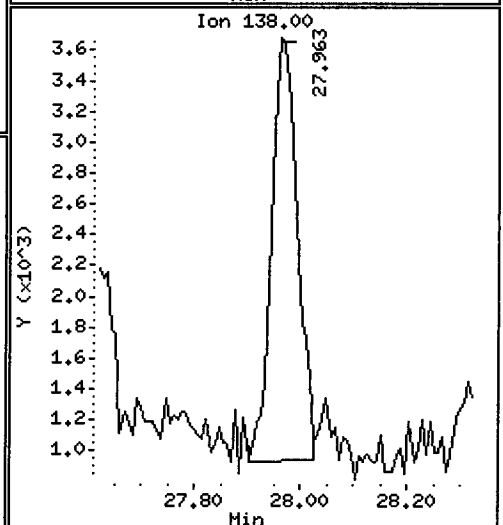
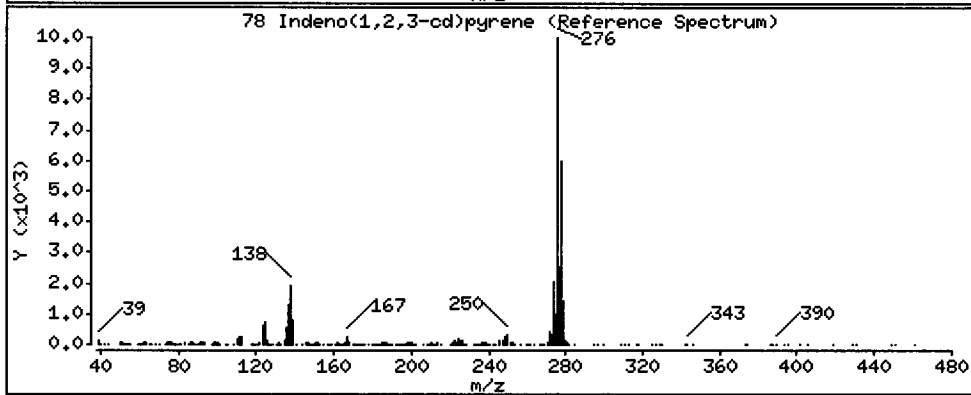
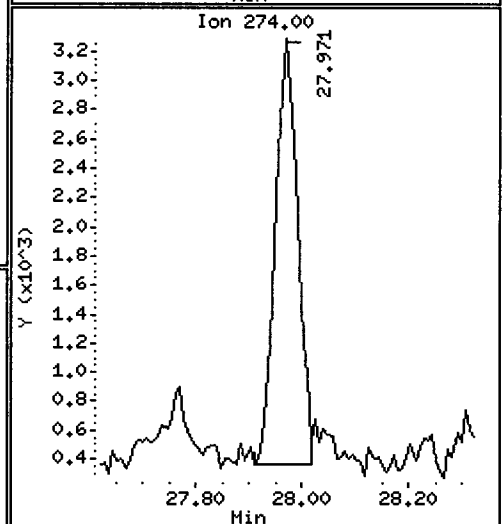
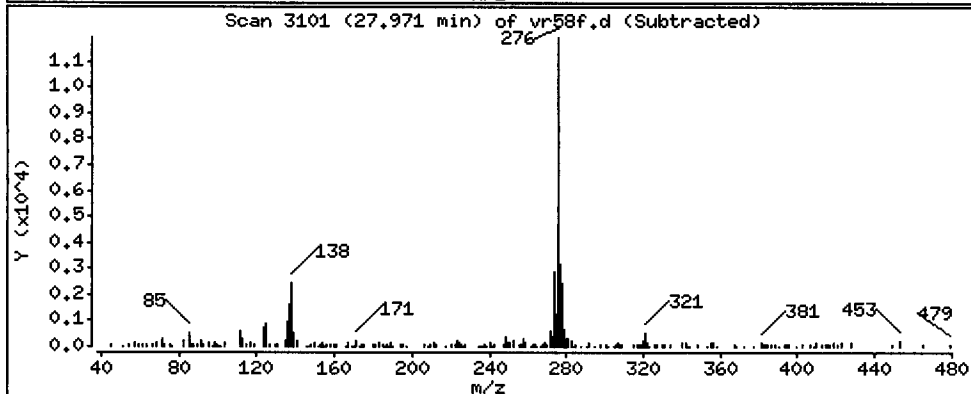
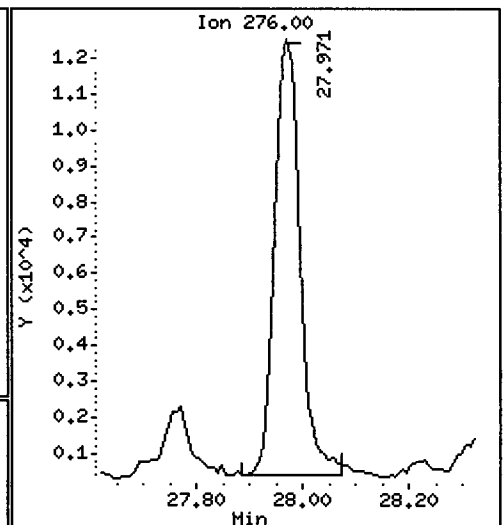
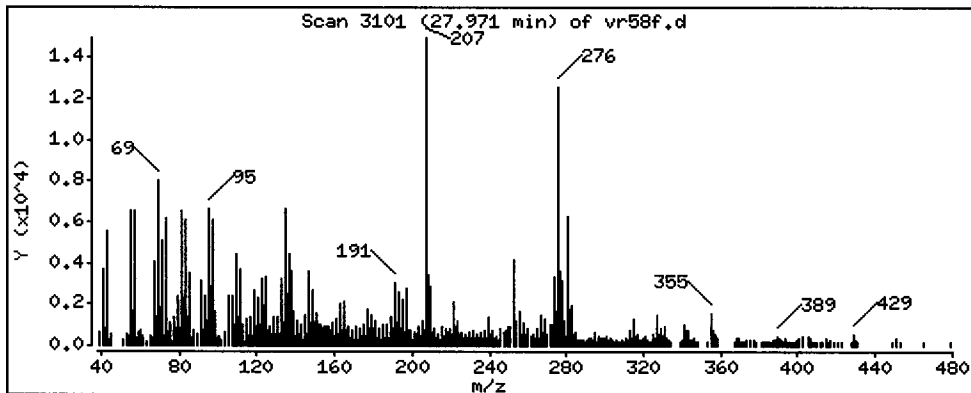
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

78 Indeno(1,2,3-cd)pyrene

Concentration: 117.2 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

Operator: VTS/YZ

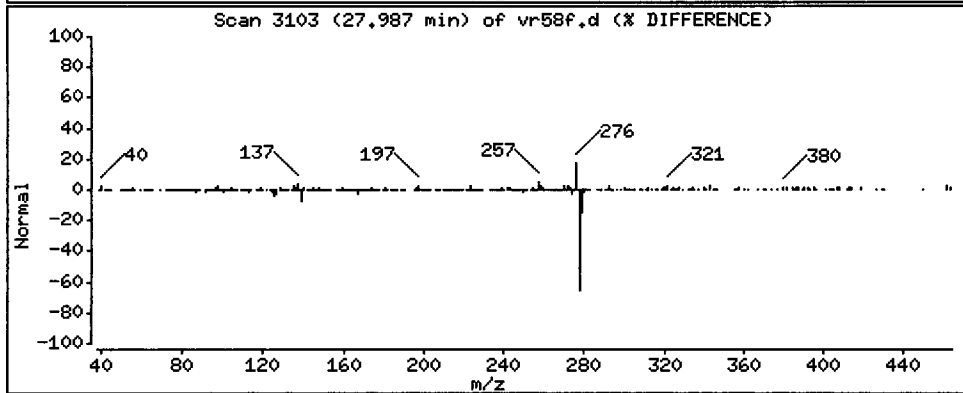
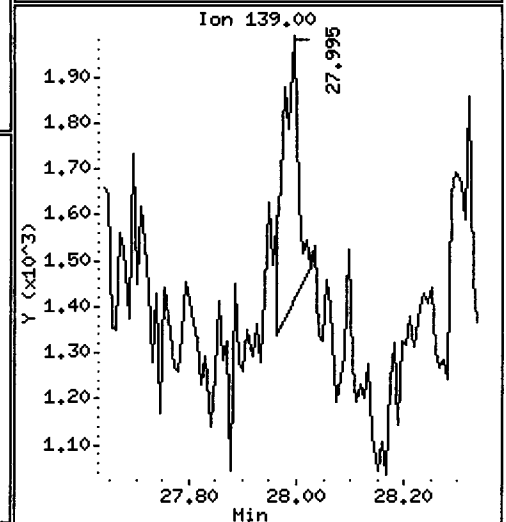
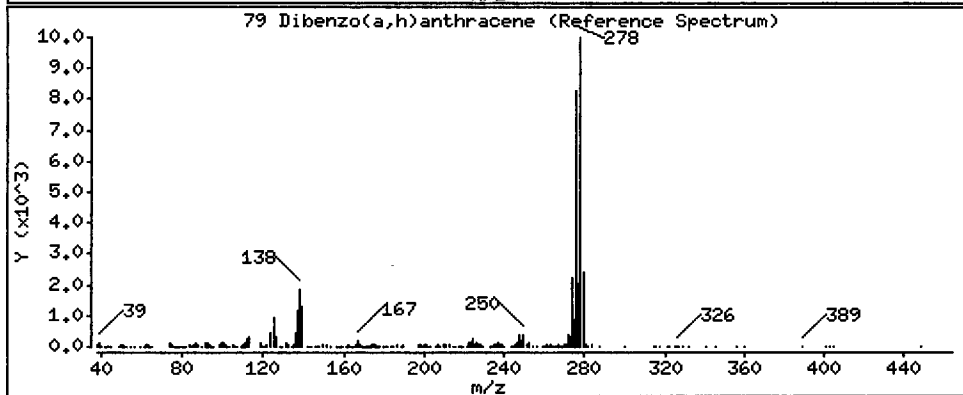
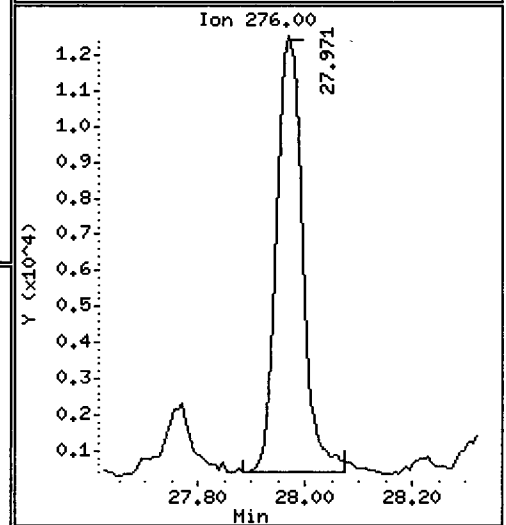
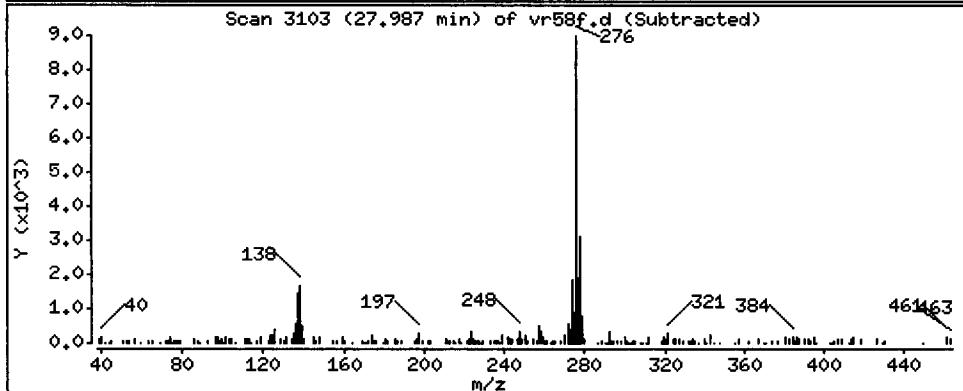
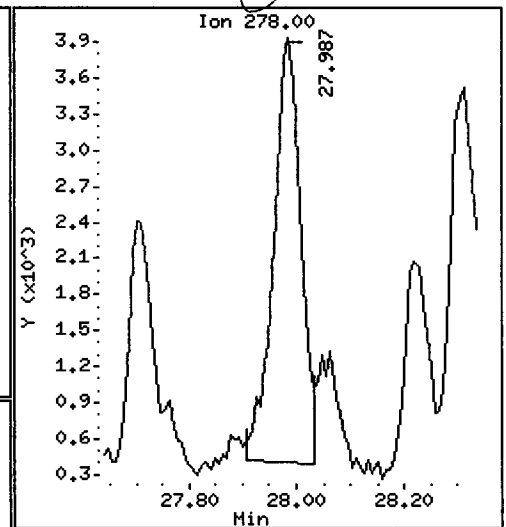
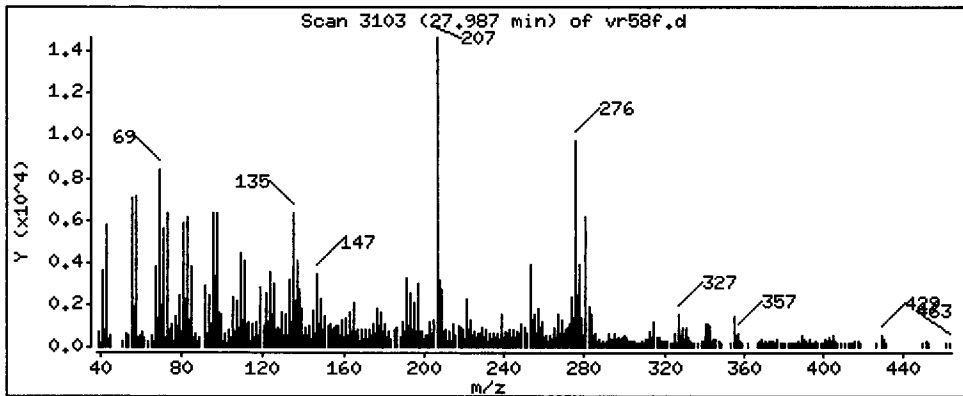
Column phase: ZB-5msi

Column diameter: 0.25

79 Dibenzo(a,h)anthracene

Concentration: 45.56 ug/kg

*VR1*



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

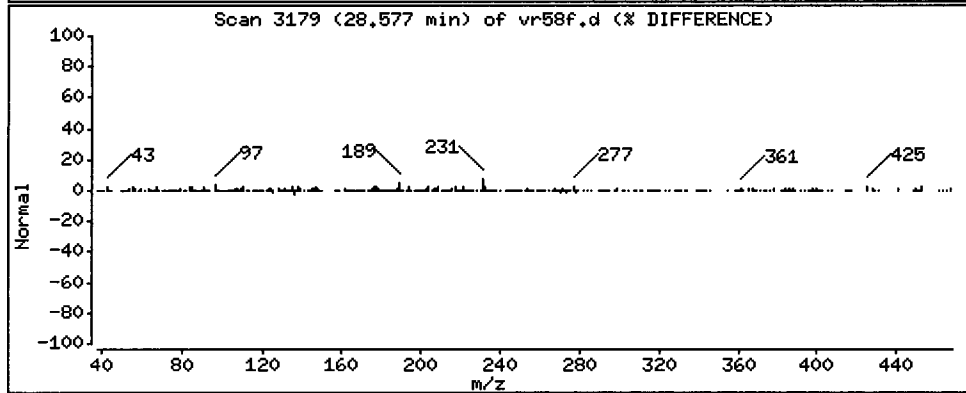
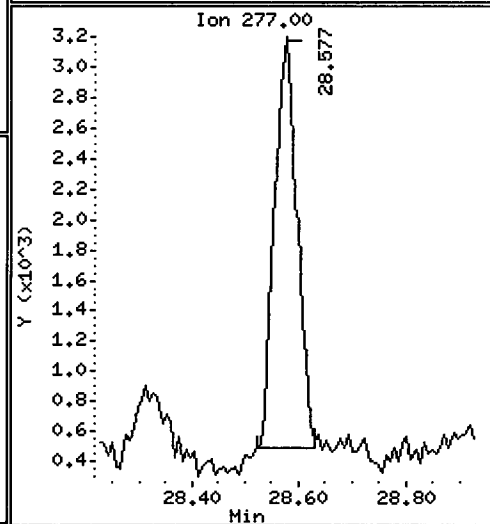
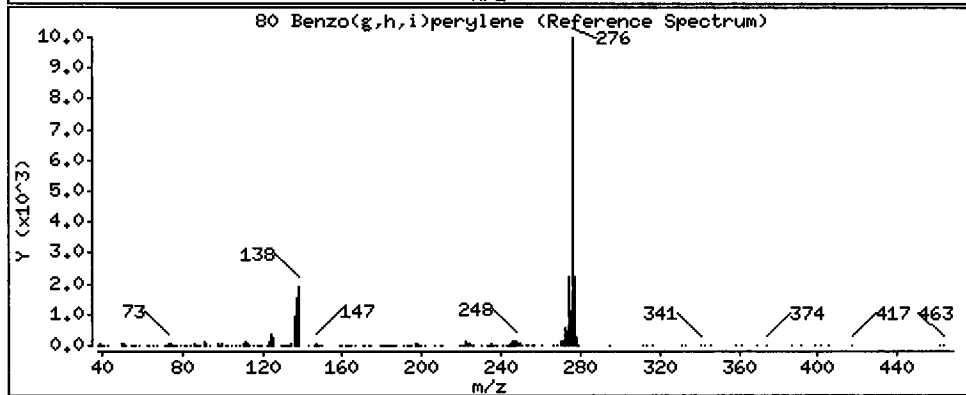
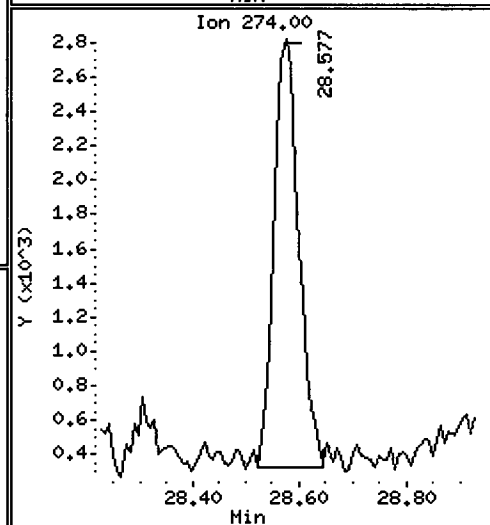
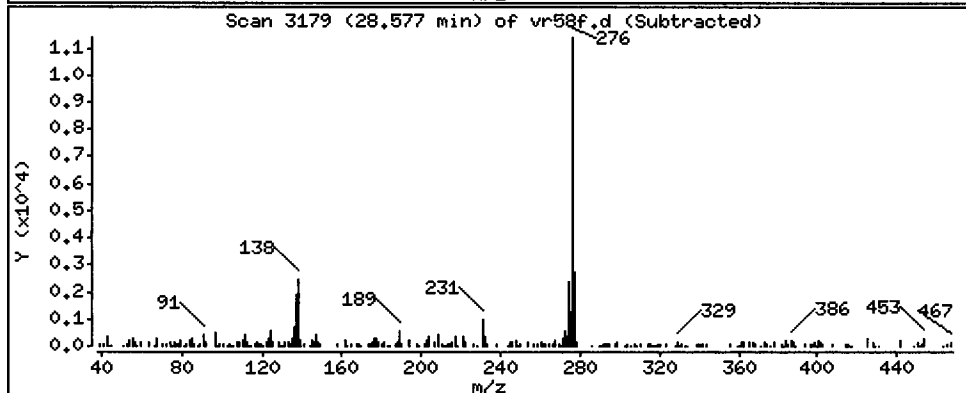
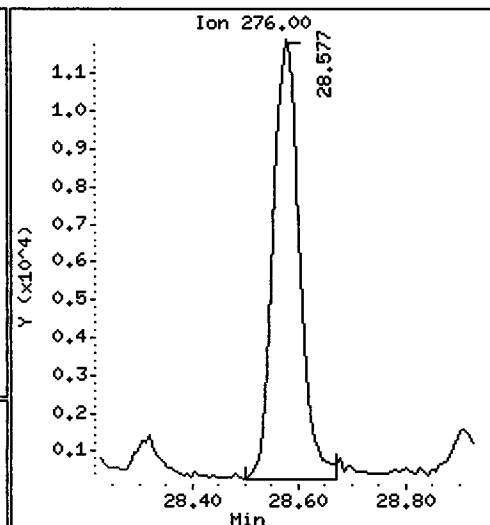
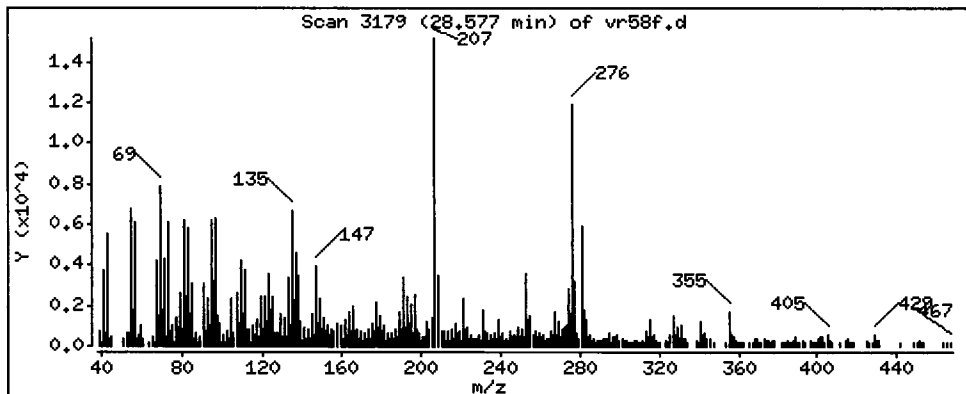
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25

80 Benzo(g,h,i)perylene

Concentration: 134.8 ug/kg



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

Operator: VTS/YZ

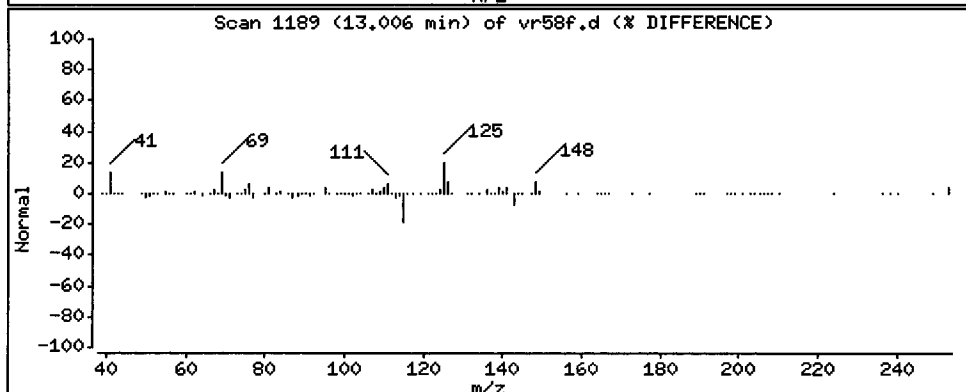
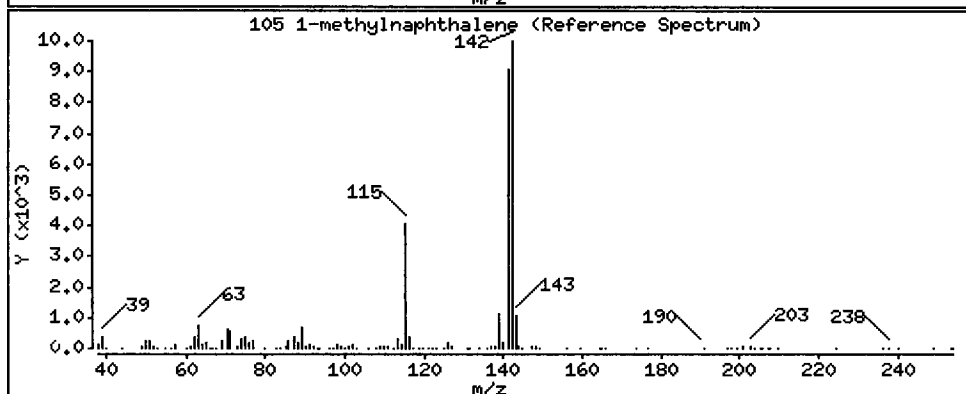
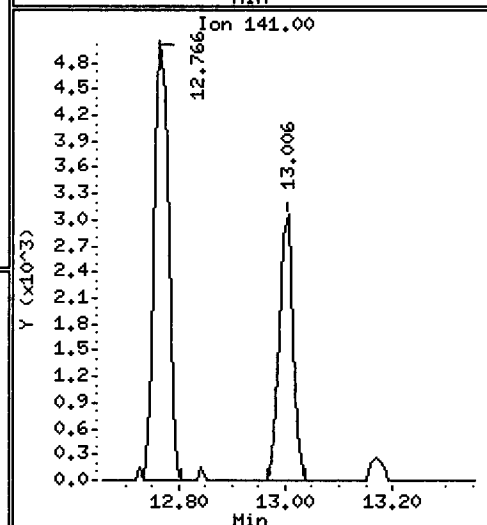
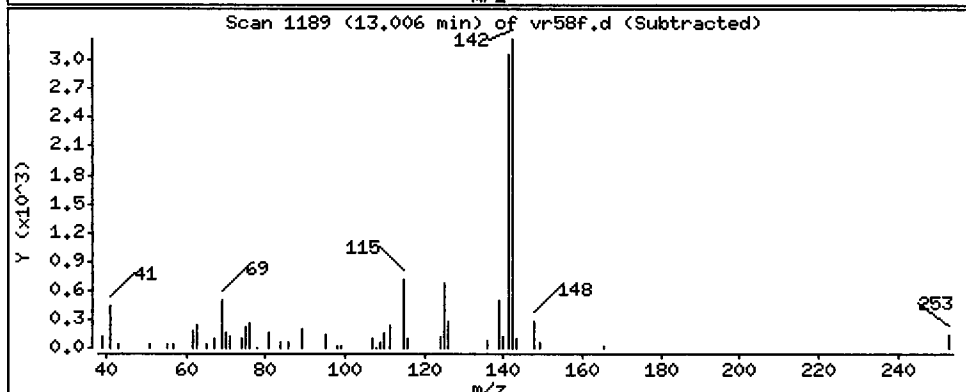
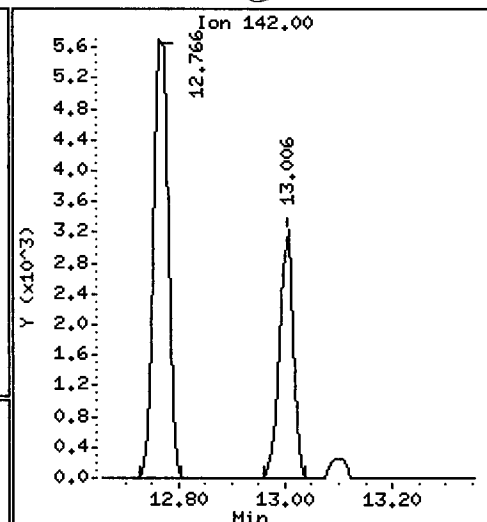
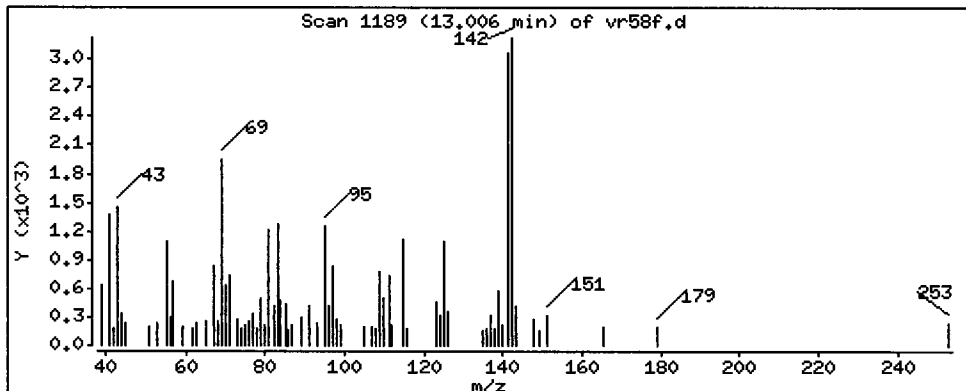
Column phase: ZB-5ms1

Column diameter: 0.25

105 1-methylnaphthalene

Concentration: 30.62 ug/kg

*Handwritten signature*



Date : 06-DEC-2012 15:11

Client ID: SG-14-S-E-121107

Instrument: nt10.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

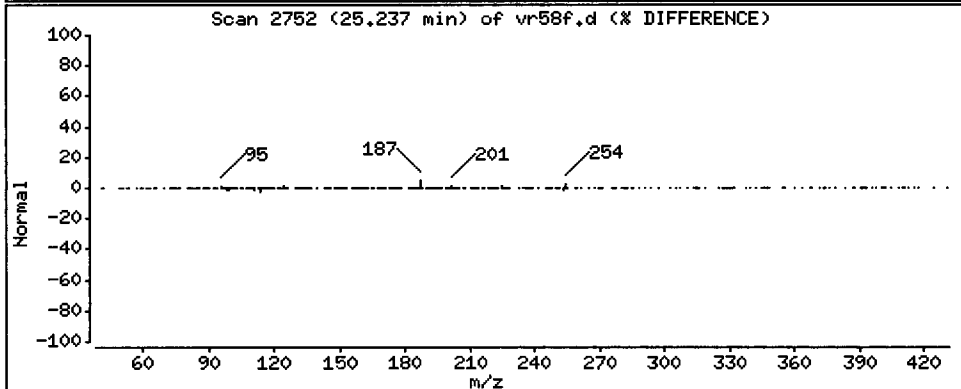
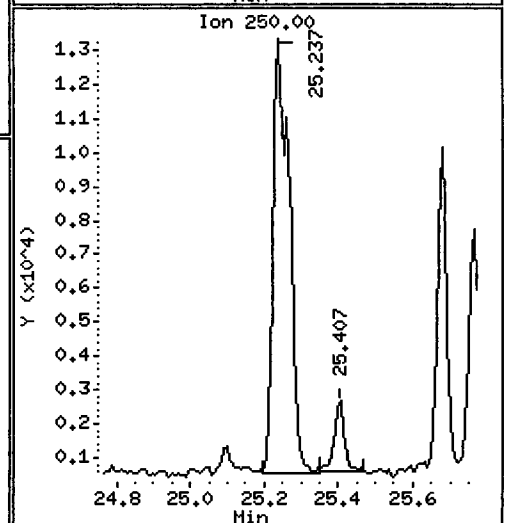
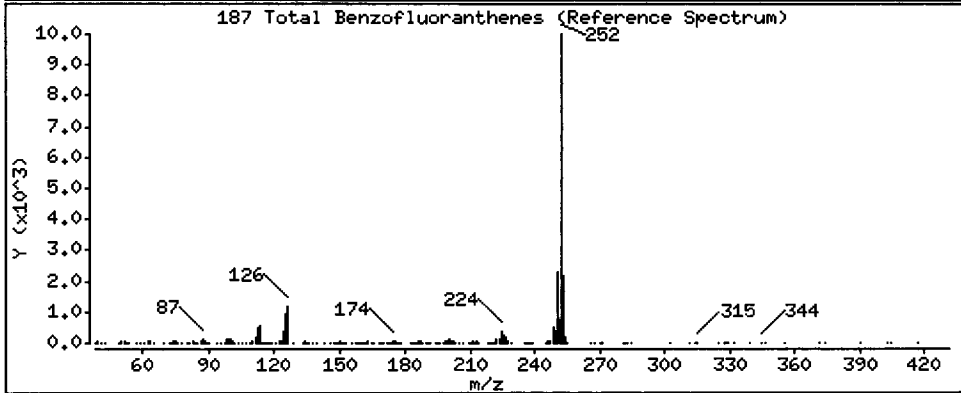
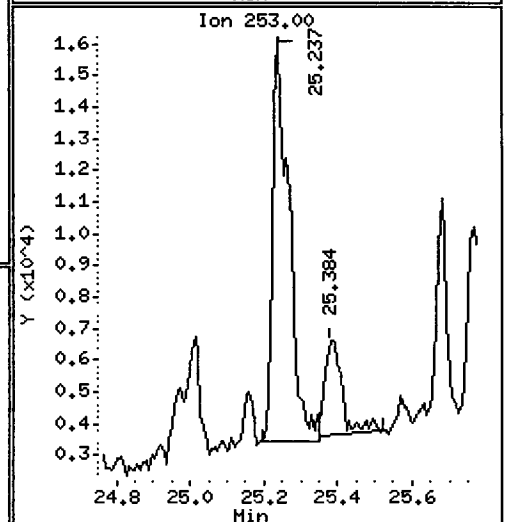
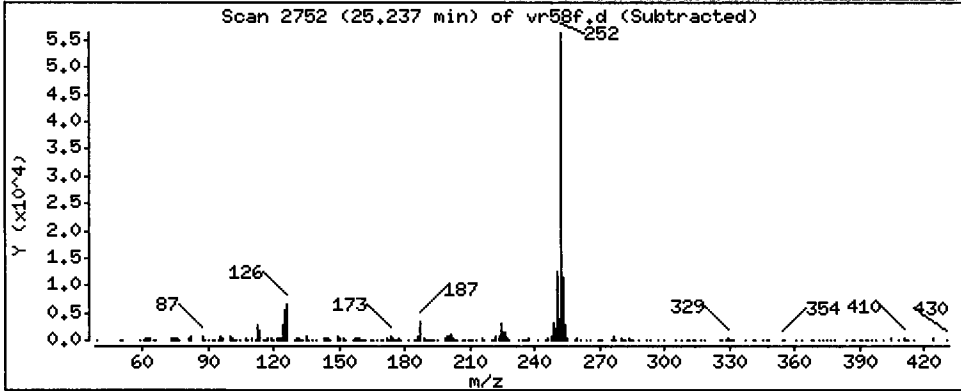
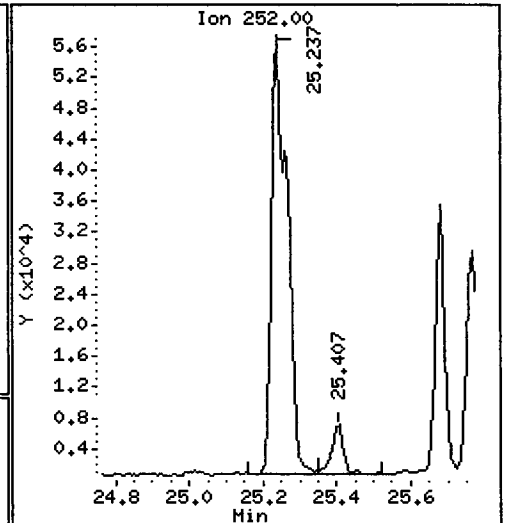
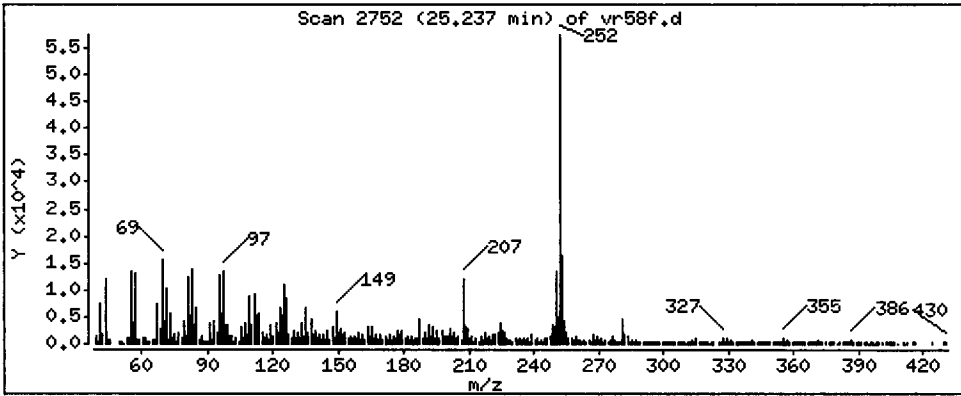
Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0,25

187 Total Benzofluoranthenes

Concentration: 542.8 ug/kg



CO-ELUTION SUMMARY FOR FILE - vr58f.d

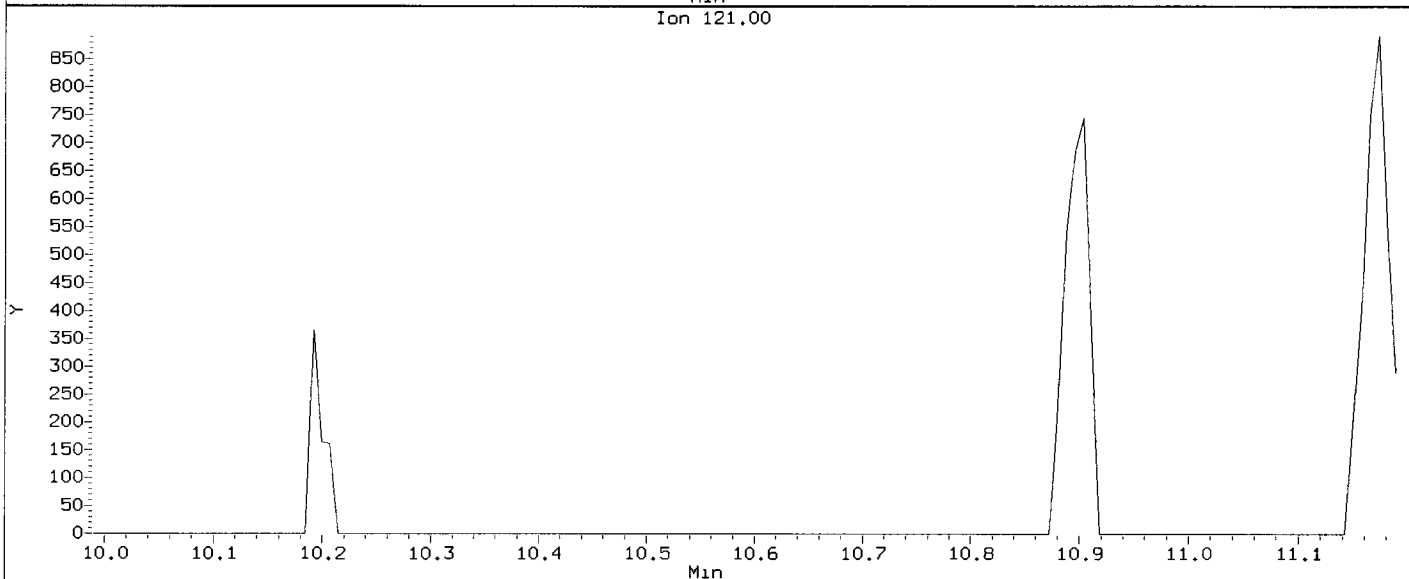
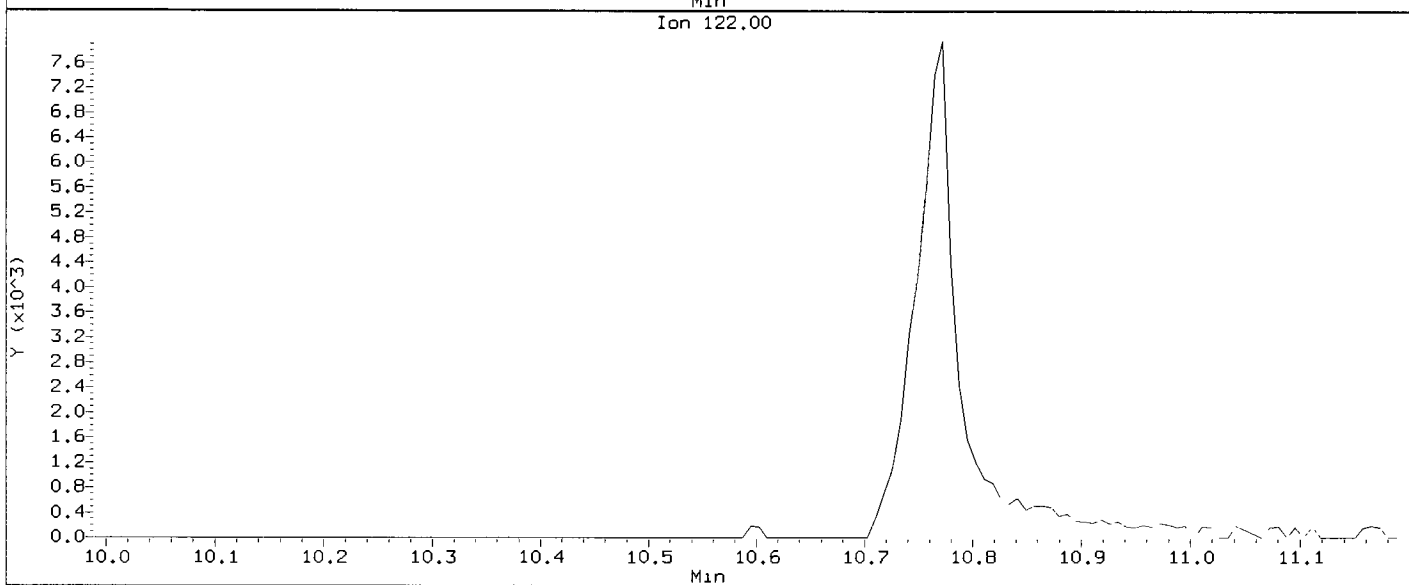
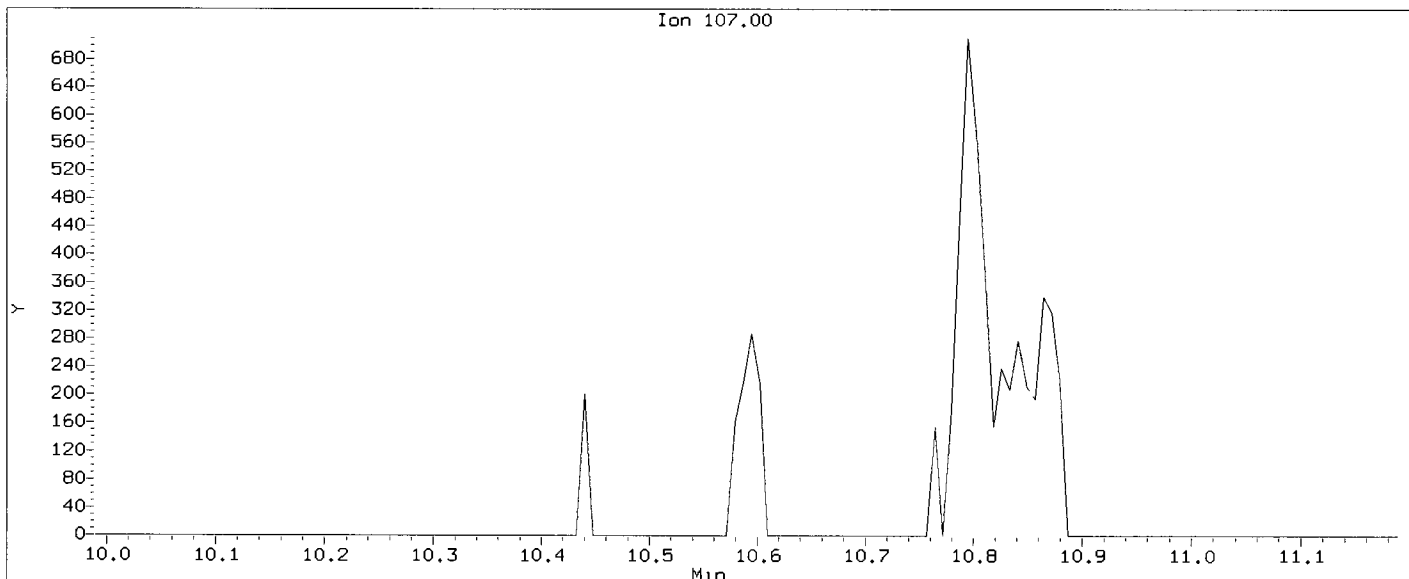
Lab ID: VR58F, Method: ABN.m, Instrument: nt10.i, Date: 06-DEC-2012

RT            CO-ELUTION COMPOUNDS

---

Data File: /chem1/nt10.1/20121206.b/vr58f.d  
Injection Date: 06-DEC-2012 15:11  
Instrument: nt10.1  
Client Sample ID: SG-14-S-E-121107

Compound: 2,4-Dimethylphenol  
CAS Number: 105-67-9





**SIM PAH Raw Data  
Extraction Bench Sheets and Notes**

**ARI Job ID: VR58**



Preparation Test SIM PNA # 5 (SPNASDMI)

In-House (5ppb)

ARI Job No(s) VR58

Page 1 of 1

Batch set up by: SP

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(Opt) Silica Gel Clean (1:1)	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
			(Y) N				NQ 11/15/12
	VR58 MBS	10.00g	(1:1) (Y) N	0.5mL	0.5mL		Analyst/Date
	↓ SBS	10.00g	(1:1) (Y) N	0.5mL	0.5mL		Microwave
	<del>SBS Dup.</del>	<del>10.00g</del>	<del>(1:1) Y/N</del>	<del>0.5mL</del>	<del>0.5mL</del>		NQ 11/15/12
	<del>QLS</del>	<del>10.00g</del>	<del>(1:1) Y/N</del>	<del>0.5mL</del>	<del>0.5mL</del>		
5	VR58 A	17.22	(1:1) (Y) N	0.5mL	0.5mL		Analyst/Date
5	B	51.04	(1:1) (Y) N	0.5mL	0.5mL	See Analyst note	KD 80-85°C
5	C	34.22	(1:1) (Y) N	0.5mL	0.5mL	See Analyst note	Hexane Exchange (2X 10mL) 100°C
5	D	42.05	(1:1) (Y) N	0.5mL	0.5mL	See Analyst note	XL /
5	E	42.11	(1:1) (Y) N	0.5mL	0.5mL	See Analyst note	11/16/12
5	F	22.05	(1:1) (Y) N	0.5mL	0.5mL		Analyst/Date
5	G	14.15	(1:1) (Y) N	0.5mL	0.5mL		TurboVap 123 Pre-Silica Gel Clean
4	H	13.06	(1:1) (Y) N	0.5mL	0.5mL		
4	Hms	13.16	(1:1) (Y) N	0.5mL	0.5mL		11-20-12 IS
4	HMSD	13.08	(1:1) (Y) N	0.5mL	0.5mL		Analyst/Date
4	I	22.06	(1:1) (Y) N	0.5mL	0.5mL		TurboVap 123
4	J	13.16	(1:1) (Y) N	0.5mL	0.5mL		Post Silica Gel Clean
Analyst/Date			ESZ				11-21-12 IS
NQ 11/15/12			11/20/12	11-21-12	11-21-12		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	B (2029-3)	15/75µg/mL	100µL	9/11/13	M	SP
Spike	15 (1987-1)	15/75µg/mL	100µL	11/30/12	M	SP
<del>QLS Spike</del>	<del>4 ( )</del>	<del>1µg/mL</del>	<del>50µL</del>			

Extraction Time: 1640

Balance ID: B139298002

**SPECIAL INSTRUCTIONS:** 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. **Note: do not fill vessel more than 2/3<sup>rd</sup> 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-re-homogenize while hot-then let cool 15 min in cold water. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing neutral glasswool. 8. Rinse with DCM 9. Microwave a 2<sup>nd</sup> time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant solvent then empty the soil into the funnel and rinse with DCM. 11. KD (Small or Large drying column) to 5mL at 80-85°C. 12. Exchange to Hexane (2X with 10mL). 13. TurboVap. 14. Silica Clean-up Opt-Any Color=REQ (All or none). 15. TurboVap (if Silica Clean). 16. Vial in DCM.

A. Need Total Solids Y (N) B. Archive/Freeze Y (N)



API Job No.: VR58

Client ID: Anche GEA, LLC

Parameter: SIM PNA

Client Project: City of Kenmore Sediment

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
<input checked="" type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)= <u>ABCDEFGHIIT</u>	<u>ET 11/1/12</u>
<input checked="" type="checkbox"/> Standing Water Decanted (Not shared)= <u>ABCDEFGHIIT</u>	<u>ET 11/2/12</u>
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=	
<input checked="" type="checkbox"/> Rocks (%+size)? <u>F, 2% small rocks</u>	<u>ET 11/2/12</u>
<input checked="" type="checkbox"/> Organics (Leaves/sticks/grass)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input checked="" type="checkbox"/> Other (Details)= <u>B-E: Samples in Swirgator has spilled into multi vessels due to heavy weight of samples and will be combined after 2nd microwave</u>	<u>ML 11/16/12</u>
<b>Aqueous:</b>	
<input type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
<input type="checkbox"/> Emulsions (%)=	
<input type="checkbox"/> Other (Details)=	
<input checked="" type="checkbox"/> Other Notes/Comments=(Note problems, concerns, corrective actions). Centrifuge#1 used for all Centrifugations	
<u>VR58 mbs, sbs, G, H, Hms, Hmsd &amp; J filtered with 0.45 prior to SPE clean-up.</u>	
<u>VR58 A, B, C, D, E, F &amp; I filtered 0.45 stacked with GDX prior to SPE clean-up.</u>	<u>11-20-12</u>

**SIM PAH Raw Data  
Initial Calibration**

**ARI Job ID: VR58**



# 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): 11/16/12 Internal Standard ID 1998-3 Expiration 7/23/2013

DFTPP Tune Meets Criteria?	<input checked="" type="checkbox"/> YES / NO	Minimum Response Factors Met/	<input checked="" type="checkbox"/> YES / NO
DDT Breakdown <20%?	<input checked="" type="checkbox"/> YES / NO	ICV Exceeding ±20%?	<input checked="" type="checkbox"/> YES / NO
Peak Tailing Factor ≤2?	<input checked="" type="checkbox"/> YES / NO	ICV Exceeding ±30%?	<input checked="" type="checkbox"/> YES / NO
ICal Meets %RSD & r <sup>2</sup> Criteria?	<input checked="" type="checkbox"/> YES / NO	Linear Fits Used?	<input checked="" type="checkbox"/> YES / NO
Q flag applied?	<input checked="" type="checkbox"/> YES / NO / <u>NA</u>	Quadratic Fits Used?	<input checked="" type="checkbox"/> YES / NO
Manual Integrations for ICal?	<input checked="" type="checkbox"/> YES / NO	Calibration Points Dropped?	<input checked="" type="checkbox"/> YES / NO
Spectral Library Updated?	<input checked="" type="checkbox"/> YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
<u>MSD Suite</u>	<u>2020-1</u>	<u>3/4/13</u>	<u>in house stock</u>	<u>2024-1</u>	<u>3/23/13</u>

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

ICV: finished on 11/16/12 and MS SS added in.

Analyst: [Signature] Date: 11/16/12  
 Reviewer: [Signature] Date: 11/16/12

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-NOV-2012 18:53  
 End Cal Date : 15-NOV-2012 21:24  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Cal Date : 16-Nov-2012 09:06 jianqing  
 Curve Type : Average

Calibration File Names:

Level 1: /chem3/nt11.i/20121115.b/11151203.d  
 Level 2: /chem3/nt11.i/20121115.b/11151204.d  
 Level 3: /chem3/nt11.i/20121115.b/11151205.d  
 Level 4: /chem3/nt11.i/20121115.b/11151202.d  
 Level 5: /chem3/nt11.i/20121115.b/11151206.d  
 Level 6: /chem3/nt11.i/20121115.b/11151207.d

*Handwritten:* 11/16/12

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
1 trans-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
2 cis-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Benzo (b) thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 Naphthalene	1.24513	1.16489	1.06275	1.03134	0.96314	0.94592	1.06886	10.913
14 2-Methylnaphthalene	0.65184	0.65602	0.61141	0.59572	0.55924	0.53916	0.60223	7.897
15 1-methylnaphthalene	0.66748	0.61955	0.56819	0.56573	0.52870	0.51132	0.57683	10.063
19 Biphenyl	1.68070	1.61021	1.44064	1.41051	1.30692	1.25030	1.44988	11.578
20 2,6-Dimethylnaphthalene	1.17937	1.13352	1.01503	1.02296	0.94371	0.90335	1.03299	10.312
21 Acenaphthylene	1.78022	1.82773	1.73389	1.78263	1.66886	1.63395	1.73788	4.263
23 Acenaphthene	1.31501	1.21353	1.08900	1.06662	0.99096	0.95606	1.10520	12.327
11 Dibenzofuran	1.88435	1.80363	1.59365	1.58153	1.45476	1.39664	1.61909	11.815
24 1,6,7-Trimethylnaphthalene	1.14785	1.12815	0.99487	0.97574	0.90491	0.86048	1.00200	11.586
4 C1-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 Fluorene	1.32085	1.37625	1.24167	1.25453	1.15913	1.11369	1.24435	7.849
5 C2-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
8 C3-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
27 Dibenzothiophene	1.23225	1.19785	1.09511	1.04878	0.99121	0.93997	1.08419	10.569
30 Phenanthrene	1.42427	1.32003	1.23036	1.15972	1.08627	1.02799	1.20811	12.242
9 C2-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
10 C1-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
31 Anthracene	1.23145	1.25026	1.16740	1.16604	1.09421	1.04924	1.15976	6.672

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-NOV-2012 18:53  
 End Cal Date : 15-NOV-2012 21:24  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Cal Date : 16-Nov-2012 09:06 jianqing  
 Curve Type : Average

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
26 Carbazole	1.31272	1.29090	1.20083	1.18009	1.11888	1.06689	1.19505	7.984
13 C3-Benzothiophenes	++++	++++	++++	++++	++++	++++	++++	++++
33 1-Methylphenanthrene	0.93890	0.95365	0.88024	0.86546	0.80712	0.76723	0.86877	8.360
16 C3-Naphthalenes	++++	++++	++++	++++	++++	++++	++++	++++
17 C1-Benzothiophenes	++++	++++	++++	++++	++++	++++	++++	++++
18 C2-Benzothiophenes	++++	++++	++++	++++	++++	++++	++++	++++
36 Fluoranthene	1.31172	1.32463	1.22815	1.20281	1.12334	1.07176	1.21040	8.302
39 Pyrene	1.20099	1.17188	1.10228	1.10066	1.02725	1.00984	1.10215	6.882
46 Benzo(a)anthracene	1.13715	1.05919	1.00634	0.97405	0.92439	0.92870	1.00497	8.167
48 Chrysene	1.15328	1.04584	0.94987	0.93654	0.89926	0.86778	0.97543	10.864
32 C4-Naphthalenes	++++	++++	++++	++++	++++	++++	++++	++++
34 C1-Fluorenes	++++	++++	++++	++++	++++	++++	++++	++++
35 C2-Dibenzothiophenes	++++	++++	++++	++++	++++	++++	++++	++++
51 Benzo(b)fluoranthene	0.97369	0.95191	0.93086	0.91509	0.86475	0.91736	0.92561	4.017
52 Benzo(k)fluoranthene	1.07737	1.03112	0.99607	1.02491	0.95418	0.94778	1.00524	4.924
64 Total Benzofluoranthenes	++++	++++	++++	++++	++++	++++	++++	++++
251 Benzo(j)fluoranthene	1.14094	1.10565	1.09053	1.04613	0.98567	0.99469	1.06060	5.895
37 C2-Phenanthrenes/Anthracenes	++++	++++	++++	++++	++++	++++	++++	++++
55 Benzo(e)pyrene	1.05404	1.04578	0.94565	0.94719	0.88540	0.88572	0.96063	7.741
54 Benzo(a)pyrene	0.90216	1.00440	0.94282	0.96026	0.91277	0.91867	0.94018	4.035
57 Perylene	1.11126	1.03744	0.96010	0.95202	0.90303	0.88619	0.97501	8.737
40 C3-Phenanthrenes/Anthracenes	++++	++++	++++	++++	++++	++++	++++	++++
41 C3-Fluorenes	++++	++++	++++	++++	++++	++++	++++	++++
42 Retene	++++	++++	++++	++++	++++	++++	++++	++++
43 C1-Dibenzothiophenes	++++	++++	++++	++++	++++	++++	++++	++++
44 C1-Phenanthrenes/Anthracenes	++++	++++	++++	++++	++++	++++	++++	++++
45 C1-Fluoranthenes/Pyrenes	++++	++++	++++	++++	++++	++++	++++	++++
63 Indeno(1,2,3-cd)pyrene	0.99465	1.14591	1.14805	1.22400	1.15060	1.17571	1.13982	6.759
62 Dibenzo(a,h)anthracene	0.81645	0.93039	0.94444	0.99335	0.94388	0.94129	0.92830	6.358

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-NOV-2012 18:53  
 End Cal Date : 15-NOV-2012 21:24  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Cal Date : 16-Nov-2012 09:06 jianqing  
 Curve Type : Average

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
49 Naphthobenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
61 Benzo(g,h,i)perylene	0.90249	0.96118	0.97711	0.97022	0.95676	1.05036	0.96969	4.907
50 C3-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 C4-Phenanthrenes/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
58 C4-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
59 C3-Fluoranthenes/Pyrenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
66 C1-Naphthobenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 C2-Fluoranthenes/Pyrenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
68 C1-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
69 C2-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
70 C2-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
71 C2-Naphthobenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
72 C3-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
73 C3-Naphthobenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
74 C1-Dibenzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
75 C2-Dibenzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
76 C3-Dibenzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
77 C4-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 12 2-Methylnaphthalene-d10	0.78189	0.74752	0.68223	0.67354	0.61812	0.59678	0.68335	10.487
\$ 253 Fluoranthene-d10	1.22307	1.22025	1.13380	1.14675	1.08117	1.04556	1.14177	6.290
\$ 60 Dibenzo(a,h)anthracene-d14	0.51832	0.62796	0.64194	0.71749	0.72083	0.75169	0.66304	12.936



Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20121115.b/FSIMPNA111512.m

Batch File: /chem3/nt11.i/20121115.b

Inst ID: nt11.i

Summary table with columns: ID, RT01, RT02, RT03, RT04, RT05, RT06, RT05, RT06, RT05, RT06. Includes handwritten annotations like 'B' and '11/16/12'.

Main data table with columns: Compound, RT01, RT02, RT03, RT04, RT05, RT06, RT05, RT06, RT05, RT06, RT WINDOW, AVG RT, STD DEV. Lists compounds like trans-Decalin, cis-Decalin, etc.

Reviewer 1

Reviewer 2

Date: 11/16/12

Date: 11/16/12

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
Batch File: /chem3/nt11.i/20121115.b  
Inst ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
5 C2-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	10.000	7.000-13.000	+++++	+++++
8 C3-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	10.296	7.296-13.296	+++++	+++++
27 Dibenzothiophene	9.635	9.635	9.632	9.635	9.635	9.639	9.635	6.635-12.635	9.635	0.002
* 28 Phenanthrene-d10	9.761	9.761	9.761	9.761	9.761	9.762	9.761	6.761-12.761	9.761	0.000
30 Phenanthrene	9.799	9.796	9.796	9.796	9.796	9.799	9.799	6.799-12.799	9.797	0.002
9 C2-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	10.453	7.453-13.453	+++++	+++++
10 C1-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	10.453	7.453-13.453	+++++	+++++
31 Anthracene	9.840	9.834	9.834	9.834	9.837	9.840	9.840	6.840-12.840	9.837	0.003
26 Carbazole	10.348	10.345	10.345	10.345	10.348	10.352	10.348	7.348-13.348	10.347	0.003
13 C3-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	11.200	8.200-14.200	+++++	+++++
33 1-Methylphenanthrene	10.547	10.544	10.544	10.544	10.547	10.550	10.547	7.547-13.547	10.546	0.003
16 C3-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	11.600	8.600-14.600	+++++	+++++
17 C1-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	11.769	8.769-14.769	+++++	+++++
18 C2-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	11.842	8.842-14.842	+++++	+++++
36 Fluoranthene	11.456	11.453	11.450	11.453	11.456	11.462	11.456	8.456-14.456	11.455	0.004
\$ 253 Fluoranthene-d10	11.421	11.418	11.418	11.418	11.421	11.425	11.421	8.421-14.421	11.420	0.003
39 Pyrene	11.923	11.920	11.920	11.920	11.923	11.929	11.923	8.923-14.923	11.922	0.004
46 Benzo(a)anthracene	14.261	14.255	14.255	14.255	14.261	14.268	14.261	11.261-17.261	14.259	0.005
* 47 Chrysene-d12	14.381	14.375	14.378	14.378	14.378	14.381	14.381	11.381-17.381	14.379	0.002
48 Chrysene	14.451	14.447	14.444	14.444	14.451	14.460	14.451	11.451-17.451	14.450	0.006
* 29 Fluorene-d10	+++++	+++++	+++++	+++++	+++++	+++++	13.163	10.163-16.163	13.163	0.000
32 C4-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	15.983	12.983-18.983	+++++	+++++

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
Batch File: /chem3/nt11.i/20121115.b  
Inst ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
34 C1-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	16.962	13.962-19.962	+++++	+++++
35 C2-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	17.000	14.000-20.000	+++++	+++++
51 Benzo(b)fluoranthene	16.896	16.890	16.887	16.893	16.902	16.909	16.896	13.896-19.896	16.896	0.008
52 Benzo(k)fluoranthene	16.959	16.947	16.947	16.950	16.962	16.975	16.959	13.959-19.959	16.957	0.011
64 Total Benzofluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	17.174	14.174-20.174	+++++	+++++
251 Benzo(j)fluoranthene	17.032	17.022	17.022	17.022	17.035	17.051	17.032	14.032-20.032	17.031	0.011
* 38 Pyrene-d10	17.041	+++++	16.883	17.013	17.035	17.041	17.041	14.041-20.041	17.003	0.068
37 C2-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	17.500	14.500-20.500	+++++	+++++
55 Benzo(e)pyrene	17.789	17.786	17.780	17.780	17.792	17.805	17.789	14.789-20.789	17.789	0.010
54 Benzo(a)pyrene	17.915	17.900	17.906	17.906	17.919	17.931	17.915	14.915-20.915	17.913	0.011
* 56 Perylene-d12	18.143	18.136	18.136	18.139	18.143	18.146	18.143	15.143-21.143	18.141	0.004
57 Perylene	18.215	18.206	18.206	18.209	18.218	18.231	18.215	15.215-21.215	18.214	0.010
40 C3-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	18.800	15.800-21.800	+++++	+++++
41 C3-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	18.831	15.831-21.831	+++++	+++++
42 Retene	+++++	+++++	+++++	+++++	+++++	+++++	18.831	15.831-21.831	+++++	+++++
43 C1-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	18.997	15.997-21.997	+++++	+++++
44 C1-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	19.008	16.008-22.008	+++++	+++++
45 C1-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	19.500	16.500-22.500	+++++	+++++
\$ 60 Dibenzo(a,h)anthracene	20.377	20.364	20.364	20.367	20.380	20.393	20.377	17.377-23.377	20.374	0.011
63 Indeno(1,2,3-cd)pyrene	20.471	20.453	20.456	20.459	20.475	20.500	20.471	17.471-23.471	20.469	0.018
62 Dibenzo(a,h)anthracene	20.468	20.453	20.459	20.459	20.471	20.497	20.468	17.468-23.468	20.468	0.016
49 Naphthobenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	20.438	17.438-23.438	+++++	+++++
61 Benzo(g,h,i)perylene	21.342	21.339	21.330	21.333	21.349	21.374	21.342	18.342-24.342	21.344	0.016
50 C3-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	21.254	18.254-24.254	+++++	+++++

11/16/12 09:05

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
Batch File: /chem3/nt11.i/20121115.b  
Inst ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
53 C4-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	21.403	18.403-24.403	+++++	+++++
58 C4-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	22.001	19.001-25.001	+++++	+++++
59 C3-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	22.500	19.500-25.500	+++++	+++++
* 65 Benzo(a)pyrene-d12	+++++	+++++	+++++	24.182	+++++	23.854	23.633	20.633-26.633	24.018	0.232
66 C1-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	24.564	21.564-27.564	+++++	+++++
67 C2-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	24.611	21.611-27.611	+++++	+++++
68 C1-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	25.122	22.122-28.122	+++++	+++++
69 C2-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	26.122	23.122-29.122	+++++	+++++
70 C2-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	26.436	23.436-29.436	+++++	+++++
71 C2-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	26.660	23.660-29.660	+++++	+++++
72 C3-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	27.203	24.203-30.203	+++++	+++++
73 C3-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	27.491	24.491-30.491	+++++	+++++
74 C1-Dibenzo(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	28.000	25.000-31.000	+++++	+++++
75 C2-Dibenzo(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	29.000	26.000-32.000	+++++	+++++
76 C3-Dibenzo(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	29.500	26.500-32.500	+++++	+++++
77 C4-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	30.777	27.777-33.777	+++++	+++++

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20121115.b

ARI Job No.: DFTP Method: tune.b/DF8270.m Instrument: nt11.i Date: 15-NOV-2012

*AS 11/16/12*

Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
1733	11151201.d	DFTPP1115	DFTPP1115	1	NO MANUAL INTEGRATION
1853	11151202.d	IC251115	IC251115	1	Benzo(g,h,i)perylene,
1924	11151203.d	IC011115	IC011115	1	Benzo(j)fluoranthene, Dibenzo(a,h)anthracene-d14,
1954	11151204.d	IC051115	IC051115	1	Dibenzo(a,h)anthracene-d14,
2024	11151205.d	IC111115	IC111115	1	Dibenzo(a,h)anthracene-d14,
2054	11151206.d	IC511115	IC511115	1	Benzo(k)fluoranthene, Benzo(g,h,i)perylene,
2124	11151207.d	IC101115	IC101115	1	Chrysene, Benzo(k)fluoranthene, Perylene,

**Analytical Resources Inc.: Organics Instrument Log**

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 11/15/12 Analysis: SIMPAA Analyst: AB  
 GC Program: SIMPAA 35 Column No: 1433 Column Type: Rxi-17Ei/MS  
 Instrument Tune (.U or .CT.): 120327 EM Voltage: 2400  
 Calibration File: 11161202 Curve Date: 11/15/12 Injection Vol.: 5ul

IS/SS	Ical/Ccal	LCS/ICV
<u>1998-3</u>	<u>2070-1</u>	<u>2074-1</u>

**Document All Maintenance Tasks In StarLIMS**

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20121115.b

Time	Filename	LabID	ClientId	DF	
1 1733	11151201.d	DFTPP1115	DFTPP1115	1	NO ISTDs FOUND
2 1853	11151202.d	IC251115	IC251115	1	5.47 516111  7.74 284255  9.76 410660 14.38 467886 18.14 472330
3 1924	11151203.d	IC011115	IC011115	1	5.47 525648  7.74 281168  9.76 400894 14.37 450177 18.14 421899
4 1954	11151204.d	IC051115	IC051115	1	5.47 502178  7.74 272531  9.76 391251 14.38 452865 18.14 442240
5 2024	11151205.d	IC111115	IC111115	1	5.47 543154  7.74 299409  9.76 422941 14.38 479647 18.14 477073
6 2054	11151206.d	ICS1115	ICS1115	1	5.47 544640  7.74 302706  9.76 431003 14.38 495359 18.14 510632
7 2124	11151207.d	IC101115	IC101115	1	5.47 559831  7.74 320166  9.76 444629 14.38 502333 18.15 522850
8 2154	11151208.d	ICV1115	ICV1115	1	5.47 674396  7.74 364379  9.76 520591 14.38 585586 18.14 582081

*Re-try on 11/16/12*

*AB 11/16/12*

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

Date : 15-NOV-2012 17:33

Client ID: DFTPP1115

Instrument: nt11.i

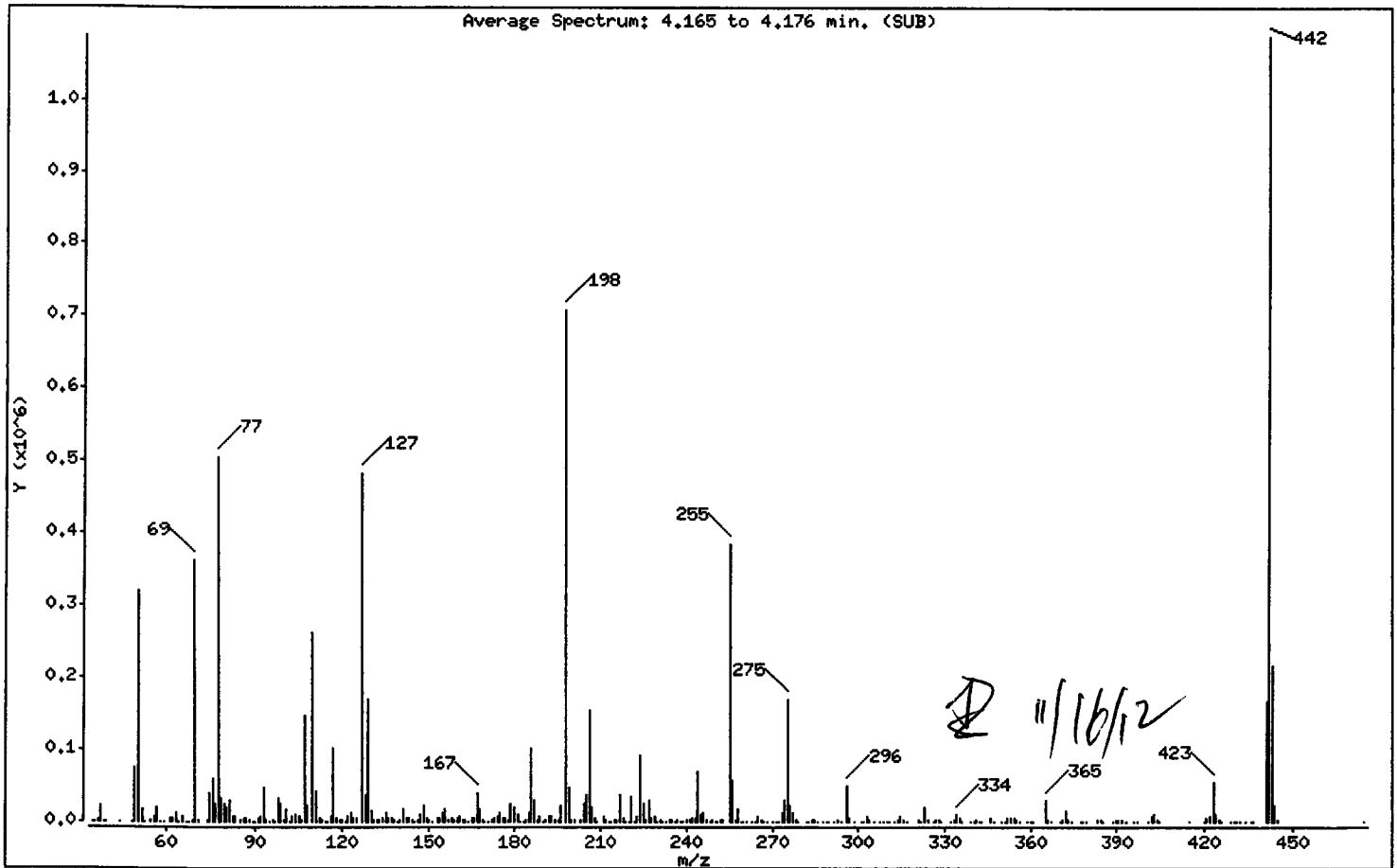
Sample Info: DFTPP1115

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	45.29
68	Less than 2.00% of mass 69	0.50 ( 0.97)
69	Mass 69 relative abundance	51.38
70	Less than 2.00% of mass 69	0.36 ( 0.69)
127	10.00 - 80.00% of mass 198	68.24
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.73
275	10.00 - 60.00% of mass 198	24.19
365	Greater than 1.00% of mass 198	4.30
441	0.01 - 24.00% of mass 442	23.85 ( 15.50)
442	50.00 - 200.00% of mass 198	153.89
443	15.00 - 24.00% of mass 442	30.94 ( 20.11)

Date : 15-NOV-2012 17:33

Client ID: DFTPP1115

Instrument: nt11.i

Sample Info: DFTPP1115

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0,25

Data File: 11151201.d

Spectrum: Average Spectrum: 4.165 to 4.176 min. (SUB)

Location of Maximum: 442.00

Number of points: 329

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	11	132.00	1990	219.00	310	315.00	6317
37.00	1240	133.00	1756	220.00	409	316.00	2688
38.00	1997	134.00	4047	221.00	35048	317.00	481
39.00	22256	135.00	12609	222.00	180	321.00	3066
40.00	839	136.00	5881	223.00	7018	322.00	209
41.00	590	137.00	5477	224.00	92888	323.00	19768
45.00	259	138.00	2380	225.00	24792	324.00	3305
49.00	1180	139.00	776	226.00	2532	326.00	561
50.00	74248	140.00	2705	227.00	29368	327.00	3021
51.00	320576	141.00	18528	228.00	5630	328.00	1794
52.00	16488	142.00	6047	229.00	8355	329.00	621
53.00	609	143.00	4754	230.00	585	332.00	876
55.00	1660	144.00	1270	231.00	2780	333.00	3146
56.00	8473	145.00	1151	232.00	471	334.00	10218
57.00	21176	146.00	3526	233.00	396	335.00	3904
58.00	1097	147.00	9078	234.00	1412	336.00	499
59.00	181	148.00	22968	235.00	2960	339.00	478
61.00	4350	149.00	4829	236.00	1232	340.00	168
62.00	4497	150.00	2172	237.00	2389	341.00	1407
63.00	13413	151.00	1247	238.00	595	342.00	1072
64.00	1001	153.00	4276	239.00	888	343.00	182
65.00	7457	154.00	4519	240.00	1298	346.00	3866
66.00	296	155.00	11477	241.00	2134	347.00	381
67.00	529	156.00	17280	242.00	5560	350.00	424
68.00	3529	157.00	2817	243.00	5355	351.00	649
69.00	363712	158.00	4328	244.00	71264	352.00	4461
70.00	2513	159.00	2693	245.00	9302	353.00	5484
73.00	2059	160.00	5261	246.00	12169	354.00	6204
74.00	39920	161.00	6508	247.00	2883	355.00	2377
75.00	61272	162.00	3100	248.00	470	356.00	170
76.00	24584	163.00	1333	249.00	3204	359.00	241
77.00	505728	164.00	69	250.00	993	360.00	205
78.00	33720	165.00	6210	251.00	1020	361.00	222
79.00	25288	166.00	5183	252.00	1726	365.00	30416
80.00	20192	167.00	40064	253.00	1787	366.00	3494



Date : 15-NOV-2012 17:33

Client ID: DFTPP1115

Instrument: nt11.i

Sample Info: DFTPP1115

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: 11151201.d

Spectrum: Average Spectrum: 4.165 to 4.176 min. (SUB)

Location of Maximum: 442.00

Number of points: 329

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	30984	168.00	16760	255.00	384960	367.00	389
82.00	8732	169.00	2275	256.00	56360	370.00	835
83.00	7892	170.00	941	257.00	3542	371.00	2105
85.00	2961	171.00	1035	258.00	17464	372.00	14192
86.00	5742	172.00	2834	259.00	1184	373.00	2883
87.00	3892	173.00	3759	260.00	578	374.00	835
88.00	1275	174.00	7655	261.00	1097	377.00	310
89.00	777	175.00	13136	263.00	574	378.00	261
90.00	261	176.00	4399	264.00	1143	379.00	179
91.00	5911	177.00	5275	265.00	8588	383.00	3468
92.00	7343	178.00	1539	266.00	1857	384.00	2092
93.00	47312	179.00	25912	267.00	465	385.00	280
94.00	3135	180.00	20176	268.00	277	389.00	183
95.00	1147	181.00	9450	270.00	715	390.00	1974
96.00	2971	182.00	1145	271.00	155	391.00	1660
97.00	1251	183.00	865	272.00	1112	392.00	1628
98.00	31880	184.00	2772	273.00	12144	393.00	177
99.00	25264	185.00	11657	274.00	31224	396.00	167
100.00	2832	186.00	102880	275.00	171200	397.00	621
101.00	17688	187.00	29536	276.00	23744	401.00	545
102.00	217	188.00	2720	277.00	13539	402.00	6526
103.00	6528	189.00	6670	278.00	2452	403.00	10651
104.00	10763	190.00	986	279.00	524	404.00	3360
105.00	8256	191.00	2354	282.00	808	405.00	1072
106.00	2649	192.00	6841	283.00	742	415.00	1059
107.00	146944	193.00	8375	284.00	1422	420.00	216
108.00	22632	194.00	1258	285.00	3369	421.00	6077
110.00	262528	195.00	1433	286.00	683	422.00	8458
111.00	41520	196.00	21328	288.00	378	423.00	54712
112.00	5546	198.00	707840	289.00	614	424.00	10691
113.00	2227	199.00	47616	290.00	1101	425.00	1499
114.00	183	200.00	3531	292.00	1207	426.00	308
115.00	542	201.00	3350	293.00	3236	429.00	271
116.00	7310	203.00	3698	294.00	860	430.00	341
117.00	103504	204.00	25752	296.00	49280	431.00	242

Date : 15-NOV-2012 17:33

Client ID: DFTPP1115

Instrument: nt11.i

Sample Info: DFTPP1115

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: 11151201.d  
Spectrum: Average Spectrum: 4.165 to 4.176 min. (SUB)  
Location of Maximum: 442.00  
Number of points: 329

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	5993	205.00	38528	297.00	5513	432.00	190
119.00	1442	206.00	154816	299.00	363	434.00	442
120.00	1865	207.00	19720	301.00	969	436.00	272
121.00	765	208.00	4796	302.00	1174	437.00	183
122.00	7624	209.00	1103	303.00	6621	441.00	168768
123.00	11403	211.00	6760	304.00	2376	442.00	1089024
124.00	5318	212.00	1720	306.00	188	443.00	219008
125.00	5238	213.00	378	308.00	1229	444.00	21824
127.00	483008	214.00	682	309.00	1020	445.00	1699
128.00	36568	215.00	1892	310.00	706	474.00	221
129.00	169856	216.00	2927	311.00	250		
130.00	16082	217.00	36696	313.00	144		
131.00	2705	218.00	4083	314.00	2515		

Data File: /chem3/nt11.i/20121115.b/tune.b/11151201.d

Page 1

Date : 15-NOV-2012 17:33

Client ID: DFTPP1115

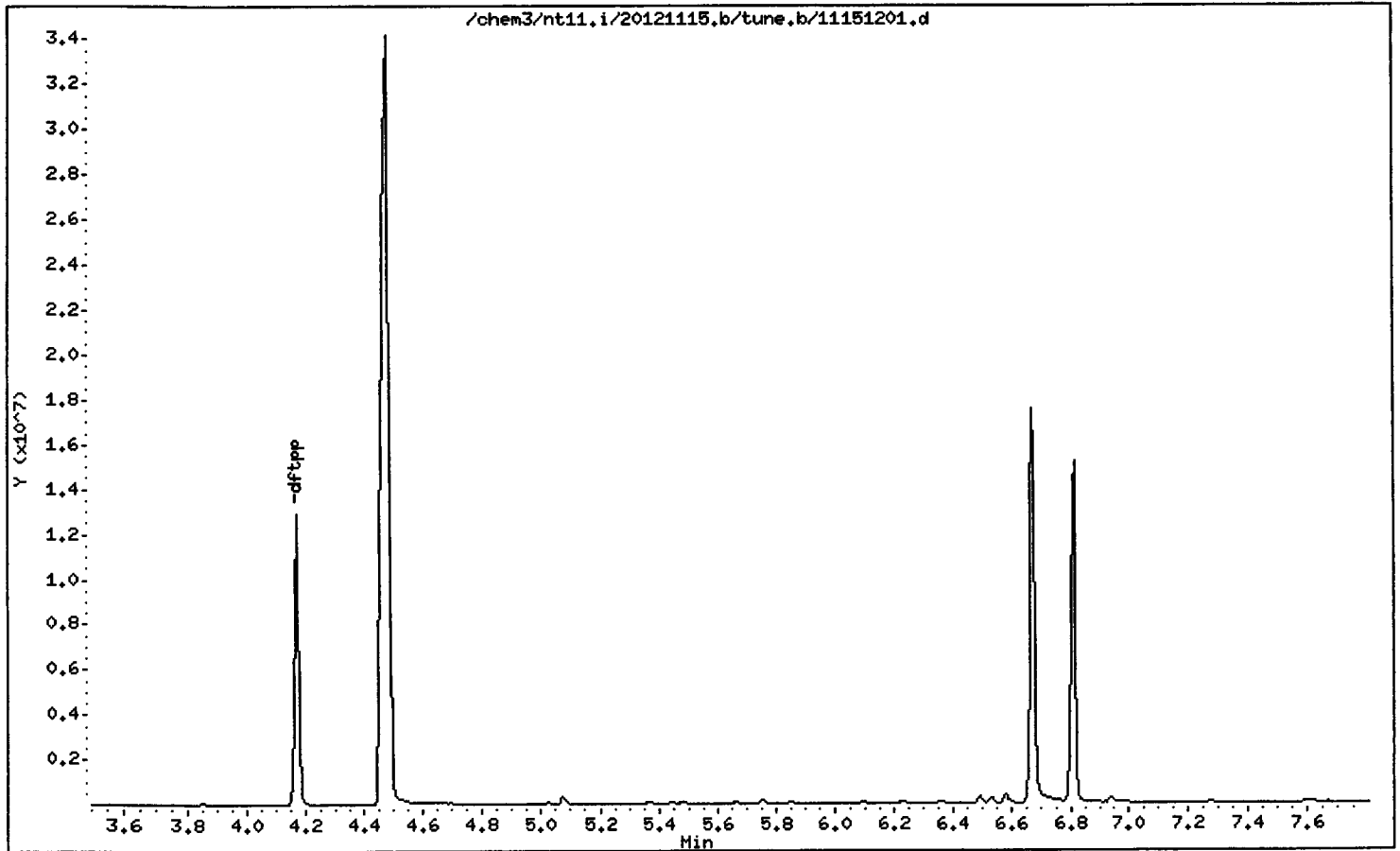
Instrument: nt11.i

Sample Info: DFTPP1115

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0,25



UR58 : 00915

Analytical Resources Inc.  
 ABN by sw846 8270C  
 DDT Breakdown Report

Data file: /chem3/nt11.i/20121115.b/ddt.b/11151201.d ARI ID:  
 Method: /chem3/nt11.i/20121115.b/ddt.b/sw846ddt.m Misc:  
 Analysis Date: 15-NOV-2012 17:33 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.486	7530186
Benzidine	6.671	7578439
4,4'-DDE	6.094	9809
4,4'-DDD	6.580	65764
4,4'-DDT	6.810	2868447

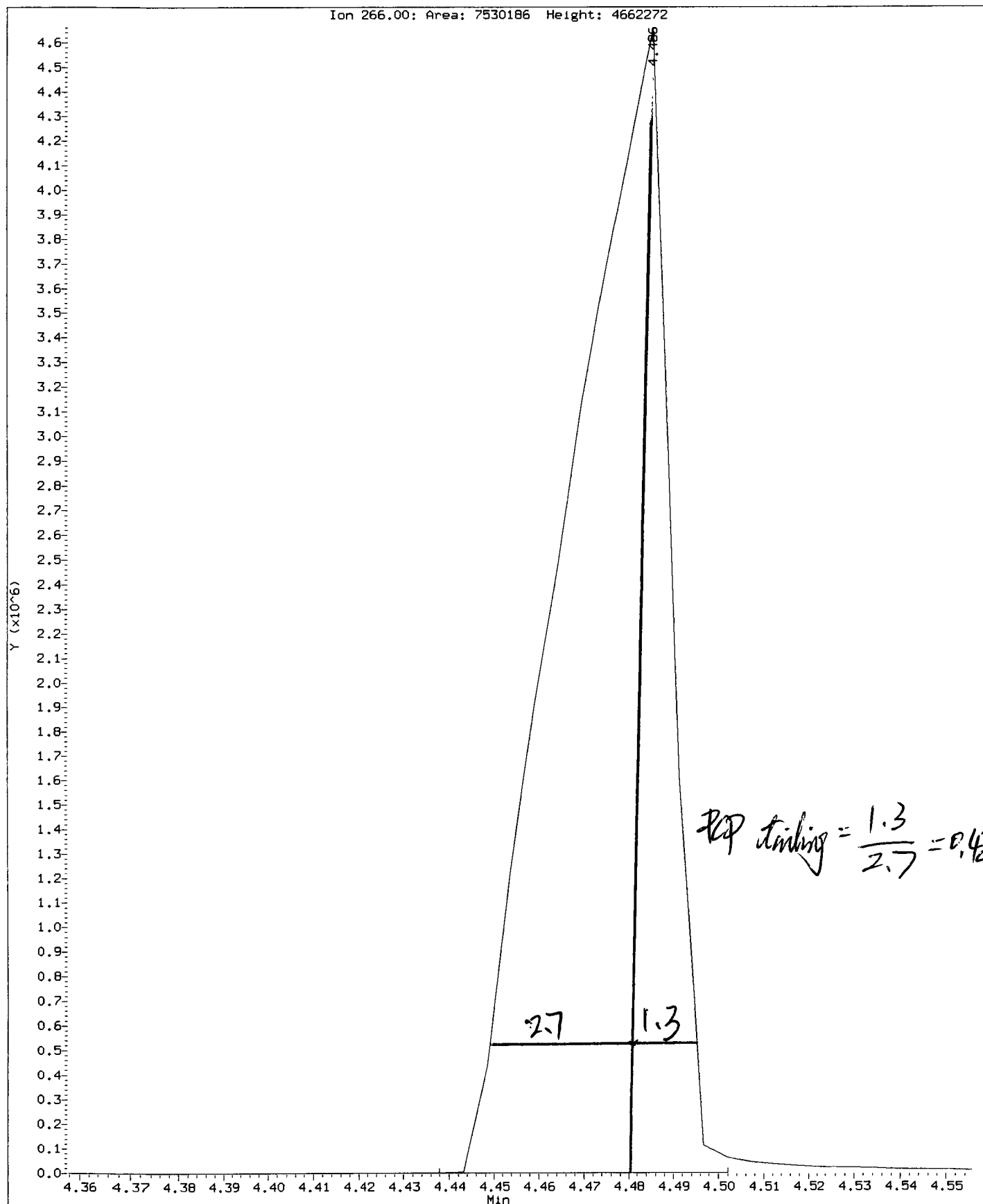
$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(9809 + 65764) * 100}{(9809 + 65764 + 2868447)}$$

$$\text{DDT Percent Breakdown} = 2.6\%$$

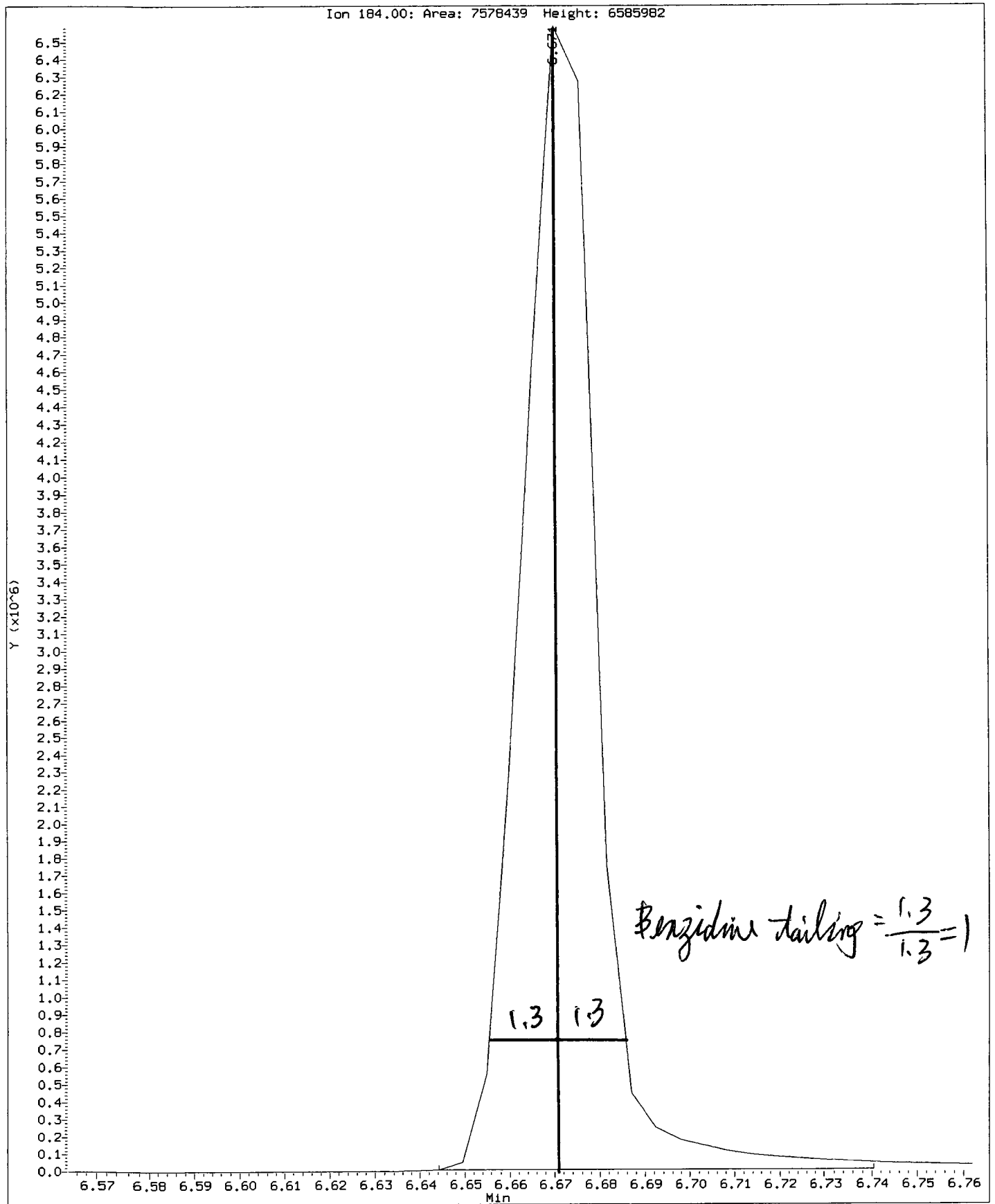
*Handwritten notes:*  
 OK ✗ 11/16/12

Data File: /chem3/nt11.1/20121115.b/ddt.b/11151201.d  
Injection Date: 15-NOV-2012 17:33  
Instrument: nt11.1  
Client Sample ID: DDT1115  
Compound: Pentachlorophenol  
CAS Number: 87-86-5



Data File: /chem3/nt11.1/20121115.b/ddt.b/11151201.d  
Injection Date: 15-NOV-2012 17:33  
Instrument: nt11.1  
Client Sample ID: DDT1115

Compound: Benzidine  
CAS Number:



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121115.b/11151203.d  
 Lab Smp Id: IC011115 Client Smp ID: IC011115  
 Inj Date : 15-NOV-2012 19:24  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : IC011115,  
 Misc Info : 12-  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Meth Date : 16-Nov-2012 09:06 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 19:24 Cal File: 11151203.d  
 Als bottle: 3 Calibration Sample, Level: 1  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: NEWSIMPNAICL.sub  
 Target Version: 3.50

*AB* 11/16/12

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
* 6 Naphthalene-d8	136	5.470	5.470	(1.000)	525648	2.00000	
7 Naphthalene	128	5.501	5.498	(1.006)	32725	0.10000	0.1094
\$ 12 2-Methylnaphthalene-d10	152	6.205	6.205	(1.134)	20550	0.10000	0.1074
14 2-Methylnaphthalene	141	6.252	6.252	(1.143)	17132	0.10000	0.1045
15 1-methylnaphthalene	141	6.445	6.445	(1.178)	17543	0.10000	0.1083
19 Biphenyl	154	6.912	6.912	(0.893)	23628	0.10000	0.1087
20 2,6-Dimethylnaphthalene	156	6.956	6.953	(0.898)	16580	0.10000	0.1071
21 Acenaphthylene	152	7.631	7.631	(0.986)	25027	0.10000	0.09993
* 22 Acenaphthene-d10	164	7.742	7.742	(1.000)	281168	2.00000	
23 Acenaphthene	153	7.789	7.792	(1.006)	18487	0.10000	0.1104
11 Dibenzofuran	168	7.941	7.941	(1.026)	26491	0.10000	0.1087
24 1,6,7-Trimethylnaphthalene	170	8.013	8.016	(1.035)	16137	0.10000	0.1081
25 Fluorene	166	8.414	8.414	(1.087)	18569	0.10000	0.1026
27 Dibenzothiophene	184	9.635	9.635	(0.987)	24700	0.10000	0.1080
* 28 Phenanthrene-d10	188	9.761	9.761	(1.000)	400894	2.00000	
30 Phenanthrene	178	9.796	9.796	(1.004)	28549	0.10000	0.1102
31 Anthracene	178	9.834	9.834	(1.007)	24684	0.10000	0.1027
26 Carbazole	167	10.345	10.345	(1.060)	26313	0.10000	0.1053
33 1-Methylphenanthrene	192	10.544	10.544	(1.080)	18820	0.10000	0.1041
36 Fluoranthene	202	11.453	11.453	(1.173)	26293	0.10000	0.1043
\$ 253 Fluoranthene-d10	212	11.418	11.418	(1.170)	24516	0.10000	0.1032
39 Pyrene	202	11.920	11.920	(0.829)	27033	0.10000	0.1044
46 Benzo(a) anthracene	228	14.255	14.255	(0.992)	25596	0.10000	0.1077
* 47 Chrysene-d12	240	14.375	14.378	(1.000)	450177	2.00000	
48 Chrysene	228	14.447	14.444	(1.005)	25959	0.10000	0.1104
51 Benzo(b) fluoranthene	252	16.890	16.893	(0.931)	20540	0.10000	0.1031
52 Benzo(k) fluoranthene	252	16.947	16.950	(0.934)	22727	0.10000	0.1025

Compounds	QUANT SIG			REL RT	RESPONSE	AMOUNTS	
	MASS	RT	EXP RT			CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	====	==	=====	=====	=====	=====	=====
251 Benzo(j) fluoranthene	252	17.022	17.022	(0.939)	24068	0.10000	0.1043 (M)
55 Benzo(e) pyrene	252	17.786	17.780	(0.981)	22235	0.10000	0.1053
54 Benzo(a) pyrene	252	17.900	17.906	(0.987)	19031	0.10000	0.09688
* 56 Perylene-d12	264	18.136	18.139	(1.000)	421899	2.00000	
57 Perylene	252	18.206	18.209	(1.004)	23442	0.10000	0.1077
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.364	20.367	(1.123)	10934	0.10000	0.08388 (M)
63 Indeno(1,2,3-cd)pyrene	276	20.453	20.459	(1.128)	20982	0.10000	0.08966
62 Dibenzo(a,h)anthracene	278	20.453	20.459	(1.128)	17223	0.10000	0.09023
61 Benzo(g,h,i)perylene	276	21.339	21.333	(1.177)	19038	0.10000	0.09638

QC Flag Legend

M - Compound response manually integrated.



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt11.i  
Lab File ID: 11151203.d  
Lab Smp Id: IC011115  
Analysis Type: SV  
Quant Type: ISTD  
Operator: JZ  
Method File: /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
Misc Info: 12-

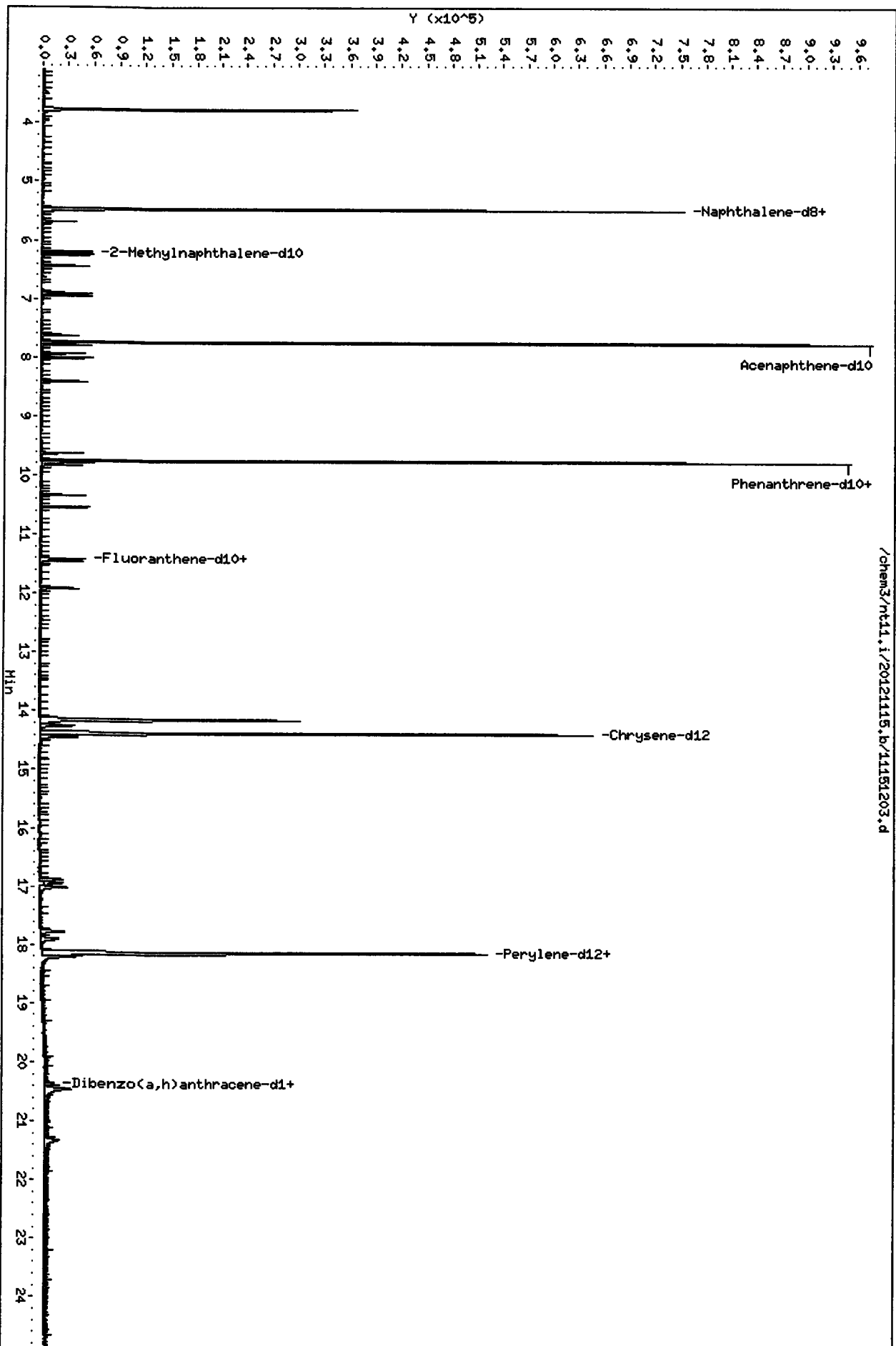
Calibration Date: 15-NOV-2012  
Calibration Time: 18:53  
Client Smp ID: IC011115  
Level:  
Sample Type:

Test Mode:  
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	525648	1.85
22 Acenaphthene-d10	284255	142128	568510	281168	-1.09
28 Phenanthrene-d10	410660	205330	821320	400894	-2.38
47 Chrysene-d12	467886	233943	935772	450177	-3.78
56 Perylene-d12	472330	236165	944660	421899	-10.68

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.47	4.97	5.97	5.47	-0.06
22 Acenaphthene-d10	7.74	7.24	8.24	7.74	-0.04
28 Phenanthrene-d10	9.76	9.26	10.26	9.76	0.00
47 Chrysene-d12	14.38	13.88	14.88	14.37	-0.04
56 Perylene-d12	18.14	17.64	18.64	18.14	-0.03

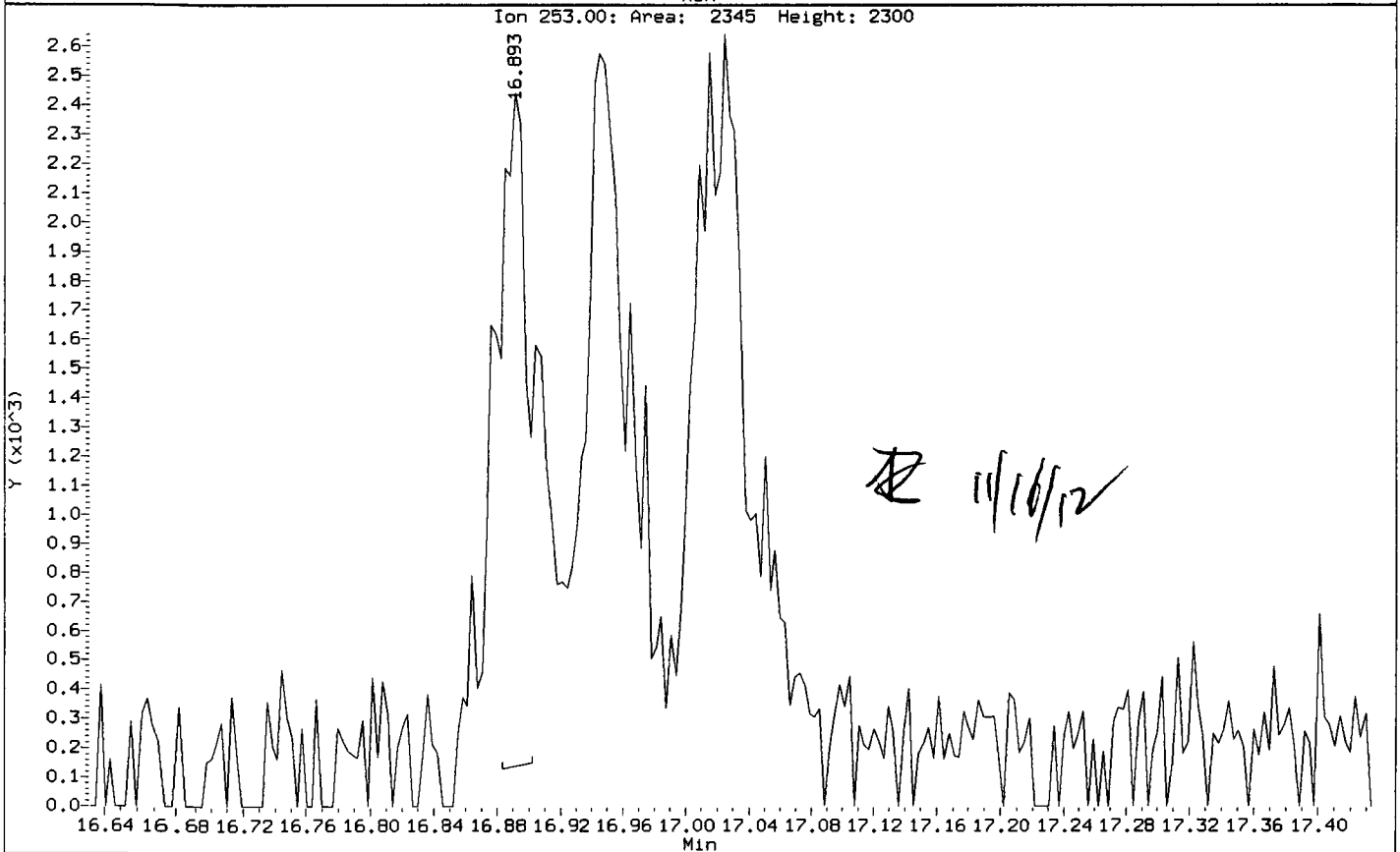
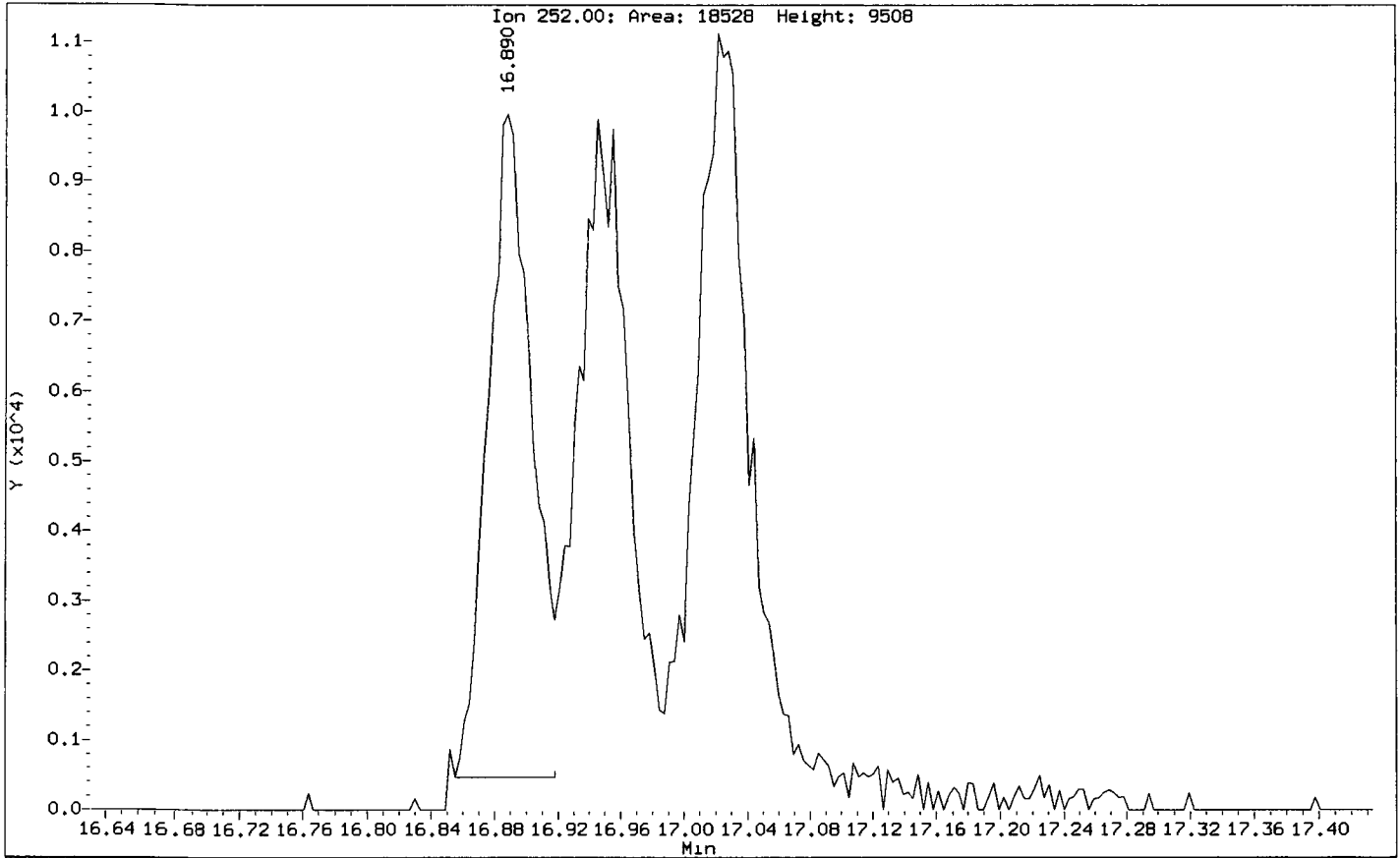
AREA UPPER LIMIT = +100% of internal standard area.  
AREA LOWER LIMIT = - 50% of internal standard area.  
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.



11151203

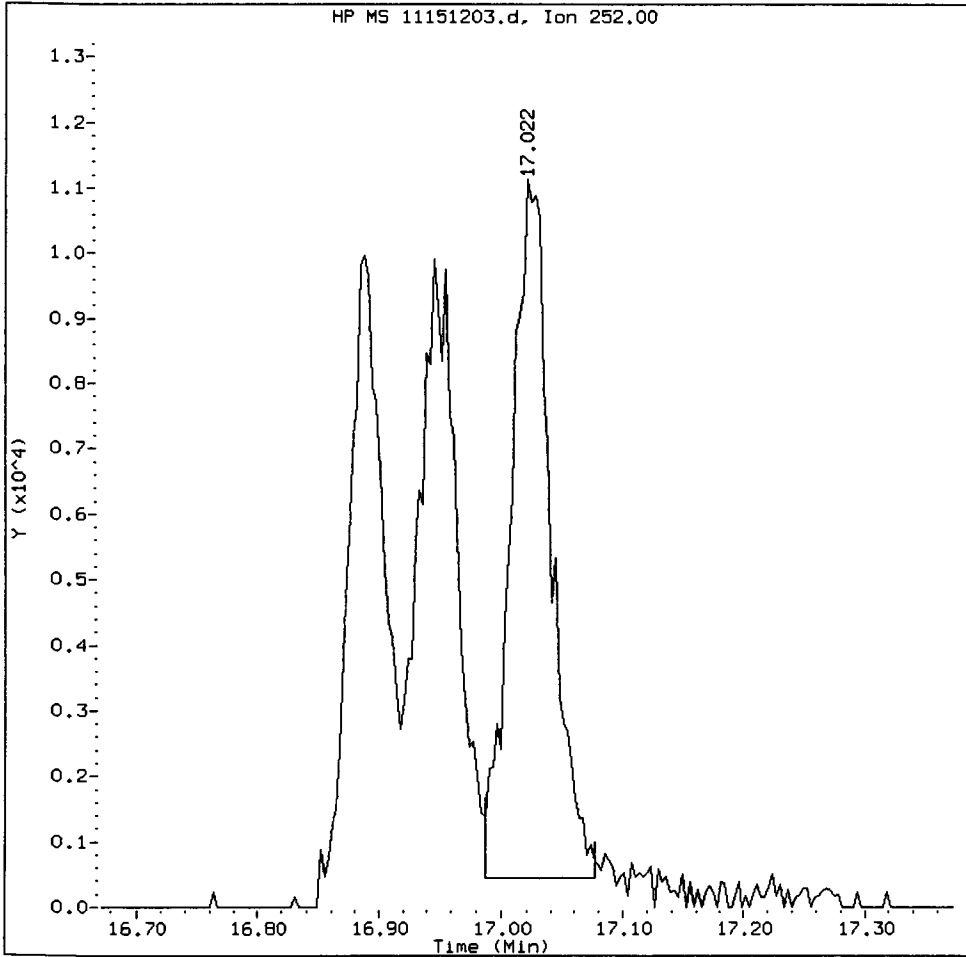
Data File: /chem3/nt11.1/20121115.b/11151203.d  
Injection Date: 15-NOV-2012 19:24  
Instrument: nt11.1  
Client Sample ID: ICO11115

Compound: Benzo(j)fluoranthene  
CAS Number:



IC011115, /chem3/nt11.i/20121115.b/11151203.d

Benzo(j)fluoranthene Amount: 0.10 Area: 24068



MANUAL INTEGRATION for Benzo(j)fluoranthene

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

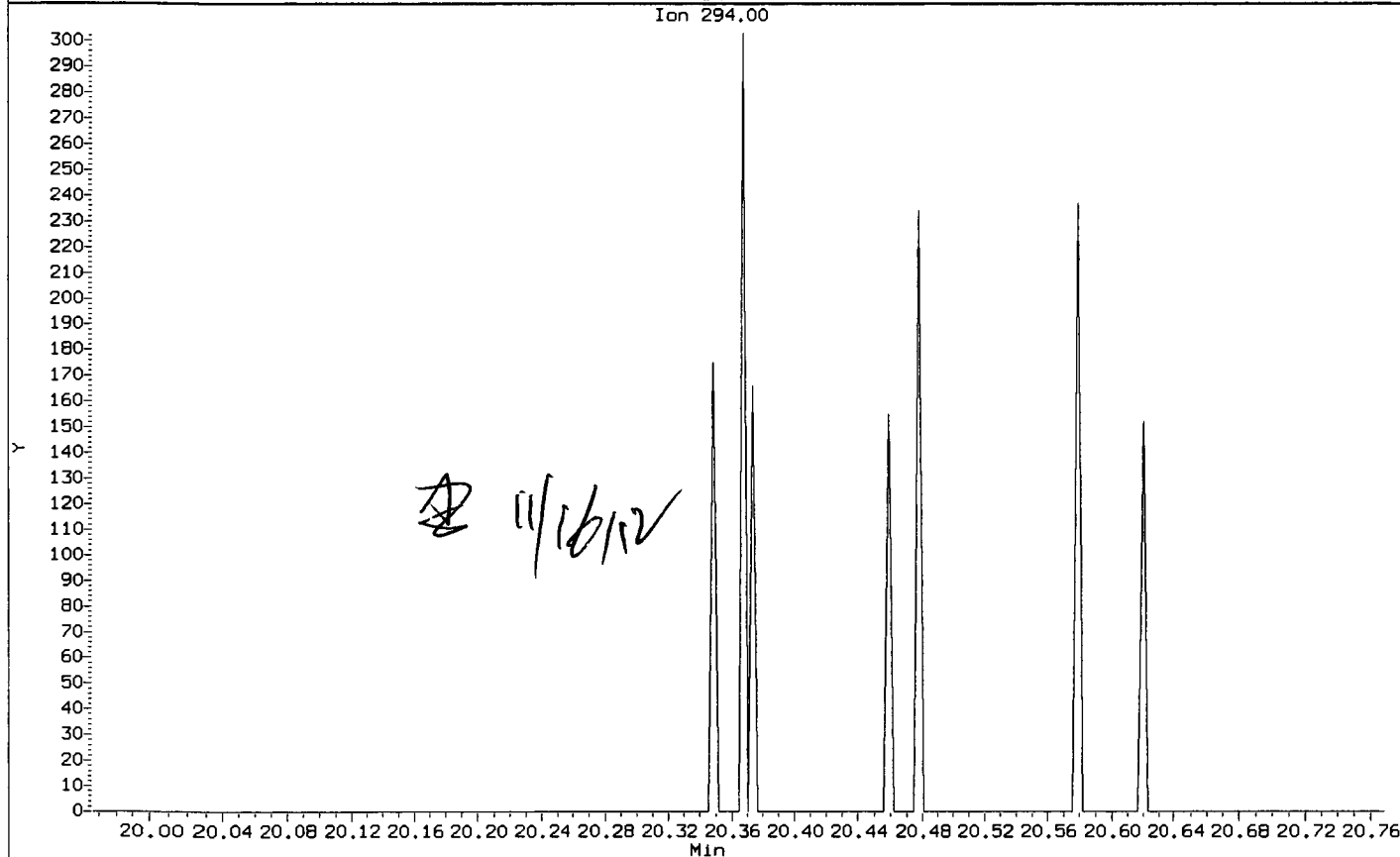
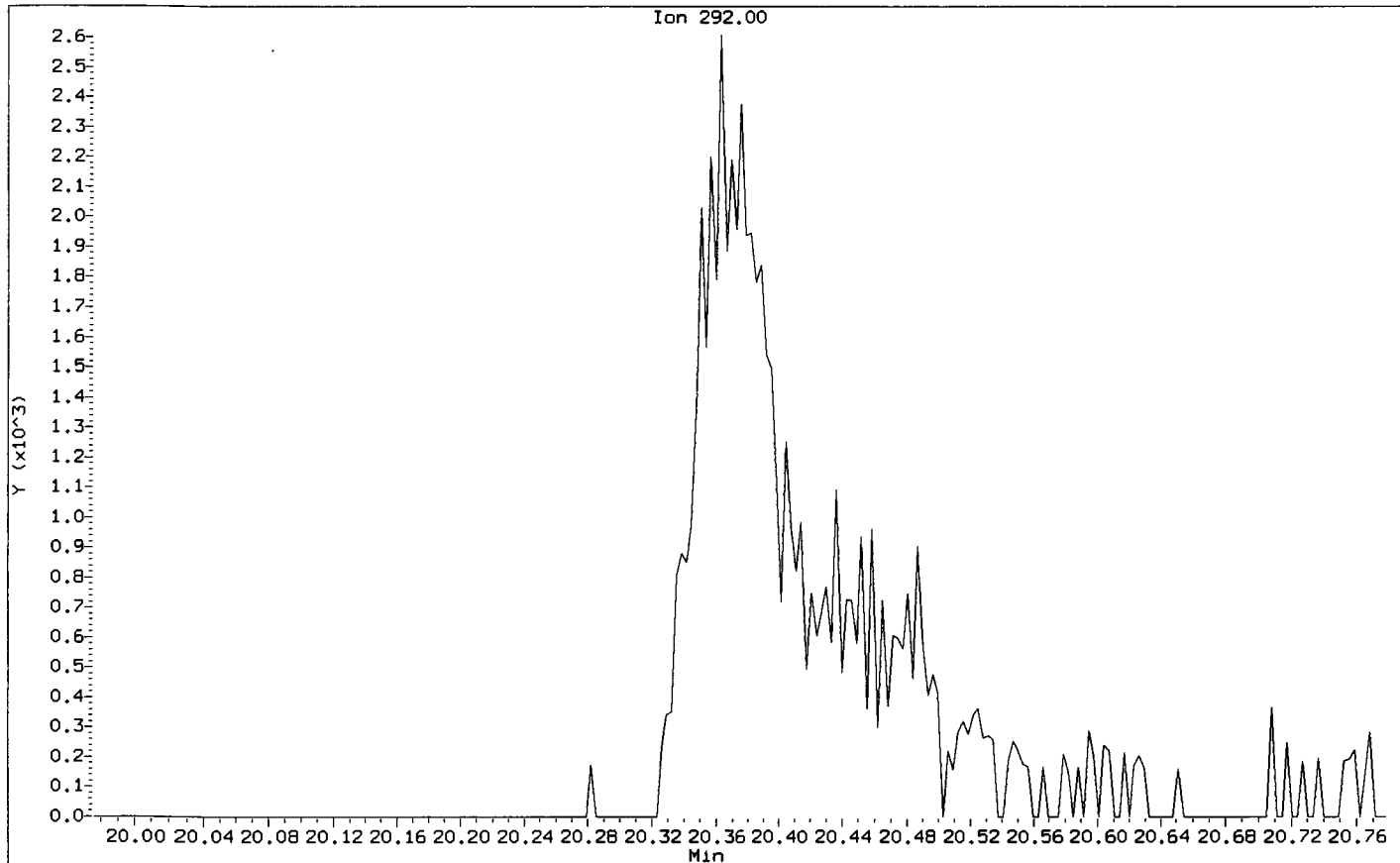
5. Other \_\_\_\_\_

Analyst:    *A*   

Date:    *1/16/12*

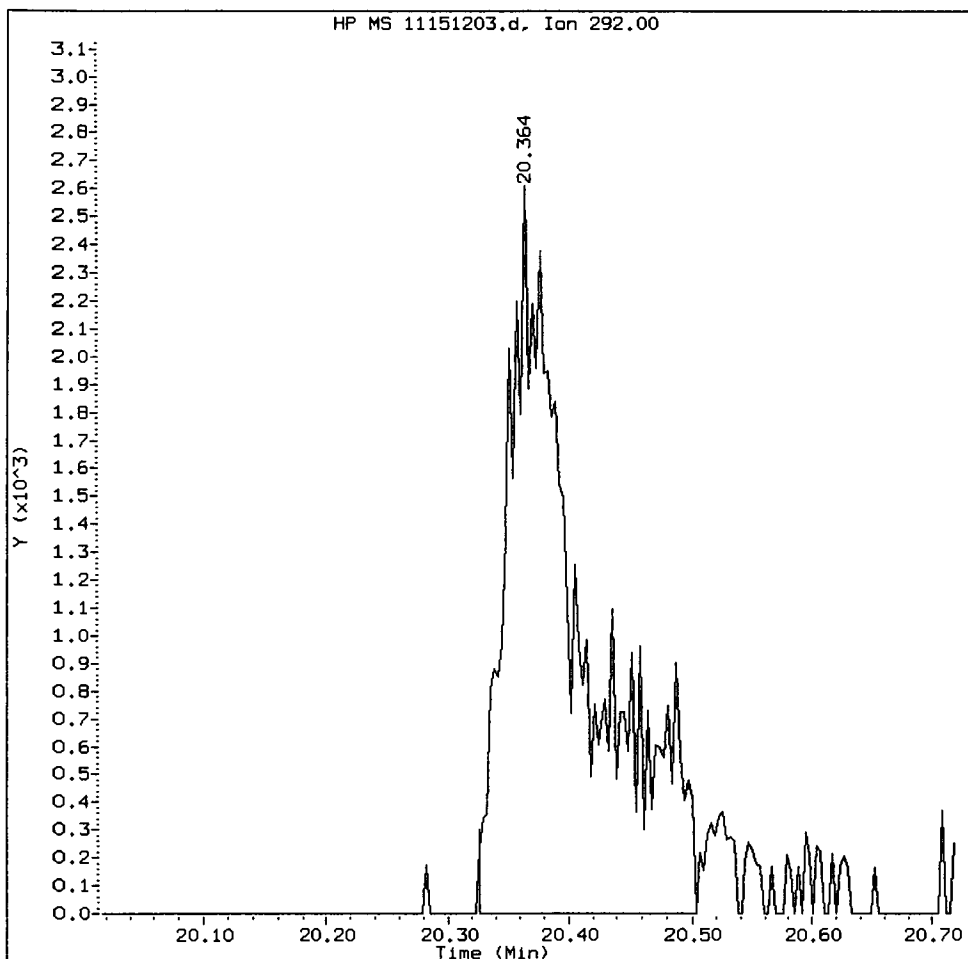
Data File: /chem3/nt11.1/20121115.b/11151203.d  
Injection Date: 15-NOV-2012 19:24  
Instrument: nt11.1  
Client Sample ID: IC011115

Compound: Dibenzo(a,h)anthracene-d14  
CAS Number:



IC011115, /chem3/nt11.i/20121115.b/11151203.d

Dibenzo(a,h)anthracene-d14 Amount: 0.08 Area: 10934



MANUAL INTEGRATION for Dibenzo(a,h)anthracene-d14

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

5. Other \_\_\_\_\_

Analyst:                     

Date:

CO-ELUTION SUMMARY FOR FILE - 11151203.d

Lab ID: IC011115, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 15-NOV-2

RT	CO-ELUTION COMPOUNDS
20.453	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.453	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

*checked ok*

*\$ 11/16/12*

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121115.b/11151204.d  
 Lab Smp Id: IC051115 Client Smp ID: IC051115  
 Inj Date : 15-NOV-2012 19:54  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : IC051115,  
 Misc Info : 12-  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Meth Date : 16-Nov-2012 09:06 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 19:54 Cal File: 11151204.d  
 Als bottle: 4 Calibration Sample, Level: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: NEWSIMPNAICL.sub  
 Target Version: 3.50

*JZ* 11/16/12  
 AMOUNTS

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
* 6 Naphthalene-d8	====	136	5.470	5.470	(1.000)	502178	2.00000	=====
7 Naphthalene		128	5.498	5.498	(1.005)	146246	0.50000	0.5449
\$ 12 2-Methylnaphthalene-d10		152	6.205	6.205	(1.134)	93847	0.50000	0.5470
14 2-Methylnaphthalene		141	6.252	6.252	(1.143)	82360	0.50000	0.5447
15 1-methylnaphthalene		141	6.445	6.445	(1.178)	77781	0.50000	0.5370
19 Biphenyl		154	6.912	6.912	(0.893)	109708	0.50000	0.5553
20 2,6-Dimethylnaphthalene		156	6.953	6.953	(0.898)	77230	0.50000	0.5487
21 Acenaphthylene		152	7.631	7.631	(0.986)	124528	0.50000	0.5258
* 22 Acenaphthene-d10		164	7.742	7.742	(1.000)	272531	2.00000	
23 Acenaphthene		153	7.789	7.792	(1.006)	82681	0.50000	0.5490
11 Dibenzofuran		168	7.941	7.941	(1.026)	122886	0.50000	0.5570
24 1,6,7-Trimethylnaphthalene		170	8.016	8.016	(1.035)	76864	0.50000	0.5629
25 Fluorene		166	8.417	8.414	(1.087)	93768	0.50000	0.5530
27 Dibenzothiophene		184	9.632	9.635	(0.987)	117165	0.50000	0.5524
* 28 Phenanthrene-d10		188	9.761	9.761	(1.000)	391251	2.00000	
30 Phenanthrene		178	9.796	9.796	(1.004)	129116	0.50000	0.5463
31 Anthracene		178	9.834	9.834	(1.007)	122291	0.50000	0.5390
26 Carbazole		167	10.345	10.345	(1.060)	126266	0.50000	0.5401
33 1-Methylphenanthrene		192	10.544	10.544	(1.080)	93279	0.50000	0.5489
36 Fluoranthene		202	11.450	11.453	(1.173)	129566	0.50000	0.5472
\$ 253 Fluoranthene-d10		212	11.418	11.418	(1.170)	119356	0.50000	0.5344
39 Pyrene		202	11.920	11.920	(0.829)	132676	0.50000	0.5316
46 Benzo(a) anthracene		228	14.255	14.255	(0.991)	119918	0.50000	0.5270
* 47 Chrysene-d12		240	14.378	14.378	(1.000)	452865	2.00000	
48 Chrysene		228	14.444	14.444	(1.005)	118406	0.50000	0.5361
51 Benzo(b) fluoranthene		252	16.887	16.893	(0.931)	105243	0.50000	0.5142
52 Benzo(k) fluoranthene		252	16.947	16.950	(0.934)	114001	0.50000	0.5129



Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	====	==	=====	=====	=====	=====	=====
251 Benzo(j) fluoranthene	252	17.022	17.022	(0.939)	122241	0.50000	0.5212
55 Benzo(e) pyrene	252	17.780	17.780	(0.980)	115621	0.50000	0.5443
54 Benzo(a) pyrene	252	17.906	17.906	(0.987)	111047	0.50000	0.5342
* 56 Perylene-d12	264	18.136	18.139	(1.000)	442240	2.00000	
57 Perylene	252	18.206	18.209	(1.004)	114699	0.50000	0.5320
§ 60 Dibenzo(a,h)anthracene-d14	292	20.364	20.367	(1.123)	69427	0.50000	0.4832 (M)
63 Indeno(1,2,3-cd)pyrene	276	20.456	20.459	(1.128)	126692	0.50000	0.5027
62 Dibenzo(a,h)anthracene	278	20.459	20.459	(1.128)	102864	0.50000	0.5011
61 Benzo(g,h,i)perylene	276	21.330	21.333	(1.176)	106268	0.50000	0.4956

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11151204.d  
 Lab Smp Id: IC051115  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Misc Info: 12-

Calibration Date: 15-NOV-2012  
 Calibration Time: 18:53  
 Client Smp ID: IC051115  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	502178	-2.70
22 Acenaphthene-d10	284255	142128	568510	272531	-4.12
28 Phenanthrene-d10	410660	205330	821320	391251	-4.73
47 Chrysene-d12	467886	233943	935772	452865	-3.21
56 Perylene-d12	472330	236165	944660	442240	-6.37

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.47	4.97	5.97	5.47	-0.06
22 Acenaphthene-d10	7.74	7.24	8.24	7.74	-0.04
28 Phenanthrene-d10	9.76	9.26	10.26	9.76	0.00
47 Chrysene-d12	14.38	13.88	14.88	14.38	-0.02
56 Perylene-d12	18.14	17.64	18.64	18.14	-0.03

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

Date: 15-NOV-2012 19:54

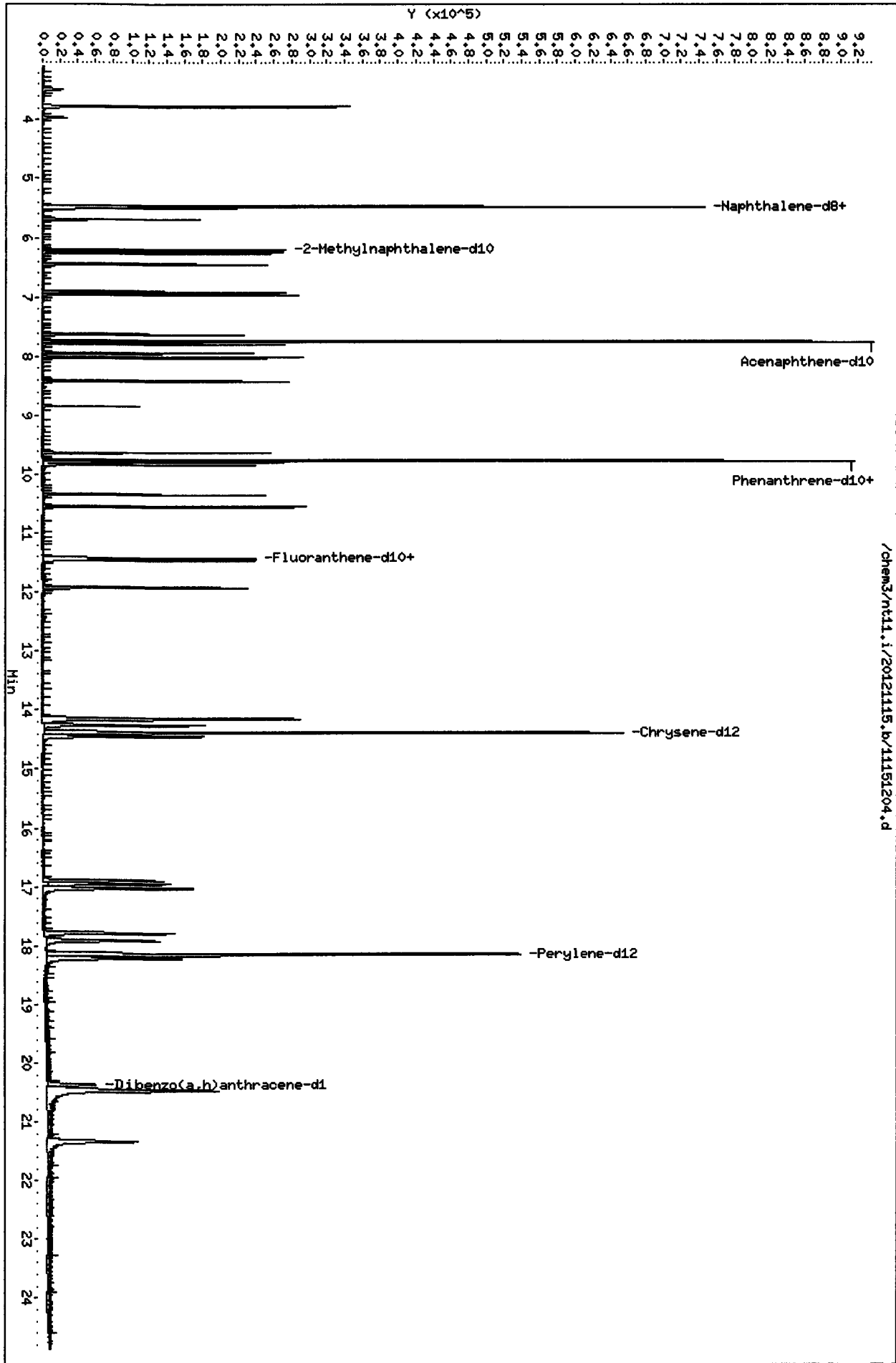
Client ID: IC051115

Instrument: nt11.i

Sample Info: IC051115,

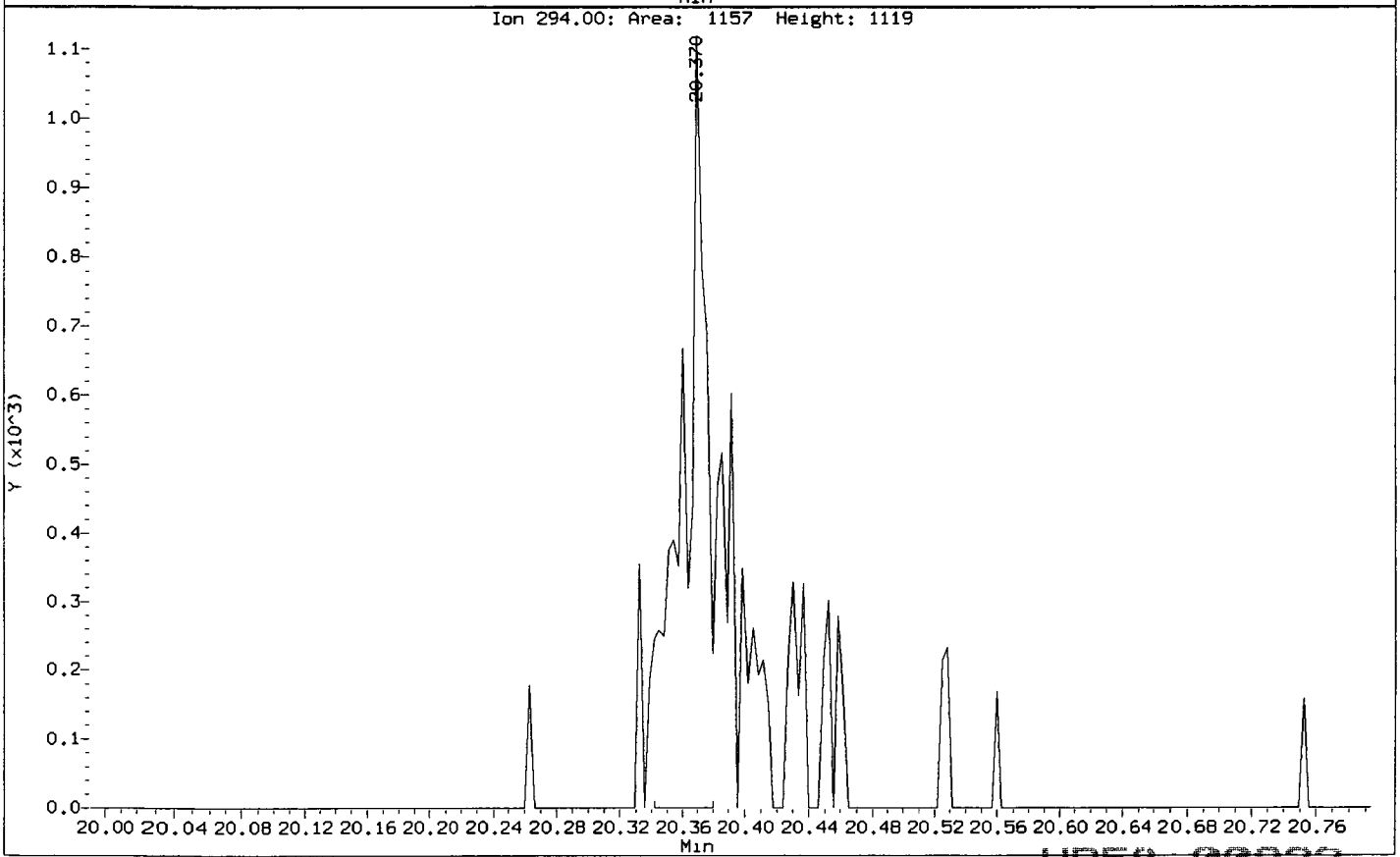
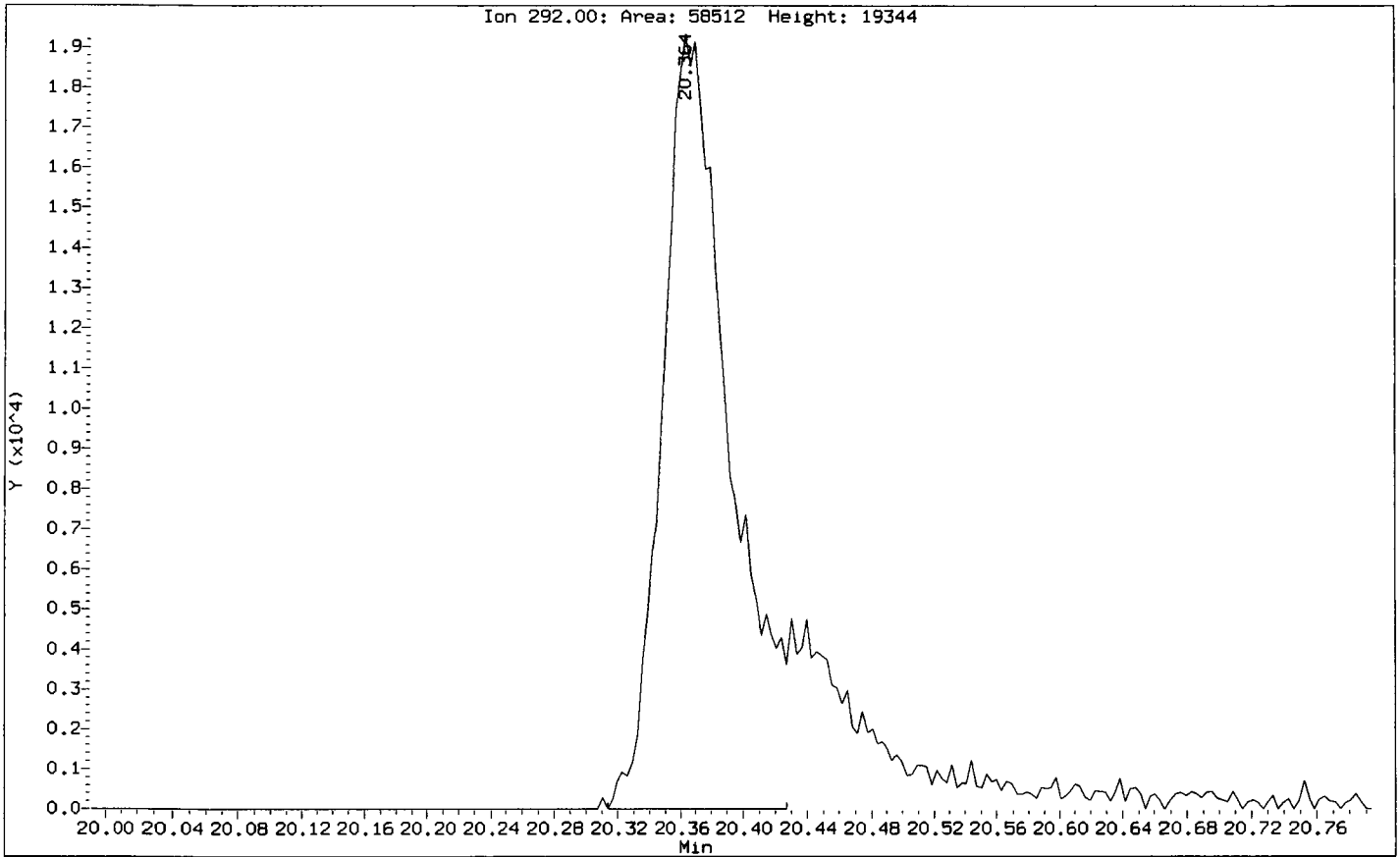
Column phase: ZB-5msi

Operator: JZ  
Column diameter: 0.25



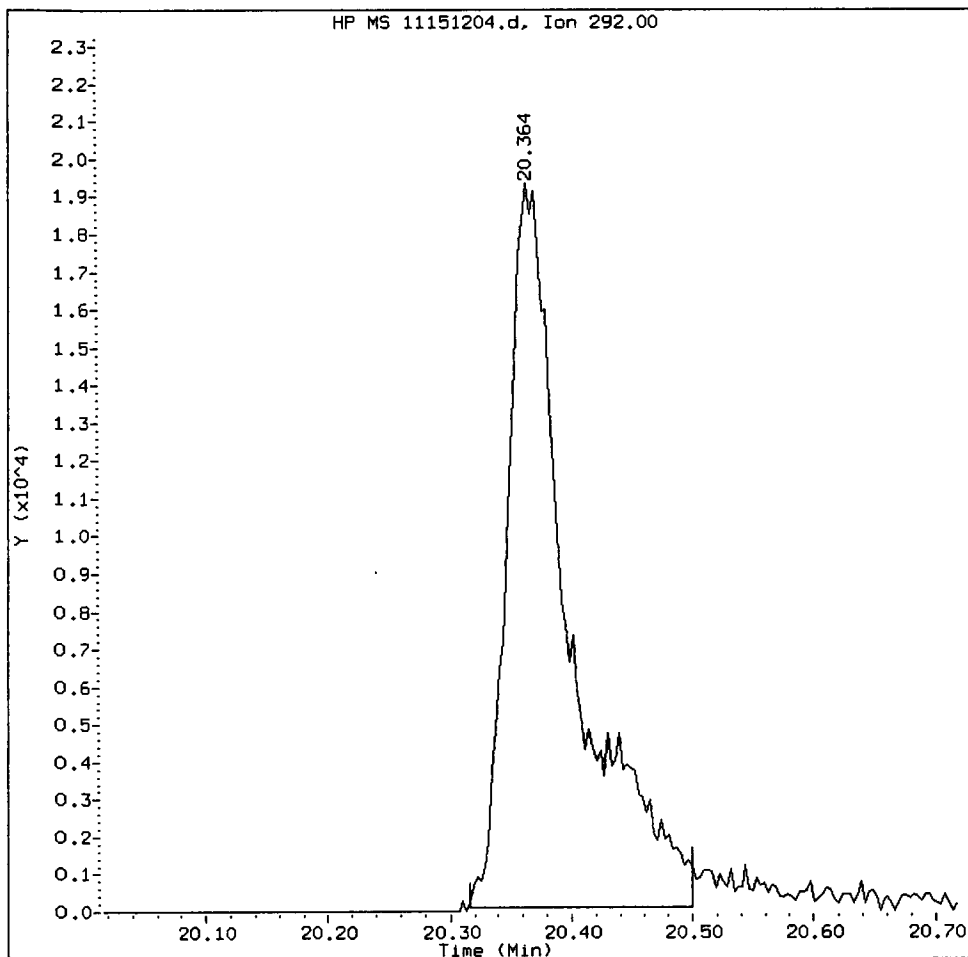
Data File: /chem3/nt11.1/20121115.b/11151204.d  
Injection Date: 15-NOV-2012 19:54  
Instrument: nt11.1  
Client Sample ID: IC051115

Compound: Dibenzo(a,h)anthracene-d14  
CAS Number:



IC051115, /chem3/nt11.i/20121115.b/11151204.d

Dibenzo(a,h)anthracene-d14 Amount: 0.48 Area: 69427



MANUAL INTEGRATION for Dibenzo(a,h)anthracene-d14

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

5. Other \_\_\_\_\_

Analyst: AB

Date: 11/16/12

CO-ELUTION SUMMARY FOR FILE - 11151204.d

Lab ID: IC051115, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 15-NOV-2

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121115.b/11151205.d  
 Lab Smp Id: IC11115 Client Smp ID: IC11115  
 Inj Date : 15-NOV-2012 20:24  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : IC11115,  
 Misc Info : 12-  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Meth Date : 16-Nov-2012 09:06 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 5 Calibration Sample, Level: 3  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: NEWSIMPNAICL.sub  
 Target Version: 3.50

*[Handwritten signature]*  
 11/16/12  
 AMOUNTS

Compounds	QUANT SIG				RESPONSE	AMOUNTS	
	MASS	RT	EXP RT	REL RT		CAL-AMT (ug/mL)	ON-COL (ug/mL)
* 6 Naphthalene-d8	136	5.470	5.470	(1.000)	543154	2.00000	
7 Naphthalene	128	5.498	5.498	(1.005)	288619	1.00000	0.9943
\$ 12 2-Methylnaphthalene-d10	152	6.205	6.205	(1.134)	185278	1.00000	0.9984
14 2-Methylnaphthalene	141	6.252	6.252	(1.143)	166046	1.00000	1.015
15 1-methylnaphthalene	141	6.445	6.445	(1.178)	154308	1.00000	0.9850
19 Biphenyl	154	6.912	6.912	(0.893)	215670	1.00000	0.9936
20 2,6-Dimethylnaphthalene	156	6.953	6.953	(0.898)	151954	1.00000	0.9826
21 Acenaphthylene	152	7.631	7.631	(0.986)	259571	1.00000	0.9977
* 22 Acenaphthene-d10	164	7.742	7.742	(1.000)	299409	2.00000	
23 Acenaphthene	153	7.792	7.792	(1.007)	163028	1.00000	0.9853
11 Dibenzofuran	168	7.941	7.941	(1.026)	238577	1.00000	0.9843
24 1,6,7-Trimethylnaphthalene	170	8.016	8.016	(1.035)	148936	1.00000	0.9929
25 Fluorene	166	8.414	8.414	(1.087)	185883	1.00000	0.9978
27 Dibenzothiophene	184	9.635	9.635	(0.987)	231583	1.00000	1.010
* 28 Phenanthrene-d10	188	9.761	9.761	(1.000)	422941	2.00000	
30 Phenanthrene	178	9.796	9.796	(1.004)	260184	1.00000	1.018
31 Anthracene	178	9.834	9.834	(1.007)	246870	1.00000	1.007
26 Carbazole	167	10.345	10.345	(1.060)	253940	1.00000	1.005
33 1-Methylphenanthrene	192	10.544	10.544	(1.080)	186145	1.00000	1.013
36 Fluoranthene	202	11.453	11.453	(1.173)	259718	1.00000	1.015
\$ 253 Fluoranthene-d10	212	11.418	11.418	(1.170)	239766	1.00000	0.9930
39 Pyrene	202	11.920	11.920	(0.829)	264352	1.00000	1.000
46 Benzo(a)anthracene	228	14.255	14.255	(0.991)	241343	1.00000	1.001
* 47 Chrysene-d12	240	14.378	14.378	(1.000)	479647	2.00000	
48 Chrysene	228	14.444	14.444	(1.005)	227801	1.00000	0.9738
51 Benzo(b)fluoranthene	252	16.893	16.893	(0.931)	222043	1.00000	1.006
52 Benzo(k)fluoranthene	252	16.950	16.950	(0.934)	237598	1.00000	0.9909

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	====	==	=====	=====	=====	=====	=====
251 Benzo(j) fluoranthene	252	17.022	17.022	(0.938)	260131	1.00000	1.028
55 Benzo(e) pyrene	252	17.780	17.780	(0.980)	225573	1.00000	0.9844
54 Benzo(a) pyrene	252	17.906	17.906	(0.987)	224896	1.00000	1.003
* 56 Perylene-d12	264	18.139	18.139	(1.000)	477073	2.00000	
57 Perylene	252	18.209	18.209	(1.004)	229020	1.00000	0.9847
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.367	20.367	(1.123)	153126	1.00000	0.9682 (M)
63 Indeno(1,2,3-cd)pyrene	276	20.459	20.459	(1.128)	273852	1.00000	1.007
62 Dibenzo(a,h)anthracene	278	20.459	20.459	(1.128)	225284	1.00000	1.017
61 Benzo(g,h,i)perylene	276	21.333	21.333	(1.176)	233076	1.00000	1.008

QC Flag Legend

M - Compound response manually integrated.



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11151205.d  
 Lab Smp Id: IC11115  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Misc Info: 12-

Calibration Date: 15-NOV-2012  
 Calibration Time: 18:53  
 Client Smp ID: IC11115  
 Level:  
 Sample Type:

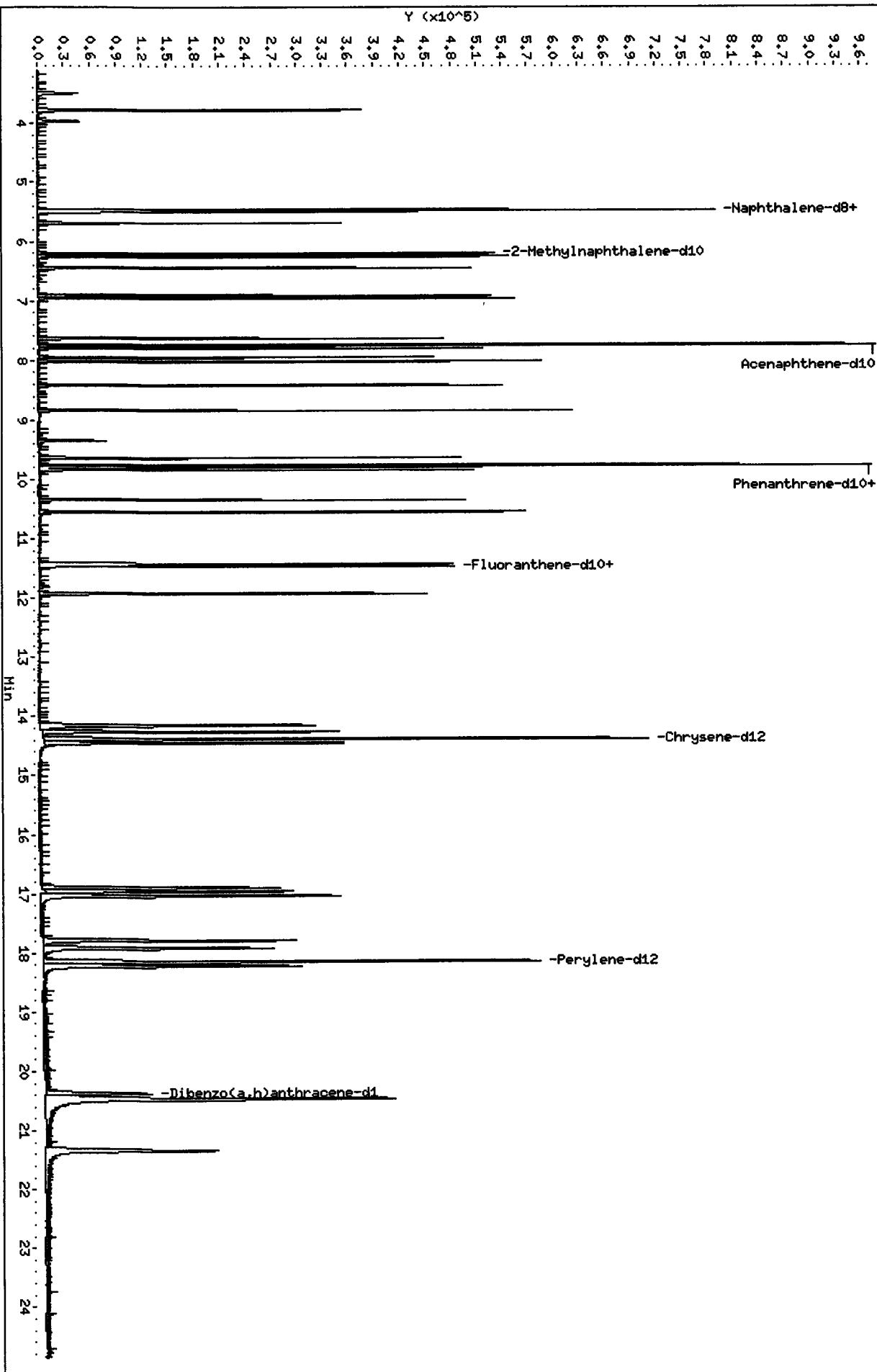
Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	543154	5.24
22 Acenaphthene-d10	284255	142128	568510	299409	5.33
28 Phenanthrene-d10	410660	205330	821320	422941	2.99
47 Chrysene-d12	467886	233943	935772	479647	2.51
56 Perylene-d12	472330	236165	944660	477073	1.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.47	4.97	5.97	5.47	-0.06
22 Acenaphthene-d10	7.74	7.24	8.24	7.74	-0.04
28 Phenanthrene-d10	9.76	9.26	10.26	9.76	0.00
47 Chrysene-d12	14.38	13.88	14.88	14.38	-0.02
56 Perylene-d12	18.14	17.64	18.64	18.14	-0.02

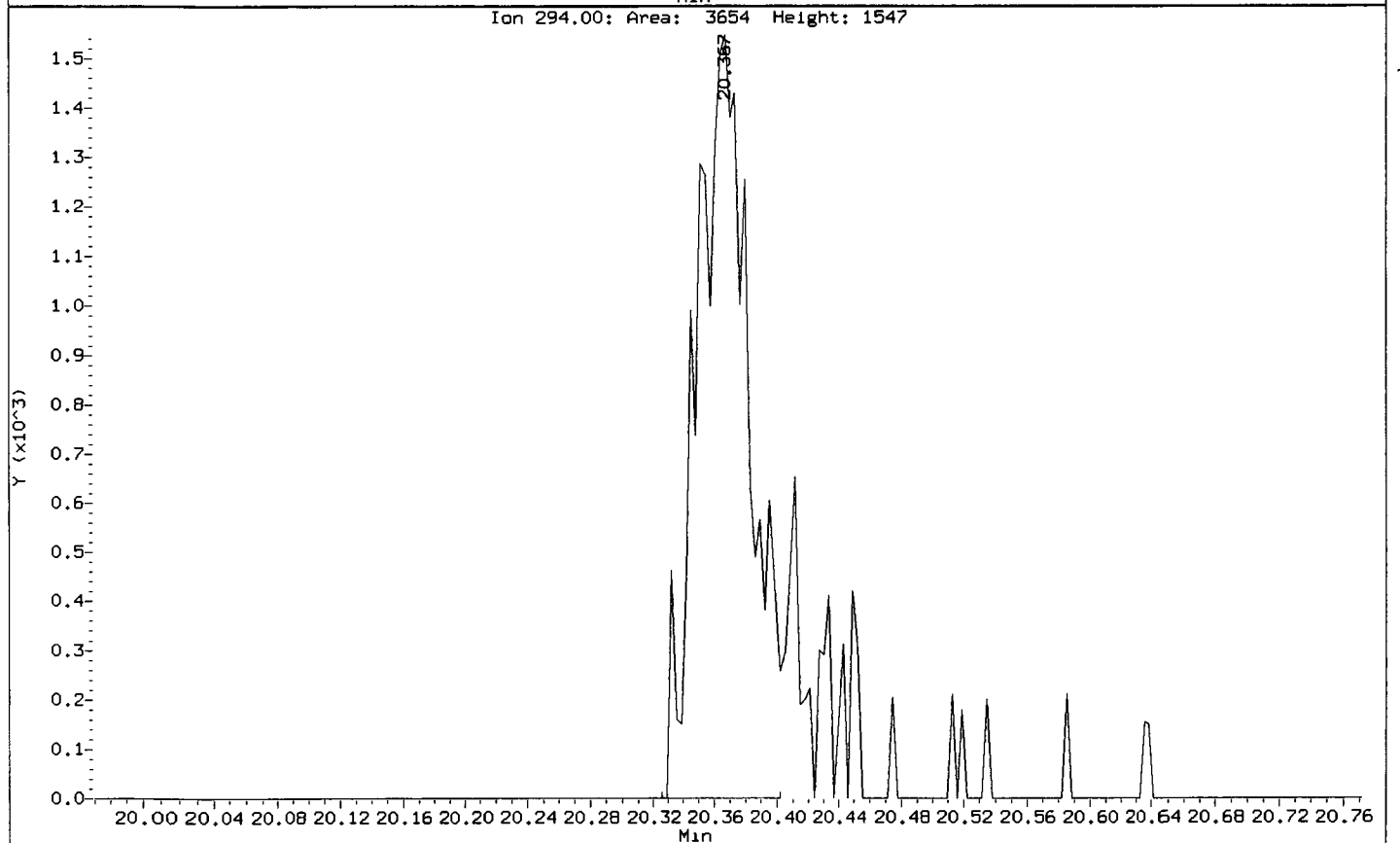
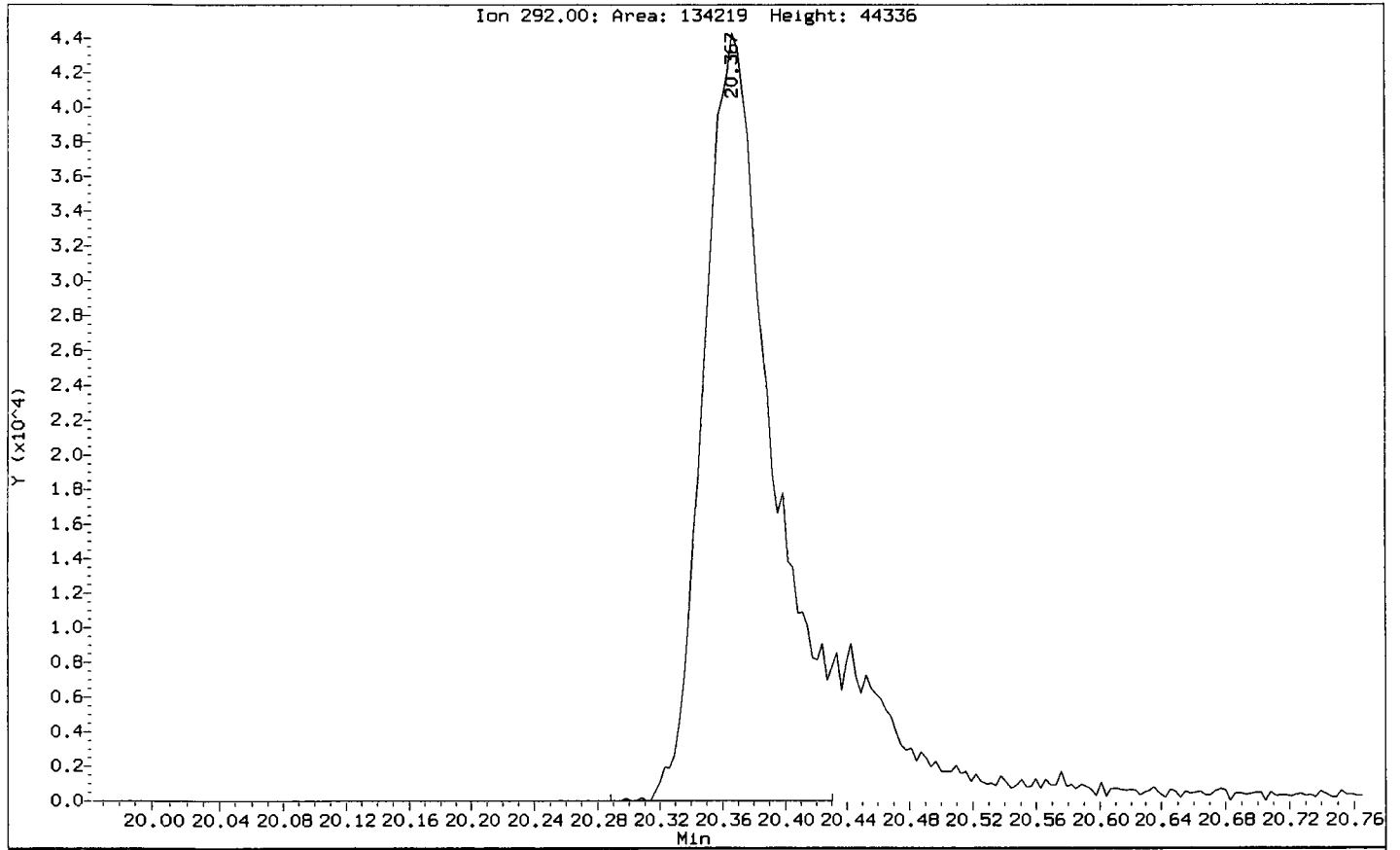
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

/chem3/nc11.i/20121115.b/11151205.d



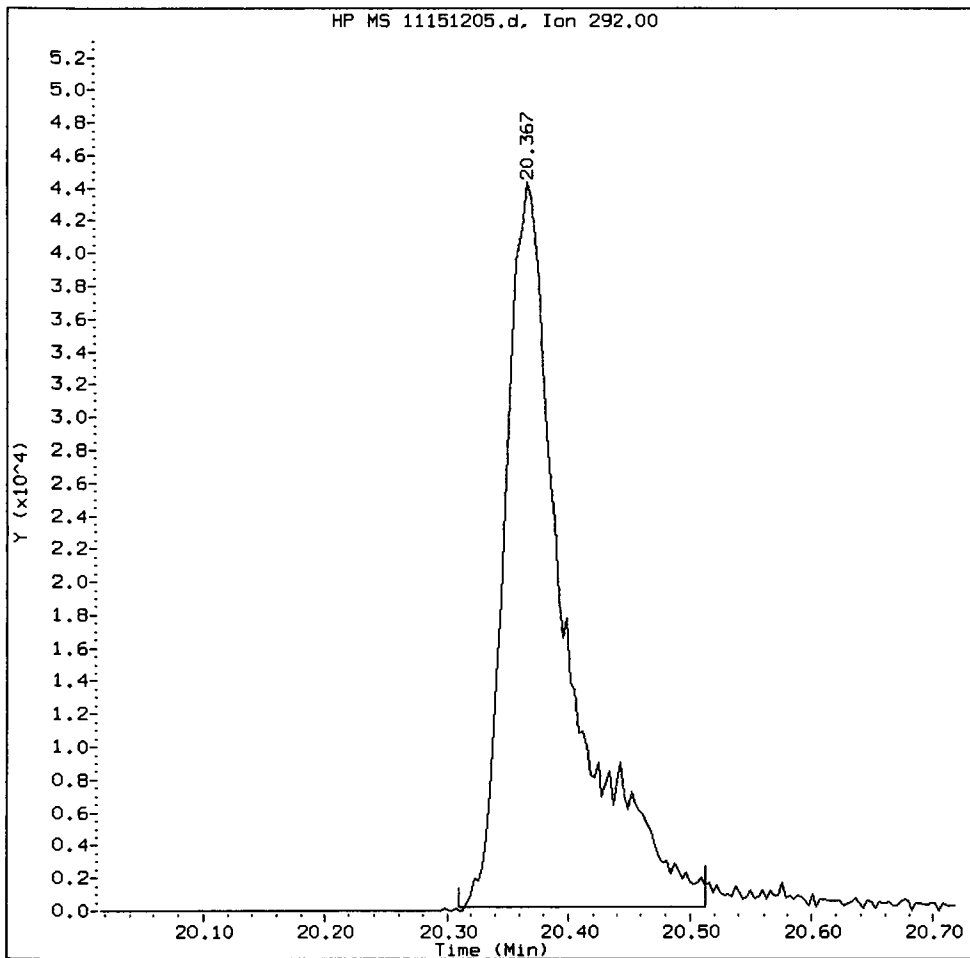
Data File: /chem3/nt11.1/20121115.b/11151205.d  
Injection Date: 15-NOV-2012 20:24  
Instrument: nt11.1  
Client Sample ID: IC11115

Compound: Dibenzo(a,h)anthracene-d14  
CAS Number:



IC11115, /chem3/nt11.i/20121115.b/11151205.d

Dibenzo(a,h)anthracene-d14 Amount: 0.97 Area: 153126



MANUAL INTEGRATION for Dibenzo(a,h)anthracene-d14

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

5. Other \_\_\_\_\_

Analyst: AS

Date: 4/16/12

CO-ELUTION SUMMARY FOR FILE - 11151205.d

Lab ID: IC11115, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 15-NOV-20

RT	CO-ELUTION COMPOUNDS
20.459	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.459	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

*checked ok*

*JE 11/16/12*

Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121115.b/11151202.d  
 Lab Smp Id: IC251115 Client Smp ID: IC251115  
 Inj Date : 15-NOV-2012 18:53  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : IC251115  
 Misc Info : 12-  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Meth Date : 16-Nov-2012 09:06 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 18:53 Cal File: 11151202.d  
 Als bottle: 2 Calibration Sample, Level: 4  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50  
 Compound Sublist: NEWSIMPNAICL.sub

*Handwritten signature and date: 11/16/12*

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
								CAL-AMT (ug/mL)	ON-COL (ug/mL)
* 6 Naphthalene-d8	136			5.473	5.470	(1.000)	516111	2.00000	
7 Naphthalene	128			5.501	5.498	(1.005)	665359	2.50000	2.500
\$ 12 2-Methylnaphthalene-d10	152			6.208	6.205	(1.134)	434526	2.50000	2.500
14 2-Methylnaphthalene	141			6.255	6.252	(1.143)	384325	2.50000	2.500
15 1-methylnaphthalene	141			6.448	6.445	(1.178)	364974	2.50000	2.500
19 Biphenyl	154			6.912	6.912	(0.892)	501181	2.50000	2.500
20 2,6-Dimethylnaphthalene	156			6.956	6.953	(0.898)	363477	2.50000	2.500
21 Acenaphthylene	152			7.631	7.631	(0.985)	633403	2.50000	2.500
* 22 Acenaphthene-d10	164			7.745	7.742	(1.000)	284255	2.00000	
23 Acenaphthene	153			7.792	7.792	(1.006)	378991	2.50000	2.500
11 Dibenzofuran	168			7.944	7.941	(1.026)	561948	2.50000	2.500
24 1,6,7-Trimethylnaphthalene	170			8.016	8.016	(1.035)	346698	2.50000	2.500
25 Fluorene	166			8.417	8.414	(1.087)	445757	2.50000	2.500
27 Dibenzothiophene	184			9.635	9.635	(0.987)	538363	2.50000	2.500
* 28 Phenanthrene-d10	188			9.761	9.761	(1.000)	410660	2.00000	
30 Phenanthrene	178			9.799	9.796	(1.004)	595314	2.50000	2.500
31 Anthracene	178			9.840	9.834	(1.008)	598555	2.50000	2.500
26 Carbazole	167			10.348	10.345	(1.060)	605770	2.50000	2.500
33 1-Methylphenanthrene	192			10.547	10.544	(1.080)	444263	2.50000	2.500
36 Fluoranthene	202			11.456	11.453	(1.174)	617430	2.50000	2.500
\$ 253 Fluoranthene-d10	212			11.421	11.418	(1.170)	588653	2.50000	2.500
39 Pyrene	202			11.923	11.920	(0.829)	643727	2.50000	2.500
46 Benzo(a) anthracene	228			14.261	14.255	(0.992)	569683	2.50000	2.500
* 47 Chrysene-d12	240			14.381	14.378	(1.000)	467886	2.00000	
48 Chrysene	228			14.451	14.444	(1.005)	547744	2.50000	2.500
51 Benzo(b) fluoranthene	252			16.896	16.893	(0.931)	540283	2.50000	2.500
52 Benzo(k) fluoranthene	252			16.959	16.950	(0.935)	605121	2.50000	2.500

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	====	==	=====	=====	=====	=====	=====
251 Benzo(j) fluoranthene	252	17.032	17.022	(0.939)	617649	2.50000	2.500
55 Benzo(e) pyrene	252	17.789	17.780	(0.981)	559230	2.50000	2.500
54 Benzo(a) pyrene	252	17.915	17.906	(0.987)	566951	2.50000	2.500
* 56 Perylene-d12	264	18.143	18.139	(1.000)	472330	2.00000	
57 Perylene	252	18.215	18.209	(1.004)	562082	2.50000	2.500
§ 60 Dibenzo(a,h)anthracene-d14	292	20.377	20.367	(1.123)	423618	2.50000	2.500
63 Indeno(1,2,3-cd)pyrene	276	20.471	20.459	(1.128)	722667	2.50000	2.500
62 Dibenzo(a,h)anthracene	278	20.468	20.459	(1.128)	586489	2.50000	2.500
61 Benzo(g,h,i)perylene	276	21.342	21.333	(1.176)	572831	2.50000	2.500 (M)

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11151202.d  
 Lab Smp Id: IC251115  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Misc Info: 12-

Calibration Date: 15-NOV-2012  
 Calibration Time: 18:53  
 Client Smp ID: IC251115  
 Level:  
 Sample Type:

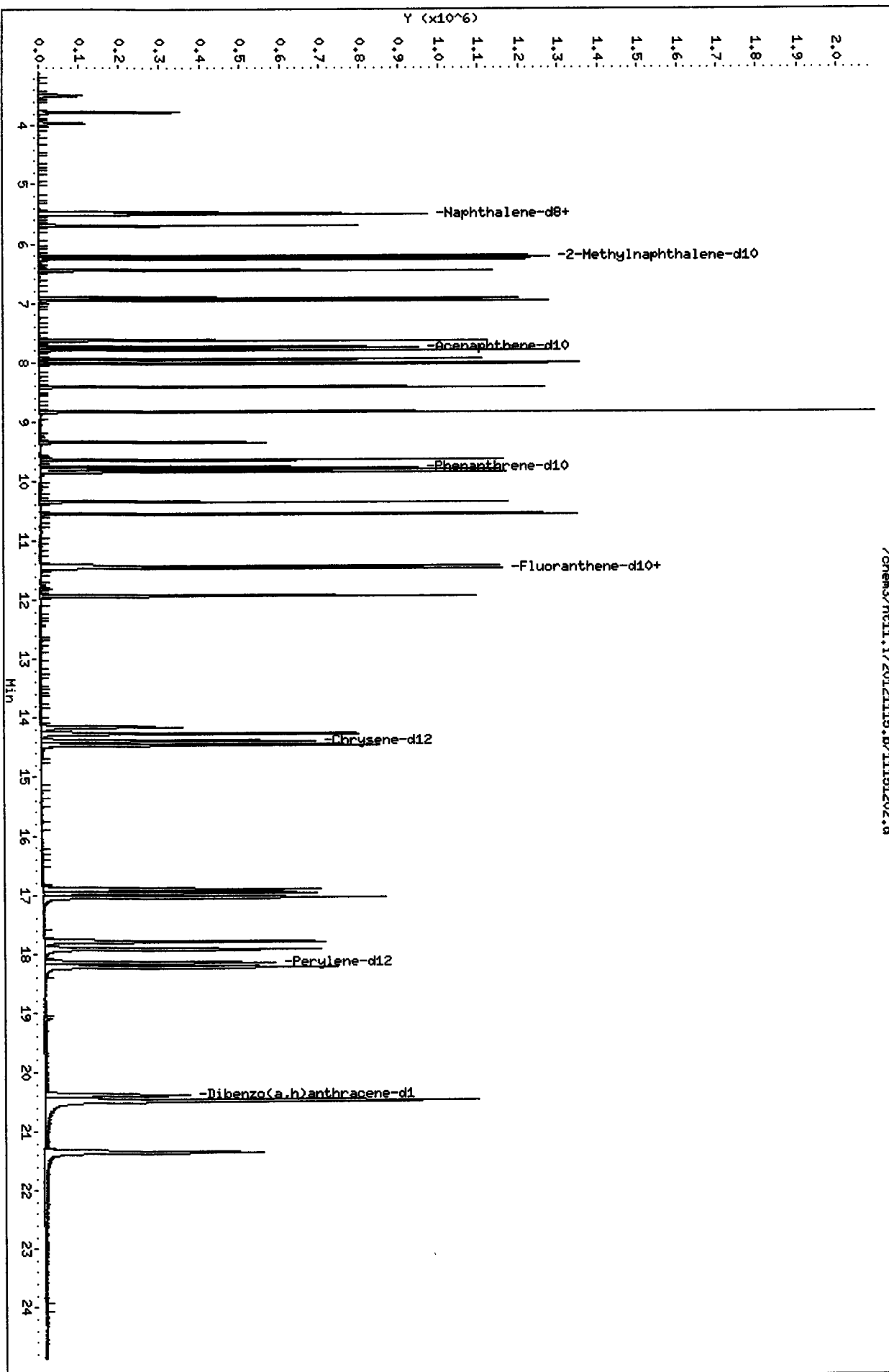
Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	516111	0.00
22 Acenaphthene-d10	284255	142128	568510	284255	0.00
28 Phenanthrene-d10	410660	205330	821320	410660	0.00
47 Chrysene-d12	467886	233943	935772	467886	0.00
56 Perylene-d12	472330	236165	944660	472330	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.47	4.97	5.97	5.47	0.00
22 Acenaphthene-d10	7.74	7.24	8.24	7.74	0.00
28 Phenanthrene-d10	9.76	9.26	10.26	9.76	0.00
47 Chrysene-d12	14.38	13.88	14.88	14.38	0.00
56 Perylene-d12	18.14	17.64	18.64	18.14	0.00

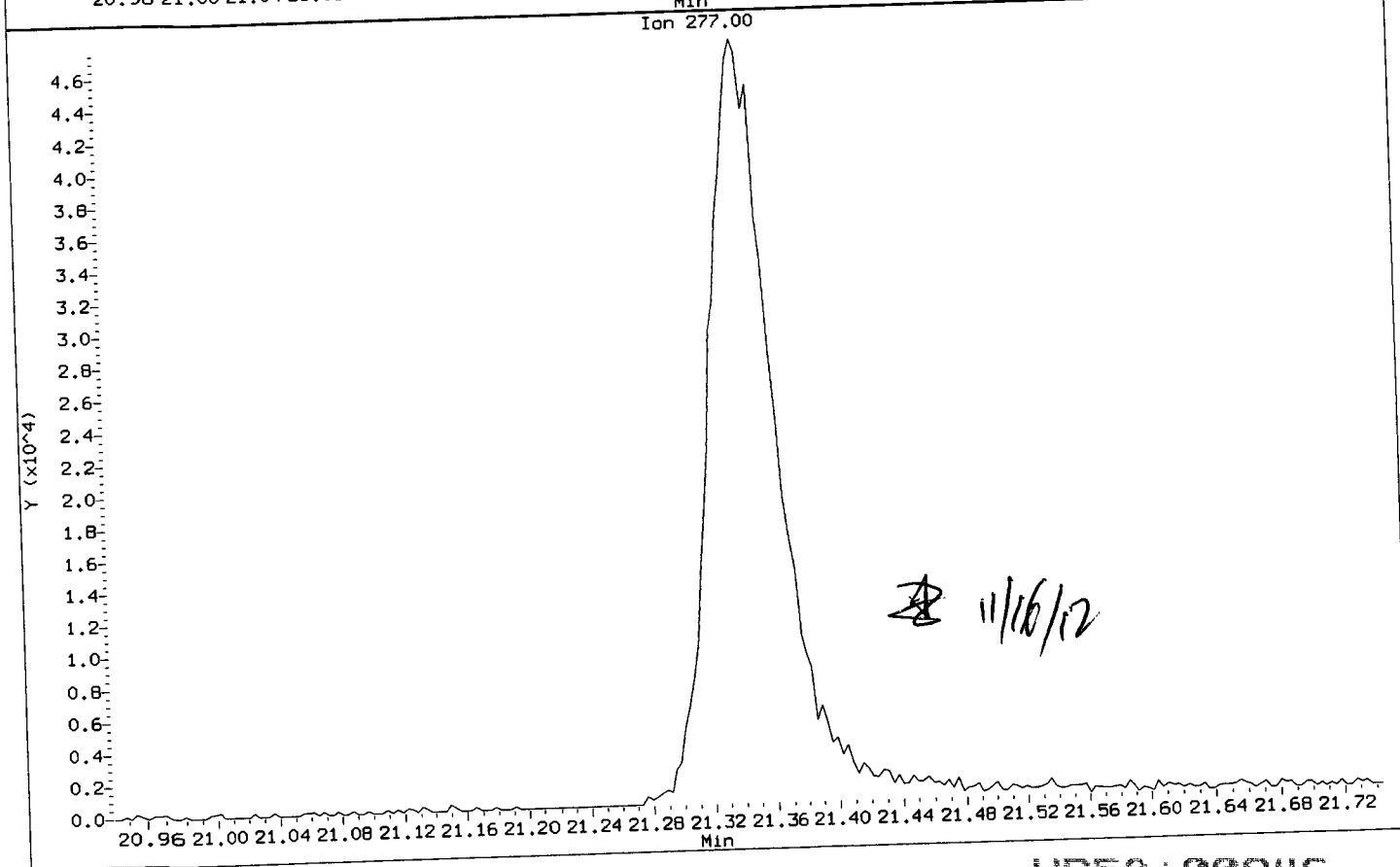
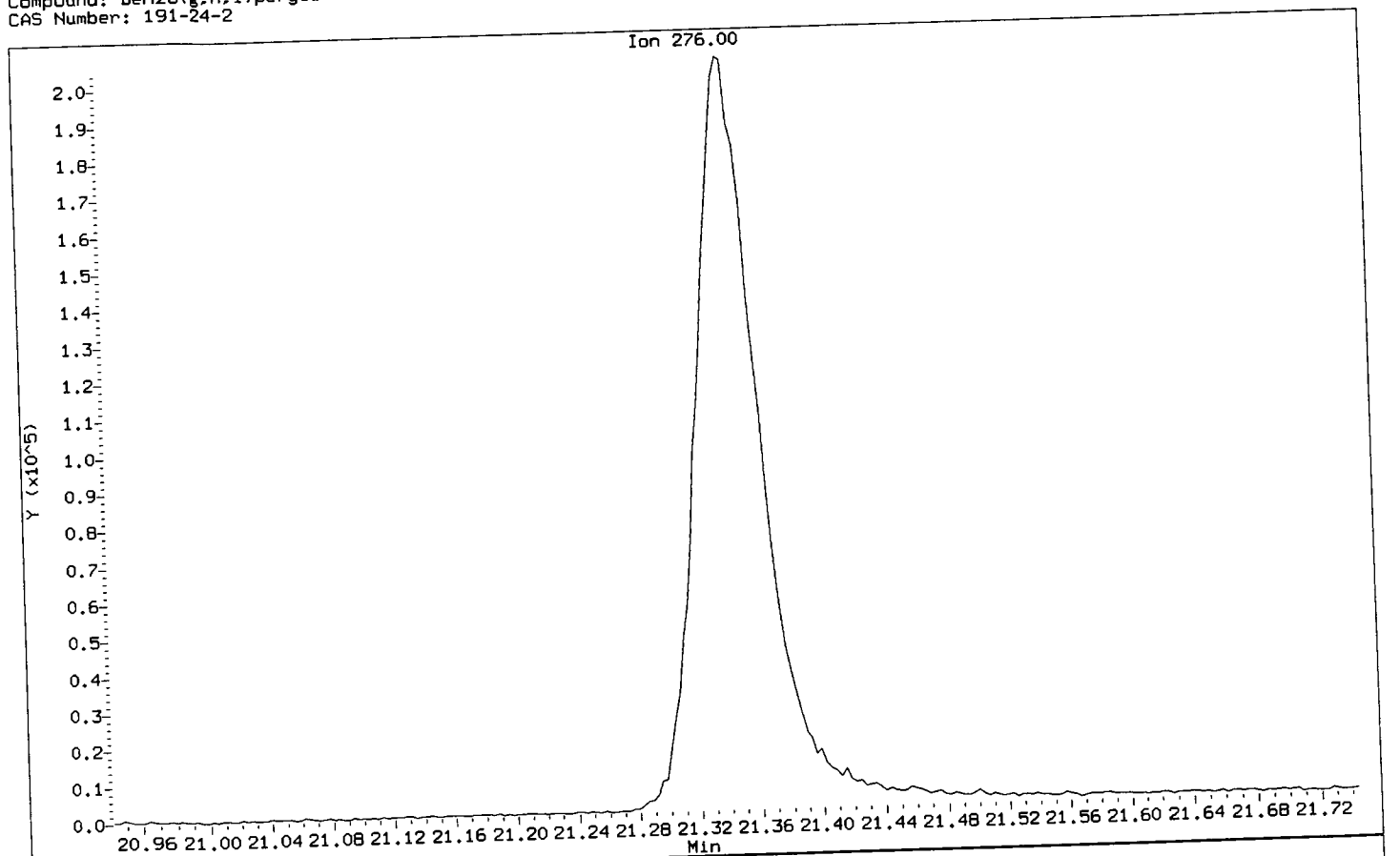
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.





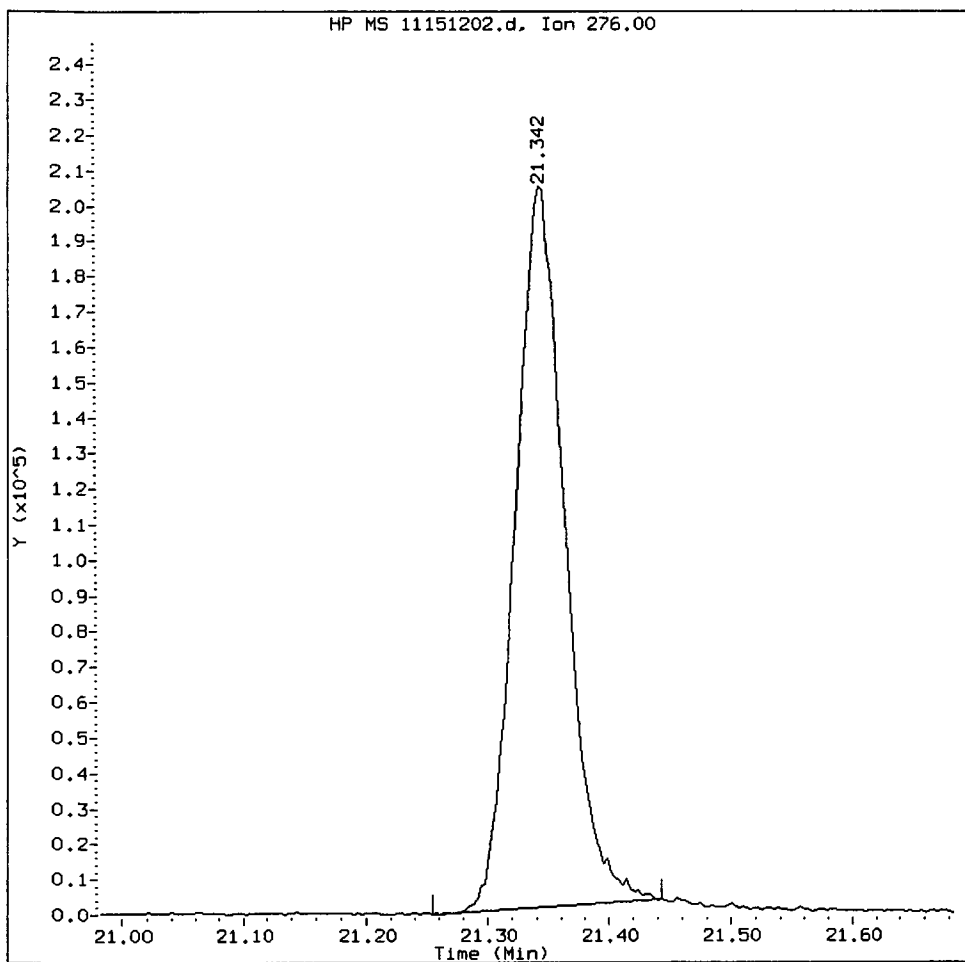
Data File: /chem3/nt11.1/20121115.b/11151202.d  
Injection Date: 15-NOV-2012 18:53  
Instrument: nt11.1  
Client Sample ID: IC251115

Compound: Benzo(g,h,i)perylene  
CAS Number: 191-24-2



IC251115, /chem3/nt11.i/20121115.b/11151202.d

Benzo(g,h,i)perylene Amount: 2.50 Area: 572831



MANUAL INTEGRATION for Benzo(g,h,i)perylene

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

5. Other \_\_\_\_\_

Analyst:   *AZ*  

Date:   4/16/12

CO-ELUTION SUMMARY FOR FILE - 11151202.d

Lab ID: IC251115, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 15-NOV-2

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121115.b/11151206.d  
Lab Smp Id: IC51115 Client Smp ID: IC51115  
Inj Date : 15-NOV-2012 20:54  
Operator : JZ Inst ID: nt11.i  
Smp Info : IC51115,  
Misc Info : 12-  
Comment : 1ul Injection  
Method : /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
Meth Date : 16-Nov-2012 09:06 jianqing Quant Type: ISTD  
Cal Date : 15-NOV-2012 20:54 Cal File: 11151206.d  
Als bottle: 6 Calibration Sample, Level: 5  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50  
Compound Sublist: NEWSIMPNAICL.sub

*J* 11/16/12  
AMOUNTS

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
* 6 Naphthalene-d8	136		5.470	5.470	(1.000)	544640	2.00000		
7 Naphthalene	128		5.498	5.498	(1.005)	1311416	5.00000	4.404	
\$ 12 2-Methylnaphthalene-d10	152		6.208	6.205	(1.135)	841637	5.00000	4.411	
14 2-Methylnaphthalene	141		6.252	6.252	(1.143)	761460	5.00000	4.548	
15 1-methylnaphthalene	141		6.448	6.445	(1.179)	719884	5.00000	4.481	
19 Biphenyl	154		6.912	6.912	(0.893)	989028	5.00000	4.386	
20 2,6-Dimethylnaphthalene	156		6.956	6.953	(0.898)	714168	5.00000	4.456	
21 Acenaphthylene	152		7.631	7.631	(0.986)	1262932	5.00000	4.745	
* 22 Acenaphthene-d10	164		7.742	7.742	(1.000)	302706	2.00000		
23 Acenaphthene	153		7.792	7.792	(1.007)	749926	5.00000	4.365	
11 Dibenzofuran	168		7.944	7.941	(1.026)	1100908	5.00000	4.372	
24 1,6,7-Trimethylnaphthalene	170		8.016	8.016	(1.035)	684801	5.00000	4.391	
25 Fluorene	166		8.417	8.414	(1.087)	877192	5.00000	4.562	
27 Dibenzothiophene	184		9.635	9.635	(0.987)	1068041	5.00000	4.453	
* 28 Phenanthrene-d10	188		9.761	9.761	(1.000)	431003	2.00000		
30 Phenanthrene	178		9.796	9.796	(1.004)	1170468	5.00000	4.366	
31 Anthracene	178		9.837	9.834	(1.008)	1179017	5.00000	4.629	
26 Carbazole	167		10.348	10.345	(1.060)	1205604	5.00000	4.583	
33 1-Methylphenanthrene	192		10.547	10.544	(1.080)	869675	5.00000	4.539	
36 Fluoranthene	202		11.456	11.453	(1.174)	1210404	5.00000	4.536	
\$ 253 Fluoranthene-d10	212		11.421	11.418	(1.170)	1164970	5.00000	4.656	
39 Pyrene	202		11.923	11.920	(0.829)	1272149	5.00000	4.583	
46 Benzo(a)anthracene	228		14.261	14.255	(0.992)	1144766	5.00000	4.530	
* 47 Chrysene-d12	240		14.378	14.378	(1.000)	495359	2.00000		
48 Chrysene	228		14.451	14.444	(1.005)	1113639	5.00000	4.510	
51 Benzo(b)fluoranthene	252		16.902	16.893	(0.932)	1103927	5.00000	4.663	
52 Benzo(k)fluoranthene	252		16.962	16.950	(0.935)	1218088	5.00000	4.692 (M)	

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	
-----	----	==	-----	-----	-----	-----	-----	
251 Benzo(j)fluoranthene	252	17.035	17.022	(0.939)	1258282	5.00000	4.590	
55 Benzo(e)pyrene	252	17.792	17.780	(0.981)	1130284	5.00000	4.538	
54 Benzo(a)pyrene	252	17.919	17.906	(0.988)	1165219	5.00000	4.832	
* 56 Perylene-d12	264	18.143	18.139	(1.000)	510632	2.00000		
57 Perylene	252	18.218	18.209	(1.004)	1152789	5.00000	4.548	
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.380	20.367	(1.123)	920202	5.00000	5.911	
63 Indeno(1,2,3-cd)pyrene	276	20.475	20.459	(1.129)	1468831	5.00000	5.079	
62 Dibenzo(a,h)anthracene	278	20.471	20.459	(1.128)	1204941	5.00000	5.098	
61 Benzo(g,h,i)perylene	276	21.349	21.333	(1.177)	1221377	5.00000	5.017 (M)	

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11151206.d  
 Lab Smp Id: IC51115  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Misc Info: 12-

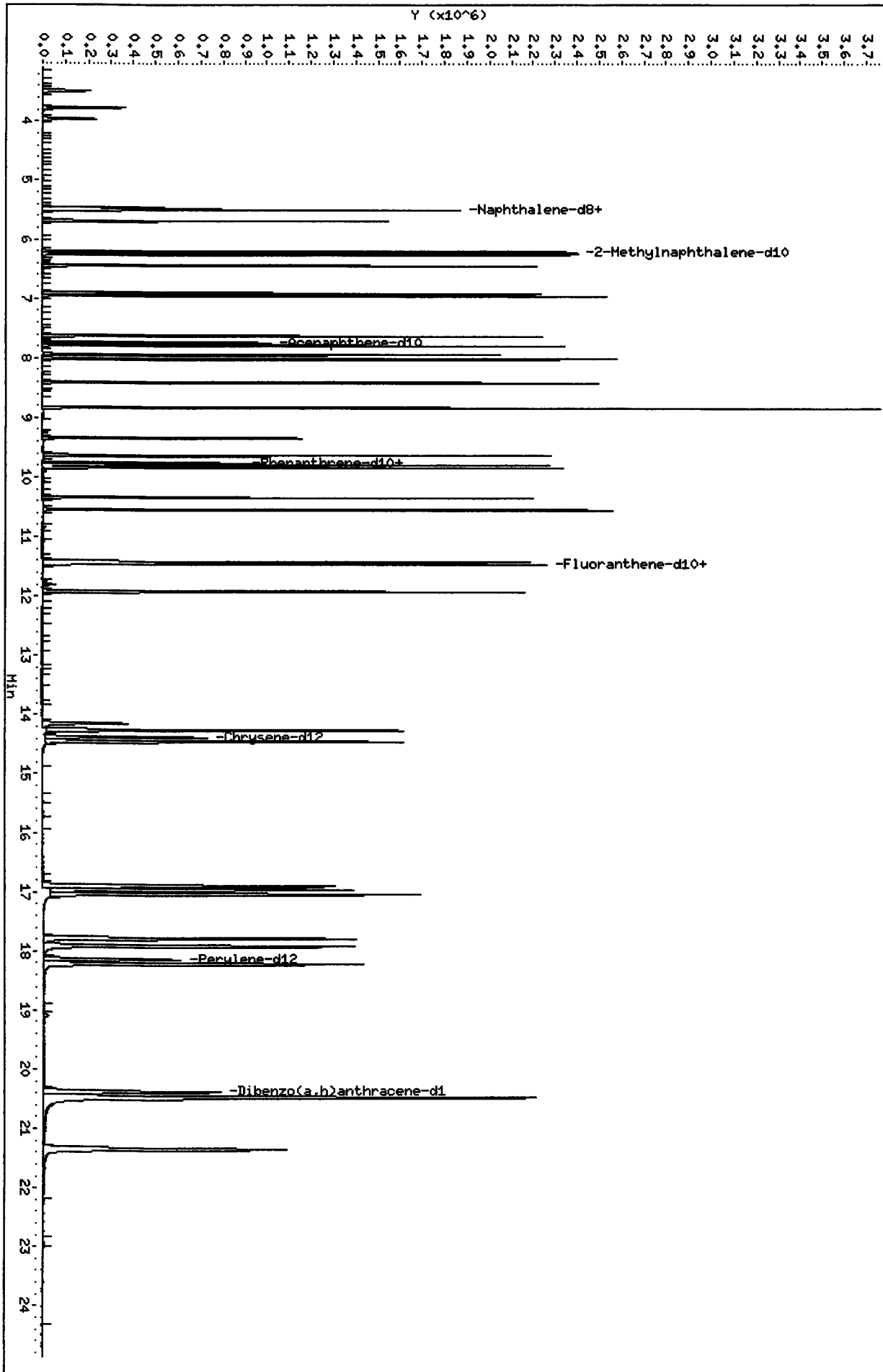
Calibration Date: 15-NOV-2012  
 Calibration Time: 18:53  
 Client Smp ID: IC51115  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	544640	5.53
22 Acenaphthene-d10	284255	142128	568510	302706	6.49
28 Phenanthrene-d10	410660	205330	821320	431003	4.95
47 Chrysene-d12	467886	233943	935772	495359	5.87
56 Perylene-d12	472330	236165	944660	510632	8.11

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.47	4.97	5.97	5.47	-0.06
22 Acenaphthene-d10	7.74	7.24	8.24	7.74	-0.04
28 Phenanthrene-d10	9.76	9.26	10.26	9.76	0.00
47 Chrysene-d12	14.38	13.88	14.88	14.38	-0.02
56 Perylene-d12	18.14	17.64	18.64	18.14	0.00

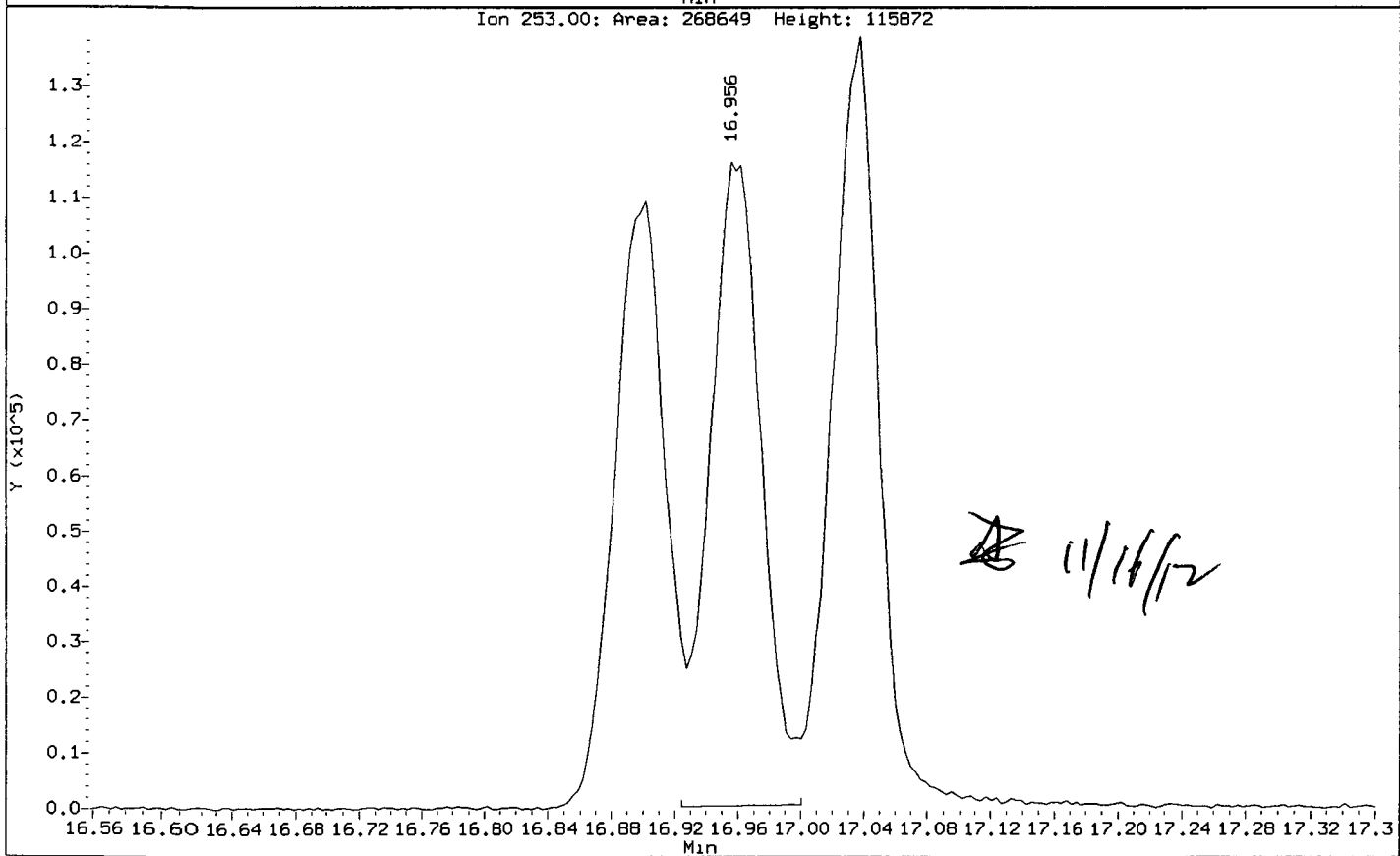
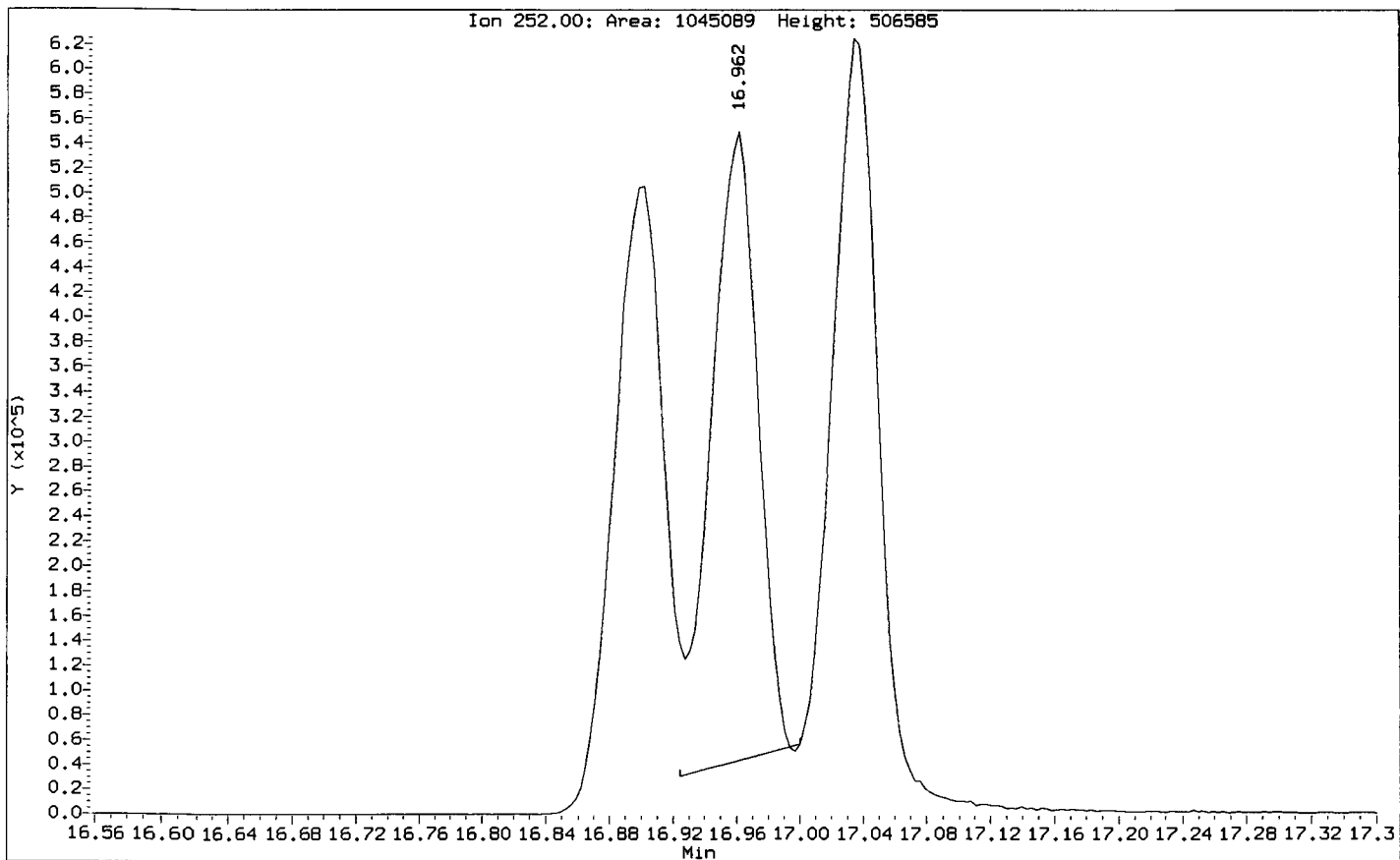
AREA UPPER LIMIT = +100% of internal standard area.  
 AREA LOWER LIMIT = - 50% of internal standard area.  
 RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
 RT LOWER LIMIT = - 0.50 minutes of internal standard RT.





Data File: /chem3/nt11.1/20121115.b/11151206.d  
Injection Date: 15-NOV-2012 20:54  
Instrument: nt11.1  
Client Sample ID: IC51115

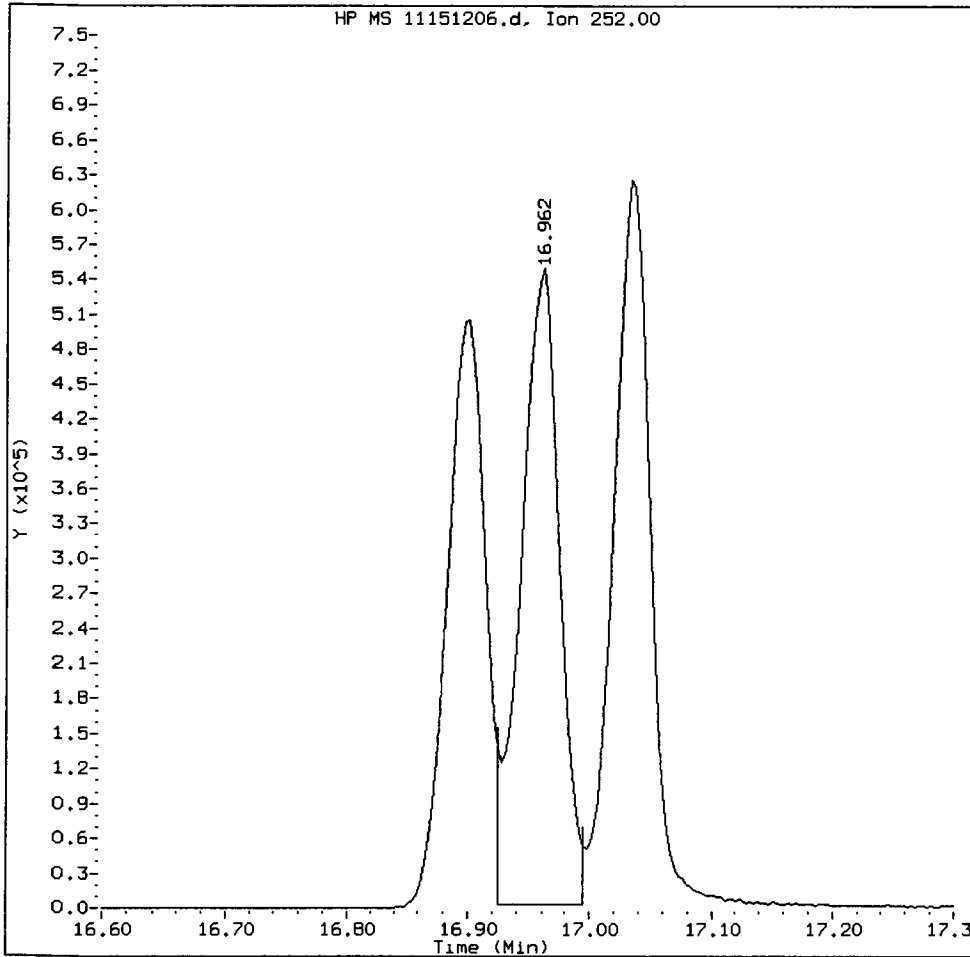
Compound: Benzo(k)fluoranthene  
CAS Number: 207-08-9



UR58: 00953

IC51115, /chem3/nt11.i/20121115.b/11151206.d

Benzo(k)fluoranthene Amount: 4.69 Area: 1218088



MANUAL INTEGRATION for Benzo(k)fluoranthene

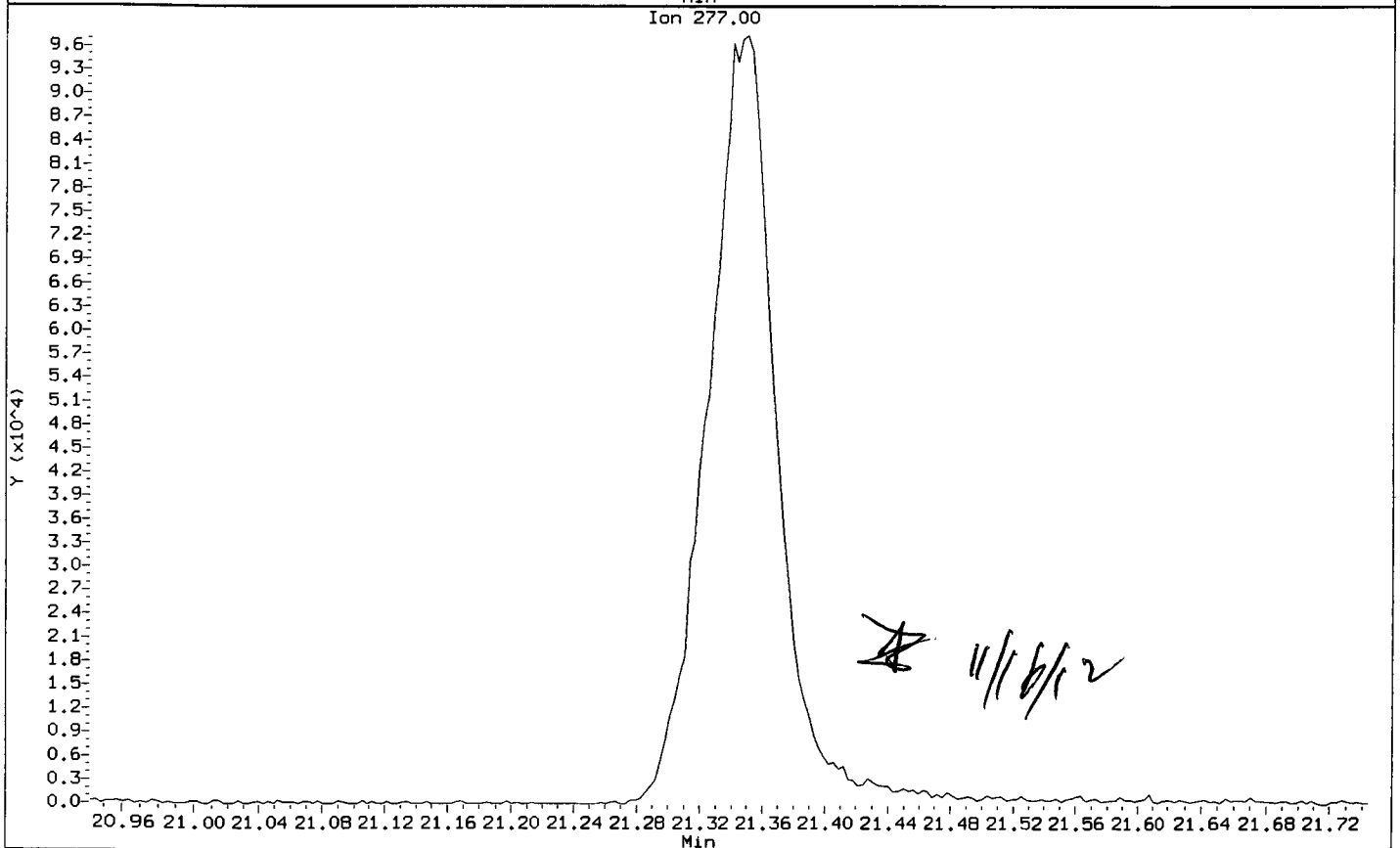
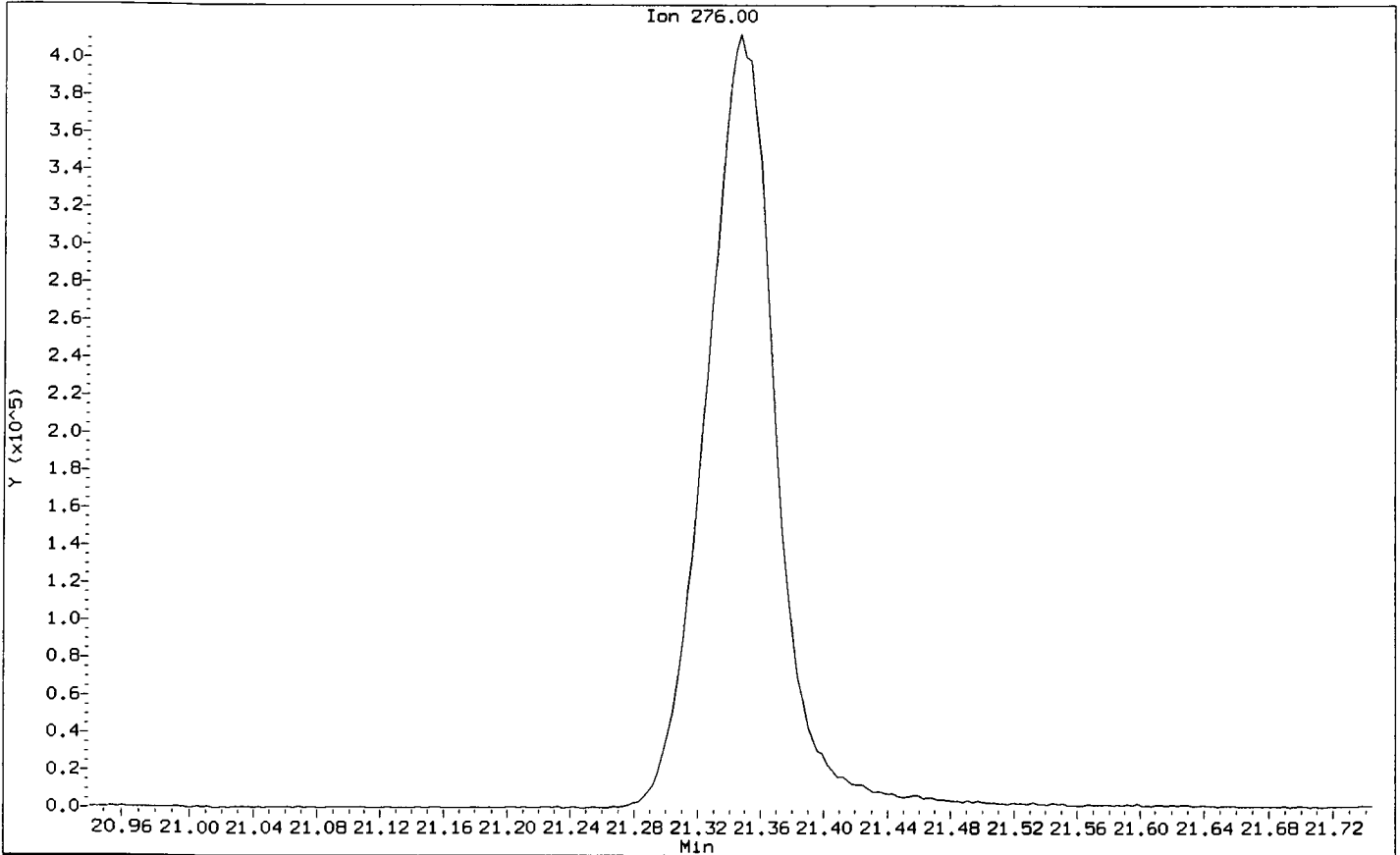
- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst:           *JB*          

Date:           *11/15/12*

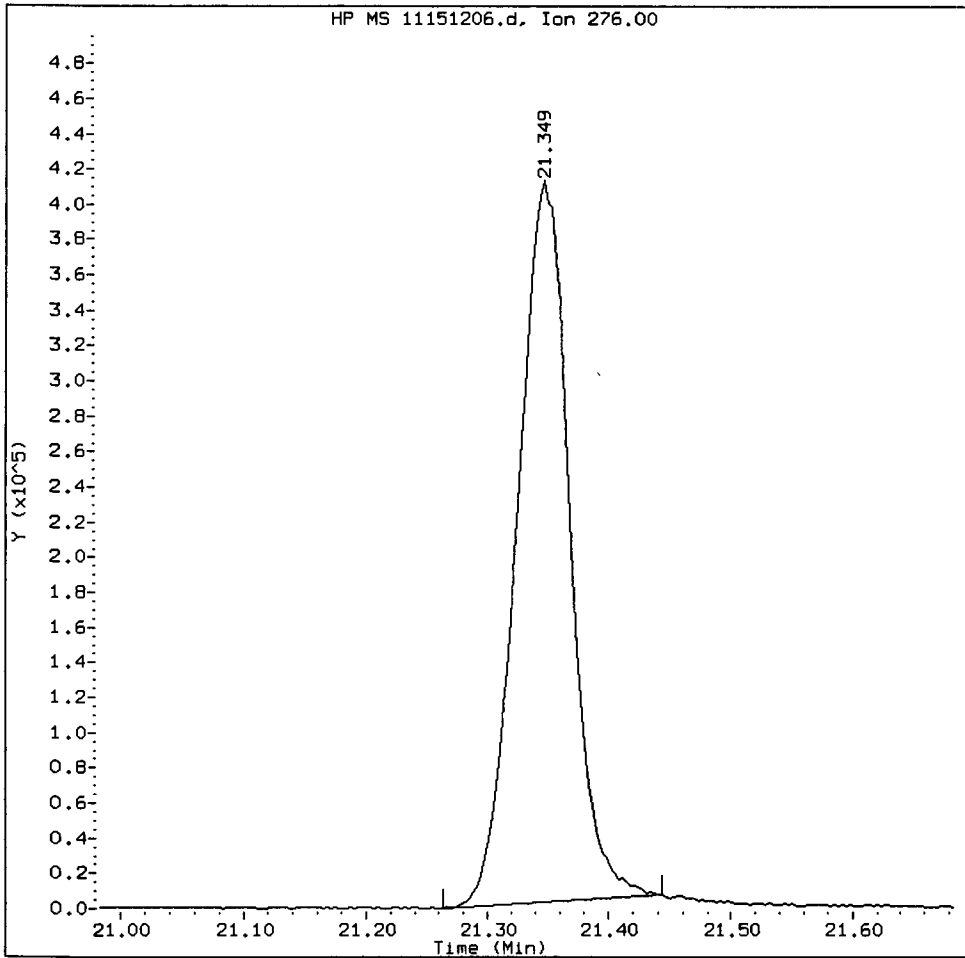
Data File: /chem3/nt11.1/20121115.b/11151206.d  
Injection Date: 15-NOV-2012 20:54  
Instrument: nt11.1  
Client Sample ID: IC51115

Compound: Benzo(g,h,i)perylene  
CAS Number: 191-24-2



IC51115, /chem3/nt11.i/20121115.b/11151206.d

Benzo(g,h,i)perylene Amount: 5.02 Area: 1221377



MANUAL INTEGRATION for Benzo(g,h,i)perylene

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

5. Other \_\_\_\_\_

Analyst: *[Signature]*

Date: 11/16/12

CO-ELUTION SUMMARY FOR FILE - 11151206.d

Lab ID: IC51115, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 15-NOV-20

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121115.b/11151207.d  
 Lab Smp Id: IC101115 Client Smp ID: IC101115  
 Inj Date : 15-NOV-2012 21:24  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : IC101115,  
 Misc Info : 12-  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Meth Date : 16-Nov-2012 09:06 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 21:24 Cal File: 11151207.d  
 Als bottle: 7 Calibration Sample, Level: 6  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: NEWSIMPNAICL.sub  
 Target Version: 3.50

*R* 11/16/12

Compounds	QUANT SIG		AMOUNTS			CAL-AMT (ug/mL)	ON-COL (ug/mL)
	MASS	RT	EXP RT	REL RT	RESPONSE		
* 6 Naphthalene-d8	136	5.470	5.470	(1.000)	559831	2.00000	
7 Naphthalene	128	5.502	5.498	(1.006)	2647781	10.0000	8.850
\$ 12 2-Methylnaphthalene-d10	152	6.208	6.205	(1.135)	1670466	10.0000	8.733
14 2-Methylnaphthalene	141	6.256	6.252	(1.144)	1509183	10.0000	8.953
15 1-methylnaphthalene	141	6.448	6.445	(1.179)	1431274	10.0000	8.864
19 Biphenyl	154	6.915	6.912	(0.893)	1939004	10.0000	8.623
20 2,6-Dimethylnaphthalene	156	6.956	6.953	(0.898)	1400950	10.0000	8.745
21 Acenaphthylene	152	7.635	7.631	(0.986)	2533981	10.0000	9.402
* 22 Acenaphthene-d10	164	7.742	7.742	(1.000)	310166	2.00000	
23 Acenaphthene	153	7.796	7.792	(1.007)	1482694	10.0000	8.651
11 Dibenzofuran	168	7.944	7.941	(1.026)	2165956	10.0000	8.626
24 1,6,7-Trimethylnaphthalene	170	8.020	8.016	(1.036)	1334457	10.0000	8.588
25 Fluorene	166	8.420	8.414	(1.088)	1727146	10.0000	8.950
27 Dibenzothiophene	184	9.639	9.635	(0.987)	2089694	10.0000	8.670
* 28 Phenanthrene-d10	188	9.762	9.761	(1.000)	444629	2.00000	
30 Phenanthrene	178	9.799	9.796	(1.004)	2285367	10.0000	8.509
31 Anthracene	178	9.840	9.834	(1.008)	2332602	10.0000	9.047
26 Carbazole	167	10.352	10.345	(1.060)	2371843	10.0000	8.928
33 1-Methylphenanthrene	192	10.550	10.544	(1.081)	1705664	10.0000	8.831
36 Fluoranthene	202	11.462	11.453	(1.174)	2382669	10.0000	8.855
\$ 253 Fluoranthene-d10	212	11.425	11.418	(1.170)	2324424	10.0000	9.157
39 Pyrene	202	11.929	11.920	(0.830)	2536391	10.0000	9.162
46 Benzo(a)anthracene	228	14.268	14.255	(0.992)	2332594	10.0000	9.241
* 47 Chrysene-d12	240	14.381	14.378	(1.000)	502333	2.00000	
48 Chrysene	228	14.460	14.444	(1.005)	2179568	10.0000	8.896 (M)
51 Benzo(b)fluoranthene	252	16.909	16.893	(0.932)	2398209	10.0000	9.911
52 Benzo(k)fluoranthene	252	16.975	16.950	(0.935)	2477735	10.0000	9.428 (M)

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
=====	----	==	=====	=====	=====	=====	=====
251 Benzo(j) fluoranthene	252	17.051	17.022	(0.940)	2600379	10.0000	9.379
55 Benzo(e) pyrene	252	17.805	17.780	(0.981)	2315497	10.0000	9.220
54 Benzo(a) pyrene	252	17.931	17.906	(0.988)	2401633	10.0000	9.771
* 56 Perylene-d12	264	18.146	18.139	(1.000)	522850	2.00000	
57 Perylene	252	18.231	18.209	(1.005)	2316715	10.0000	9.089 (M)
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.393	20.367	(1.124)	1965096	10.0000	11.87
63 Indeno(1,2,3-cd)pyrene	276	20.500	20.459	(1.130)	3073609	10.0000	10.31
62 Dibenzo(a,h)anthracene	278	20.497	20.459	(1.130)	2460774	10.0000	10.14
61 Benzo(g,h,i)perylene	276	21.374	21.333	(1.178)	2745901	10.0000	10.83

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11151207.d  
 Lab Smp Id: IC101115  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121115.b/FSIMPNA111512.m  
 Misc Info: 12-

Calibration Date: 15-NOV-2012  
 Calibration Time: 18:53  
 Client Smp ID: IC101115  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

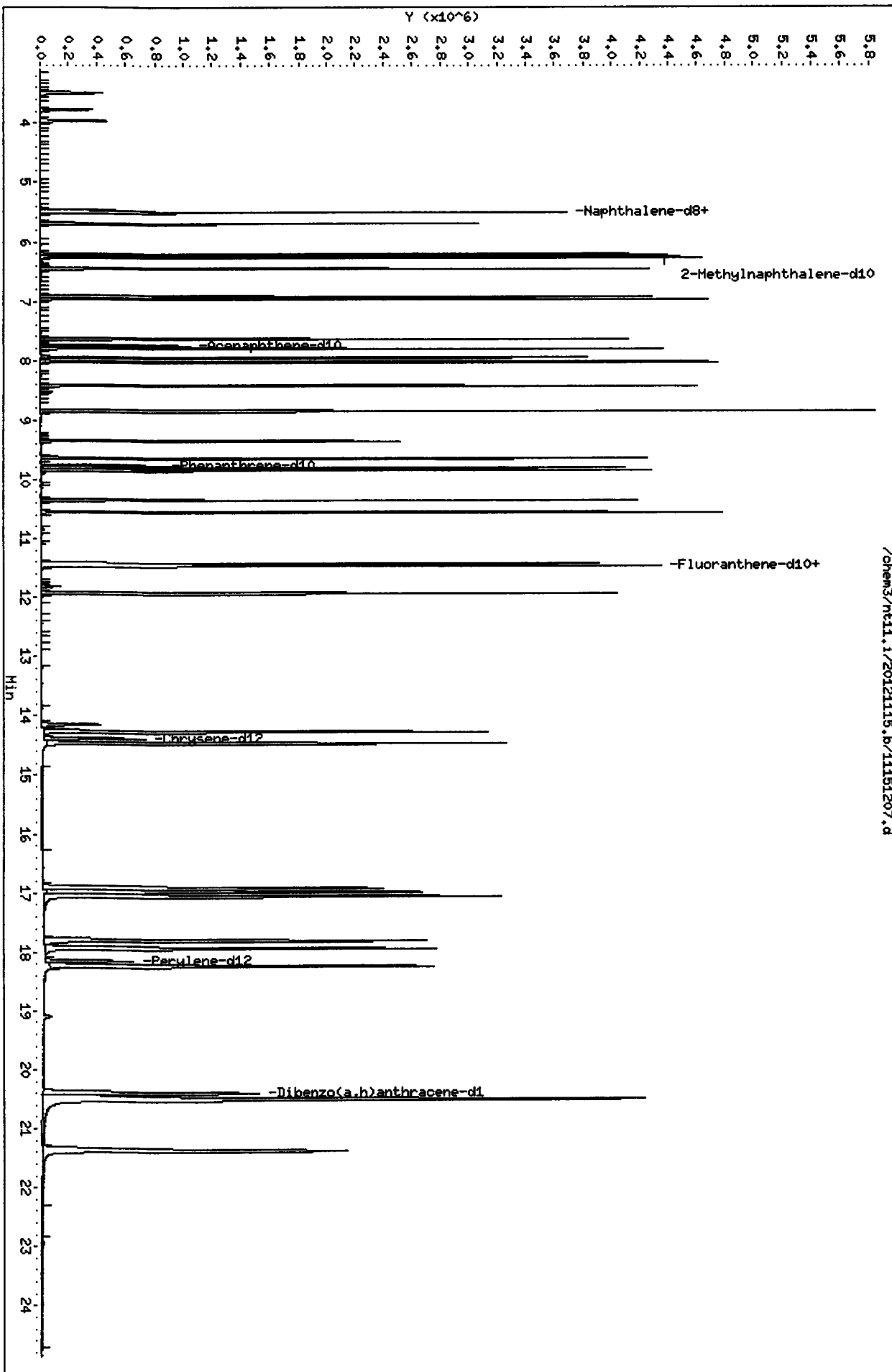
COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	559831	8.47
22 Acenaphthene-d10	284255	142128	568510	310166	9.12
28 Phenanthrene-d10	410660	205330	821320	444629	8.27
47 Chrysene-d12	467886	233943	935772	502333	7.36
56 Perylene-d12	472330	236165	944660	522850	10.70

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.47	4.97	5.97	5.47	-0.05
22 Acenaphthene-d10	7.74	7.24	8.24	7.74	-0.04
28 Phenanthrene-d10	9.76	9.26	10.26	9.76	0.00
47 Chrysene-d12	14.38	13.88	14.88	14.38	0.00
56 Perylene-d12	18.14	17.64	18.64	18.15	0.02

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

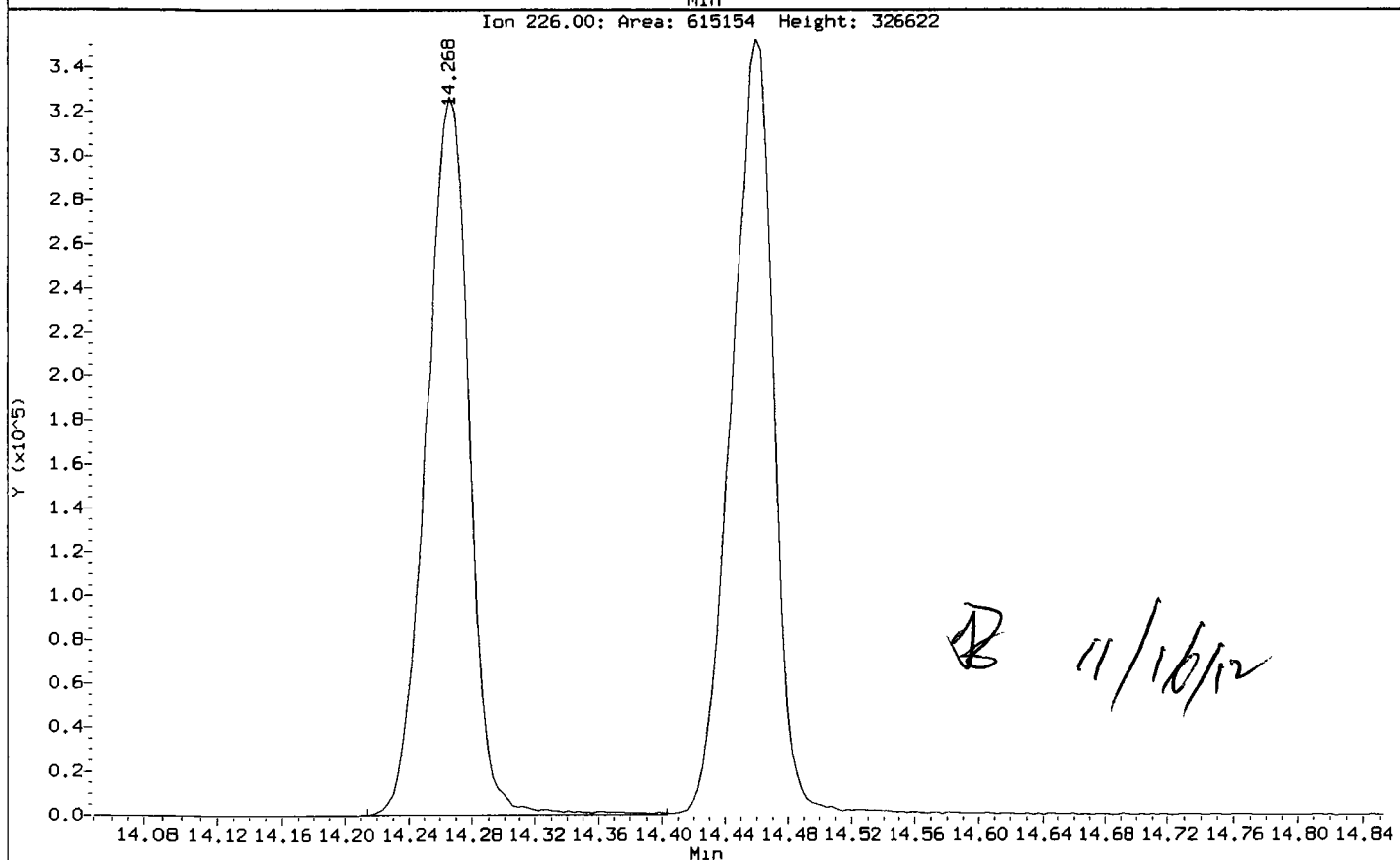
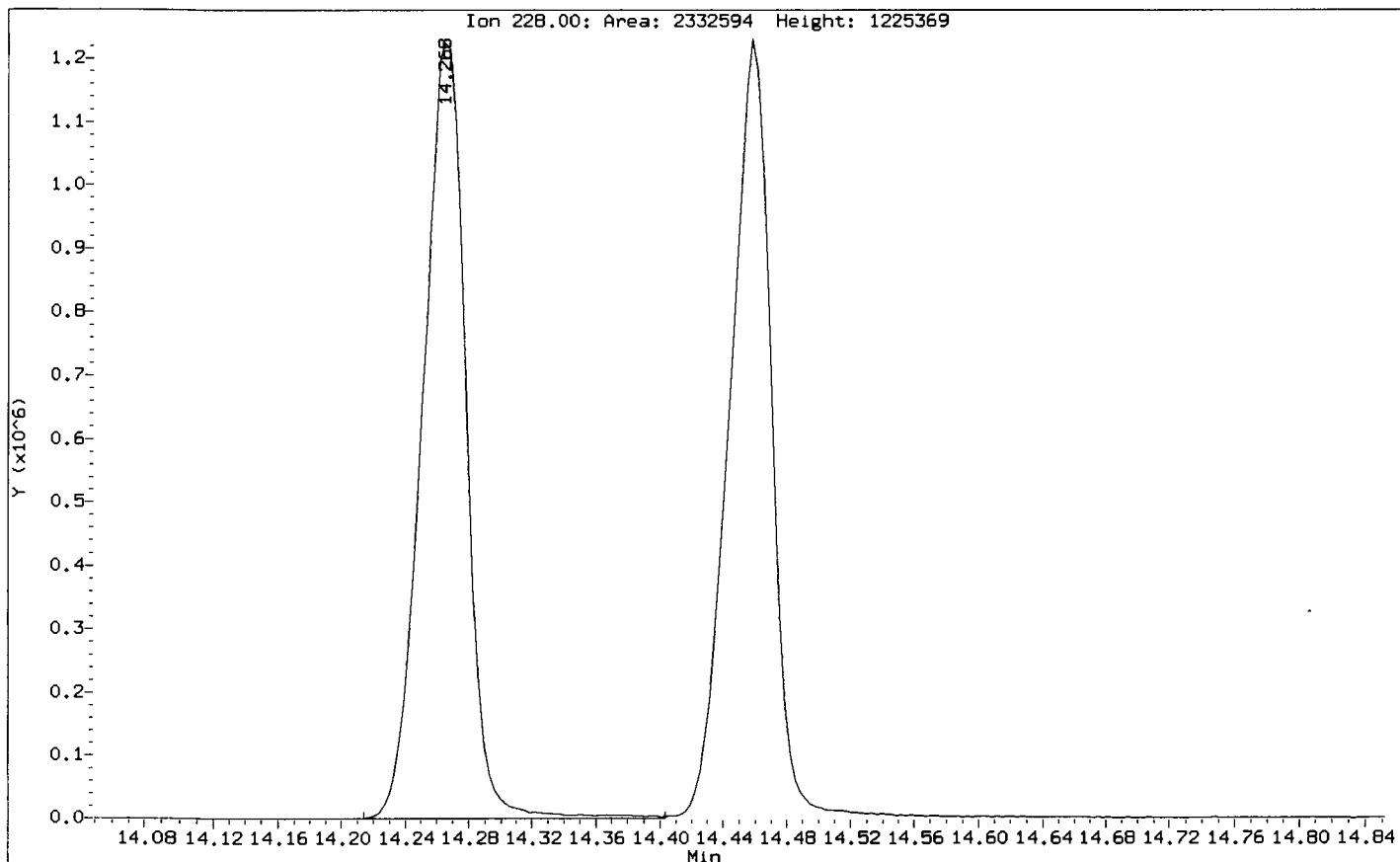


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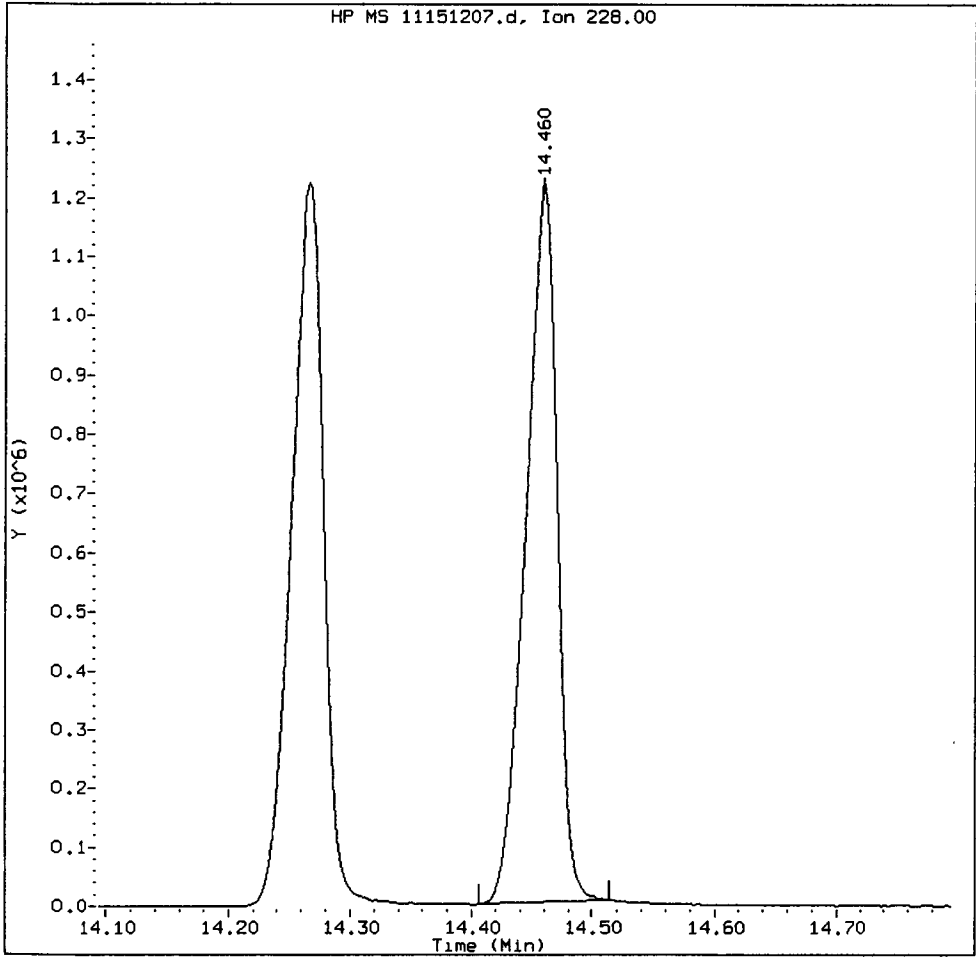
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Injection Date: 15-NOV-2012 21:24  
Instrument: nt11.1  
Client Sample ID: IC101115

Compound: Chrysene  
CAS Number: 218-01-9



IC101115, /chem3/nt11.i/20121115.b/11151207.d

Chrysene Amount: 8.90 Area: 2179568



MANUAL INTEGRATION for Chrysene

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

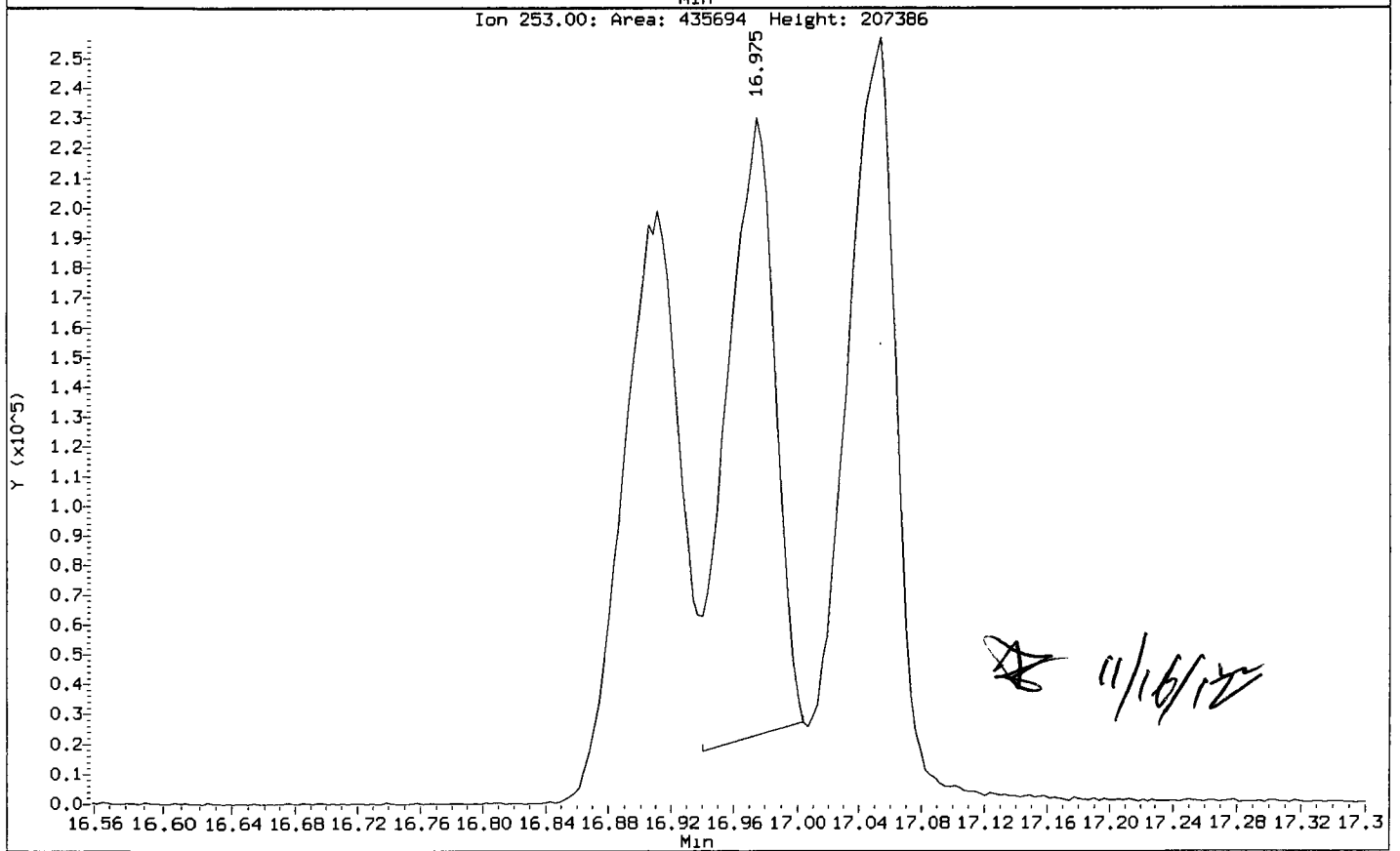
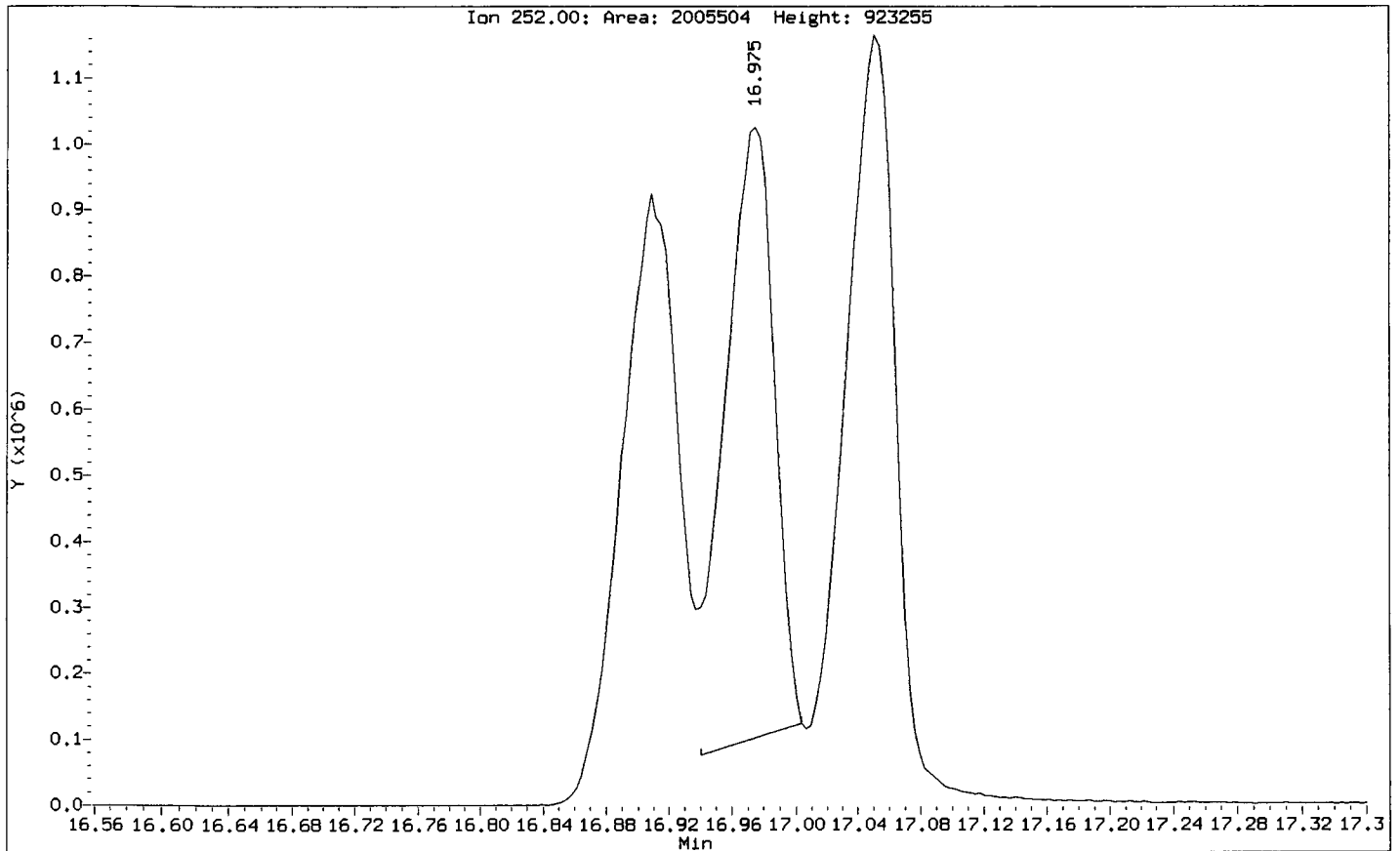
5. Other \_\_\_\_\_

Analyst: *[Signature]*

Date: 1/16/12

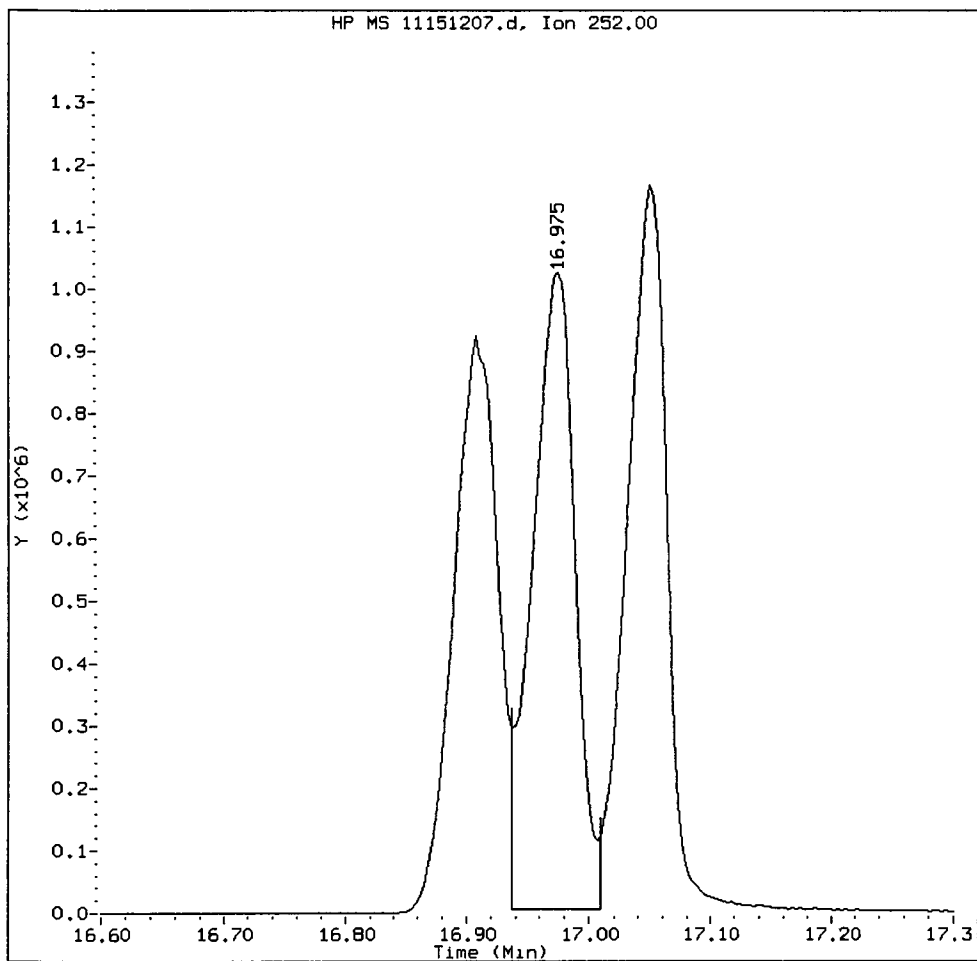
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Injection Date: 15-NOV-2012 21:24  
Instrument: nt11.i  
Client Sample ID: IC101115

Compound: Benzo(k)fluoranthene  
CAS Number: 207-08-9



IC101115, /chem3/nt11.i/20121115.b/11151207.d

Benzo(k)fluoranthene Amount: 9.43 Area: 2477735



MANUAL INTEGRATION for Benzo(k)fluoranthene

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

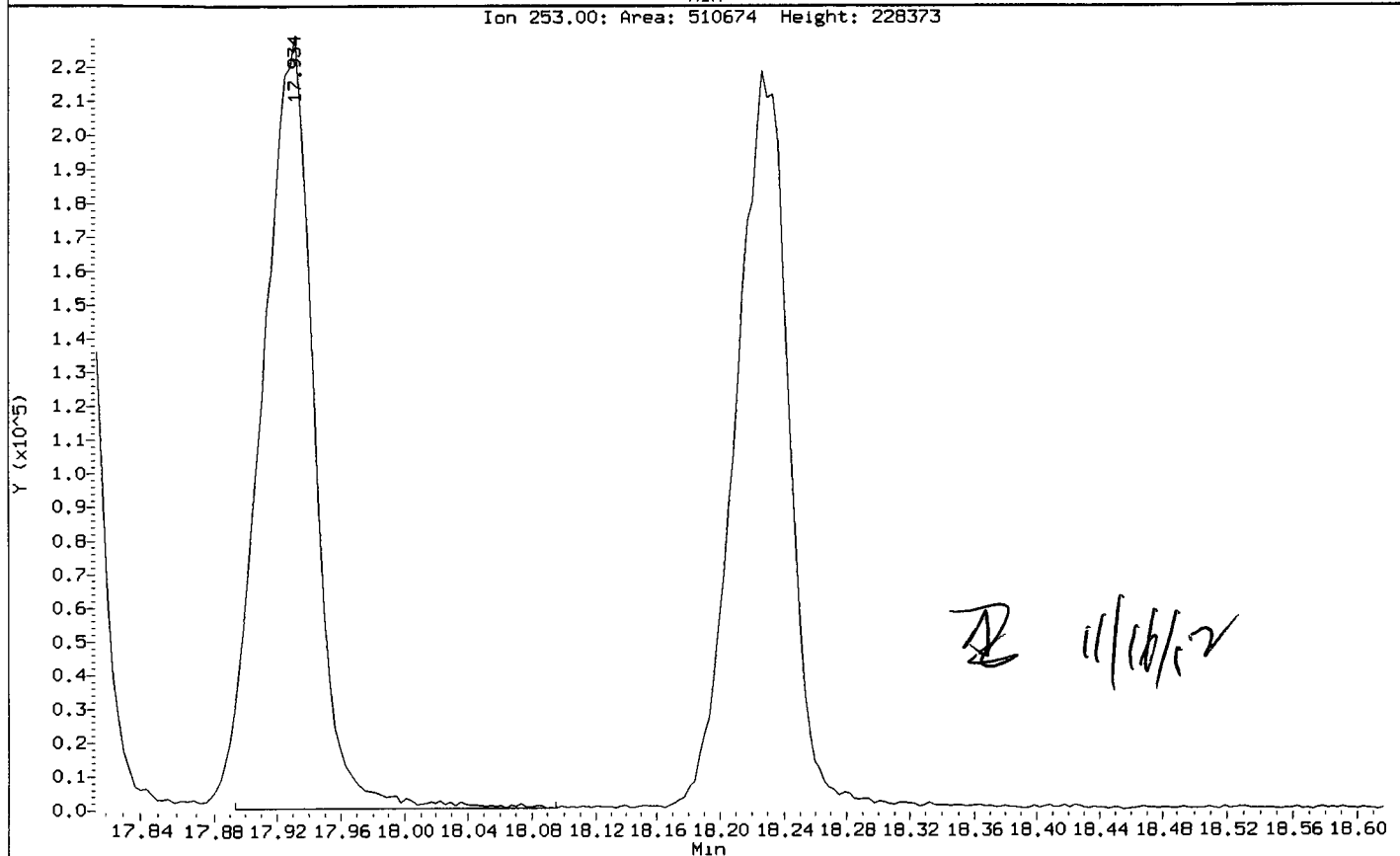
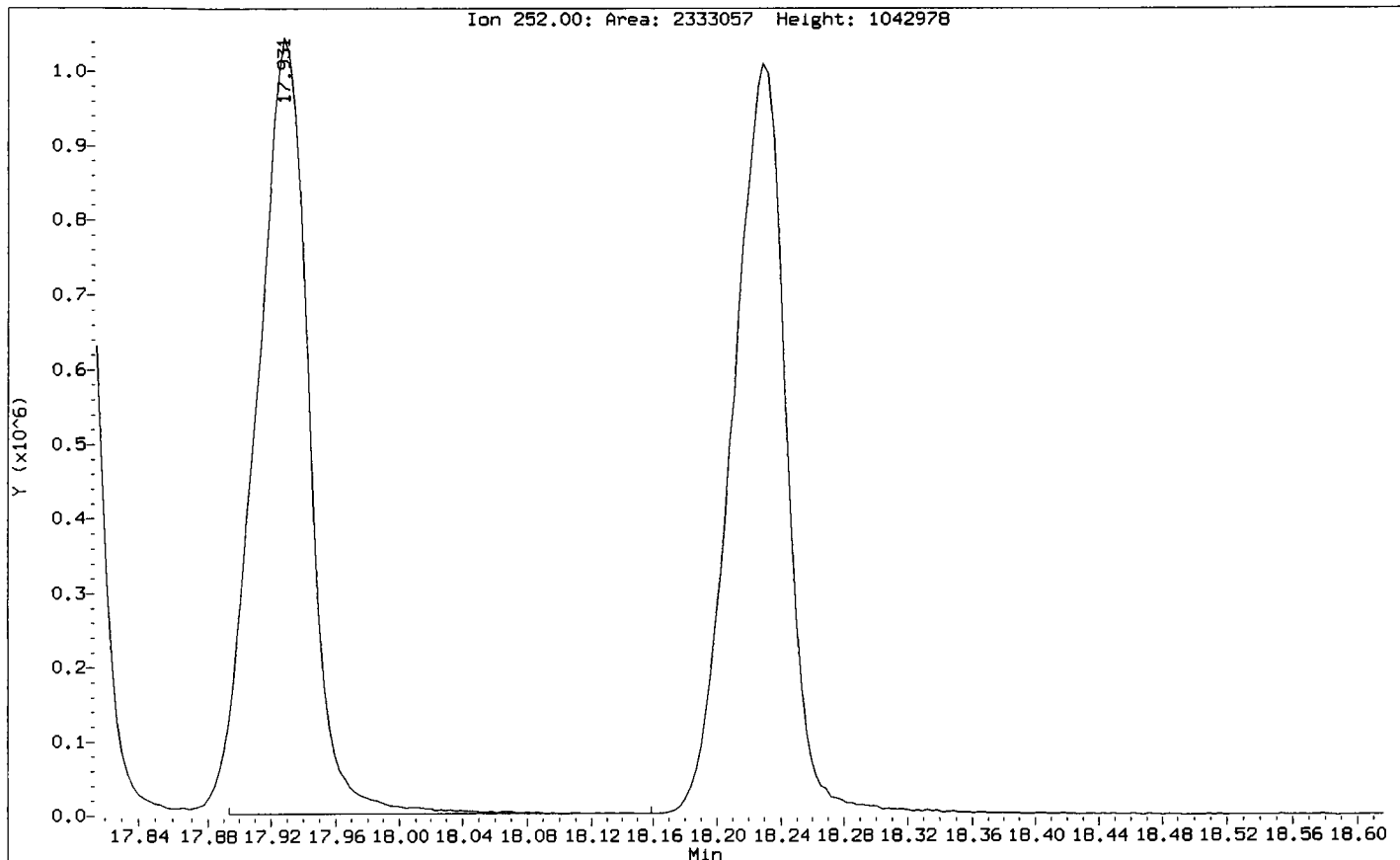
5. Other \_\_\_\_\_

Analyst: AB

Date: 11/16/12

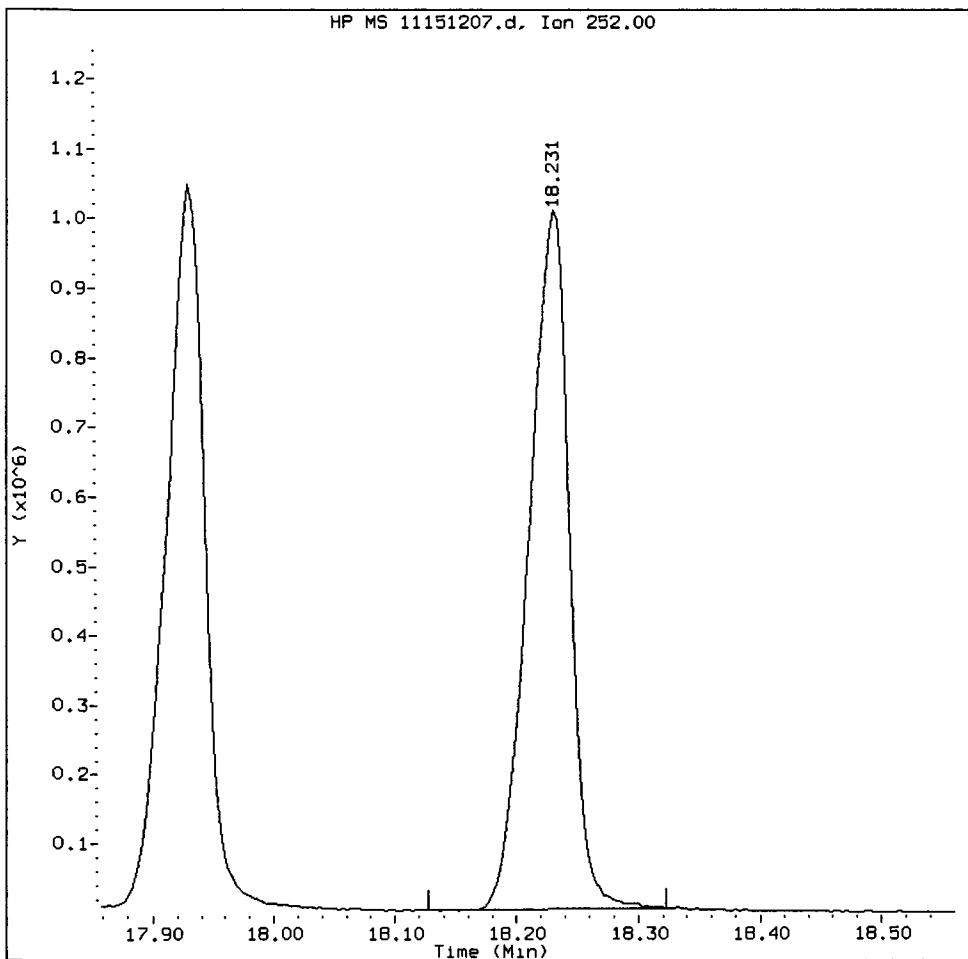
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Injection Date: 15-NOV-2012 21:24  
Instrument: nt11.1  
Client Sample ID: IC101115

Compound: Perylene  
CAS Number:



IC101115, /chem3/nt11.i/20121115.b/11151207.d

Perylene Amount: 9.09 Area: 2316715



MANUAL INTEGRATION for Perylene

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

5. Other \_\_\_\_\_

Analyst: AB

Date: 11/16/12

CO-ELUTION SUMMARY FOR FILE - 11151207.d

Lab ID: IC101115, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 15-NOV-2

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121116.b/11161202.d  
 Lab Smp Id: ICV1115 Client Smp ID: ICV1115  
 Inj Date : 16-NOV-2012 08:51  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : ICV1115  
 Misc Info : 12-  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121116.b/FSIMPNA111512.m  
 Meth Date : 16-Nov-2012 14:29 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 2 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnaf.sub  
 Target Version: 3.50

*11/16/12*

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)

*mass added in*

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	CONCENTRATIONS						
		MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/L)
* 6 Naphthalene-d8	136		5.473	5.473	(1.000)	553949	2.00000	
7 Naphthalene	128		5.501	5.501	(1.005)	707447	2.38963	2.390
\$ 12 2-Methylnaphthalene-d10	152		Compound Not Detected.					
14 2-Methylnaphthalene	141		6.256	6.256	(1.143)	407552	2.44331	2.443
15 1-methylnaphthalene	141		6.448	6.448	(1.178)	387966	2.42832	2.428
21 Acenaphthylene	152		7.635	7.631	(0.986)	667076	2.51549	2.515
* 22 Acenaphthene-d10	164		7.745	7.742	(1.000)	305185	2.00000	
23 Acenaphthene	153		7.795	7.792	(1.007)	369135	2.18883	2.189
11 Dibenzofuran	168		7.947	7.944	(1.026)	591418	2.39381	2.394
25 Fluorene	166		8.420	8.417	(1.087)	464166	2.44453	2.445
* 28 Phenanthrene-d10	188		9.765	9.761	(1.000)	428464	2.00000	
30 Phenanthrene	178		9.799	9.796	(1.004)	624942	2.41463	2.415
31 Anthracene	178		9.840	9.837	(1.008)	606429	2.44076	2.441
36 Fluoranthene	202		11.459	11.456	(1.174)	638802	2.46350	2.463
\$ 253 Fluoranthene-d10	212		Compound Not Detected.					
39 Pyrene	202		11.929	11.923	(0.829)	669509	2.53704	2.537

Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL ( ug/L)	
===== 46 Benzo(a)anthracene	228	14.268	14.258	(0.992)	597696	2.48392	2.484	
* 47 Chrysene-d12	240	14.387	14.381	(1.000)	478871	2.00000		
48 Chrysene	228	14.457	14.454	(1.005)	582904	2.49582	2.496	
51 Benzo(b)fluoranthene	252	16.902	16.896	(0.931)	578883	2.59265	2.593	
52 Benzo(k)fluoranthene	252	16.962	16.956	(0.935)	607872	2.50683	2.507	
251 Benzo(j)fluoranthene	252	17.038	17.032	(0.939)	558823	2.18425	2.184	
54 Benzo(a)pyrene	252	17.922	17.912	(0.987)	584905	2.57903	2.579	
* 56 Perylene-d12	264	18.149	18.143	(1.000)	482446	2.00000		
63 Indeno(1,2,3-cd)pyrene	276	20.471	20.468	(1.128)	717401	2.60919	2.609	
\$ 60 Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.						
62 Dibenzo(a,h)anthracene	278	20.475	20.465	(1.128)	585573	2.61501	2.615	
61 Benzo(g,h,i)perylene	276	21.352	21.342	(1.176)	633441	2.70805	2.708	
57 Perylene	252	18.225	18.215	(1.004)	580168	2.46677	2.467	

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11161202.d  
 Lab Smp Id: ICV1115  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121116.b/FSIMPNA111512.m  
 Misc Info: 12-

Calibration Date: 16-NOV-2012  
 Calibration Time: 09:23  
 Client Smp ID: ICV1115  
 Level: LOW  
 Sample Type: WATER

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	553949	7.33
22 Acenaphthene-d10	284255	142128	568510	305185	7.36
28 Phenanthrene-d10	410660	205330	821320	428464	4.34
47 Chrysene-d12	467886	233943	935772	478871	2.35
56 Perylene-d12	472330	236165	944660	482446	2.14

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.47	4.97	5.97	5.47	0.00
22 Acenaphthene-d10	7.74	7.24	8.24	7.75	0.04
28 Phenanthrene-d10	9.76	9.26	10.26	9.76	0.03
47 Chrysene-d12	14.38	13.88	14.88	14.39	0.04
56 Perylene-d12	18.14	17.64	18.64	18.15	0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

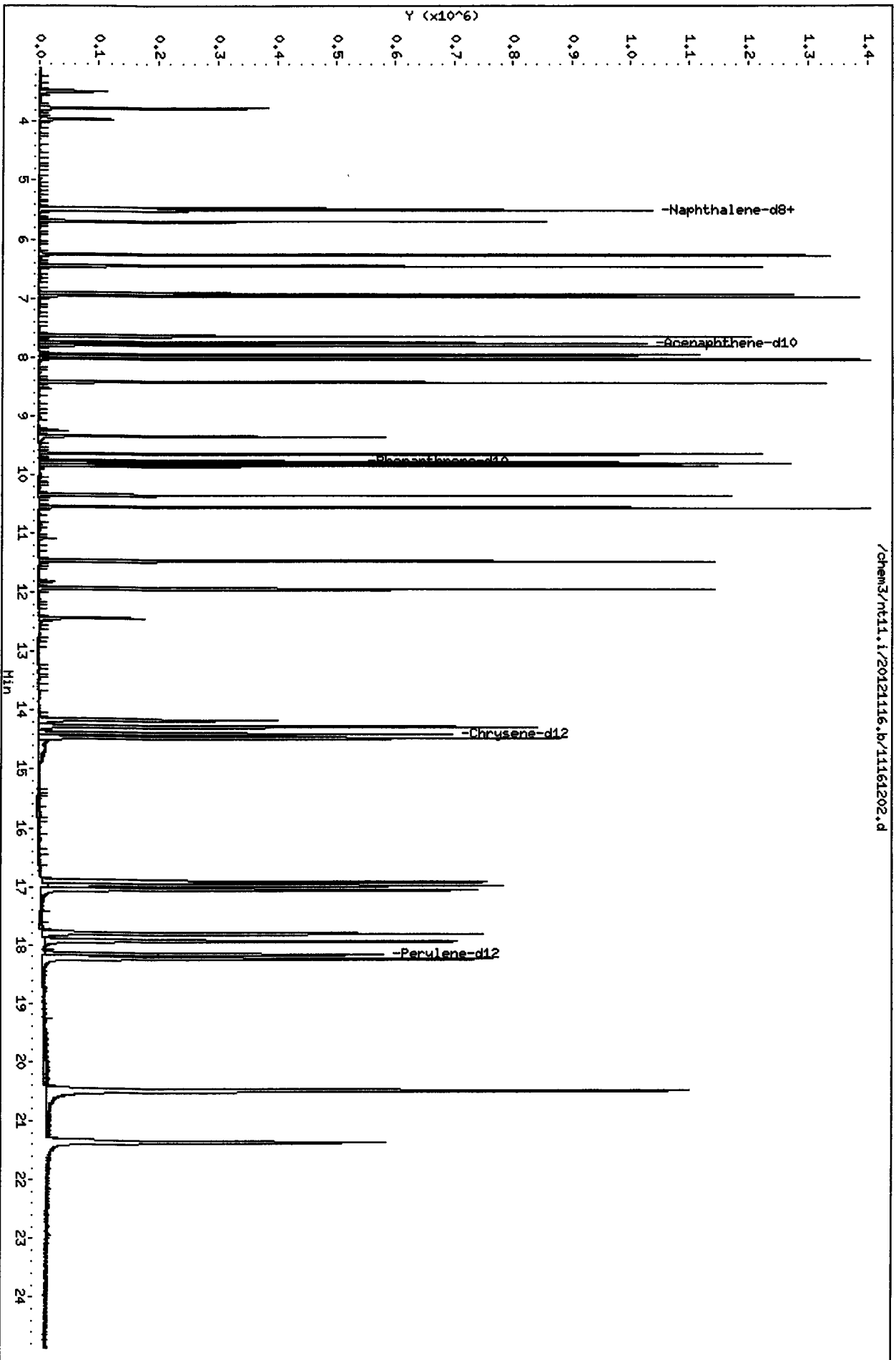
Client Name: Client SDG: 20121116  
 Sample Matrix: LIQUID Fraction: SV  
 Lab Smp Id: ICV1115 Client Smp ID: ICV1115  
 Level: LOW Operator: JZ  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: pnalcs.w.spk Quant Type: ISTD  
 Sublist File: pnaf.sub  
 Method File: /chem3/nt11.i/20121116.b/FSIMPNA111512.m  
 Misc Info: 12-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
7 Naphthalene	2.499	2.390	95.62	37-100
14 2-Methylnaphthalen	2.499	2.443	97.77	34-107
15 1-methylnaphthalen	2.499	2.428	97.17	30-160
21 Acenaphthylene	2.499	2.515	100.66	32-104
23 Acenaphthene	2.499	2.189	87.59	40-102
11 Dibenzofuran	2.499	2.394	95.79	44-104
25 Fluorene	2.499	2.445	97.82	43-114
30 Phenanthrene	2.499	2.415	96.62	43-116
31 Anthracene	2.499	2.441	97.67	30-121
36 Fluoranthene	2.499	2.463	98.58	46-138
39 Pyrene	2.499	2.537	101.52	47-124
46 Benzo (a) anthracene	2.499	2.484	99.40	38-134
48 Chrysene	2.499	2.496	99.87	52-112
51 Benzo (b) fluoranthe	2.499	2.593	103.75	49-123
52 Benzo (k) fluoranthe	2.499	2.507	100.31	50-127
54 Benzo (a) pyrene	2.499	2.579	103.20	24-118
63 Indeno (1, 2, 3-cd) py	2.499	2.609	104.41	32-123
62 Dibenzo (a, h) anthra	2.499	2.615	104.64	30-127
61 Benzo (g, h, i) peryle	2.499	2.708	108.37	26-124
57 Perylene	2.499	2.467	98.71	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthale	2.499	0.000	*	33-107
\$ 253 Fluoranthene-d10	2.499	0.000	*	40-140
\$ 60 Dibenzo (a, h) anthr	2.499	0.000	*	10-142

Data File: /chem3/rt11.1/20121116.b/11161202.d  
Date: 16-NOV-2012 08:51  
Client ID: ICV1115  
Sample Info: ICV1115  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: rt11.1  
Operator: JZ  
Column diameter: 0.25



0200 0500

CO-ELUTION SUMMARY FOR FILE - 11161202.d

Lab ID: ICV1115, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 16-NOV-20

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

**SIM PAH Raw Data**  
**Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: VR58**

**GC/MS SVOA Analyst Notes / Corrective Action Log**

ARI Project ID: VRB Client ID: Anchor QZA, LLC

ARI SOP: 801S(SIM-PNA) 802S(Butyl Tins) 804S(SVOA-8270D) 805S(op-Pest)

Parameter(s): Simp A

Instrument: NT-2 NT-4 NT-6 NT-8 NT11

Curve Date: 11/15/12 Analysis Start Date: 11/17/12

DFTPP Tune Meets Criteria?	<u>YES</u> / NO	Internal Standard Meets Criteria?	<u>YES</u> / NO
DDT Breakdown <20%?	<u>YES</u> / NO / NA	Method Blank In Control?	<u>YES</u> / NO
Peak Tailing Factor ≤2?	<u>YES</u> / NO / NA	LCS / LCSD Recovery In Control?	<u>YES</u> / NO
ICal acceptable?	<u>YES</u> / NO	CCal acceptable?	<u>YES</u> / NO
Q flag applied?	<u>YES</u> / NO	Q flag applied?	<u>YES</u> / NO
Surrogate Recovery in Control?	<u>YES</u> / NO	Special Analysis Criteria Met?	YES / NO / <u>NA</u>
Manual Integrations for ICal?	<u>YES</u> / NO	Manual Integrations for Samples?	<u>Yes</u> / NO

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

*Samples A-J + WB/LCS + MS/MSD + Richton for sample F  
 Forms included. (High BKG) Clean up done*

**Additional Details on Reverse: Yes / No**

Analyst: [Signature] Date: 11/26/12  
 Reviewer: [Signature] Date: 11/26/12



# Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.: GC=US10140004, MS=US10481502

Date: 11/21/12 Analysis: SIAPPA Analyst: [Signature]  
 GC Program: SIAPPA35 Column No: 14123 Column Type: Rxi-17G/MS  
 Instrument Tune (.U or .CT.): 120327 EM Voltage: 2400  
 Calibration File: 11211202 Curve Date: 11/15/12 Injection Vol.: [Signature]

IS/SS	Ical/Ccal	LCS/ICV
<u>198-3</u>	<u>2070-1</u>	

## Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20121121.b

Time	Filename	LabID	ClientID	DF	
1	1127	11211201.d	DFTPP1121	DFTPP1121	1   NO ISTDs FOUND
2	1142	11211202.d	CC1121	CC1121	1   5.44 623990   7.71 341705   9.74 510327   14.34 629732   18.10 635766
3	1212	11211203.d	VR58MBS1	VR58MBS1	1   5.44 631972   7.71 349117   9.73 519854   14.34 593617   18.09 585657
4	1242	11211204.d	VR58LCSS1	VR58LCSS1	1   5.44 683439   7.71 386137   9.73 569235   14.34 645376   18.09 647286
5	1312	11211205.d	VR58A	SG-10-S-E-12	1   5.43 719541   7.71 400427   9.74 553782   14.37 566871   18.15 554832
6	1342	11211206.d	VR58B	SG-11-S-E-12	3   5.44 668211   7.71 354888   9.74 508936   14.37 517191   18.14 407786
7	1412	11211207.d	VR58C	SG-12-S-E-12	1   5.44 719301   7.71 403550   9.74 537761   14.41 513773   18.15 380719
8	1442	11211208.d	VR58D	SG-13-S-E-12	1   5.44 662371   7.71 362737   9.74 494835   14.40 424844   18.16 290306
9	1512	11211209.d	VR58E	SG-13-S-E-du	1   5.44 672095   7.71 359541   9.74 481580   14.38 458848   18.15 268309
10	1542	11211210.d	VR58F	SG-14-S-E-12	1   5.44 693272   7.72 384101   9.74 515808   14.38 523767   18.15 316500
11	1612	11211211.d	VR58G	SG-15-S-E-12	1   5.44 744503   7.71 417360   9.73 590569   14.34 672563   18.10 385411
12	1642	11211212.d	VR58H	SG-16-S-E-12	1   5.44 726451   7.71 410219   9.73 603315   14.34 671490   18.10 372077
13	1712	11211213.d	VR58HMS	SG-16-S-E-12	1   5.43 783444   7.71 447528   9.73 655016   14.34 715436   18.10 436071
14	1741	11211214.d	VR58HMSD	SG-16-S-E-12	1   5.44 792411   7.71 446361   9.73 655829   14.34 722085   18.10 426384
15	1811	11211215.d	VR58I	SG-17-S-E-12	1   5.43 814587   7.71 466527   9.73 652847   14.37 680189   18.14 386826
16	1841	11211216.d	VR58J	SG-01-S-C-12	1   5.43 833752   7.71 475491   9.73 685321   14.34 743883   18.10 419279
17	1911	11211217.d	VR58F	SG-14-S-E-12	3   5.44 755637   7.71 424260   9.74 633560   14.35 693914   18.11 365510

[Signature]  
11/26/12

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/20121121.b

ARI Job No.: CC11 Method: FSIMPNA11512.m Instrument: nt11.i Date: 21-NOV-2012

*DE 11/26/12*

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1142	11211202.d	CC1121	CC1121	1	NO MANUAL INTEGRATION
1212	11211203.d	VR58MBS1	VR58MBS1	1	NO MANUAL INTEGRATION
1242	11211204.d	VR58LCSS1	VR58LCSS1	1	NO MANUAL INTEGRATION
1312	11211205.d	VR58A	SG-10-S-E	1	Benzo(k)fluoranthene, Benzo(j)fluoranthene, 1-methylnaphthalene,
1342	11211206.d	VR58B	SG-11-S-E	3	Benzo(k)fluoranthene, Benzo(j)fluoranthene, 1-methylnaphthalene, Dibenzo(a,h)anthracene-dl4,
1412	11211207.d	VR58C	SG-12-S-E	1	Anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(j)fluoranthene, 1-methylnaphthalene,
1442	11211208.d	VR58D	SG-13-S-E	1	Anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(j)fluoranthene, 1-methylnaphthalene,
1512	11211209.d	VR58E	SG-13-S-E	1	Anthracene, Benzo(k)fluoranthene, Benzo(j)fluoranthene, 1-methylnaphthalene,
1542	11211210.d	VR58F	SG-14-S-E	1	Dibenzofuran, Benzo(k)fluoranthene,
1612	11211211.d	VR58G	SG-15-S-E	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(j)fluoranthene,
1642	11211212.d	VR58H	SG-16-S-E	1	Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(j)fluoranthene,
1712	11211213.d	VR58HMS	SG-16-S-E	1	NO MANUAL INTEGRATION
1741	11211214.d	VR58HMSD	SG-16-S-E	1	NO MANUAL INTEGRATION
1811	11211215.d	VR58I	SG-17-S-E	1	Anthracene, Benzo(j)fluoranthene,
1841	11211216.d	VR58J	SG-01-S-C	1	NO MANUAL INTEGRATION
1911	11211217.d	VR58F	SG-14-S-E	3	Benzo(k)fluoranthene, Benzo(j)fluoranthene,

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20121121.b


Instrument: nt11.i Date: 21-NOV-2012 Method: FSIMPNA111512.m

INITIAL CAL: 15-NOV-2012

Compound	%RSD or R <sup>2</sup>
-----	
NO Q-FLAGS	
-----	

CONTINUING CAL: 21-NOV-2012

Compound	%D
-----	
NO Q-FLAGS	
-----	

 11/21/12

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 21-NOV-2012 11:42  
 Lab File ID: 11211202.d Init. Cal. Date(s): 15-NOV-2012 15-NOV-2012  
 Analysis Type: Init. Cal. Times: 18:53 21:24  
 Lab Sample ID: CC1121 Quant Type: ISTD  
 Method: /chem3/nt11.i/20121121.b/FSIMPNA111512.m

*B* 11/21/12

COMPOUND	RRF / AMOUNT	RF2	MIN		MAX		CURVE TYPE
			RRF	%D / %DRIFT	%D / %DRIFT		
7 Naphthalene	1.06886	1.01923	0.100	-4.64349	20.00000	Averaged	
\$ 12 2-Methylnaphthalene-d10	0.68335	0.66416	0.100	-2.80727	20.00000	Averaged	
14 2-Methylnaphthalene	0.60223	0.59411	0.100	-1.34897	20.00000	Averaged	
15 1-methylnaphthalene	0.57683	0.55520	0.100	-3.74977	20.00000	Averaged	
21 Acenaphthylene	1.73788	1.81051	0.100	4.17929	20.00000	Averaged	
23 Acenaphthene	1.10520	1.06752	0.100	-3.40893	20.00000	Averaged	
11 Dibenzofuran	1.61909	1.59020	0.100	-1.78436	20.00000	Averaged	
25 Fluorene	1.24435	1.27882	0.100	2.76975	20.00000	Averaged	
30 Phenanthrene	1.20811	1.19226	0.100	-1.31169	20.00000	Averaged	
31 Anthracene	1.15976	1.24876	0.100	7.67339	20.00000	Averaged	
36 Fluoranthene	1.21040	1.25434	0.100	3.62979	20.00000	Averaged	
39 Pyrene	1.10215	1.05143	0.100	-4.60165	20.00000	Averaged	
46 Benzo(a)anthracene	1.00497	0.97184	0.100	-3.29677	20.00000	Averaged	
48 Chrysene	0.97543	0.94437	0.100	-3.18365	20.00000	Averaged	
51 Benzo(b)fluoranthene	0.92561	0.85046	0.100	-8.11950	20.00000	Averaged	
52 Benzo(k)fluoranthene	1.00524	1.12335	0.100	11.74927	20.00000	Averaged	
251 Benzo(j)fluoranthene	1.06060	1.15105	0.100	8.52813	20.00000	Averaged	
54 Benzo(a)pyrene	0.94018	0.98920	0.100	5.21360	20.00000	Averaged	
63 Indeno(1,2,3-cd)pyrene	1.13982	1.21044	0.100	6.19573	20.00000	Averaged	
\$ 60 Dibenzo(a,h)anthracene-d14	0.66304	0.74869	0.100	12.91805	20.00000	Averaged	
62 Dibenzo(a,h)anthracene	0.92830	1.01266	0.100	9.08746	20.00000	Averaged	
61 Benzo(g,h,i)perylene	0.96969	1.04335	0.100	7.59667	20.00000	Averaged	
57 Perylene	0.97501	0.95264	0.100	-2.29416	20.00000	Averaged	

Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211202.d  
Lab Smp Id: CC1121 Client Smp ID: CC1121  
Inj Date : 21-NOV-2012 11:42  
Operator : JZ Inst ID: nt11.i  
Smp Info : CC1121  
Misc Info : 12-  
Comment : 1ul Injection  
Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Meth Date : 21-Nov-2012 15:20 jianqing Quant Type: ISTD  
Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
Als bottle: 2 Continuing Calibration Sample  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: pnax.sub  
Target Version: 3.50

*Handwritten signature and date: 11/21/12*

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
* 6 Naphthalene-d8	136	5.438	5.438	(1.000)	623990	2.00000	
7 Naphthalene	128	5.467	5.467	(1.005)	794988	2.50000	2.384
\$ 12 2-Methylnaphthalene-d10	152	6.174	6.174	(1.135)	518039	2.50000	2.430
14 2-Methylnaphthalene	141	6.221	6.221	(1.144)	463398	2.50000	2.466
15 1-methylnaphthalene	141	6.413	6.413	(1.179)	433049	2.50000	2.406
21 Acenaphthylene	152	7.600	7.600	(0.985)	773327	2.50000	2.604
* 22 Acenaphthene-d10	164	7.714	7.714	(1.000)	341705	2.00000	
23 Acenaphthene	153	7.761	7.761	(1.006)	455973	2.50000	2.415
11 Dibenzofuran	168	7.912	7.912	(1.026)	679227	2.50000	2.455
25 Fluorene	166	8.389	8.389	(1.088)	546224	2.50000	2.569
* 28 Phenanthrene-d10	188	9.736	9.736	(1.000)	510327	2.00000	
30 Phenanthrene	178	9.768	9.768	(1.003)	760553	2.50000	2.467
31 Anthracene	178	9.809	9.809	(1.007)	796593	2.50000	2.692
36 Fluoranthene	202	11.425	11.425	(1.173)	800151	2.50000	2.591
39 Pyrene	202	11.892	11.892	(0.829)	827653	2.50000	2.385
46 Benzo(a)anthracene	228	14.224	14.224	(0.992)	765000	2.50000	2.418
* 47 Chrysene-d12	240	14.343	14.343	(1.000)	629732	2.00000	
48 Chrysene	228	14.413	14.413	(1.005)	743378	2.50000	2.420
51 Benzo(b)fluoranthene	252	16.858	16.858	(0.931)	675864	2.50000	2.297
52 Benzo(k)fluoranthene	252	16.918	16.918	(0.935)	892732	2.50000	2.794
251 Benzo(j)fluoranthene	252	16.994	16.994	(0.939)	914750	2.50000	2.713
54 Benzo(a)pyrene	252	17.878	17.878	(0.988)	786123	2.50000	2.630
* 56 Perylene-d12	264	18.102	18.102	(1.000)	635766	2.00000	
63 Indeno(1,2,3-cd)pyrene	276	20.431	20.431	(1.129)	961947	2.50000	2.655
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.339	20.339	(1.124)	594991	2.50000	2.823
62 Dibenzo(a,h)anthracene	278	20.427	20.427	(1.128)	804770	2.50000	2.727
61 Benzo(g,h,i)perylene	276	21.298	21.298	(1.177)	829159	2.50000	2.690

Compounds	QUANT SIG						AMOUNTS	
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)	
-----	----	==	-----	-----	-----	-----	-----	
57 Perylene	252	18.177	18.177	(1.004)	757069	2.50000	2.443	

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt11.i  
Lab File ID: 11211202.d  
Lab Smp Id: CC1121  
Analysis Type: SV  
Quant Type: ISTD  
Operator: JZ  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA11512.m  
Misc Info: 12-

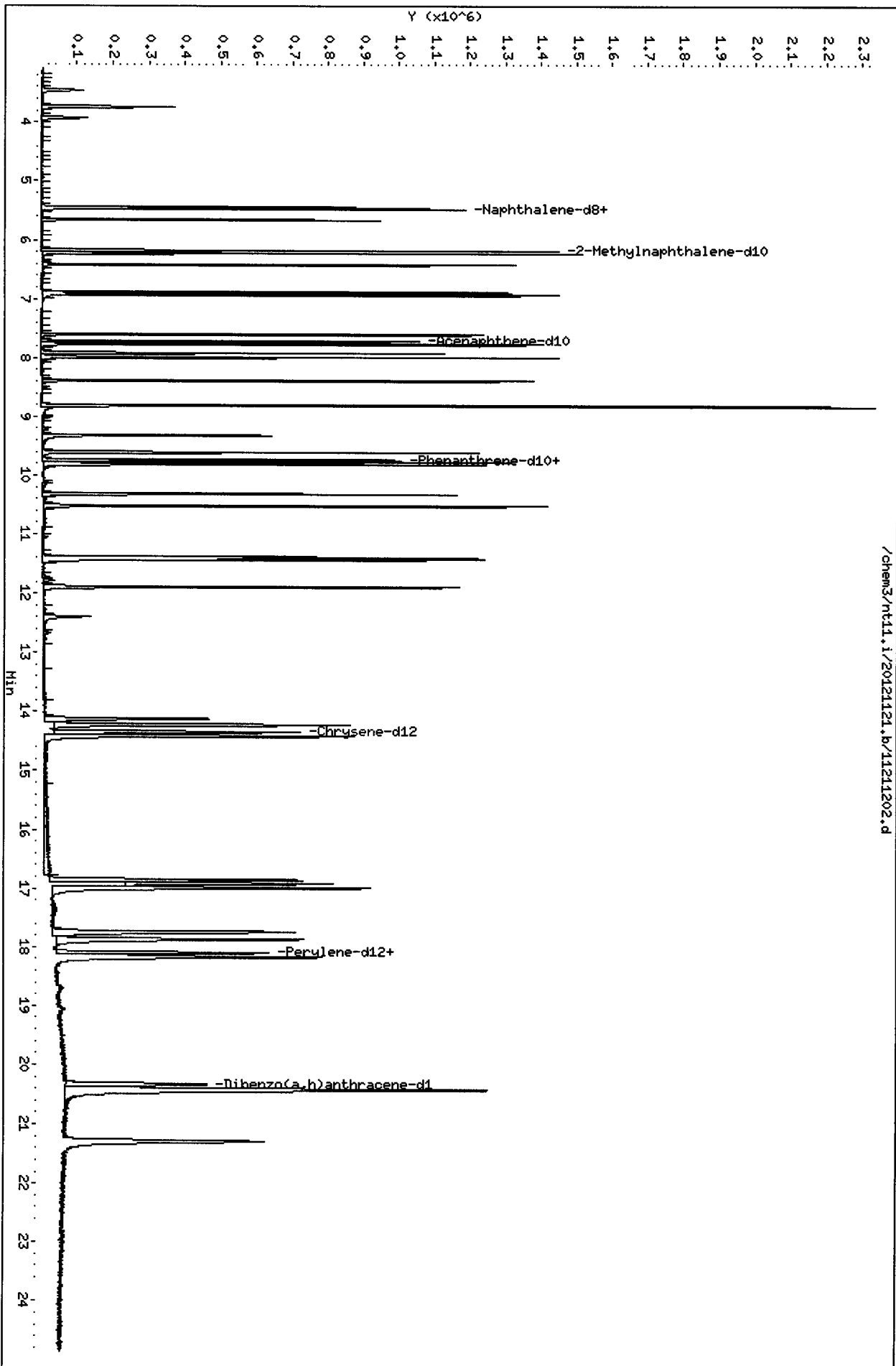
Calibration Date: 21-NOV-2012  
Calibration Time: 11:42  
Client Smp ID: CC1121  
Level:  
Sample Type:

Test Mode:  
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	623990	20.90
22 Acenaphthene-d10	284255	142128	568510	341705	20.21
28 Phenanthrene-d10	410660	205330	821320	510327	24.27
47 Chrysene-d12	467886	233943	935772	629732	34.59
56 Perylene-d12	472330	236165	944660	635766	34.60

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	0.00
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	0.00
28 Phenanthrene-d10	9.74	9.24	10.24	9.74	0.00
47 Chrysene-d12	14.34	13.84	14.84	14.34	0.00
56 Perylene-d12	18.10	17.60	18.60	18.10	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.



110000 : 00001



CO-ELUTION SUMMARY FOR FILE - 11211202.d

Lab ID: CC1121, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-201

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Date : 21-NOV-2012 11:27

Client ID: DFTPP1121

Instrument: nt11.i

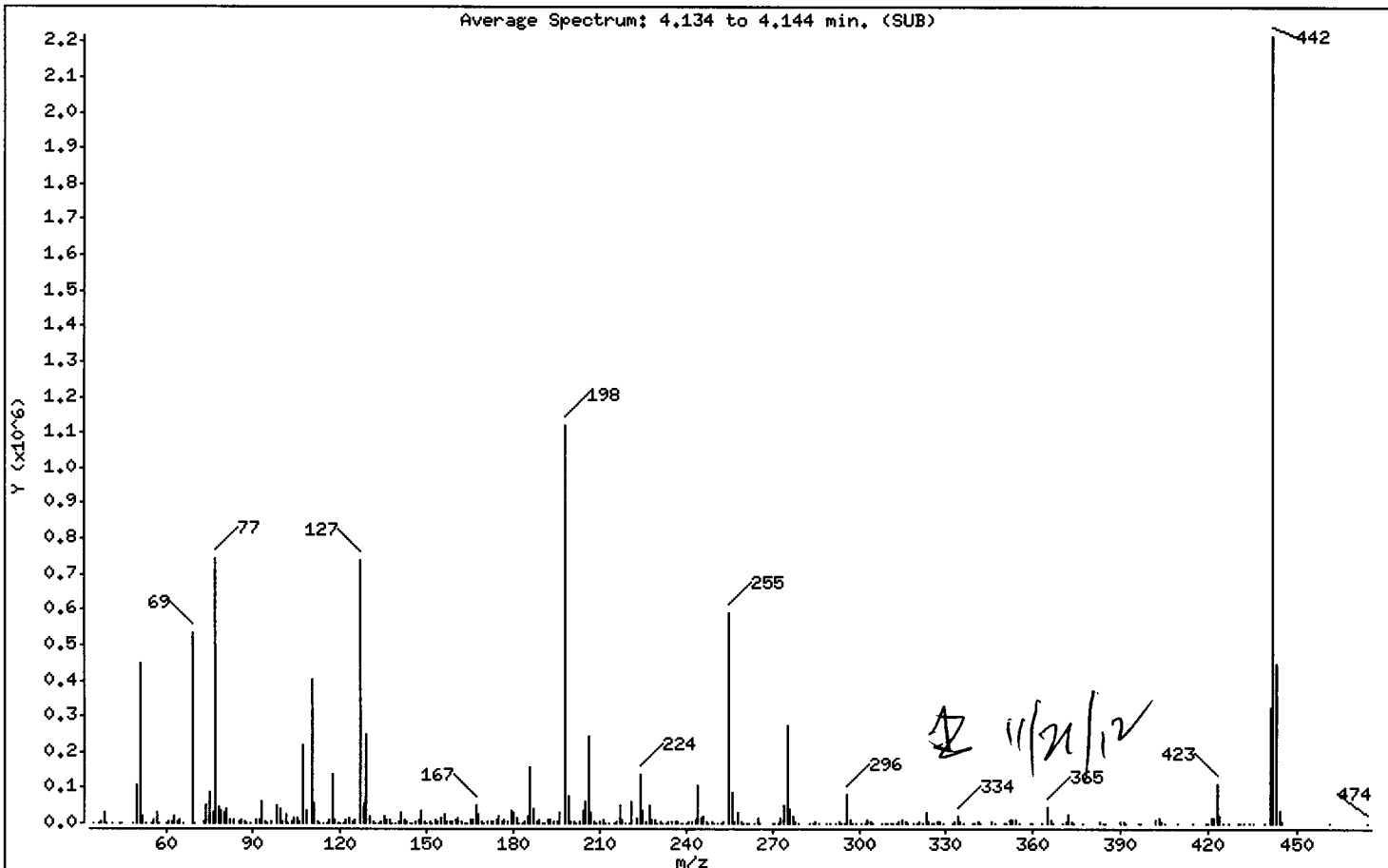
Sample Info: DFTPP1121

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	40.14
68	Less than 2.00% of mass 69	0.00 ( 0.00)
69	Mass 69 relative abundance	47.85
70	Less than 2.00% of mass 69	0.13 ( 0.28)
127	10.00 - 80.00% of mass 198	66.18
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.62
275	10.00 - 60.00% of mass 198	24.35
365	Greater than 1.00% of mass 198	4.28
441	0.01 - 24.00% of mass 442	29.31 ( 14.81)
442	50.00 - 200.00% of mass 198	197.94
443	15.00 - 24.00% of mass 442	39.90 ( 20.16)

Date : 21-NOV-2012 11:27

Client ID: DFTPP1121

Instrument: nt11.i

Sample Info: DFTPP1121

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: 11211201.d

Spectrum: Average Spectrum: 4.134 to 4.144 min. (SUB)

Location of Maximum: 442.00

Number of points: 325

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	335	134.00	6419	218.00	9057	315.00	8422
37.00	842	135.00	20832	219.00	1438	316.00	5296
38.00	3611	136.00	7699	220.00	286	317.00	1099
39.00	30048	137.00	9684	221.00	59696	319.00	224
40.00	1806	138.00	2363	223.00	14486	320.00	604
42.00	554	139.00	1738	224.00	139776	321.00	3126
44.00	25	140.00	2810	225.00	33736	322.00	1331
45.00	884	141.00	30600	226.00	2640	323.00	31304
49.00	1301	142.00	8360	227.00	49448	324.00	6358
50.00	105912	143.00	6706	228.00	8019	325.00	940
51.00	449600	144.00	932	229.00	9404	326.00	474
52.00	22360	145.00	1670	230.00	2196	327.00	4421
53.00	819	146.00	4096	231.00	5037	328.00	4010
55.00	2434	147.00	12633	232.00	977	329.00	648
56.00	12626	148.00	33448	233.00	529	332.00	2332
57.00	32800	149.00	5812	234.00	3065	333.00	3453
58.00	881	150.00	1156	235.00	4186	334.00	19216
60.00	229	151.00	6538	236.00	2903	335.00	5016
61.00	5246	152.00	847	237.00	6161	336.00	714
62.00	7150	153.00	10549	238.00	738	339.00	829
63.00	19040	154.00	5611	239.00	727	340.00	441
64.00	3320	155.00	16624	240.00	1780	341.00	5092
65.00	11671	156.00	24120	241.00	4245	342.00	1188
66.00	1021	157.00	4641	242.00	7643	346.00	6992
69.00	536000	158.00	3938	243.00	8464	347.00	632
70.00	1501	159.00	3826	244.00	107608	350.00	598
73.00	3703	160.00	8752	245.00	15246	351.00	665
74.00	51552	161.00	13186	246.00	18904	352.00	8437
75.00	88800	162.00	4455	247.00	4197	353.00	8657
76.00	30136	163.00	1242	248.00	505	354.00	12702
77.00	745536	164.00	2056	249.00	5042	355.00	2521
78.00	48224	165.00	10796	250.00	1688	359.00	682
79.00	37728	166.00	8284	251.00	1135	360.00	373
80.00	30920	167.00	52384	252.00	1155	363.00	193
81.00	42672	168.00	24184	253.00	4613	365.00	47888

Date : 21-NOV-2012 11:27

Client ID: DFTPP1121

Instrument: nt11.i

Sample Info: DFTPP1121

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: 11211201.d

Spectrum: Average Spectrum: 4.134 to 4.144 min. (SUB)

Location of Maximum: 442.00

Number of points: 325

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	11978	169.00	3607	255.00	589632	366.00	7905
83.00	11145	170.00	1533	256.00	84496	367.00	550
85.00	6498	171.00	3157	257.00	5886	370.00	1552
86.00	8291	172.00	3685	258.00	30552	371.00	3860
87.00	6223	173.00	6003	259.00	4896	372.00	23096
88.00	1253	174.00	12638	260.00	1107	373.00	6205
89.00	1241	175.00	22320	261.00	1441	374.00	758
91.00	11473	176.00	7471	262.00	285	377.00	813
92.00	10258	177.00	7936	264.00	1411	383.00	5655
93.00	61864	178.00	3455	265.00	14645	384.00	2508
94.00	3060	179.00	37936	266.00	2263	385.00	633
95.00	1374	180.00	30480	270.00	1242	390.00	2976
96.00	4079	181.00	13465	271.00	1944	391.00	3040
98.00	48936	182.00	1866	272.00	2401	392.00	2143
99.00	42592	183.00	2028	273.00	17568	396.00	216
100.00	3966	184.00	3203	274.00	52984	397.00	358
101.00	25368	185.00	18800	275.00	272704	401.00	2363
102.00	1914	186.00	159296	276.00	40696	402.00	9013
103.00	7332	187.00	42344	277.00	21280	403.00	15675
104.00	15050	188.00	4492	278.00	4078	404.00	5332
105.00	14116	189.00	8609	279.00	1238	405.00	710
106.00	2960	190.00	1582	283.00	2426	410.00	282
107.00	220992	191.00	2412	284.00	2186	415.00	814
108.00	35360	192.00	10709	285.00	3412	419.00	198
110.00	401856	193.00	12016	286.00	886	420.00	186
111.00	57344	194.00	2892	289.00	1521	421.00	13833
112.00	6390	195.00	2639	290.00	1258	422.00	15030
113.00	1829	196.00	31616	292.00	1439	423.00	112136
114.00	573	198.00	1119744	293.00	7436	424.00	22168
115.00	364	199.00	74136	294.00	1929	425.00	2159
116.00	12043	200.00	4585	295.00	1008	427.00	184
117.00	135680	201.00	5254	296.00	81368	430.00	248
118.00	9326	202.00	2447	297.00	11795	431.00	291
119.00	1357	203.00	5997	298.00	926	432.00	401
120.00	2394	204.00	33264	299.00	209	434.00	742

Date : 21-NOV-2012 11:27

Client ID: DFTPP1121

Instrument: nt11.i

Sample Info: DFTPP1121

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: 11211201.d

Spectrum: Average Spectrum: 4.134 to 4.144 min. (SUB)

Location of Maximum: 442.00

Number of points: 325

m/z	Y	m/z	Y	m/z	Y	m/z	Y
121.00	1445	205.00	60032	301.00	1951	435.00	388
122.00	12507	206.00	246336	302.00	1200	439.00	452
123.00	17648	207.00	30608	303.00	9494	441.00	328320
124.00	7250	208.00	6138	304.00	3600	442.00	2216960
125.00	7941	209.00	2255	305.00	167	443.00	446912
127.00	741376	210.00	3704	308.00	1757	444.00	38208
128.00	57280	211.00	9042	309.00	245	445.00	3278
129.00	248192	212.00	1340	310.00	1543	461.00	186
130.00	21840	213.00	468	311.00	359	474.00	175
131.00	4758	215.00	1532	312.00	199		
132.00	1773	216.00	4440	313.00	1750		
133.00	2098	217.00	52464	314.00	4621		

Date : 21-NOV-2012 11:27

Client ID: DFTPP1121

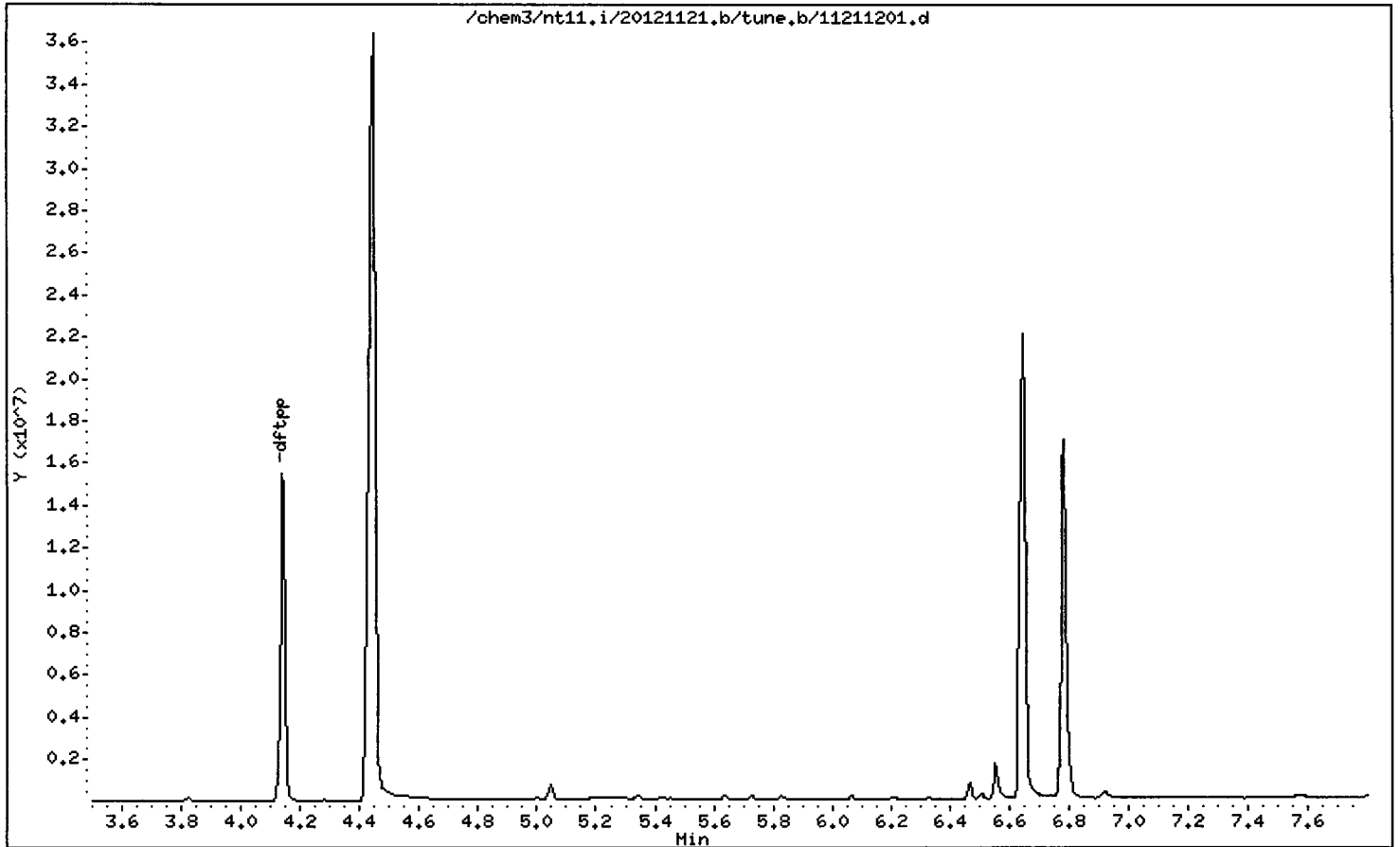
Instrument: nt11.i

Sample Info: DFTPP1121

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0.25



Analytical Resources Inc.  
ABN by sw846 8270C  
DDT Breakdown Report

Data file: /chem3/nt11.i/20121121.b/ddt.b/11211201.d ARI ID: DDT1121  
Method: /chem3/nt11.i/20121121.b/ddt.b/sw846ddt.m Misc:  
Analysis Date: 21-NOV-2012 11:27 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.449	7044409
Benzidine	6.644	10425265
4,4'-DDE	6.068	17774
4,4'-DDD	6.554	347006
4,4'-DDT	6.783	3654103

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

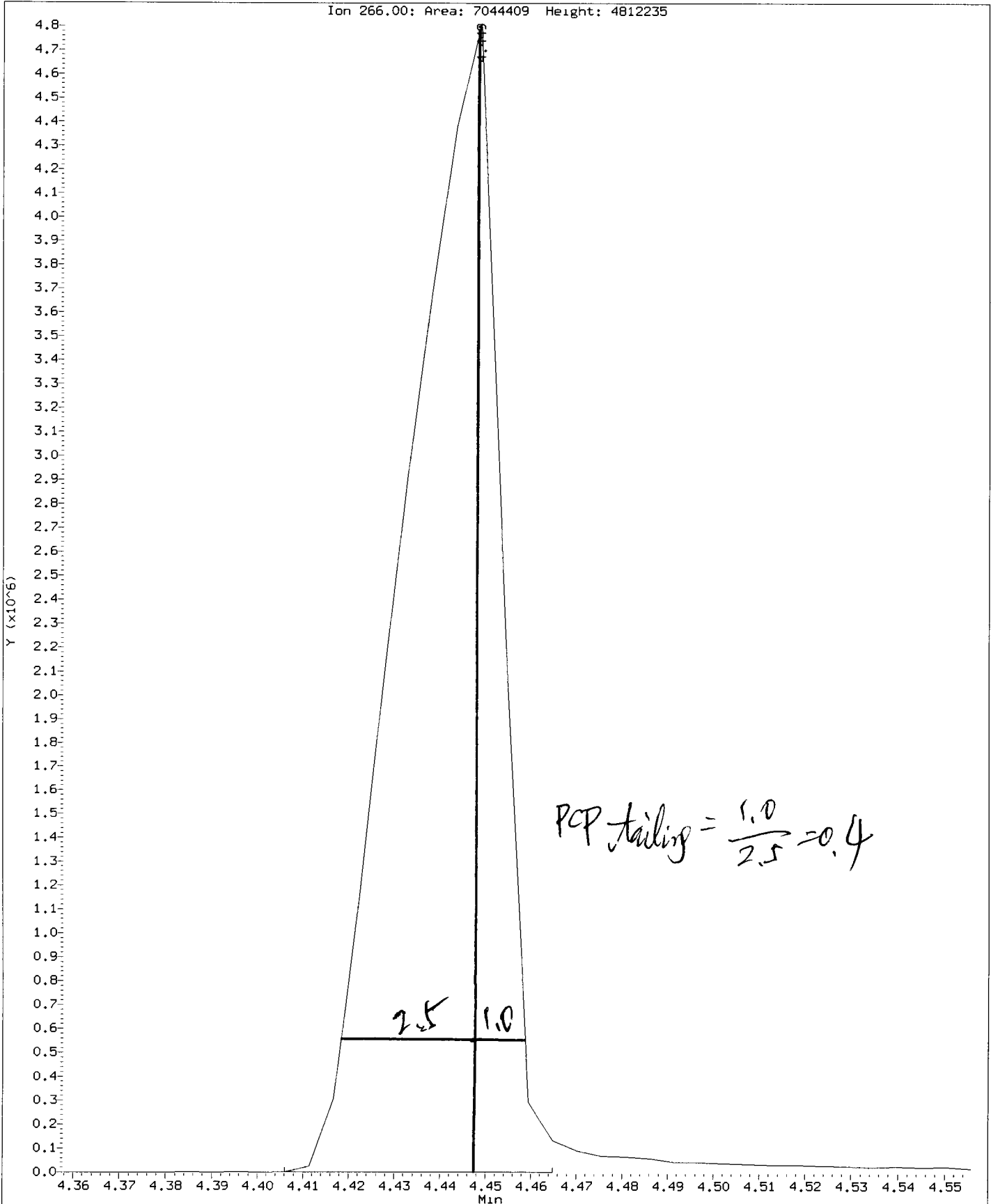
$$\text{DDT Percent Breakdown} = \frac{(17774 + 347006) * 100}{(17774 + 347006 + 3654103)}$$

DDT Percent Breakdown = 9.1 %

*OK*  
*11/21/12*

Data File: /chem3/nt11.1/20121121.b/ddt.b/11211201.d  
Injection Date: 21-NOV-2012 11:27  
Instrument: nt11.1  
Client Sample ID: DDT1121

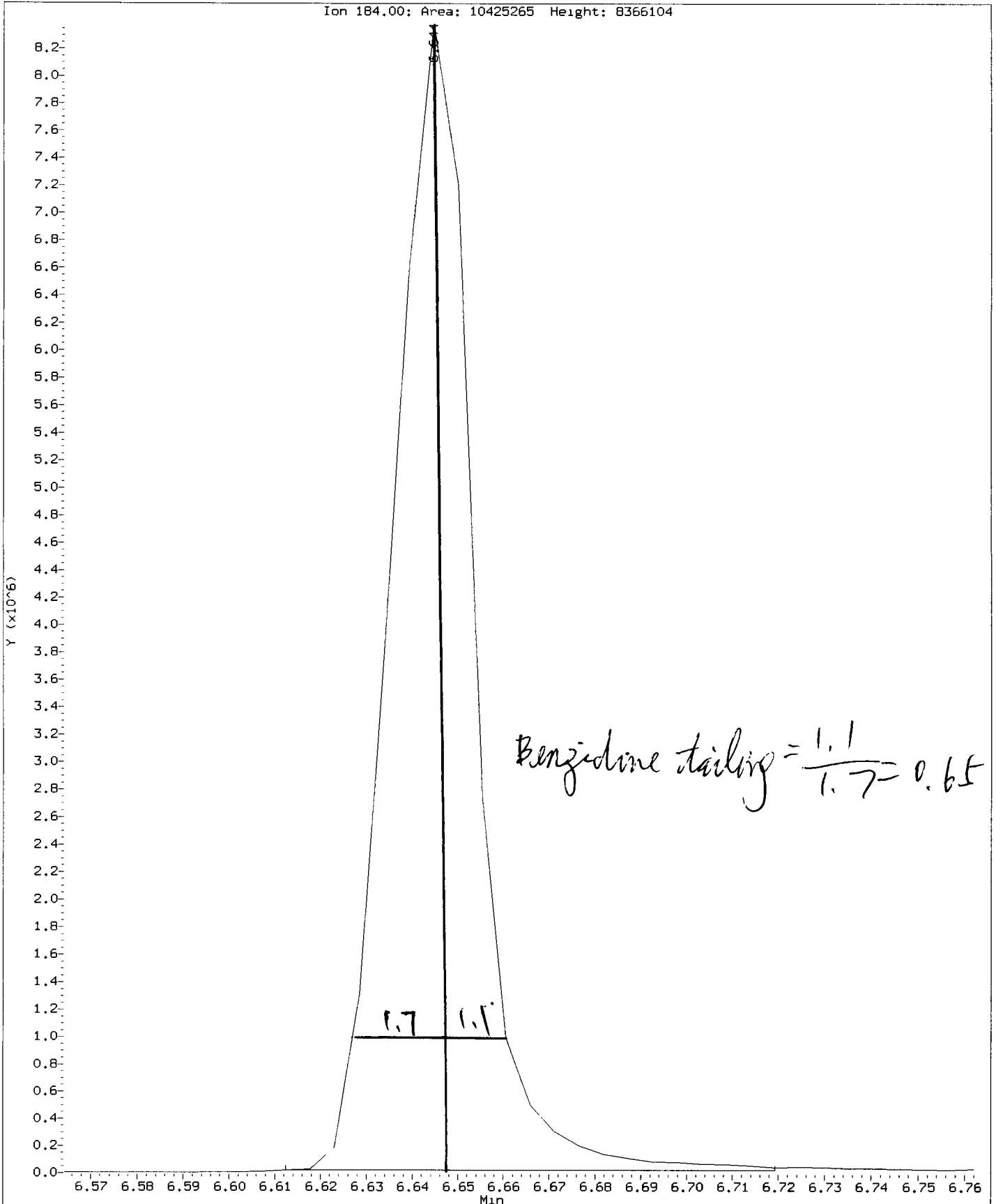
Compound: Pentachlorophenol  
CAS Number: 87-86-5





Data File: /chem3/nt11.1/20121121.b/ddt.b/11211201.d  
Injection Date: 21-NOV-2012 11:27  
Instrument: nt11.1  
Client Sample ID: DDT1121

Compound: Benzidine  
CAS Number:



Analytical Resources, Inc.

Semivolatle Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211203.d  
 Lab Smp Id: VR58MBS1 Client Smp ID: VR58MBS1  
 Inj Date : 21-NOV-2012 12:12  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58MBS1,  
 Misc Info : 12-22336  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 21-Nov-2012 15:20 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 3 QC Sample: BLANK  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

*Handwritten signature and date: 11/21/12*

Concentration Formula:  $\text{Amt} * \text{DF} * \text{Vt} / (\text{Ws} * (100 - \text{M}) / 100) * \text{CpndVariable}$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	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	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	136	5.435	5.438	(1.000)	631972	2.00000	
7 Naphthalene	128	Compound Not Detected.					
\$ 12 2-Methylnaphthalene-d10	152	6.174	6.174	(1.136)	333471	1.54436	77.22
14 2-Methylnaphthalene	141	Compound Not Detected.					
15 1-methylnaphthalene	141	Compound Not Detected.					
21 Acenaphthylene	152	Compound Not Detected.					
* 22 Acenaphthene-d10	164	7.710	7.714	(1.000)	349117	2.00000	
23 Acenaphthene	153	Compound Not Detected.					
11 Dibenzofuran	168	Compound Not Detected.					
25 Fluorene	166	Compound Not Detected.					
* 28 Phenanthrene-d10	188	9.730	9.736	(1.000)	519854	2.00000	
30 Phenanthrene	178	Compound Not Detected.					
31 Anthracene	178	Compound Not Detected.					
36 Fluoranthene	202	Compound Not Detected.					
39 Pyrene	202	Compound Not Detected.					

Compounds	QUANT SIG							CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
===== 46 Benzo(a)anthracene	228					Compound Not Detected.			
* 47 Chrysene-d12	240	14.337	14.343	(1.000)		593617	2.00000		
48 Chrysene	228					Compound Not Detected.			
51 Benzo(b)fluoranthene	252					Compound Not Detected.			
52 Benzo(k)fluoranthene	252					Compound Not Detected.			
251 Benzo(j)fluoranthene	252					Compound Not Detected.			
54 Benzo(a)pyrene	252					Compound Not Detected.			
* 56 Perylene-d12	264	18.092	18.102	(1.000)		585657	2.00000		
63 Indeno(1,2,3-cd)pyrene	276					Compound Not Detected.			
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.320	20.339	(1.123)		597217	3.07595	153.8	
62 Dibenzo(a,h)anthracene	278					Compound Not Detected.			
61 Benzo(g,h,i)perylene	276					Compound Not Detected.			
57 Perylene	252					Compound Not Detected.			

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211203.d  
 Lab Smp Id: VR58MBS1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22336

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: VR58MBS1  
 Level: LOW  
 Sample Type: Solid

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	631972	22.45
22 Acenaphthene-d10	284255	142128	568510	349117	22.82
28 Phenanthrene-d10	410660	205330	821320	519854	26.59
47 Chrysene-d12	467886	233943	935772	593617	26.87
56 Perylene-d12	472330	236165	944660	585657	23.99

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	-0.06
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	-0.04
28 Phenanthrene-d10	9.74	9.24	10.24	9.73	-0.07
47 Chrysene-d12	14.34	13.84	14.84	14.34	-0.04
56 Perylene-d12	18.10	17.60	18.60	18.09	-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.

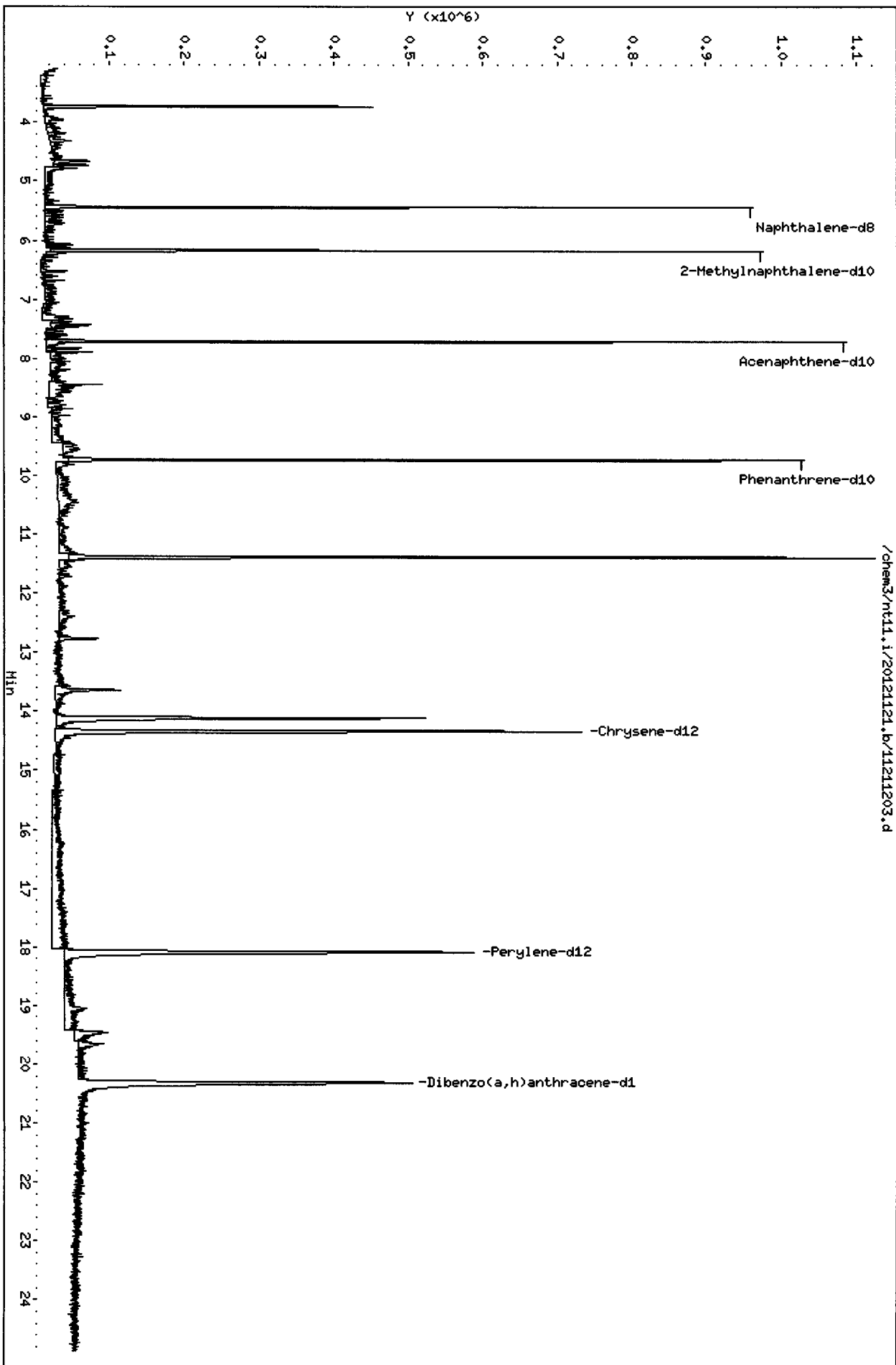
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58MBS1  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Misc Info: 12-22336

Client SDG: VR58  
Fraction: SV  
Client Smp ID: VR58MBS1  
Operator: JZ  
SampleType: BLANK  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	150.0	77.22	51.48	34-100
\$ 60 Dibenzo(a,h)anthra	150.0	153.8	102.53	10-117



CO-ELUTION SUMMARY FOR FILE - 11211203.d

Lab ID: VR58MBS1, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211204.d  
 Lab Smp Id: VR58LCSS1 Client Smp ID: VR58LCSS1  
 Inj Date : 21-NOV-2012 12:42  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58LCSS1,  
 Misc Info : 12-22336  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 21-Nov-2012 15:20 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 4 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	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	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	136	5.435	5.438	(1.000)	683439	2.00000	
7 Naphthalene	128	5.464	5.467	(1.005)	608985	1.66730	83.37
\$ 12 2-Methylnaphthalene-d10	152	6.170	6.174	(1.135)	361845	1.54957	77.48
14 2-Methylnaphthalene	141	6.218	6.221	(1.144)	342039	1.66204	83.10
15 1-methylnaphthalene	141	6.410	6.413	(1.179)	349722	1.77421	88.71
21 Acenaphthylene	152	7.597	7.600	(0.986)	597811	1.78169	89.08
* 22 Acenaphthene-d10	164	7.707	7.714	(1.000)	386137	2.00000	
23 Acenaphthene	153	7.758	7.761	(1.007)	380984	1.78548	89.27
11 Dibenzofuran	168	7.909	7.912	(1.026)	523614	1.67505	83.75
25 Fluorene	166	8.386	8.389	(1.088)	478225	1.99057	99.53
* 28 Phenanthrene-d10	188	9.730	9.736	(1.000)	569235	2.00000	
30 Phenanthrene	178	9.765	9.768	(1.004)	725902	2.11111	105.6
31 Anthracene	178	9.806	9.809	(1.008)	764902	2.31726	115.9
36 Fluoranthene	202	11.418	11.425	(1.174)	855326	2.48280	124.1
39 Pyrene	202	11.882	11.892	(0.829)	870671	2.44811	122.4



Compounds	QUANT SIG				RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT		ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	====	==	=====	=====	=====	=====	=====
46 Benzo(a)anthracene	228	14.217	14.224	(0.992)	809384	2.49585	124.8
* 47 Chrysene-d12	240	14.337	14.343	(1.000)	645376	2.00000	
48 Chrysene	228	14.406	14.413	(1.005)	798208	2.53594	126.8
51 Benzo(b)fluoranthene	252	16.849	16.858	(0.931)	737289	2.46118	123.1
52 Benzo(k)fluoranthene	252	16.912	16.918	(0.935)	945265	2.90548	145.3
251 Benzo(j)fluoranthene	252	16.985	16.994	(0.939)	815873	2.37686	118.8
54 Benzo(a)pyrene	252	17.862	17.878	(0.987)	701015	2.30383	115.2
* 56 Perylene-d12	264	18.092	18.102	(1.000)	647286	2.00000	
63 Indeno(1,2,3-cd)pyrene	276	20.421	20.431	(1.129)	1031646	2.79658	139.8
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.329	20.339	(1.124)	668787	3.11661	155.8
62 Dibenzo(a,h)anthracene	278	20.421	20.427	(1.129)	859899	2.86214	143.1
61 Benzo(g,h,i)perylene	276	21.289	21.298	(1.177)	889047	2.83287	141.6
57 Perylene	252	18.165	18.177	(1.004)	918890	2.91199	145.6

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211204.d  
 Lab Smp Id: VR58LCSS1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22336

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: VR58LCSS1  
 Level: LOW  
 Sample Type: Solid

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	683439	32.42
22 Acenaphthene-d10	284255	142128	568510	386137	35.84
28 Phenanthrene-d10	410660	205330	821320	569235	38.61
47 Chrysene-d12	467886	233943	935772	645376	37.93
56 Perylene-d12	472330	236165	944660	647286	37.04

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	-0.06
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	-0.08
28 Phenanthrene-d10	9.74	9.24	10.24	9.73	-0.07
47 Chrysene-d12	14.34	13.84	14.84	14.34	-0.04
56 Perylene-d12	18.10	17.60	18.60	18.09	-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: Anchor QEA, LLC. Client SDG: VR58  
 Sample Matrix: SOLID Fraction: SV  
 Lab Smp Id: VR58LCSS1 Client Smp ID: VR58LCSS1  
 Level: LOW Operator: JZ  
 Data Type: MS DATA SampleType: LCS  
 SpikeList File: pnalcss.spk Quant Type: ISTD  
 Sublist File: pnax.sub  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22336

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
7 Naphthalene	150.0	83.37	55.58	37-100
14 2-Methylnaphthalen	150.0	83.10	55.40	37-100
15 1-methylnaphthalen	150.0	88.71	59.14	30-160
21 Acenaphthylene	150.0	89.08	59.39	35-100
23 Acenaphthene	150.0	89.27	59.52	39-100
11 Dibenzofuran	150.0	83.75	55.83	39-100
25 Fluorene	150.0	99.53	66.35	42-100
30 Phenanthrene	150.0	105.6	70.37	47-100
31 Anthracene	150.0	115.9	77.24	41-106
36 Fluoranthene	150.0	124.1	82.76	52-109
39 Pyrene	150.0	122.4	81.60	47-111
46 Benzo(a)anthracene	150.0	124.8	83.19	47-114
48 Chrysene	150.0	126.8	84.53	51-106
51 Benzo(b)fluoranthene	150.0	123.1	82.04	30-160
52 Benzo(k)fluoranthene	150.0	145.3	96.85	30-160
54 Benzo(a)pyrene	150.0	115.2	76.79	44-111
63 Indeno(1,2,3-cd)py	150.0	139.8	93.22	41-114
62 Dibenz(a,h)anthra	150.0	143.1	95.40	42-118
61 Benzo(g,h,i)perylene	150.0	141.6	94.43	37-115
57 Perylene	150.0	145.6	97.07	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	150.0	77.48	51.65	34-100
\$ 60 Dibenz(a,h)anthra	150.0	155.8	103.89	10-117

Date: 21-NOV-2012 12:42

Client ID: VR58LCSS1

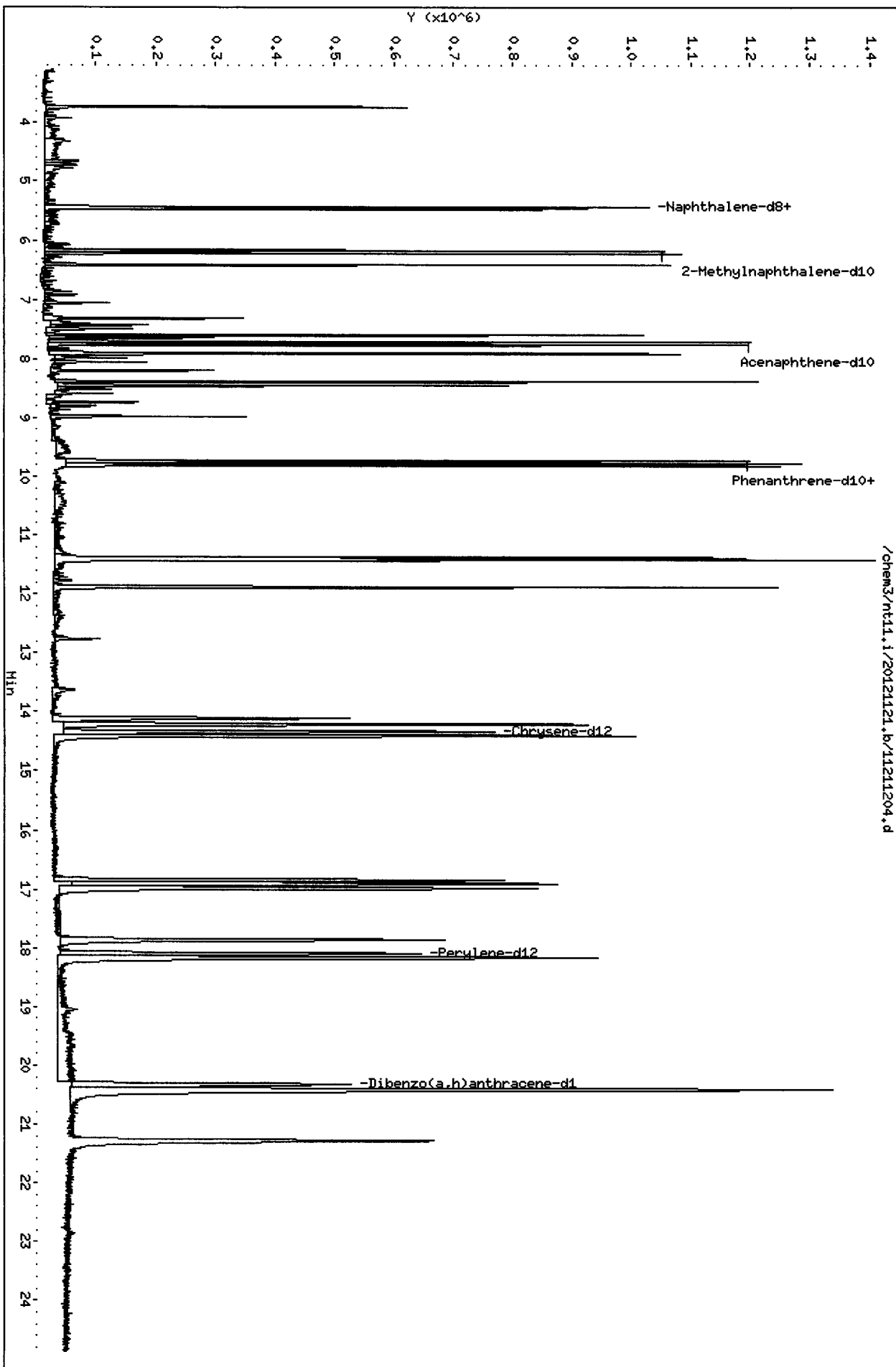
Instrument: nt11.i

Sample Info: VR58LCSS1,

Volume Injected (µL): 1.0

Column phase: ZB-5msi

Operator: JZ  
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - 11211204.d

Lab ID: VR58LCSS1, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-

RT	CO-ELUTION COMPOUNDS
20.421	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.421	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

*checked ok*

*11/21/12*

Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211205.d  
 Lab Smp Id: VR58A Client Smp ID: SG-10-S-E-121107  
 Inj Date : 21-NOV-2012 13:12  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58A  
 Misc Info : 12-22329  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 21-Nov-2012 15:33 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 5  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

*Handwritten signature and date: JZ 11/21/12*

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	17.22000	Weight of sample extracted (g)
M	40.60000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	====	136	5.432	5.438	(1.000)	719541	2.00000	
7 Naphthalene		128	5.463	5.467	(1.006)	143460	0.37306	18.24
\$ 12 2-Methylnaphthalene-d10		152	6.170	6.174	(1.136)	369939	1.50475	73.56
14 2-Methylnaphthalene		141	6.218	6.221	(1.145)	55214	0.25483	12.46
15 1-methylnaphthalene		141	6.410	6.413	(1.180)	23145	0.11153	5.452 (M)
21 Acenaphthylene		152	7.600	7.600	(0.986)	25034	0.07195	3.517
* 22 Acenaphthene-d10		164	7.710	7.714	(1.000)	400427	2.00000	
23 Acenaphthene		153	7.758	7.761	(1.006)	62680	0.28327	13.85
11 Dibenzofuran		168	7.909	7.912	(1.026)	123760	0.38178	18.66
25 Fluorene		166	8.386	8.389	(1.088)	144755	0.58103	28.40
* 28 Phenanthrene-d10		188	9.736	9.736	(1.000)	553782	2.00000	
30 Phenanthrene		178	9.771	9.768	(1.004)	1743739	5.21276	254.8
31 Anthracene		178	9.812	9.809	(1.008)	374489	1.16617	57.00
36 Fluoranthene		202	11.453	11.425	(1.176)	2230424	6.65502	325.3
39 Pyrene		202	11.936	11.892	(0.831)	2263523	7.24585	354.2

Compounds	QUANT		SIG			RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	ON-COLUMN (ug/mL)		FINAL (ug/kg)	
=====	====	==	=====	=====	=====	=====	=====	
46 Benzo(a)anthracene	228	14.249	14.224	(0.992)	1142198	4.00990	196.0	
* 47 Chrysene-d12	240	14.369	14.343	(1.000)	566871	2.00000		
48 Chrysene	228	14.441	14.413	(1.005)	1656325	5.99096	292.9	
51 Benzo(b)fluoranthene	252	16.899	16.858	(0.931)	945521	3.68223	180.0	
52 Benzo(k)fluoranthene	252	16.953	16.918	(0.934)	707232	2.53607	124.0 (M)	
251 Benzo(j)fluoranthene	252	17.029	16.994	(0.938)	609994	2.07320	101.3 (M)	
54 Benzo(a)pyrene	252	17.912	17.878	(0.987)	1002140	3.84225	187.8	
* 56 Perylene-d12	264	18.146	18.102	(1.000)	554832	2.00000		
63 Indeno(1,2,3-cd)pyrene	276	20.490	20.431	(1.129)	540612	1.70969	83.57	
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.393	20.339	(1.124)	318192	1.72989	84.56	
62 Dibenzo(a,h)anthracene	278	20.478	20.427	(1.129)	148457	0.57647	28.18	
61 Benzo(g,h,i)perylene	276	21.346	21.298	(1.176)	491954	1.82878	89.39	
57 Perylene	252	18.212	18.177	(1.004)	378533	1.39947	68.41	

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211205.d  
 Lab Smp Id: VR58A  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22329

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-10-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	719541	39.42
22 Acenaphthene-d10	284255	142128	568510	400427	40.87
28 Phenanthrene-d10	410660	205330	821320	553782	34.85
47 Chrysene-d12	467886	233943	935772	566871	21.16
56 Perylene-d12	472330	236165	944660	554832	17.47

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.43	-0.12
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	-0.04
28 Phenanthrene-d10	9.74	9.24	10.24	9.74	0.00
47 Chrysene-d12	14.34	13.84	14.84	14.37	0.17
56 Perylene-d12	18.10	17.60	18.60	18.15	0.24

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



Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58A  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Misc Info: 12-22329

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-10-S-E-121107  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	146.6	73.56	50.16	34-100
\$ 60 Dibenzo(a,h) anthra	146.6	84.56	57.66	10-117

Date: 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Sample Info: VR594

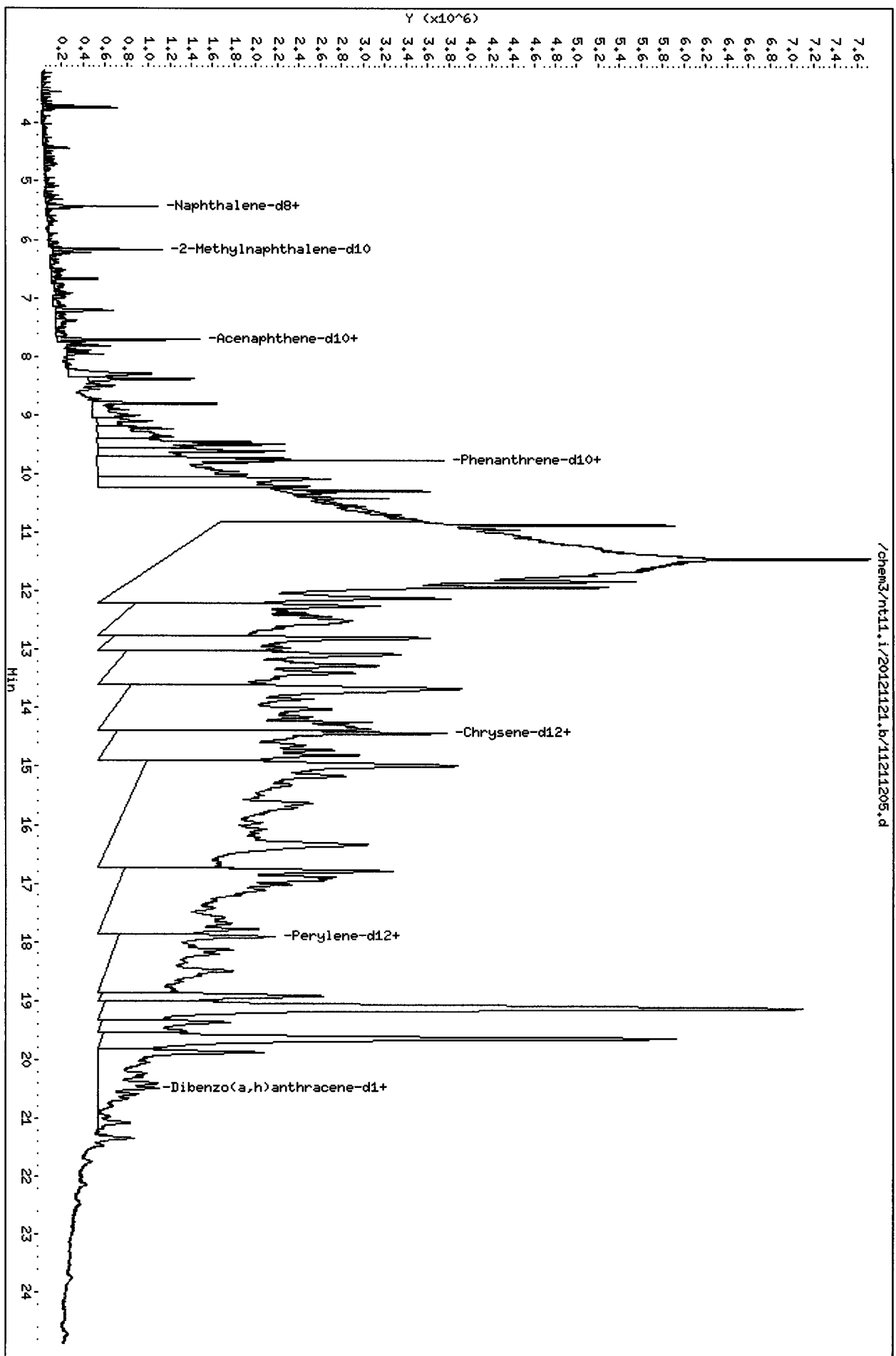
Volume Injected (µL): 1.0

Column phase: ZB-5msi

Instrument: nt11.i

Operator: JZ

Column diameter: 0.25



VR594 : 01010

Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

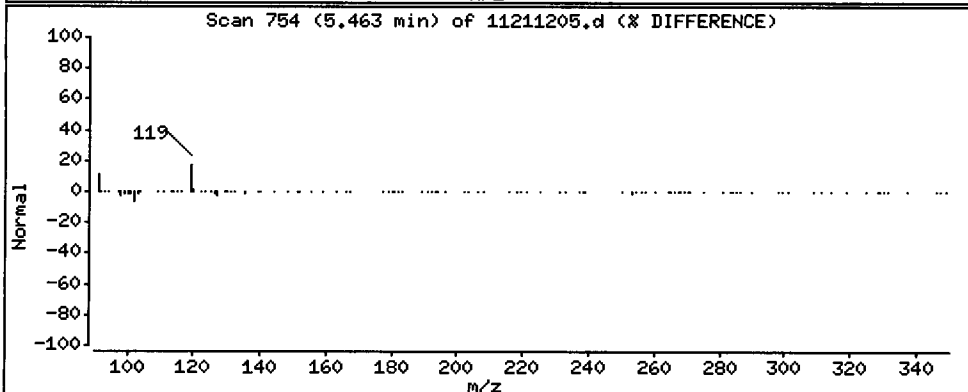
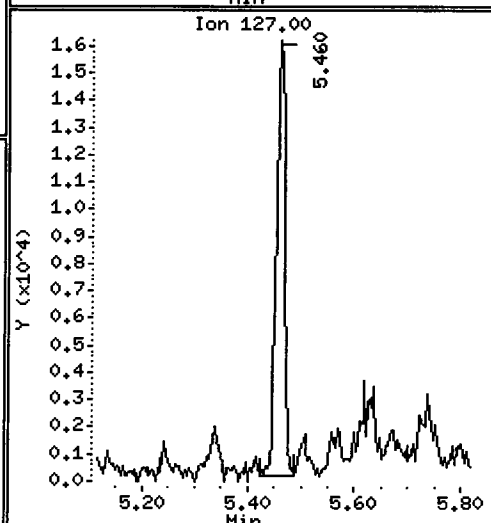
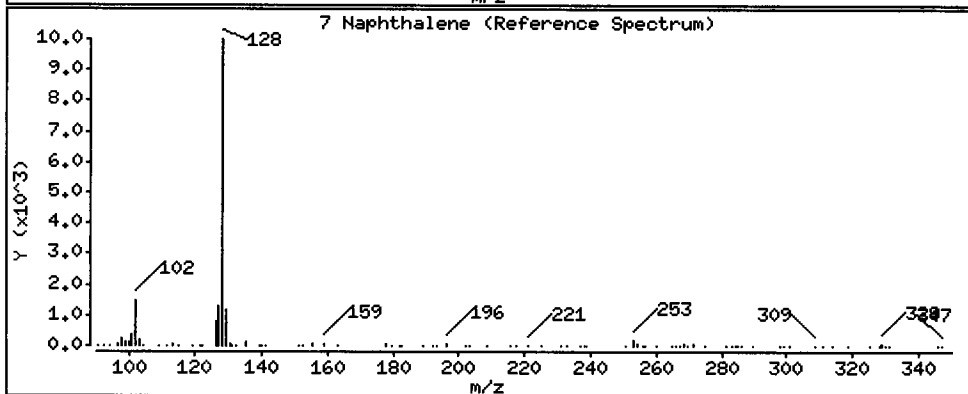
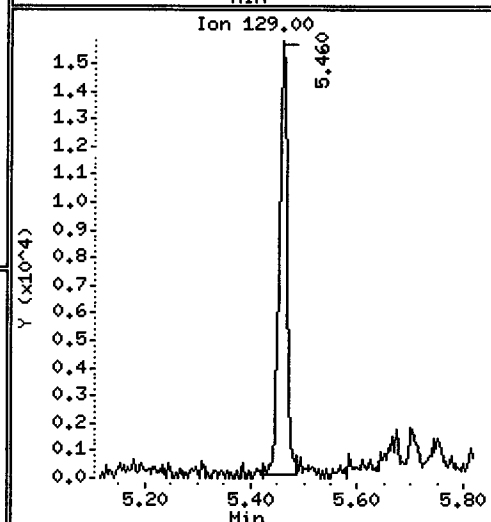
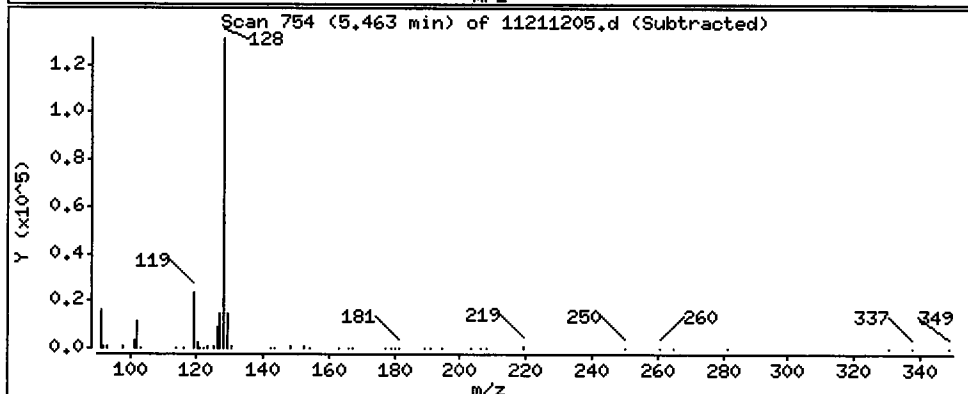
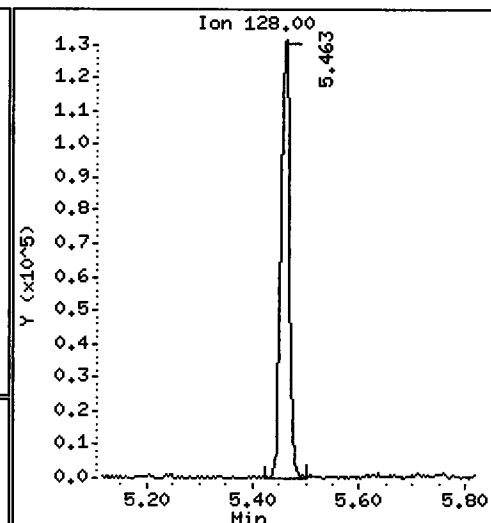
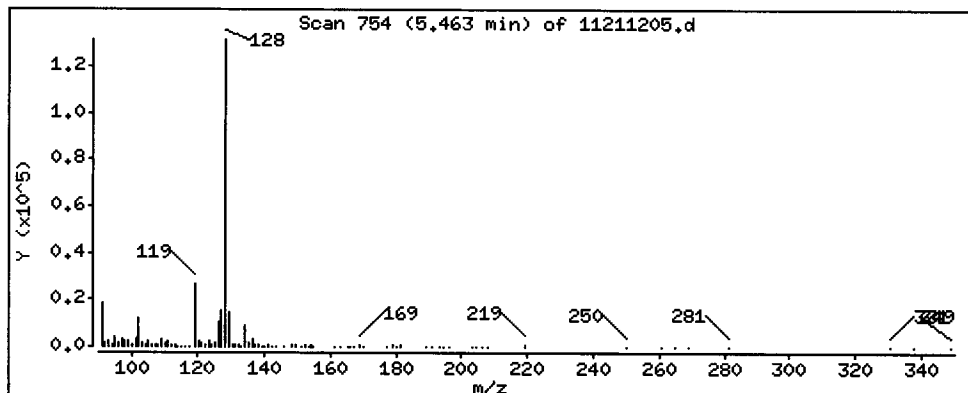
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

7 Naphthalene

Concentration: 18,24 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

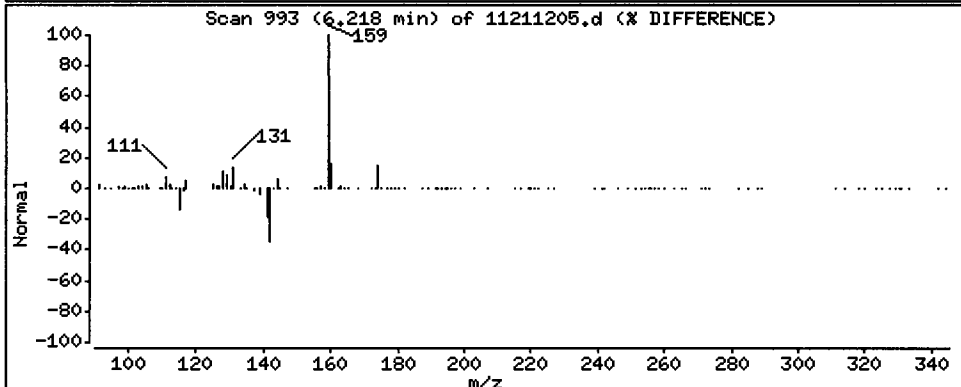
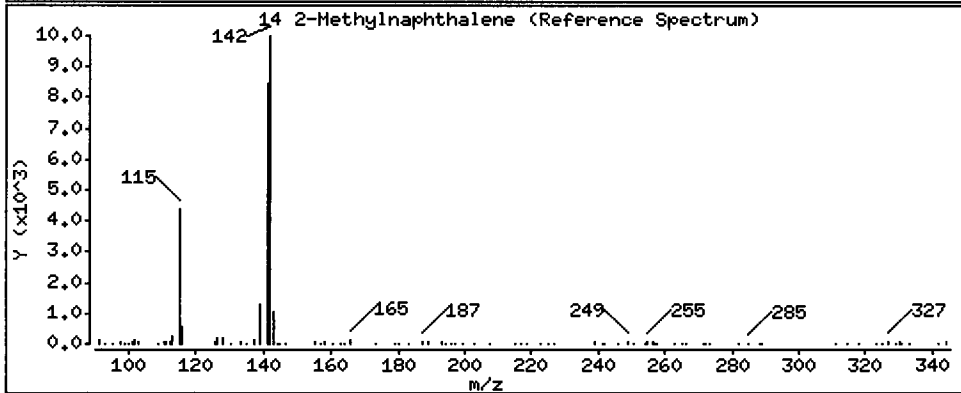
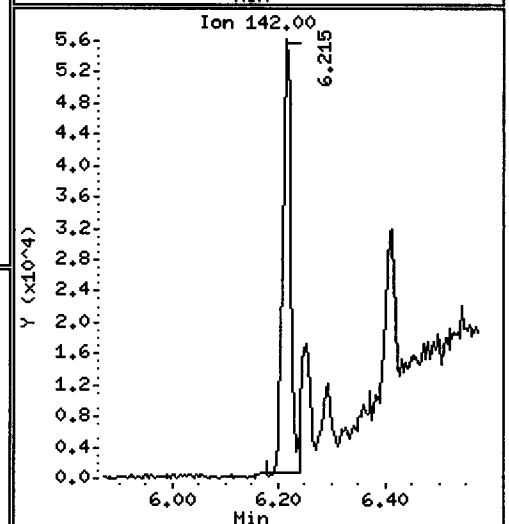
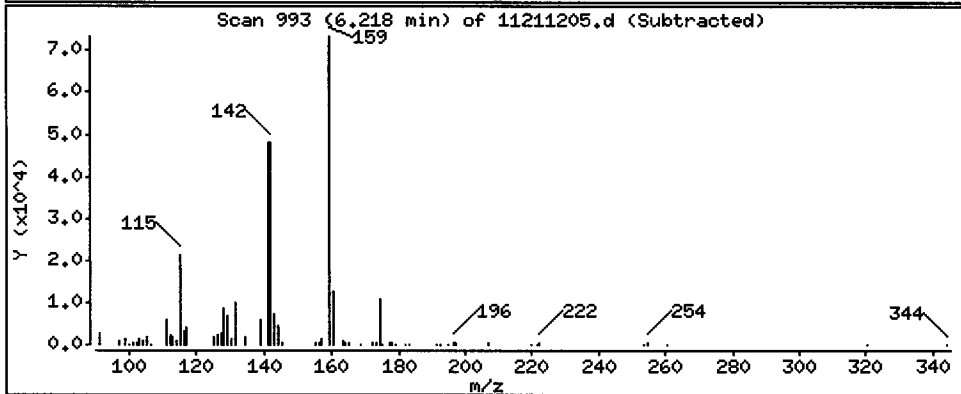
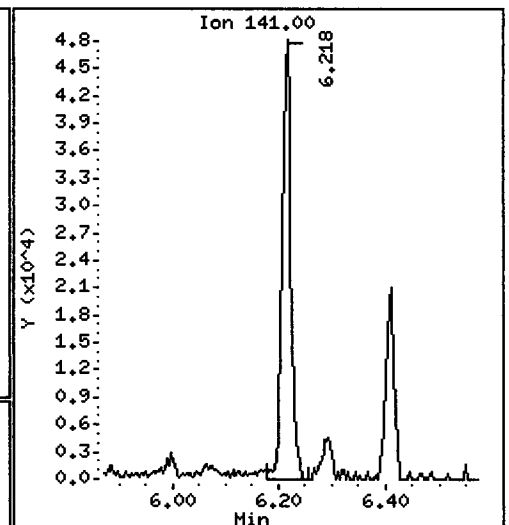
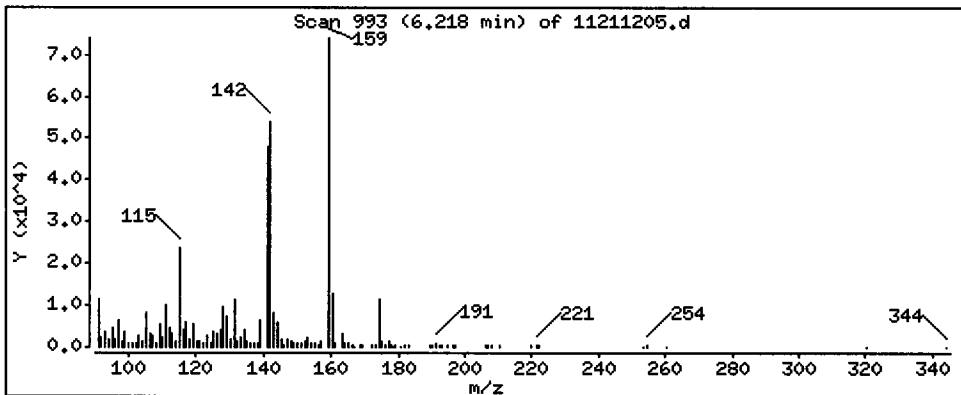
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

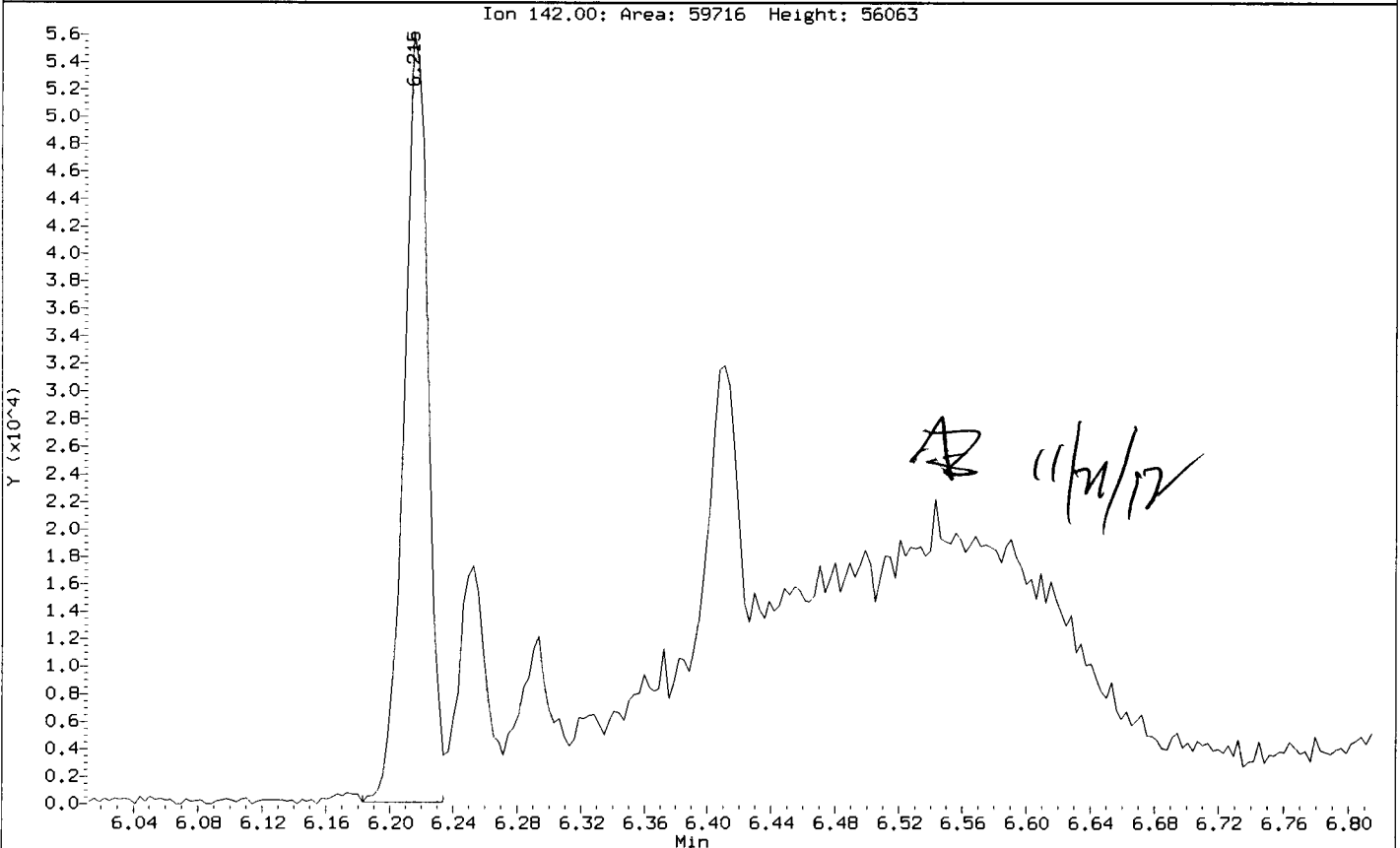
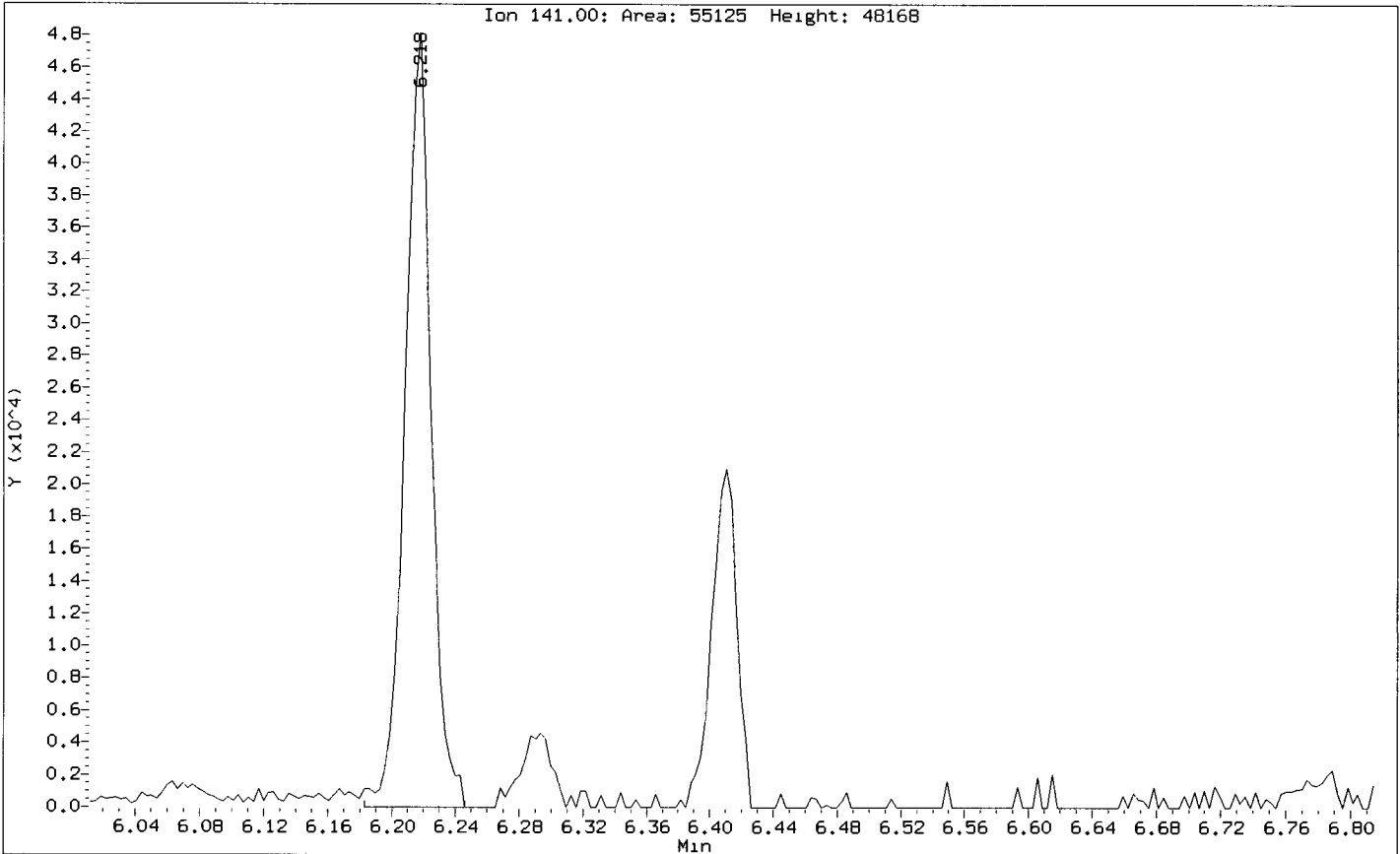
14 2-Methylnaphthalene

Concentration: 12.46 ug/kg



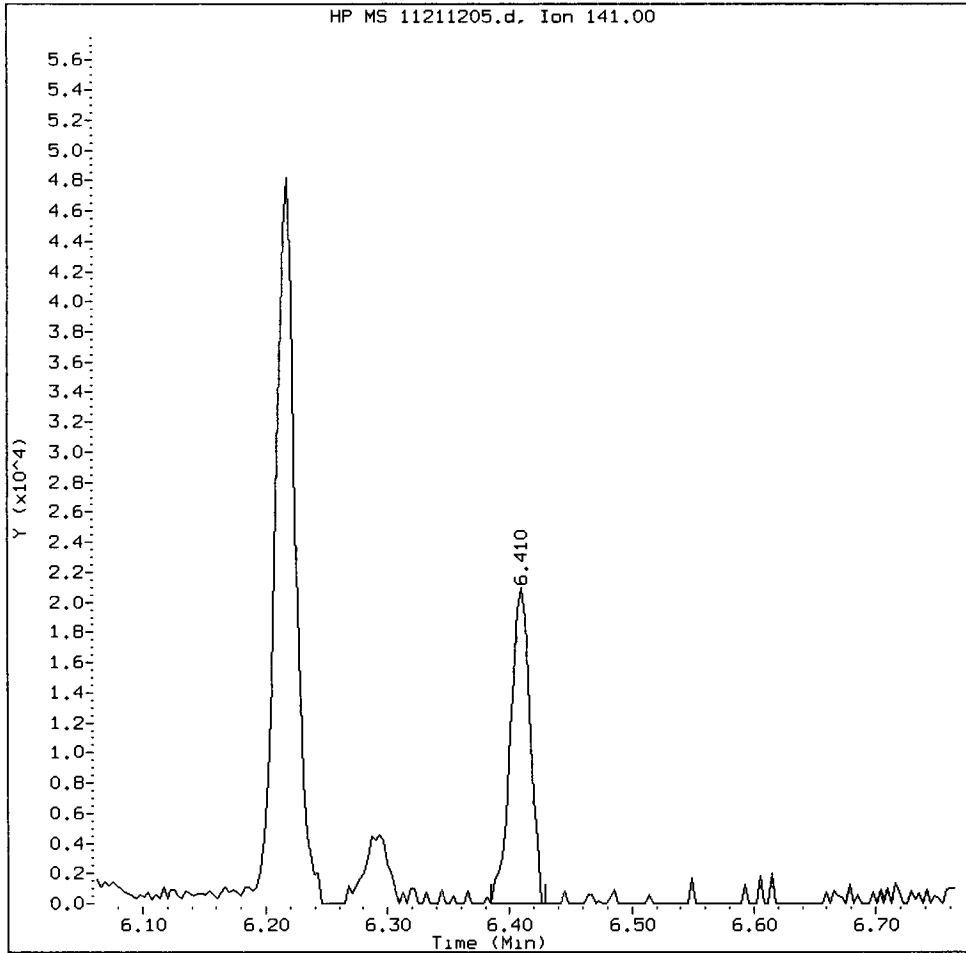
Data File: /chem3/nt11.1/20121121.b/11211205.d  
Injection Date: 21-NOV-2012 13:12  
Instrument: nt11.1  
Client Sample ID: SG-10-S-E-121107

Compound: 1-methylnaphthalene  
CAS Number:



VR58A, /chem3/nt11.i/20121121.b/11211205.d

1-methylnaphthalene Amount: 0.11 Area: 23145



MANUAL INTEGRATION for 1-methylnaphthalene

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

5. Other \_\_\_\_\_

Analyst: AB

Date: 11/21/12

Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

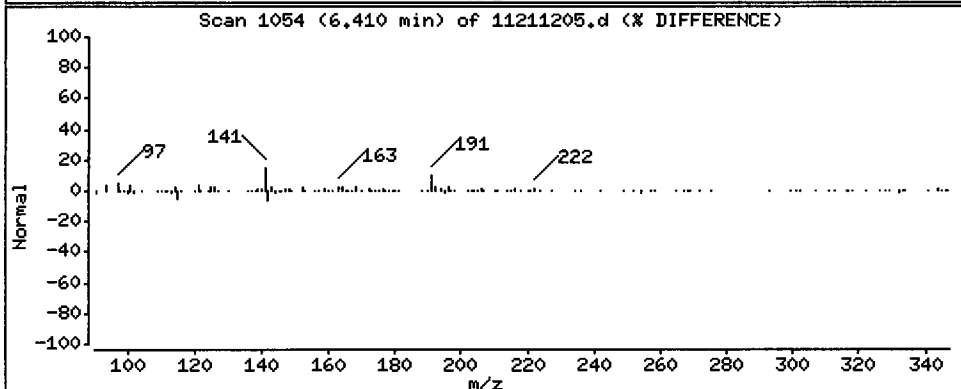
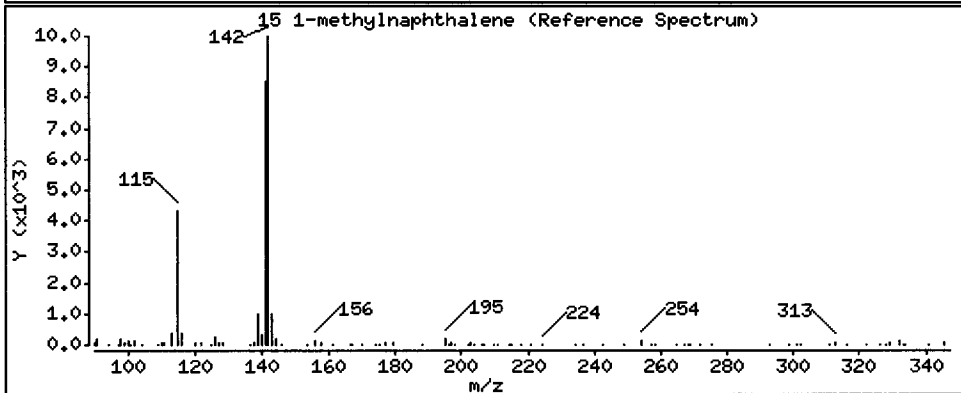
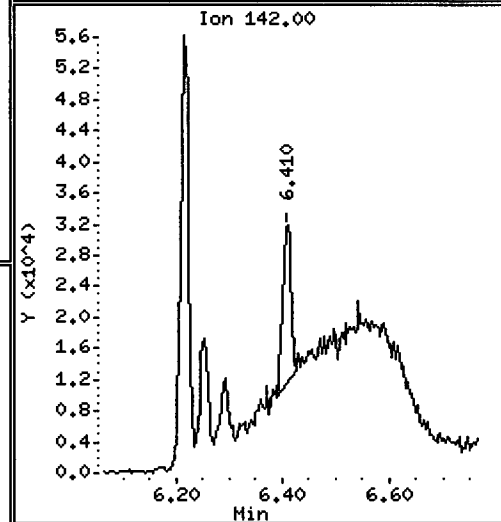
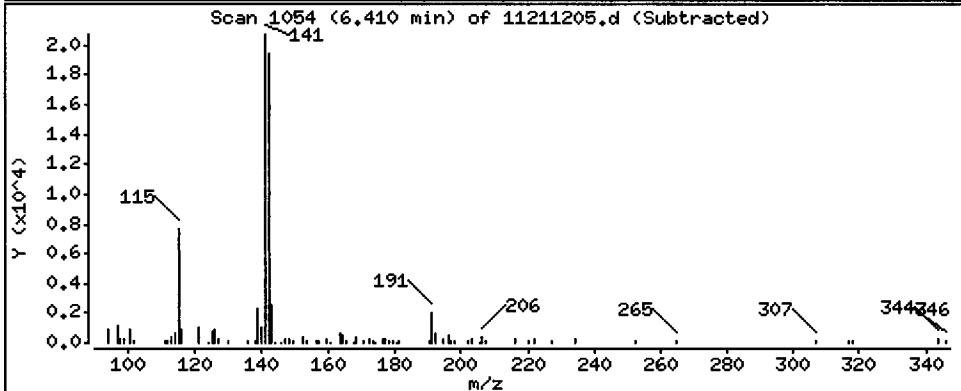
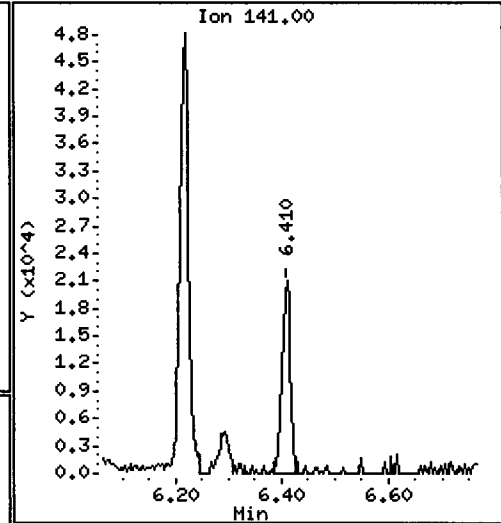
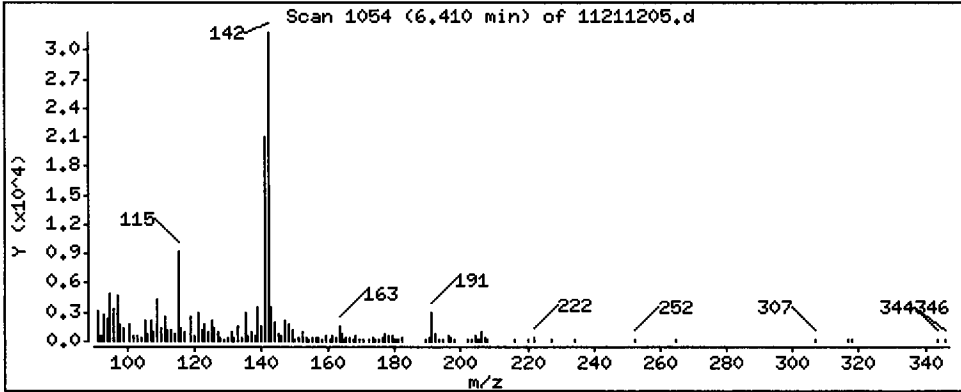
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

15 1-methylnaphthalene

Concentration: 5.452 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

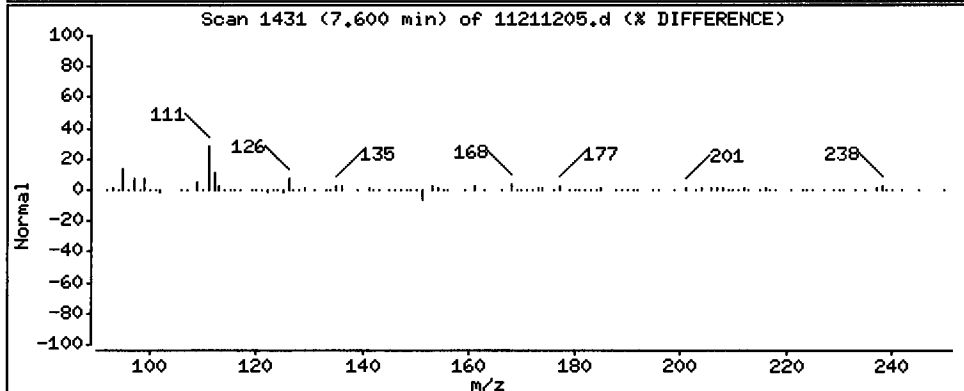
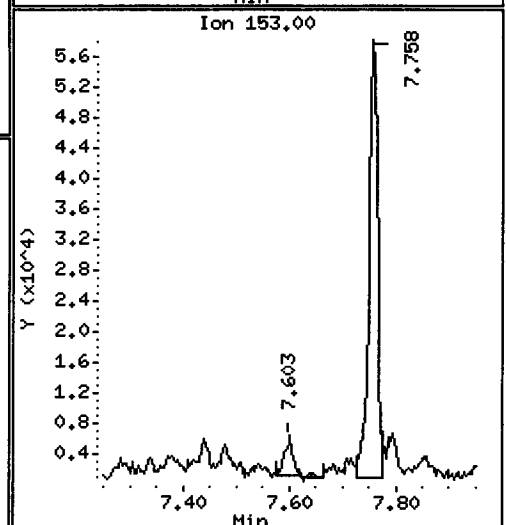
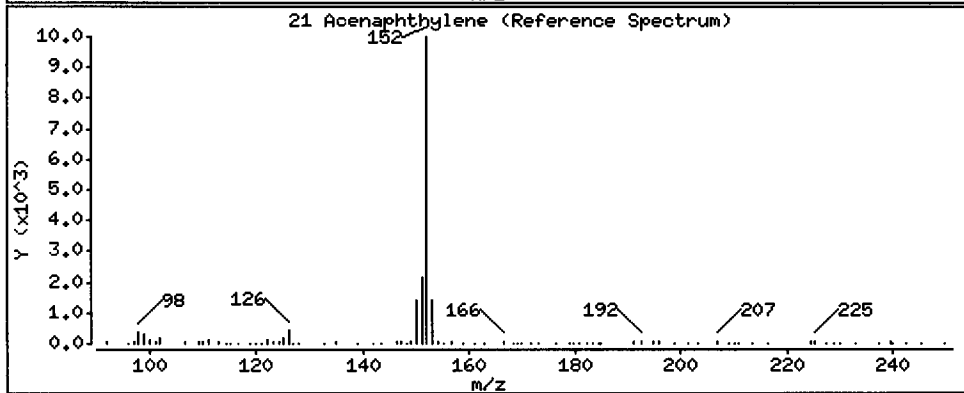
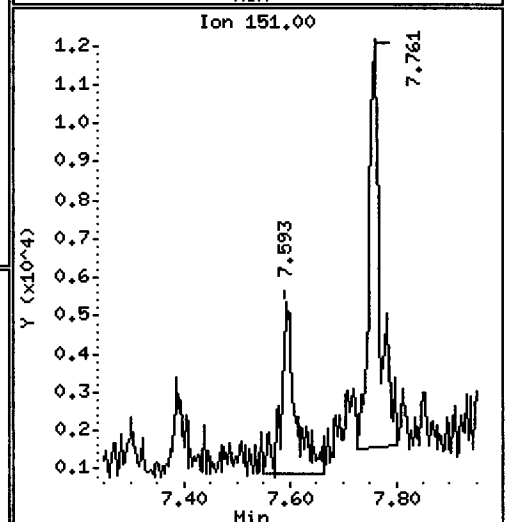
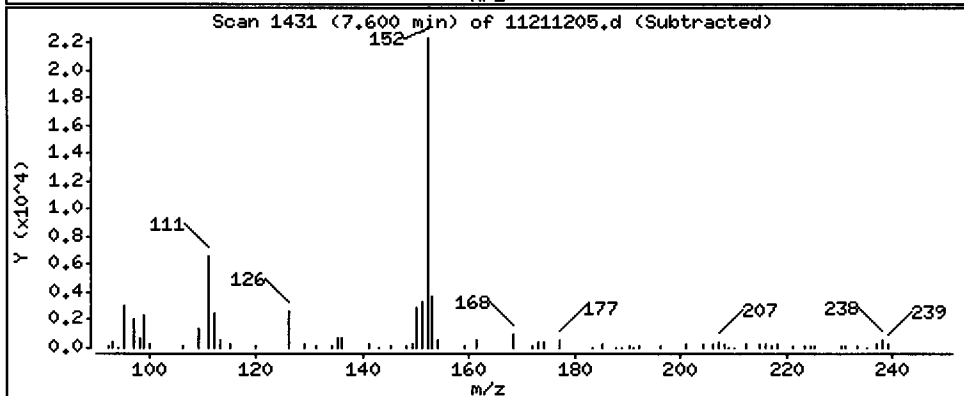
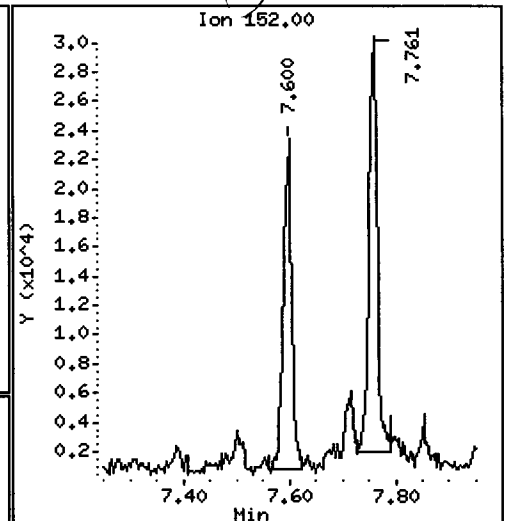
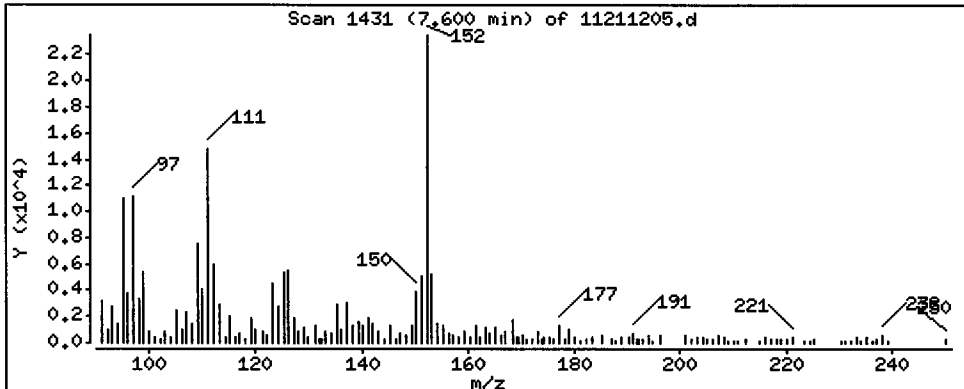
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

21 Acenaphthylene

Concentration: 3,517 ug/kg





Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

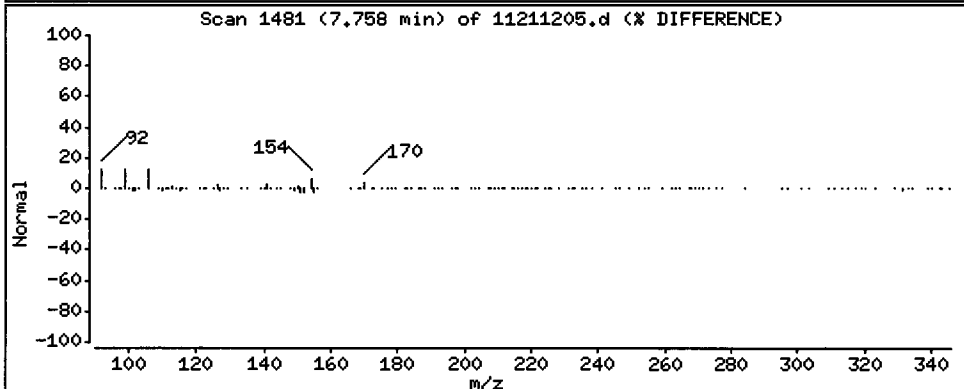
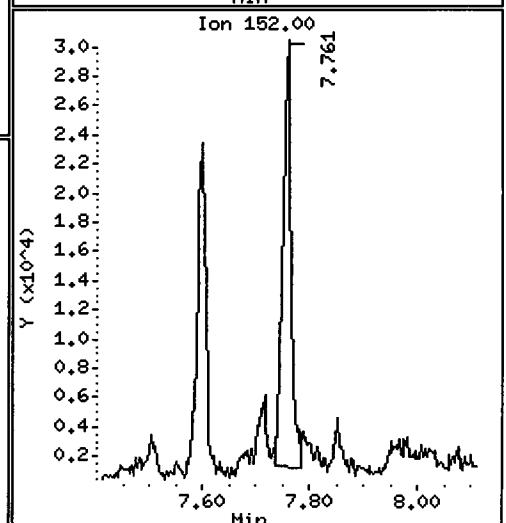
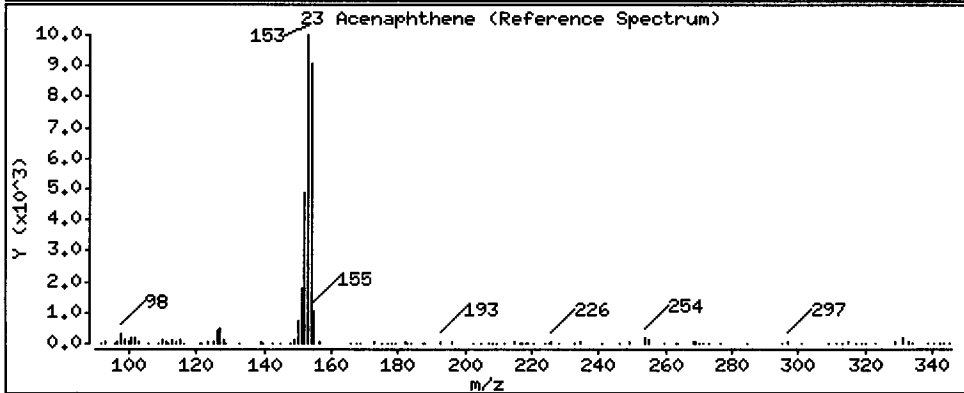
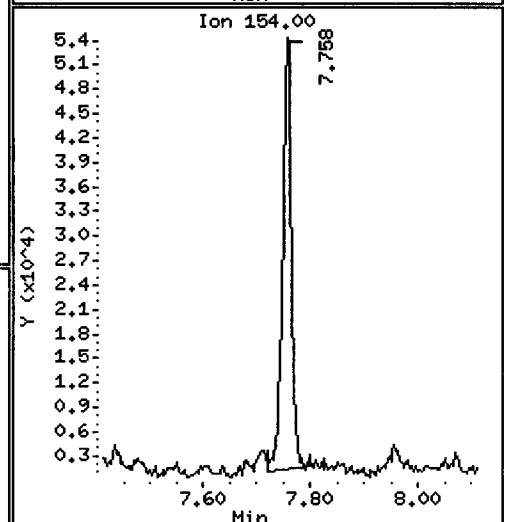
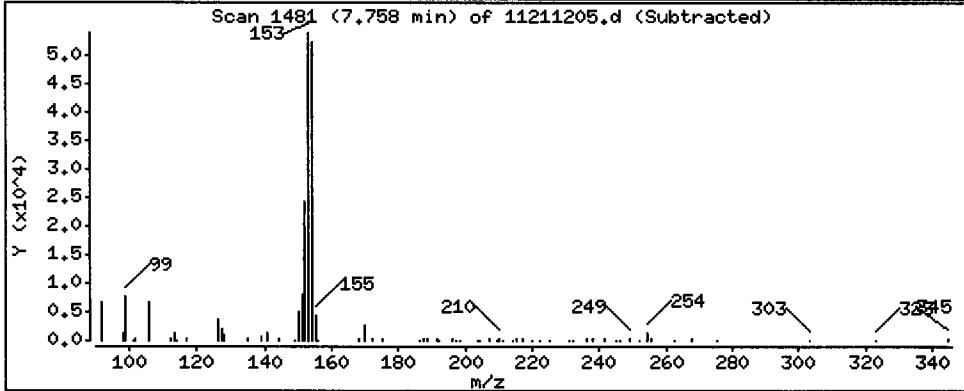
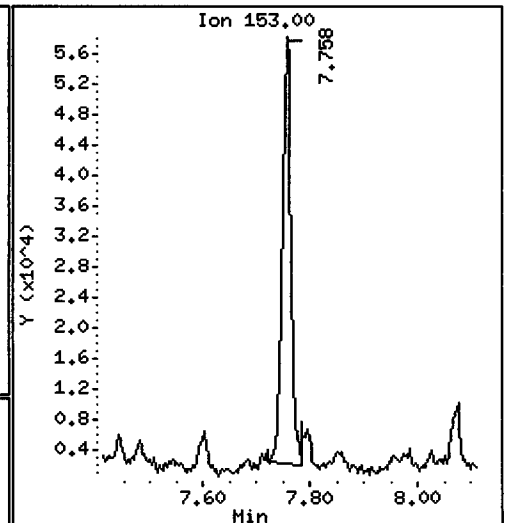
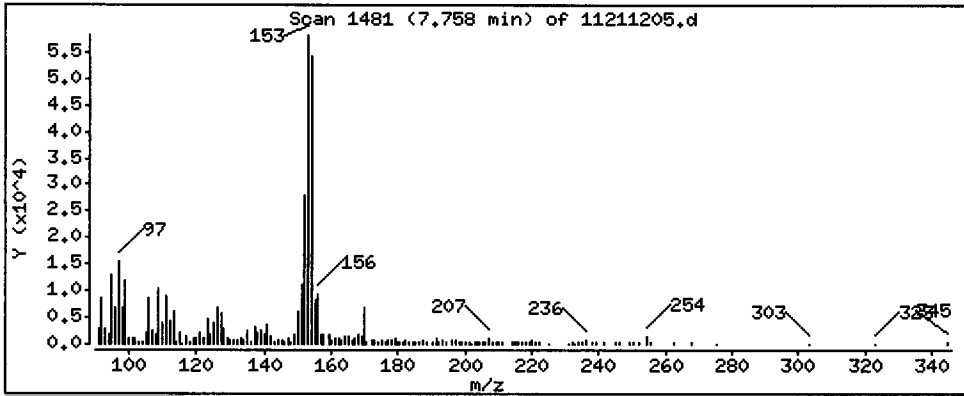
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

23 Acenaphthene

Concentration: 13.85 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

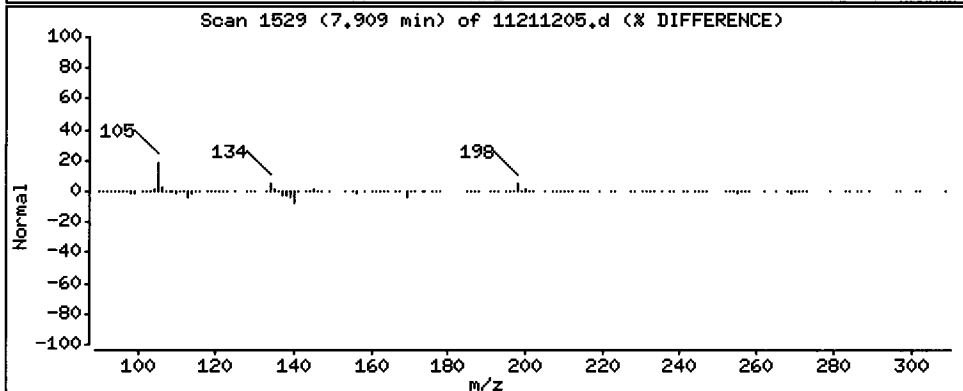
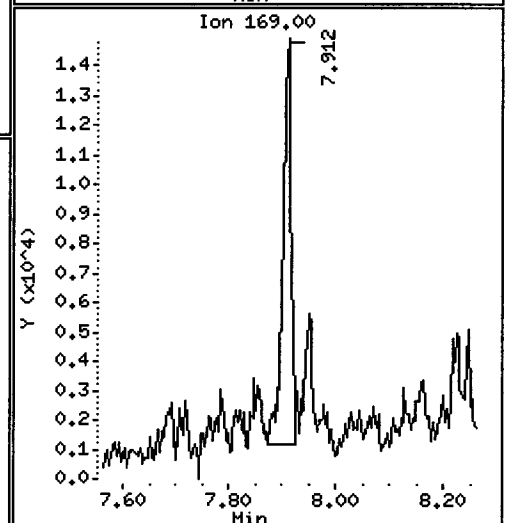
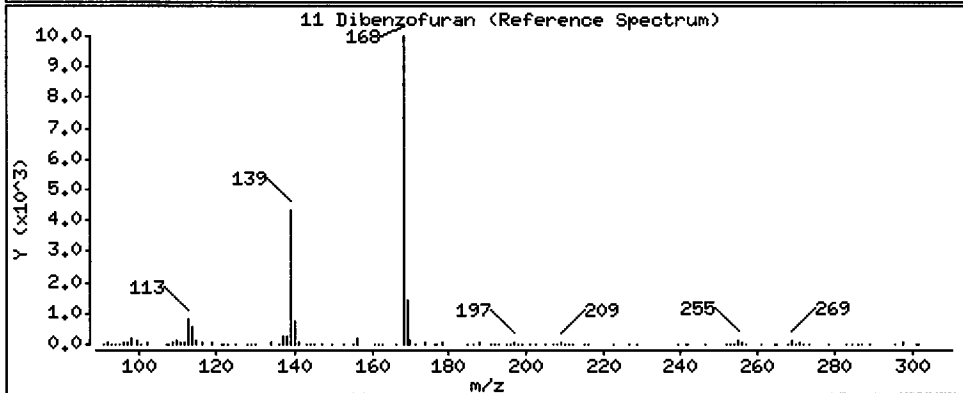
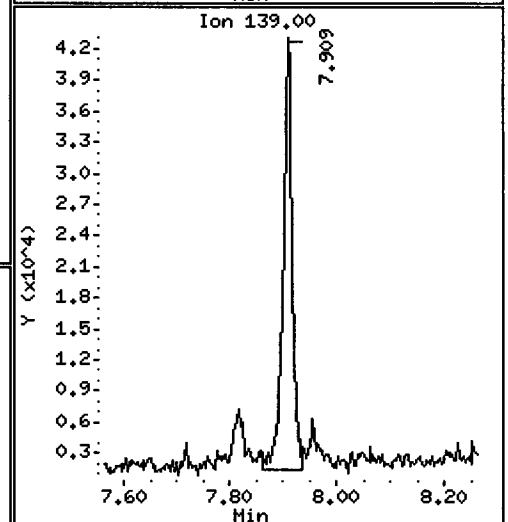
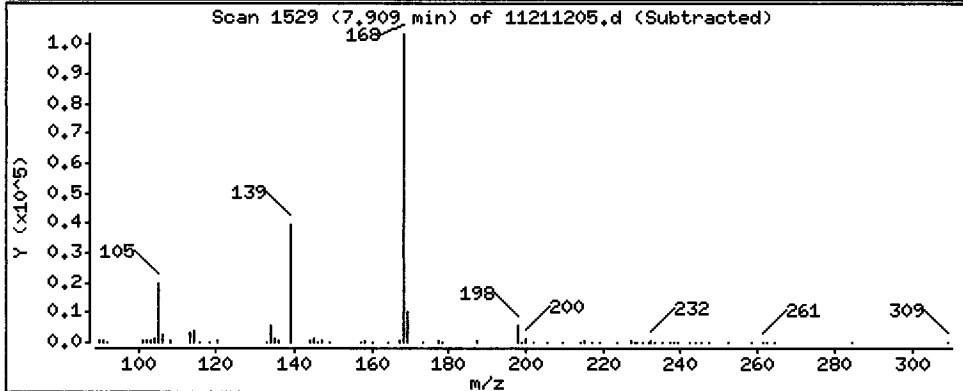
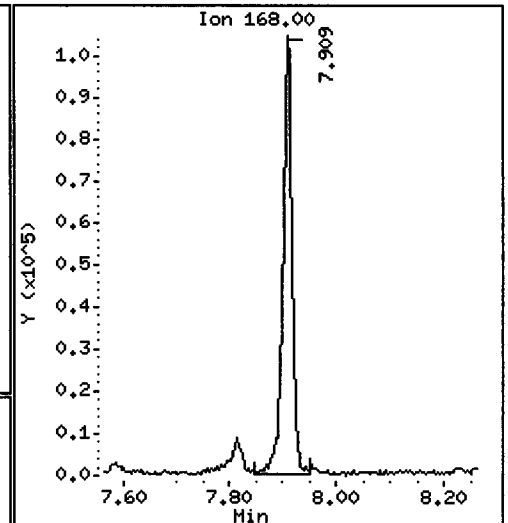
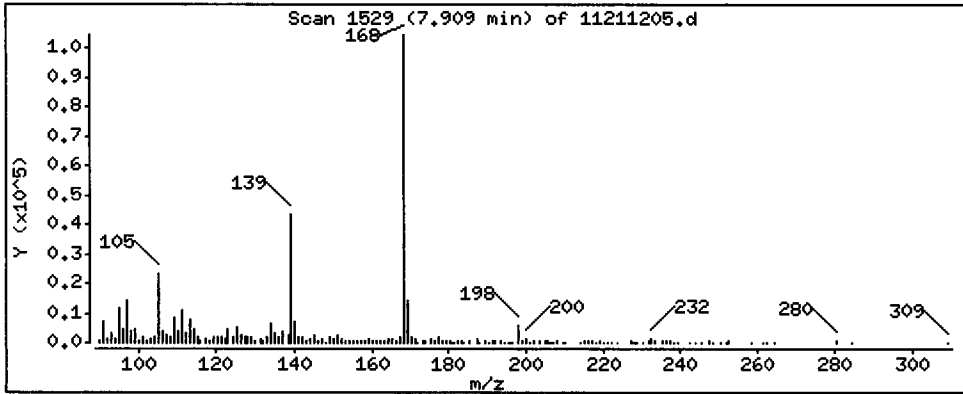
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Dibenzofuran

Concentration: 18.66 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

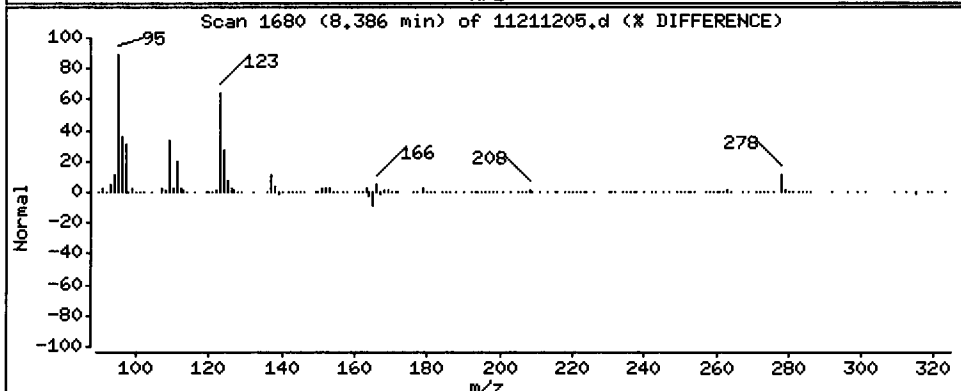
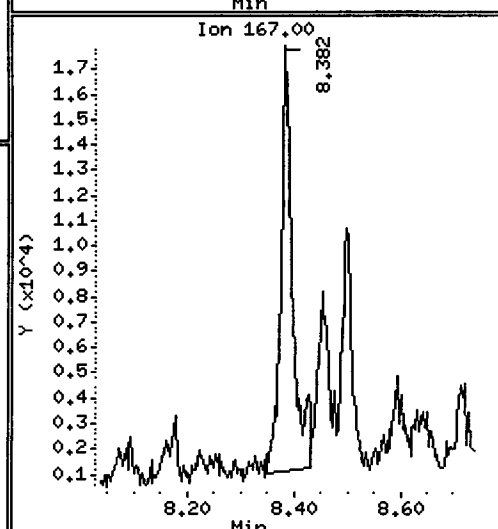
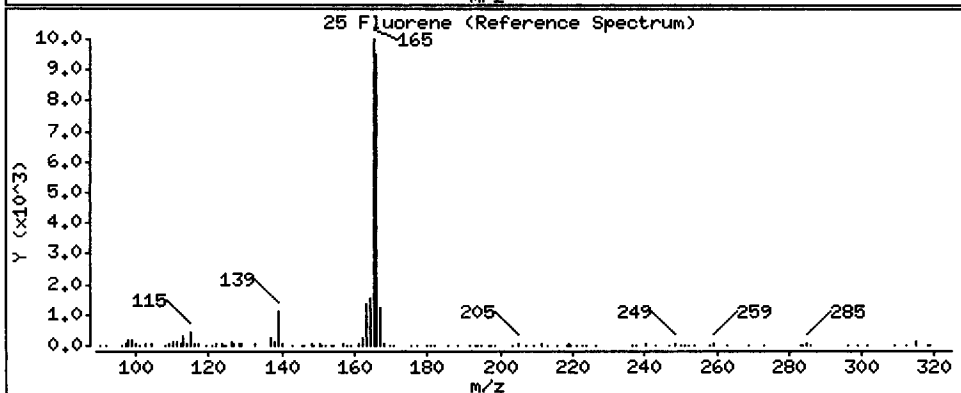
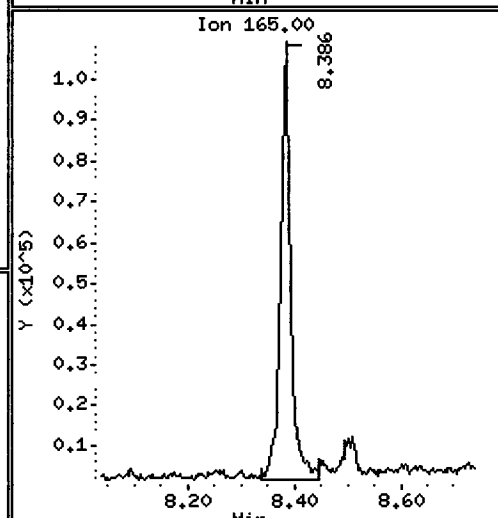
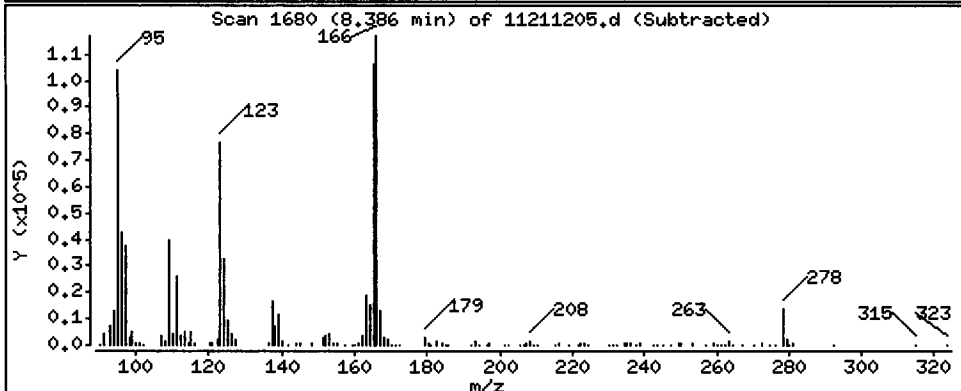
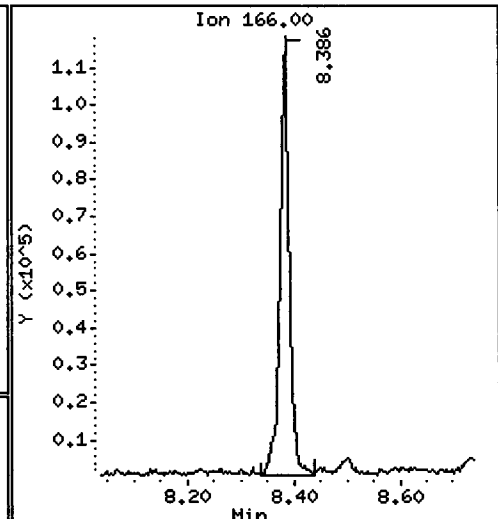
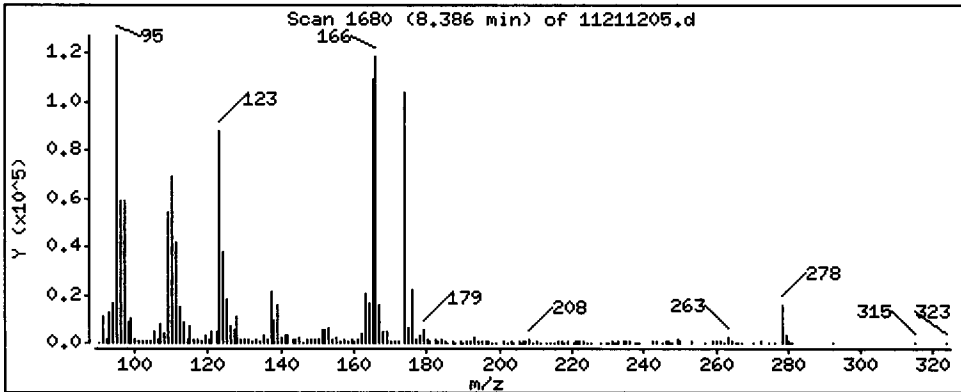
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

25 Fluorene

Concentration: 28.40 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

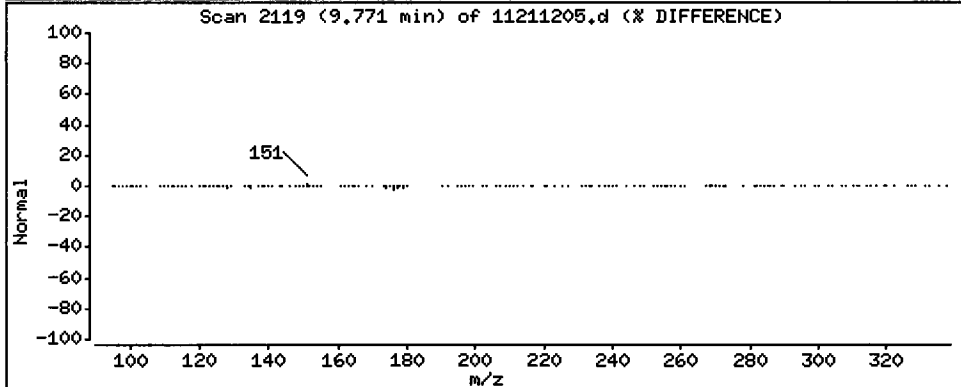
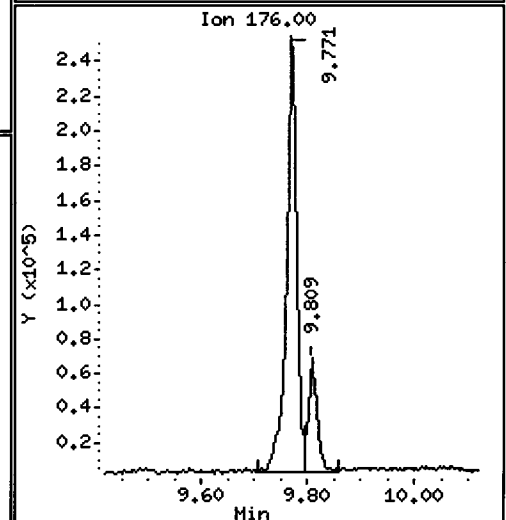
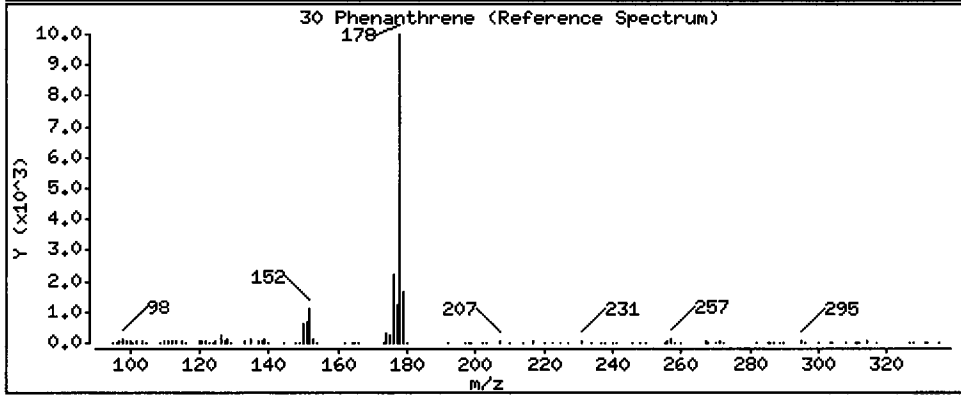
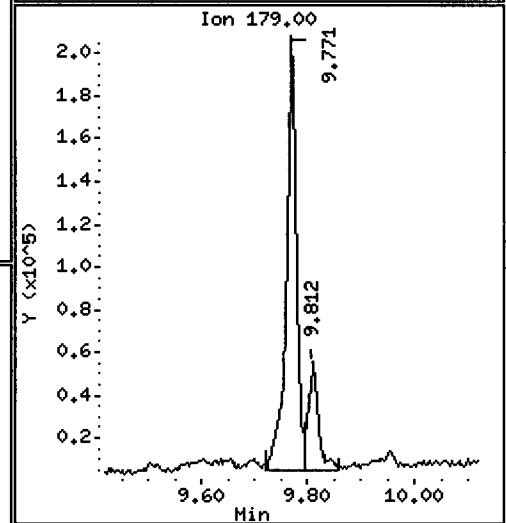
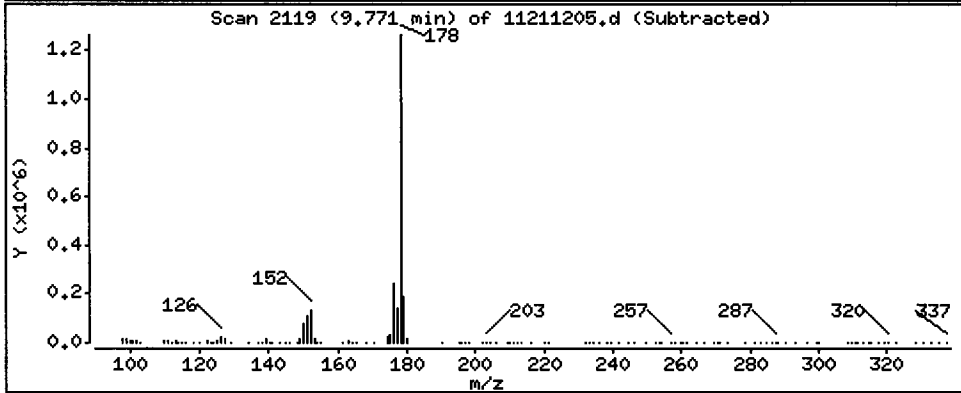
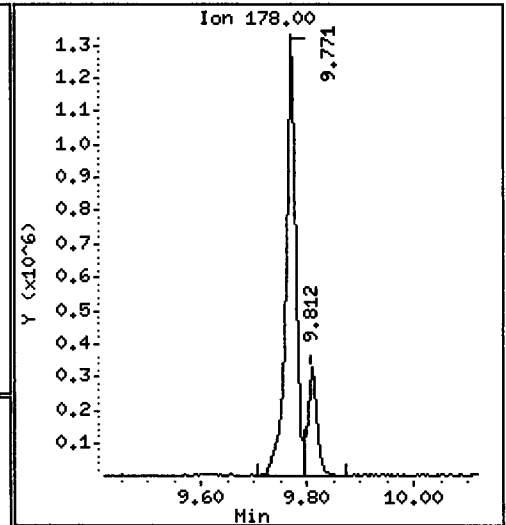
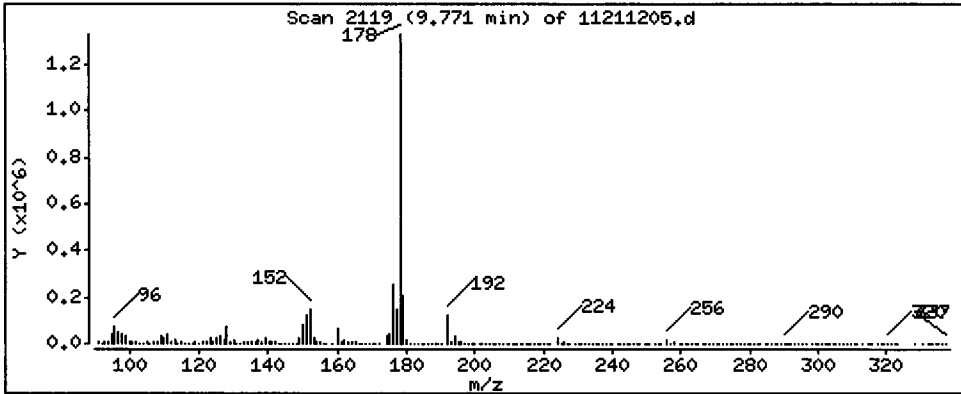
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

30 Phenanthrene

Concentration: 254.8 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

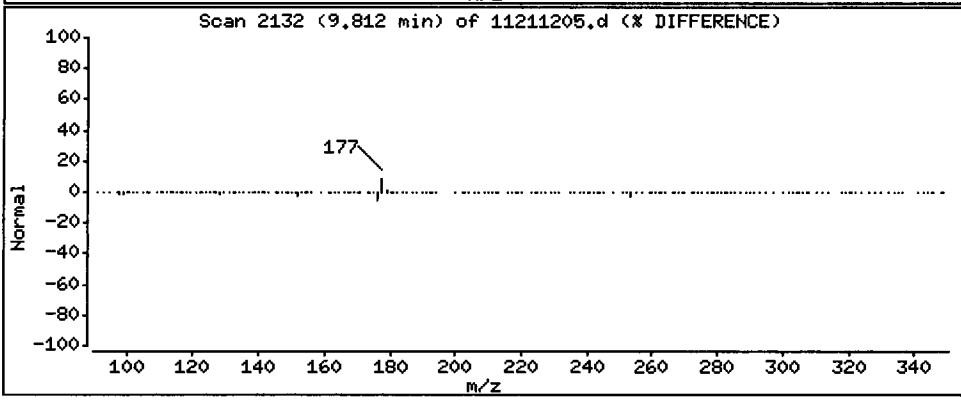
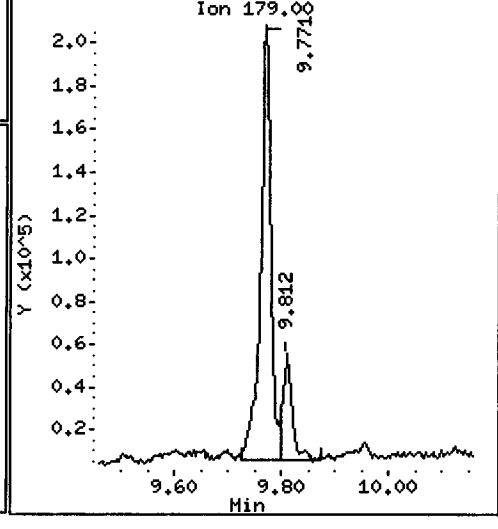
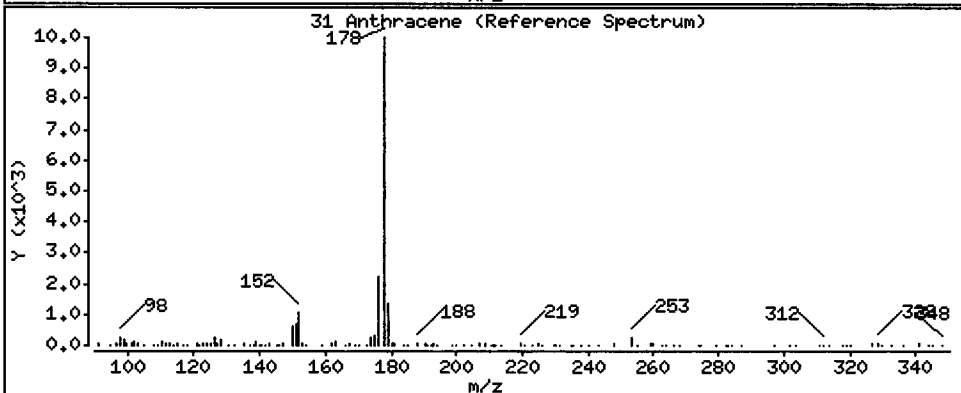
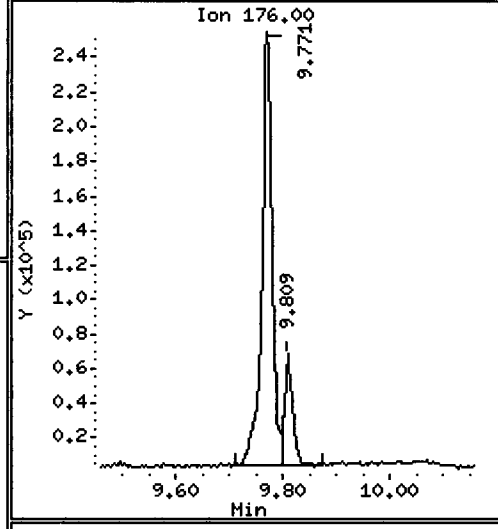
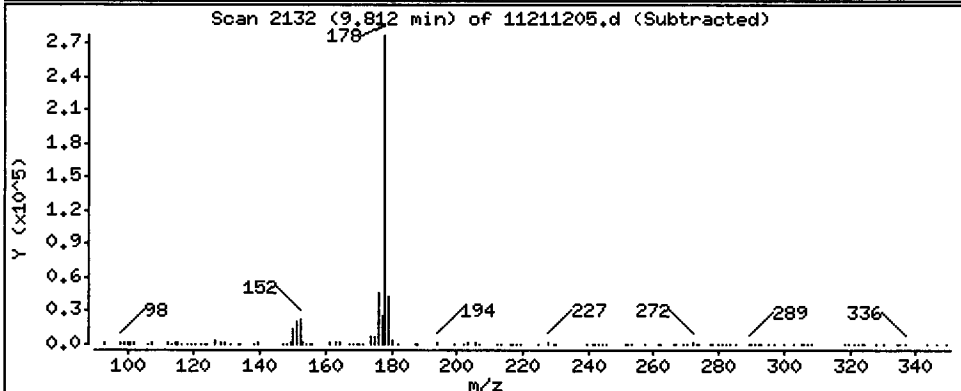
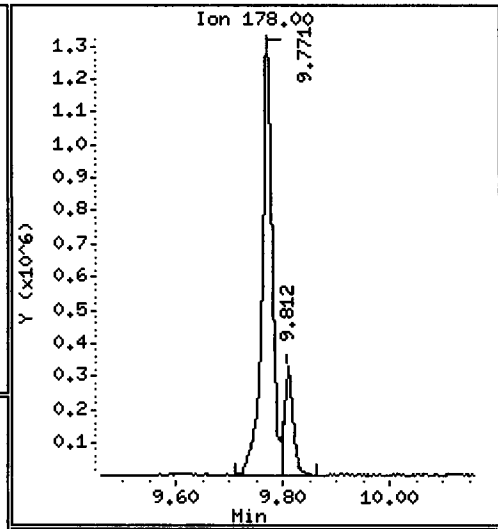
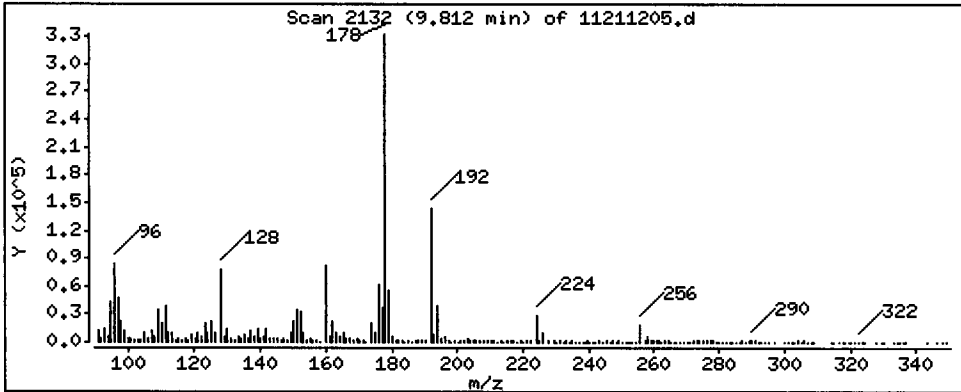
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

31 Anthracene

Concentration: 57.00 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

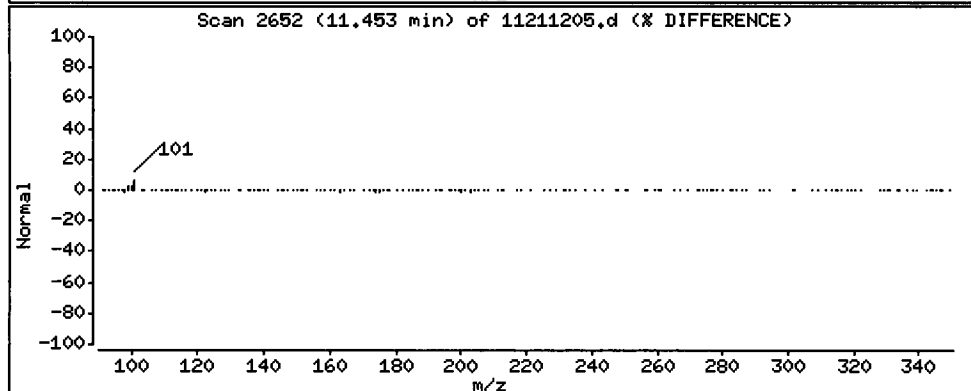
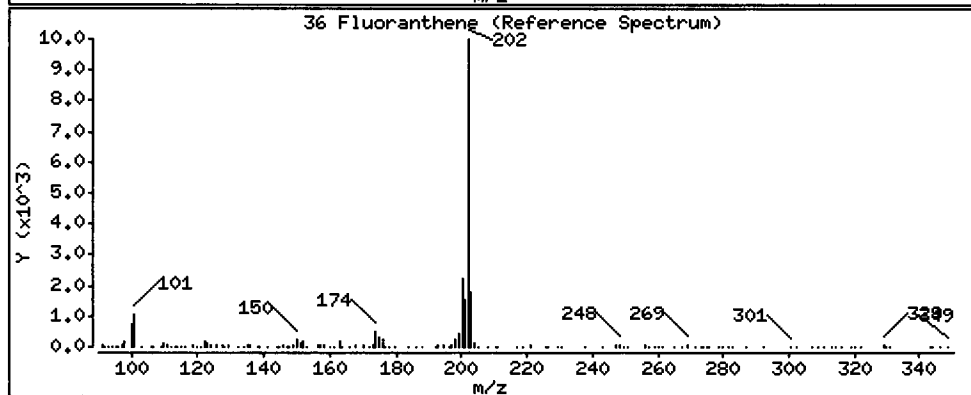
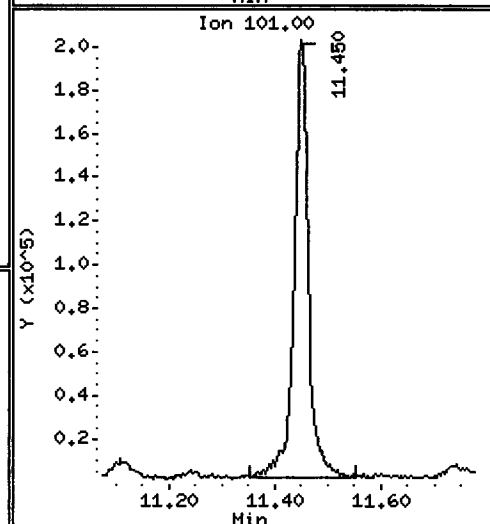
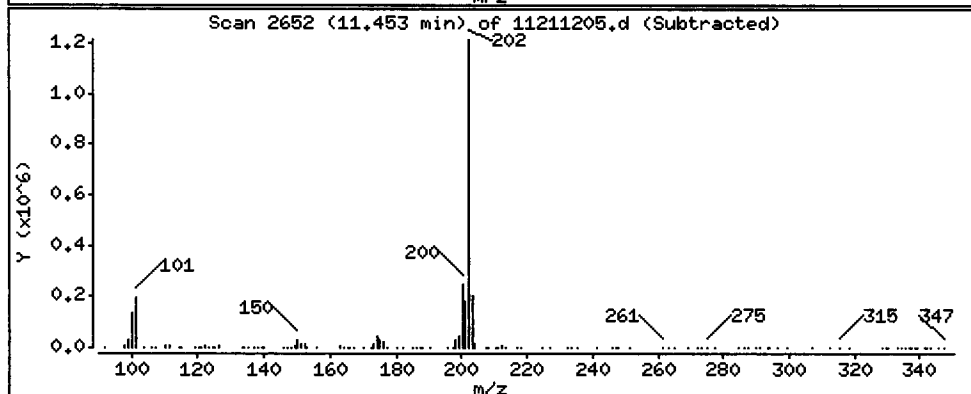
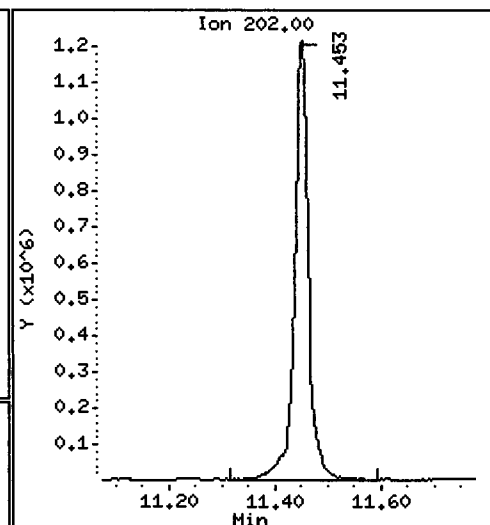
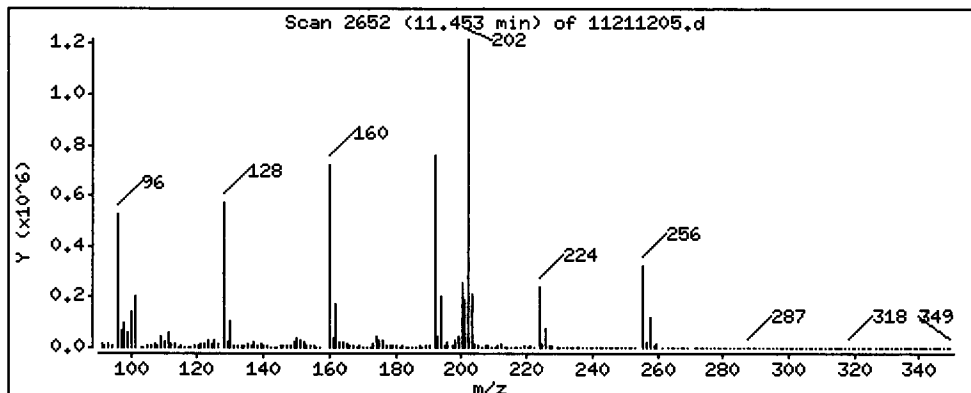
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

36 Fluoranthene

Concentration: 325.3 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

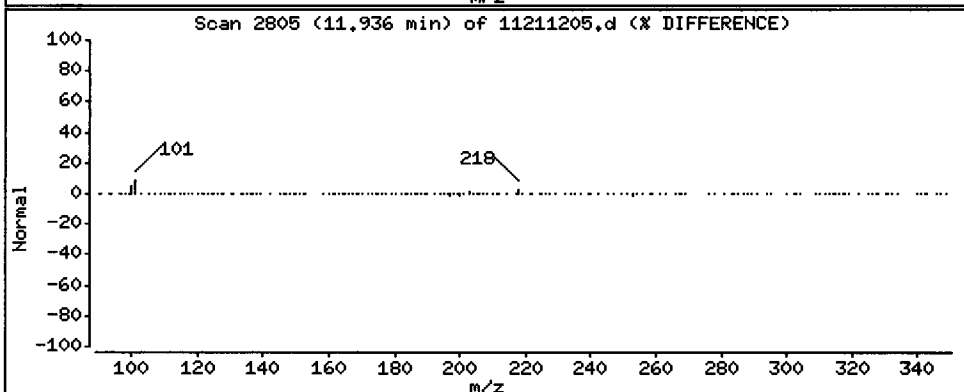
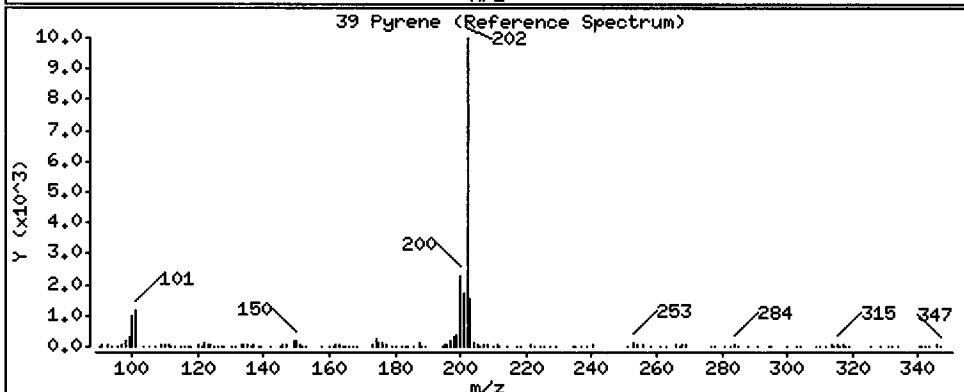
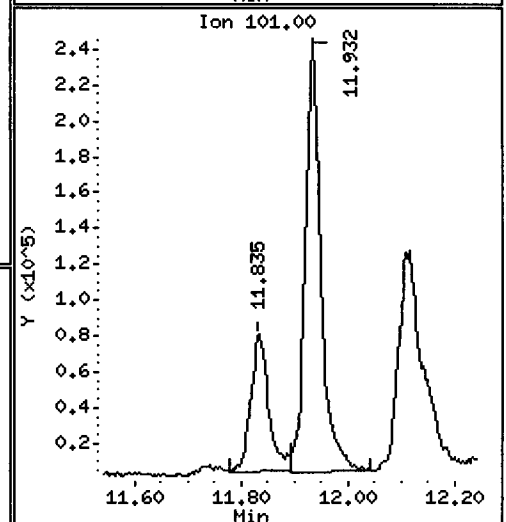
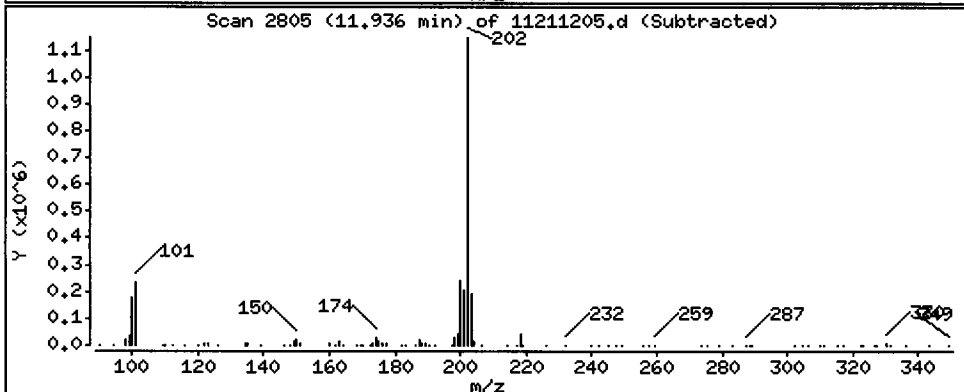
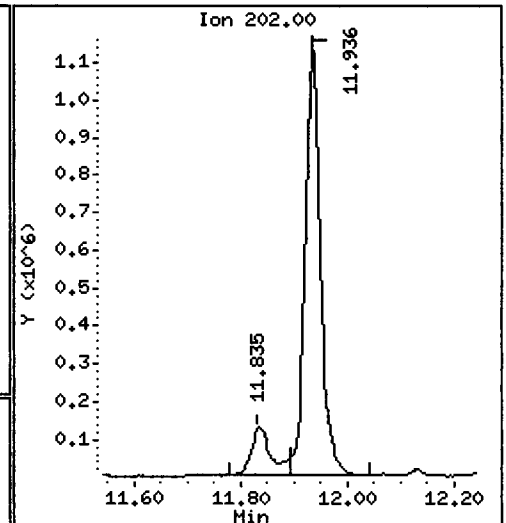
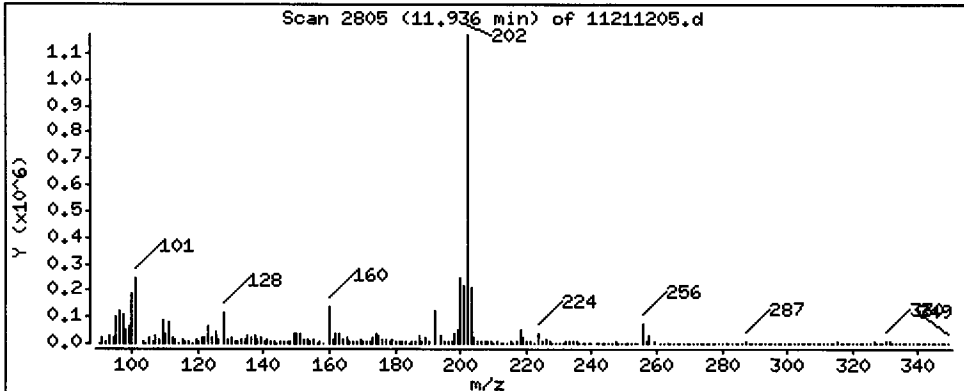
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

39 Pyrene

Concentration: 354.2 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

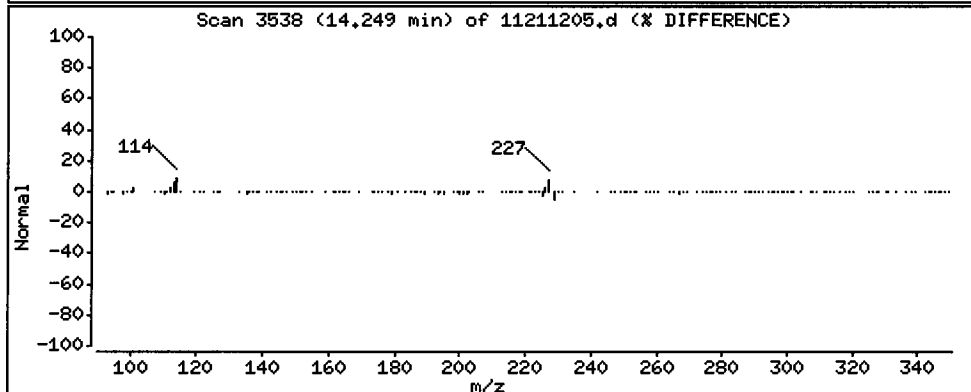
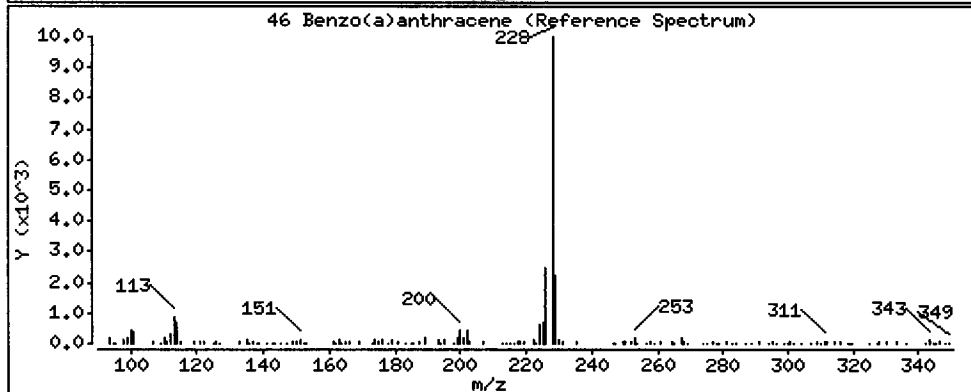
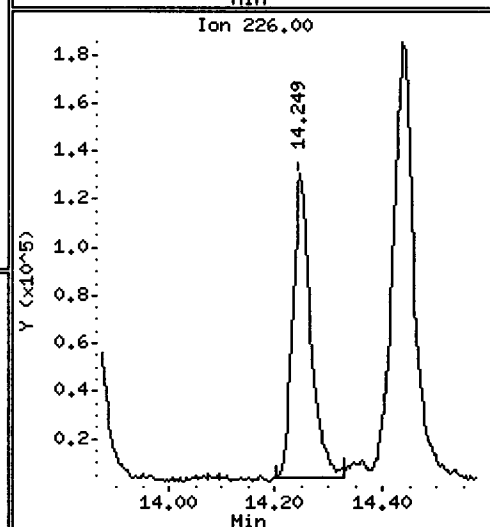
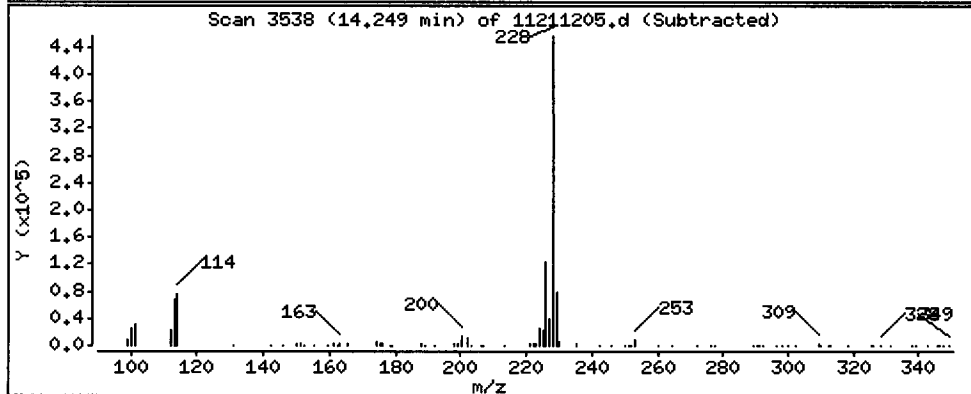
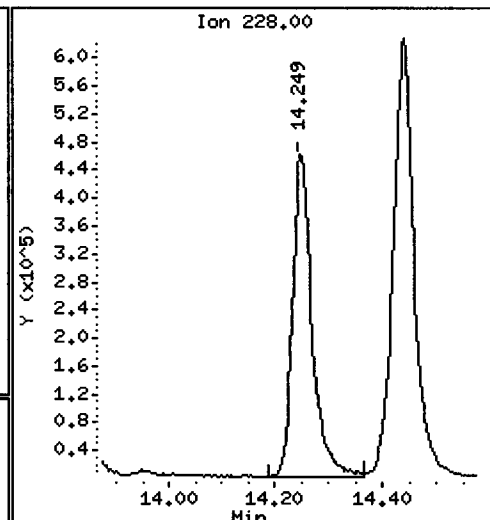
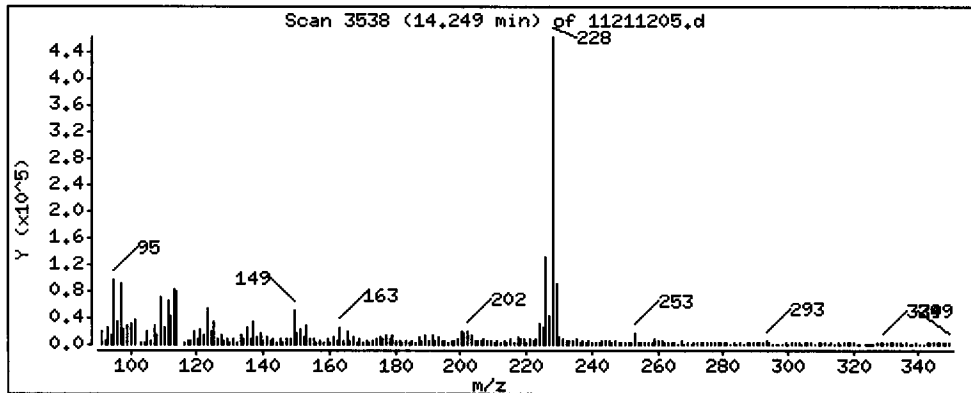
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Benzo(a)anthracene

Concentration: 196.0 ug/kg





Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

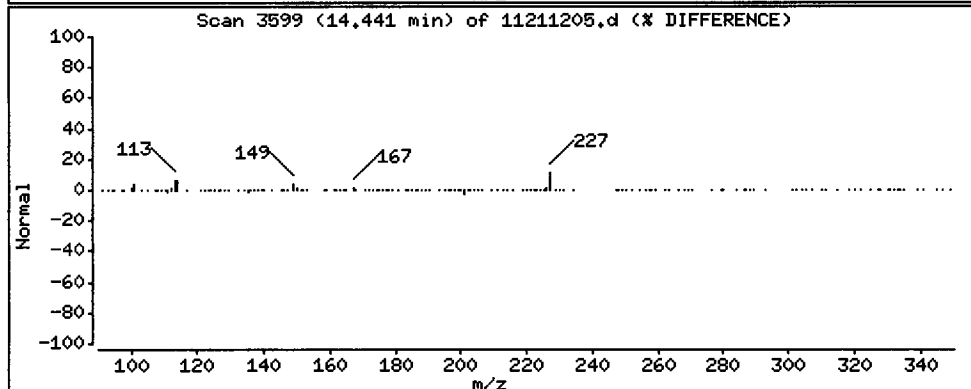
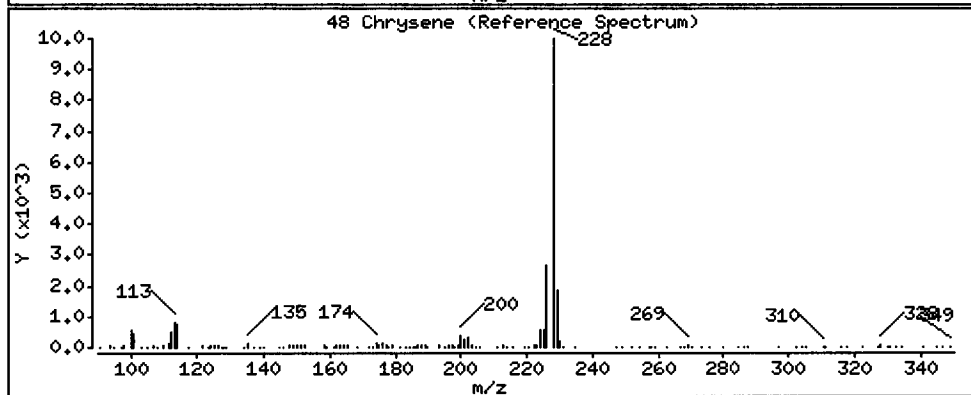
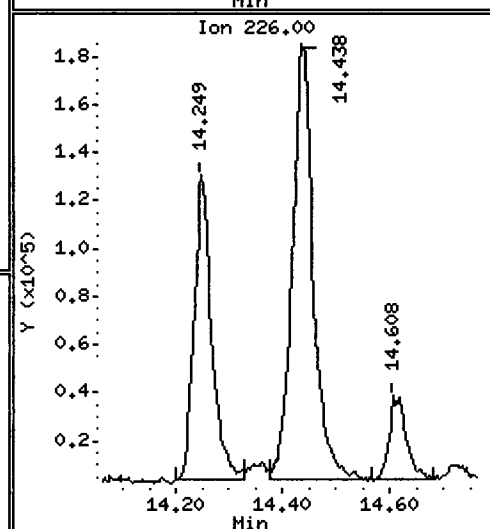
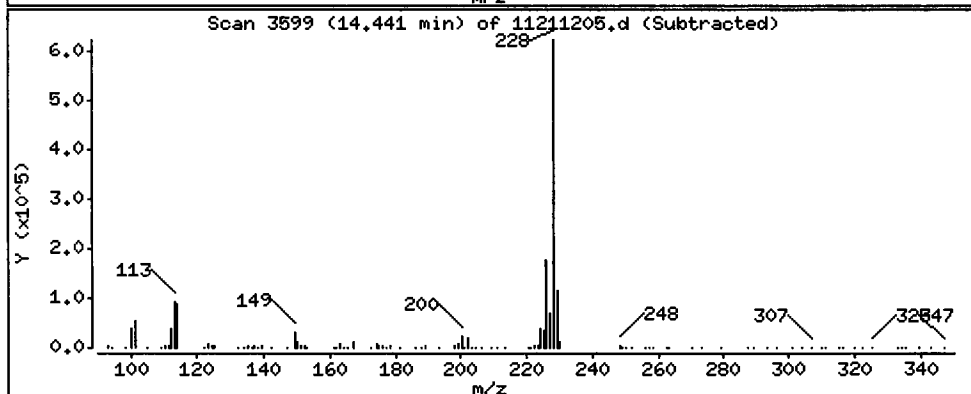
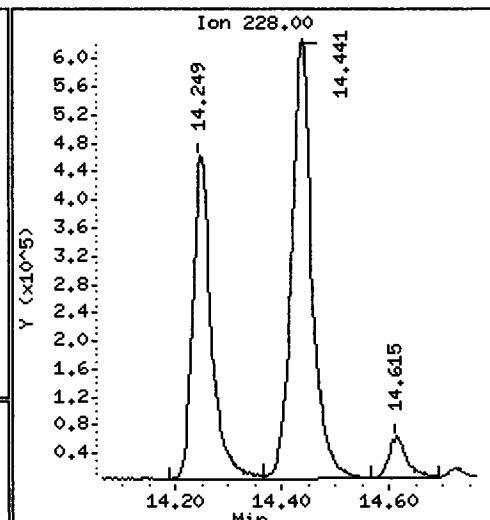
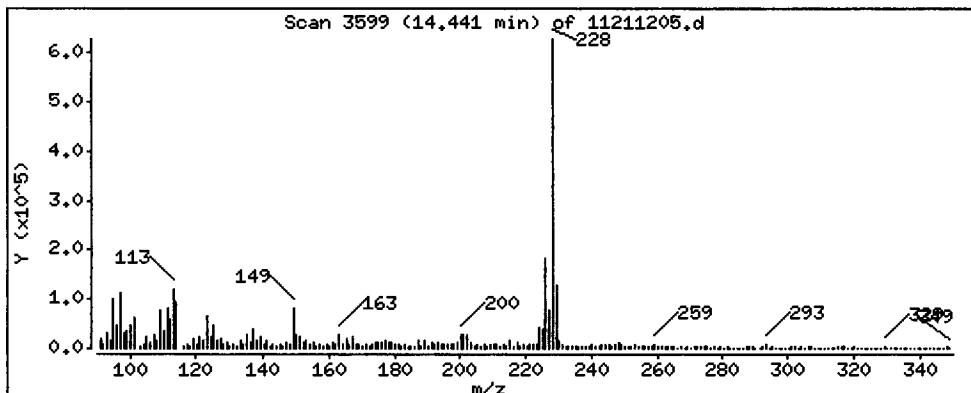
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

48 Chrysene

Concentration: 292.9 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

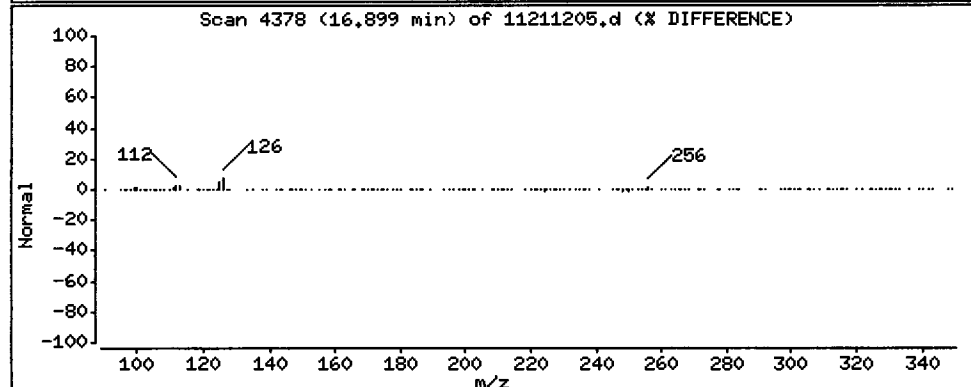
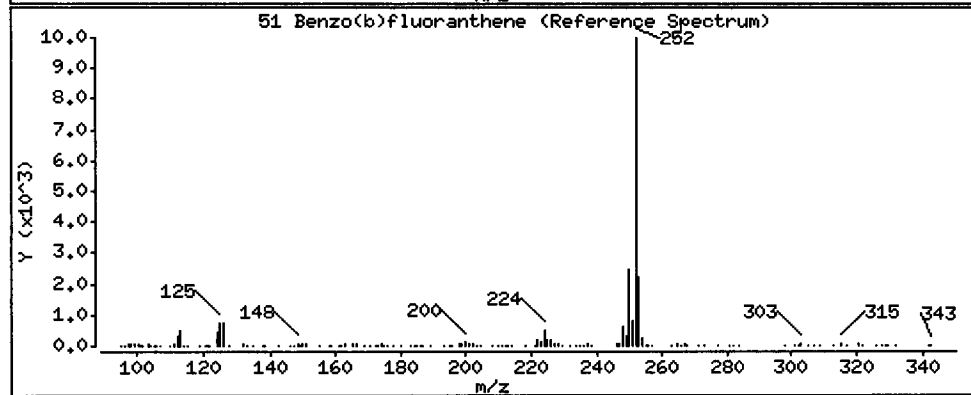
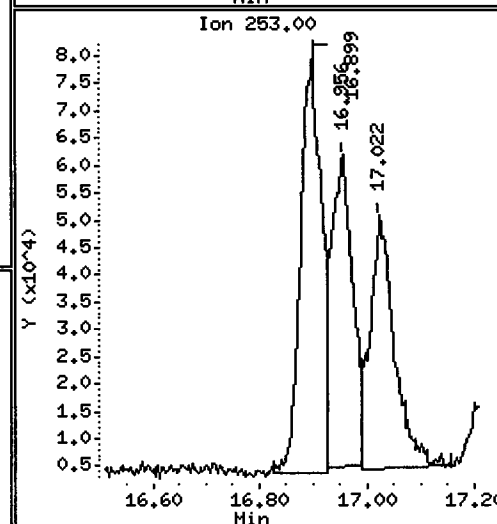
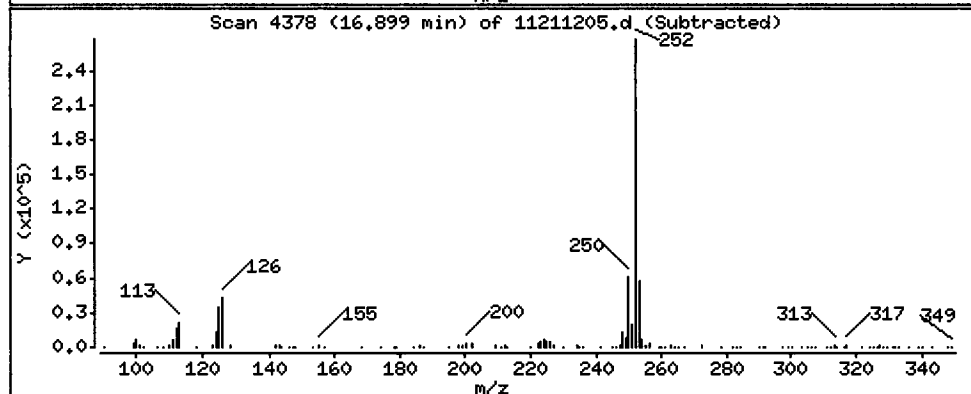
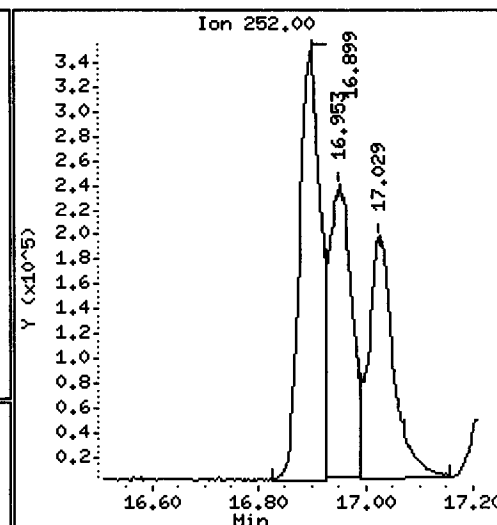
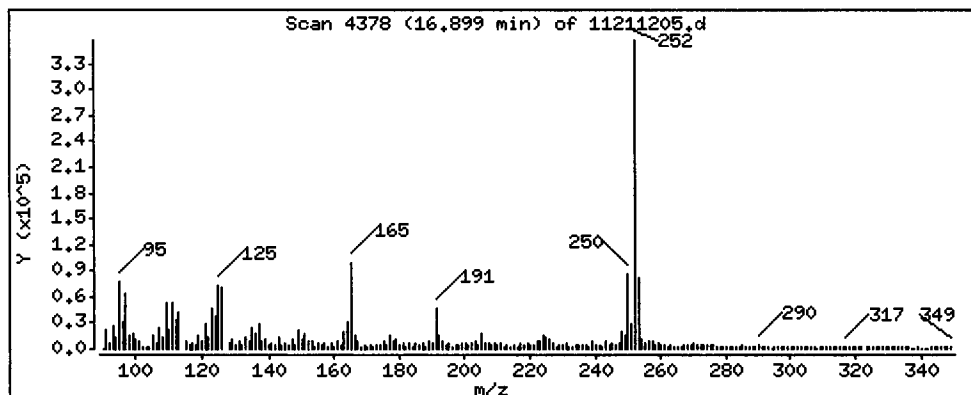
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

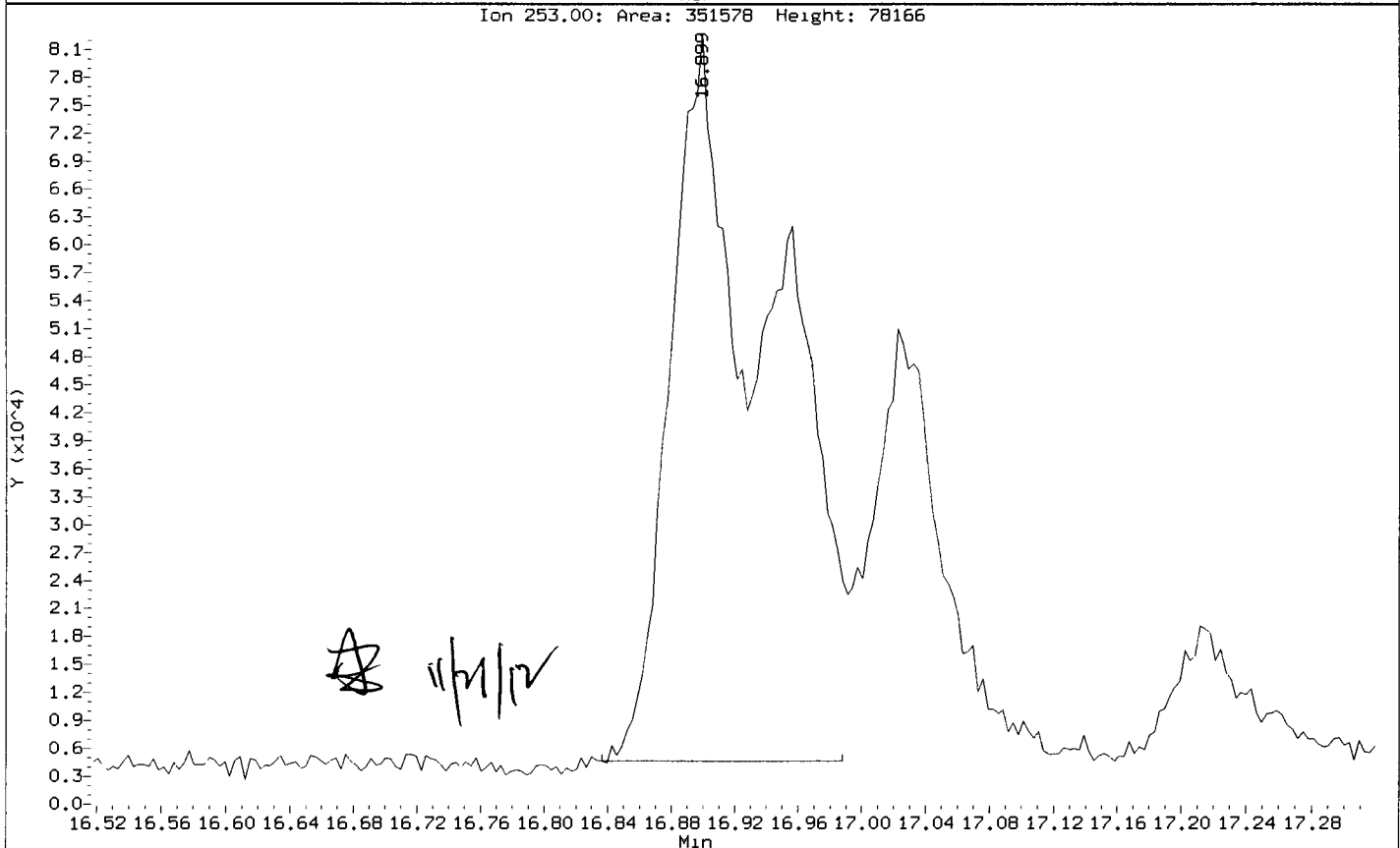
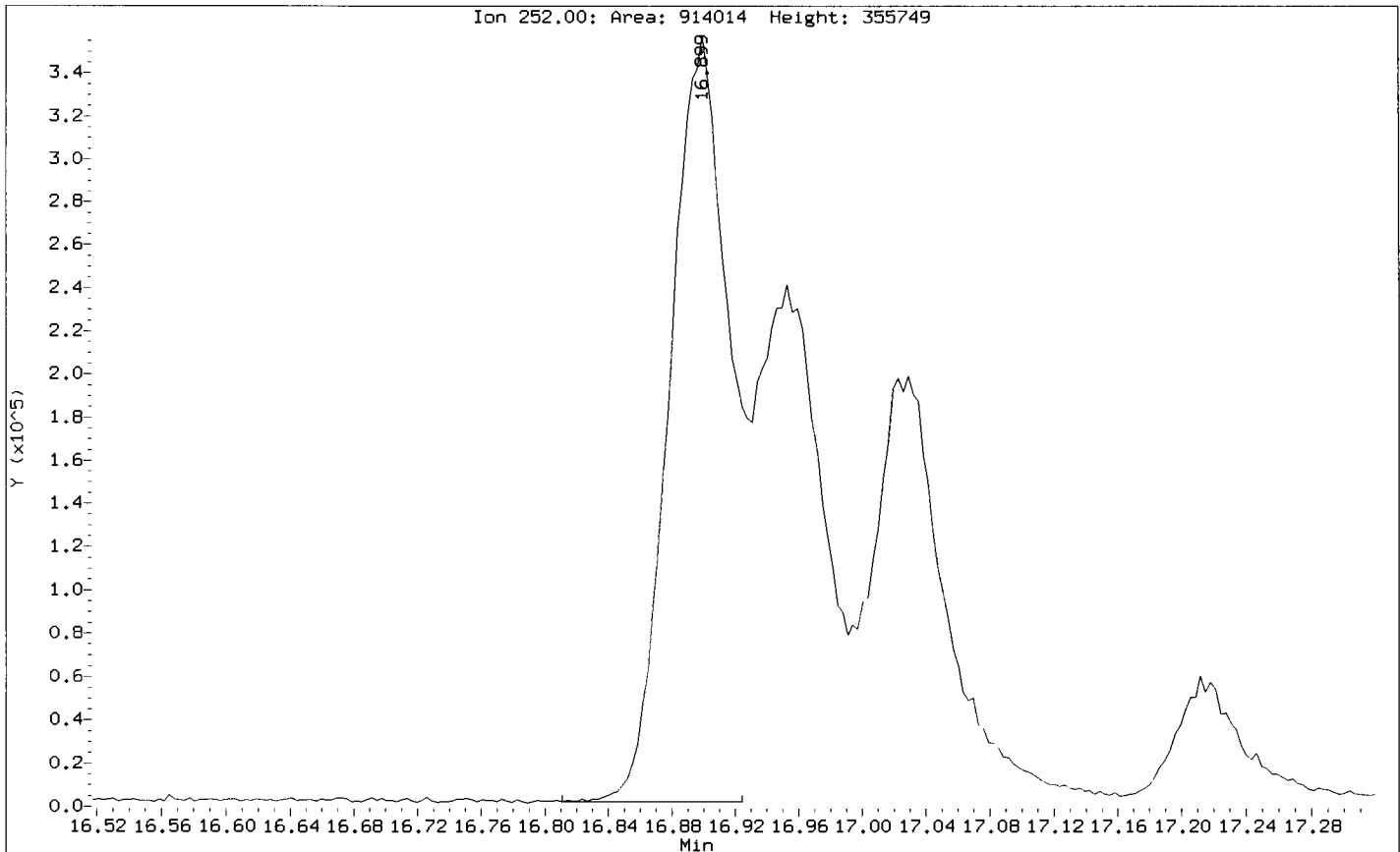
51 Benzo(b)fluoranthene

Concentration: 180.0 ug/kg



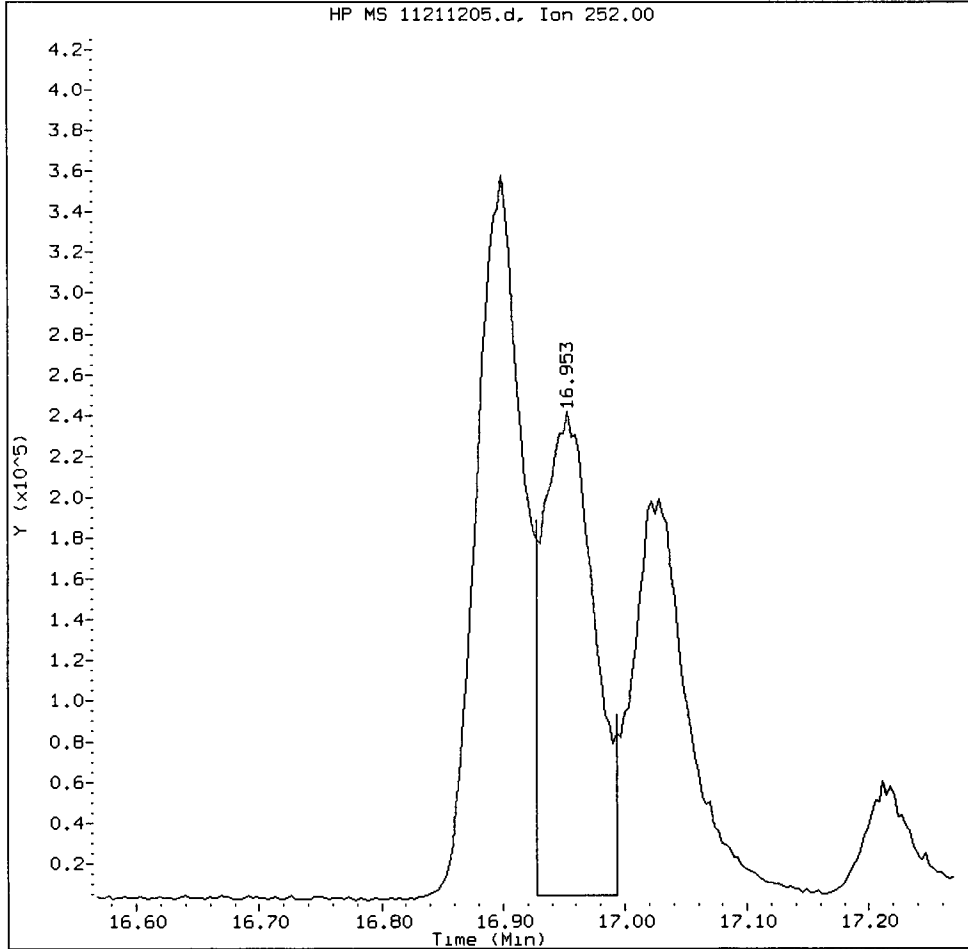
Data File: /chem3/nt11.1/20121121.b/11211205.d  
Injection Date: 21-NOV-2012 13:12  
Instrument: nt11.1  
Client Sample ID: SG-10-S-E-121107

Compound: Benzo(k)fluoranthene  
CAS Number: 207-08-9



VR58A, /chem3/nt11.i/20121121.b/11211205.d

Benzo(k)fluoranthene Amount: 2.54 Area: 707232



MANUAL INTEGRATION for Benzo(k)fluoranthene

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst:     *A*    

Date:     11/21/12

Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

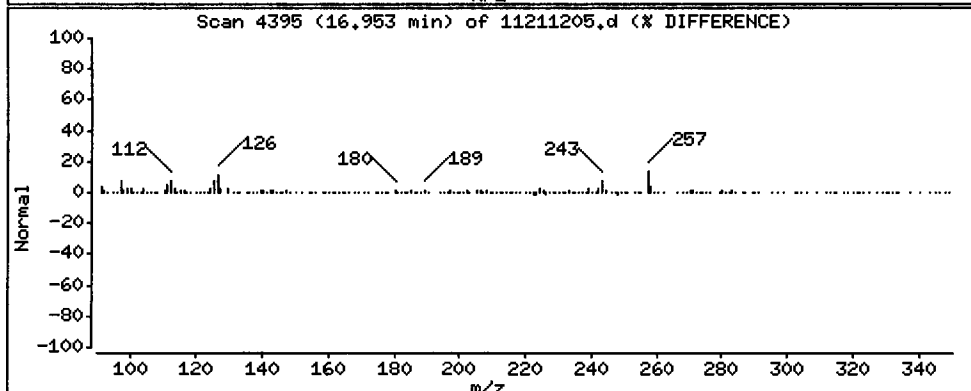
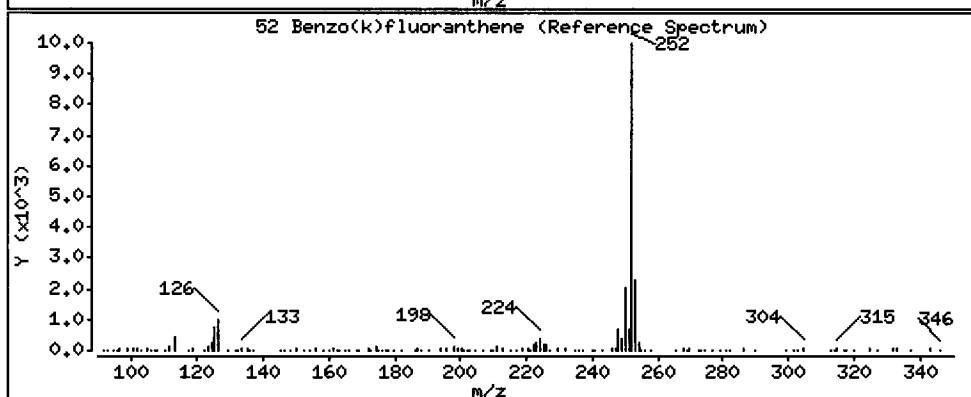
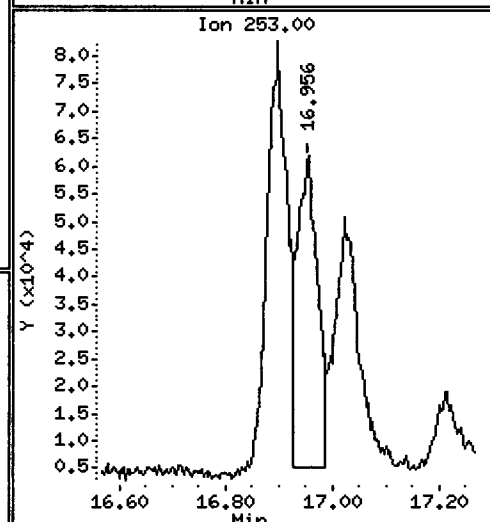
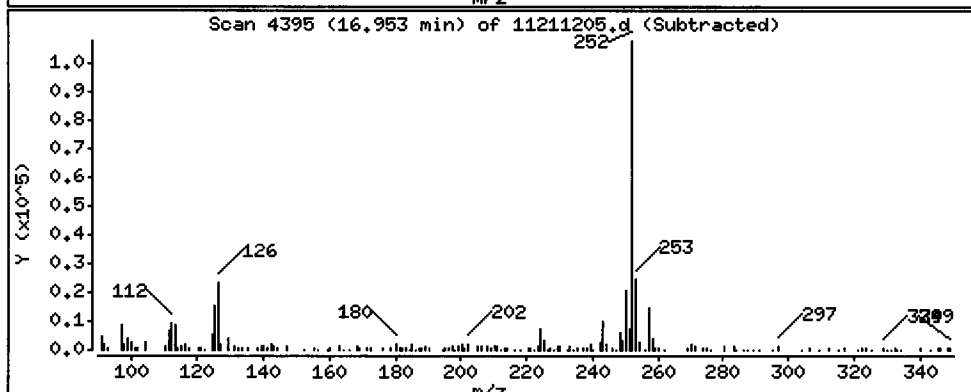
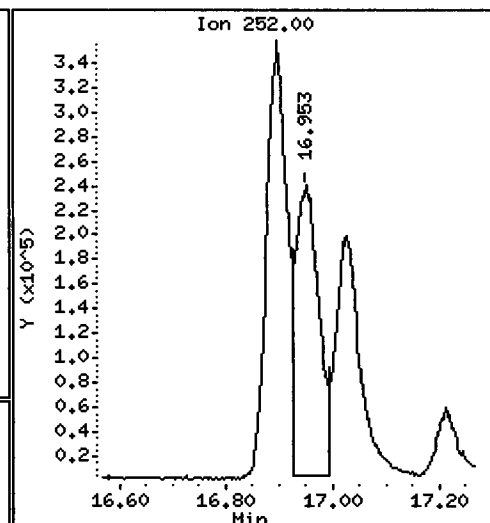
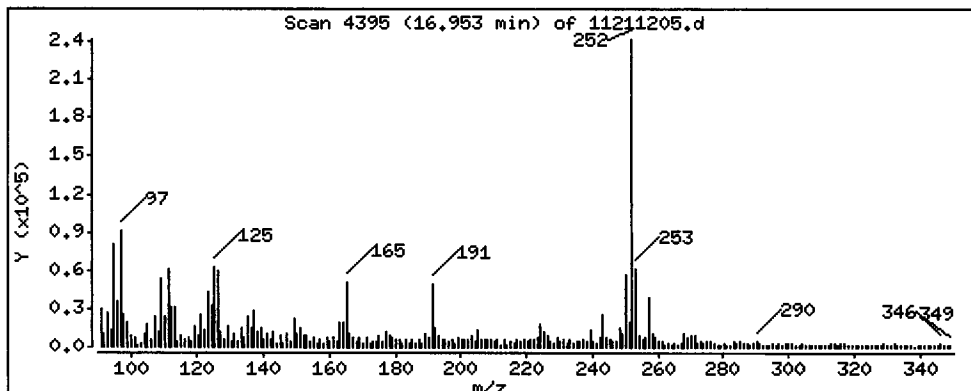
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

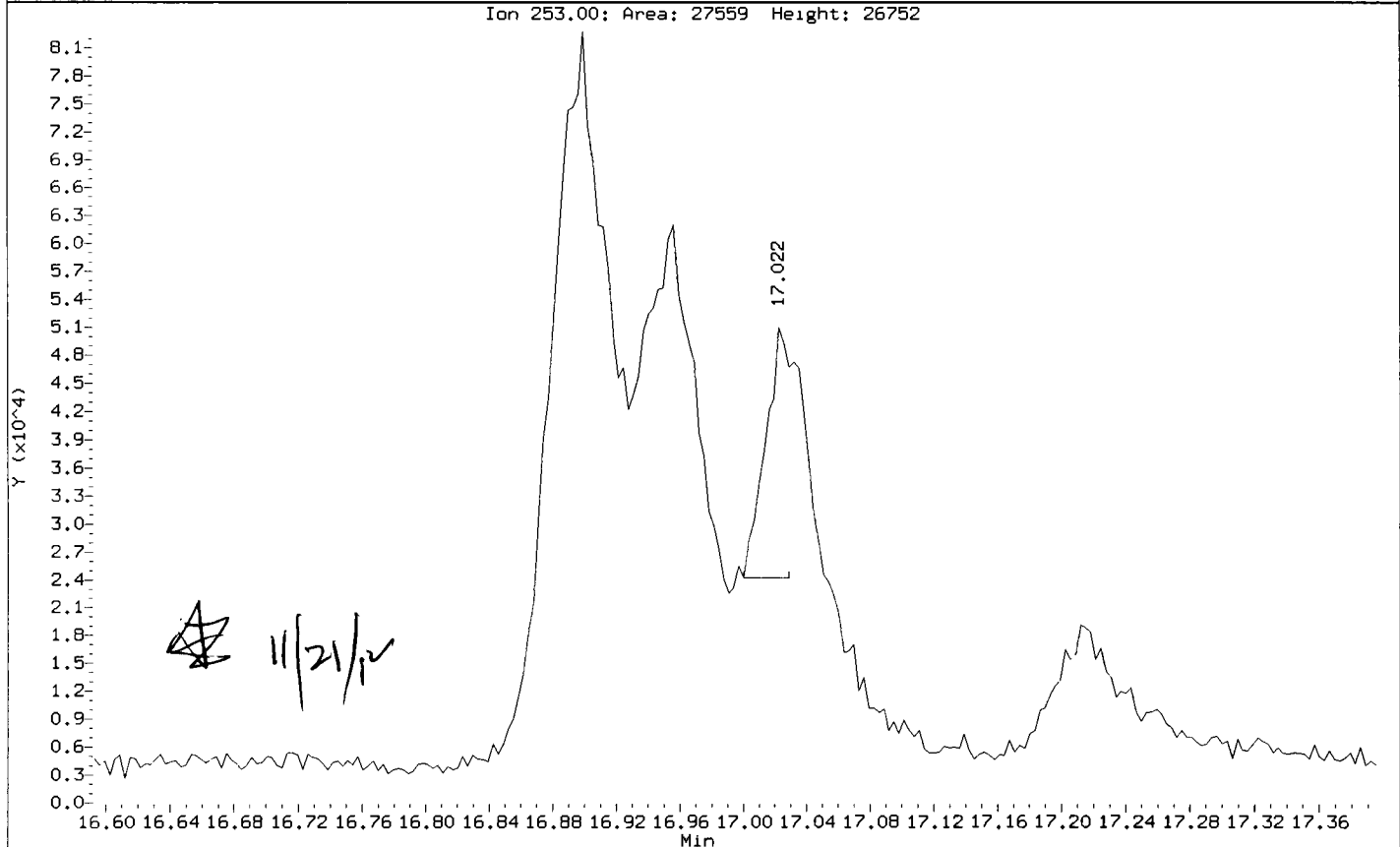
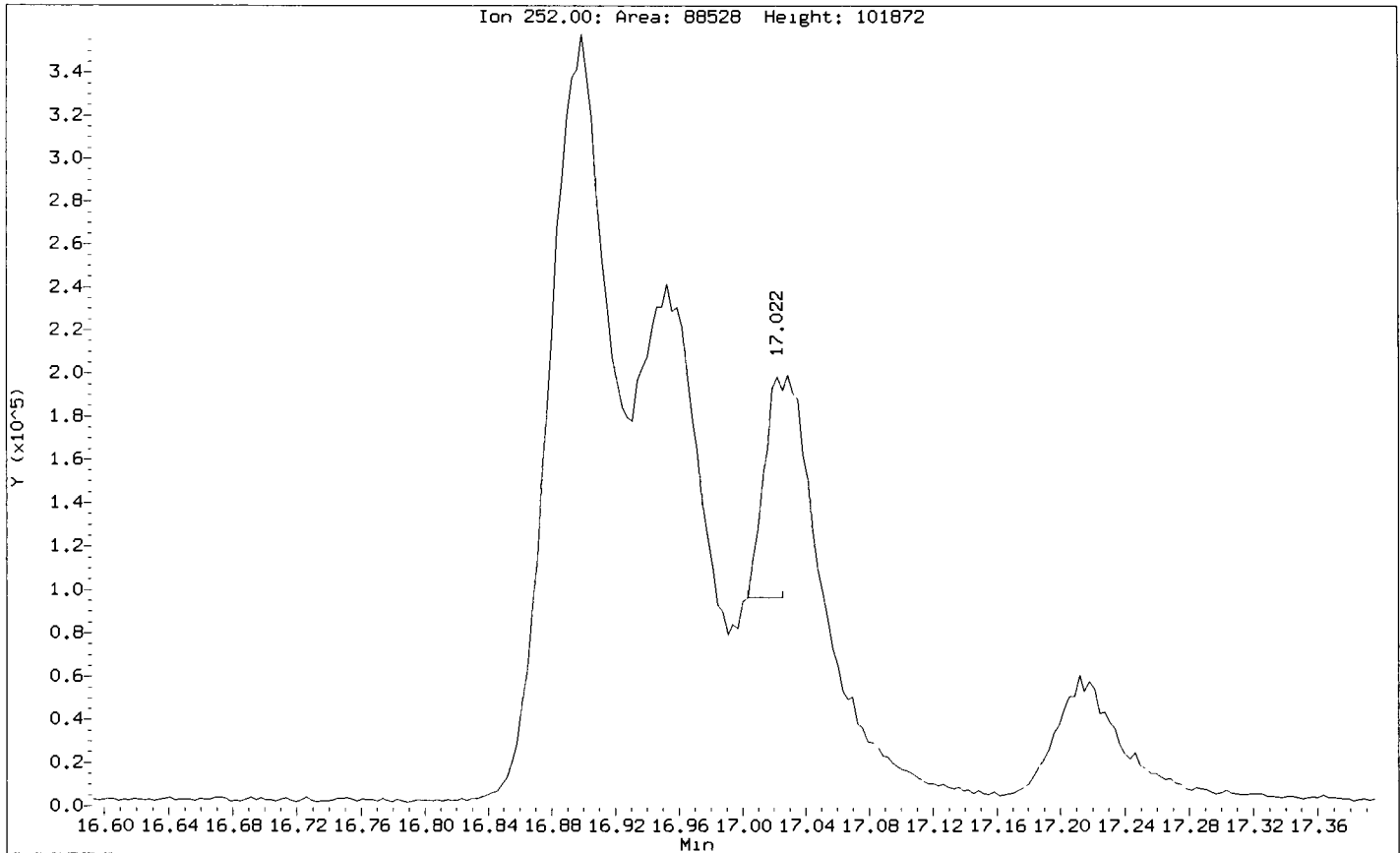
52 Benzo(k)fluoranthene

Concentration: 124.0 ug/kg



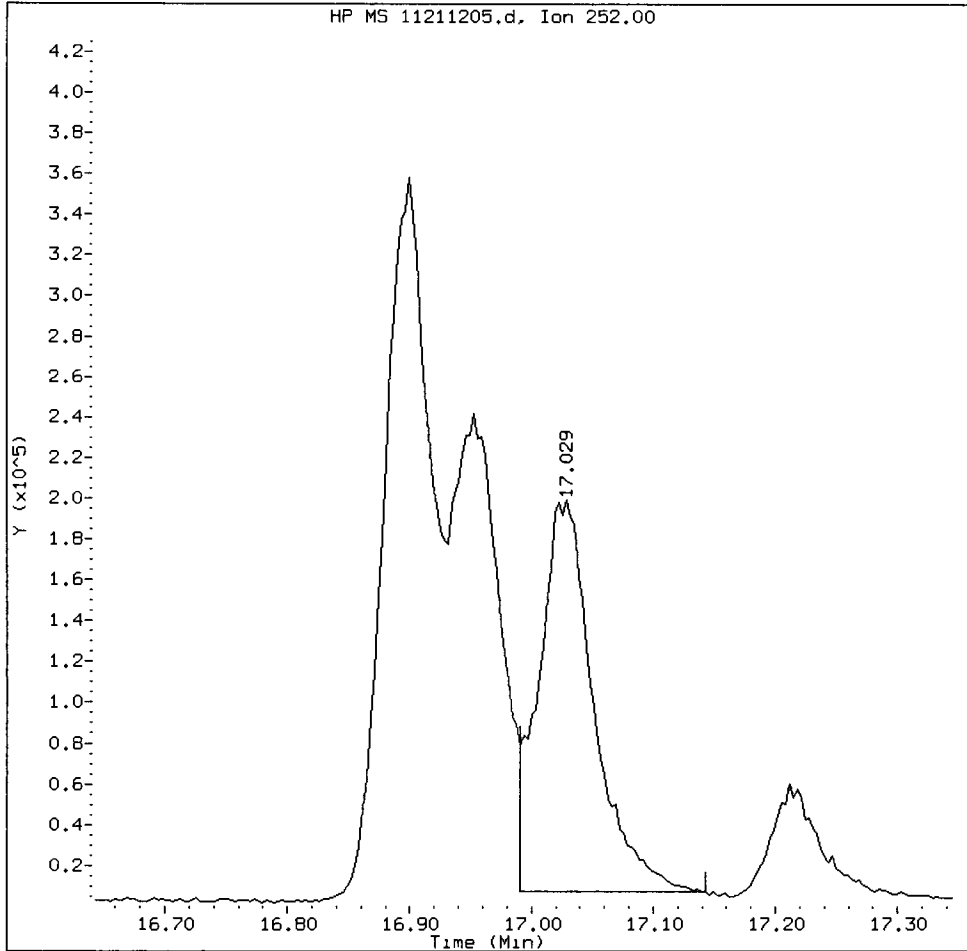
Data File: /chem3/nt11.1/20121121.b/11211205.d  
Injection Date: 21-NOV-2012 13:12  
Instrument: nt11.1  
Client Sample ID: SG-10-S-E-121107

Compound: Benzo(j)fluoranthene  
CAS Number:



VR58A, /chem3/nt11.i/20121121.b/11211205.d

Benzo(j)fluoranthene Amount: 2.07 Area: 609994



MANUAL INTEGRATION for Benzo(j)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AB

Date: 11/21/12

Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

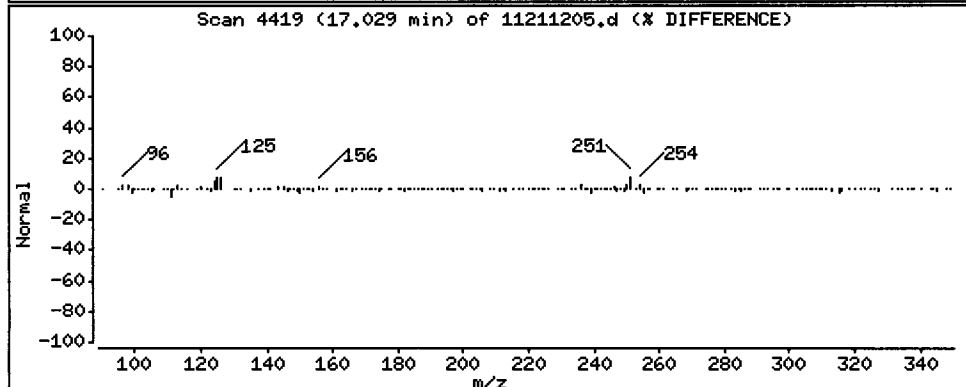
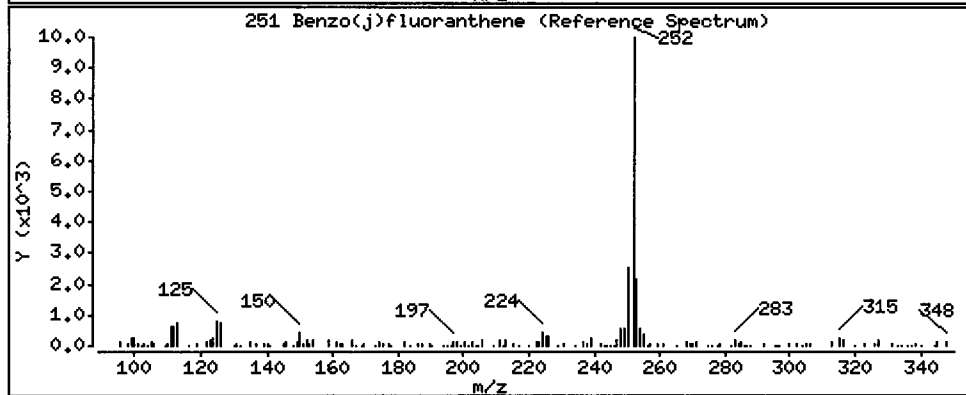
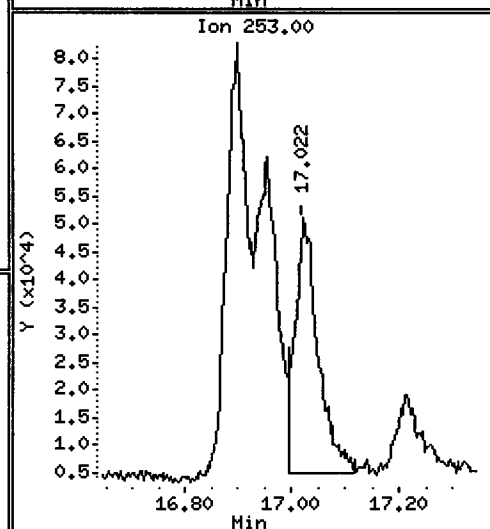
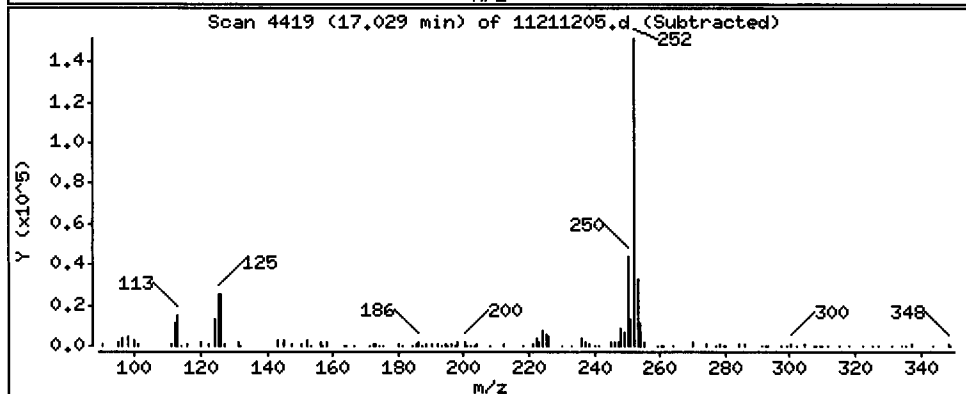
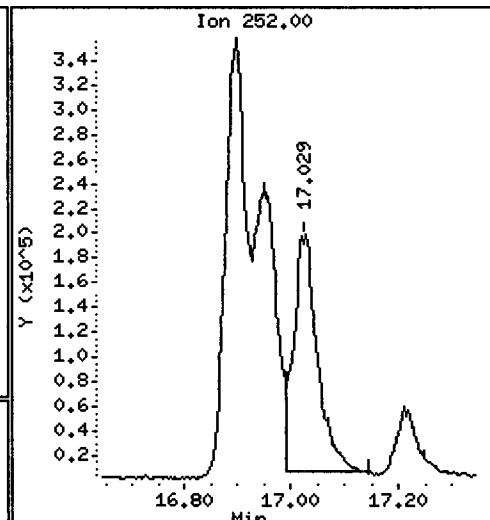
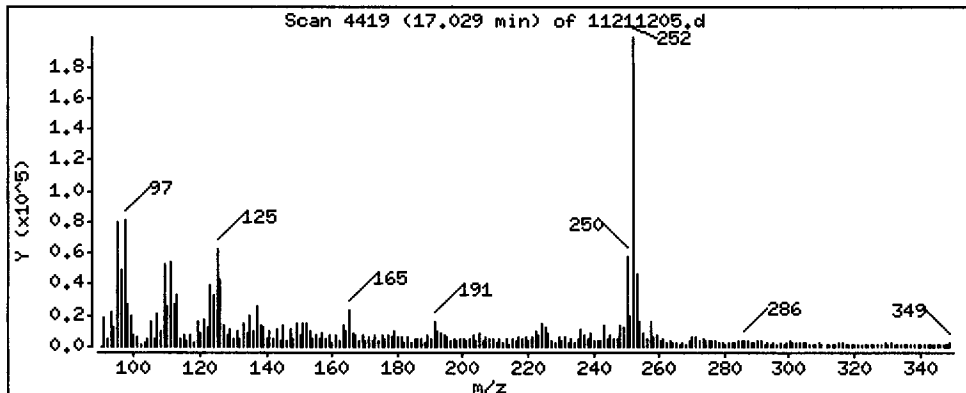
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

251 Benzo(j)fluoranthene

Concentration: 101.3 ug/kg





Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

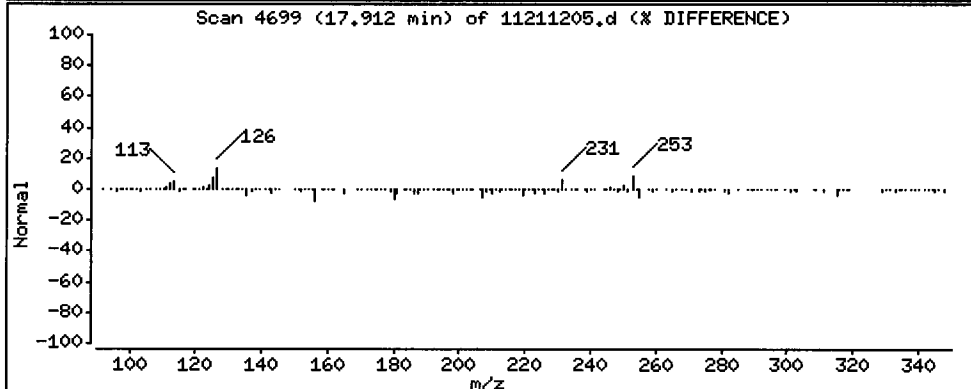
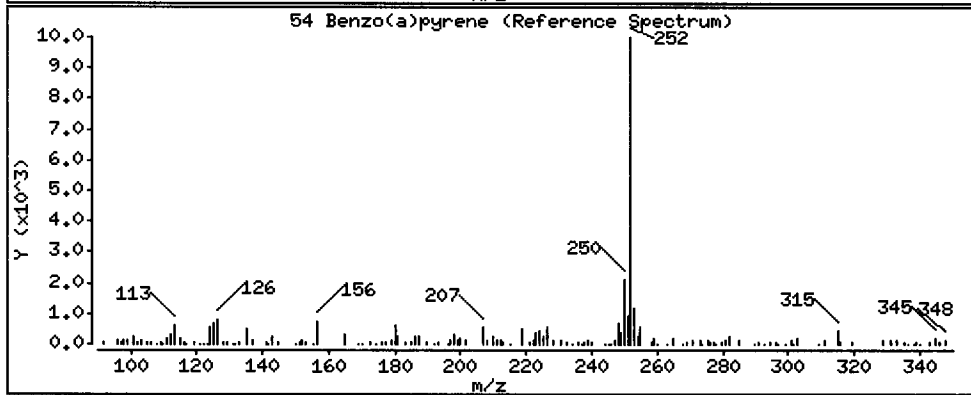
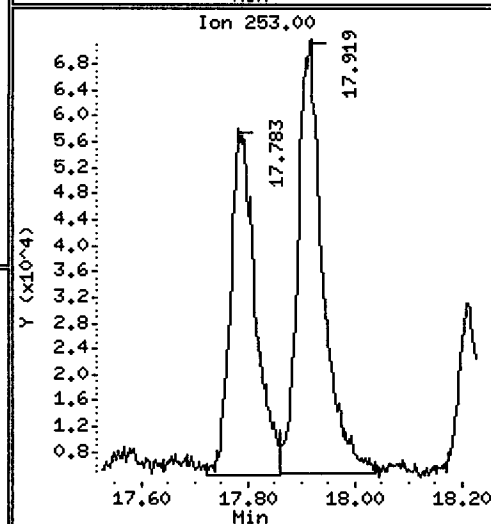
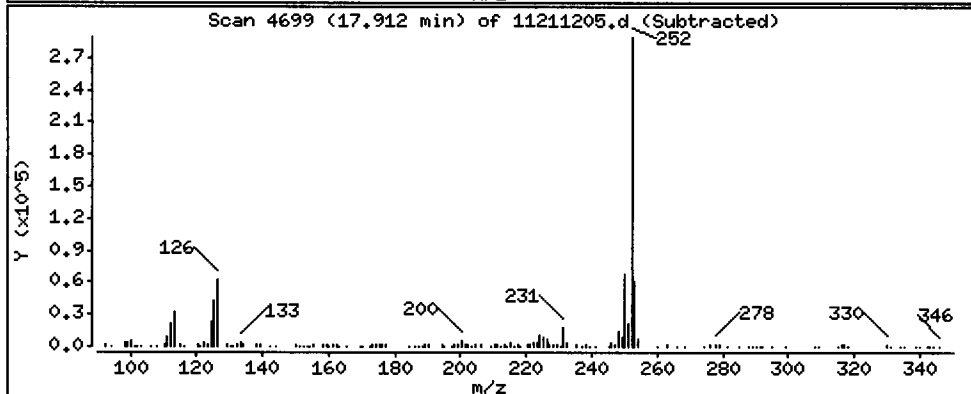
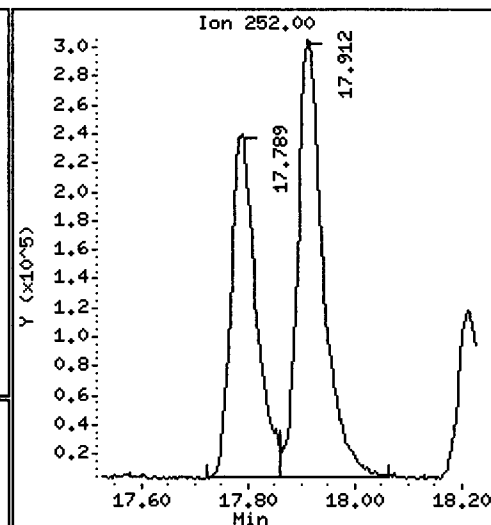
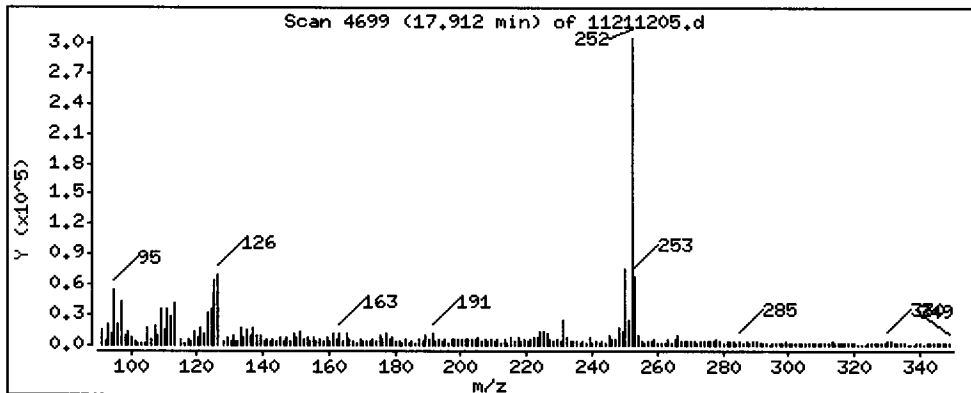
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

54 Benzo(a)pyrene

Concentration: 187.8 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

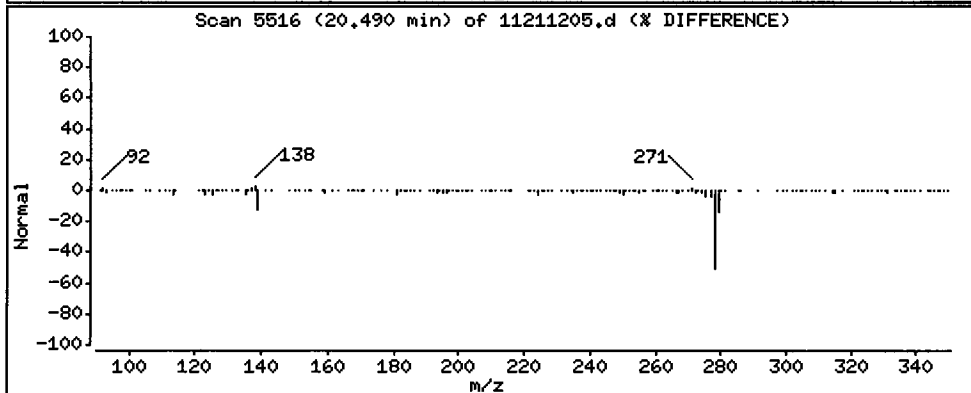
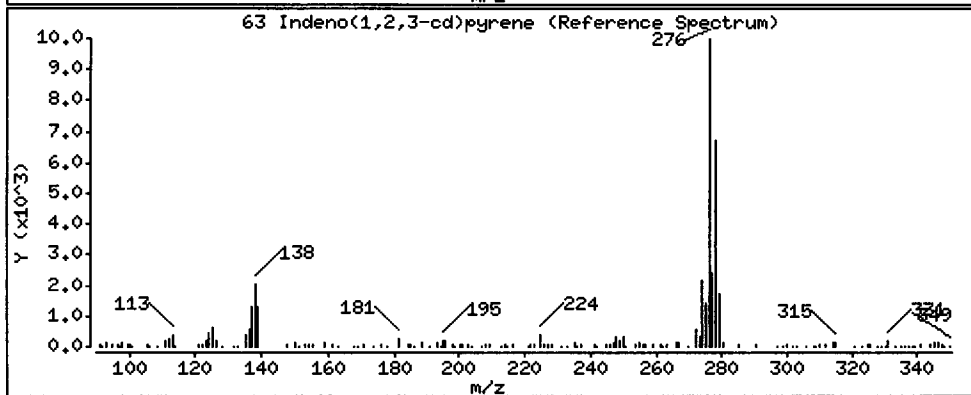
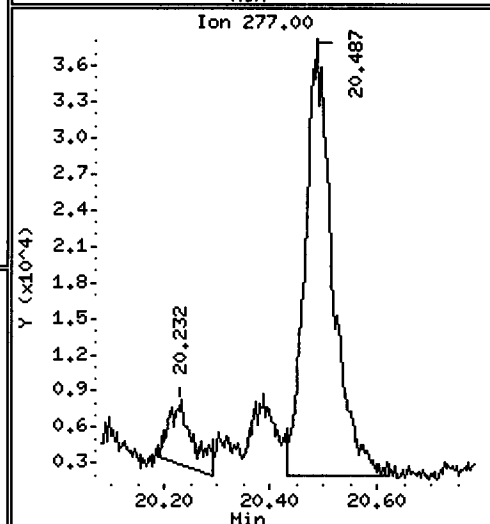
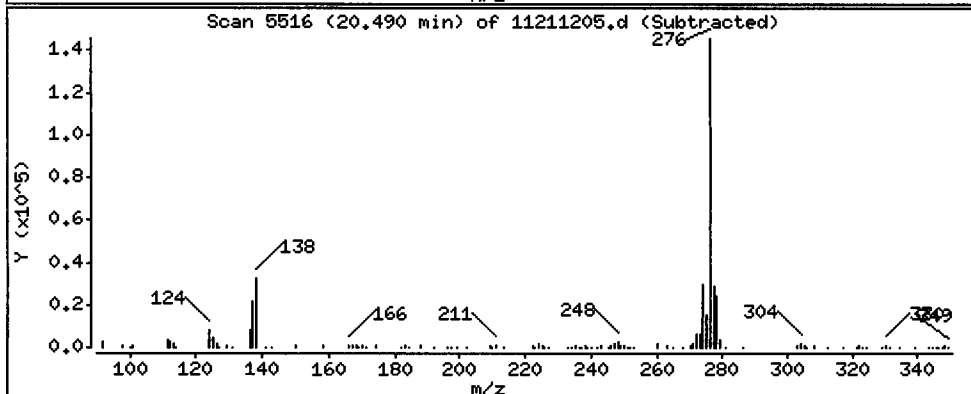
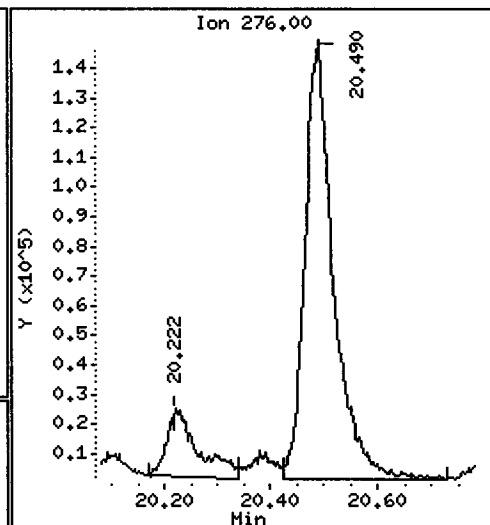
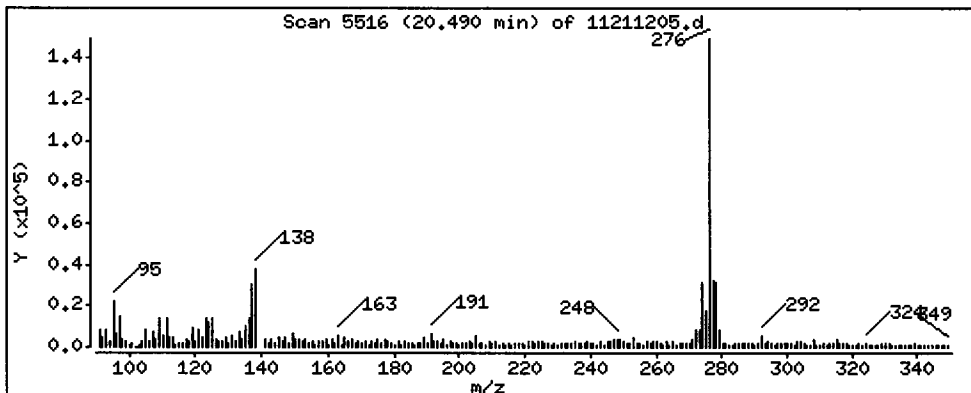
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

63 Indeno(1,2,3-cd)pyrene

Concentration: 83.57 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

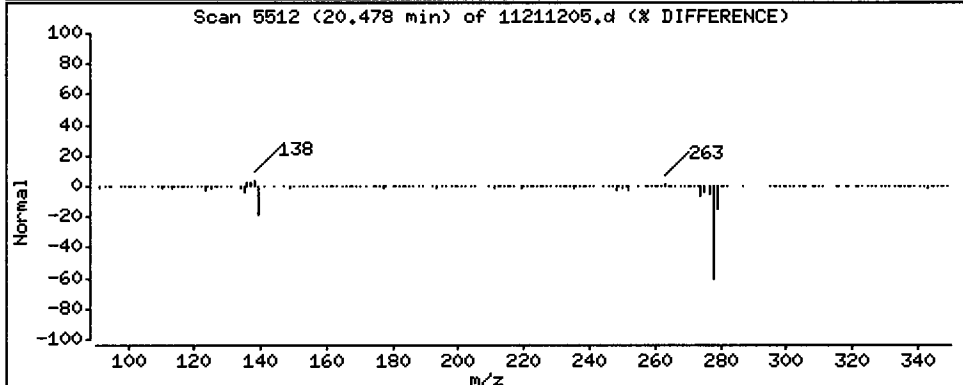
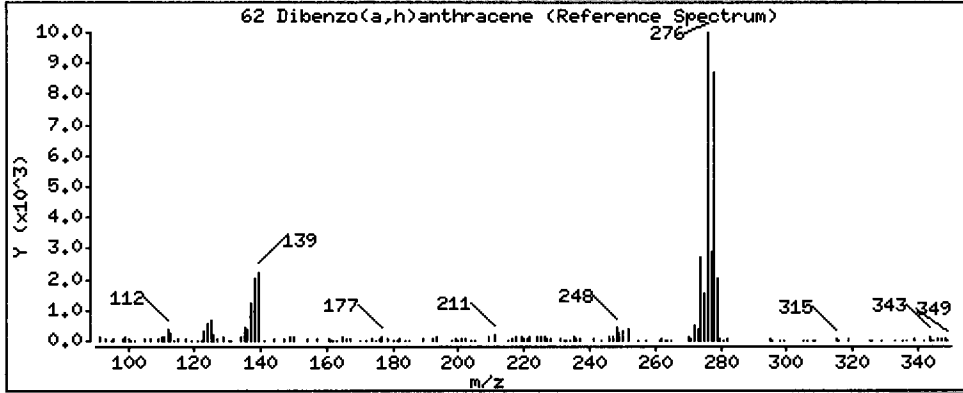
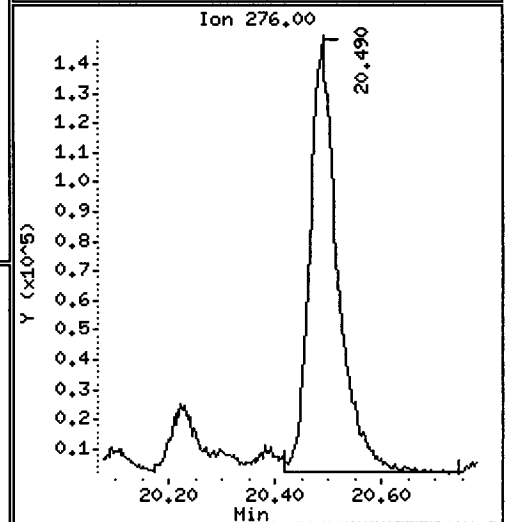
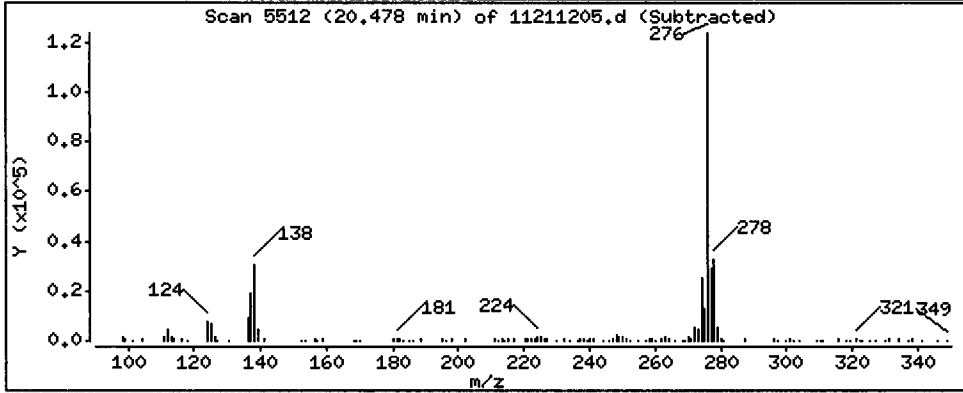
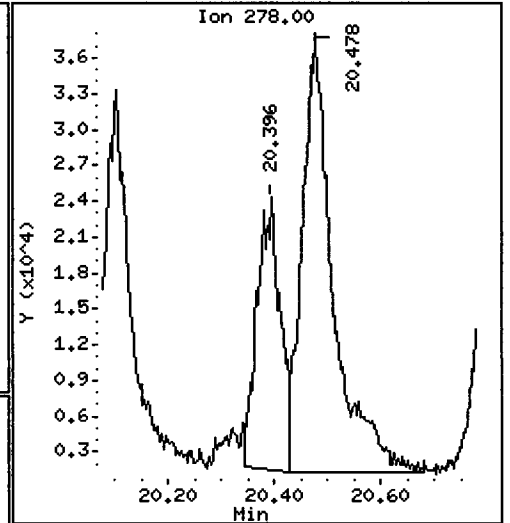
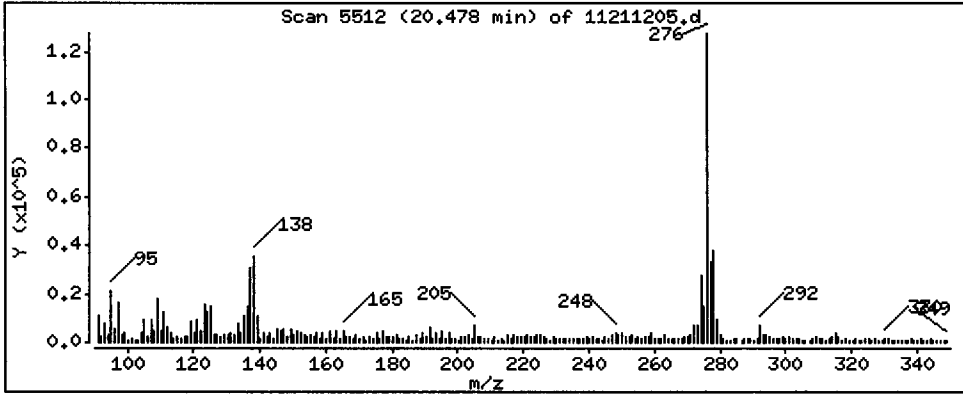
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

62 Dibenzo(a,h)anthracene

Concentration: 28.18 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

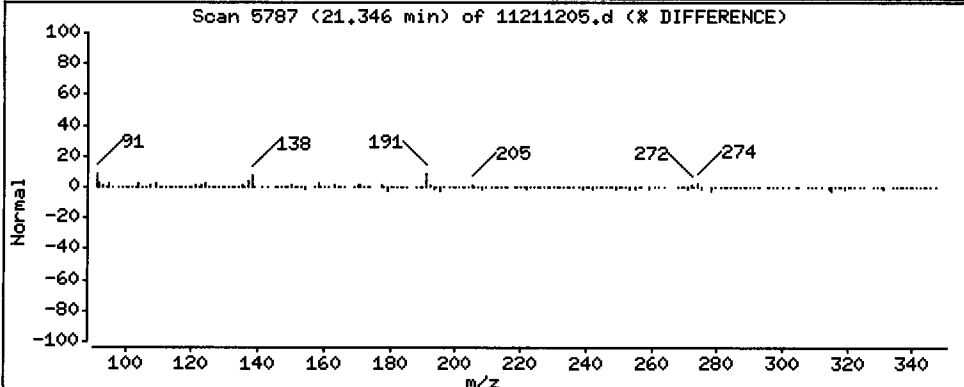
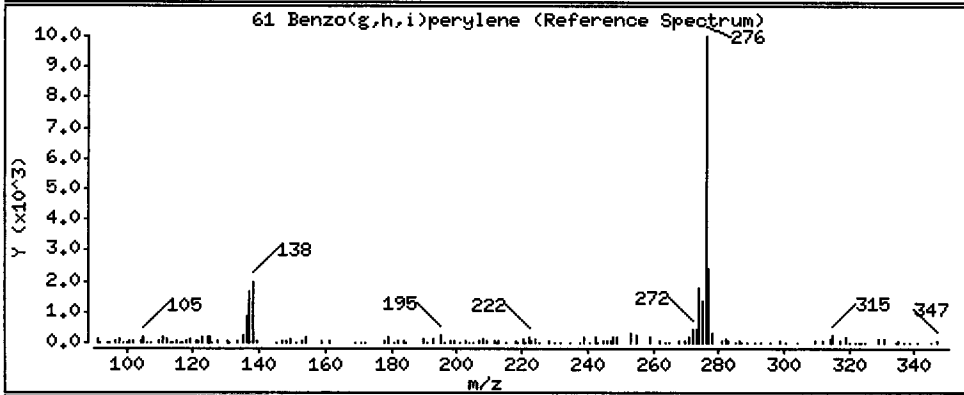
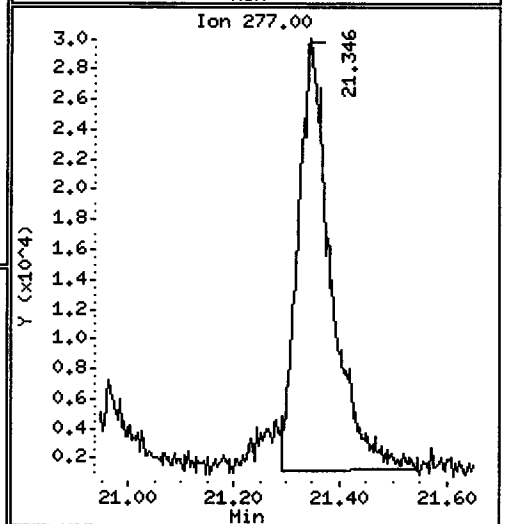
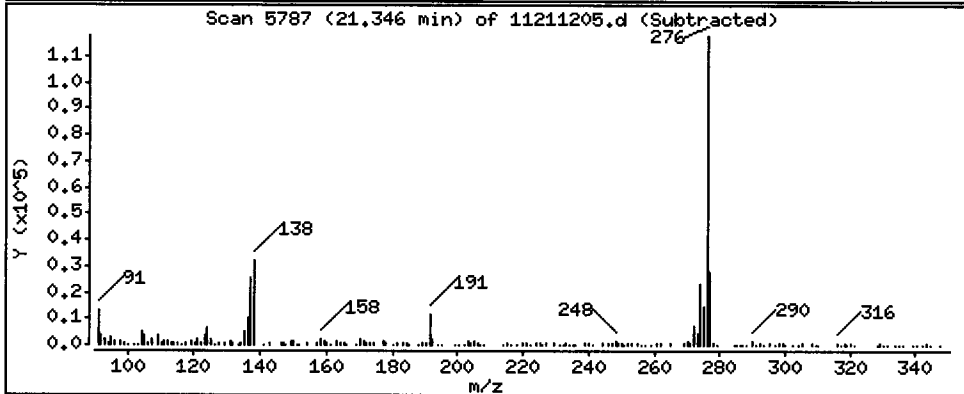
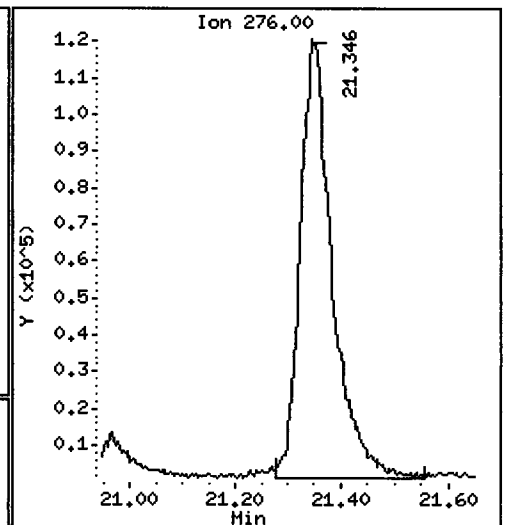
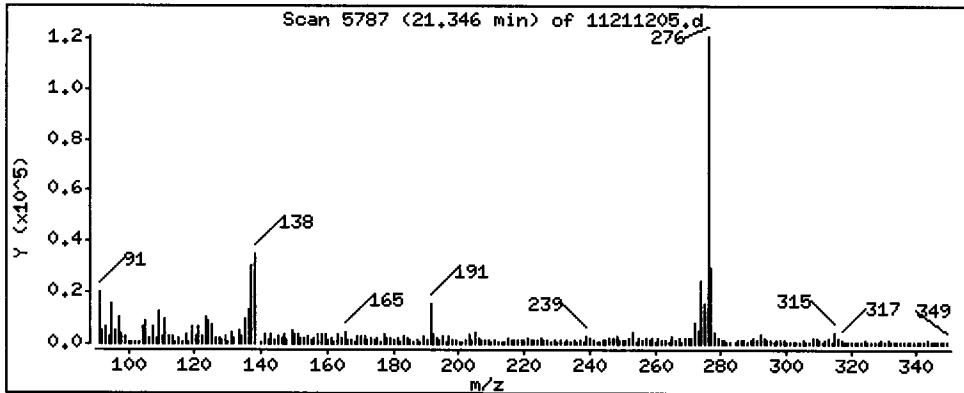
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Benzo(g,h,i)perylene

Concentration: 89.39 ug/kg



Date : 21-NOV-2012 13:12

Client ID: SG-10-S-E-121107

Instrument: nt11.i

Sample Info: VR58A

Volume Injected (uL): 1.0

Operator: JZ

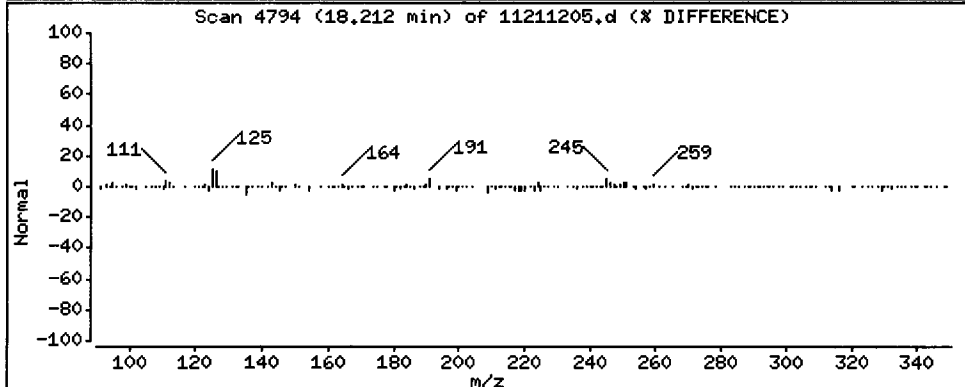
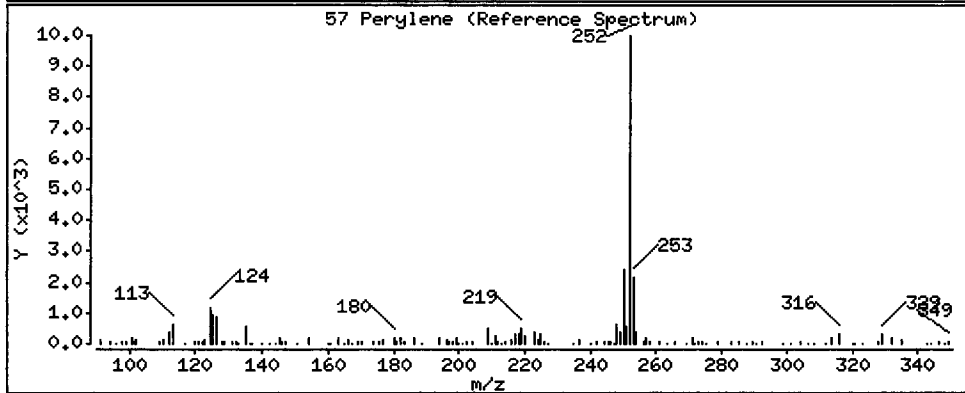
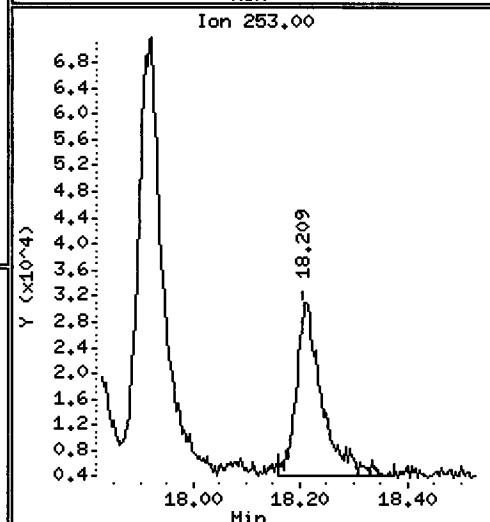
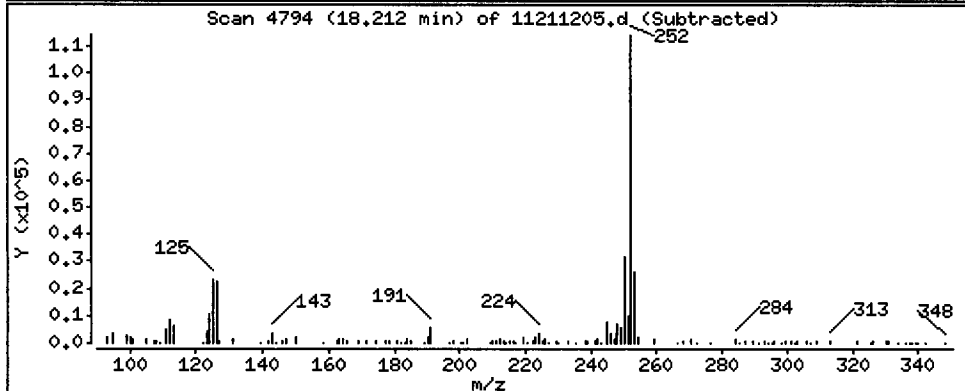
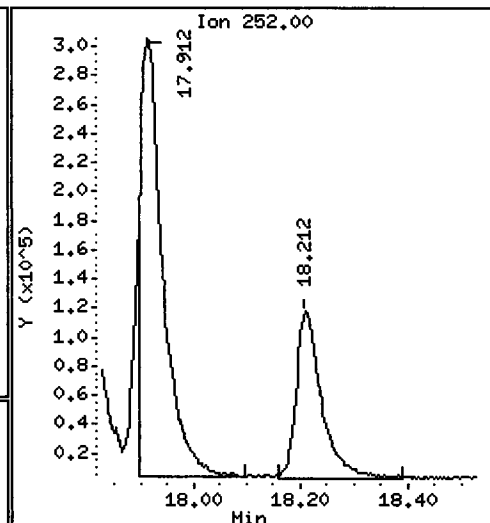
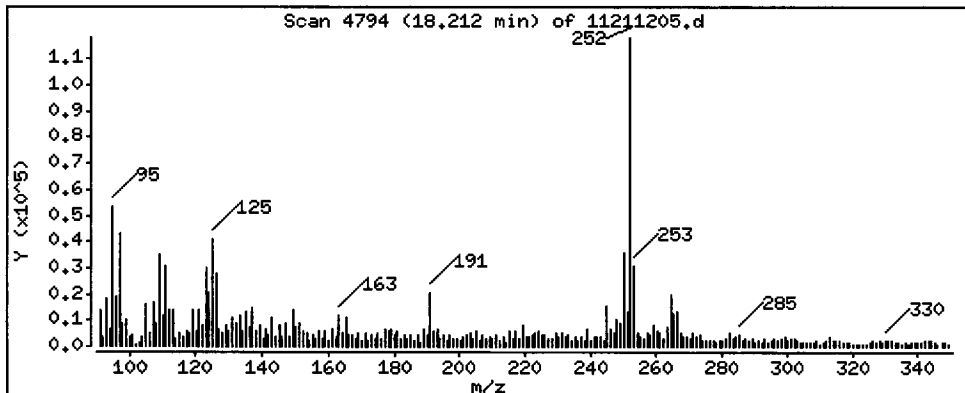
Column phase: ZB-5msi

Column diameter: 0.25

*AK*

57 Perylene

Concentration: 68.41 ug/kg



CO-ELUTION SUMMARY FOR FILE - 11211205.d

Lab ID: VR58A, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211206.d  
Lab Smp Id: VR58B Client Smp ID: SG-11-S-E-121107  
Inj Date : 21-NOV-2012 13:42  
Operator : JZ Inst ID: nt11.i  
Smp Info : VR58B,3,  
Misc Info : 12-22330  
Comment : 1ul Injection  
Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Meth Date : 21-Nov-2012 15:33 jianqing Quant Type: ISTD  
Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
Als bottle: 6  
Dil Factor: 3.00000  
Integrator: HP RTE Compound Sublist: pnax.sub  
Target Version: 3.50

*Handwritten:* 11/21/12

Concentration Formula:  $\text{Amt} * \text{DF} * \text{Vt} / (\text{Ws} * (100 - \text{M}) / 100) / *$  CpndVariable

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	51.06000	Weight of sample extracted (g)
M	80.10000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	====	136	5.438	5.438	(1.000)	668211	2.00000	
7 Naphthalene		128	5.467	5.467	(1.005)	93125	0.26077	38.50
\$ 12 2-Methylnaphthalene-d10		152	6.174	6.174	(1.135)	143540	0.62871	92.81
14 2-Methylnaphthalene		141	6.221	6.221	(1.144)	64146	0.31880	47.06
15 1-methylnaphthalene		141	6.417	6.413	(1.180)	15384	0.07982	11.78 (M)
21 Acenaphthylene		152	7.600	7.600	(0.986)	27102	0.08789	12.97
* 22 Acenaphthene-d10		164	7.710	7.714	(1.000)	354888	2.00000	
23 Acenaphthene		153	7.761	7.761	(1.007)	42237	0.21537	31.79
11 Dibenzofuran		168	7.912	7.912	(1.026)	45632	0.15883	23.45
25 Fluorene		166	8.386	8.389	(1.088)	56812	0.25730	37.98
* 28 Phenanthrene-d10		188	9.736	9.736	(1.000)	508936	2.00000	
30 Phenanthrene		178	9.771	9.768	(1.004)	434542	1.41349	208.7
31 Anthracene		178	9.812	9.809	(1.008)	126824	0.42973	63.44
36 Fluoranthene		202	11.443	11.425	(1.175)	894028	2.90261	428.5
39 Pyrene		202	11.923	11.892	(0.830)	900340	3.15896	466.3

Compounds	QUANT SIG				RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT		ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	====	==	=====	=====	=====	=====	=====
46 Benzo(a)anthracene	228	14.246	14.224	(0.991)	359936	1.38500	204.5
* 47 Chrysene-d12	240	14.369	14.343	(1.000)	517191	2.00000	
48 Chrysene	228	14.435	14.413	(1.005)	630146	2.49819	368.8
51 Benzo(b)fluoranthene	252	16.899	16.858	(0.931)	361226	1.91403	282.6
52 Benzo(k)fluoranthene	252	16.953	16.918	(0.934)	230939	1.12675	166.3 (M)
251 Benzo(j)fluoranthene	252	17.035	16.994	(0.939)	183589	0.84897	125.3 (M)
54 Benzo(a)pyrene	252	17.912	17.878	(0.987)	277584	1.44804	213.8
* 56 Perylene-d12	264	18.143	18.102	(1.000)	407786	2.00000	
63 Indeno(1,2,3-cd)pyrene	276	20.484	20.431	(1.129)	130855	0.56306	83.12
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.380	20.339	(1.123)	74555	0.55149	81.41 (M)
62 Dibenzo(a,h)anthracene	278	20.471	20.427	(1.128)	37348	0.19732	29.13
61 Benzo(g,h,i)perylene	276	21.342	21.298	(1.176)	141260	0.71447	105.5
57 Perylene	252	18.212	18.177	(1.004)	190102	0.95626	141.2

QC Flag Legend

M - Compound response manually integrated.



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211206.d  
 Lab Smp Id: VR58B  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22330

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-11-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	668211	29.47
22 Acenaphthene-d10	284255	142128	568510	354888	24.85
28 Phenanthrene-d10	410660	205330	821320	508936	23.93
47 Chrysene-d12	467886	233943	935772	517191	10.54
56 Perylene-d12	472330	236165	944660	407786	-13.67

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	0.00
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	-0.04
28 Phenanthrene-d10	9.74	9.24	10.24	9.74	0.00
47 Chrysene-d12	14.34	13.84	14.84	14.37	0.18
56 Perylene-d12	18.10	17.60	18.60	18.14	0.23

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58B  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Misc Info: 12-22330

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-11-S-E-121107  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	147.6	92.81	62.87	34-100
\$ 60 Dibenzo(a,h) anthra	147.6	81.41	55.15	10-117

Date: 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

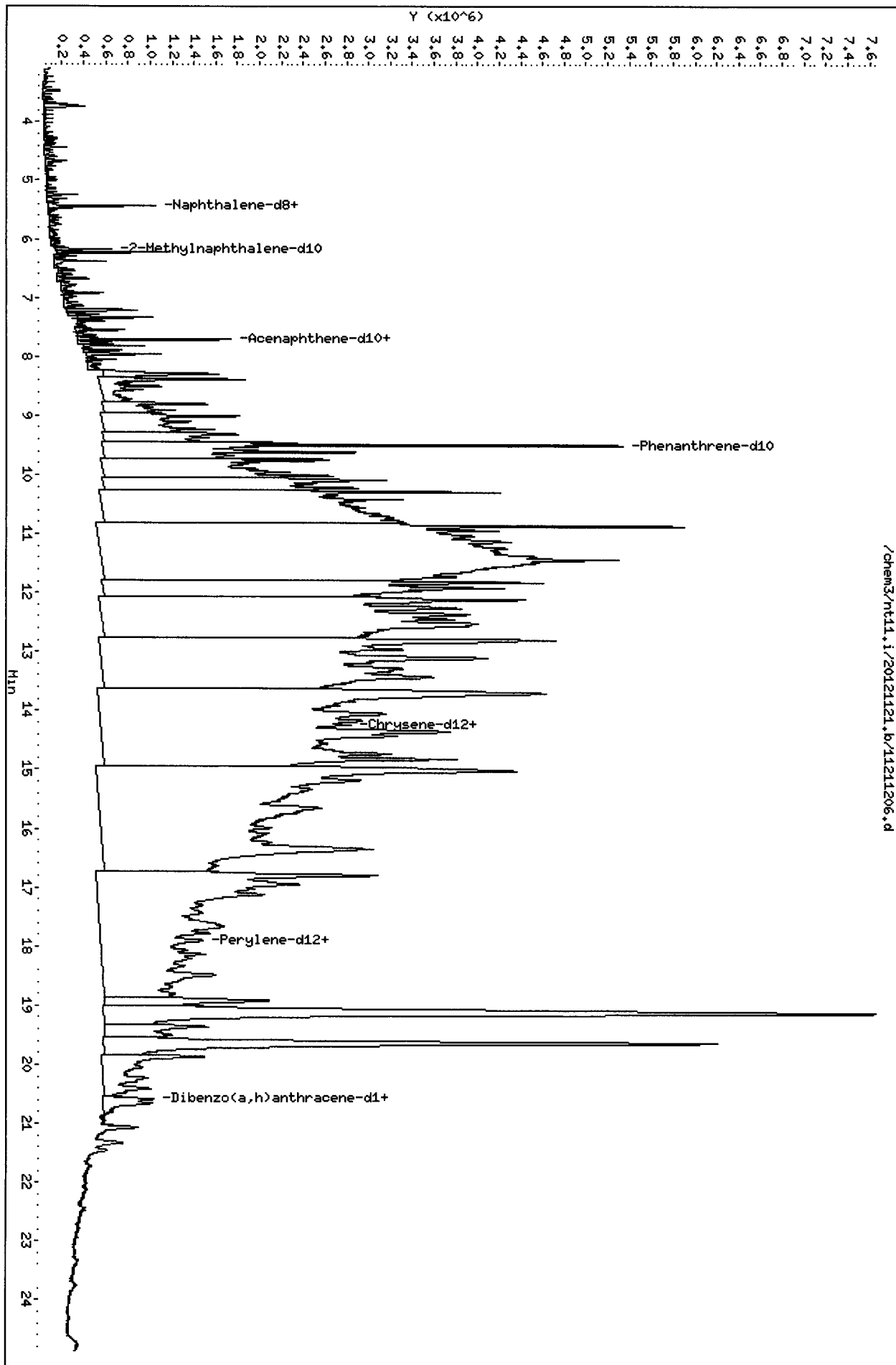
Sample Info: VR58B,3,

Volume Injected (uL): 1.0

Operator: JZ

Column phase: ZB-5ms1

Column diameter: 0.25



/chem3/nt11.i/20121121.b/11211206.d

VR58 : 010112

Date : 21-NOV-2012 13:42

Client ID: SC-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

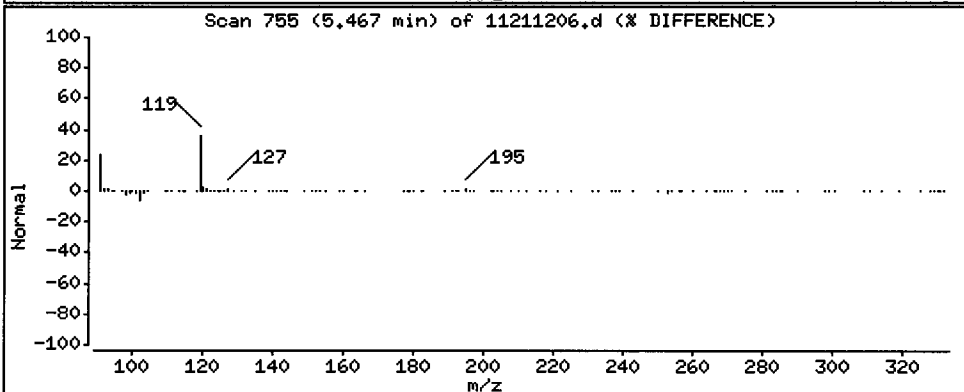
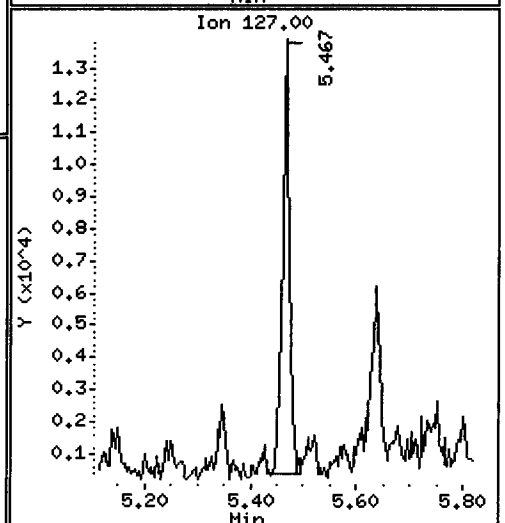
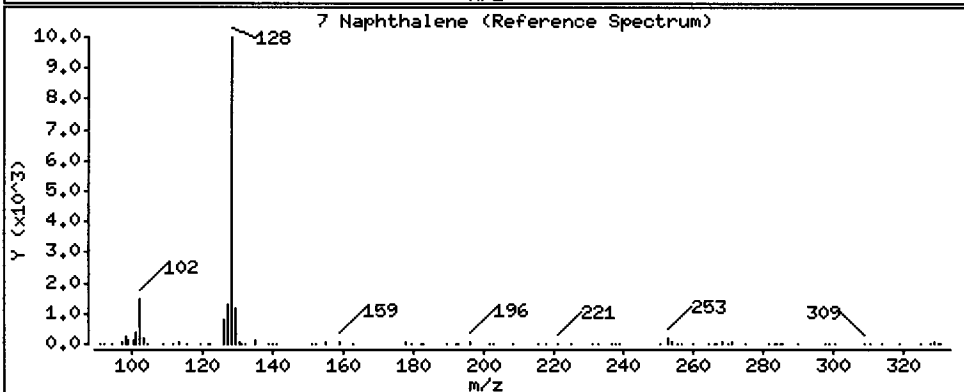
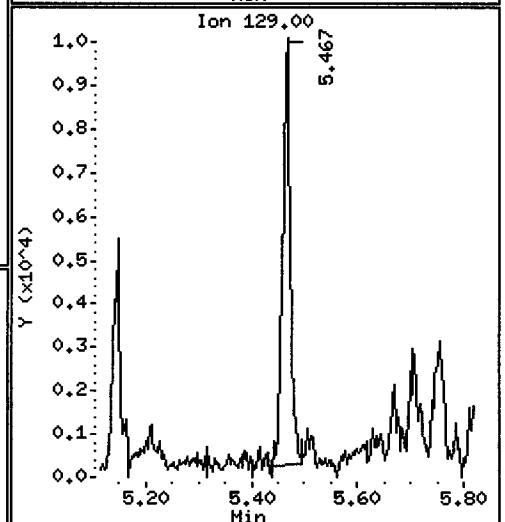
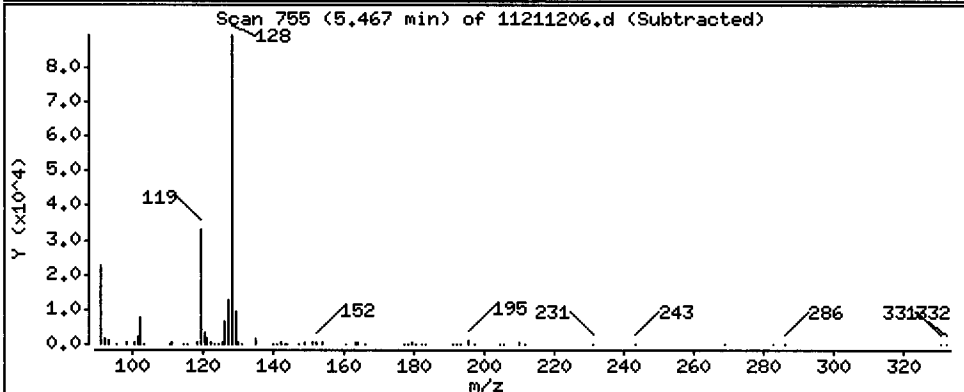
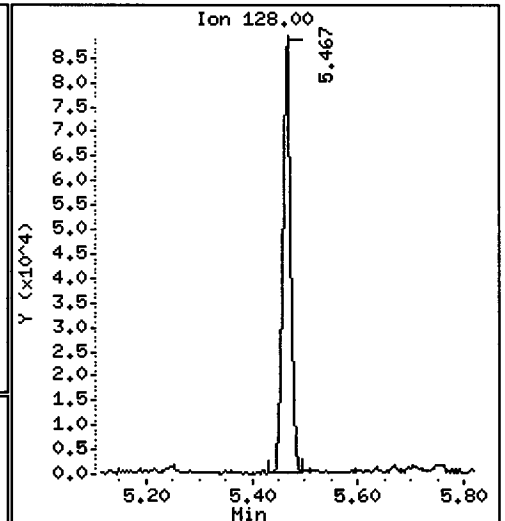
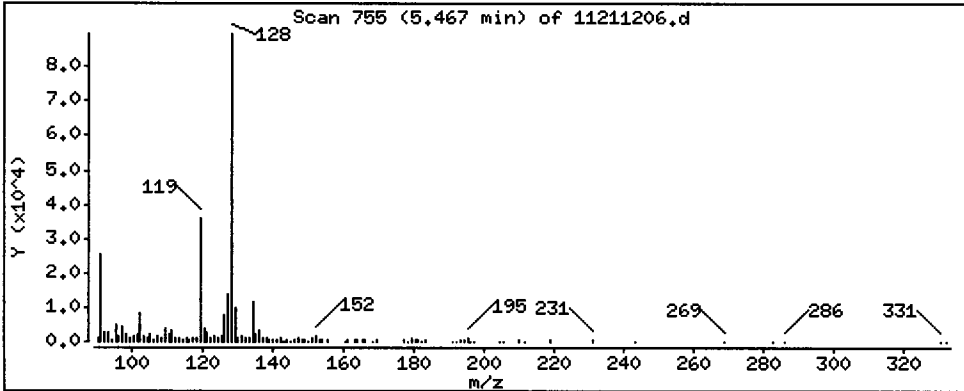
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

7 Naphthalene

Concentration: 38.50 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

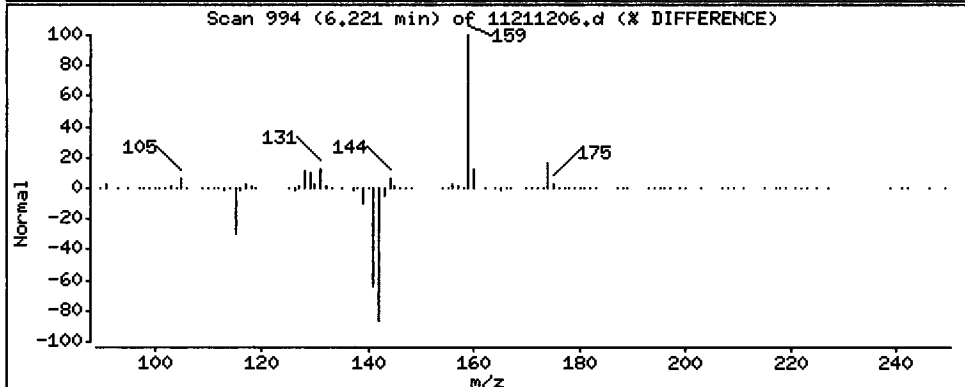
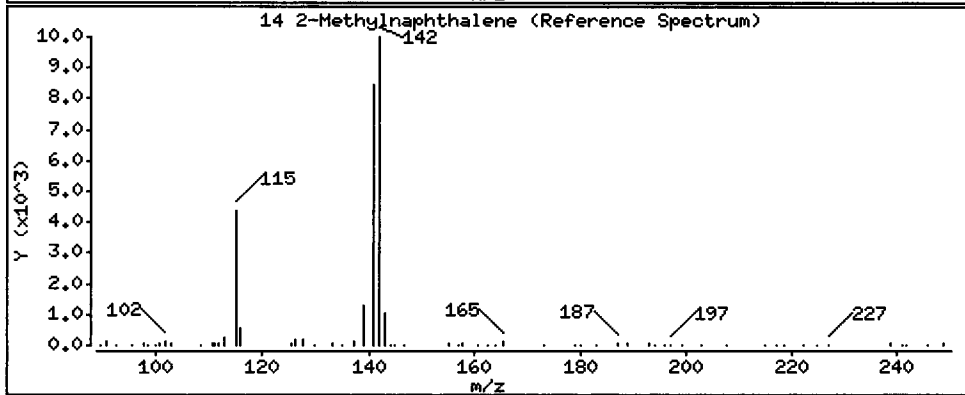
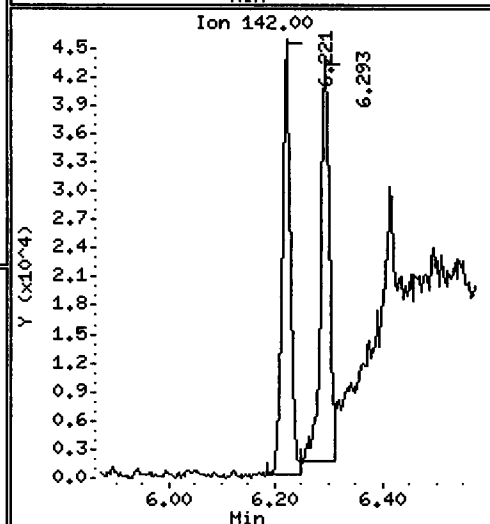
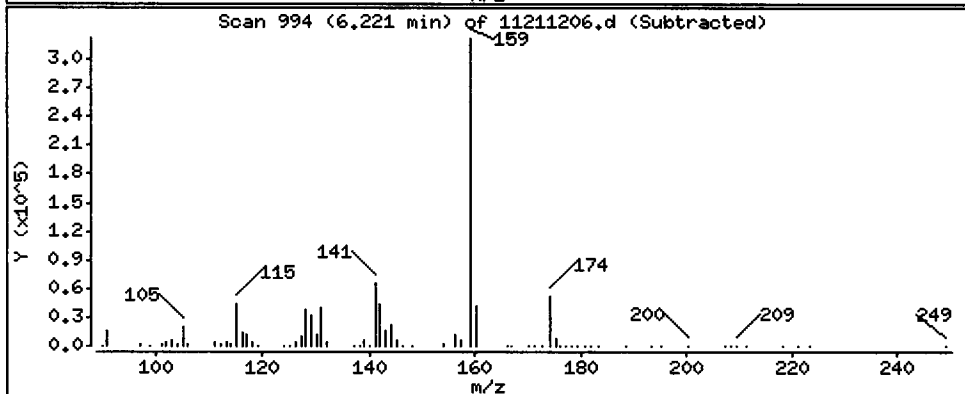
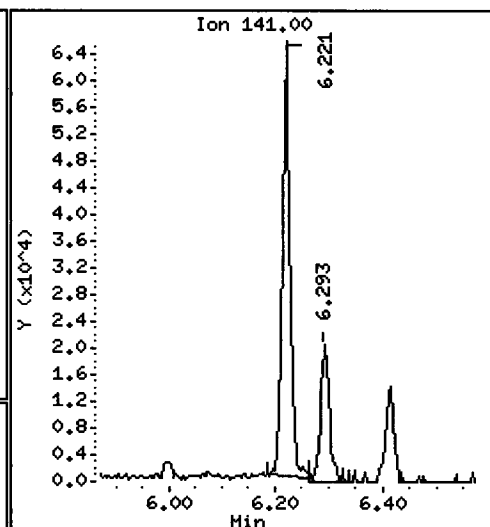
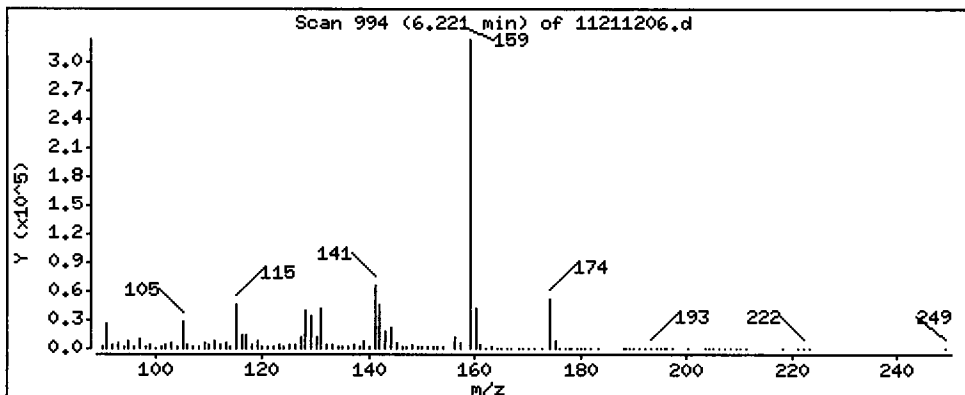
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

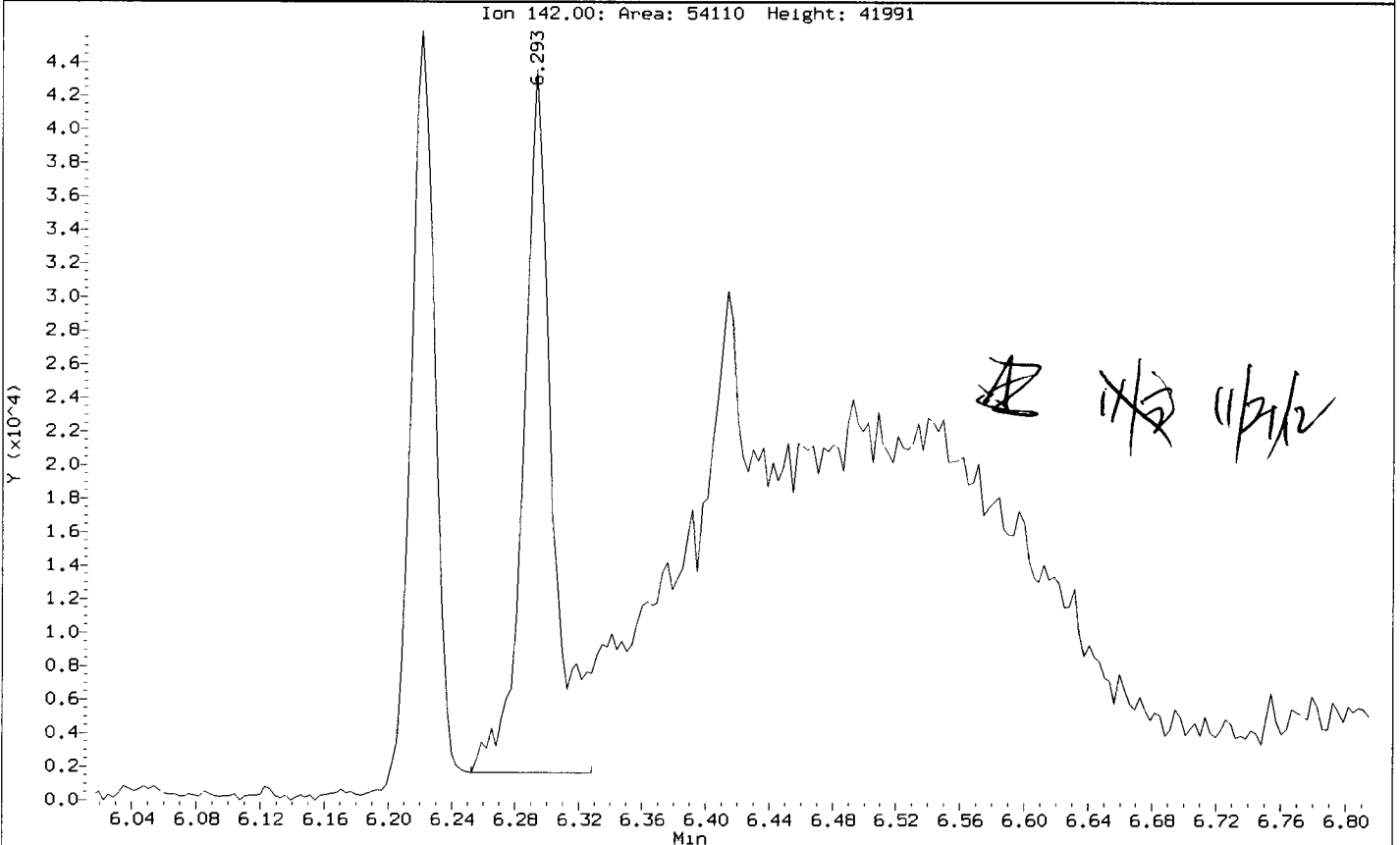
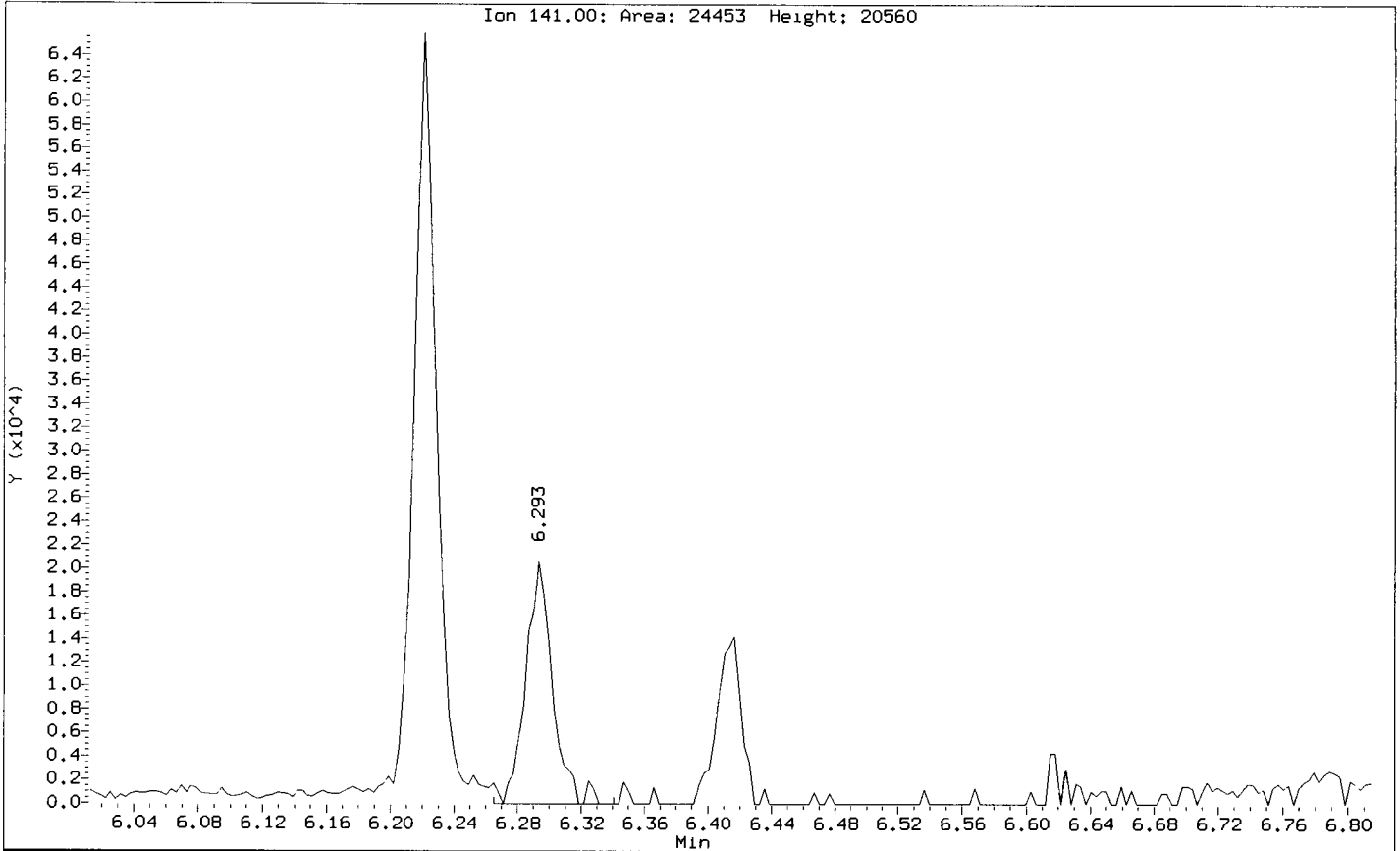
14 2-Methylnaphthalene

Concentration: 47.06 ug/kg



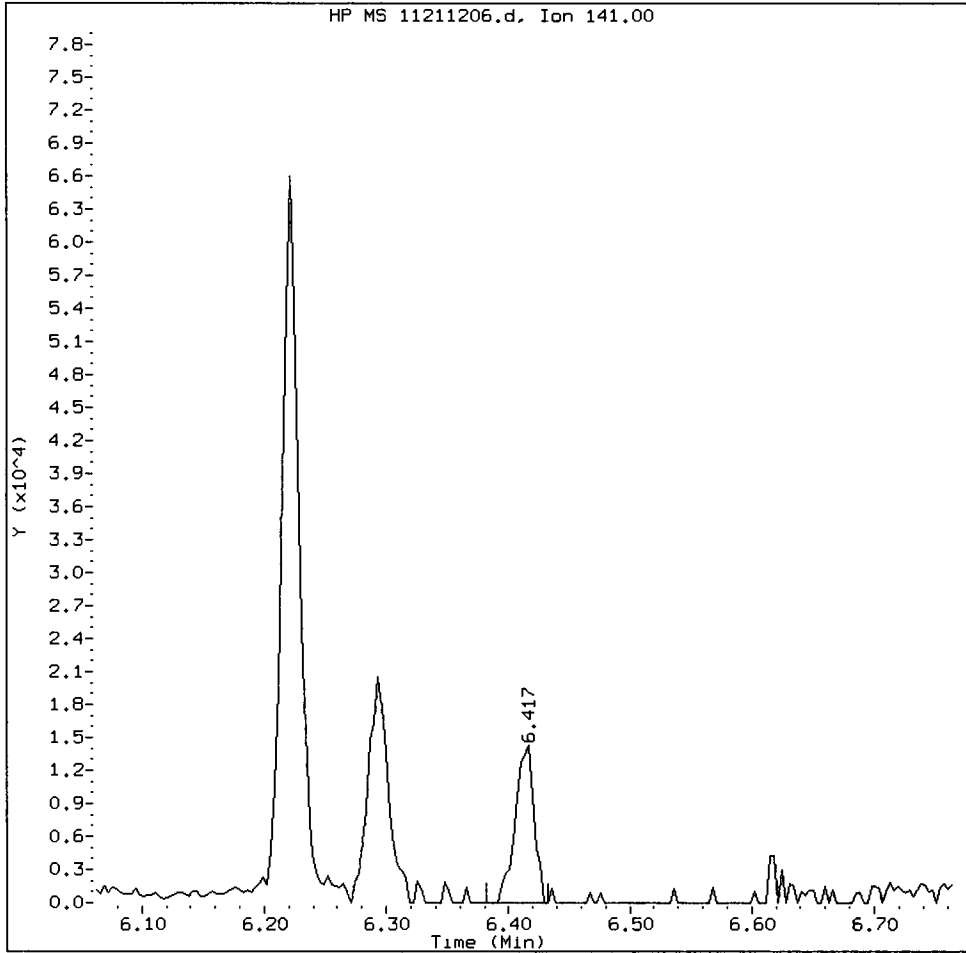
Data File: /chem3/nt11.1/20121121.b/11211206.d  
Injection Date: 21-NOV-2012 13:42  
Instrument: nt11.1  
Client Sample ID: SG-11-S-E-121107

Compound: 1-methylnaphthalene  
CAS Number:



VR58B, /chem3/nt11.i/20121121.b/11211206.d

1-methylnaphthalene Amount: 0.08 Area: 15384



MANUAL INTEGRATION for 1-methylnaphthalene

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

5. Other \_\_\_\_\_

Analyst:   *AD*  

Date:   11/21/12

Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

Operator: JZ

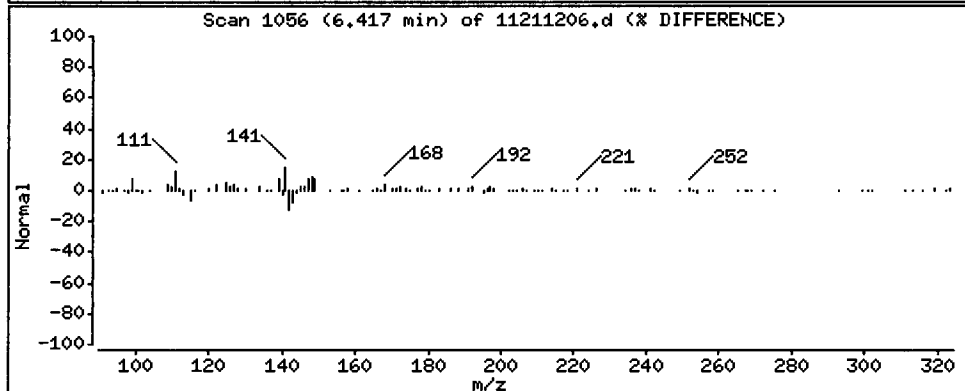
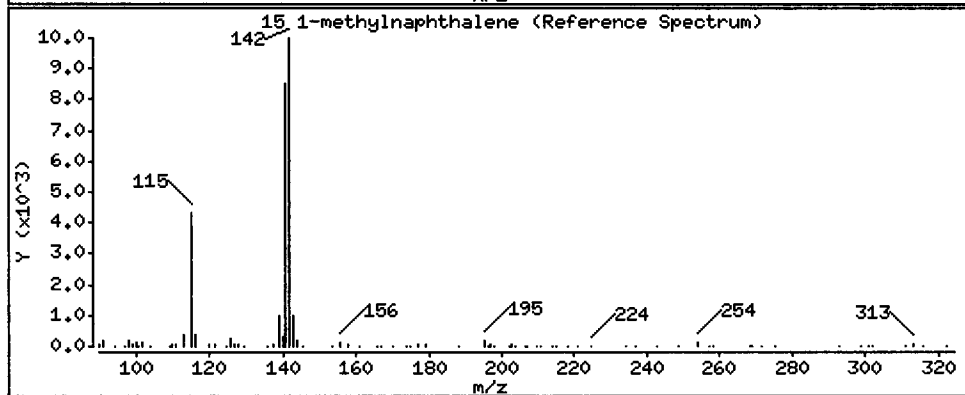
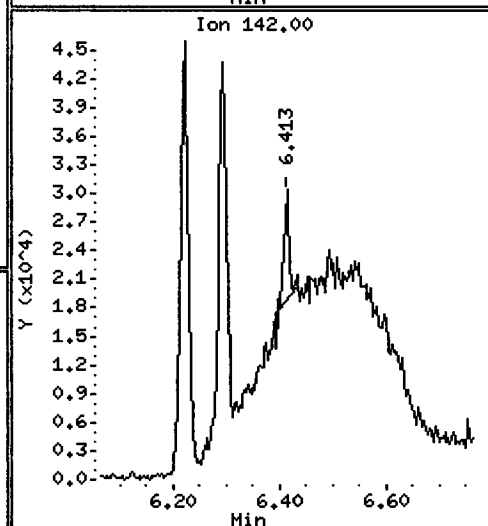
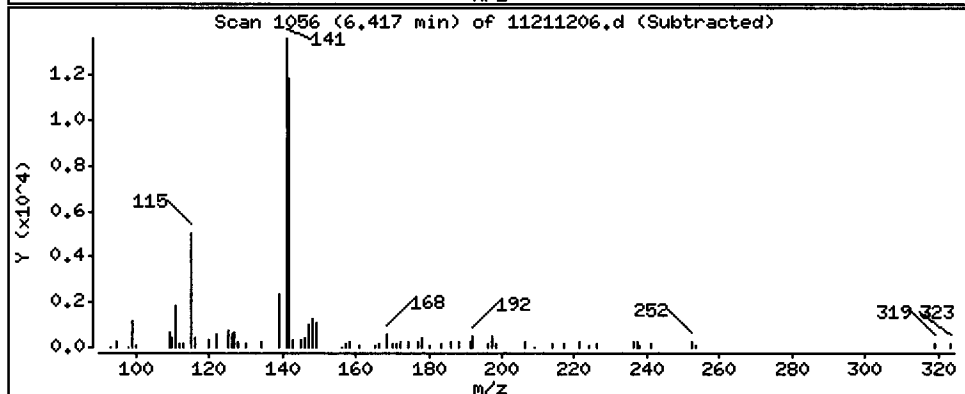
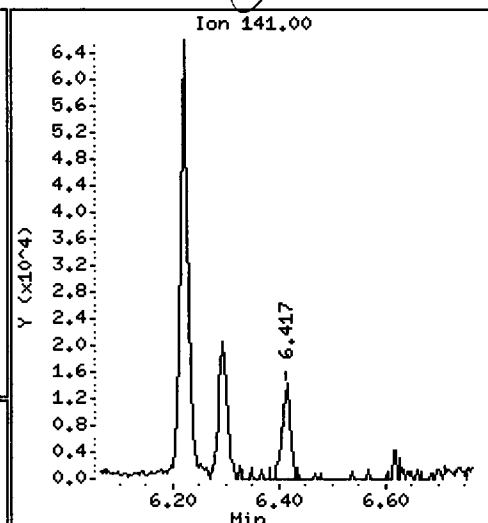
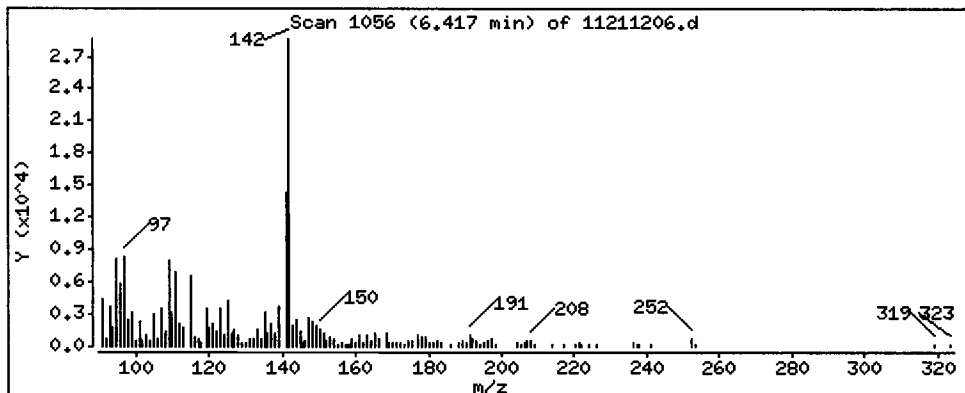
Column phase: ZB-5msi

Column diameter: 0.25

15 1-methylnaphthalene

Concentration: 11.78 ug/kg

*GC/MS*





Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

Operator: JZ

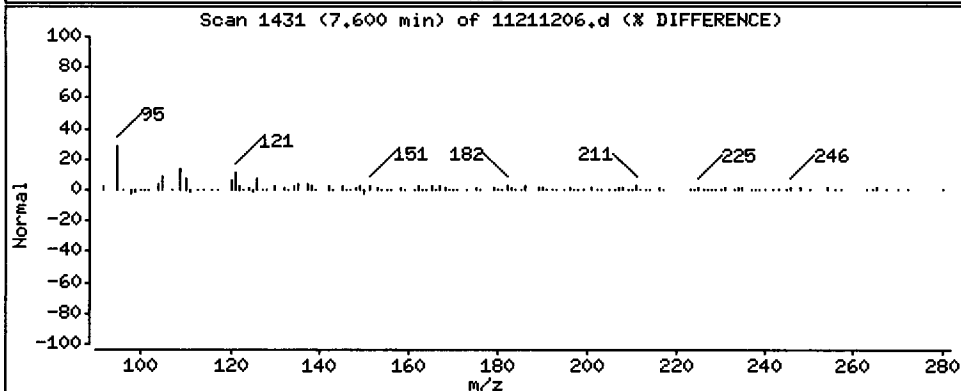
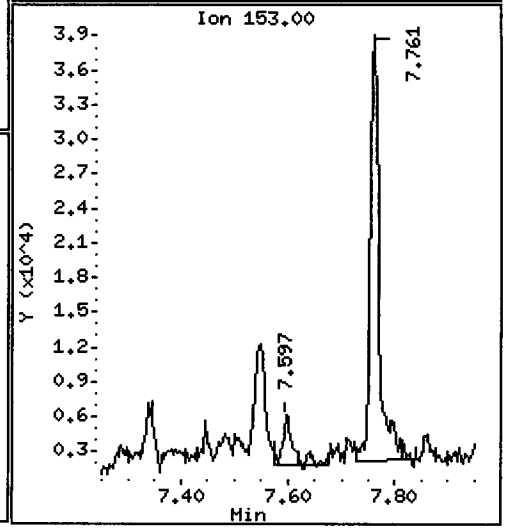
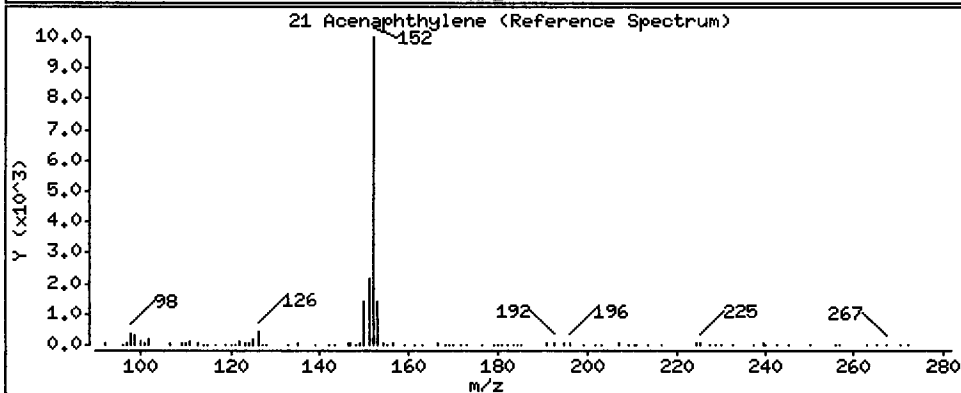
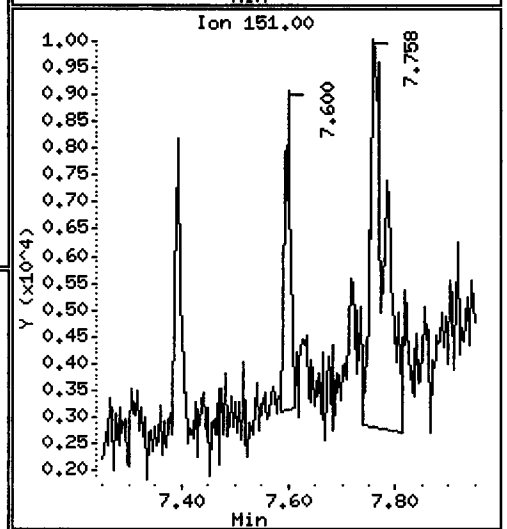
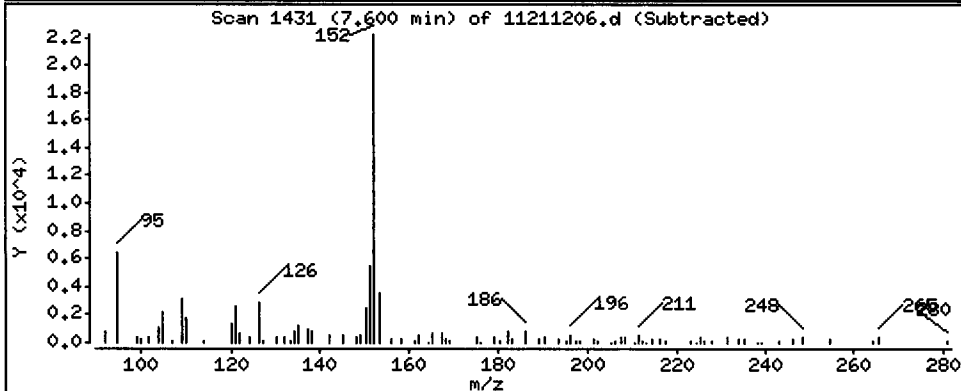
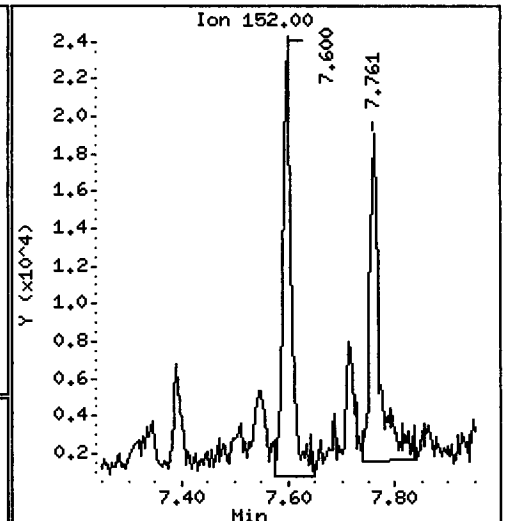
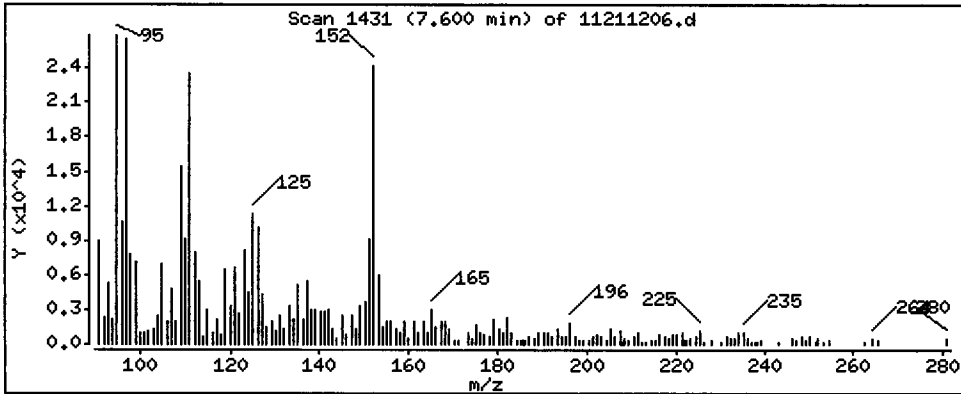
Column phase: ZB-5msi

Column diameter: 0.25

*TUAI*

21 Acenaphthylene

Concentration: 12.97 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

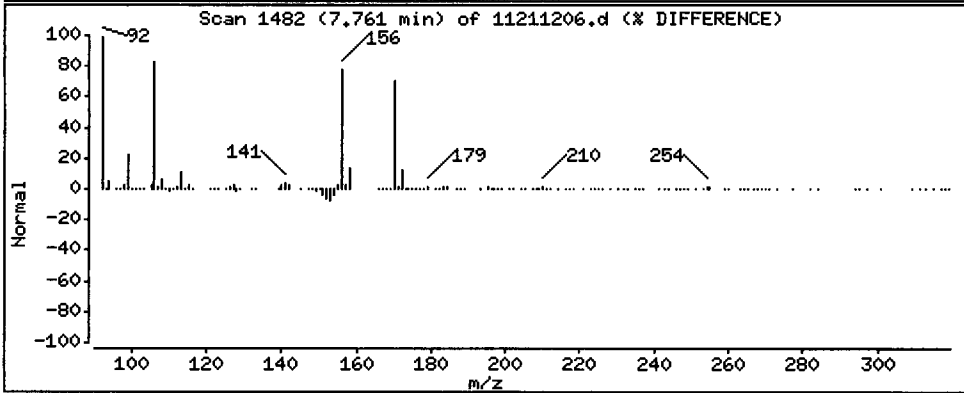
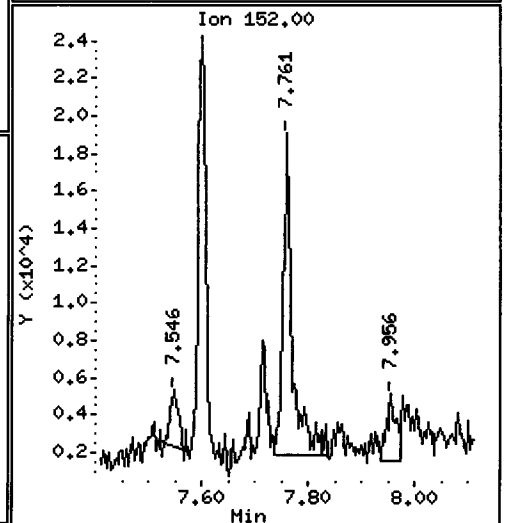
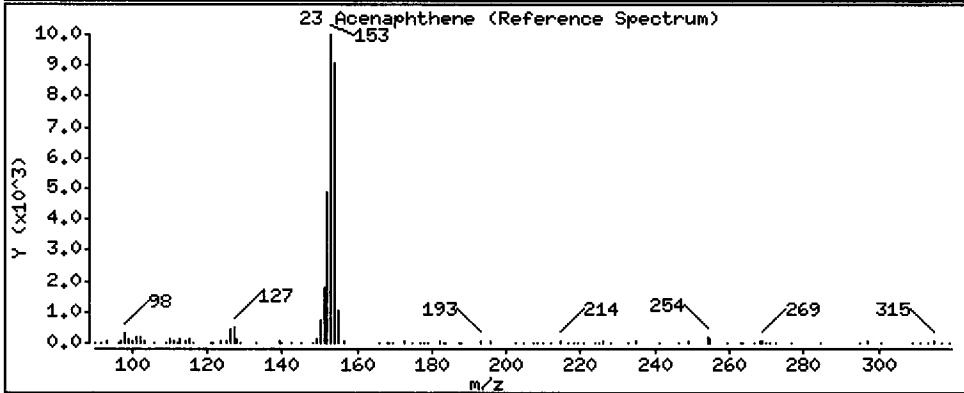
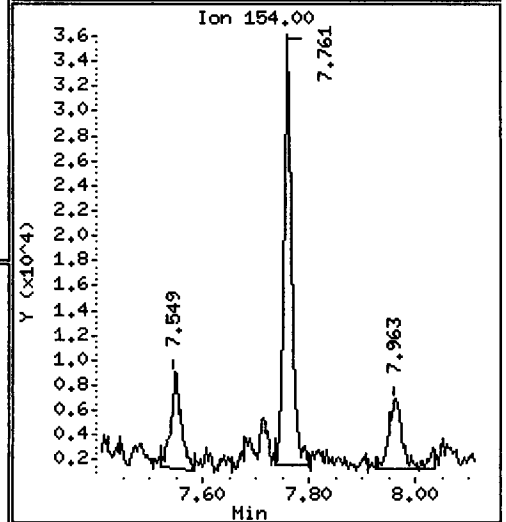
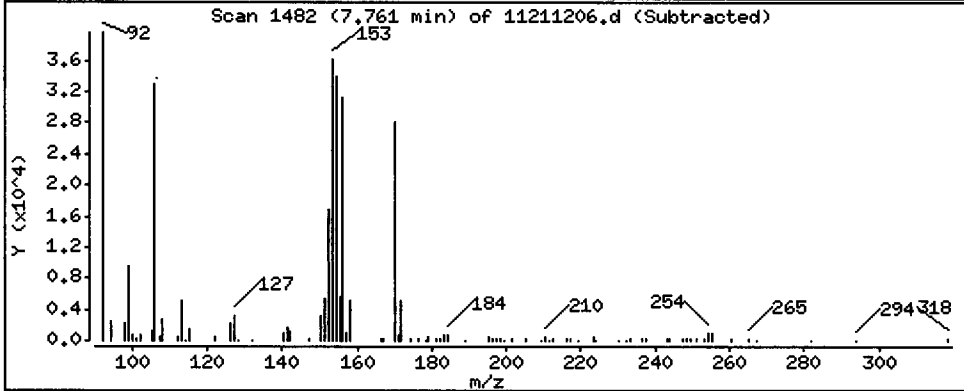
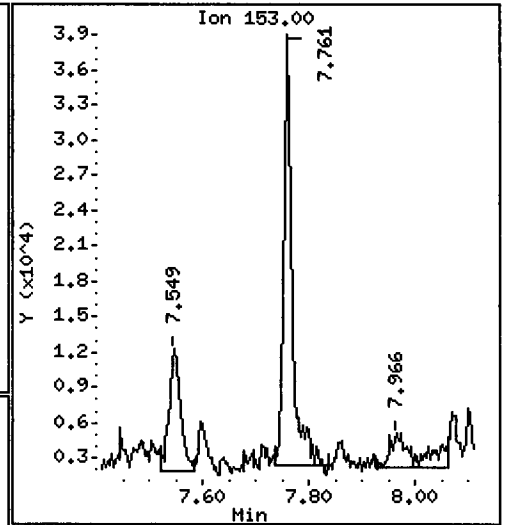
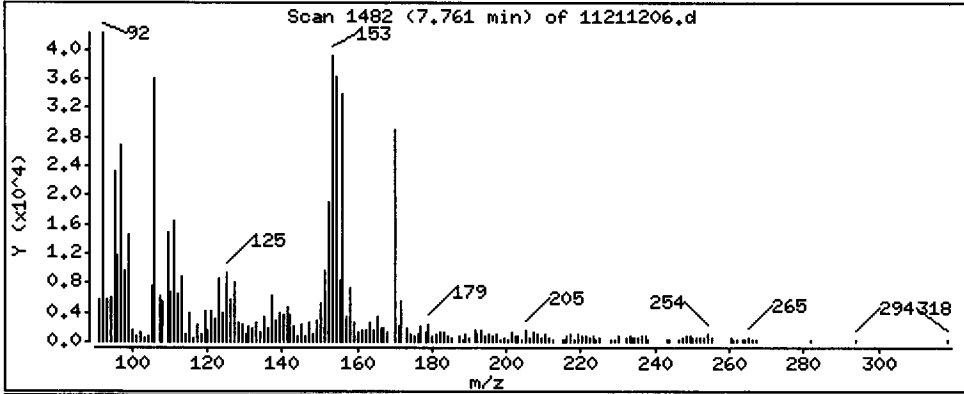
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

23 Acenaphthene

Concentration: 31.79 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

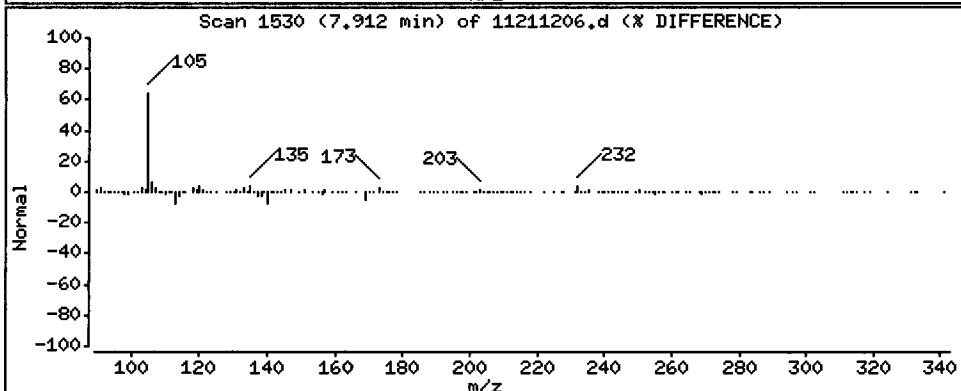
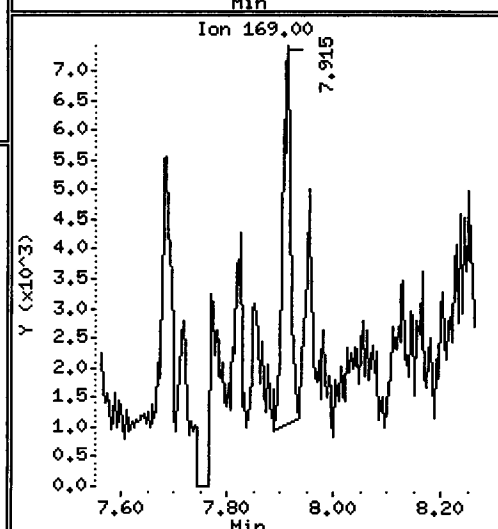
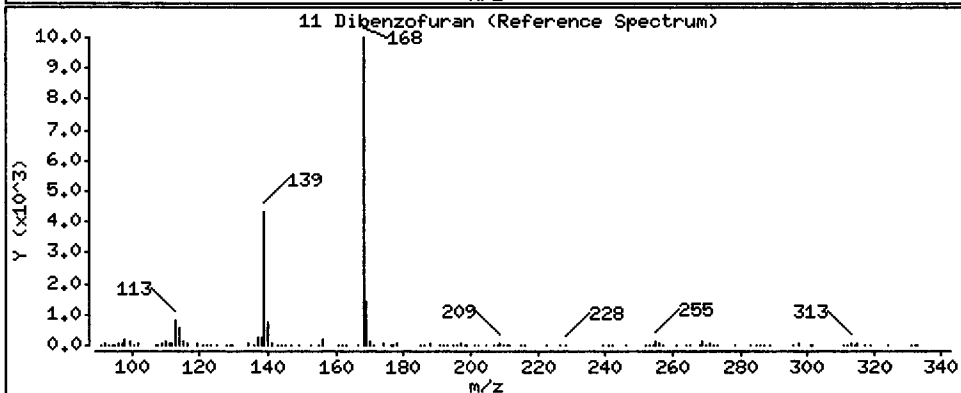
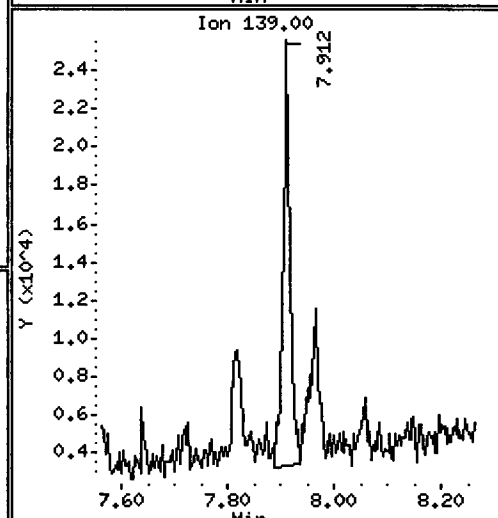
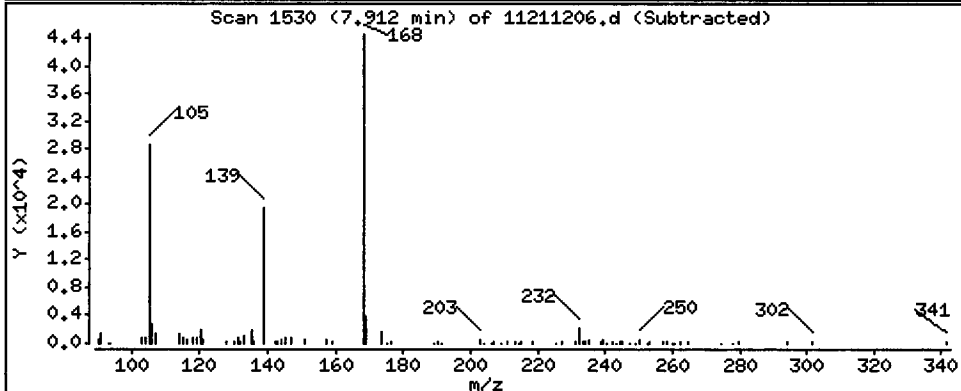
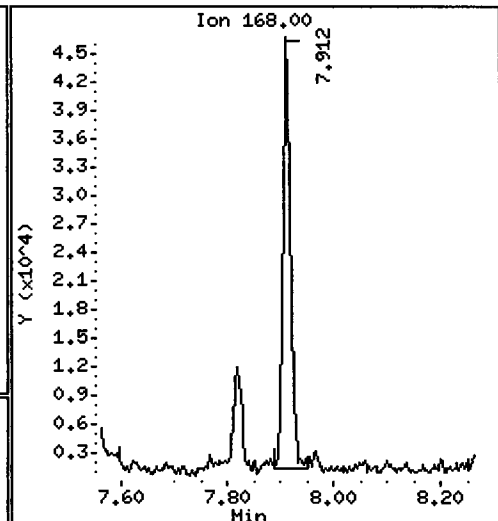
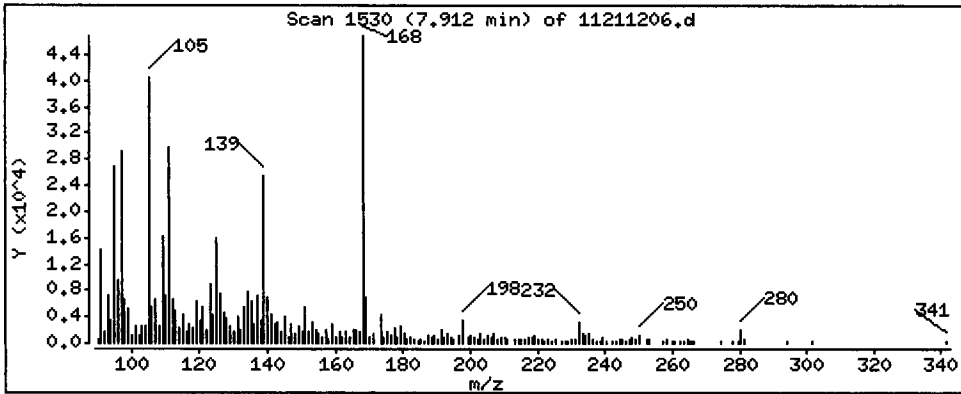
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Dibenzofuran

Concentration: 23.45 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

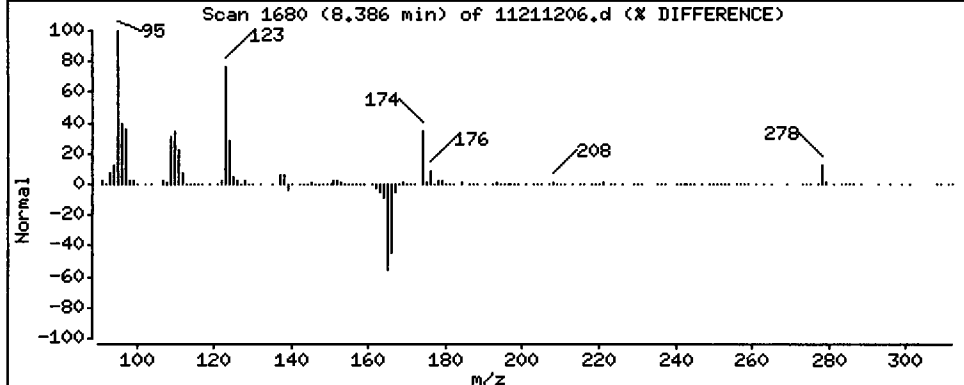
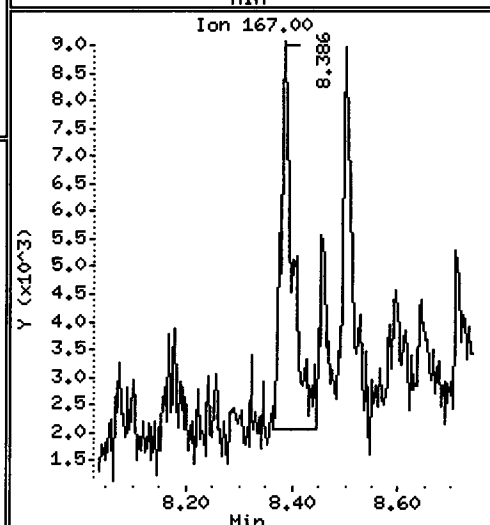
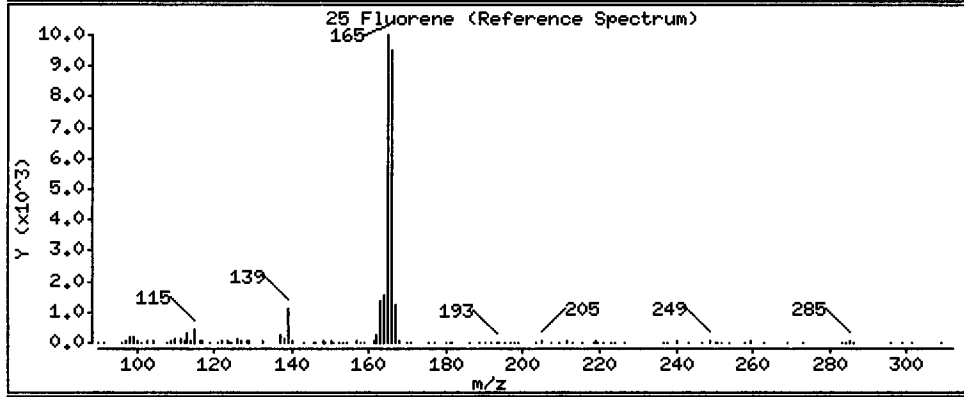
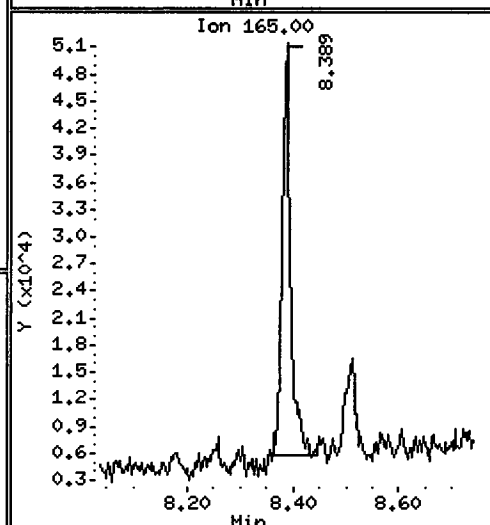
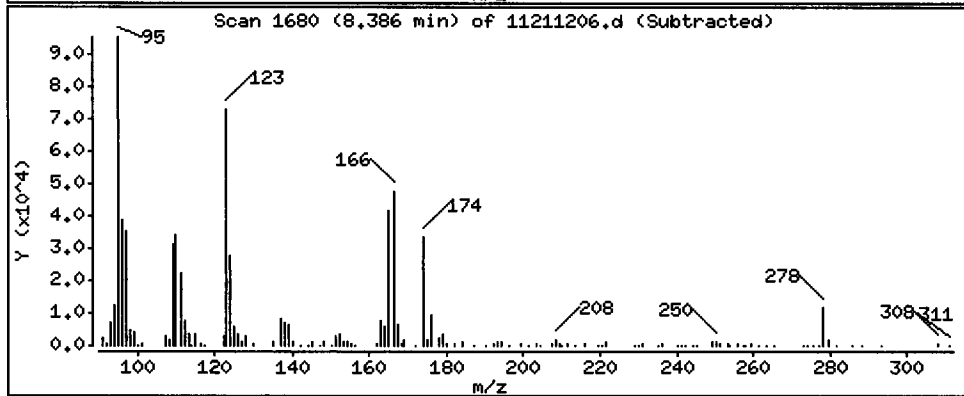
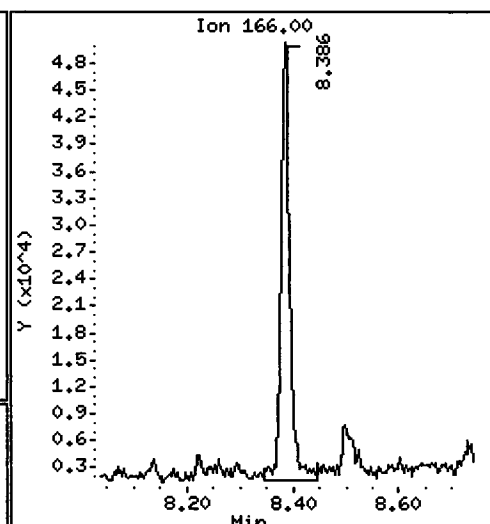
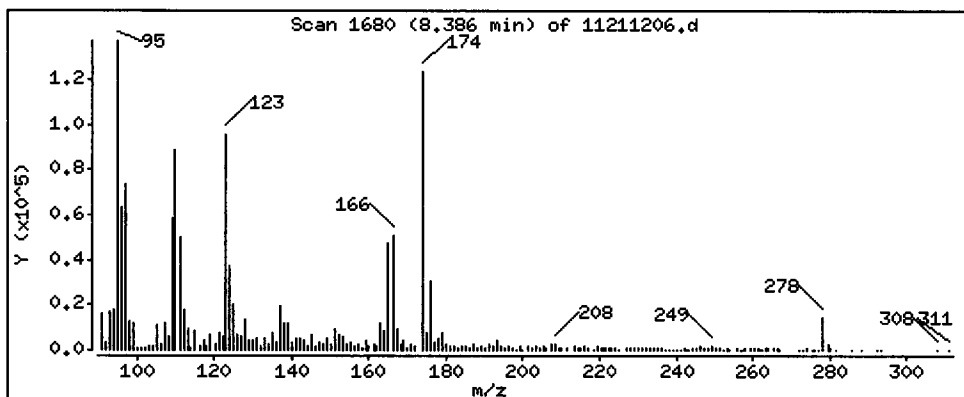
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

25 Fluorene

Concentration: 37.98 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

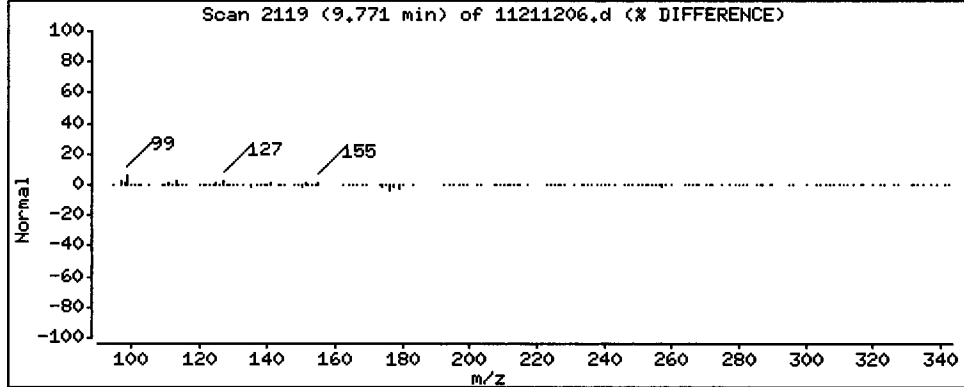
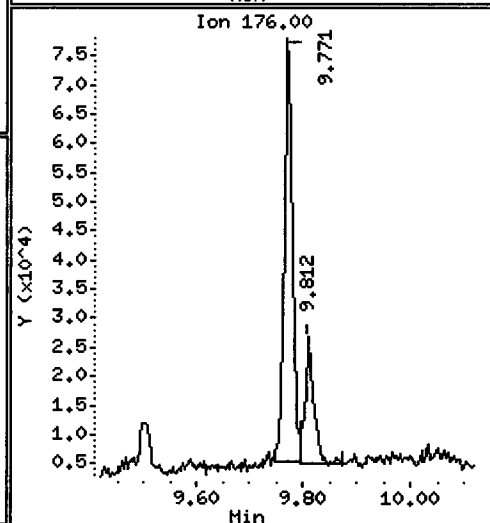
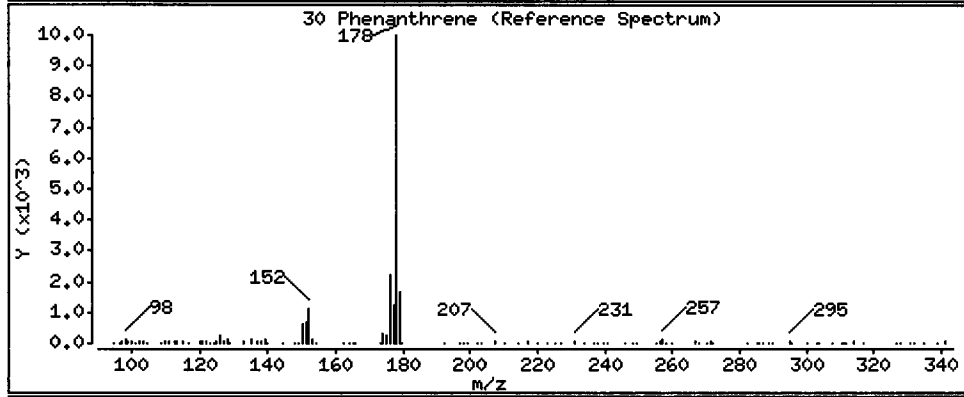
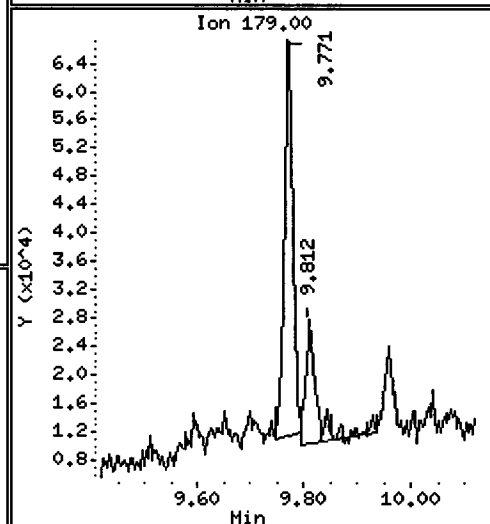
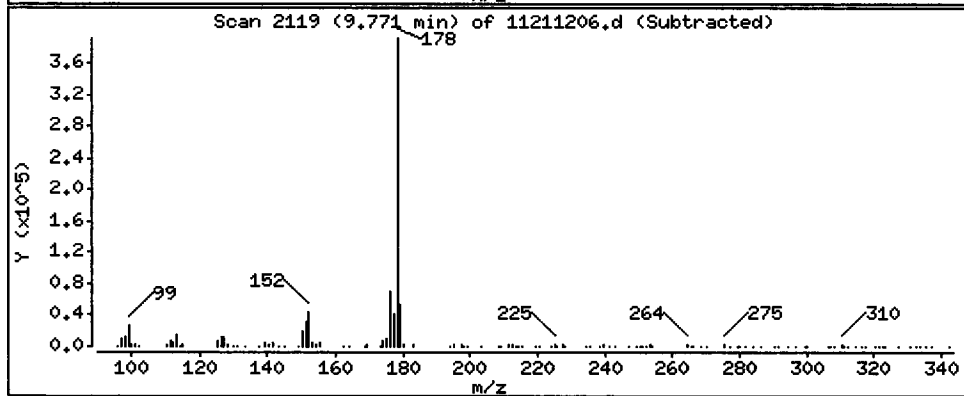
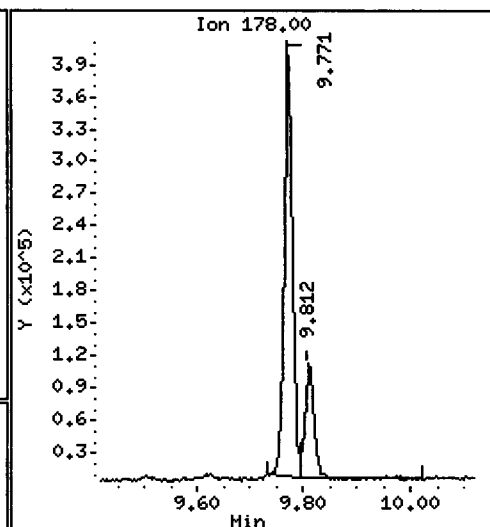
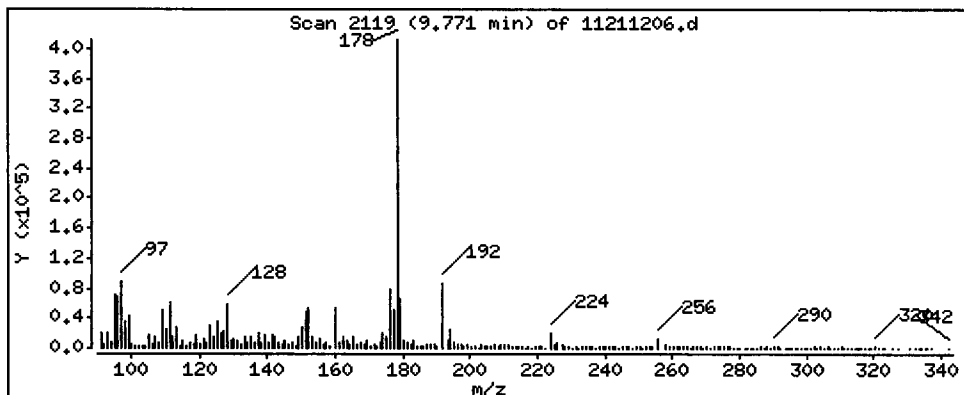
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

30 Phenanthrene

Concentration: 208.7 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

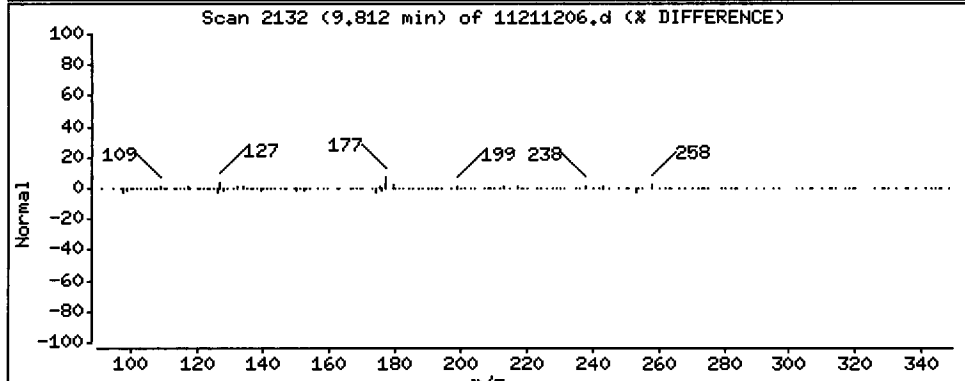
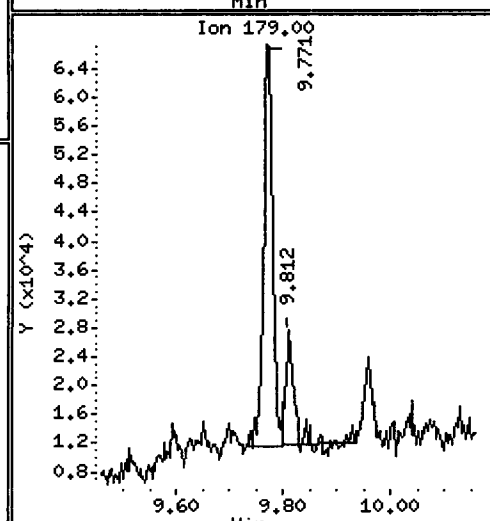
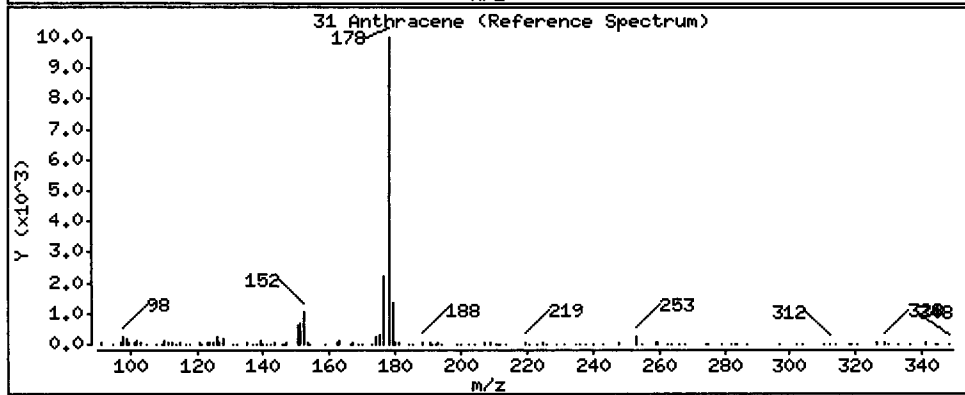
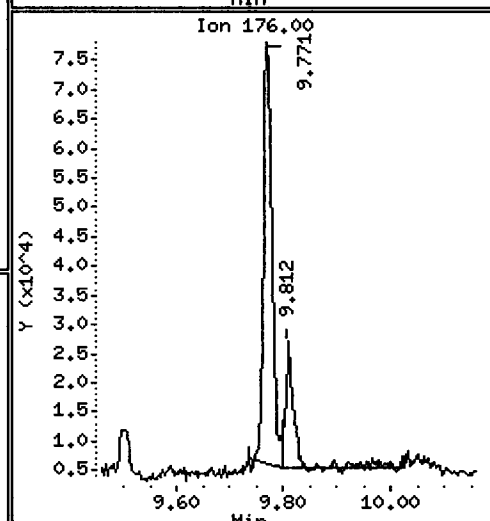
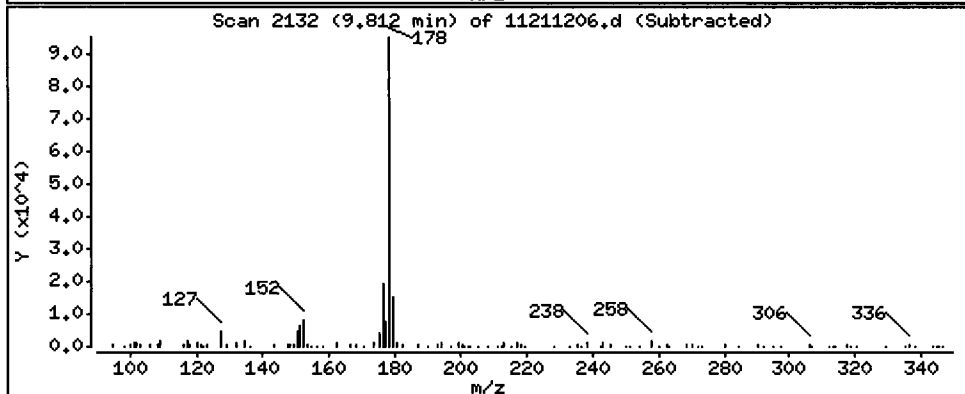
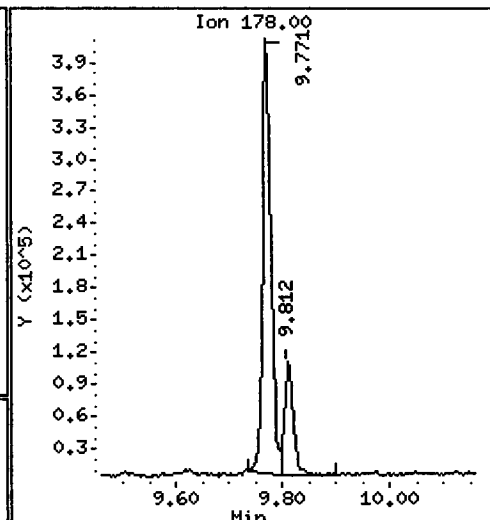
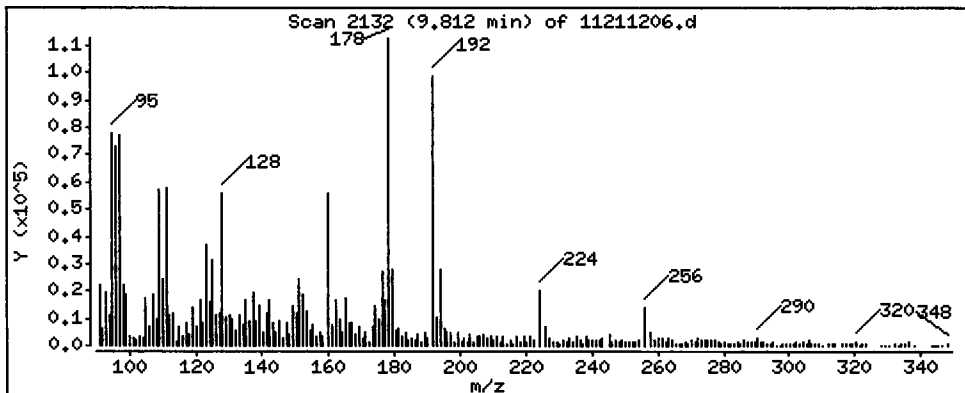
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

31 Anthracene

Concentration: 63.44 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

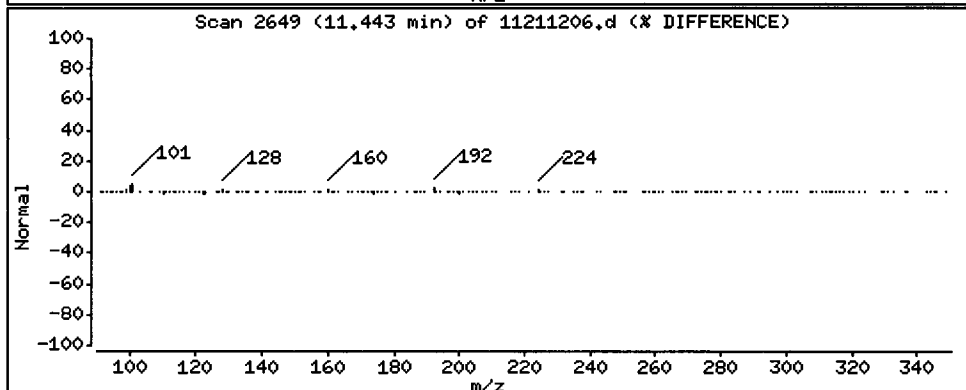
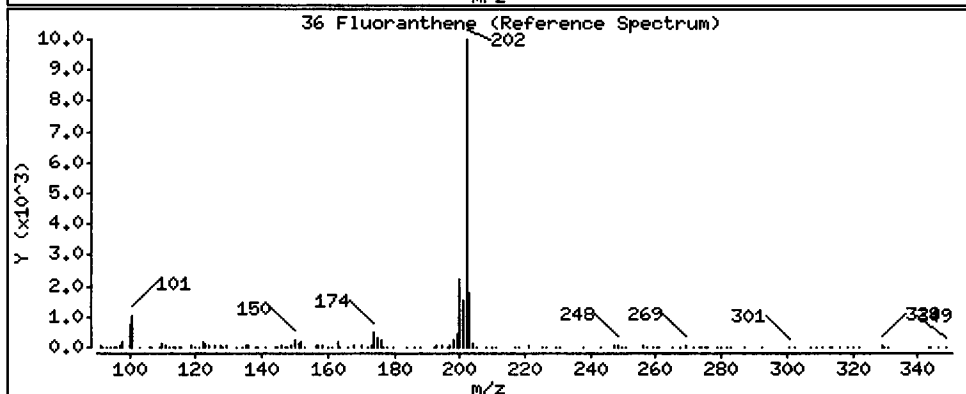
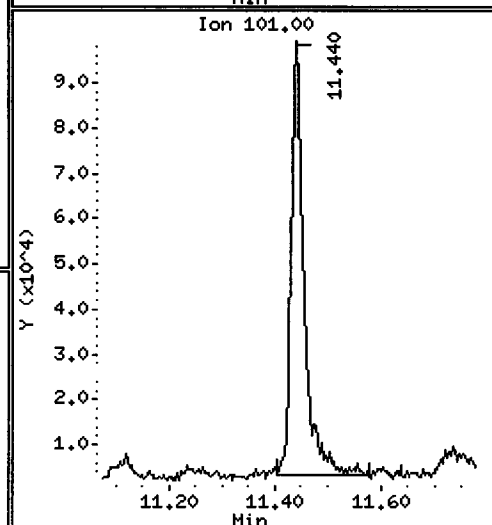
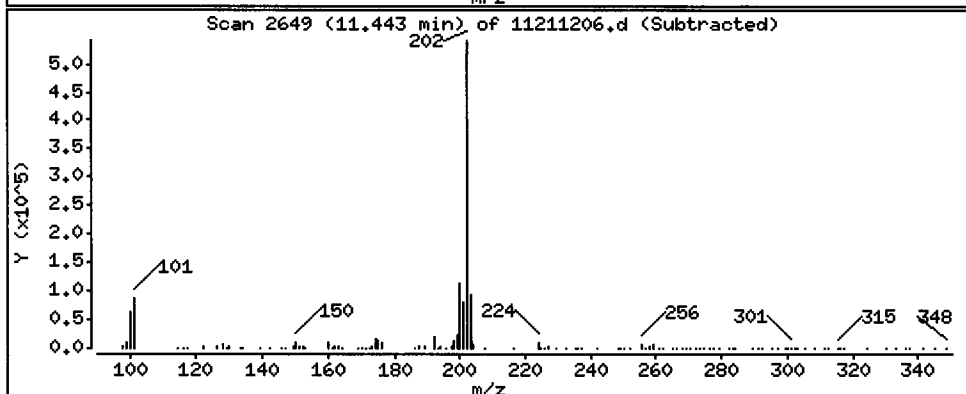
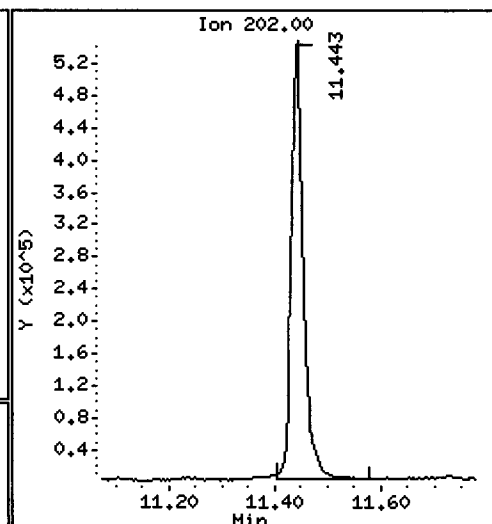
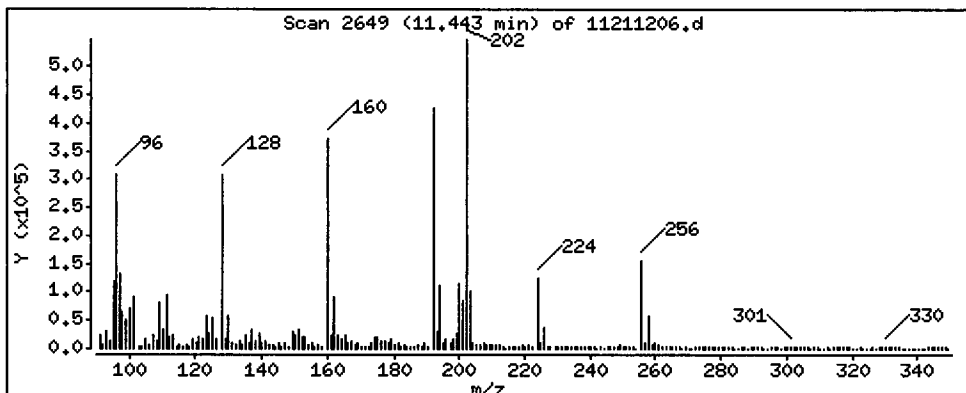
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

36 Fluoranthene

Concentration: 428.5 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

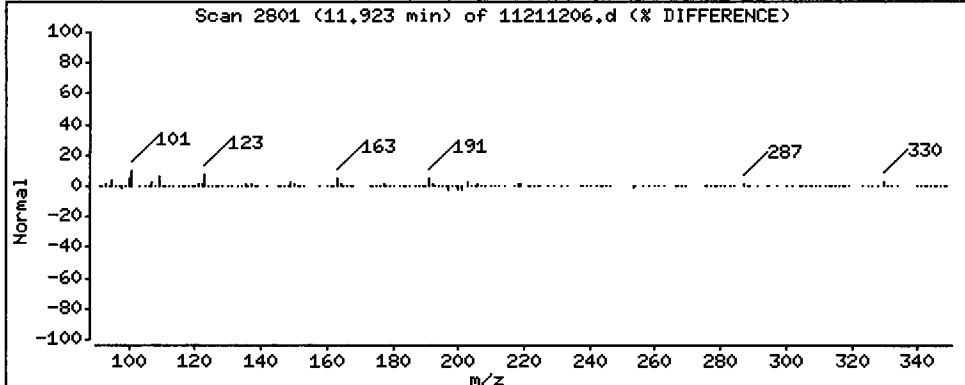
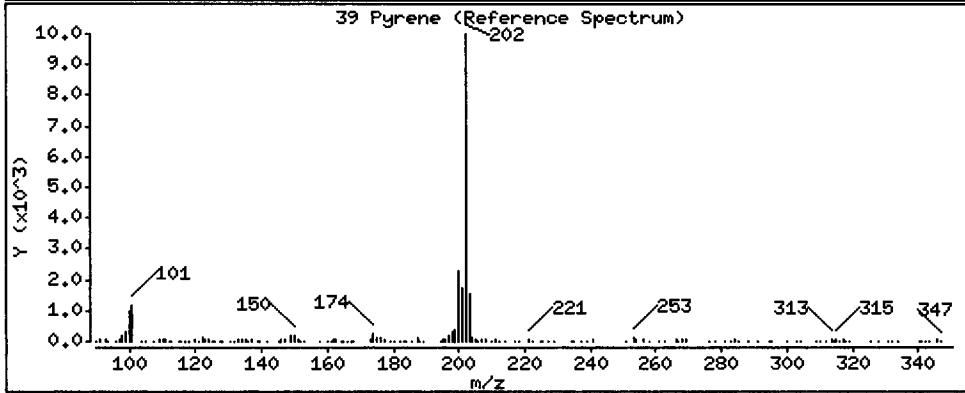
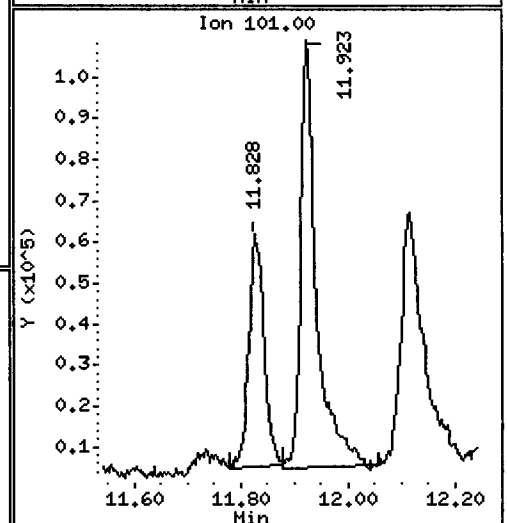
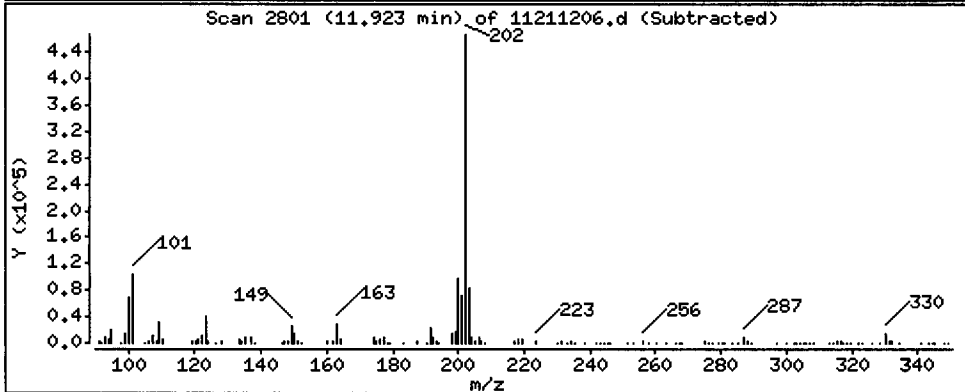
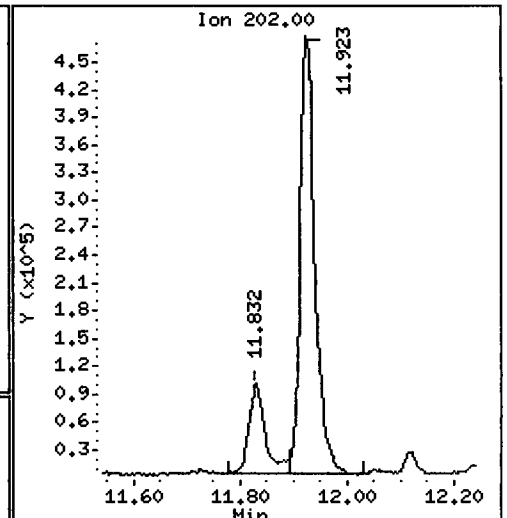
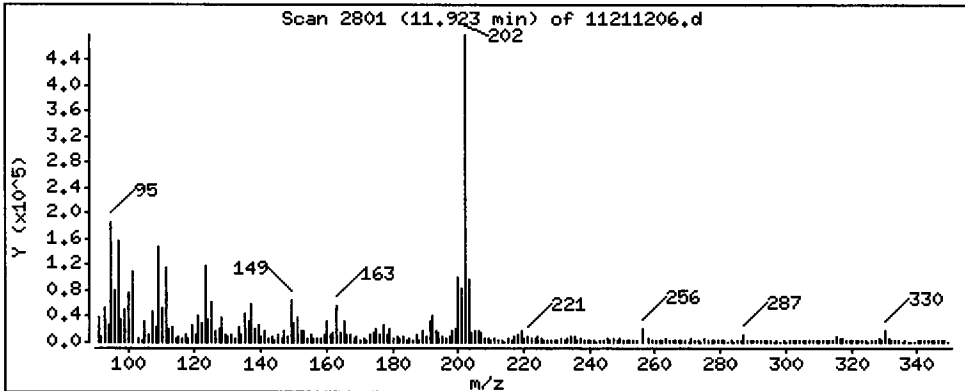
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

39 Pyrene

Concentration: 466.3 ug/kg





Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

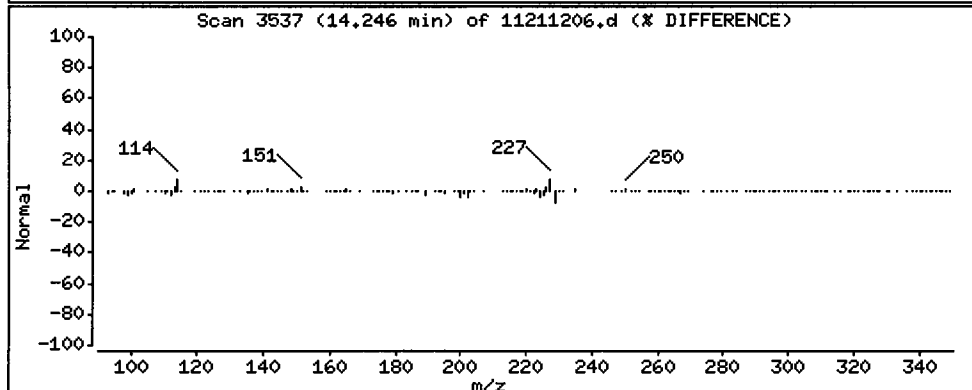
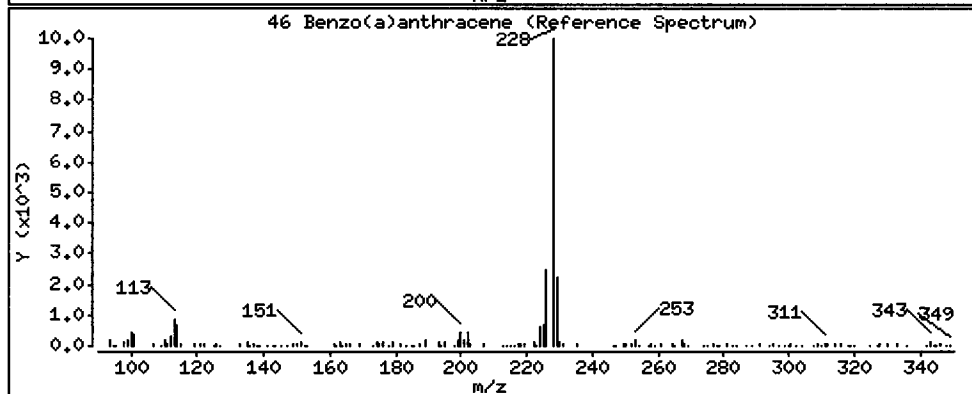
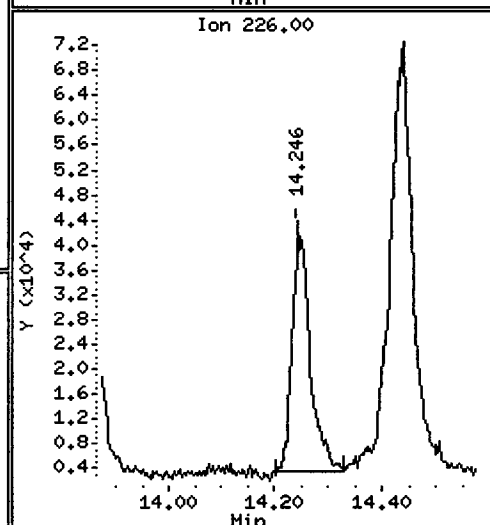
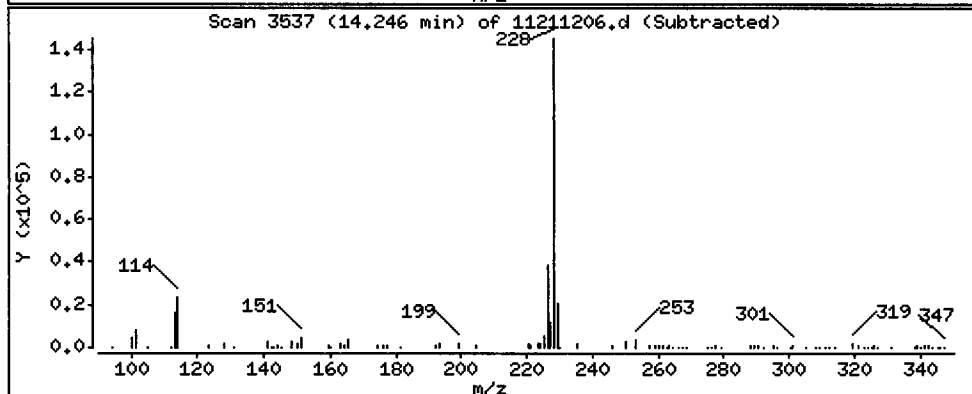
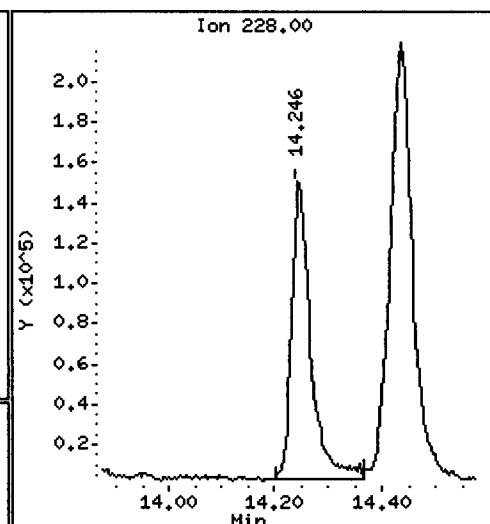
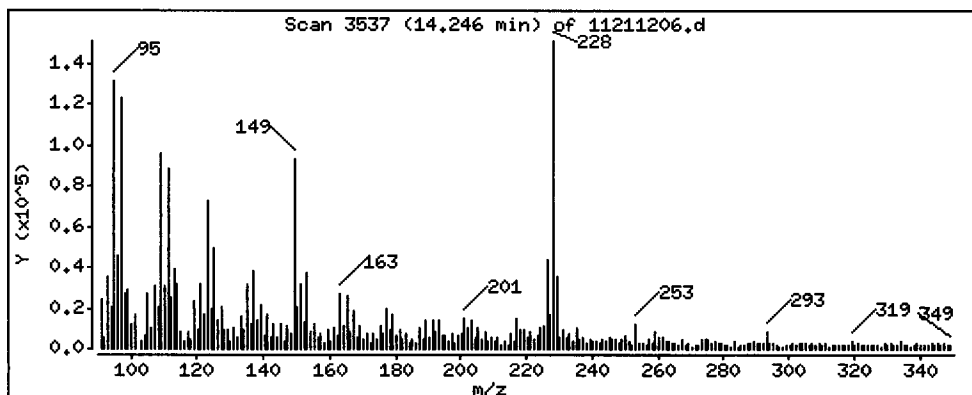
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Benzo(a)anthracene

Concentration: 204.5 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

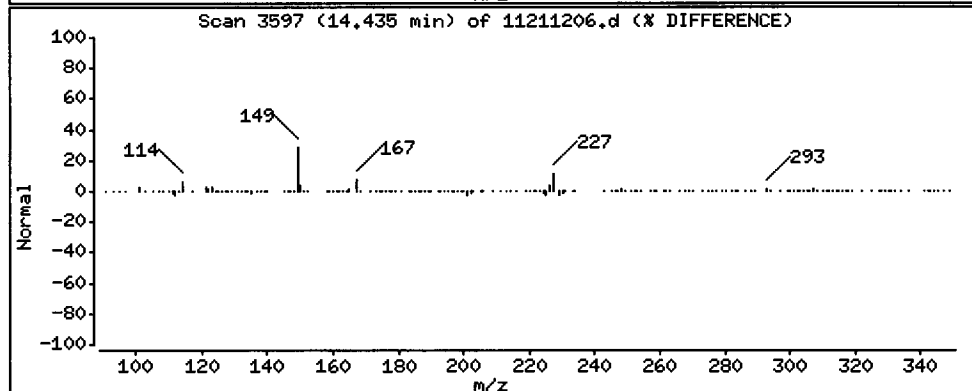
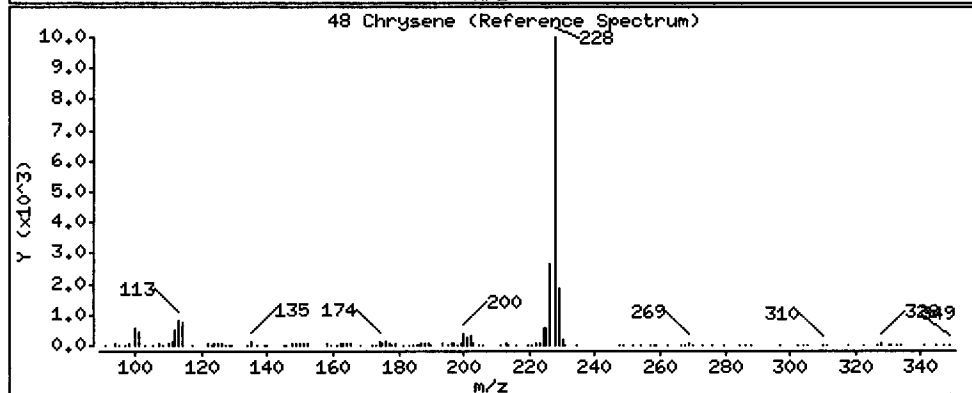
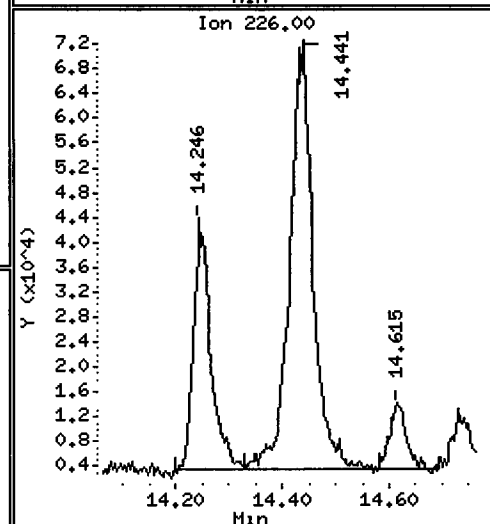
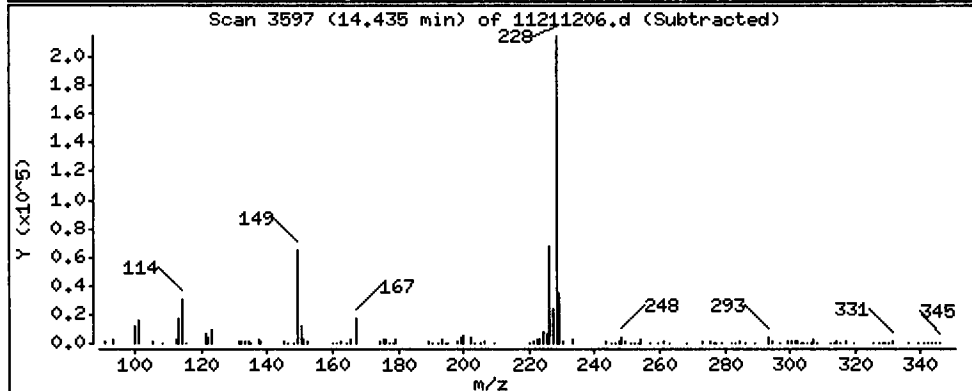
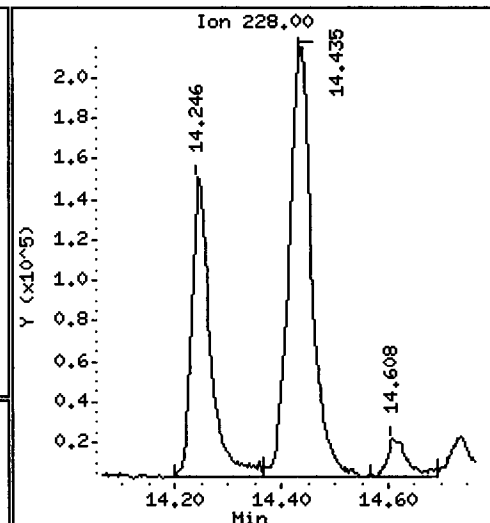
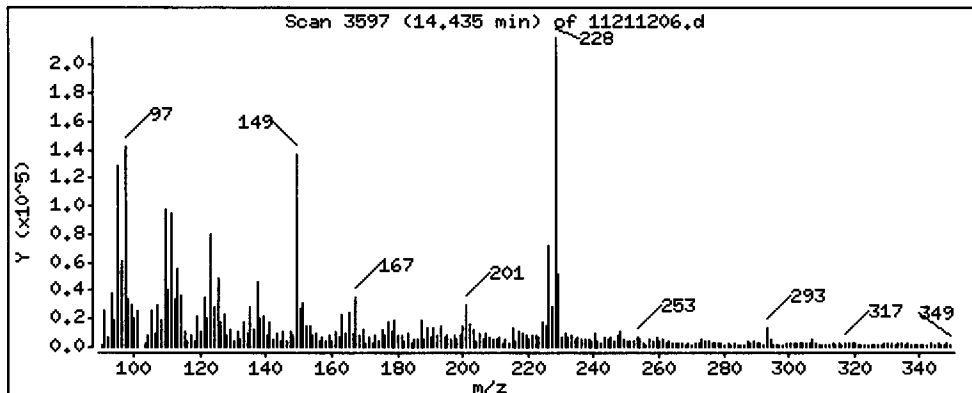
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

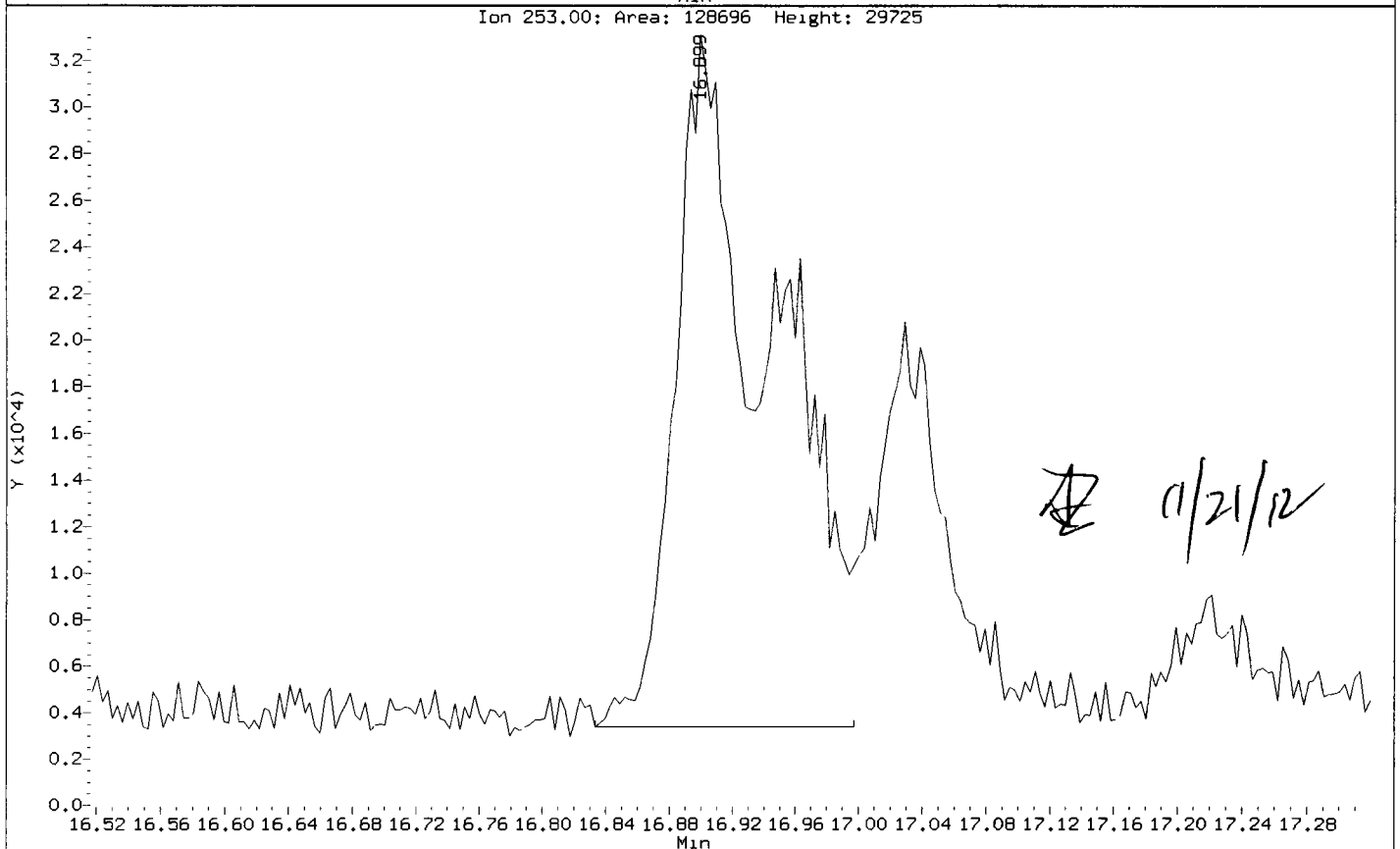
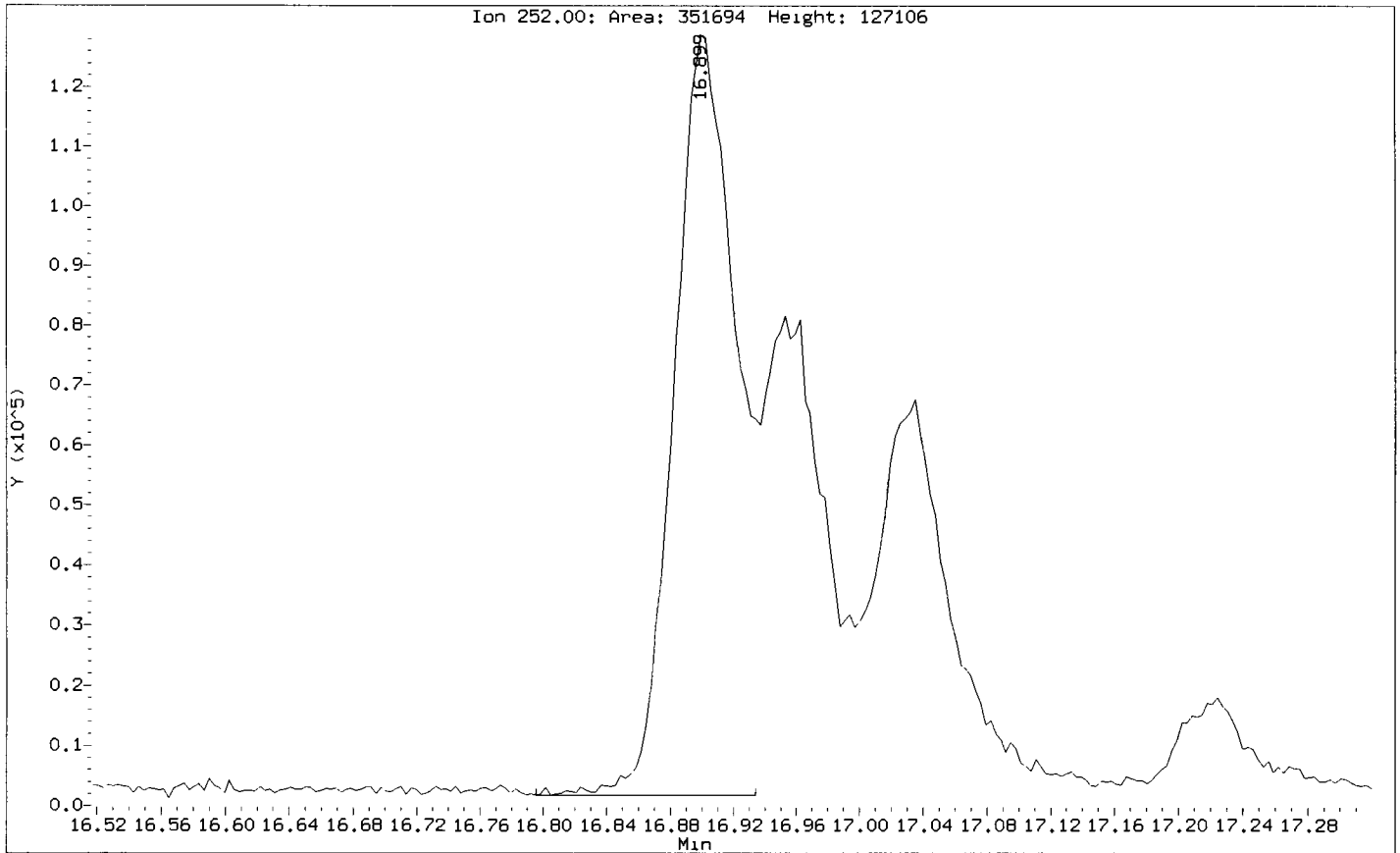
48 Chrysene

Concentration: 368.8 ug/kg

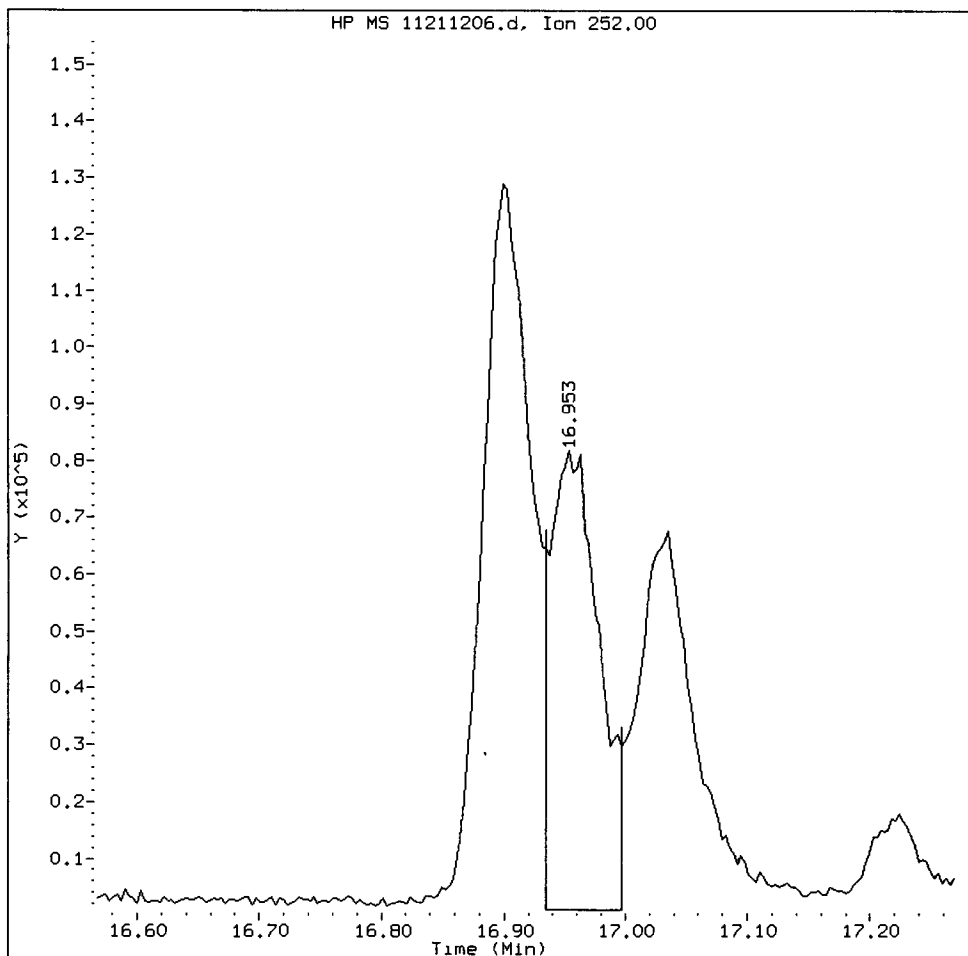


Data File: /chem3/nt11.1/20121121.b/11211206.d  
Injection Date: 21-NOV-2012 13:42  
Instrument: nt11.1  
Client Sample ID: SG-11-S-E-121107

Compound: Benzo(k)fluoranthene  
CAS Number: 207-08-9



Benzo(k)fluoranthene Amount: 1.13 Area: 230939



MANUAL INTEGRATION for Benzo(k)fluoranthene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation
5. Other \_\_\_\_\_

Analyst: AR

Date: 11/21/12

Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

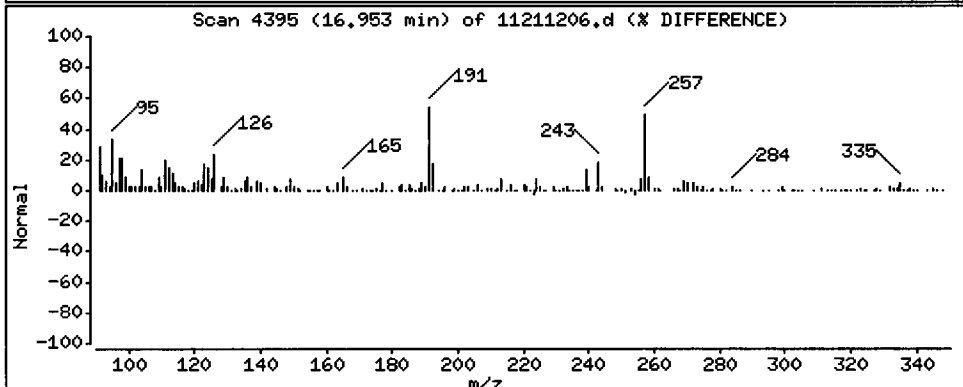
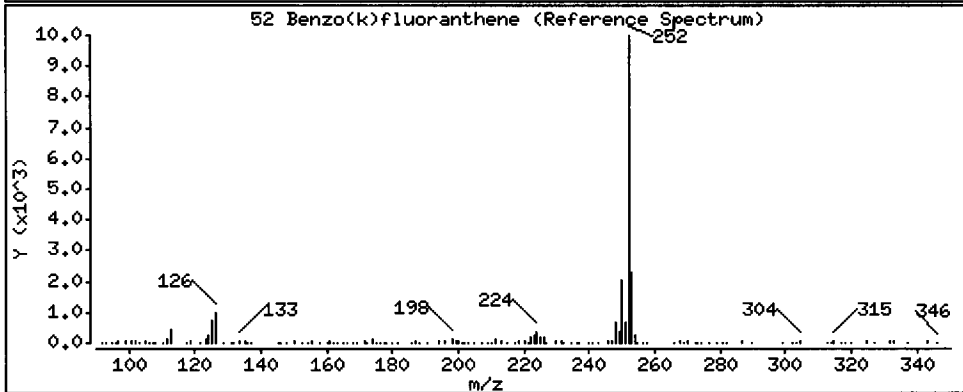
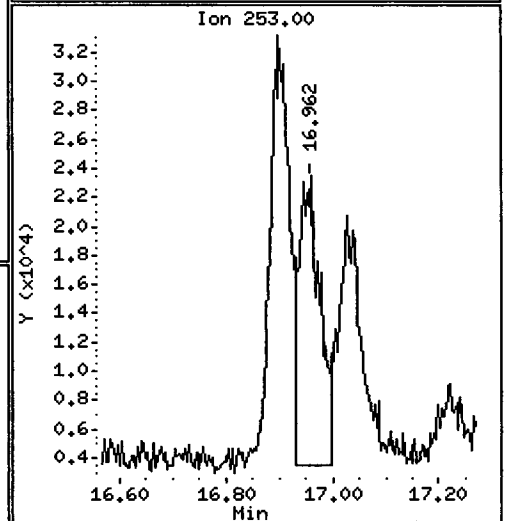
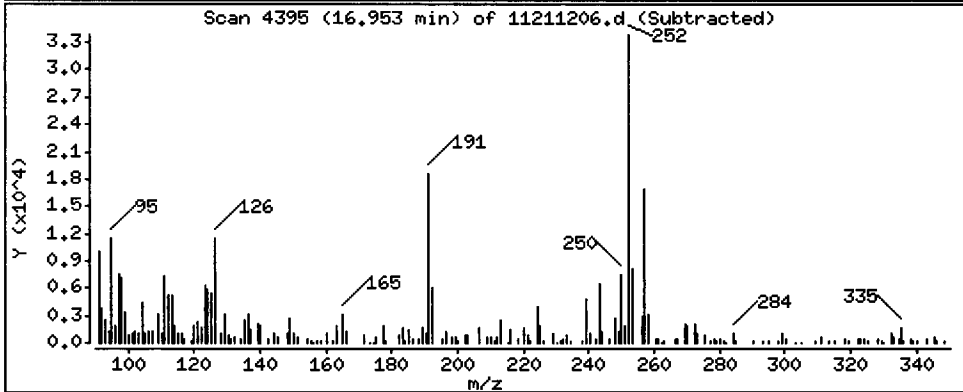
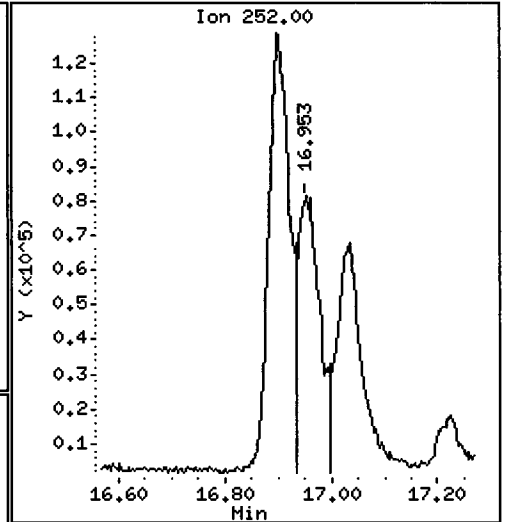
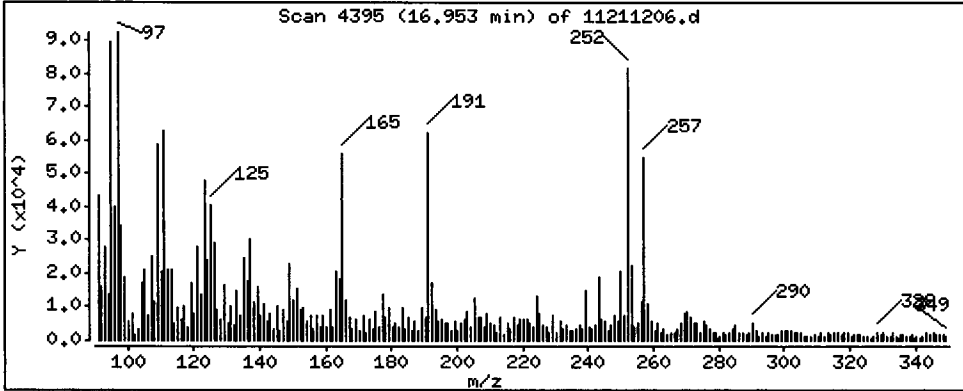
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

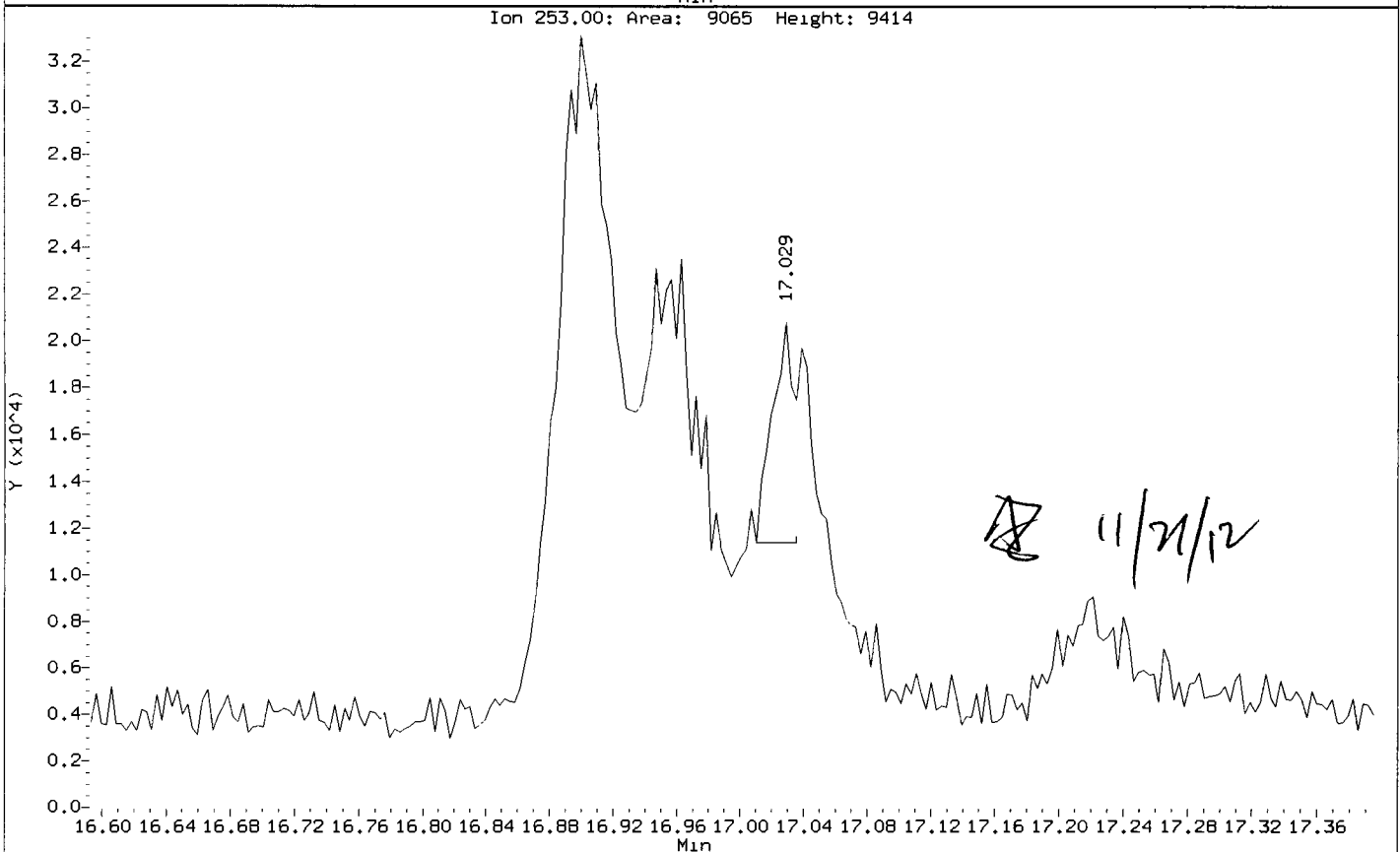
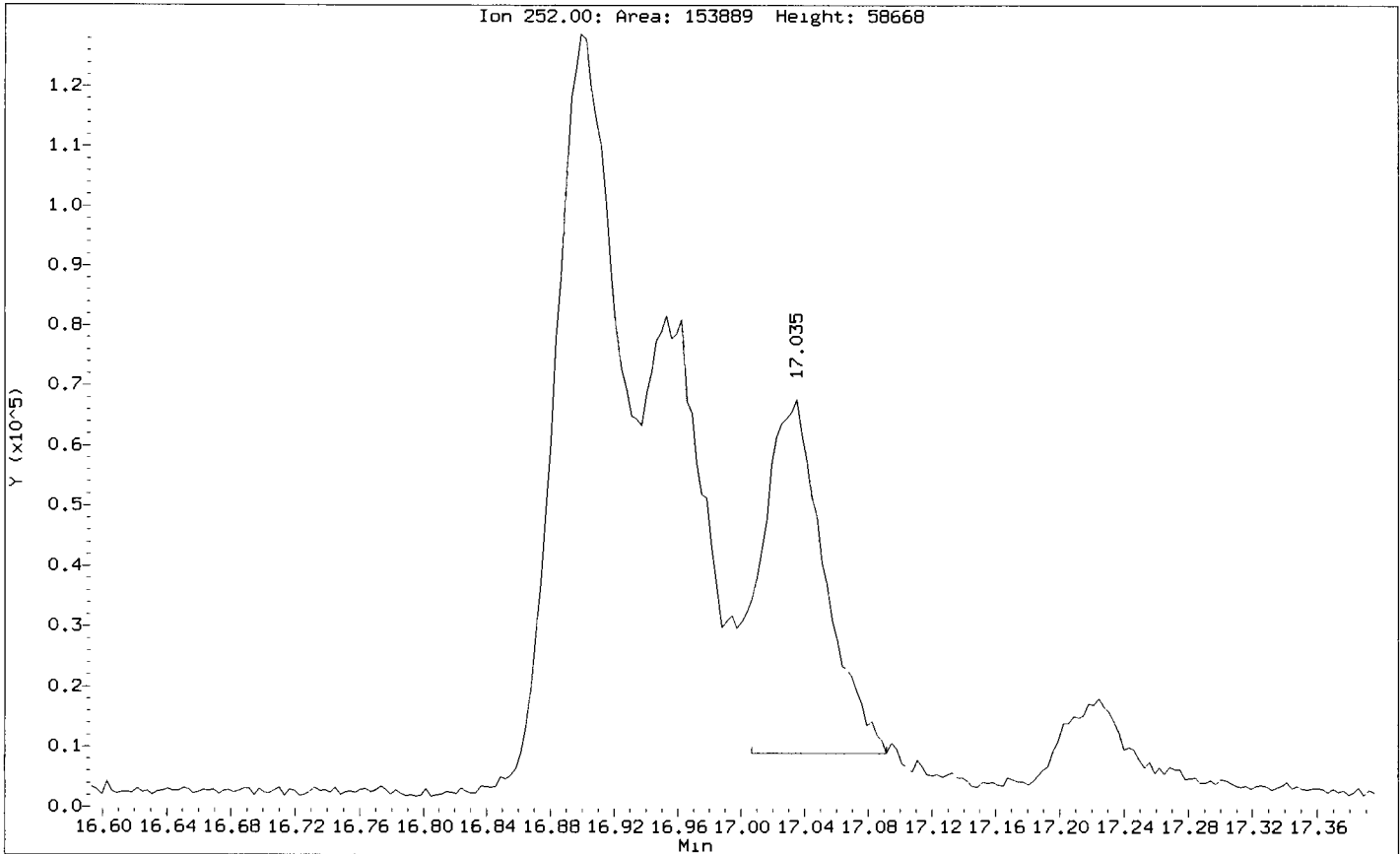
52 Benzo(k)fluoranthene

Concentration: 166.3 ug/kg



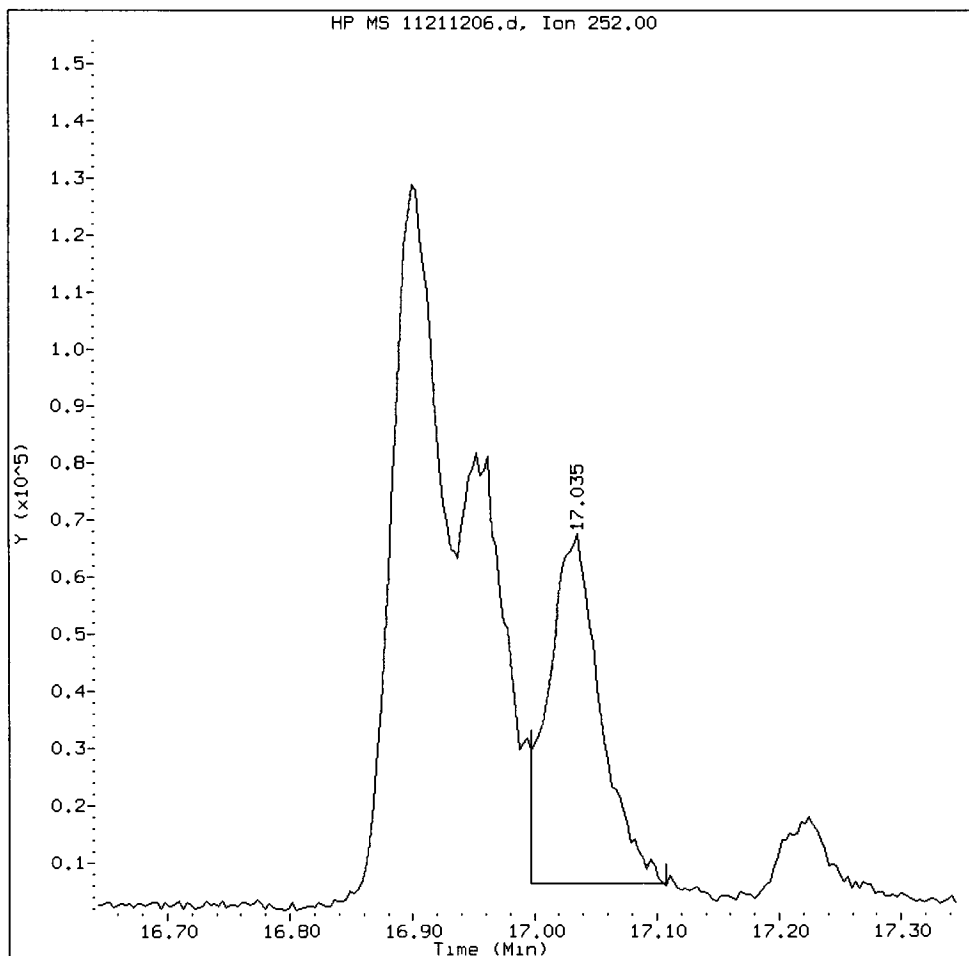
Data File: /chem3/nt11.1/20121121.b/11211206.d  
Injection Date: 21-NOV-2012 13:42  
Instrument: nt11.1  
Client Sample ID: SG-11-S-E-121107

Compound: Benzo(j)fluoranthene  
CAS Number:



VR58B, /chem3/nt11.i/20121121.b/11211206.d

Benzo(j)fluoranthene Amount: 0.85 Area: 183589



MANUAL INTEGRATION for Benzo(j)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AD

Date: 11/21/12

Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

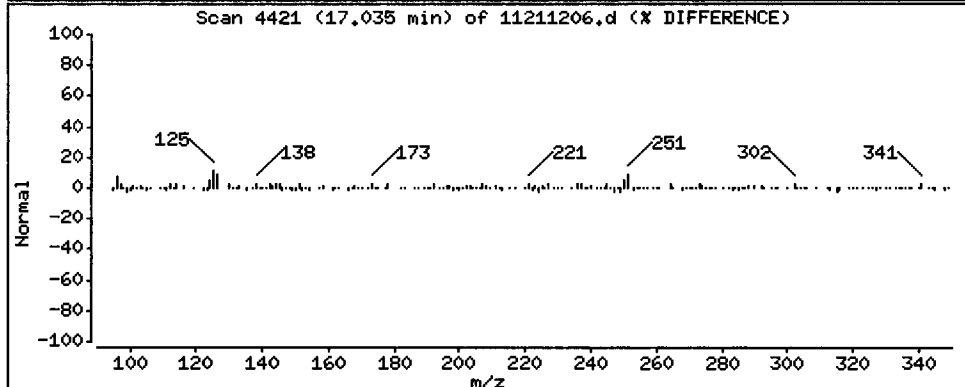
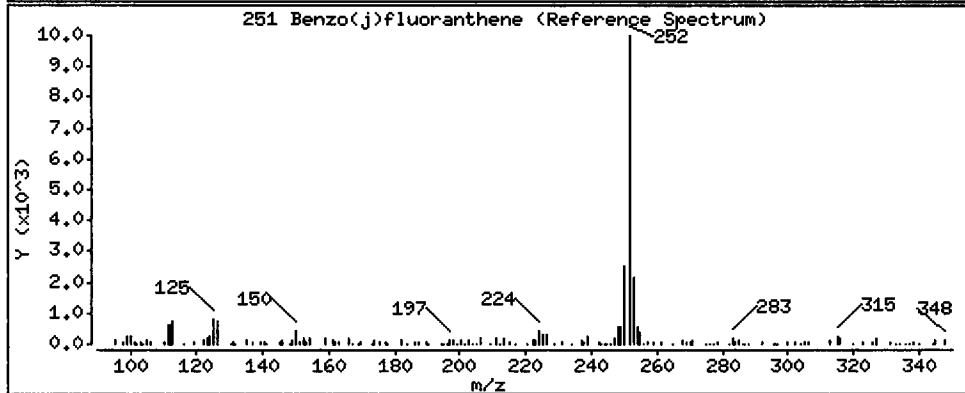
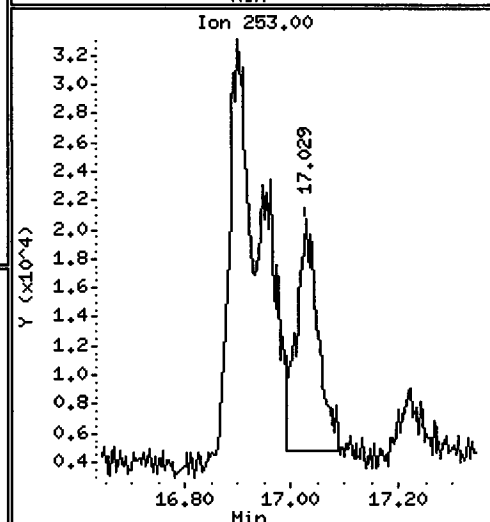
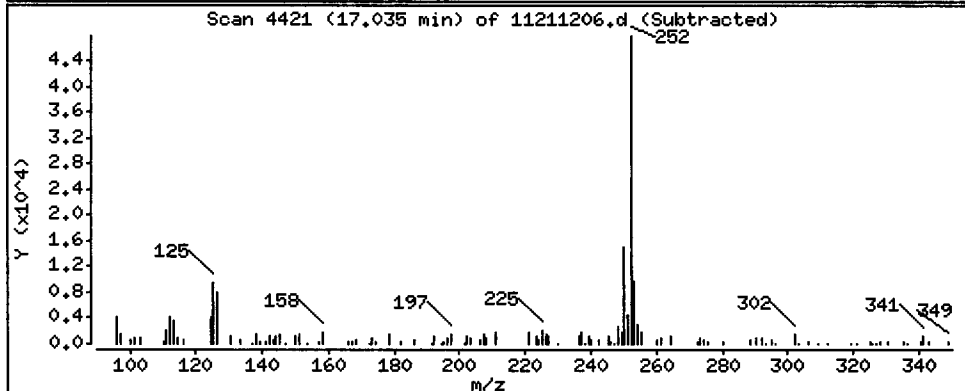
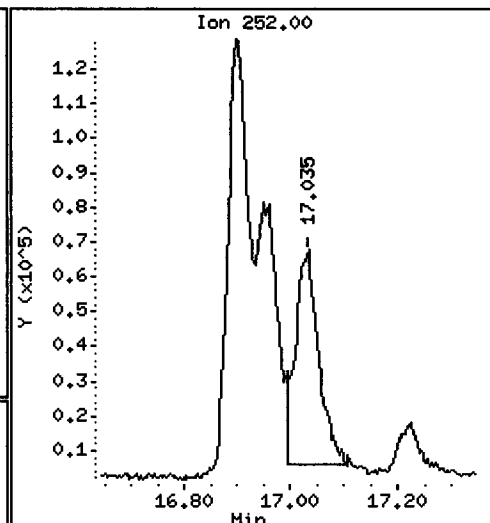
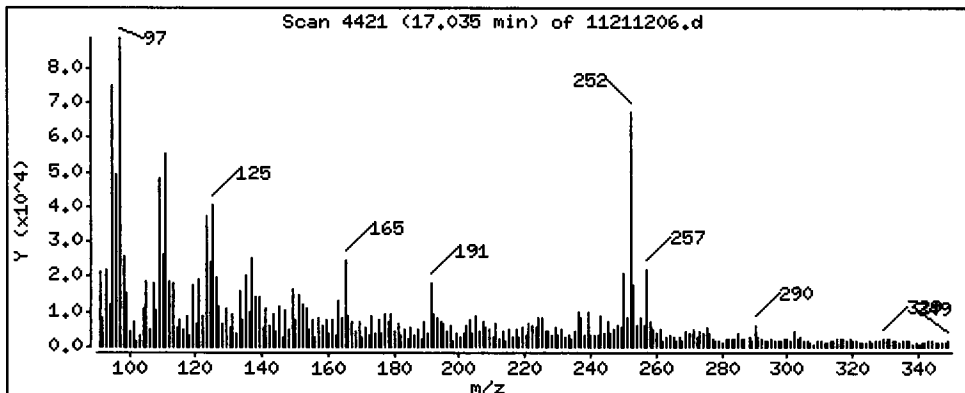
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

251 Benzo(j)fluoranthene

Concentration: 125.3 ug/kg





Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

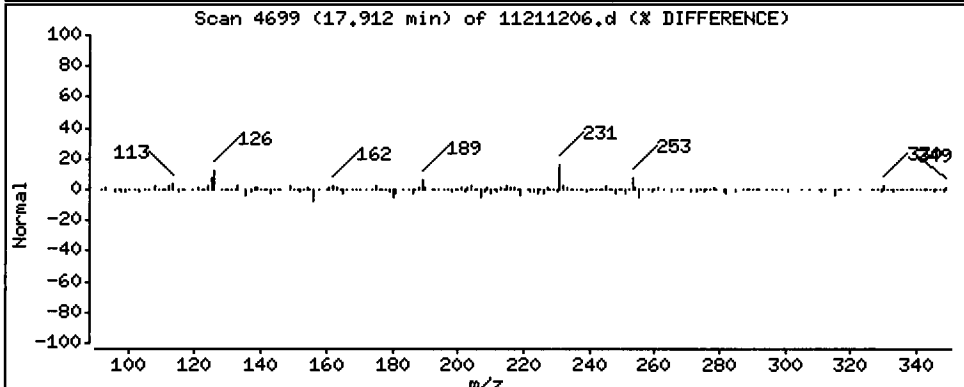
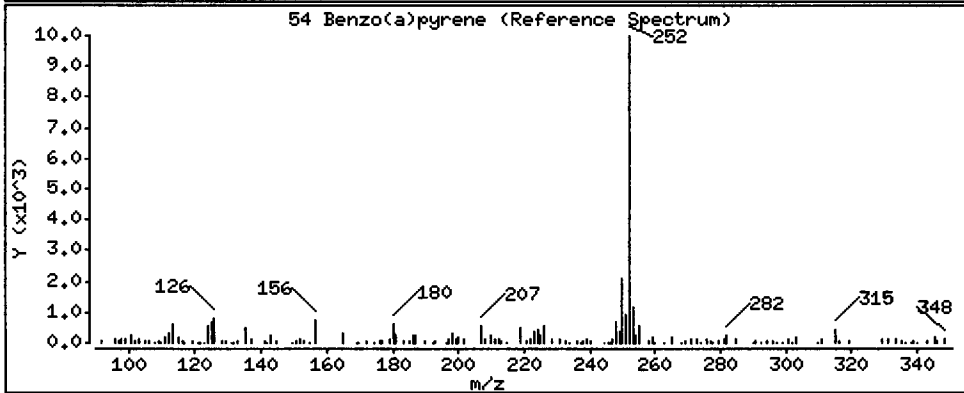
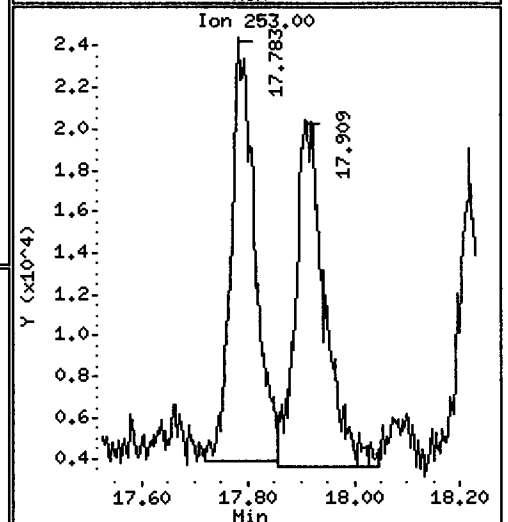
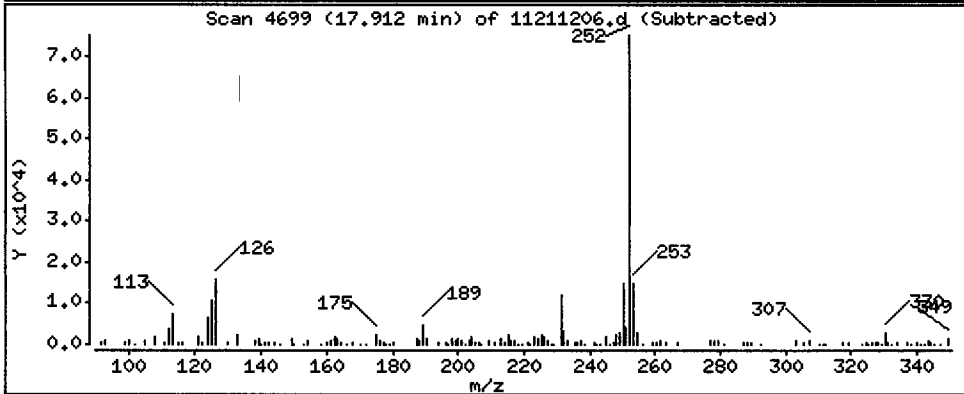
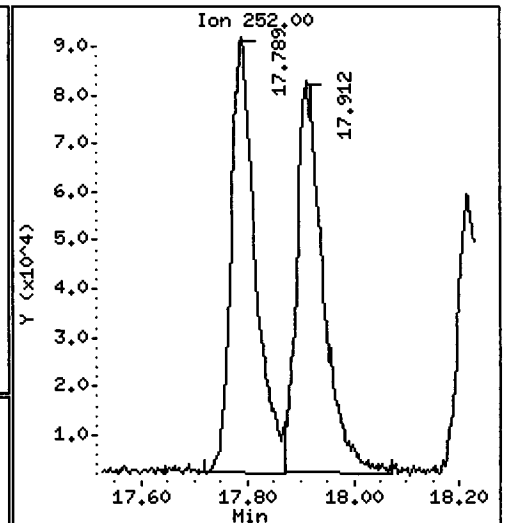
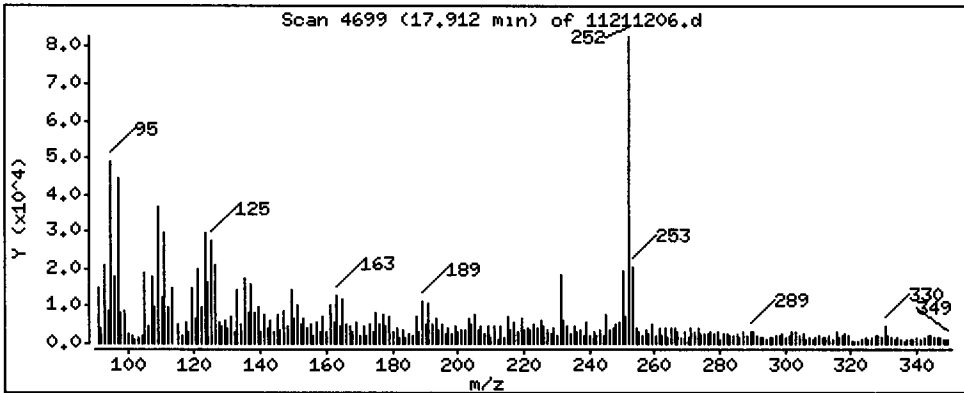
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

54 Benzo(a)pyrene

Concentration: 213.8 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

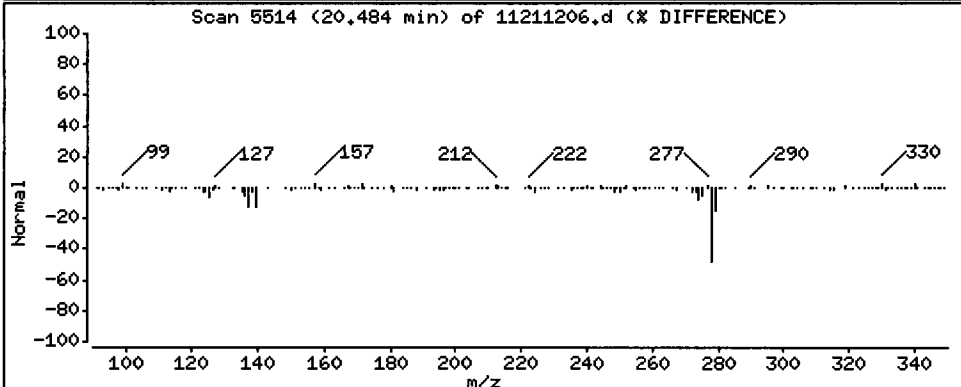
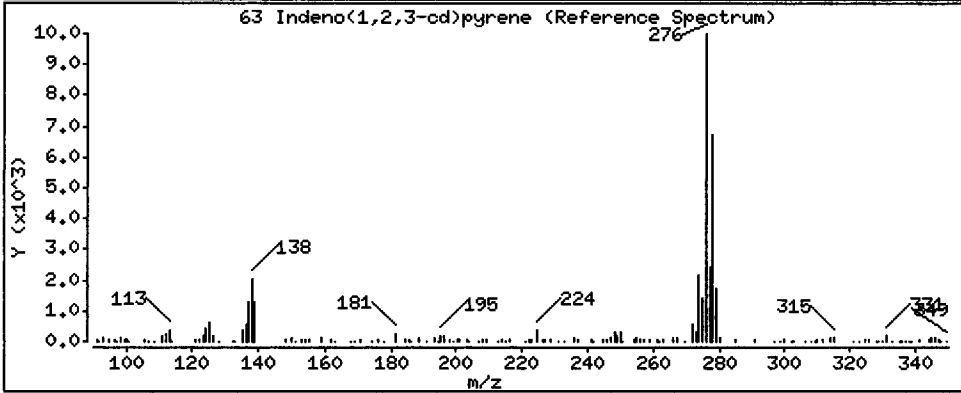
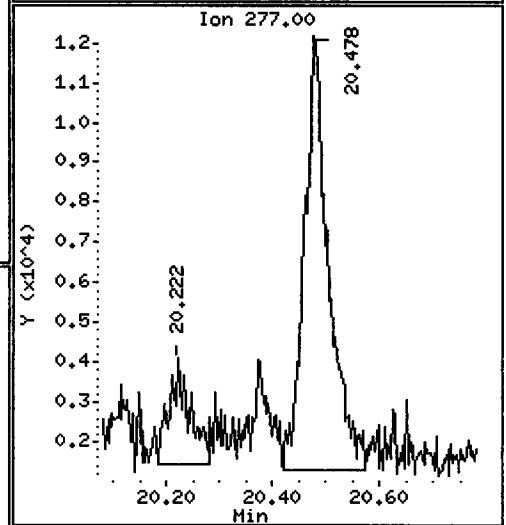
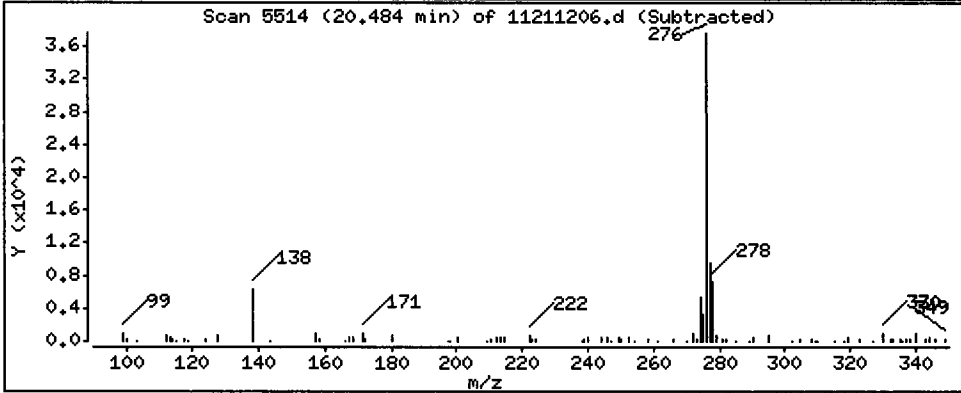
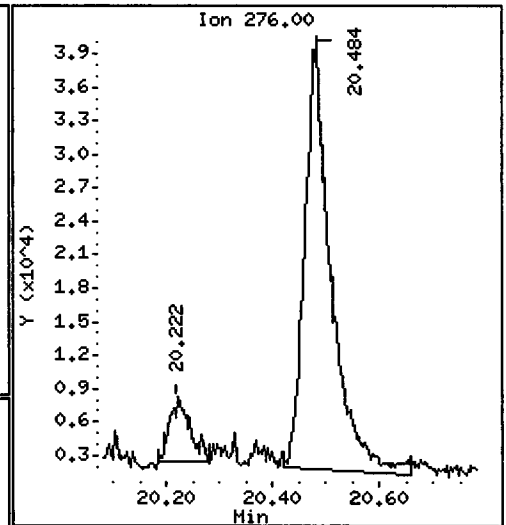
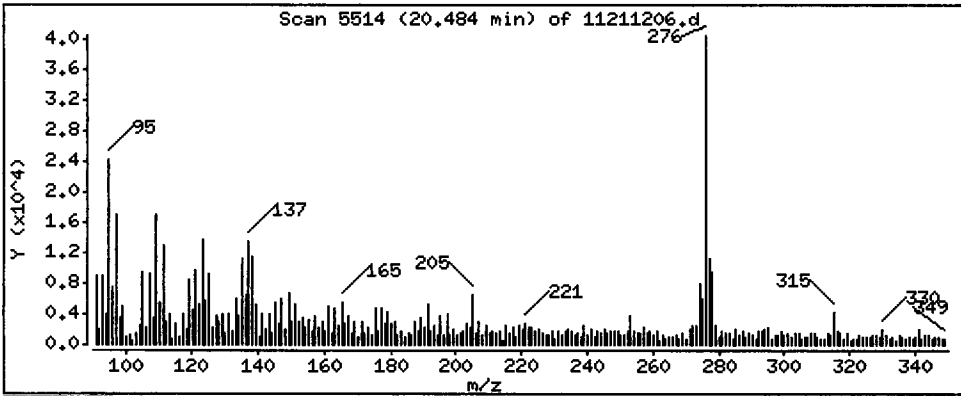
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

63 Indeno(1,2,3-cd)pyrene

Concentration: 83.12 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

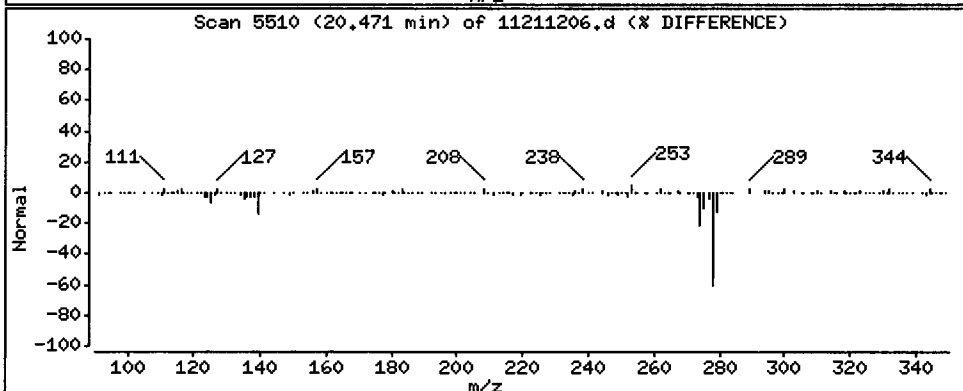
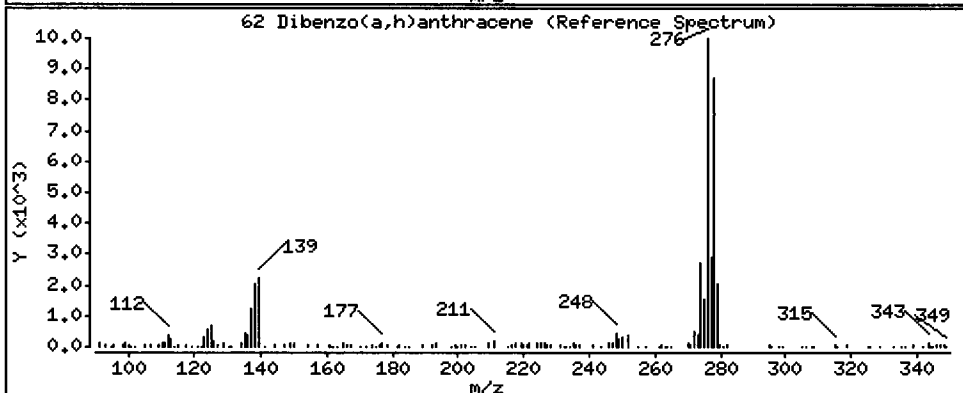
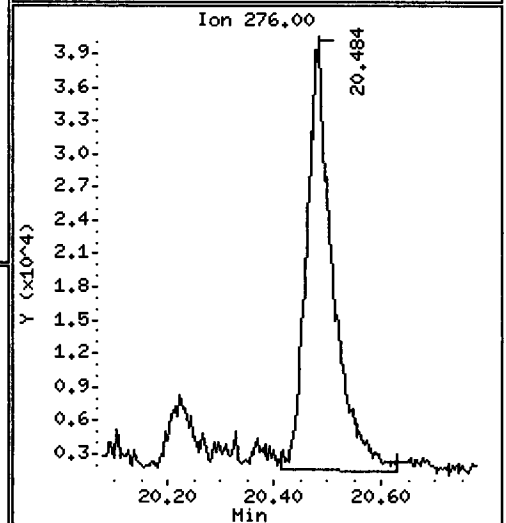
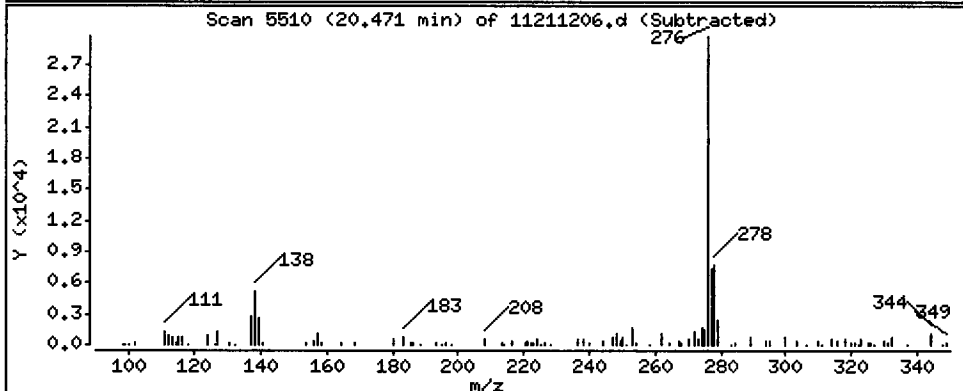
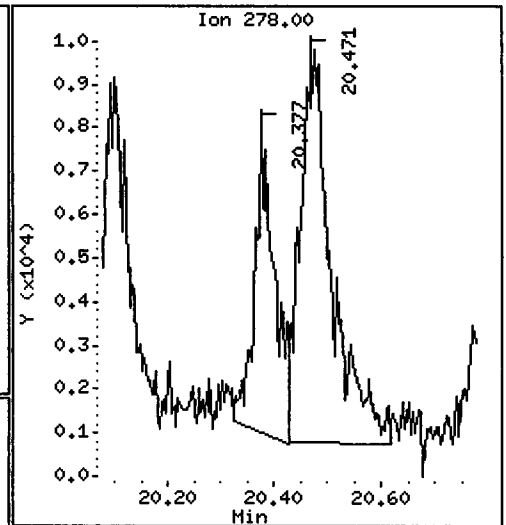
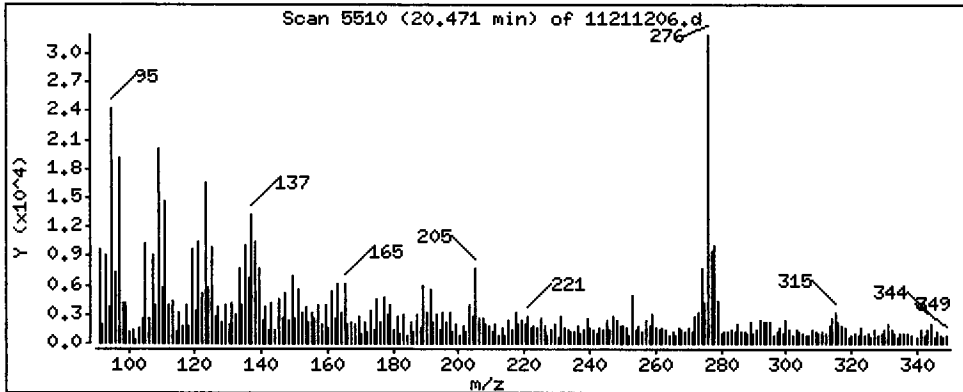
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

62 Dibenzo(a,h)anthracene

Concentration: 29.13 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

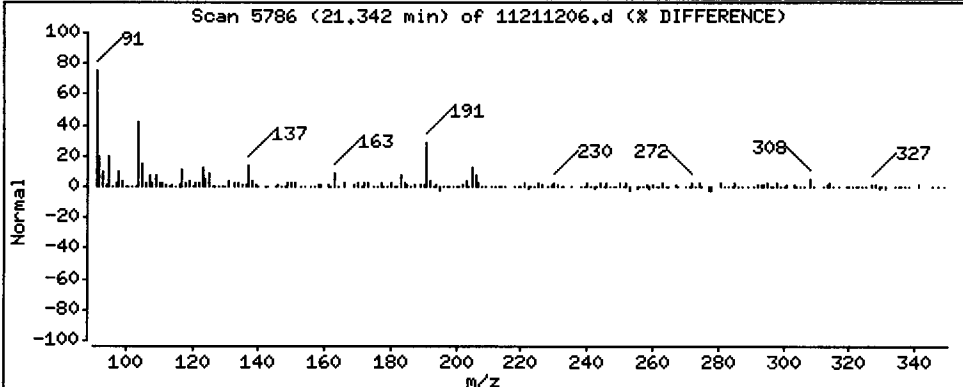
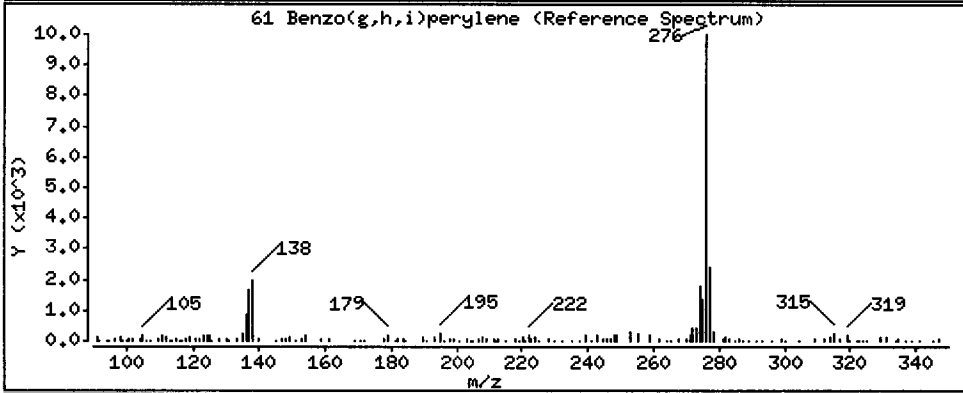
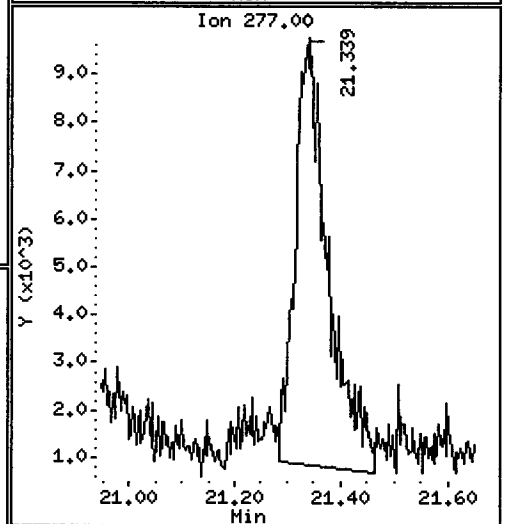
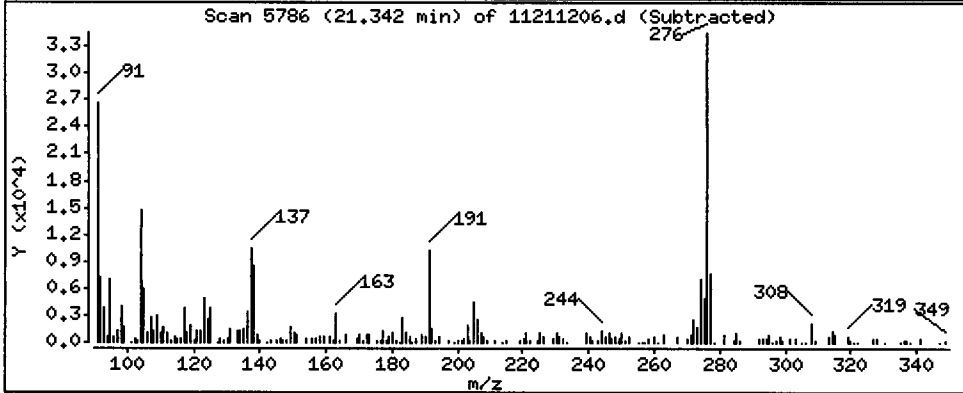
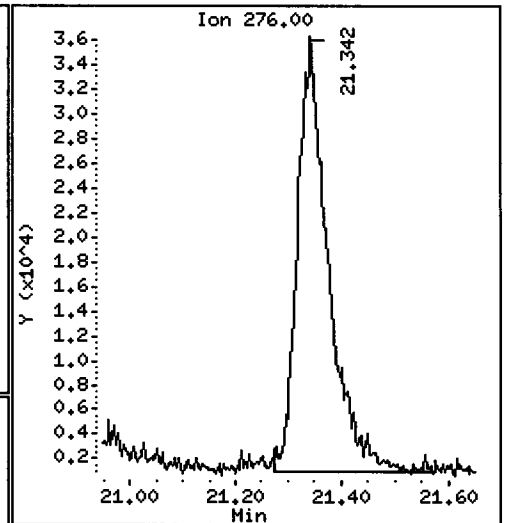
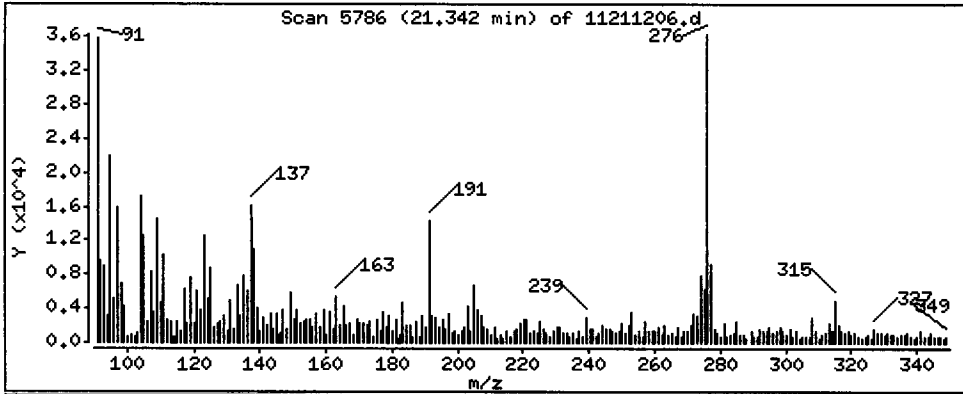
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Benzo(g,h,i)perylene

Concentration: 105.5 ug/kg



Date : 21-NOV-2012 13:42

Client ID: SG-11-S-E-121107

Instrument: nt11.i

Sample Info: VR58B,3,

Volume Injected (uL): 1.0

Operator: JZ

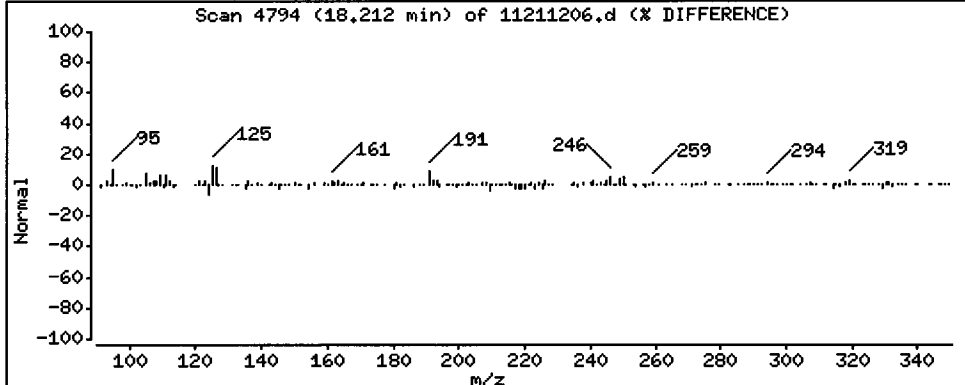
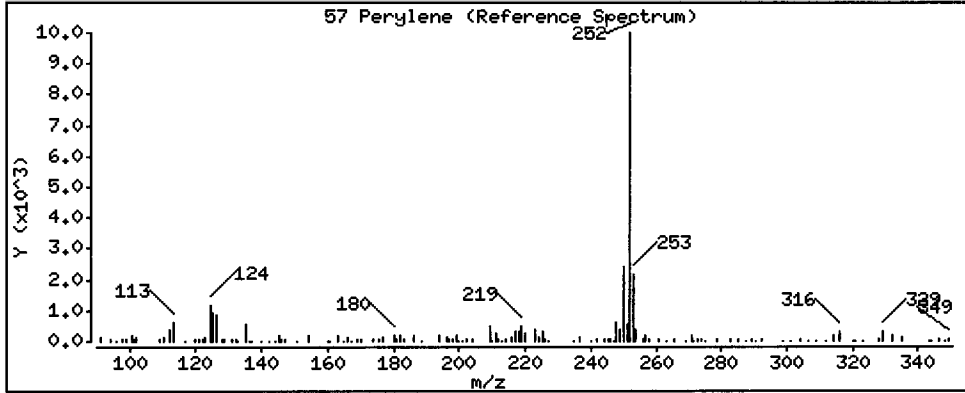
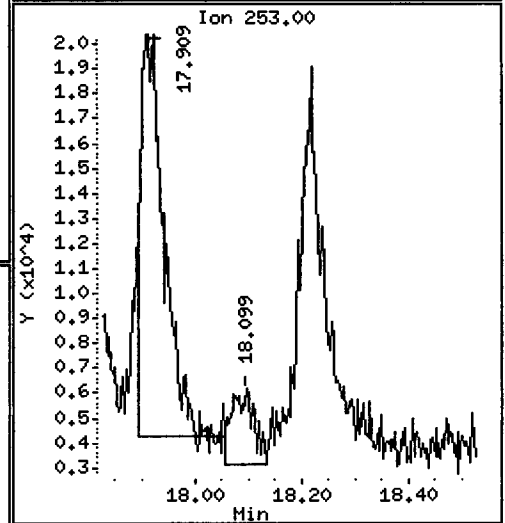
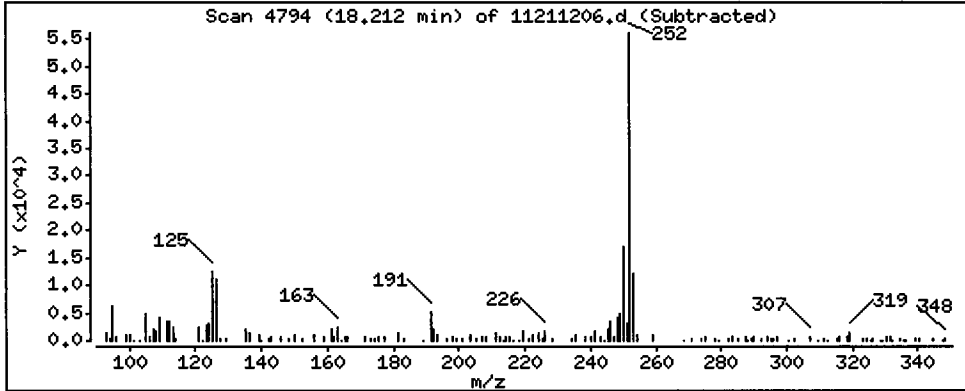
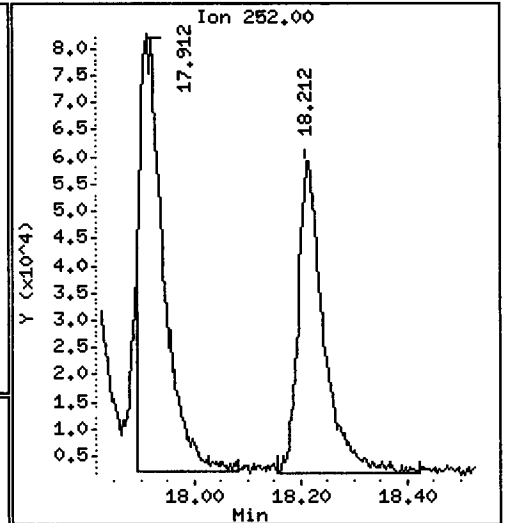
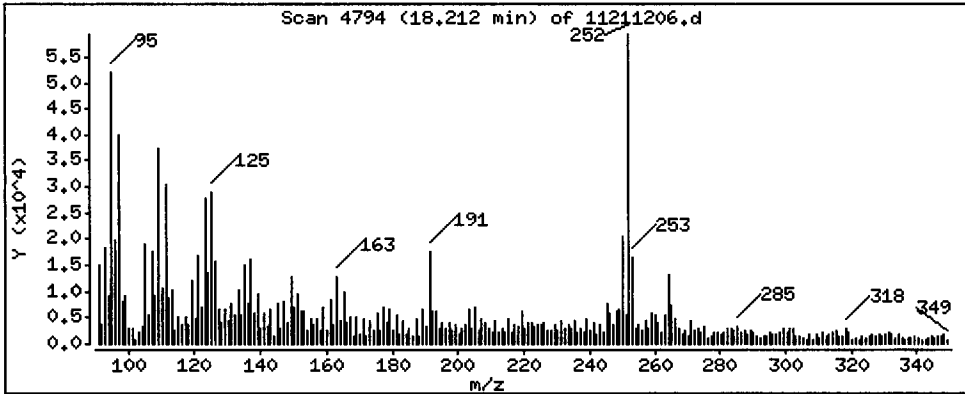
Column phase: ZB-5ms1

Column diameter: 0.25

*Handwritten signature*

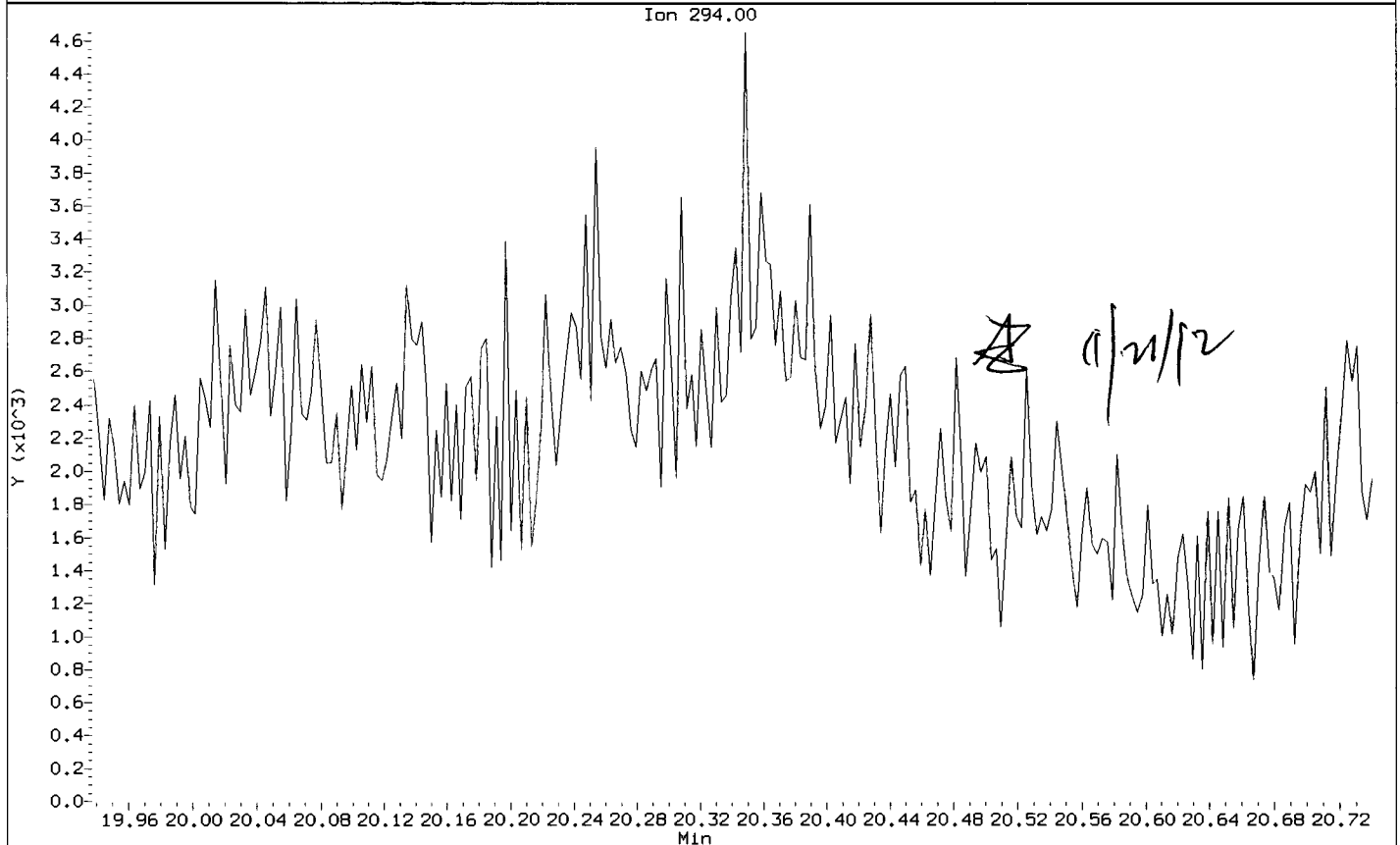
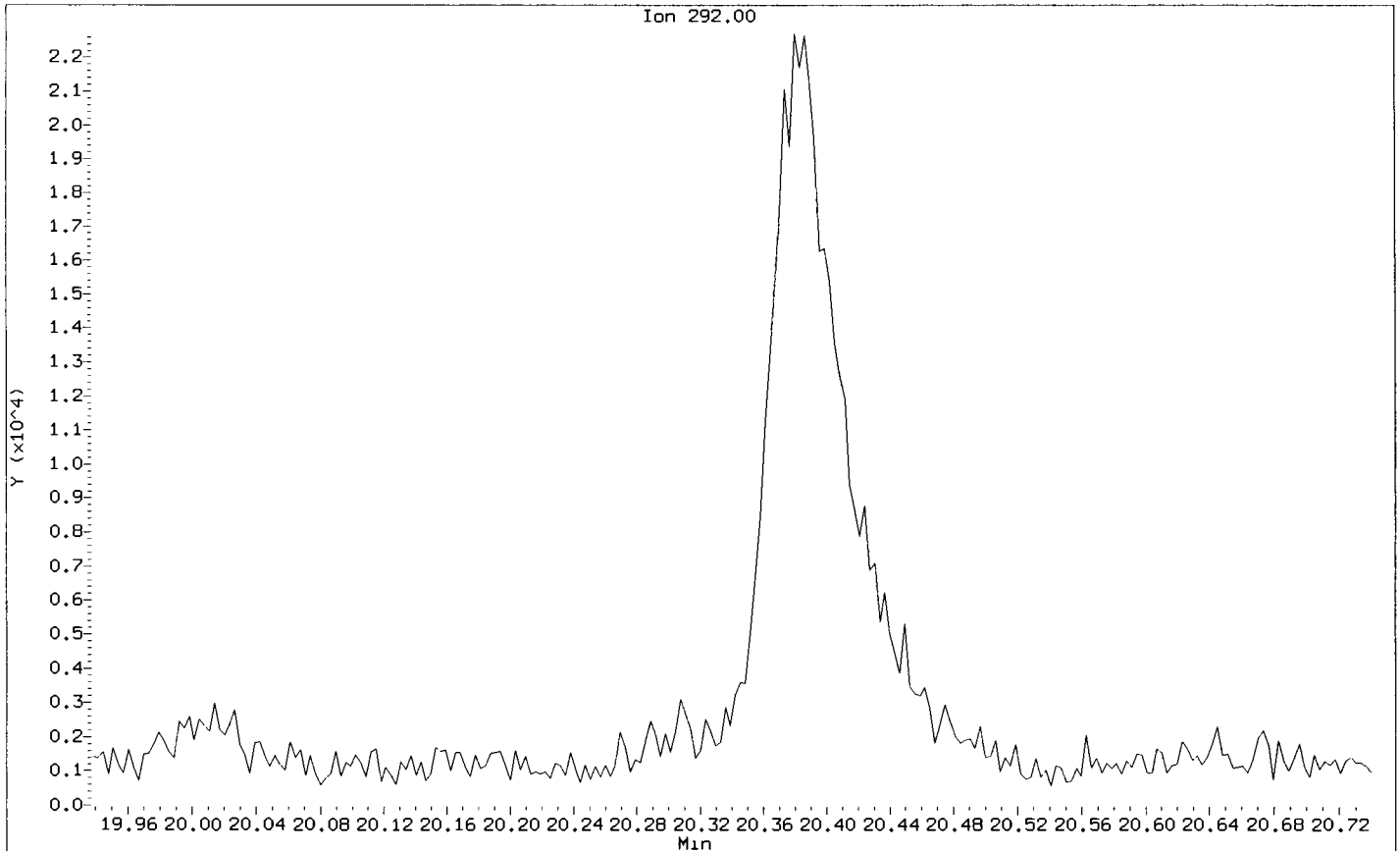
57 Perylene

Concentration: 141.2 ug/kg



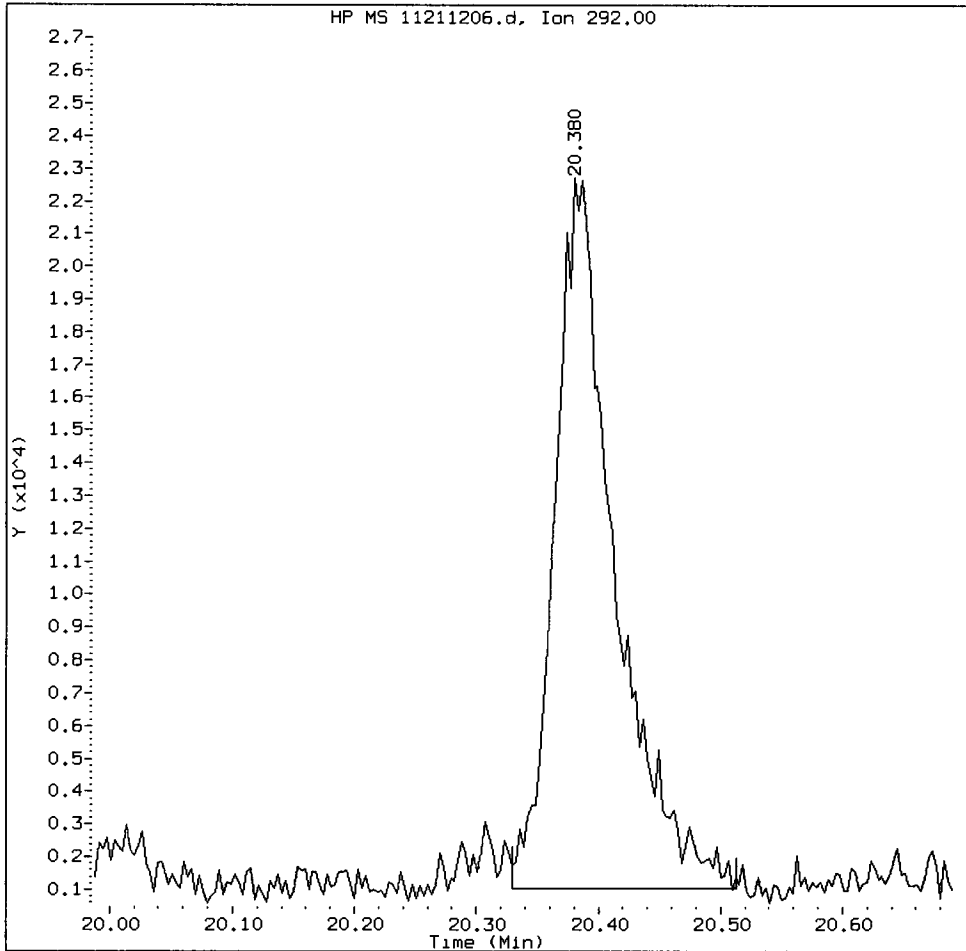
Data File: /chem3/nt11.1/20121121.b/11211206.d  
Injection Date: 21-NOV-2012 13:42  
Instrument: nt11.1  
Client Sample ID: SG-11-S-E-121107

Compound: Dibenzo(a,h)anthracene-d14  
CAS Number:



VR58B, /chem3/nt11.i/20121121.b/11211206.d

Dibenzo(a,h)anthracene-d14 Amount: 0.55 Area: 74555



MANUAL INTEGRATION for Dibenzo(a,h)anthracene-d14

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

5. Other \_\_\_\_\_

Analyst: AE

Date: 4/21/12

CO-ELUTION SUMMARY FOR FILE - 11211206.d

Lab ID: VR58B, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2012

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211207.d  
 Lab Smp Id: VR58C Client Smp ID: SG-12-S-E-121107  
 Inj Date : 21-NOV-2012 14:12  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58C  
 Misc Info : 12-22331  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 21-Nov-2012 15:33 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 7  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

*Handwritten:* 11/21/12

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	34.23000	Weight of sample extracted (g)
M	70.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	136	5.435	5.438	(1.000)	719301	2.00000		
7 Naphthalene	128	5.460	5.467	(1.005)	143824	0.37413	18.22	
\$ 12 2-Methylnaphthalene-d10	152	6.170	6.174	(1.135)	365492	1.48715	72.41	
14 2-Methylnaphthalene	141	6.218	6.221	(1.144)	57587	0.26588	12.95	
15 1-methylnaphthalene	141	6.410	6.413	(1.179)	22129	0.10667	5.194 (M)	
21 Acenaphthylene	152	7.600	7.600	(0.986)	41324	0.11785	5.738	
* 22 Acenaphthene-d10	164	7.710	7.714	(1.000)	403550	2.00000		
23 Acenaphthene	153	7.758	7.761	(1.006)	79778	0.35775	17.42	
11 Dibenzofuran	168	7.912	7.912	(1.026)	85051	0.26034	12.68	
25 Fluorene	166	8.389	8.389	(1.088)	115961	0.46185	22.49	
* 28 Phenanthrene-d10	188	9.739	9.736	(1.000)	537761	2.00000		
30 Phenanthrene	178	9.774	9.768	(1.004)	786085	2.41994	117.8	
31 Anthracene	178	9.815	9.809	(1.008)	193277	0.61980	30.18 (M)	
36 Fluoranthene	202	11.459	11.425	(1.177)	1029114	3.16210	154.0	
39 Pyrene	202	11.954	11.892	(0.829)	1077439	3.80549	185.3 (H)	

Compounds	QUANT SIG				RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT		ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	====	==	=====	=====	=====	=====	=====
46 Benzo(a)anthracene	228	14.290	14.224	(0.991)	569861	2.20736	107.5
* 47 Chrysene-d12	240	14.413	14.343	(1.000)	513773	2.00000	
48 Chrysene	228	14.479	14.413	(1.005)	958452	3.82502	186.2
51 Benzo(b)fluoranthene	252	16.915	16.858	(0.932)	522560	2.96574	144.4 (M)
52 Benzo(k)fluoranthene	252	16.966	16.918	(0.935)	313952	1.64067	79.88 (M)
251 Benzo(j)fluoranthene	252	17.038	16.994	(0.939)	278017	1.37704	67.05 (M)
54 Benzo(a)pyrene	252	17.928	17.878	(0.988)	403526	2.25469	109.8
* 56 Perylene-d12	264	18.152	18.102	(1.000)	380719	2.00000	
63 Indeno(1,2,3-cd)pyrene	276	20.475	20.431	(1.128)	191259	0.88148	42.92
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.377	20.339	(1.123)	167337	1.32580	64.55
62 Dibenzo(a,h)anthracene	278	20.475	20.427	(1.128)	51115	0.28926	14.08
61 Benzo(g,h,i)perylene	276	21.336	21.298	(1.175)	193816	1.04999	51.12
57 Perylene	252	18.225	18.177	(1.004)	551187	2.96973	144.6

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: nt11.i  
 Lab File ID: 11211207.d  
 Lab Smp Id: VR58C  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22331

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-12-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	719301	39.37
22 Acenaphthene-d10	284255	142128	568510	403550	41.97
28 Phenanthrene-d10	410660	205330	821320	537761	30.95
47 Chrysene-d12	467886	233943	935772	513773	9.81
56 Perylene-d12	472330	236165	944660	380719	-19.40

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	-0.06
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	-0.04
28 Phenanthrene-d10	9.74	9.24	10.24	9.74	0.03
47 Chrysene-d12	14.34	13.84	14.84	14.41	0.48
56 Perylene-d12	18.10	17.60	18.60	18.15	0.28

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58C  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Misc Info: 12-22331

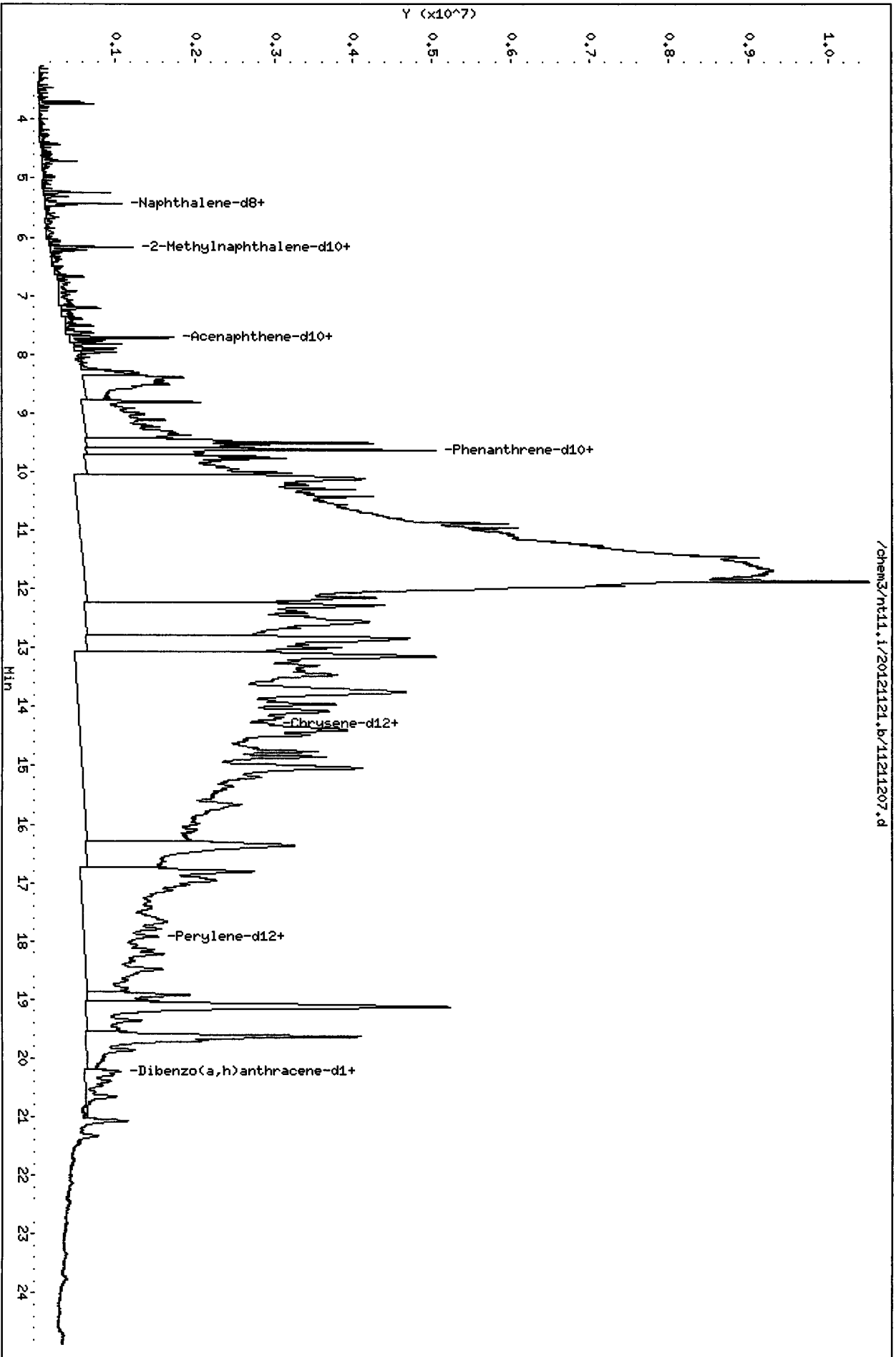
Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-12-S-E-121107  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	146.1	72.41	49.57	34-100
\$ 60 Dibenzo(a,h)anthra	146.1	64.55	44.19	10-117

Data File: /chem3/nt11.i/20121121.b/11211207.d  
Date: 21-NOV-2012 14:12  
Client ID: SG-12-S-E-121107  
Sample Info: WR59C  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt11.i  
Operator: JZ  
Column diameter: 0.25

/chem3/nt11.i/20121121.b/11211207.d



20121121

Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

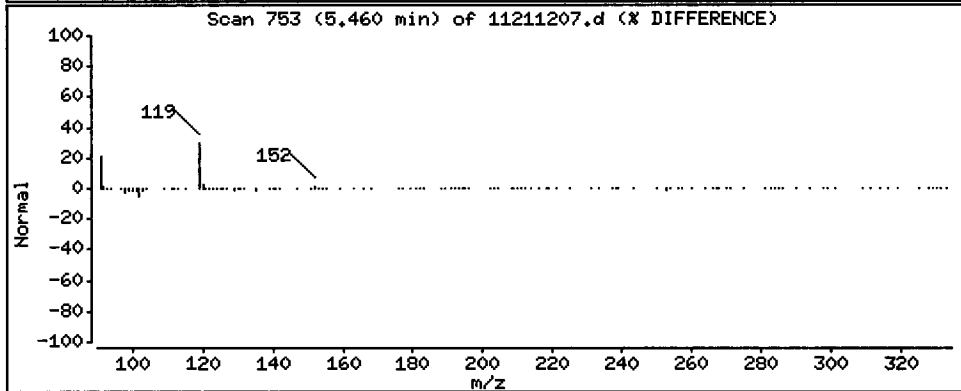
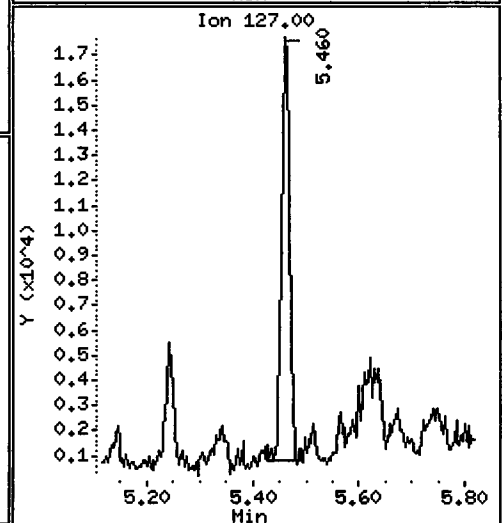
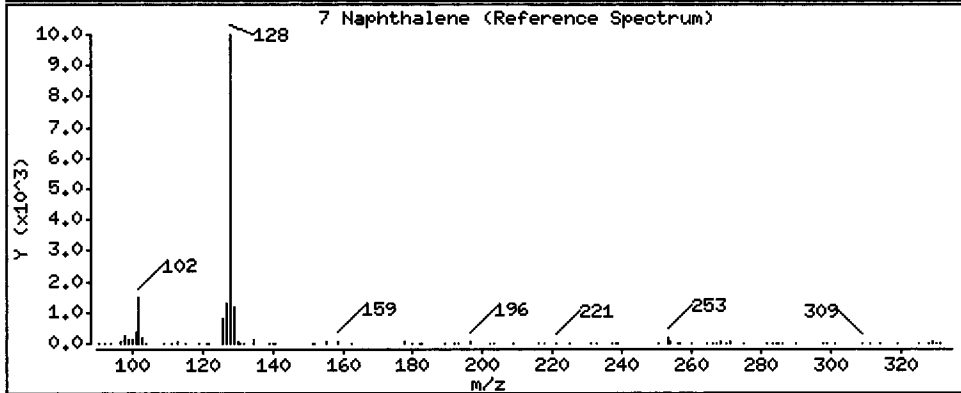
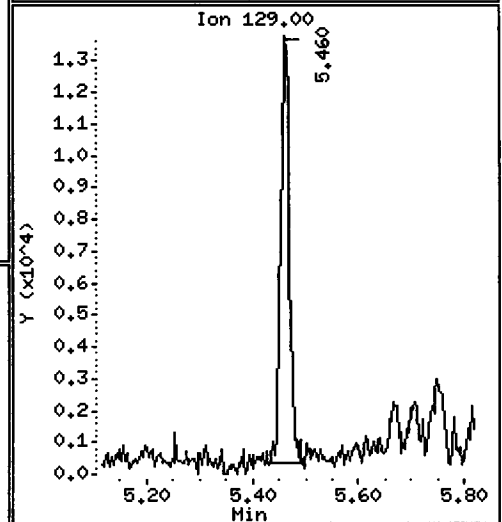
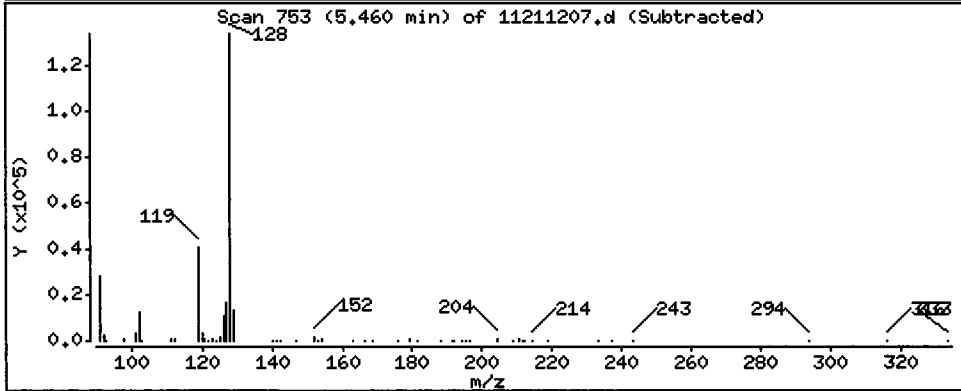
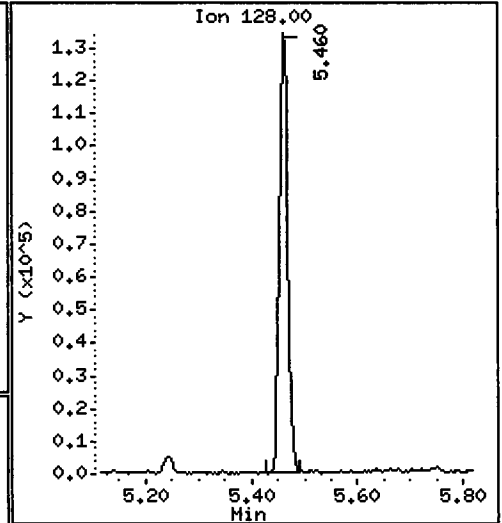
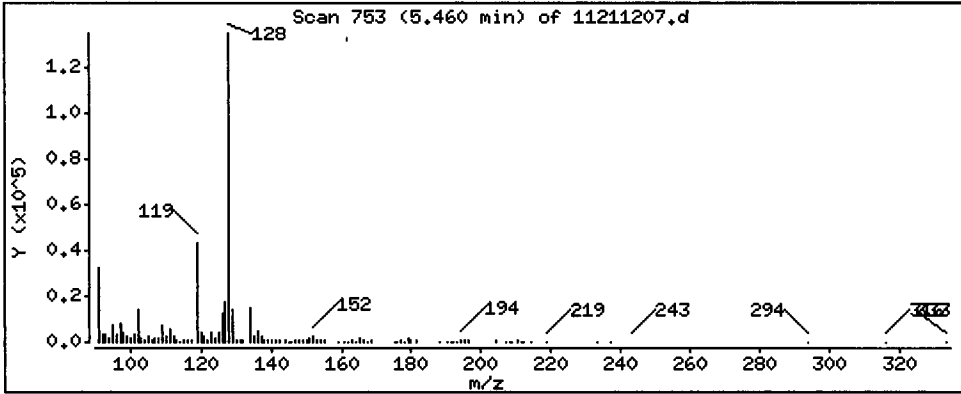
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

7 Naphthalene

Concentration: 18.22 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

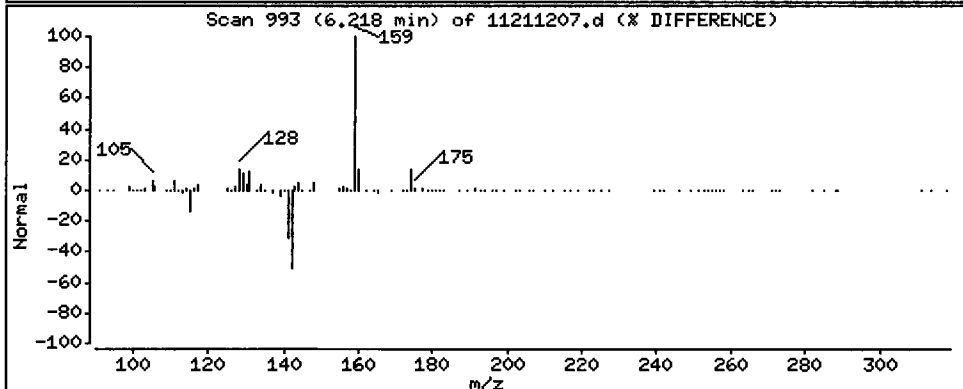
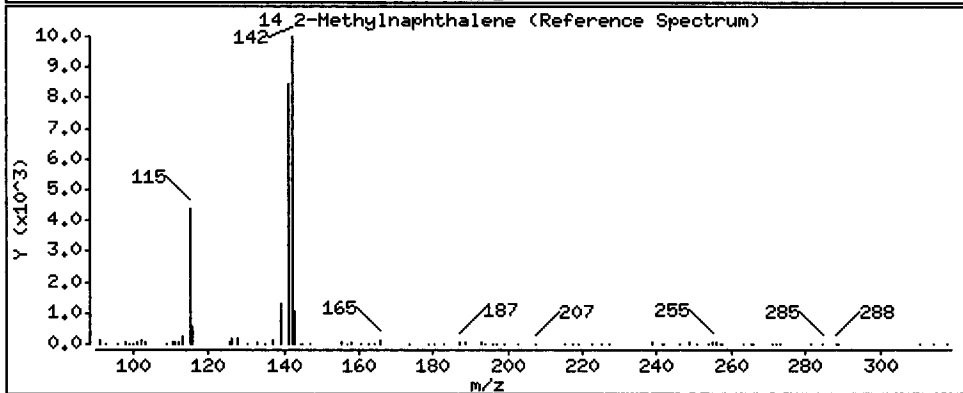
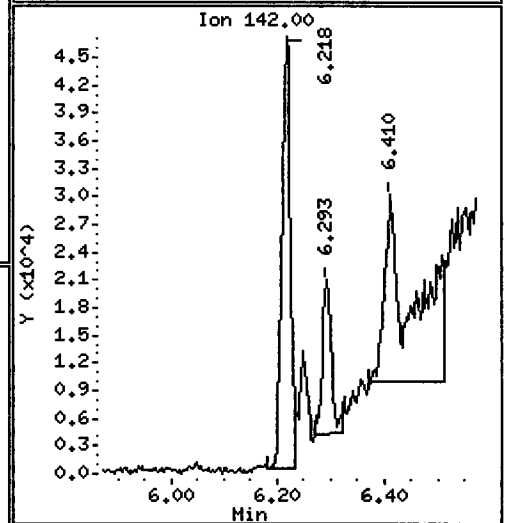
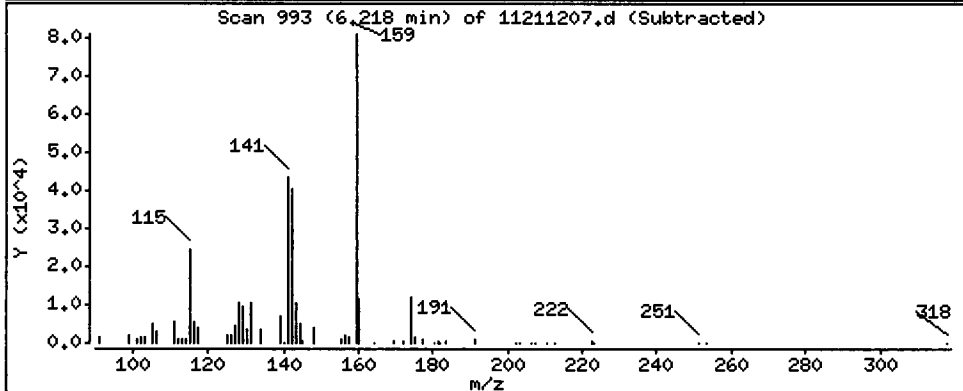
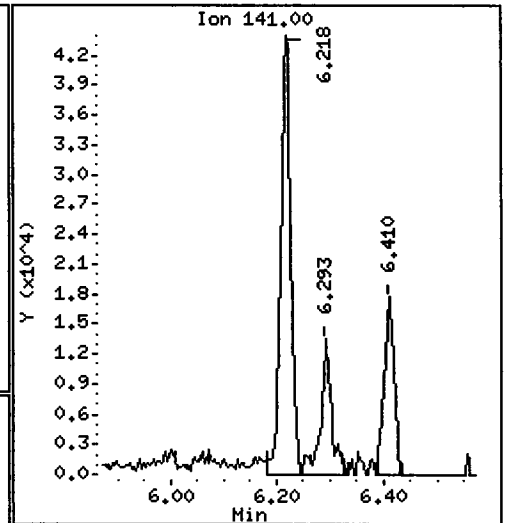
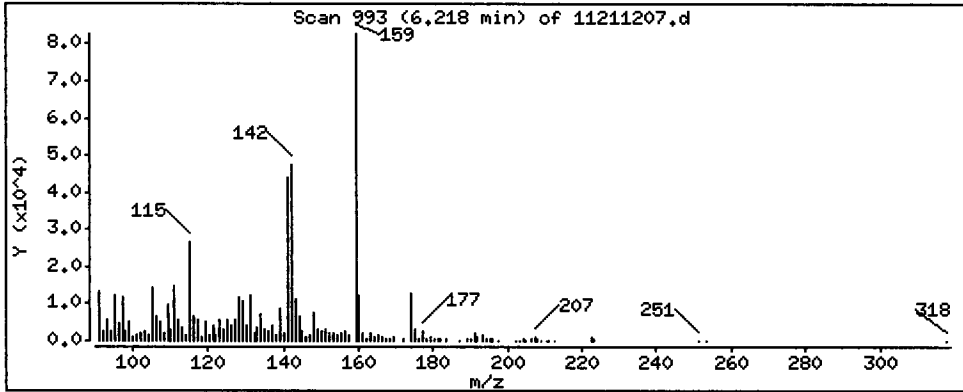
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

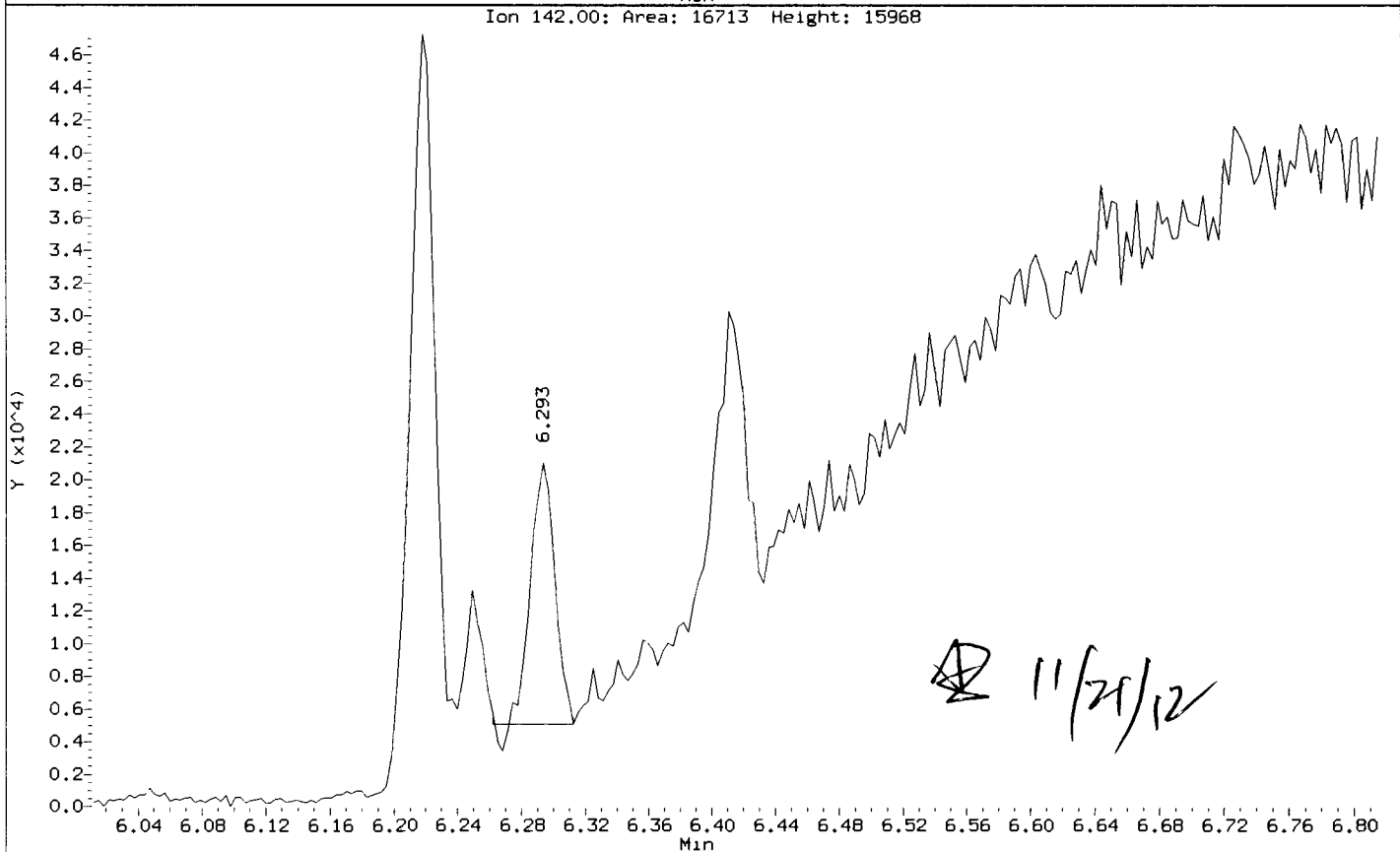
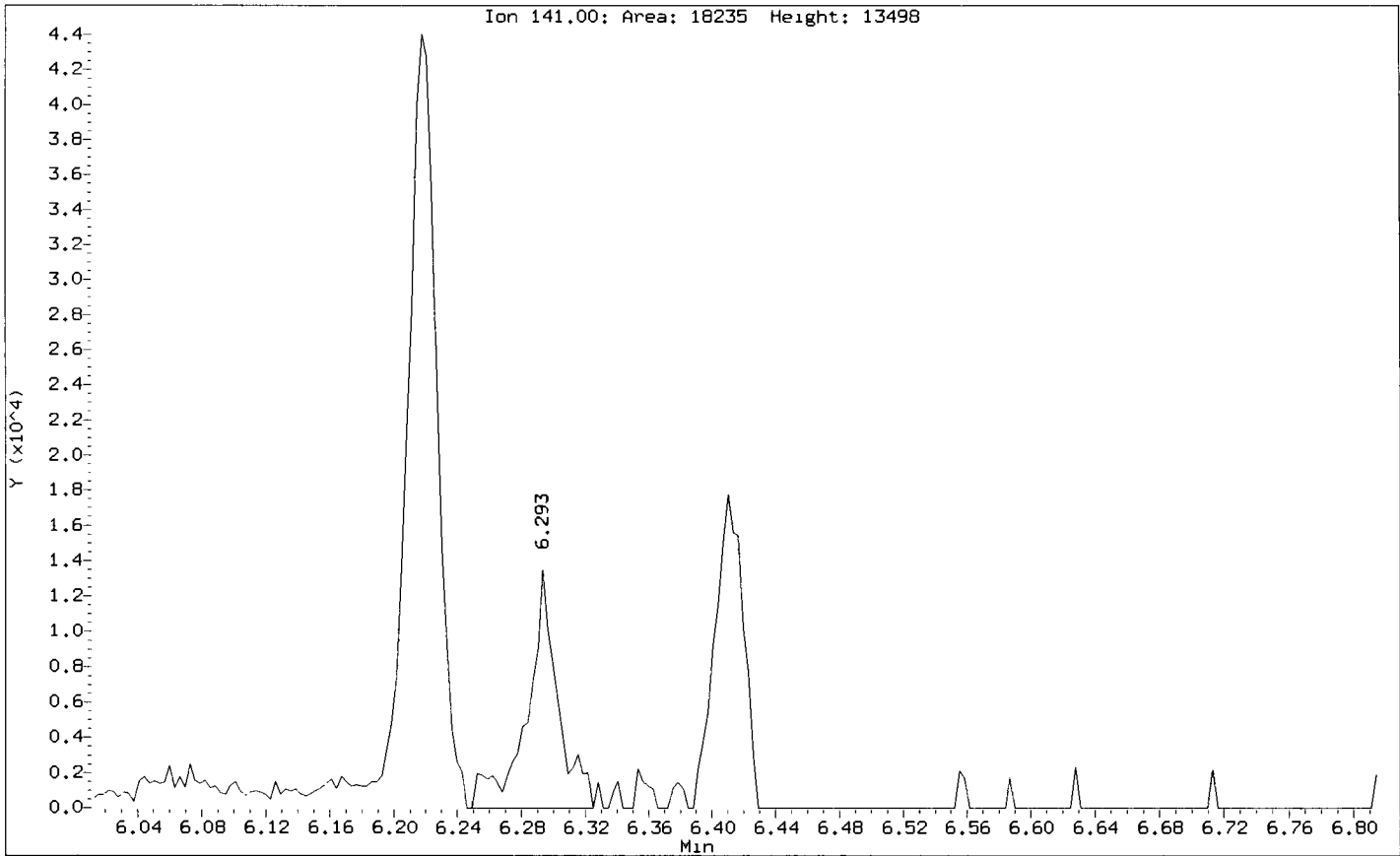
14 2-Methylnaphthalene

Concentration: 12.95 ug/kg



Data File: /chem3/nt11.1/20121121.b/11211207.d  
Injection Date: 21-NOV-2012 14:12  
Instrument: nt11.1  
Client Sample ID: SG-12-S-E-121107

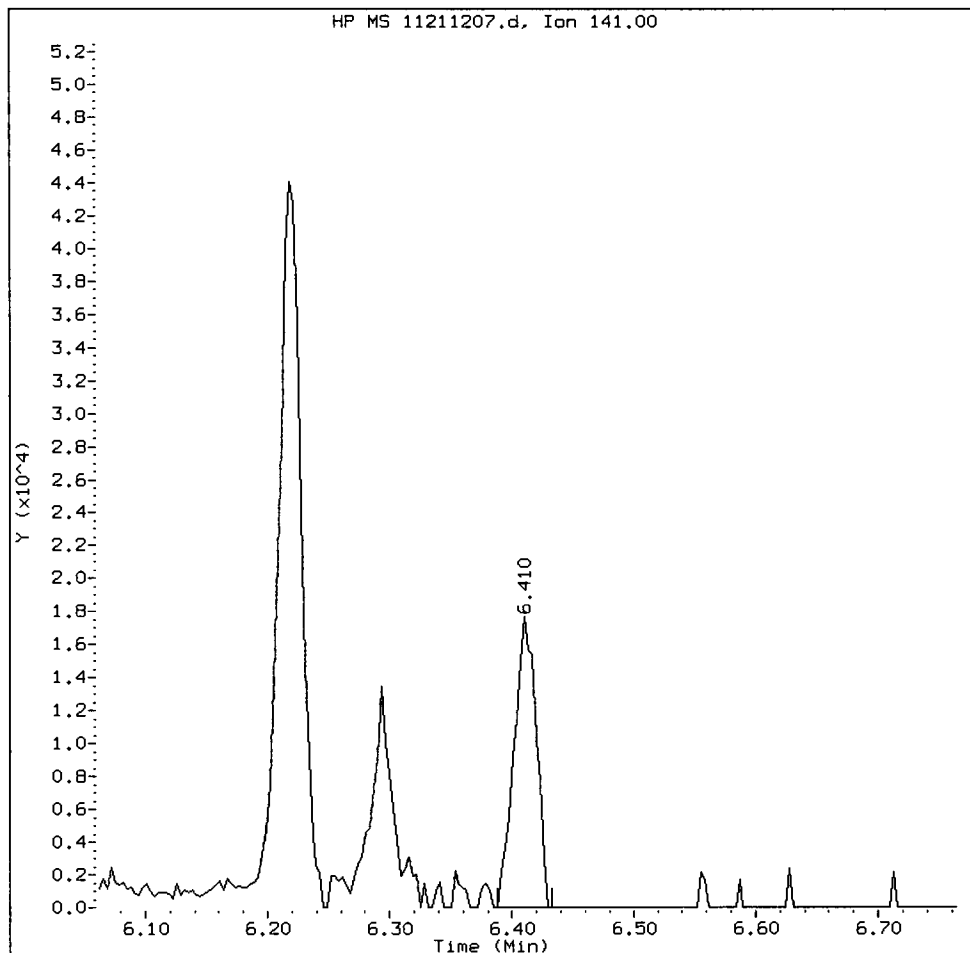
Compound: 1-methylnaphthalene  
CAS Number:





VR58C, /chem3/nt11.i/20121121.b/11211207.d


1-methylnaphthalene Amount: 0.11 Area: 22129



MANUAL INTEGRATION for 1-methylnaphthalene

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

5. Other \_\_\_\_\_

Analyst: 

Date: 11/21/12

Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

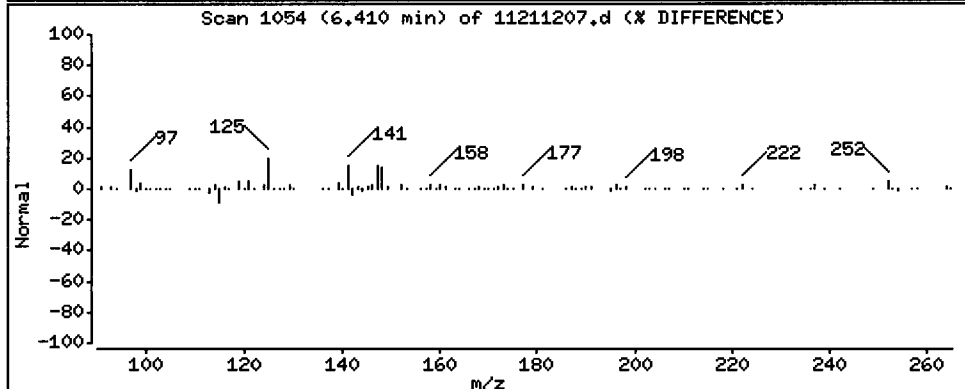
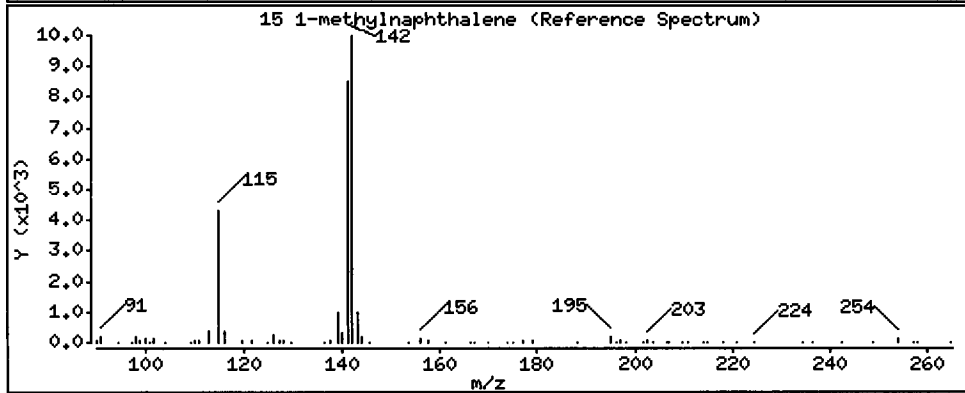
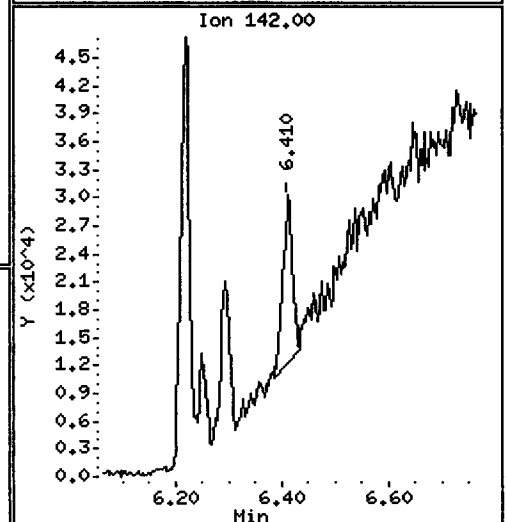
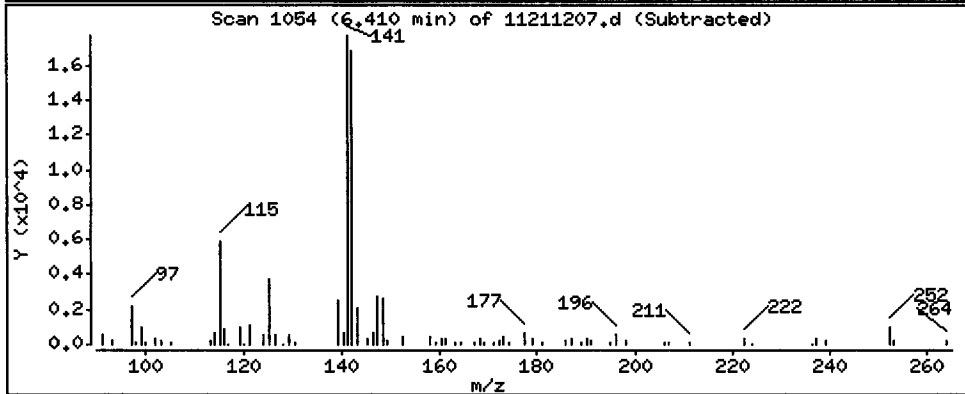
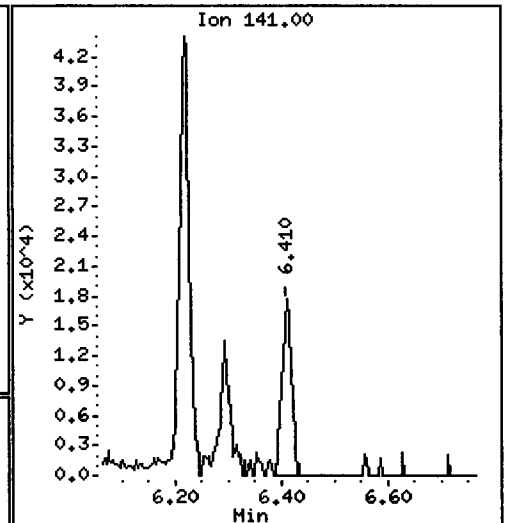
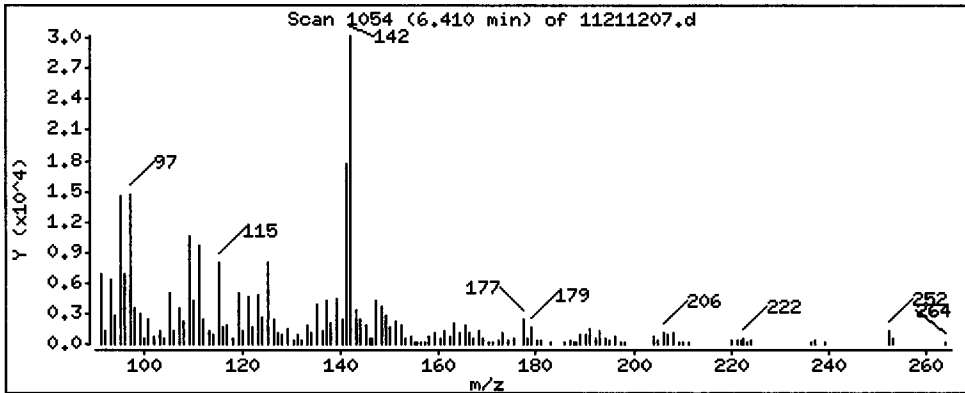
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

15 1-methylnaphthalene

Concentration: 5.194 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

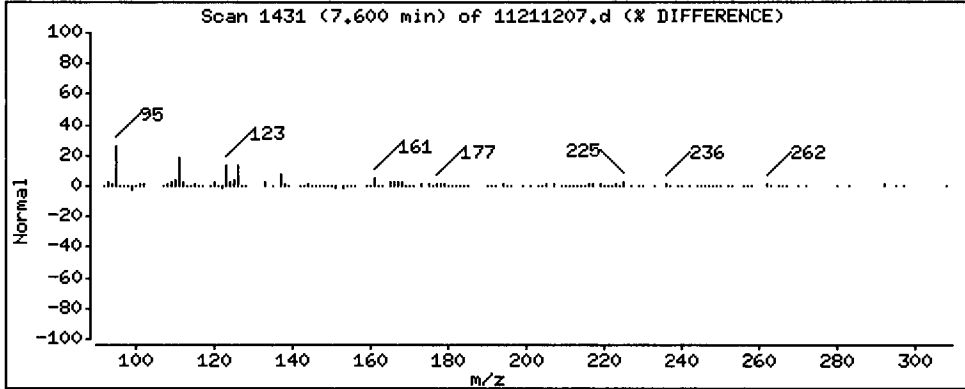
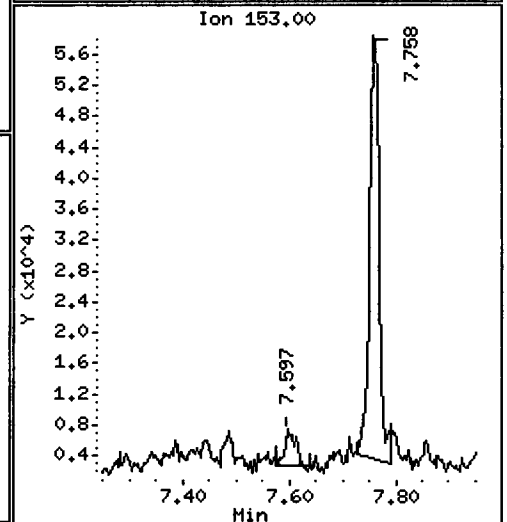
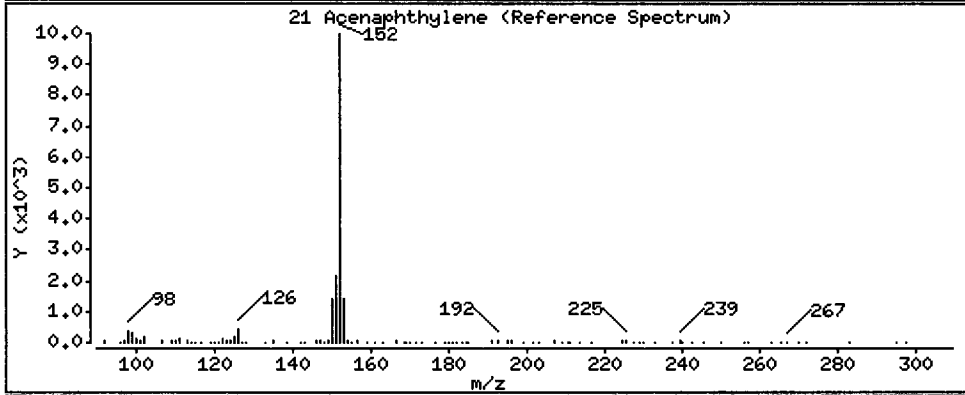
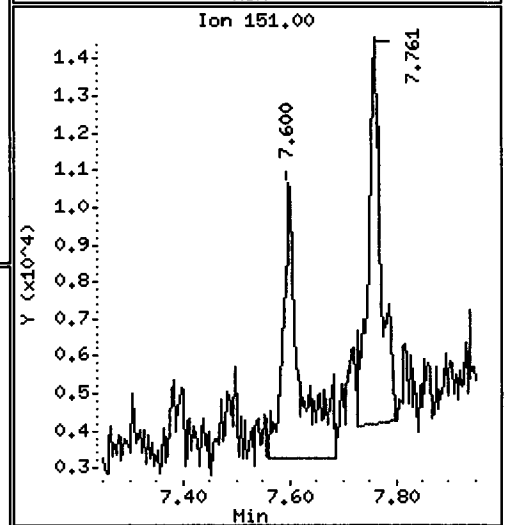
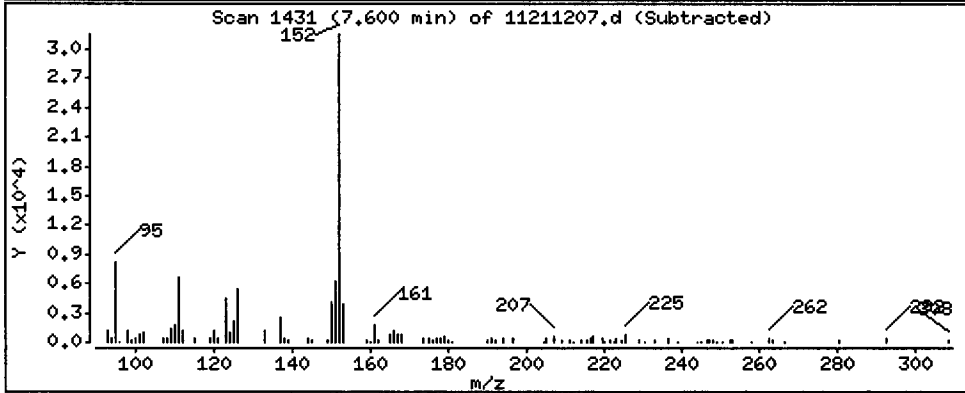
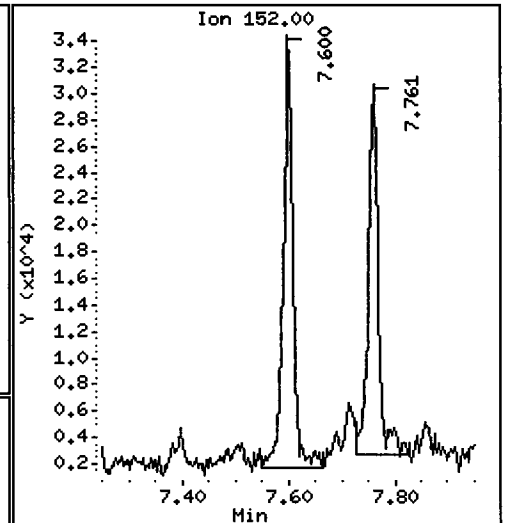
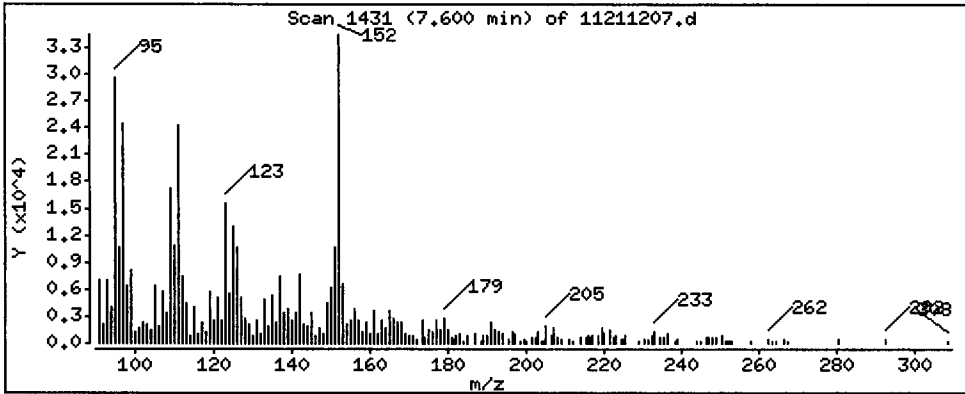
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

21 Acenaphthylene

Concentration: 5.738 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

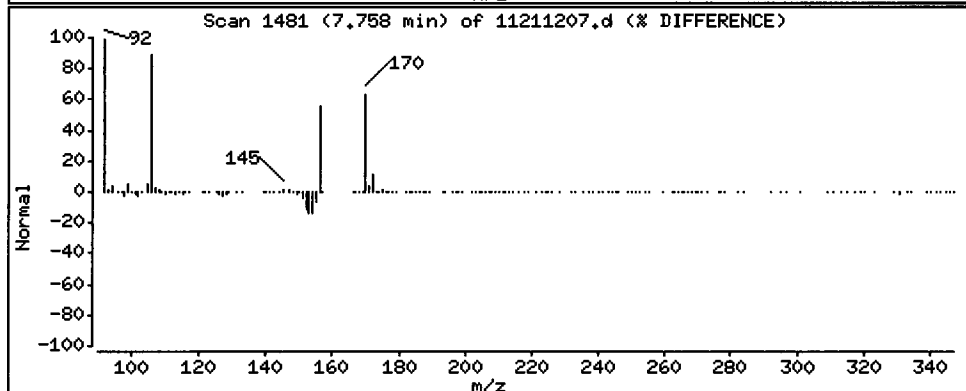
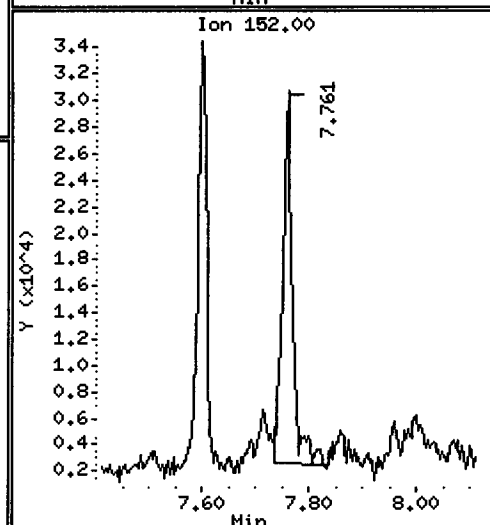
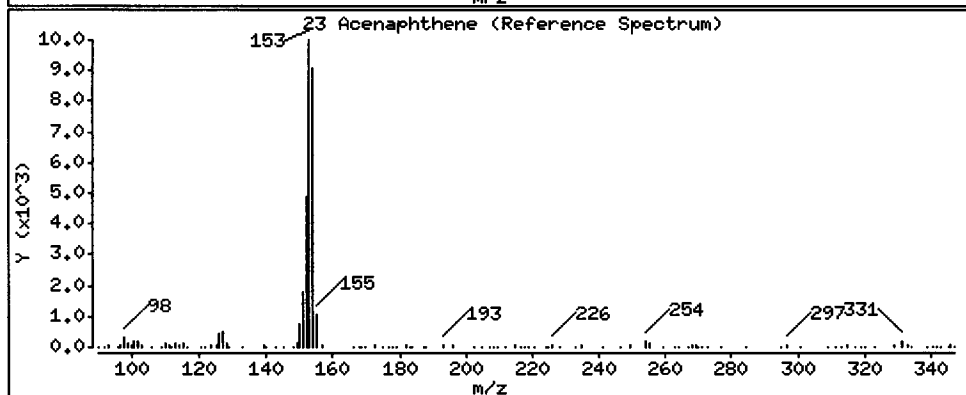
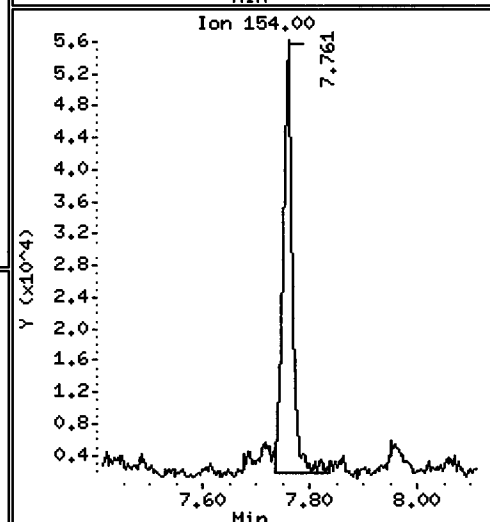
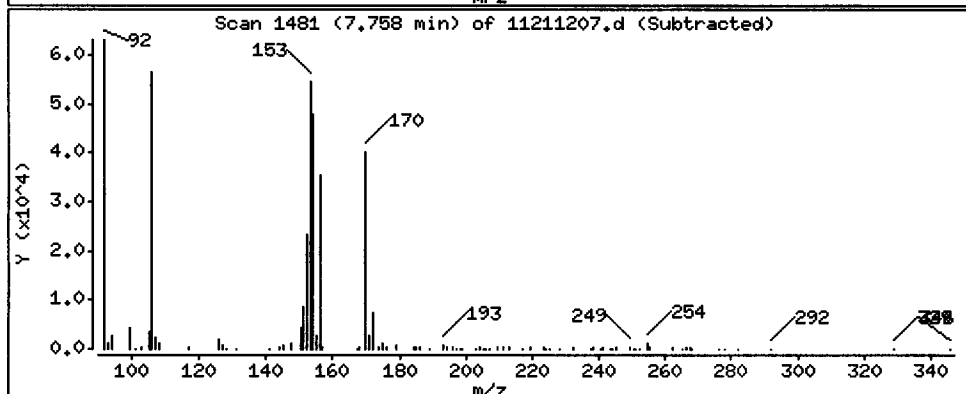
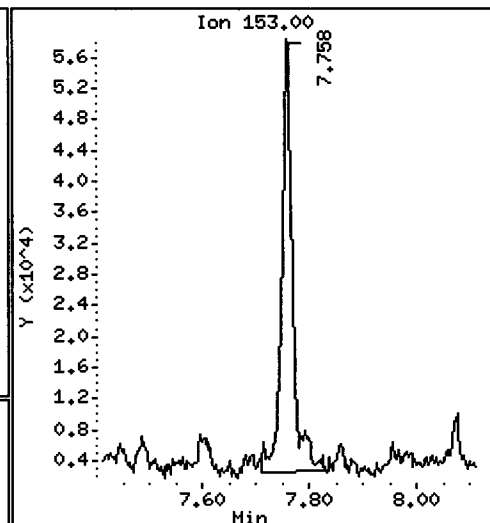
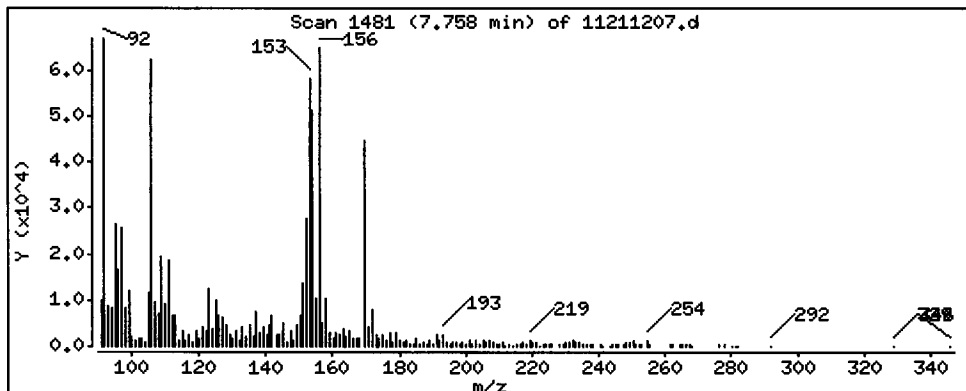
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

23 Acenaphthene

Concentration: 17.42 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

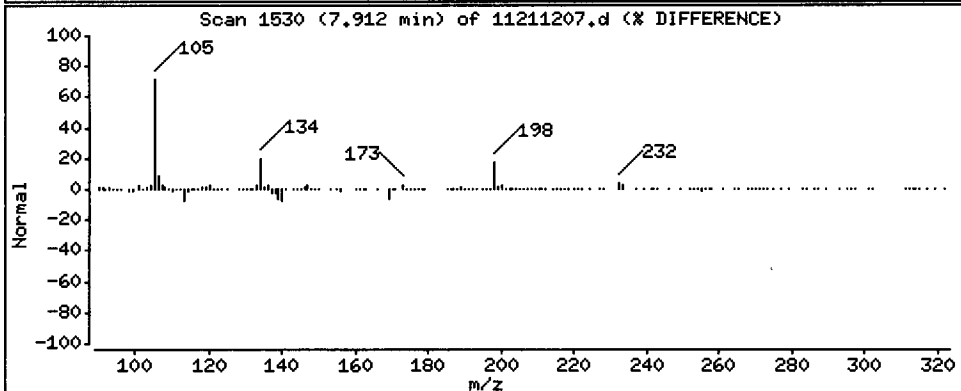
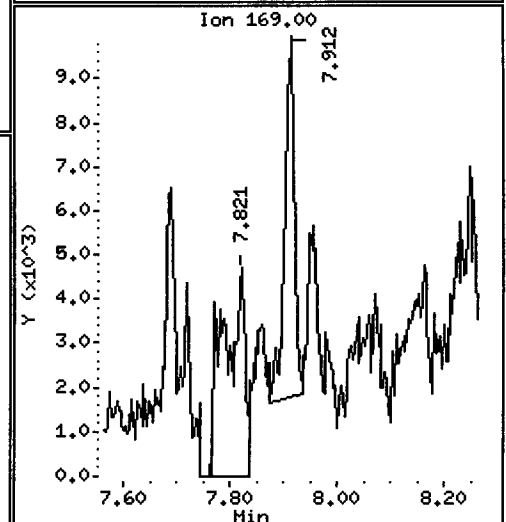
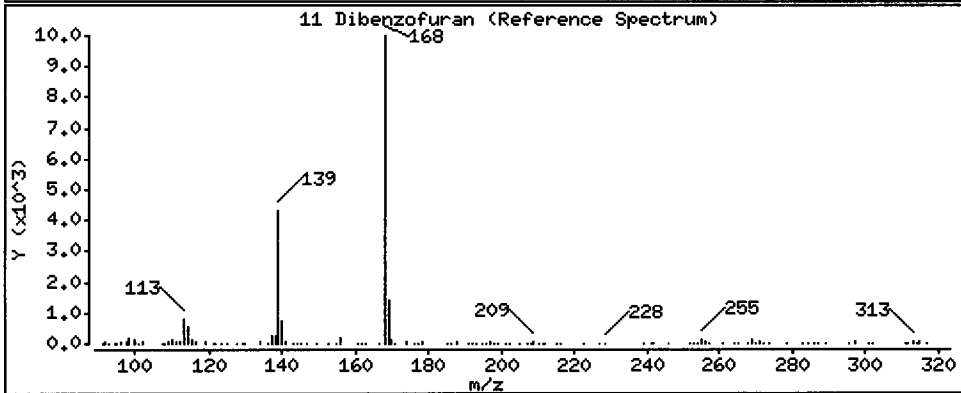
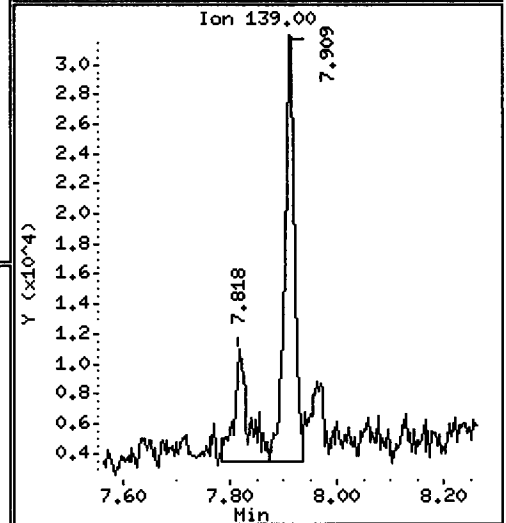
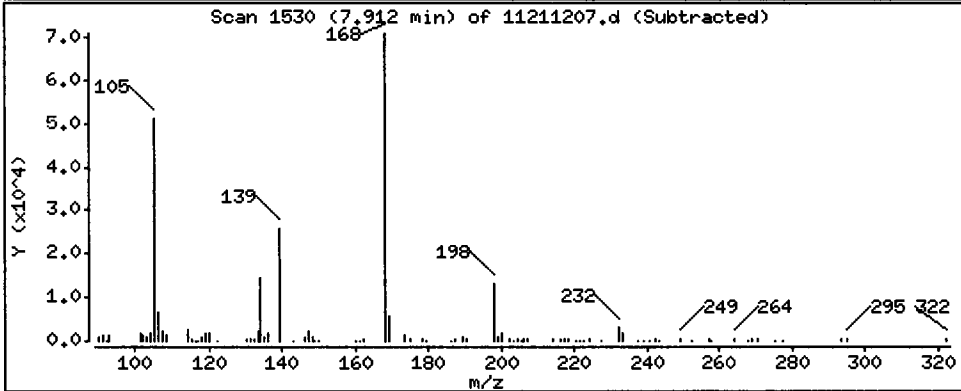
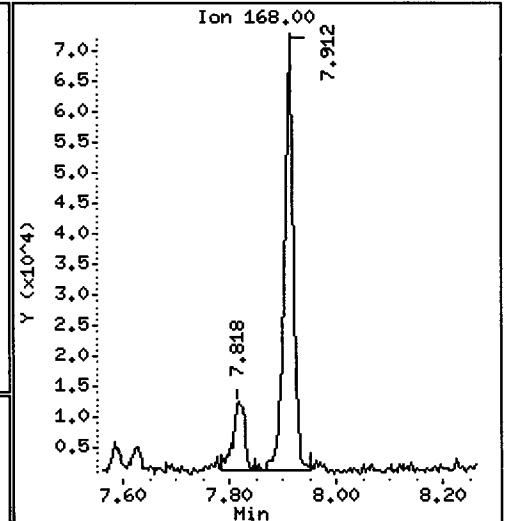
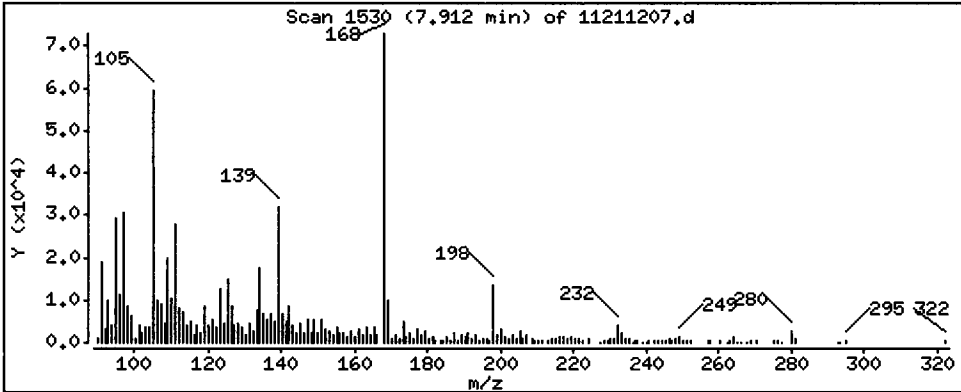
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Dibenzofuran

Concentration: 12.68 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

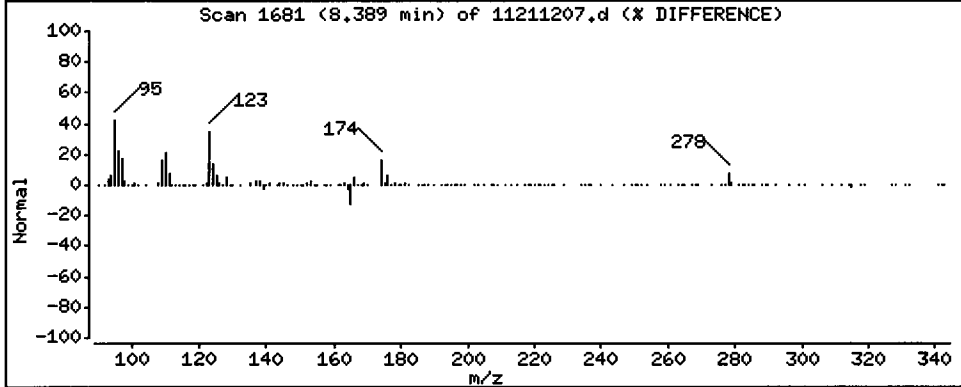
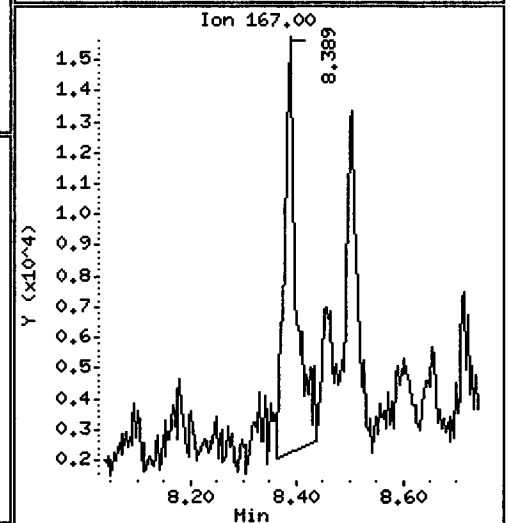
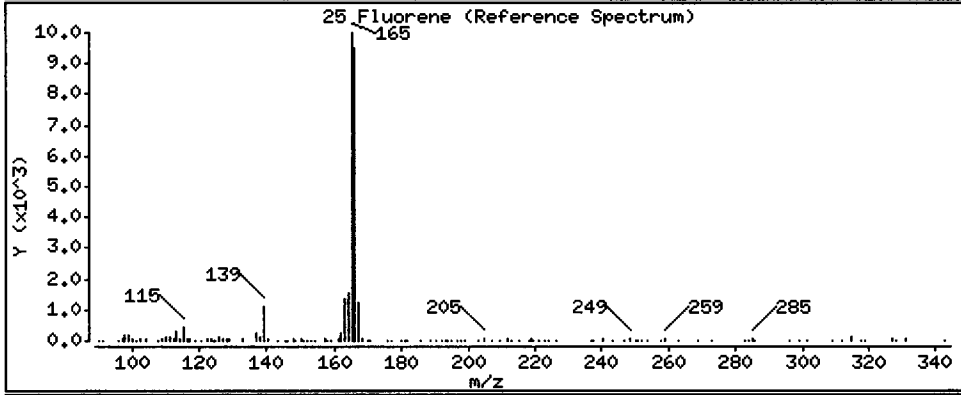
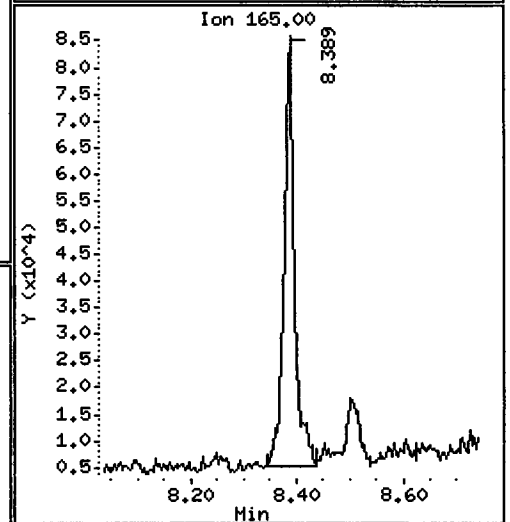
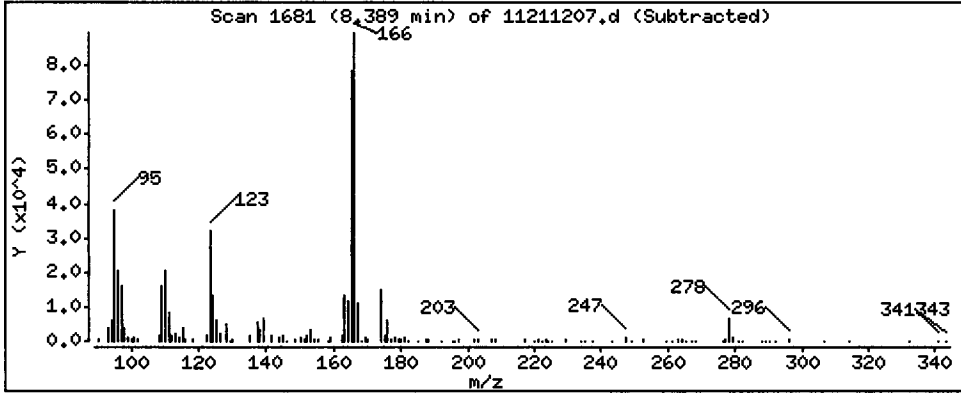
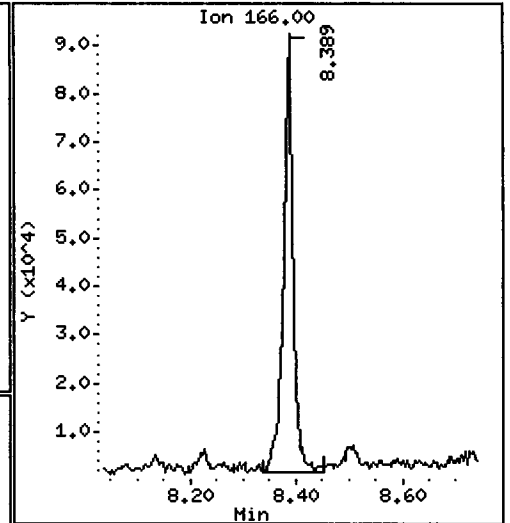
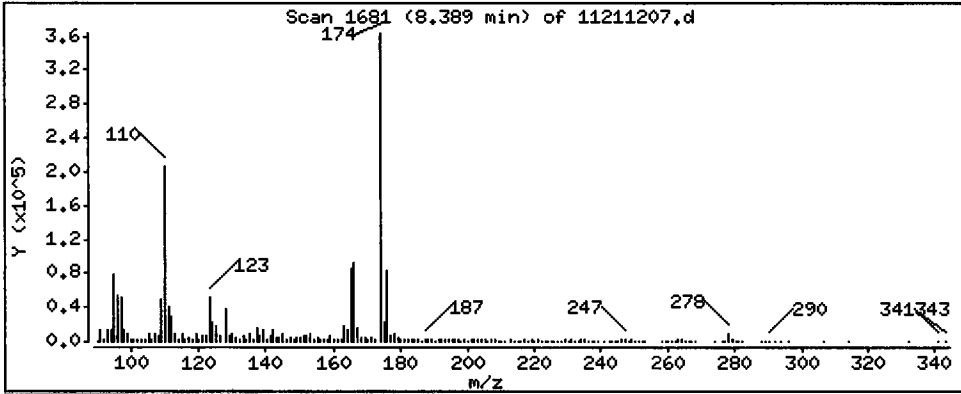
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

25 Fluorene

Concentration: 22.49 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

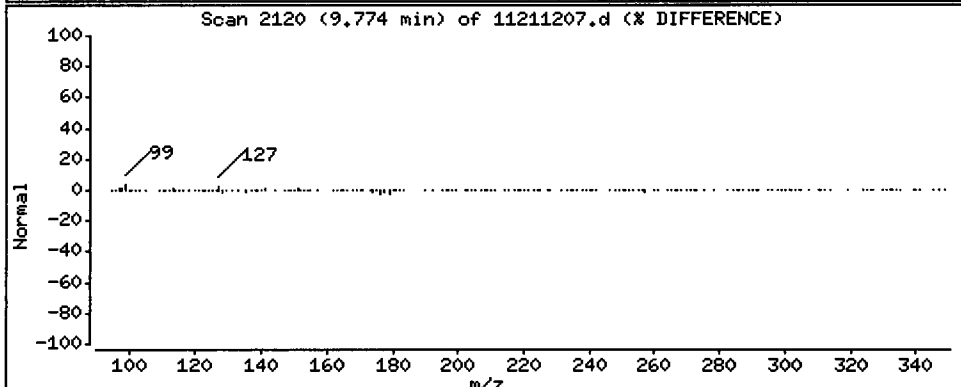
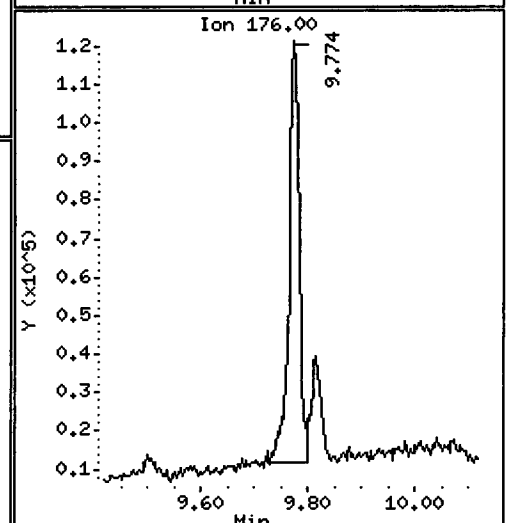
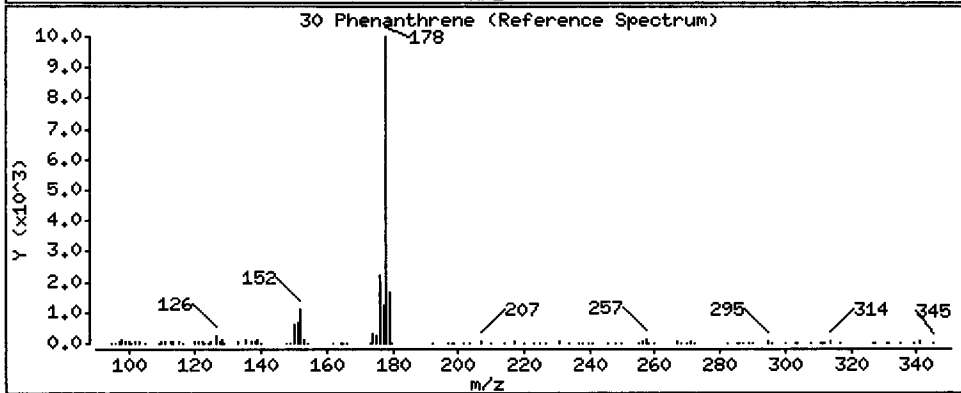
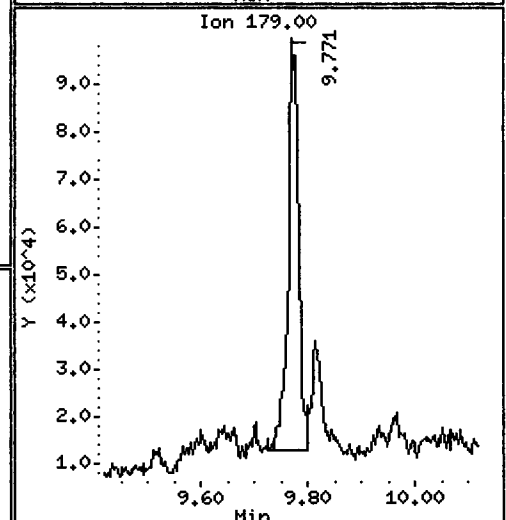
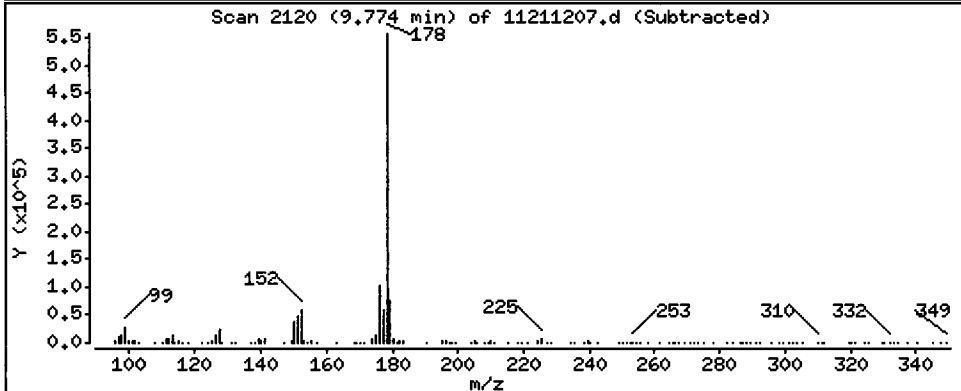
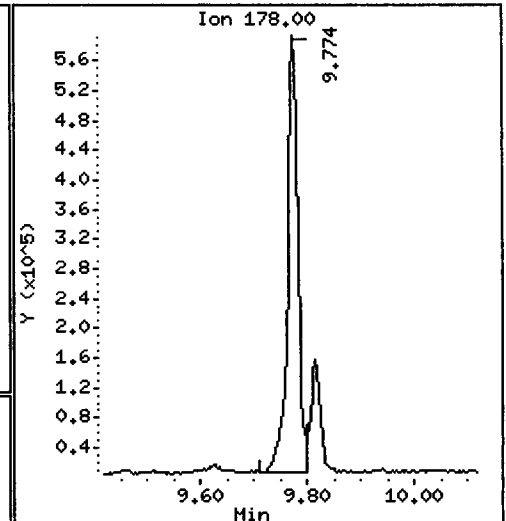
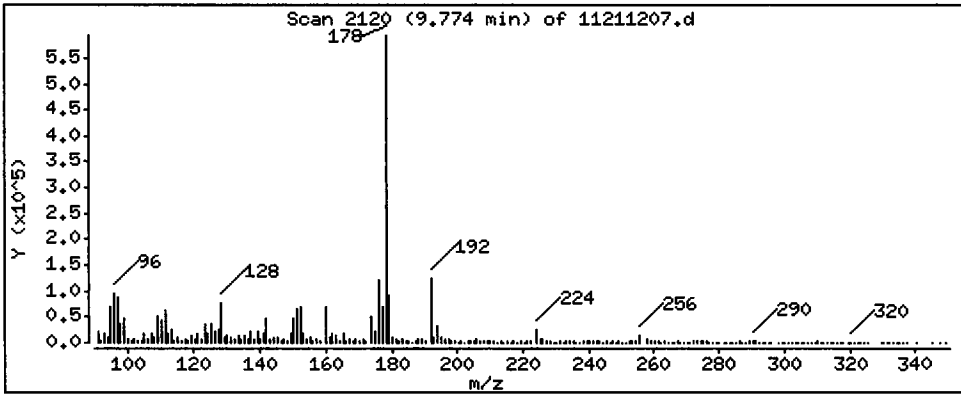
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

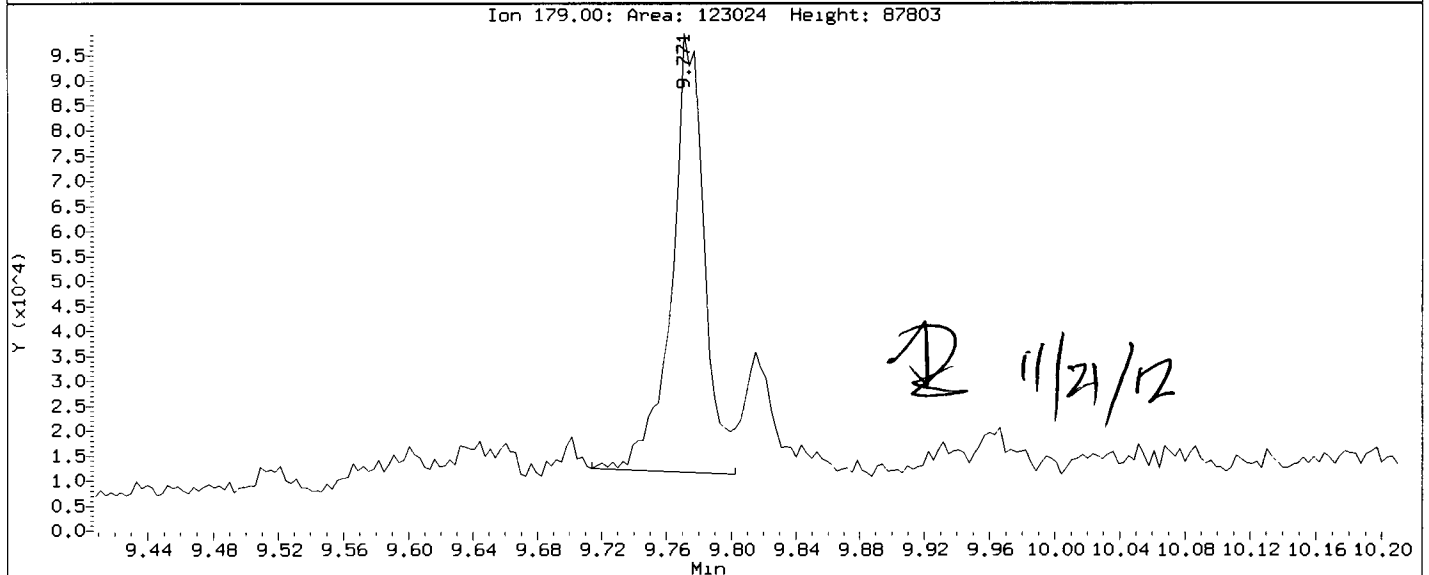
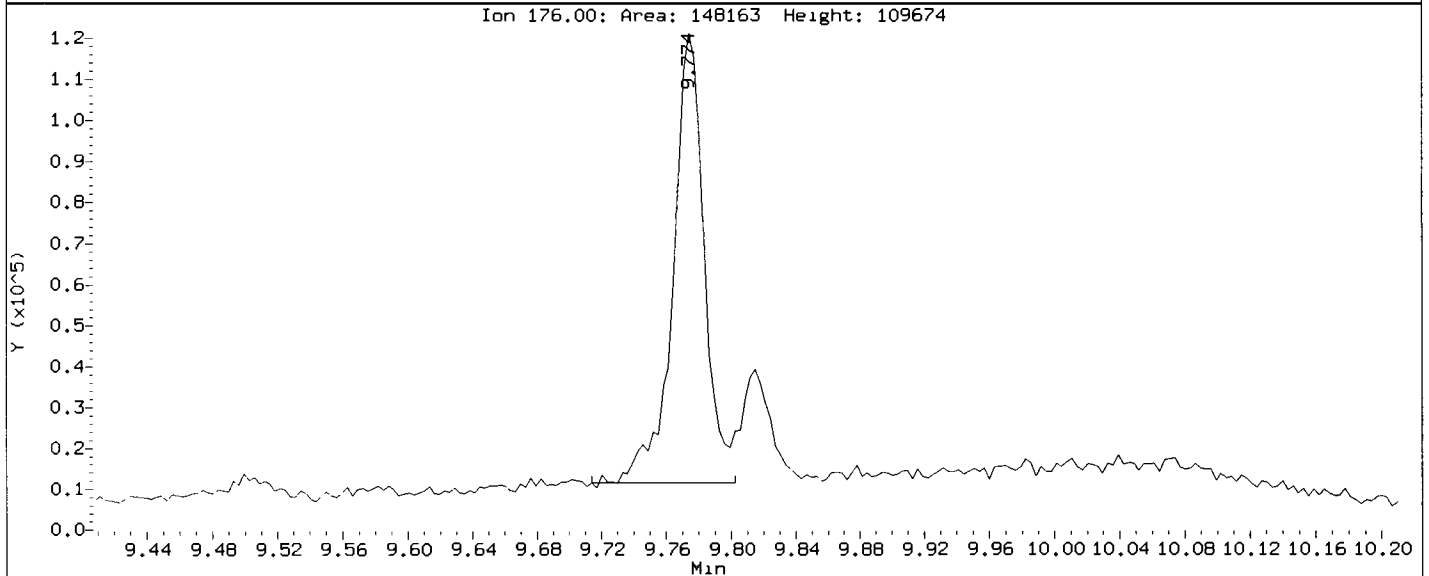
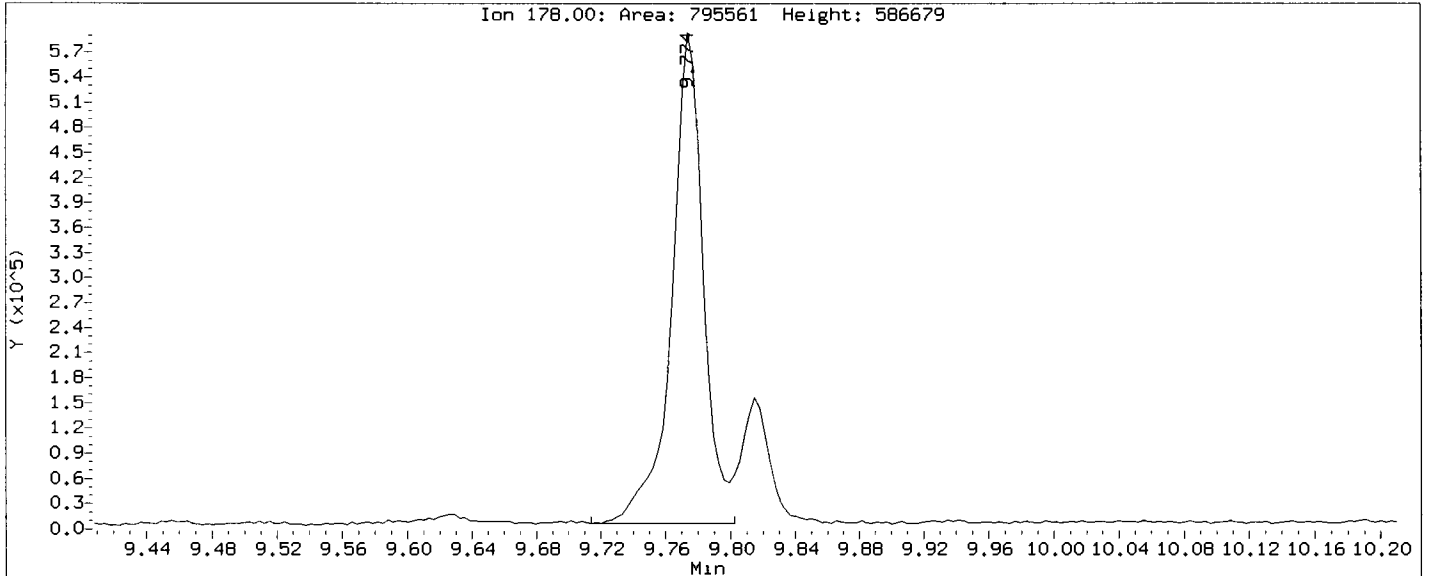
30 Phenanthrene

Concentration: 117.8 ug/kg



Data File: /chem3/nt11.1/20121121.b/11211207.d  
Injection Date: 21-NOV-2012 14:12  
Instrument: nt11.1  
Client Sample ID: SG-12-S-E-121107

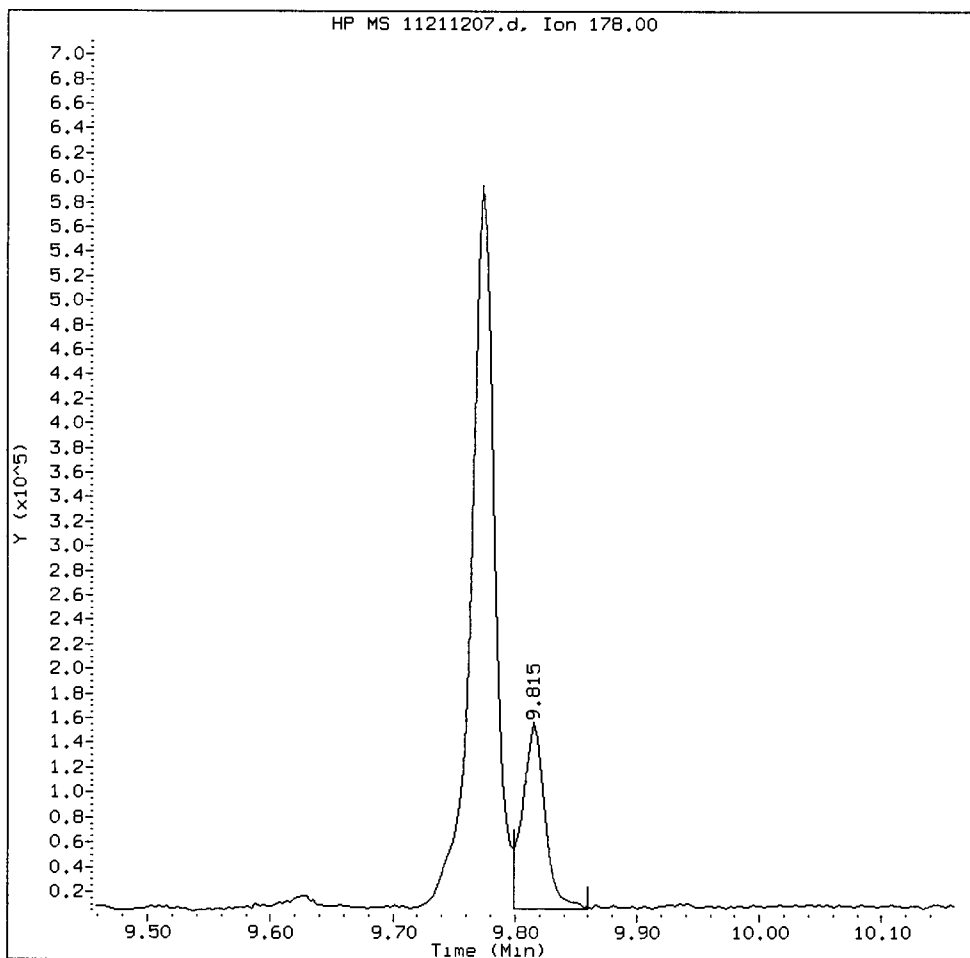
Compound: Anthracene  
CAS Number: 120-12-7





VR58C, /chem3/nt11.i/20121121.b/11211207.d

Anthracene Amount: 0.62 Area: 193277



MANUAL INTEGRATION for Anthracene

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

5. Other \_\_\_\_\_

Analyst: AB

Date: 11/21/12

Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

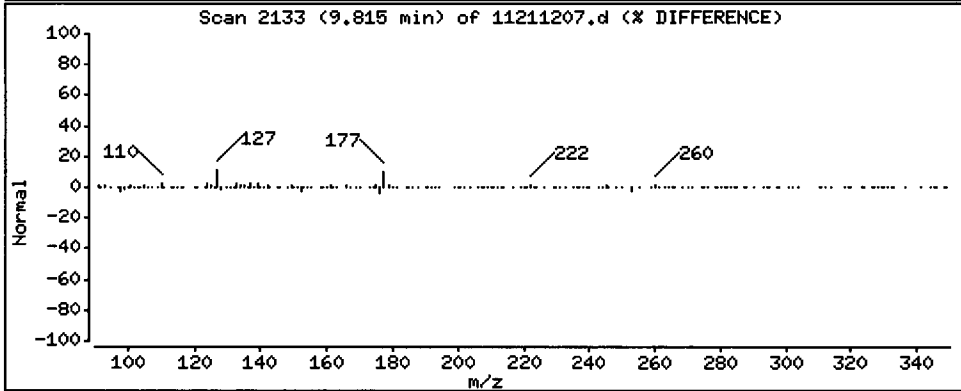
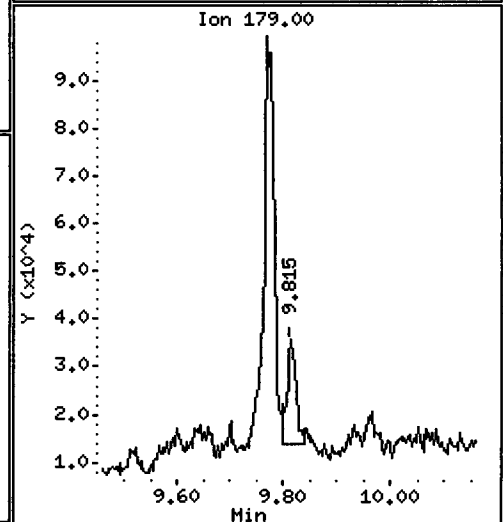
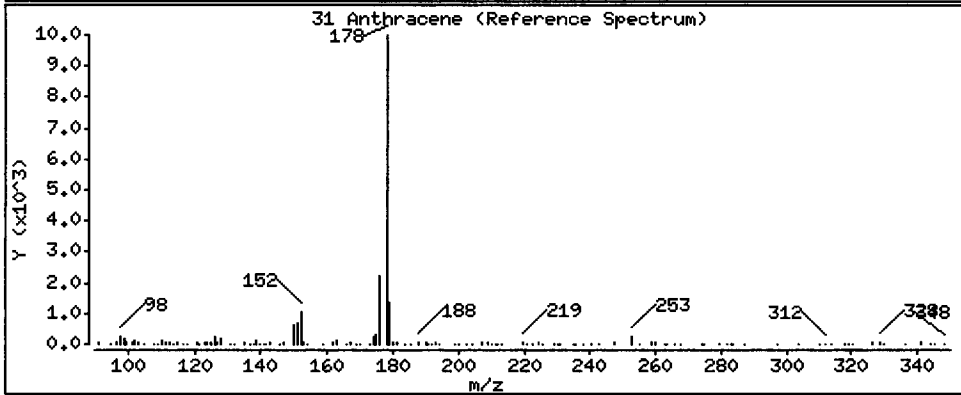
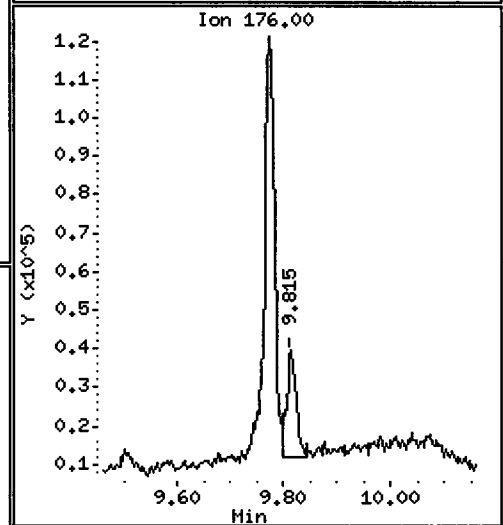
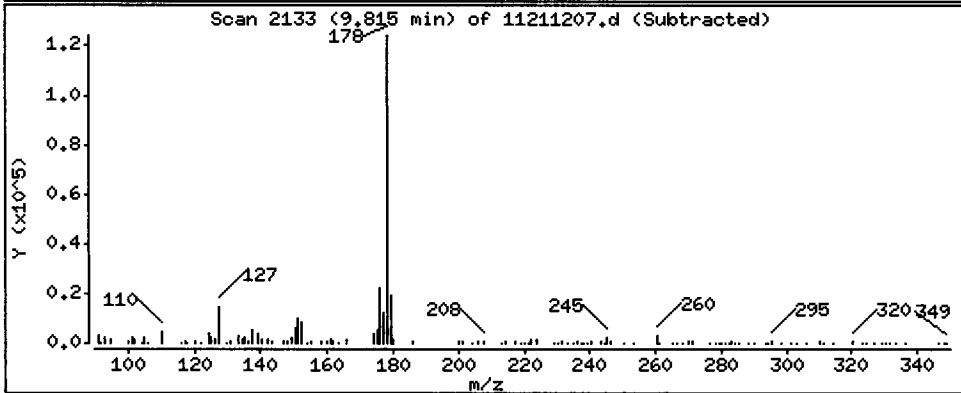
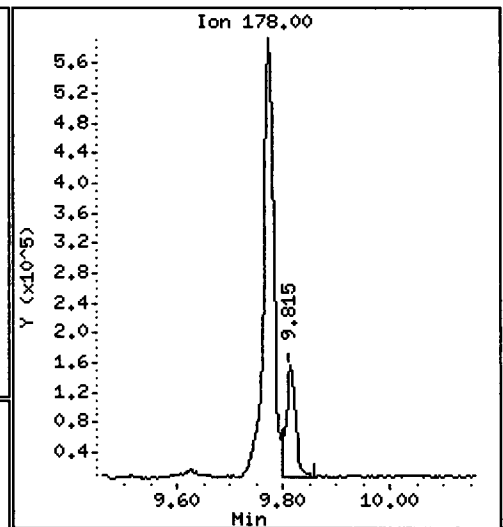
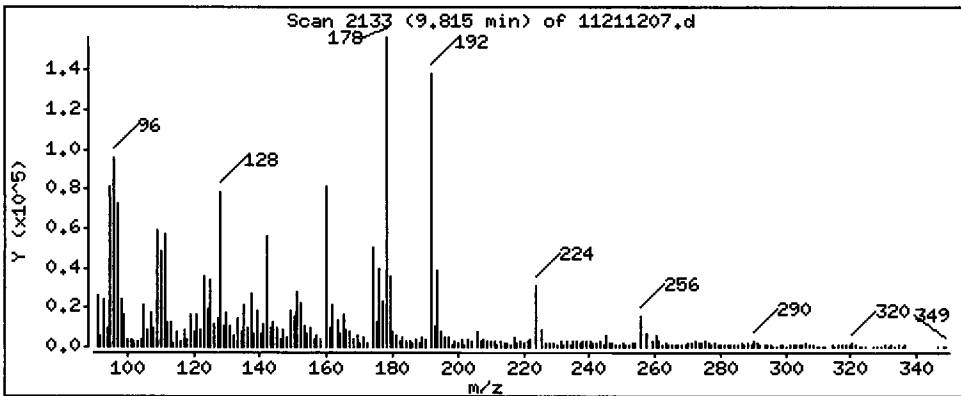
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

31 Anthracene

Concentration: 30,18 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

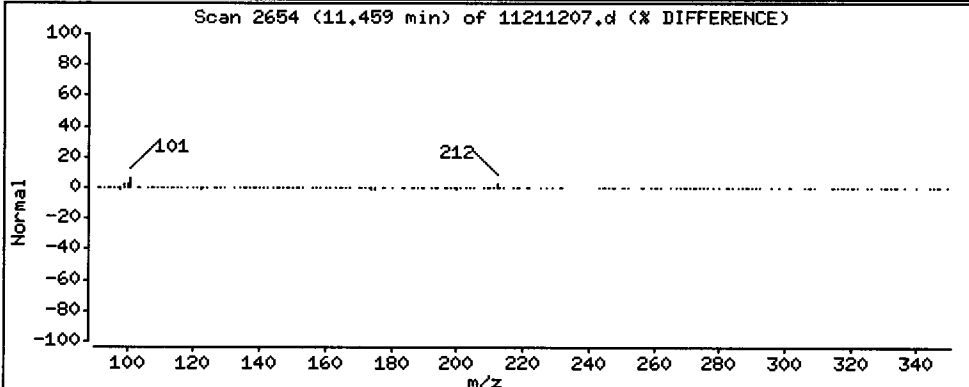
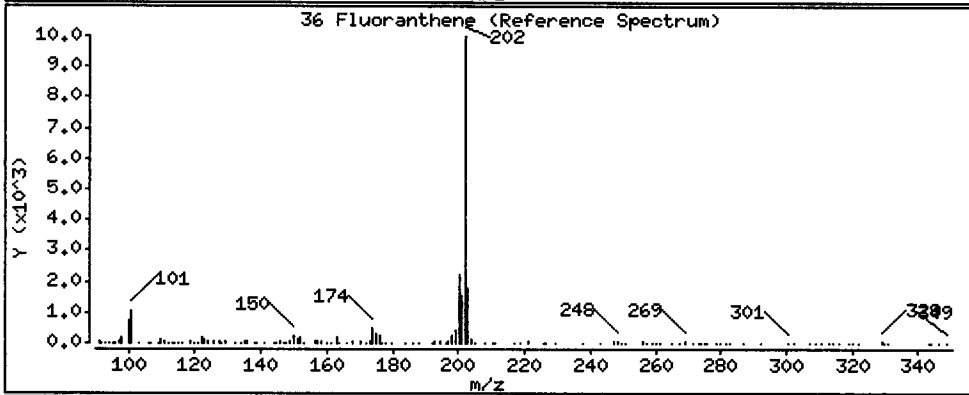
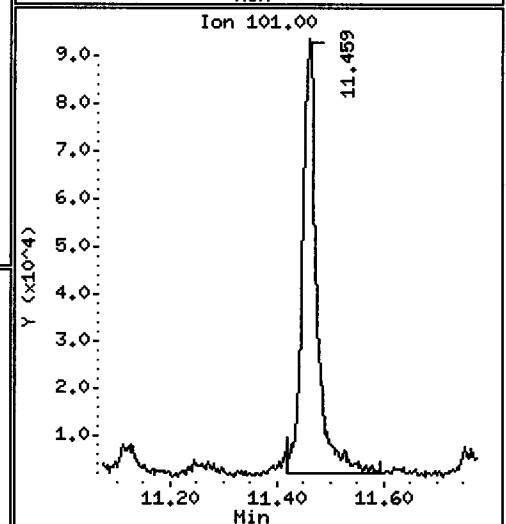
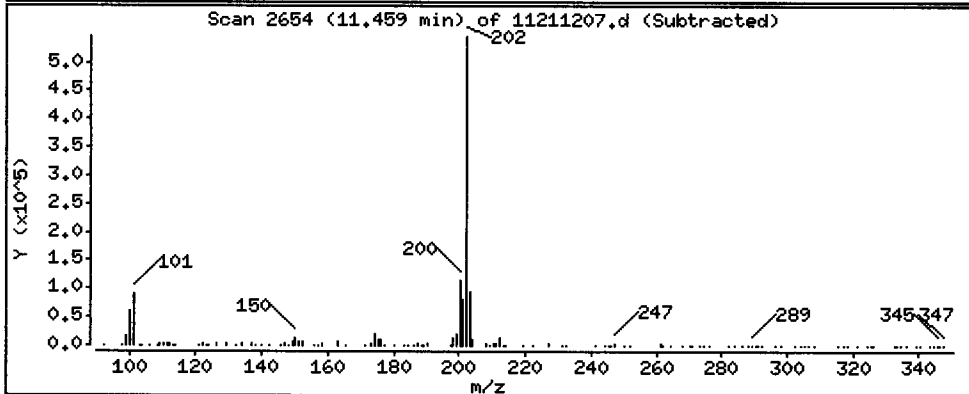
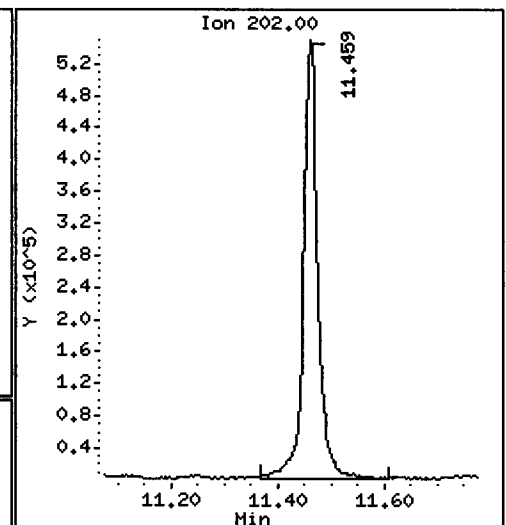
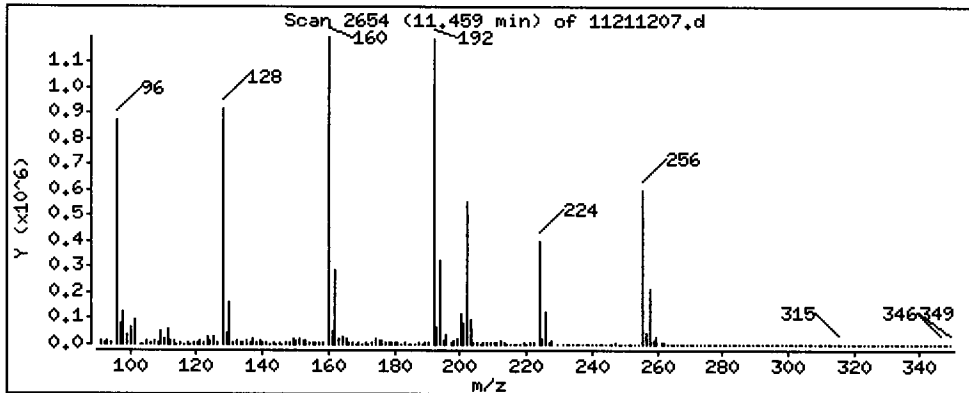
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

36 Fluoranthene

Concentration: 154.0 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

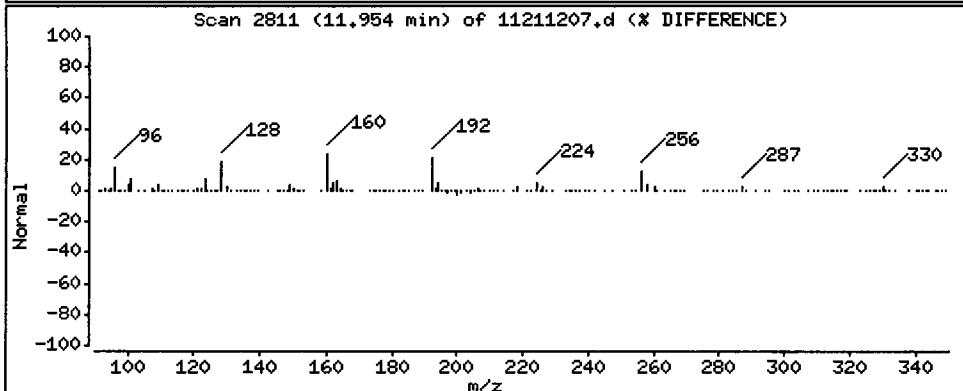
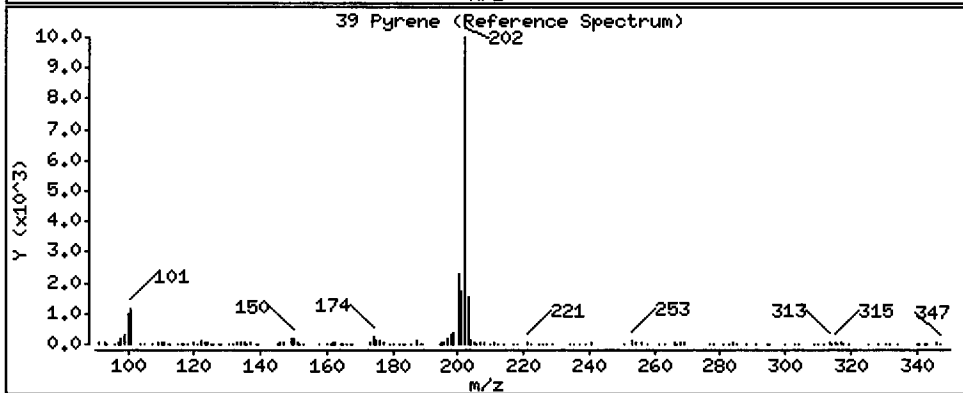
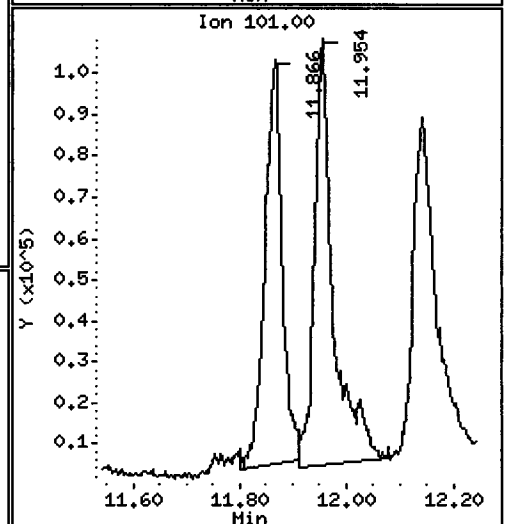
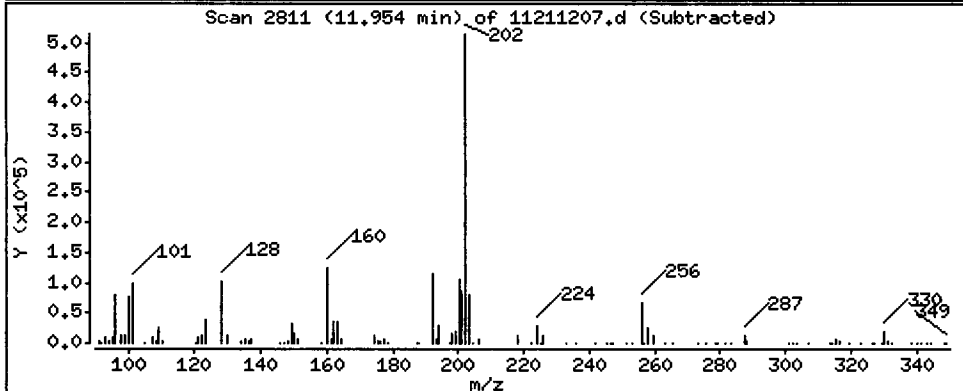
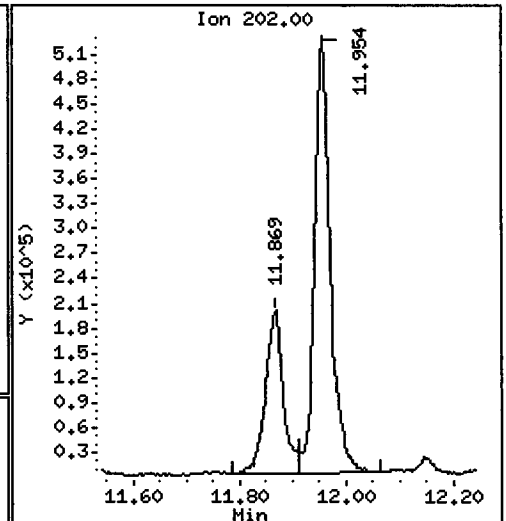
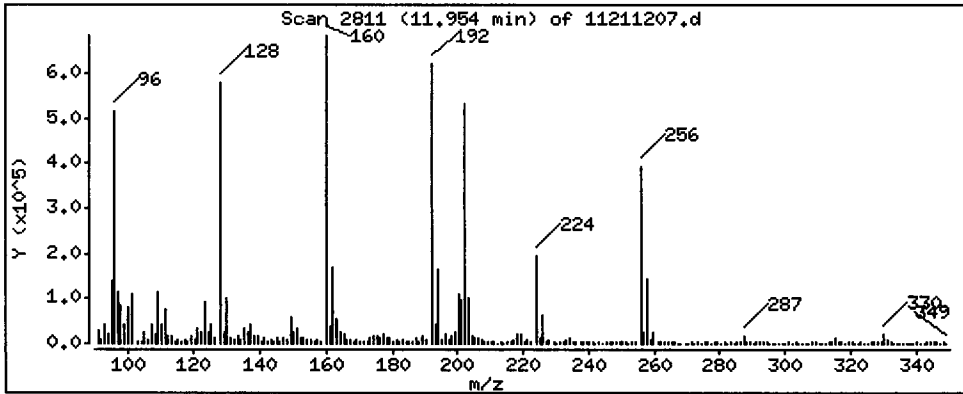
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

39 Pyrene

Concentration: 185.3 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

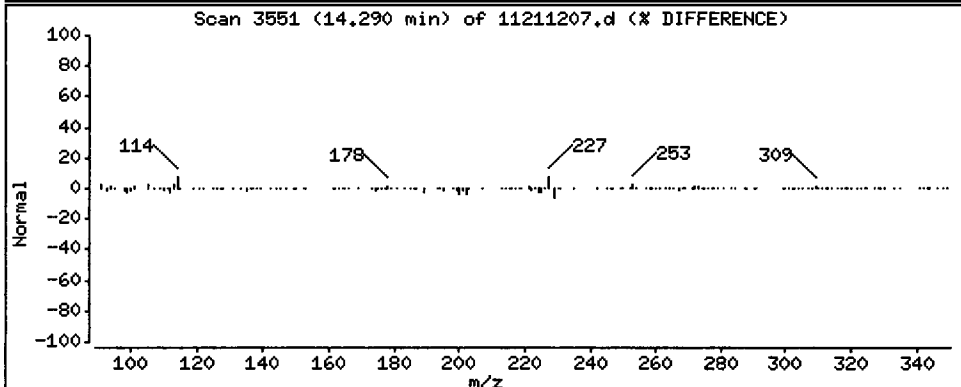
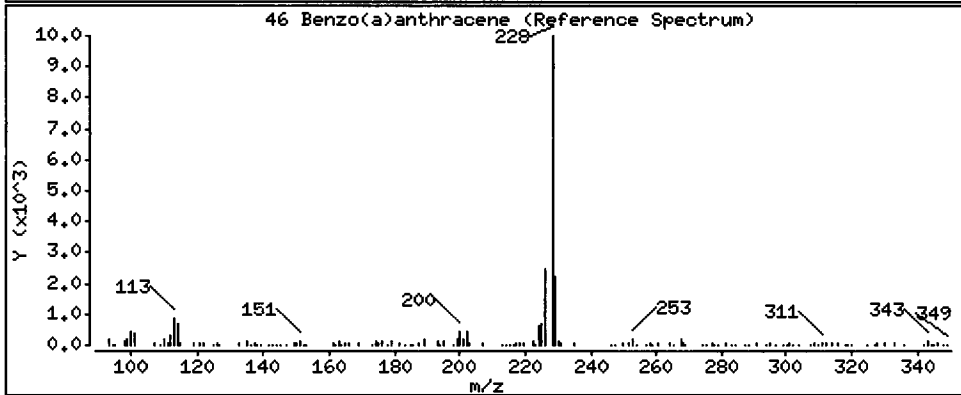
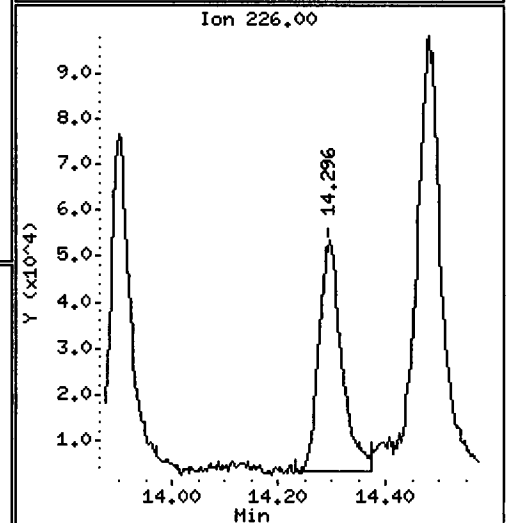
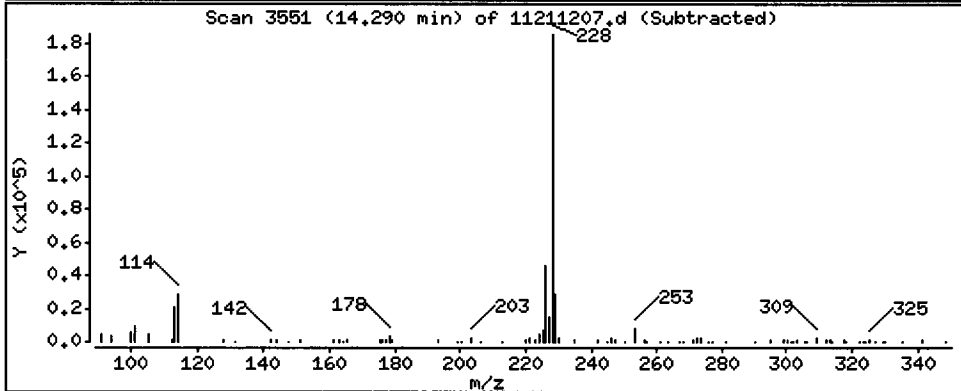
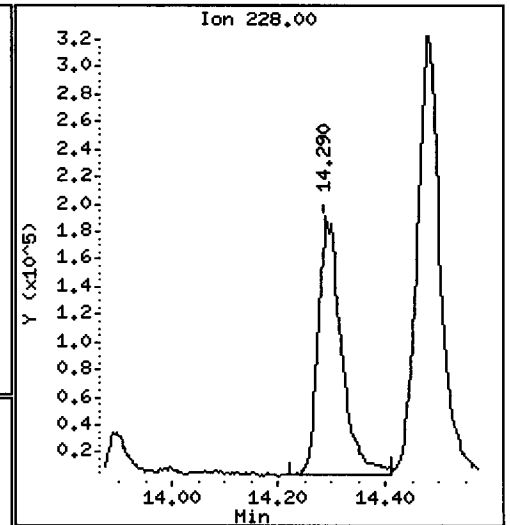
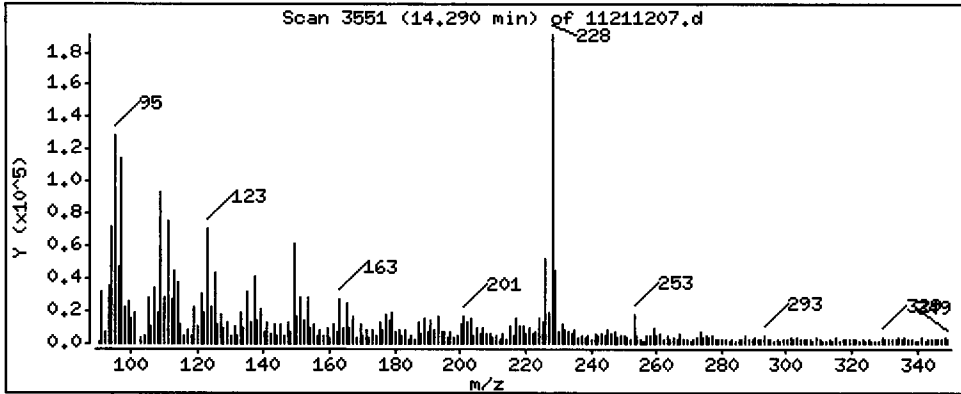
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Benzo(a)anthracene

Concentration: 107.5 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

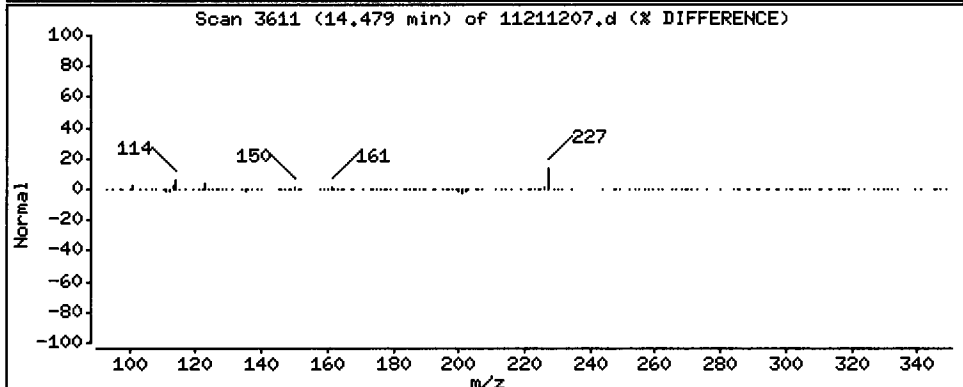
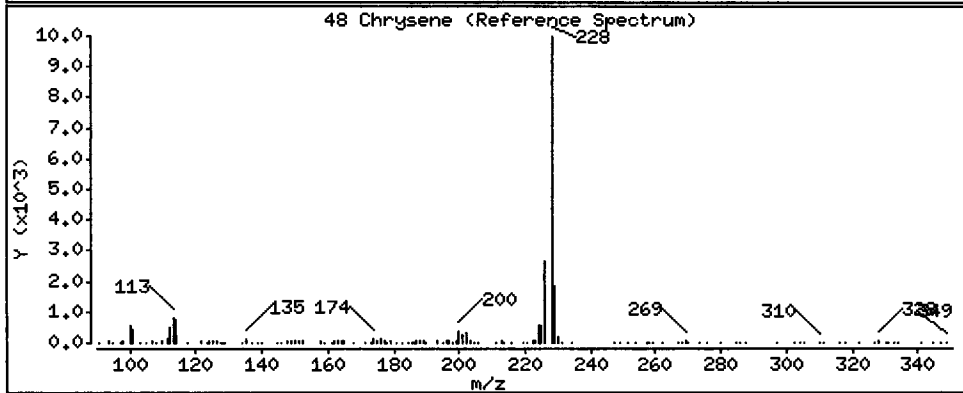
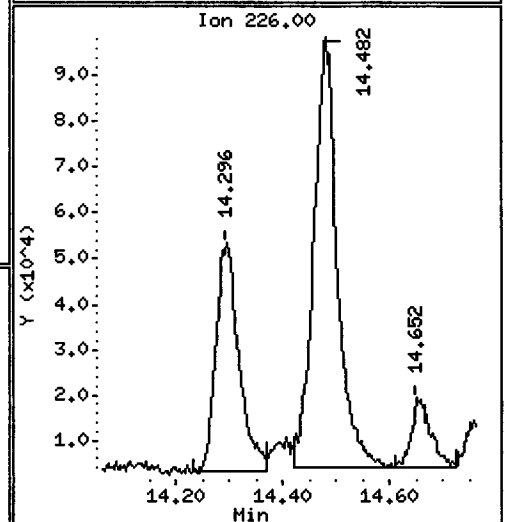
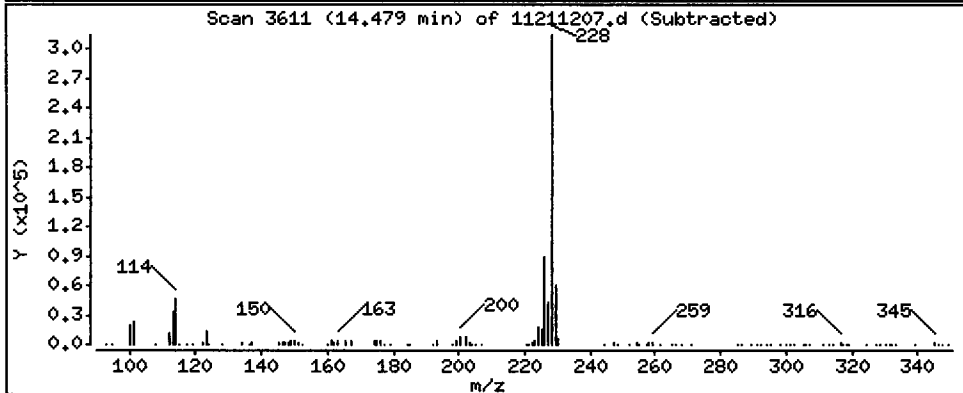
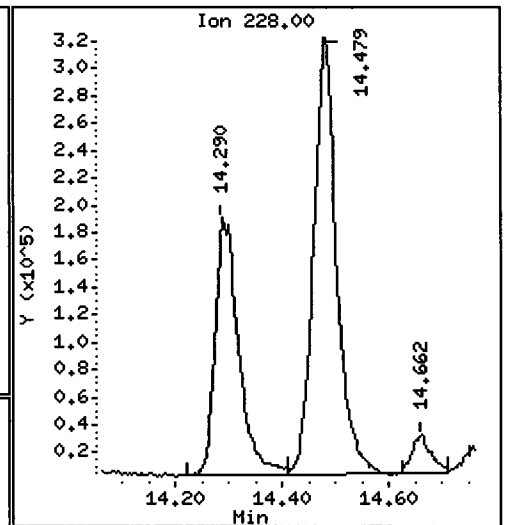
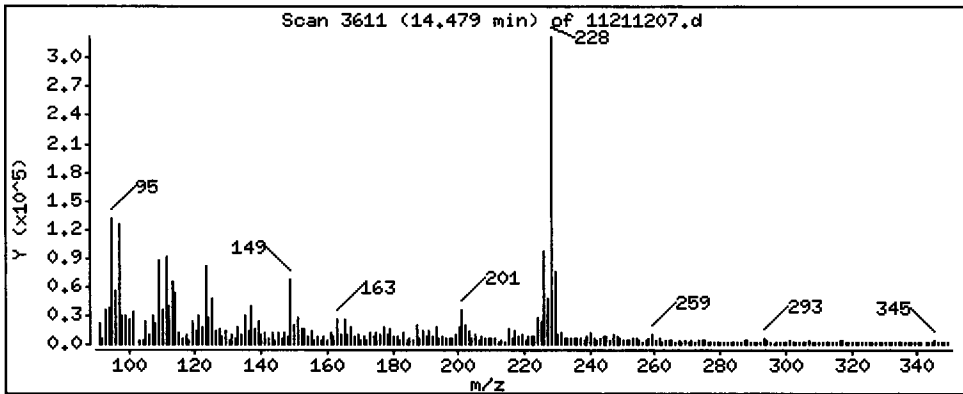
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

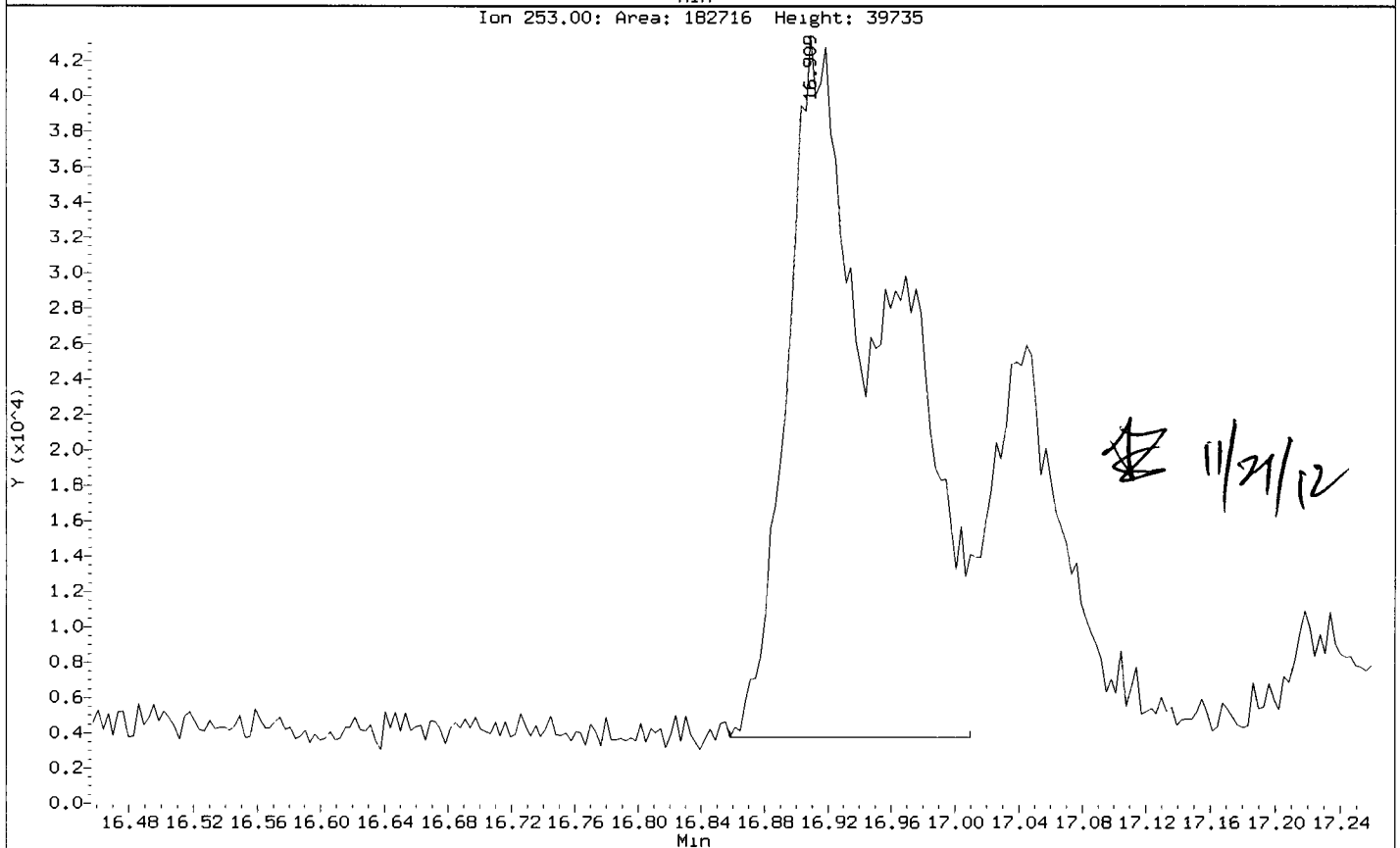
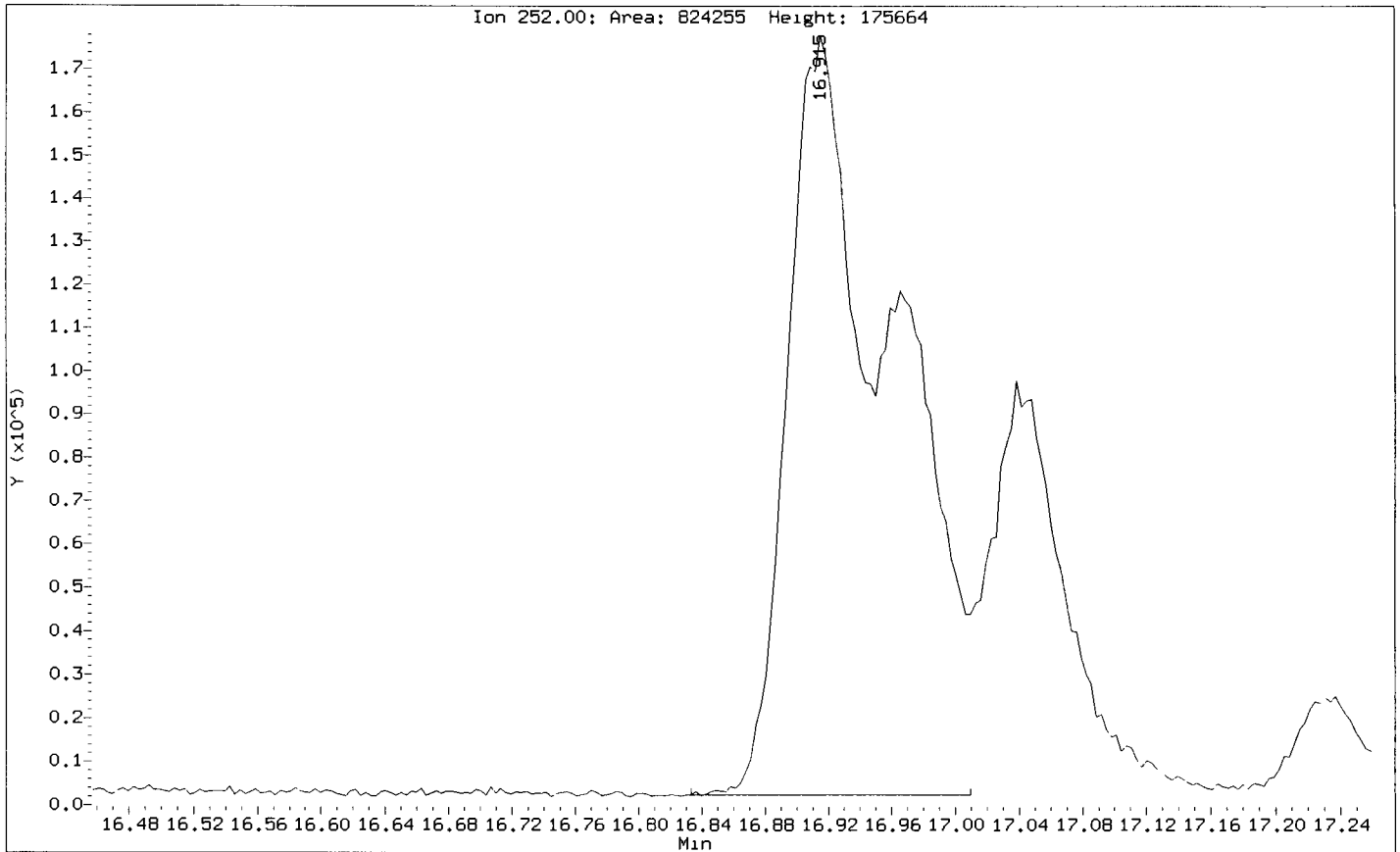
48 Chrysene

Concentration: 186.2 ug/kg



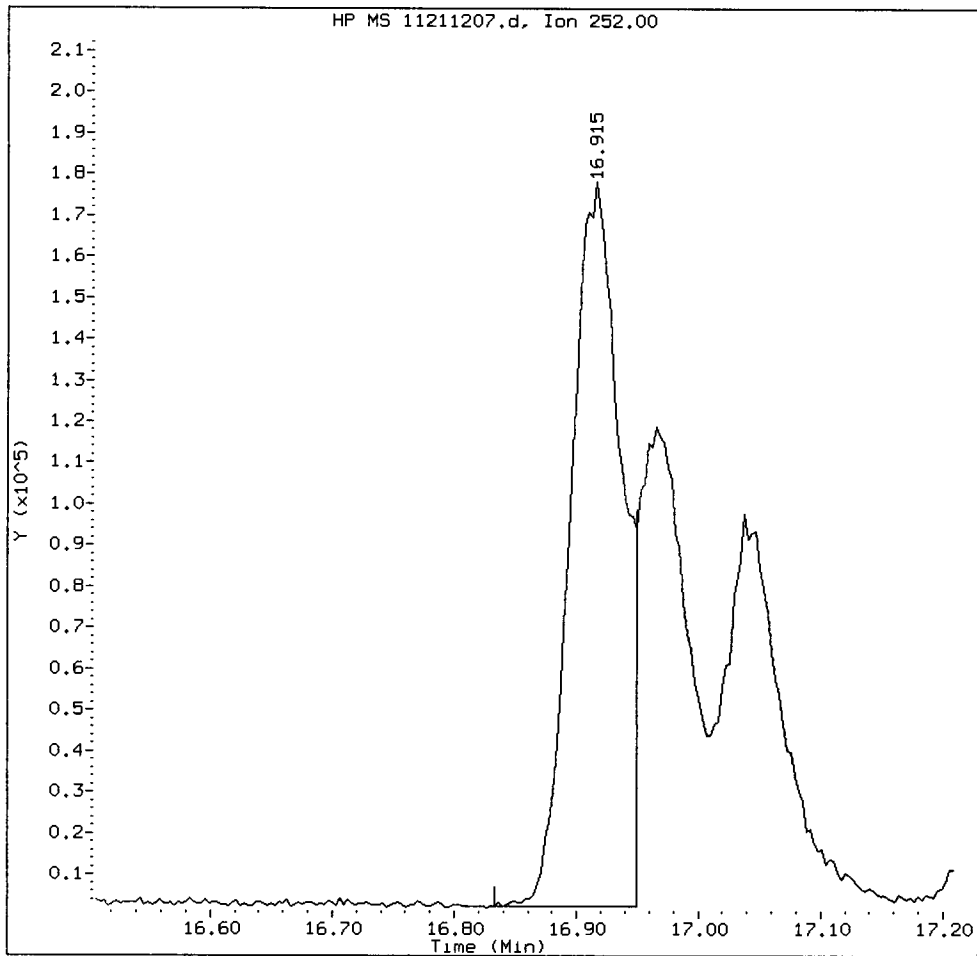
Data File: /chem3/nt11.1/20121121.b/11211207.d  
Injection Date: 21-NOV-2012 14:12  
Instrument: nt11.1  
Client Sample ID: SG-12-S-E-121107

Compound: Benzo(b)fluoranthene  
CAS Number: 205-99-2



VR58C, /chem3/nt11.i/20121121.b/11211207.d

Benzo(b)fluoranthene Amount: 2.97 Area: 522560



MANUAL INTEGRATION for Benzo(b)fluoranthene

- 1. Baseline correction
- 2. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst:                         Date: 11/21/12



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

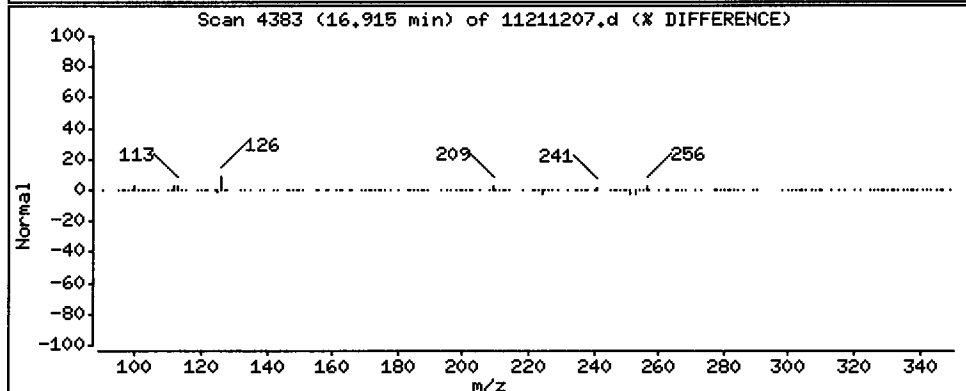
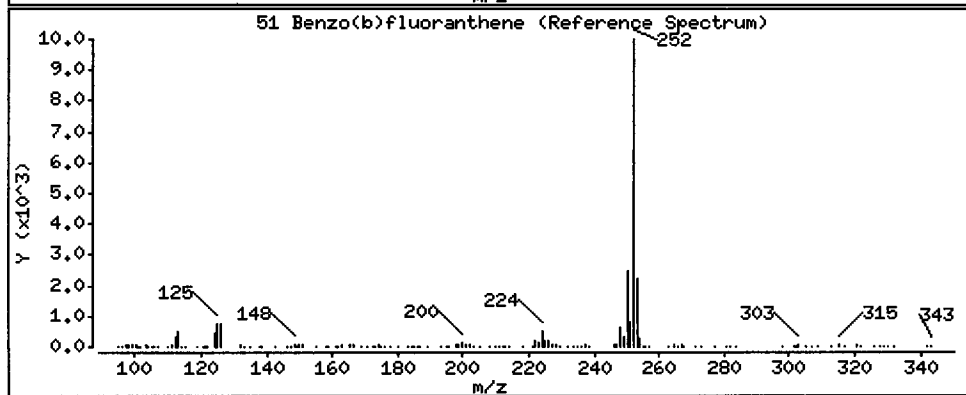
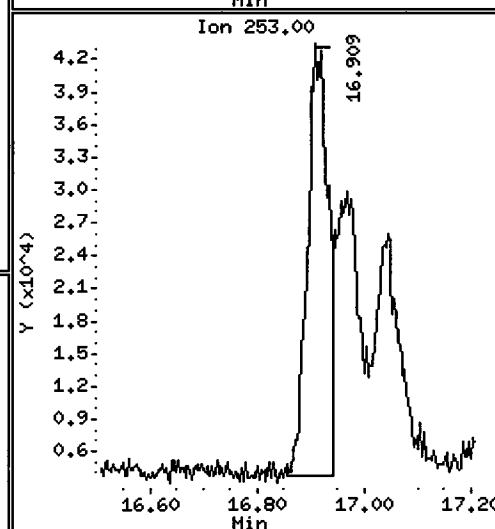
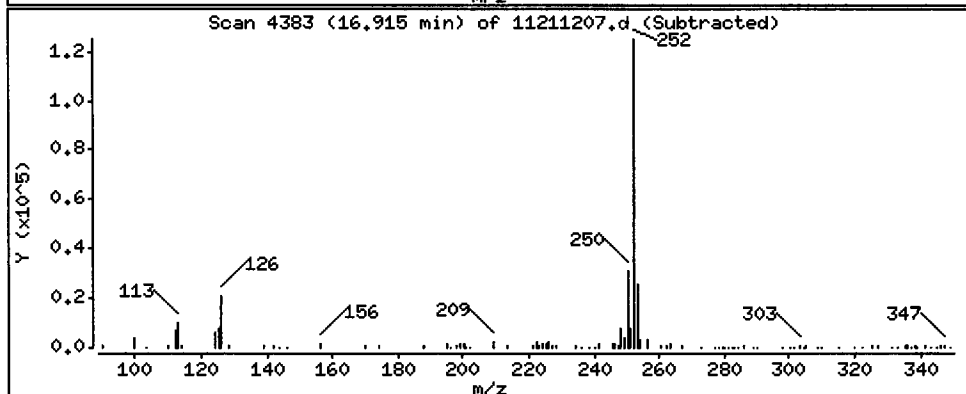
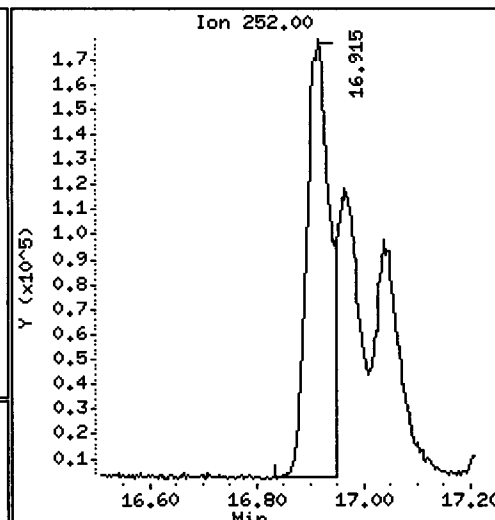
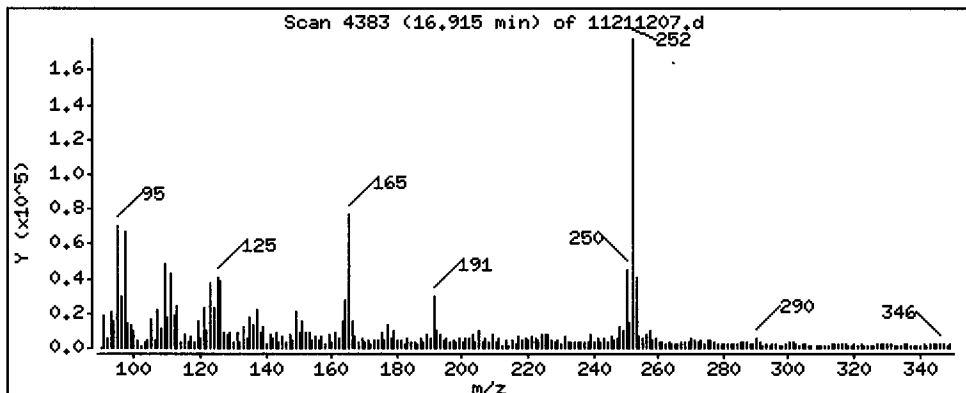
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

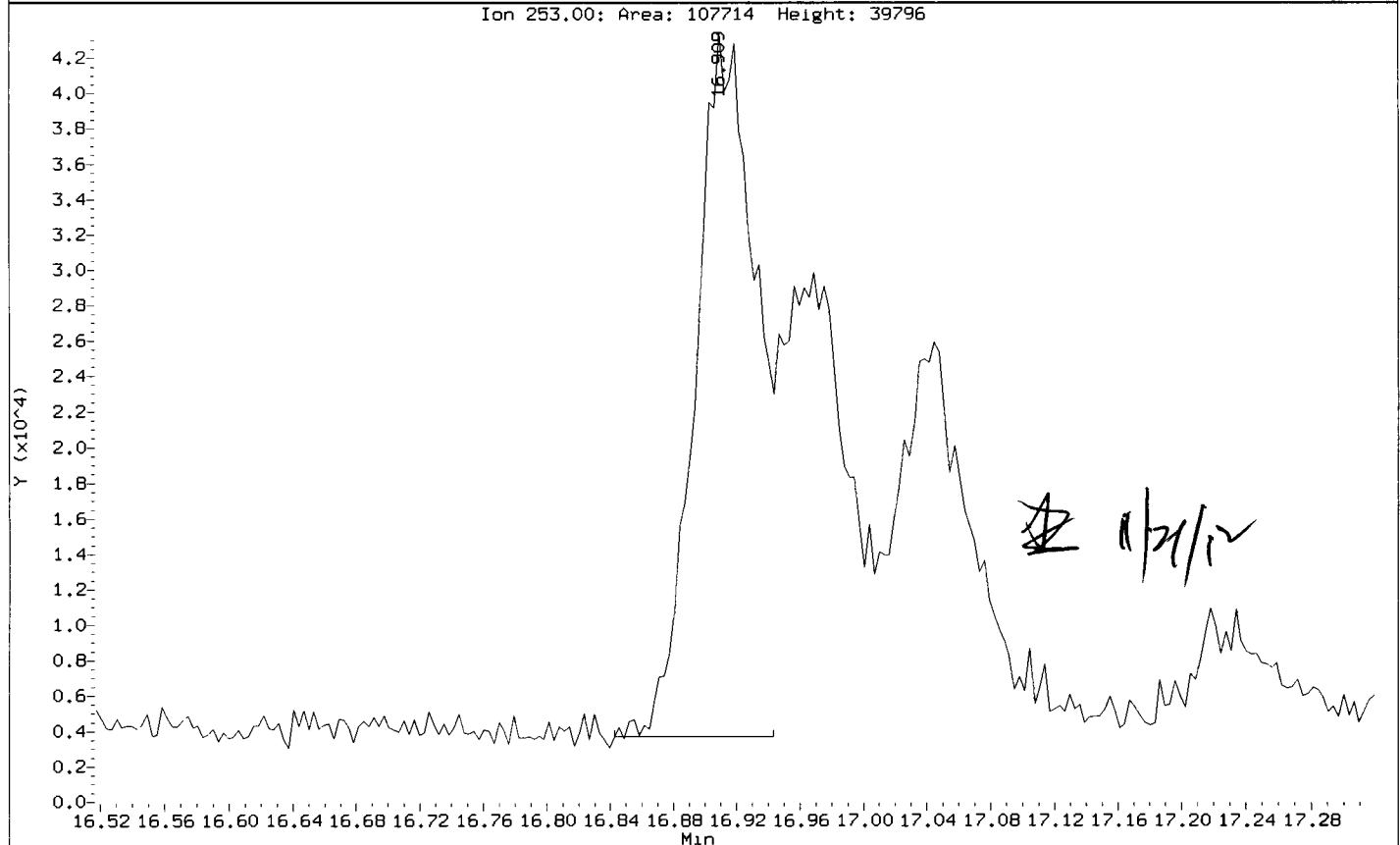
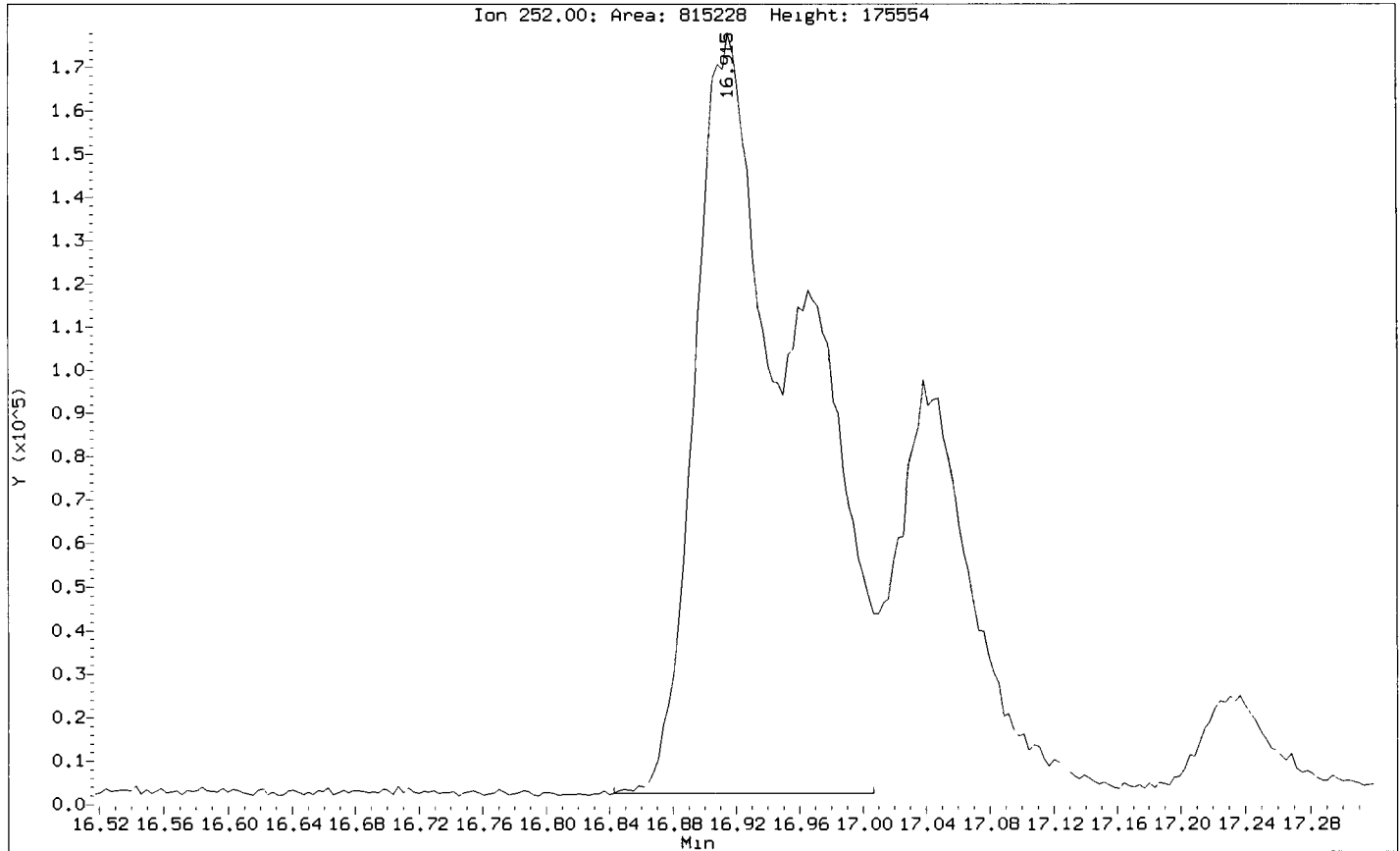
51 Benzo(b)fluoranthene

Concentration: 144.4 ug/kg



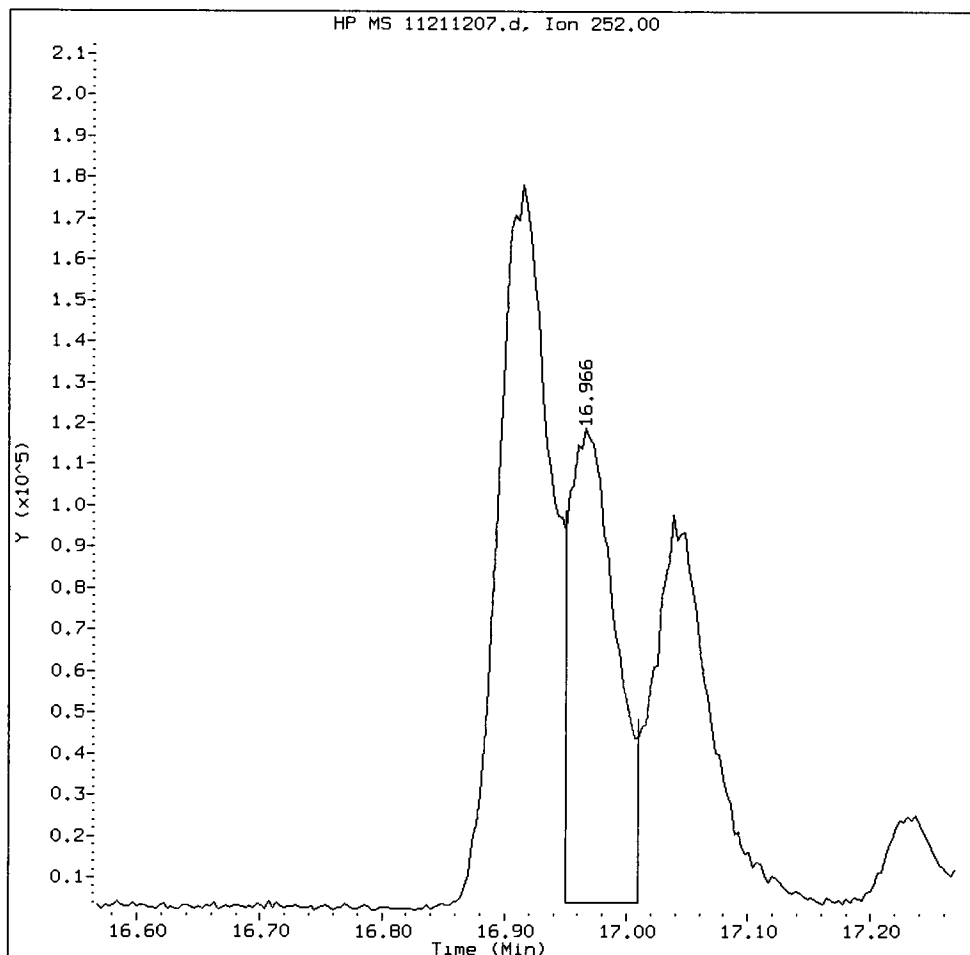
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Injection Date: 21-NOV-2012 14:12  
Instrument: nt11.1  
Client Sample ID: SG-12-S-E-121107

Compound: Benzo(k)fluoranthene  
CAS Number: 207-08-9



VR58C, /chem3/nt11.i/20121121.b/11211207.d

Benzo(k)fluoranthene Amount: 1.64 Area: 313952



MANUAL INTEGRATION for Benzo(k)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AB

Date: 11/21/12

Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11,i

Sample Info: VR58C

Volume Injected (uL): 1.0

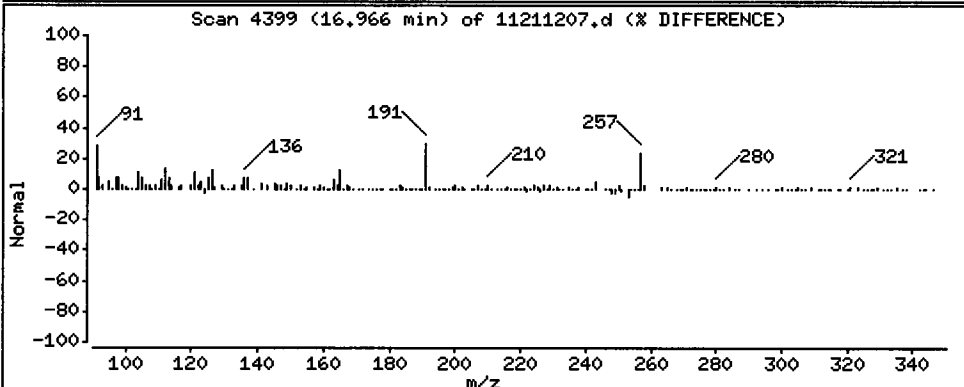
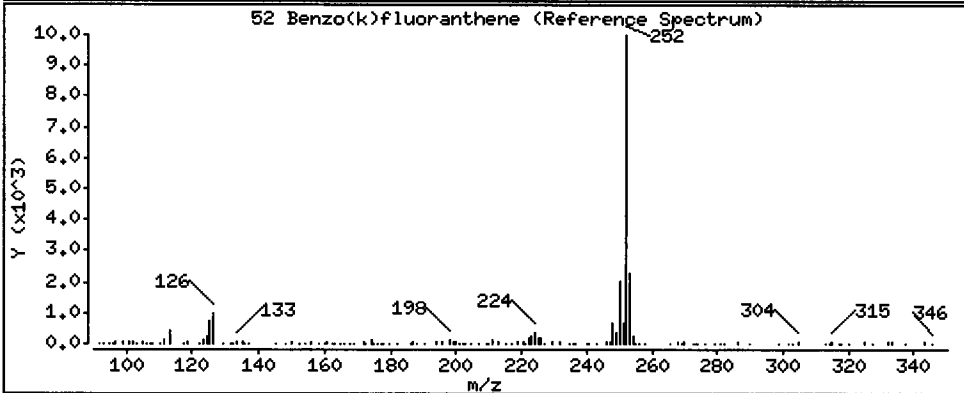
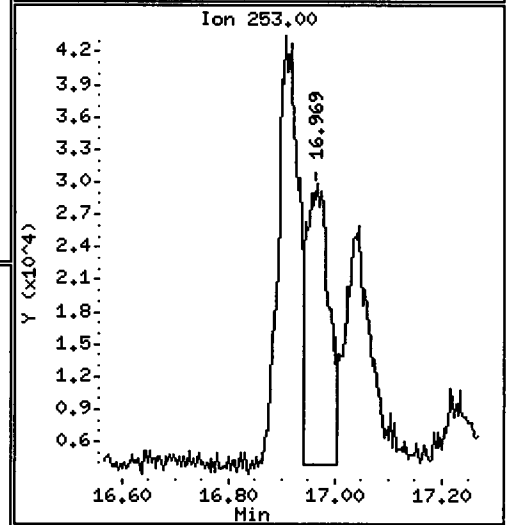
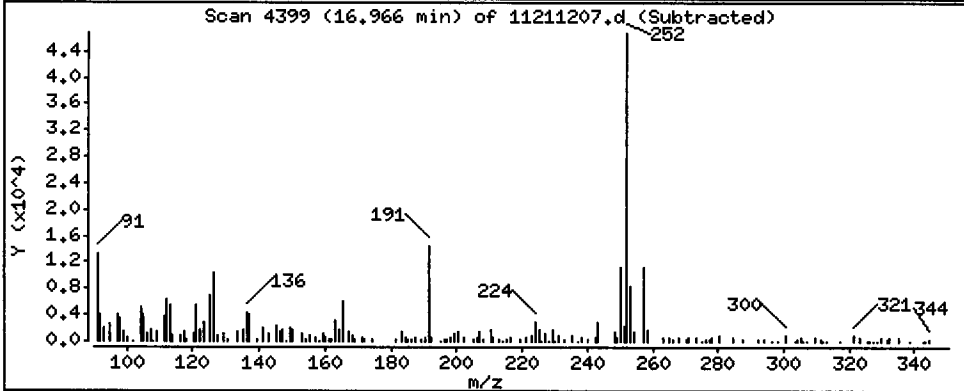
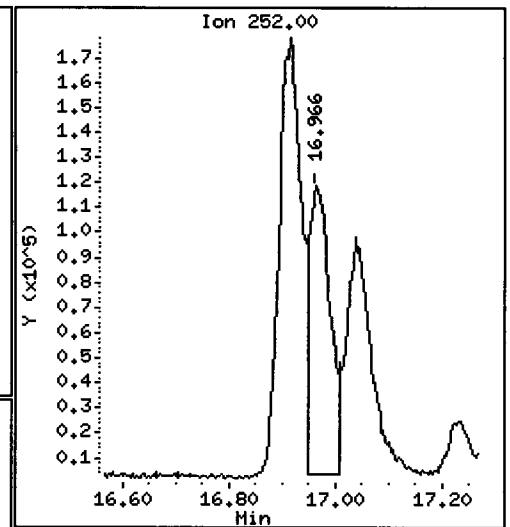
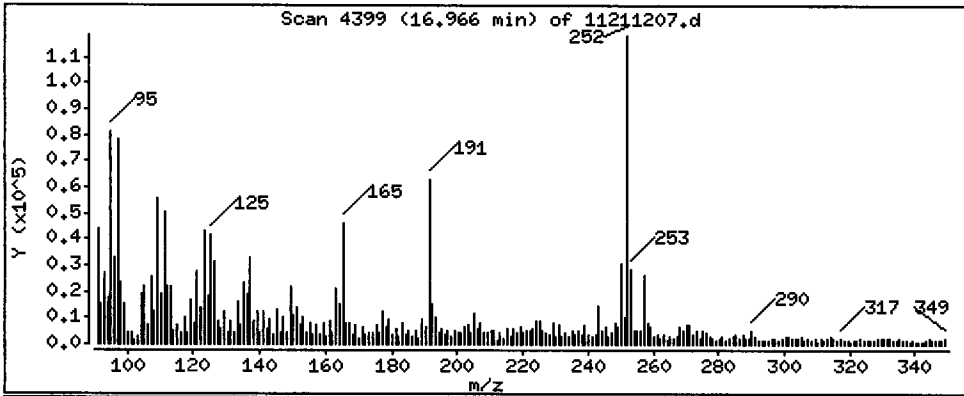
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

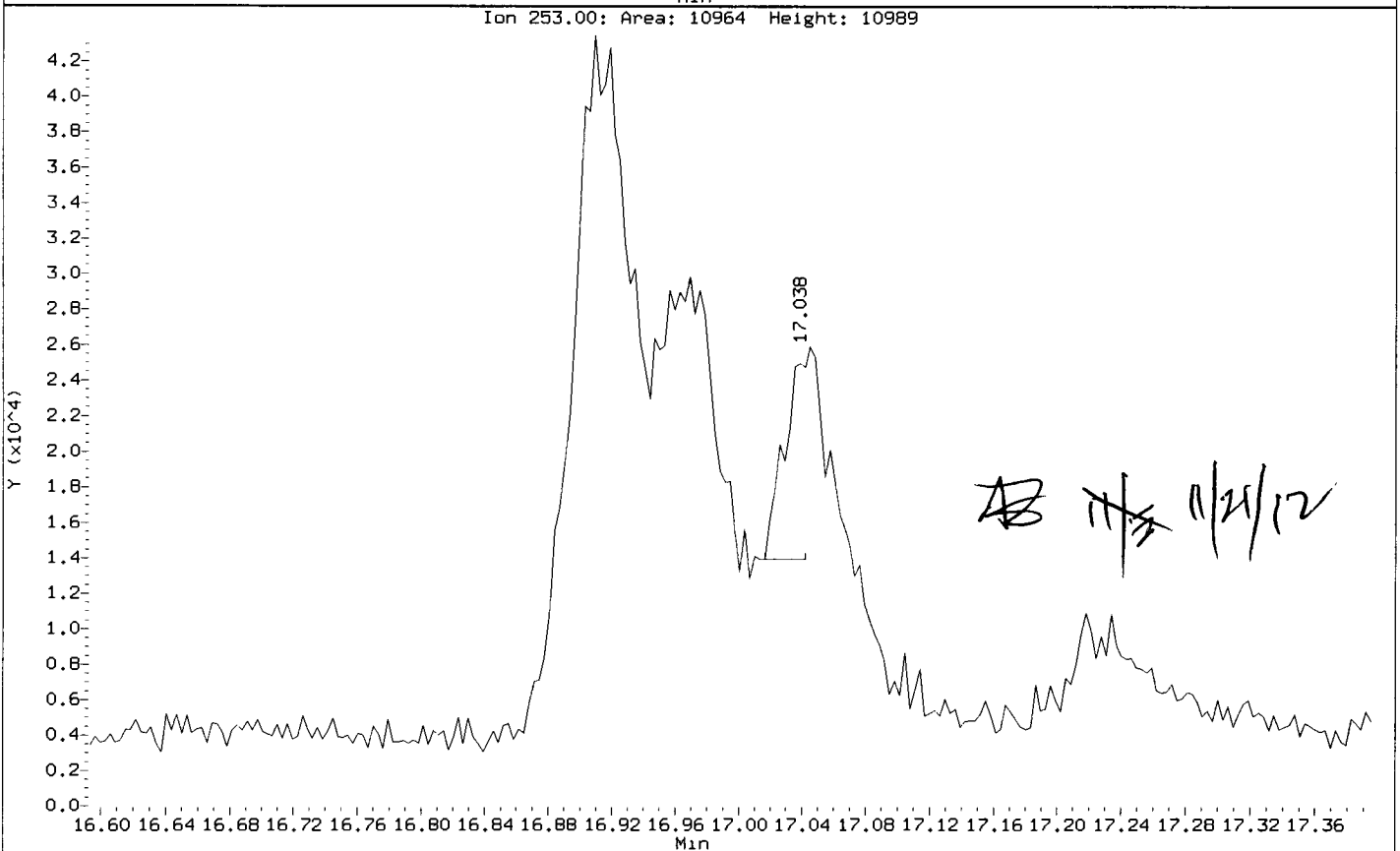
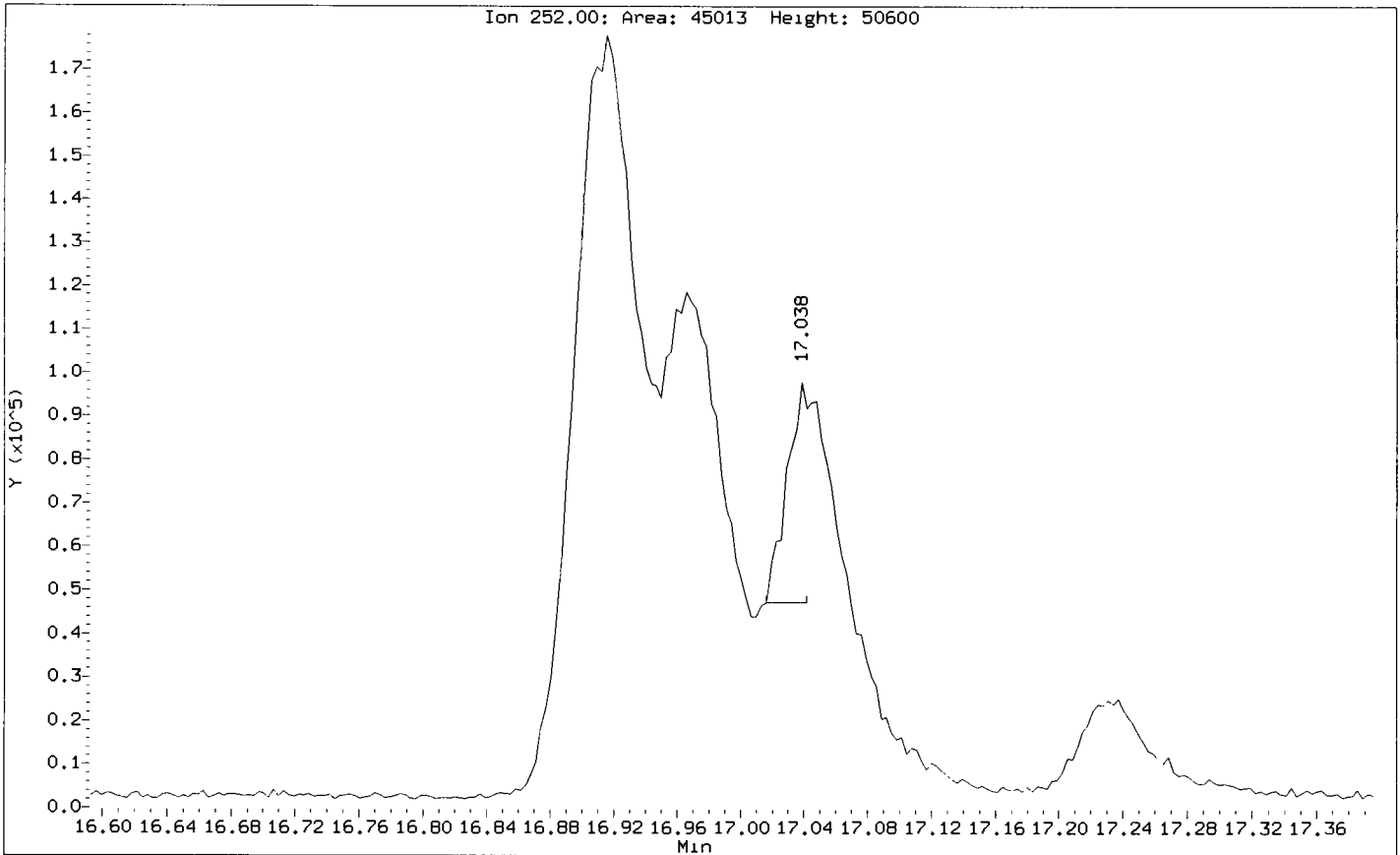
52 Benzo(k)fluoranthene

Concentration: 79.88 ug/kg



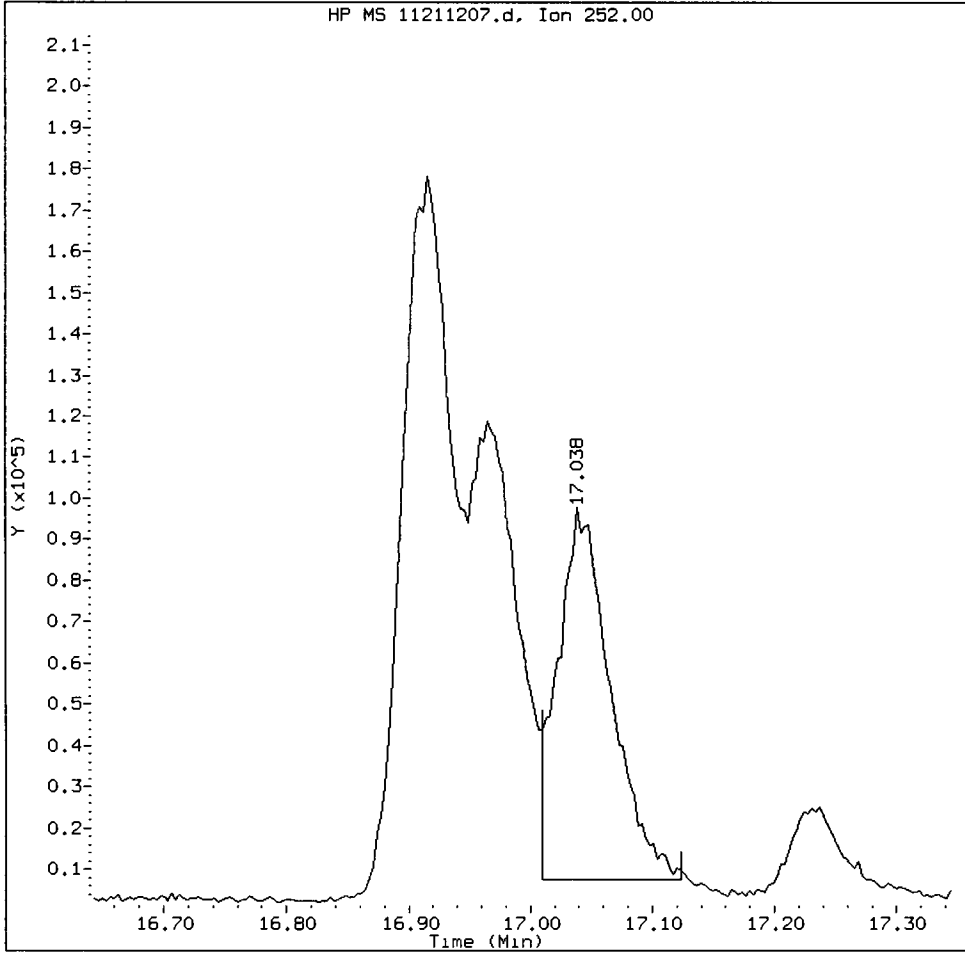
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Injection Date: 21-NOV-2012 14:12  
Instrument: nt11.1  
Client Sample ID: SG-12-S-E-121107

Compound: Benzo(j)fluoranthene  
CAS Number:



VR58C, /chem3/nt11.i/20121121.b/11211207.d

Benzo(j)fluoranthene Amount: 1.38 Area: 278017



MANUAL INTEGRATION for Benzo(j)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AK

Date: 11/21/12

Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

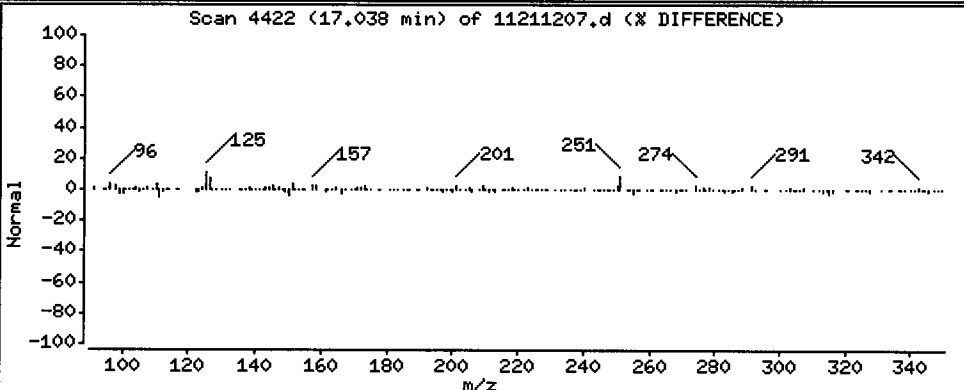
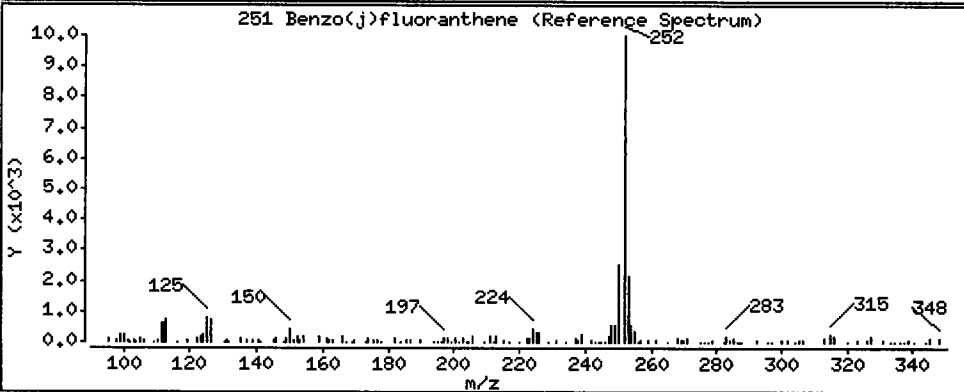
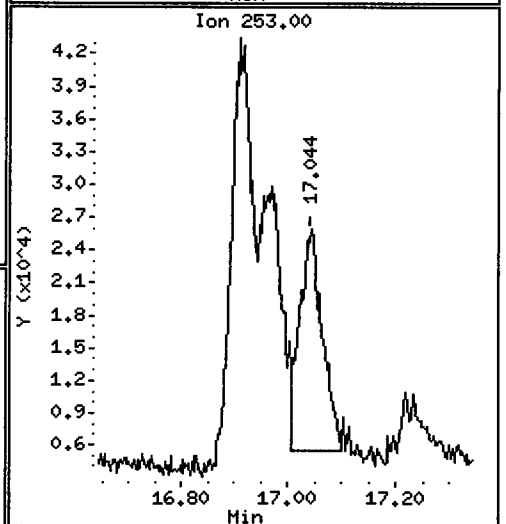
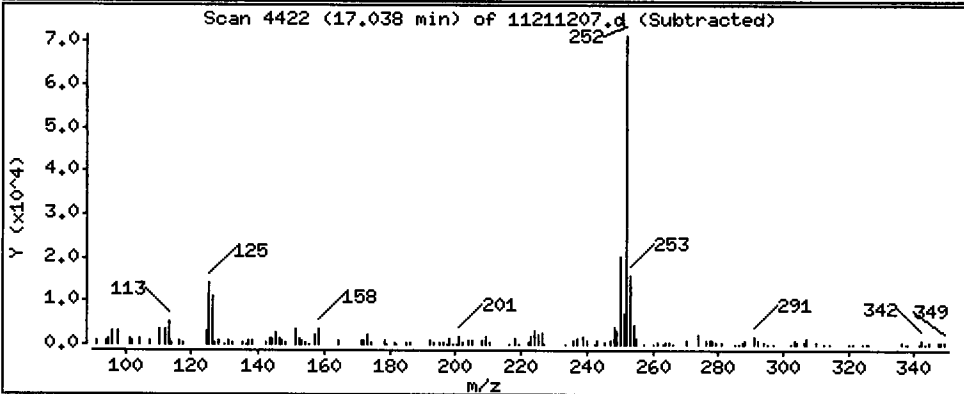
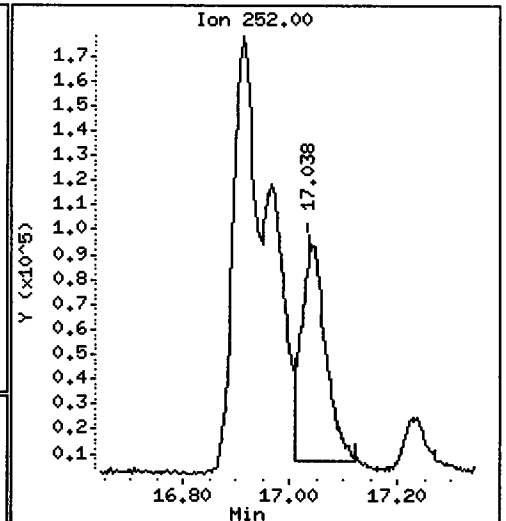
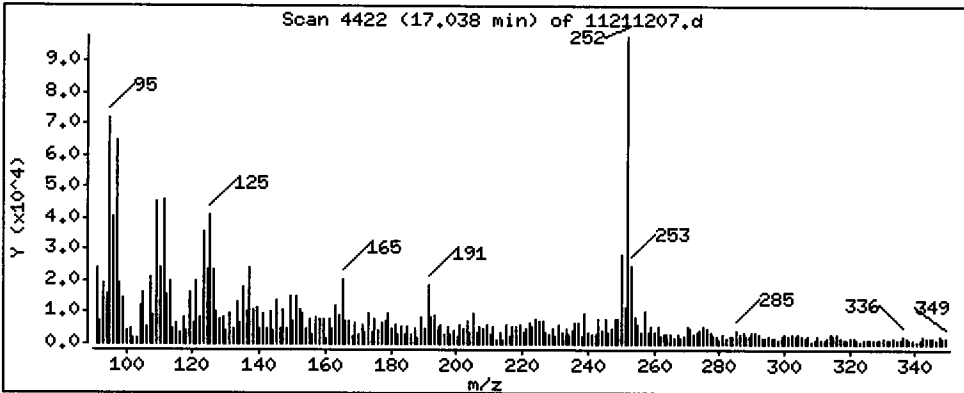
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

251 Benzo(j)fluoranthene

Concentration: 67.05 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

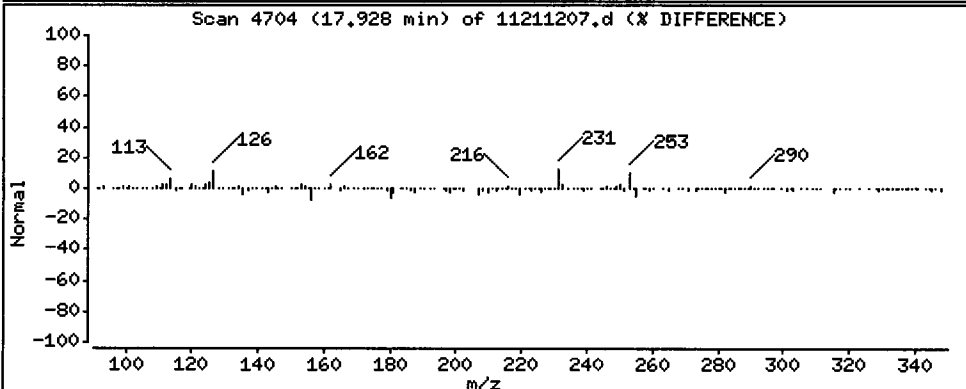
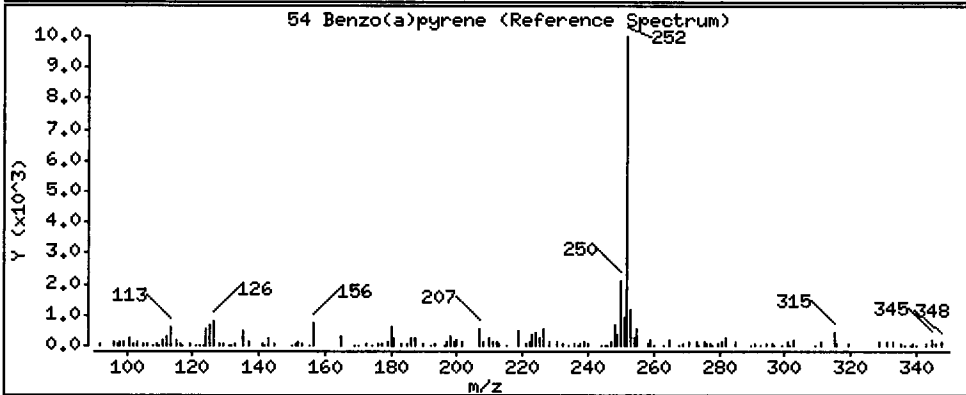
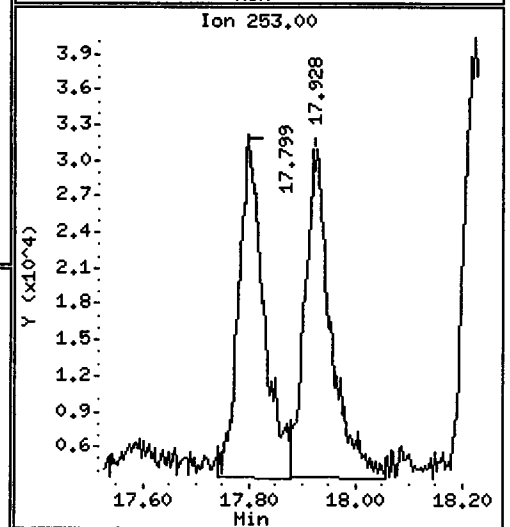
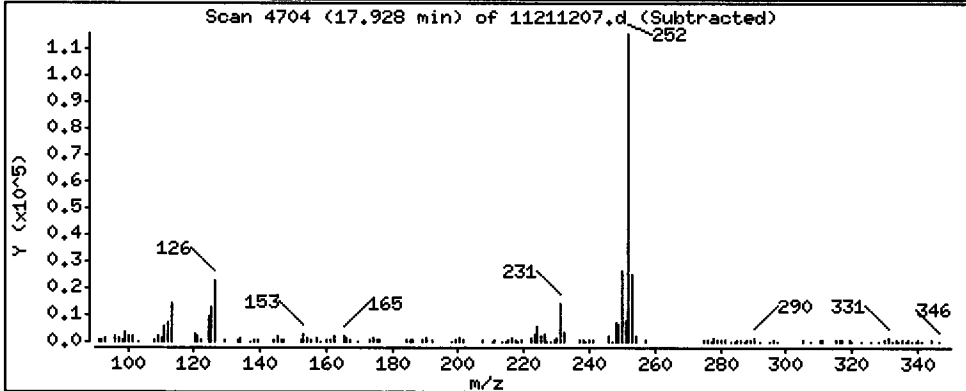
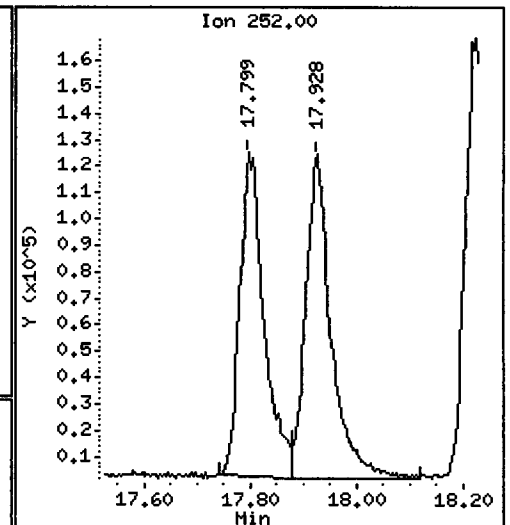
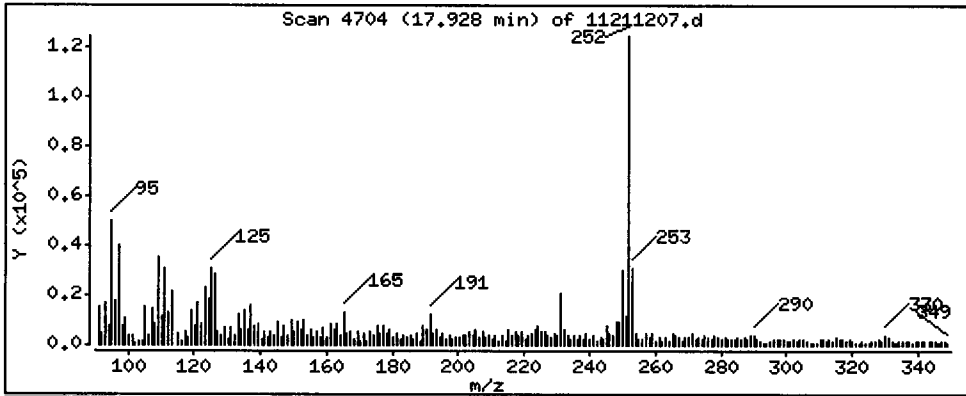
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

54 Benzo(a)pyrene

Concentration: 109.8 ug/kg





Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

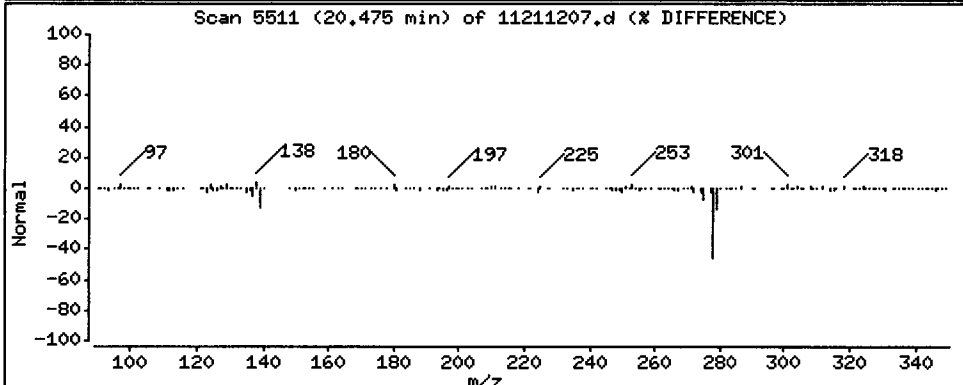
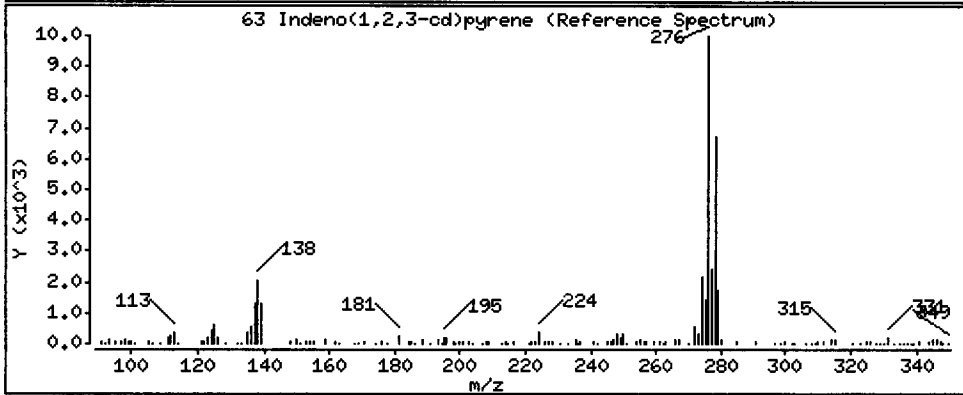
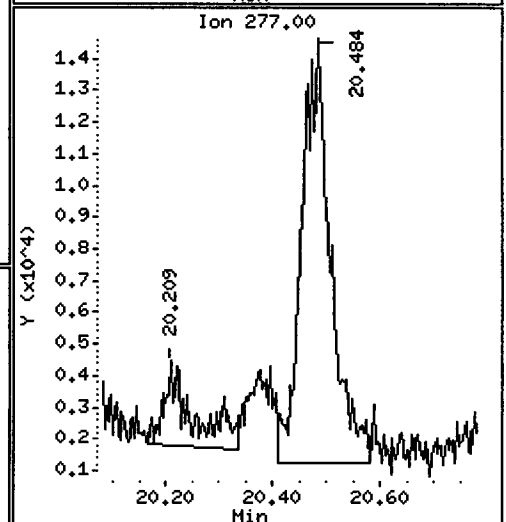
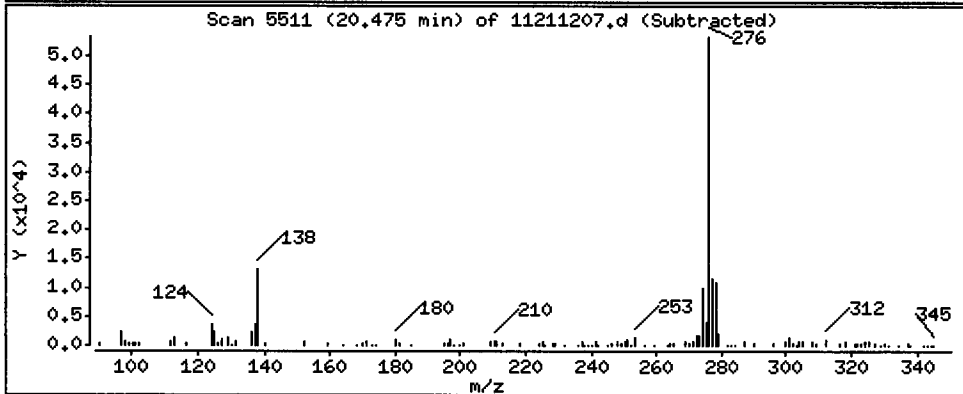
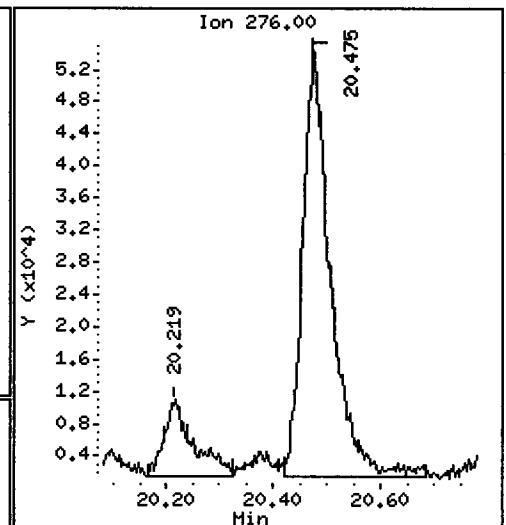
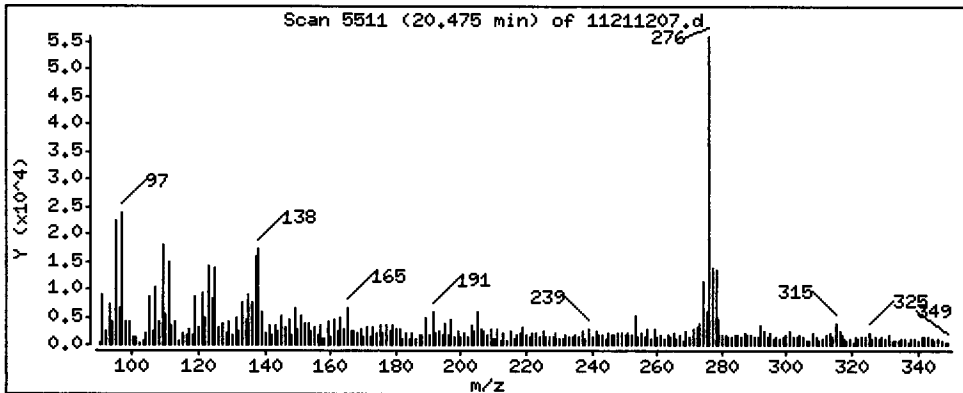
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

63 Indeno(1,2,3-cd)pyrene

Concentration: 42.92 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

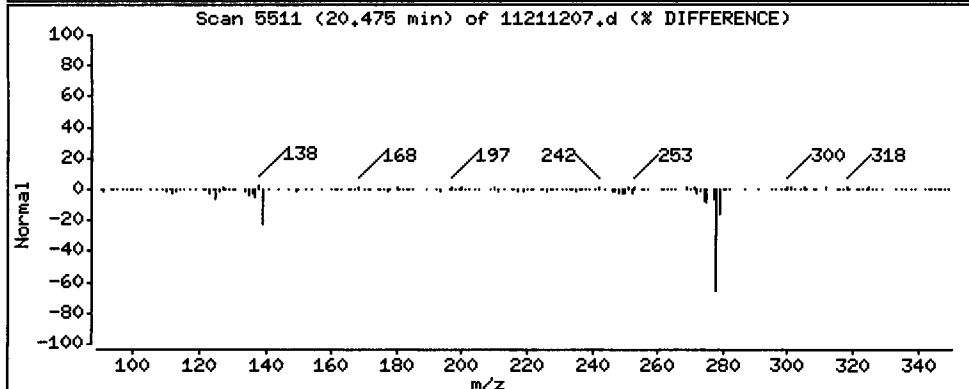
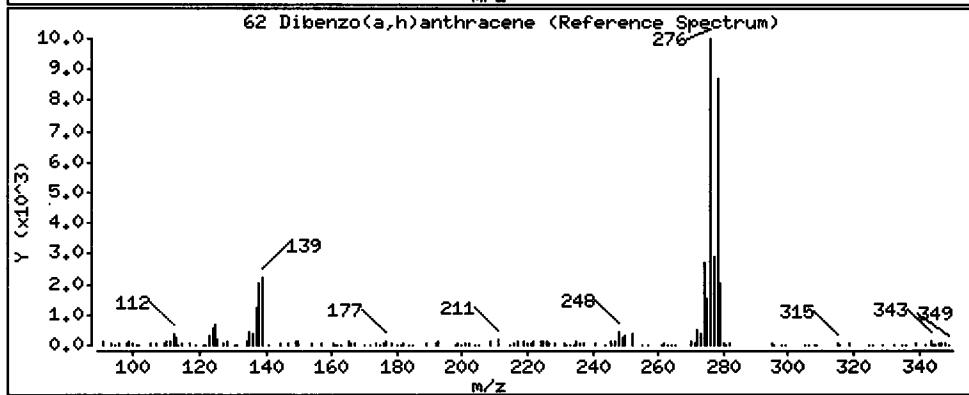
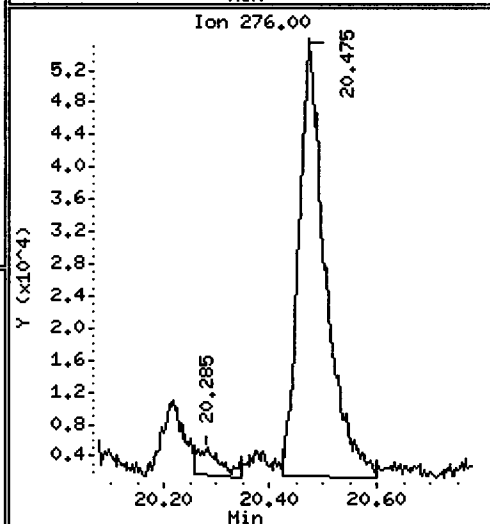
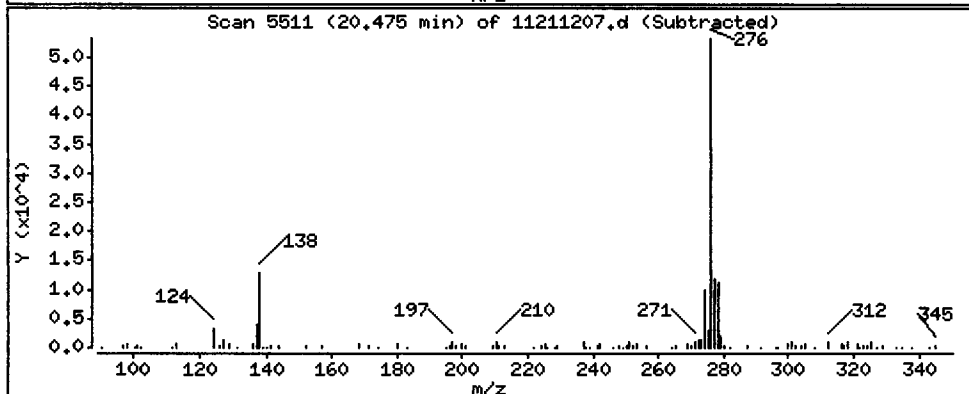
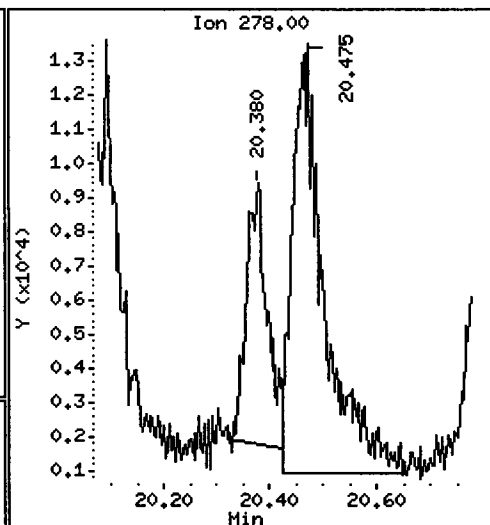
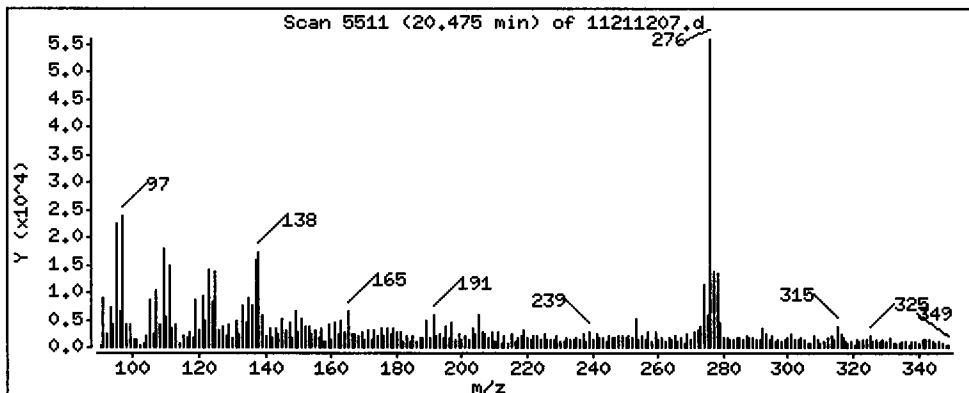
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

62 Dibenzo(a,h)anthracene

Concentration: 14.08 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

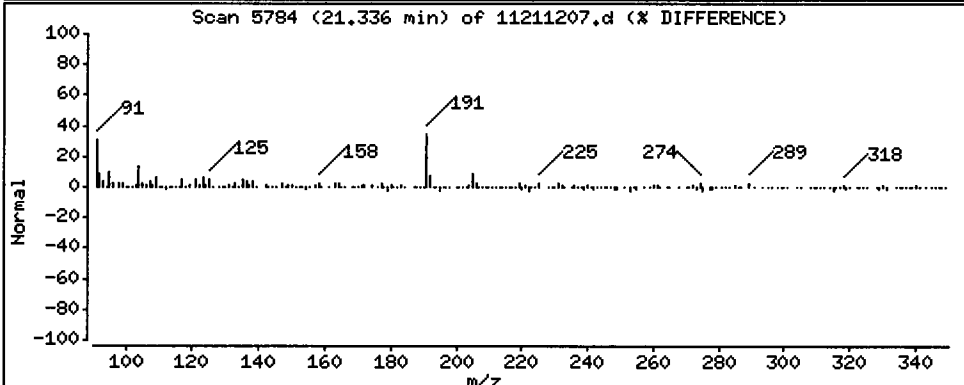
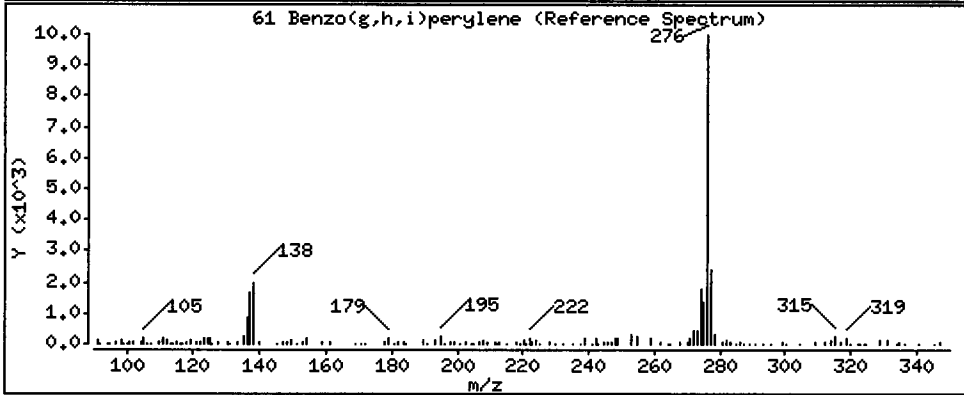
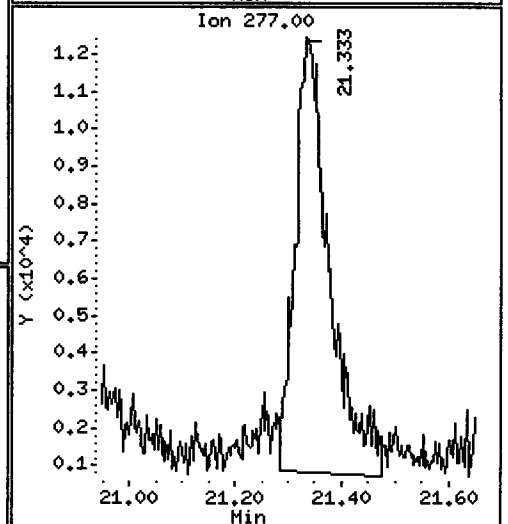
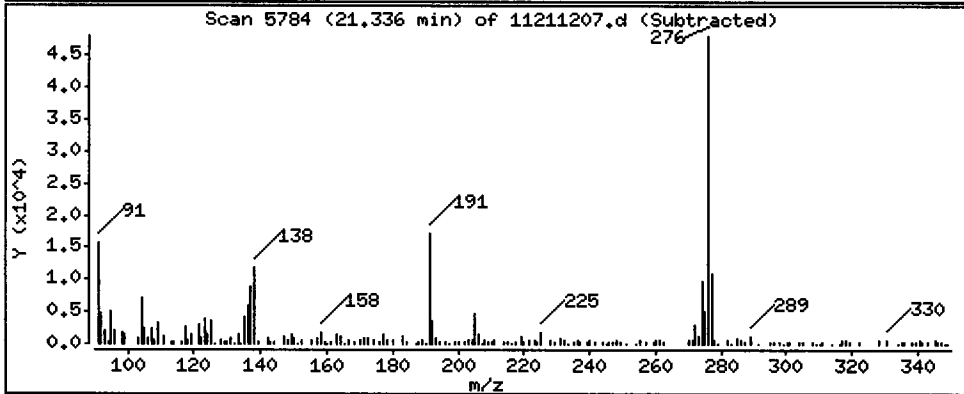
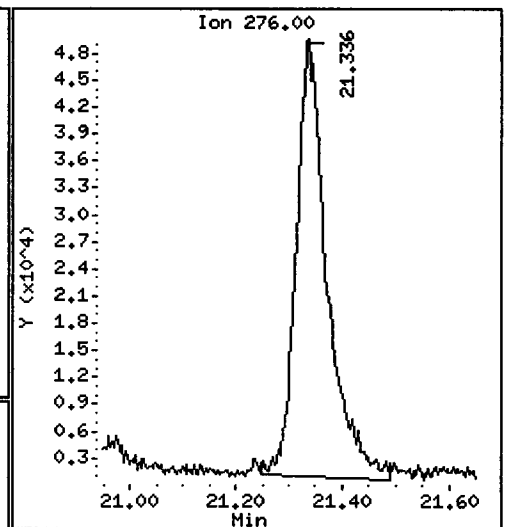
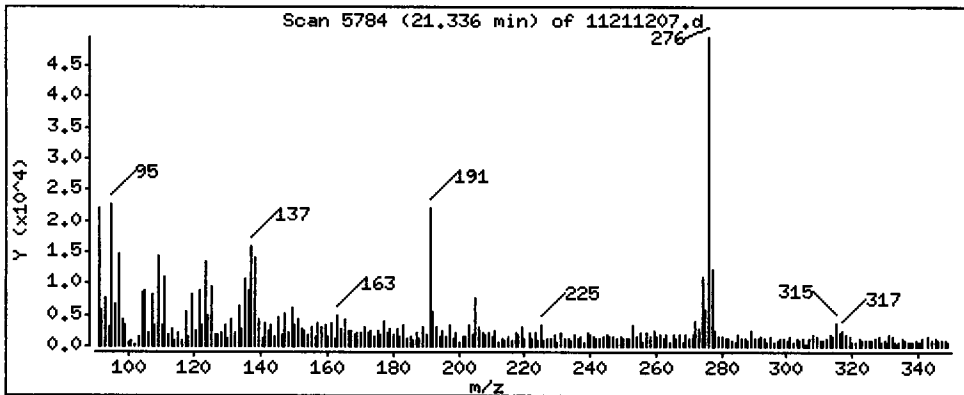
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Benzo(g,h,i)perylene

Concentration: 51.12 ug/kg



Date : 21-NOV-2012 14:12

Client ID: SG-12-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

Operator: JZ

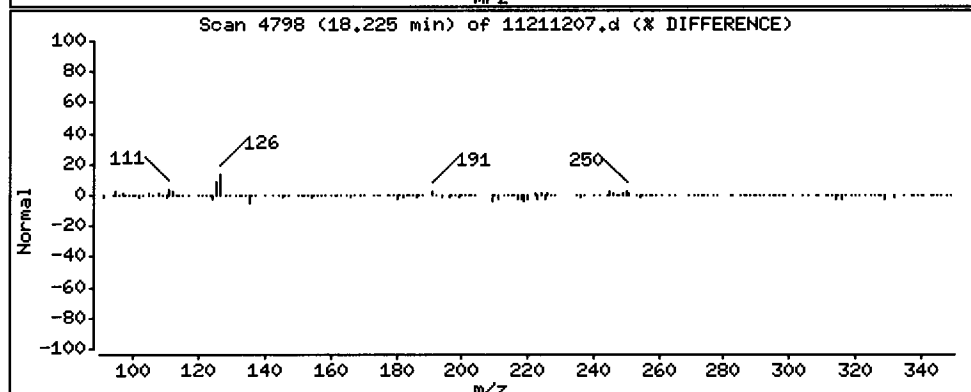
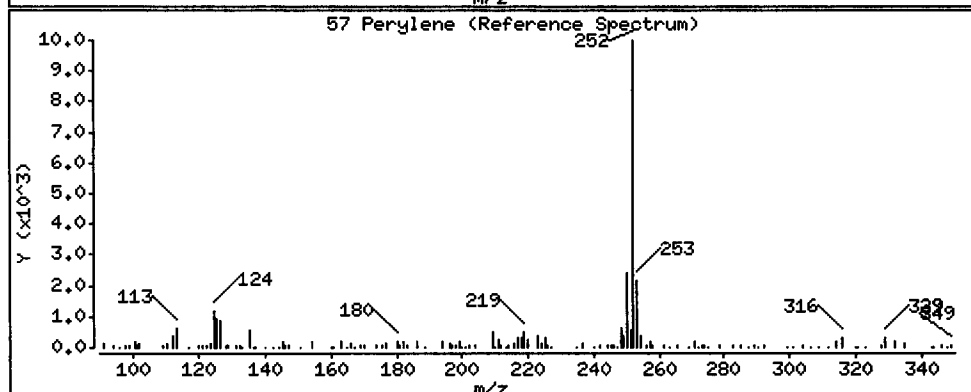
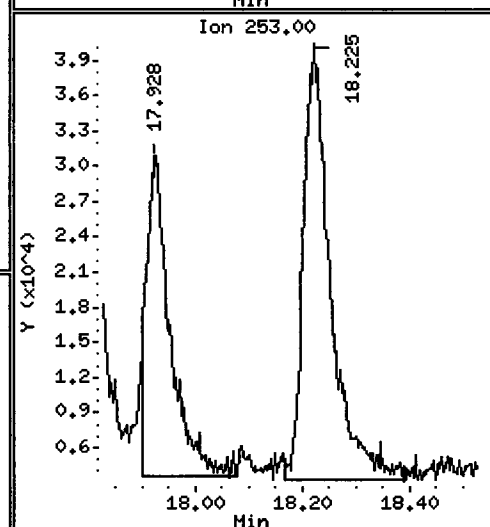
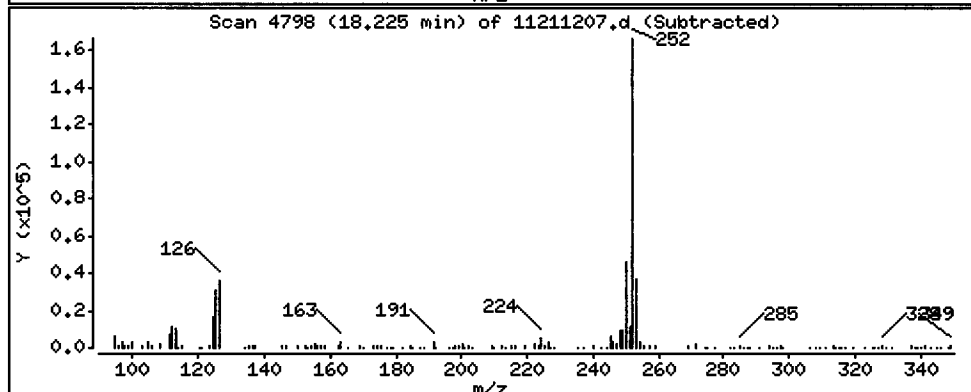
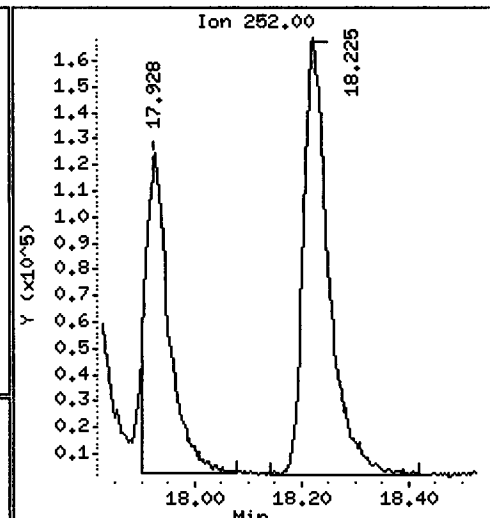
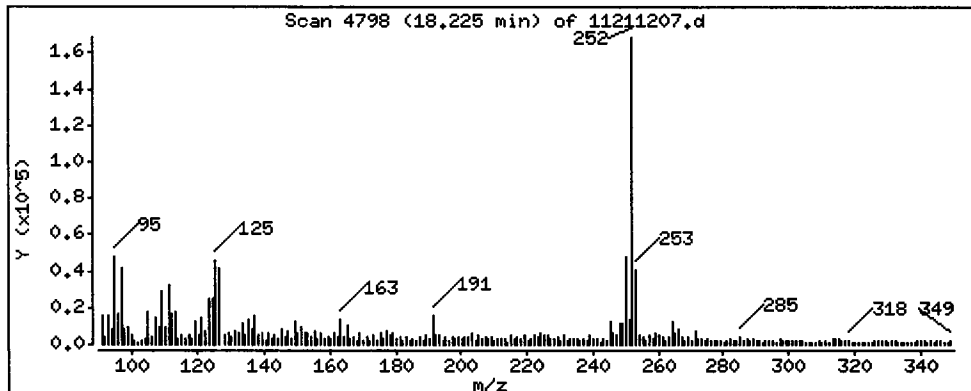
Column phase: ZB-5msi

Column diameter: 0.25

*AKOK*

57 Perylene

Concentration: 144.6 ug/kg



CO-ELUTION SUMMARY FOR FILE - 11211207.d

Lab ID: VR58C, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2012

RT	CO-ELUTION COMPOUNDS
20.475	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.475	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

*checked*

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211208.d  
 Lab Smp Id: VR58D Client Smp ID: SG-13-S-E-121107  
 Inj Date : 21-NOV-2012 14:42  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58D  
 Misc Info : 12-22332  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 21-Nov-2012 15:33 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 8  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

*Handwritten:* 2 11/21/12

Concentration Formula:  $\text{Amt} * \text{DF} * \text{Vt} / (\text{Ws} * (100 - \text{M}) / 100) * \text{CpndVariable}$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	42.04000	Weight of sample extracted (g)
M	76.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	====	136	5.435	5.438	(1.000)	662371	2.00000	=====
7 Naphthalene		128	5.463	5.467	(1.005)	127783	0.36098	17.89
\$ 12 2-Methylnaphthalene-d10		152	6.173	6.174	(1.136)	401074	1.77220	87.82
14 2-Methylnaphthalene		141	6.221	6.221	(1.145)	57514	0.28836	14.29
15 1-methylnaphthalene		141	6.413	6.413	(1.180)	21485	0.11246	5.573 (M)
21 Acenaphthylene		152	7.600	7.600	(0.985)	40340	0.12798	6.342
* 22 Acenaphthene-d10		164	7.713	7.714	(1.000)	362737	2.00000	
23 Acenaphthene		153	7.761	7.761	(1.006)	49399	0.24644	12.21
11 Dibenzofuran		168	7.915	7.912	(1.026)	69597	0.23700	11.74
25 Fluorene		166	8.389	8.389	(1.088)	78234	0.34665	17.18
* 28 Phenanthrene-d10		188	9.739	9.736	(1.000)	494835	2.00000	
30 Phenanthrene		178	9.774	9.768	(1.004)	577139	1.93083	95.68
31 Anthracene		178	9.815	9.809	(1.008)	120523	0.42002	20.81 (M)
36 Fluoranthene		202	11.462	11.425	(1.177)	854649	2.85383	141.4
39 Pyrene		202	11.951	11.892	(0.830)	1071065	4.57483	226.7

Compounds	QUANT SIG				RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT		ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	====	==	=====	=====	=====	=====	=====
46 Benzo(a)anthracene	228	14.283	14.224	(0.992)	470029	2.20177	109.1
* 47 Chrysene-d12	240	14.403	14.343	(1.000)	424844	2.00000	
48 Chrysene	228	14.469	14.413	(1.005)	774425	3.73753	185.2
51 Benzo(b)fluoranthene	252	16.924	16.858	(0.932)	440947	3.28195	162.6 (M)
52 Benzo(k)fluoranthene	252	16.975	16.918	(0.935)	299267	2.05099	101.6 (M)
251 Benzo(j)fluoranthene	252	17.057	16.994	(0.939)	229322	1.48959	73.82 (M)
54 Benzo(a)pyrene	252	17.937	17.878	(0.988)	341195	2.50015	123.9
* 56 Perylene-d12	264	18.161	18.102	(1.000)	290306	2.00000	
63 Indeno(1,2,3-cd)pyrene	276	20.487	20.431	(1.128)	179257	1.08346	53.69
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.386	20.339	(1.122)	165494	1.71956	85.21
62 Dibenzo(a,h)anthracene	278	20.471	20.427	(1.127)	47914	0.35559	17.62 (H)
61 Benzo(g,h,i)perylene	276	21.352	21.298	(1.176)	190540	1.35372	67.08
57 Perylene	252	18.234	18.177	(1.004)	635128	4.48774	222.4

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: nt11.i  
 Lab File ID: 11211208.d  
 Lab Smp Id: VR58D  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22332

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-13-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	662371	28.34
22 Acenaphthene-d10	284255	142128	568510	362737	27.61
28 Phenanthrene-d10	410660	205330	821320	494835	20.50
47 Chrysene-d12	467886	233943	935772	424844	-9.20
56 Perylene-d12	472330	236165	944660	290306	-38.54

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	-0.06
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	0.00
28 Phenanthrene-d10	9.74	9.24	10.24	9.74	0.03
47 Chrysene-d12	14.34	13.84	14.84	14.40	0.42
56 Perylene-d12	18.10	17.60	18.60	18.16	0.33

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



Analytical Resources, Inc.

RECOVERY REPORT

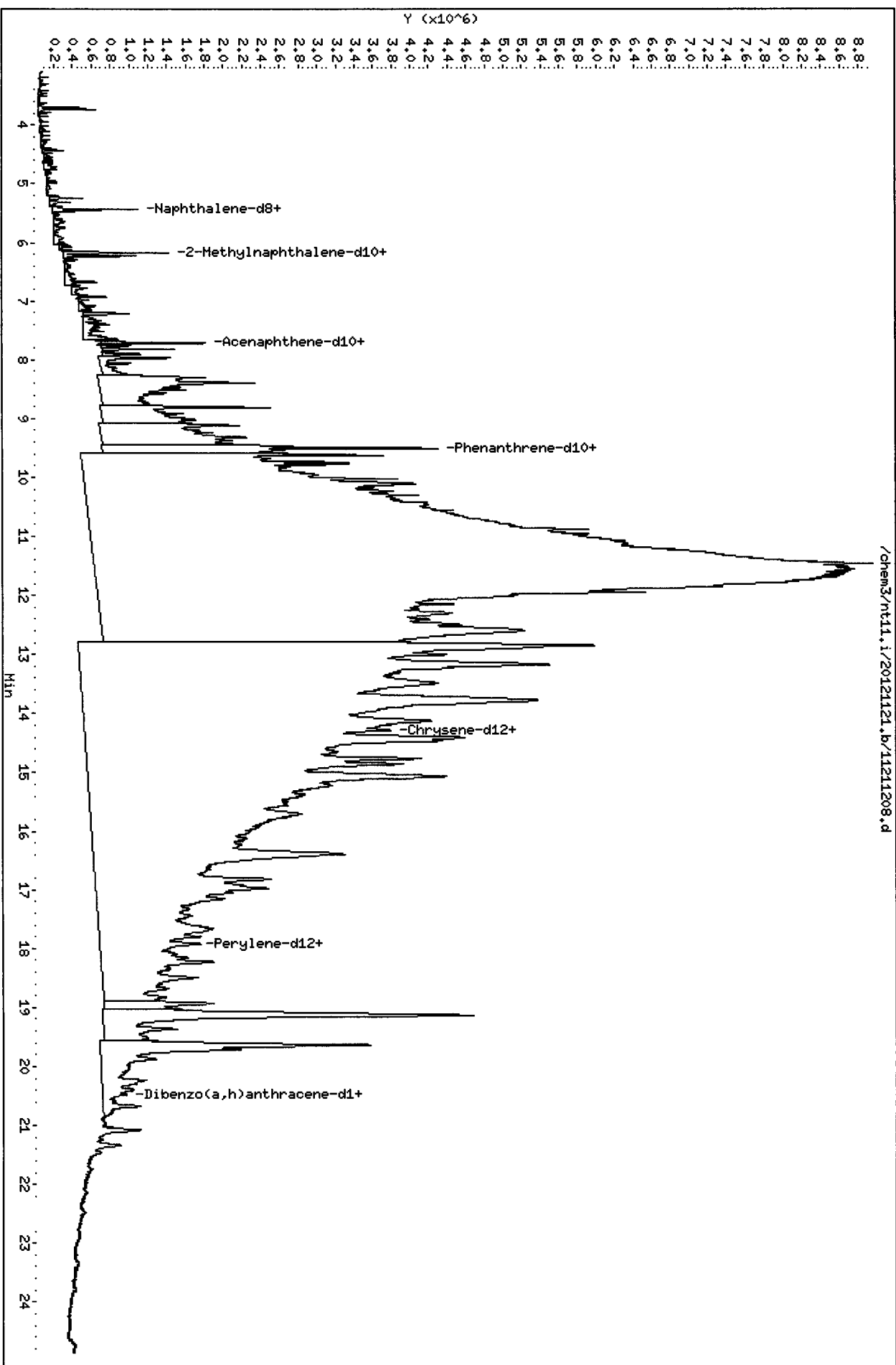
Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58D  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Misc Info: 12-22332

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-13-S-E-121107  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	148.7	87.82	59.07	34-100
\$ 60 Dibenzo(a,h)anthra	148.7	85.21	57.32	10-117

Data File: /chem3/nt11.i/20121121.b/11211208.d  
Date: 21-NOV-2012 14:42  
Client ID: SG-13-S-E-121107  
Sample Info: WR58D  
Volume Injected (uL): 1.0  
Column phase: ZB-Smsi

Instrument: nt11.i  
Operator: JZ  
Column diameter: 0.25



WR58 : 011111

Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

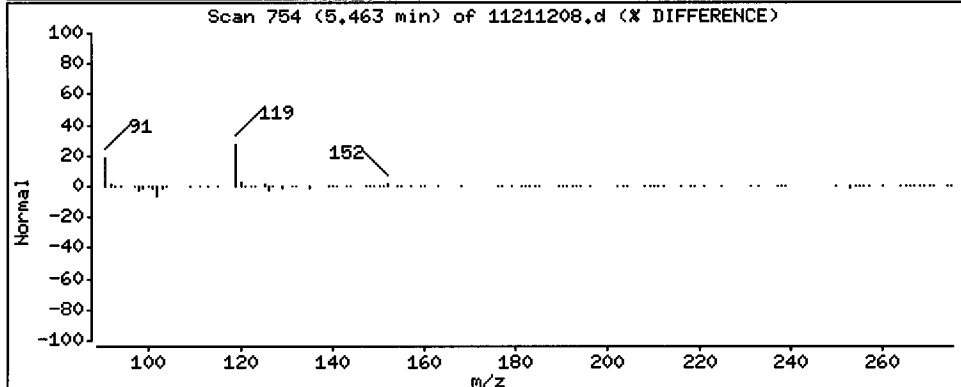
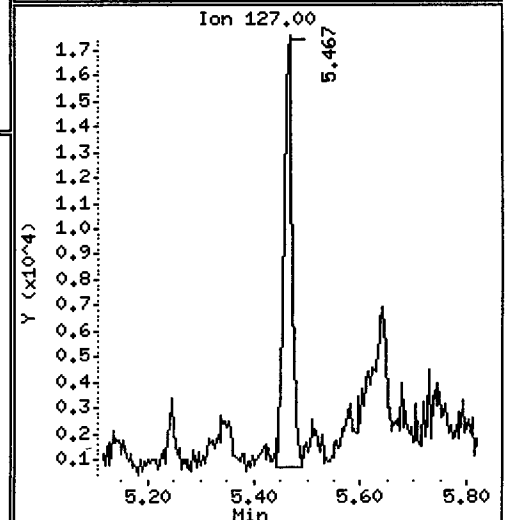
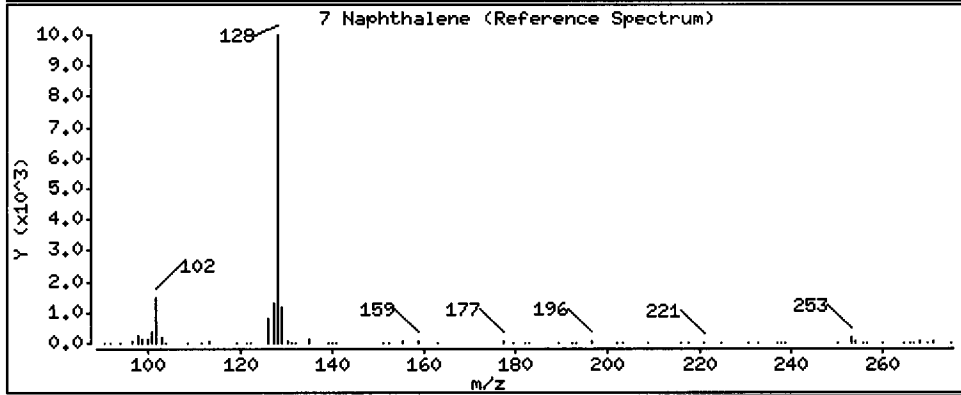
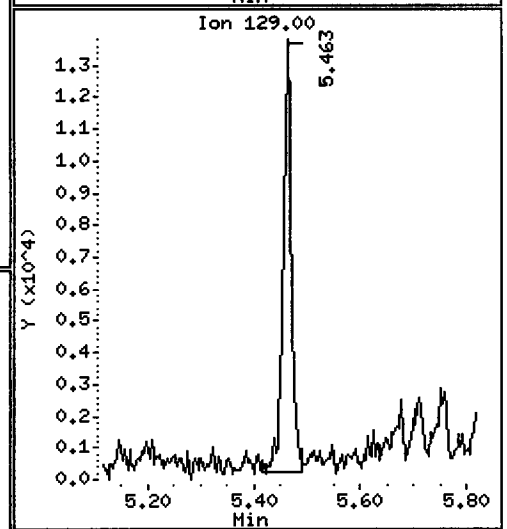
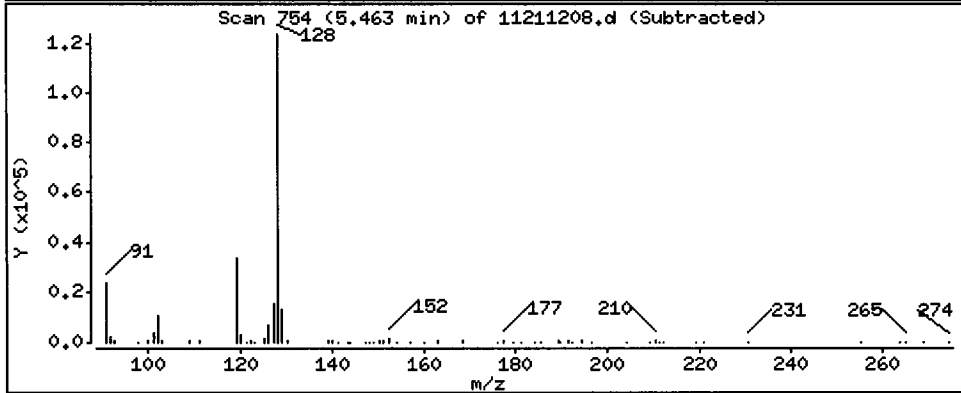
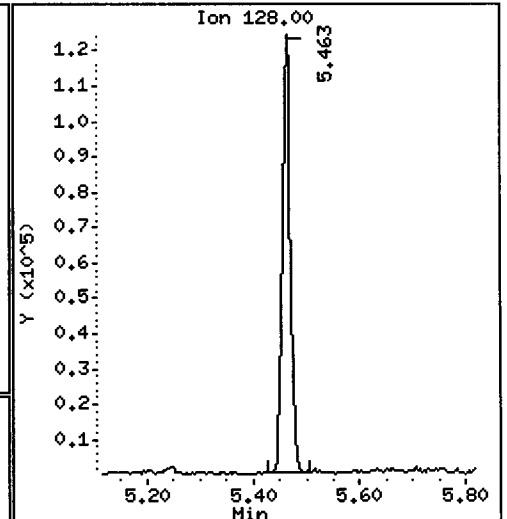
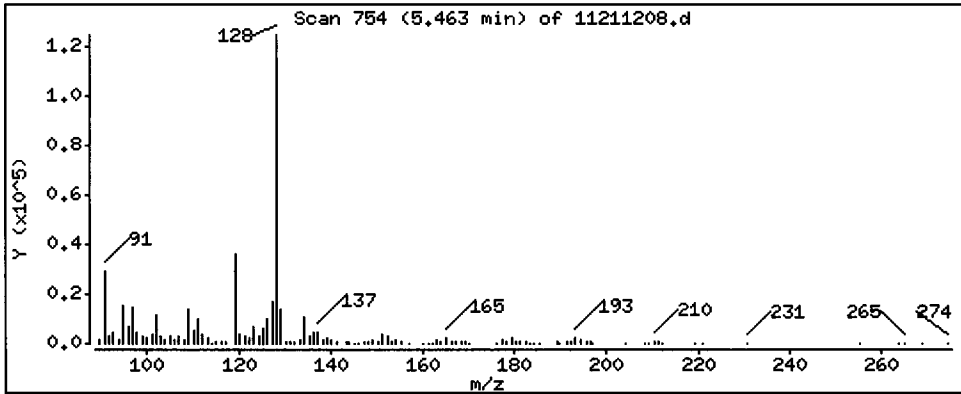
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

7 Naphthalene

Concentration: 17.89 ug/kg



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

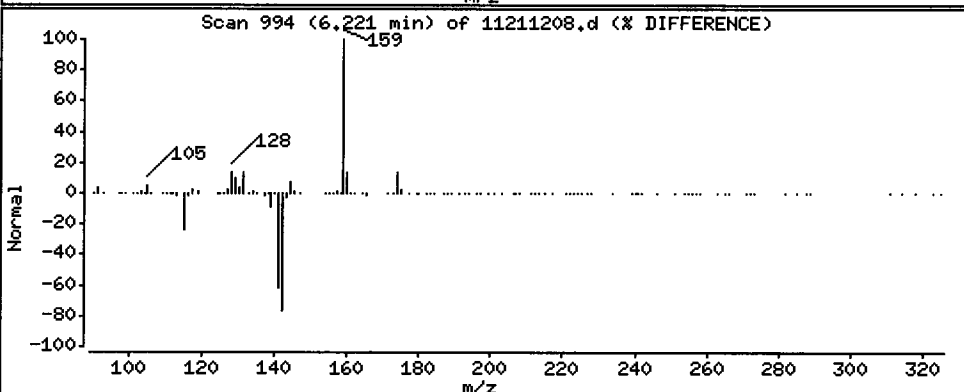
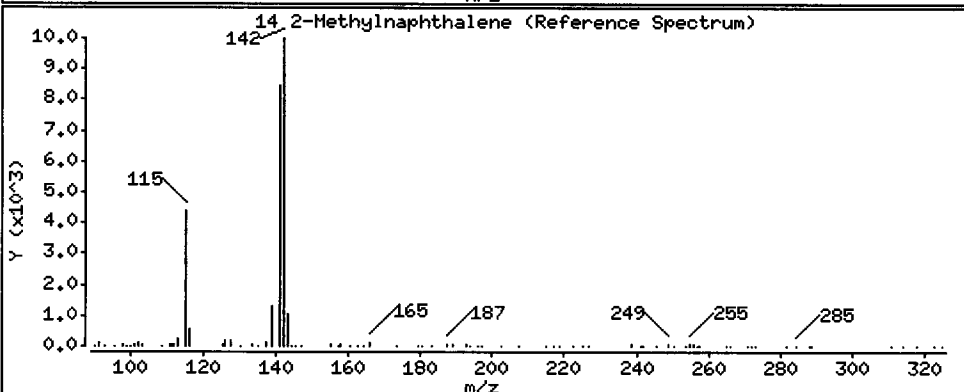
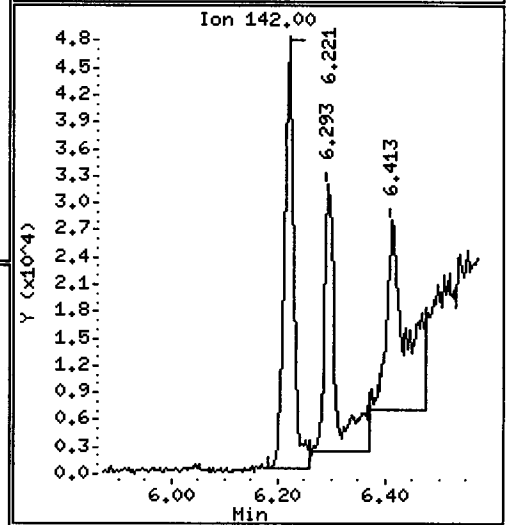
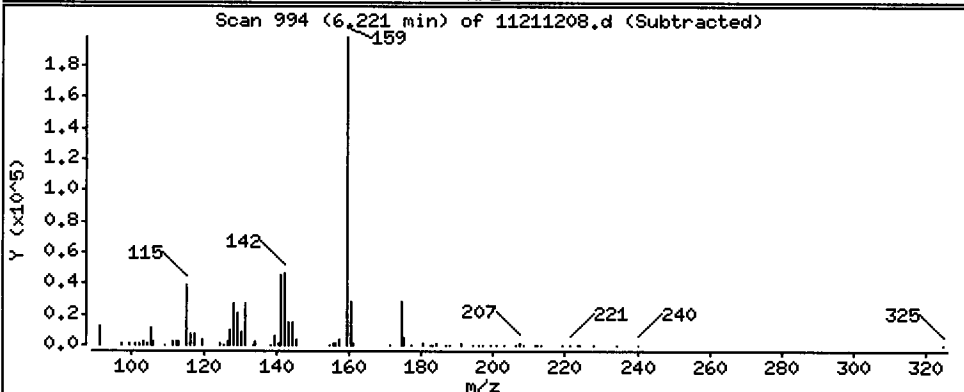
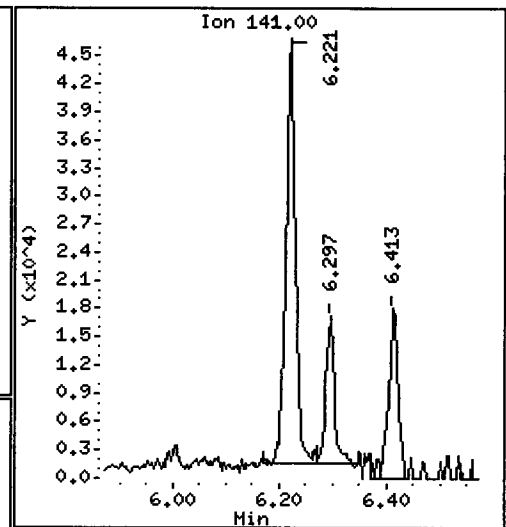
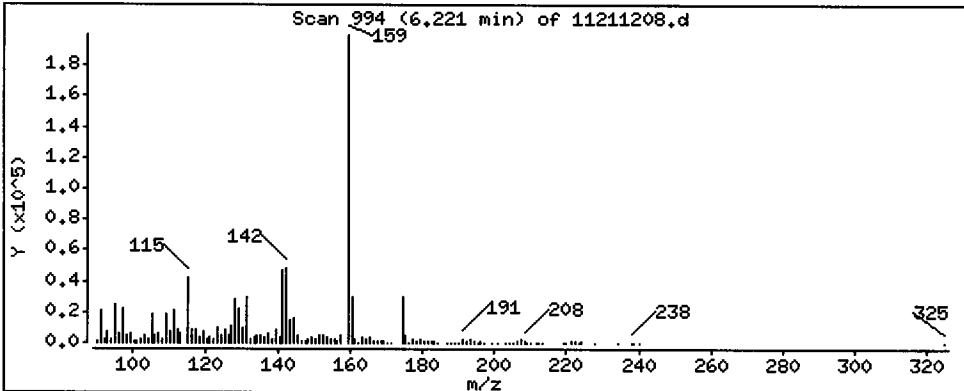
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

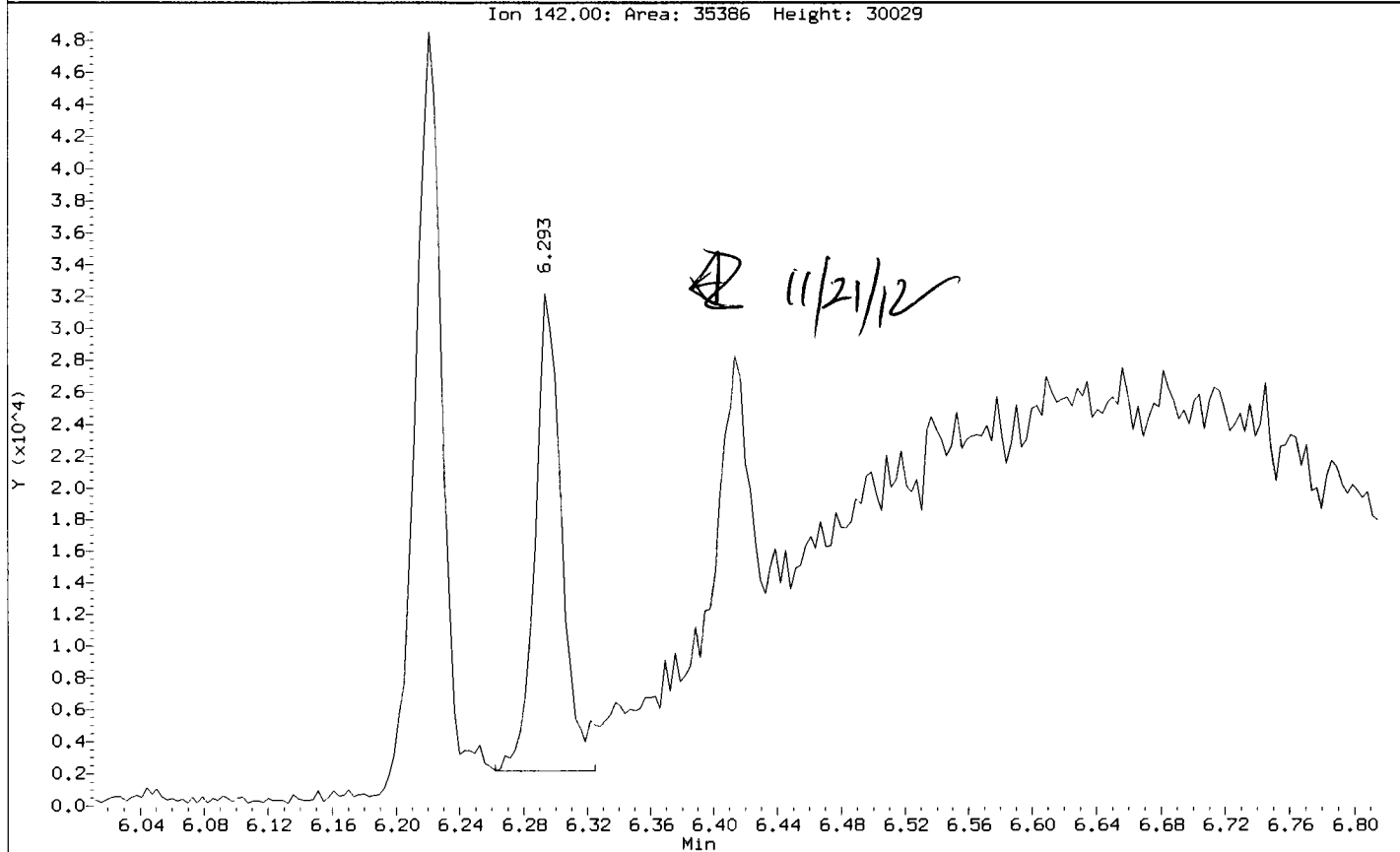
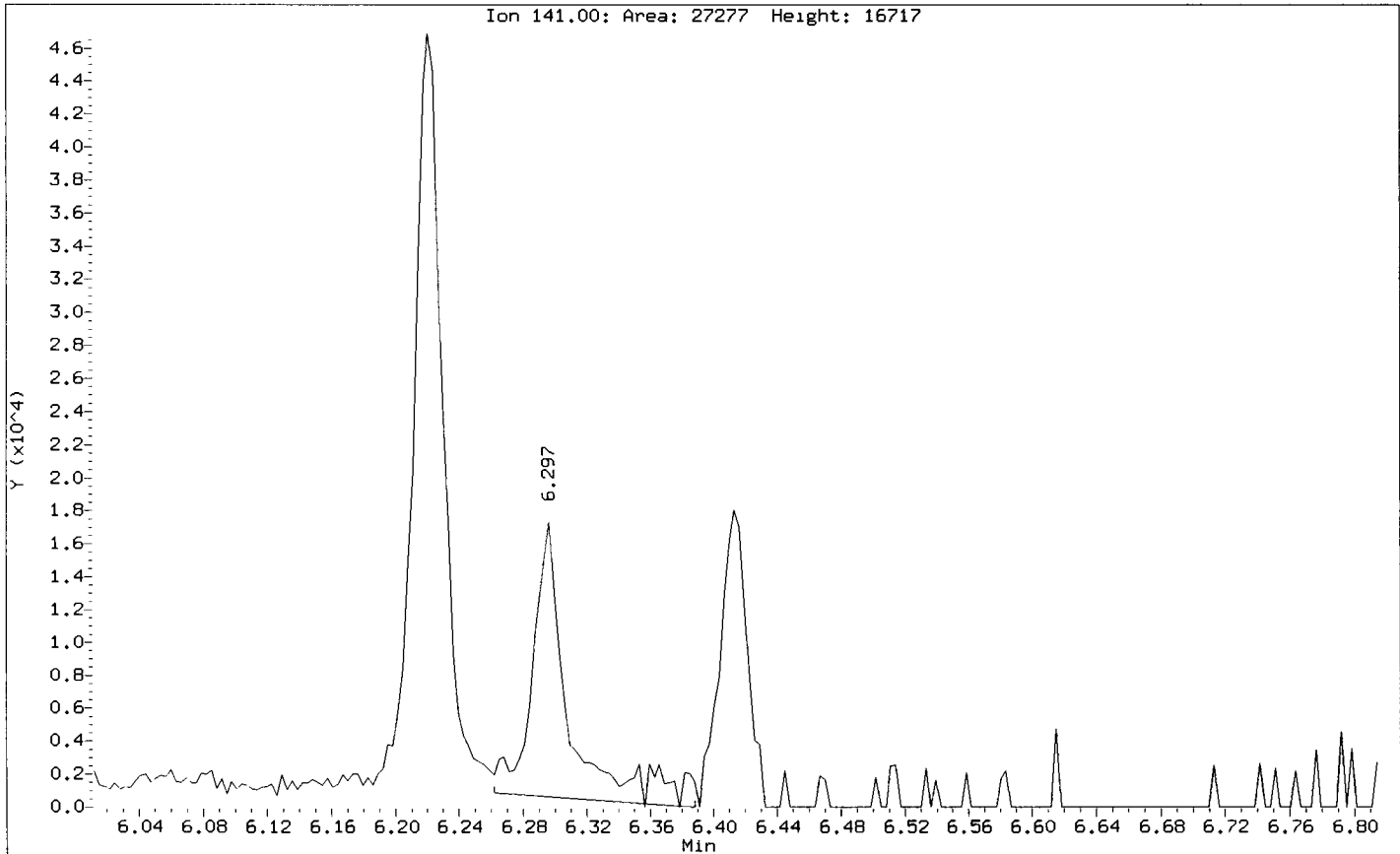
14 2-Methylnaphthalene

Concentration: 14.29 ug/kg



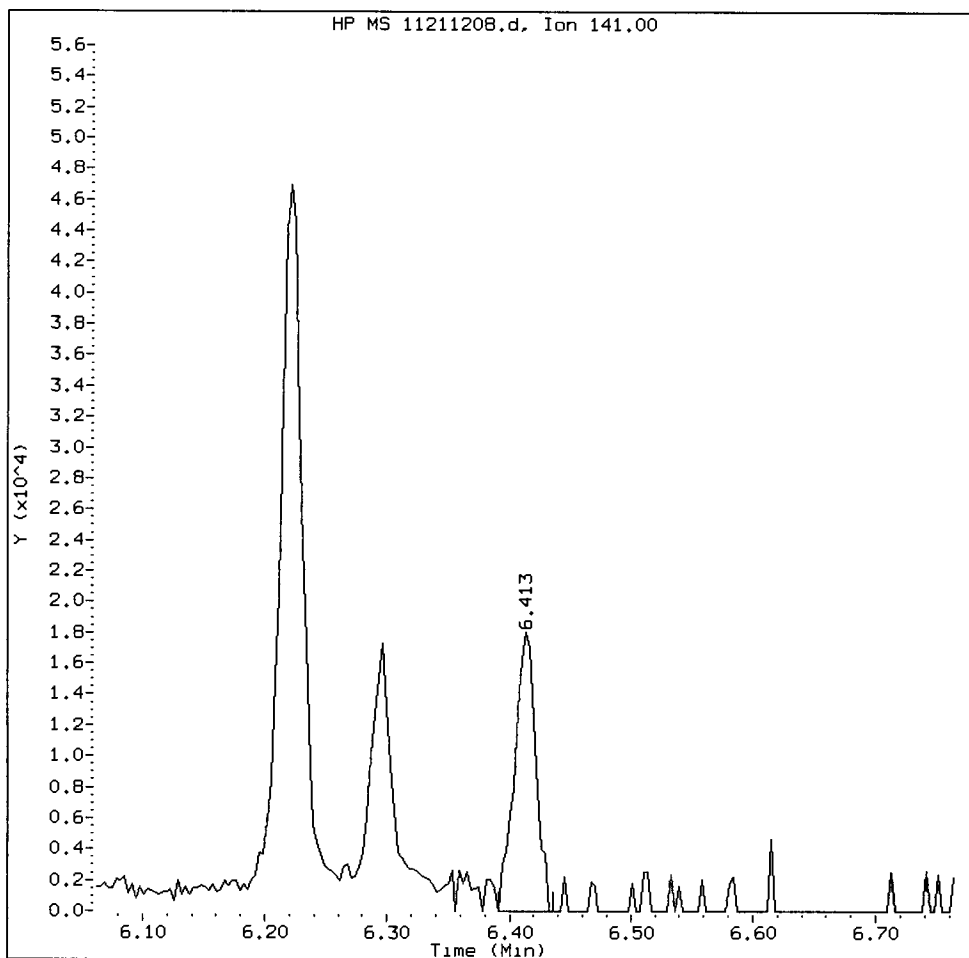
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Injection Date: 21-NOV-2012 14:42  
Instrument: nt11.1  
Client Sample ID: SG-13-S-E-121107

Compound: 1-methylnaphthalene  
CAS Number:



VR58D, /chem3/nt11.i/20121121.b/11211208.d

1-methylnaphthalene Amount: 0.11 Area: 21485



MANUAL INTEGRATION for 1-methylnaphthalene

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

5. Other \_\_\_\_\_

Analyst: AB

Date: 4/24/12

Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

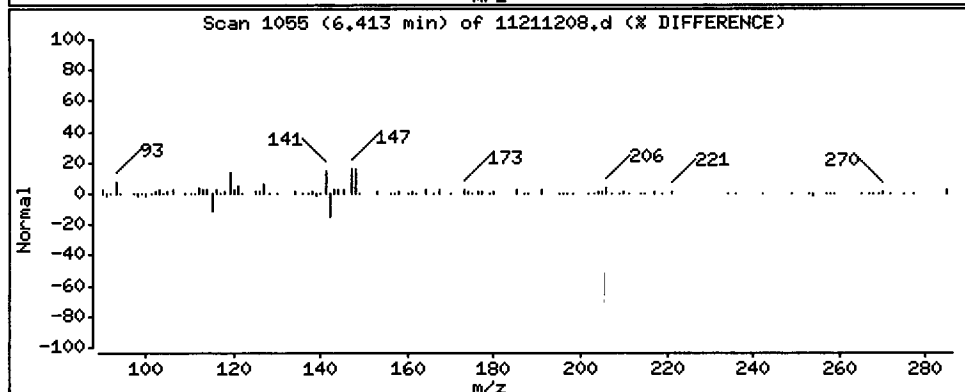
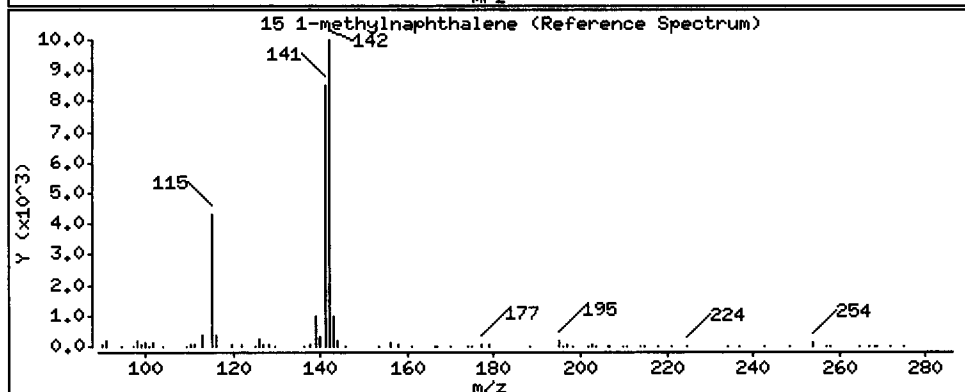
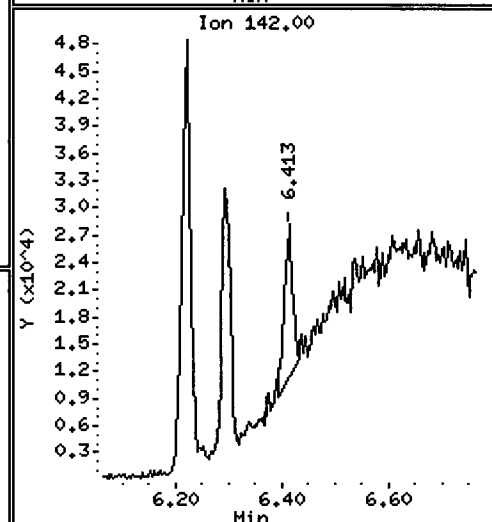
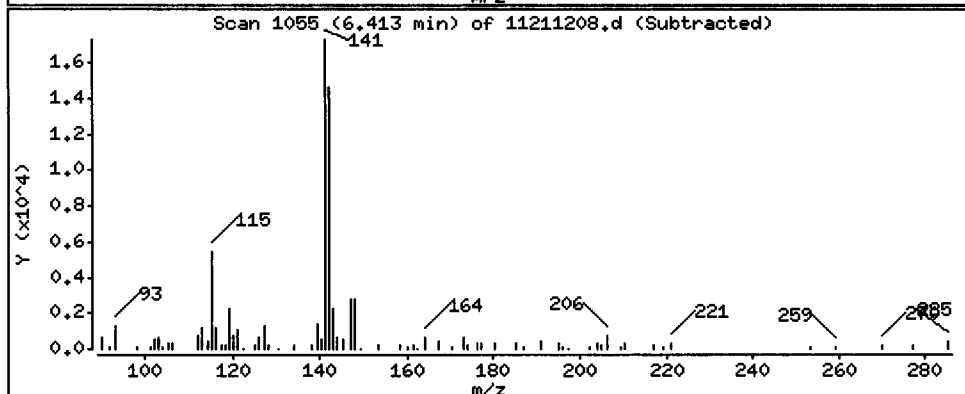
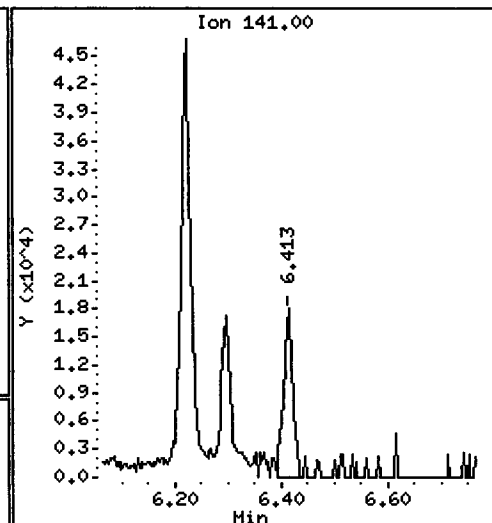
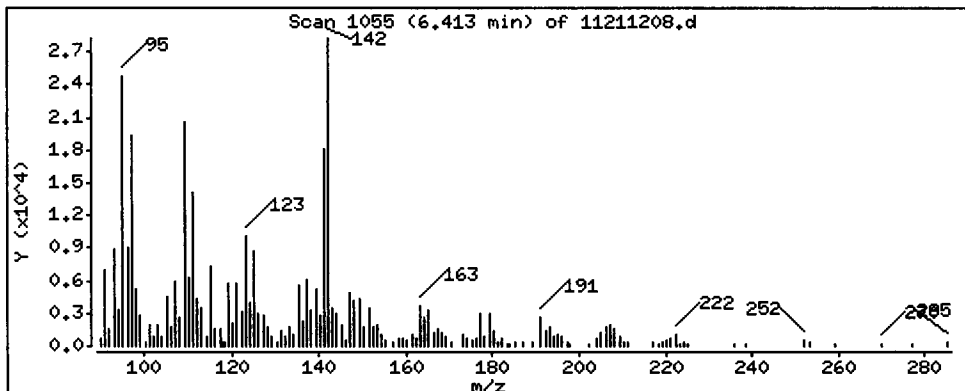
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

15 1-methylnaphthalene

Concentration: 5.573 ug/kg



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

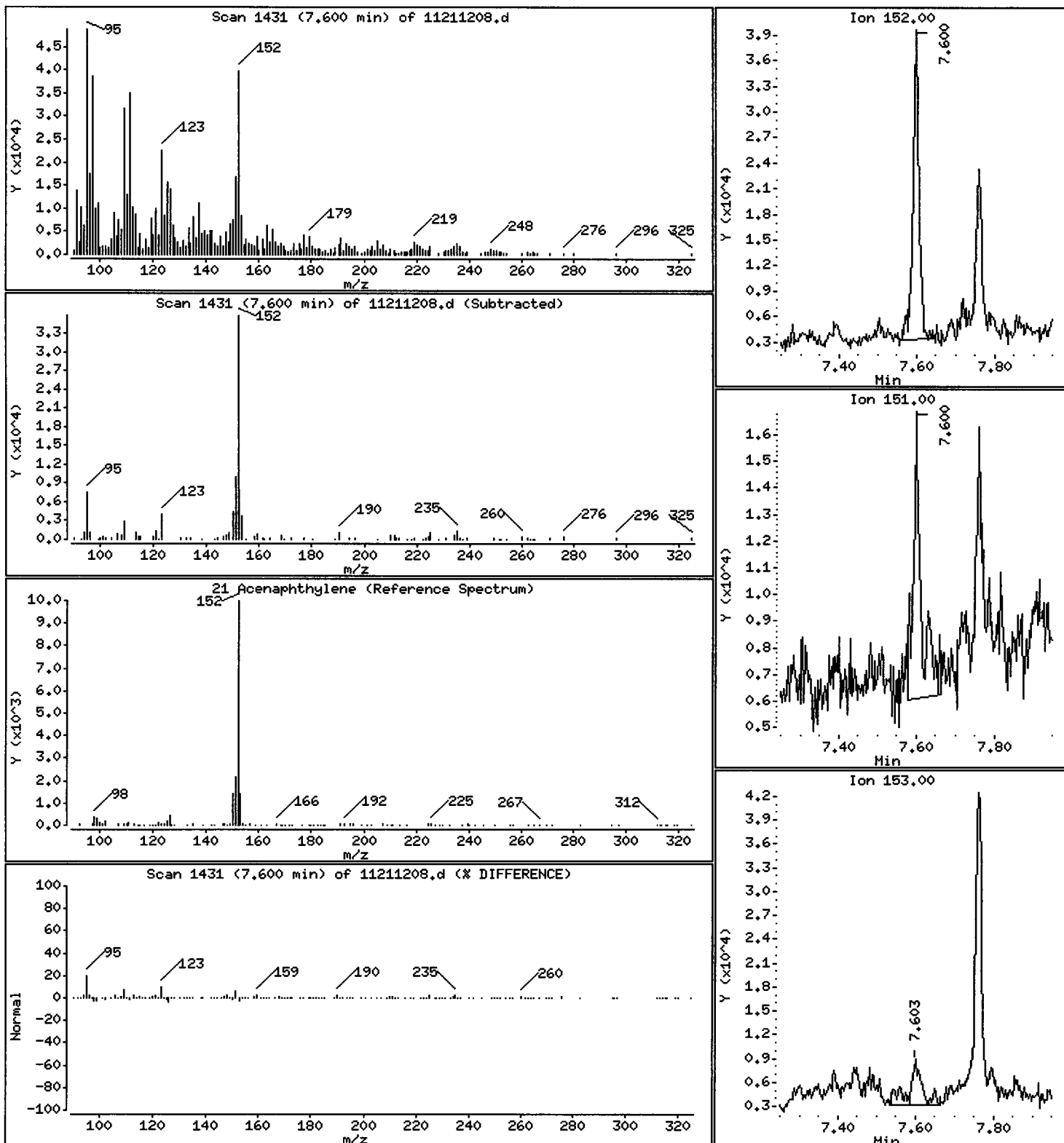
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

21 Acenaphthylene

Concentration: 6,342 ug/kg





Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

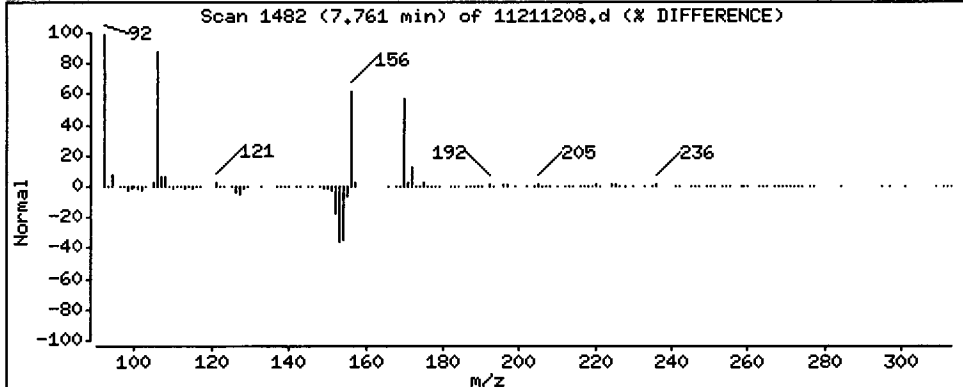
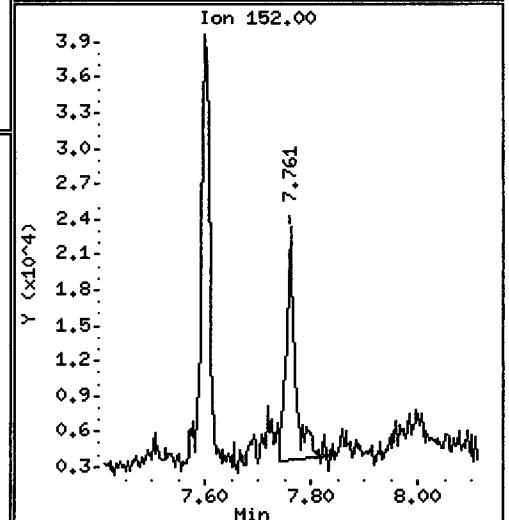
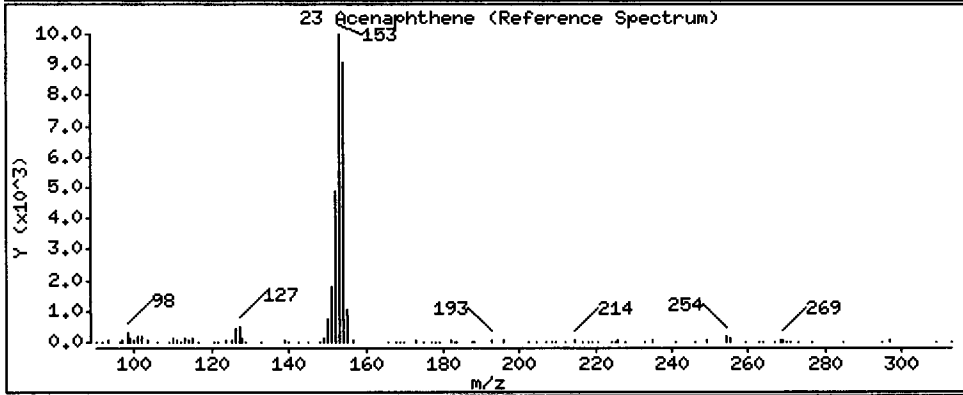
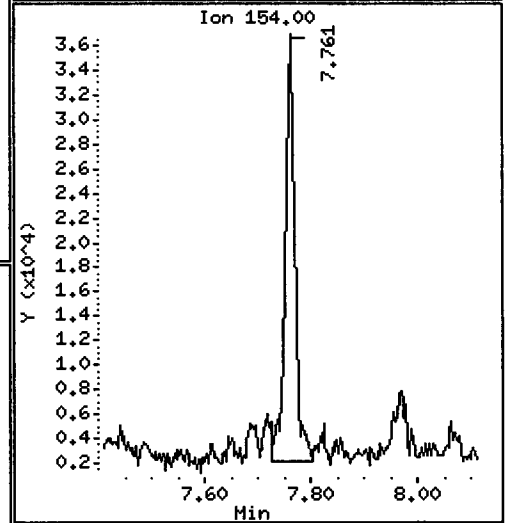
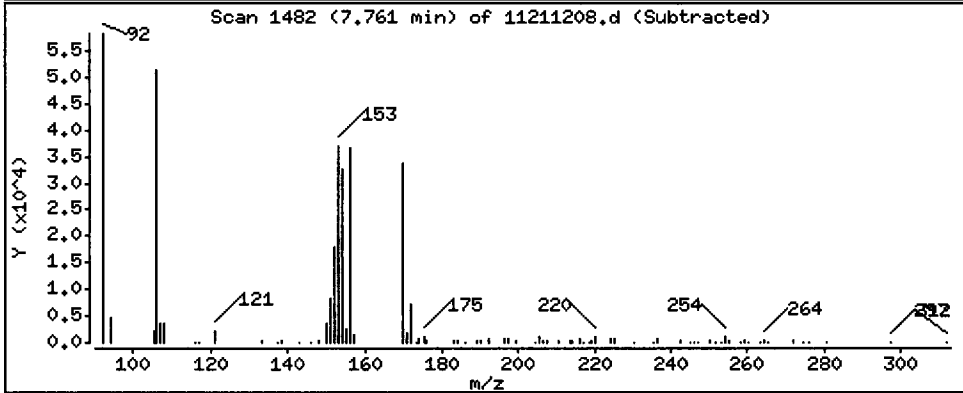
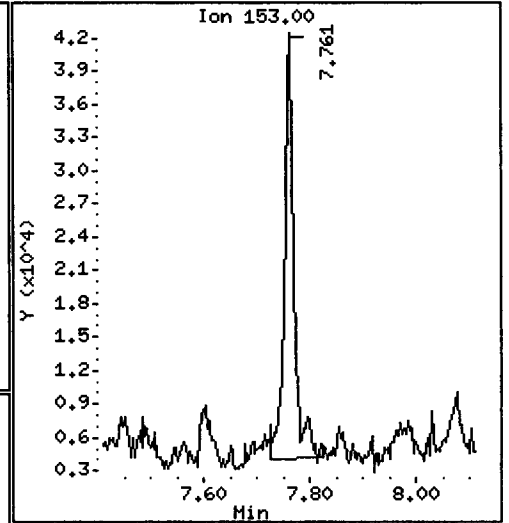
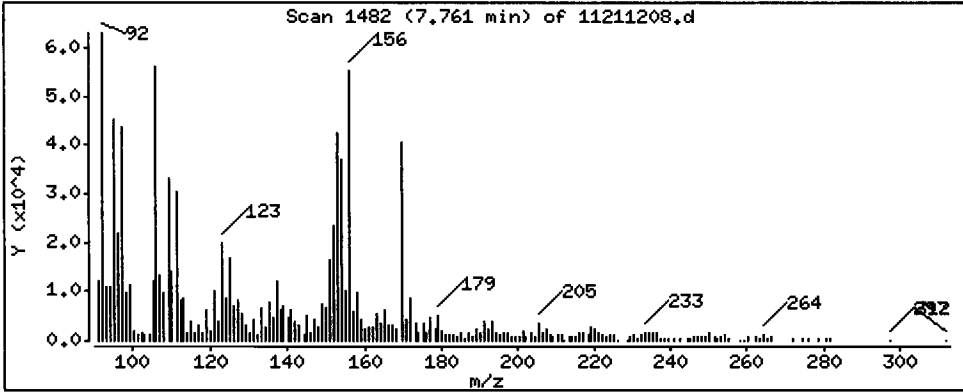
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

23 Acenaphthene

Concentration: 12.21 ug/kg



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

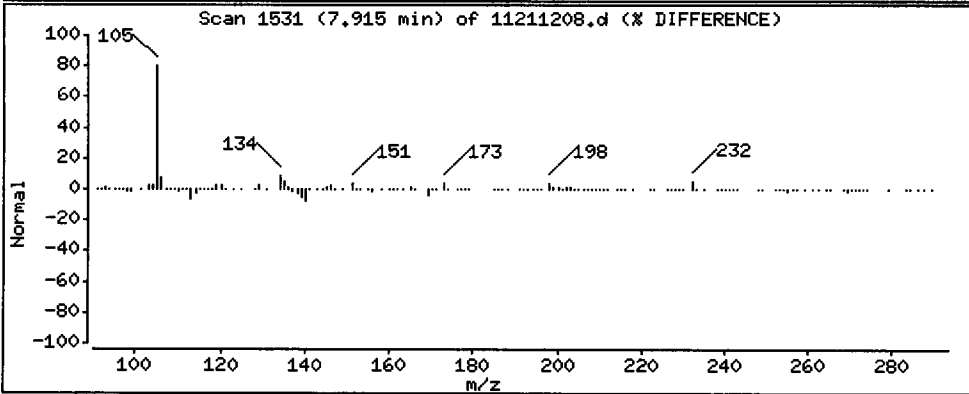
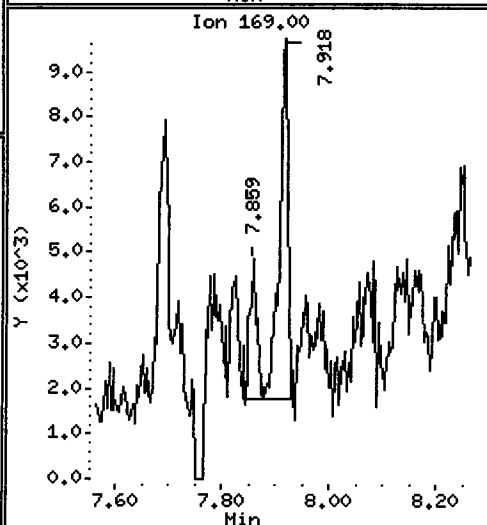
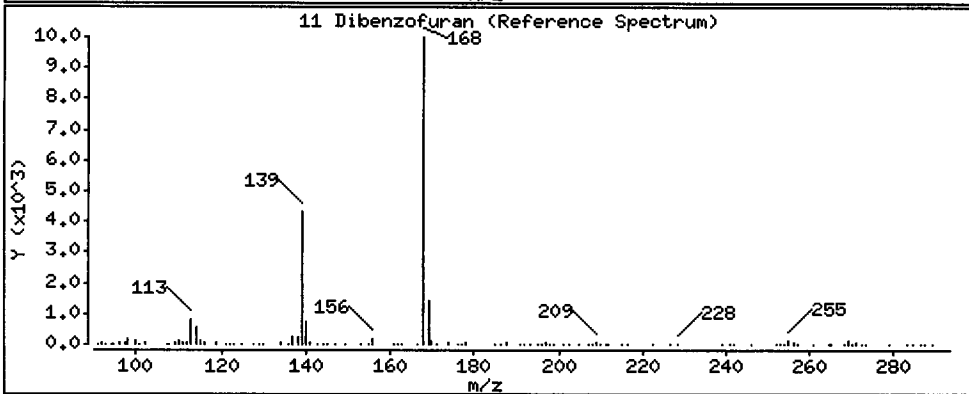
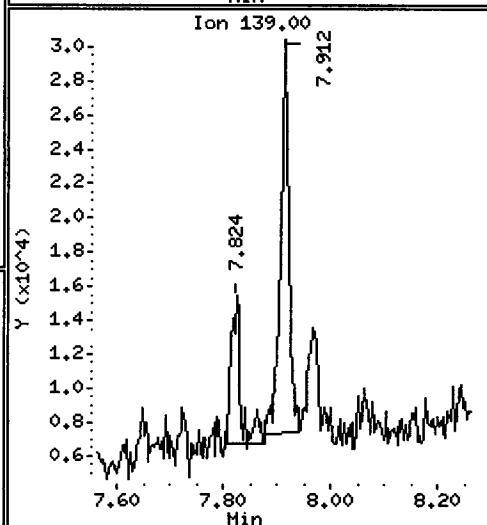
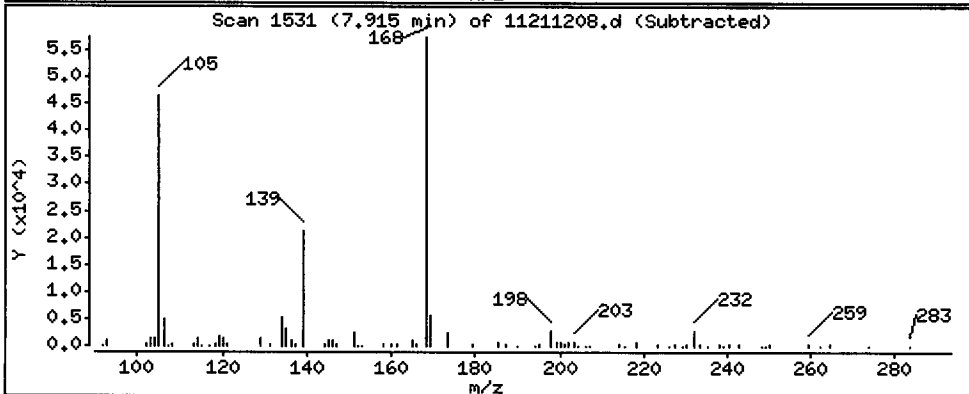
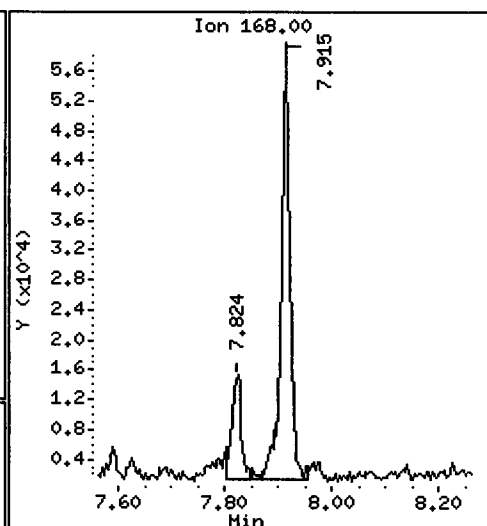
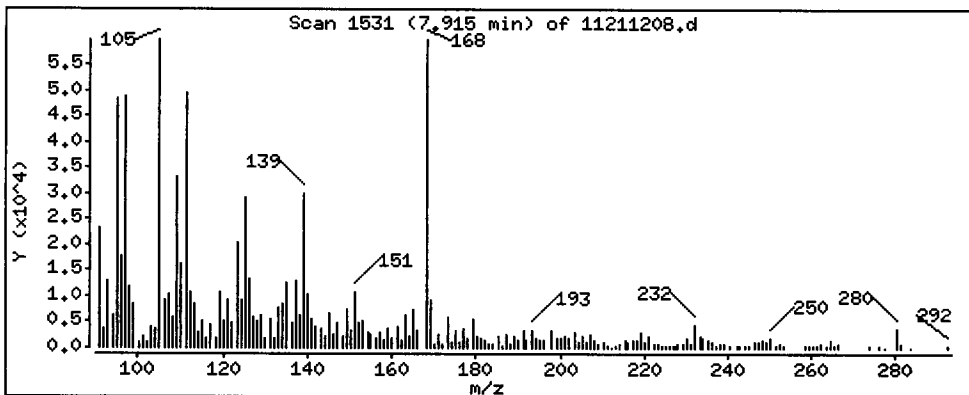
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Dibenzofuran

Concentration: 11.74 ug/kg



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

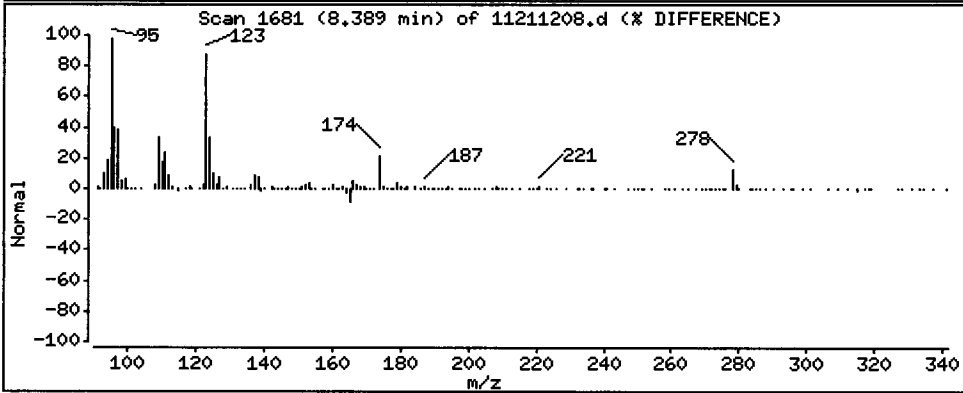
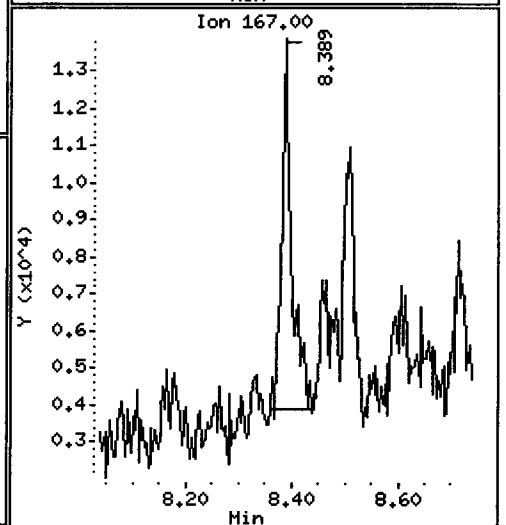
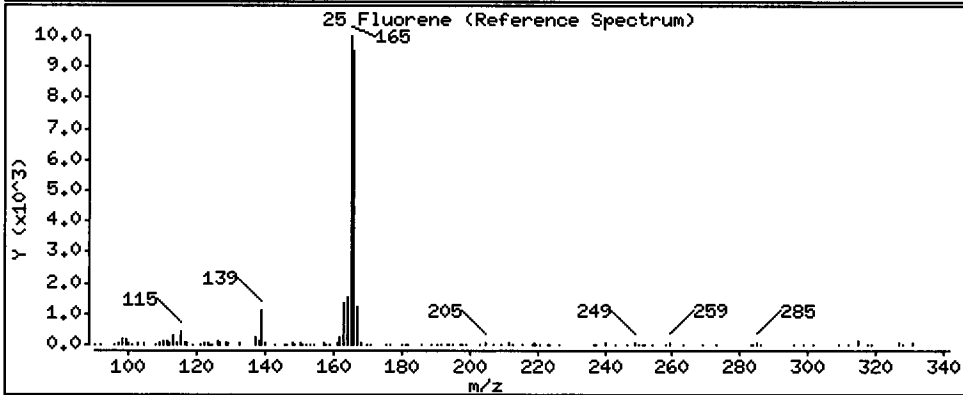
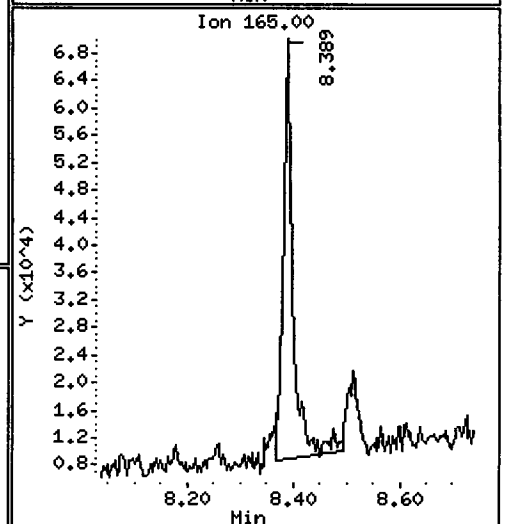
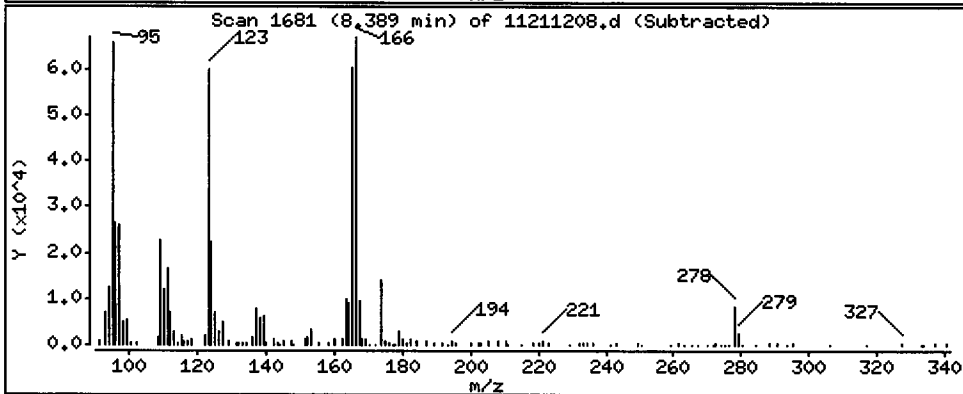
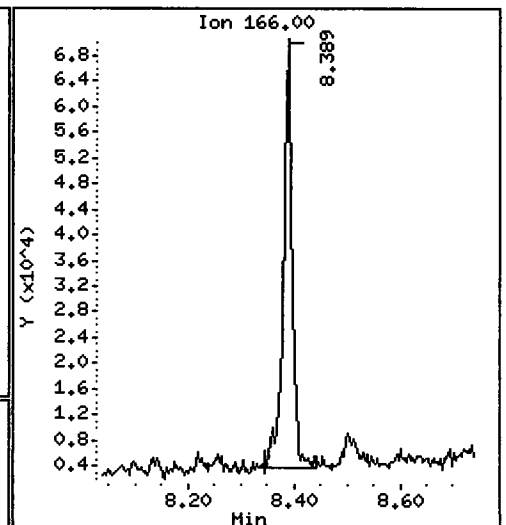
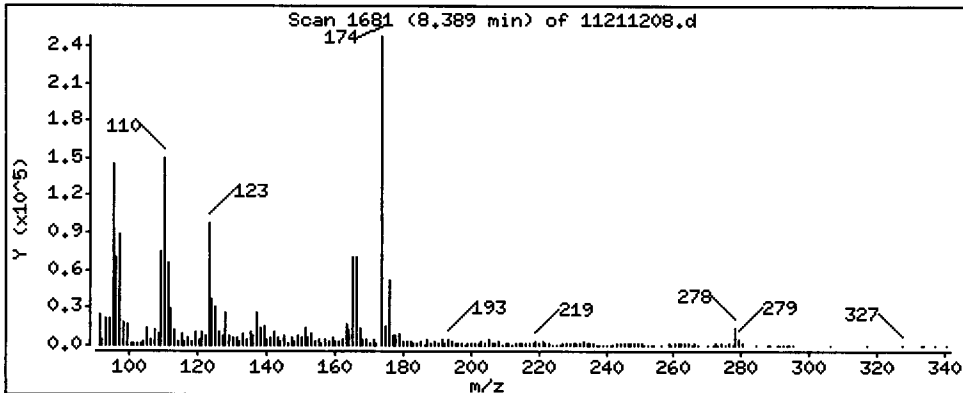
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

25 Fluorene

Concentration: 17.18 ug/kg



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

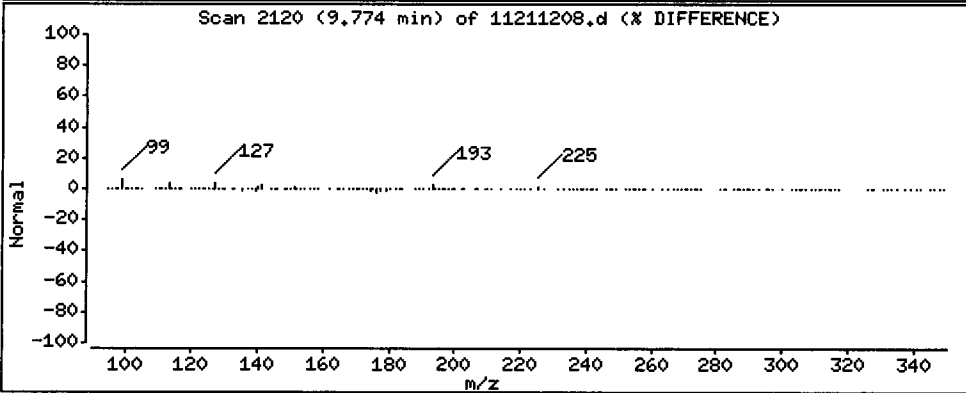
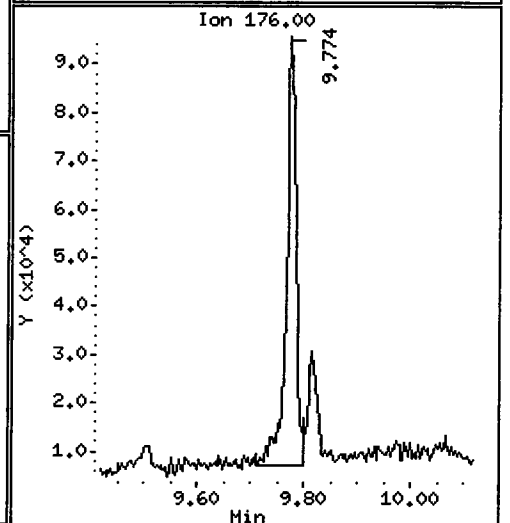
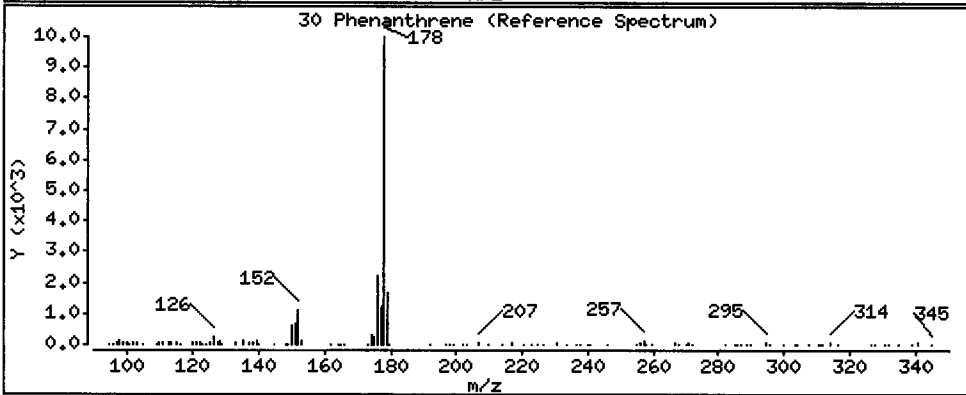
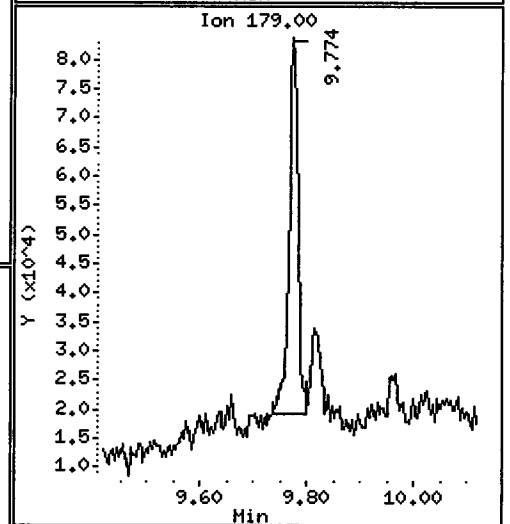
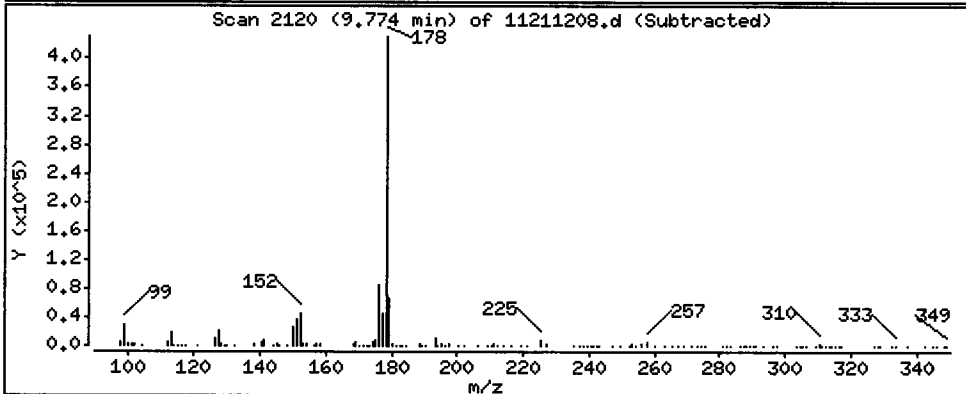
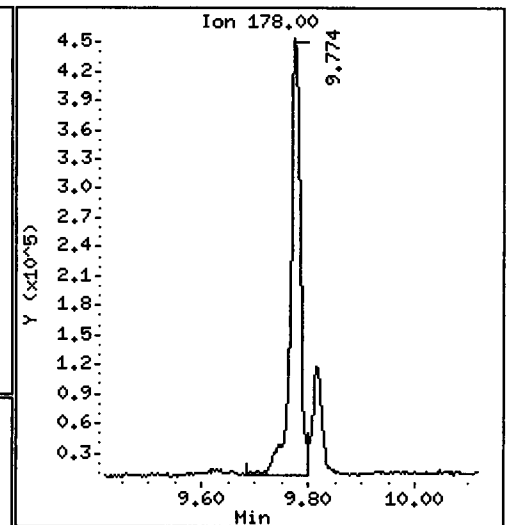
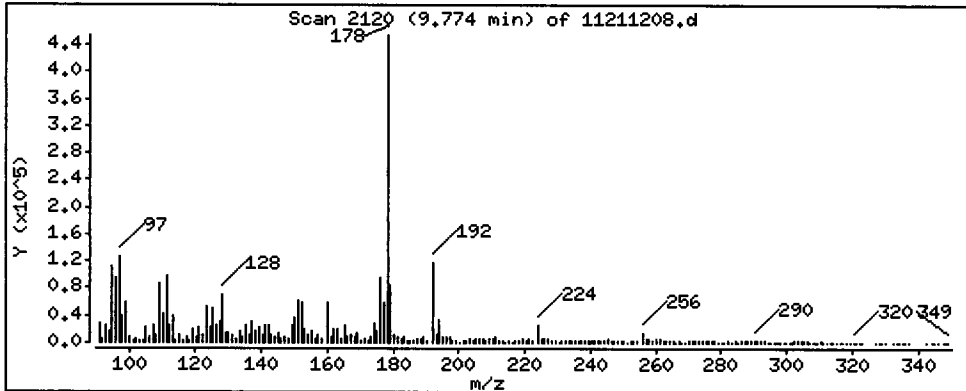
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

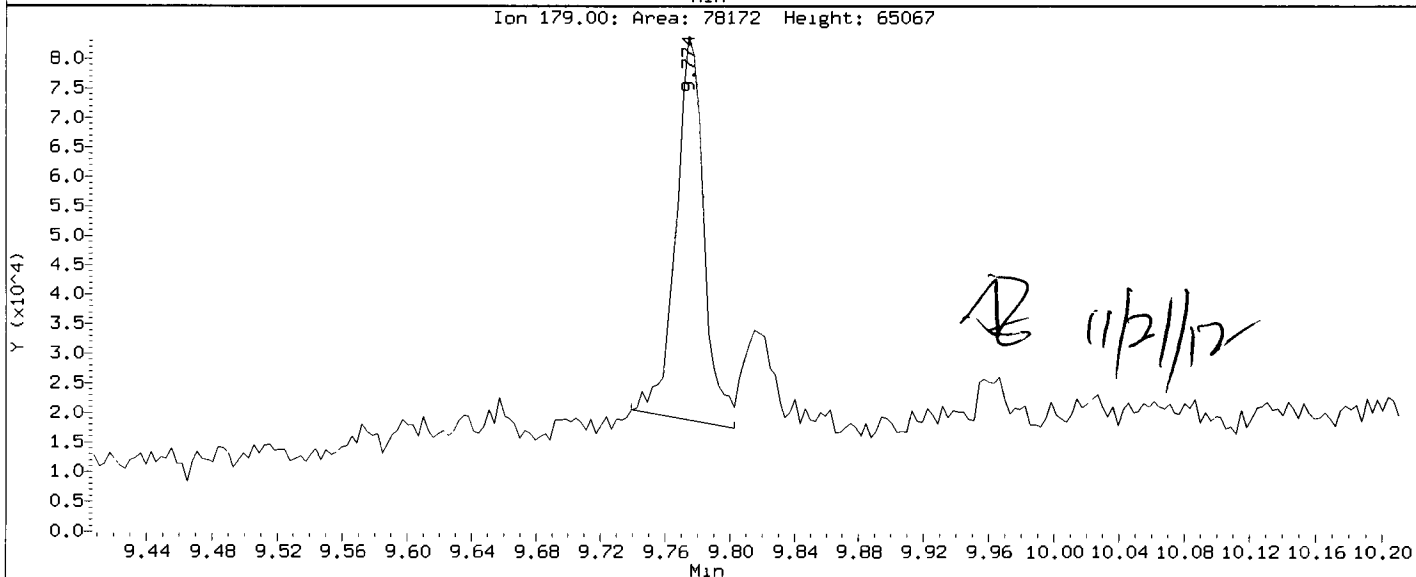
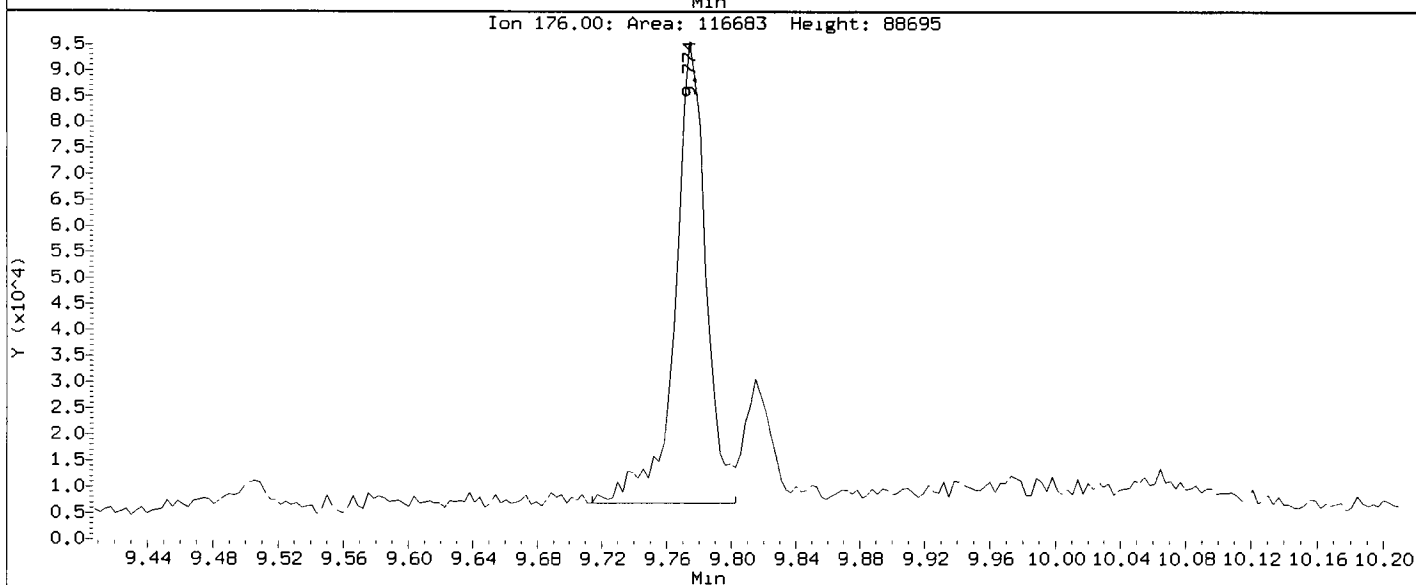
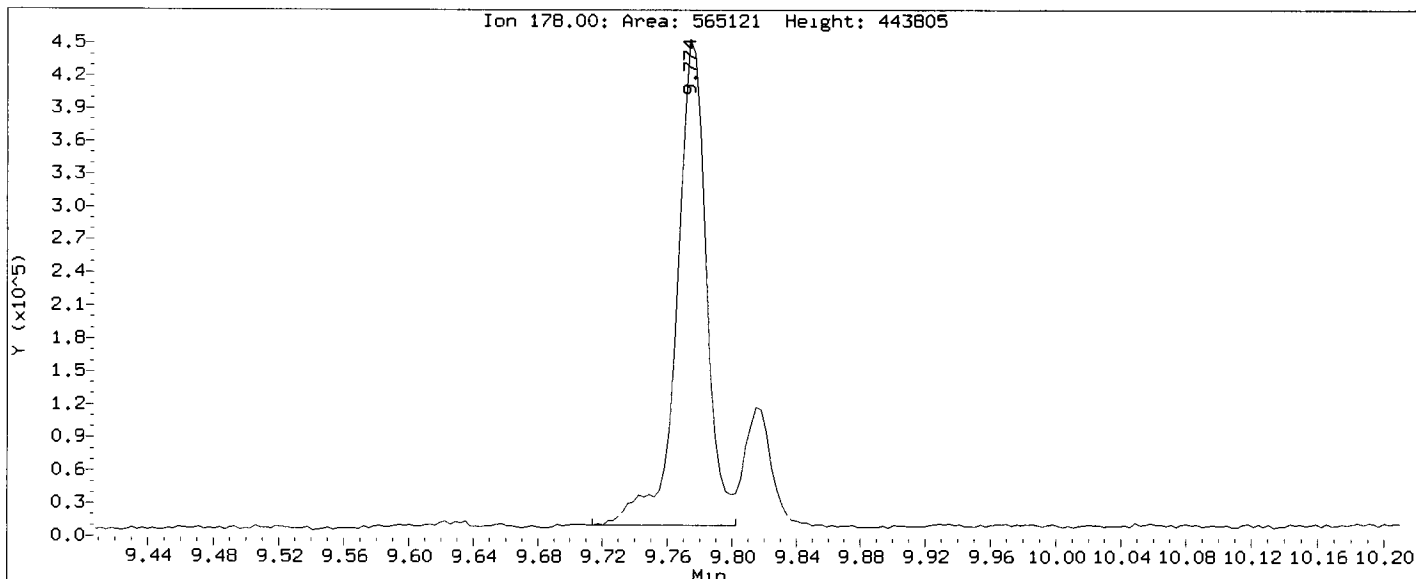
30 Phenanthrene

Concentration: 95.68 ug/kg



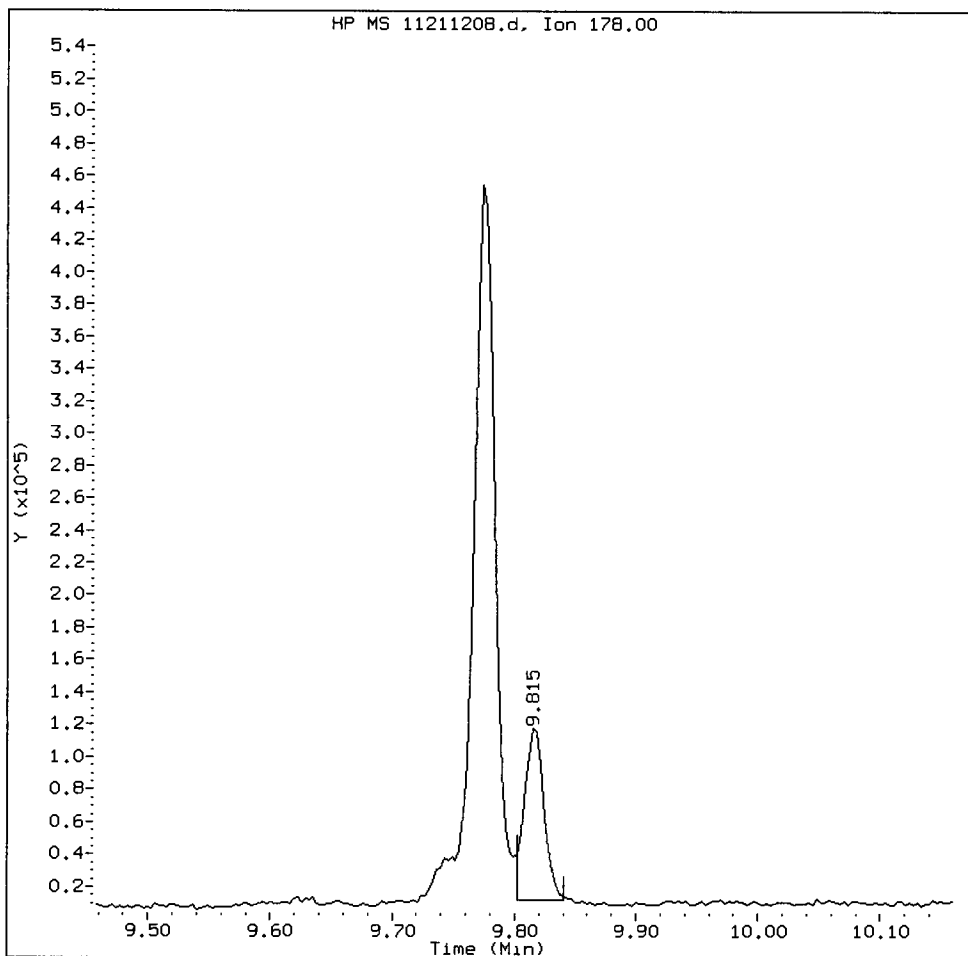
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Injection Date: 21-NOV-2012 14:42  
Instrument: nt11.1  
Client Sample ID: SG-13-S-E-121107

Compound: Anthracene  
CAS Number: 120-12-7



VR58D, /chem3/nt11.i/20121121.b/11211208.d

Anthracene Amount: 0.42 Area: 120523



MANUAL INTEGRATION for Anthracene

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

5. Other \_\_\_\_\_

Analyst: AE

Date: 11/21/12

Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

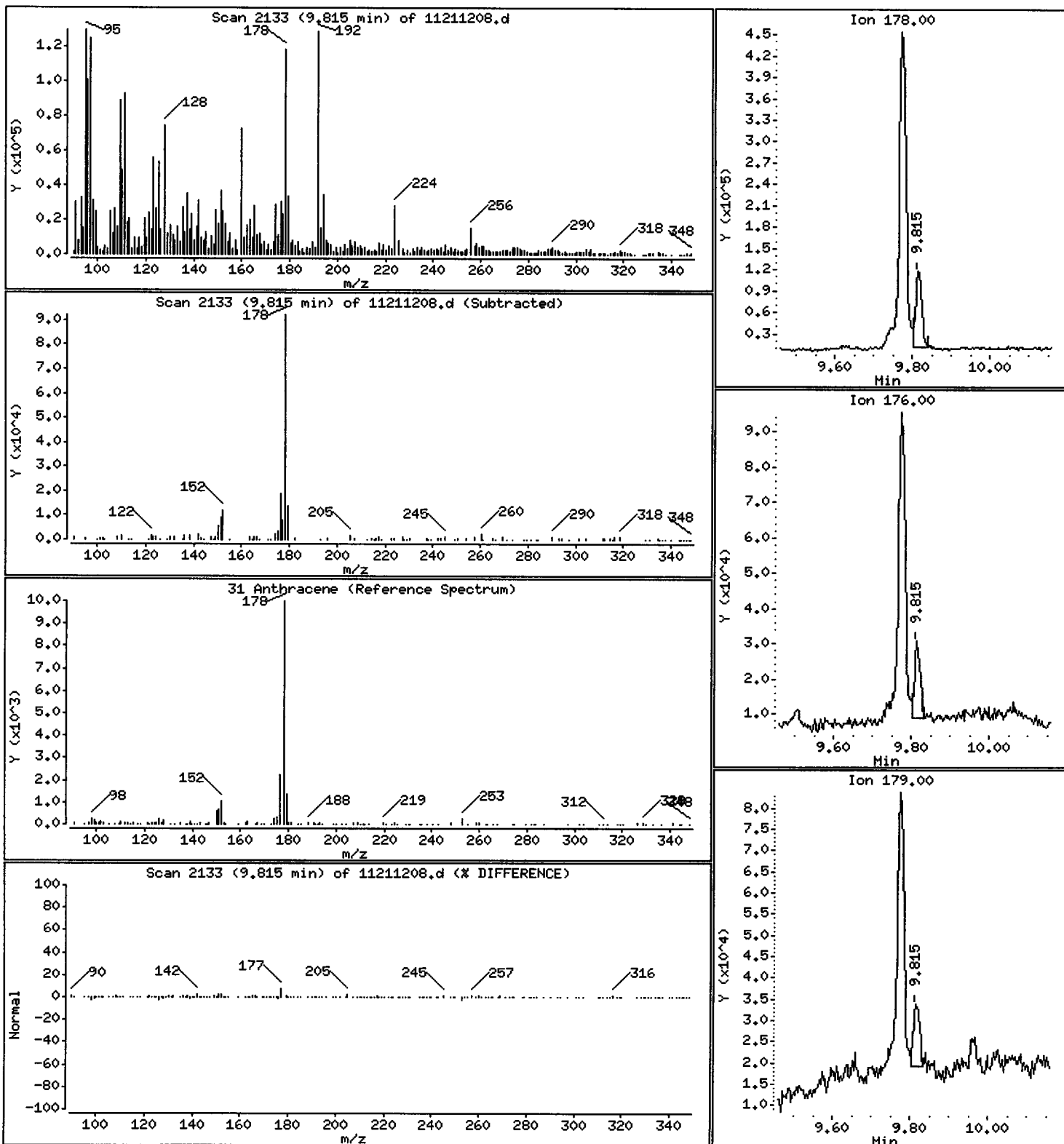
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

31 Anthracene

Concentration: 20.81 ug/kg



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

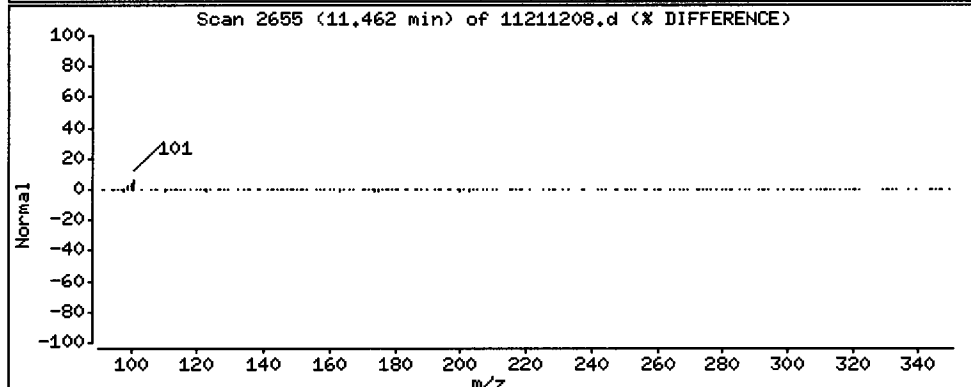
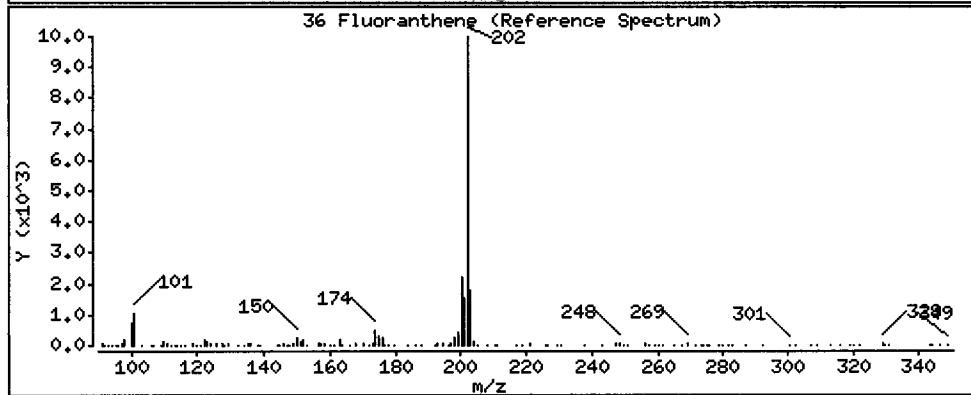
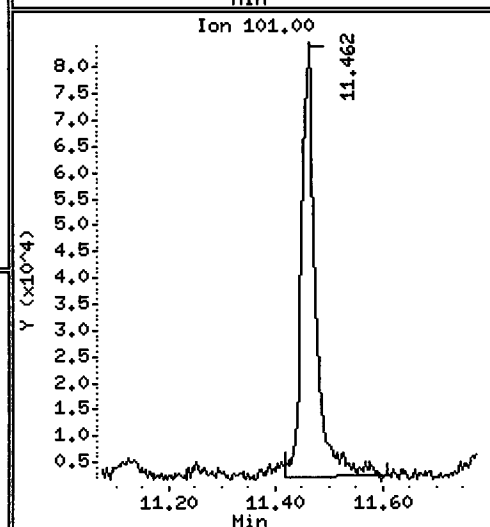
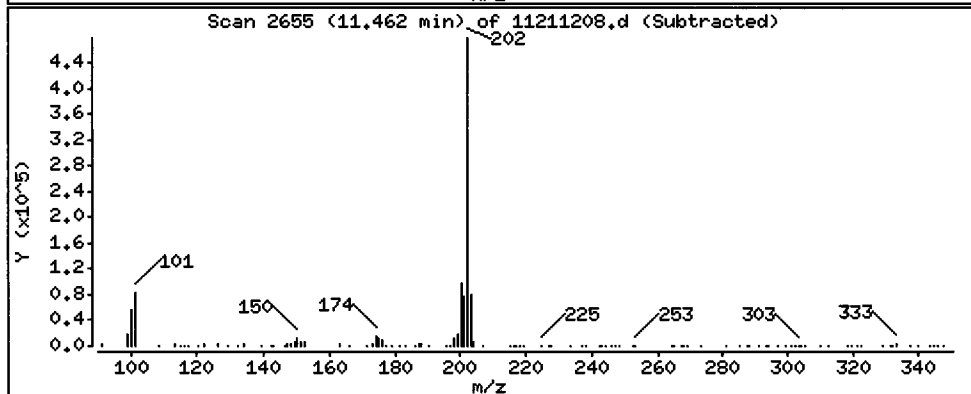
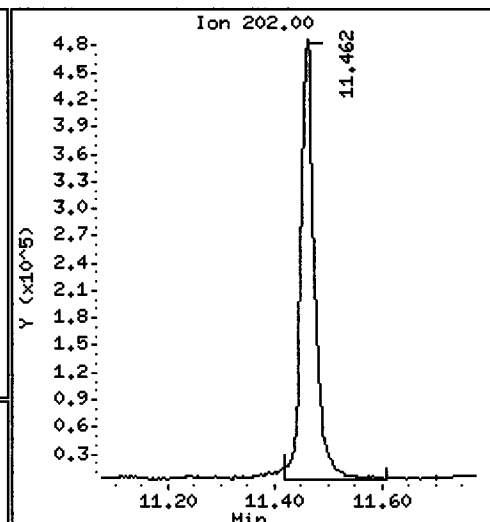
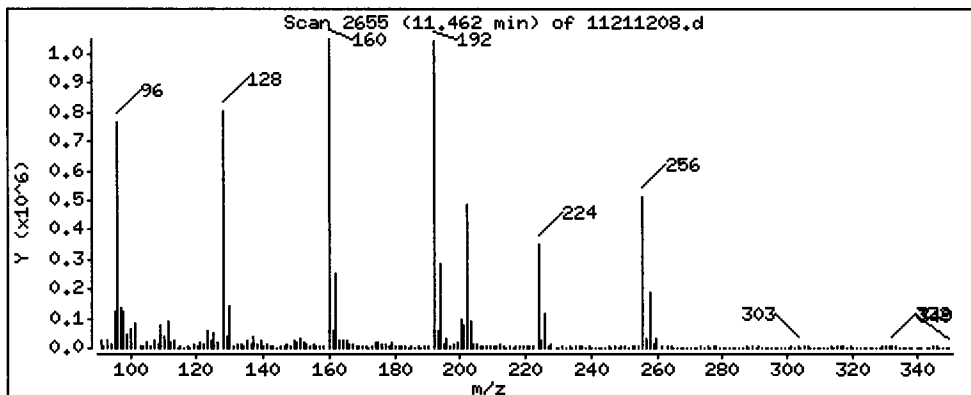
Operator: JZ

Column phase: ZB-5ms1

Column diameter: 0.25

36 Fluoranthene

Concentration: 141.4 ug/kg





Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

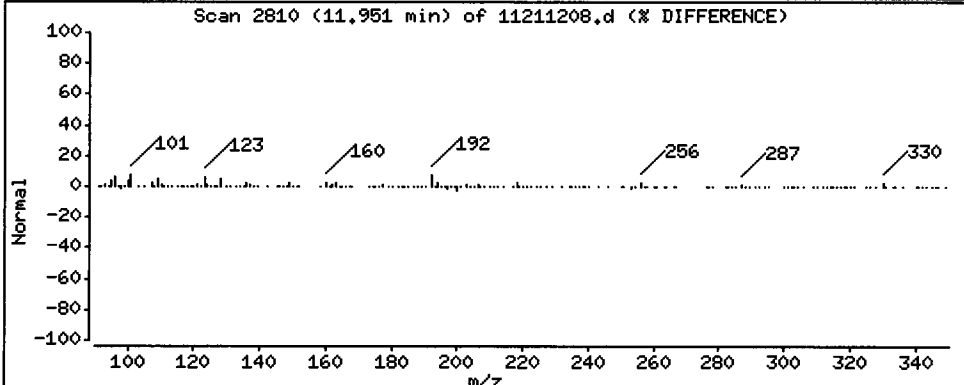
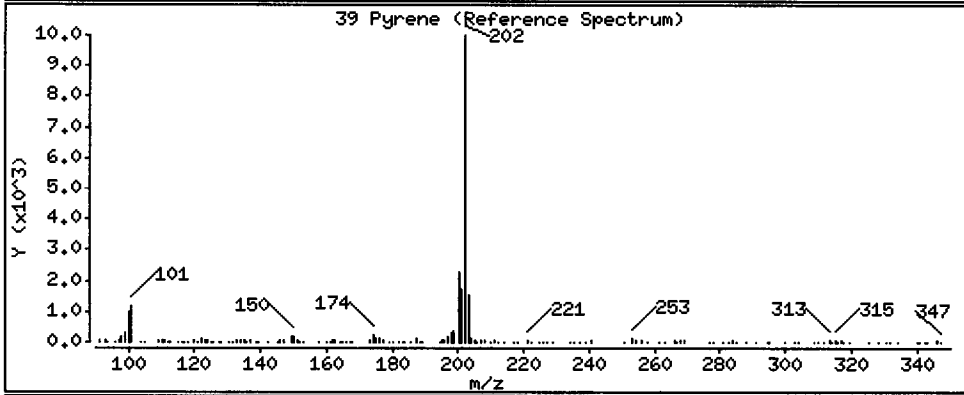
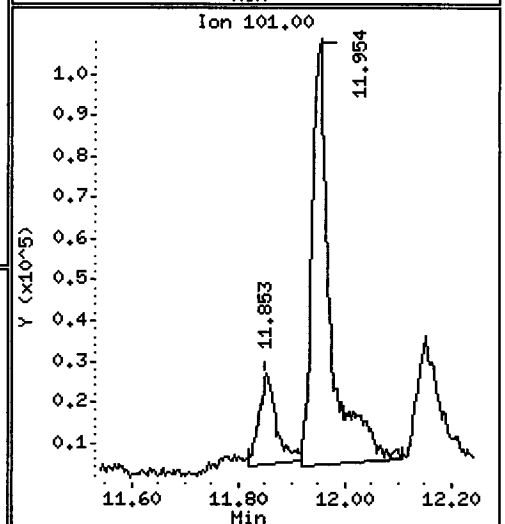
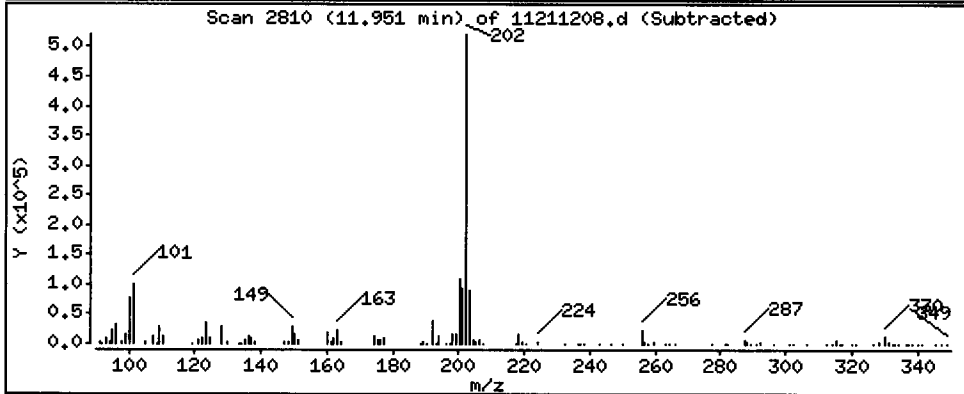
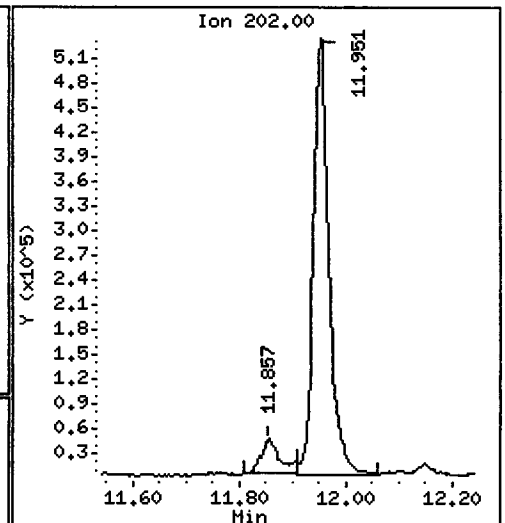
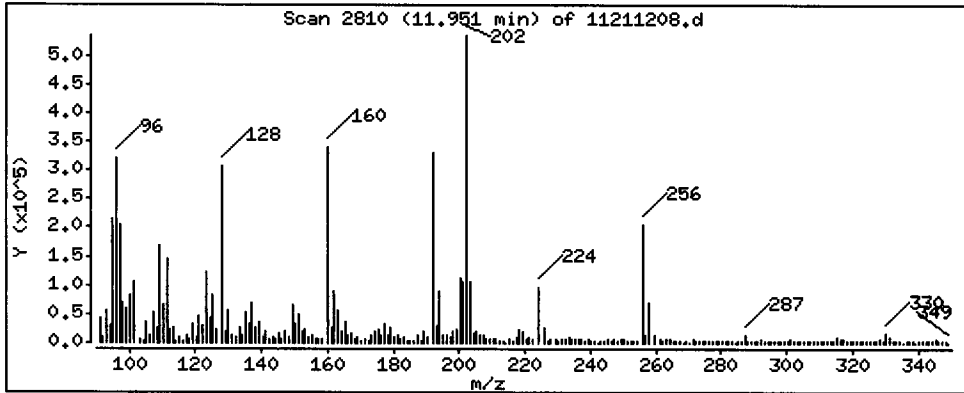
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

39 Pyrene

Concentration: 226.7 ug/kg



Date: 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

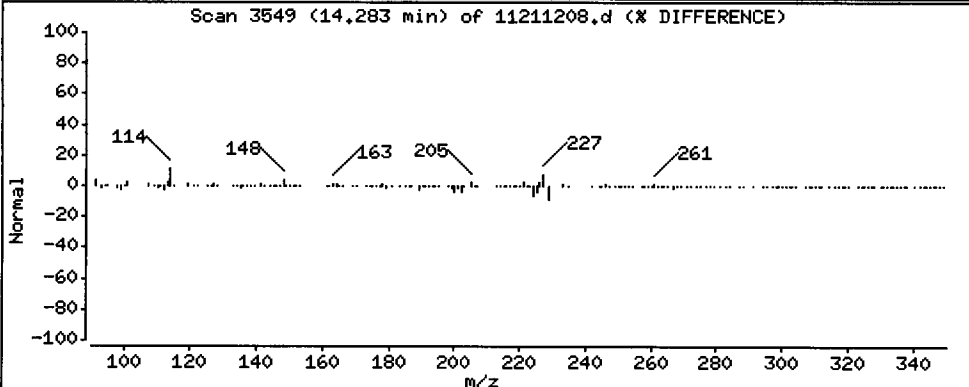
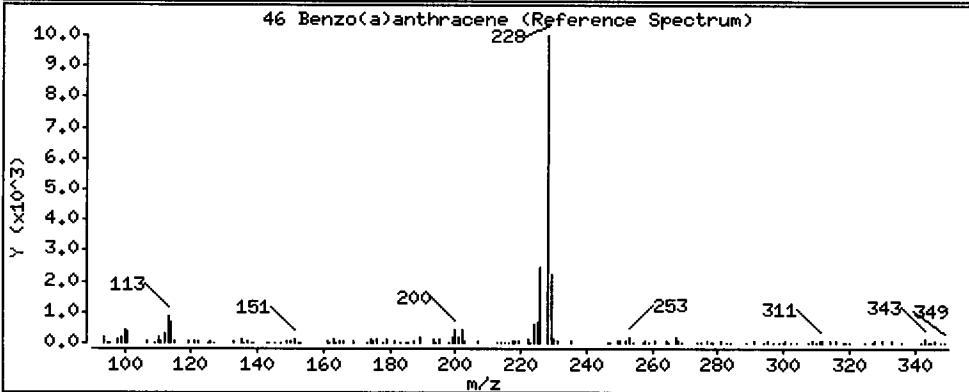
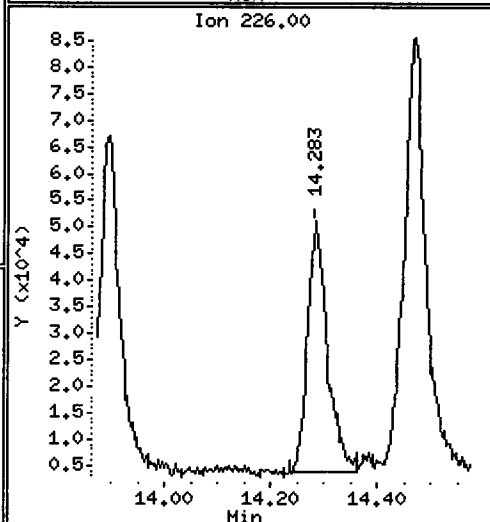
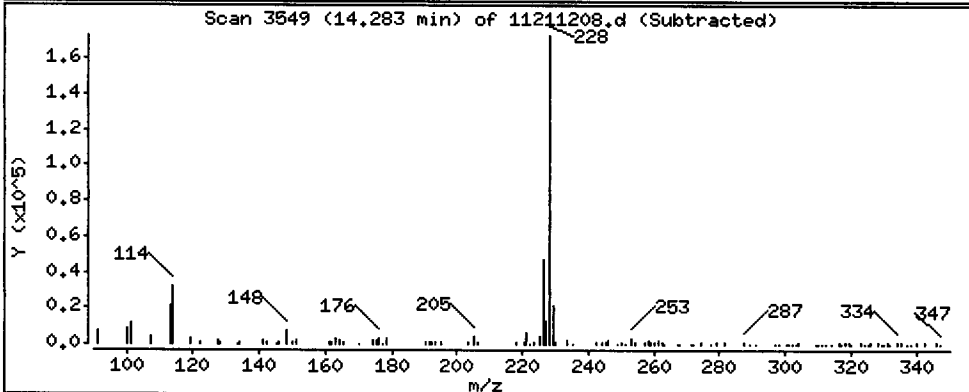
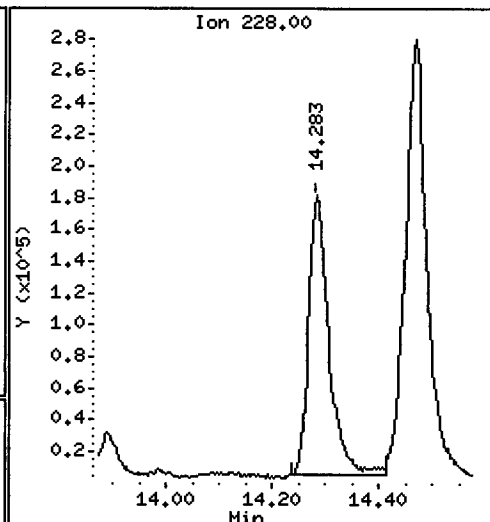
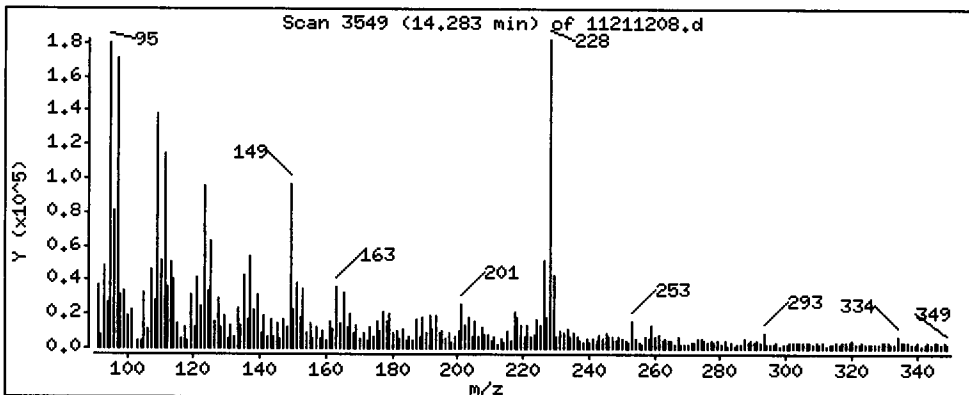
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Benzo(a)anthracene

Concentration: 109.1 ug/kg



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

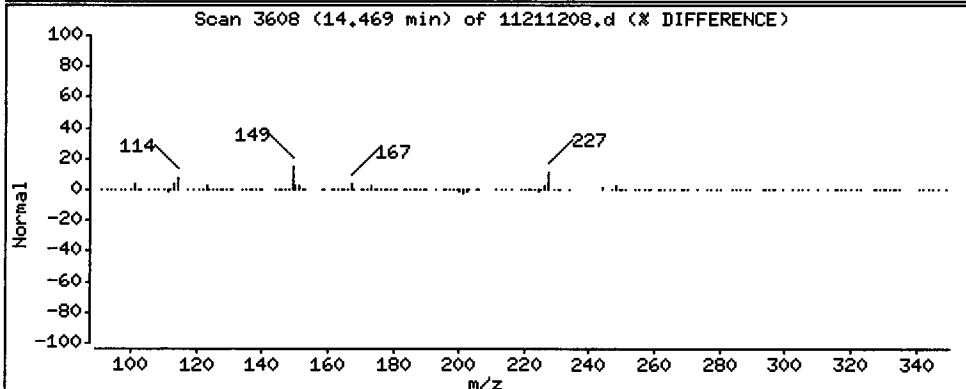
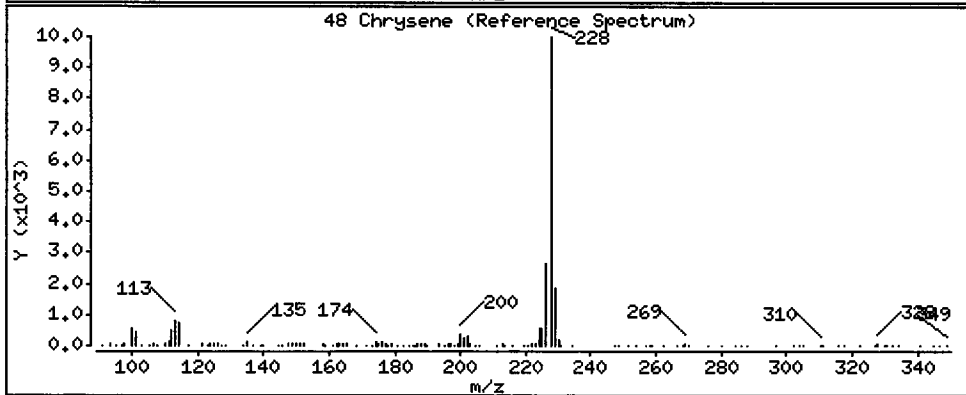
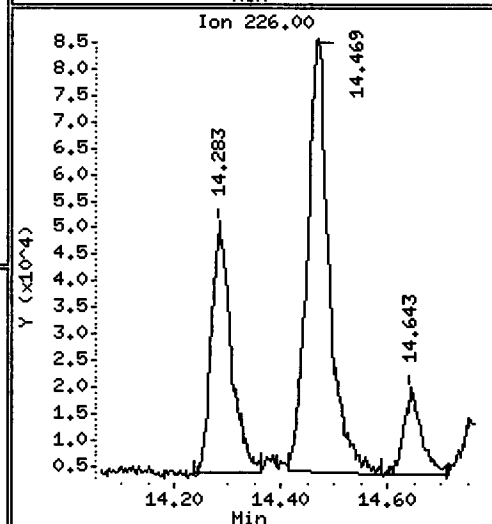
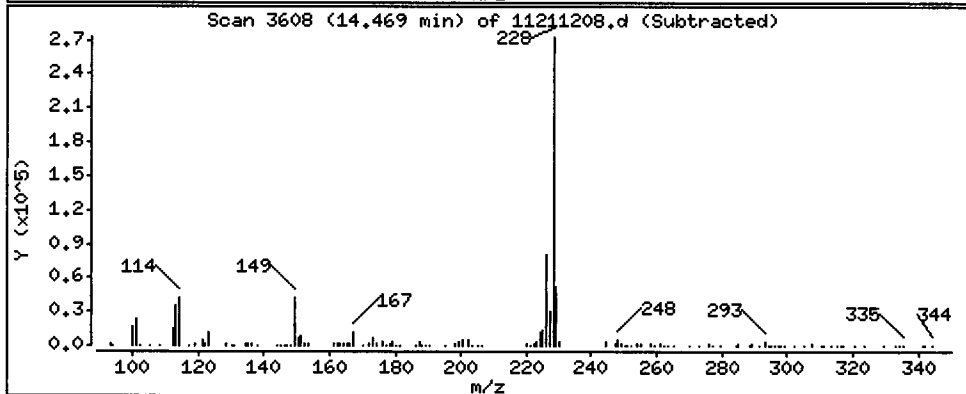
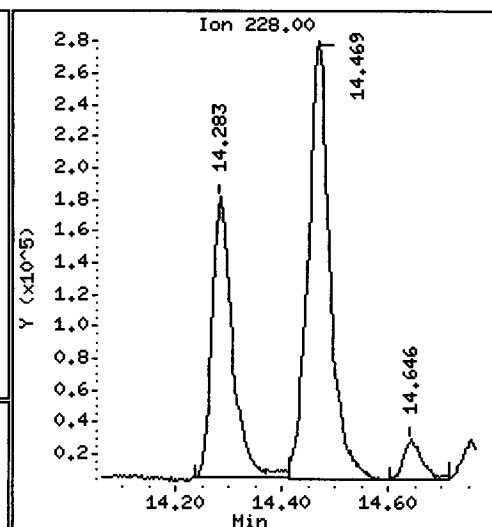
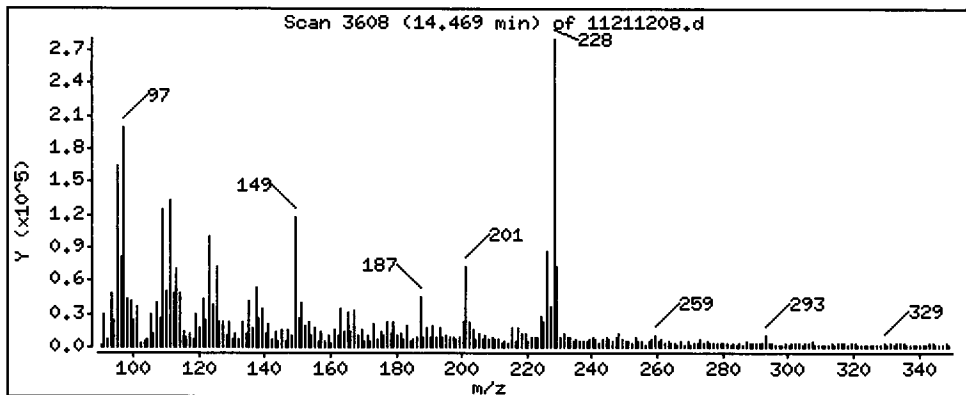
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

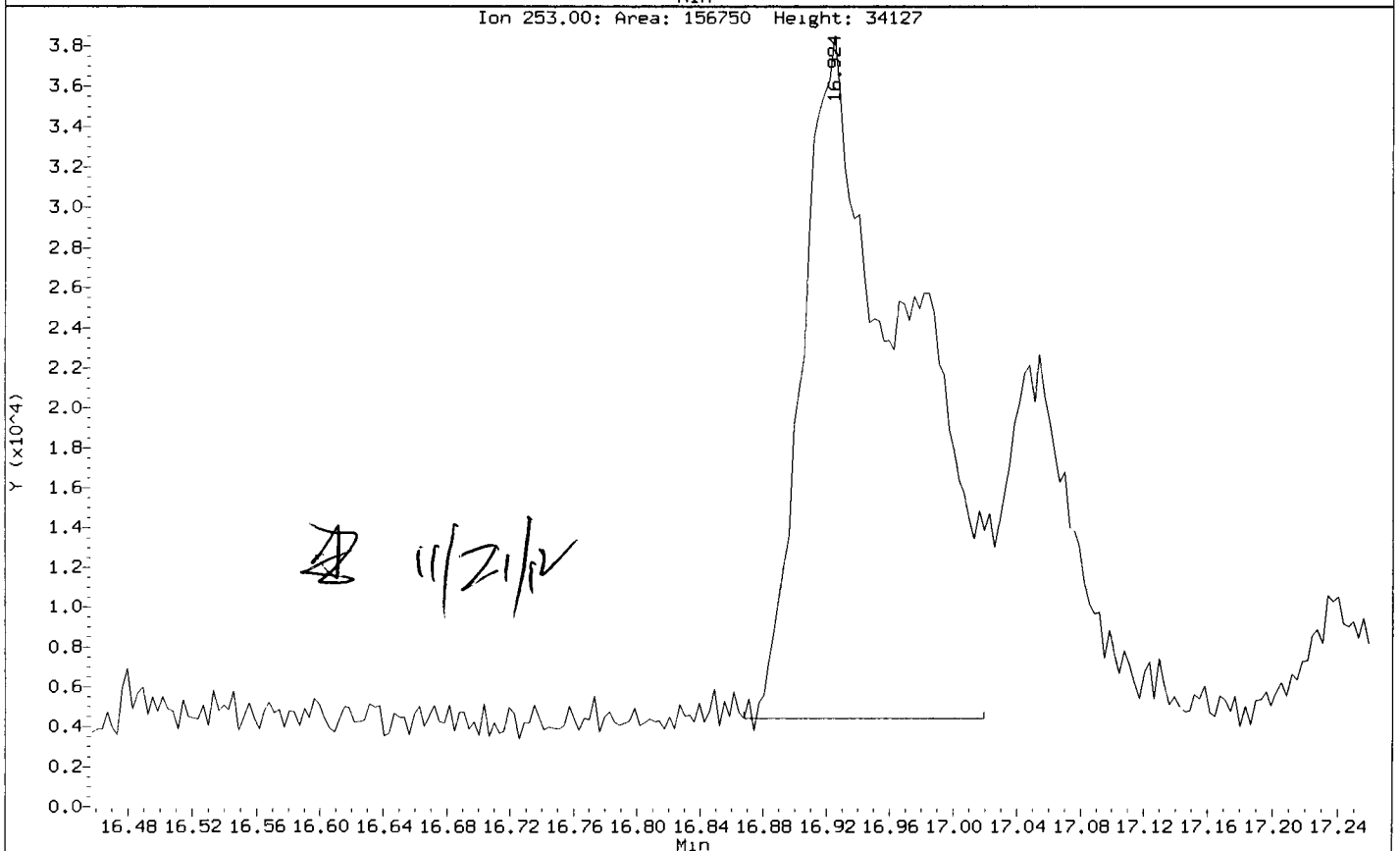
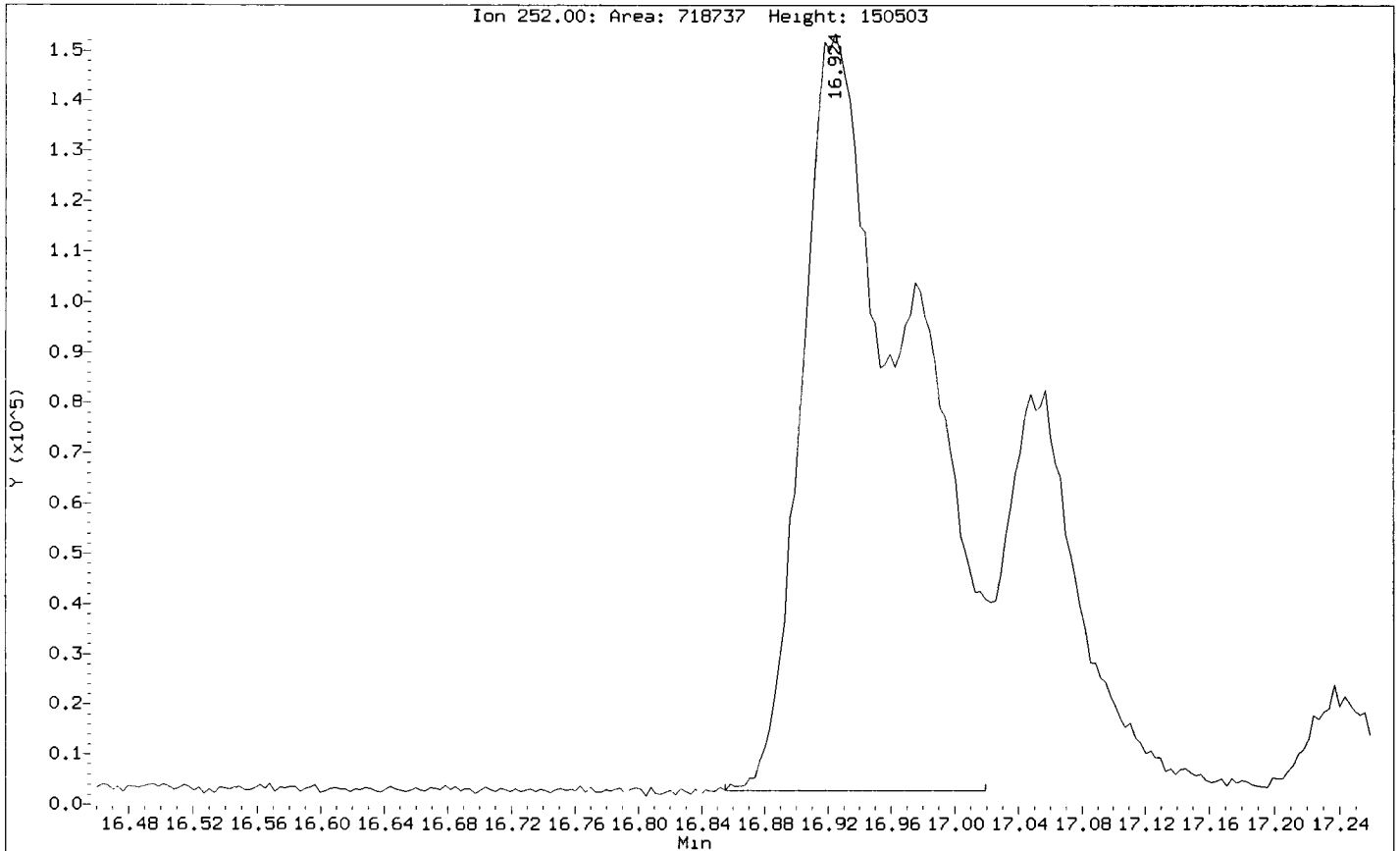
48 Chrysene

Concentration: 185.2 ug/kg

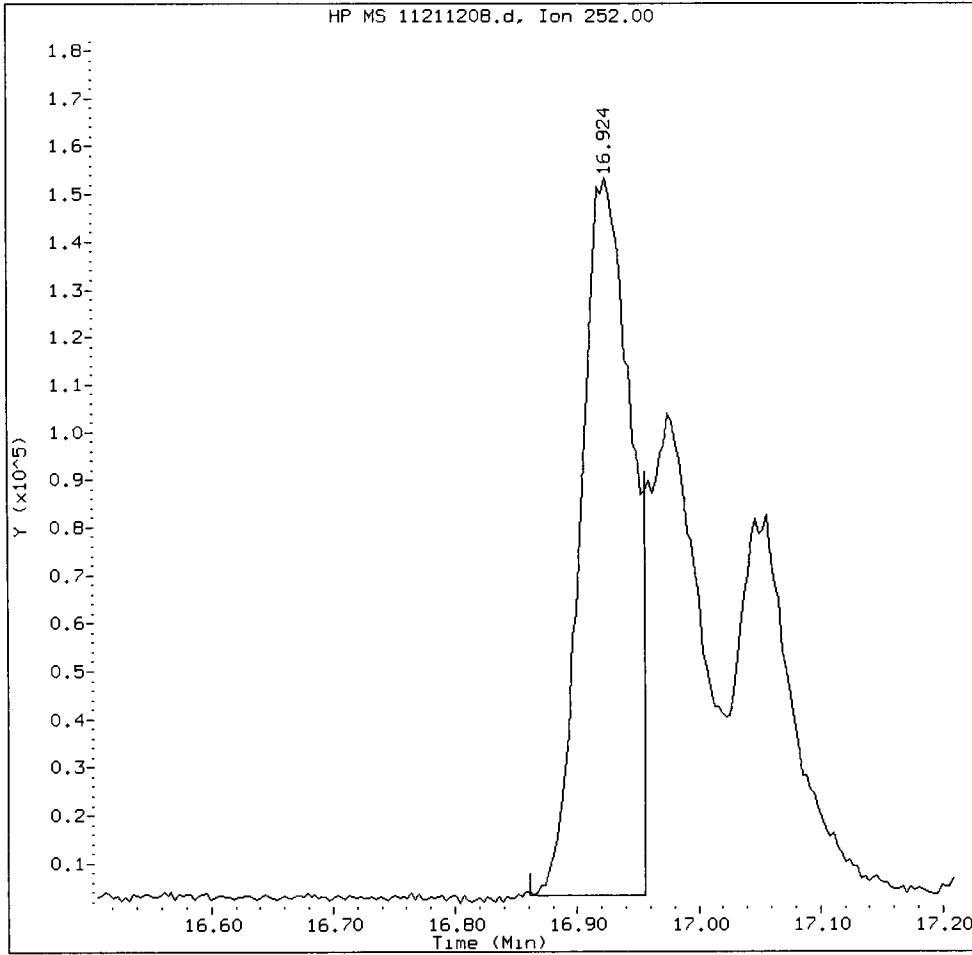


Data File: /chem3/nt11.1/20121121.b/11211208.d  
Injection Date: 21-NOV-2012 14:42  
Instrument: nt11.1  
Client Sample ID: SG-13-S-E-121107

Compound: Benzo(b)fluoranthene  
CAS Number: 205-99-2



Benzo(b)fluoranthene Amount: 3.28 Area: 440947



MANUAL INTEGRATION for Benzo(b)fluoranthene

- 1. Baseline correction
- ②. Poor chromatography
- 3. Peak not found
- 4. Totals calculation
- 5. Other \_\_\_\_\_

Analyst: AB

Date: 11/21/12

Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.1

Sample Info: VR58D

Volume Injected (uL): 1.0

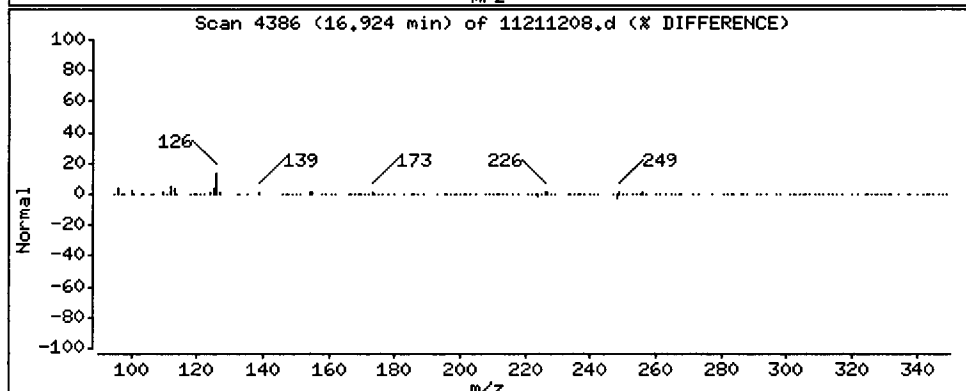
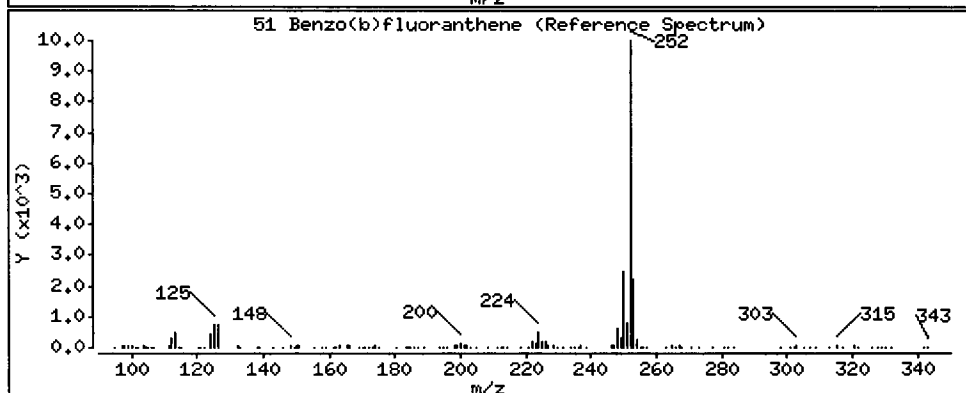
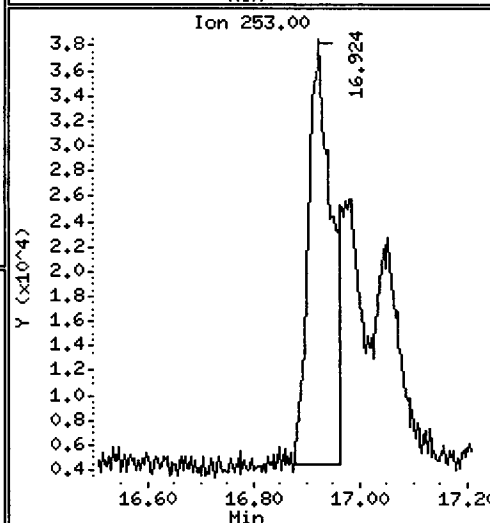
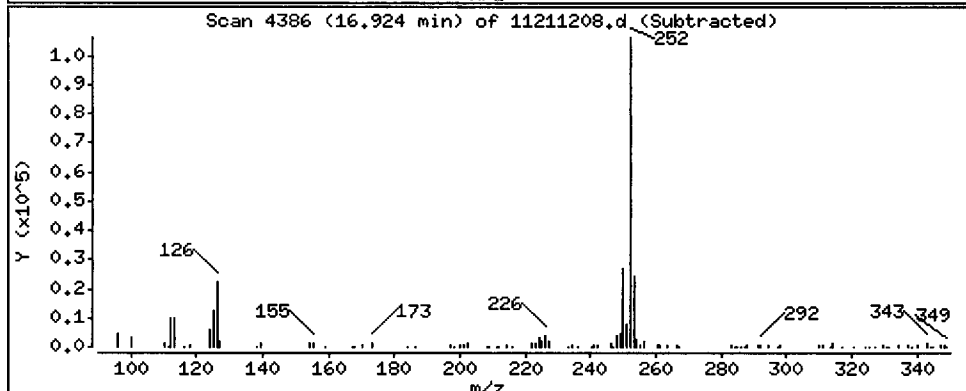
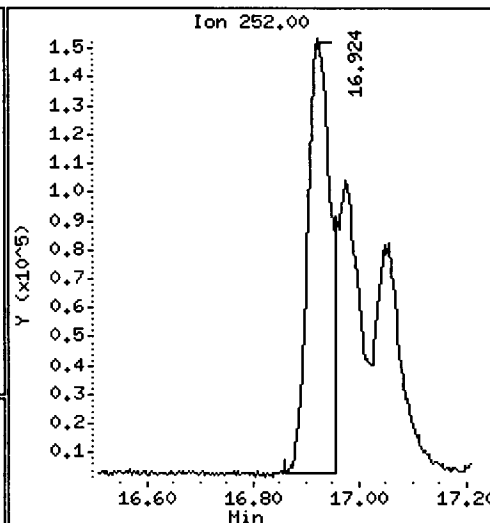
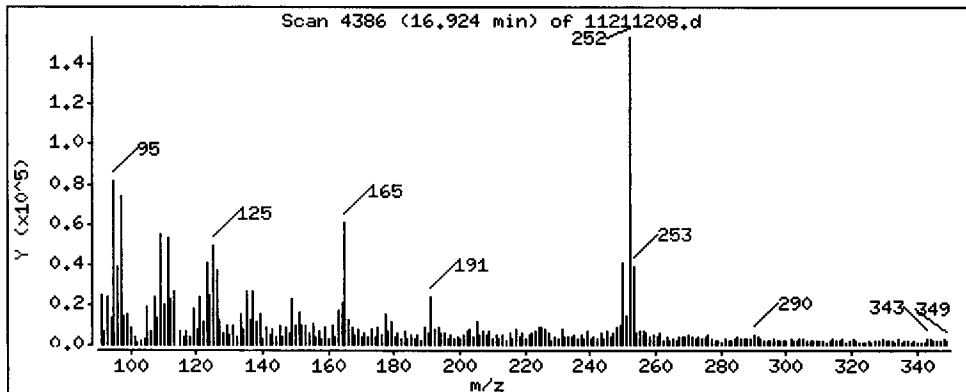
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

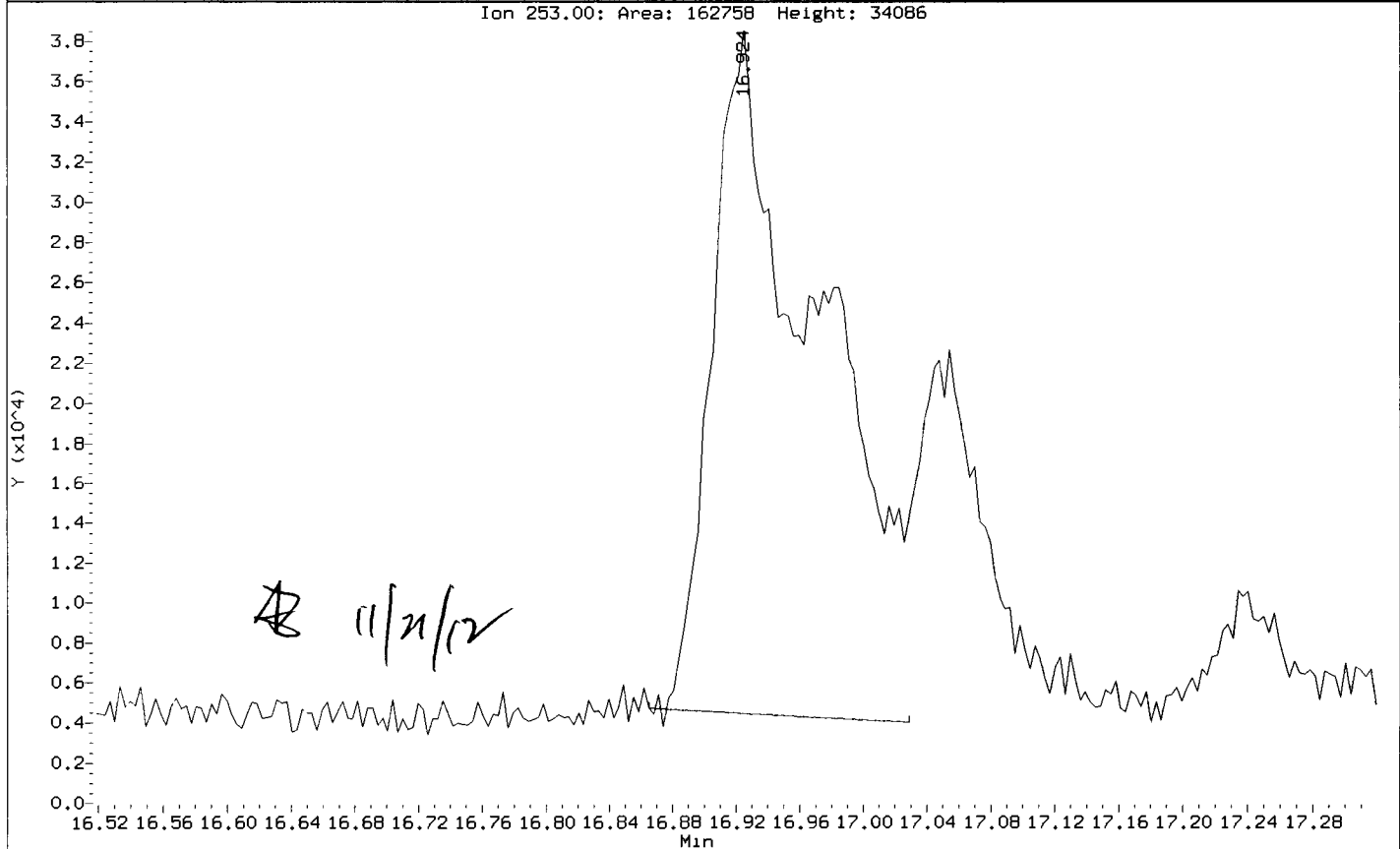
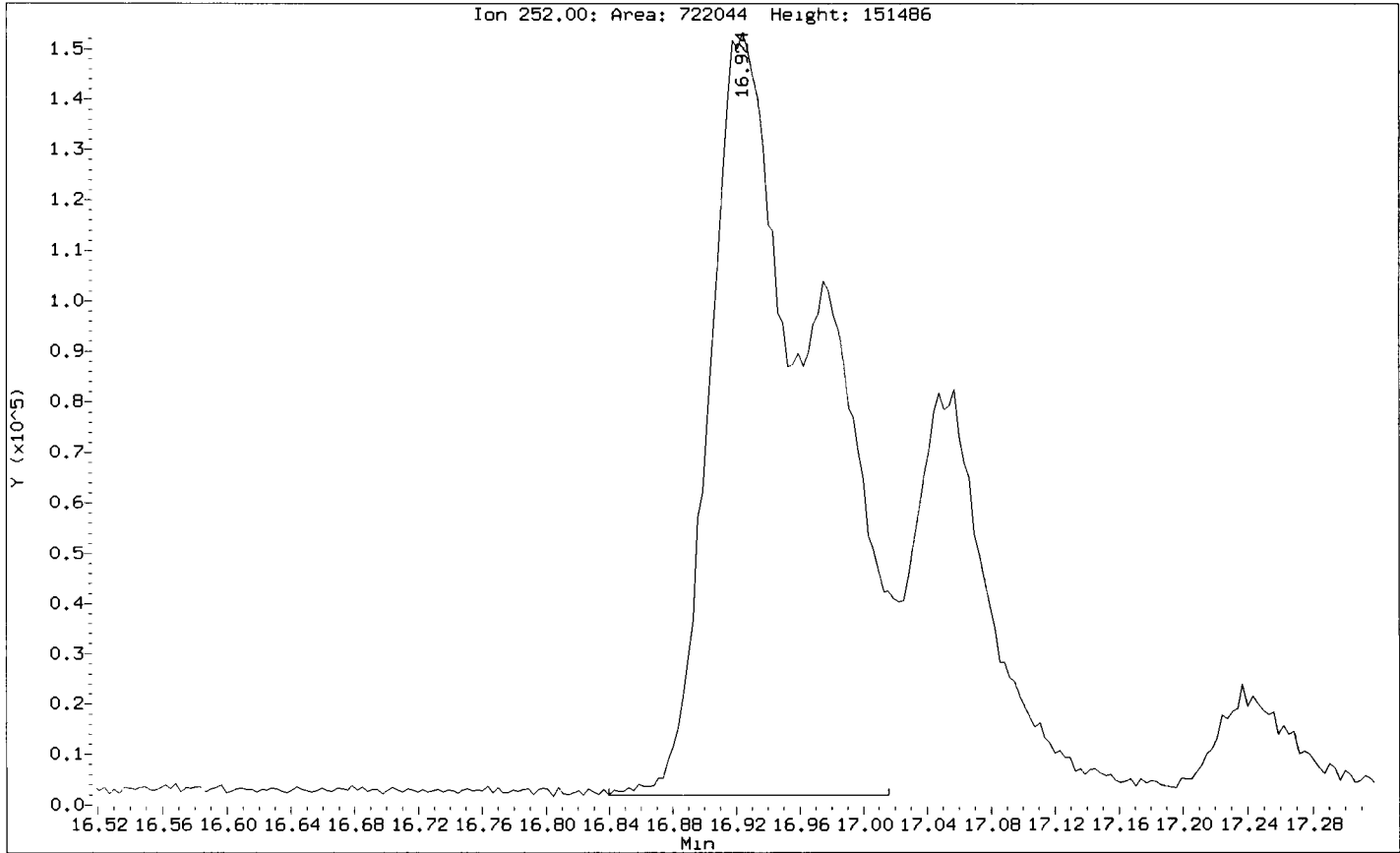
51 Benzo(b)fluoranthene

Concentration: 162.6 ug/kg



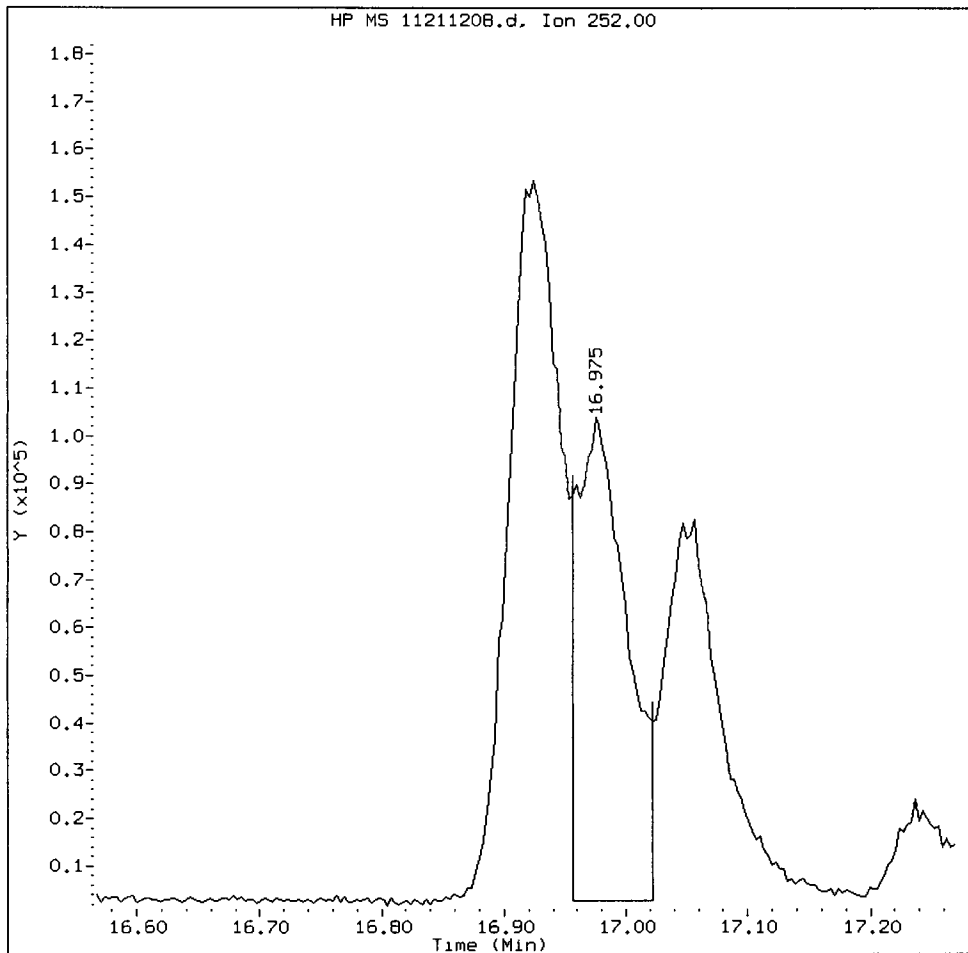
Data File: /chem3/nt11.1/20121121.b/11211208.d  
Injection Date: 21-NOV-2012 14:42  
Instrument: nt11.1  
Client Sample ID: SG-13-S-E-121107

Compound: Benzo(k)fluoranthene  
CAS Number: 207-08-9



VR58D, /chem3/nt11.i/20121121.b/11211208.d

Benzo(k)fluoranthene Amount: 2.05 Area: 299267



MANUAL INTEGRATION for Benzo(k)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AB

Date: 11/21/12



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

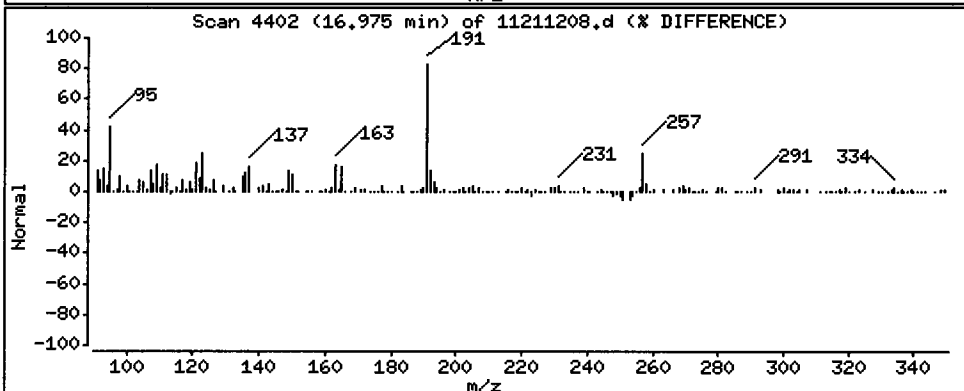
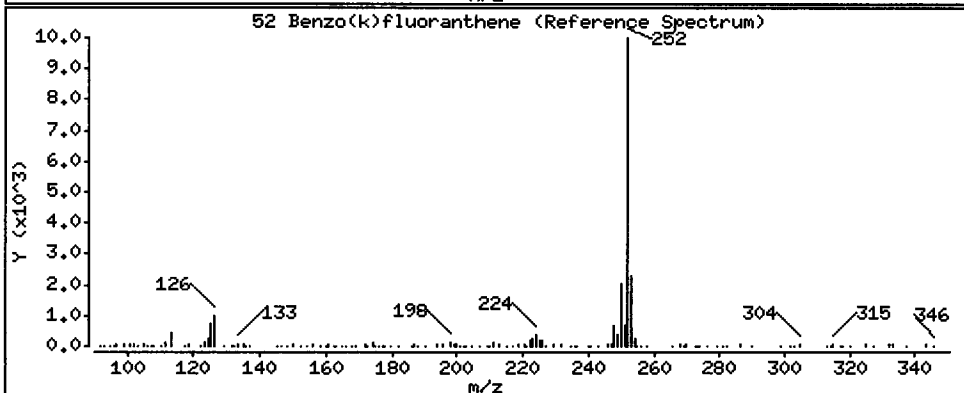
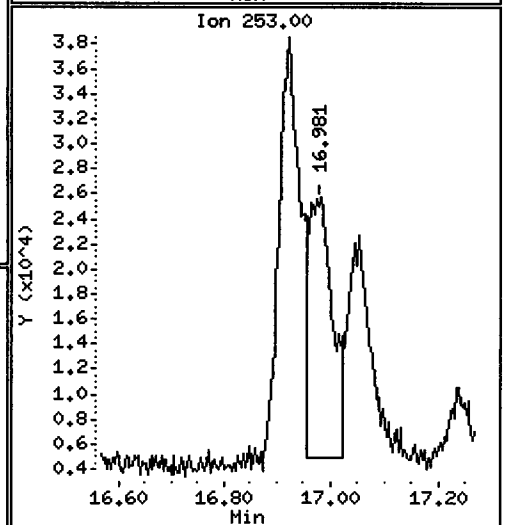
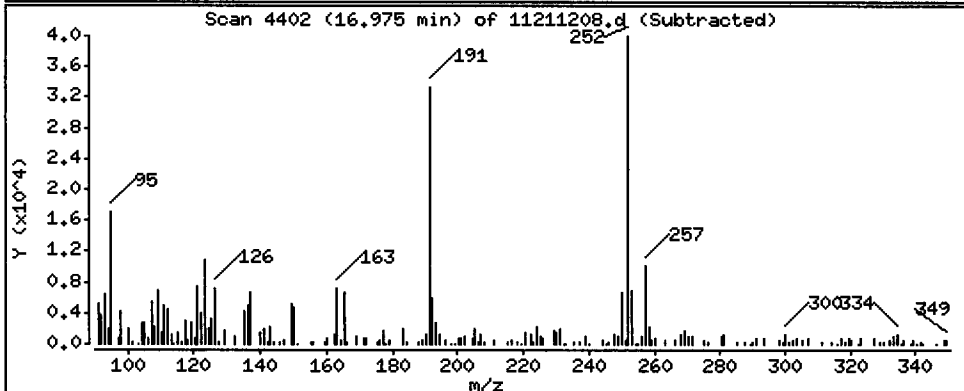
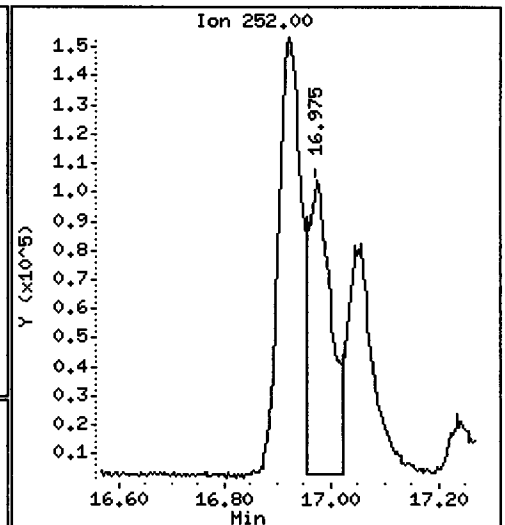
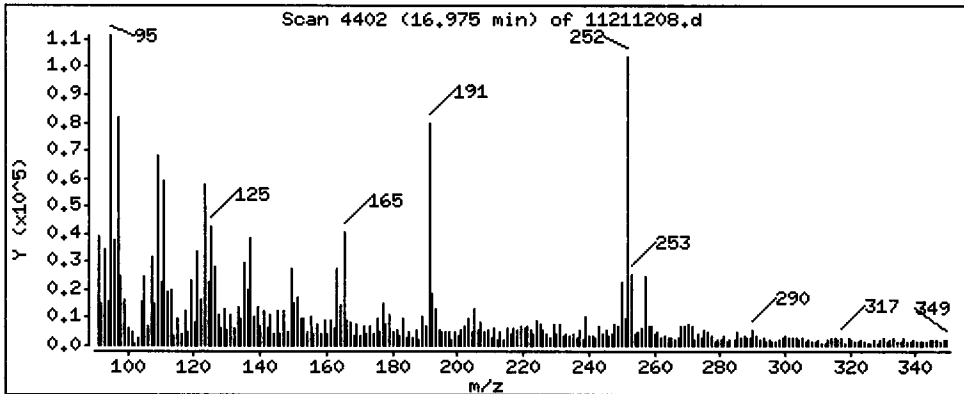
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

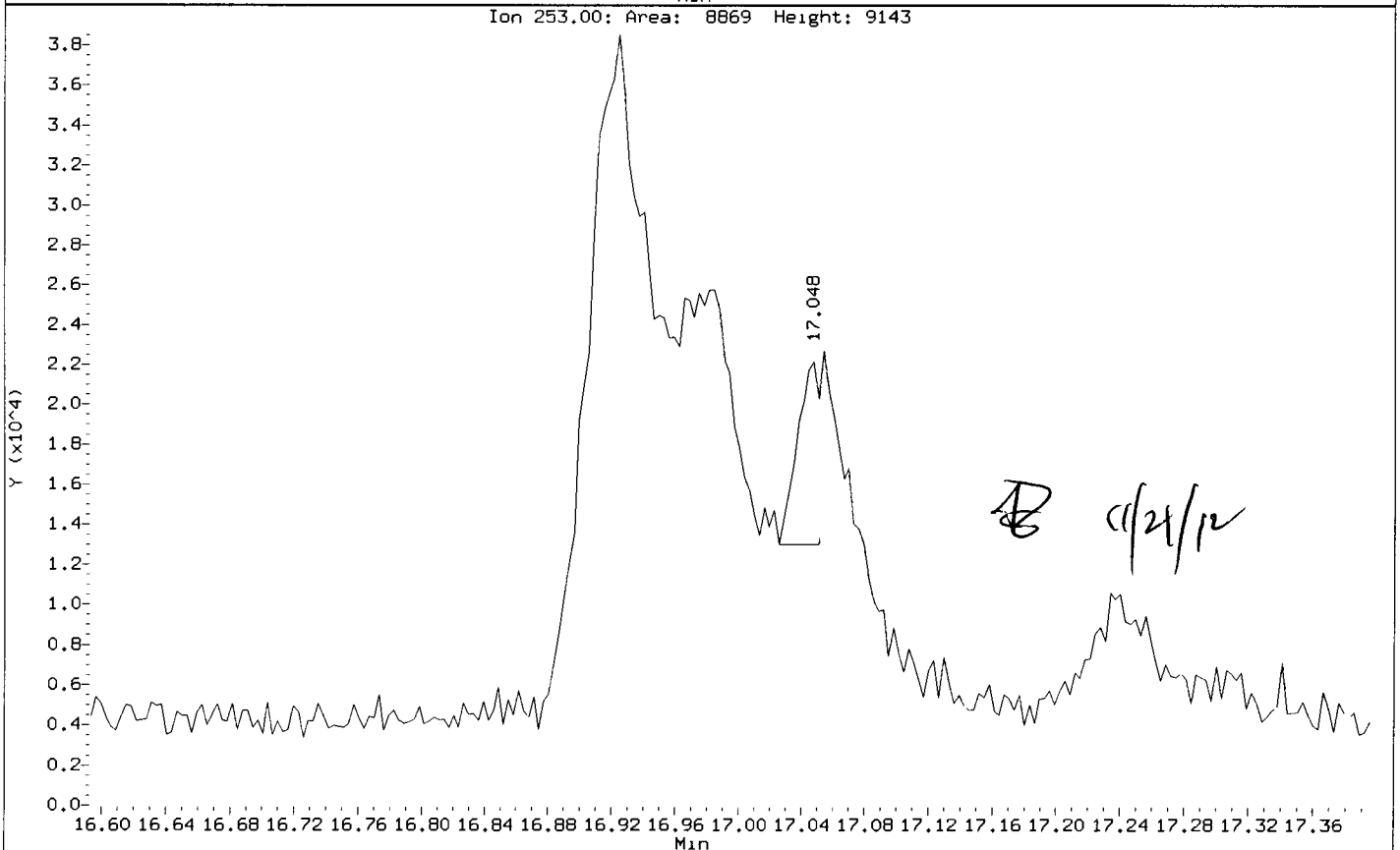
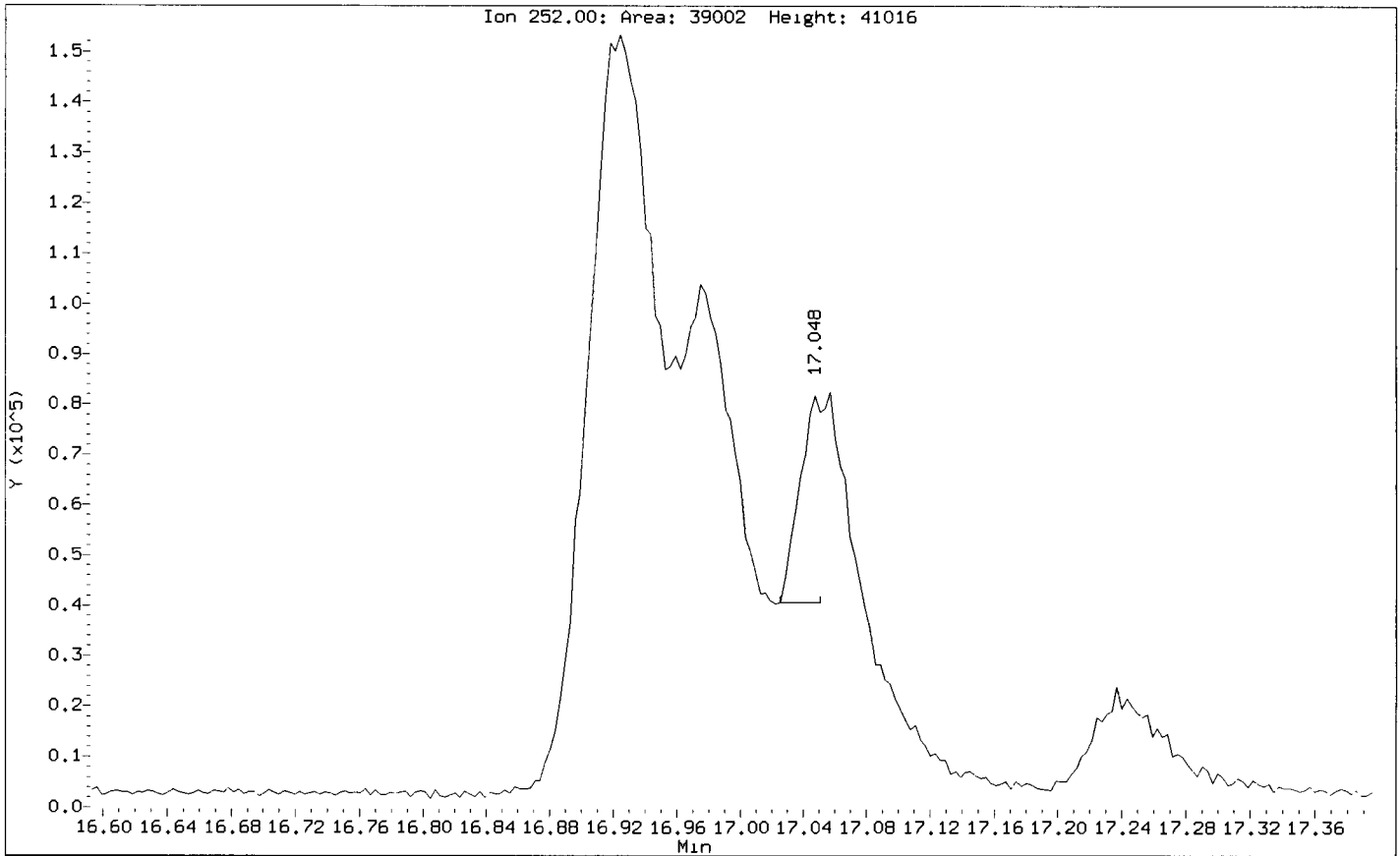
52 Benzo(k)fluoranthene

Concentration: 101.6 ug/kg



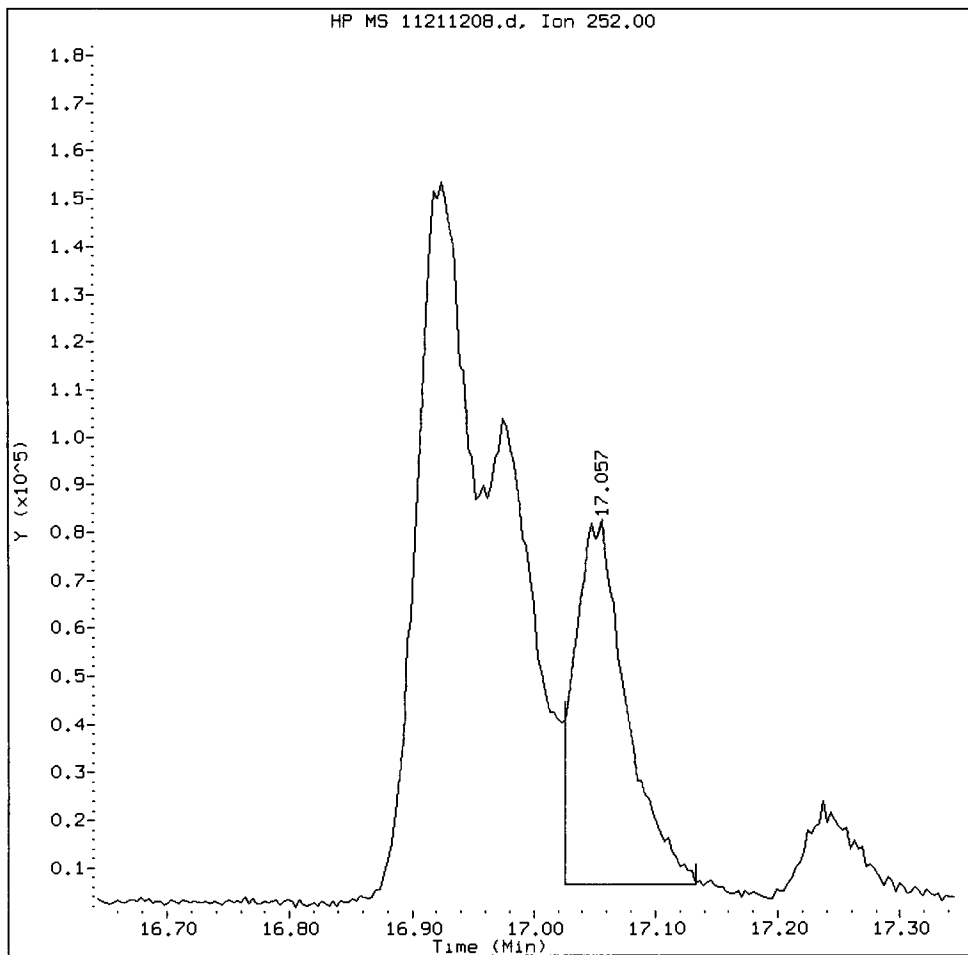
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Injection Date: 21-NOV-2012 14:42  
Instrument: nt11.1  
Client Sample ID: SG-13-S-E-121107

Compound: Benzo(j)fluoranthene  
CAS Number:



VR58D, /chem3/nt11.i/20121121.b/11211208.d

Benzo(j)fluoranthene Amount: 1.49 Area: 229322



MANUAL INTEGRATION for Benzo(j)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AE

Date: 11/21/12

Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

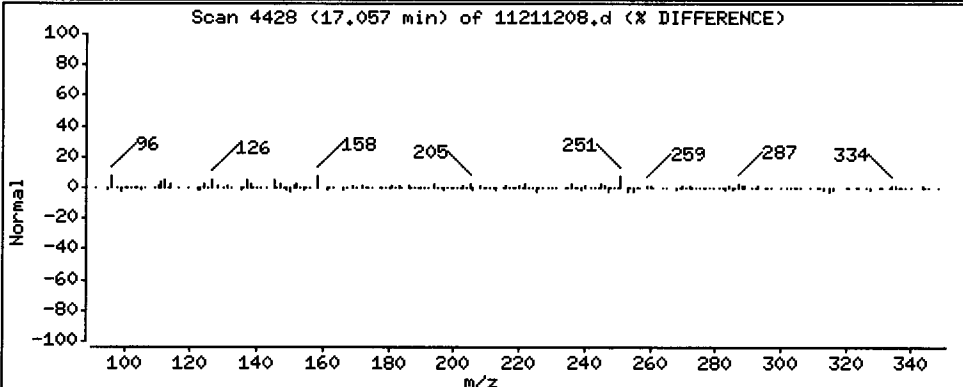
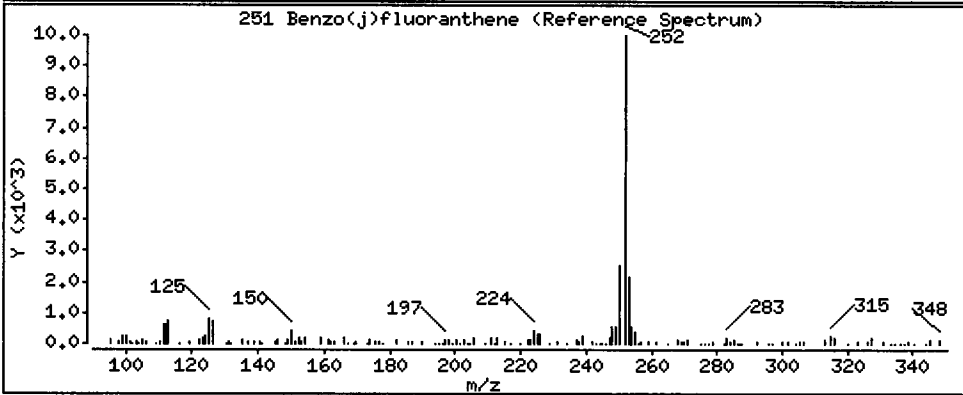
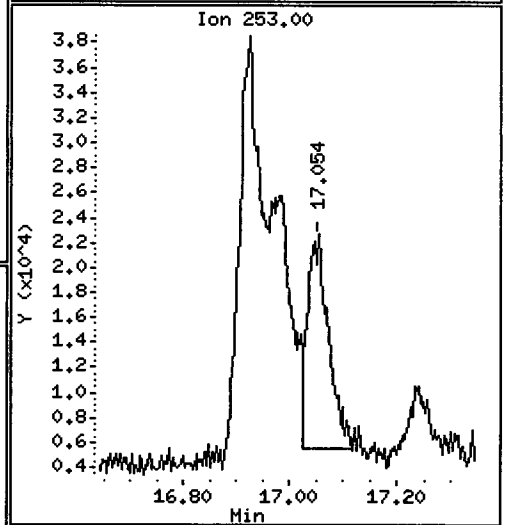
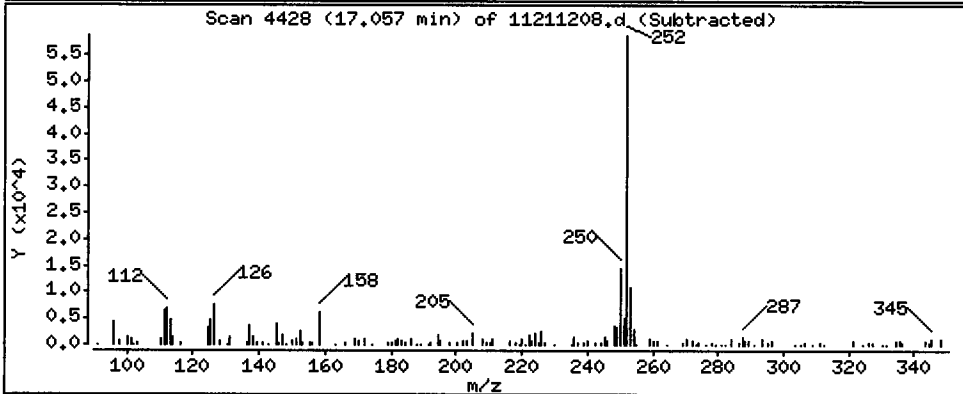
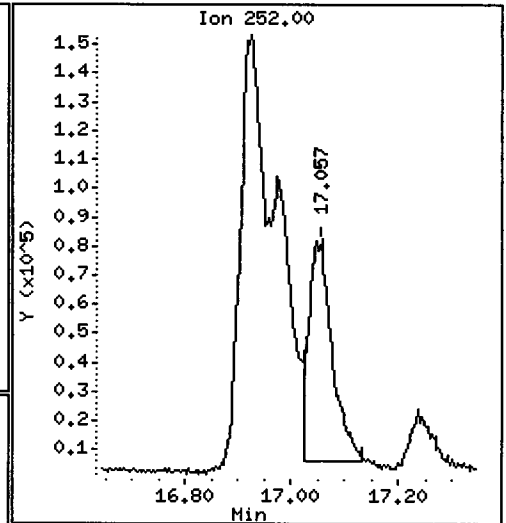
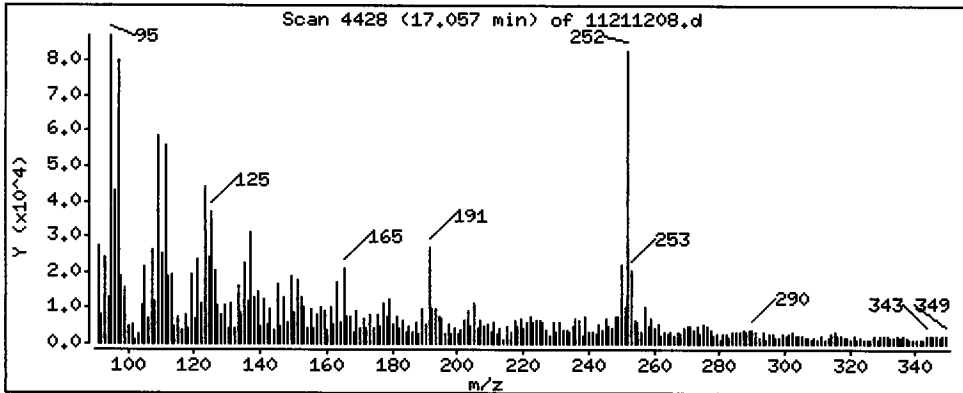
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

251 Benzo(j)fluoranthene

Concentration: 73.82 ug/kg



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

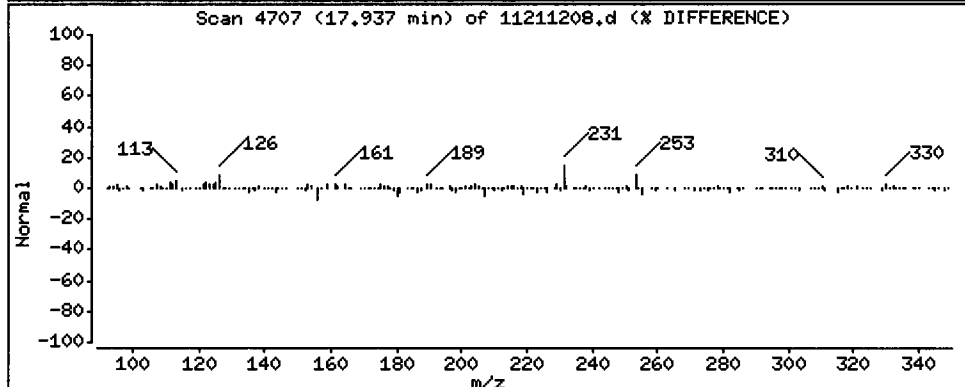
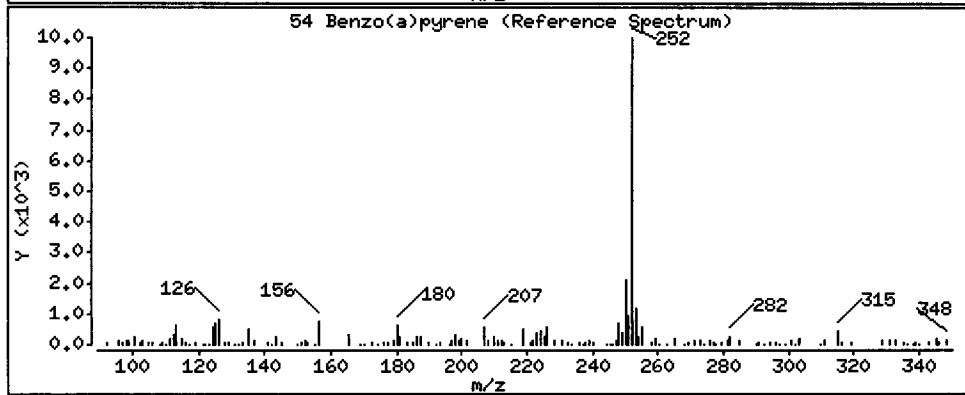
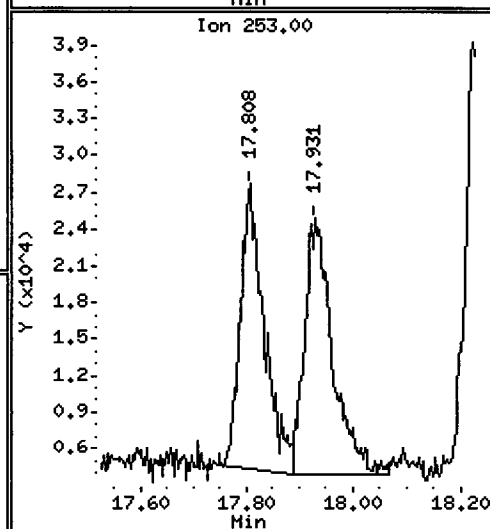
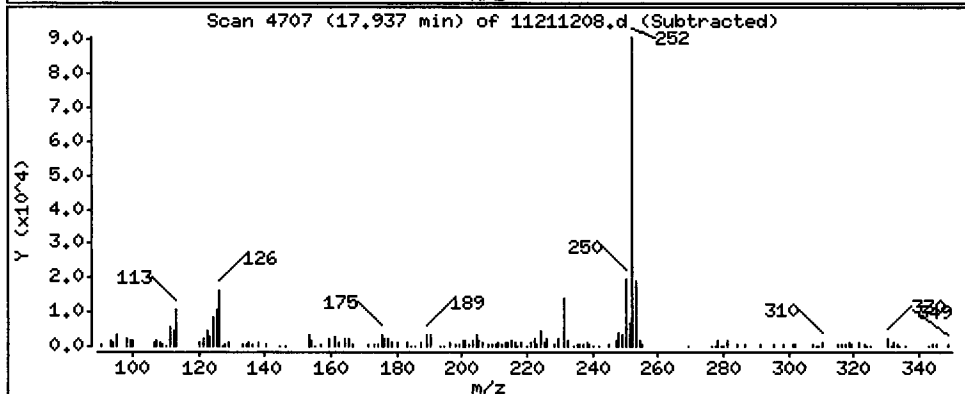
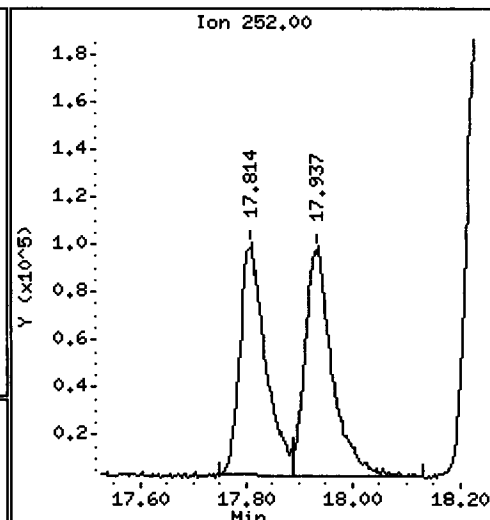
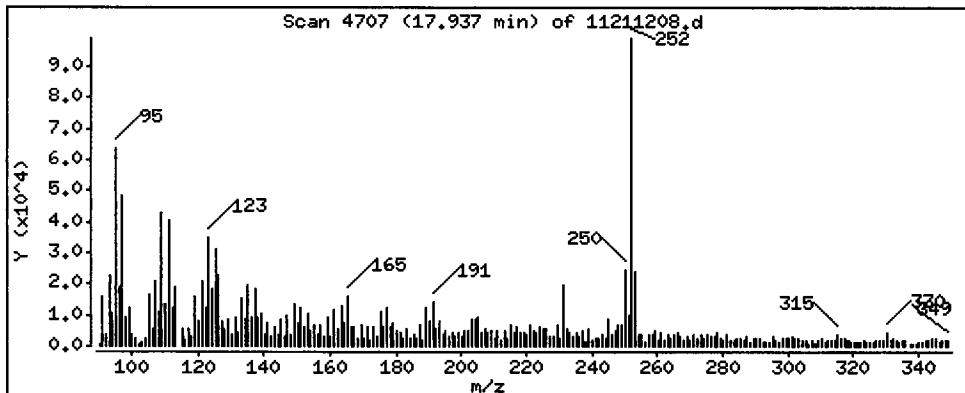
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

54 Benzo(a)pyrene

Concentration: 123.9 ug/kg



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

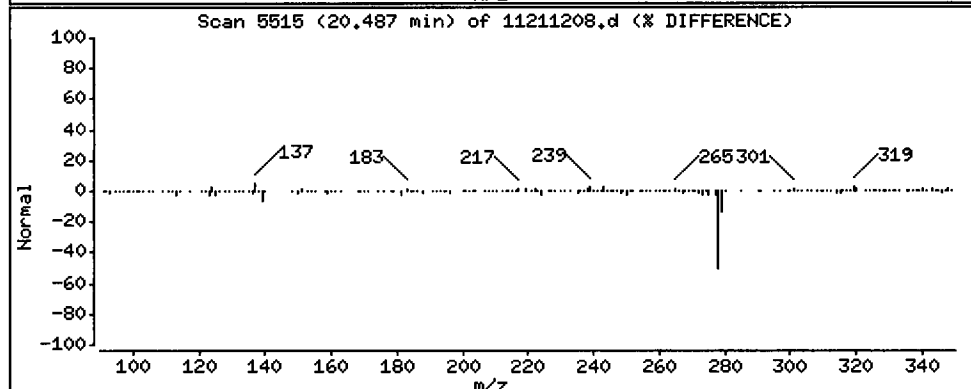
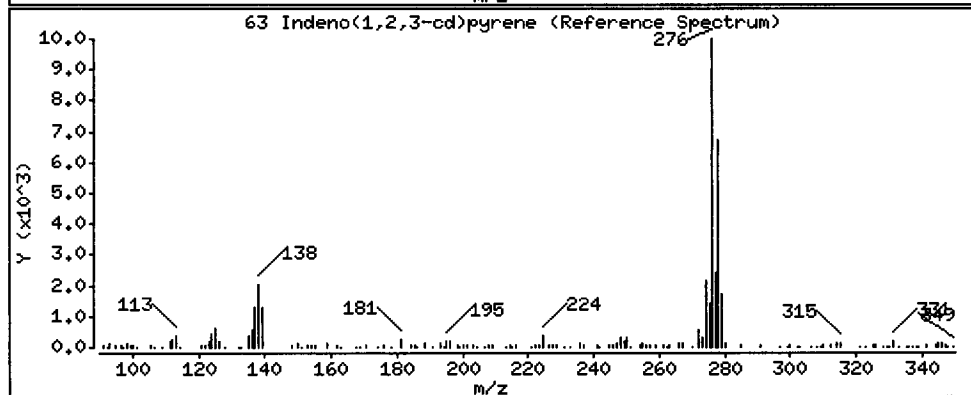
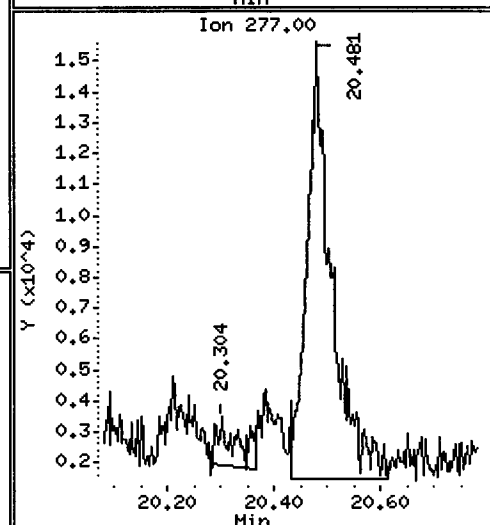
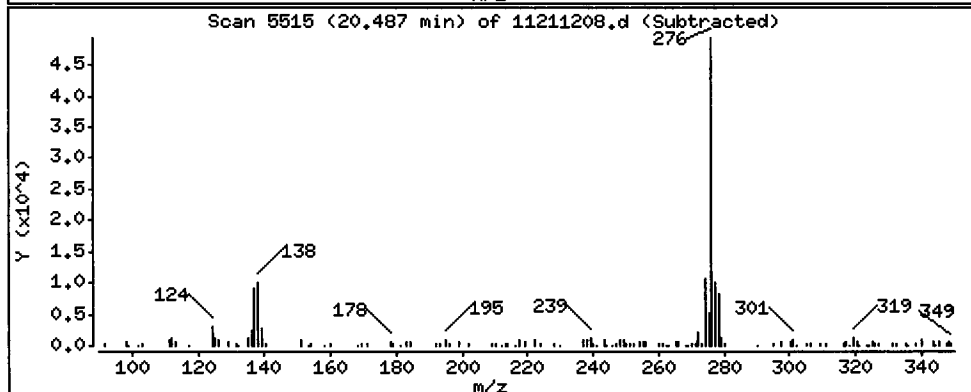
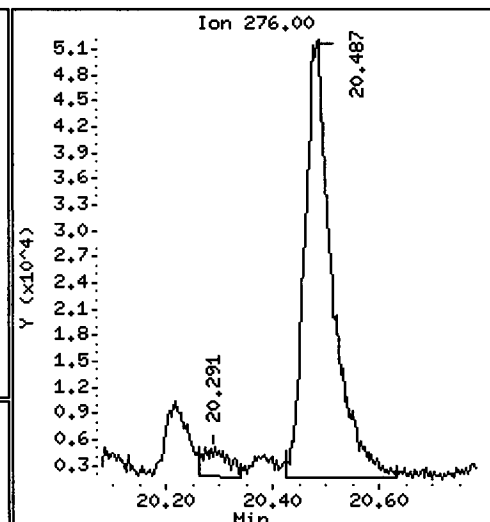
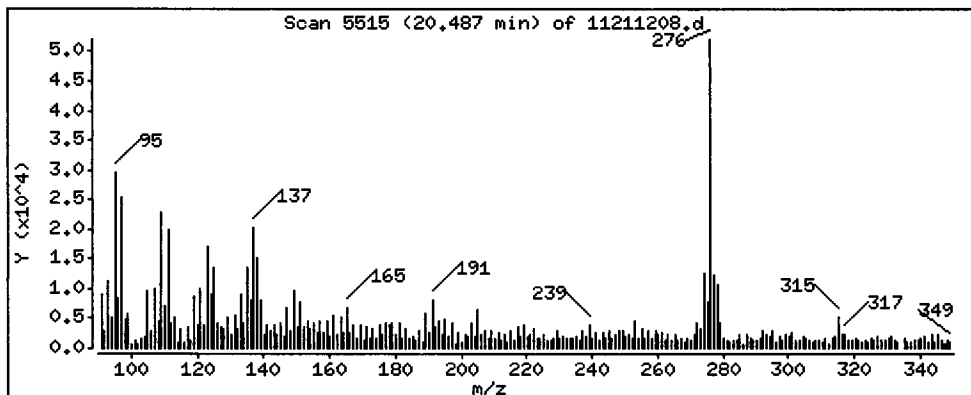
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

63 Indeno(1,2,3-cd)pyrene

Concentration: 53.69 ug/kg



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

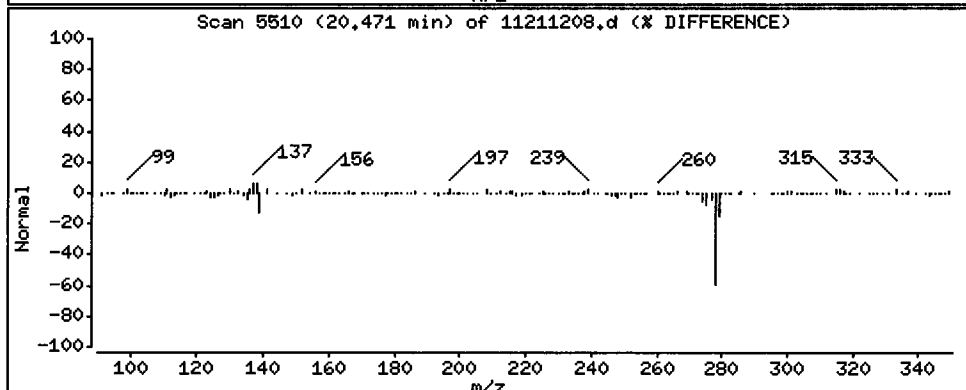
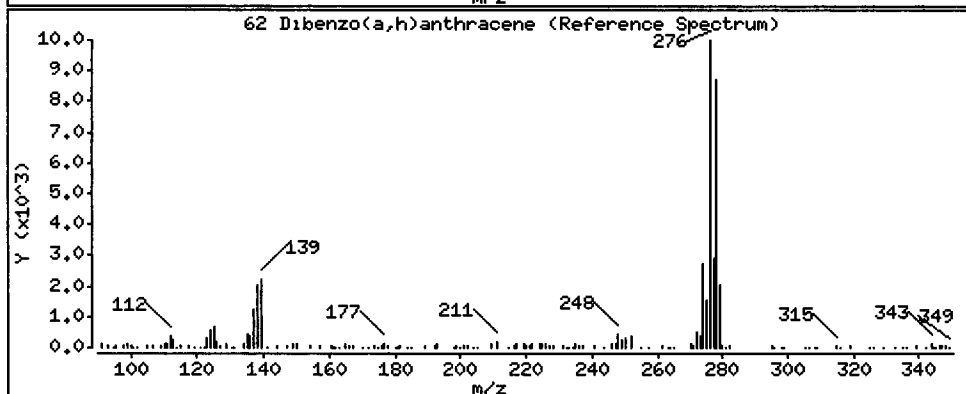
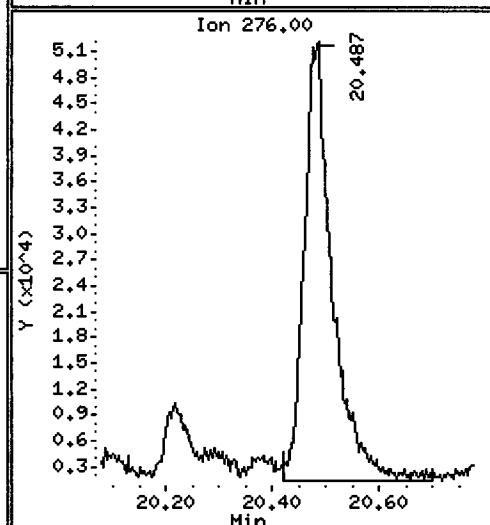
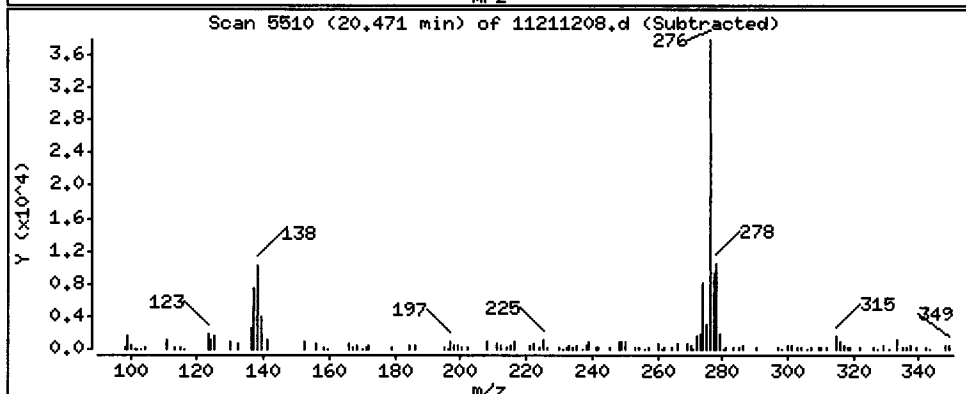
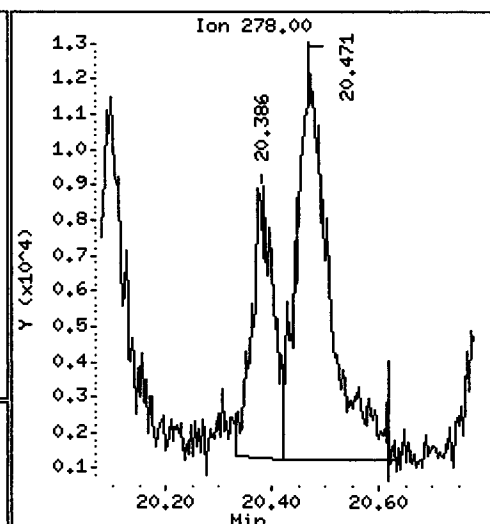
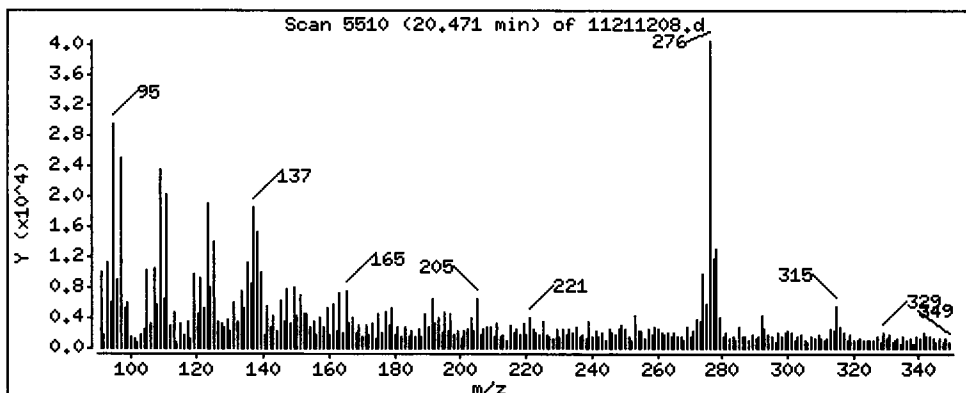
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

62 Dibenzo(a,h)anthracene

Concentration: 17.62 ug/kg



Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

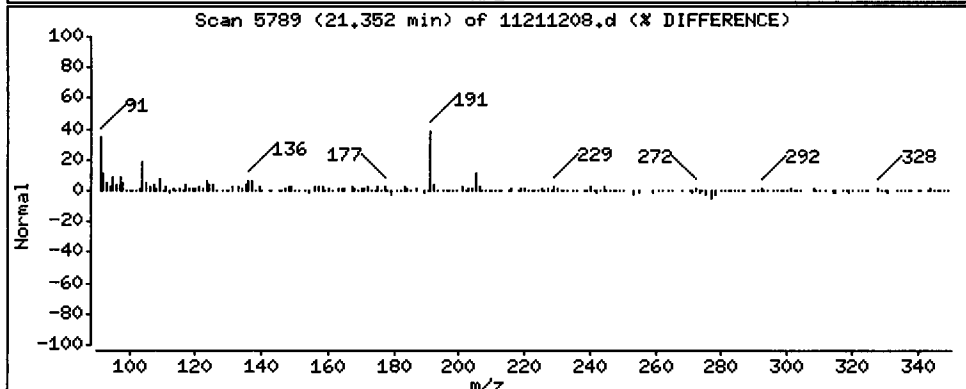
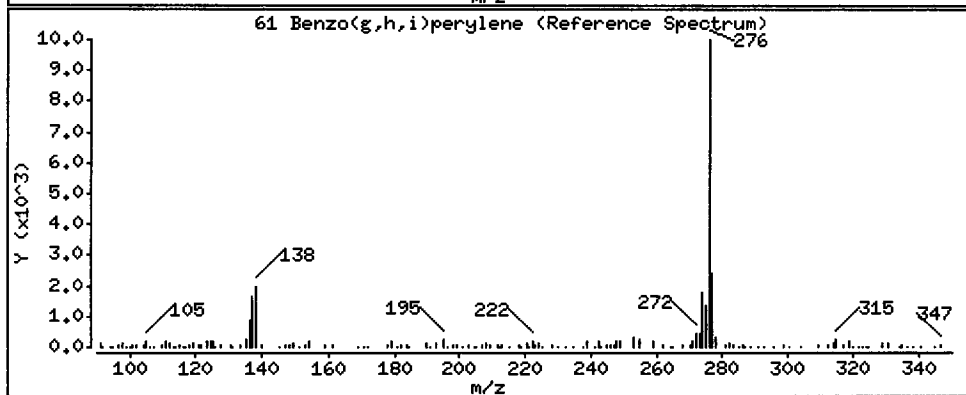
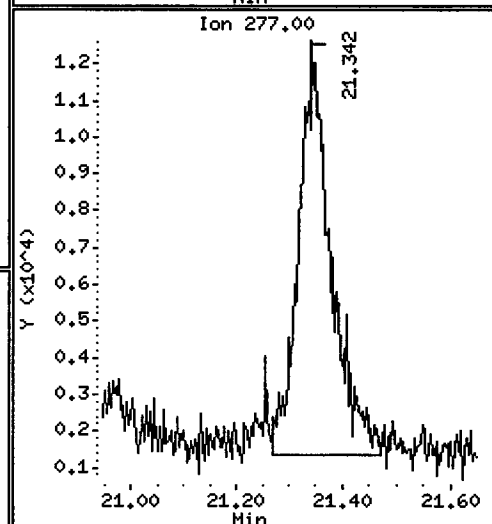
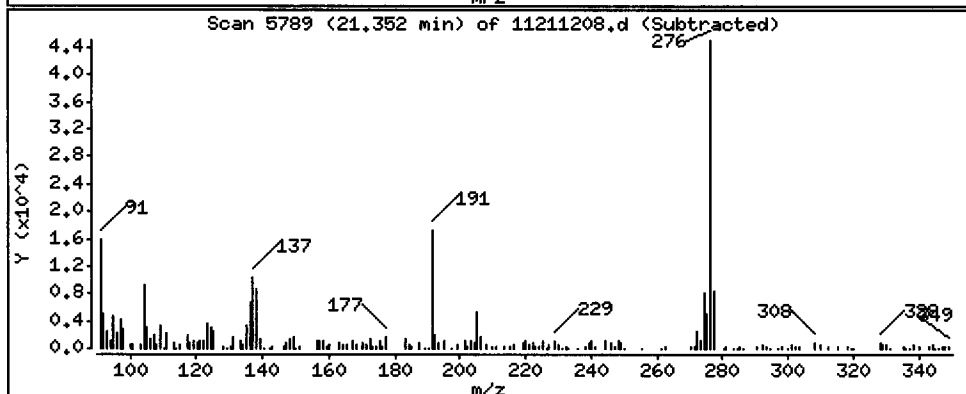
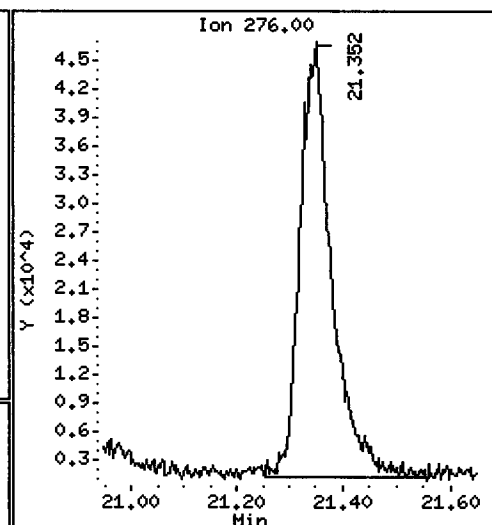
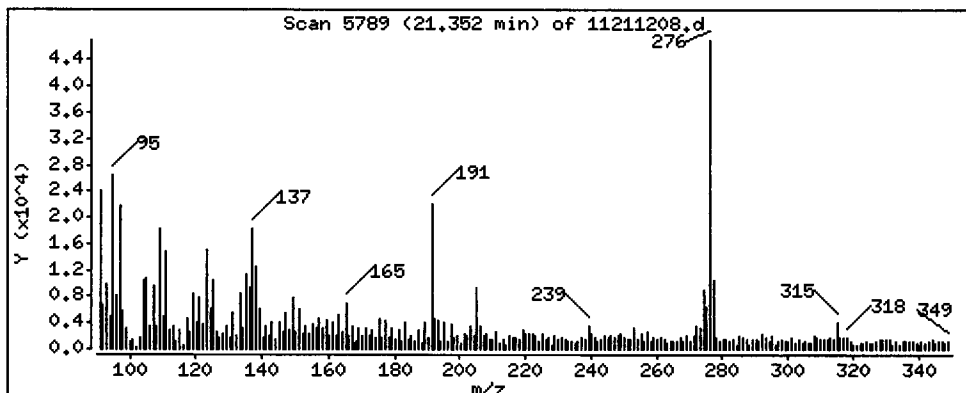
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Benzo(g,h,i)perylene

Concentration: 67.08 ug/kg





Date : 21-NOV-2012 14:42

Client ID: SG-13-S-E-121107

Instrument: nt11.i

Sample Info: VR58D

Volume Injected (uL): 1.0

Operator: JZ

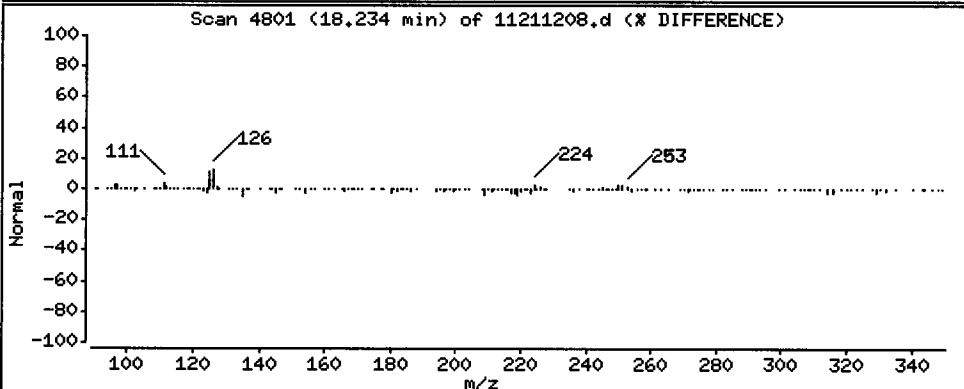
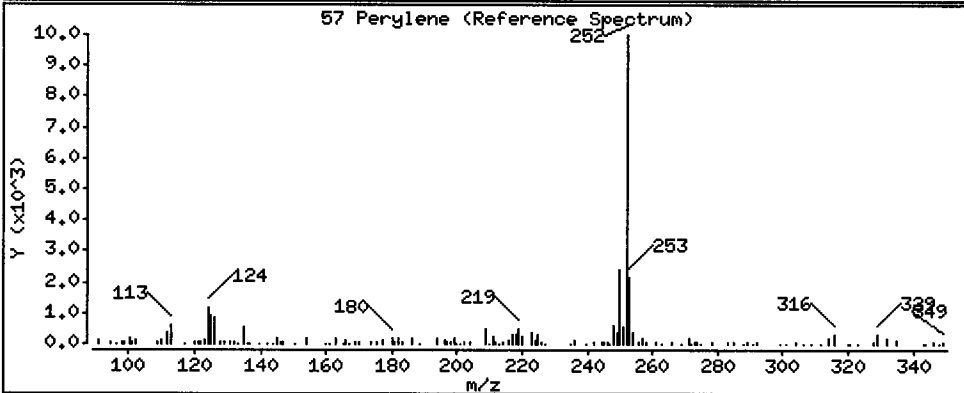
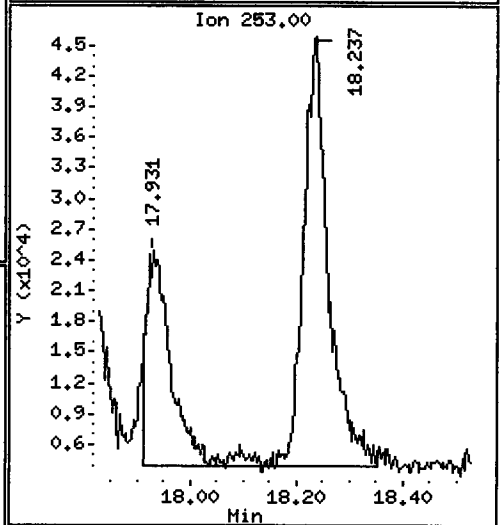
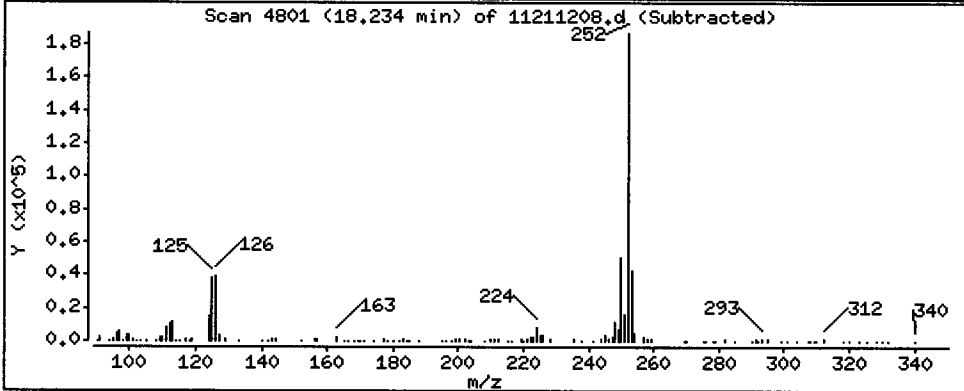
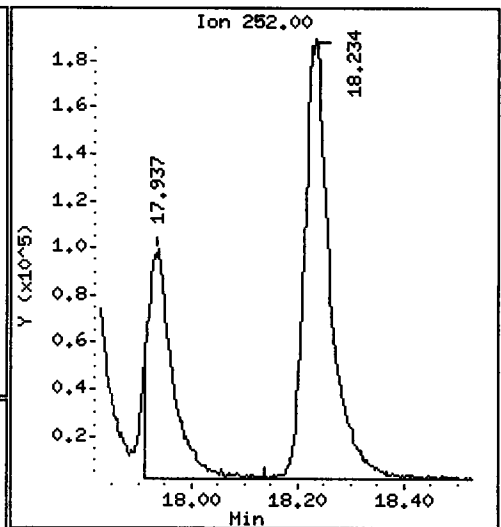
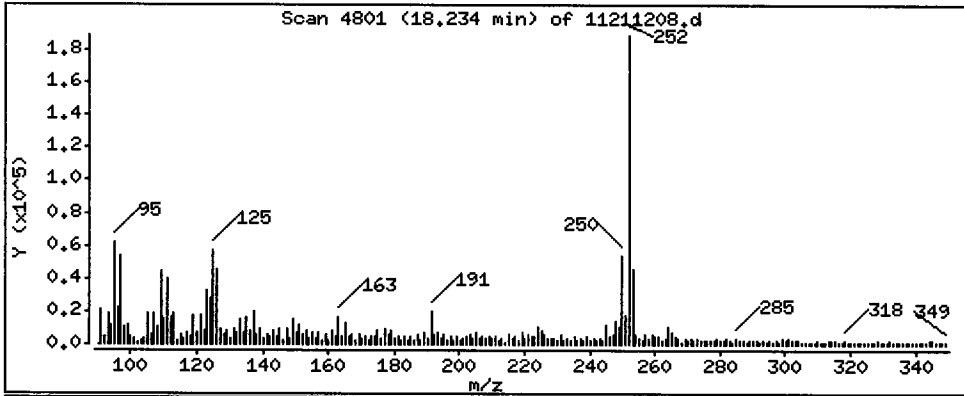
Column phase: ZB-5msi

Column diameter: 0.25

*NR open*

57 Perylene

Concentration: 222.4 ug/kg



CO-ELUTION SUMMARY FOR FILE - 11211208.d

Lab ID: VR58D, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2012

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211209.d  
 Lab Smp Id: VR58E Client Smp ID: SG-13-S-E-dup-12110  
 Inj Date : 21-NOV-2012 15:12  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58E  
 Misc Info : 12-22333  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 21-Nov-2012 15:33 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 9  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

*Handwritten:* B 11/21/12

Concentration Formula:  $\text{Amt} * \text{DF} * \text{Vt} / (\text{Ws} * (100 - \text{M}) / 100) * \text{CpndVariable}$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	42.12000	Weight of sample extracted (g)
M	76.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	136	5.438	5.438	(1.000)	672095	2.00000		
7 Naphthalene	128	5.467	5.467	(1.005)	152268	0.42392	20.97	
\$ 12 2-Methylnaphthalene-d10	152	6.174	6.174	(1.135)	380712	1.65789	82.00	
14 2-Methylnaphthalene	141	6.221	6.221	(1.144)	76005	0.37556	18.58	
15 1-methylnaphthalene	141	6.417	6.413	(1.180)	28093	0.14493	7.168 (M)	
21 Acenaphthylene	152	7.603	7.600	(0.986)	47340	0.15153	7.495	
* 22 Acenaphthene-d10	164	7.714	7.714	(1.000)	359541	2.00000		
23 Acenaphthene	153	7.761	7.761	(1.006)	62687	0.31551	15.61	
11 Dibenzofuran	168	7.912	7.912	(1.026)	98189	0.33734	16.69	
25 Fluorene	166	8.389	8.389	(1.088)	95969	0.42901	21.22	
* 28 Phenanthrene-d10	188	9.739	9.736	(1.000)	481580	2.00000		
30 Phenanthrene	178	9.774	9.768	(1.004)	626412	2.15336	106.5	
31 Anthracene	178	9.815	9.809	(1.008)	150232	0.53797	26.61 (M)	
36 Fluoranthene	202	11.456	11.425	(1.176)	947339	3.25041	160.8	
39 Pyrene	202	11.942	11.892	(0.830)	1185106	4.68681	231.8	

Compounds	QUANT		SIG			RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	ON-COLUMN (ug/mL)		FINAL (ug/kg)	
===== 46 Benzo(a)anthracene	228	14.265	14.224	(0.992)	468233	2.03081	100.4	
* 47 Chrysene-d12	240	14.381	14.343	(1.000)	458848	2.00000		
48 Chrysene	228	14.454	14.413	(1.005)	751973	3.36022	166.2	
51 Benzo(b)fluoranthene	252	16.915	16.858	(0.932)	362324	2.91785	144.3	
52 Benzo(k)fluoranthene	252	16.972	16.918	(0.935)	240575	1.78393	88.24 (M)	
251 Benzo(j)fluoranthene	252	17.048	16.994	(0.939)	198358	1.39410	68.95 (M)	
54 Benzo(a)pyrene	252	17.925	17.878	(0.987)	262018	2.07738	102.8	
* 56 Perylene-d12	264	18.152	18.102	(1.000)	268309	2.00000		
63 Indeno(1,2,3-cd)pyrene	276	20.475	20.431	(1.128)	150874	0.98667	48.80	
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.374	20.339	(1.122)	132342	1.48783	73.59	
62 Dibenzo(a,h)anthracene	278	20.462	20.427	(1.127)	41020	0.32938	16.29	
61 Benzo(g,h,i)perylene	276	21.330	21.298	(1.175)	146858	1.12891	55.84	
57 Perylene	252	18.222	18.177	(1.004)	558181	4.26739	211.1	

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211209.d  
 Lab Smp Id: VR58E  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22333

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-13-S-E-dup-12  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	672095	30.22
22 Acenaphthene-d10	284255	142128	568510	359541	26.49
28 Phenanthrene-d10	410660	205330	821320	481580	17.27
47 Chrysene-d12	467886	233943	935772	458848	-1.93
56 Perylene-d12	472330	236165	944660	268309	-43.19

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	0.00
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	0.00
28 Phenanthrene-d10	9.74	9.24	10.24	9.74	0.03
47 Chrysene-d12	14.34	13.84	14.84	14.38	0.26
56 Perylene-d12	18.10	17.60	18.60	18.15	0.28

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58E  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Misc Info: 12-22333

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-13-S-E-dup-12110  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	148.4	82.00	55.26	34-100
\$ 60 Dibenzo(a,h) anthra	148.4	73.59	49.59	10-117

Date: 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Sample Info: VR59E

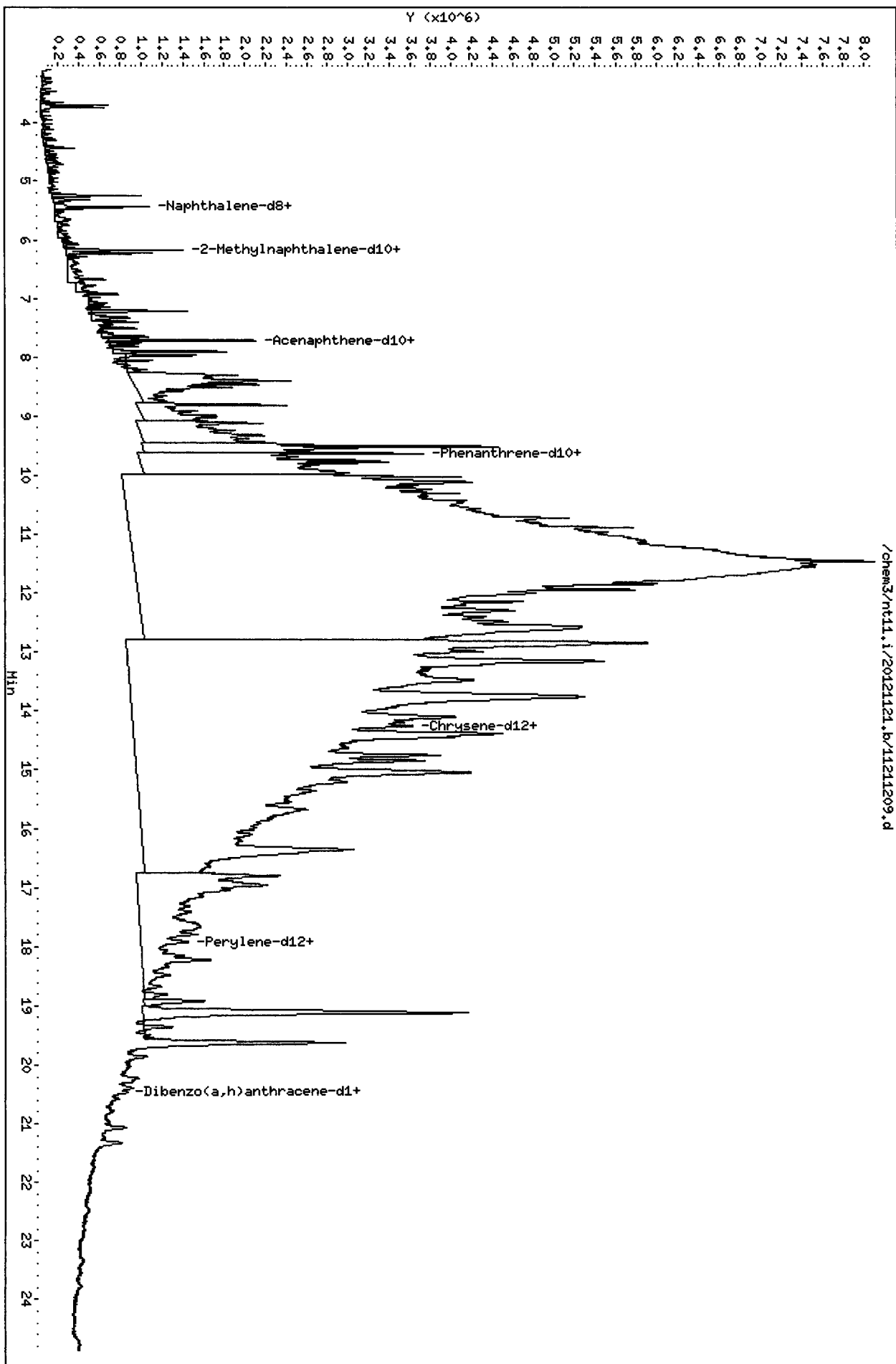
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt11.i

Operator: JZ

Column diameter: 0.25



VR59E . 211111

Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

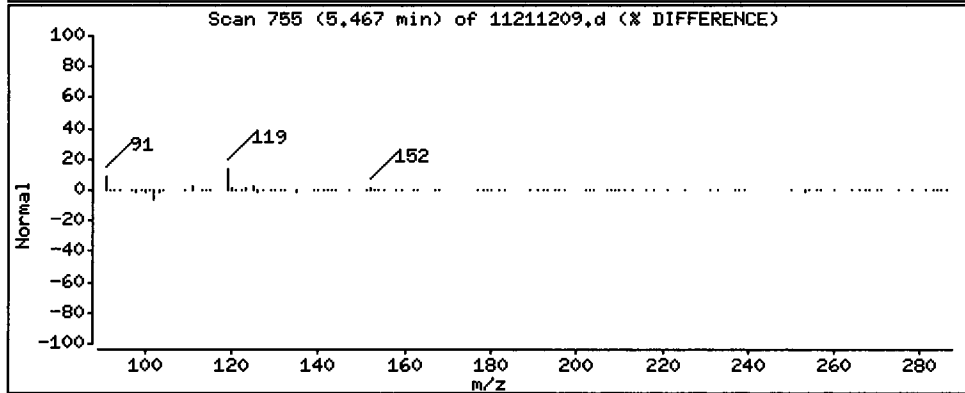
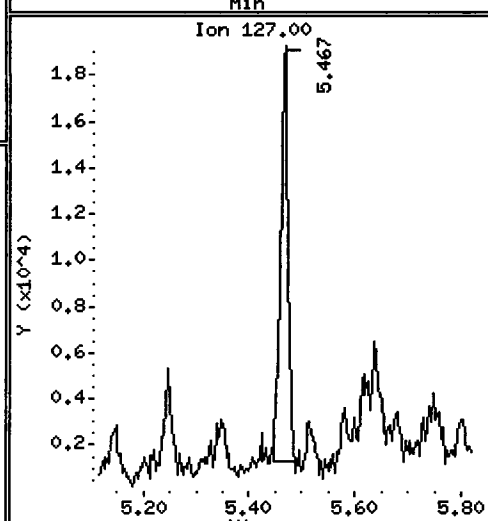
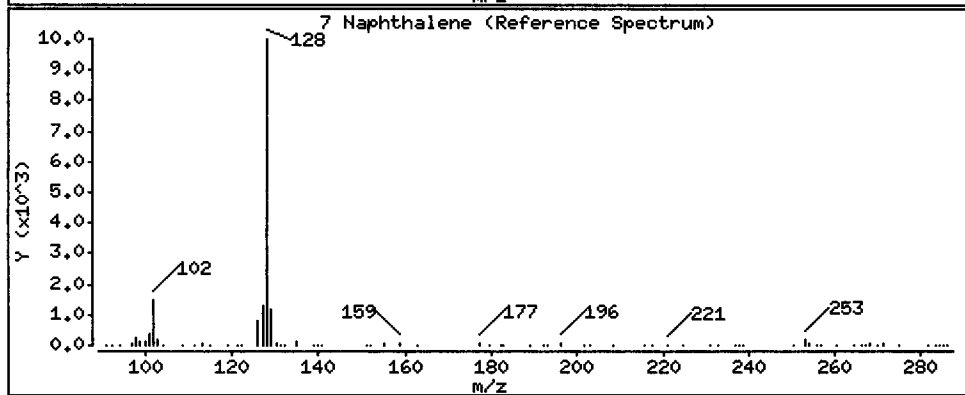
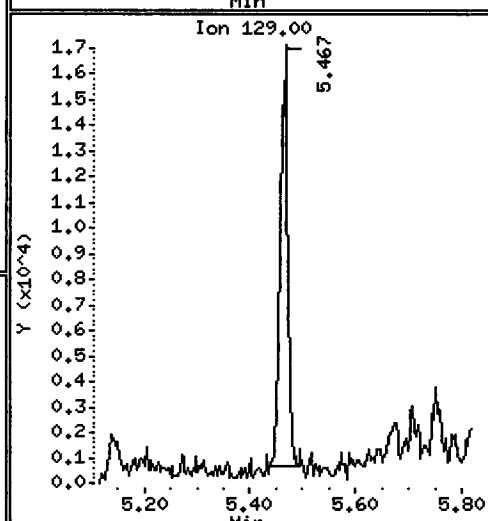
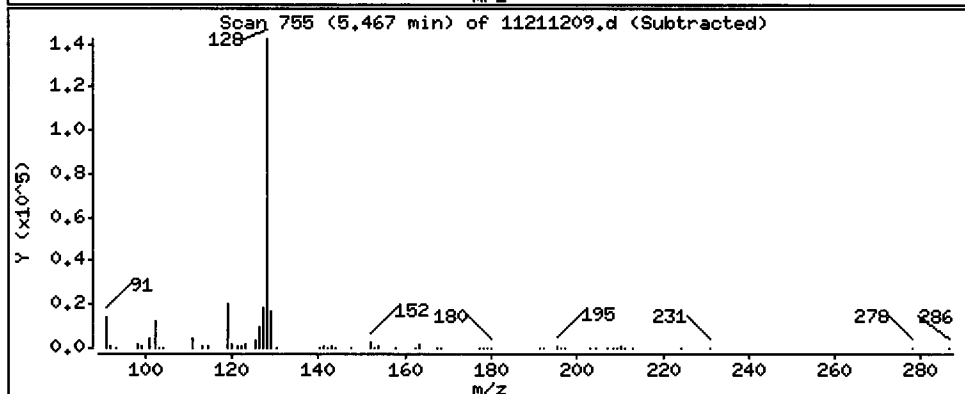
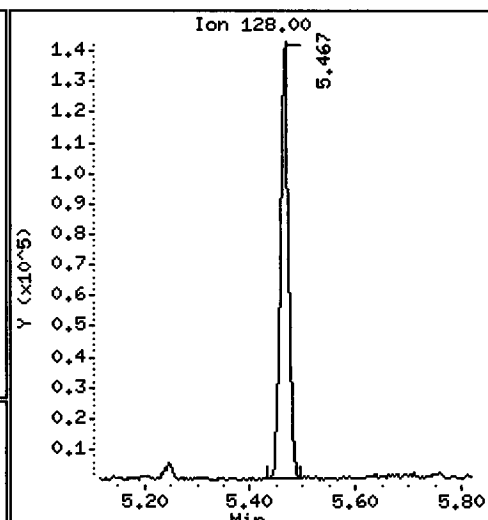
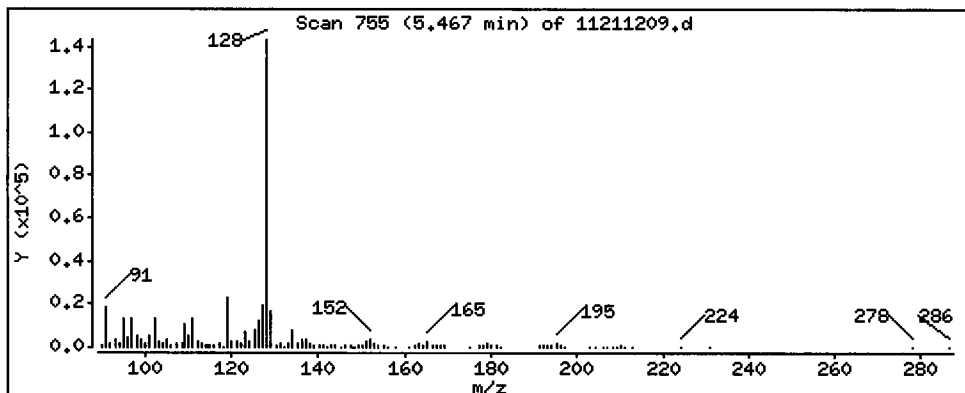
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

7 Naphthalene

Concentration: 20.97 ug/kg





Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

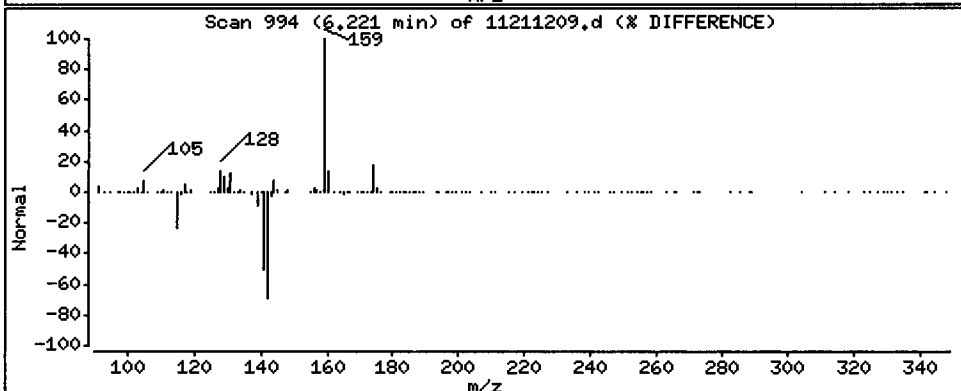
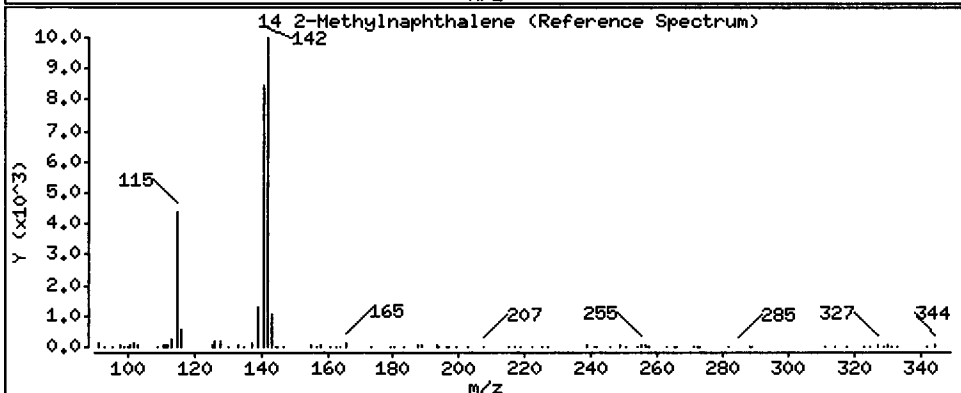
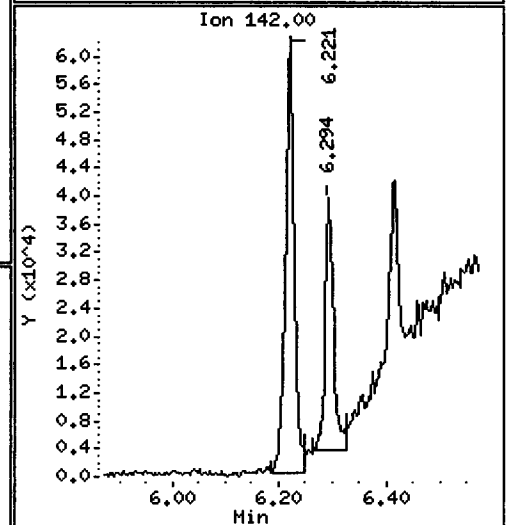
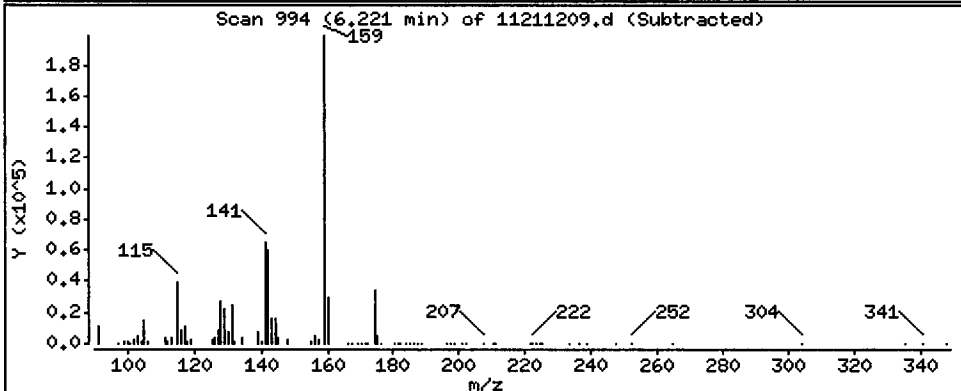
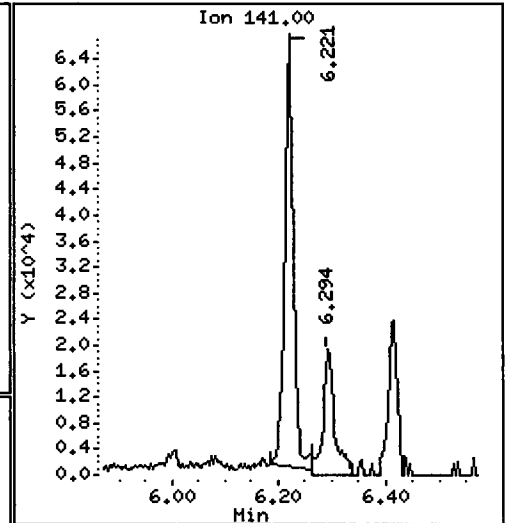
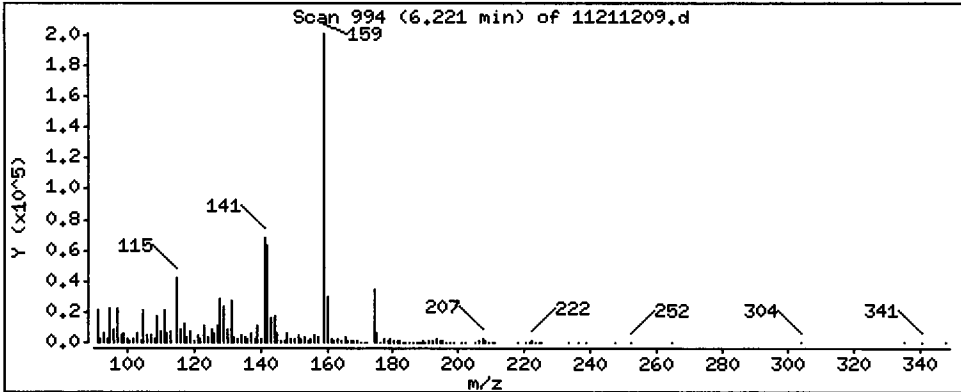
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

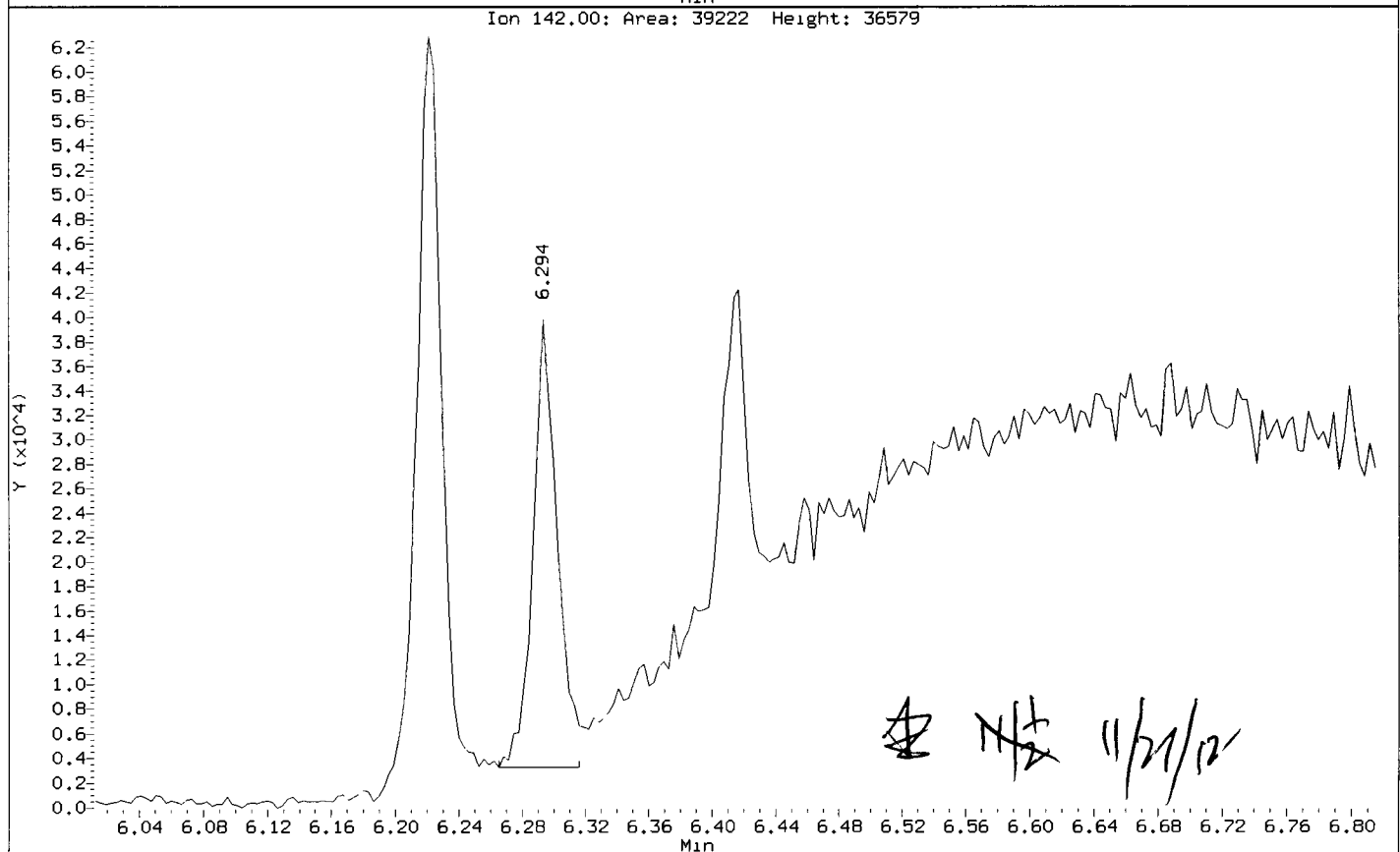
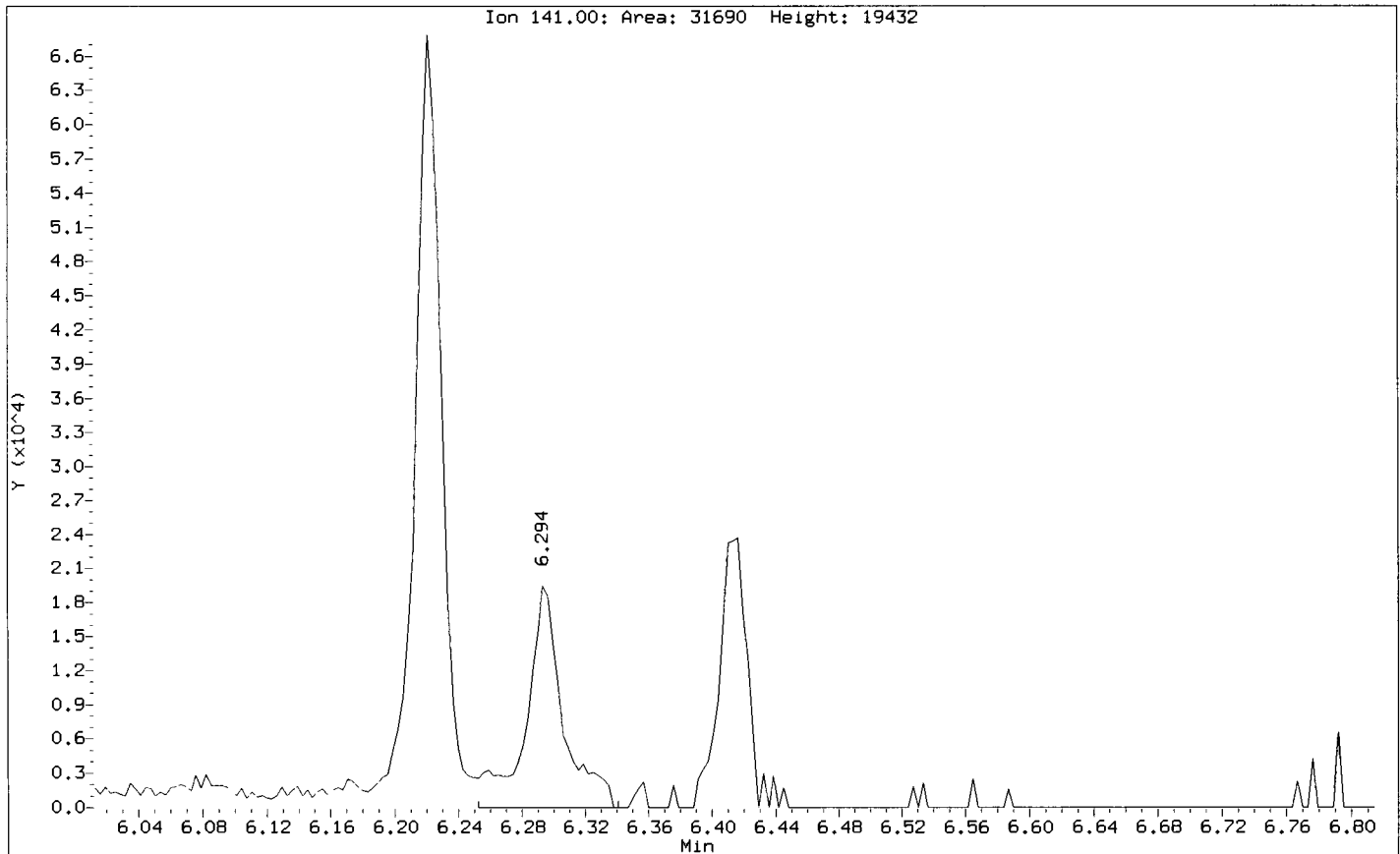
14 2-Methylnaphthalene

Concentration: 18.58 ug/kg



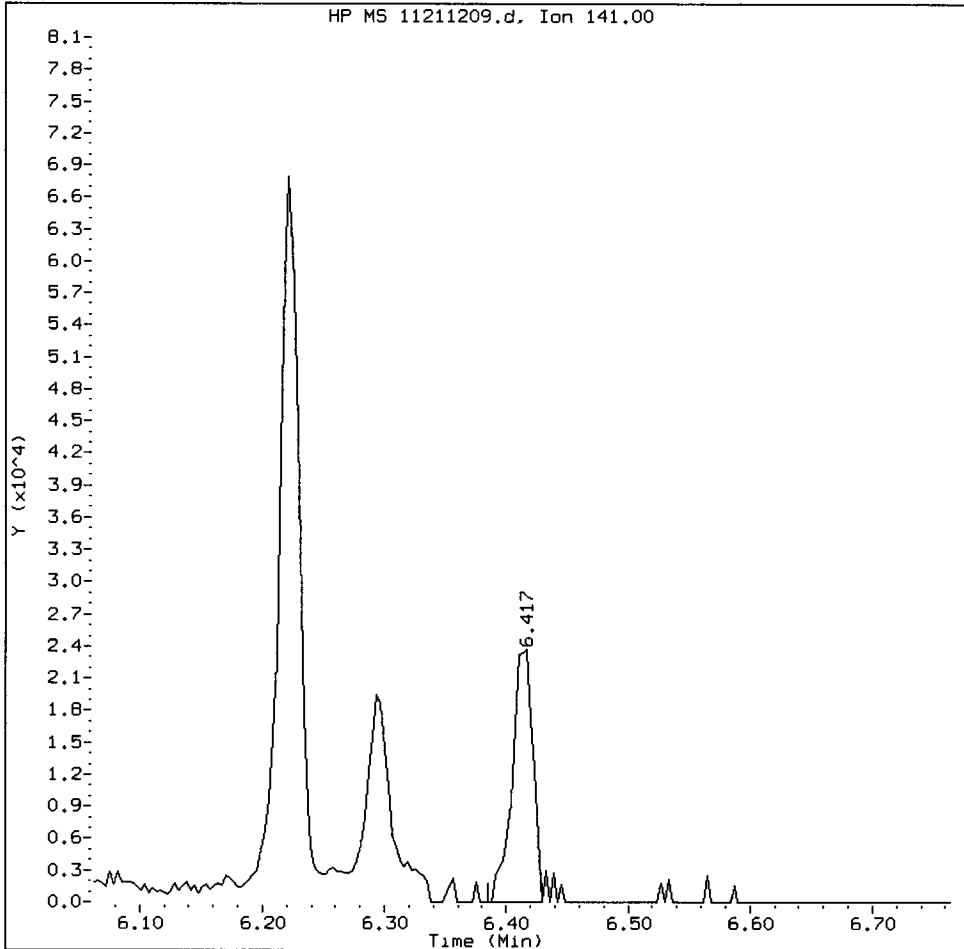
Data File: /chem3/nt11.1/20121121.b/11211209.d  
Injection Date: 21-NOV-2012 15:12  
Instrument: nt11.1  
Client Sample ID: SG-13-S-E-dup-12110

Compound: 1-methylnaphthalene  
CAS Number:



VR58E, /chem3/nt11.i/20121121.b/11211209.d

1-methylnaphthalene Amount: 0.14 Area: 28093



MANUAL INTEGRATION for 1-methylnaphthalene

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

5. Other \_\_\_\_\_

Analyst: AB

Date: 11/21/12

Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

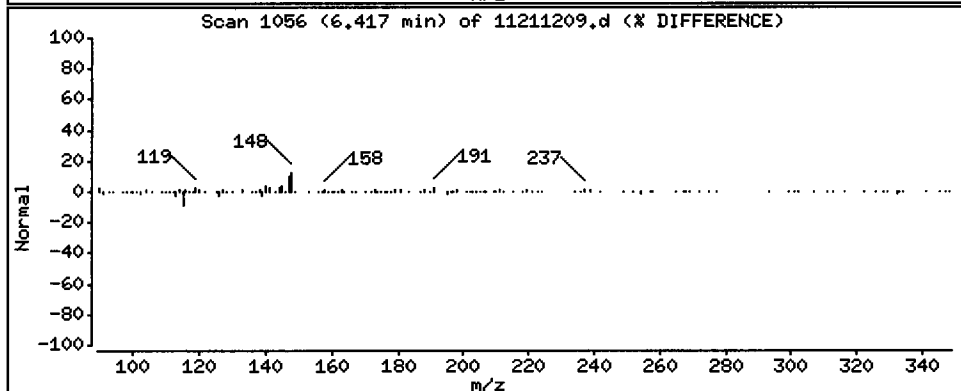
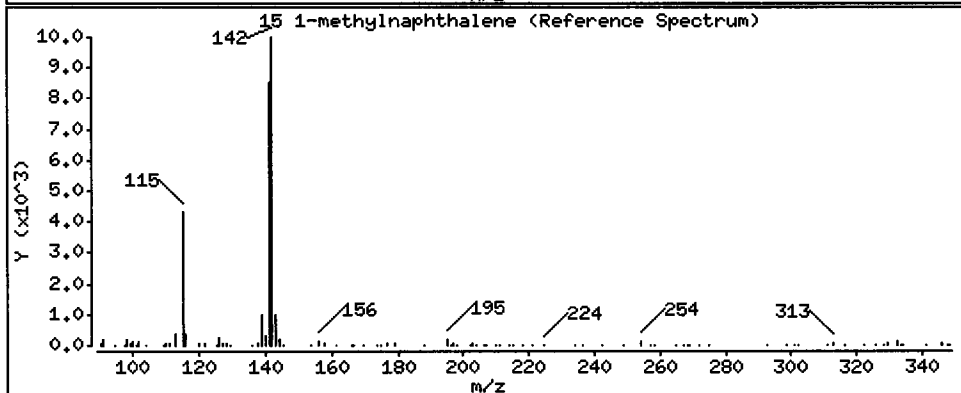
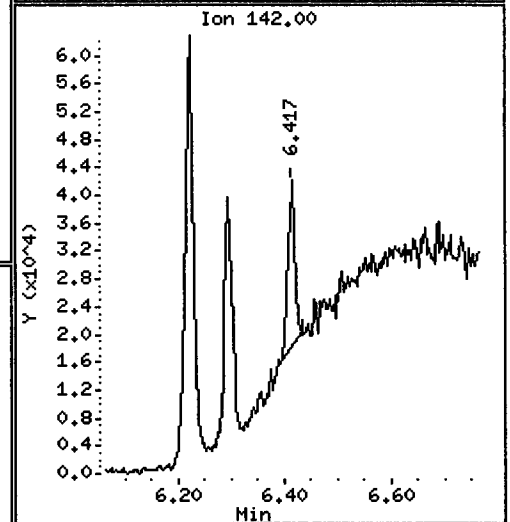
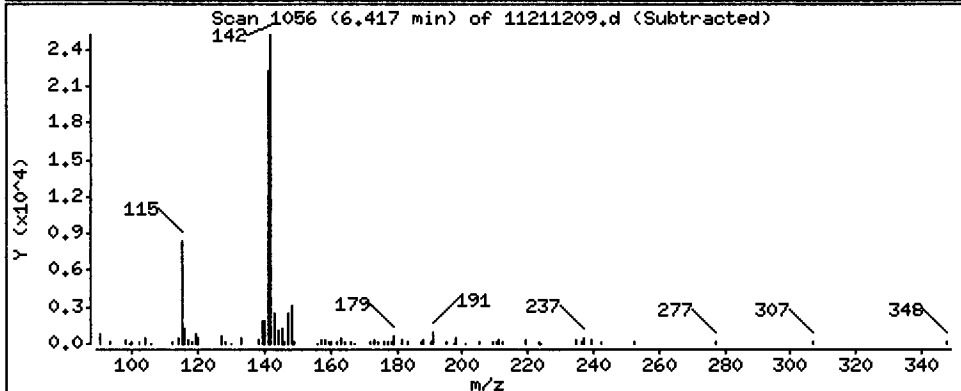
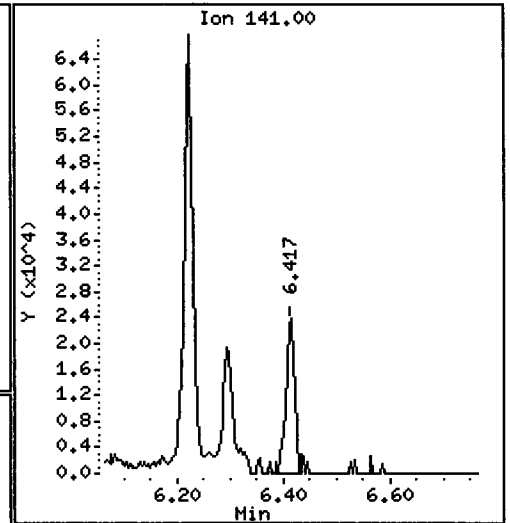
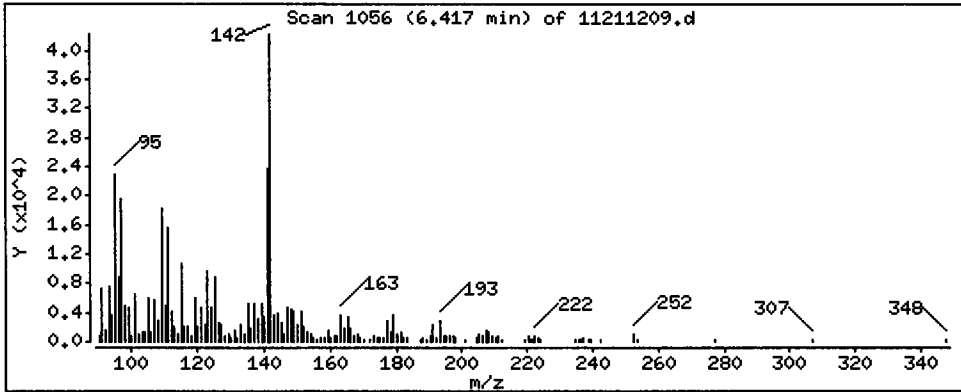
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

15 1-methylnaphthalene

Concentration: 7.168 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

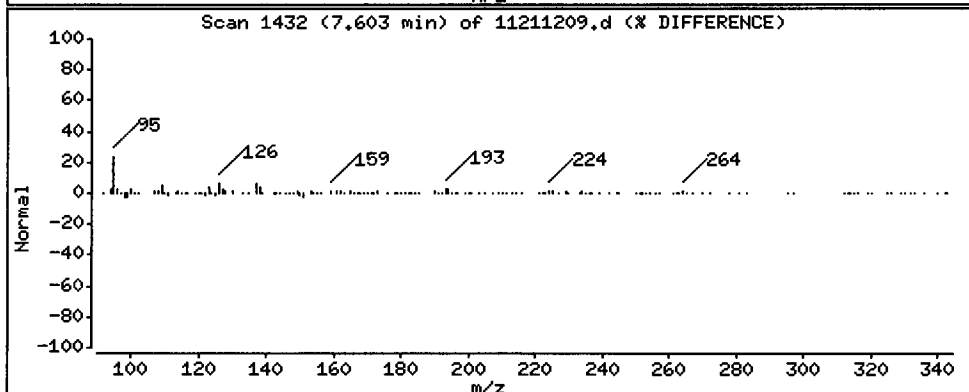
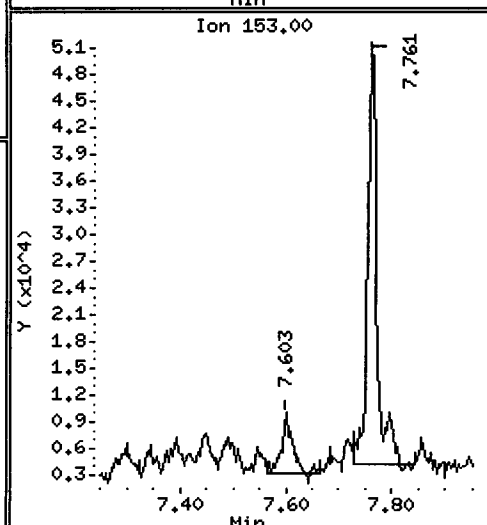
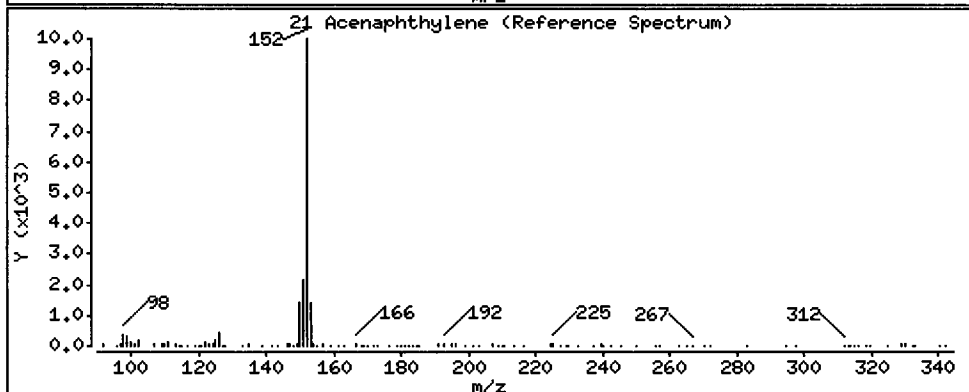
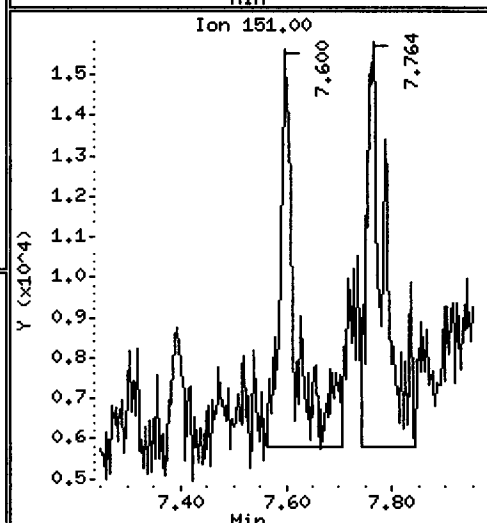
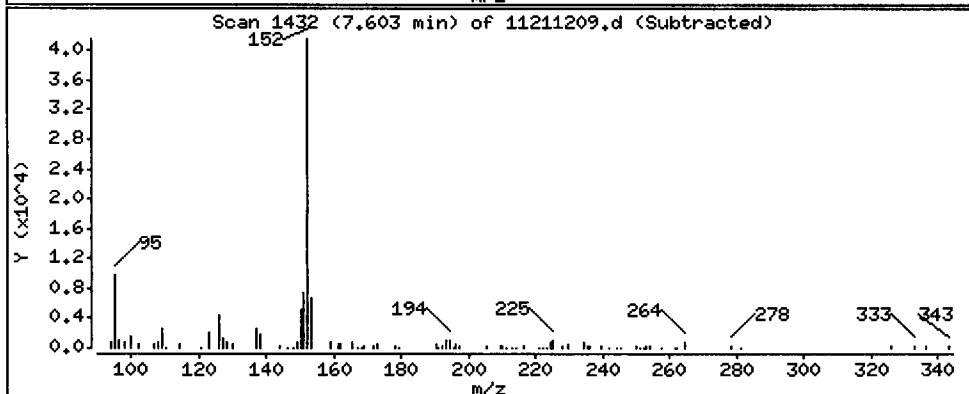
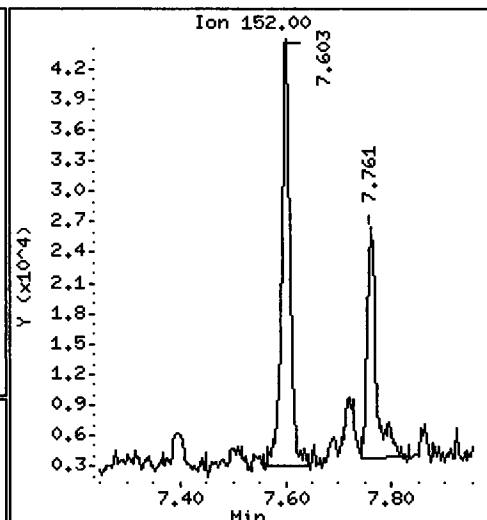
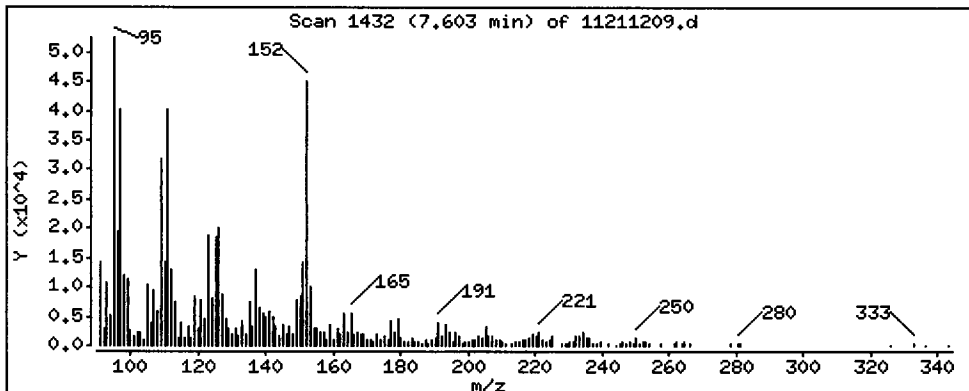
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

21 Acenaphthylene

Concentration: 7.495 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

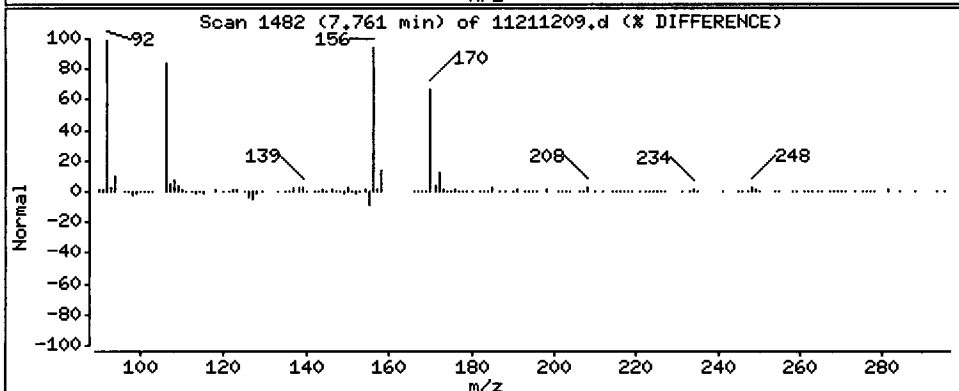
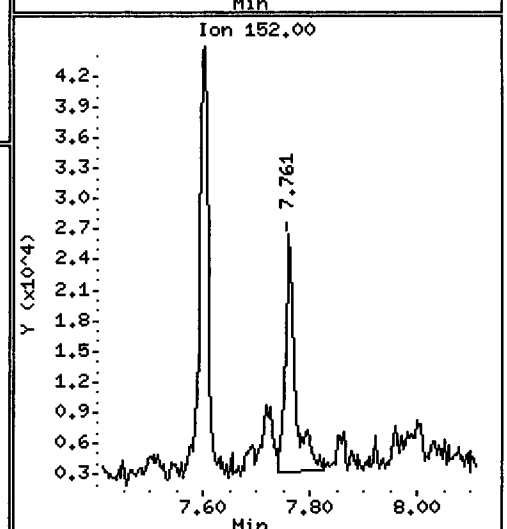
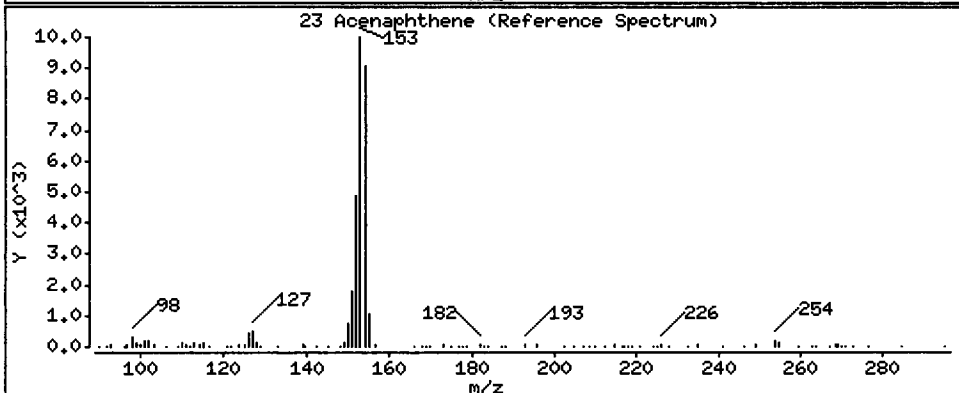
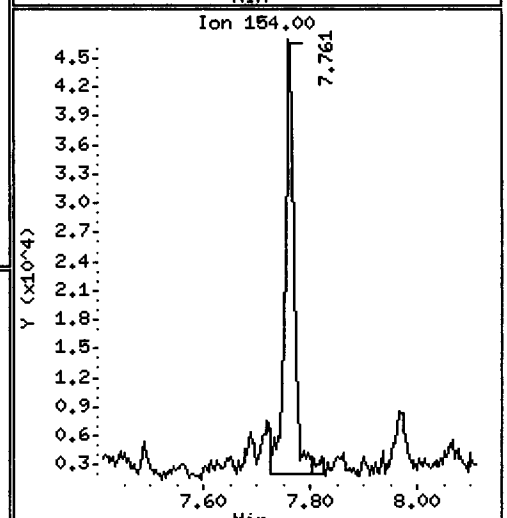
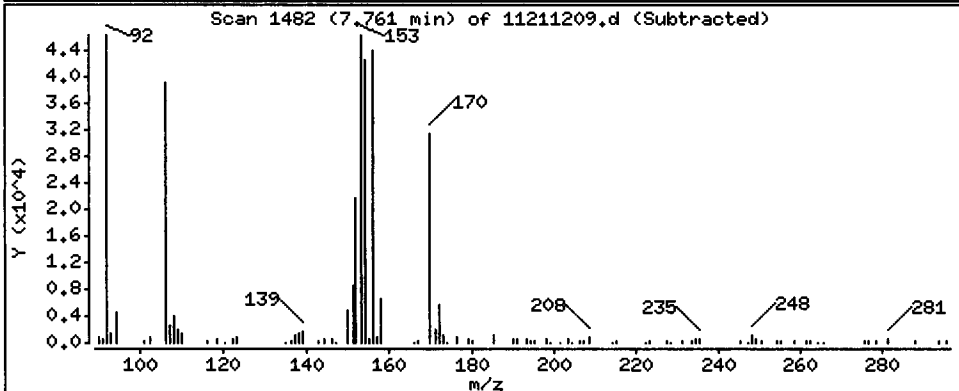
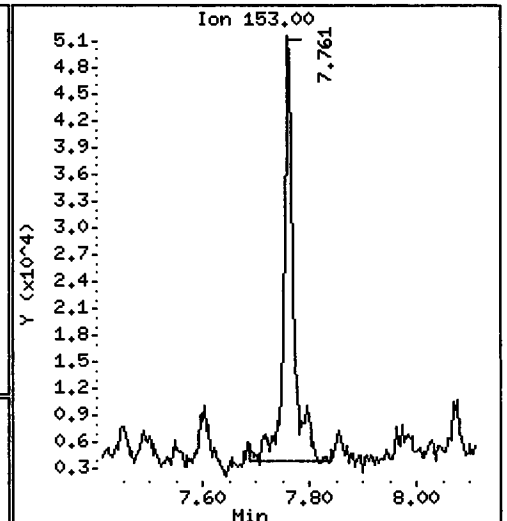
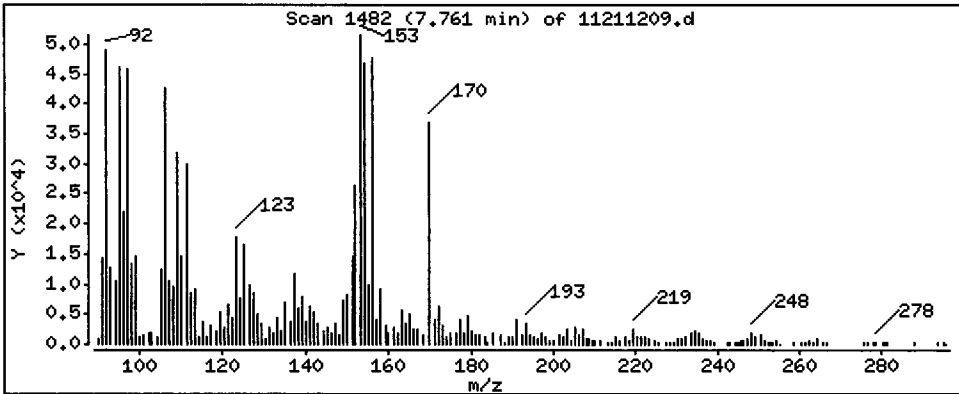
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

23 Acenaphthene

Concentration: 15.61 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

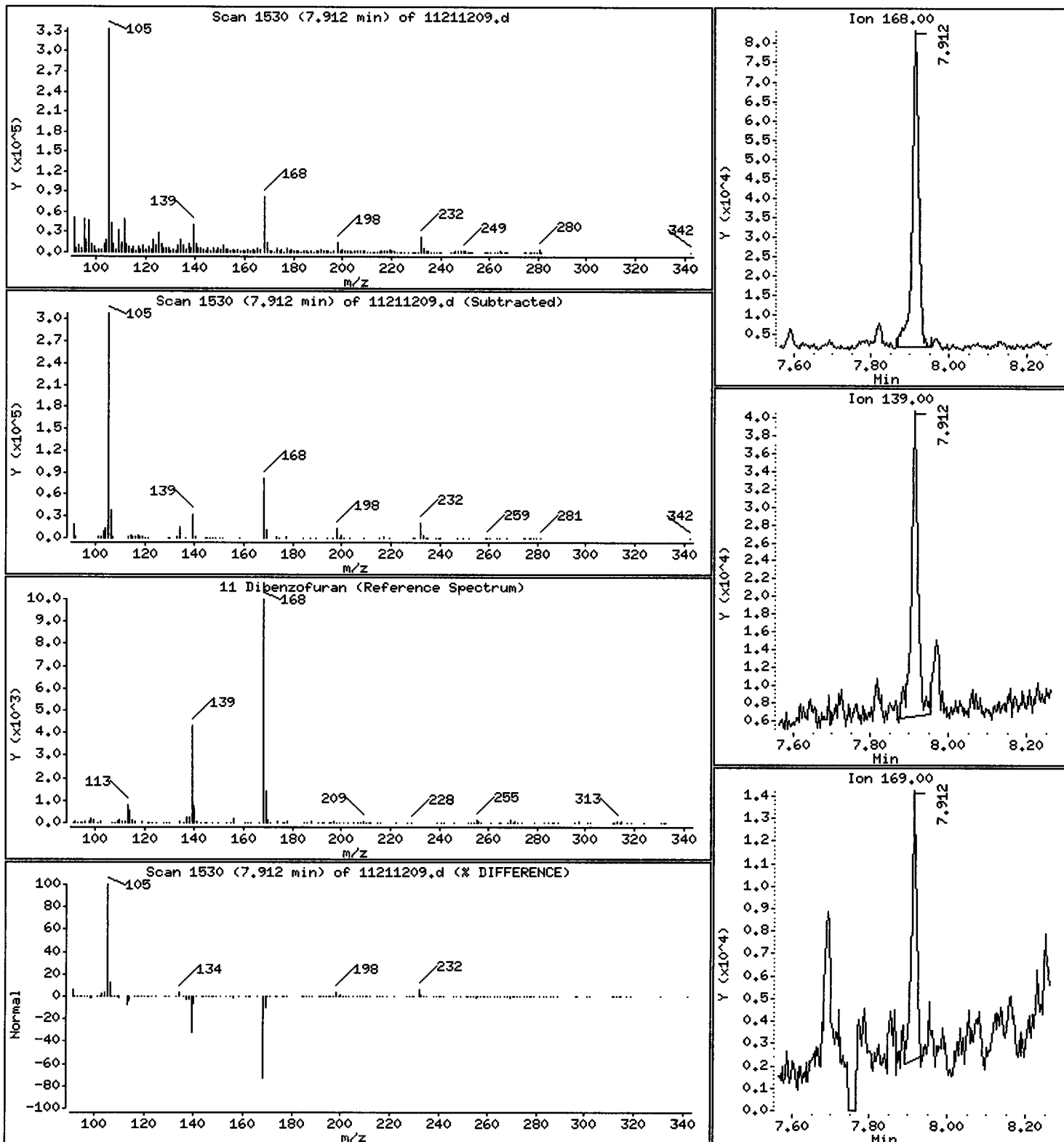
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Dibenzofuran

Concentration: 16.69 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

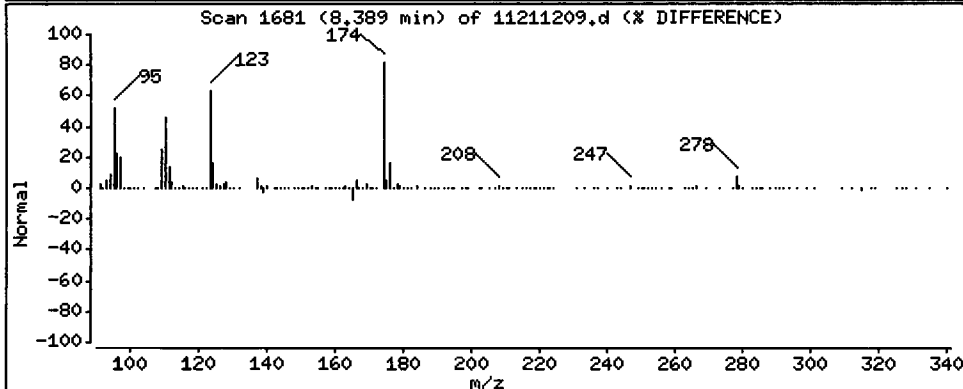
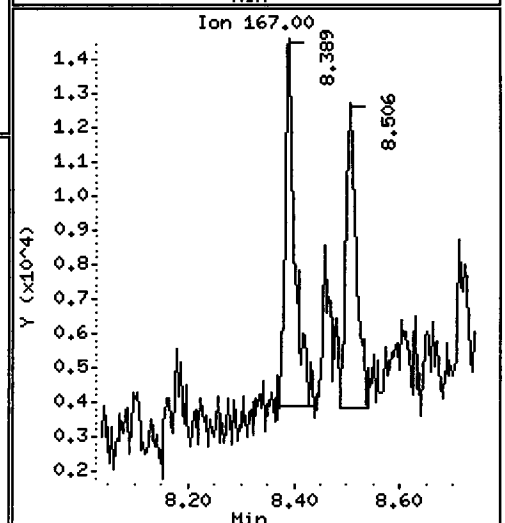
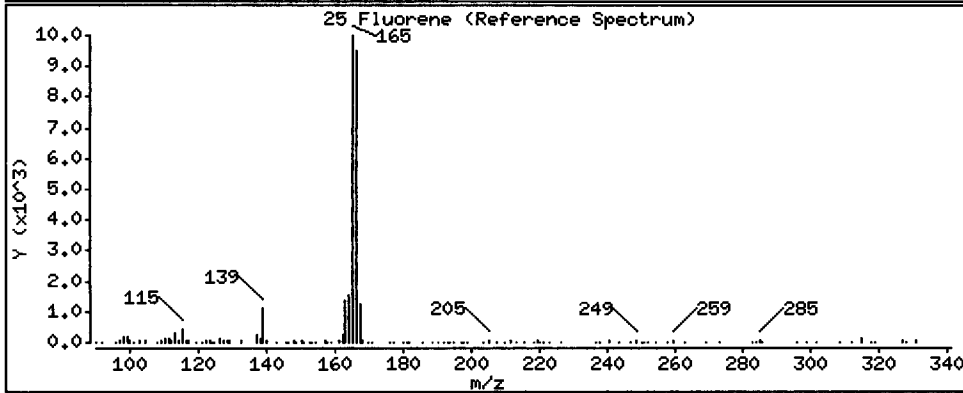
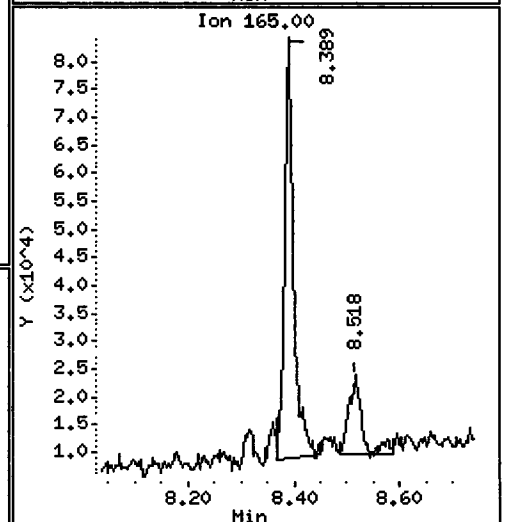
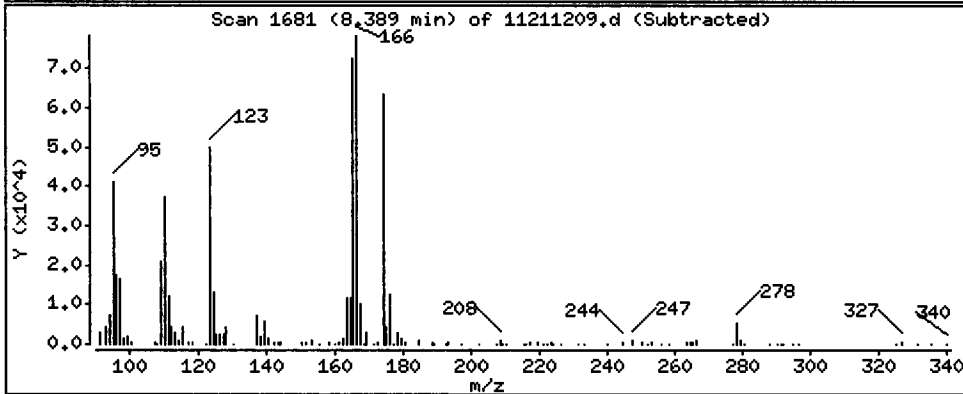
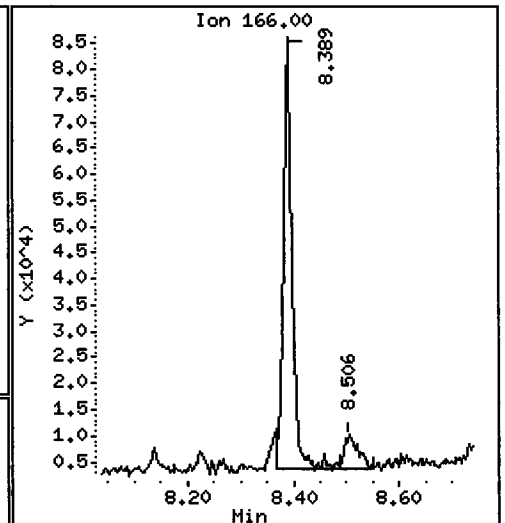
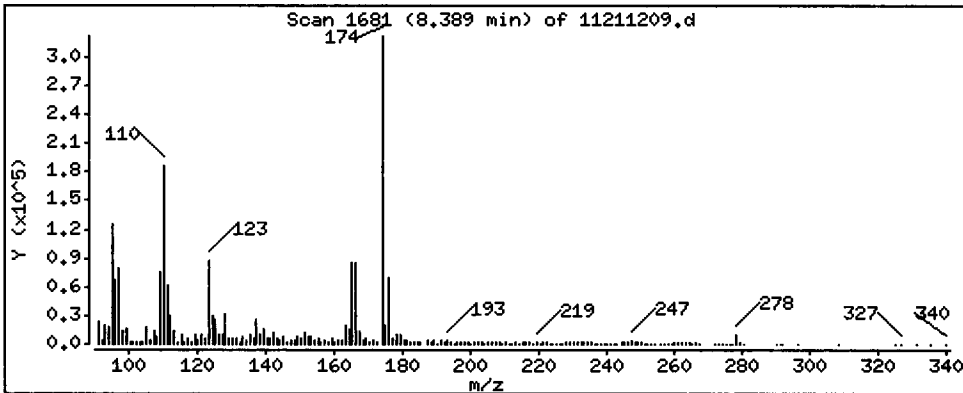
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

25 Fluorene

Concentration: 21.22 ug/kg





Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

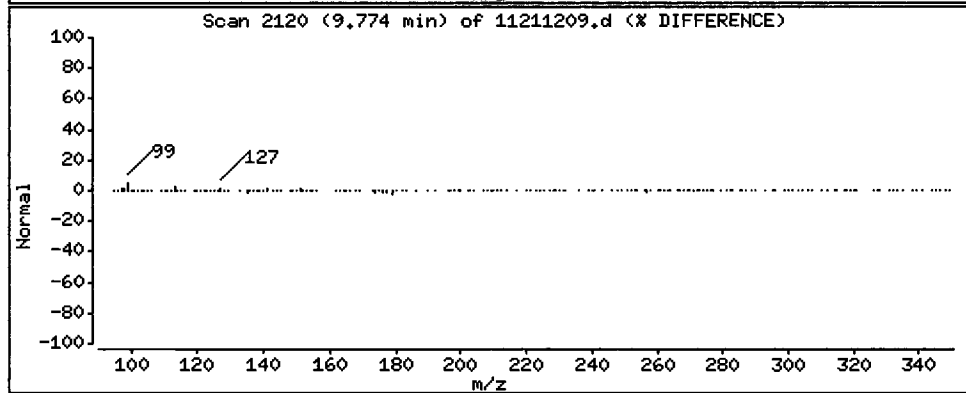
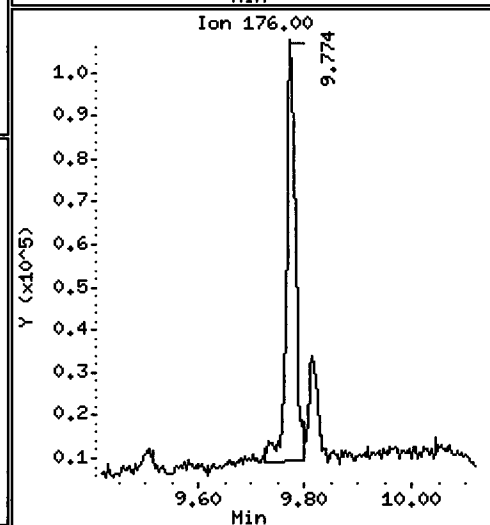
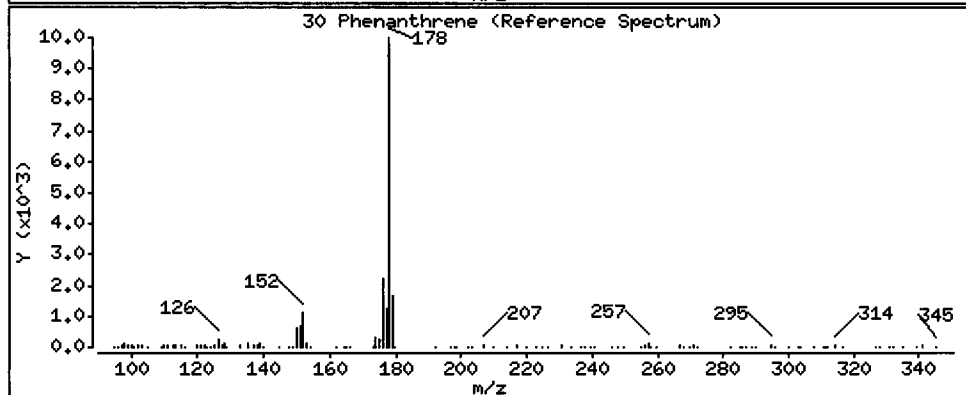
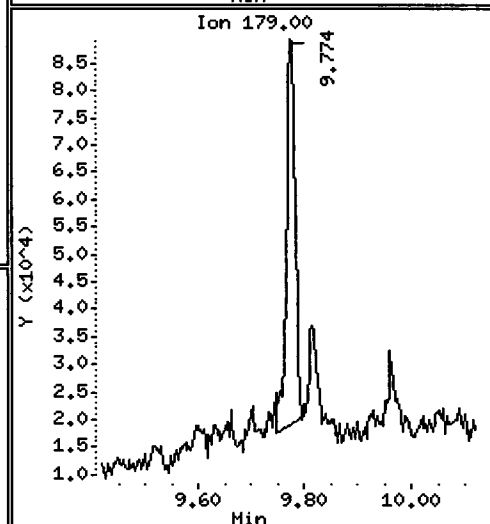
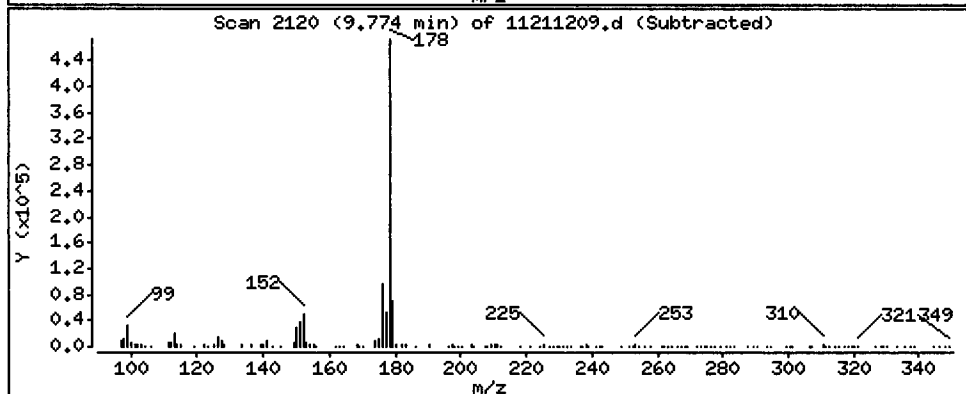
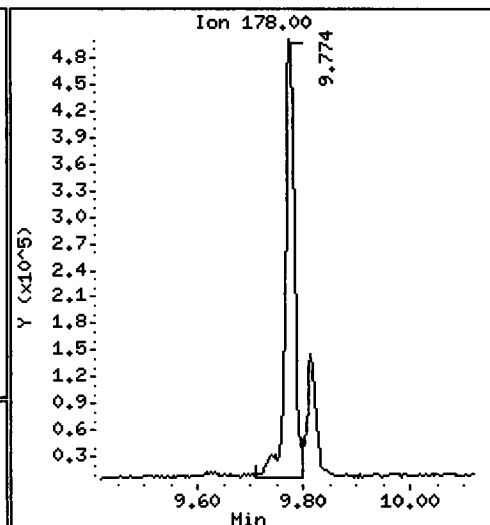
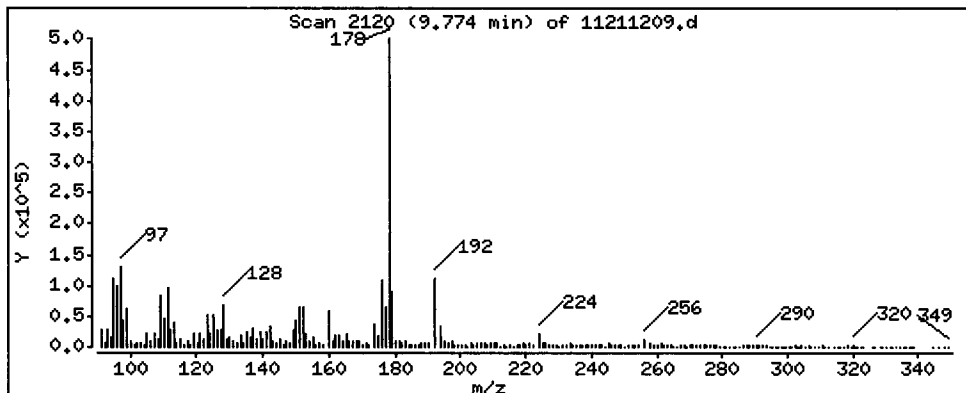
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

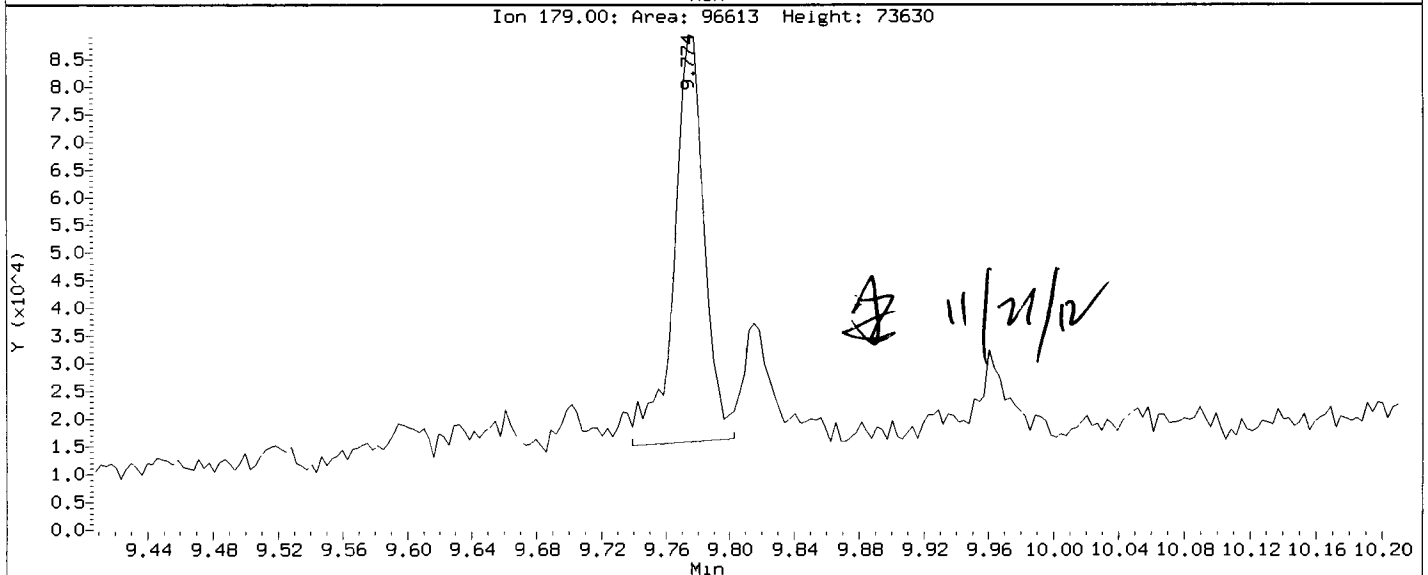
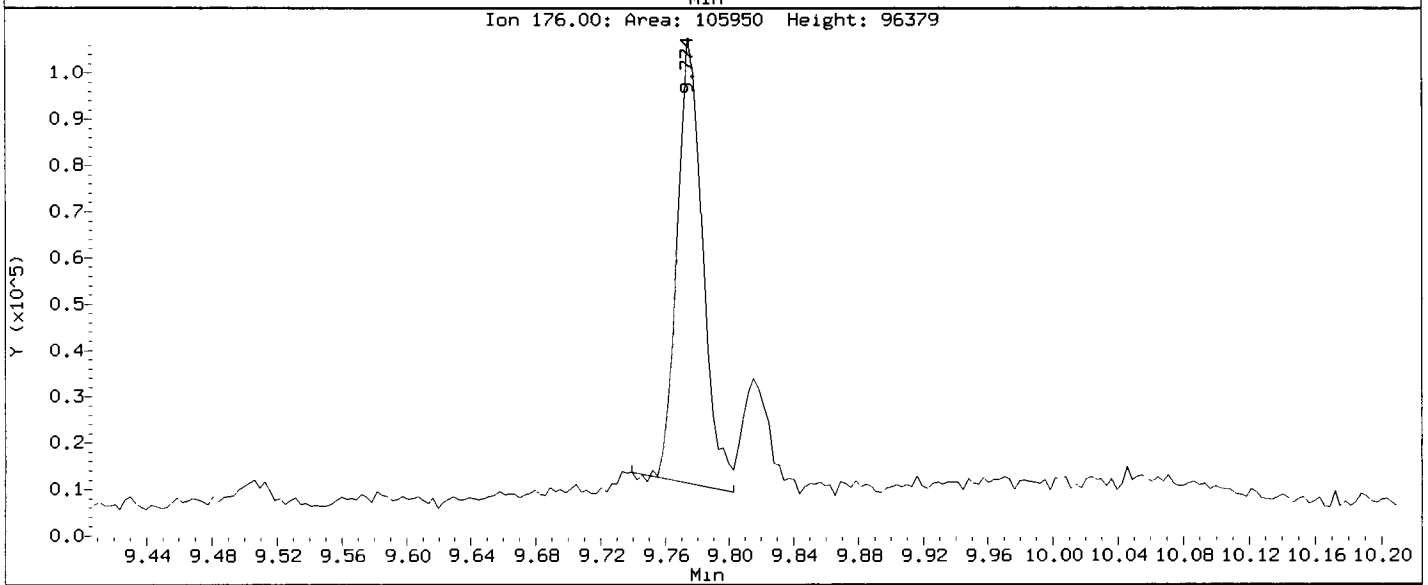
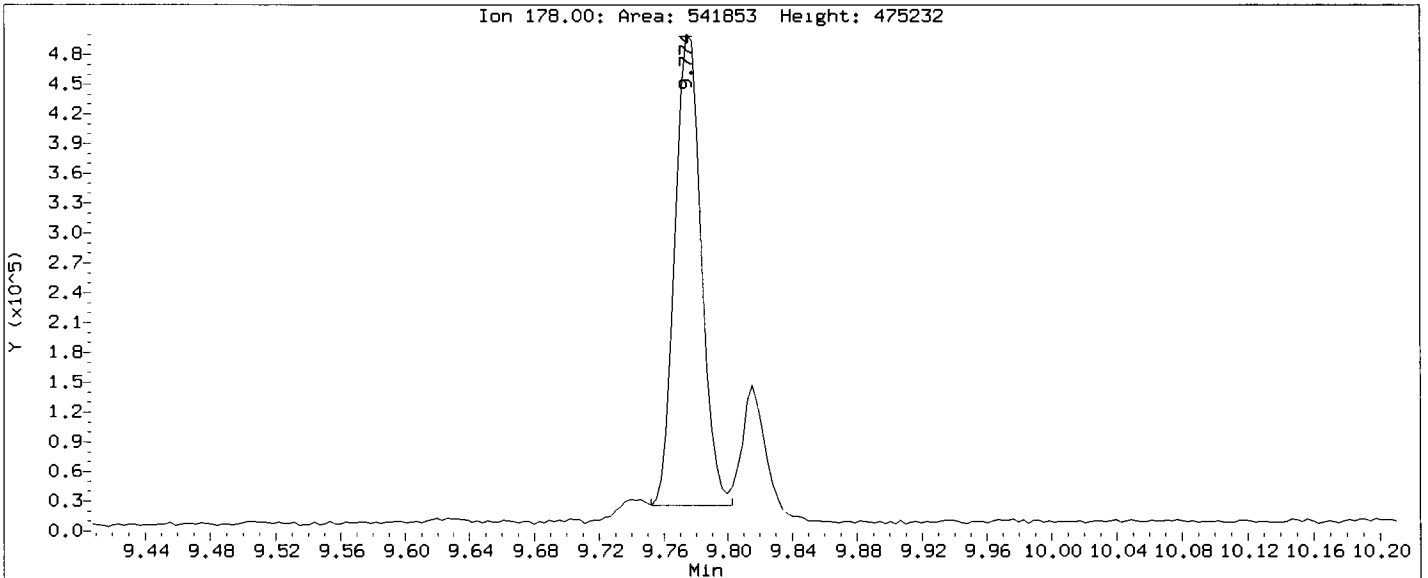
30 Phenanthrene

Concentration: 106.5 ug/kg



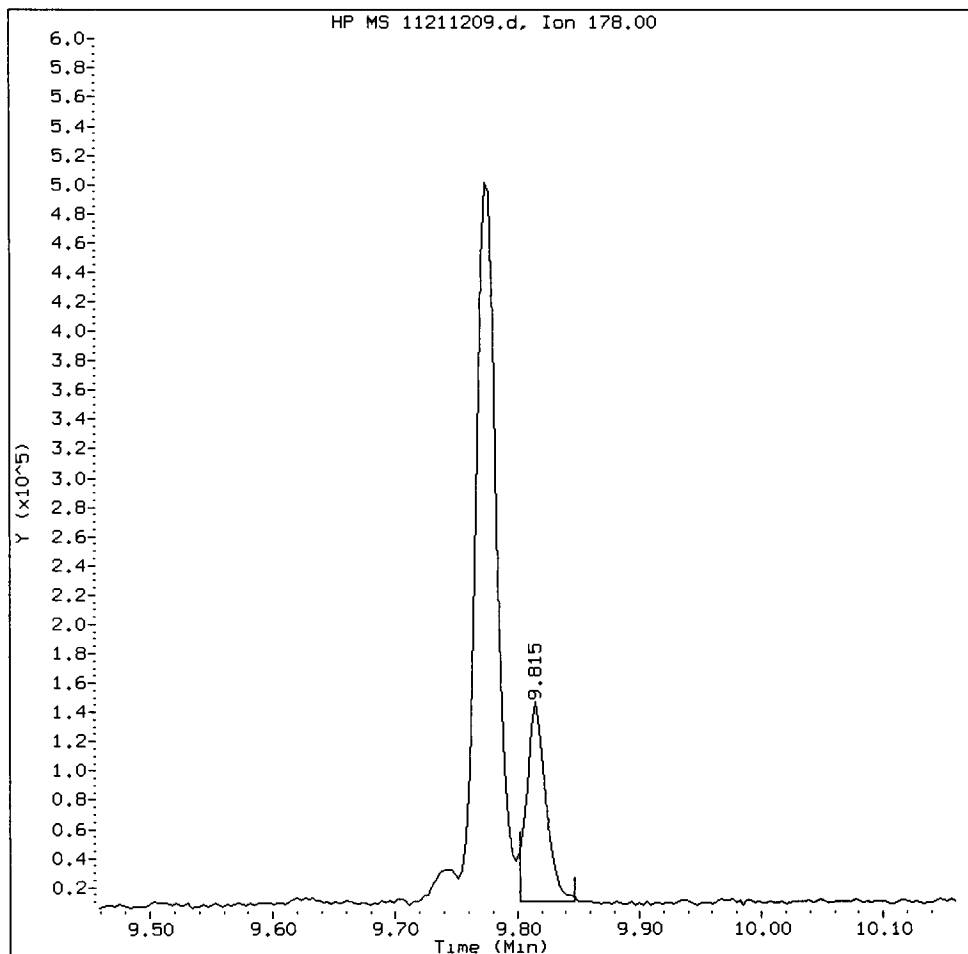
Data File: /chem3/nt11.1/20121121.b/11211209.d  
Injection Date: 21-NOV-2012 15:12  
Instrument: nt11.1  
Client Sample ID: SG-13-S-E-dup-12110

Compound: Anthracene  
CAS Number: 120-12-7



VR58E, /chem3/nt11.i/20121121.b/11211209.d

Anthracene Amount: 0.54 Area: 150232



MANUAL INTEGRATION for Anthracene

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

5. Other \_\_\_\_\_

Analyst:     *AS*    

Date:     11/21/12

Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

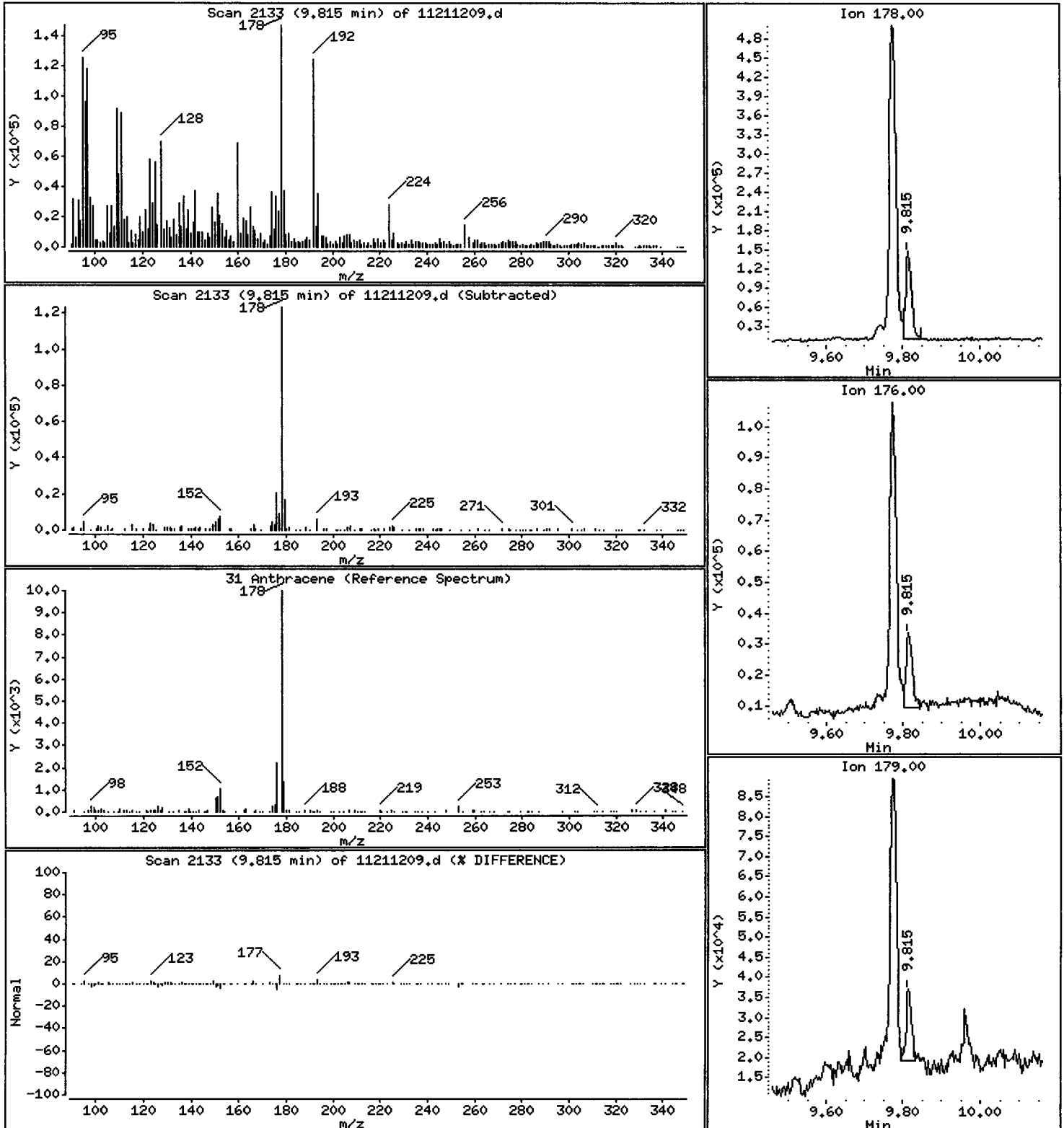
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

31 Anthracene

Concentration: 26.61 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

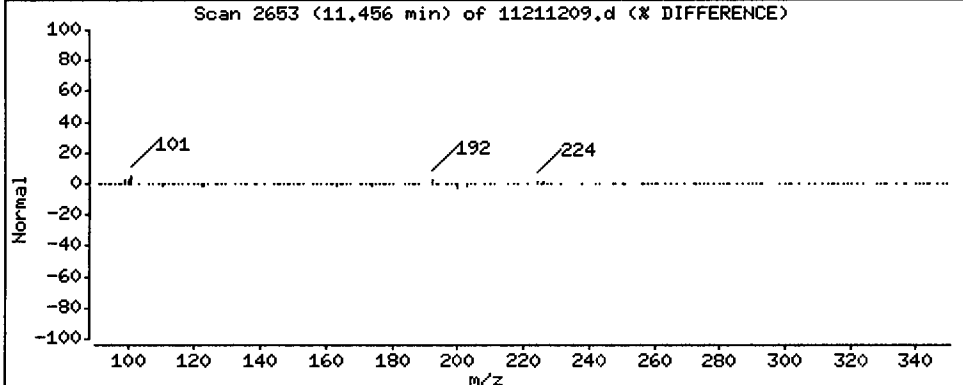
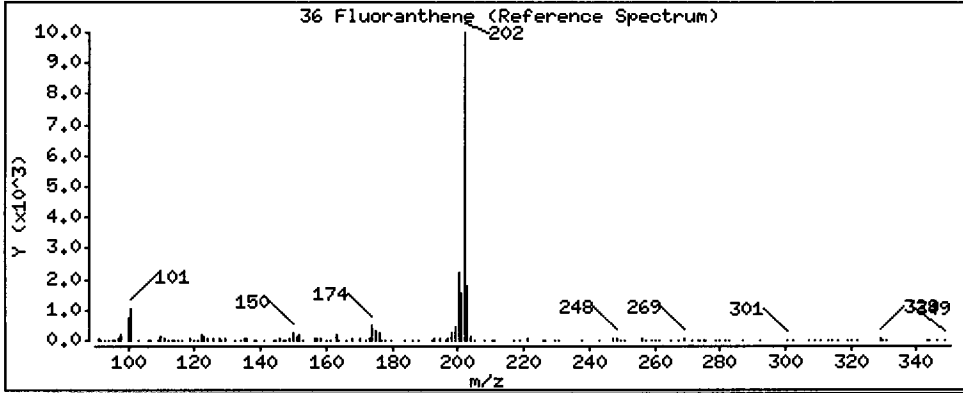
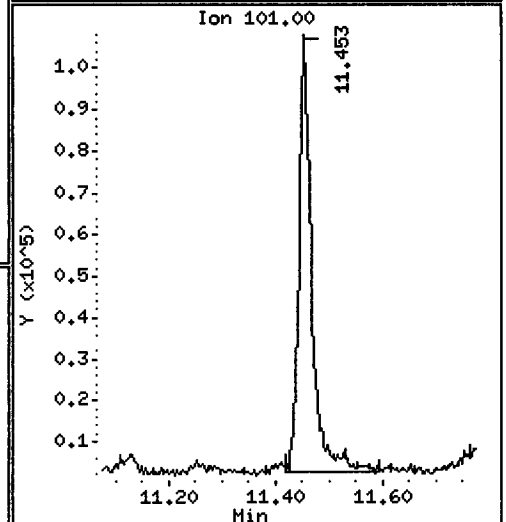
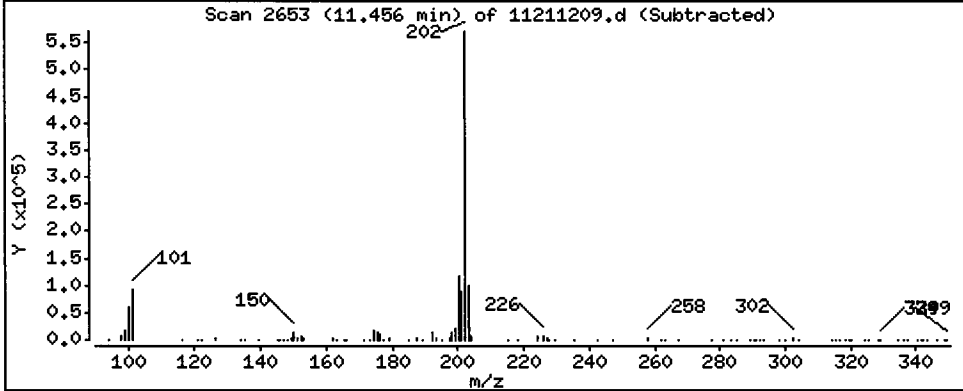
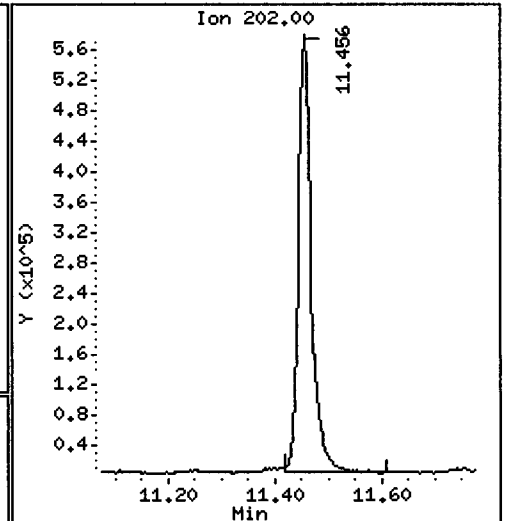
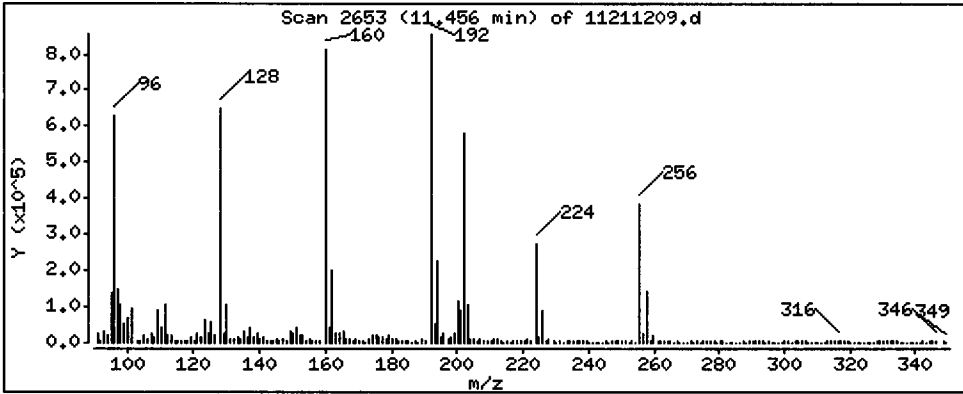
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

36 Fluoranthene

Concentration: 160.8 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

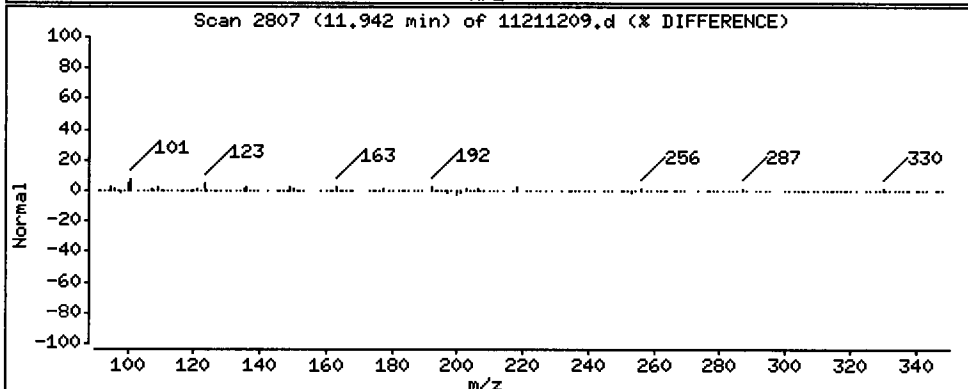
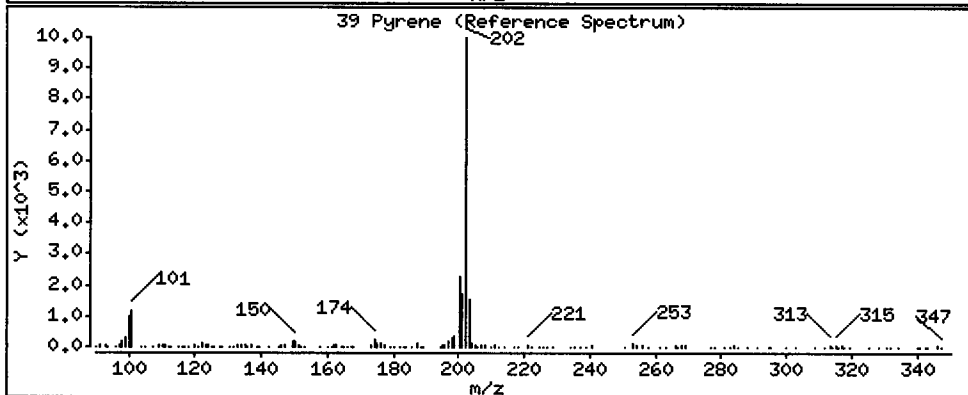
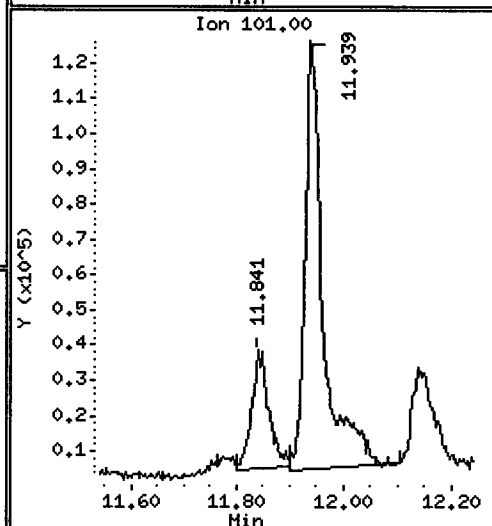
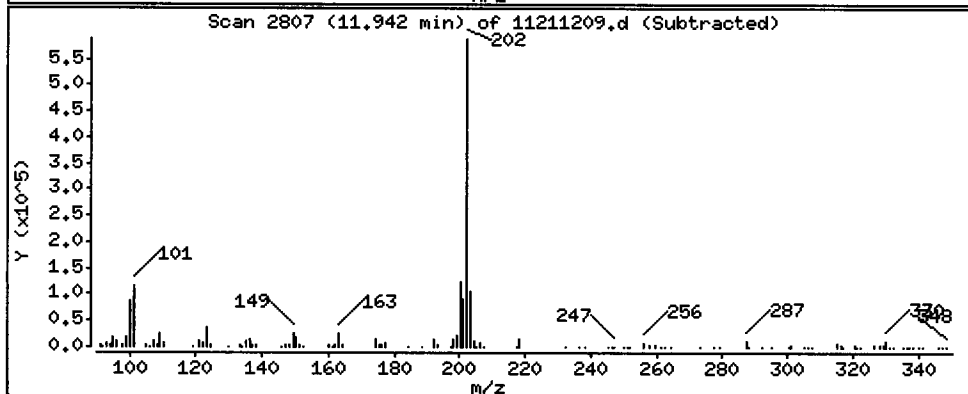
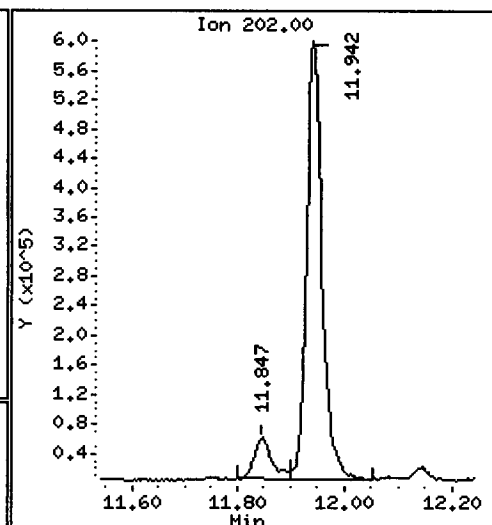
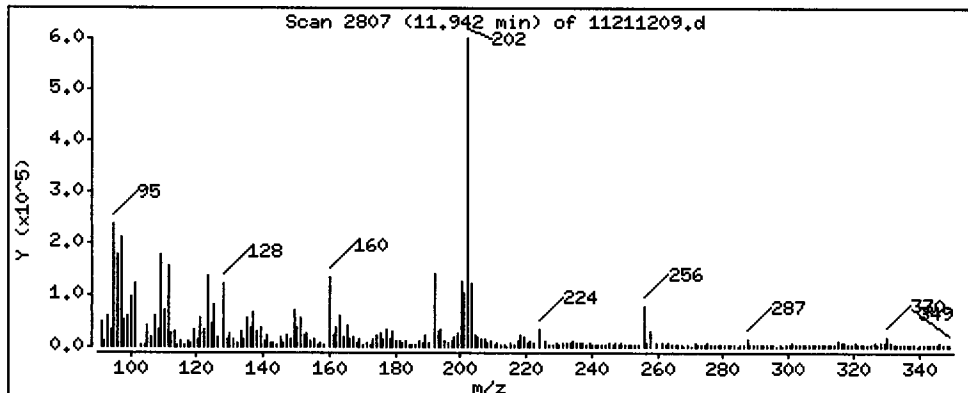
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

39 Pyrene

Concentration: 231.8 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

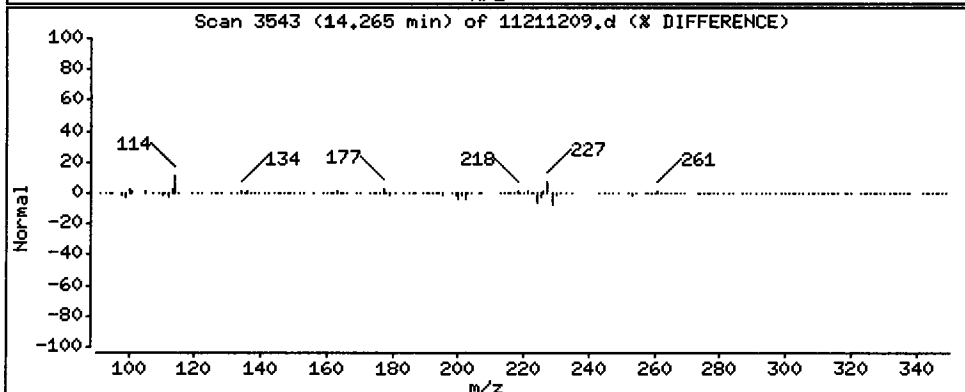
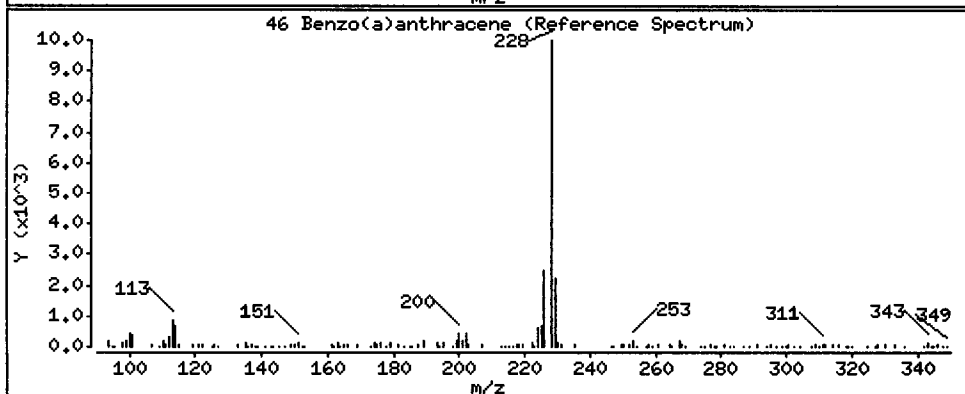
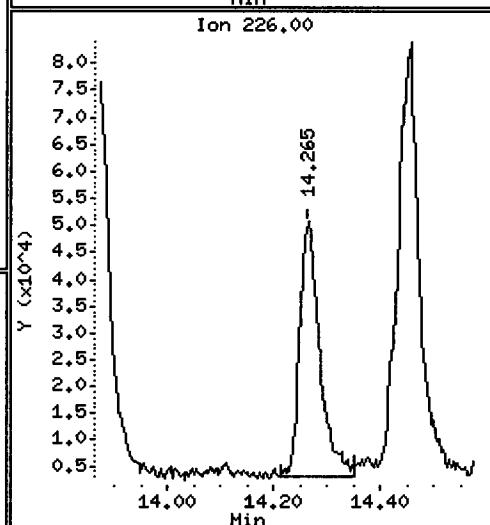
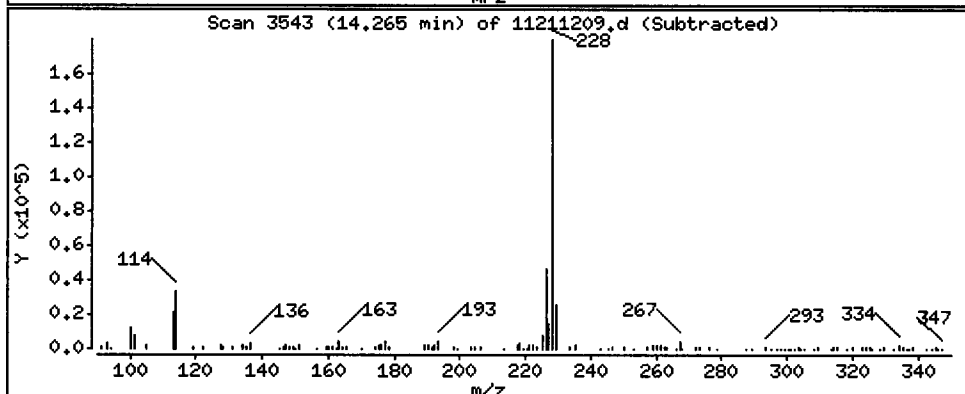
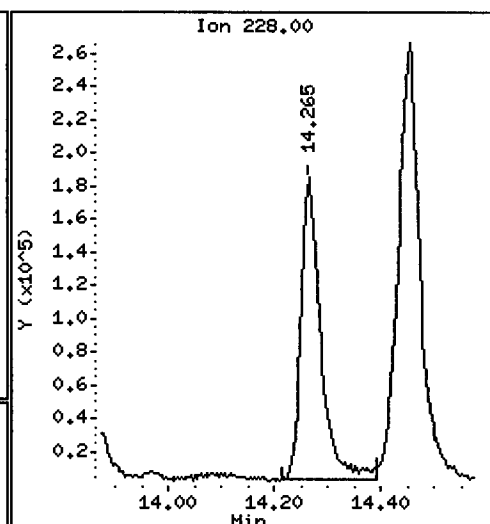
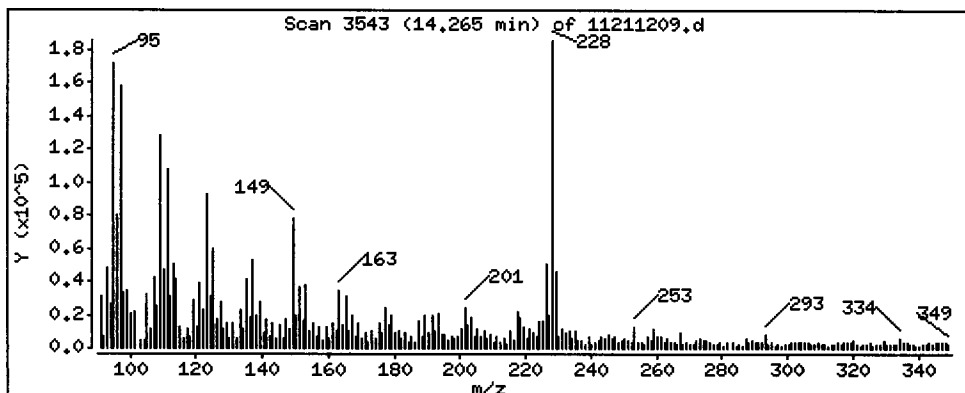
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Benzo(a)anthracene

Concentration: 100.4 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

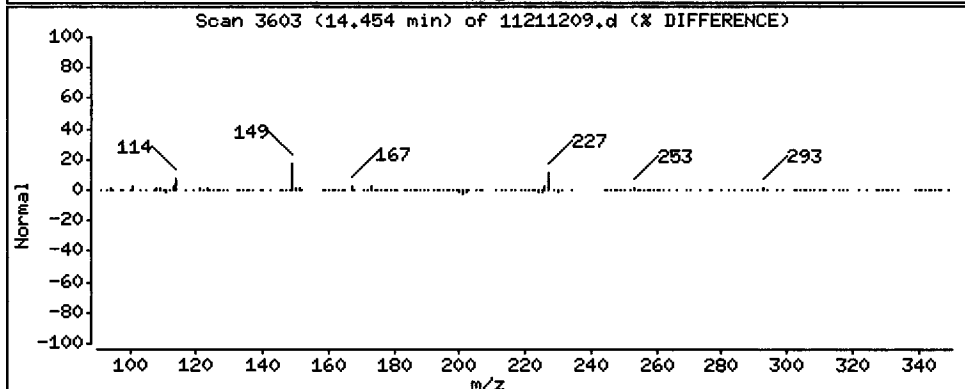
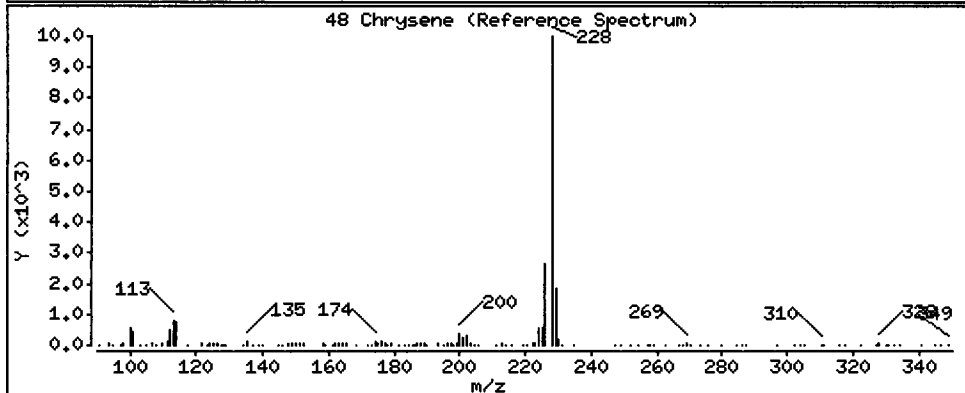
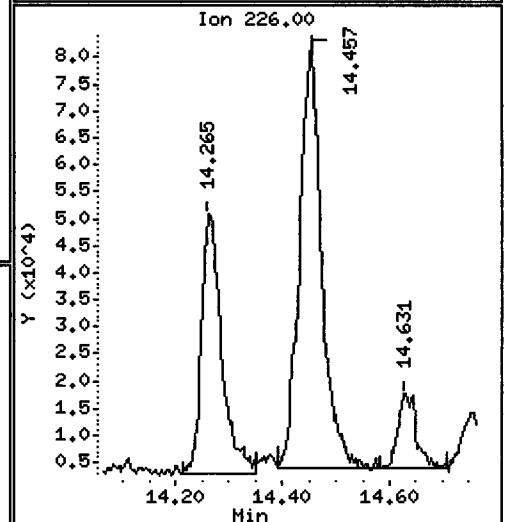
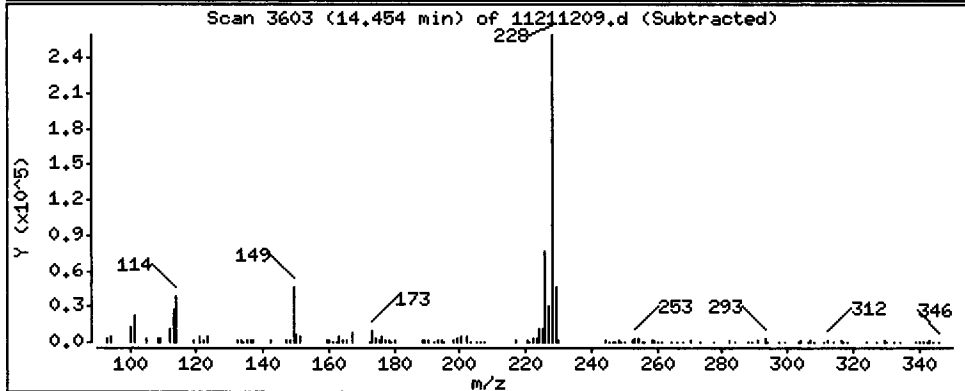
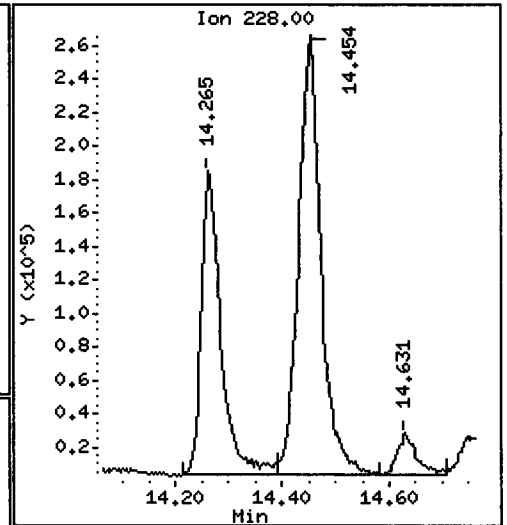
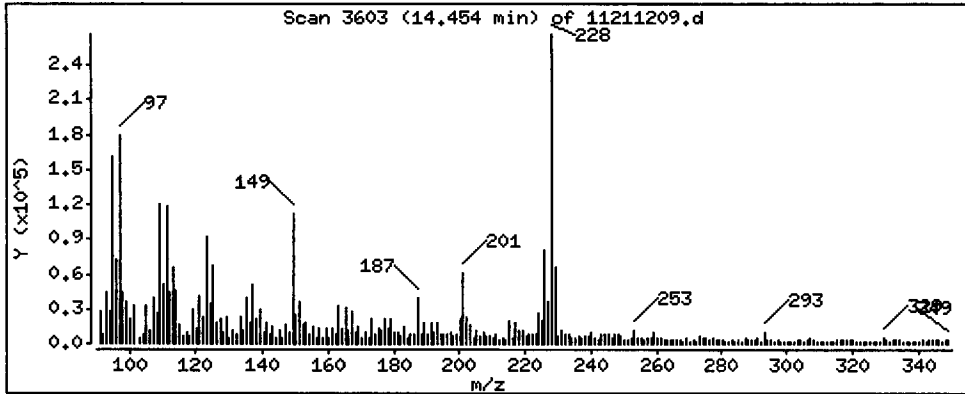
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

48 Chrysene

Concentration: 166.2 ug/kg





Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

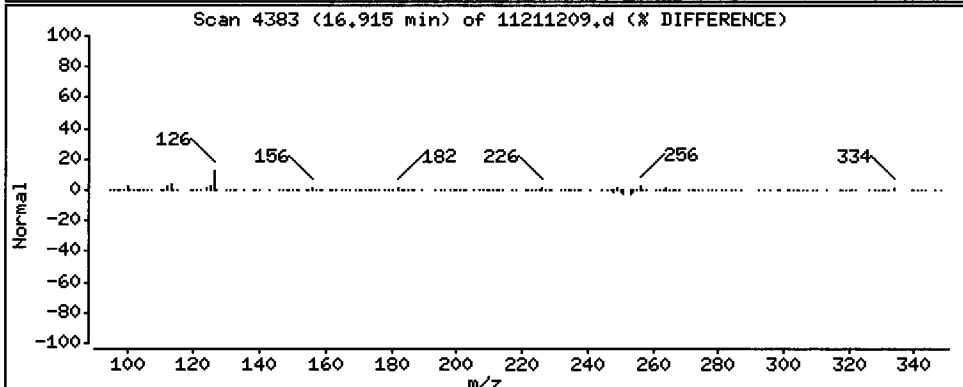
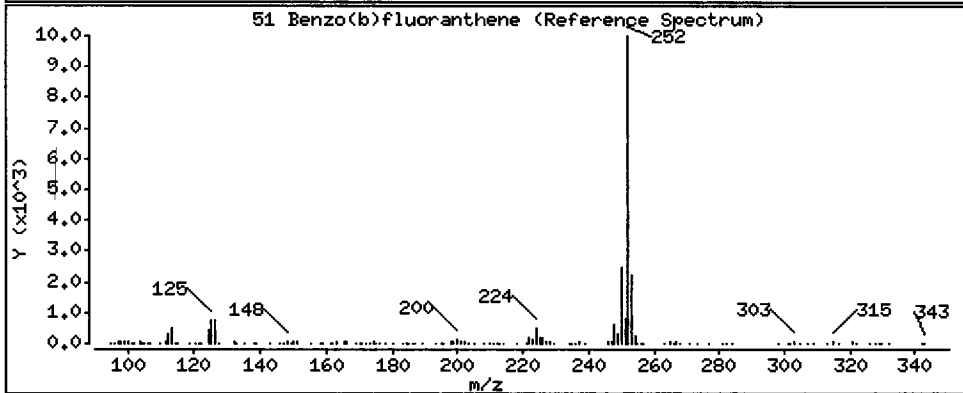
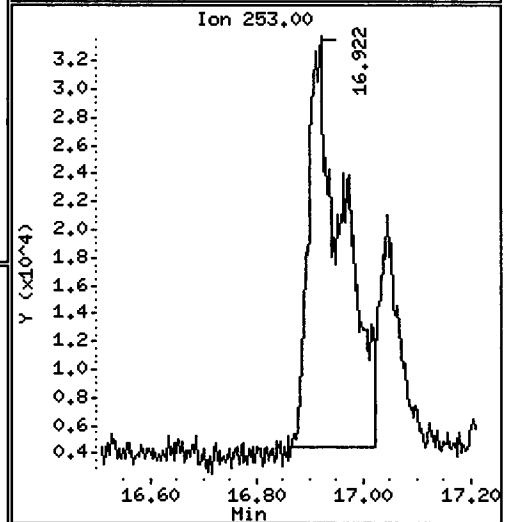
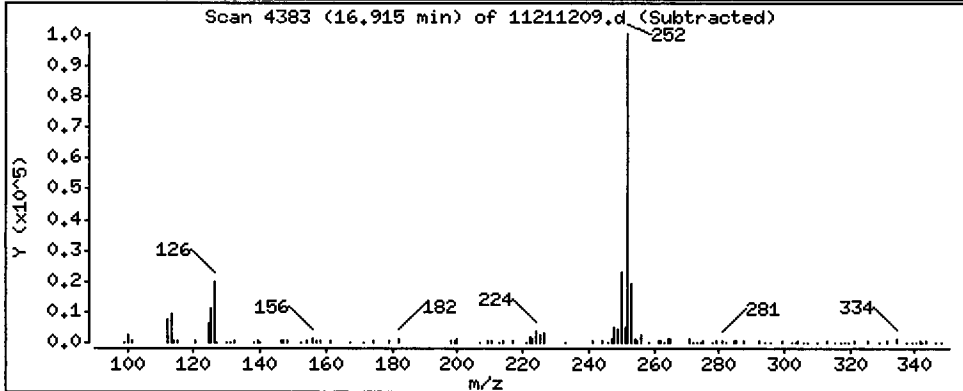
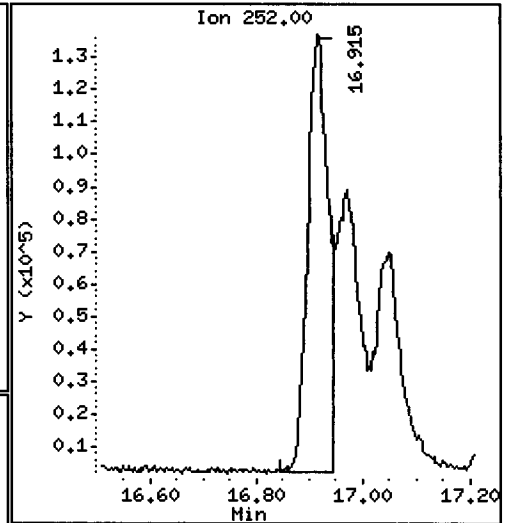
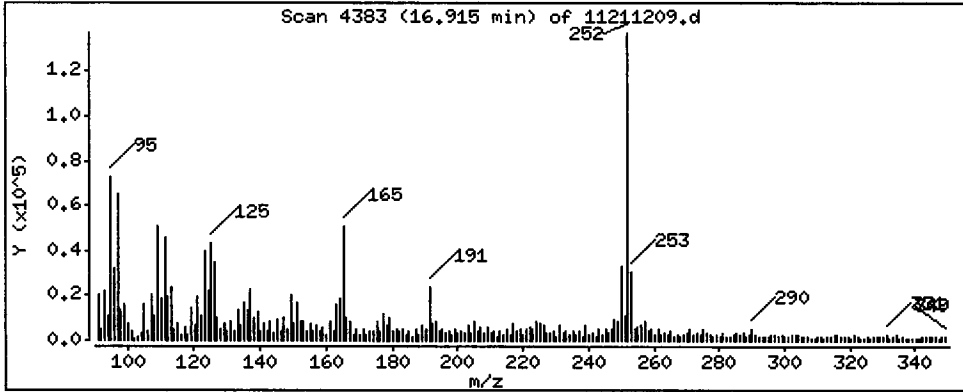
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

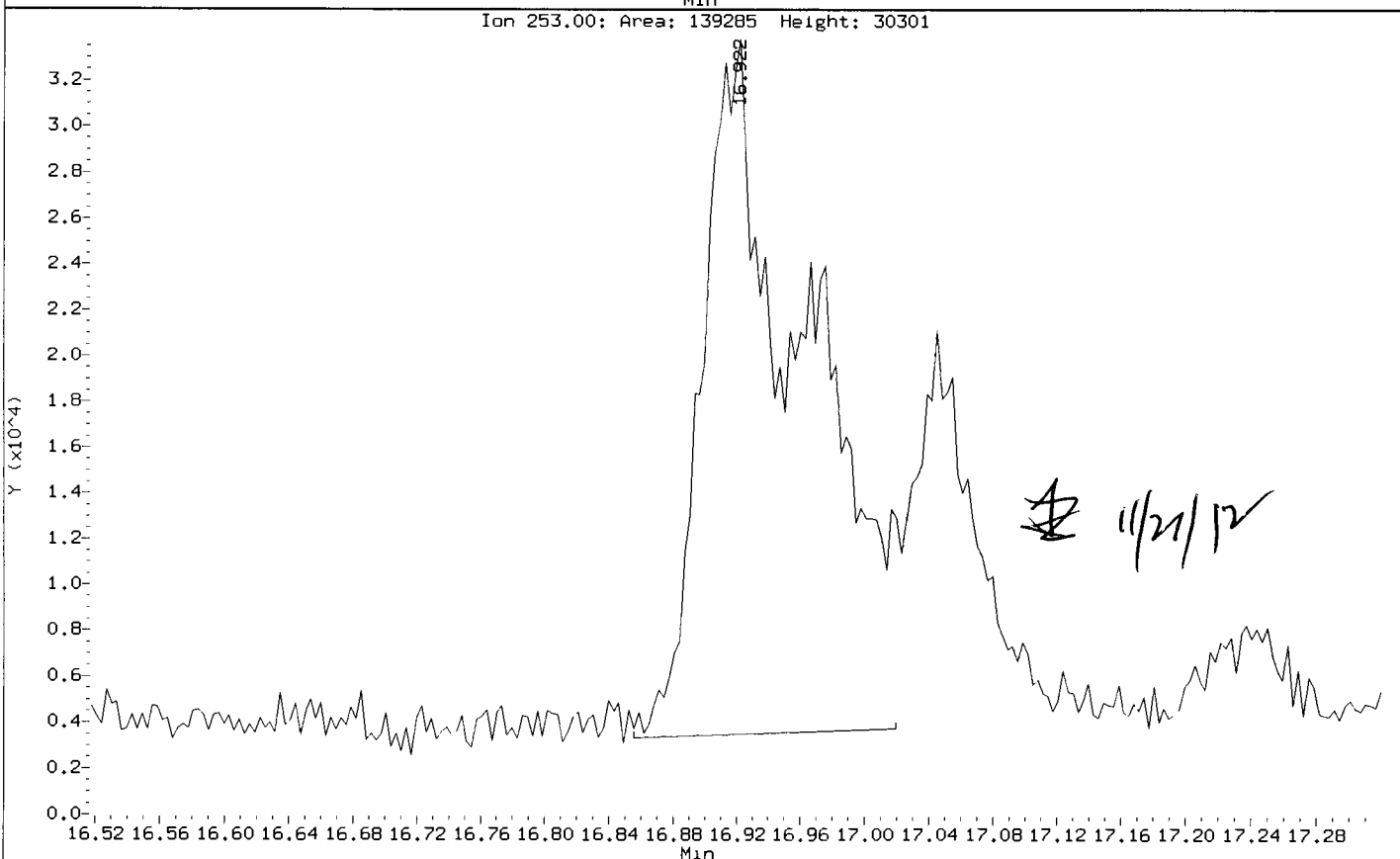
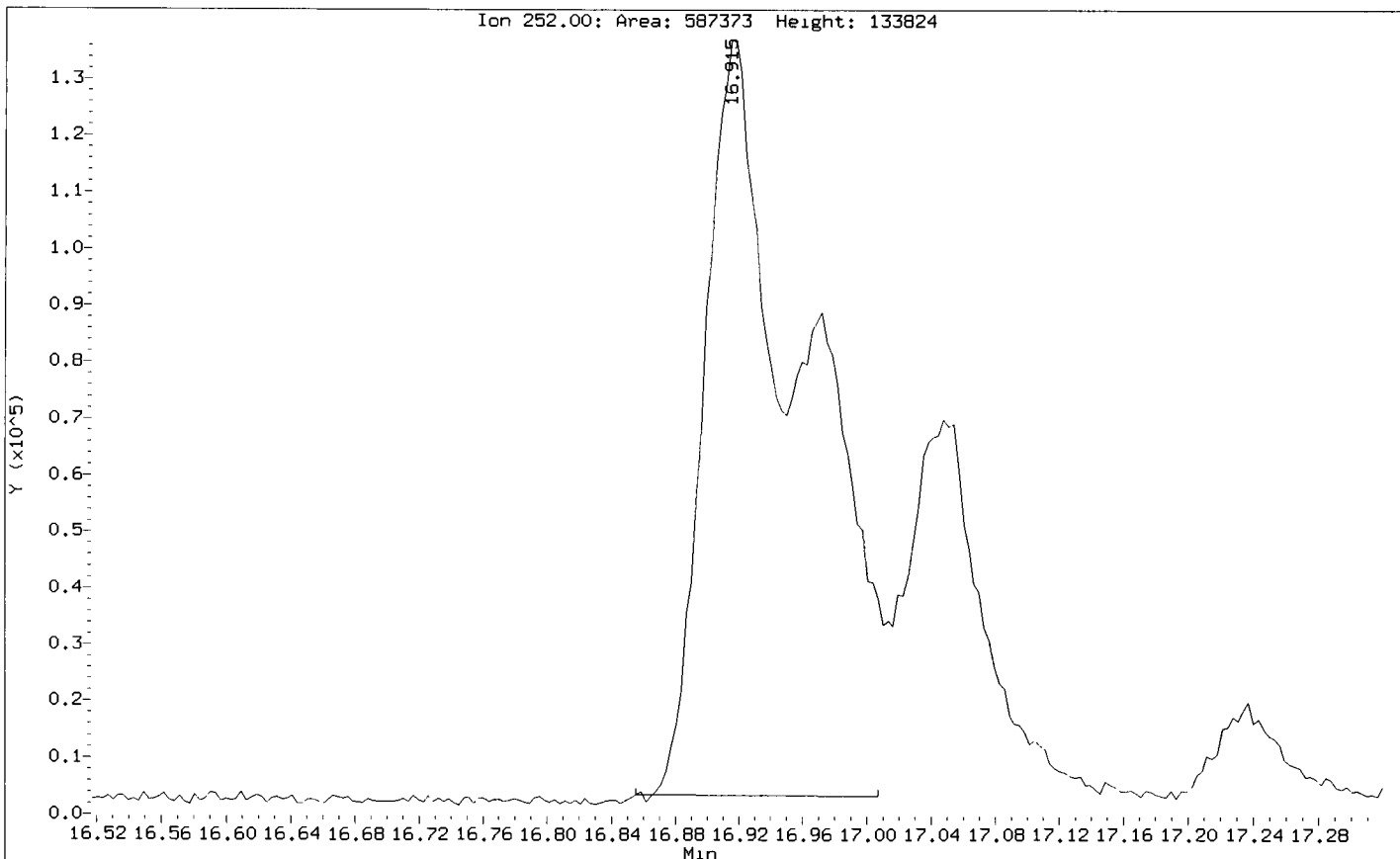
51 Benzo(b)fluoranthene

Concentration: 144.3 ug/kg



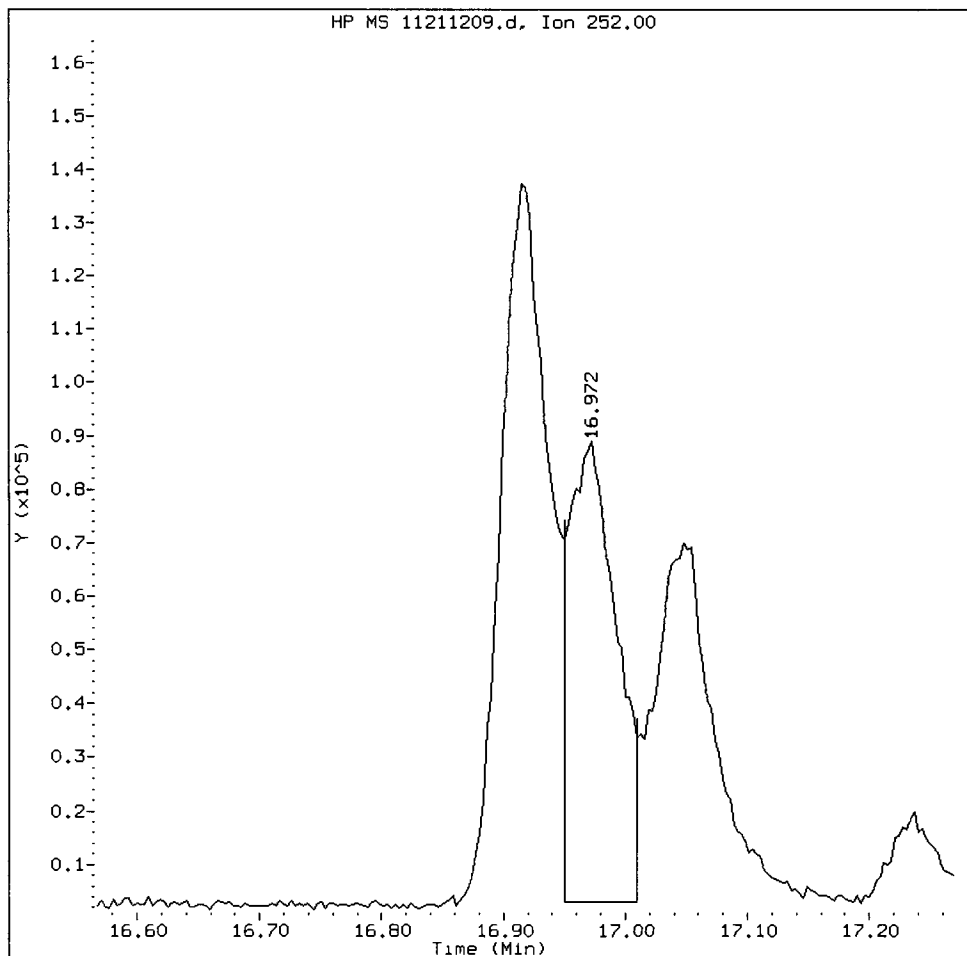
Data File: /chem3/nt11.1/20121121.b/11211209.d  
Injection Date: 21-NOV-2012 15:12  
Instrument: nt11.1  
Client Sample ID: SG-13-S-E-dup-12110

Compound: Benzo(k)fluoranthene  
CAS Number: 207-08-9



VR58E, /chem3/nt11.i/20121121.b/11211209.d

Benzo(k)fluoranthene Amount: 1.78 Area: 240575



### MANUAL INTEGRATION for Benzo(k)fluoranthene

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

5. Other \_\_\_\_\_

Analyst:    *D*   

Date:    11/21/12

Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

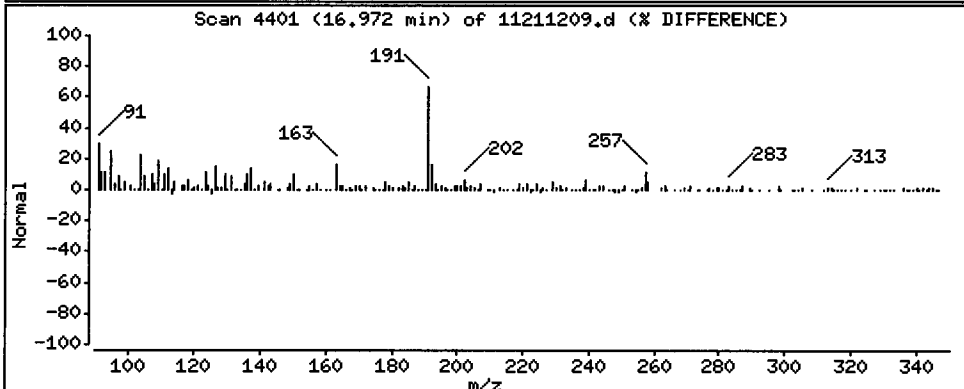
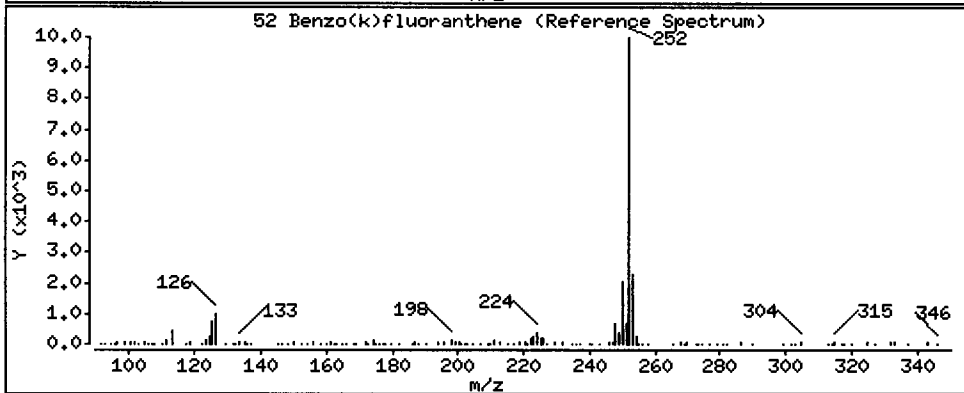
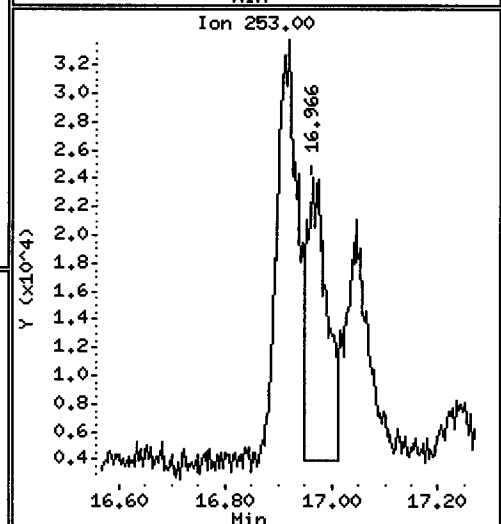
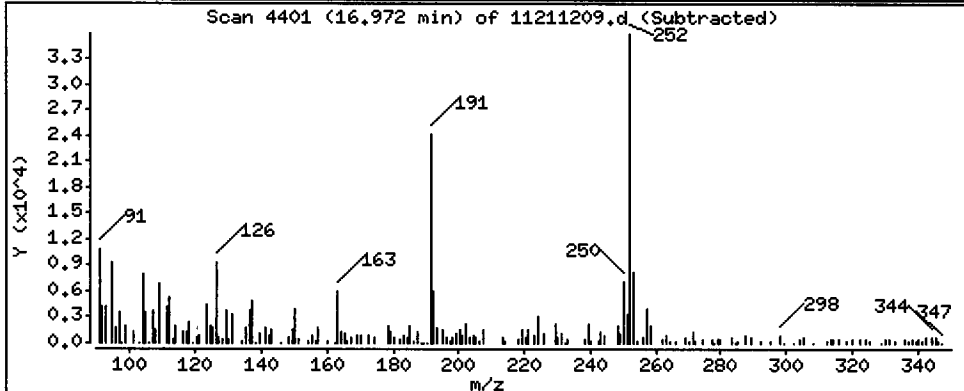
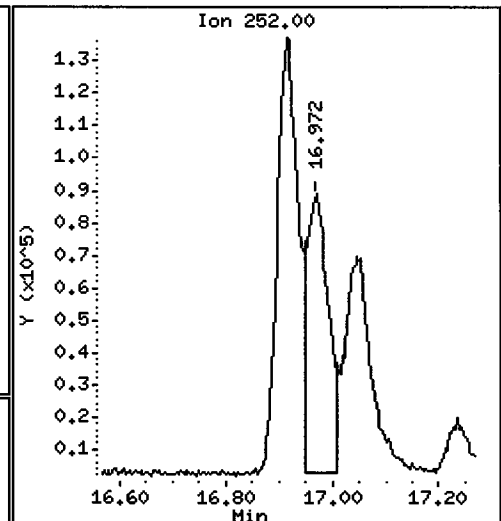
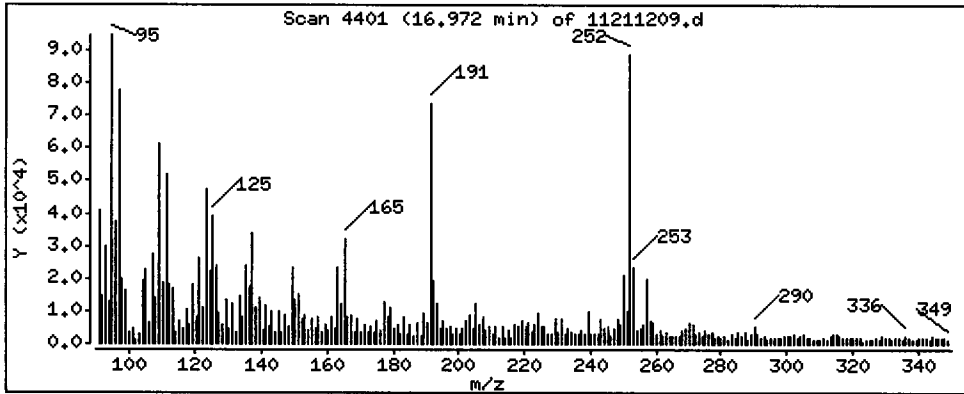
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

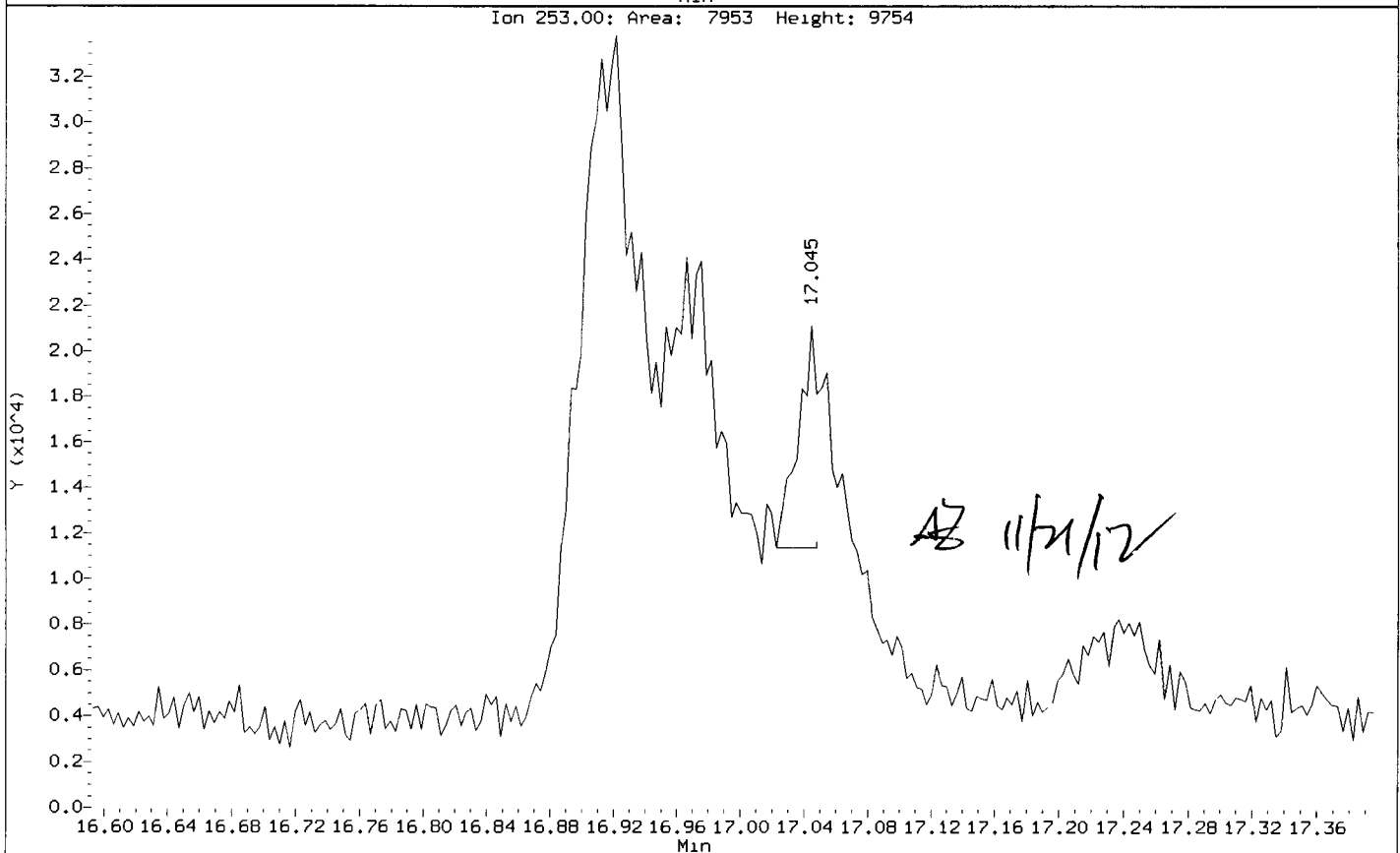
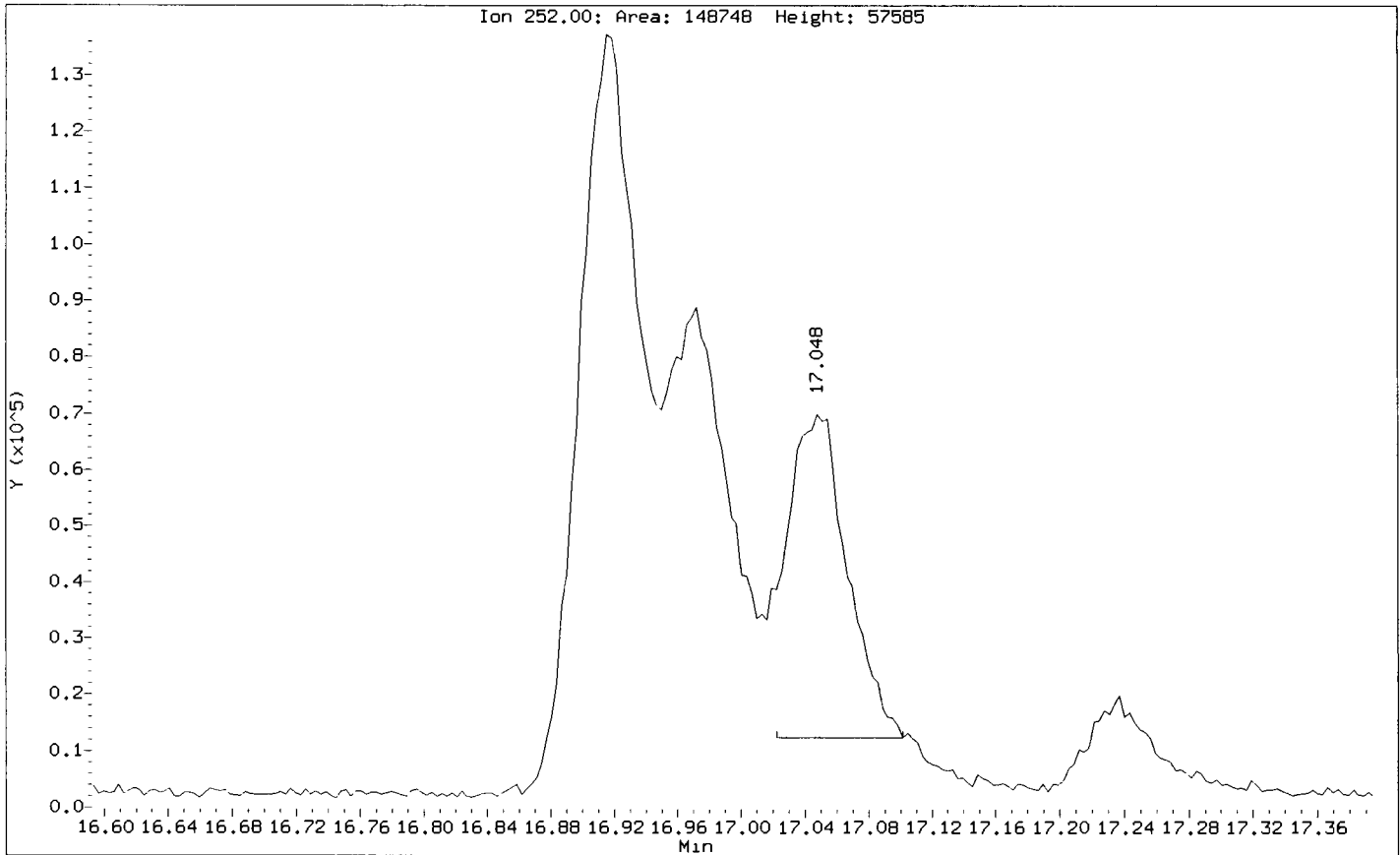
52 Benzo(k)fluoranthene

Concentration: 88.24 ug/kg



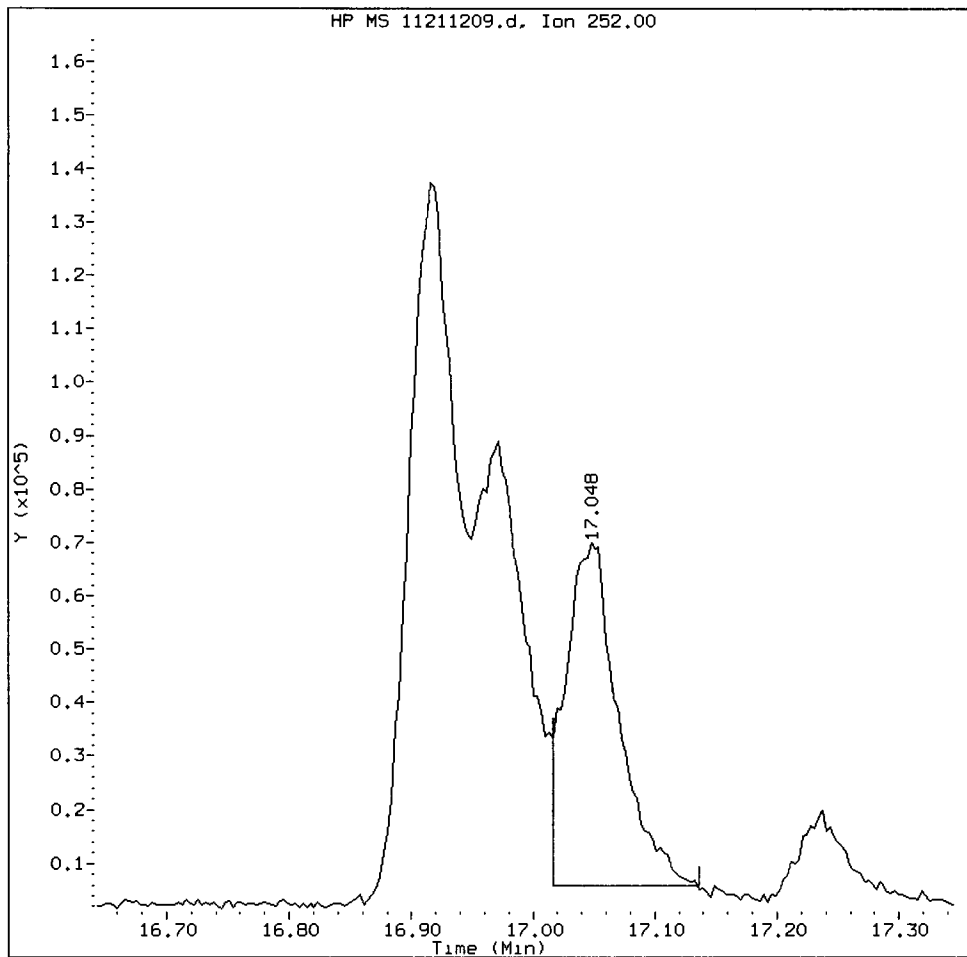
Data File: /chem3/nt11.1/20121121.b/11211209.d  
Injection Date: 21-NOV-2012 15:12  
Instrument: nt11.1  
Client Sample ID: SG-13-S-E-dup-12110

Compound: Benzo(j)fluoranthene  
CAS Number:



VR58E, /chem3/nt11.i/20121121.b/11211209.d

Benzo(j)fluoranthene Amount: 1.39 Area: 198358



MANUAL INTEGRATION for Benzo(j)fluoranthene

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

5. Other \_\_\_\_\_

Analyst:   *A*  

Date:   4/24/12

Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

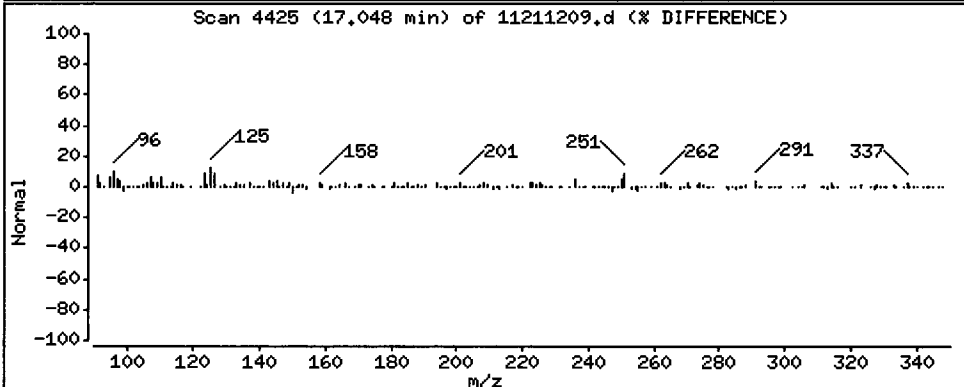
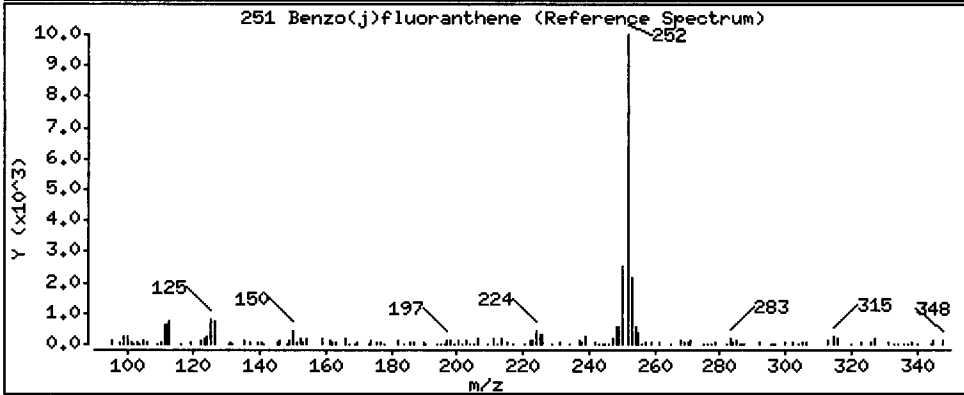
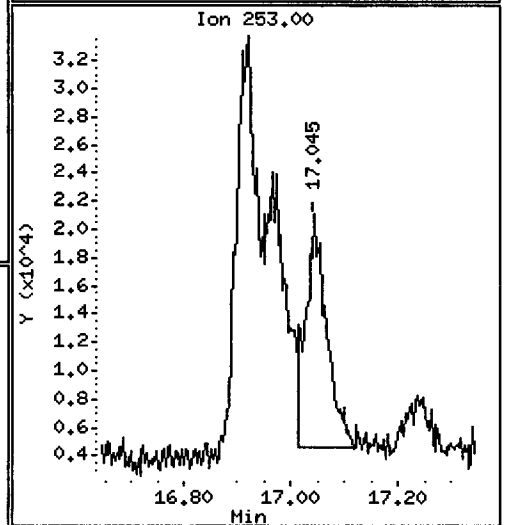
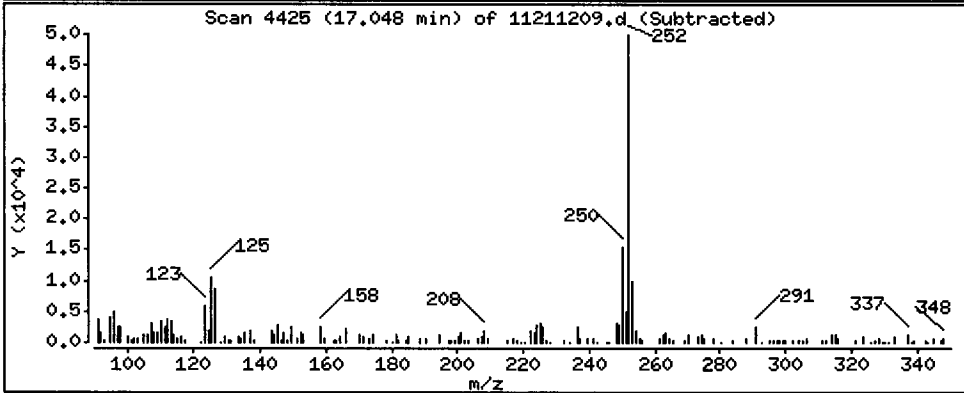
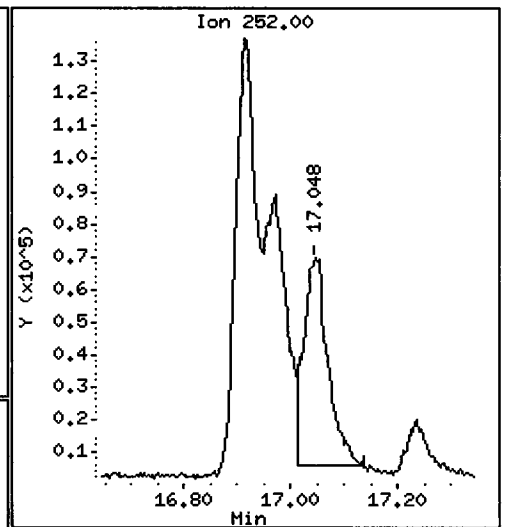
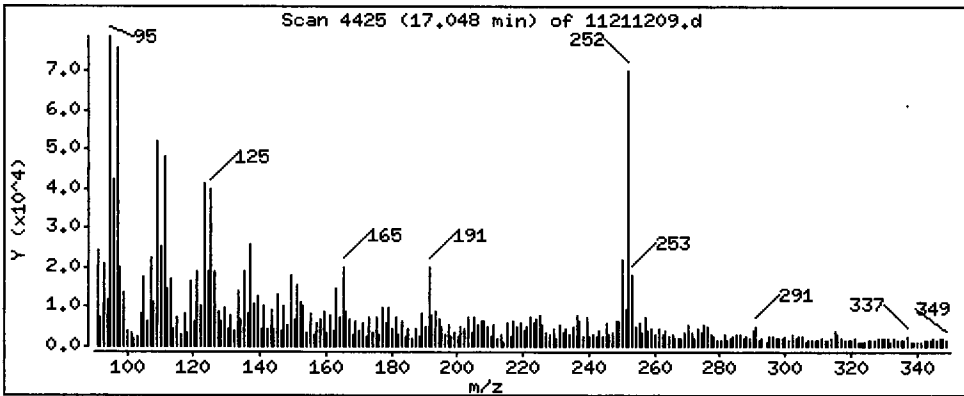
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

251 Benzo(j)fluoranthene

Concentration: 68.95 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

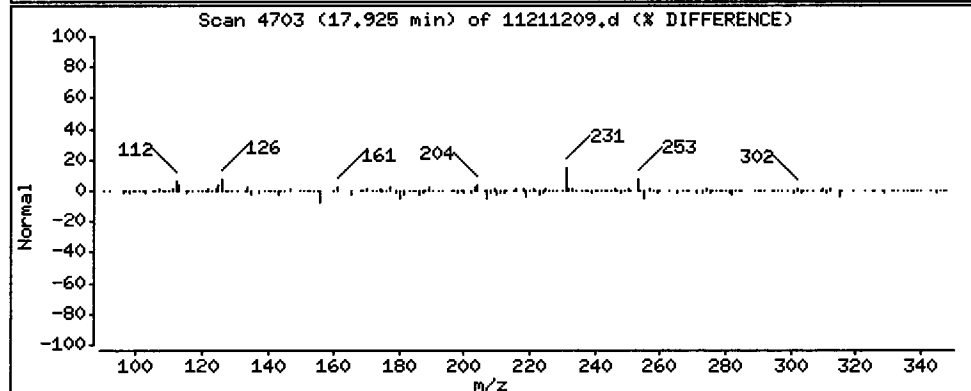
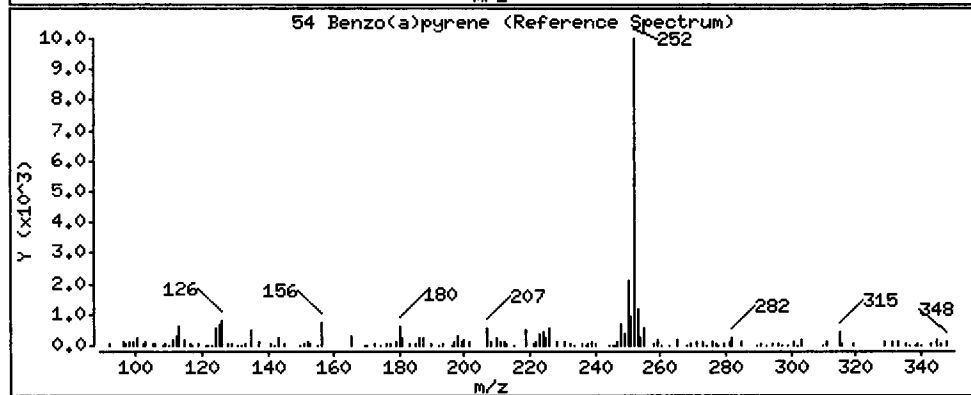
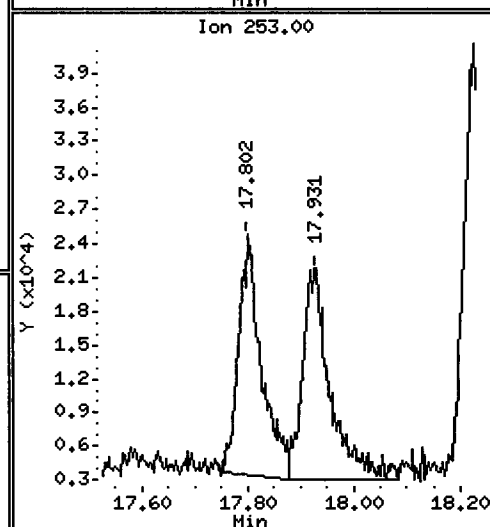
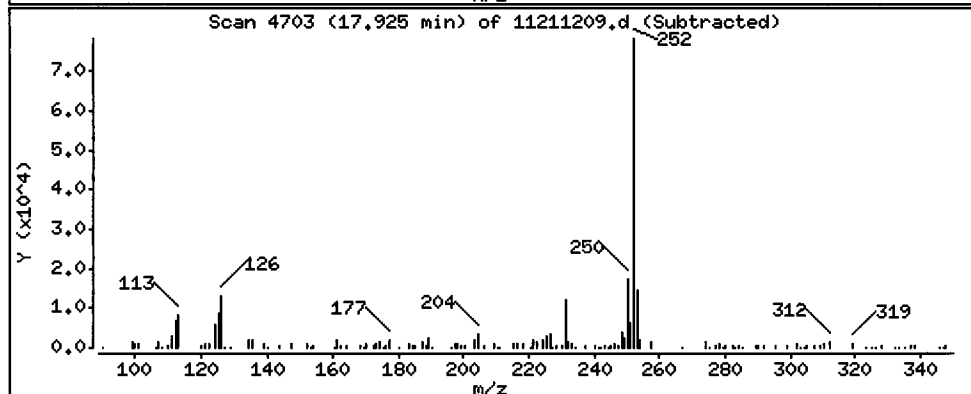
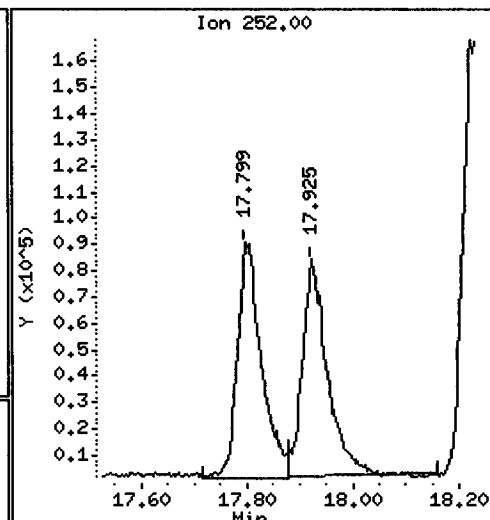
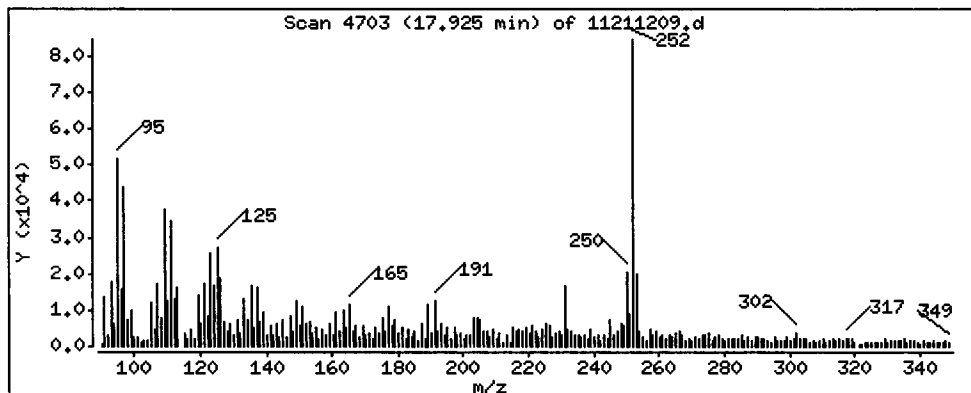
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

54 Benzo(a)pyrene

Concentration: 102.8 ug/kg





Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

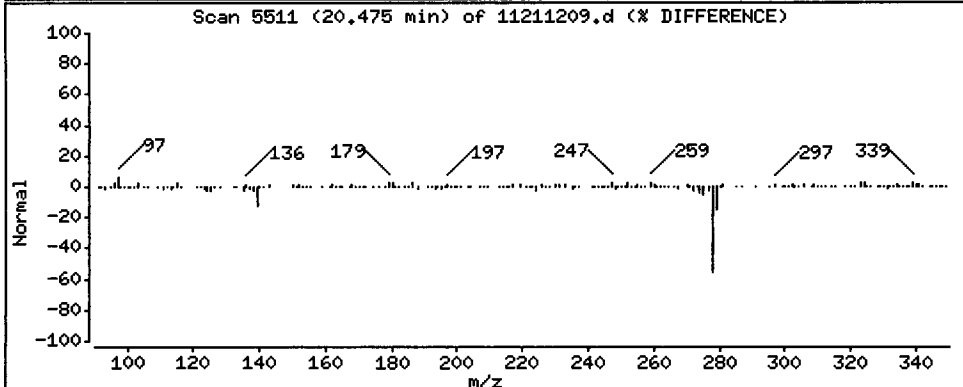
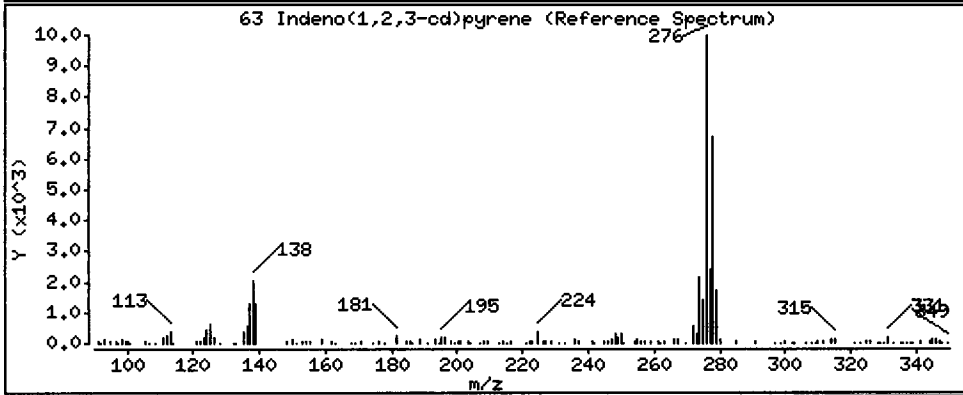
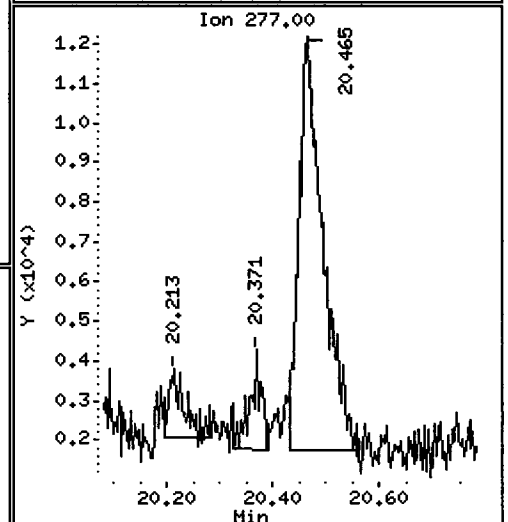
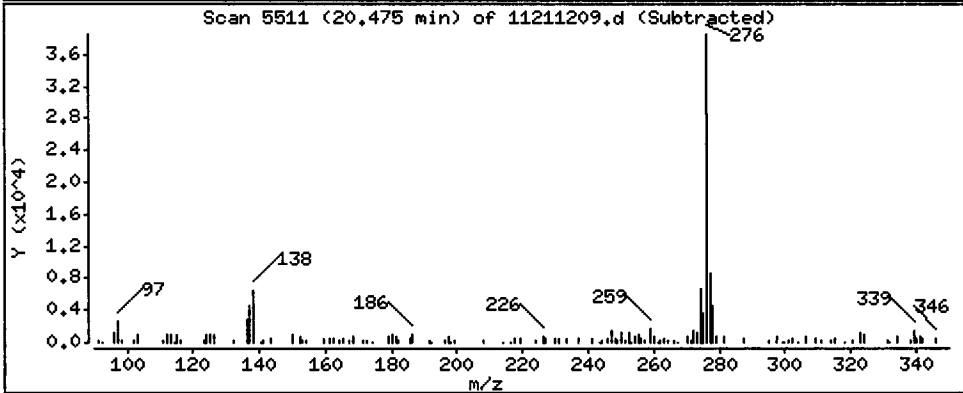
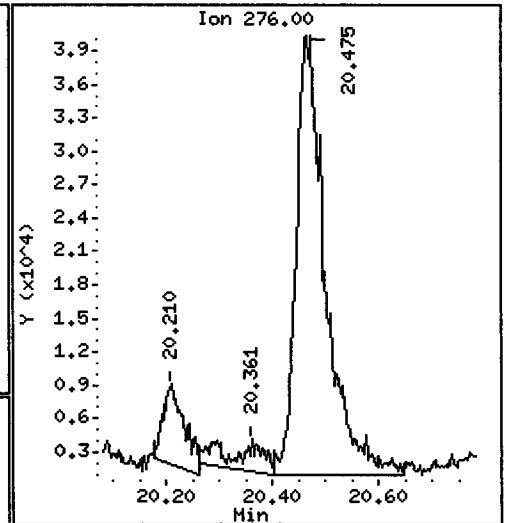
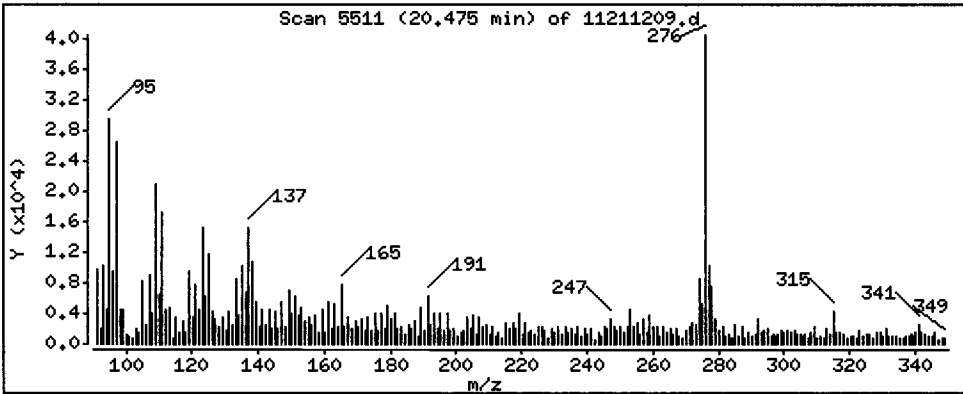
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

63 Indeno(1,2,3-cd)pyrene

Concentration: 48.80 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

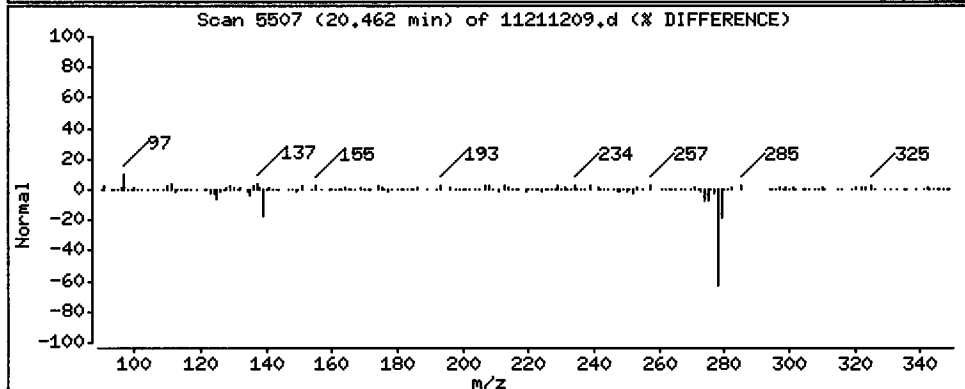
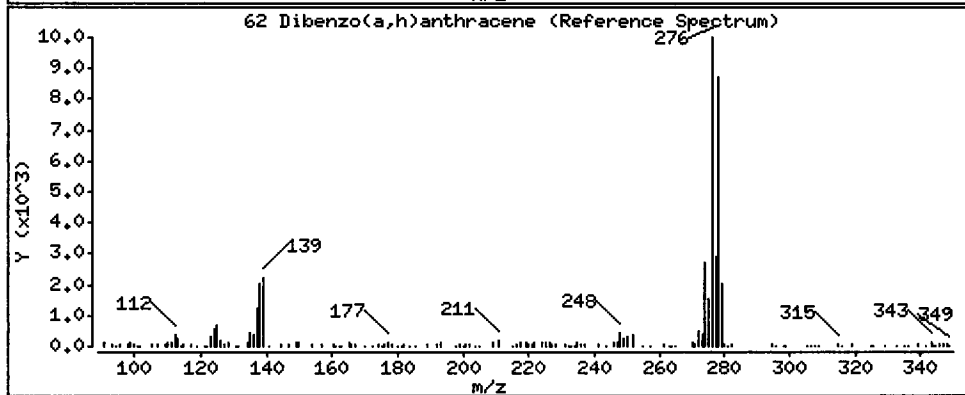
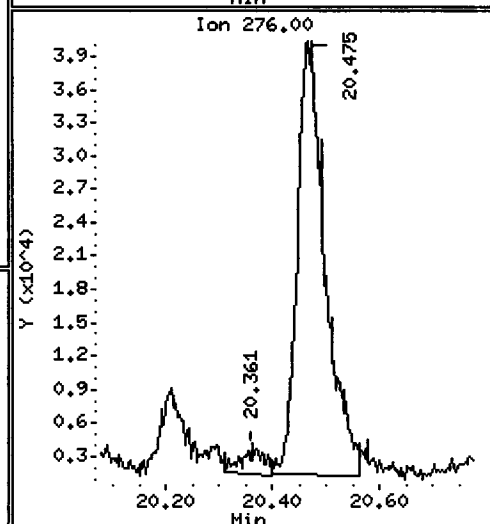
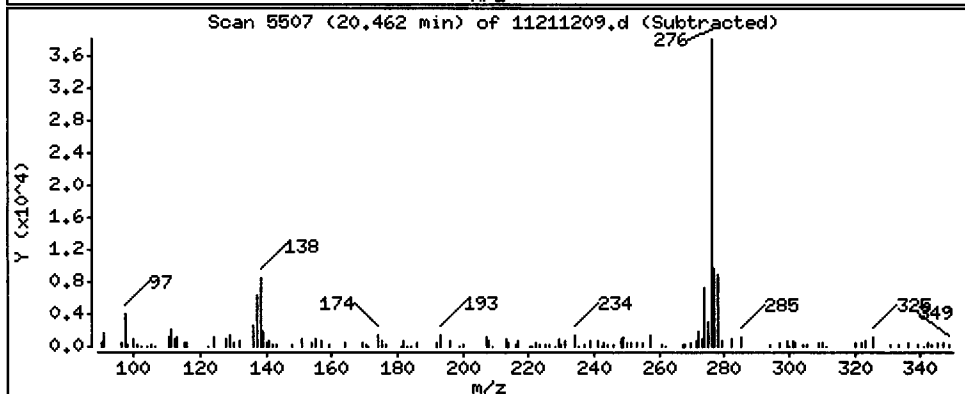
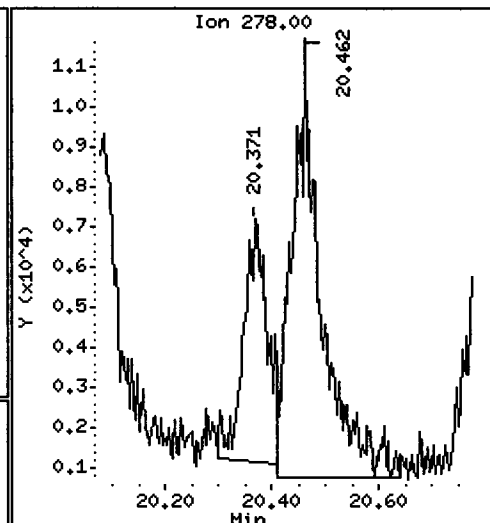
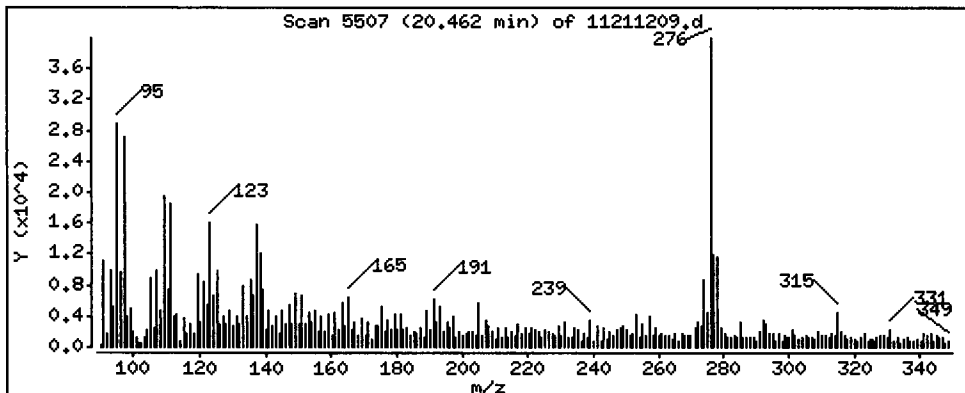
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

62 Dibenzo(a,h)anthracene

Concentration: 16.29 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

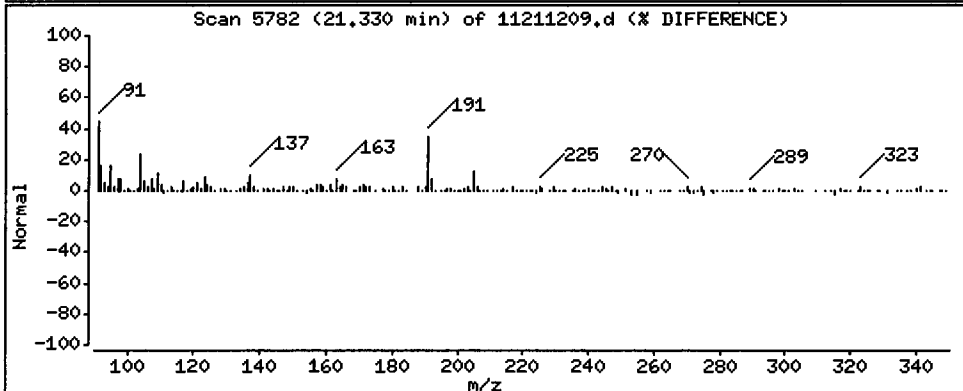
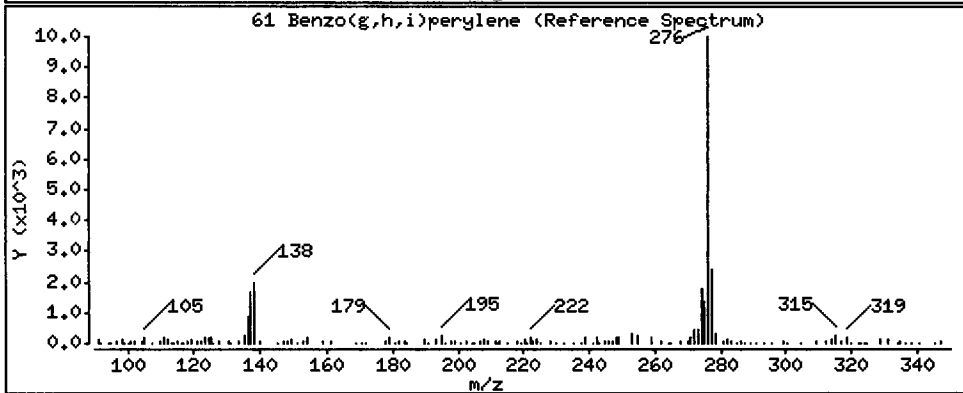
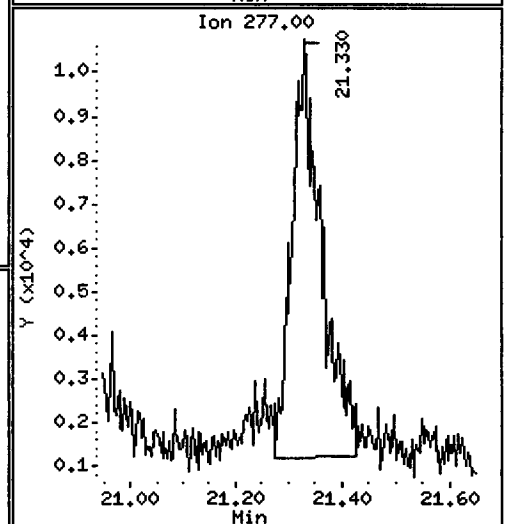
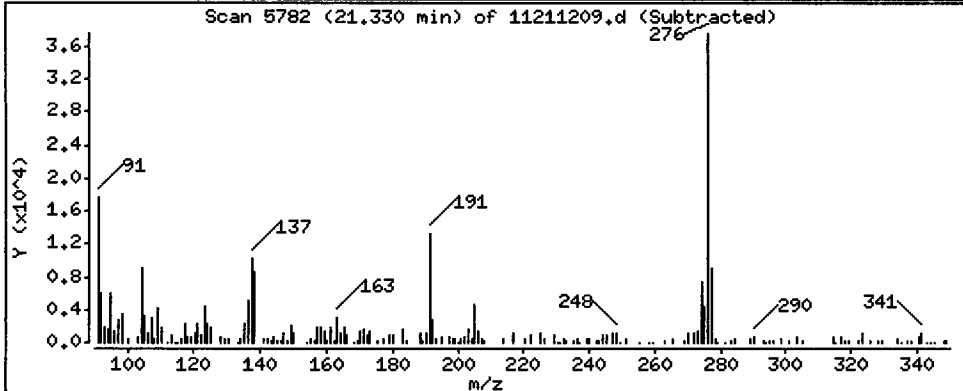
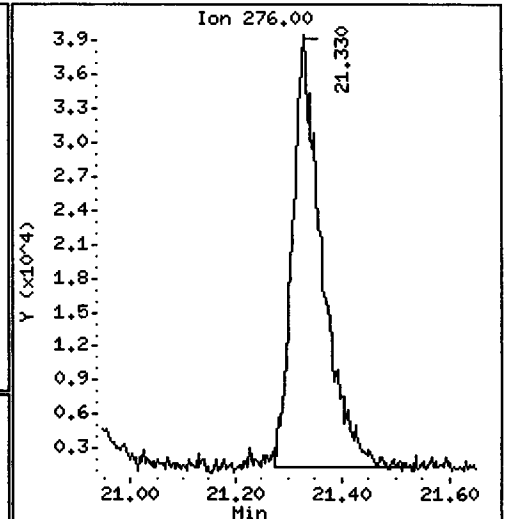
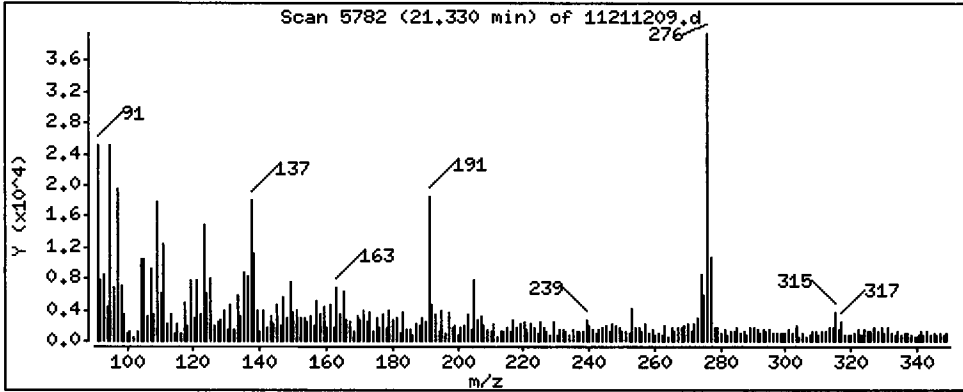
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Benzo(g,h,i)perylene

Concentration: 55.84 ug/kg



Date : 21-NOV-2012 15:12

Client ID: SG-13-S-E-dup-12110

Instrument: nt11.i

Sample Info: VR58E

Volume Injected (uL): 1.0

Operator: JZ

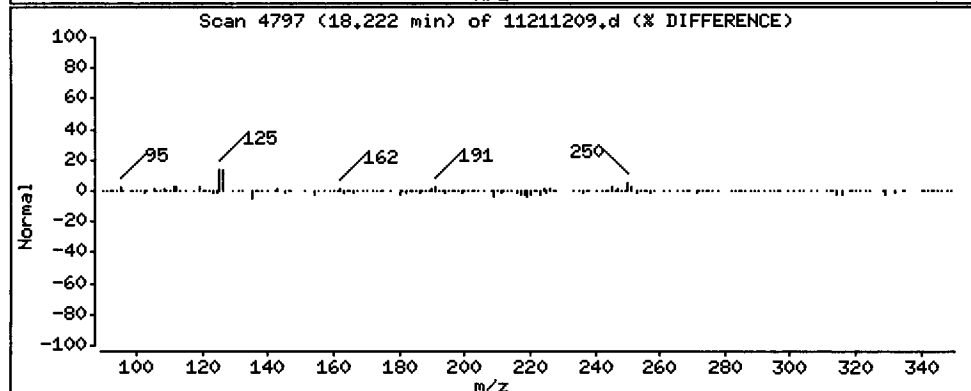
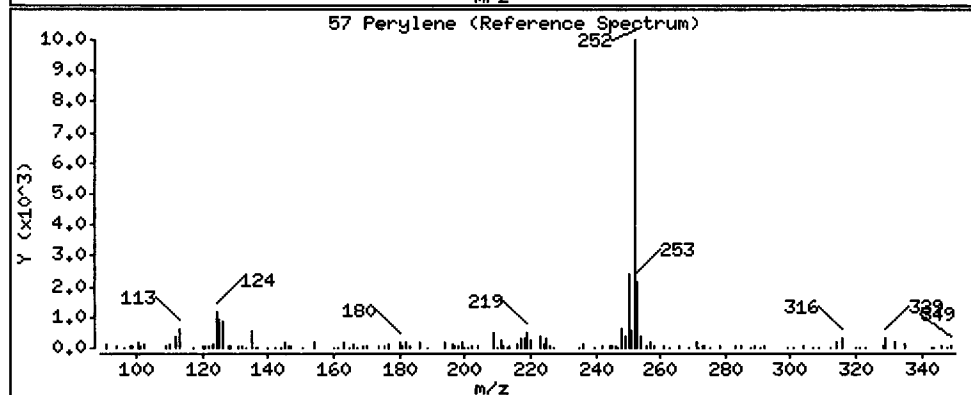
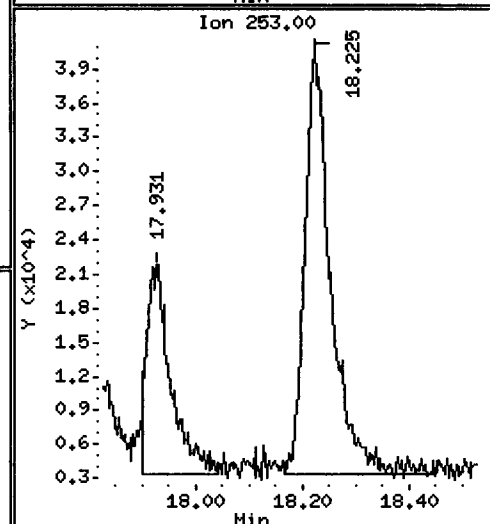
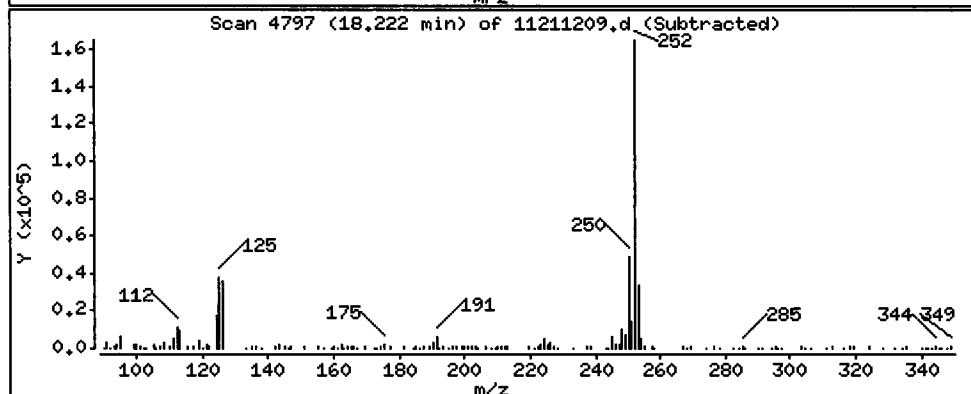
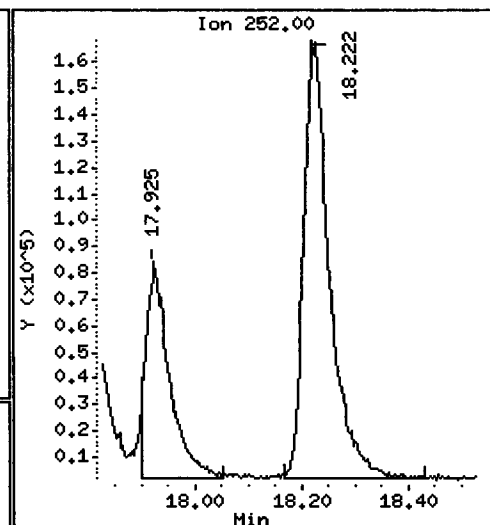
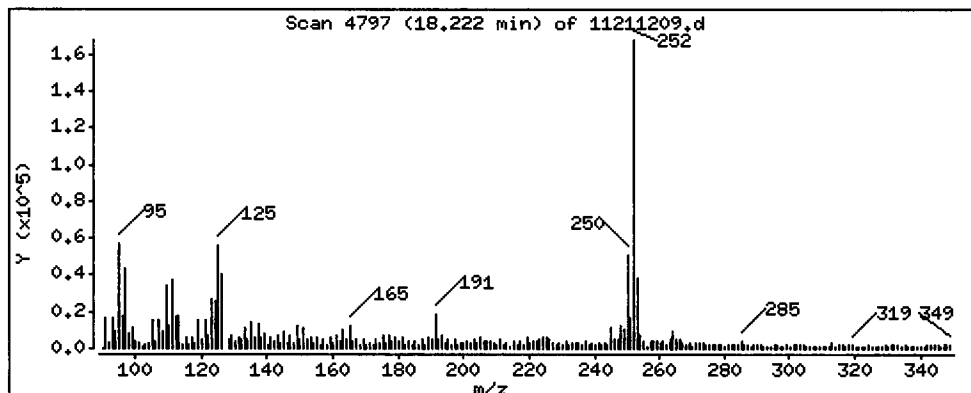
Column phase: ZB-5msi

Column diameter: 0.25

*NK*

57 Perylene

Concentration: 211.1 ug/kg



CO-ELUTION SUMMARY FOR FILE - 11211209.d

Lab ID: VR58E, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2012

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211210.d  
 Lab Smp Id: VR58F Client Smp ID: SG-14-S-E-121107  
 Inj Date : 21-NOV-2012 15:42  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58F  
 Misc Info : 12-22334  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 21-Nov-2012 15:33 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 10  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

Concentration Formula:  $\text{Amt} * \text{DF} * \text{Vt} / (\text{Ws} * (100 - \text{M}) / 100) * \text{CpndVariable}$

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	22.05000	Weight of sample extracted (g)
M	52.70000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	136	5.435	5.438	(1.000)	693272	2.00000		
7 Naphthalene	128	5.467	5.467	(1.006)	824597	2.22559	106.7	
\$ 12 2-Methylnaphthalene-d10	152	6.174	6.174	(1.136)	358241	1.51238	72.50	
14 2-Methylnaphthalene	141	6.221	6.221	(1.145)	221835	1.06265	50.94	
15 1-methylnaphthalene	141	6.417	6.413	(1.181)	115795	0.57912	27.76	
21 Acenaphthylene	152	7.603	7.600	(0.985)	113313	0.33950	16.28	
* 22 Acenaphthene-d10	164	7.717	7.714	(1.000)	384101	2.00000		
23 Acenaphthene	153	7.764	7.761	(1.006)	545563	2.57033	123.2	
11 Dibenzofuran	168	7.919	7.912	(1.026)	496468	1.59663	76.54 (M)	
25 Fluorene	166	8.392	8.389	(1.087)	737987	3.08809	148.0	
* 28 Phenanthrene-d10	188	9.743	9.736	(1.000)	515808	2.00000		
30 Phenanthrene	178	9.780	9.768	(1.004)	4107489	13.1830	632.0 E	
31 Anthracene	178	9.818	9.809	(1.008)	848292	2.83608	136.0	
36 Fluoranthene	202	11.459	11.425	(1.176)	5647740	18.0920	867.3 E	
39 Pyrene	202	11.939	11.892	(0.830)	4686735	16.2376	778.4 E	

Compounds	QUANT SIG		CONCENTRATIONS				
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
===== 46 Benzo(a)anthracene	228	14.261	14.224	(0.992)	1906650	7.24450	347.3
* 47 Chrysene-d12	240	14.378	14.343	(1.000)	523767	2.00000	
48 Chrysene	228	14.457	14.413	(1.005)	2335644	9.14331	438.3
51 Benzo(b)fluoranthene	252	16.909	16.858	(0.932)	1087493	7.42428	355.9
52 Benzo(k)fluoranthene	252	16.959	16.918	(0.934)	704715	4.42997	212.4 (M)
251 Benzo(j)fluoranthene	252	17.038	16.994	(0.939)	521660	3.10807	149.0
54 Benzo(a)pyrene	252	17.919	17.878	(0.987)	784045	5.26971	252.6
* 56 Perylene-d12	264	18.152	18.102	(1.000)	316500	2.00000	
63 Indeno(1,2,3-cd)pyrene	276	20.456	20.431	(1.127)	290838	1.61239	77.30
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.358	20.339	(1.121)	159243	1.51767	72.76
62 Dibenzo(a,h)anthracene	278	20.449	20.427	(1.127)	85453	0.58169	27.89
61 Benzo(g,h,i)perylene	276	21.320	21.298	(1.175)	270391	1.76205	84.47
57 Perylene	252	18.218	18.177	(1.004)	1024333	6.63881	318.3

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211210.d  
 Lab Smp Id: VR58F  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22334

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-14-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	693272	34.33
22 Acenaphthene-d10	284255	142128	568510	384101	35.13
28 Phenanthrene-d10	410660	205330	821320	515808	25.60
47 Chrysene-d12	467886	233943	935772	523767	11.94
56 Perylene-d12	472330	236165	944660	316500	-32.99

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	-0.06
22 Acenaphthene-d10	7.71	7.21	8.21	7.72	0.04
28 Phenanthrene-d10	9.74	9.24	10.24	9.74	0.06
47 Chrysene-d12	14.34	13.84	14.84	14.38	0.24
56 Perylene-d12	18.10	17.60	18.60	18.15	0.28

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



Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58F  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Misc Info: 12-22334

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-14-S-E-121107  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	143.8	72.50	50.41	34-100
\$ 60 Dibenzo(a,h) anthra	143.8	72.76	50.59	10-117

Date: 21-NOV-2012 15:42

Client ID: SC-14-S-E-121107

Sample Info: VR59F

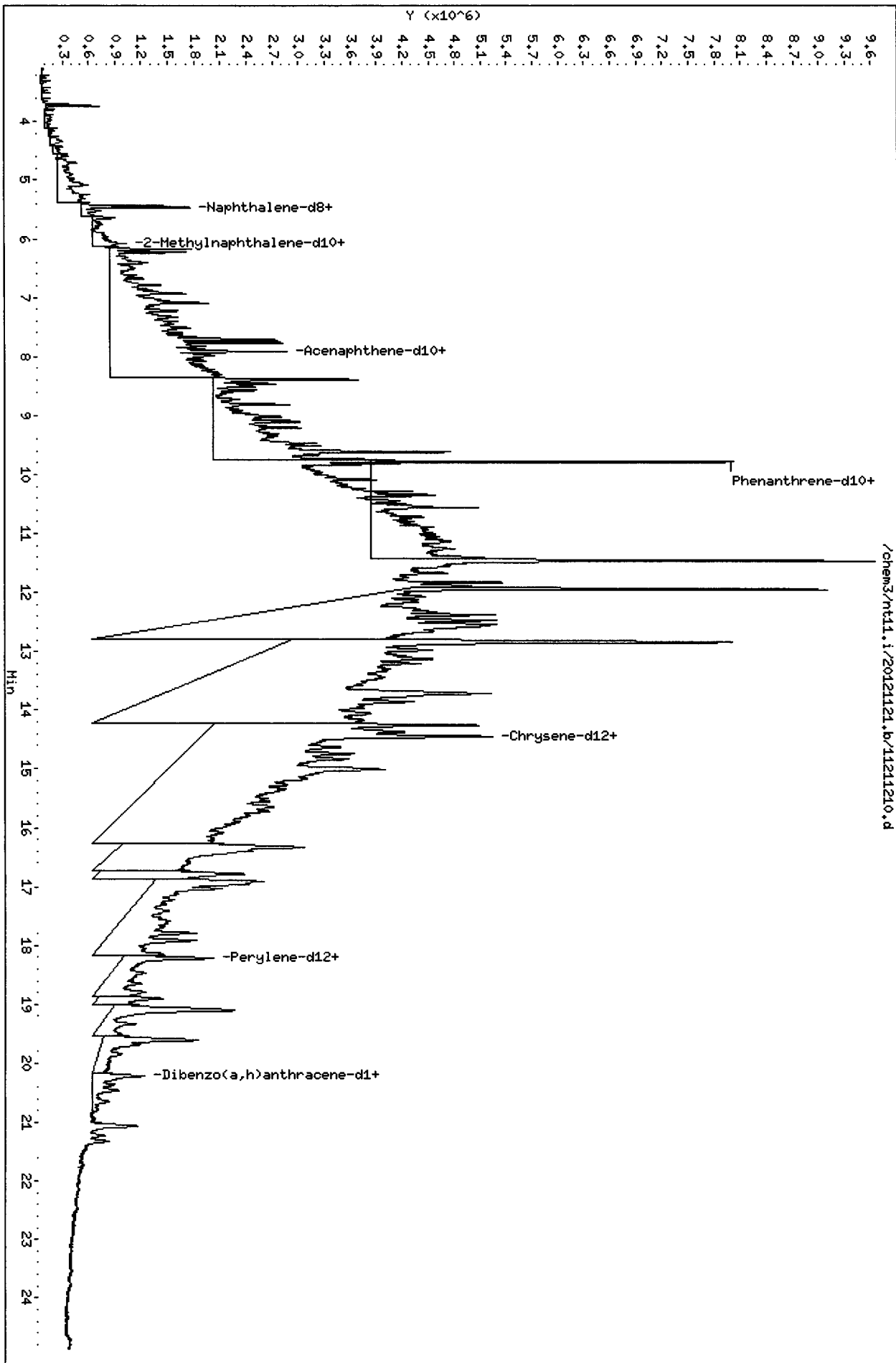
Volume Injected (µL): 1.0

Column phase: ZB-5msi

Instrument: nt11.i

Operator: JZ

Column diameter: 0.25



VR59: 011107

Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

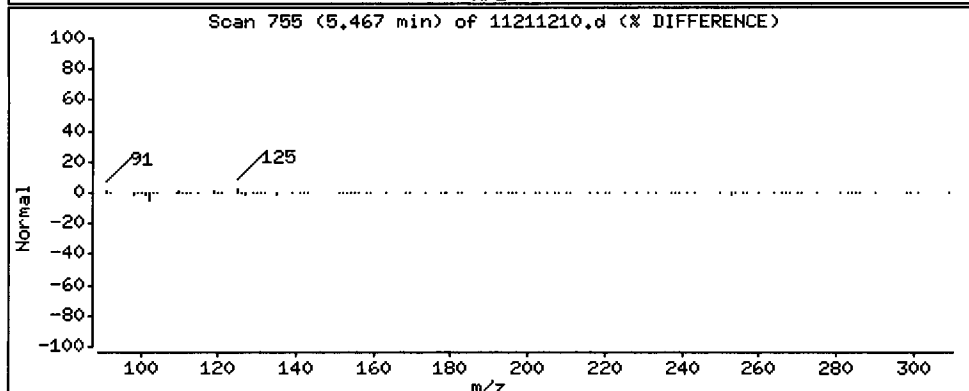
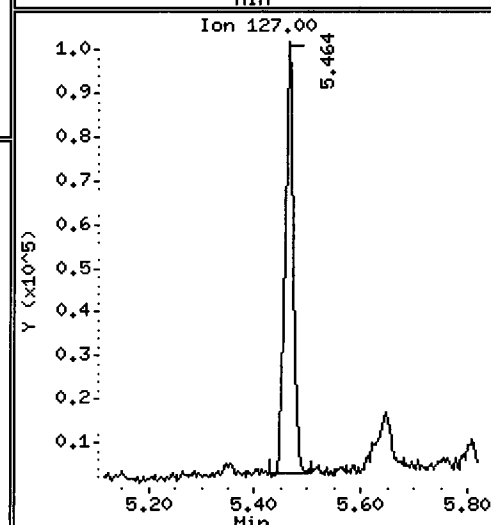
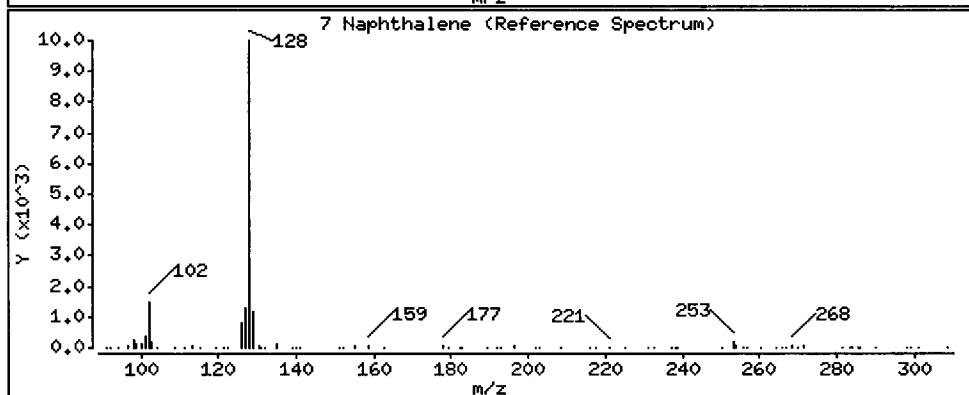
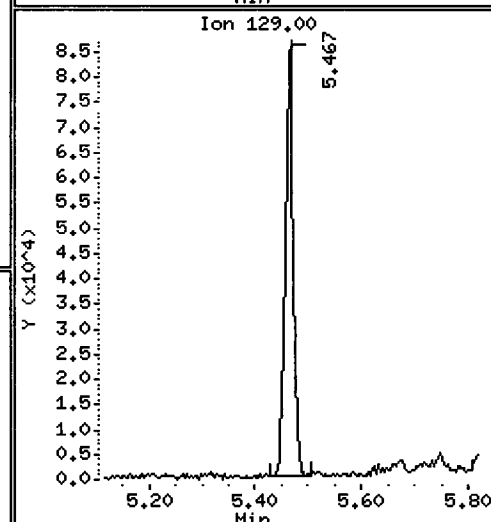
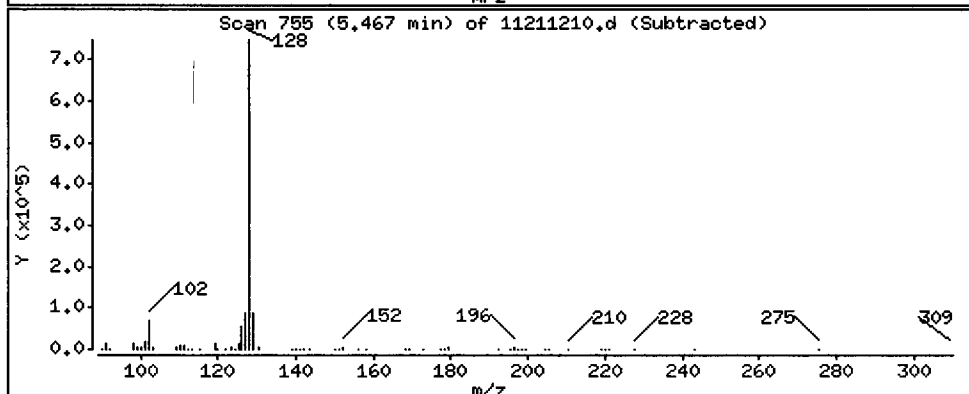
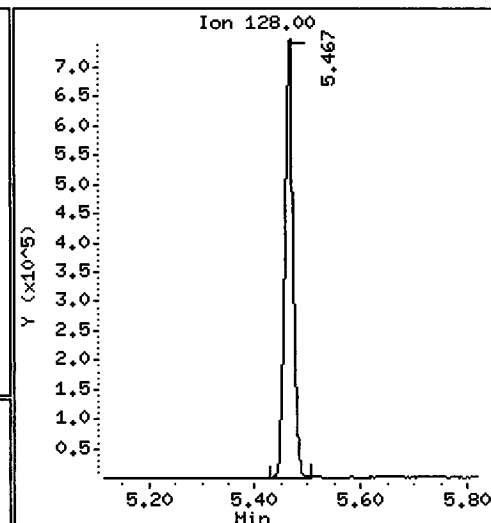
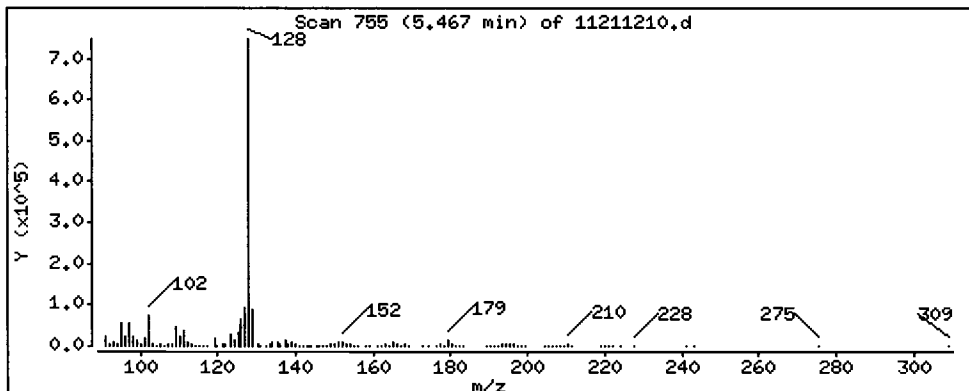
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

7 Naphthalene

Concentration: 106.7 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

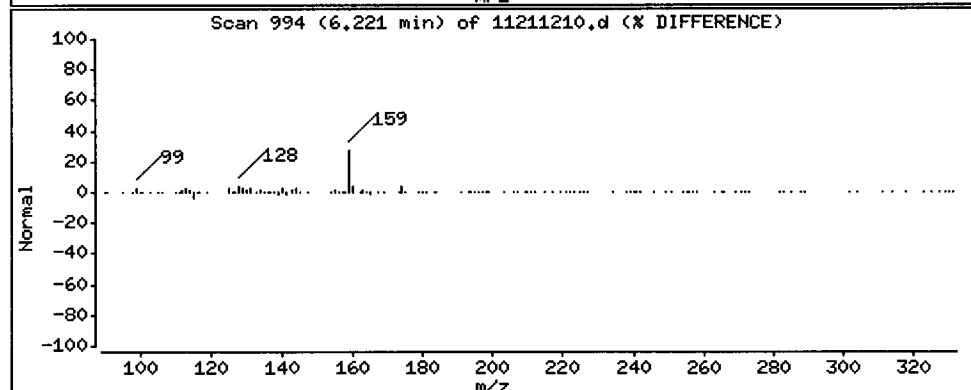
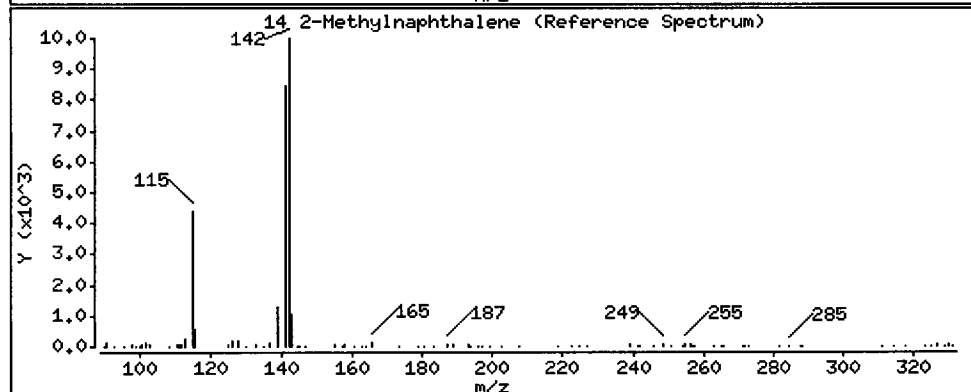
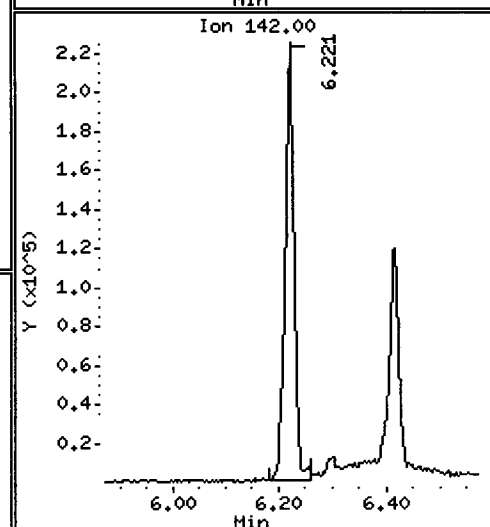
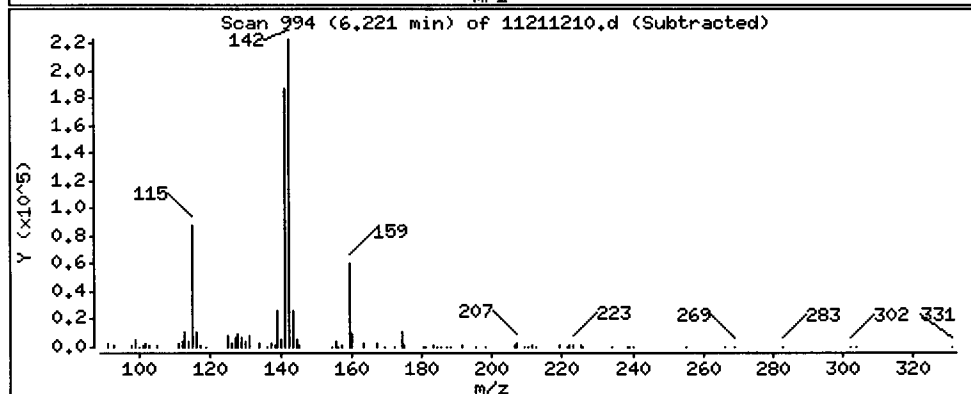
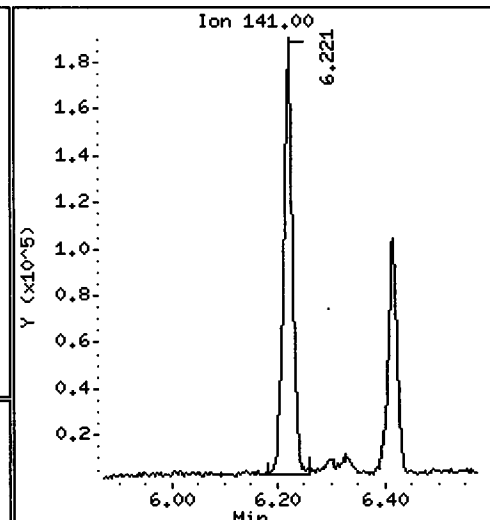
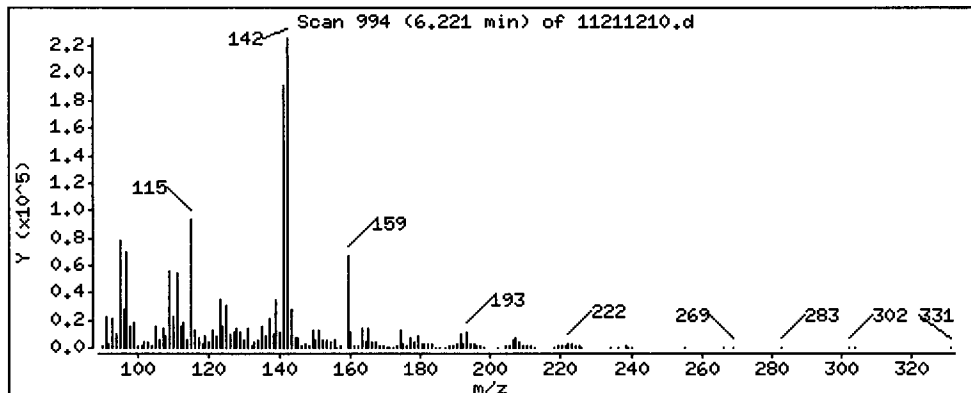
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

14 2-Methylnaphthalene

Concentration: 50.94 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

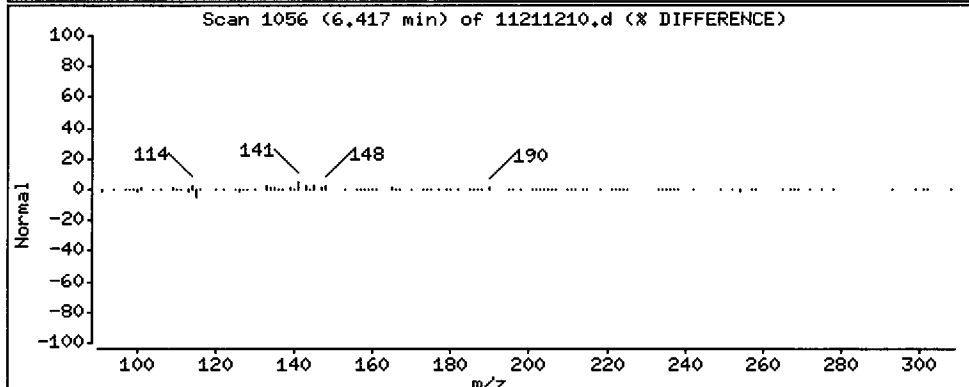
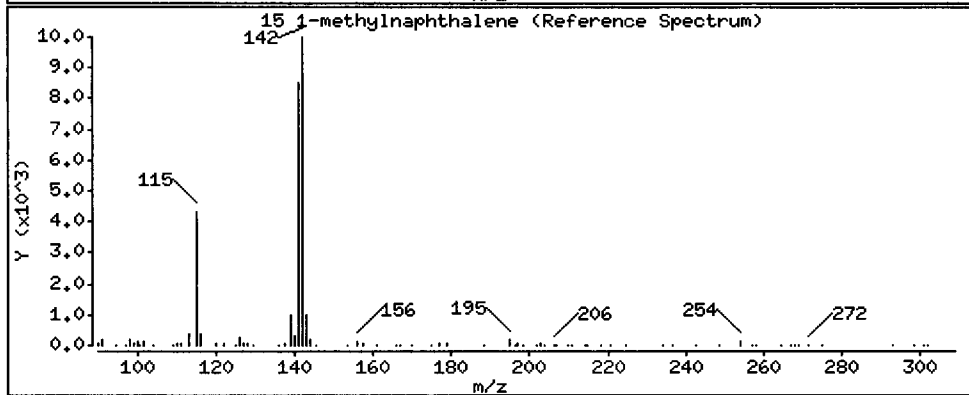
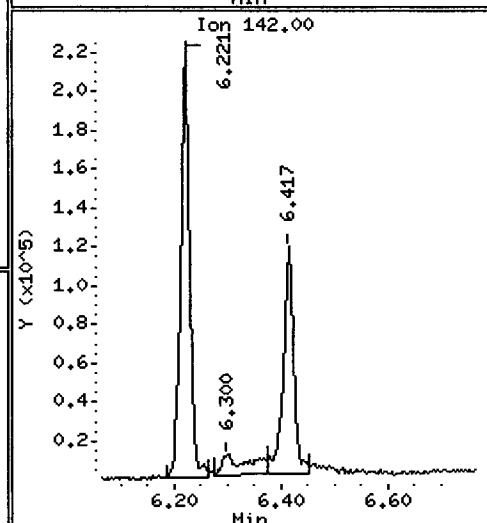
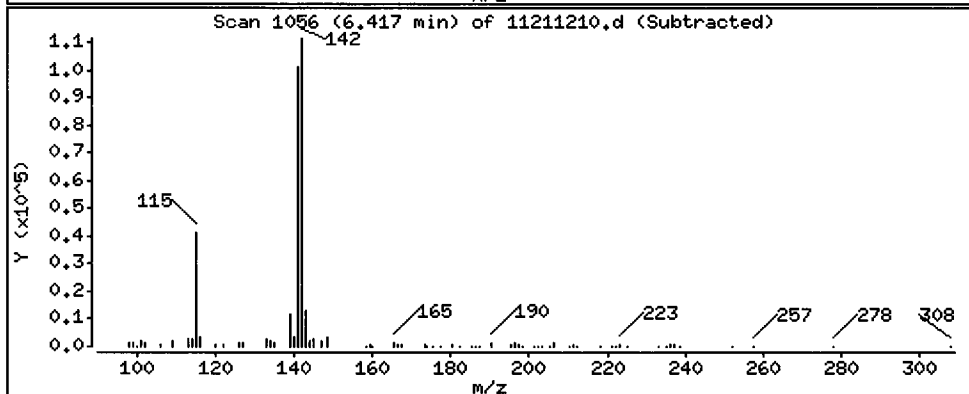
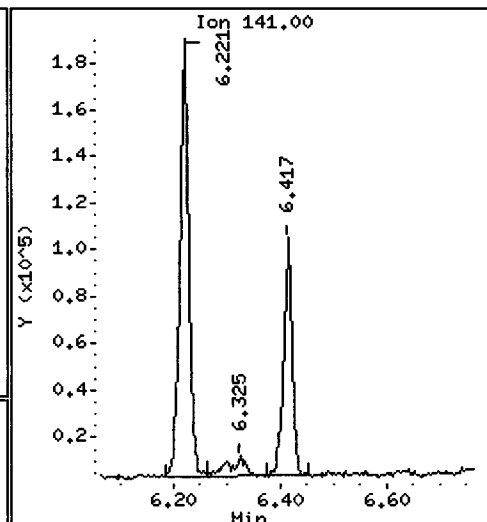
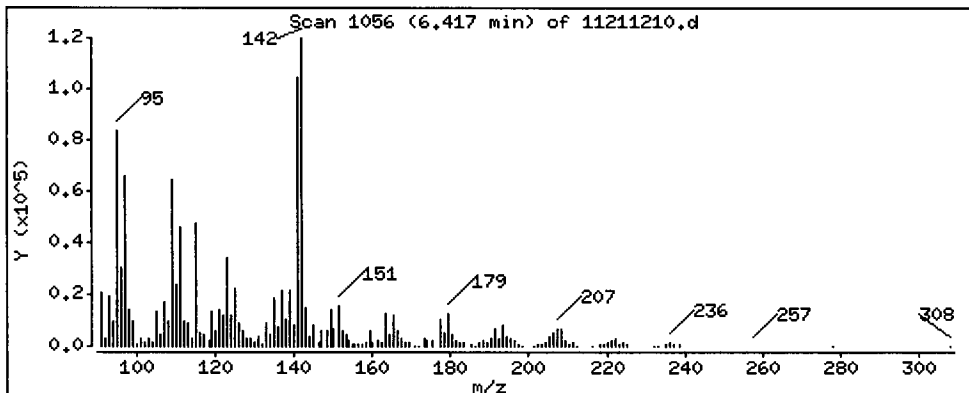
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

15 1-methylnaphthalene

Concentration: 27.76 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

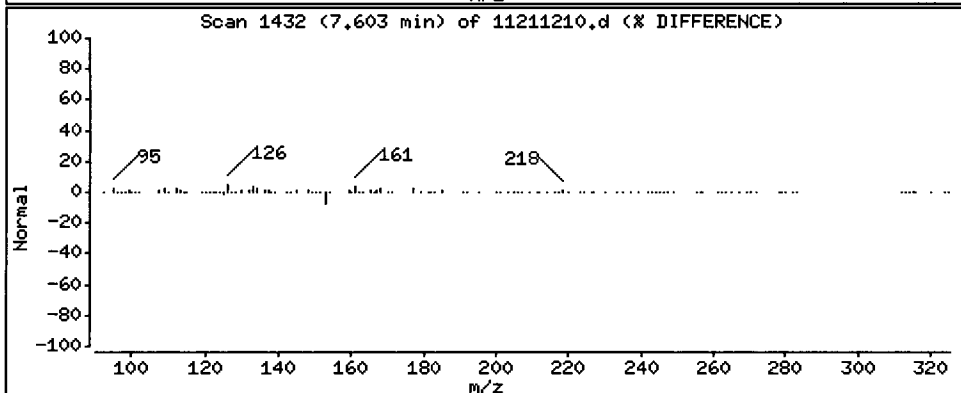
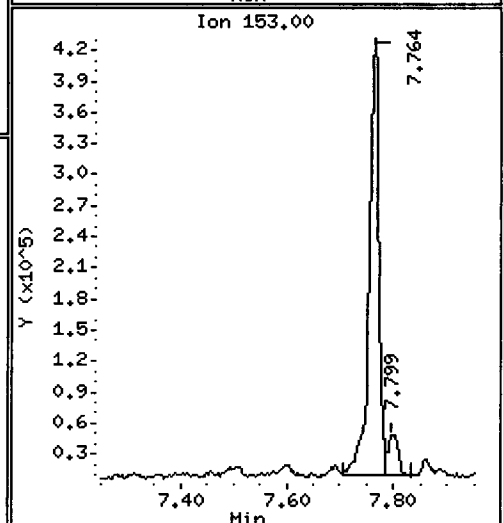
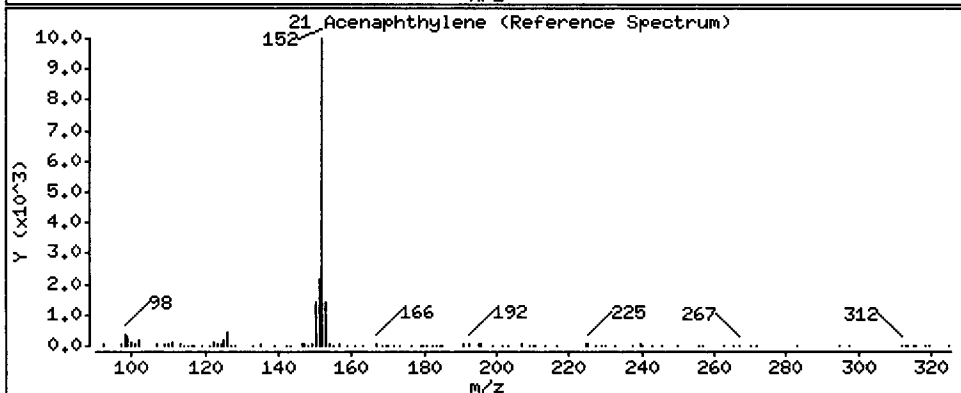
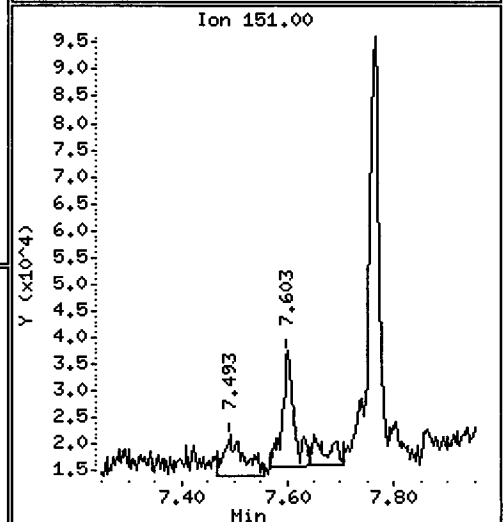
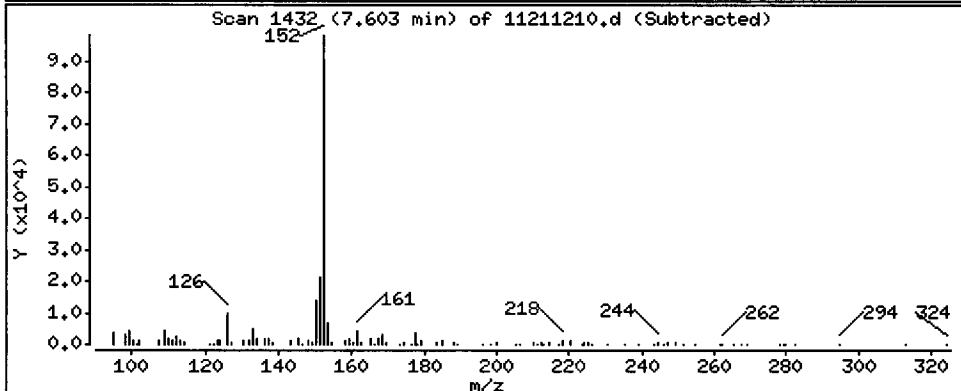
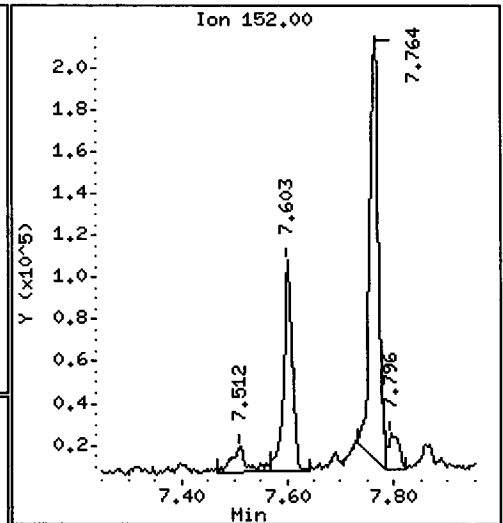
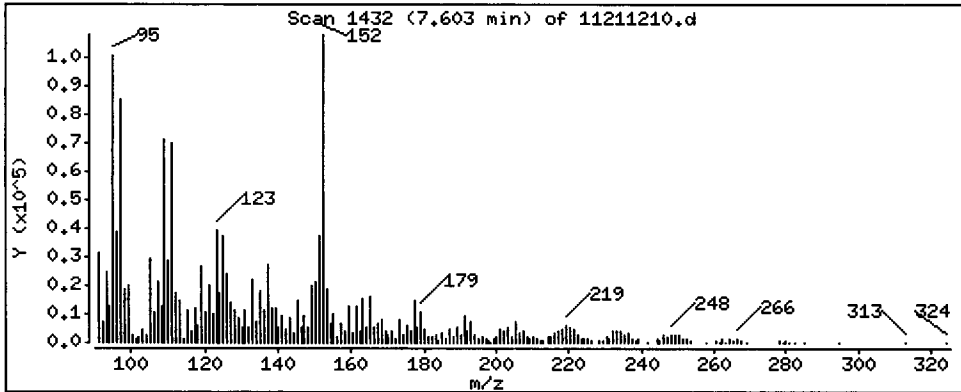
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

21 Acenaphthylene

Concentration: 16.28 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

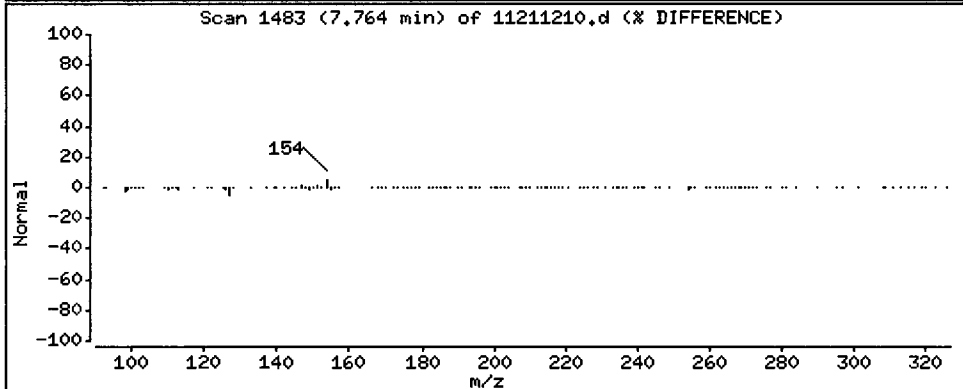
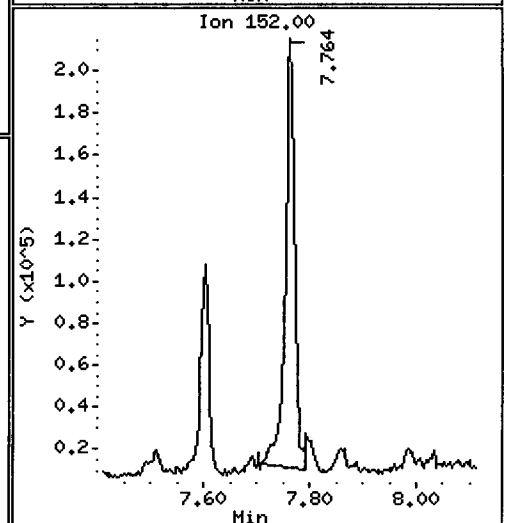
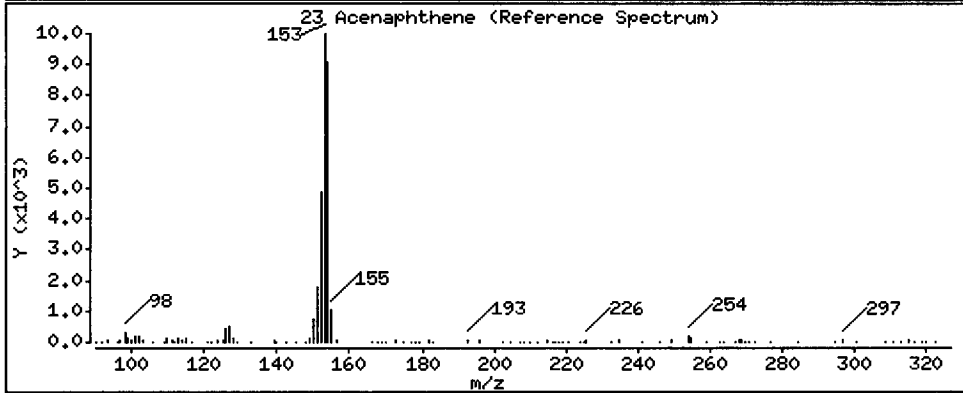
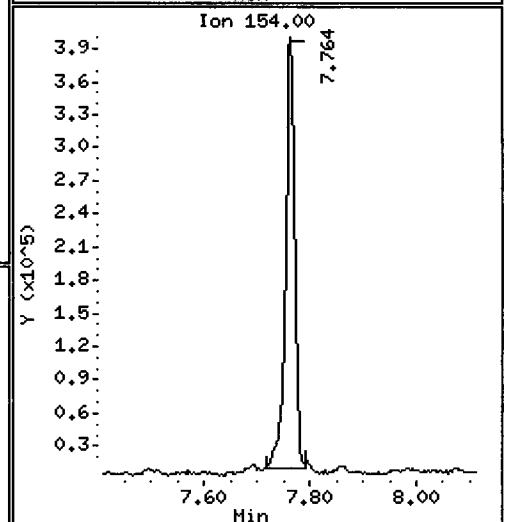
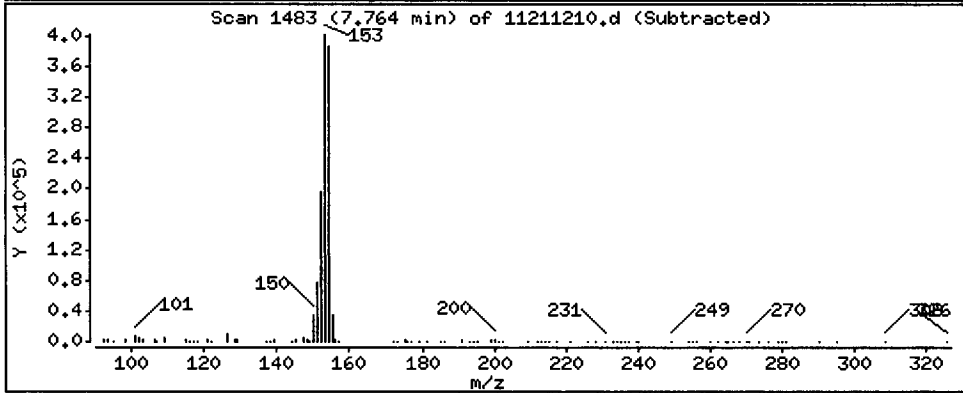
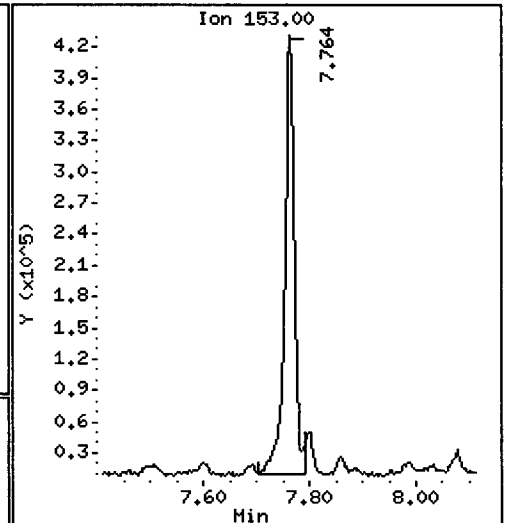
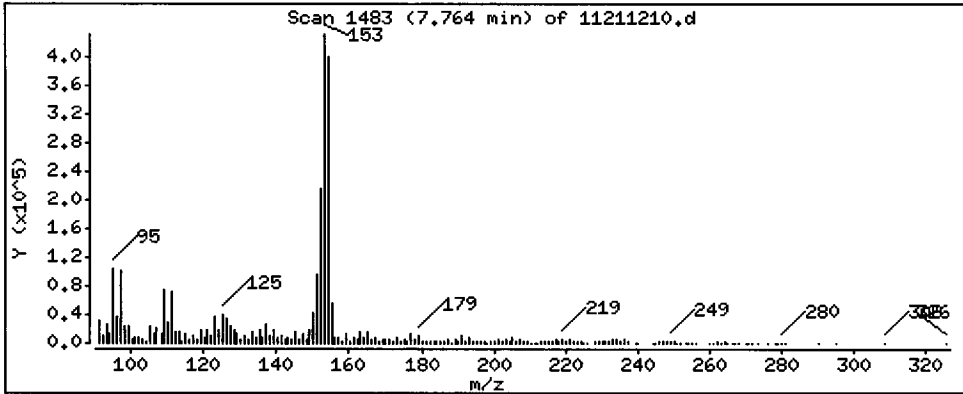
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

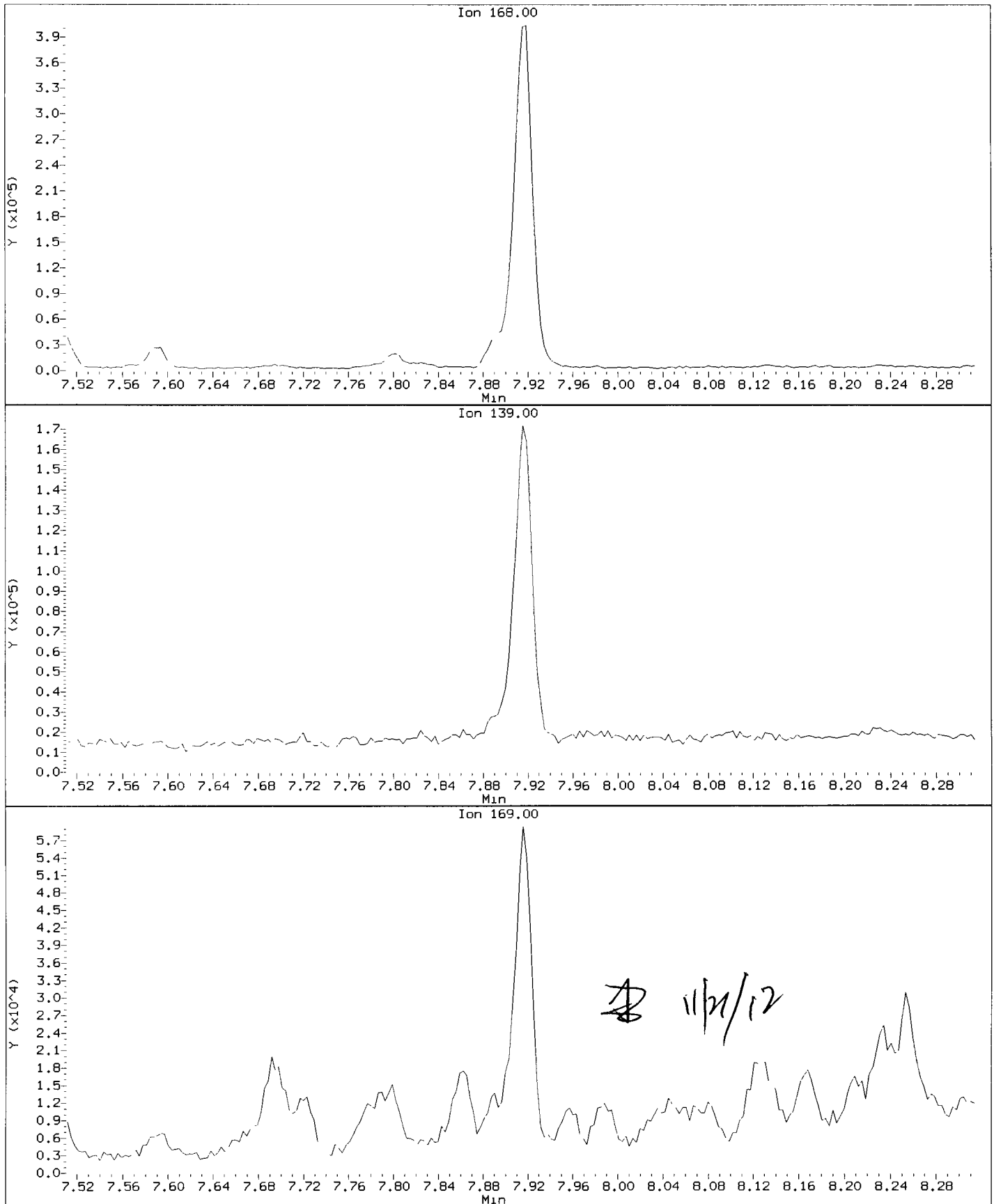
23 Acenaphthene

Concentration: 123.2 ug/kg



Data File: /chem3/nt11.1/20121121.b/11211210.d  
Injection Date: 21-NOV-2012 15:42  
Instrument: nt11.1  
Client Sample ID: SG-14-S-E-121107

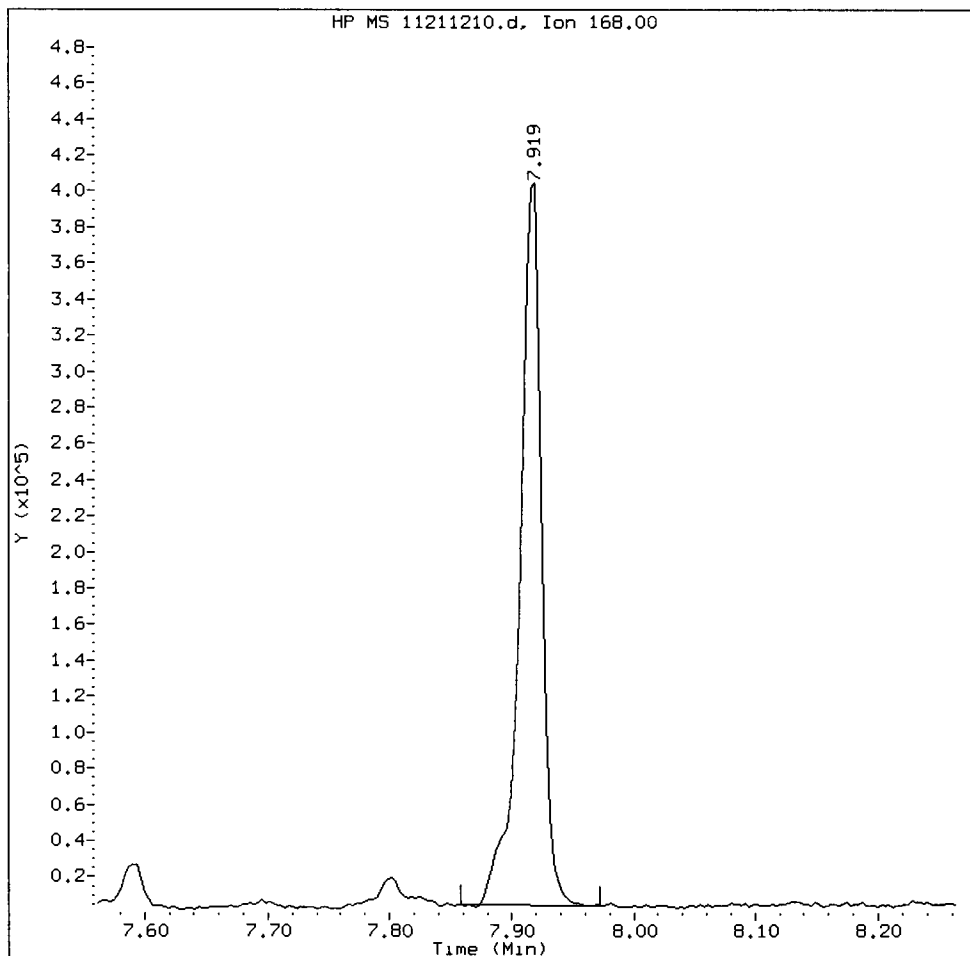
Compound: Dibenzofuran  
CAS Number: 132-64-9





VR58F, /chem3/nt11.i/20121121.b/11211210.d

Dibenzofuran Amount: 1.60 Area: 496468



#### MANUAL INTEGRATION for Dibenzofuran

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

5. Other \_\_\_\_\_

Analyst:    *AE*   

Date:    4/27/12

Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

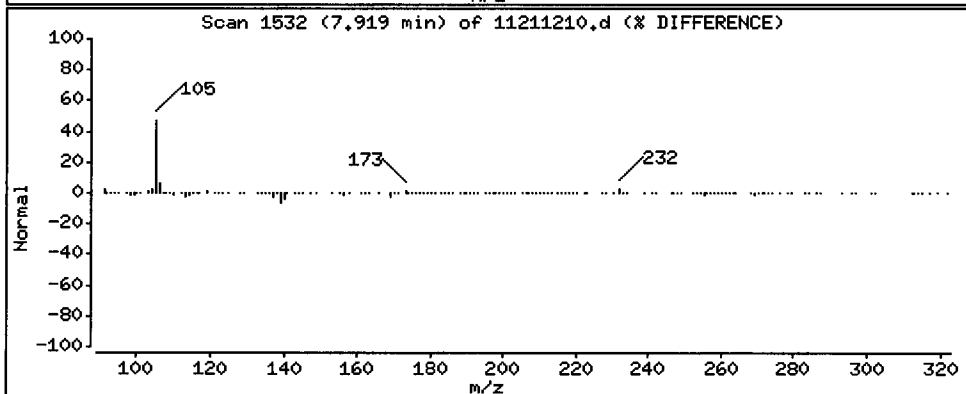
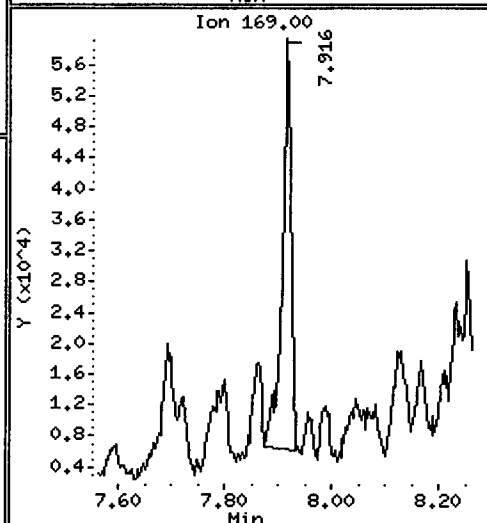
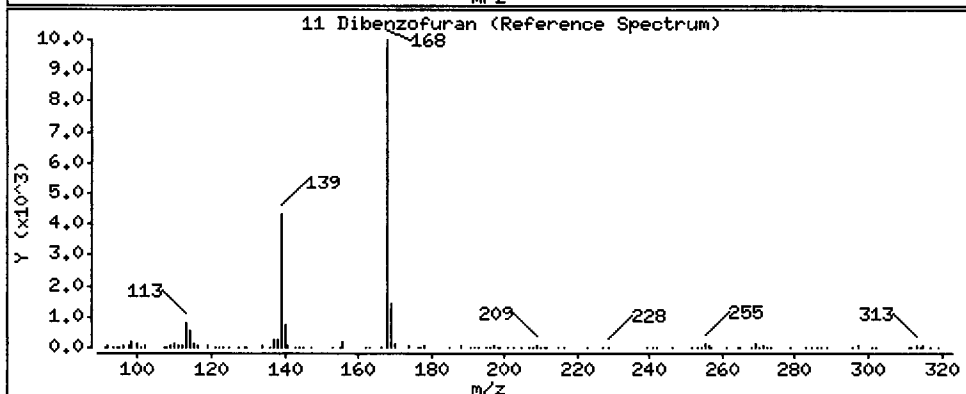
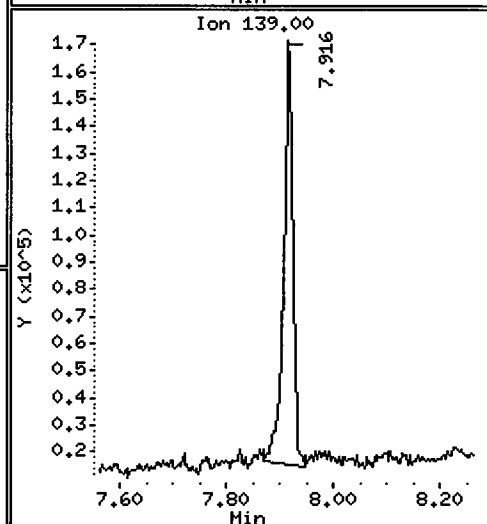
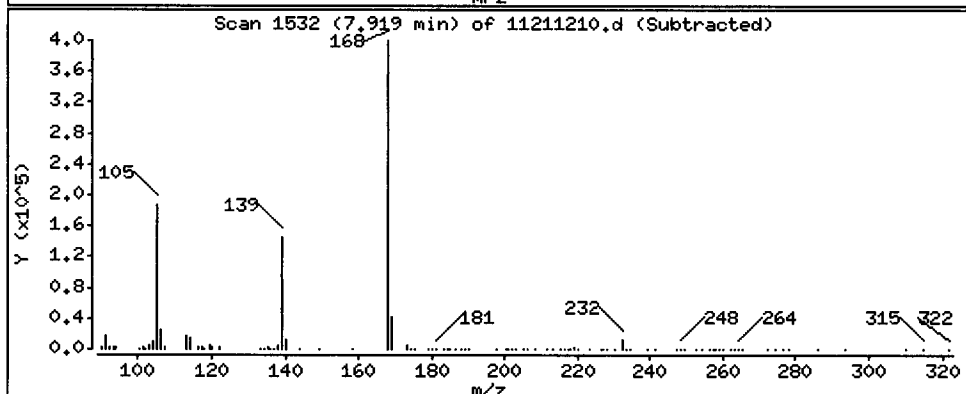
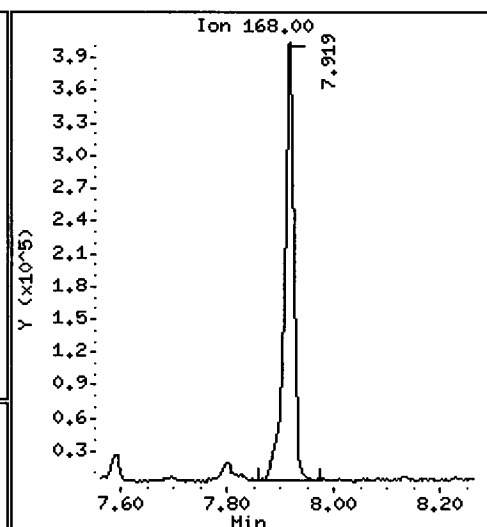
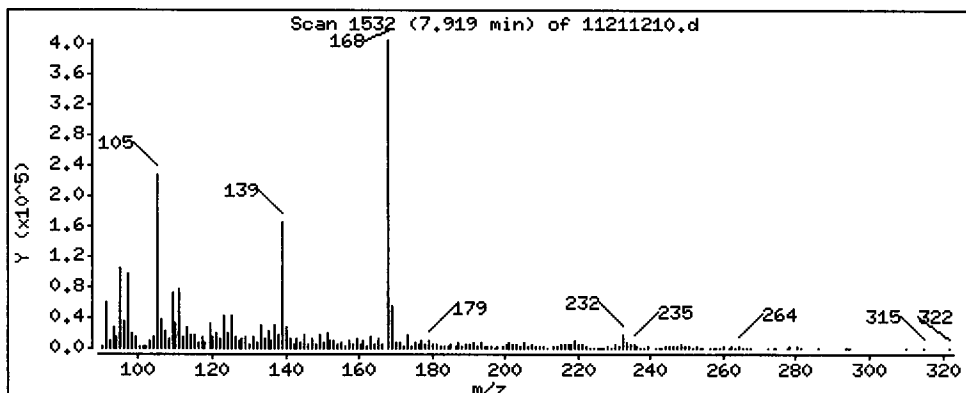
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

11 Dibenzofuran

Concentration: 76.54 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

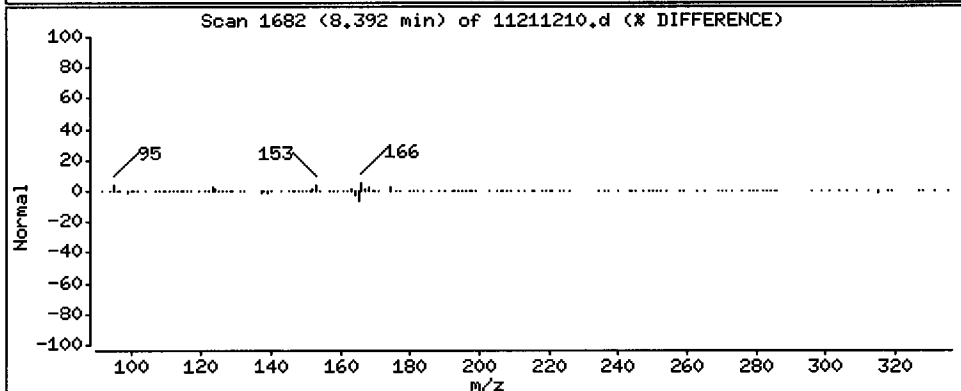
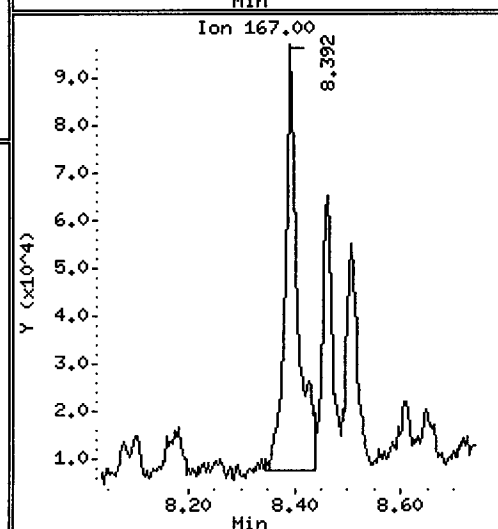
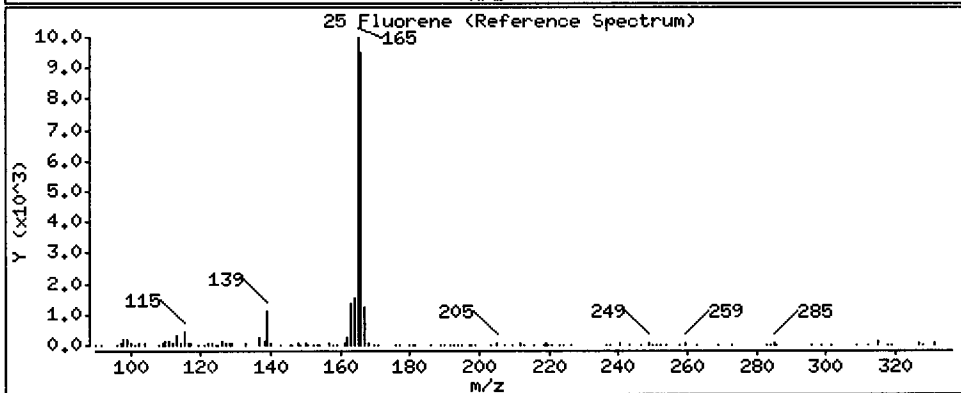
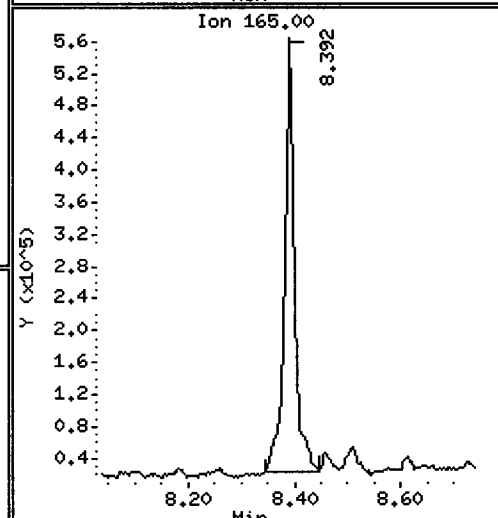
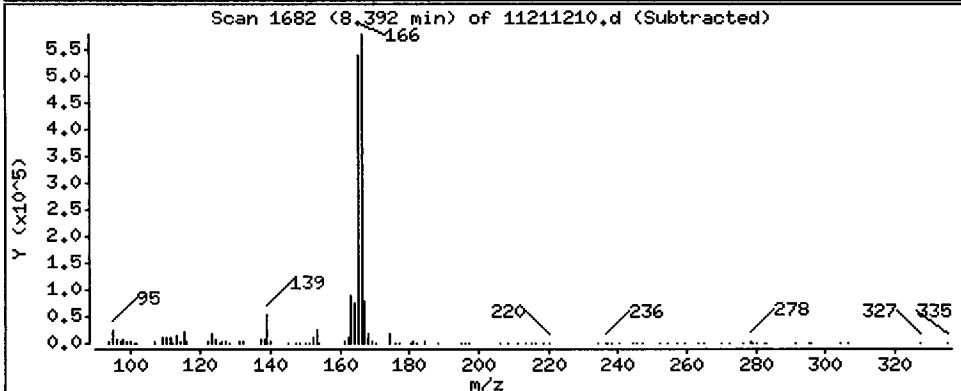
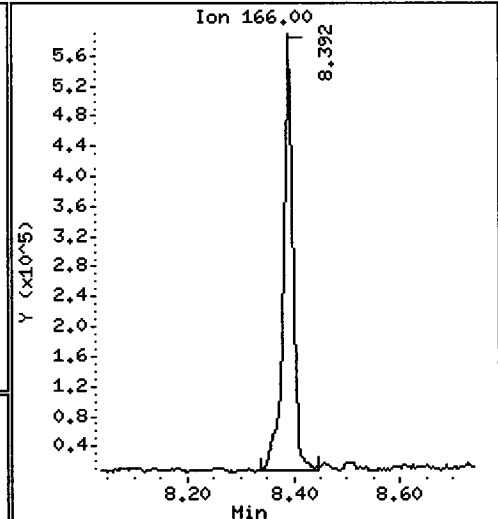
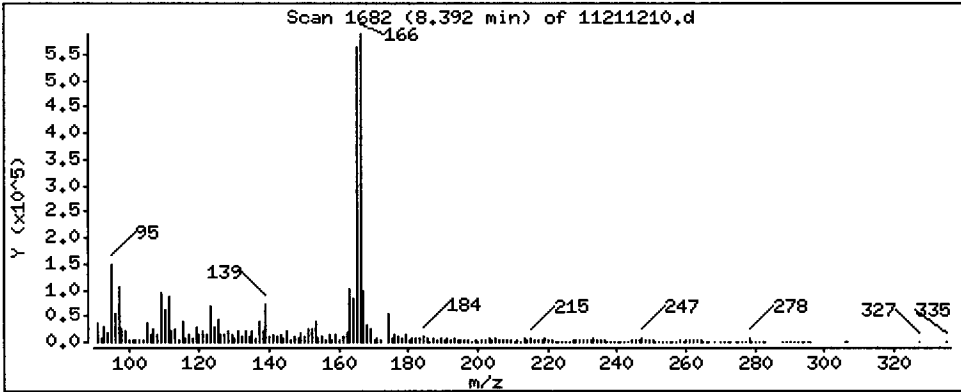
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

25 Fluorene

Concentration: 148.0 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

Operator: JZ

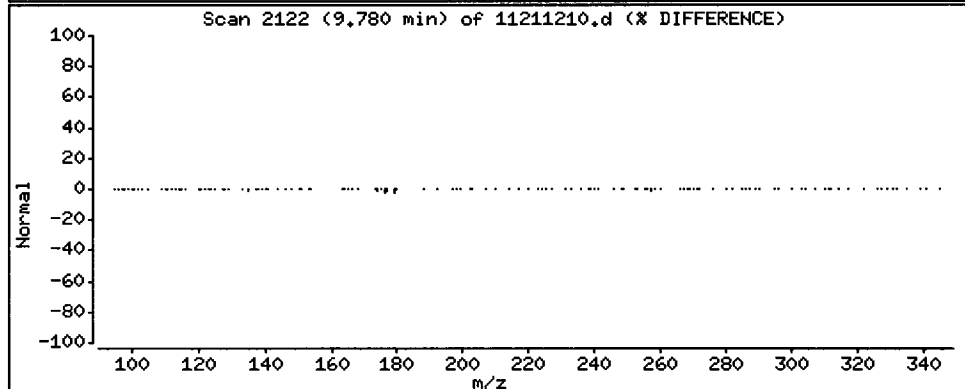
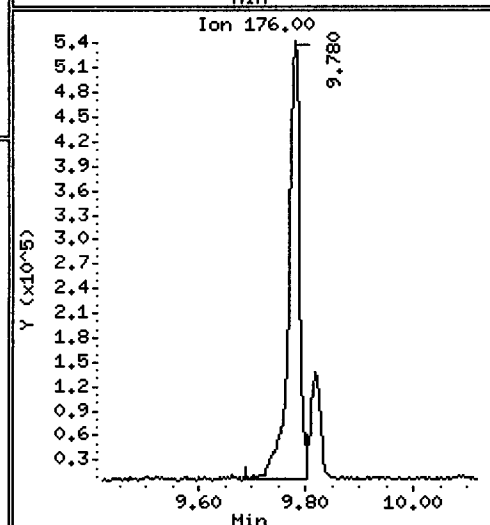
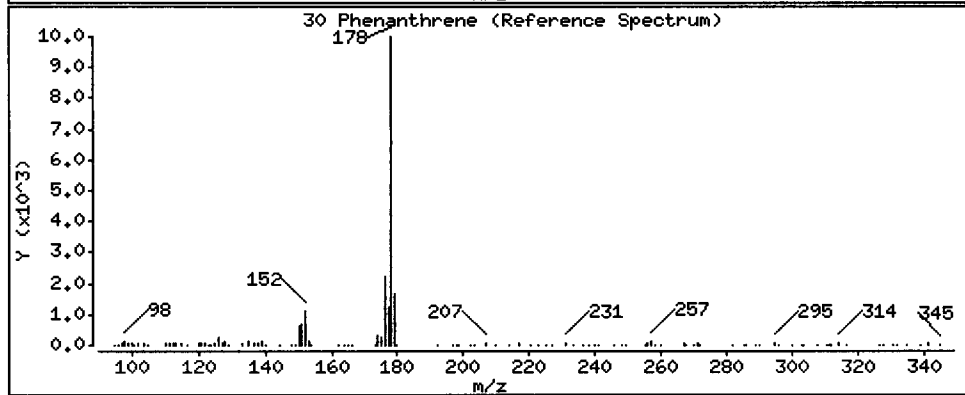
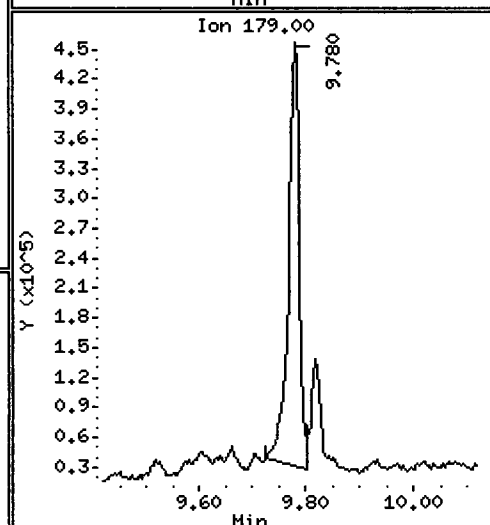
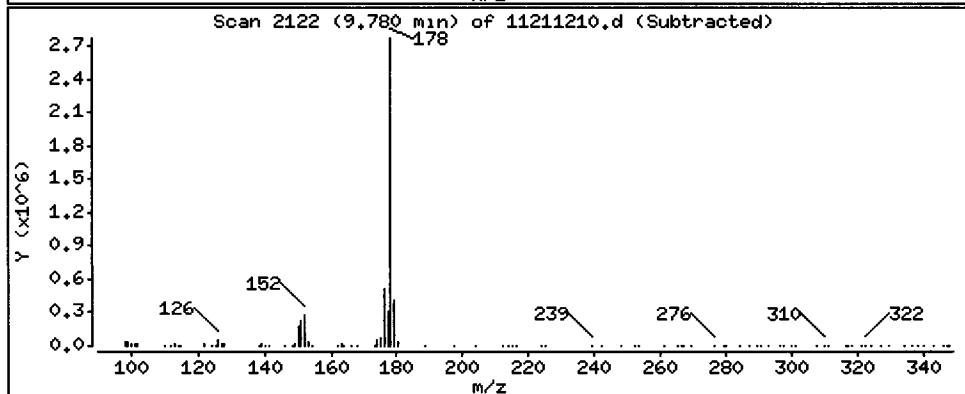
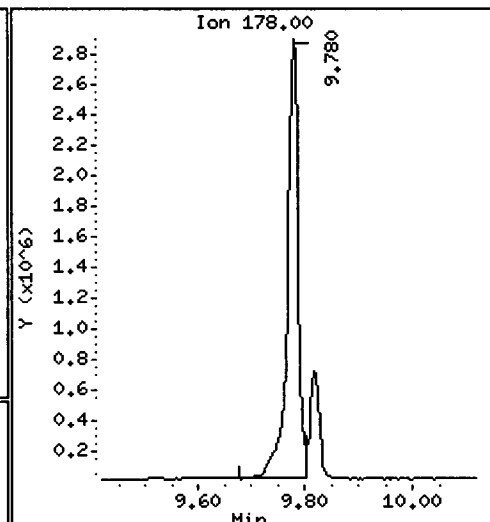
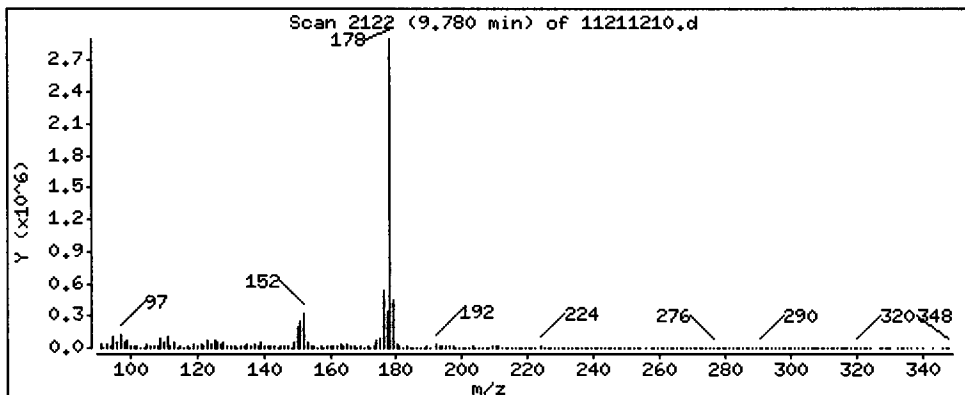
Column phase: ZB-5msi

Column diameter: 0.25

30 Phenanthrene

Concentration: 632.0 ug/kg

E



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.1

Sample Info: VR58F

Volume Injected (uL): 1.0

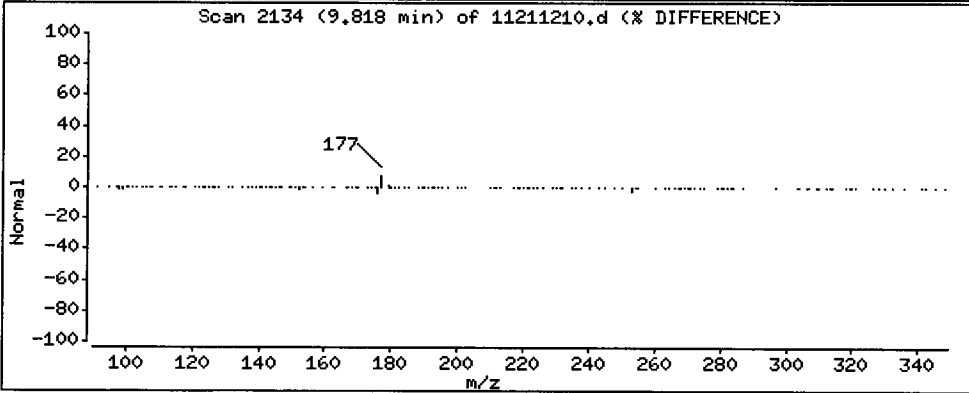
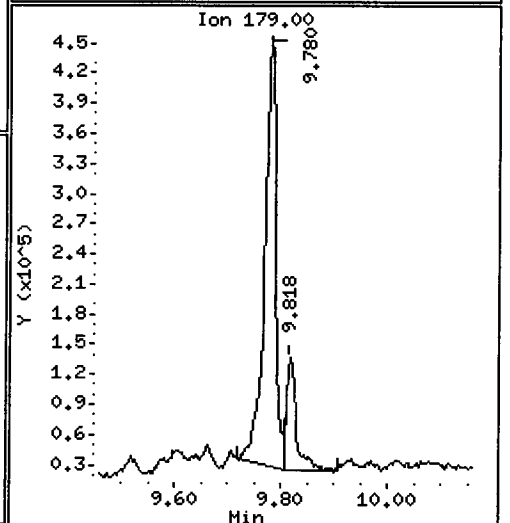
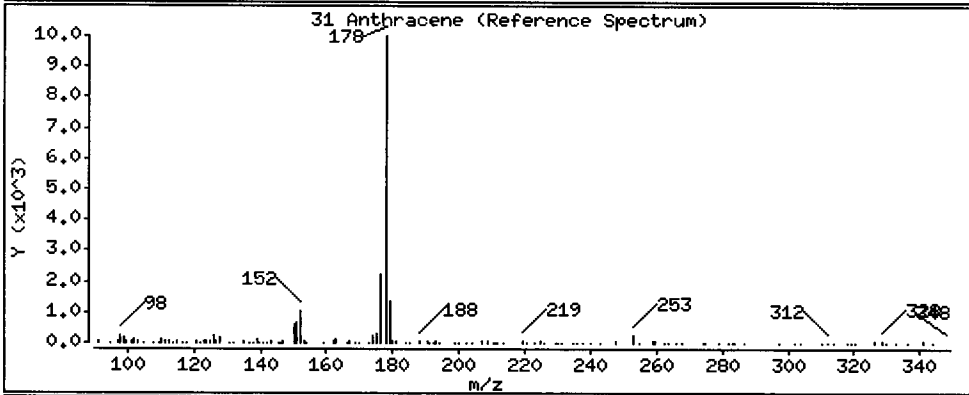
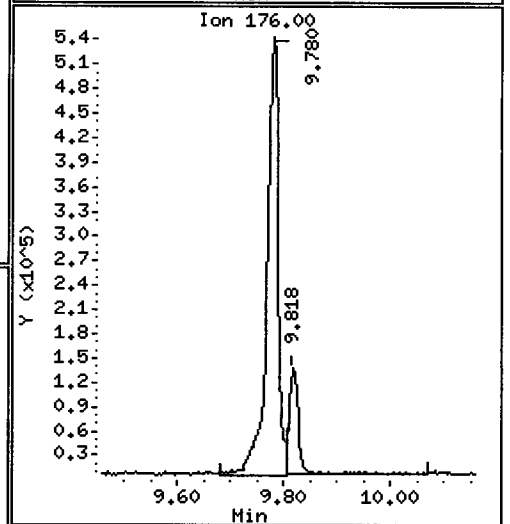
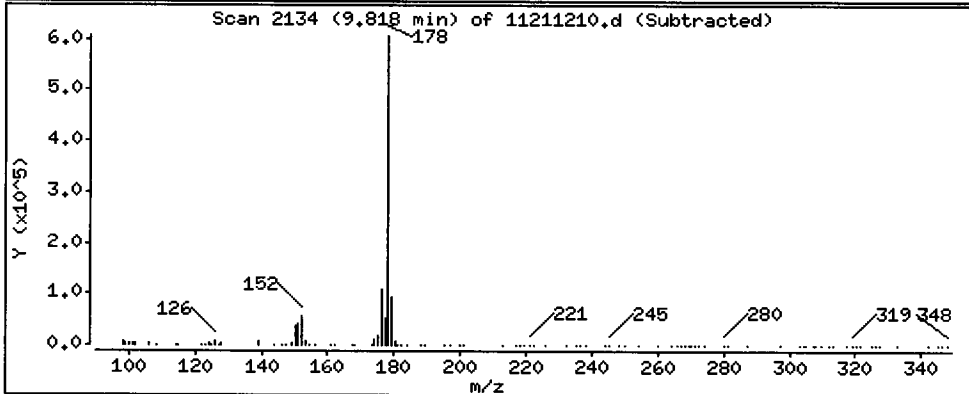
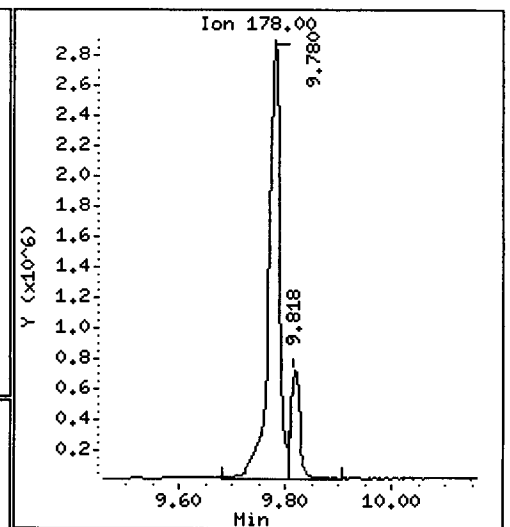
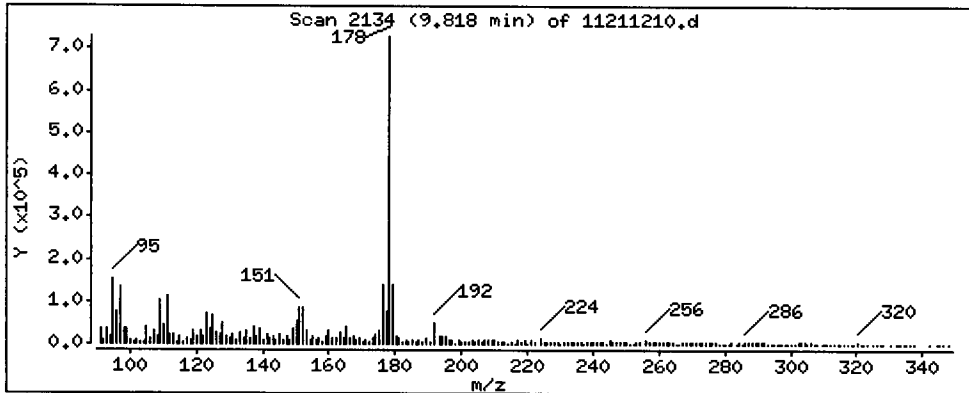
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

31 Anthracene

Concentration: 136.0 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

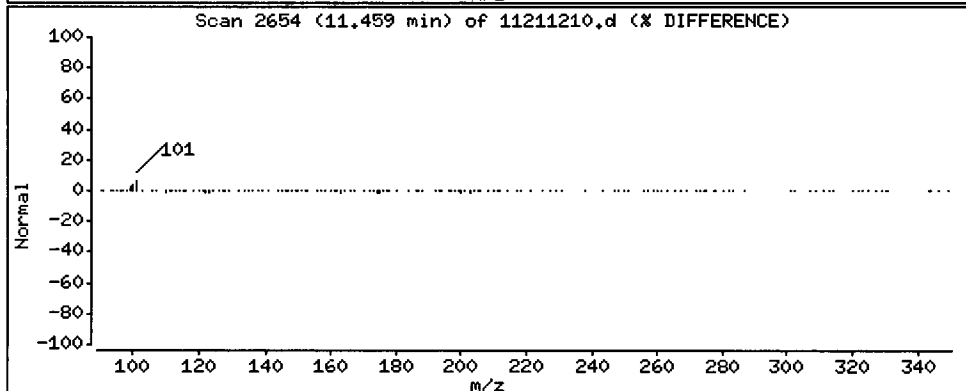
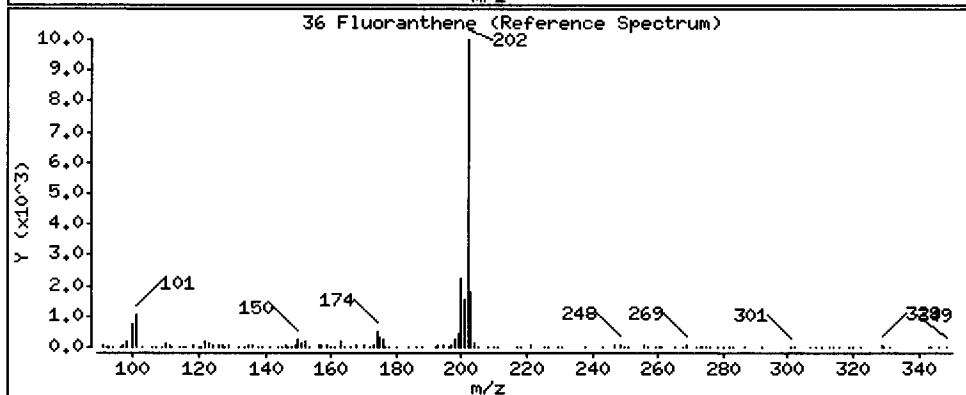
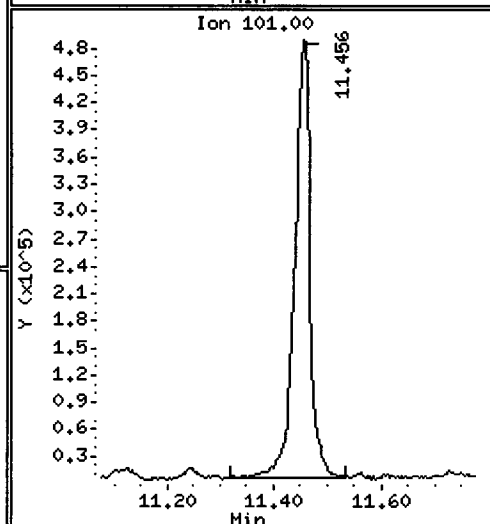
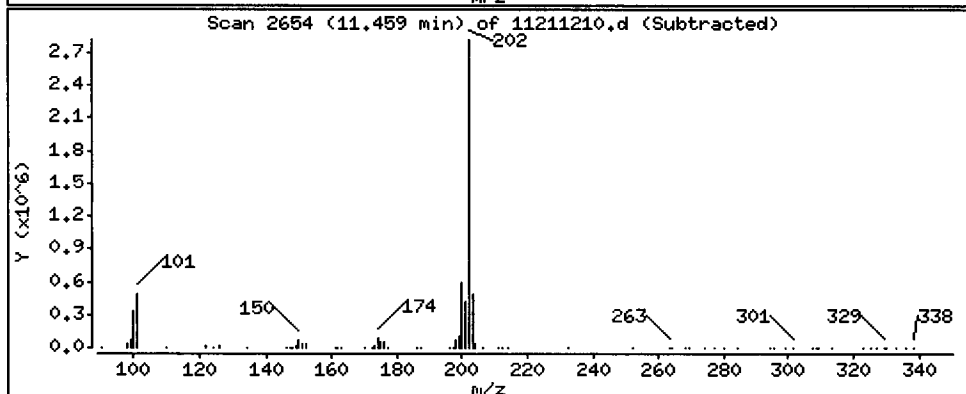
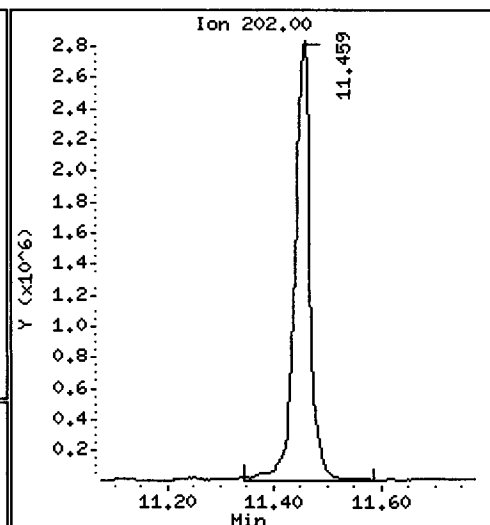
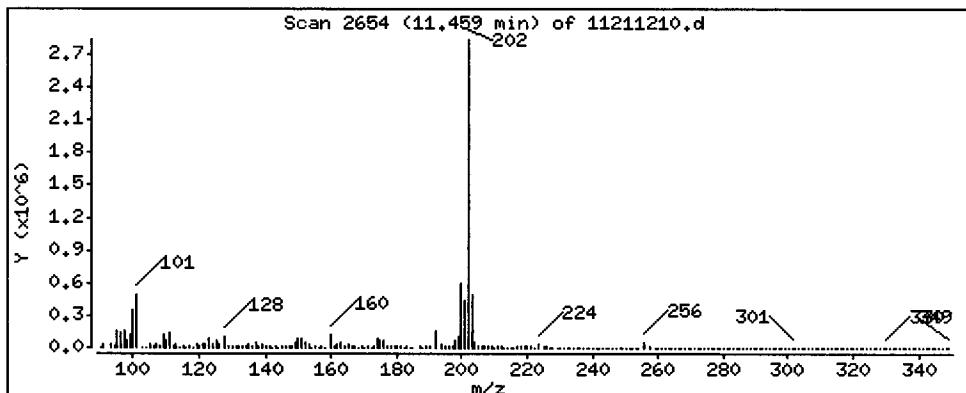
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

36 Fluoranthene

Concentration: 867.3 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

Operator: JZ

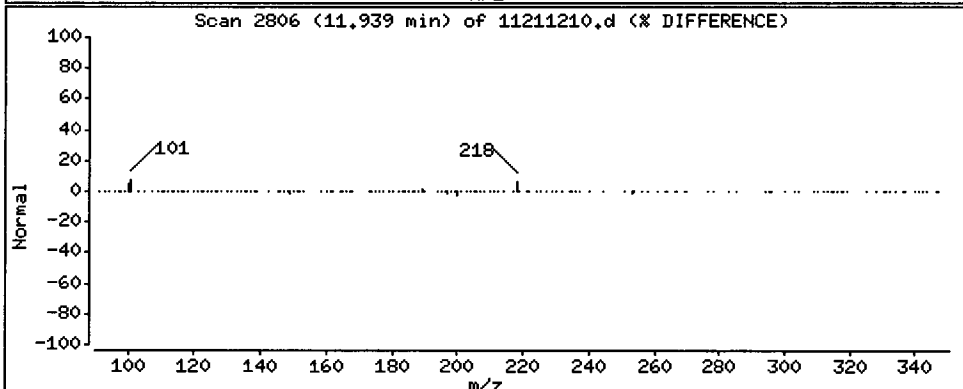
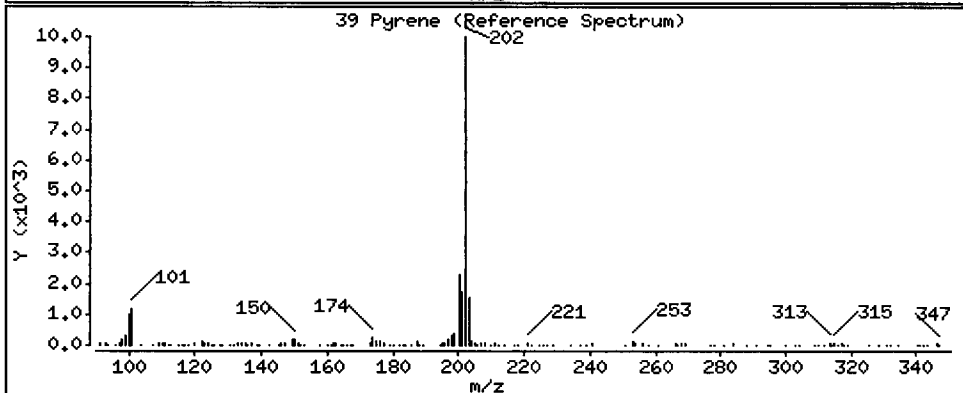
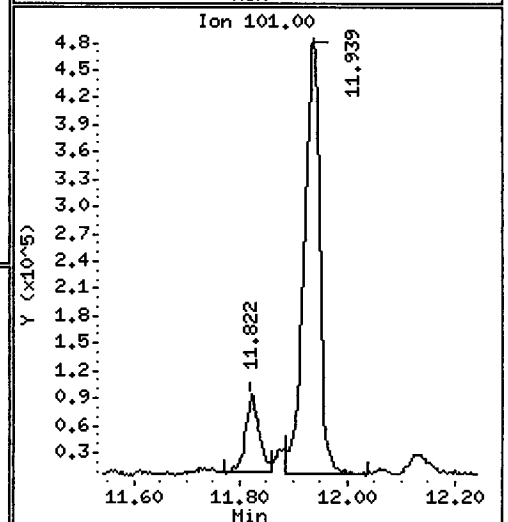
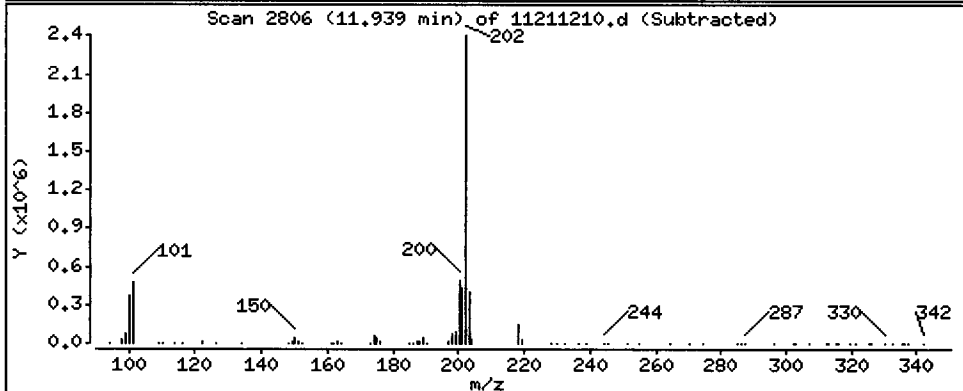
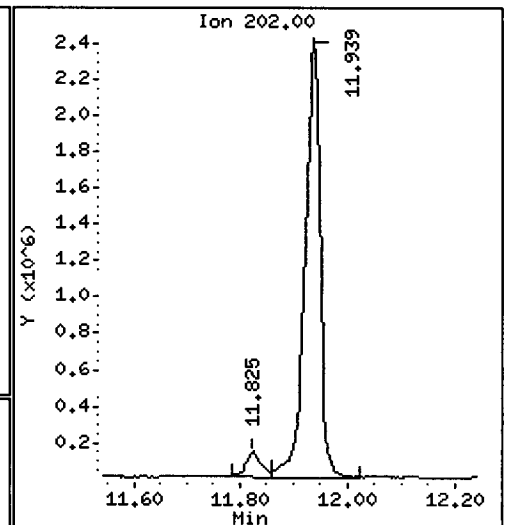
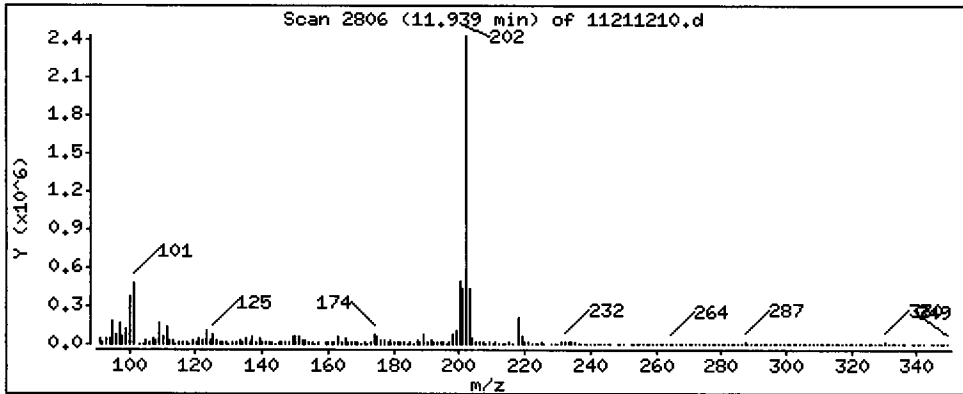
Column phase: ZB-5msi

Column diameter: 0.25

39 Pyrene

Concentration: 778.4 ug/kg

E



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

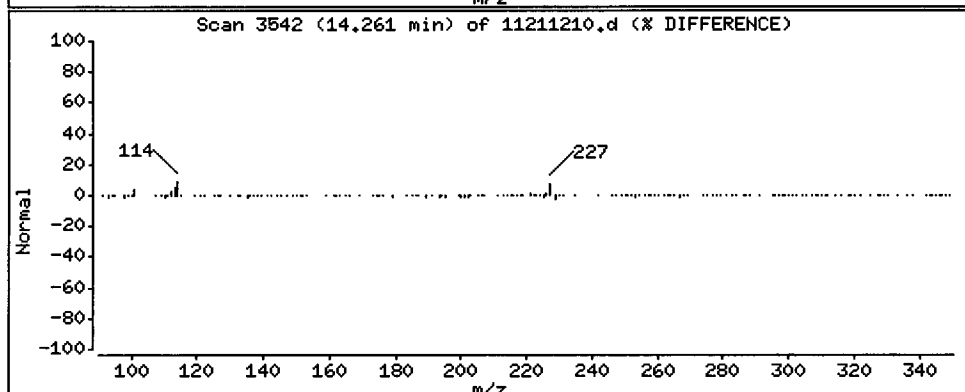
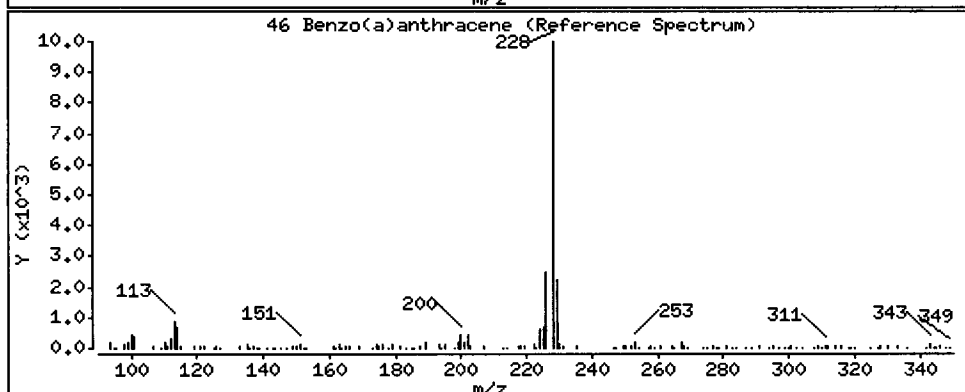
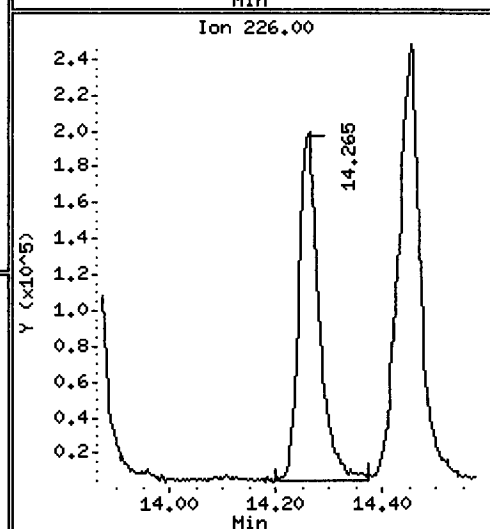
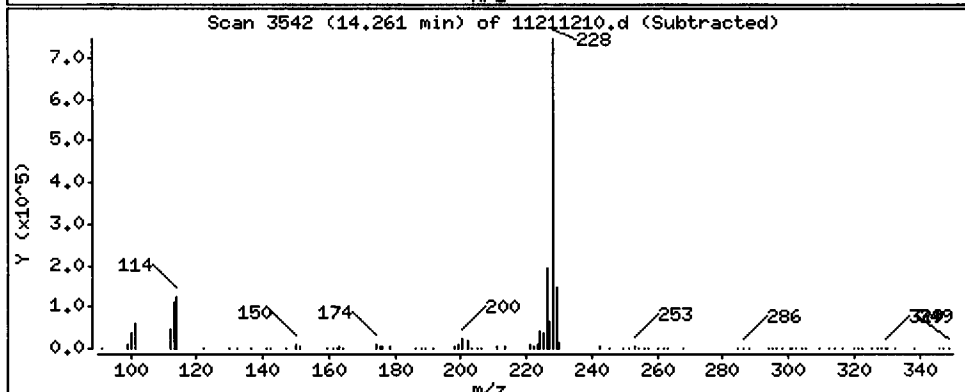
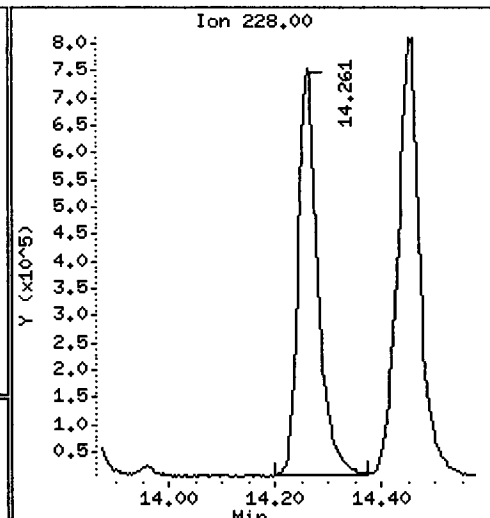
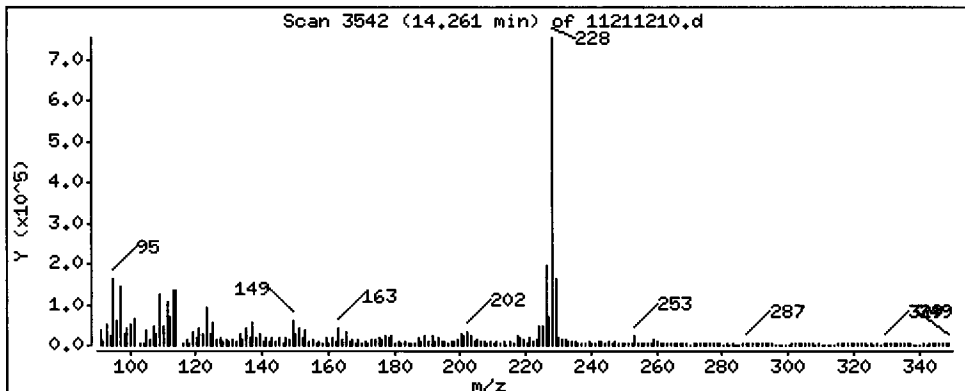
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Benzo(a)anthracene

Concentration: 347.3 ug/kg





Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

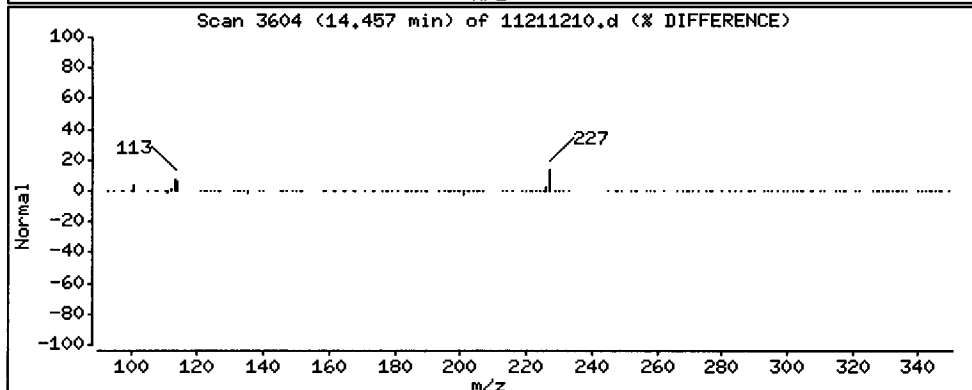
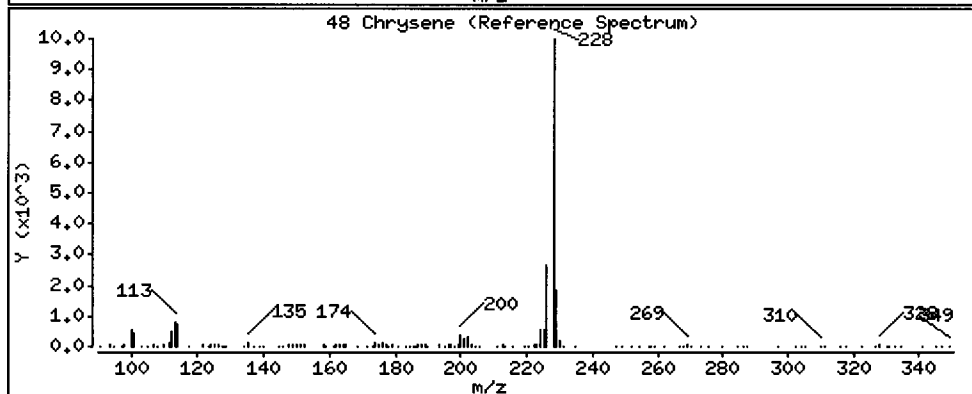
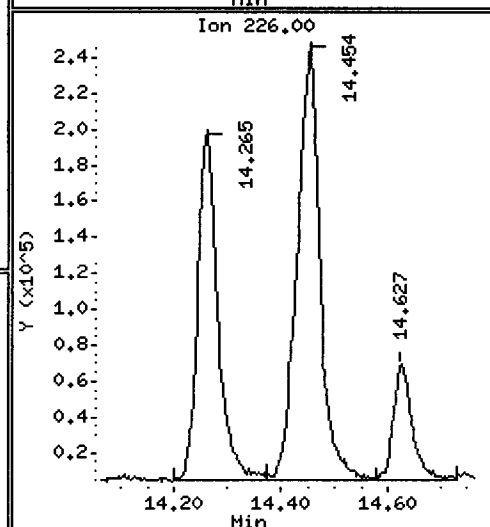
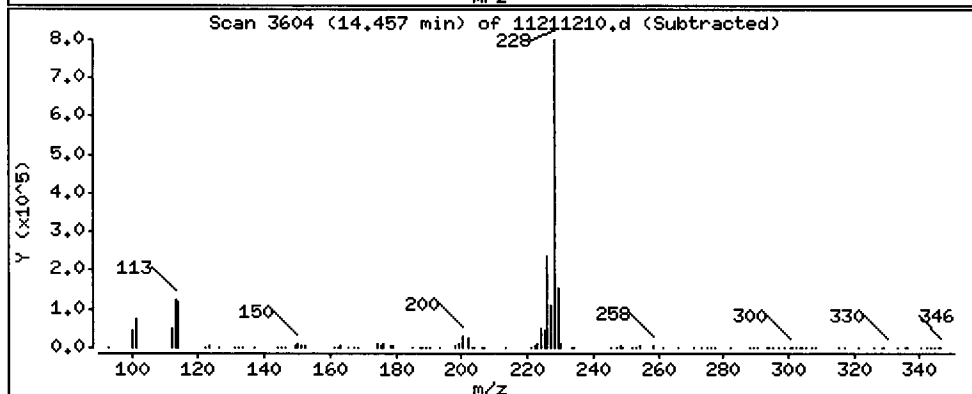
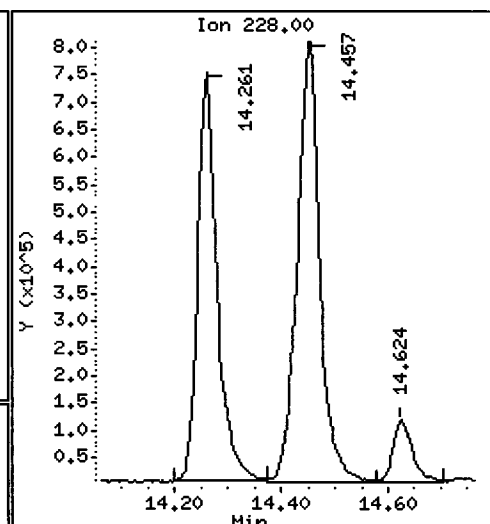
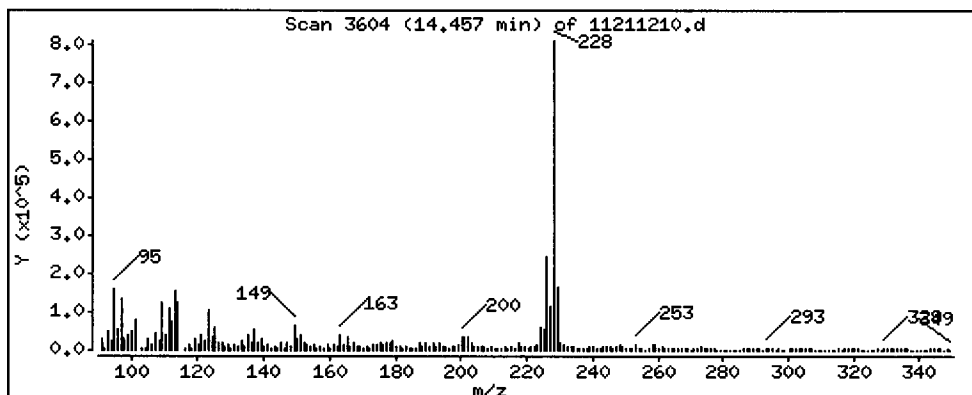
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

48 Chrysene

Concentration: 438.3 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.1

Sample Info: VR58F

Volume Injected (uL): 1.0

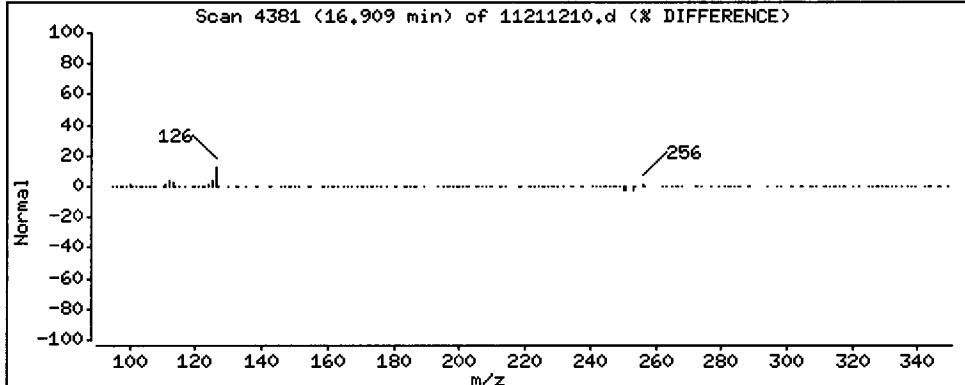
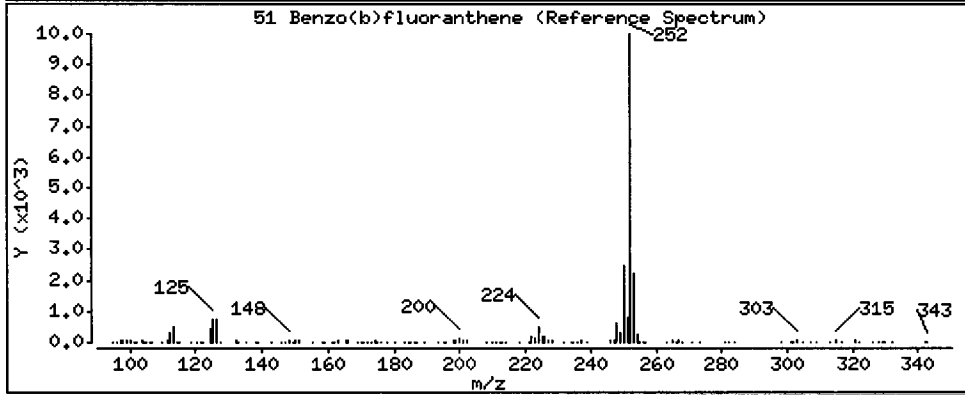
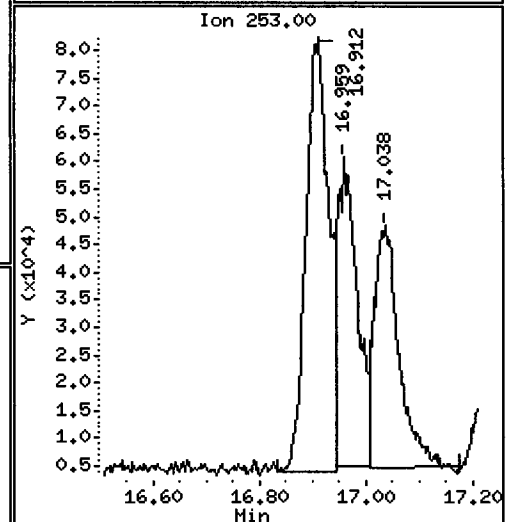
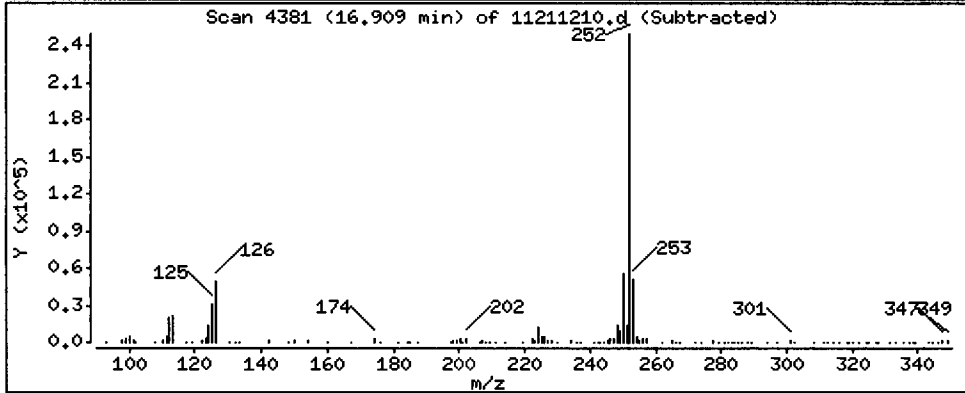
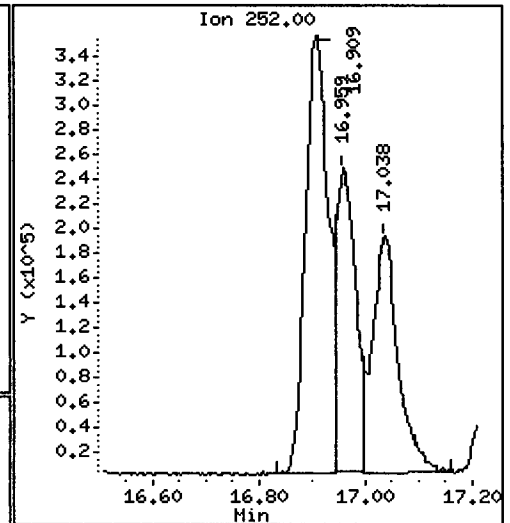
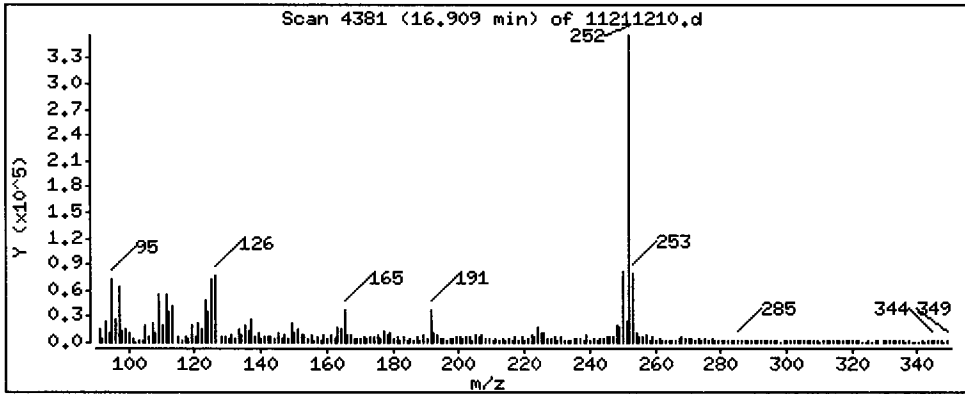
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

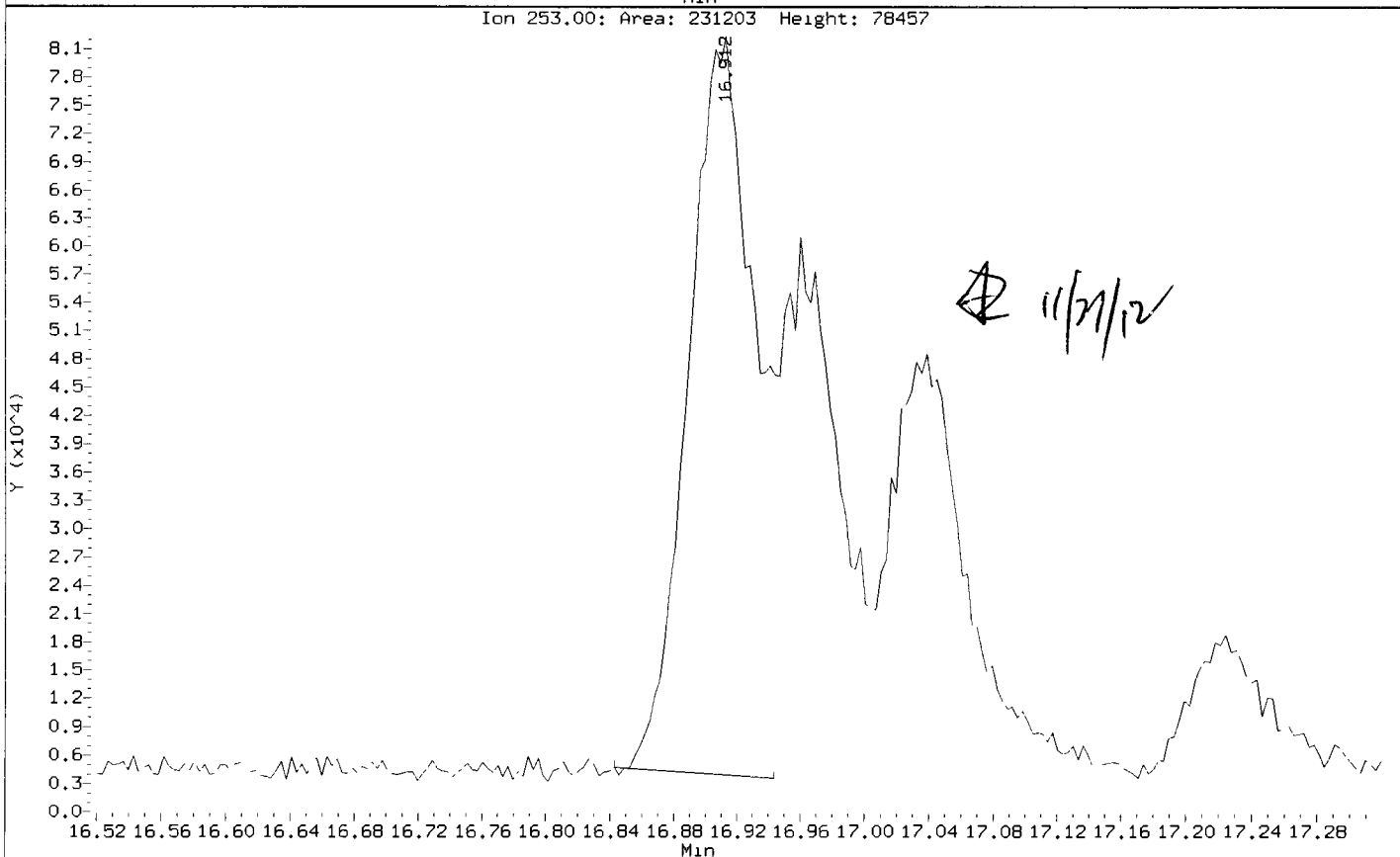
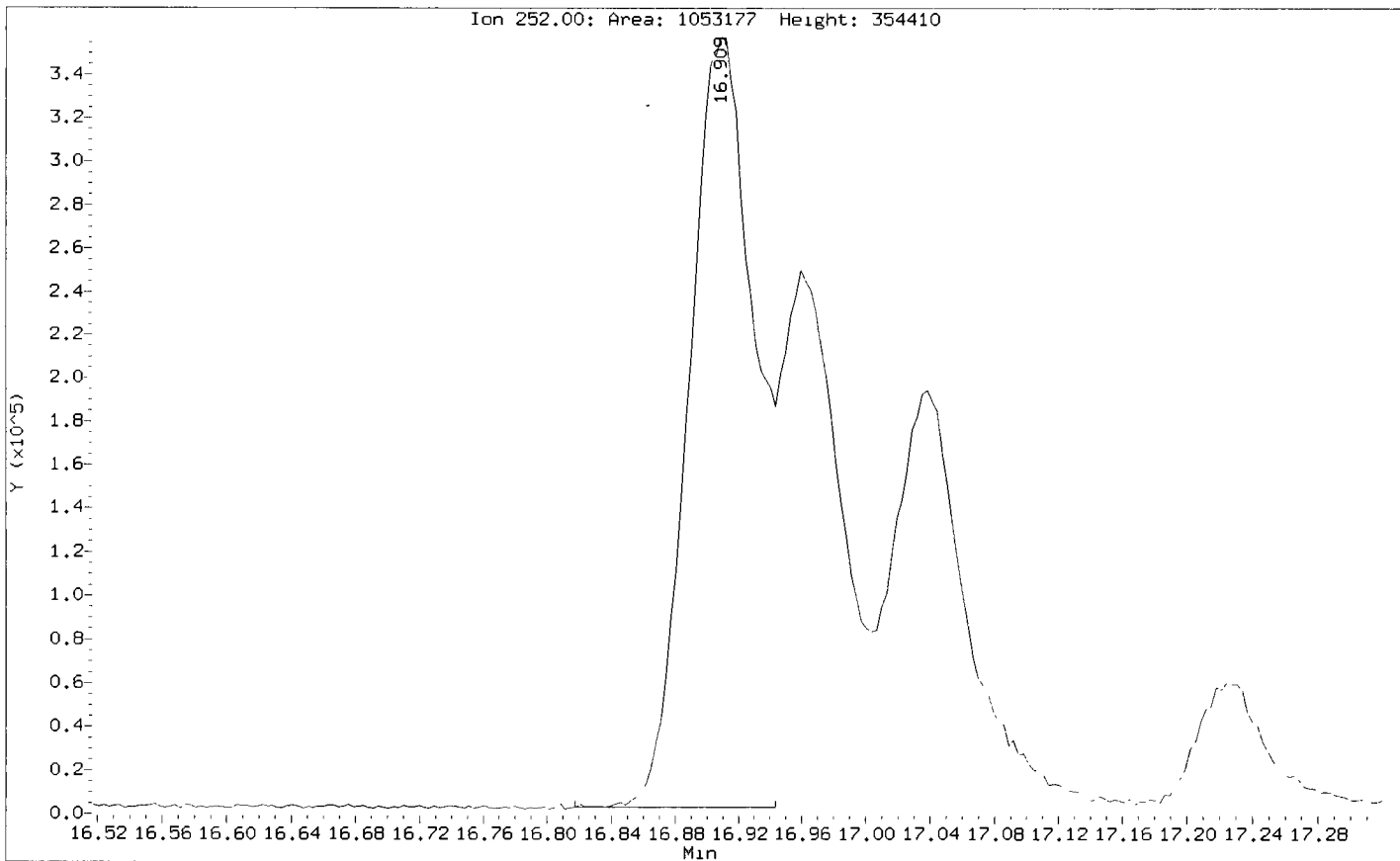
51 Benzo(b)fluoranthene

Concentration: 355.9 ug/kg



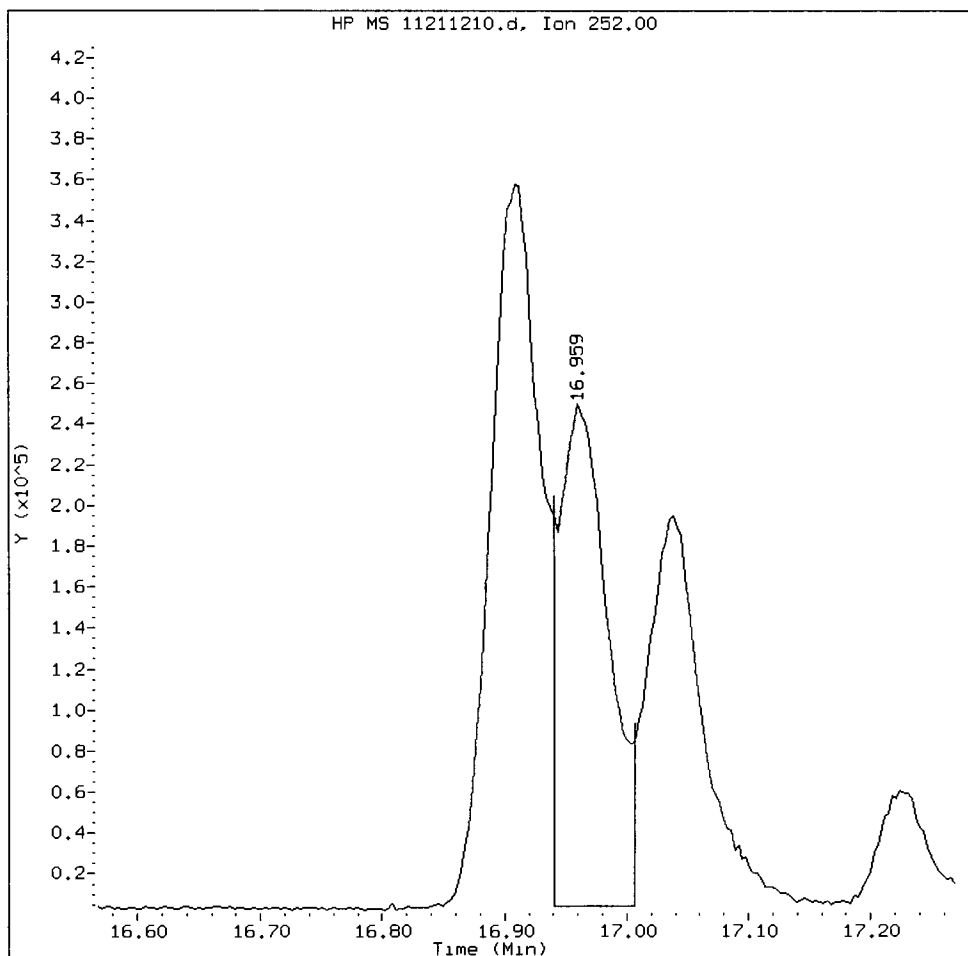
Data File: /chem3/nt11.1/20121121.b/11211210.d  
Injection Date: 21-NOV-2012 15:42  
Instrument: nt11.1  
Client Sample ID: SG-14-S-E-121107

Compound: Benzo(k)fluoranthene  
CAS Number: 207-08-9



VR58F, /chem3/nt11.i/20121121.b/11211210.d

Benzo(k)fluoranthene Amount: 4.43 Area: 704715



MANUAL INTEGRATION for Benzo(k)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AD

Date: 11/21/12

Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

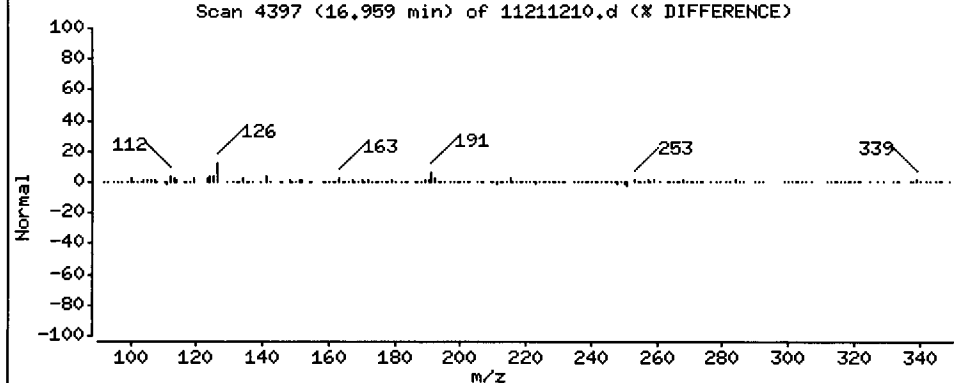
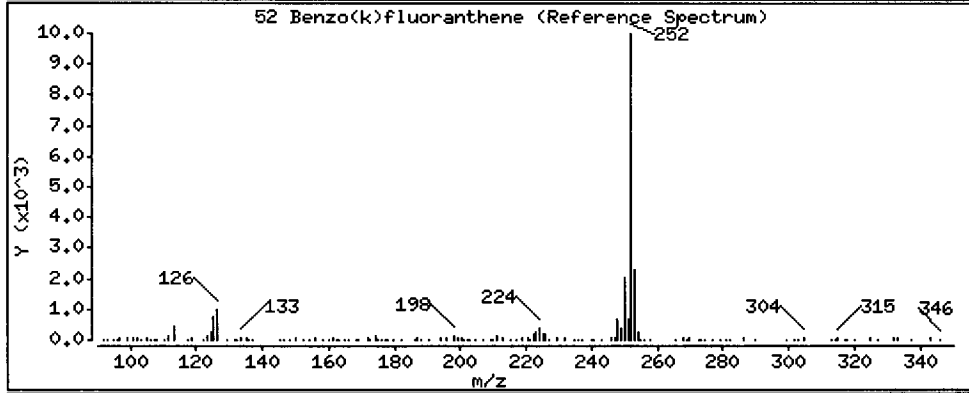
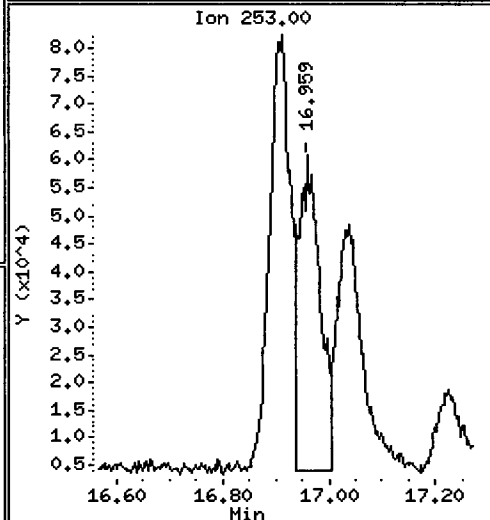
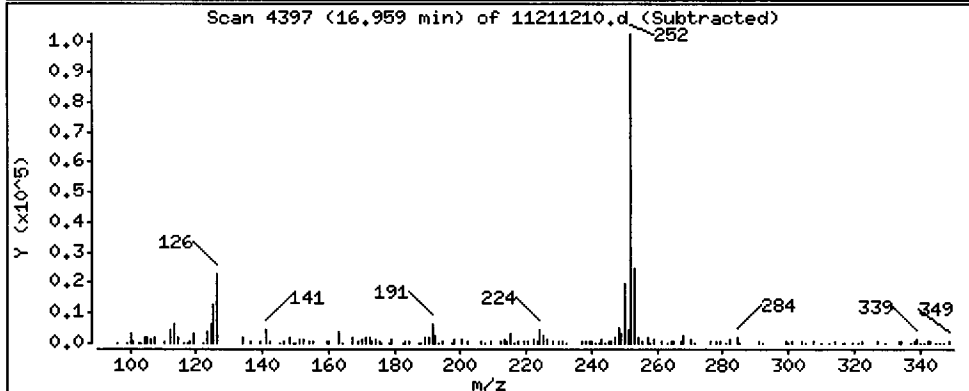
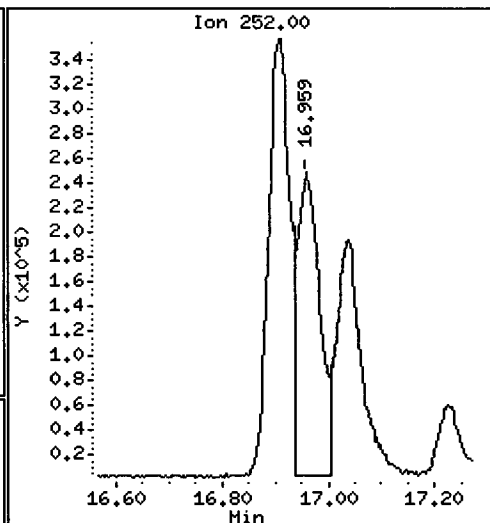
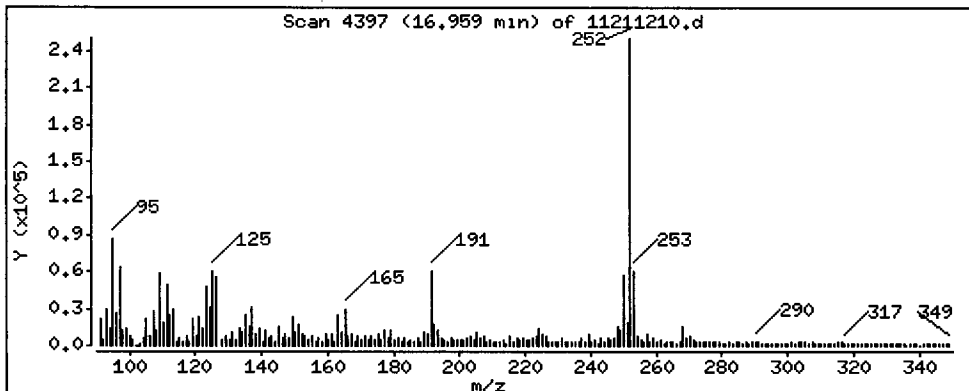
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

52 Benzo(k)fluoranthene

Concentration: 212.4 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

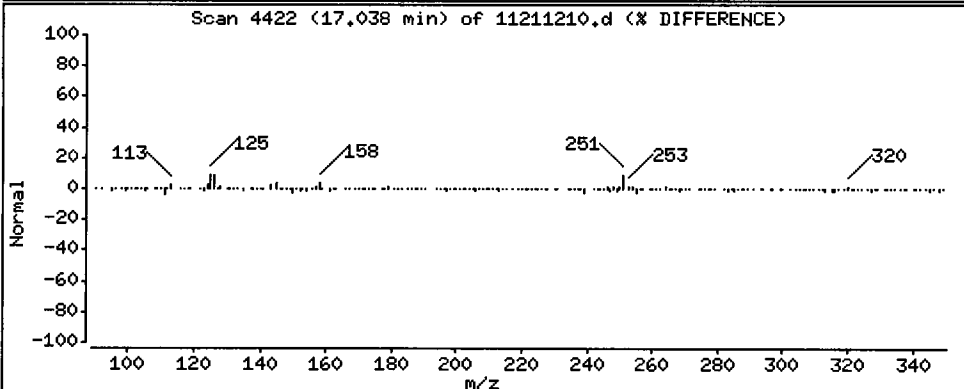
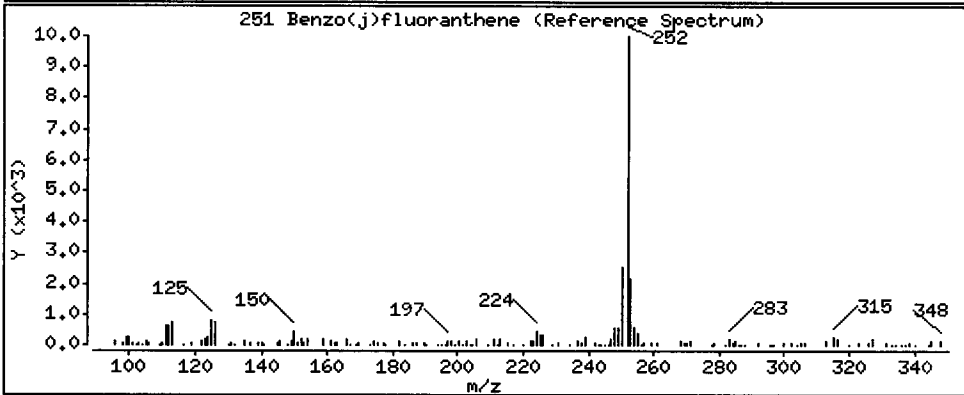
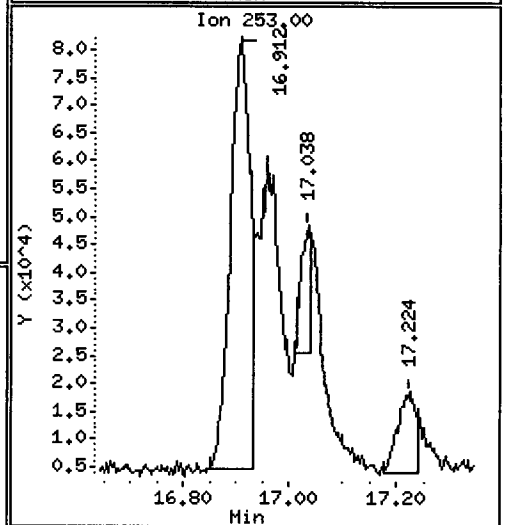
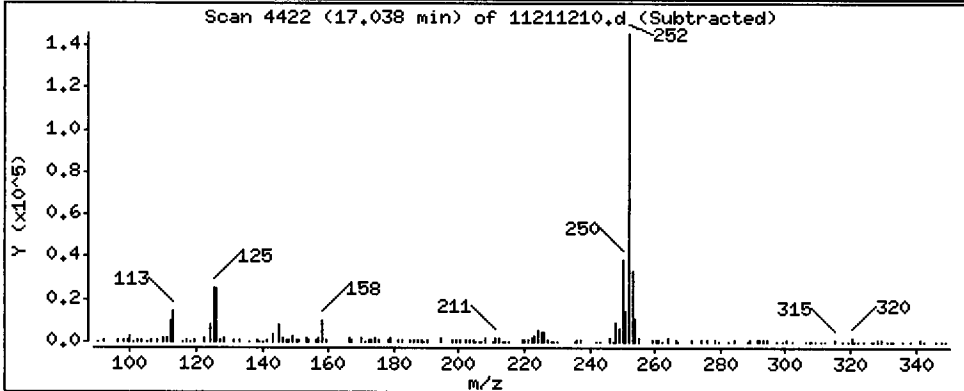
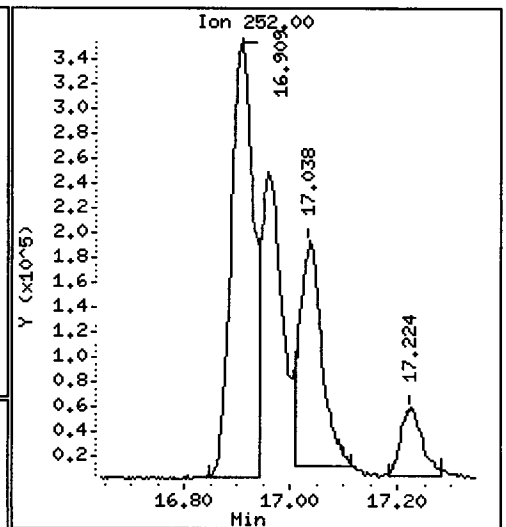
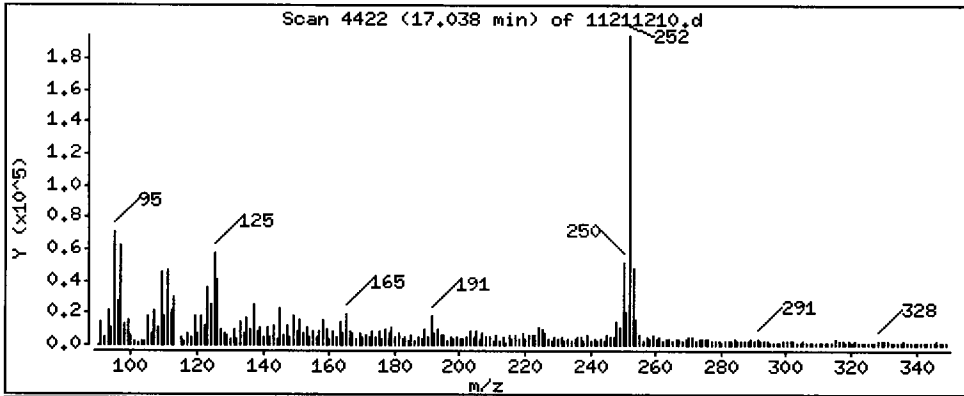
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

251 Benzo(j)fluoranthene

Concentration: 149.0 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

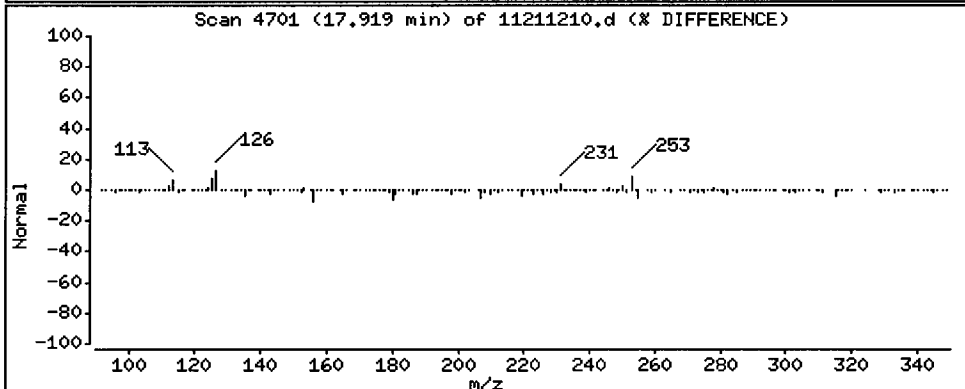
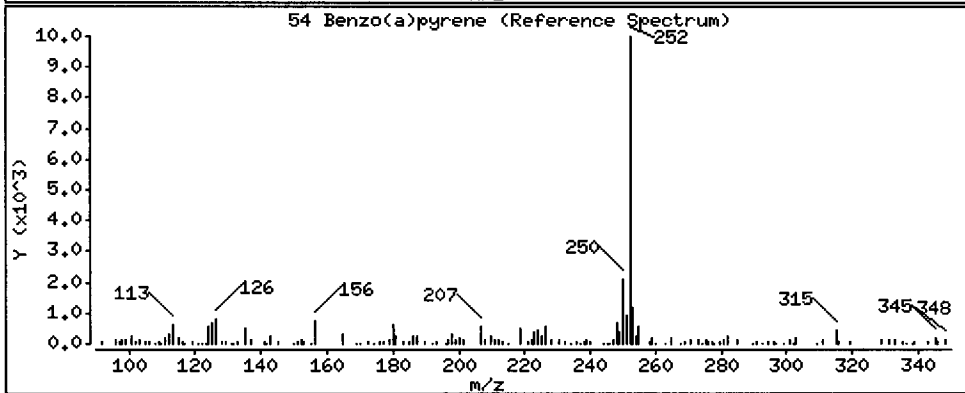
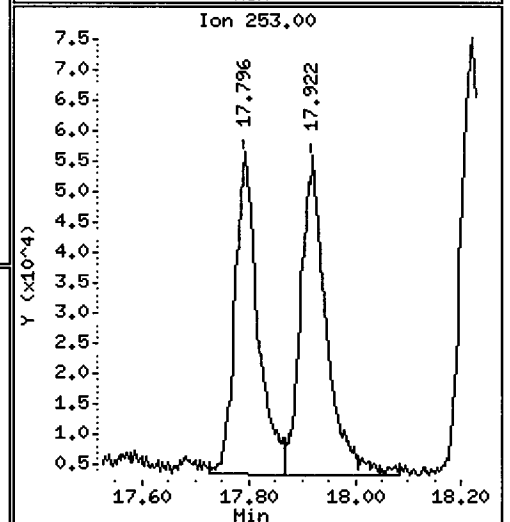
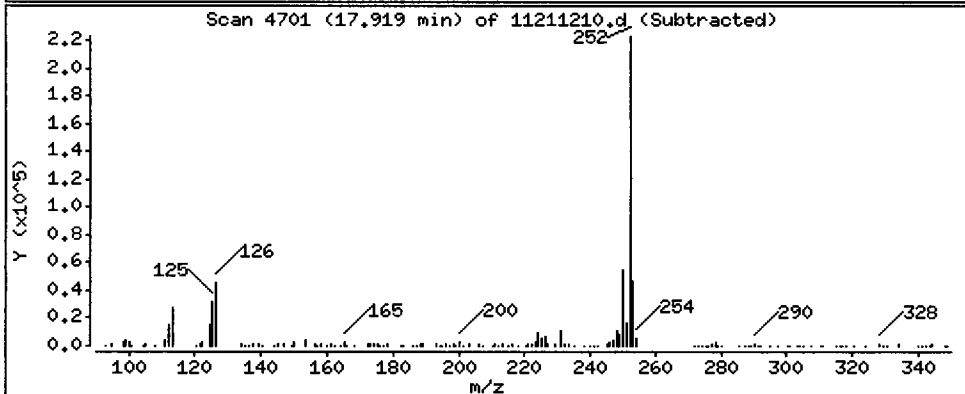
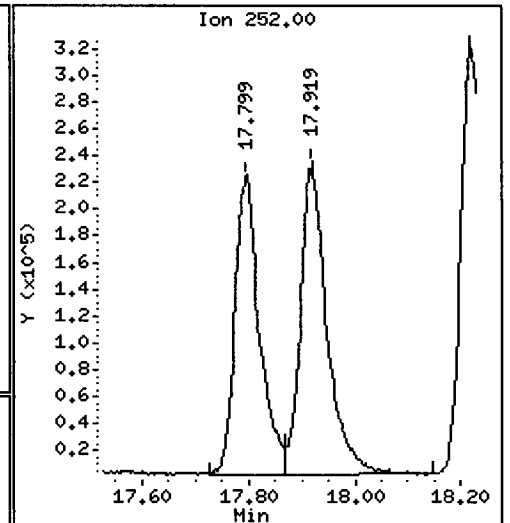
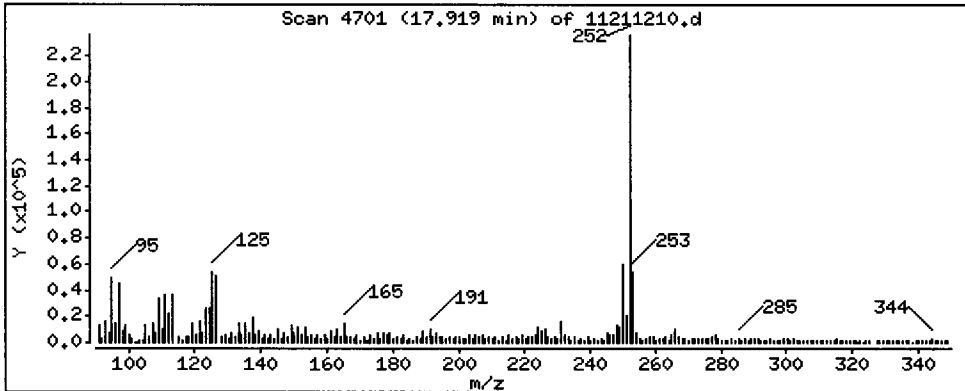
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

54 Benzo(a)pyrene

Concentration: 252.6 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

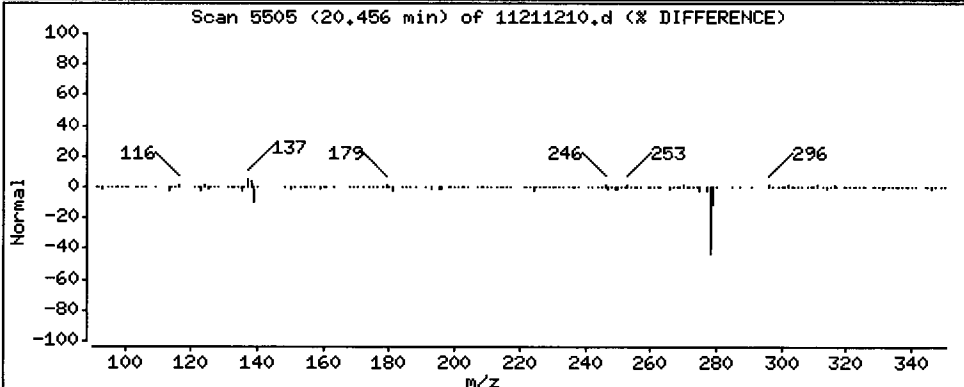
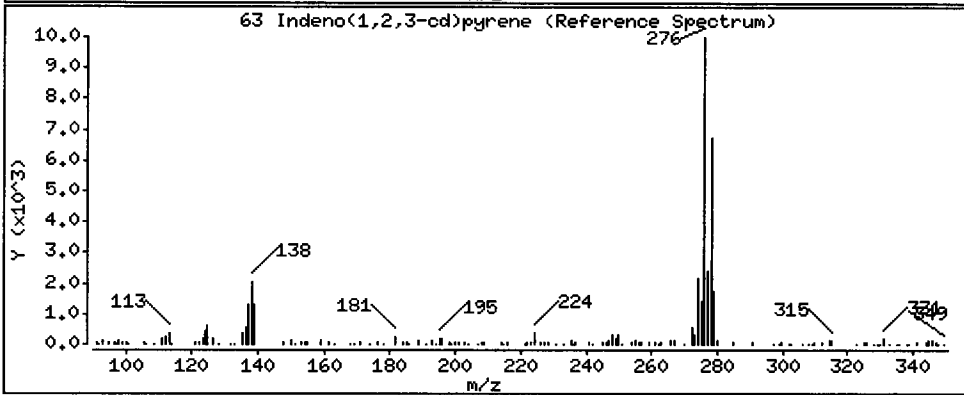
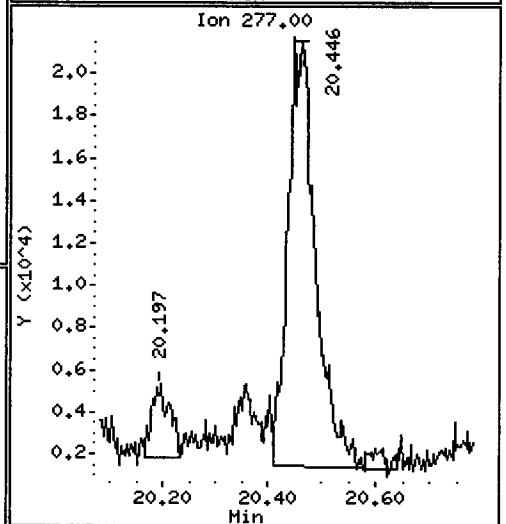
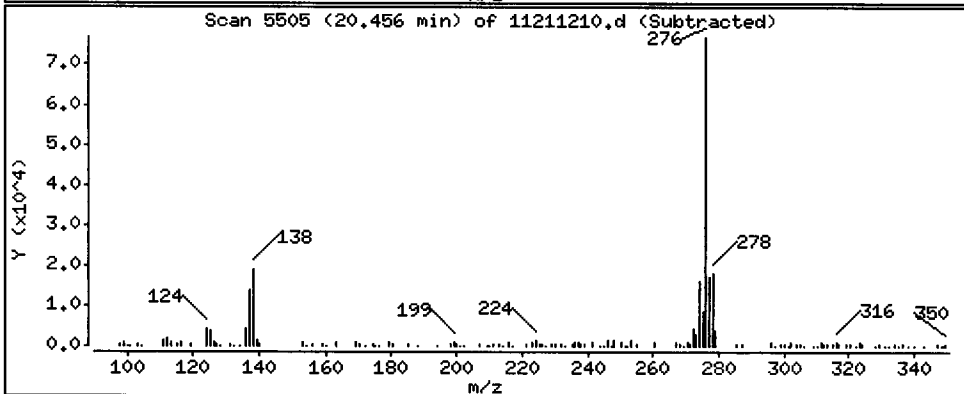
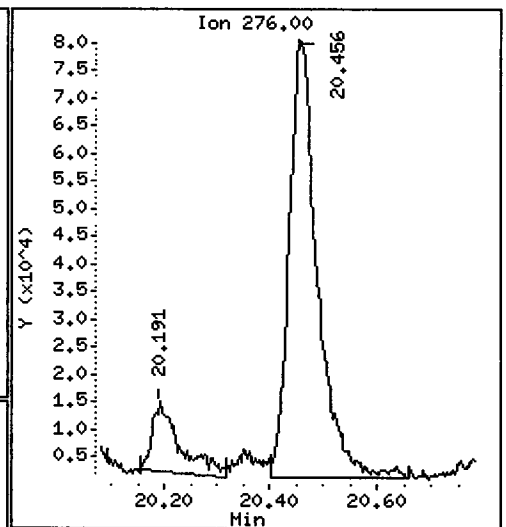
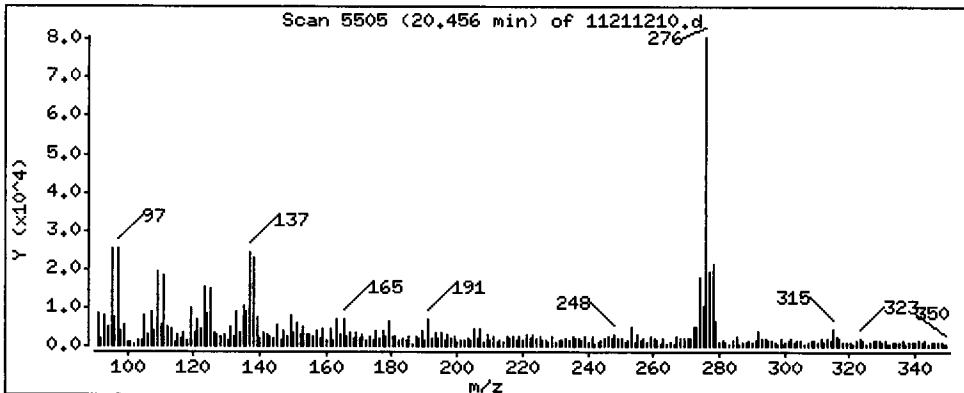
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

63 Indeno(1,2,3-cd)pyrene

Concentration: 77.30 ug/kg





Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

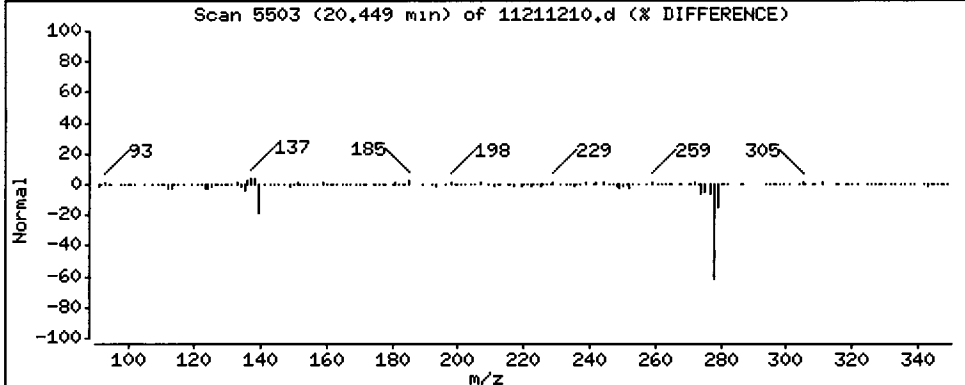
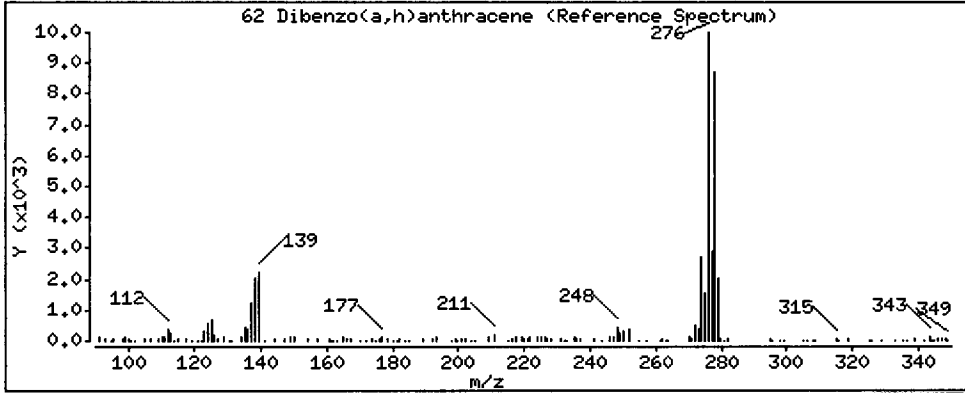
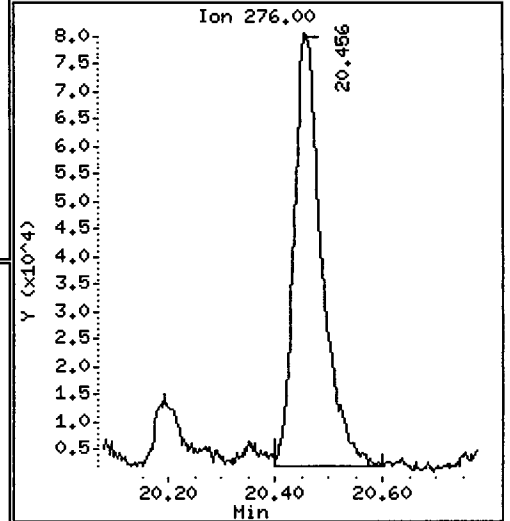
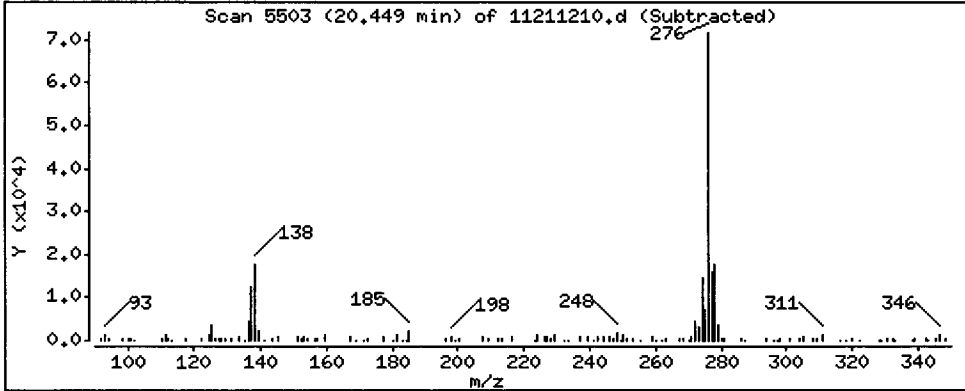
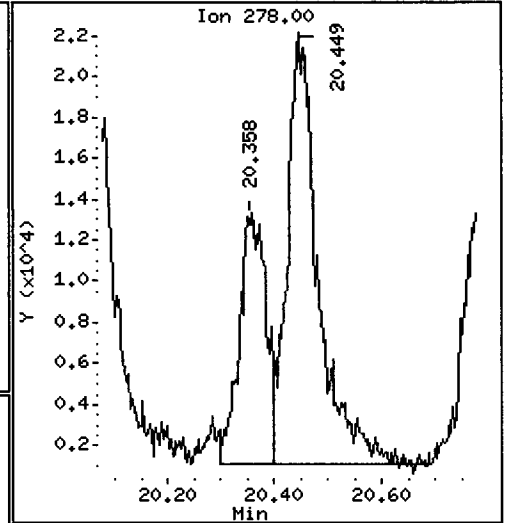
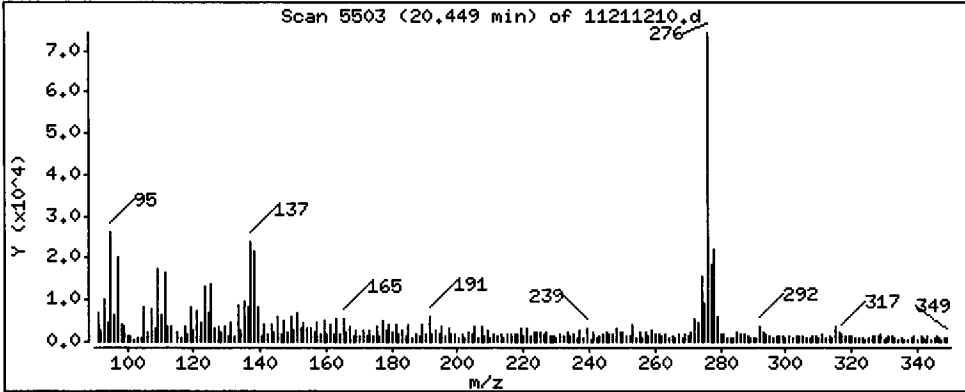
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

62 Dibenzo(a,h)anthracene

Concentration: 27.89 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

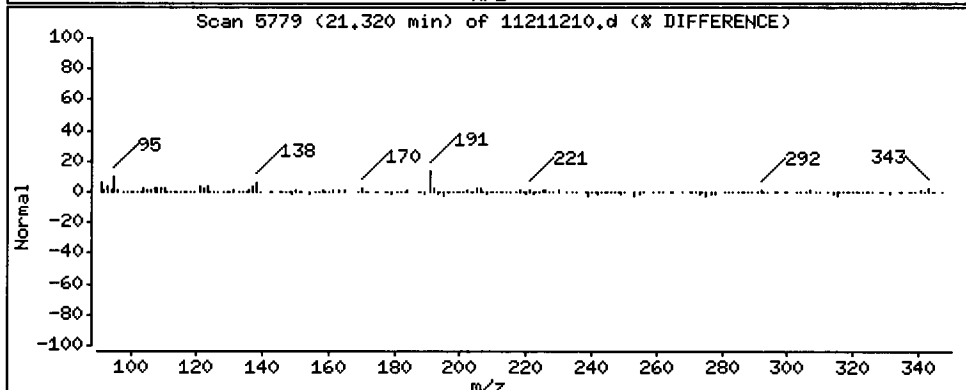
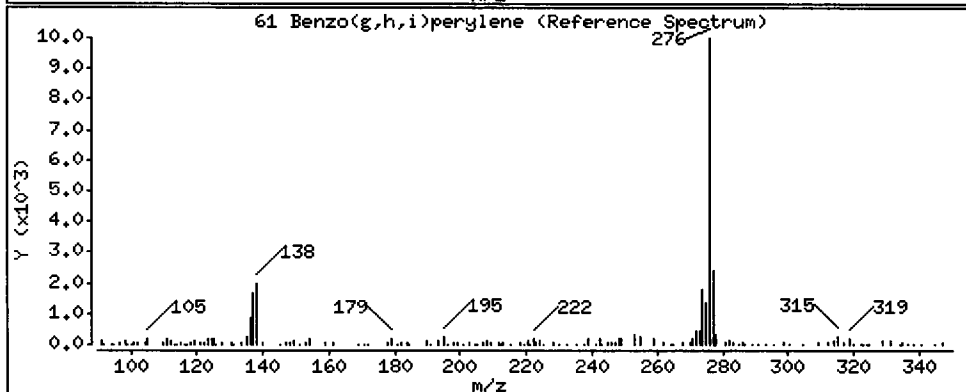
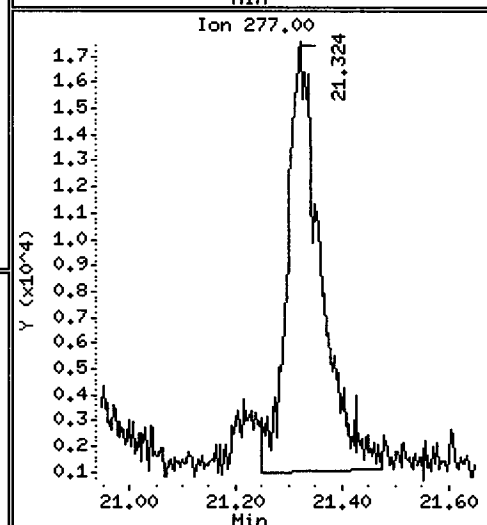
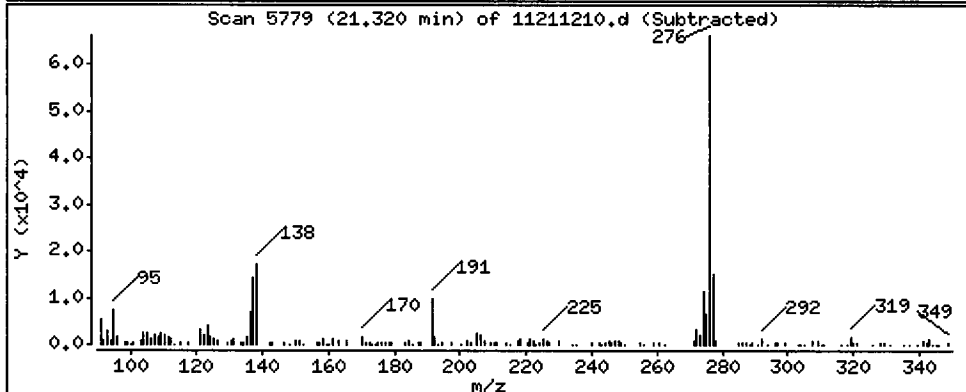
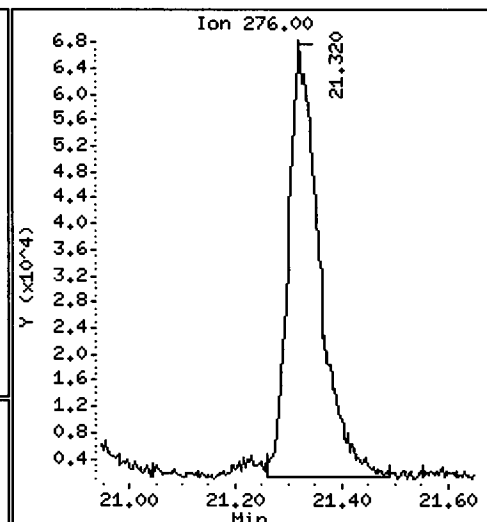
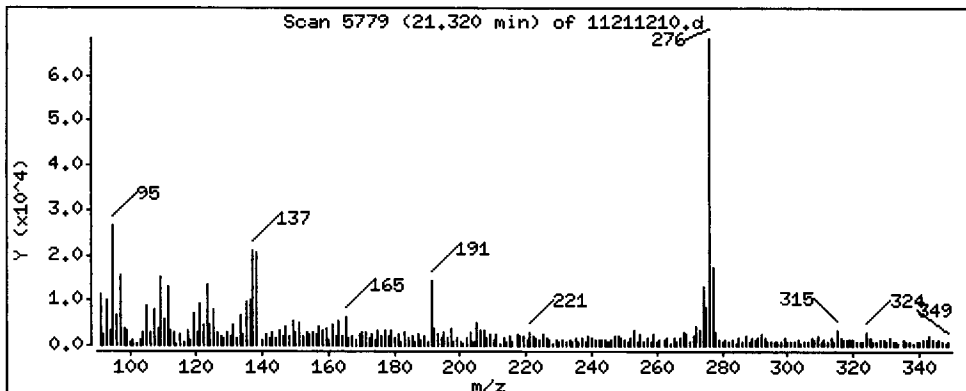
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Benzo(g,h,i)perylene

Concentration: 84.47 ug/kg



Date : 21-NOV-2012 15:42

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F

Volume Injected (uL): 1.0

Operator: JZ

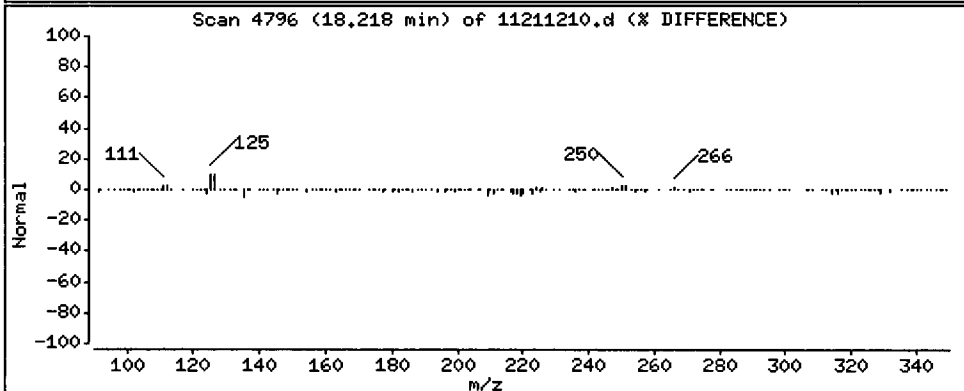
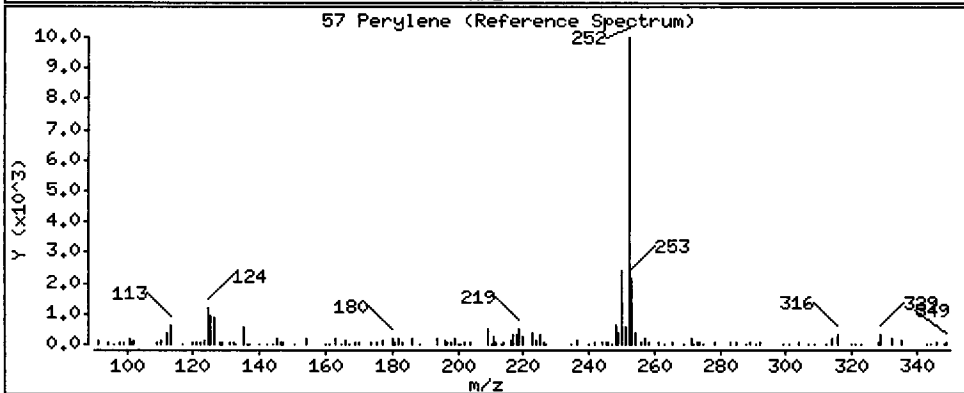
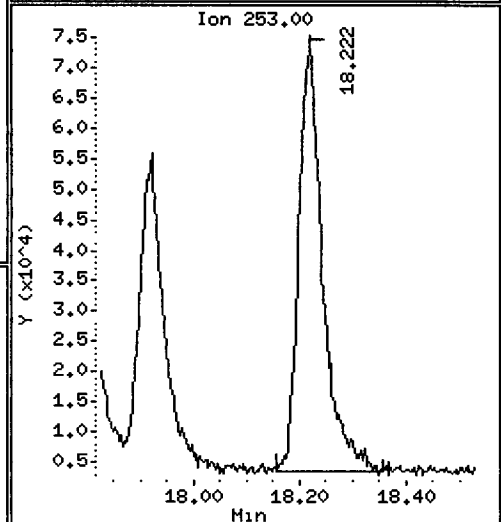
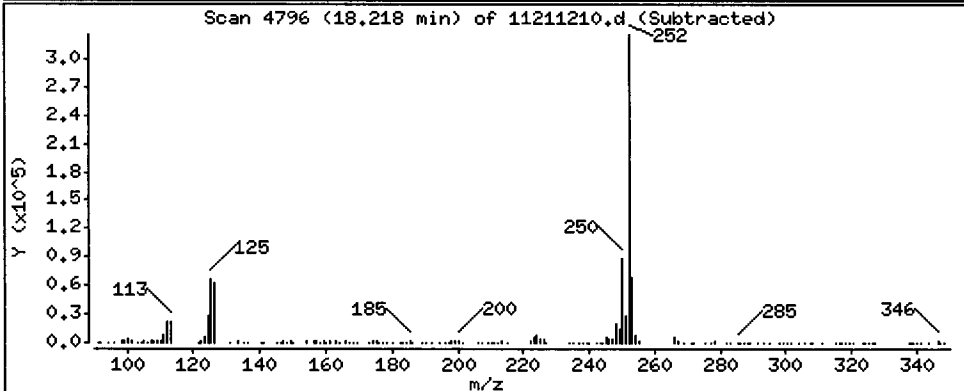
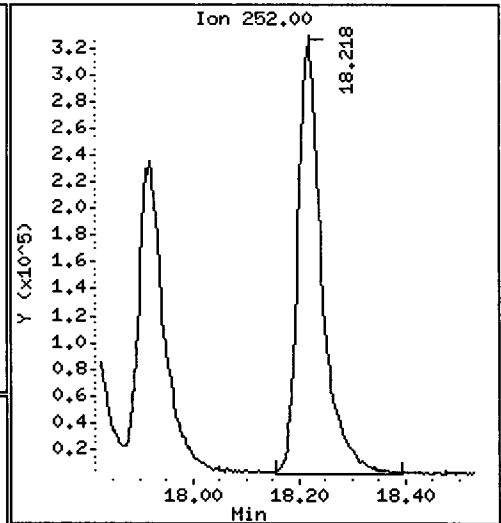
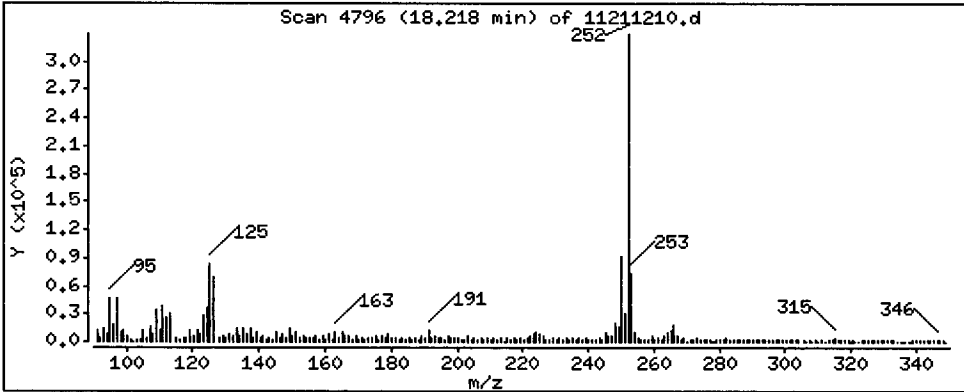
Column phase: ZB-5ms1

Column diameter: 0.25

*NKJ*

57 Perylene

Concentration: 318.3 ug/kg



CO-ELUTION SUMMARY FOR FILE - 11211210.d

Lab ID: VR58F, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2012

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211217.d  
 Lab Smp Id: VR58F Client Smp ID: SG-14-S-E-121107  
 Inj Date : 21-NOV-2012 19:11  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58F,3  
 Misc Info : 12-22334  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 26-Nov-2012 11:15 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 17  
 Dil Factor: 3.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

*Handwritten:* 11/26/12

Concentration Formula:  $\text{Amt} * \text{DF} * \text{Vt} / (\text{Ws} * (100 - \text{M}) / 100) * \text{CpndVariable}$

Name	Value	Description
DF	3.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	22.05000	Weight of sample extracted (g)
M	52.70000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN	FINAL
						(ug/mL)	(ug/kg)	
* 6 Naphthalene-d8		136	5.438	5.438	(1.000)	755637	2.00000	
7 Naphthalene		128	5.467	5.467	(1.005)	313098	0.77531	111.5
\$ 12 2-Methylnaphthalene-d10		152	6.174	6.174	(1.135)	135631	0.52533	75.55
14 2-Methylnaphthalene		141	6.221	6.221	(1.144)	85719	0.37673	54.18
15 1-methylnaphthalene		141	6.414	6.413	(1.179)	47269	0.21689	31.19
21 Acenaphthylene		152	7.600	7.600	(0.985)	44070	0.11954	17.19
* 22 Acenaphthene-d10		164	7.714	7.714	(1.000)	424260	2.00000	
23 Acenaphthene		153	7.761	7.761	(1.006)	197507	0.84244	121.2
11 Dibenzofuran		168	7.912	7.912	(1.026)	196656	0.57258	82.35
25 Fluorene		166	8.389	8.389	(1.088)	288767	1.09396	157.3
* 28 Phenanthrene-d10		188	9.736	9.736	(1.000)	633560	2.00000	
30 Phenanthrene		178	9.771	9.768	(1.004)	1810599	4.73107	680.4
31 Anthracene		178	9.812	9.809	(1.008)	375638	1.02245	147.0
36 Fluoranthene		202	11.434	11.425	(1.174)	2782174	7.25600	1044
39 Pyrene		202	11.904	11.892	(0.829)	2251359	5.88746	846.7

Compounds	QUANT SIG				RESPONSE	CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT		ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	====	==	=====	=====	=====	=====	=====
46 Benzo(a)anthracene	228	14.236	14.224	(0.992)	834546	2.39343	344.2
* 47 Chrysene-d12	240	14.353	14.343	(1.000)	693914	2.00000	
48 Chrysene	228	14.422	14.413	(1.005)	1006376	2.97365	427.7
51 Benzo(b)fluoranthene	252	16.868	16.858	(0.932)	433329	2.56165	368.4
52 Benzo(k)fluoranthene	252	16.922	16.918	(0.934)	278608	1.51655	218.1 (M)
251 Benzo(j)fluoranthene	252	16.997	16.994	(0.939)	220379	1.13697	163.5 (M)
54 Benzo(a)pyrene	252	17.884	17.878	(0.988)	297781	1.73307	249.3
* 56 Perylene-d12	264	18.108	18.102	(1.000)	365510	2.00000	
63 Indeno(1,2,3-cd)pyrene	276	20.431	20.431	(1.128)	99267	0.47654	68.54
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.339	20.339	(1.123)	55010	0.45398	65.29
62 Dibenzo(a,h)anthracene	278	20.424	20.427	(1.128)	29110	0.17159	24.68
61 Benzo(g,h,i)perylene	276	21.298	21.298	(1.176)	99890	0.56367	81.07
57 Perylene	252	18.184	18.177	(1.004)	382004	2.14384	308.3

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211217.d  
 Lab Smp Id: VR58F  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22334

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-14-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	755637	46.41
22 Acenaphthene-d10	284255	142128	568510	424260	49.25
28 Phenanthrene-d10	410660	205330	821320	633560	54.28
47 Chrysene-d12	467886	233943	935772	693914	48.31
56 Perylene-d12	472330	236165	944660	365510	-22.62

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	0.00
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	0.00
28 Phenanthrene-d10	9.74	9.24	10.24	9.74	0.00
47 Chrysene-d12	14.34	13.84	14.84	14.35	0.07
56 Perylene-d12	18.10	17.60	18.60	18.11	0.03

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58F  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Misc Info: 12-22334

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-14-S-E-121107  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	143.8	75.55	52.53	34-100
\$ 60 Dibenzo(a,h) anthra	143.8	65.29	45.40	10-117



Date: 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

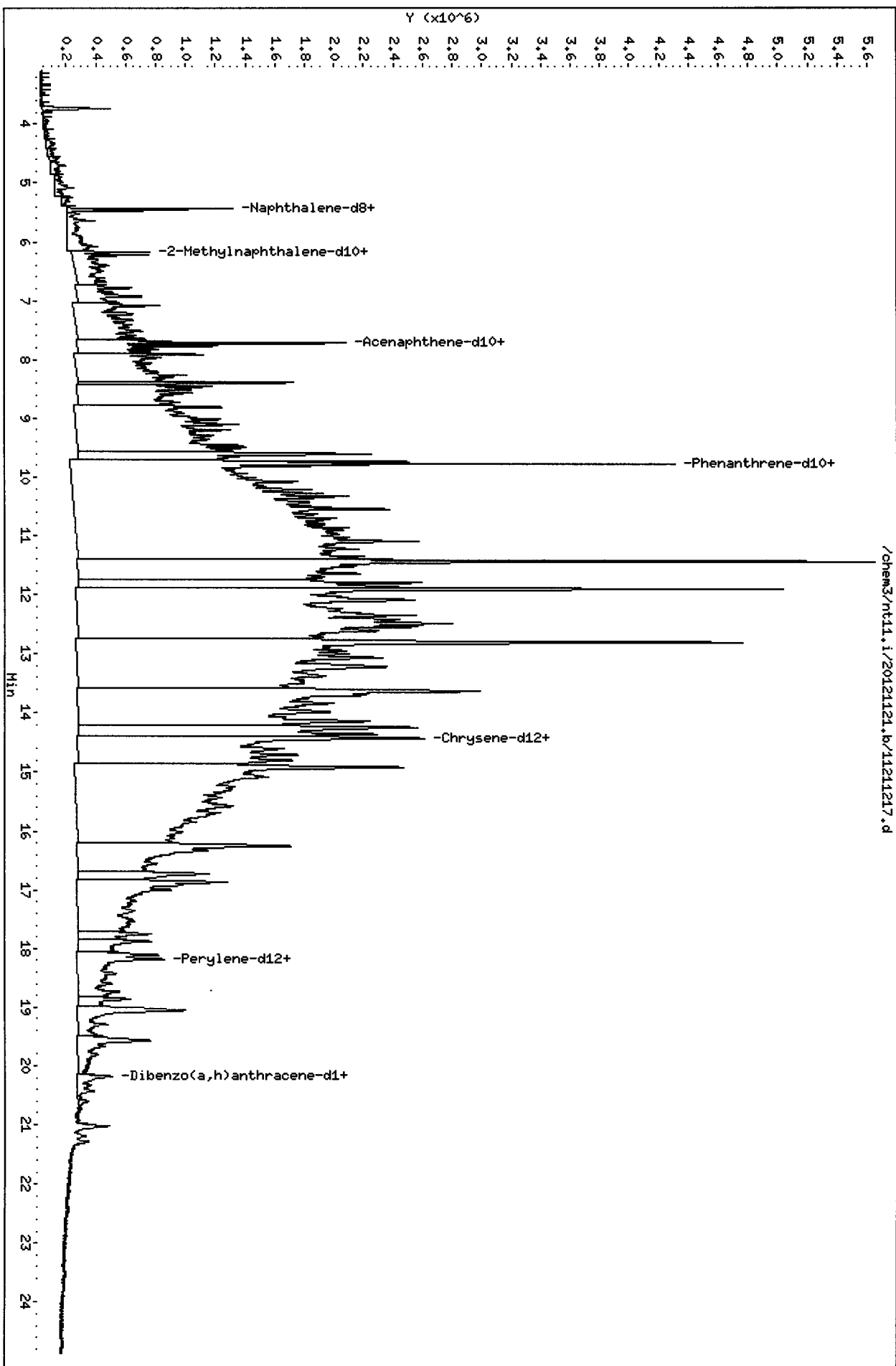
Sample Info: VR59F,3

Volume Injected (uL): 1.0

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25



20121121 09:55:55

Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

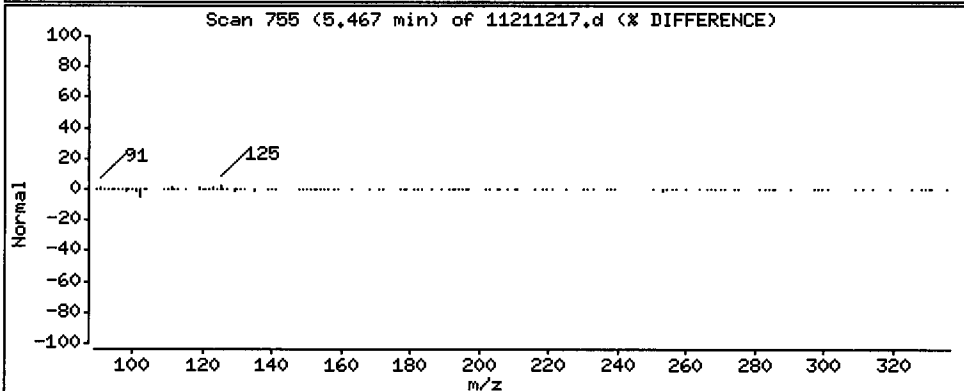
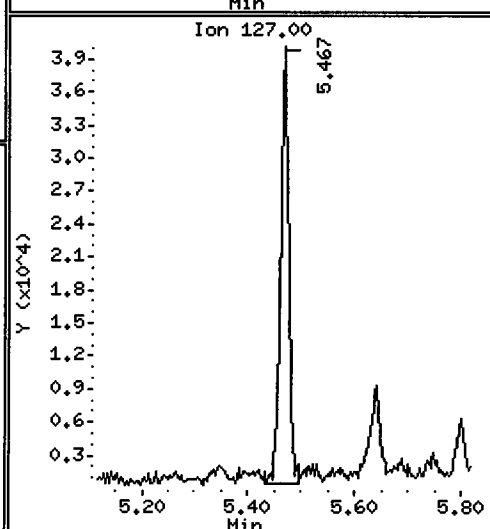
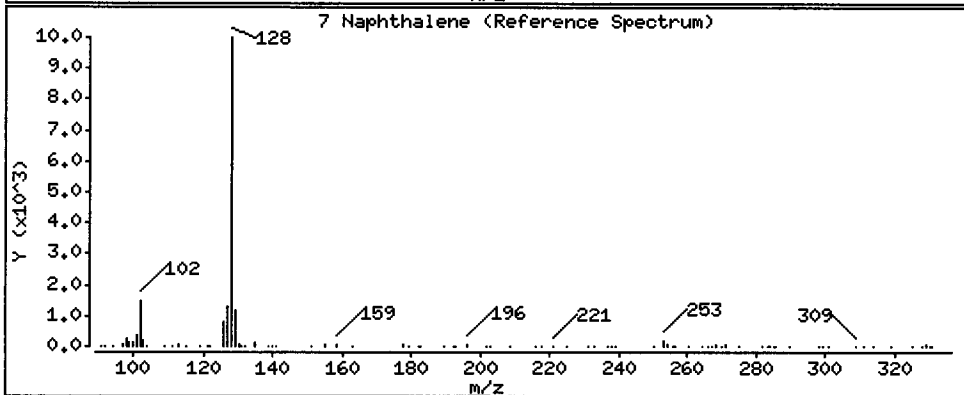
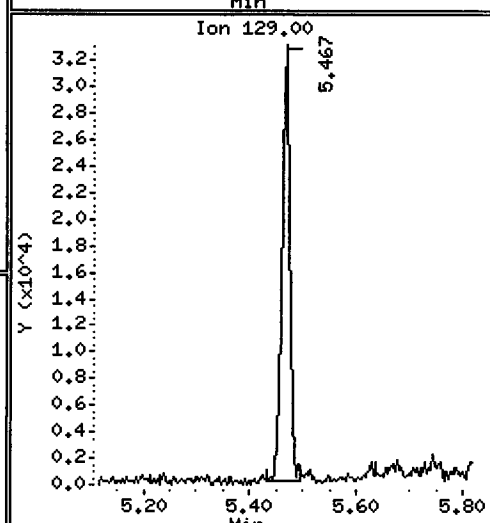
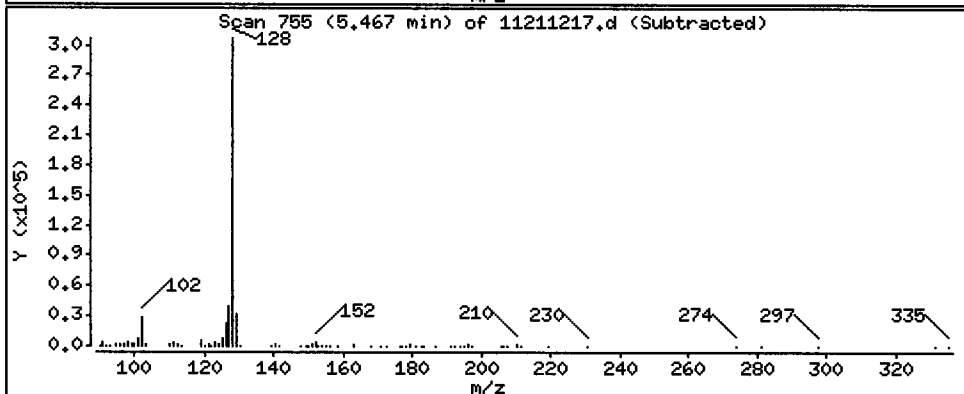
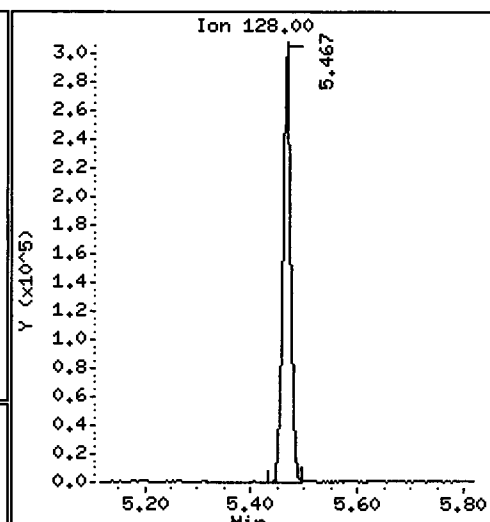
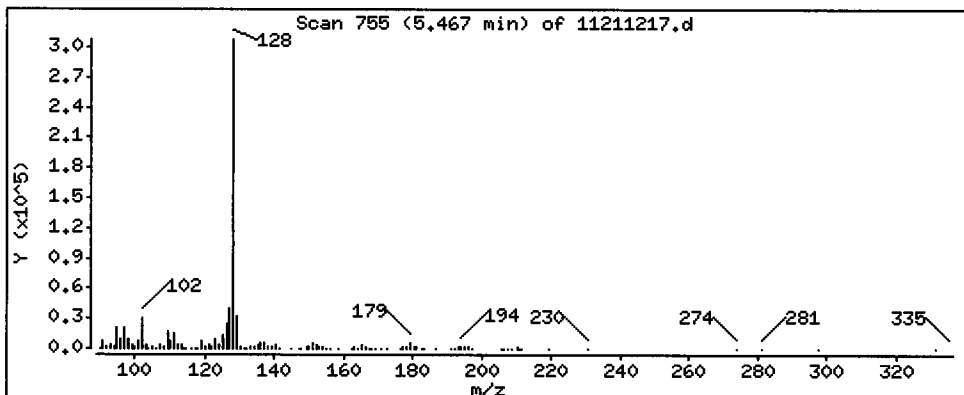
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

7 Naphthalene

Concentration: 111.5 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

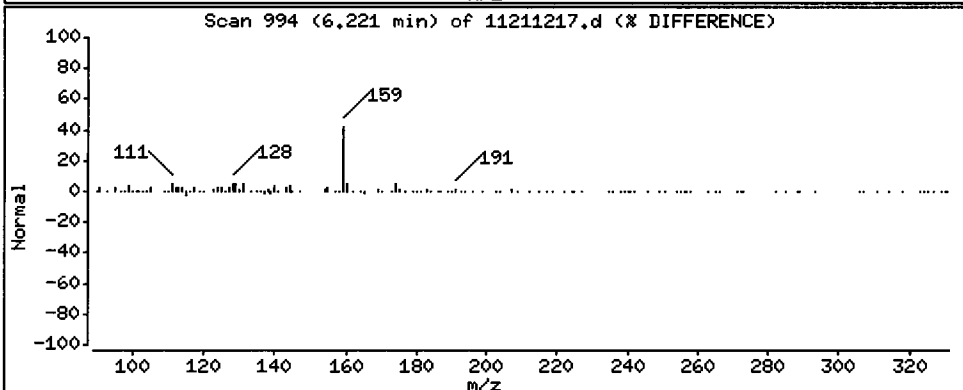
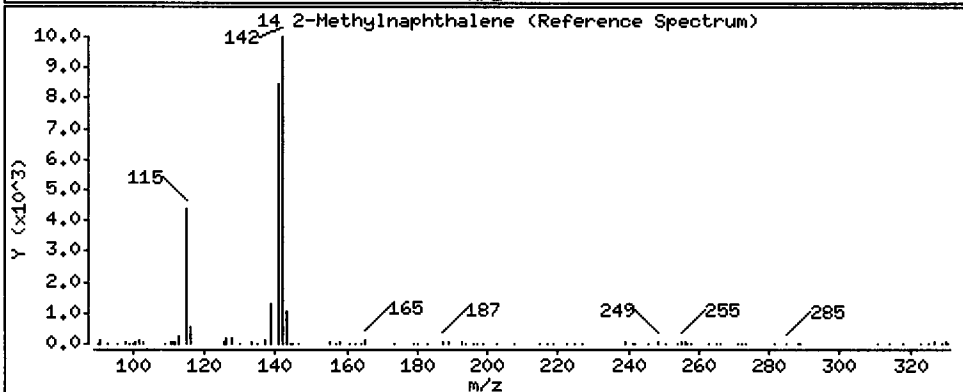
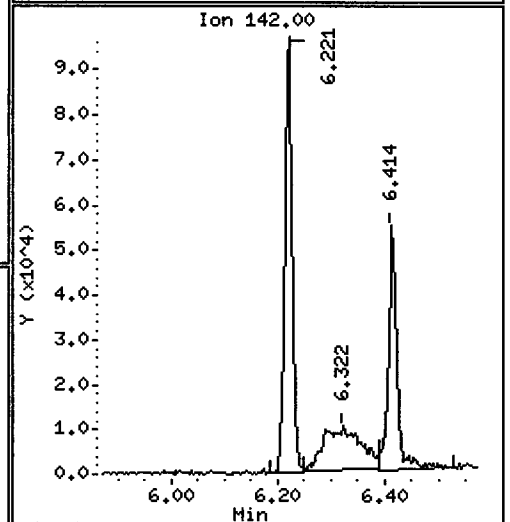
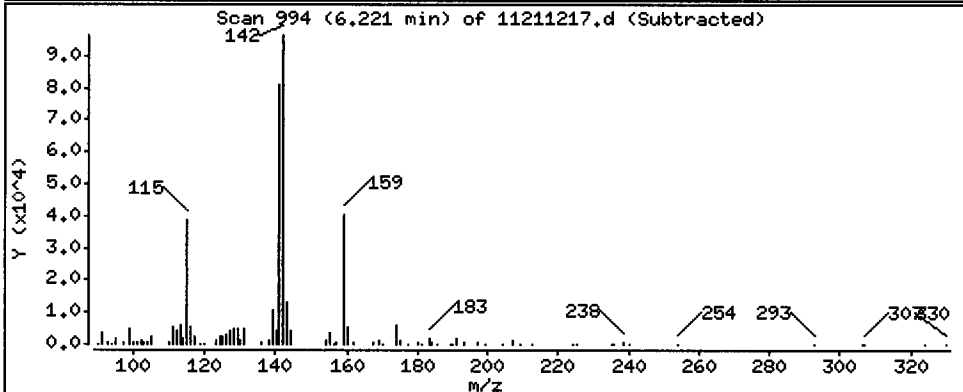
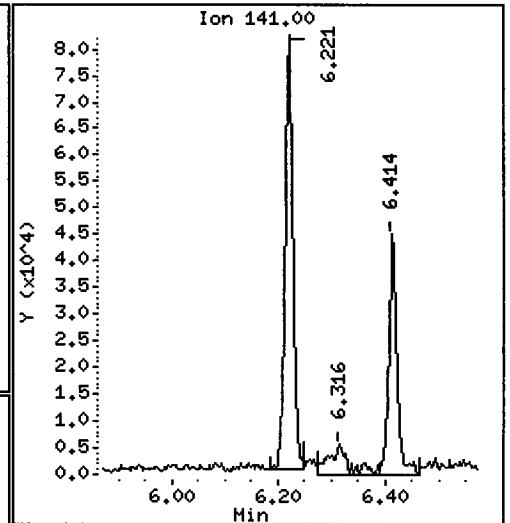
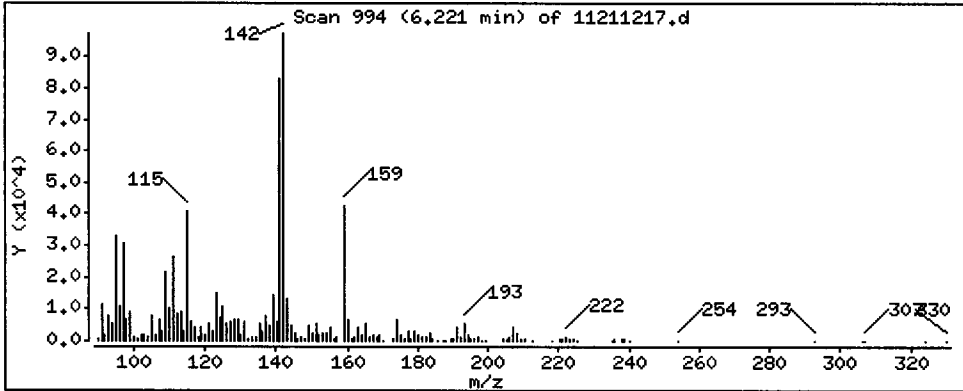
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

14 2-Methylnaphthalene

Concentration: 54.18 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

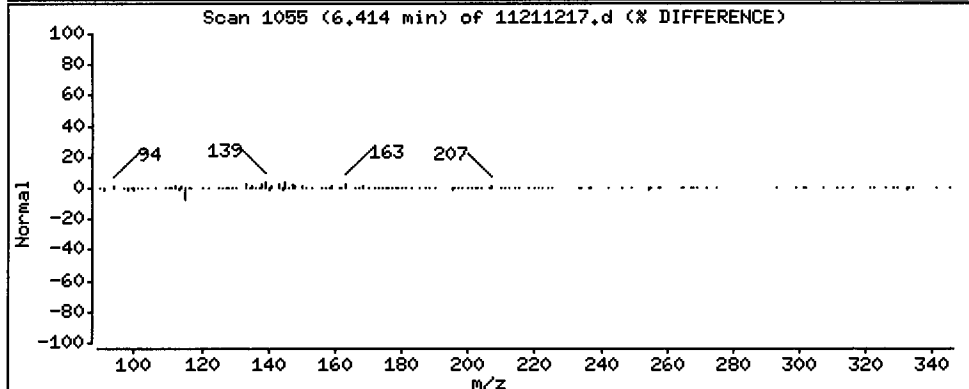
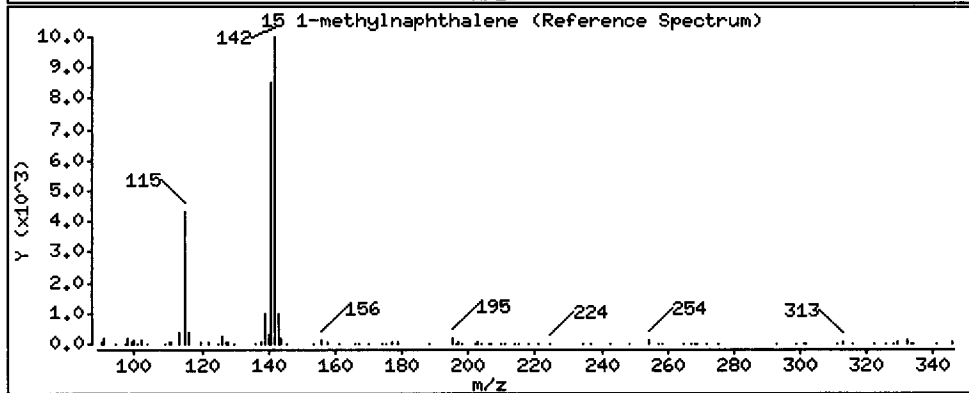
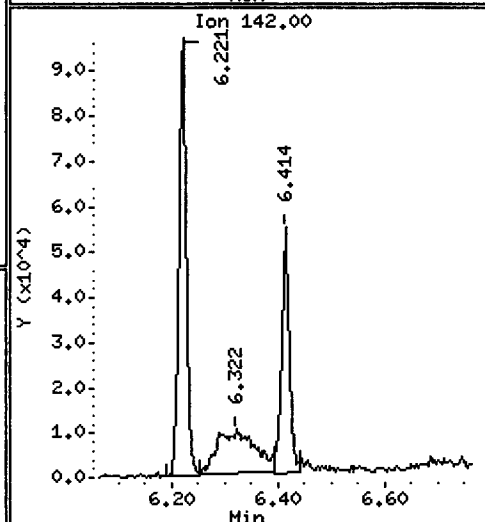
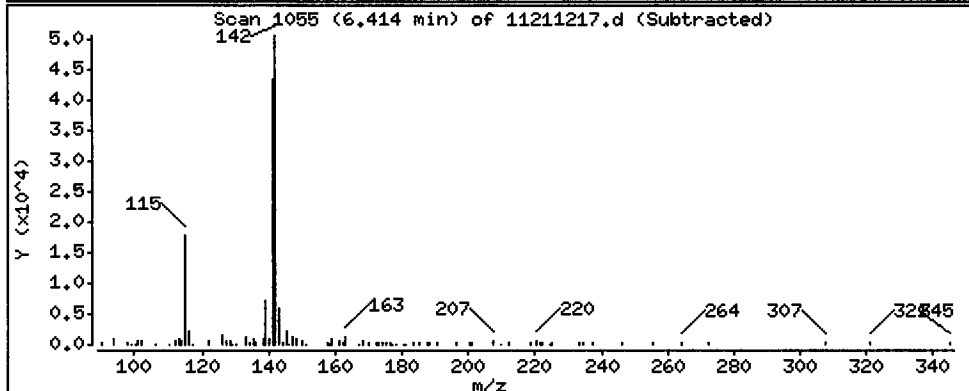
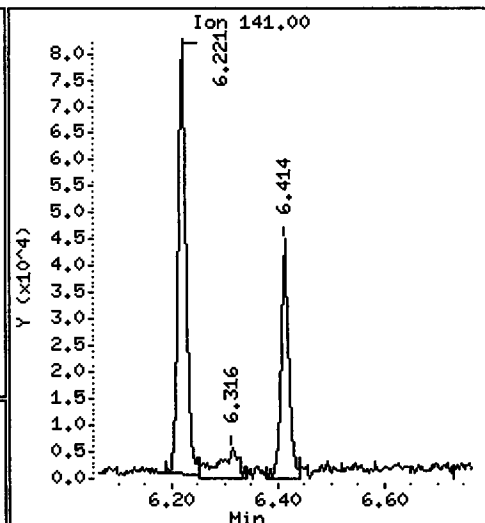
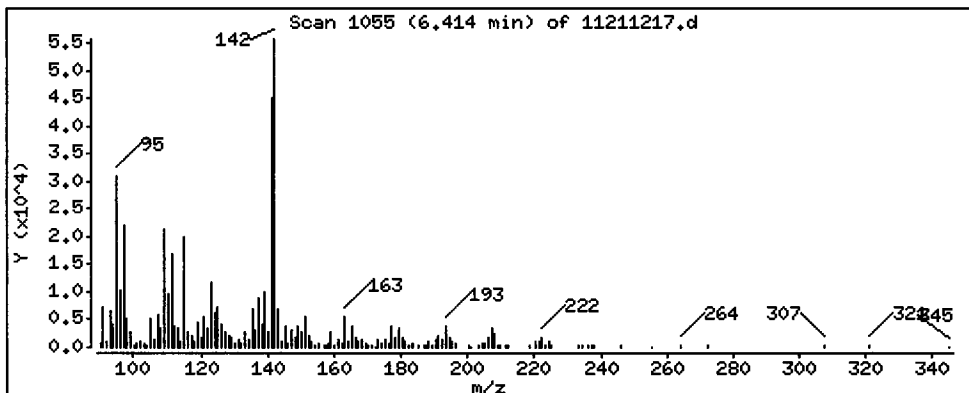
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

15 1-methylnaphthalene

Concentration: 31.19 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

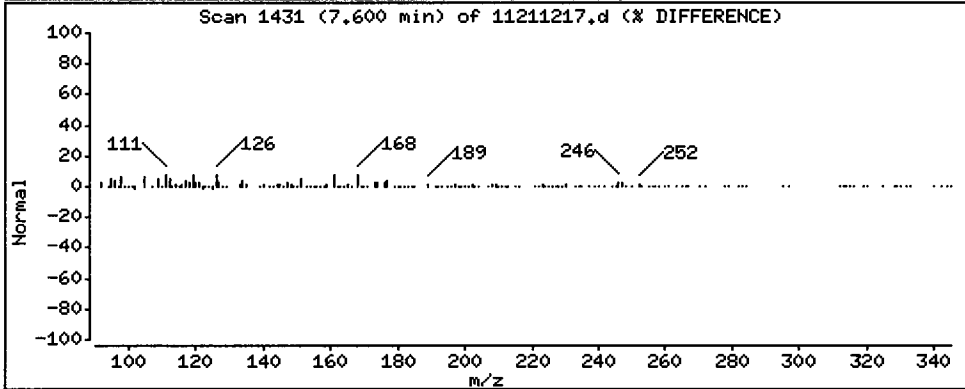
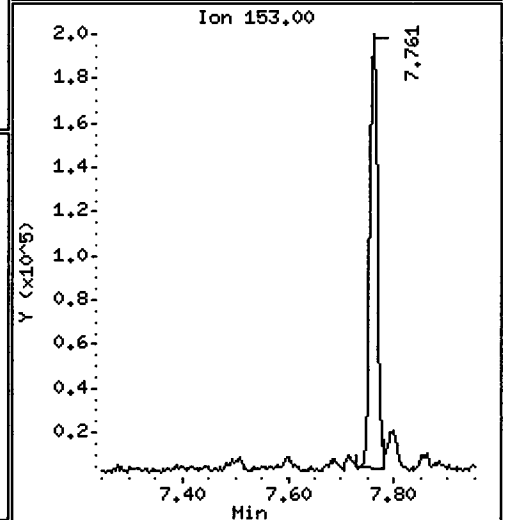
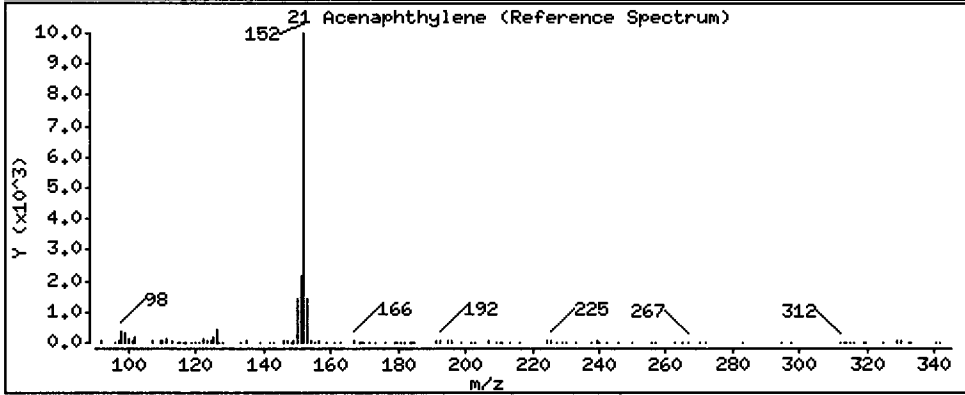
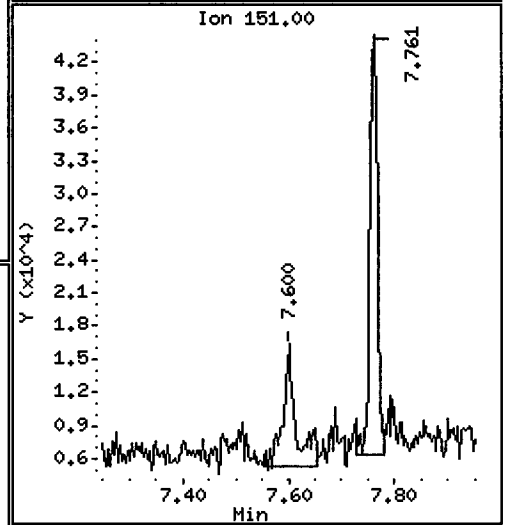
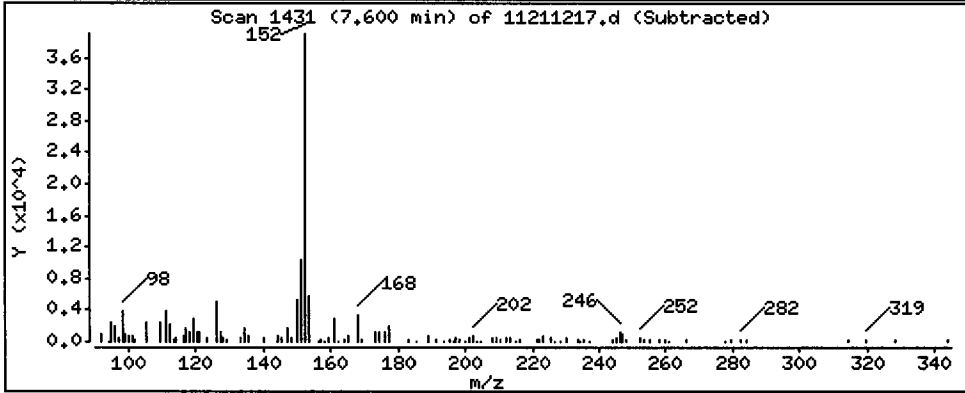
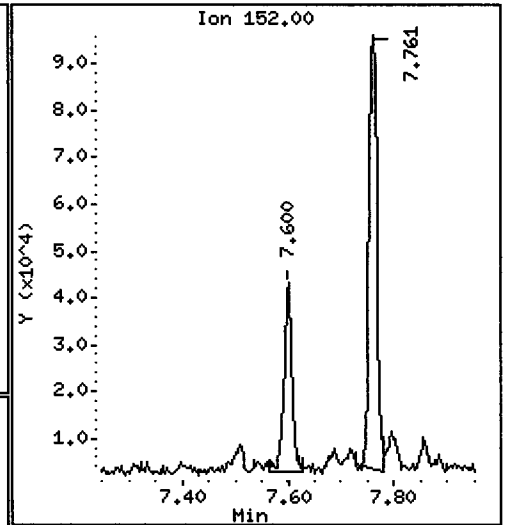
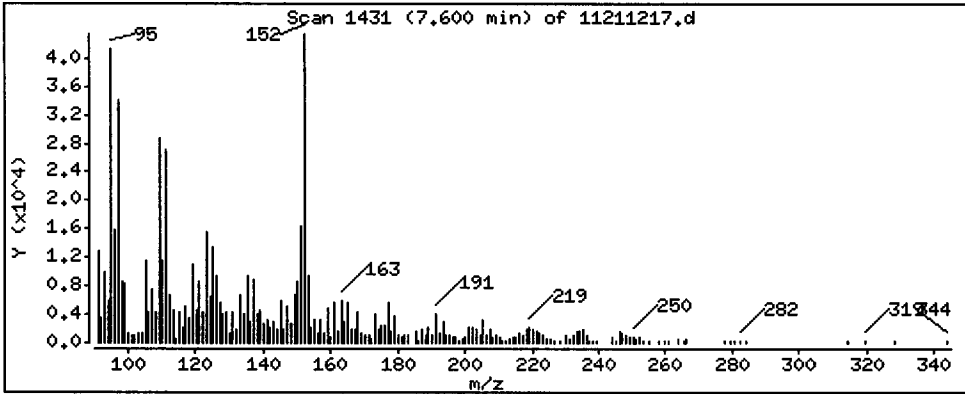
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

21 Acenaphthylene

Concentration: 17.19 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

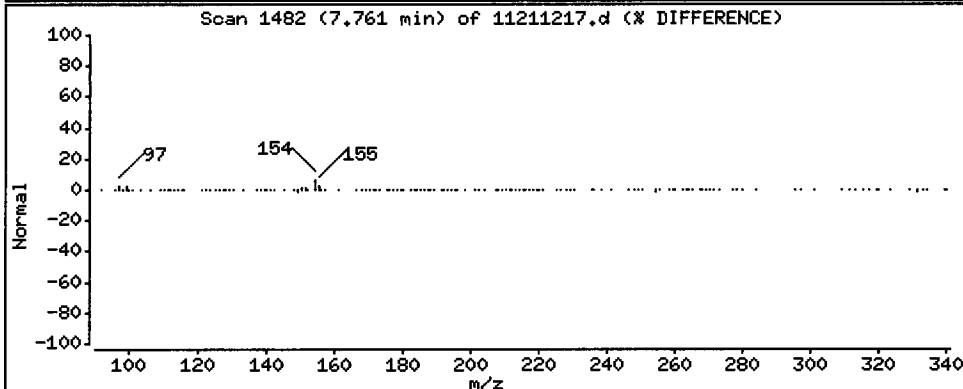
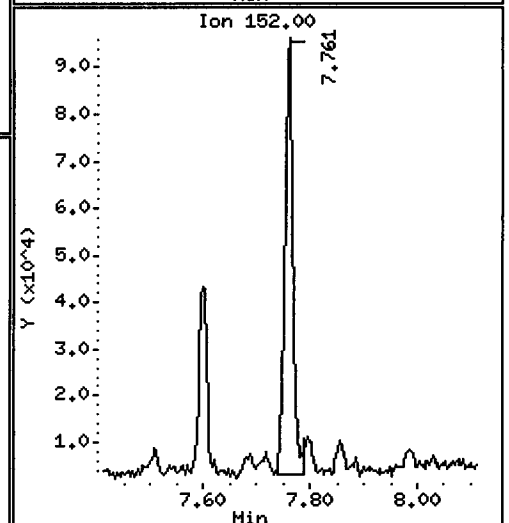
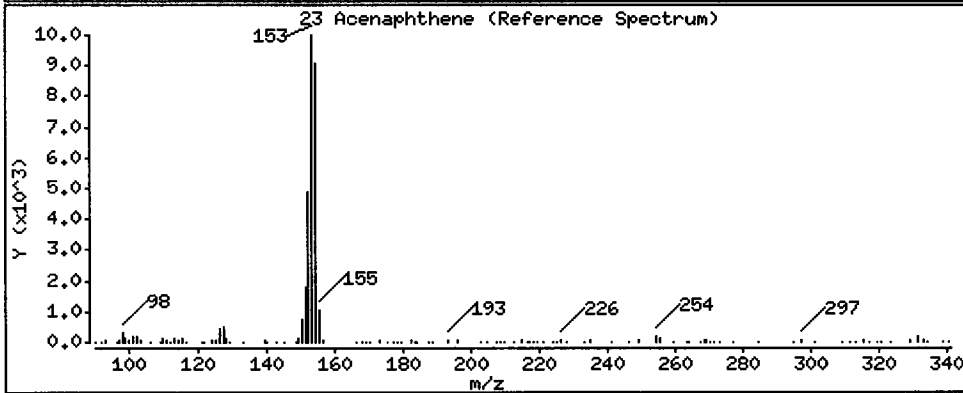
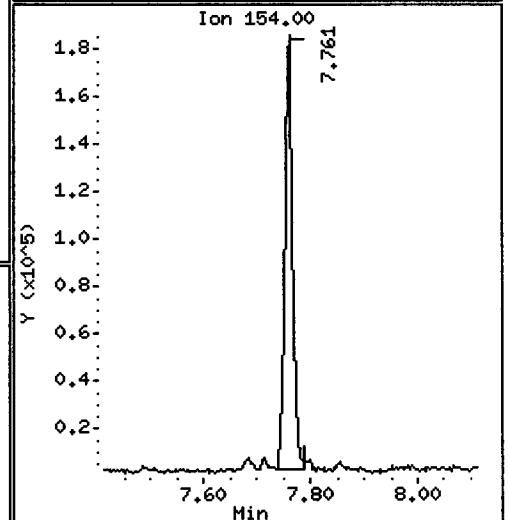
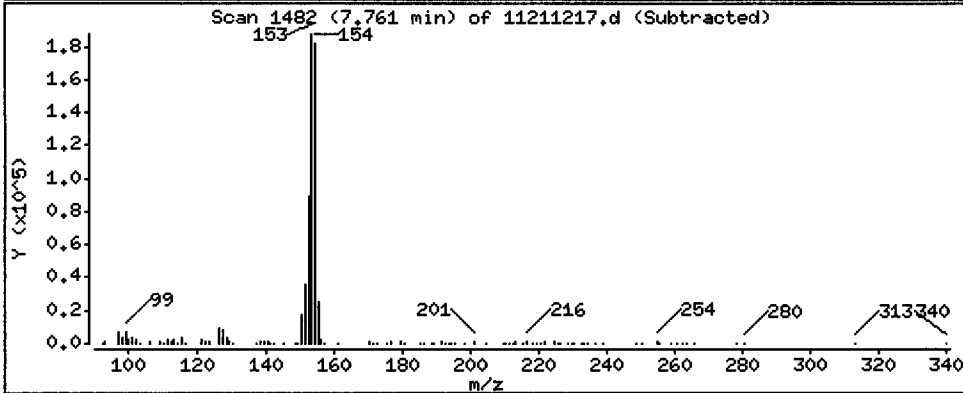
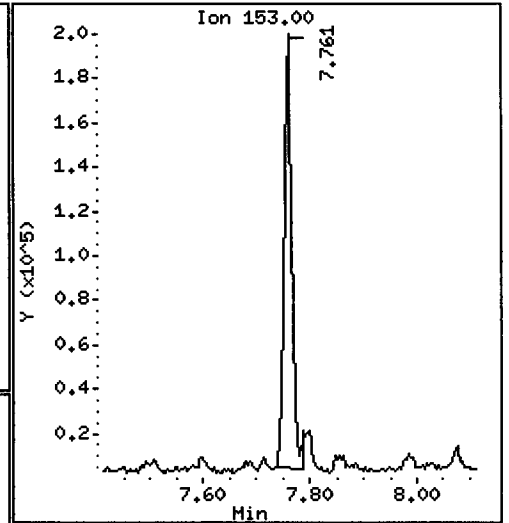
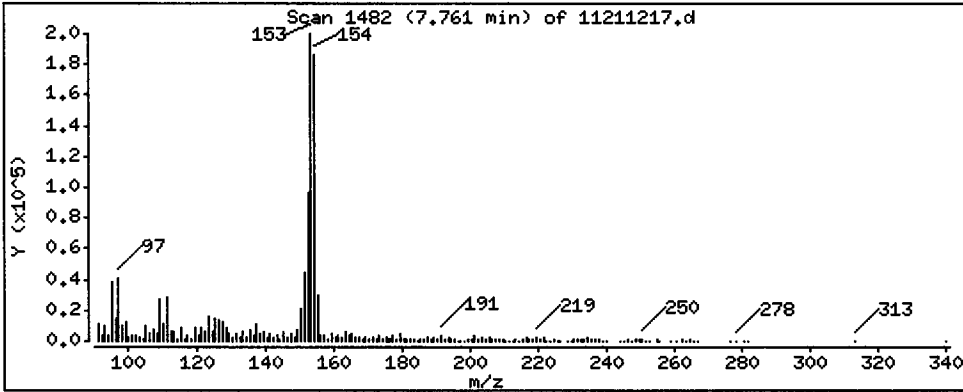
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

23 Acenaphthene

Concentration: 121.2 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

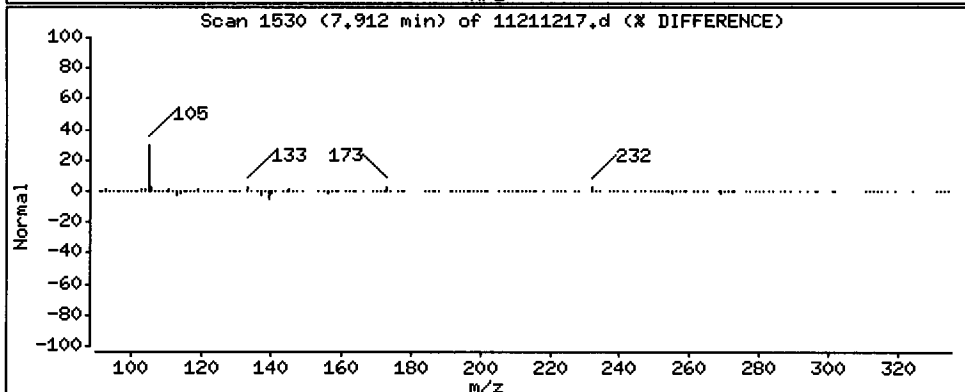
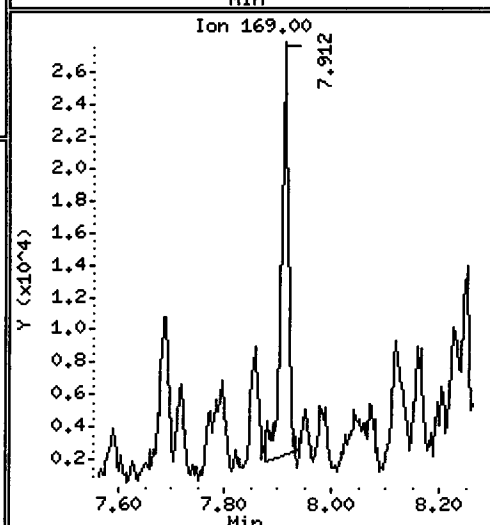
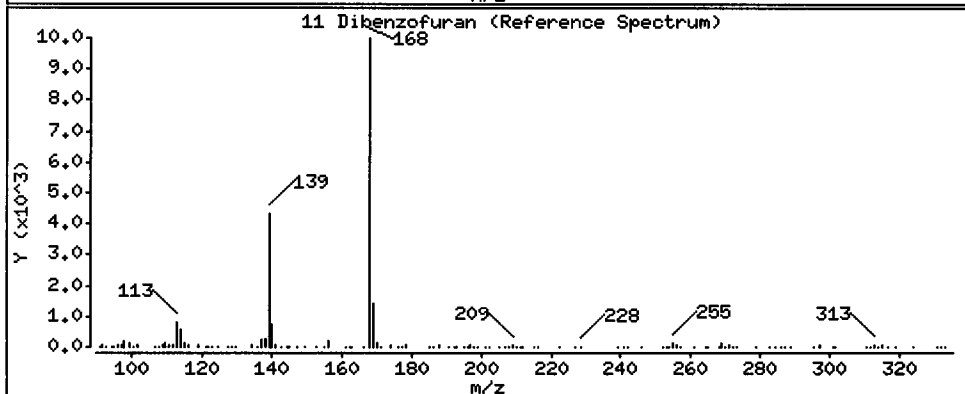
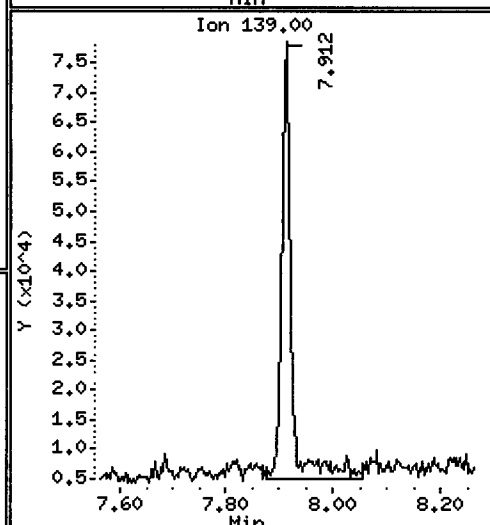
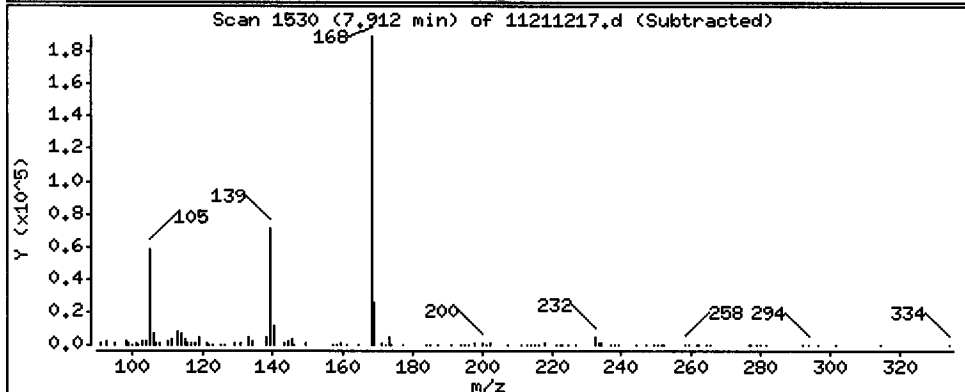
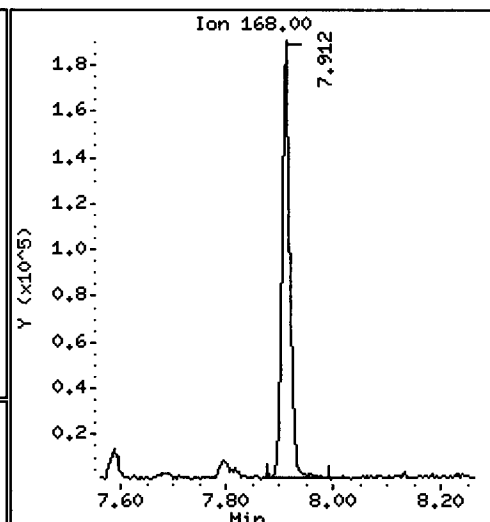
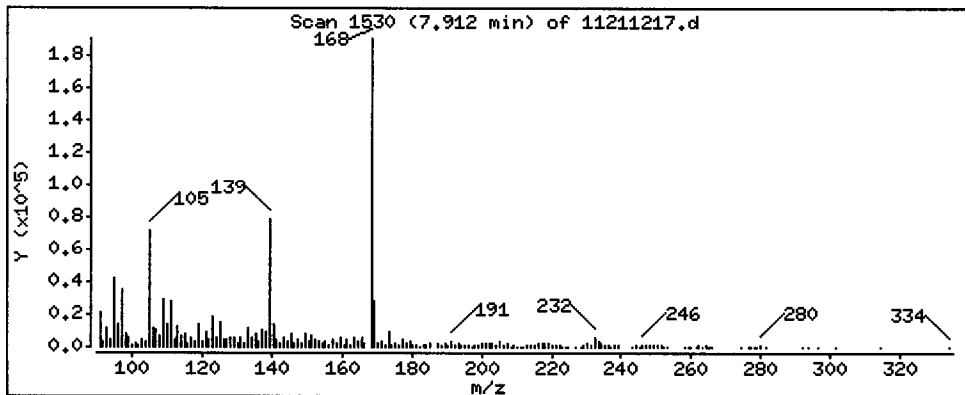
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

11 Dibenzofuran

Concentration: 82,35 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

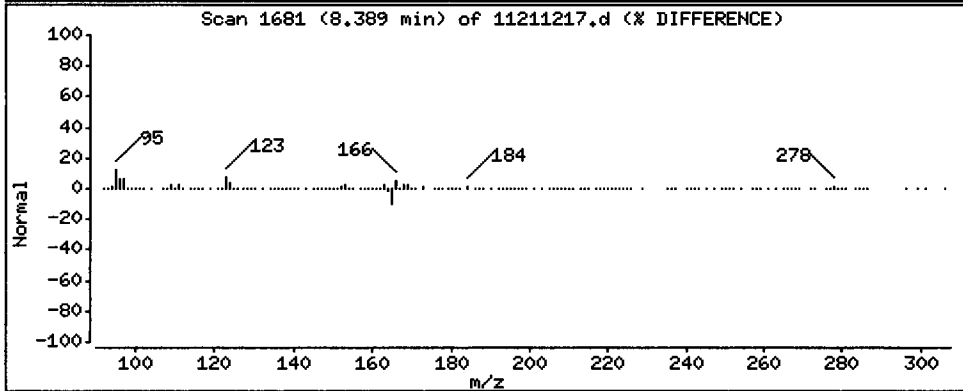
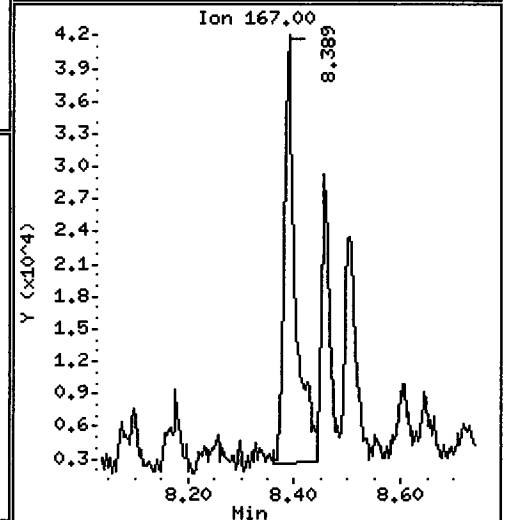
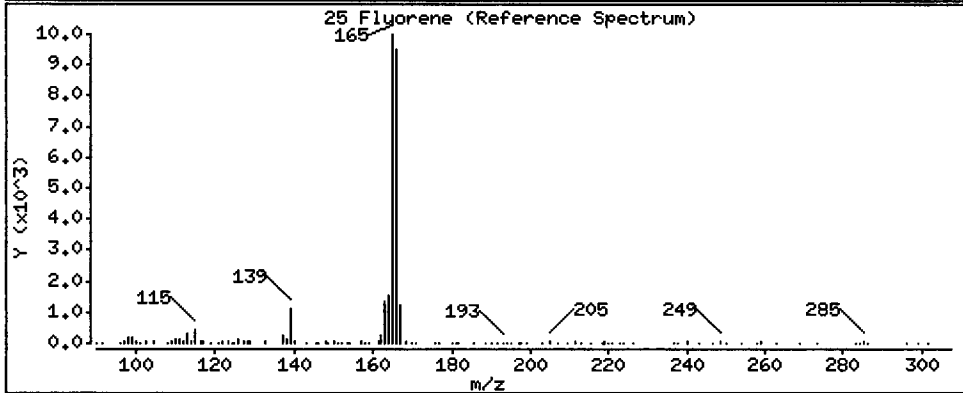
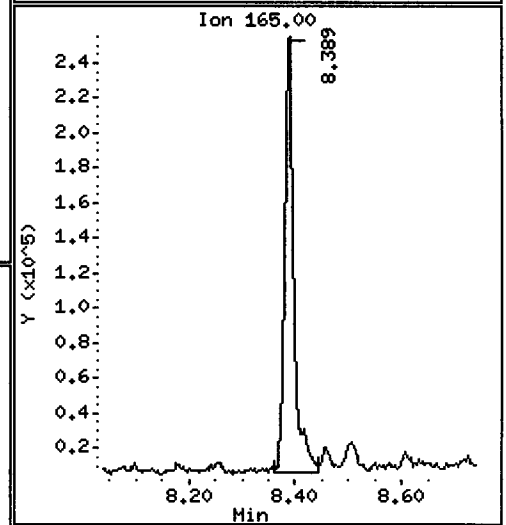
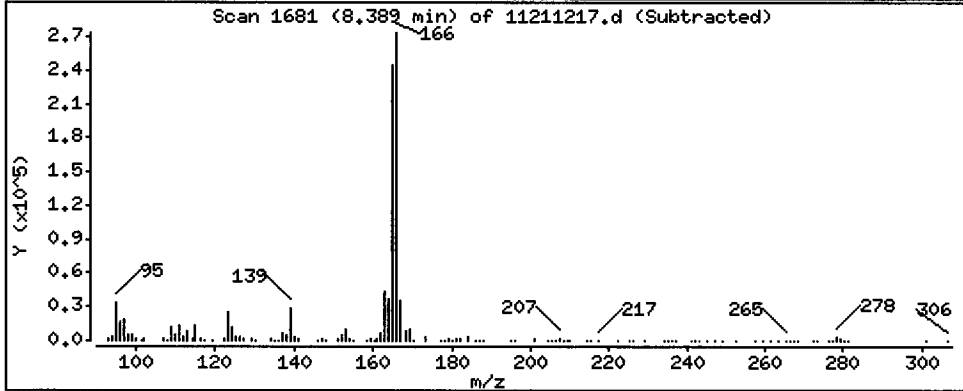
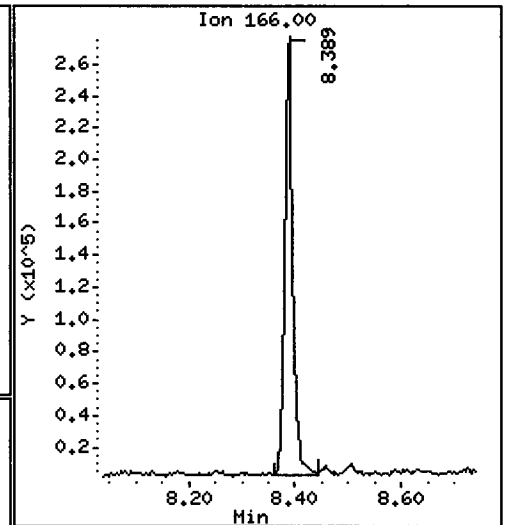
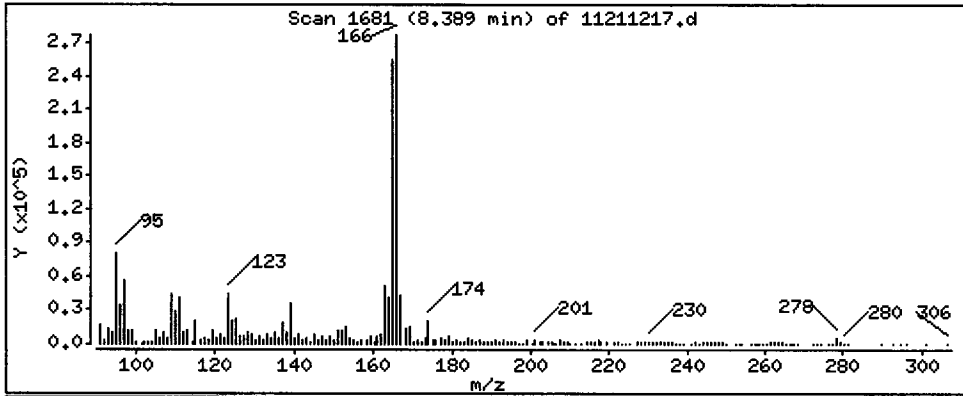
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

25 Fluorene

Concentration: 157.3 ug/kg





Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

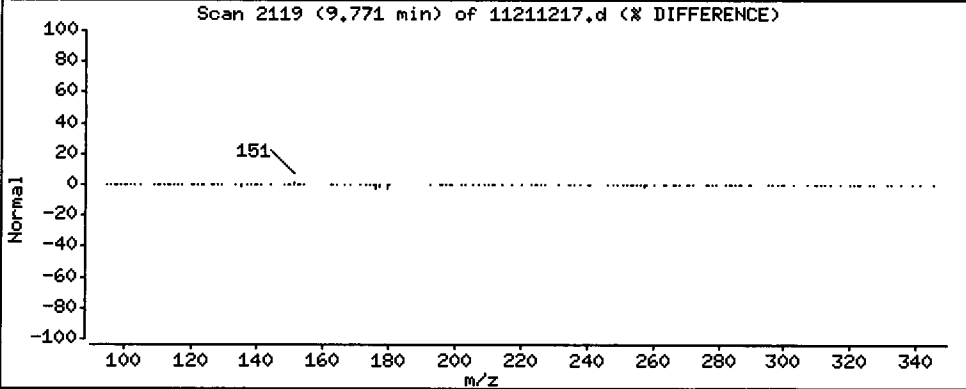
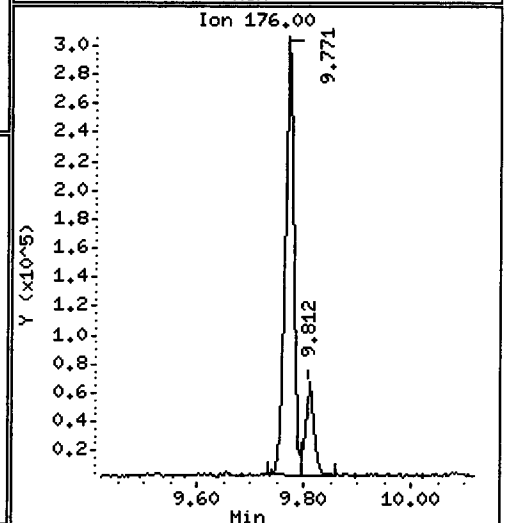
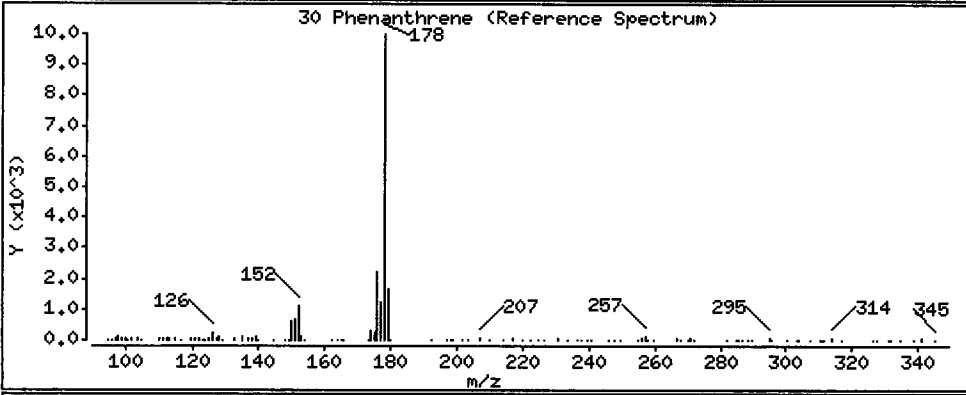
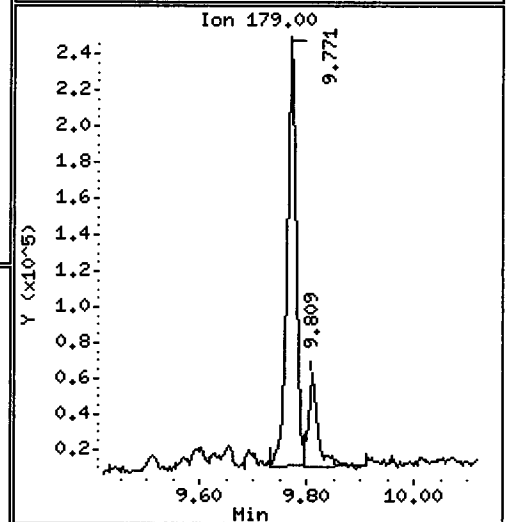
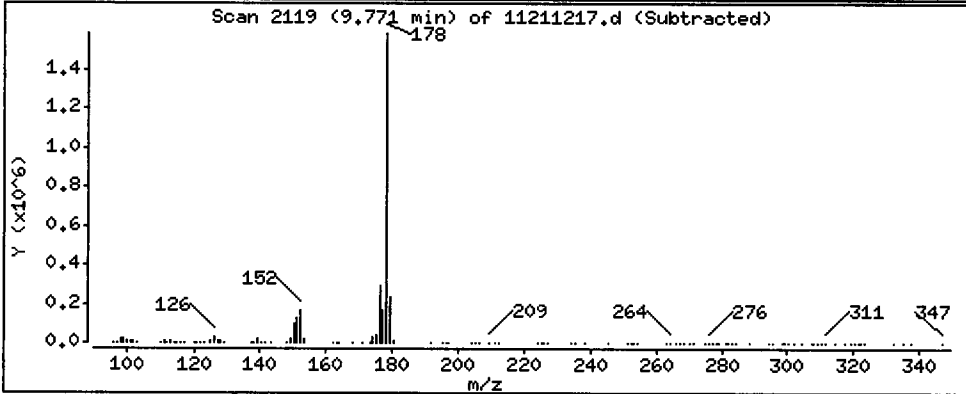
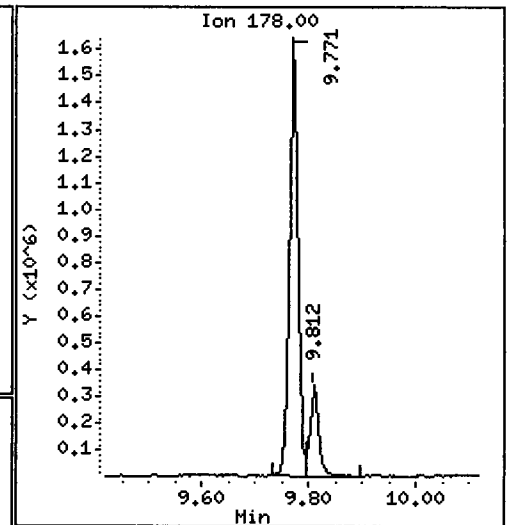
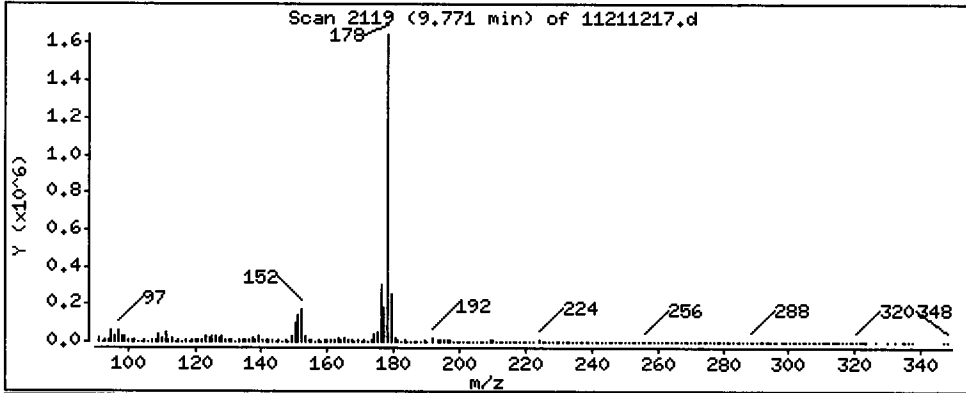
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

30 Phenanthrene

Concentration: 680.4 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11,i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

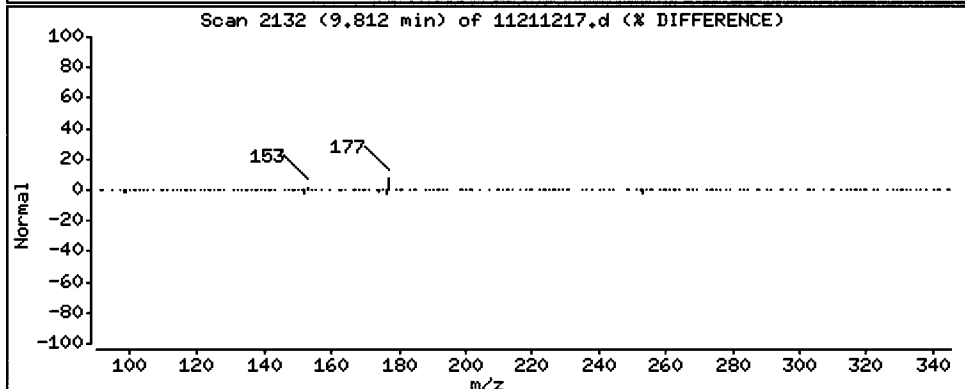
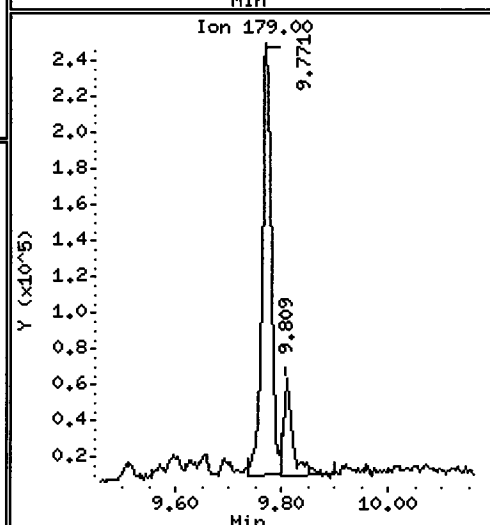
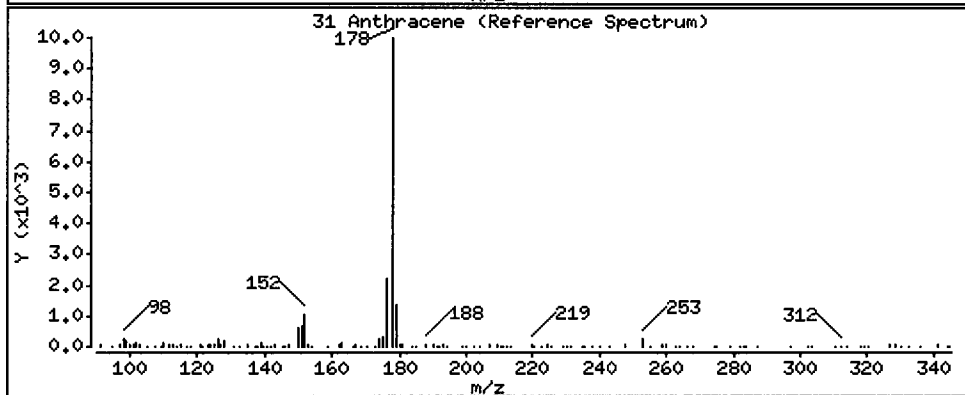
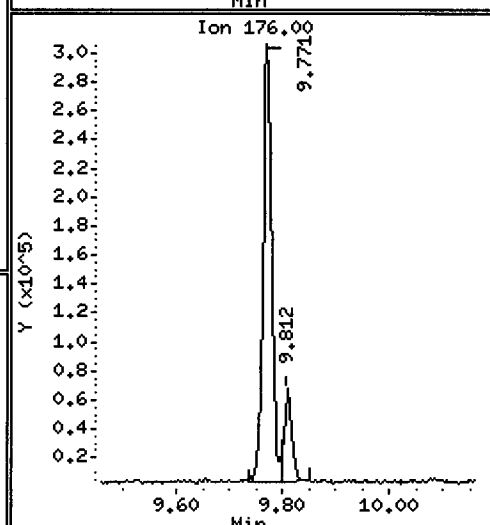
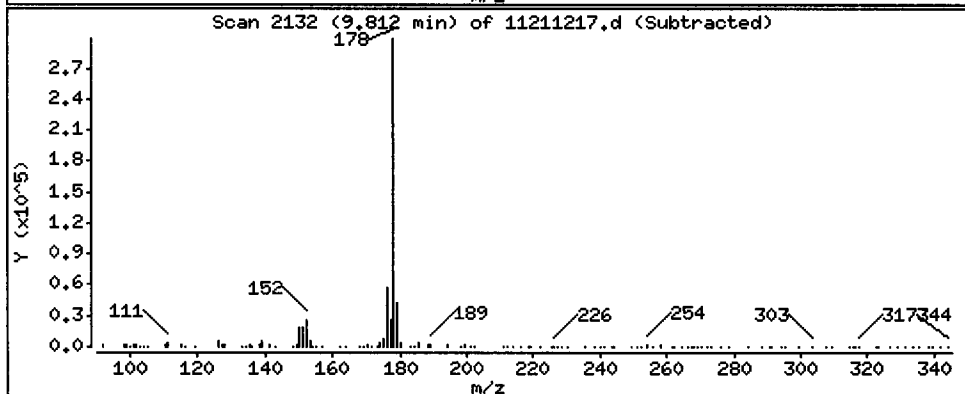
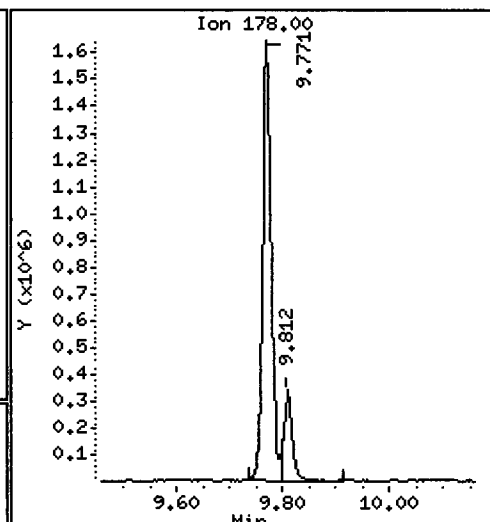
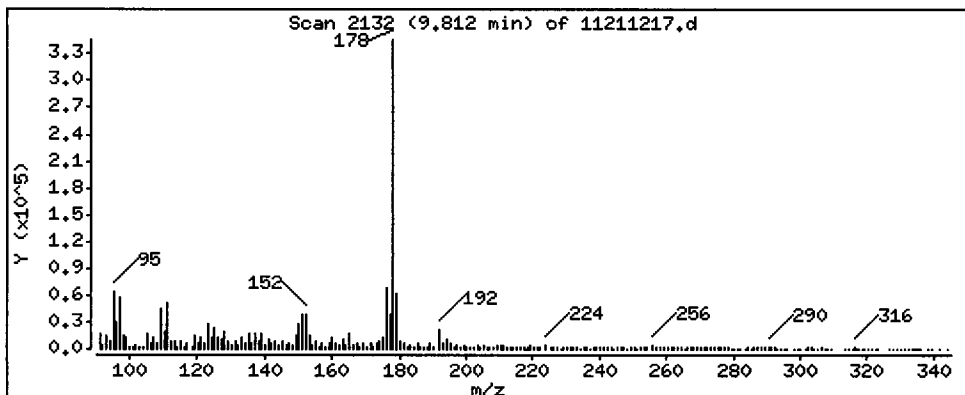
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

31 Anthracene

Concentration: 147.0 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

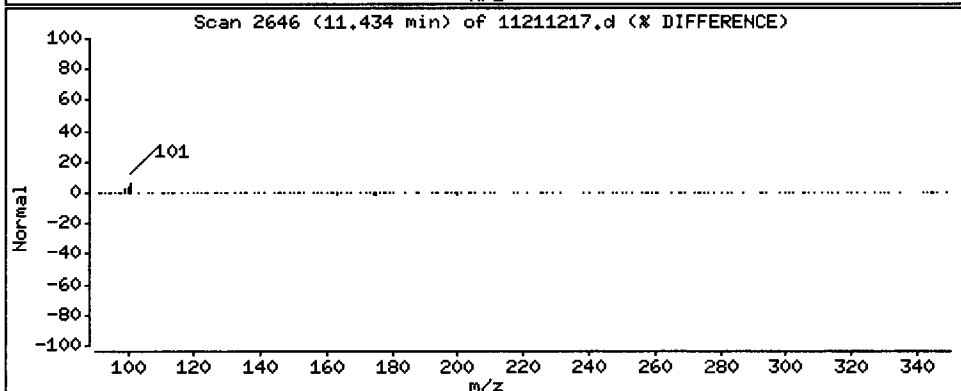
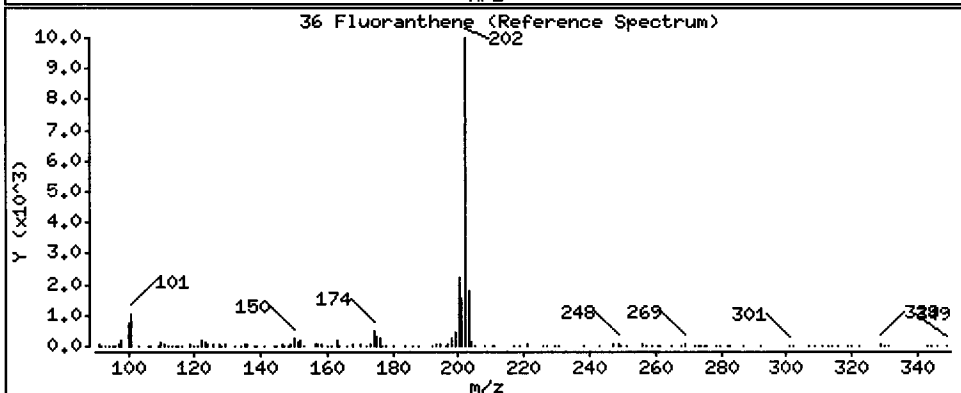
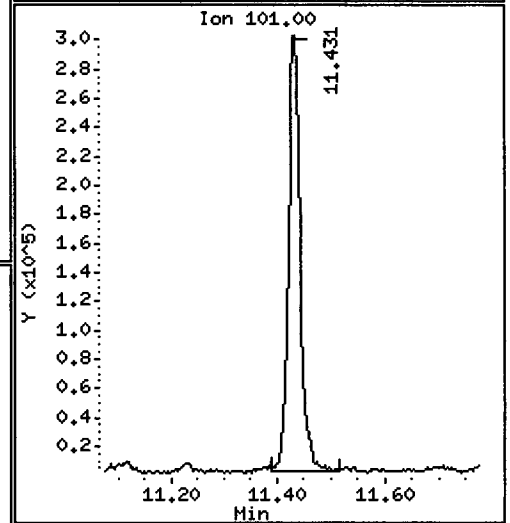
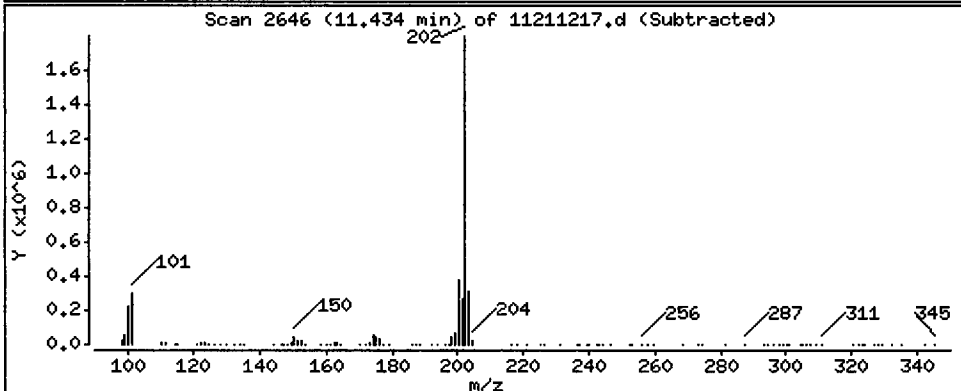
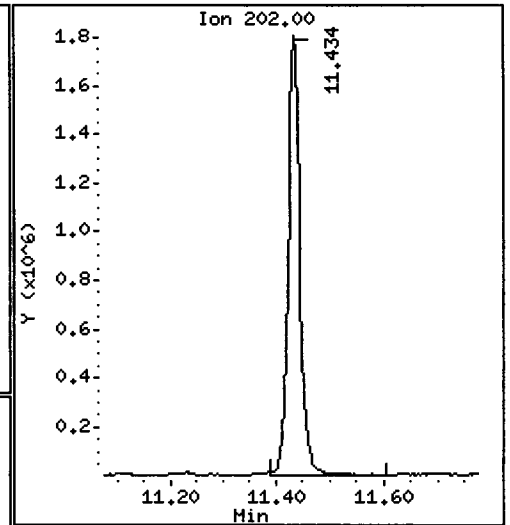
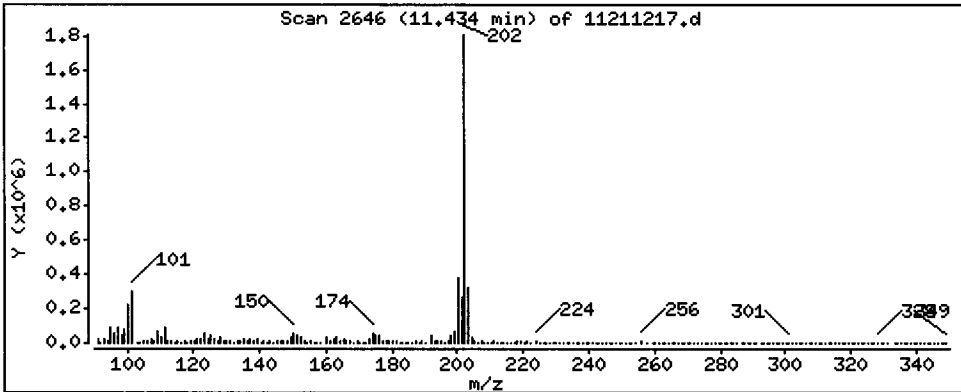
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

36 Fluoranthene

Concentration: 1044 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

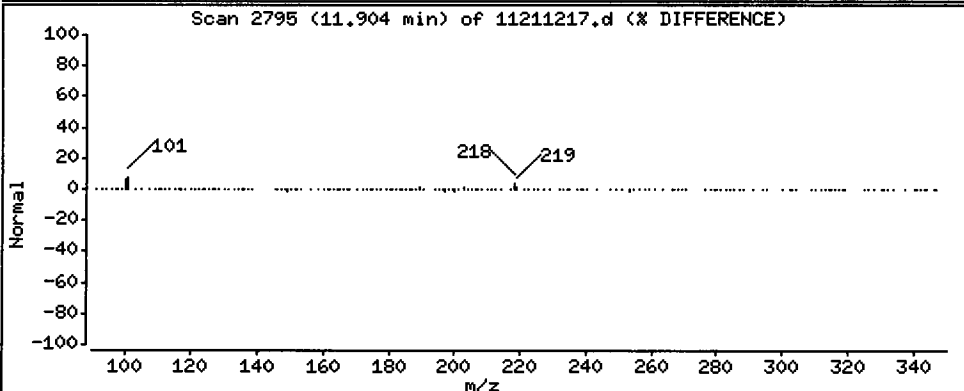
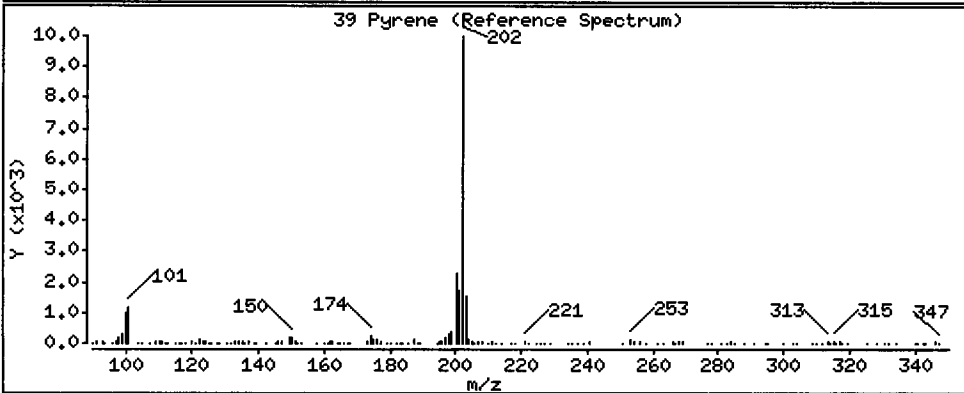
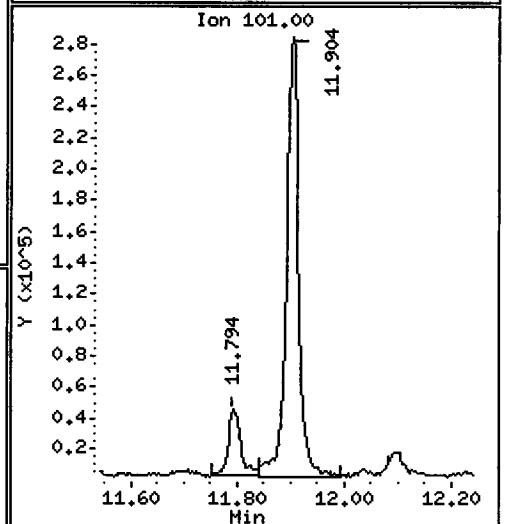
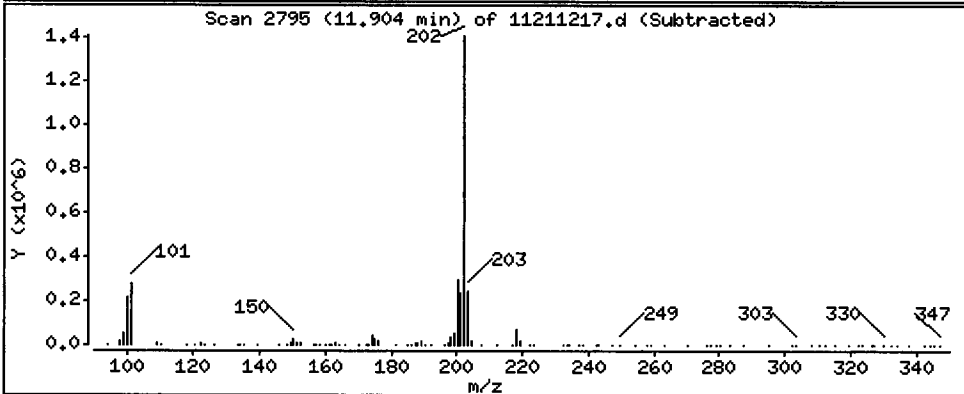
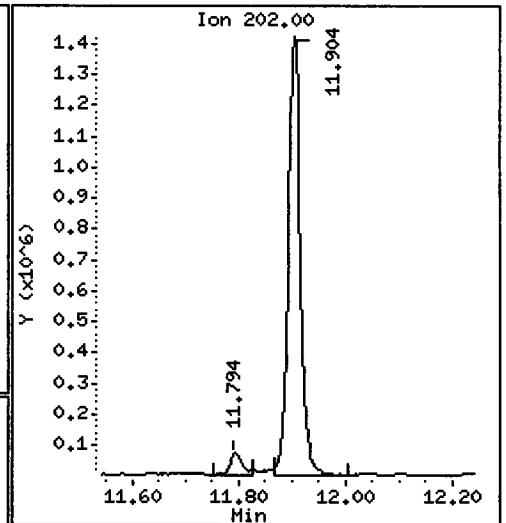
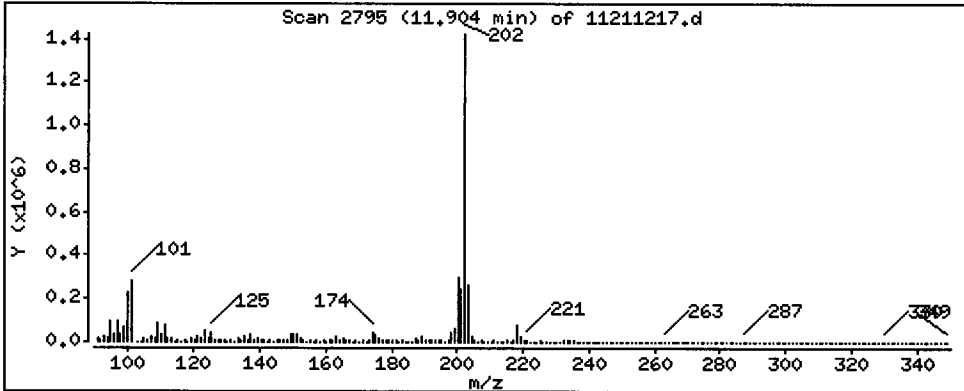
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

39 Pyrene

Concentration: 846.7 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

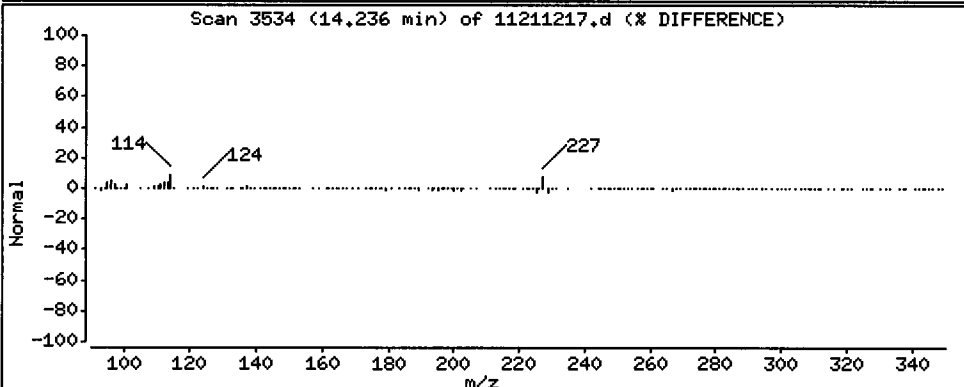
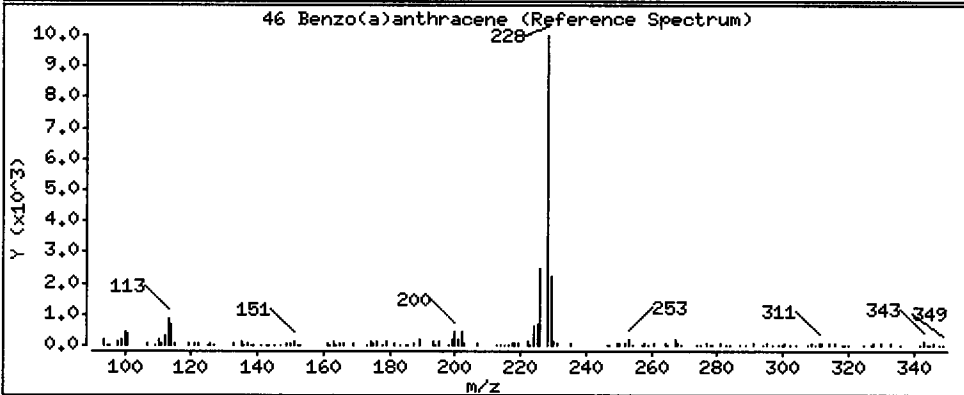
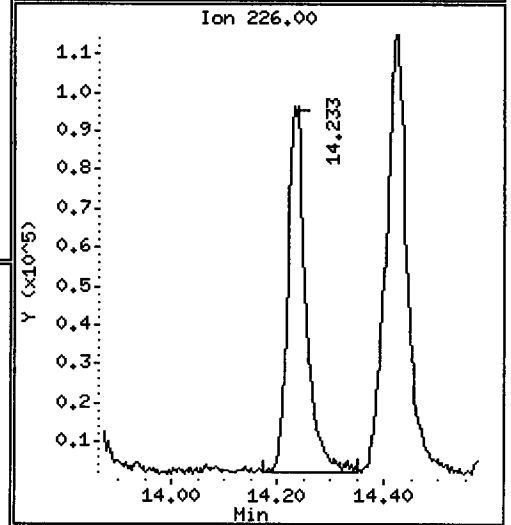
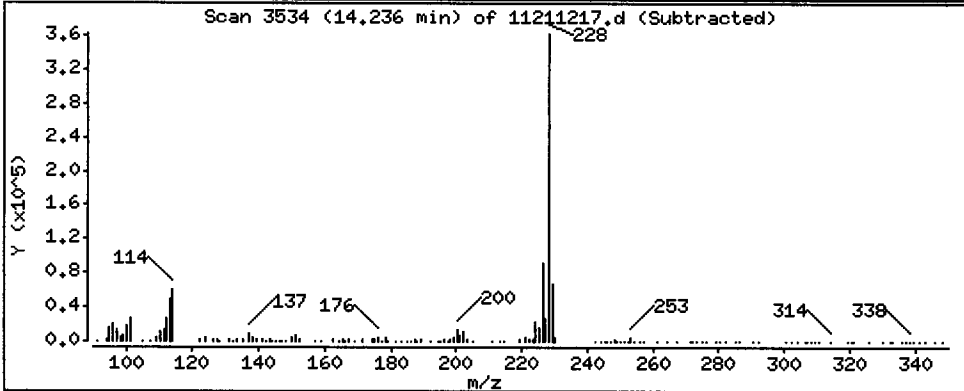
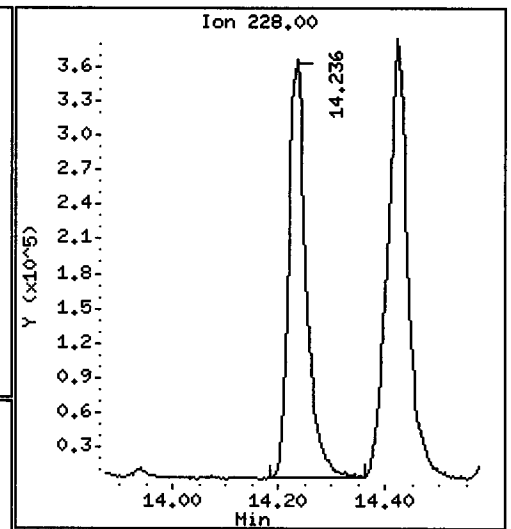
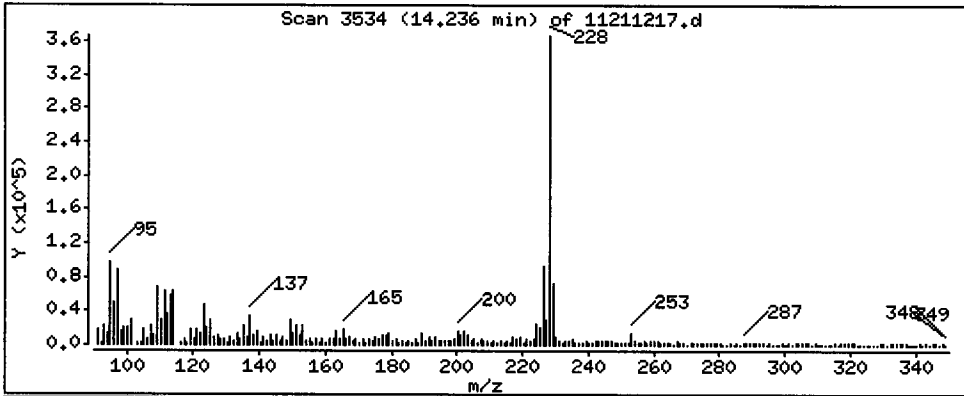
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Benzo(a)anthracene

Concentration: 344.2 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

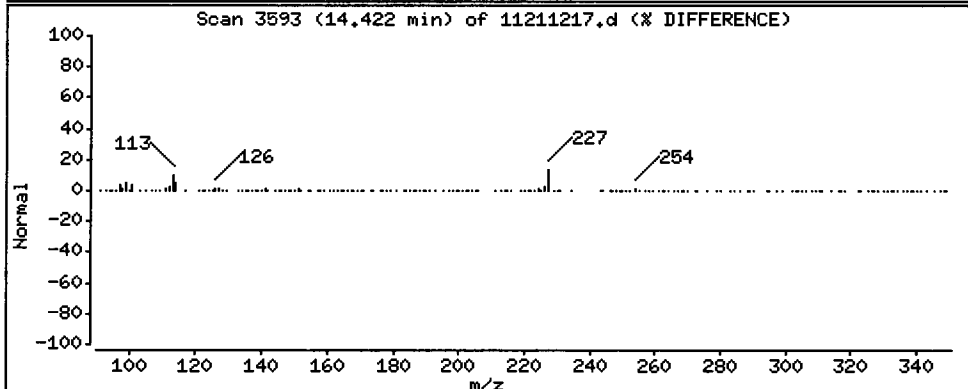
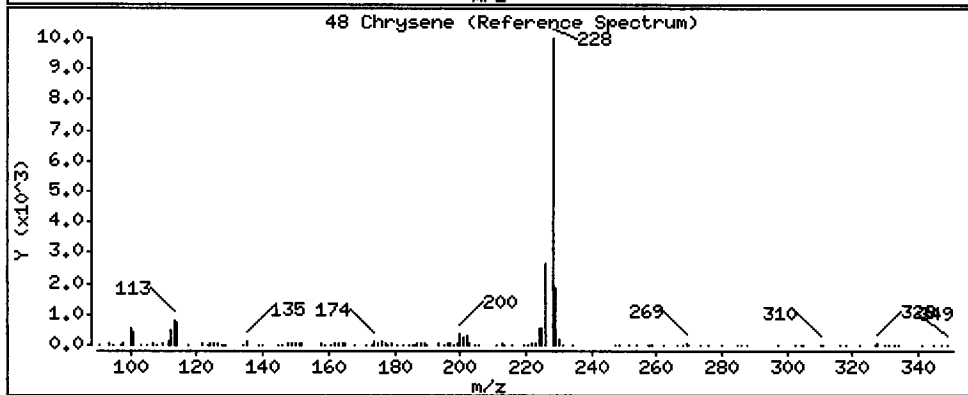
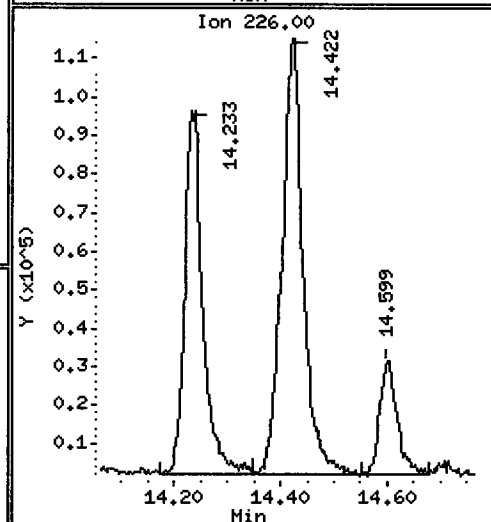
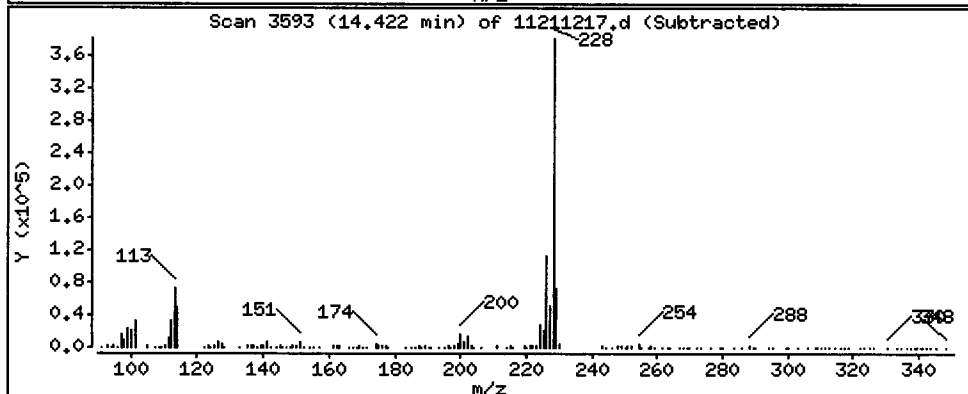
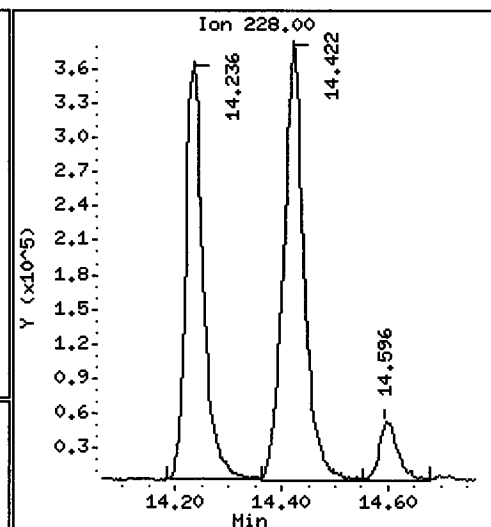
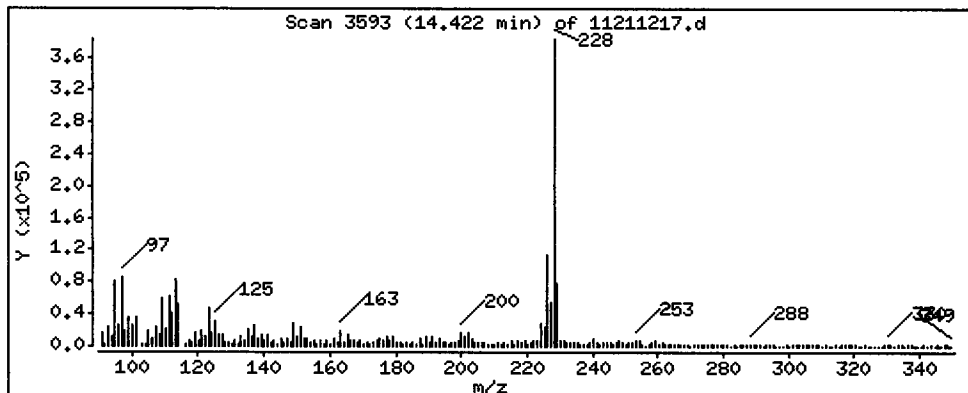
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

48 Chrysene

Concentration: 427.7 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

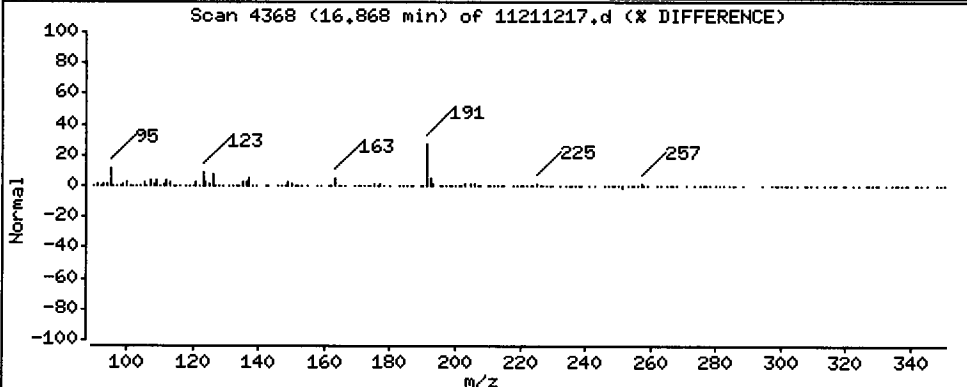
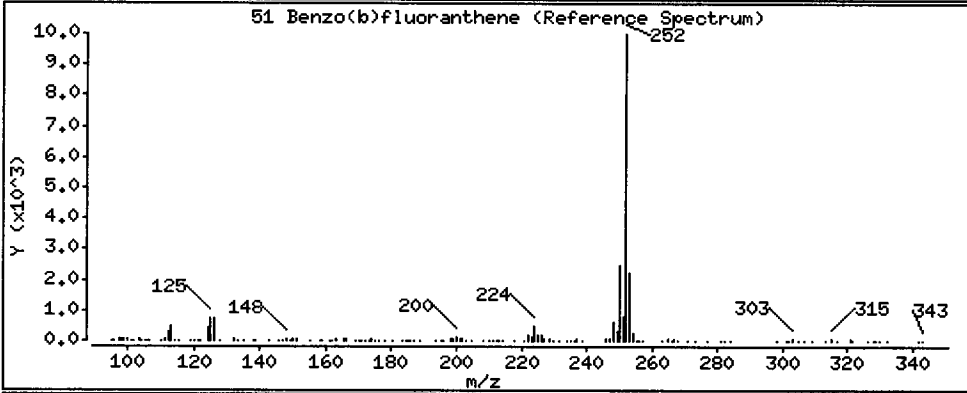
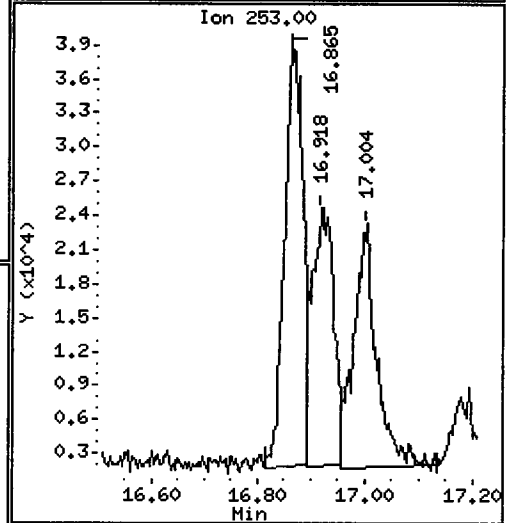
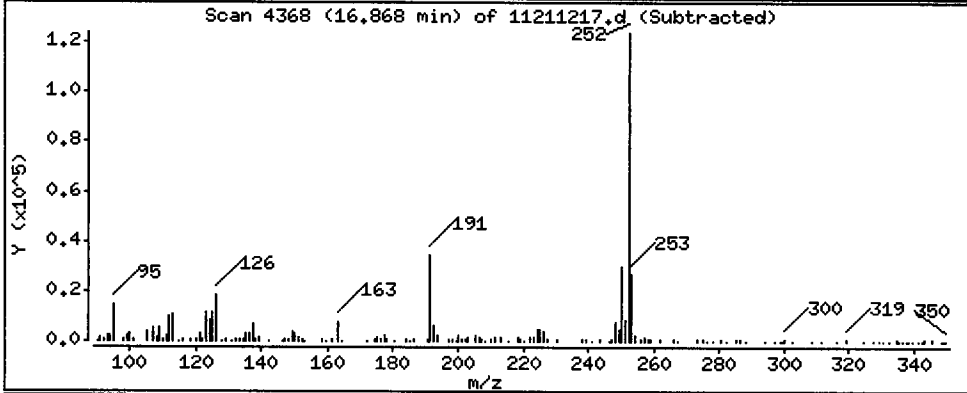
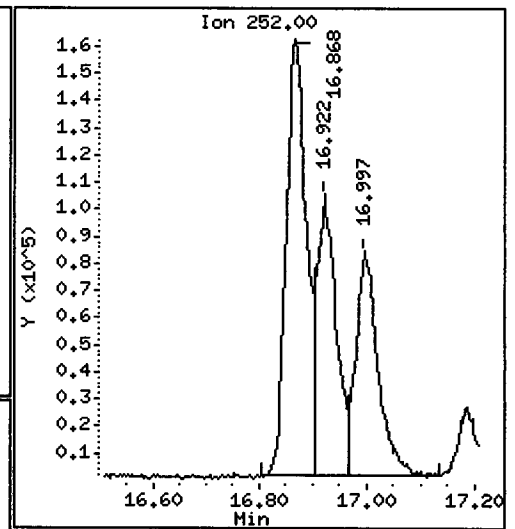
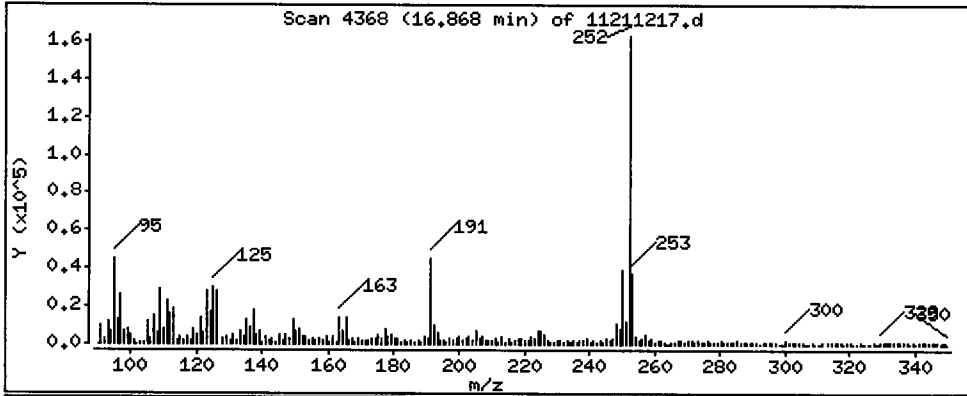
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

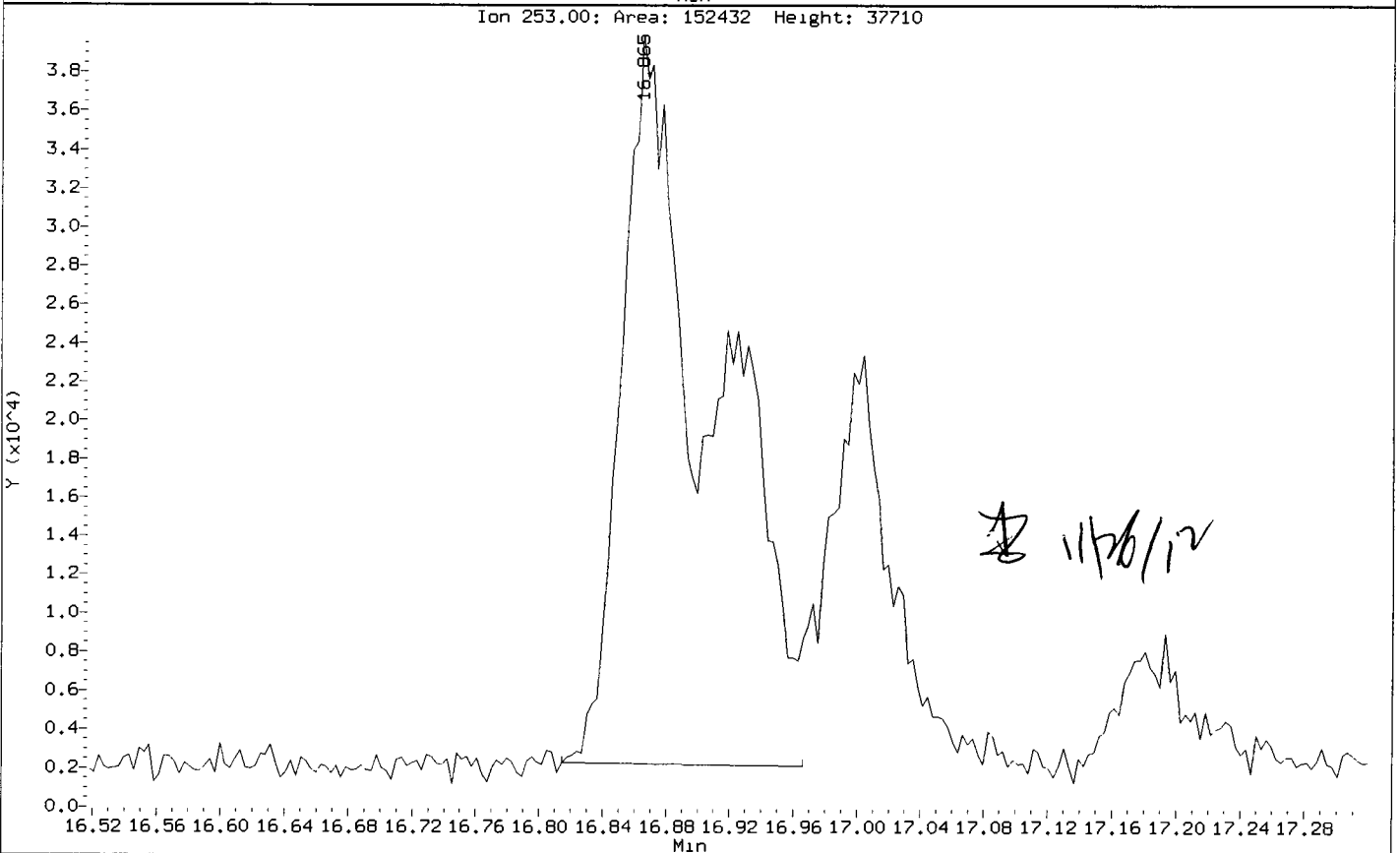
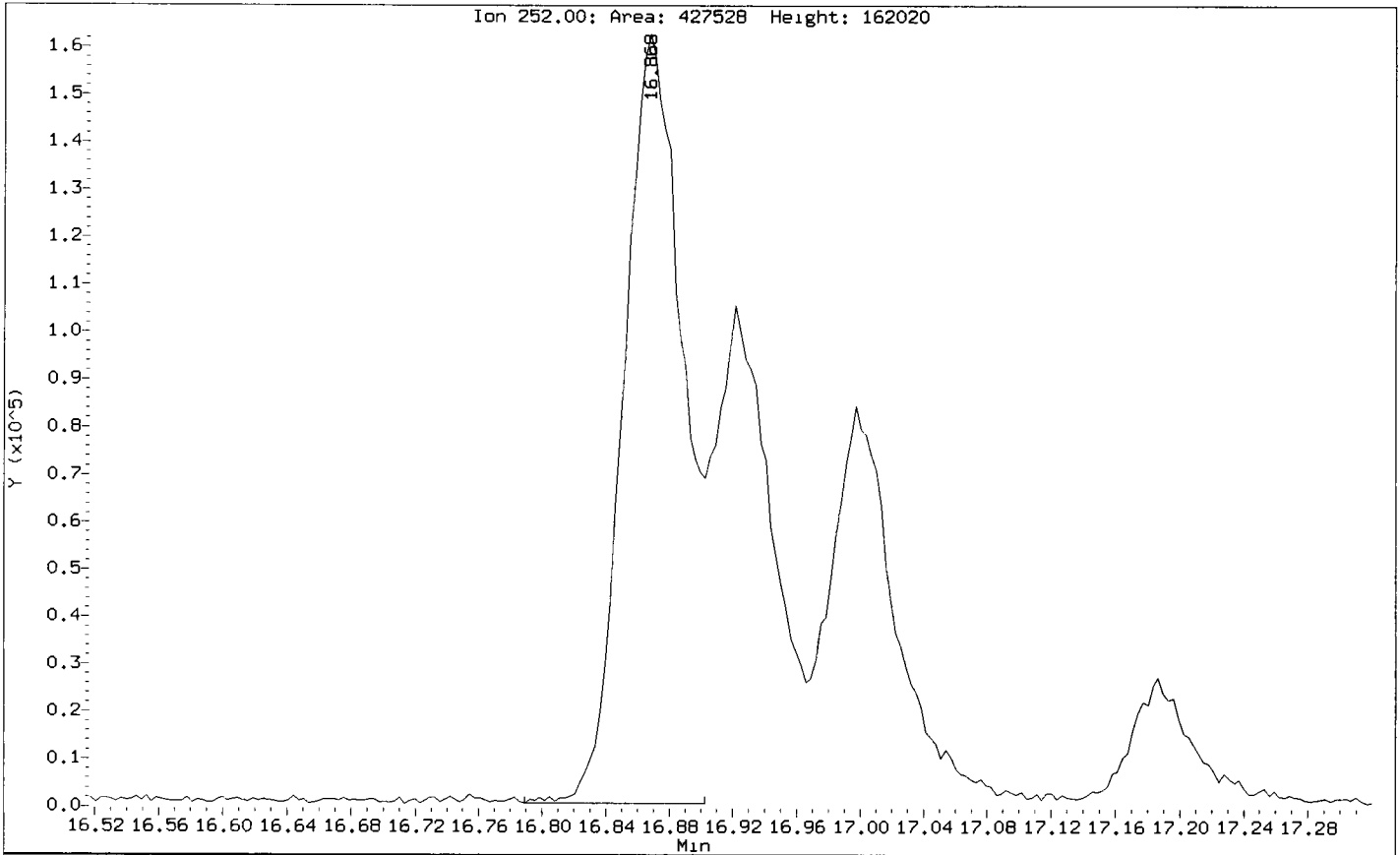
51 Benzo(b)fluoranthene

Concentration: 368.4 ug/kg



Data File: /chem3/nt11.1/20121121.b/11211217.d  
Injection Date: 21-NOV-2012 19:11  
Instrument: nt11.1  
Client Sample ID: SG-14-S-E-121107

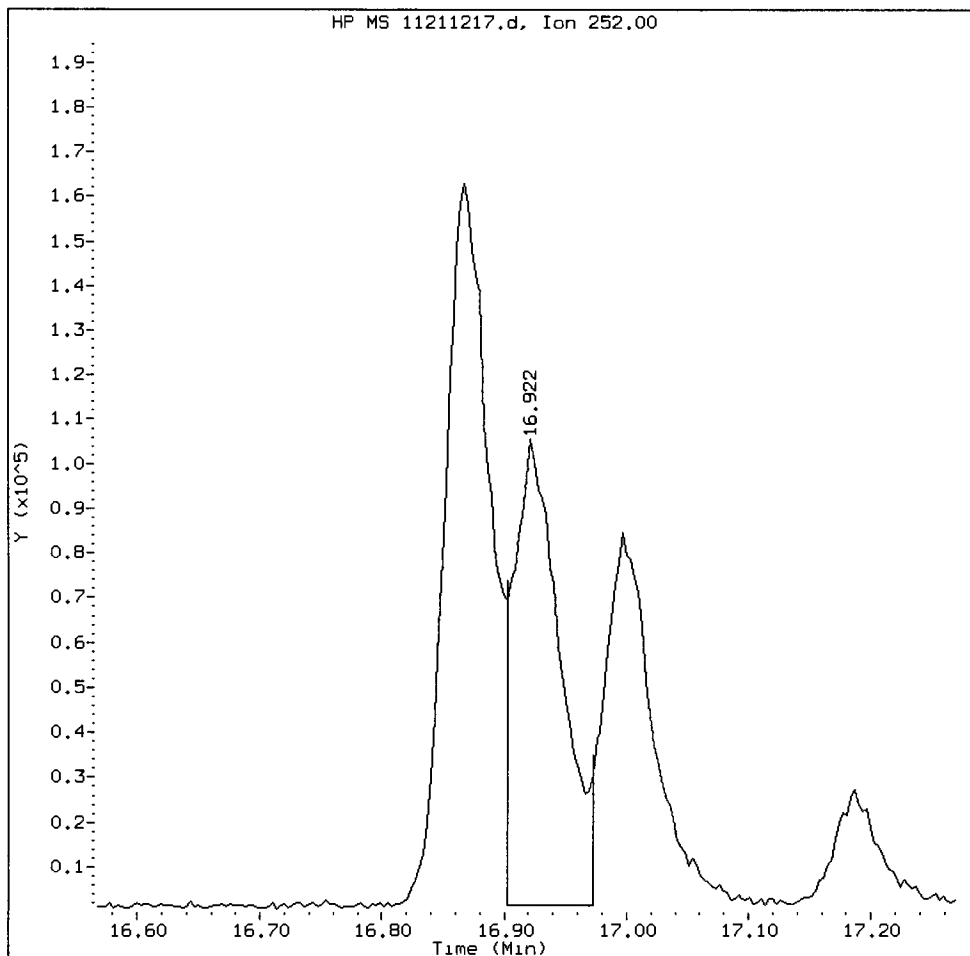
Compound: Benzo(k)fluoranthene  
CAS Number: 207-08-9





VR58F, /chem3/nt11.i/20121121.b/11211217.d

Benzo(k)fluoranthene Amount: 1.52 Area: 278608



MANUAL INTEGRATION for Benzo(k)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AR

Date: 11/20/12

Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

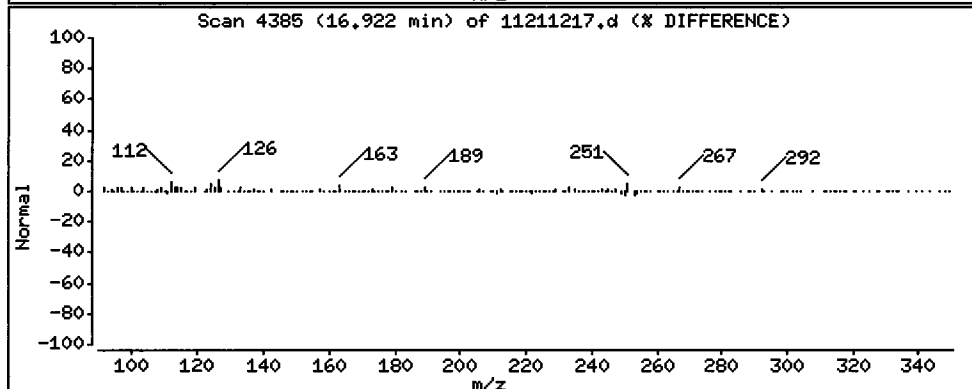
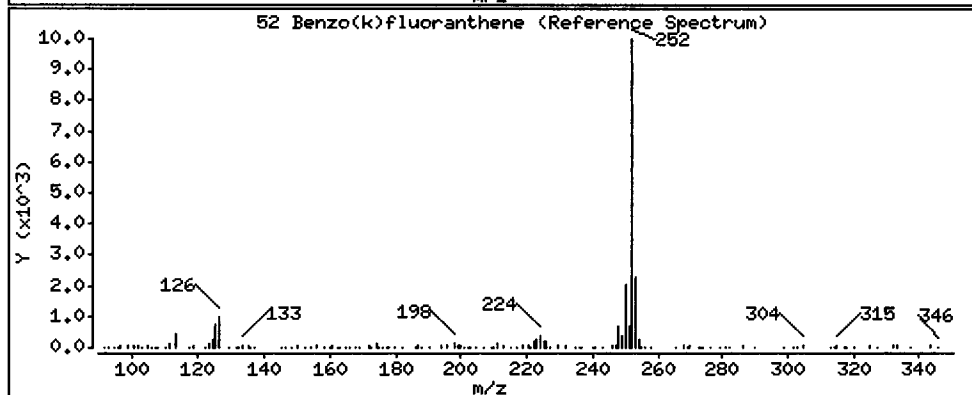
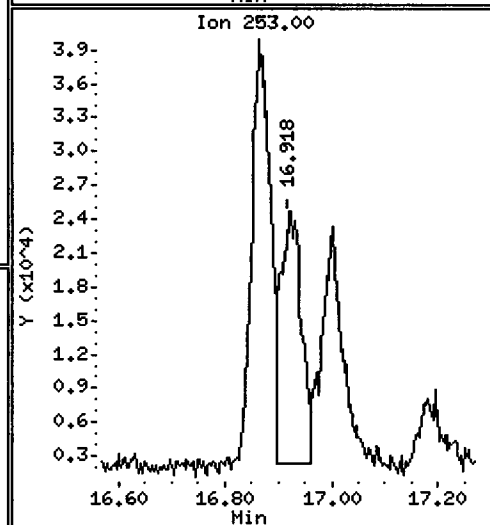
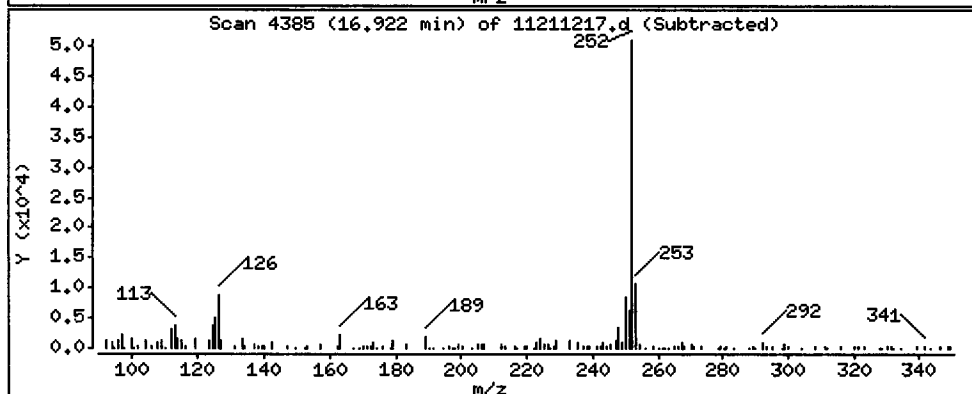
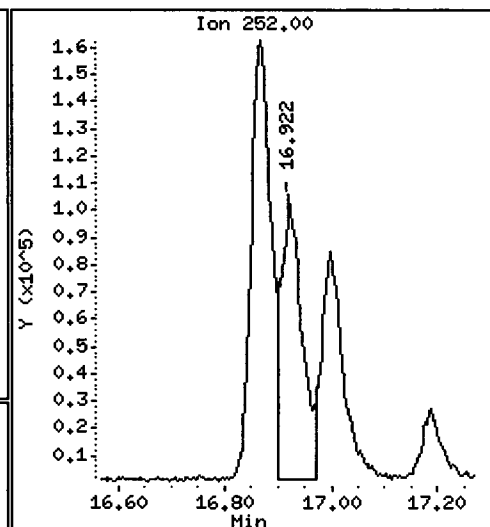
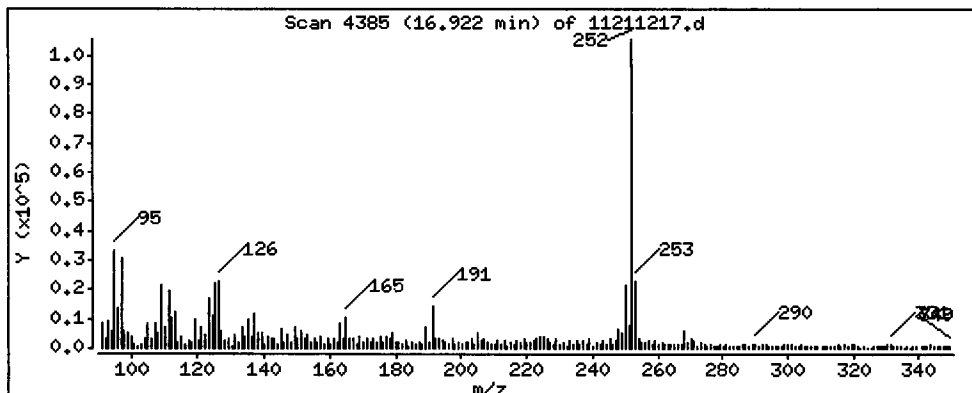
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

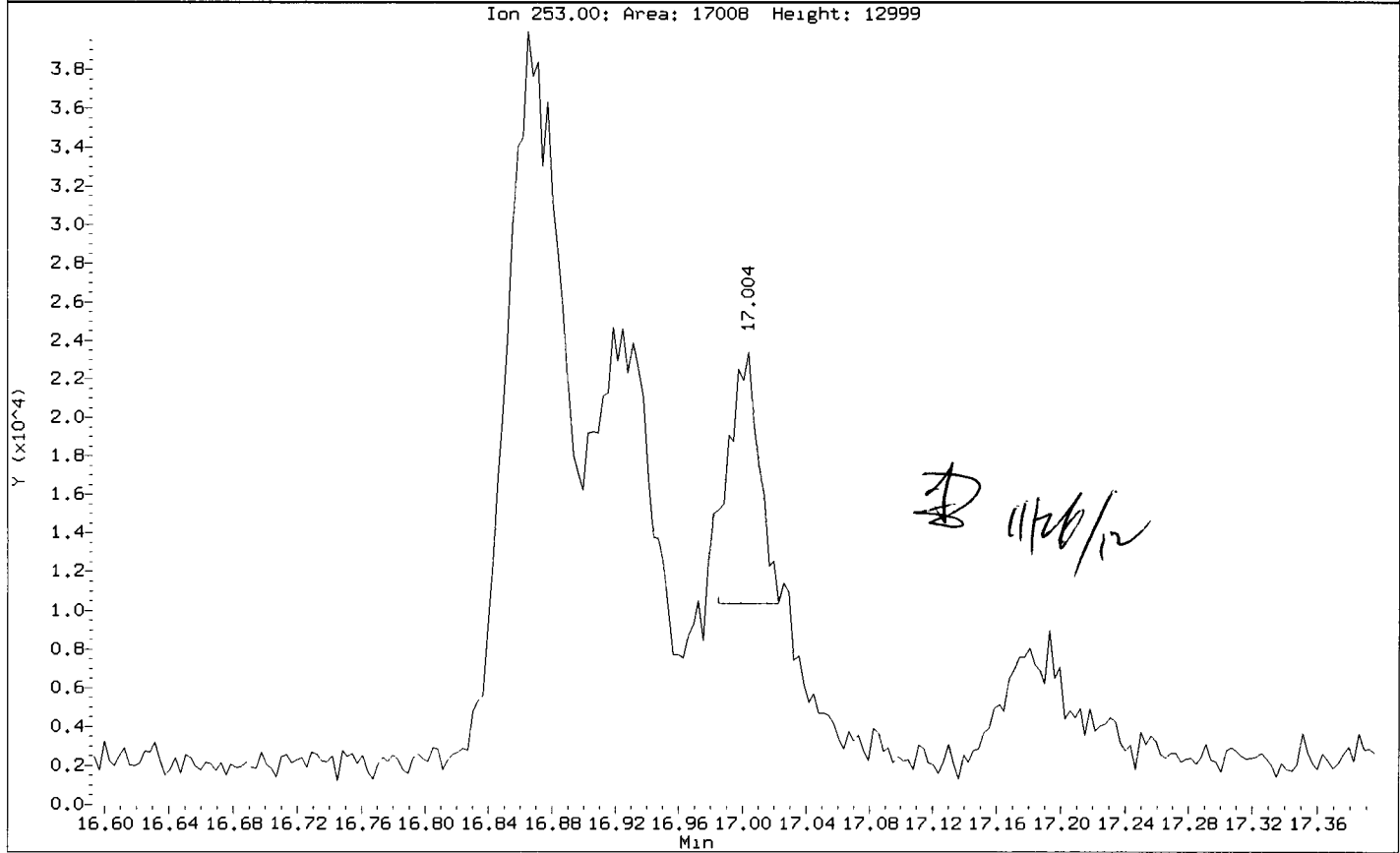
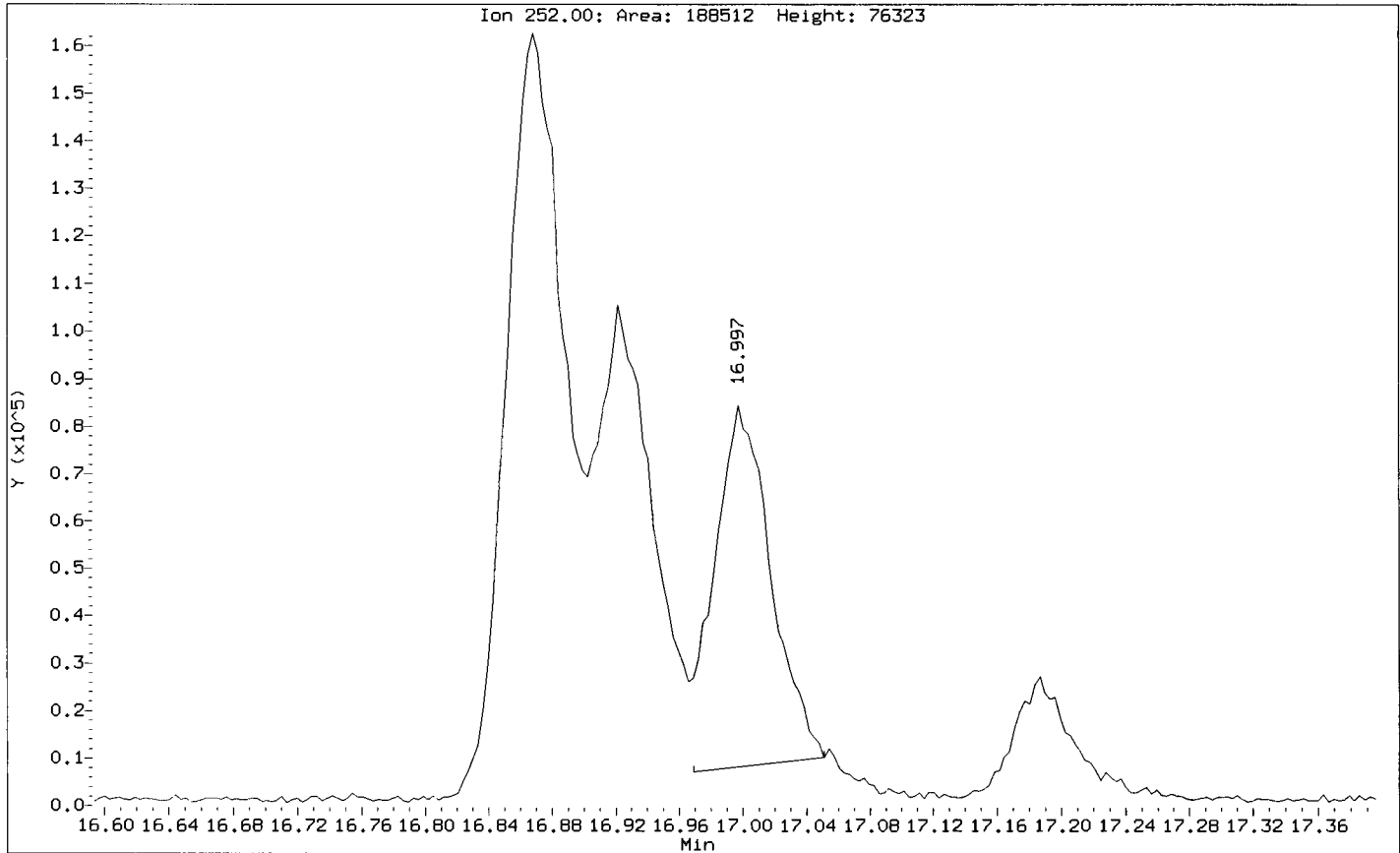
52 Benzo(k)fluoranthene

Concentration: 218.1 ug/kg



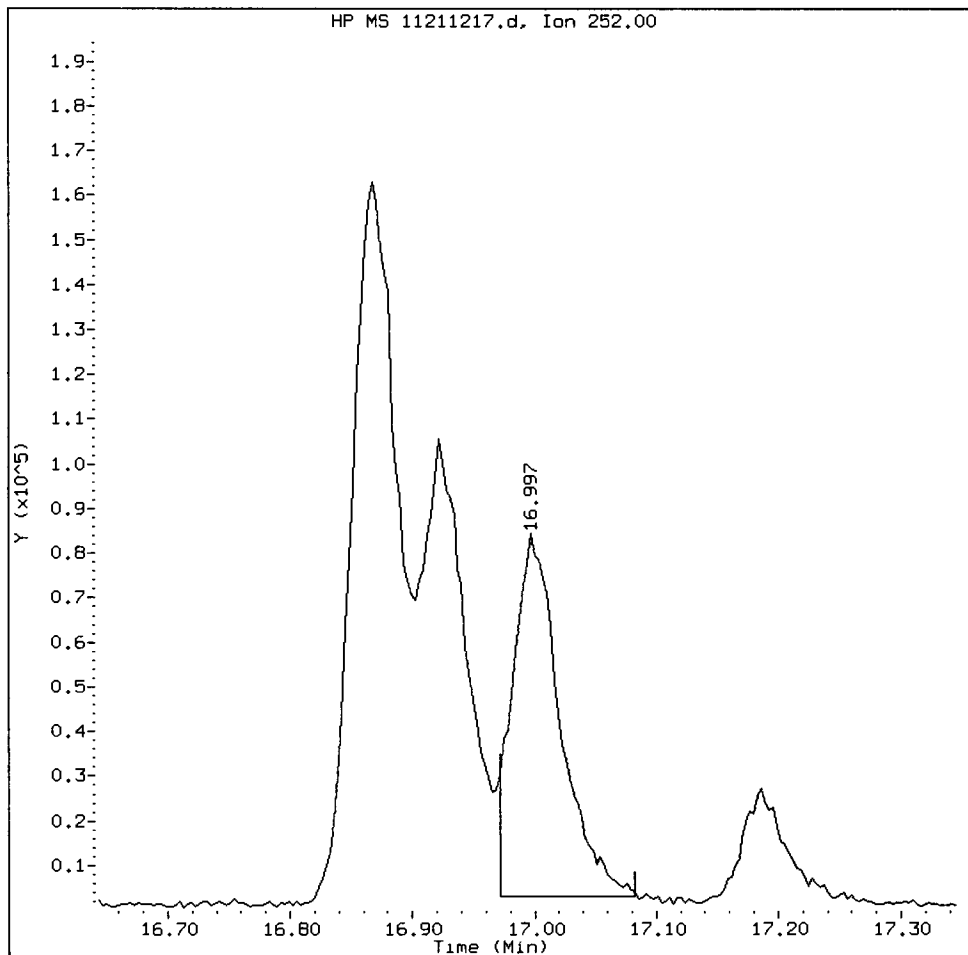
Data File: /chem3/nt11.1/20121121.b/11211217.d  
Injection Date: 21-NOV-2012 19:11  
Instrument: nt11.1  
Client Sample ID: SG-14-S-E-121107

Compound: Benzo(j)fluoranthene  
CAS Number:



VR58F, /chem3/nt11.i/20121121.b/11211217.d

Benzo(j)fluoranthene Amount: 1.14 Area: 220379



MANUAL INTEGRATION for Benzo(j)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AR

Date: 11/26/12

Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

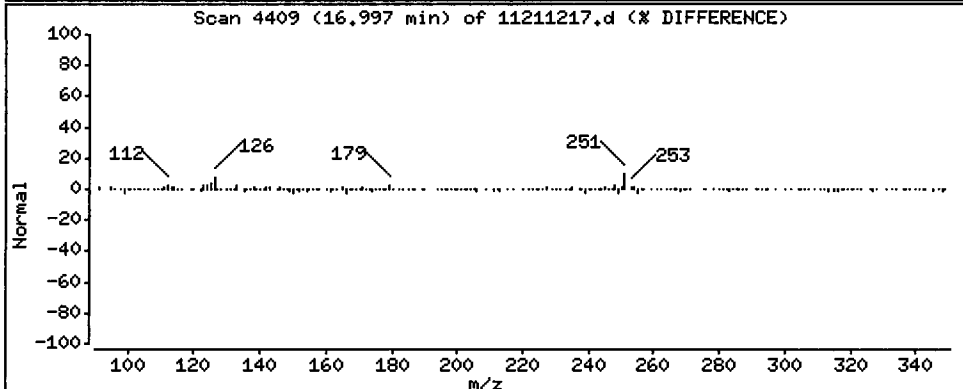
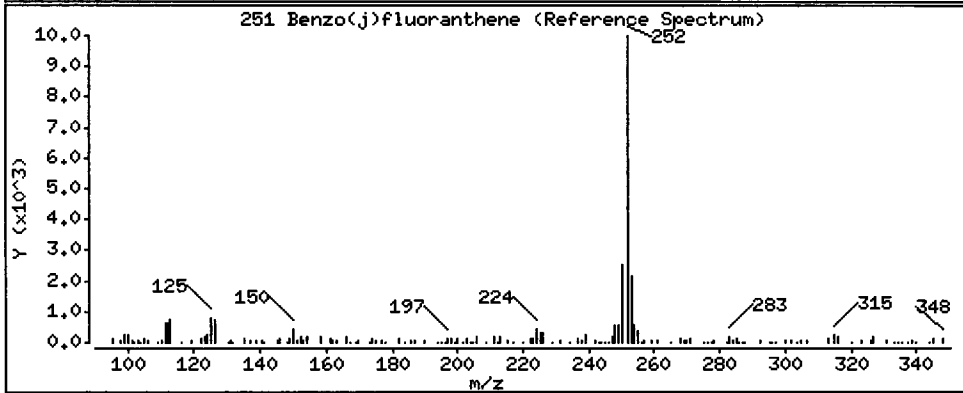
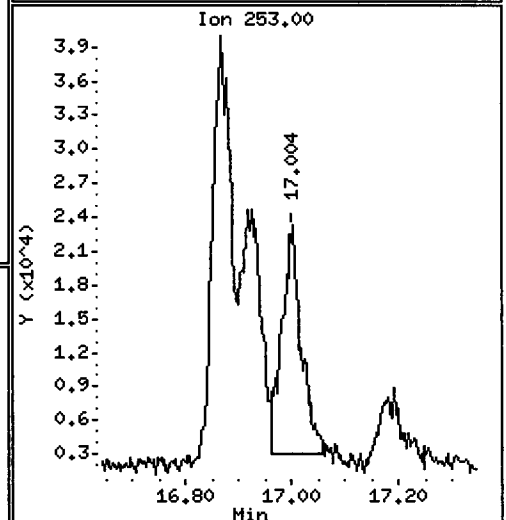
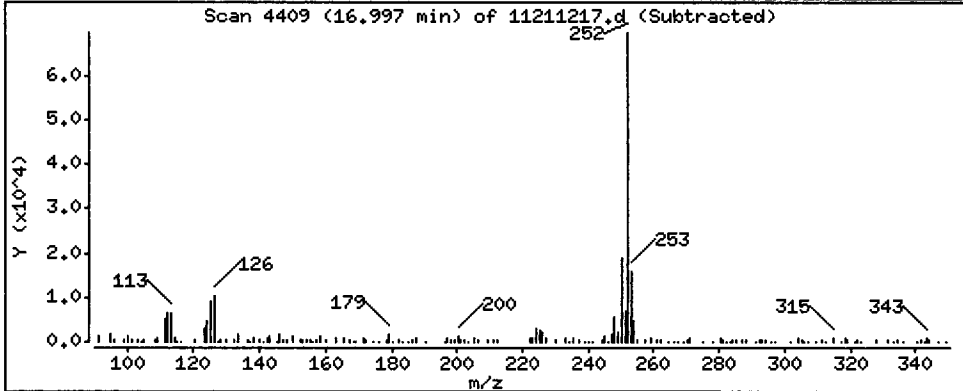
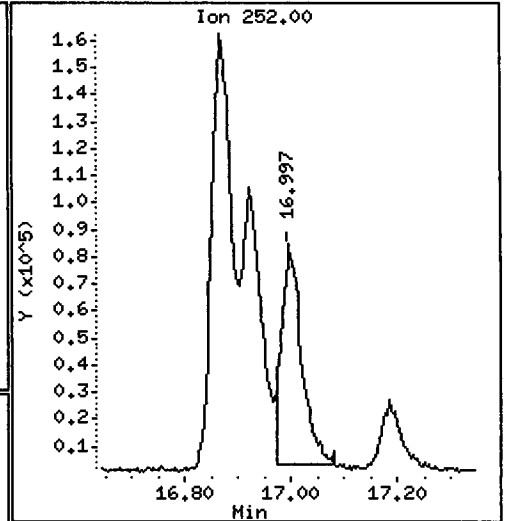
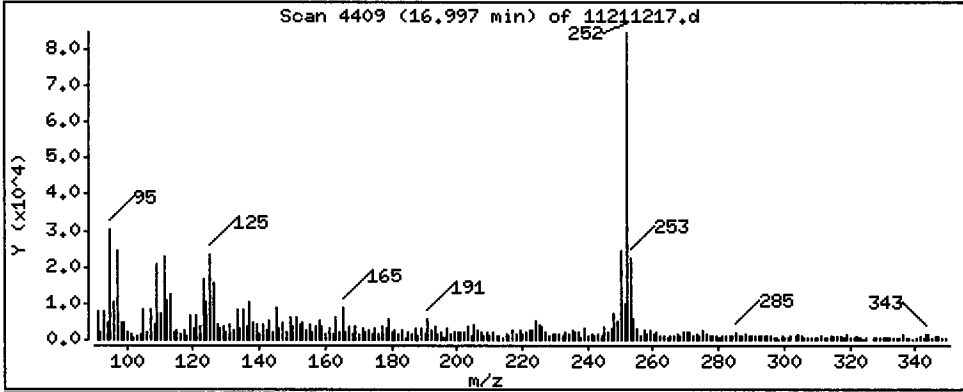
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

251 Benzo(j)fluoranthene

Concentration: 163.5 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

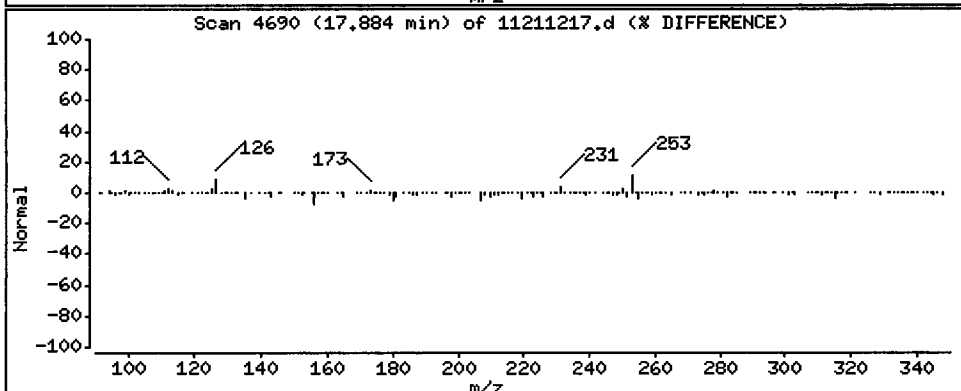
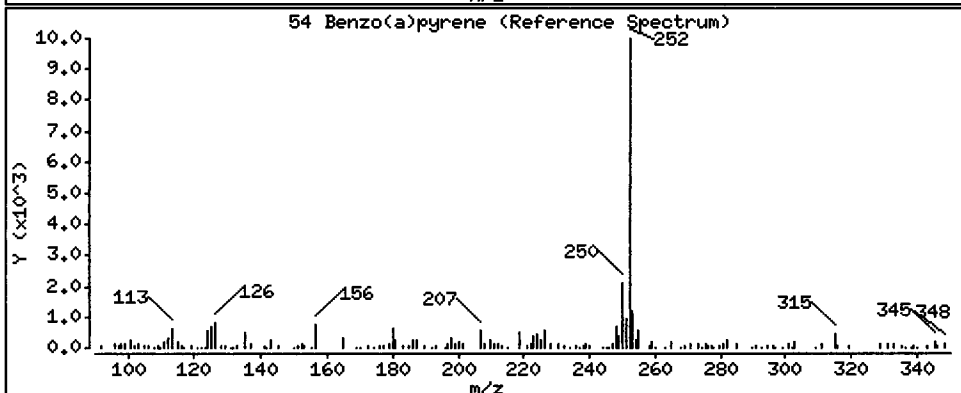
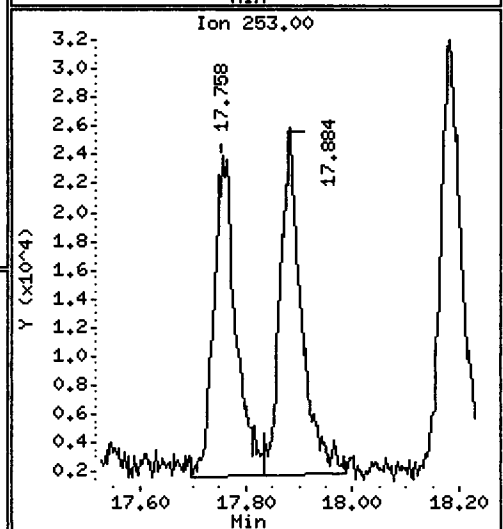
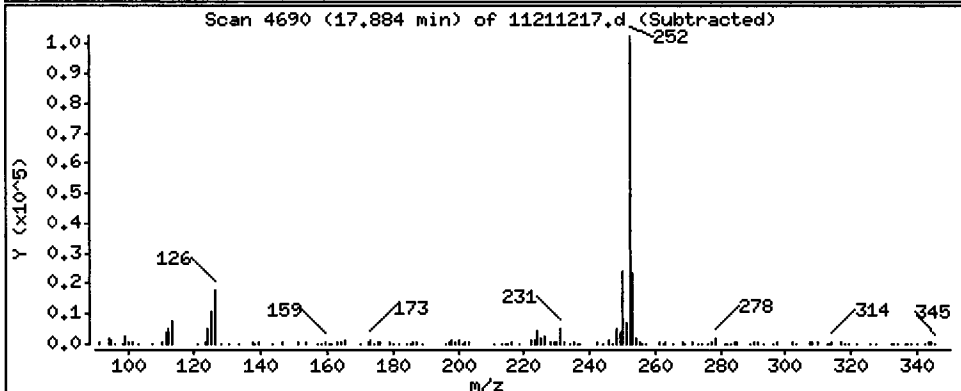
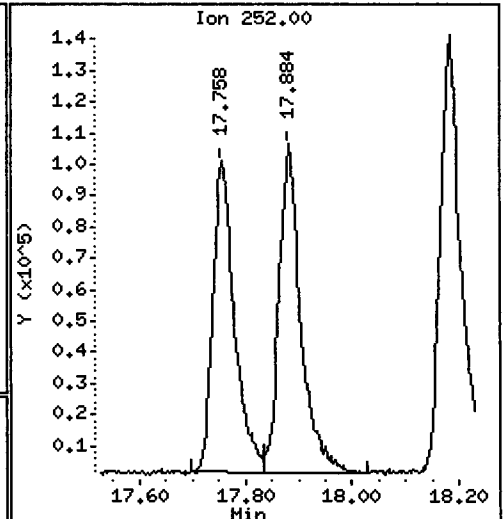
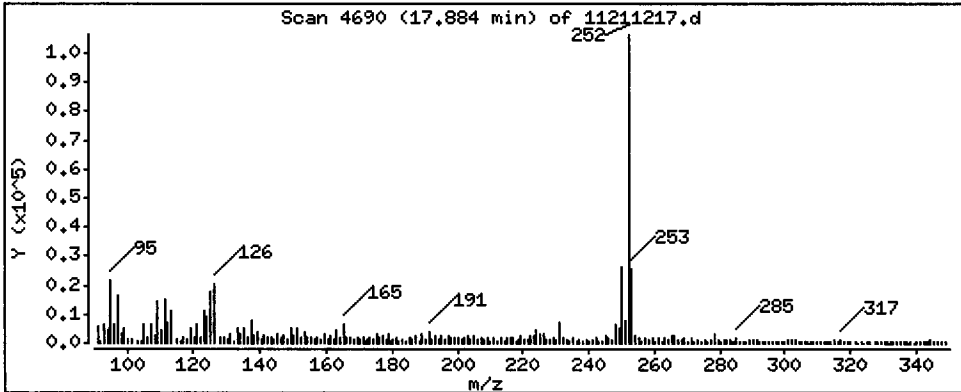
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

54 Benzo(a)pyrene

Concentration: 249.3 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

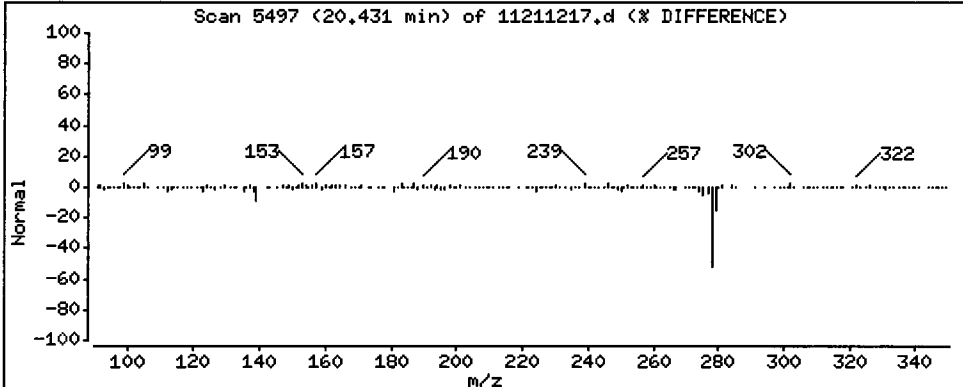
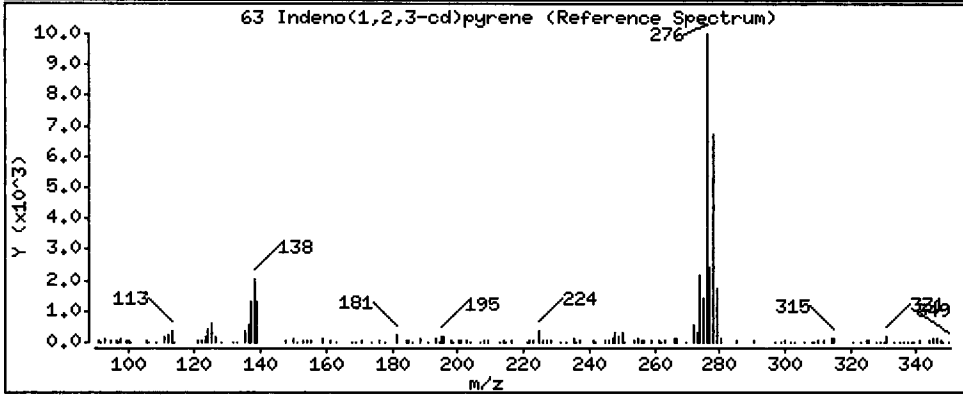
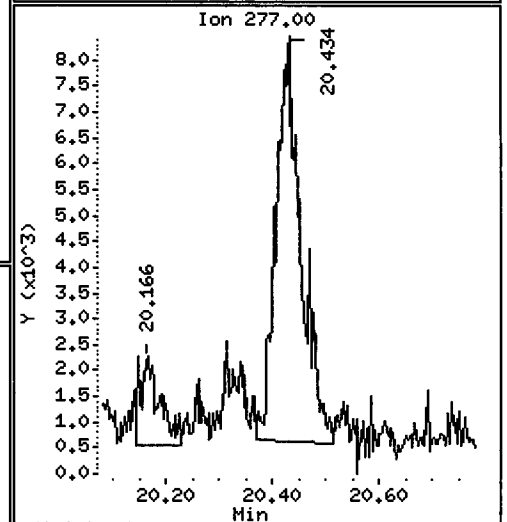
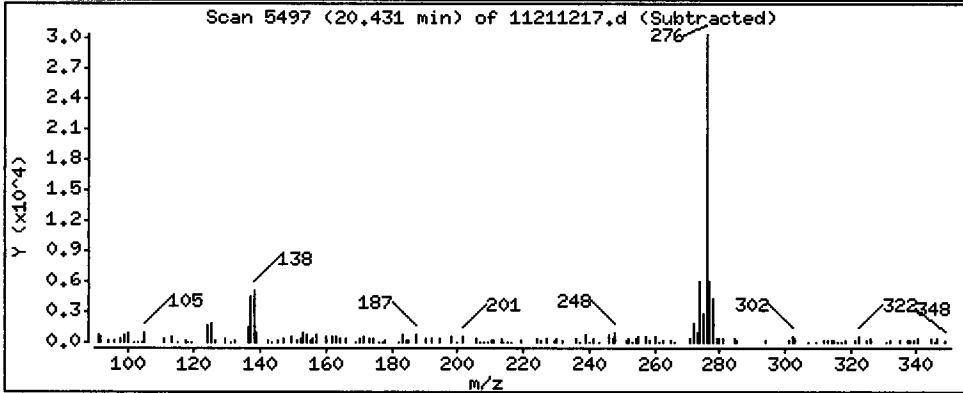
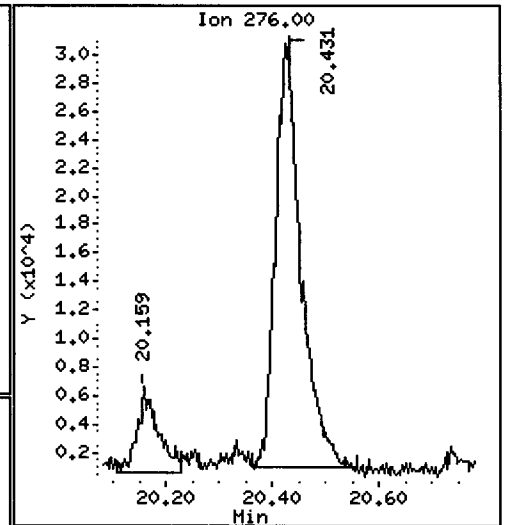
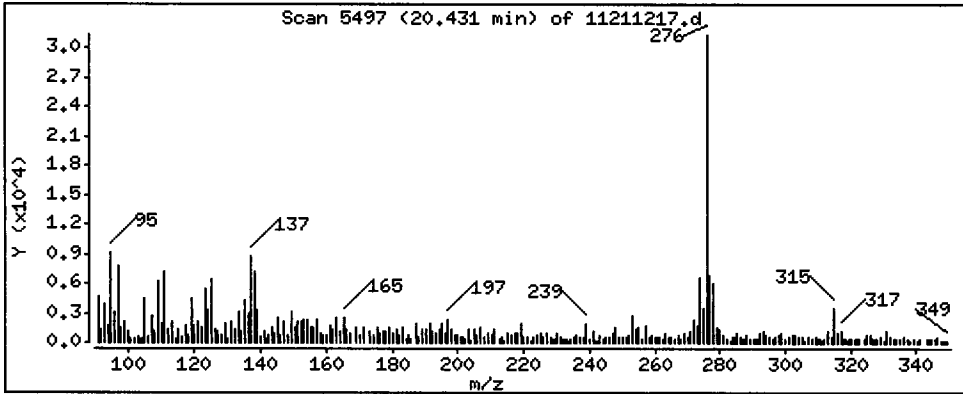
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

63 Indeno(1,2,3-cd)pyrene

Concentration: 68.54 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

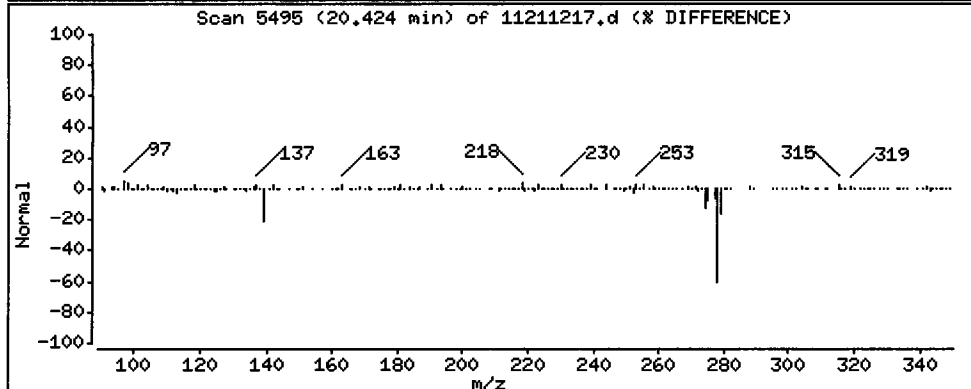
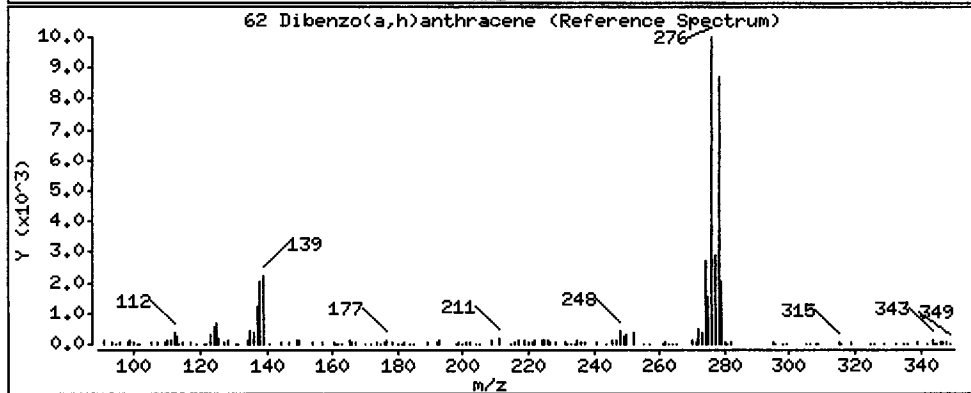
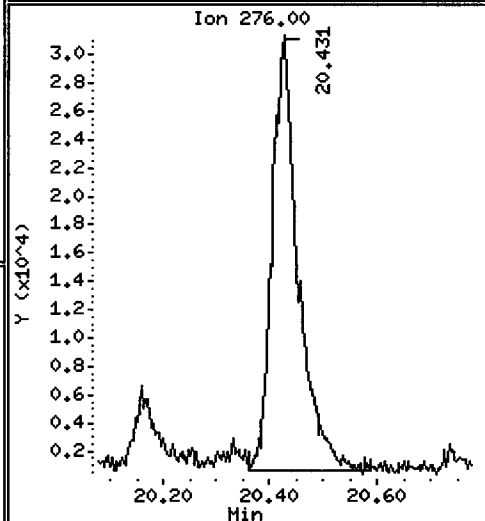
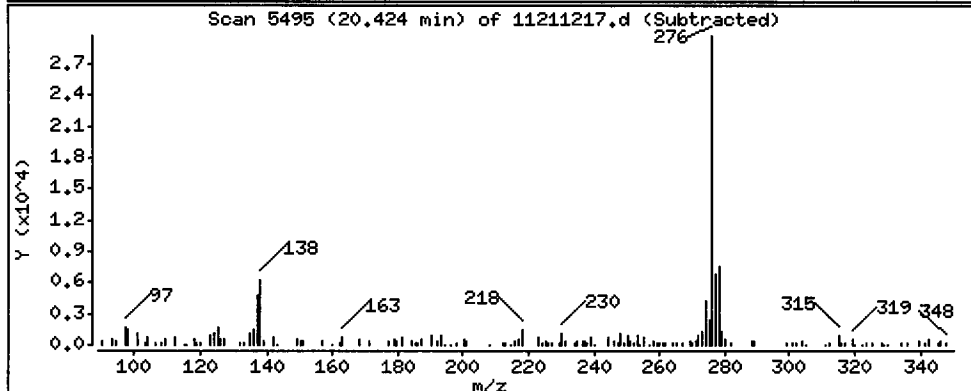
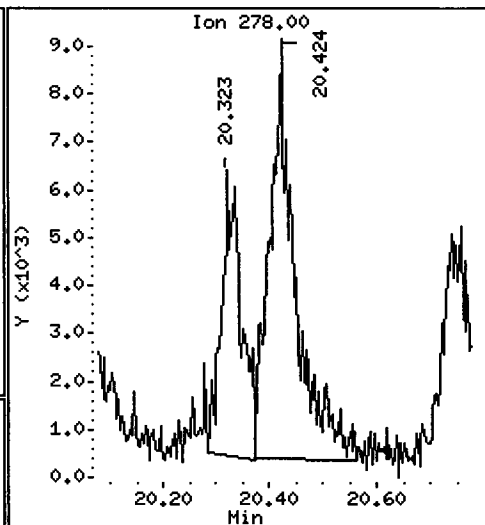
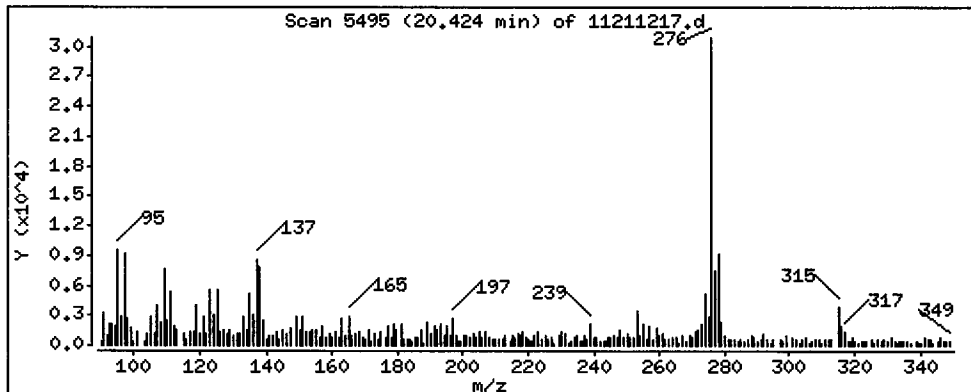
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

62 Dibenzo(a,h)anthracene

Concentration: 24.68 ug/kg





Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

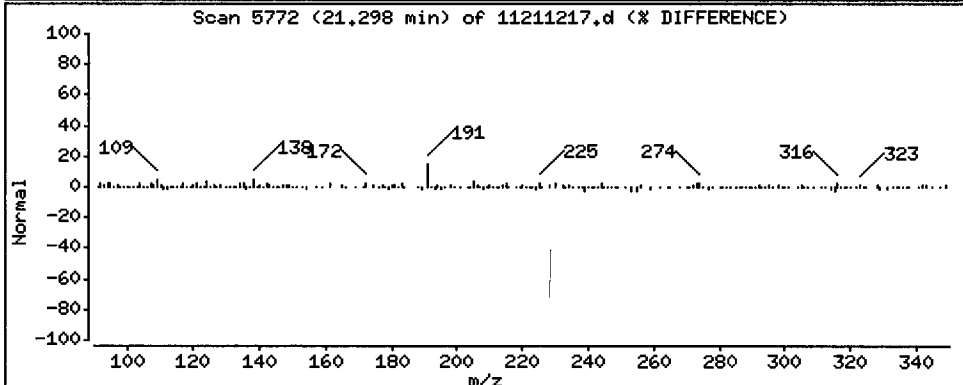
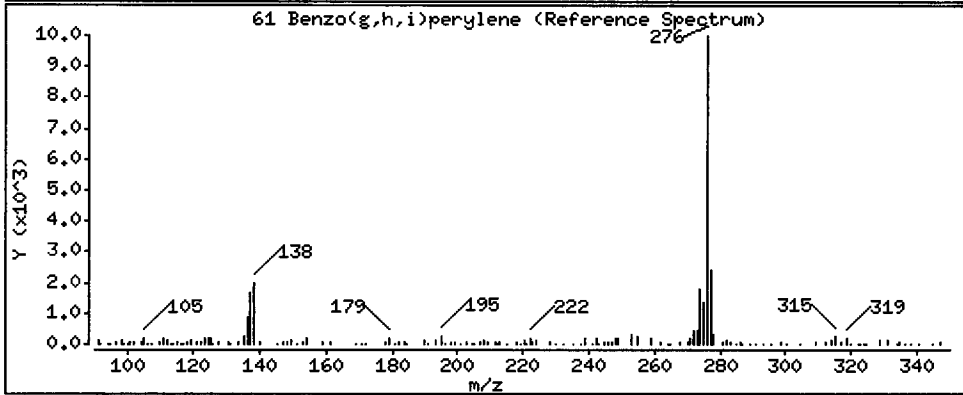
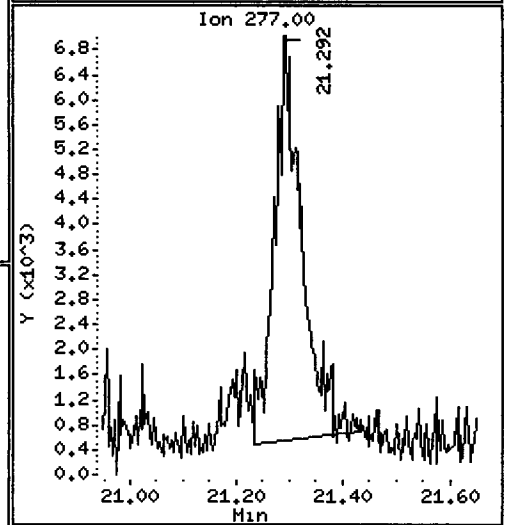
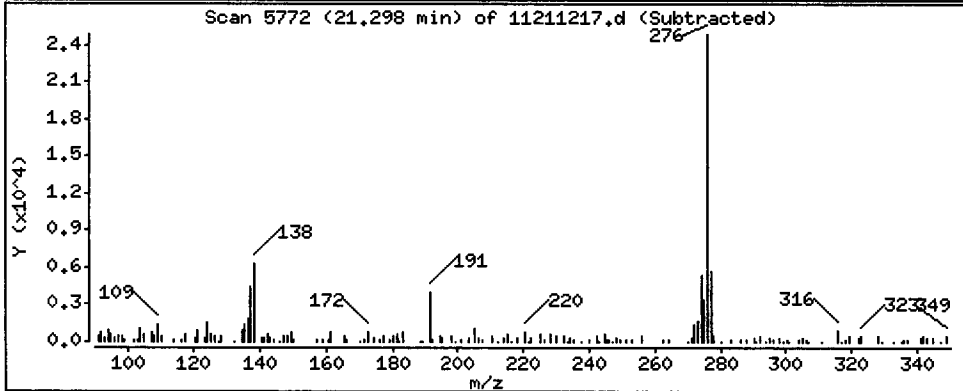
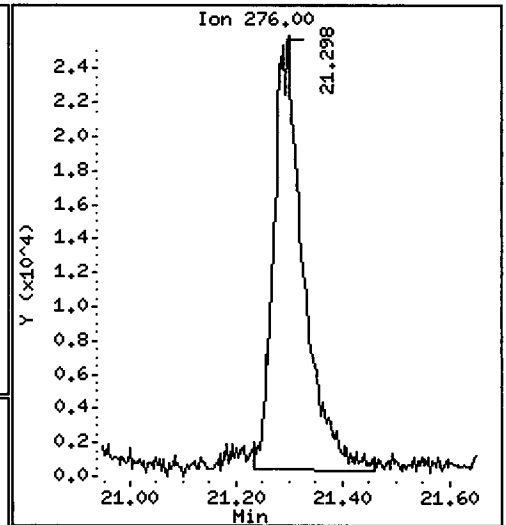
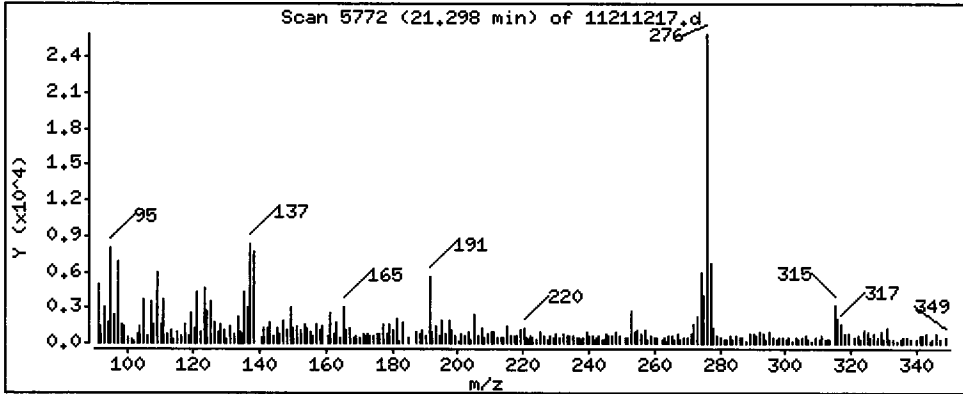
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Benzo(g,h,i)perylene

Concentration: 81.07 ug/kg



Date : 21-NOV-2012 19:11

Client ID: SG-14-S-E-121107

Instrument: nt11.i

Sample Info: VR58F,3

Volume Injected (uL): 1.0

Operator: JZ

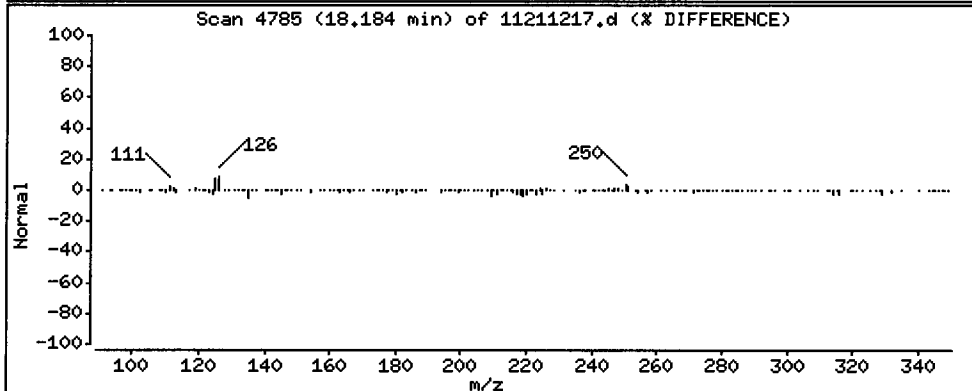
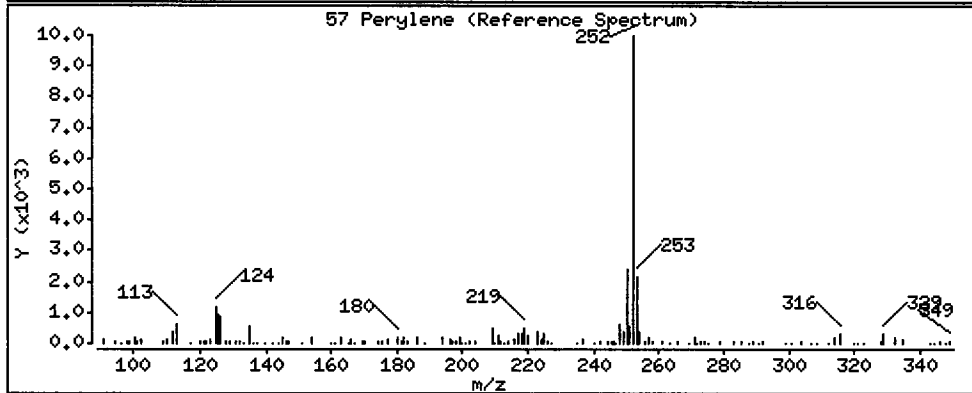
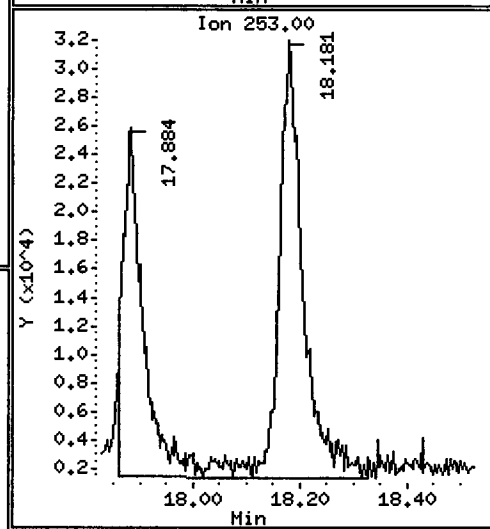
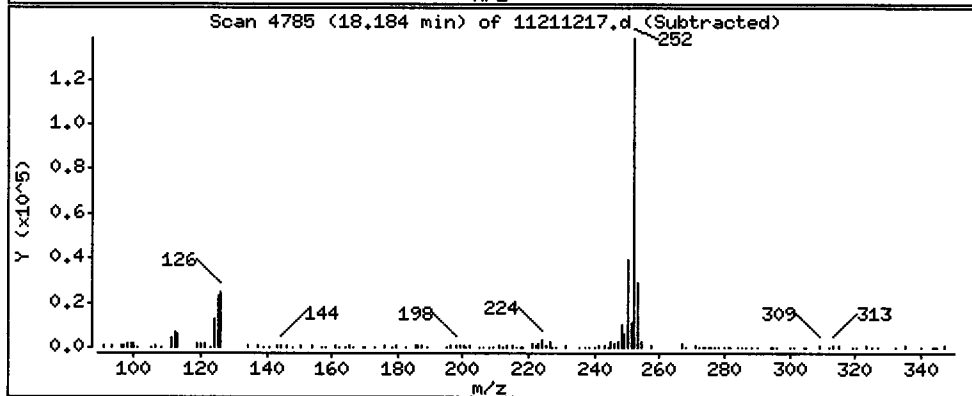
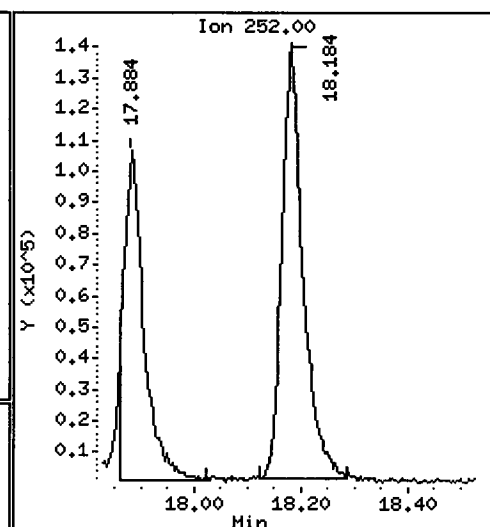
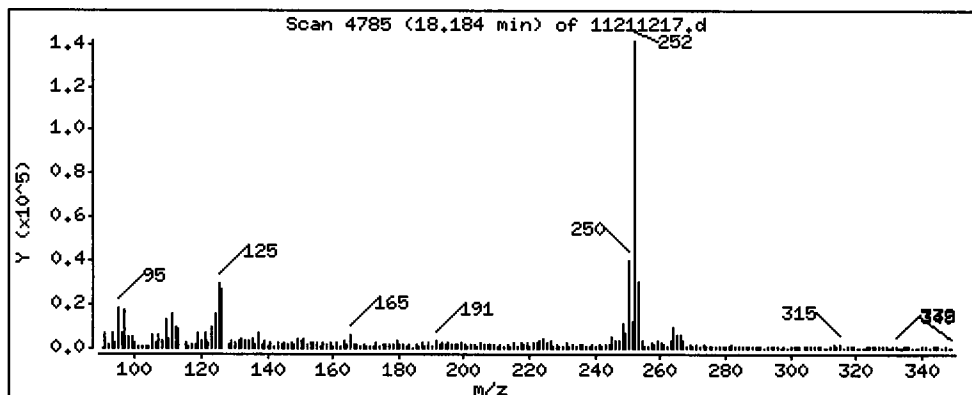
Column phase: ZB-5msi

Column diameter: 0.25

*NR*

57 Perylene

Concentration: 308.3 ug/kg



CO-ELUTION SUMMARY FOR FILE - 11211217.d

Lab ID: VR58F, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2012

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211211.d  
 Lab Smp Id: VR58G Client Smp ID: SG-15-S-E-121107  
 Inj Date : 21-NOV-2012 16:12  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58G  
 Misc Info : 12-22335  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 21-Nov-2012 15:33 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 11  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pmax.sub  
 Target Version: 3.50

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

*R 11/21/12*

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	14.16000	Weight of sample extracted (g)
M	24.70000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	136	5.435	5.438	(1.000)	744503	2.00000	
7 Naphthalene	128	Compound Not Detected.					
\$ 12 2-Methylnaphthalene-d10	152	6.170	6.174	(1.135)	370169	1.45520	68.24
14 2-Methylnaphthalene	141	Compound Not Detected.					
15 1-methylnaphthalene	141	Compound Not Detected.					
21 Acenaphthylene	152	Compound Not Detected.					
* 22 Acenaphthene-d10	164	7.710	7.714	(1.000)	417360	2.00000	
23 Acenaphthene	153	7.758	7.761	(1.006)	18796	0.08150	3.822
11 Dibenzofuran	168	7.912	7.912	(1.026)	33606	0.09946	4.664
25 Fluorene	166	8.386	8.389	(1.088)	30747	0.11841	5.553
* 28 Phenanthrene-d10	188	9.733	9.736	(1.000)	590569	2.00000	
30 Phenanthrene	178	9.768	9.768	(1.004)	51391	0.14406	6.755
31 Anthracene	178	Compound Not Detected.					
36 Fluoranthene	202	11.431	11.425	(1.174)	85535	0.23932	11.22
39 Pyrene	202	11.907	11.892	(0.830)	80429	0.21700	10.18

Compounds	QUANT		SIG			CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
=====	====	==	=====	=====	=====	=====	=====	
46 Benzo(a)anthracene	228	14.223	14.224	(0.992)	32771	0.09697	4.547	
* 47 Chrysene-d12	240	14.343	14.343	(1.000)	672563	2.00000		
48 Chrysene	228	14.410	14.413	(1.005)	34094	0.10394	4.874	
51 Benzo(b)fluoranthene	252	16.858	16.858	(0.931)	25796	0.14462	6.782 (M)	
52 Benzo(k)fluoranthene	252	16.909	16.918	(0.934)	11159	0.05761	2.701 (M)	
251 Benzo(j)fluoranthene	252	16.991	16.994	(0.938)	10283	0.05031	2.359 (M)	
54 Benzo(a)pyrene	252	17.875	17.878	(0.987)	15782	0.08711	4.085	
* 56 Perylene-d12	264	18.105	18.102	(1.000)	385411	2.00000		
63 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.						
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.326	20.339	(1.123)	221966	1.73721	81.46	
62 Dibenzo(a,h)anthracene	278	Compound Not Detected.						
61 Benzo(g,h,i)perylene	276	Compound Not Detected.						
57 Perylene	252	18.174	18.177	(1.004)	57906	0.30819	14.45	

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i	Calibration Date: 21-NOV-2012
Lab File ID: 11211211.d	Calibration Time: 11:42
Lab Smp Id: VR58G	Client Smp ID: SG-15-S-E-121107
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Sediment
Operator: JZ	
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m	
Misc Info: 12-22335	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	744503	44.25
22 Acenaphthene-d10	284255	142128	568510	417360	46.83
28 Phenanthrene-d10	410660	205330	821320	590569	43.81
47 Chrysene-d12	467886	233943	935772	672563	43.75
56 Perylene-d12	472330	236165	944660	385411	-18.40

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	-0.06
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	-0.04
28 Phenanthrene-d10	9.74	9.24	10.24	9.73	-0.03
47 Chrysene-d12	14.34	13.84	14.84	14.34	0.00
56 Perylene-d12	18.10	17.60	18.60	18.10	0.02

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58G  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Misc Info: 12-22335

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-15-S-E-121107  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	140.7	68.24	48.51	34-100
\$ 60 Dibenzo(a,h) anthra	140.7	81.46	57.91	10-117

Date: 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

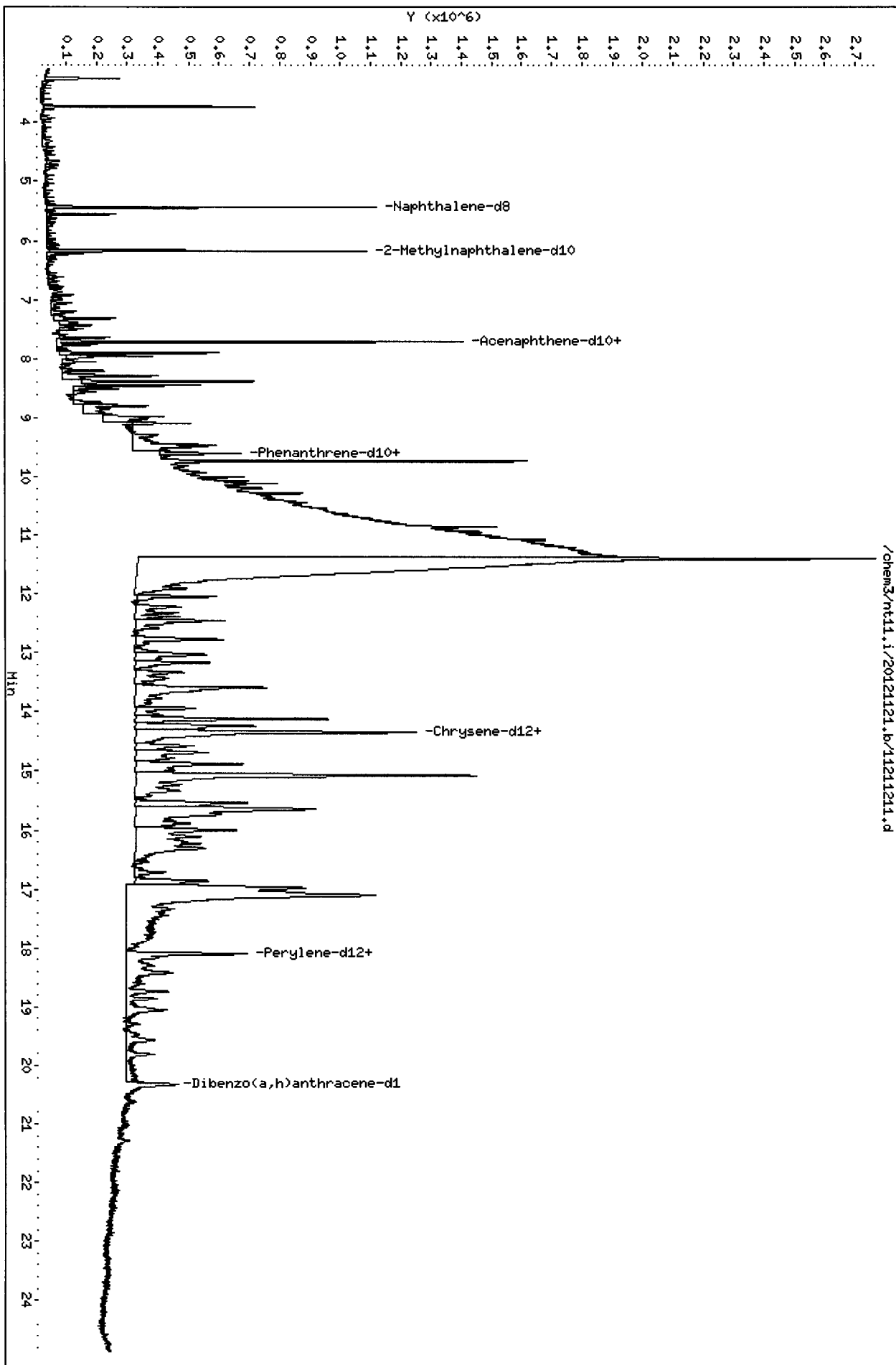
Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

Column phase: ZB-5msi

Operator: JZ  
Column diameter: 0.25



20121121 16:12:52



Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58G

Volume Injected (uL): 1.0

Operator: JZ

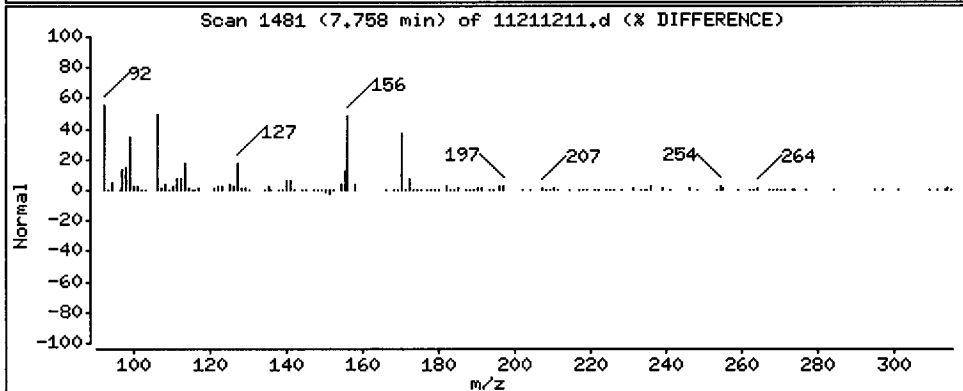
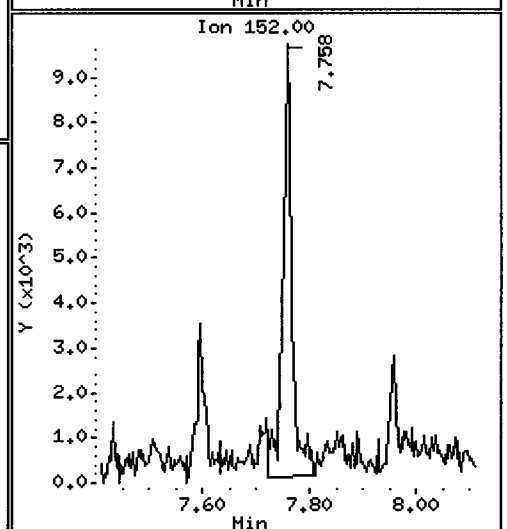
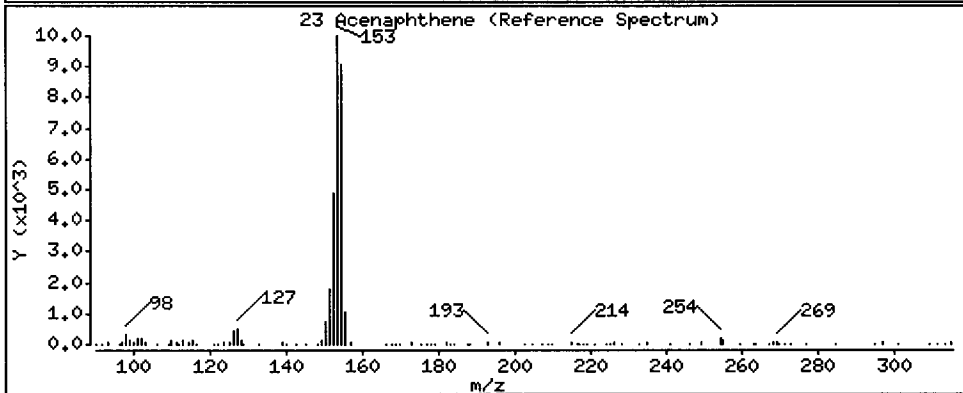
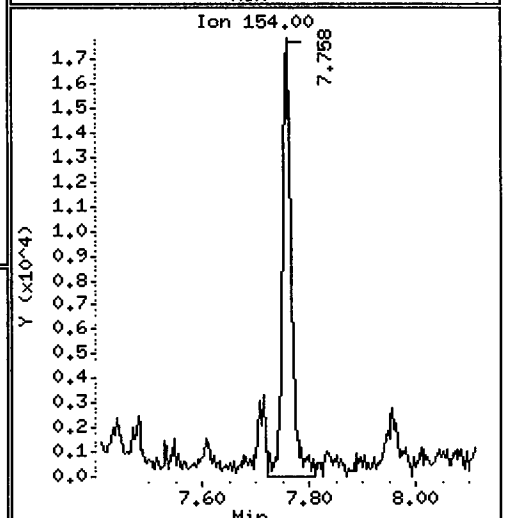
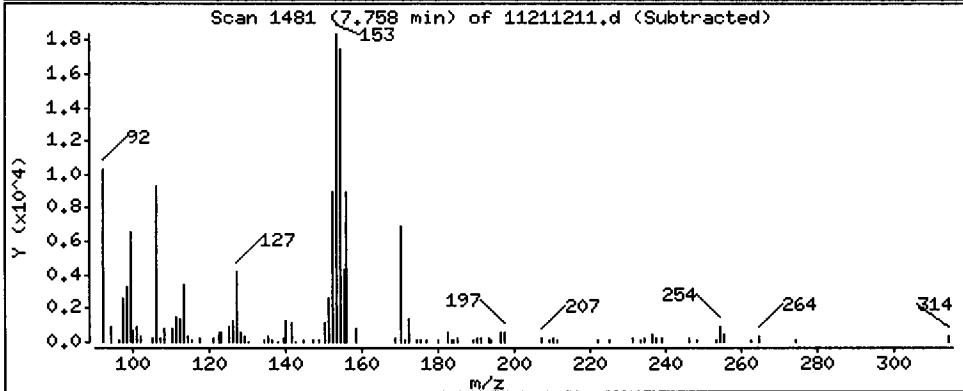
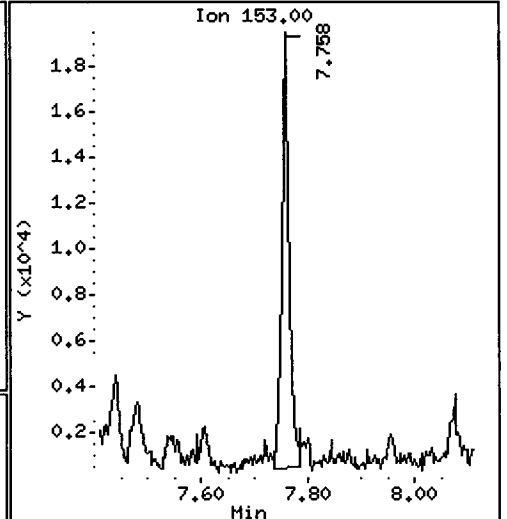
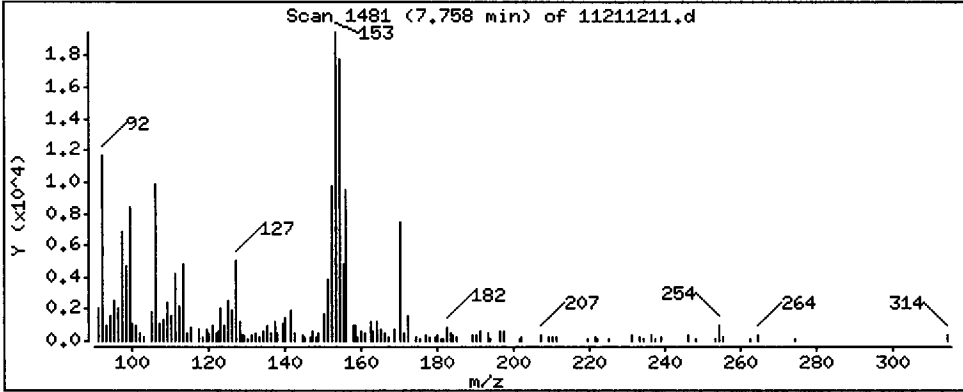
Column phase: ZB-5msi

Column diameter: 0.25

23 Acenaphthene

Concentration: 3,822 ug/kg

*GC*



Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

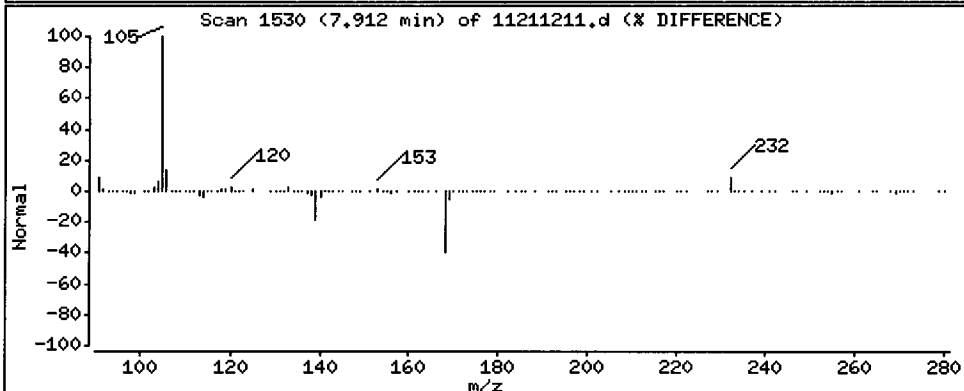
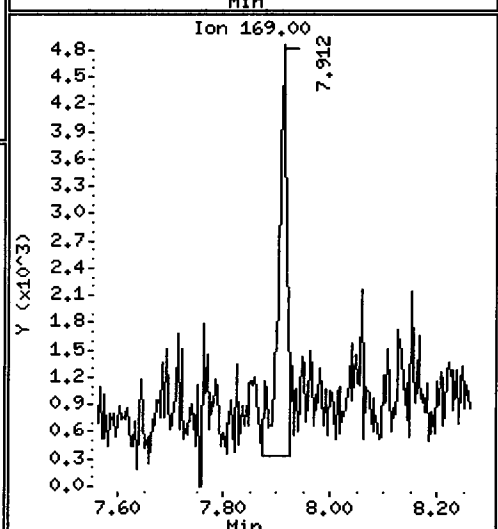
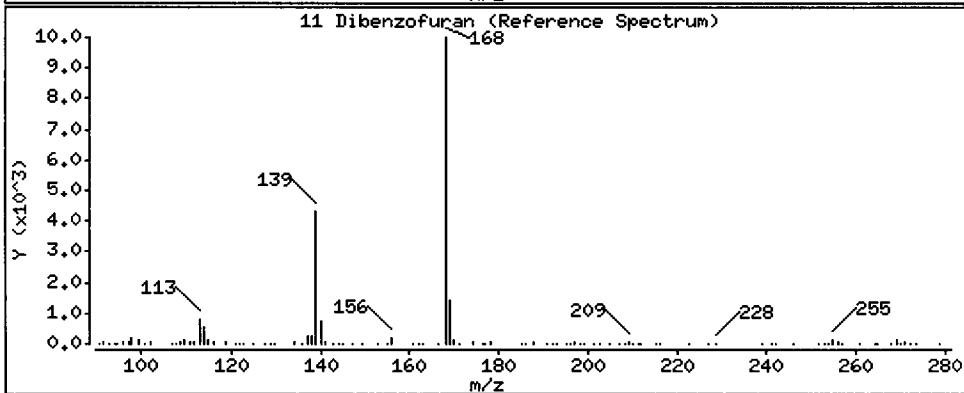
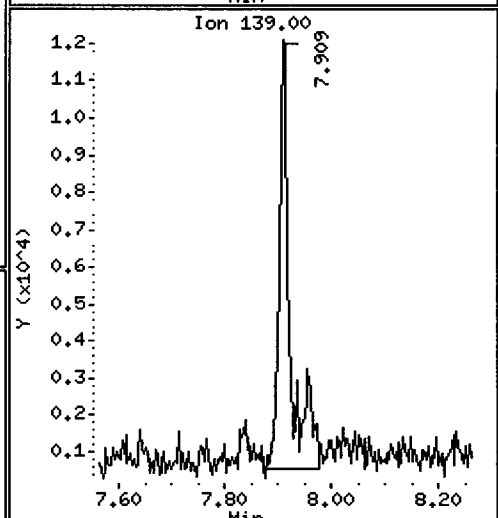
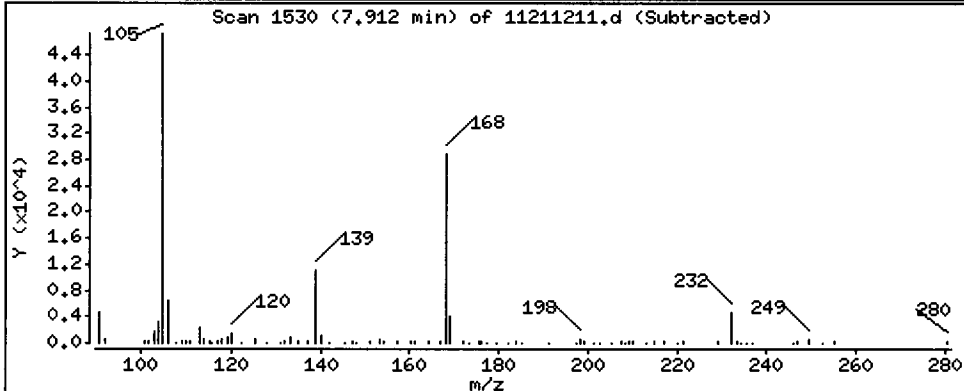
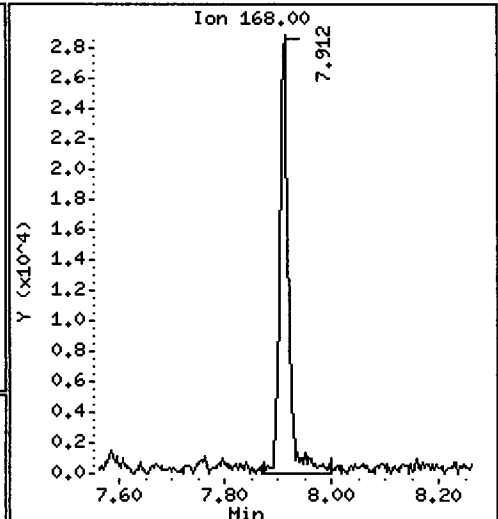
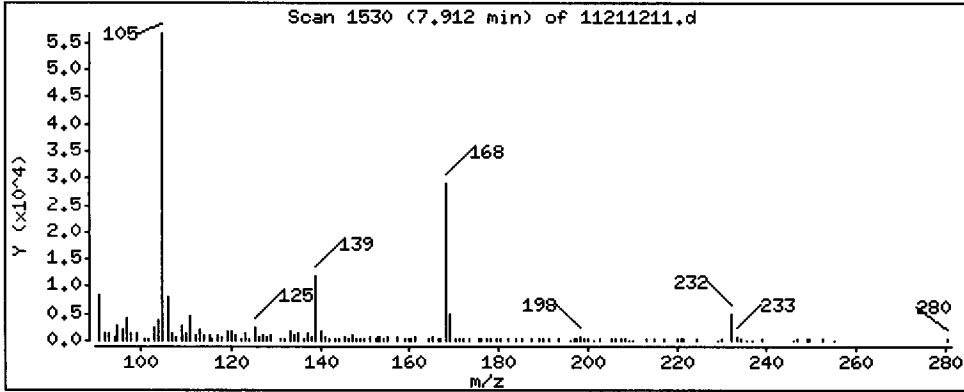
Operator: JZ

Column phase: ZB-5ms1

Column diameter: 0.25

11 Dibenzofuran

Concentration: 4,664 ug/kg



Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

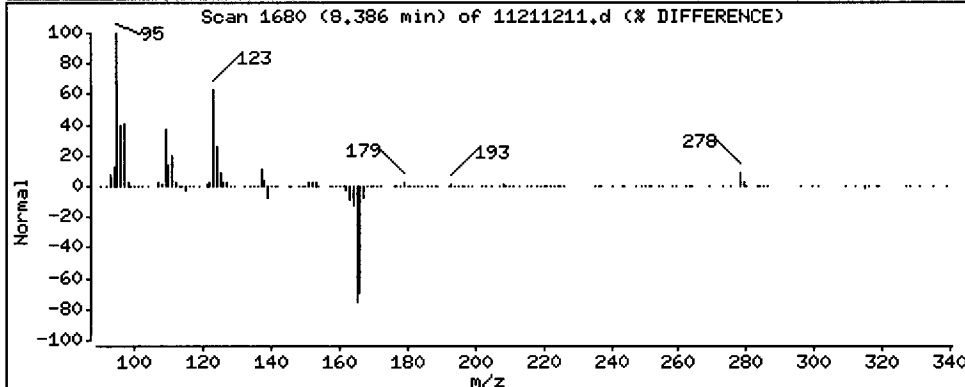
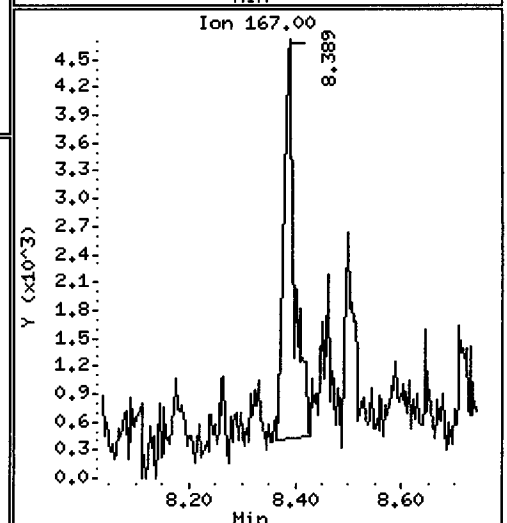
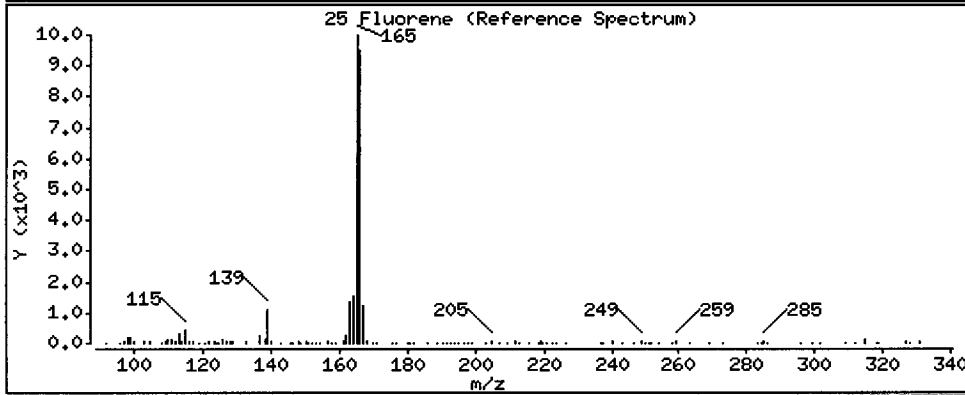
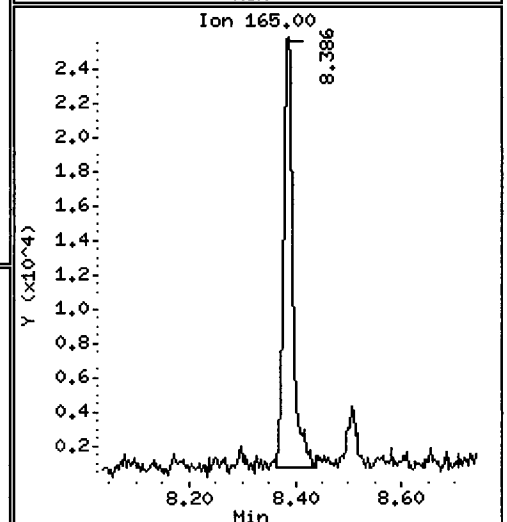
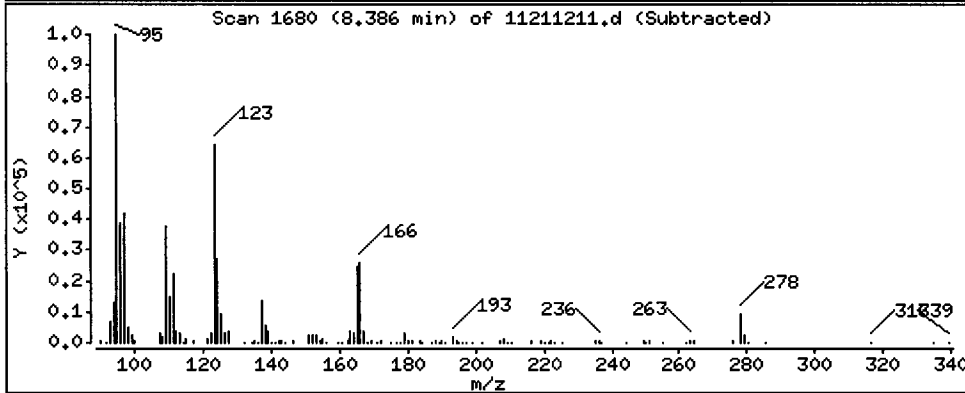
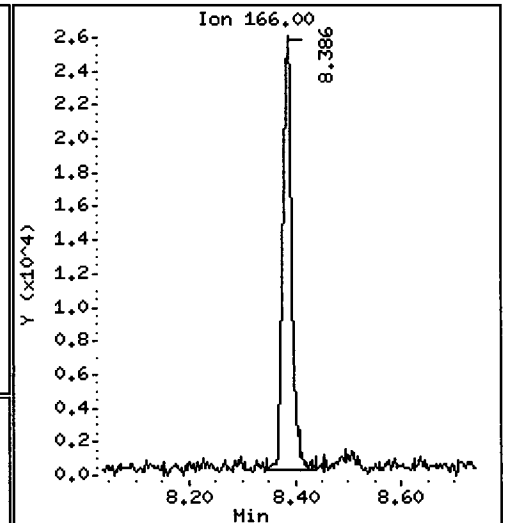
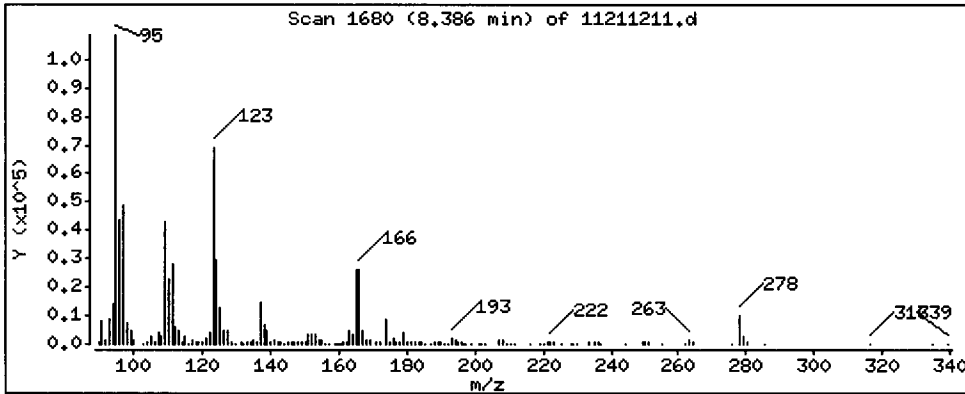
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

25 Fluorene

Concentration: 5,553 ug/kg



Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

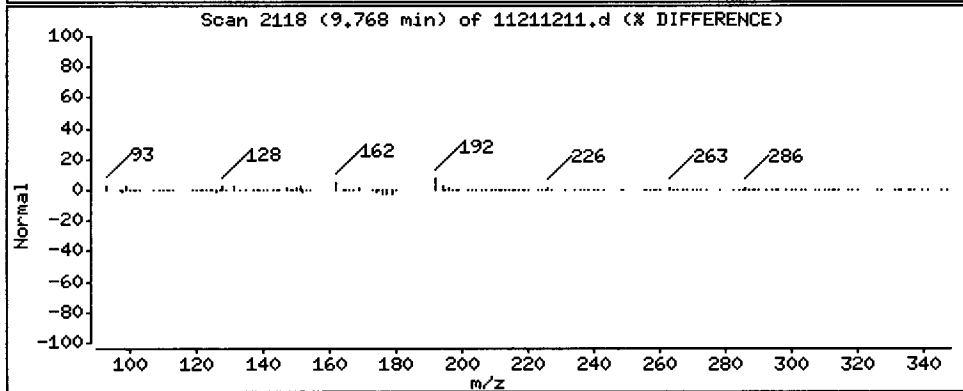
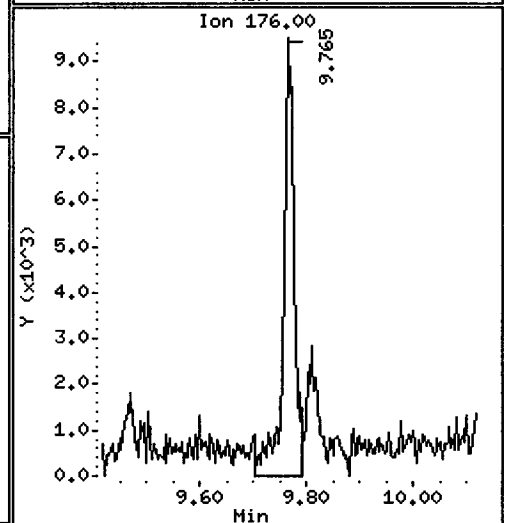
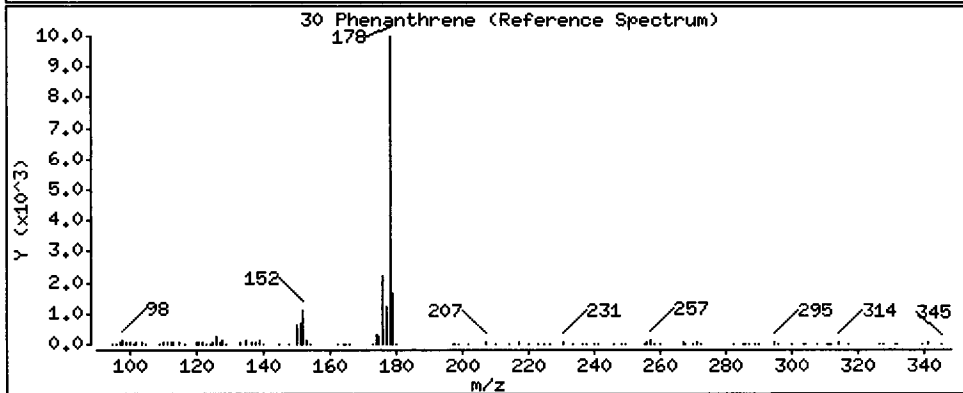
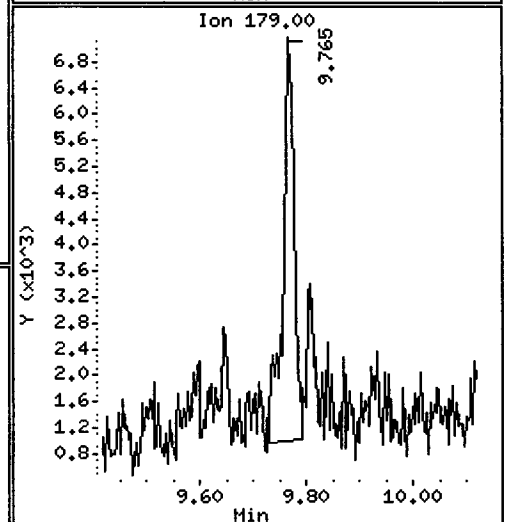
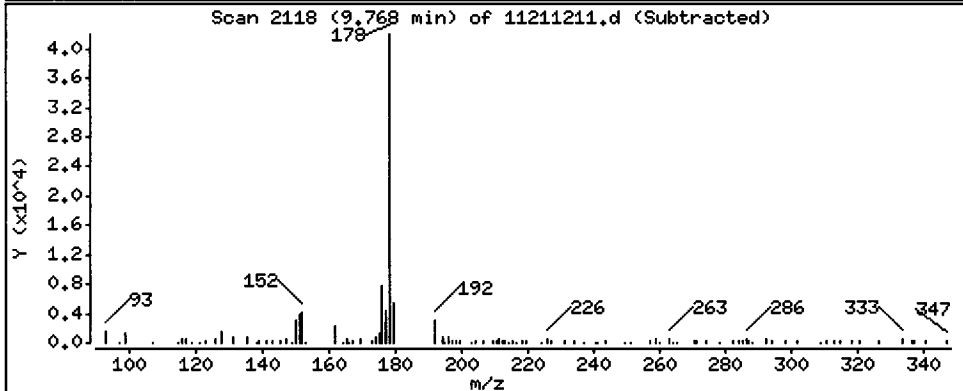
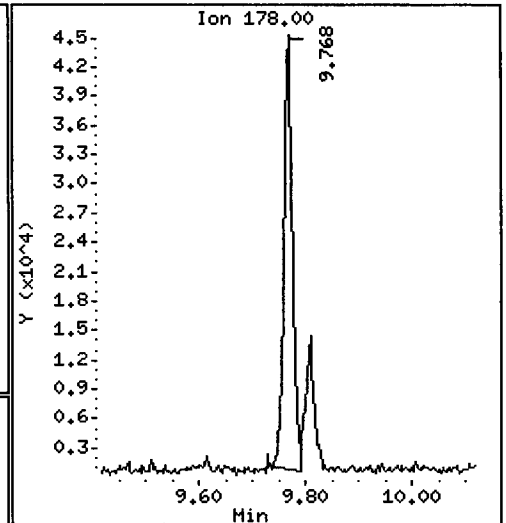
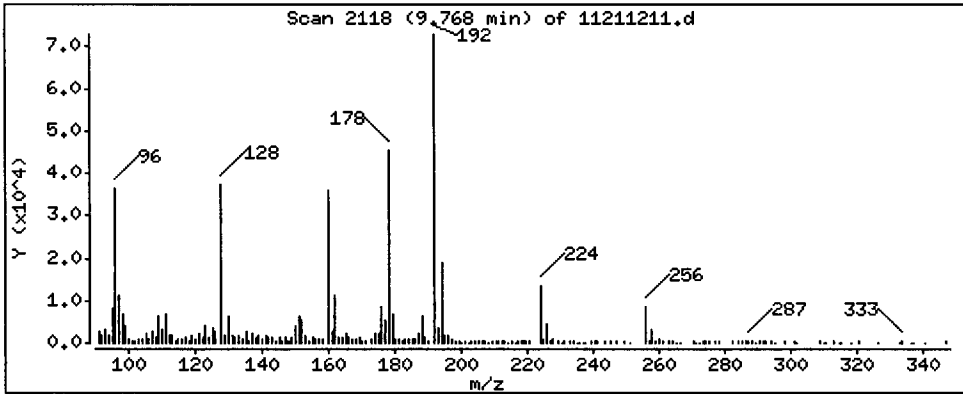
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

30 Phenanthrene

Concentration: 6.755 ug/kg



Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

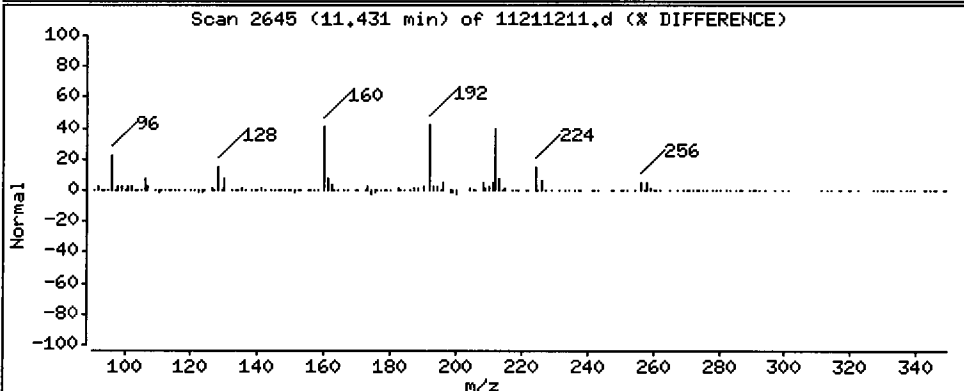
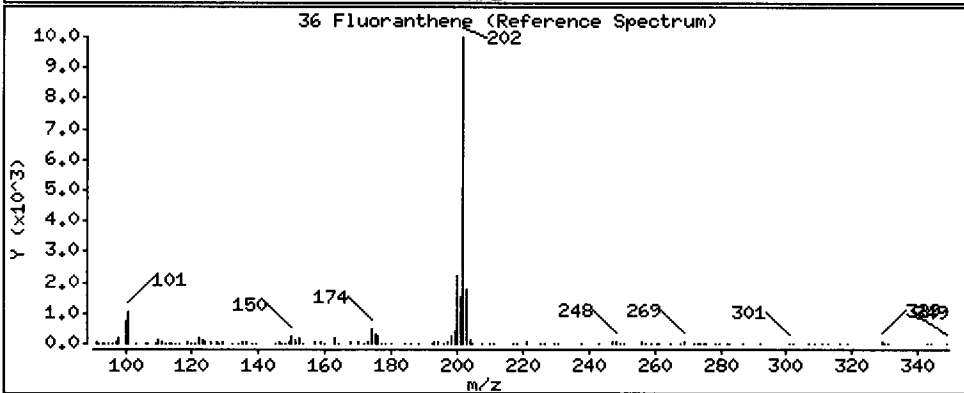
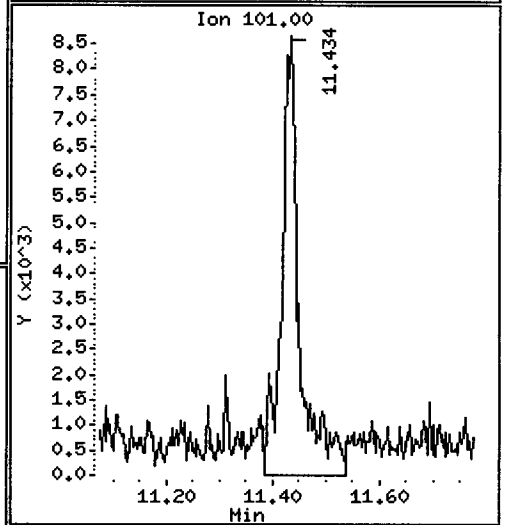
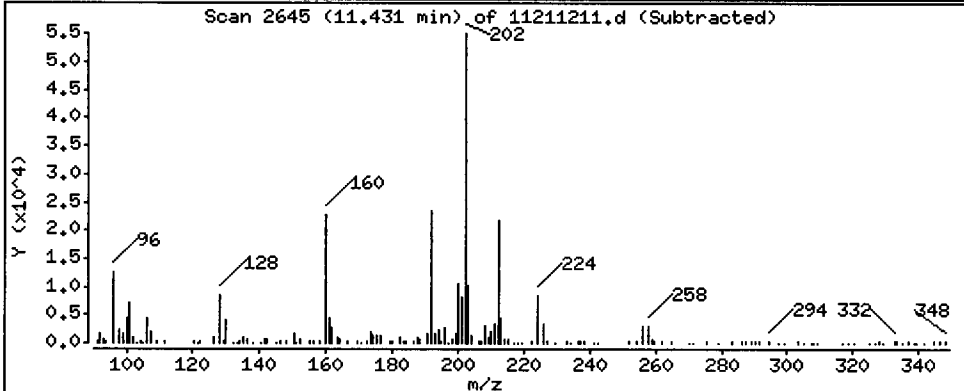
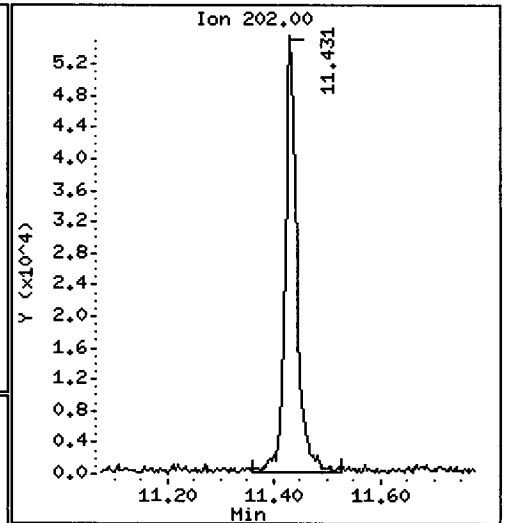
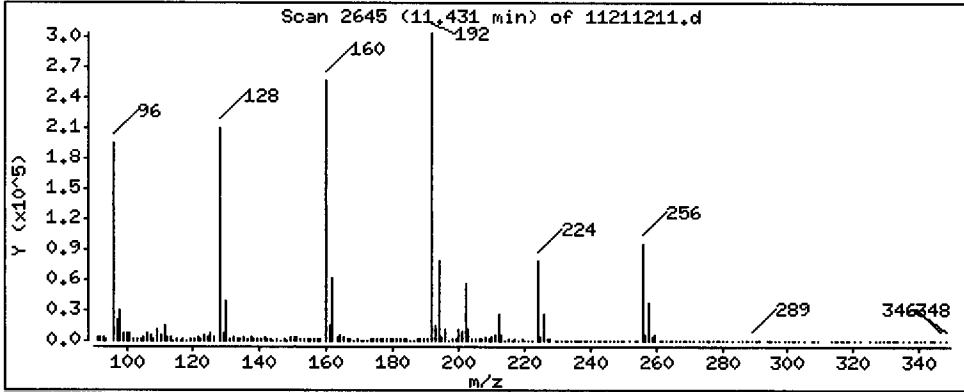
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

36 Fluoranthene

Concentration: 11.22 ug/kg



Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58G

Volume Injected (uL): 1.0

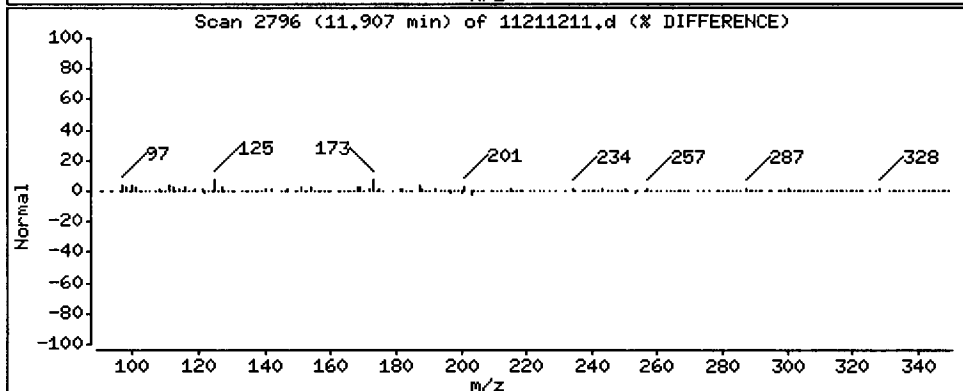
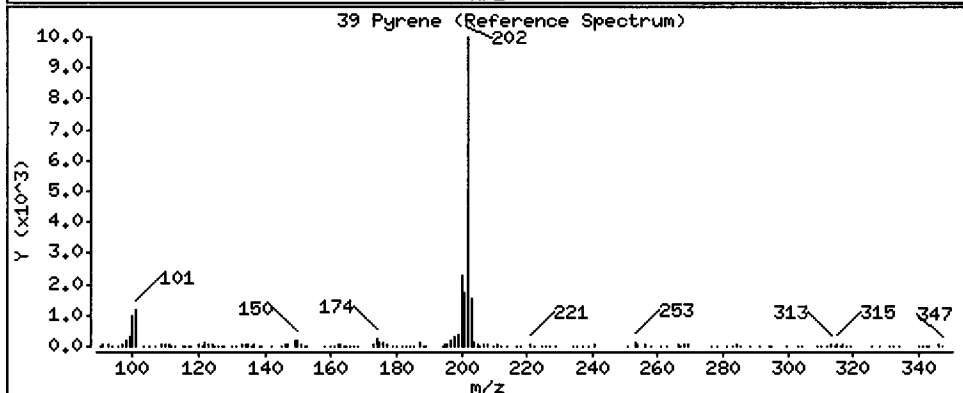
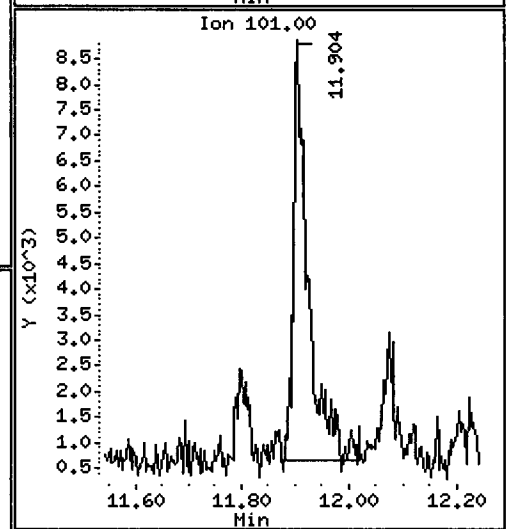
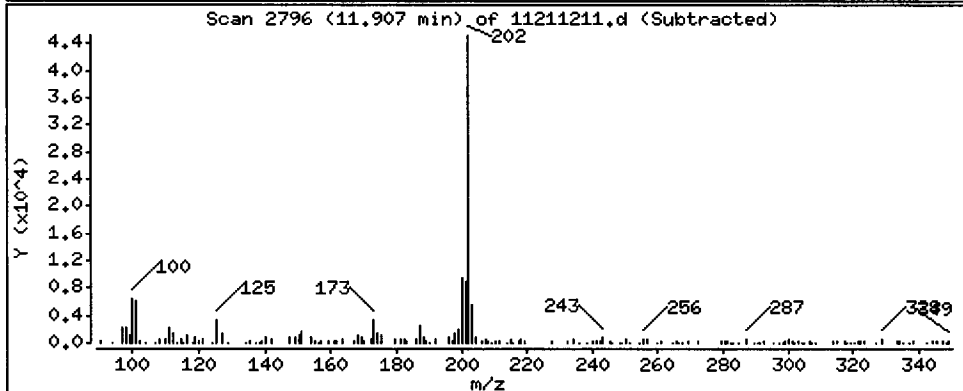
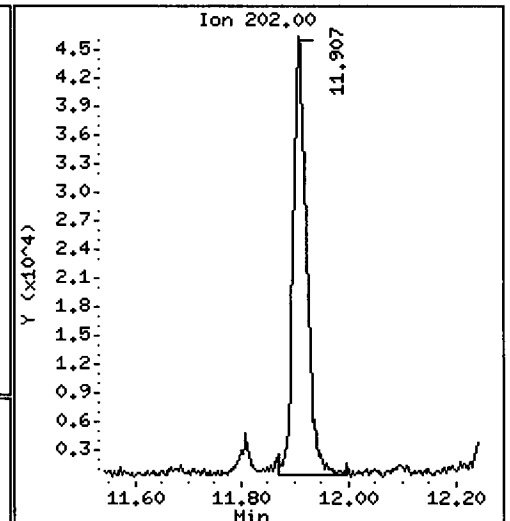
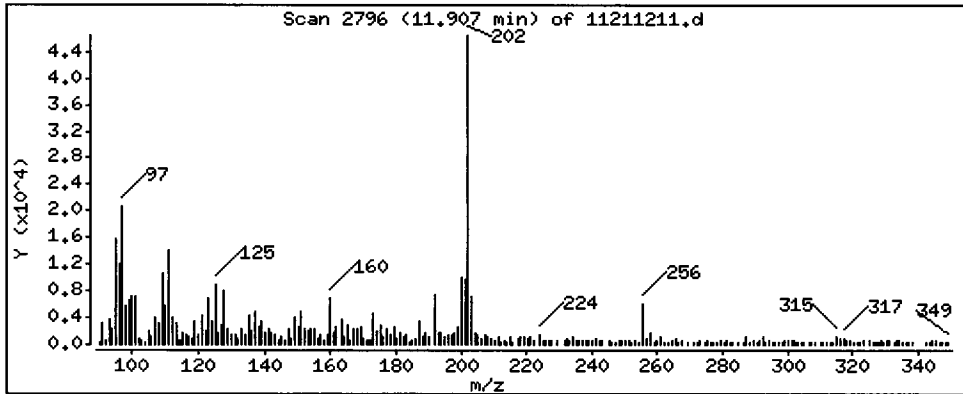
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

39 Pyrene

Concentration: 10.18 ug/kg



Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

Operator: JZ

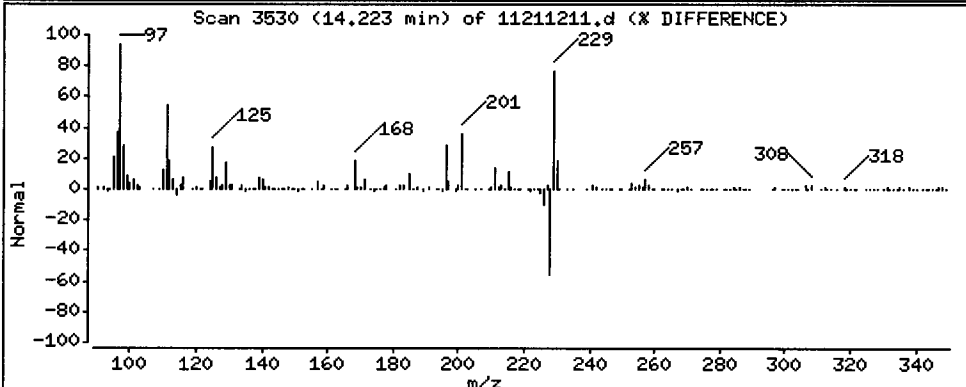
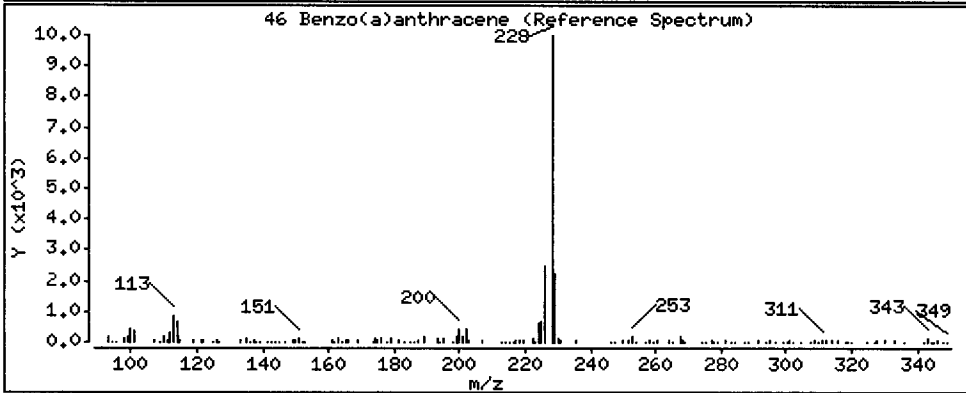
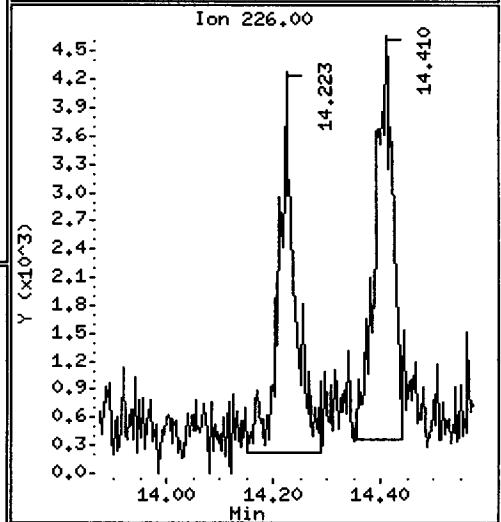
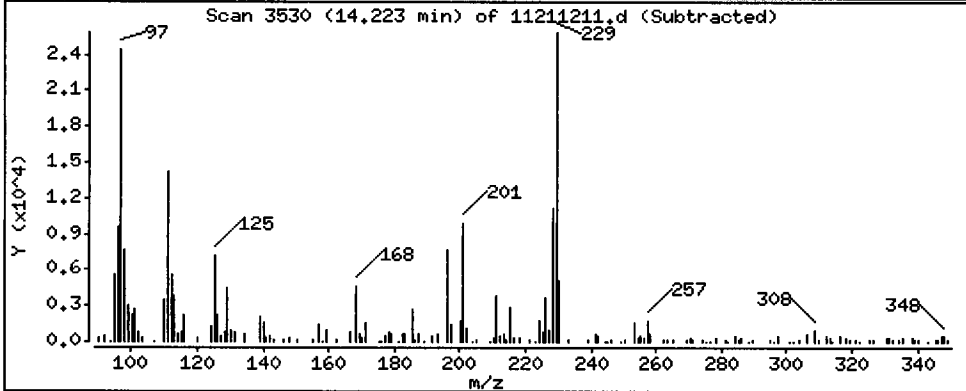
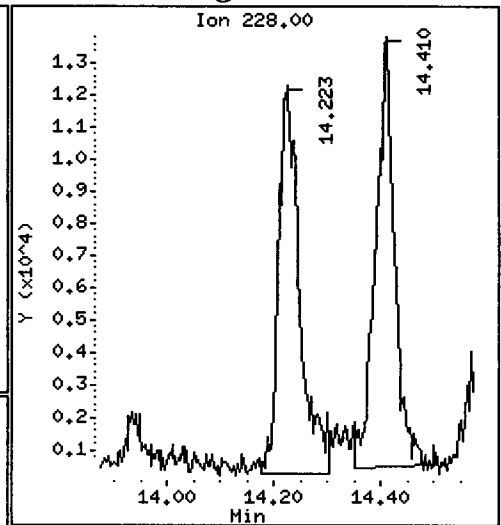
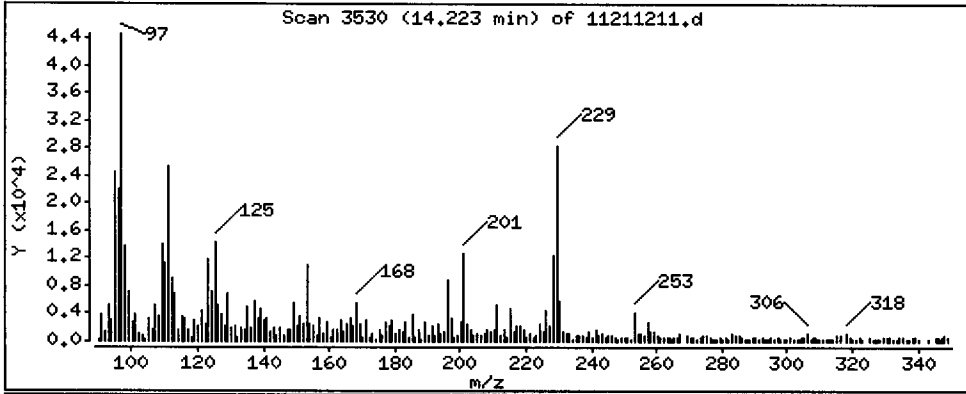
Column phase: ZB-5msi

Column diameter: 0.25

46 Benzo(a)anthracene

Concentration: 4,547 ug/kg

*604*



Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

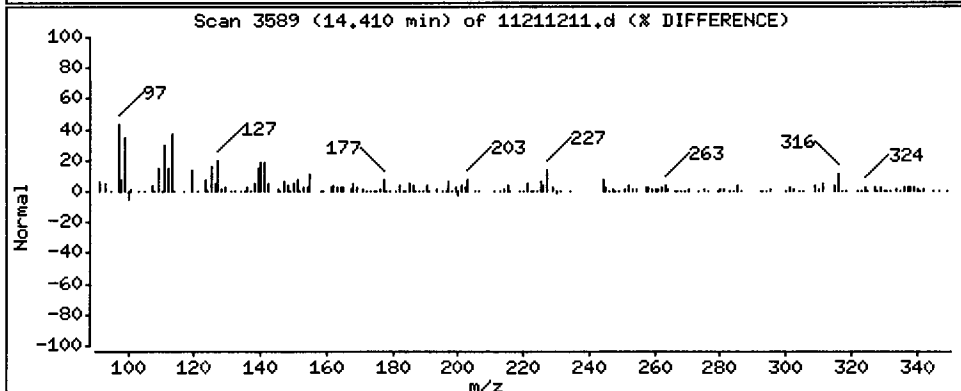
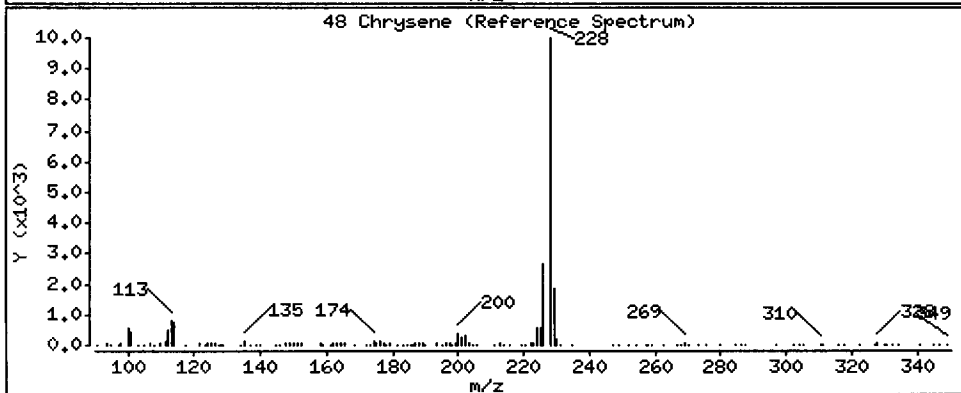
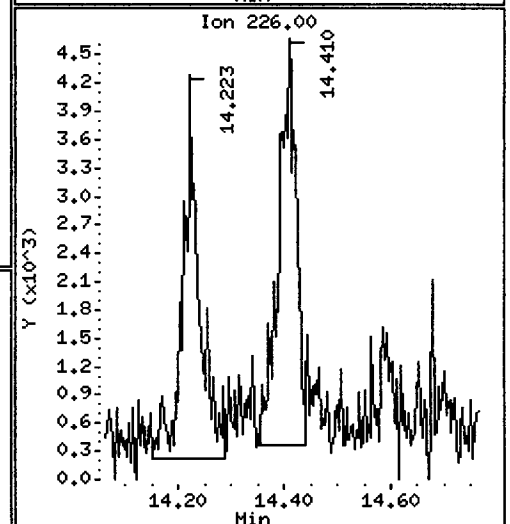
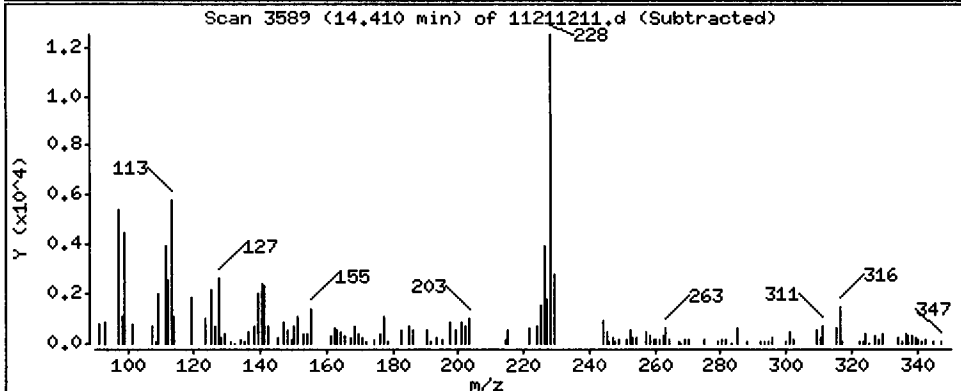
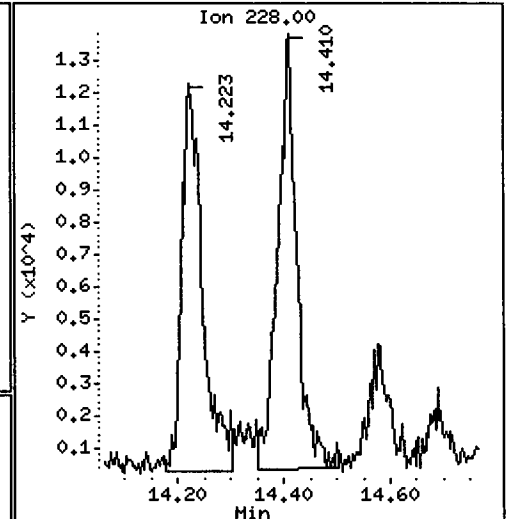
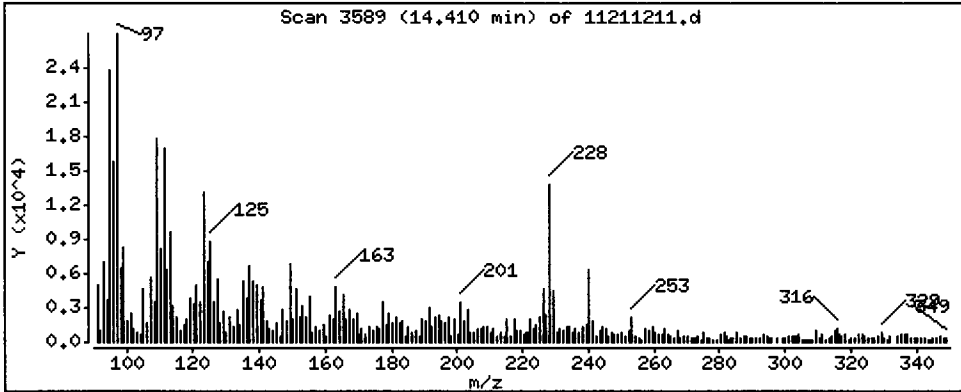
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

48 Chrysene

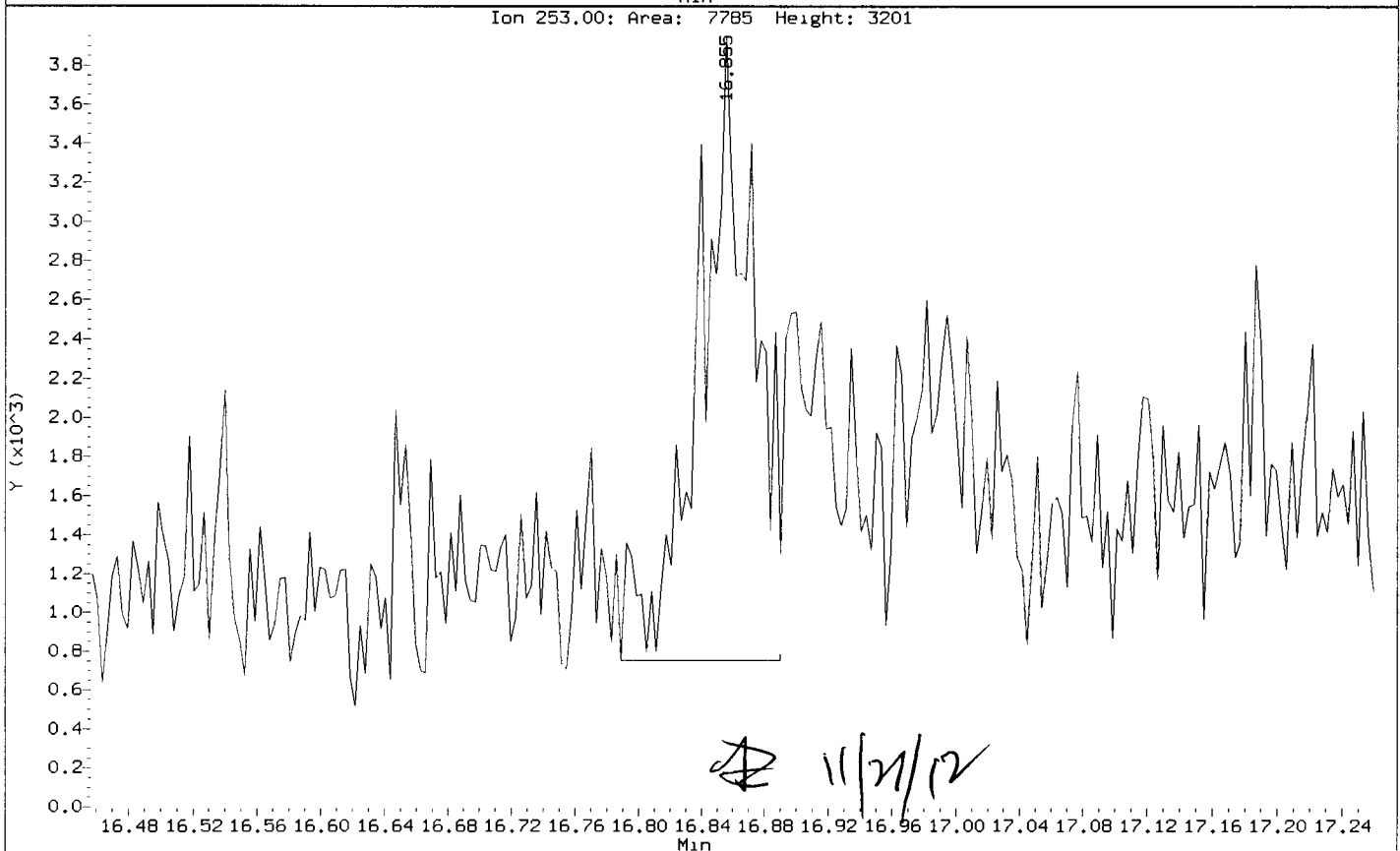
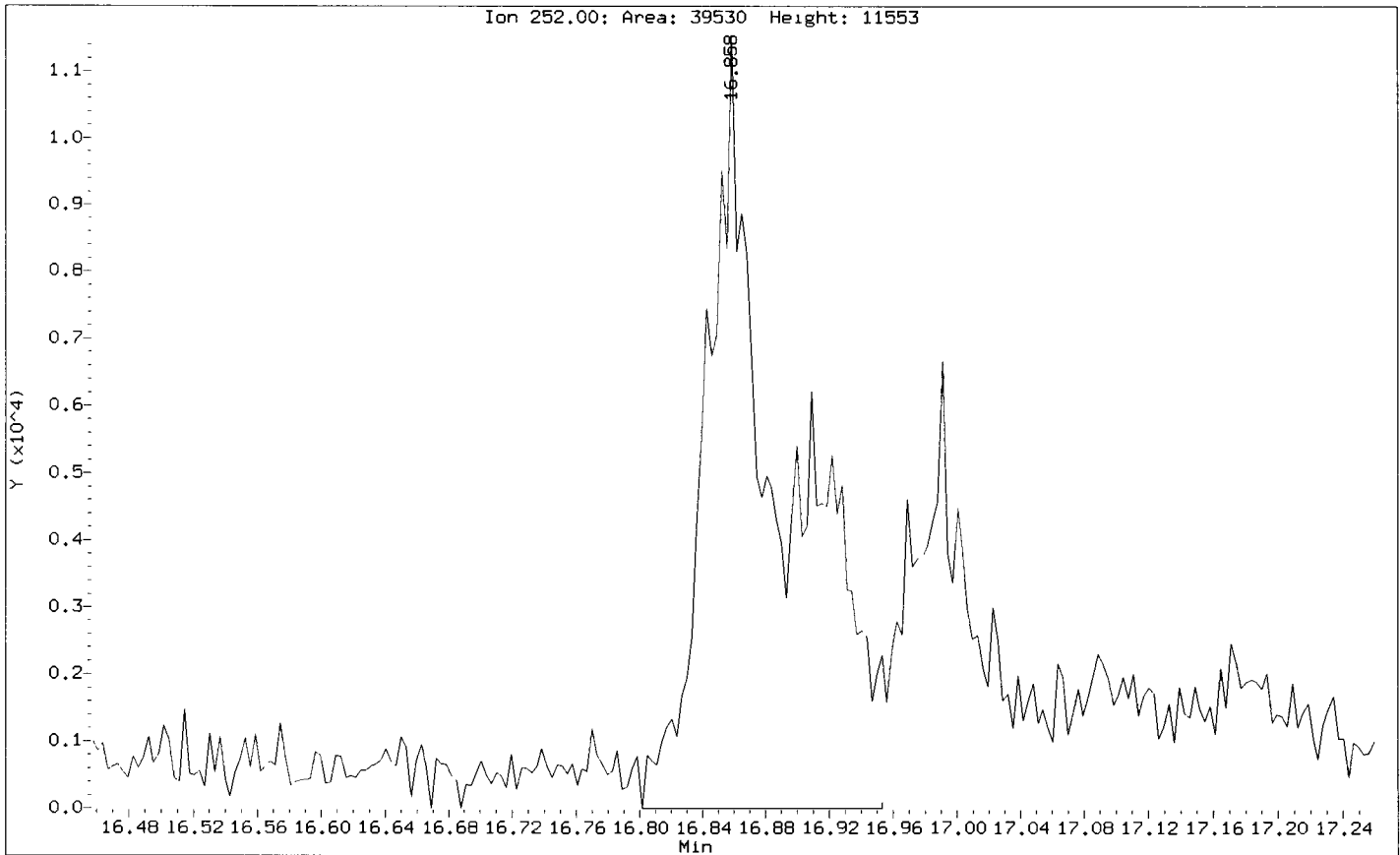
Concentration: 4,874 ug/kg





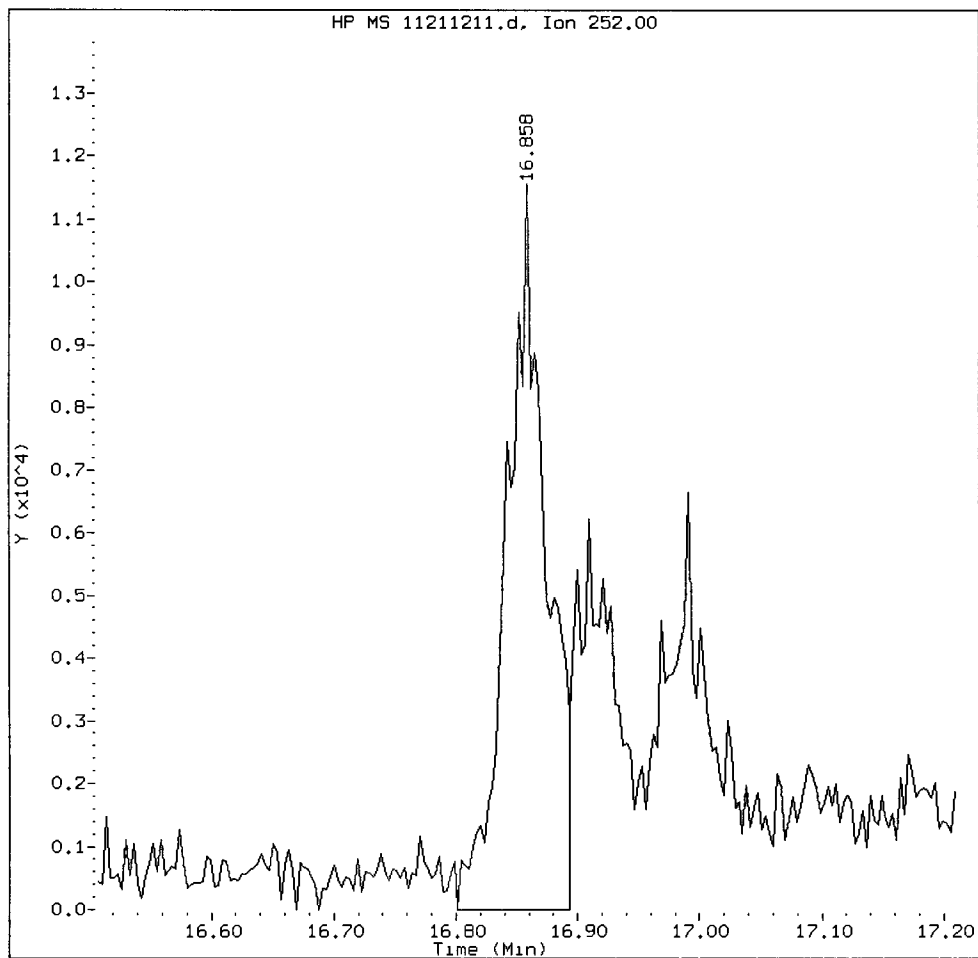
Data File: /chem3/nt11.1/20121121.b/11211211.d  
Injection Date: 21-NOV-2012 16:12  
Instrument: nt11.1  
Client Sample ID: SG-15-S-E-121107

Compound: Benzo(b)fluoranthene  
CAS Number: 205-99-2



VR58G, /chem3/nt11.i/20121121.b/11211211.d

Benzo(b)fluoranthene Amount: 0.14 Area: 25796



MANUAL INTEGRATION for Benzo(b)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AD

Date: 11/21/12

Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

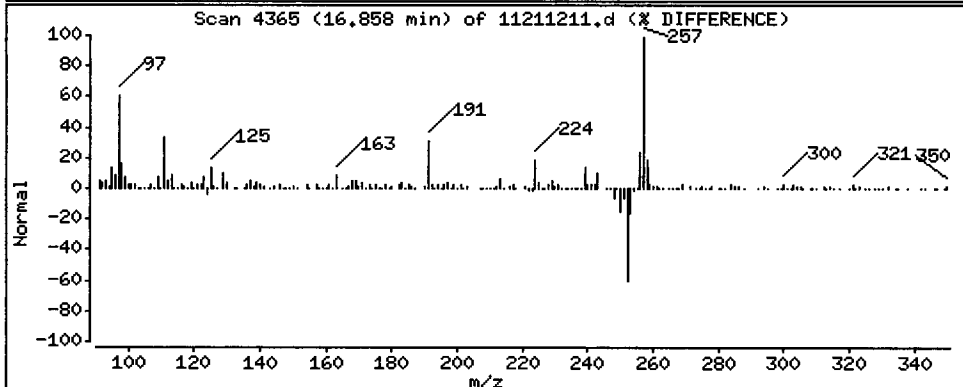
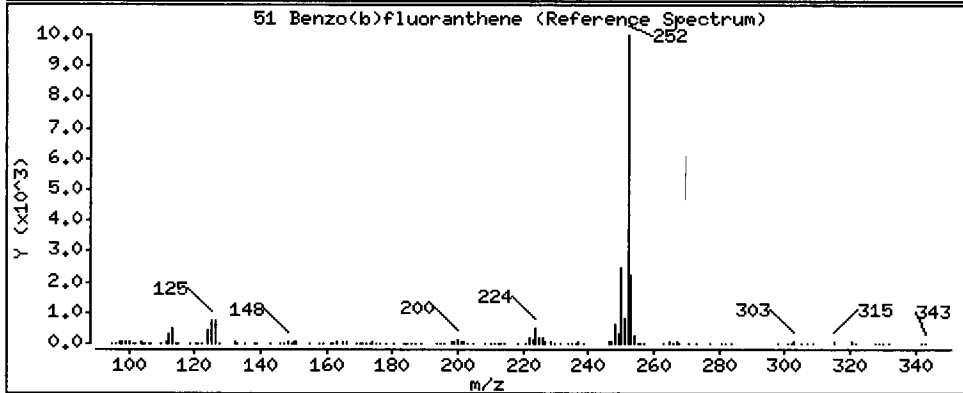
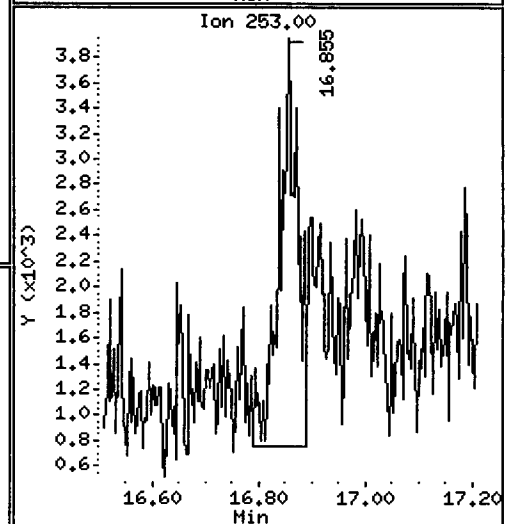
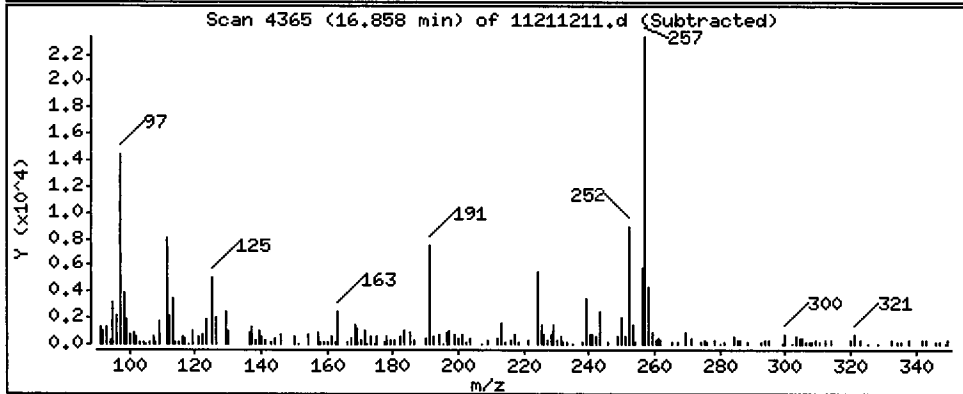
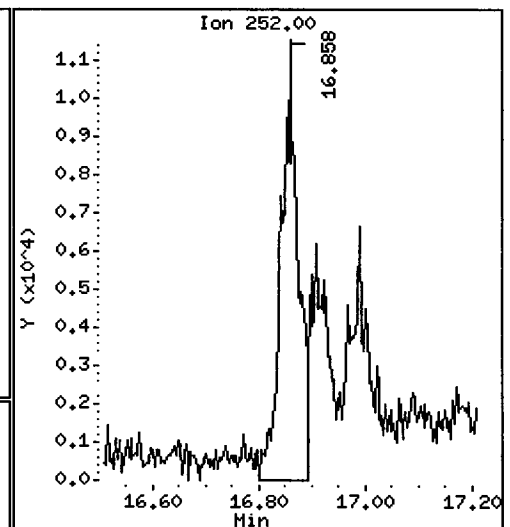
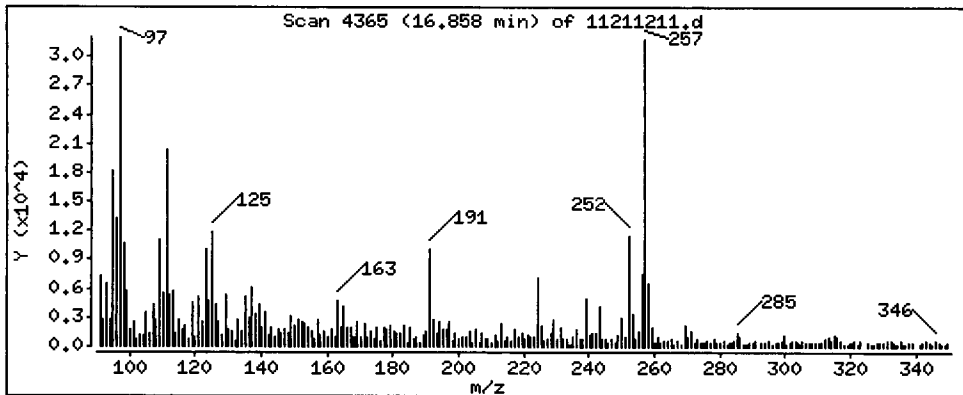
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

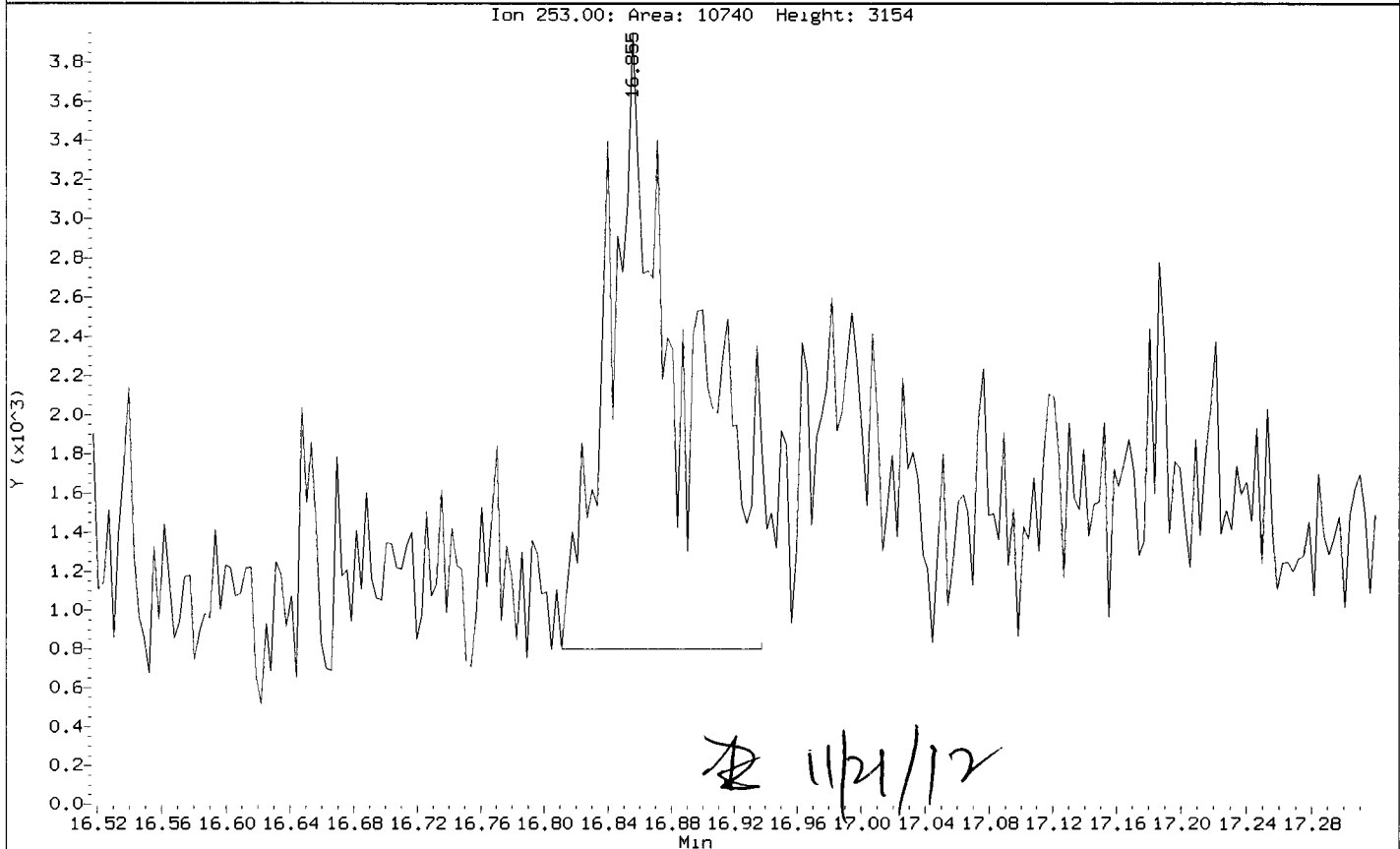
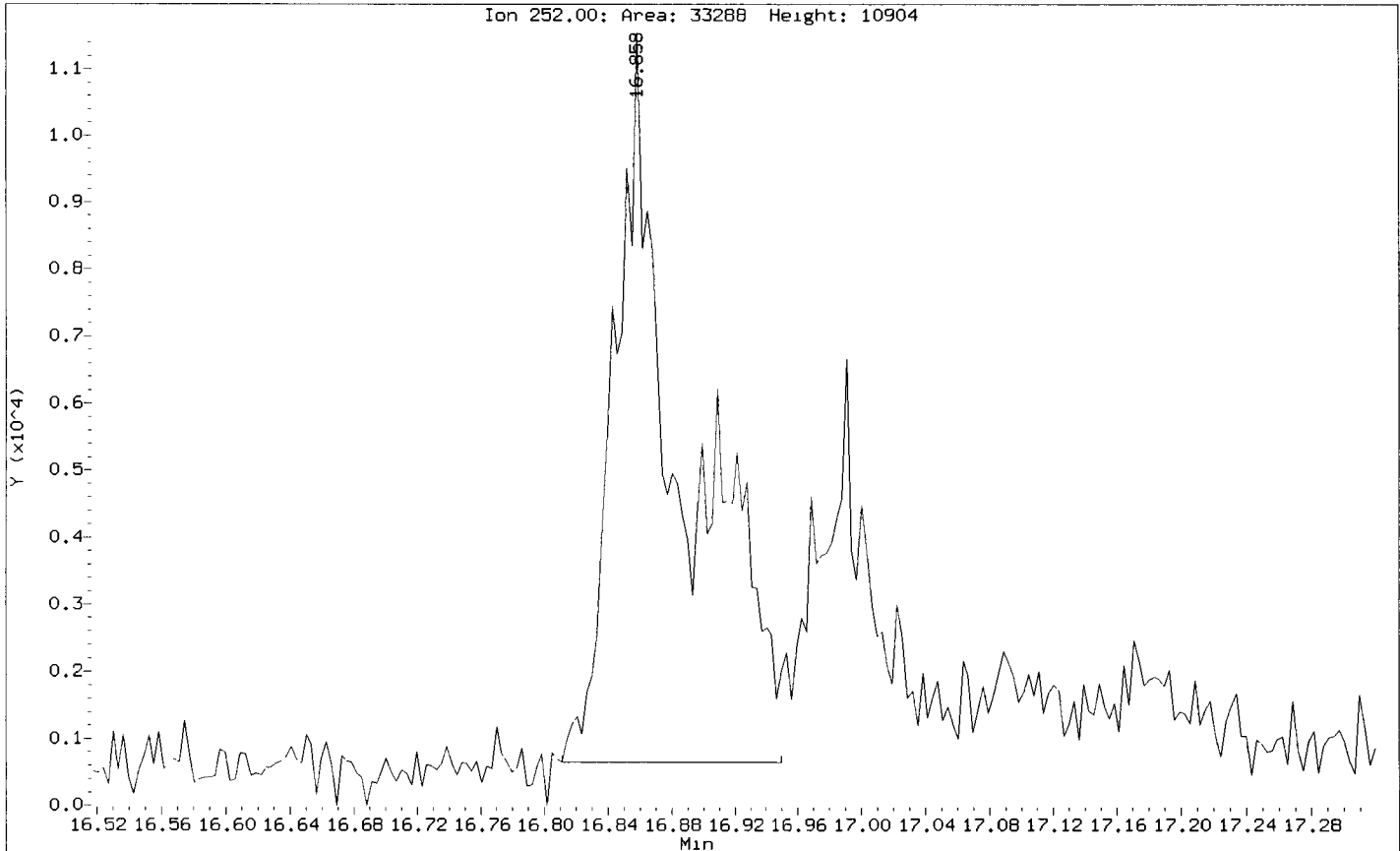
51 Benzo(b)fluoranthene

Concentration: 6.782 ug/kg



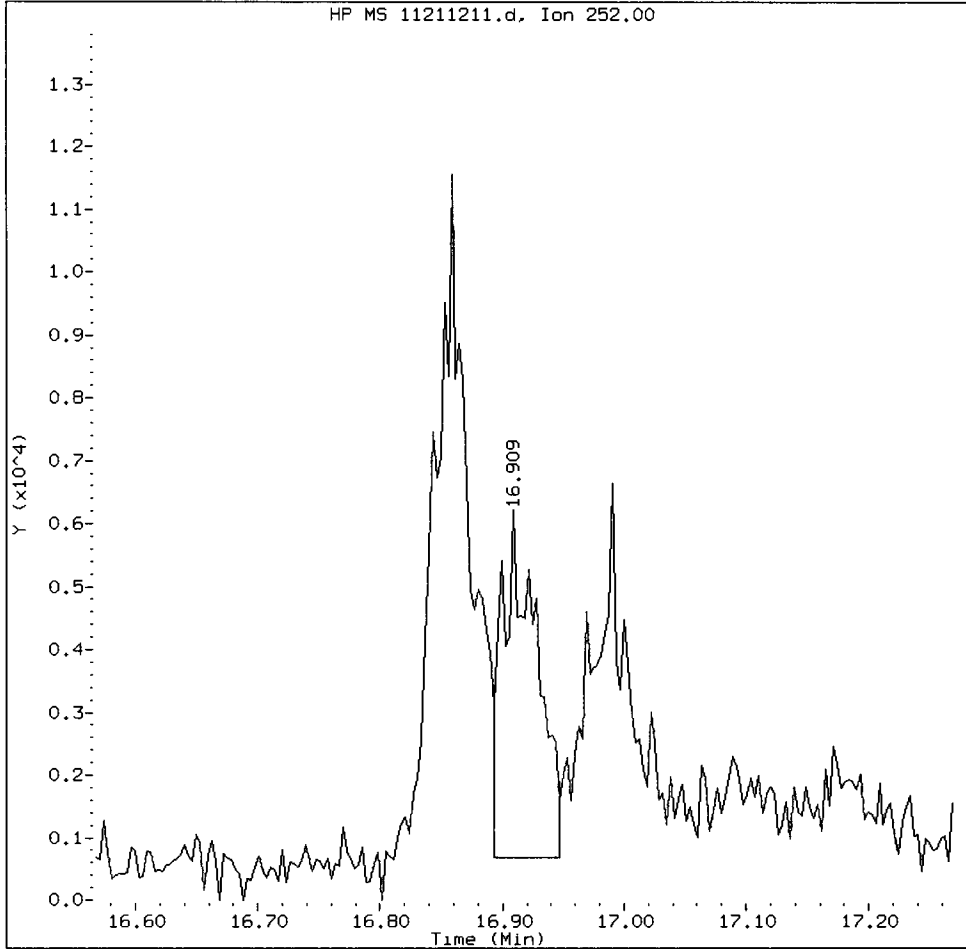
Data File: /chem3/nt11.1/20121121.b/11211211.d  
Injection Date: 21-NOV-2012 16:12  
Instrument: nt11.1  
Client Sample ID: SG-15-S-E-121107

Compound: Benzo(k)fluoranthene  
CAS Number: 207-08-9



VR58G, /chem3/nt11.i/20121121.b/11211211.d

Benzo(k)fluoranthene Amount: 0.06 Area: 11159



MANUAL INTEGRATION for Benzo(k)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AB

Date: 11/21/12

Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58G

Volume Injected (uL): 1.0

Operator: JZ

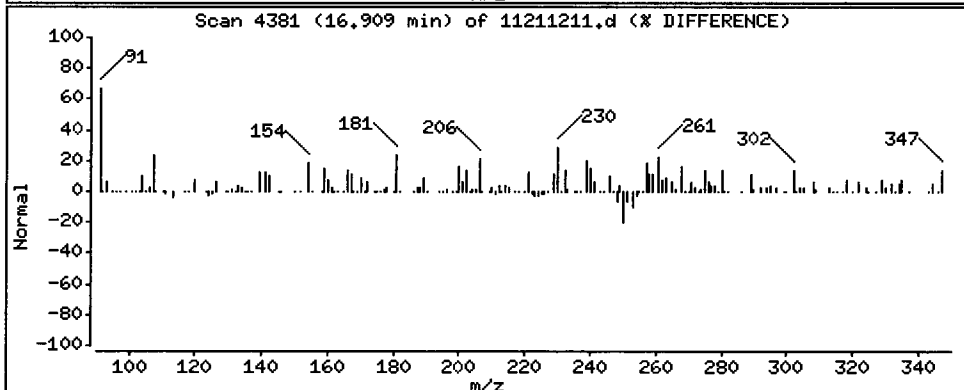
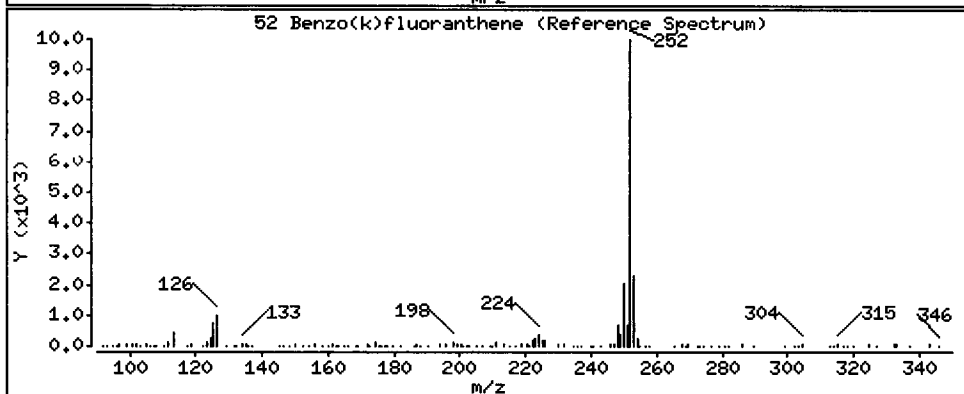
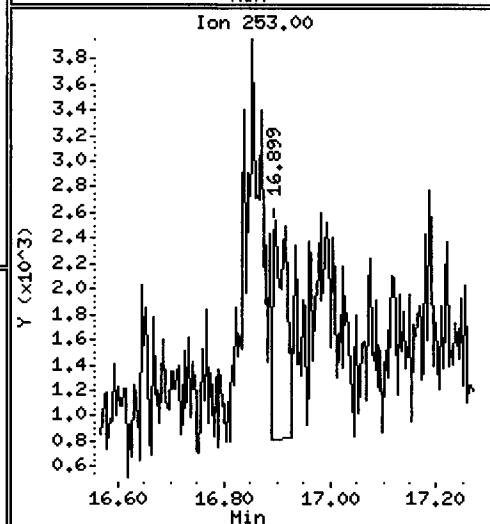
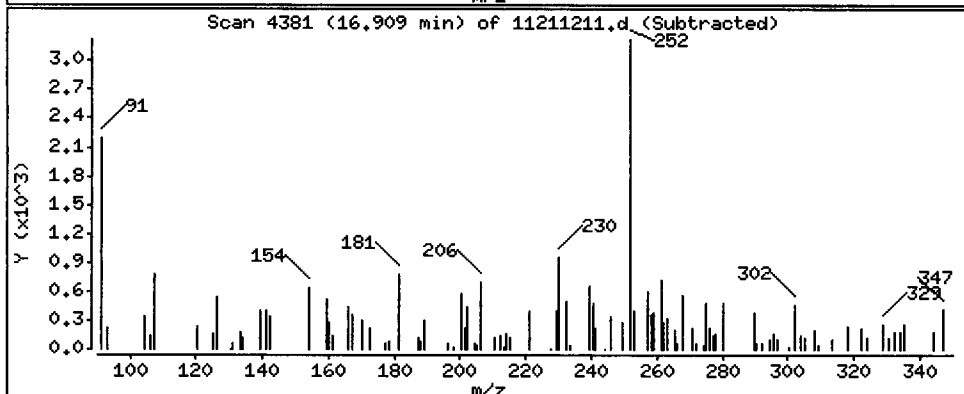
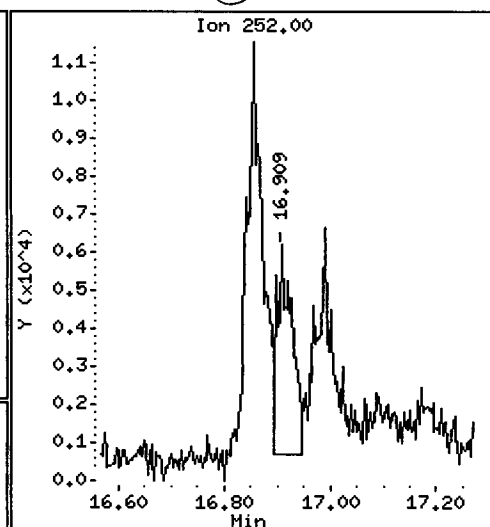
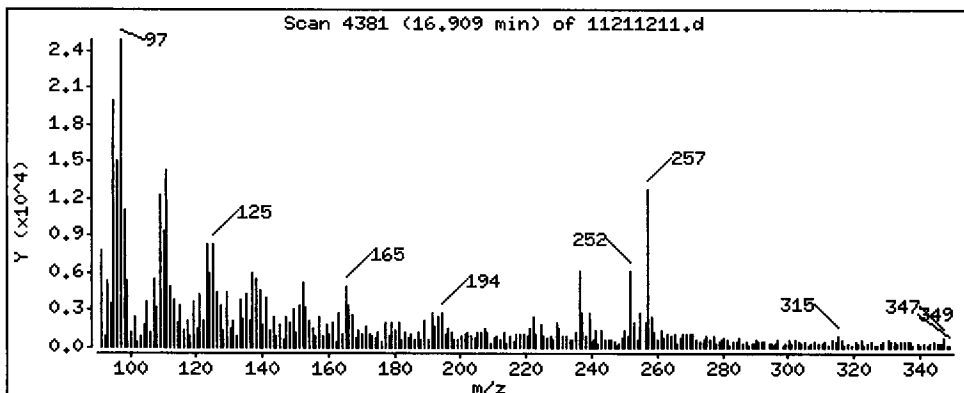
Column phase: ZB-5msi

Column diameter: 0.25

52 Benzo(k)fluoranthene

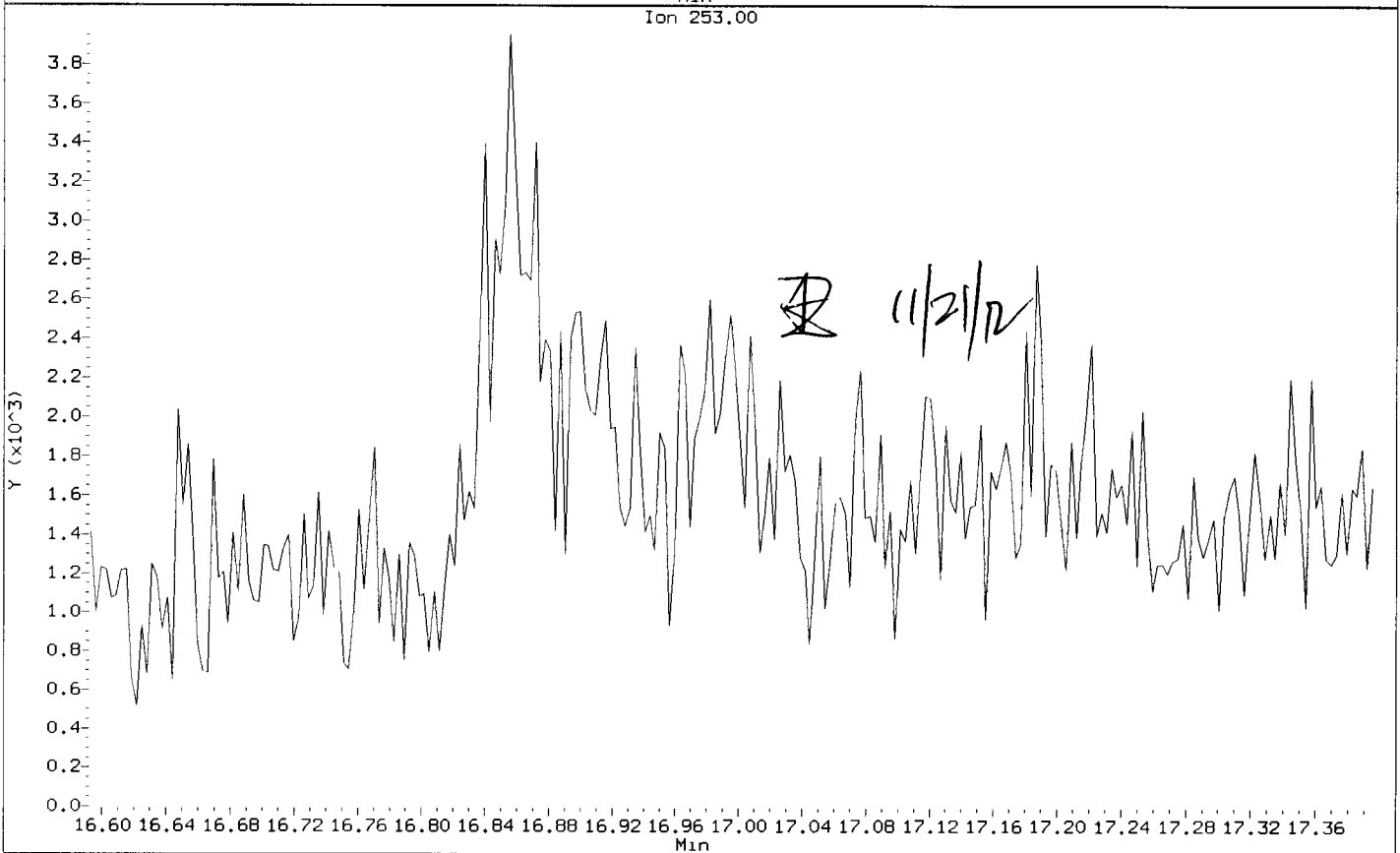
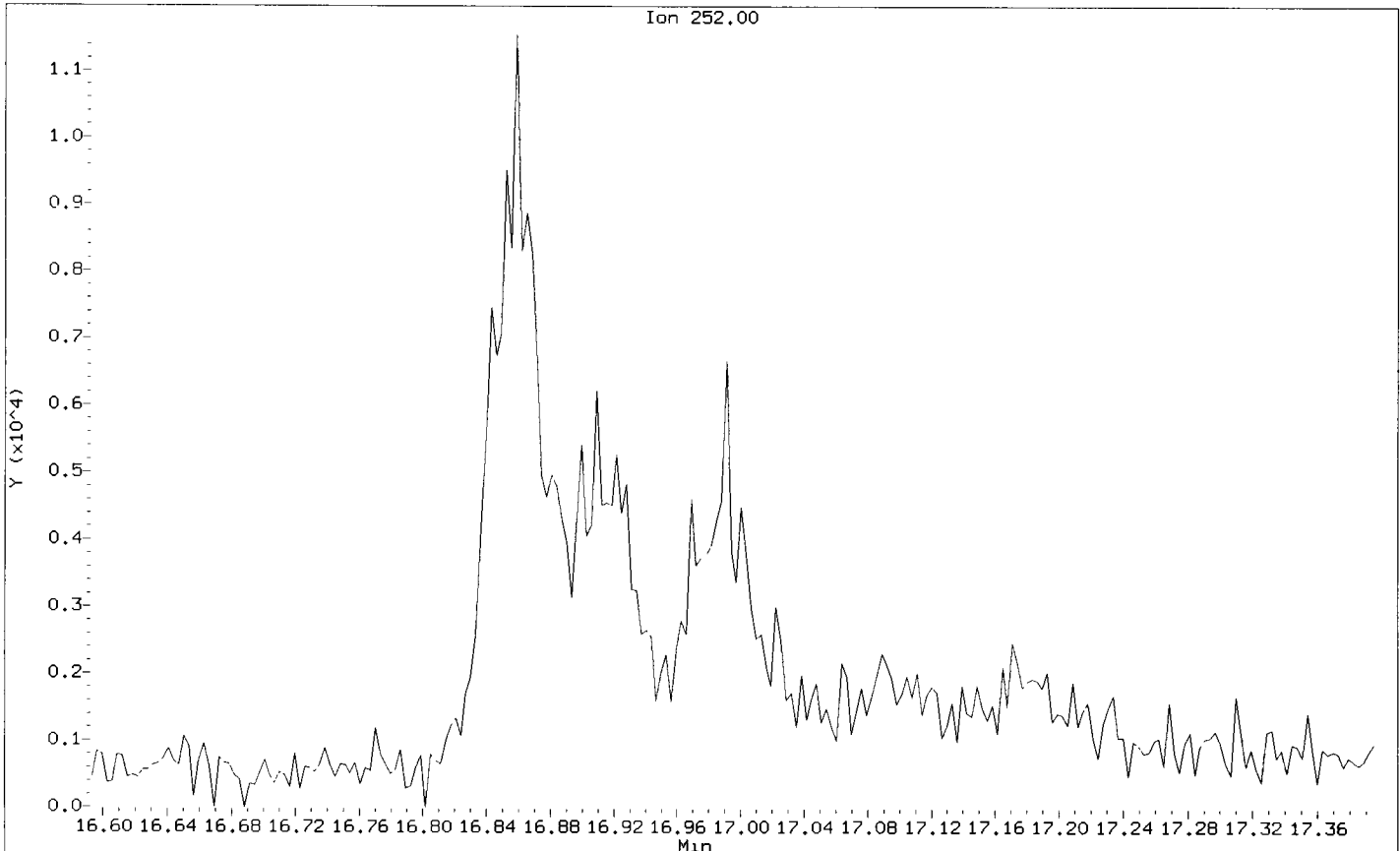
Concentration: 2,701 ug/kg

*(Handwritten initials)*

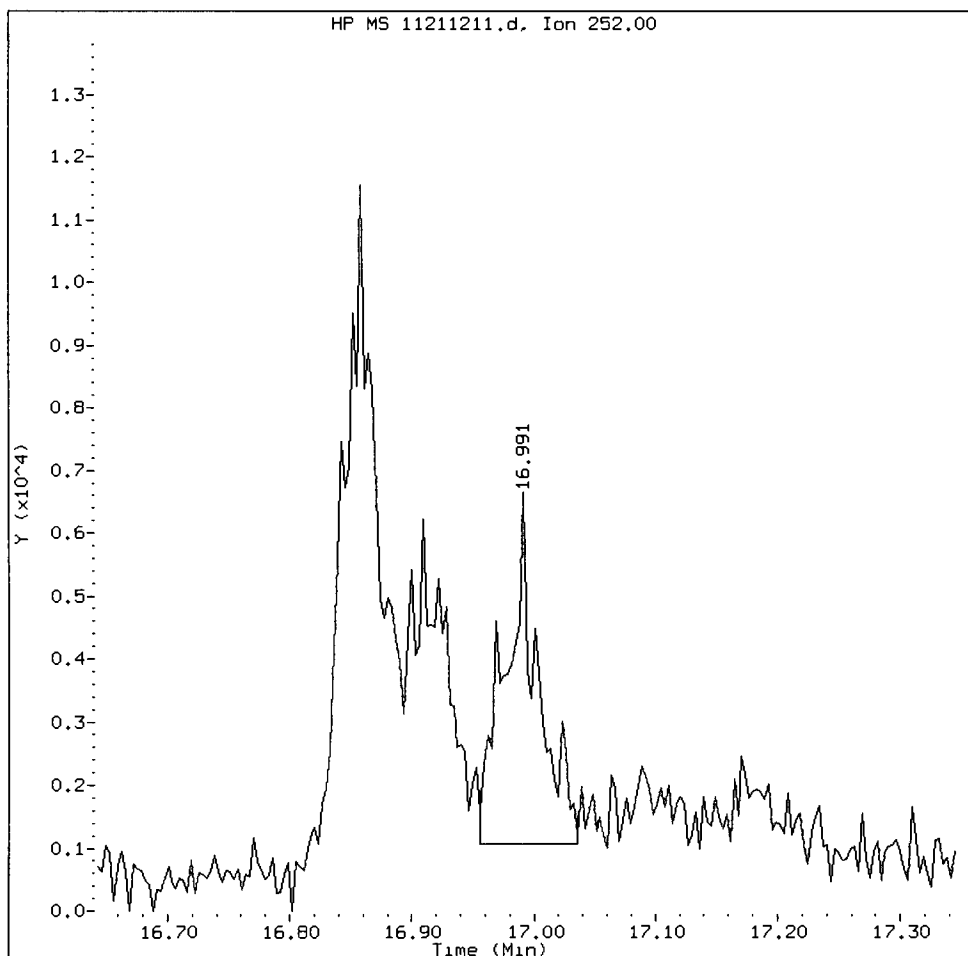


Data File: /chem3/nt11.1/20121121.b/11211211.d  
Injection Date: 21-NOV-2012 16:12  
Instrument: nt11.1  
Client Sample ID: SG-15-S-E-121107

Compound: Benzo(j)fluoranthene  
CAS Number:



Benzo(j)fluoranthene Amount: 0.05 Area: 10283



MANUAL INTEGRATION for Benzo(j)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: [Signature]

Date: 11/21/12



Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58C

Volume Injected (uL): 1.0

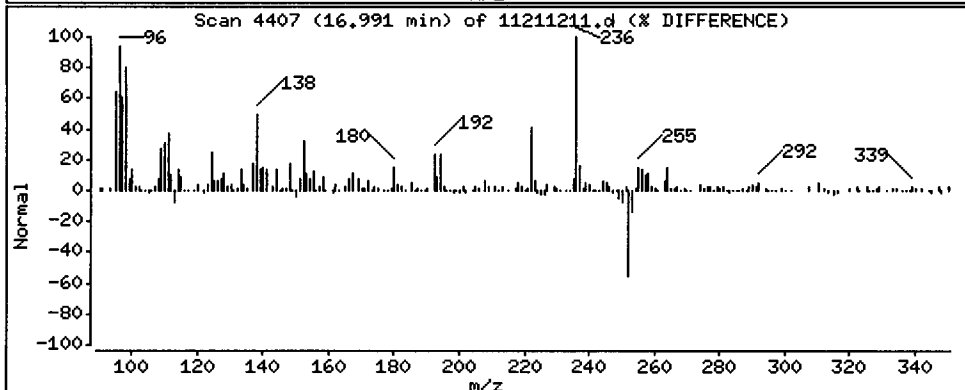
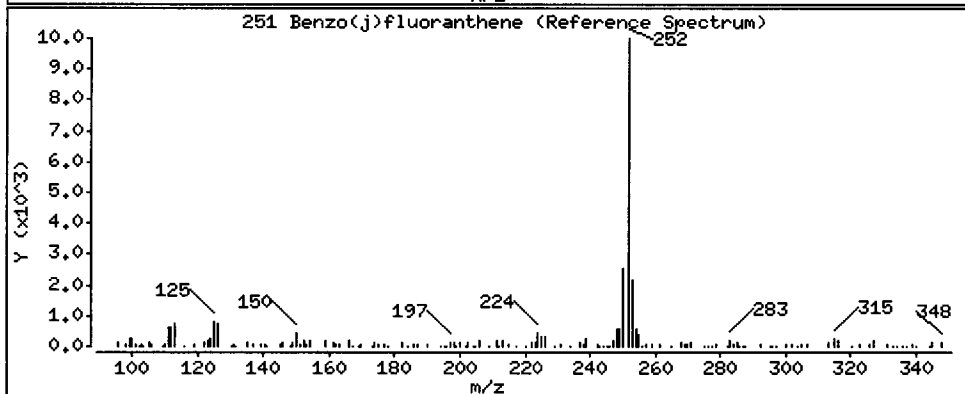
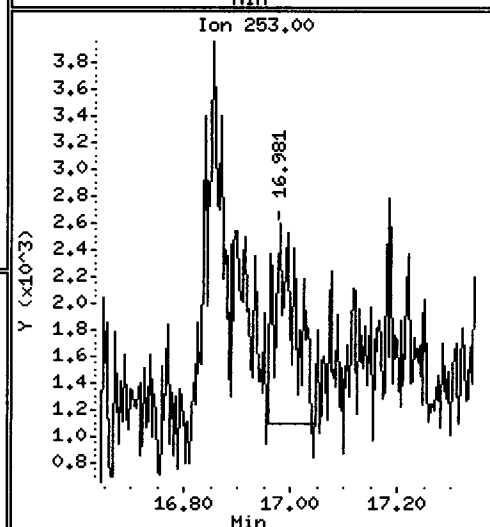
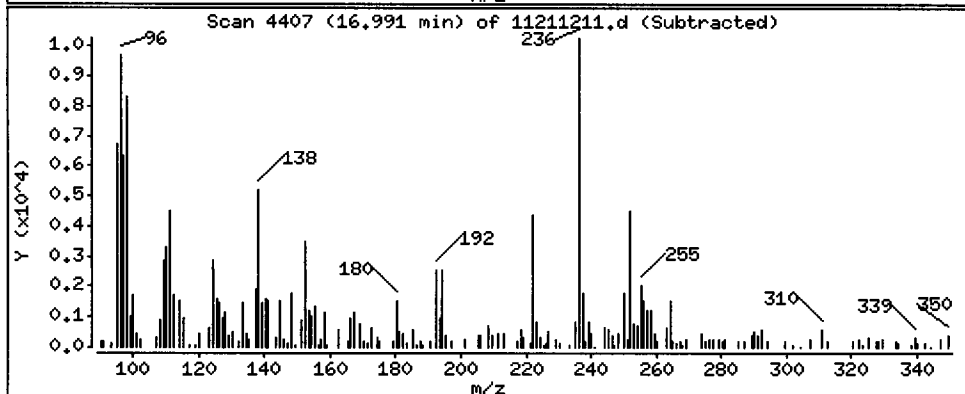
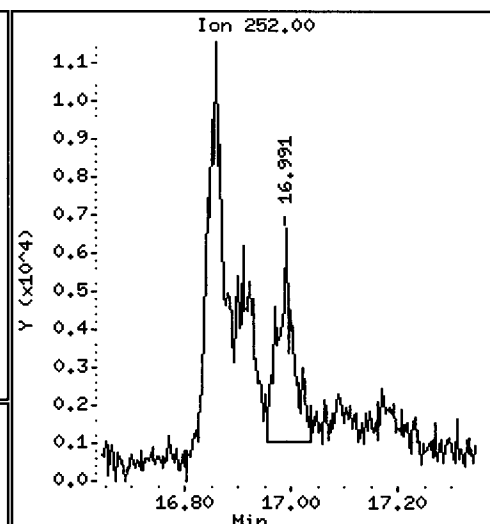
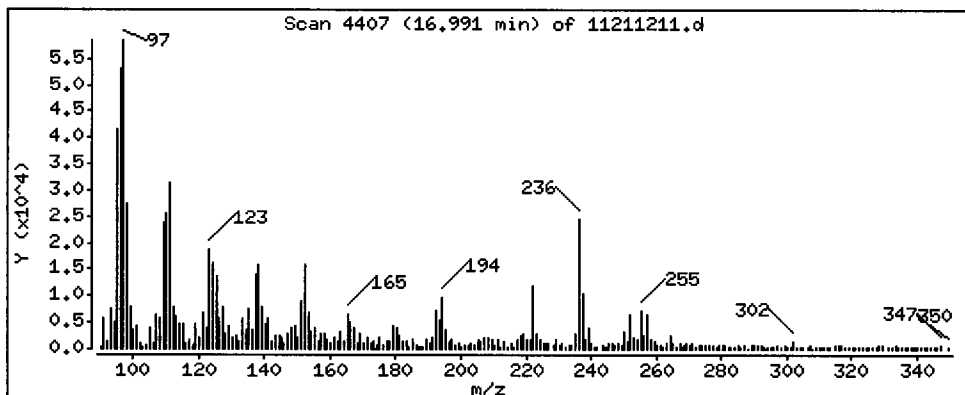
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

251 Benzo(j)fluoranthene

Concentration: 2.359 ug/kg



Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58G

Volume Injected (uL): 1.0

Operator: JZ

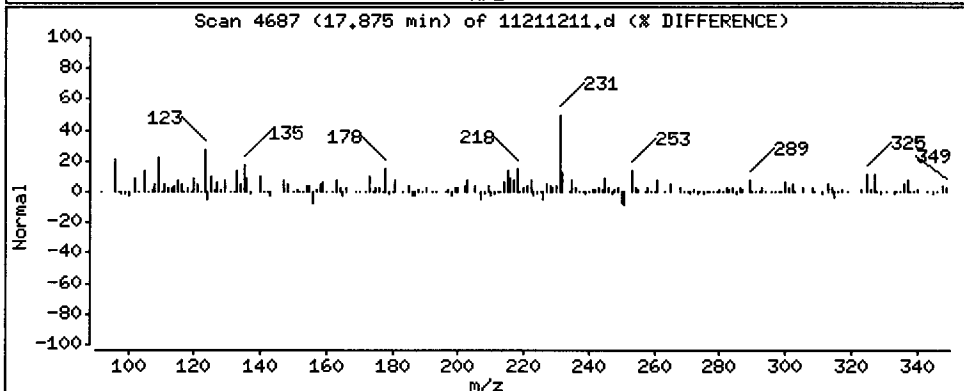
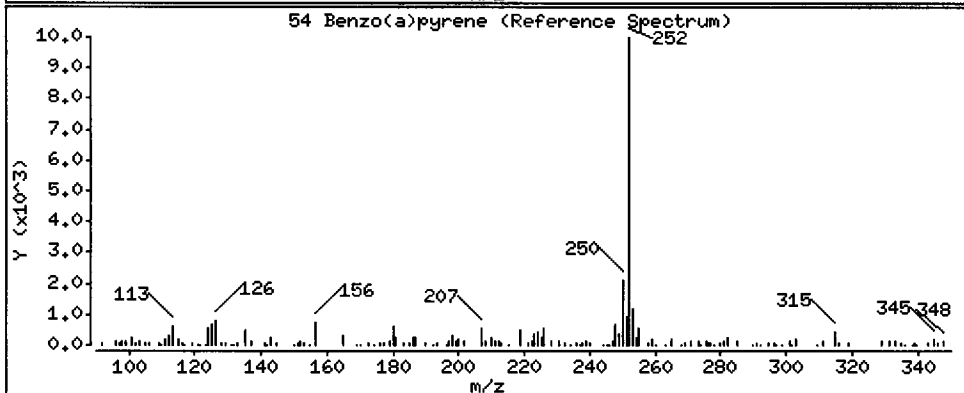
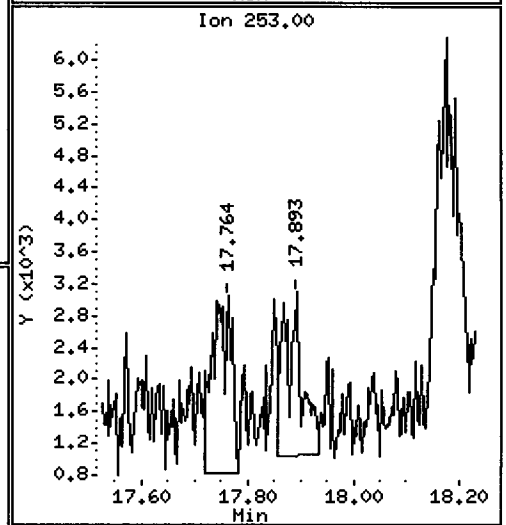
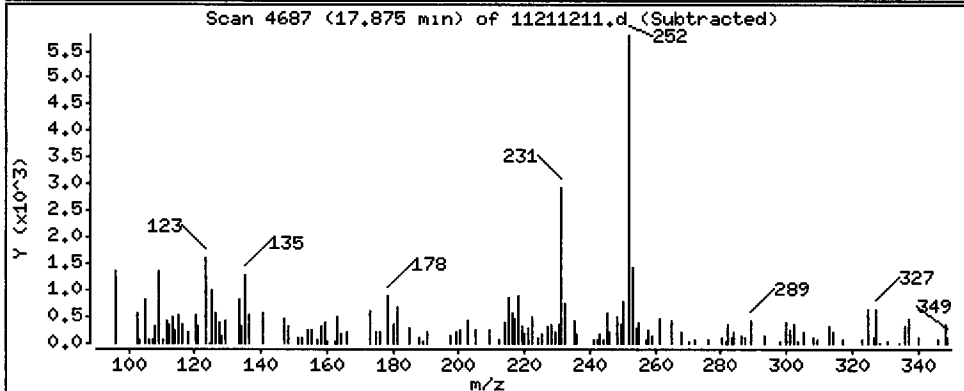
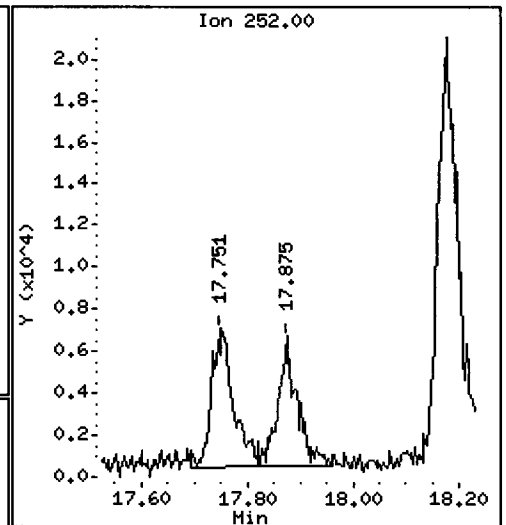
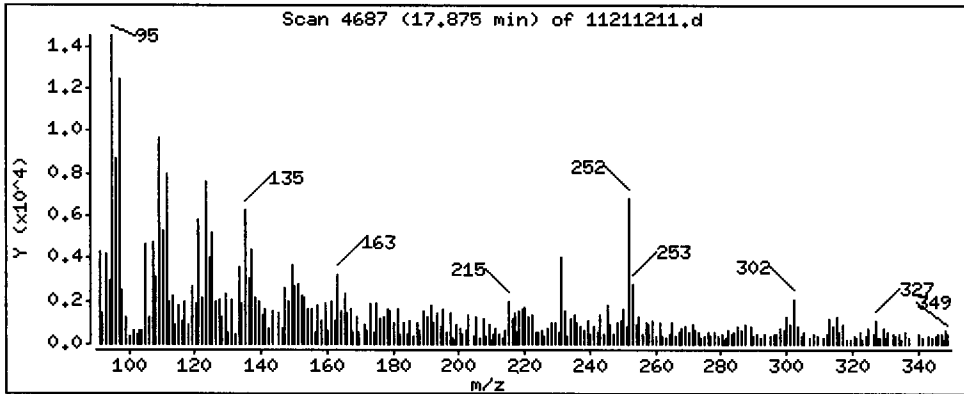
Column phase: ZB-5ms1

Column diameter: 0.25

*OK*

54 Benzo(a)pyrene

Concentration: 4.085 ug/kg



Date : 21-NOV-2012 16:12

Client ID: SG-15-S-E-121107

Instrument: nt11.i

Sample Info: VR58G

Volume Injected (uL): 1.0

Operator: JZ

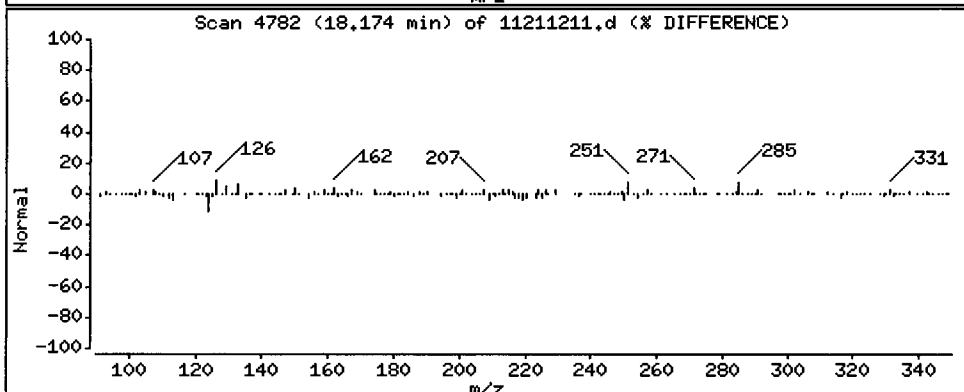
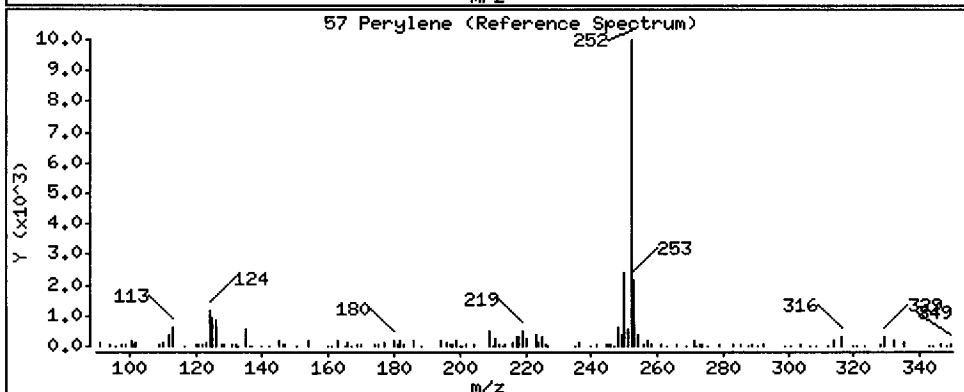
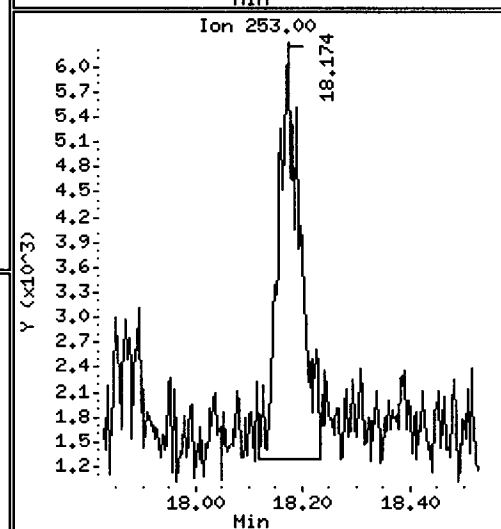
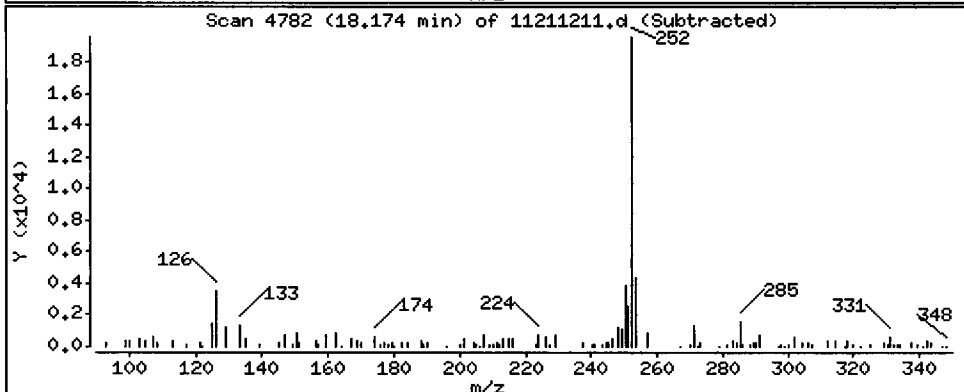
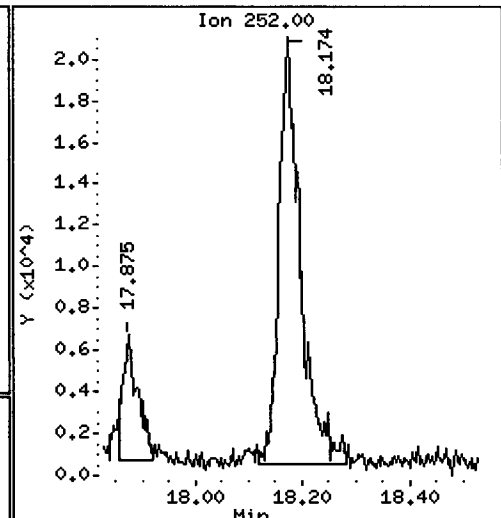
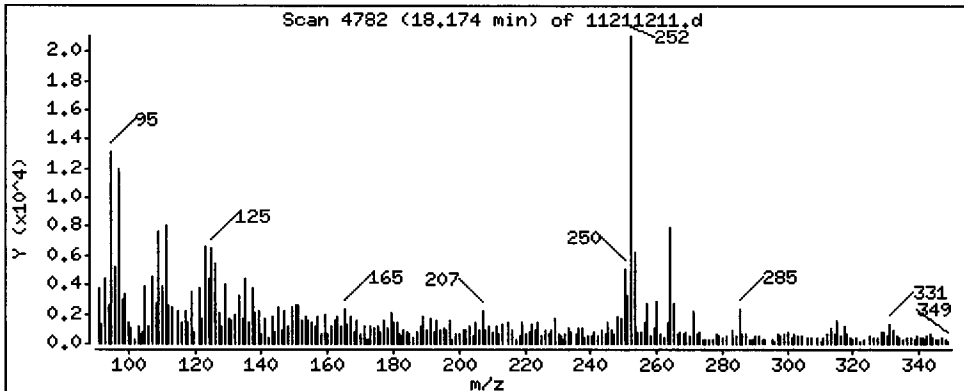
Column phase: ZB-5msi

Column diameter: 0.25

*NR 9/12*

57 Perylene

Concentration: 14.45 ug/kg



CO-ELUTION SUMMARY FOR FILE - 11211211.d

Lab ID: VR58G, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2012

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211212.d  
 Lab Smp Id: VR58H Client Smp ID: SG-16-S-E-121107  
 Inj Date : 21-NOV-2012 16:42  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58H  
 Misc Info : 12-22336  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 21-Nov-2012 15:33 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 12  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

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

*Handwritten signature and date: 11/21/12*

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	13.06000	Weight of sample extracted (g)
M	21.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	136	5.435	5.438	(1.000)	726451	2.00000		
7 Naphthalene	128				Compound Not Detected.			
\$ 12 2-Methylnaphthalene-d10	152	6.171	6.174	(1.135)	378999	1.52694	74.00	
14 2-Methylnaphthalene	141				Compound Not Detected.			
15 1-methylnaphthalene	141				Compound Not Detected.			
21 Acenaphthylene	152				Compound Not Detected.			
* 22 Acenaphthene-d10	164	7.710	7.714	(1.000)	410219	2.00000		
23 Acenaphthene	153				Compound Not Detected.			
11 Dibenzofuran	168				Compound Not Detected.			
25 Fluorene	166				Compound Not Detected.			
* 28 Phenanthrene-d10	188	9.733	9.736	(1.000)	603315	2.00000		
30 Phenanthrene	178	9.768	9.768	(1.004)	19646	0.05391	2.612	
31 Anthracene	178				Compound Not Detected.			
36 Fluoranthene	202	11.421	11.425	(1.173)	38799	0.10626	5.150	
39 Pyrene	202	11.888	11.892	(0.829)	34118	0.09220	4.468	
46 Benzo (a) anthracene	228				Compound Not Detected.			

Compounds	QUANT SIG			CONCENTRATIONS			
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 47 Chrysene-d12	240	14.340	14.343	(1.000)	671490	2.00000	
48 Chrysene	228	14.407	14.413	(1.005)	19971	0.06098	2.955
51 Benzo(b)fluoranthene	252	16.843	16.858	(0.931)	14251	0.08276	4.011 (M)
52 Benzo(k)fluoranthene	252	16.906	16.918	(0.934)	9819	0.05251	2.544 (M)
251 Benzo(j)fluoranthene	252	16.978	16.994	(0.938)	6802	0.03448	1.671 (M)
54 Benzo(a)pyrene	252	17.865	17.878	(0.987)	10399	0.05945	2.881
* 56 Perylene-d12	264	18.099	18.102	(1.000)	372077	2.00000	
63 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.323	20.339	(1.123)	211315	1.71312	83.02
62 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
61 Benzo(g,h,i)perylene	276	Compound Not Detected.					
57 Perylene	252	18.162	18.177	(1.003)	28402	0.15658	7.588

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211212.d  
 Lab Smp Id: VR58H  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22336

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-16-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	726451	40.75
22 Acenaphthene-d10	284255	142128	568510	410219	44.31
28 Phenanthrene-d10	410660	205330	821320	603315	46.91
47 Chrysene-d12	467886	233943	935772	671490	43.52
56 Perylene-d12	472330	236165	944660	372077	-21.23

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	-0.06
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	-0.04
28 Phenanthrene-d10	9.74	9.24	10.24	9.73	-0.03
47 Chrysene-d12	14.34	13.84	14.84	14.34	-0.02
56 Perylene-d12	18.10	17.60	18.60	18.10	-0.02

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

Analytical Resources, Inc.

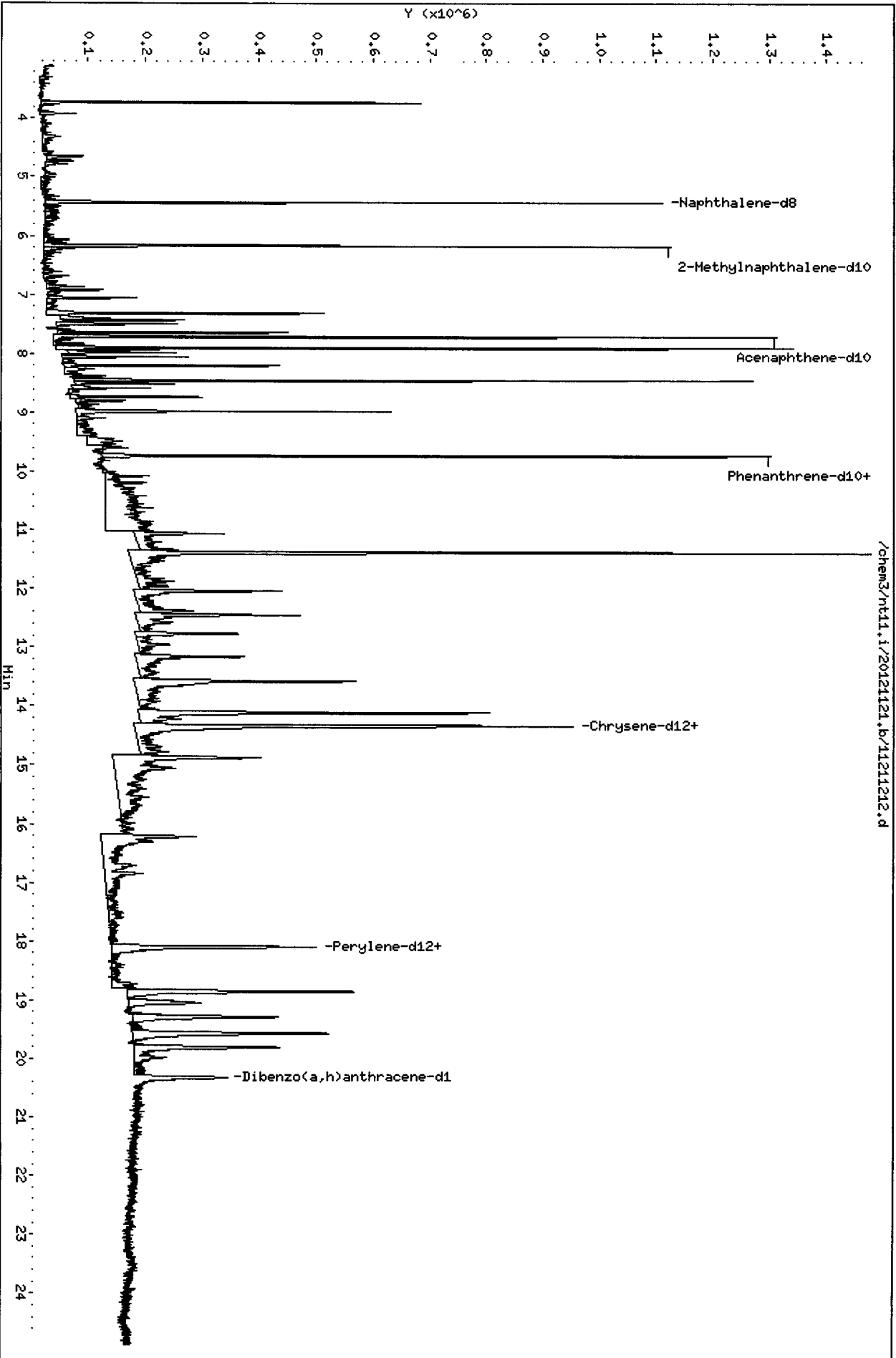
RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58H  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA11512.m  
Misc Info: 12-22336

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-16-S-E-121107  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	145.4	74.00	50.90	34-100
\$ 60 Dibenzo(a,h) anthra	145.4	83.02	57.10	10-117





VR58 01270

Date : 21-NOV-2012 16:42

Client ID: SG-16-S-E-121107

Instrument: nt11.1

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: JZ

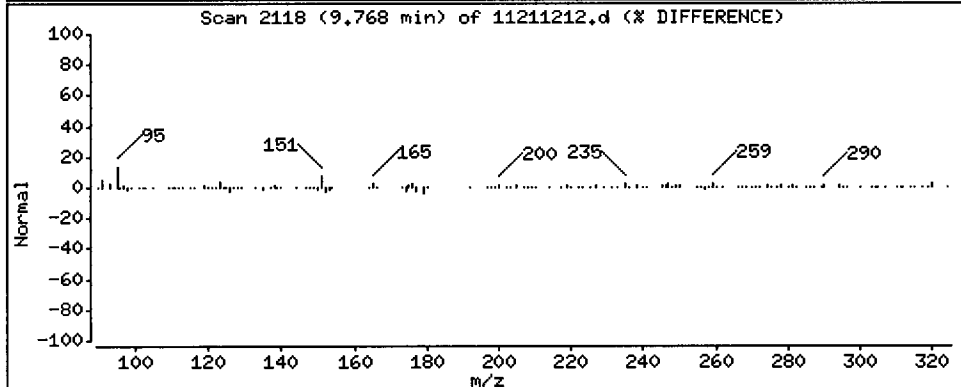
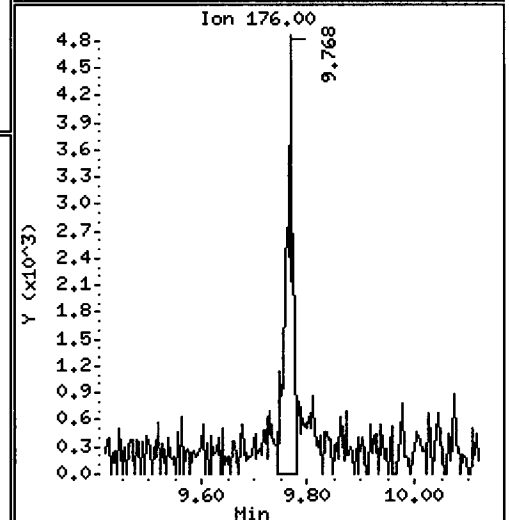
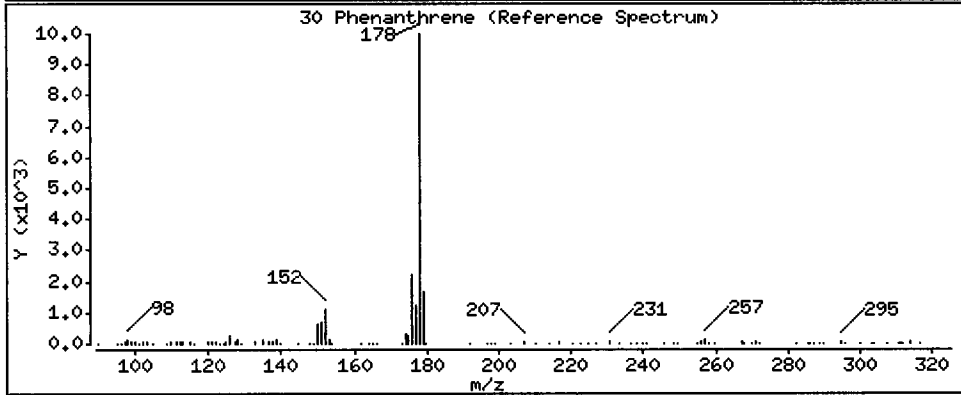
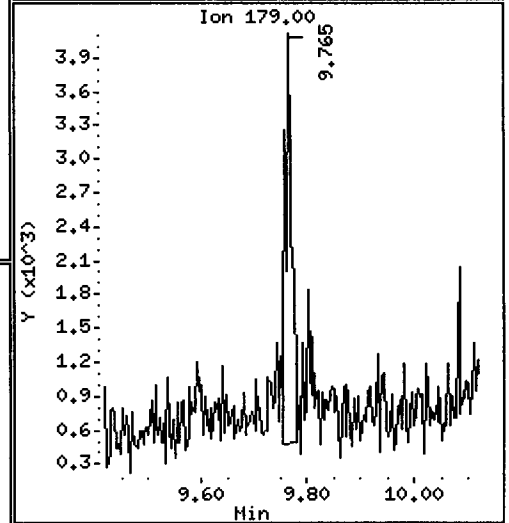
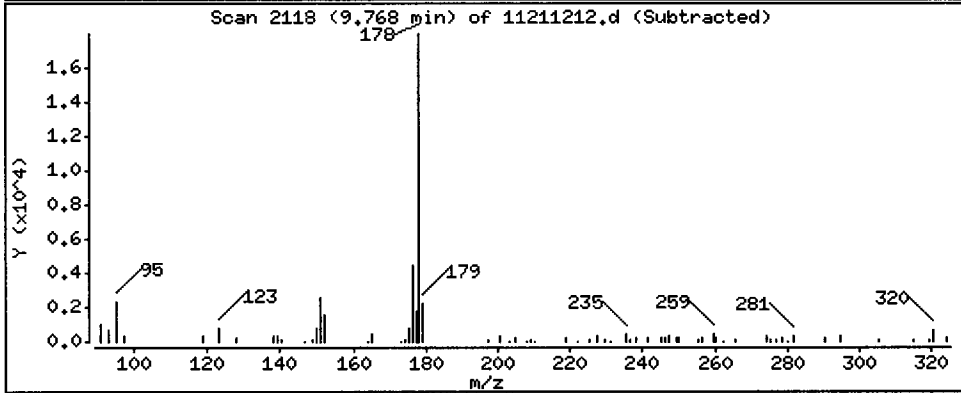
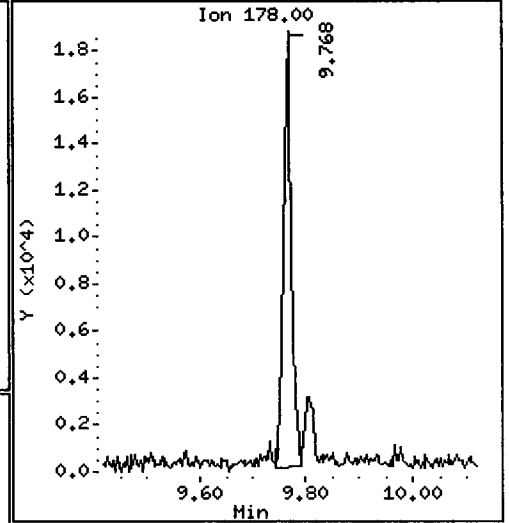
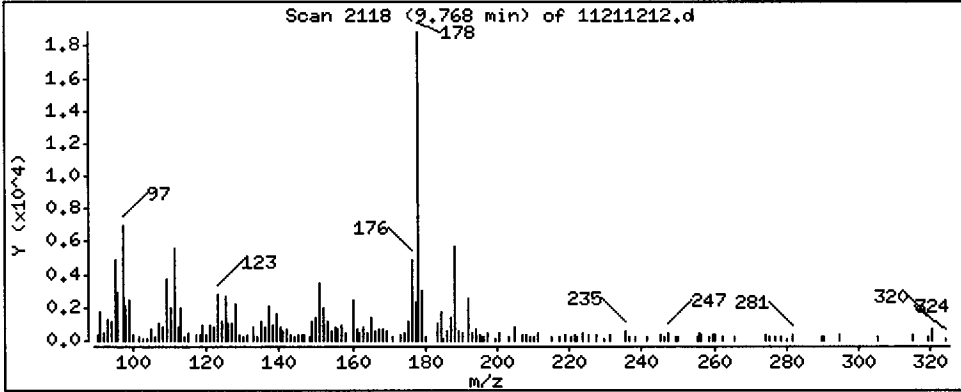
Column phase: ZB-5msi

Column diameter: 0.25

30 Phenanthrene

Concentration: 2.612 ug/kg

*JZ*



Date : 21-NOV-2012 16:42

Client ID: SG-16-S-E-121107

Instrument: nt11.i

Sample Info: VR58H

Volume Injected (uL): 1.0

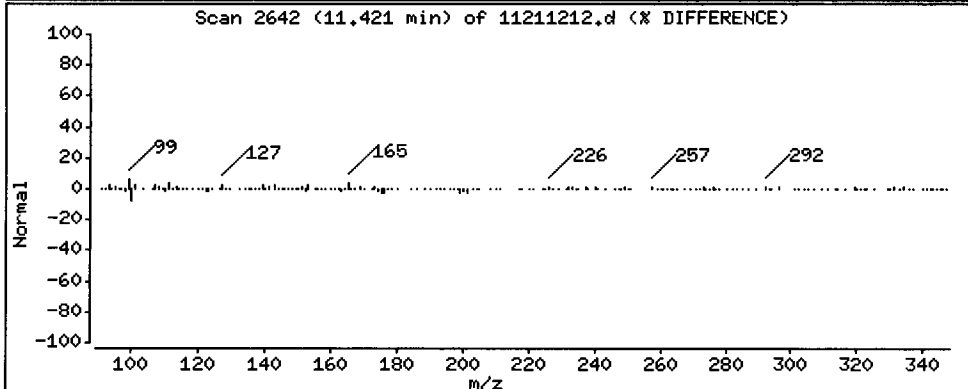
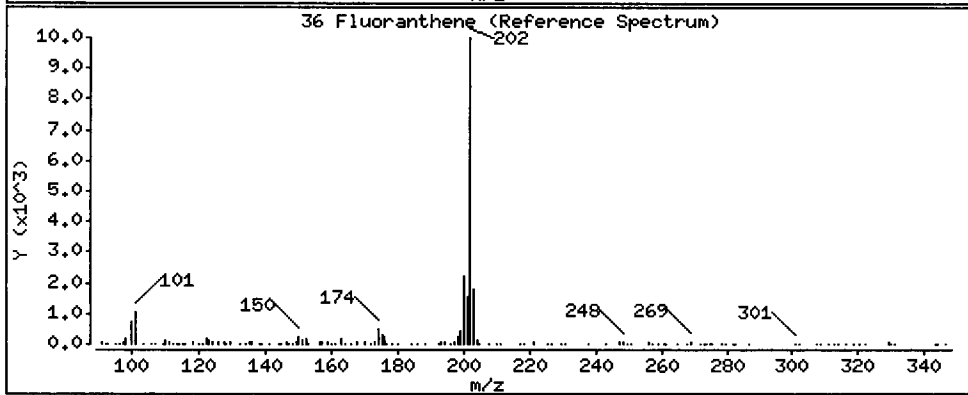
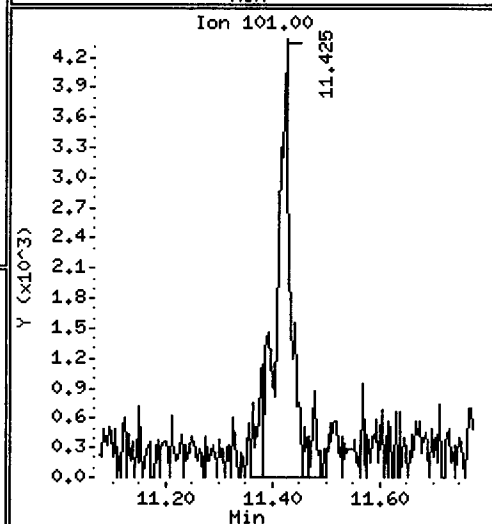
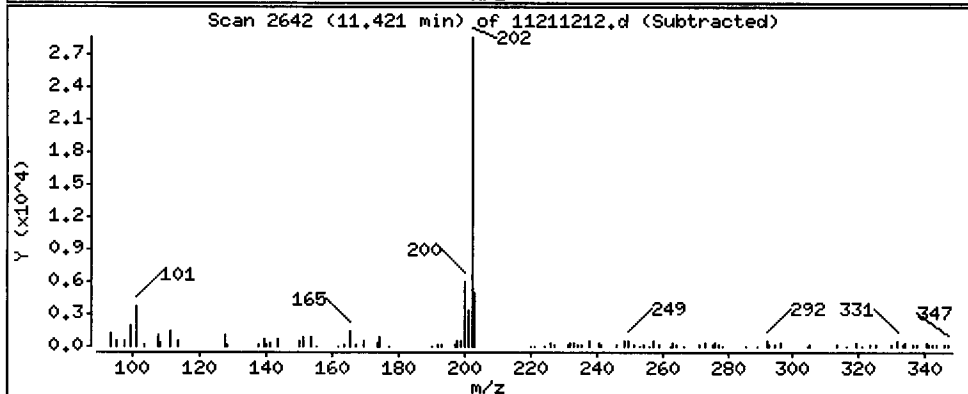
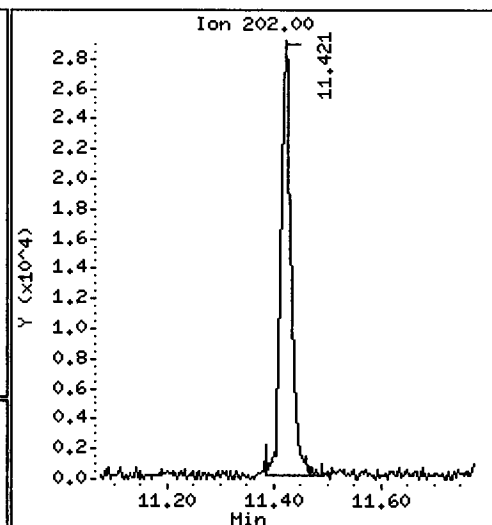
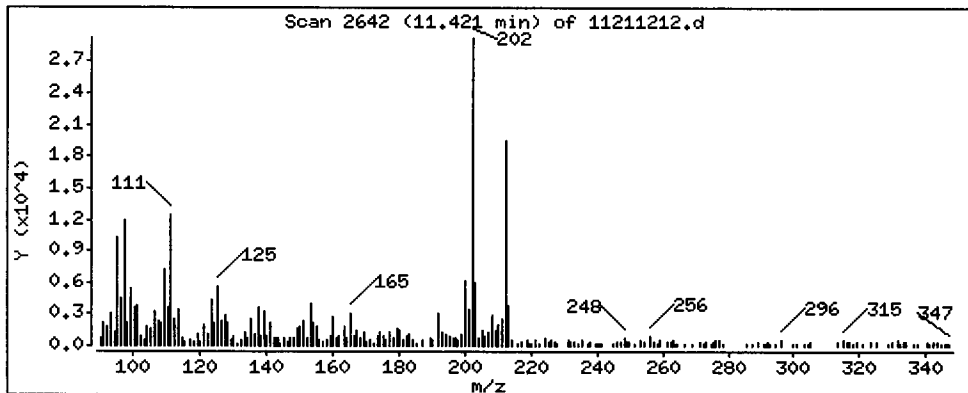
Operator: JZ

Column phase: ZB-5ms1

Column diameter: 0.25

36 Fluoranthene

Concentration: 5.150 ug/kg



Date : 21-NOV-2012 16:42

Client ID: SG-16-S-E-121107

Instrument: nt11.i

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: JZ

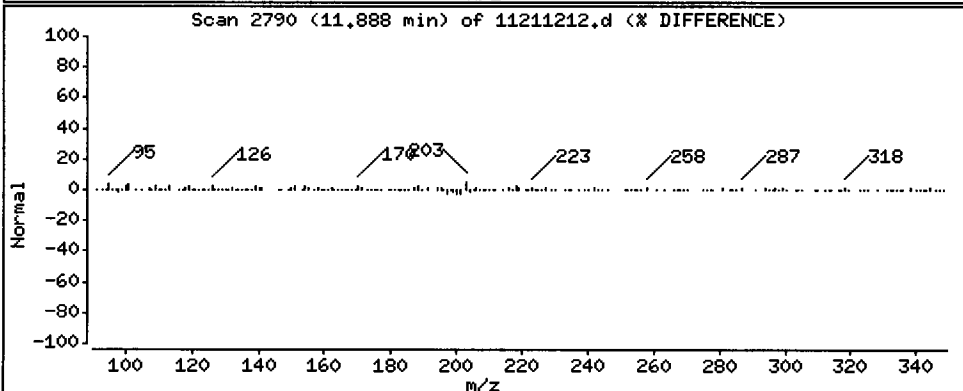
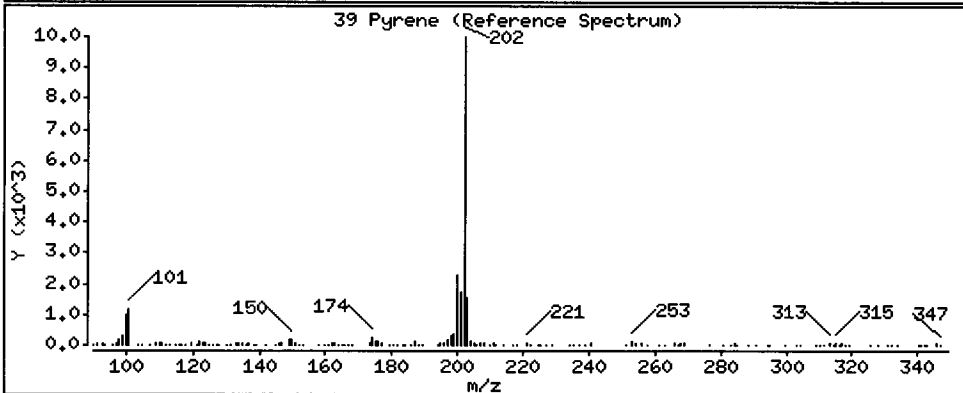
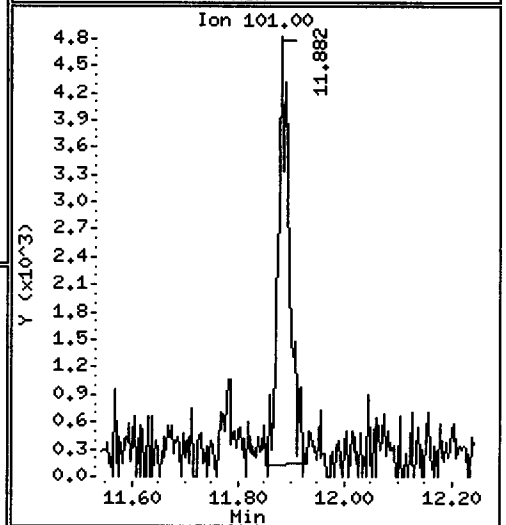
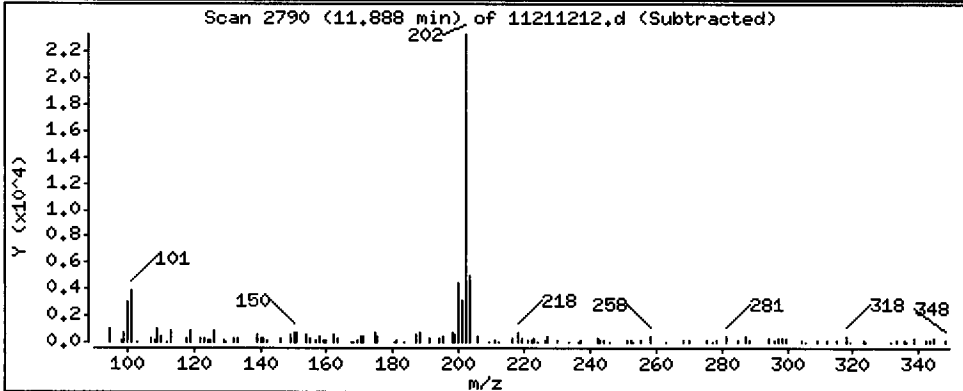
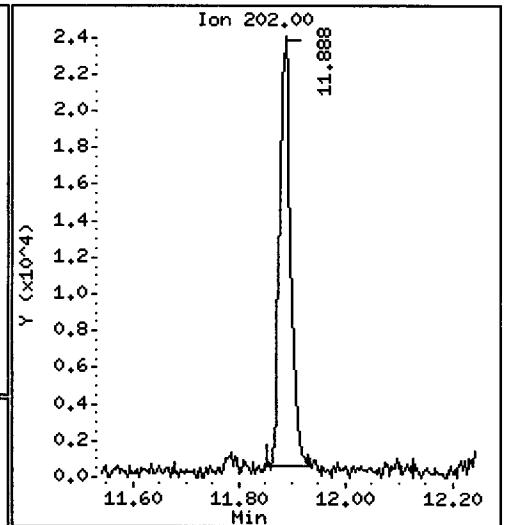
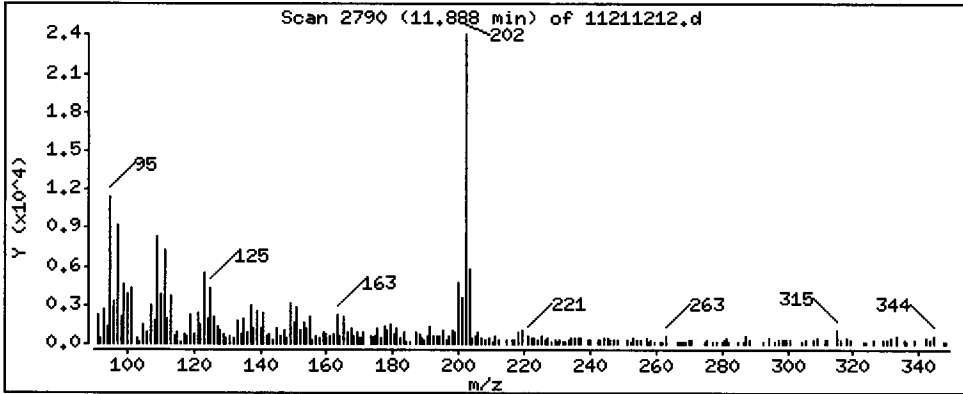
Column phase: ZB-5msi

Column diameter: 0.25

39 Pyrene

Concentration: 4.468 ug/kg

*OKL*



Date : 21-NOV-2012 16:42

Client ID: SG-16-S-E-121107

Instrument: nt11.i

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: JZ

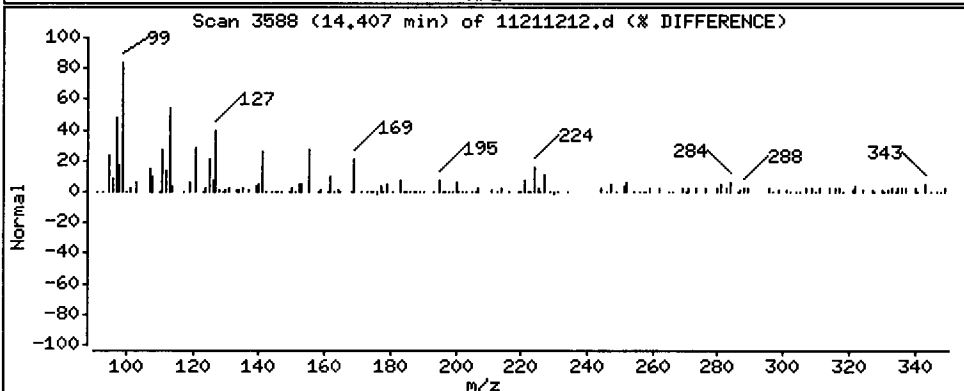
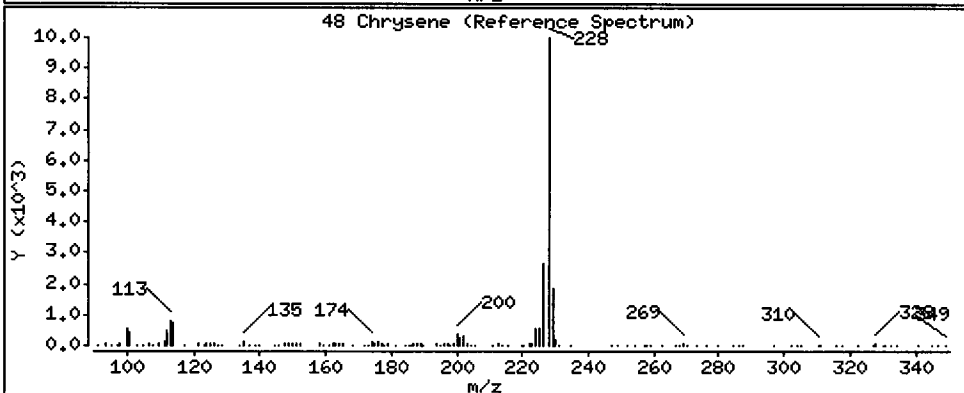
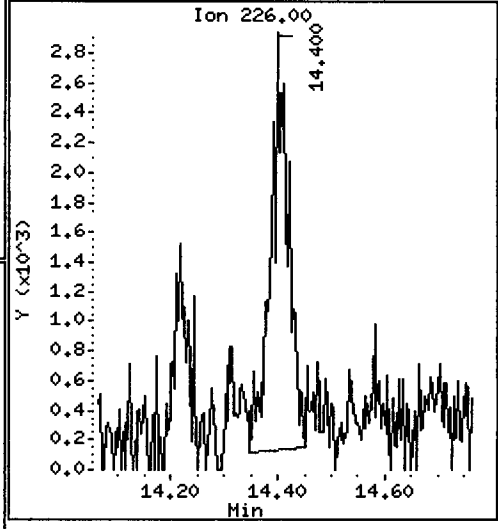
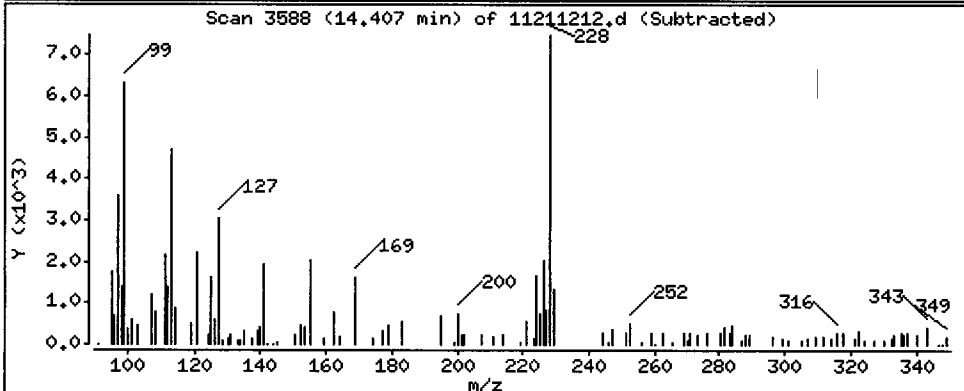
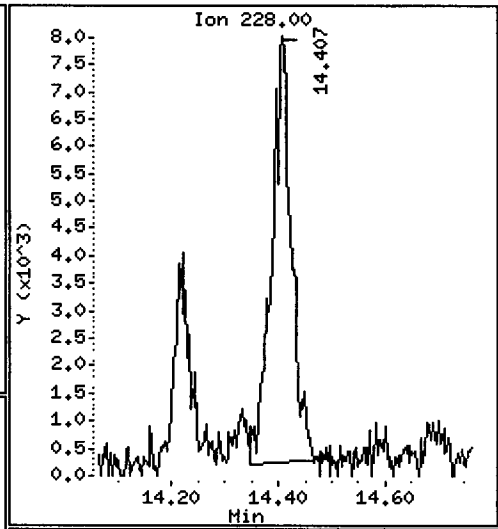
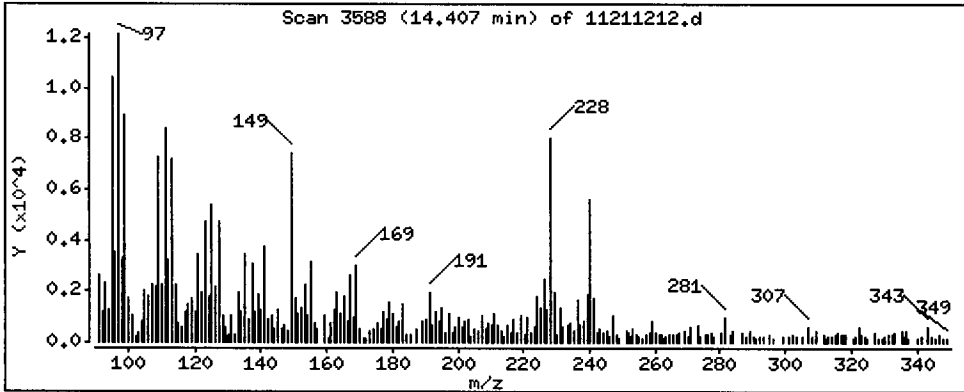
Column phase: ZB-5msi

Column diameter: 0.25

48 Chrysene

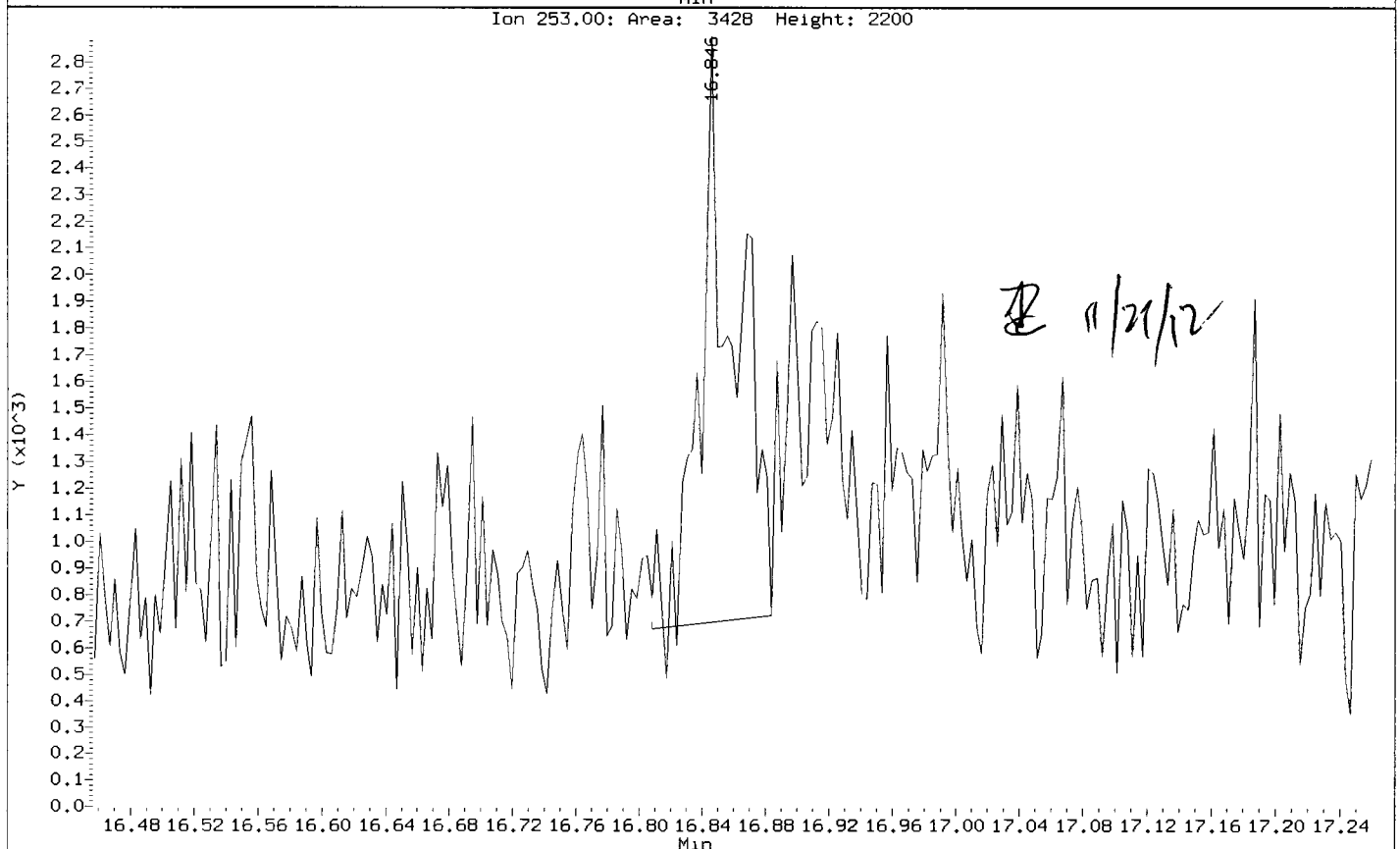
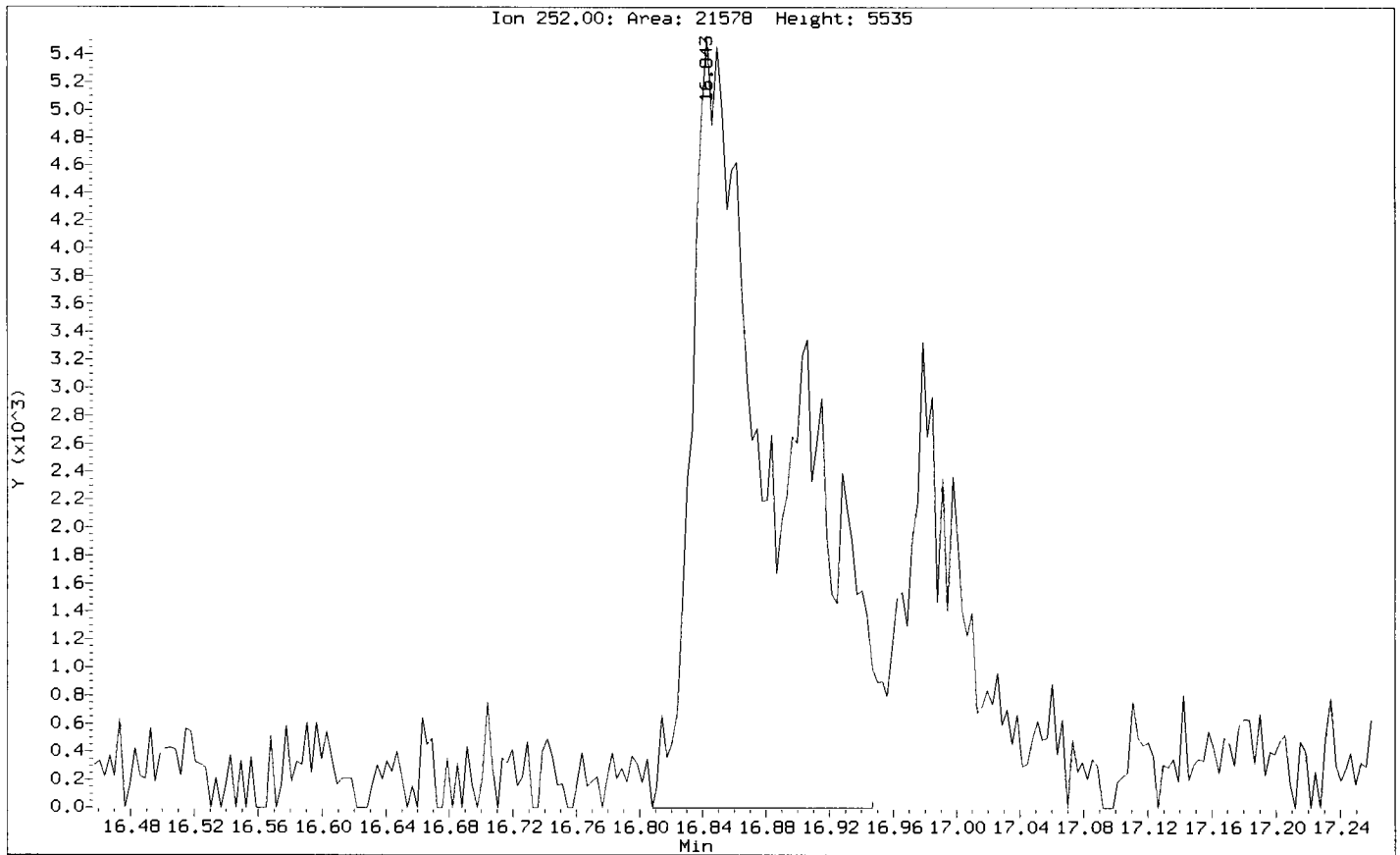
Concentration: 2.955 ug/kg

*TCR*



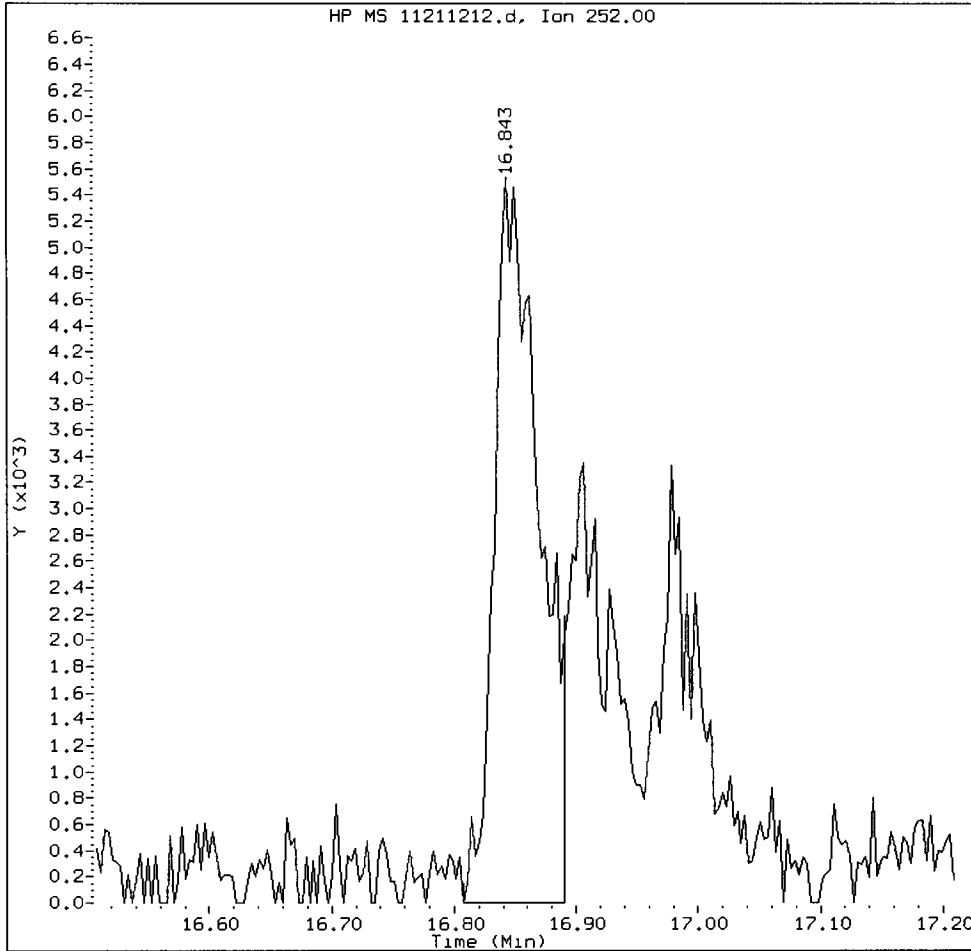
Data File: /chem3/nt11.1/20121121.b/11211212.d  
Injection Date: 21-NOV-2012 16:42  
Instrument: nt11.1  
Client Sample ID: SG-16-S-E-121107

Compound: Benzo(b)fluoranthene  
CAS Number: 205-99-2



VR58H, /chem3/nt11.i/20121121.b/11211212.d

Benzo(b)fluoranthene Amount: 0.08 Area: 14251



MANUAL INTEGRATION for Benzo(b)fluoranthene

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

5. Other \_\_\_\_\_

Analyst:    *D*   

Date:    11/21/12

Date : 21-NOV-2012 16:42

Client ID: SG-16-S-E-121107

Instrument: nt11.i

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: JZ

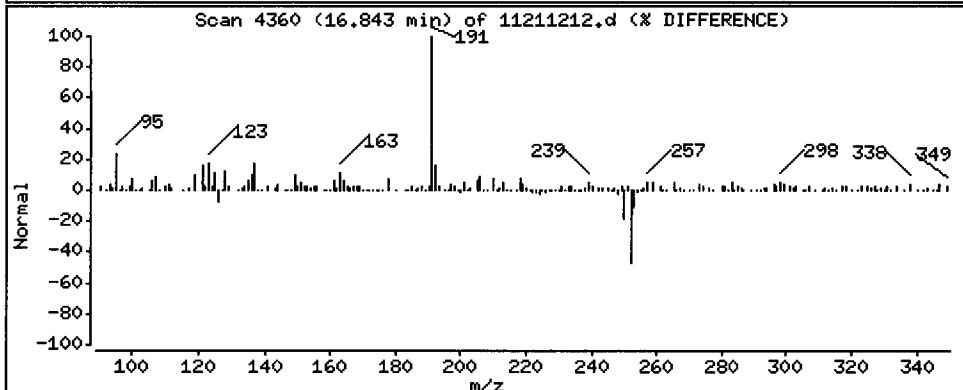
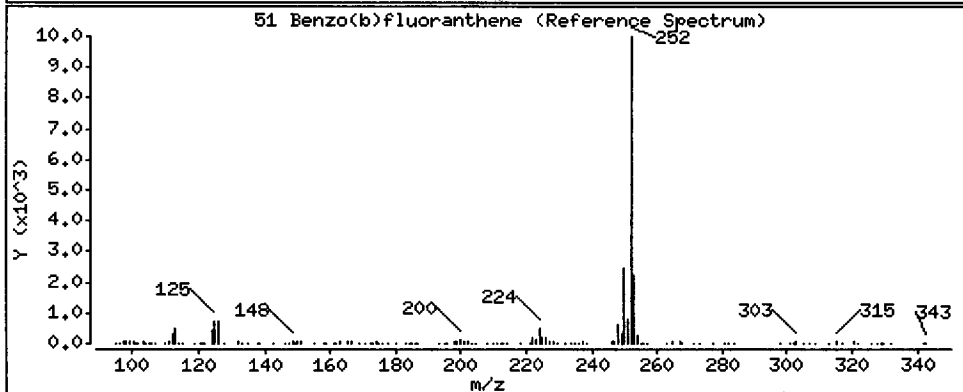
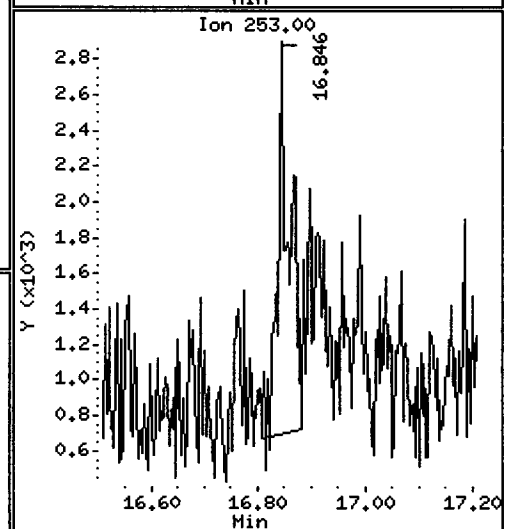
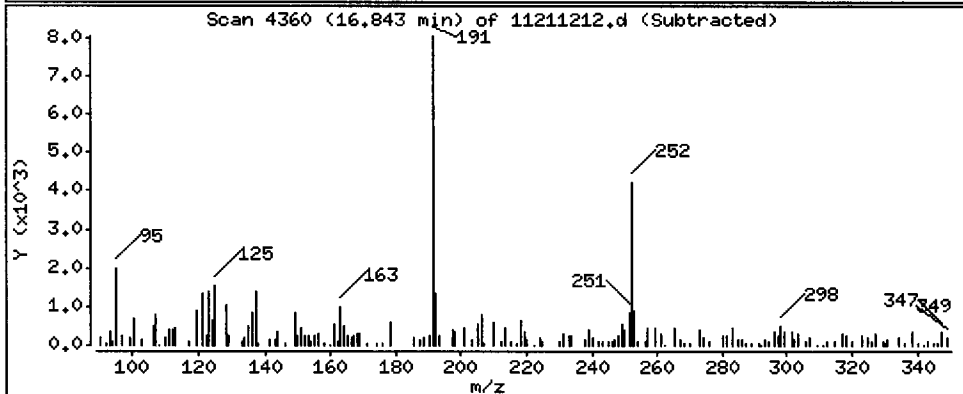
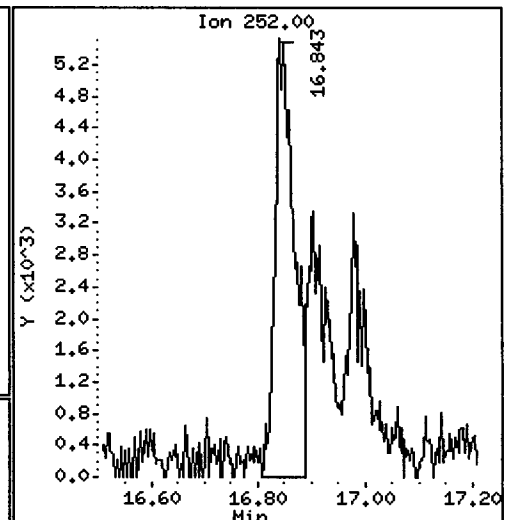
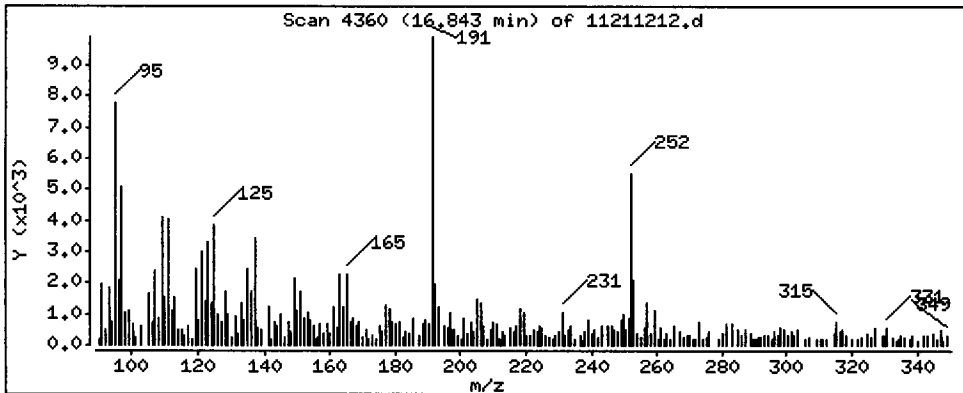
Column phase: ZB-5msi

Column diameter: 0.25

51 Benzo(b)fluoranthene

Concentration: 4,011 ug/kg

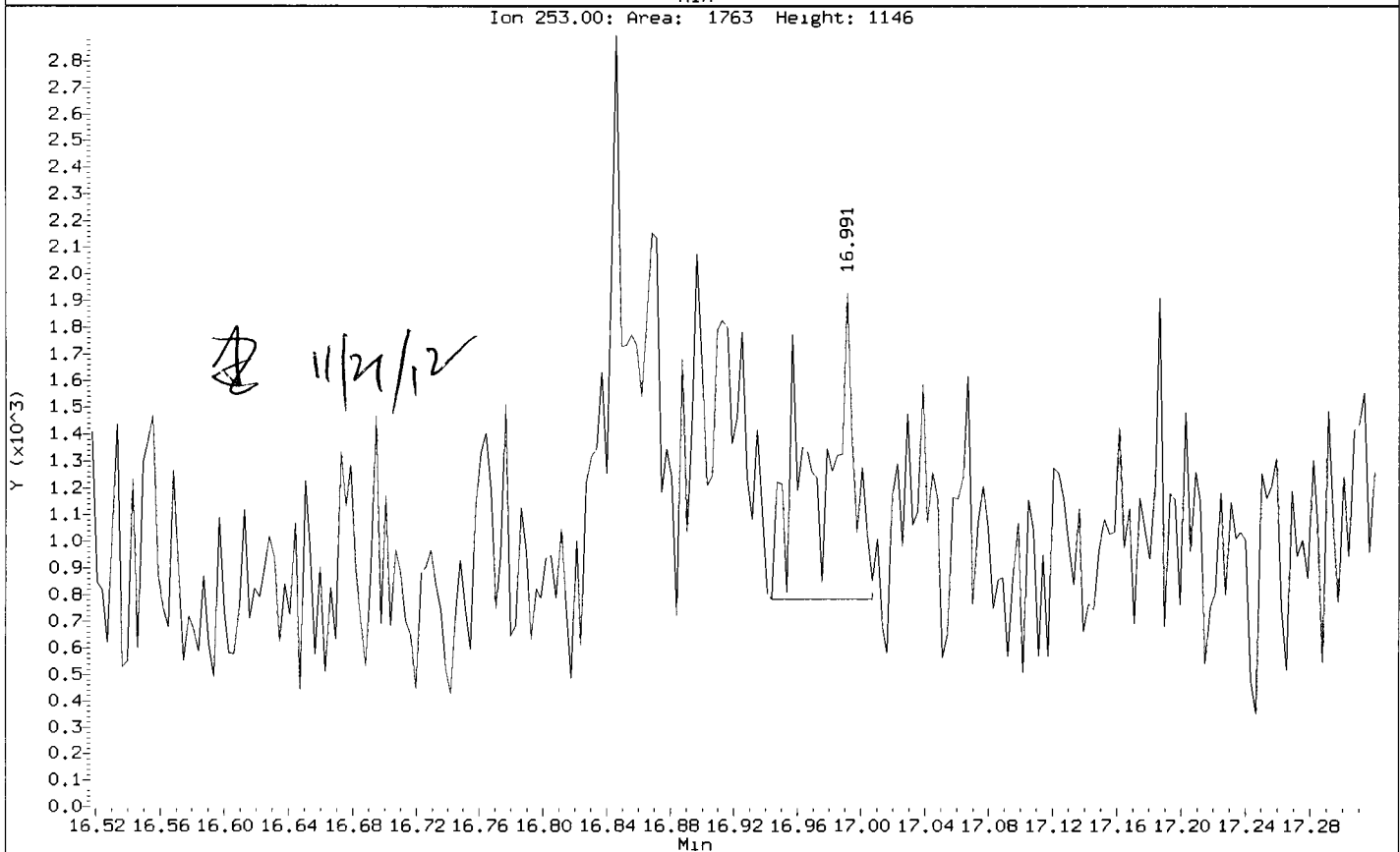
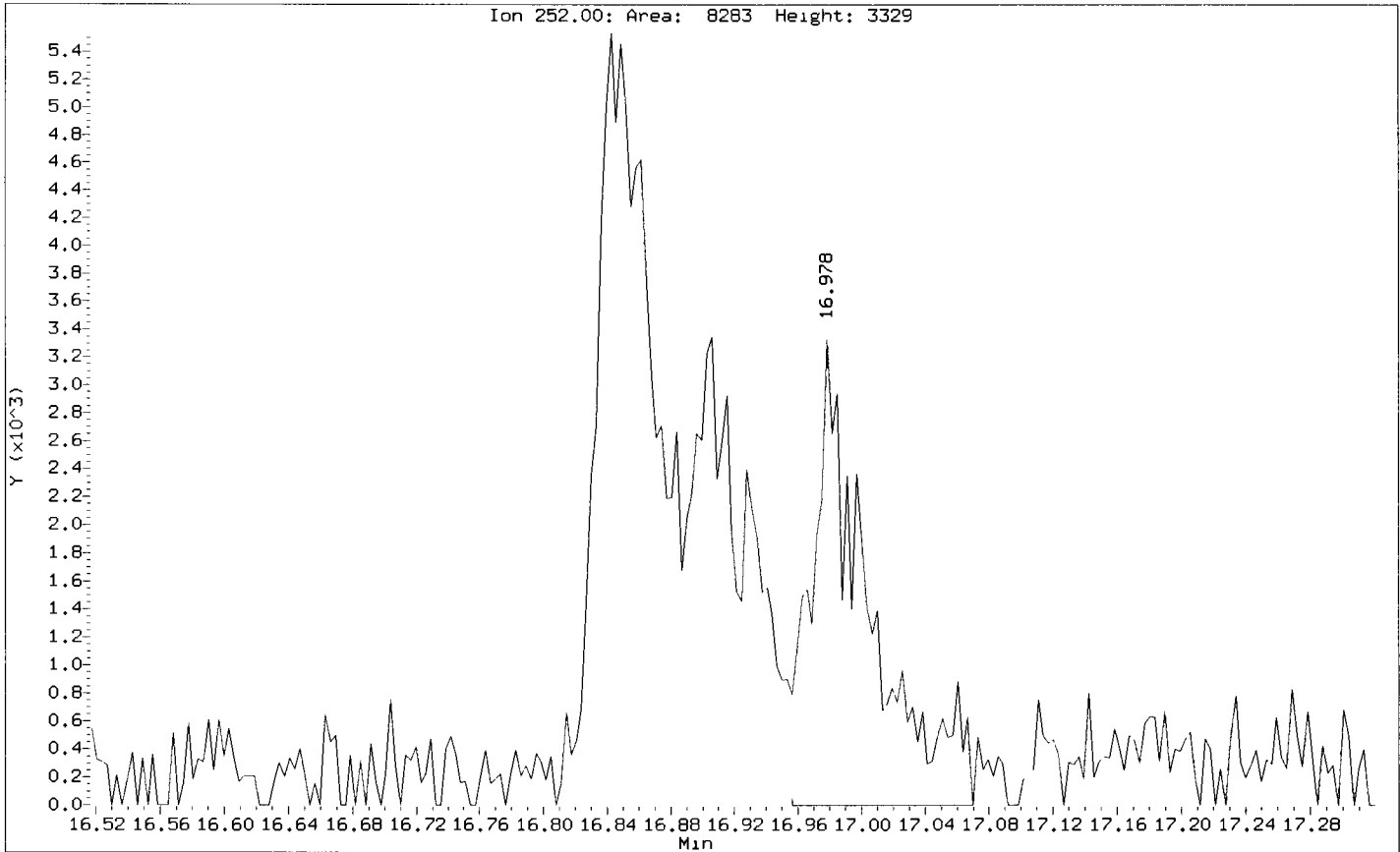
*Handwritten initials*





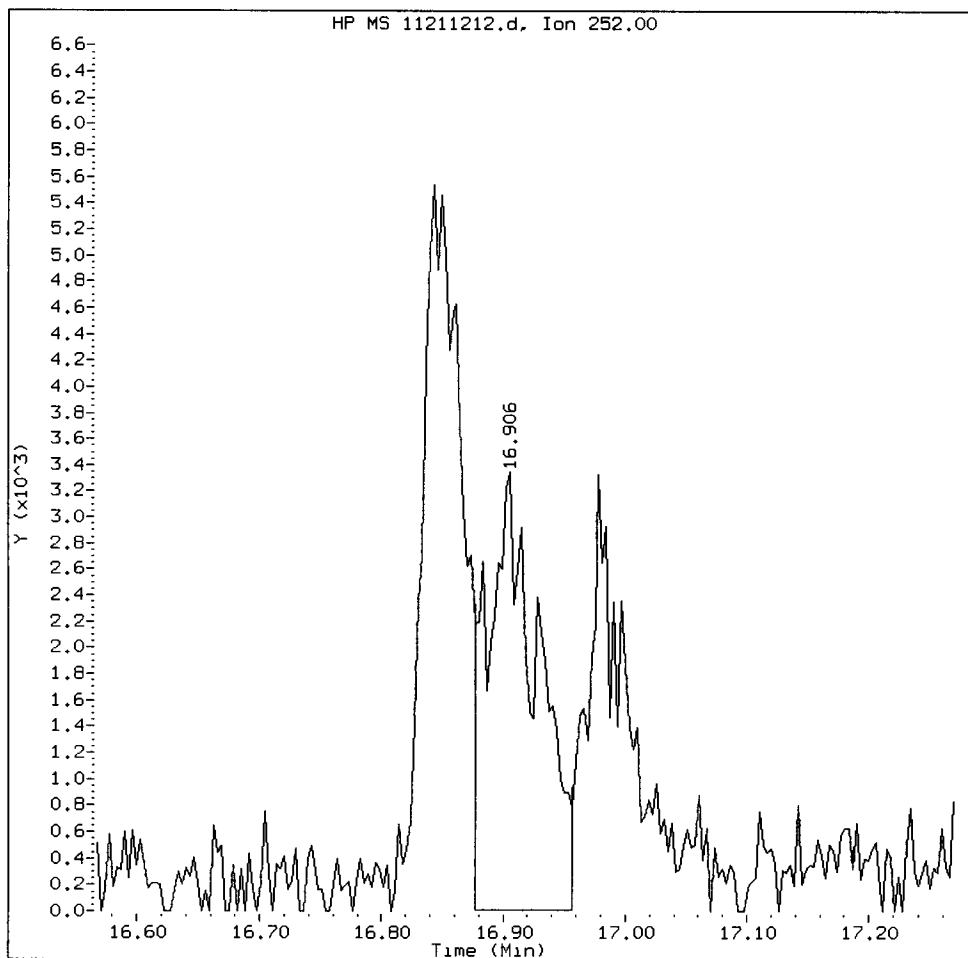
Data File: /chem3/nt11.1/20121121.b/11211212.d  
Injection Date: 21-NOV-2012 16:42  
Instrument: nt11.1  
Client Sample ID: SG-16-S-E-121107

Compound: Benzo(k)fluoranthene  
CAS Number: 207-08-9



VR58H, /chem3/nt11.i/20121121.b/11211212.d

Benzo(k)fluoranthene Amount: 0.05 Area: 9819



MANUAL INTEGRATION for Benzo(k)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: SB

Date: 11/21/12

Date : 21-NOV-2012 16:42

Client ID: SG-16-S-E-121107

Instrument: nt11.i

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: JZ

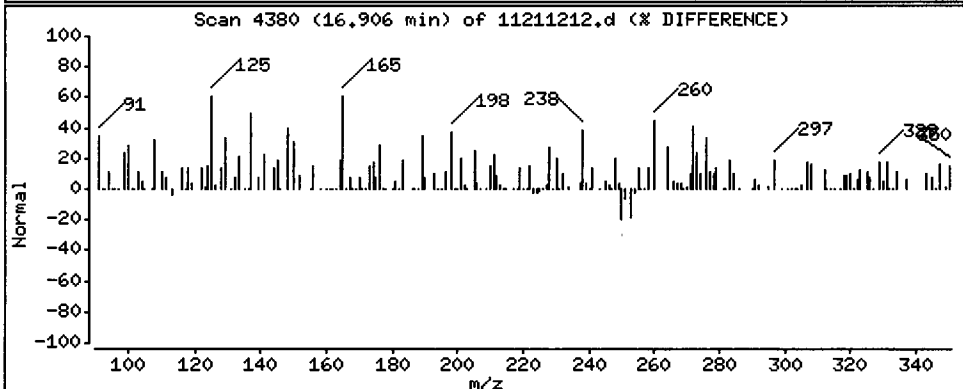
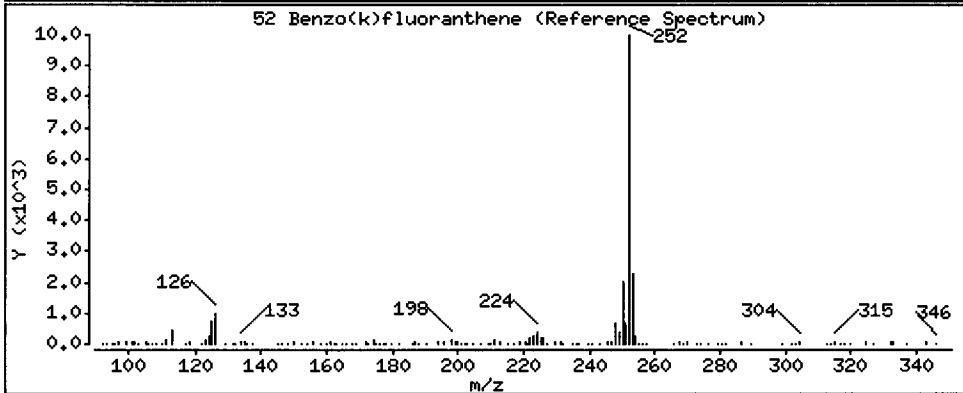
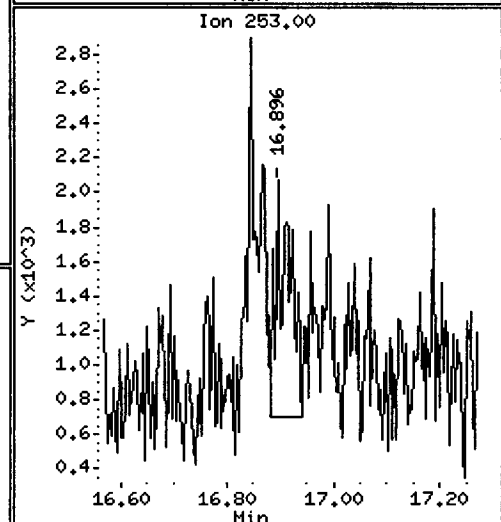
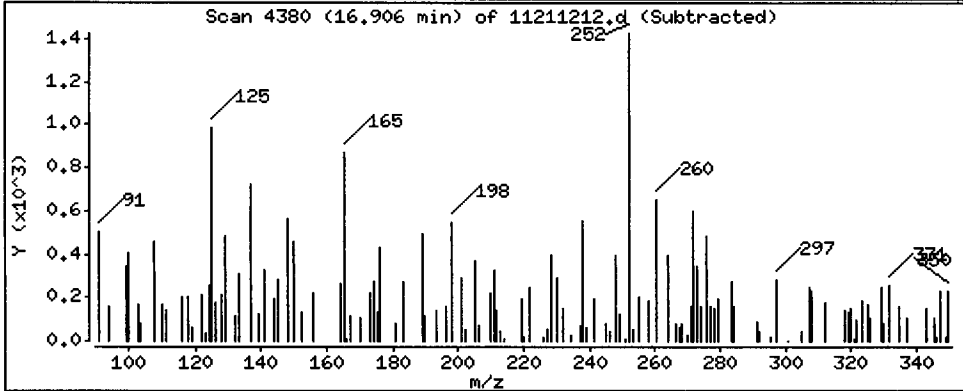
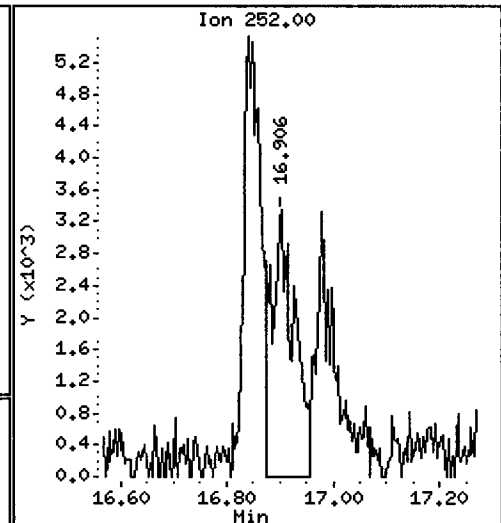
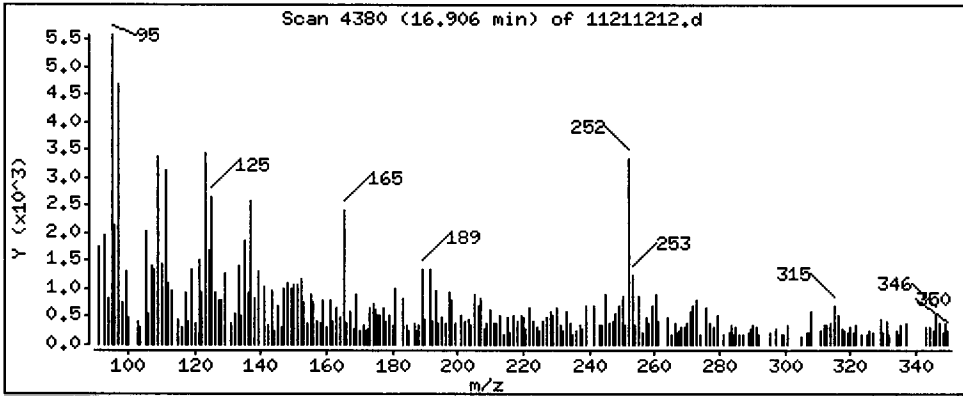
Column phase: ZB-5msi

Column diameter: 0.25

*OK*

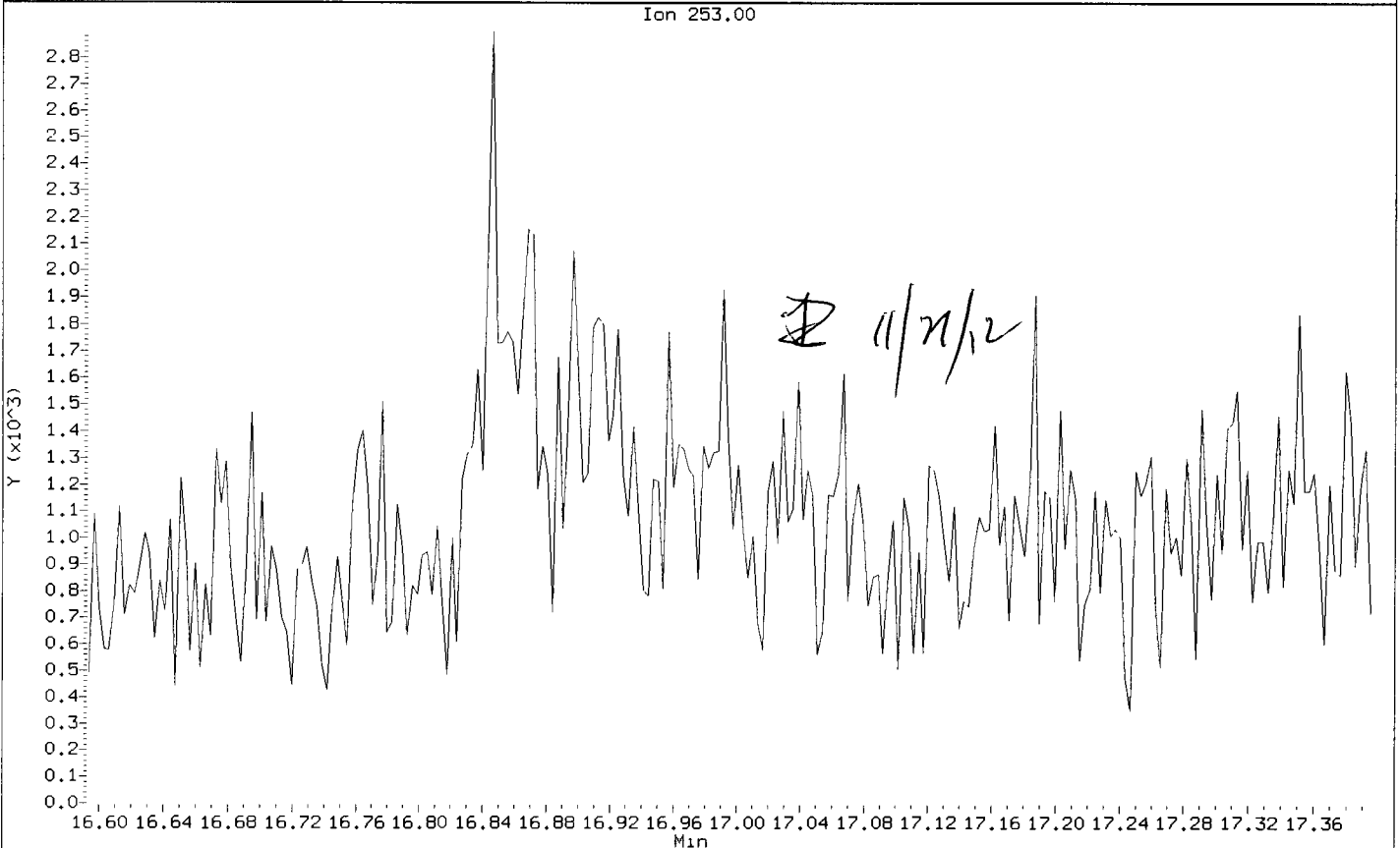
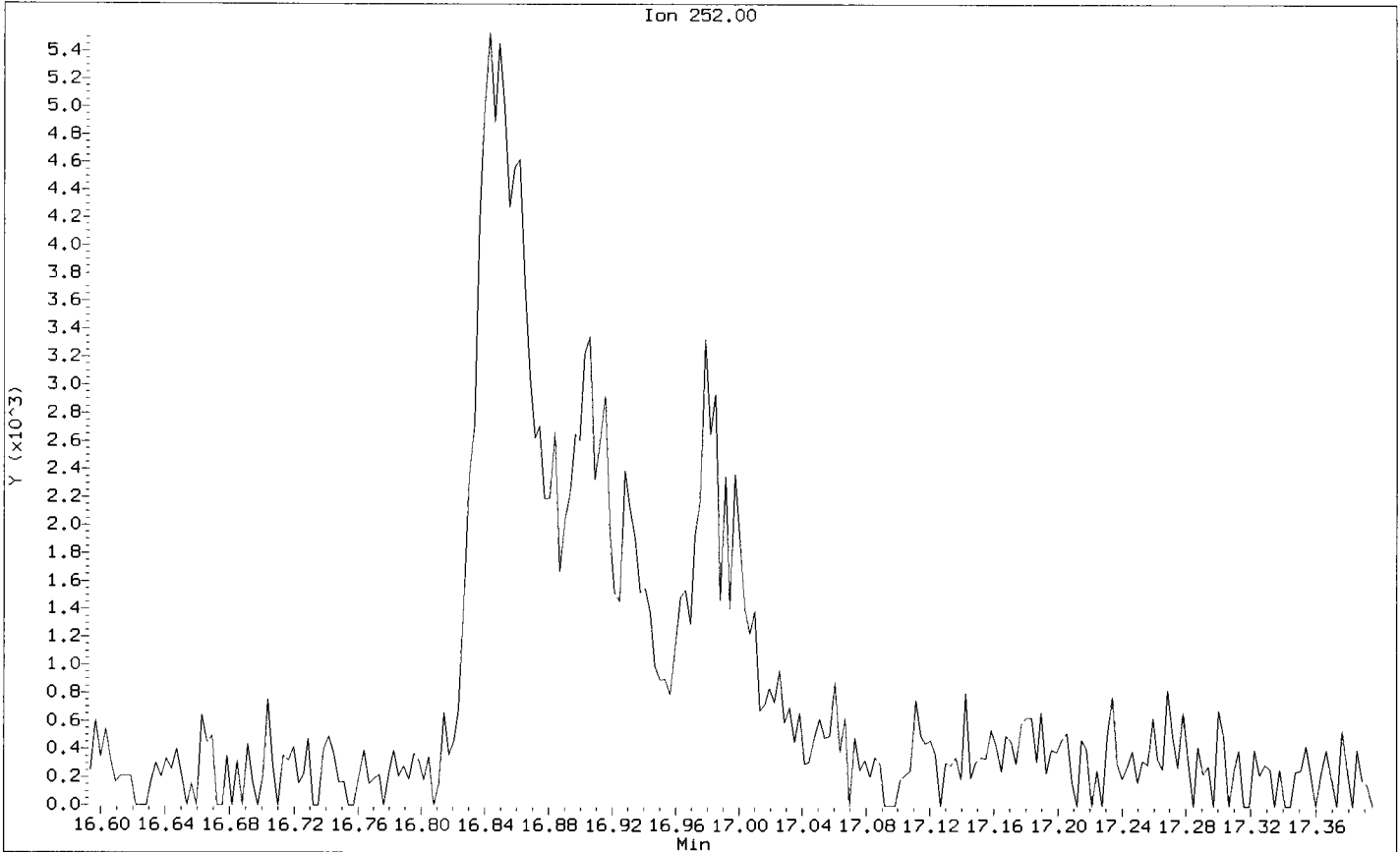
52 Benzo(k)fluoranthene

Concentration: 2,544 ug/kg



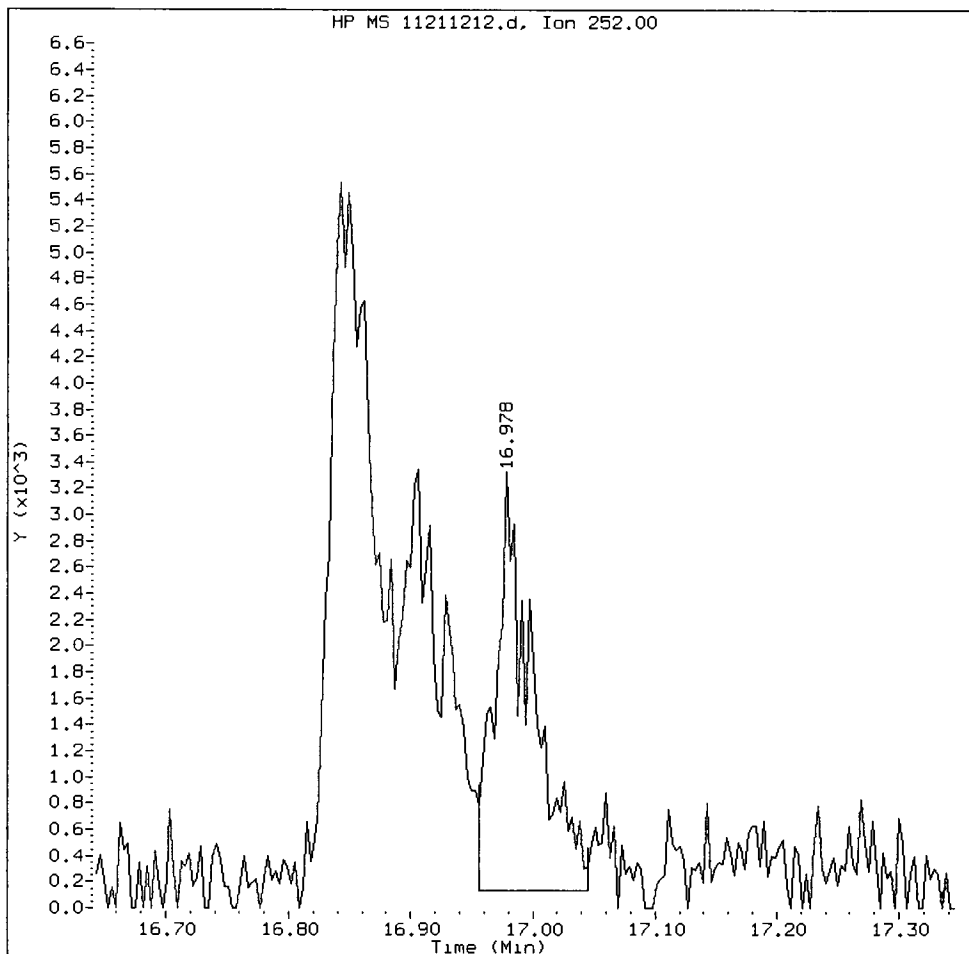
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Injection Date: 21-NOV-2012 16:42  
Instrument: nt11.1  
Client Sample ID: SG-16-S-E-121107

Compound: Benzo(j)fluoranthene  
CAS Number:



VR58H, /chem3/nt11.i/20121121.b/11211212.d

Benzo(j)fluoranthene Amount: 0.03 Area: 6802



MANUAL INTEGRATION for Benzo(j)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AD

Date: 4/21/12

Date : 21-NOV-2012 16:42

Client ID: SG-16-S-E-121107

Instrument: nt11.i

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: JZ

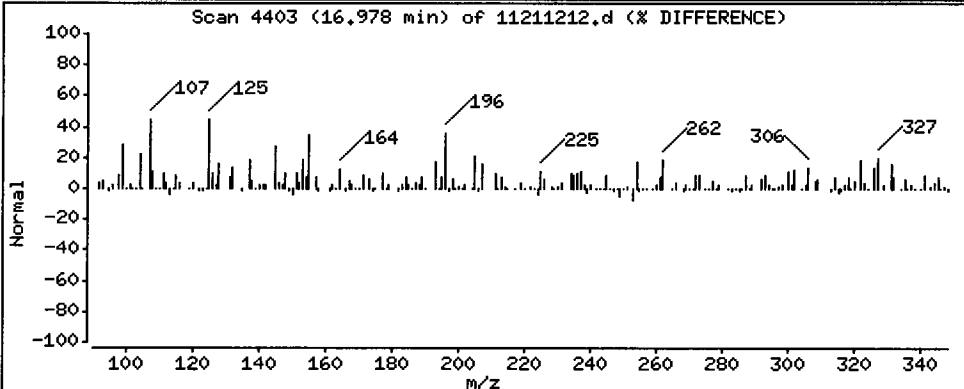
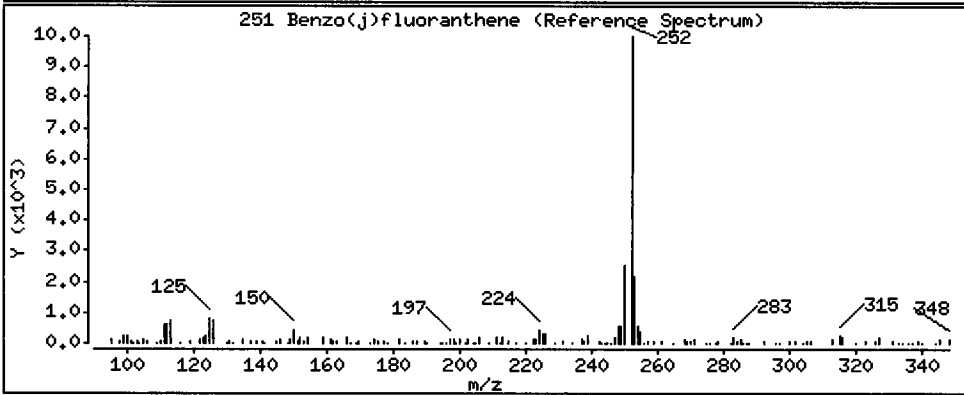
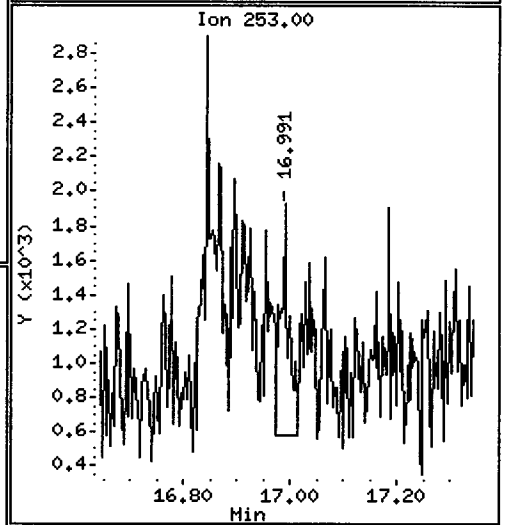
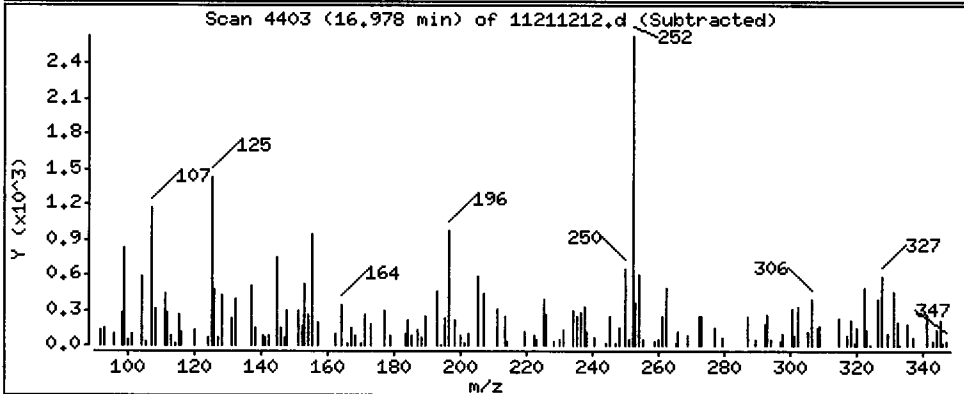
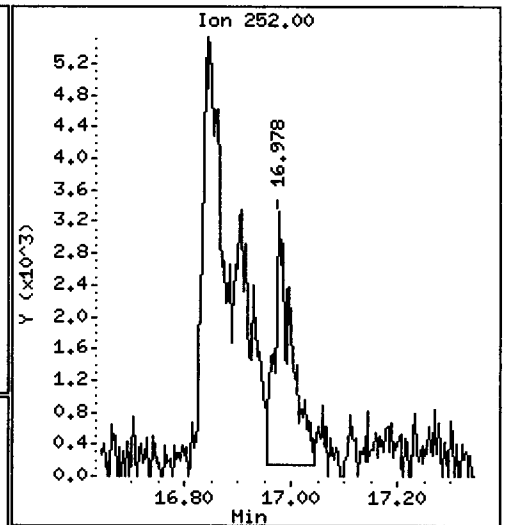
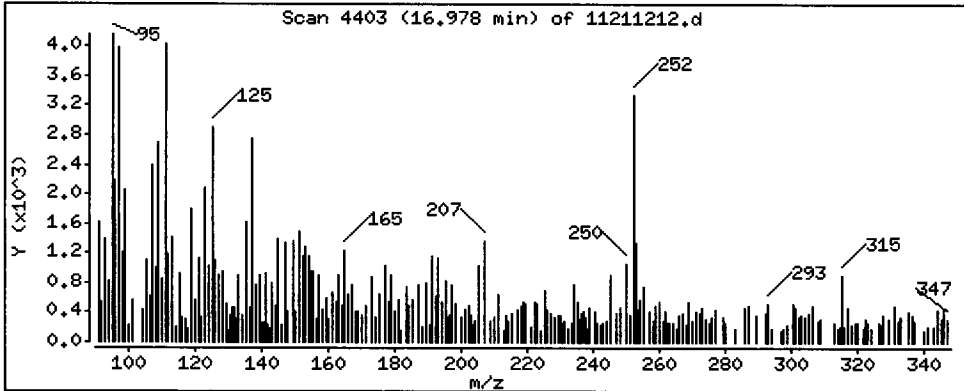
Column phase: ZB-5msi

Column diameter: 0.25

251 Benzo(j)fluoranthene

Concentration: 1.671 ug/kg

*(JZ)*



Date : 21-NOV-2012 16:42

Client ID: SG-16-S-E-121107

Instrument: nt11.i

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: JZ

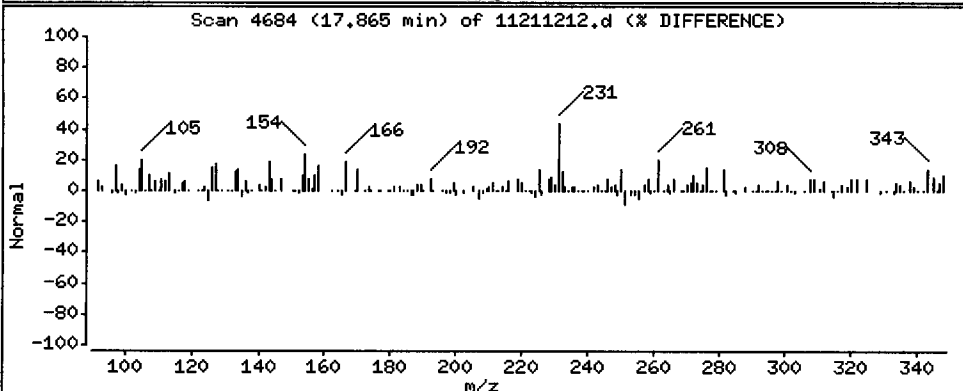
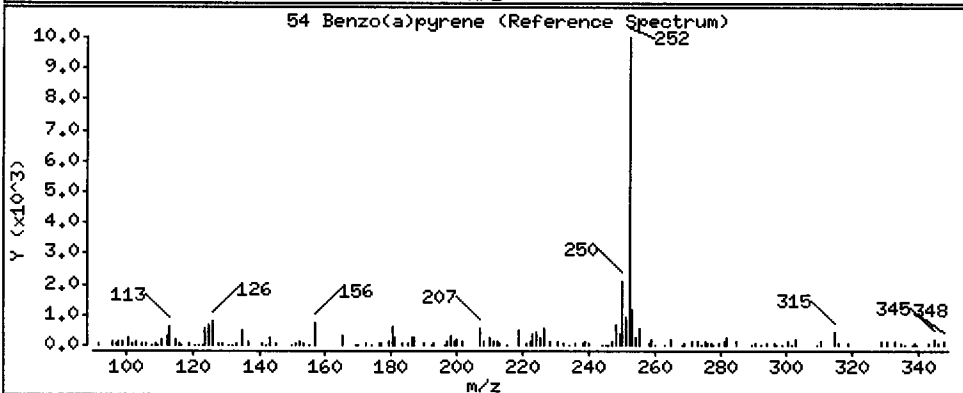
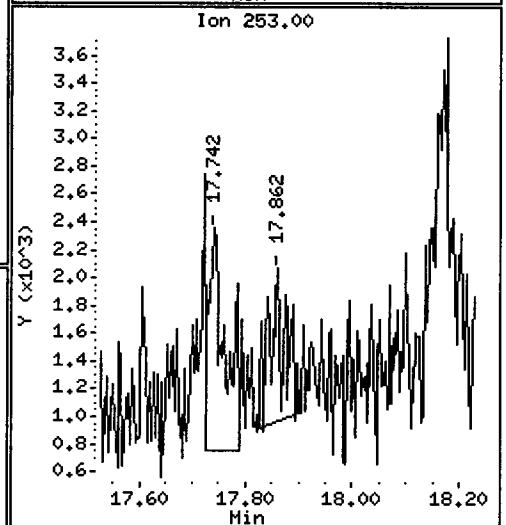
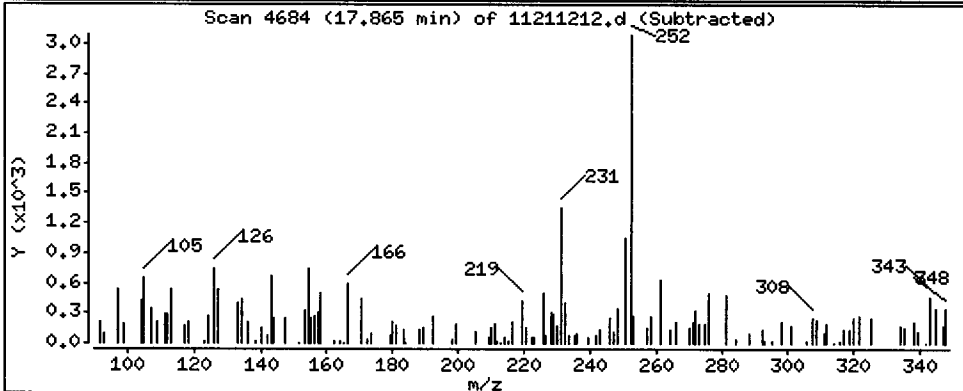
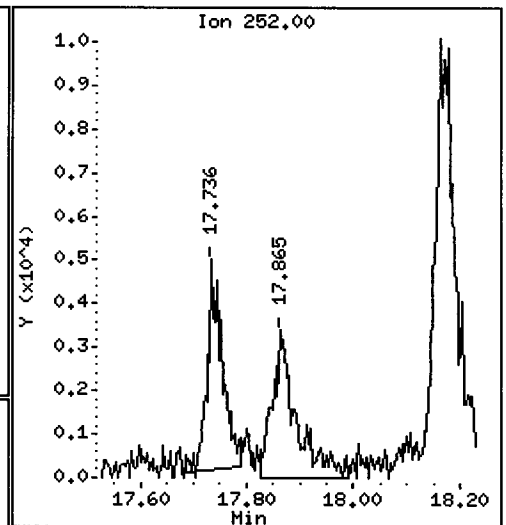
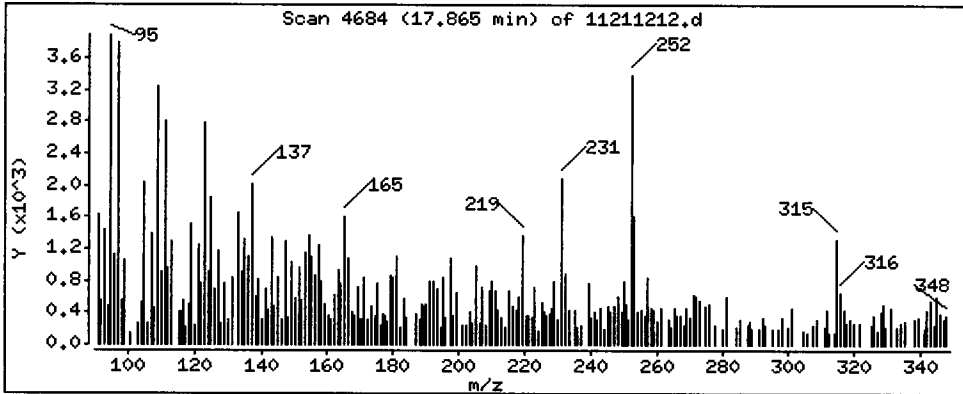
Column phase: ZB-5msi

Column diameter: 0.25

54 Benzo(a)pyrene

Concentration: 2.881 ug/kg

*TPA*



Date : 21-NOV-2012 16:42

Client ID: SG-16-S-E-121107

Instrument: nt11.i

Sample Info: VR58H

Volume Injected (uL): 1.0

Operator: JZ

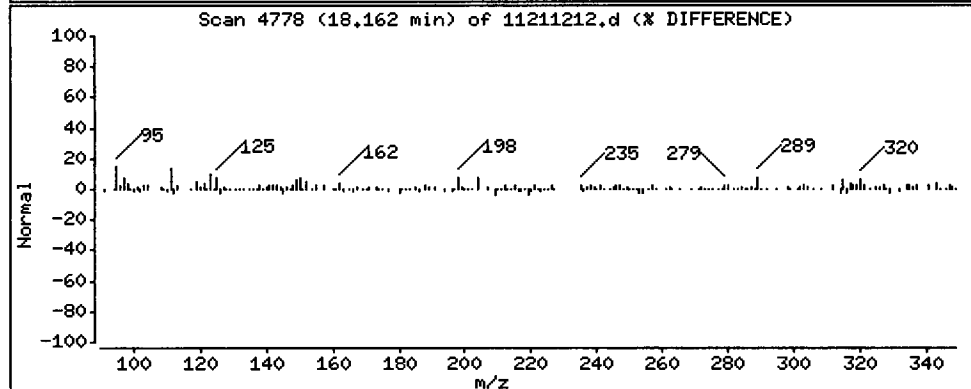
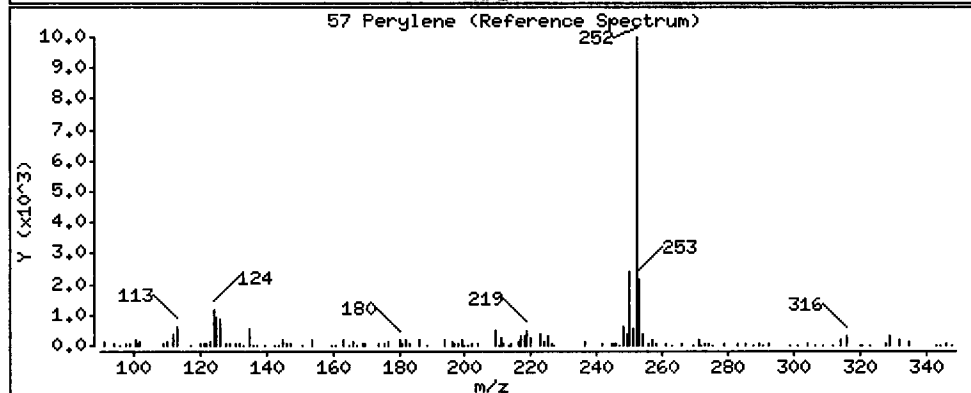
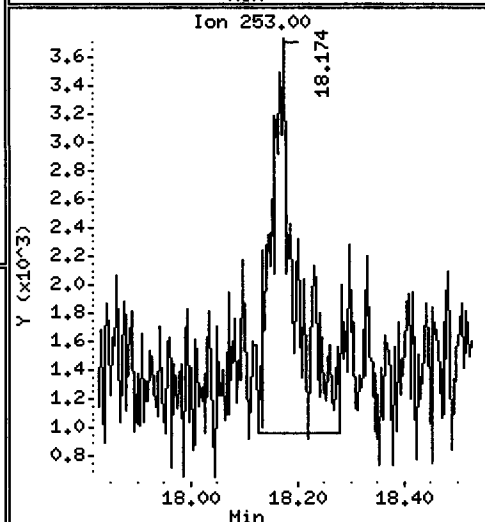
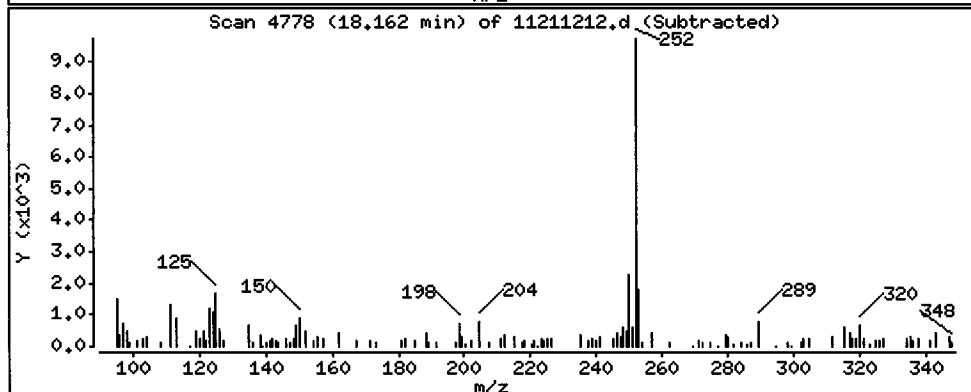
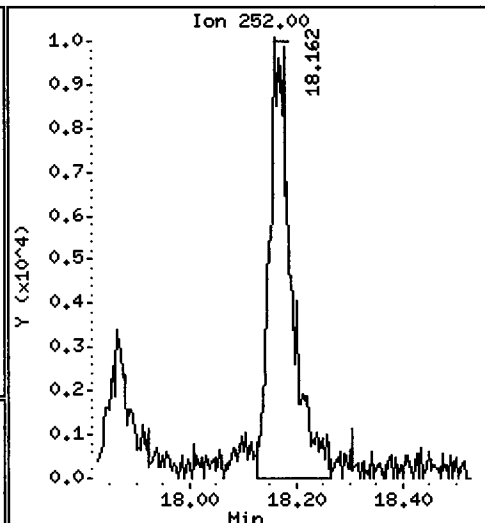
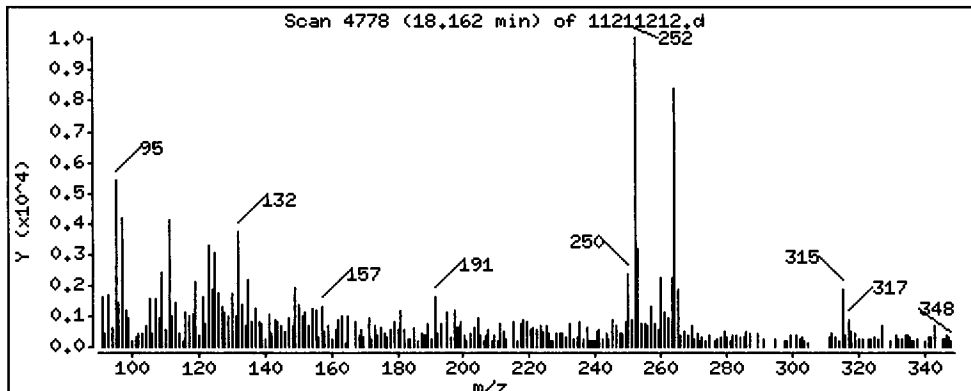
Column phase: ZB-5msi

Column diameter: 0.25

*nt11.i*

57 Perylene

Concentration: 7.588 ug/kg





CO-ELUTION SUMMARY FOR FILE - 11211212.d

Lab ID: VR58H, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2012

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211213.d  
 Lab Smp Id: VR58HMS Client Smp ID: SG-16-S-E-12110 MS  
 Inj Date : 21-NOV-2012 17:12  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58HMS  
 Misc Info : 12-22336  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 26-Nov-2012 11:15 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 13 QC Sample: MS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

Concentration Formula:  $\text{Amt} * \text{DF} * \text{Vt} / (\text{Ws} * (100 - \text{M}) / 100) * \text{CpndVariable}$  *JZ 11/26/12*

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	13.16000	Weight of sample extracted (g)
M	21.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	136	5.432	5.438	(1.000)	783444	2.00000	
7 Naphthalene	128	5.460	5.467	(1.005)	617309	1.47436	70.91
\$ 12 2-Methylnaphthalene-d10	152	6.170	6.174	(1.136)	369855	1.38170	66.45
14 2-Methylnaphthalene	141	6.215	6.221	(1.144)	361033	1.53040	73.60
15 1-methylnaphthalene	141	6.410	6.413	(1.180)	369804	1.63661	78.71
21 Acenaphthylene	152	7.597	7.600	(0.985)	720112	1.85178	89.06
* 22 Acenaphthene-d10	164	7.710	7.714	(1.000)	447528	2.00000	
23 Acenaphthene	153	7.758	7.761	(1.006)	428832	1.73403	83.40
11 Dibenzofuran	168	7.909	7.912	(1.026)	617865	1.70542	82.02
25 Fluorene	166	8.386	8.389	(1.088)	562022	2.01846	97.07
* 28 Phenanthrene-d10	188	9.730	9.736	(1.000)	655016	2.00000	
30 Phenanthrene	178	9.768	9.768	(1.004)	895376	2.26297	108.8
31 Anthracene	178	9.806	9.809	(1.008)	819765	2.15823	103.8
36 Fluoranthene	202	11.424	11.425	(1.174)	963568	2.43070	116.9
39 Pyrene	202	11.888	11.892	(0.829)	985255	2.49900	120.2

Compounds	QUANT SIG			CONCENTRATIONS			
	MASS	RT	EXP RT REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
===== 46 Benzo(a)anthracene	228	14.220	14.224 (0.991)	854446	2.37678	114.3	
* 47 Chrysene-d12	240	14.343	14.343 (1.000)	715436	2.00000		
48 Chrysene	228	14.413	14.413 (1.005)	821180	2.35344	113.2	
51 Benzo(b)fluoranthene	252	16.858	16.858 (0.931)	580681	2.87728	138.4	
52 Benzo(k)fluoranthene	252	16.909	16.918 (0.934)	721488	3.29180	158.3	
251 Benzo(j)fluoranthene	252	16.991	16.994 (0.939)	587717	2.54149	122.2	
54 Benzo(a)pyrene	252	17.868	17.878 (0.987)	472808	2.30646	110.9	
* 56 Perylene-d12	264	18.098	18.102 (1.000)	436071	2.00000		
63 Indeno(1,2,3-cd)pyrene	276	20.418	20.431 (1.128)	349502	1.40633	67.64	
§ 60 Dibenzo(a,h)anthracene-d14	292	20.326	20.339 (1.123)	228370	1.57969	75.97	
62 Dibenzo(a,h)anthracene	278	20.415	20.427 (1.128)	291133	1.43838	69.18	
61 Benzo(g,h,i)perylene	276	21.292	21.298 (1.176)	261927	1.23886	59.58	
57 Perylene	252	18.174	18.177 (1.004)	597641	2.81129	135.2	

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211213.d  
 Lab Smp Id: VR58HMS  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22336

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-16-S-E-12110  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	783444	51.80
22 Acenaphthene-d10	284255	142128	568510	447528	57.44
28 Phenanthrene-d10	410660	205330	821320	655016	59.50
47 Chrysene-d12	467886	233943	935772	715436	52.91
56 Perylene-d12	472330	236165	944660	436071	-7.68

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.43	-0.12
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	-0.04
28 Phenanthrene-d10	9.74	9.24	10.24	9.73	-0.07
47 Chrysene-d12	14.34	13.84	14.84	14.34	0.00
56 Perylene-d12	18.10	17.60	18.60	18.10	-0.02

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA  
 Sample Matrix: SOLID  
 Lab Smp Id: VR58HMS  
 Level: LOW  
 Data Type: MS DATA  
 SpikeList File: pnalcss.spk  
 Sublist File: pmax.sub  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22336

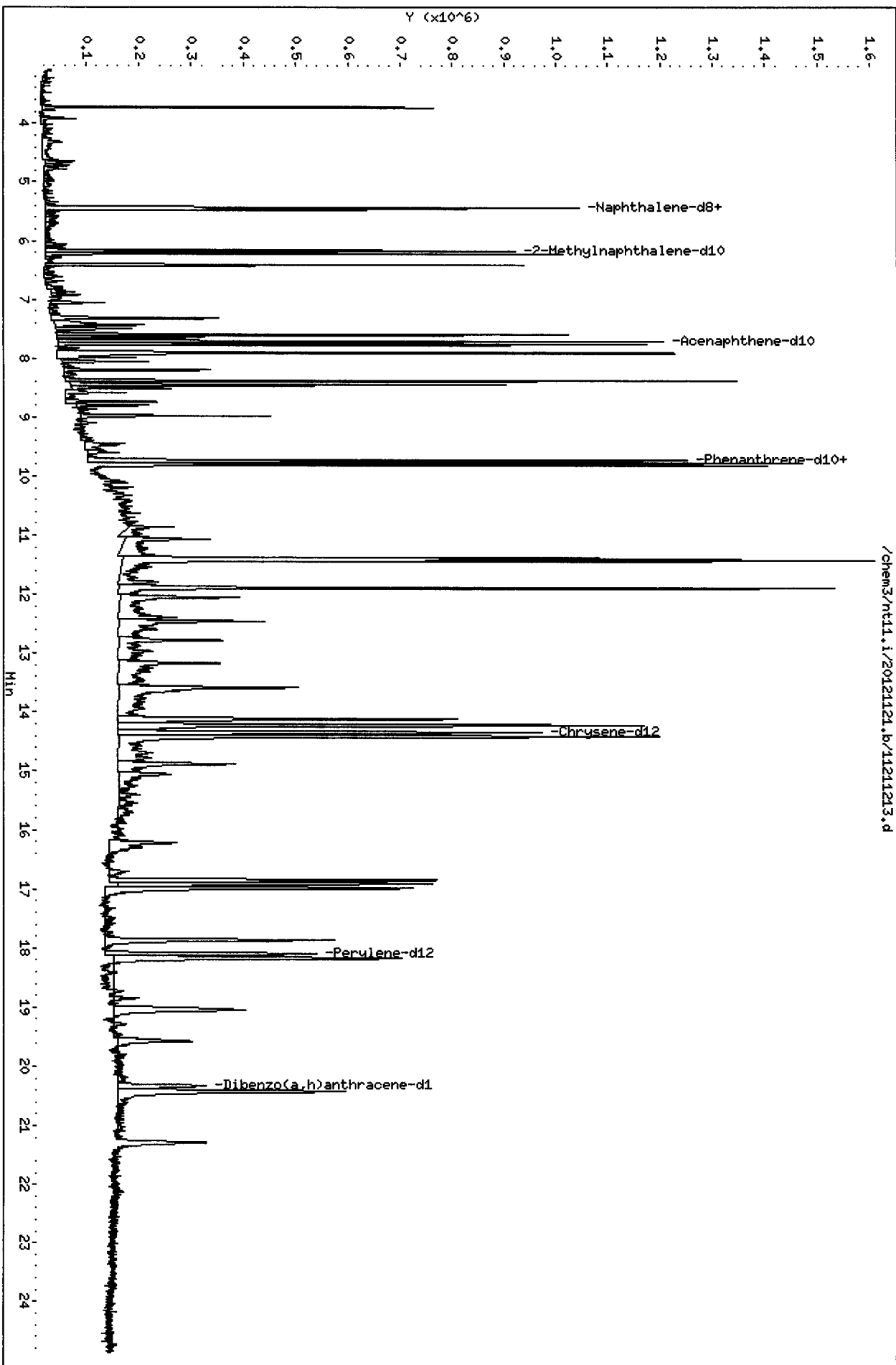
Client SDG: VR58  
 Fraction: SV  
 Client Smp ID: SG-16-S-E-12110 MS  
 Operator: JZ  
 SampleType: MS  
 Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
7 Naphthalene	144.3	70.91	49.15	37-100
14 2-Methylnaphthalen	144.3	73.60	51.01	37-100
15 1-methylnaphthalen	144.3	78.71	54.55	30-160
21 Acenaphthylene	144.3	89.06	61.73	35-100
23 Acenaphthene	144.3	83.40	57.80	39-100
11 Dibenzofuran	144.3	82.02	56.85	39-100
25 Fluorene	144.3	97.07	67.28	42-100
30 Phenanthrene	144.3	108.8	75.43	47-100
31 Anthracene	144.3	103.8	71.94	41-106
36 Fluoranthene	144.3	116.9	81.02	52-109
39 Pyrene	144.3	120.2	83.30	47-111
46 Benzo(a)anthracene	144.3	114.3	79.23	47-114
48 Chrysene	144.3	113.2	78.45	51-106
51 Benzo(b)fluoranthene	144.3	138.4	95.91	30-160
52 Benzo(k)fluoranthene	144.3	158.3	109.73	30-160
54 Benzo(a)pyrene	144.3	110.9	76.88	44-111
63 Indeno(1,2,3-cd)py	144.3	67.64	46.88	41-114
62 Dibenzo(a,h)anthra	144.3	69.18	47.95	42-118
61 Benzo(g,h,i)perylene	144.3	59.58	41.30	37-115
57 Perylene	144.3	135.2	93.71	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	144.3	66.45	46.06	34-100
\$ 60 Dibenzo(a,h)anthra	144.3	75.97	52.66	10-117

Data File: /chem3/nt11.i/20121121.b/11211213.d  
Date: 21-NOV-2012 17:12  
Client ID: SG-16-S-E-12110 MS  
Sample Info: VRS9HMS  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt11.i  
Operator: JZ  
Column diameter: 0.25



2012.11.21 17:12:52

CO-ELUTION SUMMARY FOR FILE - 11211213.d

Lab ID: VR58HMS, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-20

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211214.d  
 Lab Smp Id: VR58HMSD Client Smp ID: SG-16-S-E-12110 MSD  
 Inj Date : 21-NOV-2012 17:41  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58HMSD  
 Misc Info : 12-22336  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 26-Nov-2012 11:15 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 14 QC Sample: MS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

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

*Handwritten signature and date: JZ 11/26/12*

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	13.08000	Weight of sample extracted (g)
M	21.00000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	====	136	5.435	5.438	(1.000)	792411	2.00000	
7 Naphthalene		128	5.464	5.467	(1.005)	684526	1.61639	78.21
\$ 12 2-Methylnaphthalene-d10		152	6.170	6.174	(1.135)	398202	1.47076	71.17
14 2-Methylnaphthalene		141	6.218	6.221	(1.144)	391170	1.63938	79.33
15 1-methylnaphthalene		141	6.410	6.413	(1.179)	410511	1.79621	86.91
21 Acenaphthylene		152	7.597	7.600	(0.985)	760093	1.95971	94.83
* 22 Acenaphthene-d10		164	7.710	7.714	(1.000)	446361	2.00000	
23 Acenaphthene		153	7.758	7.761	(1.006)	470494	1.90747	92.30
11 Dibenzofuran		168	7.909	7.912	(1.026)	659068	1.82390	88.25
25 Fluorene		166	8.386	8.389	(1.088)	599899	2.16012	104.5
* 28 Phenanthrene-d10		188	9.733	9.736	(1.000)	655829	2.00000	
30 Phenanthrene		178	9.768	9.768	(1.004)	937050	2.36536	114.5
31 Anthracene		178	9.809	9.809	(1.008)	950364	2.49896	120.9
36 Fluoranthene		202	11.421	11.425	(1.173)	1021678	2.57409	124.6
39 Pyrene		202	11.888	11.892	(0.829)	1056281	2.65448	128.4



Compounds	QUANT SIG				CONCENTRATIONS		
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
=====	====	==	=====	=====	=====	=====	=====
46 Benzo(a)anthracene	228	14.217	14.224	(0.991)	909737	2.50728	121.3
* 47 Chrysene-d12	240	14.340	14.343	(1.000)	722085	2.00000	
48 Chrysene	228	14.413	14.413	(1.005)	897393	2.54817	123.3
51 Benzo(b)fluoranthene	252	16.852	16.858	(0.931)	610657	3.09455	149.7
52 Benzo(k)fluoranthene	252	16.915	16.918	(0.935)	756209	3.52860	170.7
251 Benzo(j)fluoranthene	252	16.988	16.994	(0.939)	632495	2.79727	135.4
54 Benzo(a)pyrene	252	17.865	17.878	(0.987)	485035	2.41987	117.1
* 56 Perylene-d12	264	18.098	18.102	(1.000)	426384	2.00000	
63 Indeno(1,2,3-cd)pyrene	276	20.418	20.431	(1.128)	347033	1.42812	69.10
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.323	20.339	(1.123)	225742	1.59699	77.27
62 Dibenzo(a,h)anthracene	278	20.415	20.427	(1.128)	295546	1.49336	72.26
61 Benzo(g,h,i)perylene	276	21.282	21.298	(1.176)	273249	1.32177	63.96
57 Perylene	252	18.171	18.177	(1.004)	613642	2.95214	142.8

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211214.d  
 Lab Smp Id: VR58HMSD  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22336

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-16-S-E-12110  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	792411	53.53
22 Acenaphthene-d10	284255	142128	568510	446361	57.03
28 Phenanthrene-d10	410660	205330	821320	655829	59.70
47 Chrysene-d12	467886	233943	935772	722085	54.33
56 Perylene-d12	472330	236165	944660	426384	-9.73

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.44	-0.06
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	-0.04
28 Phenanthrene-d10	9.74	9.24	10.24	9.73	-0.03
47 Chrysene-d12	14.34	13.84	14.84	14.34	-0.02
56 Perylene-d12	18.10	17.60	18.60	18.10	-0.02

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA  
 Sample Matrix: SOLID  
 Lab Smp Id: VR58HMSD  
 Level: LOW  
 Data Type: MS DATA  
 SpikeList File: pnalcss.spk  
 Sublist File: pmax.sub  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22336

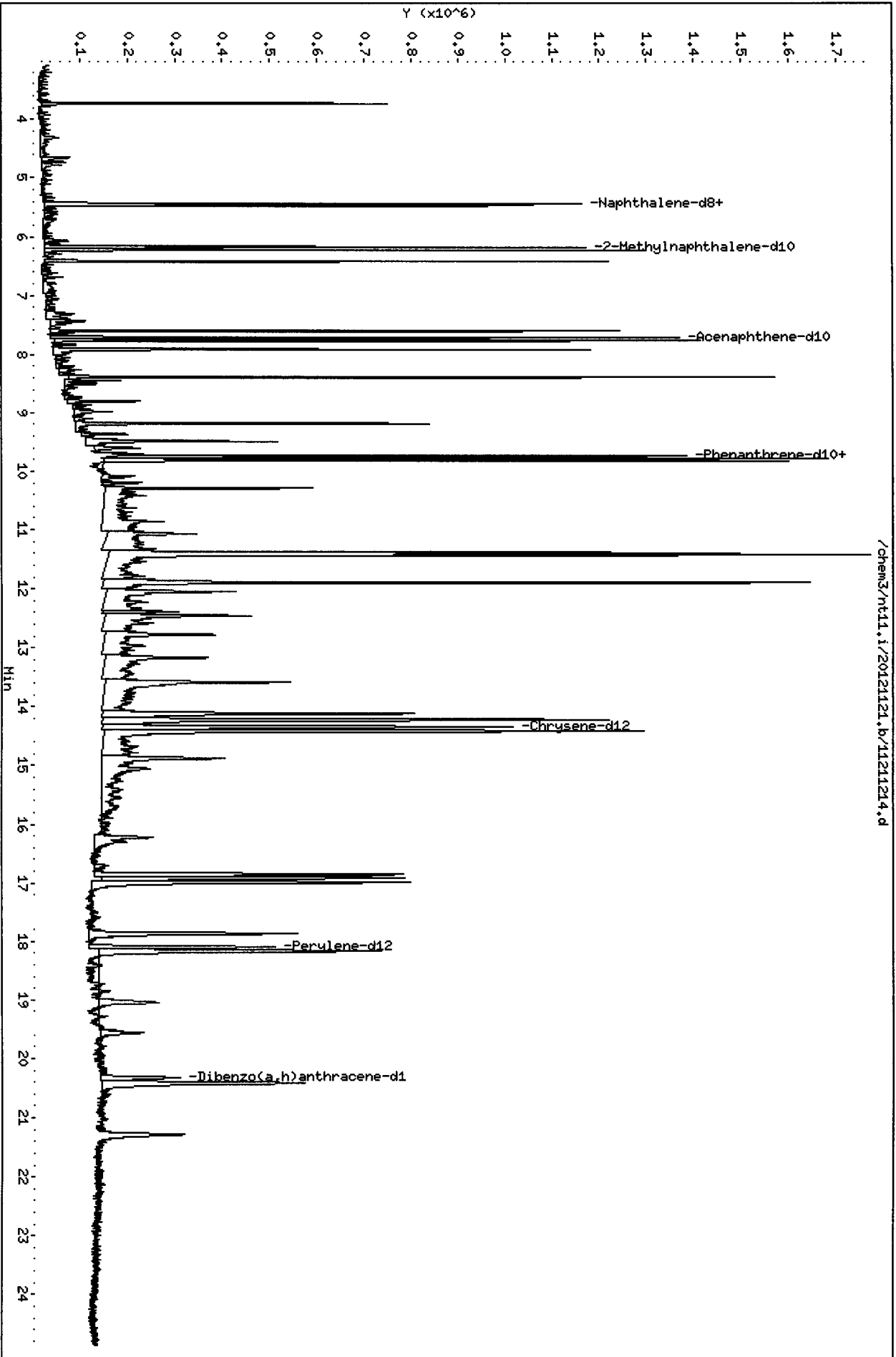
Client SDG: VR58  
 Fraction: SV  
 Client Smp ID: SG-16-S-E-12110 MSD  
 Operator: JZ  
 SampleType: MS  
 Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
7 Naphthalene	145.2	78.21	53.88	37-100
14 2-Methylnaphthalen	145.2	79.33	54.65	37-100
15 1-methylnaphthalen	145.2	86.91	59.87	30-160
21 Acenaphthylene	145.2	94.83	65.32	35-100
23 Acenaphthene	145.2	92.30	63.58	39-100
11 Dibenzofuran	145.2	88.25	60.80	39-100
25 Fluorene	145.2	104.5	72.00	42-100
30 Phenanthrene	145.2	114.5	78.85	47-100
31 Anthracene	145.2	120.9	83.30	41-106
36 Fluoranthene	145.2	124.6	85.80	52-109
39 Pyrene	145.2	128.4	88.48	47-111
46 Benzo(a)anthracene	145.2	121.3	83.58	47-114
48 Chrysene	145.2	123.3	84.94	51-106
51 Benzo(b)fluoranthene	145.2	149.7	103.15	30-160
52 Benzo(k)fluoranthene	145.2	170.7	117.62	30-160
54 Benzo(a)pyrene	145.2	117.1	80.66	44-111
63 Indeno(1,2,3-cd)py	145.2	69.10	47.60	41-114
62 Dibenz(a,h)anthra	145.2	72.26	49.78	42-118
61 Benzo(g,h,i)perylene	145.2	63.96	44.06	37-115
57 Perylene	145.2	142.8	98.40	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	145.2	71.17	49.03	34-100
\$ 60 Dibenz(a,h)anthra	145.2	77.27	53.23	10-117

Data File: /chems/nt11.i/20121121.b/11211214.d  
Date: 21-NOV-2012 17:41  
Client ID: SG-16-S-E-12110 MSD  
Sample Info: VRS9HMSD  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt11.i  
Operator: JZ  
Column diameter: 0.25



20121121

CO-ELUTION SUMMARY FOR FILE - 11211214.d

Lab ID: VR58HMSD, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatiles Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211215.d  
Lab Smp Id: VR58I Client Smp ID: SG-17-S-E-121107  
Inj Date : 21-NOV-2012 18:11  
Operator : JZ Inst ID: nt11.i  
Smp Info : VR58I  
Misc Info : 12-22337  
Comment : 1ul Injection  
Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Meth Date : 26-Nov-2012 11:15 jianqing Quant Type: ISTD  
Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
Als bottle: 15  
Dil Factor: 1.00000  
Integrator: HP RTE Compound Sublist: pnax.sub  
Target Version: 3.50

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	22.06000	Weight of sample extracted (g)
M	53.50000	% Moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT	SIG	CONCENTRATIONS						
			MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	136	==	5.432	5.438	(1.000)	814587	2.00000		
7 Naphthalene	128	=====	5.460	5.467	(1.005)	36244	0.08325	4.058	
\$ 12 2-Methylnaphthalene-d10	152	=====	6.170	6.174	(1.136)	423601	1.52198	74.19	
14 2-Methylnaphthalene	141	=====	6.218	6.221	(1.145)	37291	0.15203	7.410	
15 1-methylnaphthalene	141	=====	Compound Not Detected.						
21 Acenaphthylene	152	=====	Compound Not Detected.						
* 22 Acenaphthene-d10	164	=====	7.710	7.714	(1.000)	466527	2.00000		
23 Acenaphthene	153	=====	Compound Not Detected.						
11 Dibenzofuran	168	=====	Compound Not Detected.						
25 Fluorene	166	=====	8.386	8.389	(1.088)	15164	0.05224	2.546	
* 28 Phenanthrene-d10	188	=====	9.733	9.736	(1.000)	652847	2.00000		
30 Phenanthrene	178	=====	9.768	9.768	(1.004)	153573	0.38943	18.98	
31 Anthracene	178	=====	9.806	9.809	(1.007)	22001	0.05812	2.833 (M)	
36 Fluoranthene	202	=====	11.437	11.425	(1.175)	301549	0.76322	37.20	
39 Pyrene	202	=====	11.910	11.892	(0.829)	297493	0.79366	38.69	

Compounds	QUANT SIG							CONCENTRATIONS	
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)		
=====	====	==	=====	=====	=====	=====	=====		
46 Benzo(a)anthracene	228	14.249	14.224	(0.992)	83943	0.24560	11.97		
* 47 Chrysene-d12	240	14.365	14.343	(1.000)	680189	2.00000			
48 Chrysene	228	14.432	14.413	(1.005)	169122	0.50981	24.85		
51 Benzo(b)fluoranthene	252	16.874	16.858	(0.930)	84044	0.46945	22.88		
52 Benzo(k)fluoranthene	252	16.928	16.918	(0.933)	47296	0.24326	11.86		
251 Benzo(j)fluoranthene	252	17.000	16.994	(0.937)	44553	0.21719	10.59 (M)		
54 Benzo(a)pyrene	252	Compound Not Detected.							
* 56 Perylene-d12	264	18.136	18.102	(1.000)	386826	2.00000			
63 Indeno(1,2,3-cd)pyrene	276	20.430	20.431	(1.126)	33345	0.15125	7.373		
\$ 60 Dibenzo(a,h)anthracene-d14	292	20.336	20.339	(1.121)	179217	1.39751	68.12		
62 Dibenzo(a,h)anthracene	278	Compound Not Detected.							
61 Benzo(g,h,i)perylene	276	21.308	21.298	(1.175)	34583	0.18439	8.988		
57 Perylene	252	18.240	18.177	(1.006)	8979986	47.6193	2321 E		

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211215.d  
 Lab Smp Id: VR58I  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22337

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-17-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	814587	57.83
22 Acenaphthene-d10	284255	142128	568510	466527	64.12
28 Phenanthrene-d10	410660	205330	821320	652847	58.98
47 Chrysene-d12	467886	233943	935772	680189	45.37
56 Perylene-d12	472330	236165	944660	386826	-18.10

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.43	-0.12
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	-0.04
28 Phenanthrene-d10	9.74	9.24	10.24	9.73	-0.03
47 Chrysene-d12	14.34	13.84	14.84	14.37	0.15
56 Perylene-d12	18.10	17.60	18.60	18.14	0.19

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



Analytical Resources, Inc.

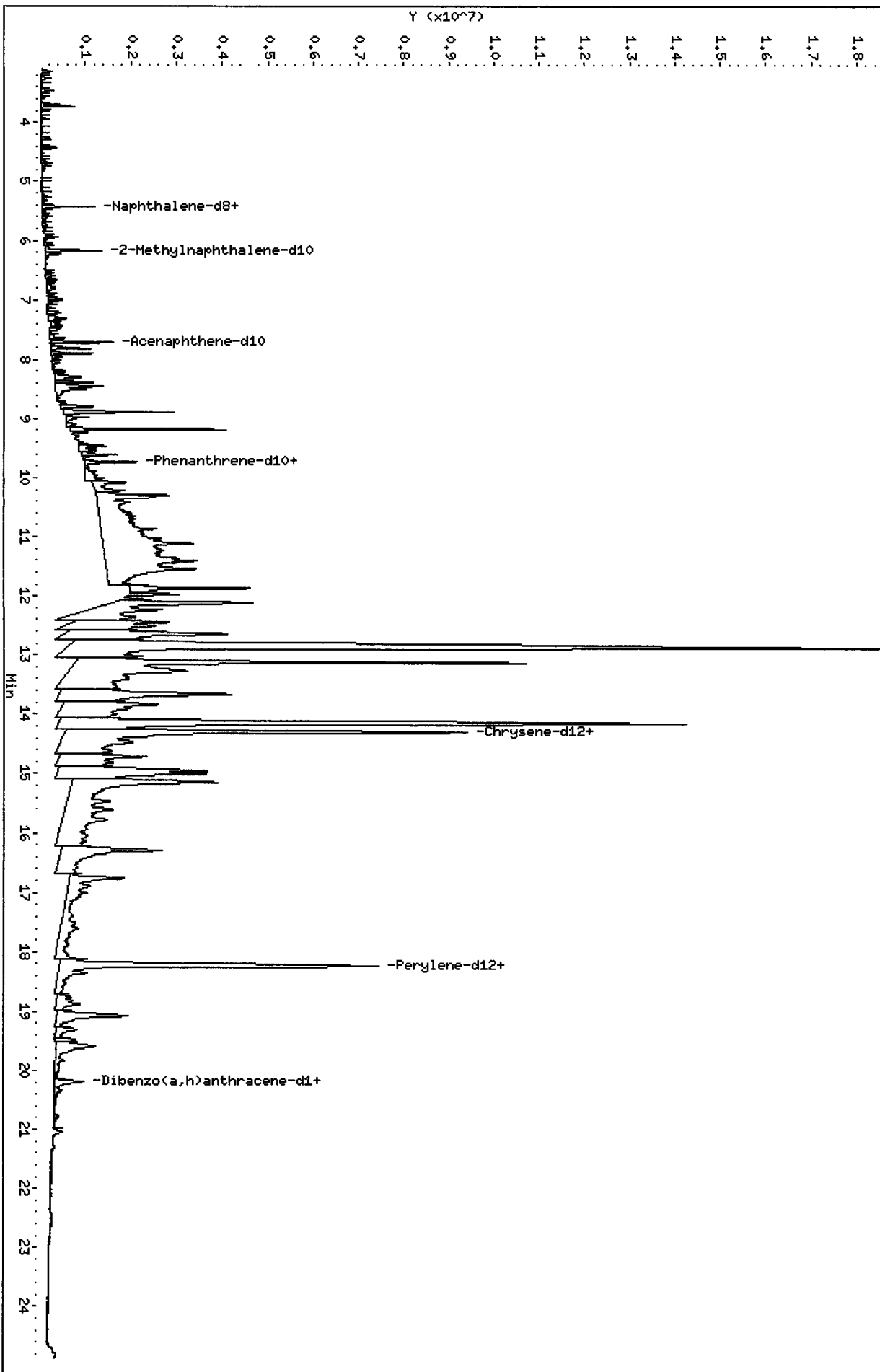
RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58I  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Misc Info: 12-22337

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-17-S-E-121107  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	146.2	74.19	50.73	34-100
\$ 60 Dibenzo (a, h) anthra	146.2	68.12	46.58	10-117

/chem3/nt11.i/20121121.b/11211215.d



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR58I

Volume Injected (uL): 1.0

Operator: JZ

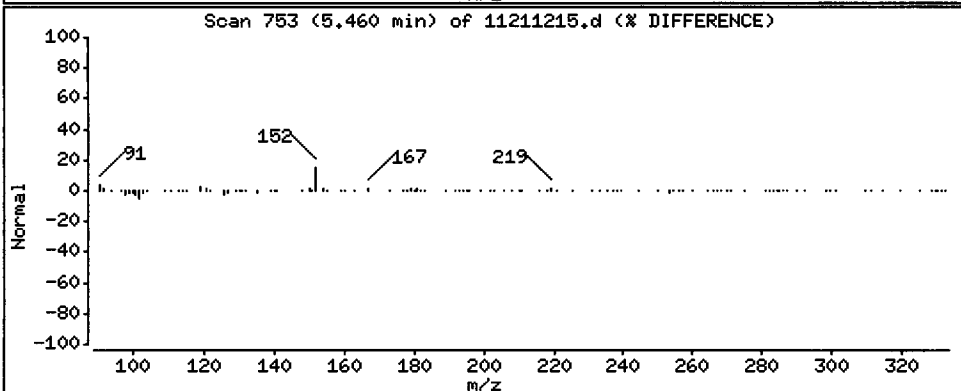
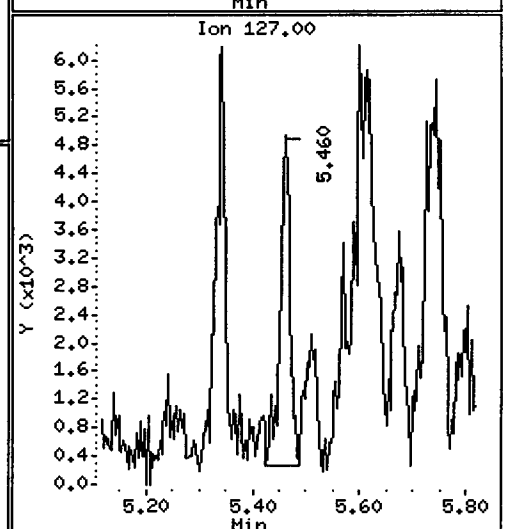
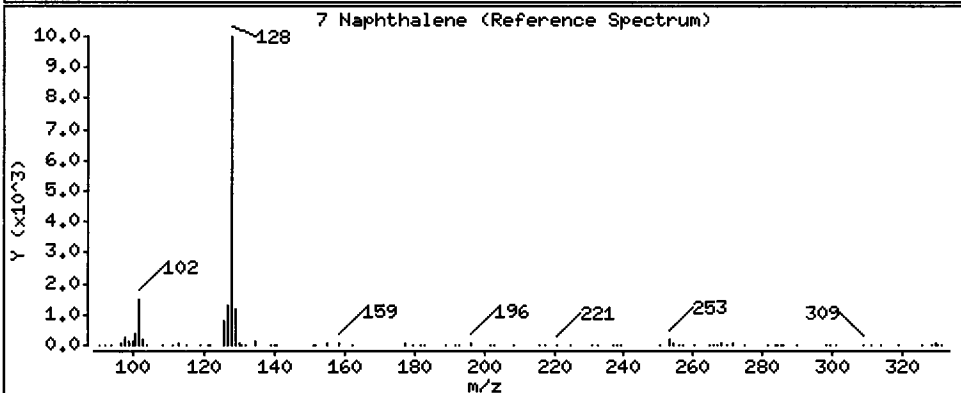
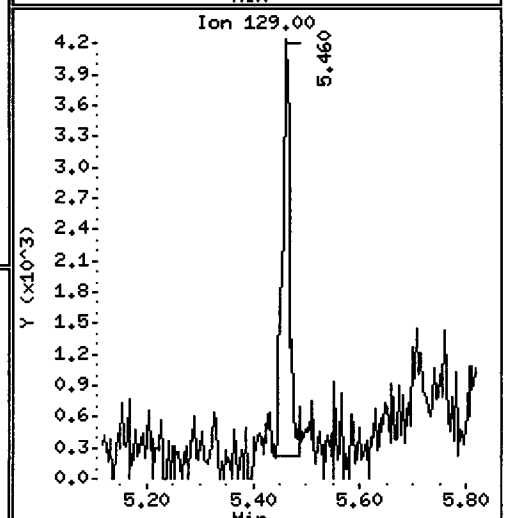
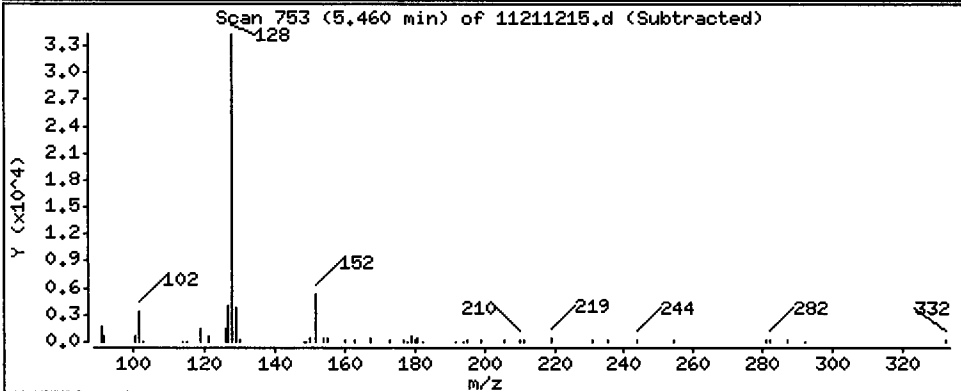
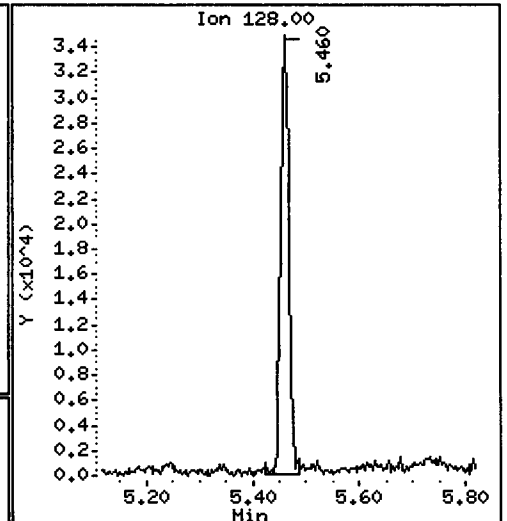
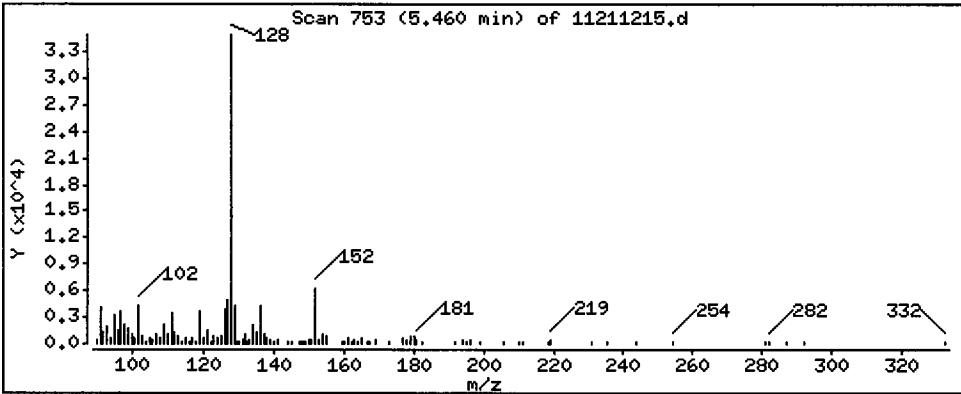
Column phase: ZB-5msi

Column diameter: 0.25

7 Naphthalene

Concentration: 4.058 ug/kg

*Handwritten signature*



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR581

Volume Injected (uL): 1.0

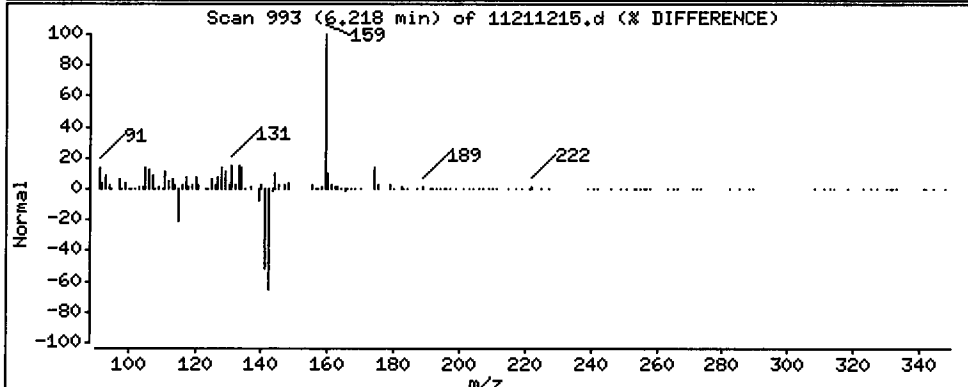
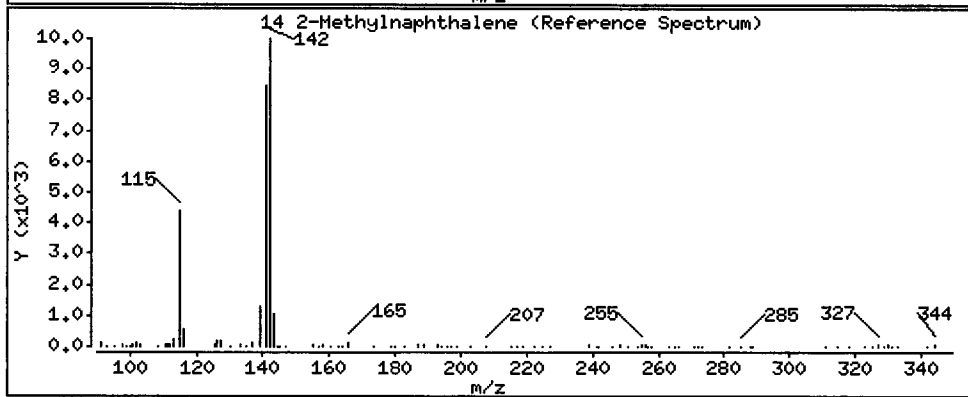
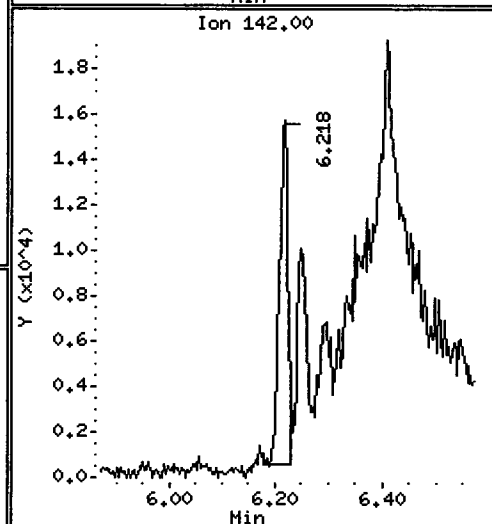
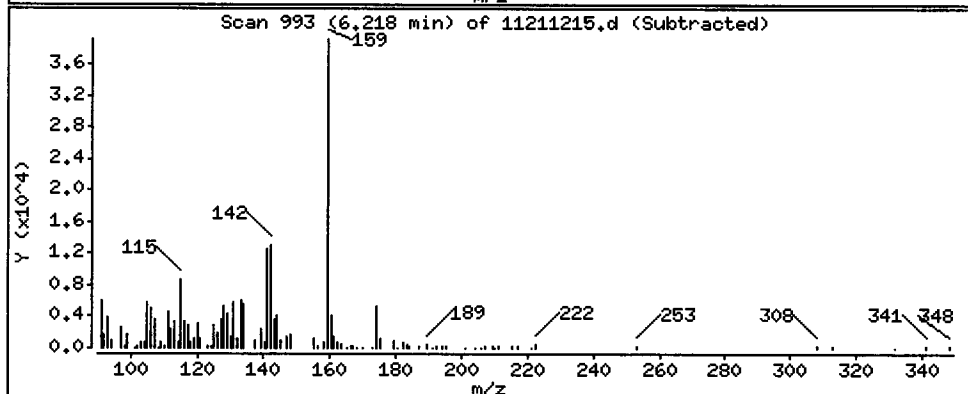
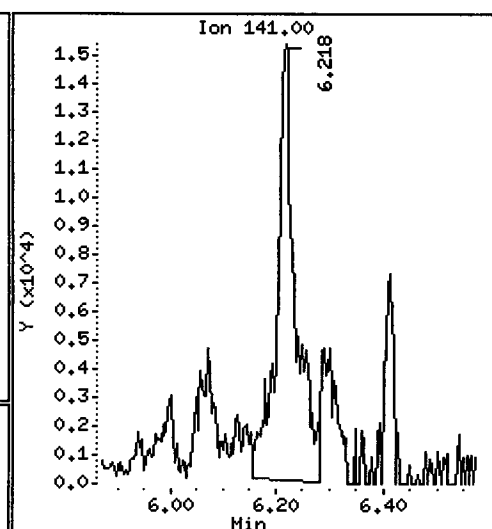
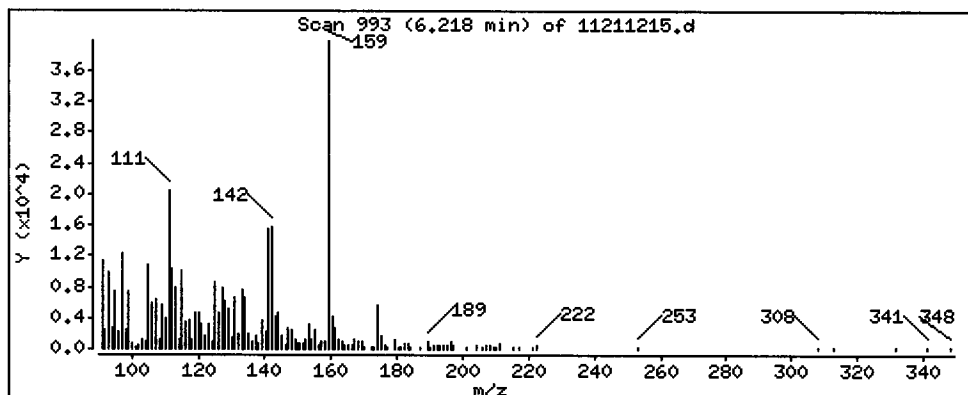
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

14 2-Methylnaphthalene

Concentration: 7,410 ug/kg



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR581

Volume Injected (uL): 1.0

Operator: JZ

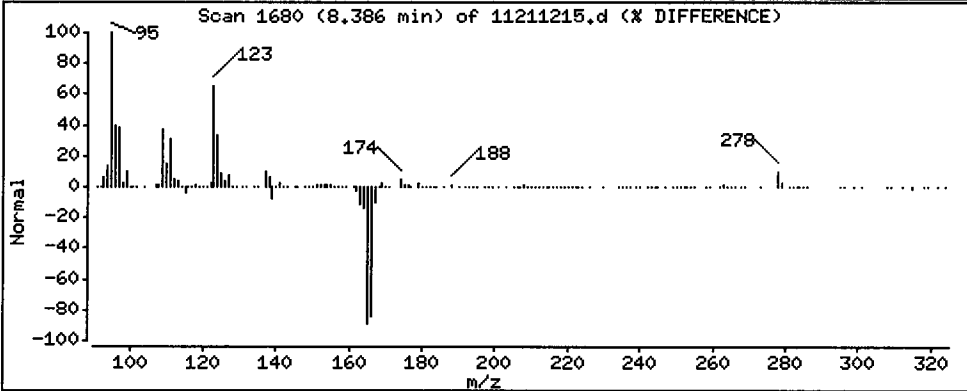
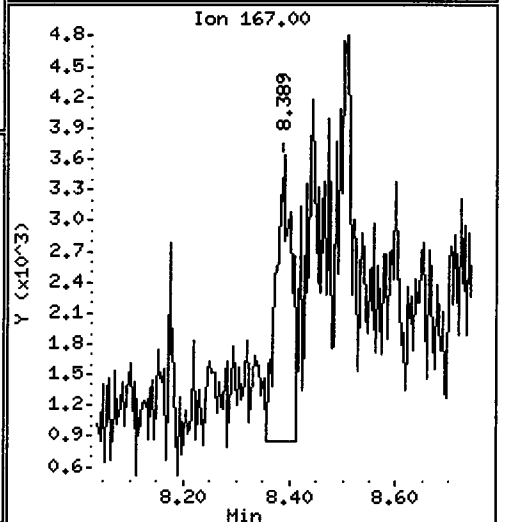
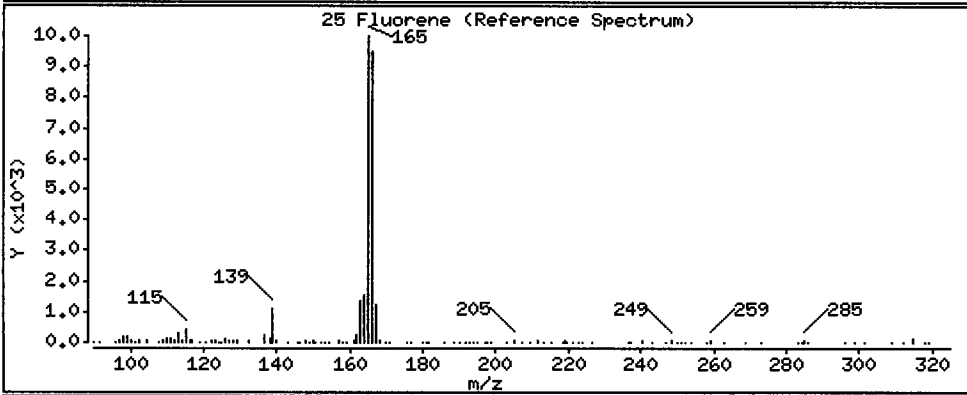
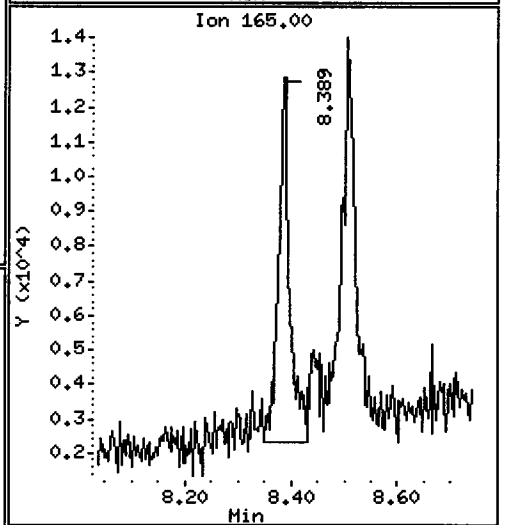
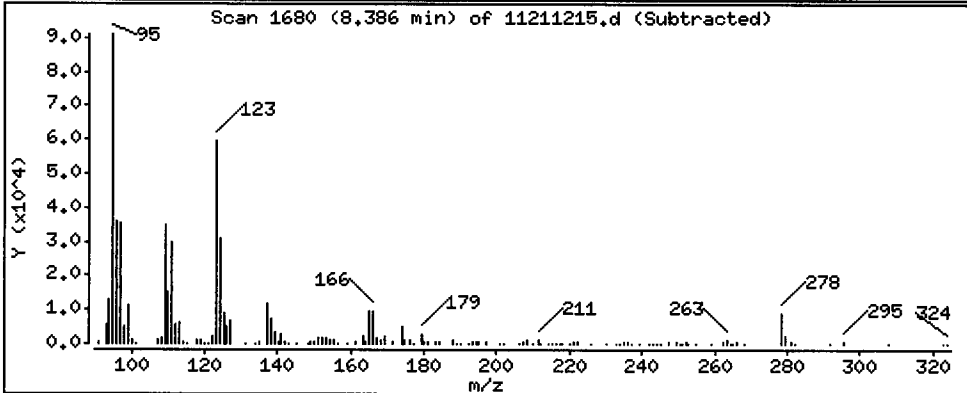
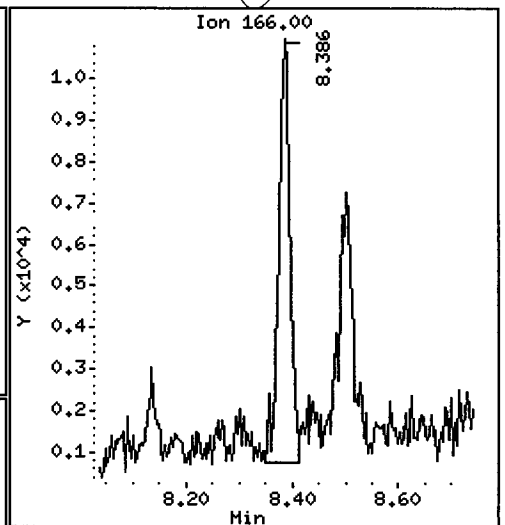
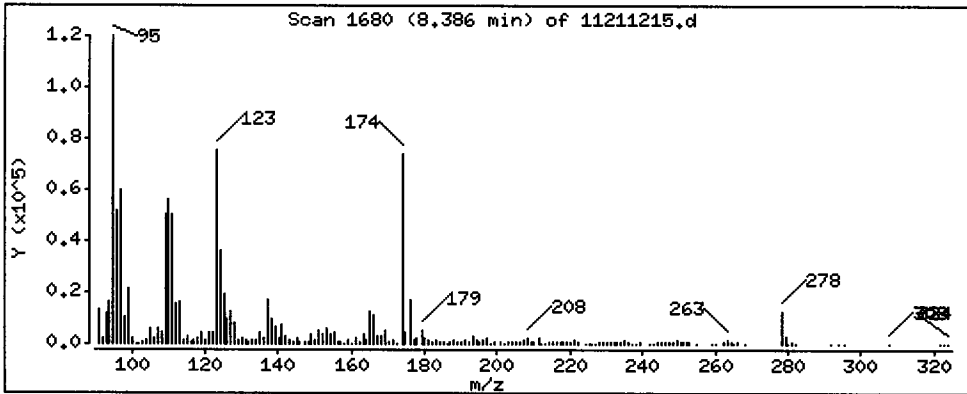
Column phase: ZB-5msi

Column diameter: 0.25

25 Fluorene

Concentration: 2,546 ug/kg

*54*



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR58I

Volume Injected (uL): 1.0

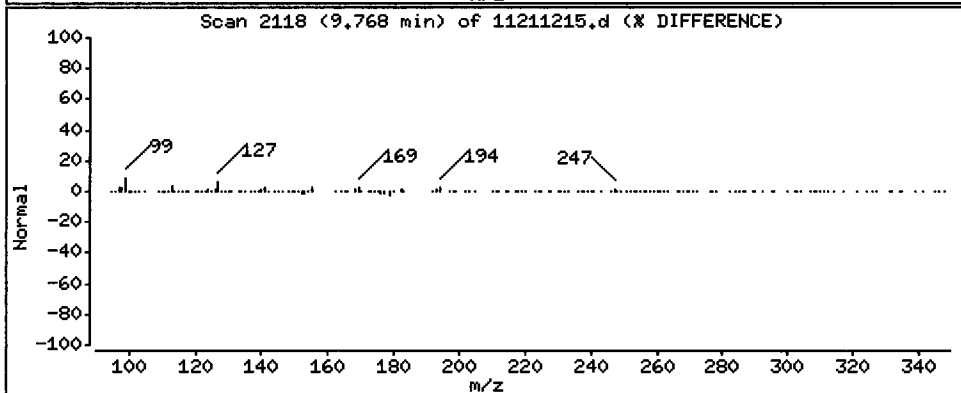
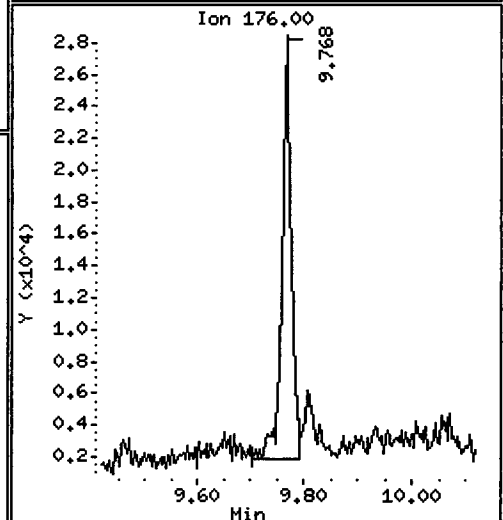
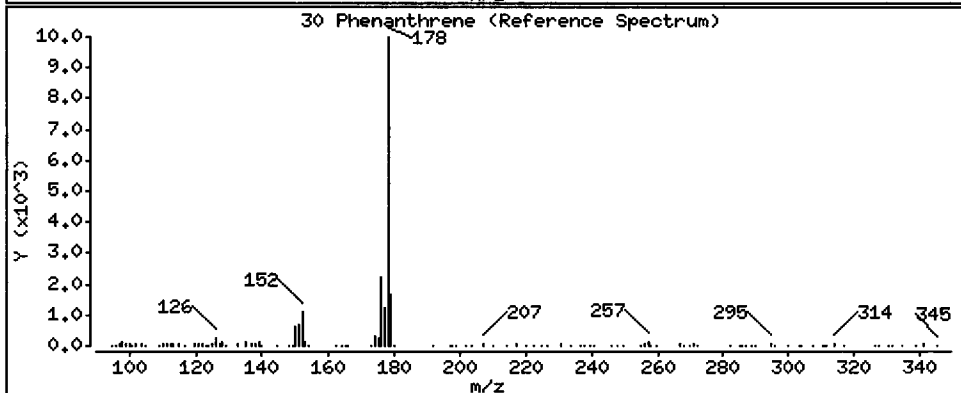
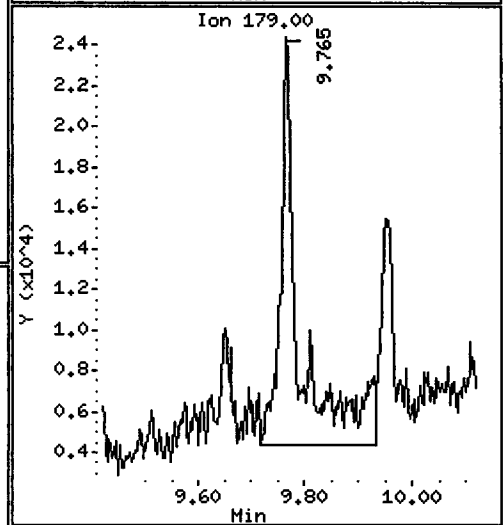
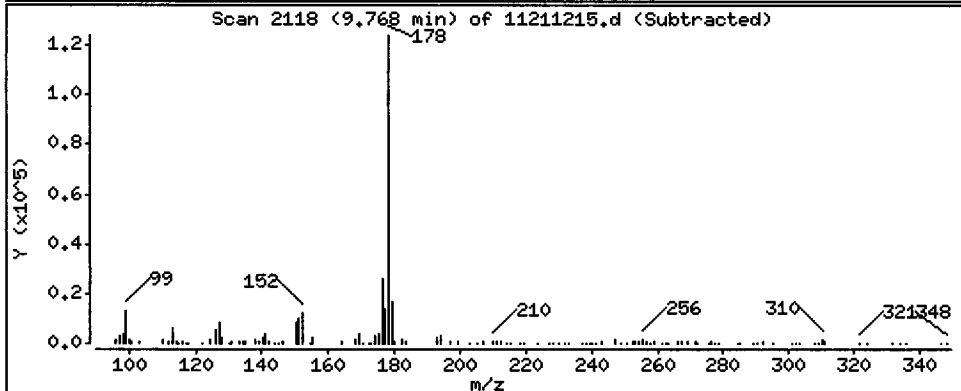
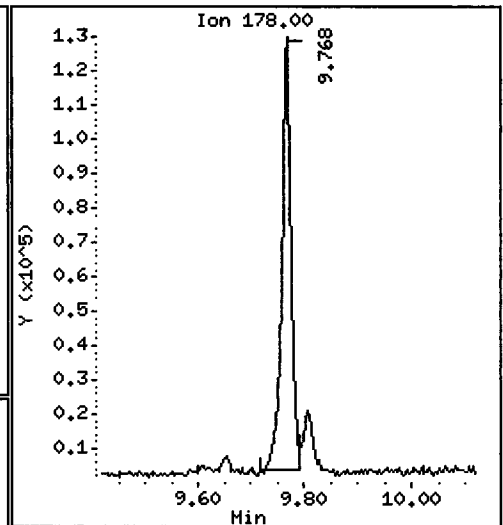
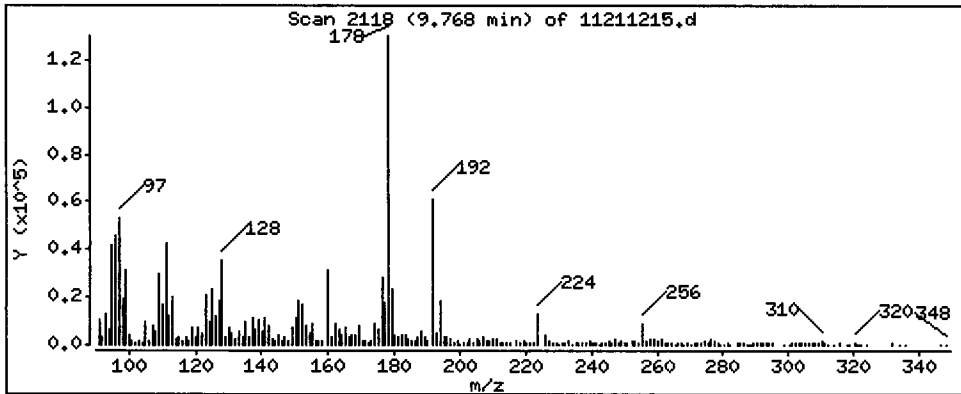
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

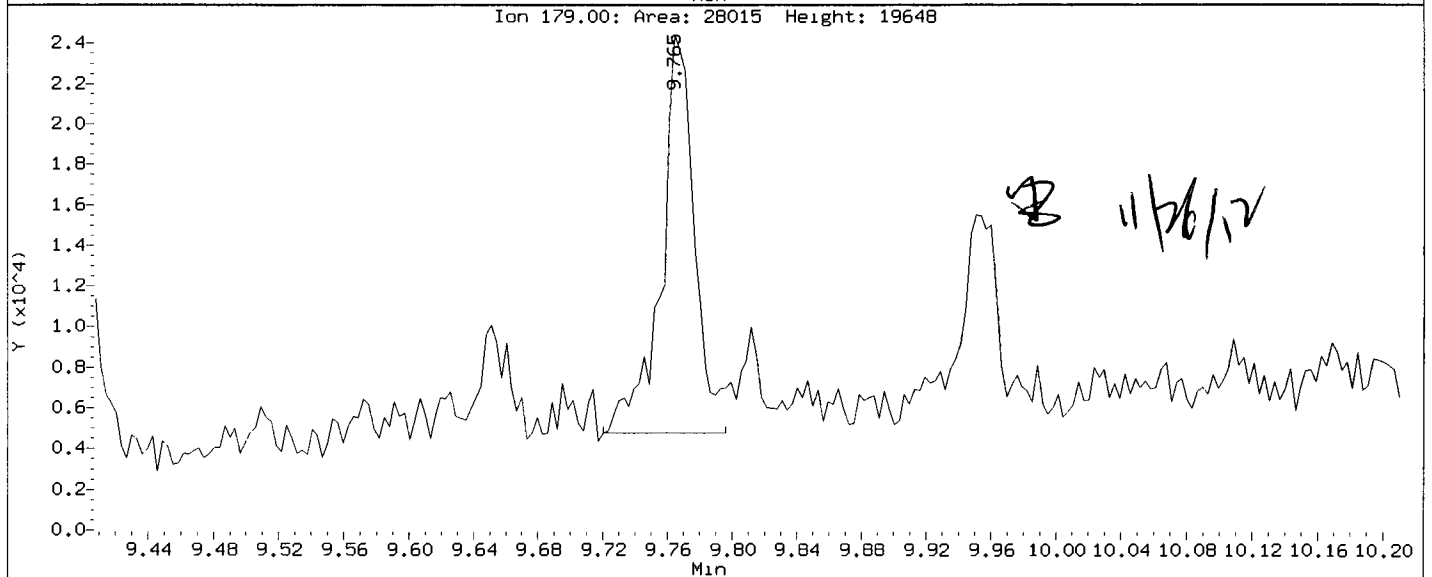
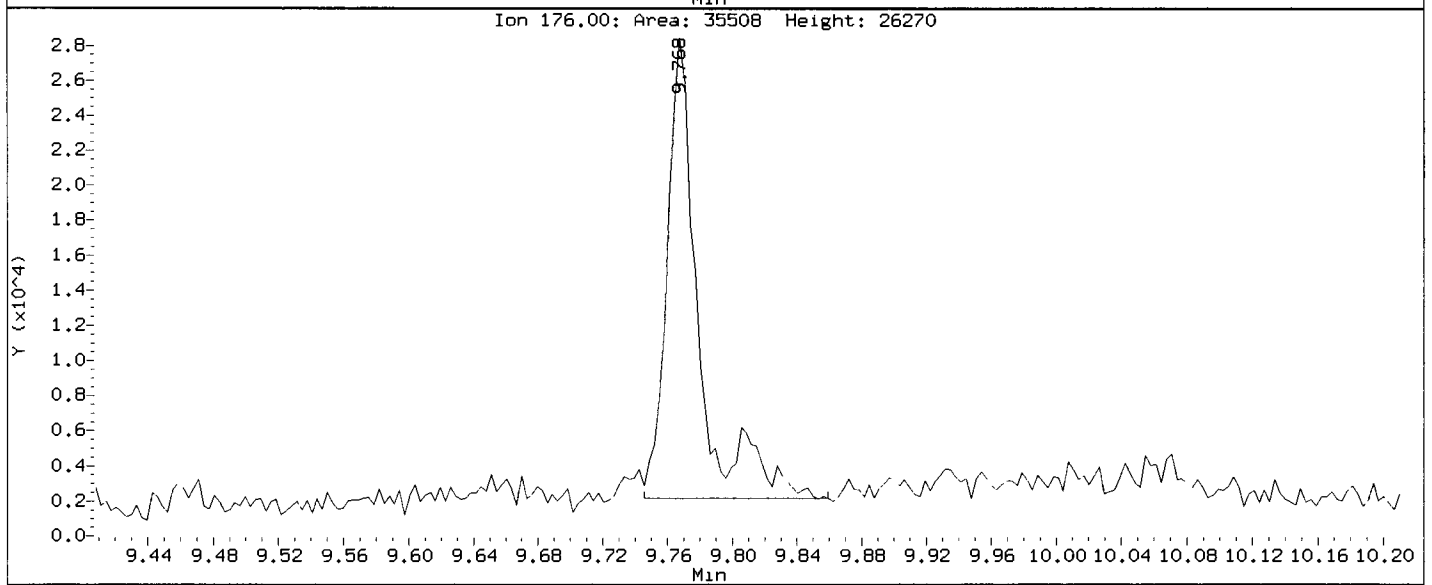
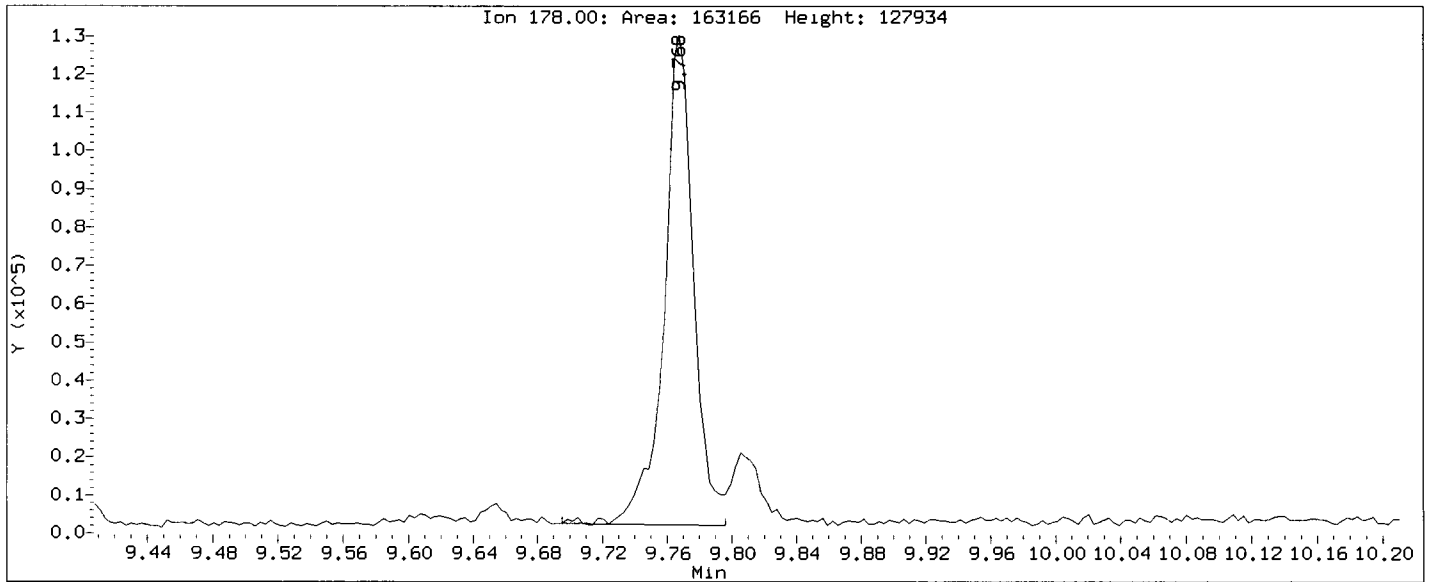
30 Phenanthrene

Concentration: 18.98 ug/kg



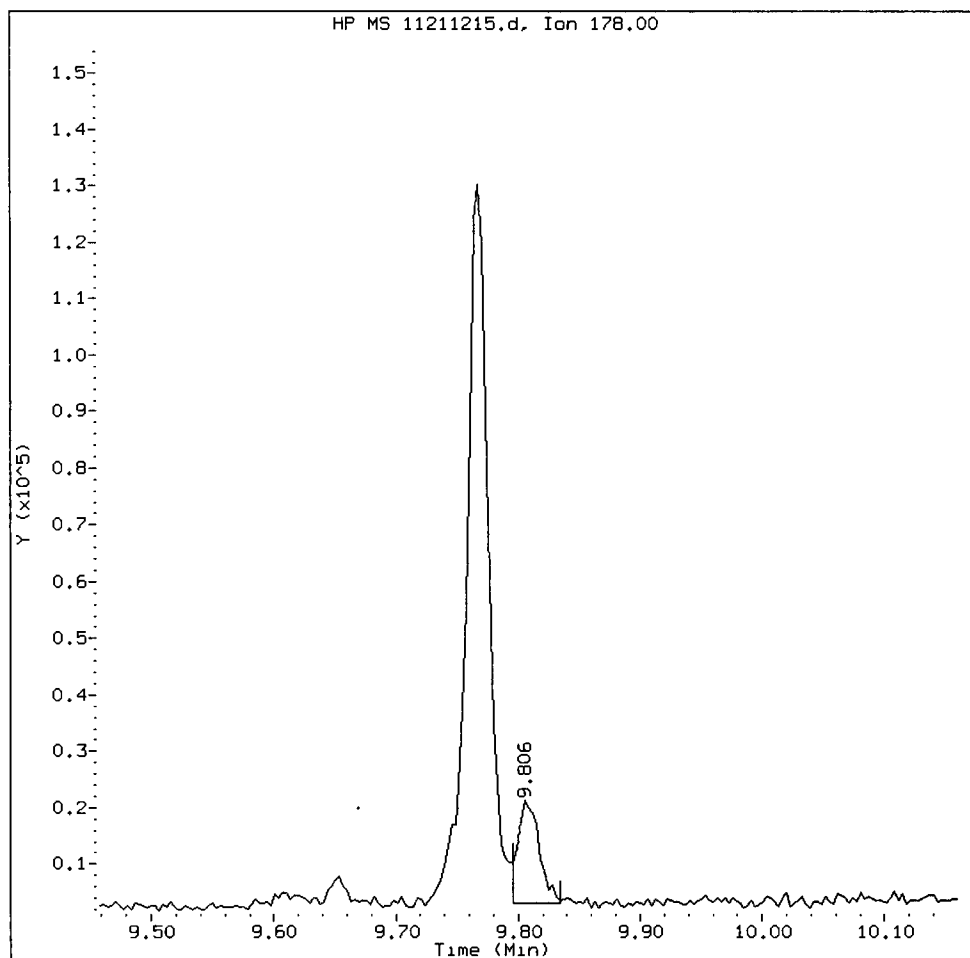
Data File: /chem3/nt11.1/20121121.b/11211215.d  
Injection Date: 21-NOV-2012 18:11  
Instrument: nt11.1  
Client Sample ID: SG-17-S-E-121107

Compound: Anthracene  
CAS Number: 120-12-7



VR58I, /chem3/nt11.i/20121121.b/11211215.d

Anthracene Amount: 0.06 Area: 22001



#### MANUAL INTEGRATION for Anthracene

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

5. Other \_\_\_\_\_

Analyst: AD

Date: 11/26/12



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR581

Volume Injected (uL): 1.0

Operator: JZ

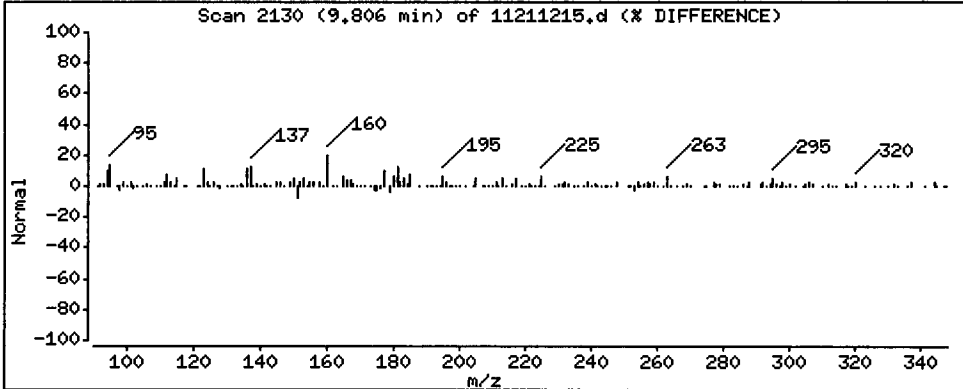
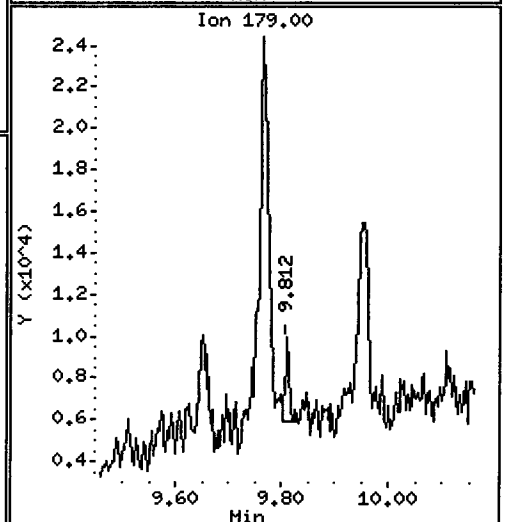
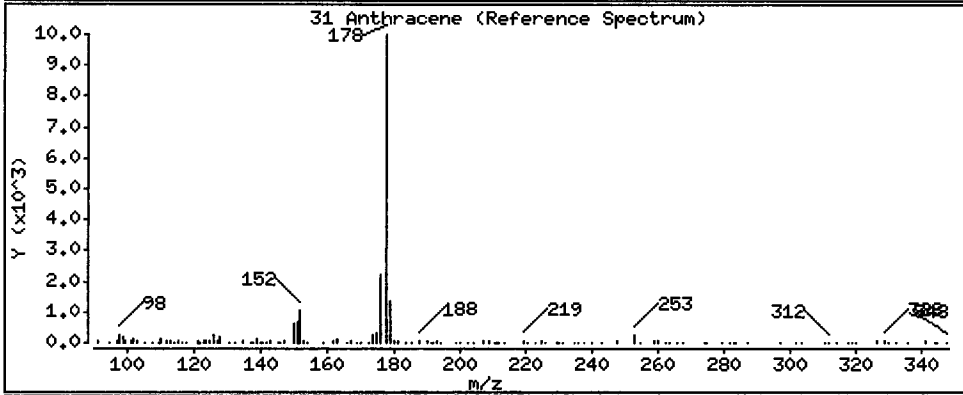
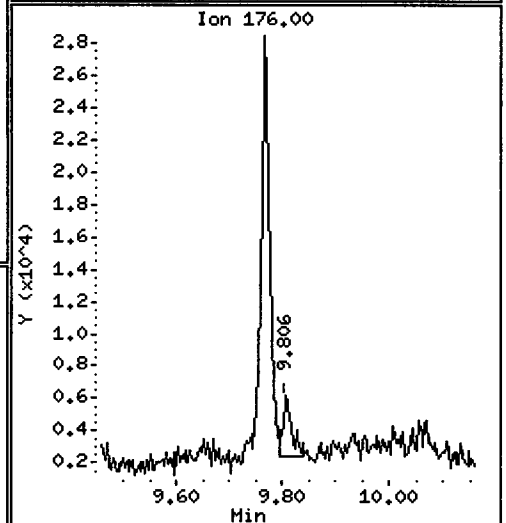
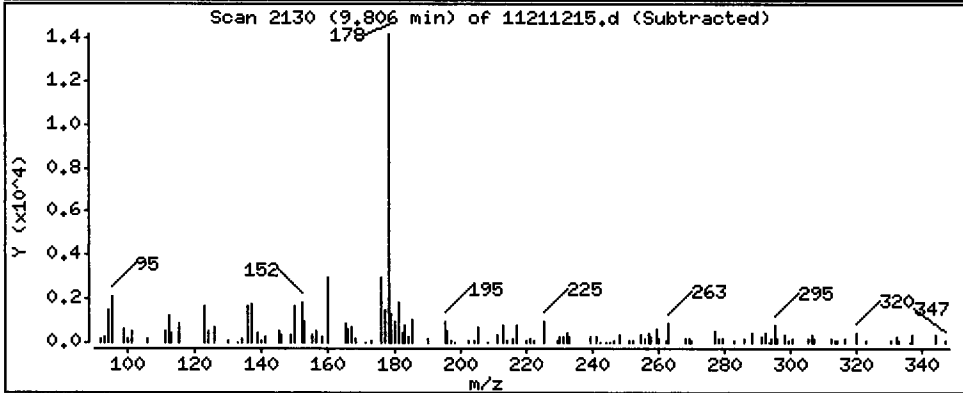
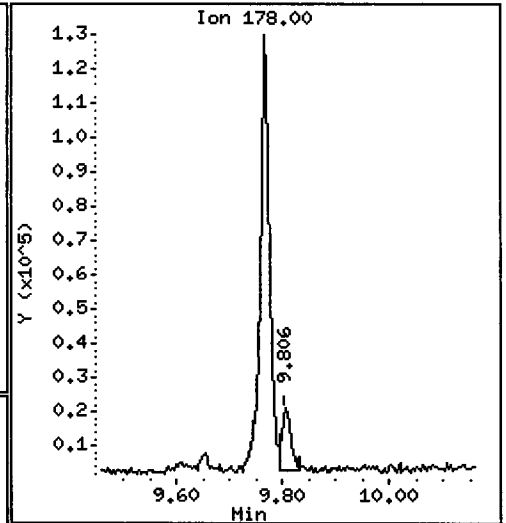
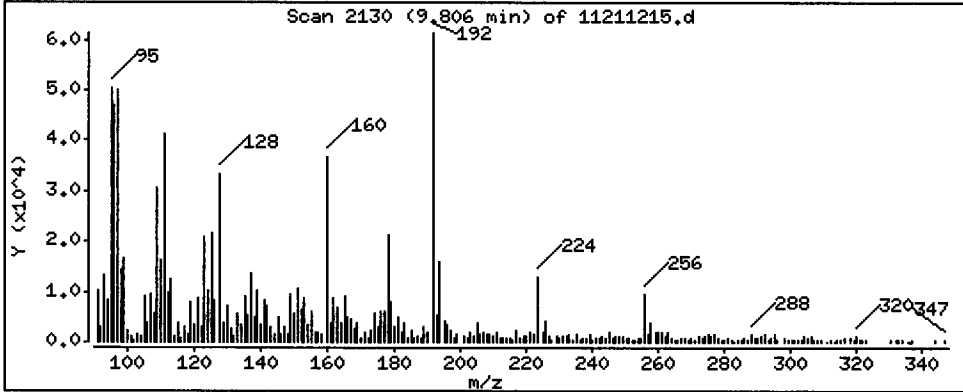
Column phase: ZB-5msi

Column diameter: 0.25

*DM*

31 Anthracene

Concentration: 2,833 ug/kg



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR581

Volume Injected (uL): 1.0

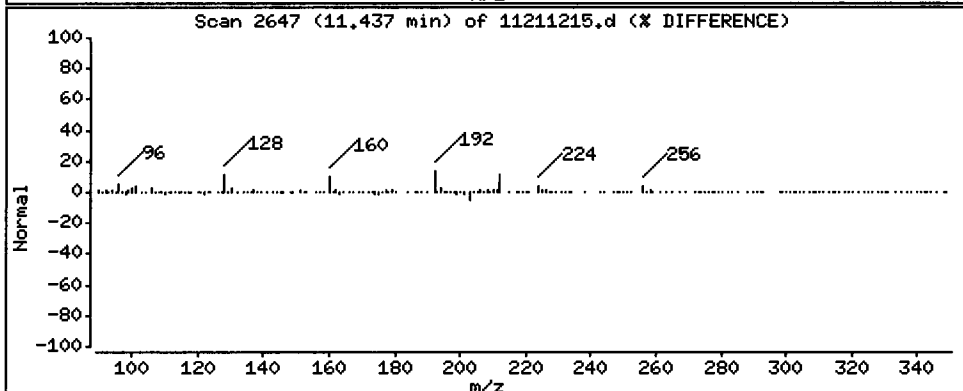
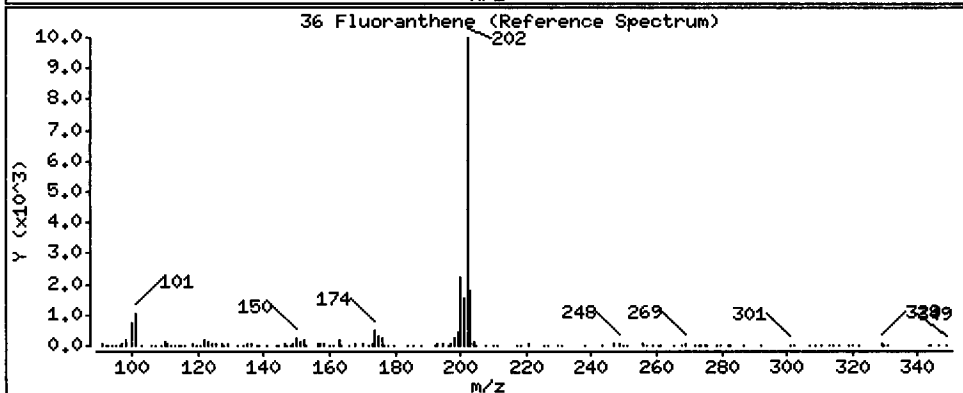
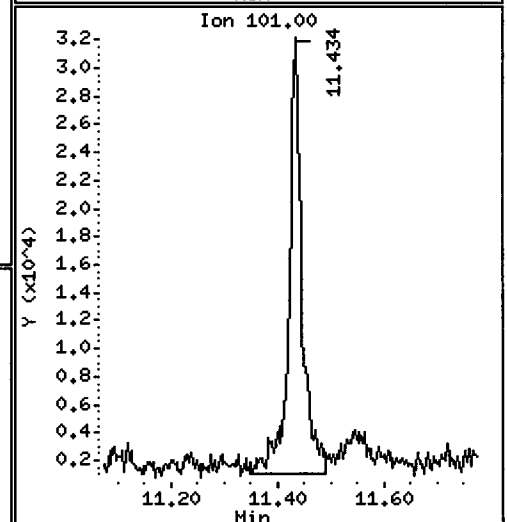
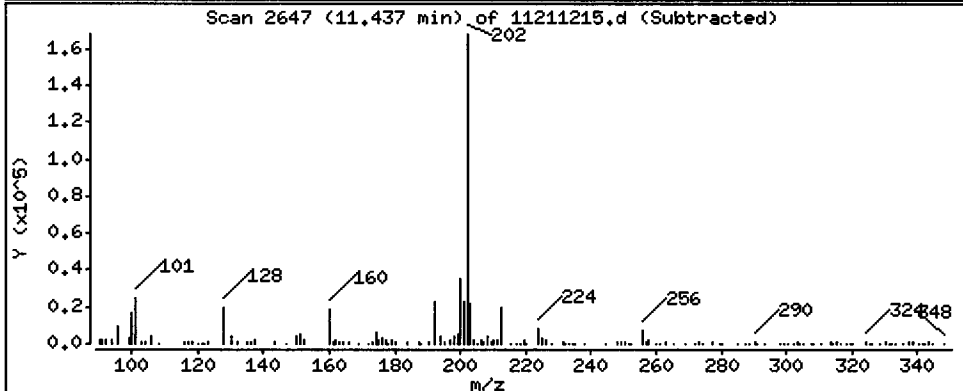
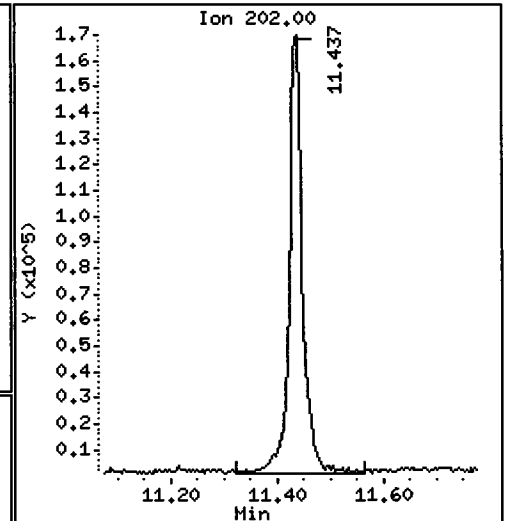
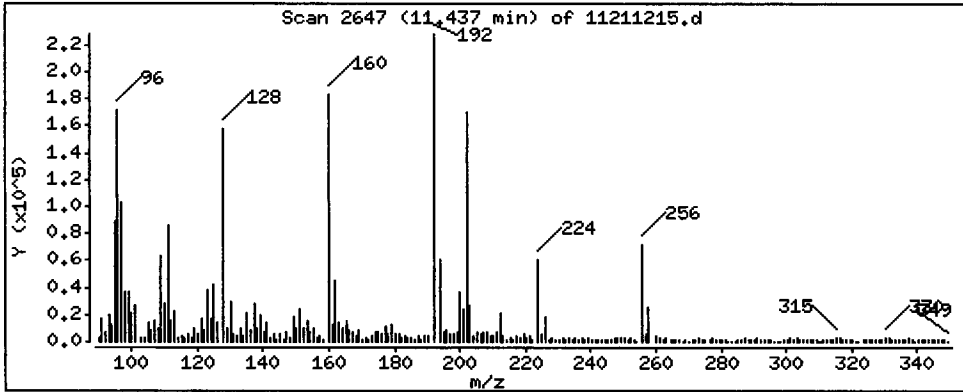
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0,25

36 Fluoranthene

Concentration: 37,20 ug/kg



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR58I

Volume Injected (uL): 1.0

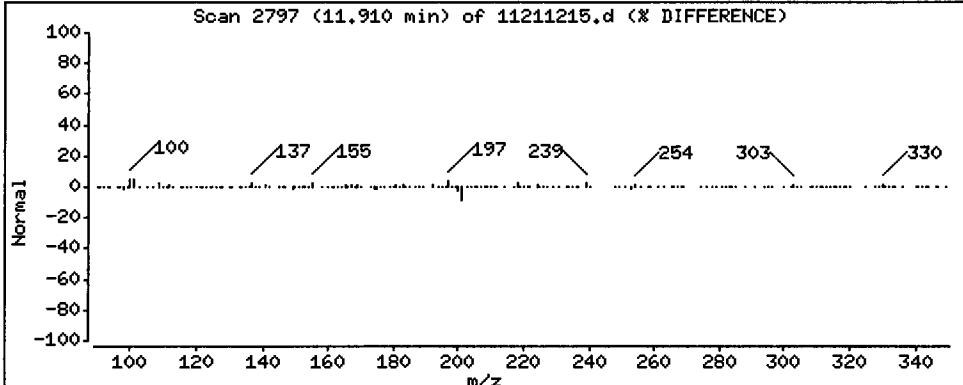
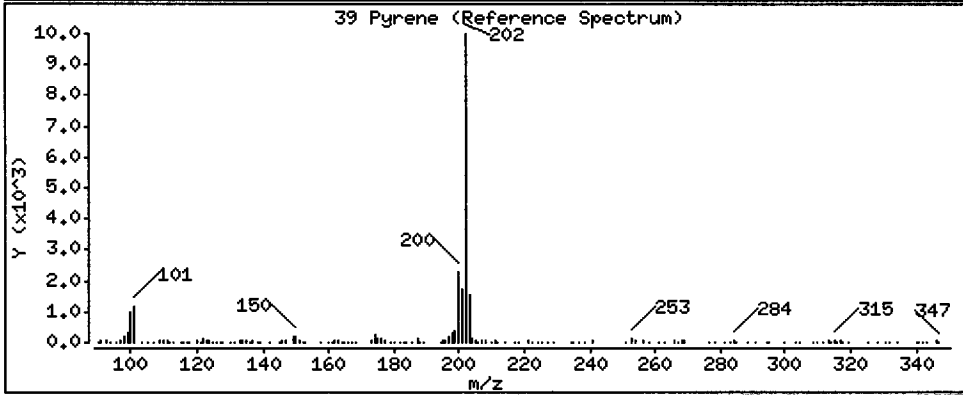
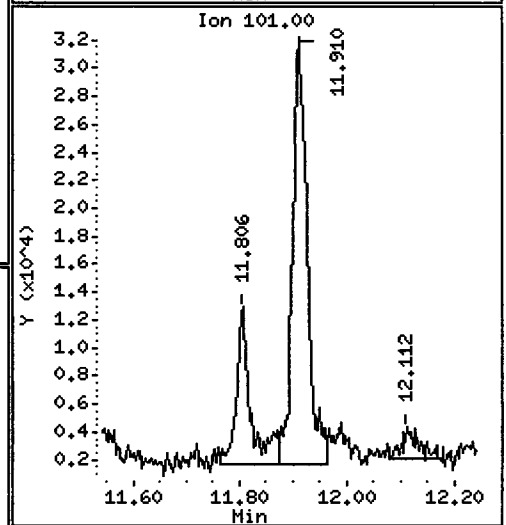
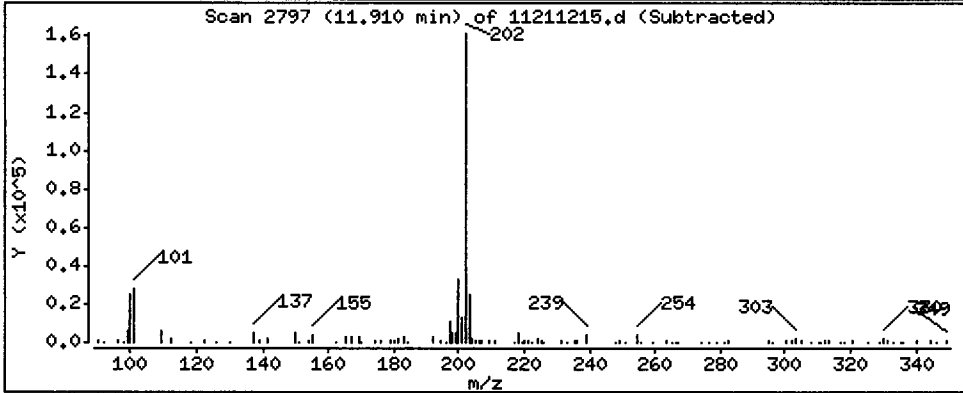
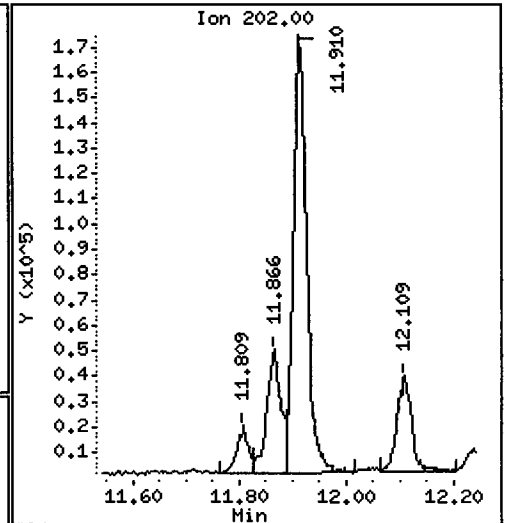
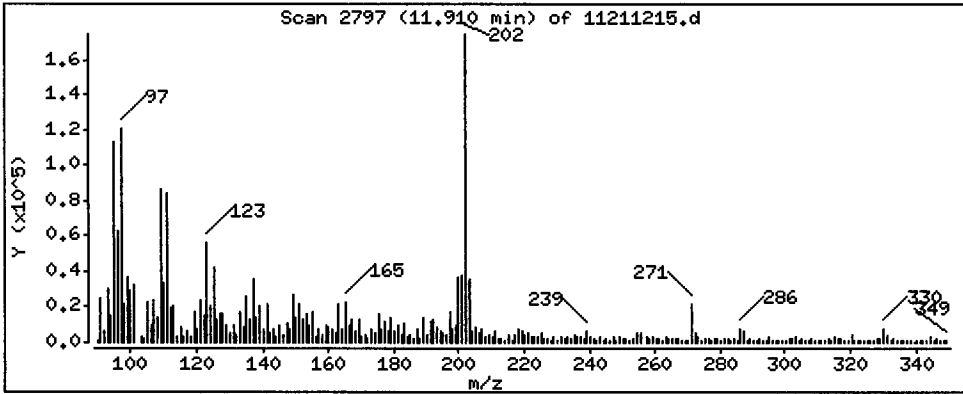
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

39 Pyrene

Concentration: 38.69 ug/kg



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR58I

Volume Injected (uL): 1.0

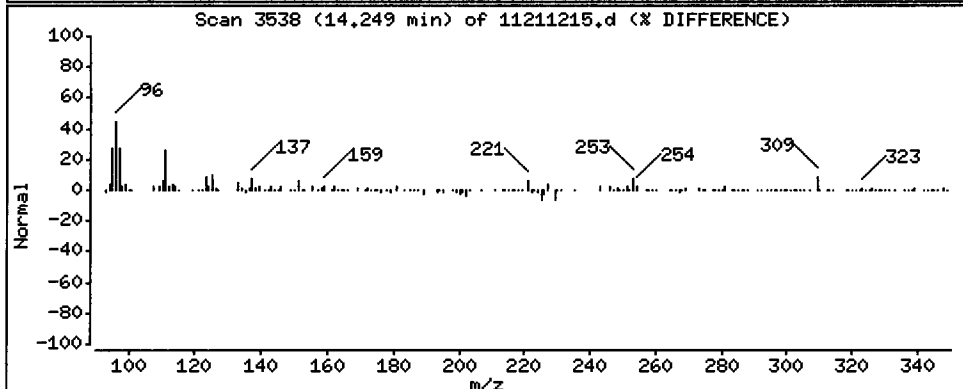
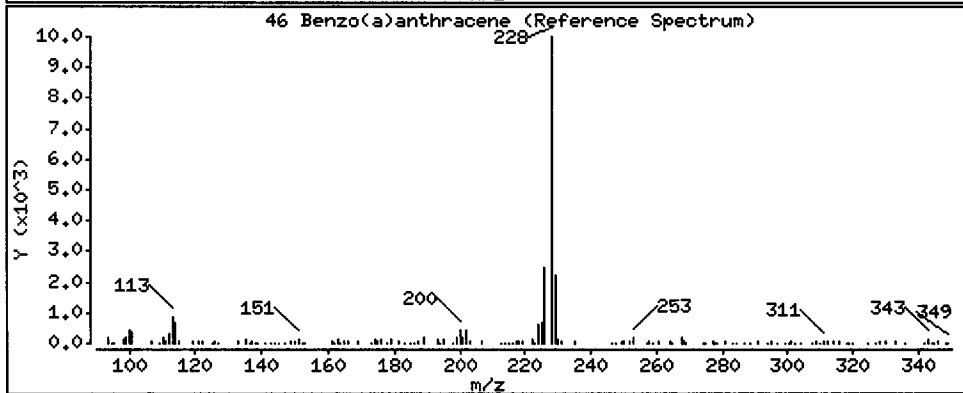
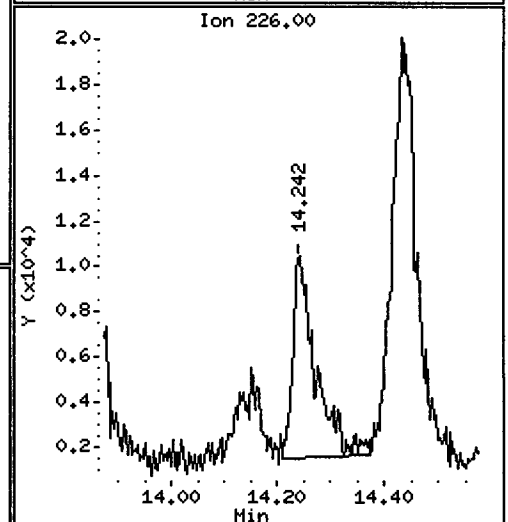
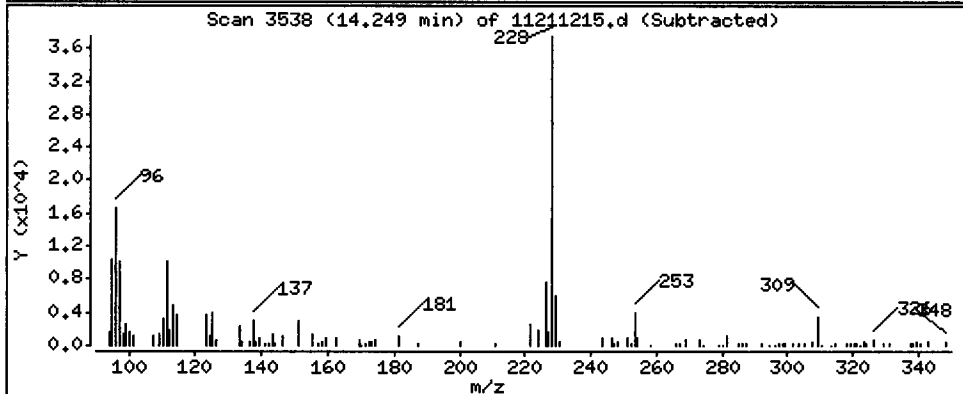
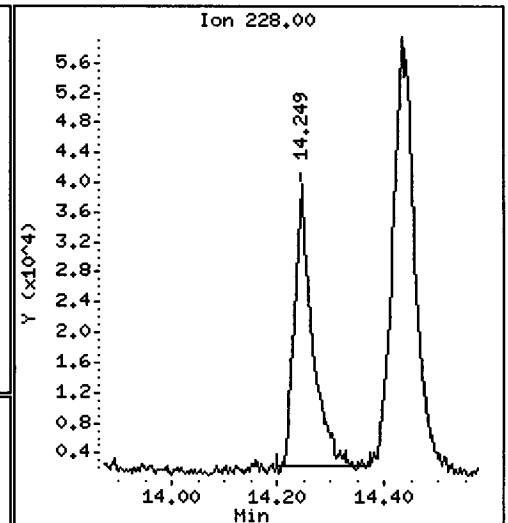
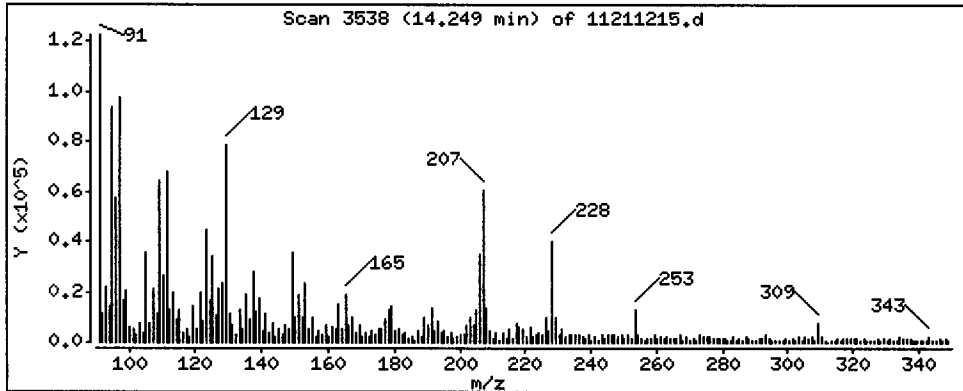
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Benzo(a)anthracene

Concentration: 11.97 ug/kg



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR58I

Volume Injected (uL): 1.0

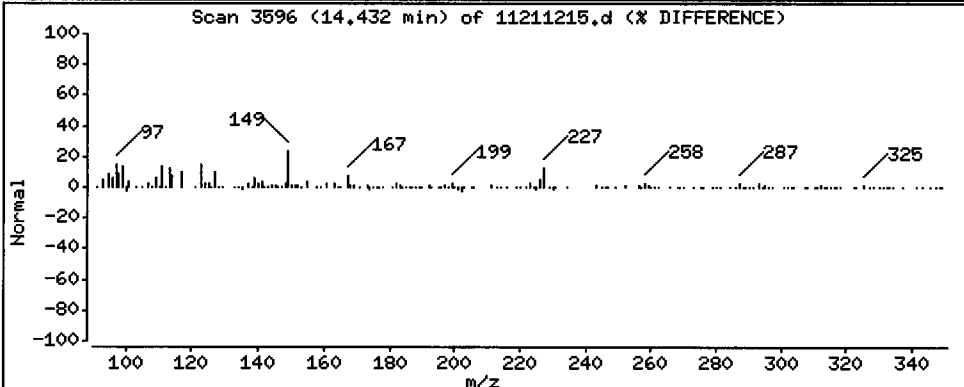
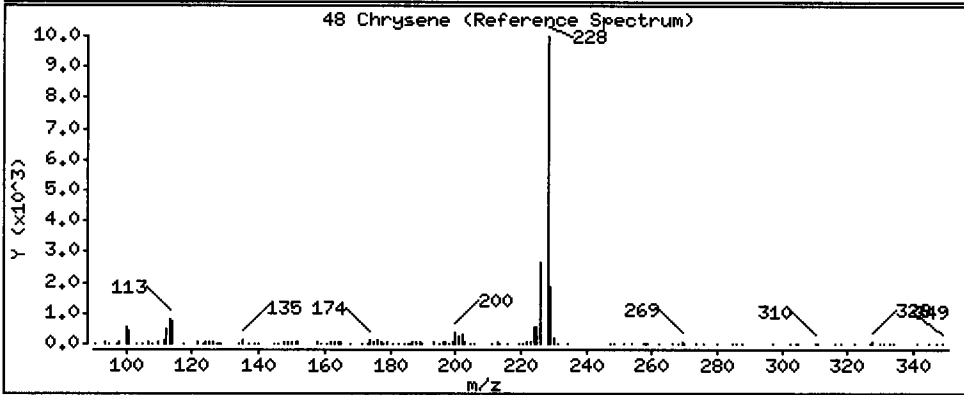
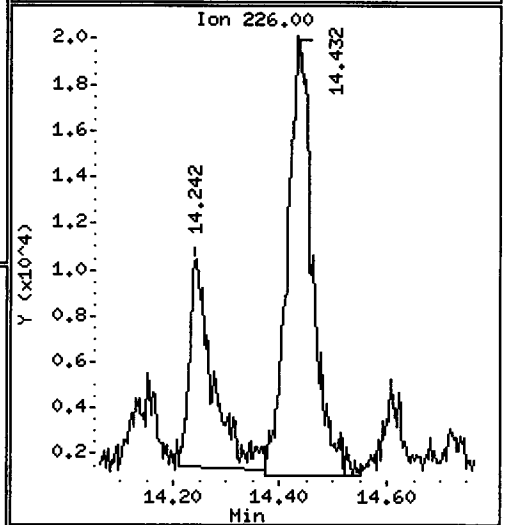
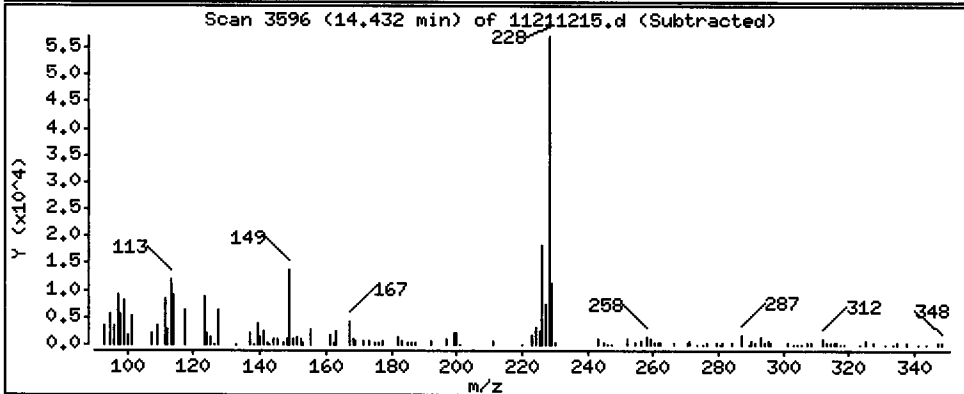
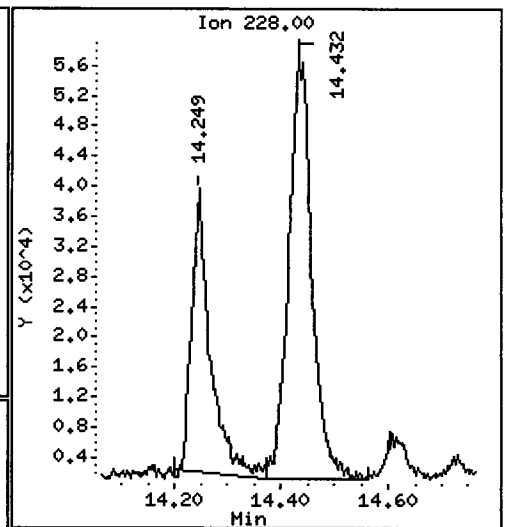
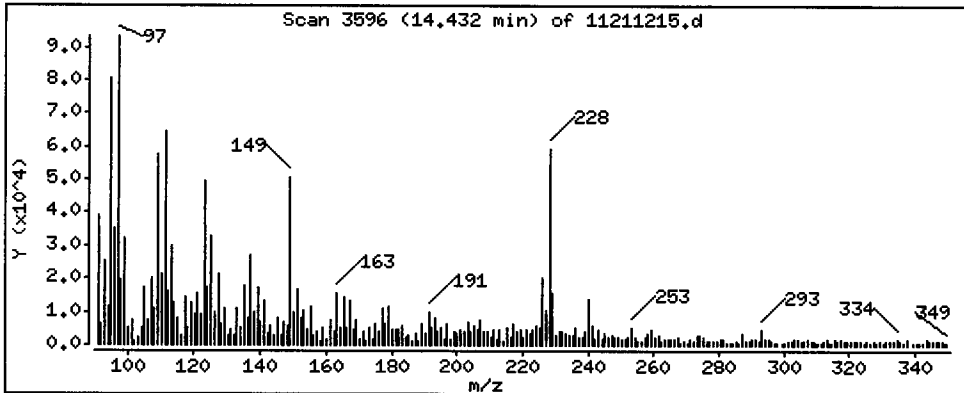
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

48 Chrysene

Concentration: 24.85 ug/kg



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR58I

Volume Injected (uL): 1.0

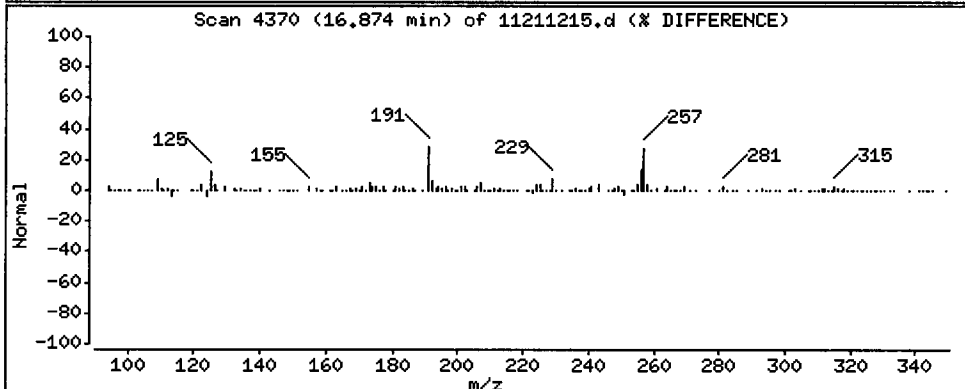
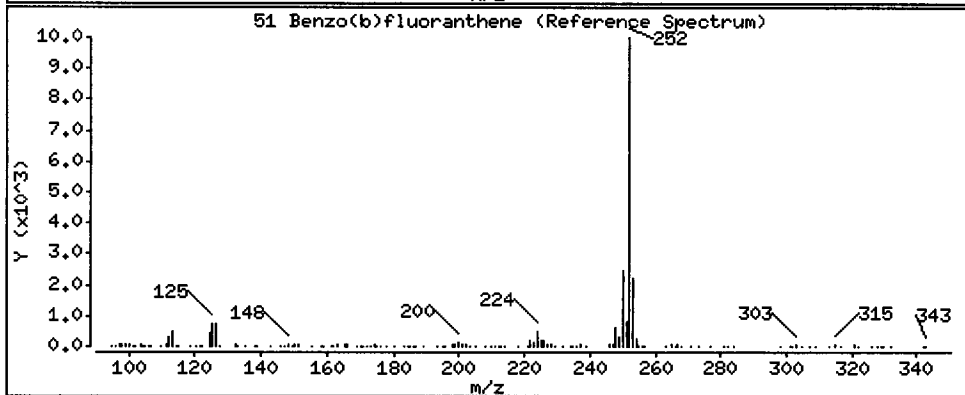
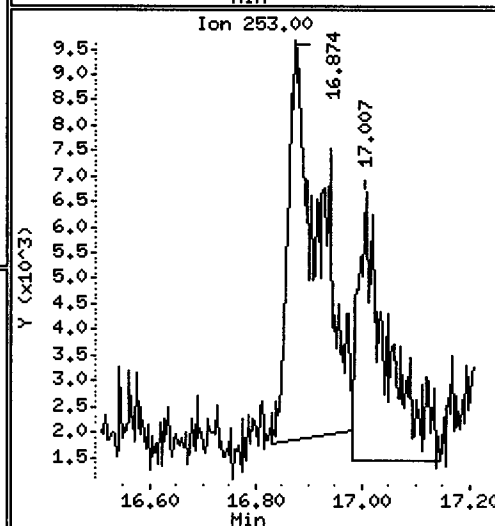
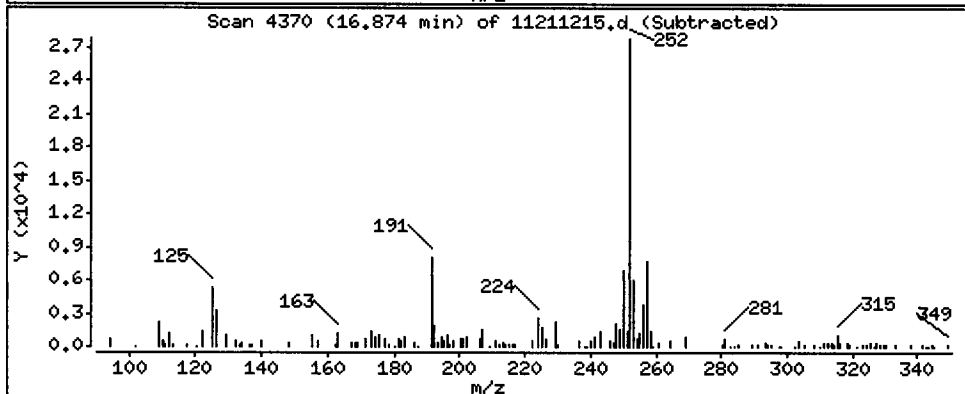
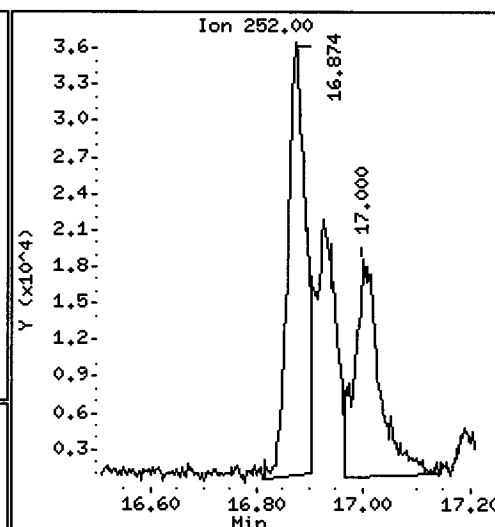
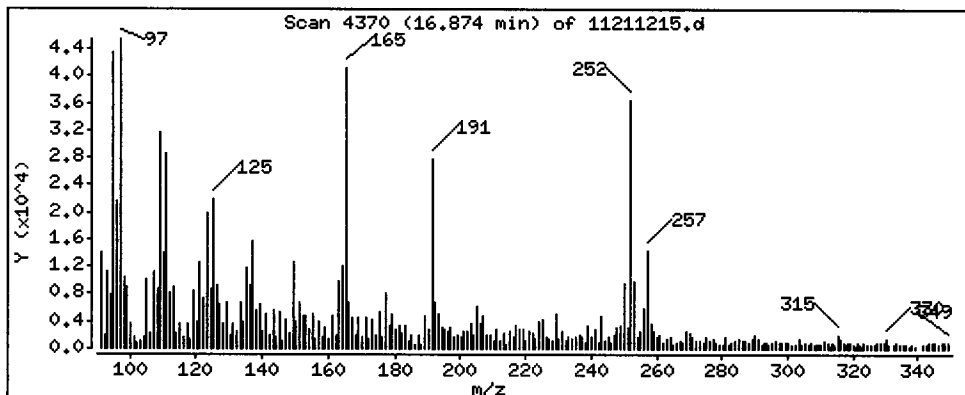
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

51 Benzo(b)fluoranthene

Concentration: 22.88 ug/kg



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR581

Volume Injected (uL): 1.0

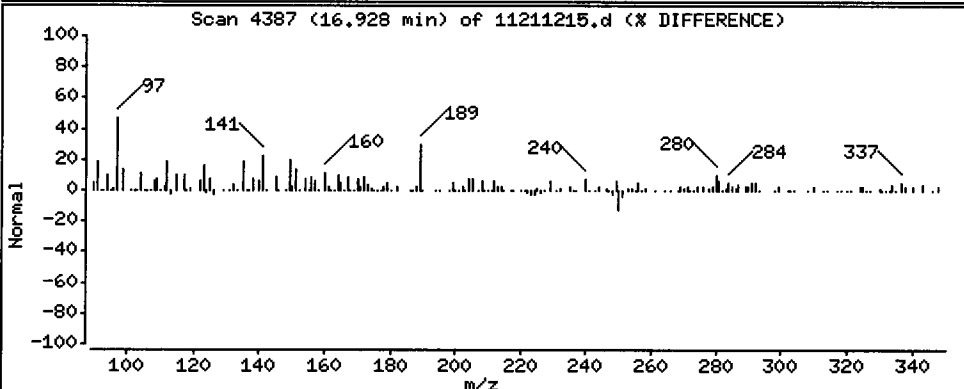
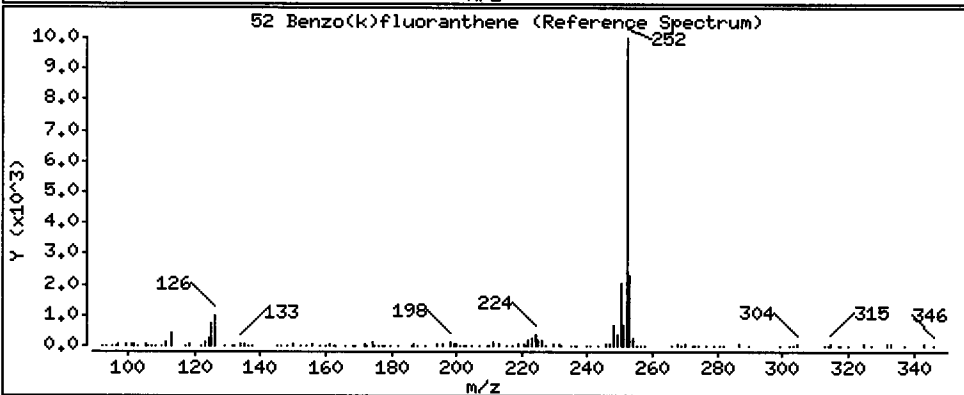
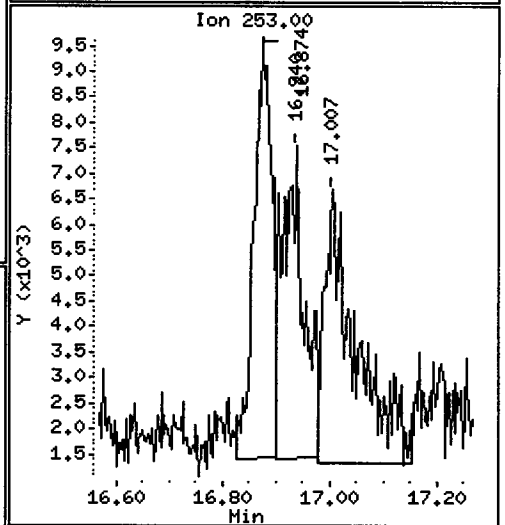
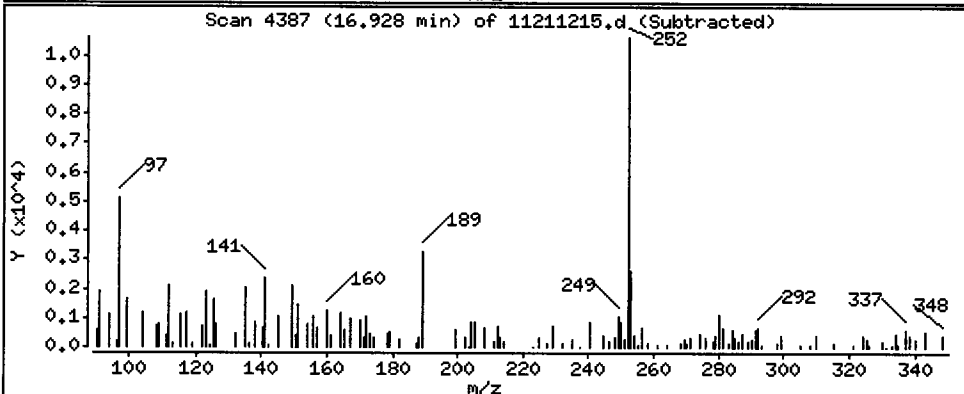
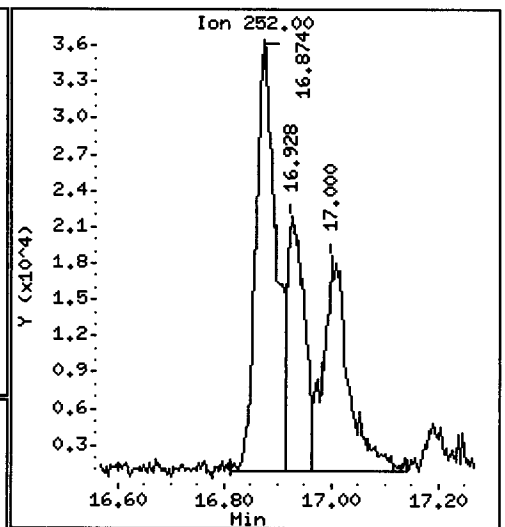
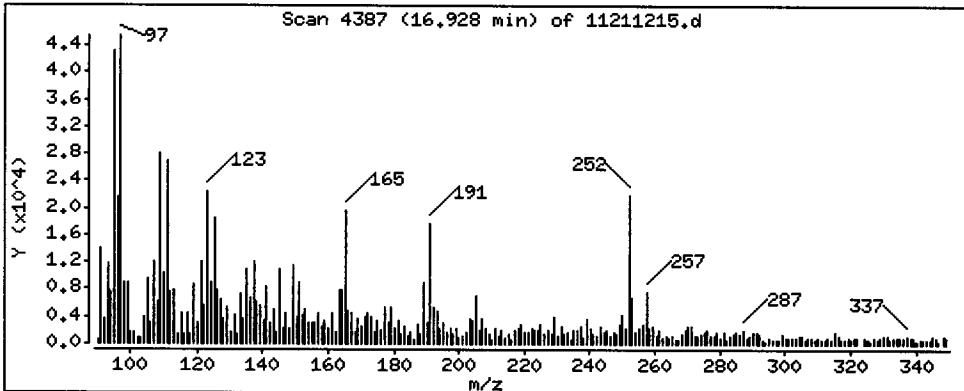
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

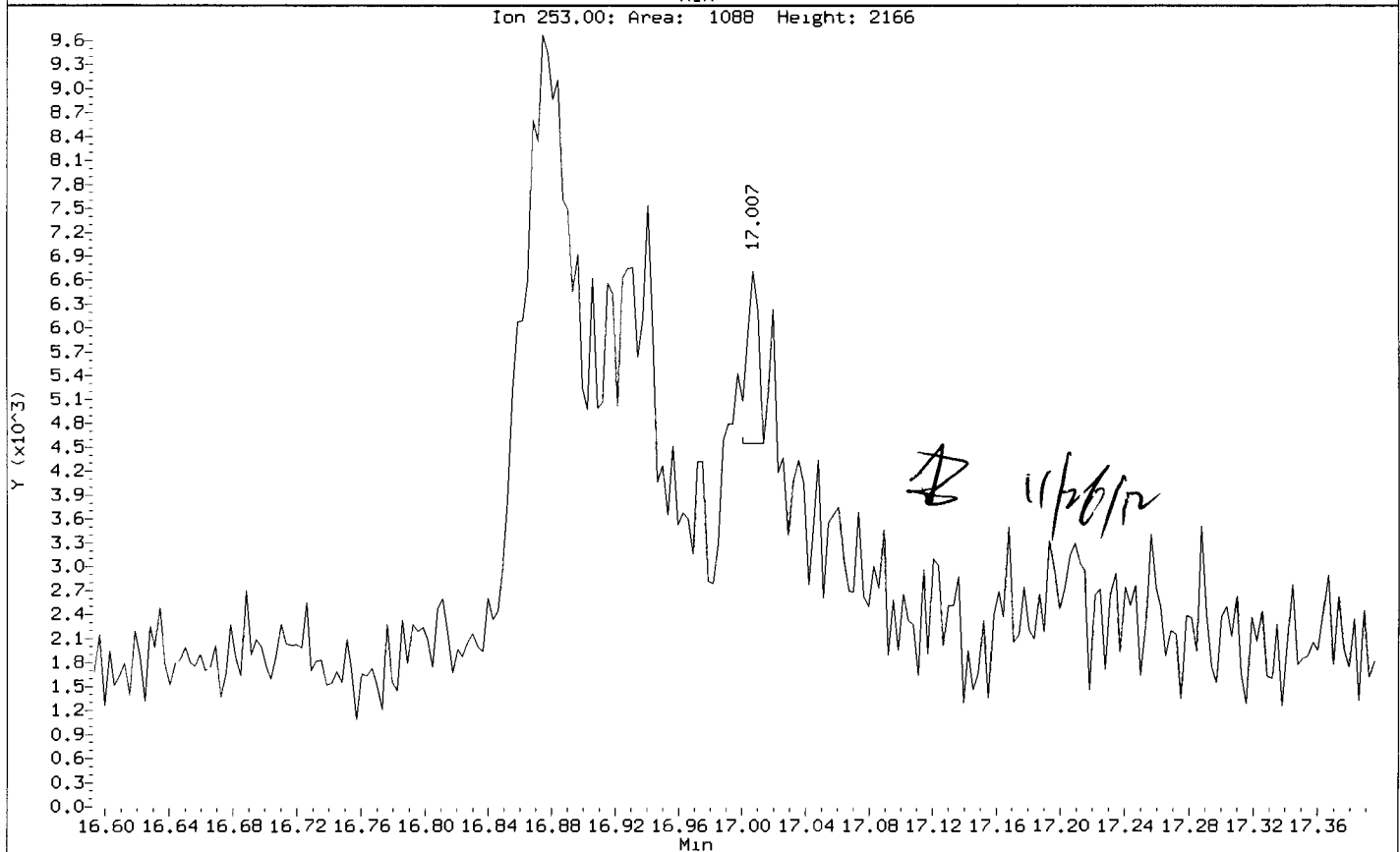
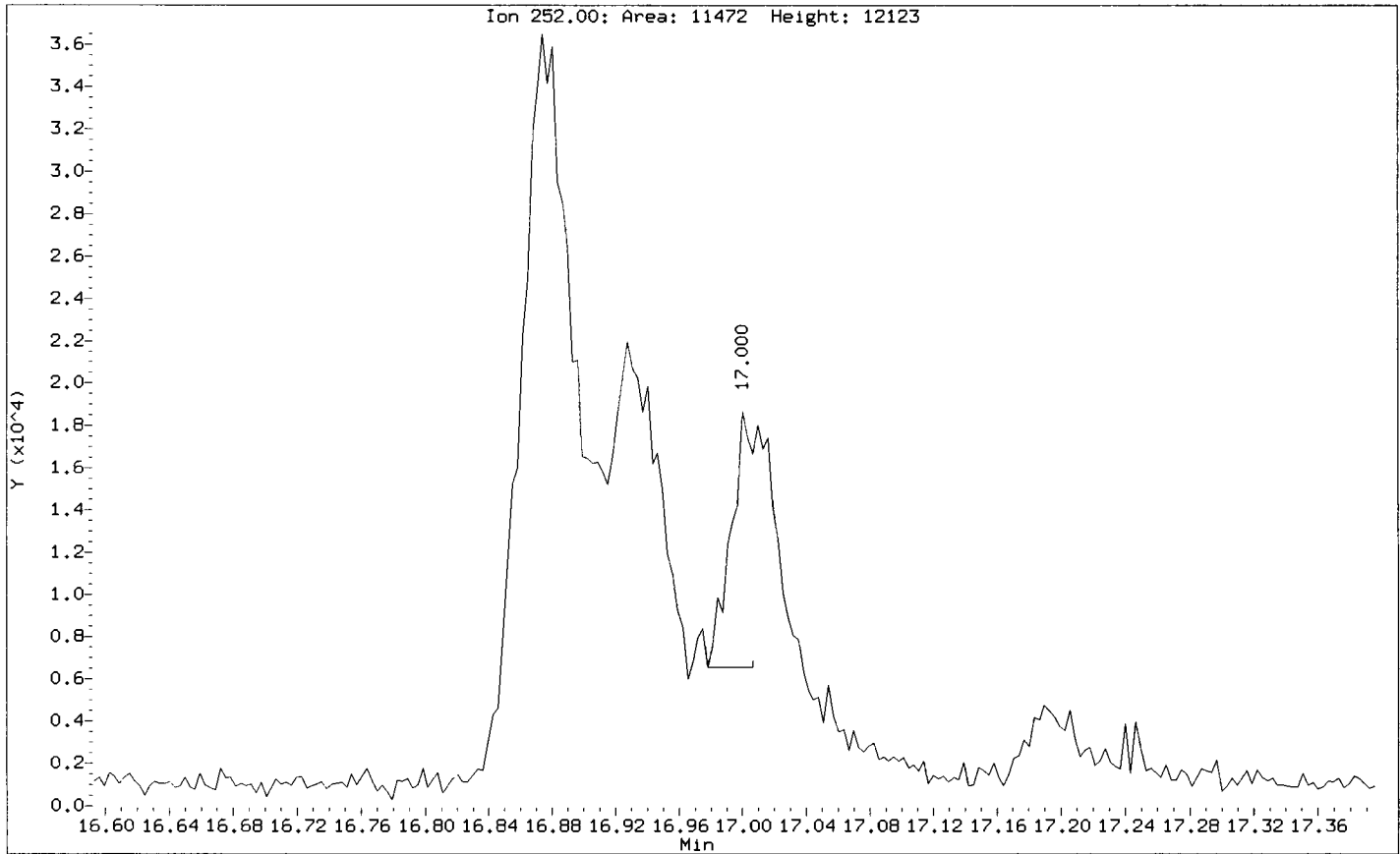
52 Benzo(k)fluoranthene

Concentration: 11.86 ug/kg



Data File: /chem3/nt11.1/20121121.b/11211215.d  
Injection Date: 21-NOV-2012 18:11  
Instrument: nt11.1  
Client Sample ID: SG-17-S-E-121107

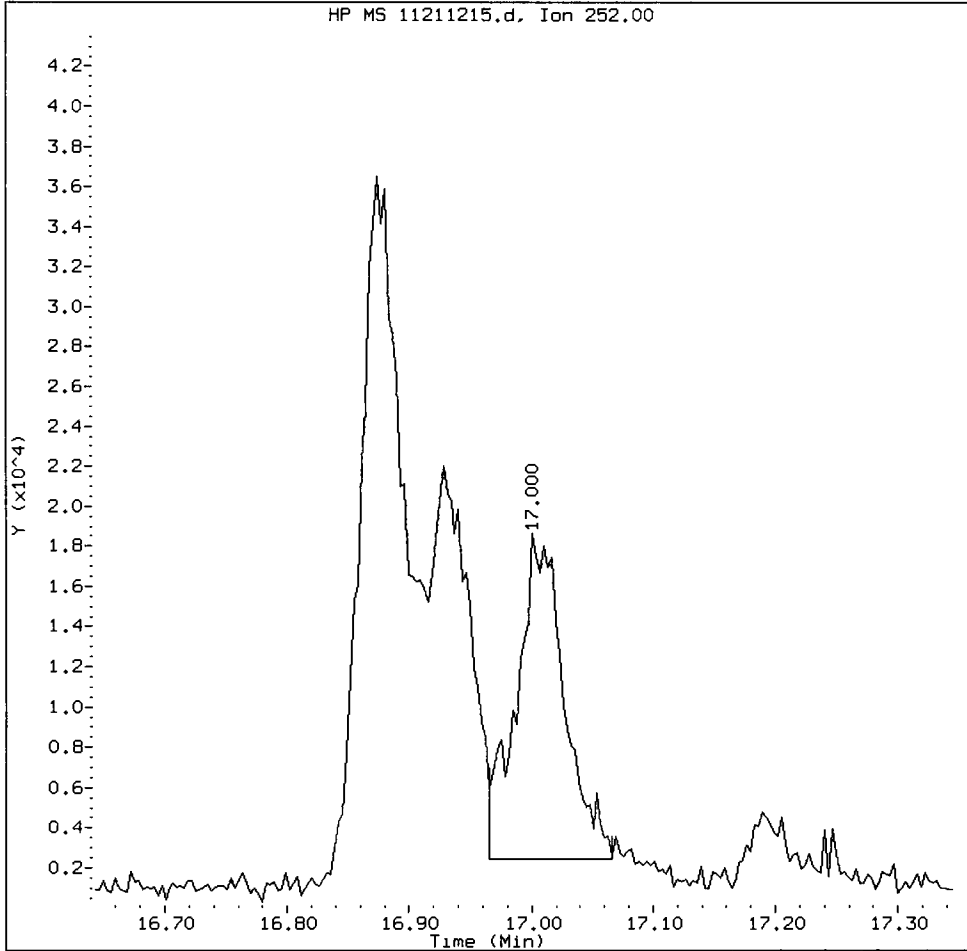
Compound: Benzo(j)fluoranthene  
CAS Number:





VR58I, /chem3/nt11.i/20121121.b/11211215.d

Benzo(j)fluoranthene Amount: 0.22 Area: 44553



MANUAL INTEGRATION for Benzo(j)fluoranthene

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

5. Other \_\_\_\_\_

Analyst: AD

Date: 11/20/12

Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR58I

Volume Injected (uL): 1.0

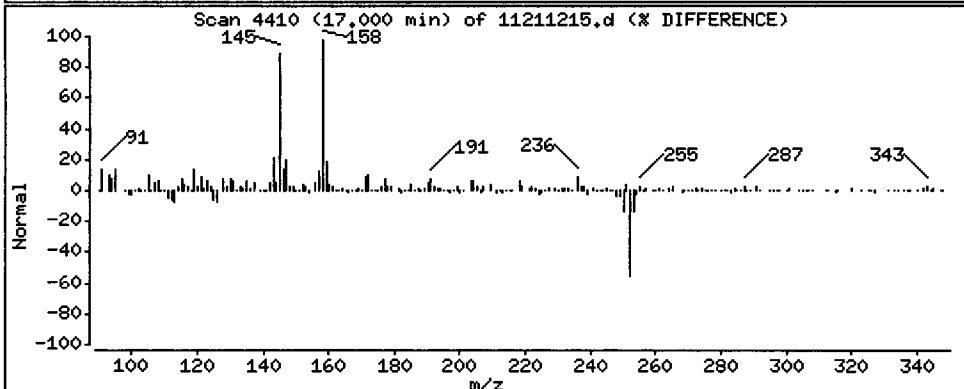
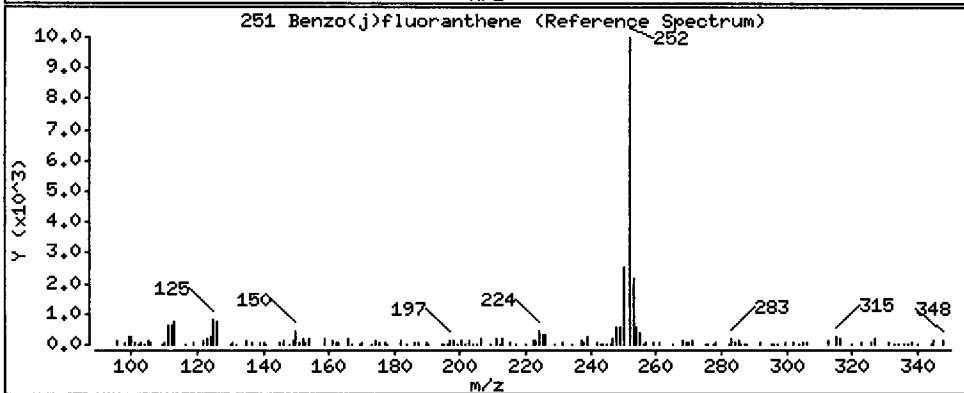
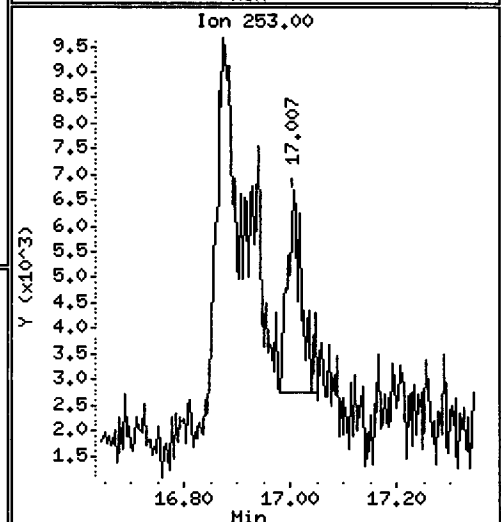
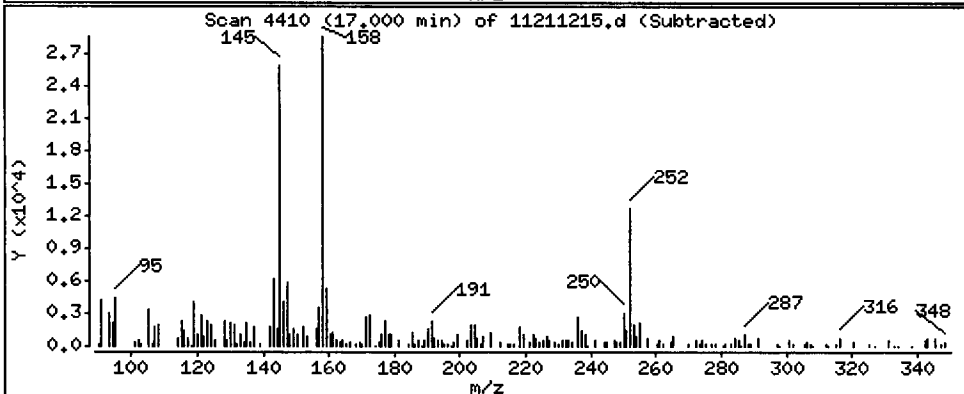
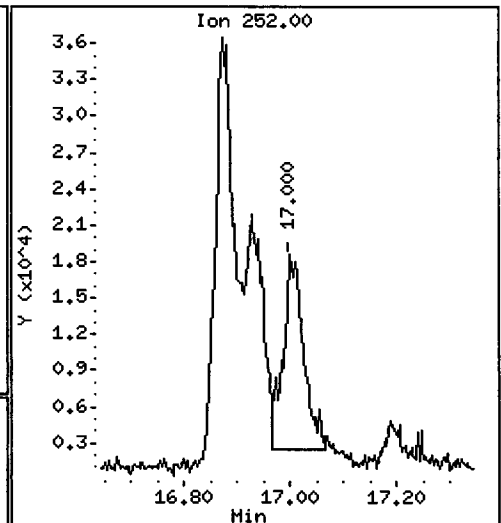
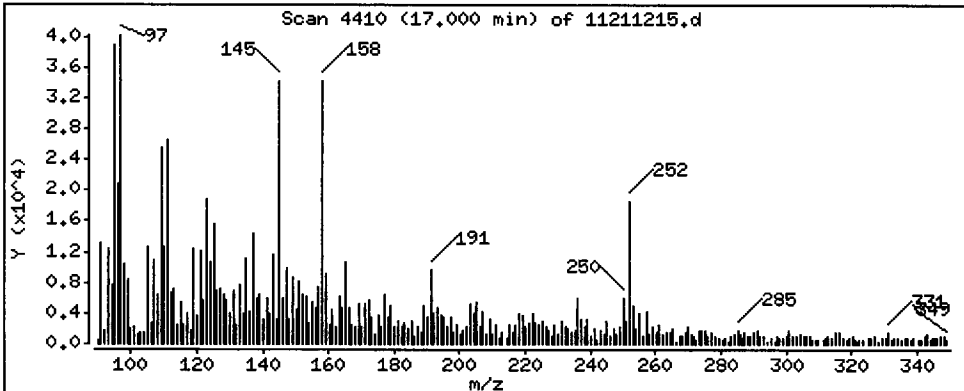
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

251 Benzo(j)fluoranthene

Concentration: 10.59 ug/kg



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR58I

Volume Injected (uL): 1.0

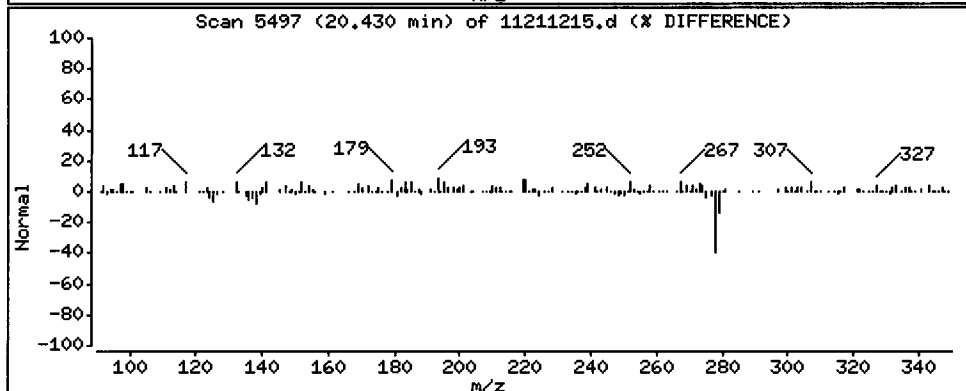
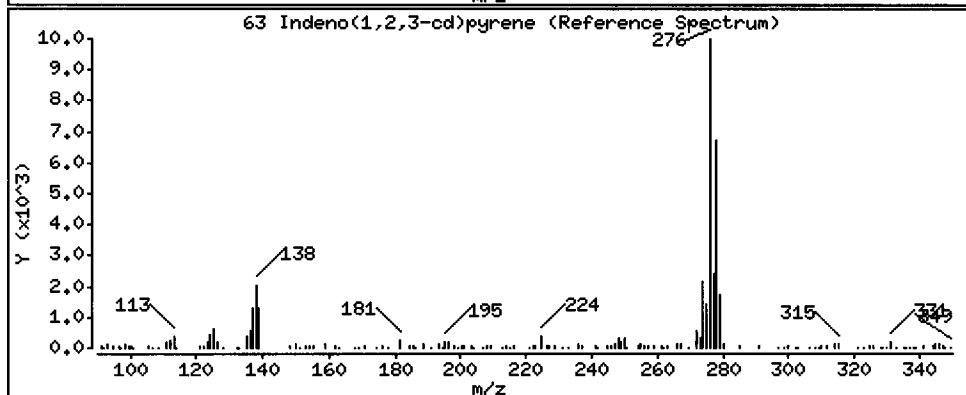
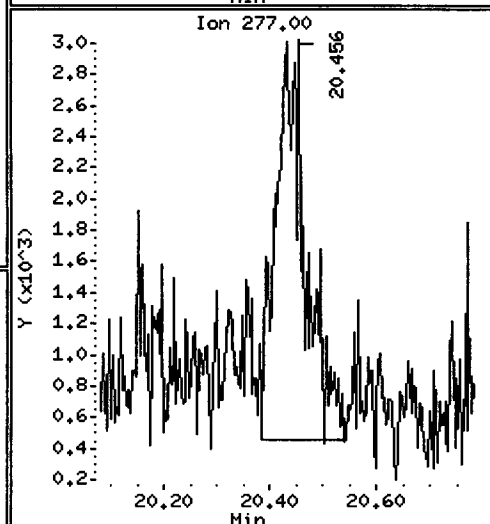
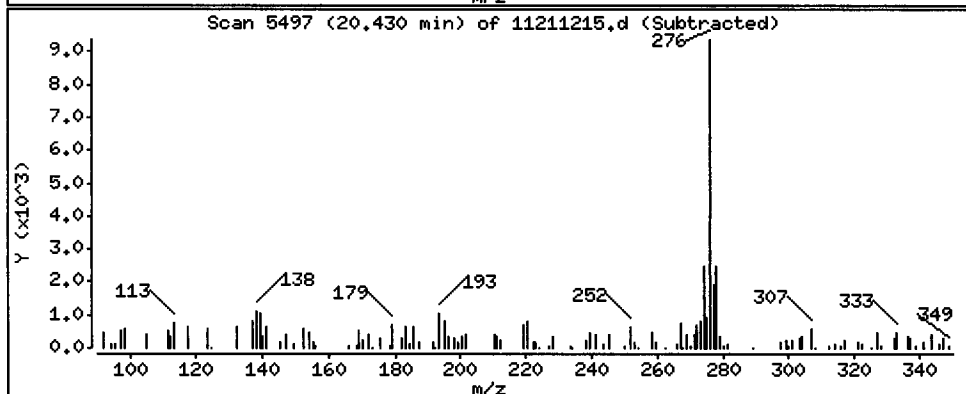
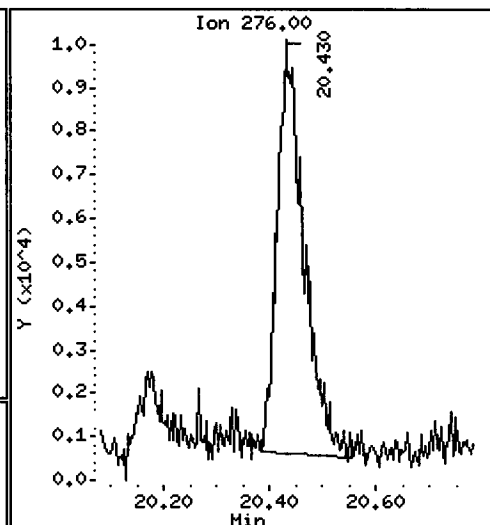
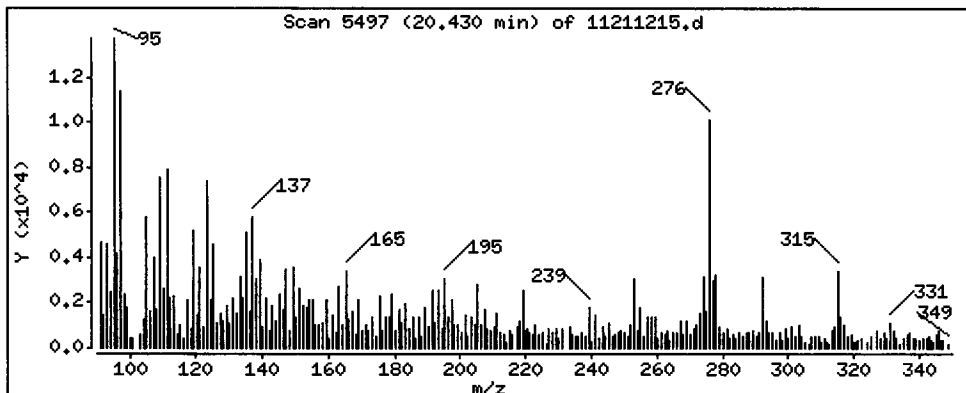
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

63 Indeno(1,2,3-cd)pyrene

Concentration: 7.373 ug/kg



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR58I

Volume Injected (uL): 1.0

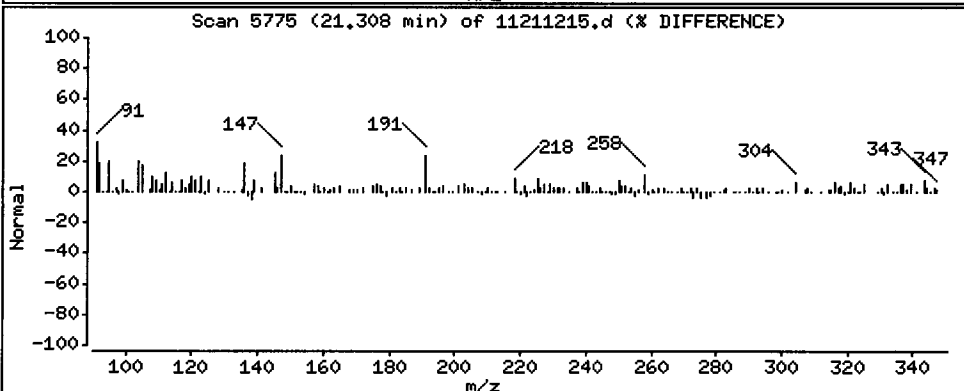
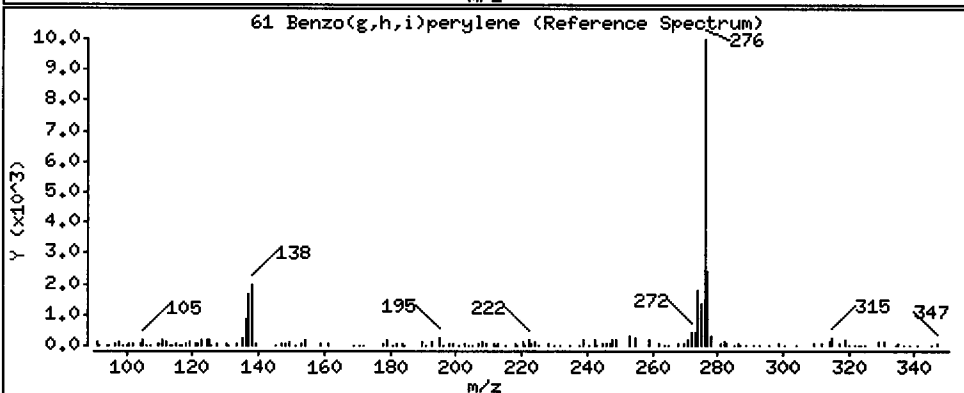
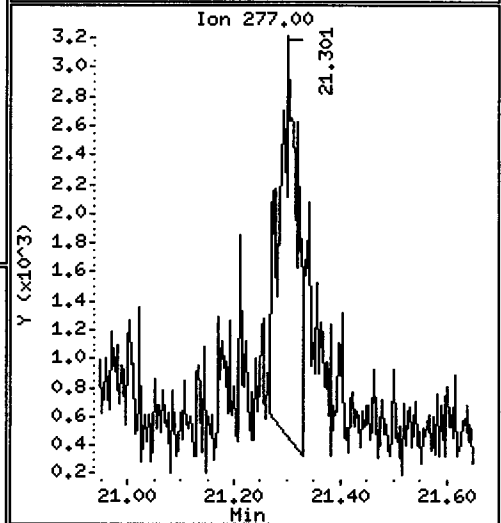
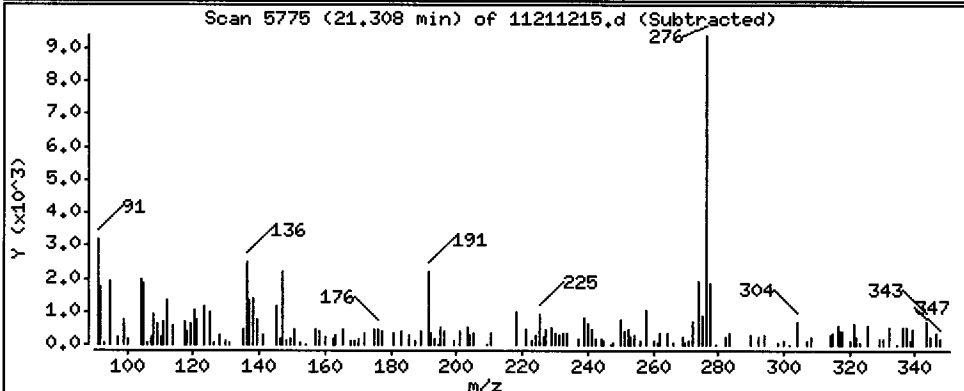
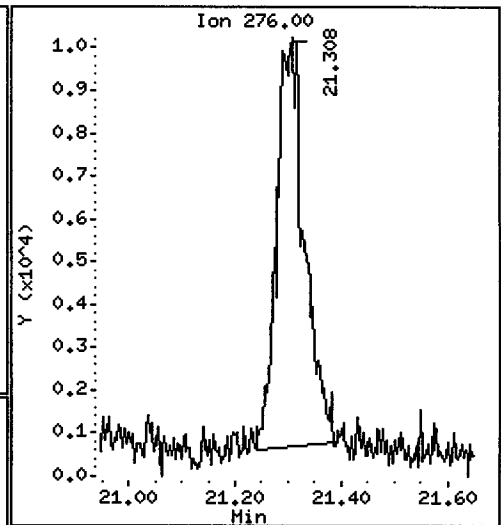
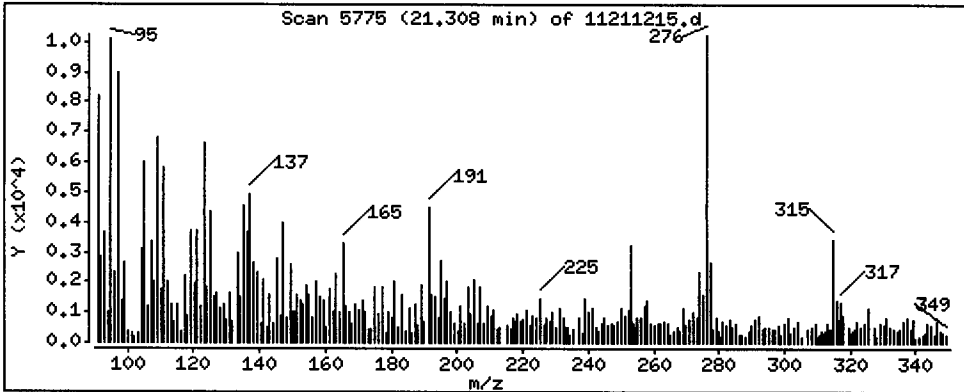
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

61 Benzo(g,h,i)perylene

Concentration: 8,988 ug/kg



Date : 21-NOV-2012 18:11

Client ID: SG-17-S-E-121107

Instrument: nt11.i

Sample Info: VR58I

Volume Injected (uL): 1.0

Operator: JZ

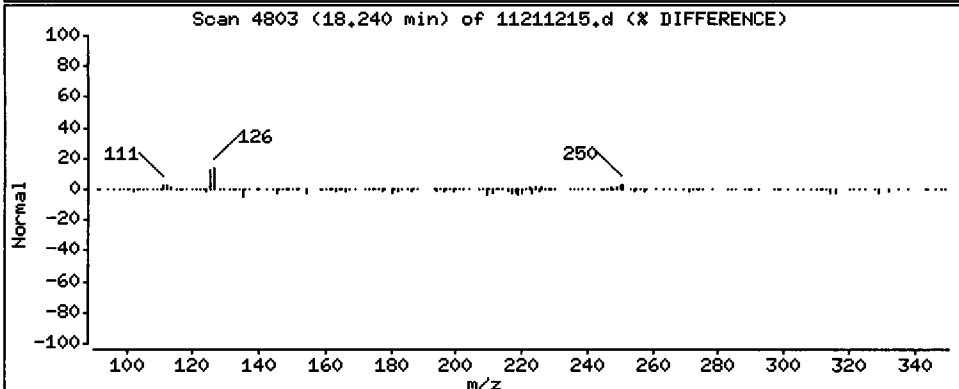
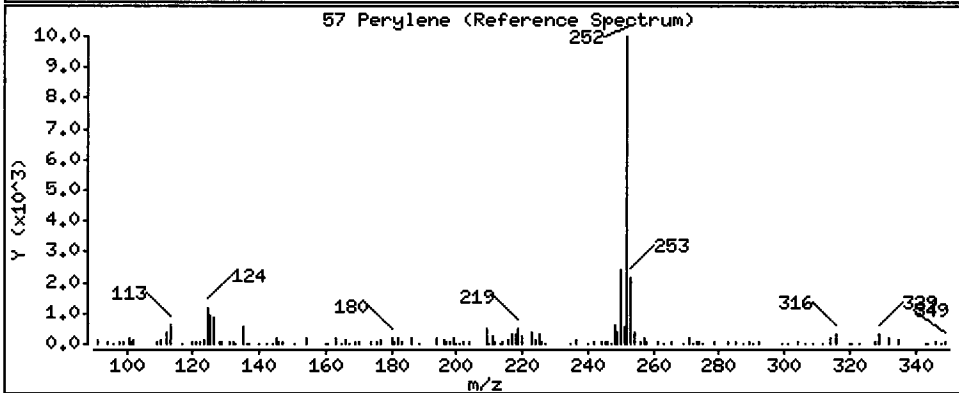
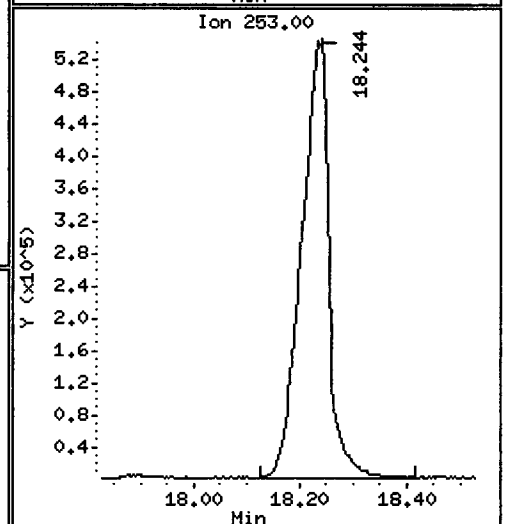
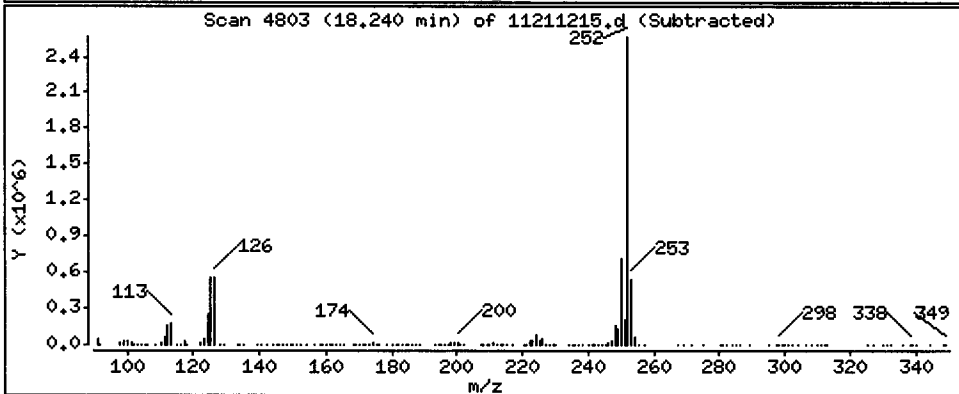
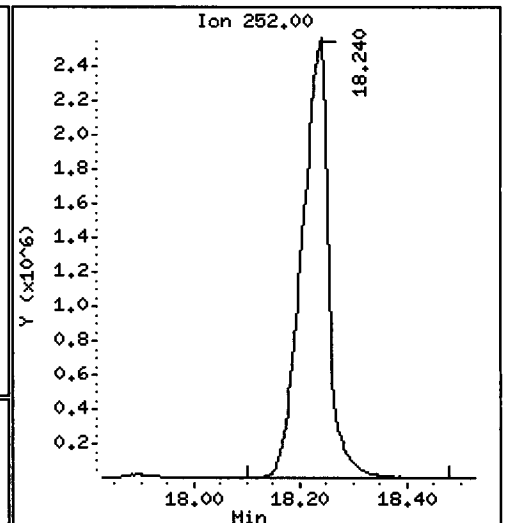
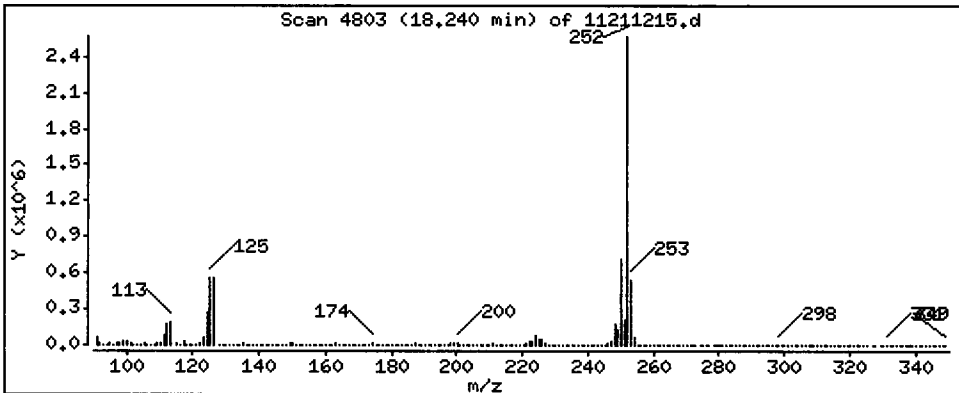
Column phase: ZB-5msi

Column diameter: 0.25

*E* *MEGA*

57 Perylene

Concentration: 2321 ug/kg



CO-ELUTION SUMMARY FOR FILE - 11211215.d

Lab ID: VR58I, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatible Report SW846 Method 8270D

Data file : /chem3/nt11.i/20121121.b/11211216.d  
 Lab Smp Id: VR58J Client Smp ID: SG-01-S-C-121107  
 Inj Date : 21-NOV-2012 18:41  
 Operator : JZ Inst ID: nt11.i  
 Smp Info : VR58J  
 Misc Info : 12-22338  
 Comment : 1ul Injection  
 Method : /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Meth Date : 26-Nov-2012 11:15 jianqing Quant Type: ISTD  
 Cal Date : 15-NOV-2012 20:24 Cal File: 11151205.d  
 Als bottle: 16  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: pnax.sub  
 Target Version: 3.50

Concentration Formula: Amt \* DF \* Vt / (Ws \* (100 - M) / 100) \* CpdnVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Ws	13.16000	Weight of sample extracted (g)
M	20.50000	% Moisture

Cpdn Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
							ON-COLUMN (ug/mL)	FINAL (ug/kg)
* 6 Naphthalene-d8	136	5.432	5.438	(1.000)	833752	2.00000		
7 Naphthalene	128	Compound Not Detected.						
\$ 12 2-Methylnaphthalene-d10	152	6.170	6.174	(1.136)	422325	1.48251	70.85	
14 2-Methylnaphthalene	141	Compound Not Detected.						
15 1-methylnaphthalene	141	Compound Not Detected.						
21 Acenaphthylene	152	Compound Not Detected.						
* 22 Acenaphthene-d10	164	7.707	7.714	(1.000)	475491	2.00000		
23 Acenaphthene	153	Compound Not Detected.						
11 Dibenzofuran	168	Compound Not Detected.						
25 Fluorene	166	Compound Not Detected.						
* 28 Phenanthrene-d10	188	9.730	9.736	(1.000)	685321	2.00000		
30 Phenanthrene	178	9.765	9.768	(1.004)	58204	0.14060	6.719	
31 Anthracene	178	Compound Not Detected.						
36 Fluoranthene	202	11.421	11.425	(1.174)	156743	0.37792	18.06	
39 Pyrene	202	11.888	11.892	(0.829)	134315	0.32765	15.66	

Compounds	QUANT SIG		CONCENTRATIONS					
	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/kg)	
=====	====	==	=====	=====	=====	=====	=====	
46 Benzo(a)anthracene	228	14.220	14.224	(0.992)	47602	0.12735	6.086	
* 47 Chrysene-d12	240	14.340	14.343	(1.000)	743883	2.00000		
48 Chrysene	228	14.403	14.413	(1.004)	69375	0.19122	9.139	
51 Benzo(b)fluoranthene	252	16.852	16.858	(0.931)	37073	0.19105	9.131	
52 Benzo(k)fluoranthene	252	16.909	16.918	(0.934)	22515	0.10684	5.106	
251 Benzo(j)fluoranthene	252	16.985	16.994	(0.939)	18116	0.08148	3.894	
54 Benzo(a)pyrene	252	17.865	17.878	(0.987)	29541	0.14988	7.163	
* 56 Perylene-d12	264	18.095	18.102	(1.000)	419279	2.00000		
63 Indeno(1,2,3-cd)pyrene	276	20.415	20.431	(1.128)	18112	0.07580	3.622	
§ 60 Dibenzo(a,h)anthracene-d14	292	20.323	20.339	(1.123)	205318	1.47712	70.59	
62 Dibenzo(a,h)anthracene	278	Compound Not Detected.						
61 Benzo(g,h,i)perylene	276	21.276	21.298	(1.176)	13932	0.06853	3.275	
57 Perylene	252	18.168	18.177	(1.004)	60159	0.29432	14.07	



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt11.i  
 Lab File ID: 11211216.d  
 Lab Smp Id: VR58J  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: JZ  
 Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
 Misc Info: 12-22338

Calibration Date: 21-NOV-2012  
 Calibration Time: 11:42  
 Client Smp ID: SG-01-S-C-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	516111	258056	1032222	833752	61.55
22 Acenaphthene-d10	284255	142128	568510	475491	67.28
28 Phenanthrene-d10	410660	205330	821320	685321	66.88
47 Chrysene-d12	467886	233943	935772	743883	58.99
56 Perylene-d12	472330	236165	944660	419279	-11.23

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
6 Naphthalene-d8	5.44	4.94	5.94	5.43	-0.12
22 Acenaphthene-d10	7.71	7.21	8.21	7.71	-0.08
28 Phenanthrene-d10	9.74	9.24	10.24	9.73	-0.07
47 Chrysene-d12	14.34	13.84	14.84	14.34	-0.02
56 Perylene-d12	18.10	17.60	18.60	18.10	-0.04

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

Analytical Resources, Inc.

RECOVERY REPORT

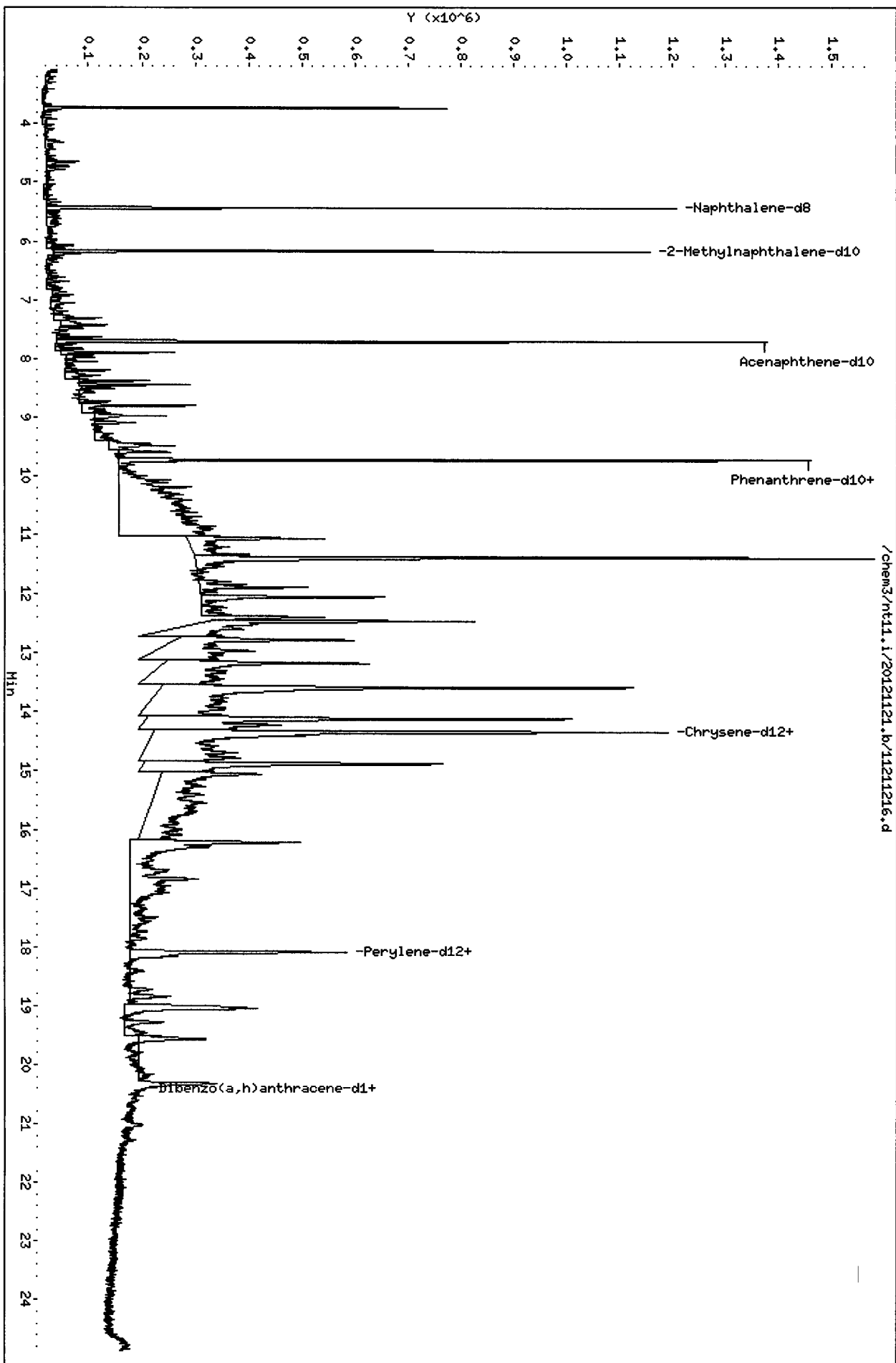
Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58J  
Level: LOW  
Data Type: MS DATA  
SpikeList File: pnalcss.spk  
Sublist File: pnax.sub  
Method File: /chem3/nt11.i/20121121.b/FSIMPNA111512.m  
Misc Info: 12-22338

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-01-S-C-121107  
Operator: JZ  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 12 2-Methylnaphthalen	143.4	70.85	49.42	34-100
\$ 60 Dibenzo(a,h)anthra	143.4	70.59	49.24	10-117

Data File: /chem3/nt11.i/20121121.b/11211216.d  
Date: 21-NOV-2012 18:41  
Client ID: SG-01-S-C-121107  
Sample Info: WR58J  
Volume Injected (uL): 1.0  
Column phase: ZB-5msi

Instrument: nt11.i  
Operator: JZ  
Column diameter: 0.25



20121121 18:41:00

Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

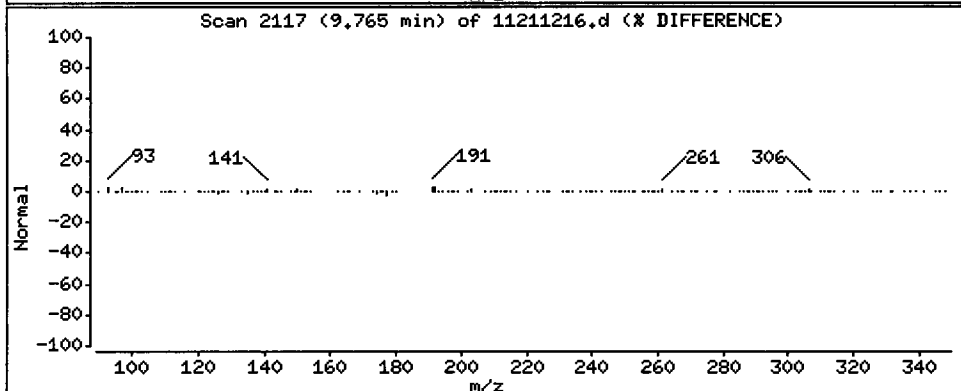
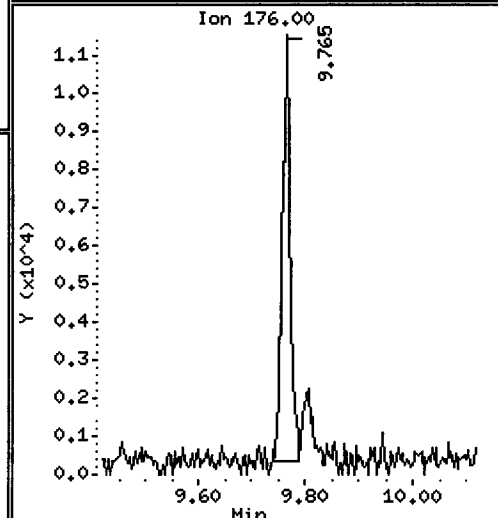
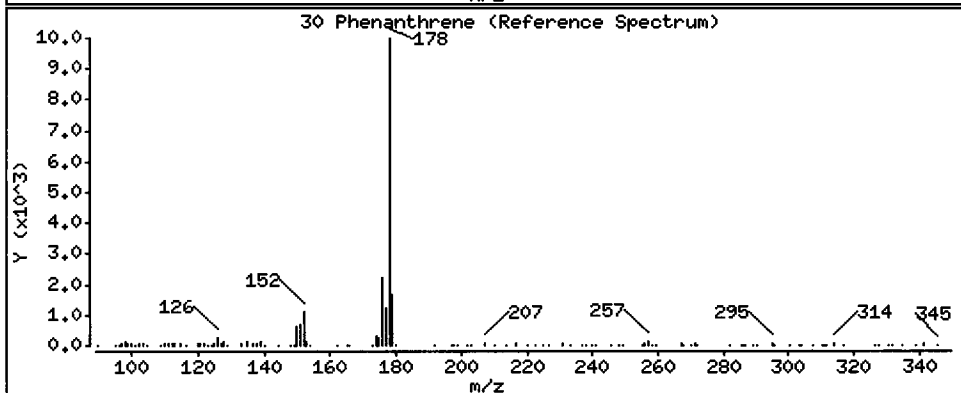
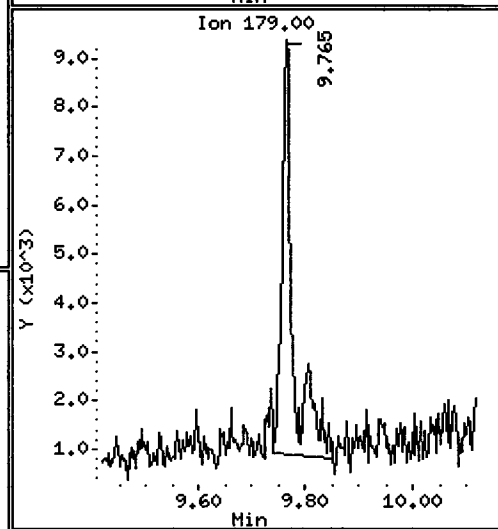
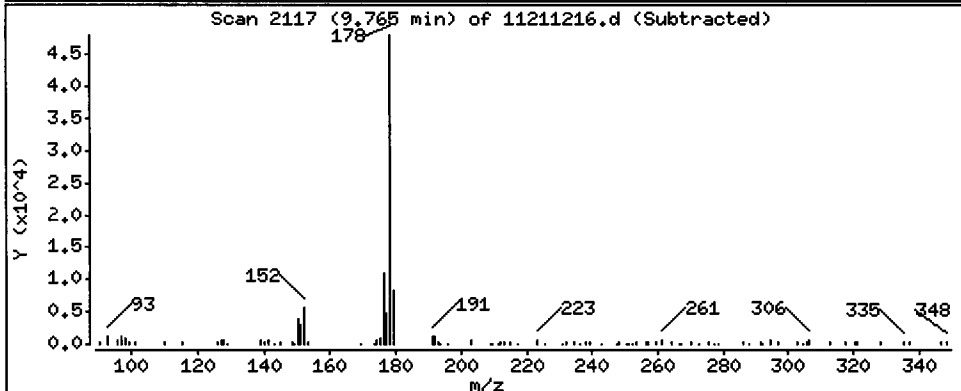
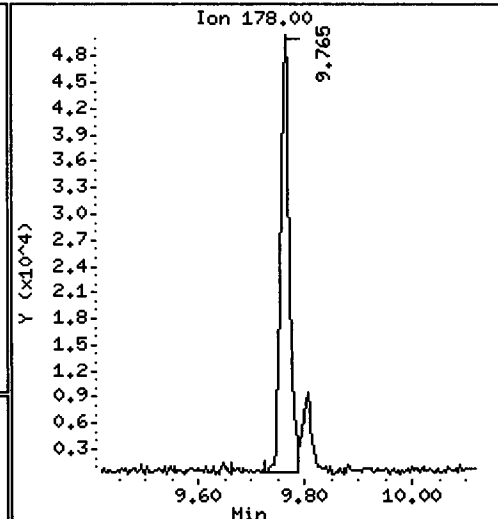
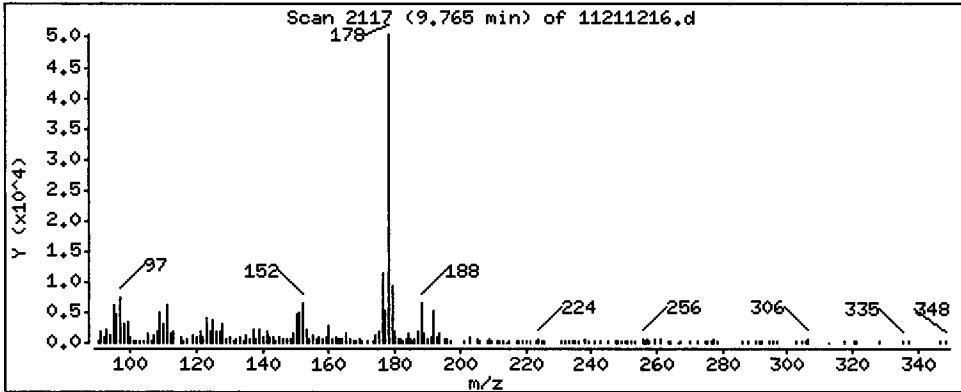
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

30 Phenanthrene

Concentration: 6.719 ug/kg



Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

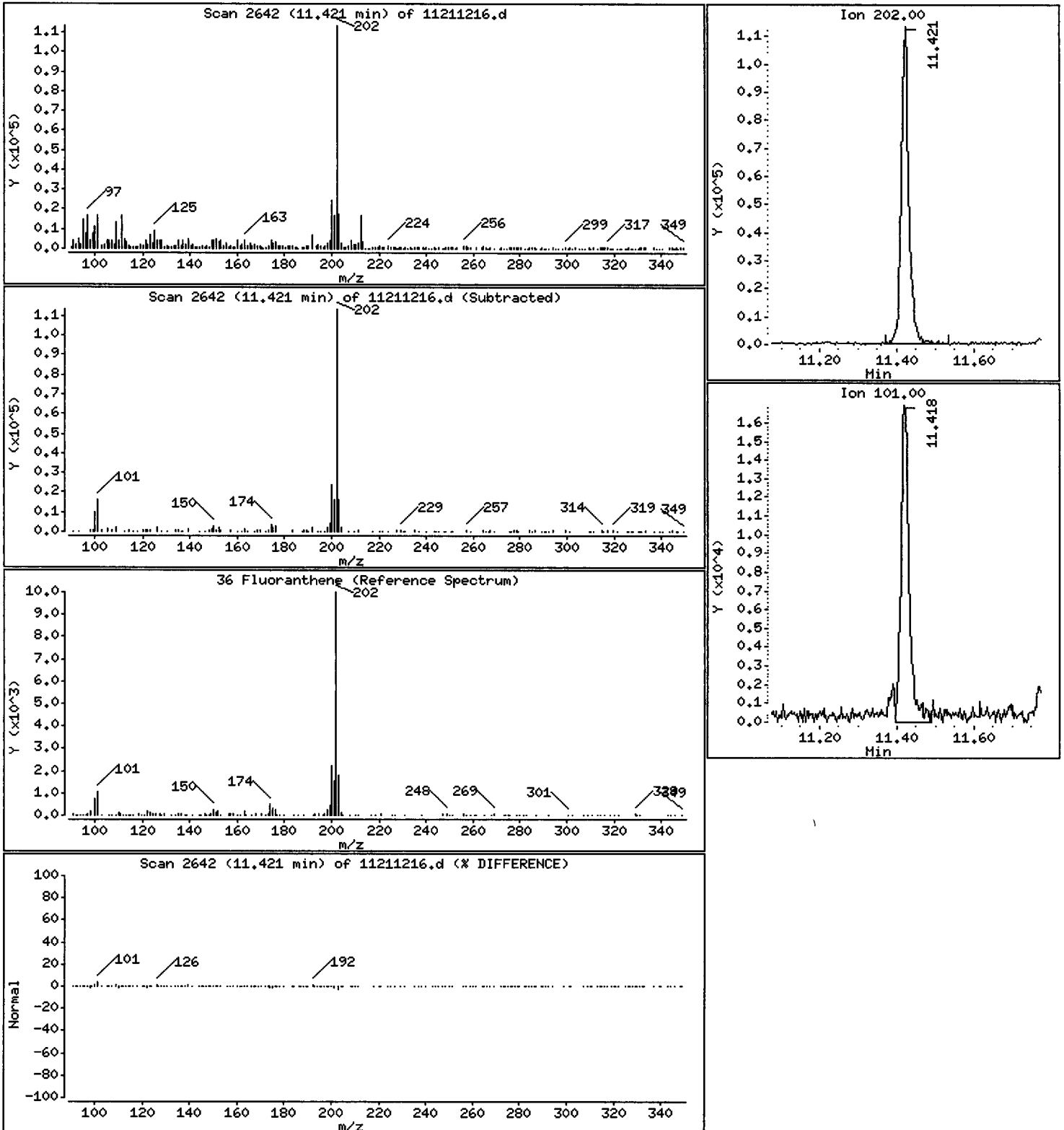
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

36 Fluoranthene

Concentration: 18.06 ug/kg



Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

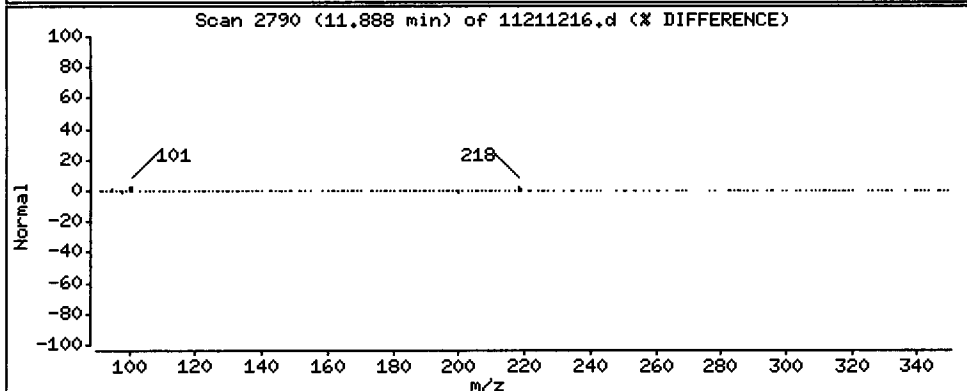
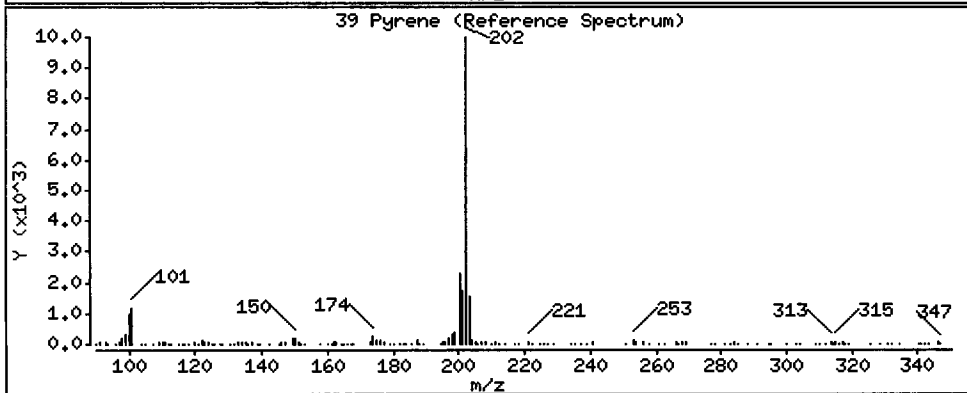
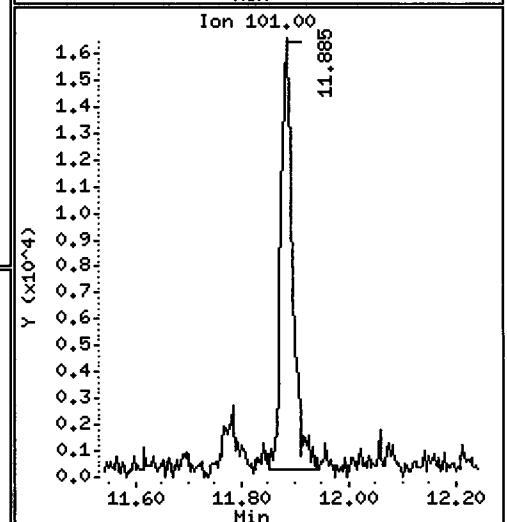
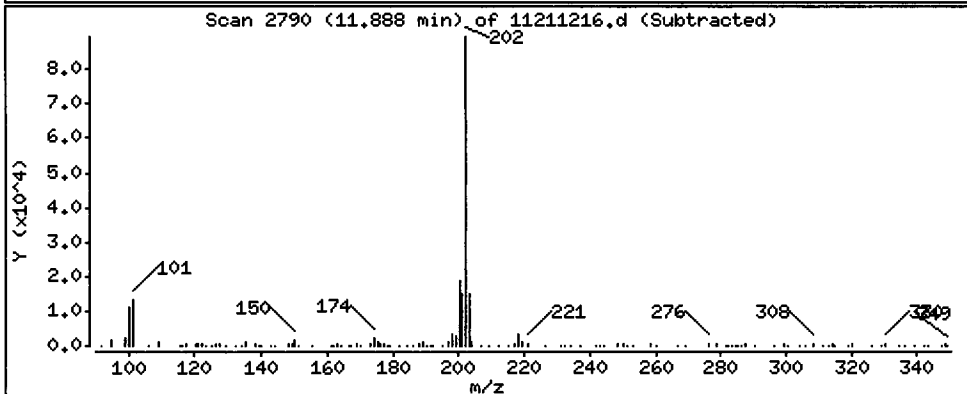
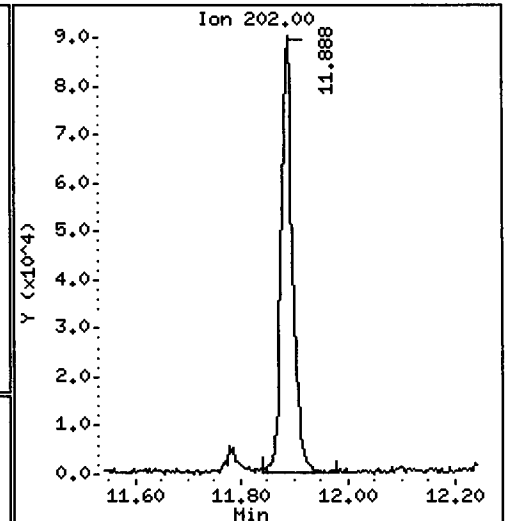
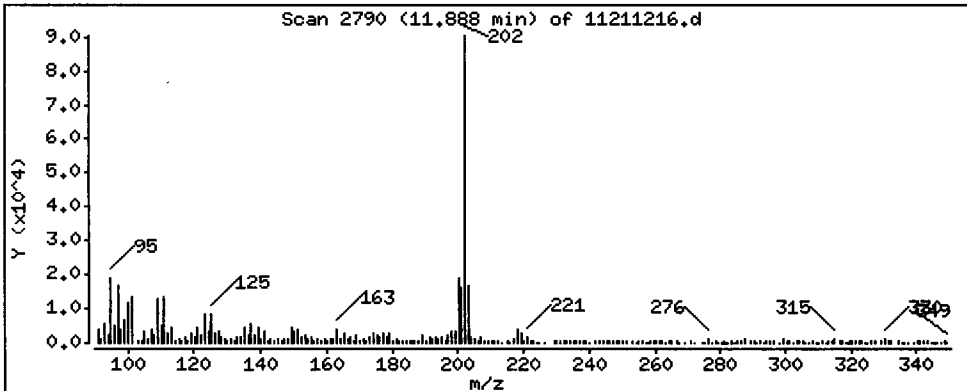
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

39 Pyrene

Concentration: 15.66 ug/kg



Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

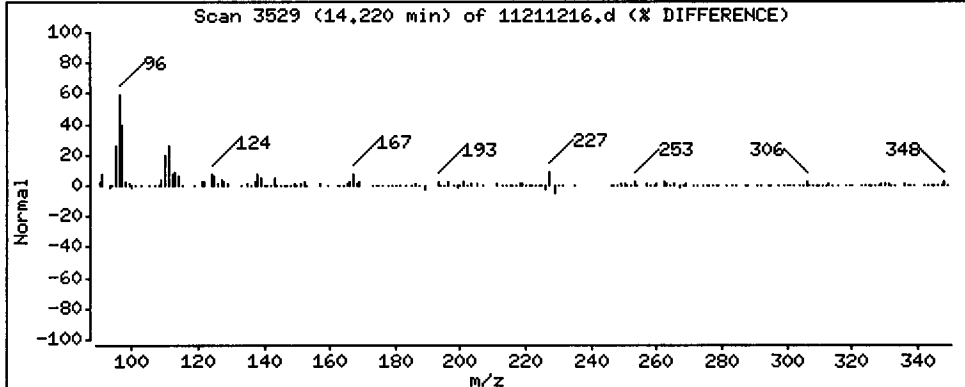
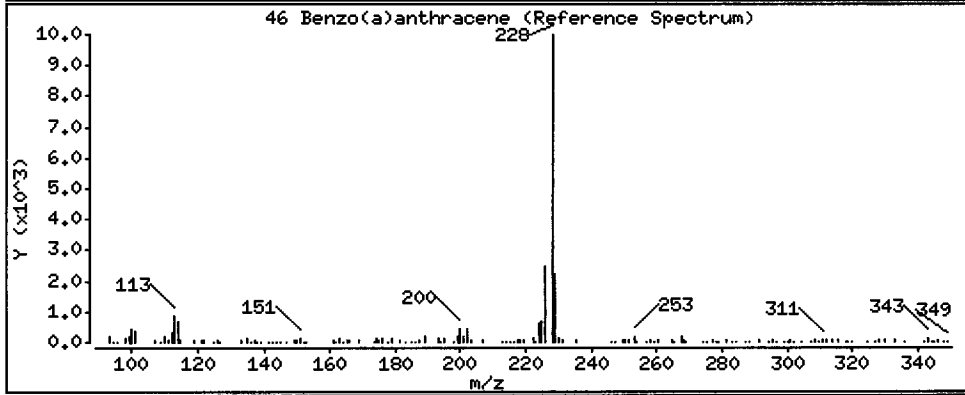
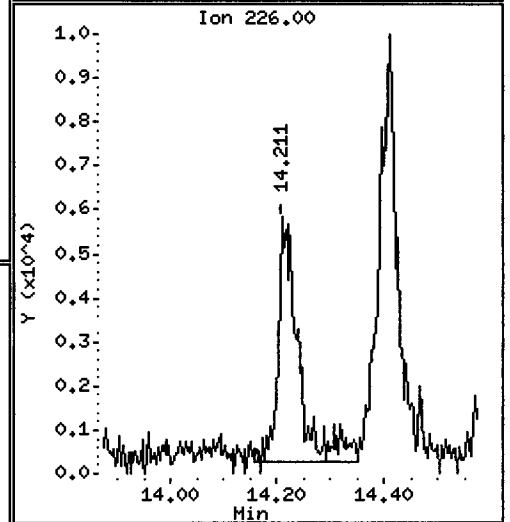
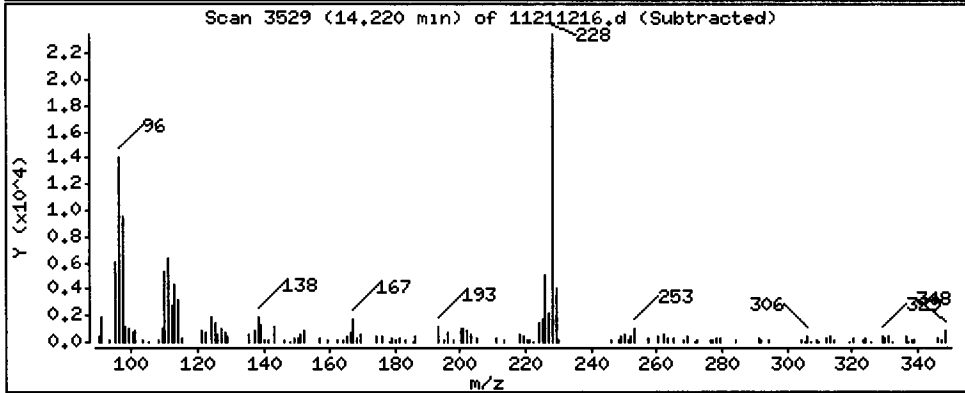
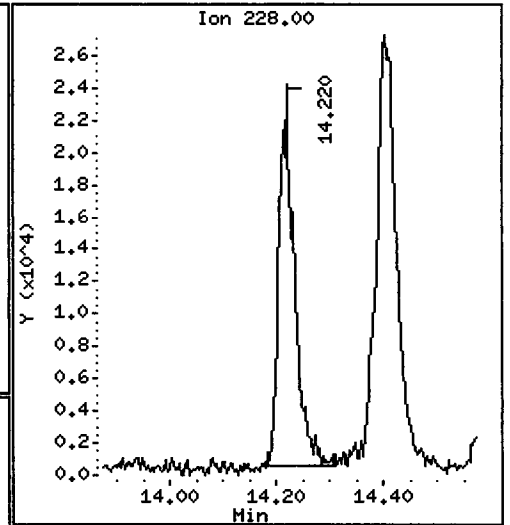
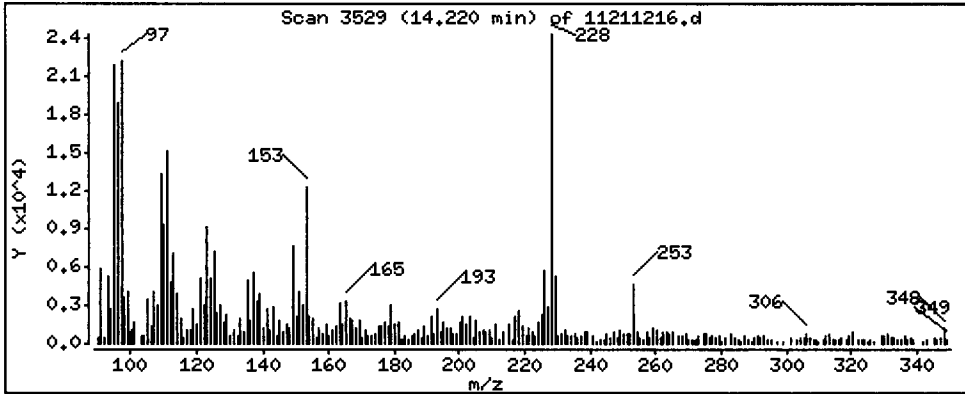
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

46 Benzo(a)anthracene

Concentration: 6,086 ug/kg



Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

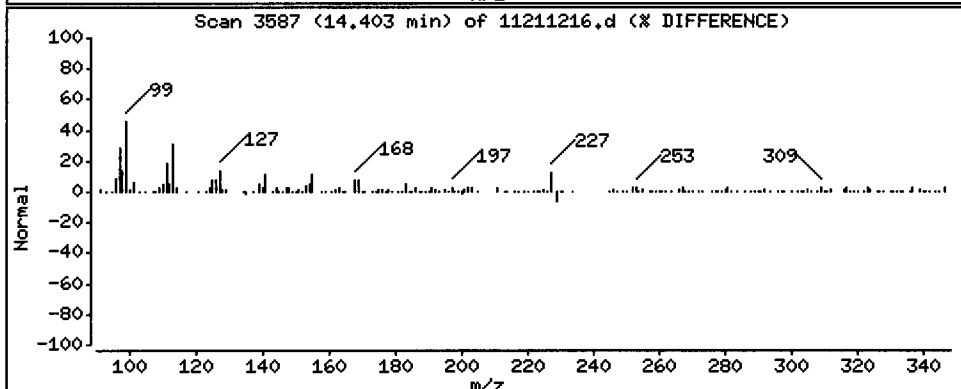
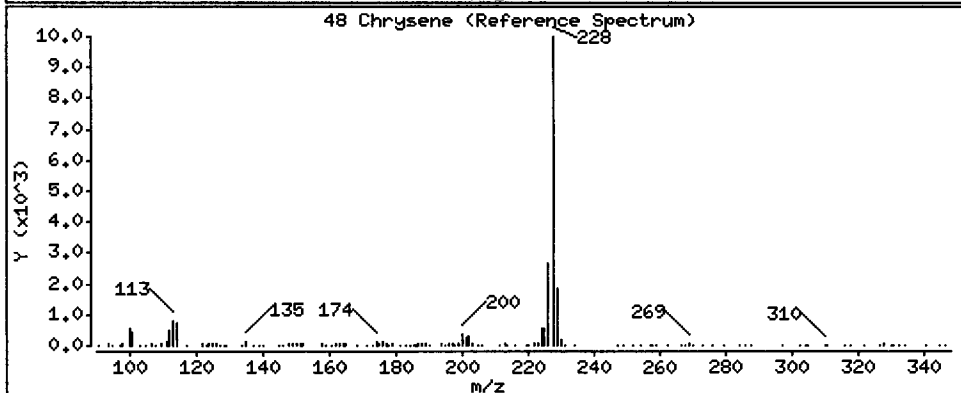
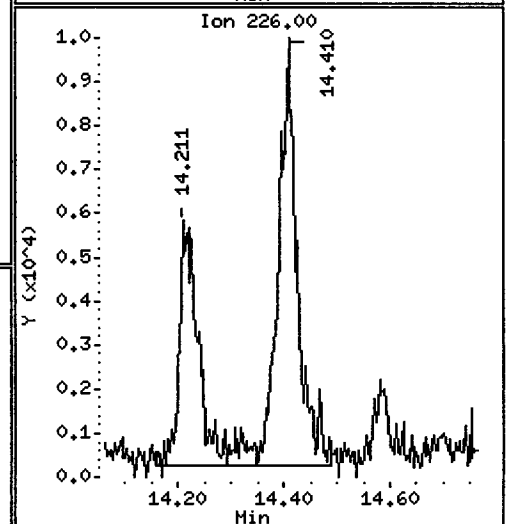
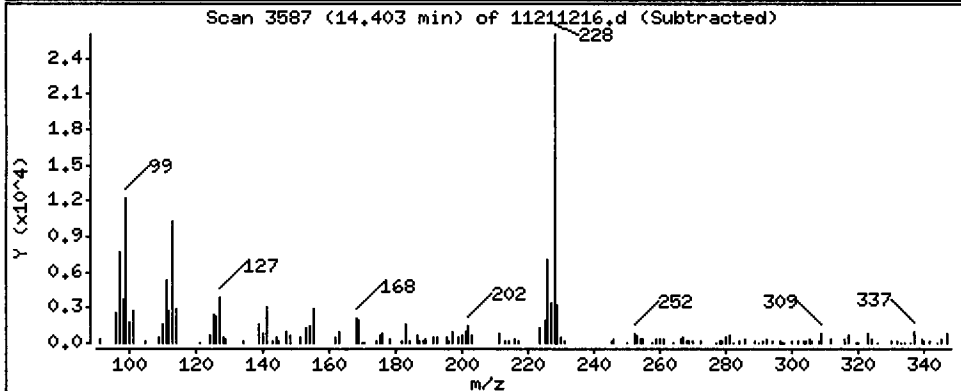
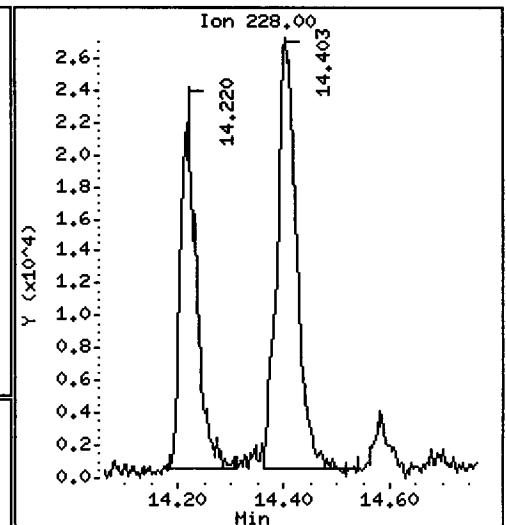
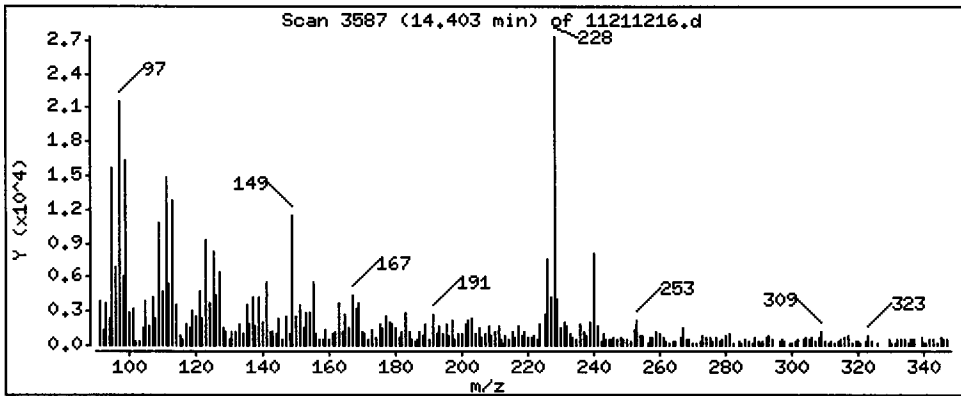
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

48 Chrysene

Concentration: 9.139 ug/kg





Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

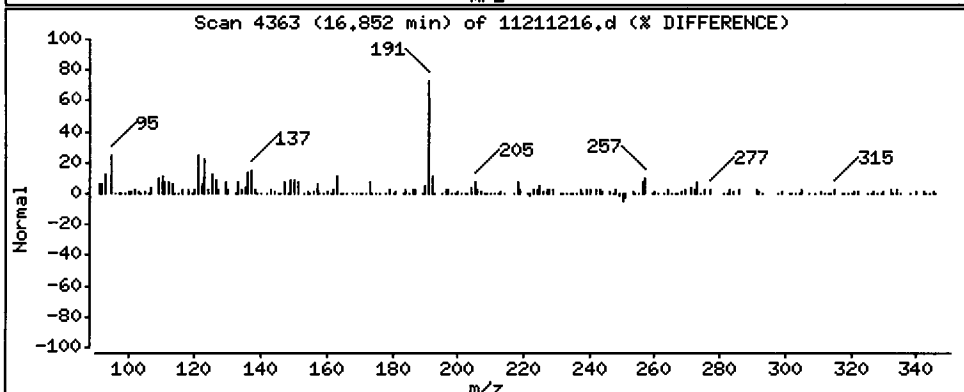
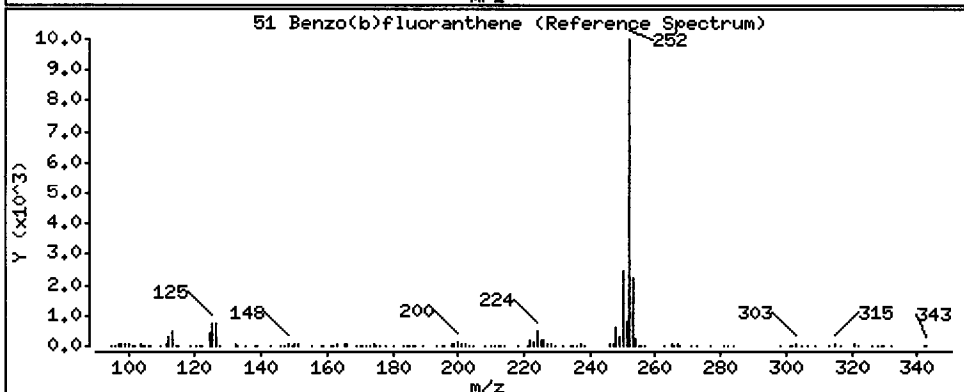
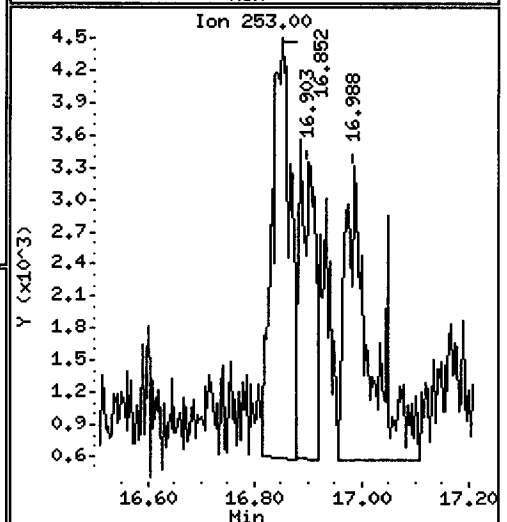
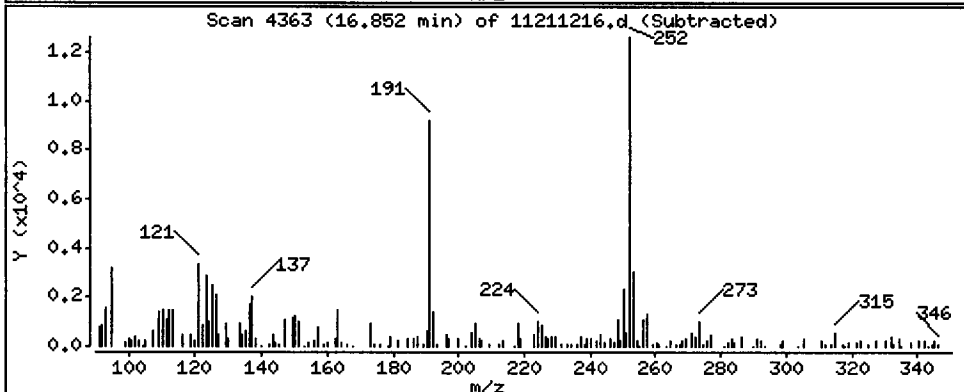
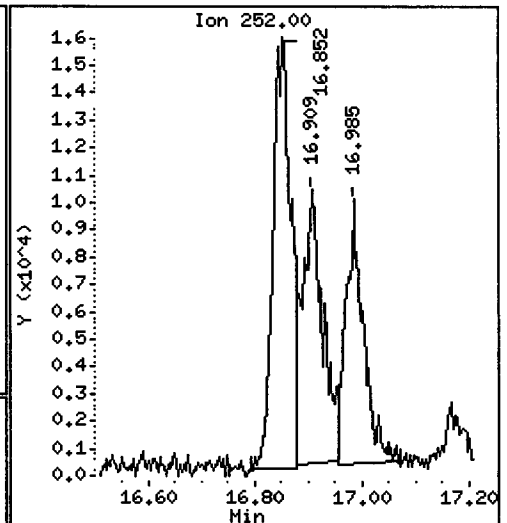
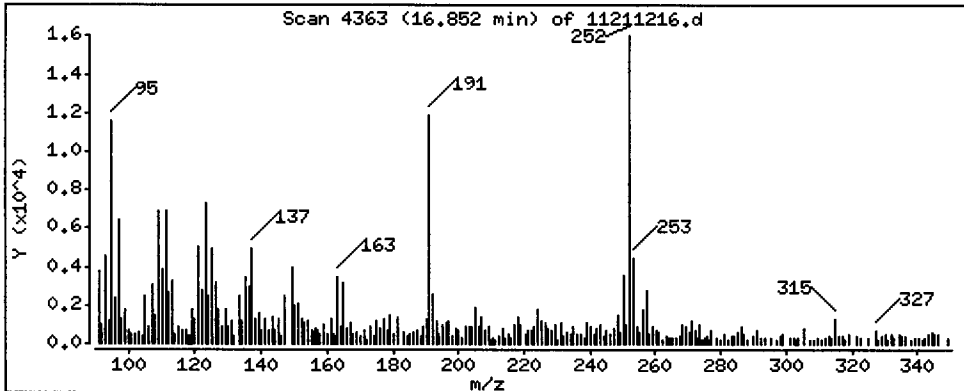
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

51 Benzo(b)fluoranthene

Concentration: 9.131 ug/kg



Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

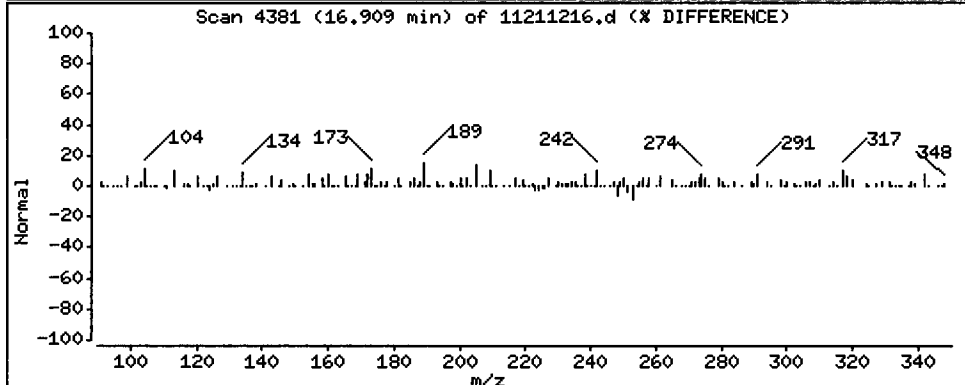
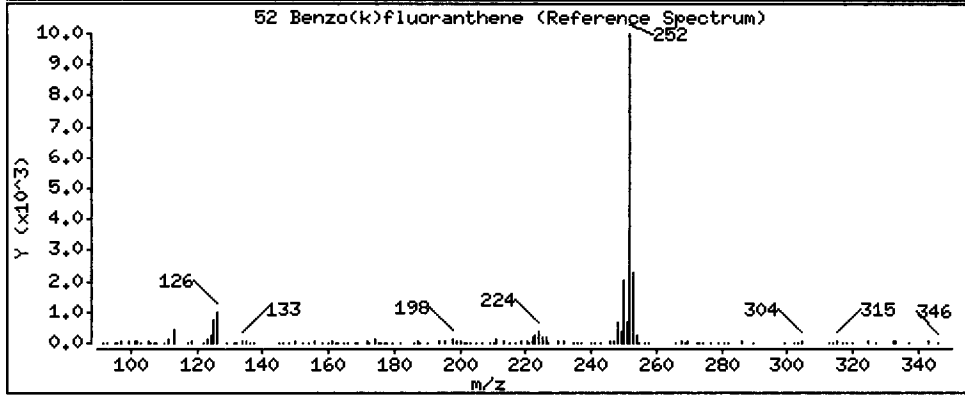
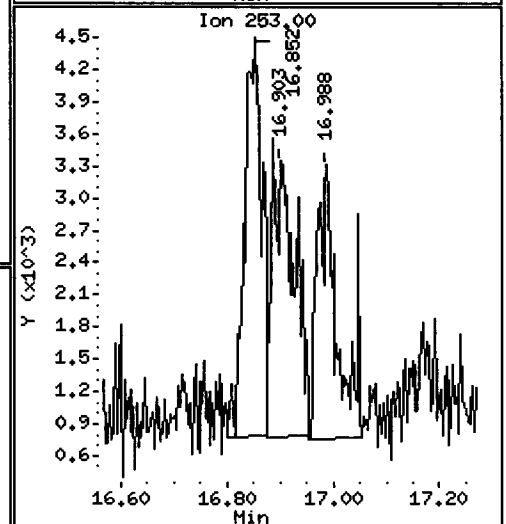
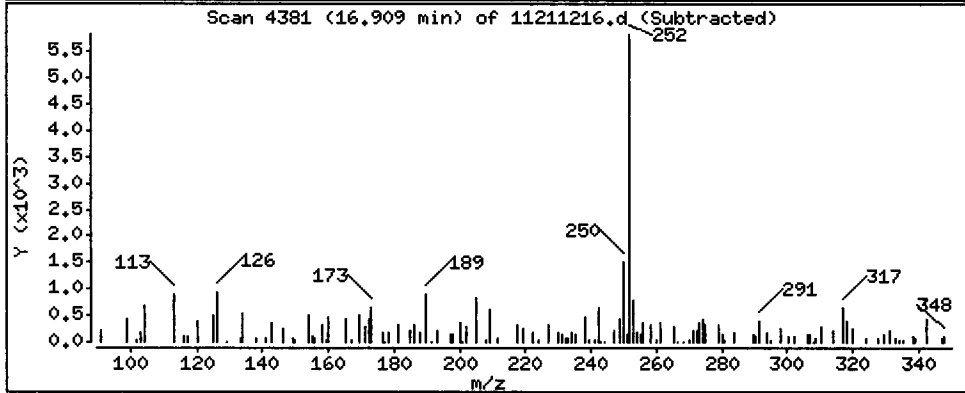
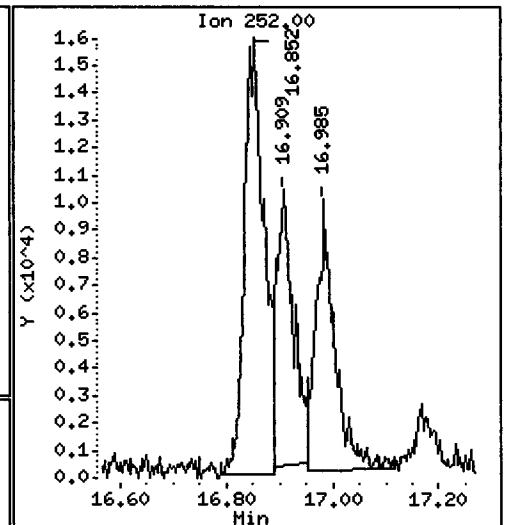
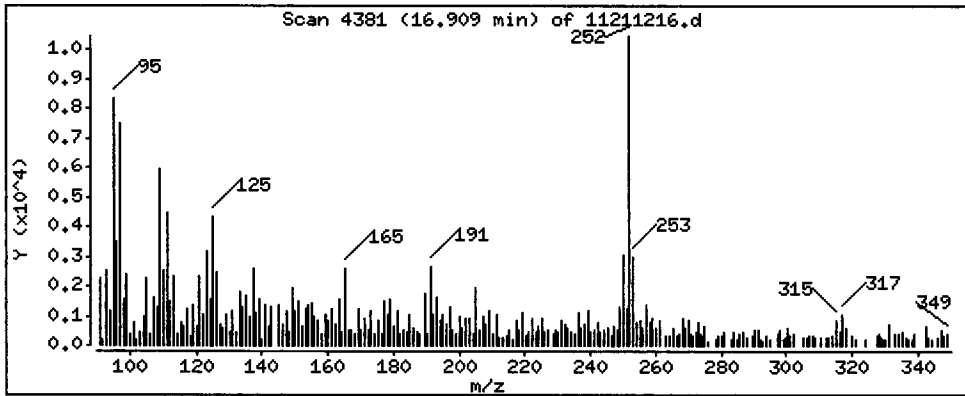
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

52 Benzo(k)fluoranthene

Concentration: 5.106 ug/kg



Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

Operator: JZ

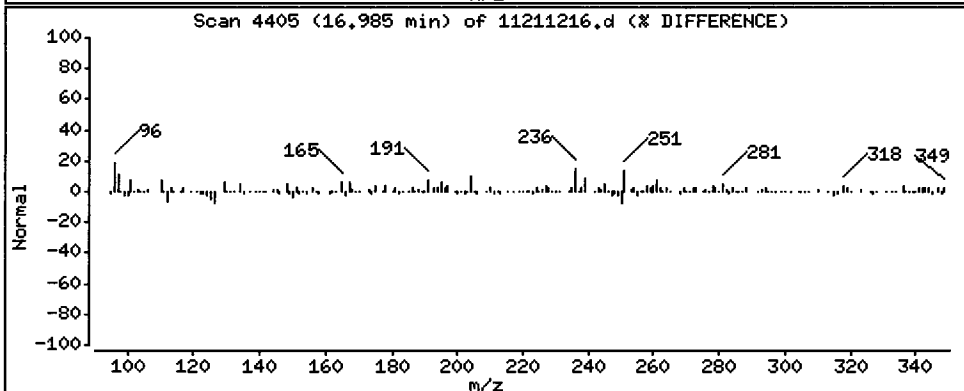
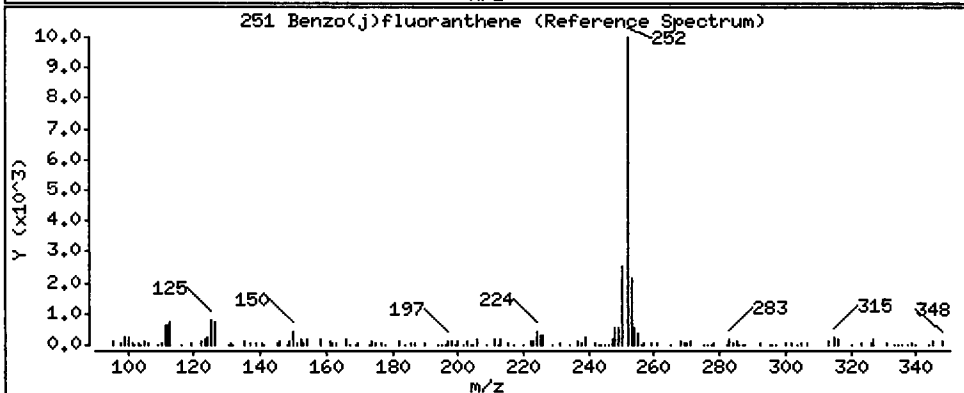
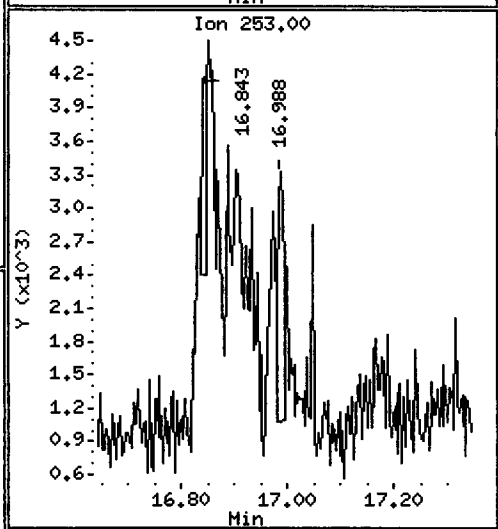
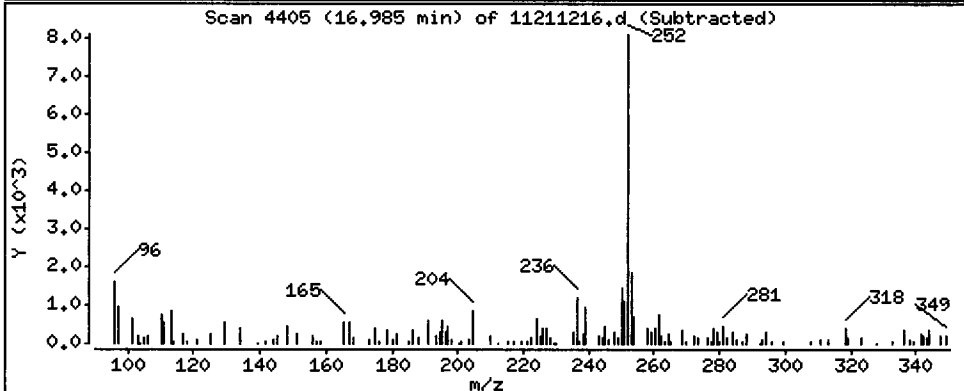
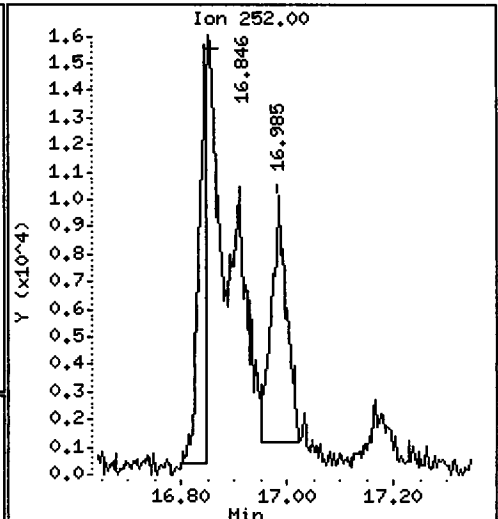
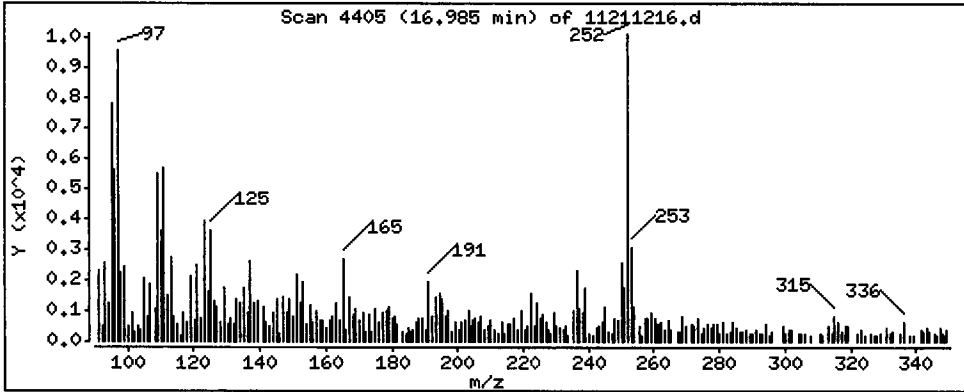
Column phase: ZB-5msi

Column diameter: 0.25

251 Benzo(j)fluoranthene

Concentration: 3,894 ug/kg

*RZ*



Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

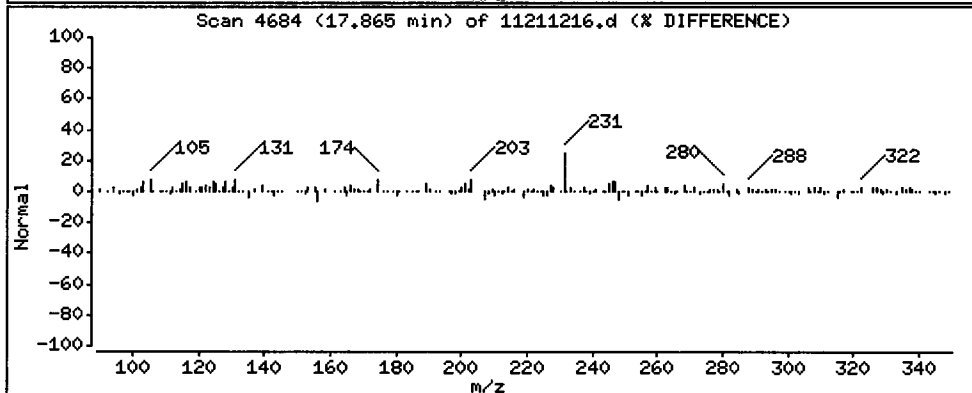
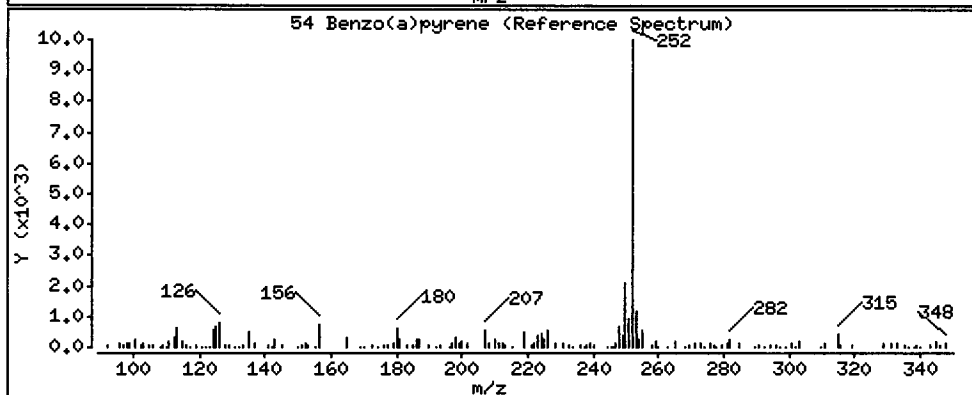
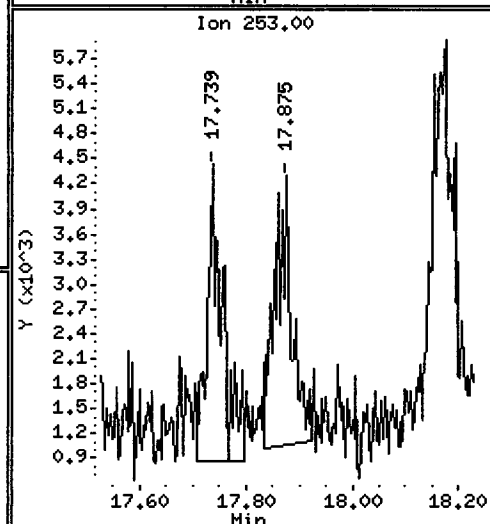
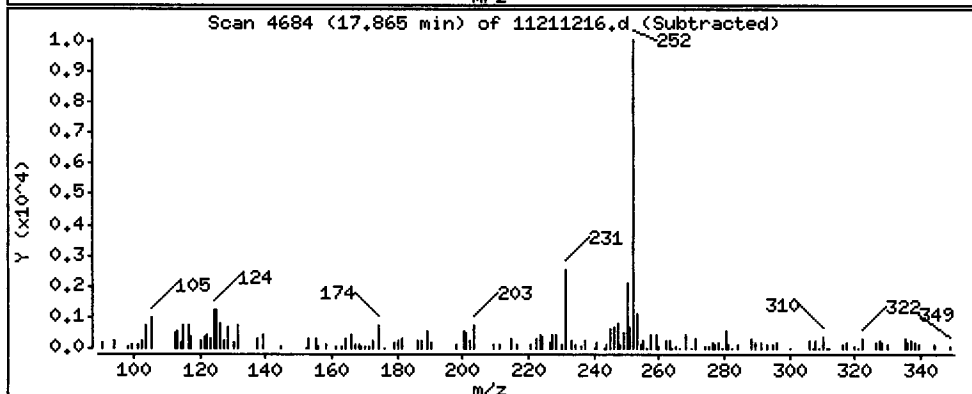
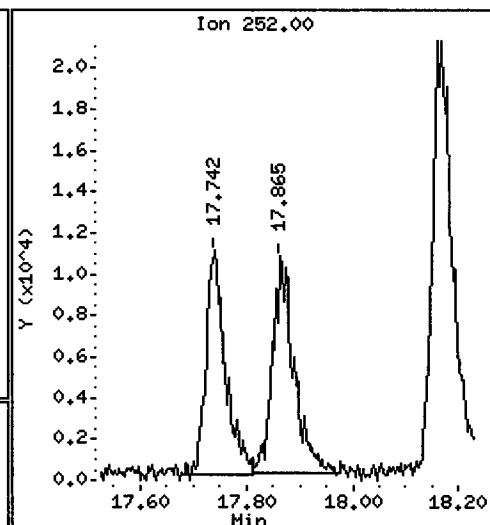
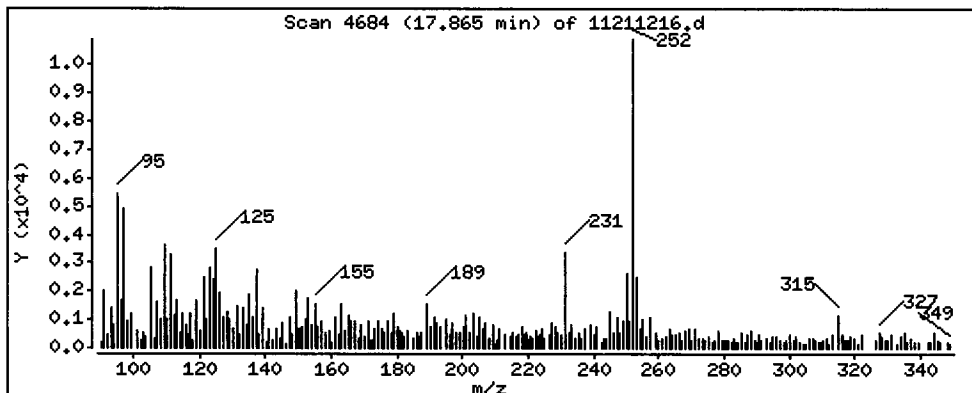
Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.25

54 Benzo(a)pyrene

Concentration: 7.163 ug/kg



Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

Operator: JZ

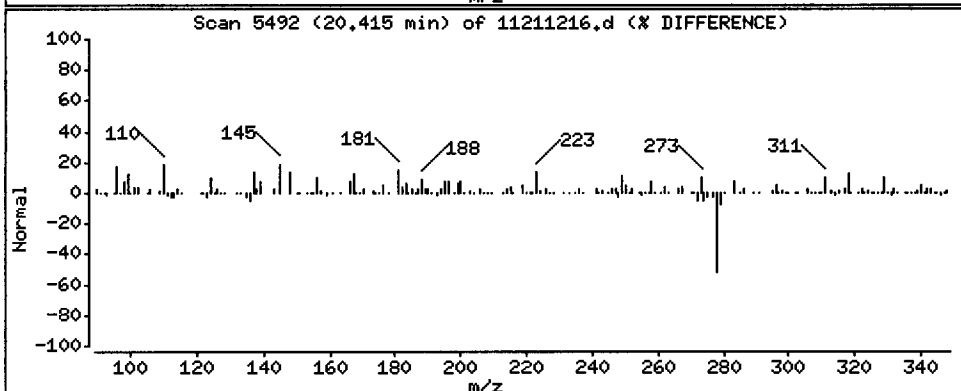
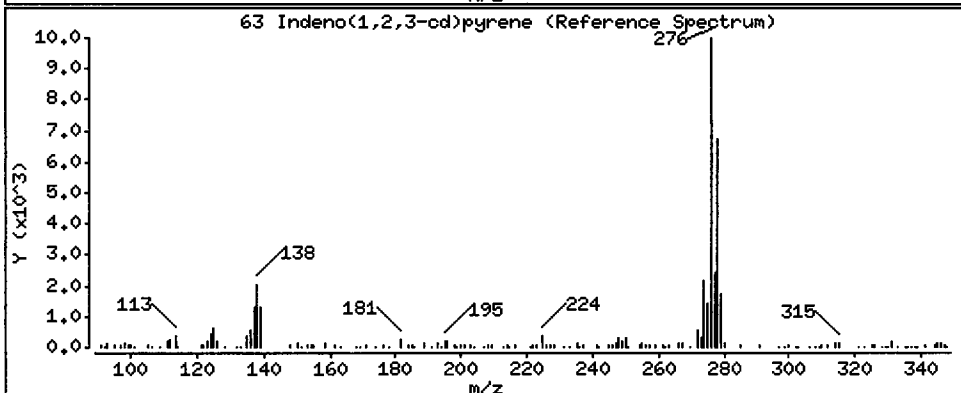
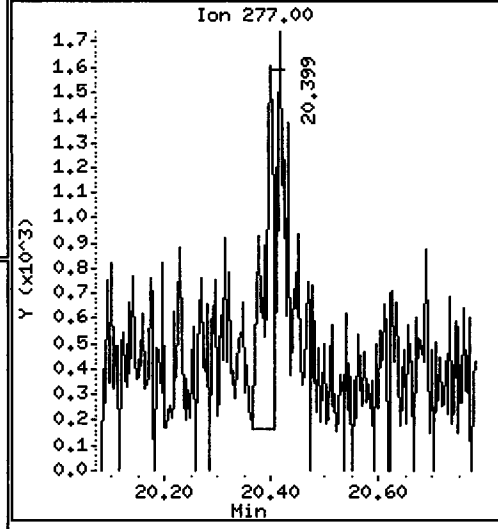
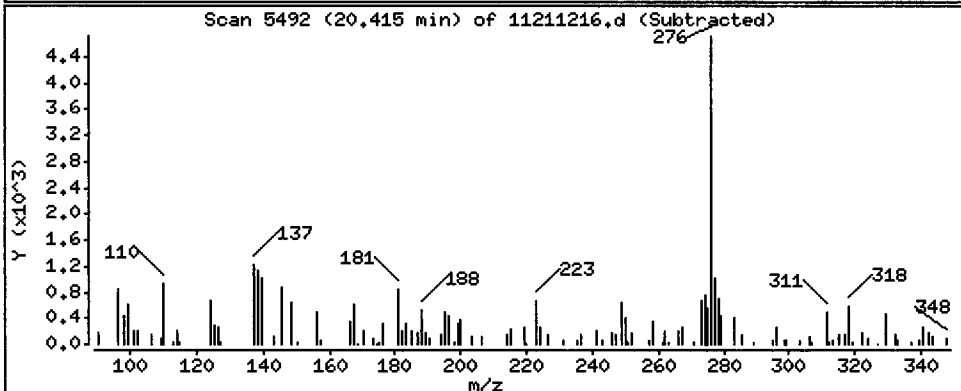
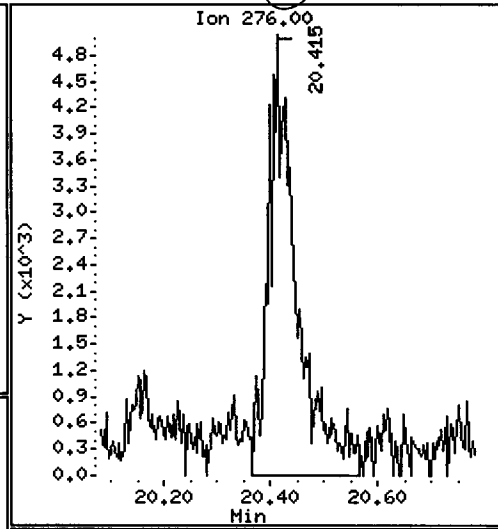
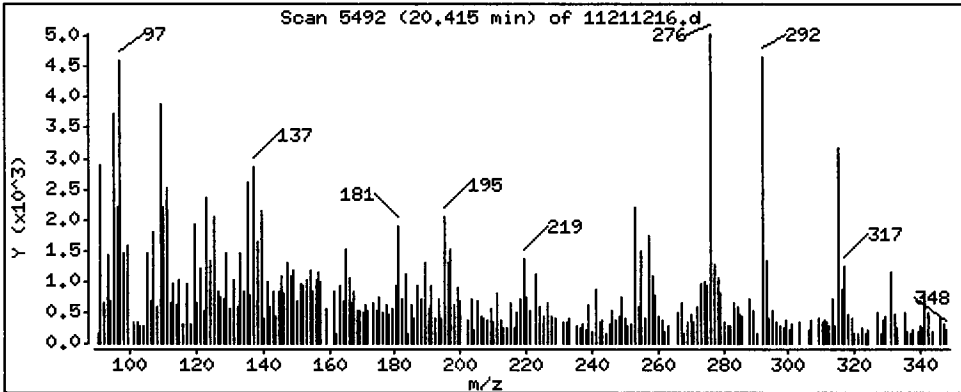
Column phase: ZB-5ms1

Column diameter: 0.25

63 Indeno(1,2,3-cd)pyrene

Concentration: 3.622 ug/kg

*TCR*



Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

Operator: JZ

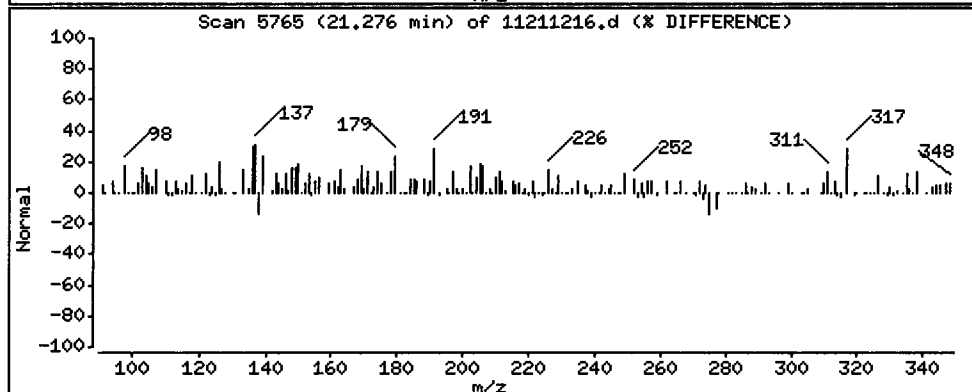
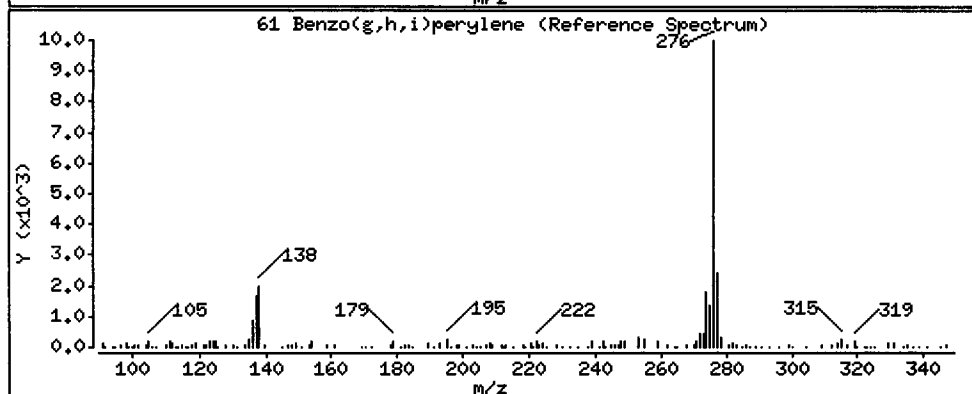
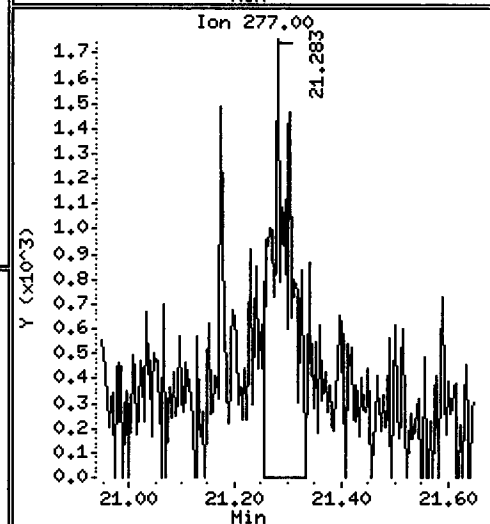
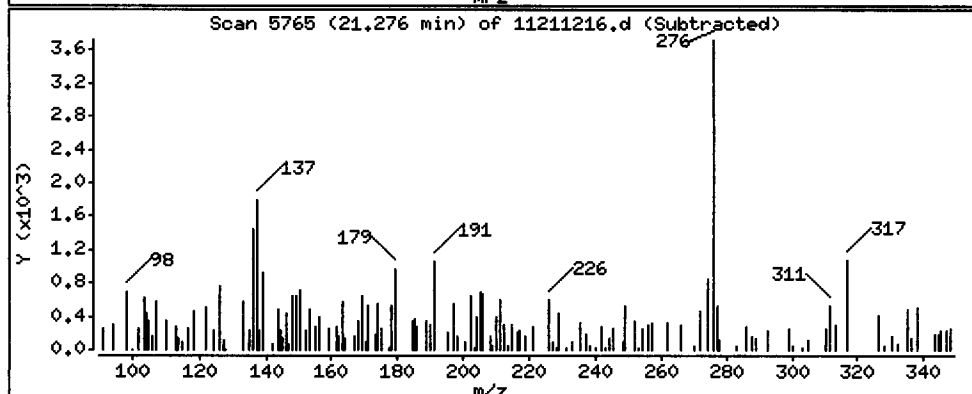
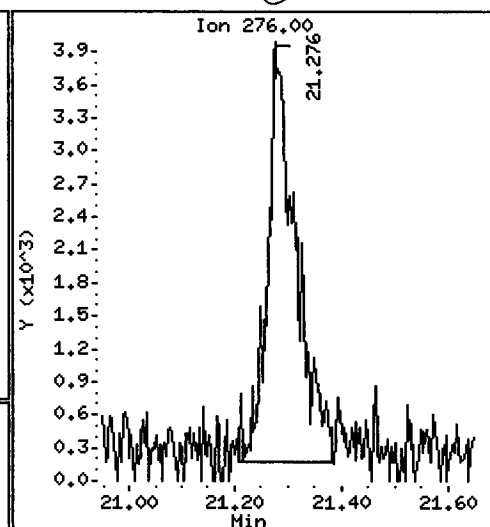
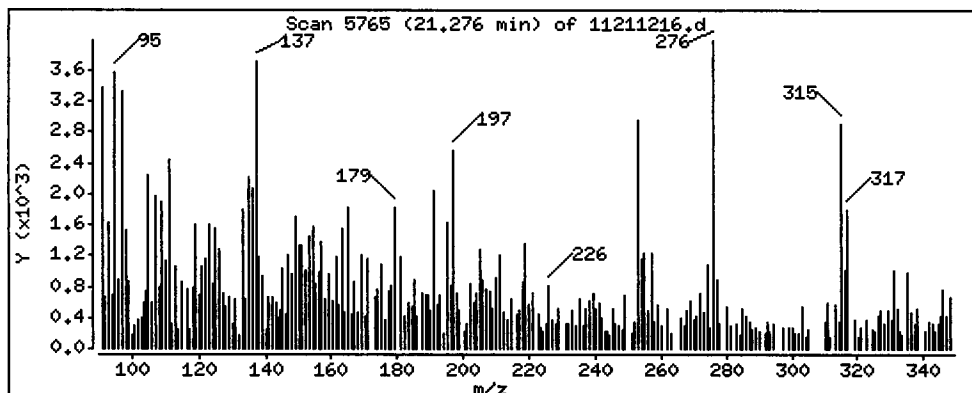
Column phase: ZB-5msi

Column diameter: 0.25

61 Benzo(g,h,i)perylene

Concentration: 3.275 ug/kg

*5.42*



Date : 21-NOV-2012 18:41

Client ID: SG-01-S-C-121107

Instrument: nt11.i

Sample Info: VR58J

Volume Injected (uL): 1.0

Operator: JZ

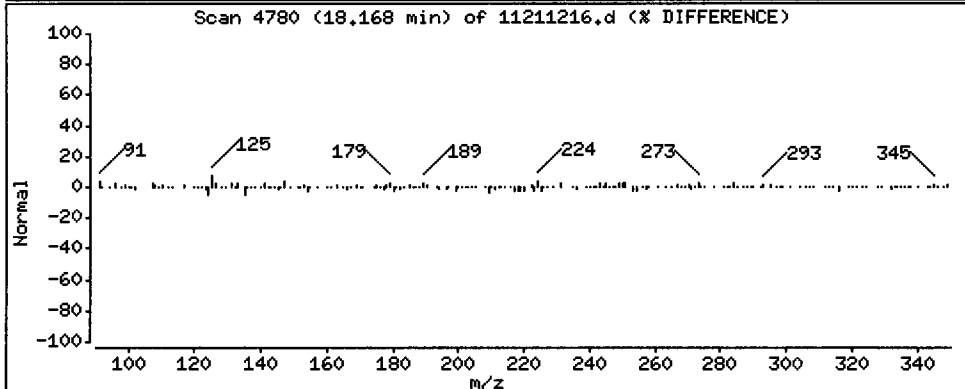
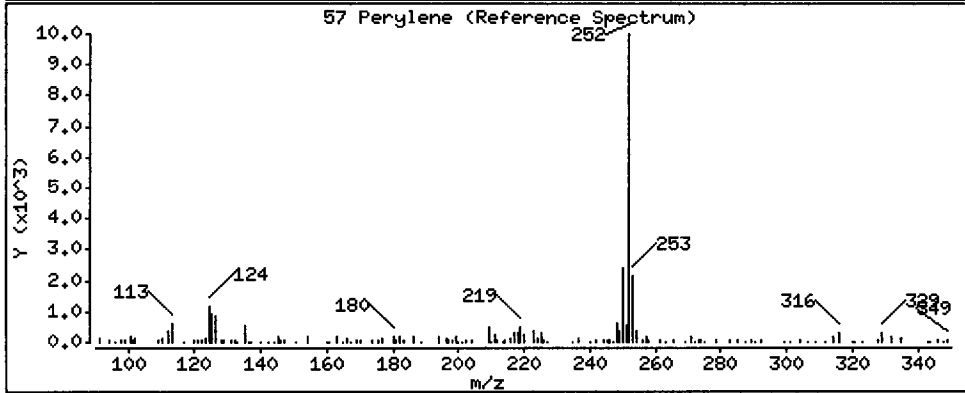
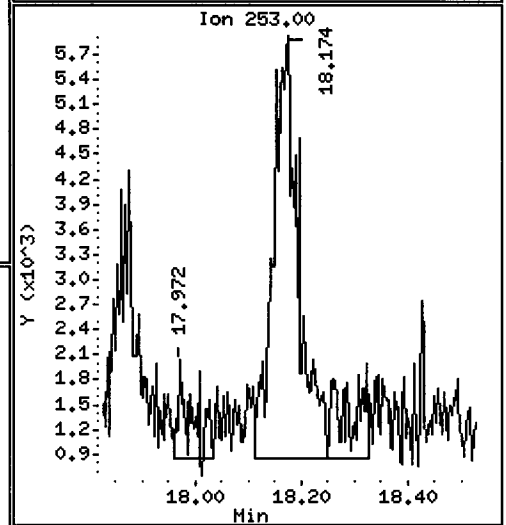
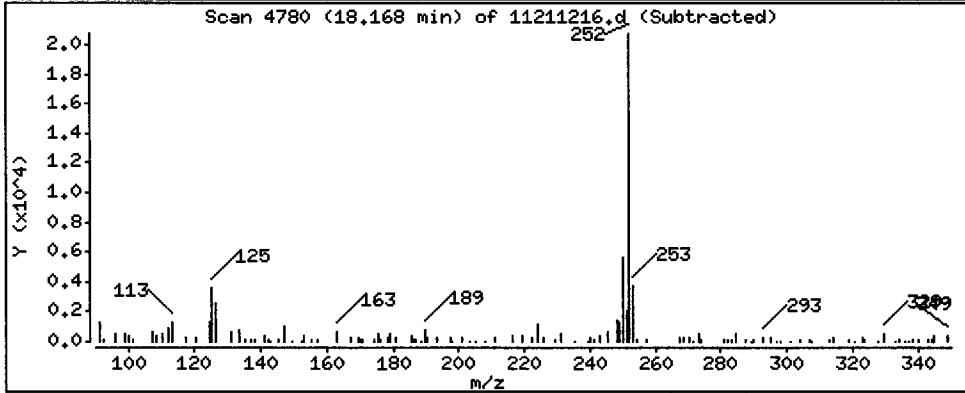
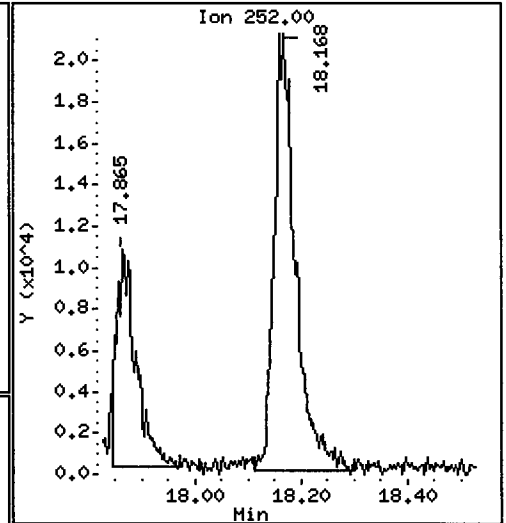
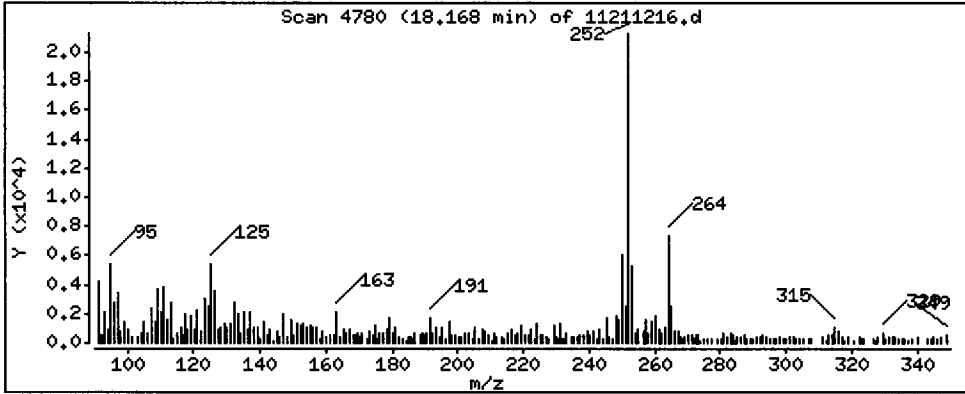
Column phase: ZB-5msi

Column diameter: 0.25

*MEGA*

57 Perylene

Concentration: 14.07 ug/kg



CO-ELUTION SUMMARY FOR FILE - 11211216.d

Lab ID: VR58J, Method: FSIMPNA111512.m, Instrument: nt11.i, Date: 21-NOV-2012

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS



**Butyl Tin Raw Data  
Extraction Bench Sheets and Notes**

**ARI Job ID: VR58**



Preparation Test TBT # 4 (TBTSDMI)

ARI Job No(s) VR38, VR58

Page 1 of     

In-House (4-6ppb)  
Batch set up by: SP

Bottle #	Extraction Requirements	Weight Extracted (eq. to 5g dry wt)	Final Effective Volume	Volume to Lab	Comments	Verify Client ID N& 11/13/12 Analyst/Date
	<u>VR38</u> MBS	5.00g	0.5mL	0.5mL	(Blanks=Solvent Only)	Microwave
	↓ SBS	5.00g	0.5mL	0.5mL	(Blanks=Solvent Only)	N& 11/13/12 Analyst/Date
	<del>SBSDup</del>	<del>5.00g</del>	<del>0.5mL</del>	<del>0.5mL</del>	<del>(Blanks=Solvent Only)</del>	
	<del>OLS</del>	<del>5.00g</del>	<del>0.5mL</del>	<del>0.5mL</del>	<del>(Blanks=Solvent Only)</del>	
5	<u>VR38</u> J	7.14	0.5mL	0.5mL		TurboVap 103 Hexane Exchange (15mL)
5	↓ K	6.21	0.5mL	0.5mL		WW 11/13/12 Analyst/Date
5	↓ Kms	6.18	0.5mL	0.5mL		HexMgBr Addition Vortex 45min +Overnight
5	↓ KmsD	6.11	0.5mL	0.5mL		WW 11/13/12 Analyst/Date
5	<u>VR58</u> A	9.18	0.5mL	0.5mL		(REQ) Derivitize (4mL)
5	↓ B	26.05	0.5mL	0.5mL	See Analyst note	CJZ 11/14/12 Analyst/Date
5	↓ C	17.21	0.5mL	0.5mL	See Analyst note	(REQ) Alumina Clean (2mL)
5	↓ D	21.11	0.5mL	0.5mL	See Analyst note	CJZ 11/14/12 Analyst/Date
5	↓ E	21.20	0.5mL	0.5mL	See Analyst note	(REQ) Alumina Clean (2mL)
5	↓ G	7.22	0.5mL	0.5mL		CJZ 11/14/12 Analyst/Date
			0.5mL	0.5mL		TurboVap 103
			0.5mL	0.5mL		Post Alumina Cleanup
Analyst/Date			CJZ 11/14/12	CJZ 11/14/12		CJZ 11/14/12 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	L (1993-4)	2.5µg/mL	100µL	11/23/12	M	SP
Spike	8 (1916-2)	2.5µg/mL	100µL	11/23/12	M	SP
<del>QLS Spike</del>	<del>3 ( )</del>	<del>0.5µg/mL</del>	<del>40µL</del>			

Extraction Time: 1430 Balance ID: B139298002

**SPECIAL INSTRUCTIONS: NOTE: TBT Extractions must be completed within 48 hours!**  
 1. Blanks=Solvent Only (NO Sulfate). 2. Weigh samples into 100mL beakers-dry with Sodium Sulfate. 3. Pre-Rinse microwave vessel with 0.10% Troponone in DCM. 4. Transfer soil to microwave vessel. 5. Add 0.10% Troponone in DCM to vessel until solvent is 1" above soil layer after homogenization). 6. Add surr/spike. 7. Microwave on appropriate power setting determined by # of samples. 8. After microwave-Re-homogenize while hot then let cool 15 min. in cold water bath. 9. Decant into 0.10% troplone rinsed turbo tube with sm. Funnel containing glasswool and 1" sodium sulfate. 10. Add (2) 10mL Hexane rinses to vessel and transfer to turbo tube. 11. TV to 2mL and add 15mL Hexane (X1)-mix well. 12. TurboVap to 3mL-Transfer with Hexane to 40mL VOA vial. 13. Derivitize=1 1/2 pipet HexMgBr (Mix by hand) then Vortex. Let sit 45min (vortex every 10 min) Then let sit overnite in fridge. 14. Derivitize: Add (2) pipet 1:1 HCL. Vortex. Draw off/discard HCL. Add 1 pipet 1:1 HCL and 5mL DI H2O. Vortex. Draw off/discard H2O. Add 5mL DI H2O. Vortex. Draw off/discard H2O. 15. Add sodium sulfate-Let sit 15min. 16. TurboVap to 2mL. 17. 7.5g 0% Alumina Clean-up Required. (Collect 6mL). 18. TurboVap. 19. Vial in hexane.

A. Need Total Solids Y/N B. Archive/Freeze Y/N

3064F  
22277  
22329



ARI Job No: VR58

Client ID: Anchorage GEA, LLC

Parameter: TBT

Client Project: City of Kenmore Sediment

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
<input checked="" type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)= <u>ABCDEFGHIJ</u>	<u>ET 11/12</u>
<input checked="" type="checkbox"/> Standing Water Decanted (Not shared)= <u>ABCDEFGHIJ</u>	<u>ET 11/12</u>
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=	
<input checked="" type="checkbox"/> Rocks (%+size)? <u>2% F<sub>150</sub> similar to rocks</u>	<u>ET 11/12</u>
<input checked="" type="checkbox"/> Organics (Leaves/sticks/grass)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input checked="" type="checkbox"/> Other (Details)= <u>B-E - samples &amp; surrogate has to be split into 2 vessels due to sample weights and 2 Turbo tubes also. Samples will combined.</u>	<u>NZ 11/13/12</u>
<b>Aqueous:</b>	
<input type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
<input type="checkbox"/> Emulsions (%)=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Other Notes/Comments=(Note problems, concerns, corrective actions).	
Centrifuge #1 used for all Centrifugations)	

**Butyl Tin Raw Data  
Initial Calibration**

**ARI Job ID: VR58**



## 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): 10.6.12 Internal Standard ID 196(-) Expiration 3.17.13

DFTPP Tune Meets Criteria?	<u>YES</u> / NO	Minimum Response Factors Met/	<u>YES</u> / NO
DDT Breakdown <20%?	<u>YES</u> / NO	1CV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	<u>YES</u> / NO	1CV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r <sup>2</sup> Criteria?	<u>YES</u> / NO	Linear Fits Used?	YES <u>NO</u>
Q flag applied?	YES / <u>NO</u>	Quadratic Fits Used?	YES <u>NO</u>
Manual Integrations for ICal?	YES <u>NO</u>	Calibration Points Dropped?	YES <u>NO</u>
Spectral Library Updated?	<u>YES</u> / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
<u>Art. Stocks</u>	<u>1960-2</u>	<u>3.17.13</u>			

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

Analyst: VB Date: 10.9.12  
 Reviewer: [Signature] Date: 10/9/12

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt12.i/20121006.b/lowbts.m  
Batch File: /chem1/nt12.i/20121006.b  
Inst ID: nt12.i

ID: RT01 RT02 RT03 RT04 RT05 RT06  
FILENAME: ic1006a ic1006b ic1006c ic1006d ic1006e ic1006f  
INJ.DAYS: 06-OCT-2012 06-OCT-2012 06-OCT-2012 06-OCT-2012 06-OCT-2012 06-OCT-2012  
INJ.TIME: 14:05 14:18 14:32 14:46 15:00 15:14

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Tripropyl Tin (Hexyl)	6.157	6.169	6.169	6.169	6.169	6.169	6.157	6.034-6.281	6.167	0.005
2 Tetrabutyl Tin	6.376	6.388	6.388	6.388	6.388	6.388	6.376	6.249-6.504	6.386	0.005
3 Tributyl Tin (Hexyl)	7.159	7.159	7.159	7.159	7.159	7.159	7.159	7.015-7.302	7.159	0.000
* 4 Tetrapentyl Tin	7.801	7.814	7.814	7.814	7.814	7.814	7.801	7.645-7.957	7.812	0.006
5 Dibutyl Tin (Hexyl)	7.854	7.854	7.854	7.854	7.854	7.854	7.854	7.697-8.011	7.854	0.000
\$ 6 Tripentyl Tin (Hexyl)	8.136	8.149	8.149	8.149	8.149	8.149	8.136	7.973-8.298	8.147	0.006
7 Butyl Tin (Hexyl)	8.484	8.485	8.484	8.484	8.485	8.485	8.484	8.315-8.654	8.484	0.000
* 8 p-Terphenyl-d14	8.766	8.780	8.779	8.779	8.780	8.780	8.766	8.591-8.941	8.777	0.006

Reviewer 1 VD Date: 10.9.12  
Reviewer 2 AS Date: 10/9/12

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt12.i/20121006.b

ARI Job No.: TBT Method: lowbts.m Instrument: nt12.i Date: 06-OCT-2012

Time Filename LabID ClientId DF Manually Integrated Compounds

1405 ic1006a.d TBT 1 1 NO MANUAL INTEGRATION

1418 ic1006b.d TBT 4 1 NO MANUAL INTEGRATION

1432 ic1006c.d TBT .05 1 NO MANUAL INTEGRATION

1446 ic1006d.d TBT 2 1 NO MANUAL INTEGRATION

1500 ic1006e.d TBT .2 1 NO MANUAL INTEGRATION

1514 ic1006f.d TBT .5 1 NO MANUAL INTEGRATION

1351 6f1006.d DFTPP 25 1 NO MANUAL INTEGRATION

**Analytical Resources Inc.: Organics Instrument Log**

NT-12 Serial No.: GC=US00032558, MS= US01180091

Date: 10.6.12 Analysis: TBT S Analyst: VJD  
 GC Program: BTS Column No: 230930 Column Type: ZB-Smsi  
 Instrument Tune (U or .CT.): 120927.U EM Voltage: 1800  
 Calibration File: df1006 Curve Date: 10.6.12 Injection Vol.: 2ul

IS/SS	Ical/Ccal	LCS/ICV		
<u>1960-1</u>	<u>1960-2</u>			
INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt				
Time	Filename	LabID	ClientId	DF
1	1351 df1006.d	DFTPP 25		1   NO ISTDs FOUND
2	1405 ic1006a.d	TBT 1		1   7.80 343457   8.77 317005
3	1418 ic1006b.d	TBT 4		1   7.81 369658   8.78 314201
4	1432 ic1006c.d	TBT .05		1   7.81 316414   8.78 301375
5	1446 ic1006d.d	TBT 2		1   7.81 348442   8.78 324906
6	1500 ic1006e.d	TBT .2		1   7.81 311467   8.78 295038
7	1514 ic1006f.d	TBT .5		1   7.81 332130   8.78 306646
8	1528 vl06mb.d	VL06MBS1	VL06MBS1	1   7.81 334888   8.78 326266
9	1542 vl06mb.d	VL06LCSS1	VL06LCSS1	1   7.81 340730   8.78 323326
10	1555 vl06mbd.d	VL06LCSDS1	VL06LCSDS1	1   7.81 327578   8.78 321003
11	1609 vl06a.d	VL06A	SC-56(-14 to	1   7.81 352642   8.78 339311
12	1623 vl06b.d	VL06B	SC-58(-14 to	1   7.81 385988   8.78 371667
13	1637 vl06c.d	VL06C	SC-59(-14 to	1   7.88 200040   8.86 76977
14	1651 vl06d.d	VL06D	DUP-2	1   7.88 329263   8.85 204870
15	1705 vl06e.d	VL06E	SC-60(-12 to	1   7.81 708230   8.78 612596
16	1718 vl06f.d	VL06F	SC-61(-12 to	1   7.81 663931   8.78 622116
17	1732 vl06fms.d	VL06FMS	SC-61(-12 to	1   7.81 635455   8.78 610757
18	1746 vl06fmsd.d	VL06FMSD	SC-61(-12 to	1   7.81 649189   8.78 615661
19	1800 vl06g.d	VL06G	SC-63(-12 to	1   7.81 606116   8.78 581692
20	1814 vl06h.d	VL06H	SC-64(-11 to	1   7.81 615402   8.78 601289
21	1828 vl06i.d	VL06I	SC-64(-12 to	1   7.81 614287   8.78 579767
22	1841 vl06j.d	VL06J	SC-65(-11 to	1   7.81 619253   8.78 593920
23	1855 vl06l.d	VL06L	SC-65(-12 to	1   7.81 581300   8.78 565648
24	1909 vl06m.d	VL06M	SC-66(-9 to	1   7.81 596104   8.78 557170
25	1923 vl06n.d	VL06N	SC-66(-10.5	1   7.81 604820   8.78 560292
26	1937 vl06o.d	VL06O	SC-66(-12 to	1   7.81 604492   8.78 567423
27	1950 vl06p.d	VL06P	SC-67(-10 to	1   7.81 584653   8.78 567975
28	2004 vl06q.d	VL06Q	SC-67(-10.5	1   7.81 571646   8.78 531446
29	2018 vl06r.d	VL06R	SC-67(-12 to	1   7.81 574210   8.78 534368
30	2032 vl06s.d	VL06S	SC-68(-13.4	1   7.81 521996   8.78 498045

Every line must c  
Start a new page

*VJD*  
*10.6.12*  
US00032558 : 01352



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 06-OCT-2012 14:05  
 End Cal Date : 06-OCT-2012 15:14  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP RTE  
 Method file : /chem1/nt12.i/20121006.b/lowbts.m  
 Cal Date : 06-Oct-2012 16:35 van  
 Curve Type : Average

Calibration File Names:

Level 1: /chem1/nt12.i/20121006.b/ic1006c.d  
 Level 2: /chem1/nt12.i/20121006.b/ic1006e.d  
 Level 3: /chem1/nt12.i/20121006.b/ic1006f.d  
 Level 4: /chem1/nt12.i/20121006.b/ic1006a.d  
 Level 5: /chem1/nt12.i/20121006.b/ic1006d.d  
 Level 6: /chem1/nt12.i/20121006.b/ic1006b.d

Compound	0.05000 Level 1	0.20000 Level 2	0.50000 Level 3	1.000 Level 4	2.000 Level 5	4.000 Level 6	RRF	% RSD
2 Tetrabutyl Tin	0.65231	0.69664	0.74871	0.79144	0.75496	0.73020	0.72904	6.689
3 Tributyl Tin (Hexyl)	0.54991	0.59188	0.66714	0.68416	0.68362	0.66395	0.64011	8.724
5 Dibutyl Tin (Hexyl)	0.04585	0.04882	0.05314	0.05325	0.05212	0.05463	0.05130	6.451
7 Butyl Tin (Hexyl)	0.06016	0.06674	0.08094	0.08359	0.08296	0.09032	0.07745	14.827
\$ 1 Tripropyl Tin (Hexyl)	0.64713	0.67455	0.71183	0.75654	0.72109	0.68958	0.70012	5.470
\$ 6 Tripentyl Tin (Hexyl)	0.05458	0.06040	0.07168	0.07068	0.07198	0.07903	0.06806	13.074

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt12.i/20121006.b

Instrument: nt12.i Date: 06-OCT-2012 Method: lowbts.m

INITIAL CAL: 06-OCT-2012

Compound	%RSD or R <sup>2</sup>
-----	
NO Q-FLAGS	
-----	

CONTINUING CAL: 06-OCT-2012

Compound	%D
-----	
NO Q-FLAGS	
-----	

Data File: /chem1/nt12.1/20121006.b/df1006.d

Page 1

Date : 06-OCT-2012 13:51

Client ID:

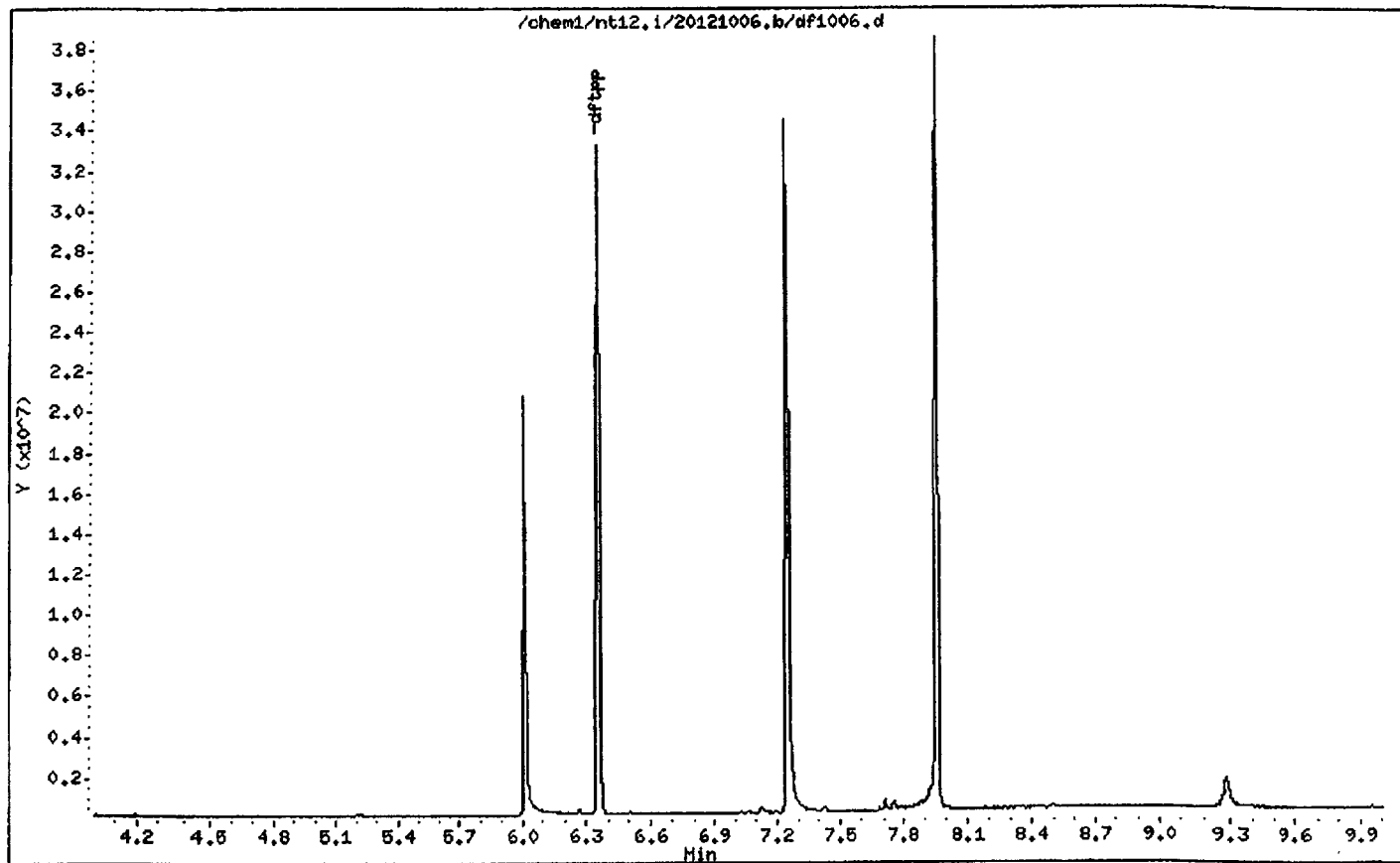
Instrument: nt12.i

Sample Info: DF1PP 25

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25



UR58 : 01055

Date: 06-OCT-2012 13:51

Client ID:

Instrument: nt12.1

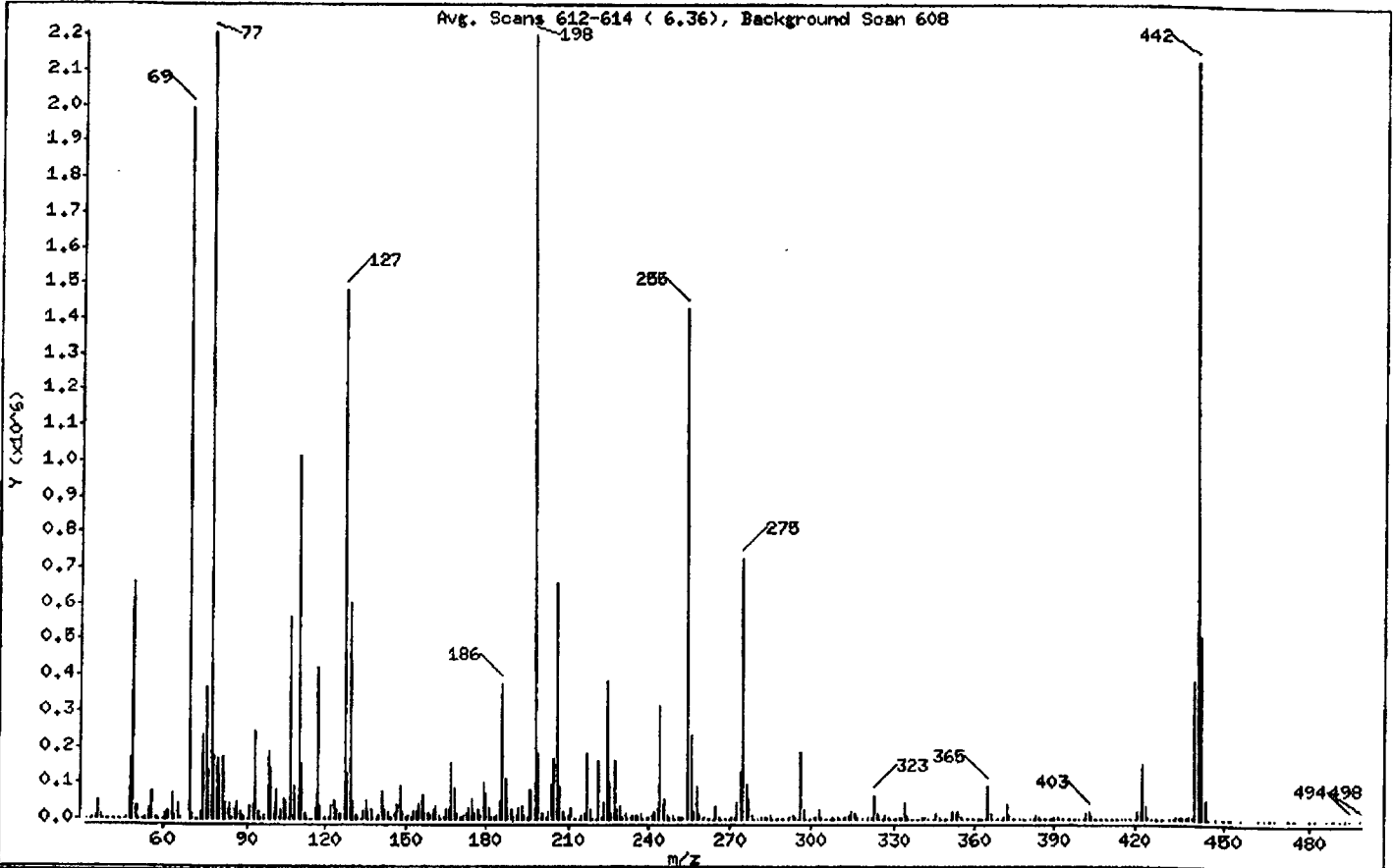
Sample Info: DFTPP 28

Operator: VTS

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	28.81
68	Less than 2.00% of mass 69	0.00 ( 0.00)
69	Mass 69 relative abundance	89.83
70	Less than 2.00% of mass 69	0.53 ( 0.59)
127	10.00 - 80.00% of mass 198	65.60
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.17
275	10.00 - 60.00% of mass 198	33.43
365	Greater than 1.00% of mass 198	4.54
441	0.01 - 24.00% of mass 442	19.82 ( 17.48)
442	50.00 - 200.00% of mass 198	113.40
443	15.00 - 24.00% of mass 442	26.04 ( 22.96)

Date : 06-OCT-2012 13:51

Client ID:

Instrument: nt12.i

Sample Info: DFTPP 25

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1006.d

Spectrum: Avg. Scans 612-614 ( 6,36), Background Scan 608

Location of Maximum: 77.00

Number of points: 419

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	393	145.00	5090	251.00	2672	360.00	907
36.00	1371	146.00	12768	262.00	3296	361.00	834
37.00	4924	147.00	39784	263.00	6711	362.00	1201
38.00	10644	148.00	91480	265.00	1427968	363.00	41
39.00	51704	149.00	20984	266.00	231040	364.00	149
40.00	9216	150.00	4170	267.00	18192	365.00	93624
41.00	1418	151.00	11701	268.00	90680	366.00	15056
42.00	968	152.00	4152	269.00	14616	367.00	1071
43.00	553	153.00	21800	260.00	2465	368.00	64
44.00	1822	154.00	20384	261.00	2570	369.00	1104
45.00	1001	155.00	41592	262.00	563	370.00	2179
46.00	597	156.00	68304	263.00	1160	371.00	5670
47.00	531	157.00	13283	264.00	2179	372.00	38120
48.00	1180	158.00	14897	265.00	36616	373.00	7990
49.00	4311	159.00	9015	266.00	7485	374.00	531
50.00	168000	160.00	25352	267.00	1602	375.00	543
51.00	689328	161.00	36040	268.00	2386	377.00	1824
52.00	36400	162.00	11222	269.00	74	378.00	526
53.00	2243	163.00	1179	270.00	2117	379.00	61
54.00	781	164.00	3880	271.00	4949	381.00	462
55.00	5392	165.00	25112	272.00	3444	382.00	186
56.00	31680	166.00	23812	273.00	44944	383.00	10812
57.00	74824	167.00	154752	274.00	134144	384.00	3287
58.00	4199	168.00	83760	275.00	731584	385.00	489
59.00	670	169.00	13223	276.00	96016	386.00	561
60.00	423	170.00	6262	277.00	54440	387.00	8
61.00	17392	171.00	5407	278.00	9418	388.00	218
62.00	22480	172.00	11589	279.00	2508	389.00	326
63.00	72656	173.00	12908	280.00	304	390.00	5667
64.00	8042	174.00	28368	282.00	3359	391.00	2752
65.00	38648	175.00	55424	283.00	5901	392.00	2399
66.00	2824	176.00	16432	284.00	4420	393.00	771
69.00	1993728	177.00	26776	285.00	10572	395.00	536
70.00	13412	178.00	8471	286.00	1388	396.00	94
71.00	1602	179.00	103552	287.00	354	397.00	1256

Date : 06-OCT-2012 13:51

Client ID:

Instrument: nt12.i

Sample Info: DFTPP 25

Operator: VTS

Column phase: ZB-8msi

Column diameter: 0.25

Data File: df1006.d

Spectrum: Avg. Scans 612-614 ( 6.36), Background Scan 608

Location of Maximum: 77.00

Number of points: 419

m/z	Y	m/z	Y	m/z	Y	m/z	Y
72.00	2462	180.00	71344	288.00	1243	398.00	382
73.00	19776	181.00	32800	289.00	1930	399.00	114
74.00	233152	182.00	5860	290.00	1840	401.00	1994
75.00	363884	183.00	3823	291.00	1927	402.00	15008
76.00	136768	184.00	9900	292.00	3676	403.00	21552
77.00	2206208	185.00	52040	293.00	11773	404.00	9648
78.00	176128	186.00	373824	294.00	3330	405.00	890
79.00	168384	187.00	112752	295.00	1488	406.00	489
80.00	122584	188.00	10004	296.00	187648	407.00	107
81.00	172416	189.00	24344	297.00	25768	408.00	295
82.00	48040	190.00	4166	298.00	2258	409.00	128
83.00	40312	191.00	11813	299.00	783	410.00	736
84.00	5692	192.00	32688	300.00	265	411.00	786
85.00	26568	193.00	37544	301.00	2910	412.00	217
86.00	48176	194.00	9276	302.00	3754	413.00	83
87.00	22328	195.00	6512	303.00	24536	414.00	225
88.00	8234	196.00	80096	304.00	7248	415.00	1098
89.00	4192	198.00	2199582	305.00	1466	417.00	819
90.00	326	199.00	184192	306.00	390	418.00	13
91.00	36392	200.00	15488	307.00	379	419.00	720
92.00	40840	201.00	14251	308.00	2978	420.00	293
93.00	243904	202.00	3256	309.00	1851	421.00	21288
94.00	20232	203.00	18064	310.00	3619	422.00	21088
95.00	4659	204.00	94480	311.00	399	423.00	154688
96.00	11060	205.00	165632	312.00	268	424.00	33344
98.00	187584	206.00	659456	313.00	3283	425.00	3440
99.00	141440	207.00	89912	314.00	9531	426.00	689
100.00	12831	208.00	21472	315.00	20088	427.00	1018
101.00	82256	209.00	5957	316.00	13735	428.00	437
102.00	3884	210.00	12005	317.00	3361	429.00	293
103.00	26680	211.00	28768	319.00	390	430.00	1020
104.00	55000	212.00	606	320.00	516	431.00	844
105.00	50080	213.00	2454	321.00	4785	432.00	1689
106.00	5598	214.00	714	322.00	5651	433.00	774
107.00	564736	215.00	8551	323.00	64200	434.00	1663

Date : 06-OCT-2012 13:51

Client ID:

Instrument: nt12.i

Sample Info: DF7PP 25

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0,25

Data File: df1006.d

Spectrum: Avg. Scans 612-614 ( 6,36), Background Scan 608

Location of Maximum: 77,00

Number of points: 419

m/z	Y	m/z	Y	m/z	Y	m/z	Y
108,00	90952	216,00	13792	324,00	13273	438,00	2922
110,00	1013888	217,00	184896	325,00	1100	436,00	2643
111,00	180208	218,00	23888	326,00	1194	437,00	3300
112,00	16363	219,00	1739	327,00	12066	438,00	8664
113,00	6641	220,00	1148	328,00	6036	439,00	4894
114,00	1303	221,00	161792	329,00	1691	440,00	2991
118,00	1048	222,00	8881	330,00	645	441,00	384128
116,00	31728	223,00	44952	331,00	536	442,00	2131968
117,00	423104	224,00	387264	332,00	3838	443,00	513984
118,00	33182	225,00	102912	333,00	6731	444,00	80884
119,00	1872	226,00	14038	334,00	43368	448,00	2096
120,00	7088	227,00	164224	338,00	11828	447,00	239
121,00	3087	228,00	28960	336,00	1988	449,00	387
122,00	37804	229,00	38712	337,00	108	480,00	178
123,00	49184	230,00	8483	338,00	449	481,00	288
124,00	22888	231,00	18664	339,00	1061	482,00	32
125,00	16982	232,00	3079	340,00	856	488,00	76
127,00	1479680	233,00	3022	341,00	6862	461,00	80
128,00	126876	234,00	9701	342,00	2918	463,00	123
129,00	601600	238,00	9823	343,00	723	468,00	209
130,00	49192	236,00	9786	348,00	369	467,00	131
131,00	9881	237,00	14480	346,00	18132	472,00	22
132,00	8778	238,00	2280	347,00	3890	473,00	94
133,00	1297	239,00	8780	348,00	638	474,00	228
134,00	17800	240,00	8084	349,00	178	478,00	168
135,00	80744	241,00	9892	380,00	862	480,00	107
136,00	18192	242,00	21768	381,00	1898	482,00	138
137,00	28860	243,00	28648	382,00	19232	486,00	72
138,00	6464	244,00	314496	383,00	18388	488,00	204
139,00	3718	248,00	42440	384,00	21784	489,00	148
140,00	8834	246,00	86488	388,00	4316	491,00	183
141,00	76720	247,00	12868	386,00	673	493,00	82
142,00	26112	248,00	3107	387,00	889	494,00	348
143,00	19128	249,00	11813	388,00	262	498,00	138
144,00	4489	280,00	2063	389,00	1834		

Data File: /chem1/nt12,i/20121006,b/df1006.d

Page 6

Date : 06-OCT-2012 13:51

Client ID:

Instrument: nt12.i

Sample Info: DFTPP 25

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1006.d

Spectrum: Avg. Scans 612-614 ( 6.36), Background Scan 608

Location of Maximum: 77.00

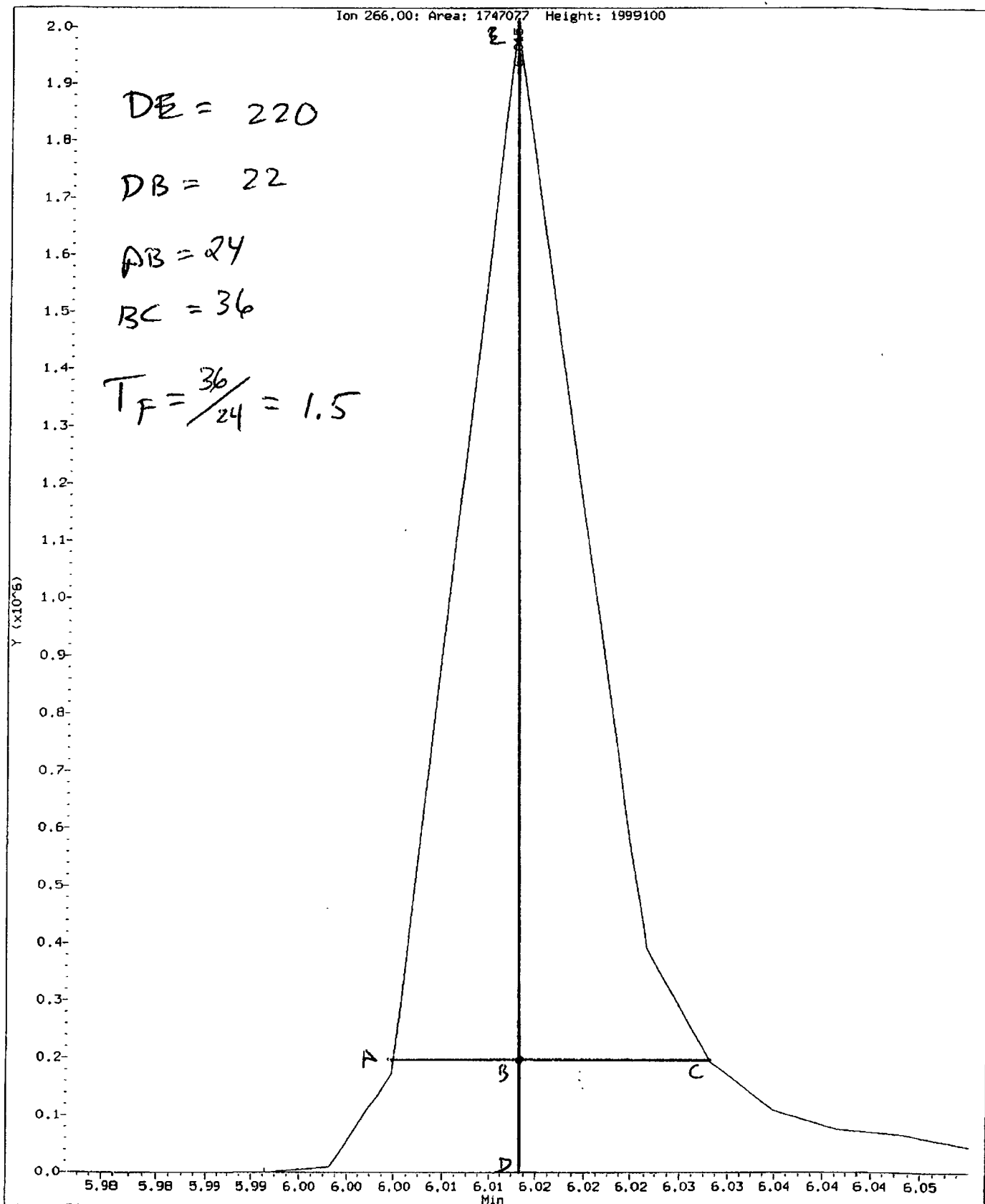
Number of points: 419

m/z	Y	m/z	Y	m/z	Y	m/z	Y
----->							



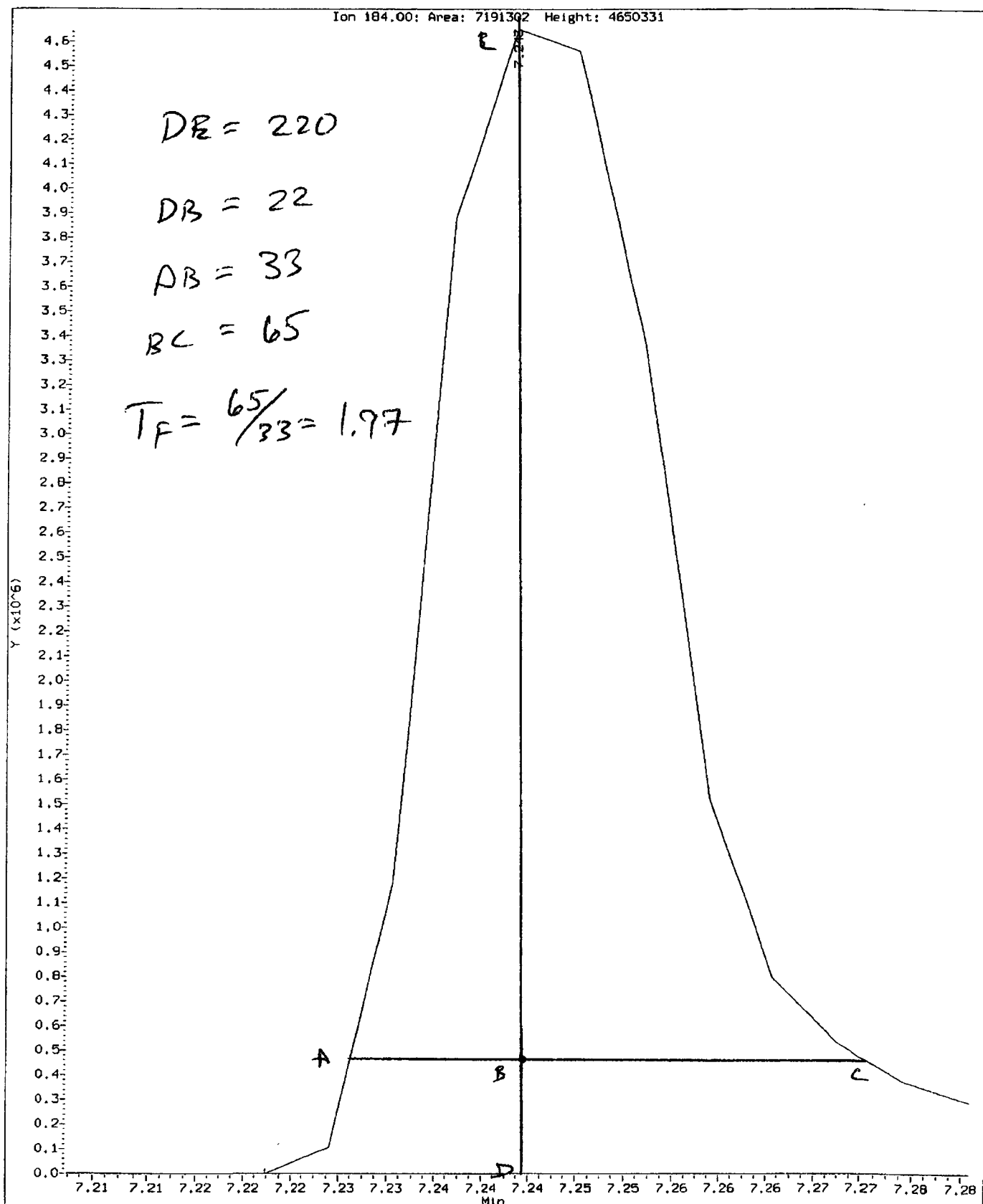
Data File: /chem1/nt12.1/20121006.b/ddt.b/df1006.d  
Injection Date: 06-OCT-2012 13:51  
Instrument: nt12.1  
Client Sample ID:

Compound: Pentachlorophenol  
CAS Number: 87-86-5



Data File: /chem1/nt12.1/20121006.b/ddt.b/df1006.d  
Injection Date: 06-OCT-2012 13:51  
Instrument: nt12.1  
Client Sample ID:

Compound: Benzidine  
CAS Number:



Analytical Resources Inc.  
ABN by sw846 8270C  
DDT Breakdown Report

Data file: /chem1/nt12.i/20121006.b/ddt.b/df1006.d      ARI ID: DFTPP 25  
Method: /chem1/nt12.i/20121006.b/ddt.b/sw846ddt.m      Misc:  
Analysis Date: 06-OCT-2012 13:51      Instrument: nt12.i

COMPOUND	RT	AREA
Pentachlorophenol	6.015	1747077
Benzidine	7.243	7191302
4,4'-DDE	7.425	19851
4,4'-DDD	7.708	75249
4,4'-DDT	7.959	4160178

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

$$\text{DDT Percent Breakdown} = \frac{(19851 + 75249) * 100}{(19851 + 75249 + 4160178)}$$

DDT Percent Breakdown = 2.2 %

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121006.b/ic1006a.d  
 Lab Smp Id: TBT 1  
 Inj Date : 06-OCT-2012 14:05  
 Operator : VTS  
 Smp Info : TBT 1  
 Misc Info :  
 Comment : 2 ul Injection  
 Method : /chem1/nt12.i/20121006.b/lowbts.m  
 Meth Date : 06-Oct-2012 16:36 van  
 Cal Date : 06-OCT-2012 14:05  
 Als bottle: 2  
 Dil Factor: 1.00000  
 Integrator: HP RTE  
 Target Version: 3.50

Inst ID: nt12.i  
 Quant Type: ISTD  
 Cal File: ic1006a.d  
 Calibration Sample, Level: 4  
 Compound Sublist: SED.sub

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS	
								CAL-AMT (ng/mL)	ON-COL (ng/mL)
\$ 1 Tripropyl Tin (Hexyl)	291			6.157	6.157	(0.789)	129920	1.00000	1.000
2 Tetrabutyl Tin	289			6.376	6.376	(0.817)	135913	1.00000	1.000
3 Tributyl Tin (Hexyl)	319			7.159	7.159	(0.918)	117489	1.00000	1.000
* 4 Tetrapentyl Tin	333			7.801	7.801	(1.000)	343457	2.00000	
5 Dibutyl Tin (Hexyl)	347			7.854	7.854	(0.896)	168805	2.00000	2.000
\$ 6 Tripentyl Tin (Hexyl)	347			8.136	8.136	(0.928)	224056	2.00000	2.000
7 Butyl Tin (Hexyl)	347			8.484	8.484	(0.968)	264989	2.00000	2.000
* 8 p-Terphenyl-d14	244			8.766	8.766	(1.000)	317005	0.20000	

UT  
10-8-12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt12.i  
 Lab File ID: ic1006a.d  
 Lab Smp Id: TBT 1  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem1/nt12.i/20121006.b/lowbts.m  
 Misc Info:

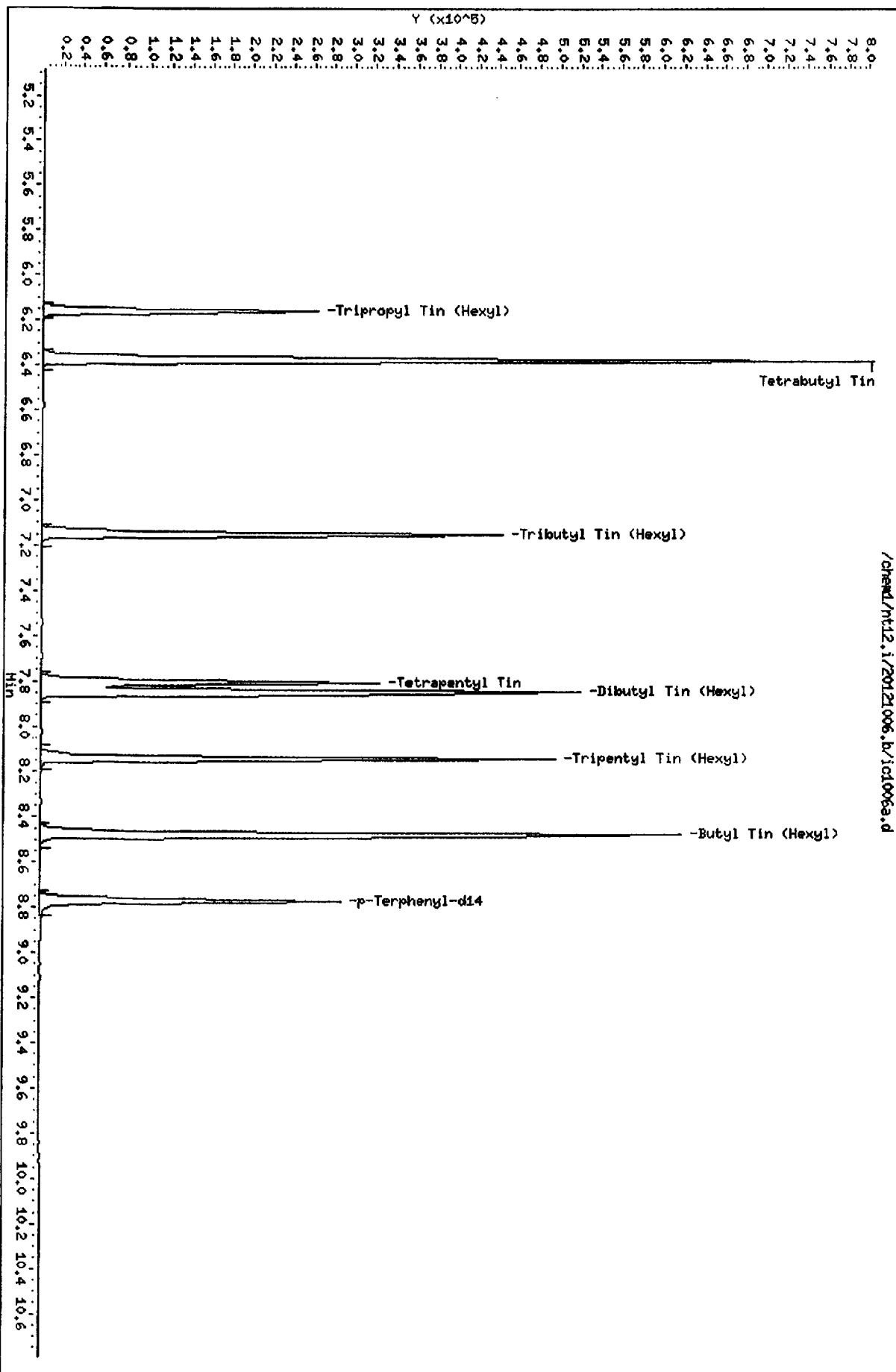
Calibration Date: 06-OCT-2012  
 Calibration Time: 14:05  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	343457	0.00
8 p-Terphenyl-d14	317005	158502	634010	317005	0.00

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.80	7.30	8.30	7.80	0.00
8 p-Terphenyl-d14	8.77	8.27	9.27	8.77	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.



02061006

CO-ELUTION SUMMARY FOR FILE - ic1006a.d

Lab ID: TBT 1, Method: lowbts.m, Instrument: nt12.i, Date: 06-OCT-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121006.b/ic1006b.d  
Lab Smp Id: TBT 4  
Inj Date : 06-OCT-2012 14:18  
Operator : VTS  
Smp Info : TBT 4  
Misc Info :  
Comment : 2 ul Injection  
Method : /chem1/nt12.i/20121006.b/lowbts.m  
Meth Date : 06-Oct-2012 16:36 van  
Cal Date : 06-OCT-2012 14:18  
Als bottle: 3  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50

Inst ID: nt12.i  
Quant Type: ISTD  
Cal File: ic1006b.d  
Calibration Sample, Level: 6  
Compound Sublist: SED.sub

Compounds	QUANT SIG			AMOUNTS			
	MASS	RT	EXP RT REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)	
\$ 1 Tripropyl Tin (Hexyl)	291	6.169	6.157 (0.789)	509819	4.00000	3.815	
2 Tetrabutyl Tin	289	6.388	6.376 (0.817)	539848	4.00000	3.839	
3 Tributyl Tin (Hexyl)	319	7.159	7.159 (0.916)	490867	4.00000	3.940	
* 4 Tetrapentyl Tin	333	7.814	7.801 (1.000)	369658	2.00000		
5 Dibutyl Tin (Hexyl)	347	7.854	7.854 (0.895)	686539	8.00000	8.102	
\$ 6 Tripentyl Tin (Hexyl)	347	8.149	8.136 (0.928)	993202	8.00000	8.446	
7 Butyl Tin (Hexyl)	347	8.485	8.484 (0.966)	1135173	8.00000	8.310	
* 8 p-Terphenyl-d14	244	8.780	8.766 (1.000)	314201	0.20000		

WJ  
10.9.12



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt12.i  
 Lab File ID: ic1006b.d  
 Lab Smp Id: TBT 4  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem1/nt12.i/20121006.b/lowbts.m  
 Misc Info:

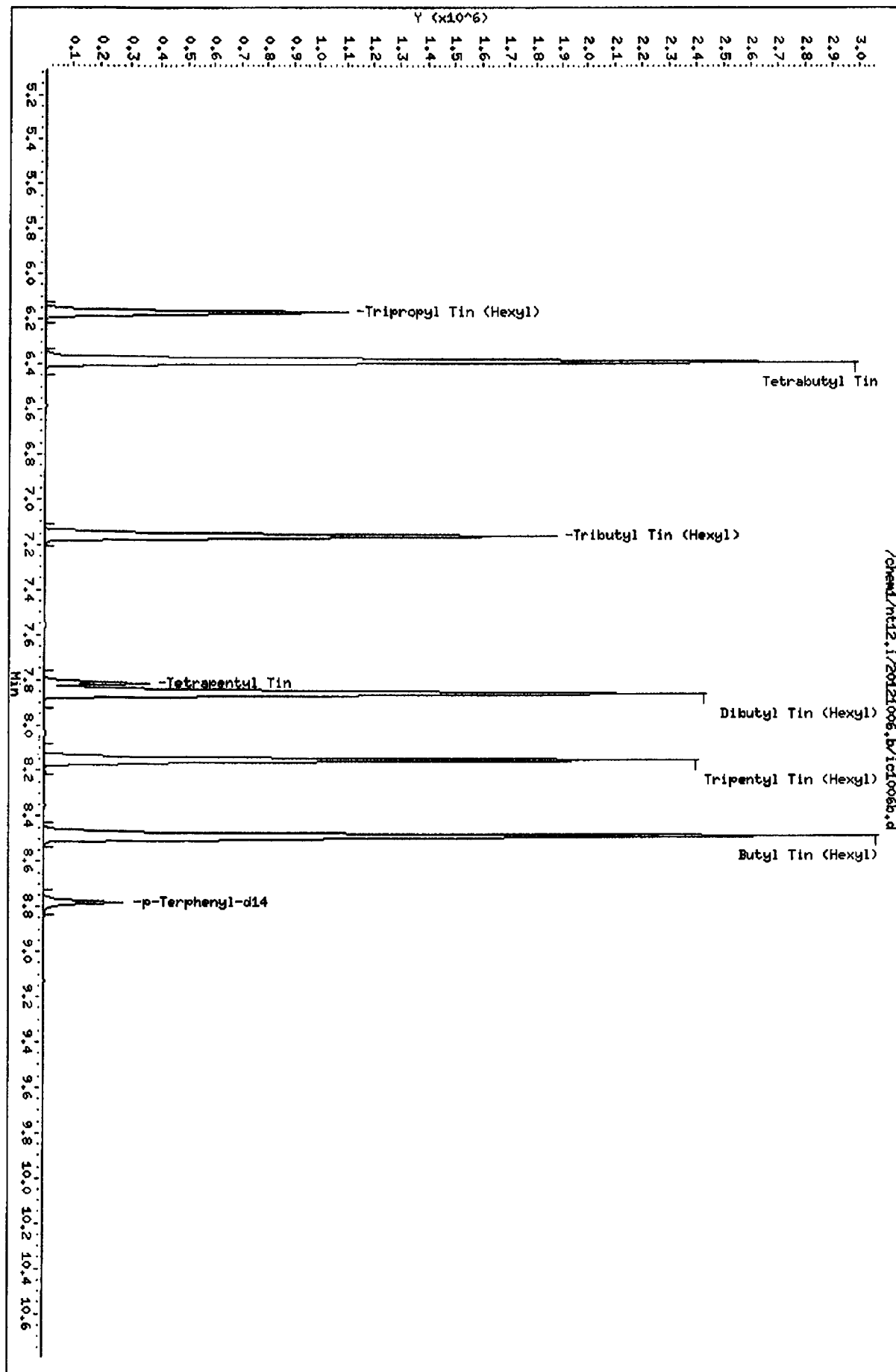
Calibration Date: 06-OCT-2012  
 Calibration Time: 14:05  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	369658	7.63
8 p-Terphenyl-d14	317005	158502	634010	314201	-0.88

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.80	7.30	8.30	7.81	0.17
8 p-Terphenyl-d14	8.77	8.27	9.27	8.78	0.15

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.



87012106

CO-ELUTION SUMMARY FOR FILE - ic1006b.d

Lab ID: TBT 4, Method: lowbts.m, Instrument: nt12.i, Date: 06-OCT-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121006.b/ic1006c.d  
Lab Smp Id: TBT .05  
Inj Date : 06-OCT-2012 14:32  
Operator : VTS  
Smp Info : TBT .05  
Misc Info :  
Comment : 2 ul Injection  
Method : /chem1/nt12.i/20121006.b/lowbts.m  
Meth Date : 06-Oct-2012 16:36 van  
Cal Date : 06-OCT-2012 14:32  
Als bottle: 4  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50

Inst ID: nt12.i  
Quant Type: ISTD  
Cal File: ic1006c.d  
Calibration Sample, Level: 1  
Compound Sublist: SED.sub

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
\$ 1 Tripropyl Tin (Hexyl)	291	6.169	6.157	(0.789)	5119	0.05000	0.04637
2 Tetrabutyl Tin	289	6.388	6.376	(0.817)	5160	0.05000	0.04501
3 Tributyl Tin (Hexyl)	319	7.159	7.159	(0.916)	4350	0.05000	0.04346
* 4 Tetrapentyl Tin	333	7.814	7.801	(1.000)	316414	2.00000	
5 Dibutyl Tin (Hexyl)	347	7.854	7.854	(0.895)	6909	0.10000	0.08948
\$ 6 Tripentyl Tin (Hexyl)	347	8.149	8.136	(0.928)	8225	0.10000	0.08016
7 Butyl Tin (Hexyl)	347	8.484	8.484	(0.966)	9066	0.10000	0.07711
* 8 p-Terphenyl-d14	244	8.779	8.766	(1.000)	301375	0.20000	

VJ  
10.9.12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt12.i	Calibration Date: 06-OCT-2012
Lab File ID: ic1006c.d	Calibration Time: 14:05
Lab Smp Id: TBT .05	
Analysis Type: SV	Level:
Quant Type: ISTD	Sample Type:
Operator: VTS	
Method File: /chem1/nt12.i/20121006.b/lowbts.m	
Misc Info:	

Test Mode: Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	316414	-7.87
8 p-Terphenyl-d14	317005	158502	634010	301375	-4.93

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.80	7.30	8.30	7.81	0.17
8 p-Terphenyl-d14	8.77	8.27	9.27	8.78	0.15

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/nt12.i/20121006.b/ic1006c.d

Date: 06-OCT-2012 14:32

Client ID:

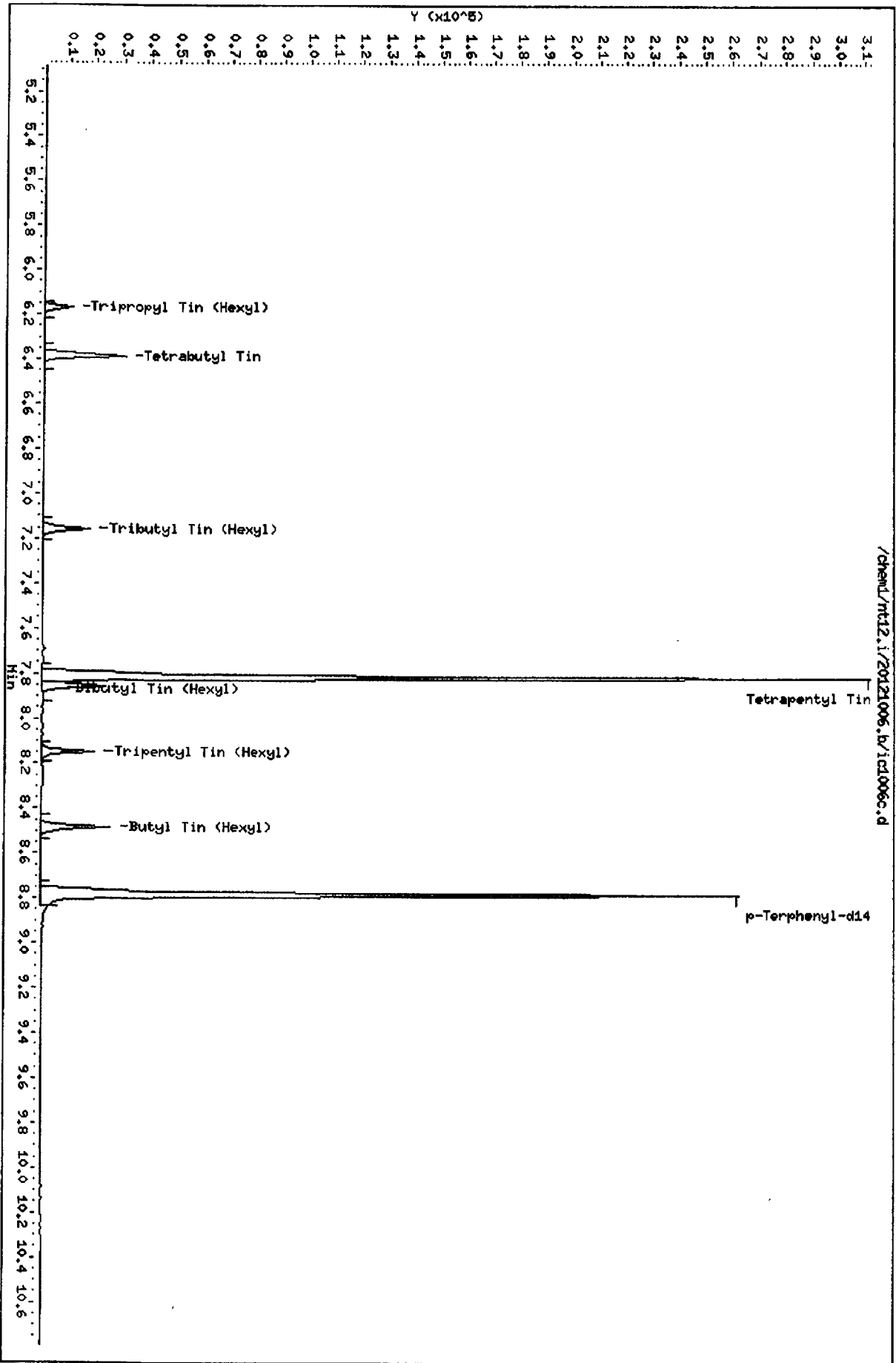
Sample Info: TBT .05

Column phase: ZB-5msi

Instrument: nt12.i

Operator: VTS

Column diameter: 0.25



0610374

CO-ELUTION SUMMARY FOR FILE - ic1006c.d

Lab ID: TBT .05, Method: lowbts.m, Instrument: nt12.i, Date: 06-OCT-2012

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121006.b/ic1006d.d  
Lab Smp Id: TBT 2  
Inj Date : 06-OCT-2012 14:46  
Operator : VTS  
Smp Info : TBT 2  
Misc Info :  
Comment : 2 ul Injection  
Method : /chem1/nt12.i/20121006.b/lowbts.m  
Meth Date : 06-Oct-2012 16:36 van  
Cal Date : 06-OCT-2012 14:46  
Als bottle: 5  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50

Inst ID: nt12.i  
Quant Type: ISTD  
Cal File: ic1006d.d  
Calibration Sample, Level: 5  
Compound Sublist: SED.sub

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
\$ 1 Tripropyl Tin (Hexyl)	291	6.169	6.157	(0.789)	251259	2.00000	2.050
2 Tetrabutyl Tin	289	6.388	6.376	(0.817)	263059	2.00000	2.062
3 Tributyl Tin (Hexyl)	319	7.159	7.159	(0.916)	238201	2.00000	2.118
* 4 Tetrapentyl Tin	333	7.814	7.801	(1.000)	348442	2.00000	
5 Dibutyl Tin (Hexyl)	347	7.854	7.854	(0.895)	338689	4.00000	4.051
\$ 6 Tripentyl Tin (Hexyl)	347	8.149	8.136	(0.928)	467708	4.00000	4.169
7 Butyl Tin (Hexyl)	347	8.484	8.484	(0.966)	539053	4.00000	4.187
* 8 p-Terphenyl-d14	244	8.779	8.766	(1.000)	324906	0.20000	

UD  
10-9-12



Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt12.i  
 Lab File ID: ic1006d.d  
 Lab Smp Id: TBT 2  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem1/nt12.i/20121006.b/lowbts.m  
 Misc Info:

Calibration Date: 06-OCT-2012  
 Calibration Time: 14:05

Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	348442	1.45
8 p-Terphenyl-d14	317005	158502	634010	324906	2.49

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.80	7.30	8.30	7.81	0.17
8 p-Terphenyl-d14	8.77	8.27	9.27	8.78	0.15

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: /chem/nt12.i/20121006.b/101006d.d

Date: 06-OCT-2012 14:46

Client ID:

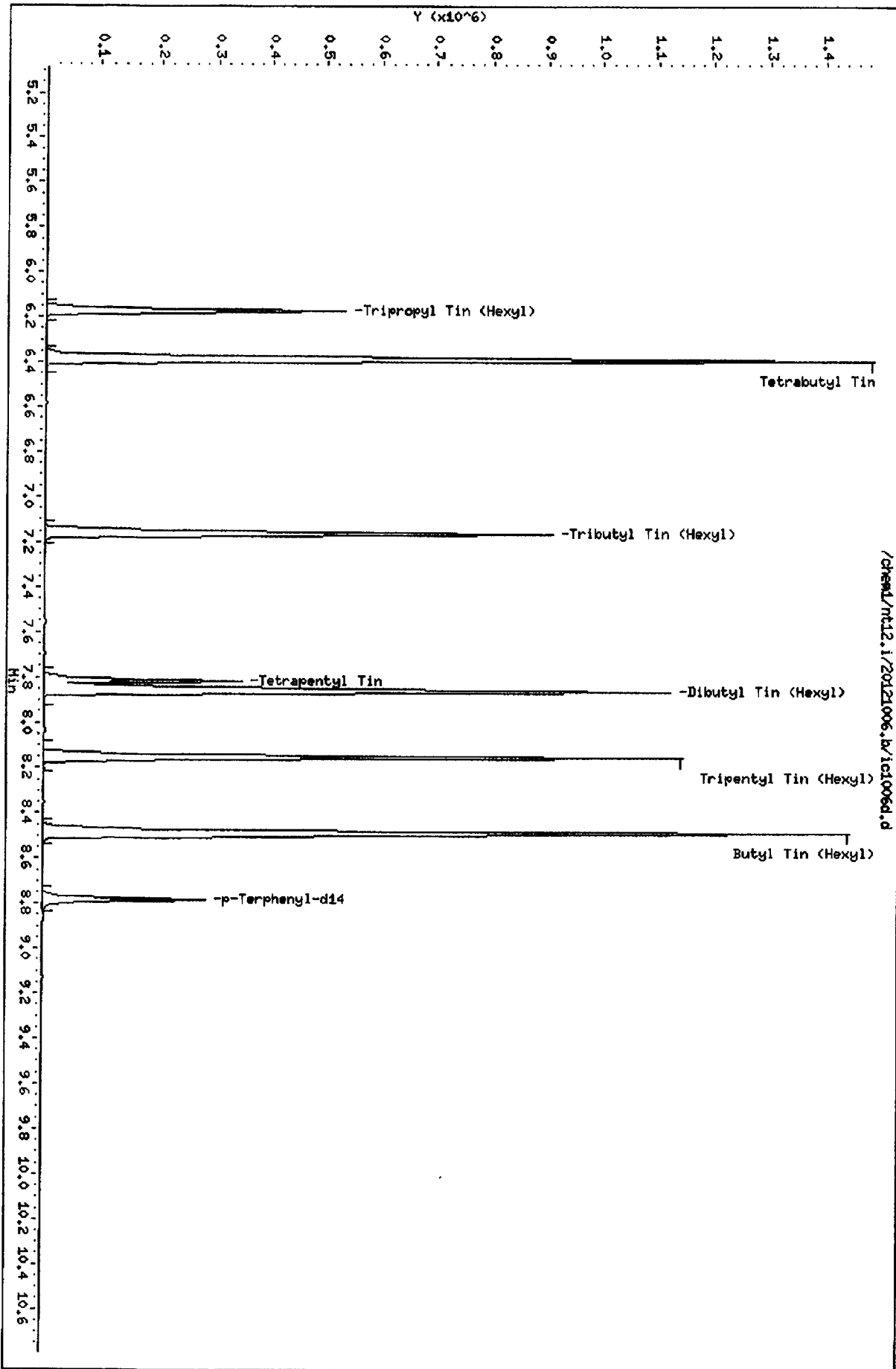
Sample Info: TBT 2

Column phase: ZB-Smsi

Instrument: nt12.i

Operator: VTS

Column diameter: 0.25



01 02 03 04 05 06 07 08 09 10 11 12

CO-ELUTION SUMMARY FOR FILE - ic1006d.d

Lab ID: TBT 2, Method: lowbts.m, Instrument: nt12.i, Date: 06-OCT-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121006.b/ic1006e.d  
Lab Smp Id: TBT .2  
Inj Date : 06-OCT-2012 15:00  
Operator : VTS  
Smp Info : TBT .2  
Misc Info :  
Comment : 2 ul Injection  
Method : /chem1/nt12.i/20121006.b/lowbts.m  
Meth Date : 06-Oct-2012 16:36 van  
Cal Date : 06-OCT-2012 15:00  
Als bottle: 6  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50

Inst ID: nt12.i  
Quant Type: ISTD  
Cal File: ic1006e.d  
Calibration Sample, Level: 2  
Compound Sublist: SED.sub

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
*****	====	--	*****	*****	*****	*****	*****
\$ 1 Tripropyl Tin (Hexyl)	291	6.169	6.157	(0.789)	21010	0.20000	0.1933
2 Tetrabutyl Tin	289	6.388	6.376	(0.817)	21698	0.20000	0.1921
3 Tributyl Tin (Hexyl)	319	7.159	7.159	(0.916)	18435	0.20000	0.1865
* 4 Tetrapentyl Tin	333	7.814	7.801	(1.000)	311467	2.00000	
5 Dibutyl Tin (Hexyl)	347	7.854	7.854	(0.895)	28809	0.40000	0.3834
\$ 6 Tripentyl Tin (Hexyl)	347	8.149	8.136	(0.928)	35641	0.40000	0.3588
7 Butyl Tin (Hexyl)	347	8.485	8.484	(0.966)	39381	0.40000	0.3478
* 8 p-Terphenyl-d14	244	8.780	8.766	(1.000)	295038	0.20000	

LD  
10.9.12

Data File: /chem/nt12.i/20121006.b/101006e.d

Date: 06-OCT-2012 15:00

Client ID:

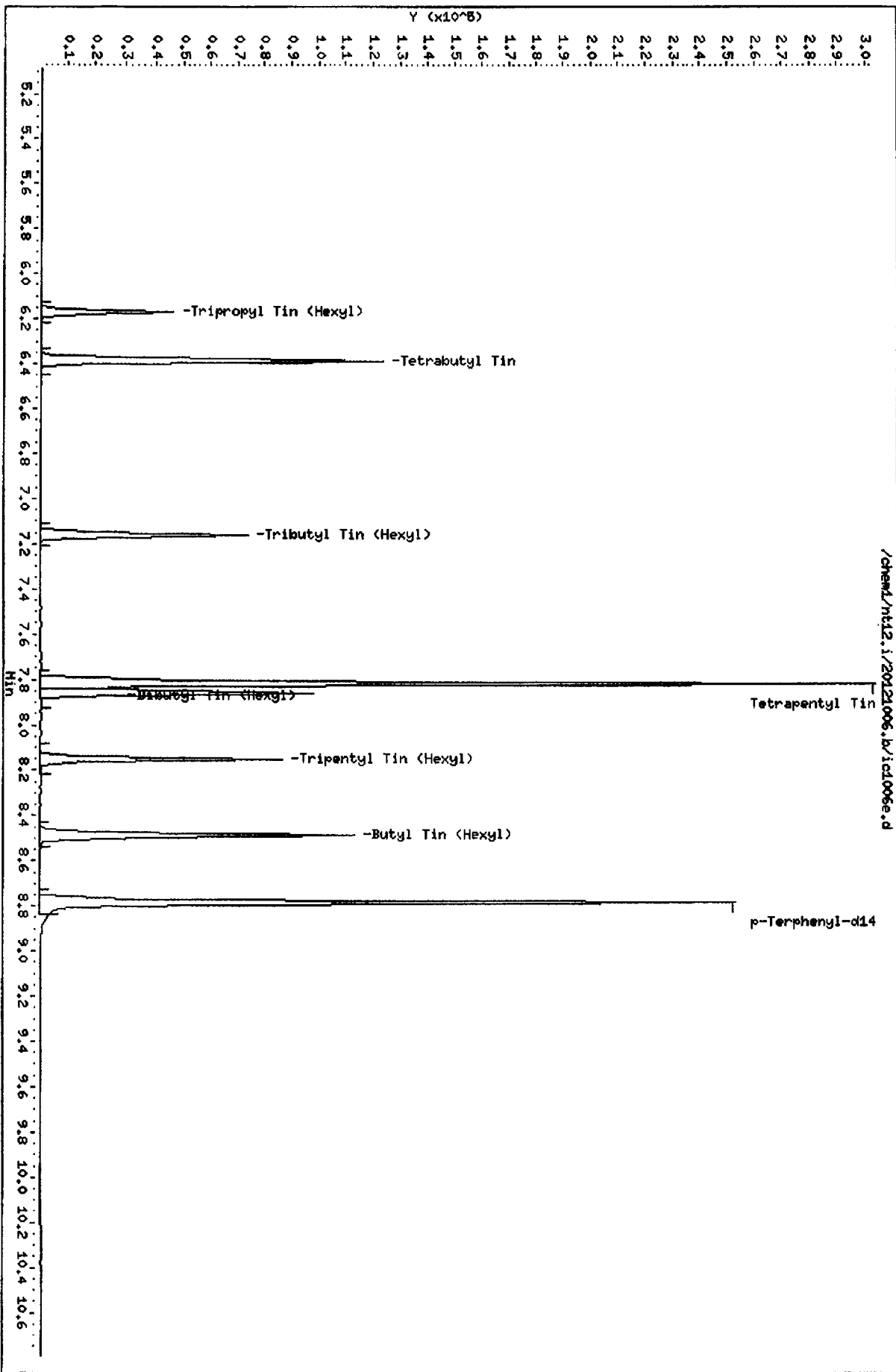
Sample Info: TBT .2

Column Phase: ZB-Smsi

Instrument: nt12.i

Operator: VTS

Column diameter: 0.25



101006e.d

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt12.i  
 Lab File ID: ic1006e.d  
 Lab Smp Id: TBT .2  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem1/nt12.i/20121006.b/lowbts.m  
 Misc Info:

Calibration Date: 06-OCT-2012  
 Calibration Time: 14:05  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	311467	-9.31
8 p-Terphenyl-d14	317005	158502	634010	295038	-6.93

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.80	7.30	8.30	7.81	0.17
8 p-Terphenyl-d14	8.77	8.27	9.27	8.78	0.15

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.

CO-ELUTION SUMMARY FOR FILE - ic1006e.d

Lab ID: TBT .2, Method: lowbts.m, Instrument: nt12.i, Date: 06-OCT-2012

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121006.b/ic1006f.d  
Lab Smp Id: TBT .5  
Inj Date : 06-OCT-2012 15:14  
Operator : VTS  
Smp Info : TBT .5  
Misc Info :  
Comment : 2 ul Injection  
Method : /chem1/nt12.i/20121006.b/lowbts.m  
Meth Date : 06-Oct-2012 16:36 van  
Cal Date : 06-OCT-2012 15:14  
Als bottle: 7  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50

Inst ID: nt12.i  
Quant Type: ISTD  
Cal File: ic1006f.d  
Calibration Sample, Level: 3  
Compound Sublist: SED.sub

Compounds	QUANT SIG		AMOUNTS				
	MASS	RT	EXP RT	RSL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
\$ 1 Tripropyl Tin (Hexyl)	291	6.169	6.157	(0.789)	59105	0.50000	0.5084
2 Tetrabutyl Tin	289	6.388	6.376	(0.817)	62167	0.50000	0.5135
3 Tributyl Tin (Hexyl)	319	7.159	7.159	(0.916)	55394	0.50000	0.5211
* 4 Tetrapentyl Tin	333	7.814	7.801	(1.000)	332130	2.00000	
5 Dibutyl Tin (Hexyl)	347	7.854	7.854	(0.895)	81476	1.00000	1.036
\$ 6 Tripentyl Tin (Hexyl)	347	8.149	8.136	(0.928)	109905	1.00000	1.053
7 Butyl Tin (Hexyl)	347	8.485	8.484	(0.966)	124102	1.00000	1.045
* 8 p-Terphenyl-d14	244	8.780	8.766	(1.000)	306646	0.20000	

UN  
10A-12



Analytical Resources, Inc.  
 INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt12.i  
 Lab File ID: ic1006f.d  
 Lab Smp Id: TBT .5  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem1/nt12.i/20121006.b/lowbts.m  
 Misc Info:

Calibration Date: 06-OCT-2012  
 Calibration Time: 14:05  
 Level:  
 Sample Type:

Test Mode:  
 Use Initial Calibration Level 4.

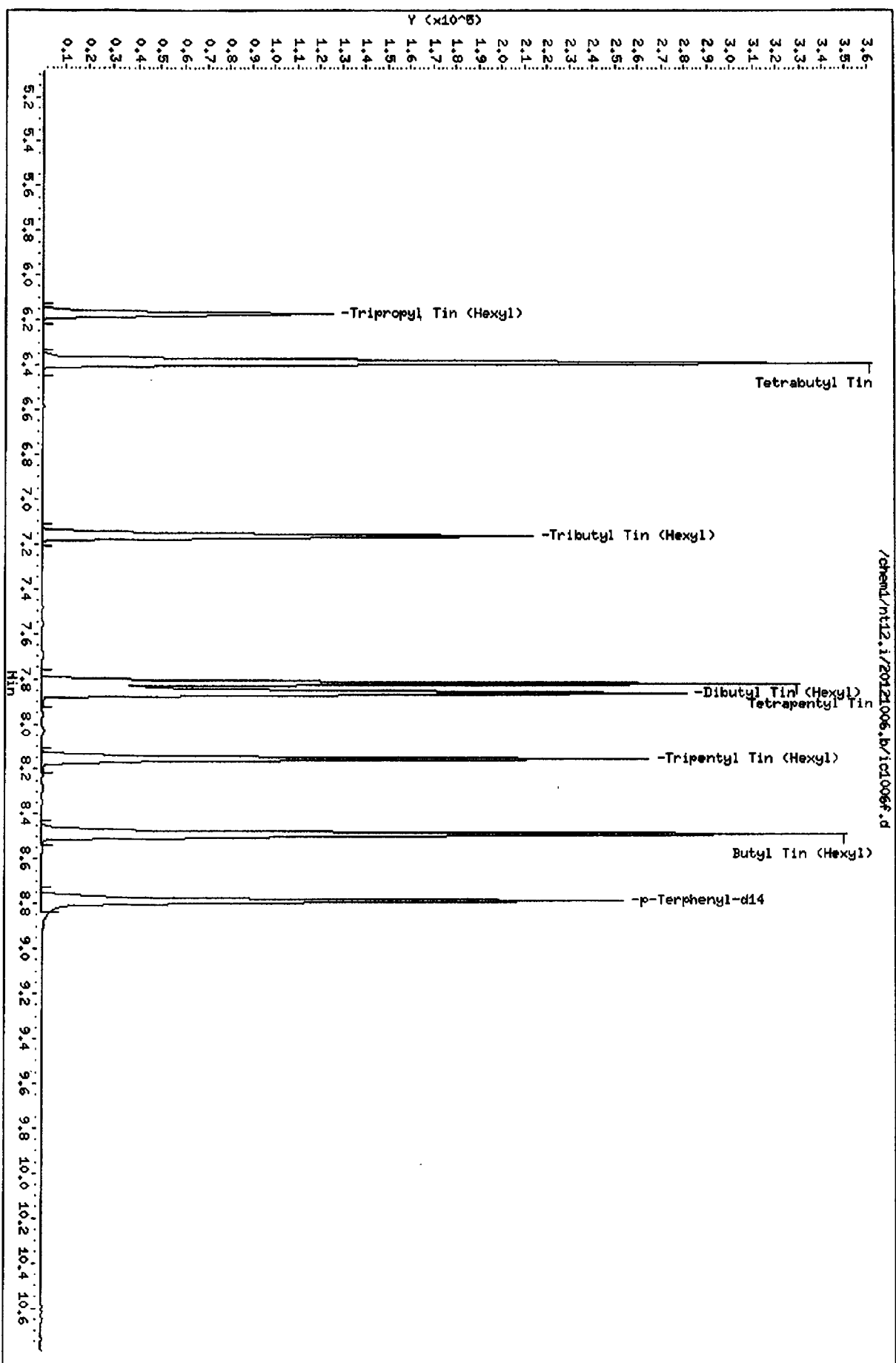
COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	332130	-3.30
8 p-Terphenyl-d14	317005	158502	634010	306646	-3.27

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.80	7.30	8.30	7.81	0.17
8 p-Terphenyl-d14	8.77	8.27	9.27	8.78	0.16

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: /chem/nt12.i/20121006.b/vic1006f.d  
 Date: 06-OCT-2012 15:14  
 Client ID:  
 Sample Info: TBT .5  
 Column phase: ZB-Smsi

Instrument: nt12.i  
 Operator: VTS  
 Column diameter: 0.25



06 OCT 2012 15:14

CO-ELUTION SUMMARY FOR FILE - ic1006f.d

Lab ID: TBT .5, Method: lowbts.m, Instrument: nt12.i, Date: 06-OCT-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

**Butyl Tin Raw Data  
Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: VR58**



**GC/MS SVOA Analyst Notes / Corrective Action Log**

ARI Project ID: VR58 Client ID: Anchor

ARI SOP: **801S**(SIM-PNA) 802S(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Parameter(s): TBT

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 10.6.12 Analysis Start Date: 11.14.12

DFTPP Tune Meets Criteria?	<u>YES</u> / NO	Internal Standard Meets Criteria?	<u>YES</u> / NO
DDT Breakdown <20%?	<u>YES</u> / NO / NA	Method Blank In Control?	<u>YES</u> / NO
Peak Tailing Factor ≤2?	<u>YES</u> / NO / NA	<u>LCS</u> / LCSD Recovery In Control?	<u>YES</u> / NO
ICal acceptable?	<u>YES</u> / NO	CCal acceptable?	<u>YES</u> / NO
Q flag applied?	YES / <u>NO</u>	Q flag applied?	YES / <u>NO</u>
Surrogate Recovery in Control?	<u>YES</u> / NO	Special Analysis Criteria Met?	<u>YES</u> / NO / NA
Manual Integrations for ICal?	YES / <u>NO</u>	Manual Integrations for Samples?	<u>Yes</u> / NO

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

- Batched with VR 38

**Additional Details on Reverse: Yes / No**

Analyst: WJ Date: 11.15.12

Reviewer: A Date: 11/15/12

Analytical Resources Inc.: Organics Instrument Log

NT-12 Serial No.:GC=US00032558, MS= US01180091

Date: 11.14.12 Analysis: TBT5 Analyst: VD  
GC Program: BTS Column No: 230930 Column Type: ZB.5ms;  
Instrument Tune (.U or .CT.): 120927.U EM Voltage: 1824  
Calibration File: df1114 Curve Date: 10.6.12 Injection Vol.: 2.0

1961-1 1960-2 LCS/ICV

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt

Time	Filename	LabID	ClientID	DF					
1	1138	df1114.d	DFTPP 25		1	NO ISTDS FOUND			
2	1151	cc1114.d	TBT 1		1	7.81 348078	8.78	335859	
3	1220	vo93mb.d	VO93MBS1	VO93MBS1	1	7.79 339443	8.75	318990	
4	1234	vo93sb.d	VO93LCSS1	VO93LCSS1	1	7.76 342490	8.73	316679	
5	1248	vo93am.d	VO93AM	SPE073-30G	1	7.77 340531	8.74	320824	
6	1302	vs00mb.d	VS00MBW1	VS00MBW1	1	7.79 352085	8.75	336594	
7	1316	vs00sb.d	VS00LCSW1	VS00LCSW1	1	7.76 318230	8.73	249648	
8	1330	vs00sbd.d	VS00LCSW1	VS00LCSW1	1	7.79 347564	8.75	328427	
9	1344	vs00a.d	VS00A	MW107-201211	1	7.79 362738	8.75	337631	
10	1358	vs00b.d	VS00B	MW4-20121106	1	7.76 350441	8.73	326423	
11	1411	vs00c.d	VS00C	MW104-201211	1	7.77 363474	8.74	341661	
12	1425	vs00d.d	VS00D	MW105-201211	1	7.79 366695	8.75	339119	
13	1439	vs01a.d	VS01A	MW103-201211	1	7.80 366525	8.77	336596	
14	1453	vs01b.d	VS01B	MW5-20121105	1	7.80 364708	8.77	337215	
15	1507	vs01c.d	VS01C	MW101-201211	1	7.80 373141	8.77	343306	
16	1521	vs01d.d	VS01D	MW102-201211	1	7.80 376429	8.77	344319	
17	1534	vs01e.d	VS01E	MW106-201211	1	7.80 363875	8.77	341665	
18	1548	vr38mb.d	VR38MBS1	VR38MBS1	1	7.80 372403	8.77	344209	
19	1602	vr38sb.d	VR38LCSS1	VR38LCSS1	1	7.80 363079	8.77	335464	
20	1616	vr38j.d	VR38J	HT-06-S-E-12	1	7.80 367009	8.77	348335	
21	1630	vr38k.d	VR38K	HT-07-S-E-12	1	7.80 364472	8.77	340114	
22	1643	vr38kms.d	VR38KMS	HT-07-S-E-12	1	7.80 377212	8.77	349164	
23	1657	vr38kmsd.d	VR38KMSD	HT-07-S-E-12	1	7.80 384249	8.77	348526	
24	1711	vr58a.d	VR58A	SG-10-S-E-12	1	7.80 373082	8.77	352219	
25	1725	vr58b.d	VR58B	SG-11-S-E-12	1	7.80 390935	8.78	373865	
26	1739	vr58c.d	VR58C	SG-12-S-E-12	1	7.80 397853	8.78	378443	
27	1752	vr58d.d	VR58D	SG-13-S-E-12	1	7.80 404376	8.78	410881	
28	1806	vr58e.d	VR58E	SG-13-S-E-12	1	7.80 396662	8.78	389934	
29	1820	vr58g.d	VR58G	SG-15-S-E-12	1	7.80 390399	8.78	371267	

Every line must contain  
Start a new page for each

VD 11.15.12  
0058 01308

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt12.i/20121114.b

ARI Job No.: DFTP Method: DF8270.m Instrument: nt12.i Date: 14-NOV-2012

Time Filename LabID ClientId DF Manually Integrated Compounds

1138 df11114.d DF8270 25 1 NO MANUAL INTEGRATION

1151 cc11114.d TBT 1 1 NO MANUAL INTEGRATION

1616 vt38j.d VR38J HT-06-S-E 1 NO MANUAL INTEGRATION

1630 vt38k.d VR38K HT-07-S-E 1 NO MANUAL INTEGRATION

1643 vt38kms.d VR38KMS HT-07-S-E 1 NO MANUAL INTEGRATION

1657 vt38kmsd.d VR38KMSD HT-07-S-E 1 NO MANUAL INTEGRATION

1548 vt38mb.d VR38MBS1 VR38MBS1 1 NO MANUAL INTEGRATION

1602 vt38sb.d VR38LCSS1 VR38LCSS1 1 NO MANUAL INTEGRATION

1711 vt58a.d VR58A SG-10-S-E 1 NO MANUAL INTEGRATION

1725 vt58b.d VR58B SG-11-S-E 1 NO MANUAL INTEGRATION

1739 vt58c.d VR58C SG-12-S-E 1 NO MANUAL INTEGRATION

1752 vt58d.d VR58D SG-13-S-E 1 Butyl Tin (Hexyl),

1806 vt58e.d VR58E SG-13-S-E 1 Butyl Tin (Hexyl),

1820 vt58g.d VR58G SG-15-S-E 1 NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt12.i/20121114.b

Instrument: nt12.i Date: 14-NOV-2012 Method: lowbts.m

INITIAL CAL: 06-OCT-2012

Compound	%RSD or R <sup>2</sup>
----------	------------------------

-----  
NO Q-FLAGS  
-----

CONTINUING CAL: 14-NOV-2012

Compound	%D
----------	----

-----  
NO Q-FLAGS  
-----



Date : 14-NOV-2012 11:38

Client ID:

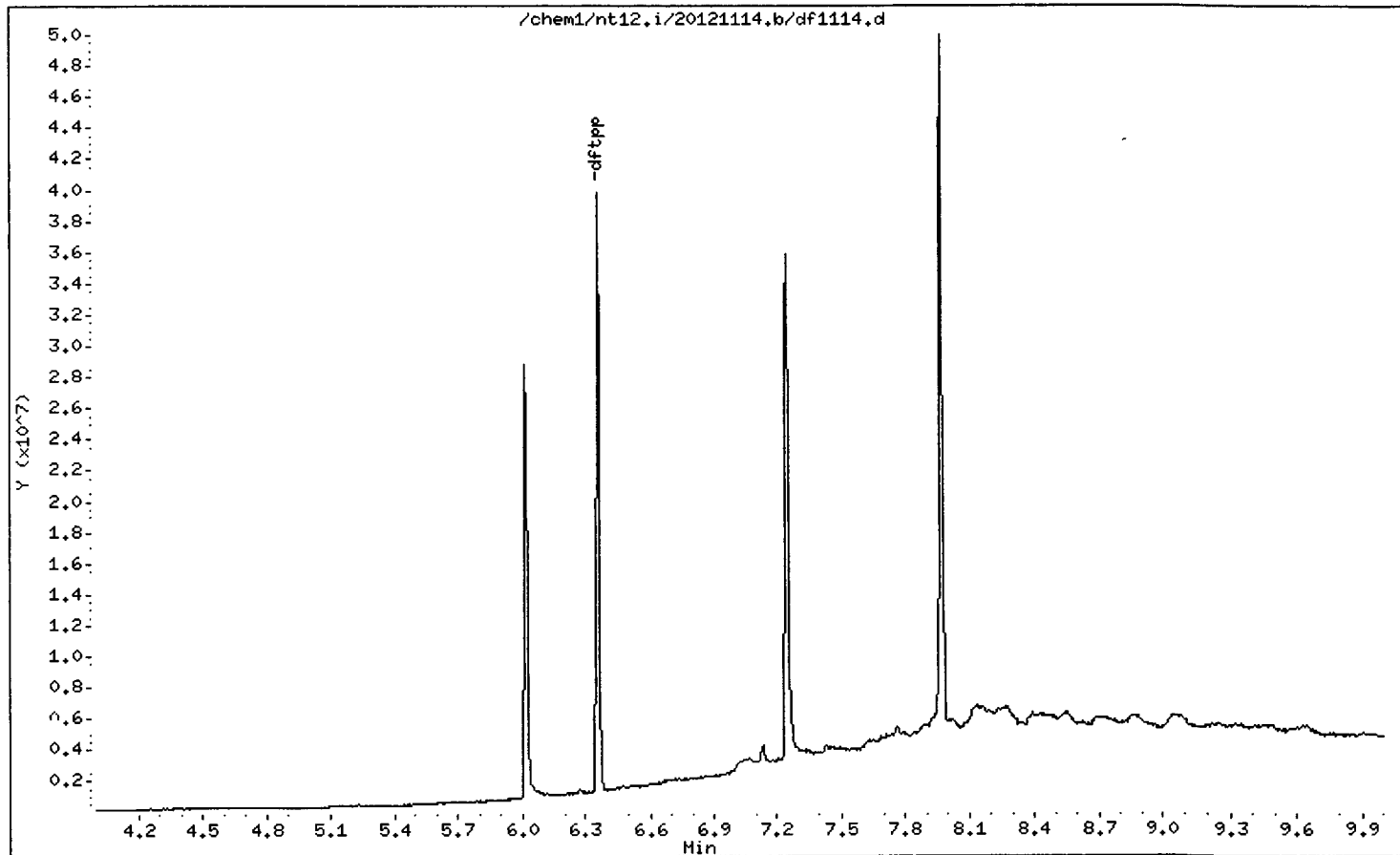
Instrument: nt12.i

Sample Info: DFTPP 25

Operator: VTS

Column phase: ZB-5ms1

Column diameter: 0.25



Date : 14-NOV-2012 11:38

Client ID:

Instrument: nt12.1

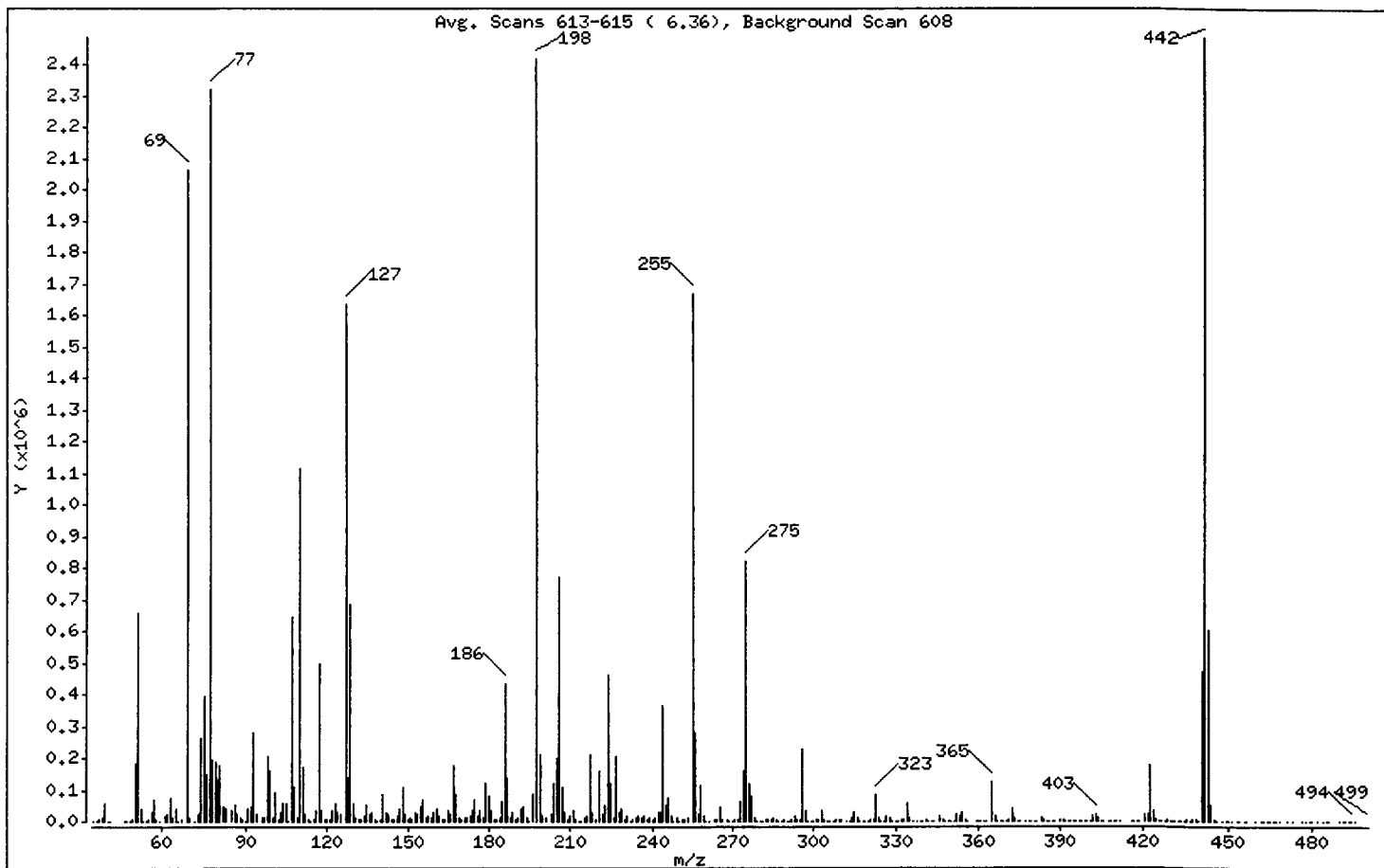
Sample Info: DFTPP 25

Operator: VTS

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	27.64
68	Less than 2.00% of mass 69	0.00 ( 0.00)
69	Mass 69 relative abundance	88.88
70	Less than 2.00% of mass 69	0.53 ( 0.59)
127	10.00 - 80.00% of mass 198	67.45
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	8.52
275	10.00 - 60.00% of mass 198	33.09
365	Greater than 1.00% of mass 198	5.22
441	0.01 - 24.00% of mass 442	19.44 ( 18.34)
442	50.00 - 200.00% of mass 198	106.01
443	15.00 - 24.00% of mass 442	24.76 ( 23.36)

Date : 14-NOV-2012 11:38

Client ID:

Instrument: nt12.i

Sample Info: DF1PP 25

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1114.d

Spectrum: Avg. Scans 613-615 ( 6.36), Background Scan 608

Location of Maximum: 442.00

Number of points: 418

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	236	149.00	24080	258.00	113032	370.00	2587
36.00	165	150.00	4214	259.00	17752	371.00	7529
37.00	5592	151.00	9940	260.00	1006	372.00	42120
38.00	13713	152.00	5084	261.00	2817	373.00	12117
39.00	55760	153.00	30496	263.00	3284	374.00	396
40.00	2192	154.00	20688	264.00	3387	375.00	676
41.00	938	155.00	46088	265.00	47312	377.00	1171
45.00	941	156.00	69464	266.00	6777	378.00	970
46.00	416	157.00	11916	268.00	3669	379.00	85
47.00	128	158.00	15414	269.00	610	380.00	226
48.00	508	159.00	13174	270.00	1235	381.00	509
49.00	5052	160.00	27792	271.00	6590	383.00	9396
50.00	183360	161.00	37872	272.00	7014	384.00	4076
51.00	657728	162.00	14409	273.00	60536	385.00	1675
52.00	42024	163.00	3005	274.00	157888	386.00	567
53.00	1474	164.00	5581	275.00	823104	387.00	104
54.00	1169	165.00	35504	276.00	118272	388.00	295
55.00	6482	166.00	25088	277.00	79104	390.00	6927
56.00	29504	167.00	177600	278.00	11242	391.00	3816
57.00	69928	168.00	86816	279.00	2441	392.00	2661
58.00	3808	169.00	11439	280.00	414	393.00	1113
59.00	1330	170.00	6333	281.00	1274	394.00	122
61.00	19424	171.00	8978	282.00	2878	395.00	337
62.00	25112	172.00	12760	283.00	7732	396.00	524
63.00	71560	173.00	19216	284.00	5553	397.00	227
64.00	11837	174.00	33640	285.00	12273	398.00	201
65.00	39184	175.00	66944	286.00	3029	399.00	639
66.00	1200	176.00	18624	287.00	536	400.00	120
67.00	5008	177.00	36384	288.00	1123	401.00	2397
69.00	2063872	178.00	8894	289.00	2902	402.00	17592
70.00	13728	179.00	120432	290.00	1979	403.00	23864
72.00	1257	180.00	79776	291.00	2118	404.00	8627
73.00	20552	181.00	34456	292.00	3225	405.00	1497
74.00	264128	182.00	6372	293.00	19392	406.00	100
75.00	397440	183.00	4013	294.00	3681	408.00	797

Date : 14-NOV-2012 11:38

Client ID:

Instrument: nt12.i

Sample Info: DFTPP 25

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1114.d

Spectrum: Avg. Scans 613-615 ( 6.36), Background Scan 608

Location of Maximum: 442.00

Number of points: 418

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	147904	184.00	10919	295.00	3845	409.00	650
77.00	2322432	185.00	60888	296.00	231232	410.00	1103
78.00	193920	186.00	437184	297.00	35296	411.00	692
79.00	188992	187.00	137152	298.00	2604	412.00	369
80.00	134016	188.00	13920	299.00	1193	416.00	83
81.00	177152	189.00	28328	300.00	986	417.00	1050
82.00	46744	190.00	4564	301.00	2921	418.00	271
83.00	37312	191.00	12633	302.00	4255	419.00	1536
85.00	33216	192.00	39976	303.00	31976	421.00	21672
86.00	51024	193.00	45856	304.00	5973	422.00	24472
87.00	21776	194.00	10257	305.00	1248	423.00	175104
88.00	9128	195.00	1139	306.00	25	424.00	36904
89.00	3903	196.00	87992	307.00	483	425.00	3278
90.00	205	198.00	2418688	308.00	3101	426.00	664
91.00	38856	199.00	210688	309.00	2964	427.00	1664
92.00	44928	200.00	16250	310.00	3175	428.00	942
93.00	282816	201.00	13277	312.00	1030	429.00	3487
94.00	21424	203.00	22344	313.00	1544	430.00	140
96.00	12146	204.00	118640	314.00	11428	431.00	782
97.00	11154	205.00	200448	315.00	26528	432.00	1685
98.00	208192	206.00	770560	316.00	11728	433.00	913
99.00	158400	207.00	106256	317.00	2286	434.00	1270
100.00	14020	208.00	28416	318.00	728	435.00	2534
101.00	90304	209.00	8378	319.00	1937	436.00	4023
102.00	5361	210.00	15213	320.00	1061	437.00	904
103.00	29792	211.00	32328	321.00	7025	438.00	6526
104.00	57456	212.00	3823	322.00	3278	439.00	6711
105.00	57608	213.00	1669	323.00	87192	440.00	1853
106.00	1503	214.00	651	324.00	13532	441.00	472896
107.00	645888	215.00	10849	325.00	2026	442.00	2488320
108.00	108824	216.00	16944	326.00	2846	443.00	606144
109.00	13152	217.00	211520	327.00	18056	444.00	54040
110.00	1116672	218.00	27576	328.00	10171	445.00	3371
111.00	171392	219.00	4737	329.00	951	446.00	396
112.00	22040	221.00	159616	330.00	1045	448.00	136

Date : 14-NOV-2012 11:38

Client ID:

Instrument: nt12.1

Sample Info: DFTPP 25

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1114.d

Spectrum: Avg. Scans 613-615 ( 6.36), Background Scan 608

Location of Maximum: 442.00

Number of points: 418

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	6911	222.00	24056	331.00	1161	449.00	381
114.00	1718	223.00	53896	332.00	6172	450.00	14
115.00	3543	224.00	461888	333.00	7931	451.00	626
116.00	32552	225.00	118928	334.00	54752	453.00	309
117.00	495488	226.00	13503	335.00	13126	454.00	261
118.00	32968	227.00	204160	336.00	2450	456.00	830
119.00	5731	228.00	30896	338.00	144	457.00	383
120.00	7479	229.00	39280	339.00	1448	460.00	278
121.00	4781	230.00	5609	340.00	1072	462.00	106
122.00	36904	231.00	18576	341.00	8191	463.00	357
123.00	56112	232.00	2767	342.00	2698	464.00	57
124.00	26224	233.00	4832	343.00	1701	465.00	467
125.00	20824	234.00	11367	344.00	472	466.00	163
127.00	1634816	235.00	18512	346.00	19064	467.00	90
128.00	134848	236.00	11200	347.00	3803	468.00	250
129.00	688960	237.00	17024	348.00	788	471.00	81
130.00	58768	238.00	3110	349.00	152	473.00	287
131.00	12130	239.00	9891	350.00	981	476.00	303
132.00	6277	240.00	6678	351.00	1551	478.00	289
133.00	3360	241.00	12247	352.00	23368	479.00	479
134.00	18800	242.00	27112	353.00	15385	480.00	56
135.00	53504	243.00	27712	354.00	26352	482.00	385
136.00	24720	244.00	363392	355.00	5478	484.00	313
137.00	26512	245.00	49632	356.00	838	485.00	373
138.00	8098	246.00	77088	358.00	565	486.00	487
139.00	1606	247.00	15198	359.00	1801	490.00	192
140.00	7766	248.00	2425	360.00	845	491.00	83
141.00	88232	249.00	13033	361.00	2052	492.00	123
142.00	28592	250.00	778	362.00	571	493.00	109
143.00	20304	251.00	3960	363.00	1397	494.00	508
144.00	6388	252.00	3772	365.00	126440	495.00	263
145.00	3946	253.00	12595	366.00	19576	497.00	96
146.00	14557	255.00	1672192	367.00	1297	499.00	311
147.00	41944	256.00	279424	368.00	105		
148.00	110072	257.00	22368	369.00	1314		

Data File: /chem1/nt12.1/20121114.b/df1114.d

Page 6

Date : 14-NOV-2012 11:38

Client ID:

Instrument: nt12.i

Sample Info: DFTPP 25

Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df1114.d

Spectrum: Avg. Scans 613-615 ( 6.36), Background Scan 608

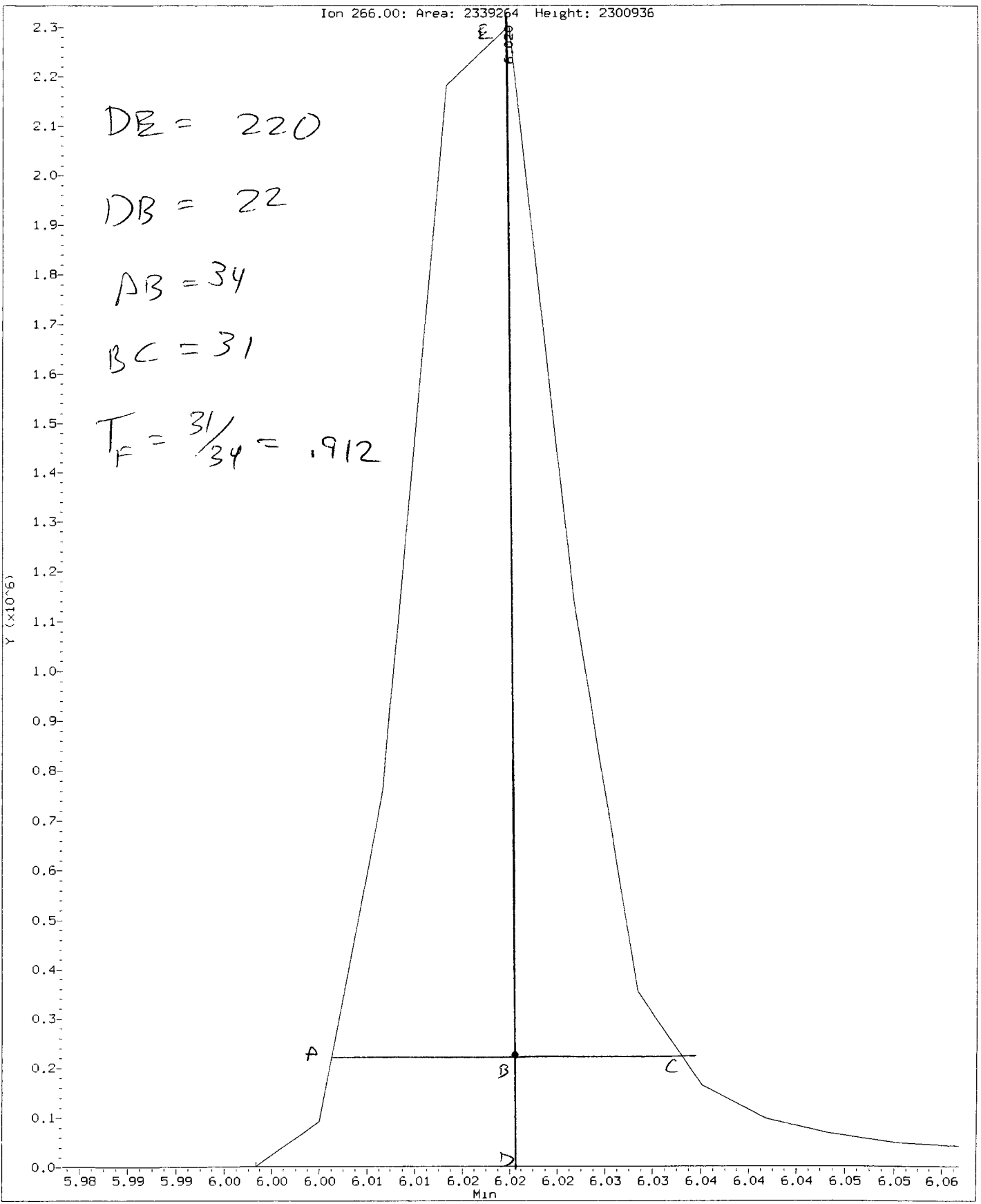
Location of Maximum: 442.00

Number of points: 418

m/z	Y	m/z	Y	m/z	Y	m/z	Y
+-----+-----+-----+-----+							

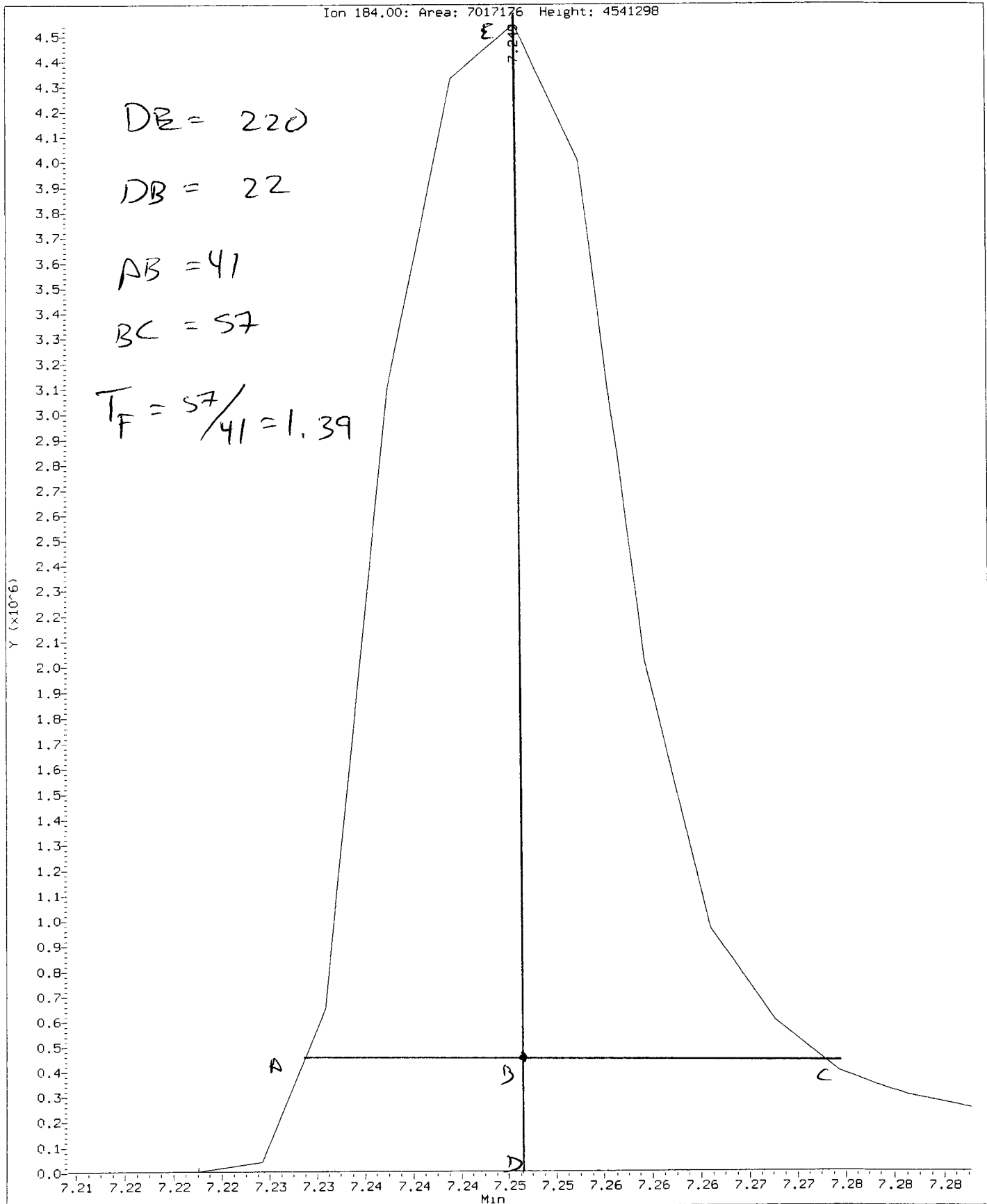
Data File: /chem1/nt12.1/20121114.b/ddt.b/df1114.d  
Injection Date: 14-NOV-2012 11:38  
Instrument: nt12.1  
Client Sample ID:

Compound: Pentachlorophenol  
CAS Number: 87-86-5



Data File: /chem1/nt12.1/20121114.b/ddt.b/df1114.d  
Injection Date: 14-NOV-2012 11:38  
Instrument: nt12.1  
Client Sample ID:

Compound: Benzidine  
CAS Number:





Analytical Resources Inc.  
ABN by sw846 8270C  
DDT Breakdown Report

Data file: /chem1/nt12.i/20121114.b/ddt.b/df1114.d      ARI ID: DFTPP 25  
Method: /chem1/nt12.i/20121114.b/ddt.b/sw846ddt.m      Misc:  
Analysis Date: 14-NOV-2012 11:38      Instrument: nt12.i

COMPOUND	RT	AREA
Pentachlorophenol	6.020	2339264
Benzidine	7.249	7017176
4,4'-DDE	7.430	33354
4,4'-DDD	7.762	66779
4,4'-DDT	7.970	4740940

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

$$\text{DDT Percent Breakdown} = \frac{(33354 + 66779) * 100}{(33354 + 66779 + 4740940)}$$

$$\text{DDT Percent Breakdown} = 2.1 \%$$

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121114.b/cc1114.d  
Lab Smp Id: TBT 1  
Inj Date : 14-NOV-2012 11:51  
Operator : VTS  
Smp Info : TBT 1  
Misc Info :  
Comment : 2 ul Injection  
Method : /chem1/nt12.i/20121114.b/lowbts.m  
Meth Date : 14-Nov-2012 12:24 van  
Cal Date : 06-OCT-2012 15:14  
Als bottle: 3  
Dil Factor: 1.00000  
Integrator: HP RTE  
Target Version: 3.50  
Processing Host: cserv3

Inst ID: nt12.i  
Quant Type: ISTD  
Cal File: ic1006f.d  
Continuing Calibration Sample  
Compound Sublist: SED.sub

Compounds	QUANT SIG				AMOUNTS		
	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ng/mL)	ON-COL (ng/mL)
=====	=====	==	=====	=====	=====	=====	=====
\$ 1 Tripropyl Tin (Hexyl)	291	6.169	6.169	(0.789)	131507	1.00000	1.079
2 Tetrabutyl Tin	289	6.388	6.388	(0.817)	135954	1.00000	1.072
3 Tributyl Tin (Hexyl)	319	7.159	7.159	(0.916)	128972	1.00000	1.158
* 4 Tetrapentyl Tin	333	7.814	7.814	(1.000)	348078	2.00000	
5 Dibutyl Tin (Hexyl)	347	7.854	7.854	(0.895)	169481	2.00000	1.967
\$ 6 Tripentyl Tin (Hexyl)	347	8.149	8.149	(0.928)	235079	2.00000	2.057
7 Butyl Tin (Hexyl)	347	8.484	8.484	(0.966)	272976	2.00000	2.099
* 8 p-Terphenyl-d14	244	8.779	8.779	(1.000)	335859	0.20000	

JD  
11-14-12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt12.i  
Lab File ID: cc1114.d  
Lab Smp Id: TBT 1  
Analysis Type: SV  
Quant Type: ISTD  
Operator: VTS  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info:

Calibration Date: 14-NOV-2012  
Calibration Time: 11:51  
Level:  
Sample Type:

Test Mode:  
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	348078	1.35
8 p-Terphenyl-d14	317005	158502	634010	335859	5.95

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.81	7.31	8.31	7.81	0.00
8 p-Terphenyl-d14	8.78	8.28	9.28	8.78	0.00

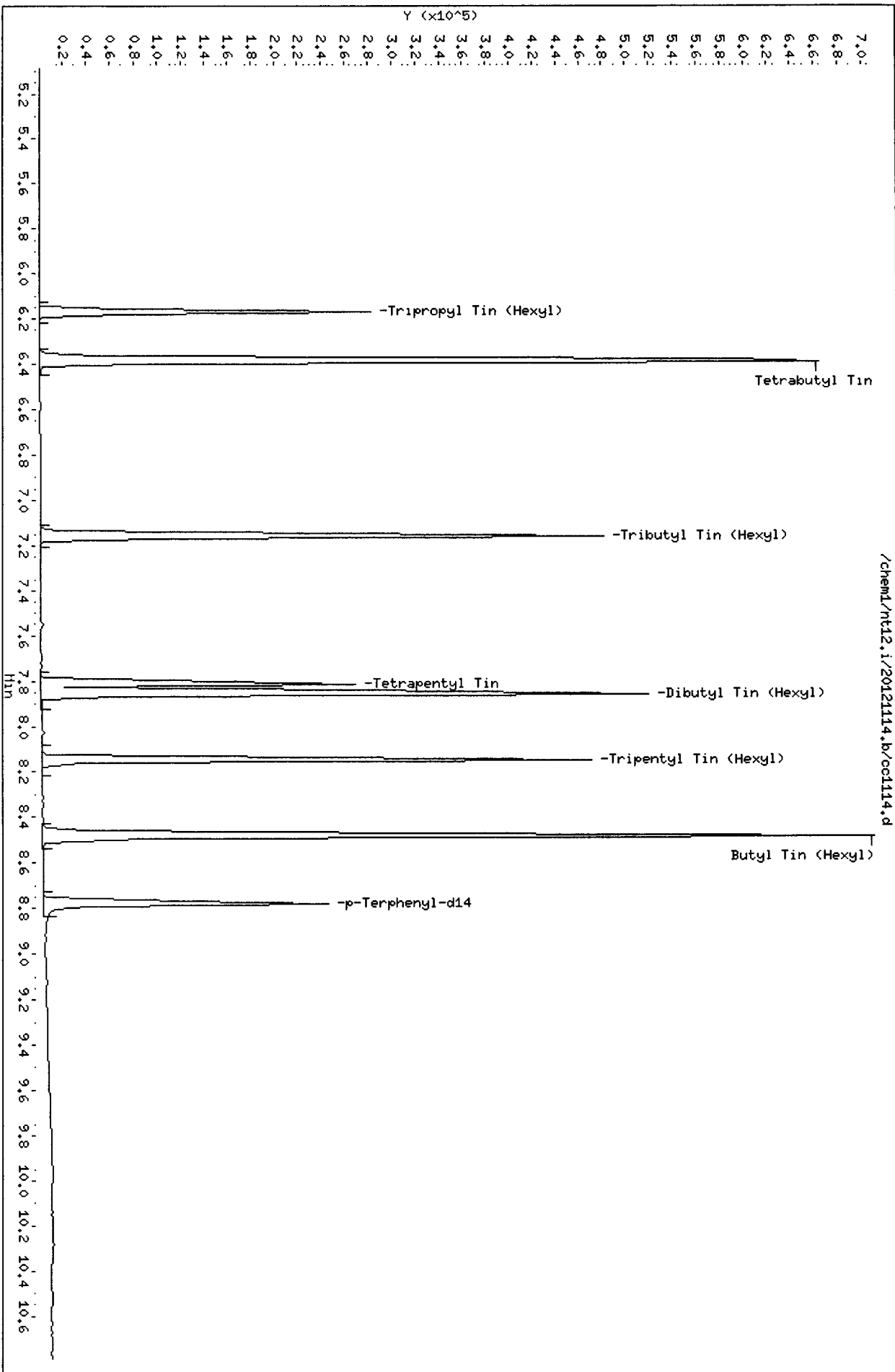
AREA UPPER LIMIT = +100% of internal standard area.  
AREA LOWER LIMIT = - 50% of internal standard area.  
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.  
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt12.i                    Injection Date: 14-NOV-2012 11:51  
Lab File ID: cc1114.d                  Init. Cal. Date(s): 06-OCT-2012 06-OCT-2012  
Analysis Type:                          Init. Cal. Times: 14:05 15:14  
Lab Sample ID: TBT 1                    Quant Type: ISTD  
Method: /chem1/nt12.i/20121114.b/lowbts.m

COMPOUND			MIN		MAX		CURVE TYPE
	RRF / AMOUNT	RF1	RRF	%D / %DRIFT	%D / %DRIFT		
\$ 1 Tripropyl Tin (Hexyl)	0.70012	0.75562	0.005	7.92736	20.00000	Averaged	
2 Tetrabutyl Tin	0.72904	0.78117	0.010	7.15050	20.00000	Averaged	
3 Tributyl Tin (Hexyl)	0.64011	0.74105	0.005	15.77009	20.00000	Averaged	
5 Dibutyl Tin (Hexyl)	0.05130	0.05046	0.005	-1.63638	20.00000	Averaged	
\$ 6 Tripentyl Tin (Hexyl)	0.06806	0.06999	0.010	2.84415	20.00000	Averaged	
7 Butyl Tin (Hexyl)	0.07745	0.08128	0.005	4.93834	20.00000	Averaged	



11/14/12 11:51

CO-ELUTION SUMMARY FOR FILE - cc1114.d

Lab ID: TBT 1, Method: lowbts.m, Instrument: nt12.i, Date: 14-NOV-2012

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121114.b/vr38mb.d  
 Lab Smp Id: VR38MBS1 Client Smp ID: VR38MBS1  
 Inj Date : 14-NOV-2012 15:48  
 Operator : VTS Inst ID: nt12.i  
 Smp Info : VR38MBS1  
 Misc Info : 12-22277  
 Comment : 2 ul Injection  
 Method : /chem1/nt12.i/20121114.b/lowbts.m  
 Meth Date : 14-Nov-2012 17:02 van Quant Type: ISTD  
 Cal Date : 06-OCT-2012 15:14 Cal File: ic1006f.d  
 Als bottle: 19 QC Sample: BLANK  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SED.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	500.00000	Effective Final Volume of extract (uL)
Ws	5.00000	Dry Weight of sample extracted (g)
M	0.00000	Percent moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
								ON-COLUMN	FINAL
								(ng/mL)	(ug/kg)
\$ 1 Tripropyl Tin (Hexyl)	291		291	6.169	6.169	(0.791)	52605	0.40353	40.35
2 Tetrabutyl Tin	289		289	Compound Not Detected.					
3 Tributyl Tin (Hexyl)	319		319	Compound Not Detected.					
* 4 Tetrapentyl Tin	333		333	7.801	7.814	(1.000)	372403	2.00000	
5 Dibutyl Tin (Hexyl)	347		347	Compound Not Detected.					
\$ 6 Tripentyl Tin (Hexyl)	347		347	8.149	8.149	(0.930)	52869	0.45137	45.14
7 Butyl Tin (Hexyl)	347		347	Compound Not Detected.					
* 8 p-Terphenyl-d14	244		244	8.766	8.779	(1.000)	344209	0.20000	

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt12.i	Calibration Date: 14-NOV-2012
Lab File ID: vr38mb.d	Calibration Time: 11:51
Lab Smp Id: VR38MBS1	Client Smp ID: VR38MBS1
Analysis Type: SV	Level: LOW
Quant Type: ISTD	Sample Type: Solid
Operator: VTS	
Method File: /chem1/nt12.i/20121114.b/lowbts.m	
Misc Info: 12-22277	

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	372403	8.43
8 p-Terphenyl-d14	317005	158502	634010	344209	8.58

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.81	7.31	8.31	7.80	-0.17
8 p-Terphenyl-d14	8.78	8.28	9.28	8.77	-0.15

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



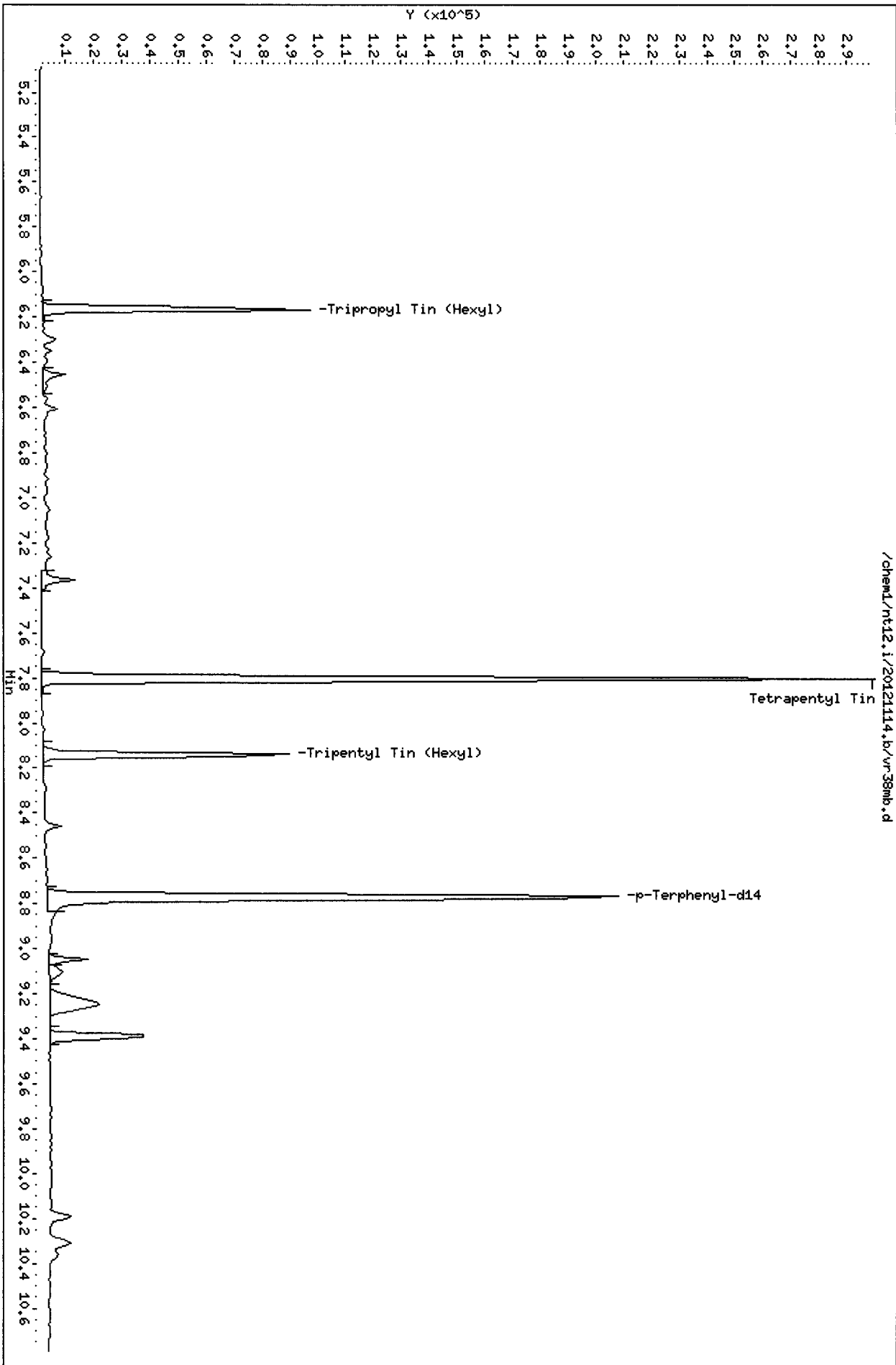
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR38MBS1  
Level: LOW  
Data Type: MS DATA  
SpikeList File: tbtсед.spk  
Sublist File: SED.sub  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22277

Client SDG: VR38  
Fraction: SV  
Client Smp ID: VR38MBS1  
Operator: VTS  
SampleType: BLANK  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 Tripropyl Tin (Hex	58.80	40.35	68.63	32-104
\$ 6 Tripentyl Tin (Hex	56.80	45.14	79.47	25-140



CO-ELUTION SUMMARY FOR FILE - vr38mb.d

Lab ID: VR38MBS1, Method: lowbts.m, Instrument: nt12.i, Date: 14-NOV-2012

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121114.b/vr38sb.d  
 Lab Smp Id: VR38LCSS1 Client Smp ID: VR38LCSS1  
 Inj Date : 14-NOV-2012 16:02  
 Operator : VTS Inst ID: nt12.i  
 Smp Info : VR38LCSS1  
 Misc Info : 12-22277  
 Comment : 2 ul Injection  
 Method : /chem1/nt12.i/20121114.b/lowbts.m  
 Meth Date : 14-Nov-2012 17:02 van Quant Type: ISTD  
 Cal Date : 06-OCT-2012 15:14 Cal File: ic1006f.d  
 Als bottle: 20 QC Sample: LCS  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SED.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	500.00000	Effective Final Volume of extract (uL)
Ws	5.00000	Dry Weight of sample extracted (g)
M	0.00000	Percent moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/kg)
\$ 1 Tripropyl Tin (Hexyl)	291	6.169	6.169	(0.791)	55500	0.43667	43.67
2 Tetrabutyl Tin	289	Compound Not Detected.					
3 Tributyl Tin (Hexyl)	319	7.159	7.159	(0.918)	58574	0.50406	50.41
* 4 Tetrapentyl Tin	333	7.801	7.814	(1.000)	363079	2.00000	
5 Dibutyl Tin (Hexyl)	347	7.854	7.854	(0.896)	44562	0.51787	51.79
\$ 6 Tripentyl Tin (Hexyl)	347	8.149	8.149	(0.930)	54720	0.47935	47.93
7 Butyl Tin (Hexyl)	347	8.485	8.484	(0.968)	58401	0.44954	44.95
* 8 p-Terphenyl-d14	244	8.766	8.779	(1.000)	335464	0.20000	

*11.15.12*

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt12.i  
Lab File ID: vr38sb.d  
Lab Smp Id: VR38LCSS1  
Analysis Type: SV  
Quant Type: ISTD  
Operator: VTS  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22277

Calibration Date: 14-NOV-2012  
Calibration Time: 11:51  
Client Smp ID: VR38LCSS1  
Level: LOW  
Sample Type: Solid

Test Mode:  
Use Initial Calibration Level 4.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	363079	5.71
8 p-Terphenyl-d14	317005	158502	634010	335464	5.82

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER	UPPER		
4 Tetrapentyl Tin	7.81	7.31	8.31	7.80	-0.17
8 p-Terphenyl-d14	8.78	8.28	9.28	8.77	-0.15

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

Analytical Resources, Inc.

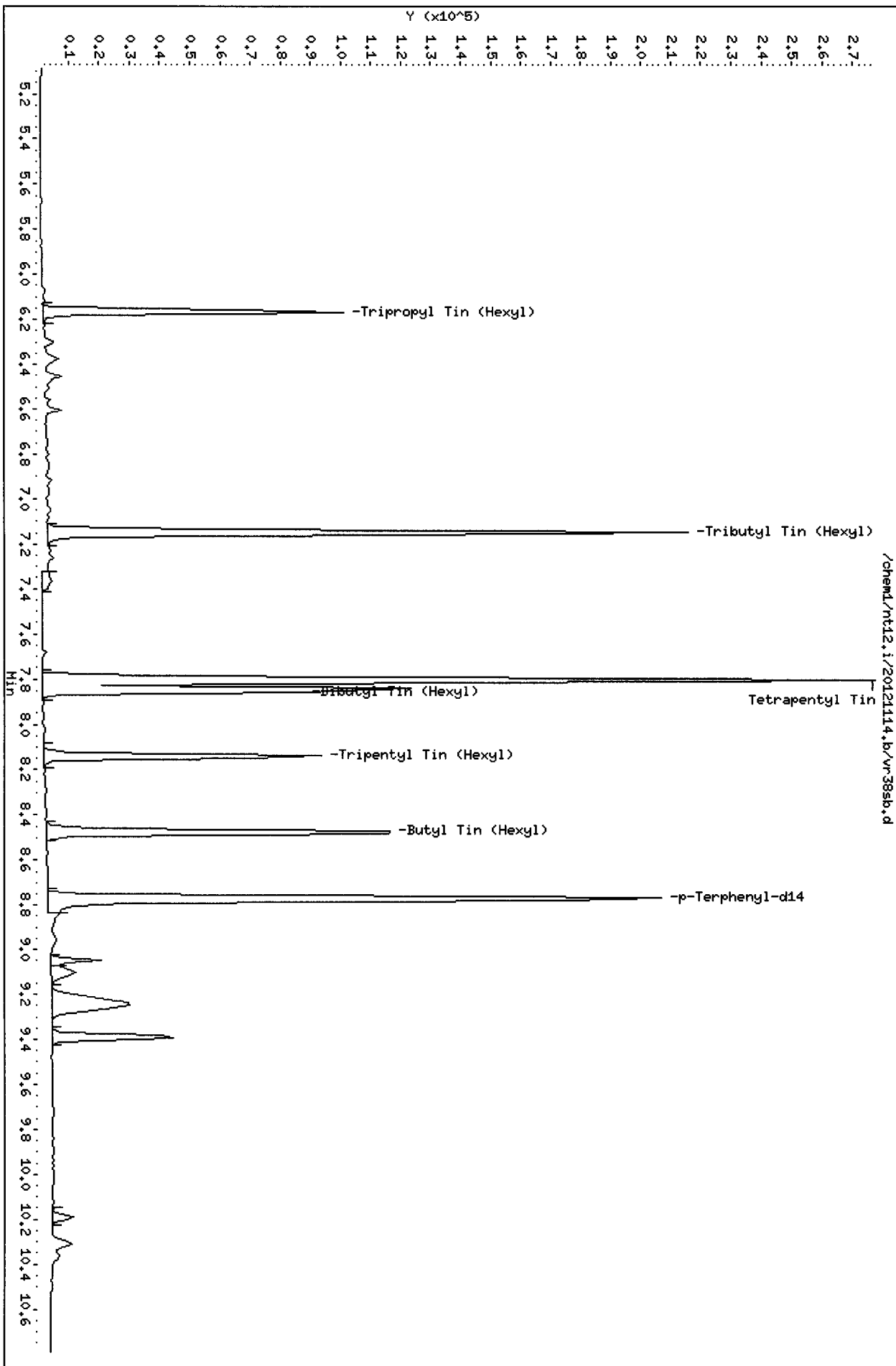
RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR38LCSS1  
Level: LOW  
Data Type: MS DATA  
SpikeList File: tbtsted.spk  
Sublist File: SED.sub  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22277

Client SDG: VR38  
Fraction: SV  
Client Smp ID: VR38LCSS1  
Operator: VTS  
SampleType: LCS  
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Tributyl Tin (Hexy	57.60	50.41	87.51	40-144
5 Dibutyl Tin (Hexyl	66.40	51.79	77.99	34-115
7 Butyl Tin (Hexyl)	76.40	44.95	58.84	10-111

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 Tripropyl Tin (Hex	58.80	43.67	74.26	32-104
\$ 6 Tripentyl Tin (Hex	56.80	47.93	84.39	25-140



11/14/2012 16:02:02

CO-ELUTION SUMMARY FOR FILE - vr38sb.d

Lab ID: VR38LCSS1, Method: lowbts.m, Instrument: nt12.i, Date: 14-NOV-2012

RT CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS



TBT as Ion Sample-tbt103s  
Data By: Van Spohn  
Created: 11/15/12

Worklist: 4795  
Analyst: VTS  
Comments:

1. VR58A Sediment 12-22329 SG-10-S-E-121107

Method: Krone 1988 Sample Amt: 5.45 g-dry-wt  
Ext Date: 11/13/12 EFV (mL): 0.50  
Ext Meth: SW3546-Microwave Dilution: 1.0  
Instrument: NT12 Date/Time: 11/14/12 17:11

Surrogate	On Col (ng/mL)	Spiked (ng/mL)	LCL-UCL (%)	Rec (%)	Q
Hexyl Tripropyl Tin	0.396				
Hexyl Tripentyl Tin	0.415				
Tripropyl Tin Chloride	0.337	0.500	32-104	67.4	
Tripentyl Tin Chloride	0.366	0.500	25-140	73.1	
Analyte	On Col (ng/mL)	RL (ug/kg)	Final (ug/kg)		Q
Hexyl Tributyl Tin	0.000	4.59	< 4.59		U
Tributyltin Ion		3.55	< 3.55		U

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121114.b/vr58a.d  
 Lab Smp Id: VR58A Client Smp ID: SG-10-S-E-121107  
 Inj Date : 14-NOV-2012 17:11  
 Operator : VTS Inst ID: nt12.i  
 Smp Info : VR58A  
 Misc Info : 12-22329  
 Comment : 2 ul Injection  
 Method : /chem1/nt12.i/20121114.b/lowbts.m  
 Meth Date : 14-Nov-2012 17:02 van Quant Type: ISTD  
 Cal Date : 06-OCT-2012 15:14 Cal File: ic1006f.d  
 Als bottle: 25  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SED.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	500.00000	Effective Final Volume of extract (uL)
Ws	9.18000	Dry Weight of sample extracted (g)
M	40.60000	Percent moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/kg)
\$ 1 Tripropyl Tin (Hexyl)	291	6.169	6.169	(0.791)	51683	0.39573	36.29
2 Tetrabutyl Tin	289	Compound Not Detected.					
3 Tributyl Tin (Hexyl)	319	Compound Not Detected.					
* 4 Tetrapentyl Tin	333	7.801	7.814	(1.000)	373082	2.00000	
5 Dibutyl Tin (Hexyl)	347	Compound Not Detected.					
\$ 6 Tripentyl Tin (Hexyl)	347	8.149	8.149	(0.930)	49756	0.41513	38.06
7 Butyl Tin (Hexyl)	347	Compound Not Detected.					
* 8 p-Terphenyl-d14	244	8.766	8.779	(1.000)	352219	0.20000	

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt12.i  
Lab File ID: vr58a.d  
Lab Smp Id: VR58A  
Analysis Type: SV  
Quant Type: ISTD  
Operator: VTS  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22329

Calibration Date: 14-NOV-2012  
Calibration Time: 11:51  
Client Smp ID: SG-10-S-E-121107  
Level: LOW  
Sample Type: Sediment

Test Mode:  
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	373082	8.63
8 p-Terphenyl-d14	317005	158502	634010	352219	11.11

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.81	7.31	8.31	7.80	-0.17
8 p-Terphenyl-d14	8.78	8.28	9.28	8.77	-0.15

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

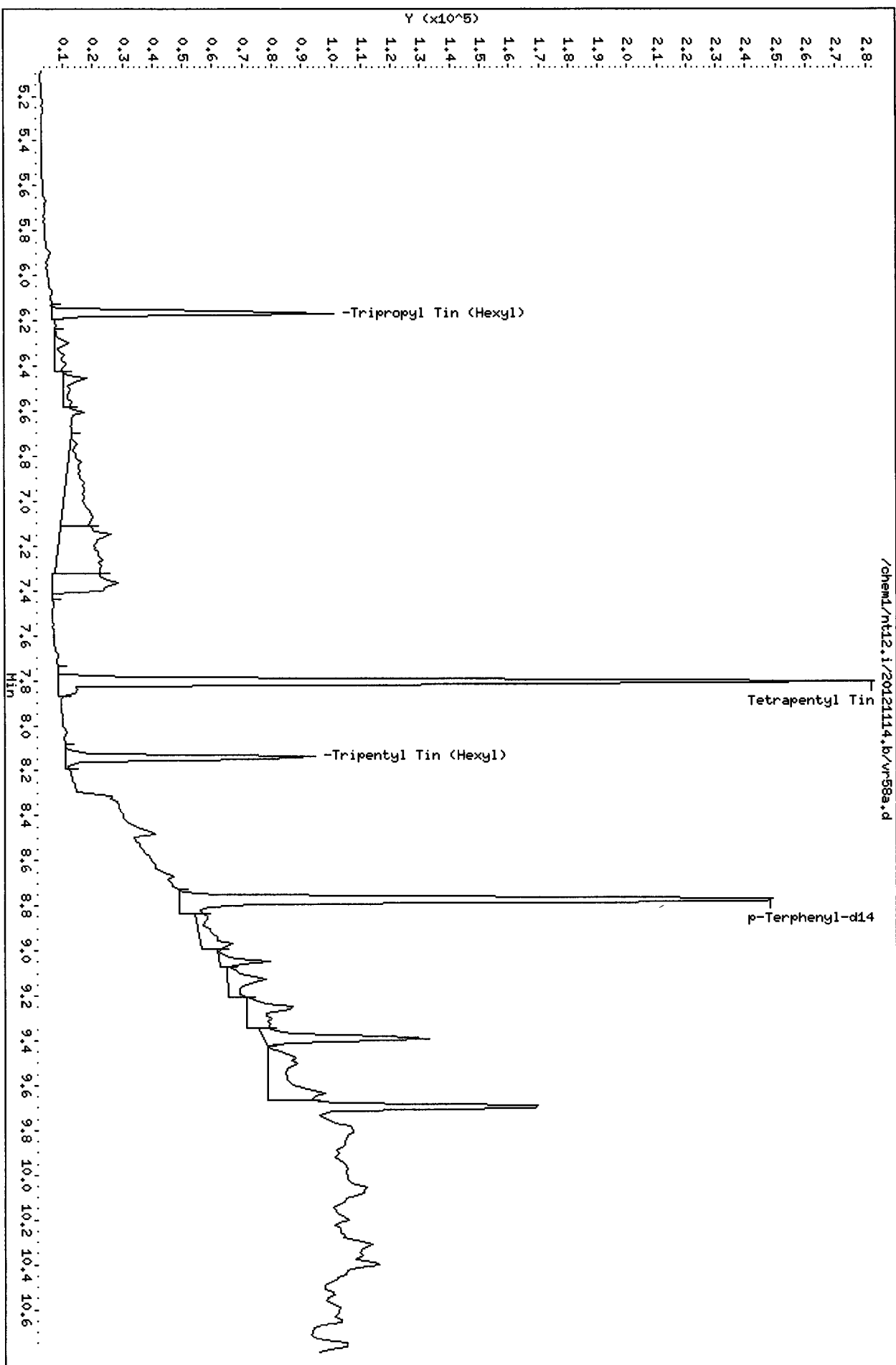
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58A  
Level: LOW  
Data Type: MS DATA  
SpikeList File: tbtсед.spk  
Sublist File: SED.sub  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22329

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-10-S-E-121107  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 Tripropyl Tin (Hex	53.92	36.29	67.30	32-104
\$ 6 Tripentyl Tin (Hex	52.08	38.06	73.09	25-140



VR58A - 201114

CO-ELUTION SUMMARY FOR FILE - vr58a.d

Lab ID: VR58A, Method: lowbts.m, Instrument: nt12.i, Date: 14-NOV-2012

RT            CO-ELUTION COMPOUNDS

---

NO CO-ELUTIONS

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121114.b/vr58b.d  
 Lab Smp Id: VR58B Client Smp ID: SG-11-S-E-121107  
 Inj Date : 14-NOV-2012 17:25  
 Operator : VTS Inst ID: nt12.i  
 Smp Info : VR58B  
 Misc Info : 12-22330  
 Comment : 2 ul Injection  
 Method : /chem1/nt12.i/20121114.b/lowbts.m  
 Meth Date : 14-Nov-2012 17:02 van Quant Type: ISTD  
 Cal Date : 06-OCT-2012 15:14 Cal File: ic1006f.d  
 Als bottle: 26  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SED.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	500.00000	Effective Final Volume of extract (uL)
Ws	26.00000	Dry Weight of sample extracted (g)
M	80.10000	Percent moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT	SIG	MASS	RT	EXP	RT	REL	RT	RESPONSE	CONCENTRATIONS	
										ON-COLUMN	FINAL
										(ng/mL)	(ug/kg)
\$ 1 Tripropyl Tin (Hexyl)	291		291	6.169	6.169	(0.791)			51350	0.37523	36.26
2 Tetrabutyl Tin	289		289	Compound Not Detected.							
3 Tributyl Tin (Hexyl)	319		319	7.159	7.159	(0.918)			16502	0.13189	12.75
* 4 Tetrapentyl Tin	333		333	7.801	7.814	(1.000)			390935	2.00000	
5 Dibutyl Tin (Hexyl)	347		347	7.854	7.854	(0.895)			10964	0.11433	11.05 <i>new</i>
\$ 6 Tripentyl Tin (Hexyl)	347		347	8.149	8.149	(0.928)			55128	0.43332	41.87
7 Butyl Tin (Hexyl)	347		347	8.485	8.484	(0.966)			21879	0.15112	14.60 <i>new</i>
* 8 p-Terphenyl-d14	244		244	8.780	8.779	(1.000)			373865	0.20000	

*VI)*  
*11-15-12*

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt12.i  
Lab File ID: vr58b.d  
Lab Smp Id: VR58B  
Analysis Type: SV  
Quant Type: ISTD  
Operator: VTS  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22330

Calibration Date: 14-NOV-2012  
Calibration Time: 11:51  
Client Smp ID: SG-11-S-E-121107  
Level: LOW  
Sample Type: Sediment

Test Mode:  
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	390935	13.82
8 p-Terphenyl-d14	317005	158502	634010	373865	17.94

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.81	7.31	8.31	7.80	-0.17
8 p-Terphenyl-d14	8.78	8.28	9.28	8.78	0.00

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



Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58B  
Level: LOW  
Data Type: MS DATA  
SpikeList File: tbtсед.spk  
Sublist File: SED.sub  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22330

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-11-S-E-121107  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 Tripropyl Tin (Hex	56.82	36.26	63.81	32-104
\$ 6 Tripentyl Tin (Hex	54.89	41.87	76.29	25-140

Data File: /chem1/nt12.i/20121114.b/vr58b.d

Date: 14-NOV-2012 17:25

Client ID: SG-11-S-E-121107

Sample Info: VR58B

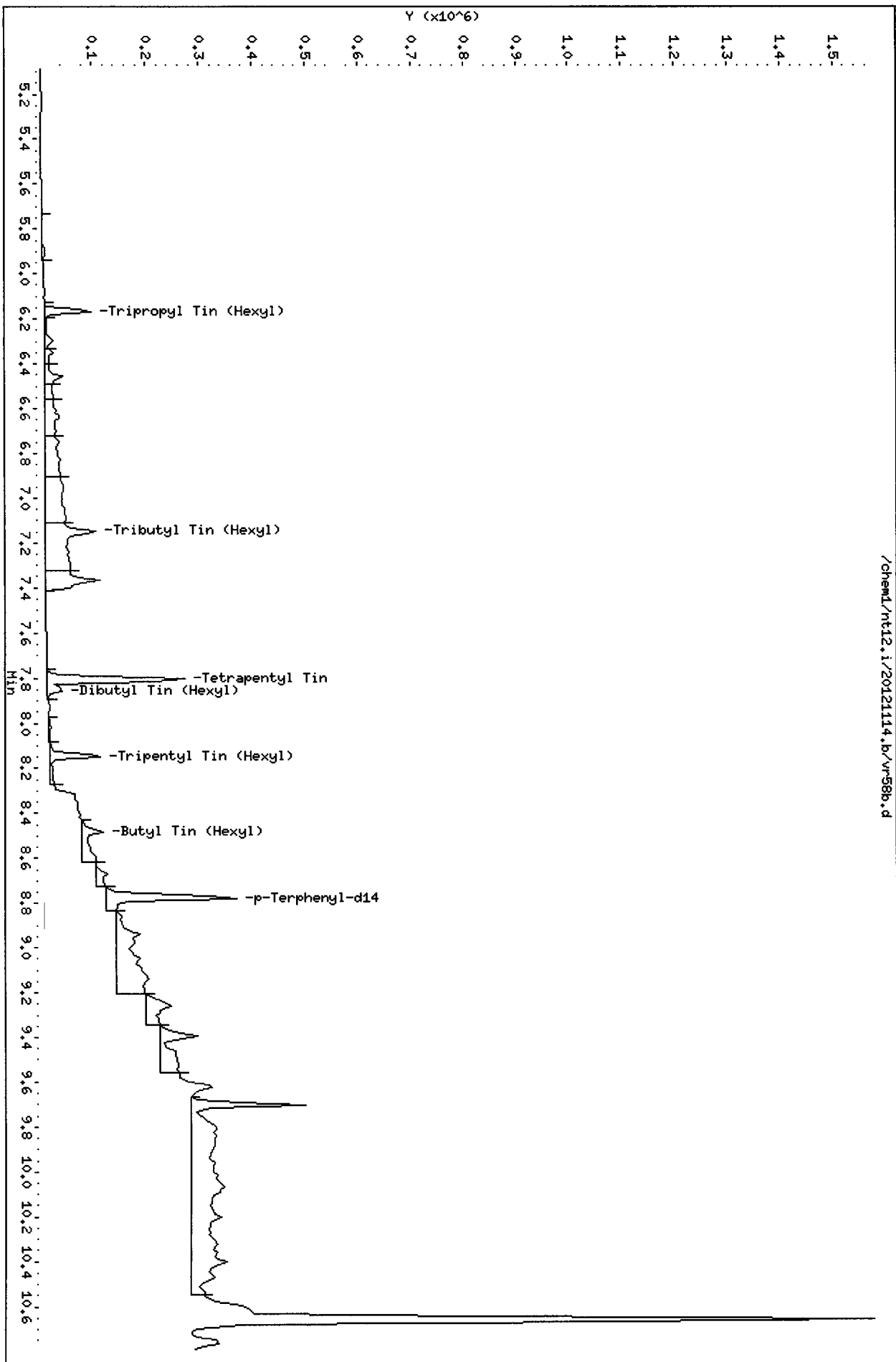
Column phase: ZB-5msi

Instrument: nt12.i

Operator: VTS

Column diameter: 0.25

/chem1/nt12.i/20121114.b/vr58b.d



Date : 14-NOV-2012 17:25

Client ID: SG-11-S-E-121107

Instrument: nt12.i

Sample Info: VR58B

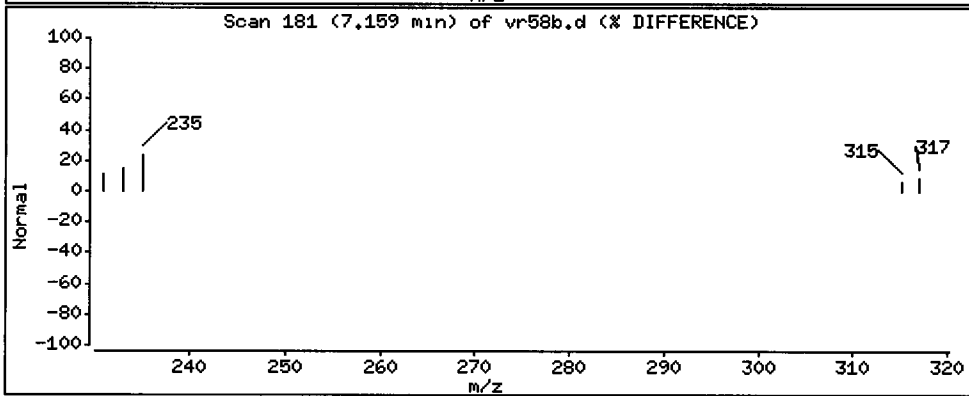
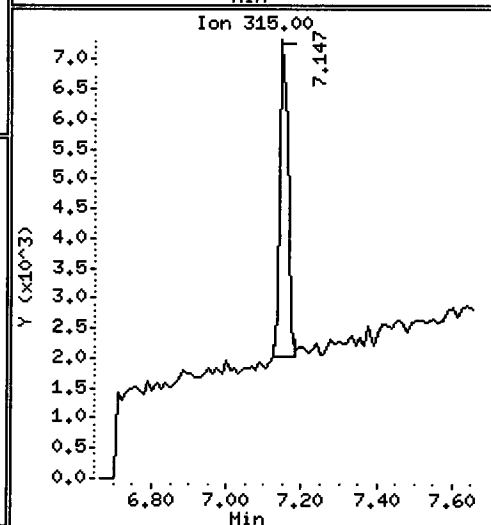
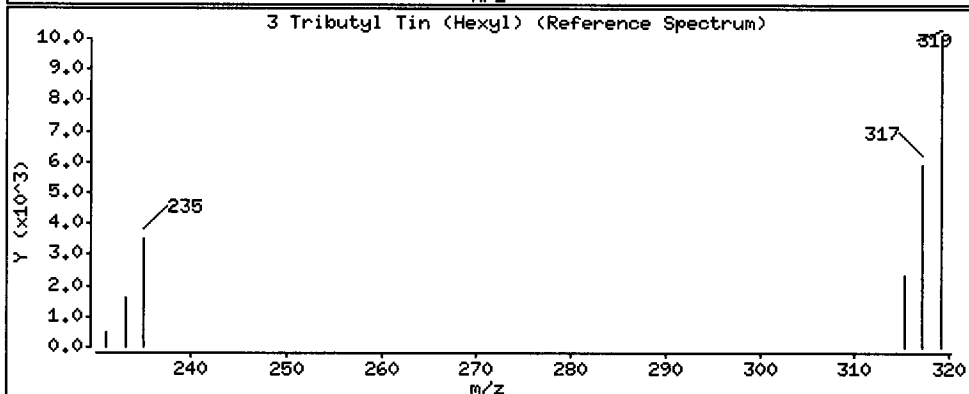
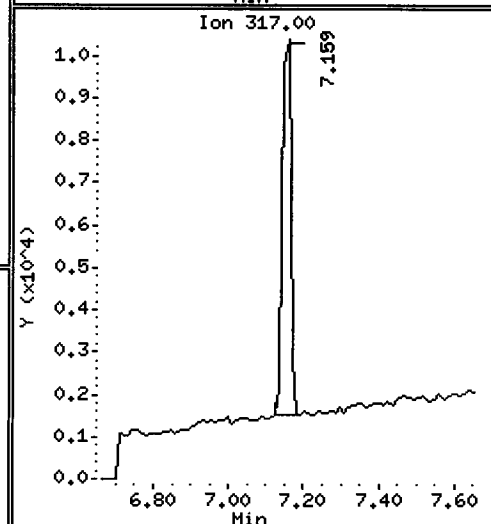
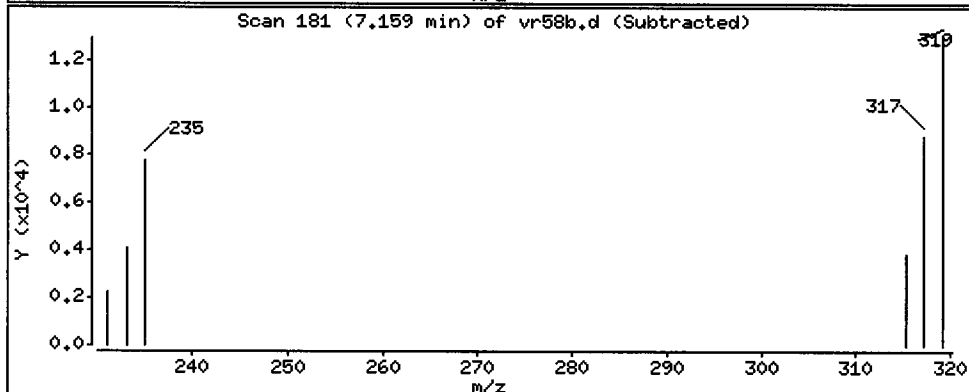
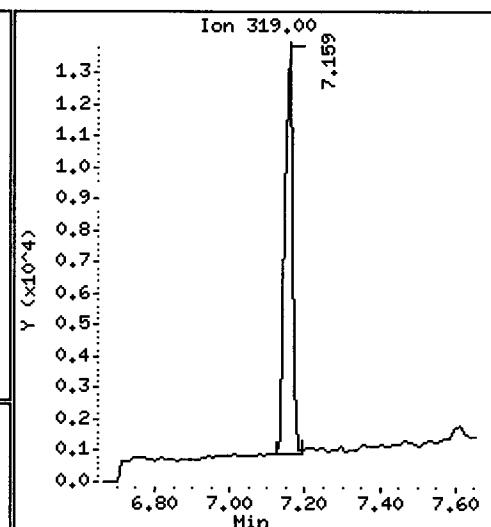
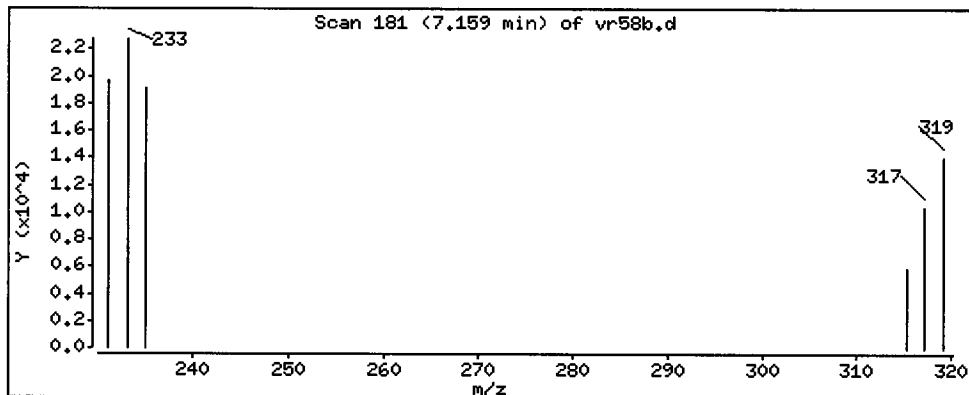
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

3 Tributyl Tin (Hexyl)

Concentration: 12.75 ug/kg



CO-ELUTION SUMMARY FOR FILE - vr58b.d

Lab ID: VR58B, Method: lowbts.m, Instrument: nt12.i, Date: 14-NOV-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121114.b/vr58c.d  
 Lab Smp Id: VR58C Client Smp ID: SG-12-S-E-121107  
 Inj Date : 14-NOV-2012 17:39  
 Operator : VTS Inst ID: nt12.i  
 Smp Info : VR58C  
 Misc Info : 12-22331  
 Comment : 2 ul Injection  
 Method : /chem1/nt12.i/20121114.b/lowbts.m  
 Meth Date : 14-Nov-2012 17:02 van Quant Type: ISTD  
 Cal Date : 06-OCT-2012 15:14 Cal File: ic1006f.d  
 Als bottle: 27  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SED.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	500.00000	Effective Final Volume of extract (uL)
Ws	17.20000	Dry Weight of sample extracted (g)
M	70.00000	Percent moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/kg)
\$ 1 Tripropyl Tin (Hexyl)	291	6.169	6.169	(0.791)	52074	0.37390	36.23
2 Tetrabutyl Tin	289	Compound Not Detected.					
3 Tributyl Tin (Hexyl)	319	7.159	7.159	(0.918)	11621	0.09126	8.843
* 4 Tetrapentyl Tin	333	7.801	7.814	(1.000)	397853	2.00000	
5 Dibutyl Tin (Hexyl)	347	7.854	7.854	(0.895)	8651	0.08912	8.635 - <i>W</i>
\$ 6 Tripentyl Tin (Hexyl)	347	8.149	8.149	(0.928)	54458	0.42288	40.98
7 Butyl Tin (Hexyl)	347	8.484	8.484	(0.966)	16371	0.11170	10.82 - <i>W</i>
* 8 p-Terphenyl-d14	244	8.779	8.779	(1.000)	378443	0.20000	

*U1*  
*11-15-12*

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
AREA AND RT SUMMARY

Instrument ID: nt12.i  
Lab File ID: vr58c.d  
Lab Smp Id: VR58C  
Analysis Type: SV  
Quant Type: ISTD  
Operator: VTS  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22331

Calibration Date: 14-NOV-2012  
Calibration Time: 11:51  
Client Smp ID: SG-12-S-E-121107  
Level: LOW  
Sample Type: Sediment

Test Mode:  
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	397853	15.84
8 p-Terphenyl-d14	317005	158502	634010	378443	19.38

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.81	7.31	8.31	7.80	-0.17
8 p-Terphenyl-d14	8.78	8.28	9.28	8.78	0.00

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

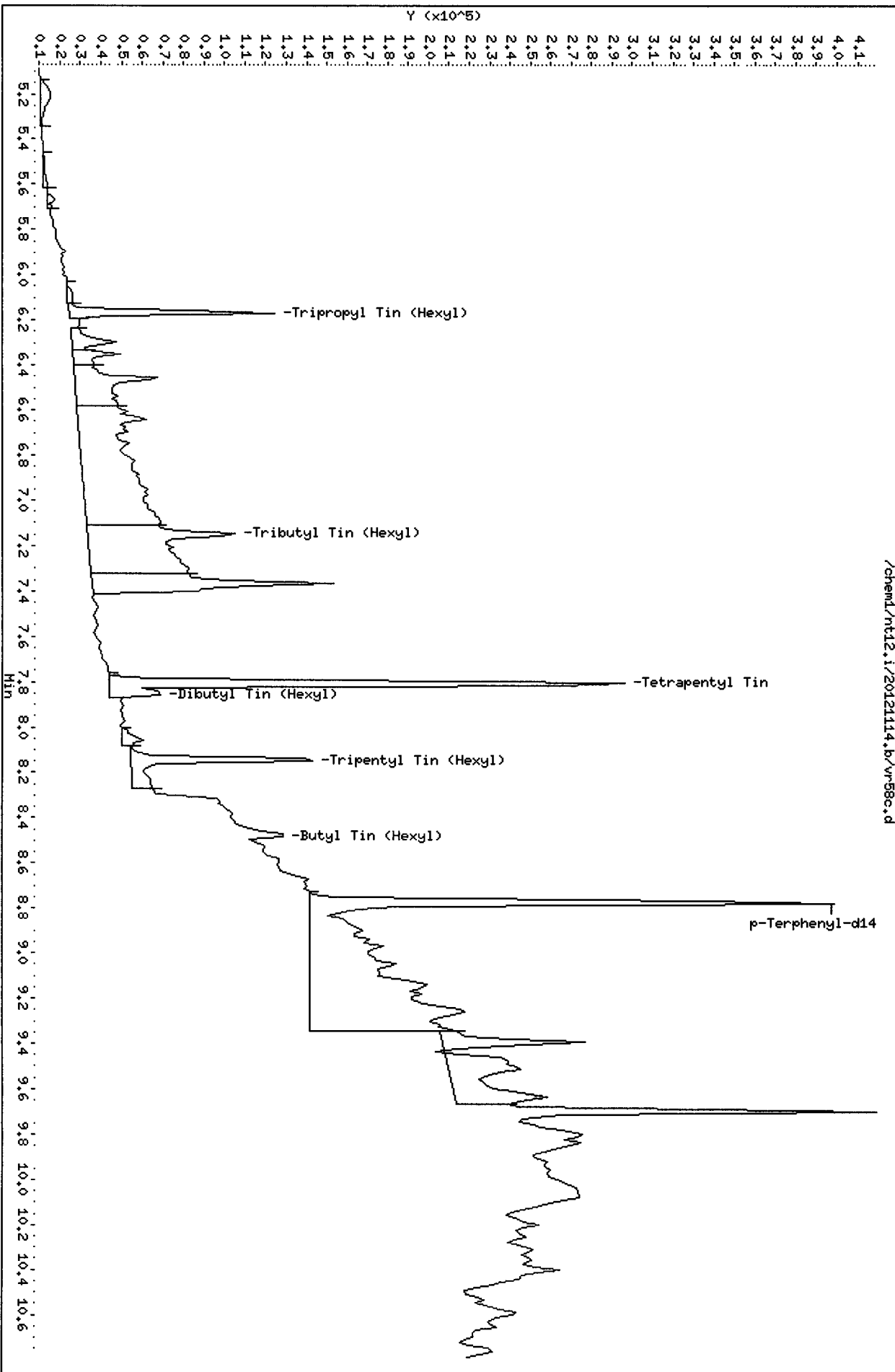
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58C  
Level: LOW  
Data Type: MS DATA  
SpikeList File: tbtсед.spk  
Sublist File: SED.sub  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22331

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-12-S-E-121107  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 Tripropyl Tin (Hex	56.98	36.23	63.59	32-104
\$ 6 Tripentyl Tin (Hex	55.04	40.98	74.45	25-140



VR58 : 011102



Date : 14-NOV-2012 17:39

Client ID: SG-12-S-E-121107

Instrument: nt12.i

Sample Info: VR58C

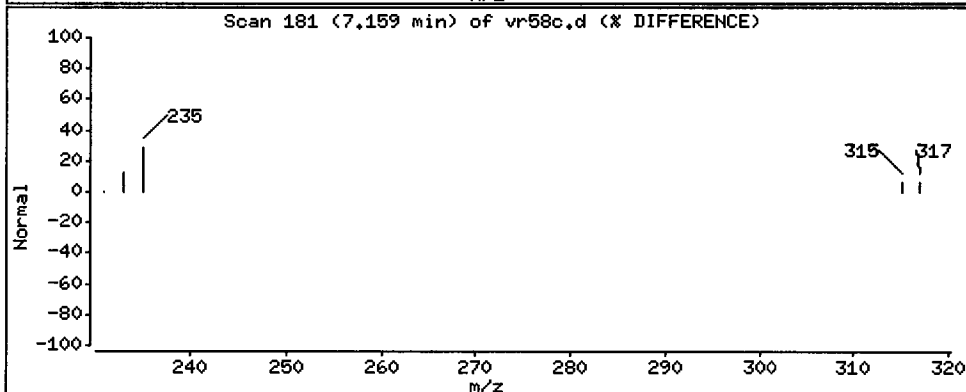
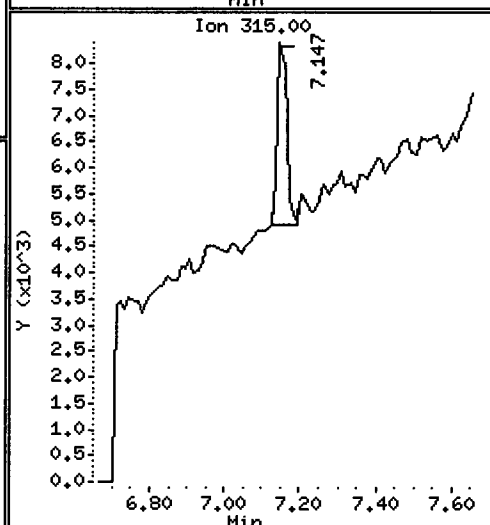
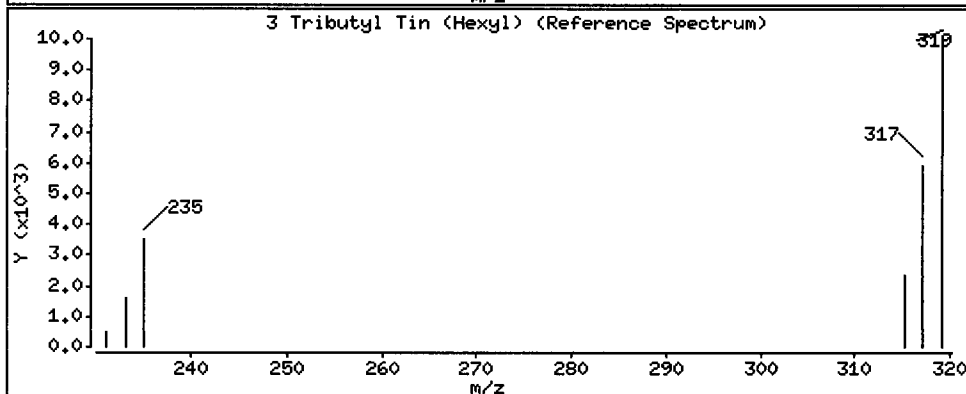
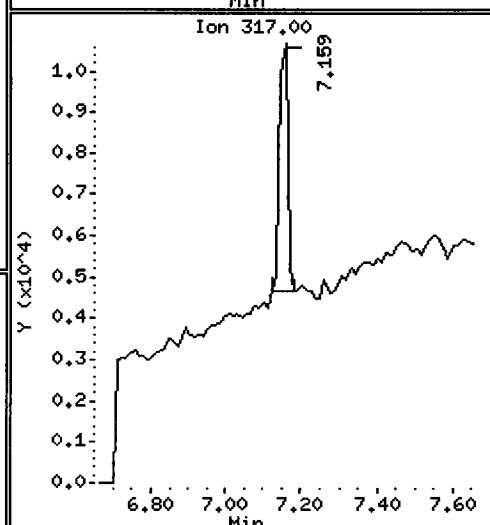
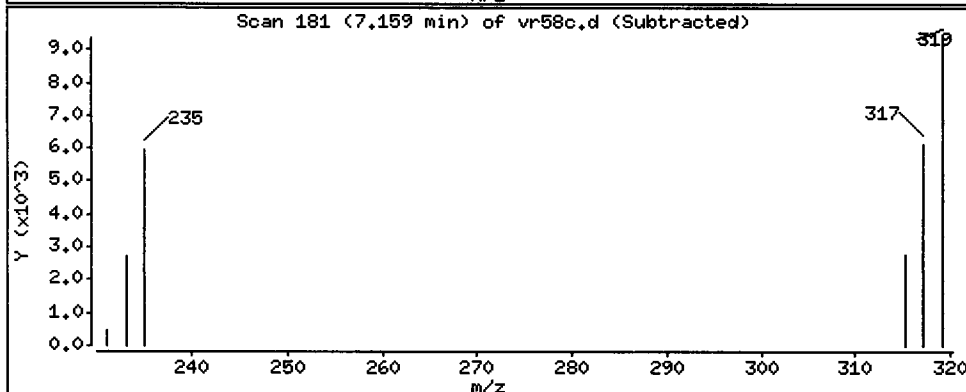
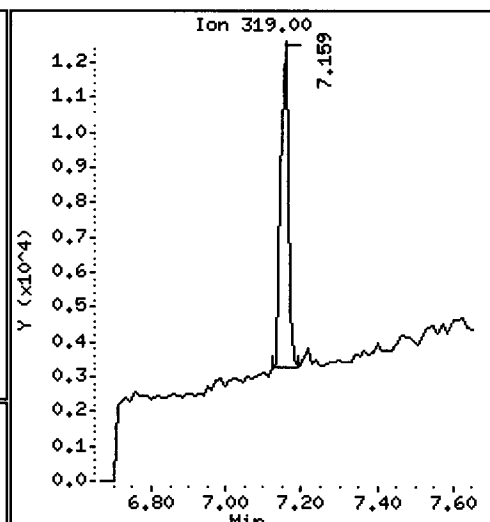
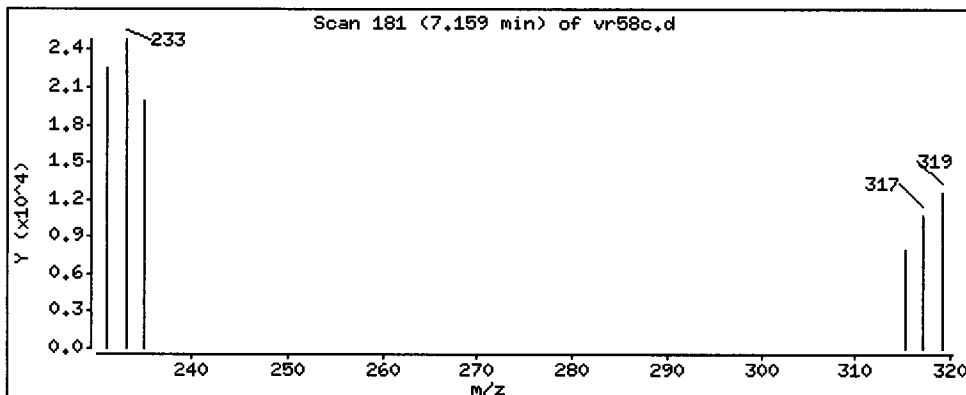
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

3 Tributyl Tin (Hexyl)

Concentration: 8.843 ug/kg



CO-ELUTION SUMMARY FOR FILE - vr58c.d

Lab ID: VR58C, Method: lowbts.m, Instrument: nt12.i, Date: 14-NOV-2012

RT CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121114.b/vr58d.d  
 Lab Smp Id: VR58D Client Smp ID: SG-13-S-E-121107  
 Inj Date : 14-NOV-2012 17:52  
 Operator : VTS Inst ID: nt12.i  
 Smp Info : VR58D  
 Misc Info : 12-22332  
 Comment : 2 ul Injection  
 Method : /chem1/nt12.i/20121114.b/lowbts.m  
 Meth Date : 14-Nov-2012 17:02 van Quant Type: ISTD  
 Cal Date : 06-OCT-2012 15:14 Cal File: ic1006f.d  
 Als bottle: 28  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SED.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	500.00000	Effective Final Volume of extract (uL)
Ws	21.10000	Dry Weight of sample extracted (g)
M	76.00000	Percent moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/kg)
\$ 1 Tripropyl Tin (Hexyl)	291	6.169	6.169	(0.791)	47898	0.33837	33.41
2 Tetrabutyl Tin	289	Compound Not Detected.					
3 Tributyl Tin (Hexyl)	319	7.159	7.159	(0.918)	20047	0.15490	15.29
* 4 Tetrapentyl Tin	333	7.801	7.814	(1.000)	404376	2.00000	
5 Dibutyl Tin (Hexyl)	347	7.854	7.854	(0.895)	8052	0.07640	7.543 <i>NEW</i>
\$ 6 Tripentyl Tin (Hexyl)	347	8.149	8.149	(0.928)	51257	0.36660	36.20
7 Butyl Tin (Hexyl)	347	8.484	8.484	(0.966)	18813	0.11824	11.67 (M) <i>NEW</i>
* 8 p-Terphenyl-d14	244	8.779	8.779	(1.000)	410881	0.20000	

QC Flag Legend

M - Compound response manually integrated.

*Handwritten:* 11.15.12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt12.i  
 Lab File ID: vr58d.d  
 Lab Smp Id: VR58D  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem1/nt12.i/20121114.b/lowbts.m  
 Misc Info: 12-22332

Calibration Date: 14-NOV-2012  
 Calibration Time: 11:51  
 Client Smp ID: SG-13-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	404376	17.74
8 p-Terphenyl-d14	317005	158502	634010	410881	29.61

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.81	7.31	8.31	7.80	-0.17
8 p-Terphenyl-d14	8.78	8.28	9.28	8.78	0.00

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

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58D  
Level: LOW  
Data Type: MS DATA  
SpikeList File: tbtspd.spk  
Sublist File: SED.sub  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22332

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-13-S-E-121107  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 Tripropyl Tin (Hex	58.06	33.41	57.55	32-104
\$ 6 Tripentyl Tin (Hex	56.08	36.20	64.54	25-140

Data File: /chem1/nt12.i/20121114.b/vr58d.d

Date : 14-NOV-2012 17:52

Client ID: SC-13-S-E-121107

Sample Info: VR58D

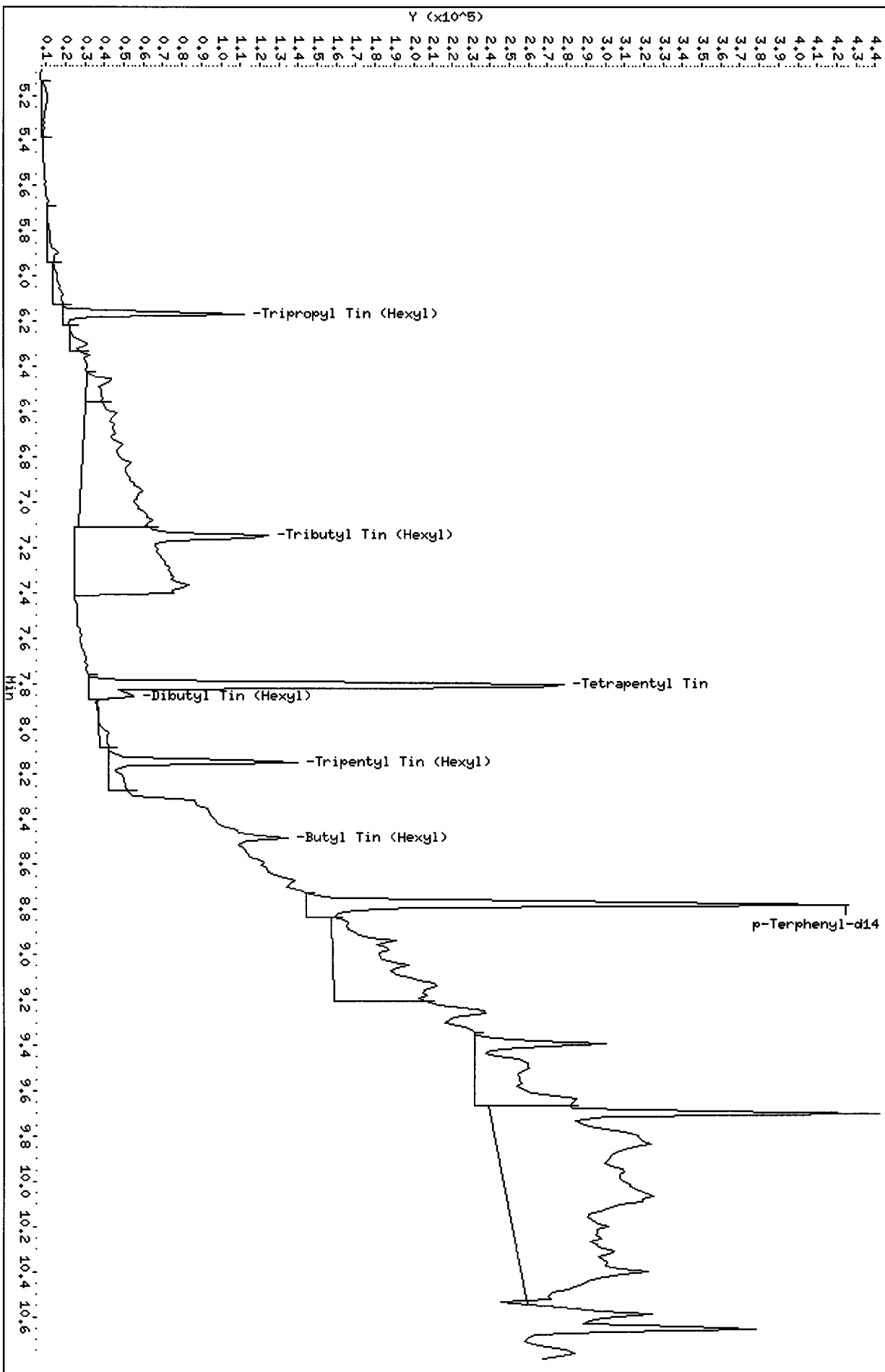
Column phase: ZB-5msi

Instrument: nt12.i

Operator: VTS

Column diameter: 0.25

/chem1/nt12.i/20121114.b/vr58d.d



Date : 14-NOV-2012 17:52

Client ID: SG-13-S-E-121107

Instrument: nt12.i

Sample Info: VR58D

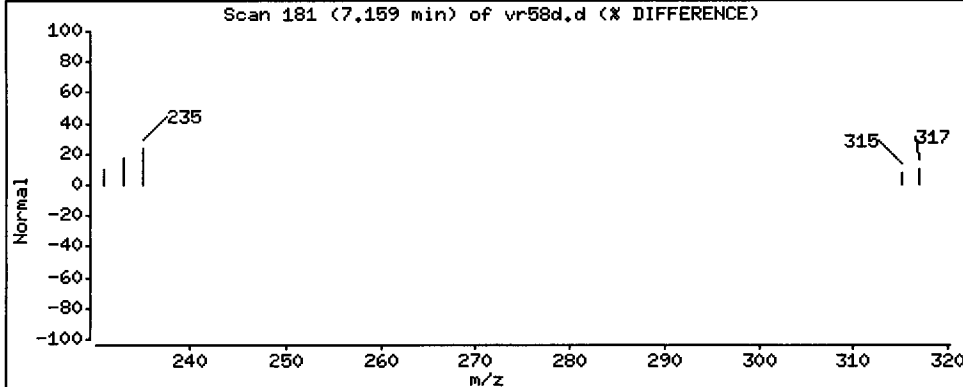
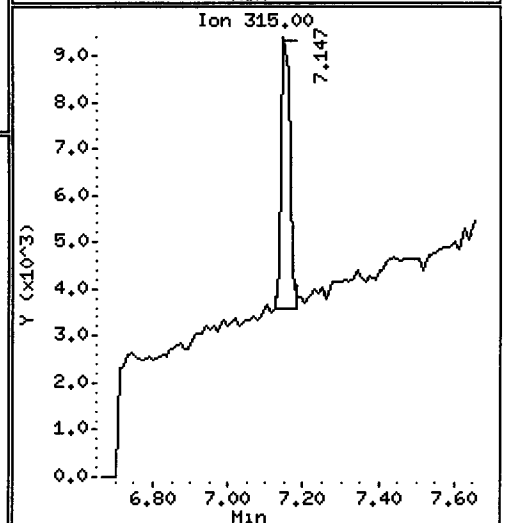
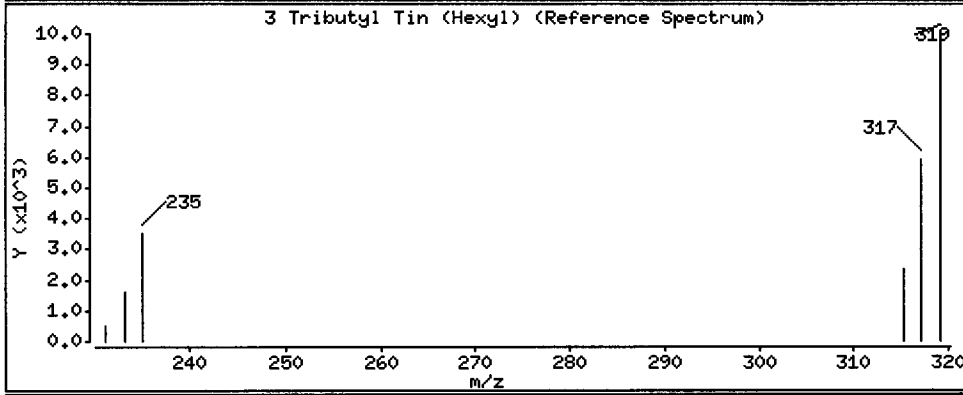
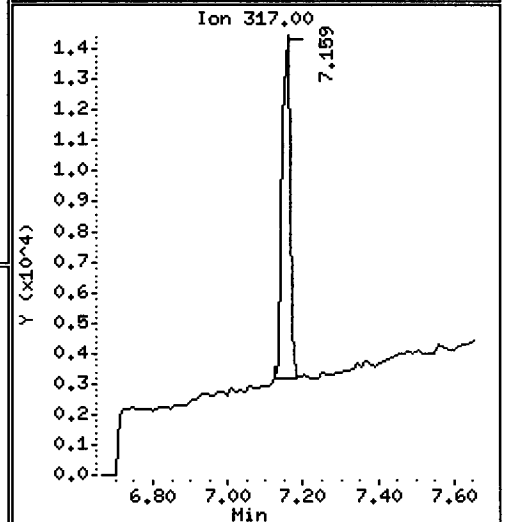
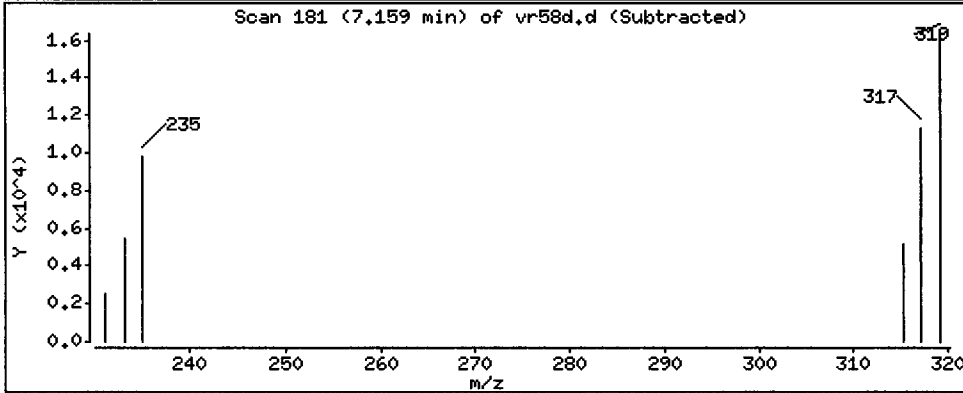
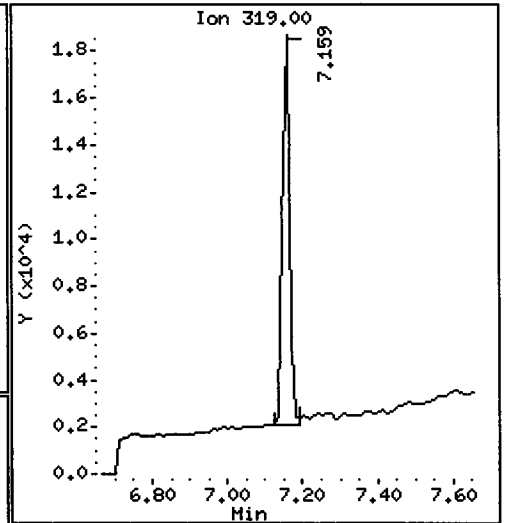
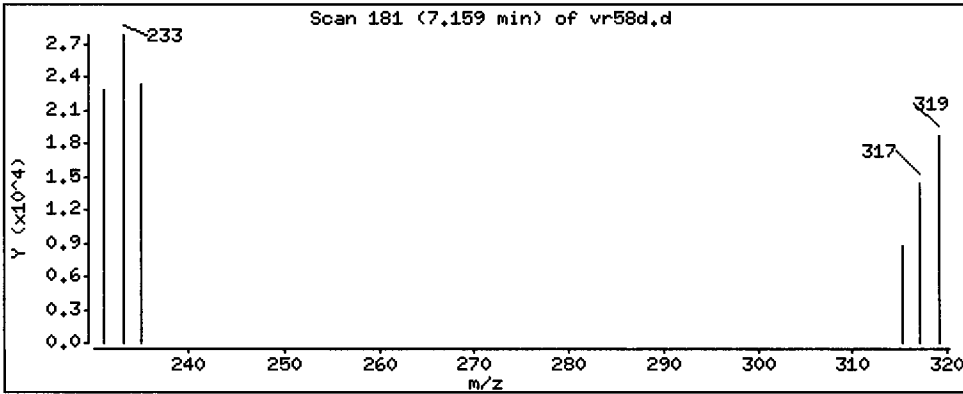
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

3 Tributyl Tin (Hexyl)

Concentration: 15.29 ug/kg



CO-ELUTION SUMMARY FOR FILE - vr58d.d

Lab ID: VR58D, Method: lowbts.m, Instrument: nt12.i, Date: 14-NOV-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS



Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121114.b/vr58e.d  
 Lab Smp Id: VR58E Client Smp ID: SG-13-S-E-dup-12110  
 Inj Date : 14-NOV-2012 18:06  
 Operator : VTS Inst ID: nt12.i  
 Smp Info : VR58E  
 Misc Info : 12-22333  
 Comment : 2 ul Injection  
 Method : /chem1/nt12.i/20121114.b/lowbts.m  
 Meth Date : 14-Nov-2012 17:02 van Quant Type: ISTD  
 Cal Date : 06-OCT-2012 15:14 Cal File: ic1006f.d  
 Als bottle: 29  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SED.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	500.00000	Effective Final Volume of extract (uL)
Ws	21.20000	Dry Weight of sample extracted (g)
M	76.00000	Percent moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS	
						ON-COLUMN (ng/mL)	FINAL (ug/kg)
\$ 1 Tripropyl Tin (Hexyl)	291	6.169	6.169	(0.791)	48311	0.34792	34.19
2 Tetrabutyl Tin	289	Compound Not Detected.					
3 Tributyl Tin (Hexyl)	319	7.159	7.159	(0.918)	20230	0.15935	15.66
* 4 Tetrapentyl Tin	333	7.801	7.814	(1.000)	396662	2.00000	
5 Dibutyl Tin (Hexyl)	347	7.854	7.854	(0.895)	8072	0.08070	7.931
\$ 6 Tripentyl Tin (Hexyl)	347	8.149	8.149	(0.928)	51356	0.38704	38.03
7 Butyl Tin (Hexyl)	347	8.485	8.484	(0.966)	15426	0.10216	10.04 (M)
* 8 p-Terphenyl-d14	244	8.780	8.779	(1.000)	389934	0.20000	

QC Flag Legend

M - Compound response manually integrated.

*Handwritten:* 11-15-12 VJ

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt12.i  
 Lab File ID: vr58e.d  
 Lab Smp Id: VR58E  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem1/nt12.i/20121114.b/lowbts.m  
 Misc Info: 12-22333

Calibration Date: 14-NOV-2012  
 Calibration Time: 11:51  
 Client Smp ID: SG-13-S-E-dup-12  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	396662	15.49
8 p-Terphenyl-d14	317005	158502	634010	389934	23.01

COMPOUND	STANDARD	RT LIMIT		SAMPLE	%DIFF
		LOWER	UPPER		
4 Tetrapentyl Tin	7.81	7.31	8.31	7.80	-0.17
8 p-Terphenyl-d14	8.78	8.28	9.28	8.78	0.00

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

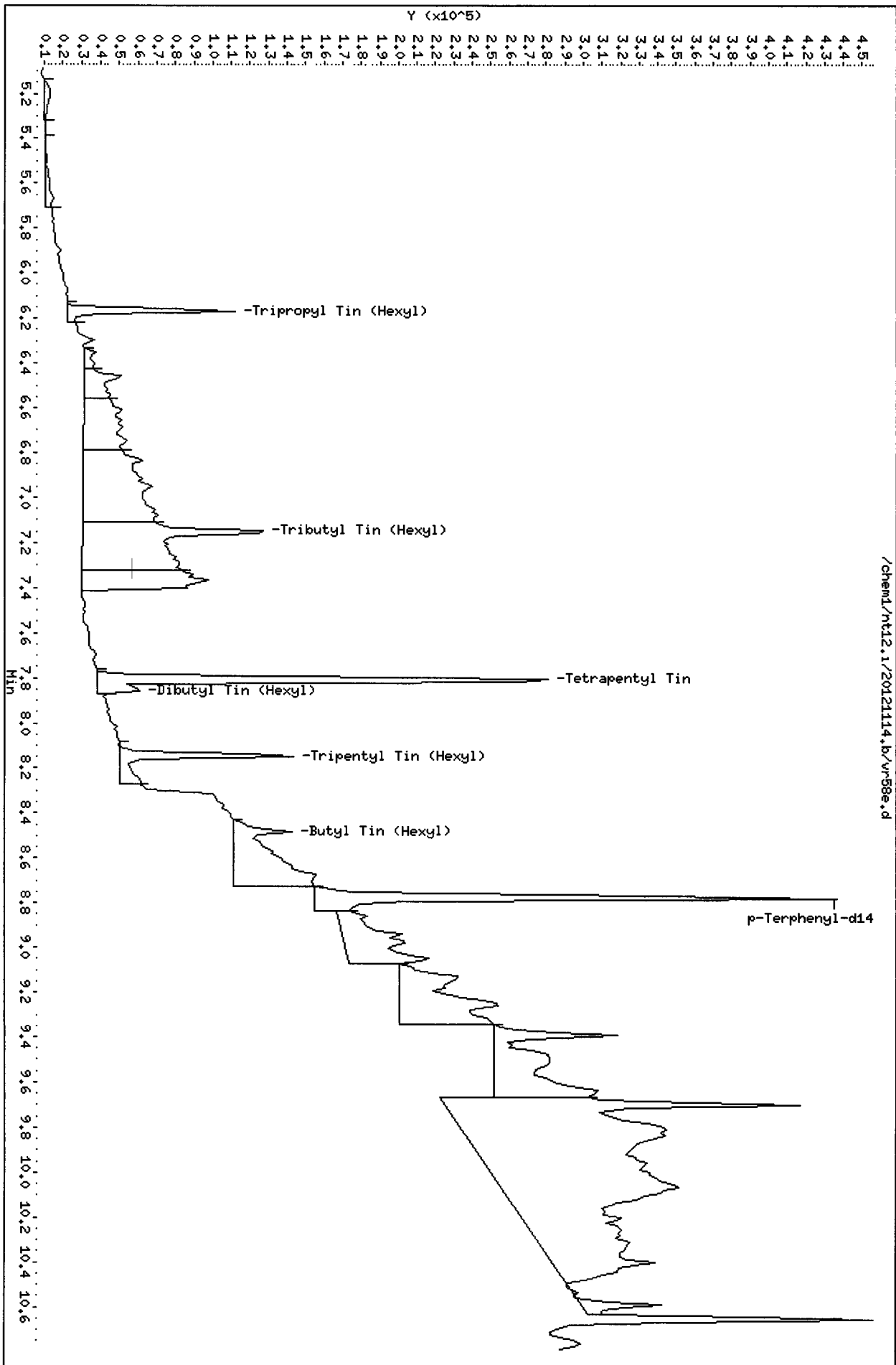
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58E  
Level: LOW  
Data Type: MS DATA  
SpikeList File: tbtсед.spk  
Sublist File: SED.sub  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22333

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-13-S-E-dup-12110  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 Tripropyl Tin (Hex	57.78	34.19	59.17	32-104
\$ 6 Tripentyl Tin (Hex	55.82	38.03	68.14	25-140



11/14/2012 18:06:00

Date : 14-NOV-2012 18:06

Client ID: SG-13-S-E-dup-12110

Instrument: nt12.i

Sample Info: VR58E

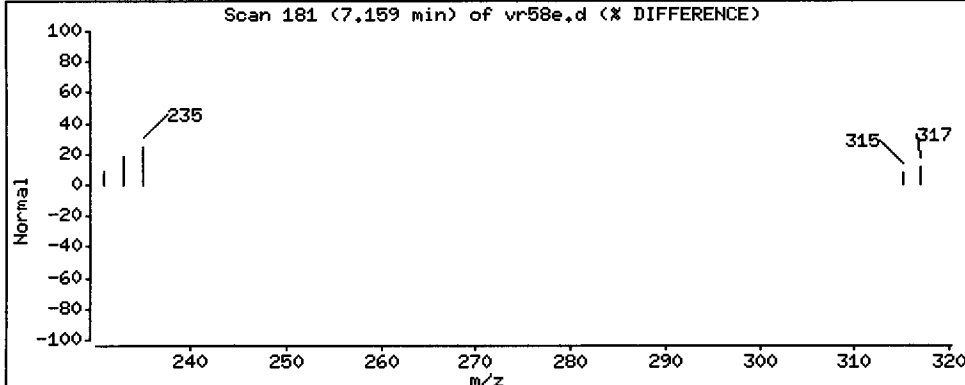
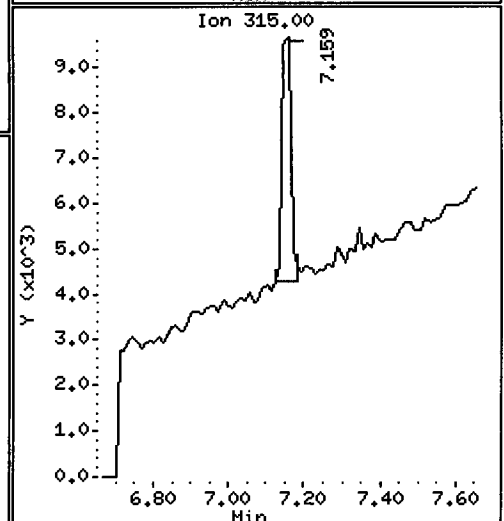
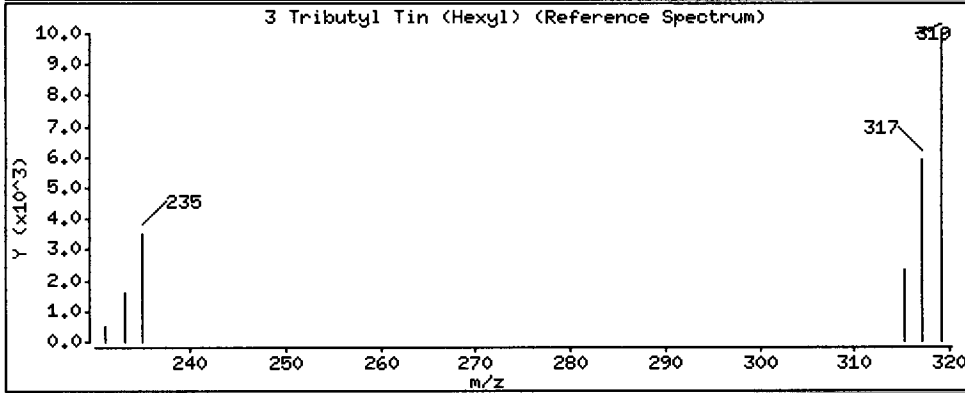
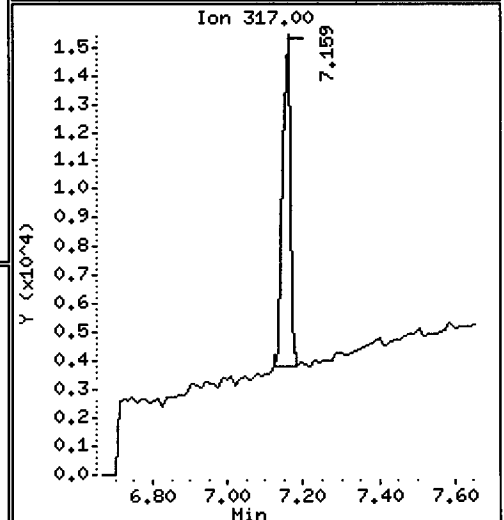
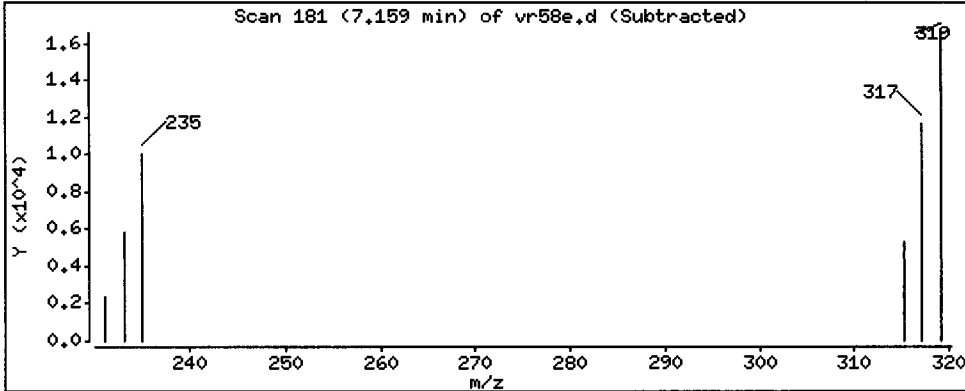
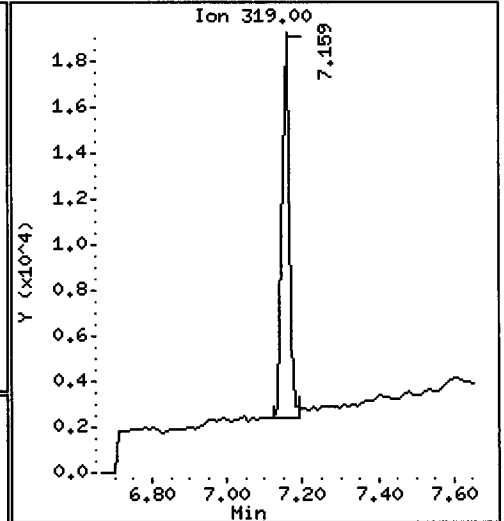
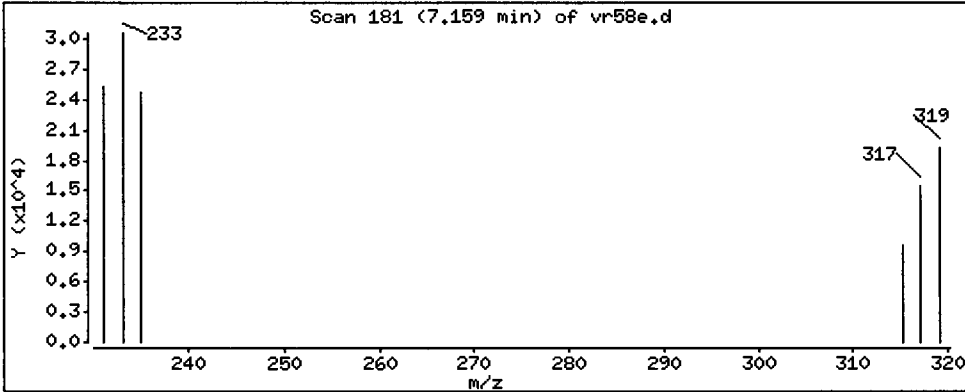
Operator: VTS

Column phase: ZB-5msi

Column diameter: 0.25

3 Tributyl Tin (Hexyl)

Concentration: 15.66 ug/kg



CO-ELUTION SUMMARY FOR FILE - vr58e.d

Lab ID: VR58E, Method: lowbts.m, Instrument: nt12.i, Date: 14-NOV-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

VR58 : 01446

Analytical Resources, Inc.

Krone-1988

Data file : /chem1/nt12.i/20121114.b/vr58g.d  
 Lab Smp Id: VR58G Client Smp ID: SG-15-S-E-121107  
 Inj Date : 14-NOV-2012 18:20  
 Operator : VTS Inst ID: nt12.i  
 Smp Info : VR58G  
 Misc Info : 12-22335  
 Comment : 2 ul Injection  
 Method : /chem1/nt12.i/20121114.b/lowbts.m  
 Meth Date : 14-Nov-2012 17:02 van Quant Type: ISTD  
 Cal Date : 06-OCT-2012 15:14 Cal File: ic1006f.d  
 Als bottle: 30  
 Dil Factor: 1.00000  
 Integrator: HP RTE Compound Sublist: SED.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	500.00000	Effective Final Volume of extract (uL)
Ws	7.22000	Dry Weight of sample extracted (g)
M	0.00000	Percent moisture

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG	MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS		
							ON-COLUMN (ng/mL)	FINAL (ug/kg)	
\$ 1 Tripropyl Tin (Hexyl)	====	291	6.169	6.169	(0.791)	42628	0.31192	21.60	
2 Tetrabutyl Tin		289	Compound Not Detected.						
3 Tributyl Tin (Hexyl)		319	Compound Not Detected.						
* 4 Tetrapentyl Tin		333	7.801	7.814	(1.000)	390399	2.00000		
5 Dibutyl Tin (Hexyl)		347	Compound Not Detected.						
\$ 6 Tripentyl Tin (Hexyl)		347	8.149	8.149	(0.928)	45608	0.36100	25.00	
7 Butyl Tin (Hexyl)		347	Compound Not Detected.						
* 8 p-Terphenyl-d14		244	8.779	8.779	(1.000)	371267	0.20000		

*VR*  
11-15-12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS  
 AREA AND RT SUMMARY

Instrument ID: nt12.i  
 Lab File ID: vr58g.d  
 Lab Smp Id: VR58G  
 Analysis Type: SV  
 Quant Type: ISTD  
 Operator: VTS  
 Method File: /chem1/nt12.i/20121114.b/lowbts.m  
 Misc Info: 12-22335

Calibration Date: 14-NOV-2012  
 Calibration Time: 11:51  
 Client Smp ID: SG-15-S-E-121107  
 Level: LOW  
 Sample Type: Sediment

Test Mode:  
 Use Initial Calibration Level 4.

COMPOUND =====	STANDARD =====	AREA LIMIT		SAMPLE =====	%DIFF =====
		LOWER	UPPER		
4 Tetrapentyl Tin	343457	171728	686914	390399	13.67
8 p-Terphenyl-d14	317005	158502	634010	371267	17.12

COMPOUND =====	STANDARD =====	RT LIMIT		SAMPLE =====	%DIFF =====
		LOWER	UPPER		
4 Tetrapentyl Tin	7.81	7.31	8.31	7.80	-0.17
8 p-Terphenyl-d14	8.78	8.28	9.28	8.78	0.00

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



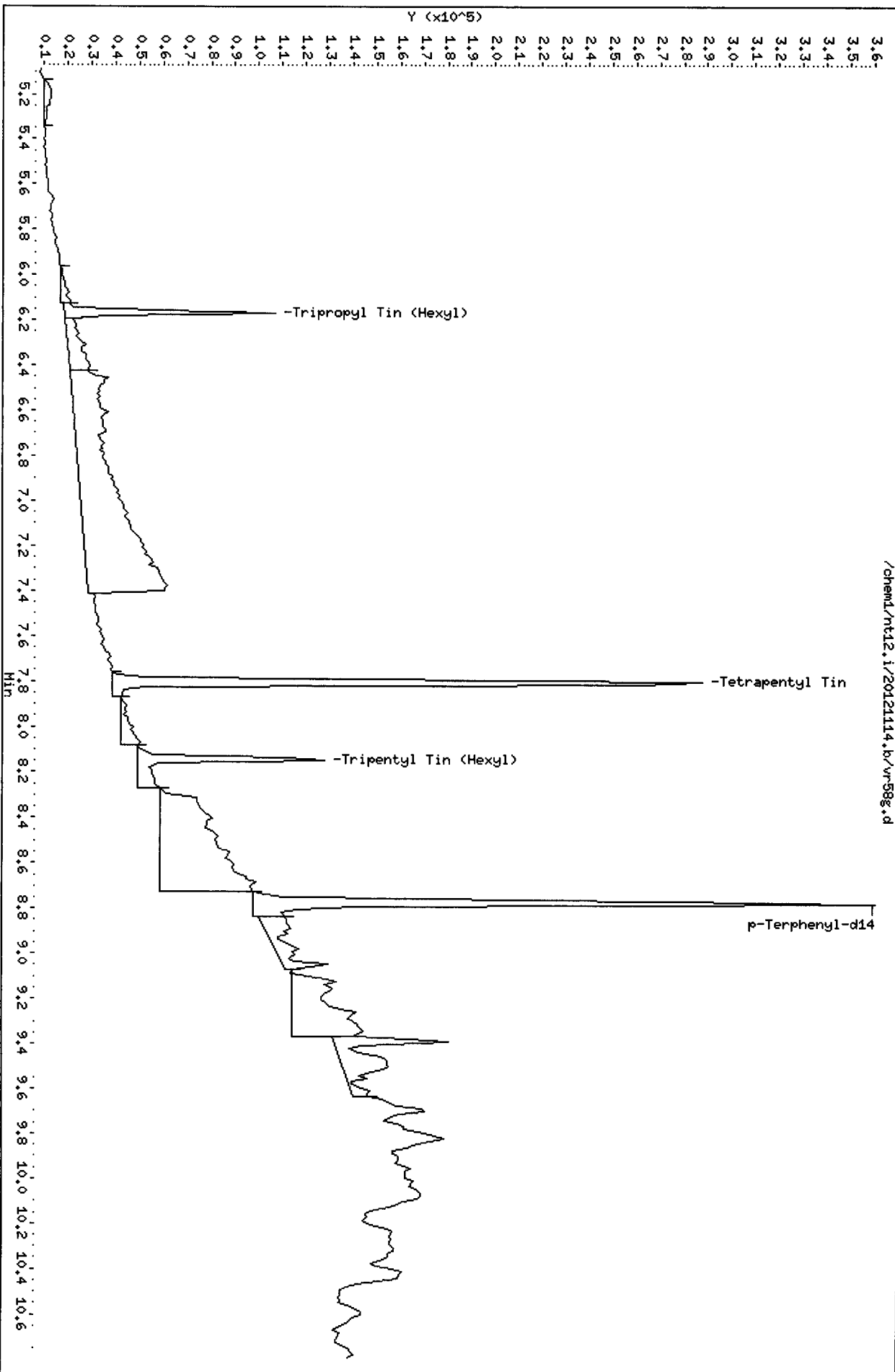
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA, LLC.  
Sample Matrix: SOLID  
Lab Smp Id: VR58G  
Level: LOW  
Data Type: MS DATA  
SpikeList File: tbtсед.spk  
Sublist File: SED.sub  
Method File: /chem1/nt12.i/20121114.b/lowbts.m  
Misc Info: 12-22335

Client SDG: VR58  
Fraction: SV  
Client Smp ID: SG-15-S-E-121107  
Operator: VTS  
SampleType: SAMPLE  
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
\$ 1 Tripropyl Tin (Hex	40.72	21.60	53.05	32-104
\$ 6 Tripentyl Tin (Hex	39.34	25.00	63.56	25-140



SG-15-S-E-121107

CO-ELUTION SUMMARY FOR FILE - vr58g.d

Lab ID: VR58G, Method: lowbts.m, Instrument: nt12.i, Date: 14-NOV-2012

RT            CO-ELUTION COMPOUNDS

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NO CO-ELUTIONS

Dioxin Raw Data  
Extraction Bench Sheets and Notes

ARI Job ID: VR58



# Dioxin / Furan Bench Sheet EPA Methods 8290 & 1613B Solid Samples

ARI Job No(s) VR58, VR82

Matrix (circle one)	Soil	Sediment	Oil	Tissue
Extraction Method	Start Time/Date:	End Time/Date:		
<u>Soxhlet</u>	<u>17:45</u>	<u>11/14/12</u>	<u>16:52</u>	<u>11/15/12</u>

Reagent / Standard	NA	ID / Lot Number	Initials	Date
Analytical Balance		SN 24650344	PD	11/14/12
Purified Sand		2/14/12	PD	11/14/12
Toluene		17837	PD	11/14/12
Hexane		47866 / E7553	PD / JW	11/15/12
CH <sub>2</sub> Cl <sub>2</sub>		I 7133	JW	11/20/12
H <sub>2</sub> SO <sub>4</sub>		I 7853	JW	11/16/12
Na <sub>2</sub> SO <sub>4</sub>		11-6-12	JW	11/20/12
Glasswool		S-18-12	↓	↓
10 % AgNO <sub>3</sub>				
Basic Silica		G933	JW	11/22/12
Acid Silica		H104	↓	↓
0% Silica		J7764	↓	↓
Activated Florisil		H103	↓	↓
Dual Carbon Column				
Other (P&S/M)		VMSA #1	PD	11/14/12
Nonane		35167	PD	11/21/12

Bottle ID	ARI Sample ID	Sample Weight (eq to dry wt)	Roto Vap	Final Vol.	H2O Trap Vol (mL)	Comments
11/14/12	VR58 MB	10.00g	(1)2	10uL	0.5	
↓	↓ OPR	10.00g	1/2	10uL	0.6	
	GLS	10.00g	1/2	10uL		
11/14/12	VR58 SRM	10.00g	(1)2	10uL	0.1	
3	A	17.18	(1)2	10uL	1.2	
	B	50.26	(1)2	10uL	1.7	
	C	32.44	1/2	10uL	15.5	
	D	41.77	(1)2	10uL	32.0	
	E	41.72	(1)2	10uL	18.2	
	F	21.21	(1)2	10uL	11.8	
	G	13.41	(1)2	10uL	3.8	
	H	12.68	(1)2	10uL	3.2	
	I	21.54	(1)2	10uL	4.8	
	J	12.74	(1)2	10uL	2.0	
	VR52 A	32.08	1/2	10uL	22.6	
	B	40.38	(1)2	10uL	19.0	
	C	11.91	(1)2	10uL	2.0	
	D	29.67	1/2	10uL	10.7	
	E	34.65	(1)2	10uL	6.4	
	F	28.64	(1)2	10uL	8.0	
	G	22.53	1/2	10uL	7.1	
	H	24.65	1/2	10uL	5.8	
	I	27.95	(1)2	10uL	8.0	
↓	VR52 J	11.94	(1)2	10uL	1.8	
	Prep Analyst/Date	PD 11/14/12	PD 11/15/12	PD 11/22/12		

Reagent / Standard	Vol	ID / Lot Number	Solution Conc.	Expiration Date	Initials	Date	Witness
Recovery Standard	1.0 mL	2035-3	24ng/mL	11/3/13	PD	11/14/12	WV
Spiking Precision /Recovery	20 µL	1954-3	10/50/100ng/mL	2/21/13	PD	11/14/12	WV
GLS Standard	10 µL	21/	0.5/2.5/5ng/mL	11/03/13	JW	11/22/12	WV
Clean-up Standard	1.0 mL	2035-4	0.8ng/mL	11/20/12	JW	11/21/12	EP
Internal Standard	10 µL		200ng/mL				

Analyst/Date	Verify Client ID
PD 11/14/12	Acid Clean
JW 11/16/12	Silica-Florisil
JW 11/22/12	



ARI Job No.: VR58

Client ID: Anchor QEA, LLC

Parameter:

Client Project:

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
<input checked="" type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)= <u>ABCDEFGHI, H, I, J,</u>	<u>ET 11/8/12</u>
<input checked="" type="checkbox"/> Standing Water Decanted (Not shared)= <u>ABCDEFGHI, H, I, J,</u>	<u>ET 11/8/12</u>
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=	
<input checked="" type="checkbox"/> Rocks (%+size)? <u>F, 2% small rocks</u>	<u>ET 11/8/12</u>
<input checked="" type="checkbox"/> Organics (Leaves/sticks/grass)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Other (Details)=	
<b>Aqueous:</b>	
<input type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
<input type="checkbox"/> Emulsions (%)=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Other Notes/Comments= (Note problems, concerns, corrective actions). (Centrifuge#1 used for all Centrifugations)	
<u>VR58B double acid silica gel</u>	<u>JE 11/20/12</u>

VR58 : 01454

Dioxin Raw Data  
Initial Calibration

ARI Job ID: VR58

### HR-GC/MS Analyst Notes / Corrective Action Log

ARI Project ID: \_\_\_\_\_ Client ID: \_\_\_\_\_

ARI SOP: 806S (Dioxins)

Parameter(s): Dioxin Curve 11/23/12

Instrument: AutoSpec01

Curve Date: 11/23/12 Analysis Start Date: \_\_\_\_\_

Internal Standard Meets Criteria?	<input checked="" type="radio"/> YES / NO	Method Blank in Control?	YES / NO
Extraction Std Recovery in Control?	<input checked="" type="radio"/> YES / NO	IPR / OPR Recovery in Control?	YES / NO
Cal acceptable?	<input checked="" type="radio"/> YES / NO	CCal acceptable?	YES / NO
Manual Integrations for ICal?	<input checked="" type="radio"/> YES / NO	Manual Integrations for Samples?	Yes / NO
Special Analysis Criteria Met?	YES / NO / NA		

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

- All cups 6 pts: CSL - CS5
- All < 20% RSD
- Man. Int. for HpD in CSL.

Additional Details on Reverse: Yes / No

Analyst: Alex Date: 11/26/12

Reviewer: \_\_\_\_\_ Date: \_\_\_\_\_



Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.: GC=CN10921030, MS=P764

Date: 1/23/12 Analysis: Dioxins Analyst: JH  
GC Program: 8090C Column No: 1081305 Column Type: MSX Dioxin 2  
Inj Vol: 1ul Instrument Tune (IPR): 10158290B Detector Voltage: 350  
Resolution Check Files: 10:33, 21:14 Curve Date: 1/23/12

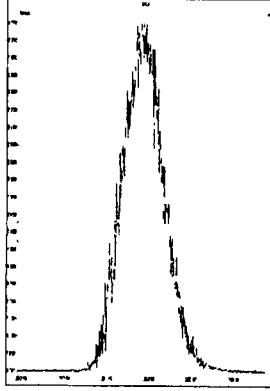
IS/SS	Ical/Ccal	LCS/ICV
<u>IT908</u>	<u>IT214</u>	
	<u>1997-2</u>	

1	23-Nov-12	10:34:06	12112302	PCDFS	39.6	39.6	17084
2	23-Nov-12	11:24:26	12112303	CS3	39.6	39.6	2672022
3	23-Nov-12	12:16:42	12112304	ISC01	2.5		
4	23-Nov-12	14:07:24	12112305	CSL	39.6	39.6	3137527
5	23-Nov-12	15:02:34	12112306	CS1	39.6	39.6	3300814
6	23-Nov-12	15:55:02	12112307	CS2	39.6	39.6	3479761
7	23-Nov-12	16:45:35	12112308	CS3	39.6	39.6	2679815
8	23-Nov-12	17:37:45	12112309	CS4	39.6	39.6	3593846
9	23-Nov-12	18:30:06	12112310	CS5	39.6	39.6	8062691
10	23-Nov-12	19:22:21	12112311	ICV	39.6	39.6	2718432

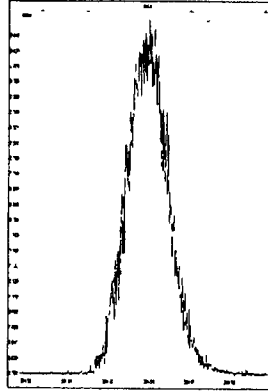
*JH 1/29/12*

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

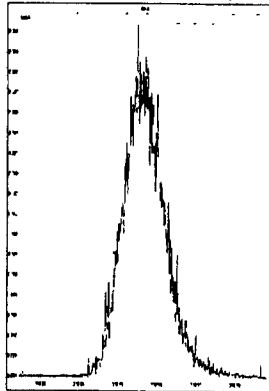
M 292.9824 R 13021



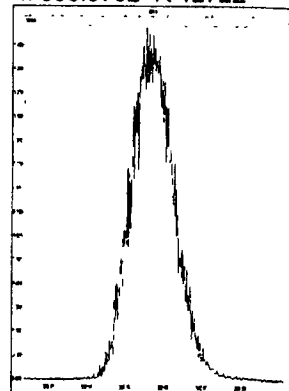
M 304.9824 R 13262



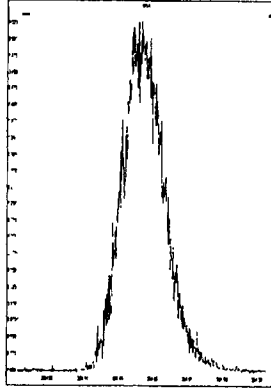
M 318.9792 R 12965



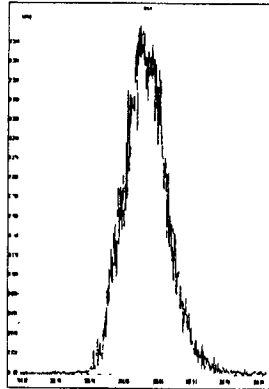
M 330.9792 R 12722



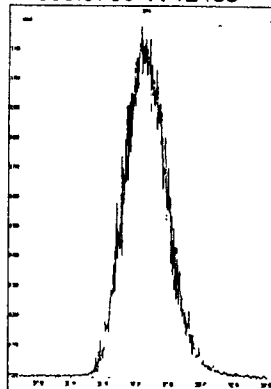
M 354.9792 R 13023



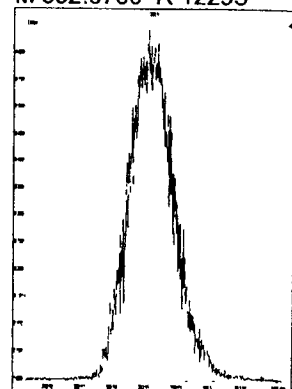
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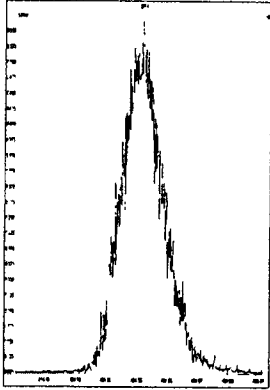
M 380.9760 R 12438



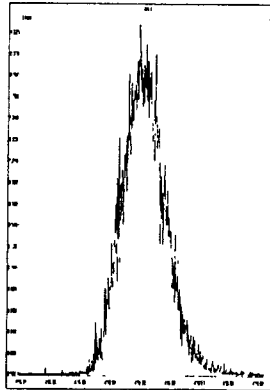
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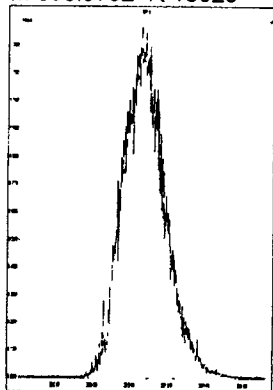
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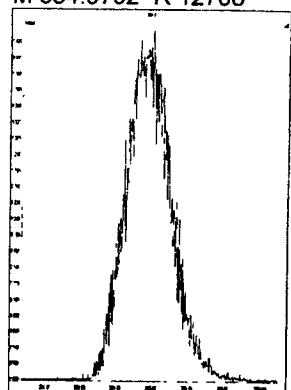
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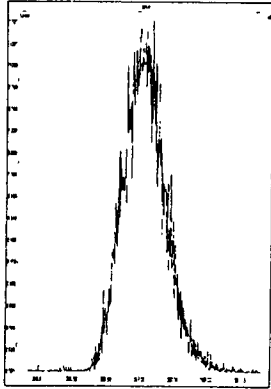
M 330.9792 R 13025



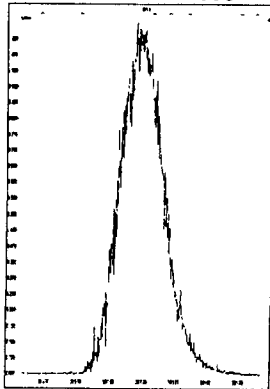
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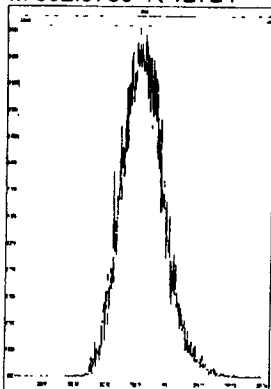
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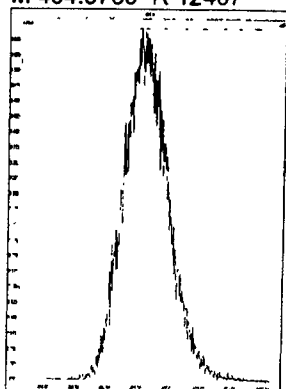
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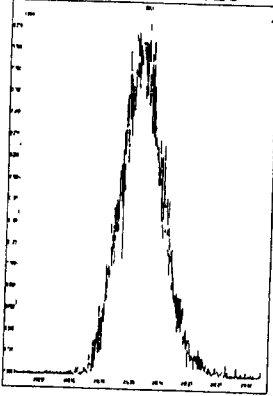
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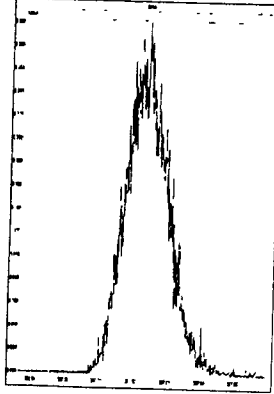
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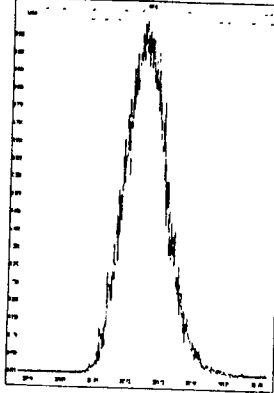
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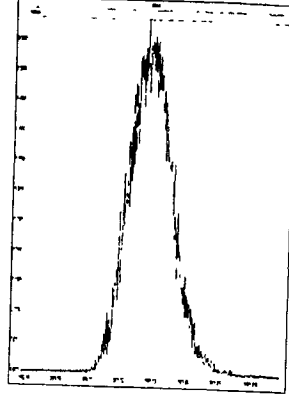
M 366.9792 R 13661



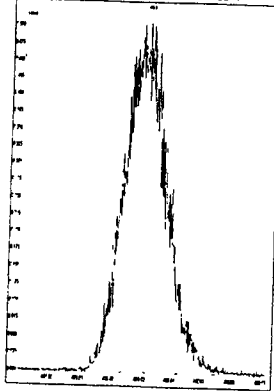
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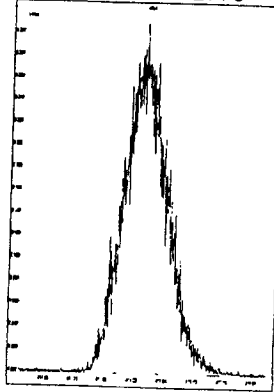
M 392.9760 R 12661



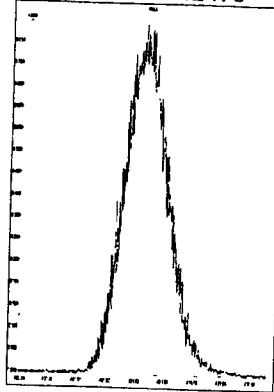
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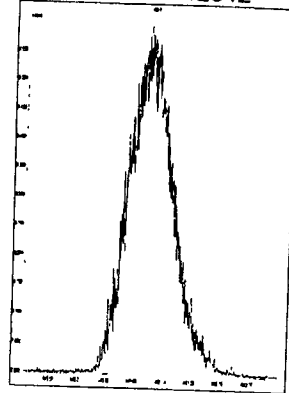
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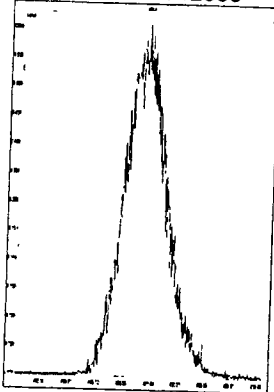
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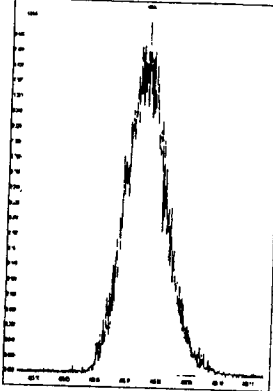
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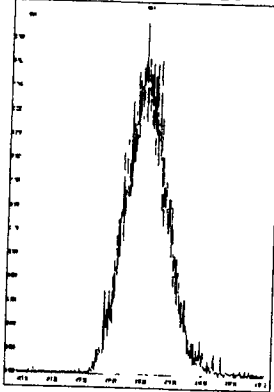
M 454.9728 R 12855



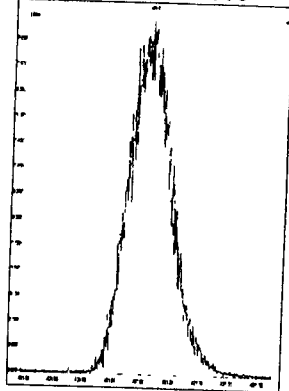
M 404.9760 R 13138



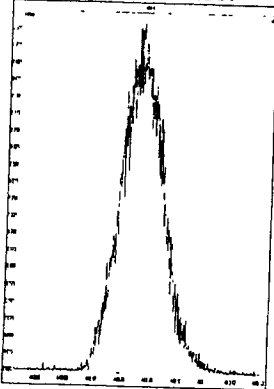
M 416.9760 R 12926



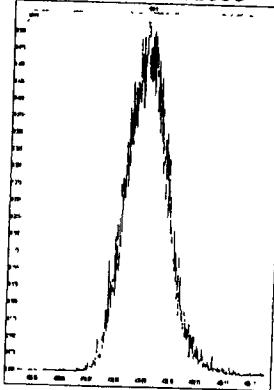
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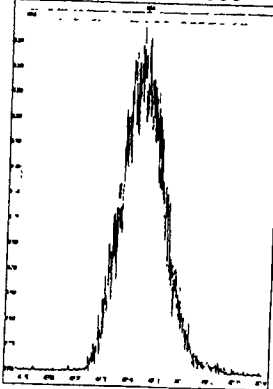
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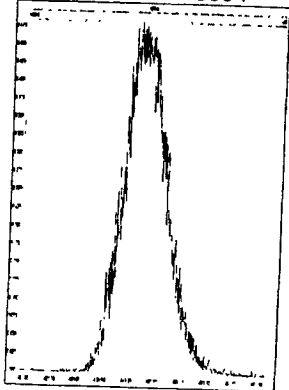
M 454.9728 R 12658



M 466.9728 R 12855

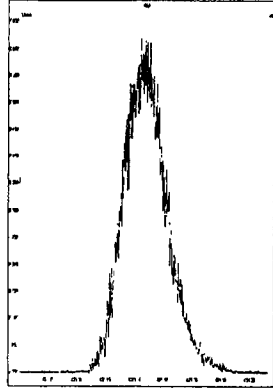


M 480.9696 R 13094

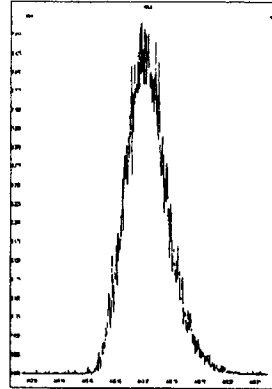


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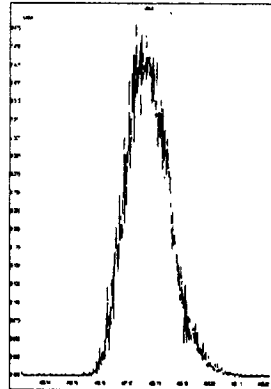
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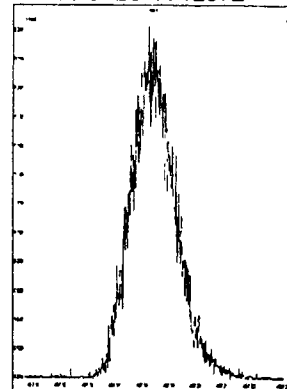
M 442.9728 R 12626



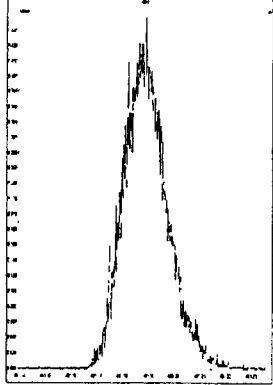
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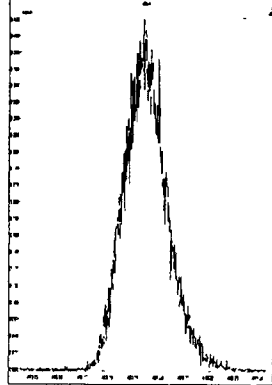
M 466.9728 R 12872



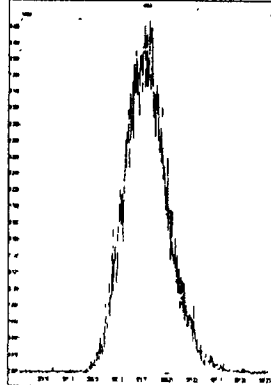
M 480.9696 R 12565



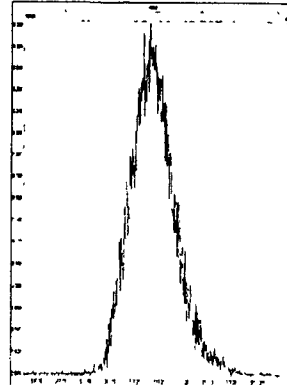
M 492.9696 R 12499



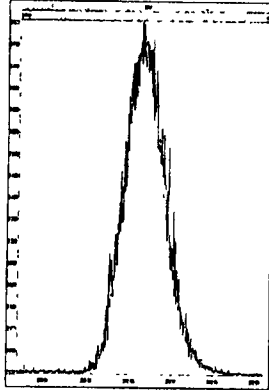
M 504.9696 R 12660



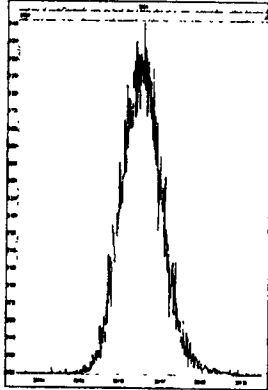
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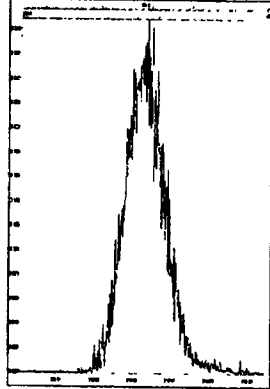
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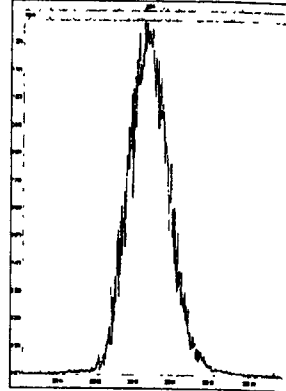
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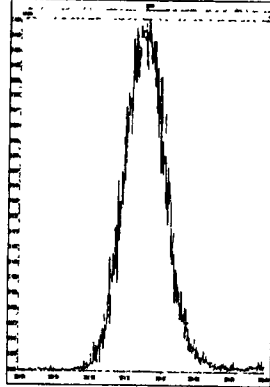
M 318.9792 R 14165



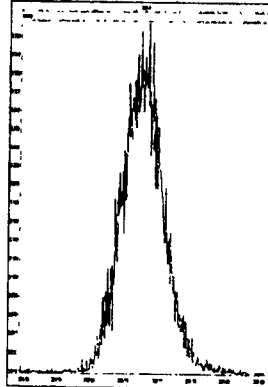
M 330.9792 R 13590



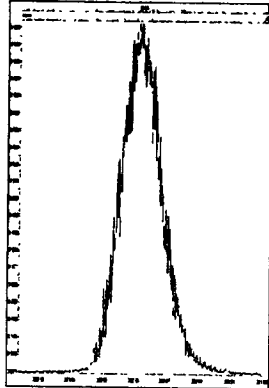
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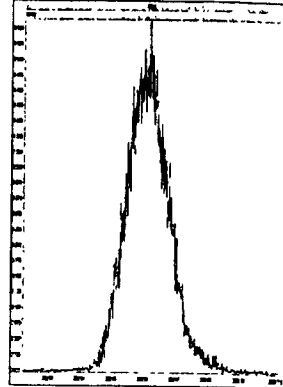
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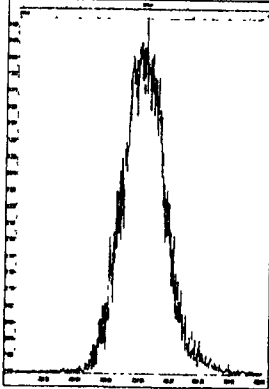
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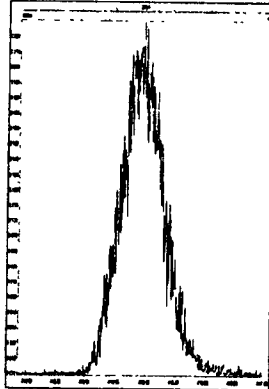
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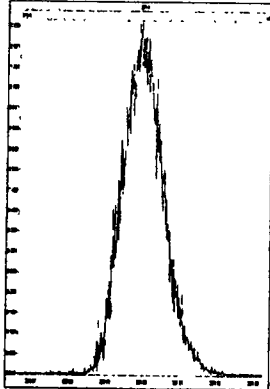
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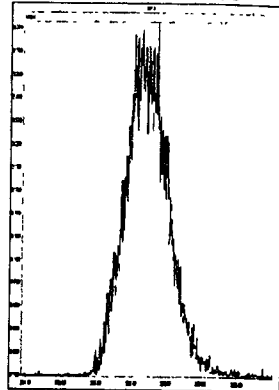
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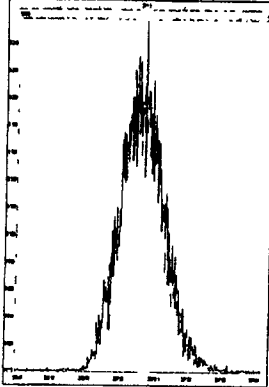
M 330.9792 R 13335



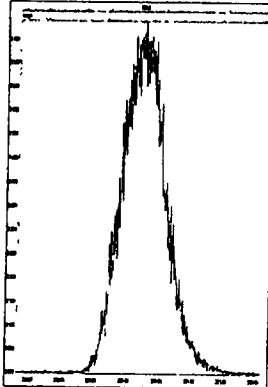
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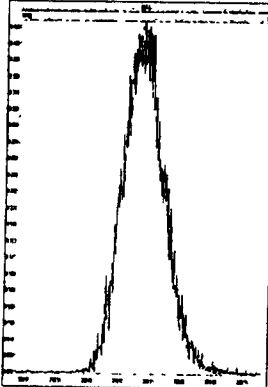
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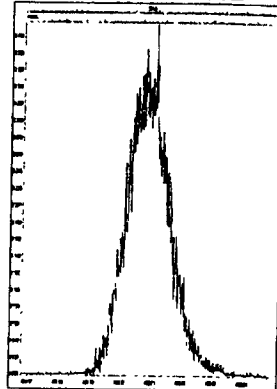
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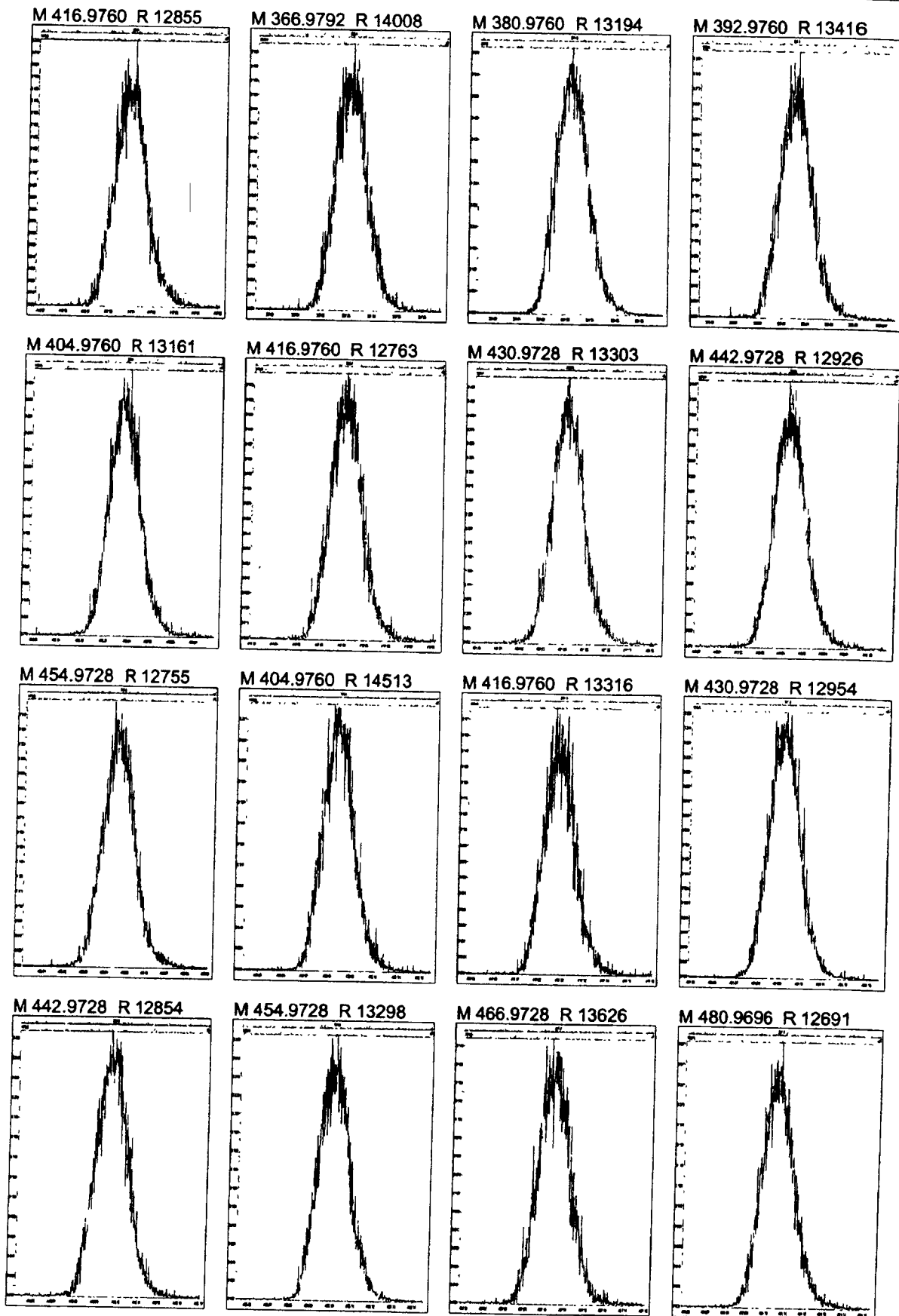


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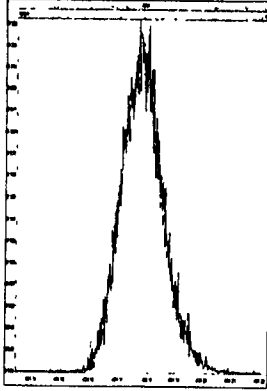
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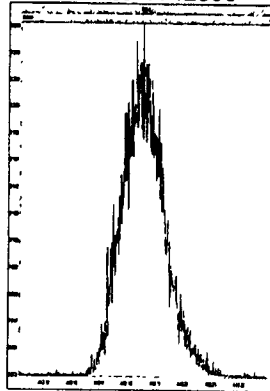


Printed: Friday, November 23, 2012 21:14:57 Pacific Standard Time

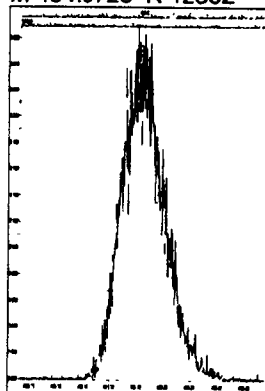
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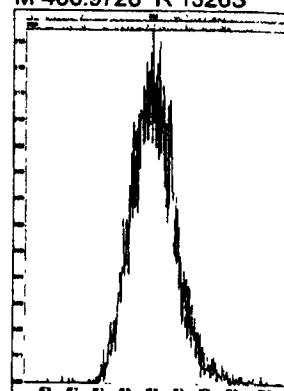
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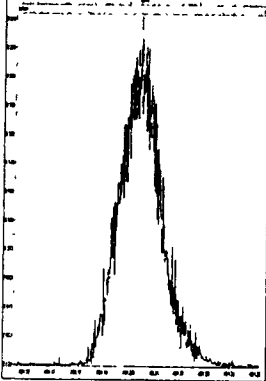
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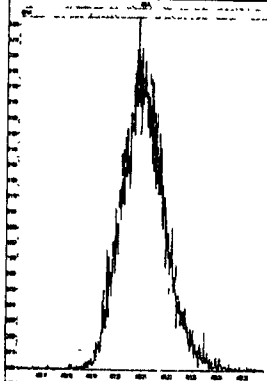
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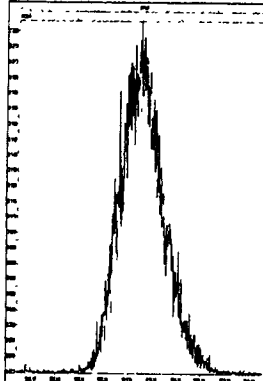
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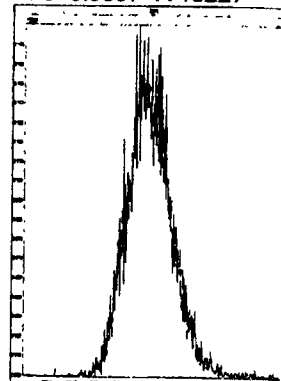
M 492.9696 R 12658



M 504.9696 R 12986

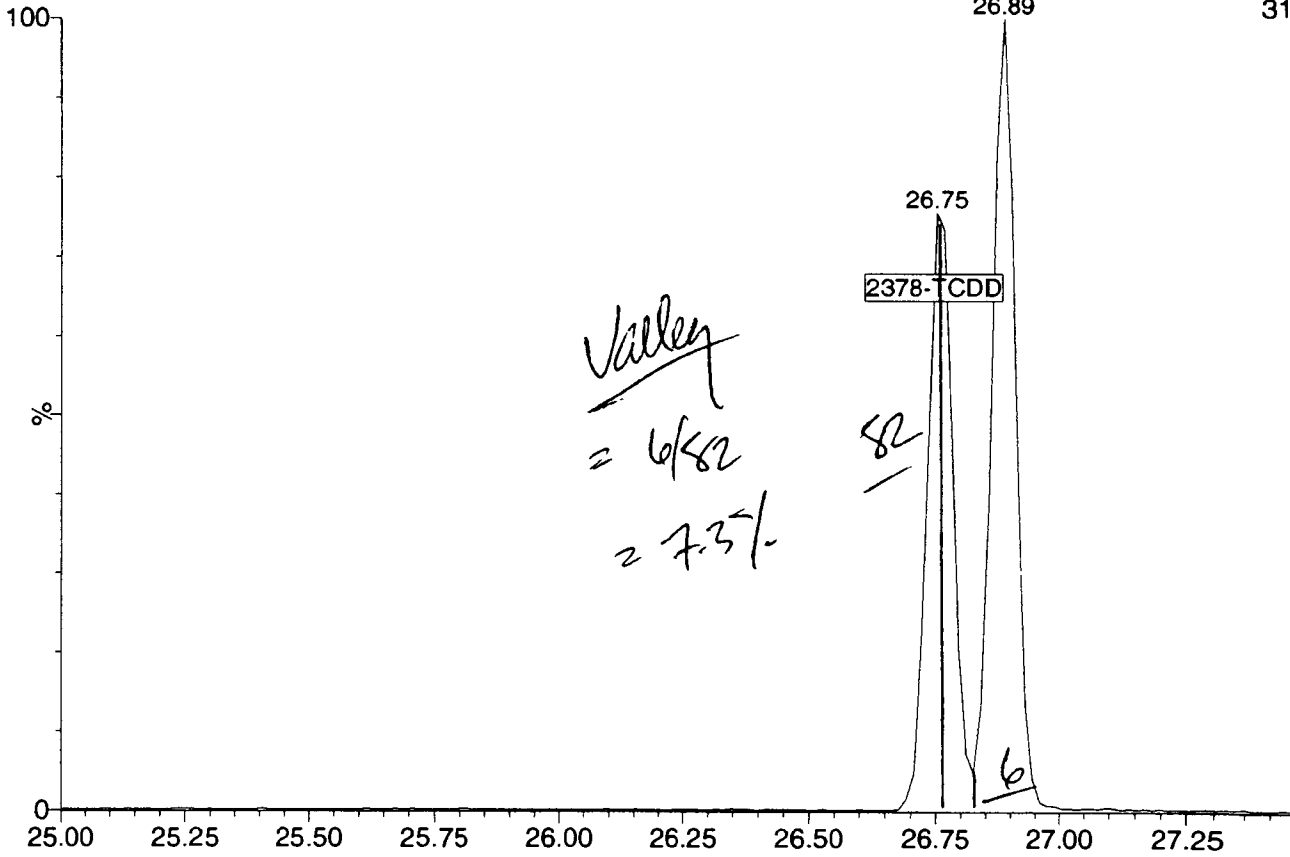


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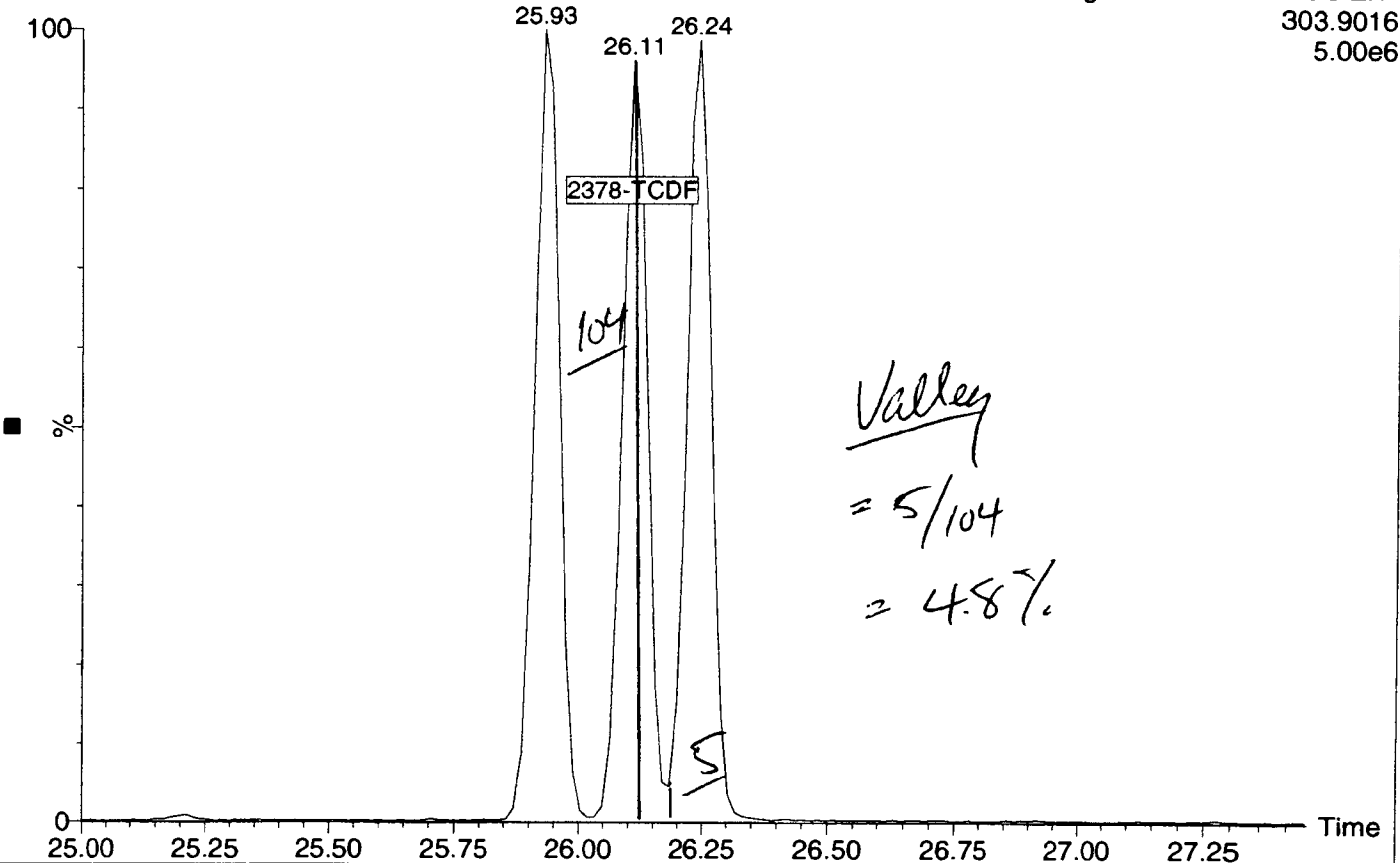
12112304

1: Voltage SIR 15 Channels EI+  
26.89  
319.8965  
4.73e6



12112304

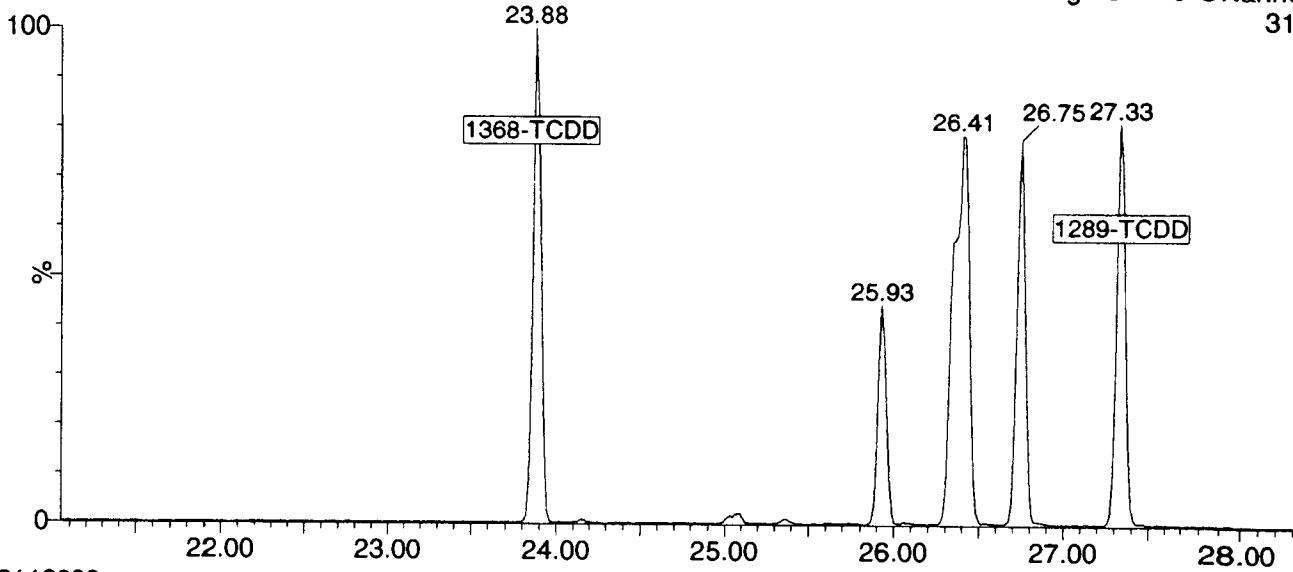
1: Voltage SIR 15 Channels EI+  
303.9016  
5.00e6





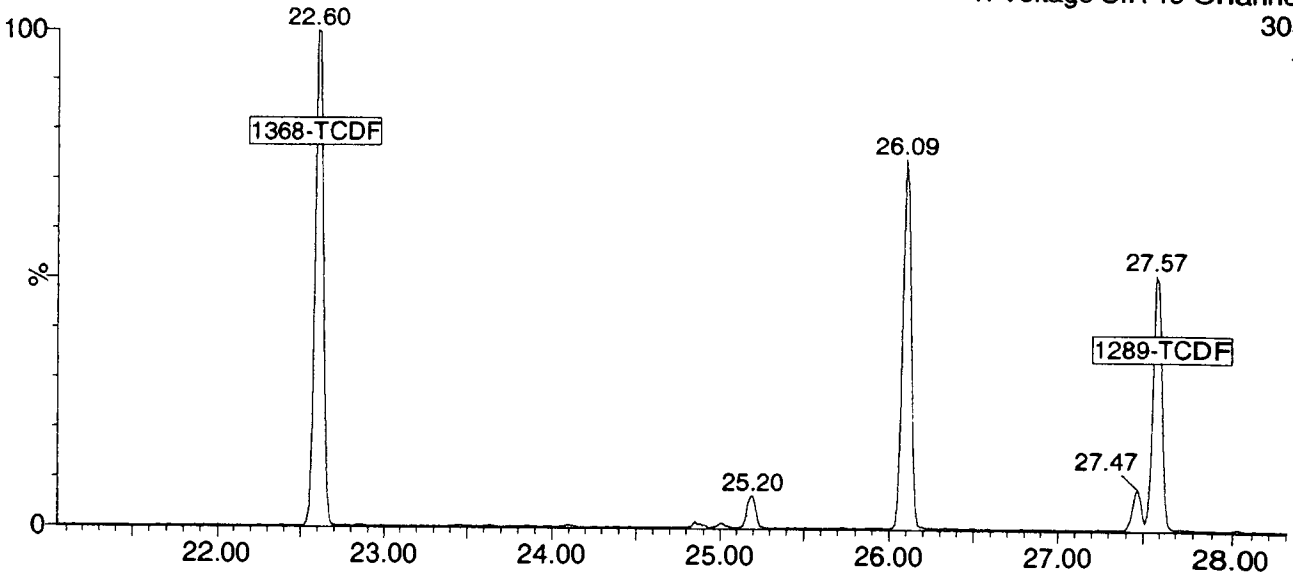
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1: Voltage SIR 15 Channels EI+  
319.8965  
3.68e6



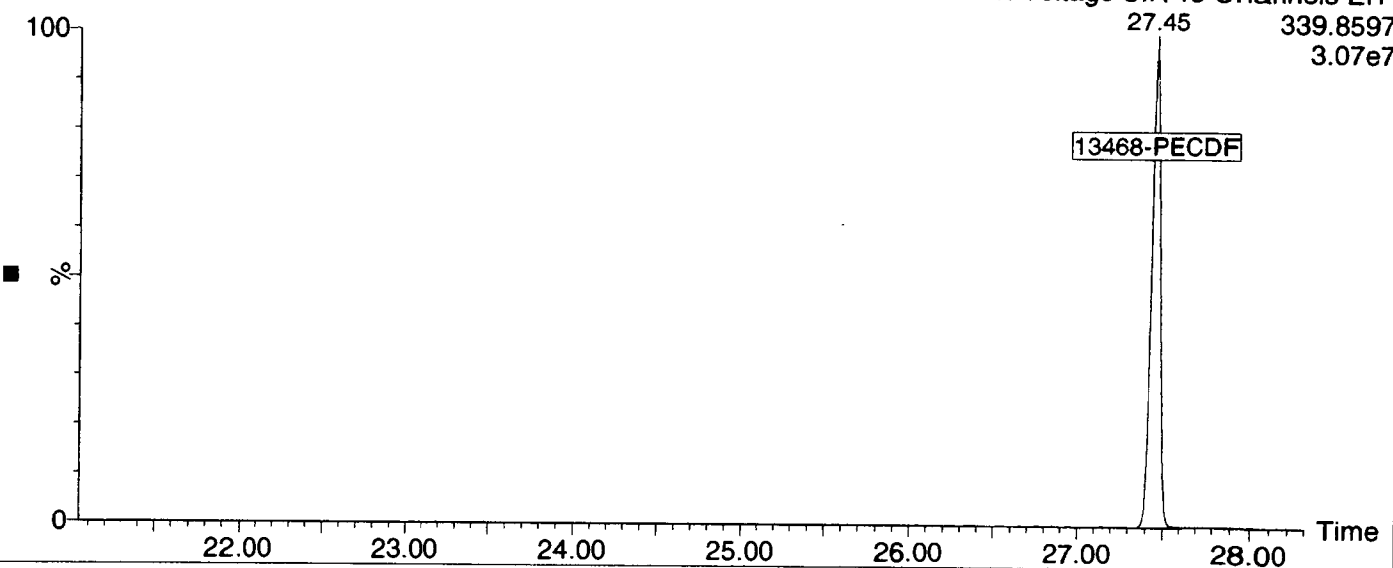
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1: Voltage SIR 15 Channels EI+  
303.9016  
4.84e6



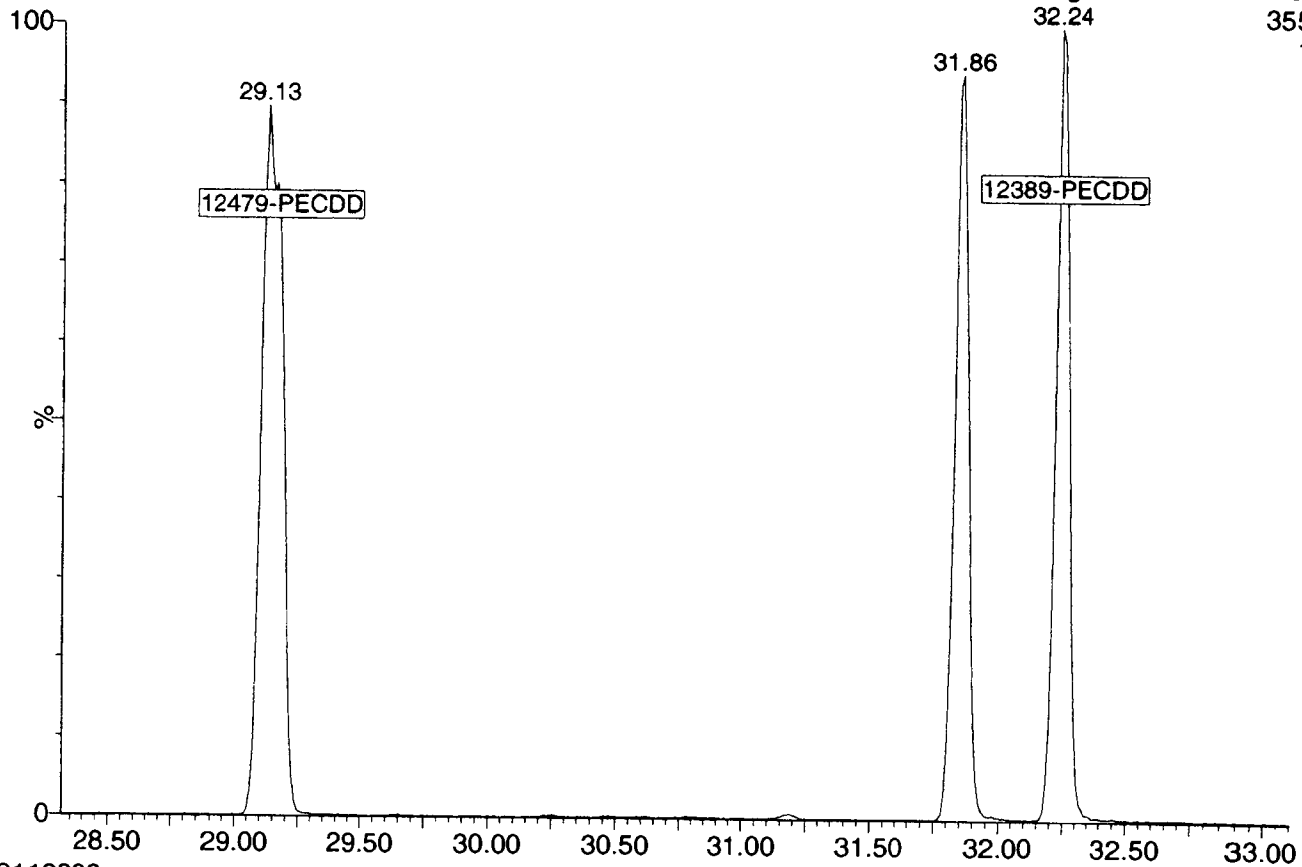
12112303

1: Voltage SIR 15 Channels EI+  
339.8597  
3.07e7



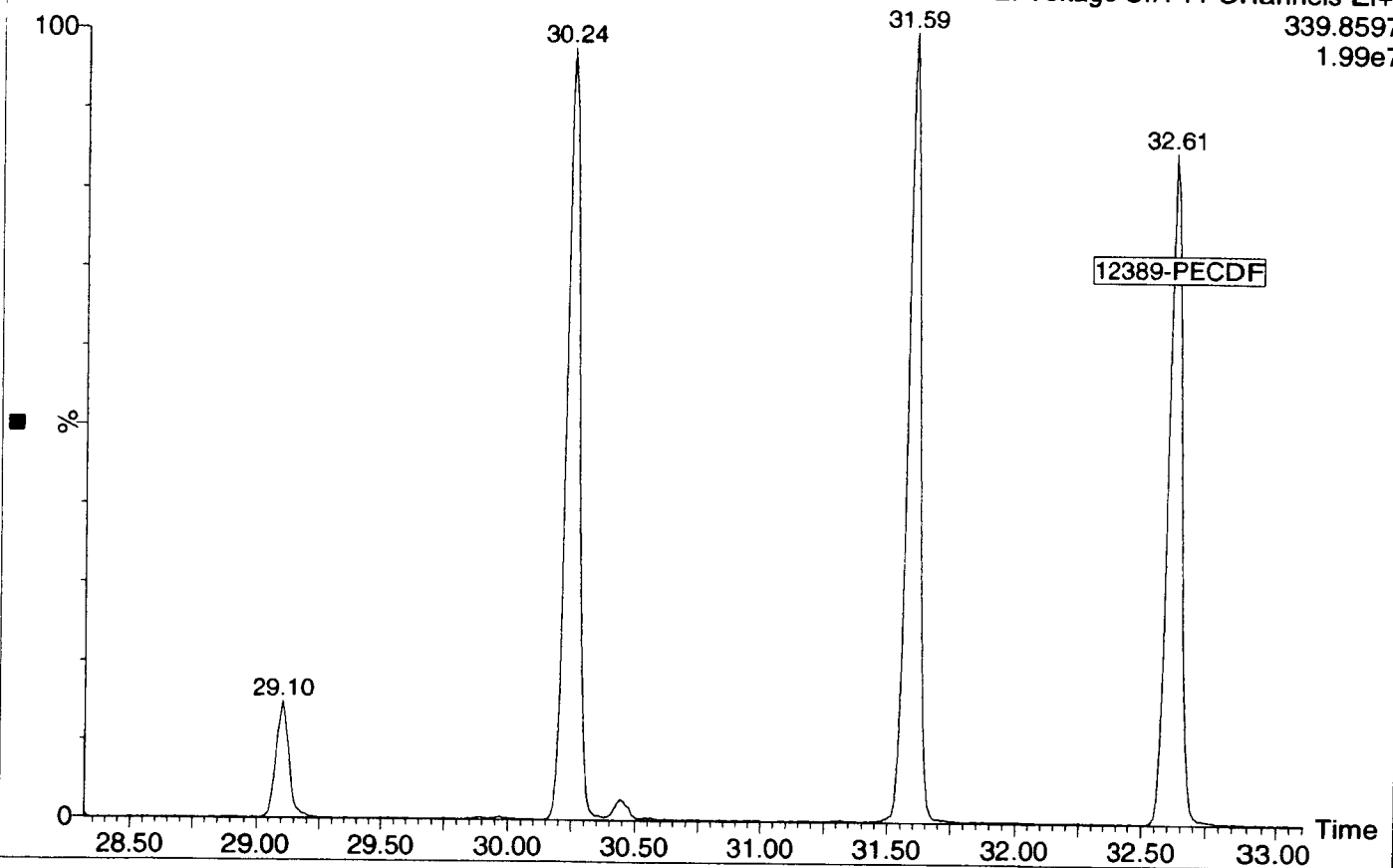
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2: Voltage SIR 11 Channels EI+  
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1.43e7



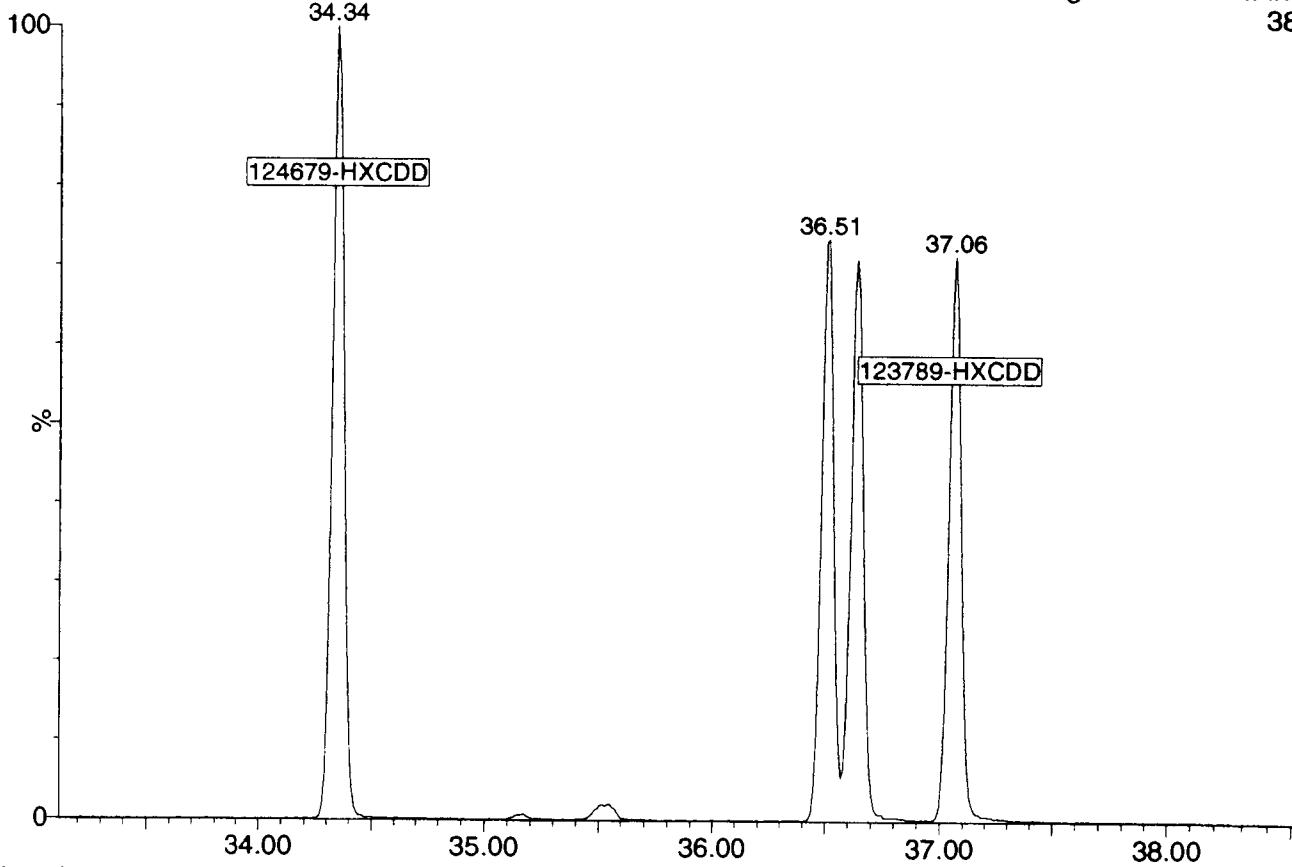
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2: Voltage SIR 11 Channels EI+  
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1.99e7



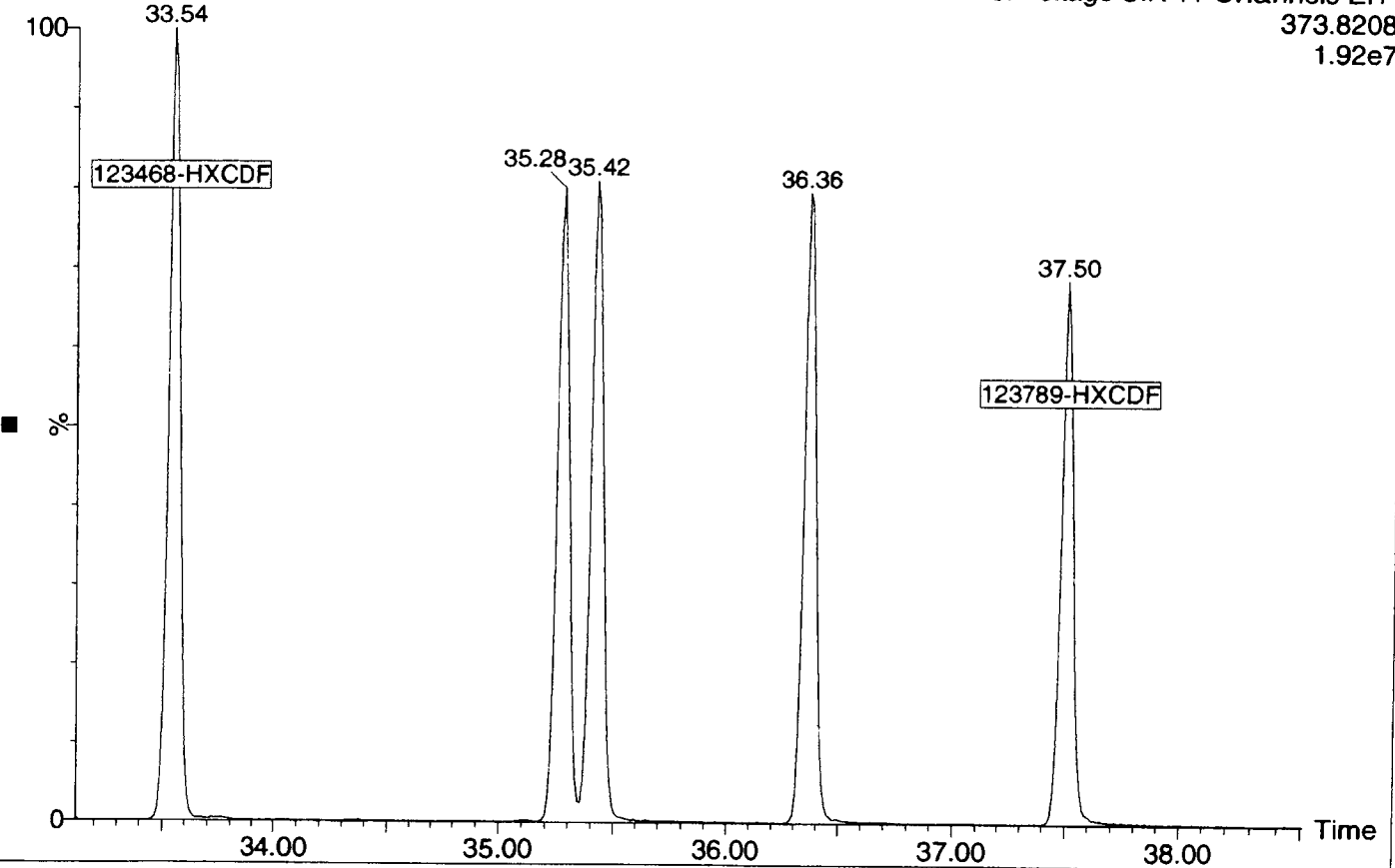
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3: Voltage SIR 11 Channels EI+  
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1.57e7



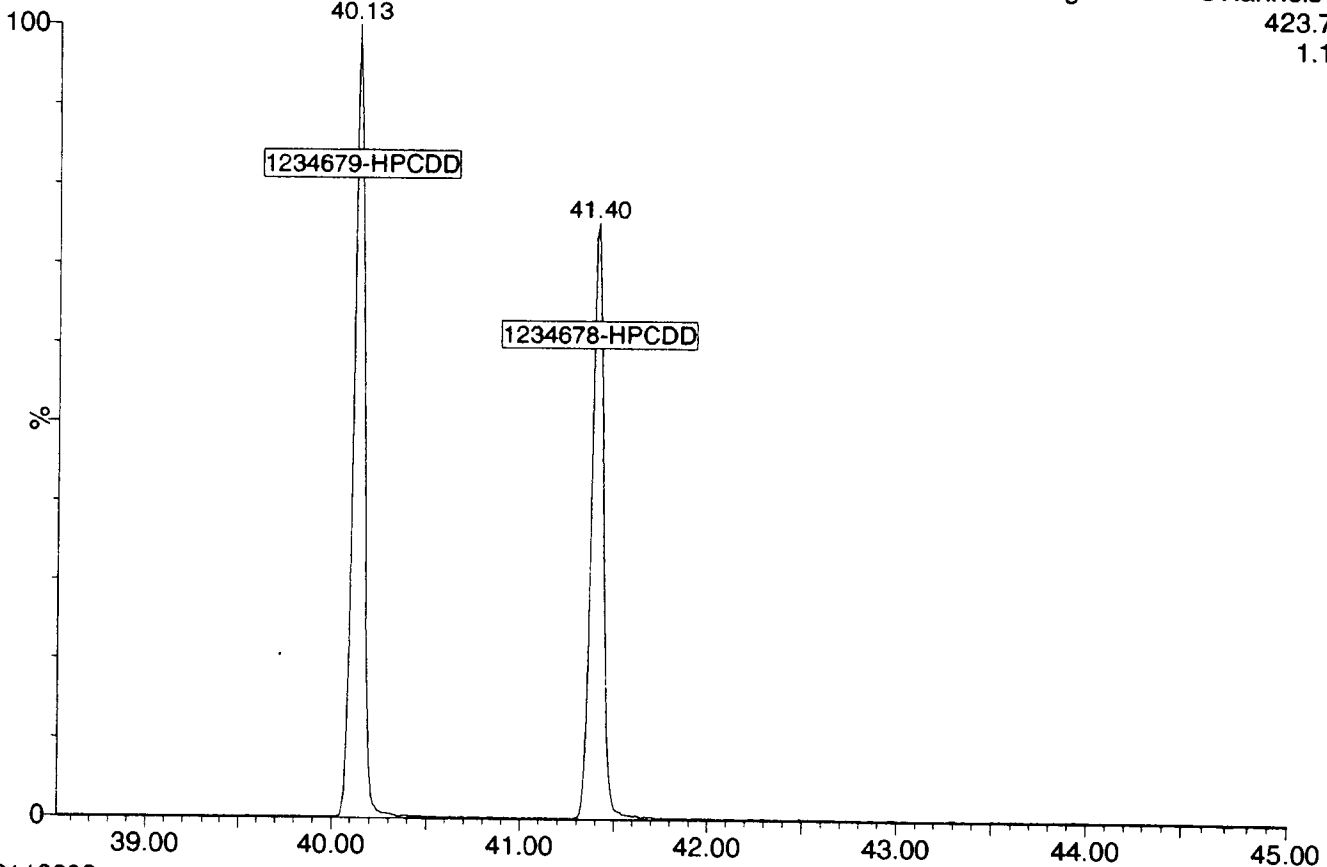
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3: Voltage SIR 11 Channels EI+  
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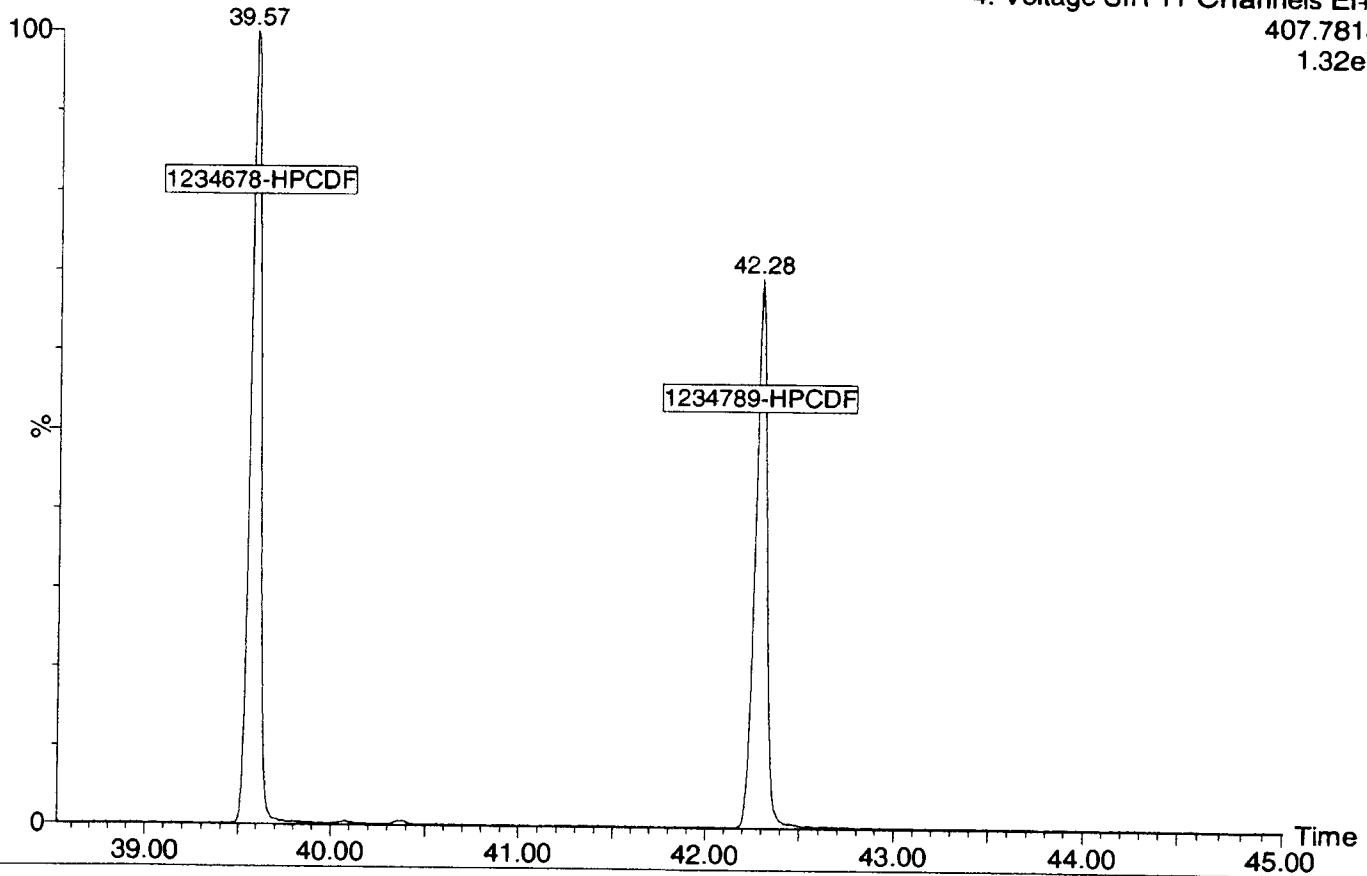
12112303

4: Voltage SIR 11 Channels EI+  
423.7766  
1.10e7



12112303

4: Voltage SIR 11 Channels EI+  
407.7818  
1.32e7



Dataset: P:\DIOXIN8290.PRO\121123IC.qid  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin\121123.mdb 23 Nov 2012 12:31:40  
Callibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.108	1.001	2721	3557	6278	bb	0.877	0.765	0.770	NO	11.7	0.111
12378-PeCDF	30.244	1.000	13232	9002	22234	bb	0.896	1.470	1.550	NO	120.9	0.502
23478-PeCDF	31.604	1.001	14060	9420	23480	bb	0.926	1.492	1.550	NO	119.8	0.525
123478-HxCDF	35.275	1.001	10621	8655	19276	bd	1.068	1.227	1.240	NO	99.2	0.496
234678-HxCDF	36.361	1.000	10351	8987	19338	bb	1.037	1.152	1.240	NO	94.2	0.492
123678-HxCDF	35.429	1.001	10585	8952	19538	db	1.035	1.182	1.240	NO	94.6	0.493
123789-HxCDF	37.500	1.000	9311	7489	16801	bb	0.967	1.243	1.240	NO	85.3	0.490
1234678-HpCDF	39.572	1.000	10429	9919	20348	bb	1.232	1.051	1.050	NO	246.1	0.509
1234789-HpCDF	42.290	1.001	7252	7572	14824	bb	1.215	0.958	1.050	NO	137.5	0.489
OCDF	47.620	1.006	11389	14077	25466	bb	1.138	0.809	0.890	NO	121.1	0.979
2378-TCDD	26.750	1.001	2061	2675	4736	bb	1.049	0.770	0.770	NO	20.2	0.109
12378-PeCDD	31.855	1.001	9330	6316	15646	bb	0.998	1.477	1.550	NO	58.1	0.497
123478-HxCDD	36.514	1.001	7902	6024	13926	bd	0.971	1.312	1.240	NO	76.4	0.469
123678-HxCDD	36.635	1.000	8132	5933	14065	db	0.918	1.370	1.240	NO	84.8	0.487
123789-HxCDD	37.062	1.012	7855	6930	14785	bb	0.932	1.133	1.240	NO	74.0	0.511
1234678-HpCDD	41.403	1.001	6787	7558	14345	MM	1.017	0.898	1.050	NO	94.8	0.529
OCDD	47.360	1.001	11430	12431	23860	bb	1.008	0.919	0.890	NO	160.1	1.035
13C-2378-TCDF	26.083	1.007	2828660	3619955	6448615	bb	1.473	0.781	0.770	NO	3101.3	100.398
13C-12378-PeCDF	30.233	1.167	3008237	1937844	4946081	bb	1.148	1.552	1.550	NO	11982.4	98.789
13C-23478-PeCDF	31.571	1.218	2946904	1888759	4833663	bb	1.113	1.562	1.550	NO	11263.7	99.593
13C-123478-HxCDF	35.254	0.951	1246027	2393443	3639470	bd	1.209	0.521	0.510	NO	4957.8	95.946
13C-123678-HxCDF	35.407	0.956	1322227	2510932	3833159	db	1.269	0.527	0.510	NO	5296.4	96.302
13C-234678-HxCDF	36.349	0.981	1301939	2491248	3793187	bb	1.236	0.523	0.510	NO	5273.9	97.829
13C-123789-HxCDF	37.489	1.012	1196154	2281905	3478058	bb	1.107	0.524	0.510	NO	4910.8	100.165
13C-1234678-HpCDF	39.561	1.068	1007048	2236531	3243579	bb	1.051	0.450	0.440	NO	4140.9	98.352
13C-1234789-HpCDF	42.269	1.141	780470	1716306	2496776	bb	0.815	0.455	0.440	NO	2662.4	97.677
13C-1234-TCDD	25.914	0.000	1924593	2437145	4361738	bb	1.000	0.790	0.770	NO	3730.8	100.000
13C-2378-TCDD	26.736	1.032	1812636	2336375	4149011	bb	0.946	0.776	0.770	NO	3358.5	100.581
13C-12378-PeCDD	31.834	1.228	1933049	1219518	3152566	bb	0.721	1.585	1.550	NO	12611.4	100.292
13C-123478-HxCDD	36.492	0.985	1707469	1348165	3055633	bd	0.991	1.266	1.240	NO	3619.9	98.289
13C-123678-HxCDD	36.624	0.988	1743110	1403686	3146797	db	1.025	1.242	1.240	NO	3657.2	97.880
13C-1234678-HpCDD	41.381	1.117	1370276	1297335	2667611	bb	0.866	1.056	1.050	NO	7173.0	98.161
13C-OCDD	47.324	1.277	2150377	2420502	4570879	bb	0.769	0.888	0.890	NO	10573.6	189.417

Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

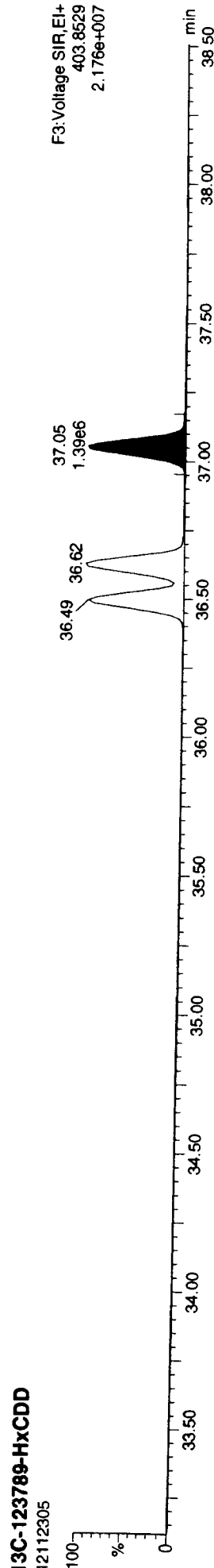
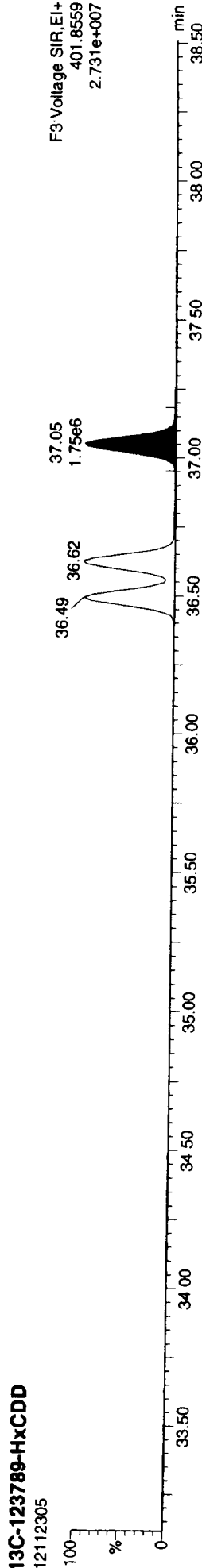
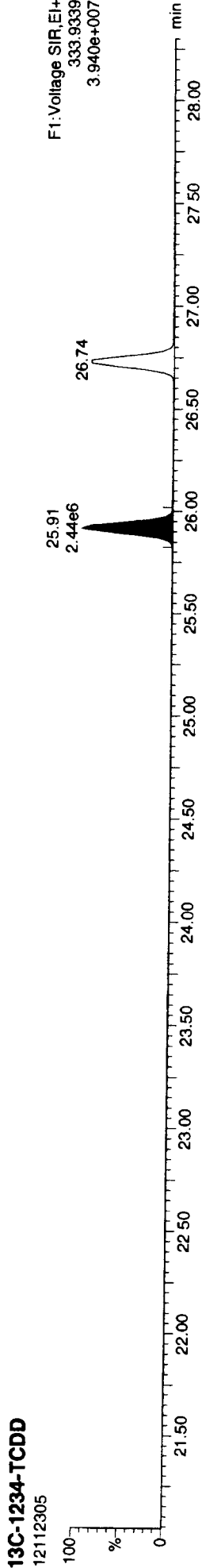
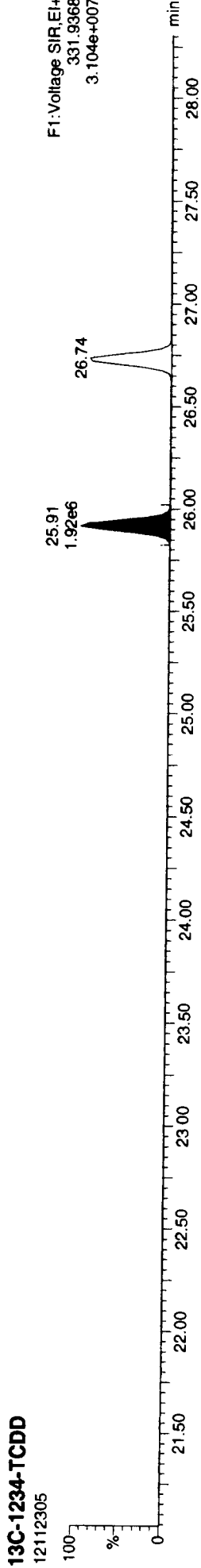
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13C-123789-HxCDD			2721				0.877						
Total-tetrafurans			0										
Total-penta			27292				0.911					1.030	1.026
Total-pentafurans			40868				1.032					1.970	1.970
Total-hexafurans			17682				1.223					0.998	0.998
Total-heptafurans			99953				1.041					5.088	5.084
Total-Furans			2061				1.049					0.109	0.109
Total-tetraoxins			9330				0.998					0.497	0.497
Total-pentadioxins			23888				0.940					1.468	1.468
Total-hexadioxins			6787				1.017					0.529	0.529
Total-heptadioxins			53495				0.985					3.638	3.638
Total-Dioxins			153448									8.726	8.722
Total-TEQ			4783		4783		1.044				15.0		0.105
37CL-2378-TCDD	26.750	1.032											
FUNCTION1 PFK			609450										
FUNCTION2 PFK			1441384										
FUNCTION3 PFK			894386										
FUNCTION4 PFK			1005733										
FUNCTION5 PFK			2477494										
FUNCTION1 HXCDPE			1692										0.000
FUNCTION1 HPCDPE			2571										0.000
FUNCTION2 HPCDPE			1054										0.000
FUNCTION3 OCDPE			157										0.000
FUNCTION4 NCDPE			401										0.000
FUNCTION5 DCDPE			0										0.000

Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121123IC.qid  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin\121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

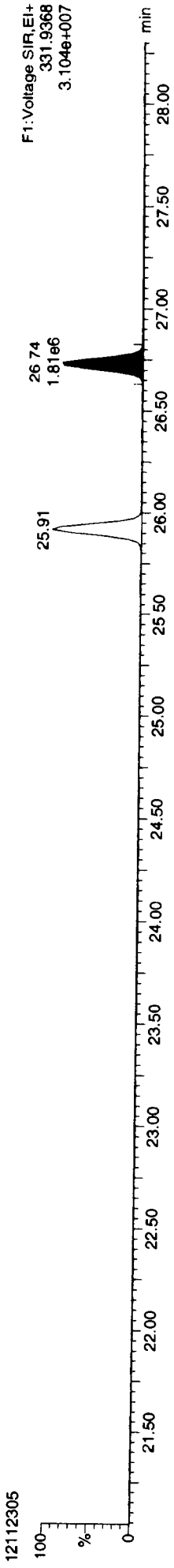
Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk



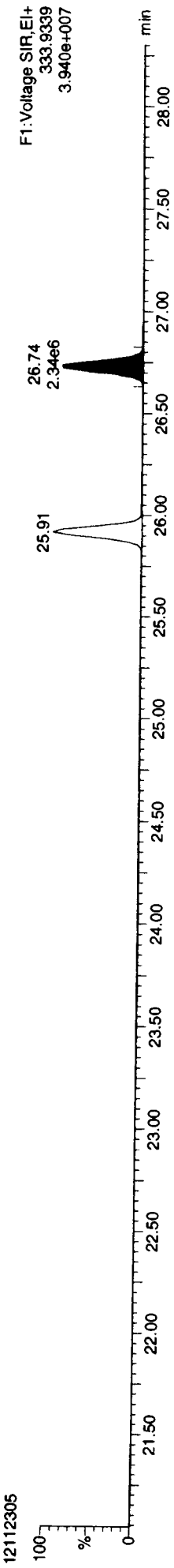
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\12112305.gld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

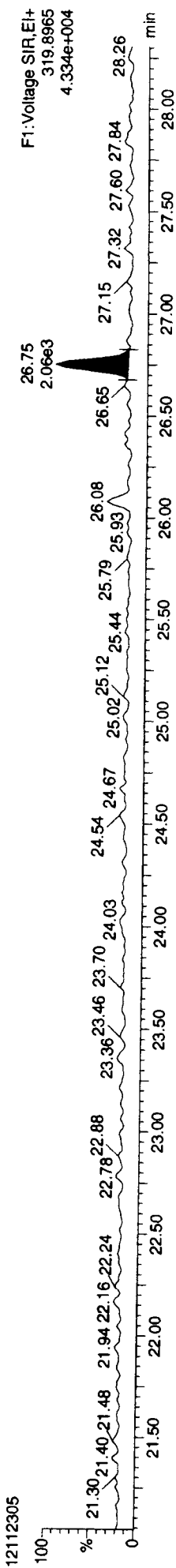
13C-2378-TCDD



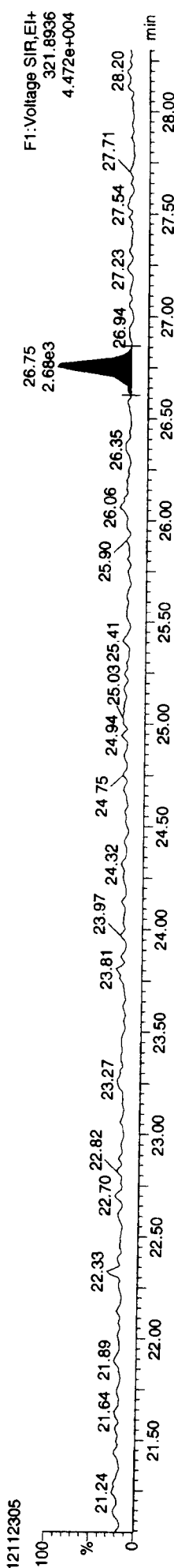
13C-2378-TCDD



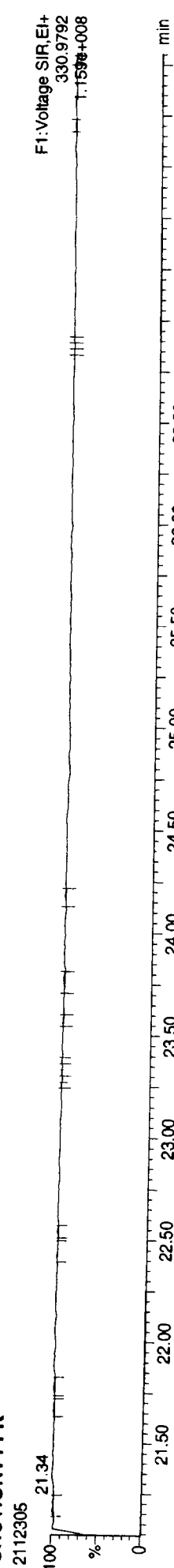
Total-tetradoxins



Total-tetradoxins



FUNCTION1 PFK



CSL 11/26/12 14:07:24

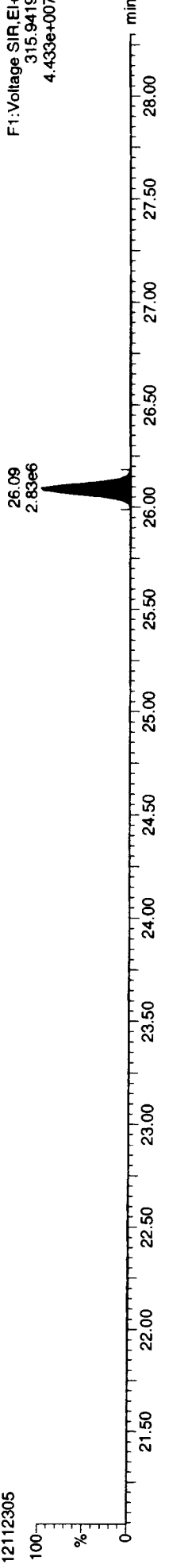


Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121123\C.dld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

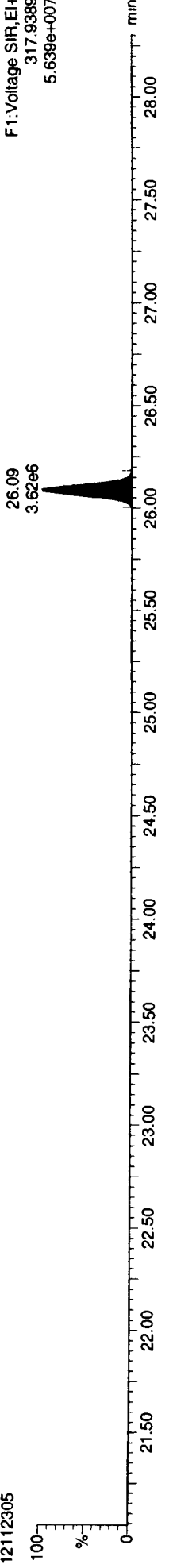
Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-2378-TCDF



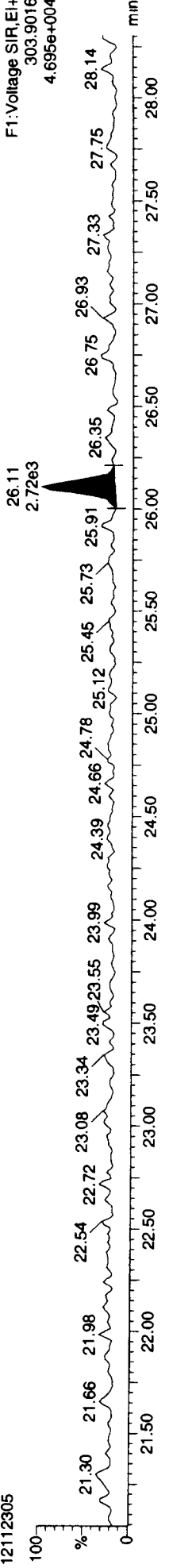
F1: Voltage SIR, EI+  
315.9419  
4.433e+007

13C-2378-TCDF



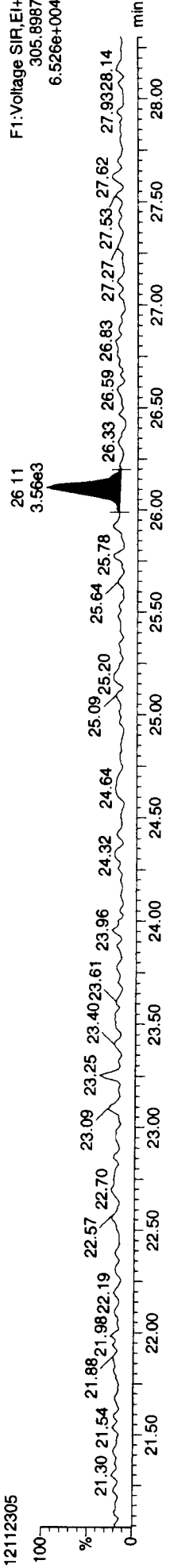
F1: Voltage SIR, EI+  
317.9389  
5.639e+007

Total-tetrafurans



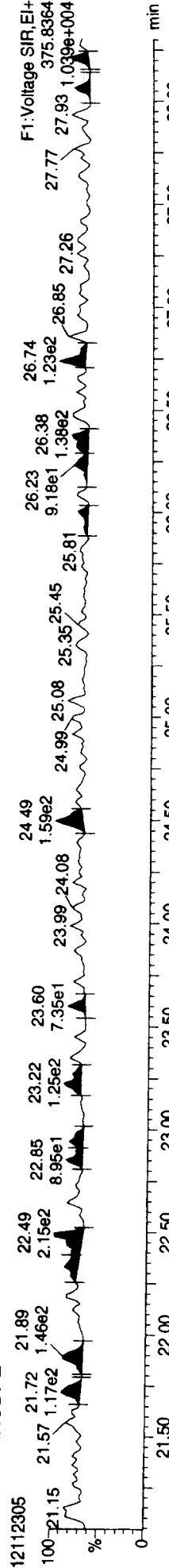
F1: Voltage SIR, EI+  
303.9016  
4.695e+004

Total-tetrafurans



F1: Voltage SIR, EI+  
305.8987  
6.526e+004

FUNCTION1 HXCDFE



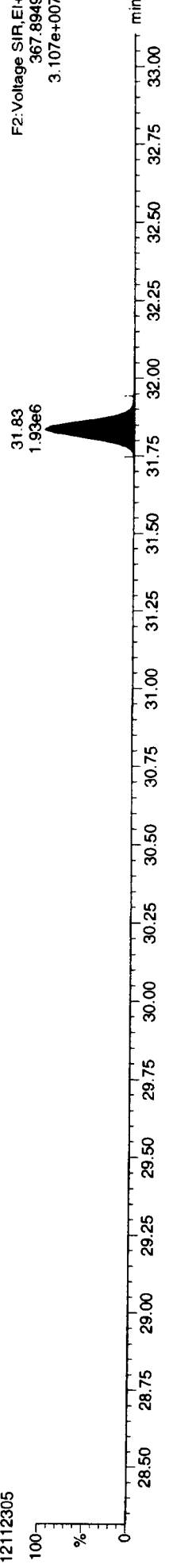
F1: Voltage SIR, EI+  
375.8364  
1.039e+004

Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD

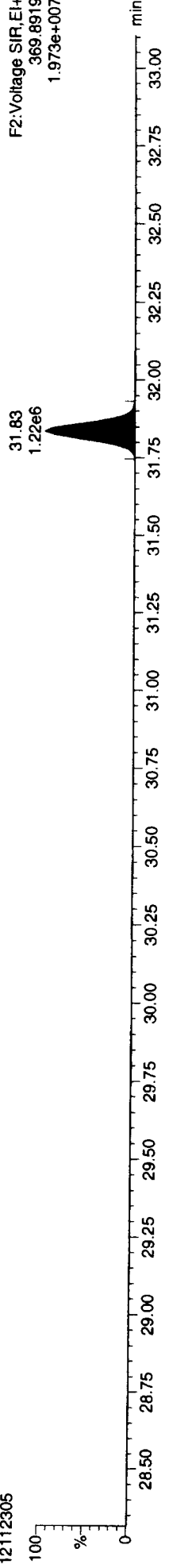
12112305



F2: Voltage SIR, EI+  
367.8949  
3.107e+007

13C-12378-PeCDD

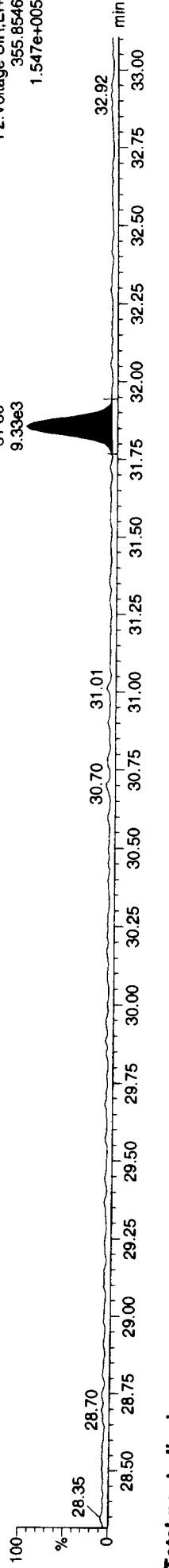
12112305



F2: Voltage SIR, EI+  
369.8919  
1.973e+007

Total-pentadioxins

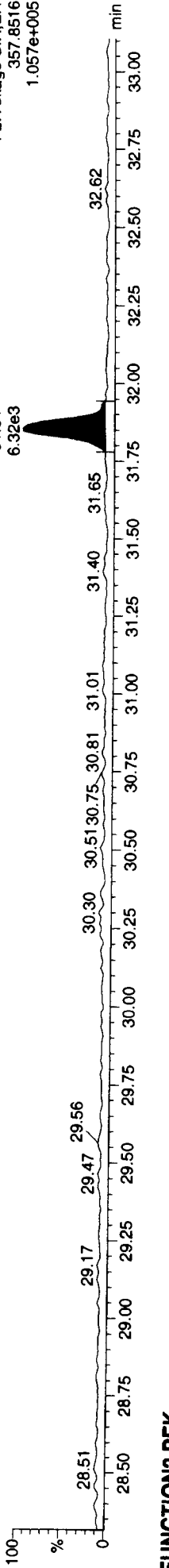
12112305



F2: Voltage SIR, EI+  
355.8546  
1.547e+005

Total-pentadioxins

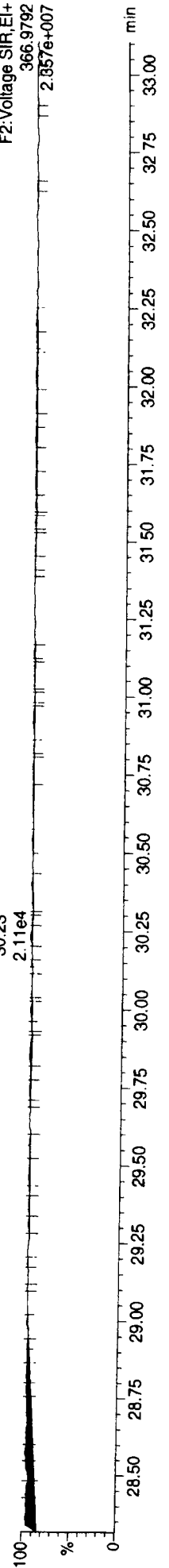
12112305



F2: Voltage SIR, EI+  
357.8516  
1.057e+005

FUNCTION2 PFK

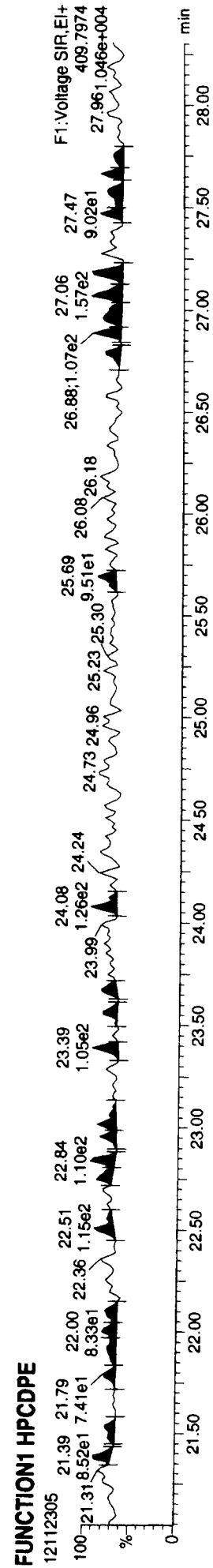
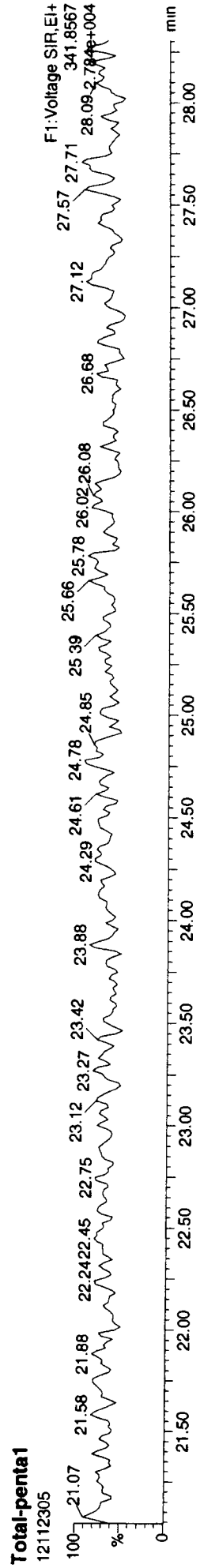
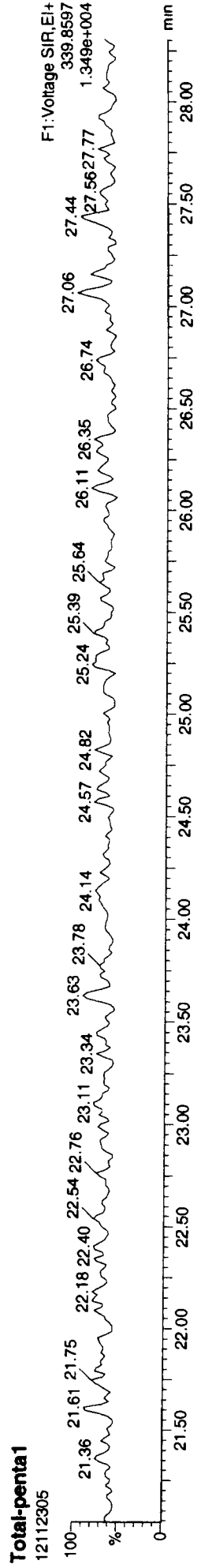
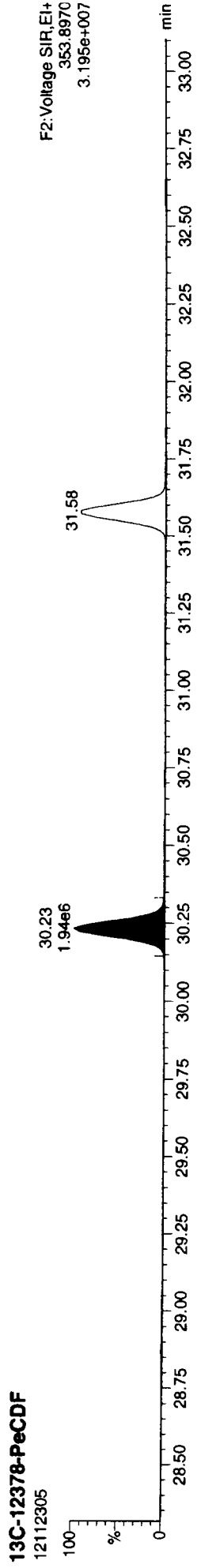
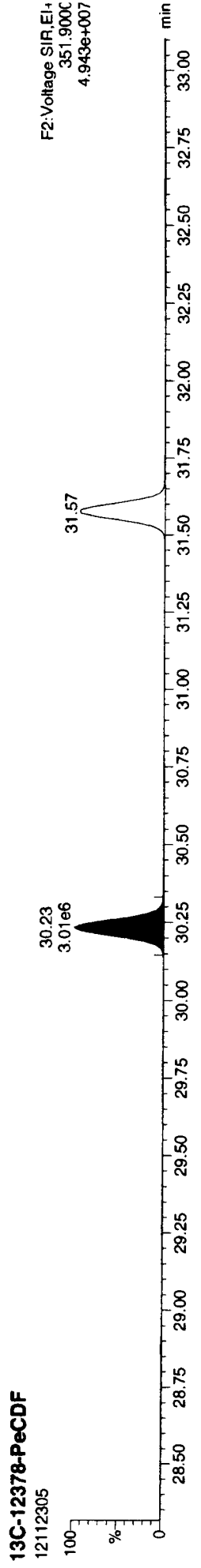
12112305



F2: Voltage SIR, EI+  
366.9792  
2.957e+007

**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
 Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
 Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
 Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

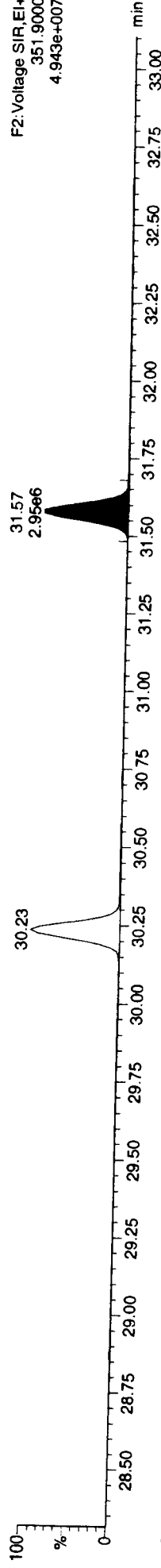
**Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk**



Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

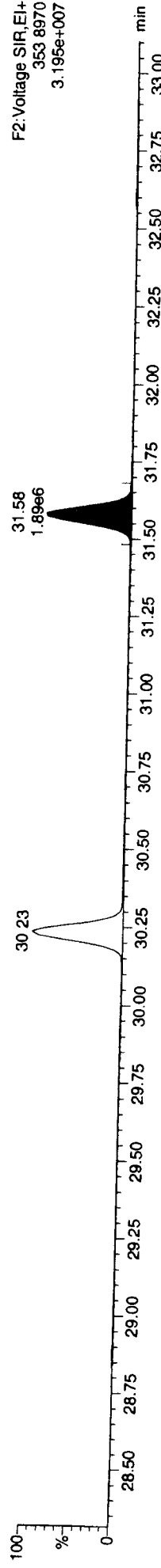
13C-23478-PeCDF

12112305



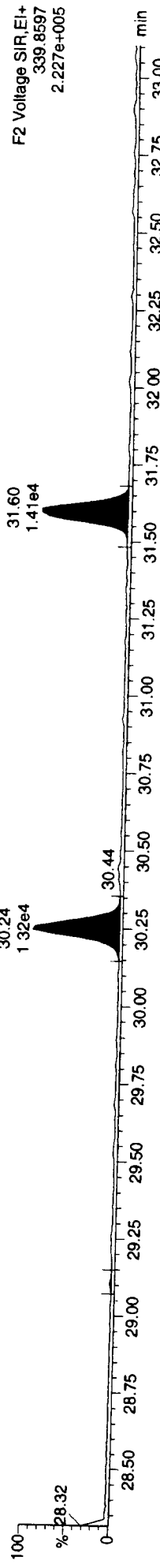
13C-23478-PeCDF

12112305



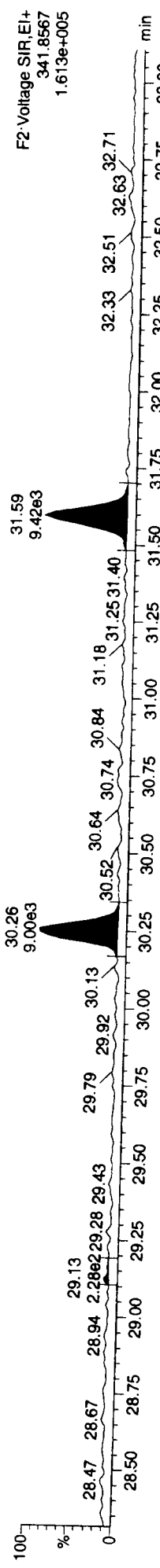
Total-pentafurans

12112305



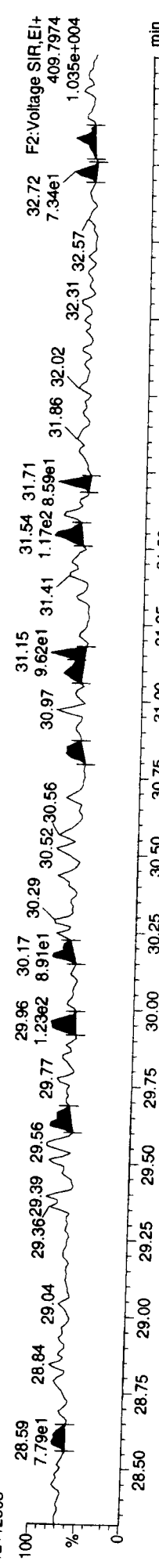
Total-pentafurans

12112305



FUNCTION2 HPCDPE

12112305

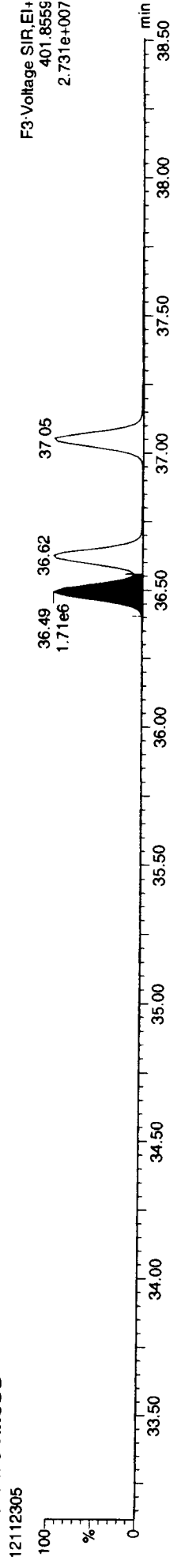


CSL

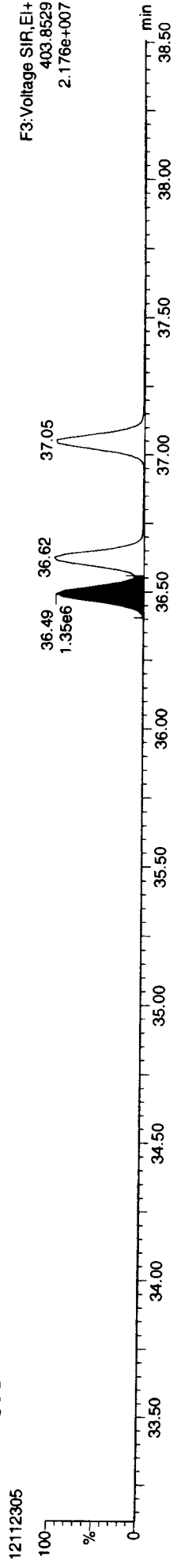
Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

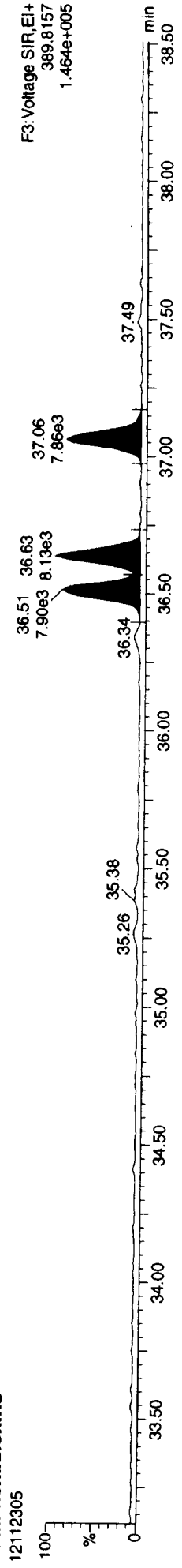
13C-123478-HxCDD



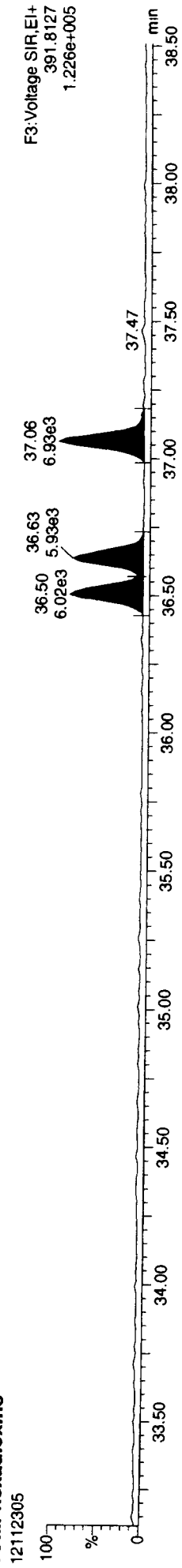
13C-123478-HxCDD



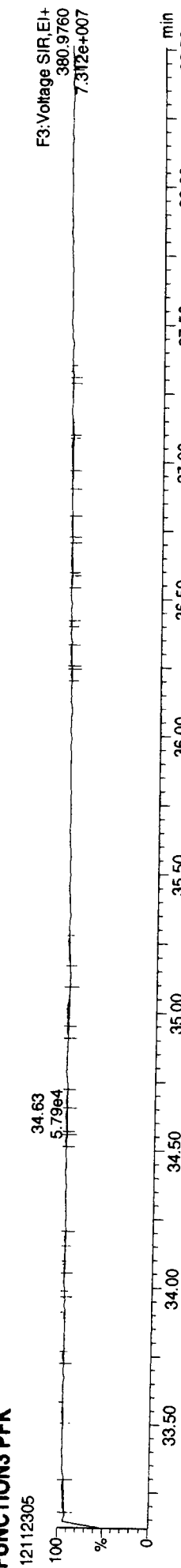
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

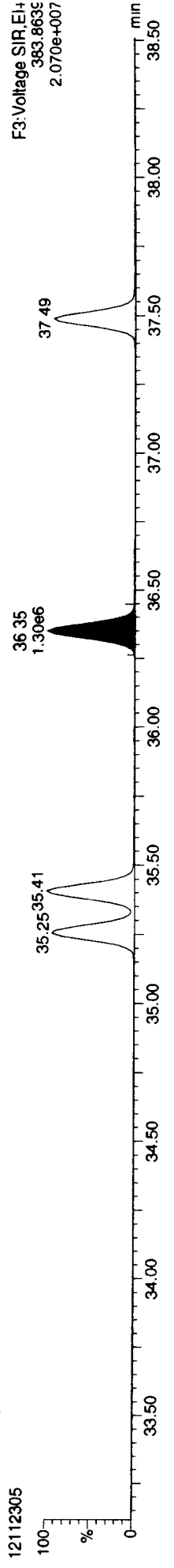


Quantify Sample Report MassLynx 4.1 SCN 714

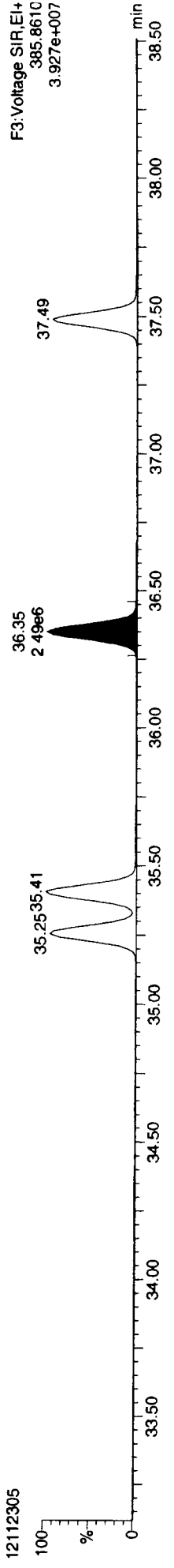
Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

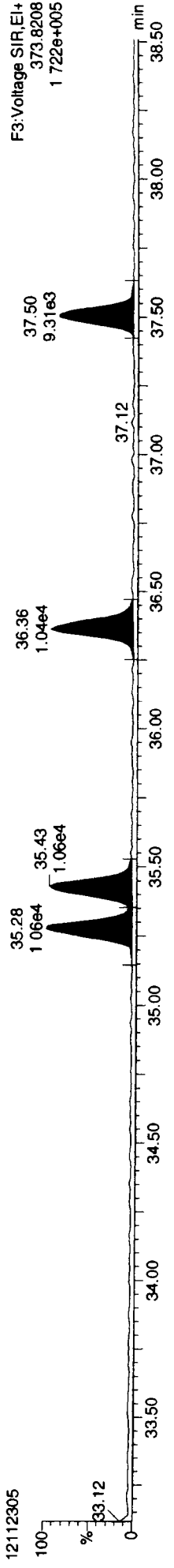
13C-234678-HxCDF



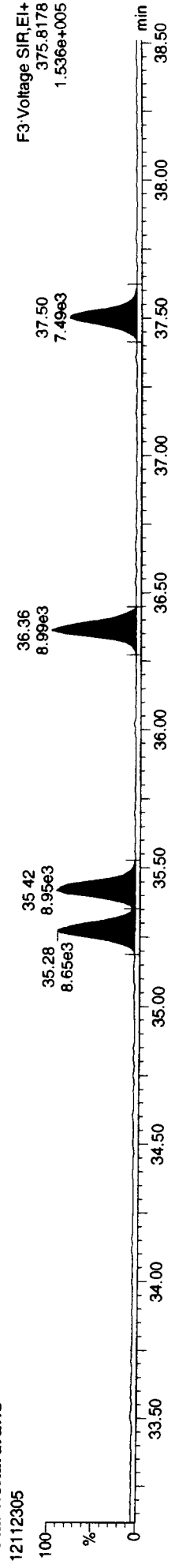
13C-234678-HxCDF



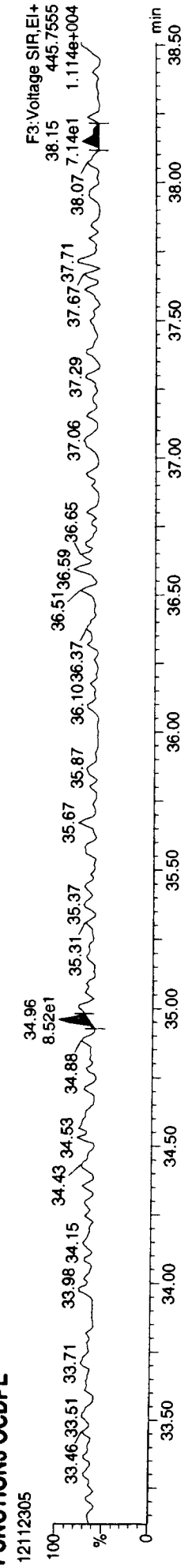
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDFE



Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

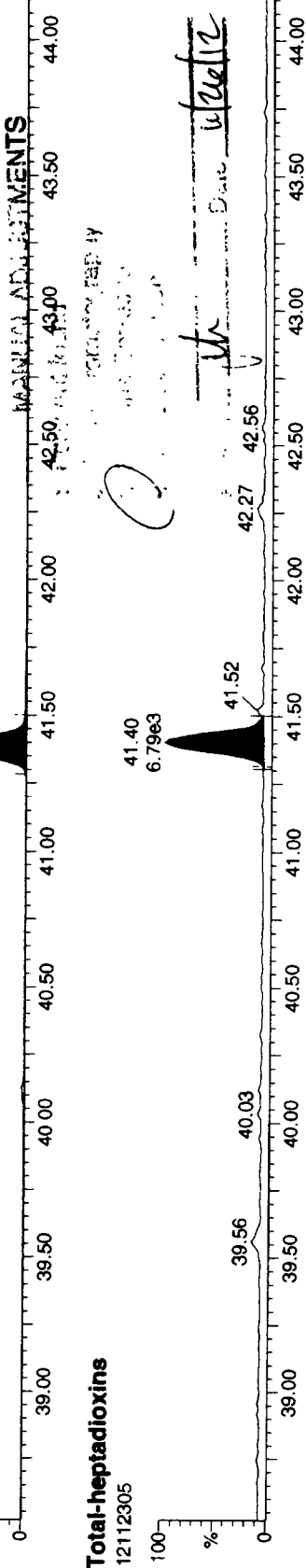
13C-1234678-HpCDD



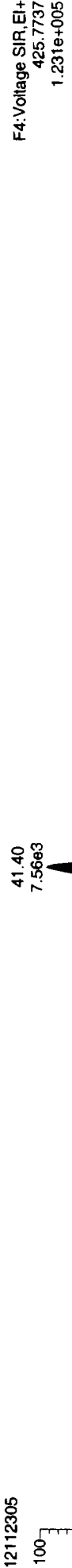
13C-1234678-HpCDD



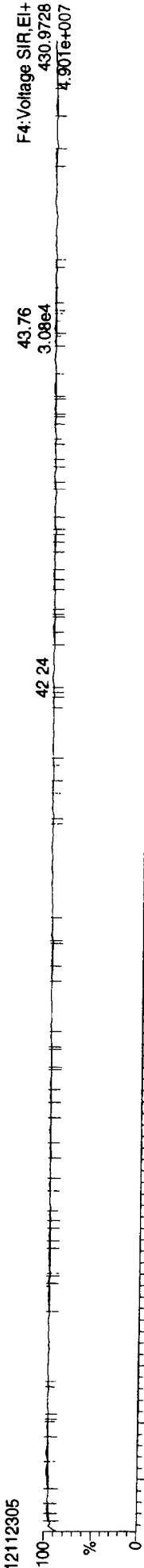
Total-heptadioxins



Total-heptadioxins

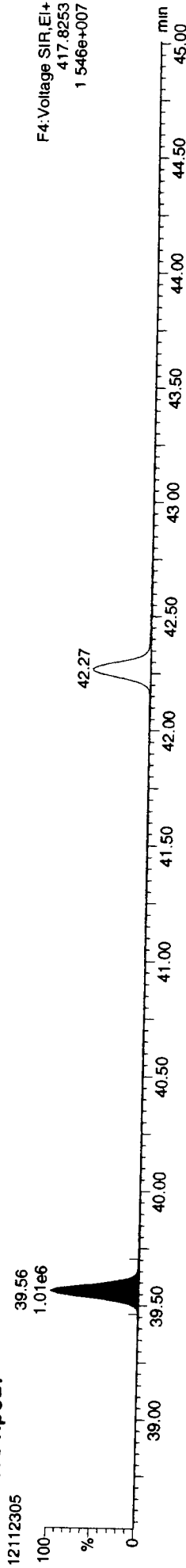


FUNCTION4 PFK

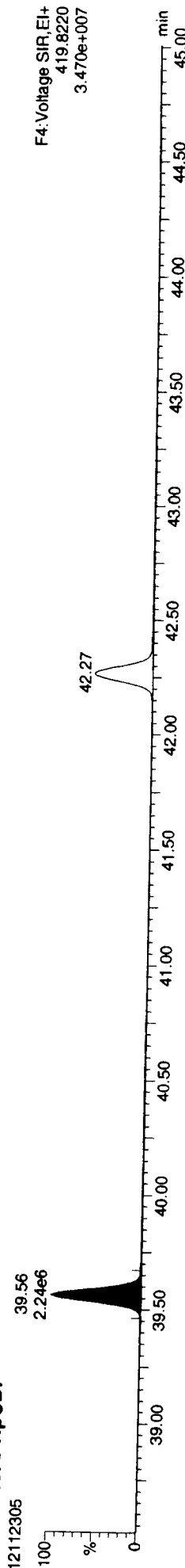


Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

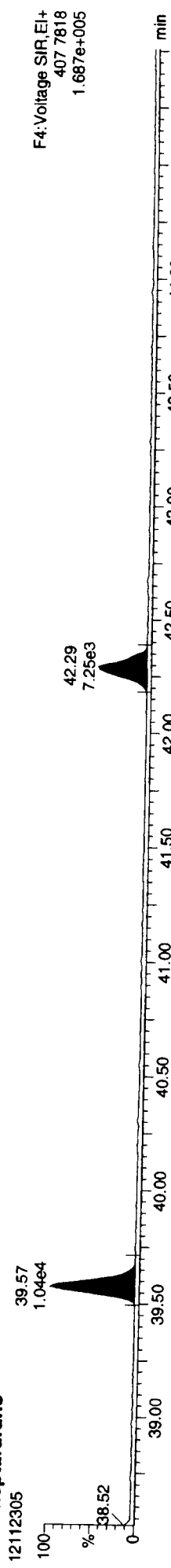
13C-1234678-HpCDF



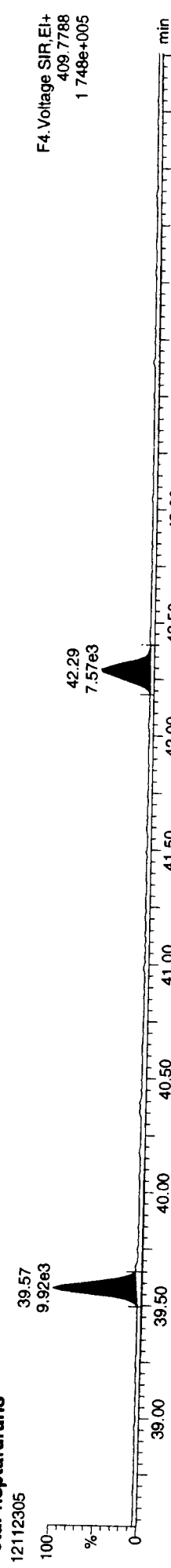
13C-1234678-HpCDF



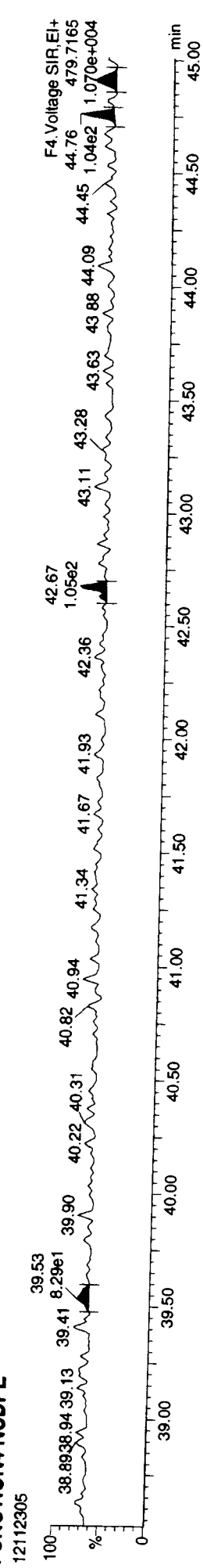
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE





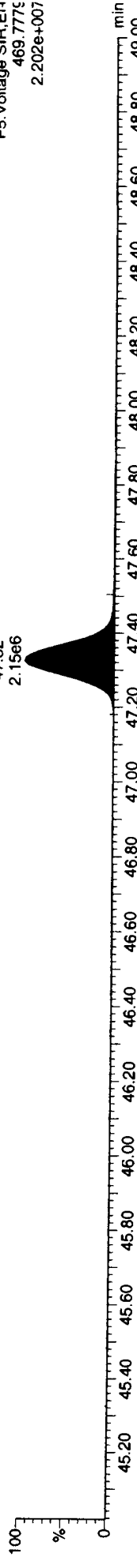
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\12112305.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

13C-OCDD

12112305

F5: Voltage SIR, EI+  
469.7775  
2.202e+007



13C-OCDD

12112305

F5: Voltage SIR, EI+  
471.7750  
2.487e+007



OCDD

12112305

F5: Voltage SIR, EI+  
457.7377  
1.203e+005



OCDD

12112305

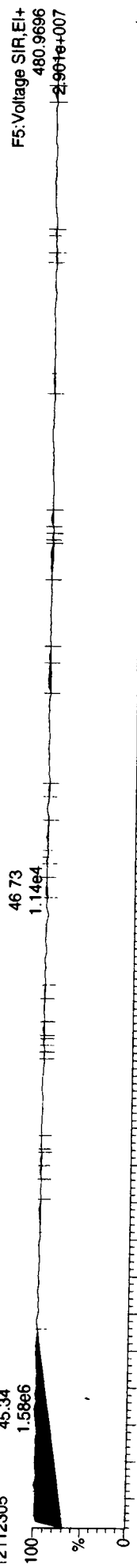
F5: Voltage SIR, EI+  
459.7348  
1.433e+005



FUNCTION5 PFK

12112305

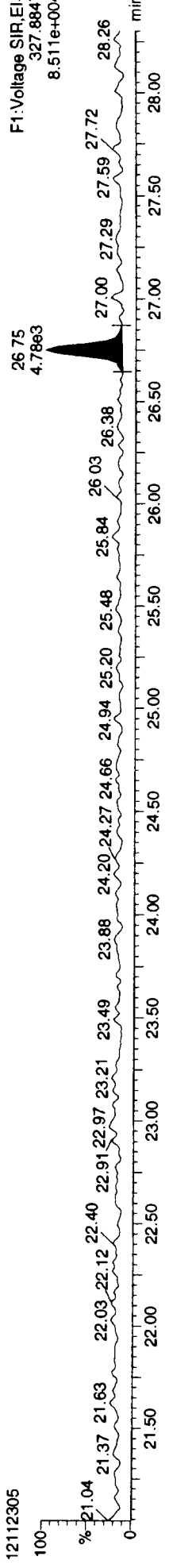
F5: Voltage SIR, EI+  
480.9696  
2.907e+007



Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:22 Pacific Standard Time

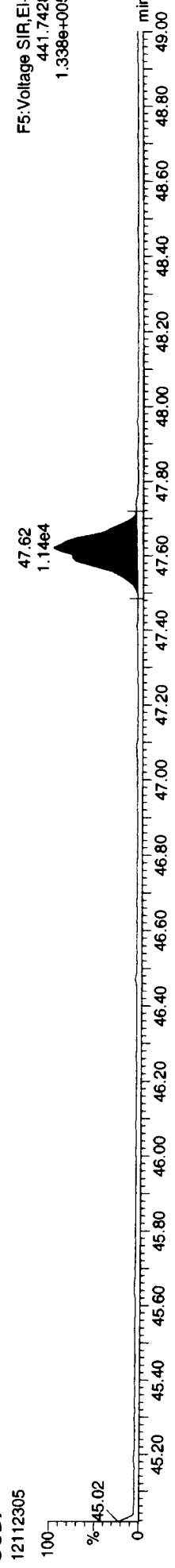
Name: 12112305, Date: 23-Nov-2012, Time: 14:07:24, ID: CSL, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



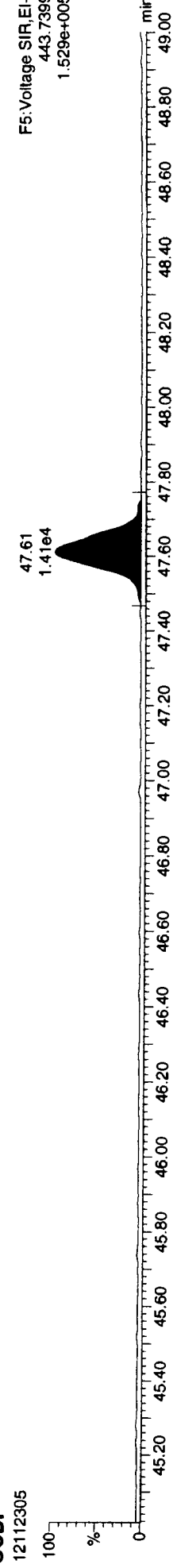
F1: Voltage SIR, EI+  
327.8847  
8.511e+004

OCDF



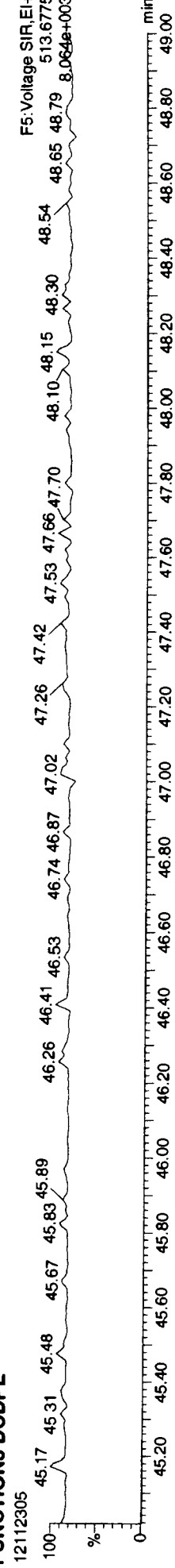
F5: Voltage SIR, EI+  
441.7428  
1.338e+005

OCDF



F5: Voltage SIR, EI+  
443.7399  
1.529e+005

FUNCTION5 DCDPE



F5: Voltage SIR, EI+  
513.6775  
8.064e+003

Quantity Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:35:31 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112306, Date: 23-Nov-2012, Time: 15:02:34, ID: CS1, Conditions: AUTOSPEC01, User: pk

Compound	26.108	1.001	12216	16488	28703	bb	0.877	0.741	0.770	NO	56.2	0.459
2378-TCDF	26.108	1.001	12216	16488	28703	bb	0.877	0.741	0.770	NO	56.2	0.459
12378-PeCDF	30.244	1.000	72435	48313	120749	bb	0.896	1.499	1.550	NO	620.7	2.487
23478-PeCDF	31.593	1.000	68720	48070	116791	bb	0.926	1.430	1.550	NO	595.2	2.403
123478-HxCDF	35.276	1.001	57730	49910	107640	bd	1.068	1.157	1.240	NO	433.9	2.455
234678-HxCDF	36.372	1.001	55055	48545	103600	bb	1.037	1.134	1.240	NO	422.0	2.435
123678-HxCDF	35.429	1.001	57608	49995	107603	db	1.035	1.152	1.240	NO	430.2	2.439
123789-HxCDF	37.512	1.001	47713	39685	87398	bb	0.987	1.202	1.240	NO	358.3	2.442
1234678-HpCDF	39.583	1.001	51567	52049	103616	bd	1.232	0.991	1.050	NO	603.9	2.459
1234789-HpCDF	42.280	1.000	38385	39804	78188	bb	1.215	0.964	1.050	NO	434.8	2.463
OCDF	47.611	1.006	61819	69999	131818	bb	1.138	0.883	0.890	NO	82.5	4.825
2378-TCDD	26.750	1.001	10226	13178	23404	bb	1.049	0.776	0.770	NO	97.9	0.490
12378-PeCDD	31.856	1.001	50367	32017	82384	bb	0.998	1.573	1.550	NO	292.8	2.446
123478-HxCDD	36.514	1.001	43836	34707	78543	bd	0.971	1.263	1.240	NO	416.9	2.474
123678-HxCDD	36.646	1.001	43336	34466	77802	db	0.918	1.257	1.240	NO	405.1	2.510
123789-HxCDD	37.062	1.012	41351	34177	75528	bb	0.932	1.210	1.240	NO	381.7	2.437
1234678-HpCDD	41.403	1.001	33892	34520	68411	bb	1.017	0.982	1.050	NO	538.0	2.405
OCDD	47.351	1.001	57896	62884	120780	bb	1.008	0.921	0.890	NO	852.2	4.988
13C-2378-TCDF	26.093	1.007	3125337	4012399	7137736	bb	1.473	0.779	0.770	NO	4237.5	97.416
13C-12378-PeCDF	30.233	1.167	3301785	2114999	5416784	bb	1.148	1.561	1.550	NO	17270.4	94.843
13C-23478-PeCDF	31.582	1.219	3201033	2046897	5247930	bb	1.113	1.564	1.550	NO	16628.6	94.788
13C-123478-HxCDF	35.254	0.951	1405431	2698855	4104286	bd	1.209	0.521	0.510	NO	5175.9	102.848
13C-123678-HxCDF	35.407	0.956	1463292	2800353	4263645	db	1.269	0.522	0.510	NO	5333.5	101.818
13C-234678-HxCDF	36.350	0.981	1412262	2692036	4104298	bb	1.236	0.525	0.510	NO	5178.3	100.616
13C-123789-HxCDF	37.490	1.012	1247355	2380299	3627653	bb	1.107	0.524	0.510	NO	4683.8	98.305
13C-1234678-HpCDF	39.561	1.068	1057891	2383308	3421199	bb	1.051	0.448	0.440	NO	6282.1	98.606
13C-1234789-HpCDF	42.269	1.141	806343	1806364	2612707	bb	0.815	0.446	0.440	NO	4051.9	97.157
13C-1234-TCDD	25.914	0.000	2193198	2782410	4975608	bb	1.000	0.788	0.770	NO	3879.5	100.000
13C-2378-TCDD	26.736	1.032	1993810	2554211	4548021	bb	0.846	0.781	0.770	NO	3472.1	96.652
13C-12378-PeCDD	31.834	1.228	2063451	1310850	3374301	bb	0.721	1.574	1.550	NO	13022.7	94.102
13C-123478-HxCDD	36.492	0.985	1822913	1447254	3270167	bd	0.991	1.260	1.240	NO	4399.1	99.986
13C-123678-HxCDD	36.624	0.988	1868627	1508180	3376807	db	1.025	1.239	1.240	NO	4451.9	99.839
13C-1234678-HpCDD	41.381	1.117	1435075	1362100	2797175	bb	0.866	1.054	1.050	NO	5709.2	97.837
13C-OCDD	47.324	1.277	2276928	2525708	4802636	bb	0.769	0.901	0.890	NO	9263.8	189.175

Dataset: P:\DIOXIN8290.PRO\121123IC.qld

Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time

Printed: Monday, November 26, 2012 09:35:31 Pacific Standard Time

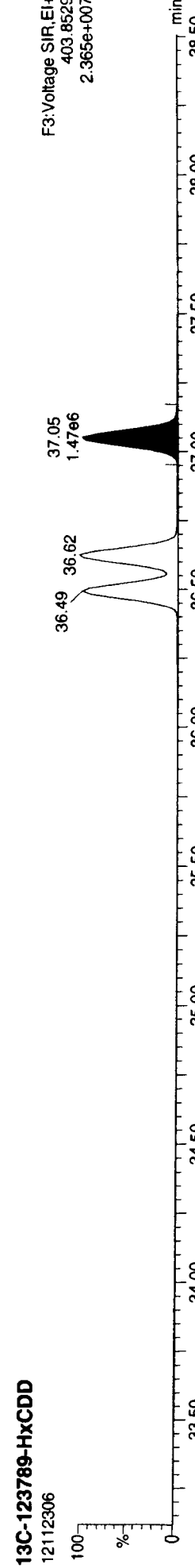
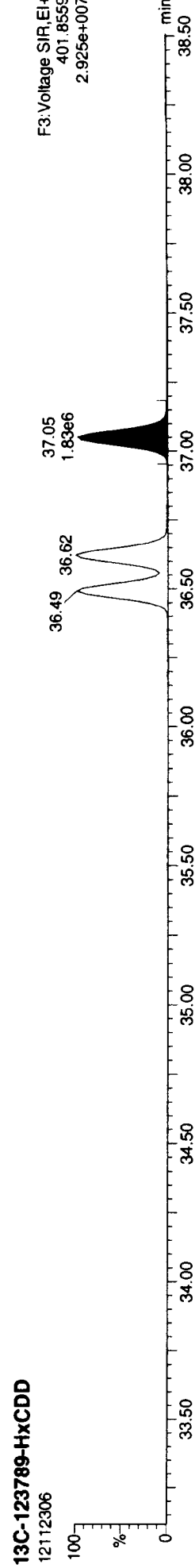
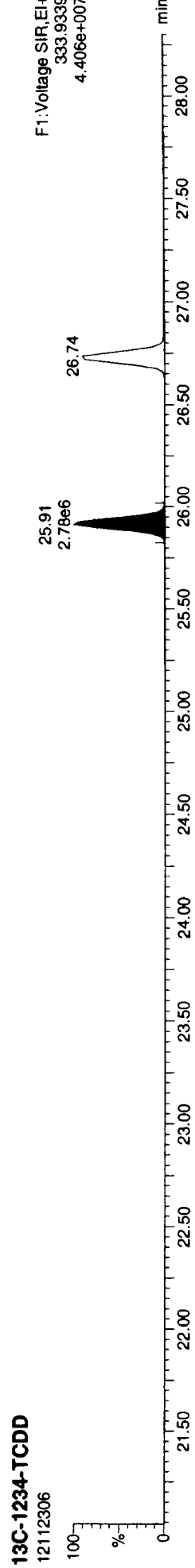
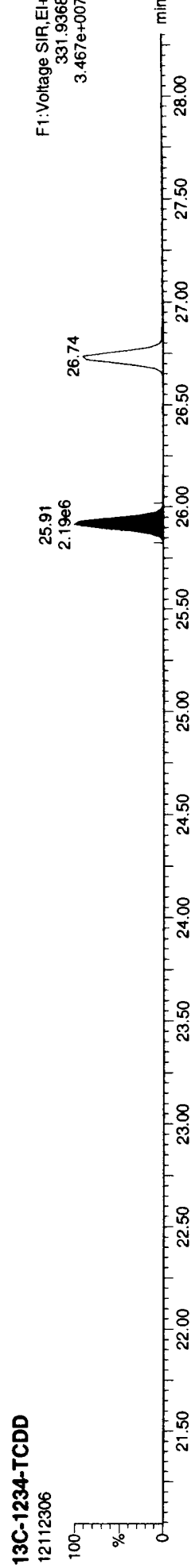
Name: 12112306, Date: 23-Nov-2012, Time: 15:02:34, ID: CS1, Conditions: AUTOSPEC01, User: pk

	13C-123789-HxCDD	37,051	0.000	1833369	1467445	3300814	bb	1.000	1.249	1.240	NO	4356.6			
Total-tetrafurans				12216			0.877							0.459	100.000
Total-penta1				0										0.003	0.000
Total-pentafurans				141156			0.911							4.917	4.890
Total-hexafurans				218106			1.032							9.771	9.771
Total-heptafurans				90098			1.223							4.929	4.929
Total-Furans				523394			1.041							24.904	24.875
Total-tetraioxins				10713			1.049							0.519	0.515
Total-pentadioxins				50367			0.998							2.446	2.446
Total-hexadioxins				128522			0.940							7.440	7.421
Total-heptadioxins				33892			1.017							2.405	2.405
Total-Dioxins				281389			0.985							17.798	17.775
Total-TEQ				804783			1.044							42.702	42.650
37CL-2378-TCDD		26.750	1.032	25878		25878					121.7				0.498
FUNCTION1 PFK				2955590											0.000
FUNCTION2 PFK				179826											0.000
FUNCTION3 PFK				1137925											0.000
FUNCTION4 PFK				658912											0.000
FUNCTION5 PFK				424915											0.000
FUNCTION1 HXCDPE				1010											0.000
FUNCTION1 HPCDPE				1355											0.000
FUNCTION2 HPCDPE				1117											0.000
FUNCTION3 OCDPE				324											0.000
FUNCTION4 NCDPE				0											0.000
FUNCTION5 DCDPE				0											0.000

Dataset: P:\DIOXIN8290.PRO\121123\C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:35:31 Pacific Standard Time

Method: P:\DIOXIN8290.PROMethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112306, Date: 23-Nov-2012, Time: 15:02:34, ID: CS1, Conditions: AUTOSPEC01, User: pk

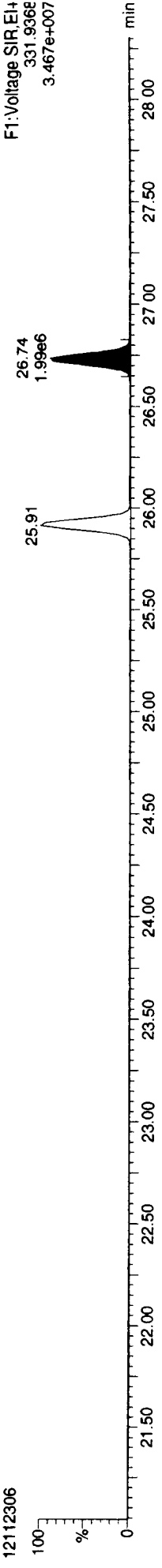


Quantify Sample Report MassLynx 4.1 SCN 714

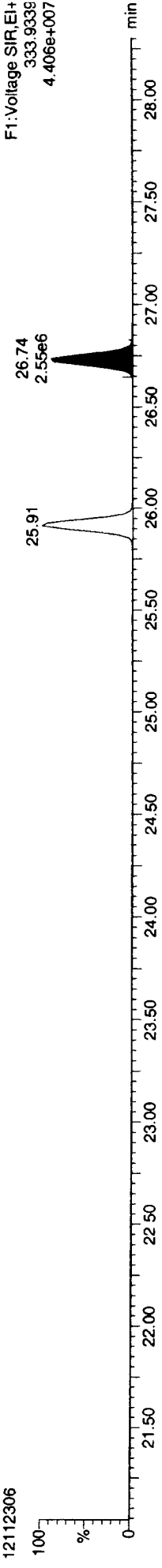
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Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:35:31 Pacific Standard Time

Name: 12112306, Date: 23-Nov-2012, Time: 15:02:34, ID: CS1, Conditions: AUTOSPEC01, User: pk

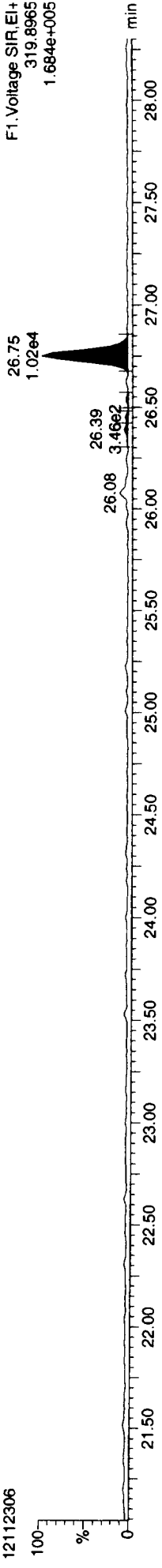
13C-2378-TCDD



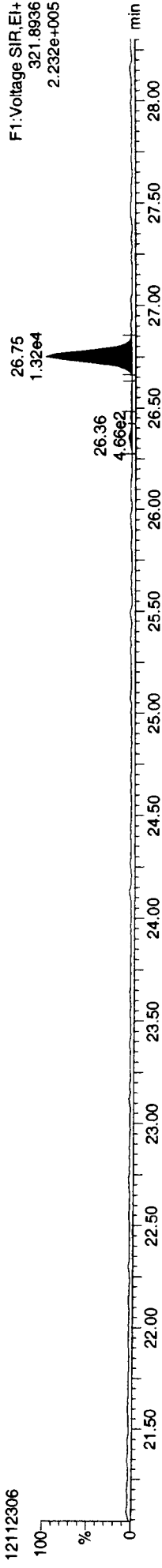
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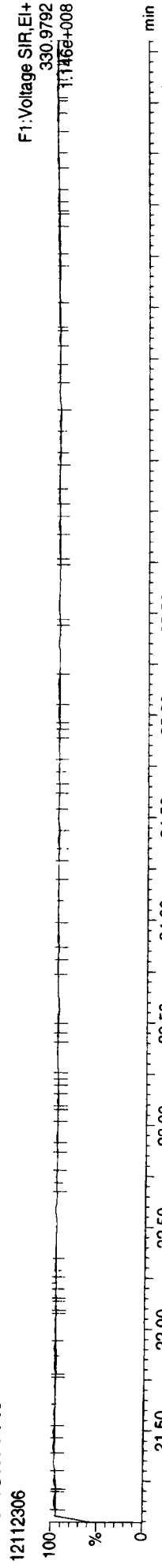
Total-tetradoxins



Total-tetradoxins



FUNCTION1 PFK



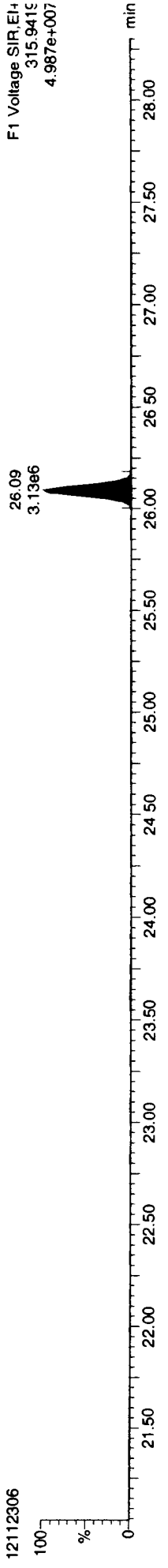
CS1 23 Nov 2012 15:02:34

Quantify Sample Report MassLynx 4.1 SCN 714

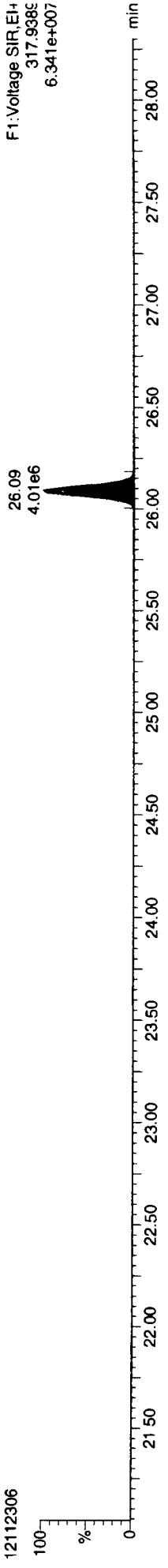
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Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:35:31 Pacific Standard Time

Name: 12112306, Date: 23-Nov-2012, Time: 15:02:34, ID: CS1, Conditions: AUTOSPEC01, User: pk

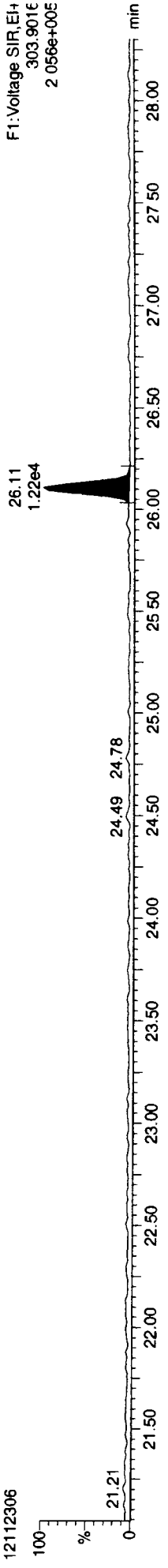
13C-2378-TCDF



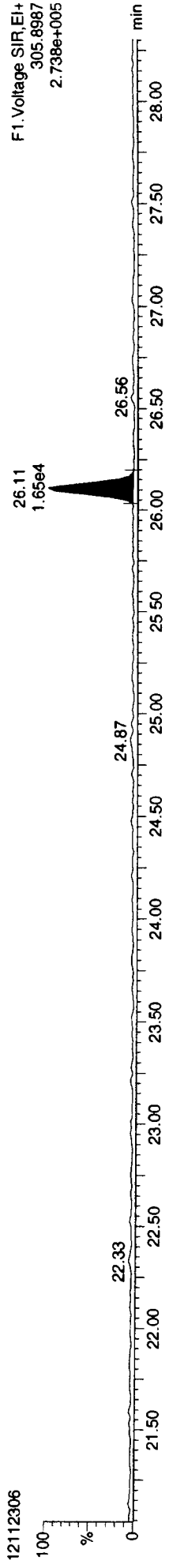
13C-2378-TCDF



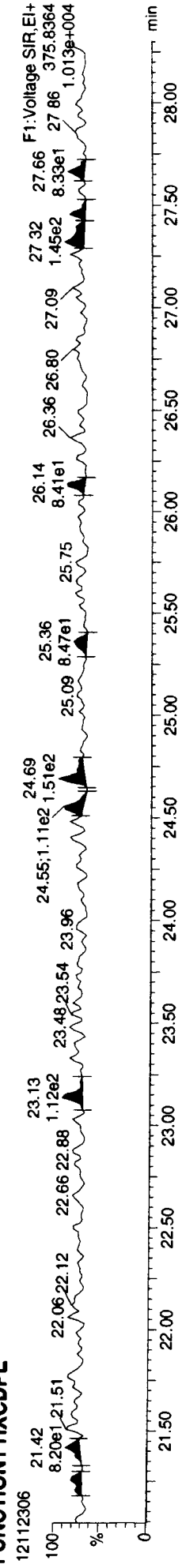
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDFE

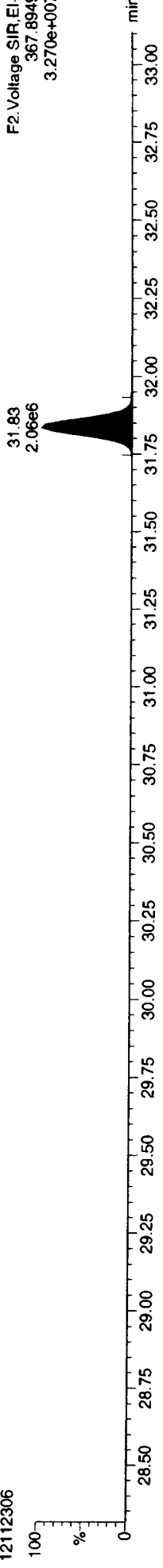


Quantify Sample Report MassLynx 4.1 SCN 714

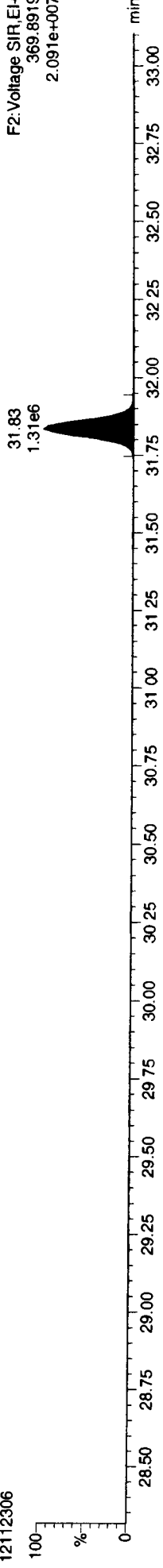
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Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:35:31 Pacific Standard Time

Name: 12112306, Date: 23-Nov-2012, Time: 15:02:34, ID: CS1, Conditions: AUTOSPEC01, User: pk

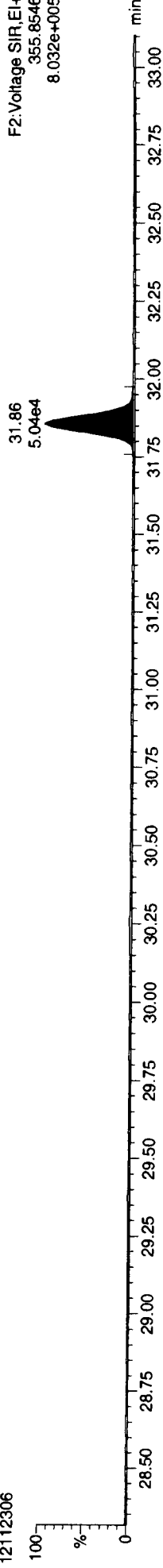
13C-12378-PeCDD



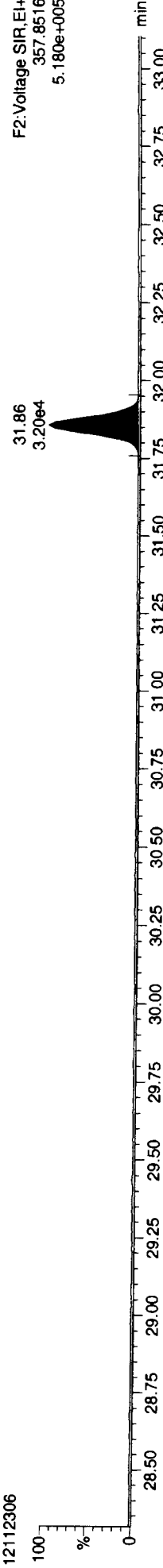
13C-12378-PeCDD



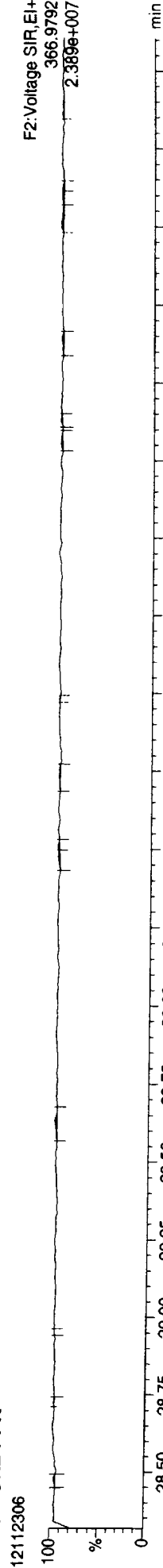
Total-pentadioxins



Total-pentadioxins



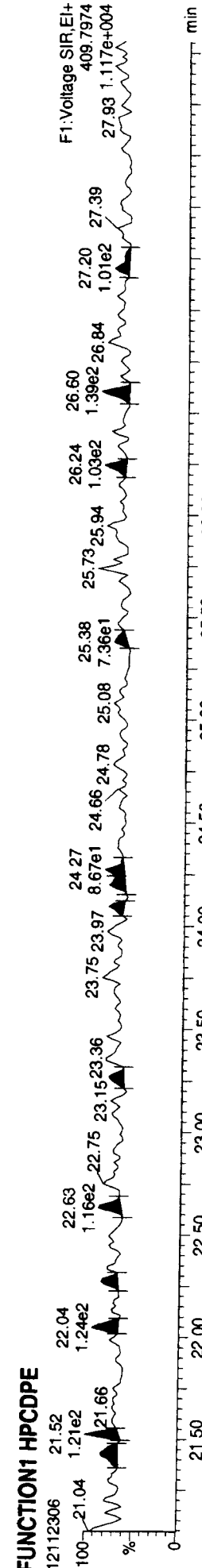
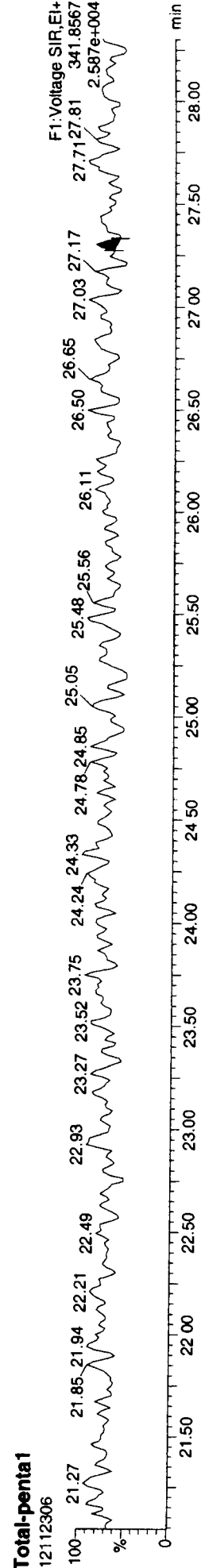
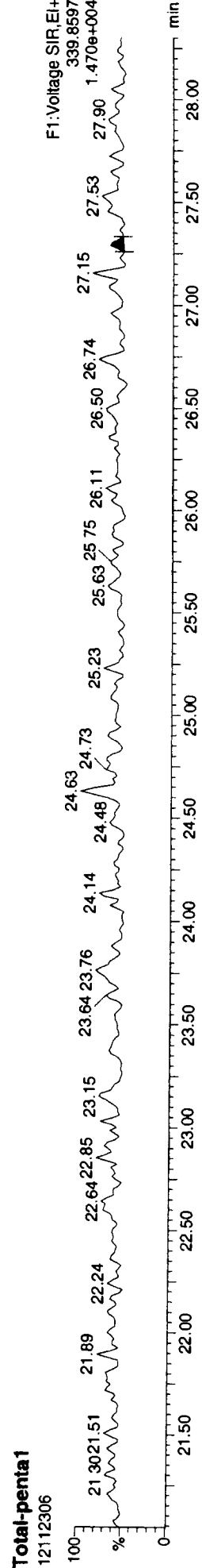
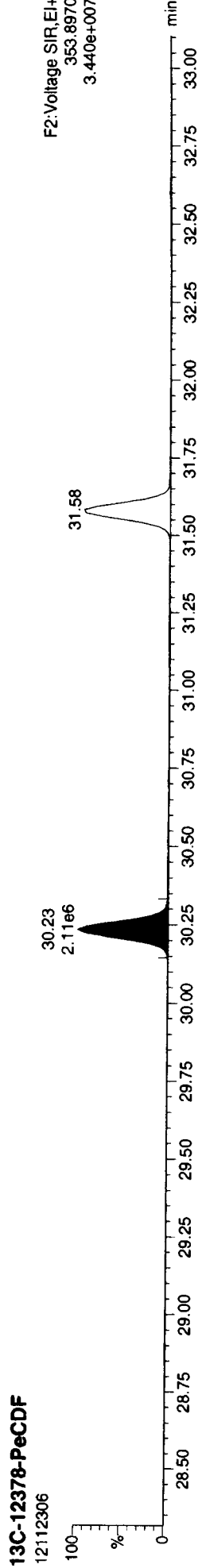
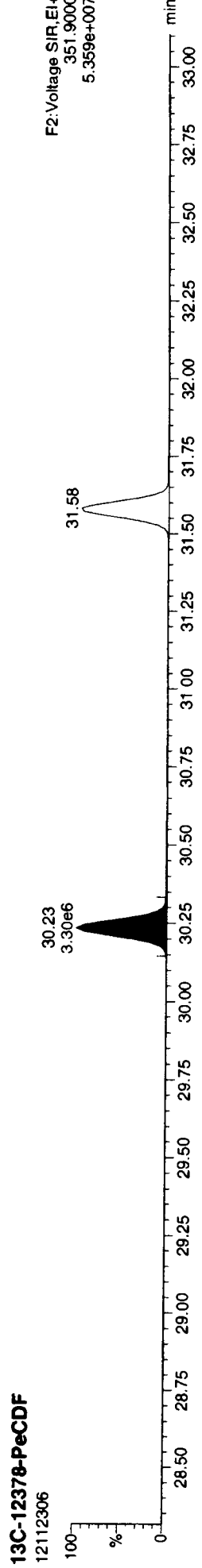
FUNCTION2 PFK





Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121123\C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:35:31 Pacific Standard Time

Name: 12112306, Date: 23-Nov-2012, Time: 15:02:34, ID: CS1, Conditions: AUTOSPEC01, User: pk

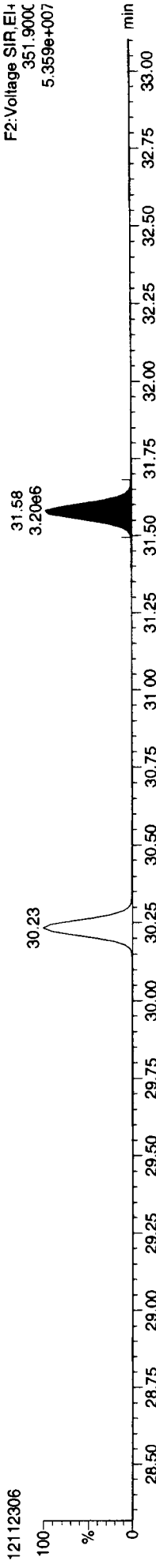


Quantify Sample Report MassLynx 4.1 SCN 714

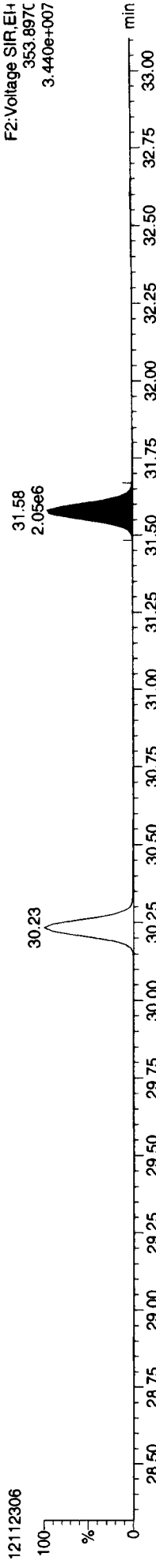
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Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:35:31 Pacific Standard Time

Name: 12112306, Date: 23-Nov-2012, Time: 15:02:34, ID: CS1, Conditions: AUTOSPEC01, User: pk

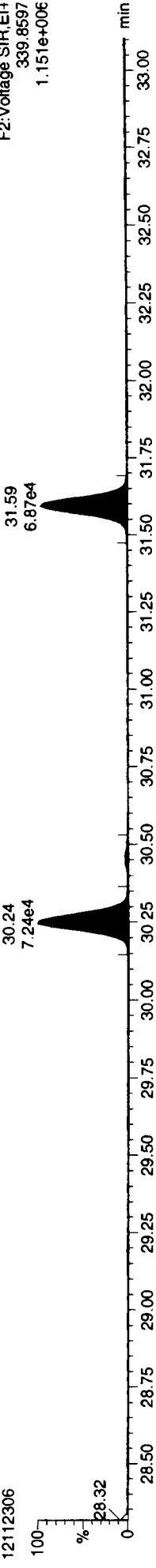
13C-23478-PeCDF



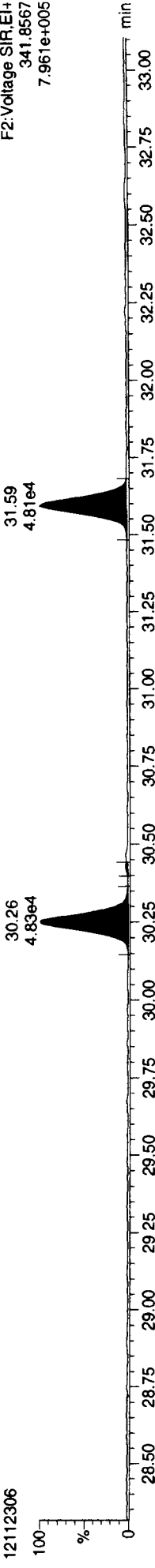
13C-23478-PeCDF



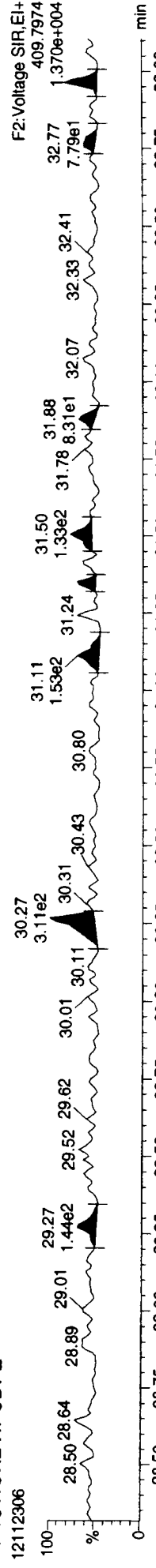
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE

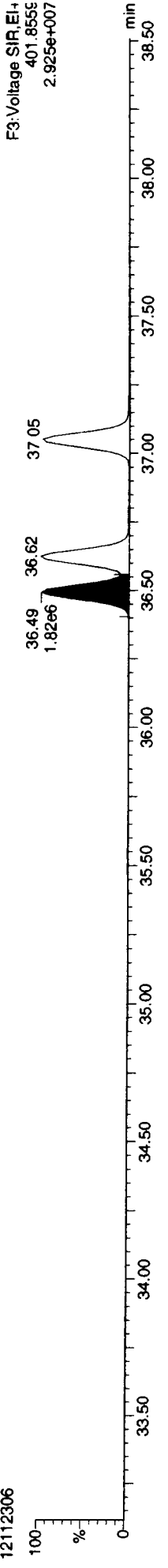


Quantify Sample Report MassLynx 4.1 SCN 714

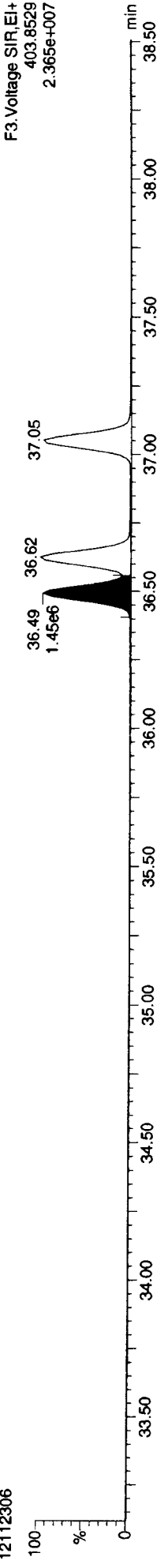
Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:35:31 Pacific Standard Time

Name: 12112306, Date: 23-Nov-2012, Time: 15:02:34, ID: CS1, Conditions: AUTOSPEC01, User: pk

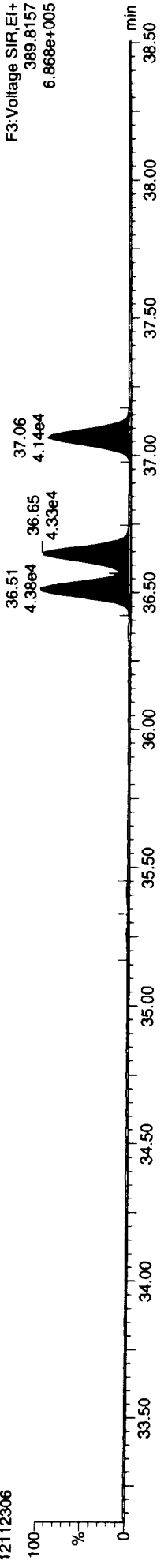
13C-123478-HxCDD



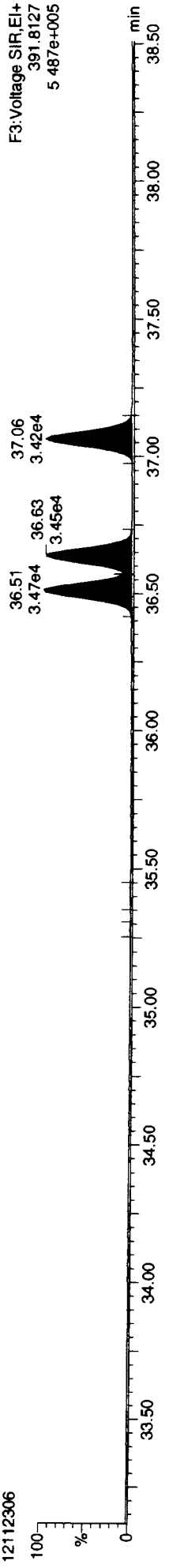
13C-123478-HxCDD



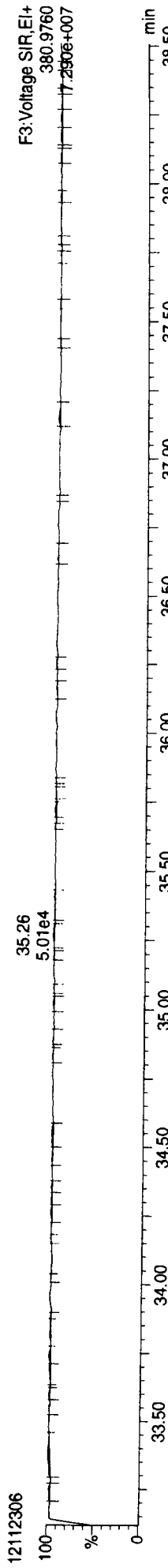
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk

Compound	Area	Height	Retention	Integration	Response	Concentration	Mass	Yield	Recovery	Std. Dev.	Limit	
2378-TCDF	26.106	1.001	51837	72489	124327	bb	0.877	0.715	0.770	NO	345.2	1.956
12378-PeCDF	30.256	1.000	281153	192278	473431	bb	0.896	1.462	1.550	NO	2392.0	9.742
23478-PeCDF	31.604	1.001	282981	194793	477774	bb	0.926	1.453	1.550	NO	2353.8	9.716
123478-HxCDF	35.287	1.001	238121	200406	438527	bd	1.068	1.188	1.240	NO	1846.2	9.869
234678-HxCDF	36.373	1.000	241007	201891	442898	bd	1.037	1.194	1.240	NO	1849.6	9.964
123678-HxCDF	35.430	1.000	239972	200501	440473	db	1.035	1.197	1.240	NO	1872.0	9.795
123789-HxCDF	37.513	1.000	211399	175671	387069	bd	0.987	1.203	1.240	NO	1673.8	10.002
1234678-HpCDF	39.584	1.000	217217	224957	442174	bb	1.232	0.966	1.050	NO	2178.2	9.748
1234789-HpCDF	42.292	1.001	177429	180863	358291	bb	1.215	0.981	1.050	NO	1554.9	9.872
OCDF	47.620	1.006	287498	335589	623087	bb	1.138	0.857	0.890	NO	1773.2	19.749
2378-TCDD	26.751	1.001	39415	52619	92034	bb	1.049	0.749	0.770	NO	513.8	1.918
12378-PeCDD	31.867	1.001	204983	133070	338053	bb	0.998	1.540	1.550	NO	1626.8	9.917
123478-HxCDD	36.515	1.000	183339	145606	328945	bd	0.971	1.259	1.240	NO	1719.6	10.010
123678-HxCDD	36.646	1.001	178782	144059	320841	db	0.918	1.227	1.240	NO	1698.4	9.844
123789-HxCDD	37.074	1.012	172609	145821	318430	bb	0.932	1.184	1.240	NO	1635.7	9.850
1234678-HpCDD	41.404	1.000	158131	150290	308420	bd	1.017	1.052	1.050	NO	1904.4	9.780
OCDD	47.351	1.000	258998	287575	544573	bb	1.008	0.894	0.890	NO	2315.8	19.472
13C-2378-TCDF	26.093	1.006	3198308	4052299	7251607	bb	1.473	0.789	0.770	NO	5844.0	104.358
13C-12378-PeCDF	30.245	1.166	3311487	2111169	5422656	bb	1.148	1.569	1.550	NO	17141.8	100.114
13C-23478-PeCDF	31.582	1.218	3236019	2073470	5309490	bb	1.113	1.561	1.550	NO	16657.4	101.121
13C-123478-HxCDF	35.265	0.952	1414831	2744770	4159601	bd	1.209	0.516	0.510	NO	6165.5	98.873
13C-123678-HxCDF	35.419	0.956	1483929	2862757	4346687	db	1.269	0.518	0.510	NO	6455.2	98.463
13C-234678-HxCDF	36.361	0.981	1475325	2812086	4287412	bb	1.236	0.525	0.510	NO	6374.8	99.700
13C-123789-HxCDF	37.501	1.012	1349021	2573186	3922207	bb	1.107	0.524	0.510	NO	5790.9	101.847
13C-1234678-HpCDF	39.573	1.068	1132555	2549678	3682233	bb	1.051	0.444	0.440	NO	5683.3	100.672
13C-1234789-HpCDF	42.270	1.141	916417	2070563	2986980	bb	0.815	0.443	0.440	NO	3962.3	105.362
13C-1234-TCDD	25.929	0.000	2086833	2631897	4718730	bb	1.000	0.793	0.770	NO	5013.4	100.000
13C-2378-TCDD	26.736	1.031	2001661	2571492	4573154	bb	0.946	0.778	0.770	NO	4839.6	102.476
13C-12378-PeCDD	31.845	1.228	2089989	1326662	3415651	bb	0.721	1.575	1.550	NO	16001.3	100.440
13C-123478-HxCDD	36.504	0.985	1896092	1488803	3384895	bd	0.991	1.274	1.240	NO	5136.1	98.172
13C-123678-HxCDD	36.625	0.988	1972501	1577307	3549809	db	1.025	1.250	1.240	NO	5271.8	99.557
13C-1234678-HpCDD	41.393	1.117	1597492	1503824	3101316	bb	0.866	1.062	1.050	NO	6422.5	102.896
13C-OCDD	47.333	1.277	2614910	2932031	5546941	bb	0.769	0.892	0.890	NO	12875.0	207.258

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk

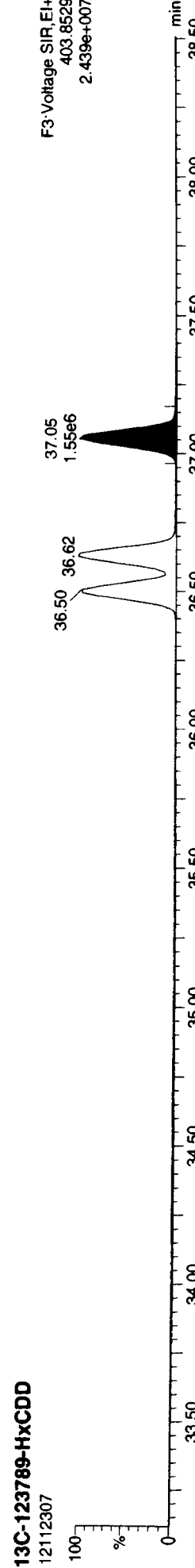
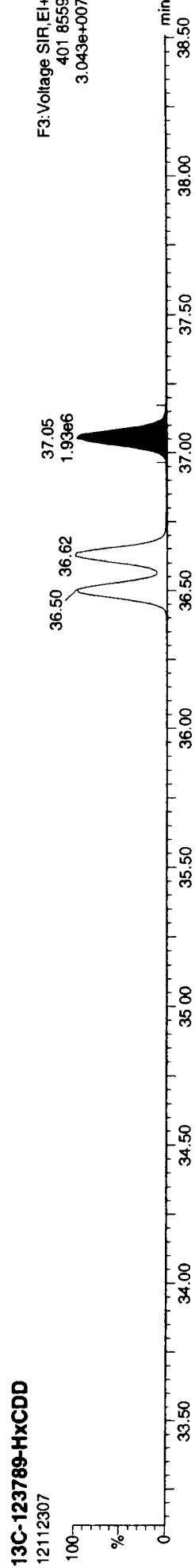
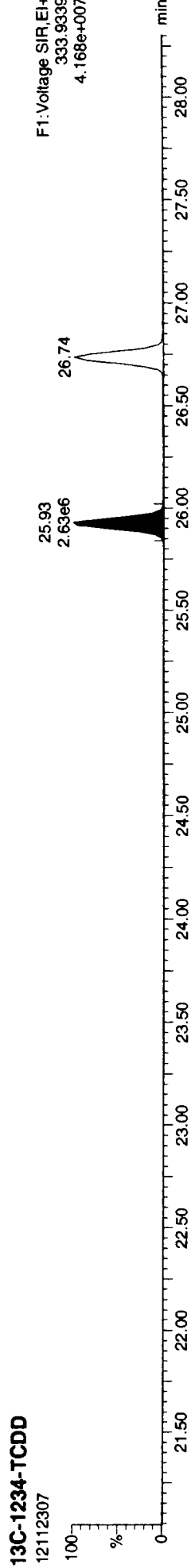
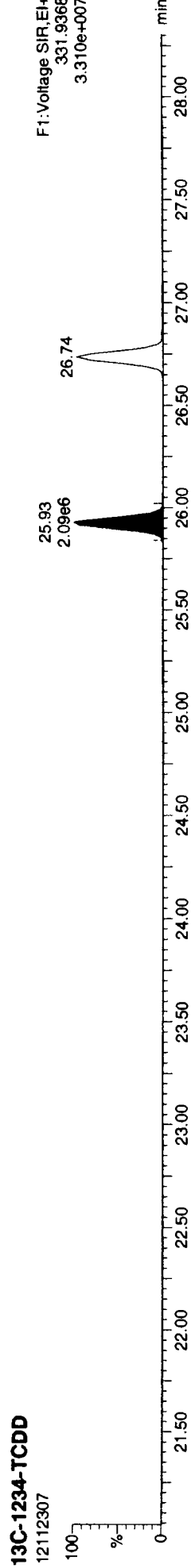
	37.052	0.000	1933322	1546439	3479761	bb	1.000	1.250	1.240	NO	5177.2	1.978	1.956	100.000
13C-123789-HxCDD														
Total-tetrafurans			51837				0.877					1.978	1.956	100.000
Total-penta1			0									0.006	0.000	0.000
Total-pentafurans			571711				0.911					19.805	19.723	19.723
Total-hexafurans			930498				1.032					39.637	39.631	39.631
Total-heptafurans			394645				1.223					19.648	19.620	19.620
Total-Furans			2236190				1.041					100.823	100.679	100.679
Total-tetraioxins			39415				1.049					1.965	1.918	1.918
Total-pentadioxins			204983				0.998					9.917	9.917	9.917
Total-hexadioxins			532730				0.940					29.735	29.705	29.705
Total-heptadioxins			158329				1.017					9.847	9.792	9.792
Total-Dioxins			1192455				0.985					70.935	70.803	70.803
Total-TEQ			3428645									171.758	171.481	171.481
37CL-2378-TCDD	26.751	1.032	95462		95462		1.044				463.5		1.939	1.939
FUNCTION1 PFK			57956416											0.000
FUNCTION2 PFK			185486											0.000
FUNCTION3 PFK			717138											0.000
FUNCTION4 PFK			0											0.000
FUNCTION5 PFK			7681998											0.000
FUNCTION1 HXCDPE			649											0.000
FUNCTION1 HPCDPE			1745											0.000
FUNCTION2 HPCDPE			1103											0.000
FUNCTION3 OCDPE			259											0.000
FUNCTION4 NCDPE			337											0.000
FUNCTION5 DCDPE			0											0.000

Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

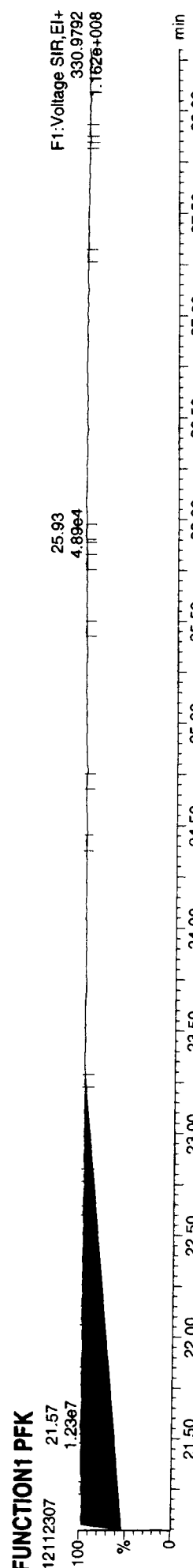
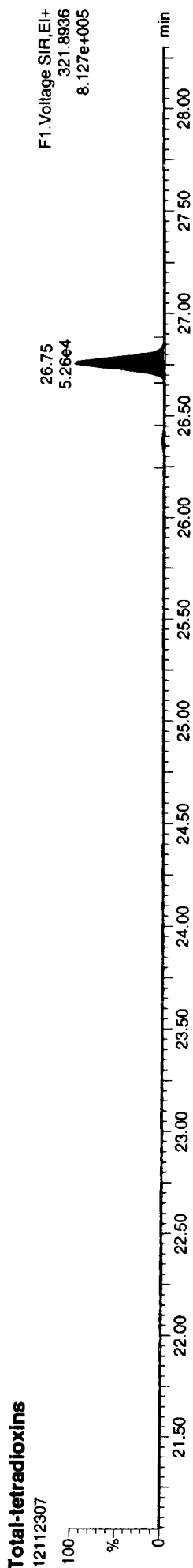
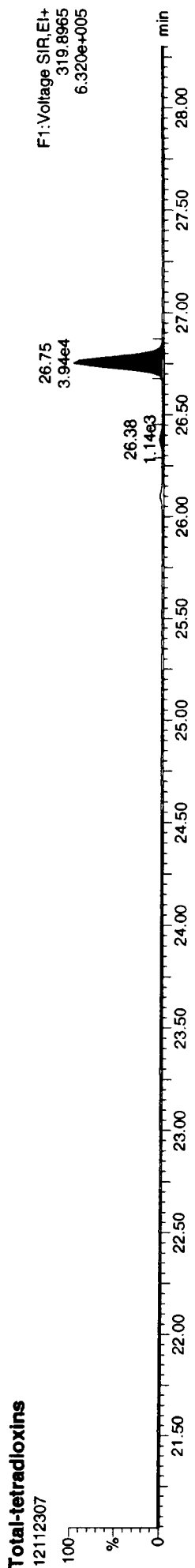
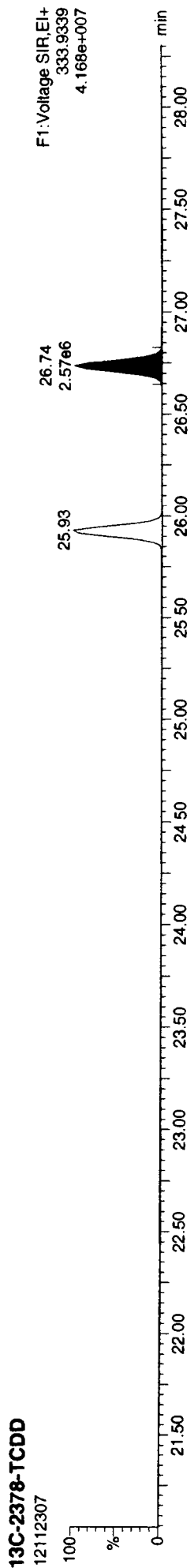
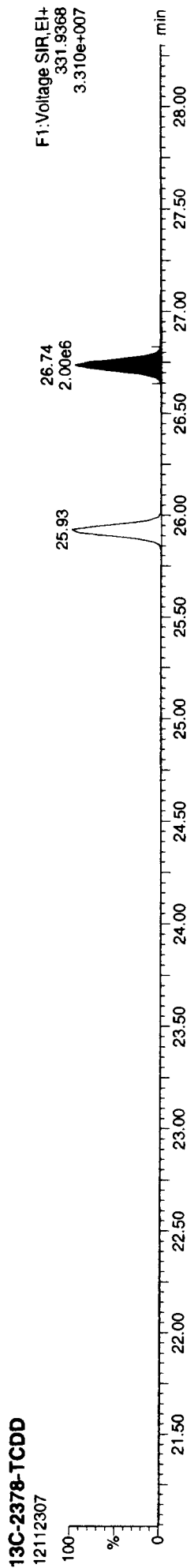
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk

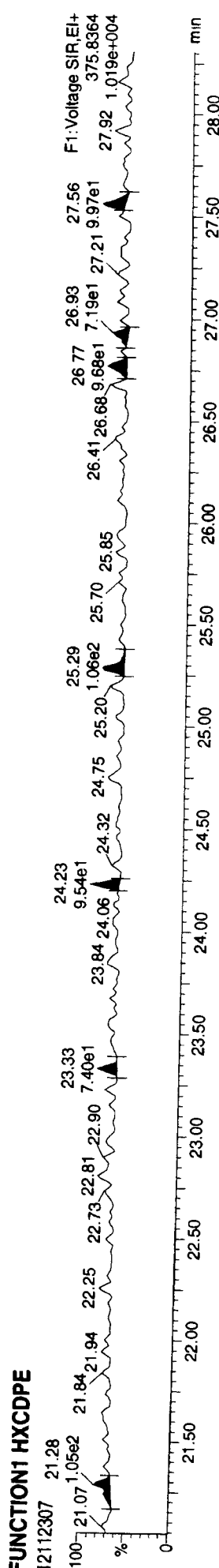
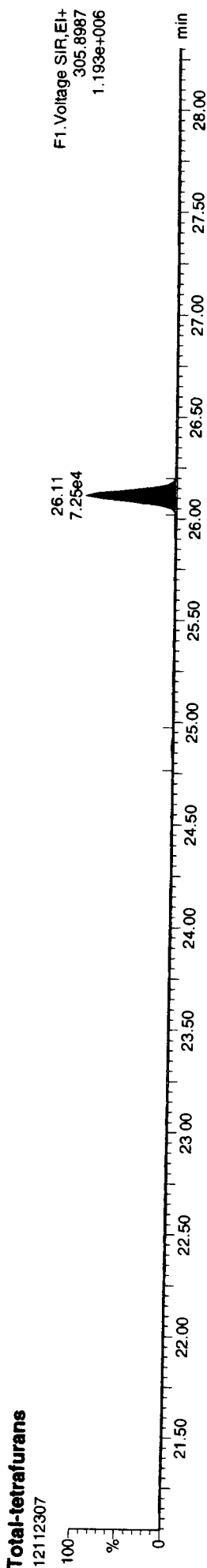
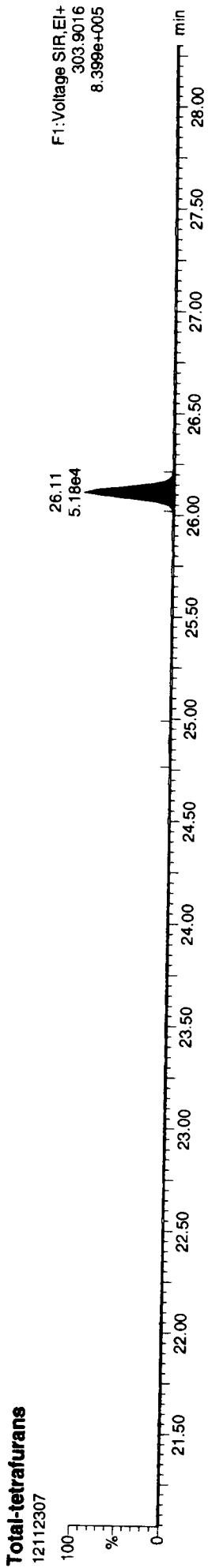
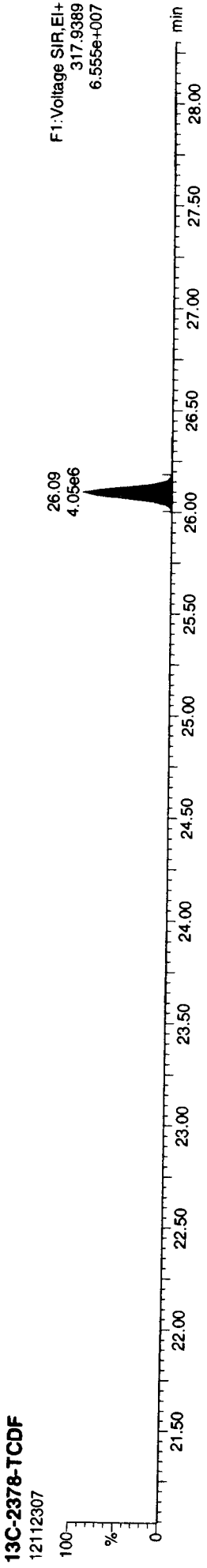
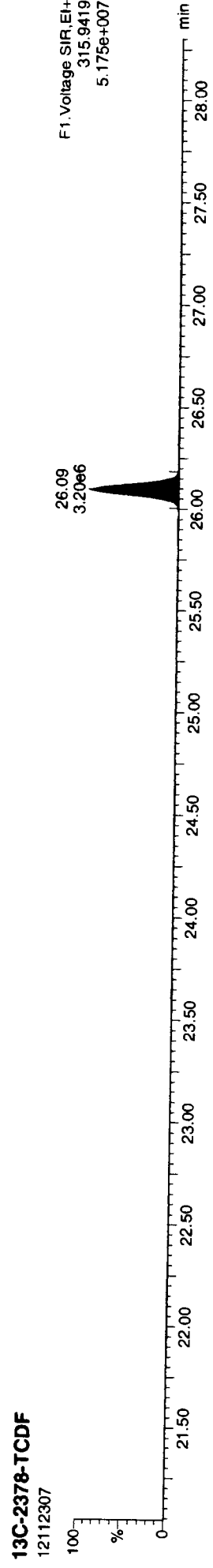


Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\12112307.d  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk



Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk



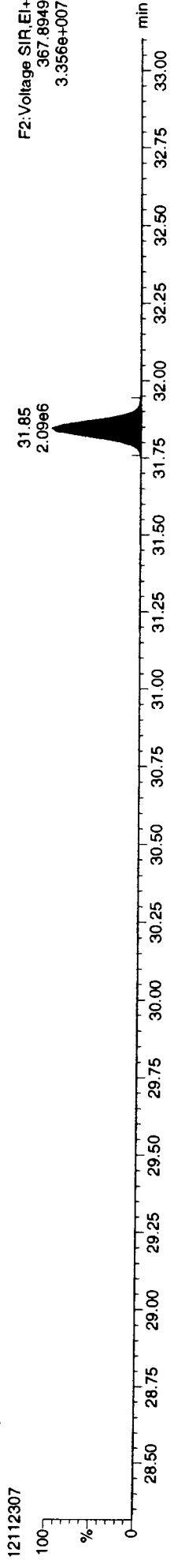
500000 1000000 1500000 2000000 2500000 3000000 3500000 4000000 4500000 5000000



Quantity Sample Report    MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

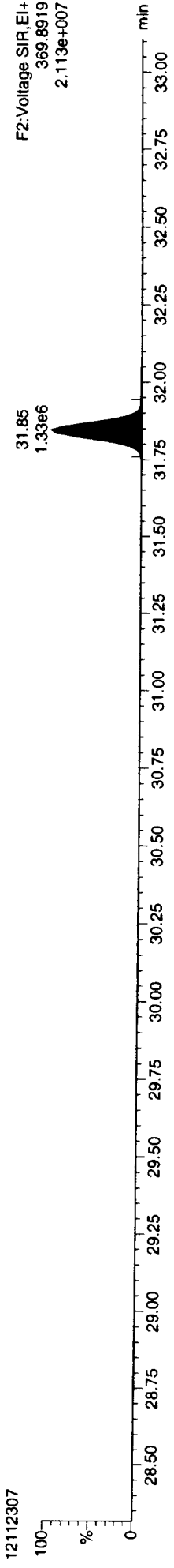
Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk

**13C-12378-PeCDD**



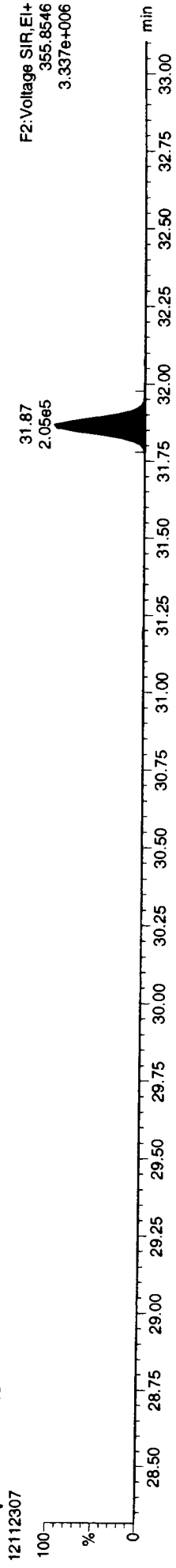
F2: Voltage SIR, EI+  
367.8949  
3.356e+007

**13C-12378-PeCDD**



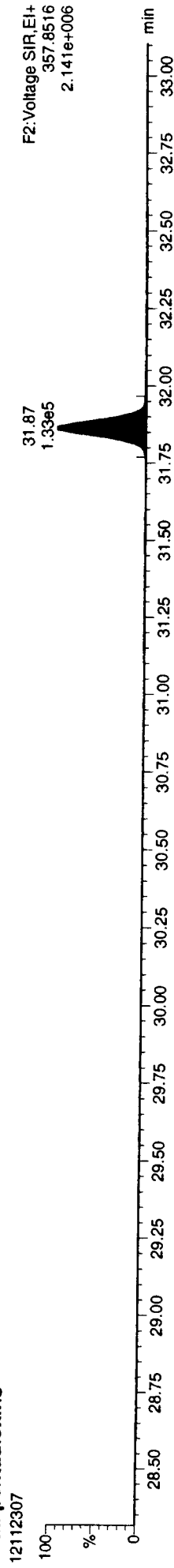
F2: Voltage SIR, EI+  
369.8919  
2.113e+007

**Total-pentadioxins**



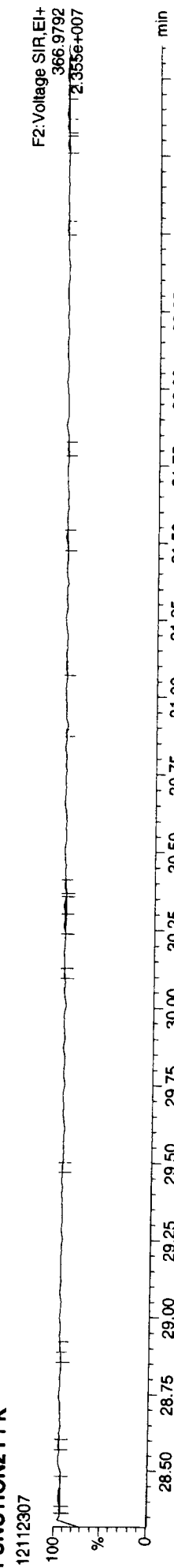
F2: Voltage SIR, EI+  
355.8546  
3.337e+006

**Total-pentadioxins**



F2: Voltage SIR, EI+  
357.8516  
2.141e+006

**FUNCTION2 PFK**



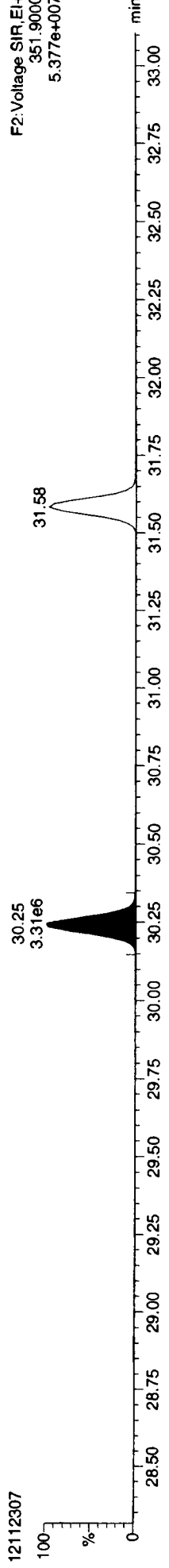
F2: Voltage SIR, EI+  
366.9792  
2.355e+007

Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

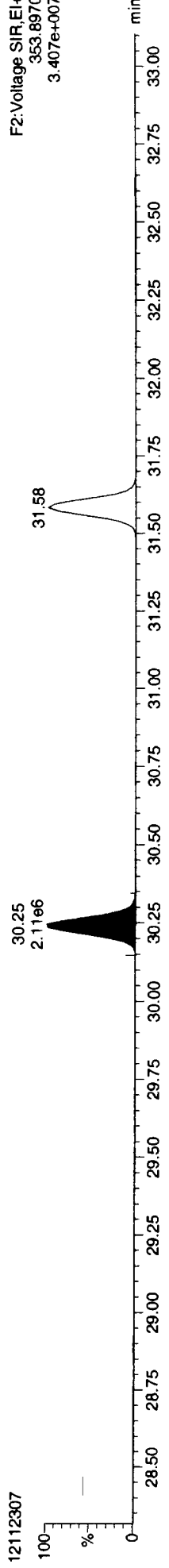
Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDF



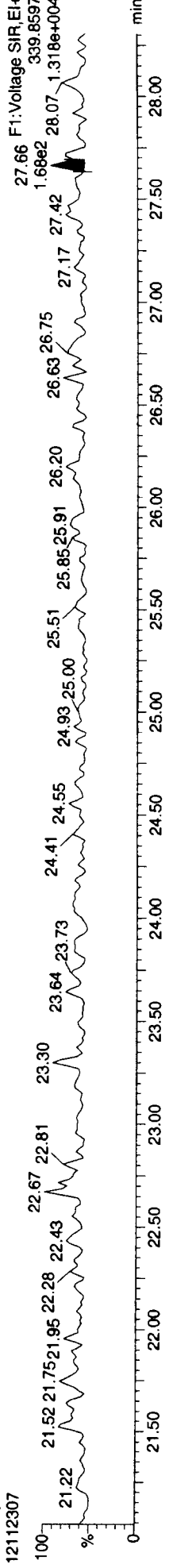
F2: Voltage SIR, EI+  
351.9000  
5.377e+007

13C-12378-PeCDF



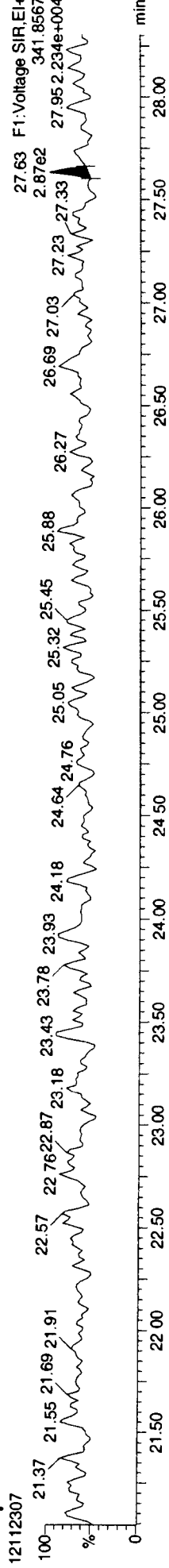
F2: Voltage SIR, EI+  
353.8970  
3.407e+007

Total-penta1



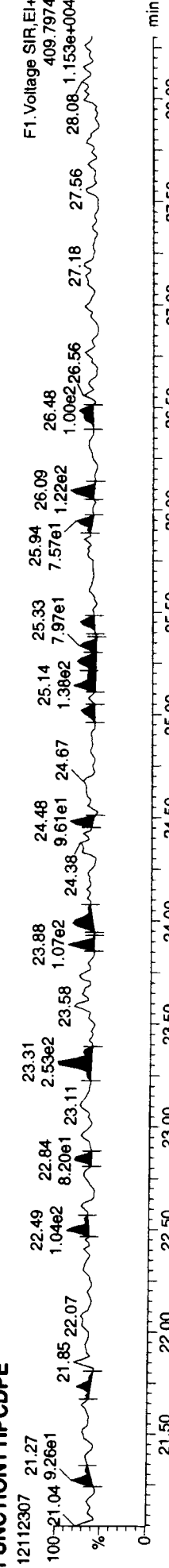
F1: Voltage SIR, EI+  
339.8597  
1.318e+004

Total-penta1



F1: Voltage SIR, EI+  
341.8567  
27.952.234e+004

FUNCTION1 HPCDPE

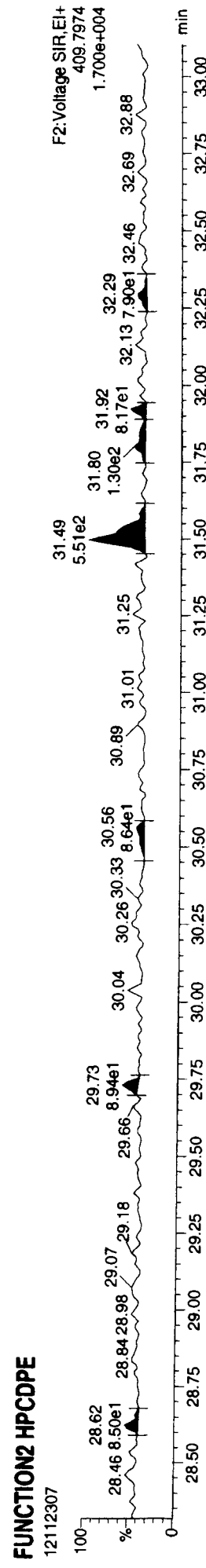
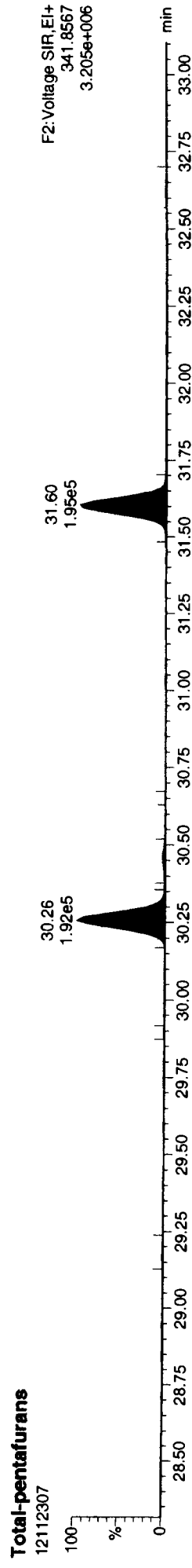
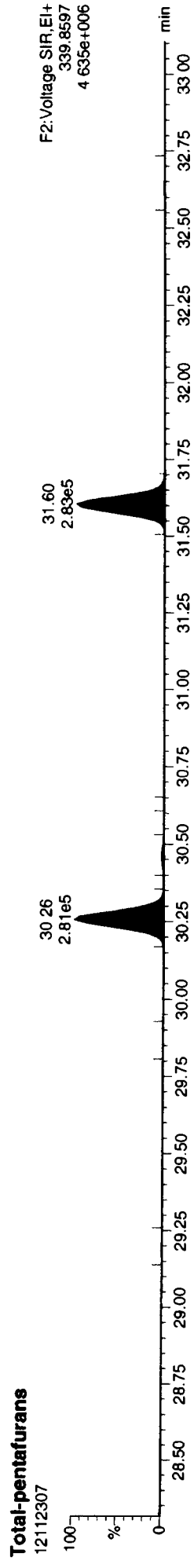
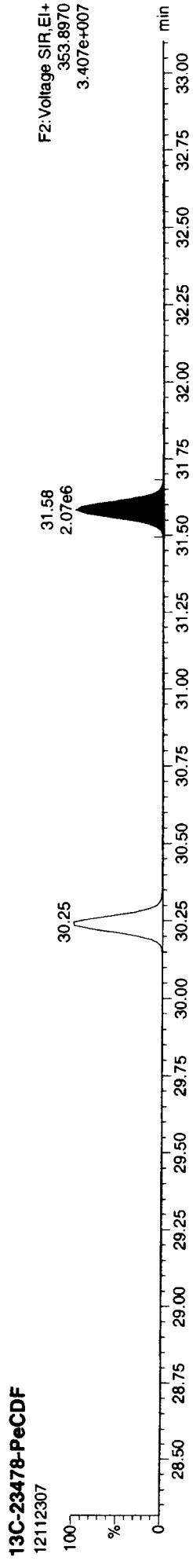
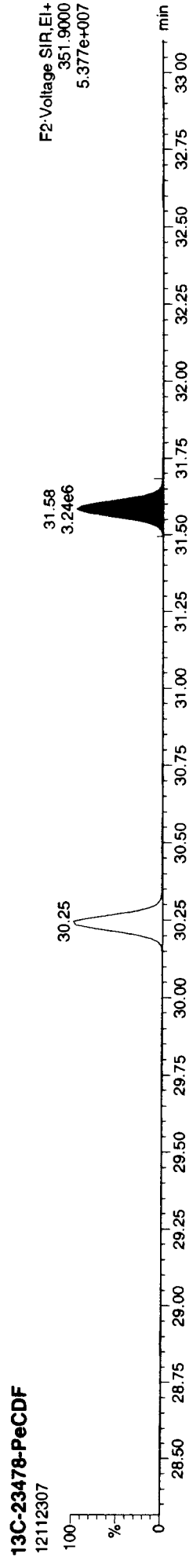


F1: Voltage SIR, EI+  
409.7974  
1.153e+004

Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\12112307.D  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

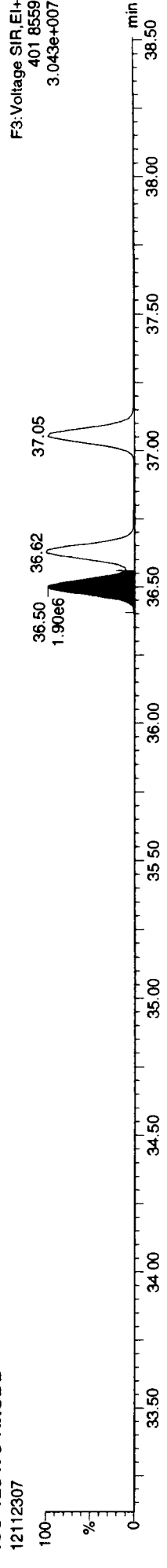
Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk



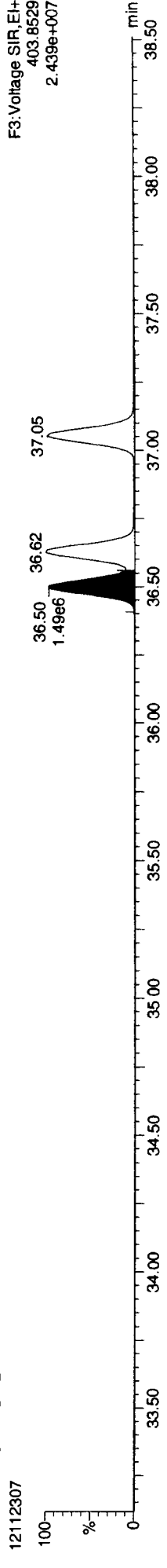
Dataset: P:\DIOXIN8290.PRO\12112307.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk

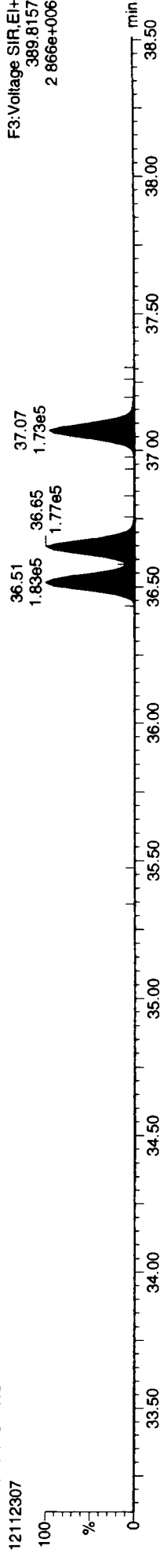
13C-123478-HxCDD



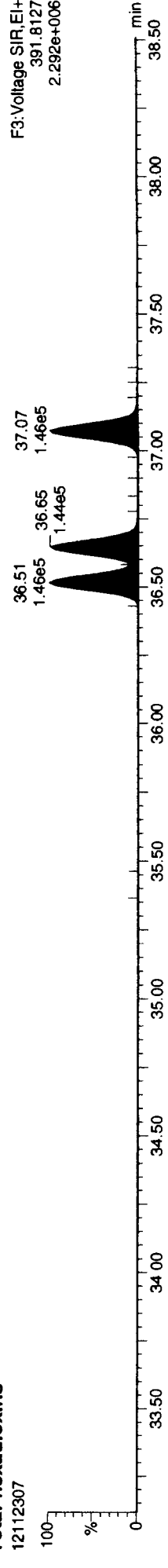
13C-123478-HxCDD



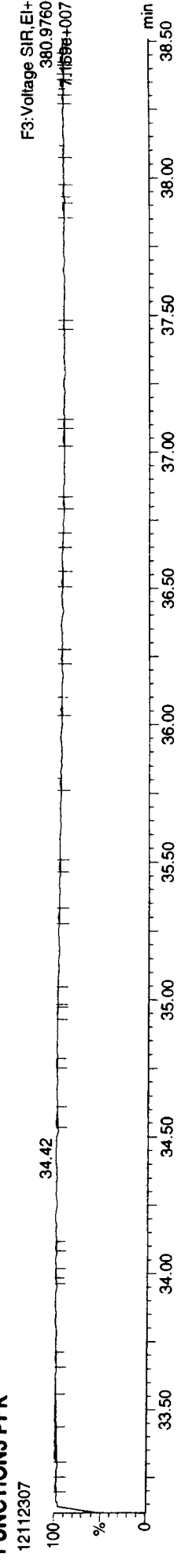
Total-hexadioxins



Total-hexadioxins

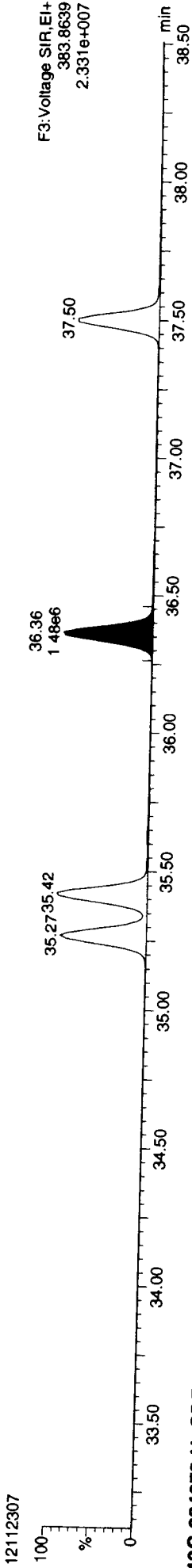


FUNCTION3 PFK

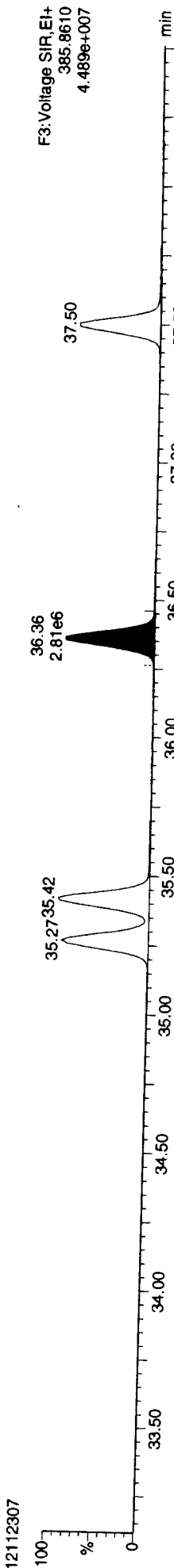


Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk

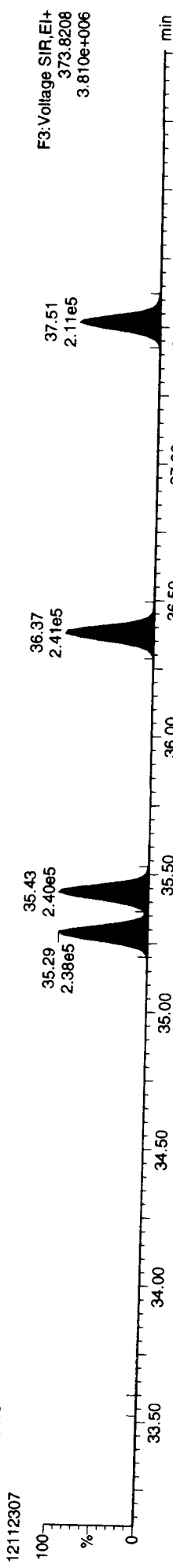
13C-234678-HxCDF



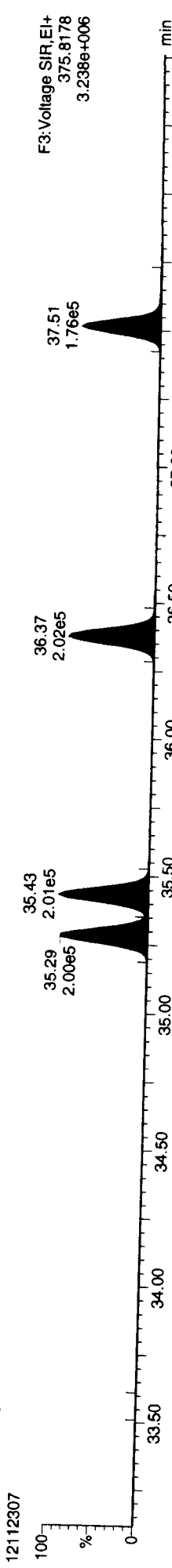
13C-234678-HxCDF



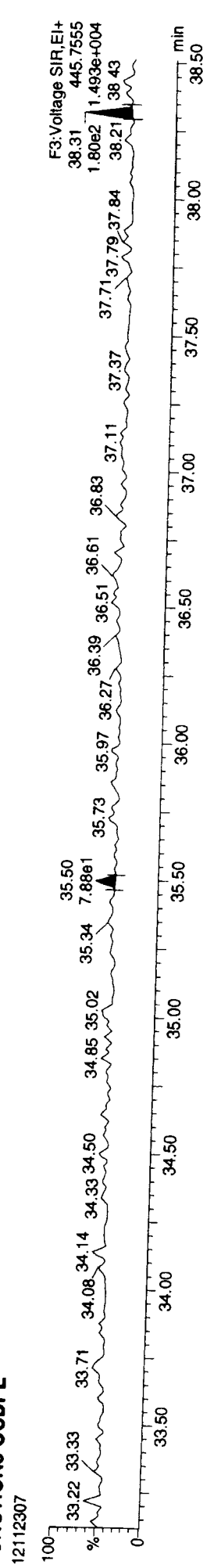
Total-hexafurans



Total-hexafurans



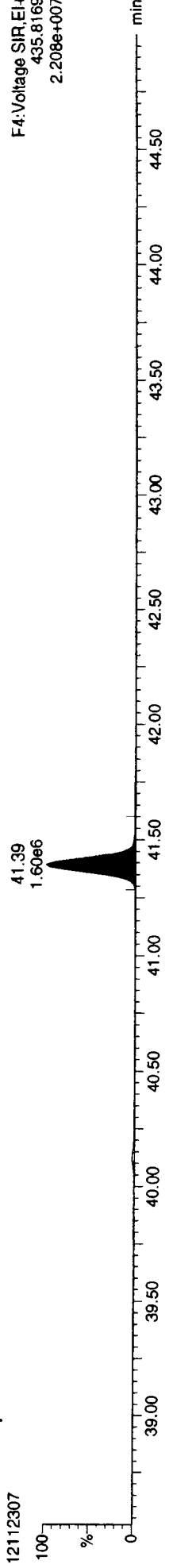
FUNCTION3 OCDFE



Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

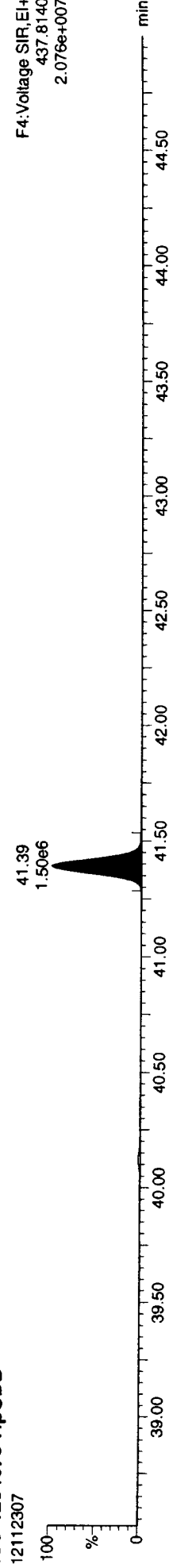
Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



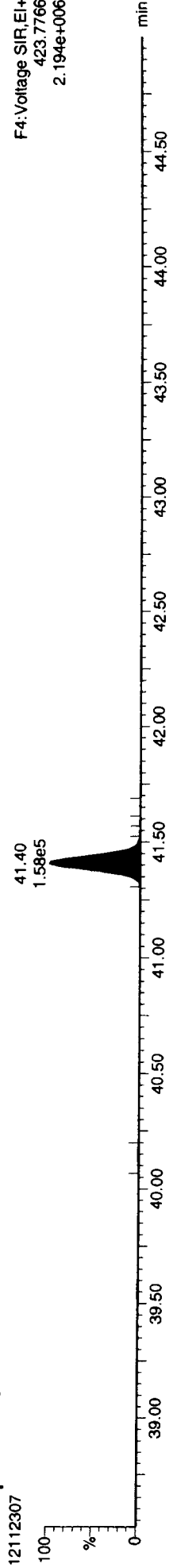
F4: Voltage SIR, EI+  
435.8169  
2.208e+007

13C-1234678-HpCDD



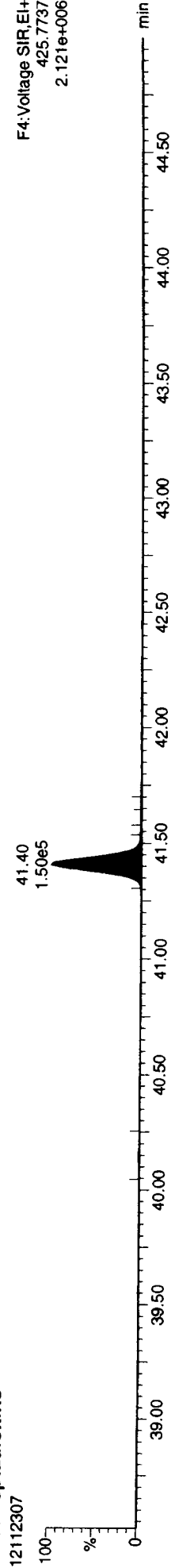
F4: Voltage SIR, EI+  
437.8140  
2.076e+007

Total-heptadioxins



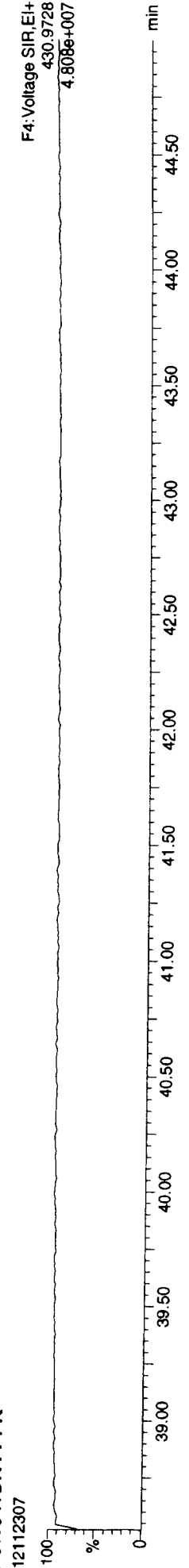
F4: Voltage SIR, EI+  
423.7766  
2.194e+006

Total-heptadioxins



F4: Voltage SIR, EI+  
425.7737  
2.121e+006

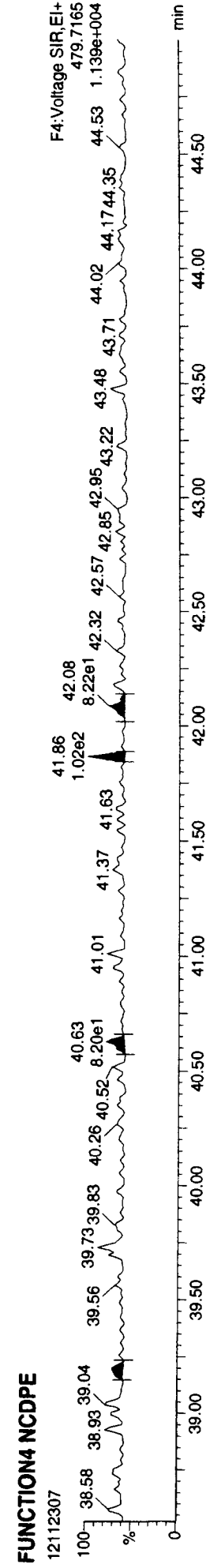
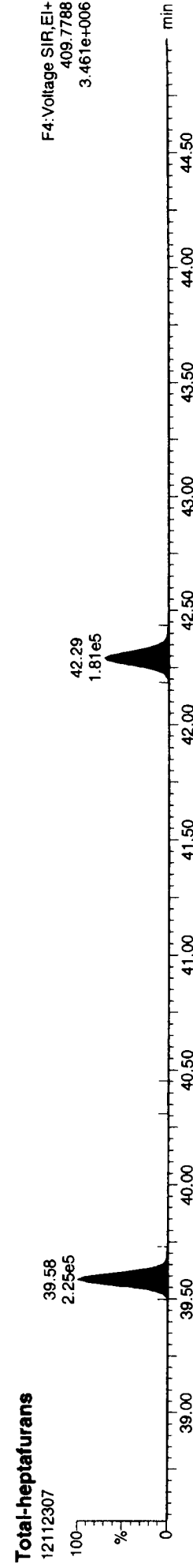
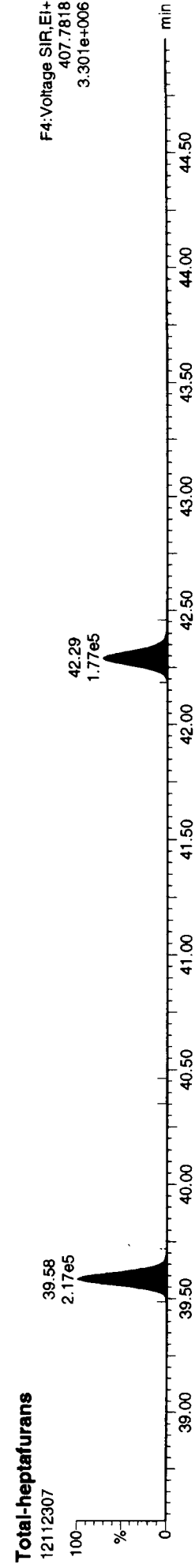
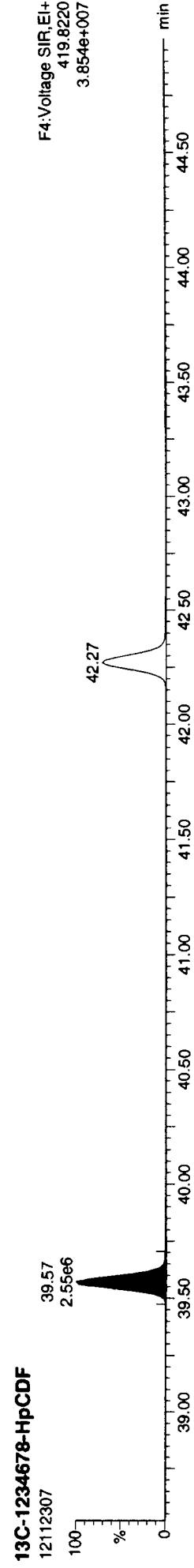
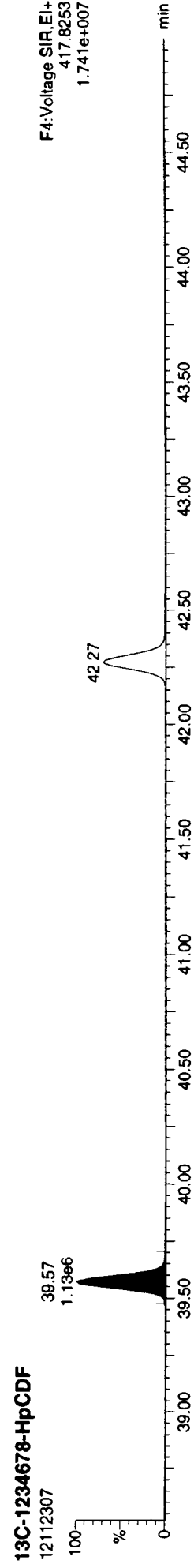
FUNCTION4 PFK



F4: Voltage SIR, EI+  
430.9728  
4.808e+007

Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk



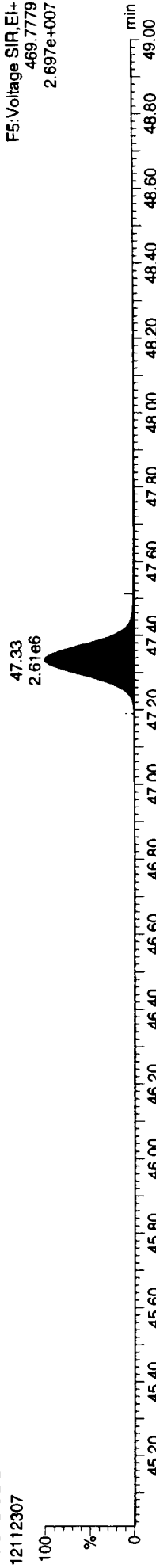
Quantify Sample Report **MassLynx 4.1 SCN 714**

Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk

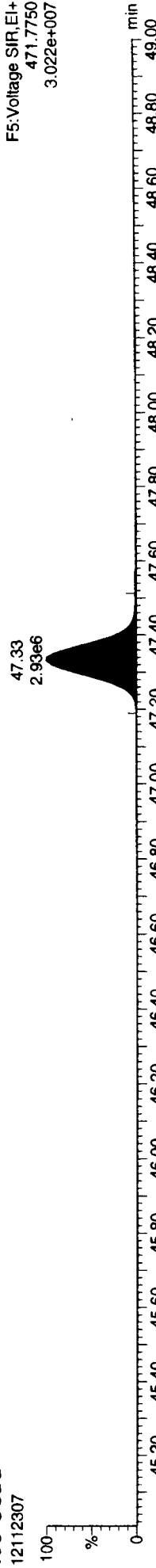
**13C-OCDD**

12112307



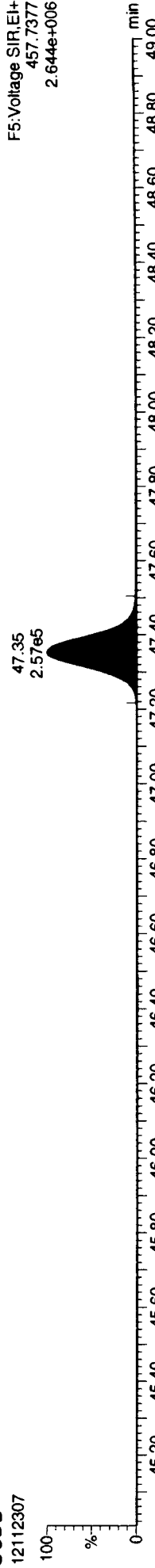
**13C-OCDD**

12112307



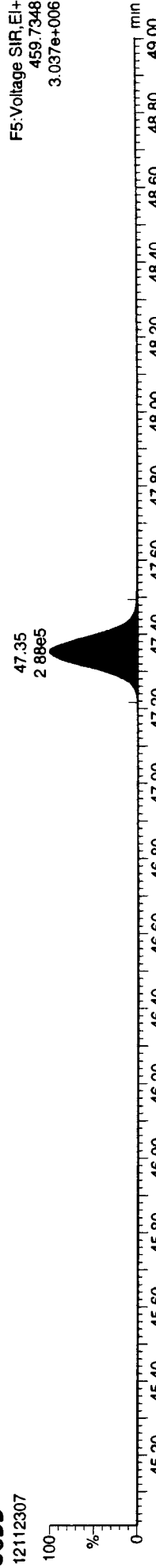
**OCDD**

12112307



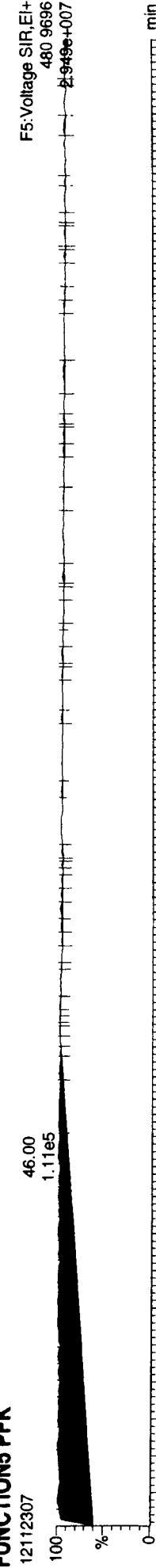
**OCDD**

12112307



**FUNCTION5 PFK**

12112307

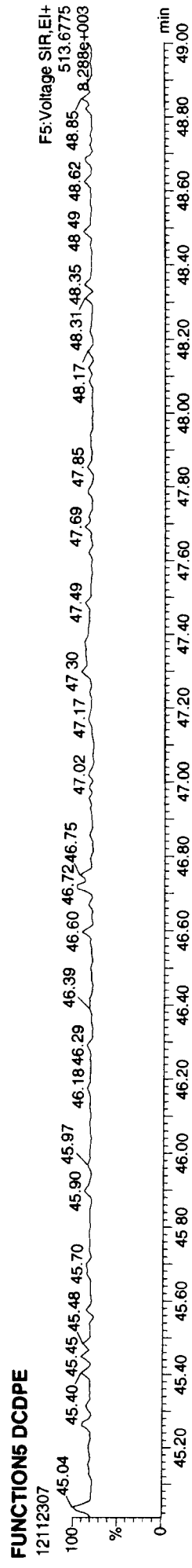
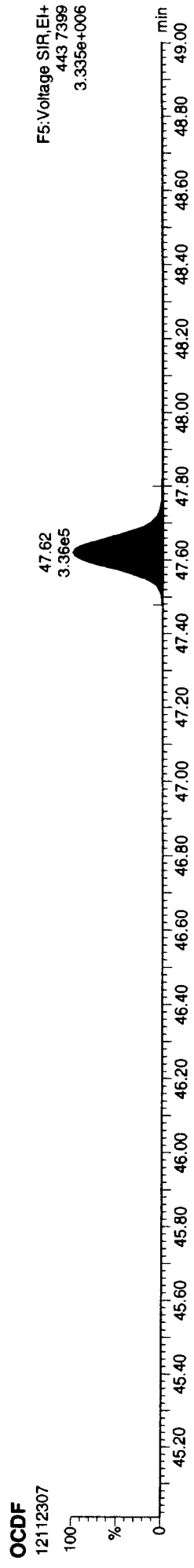
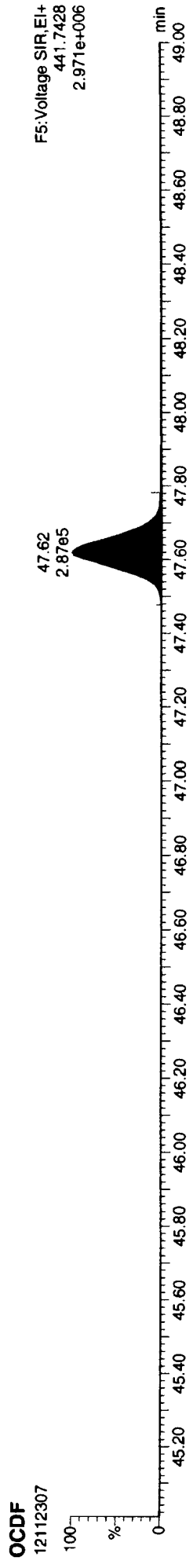
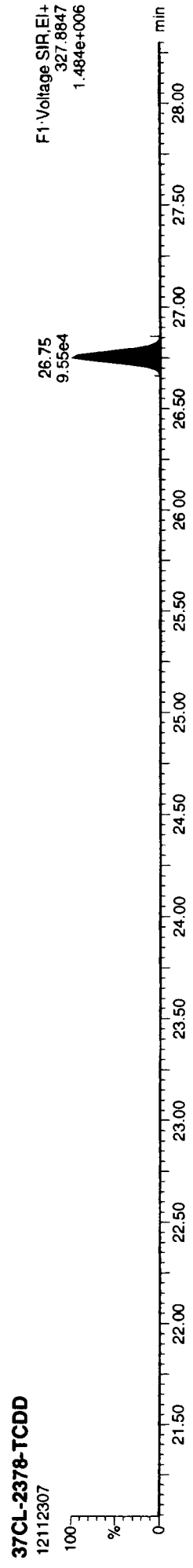


50 10 20 30 40 50 60 70 80 90 100



Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\12112307.D  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:43 Pacific Standard Time

Name: 12112307, Date: 23-Nov-2012, Time: 15:55:02, ID: CS2, Conditions: AUTOSPEC01, User: pk



Quantity Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121123IC.qid  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk

Compound	Area	Height	Retention	Abundance	Ratio	Label	Abundance	Ratio	Label	Abundance	Ratio	Label
2378-TCDF	26.083	1.001	213928	290095	504023	bb	0.877	0.737	1190.1	NO	0.770	9.834
12378-PeCDF	30.233	1.000	1156210	781358	1937568	bb	0.896	1.480	4686.8	NO	1.550	49.802
23478-PeCDF	31.582	1.001	1137087	772882	1909968	bb	0.926	1.471	4541.5	NO	1.550	49.602
123478-HxCDF	35.285	1.001	936705	786783	1723488	bd	1.068	1.191	3405.1	NO	1.240	49.310
234678-HxCDF	36.350	1.000	928801	782097	1710898	bb	1.037	1.188	3308.9	NO	1.240	49.788
123678-HxCDF	35.407	1.000	954848	809981	1764829	db	1.035	1.179	3430.0	NO	1.240	50.254
123789-HxCDF	37.490	1.000	789335	660161	1448496	bb	0.987	1.196	2880.5	NO	1.240	49.490
1234678-HpCDF	39.561	1.000	841683	857247	1688931	bb	1.232	0.982	4599.1	NO	1.050	49.532
1234789-HpCDF	42.269	1.001	646769	659996	1308765	bb	1.215	0.980	3029.3	NO	1.050	49.817
OCDF	47.593	1.006	1037025	1193546	2230571	bb	1.138	0.869	8284.4	NO	0.890	101.071
2378-TCDD	26.735	1.001	168653	217774	386426	bd	1.049	0.774	1605.5	NO	0.770	9.822
12378-PeCDD	31.845	1.001	813777	521830	1335607	bb	0.998	1.559	3776.6	NO	1.550	49.810
123478-HxCDD	36.492	1.000	707337	578925	1286262	bd	0.971	1.222	3224.8	NO	1.240	50.349
123678-HxCDD	36.624	1.000	685667	554763	1240430	db	0.918	1.236	3087.5	NO	1.240	49.928
123789-HxCDD	37.051	1.012	701043	562904	1263946	bb	0.932	1.245	3135.6	NO	1.240	50.797
1234678-HpCDD	41.381	1.000	584414	561145	1145559	bb	1.017	1.041	3309.3	NO	1.050	49.058
OCDD	47.324	1.000	902163	1013251	1915414	bb	1.008	0.890	4016.0	NO	0.890	97.911
13C-2378-TCDF	26.078	1.007	2563645	3282954	5846599	bb	1.473	0.781	4087.7	NO	0.770	99.879
13C-12378-PeCDF	30.222	1.167	2649150	1682127	4341276	bb	1.148	1.566	8940.2	NO	1.550	95.144
13C-23478-PeCDF	31.560	1.219	2527379	1630334	4157713	bb	1.113	1.550	8368.2	NO	1.550	93.999
13C-123478-HxCDF	35.243	0.952	1118730	2153325	3272055	bd	1.209	0.520	5289.3	NO	0.510	100.993
13C-123678-HxCDF	35.396	0.956	1163497	2230950	3394447	db	1.269	0.521	5601.4	NO	0.510	99.846
13C-234678-HxCDF	36.339	0.981	1130474	2184101	3314575	bb	1.236	0.518	5257.9	NO	0.510	100.086
13C-123789-HxCDF	37.479	1.012	1019042	1949503	2968545	bb	1.107	0.523	4814.3	NO	0.510	100.093
13C-1234678-HpCDF	39.550	1.068	863095	1921193	2784288	bb	1.051	0.449	4962.2	NO	0.440	98.845
13C-1234789-HpCDF	42.247	1.141	659755	1489129	2158883	bb	0.815	0.440	3276.1	NO	0.440	98.884
13C-1234-TCDD	25.899	0.000	1752512	2222562	3975074	bb	1.000	0.789	4416.2	NO	0.770	100.000
13C-2378-TCDD	26.721	1.032	1619131	2130808	3749939	bd	0.946	0.760	3994.6	NO	0.770	99.750
13C-12378-PeCDD	31.823	1.229	1643463	1043219	2686682	bb	0.721	1.575	13466.6	NO	1.550	93.785
13C-123478-HxCDD	36.481	0.985	1476891	1154653	2631544	bd	0.991	1.279	4457.6	NO	1.240	99.105
13C-123678-HxCDD	36.613	0.989	1497921	1208103	2706025	db	1.025	1.240	4419.8	NO	1.240	98.547
13C-1234678-HpCDD	41.370	1.117	1174691	1121641	2296332	bb	0.866	1.047	6566.4	NO	1.050	98.931
13C-OCDD	47.306	1.278	1831116	2048884	3880000	bb	0.769	0.894	11336.5	NO	0.890	188.249

Dataset: P:\DIOXIN8290.PRO\121123IC.qld

Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time

Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk

	37.029	0.000	1491210	1188605	2679815	bb	1.000	1.255	1.240	NO	4373.3	
13C-123789-HxCDD												100.000
Total-tetrafurans			681965				0.877					31.967
Total-penta 1			1743492									73.434
Total-pentafurans			3493704				0.911					151.492
Total-hexafurans			4738730				1.032					261.258
Total-heptafurans			1488644				1.223					99.362
Total-Furans			13184043				1.041					717.524
Total-tetra-dioxins			956279				1.049					55.542
Total-pentadioxins			2917842				0.998					178.867
Total-hexadioxins			3044627				0.940					220.722
Total-heptadioxins			1276742				1.017					107.268
Total-Dioxins			9097653				0.985					660.657
Total-TEQ			22281696									1379.605
37CL-2378-TCDD	26.735	1.032	401259		401259		1.044			2091.1		1376.438
FUNCTION1 PFK			3607643									9.673
FUNCTION2 PFK			126655									0.000
FUNCTION3 PFK			61568									0.000
FUNCTION4 PFK			19179									0.000
FUNCTION5 PFK			7229271									0.000
FUNCTION1 HXCDPE			782									0.000
FUNCTION1 HPCDPE			1559									0.000
FUNCTION2 HPCDPE			2382									0.000
FUNCTION3 OCDPE			225									0.000
FUNCTION4 NCDPE			466									0.000
FUNCTION5 DCDPE			0									0.000

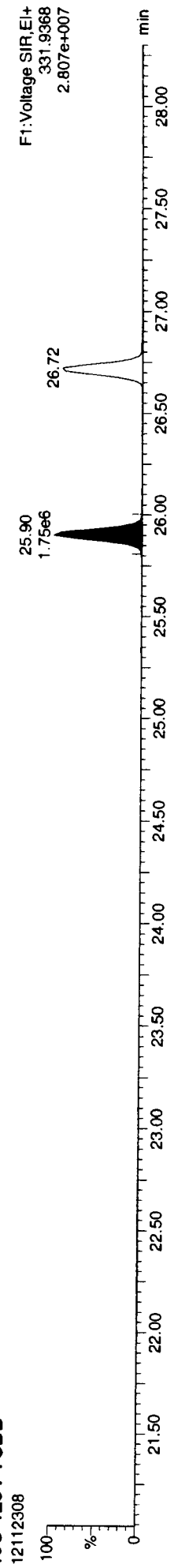
11/26/12 09:27:04

Dataset: P:\DIOXIN8290.PRO\121123\C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

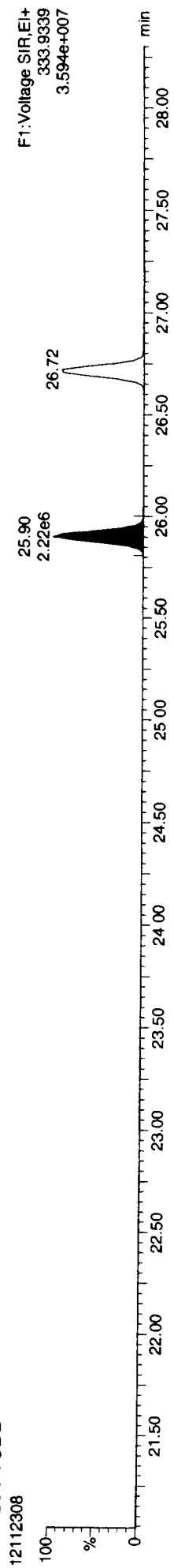
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk

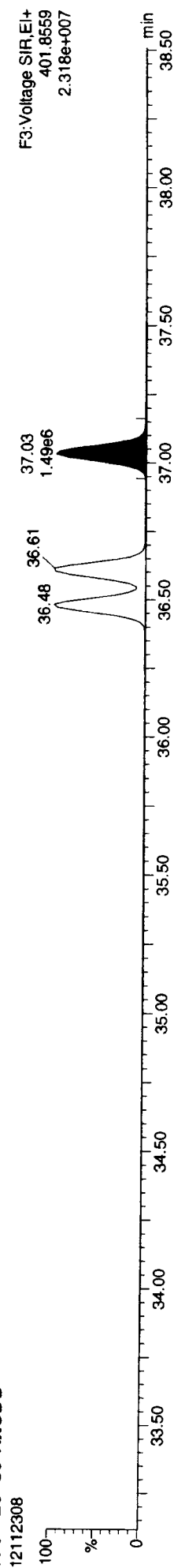
13C-1234-TCDD



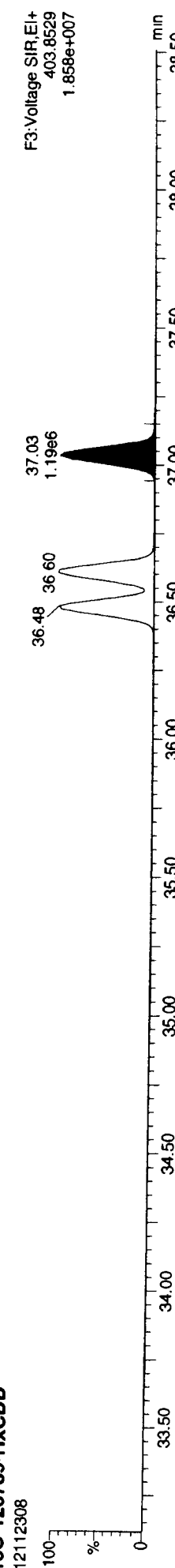
13C-1234-TCDD



13C-123789-HxCDD

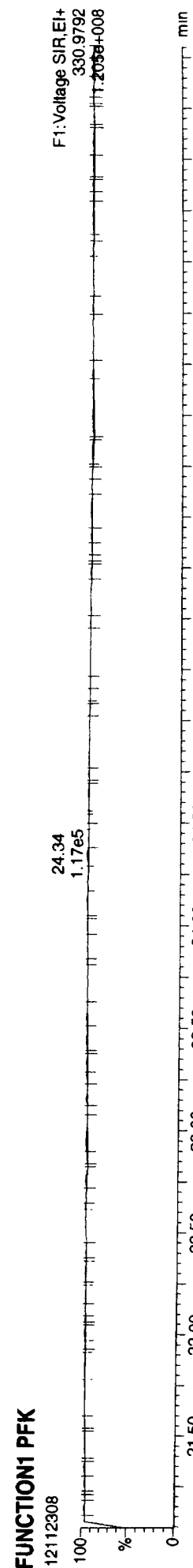
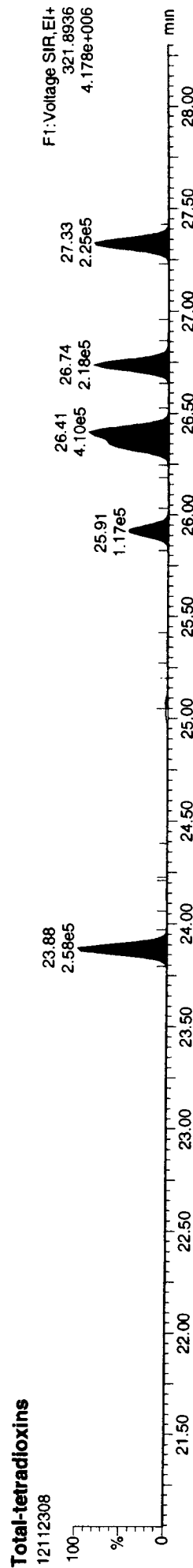
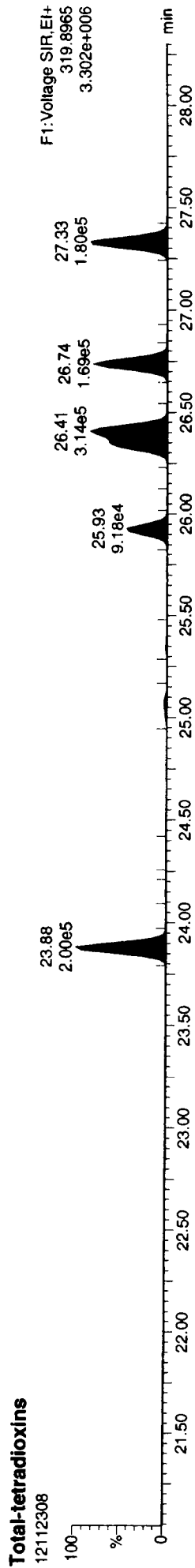
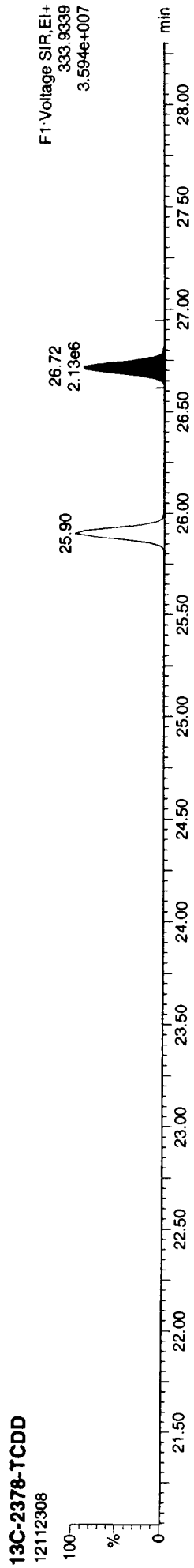
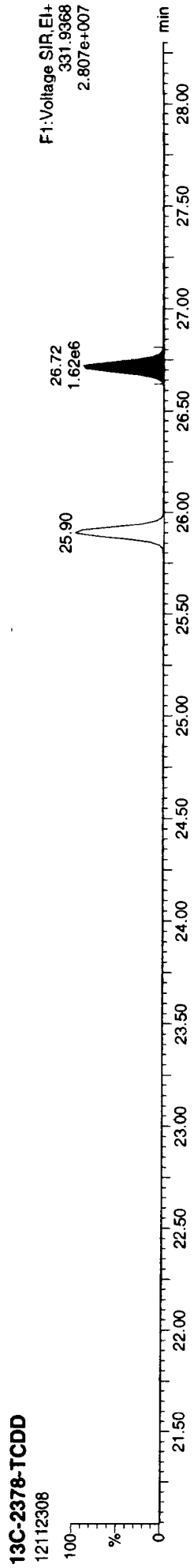


13C-123789-HxCDD



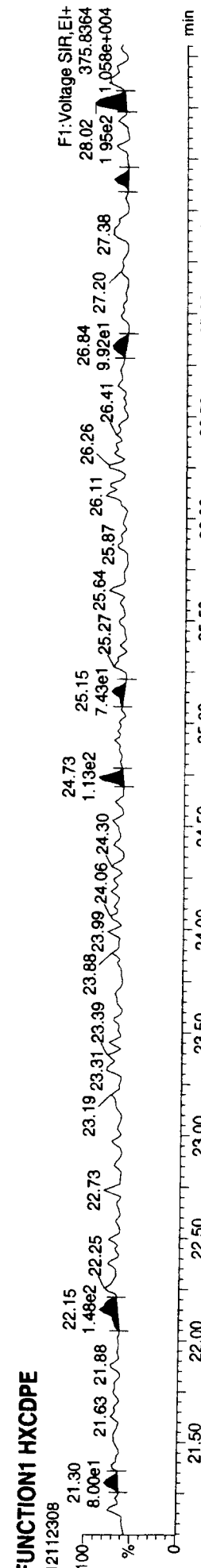
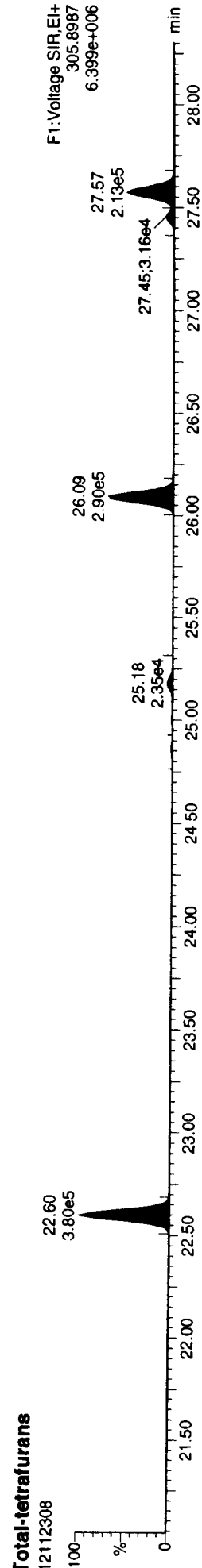
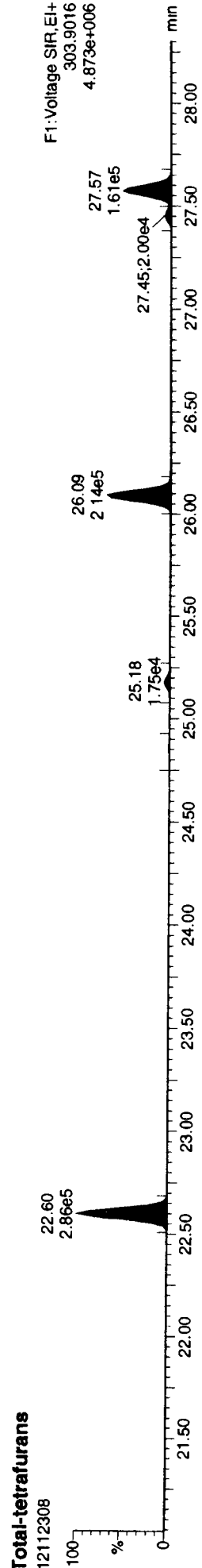
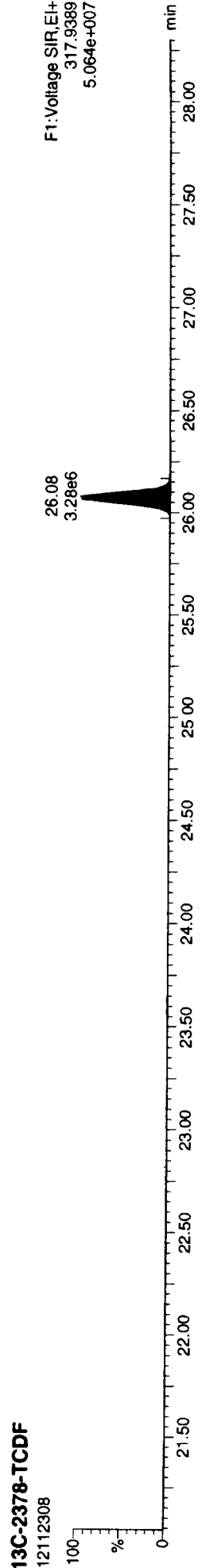
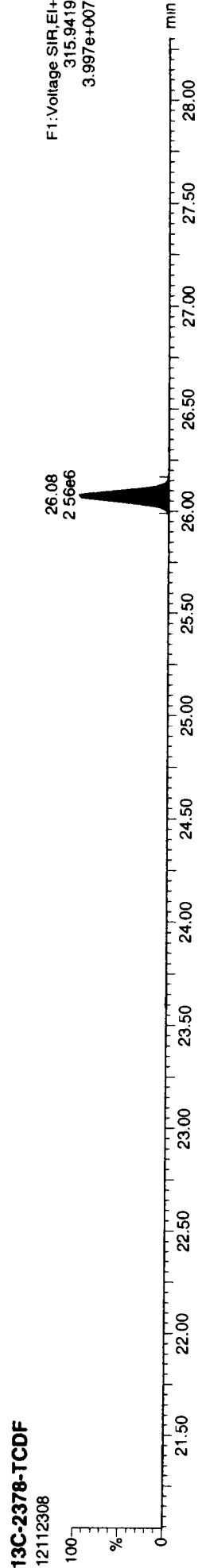
Quantify Sample Report  
Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk



Dataset: P:\DIOXIN8290.PRO\121123\C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

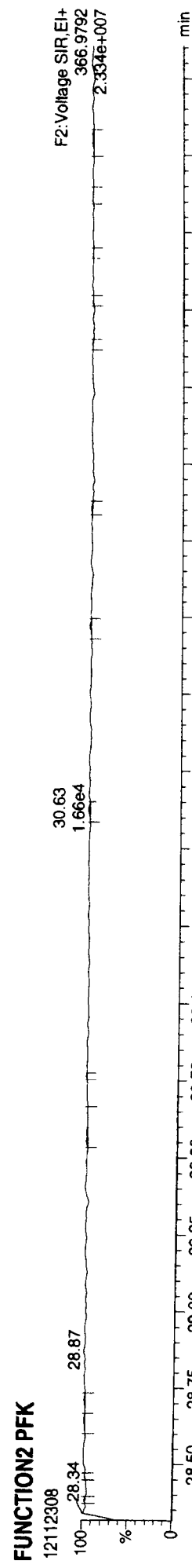
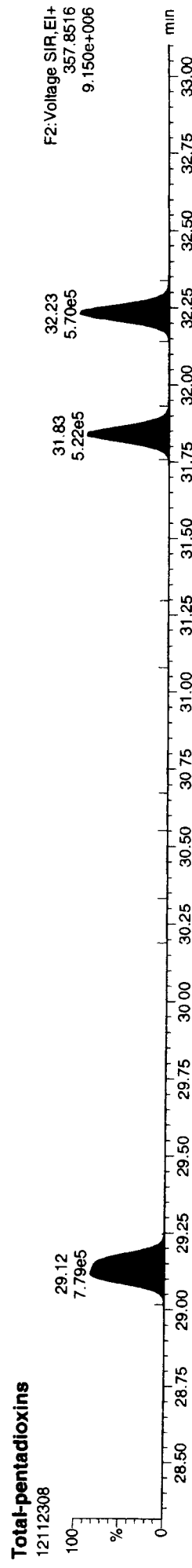
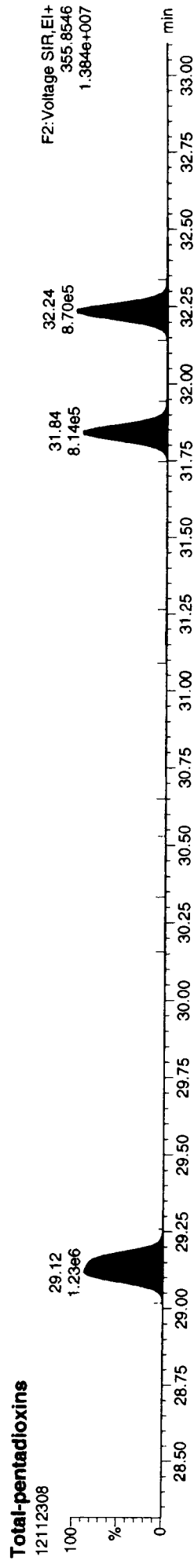
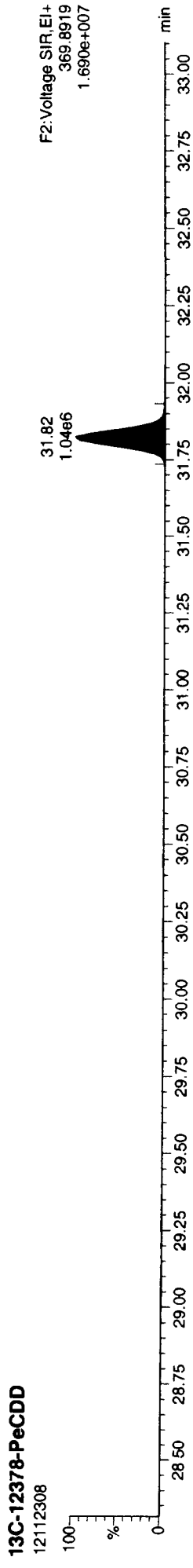
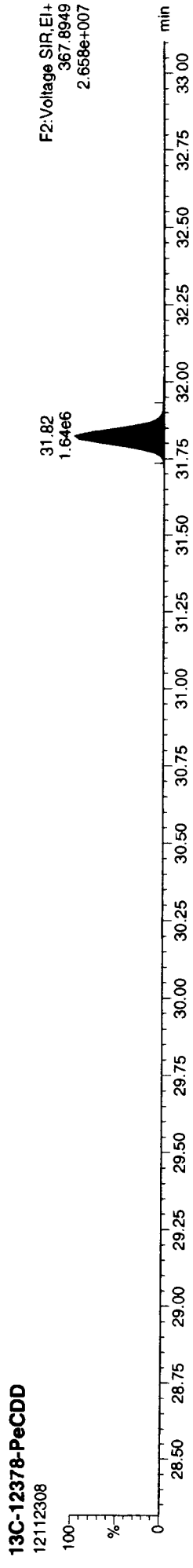
Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

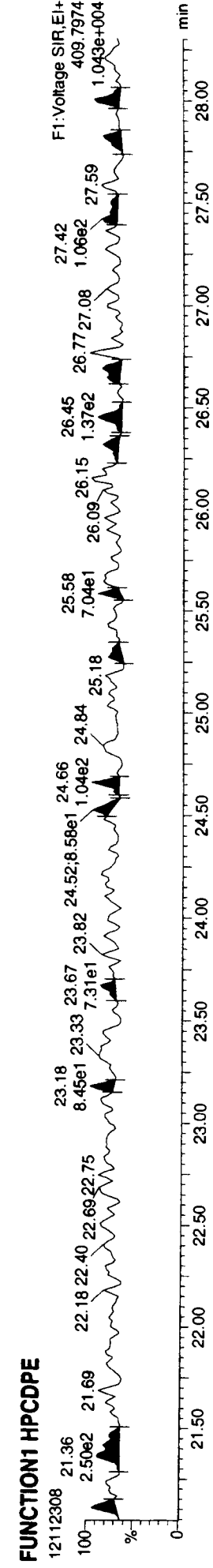
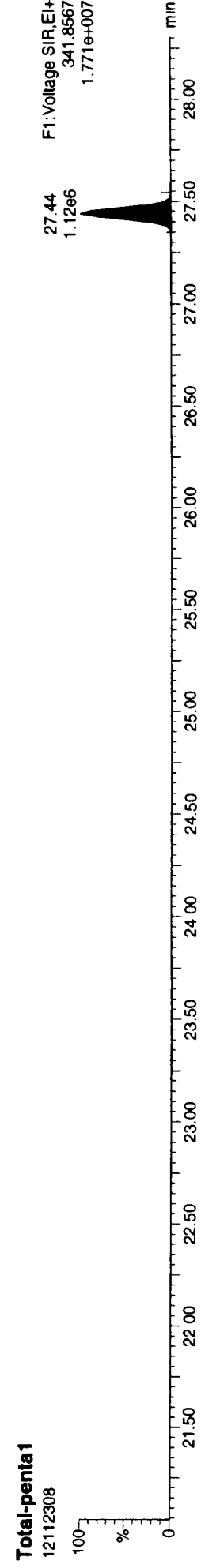
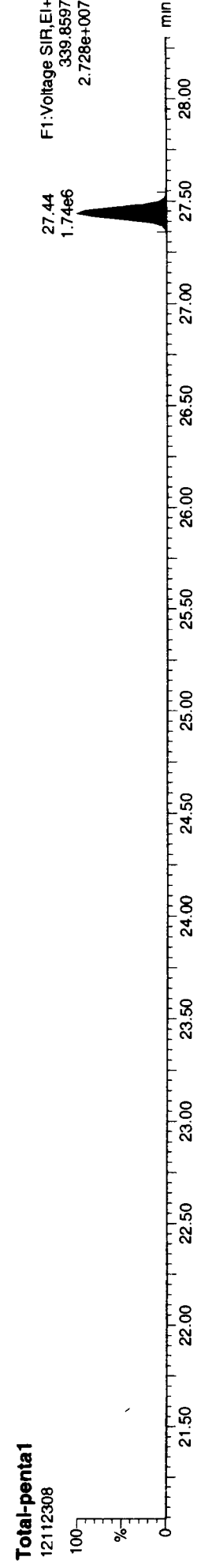
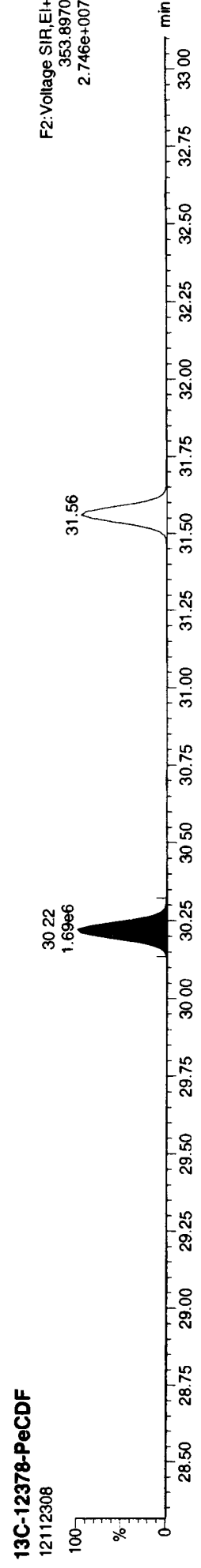
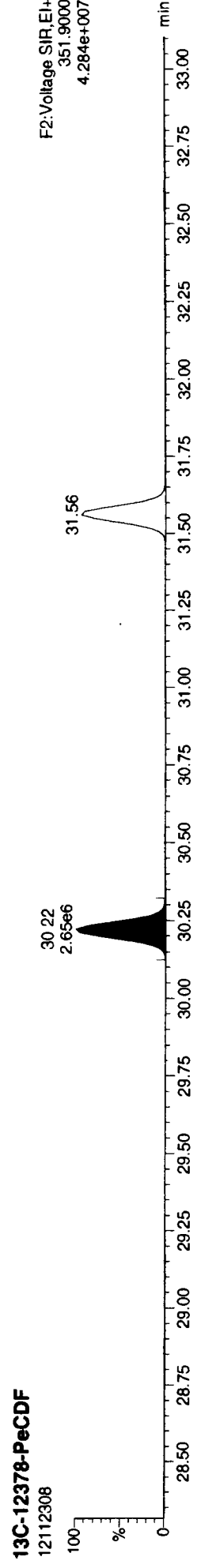
Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk



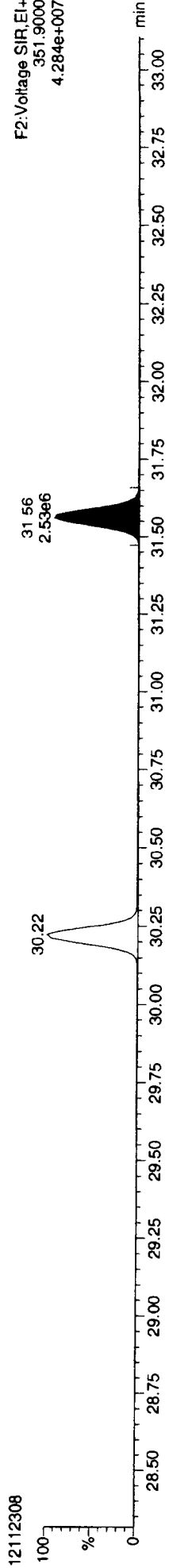
5000 10000 20000 30000 40000 50000



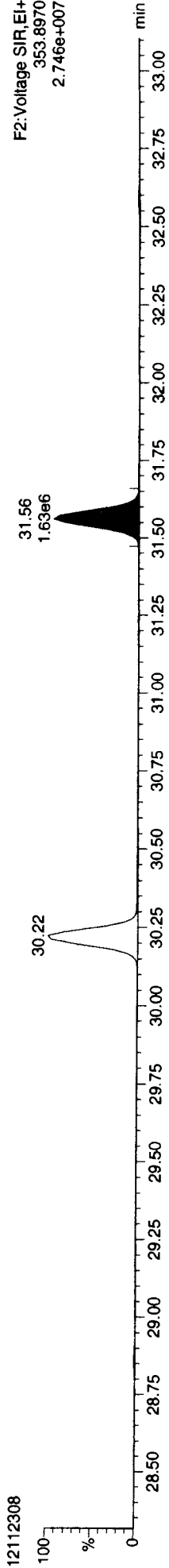
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk

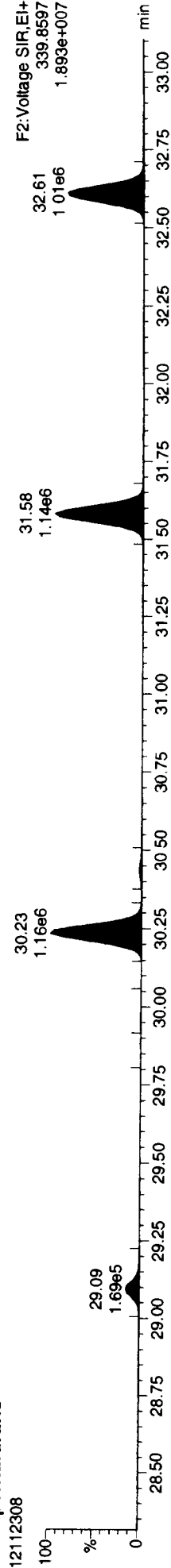
13C-23478-PeCDF



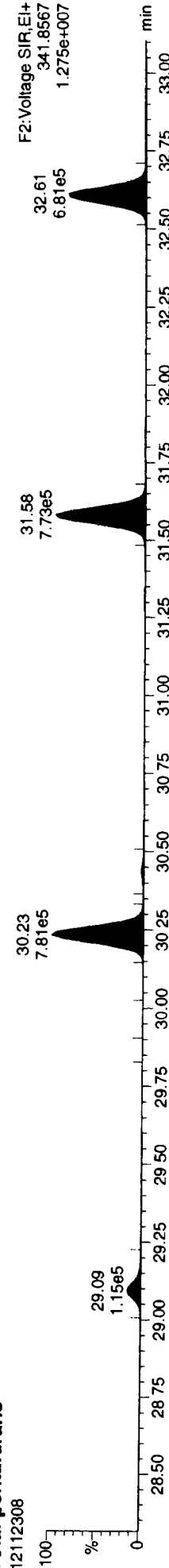
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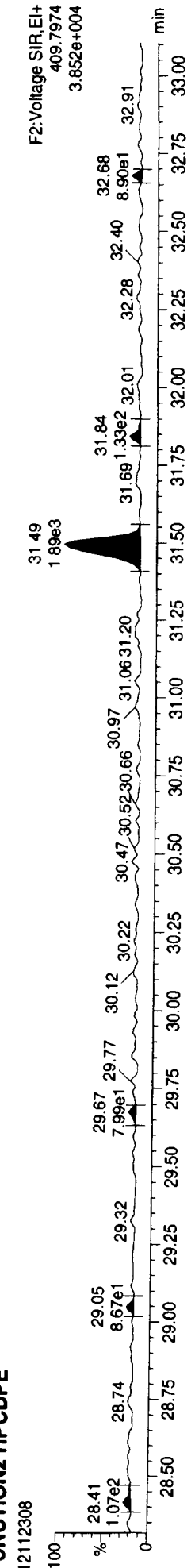
Total-pentafurans



Total-pentafurans



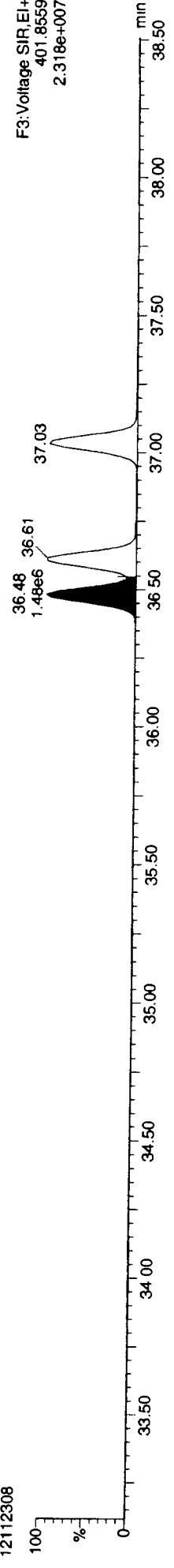
FUNCTION2 HPCDPE



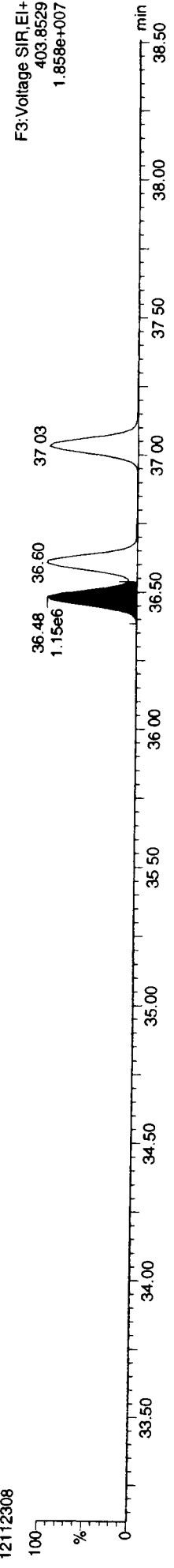
Quantity Sample Report  
Dataset: P:\DIOXIN8290.PRO\121123\C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk

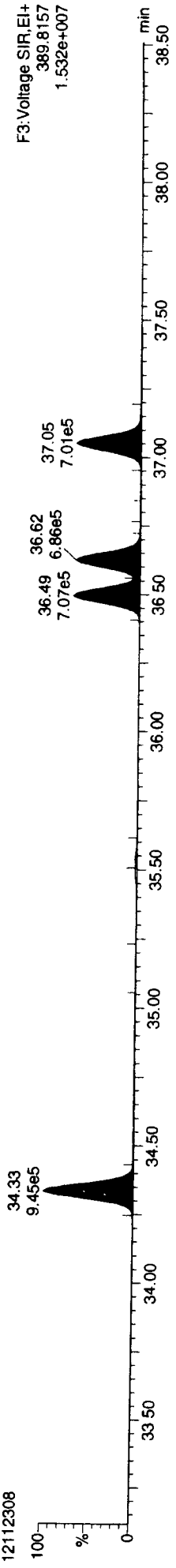
13C-123478-HxCDD



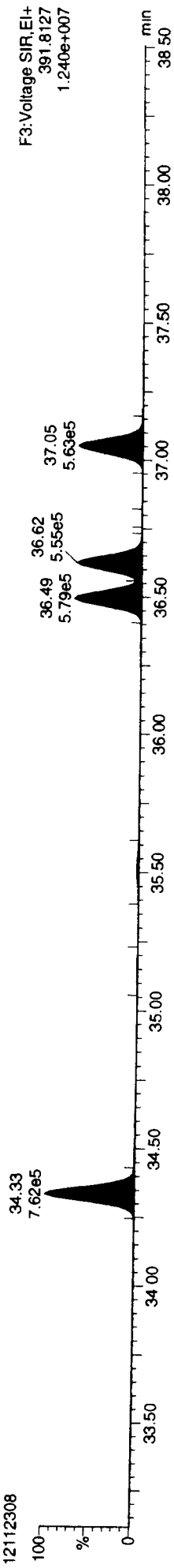
13C-123478-HxCDD



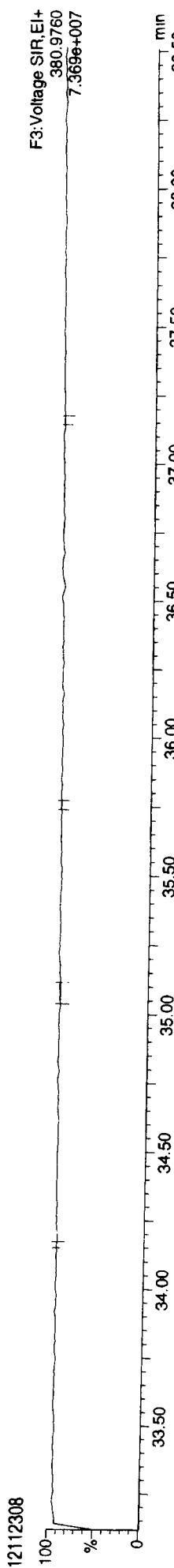
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

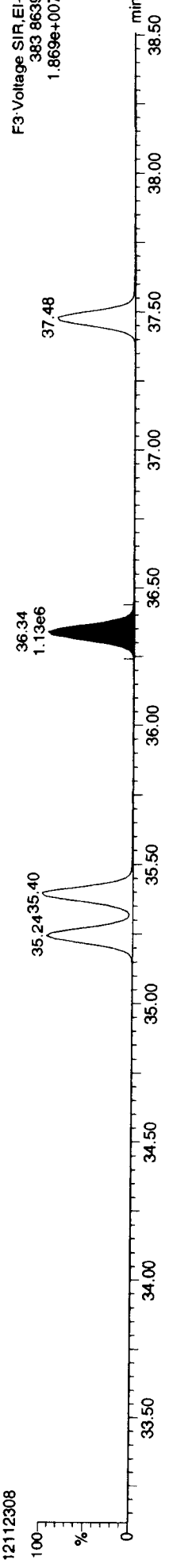


Quantify Sample Report MassLynx 4.1 SCN 714

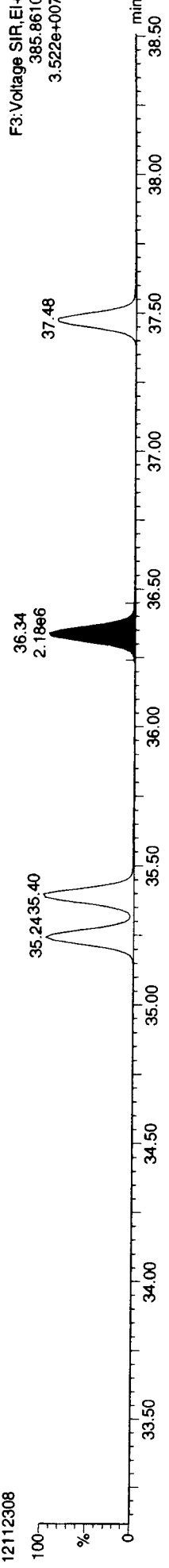
Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk

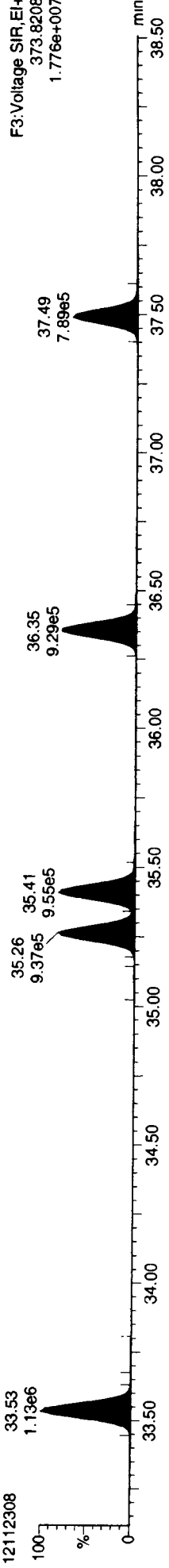
13C-234678-HxCDF



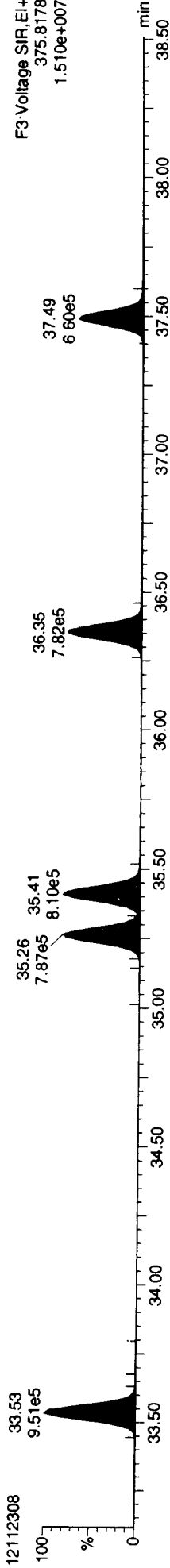
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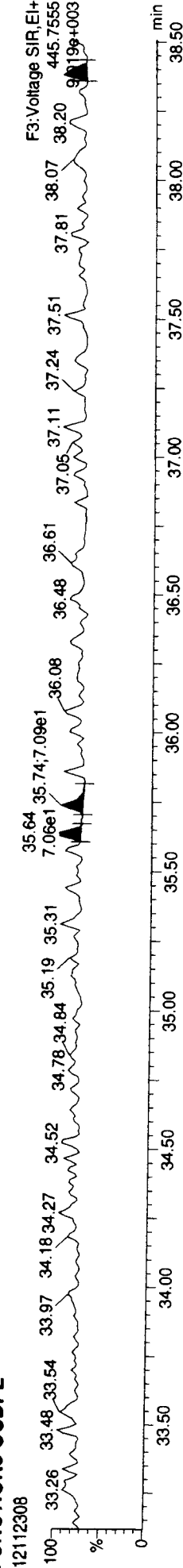
Total-hexafurans



Total-hexafurans



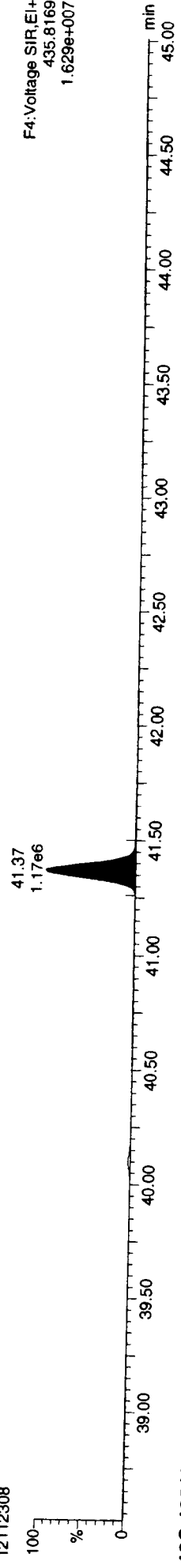
FUNCTION3 OCDPE



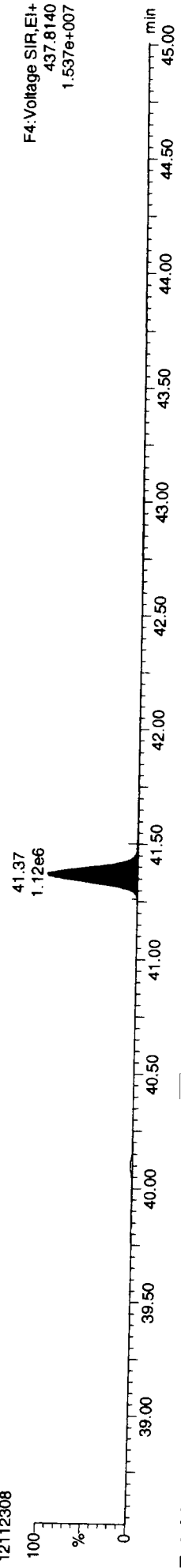
CS050 19 11 11

Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk

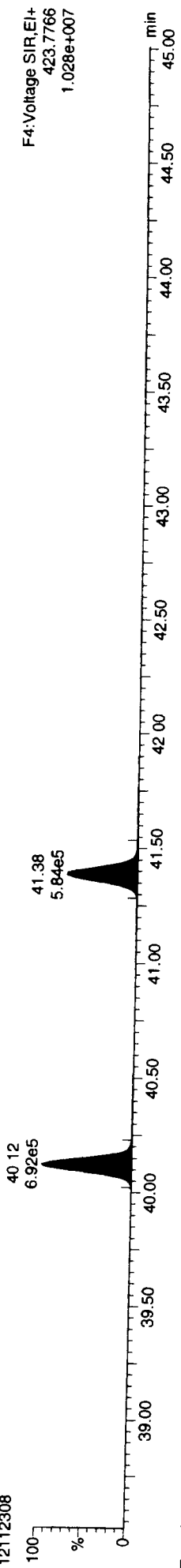
**13C-1234678-HpCDD**  
12112308



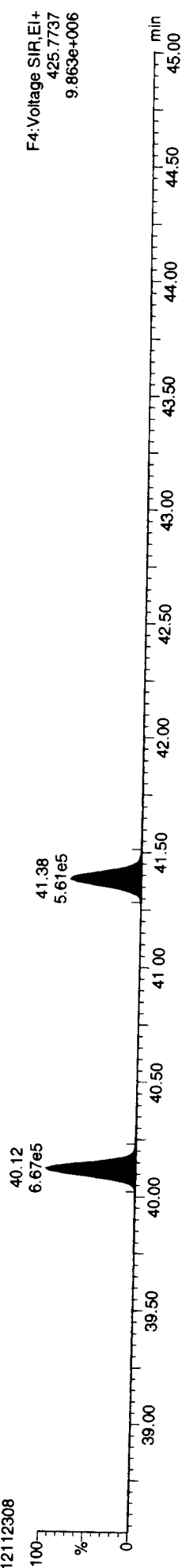
**13C-1234678-HpCDD**  
12112308



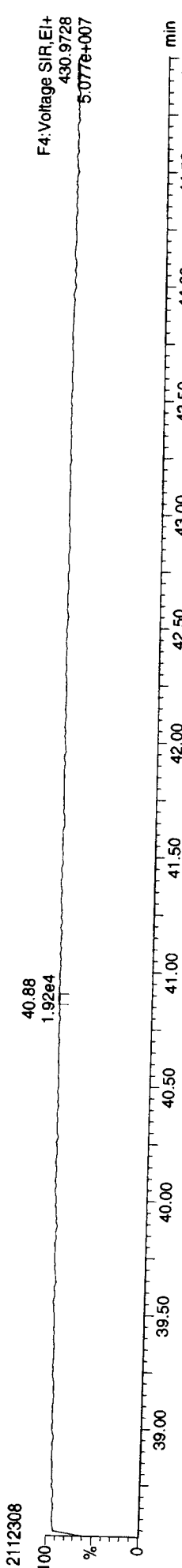
**Total-heptadioxins**  
12112308



**Total-heptadioxins**  
12112308



**FUNCTION4 PFK**  
12112308

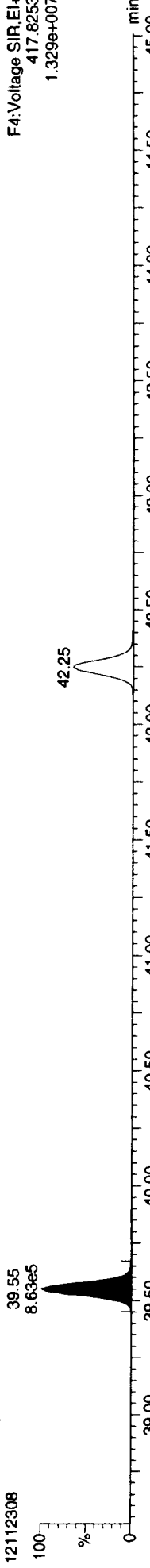


Quantify Sample Report MassLynx 4.1 SCN 714

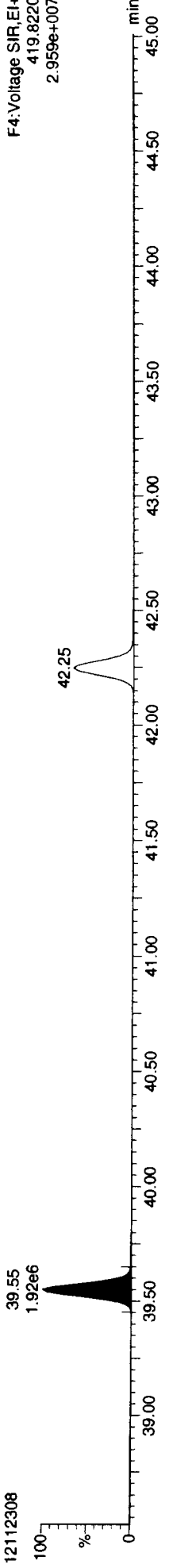
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Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk

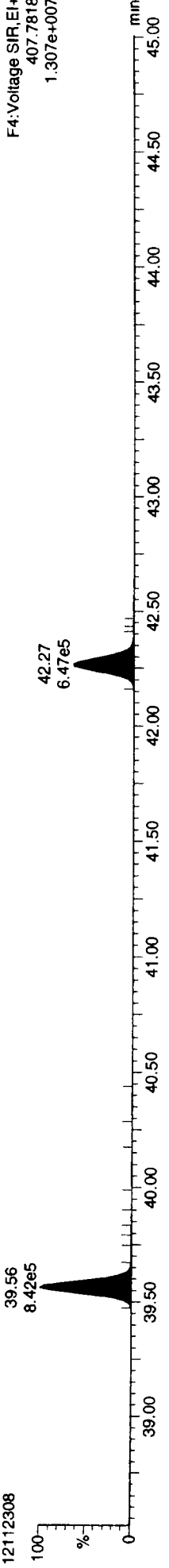
13C-1234678-HpCDF



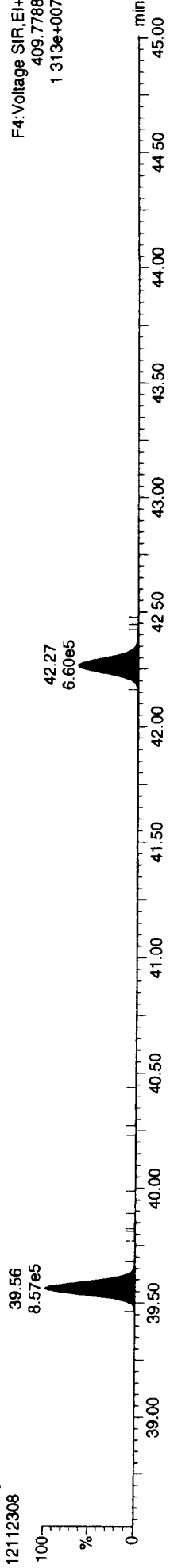
13C-1234678-HpCDF



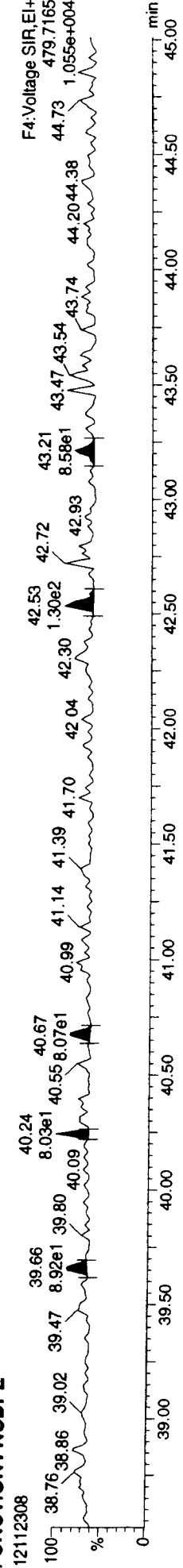
Total-heptafulurans



Total-heptafulurans



FUNCTION4 NCDPE



Quantity Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN\290.PRO\1211231C.qld

Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time

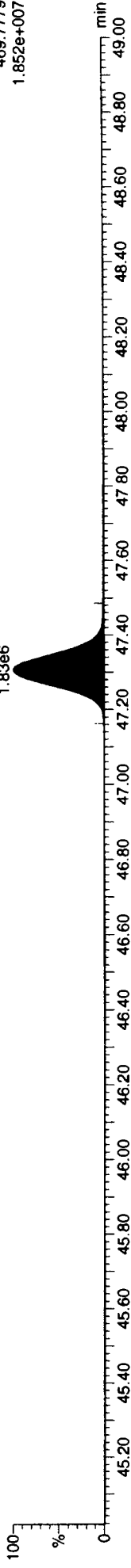
Printed: Monday, November 26, 2012 09:26:53 Pacific Standard Time

Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-OCDD

12112308

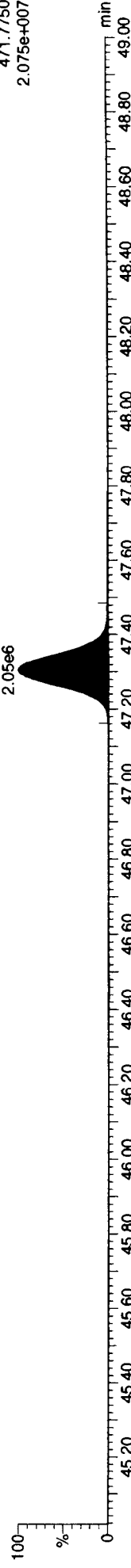
F5: Voltage SIR, EI+  
469.7779  
1.852e+007



13C-OCDD

12112308

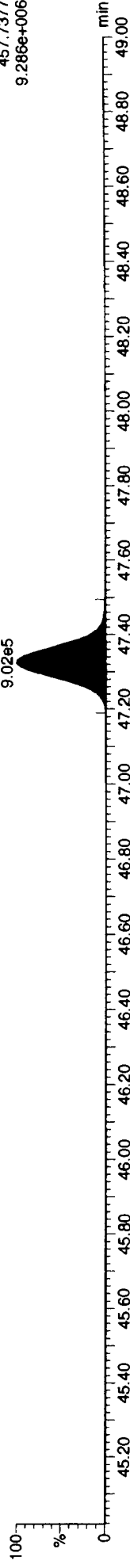
F5: Voltage SIR, EI+  
471.7750  
2.075e+007



OCDD

12112308

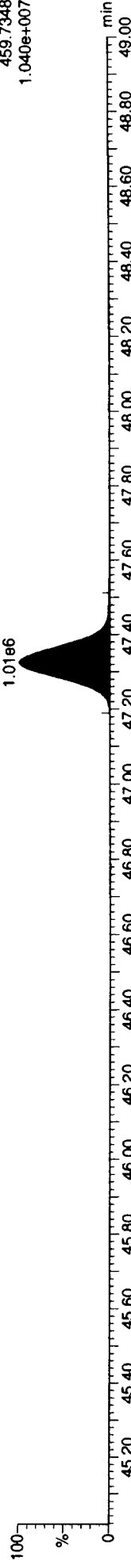
F5: Voltage SIR, EI+  
457.7377  
9.286e+006



OCDD

12112308

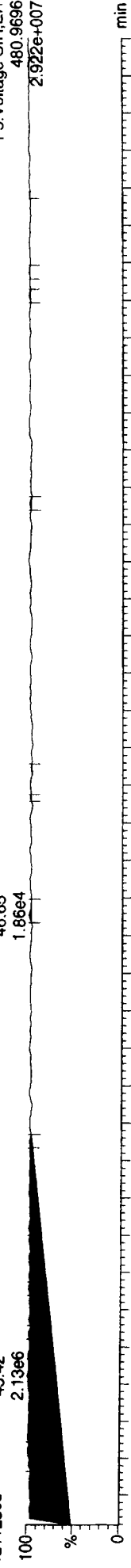
F5: Voltage SIR, EI+  
459.7348  
1.040e+007



FUNCTION5 PFK

12112308

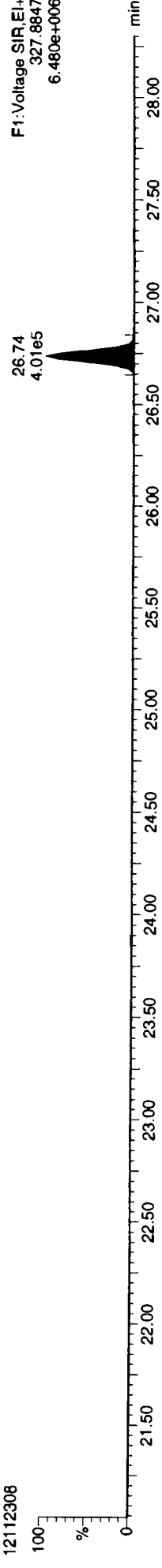
F5: Voltage SIR, EI+  
480.9696  
2.922e+007



Name: 12112308, Date: 23-Nov-2012, Time: 16:45:35, ID: CS3, Conditions: AUTOSPEC01, User: pk

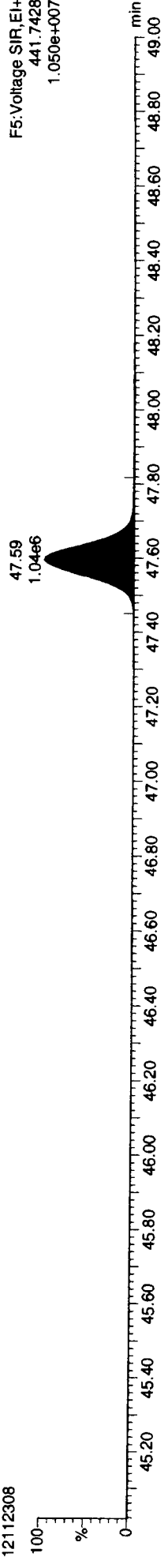
37CL-2378-TCDD

12112308



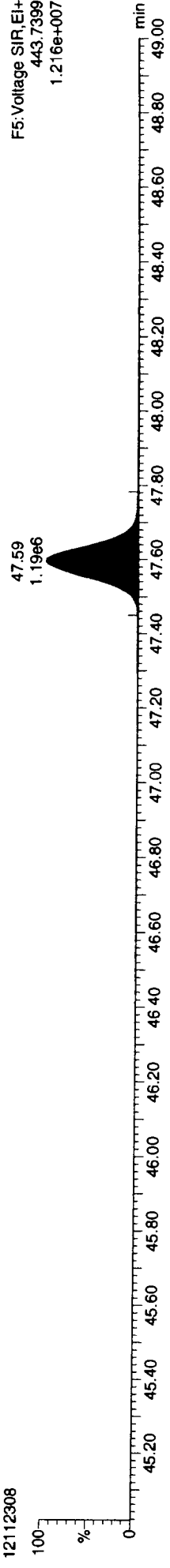
OCDF

12112308



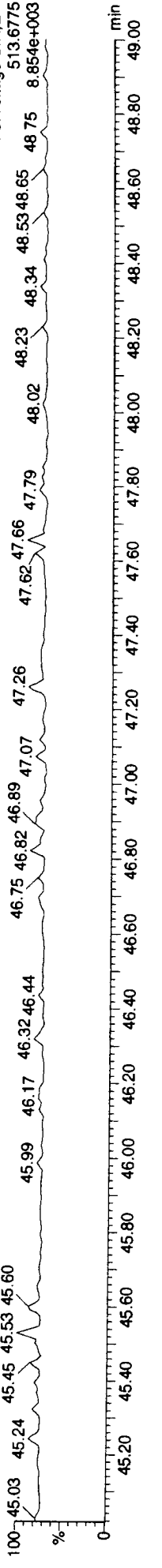
OCDF

12112308



FUNCTION5 DCDPE

12112308



Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121123IC.qld
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time
Printed: Monday, November 26, 2012 09:27:03 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CSA, Conditions: AUTOSPEC01, User: pk

Table with columns for compound name, retention time, peak number, area, height, width, and abundance. Rows include various dioxin and furan congeners like 2378-TCDF, 12378-PeCDF, etc.



Quantify Sample Summary Report

MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121123IC.qld

Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time

Printed: Monday, November 26, 2012 09:27:03 Pacific Standard Time

Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk

Compound	37.041	1985056	1608789	3593846	bb	1.000	1.234	1.240	6728.0	40.836	100.000
13C-123789-HxCDD	37.041	0.000	1985056	1608789	3593846	bb	1.000	1.234	1.240	6728.0	100.000
Total-tetrafurans		1133239					0.877				40.536
Total-penta1		0									0.000
Total-pentafurans		12805170					0.911				0.000
Total-hexafurans		20390854					1.032				413.435
Total-heptafurans		8461646					1.223				817.414
Total-Furans		49009411					1.041				409.192
Total-tetraoxins		886981					1.049				2088.881
Total-pentadioxins		4384844					0.998				40.620
Total-hexadioxins		11786944					0.940				202.647
Total-heptadioxins		3275573					1.017				603.942
Total-Dioxins		25768332					0.985				202.065
Total-TEQ		7477743									1449.051
37CL-2378-TCDD	26.736	1.032	2091817	2091817			1.044				3537.932
FUNCTION1 PFK		1187850								12418.7	37.571
FUNCTION2 PFK		60223									0.000
FUNCTION3 PFK		606171									0.000
FUNCTION4 PFK		311261									0.000
FUNCTION5 PFK		410475									0.000
FUNCTION1 HxCDPE		349									0.000
FUNCTION1 HPCDPE		2544									0.000
FUNCTION2 HPCDPE		10109									0.000
FUNCTION3 OCDPE		119									0.000
FUNCTION4 NCDPE		82									0.000
FUNCTION5 DCDPE		0									0.000

Dataset: P:\DIOXIN8290.PRO\121123IC.qld

Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time

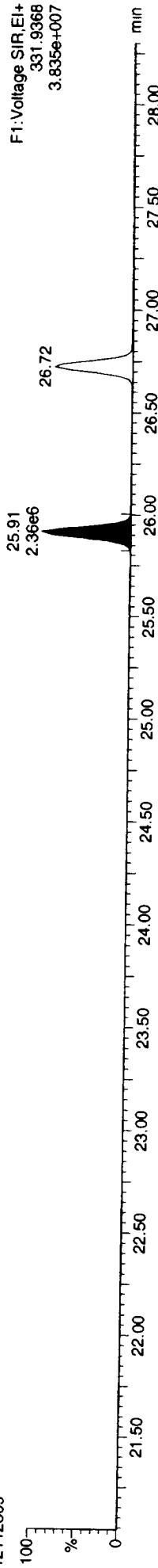
Printed: Monday, November 26, 2012 09:27:03 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin\121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk

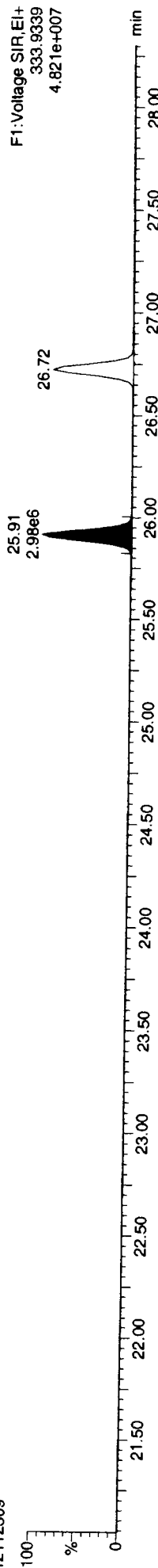
13C-1234-TCDD

12112309



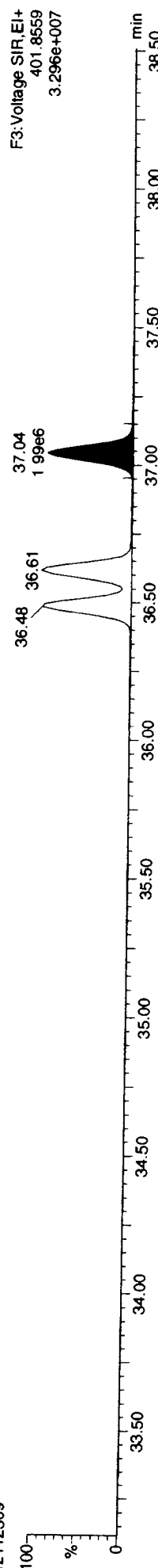
13C-1234-TCDD

12112309



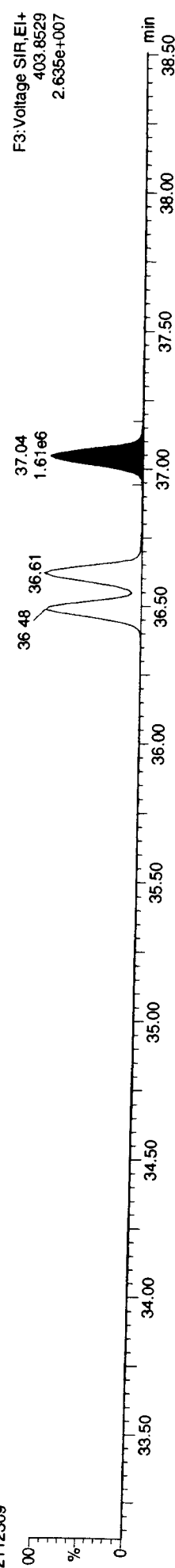
13C-123789-HxCDD

12112309



13C-123789-HxCDD

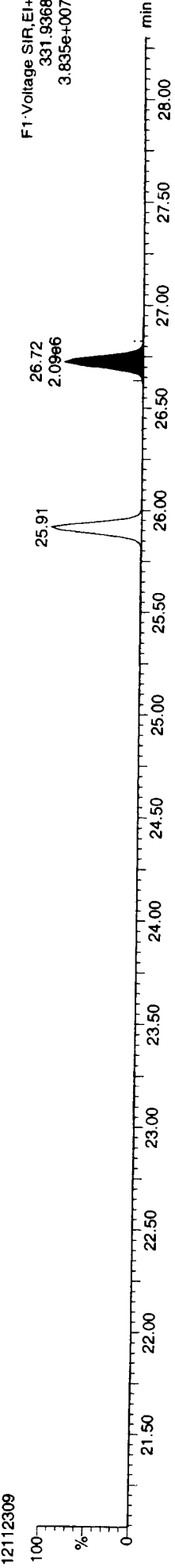
12112309



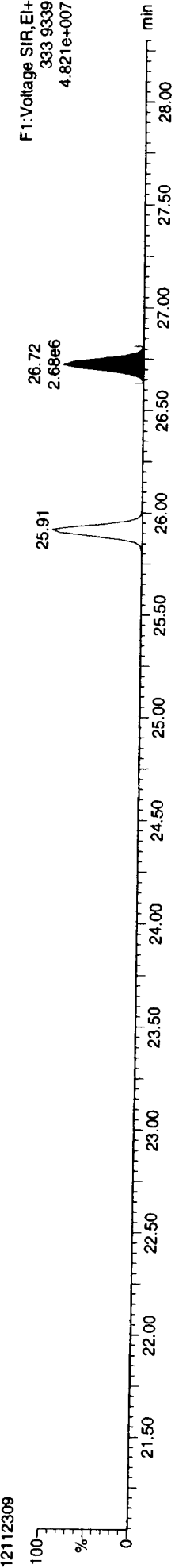
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:03 Pacific Standard Time

Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk

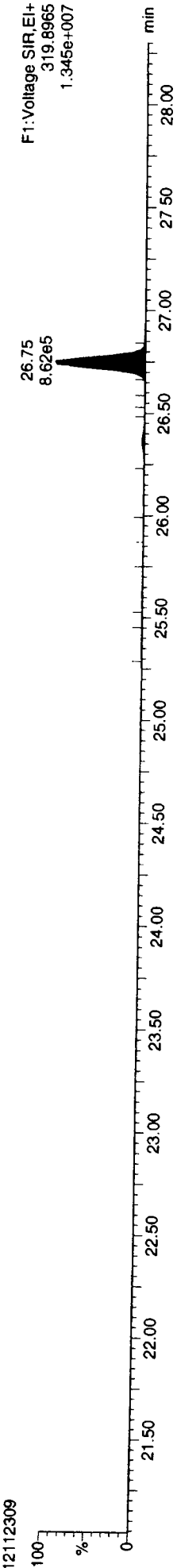
13C-2378-TCDD



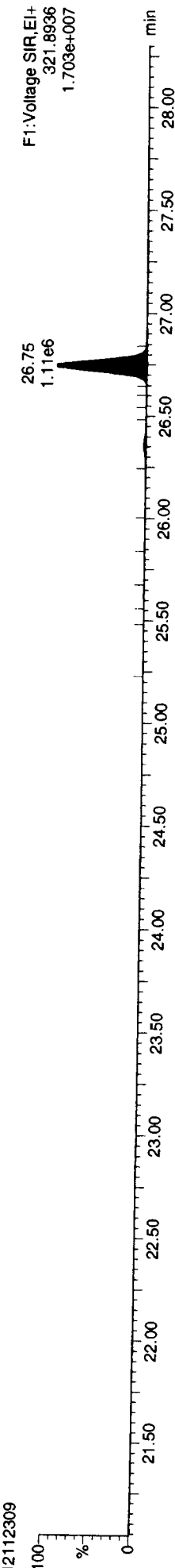
13C-2378-TCDD



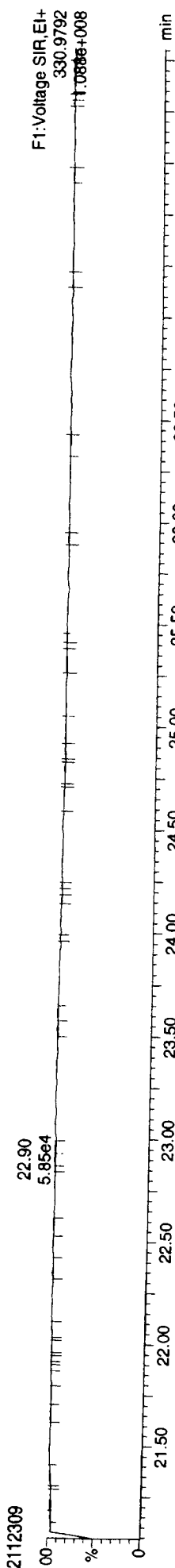
Total-tetradoxins



Total-tetradoxins



FUNCTION1 PFK

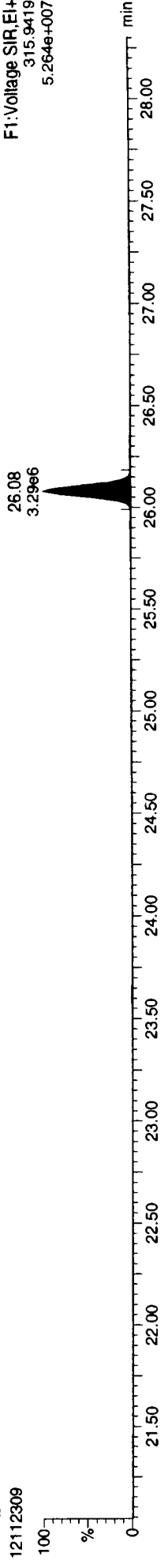


12112309

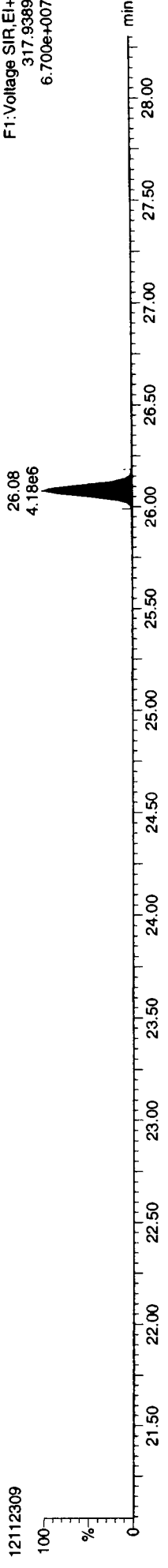
Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:03 Pacific Standard Time

Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk

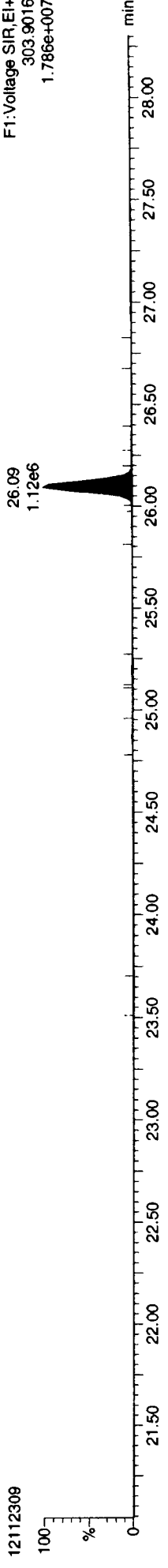
13C-2378-TCDF



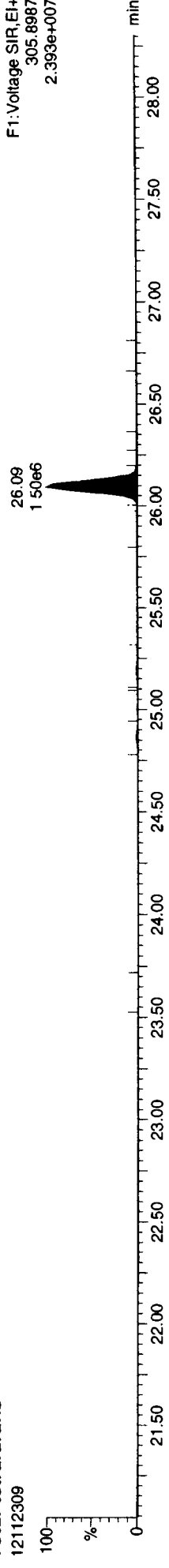
13C-2378-TCDF



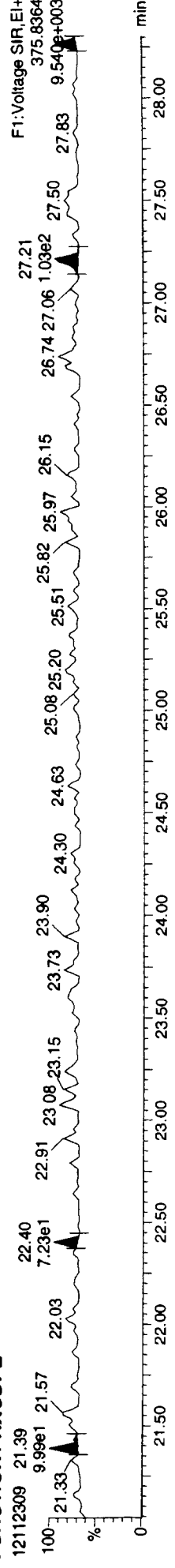
Total-tetrafurans



Total-tetrafurans



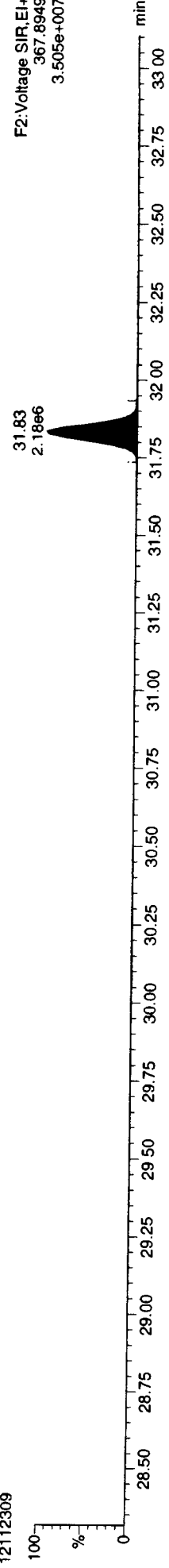
FUNCTION1 HXCDPE



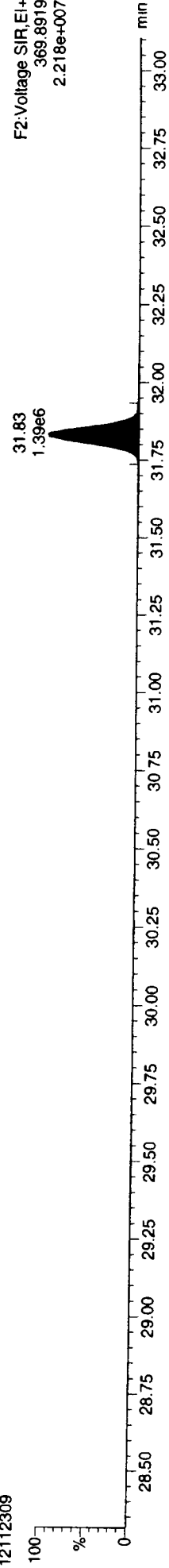
Quantity Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:03 Pacific Standard Time

Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk

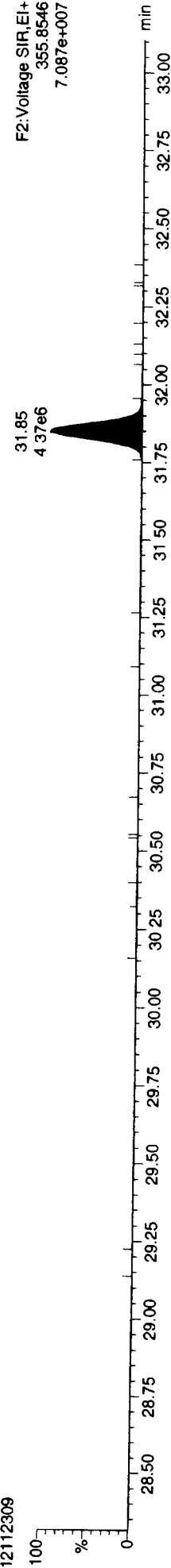
**13C-12378-PeCDD**



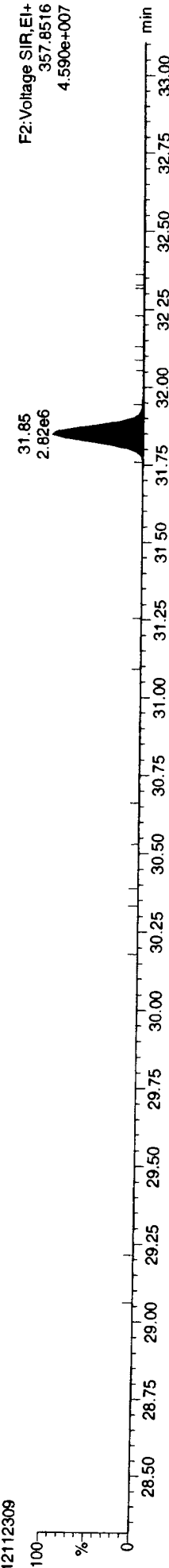
**13C-12378-PeCDD**



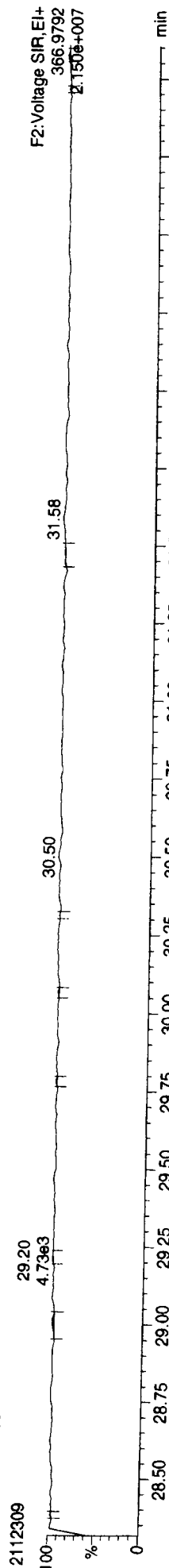
**Total-pentadioxins**



**Total-pentadioxins**

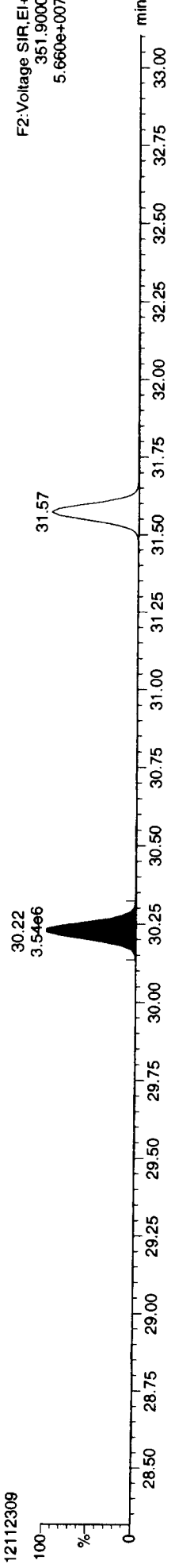


**FUNCTION2 PFK**

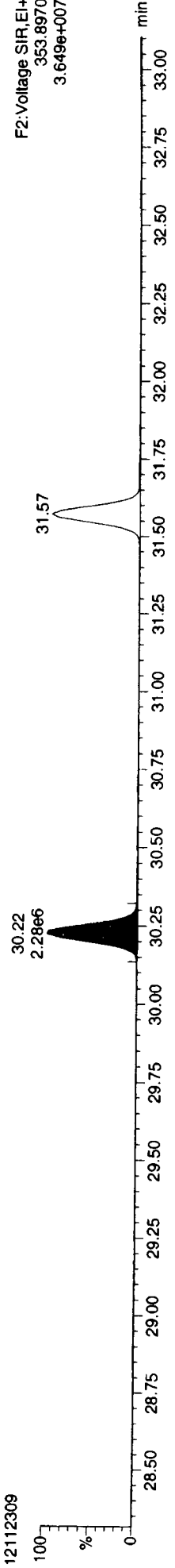


Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk

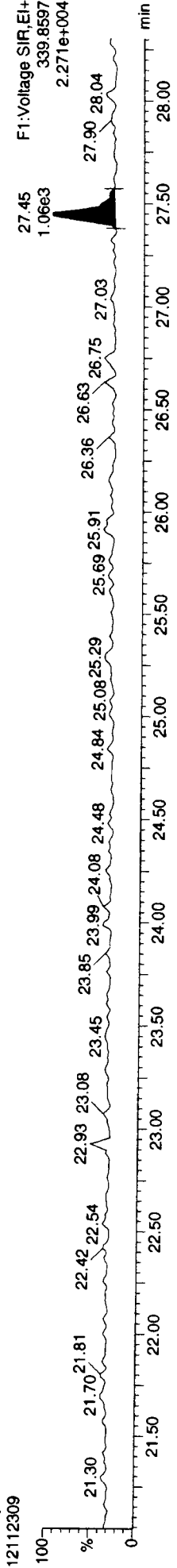
13C-12378-PeCDF



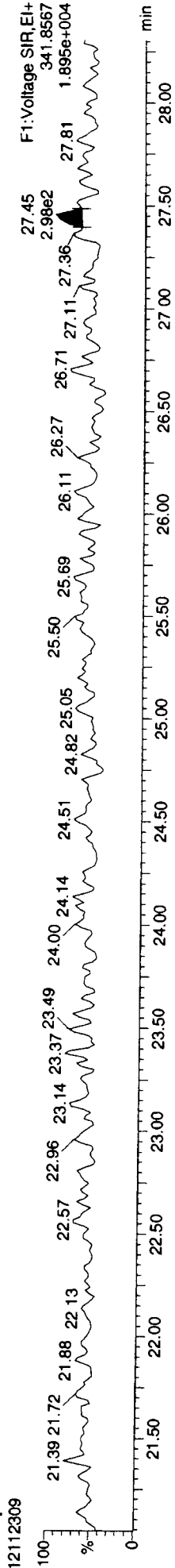
13C-12378-PeCDF



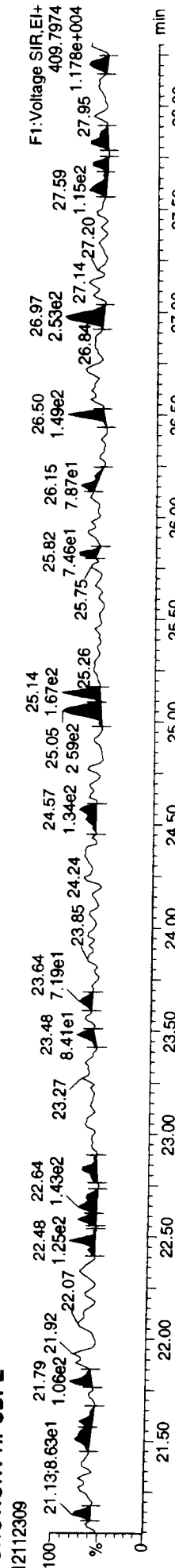
Total-penta1



Total-penta1

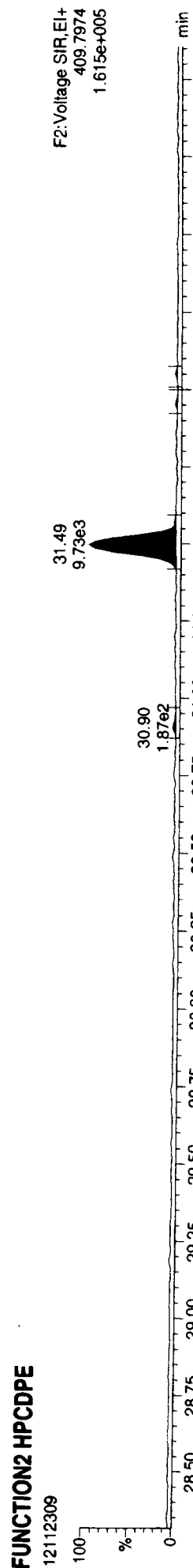
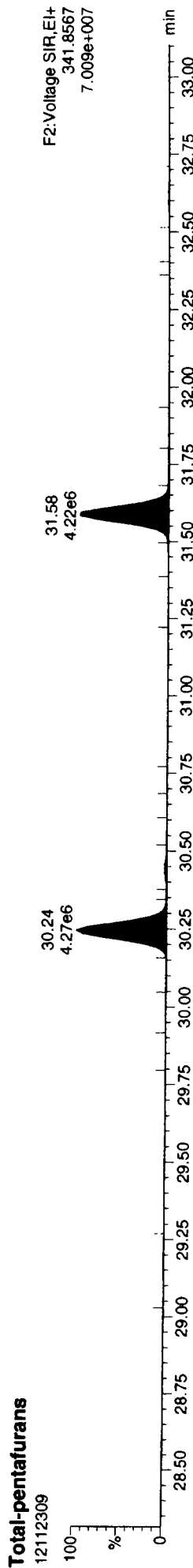
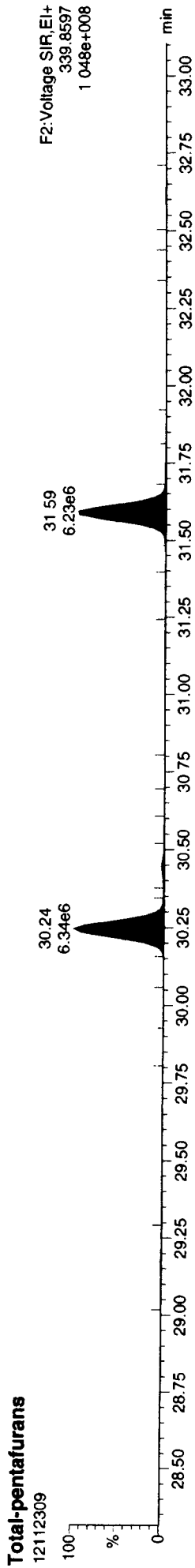
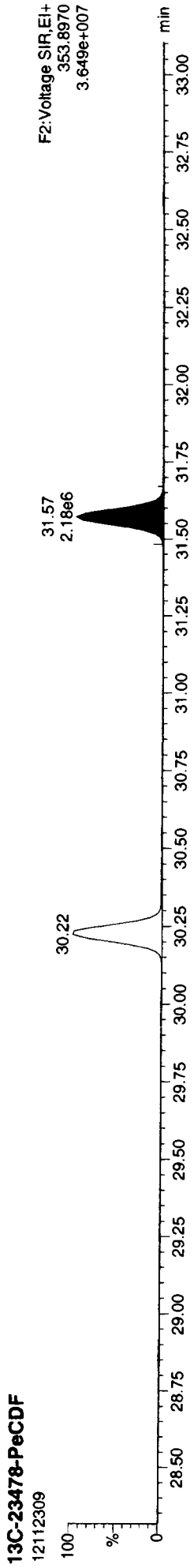
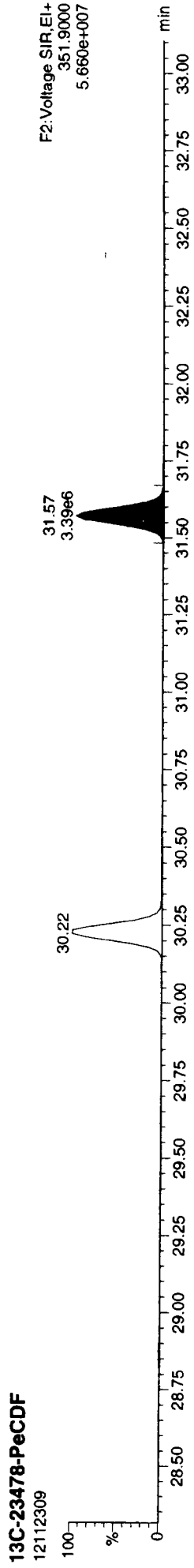


FUNCTION1 HPCDPE



Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:03 Pacific Standard Time

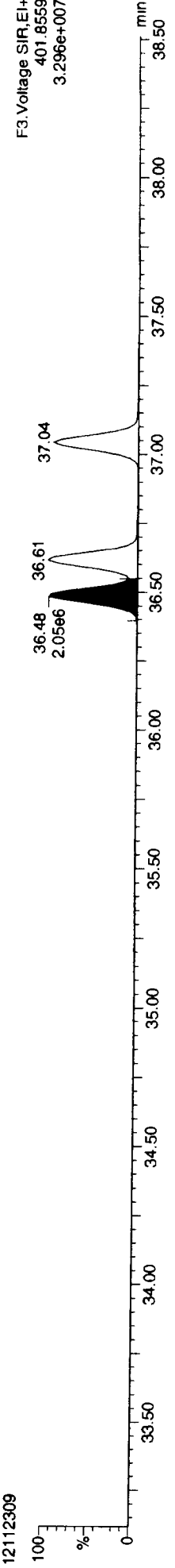
Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk



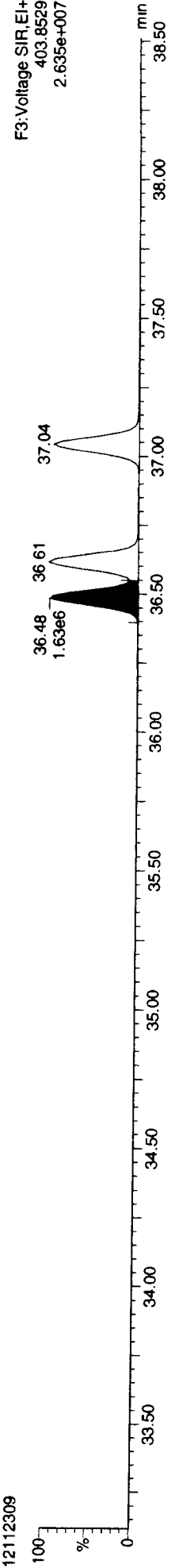
12112309 : 23112012

Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk

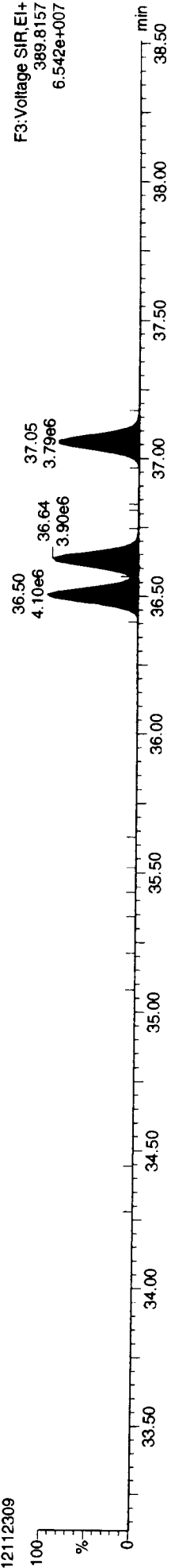
13C-123478-HxCDD



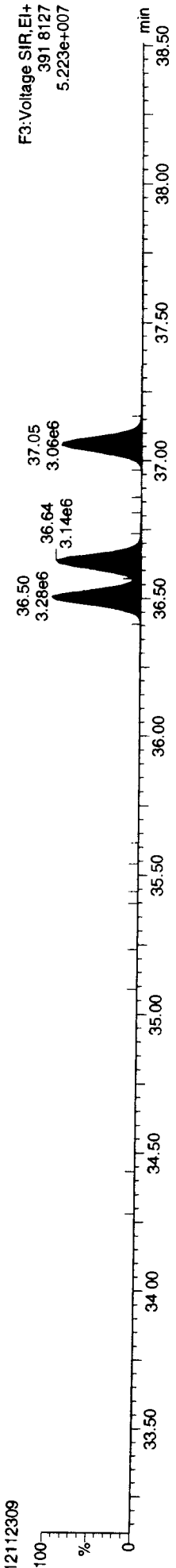
13C-123478-HxCDD



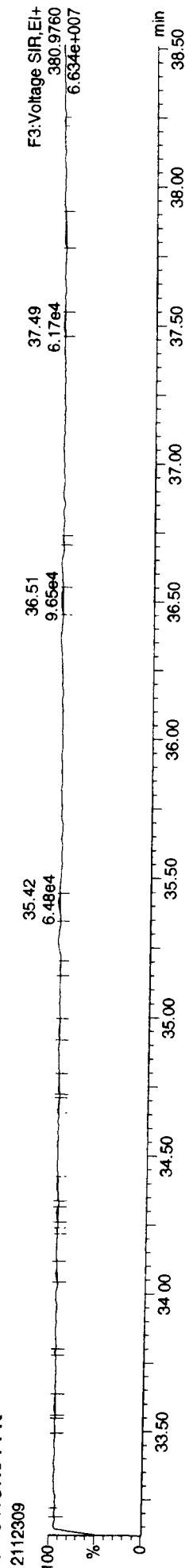
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



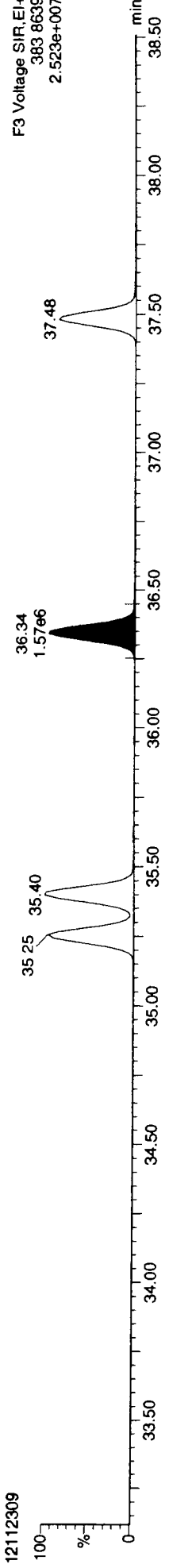


Quantify Sample Report MassLynx 4.1 SCN 714

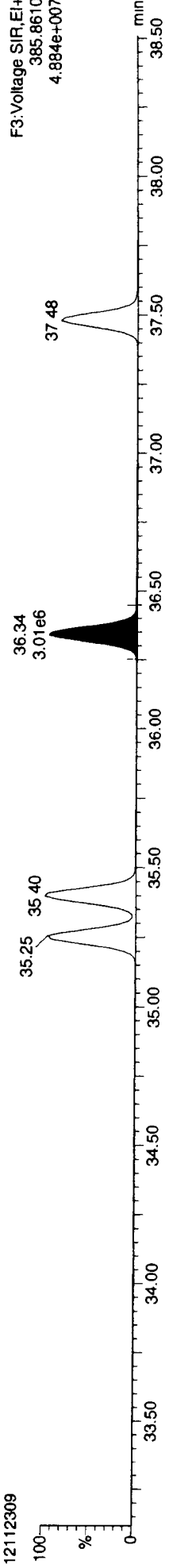
Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:03 Pacific Standard Time

Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk

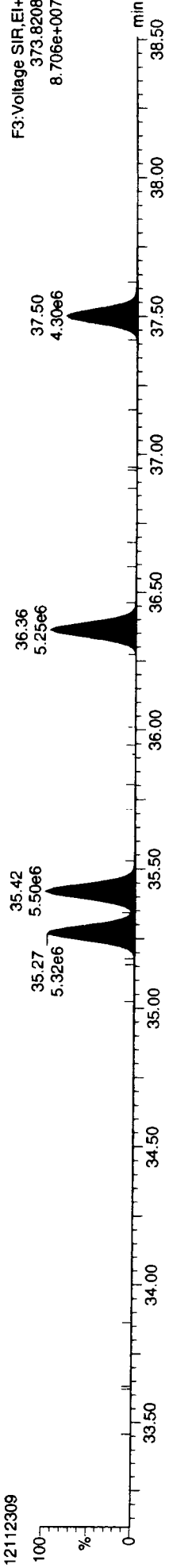
13C-234678-HxCDF



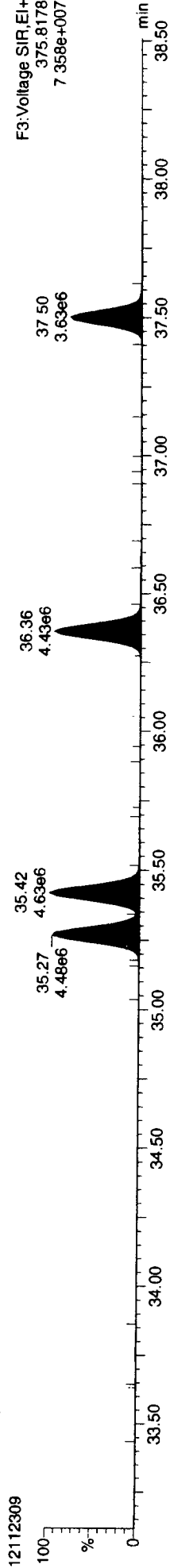
13C-234678-HxCDF



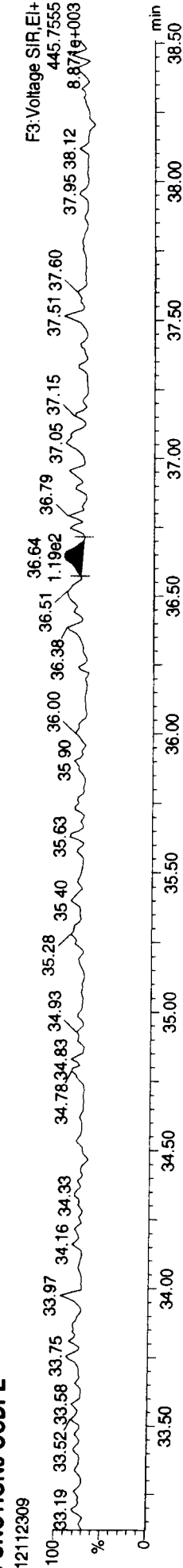
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE

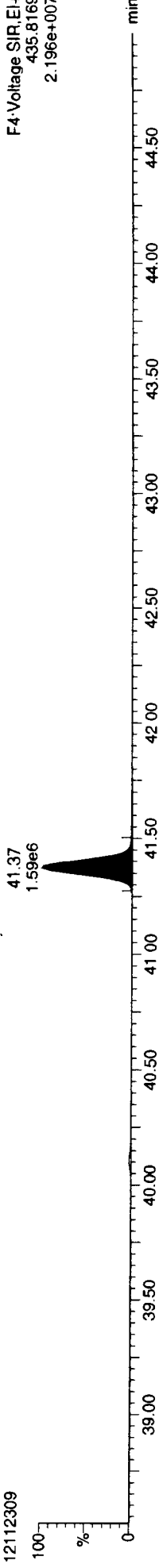


Quantify Sample Report MassLynx 4.1 SCN 714

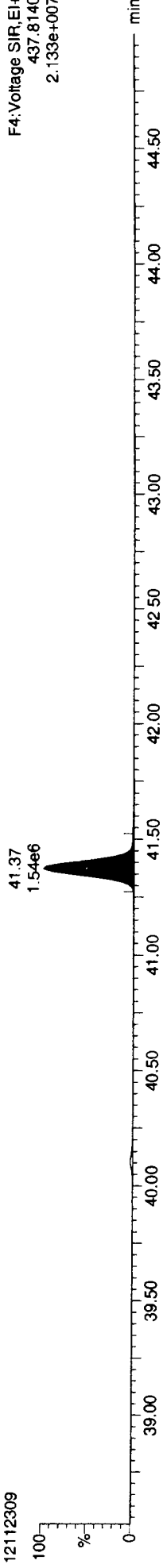
Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:03 Pacific Standard Time

Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk

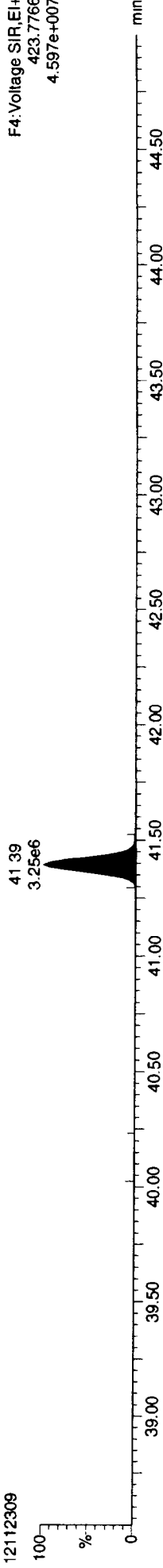
13C-1234678-HpCDD



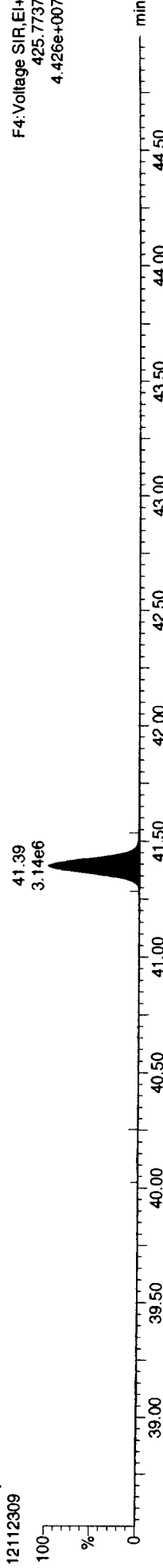
13C-1234678-HpCDD



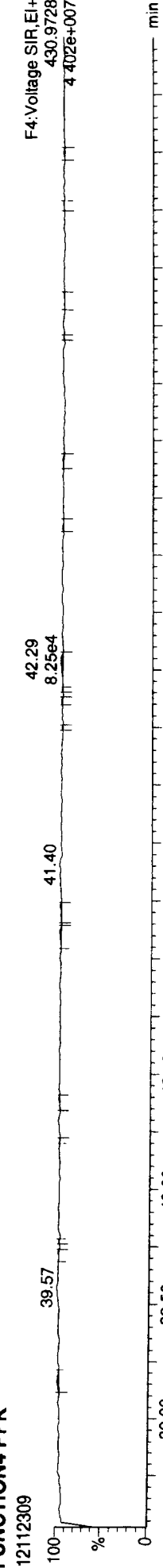
Total-heptadioxins



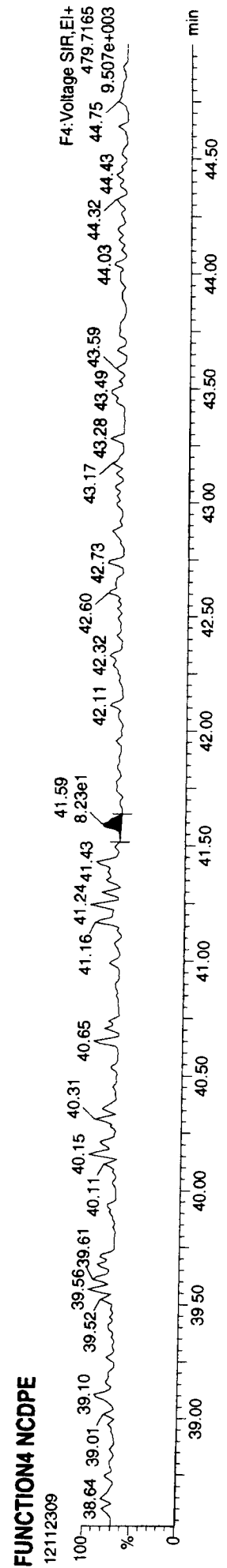
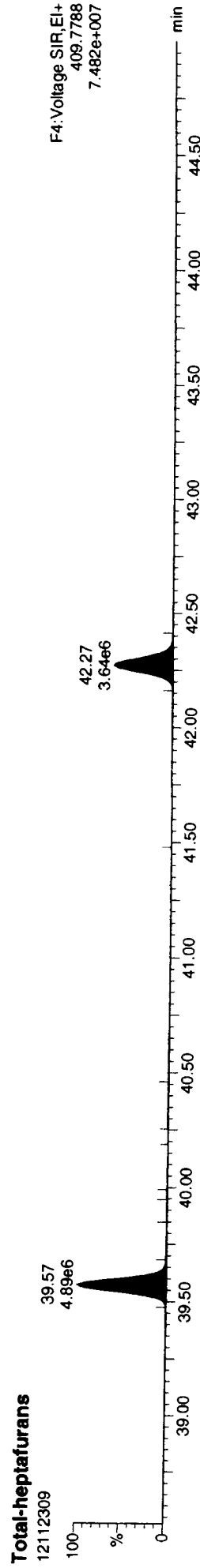
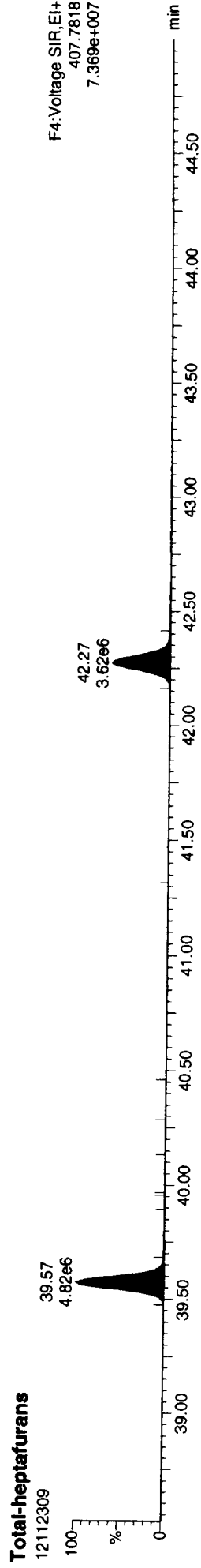
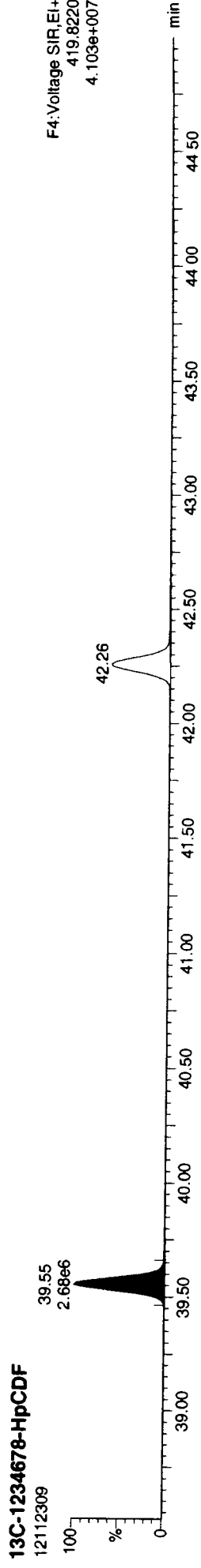
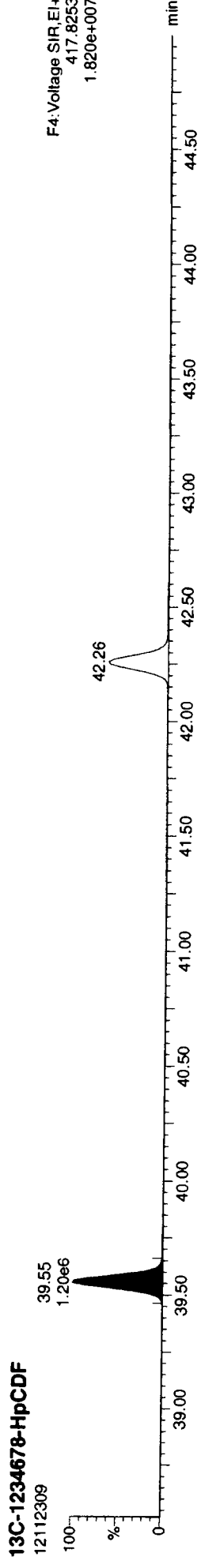
Total-heptadioxins



FUNCTION4 PFK



Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk

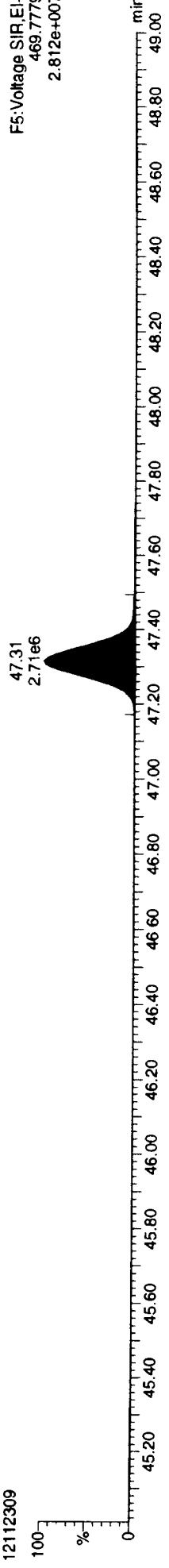


Quantity Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:03 Pacific Standard Time

Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CSA, Conditions: AUTOSPEC01, User: pk

13C-OCDD

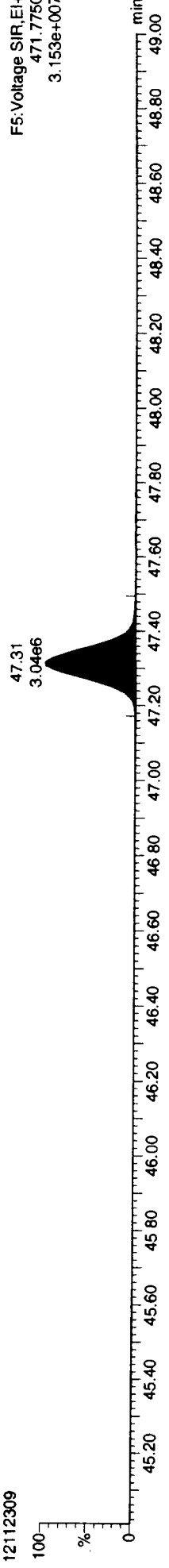
12112309



F5: Voltage SIR, EI+  
469.7779  
2.812e+007

13C-OCDD

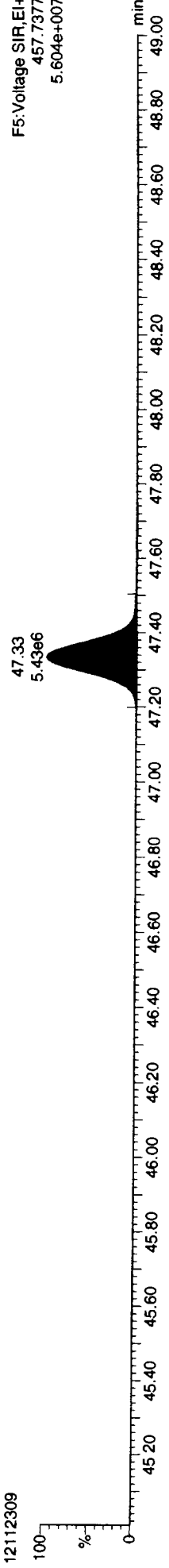
12112309



F5: Voltage SIR, EI+  
471.7750  
3.153e+007

OCDD

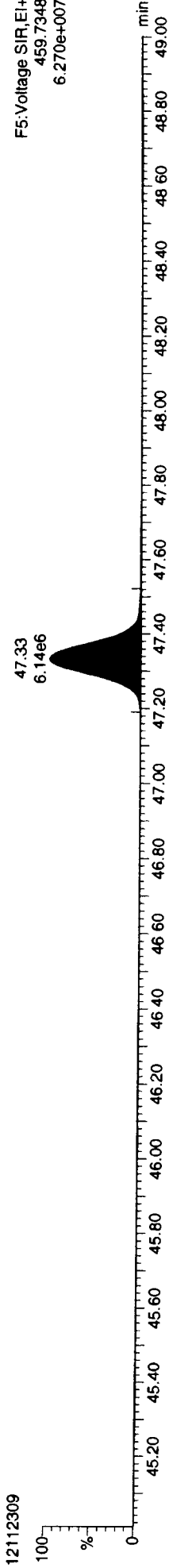
12112309



F5: Voltage SIR, EI+  
457.7377  
5.604e+007

OCDD

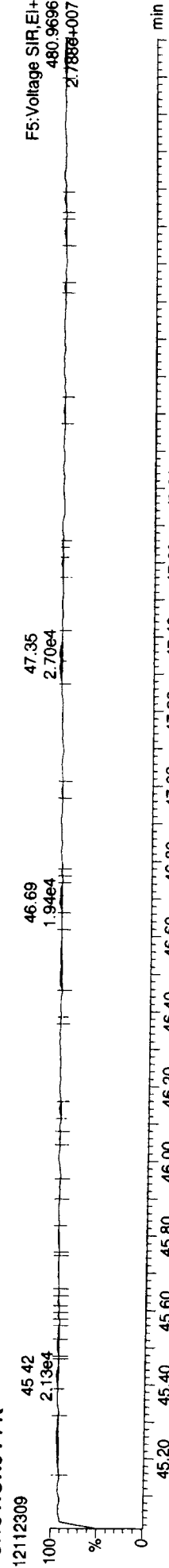
12112309



F5: Voltage SIR, EI+  
459.7348  
6.270e+007

FUNCTION5 PFK

12112309

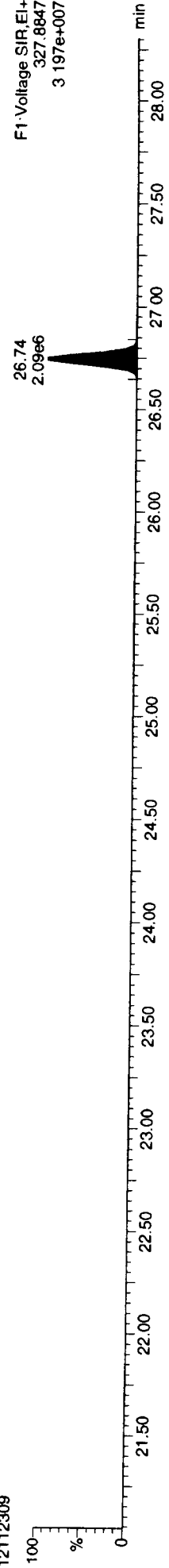


F5: Voltage SIR, EI+  
480.9696  
2.788e+007

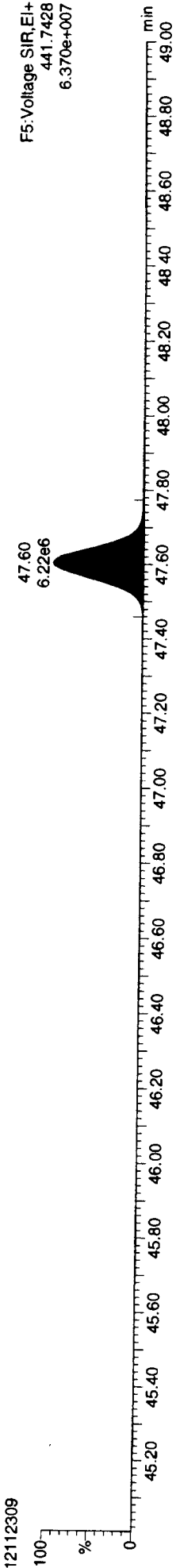
2012 11 26 17:37:45

Name: 12112309, Date: 23-Nov-2012, Time: 17:37:45, ID: CS4, Conditions: AUTOSPEC01, User: pk

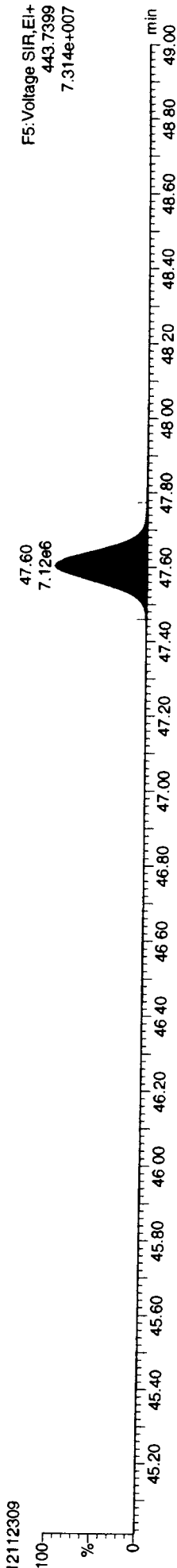
37CL-2378-TCDD



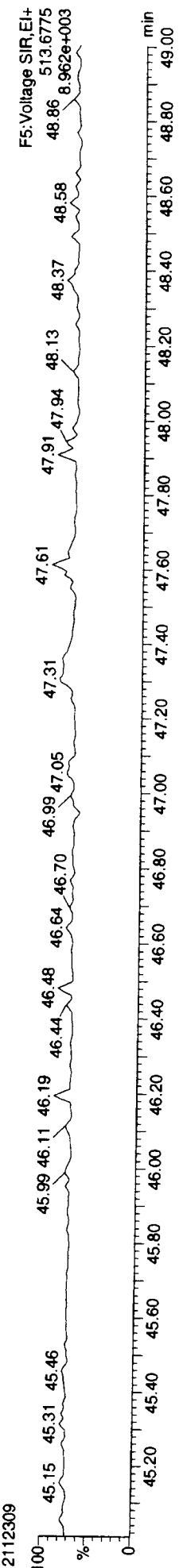
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\121123IC.qld  
 Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
 Printed: Monday, November 26, 2012 09:27:13 Pacific Standard Time

Method: P:\DIOXIN8290.PROMethDB\Ioxin121123.mdb 23 Nov 2012 12:31:40  
 Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk

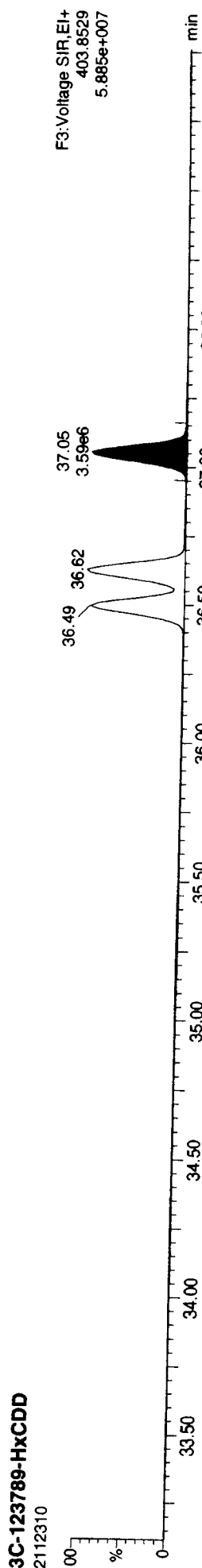
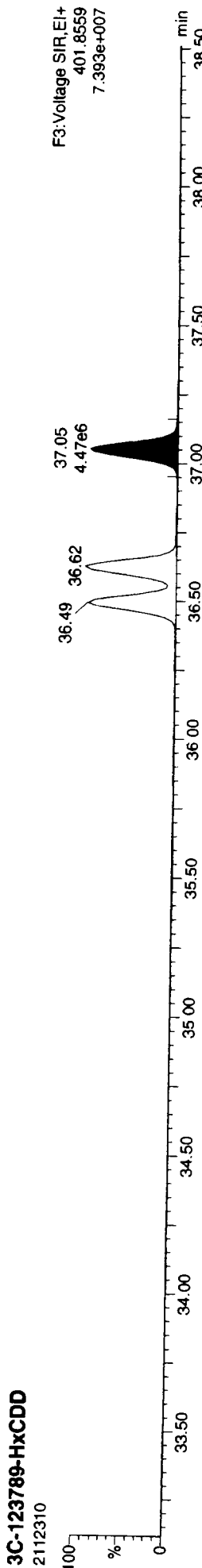
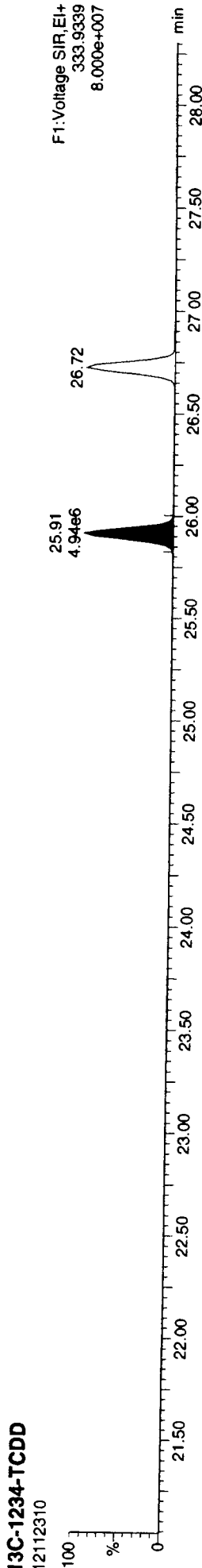
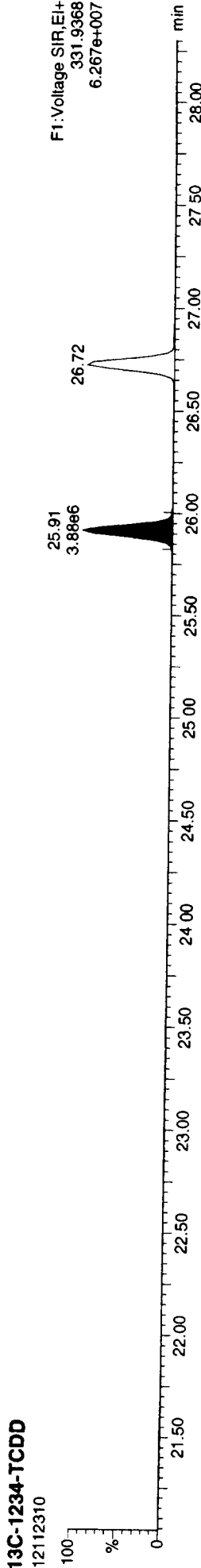
Compound	Area	Height	Retention	Abundance	Ratio	Mass	Label	Area	Height	Retention	Abundance	Ratio	Mass	Label
2378-TCDF	26.093	1.001	10158803	13548127	23704930	bb	0.877	0.750	0.770	NO	50311.8	202.161	202.161	
12378-PeCDF	30.245	1.000	63442416	43374736	106817152	bb	0.896	1.463	1.550	NO	102388.2	1014.081	1014.081	
23478-PeCDF	31.593	1.001	63592136	43867692	107459828	bb	0.926	1.450	1.550	NO	102186.0	1012.957	1012.957	
123478-HxCDF	35.276	1.001	57197636	48104260	105301896	bd	1.068	1.189	1.240	NO	51956.4	1034.946	1034.946	
234678-HxCDF	36.372	1.001	57102696	47976804	105079500	bb	1.037	1.190	1.240	NO	52089.3	1029.533	1029.533	
123678-HxCDF	35.418	1.000	58363480	49253956	107617436	db	1.035	1.185	1.240	NO	53248.2	1033.576	1033.576	
123789-HxCDF	37.512	1.001	49284076	41322052	90606128	bb	0.987	1.193	1.240	NO	45119.2	1032.540	1032.540	
1234678-HpCDF	39.573	1.000	53423632	53628824	107050456	bb	1.232	0.996	1.050	NO	66007.3	1016.970	1016.970	
1234789-HpCDF	42.280	1.000	41571056	41697728	83268784	bb	1.215	0.997	1.050	NO	45025.8	1029.105	1029.105	
OCDF	47.621	1.006	74597484	84892040	159489504	bb	1.138	0.879	0.890	NO	116333.9	2073.036	2073.036	
2378-TCDD	26.750	1.001	8121943	10505997	18627940	bb	1.049	0.773	0.770	NO	69685.9	200.665	200.665	
12378-PeCDD	31.856	1.001	47054832	30387568	77442400	bb	0.998	1.548	1.550	NO	151323.6	1028.795	1028.795	
123478-HxCDD	36.504	1.000	44909516	35890444	80799960	bd	0.971	1.251	1.240	NO	57783.5	1030.397	1030.397	
123678-HxCDD	36.635	1.000	43732224	35173284	78905508	db	0.918	1.243	1.240	NO	56933.6	1033.148	1033.148	
123789-HxCDD	37.063	1.012	43197268	34859756	78057024	bb	0.932	1.239	1.240	NO	55861.3	1021.228	1021.228	
1234678-HpCDD	41.403	1.001	37453088	35873324	73326412	bb	1.017	1.044	1.050	NO	41201.2	1017.408	1017.408	
OCDD	47.361	1.000	65176824	73259264	138435888	bb	1.008	0.890	0.890	NO	111857.1	2029.931	2029.931	
13C-2378-TCDF	26.078	1.006	5861890	7514370	13376260	bb	1.473	0.780	0.770	NO	15314.5	102.974	102.974	
13C-12378-PeCDF	30.234	1.167	7167588	4586062	11753650	bb	1.148	1.563	1.550	NO	36544.3	116.080	116.080	
13C-23478-PeCDF	31.571	1.218	6979810	4474821	11454631	bb	1.113	1.560	1.550	NO	34617.8	116.700	116.700	
13C-123478-HxCDF	35.254	0.951	3258670	6266416	9525086	bd	1.209	0.520	0.510	NO	358.8	97.716	97.716	
13C-123678-HxCDF	35.408	0.956	3462959	6601223	10064182	db	1.269	0.525	0.510	NO	394.0	98.393	98.393	
13C-234678-HxCDF	36.350	0.981	3378972	6465867	9844839	bb	1.236	0.523	0.510	NO	382.0	98.805	98.805	
13C-123789-HxCDF	37.490	1.012	3049819	5844131	8893950	bb	1.107	0.522	0.510	NO	347.8	99.674	99.674	
13C-1234678-HpCDF	39.562	1.068	2634510	5910353	8544862	bb	1.051	0.446	0.440	NO	10742.2	100.826	100.826	
13C-1234789-HpCDF	42.269	1.141	2086623	4592781	6659403	bb	0.815	0.450	0.440	NO	7201.7	101.381	101.381	
13C-1234-TCDD	25.914	0.000	3878525	4942588	8821113	bb	1.000	0.785	0.770	NO	11555.0	100.000	100.000	
13C-2378-TCDD	26.721	1.031	3852857	4994901	8847757	bb	0.946	0.771	0.770	NO	11156.9	106.058	106.058	
13C-12378-PeCDD	31.834	1.228	4602958	2939284	7542242	bb	0.721	1.566	1.550	NO	29088.9	118.642	118.642	
13C-123478-HxCDD	36.493	0.985	4504004	3573475	8077478	bd	0.991	1.260	1.240	NO	17088.1	101.108	101.108	
13C-123678-HxCDD	36.624	0.988	4813656	3704917	8318573	db	1.025	1.245	1.240	NO	17628.9	100.689	100.689	
13C-1234678-HpCDD	41.382	1.117	3623856	3463615	7087471	bb	0.866	1.046	1.050	NO	6486.0	101.488	101.488	
13C-OCDD	47.343	1.278	6365736	7160195	13525931	bb	0.769	0.889	0.890	NO	20786.0	218.119	218.119	

Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk

	37.051	0.000	4474912	3587779	8062691	bb	1.000	1.247	1.240	NO	16908.9			
13C-123789-HxCDD														100.000
Total-tetrafurans			10328127				0.877						205.927	205.618
Total-penta			991										0.023	0.015
Total-pentafurans			129098142				0.911						2060.420	2059.741
Total-hexafurans			222220906				1.032						4135.653	4135.653
Total-heptafurans			95047297				1.223						2048.226	2047.199
Total-Furans			531292927				1.041						10523.284	10521.262
Total-tetra-dioxins			8333050				1.049						205.919	205.852
Total-penta-dioxins			47152508				0.998						1030.935	1030.931
Total-hexa-dioxins			131846862				0.940						3085.119	3084.964
Total-hepta-dioxins			37557536				1.017						1020.645	1020.268
Total-Dioxins			290066579				0.985						7372.559	7371.945
Total-TEQ			821359507										17895.843	17893.207
37Cl-2378-TCDD	26.750	1.032	19823958		19823958		1.044				74958.3			215.343
FUNCTION1 PFK			1019534											0.000
FUNCTION2 PFK			20556											0.000
FUNCTION3 PFK			45047985											0.000
FUNCTION4 PFK			20180373											0.000
FUNCTION5 PFK			256260											0.000
FUNCTION1 HXCDPE			5772											0.000
FUNCTION1 HPCDPE			2057											0.000
FUNCTION2 HPCDPE			84809											0.000
FUNCTION3 OCDPE			10302											0.000
FUNCTION4 NCDPE			1410											0.000
FUNCTION5 DCDPE			2552											0.000

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk

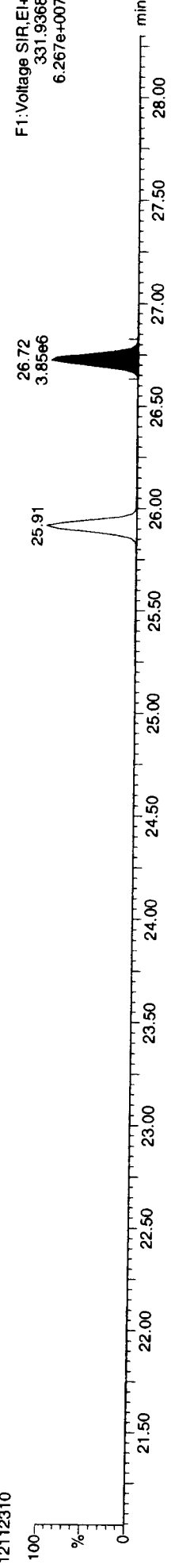




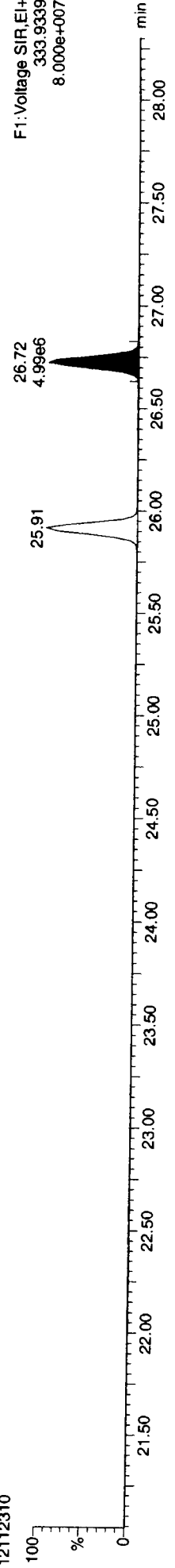
Quantity Sample Report  
Dataset: P:\DIOXIN8290.PRO\12112310.C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:13 Pacific Standard Time

Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk

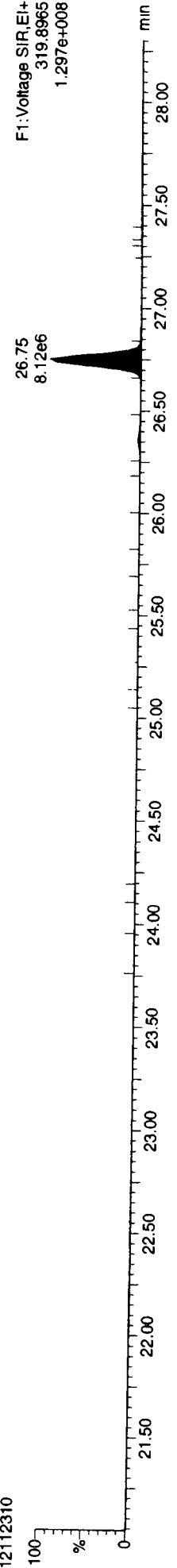
13C-2378-TCDD



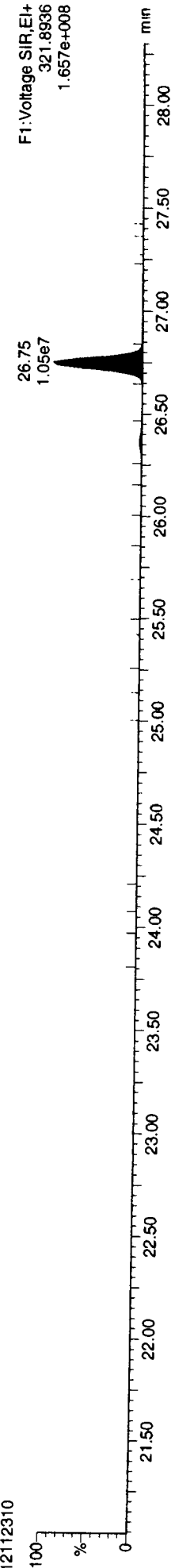
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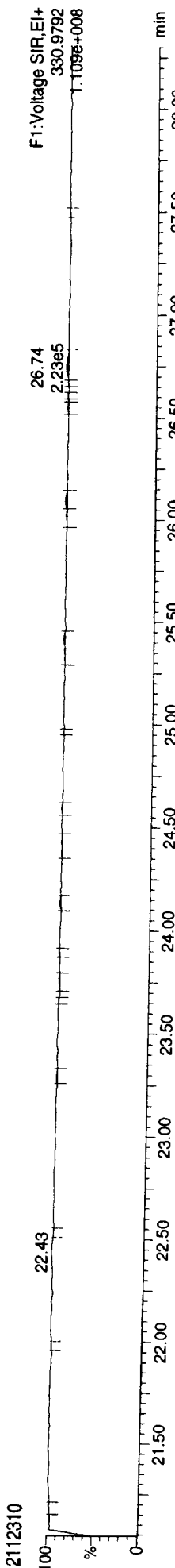
Total-tetradoxins



Total-tetradoxins



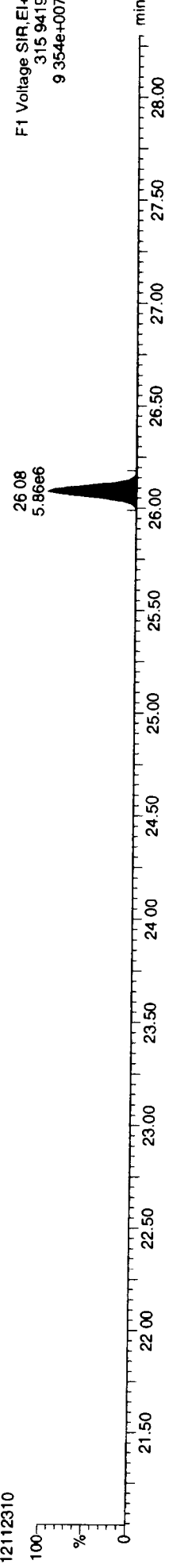
FUNCTION1 PFK



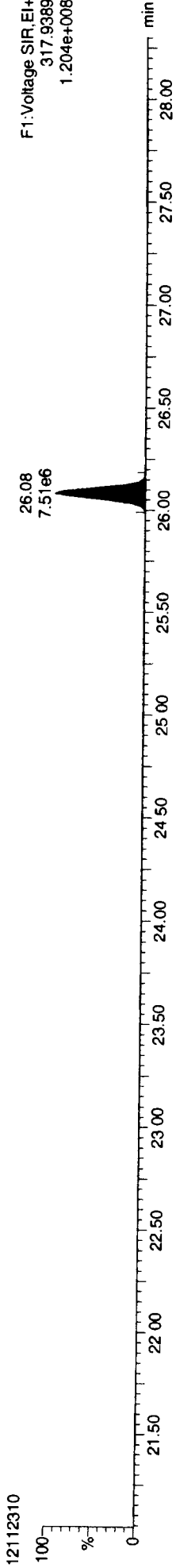
Quantify Sample Report  
MassLynx 4.1 SCN 714  
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Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk

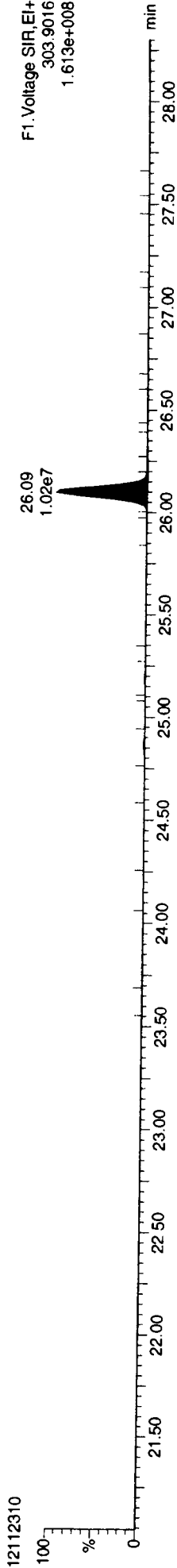
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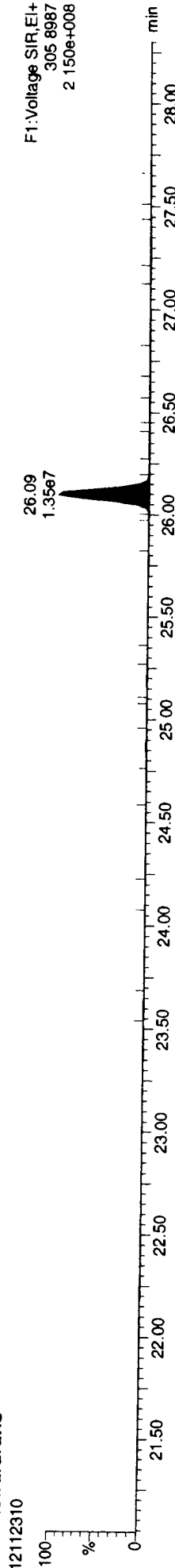
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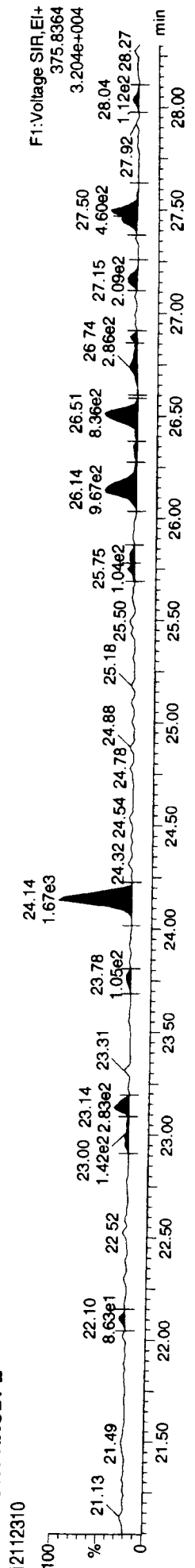
Total-tetrafurans



Total-tetrafurans

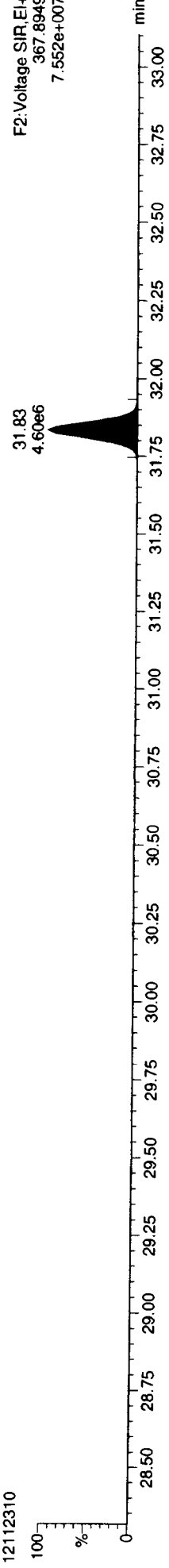


FUNCTION1 HXCDFE



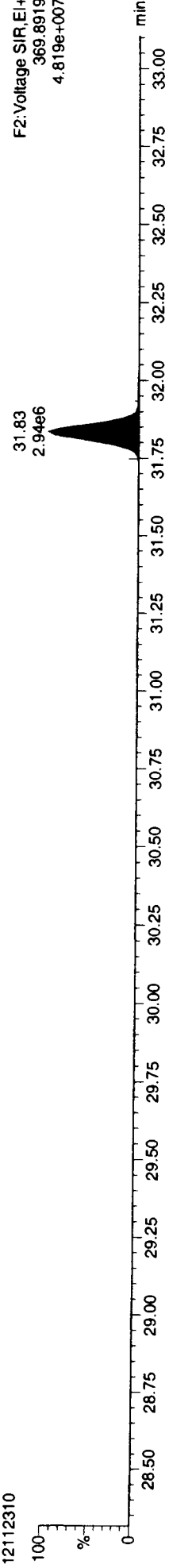
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13C-12378-PeCDD



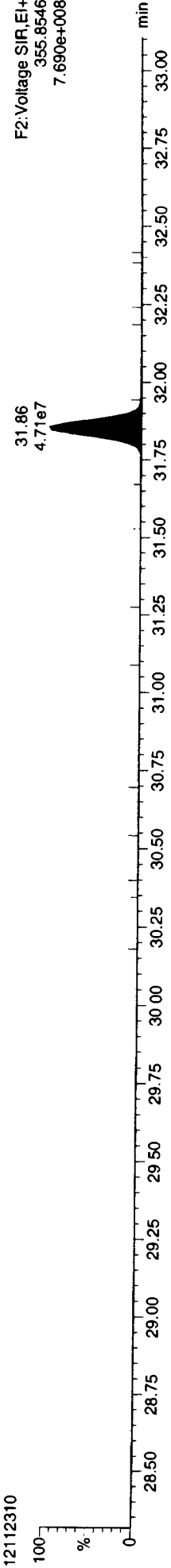
F2: Voltage SIR, EI+  
367.8949  
7.552e+007

13C-12378-PeCDD



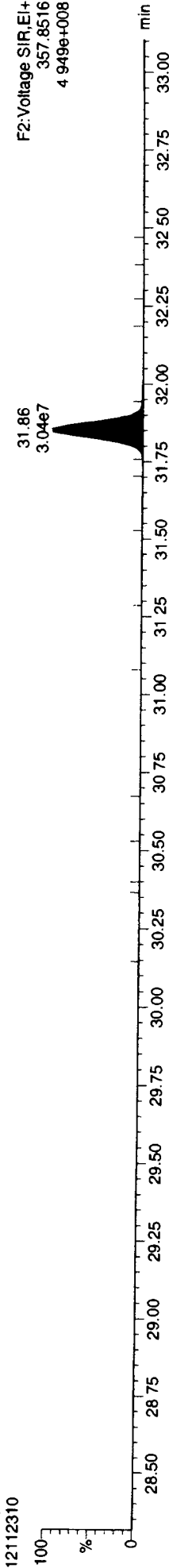
F2: Voltage SIR, EI+  
369.8919  
4.819e+007

Total-pentadioxins



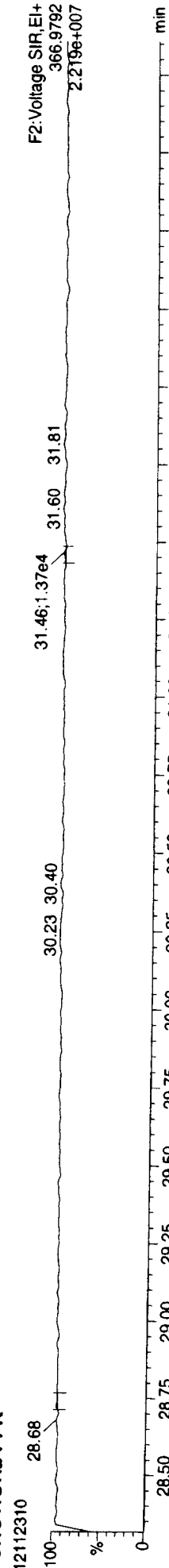
F2: Voltage SIR, EI+  
355.8546  
7.690e+008

Total-pentadioxins



F2: Voltage SIR, EI+  
357.8516  
4.949e+008

FUNCTION2 PFK

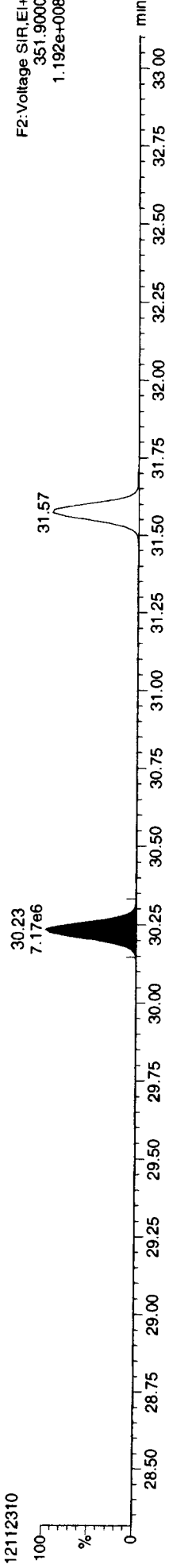


F2: Voltage SIR, EI+  
366.9792  
2.219e+007

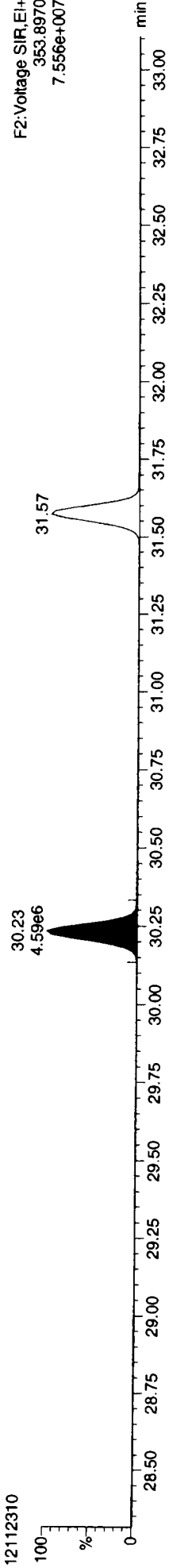
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Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:13 Pacific Standard Time

Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk

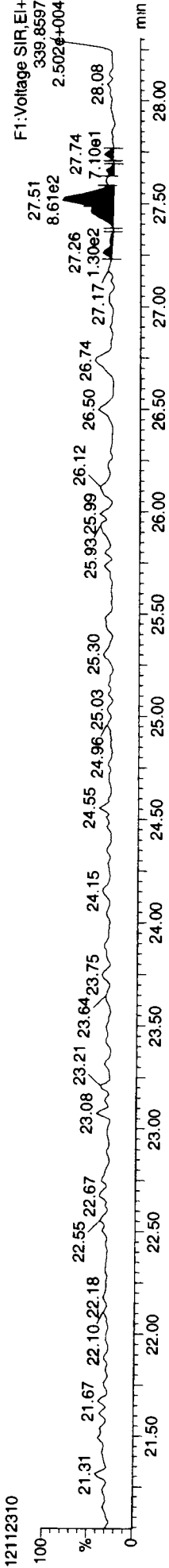
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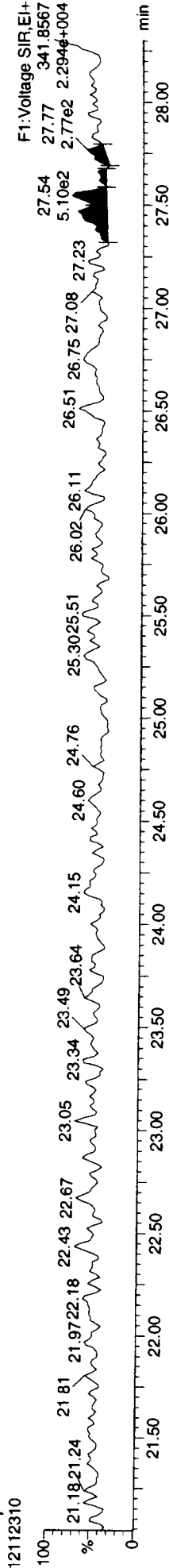
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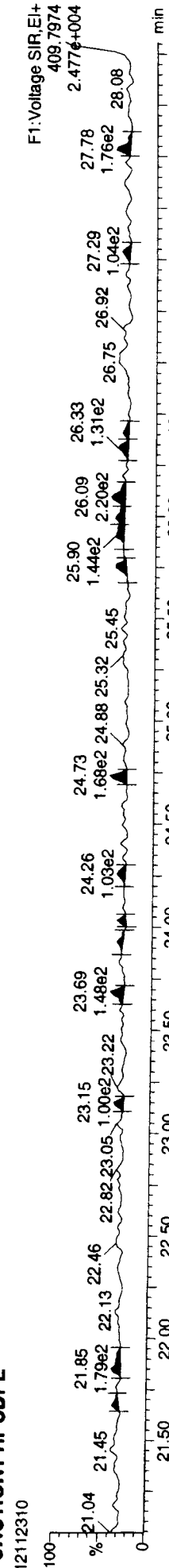
Total-penta1



Total-penta1



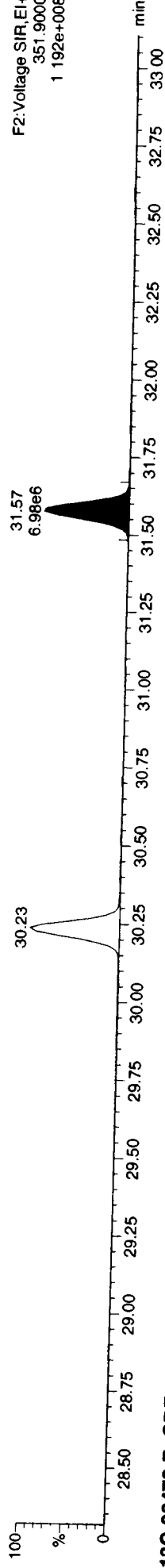
FUNCTION1 HPCDPE



Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk

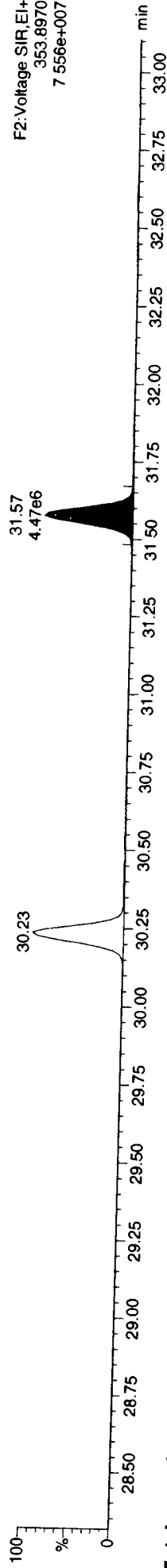
13C-23478-PeCDF

12112310



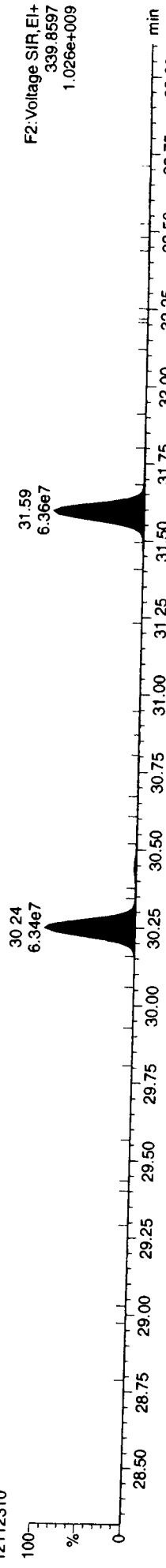
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12112310



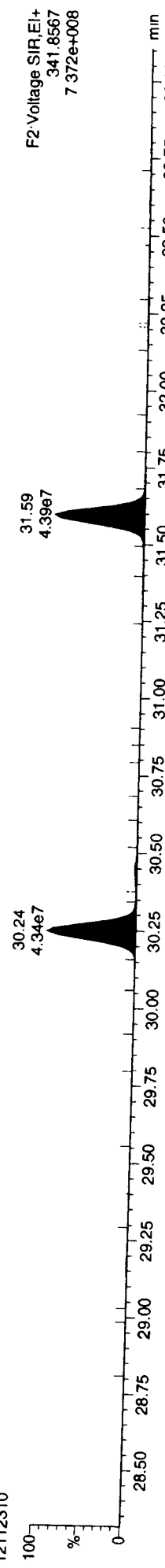
Total-pentafurans

12112310



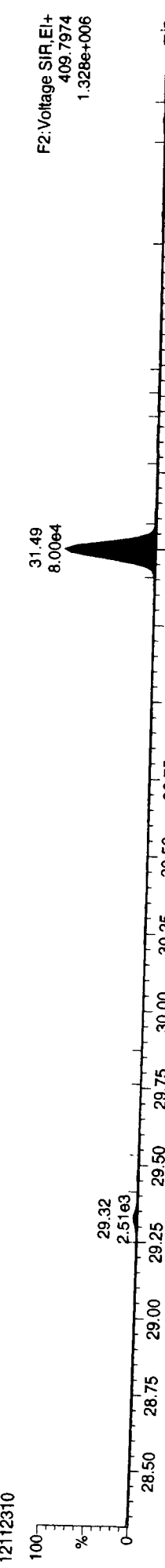
Total-pentafurans

12112310



FUNCTION2 HPCDPE

12112310

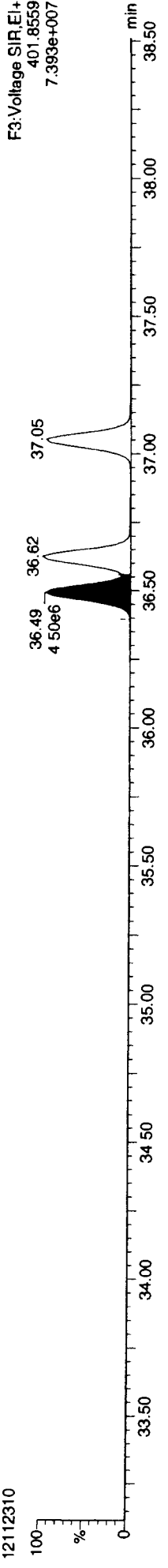


Quantify Sample Report MassLynx 4.1 SCN 714

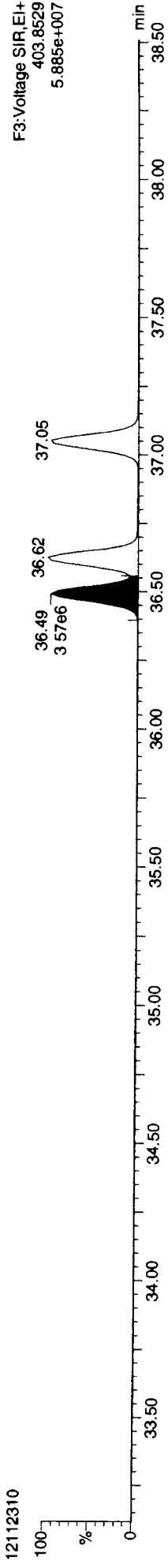
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Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:13 Pacific Standard Time

Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk

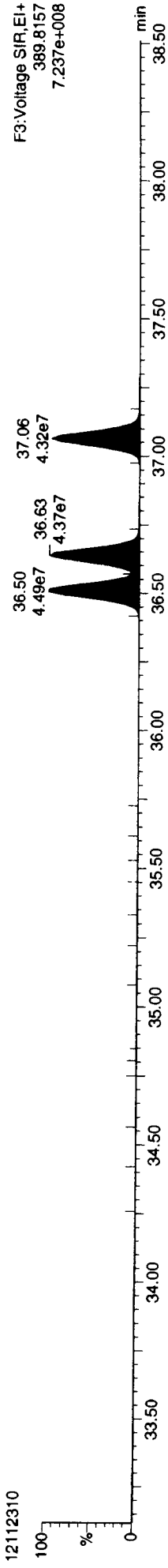
13C-123478-HxCDD



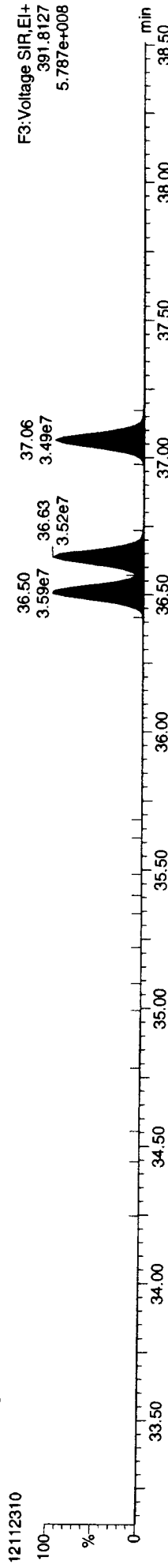
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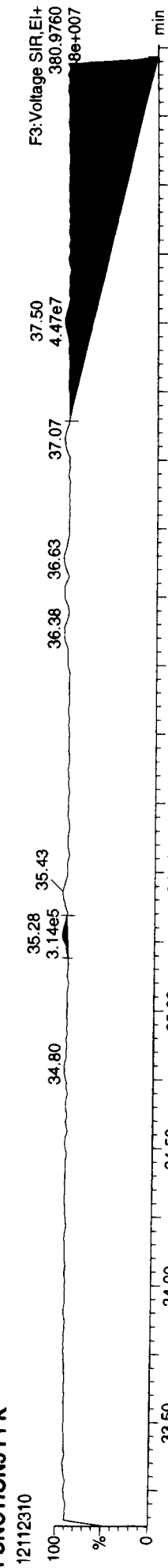
Total-hexadioxins



Total-hexadioxins



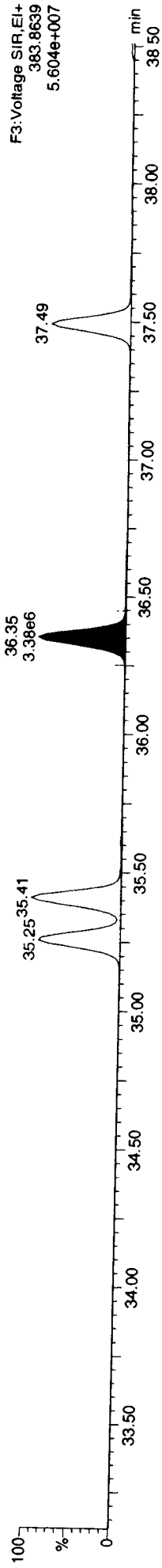
FUNCTION3 PFK



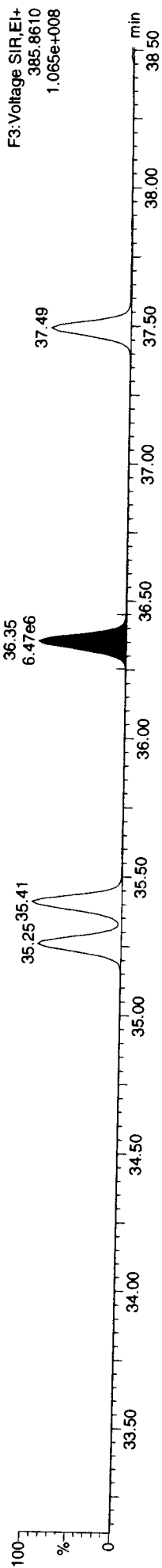
12112310 11/26/12 15:50

Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk

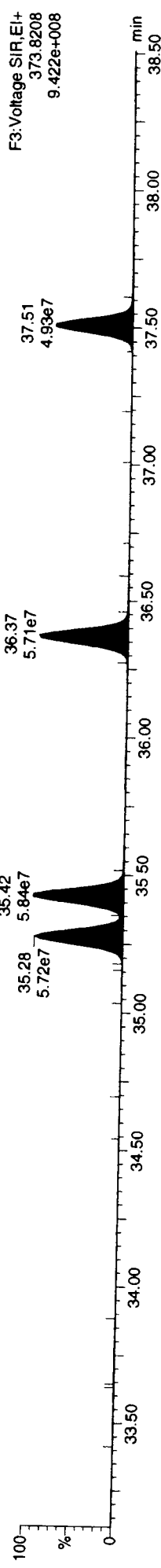
13C-234678-HxCDF  
12112310



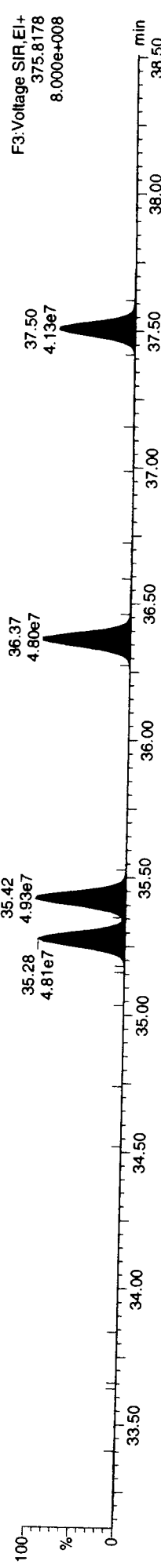
13C-234678-HxCDF  
12112310



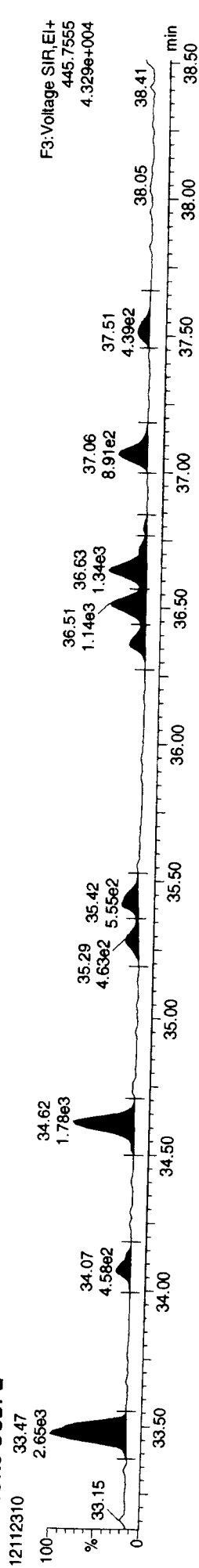
Total-hexafurans  
12112310



Total-hexafurans  
12112310



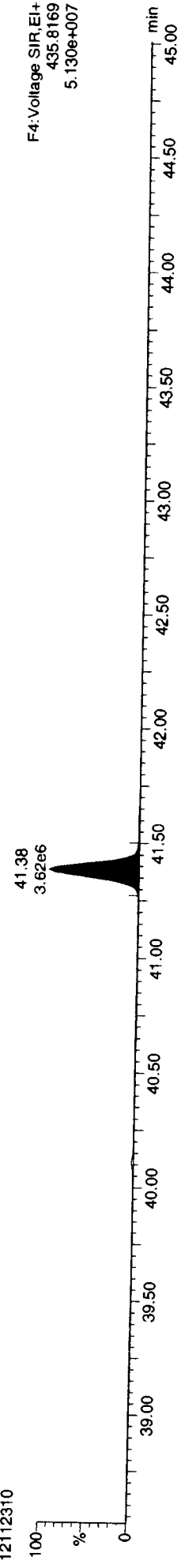
FUNCTION3 OCDFE  
12112310



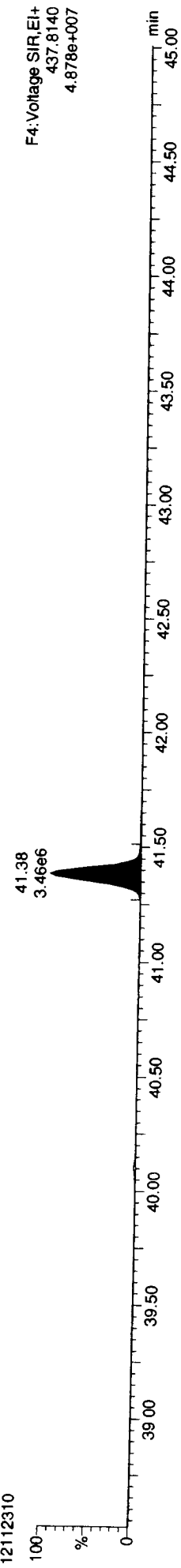
CS05 18:30:06

Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk

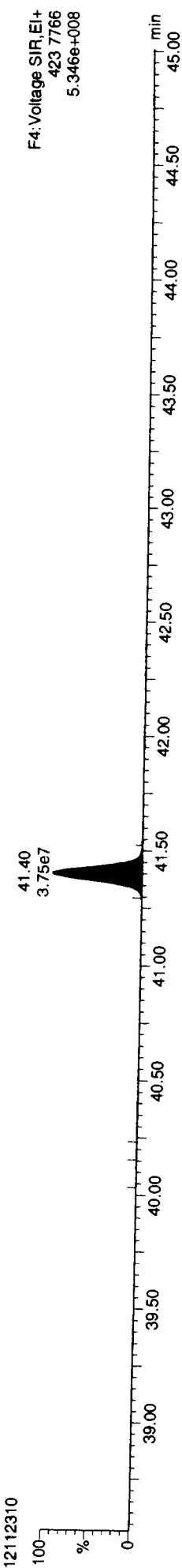
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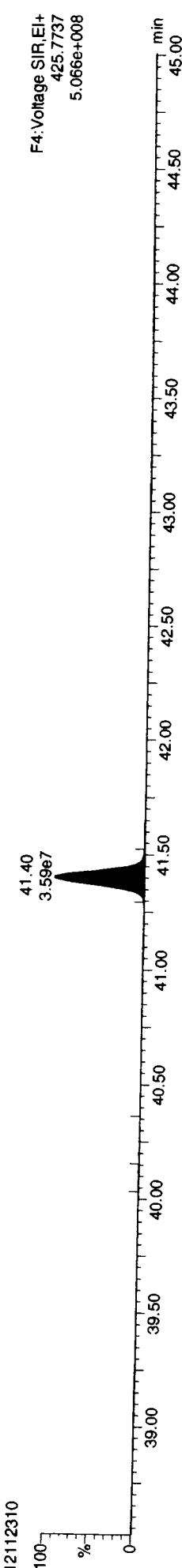
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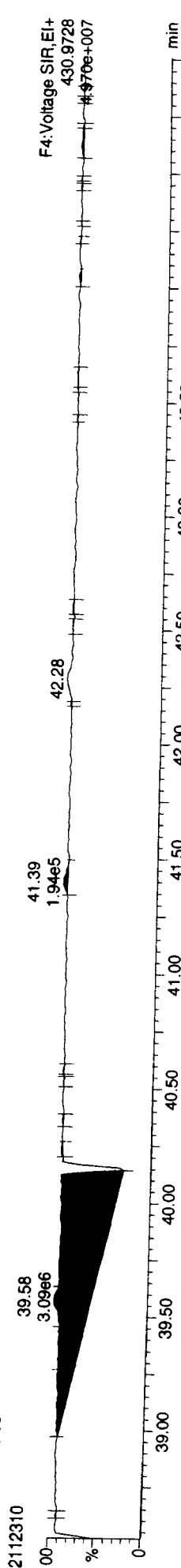
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK





Quantify Sample Report

MassLynx 4.1 SCN 714

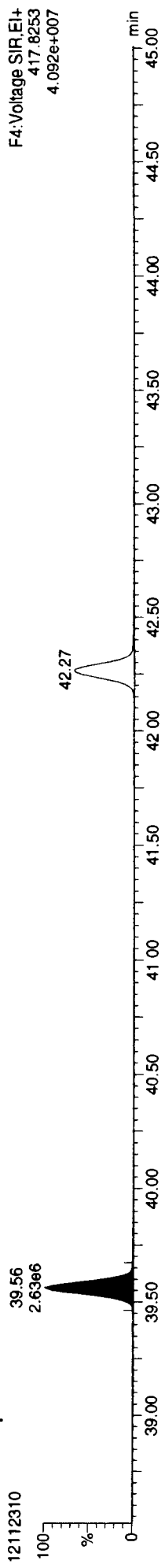
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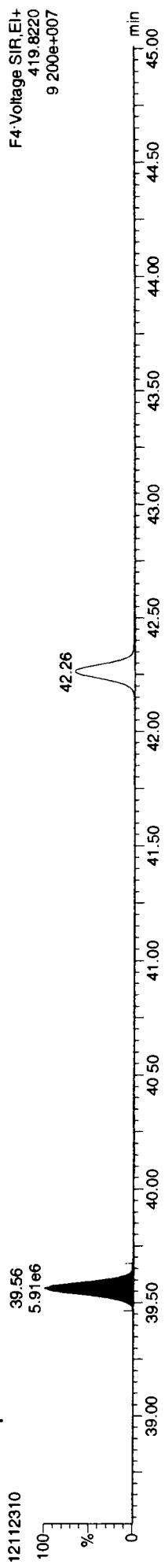
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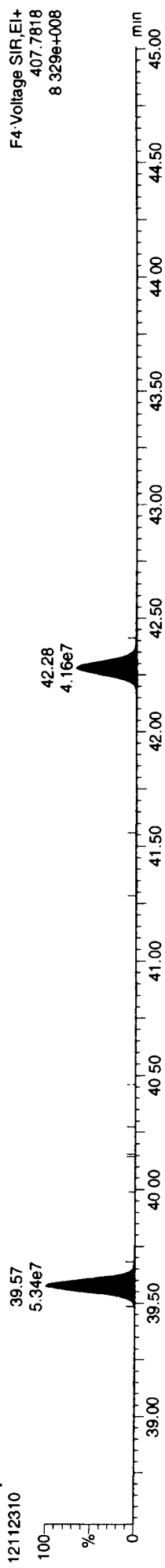
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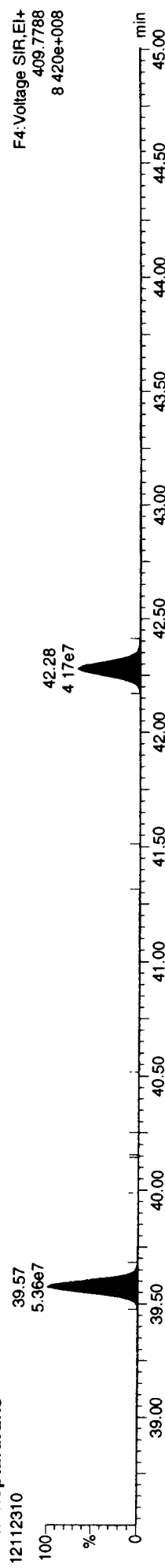
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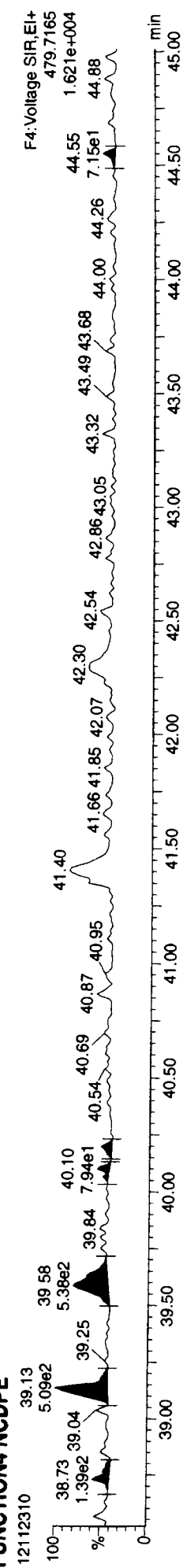
Total-heptafulurans



Total-heptafulurans

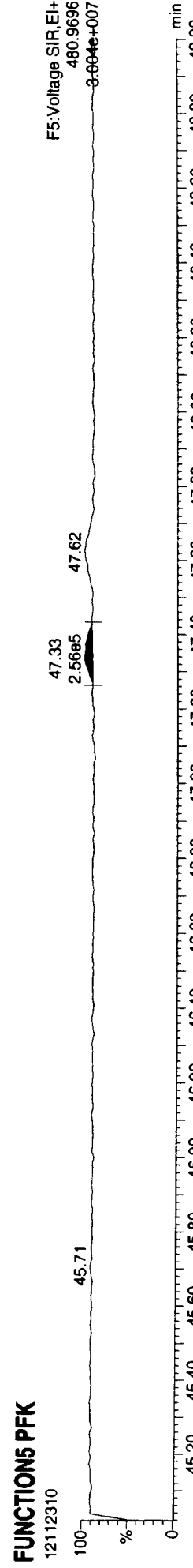
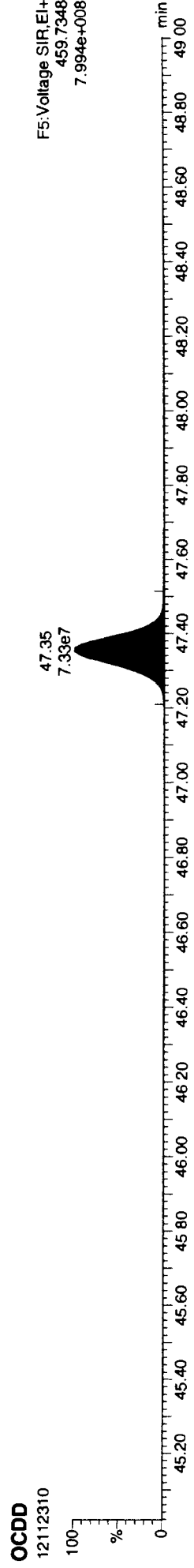
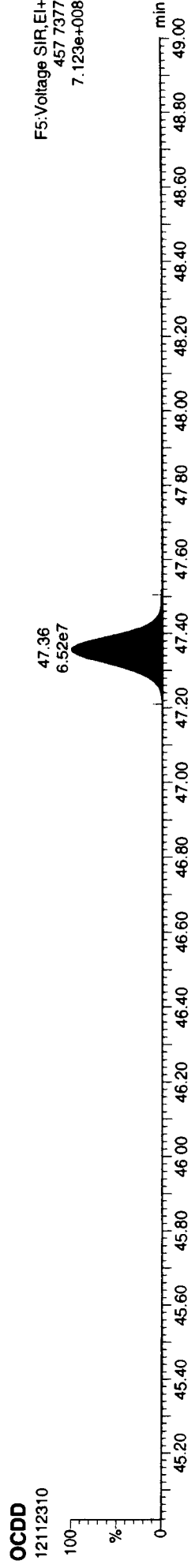
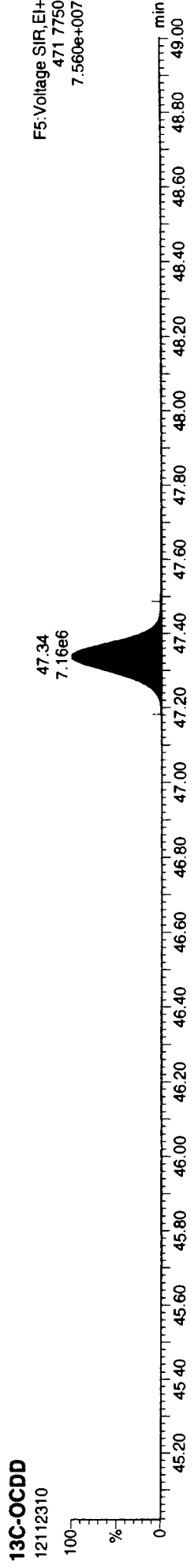
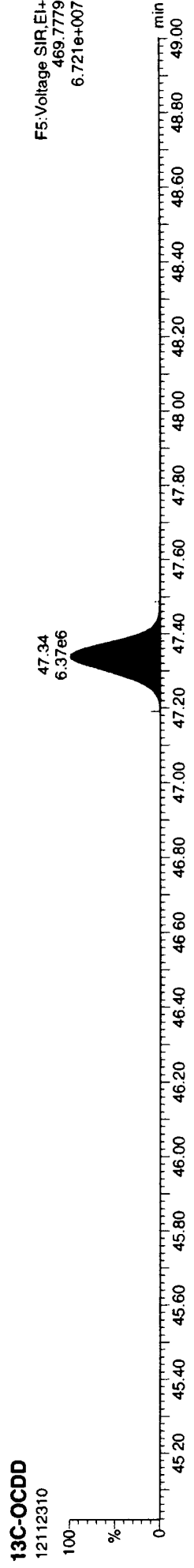


FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290.PRO\1211231C.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:13 Pacific Standard Time

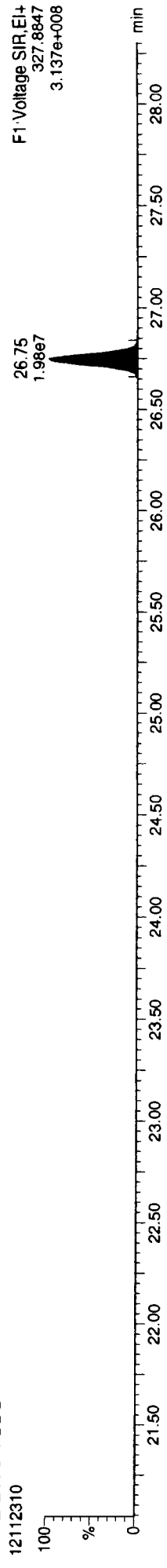
Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk



Dataset: P:\DIOXIN8290.PRO\12112310.qld  
Last Altered: Monday, November 26, 2012 09:23:14 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:27:13 Pacific Standard Time

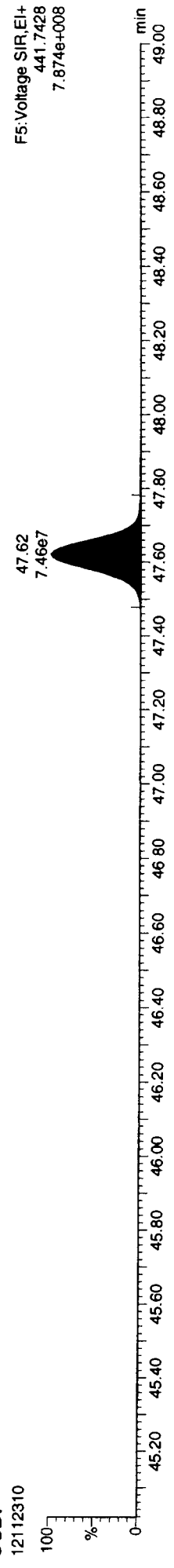
Name: 12112310, Date: 23-Nov-2012, Time: 18:30:06, ID: CS5, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



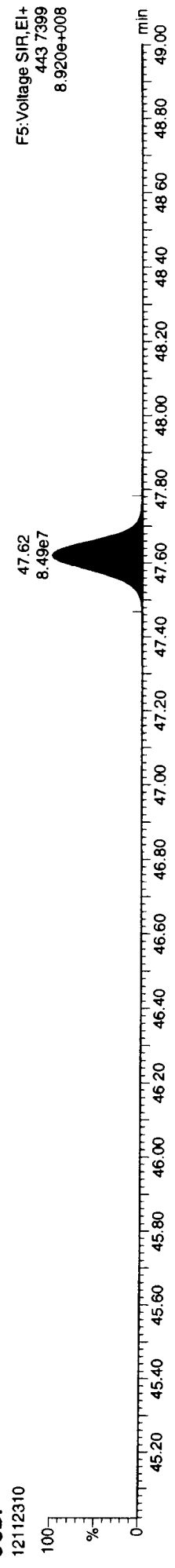
F1: Voltage SIR, EI+  
327.8847  
3.137e+008

OCDF



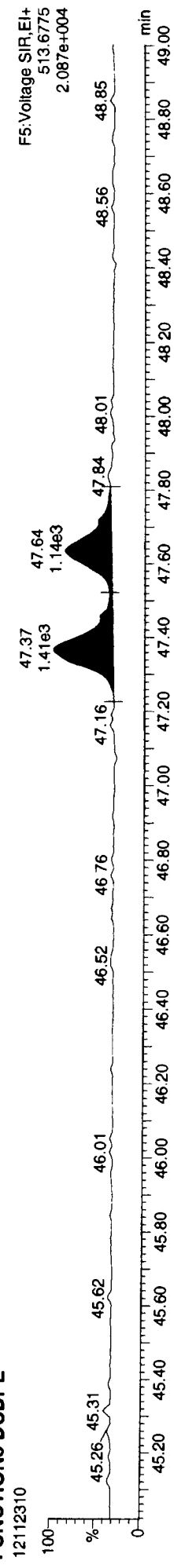
F5: Voltage SIR, EI+  
441.7428  
7.874e+008

OCDF



F5: Voltage SIR, EI+  
443.7399  
8.920e+008

FUNCTION5 DCDPE



F5: Voltage SIR, EI+  
513.6775  
2.087e+004

Dataset: P:\DIOXIN8290.PRO\121123\ICV.qld  
Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Callibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk

Compound	Area	Height	Retention	Abundance	Ratio	Label	Abundance	Ratio	Label	Abundance	Ratio	Label
2378-TCDF	26.094	1.001	207939	281261	489200	bb	0.877	0.739	NO	884.0	10.621	10.621
12378-PeCDF	30.245	1.000	1253696	845668	2099364	bb	0.896	1.482	NO	6097.0	56.022	56.022
23478-PeCDF	31.594	1.001	1155540	777114	1932654	bb	0.926	1.487	NO	5490.8	50.929	50.929
123478-HxCDF	35.265	1.000	1054963	894228	1949191	bd	1.068	1.180	NO	4841.6	56.248	56.248
234678-HxCDF	36.362	1.000	982319	855205	1837524	bd	1.037	1.149	NO	4468.9	53.411	53.411
123678-HxCDF	35.419	1.001	1070624	908027	1978651	db	1.035	1.179	NO	4943.2	53.412	53.412
123789-HxCDF	37.502	1.001	825809	693835	1519645	bb	0.987	1.190	NO	3932.1	56.551	56.551
1234678-HpCDF	39.574	1.001	928652	951801	1880453	bb	1.232	0.976	NO	5288.2	53.729	53.729
1234789-HpCDF	42.281	1.001	692611	699692	1392303	bb	1.215	0.990	NO	3327.9	50.554	50.554
OCDF	47.604	1.006	1207597	1399554	2607151	bb	1.138	0.863	NO	4177.7	109.575	109.575
2378-TCDD	26.751	1.001	169622	224565	394187	bd	1.049	0.755	NO	1867.4	9.959	9.959
12378-PeCDD	31.846	1.000	834118	535002	1369120	bb	0.998	1.559	NO	5829.7	47.623	47.623
123478-HxCDD	36.504	1.000	768519	605429	1373948	bd	0.971	1.269	NO	5000.0	53.212	53.212
123678-HxCDD	36.636	1.001	729327	580223	1309550	db	0.918	1.257	NO	4617.3	55.701	55.701
123789-HxCDD	37.063	1.012	746620	607312	1353932	bb	0.932	1.229	NO	4597.5	55.634	55.634
1234678-HpCDD	41.393	1.000	664113	633547	1297660	bb	1.017	1.048	NO	5937.7	50.353	50.353
OCDD	47.334	1.000	1074224	1208372	2282596	bb	1.008	0.889	NO	5180.2	108.226	108.226
13C-2378-TCDF	26.079	1.006	2311740	2942616	5254356	bb	1.473	0.786	NO	6975.9	79.080	79.080
13C-12378-PeCDF	30.234	1.167	2554025	1627498	4181523	bb	1.148	1.569	NO	13108.9	80.737	80.737
13C-23478-PeCDF	31.572	1.218	2508271	1589203	4097474	bb	1.113	1.578	NO	13200.7	81.612	81.612
13C-123478-HxCDF	35.255	0.952	1115934	2128181	3244114	bd	1.209	0.524	NO	5212.9	98.672	98.672
13C-123678-HxCDF	35.397	0.956	1239806	2340884	3580689	db	1.269	0.530	NO	5709.4	103.790	103.790
13C-234678-HxCDF	36.351	0.981	1136315	2182102	3318418	bb	1.236	0.521	NO	5125.7	98.742	98.742
13C-123789-HxCDF	37.480	1.012	935592	1788002	2723594	bb	1.107	0.523	NO	4360.0	90.496	90.496
13C-1234678-HpCDF	39.552	1.068	874833	1966221	2841055	bb	1.051	0.445	NO	5391.3	99.391	99.391
13C-1234789-HpCDF	42.259	1.141	691764	1574907	2266671	bb	0.815	0.439	NO	3726.6	102.309	102.309
13C-1234-TCDD	25.914	0.000	1990450	2521577	4512026	bb	1.000	0.789	NO	5823.8	100.000	100.000
13C-2378-TCDD	26.721	1.031	1640150	2132310	3772460	bb	0.946	0.769	NO	4681.6	88.407	88.407
13C-12378-PeCDD	31.834	1.228	1768744	1111779	2860523	bb	0.721	1.591	NO	11548.2	88.585	88.585
13C-123478-HxCDD	36.493	0.965	1489072	1170617	2659689	bd	0.991	1.272	NO	6814.7	98.706	98.706
13C-123678-HxCDD	36.614	0.988	1427519	1133204	2560722	db	1.025	1.260	NO	6557.0	91.896	91.896
13C-1234678-HpCDD	41.382	1.117	1315164	1219160	2534323	bb	0.866	1.079	NO	7546.6	107.594	107.594
13C-OCDD	47.317	1.277	1968421	2214682	4183103	bd	0.769	0.889	NO	8836.8	199.998	199.998

Dataset: P:\DIOXIN8290.PRO\121123ICV.qid  
 Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
 Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

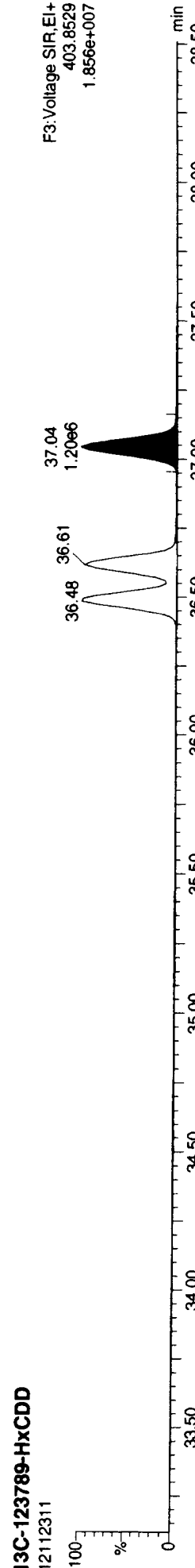
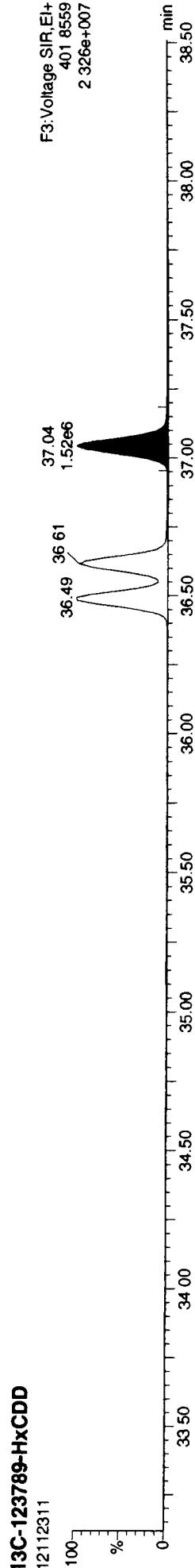
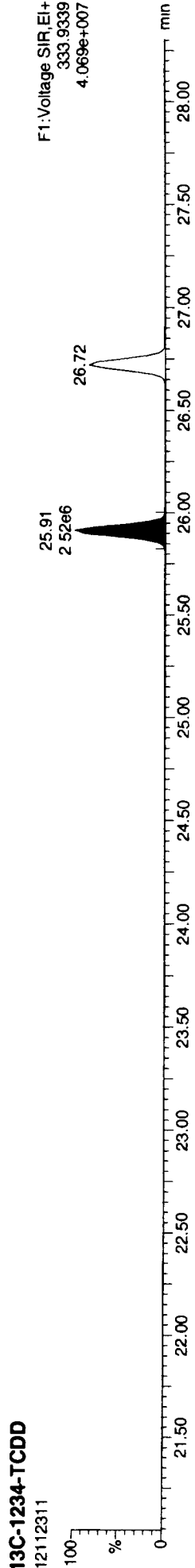
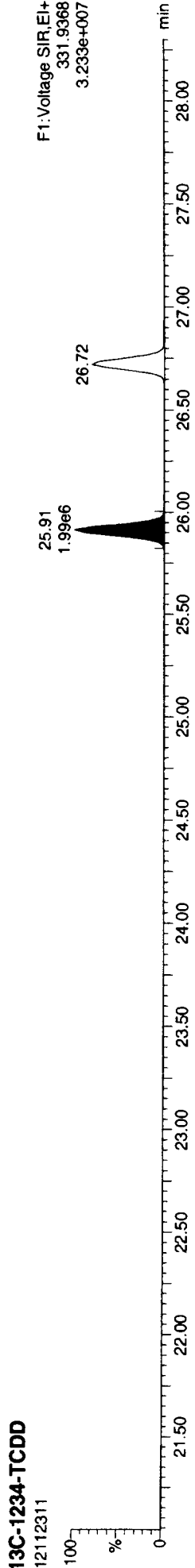
Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk

Component	37.041	0.000	1518692	1200740	2719432	bb	1.000	1.265	1.240	NO	6813.4	10.858	100.000
13C-123789-HxCDD	37.041	0.000	1518692	1200740	2719432	bb	1.000	1.265	1.240	NO	6813.4	10.858	100.000
Total-tetrafurans			211548				0.877						10.812
Total-penta1			0										
Total-pentafurans			2428983				0.911					108.256	107.819
Total-hexafurans			3933715				1.032					219.806	219.623
Total-heptafurans			1625532				1.223					104.627	104.550
Total-Furans			9407375				1.041					553.122	552.379
Total-tetraoxins			170621				1.049					10.045	10.020
Total-pentadioxins			834787				0.998					47.731	47.663
Total-hexadioxins			2244466				0.940					164.610	164.547
Total-heptadioxins			668464				1.017					50.682	50.682
Total-Dioxins			4992562				0.985					381.293	381.137
Total-TEQ			14399937									934.415	933.517
37CL-2378-TCDD	26.751	1.032	404180		404180		1.044				2215.6		8.584
FUNCTION1 PFK			79884198										0.000
FUNCTION2 PFK			90653										0.000
FUNCTION3 PFK			672627										0.000
FUNCTION4 PFK			0										0.000
FUNCTION5 PFK			763152										0.000
FUNCTION1 HXCDPE			866										0.000
FUNCTION1 HPCDPE			8392										0.000
FUNCTION2 HPCDPE			874										0.000
FUNCTION3 OCDPE			347										0.000
FUNCTION4 NCDPE			189										0.000
FUNCTION5 DCDPE			0										0.000

Dataset: P:\DIOXIN8290.PRO\121123\ICV.qld  
Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin\121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

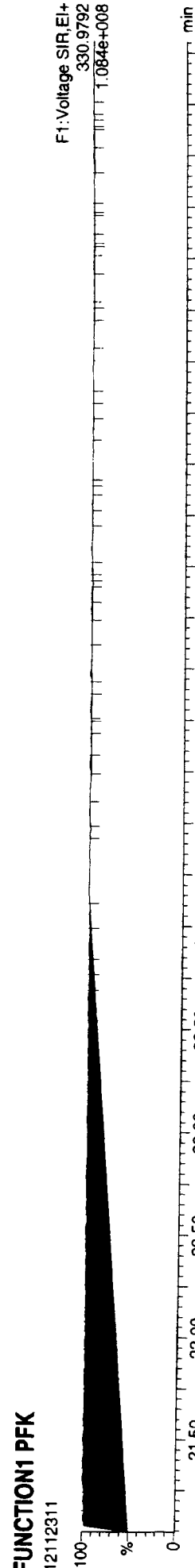
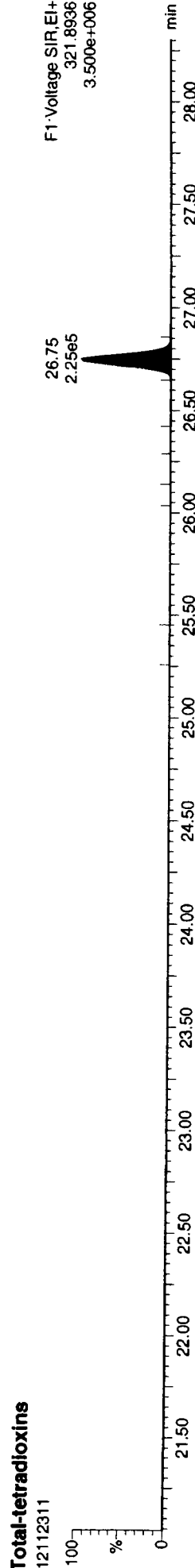
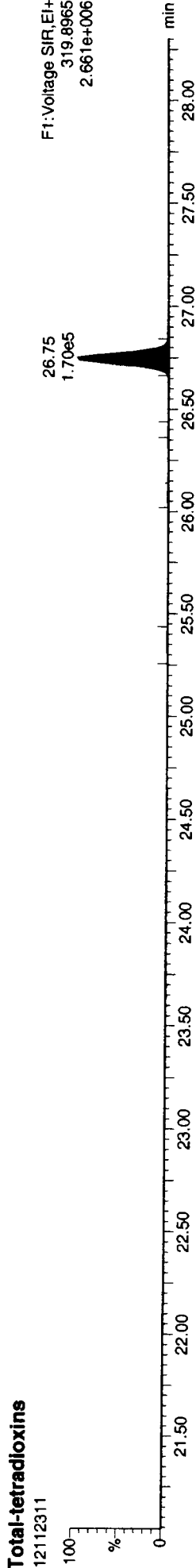
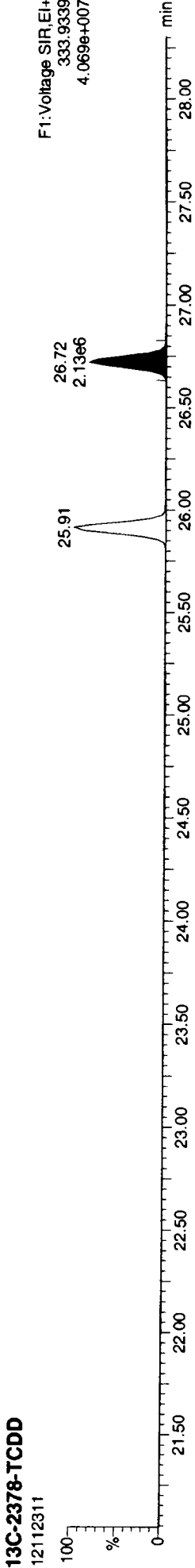
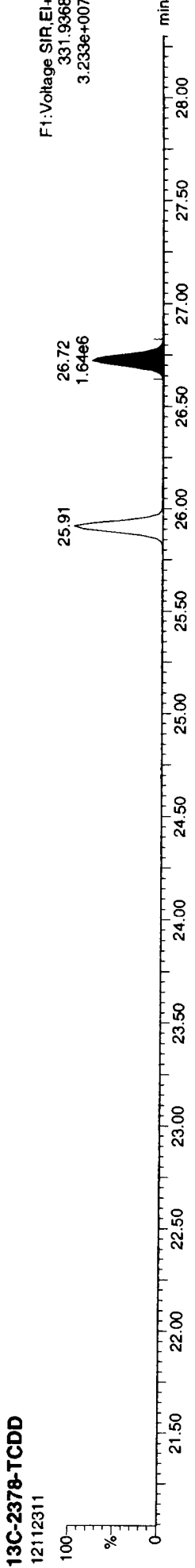
Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report MassLynx 4.1 SCN 714

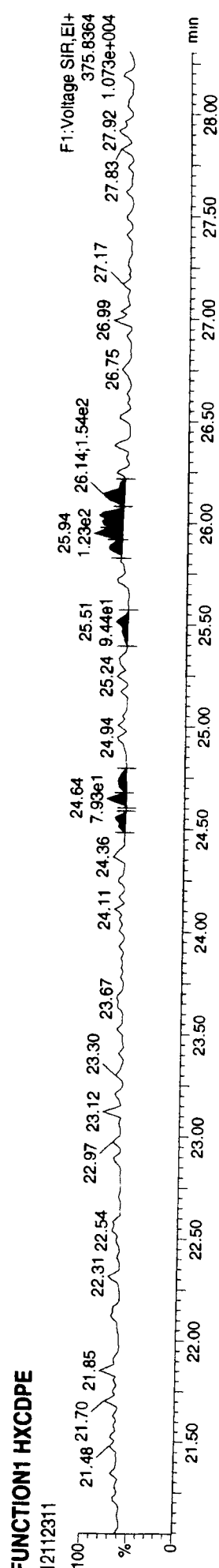
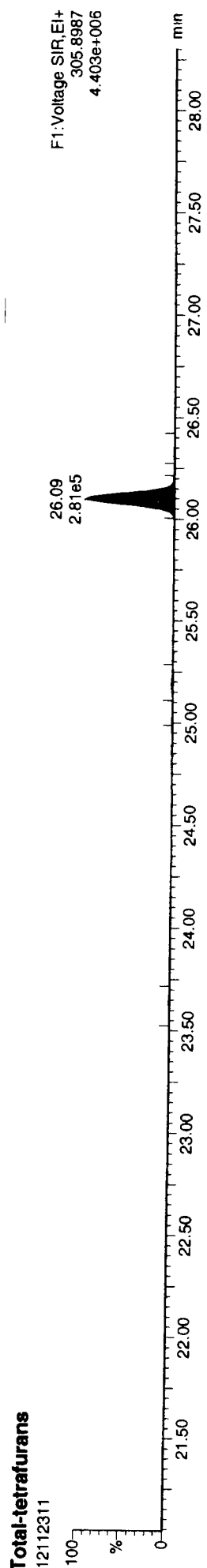
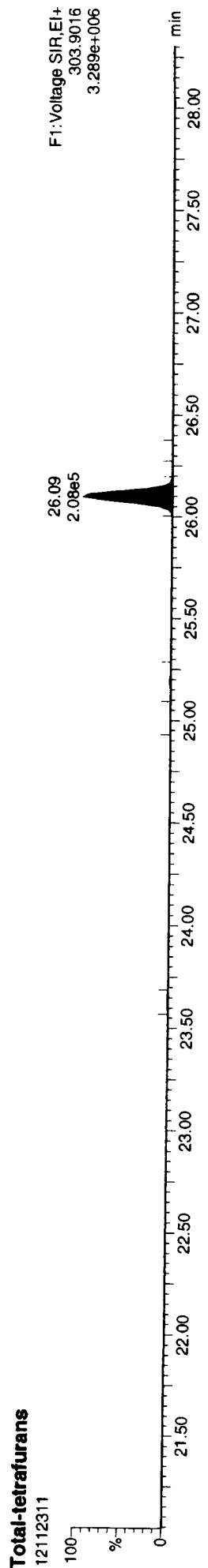
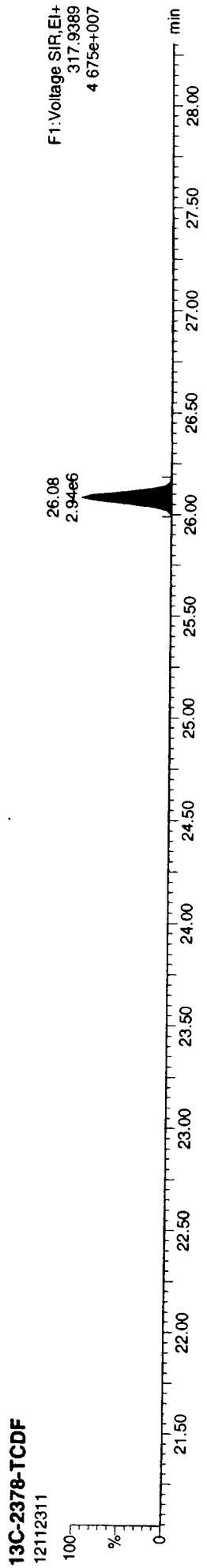
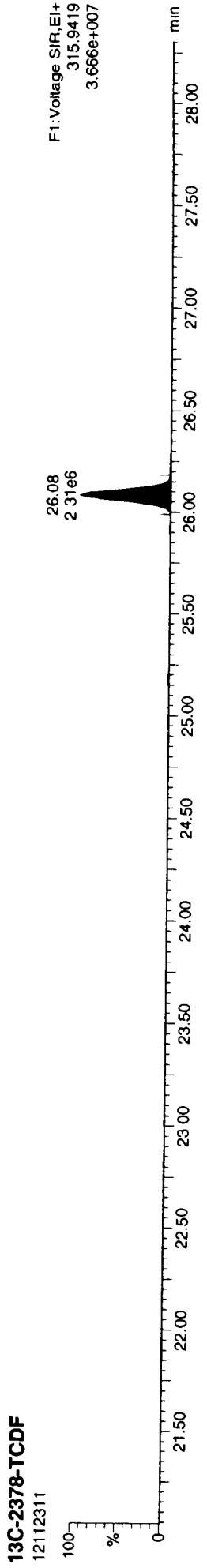
Dataset: P:\DIOXIN8290.PRO\121123\ICV.qld  
Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report  
Dataset: P:\DIOXIN8290.PRO\1211231CV.qld  
Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

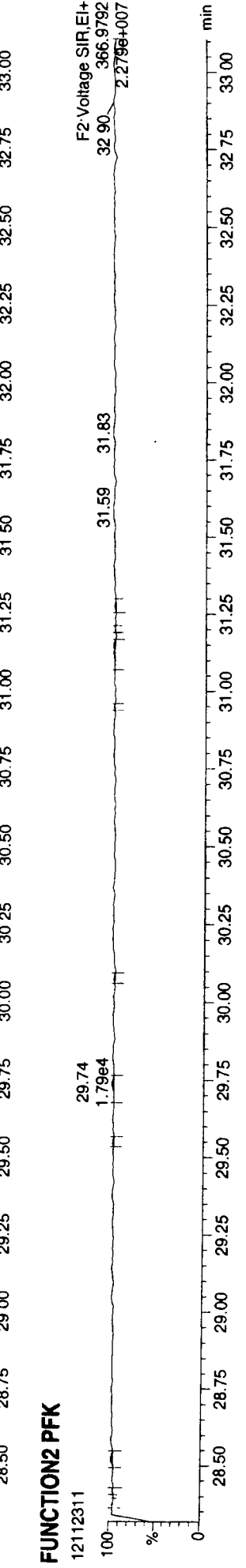
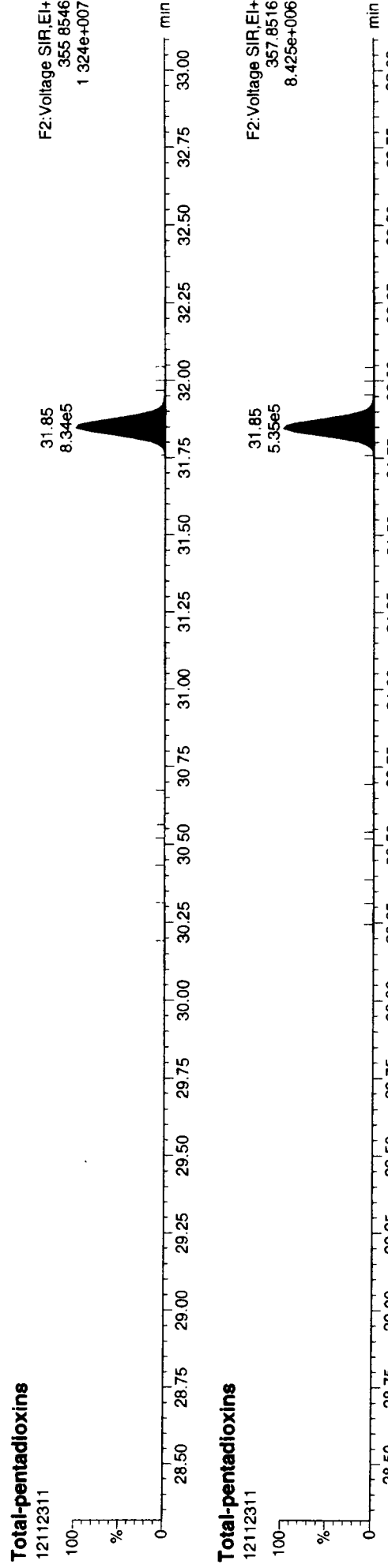
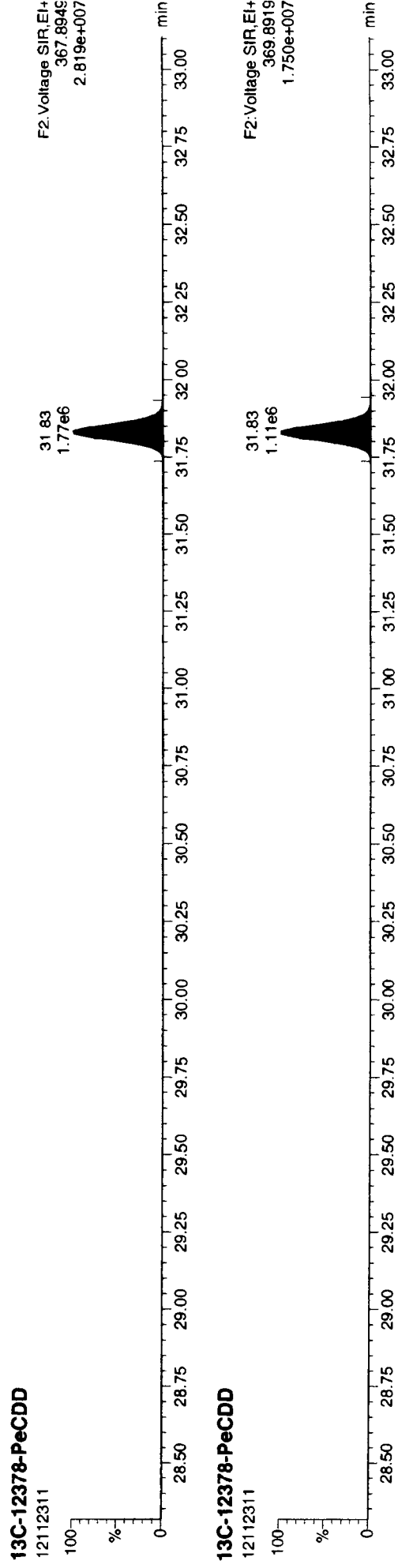
Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk





Quantify Sample Report  
Dataset: P:\DIOXIN8290.PRO\1211231CV.qld  
Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk

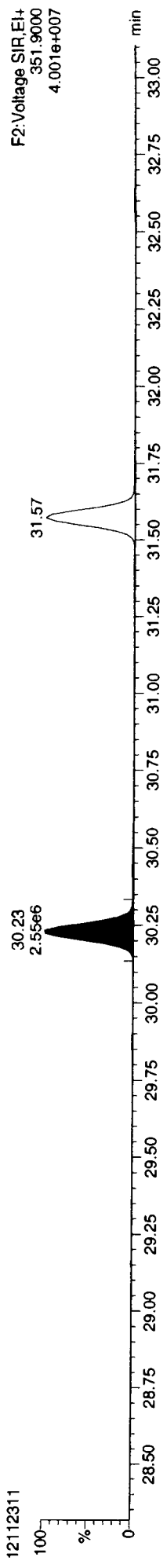


12112311

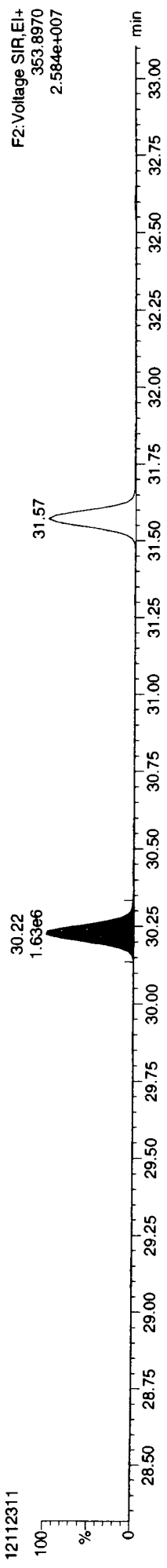
**Quantify Sample Report**      **MassLynx 4.1 SCN 714**  
 Dataset: P:\DIOXIN8290.PRO\121123\ICV.qld  
 Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
 Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

**Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk**

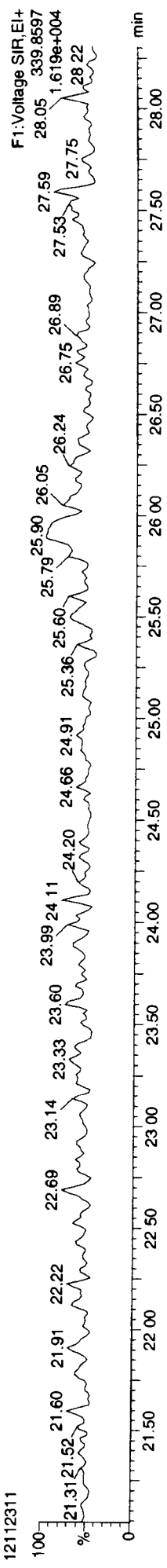
**13C-12378-PeCDF**



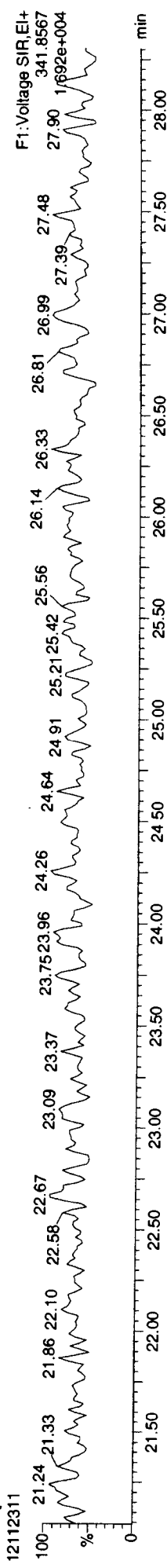
**13C-12378-PeCDF**



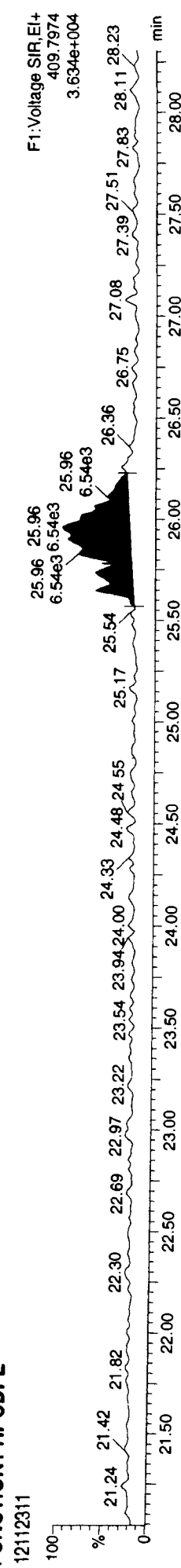
**Total-penta1**



**Total-penta1**



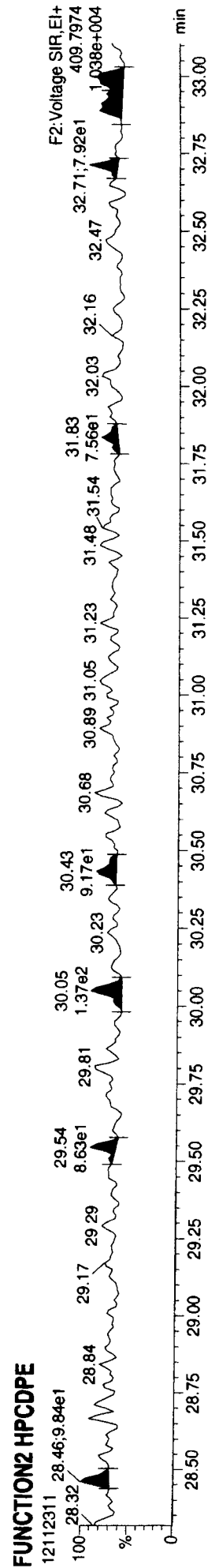
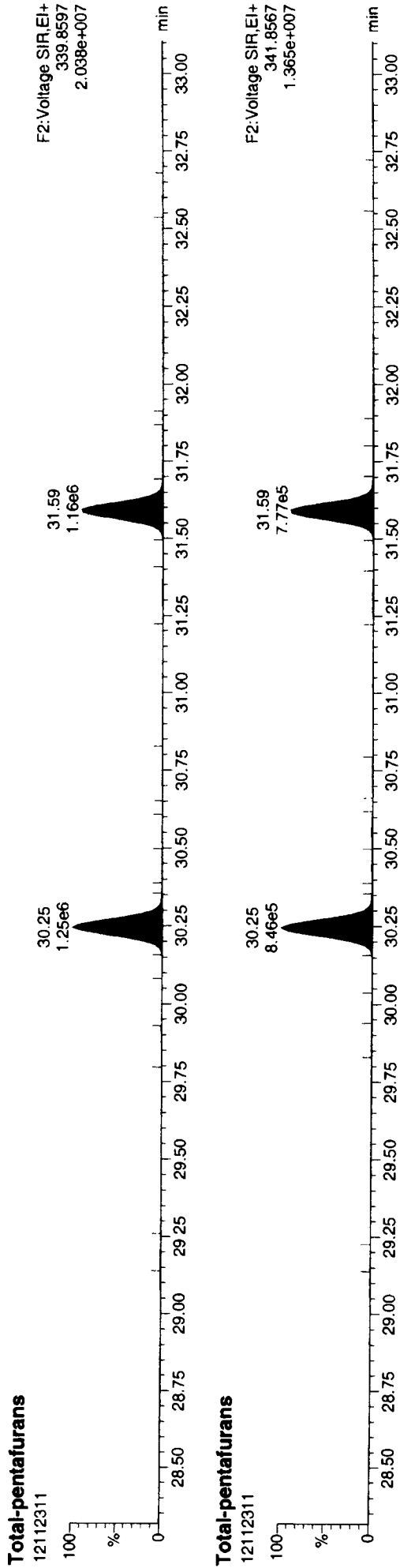
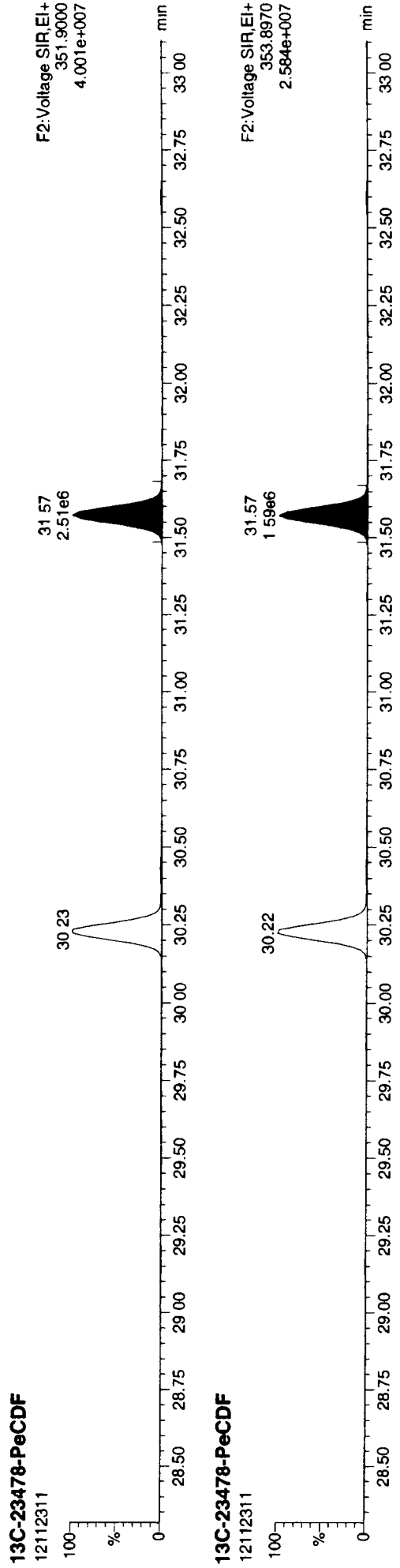
**FUNCTION1 HPCDPE**



SCD 00 19 00 00

Quantify Sample Report **MassLynx 4.1 SCN 714**  
Dataset: P:\DIOXIN8290.PRO\121123\ICV.dld  
Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk

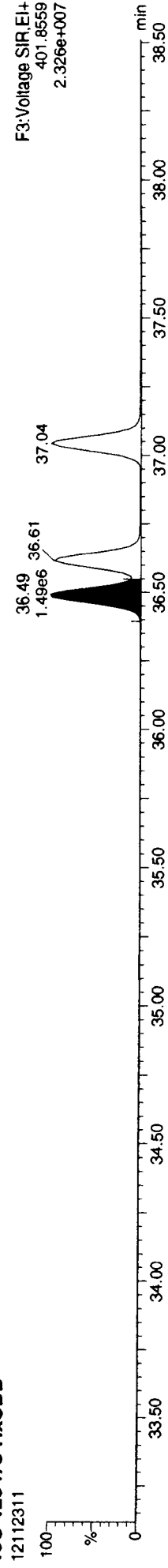


12112311

Dataset: P:\DIOXIN8290.PRO\1211231CV.qld  
Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

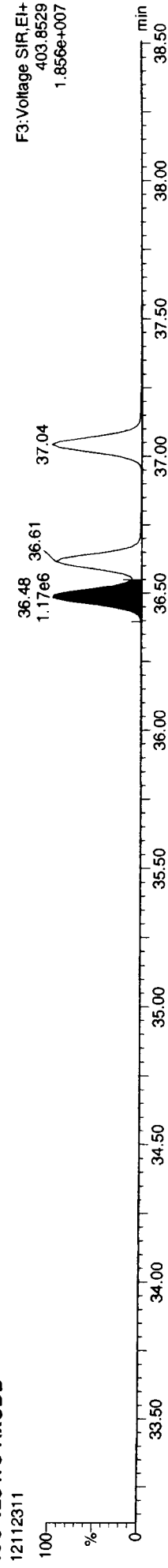
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13C-123478-HxCDD



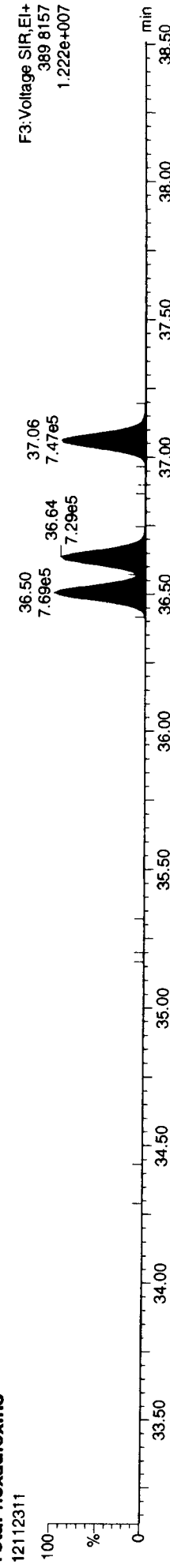
F3: Voltage SIR, EI+  
401.8559  
2.326e+007

13C-123478-HxCDD



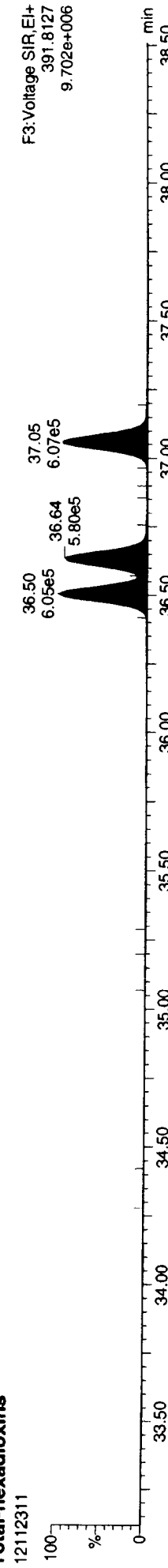
F3: Voltage SIR, EI+  
403.8529  
1.856e+007

Total-hexadioxins



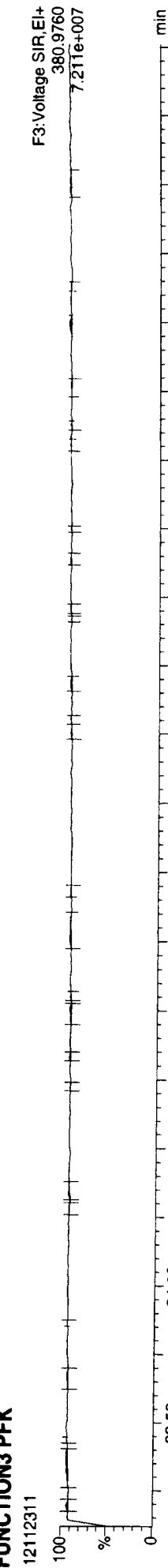
F3: Voltage SIR, EI+  
389.8157  
1.222e+007

Total-hexadioxins



F3: Voltage SIR, EI+  
391.8127  
9.702e+006

FUNCTION3 PFK



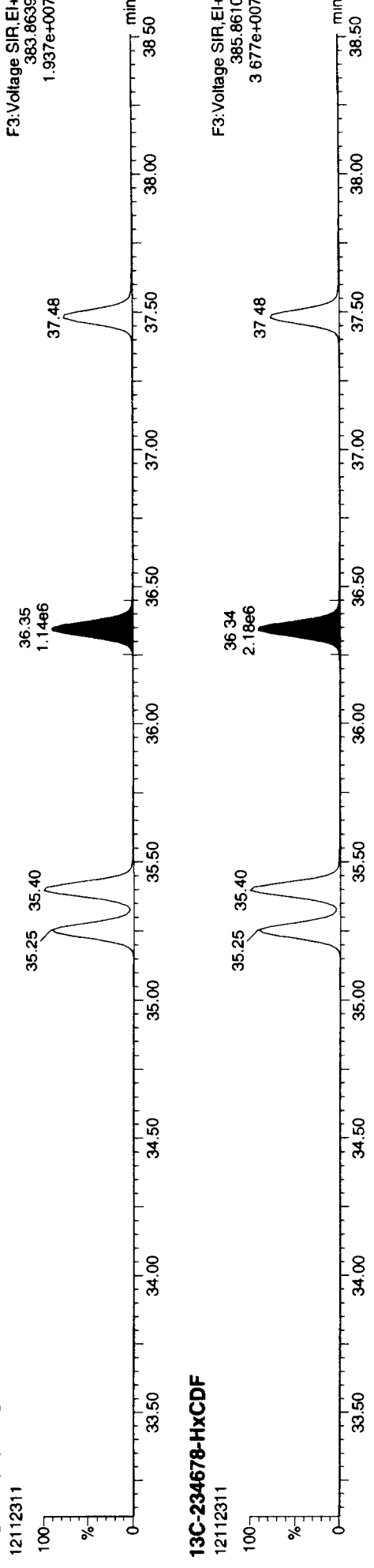
F3: Voltage SIR, EI+  
380.9760  
7.211e+007

5000 : 33.50 38.50

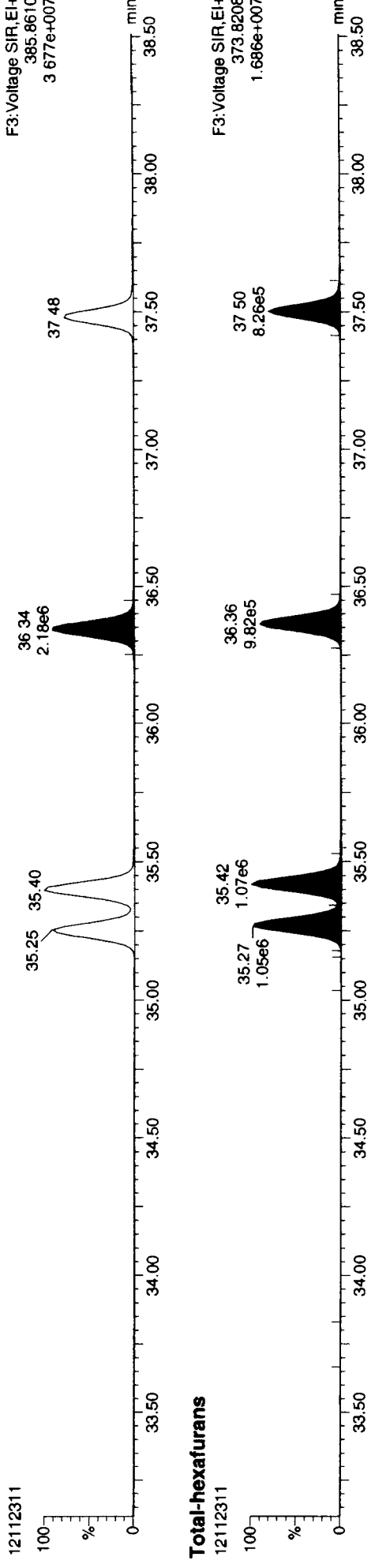
**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
 Dataset: P:\DIOXIN8290.PRO\1211231CV.qld  
 Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
 Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

**Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk**

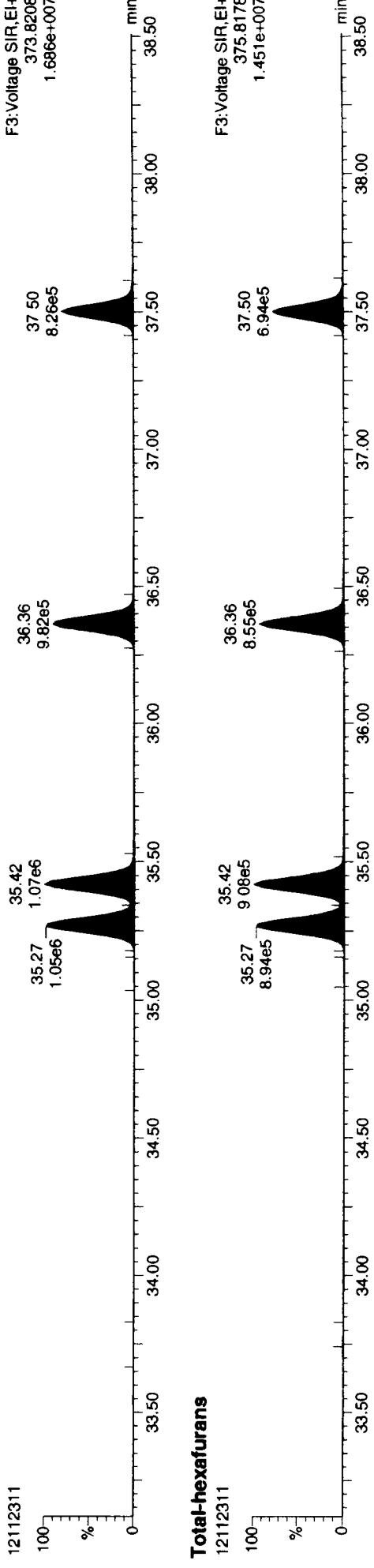
**13C-234678-HxCDF**



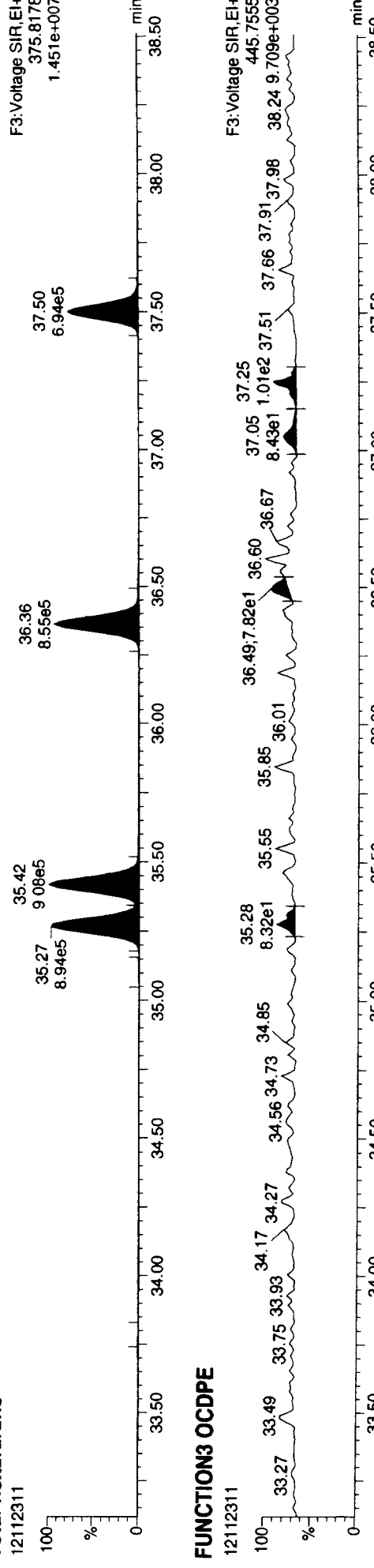
**13C-234678-HxCDF**



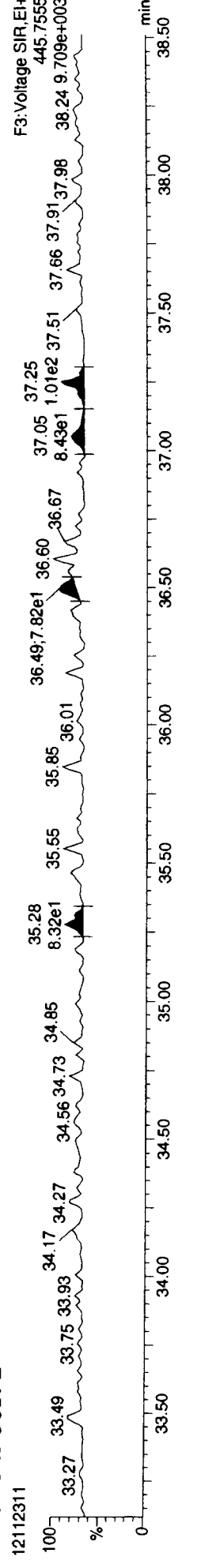
**Total-hexafurans**



**Total-hexafurans**



**FUNCTION3 OCDPE**



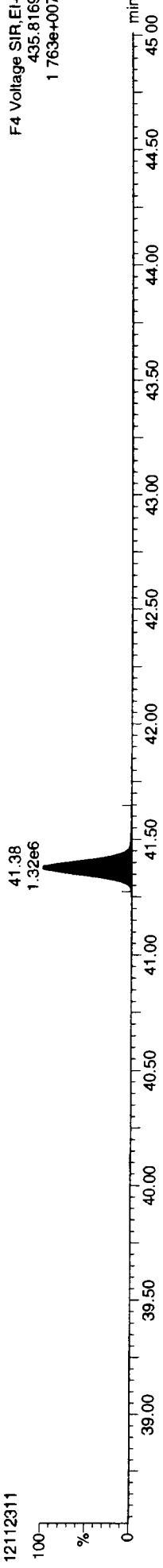
50000 100000

Quantify Sample Report MassLynx 4.1 SCN 714

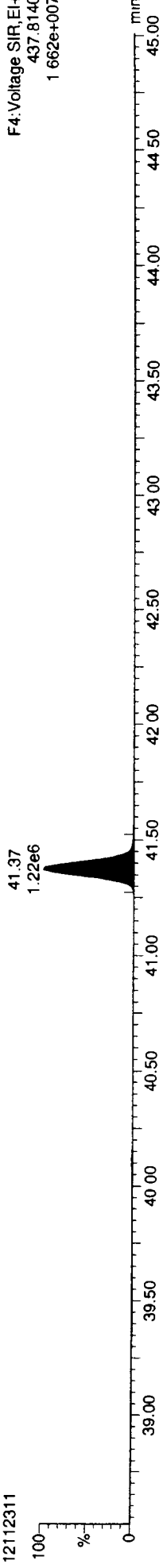
Dataset: P:\DIOXIN8290.PRO\121123\ICV.qld  
Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk

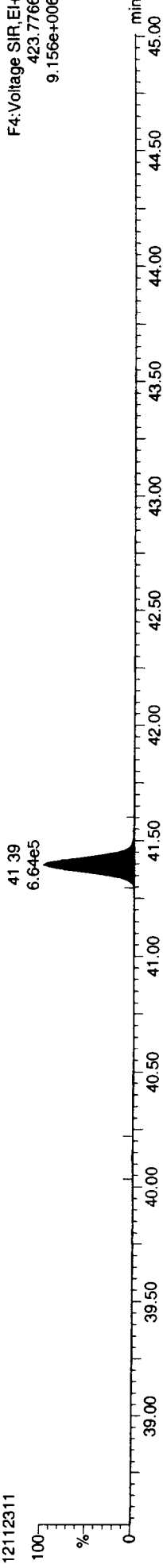
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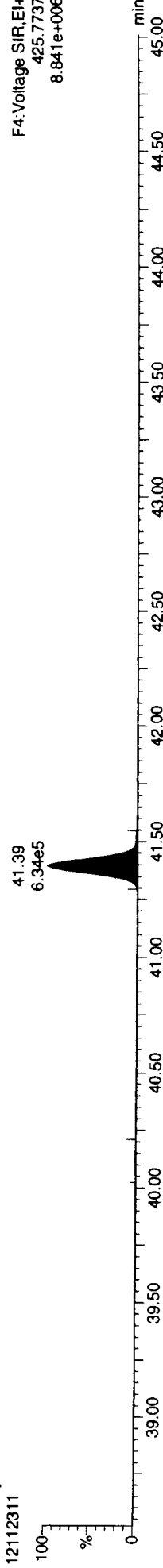
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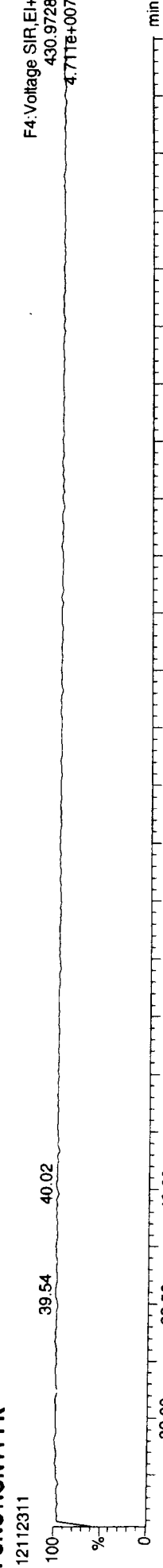
Total-heptadioxins



Total-heptadioxins

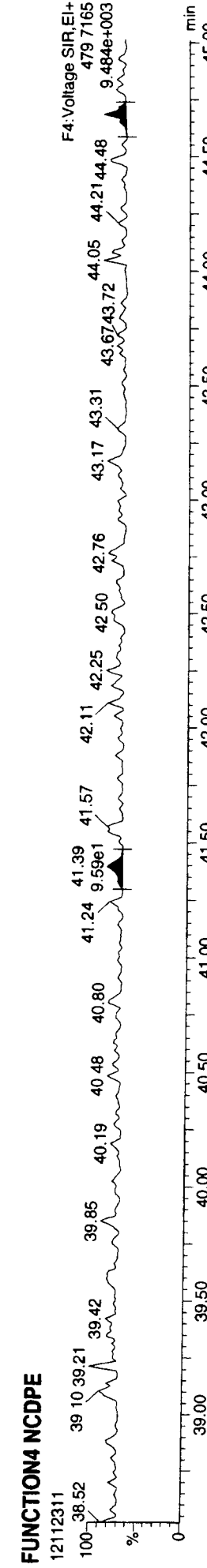
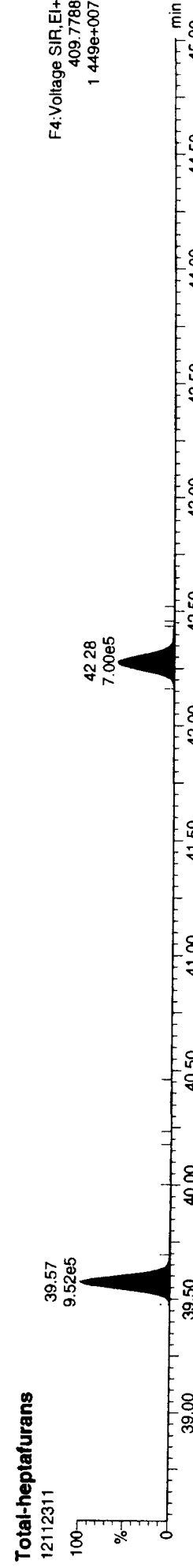
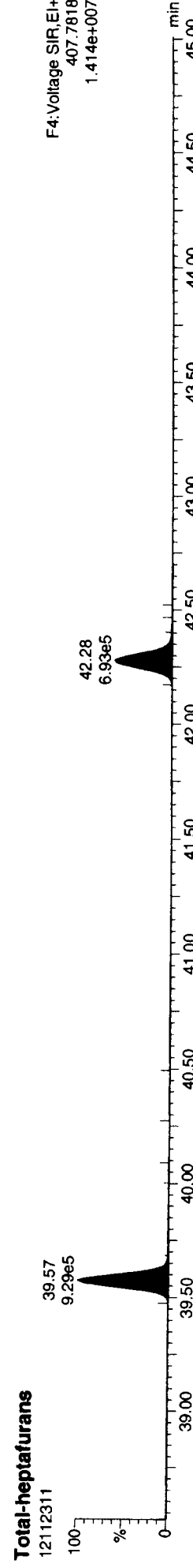
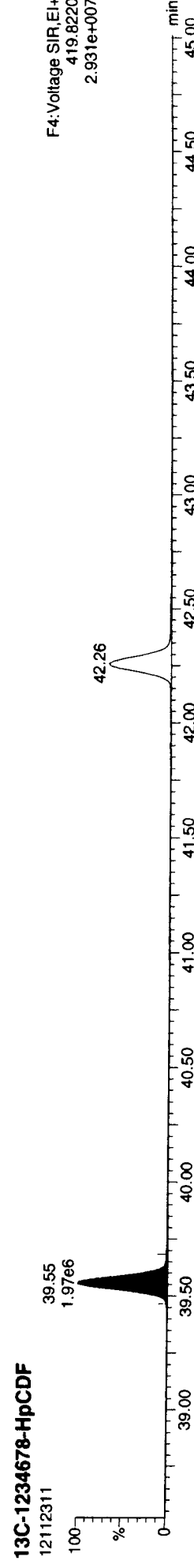
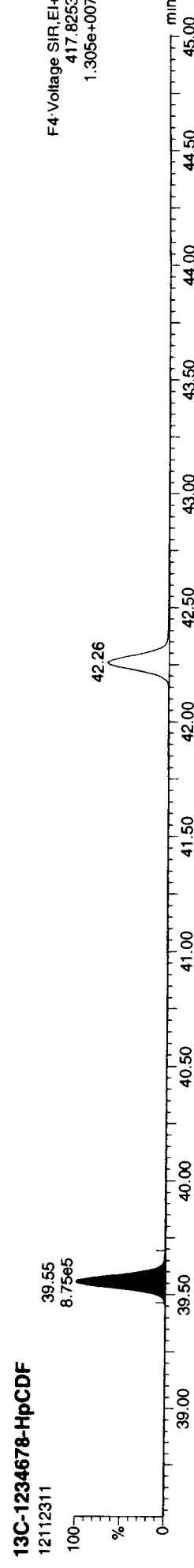


FUNCTION4 PFK



Quantity Sample Report  
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Last Altered: Monday, November 26, 2012 09:36:55 Pacific Standard Time  
Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

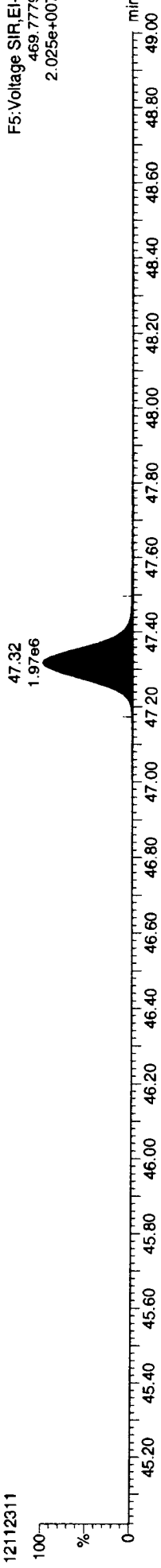
Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk



Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk

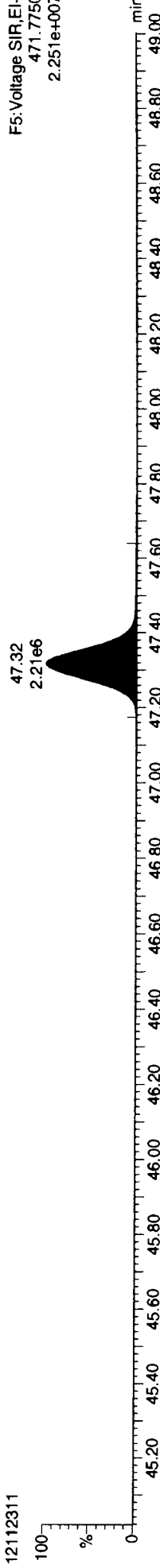
13C-OCDD

12112311



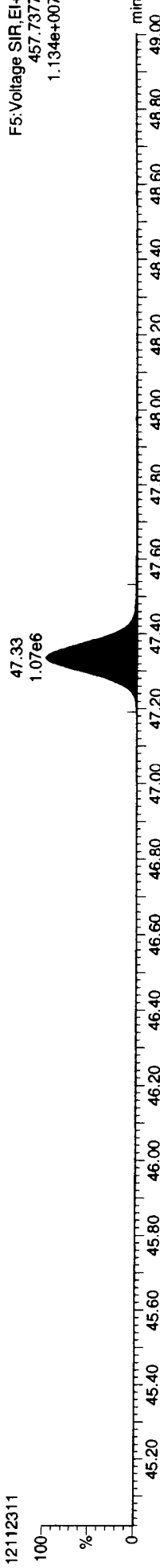
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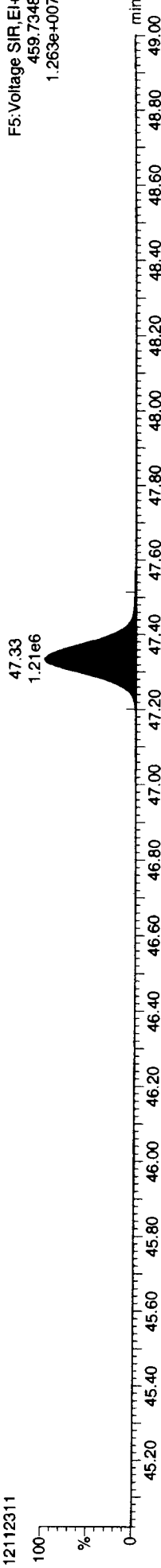
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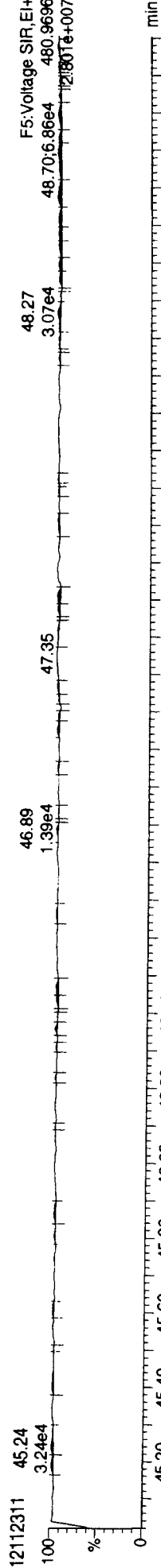
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12112311



FUNCTION5 PFK

12112311





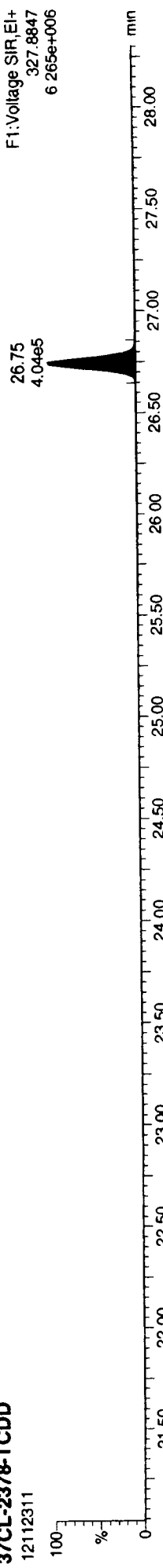
Quantify Sample Report **MassLynx 4.1 SCN 714**

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Printed: Monday, November 26, 2012 09:55:55 Pacific Standard Time

Name: 12112311, Date: 23-Nov-2012, Time: 19:22:21, ID: ICV, Conditions: AUTOSPEC01, User: pk

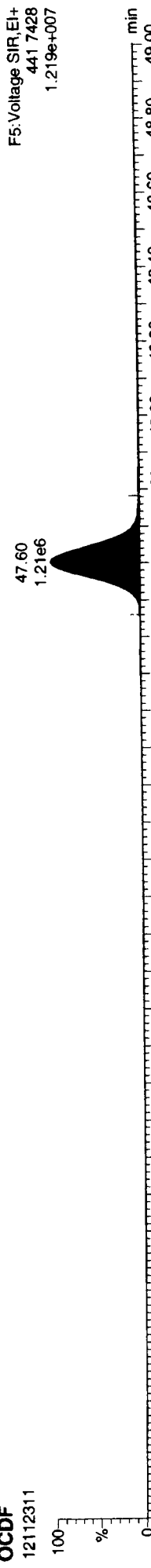
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12112311



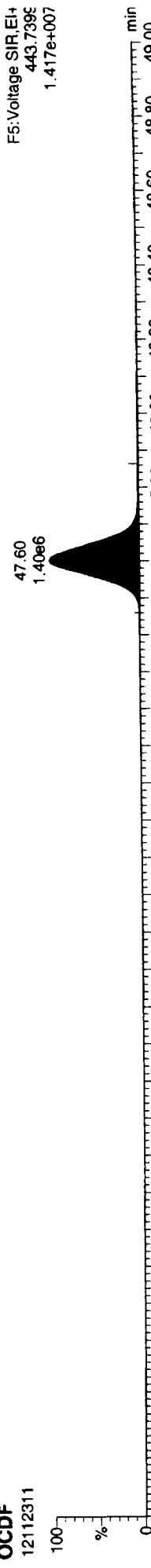
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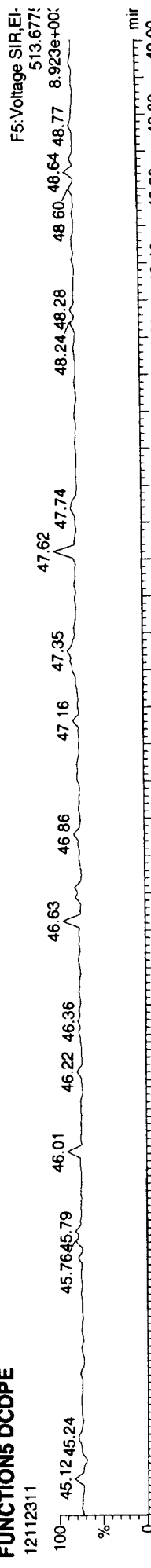
**OCDF**

12112311



**FUNCTION5 DCDPE**

12112311



**Dioxin Raw Data  
Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: VR58**

### HR-GC/MS Analyst Notes / Corrective Action Log

ARI Project ID: VP58, VP52 Client ID: Anchor

ARI SOP: **806S** (Dioxins)

Parameter(s): HeB

Instrument: **AutoSpec01**

Curve Date: 11/23/12 Analysis Start Date: 11/28/12

- |                                     |  |                                  |   |
|-------------------------------------|--|----------------------------------|---|
| Internal Standard Meets Criteria?   | <input checked="" type="radio"/> YES / NO      | Method Blank in Control?         | <input checked="" type="radio"/> YES / NO |
| Extraction Std Recovery in Control? | <input checked="" type="radio"/> YES / NO      | IPR / OPR Recovery in Control?   | <input checked="" type="radio"/> YES / NO |
| Cal acceptable?                     | <input checked="" type="radio"/> YES / NO      | CCal acceptable?                 | <input checked="" type="radio"/> YES / NO |
| Manual Integrations for ICal?       | <input checked="" type="radio"/> YES / NO      | Manual Integrations for Samples? | <input checked="" type="radio"/> Yes / NO |
| Special Analysis Criteria Met?      | YES / NO / <input checked="" type="radio"/> NA |                                  |   |

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

*OK.*

Additional Details on Reverse: Yes / No

Analyst: *[Signature]* Date: 12/10/12

Reviewer: *[Signature]* Date: 12/11

# Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.: GC=CN10921030, MS=P764

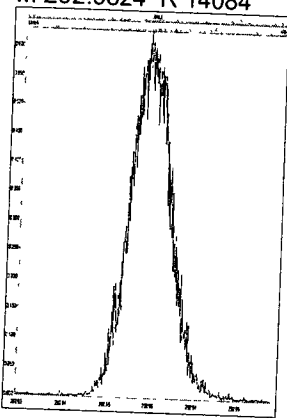
Date: 11/28/12 Analysis: Dioxin Analyst: pk  
 GC Program: 8290C Column No: 1081305 Column Type: VR58Dioxin2  
 Inj Vol: 1ul Instrument Tune (IPR): 1088290B Detector Voltage: 350  
 Resolution Check Files: \_\_\_\_\_ Curve Date: 11/23/12

IS/SS	Ical/Ccal	LCS/ICV
<u>17908</u>	<u>17214</u>	
	<u>19972</u>	

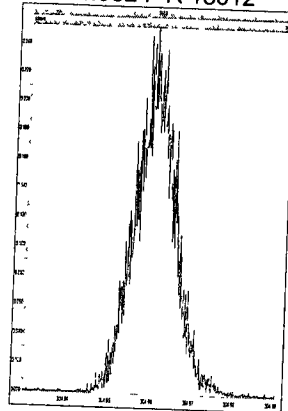
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2	28-Nov-12	10:52:39	12112803	ISC01	25.9		
3	28-Nov-12	12:05:16	12112804	VR58MBS	25.9	25.9	2951985
4	28-Nov-12	12:58:56	12112805	VR58OPR	25.9	25.9	3855197
5	28-Nov-12	13:49:08	12112806	VR58SRM	25.9	25.9	3811036
6	28-Nov-12	15:06:14	12112807	VR58A	25.9	25.9	3638475
7	28-Nov-12	15:56:33	12112808	VR58B	25.9	25.9	4629988
8	28-Nov-12	16:48:47	12112809	VR58C	25.9	25.9	3793507
9	28-Nov-12	17:41:07	12112810	VR58D	25.9	25.9	4651273
10	28-Nov-12	18:33:14	12112811	CS3	25.9	25.9	4882381
11	28-Nov-12	19:33:45	12112812	VR58E	25.9	25.9	4189453
12	28-Nov-12	20:29:18	12112813	VR58F	25.9	25.9	4627790
13	28-Nov-12	21:21:25	12112814	VR58G	25.9	25.9	4242642
14	28-Nov-12	22:13:45	12112815	VR58H	25.9	25.9	3774545
15	28-Nov-12	23:06:00	12112816	VR58I	25.9	25.9	3924639
16	28-Nov-12	23:58:20	12112817	VR58J	25.9	25.9	3767517
17	29-Nov-12	00:50:28	12112818	VR82A	25.9	25.9	4417832
18	29-Nov-12	01:43:02	12112819	VR82B	25.9	25.9	4717986
19	29-Nov-12	02:35:10	12112820	CS3	25.9	25.9	4467924
20	29-Nov-12	03:35:35	12112821	VR82C	25.9	25.9	3851846
21	29-Nov-12	04:31:08	12112822	VR82CDUP	25.9	25.9	3651242
22	29-Nov-12	05:23:23	12112823	VR82D	25.9	25.9	4088772
23	29-Nov-12	06:15:42	12112824	VR82E	25.9	25.9	3625697
24	29-Nov-12	07:07:57	12112825	VR82F	25.9	25.9	3865681
25	29-Nov-12	08:00:18	12112826	VR82G	25.9	25.9	3837460
26	29-Nov-12	08:52:31	12112827	VR82H	25.9	25.9	3989566
27	29-Nov-12	09:44:52	12112828	VR82I	25.9	25.9	4152420
28	29-Nov-12	10:37:05	12112829	CS3	25.9	25.9	4107160
29	29-Nov-12	12:00:42	12112830	VR58B 5X	25.9	25.9	3505635
30	29-Nov-12	12:51:00	12112831	VR58C 5X	25.9	25.9	3565056
31	29-Nov-12	13:43:29	12112832	VR58D 5X	25.9	25.9	4059088
32	29-Nov-12	14:35:41	12112833	VR82A 5X	25.9	25.9	3733411
33	29-Nov-12	15:27:56	12112834	VR82B 5X	25.9	25.9	3675051
34	29-Nov-12	16:20:15	12112835	CS3	25.9	25.9	4337830

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 Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

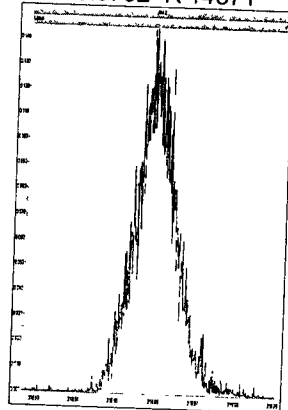
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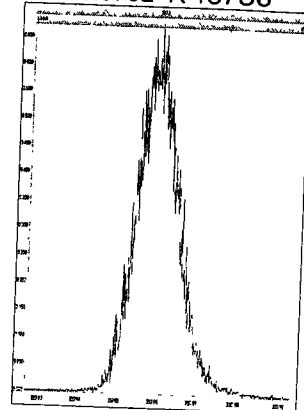
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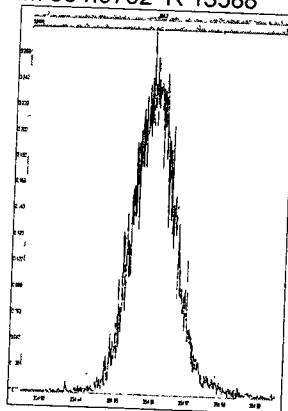
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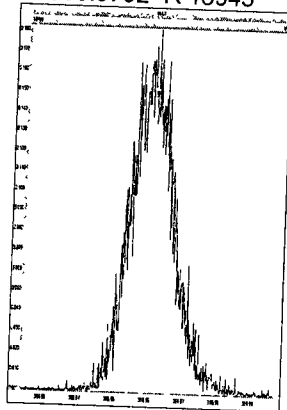
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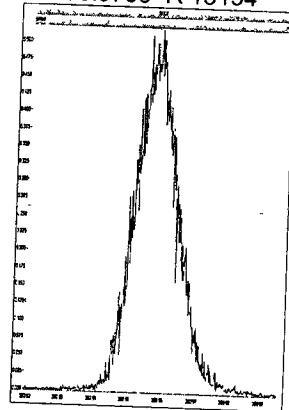
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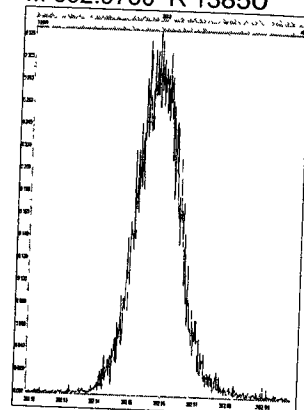
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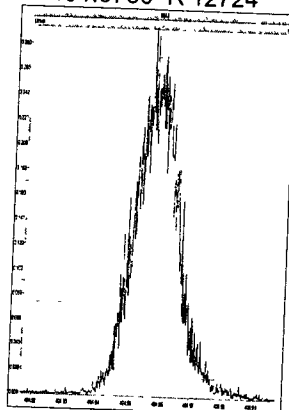
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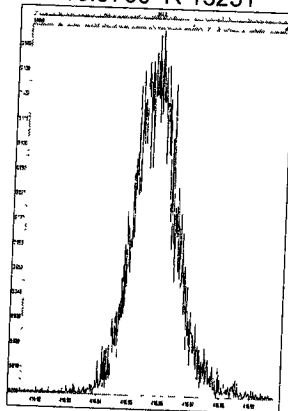
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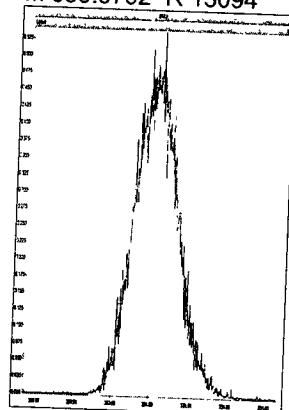
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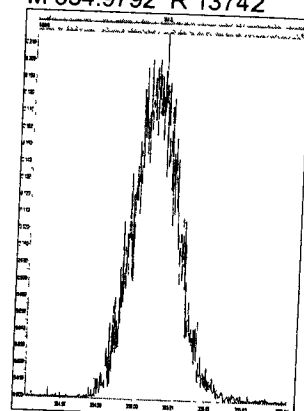
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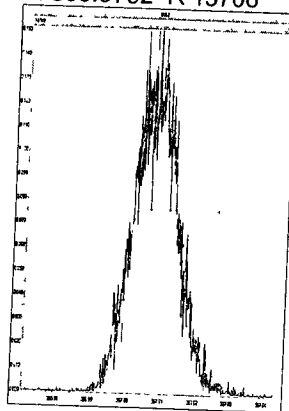
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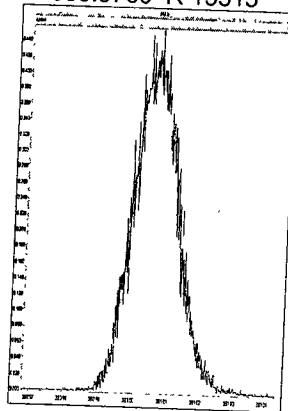
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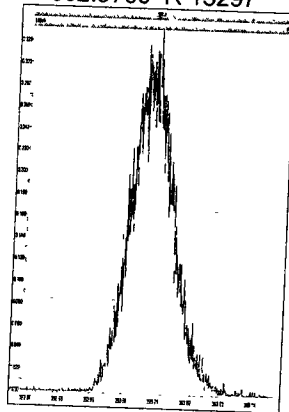
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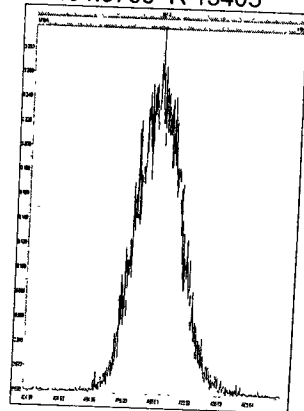
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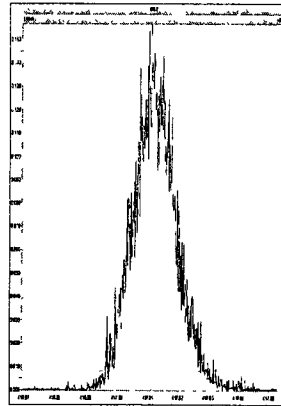
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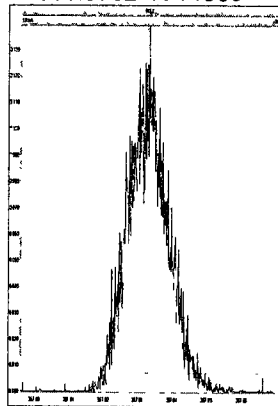
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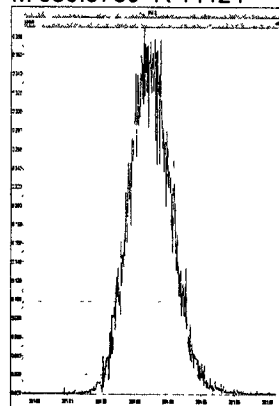
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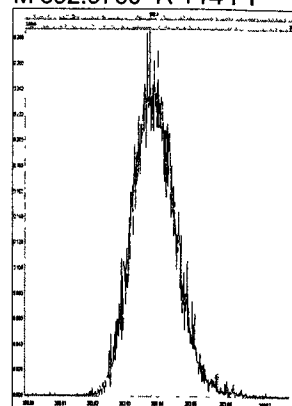
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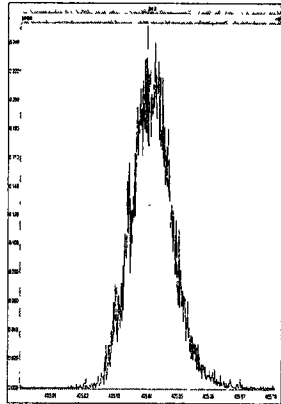
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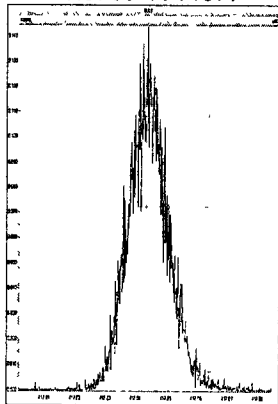
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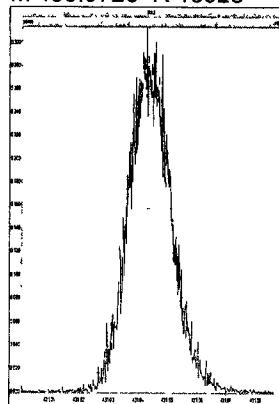
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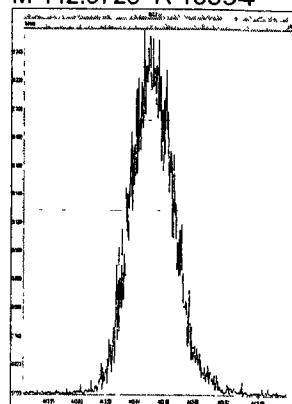
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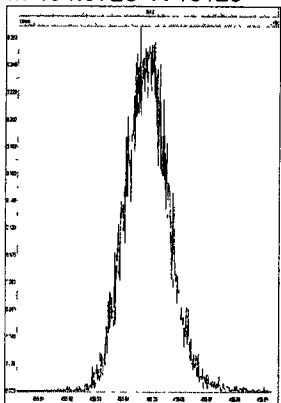
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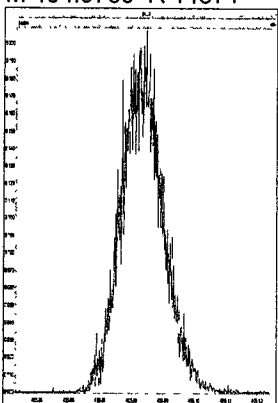
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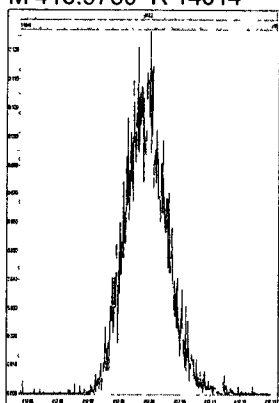
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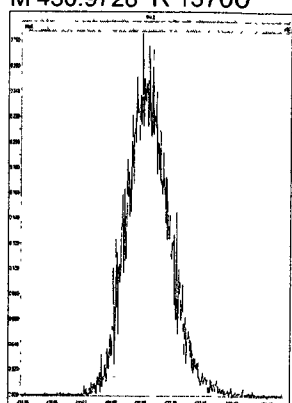
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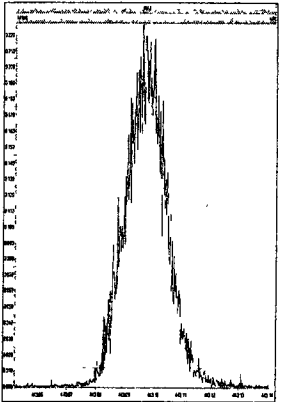
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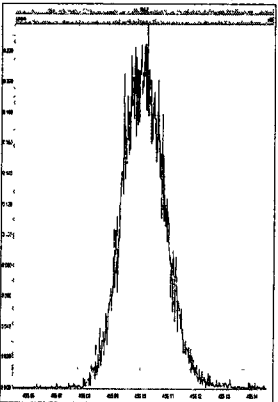
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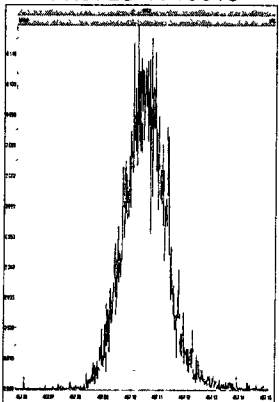
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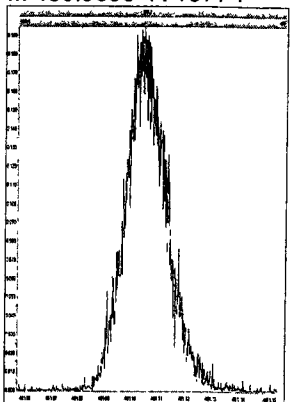
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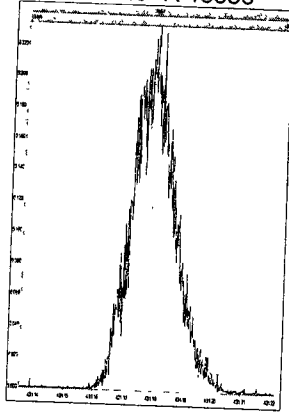
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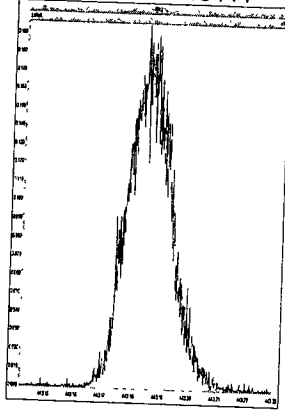
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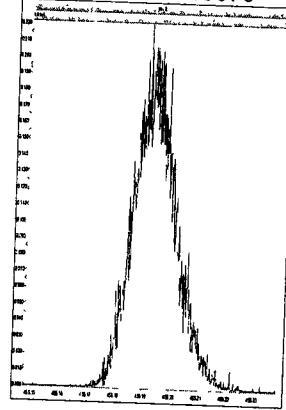
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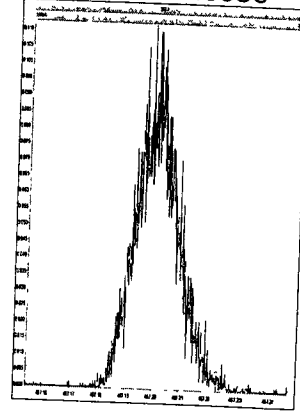
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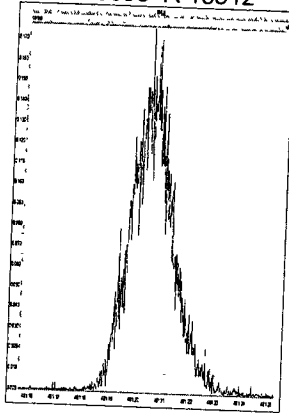
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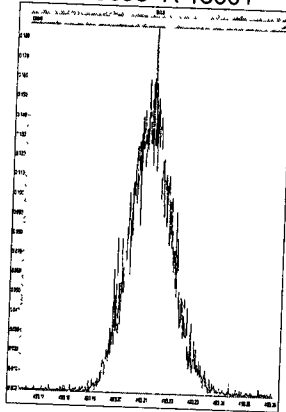
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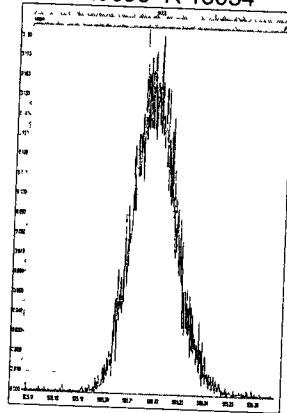
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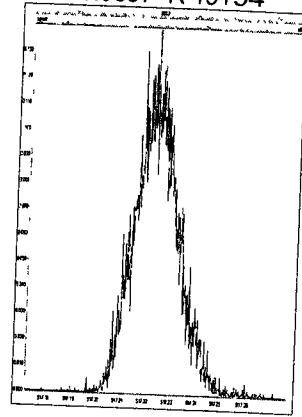
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M 504.9696 R 13054

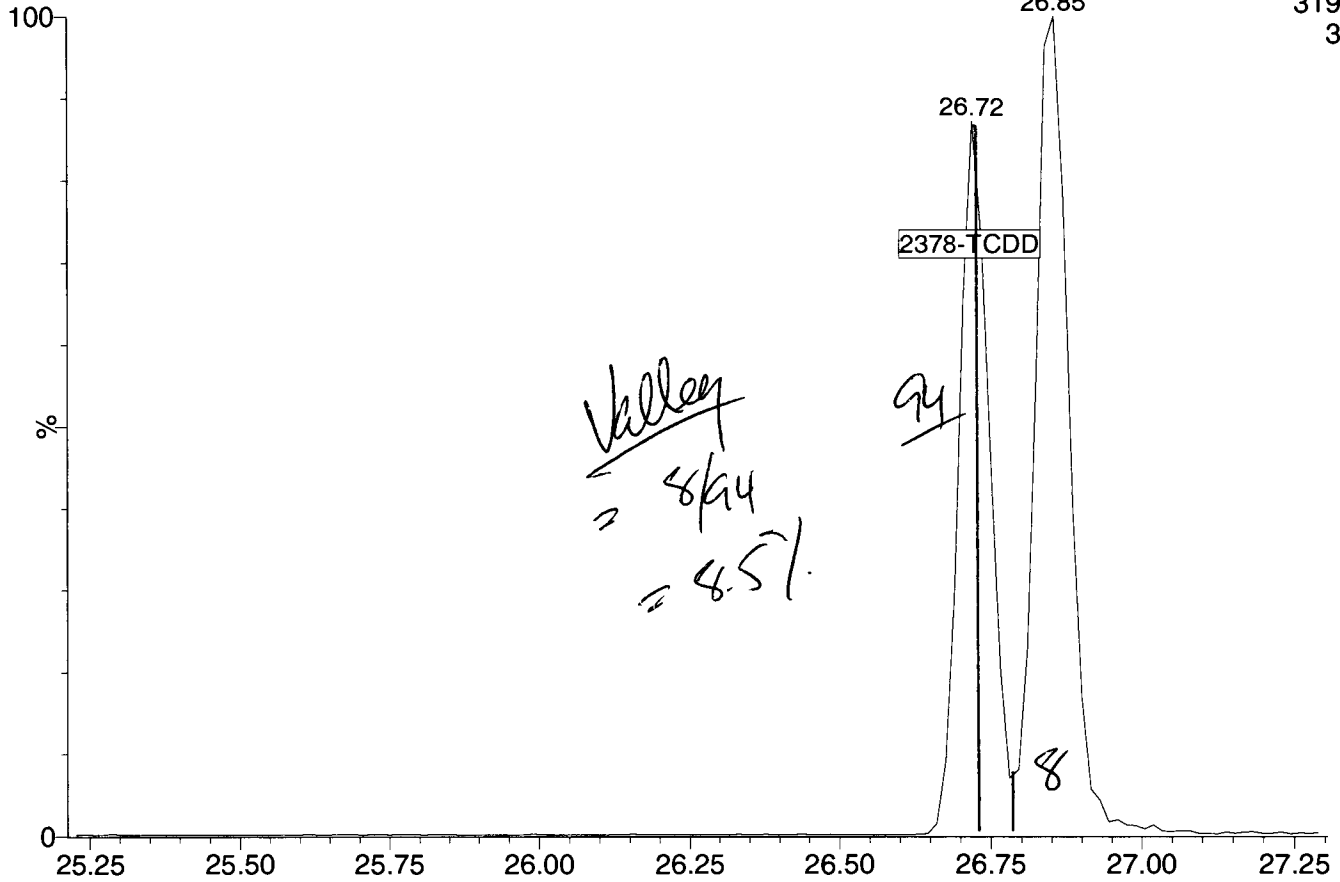


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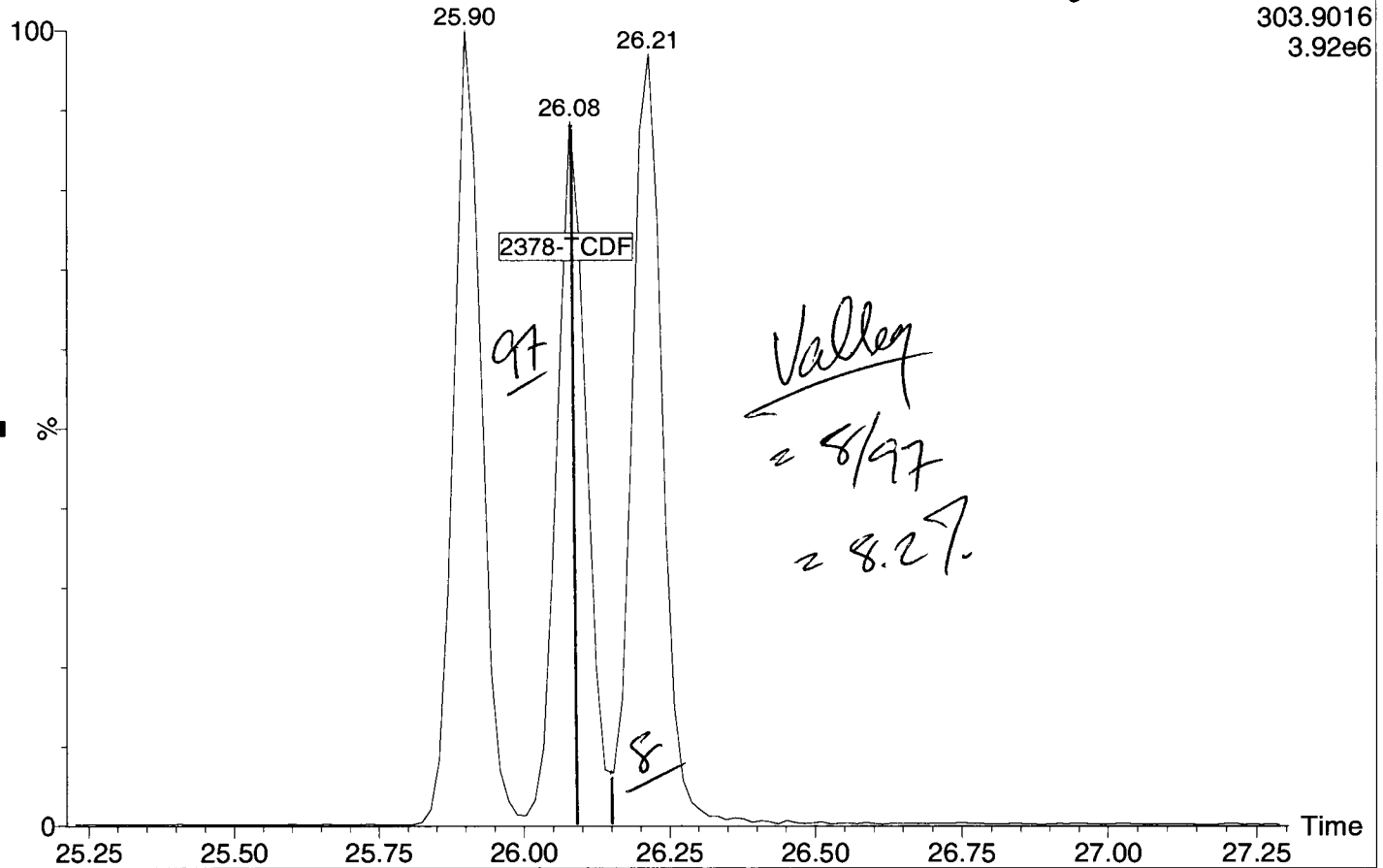
12112803

1: Voltage SIR 15 Channels EI+  
319.8965  
3.14e6

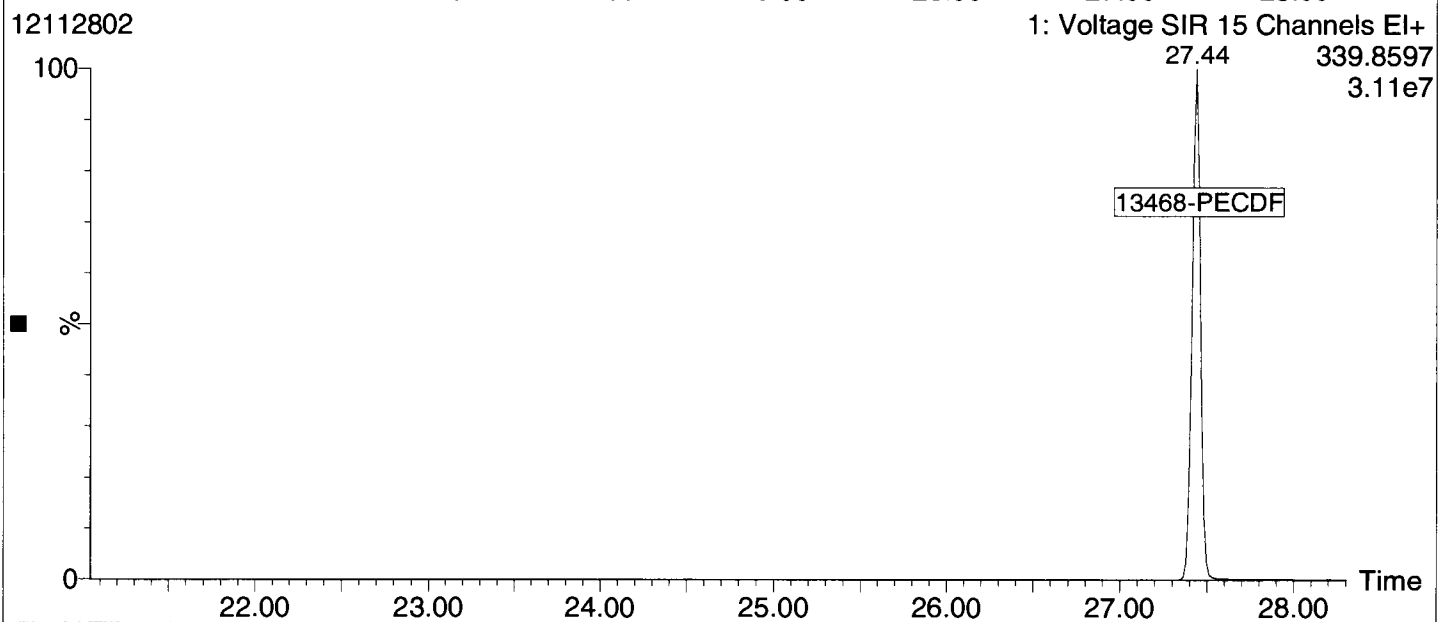
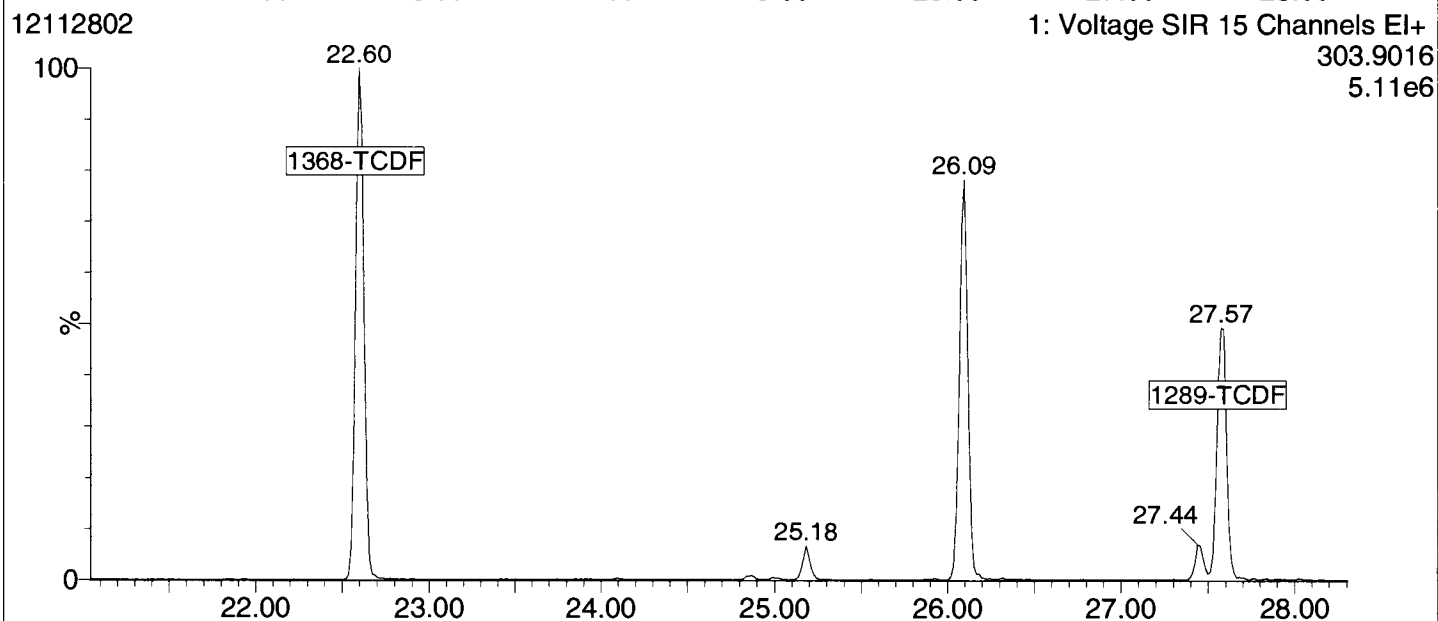
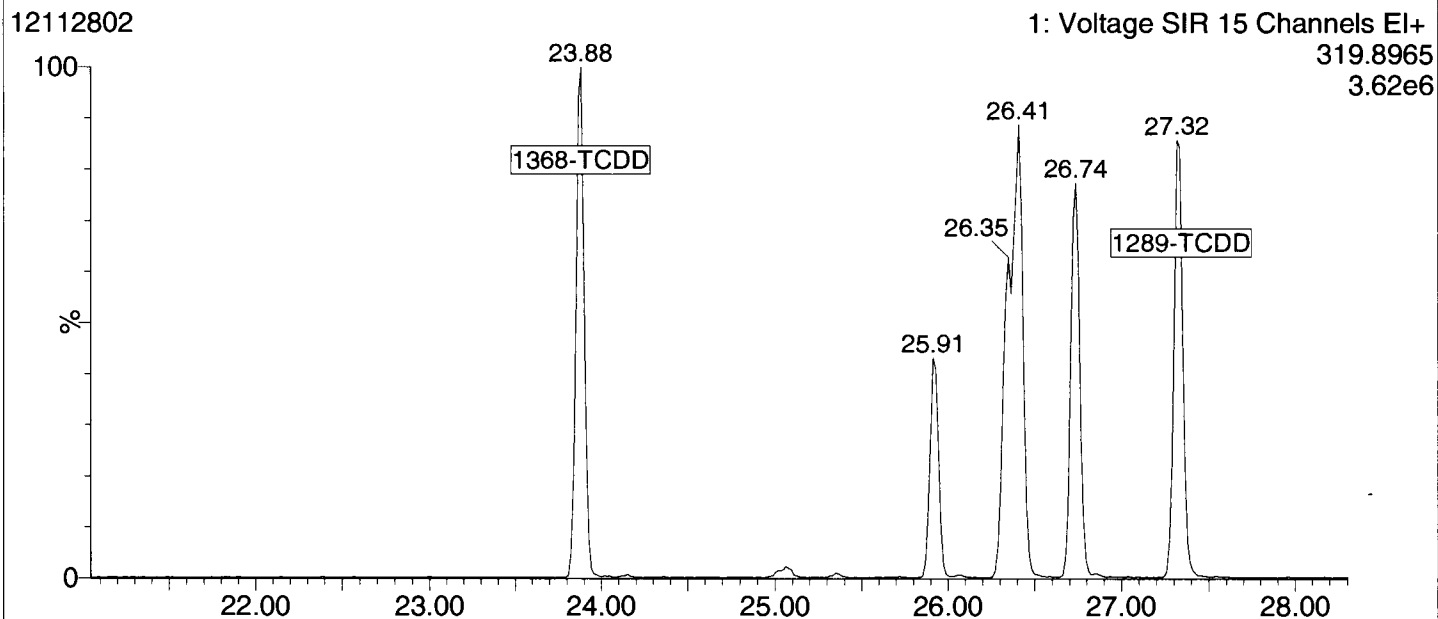


12112803

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3.92e6

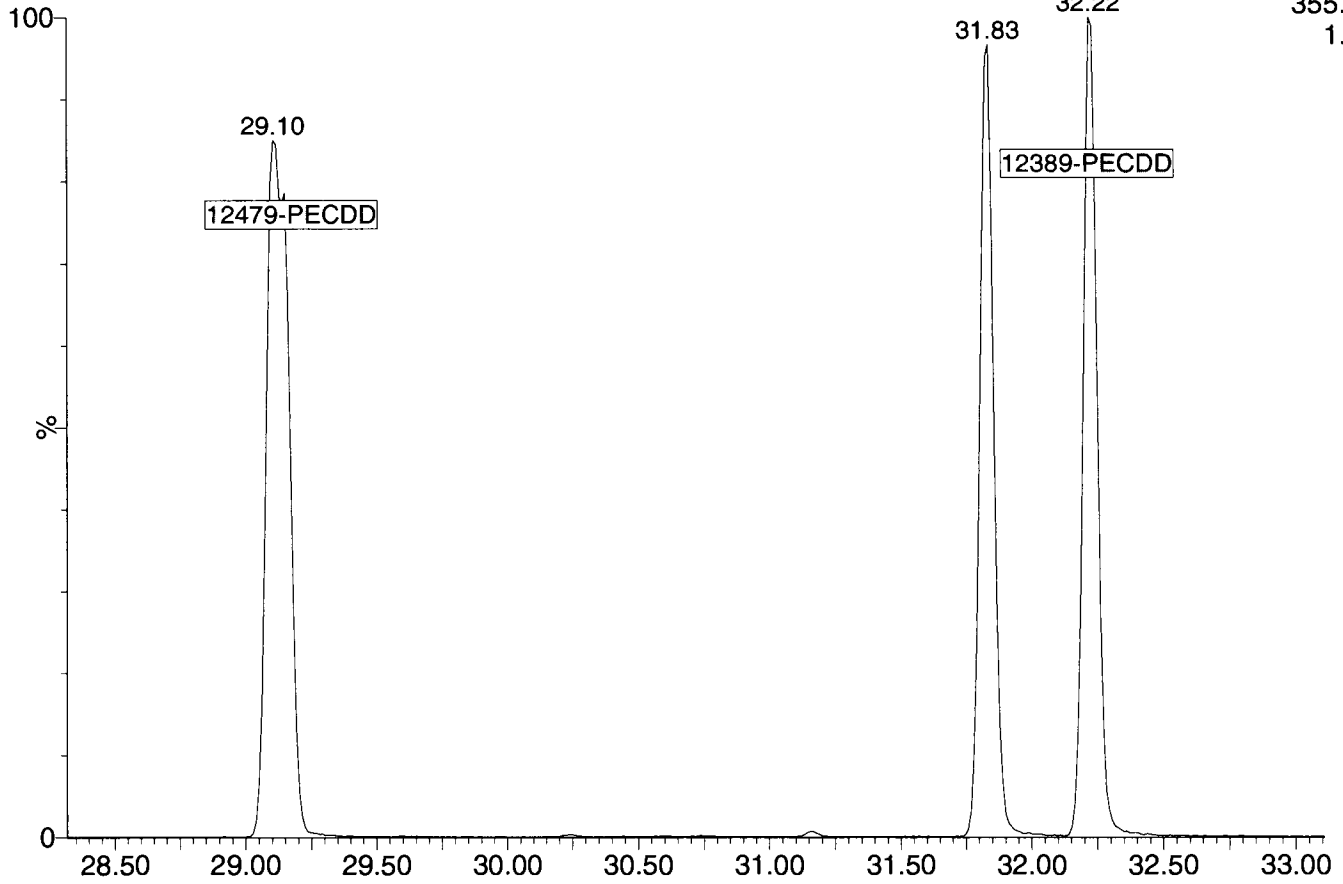






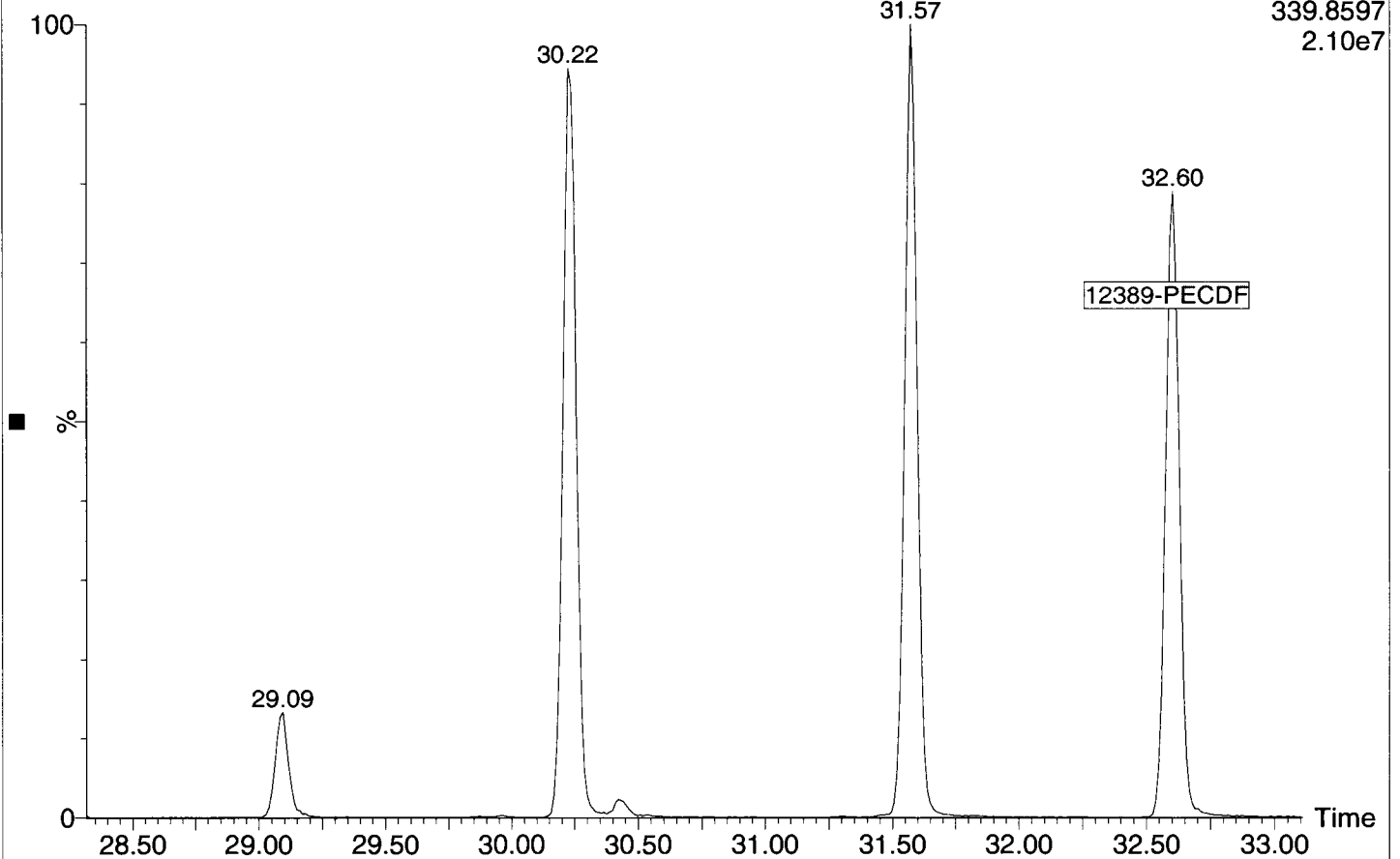
12112802

2: Voltage SIR 11 Channels EI+  
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12112802

2: Voltage SIR 11 Channels EI+  
339.8597  
2.10e7

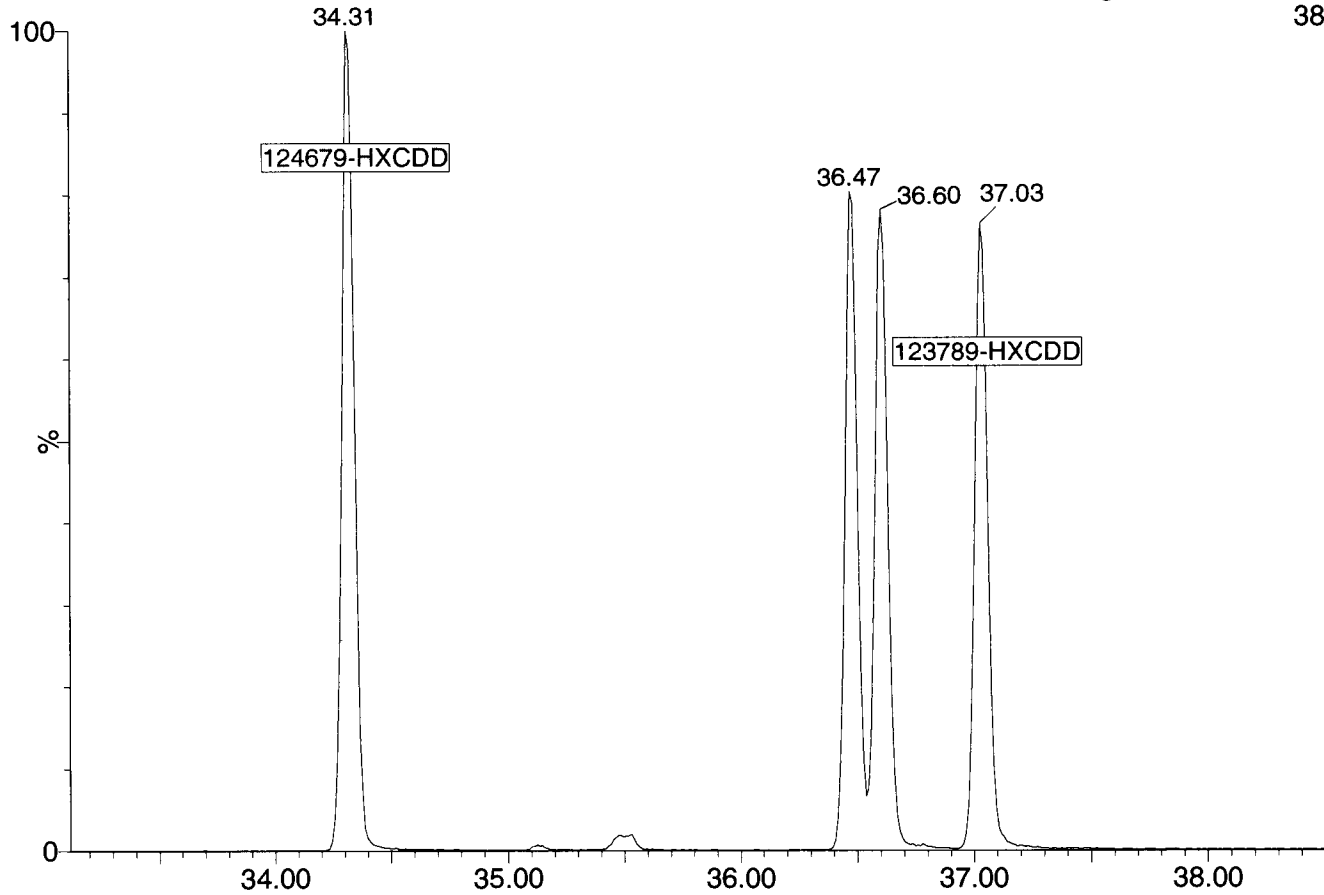


12112802

3: Voltage SIR 11 Channels EI+

389.8157

1.54e7

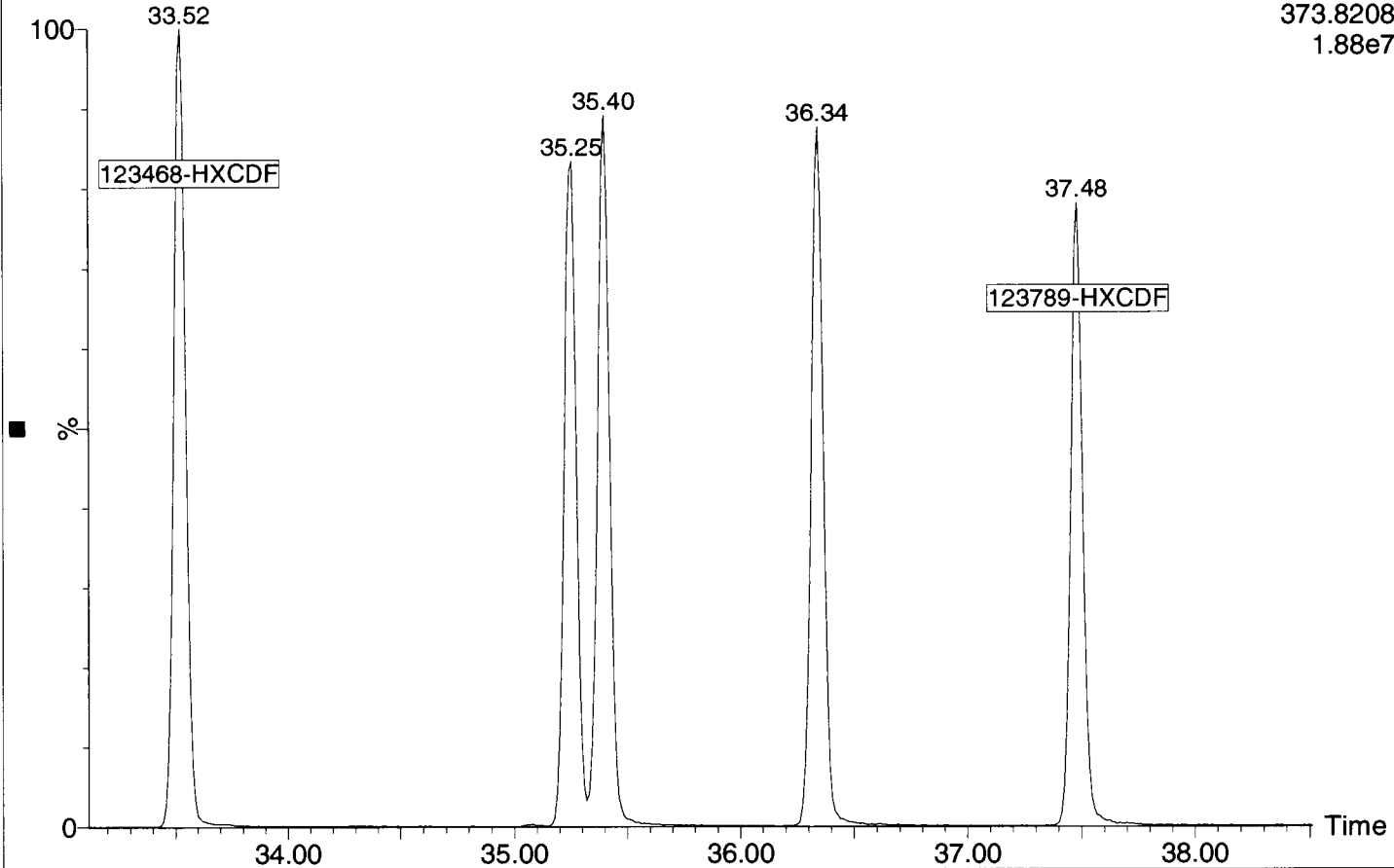


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3: Voltage SIR 11 Channels EI+

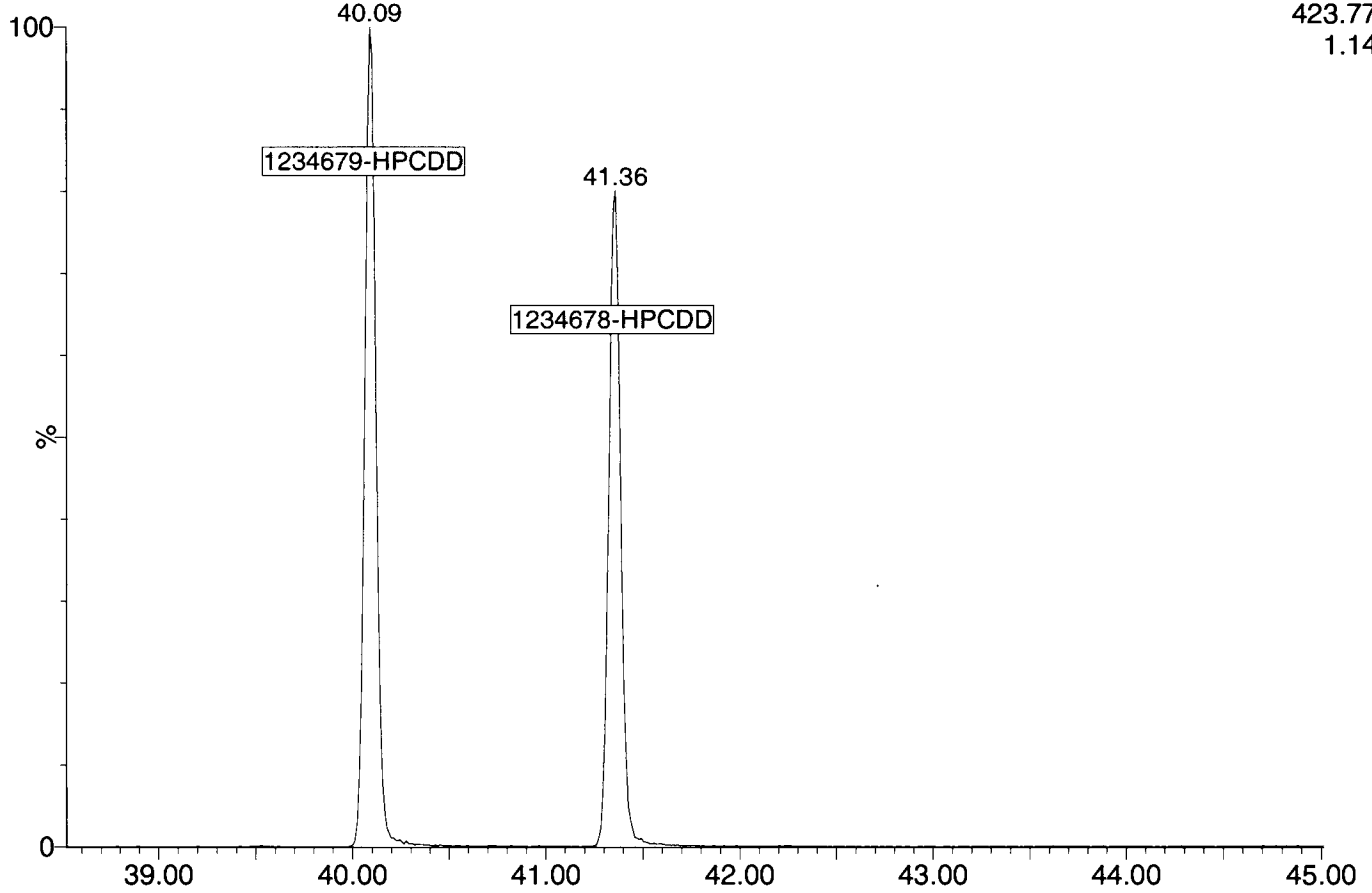
373.8208

1.88e7



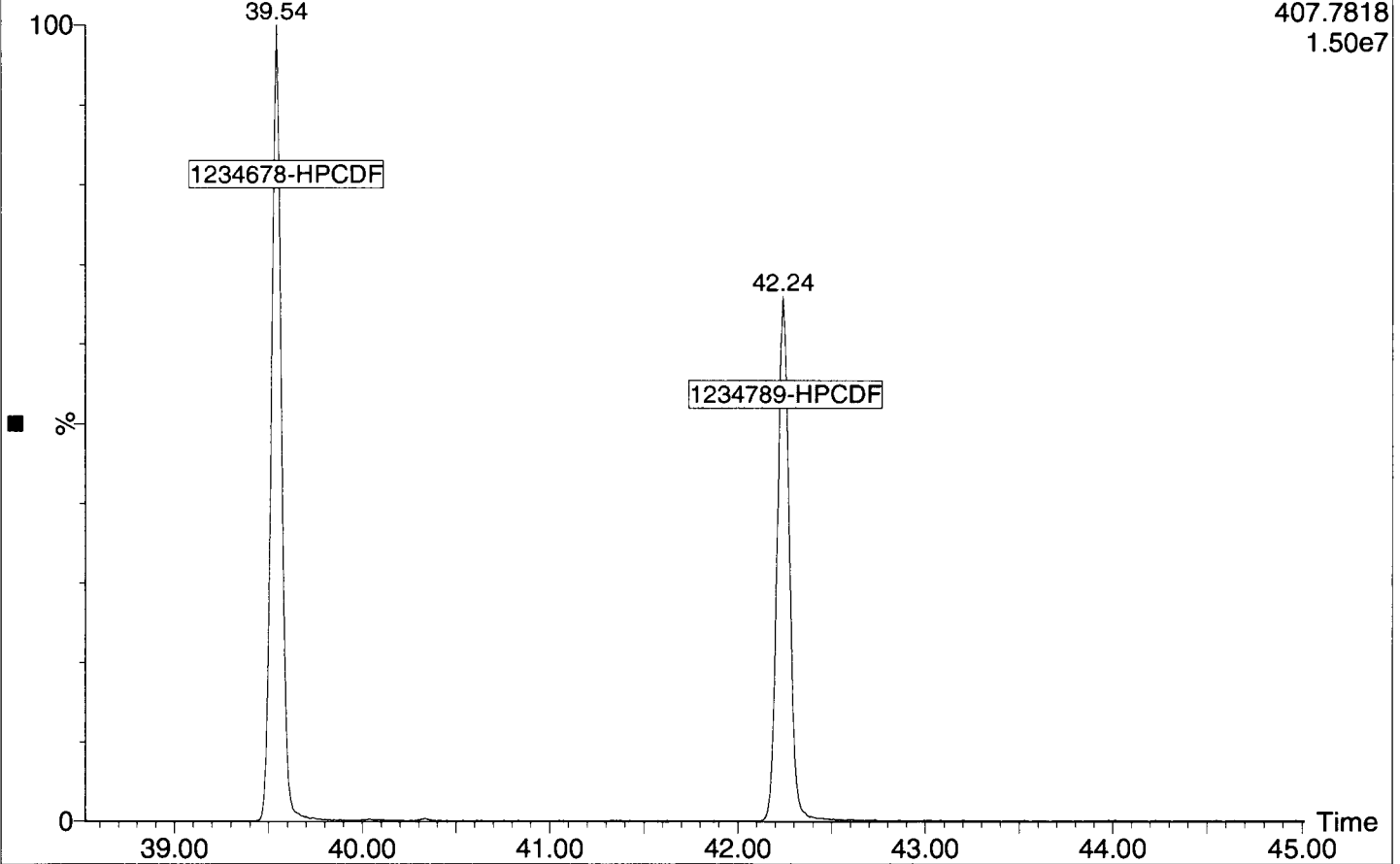
12112802

4: Voltage SIR 11 Channels EI+  
423.7766  
1.14e7



12112802

4: Voltage SIR 11 Channels EI+  
407.7818  
1.50e7



Dataset: P:\DIOXIN8290.PRO\121128OPEN.qld  
 Last Altered: Wednesday, November 28, 2012 11:16:34 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 13:07:59 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
 Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112802, Date: 28-Nov-2012, Time: 10:02:21, ID: CS3, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.093	1.001	2.22e5	3.03e5	0.877	0.732	0.770	2267.9	NO	9.821	9.821
12378-PeCDF	30.234	1.001	1.19e6	8.13e5	0.896	1.460	1.550	5622.6	NO	49.425	49.425
23478-PeCDF	31.571	1.000	1.20e6	8.06e5	0.926	1.489	1.550	5894.4	NO	49.496	49.496
123478-HxCDF	35.243	1.000	9.82e5	8.24e5	1.068	1.191	1.240	3040.3	NO	49.736	49.736
234678-HxCDF	36.340	1.001	1.00e6	8.41e5	1.037	1.192	1.240	3159.0	NO	50.428	50.428
123678-HxCDF	35.397	1.001	1.04e6	8.68e5	1.035	1.196	1.240	3205.7	NO	50.586	50.586
123789-HxCDF	37.480	1.001	8.72e5	7.26e5	0.987	1.202	1.240	2792.6	NO	50.287	50.287
1234678-HpCDF	39.541	1.000	9.08e5	9.15e5	1.232	0.992	1.050	4735.9	NO	48.956	48.956
1234789-HpCDF	42.237	1.000	7.25e5	7.44e5	1.215	0.974	1.050	3206.3	NO	50.824	50.824
OCDF	47.550	1.006	1.14e6	1.33e6	1.138	0.854	0.890	4716.9	NO	100.931	100.931
2378-TCDD	26.736	1.001	1.69e5	2.18e5	1.049	0.779	0.770	1932.8	NO	9.505	9.505
12378-PeCDD	31.834	1.001	8.37e5	5.42e5	0.998	1.546	1.550	5997.9	NO	49.325	49.325
123478-HxCDD	36.471	1.000	7.50e5	6.06e5	0.971	1.239	1.240	3771.8	NO	49.437	49.437
123678-HxCDD	36.603	1.000	7.55e5	6.14e5	0.918	1.230	1.240	3699.4	NO	50.527	50.527
123789-HxCDD	37.030	1.012	7.55e5	6.08e5	0.932	1.243	1.240	3582.1	NO	50.602	50.602
1234678-HpCDD	41.360	1.000	6.43e5	6.22e5	1.017	1.034	1.050	2951.5	NO	49.634	49.634
OCDD	47.280	1.001	9.99e5	1.13e6	1.008	0.885	0.890	8424.7	NO	98.158	98.158
13C-2378-TCDF	26.078	1.007	2.67e6	3.43e6	1.473	0.777	0.770	11355.6	NO	101.609	101.609
13C-12378-PeCDF	30.212	1.166	2.76e6	1.76e6	1.148	1.572	1.550	12708.1	NO	96.578	96.578
13C-23478-PeCDF	31.560	1.219	2.67e6	1.71e6	1.113	1.567	1.550	12133.9	NO	96.536	96.536
13C-123478-HxCDF	35.232	0.952	1.16e6	2.24e6	1.209	0.521	0.510	3615.6	NO	96.753	96.753
13C-123678-HxCDF	35.375	0.956	1.24e6	2.41e6	1.269	0.514	0.510	3824.4	NO	98.824	98.824
13C-234678-HxCDF	36.318	0.981	1.21e6	2.31e6	1.236	0.523	0.510	3814.6	NO	98.166	98.166
13C-123789-HxCDF	37.458	1.012	1.11e6	2.11e6	1.107	0.529	0.510	3507.2	NO	100.176	100.176
13C-1234678-HpCDF	39.529	1.068	9.26e5	2.10e6	1.051	0.442	0.440	6313.4	NO	98.921	98.921
13C-1234789-HpCDF	42.226	1.141	7.36e5	1.64e6	0.815	0.448	0.440	4354.1	NO	100.482	100.482
13C-1234-TCDD	25.899	0.000	1.80e6	2.28e6	1.000	0.790	0.770	7896.6	NO	100.000	100.000
13C-2378-TCDD	26.706	1.031	1.70e6	2.18e6	0.946	0.776	0.770	7011.6	NO	100.680	100.680
13C-12378-PeCDD	31.813	1.228	1.72e6	1.08e6	0.721	1.582	1.550	15545.4	NO	95.364	95.364
13C-123478-HxCDD	36.460	0.985	1.57e6	1.25e6	0.991	1.258	1.240	8817.2	NO	98.126	98.126
13C-123678-HxCDD	36.592	0.988	1.64e6	1.31e6	1.025	1.252	1.240	9090.5	NO	99.163	99.163
13C-1234678-HpCDD	41.338	1.117	1.28e6	1.22e6	0.866	1.049	1.050	6619.3	NO	99.592	99.592
13C-OCDD	47.254	1.276	2.04e6	2.26e6	0.769	0.901	0.890	8088.2	NO	192.321	192.321

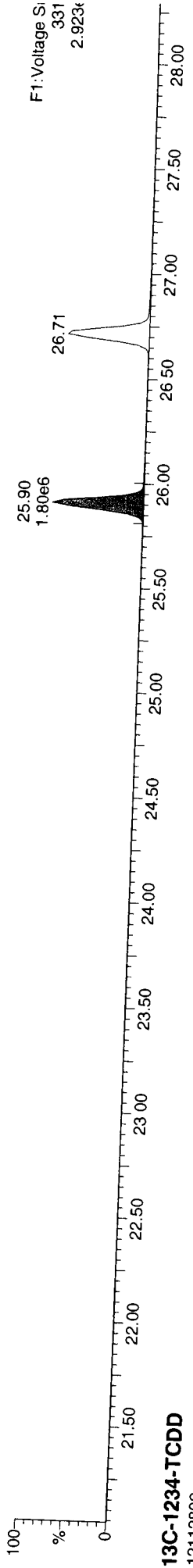
Name: 12112802, Date: 28-Nov-2012, Time: 10:02:21, ID: CS3, Conditions: AUTOSPEC01, User: pk

Label	13C-123789-HxCDD	37.019	0.000	1.61e6	1.29e6	1.000	1.251	1.240	8396.9	NO	
Total-tetrafurans				6.97e5		0.877					100.000
Total-penta1				1.75e6						31.132	31.027
Total-penta2				3.60e6		0.911				70.371	70.371
Total-hexa1				5.04e6		1.032				149.256	149.203
Total-hexa2				1.64e6		1.223				260.013	260.013
Total-Hepta1				1.38e7		1.041				100.019	100.013
Total-tetra1				9.68e5		1.049				711.748	711.558
Total-penta1				2.92e6		0.998				54.363	54.298
Total-hexa1				3.22e6		0.940				172.003	171.906
Total-hepta1				1.40e6		1.017				215.012	214.088
Total-Dioxins				9.50e6		0.985				107.639	107.623
Total-TEQ				2.33e7						647.174	646.073
37CL-2378-TCDD		26.736	1.032	4.25e5		1.044			2899.6	1358.922	1357.631
FUNCTION1 PFK				1.68e6							9.985
FUNCTION2 PFK				0.00e0							0.000
FUNCTION3 PFK				5.87e4							0.000
FUNCTION4 PFK				6.94e5							0.000
FUNCTION5 PFK				1.78e5							0.000
FUNCTION1 HxCDPE				3.75e2							0.000
FUNCTION1 HPCDPE				1.14e3							0.000
FUNCTION2 HPCDPE				2.04e3							0.000
FUNCTION3 OCDPE				0.00e0							0.000
FUNCTION4 NCDPE				0.00e0							0.000
FUNCTION5 DCDPE				0.00e0							0.000

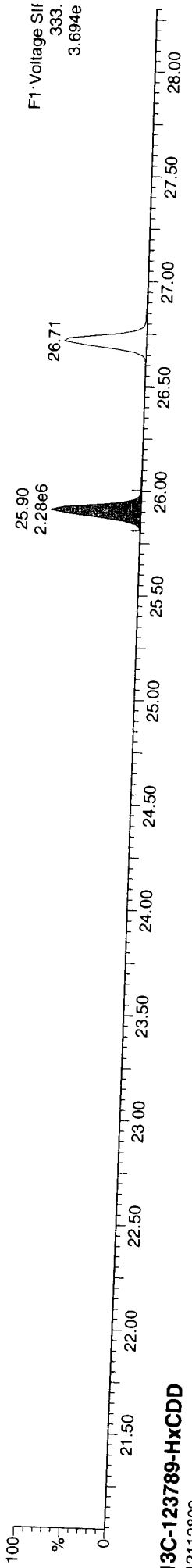
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112802, Date: 28-Nov-2012, Time: 10:02:21, ID: CS3, Conditions: AUTOSPEC01, User: pk

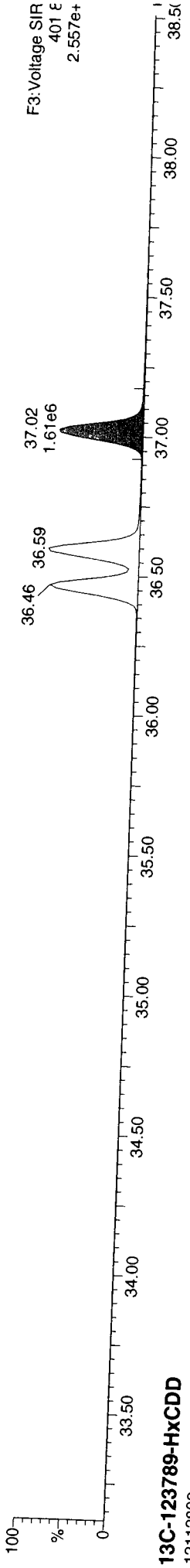
13C-1234-TCDD  
12112802



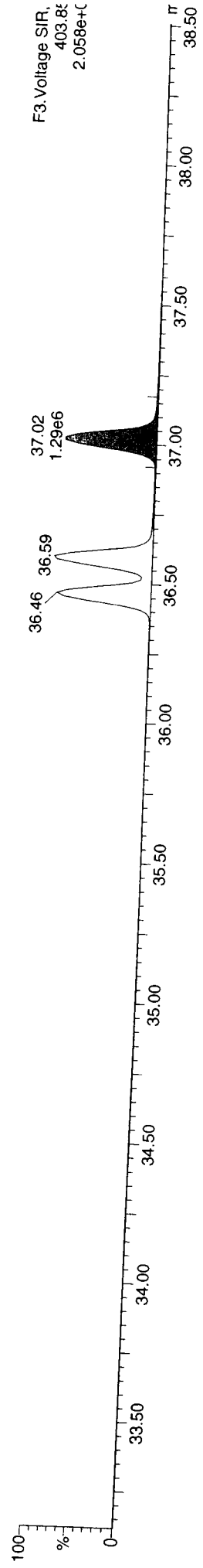
13C-123789-HxCDD  
12112802



13C-123789-HxCDD  
12112802



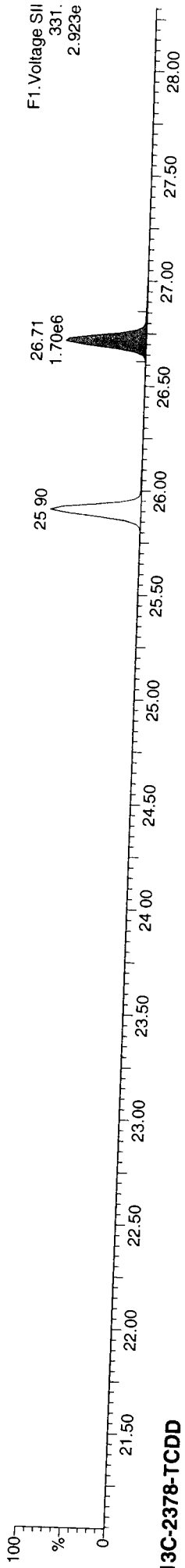
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Name: 12112802, Date: 28-Nov-2012, Time: 10:02:21, ID: CS3, Conditions: AUTOSPEC01, User: pk

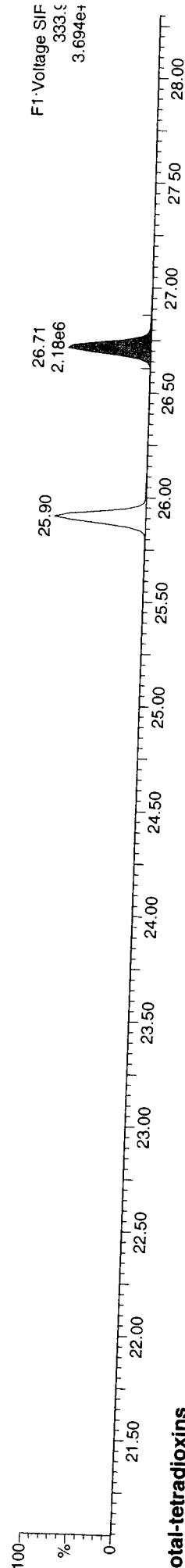
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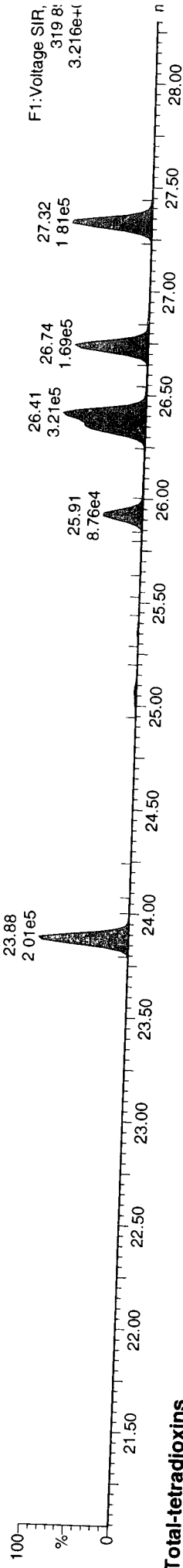
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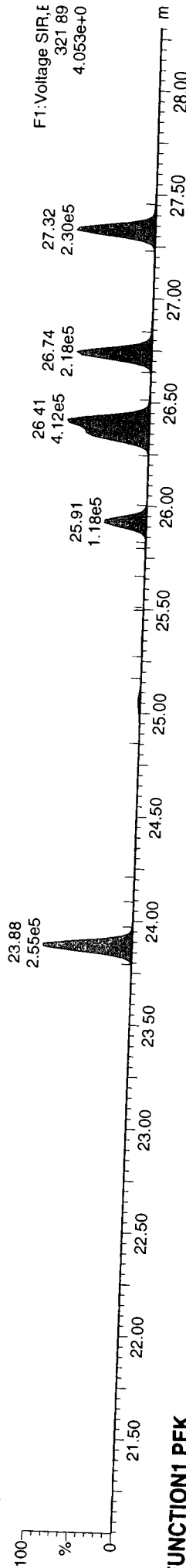
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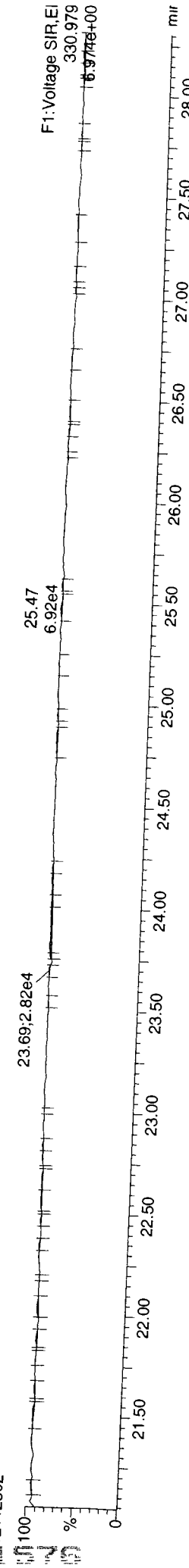
Total-tetradoxins

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FUNCTION1 PFK

12112802

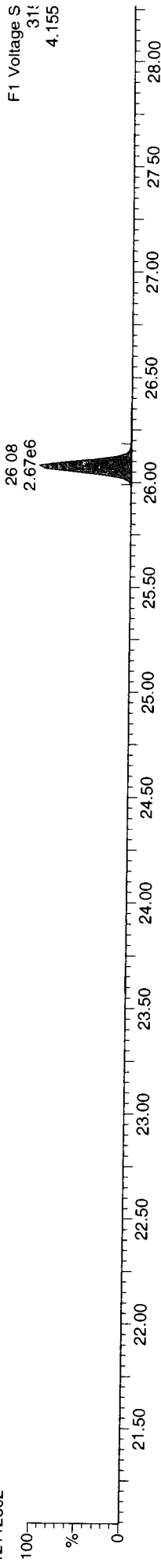




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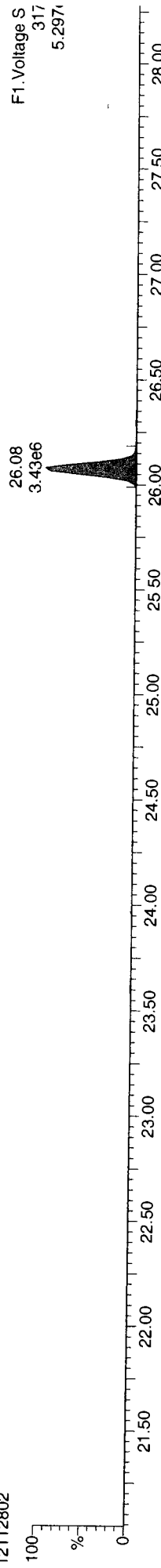
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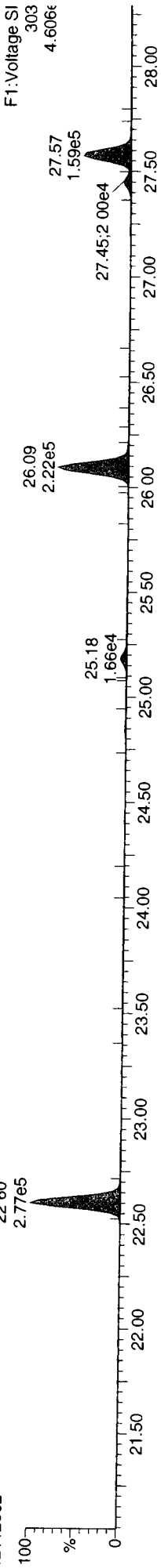
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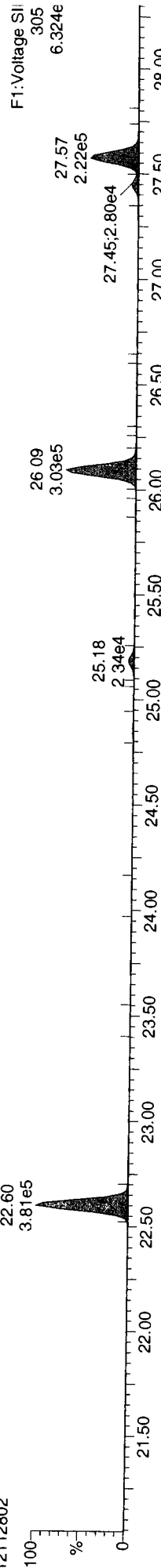
Total-tetrafurans

12112802



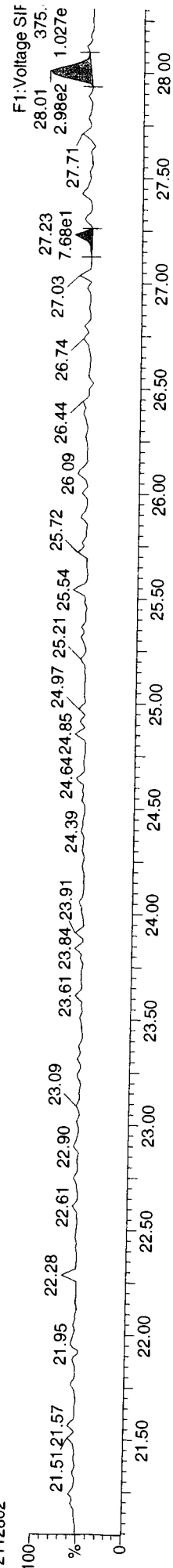
Total-tetrafurans

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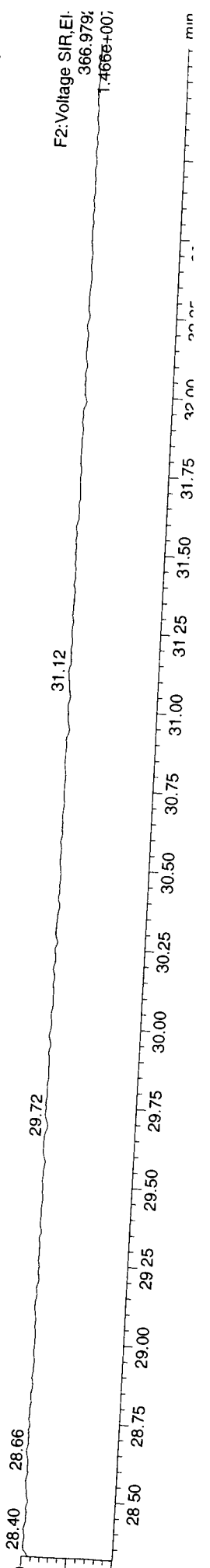
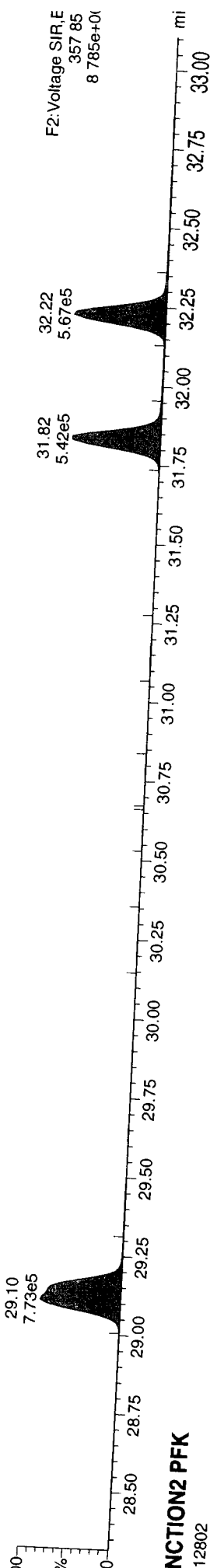
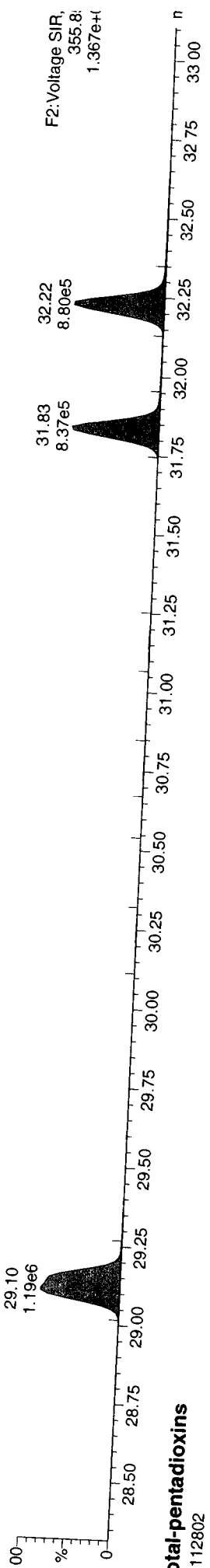
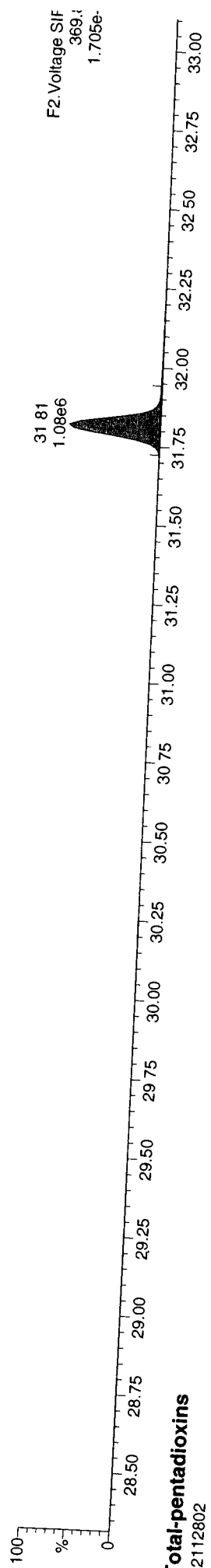
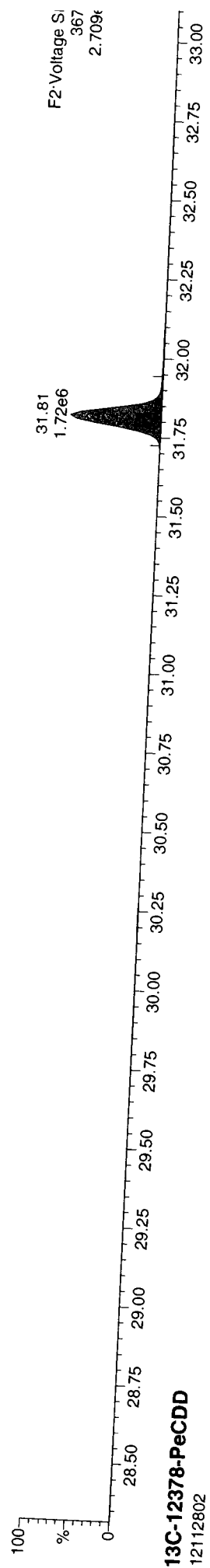
FUNCTION1 HXCDPE

12112802



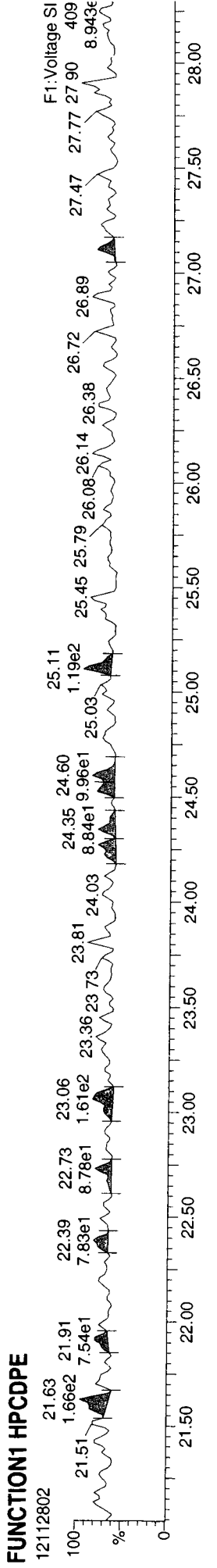
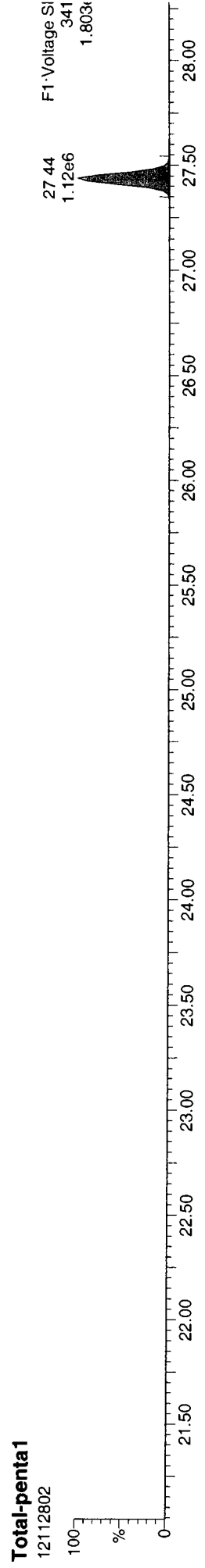
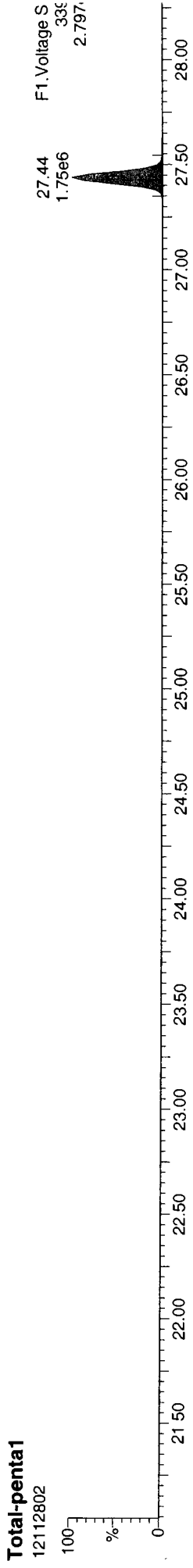
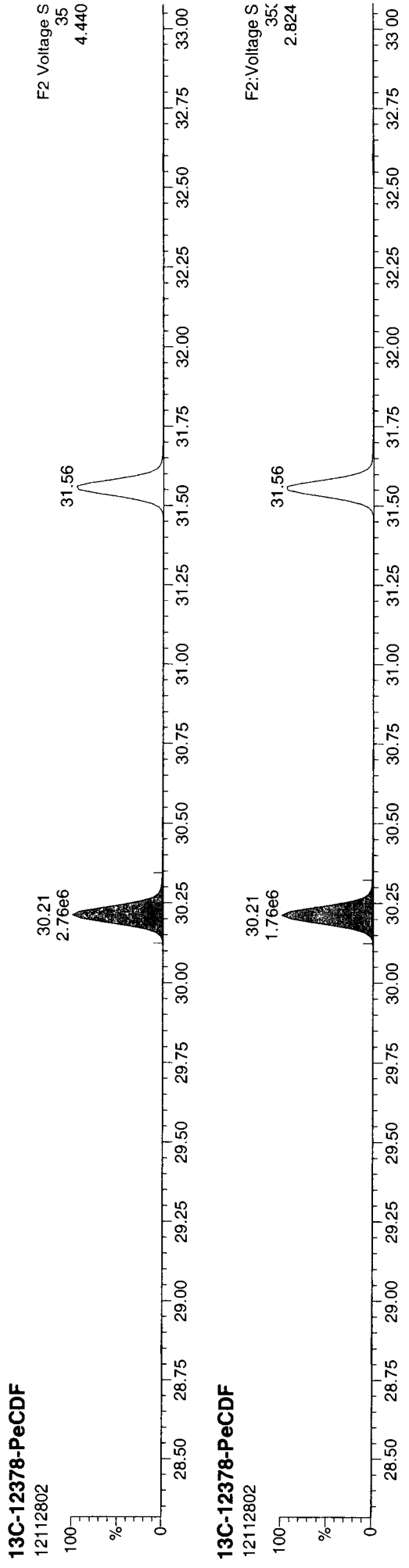
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**Name: 12112802, Date: 28-Nov-2012, Time: 10:02:21, ID: CS3, Conditions: AUTOSPEC01, User: pk**  
**13C-12378-PeCDD**  
 12112802

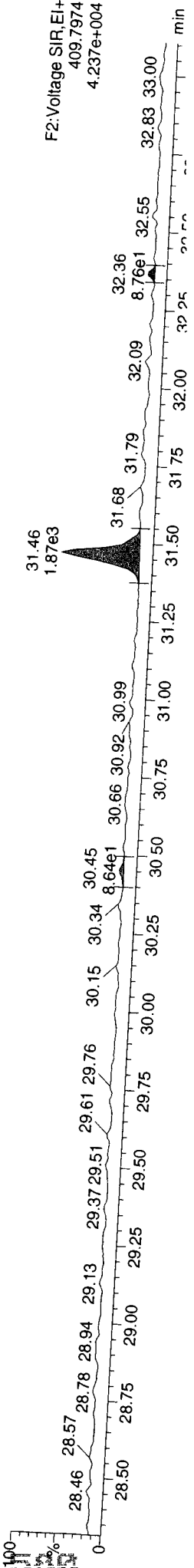
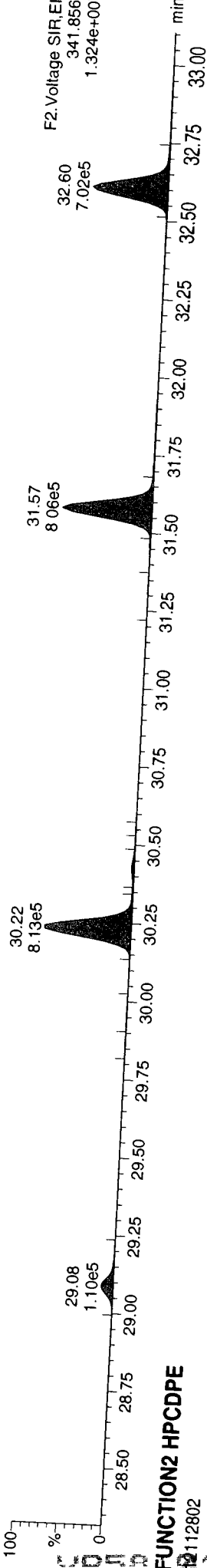
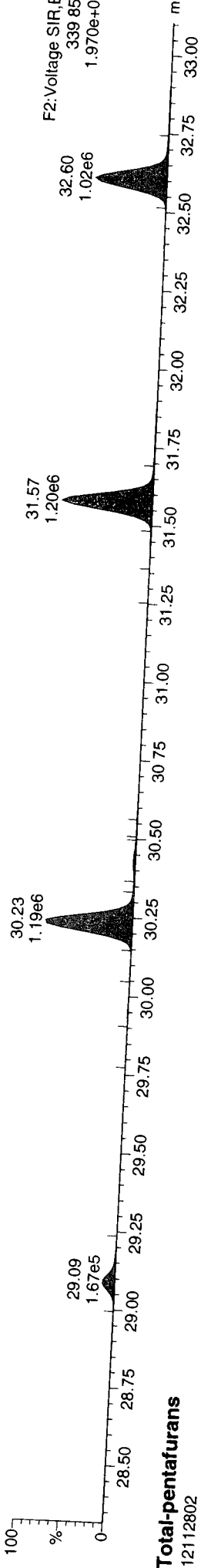
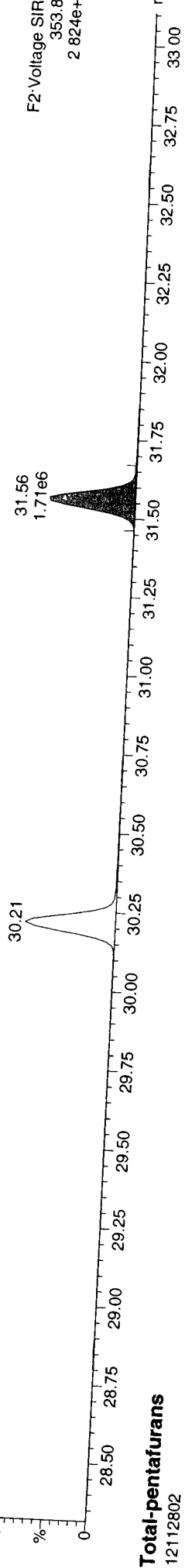
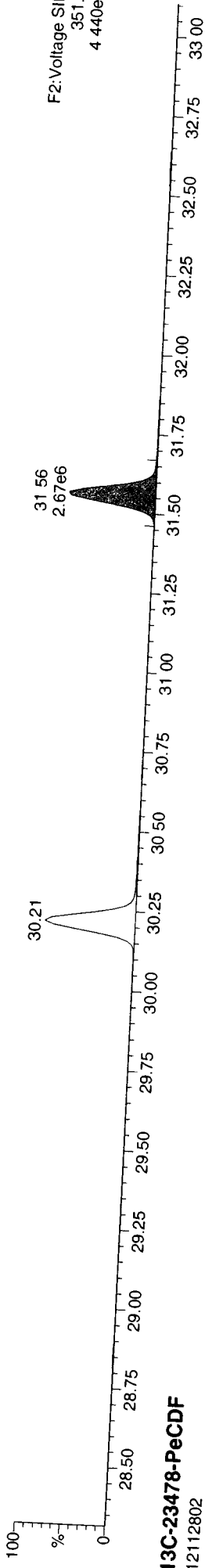


**Quantify Sample Report**  
**MassLynx 4.1 SCN 714**  
 Dataset: P:\DIOXIN8290.PRO\121128OPEN.qid  
 Last Altered: Wednesday, November 28, 2012 11:16:34 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 13:07:59 Pacific Standard Time

**Name: 12112802, Date: 28-Nov-2012, Time: 10:02:21, ID: CS3, Conditions: AUTOSPEC01, User: pk**

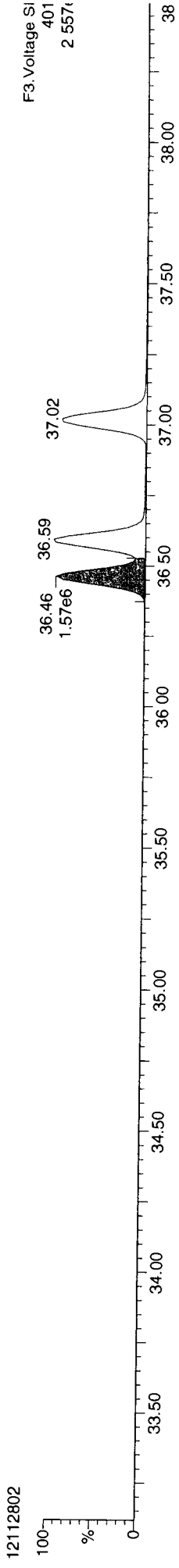


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12112802

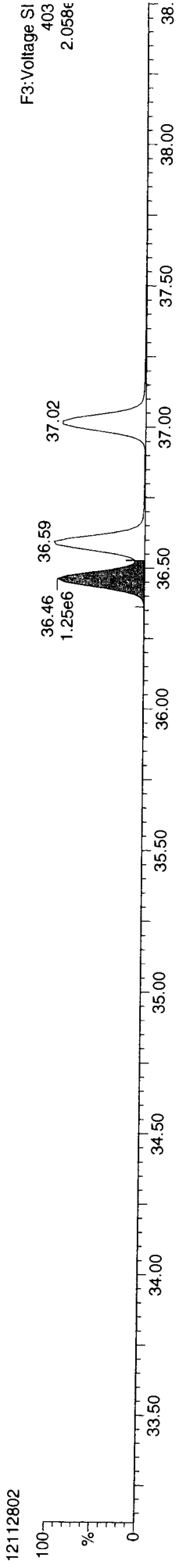


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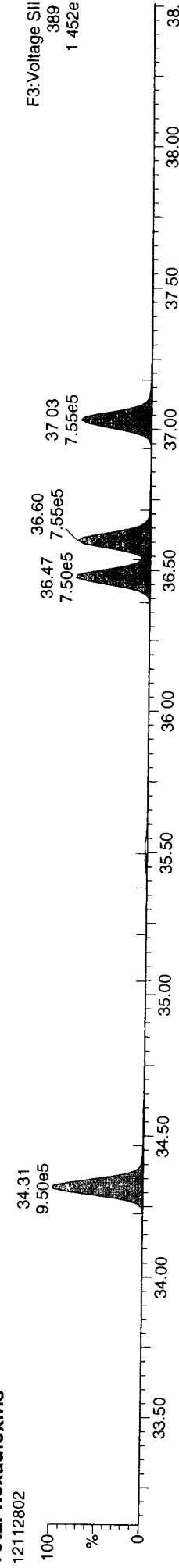
13C-123478-HxCDD



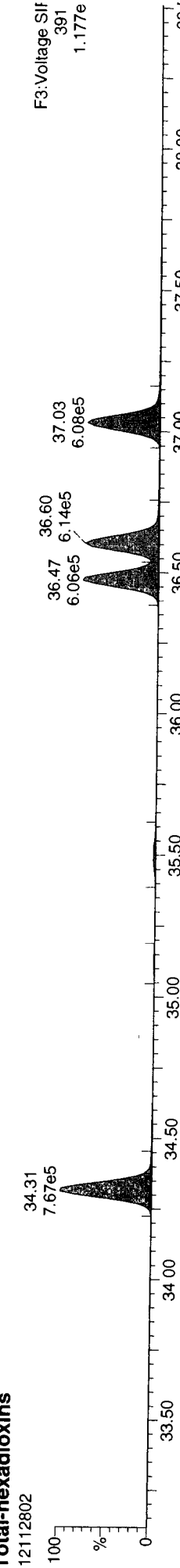
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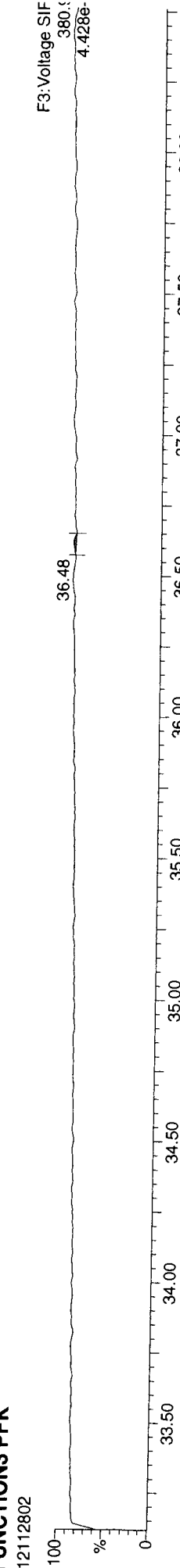
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

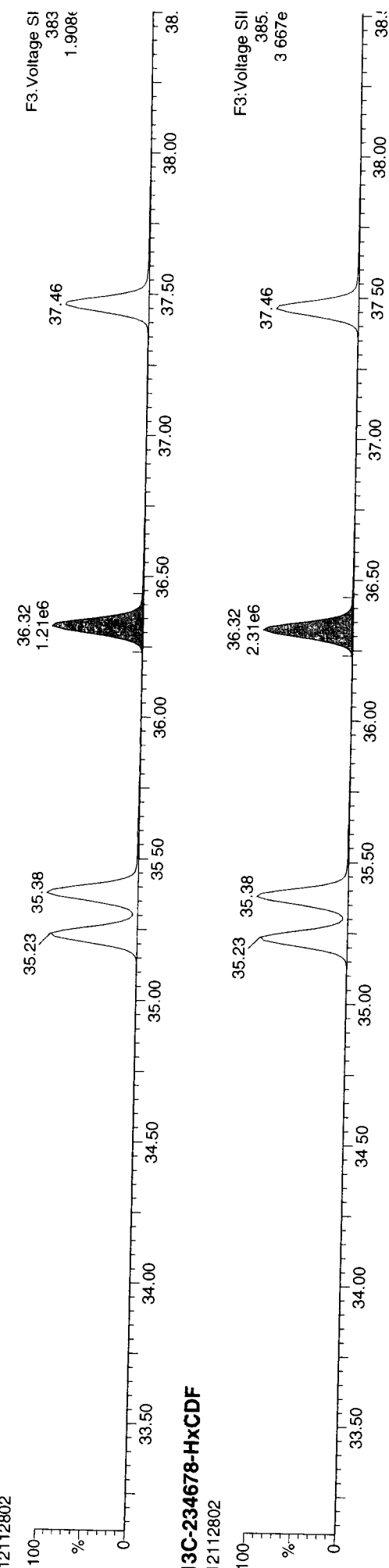


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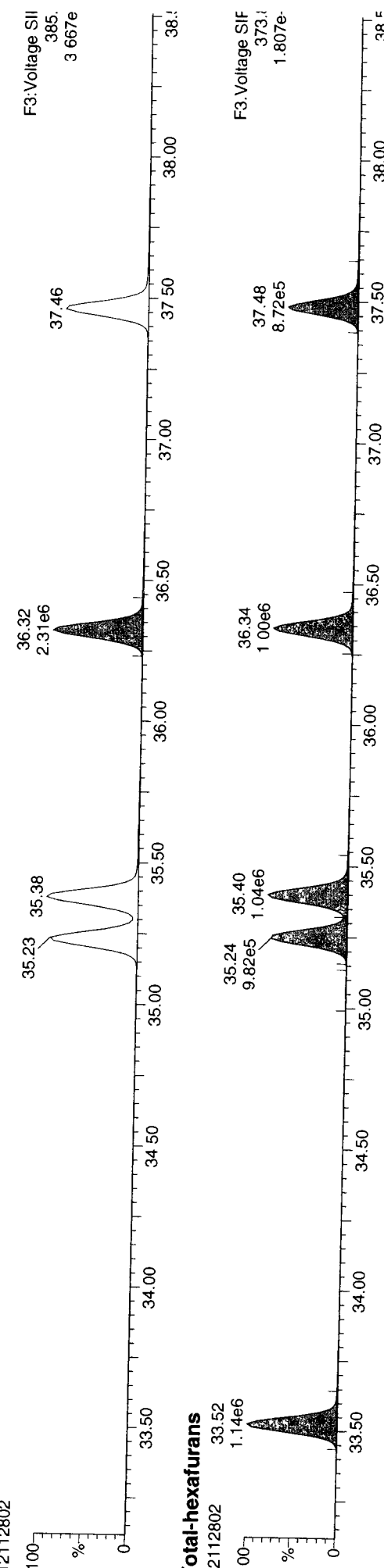
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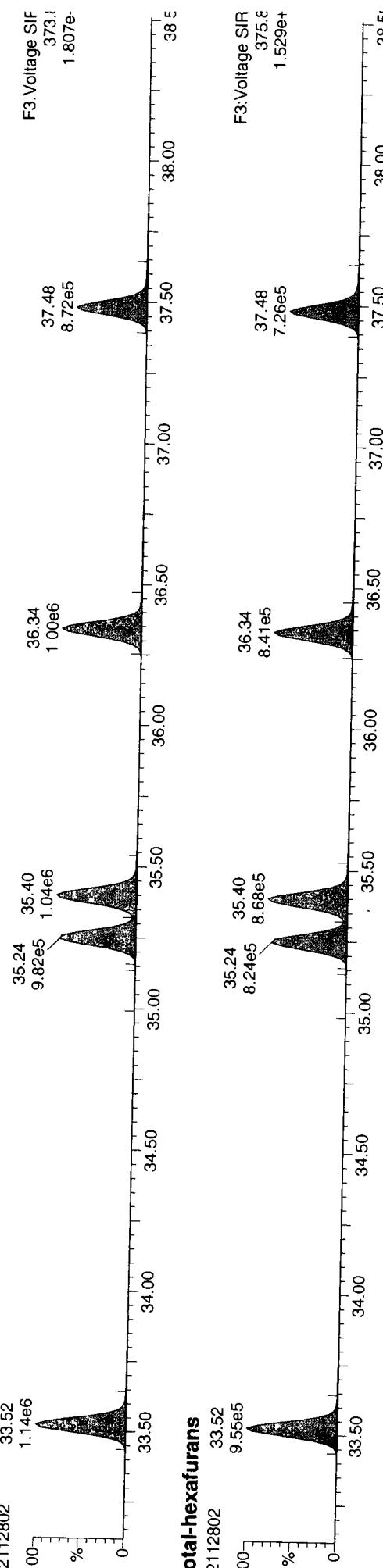
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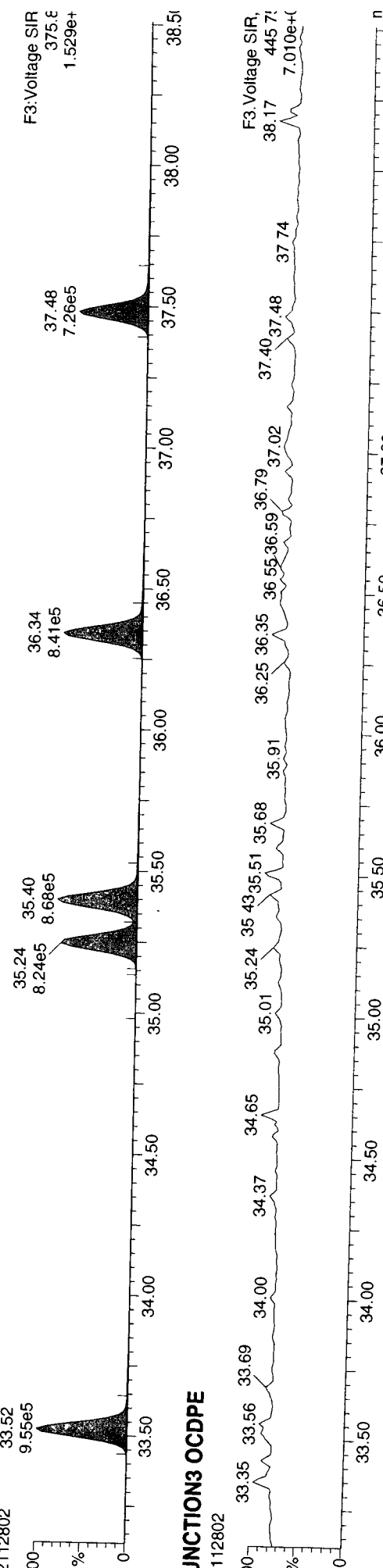
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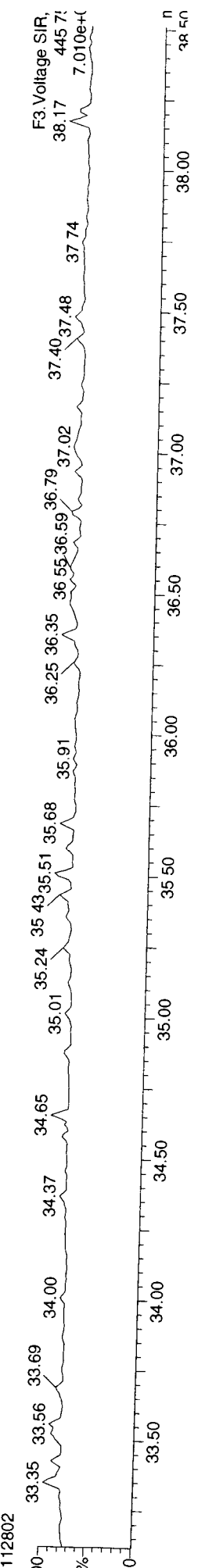
Total-hexafurans



Total-hexafurans

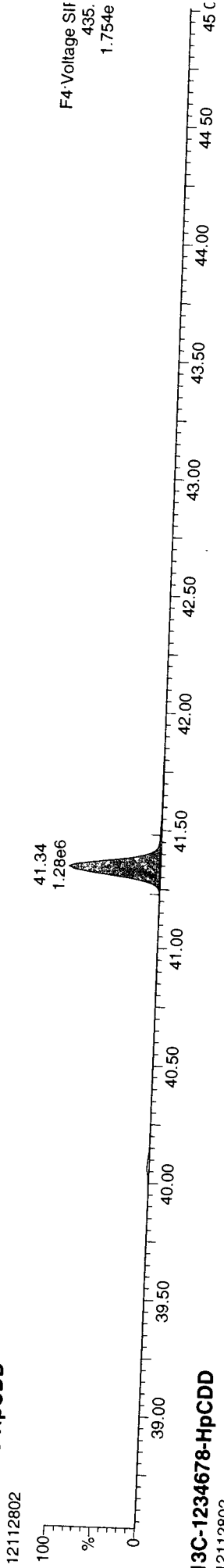


FUNCTION3 OCDFE

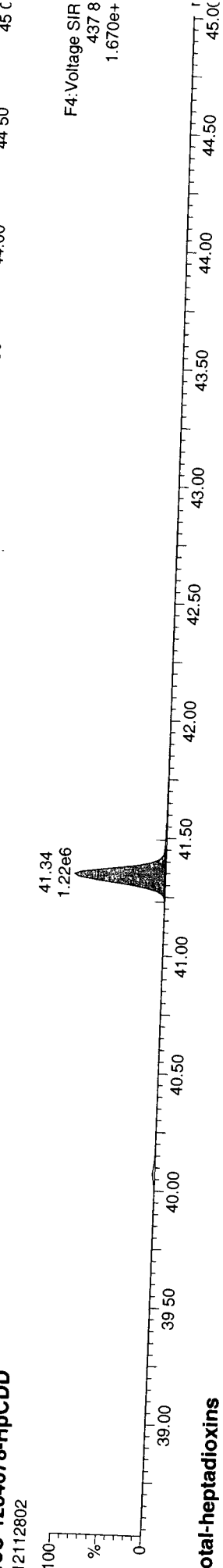


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13C-1234678-HpCDD

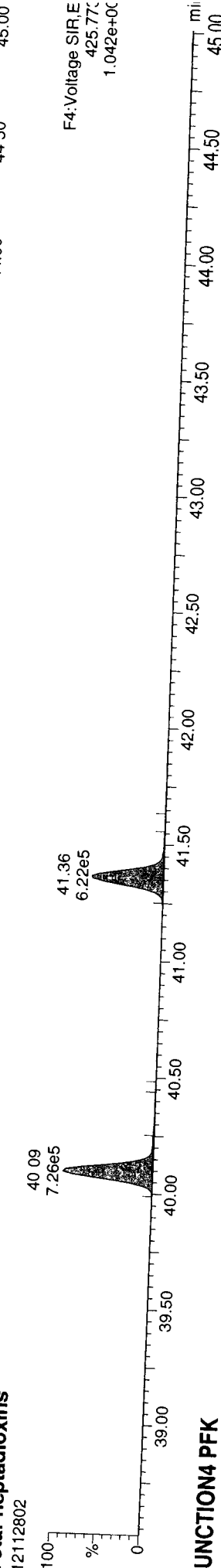


13C-1234678-HpCDD

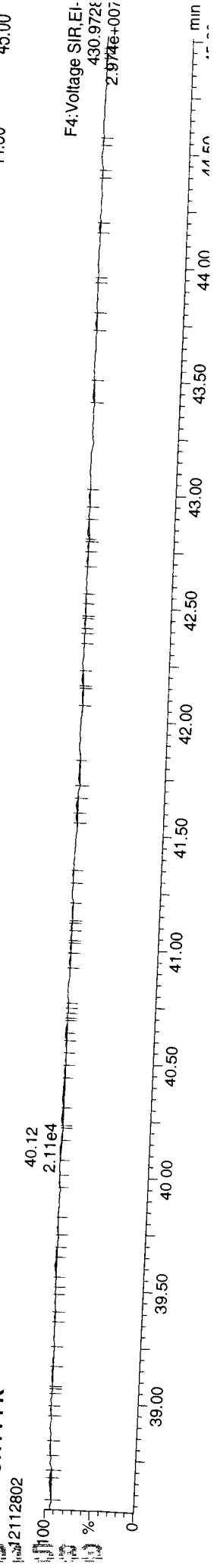


Total-heptadioxins

Total-heptadioxins



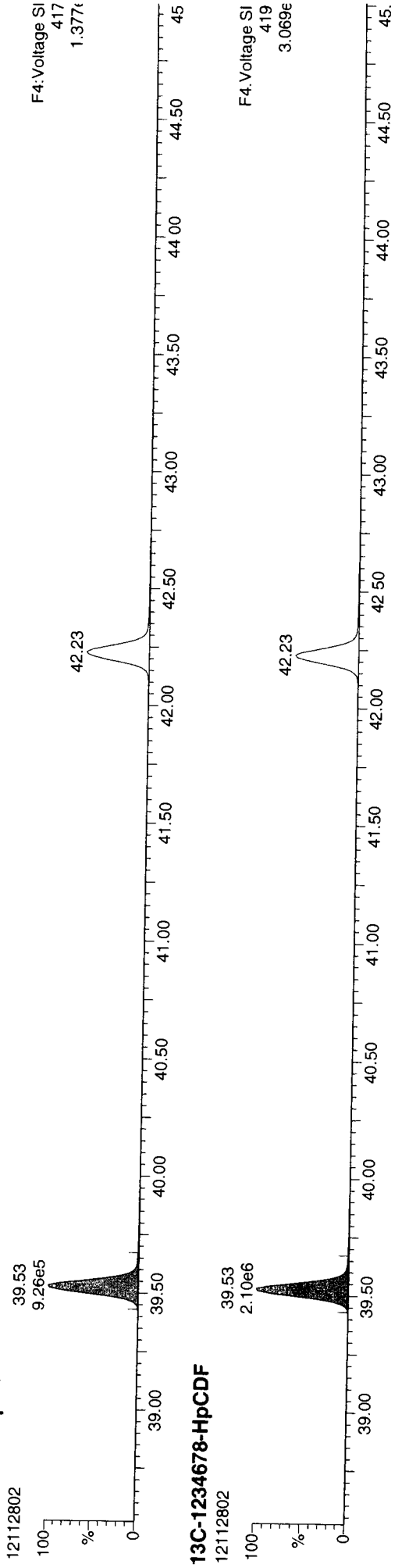
FUNCTION4 PFK



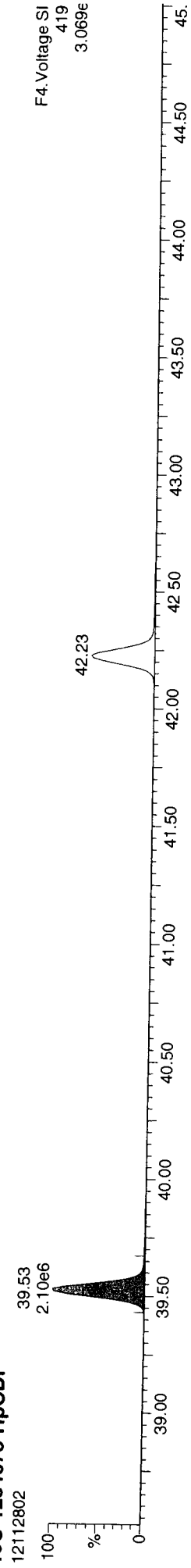
FUNCTION4 PFK

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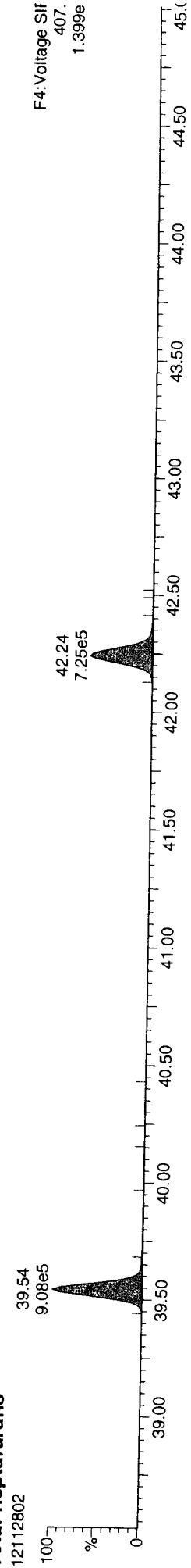
13C-1234678-HpCDF



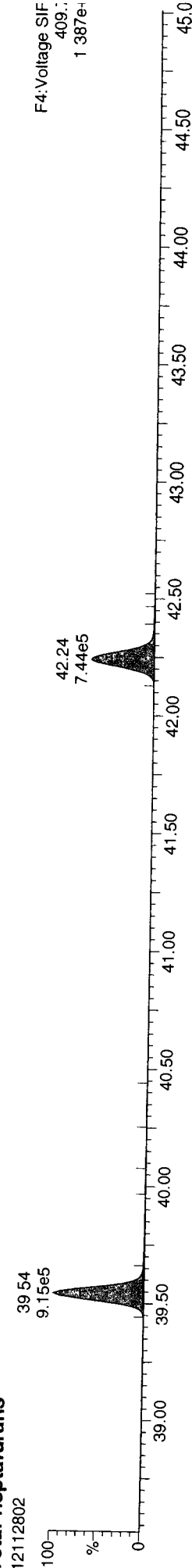
13C-1234678-HpCDF



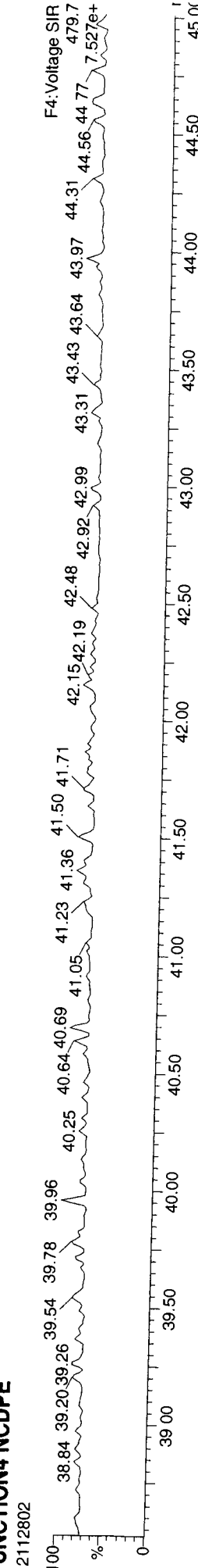
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



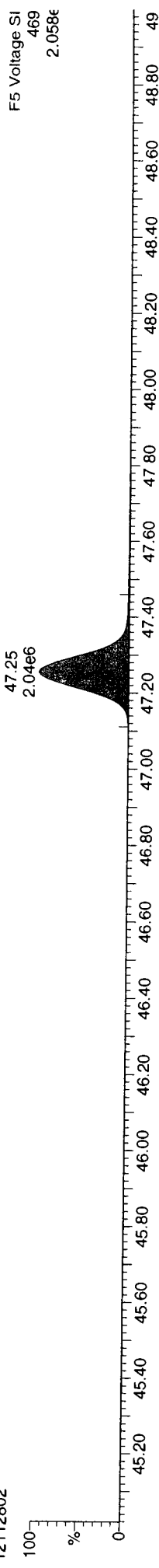


Dataset: P:\DIOXIN8290.PRO\121128OPEN.qld  
Last Altered: Wednesday, November 28, 2012 11:16:34 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 13:07:59 Pacific Standard Time

Name: 12112802, Date: 28-Nov-2012, Time: 10:02:21, ID: CS3, Conditions: AUTOSPEC01, User: pk

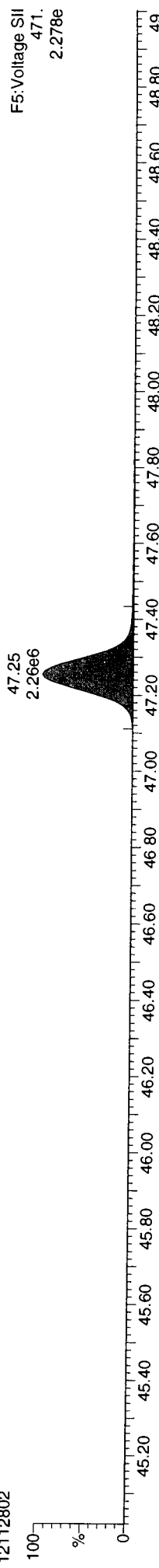
13C-OCDD

12112802



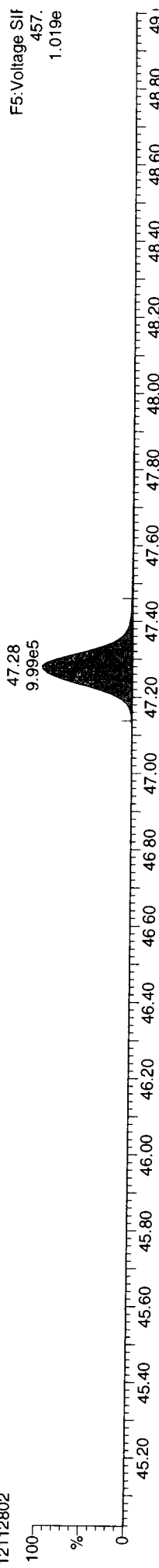
13C-OCDD

12112802



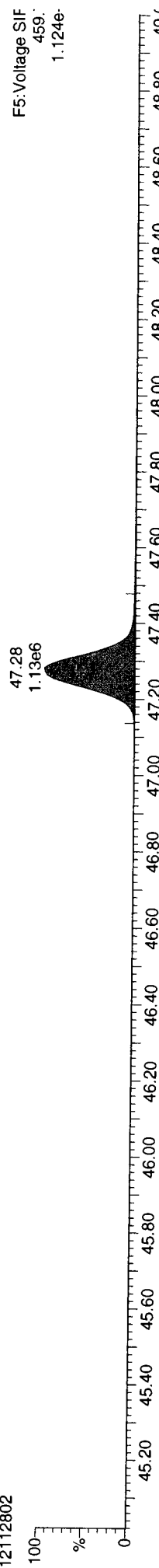
OCDD

12112802



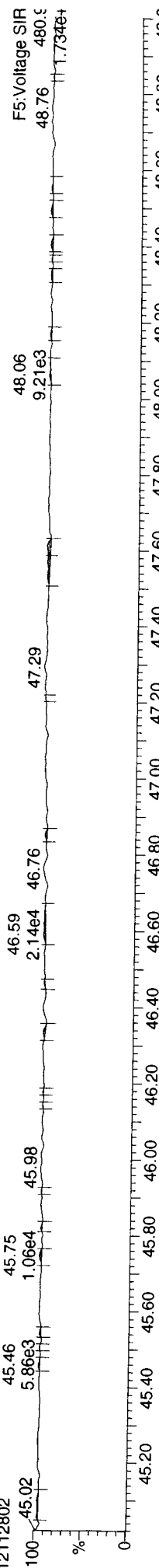
OCDD

12112802



FUNCTION5 PFK

12112802



Dataset: P:\DIOXIN8290.PRO\121128OPEN.qld

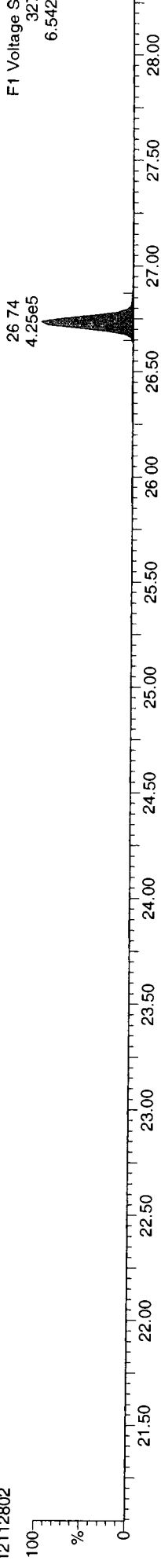
Last Altered: Wednesday, November 28, 2012 11:16:34 Pacific Standard Time

Printed: Tuesday, December 11, 2012 13:07:59 Pacific Standard Time

Name: 12112802, Date: 28-Nov-2012, Time: 10:02:21, ID: CS3, Conditions: AUTOSPEC01, User: pk

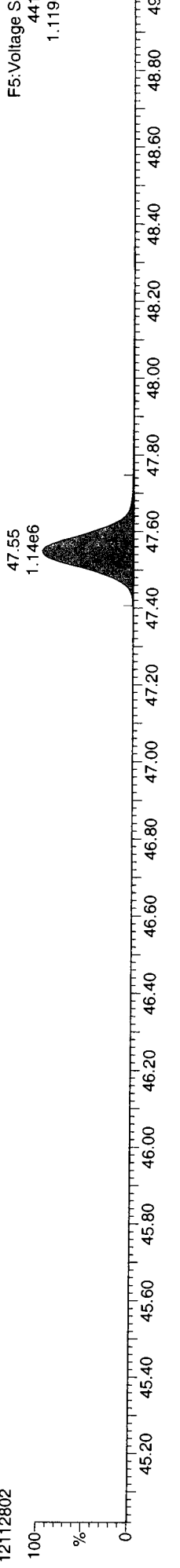
37CL-2378-TCDD

12112802



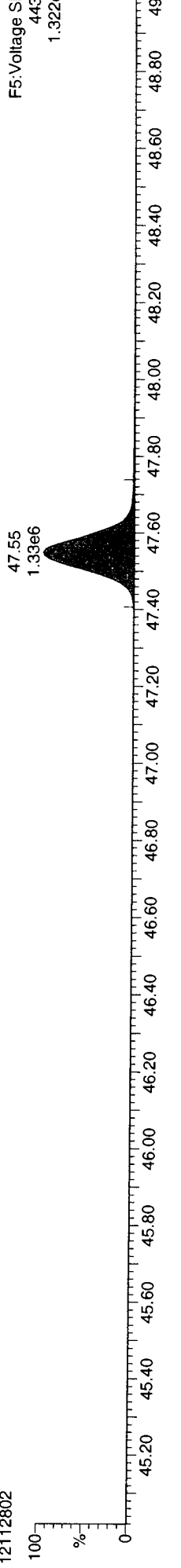
OCDF

12112802



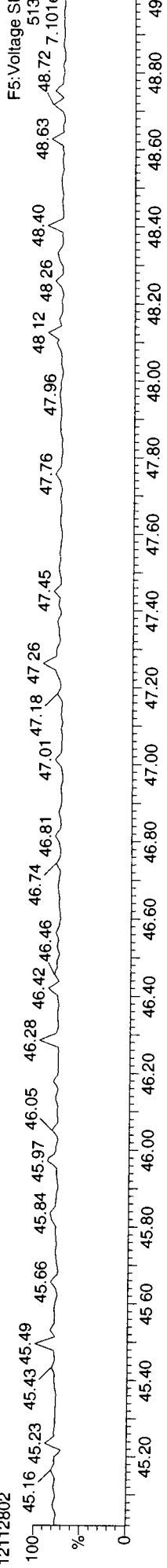
OCDF

12112802



FUNCTION5 DCDPE

12112802



12112802

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:20 Pacific Standard Time

NR 12/10/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.093	1.001	5.94e3	8.76e3	0.877	0.679	0.770	71.0	1372	1886	9.74e4	1.34e5	NO	0.387
12378-PeCDF	30.234	1.001	6.30e3	4.73e3	0.896	1.332	1.550	68.9	1587	1783	1.09e5	7.20e4	NO	0.344
23478-PeCDF	31.582	1.001	7.51e3	4.49e3	0.926	1.673	1.550	72.4	1587	1783	1.15e5	7.54e4	NO	0.370
123478-HxCDF	35.254	1.001	1.20e4	9.75e3	1.068	1.235	1.240	105.6	1780	1503	1.88e5	1.66e5	NO	0.762
234678-HxCDF	36.317	1.000	1.41e4	1.30e4	1.037	1.086	1.240	79.4	1780	1503	1.41e5	1.50e5	NO	1.000
123678-HxCDF	35.396	1.000	1.04e4	8.00e3	1.035	1.295	1.240	88.1	1780	1503	1.57e5	1.40e5	NO	0.641
123789-HxCDF	37.446	0.999	5.45e3	4.52e3	0.987	1.206	1.240	45.9	1780	1503	8.17e4	7.33e4	NO	0.353
1234678-HpCDF	39.551	1.001	1.53e5	1.55e5	1.232	0.987	1.050	1347.7	1693	1777	2.28e6	2.29e6	NO	11.358
1234789-HpCDF	42.236	1.000	7.98e3	8.85e3	1.215	0.902	1.050	60.2	1693	1777	1.02e5	1.15e5	NO	0.812
OCDF	47.557	1.006	2.83e5	3.44e5	1.138	0.823	0.890	2430.2	1169	1717	2.84e6	3.45e6	NO	39.524
2378-TCDD	26.721	1.001	1.66e3	4.61e3	1.049	0.360	0.770	19.0	1378	1253	2.62e4	6.71e4	YES	0.120
12378-PeCDD	31.823	1.000	1.05e4	6.21e3	0.998	1.692	1.550	77.4	2035	1401	1.58e5	8.72e4	NO	0.750
123478-HxCDD	36.493	1.001	1.41e4	1.07e4	0.971	1.321	1.240	143.1	1515	1874	2.17e5	1.58e5	NO	1.153
123678-HxCDD	36.624	1.001	5.09e4	4.10e4	0.918	1.241	1.240	516.1	1515	1874	7.82e5	6.21e5	NO	4.242
123789-HxCDD	37.041	1.012	2.86e4	2.28e4	0.932	1.256	1.240	298.5	1515	1874	4.52e5	3.69e5	NO	2.412
1234678-HpCDD	41.359	1.000	8.60e5	8.22e5	1.017	1.046	1.050	2509.6	4666	4936	1.17e7	1.11e7	NO	85.851
OCDD	47.279	1.000	4.35e6	4.87e6	1.008	0.894	0.890	17492.2	2516	2823	4.40e7	4.94e7	NO	656.166
13C-2378-TCDF	26.078	1.007	1.90e6	2.43e6	1.473	0.785	0.770	9884.3	3015	2167	2.98e7	3.78e7	NO	80.835
13C-12378-PeCDF	30.212	1.166	2.18e6	1.40e6	1.148	1.557	1.550	6049.2	5689	2791	3.44e7	2.24e7	NO	85.715
13C-23478-PeCDF	31.560	1.219	2.14e6	1.36e6	1.113	1.567	1.550	5860.2	5689	2791	3.33e7	2.13e7	NO	86.418
13C-123478-HxCDF	35.232	0.951	9.15e5	1.76e6	1.209	0.520	0.510	2482.9	5723	3509	1.42e7	2.72e7	NO	83.343
13C-123678-HxCDF	35.386	0.956	9.49e5	1.82e6	1.269	0.522	0.510	2521.5	5723	3509	1.44e7	2.75e7	NO	82.078
13C-234678-HxCDF	36.328	0.981	8.97e5	1.71e6	1.236	0.523	0.510	2432.1	5723	3509	1.39e7	2.65e7	NO	79.552
13C-123789-HxCDF	37.468	1.012	9.77e5	1.88e6	1.107	0.518	0.510	2630.1	5723	3509	1.51e7	2.87e7	NO	97.322
13C-1234678-HpCDF	39.529	1.067	6.76e5	1.52e6	1.051	0.445	0.440	3730.8	2703	2608	1.01e7	2.24e7	NO	78.665
13C-1234789-HpCDF	42.225	1.140	5.30e5	1.17e6	0.815	0.452	0.440	2543.5	2703	2608	6.87e6	1.51e7	NO	78.770
13C-1234-TCDD	25.899	0.000	1.61e6	2.03e6	1.000	0.795	0.770	7787.3	3383	1921	2.63e7	3.30e7	NO	100.000
13C-2378-TCDD	26.706	1.031	1.33e6	1.69e6	0.946	0.785	0.770	6021.7	3383	1921	2.04e7	2.63e7	NO	87.817
13C-12378-PeCDD	31.812	1.228	1.36e6	8.70e5	0.721	1.568	1.550	9971.2	2180	1368	2.17e7	1.41e7	NO	85.188
13C-123478-HxCDD	36.471	0.985	1.24e6	9.69e5	0.991	1.280	1.240	7254.9	2646	2200	1.92e7	1.51e7	NO	83.938
13C-123678-HxCDD	36.602	0.988	1.31e6	1.05e6	1.025	1.257	1.240	7610.4	2646	2200	2.01e7	1.61e7	NO	86.713
13C-1234678-HpCDD	41.337	1.116	9.88e5	9.38e5	0.866	1.053	1.050	4065.7	3271	3065	1.33e7	1.27e7	NO	83.749
13C-OCDD	47.261	1.276	1.31e6	1.47e6	0.769	0.892	0.890	4526.0	2936	1668	1.33e7	1.50e7	NO	136.398

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld

Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time

Printed: Monday, December 10, 2012 14:38:20 Pacific Standard Time

Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

	37.030	0.000	1.47e6	1.18e6	1.000	1.248	1.240	8508.0	2646	2200	2.25e7	1.78e7	NO	
13C-123789-HxCDD					0.877				1372		1.11e6			100.000
Total-tetrafurans			7.30e4						772		1.69e6		5.773	4.395
Total-penta1			1.11e5						1587		1.11e6		5.544	5.544
Total-pentafurans			7.06e4		0.911				1780		4.62e6		4.520	3.714
Total-hexafurans			3.02e5		1.032				1693		6.60e6		19.923	19.923
Total-heptafurans			4.56e5		1.223				1372		1.80e7		37.404	37.391
Total-Furans			1.30e6		1.041				1378		2.41e5		112.688	110.491
Total-tetra-dioxins			1.63e4		1.049				2035		8.14e5		1.667	1.148
Total-pentadioxins			5.71e4		0.998				1515		4.10e6		4.366	4.226
Total-hexadioxins			2.99e5		0.940				4666		2.37e7		25.788	25.276
Total-heptadioxins			1.69e6		1.017				1378		7.29e7		169.121	169.121
Total-Dioxins			6.41e6		0.985				1378		9.09e7		857.114	855.936
Total-TEQ			7.71e6						1746		2.18e7		969.802	966.428
37CL-2378-TCDD	26.736	1.032	1.40e6		1.044			12514.2						36.907
FUNCTION1 PFK			1.49e5						801160		2.89e6			0.000
FUNCTION2 PFK			4.64e5						248046		1.23e7			0.000
FUNCTION3 PFK			1.14e6						539461		2.22e7			
FUNCTION4 PFK			0.00e0						407385		0.00e0			
FUNCTION5 PFK			3.57e5						317788		1.14e7			
FUNCTION1 HXCDPE			1.78e3						809		3.40e4			0.000
FUNCTION1 HPCDPE			7.97e2						1103		1.58e4			0.000
FUNCTION2 HPCDPE			6.95e2						1046		1.53e4			0.000
FUNCTION3 OCDPE			0.00e0						398		0.00e0			0.000
FUNCTION4 NCDPE			1.20e4						623		1.68e5			0.000
FUNCTION5 DCDPE			0.00e0						435		0.00e0			0.000

12 11 28 07 15 06 14

Quantify Totals Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time
Printed: Monday, December 10, 2012 14:38:20 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

TF

Table with 12 columns: Name, RT, Area, Abs, Peak, Total, Ratio, Ratio, Ratio, Ratio, Status, Area. Contains 28 rows of data for 'Total-tetrafurans' and '2378-TCDF'.

PP

Table with 12 columns: Name, RT, Area, Abs, Peak, Total, Ratio, Ratio, Ratio, Ratio, Status, Area. Contains 1 row of data for 'Total-penta1'.

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
 Printed: Monday, December 10, 2012 14:38:20 Pacific Standard Time

Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

PF

Sample	Compound	Area	RT	Abn. Peak	Int. M.	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
37	Total-pentafurans	339.8597	29.47	1075.223	0.911	0.033	0.033	1.69	1.55	NO	5.4	
37	Total-pentafurans	339.8597	29.30	0.000	0.911	0.000	0.014	1.15	1.55	YES	2.9	
37	Total-pentafurans	339.8597	29.16	35454.737	0.911	1.099	1.099	1.39	1.55	NO	199.0	
37	Total-pentafurans	339.8597	29.08	20236.185	0.911	0.628	0.628	1.36	1.55	NO	129.0	
37	Total-pentafurans	339.8597	28.97	11184.506	0.911	0.347	0.347	1.55	1.55	NO	55.8	
37	Total-pentafurans	339.8597	28.86	0.000	0.911	0.000	0.025	0.74	1.55	YES	9.0	
3	23478-PeCDF	339.8597	31.58	12003.893	0.926	0.370	0.370	1.67	1.55	NO	72.4	
37	Total-pentafurans	339.8597	31.42	9920.662	0.911	0.308	0.308	1.45	1.55	NO	60.9	
37	Total-pentafurans	339.8597	31.31	0.000	0.911	0.000	0.147	1.27	1.55	YES	31.8	
37	Total-pentafurans	339.8597	30.54	2473.237	0.911	0.077	0.077	1.38	1.55	NO	15.1	
37	Total-pentafurans	339.8597	30.43	9650.081	0.911	0.299	0.299	1.35	1.55	NO	49.4	
2	12378-PeCDF	339.8597	30.23	11027.245	0.896	0.344	0.344	1.33	1.55	NO	68.9	
37	Total-pentafurans	339.8597	29.95	3983.437	0.911	0.124	0.124	1.59	1.55	NO	30.7	
37	Total-pentafurans	339.8597	29.87	0.000	0.911	0.000	0.529	1.29	1.55	YES	98.4	
37	Total-pentafurans	339.8597	29.76	0.000	0.911	0.000	0.091	1.31	1.55	YES	17.6	
37	Total-pentafurans	339.8597	29.65	2746.801	0.911	0.085	0.085	1.69	1.55	NO	13.7	

HF

Sample	Compound	Area	RT	Abn. Peak	Int. M.	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
38	Total-hexafurans	373.8208	35.76	1333.805	1.032	0.047	0.047	1.23	1.24	NO	7.4
6	123678-HxCDF	373.8208	35.40	18349.799	1.035	0.641	0.641	1.29	1.24	NO	88.1
4	123478-HxCDF	373.8208	35.25	21789.349	1.068	0.762	0.762	1.24	1.24	NO	105.6
38	Total-hexafurans	373.8208	35.08	5460.366	1.032	0.194	0.194	1.38	1.24	NO	30.1
38	Total-hexafurans	373.8208	34.60	205591.461	1.032	7.305	7.305	1.14	1.24	NO	964.5
38	Total-hexafurans	373.8208	34.29	3415.068	1.032	0.121	0.121	1.35	1.24	NO	15.1
38	Total-hexafurans	373.8208	33.74	196342.149	1.032	6.976	6.976	1.16	1.24	NO	921.3
38	Total-hexafurans	373.8208	33.52	70973.982	1.032	2.522	2.522	1.25	1.24	NO	339.0
7	123789-HxCDF	373.8208	37.45	9975.044	0.987	0.353	0.353	1.21	1.24	NO	45.9
5	234678-HxCDF	373.8208	36.32	27068.286	1.037	1.000	1.000	1.09	1.24	NO	79.4

HPF

Sample	Compound	Area	RT	Abn. Peak	Int. M.	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
9	1234789-HpCDF	407.7818	42.24	16823.125	1.215	0.812	0.812	0.90	1.05	NO	60.2
39	Total-heptafurans	407.7818	41.36	0.000	1.223	0.000	0.013	4.17	1.05	YES	5.4
39	Total-heptafurans	407.7818	40.34	594572.063	1.223	24.918	24.918	0.96	1.05	NO	2463.4
39	Total-heptafurans	407.7818	40.04	7222.951	1.223	0.303	0.303	0.95	1.05	NO	26.7
8	1234678-HpCDF	407.7818	39.55	307279.610	1.232	11.358	11.358	0.99	1.05	NO	1347.7

Quantify Totals Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
 Printed: Monday, December 10, 2012 14:38:20 Pacific Standard Time

Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

35 Total-tetrafurans	303.9016	24.85	0.000	0.877	0.000	0.172	0.65	0.77	YES	32.5
35 Total-tetrafurans	303.9016	24.76	10966.981	0.877	0.289	0.289	0.69	0.77	NO	39.5
35 Total-tetrafurans	303.9016	24.35	9141.461	0.877	0.241	0.241	0.79	0.77	NO	46.3
35 Total-tetrafurans	303.9016	24.20	8866.497	0.877	0.234	0.234	0.69	0.77	NO	41.7
35 Total-tetrafurans	303.9016	24.09	14291.612	0.877	0.376	0.376	0.73	0.77	NO	65.2
35 Total-tetrafurans	303.9016	23.94	0.000	0.877	0.000	0.092	0.62	0.77	YES	19.2
35 Total-tetrafurans	303.9016	23.84	0.000	0.877	0.000	0.293	0.62	0.77	YES	54.2
35 Total-tetrafurans	303.9016	23.75	8857.035	0.877	0.233	0.233	0.79	0.77	NO	35.7
35 Total-tetrafurans	303.9016	23.60	0.000	0.877	0.000	0.228	0.68	0.77	NO	31.9
35 Total-tetrafurans	303.9016	23.55	0.000	0.877	0.000	0.081	0.57	0.77	YES	27.5
35 Total-tetrafurans	303.9016	23.43	35721.402	0.877	0.941	0.941	0.69	0.77	NO	174.5
35 Total-tetrafurans	303.9016	22.87	0.000	0.877	0.000	0.163	0.64	0.77	YES	31.1
35 Total-tetrafurans	303.9016	22.60	4165.807	0.877	0.110	0.110	0.85	0.77	NO	22.6
35 Total-tetrafurans	303.9016	27.50	0.000	0.877	0.000	0.128	0.98	0.77	YES	20.4
35 Total-tetrafurans	303.9016	26.57	0.000	0.877	0.000	0.008	0.51	0.77	YES	1.7
35 Total-tetrafurans	303.9016	26.32	15367.920	0.877	0.405	0.405	0.67	0.77	NO	70.5
35 Total-tetrafurans	303.9016	26.23	0.000	0.877	0.000	0.106	0.52	0.77	YES	18.3
1 2378-TCDF	303.9016	26.09	14701.153	0.877	0.387	0.387	0.68	0.77	NO	71.0
35 Total-tetrafurans	303.9016	25.87	4019.183	0.877	0.106	0.106	0.67	0.77	NO	21.8
35 Total-tetrafurans	303.9016	25.70	0.000	0.877	0.000	0.010	0.29	0.77	YES	1.8
35 Total-tetrafurans	303.9016	25.60	4011.150	0.877	0.106	0.106	0.67	0.77	NO	17.7
35 Total-tetrafurans	303.9016	25.41	5828.614	0.877	0.154	0.154	0.68	0.77	NO	23.2
35 Total-tetrafurans	303.9016	25.18	10438.914	0.877	0.275	0.275	0.75	0.77	NO	52.1
35 Total-tetrafurans	303.9016	25.00	20490.478	0.877	0.540	0.540	0.74	0.77	NO	96.8
37 Total-pentafurans	339.8597	29.47	1075.223	0.911	0.033	0.033	1.69	1.55	NO	5.4
37 Total-pentafurans	339.8597	29.30	0.000	0.911	0.000	0.014	1.15	1.55	YES	2.9
37 Total-pentafurans	339.8597	29.16	35454.737	0.911	1.099	1.099	1.39	1.55	NO	199.0
37 Total-pentafurans	339.8597	29.08	20236.185	0.911	0.628	0.628	1.36	1.55	NO	129.0
37 Total-pentafurans	339.8597	28.97	11184.506	0.911	0.347	0.347	1.55	1.55	NO	55.8
37 Total-pentafurans	339.8597	28.86	0.000	0.911	0.000	0.025	0.74	1.55	YES	9.0
3 23478-PeCDF	339.8597	31.58	12003.893	0.926	0.370	0.370	1.67	1.55	NO	72.4
37 Total-pentafurans	339.8597	31.42	9920.662	0.911	0.308	0.308	1.45	1.55	NO	60.9
37 Total-pentafurans	339.8597	31.31	0.000	0.911	0.000	0.147	1.27	1.55	YES	31.8
37 Total-pentafurans	339.8597	30.54	2473.237	0.911	0.077	0.077	1.38	1.55	NO	15.1
37 Total-pentafurans	339.8597	30.43	9650.081	0.911	0.299	0.299	1.35	1.55	NO	49.4
2 12378-PeCDF	339.8597	30.23	11027.245	0.896	0.344	0.344	1.33	1.55	NO	68.9
37 Total-pentafurans	339.8597	29.95	3983.437	0.911	0.124	0.124	1.59	1.55	NO	30.7
37 Total-pentafurans	339.8597	29.87	0.000	0.911	0.000	0.529	1.29	1.55	YES	98.4
37 Total-pentafurans	339.8597	29.76	0.000	0.911	0.000	0.091	1.31	1.55	YES	17.6
37 Total-pentafurans	339.8597	29.65	2746.801	0.911	0.085	0.085	1.69	1.55	NO	13.7
38 Total-hexafurans	373.8208	35.76	1333.805	1.032	0.047	0.047	1.23	1.24	NO	7.4
6 123678-HxCDF	373.8208	35.40	18349.799	1.035	0.641	0.641	1.29	1.24	NO	88.1
4 123478-HxCDF	373.8208	35.25	21789.349	1.068	0.762	0.762	1.24	1.24	NO	105.6
38 Total-hexafurans	373.8208	35.08	5460.366	1.032	0.194	0.194	1.38	1.24	NO	30.1
38 Total-hexafurans	373.8208	34.60	205591.461	1.032	7.305	7.305	1.14	1.24	NO	964.5
38 Total-hexafurans	373.8208	34.29	3415.068	1.032	0.121	0.121	1.35	1.24	NO	15.1
38 Total-hexafurans	373.8208	33.74	196342.149	1.032	6.976	6.976	1.16	1.24	NO	921.3
38 Total-hexafurans	373.8208	33.52	70973.982	1.032	2.522	2.522	1.25	1.24	NO	339.0
7 123789-HxCDF	373.8208	37.45	9975.044	0.987	0.353	0.353	1.21	1.24	NO	45.9

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Furans,TF,PP,PF,HF,HPF,OF

ID	Name	Area	RT	Abn Resp	RF	RF	RF	RF	RF	RF	RF	SN
5	234678-HxCDF	373.8208	36.32	27068.286	1.037	1.000	1.000	1.09	1.24	NO	79.4	
9	1234789-HpCDF	407.7818	42.24	16823.125	1.215	0.812	0.812	0.90	1.05	NO	60.2	
39	Total-heptafurans	407.7818	41.36	0.000	1.223	0.000	0.013	4.17	1.05	YES	5.4	
39	Total-heptafurans	407.7818	40.34	594572.063	1.223	24.918	24.918	0.96	1.05	NO	2463.4	
39	Total-heptafurans	407.7818	40.04	7222.951	1.223	0.303	0.303	0.95	1.05	NO	26.7	
8	1234678-HpCDF	407.7818	39.55	307279.610	1.232	11.358	11.358	0.99	1.05	NO	1347.7	
10	OCDF	441.7428	47.56	626387.657	1.138	39.524	39.524	0.82	0.89	NO	2430.2	
36	Total-penta1	339.8597	27.51	179934.711		5.544	5.544	1.60	1.55	NO	2187.3	
35	Total-tetrafurans	303.9016	25.88	0.000	0.877	0.000	0.096	0.62	0.77	YES	20.6	

TD

ID	Name	Area	RT	Abn Resp	RF	RF	RF	RF	RF	RF	RF	SN
41	Total-tetradoxins	319.8965	24.35	0.000	1.049	0.000	0.057	0.55	0.77	YES	8.7	
41	Total-tetradoxins	319.8965	24.14	0.000	1.049	0.000	0.238	0.90	0.77	YES	46.3	
41	Total-tetradoxins	319.8965	23.88	12785.258	1.049	0.403	0.403	0.80	0.77	NO	65.9	
41	Total-tetradoxins	319.8965	27.30	1110.285	1.049	0.035	0.035	0.85	0.77	NO	7.0	
41	Total-tetradoxins	319.8965	26.84	2239.490	1.049	0.071	0.071	0.77	0.77	NO	8.5	
11	2378-TCDD	319.8965	26.72	6264.095	1.049	0.000	0.120	0.36	0.77	YES	19.0	
41	Total-tetradoxins	319.8965	26.36	3453.696	1.049	0.109	0.109	0.76	0.77	NO	13.6	
41	Total-tetradoxins	319.8965	26.06	0.000	1.049	0.000	0.011	2.44	0.77	YES	5.2	
41	Total-tetradoxins	319.8965	25.91	0.000	1.049	0.000	0.080	0.90	0.77	YES	16.4	
41	Total-tetradoxins	319.8965	25.70	2306.992	1.049	0.073	0.073	0.68	0.77	NO	7.1	
41	Total-tetradoxins	319.8965	25.60	0.000	1.049	0.000	0.014	0.55	0.77	YES	3.3	
41	Total-tetradoxins	319.8965	25.35	6290.743	1.049	0.198	0.198	0.85	0.77	NO	32.8	
41	Total-tetradoxins	319.8965	25.08	4052.994	1.049	0.128	0.128	0.87	0.77	NO	17.6	
41	Total-tetradoxins	319.8965	24.87	4153.118	1.049	0.131	0.131	0.87	0.77	NO	22.6	

PD

ID	Name	Area	RT	Abn Resp	RF	RF	RF	RF	RF	RF	RF	SN
42	Total-pentadioxins	355.8546	32.23	0.000	0.998	0.000	0.140	1.20	1.55	YES	15.5	
12	12378-PeCDD	355.8546	31.82	16719.692	0.998	0.750	0.750	1.69	1.55	NO	77.4	
42	Total-pentadioxins	355.8546	31.14	2762.412	0.998	0.124	0.124	1.62	1.55	NO	11.6	
42	Total-pentadioxins	355.8546	30.76	9271.066	0.998	0.416	0.416	1.38	1.55	NO	28.8	
42	Total-pentadioxins	355.8546	30.58	8324.659	0.998	0.373	0.373	1.49	1.55	NO	41.0	
42	Total-pentadioxins	355.8546	30.45	13260.280	0.998	0.595	0.595	1.59	1.55	NO	63.7	
42	Total-pentadioxins	355.8546	30.23	10482.404	0.998	0.470	0.470	1.38	1.55	NO	51.5	
42	Total-pentadioxins	355.8546	29.62	7619.121	0.998	0.342	0.342	1.55	1.55	NO	41.5	
42	Total-pentadioxins	355.8546	29.15	25776.254	0.998	1.156	1.156	1.54	1.55	NO	84.5	



Quantify Totals Report MassLynx 4.1 SCN 714

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HD

Table with 12 columns: ID, Name, Amount, %Area, TotalArea, %GC, GC, %MS, MS, %IS, IS, Result, Amount. Rows include Total-hexadioxins and 123789-HxCDD.

HPD

Table with 12 columns: ID, Name, Amount, %Area, TotalArea, %GC, GC, %MS, MS, %IS, IS, Result, Amount. Rows include 1234678-HpCDD and Total-heptadioxins.

Quantify Totals Report MassLynx 4.1 SCN 714

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Dioxins,TD,PD,HD,HPD,OD

Table with 12 columns: ID, Name, Value 1, Value 2, Value 3, Value 4, Value 5, Value 6, Value 7, Value 8, Value 9, Value 10. Rows include various dioxin and furan compounds like Total-tetradoxins, 2378-TCDD, 12378-PeCDD, Total-pentadoxins, Total-hexadoxins, 123789-HxCDD, 123678-HxCDD, 123478-HxCDD, Total-hexadoxins, 1234678-HpCDD, Total-heptadoxins, and OCDD.

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## TotalTEQ,Furans,Dioxins

Sample ID	Compound	Amount	TEQ	Furans	Dioxins	TEQ	Furans	Dioxins	Y/N	Sum	
35	Total-tetrafurans	303.9016	24.85	0.000	0.877	0.000	0.172	0.65	0.77	YES	32.5
35	Total-tetrafurans	303.9016	24.76	10966.981	0.877	0.289	0.289	0.69	0.77	NO	39.5
35	Total-tetrafurans	303.9016	24.35	9141.461	0.877	0.241	0.241	0.79	0.77	NO	46.3
35	Total-tetrafurans	303.9016	24.20	8866.497	0.877	0.234	0.234	0.69	0.77	NO	41.7
35	Total-tetrafurans	303.9016	24.09	14291.612	0.877	0.376	0.376	0.73	0.77	NO	65.2
35	Total-tetrafurans	303.9016	23.94	0.000	0.877	0.000	0.092	0.62	0.77	YES	19.2
35	Total-tetrafurans	303.9016	23.84	0.000	0.877	0.000	0.293	0.62	0.77	YES	54.2
35	Total-tetrafurans	303.9016	23.75	8857.035	0.877	0.233	0.233	0.79	0.77	NO	35.7
35	Total-tetrafurans	303.9016	23.60	0.000	0.877	0.000	0.228	0.68	0.77	NO	31.9
35	Total-tetrafurans	303.9016	23.55	0.000	0.877	0.000	0.081	0.57	0.77	YES	27.5
35	Total-tetrafurans	303.9016	23.43	35721.402	0.877	0.941	0.941	0.69	0.77	NO	174.5
35	Total-tetrafurans	303.9016	22.87	0.000	0.877	0.000	0.163	0.64	0.77	YES	31.1
35	Total-tetrafurans	303.9016	22.60	4165.807	0.877	0.110	0.110	0.85	0.77	NO	22.6
35	Total-tetrafurans	303.9016	27.50	0.000	0.877	0.000	0.128	0.98	0.77	YES	20.4
35	Total-tetrafurans	303.9016	26.57	0.000	0.877	0.000	0.008	0.51	0.77	YES	1.7
35	Total-tetrafurans	303.9016	26.32	15367.920	0.877	0.405	0.405	0.67	0.77	NO	70.5
35	Total-tetrafurans	303.9016	26.23	0.000	0.877	0.000	0.106	0.52	0.77	YES	18.3
1	2378-TCDF	303.9016	26.09	14701.153	0.877	0.387	0.387	0.68	0.77	NO	71.0
35	Total-tetrafurans	303.9016	25.87	4019.183	0.877	0.106	0.106	0.67	0.77	NO	21.8
35	Total-tetrafurans	303.9016	25.70	0.000	0.877	0.000	0.010	0.29	0.77	YES	1.8
35	Total-tetrafurans	303.9016	25.60	4011.150	0.877	0.106	0.106	0.67	0.77	NO	17.7
35	Total-tetrafurans	303.9016	25.41	5828.614	0.877	0.154	0.154	0.68	0.77	NO	23.2
35	Total-tetrafurans	303.9016	25.18	10438.914	0.877	0.275	0.275	0.75	0.77	NO	52.1
35	Total-tetrafurans	303.9016	25.00	20490.478	0.877	0.540	0.540	0.74	0.77	NO	96.8
37	Total-pentafurans	339.8597	29.47	1075.223	0.911	0.033	0.033	1.69	1.55	NO	5.4
37	Total-pentafurans	339.8597	29.30	0.000	0.911	0.000	0.014	1.15	1.55	YES	2.9
37	Total-pentafurans	339.8597	29.16	35454.737	0.911	1.099	1.099	1.39	1.55	NO	199.0
37	Total-pentafurans	339.8597	29.08	20236.185	0.911	0.628	0.628	1.36	1.55	NO	129.0
37	Total-pentafurans	339.8597	28.97	11184.506	0.911	0.347	0.347	1.55	1.55	NO	55.8
37	Total-pentafurans	339.8597	28.86	0.000	0.911	0.000	0.025	0.74	1.55	YES	9.0
3	23478-PeCDF	339.8597	31.58	12003.893	0.926	0.370	0.370	1.67	1.55	NO	72.4
37	Total-pentafurans	339.8597	31.42	9920.662	0.911	0.308	0.308	1.45	1.55	NO	60.9
37	Total-pentafurans	339.8597	31.31	0.000	0.911	0.000	0.147	1.27	1.55	YES	31.8
37	Total-pentafurans	339.8597	30.54	2473.237	0.911	0.077	0.077	1.38	1.55	NO	15.1
37	Total-pentafurans	339.8597	30.43	9650.081	0.911	0.299	0.299	1.35	1.55	NO	49.4
2	12378-PeCDF	339.8597	30.23	11027.245	0.896	0.344	0.344	1.33	1.55	NO	68.9
37	Total-pentafurans	339.8597	29.95	3983.437	0.911	0.124	0.124	1.59	1.55	NO	30.7
37	Total-pentafurans	339.8597	29.87	0.000	0.911	0.000	0.529	1.29	1.55	YES	98.4
37	Total-pentafurans	339.8597	29.76	0.000	0.911	0.000	0.091	1.31	1.55	YES	17.6
37	Total-pentafurans	339.8597	29.65	2746.801	0.911	0.085	0.085	1.69	1.55	NO	13.7
38	Total-hexa furans	373.8208	35.76	1333.805	1.032	0.047	0.047	1.23	1.24	NO	7.4
6	123678-HxCDF	373.8208	35.40	18349.799	1.035	0.641	0.641	1.29	1.24	NO	88.1
4	123478-HxCDF	373.8208	35.25	21789.349	1.068	0.762	0.762	1.24	1.24	NO	105.6
38	Total-hexa furans	373.8208	35.08	5460.366	1.032	0.194	0.194	1.38	1.24	NO	30.1
38	Total-hexa furans	373.8208	34.60	205591.461	1.032	7.305	7.305	1.14	1.24	NO	964.5
38	Total-hexa furans	373.8208	34.29	3415.068	1.032	0.121	0.121	1.35	1.24	NO	15.1
38	Total-hexa furans	373.8208	33.74	196342.149	1.032	6.976	6.976	1.16	1.24	NO	921.3
38	Total-hexa furans	373.8208	33.52	70973.982	1.032	2.522	2.522	1.25	1.24	NO	339.0
7	123789-HxCDF	373.8208	37.45	9975.044	0.987	0.353	0.353	1.21	1.24	NO	45.8

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TotalTEQ,Furans,Dioxins

5	234678-HxCDF	373.8208	36.32	27068.286	1.037	1.000	1.000	1.09	1.24	NO	79.4
9	1234789-HpCDF	407.7818	42.24	16823.125	1.215	0.812	0.812	0.90	1.05	NO	60.2
39	Total-heptafurans	407.7818	41.36	0.000	1.223	0.000	0.013	4.17	1.05	YES	5.4
39	Total-heptafurans	407.7818	40.34	594572.063	1.223	24.918	24.918	0.96	1.05	NO	2463.4
39	Total-heptafurans	407.7818	40.04	7222.951	1.223	0.303	0.303	0.95	1.05	NO	26.7
8	1234678-HpCDF	407.7818	39.55	307279.610	1.232	11.358	11.358	0.99	1.05	NO	1347.7
10	OCDF	441.7428	47.56	626387.657	1.138	39.524	39.524	0.82	0.89	NO	2430.2
36	Total-penta1	339.8597	27.51	179934.711		5.544	5.544	1.60	1.55	NO	2187.3
35	Total-tetrafurans	303.9016	25.88	0.000	0.877	0.000	0.096	0.62	0.77	YES	20.6
41	Total-tetradiioxins	319.8965	24.35	0.000	1.049	0.000	0.057	0.55	0.77	YES	8.7
41	Total-tetradiioxins	319.8965	24.14	0.000	1.049	0.000	0.238	0.90	0.77	YES	46.3
41	Total-tetradiioxins	319.8965	23.88	12785.258	1.049	0.403	0.403	0.80	0.77	NO	65.9
45	Total-Dioxins	319.8965	27.62	0.000	0.985	0.000	0.006	0.46	0.77	YES	0.9
41	Total-tetradiioxins	319.8965	27.30	1110.285	1.049	0.035	0.035	0.85	0.77	NO	7.0
41	Total-tetradiioxins	319.8965	26.84	2239.490	1.049	0.071	0.071	0.77	0.77	NO	8.5
11	2378-TCDD	319.8965	26.72	6264.095	1.049	0.000	0.120	0.36	0.77	YES	19.0
41	Total-tetradiioxins	319.8965	26.36	3453.696	1.049	0.109	0.109	0.76	0.77	NO	13.6
41	Total-tetradiioxins	319.8965	26.06	0.000	1.049	0.000	0.011	2.44	0.77	YES	5.2
41	Total-tetradiioxins	319.8965	25.91	0.000	1.049	0.000	0.080	0.90	0.77	YES	16.4
41	Total-tetradiioxins	319.8965	25.70	2306.992	1.049	0.073	0.073	0.68	0.77	NO	7.1
41	Total-tetradiioxins	319.8965	25.60	0.000	1.049	0.000	0.014	0.55	0.77	YES	3.3
41	Total-tetradiioxins	319.8965	25.35	6290.743	1.049	0.198	0.198	0.85	0.77	NO	32.8
41	Total-tetradiioxins	319.8965	25.08	4052.994	1.049	0.128	0.128	0.87	0.77	NO	17.6
41	Total-tetradiioxins	319.8965	24.87	4153.118	1.049	0.131	0.131	0.87	0.77	NO	22.6
42	Total-pentadiioxins	355.8546	32.23	0.000	0.998	0.000	0.140	1.20	1.55	YES	15.5
12	12378-PeCDD	355.8546	31.82	16719.692	0.998	0.750	0.750	1.69	1.55	NO	77.4
42	Total-pentadiioxins	355.8546	31.14	2762.412	0.998	0.124	0.124	1.62	1.55	NO	11.6
42	Total-pentadiioxins	355.8546	30.76	9271.066	0.998	0.416	0.416	1.38	1.55	NO	28.8
42	Total-pentadiioxins	355.8546	30.58	8324.659	0.998	0.373	0.373	1.49	1.55	NO	41.0
42	Total-pentadiioxins	355.8546	30.45	13260.280	0.998	0.595	0.595	1.59	1.55	NO	63.7
42	Total-pentadiioxins	355.8546	30.23	10482.404	0.998	0.470	0.470	1.38	1.55	NO	51.5
42	Total-pentadiioxins	355.8546	29.62	7619.121	0.998	0.342	0.342	1.55	1.55	NO	41.5
42	Total-pentadiioxins	355.8546	29.15	25776.254	0.998	1.156	1.156	1.54	1.55	NO	84.5
43	Total-hexadiioxins	389.8157	35.53	196328.617	0.940	9.139	9.139	1.20	1.24	NO	735.7
43	Total-hexadiioxins	389.8157	35.13	27298.995	0.940	1.271	1.271	1.28	1.24	NO	152.0
43	Total-hexadiioxins	389.8157	34.32	134979.226	0.940	6.283	6.283	1.20	1.24	NO	771.4
43	Total-hexadiioxins	389.8157	34.10	6251.842	0.940	0.291	0.291				33.6
15	123789-HxCDD	389.8157	37.04	51365.666	0.932	2.412	2.412	1.26	1.24	NO	298.5
43	Total-hexadiioxins	389.8157	36.79	10431.940	0.940	0.486	0.486	1.23	1.24	NO	54.9
14	123678-HxCDD	389.8157	36.62	91903.746	0.918	4.242	4.242	1.24	1.24	NO	516.1
13	123478-HxCDD	389.8157	36.49	24730.683	0.971	1.153	1.153	1.32	1.24	NO	143.1
43	Total-hexadiioxins	389.8157	35.64	0.000	0.940	0.000	0.513	1.44	1.24	YES	72.3
16	1234678-HpCDD	423.7766	41.36	1681945.813	1.017	85.851	85.851	1.05	1.05	NO	2509.6
44	Total-heptadiioxins	423.7766	40.10	1631387.250	1.017	83.270	83.270	1.04	1.05	NO	2576.7
17	OCDD	457.7377	47.28	9217957.500	1.008	656.166	656....	0.89	0.89	NO	17492.2

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
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Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

PFK1

Name	Area	Height	Retention	Abundance	EMPO	Ratio	Ratio	Ratio
48 FUNCTION1 PFK	330.9792	26.27	0.000					2.1
48 FUNCTION1 PFK	330.9792	24.12	0.000					1.6

PFK2

Name	Area	Height	Retention	Abundance	EMPO	Ratio	Ratio	Ratio
49 FUNCTION2 PFK	366.9792	28.70	0.000	0.000				1.3
49 FUNCTION2 PFK	366.9792	28.63	0.000	0.000				2.1
49 FUNCTION2 PFK	366.9792	28.58	0.000	0.000				2.1
49 FUNCTION2 PFK	366.9792	28.52	0.000	0.000				2.5
49 FUNCTION2 PFK	366.9792	28.48	0.000	0.000				2.8
49 FUNCTION2 PFK	366.9792	28.40	0.000	0.000				2.7
49 FUNCTION2 PFK	366.9792	30.52	0.000	0.000				0.3
49 FUNCTION2 PFK	366.9792	30.45	0.000	0.000				0.7
49 FUNCTION2 PFK	366.9792	30.41	0.000	0.000				1.2
49 FUNCTION2 PFK	366.9792	30.32	0.000	0.000				0.5
49 FUNCTION2 PFK	366.9792	30.18	0.000	0.000				1.2
49 FUNCTION2 PFK	366.9792	30.11	0.000	0.000				1.2
49 FUNCTION2 PFK	366.9792	30.08	0.000	0.000				1.1
49 FUNCTION2 PFK	366.9792	30.00	0.000	0.000				0.5
49 FUNCTION2 PFK	366.9792	29.98	0.000	0.000				0.5
49 FUNCTION2 PFK	366.9792	29.93	0.000	0.000				1.0
49 FUNCTION2 PFK	366.9792	29.52	0.000	0.000				0.7
49 FUNCTION2 PFK	366.9792	29.30	0.000	0.000				1.1
49 FUNCTION2 PFK	366.9792	29.16	0.000	0.000				1.6
49 FUNCTION2 PFK	366.9792	29.12	0.000	0.000				1.5
49 FUNCTION2 PFK	366.9792	28.97	0.000	0.000				0.7
49 FUNCTION2 PFK	366.9792	28.94	0.000	0.000				0.4
49 FUNCTION2 PFK	366.9792	32.56	0.000	0.000				1.0
49 FUNCTION2 PFK	366.9792	32.39	0.000	0.000				1.4
49 FUNCTION2 PFK	366.9792	32.21	0.000	0.000				0.9
49 FUNCTION2 PFK	366.9792	32.18	0.000	0.000				1.0
49 FUNCTION2 PFK	366.9792	32.03	0.000	0.000				1.7
49 FUNCTION2 PFK	366.9792	31.99	0.000	0.000				0.9
49 FUNCTION2 PFK	366.9792	31.91	0.000	0.000				1.1
49 FUNCTION2 PFK	366.9792	31.80	0.000	0.000				0.9
49 FUNCTION2 PFK	366.9792	31.40	0.000	0.000				1.1
49 FUNCTION2 PFK	366.9792	31.32	0.000	0.000				1.2
49 FUNCTION2 PFK	366.9792	31.19	0.000	0.000				1.0
49 FUNCTION2 PFK	366.9792	31.08	0.000	0.000				0.3
49 FUNCTION2 PFK	366.9792	30.84	0.000	0.000				0.5
49 FUNCTION2 PFK	366.9792	30.74	0.000	0.000				1.7
49 FUNCTION2 PFK	366.9792	30.69	0.000	0.000				2.3
49 FUNCTION2 PFK	366.9792	30.63	0.000	0.000				1.7
49 FUNCTION2 PFK	366.9792	32.92	0.000	0.000				0.8
49 FUNCTION2 PFK	366.9792	32.90	0.000	0.000				1.1
49 FUNCTION2 PFK	366.9792	32.83	0.000	0.000				1.0
49 FUNCTION2 PFK	366.9792	32.60	0.000	0.000				0.5

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
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Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

PFK3

Area	Name	Mass	RT	Abs Peak	Area	EMPO	Peak	Ratio	SN
50	FUNCTION3 PFK	380.9760	35.21	0.000	0.000				0.9
50	FUNCTION3 PFK	380.9760	35.03	0.000	0.000				0.6
50	FUNCTION3 PFK	380.9760	34.42	0.000	0.000				1.5
50	FUNCTION3 PFK	380.9760	34.28	0.000	0.000				1.2
50	FUNCTION3 PFK	380.9760	34.25	0.000	0.000				2.3
50	FUNCTION3 PFK	380.9760	34.16	0.000	0.000				4.8
50	FUNCTION3 PFK	380.9760	33.89	0.000	0.000				0.6
50	FUNCTION3 PFK	380.9760	33.45	0.000	0.000				1.0
50	FUNCTION3 PFK	380.9760	33.31	0.000	0.000				0.8
50	FUNCTION3 PFK	380.9760	33.23	0.000	0.000				0.5
50	FUNCTION3 PFK	380.9760	33.15	0.000	0.000				2.8
50	FUNCTION3 PFK	380.9760	38.33	0.000	0.000				2.0
50	FUNCTION3 PFK	380.9760	37.45	0.000	0.000				9.6
50	FUNCTION3 PFK	380.9760	37.36	0.000	0.000				10.2
50	FUNCTION3 PFK	380.9760	36.62	0.000	0.000				1.5
50	FUNCTION3 PFK	380.9760	35.39	0.000	0.000				0.6

PFK4

Area	Name	Mass	RT	Abs Peak	Area	EMPO	Peak	Ratio	SN

Quantify Totals Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time
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Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

PFK5

Table with 7 columns: Name, Conc, Area, Ret.M, EMPC, P, and SN. Contains 30 rows of data for PFK5, with values ranging from 45.80 to 48.97 in the Conc column and 0.3 to 2.3 in the SN column.

ETHERS1

Table with 7 columns: Name, Conc, Area, Ret.M, EMPC, P, and SN. Contains 6 rows of data for ETHERS1, with values ranging from 23.96 to 27.65 in the Conc column and 1.6 to 21.4 in the SN column.

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
 Printed: Monday, December 10, 2012 14:38:20 Pacific Standard Time

Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

ETHERS2

#	Name	Trace	RT	Abs Peak	Area	Area%	SN
54	FUNCTION1 HPCD...	409.7974	27.92	0.000	0.000		1.9
54	FUNCTION1 HPCD...	409.7974	27.84	0.000	0.000		2.1
54	FUNCTION1 HPCD...	409.7974	27.68	0.000	0.000		2.5
54	FUNCTION1 HPCD...	409.7974	27.15	0.000	0.000		1.2
54	FUNCTION1 HPCD...	409.7974	25.09	0.000	0.000		2.0
54	FUNCTION1 HPCD...	409.7974	23.94	0.000	0.000		1.6
54	FUNCTION1 HPCD...	409.7974	22.40	0.000	0.000		1.5
54	FUNCTION1 HPCD...	409.7974	21.91	0.000	0.000		1.4

ETHERS3

#	Name	Trace	RT	Abs Peak	Area	Area%	SN
55	FUNCTION2 HPCD...	409.7974	31.44	0.000	0.000		1.6
55	FUNCTION2 HPCD...	409.7974	30.22	0.000	0.000		3.9
55	FUNCTION2 HPCD...	409.7974	29.89	0.000	0.000		2.5
55	FUNCTION2 HPCD...	409.7974	29.85	0.000	0.000		2.5
55	FUNCTION2 HPCD...	409.7974	29.65	0.000	0.000		4.1

ETHERS4

#	Name	Trace	RT	Abs Peak	Area	Area%	SN

ETHERS5

#	Name	Trace	RT	Abs Peak	Area	Area%	SN
57	FUNCTION4 NCDPE	479.7165	41.32	0.000	0.000		5.3
57	FUNCTION4 NCDPE	479.7165	39.13	0.000	0.000		263.8

ETHERS6

#	Name	Trace	RT	Abs Peak	Area	Area%	SN

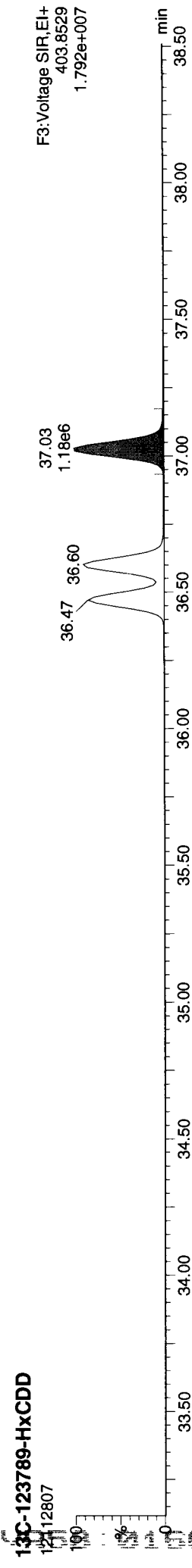
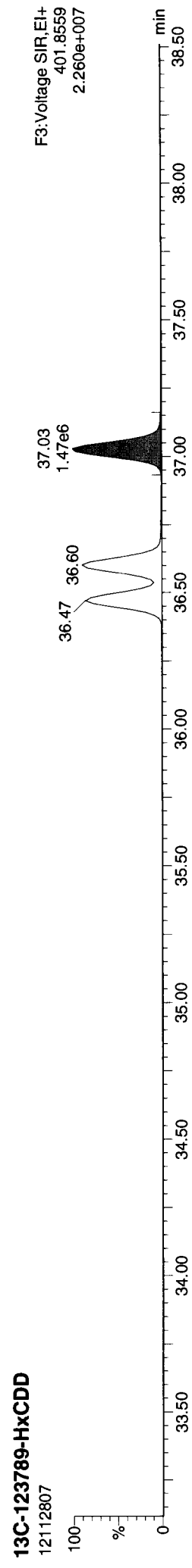
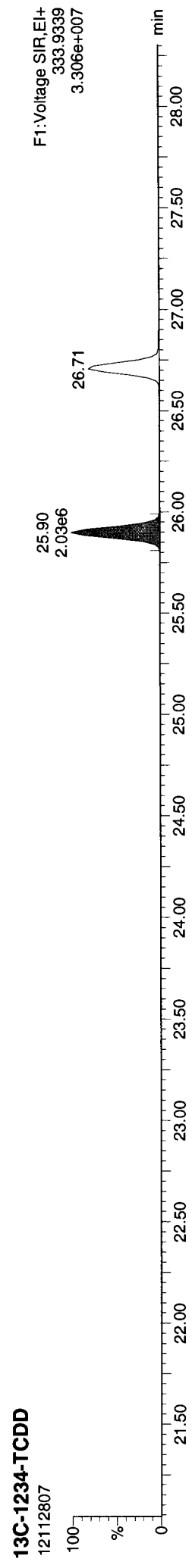
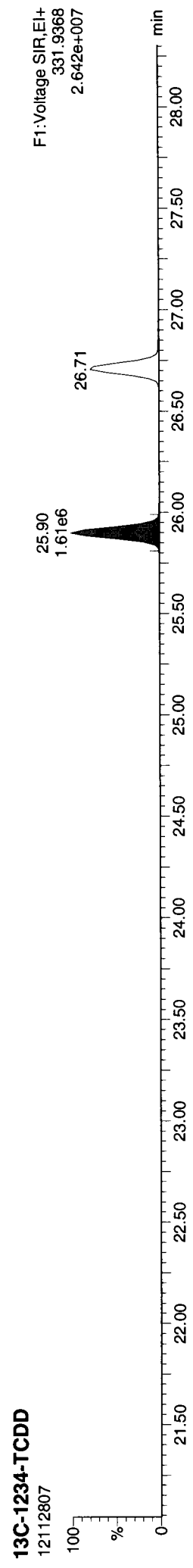


Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:20 Pacific Standard Time

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Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

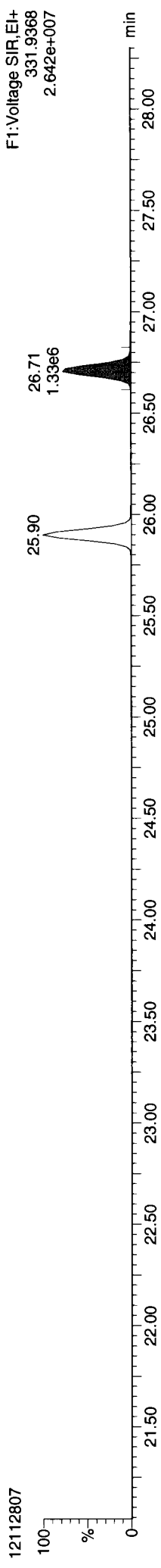
Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk



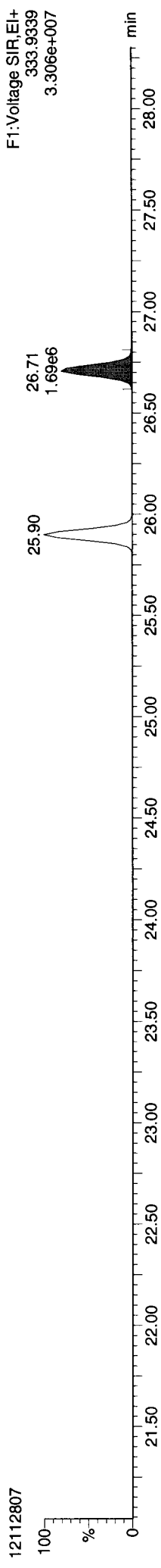
Quantify Sample Report **MassLynx 4.1 SCN 714**  
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
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Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

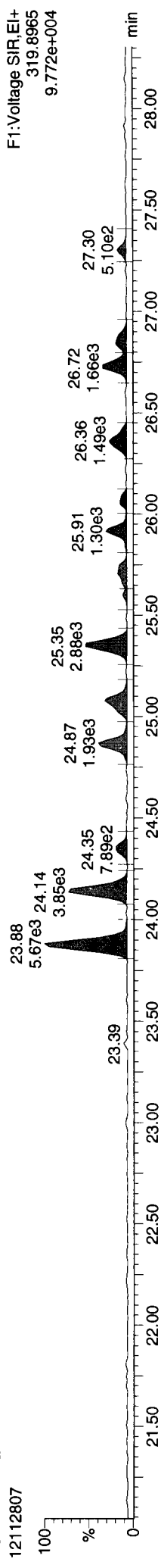
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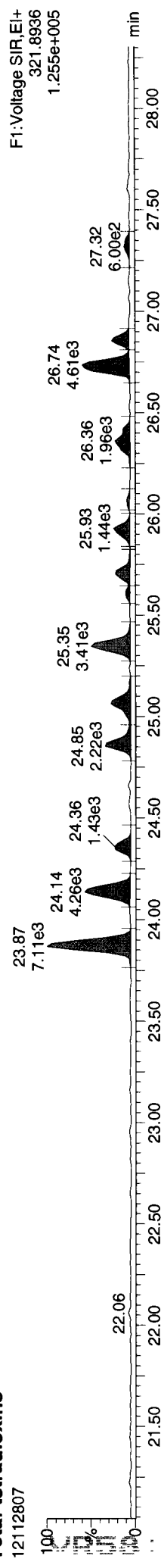
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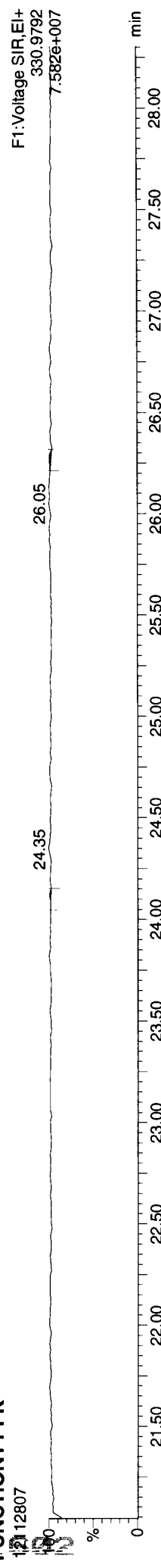
**Total-tetradoxins**



**Total-tetradoxins**

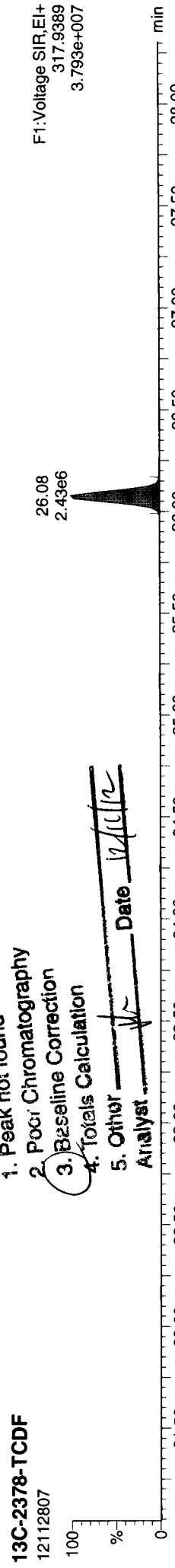
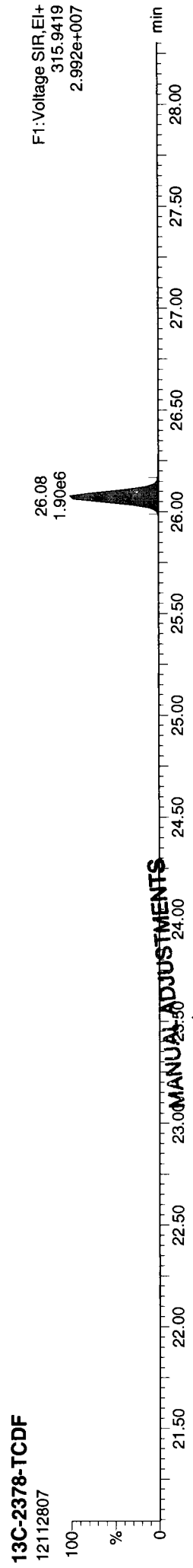


**FUNCTION1 PFK**

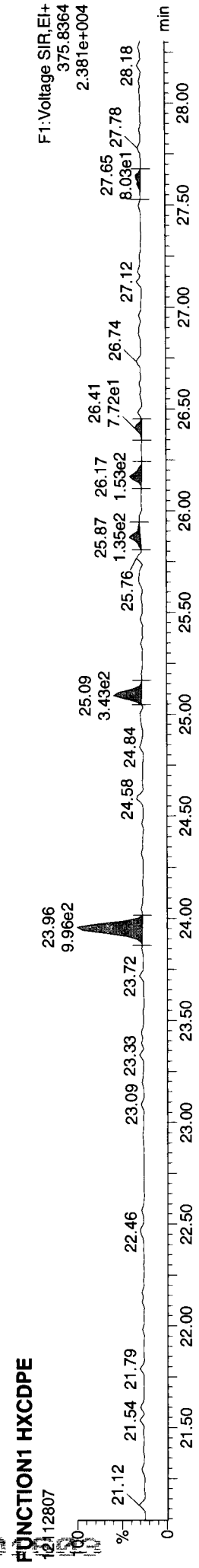
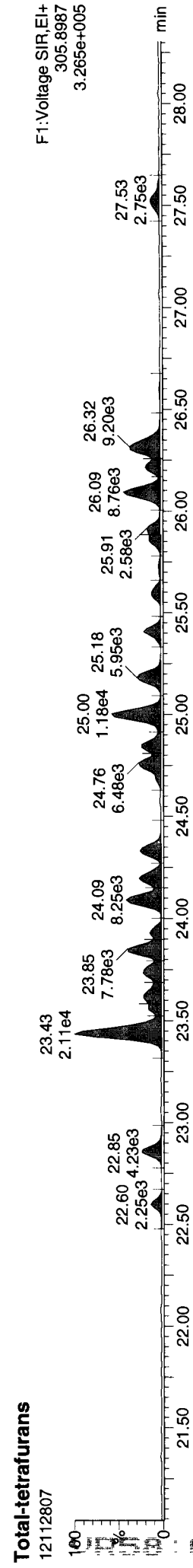
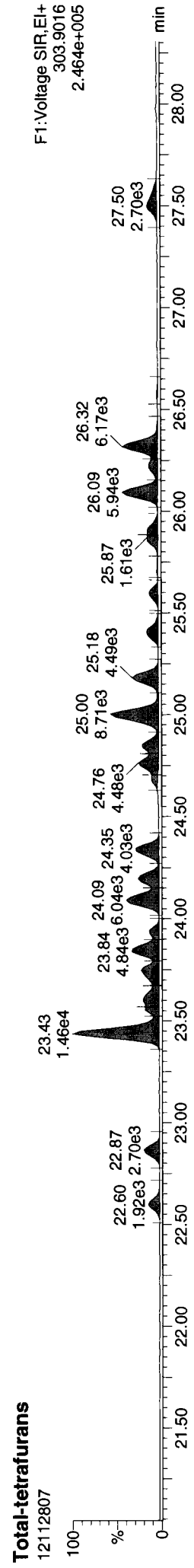


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Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

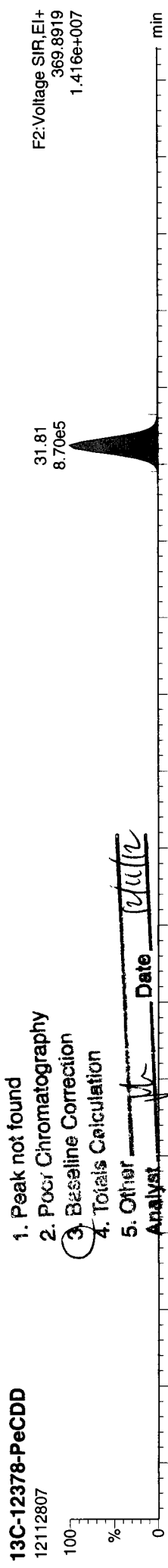
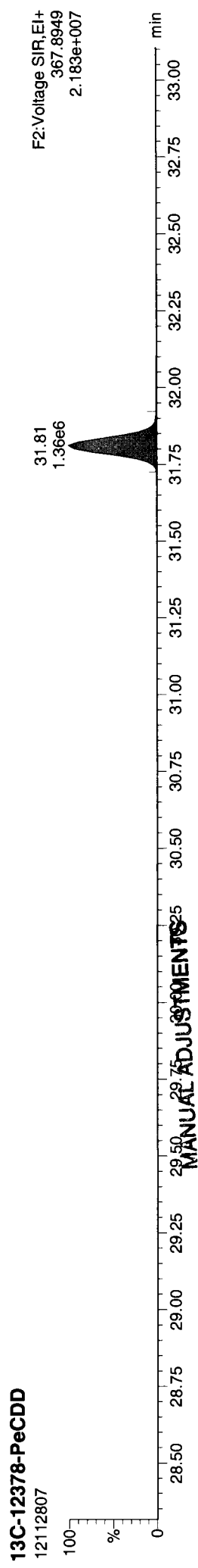


1. Peak not found
  2. Pocr Chromatography
  3. Baseline Correction
  4. Totals Calculation
  5. Other
- Analyst: pk Date: 12/11/12

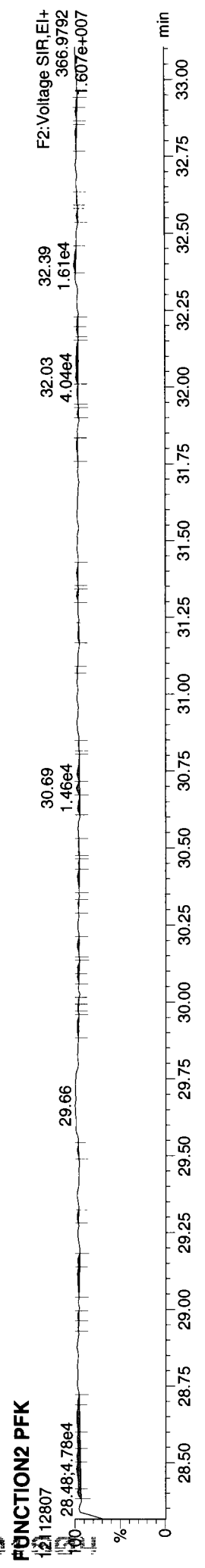
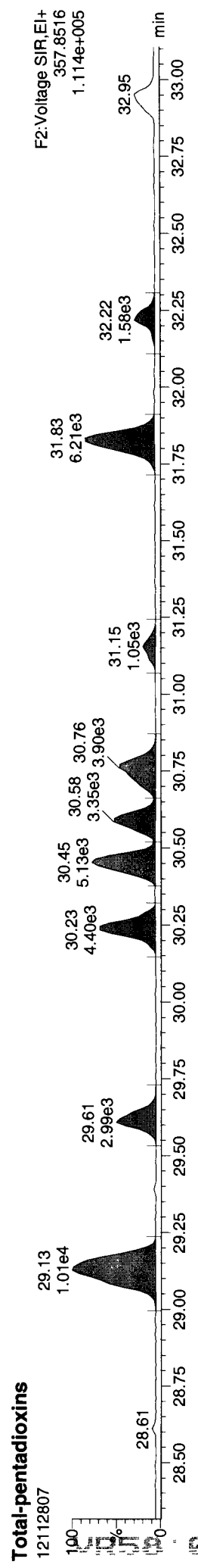
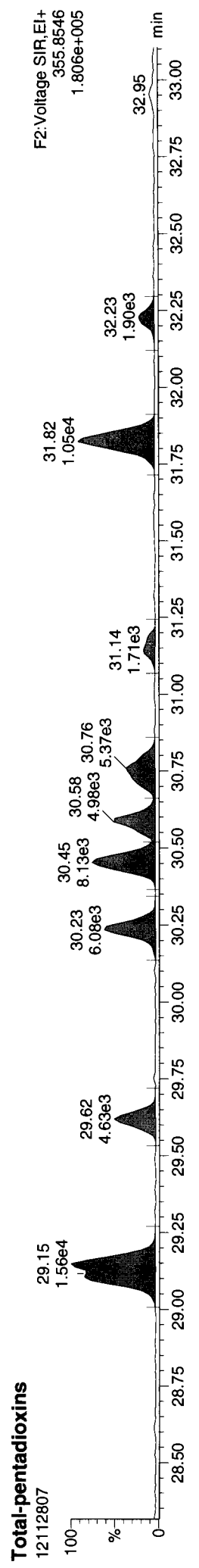


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Printed: Monday, December 10, 2012 14:38:20 Pacific Standard Time

Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk



1. Peak not found
  2. Poor Chromatography
  3. Baseline Correction
  4. Totals Calculation
  5. Other
- Analyst: pk Date: 12/10/12



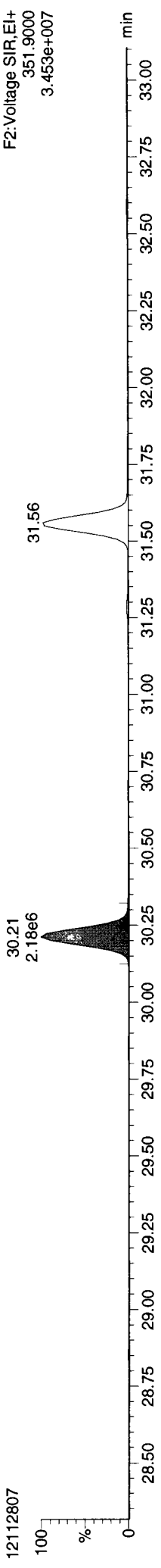
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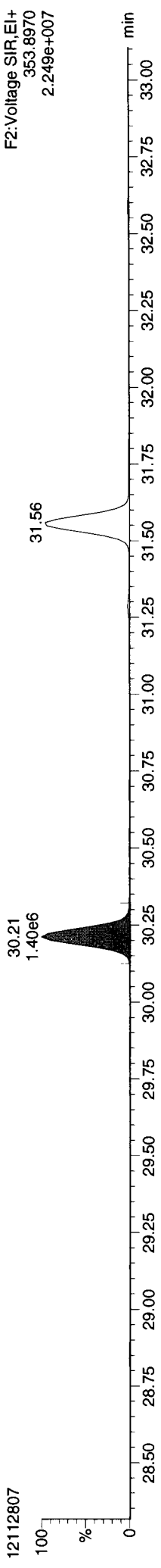
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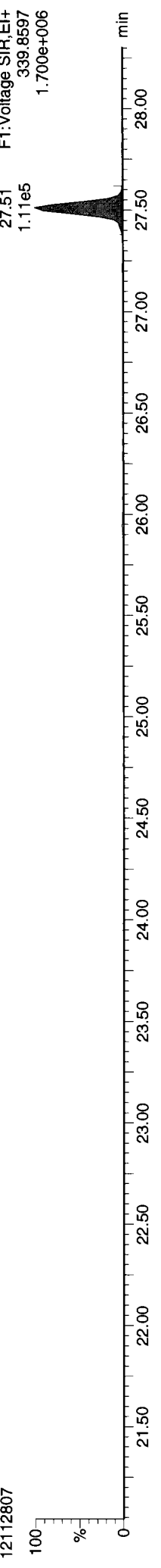
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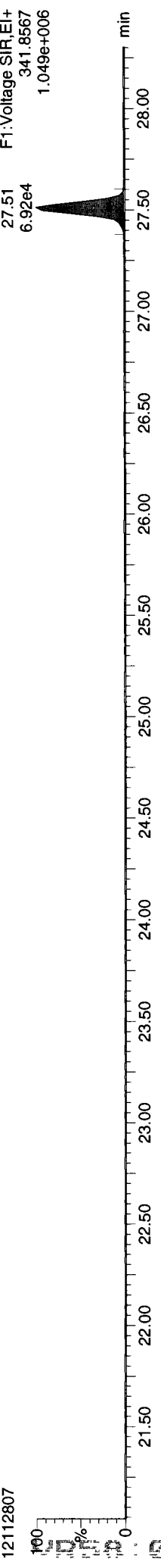
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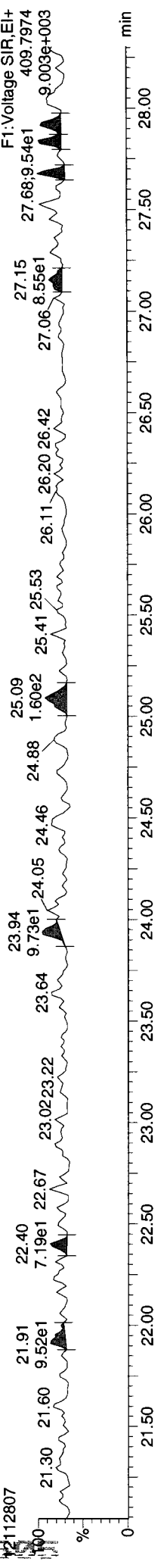
Total-penta1



Total-penta1

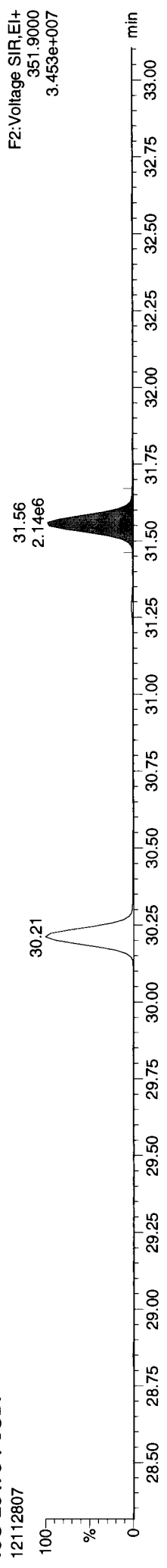


FUNCTION1 HPCDPE

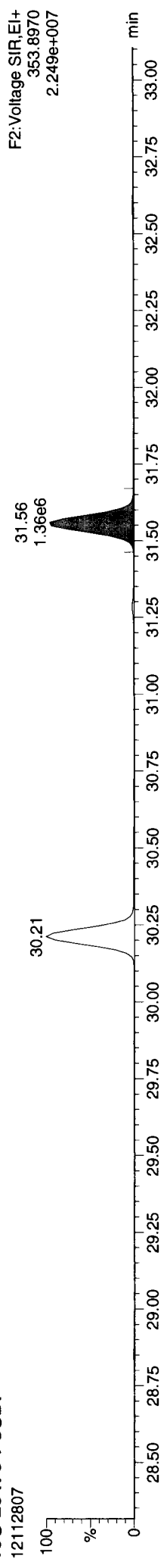


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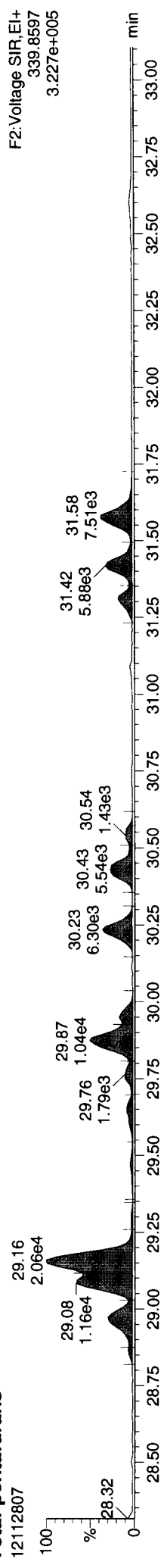
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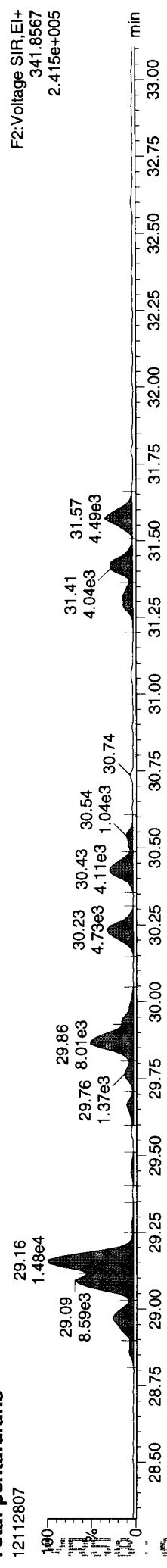
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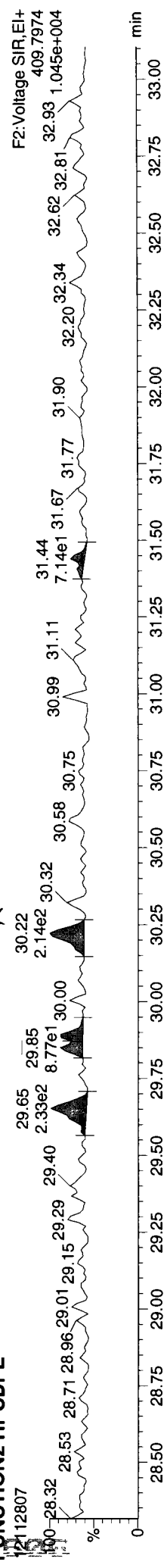
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



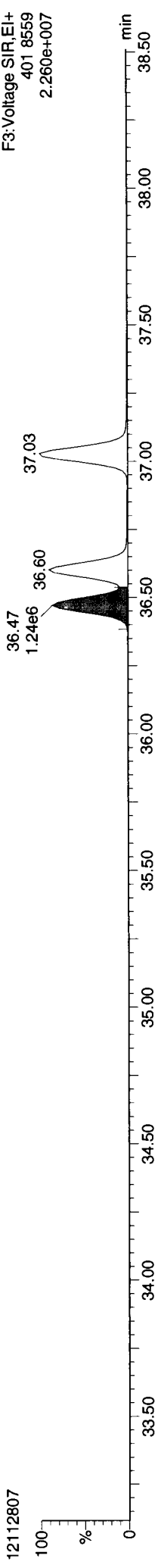
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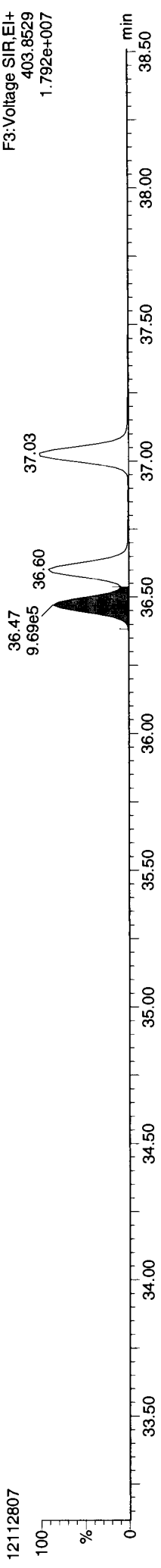
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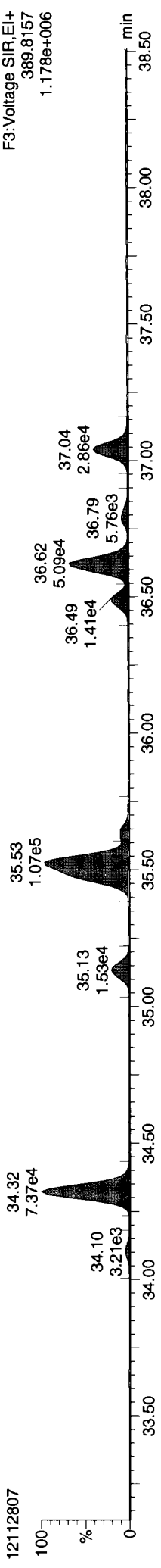
13C-123478-HxCDD



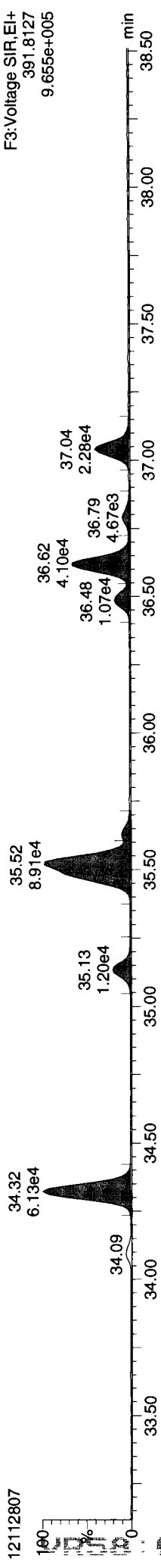
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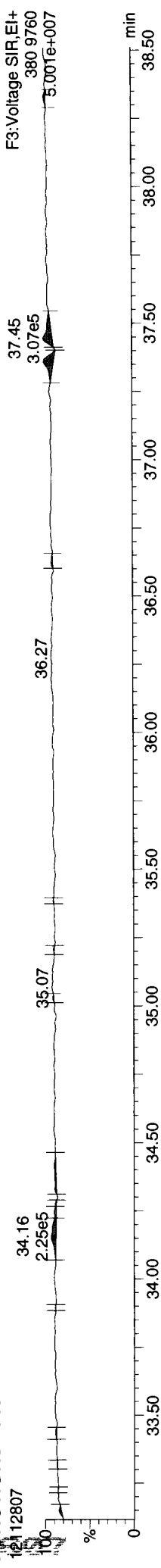
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

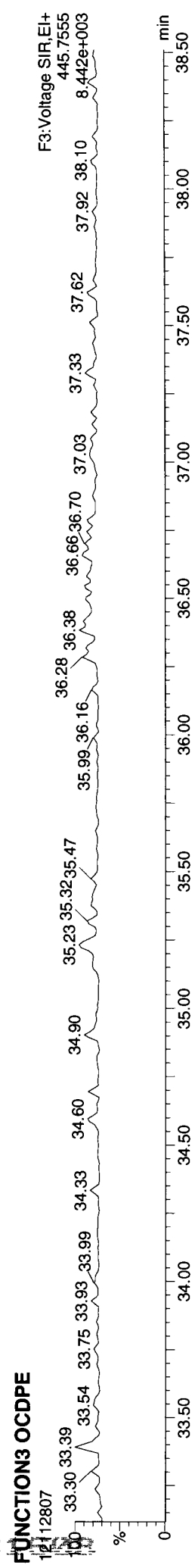
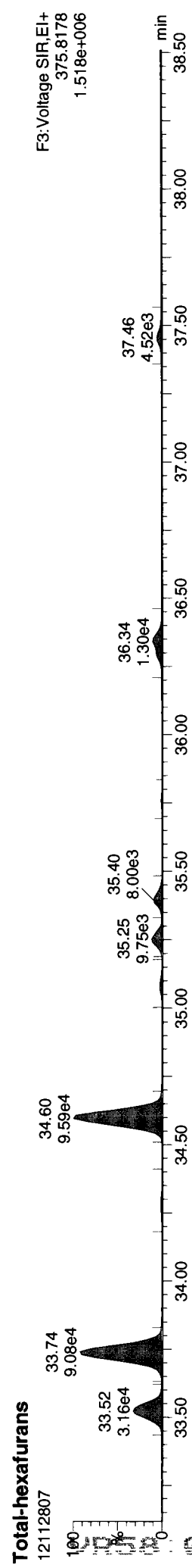
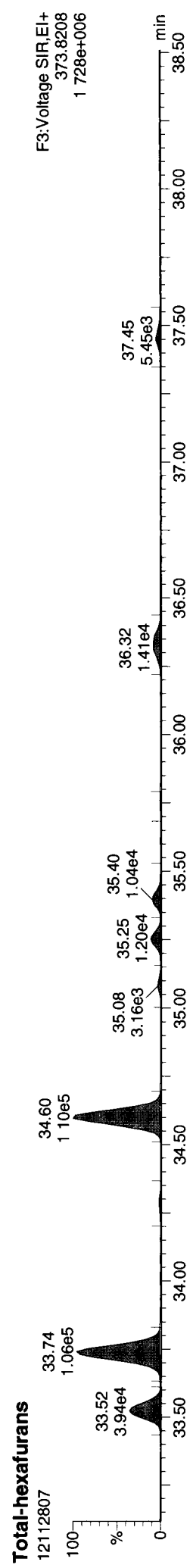
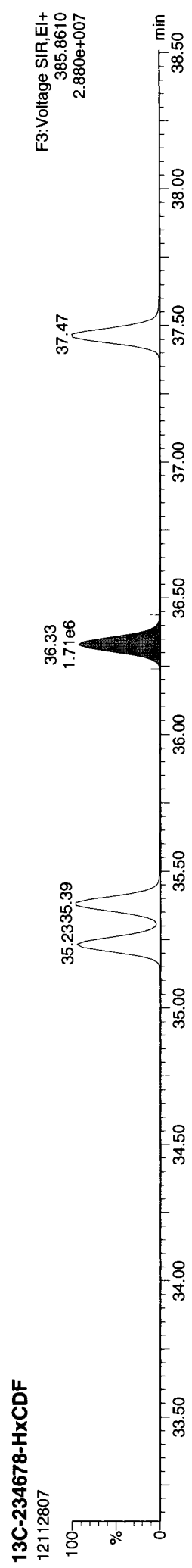
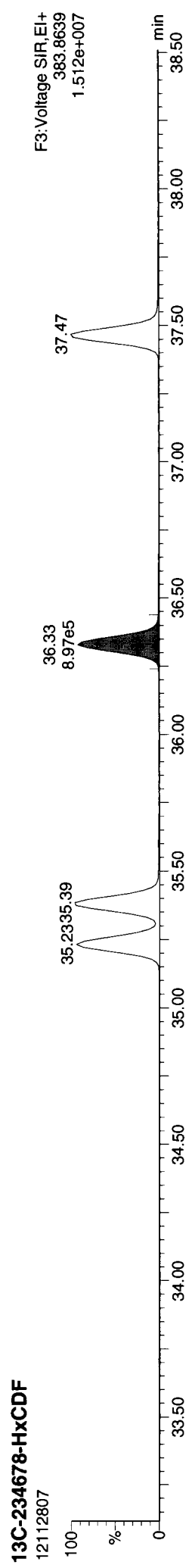


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Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

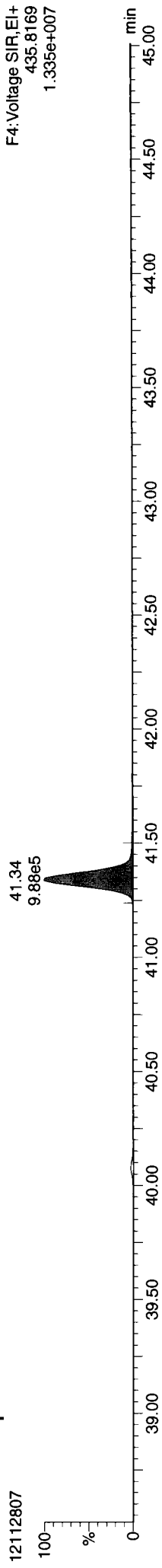




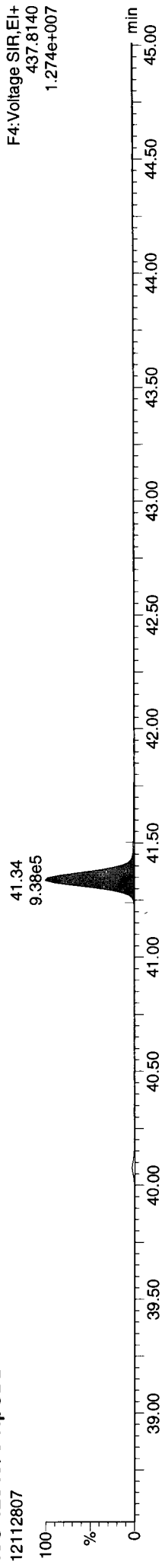
Quantify Sample Report MassLynx 4.1 SCN 714  
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Printed: Monday, December 10, 2012 14:38:20 Pacific Standard Time

Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

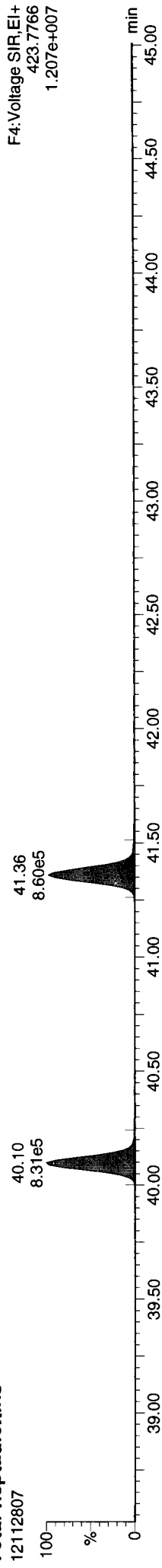
13C-1234678-HpCDD



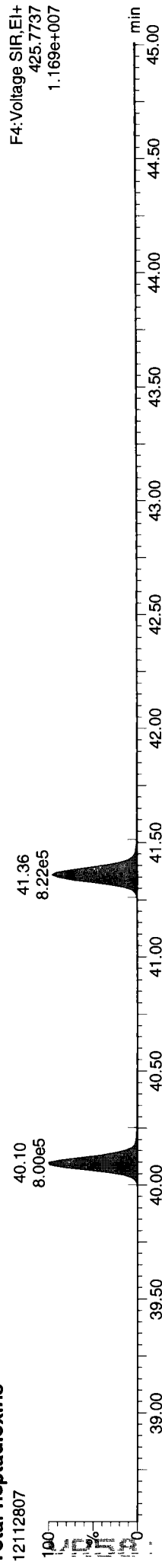
13C-1234678-HpCDD



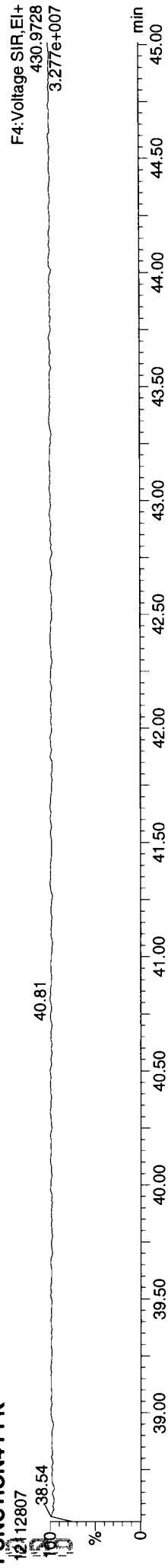
Total-heptadioxins



Total-heptadioxins

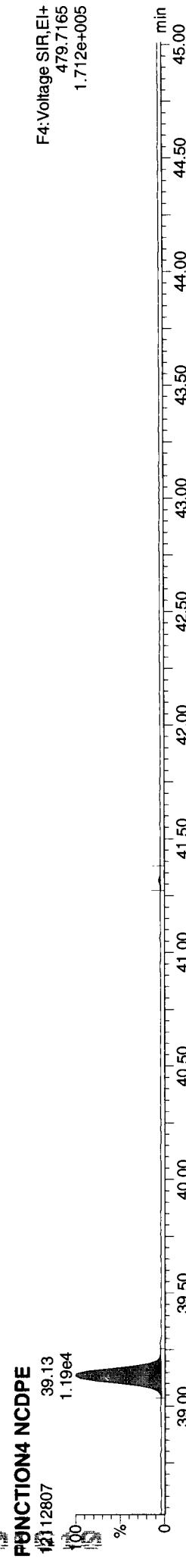
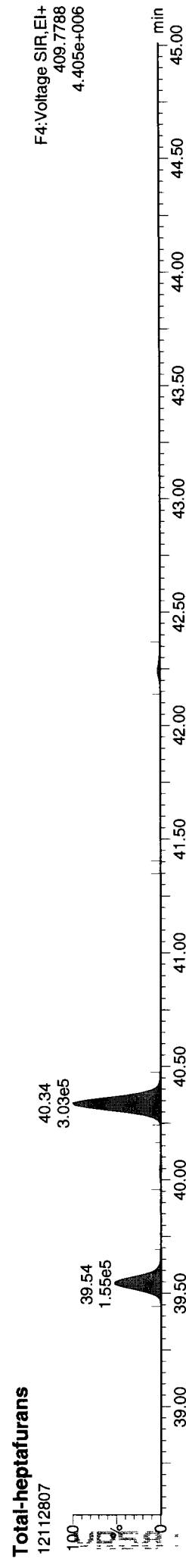
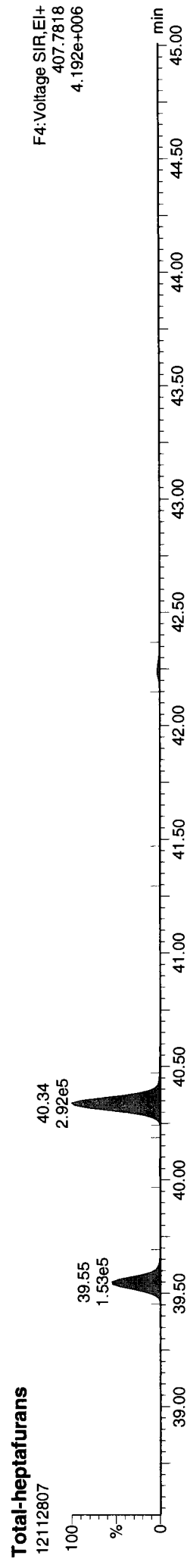
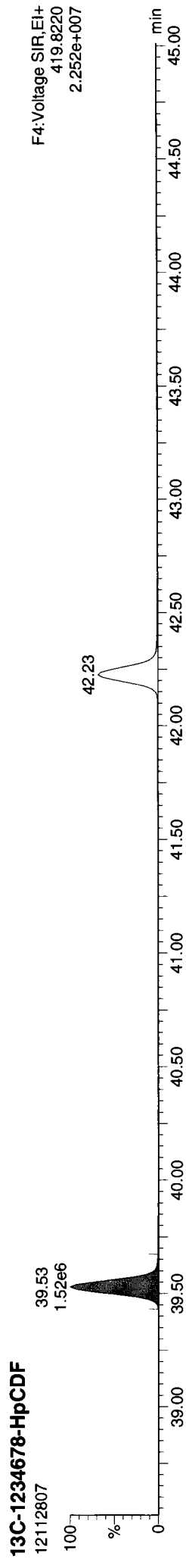
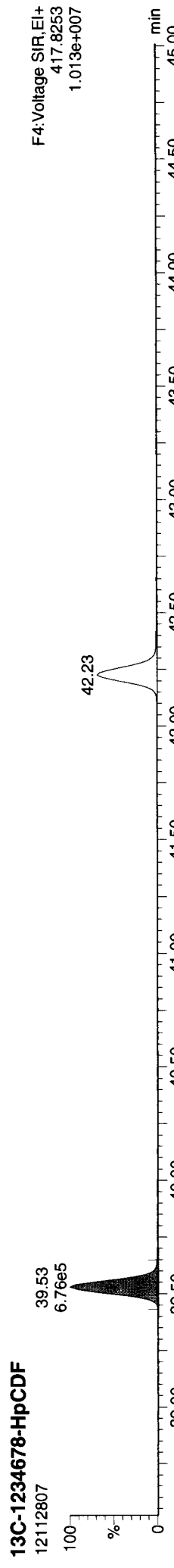


FUNCTION4 PFK

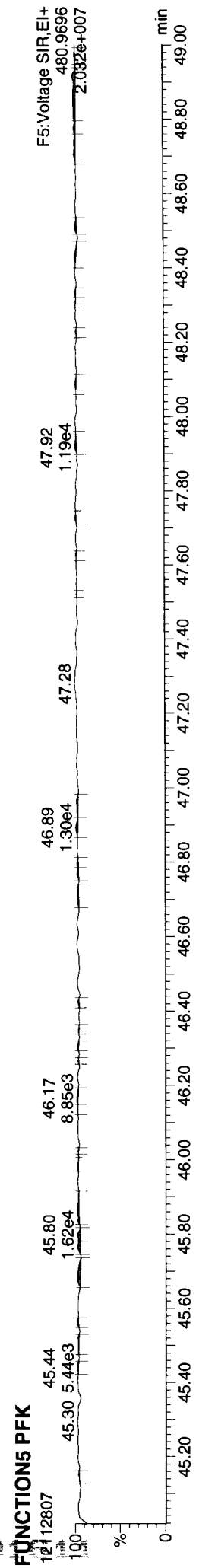
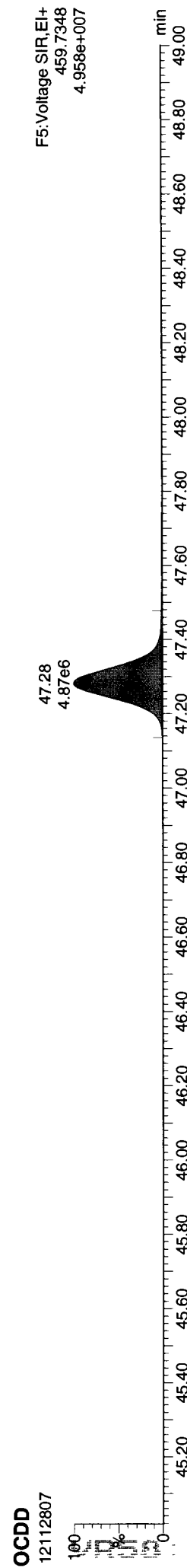
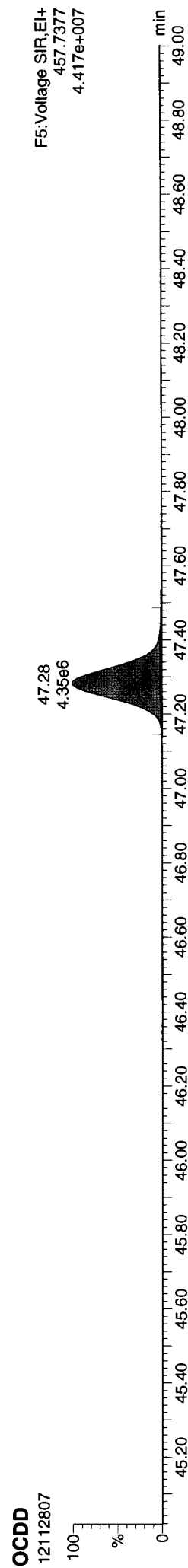
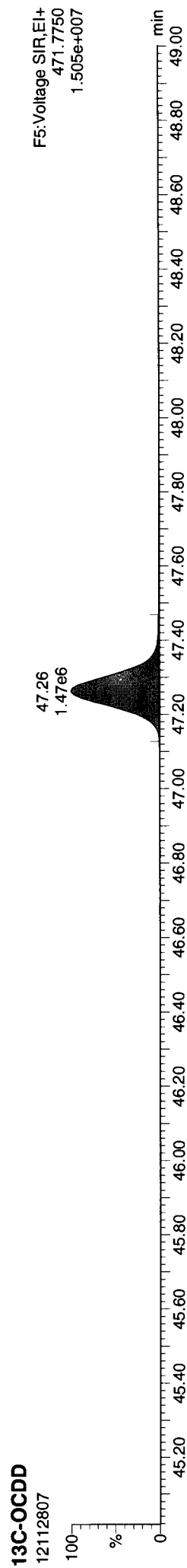
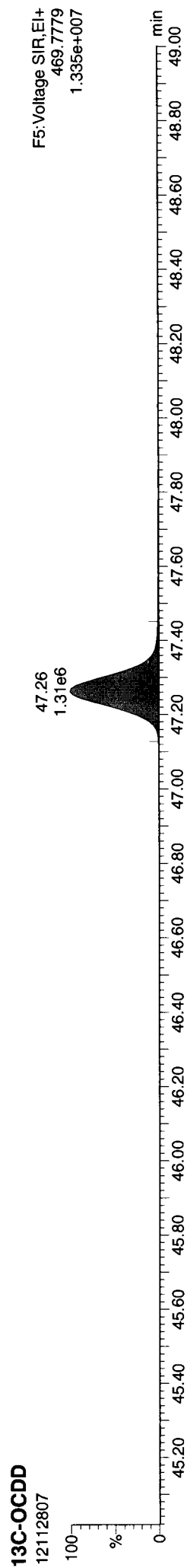


**Quantify Sample Report**      **MassLynx 4.1 SCN 714**  
**Dataset:** P:\DIOXIN8290.PRO\121128DATA1.qld  
**Last Altered:** Monday, December 10, 2012 14:32:13 Pacific Standard Time  
**Printed:** Monday, December 10, 2012 14:38:20 Pacific Standard Time

**Name:** 12112807, **Date:** 28-Nov-2012, **Time:** 15:06:14, **ID:** VR58A, **Conditions:** AUTOSPEC01, **User:** pk



Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk



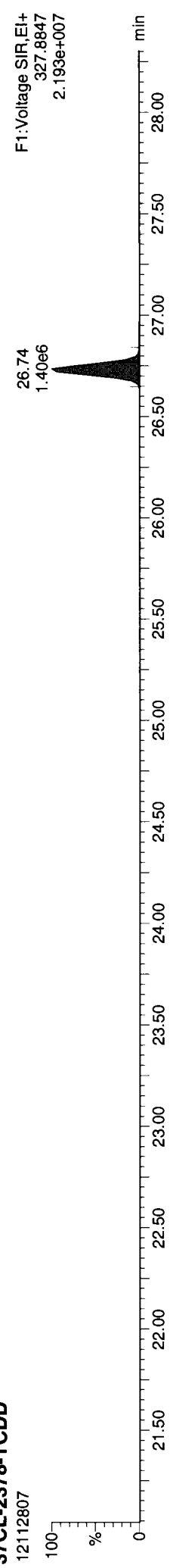
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld

Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time

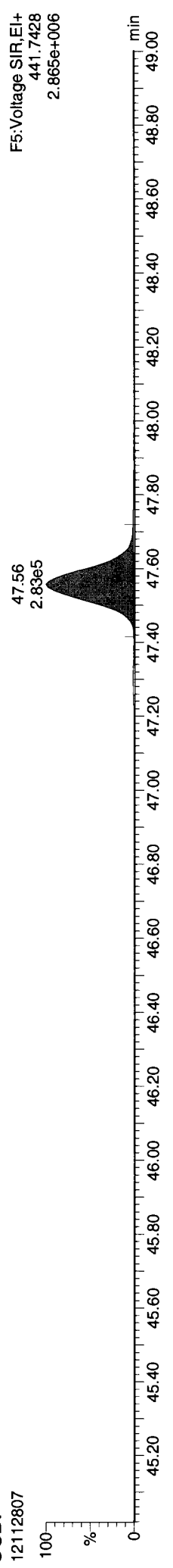
Printed: Monday, December 10, 2012 14:38:20 Pacific Standard Time

Name: 12112807, Date: 28-Nov-2012, Time: 15:06:14, ID: VR58A, Conditions: AUTOSPEC01, User: pk

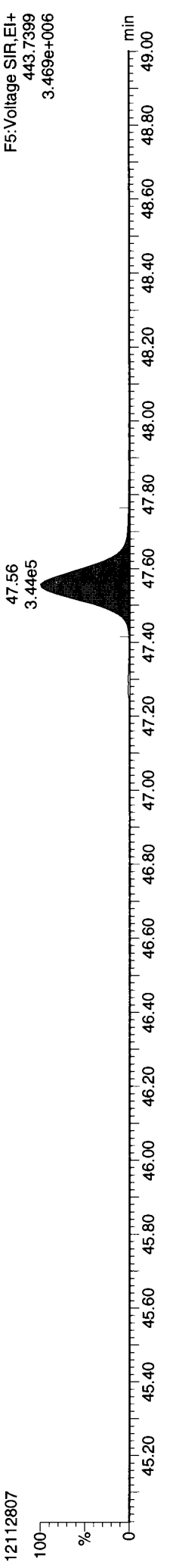
37CL-2378-TCDD



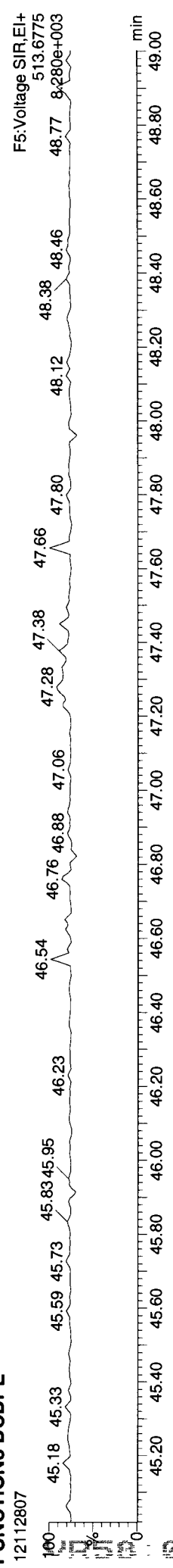
OCDF



OCDF



FUNCTION5 DCDPE



12112807

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

*Mr 12/10/12*

Method: P:\DIOXIN8290.PROMethDB\DiDioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurvedB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.078	1.001	3.25e4	4.56e4	0.877	0.712	0.770	321.4	1688	2250	5.43e5	7.10e5	NO	1.693
12378-PeCDF	30.223	1.001	6.19e4	4.46e4	0.896	1.389	1.550	632.0	1573	2518	9.94e5	6.90e5	NO	2.688
23478-PeCDF	31.560	1.000	6.43e4	4.44e4	0.926	1.448	1.550	645.9	1573	2518	1.02e6	6.83e5	NO	2.596
123478-HxCDF	35.243	1.001	1.57e5	1.32e5	1.068	1.190	1.240	554.9	4348	5774	2.41e6	2.05e6	NO	7.658
234678-HxCDF	36.328	1.000	2.11e5	1.79e5	1.037	1.180	1.240	520.5	4348	5774	2.26e6	1.97e6	NO	10.542
123678-HxCDF	35.386	1.000	1.41e5	1.21e5	1.035	1.166	1.240	516.0	4348	5774	2.24e6	1.87e6	NO	6.827
123789-HxCDF	37.447	1.000	6.37e4	5.24e4	0.987	1.214	1.240	201.7	4348	5774	8.77e5	7.38e5	NO	3.559
1234678-HpCDF	39.540	1.001	2.48e6	2.51e6	1.232	0.988	1.050	6748.2	5538	5576	3.74e7	3.78e7	NO	141.176
1234789-HpCDF	42.237	1.000	1.04e5	1.09e5	1.215	0.992	1.050	240.8	5538	5576	1.33e6	1.42e6	NO	7.681
OCDF	47.558	1.006	5.13e6	6.05e6	1.138	0.848	0.890	14051.3	3656	1631	5.14e7	6.07e7	NO	436.131
2378-TCDD	26.721	1.001	1.07e4	1.61e4	1.049	0.668	0.770	123.4	1330	1268	1.64e5	2.64e5	NO	0.661
12378-PeCDD	31.823	1.001	1.17e5	7.60e4	0.998	1.537	1.550	760.9	2272	1345	1.73e6	1.11e6	NO	6.400
123478-HxCDD	36.471	1.000	2.09e5	1.71e5	0.971	1.223	1.240	429.2	7704	6219	3.31e6	2.67e6	NO	12.912
123678-HxCDD	36.603	1.001	9.85e5	7.84e5	0.918	1.256	1.240	1934.3	7704	6219	1.49e7	1.20e7	NO	59.459
123789-HxCDD	37.030	1.012	4.28e5	3.39e5	0.932	1.257	1.240	836.6	7704	6219	6.45e6	5.07e6	NO	26.185
1234678-HpCDD	41.360	1.001	1.59e7	1.53e7	1.017	1.038	1.050	13746.7	15760	19691	2.17e8	2.09e8	NO	1125.052
OCDD	47.289	1.000	8.79e7	9.83e7	1.008	0.888	0.890	102530.4	8609	9096	8.83e8	9.95e8	NO	8168.701
13C-2378-TCDF	26.063	1.007	2.30e6	2.96e6	1.473	0.776	0.770	12210.1	2985	2133	3.64e7	4.68e7	NO	77.158
13C-12378-PeCDF	30.201	1.167	2.70e6	1.72e6	1.148	1.566	1.550	7330.8	5877	3817	4.31e7	2.77e7	NO	83.119
13C-23478-PeCDF	31.549	1.219	2.76e6	1.77e6	1.113	1.559	1.550	7202.1	5877	3817	4.23e7	2.74e7	NO	87.809
13C-123478-HxCDF	35.221	0.952	1.21e6	2.32e6	1.209	0.519	0.510	5443.1	3484	4213	1.90e7	3.63e7	NO	76.145
13C-123678-HxCDF	35.375	0.956	1.27e6	2.43e6	1.269	0.523	0.510	5574.8	3484	4213	1.94e7	3.69e7	NO	75.984
13C-234678-HxCDF	36.318	0.981	1.22e6	2.35e6	1.236	0.519	0.510	5358.6	3484	4213	1.87e7	3.60e7	NO	75.167
13C-123789-HxCDF	37.458	1.012	1.14e6	2.17e6	1.107	0.524	0.510	5036.8	3484	4213	1.75e7	3.37e7	NO	77.901
13C-1234678-HpCDF	39.518	1.068	8.89e5	1.98e6	1.051	0.448	0.440	3227.1	4114	2864	1.33e7	2.98e7	NO	71.232
13C-1234789-HpCDF	42.226	1.141	7.05e5	1.58e6	0.815	0.448	0.440	2148.2	4114	2864	8.84e6	1.97e7	NO	73.018
13C-1234-TCDD	25.884	0.000	2.04e6	2.59e6	1.000	0.785	0.770	8908.6	3674	1922	3.27e7	4.18e7	NO	100.000
13C-2378-TCDD	26.691	1.031	1.70e6	2.17e6	0.946	0.786	0.770	7046.7	3674	1922	2.59e7	3.32e7	NO	88.315
13C-12378-PeCDD	31.802	1.229	1.85e6	1.17e6	0.721	1.574	1.550	11685.1	2480	2615	2.90e7	1.85e7	NO	90.504
13C-123478-HxCDD	36.460	0.985	1.69e6	1.34e6	0.991	1.257	1.240	7559.9	3421	3073	2.59e7	2.05e7	NO	79.653
13C-123678-HxCDD	36.581	0.988	1.80e6	1.44e6	1.025	1.248	1.240	7927.6	3421	3073	2.71e7	2.18e7	NO	82.476
13C-1234678-HpCDD	41.338	1.117	1.40e6	1.33e6	0.866	1.053	1.050	6130.4	3131	2620	1.92e7	1.81e7	NO	82.070
13C-OCDD	47.271	1.277	2.13e6	2.38e6	0.769	0.894	0.890	9404.6	2236	2845	2.10e7	2.39e7	NO	152.804

X

2

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

	37.008	0.000	2.13e6	1.70e6	1.000	1.250	1.240	9411.2	3421	3073	3.22e7	2.58e7	NO	
13C-123789-HXCDD														100.000
Total-tetrafurans			4.50e5		0.877				1688		6.95e6			25.626
Total-penta1			1.16e6						1025		1.78e7			47.013
Total-pentafurans			7.51e5		0.911				1573		1.16e7			31.225
Total-hexafurans			4.66e6		1.032				4348		7.17e7			236.376
Total-heptafurans			7.14e6		1.223				5538		1.05e8			439.780
Total-Furans			1.93e7		1.041				1688		2.65e8			1216.581
Total-tetra-dioxins			1.14e5		1.049				1330		1.68e6			7.350
Total-penta-dioxins			5.52e5		0.998				2272		7.51e6			30.169
Total-hexa-dioxins			4.61e6		0.940				7704		6.32e7			281.622
Total-hepta-dioxins			2.93e7		1.017				15760		4.19e8			2076.890
Total-Dioxins			1.22e8		0.985				1330		1.37e9			10563.948
Total-TEQ			1.41e8					17819.6	1330		1.64e9			11777.654
37CL-2378-TCDD	26.721	1.032	1.81e6		1.044				1610		2.87e7			37.452
FUNCTION1 PFK			2.88e6						618468		2.31e7			0.000
FUNCTION2 PFK			1.64e6						248156		3.93e6			0.000
FUNCTION3 PFK			6.13e5						478485		4.11e6			
FUNCTION4 PFK			4.34e5						416161		1.06e7			
FUNCTION5 PFK			7.68e3						312168		4.78e5			
FUNCTION1 HXCDPE			7.30e3						1133		1.20e5			0.000
FUNCTION1 HPCDPE			1.40e3						1054		3.11e4			0.000
FUNCTION2 HPCDPE			5.94e3						2077		9.55e4			0.000
FUNCTION3 OCDPE			3.48e3						839		6.26e4			0.000
FUNCTION4 NCDPE			9.36e4						1116		1.44e6			0.000
FUNCTION5 DCDPE			1.64e3						413		1.94e4			0.000

12/10/12 14:38:43

**Quantify Totals Report MassLynx 4.1 SCN 714**

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
 Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
 Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

**TF**

35 Total-tetrafurans	303.9016	24.58	0.000	0.877	0.000	0.042	0.91	0.77	YES	9.7
35 Total-tetrafurans	303.9016	24.33	47659.477	0.877	1.033	1.033	0.74	0.77	NO	187.5
35 Total-tetrafurans	303.9016	24.18	35160.353	0.877	0.762	0.762	0.79	0.77	NO	148.4
35 Total-tetrafurans	303.9016	24.08	90310.187	0.877	1.958	1.958	0.71	0.77	NO	344.4
35 Total-tetrafurans	303.9016	23.91	17560.186	0.877	0.381	0.381	0.83	0.77	NO	80.1
35 Total-tetrafurans	303.9016	23.84	75087.621	0.877	1.628	1.628	0.70	0.77	NO	295.5
35 Total-tetrafurans	303.9016	23.73	40799.984	0.877	0.885	0.885	0.71	0.77	NO	142.2
35 Total-tetrafurans	303.9016	23.61	0.000	0.877	0.000	0.672	0.57	0.77	YES	123.6
35 Total-tetrafurans	303.9016	23.55	0.000	0.877	0.000	0.408	0.97	0.77	YES	104.4
35 Total-tetrafurans	303.9016	23.42	196214.852	0.877	4.255	4.255	0.71	0.77	NO	756.2
35 Total-tetrafurans	303.9016	22.85	37839.037	0.877	0.821	0.821	0.74	0.77	NO	161.0
35 Total-tetrafurans	303.9016	22.73	0.000	0.877	0.000	0.003	1.58	0.77	YES	2.2
35 Total-tetrafurans	303.9016	22.58	22884.615	0.877	0.496	0.496	0.71	0.77	NO	91.9
35 Total-tetrafurans	303.9016	26.57	0.000	0.877	0.000	0.014	0.47	0.77	YES	3.2
35 Total-tetrafurans	303.9016	26.48	0.000	0.877	0.000	0.010	0.47	0.77	YES	3.3
35 Total-tetrafurans	303.9016	26.30	70779.400	0.877	1.535	1.535	0.75	0.77	NO	249.0
35 Total-tetrafurans	303.9016	26.21	21804.859	0.877	0.473	0.473	0.73	0.77	NO	91.6
1 2378-TCDF	303.9016	26.08	78077.176	0.877	1.693	1.693	0.71	0.77	NO	321.4
35 Total-tetrafurans	303.9016	25.90	21307.324	0.877	0.462	0.462	0.79	0.77	NO	82.0
35 Total-tetrafurans	303.9016	25.84	0.000	0.877	0.000	0.264	0.47	0.77	YES	65.2
35 Total-tetrafurans	303.9016	25.69	0.000	0.877	0.000	0.044	0.50	0.77	YES	8.5
35 Total-tetrafurans	303.9016	25.59	17092.983	0.877	0.371	0.371	0.71	0.77	NO	64.2
35 Total-tetrafurans	303.9016	25.39	25710.169	0.877	0.558	0.558	0.73	0.77	NO	102.9
35 Total-tetrafurans	303.9016	25.17	59434.852	0.877	1.289	1.289	0.79	0.77	NO	236.4
35 Total-tetrafurans	303.9016	24.99	113848.390	0.877	2.469	2.469	0.73	0.77	NO	438.2
35 Total-tetrafurans	303.9016	24.84	39397.603	0.877	0.854	0.854	0.69	0.77	NO	144.6
35 Total-tetrafurans	303.9016	24.75	58043.390	0.877	1.259	1.259	0.71	0.77	NO	179.2
35 Total-tetrafurans	303.9016	27.48	0.000	0.877	0.000	0.988	0.91	0.77	YES	232.6

**PP**

36 Total-penta1	339.8597	27.50	1927326.313		47.013	47.013	1.51	1.55	NO	17379.5
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Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
 Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

PF

37	Total-pentafurans	339.8597	30.53	16305.225	0.911	0.400	0.400	1.51	1.55	NO	100.1
37	Total-pentafurans	339.8597	30.42	100114.348	0.911	2.458	2.458	1.40	1.55	NO	578.3
2	12378-PeCDF	339.8597	30.22	106428.996	0.896	2.688	2.688	1.39	1.55	NO	632.0
37	Total-pentafurans	339.8597	29.86	195183.015	0.911	4.792	4.792	1.39	1.55	NO	906.0
37	Total-pentafurans	339.8597	29.76	28155.042	0.911	0.691	0.691	1.48	1.55	NO	186.4
37	Total-pentafurans	339.8597	29.64	16590.307	0.911	0.407	0.407	1.57	1.55	NO	79.7
37	Total-pentafurans	339.8597	29.44	8242.335	0.911	0.202	0.202	1.53	1.55	NO	52.0
37	Total-pentafurans	339.8597	29.29	0.000	0.911	0.000	0.081	2.54	1.55	YES	34.2
37	Total-pentafurans	339.8597	29.15	305360.727	0.911	7.496	7.496	1.48	1.55	NO	1843.3
37	Total-pentafurans	339.8597	29.08	177887.406	0.911	4.367	4.367	1.46	1.55	NO	1179.0
37	Total-pentafurans	339.8597	28.96	63051.204	0.911	1.548	1.548	1.45	1.55	NO	308.0
37	Total-pentafurans	339.8597	28.86	0.000	0.911	0.000	0.190	1.15	1.55	YES	72.9
37	Total-pentafurans	339.8597	28.46	0.000	0.911	0.000	0.003	0.92	1.55	YES	2.0
37	Total-pentafurans	339.8597	32.59	14379.507	0.911	0.353	0.353	1.48	1.55	NO	85.6
37	Total-pentafurans	339.8597	31.70	0.000	0.911	0.000	0.017	0.97	1.55	YES	7.7
3	23478-PeCDF	339.8597	31.56	108767.945	0.926	2.596	2.596	1.45	1.55	NO	645.9
37	Total-pentafurans	339.8597	31.41	99042.012	0.911	2.431	2.431	1.43	1.55	NO	579.5
37	Total-pentafurans	339.8597	31.30	30564.413	0.911	0.750	0.750	1.35	1.55	NO	162.8
37	Total-pentafurans	339.8597	31.06	0.000	0.911	0.000	0.084	1.28	1.55	YES	21.2
37	Total-pentafurans	339.8597	30.71	1793.821	0.911	0.044	0.044	1.39	1.55	NO	11.2

HF

38	Total-hexafurans	373.8208	35.75	18936.526	1.032	0.521	0.521	1.28	1.24	NO	38.0
38	Total-hexafurans	373.8208	35.62	0.000	1.032	0.000	0.055	1.80	1.24	YES	6.4
6	123678-HxCDF	373.8208	35.39	261119.539	1.035	6.827	6.827	1.17	1.24	NO	516.0
4	123478-HxCDF	373.8208	35.24	288795.704	1.068	7.658	7.658	1.19	1.24	NO	554.9
38	Total-hexafurans	373.8208	35.07	46965.543	1.032	1.292	1.292	1.20	1.24	NO	91.4
38	Total-hexafurans	373.8208	34.59	3236972.125	1.032	89.043	89.043	1.17	1.24	NO	6282.8
38	Total-hexafurans	373.8208	34.27	44258.306	1.032	1.217	1.217	1.12	1.24	NO	85.3
38	Total-hexafurans	373.8208	33.99	5679.108	1.032	0.156	0.156	1.41	1.24	NO	10.3
38	Total-hexafurans	373.8208	33.73	3006873.000	1.032	82.714	82.714	1.18	1.24	NO	5851.3
38	Total-hexafurans	373.8208	33.51	1188181.751	1.032	32.685	32.685	1.16	1.24	NO	2333.2
7	123789-HxCDF	373.8208	37.45	116097.778	0.987	3.559	3.559	1.21	1.24	NO	201.7
5	234678-HxCDF	373.8208	36.33	389378.000	1.037	10.542	10.542	1.18	1.24	NO	520.5
38	Total-hexafurans	373.8208	35.96	5892.819	1.032	0.162	0.162	1.42	1.24	NO	11.1

HPF

39	Total-heptafurans	407.7818	40.33	9056395.000	1.223	287.298	287...	0.99	1.05	NO	11897.3
39	Total-heptafurans	407.7818	40.03	97840.188	1.223	3.104	3.104	1.05	1.05	NO	111.8
8	1234678-HpCDF	407.7818	39.54	4994025.250	1.232	141.176	141...	0.99	1.05	NO	6748.2
9	1234789-HpCDF	407.7818	42.24	212931.157	1.215	7.681	7.681	0.96	1.05	NO	240.8
39	Total-heptafurans	407.7818	41.36	16417.016	1.223	0.521	0.521	1.01	1.05	NO	19.6



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Furans,TF,PP,PF,HF,HPF,OF

35	Total-tetrafurans	303.9016	24.58	0.000	0.877	0.000	0.042	0.91	0.77	YES	9.7
35	Total-tetrafurans	303.9016	24.33	47659.477	0.877	1.033	1.033	0.74	0.77	NO	187.5
35	Total-tetrafurans	303.9016	24.18	35160.353	0.877	0.762	0.762	0.79	0.77	NO	148.4
35	Total-tetrafurans	303.9016	24.08	90310.187	0.877	1.958	1.958	0.71	0.77	NO	344.4
35	Total-tetrafurans	303.9016	23.91	17560.186	0.877	0.381	0.381	0.83	0.77	NO	80.1
35	Total-tetrafurans	303.9016	23.84	75087.621	0.877	1.628	1.628	0.70	0.77	NO	295.5
35	Total-tetrafurans	303.9016	23.73	40799.984	0.877	0.885	0.885	0.71	0.77	NO	142.2
35	Total-tetrafurans	303.9016	23.61	0.000	0.877	0.000	0.672	0.57	0.77	YES	123.6
35	Total-tetrafurans	303.9016	23.55	0.000	0.877	0.000	0.408	0.97	0.77	YES	104.4
35	Total-tetrafurans	303.9016	23.42	196214.852	0.877	4.255	4.255	0.71	0.77	NO	756.2
35	Total-tetrafurans	303.9016	22.85	37839.037	0.877	0.821	0.821	0.74	0.77	NO	161.0
35	Total-tetrafurans	303.9016	22.73	0.000	0.877	0.000	0.003	1.58	0.77	YES	2.2
35	Total-tetrafurans	303.9016	22.58	22884.615	0.877	0.496	0.496	0.71	0.77	NO	91.9
35	Total-tetrafurans	303.9016	26.57	0.000	0.877	0.000	0.014	0.47	0.77	YES	3.2
35	Total-tetrafurans	303.9016	26.48	0.000	0.877	0.000	0.010	0.47	0.77	YES	3.3
35	Total-tetrafurans	303.9016	26.30	70779.400	0.877	1.535	1.535	0.75	0.77	NO	249.0
35	Total-tetrafurans	303.9016	26.21	21804.859	0.877	0.473	0.473	0.73	0.77	NO	91.6
1	2378-TCDF	303.9016	26.08	78077.176	0.877	1.693	1.693	0.71	0.77	NO	321.4
35	Total-tetrafurans	303.9016	25.90	21307.324	0.877	0.462	0.462	0.79	0.77	NO	82.0
35	Total-tetrafurans	303.9016	25.84	0.000	0.877	0.000	0.264	0.47	0.77	YES	65.2
35	Total-tetrafurans	303.9016	25.69	0.000	0.877	0.000	0.044	0.50	0.77	YES	8.5
35	Total-tetrafurans	303.9016	25.59	17092.983	0.877	0.371	0.371	0.71	0.77	NO	64.2
35	Total-tetrafurans	303.9016	25.39	25710.169	0.877	0.558	0.558	0.73	0.77	NO	102.9
35	Total-tetrafurans	303.9016	25.17	59434.852	0.877	1.289	1.289	0.79	0.77	NO	236.4
35	Total-tetrafurans	303.9016	24.99	113848.390	0.877	2.469	2.469	0.73	0.77	NO	438.2
35	Total-tetrafurans	303.9016	24.84	39397.603	0.877	0.854	0.854	0.69	0.77	NO	144.6
35	Total-tetrafurans	303.9016	24.75	58043.390	0.877	1.259	1.259	0.71	0.77	NO	179.2
35	Total-tetrafurans	303.9016	27.48	0.000	0.877	0.000	0.988	0.91	0.77	YES	232.6
37	Total-pentafurans	339.8597	30.53	16305.225	0.911	0.400	0.400	1.51	1.55	NO	100.1
37	Total-pentafurans	339.8597	30.42	100114.348	0.911	2.458	2.458	1.40	1.55	NO	578.3
2	12378-PeCDF	339.8597	30.22	106428.996	0.896	2.688	2.688	1.39	1.55	NO	632.0
37	Total-pentafurans	339.8597	29.86	195183.015	0.911	4.792	4.792	1.39	1.55	NO	906.0
37	Total-pentafurans	339.8597	29.76	28155.042	0.911	0.691	0.691	1.48	1.55	NO	186.4
37	Total-pentafurans	339.8597	29.64	16590.307	0.911	0.407	0.407	1.57	1.55	NO	79.7
37	Total-pentafurans	339.8597	29.44	8242.335	0.911	0.202	0.202	1.53	1.55	NO	52.0
37	Total-pentafurans	339.8597	29.29	0.000	0.911	0.000	0.081	2.54	1.55	YES	34.2
37	Total-pentafurans	339.8597	29.15	305360.727	0.911	7.496	7.496	1.48	1.55	NO	1843.3
37	Total-pentafurans	339.8597	29.08	177887.406	0.911	4.367	4.367	1.46	1.55	NO	1179.0
37	Total-pentafurans	339.8597	28.96	63051.204	0.911	1.548	1.548	1.45	1.55	NO	308.0
37	Total-pentafurans	339.8597	28.86	0.000	0.911	0.000	0.190	1.15	1.55	YES	72.9
37	Total-pentafurans	339.8597	28.46	0.000	0.911	0.000	0.003	0.92	1.55	YES	2.0
37	Total-pentafurans	339.8597	32.59	14379.507	0.911	0.353	0.353	1.48	1.55	NO	85.6
37	Total-pentafurans	339.8597	31.70	0.000	0.911	0.000	0.017	0.97	1.55	YES	7.7
3	23478-PeCDF	339.8597	31.56	108767.945	0.926	2.596	2.596	1.45	1.55	NO	645.9
37	Total-pentafurans	339.8597	31.41	99042.012	0.911	2.431	2.431	1.43	1.55	NO	579.5
37	Total-pentafurans	339.8597	31.30	30564.413	0.911	0.750	0.750	1.35	1.55	NO	162.8
37	Total-pentafurans	339.8597	31.06	0.000	0.911	0.000	0.084	1.28	1.55	YES	21.2
37	Total-pentafurans	339.8597	30.71	1793.821	0.911	0.044	0.044	1.39	1.55	NO	11.2
38	Total-hexafurans	373.8208	35.75	18936.526	1.032	0.521	0.521	1.28	1.24	NO	36.0

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Furans,TF,PP,PF,HF,HPF,OF

38	Total-hexafurans	373.8208	35.62	0.000	1.032	0.000	0.055	1.80	1.24	YES	6.4
6	123678-HxCDF	373.8208	35.39	261119.539	1.035	6.827	6.827	1.17	1.24	NO	516.0
4	123478-HxCDF	373.8208	35.24	288795.704	1.068	7.658	7.658	1.19	1.24	NO	554.9
38	Total-hexafurans	373.8208	35.07	46965.543	1.032	1.292	1.292	1.20	1.24	NO	91.4
38	Total-hexafurans	373.8208	34.59	3236972.125	1.032	89.043	89.043	1.17	1.24	NO	6282.8
38	Total-hexafurans	373.8208	34.27	44258.306	1.032	1.217	1.217	1.12	1.24	NO	85.3
38	Total-hexafurans	373.8208	33.99	5679.108	1.032	0.156	0.156	1.41	1.24	NO	10.3
38	Total-hexafurans	373.8208	33.73	3006873.000	1.032	82.714	82.714	1.18	1.24	NO	5851.3
38	Total-hexafurans	373.8208	33.51	1188181.751	1.032	32.685	32.685	1.16	1.24	NO	2333.2
7	123789-HxCDF	373.8208	37.45	116097.778	0.987	3.559	3.559	1.21	1.24	NO	201.7
5	234678-HxCDF	373.8208	36.33	389378.000	1.037	10.542	10.542	1.18	1.24	NO	520.5
38	Total-hexafurans	373.8208	35.96	5892.819	1.032	0.162	0.162	1.42	1.24	NO	11.1
39	Total-heptafurans	407.7818	40.33	9056395.000	1.223	287.298	287....	0.99	1.05	NO	11897.3
39	Total-heptafurans	407.7818	40.03	97840.188	1.223	3.104	3.104	1.05	1.05	NO	111.8
8	1234678-HpCDF	407.7818	39.54	4994025.250	1.232	141.176	141....	0.99	1.05	NO	6748.2
10	OCDF	441.7428	47.56	11181231....	1.138	436.131	436....	0.85	0.89	NO	14051.3
9	1234789-HpCDF	407.7818	42.24	212931.157	1.215	7.681	7.681	0.96	1.05	NO	240.8
39	Total-heptafurans	407.7818	41.36	16417.016	1.223	0.521	0.521	1.01	1.05	NO	19.6
36	Total-penta1	339.8597	27.50	1927326.313		47.013	47.013	1.51	1.55	NO	17379.5

TD

41	Total-tetradoxins	319.8965	26.35	20153.139	1.049	0.497	0.497	0.75	0.77	NO	80.6
41	Total-tetradoxins	319.8965	26.05	2708.982	1.049	0.067	0.067	0.85	0.77	NO	14.4
41	Total-tetradoxins	319.8965	25.90	0.000	1.049	0.000	0.300	0.64	0.77	YES	60.1
41	Total-tetradoxins	319.8965	25.69	11463.113	1.049	0.283	0.283	0.73	0.77	NO	54.7
41	Total-tetradoxins	319.8965	25.60	0.000	1.049	0.000	0.126	1.08	0.77	YES	38.1
41	Total-tetradoxins	319.8965	25.33	37920.511	1.049	0.935	0.935	0.81	0.77	NO	194.0
41	Total-tetradoxins	319.8965	25.06	20480.806	1.049	0.505	0.505	0.68	0.77	NO	81.7
41	Total-tetradoxins	319.8965	24.85	12757.872	1.049	0.314	0.314	0.81	0.77	NO	60.6
41	Total-tetradoxins	319.8965	24.35	0.000	1.049	0.000	0.359	0.91	0.77	YES	87.8
41	Total-tetradoxins	319.8965	24.14	47712.399	1.049	1.176	1.176	0.73	0.77	NO	230.0
41	Total-tetradoxins	319.8965	23.87	65727.618	1.049	1.620	1.620	0.74	0.77	NO	326.9
41	Total-tetradoxins	319.8965	27.32	4872.795	1.049	0.120	0.120	0.86	0.77	NO	16.9
41	Total-tetradoxins	319.8965	26.84	15790.108	1.049	0.389	0.389	0.79	0.77	NO	80.6
11	2378-TCDD	319.8965	26.72	26803.418	1.049	0.661	0.661	0.67	0.77	NO	123.4

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PD

ID	Name	Trace	RT	Abundance	RELM	pg	EMPC	17:00	17:00	RT	Area
42	Total-pentadioxins	355.8546	32.22	27725.100	0.998	0.920	0.920	1.59	1.55	NO	116.1
12	12378-PeCDD	355.8546	31.82	192881.515	0.998	6.400	6.400	1.54	1.55	NO	760.9
42	Total-pentadioxins	355.8546	31.13	16971.383	0.998	0.563	0.563	1.56	1.55	NO	62.5
42	Total-pentadioxins	355.8546	30.75	84925.695	0.998	2.818	2.818	1.61	1.55	NO	234.5
42	Total-pentadioxins	355.8546	30.57	68808.694	0.998	2.283	2.283	1.67	1.55	NO	299.1
42	Total-pentadioxins	355.8546	30.44	138375.762	0.998	4.591	4.591	1.51	1.55	NO	577.2
42	Total-pentadioxins	355.8546	30.22	90882.016	0.998	3.015	3.015	1.49	1.55	NO	385.3
42	Total-pentadioxins	355.8546	29.61	52704.506	0.998	1.749	1.749	1.54	1.55	NO	239.2
42	Total-pentadioxins	355.8546	29.13	235993.679	0.998	7.830	7.830	1.52	1.55	NO	629.2

HD

ID	Name	Trace	RT	Abundance	RELM	pg	EMPC	17:00	17:00	RT	Area
43	Total-hexadioxins	389.8157	34.31	1742859.875	0.940	59.134	59.134	1.24	1.24	NO	1960.1
15	123789-HxCDD	389.8157	37.03	765126.344	0.932	26.185	26.185	1.26	1.24	NO	836.6
43	Total-hexadioxins	389.8157	36.78	115214.668	0.940	3.909	3.909	1.23	1.24	NO	122.1
14	123678-HxCDD	389.8157	36.60	1769372.875	0.918	59.459	59.459	1.26	1.24	NO	1934.3
13	123478-HxCDD	389.8157	36.47	379418.235	0.971	12.912	12.912	1.22	1.24	NO	429.2
43	Total-hexadioxins	389.8157	35.62	114623.739	0.940	3.889	3.889	1.25	1.24	NO	137.7
43	Total-hexadioxins	389.8157	35.52	3124089.875	0.940	105.998	105.998	1.24	1.24	NO	2460.6
43	Total-hexadioxins	389.8157	35.12	298750.094	0.940	10.136	10.136	1.22	1.24	NO	325.8

HPD

ID	Name	Trace	RT	Abundance	RELM	pg	EMPC	17:00	17:00	RT	Area
44	Total-heptadioxins	423.7766	40.09	26387943.000	1.017	951.839	951.839	1.04	1.05	NO	12835.6
16	1234678-HpCDD	423.7766	41.36	31189950.000	1.017	1125.000	1125.000	1.04	1.05	NO	13746.7

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Dioxins,TD,PD,HD,HPD,OD

41	Total-tetradoxins	319.8965	26.35	20153.139	1.049	0.497	0.497	0.75	0.77	NO	80.6
41	Total-tetradoxins	319.8965	26.05	2708.982	1.049	0.067	0.067	0.85	0.77	NO	14.4
41	Total-tetradoxins	319.8965	25.90	0.000	1.049	0.000	0.300	0.64	0.77	YES	60.1
41	Total-tetradoxins	319.8965	25.69	11463.113	1.049	0.283	0.283	0.73	0.77	NO	54.7
41	Total-tetradoxins	319.8965	25.60	0.000	1.049	0.000	0.126	1.08	0.77	YES	38.1
41	Total-tetradoxins	319.8965	25.33	37920.511	1.049	0.935	0.935	0.81	0.77	NO	194.0
41	Total-tetradoxins	319.8965	25.06	20480.806	1.049	0.505	0.505	0.68	0.77	NO	81.7
41	Total-tetradoxins	319.8965	24.85	12757.872	1.049	0.314	0.314	0.81	0.77	NO	60.6
41	Total-tetradoxins	319.8965	24.35	0.000	1.049	0.000	0.359	0.91	0.77	YES	87.8
41	Total-tetradoxins	319.8965	24.14	47712.399	1.049	1.176	1.176	0.73	0.77	NO	230.0
41	Total-tetradoxins	319.8965	23.87	65727.618	1.049	1.620	1.620	0.74	0.77	NO	326.9
41	Total-tetradoxins	319.8965	27.32	4872.795	1.049	0.120	0.120	0.86	0.77	NO	16.9
41	Total-tetradoxins	319.8965	26.84	15790.108	1.049	0.389	0.389	0.79	0.77	NO	80.6
11	2378-TCDD	319.8965	26.72	26803.418	1.049	0.661	0.661	0.67	0.77	NO	123.4
42	Total-pentadioxins	355.8546	32.22	27725.100	0.998	0.920	0.920	1.59	1.55	NO	116.1
12	12378-PeCDD	355.8546	31.82	192881.515	0.998	6.400	6.400	1.54	1.55	NO	760.9
42	Total-pentadioxins	355.8546	31.13	16971.383	0.998	0.563	0.563	1.56	1.55	NO	62.5
42	Total-pentadioxins	355.8546	30.75	84925.695	0.998	2.818	2.818	1.61	1.55	NO	234.5
42	Total-pentadioxins	355.8546	30.57	68808.694	0.998	2.283	2.283	1.67	1.55	NO	299.1
42	Total-pentadioxins	355.8546	30.44	138375.762	0.998	4.591	4.591	1.51	1.55	NO	577.2
42	Total-pentadioxins	355.8546	30.22	90882.016	0.998	3.015	3.015	1.49	1.55	NO	385.3
42	Total-pentadioxins	355.8546	29.61	52704.506	0.998	1.749	1.749	1.54	1.55	NO	239.2
42	Total-pentadioxins	355.8546	29.13	235993.679	0.998	7.830	7.830	1.52	1.55	NO	629.2
43	Total-hexadioxins	389.8157	34.31	1742859.875	0.940	59.134	59.134	1.24	1.24	NO	1960.1
15	123789-HxCDD	389.8157	37.03	765126.344	0.932	26.185	26.185	1.26	1.24	NO	836.6
43	Total-hexadioxins	389.8157	36.78	115214.668	0.940	3.909	3.909	1.23	1.24	NO	122.1
14	123678-HxCDD	389.8157	36.60	1769372.875	0.918	59.459	59.459	1.26	1.24	NO	1934.3
13	123478-HxCDD	389.8157	36.47	379418.235	0.971	12.912	12.912	1.22	1.24	NO	429.2
43	Total-hexadioxins	389.8157	35.62	114623.739	0.940	3.889	3.889	1.25	1.24	NO	137.7
43	Total-hexadioxins	389.8157	35.52	3124089.875	0.940	105.998	105....	1.24	1.24	NO	2460.6
43	Total-hexadioxins	389.8157	35.12	298750.094	0.940	10.136	10.136	1.22	1.24	NO	325.8
44	Total-heptadioxins	423.7766	40.09	26387943....	1.017	951.839	951....	1.04	1.05	NO	12835.6
16	1234678-HpCDD	423.7766	41.36	31189950....	1.017	1125.0...	1125...	1.04	1.05	NO	13746.7
17	OCDD	457.7377	47.29	185638248...	1.008	8168.7...	8168...	0.89	0.89	NO	10253...

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TotalTEQ,Furans,Dioxins

Sample	Component	Concentration	Mass	Area	Response	Response	Response	Response	Response	Response	Response
35	Total-tetrafurans	303.9016	24.58	0.000	0.877	0.000	0.042	0.91	0.77	YES	9.7
35	Total-tetrafurans	303.9016	24.33	47659.477	0.877	1.033	1.033	0.74	0.77	NO	187.5
35	Total-tetrafurans	303.9016	24.18	35160.353	0.877	0.762	0.762	0.79	0.77	NO	148.4
35	Total-tetrafurans	303.9016	24.08	90310.187	0.877	1.958	1.958	0.71	0.77	NO	344.4
35	Total-tetrafurans	303.9016	23.91	17560.186	0.877	0.381	0.381	0.83	0.77	NO	80.1
35	Total-tetrafurans	303.9016	23.84	75087.621	0.877	1.628	1.628	0.70	0.77	NO	295.5
35	Total-tetrafurans	303.9016	23.73	40799.984	0.877	0.885	0.885	0.71	0.77	NO	142.2
35	Total-tetrafurans	303.9016	23.61	0.000	0.877	0.000	0.672	0.57	0.77	YES	123.6
35	Total-tetrafurans	303.9016	23.55	0.000	0.877	0.000	0.408	0.97	0.77	YES	104.4
35	Total-tetrafurans	303.9016	23.42	196214.852	0.877	4.255	4.255	0.71	0.77	NO	756.2
35	Total-tetrafurans	303.9016	22.85	37839.037	0.877	0.821	0.821	0.74	0.77	NO	161.0
35	Total-tetrafurans	303.9016	22.73	0.000	0.877	0.000	0.003	1.58	0.77	YES	2.2
35	Total-tetrafurans	303.9016	22.58	22884.615	0.877	0.496	0.496	0.71	0.77	NO	91.9
35	Total-tetrafurans	303.9016	26.57	0.000	0.877	0.000	0.014	0.47	0.77	YES	3.2
35	Total-tetrafurans	303.9016	26.48	0.000	0.877	0.000	0.010	0.47	0.77	YES	3.3
35	Total-tetrafurans	303.9016	26.30	70779.400	0.877	1.535	1.535	0.75	0.77	NO	249.0
35	Total-tetrafurans	303.9016	26.21	21804.859	0.877	0.473	0.473	0.73	0.77	NO	91.6
1	2378-TCDF	303.9016	26.08	78077.176	0.877	1.693	1.693	0.71	0.77	NO	321.4
35	Total-tetrafurans	303.9016	25.90	21307.324	0.877	0.462	0.462	0.79	0.77	NO	82.0
35	Total-tetrafurans	303.9016	25.84	0.000	0.877	0.000	0.264	0.47	0.77	YES	65.2
35	Total-tetrafurans	303.9016	25.69	0.000	0.877	0.000	0.044	0.50	0.77	YES	8.5
35	Total-tetrafurans	303.9016	25.59	17092.983	0.877	0.371	0.371	0.71	0.77	NO	64.2
35	Total-tetrafurans	303.9016	25.39	25710.169	0.877	0.558	0.558	0.73	0.77	NO	102.9
35	Total-tetrafurans	303.9016	25.17	59434.852	0.877	1.289	1.289	0.79	0.77	NO	236.4
35	Total-tetrafurans	303.9016	24.99	113848.390	0.877	2.469	2.469	0.73	0.77	NO	438.2
35	Total-tetrafurans	303.9016	24.84	39397.603	0.877	0.854	0.854	0.69	0.77	NO	144.6
35	Total-tetrafurans	303.9016	24.75	58043.390	0.877	1.259	1.259	0.71	0.77	NO	179.2
35	Total-tetrafurans	303.9016	27.48	0.000	0.877	0.000	0.988	0.91	0.77	YES	232.6
37	Total-pentafurans	339.8597	30.53	16305.225	0.911	0.400	0.400	1.51	1.55	NO	100.1
37	Total-pentafurans	339.8597	30.42	100114.348	0.911	2.458	2.458	1.40	1.55	NO	578.3
2	12378-PeCDF	339.8597	30.22	106428.996	0.896	2.688	2.688	1.39	1.55	NO	632.0
37	Total-pentafurans	339.8597	29.86	195183.015	0.911	4.792	4.792	1.39	1.55	NO	906.0
37	Total-pentafurans	339.8597	29.76	28155.042	0.911	0.691	0.691	1.48	1.55	NO	186.4
37	Total-pentafurans	339.8597	29.64	16590.307	0.911	0.407	0.407	1.57	1.55	NO	79.7
37	Total-pentafurans	339.8597	29.44	8242.335	0.911	0.202	0.202	1.53	1.55	NO	52.0
37	Total-pentafurans	339.8597	29.29	0.000	0.911	0.000	0.081	2.54	1.55	YES	34.2
37	Total-pentafurans	339.8597	29.15	305360.727	0.911	7.496	7.496	1.48	1.55	NO	1843.3
37	Total-pentafurans	339.8597	29.08	177887.406	0.911	4.367	4.367	1.46	1.55	NO	1179.0
37	Total-pentafurans	339.8597	28.96	63051.204	0.911	1.548	1.548	1.45	1.55	NO	308.0
37	Total-pentafurans	339.8597	28.86	0.000	0.911	0.000	0.190	1.15	1.55	YES	72.9
37	Total-pentafurans	339.8597	28.46	0.000	0.911	0.000	0.003	0.92	1.55	YES	2.0
37	Total-pentafurans	339.8597	32.59	14379.507	0.911	0.353	0.353	1.48	1.55	NO	85.6
37	Total-pentafurans	339.8597	31.70	0.000	0.911	0.000	0.017	0.97	1.55	YES	7.7
3	23478-PeCDF	339.8597	31.56	108767.945	0.926	2.596	2.596	1.45	1.55	NO	645.9
37	Total-pentafurans	339.8597	31.41	99042.012	0.911	2.431	2.431	1.43	1.55	NO	579.5
37	Total-pentafurans	339.8597	31.30	30564.413	0.911	0.750	0.750	1.35	1.55	NO	162.8
37	Total-pentafurans	339.8597	31.06	0.000	0.911	0.000	0.084	1.28	1.55	YES	21.2
37	Total-pentafurans	339.8597	30.71	1793.821	0.911	0.044	0.044	1.39	1.55	NO	11.2
38	Total-hexafurans	373.8208	35.75	18936.526	1.032	0.521	0.521	1.28	1.24	NO	38.0

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**TotalTEQ,Furans,Dioxins**

38	Total-hexafurans	373.8208	35.62	0.000	1.032	0.000	0.055	1.80	1.24	YES	6.4
6	123678-HxCDF	373.8208	35.39	261119.539	1.035	6.827	6.827	1.17	1.24	NO	516.0
4	123478-HxCDF	373.8208	35.24	288795.704	1.068	7.658	7.658	1.19	1.24	NO	554.9
38	Total-hexafurans	373.8208	35.07	46965.543	1.032	1.292	1.292	1.20	1.24	NO	91.4
38	Total-hexafurans	373.8208	34.59	3236972.125	1.032	89.043	89.043	1.17	1.24	NO	6282.8
38	Total-hexafurans	373.8208	34.27	44258.306	1.032	1.217	1.217	1.12	1.24	NO	85.3
38	Total-hexafurans	373.8208	33.99	5679.108	1.032	0.156	0.156	1.41	1.24	NO	10.3
38	Total-hexafurans	373.8208	33.73	3006873.000	1.032	82.714	82.714	1.18	1.24	NO	5851.3
38	Total-hexafurans	373.8208	33.51	1188181.751	1.032	32.685	32.685	1.16	1.24	NO	2333.2
7	123789-HxCDF	373.8208	37.45	116097.778	0.987	3.559	3.559	1.21	1.24	NO	201.7
5	234678-HxCDF	373.8208	36.33	389378.000	1.037	10.542	10.542	1.18	1.24	NO	520.5
38	Total-hexafurans	373.8208	35.96	5892.819	1.032	0.162	0.162	1.42	1.24	NO	11.1
39	Total-hepta furans	407.7818	40.33	9056395.000	1.223	287.298	287....	0.99	1.05	NO	11897.3
39	Total-hepta furans	407.7818	40.03	97840.188	1.223	3.104	3.104	1.05	1.05	NO	111.8
8	1234678-HpCDF	407.7818	39.54	4994025.250	1.232	141.176	141....	0.99	1.05	NO	6748.2
10	OCDF	441.7428	47.56	11181231....	1.138	436.131	436....	0.85	0.89	NO	14051.3
9	1234789-HpCDF	407.7818	42.24	212931.157	1.215	7.681	7.681	0.96	1.05	NO	240.8
39	Total-hepta furans	407.7818	41.36	16417.016	1.223	0.521	0.521	1.01	1.05	NO	19.6
36	Total-penta1	339.8597	27.50	1927326.313		47.013	47.013	1.51	1.55	NO	17379.5
41	Total-tetra dioxins	319.8965	26.35	20153.139	1.049	0.497	0.497	0.75	0.77	NO	80.6
41	Total-tetra dioxins	319.8965	26.05	2708.982	1.049	0.067	0.067	0.85	0.77	NO	14.4
41	Total-tetra dioxins	319.8965	25.90	0.000	1.049	0.000	0.300	0.64	0.77	YES	60.1
41	Total-tetra dioxins	319.8965	25.69	11463.113	1.049	0.283	0.283	0.73	0.77	NO	54.7
41	Total-tetra dioxins	319.8965	25.60	0.000	1.049	0.000	0.126	1.08	0.77	YES	38.1
41	Total-tetra dioxins	319.8965	25.33	37920.511	1.049	0.935	0.935	0.81	0.77	NO	194.0
41	Total-tetra dioxins	319.8965	25.06	20480.806	1.049	0.505	0.505	0.68	0.77	NO	81.7
41	Total-tetra dioxins	319.8965	24.85	12757.872	1.049	0.314	0.314	0.81	0.77	NO	60.6
41	Total-tetra dioxins	319.8965	24.35	0.000	1.049	0.000	0.359	0.91	0.77	YES	87.8
41	Total-tetra dioxins	319.8965	24.14	47712.399	1.049	1.176	1.176	0.73	0.77	NO	230.0
41	Total-tetra dioxins	319.8965	23.87	65727.618	1.049	1.620	1.620	0.74	0.77	NO	326.9
41	Total-tetra dioxins	319.8965	27.32	4872.795	1.049	0.120	0.120	0.86	0.77	NO	16.9
41	Total-tetra dioxins	319.8965	26.84	15790.108	1.049	0.389	0.389	0.79	0.77	NO	80.6
11	2378-TCDD	319.8965	26.72	26803.418	1.049	0.661	0.661	0.67	0.77	NO	123.4
42	Total-penta dioxins	355.8546	32.22	27725.100	0.998	0.920	0.920	1.59	1.55	NO	116.1
12	12378-PeCDD	355.8546	31.82	192881.515	0.998	6.400	6.400	1.54	1.55	NO	760.9
42	Total-penta dioxins	355.8546	31.13	16971.383	0.998	0.563	0.563	1.56	1.55	NO	62.5
42	Total-penta dioxins	355.8546	30.75	84925.695	0.998	2.818	2.818	1.61	1.55	NO	234.5
42	Total-penta dioxins	355.8546	30.57	68808.694	0.998	2.283	2.283	1.67	1.55	NO	299.1
42	Total-penta dioxins	355.8546	30.44	138375.762	0.998	4.591	4.591	1.51	1.55	NO	577.2
42	Total-penta dioxins	355.8546	30.22	90882.016	0.998	3.015	3.015	1.49	1.55	NO	385.3
42	Total-penta dioxins	355.8546	29.61	52704.506	0.998	1.749	1.749	1.54	1.55	NO	239.2
42	Total-penta dioxins	355.8546	29.13	235993.679	0.998	7.830	7.830	1.52	1.55	NO	629.2
43	Total-hexa dioxins	389.8157	34.31	1742859.875	0.940	59.134	59.134	1.24	1.24	NO	1960.1
15	123789-HxCDD	389.8157	37.03	765126.344	0.932	26.185	26.185	1.26	1.24	NO	836.6
43	Total-hexa dioxins	389.8157	36.78	115214.668	0.940	3.909	3.909	1.23	1.24	NO	122.1
14	123678-HxCDD	389.8157	36.60	1769372.875	0.918	59.459	59.459	1.26	1.24	NO	1934.3
13	123478-HxCDD	389.8157	36.47	379418.235	0.971	12.912	12.912	1.22	1.24	NO	429.2
43	Total-hexa dioxins	389.8157	35.62	114623.739	0.940	3.889	3.889	1.25	1.24	NO	137.7
43	Total-hexa dioxins	389.8157	35.52	3124089.875	0.940	105.998	105....	1.24	1.24	NO	2460.6

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TotalTEQ,Furans,Dioxins

ID	Name	Trace	RT	Abs Resp	RFEM	LO	EMPC	1' Rad	1" Rad	1.5"	SN
43	Total-hexadioxins	389.8157	35.12	298750.094	0.940	10.136	10.136	1.22	1.24	NO	325.8
44	Total-heptadioxins	423.7766	40.09	26387943....	1.017	951.839	951....	1.04	1.05	NO	12835.6
16	1234678-HpCDD	423.7766	41.36	31189950....	1.017	1125.0...	1125...	1.04	1.05	NO	13746.7
17	OCDD	457.7377	47.29	185638248...	1.008	8168.7...	8168...	0.89	0.89	NO	10253...

PFK1

ID	Name	Trace	RT	Abs Resp	RFEM	LO	EMPC	1' Rad	1" Rad	1.5"	SN
48	FUNCTION1 PFK	330.9792	21.73	0.000							3.1
48	FUNCTION1 PFK	330.9792	21.63	0.000							6.1
48	FUNCTION1 PFK	330.9792	21.19	0.000							5.1
48	FUNCTION1 PFK	330.9792	27.17	0.000							1.9
48	FUNCTION1 PFK	330.9792	26.93	0.000							3.2
48	FUNCTION1 PFK	330.9792	26.42	0.000							4.1
48	FUNCTION1 PFK	330.9792	26.26	0.000							0.9
48	FUNCTION1 PFK	330.9792	23.99	0.000							1.9
48	FUNCTION1 PFK	330.9792	23.43	0.000							4.5
48	FUNCTION1 PFK	330.9792	23.33	0.000							2.9
48	FUNCTION1 PFK	330.9792	23.25	0.000							1.8
48	FUNCTION1 PFK	330.9792	22.18	0.000							2.1

PFK2

ID	Name	Trace	RT	Abs Resp	RFEM	LO	EMPC	1' Rad	1" Rad	1.5"	SN
49	FUNCTION2 PFK	366.9792	31.76	0.000		0.000					8.7
49	FUNCTION2 PFK	366.9792	31.23	0.000		0.000					7.1

PFK3

ID	Name	Trace	RT	Abs Resp	RFEM	LO	EMPC	1' Rad	1" Rad	1.5"	SN
50	FUNCTION3 PFK	380.9760	36.17	0.000		0.000					8.6

Quantify Totals Report MassLynx 4.1 SCN 714

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PFK4

Peak	Name	Area	Height	Abundance	Retention	SN
51	FUNCTION4 PFK	430.9728	38.73	0.000		2.2
51	FUNCTION4 PFK	430.9728	44.20	0.000		0.6
51	FUNCTION4 PFK	430.9728	43.79	0.000		1.1
51	FUNCTION4 PFK	430.9728	43.20	0.000		1.8
51	FUNCTION4 PFK	430.9728	43.10	0.000		0.9
51	FUNCTION4 PFK	430.9728	43.04	0.000		1.4
51	FUNCTION4 PFK	430.9728	42.38	0.000		0.5
51	FUNCTION4 PFK	430.9728	40.89	0.000		0.5
51	FUNCTION4 PFK	430.9728	40.72	0.000		0.8
51	FUNCTION4 PFK	430.9728	40.64	0.000		1.6
51	FUNCTION4 PFK	430.9728	39.77	0.000		1.3
51	FUNCTION4 PFK	430.9728	39.43	0.000		1.7
51	FUNCTION4 PFK	430.9728	39.39	0.000		0.5
51	FUNCTION4 PFK	430.9728	39.20	0.000		1.1
51	FUNCTION4 PFK	430.9728	38.96	0.000		1.7
51	FUNCTION4 PFK	430.9728	38.84	0.000		2.2
51	FUNCTION4 PFK	430.9728	38.77	0.000		2.2
51	FUNCTION4 PFK	430.9728	44.79	0.000		0.6
51	FUNCTION4 PFK	430.9728	44.42	0.000		1.4
51	FUNCTION4 PFK	430.9728	44.28	0.000		1.5

PFK5

Peak	Name	Area	Height	Abundance	Retention	SN
52	FUNCTION5 PFK	480.9696	45.09	0.000		1.5

ETHERS1

Peak	Name	Area	Height	Abundance	Retention	SN
53	FUNCTION1 HXCD...	375.8364	26.11	0.000	0.000	7.3
53	FUNCTION1 HXCD...	375.8364	25.91	0.000	0.000	8.3
53	FUNCTION1 HXCD...	375.8364	25.82	0.000	0.000	4.6
53	FUNCTION1 HXCD...	375.8364	25.63	0.000	0.000	4.4
53	FUNCTION1 HXCD...	375.8364	25.06	0.000	0.000	6.6
53	FUNCTION1 HXCD...	375.8364	24.58	0.000	0.000	3.2
53	FUNCTION1 HXCD...	375.8364	24.11	0.000	0.000	12.8
53	FUNCTION1 HXCD...	375.8364	23.93	0.000	0.000	31.5
53	FUNCTION1 HXCD...	375.8364	22.61	0.000	0.000	2.9
53	FUNCTION1 HXCD...	375.8364	21.79	0.000	0.000	2.5
53	FUNCTION1 HXCD...	375.8364	28.05	0.000	0.000	6.9
53	FUNCTION1 HXCD...	375.8364	27.66	0.000	0.000	3.5
53	FUNCTION1 HXCD...	375.8364	26.47	0.000	0.000	9.5
53	FUNCTION1 HXCD...	375.8364	26.29	0.000	0.000	2.4



## Quantify Totals Report MassLynx 4.1 SCN 714

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## ETHERS2

54	FUNCTION1	HPCD...	409.7974	27.03	0.000	0.000	2.3
54	FUNCTION1	HPCD...	409.7974	26.38	0.000	0.000	2.2
54	FUNCTION1	HPCD...	409.7974	25.35	0.000	0.000	3.4
54	FUNCTION1	HPCD...	409.7974	24.73	0.000	0.000	1.3
54	FUNCTION1	HPCD...	409.7974	23.66	0.000	0.000	2.7
54	FUNCTION1	HPCD...	409.7974	23.25	0.000	0.000	1.0
54	FUNCTION1	HPCD...	409.7974	22.61	0.000	0.000	3.2
54	FUNCTION1	HPCD...	409.7974	22.55	0.000	0.000	1.6
54	FUNCTION1	HPCD...	409.7974	22.39	0.000	0.000	3.4
54	FUNCTION1	HPCD...	409.7974	22.15	0.000	0.000	2.5
54	FUNCTION1	HPCD...	409.7974	21.18	0.000	0.000	2.8
54	FUNCTION1	HPCD...	409.7974	27.50	0.000	0.000	1.5
54	FUNCTION1	HPCD...	409.7974	27.15	0.000	0.000	1.5

## ETHERS3

55	FUNCTION2	HPCD...	409.7974	32.54	0.000	0.000	3.1
55	FUNCTION2	HPCD...	409.7974	31.45	0.000	0.000	1.5
55	FUNCTION2	HPCD...	409.7974	31.38	0.000	0.000	2.2
55	FUNCTION2	HPCD...	409.7974	30.58	0.000	0.000	1.7
55	FUNCTION2	HPCD...	409.7974	30.46	0.000	0.000	2.5
55	FUNCTION2	HPCD...	409.7974	30.40	0.000	0.000	2.0
55	FUNCTION2	HPCD...	409.7974	30.18	0.000	0.000	4.9
55	FUNCTION2	HPCD...	409.7974	29.86	0.000	0.000	7.0
55	FUNCTION2	HPCD...	409.7974	29.61	0.000	0.000	4.9
55	FUNCTION2	HPCD...	409.7974	29.51	0.000	0.000	1.5
55	FUNCTION2	HPCD...	409.7974	29.43	0.000	0.000	7.5
55	FUNCTION2	HPCD...	409.7974	29.28	0.000	0.000	7.4

## ETHERS4

56	FUNCTION3	OCDPE	445.7555	37.63	0.000	0.000	2.0
56	FUNCTION3	OCDPE	445.7555	35.47	0.000	0.000	2.4
56	FUNCTION3	OCDPE	445.7555	35.24	0.000	0.000	2.6
56	FUNCTION3	OCDPE	445.7555	35.21	0.000	0.000	4.7
56	FUNCTION3	OCDPE	445.7555	35.16	0.000	0.000	3.5
56	FUNCTION3	OCDPE	445.7555	34.56	0.000	0.000	27.7
56	FUNCTION3	OCDPE	445.7555	34.05	0.000	0.000	5.1
56	FUNCTION3	OCDPE	445.7555	33.45	0.000	0.000	26.7

**Quantify Totals Report MassLynx 4.1 SCN 714**

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

**ETHERS5**

Peak No.	Retention Time (min)	Area	Height	Abundance	Integration	SN
57	FUNCTION4 NCDPE	479.7165	41.91	0.000	0.000	2.0
57	FUNCTION4 NCDPE	479.7165	41.32	0.000	0.000	5.7
57	FUNCTION4 NCDPE	479.7165	41.10	0.000	0.000	2.6
57	FUNCTION4 NCDPE	479.7165	40.98	0.000	0.000	3.8
57	FUNCTION4 NCDPE	479.7165	39.26	0.000	0.000	5.7
57	FUNCTION4 NCDPE	479.7165	39.13	0.000	0.000	1256.7
57	FUNCTION4 NCDPE	479.7165	38.72	0.000	0.000	2.5
57	FUNCTION4 NCDPE	479.7165	44.77	0.000	0.000	3.0
57	FUNCTION4 NCDPE	479.7165	44.45	0.000	0.000	4.9

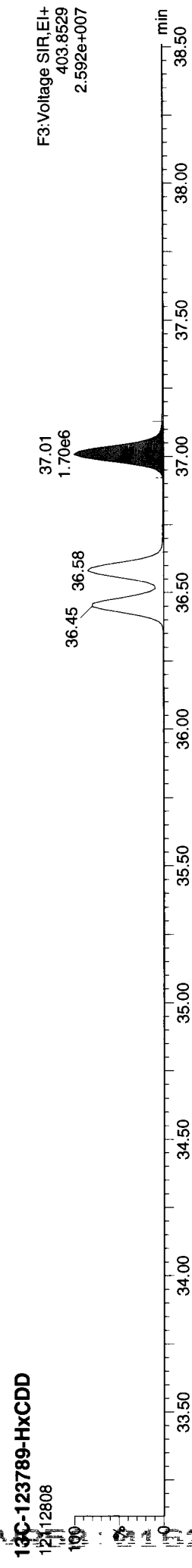
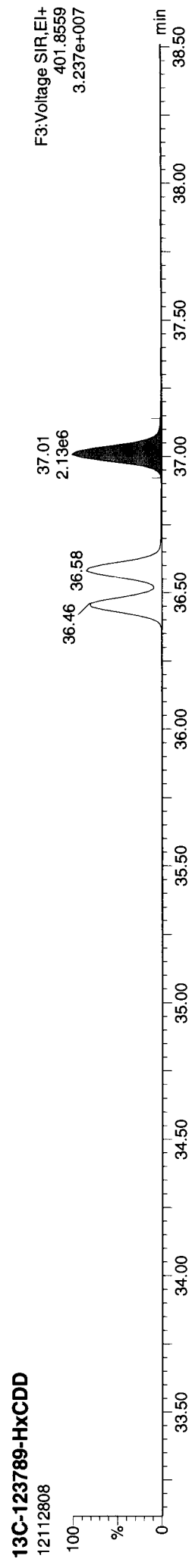
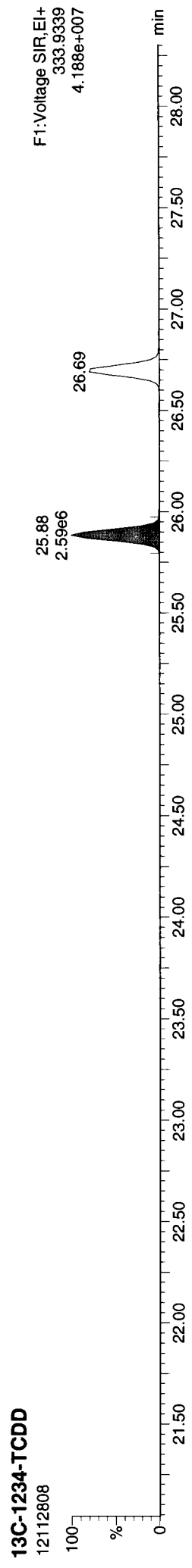
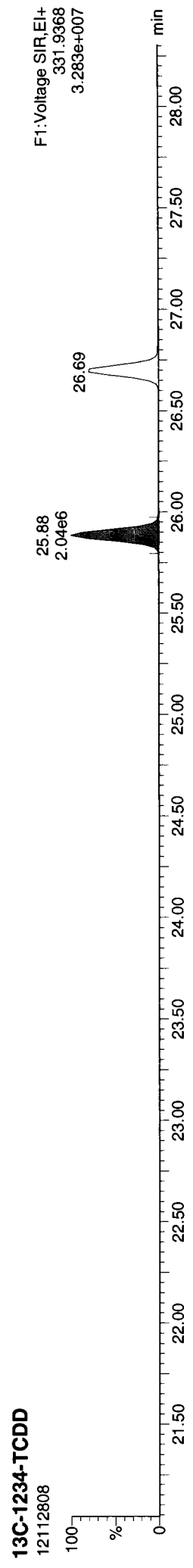
**ETHERS6**

Peak No.	Retention Time (min)	Area	Height	Abundance	Integration	SN
58	FUNCTION5 DCDPE	513.6775	47.31	0.000	0.000	47.1

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

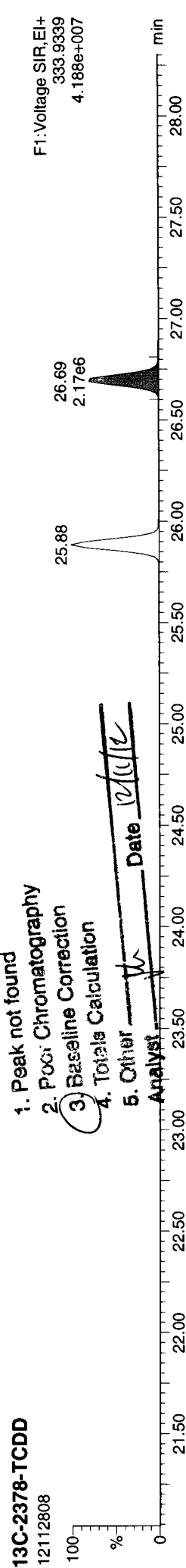
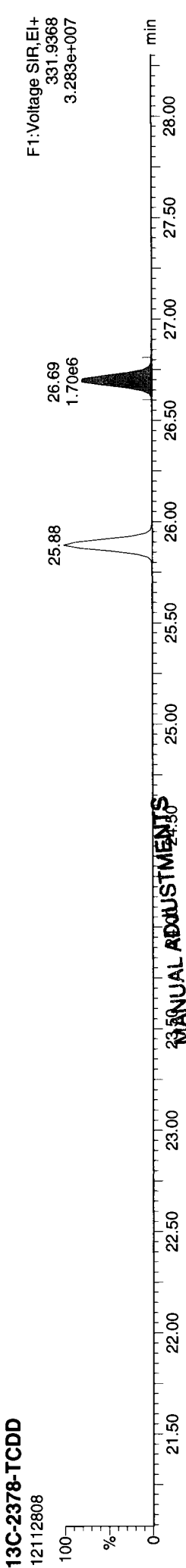
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

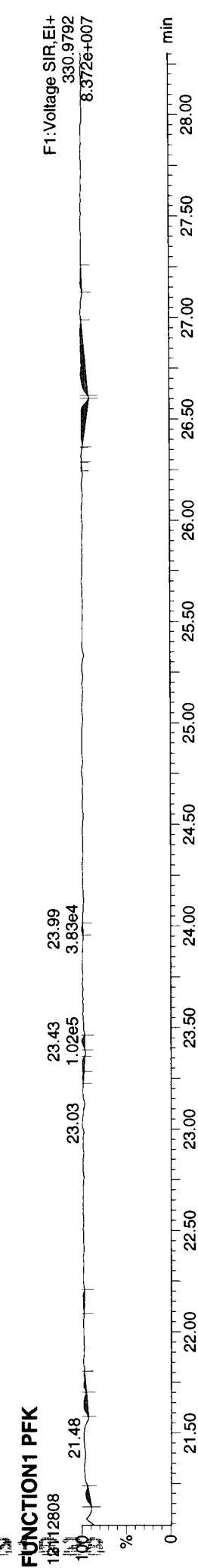
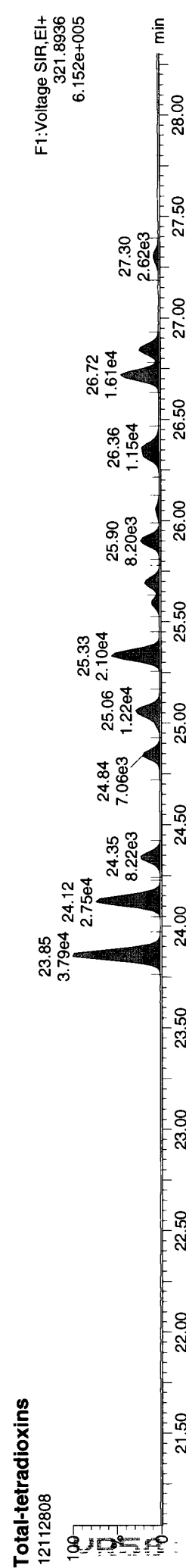
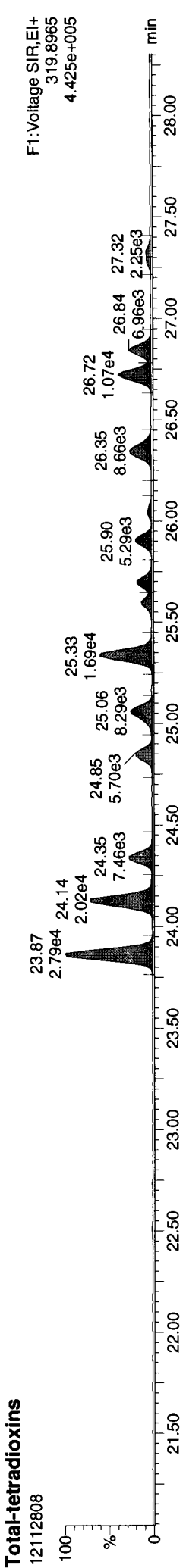


Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

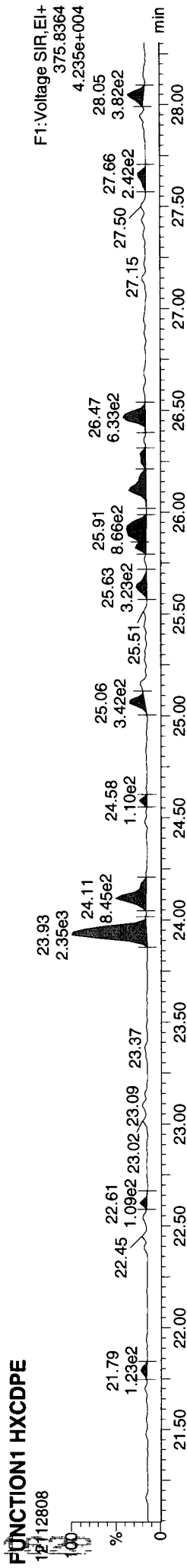
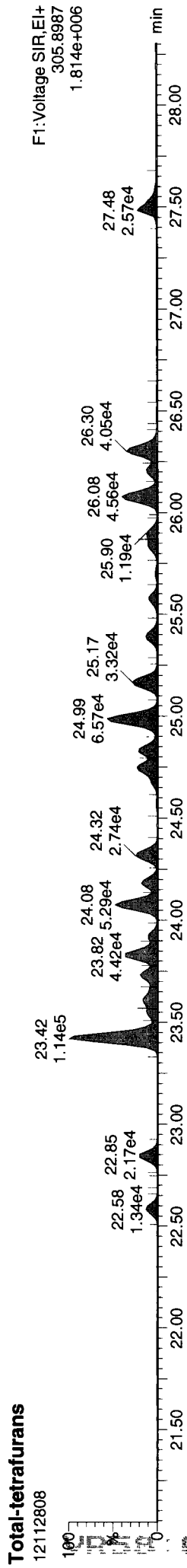
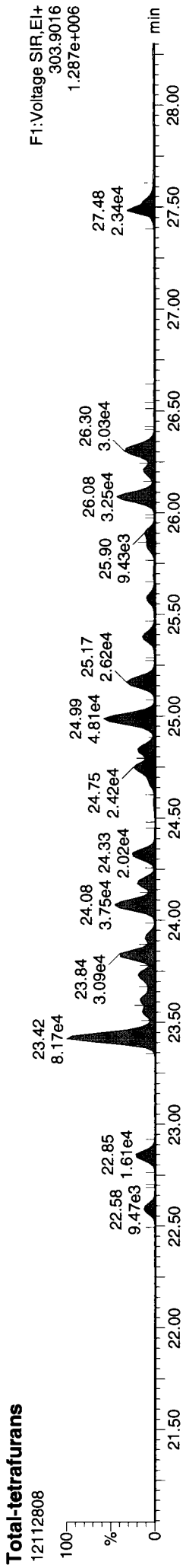
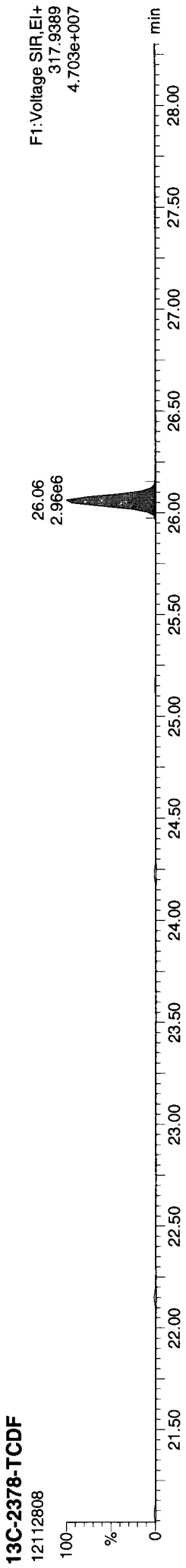
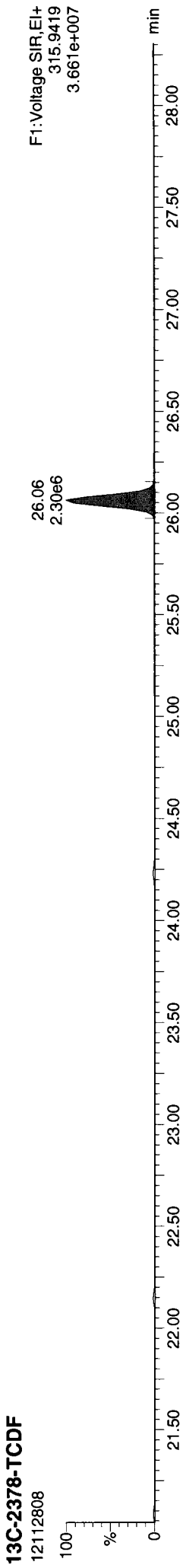


1. Peak not found
  2. POC: Chromatography
  3. Baseline Correction
  4. Totals Calculation
  5. Other
- Analyst: pk Date: 12/10/12



Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

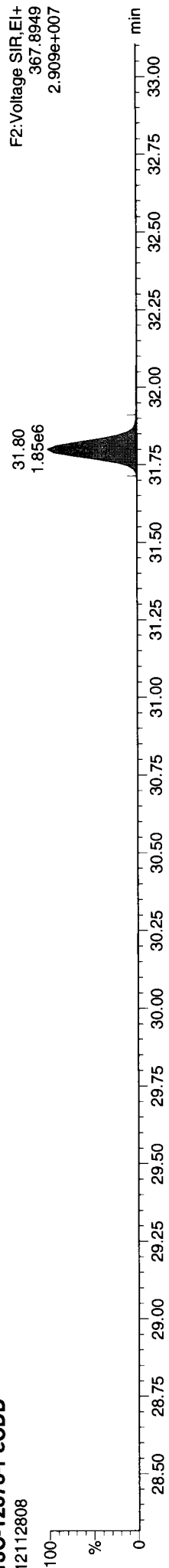
Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk



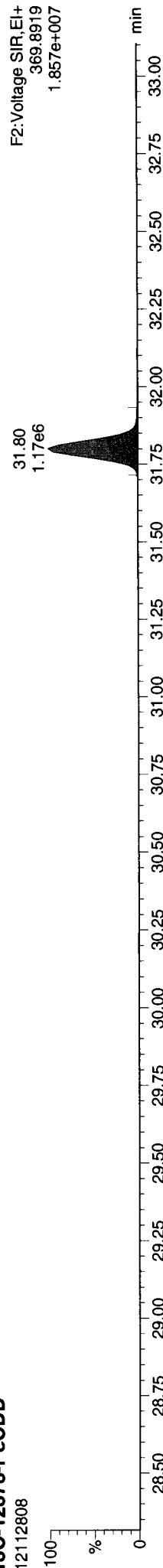
Quantify Sample Report **MassLynx 4.1 SCN 714**  
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

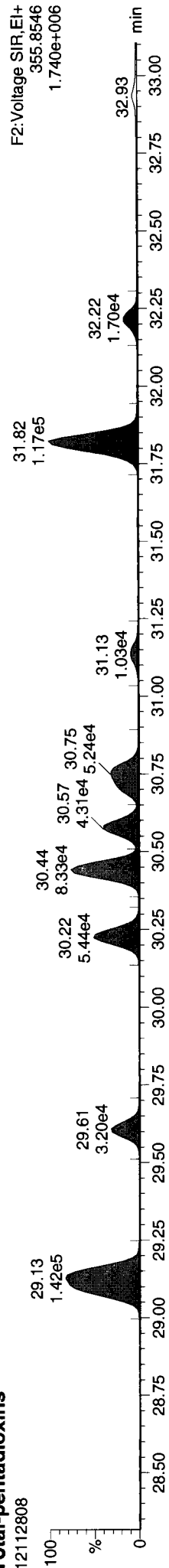
**13C-12378-PeCDD**  
12112808



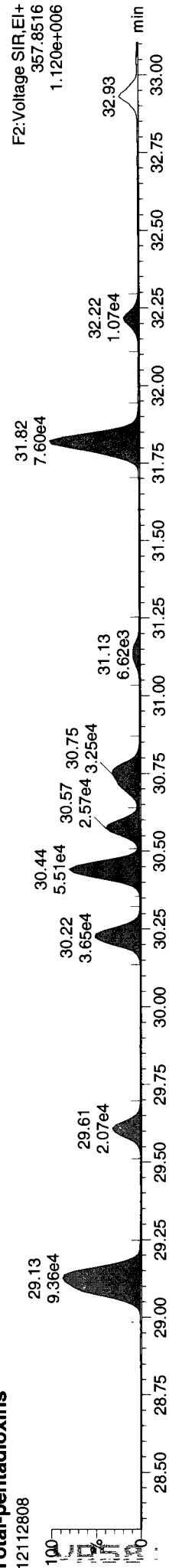
**13C-12378-PeCDD**  
12112808



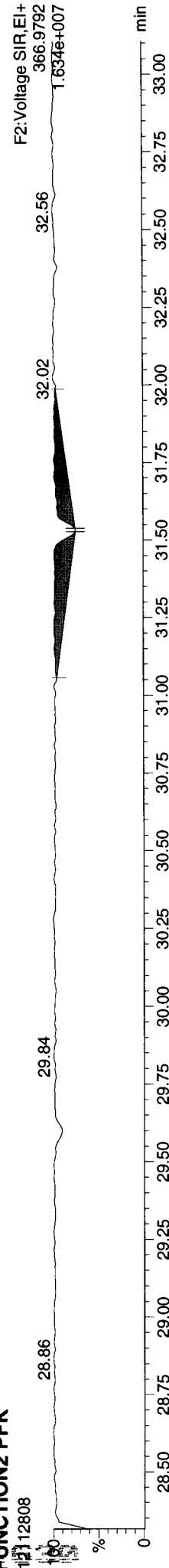
**Total-pentadioxins**  
12112808



**Total-pentadioxins**  
12112808

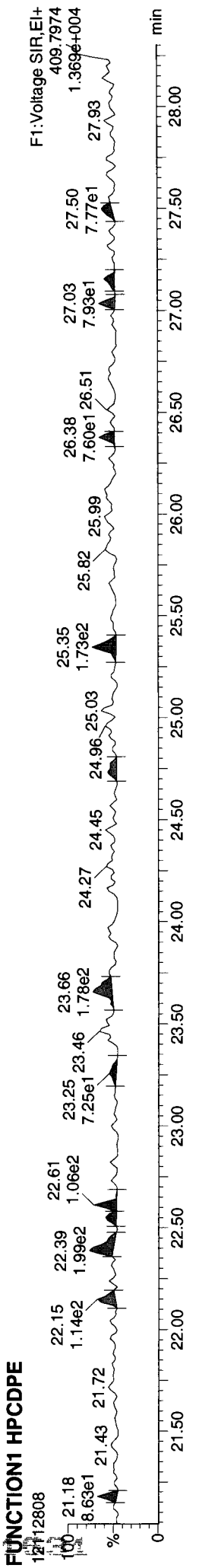
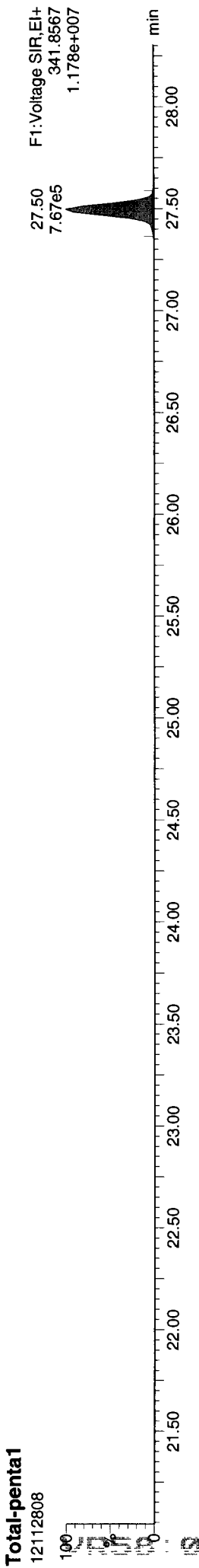
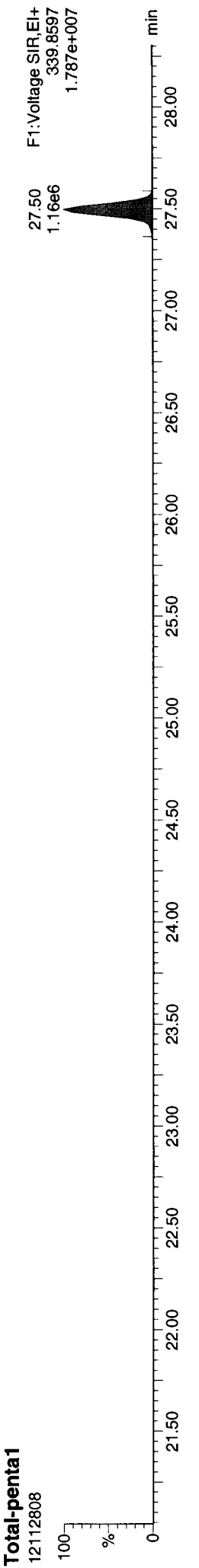
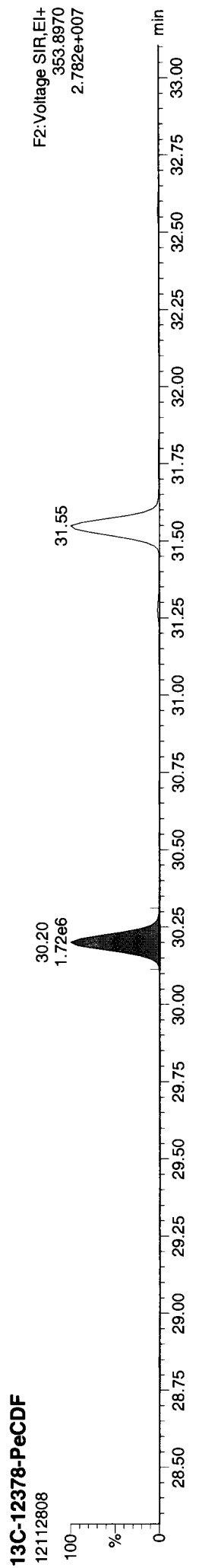
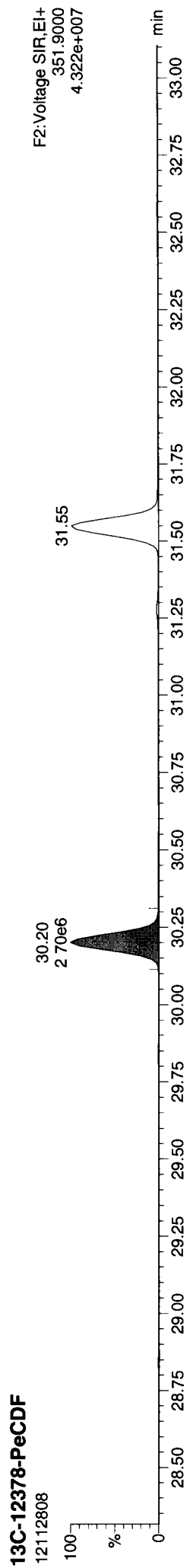


**FUNCTION2 PFK**  
12112808



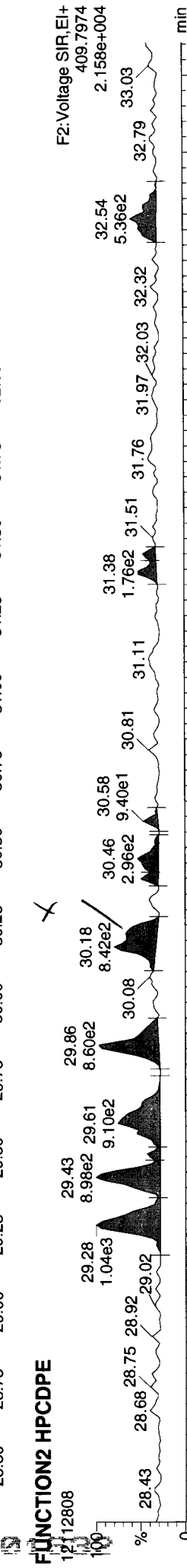
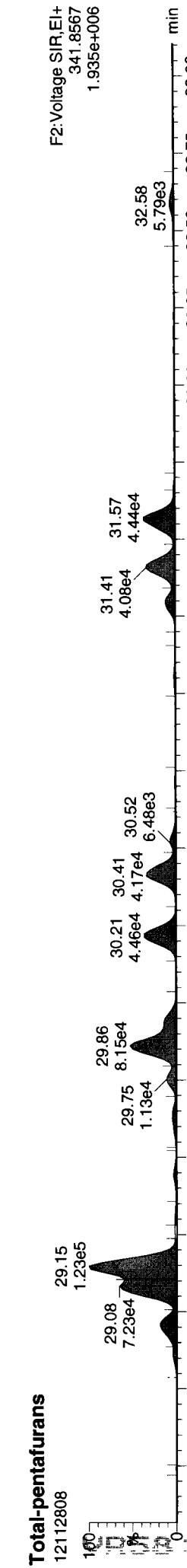
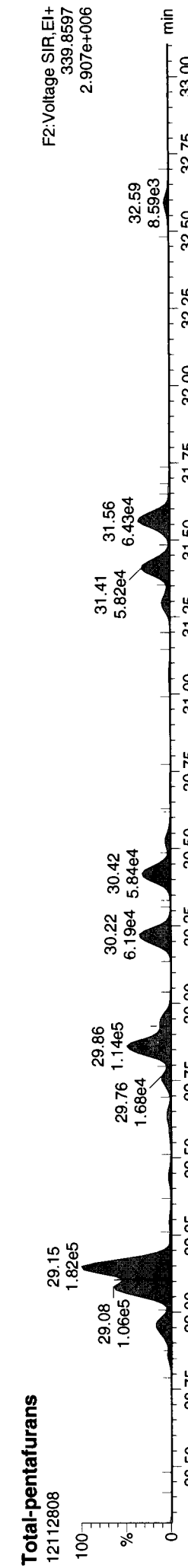
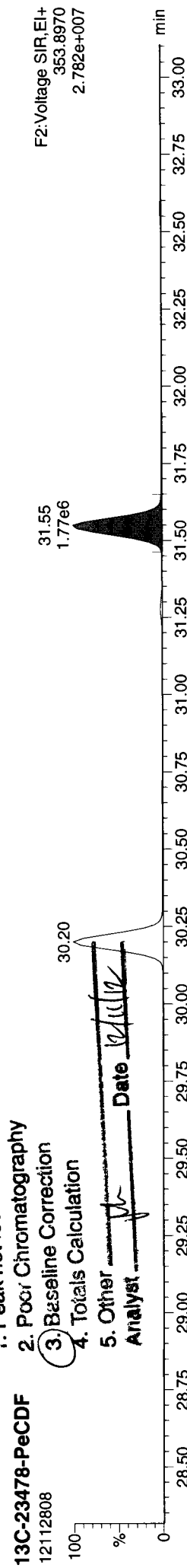
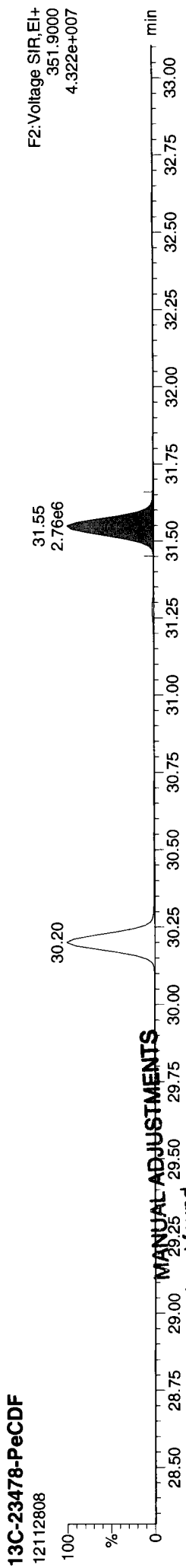
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk



Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

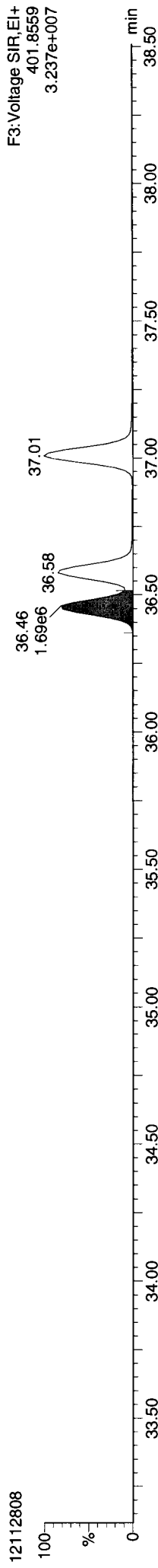


1. Peak not found
  2. Poor Chromatography
  3. Baseline Correction
  4. Totals Calculation
  5. Other
- Analyst: *[Signature]* Date: *12/10/12*

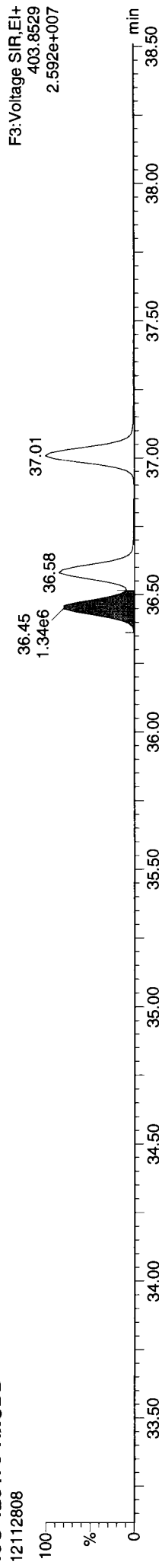


Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

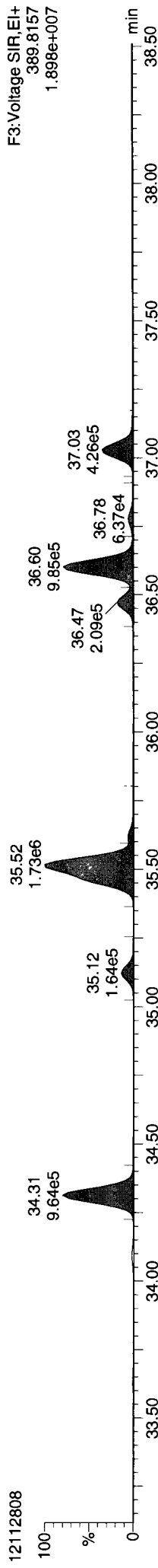
13C-123478-HxCDD



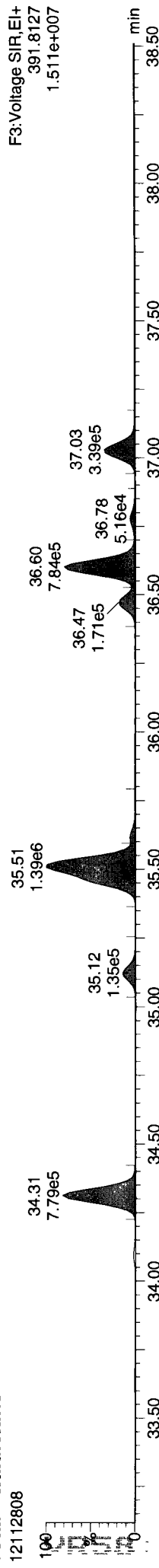
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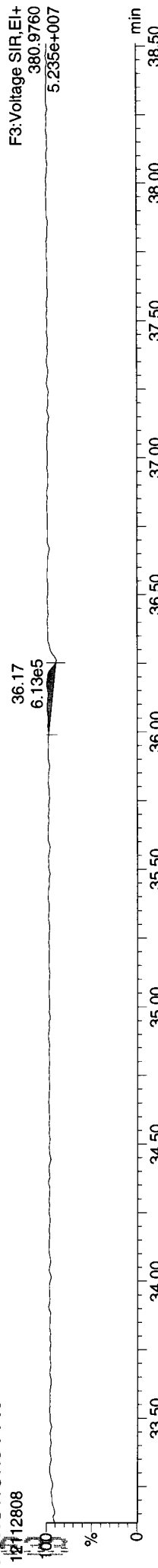
Total-hexadioxins



Total-hexadioxins

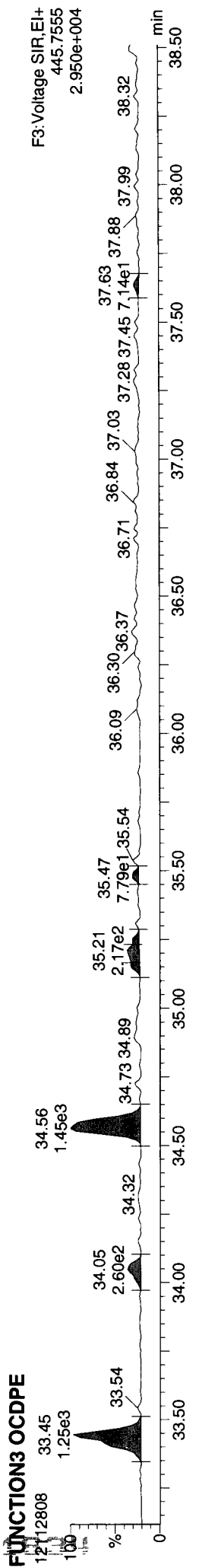
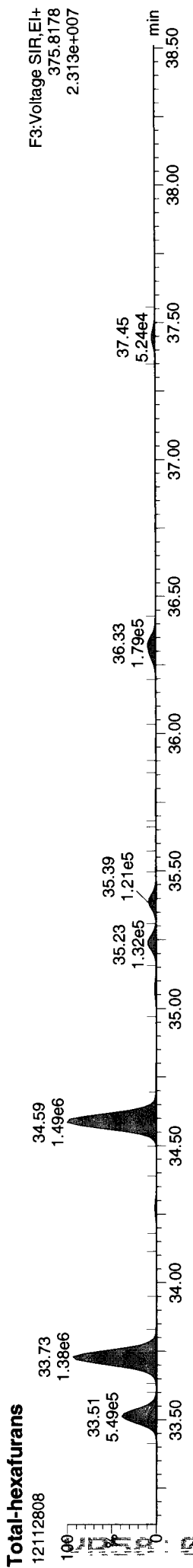
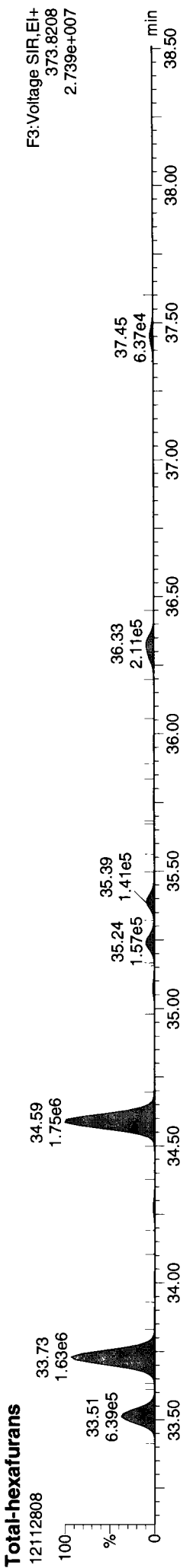
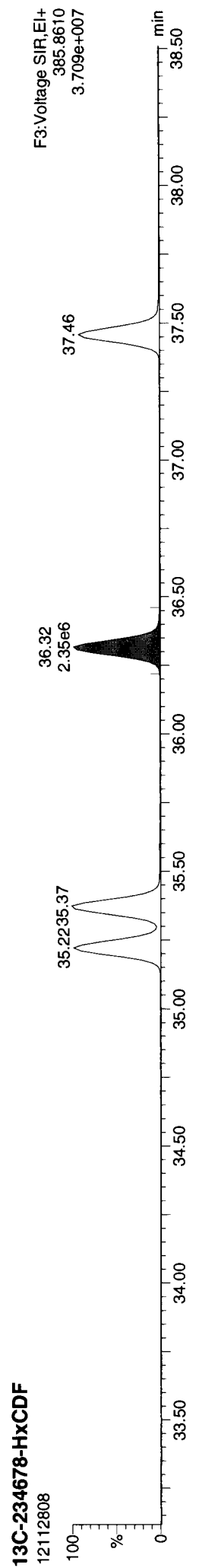
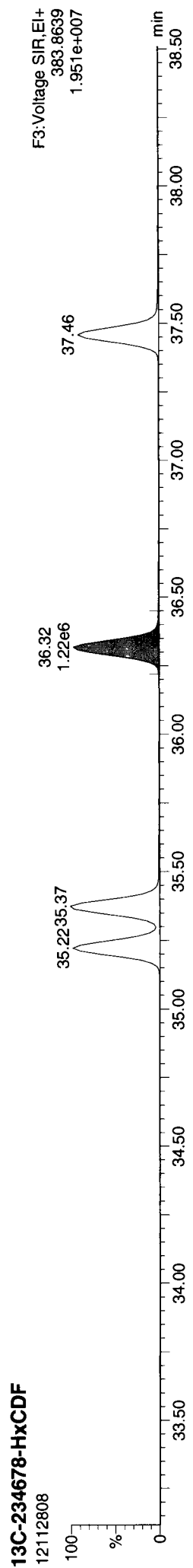


FUNCTION3 PFK



Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

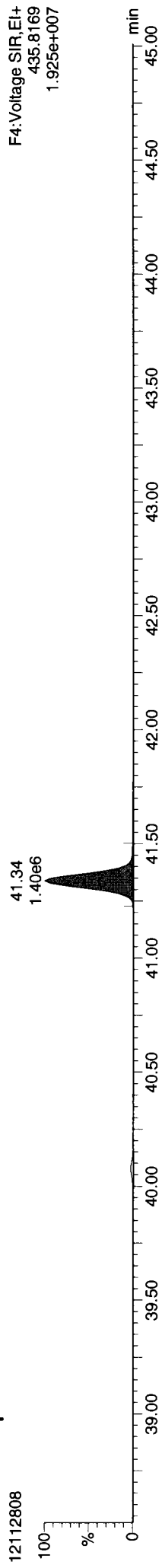
Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk



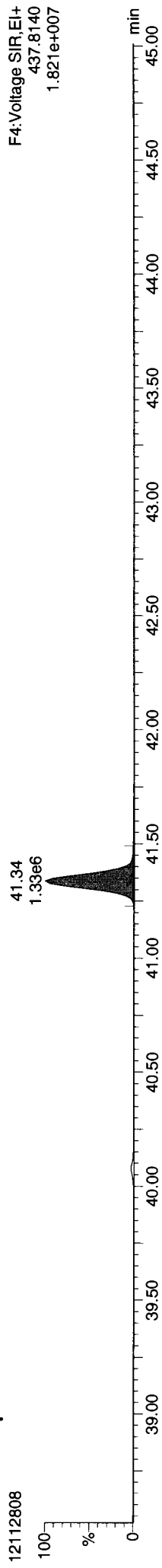
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

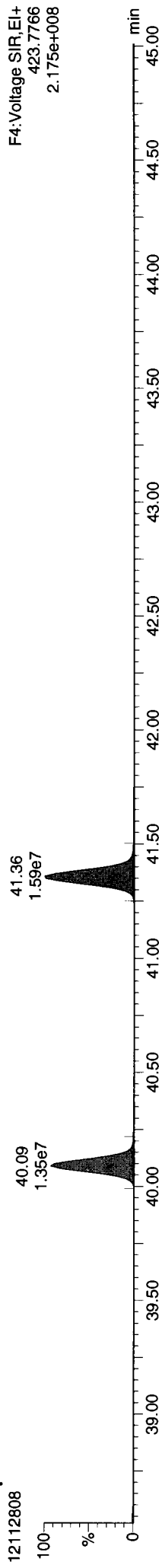
13C-1234678-HpCDD



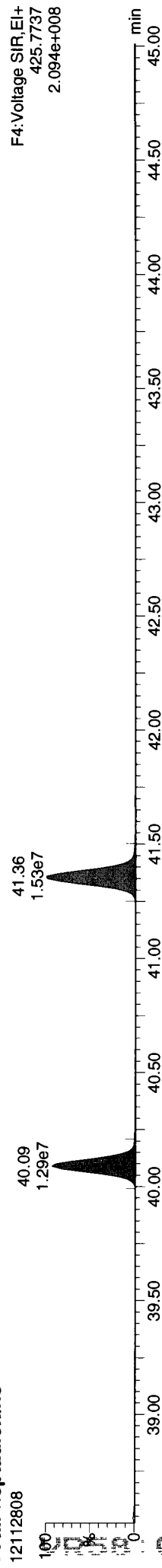
13C-1234678-HpCDD



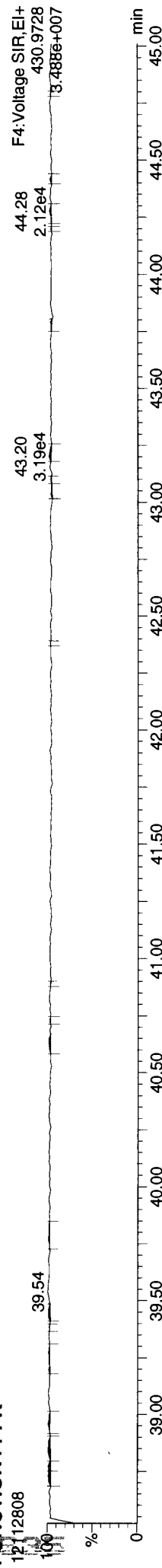
Total-heptadioxins



Total-heptadioxins

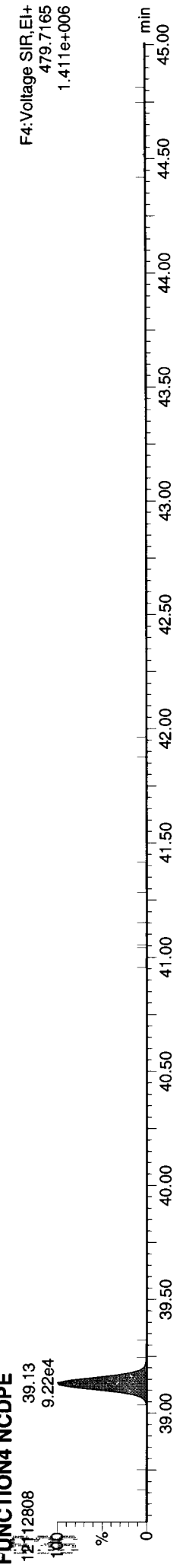
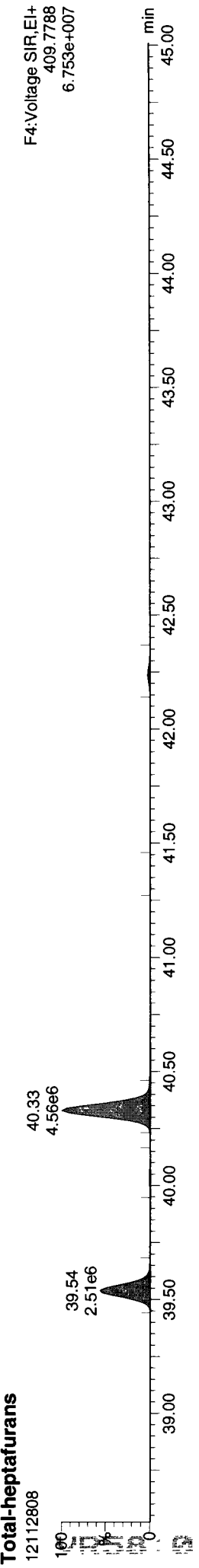
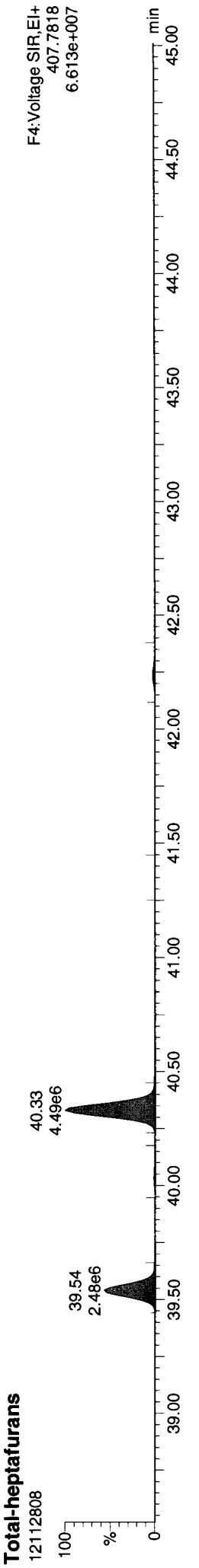
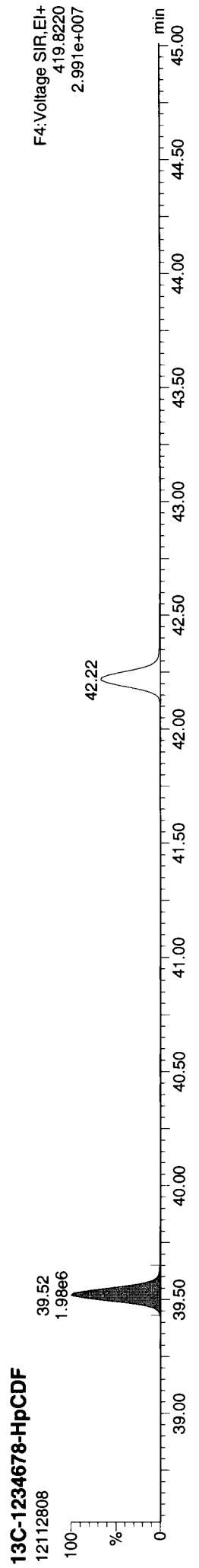
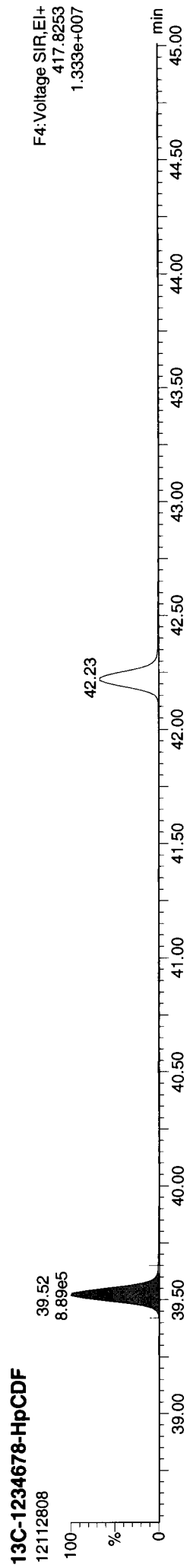


FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk



**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

**Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk**

**13C-OCDD**



**13C-OCDD**



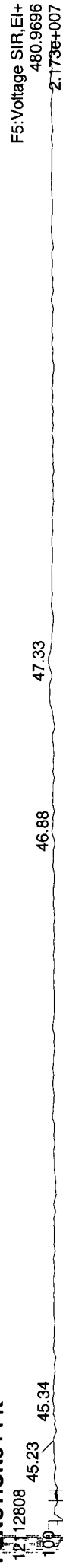
**OCDD**



**OCDD**



**FUNCTION5 PFK**

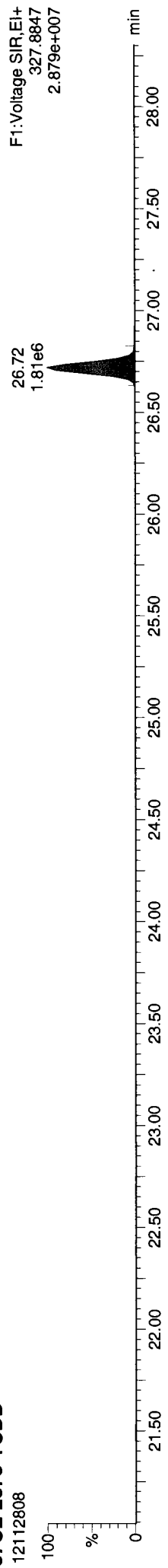


Quantify Sample Report MassLynx 4.1 SCN 714

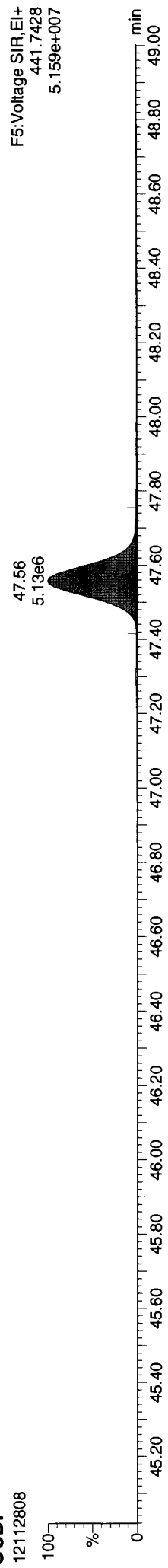
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:38:43 Pacific Standard Time

Name: 12112808, Date: 28-Nov-2012, Time: 15:56:33, ID: VR58B, Conditions: AUTOSPEC01, User: pk

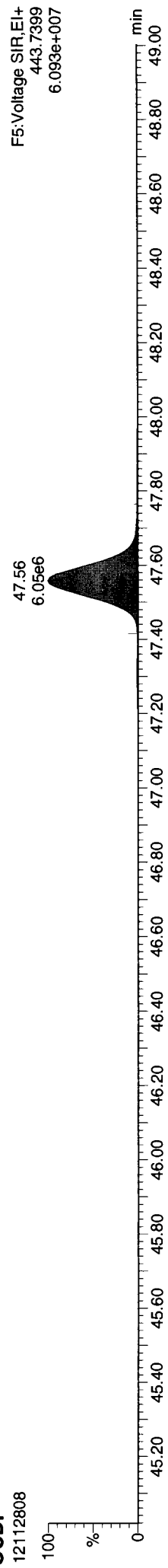
37CL-2378-TCDD  
12112808



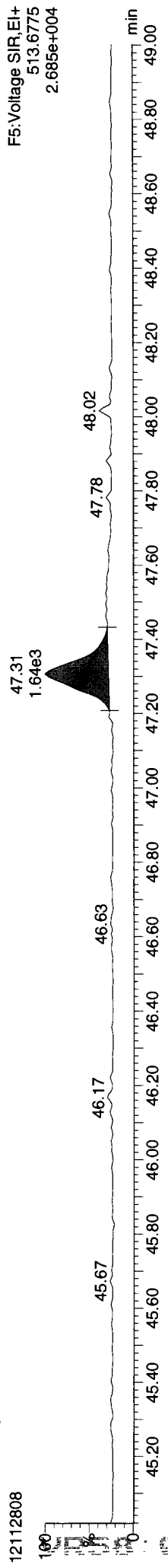
OCDF  
12112808



OCDF  
12112808



FUNCTION5 DCDPE  
12112808



12112808

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld

Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time

Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

pk 12/16/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin\121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurvedB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

Compound	26.063	1.001	1.4064	2.07e4	0.877	0.676	0.770	162.7	1370	1973	2.23e5	3.24e5	NO	1.079
2378-TCDF	26.063	1.001	1.4064	2.07e4	0.877	0.676	0.770	162.7	1370	1973	2.23e5	3.24e5	NO	1.079
12378-PeCDF	30.212	1.001	2.20e4	1.58e4	0.896	1.390	1.550	101.0	3538	2633	3.57e5	2.54e5	NO	1.437
23478-PeCDF	31.560	1.001	1.98e4	1.50e4	0.926	1.315	1.550	91.7	3538	2633	3.24e5	2.45e5	YES	1.204
123478-HxCDF	35.232	1.000	4.21e4	3.53e4	1.068	1.194	1.240	158.1	3952	2663	6.25e5	5.11e5	NO	3.212
234678-HxCDF	36.328	1.000	5.11e4	4.42e4	1.037	1.157	1.240	131.3	3952	2663	5.19e5	4.69e5	NO	4.020
123678-HxCDF	35.386	1.001	3.30e4	2.86e4	1.035	1.154	1.240	125.9	3952	2663	4.98e5	4.36e5	NO	2.581
123789-HxCDF	37.446	1.000	1.92e4	1.67e4	0.987	1.150	1.240	68.2	3952	2663	2.69e5	2.51e5	NO	1.484
1234678-HpCDF	39.540	1.001	5.94e5	5.97e5	1.232	0.995	1.050	2435.1	3610	3541	8.79e6	8.85e6	NO	51.907
1234789-HpCDF	42.237	1.001	2.75e4	2.88e4	1.215	0.957	1.050	104.5	3610	3541	3.77e5	3.86e5	NO	3.010
OCDF	47.549	1.006	1.21e6	1.43e6	1.138	0.845	0.890	3923.8	3005	2284	1.18e7	1.41e7	NO	178.782
2378-TCDD	26.706	1.001	4.24e3	6.16e3	1.049	0.688	0.770	49.9	1297	1172	6.47e4	9.66e4	NO	0.403
12378-PeCDD	31.812	1.001	2.94e4	1.94e4	0.998	1.517	1.550	164.9	2664	2531	4.39e5	2.82e5	NO	2.556
123478-HxCDD	36.482	1.001	4.24e4	3.38e4	0.971	1.255	1.240	266.3	2591	3424	6.90e5	5.22e5	NO	4.157
123678-HxCDD	36.613	1.001	2.00e5	1.62e5	0.918	1.234	1.240	1195.6	2591	3424	3.10e6	2.45e6	NO	19.451
123789-HxCDD	37.030	1.012	8.99e4	7.47e4	0.932	1.204	1.240	548.1	2591	3424	1.42e6	1.19e6	NO	9.007
1234678-HpCDD	41.349	1.001	3.49e6	3.38e6	1.017	1.033	1.050	3732.7	12686	9397	4.74e7	4.61e7	NO	385.554
OCDD	47.280	1.000	1.99e7	2.25e7	1.008	0.885	0.890	20025.5	10372	5000	2.08e8	2.37e8	NO	3238.491
13C-2378-TCDF	26.048	1.006	1.60e6	2.06e6	1.473	0.777	0.770	8460.5	2977	1550	2.52e7	3.26e7	NO	65.508
13C-12378-PeCDF	30.190	1.166	1.80e6	1.14e6	1.148	1.573	1.550	7193.4	3969	3243	2.86e7	1.83e7	NO	67.551
13C-23478-PeCDF	31.538	1.218	1.78e6	1.13e6	1.113	1.574	1.550	7126.6	3969	3243	2.83e7	1.80e7	NO	69.086
13C-123478-HxCDF	35.221	0.951	7.65e5	1.49e6	1.209	0.514	0.510	3442.8	3453	4288	1.19e7	2.30e7	NO	57.431
13C-123678-HxCDF	35.364	0.955	7.87e5	1.52e6	1.269	0.517	0.510	3495.4	3453	4288	1.21e7	2.32e7	NO	56.085
13C-234678-HxCDF	36.317	0.981	7.88e5	1.50e6	1.236	0.525	0.510	3444.0	3453	4288	1.19e7	2.30e7	NO	56.999
13C-123789-HxCDF	37.457	1.012	8.42e5	1.61e6	1.107	0.523	0.510	3781.6	3453	4288	1.31e7	2.51e7	NO	68.185
13C-1234678-HpCDF	39.518	1.068	5.78e5	1.28e6	1.051	0.450	0.440	2653.8	3266	3779	8.67e6	1.92e7	NO	54.590
13C-1234789-HpCDF	42.215	1.140	4.78e5	1.06e6	0.815	0.450	0.440	1884.2	3266	3779	6.15e6	1.37e7	NO	58.220
13C-1234-TCDD	25.884	0.000	1.67e6	2.13e6	1.000	0.785	0.770	7452.8	3530	2113	2.63e7	3.30e7	NO	100.000
13C-2378-TCDD	26.691	1.031	1.07e6	1.39e6	0.946	0.772	0.770	4903.2	3530	2113	1.73e7	2.22e7	NO	68.631
13C-12378-PeCDD	31.790	1.228	1.17e6	7.40e5	0.721	1.584	1.550	7391.0	2484	966	1.84e7	1.18e7	NO	69.922
13C-123478-HxCDD	36.460	0.985	1.06e6	8.34e5	0.991	1.266	1.240	7622.3	2123	2669	1.62e7	1.29e7	NO	58.744
13C-123678-HxCDD	36.591	0.988	1.12e6	9.04e5	1.025	1.243	1.240	7915.2	2123	2669	1.68e7	1.36e7	NO	60.951
13C-1234678-HpCDD	41.327	1.116	8.97e5	8.56e5	0.866	1.048	1.050	3889.6	3068	2482	1.19e7	1.14e7	NO	62.359
13C-OCDD	47.262	1.277	1.23e6	1.37e6	0.769	0.894	0.890	6956.0	1795	1657	1.25e7	1.40e7	NO	104.172

6

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

Compound	37.019	0.000	1.80e6	1.45e6	1.000	1.247	1.240	13158.3	2123	2669	2.79e7	2.26e7	NO	100.000
13C-123789-HxCDD	37.019	0.000	1.80e6	1.45e6	1.000	1.247	1.240	13158.3	2123	2669	2.79e7	2.26e7	NO	100.000
Total-tetrafurans			1.87e5		0.877				1370		2.73e6		14.898	12.918
Total-penta1			3.64e5						1448		5.59e6		22.380	22.380
Total-pentafurans			1.77e5		0.911				3538		2.80e6		15.351	11.257
Total-hexafurans			1.25e6		1.032				3952		1.94e7		96.756	96.098
Total-heptafurans			1.86e6		1.223				3610		2.71e7		174.260	174.260
Total-Furans			5.05e6		1.041				1370		6.93e7		502.426	495.694
Total-tetra-dioxins			4.00e4		1.049				1297		6.31e5		4.677	3.555
Total-penta-dioxins			1.62e5		0.998				2664		2.25e6		13.938	13.938
Total-hexa-dioxins			1.02e6		0.940				2591		1.41e7		99.691	99.691
Total-hepta-dioxins			6.70e6		1.017				12686		9.42e7		739.604	739.604
Total-Dioxins			2.79e7		0.985				1297		3.19e8		4096.415	4095.279
Total-TEQ			3.29e7						1297		3.88e8		4598.841	4590.973
37CL-2378-TCDD	26.706	1.032	1.55e6		1.044			12487.4	1960		2.45e7			39.081
FUNCTION1 PFK			2.48e6						760117		3.72e7			
FUNCTION2 PFK			1.19e5						221065		2.36e6			0.000
FUNCTION3 PFK			9.83e6						556280		7.37e7			0.000
FUNCTION4 PFK			1.15e6						411097		3.06e7			
FUNCTION5 PFK			3.23e5						303080		1.00e7			
FUNCTION1 HXCDPE			2.27e3						759		3.84e4			0.000
FUNCTION1 HPCDPE			1.33e3						1082		2.45e4			0.000
FUNCTION2 HPCDPE			1.29e3						1259		3.44e4			0.000
FUNCTION3 OCDPE			7.47e1						660		1.34e3			0.000
FUNCTION4 NCDPE			5.22e4						957		8.12e5			0.000
FUNCTION5 DCDPE			2.92e2						526		2.56e3			0.000

27.731  
35.637

12112809 : 03101519



Dataset: P:\DIOXIN8290.PRO\121128DATA1.gld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
 Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
 Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

TF

Name	Trace	RT	Abundance	RFM	EMPC	IP	IP	IP	IP	IP	IP	IP
35 Total-tetrafurans	303.9016	24.73	26445.123	0.877	0.824	0.824	0.69	0.77	NO	96.5		
35 Total-tetrafurans	303.9016	24.58	0.000	0.877	0.000	0.021	0.94	0.77	YES	5.3		
35 Total-tetrafurans	303.9016	24.32	18875.691	0.877	0.588	0.588	0.71	0.77	NO	90.6		
35 Total-tetrafurans	303.9016	24.18	0.000	0.877	0.000	0.427	0.61	0.77	YES	68.7		
35 Total-tetrafurans	303.9016	24.06	33815.762	0.877	1.054	1.054	0.75	0.77	NO	169.5		
35 Total-tetrafurans	303.9016	23.91	8318.460	0.877	0.259	0.259	0.70	0.77	NO	45.5		
35 Total-tetrafurans	303.9016	23.82	32155.076	0.877	1.002	1.002	0.74	0.77	NO	142.5		
35 Total-tetrafurans	303.9016	23.72	15622.501	0.877	0.487	0.487	0.86	0.77	NO	72.5		
35 Total-tetrafurans	303.9016	23.57	0.000	0.877	0.000	0.807	0.70	0.77	NO	63.1		
35 Total-tetrafurans	303.9016	23.42	72796.092	0.877	2.269	2.269	0.74	0.77	NO	340.4		
35 Total-tetrafurans	303.9016	22.84	15557.084	0.877	0.485	0.485	0.66	0.77	NO	74.1		
35 Total-tetrafurans	303.9016	22.58	10321.539	0.877	0.322	0.322	0.72	0.77	NO	53.2		
35 Total-tetrafurans	303.9016	27.50	13268.096	0.877	0.414	0.414	0.85	0.77	NO	49.1		
35 Total-tetrafurans	303.9016	26.59	0.000	0.877	0.000	0.014	0.49	0.77	YES	3.4		
35 Total-tetrafurans	303.9016	26.30	32156.422	0.877	1.002	1.002	0.78	0.77	NO	163.1		
35 Total-tetrafurans	303.9016	26.20	11050.185	0.877	0.344	0.344	0.67	0.77	NO	48.3		
1 2378-TCDF	303.9016	26.06	34624.740	0.877	1.079	1.079	0.68	0.77	NO	162.7		
35 Total-tetrafurans	303.9016	25.88	0.000	0.877	0.000	0.192	1.14	0.77	YES	47.6		
35 Total-tetrafurans	303.9016	25.70	0.000	0.877	0.000	0.028	0.56	0.77	YES	5.3		
35 Total-tetrafurans	303.9016	25.57	7085.883	0.877	0.221	0.221	0.80	0.77	NO	35.6		
35 Total-tetrafurans	303.9016	25.38	0.000	0.877	0.000	0.322	0.65	0.77	YES	50.4		
35 Total-tetrafurans	303.9016	25.15	27024.901	0.877	0.842	0.842	0.74	0.77	NO	126.2		
35 Total-tetrafurans	303.9016	24.97	43626.328	0.877	1.360	1.360	0.81	0.77	NO	202.6		
35 Total-tetrafurans	303.9016	24.82	11651.165	0.877	0.363	0.363	0.71	0.77	NO	57.9		
35 Total-tetrafurans	303.9016	25.84	0.000	0.877	0.000	0.169	0.48	0.77	YES	35.1		

PP

Name	Trace	RT	Abundance	RFM	EMPC	IP	IP	IP	IP	IP	IP
36 Total-penta1	339.8597	27.48	601065.265		22.380	22.380	1.53	1.55	NO	3861.1	

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
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Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

PF

Sample	Concentration	Area	Response	Retention	Abundance	Mass	Mass	Mass	Mass	Mass	Mass
37 Total-pentafurans	339.8597	29.07	47651.734	0.911	1.786	1.786	1.47	1.55	NO	143.8	
37 Total-pentafurans	339.8597	28.95	27143.694	0.911	1.017	1.017	1.52	1.55	NO	51.8	
37 Total-pentafurans	339.8597	32.59	5118.285	0.911	0.192	0.192	1.73	1.55	NO	15.0	
3 23478-PeCDF	339.8597	31.56	34806.002	0.926	0.000	1.204	1.32	1.55	YES	91.7	
37 Total-pentafurans	339.8597	31.41	0.000	0.911	0.000	1.374	1.32	1.55	YES	94.6	
37 Total-pentafurans	339.8597	31.29	0.000	0.911	0.000	0.407	1.30	1.55	YES	33.1	
37 Total-pentafurans	339.8597	31.03	1429.849	0.911	0.054	0.054	1.70	1.55	NO	3.7	
37 Total-pentafurans	339.8597	30.52	0.000	0.911	0.000	0.212	1.20	1.55	YES	16.7	
37 Total-pentafurans	339.8597	30.41	34390.799	0.911	1.289	1.289	1.39	1.55	NO	91.3	
2 12378-PeCDF	339.8597	30.21	37882.615	0.896	1.437	1.437	1.39	1.55	NO	101.0	
37 Total-pentafurans	339.8597	29.93	0.000	0.911	0.000	0.402	2.01	1.55	YES	43.9	
37 Total-pentafurans	339.8597	29.85	46181.809	0.911	1.731	1.731	1.37	1.55	NO	114.7	
37 Total-pentafurans	339.8597	29.74	0.000	0.911	0.000	0.371	1.24	1.55	YES	25.7	
37 Total-pentafurans	339.8597	29.63	6495.304	0.911	0.243	0.243	1.68	1.55	NO	12.6	
37 Total-pentafurans	339.8597	29.43	0.000	0.911	0.000	0.072	1.25	1.55	YES	6.7	
37 Total-pentafurans	339.8597	29.26	0.000	0.911	0.000	0.051	1.98	1.55	YES	4.8	
37 Total-pentafurans	339.8597	29.14	93656.688	0.911	3.510	3.510	1.42	1.55	NO	256.2	

HF

Sample	Concentration	Area	Response	Retention	Abundance	Mass	Mass	Mass	Mass	Mass
5 234678-HxCDF	373.8208	36.33	95320.176	1.037	4.020	4.020	1.16	1.24	NO	131.3
38 Total-hexafurans	373.8208	35.75	0.000	1.032	0.000	0.183	0.86	1.24	YES	9.8
6 123678-HxCDF	373.8208	35.39	61684.109	1.035	2.581	2.581	1.15	1.24	NO	125.9
4 123478-HxCDF	373.8208	35.23	77357.281	1.068	3.212	3.212	1.19	1.24	NO	158.1
38 Total-hexafurans	373.8208	35.08	16651.459	1.032	0.694	0.694	1.22	1.24	NO	34.2
38 Total-hexafurans	373.8208	34.59	939818.187	1.032	39.178	39.178	1.18	1.24	NO	2040.8
38 Total-hexafurans	373.8208	34.27	0.000	1.032	0.000	0.445	0.99	1.24	YES	22.0
38 Total-hexafurans	373.8208	34.02	0.000	1.032	0.000	0.030	3.47	1.24	YES	4.5
38 Total-hexafurans	373.8208	33.72	739366.562	1.032	30.822	30.822	1.19	1.24	NO	1597.7
38 Total-hexafurans	373.8208	33.51	338423.047	1.032	14.108	14.108	1.17	1.24	NO	741.1
7 123789-HxCDF	373.8208	37.45	35867.375	0.987	1.484	1.484	1.15	1.24	NO	68.2

HPF

Sample	Concentration	Area	Response	Retention	Abundance	Mass	Mass	Mass	Mass	Mass
9 1234789-HpCDF	407.7818	42.24	56323.068	1.215	3.010	3.010	0.96	1.05	NO	104.5
39 Total-heptafurans	407.7818	41.35	3668.871	1.223	0.176	0.176	1.12	1.05	NO	8.2
39 Total-heptafurans	407.7818	40.33	2454773.375	1.223	117.911	117....	0.99	1.05	NO	4898.6
39 Total-heptafurans	407.7818	40.03	26131.178	1.223	1.255	1.255	1.08	1.05	NO	48.0
8 1234678-HpCDF	407.7818	39.54	1191385.313	1.232	51.907	51.907	0.99	1.05	NO	2435.1

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Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

Sample	Compound	Area	Conc	Response	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
35	Total-tetrafurans	303.9016	24.73	26445.123	0.877	0.824	0.824	0.69	0.77	NO	96.5	
35	Total-tetrafurans	303.9016	24.58	0.000	0.877	0.000	0.021	0.94	0.77	YES	5.3	
35	Total-tetrafurans	303.9016	24.32	18875.691	0.877	0.588	0.588	0.71	0.77	NO	90.6	
35	Total-tetrafurans	303.9016	24.18	0.000	0.877	0.000	0.427	0.61	0.77	YES	68.7	
35	Total-tetrafurans	303.9016	24.06	33815.762	0.877	1.054	1.054	0.75	0.77	NO	169.5	
35	Total-tetrafurans	303.9016	23.91	8318.460	0.877	0.259	0.259	0.70	0.77	NO	45.5	
35	Total-tetrafurans	303.9016	23.82	32155.076	0.877	1.002	1.002	0.74	0.77	NO	142.5	
35	Total-tetrafurans	303.9016	23.72	15622.501	0.877	0.487	0.487	0.86	0.77	NO	72.5	
35	Total-tetrafurans	303.9016	23.57	0.000	0.877	0.000	0.807	0.70	0.77	NO	63.1	
35	Total-tetrafurans	303.9016	23.42	72796.092	0.877	2.269	2.269	0.74	0.77	NO	340.4	
35	Total-tetrafurans	303.9016	22.84	15557.084	0.877	0.485	0.485	0.66	0.77	NO	74.1	
35	Total-tetrafurans	303.9016	22.58	10321.539	0.877	0.322	0.322	0.72	0.77	NO	53.2	
35	Total-tetrafurans	303.9016	27.50	13268.096	0.877	0.414	0.414	0.85	0.77	NO	49.1	
35	Total-tetrafurans	303.9016	26.59	0.000	0.877	0.000	0.014	0.49	0.77	YES	3.4	
35	Total-tetrafurans	303.9016	26.30	32156.422	0.877	1.002	1.002	0.78	0.77	NO	163.1	
35	Total-tetrafurans	303.9016	26.20	11050.185	0.877	0.344	0.344	0.67	0.77	NO	48.3	
1	2378-TCDF	303.9016	26.06	34624.740	0.877	1.079	1.079	0.68	0.77	NO	162.7	
35	Total-tetrafurans	303.9016	25.88	0.000	0.877	0.000	0.192	1.14	0.77	YES	47.6	
35	Total-tetrafurans	303.9016	25.70	0.000	0.877	0.000	0.028	0.56	0.77	YES	5.3	
35	Total-tetrafurans	303.9016	25.57	7085.883	0.877	0.221	0.221	0.80	0.77	NO	35.6	
35	Total-tetrafurans	303.9016	25.38	0.000	0.877	0.000	0.322	0.65	0.77	YES	50.4	
35	Total-tetrafurans	303.9016	25.15	27024.901	0.877	0.842	0.842	0.74	0.77	NO	126.2	
35	Total-tetrafurans	303.9016	24.97	43626.328	0.877	1.360	1.360	0.81	0.77	NO	202.6	
35	Total-tetrafurans	303.9016	24.82	11651.165	0.877	0.363	0.363	0.71	0.77	NO	57.9	
37	Total-pentafurans	339.8597	29.07	47651.734	0.911	1.786	1.786	1.47	1.55	NO	143.8	
37	Total-pentafurans	339.8597	28.95	27143.694	0.911	1.017	1.017	1.52	1.55	NO	51.8	
37	Total-pentafurans	339.8597	32.59	5118.285	0.911	0.192	0.192	1.73	1.55	NO	15.0	
3	23478-PeCDF	339.8597	31.56	34806.002	0.926	0.000	1.204	1.32	1.55	YES	91.7	
37	Total-pentafurans	339.8597	31.41	0.000	0.911	0.000	1.374	1.32	1.55	YES	94.6	
37	Total-pentafurans	339.8597	31.29	0.000	0.911	0.000	0.407	1.30	1.55	YES	33.1	
37	Total-pentafurans	339.8597	31.03	1429.849	0.911	0.054	0.054	1.70	1.55	NO	3.7	
37	Total-pentafurans	339.8597	30.52	0.000	0.911	0.000	0.212	1.20	1.55	YES	16.7	
37	Total-pentafurans	339.8597	30.41	34390.799	0.911	1.289	1.289	1.39	1.55	NO	91.3	
2	12378-PeCDF	339.8597	30.21	37882.615	0.896	1.437	1.437	1.39	1.55	NO	101.0	
37	Total-pentafurans	339.8597	29.93	0.000	0.911	0.000	0.402	2.01	1.55	YES	43.9	
37	Total-pentafurans	339.8597	29.85	46181.809	0.911	1.731	1.731	1.37	1.55	NO	114.7	
37	Total-pentafurans	339.8597	29.74	0.000	0.911	0.000	0.371	1.24	1.55	YES	25.7	
37	Total-pentafurans	339.8597	29.63	6495.304	0.911	0.243	0.243	1.68	1.55	NO	12.6	
37	Total-pentafurans	339.8597	29.43	0.000	0.911	0.000	0.072	1.25	1.55	YES	6.7	
37	Total-pentafurans	339.8597	29.26	0.000	0.911	0.000	0.051	1.98	1.55	YES	4.8	
37	Total-pentafurans	339.8597	29.14	93656.688	0.911	3.510	3.510	1.42	1.55	NO	256.2	
5	234678-HxCDF	373.8208	36.33	95320.176	1.037	4.020	4.020	1.16	1.24	NO	131.3	
38	Total-hexafurans	373.8208	35.75	0.000	1.032	0.000	0.183	0.86	1.24	YES	9.8	
6	123678-HxCDF	373.8208	35.39	61684.109	1.035	2.581	2.581	1.15	1.24	NO	125.9	
4	123478-HxCDF	373.8208	35.23	77357.281	1.068	3.212	3.212	1.19	1.24	NO	158.1	
38	Total-hexafurans	373.8208	35.08	16651.459	1.032	0.694	0.694	1.22	1.24	NO	34.2	
38	Total-hexafurans	373.8208	34.59	939818.187	1.032	39.178	39.178	1.18	1.24	NO	2040.8	
38	Total-hexafurans	373.8208	34.27	0.000	1.032	0.000	0.445	0.99	1.24	YES	22.0	
38	Total-hexafurans	373.8208	34.02	0.000	1.032	0.000	0.030	3.47	1.24	YES	1.5	

**Quantify Totals Report MassLynx 4.1 SCN 714**

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**Furans,TF,PP,PF,HF,HPF,OF**

#	Name	Total	RT	Amount	RP	EMPC	RF	RF	RF	RF	RF	SN
38	Total-hexafurans	373.8208	33.72	739366.562	1.032	30.822	30.822	1.19	1.24	NO	1597.7	
38	Total-hexafurans	373.8208	33.51	338423.047	1.032	14.108	14.108	1.17	1.24	NO	741.1	
7	123789-HxCDF	373.8208	37.45	35867.375	0.987	1.484	1.484	1.15	1.24	NO	68.2	
9	1234789-HpCDF	407.7818	42.24	56323.068	1.215	3.010	3.010	0.96	1.05	NO	104.5	
39	Total-heptafurans	407.7818	41.35	3668.871	1.223	0.176	0.176	1.12	1.05	NO	8.2	
39	Total-heptafurans	407.7818	40.33	2454773.375	1.223	117.911	117....	0.99	1.05	NO	4898.6	
39	Total-heptafurans	407.7818	40.03	26131.178	1.223	1.255	1.255	1.08	1.05	NO	48.0	
8	1234678-HpCDF	407.7818	39.54	1191385.313	1.232	51.907	51.907	0.99	1.05	NO	2435.1	
10	OCDF	441.7428	47.55	2645498.500	1.138	178.782	178....	0.85	0.89	NO	3923.8	
36	Total-penta1	339.8597	27.48	601065.265		22.380	22.380	1.53	1.55	NO	3861.1	
35	Total-tetrafurans	303.9016	25.84	0.000	0.877	0.000	0.169	0.48	0.77	YES	35.1	

**TD**

#	Name	Total	RT	Amount	RP	EMPC	RF	RF	RF	RF	RF	SN
41	Total-tetradoxins	319.8965	25.33	13014.614	1.049	0.504	0.504	0.76	0.77	NO	67.2	
41	Total-tetradoxins	319.8965	25.05	6505.406	1.049	0.252	0.252	0.80	0.77	NO	31.9	
41	Total-tetradoxins	319.8965	24.84	0.000	1.049	0.000	0.262	0.89	0.77	YES	42.0	
41	Total-tetradoxins	319.8965	24.33	0.000	1.049	0.000	0.228	0.92	0.77	YES	41.0	
41	Total-tetradoxins	319.8965	24.12	19144.799	1.049	0.741	0.741	0.76	0.77	NO	105.6	
41	Total-tetradoxins	319.8965	23.85	27668.495	1.049	1.071	1.071	0.79	0.77	NO	156.9	
41	Total-tetradoxins	319.8965	27.29	2143.044	1.049	0.083	0.083	0.78	0.77	NO	8.3	
41	Total-tetradoxins	319.8965	26.84	5826.212	1.049	0.226	0.226	0.89	0.77	NO	28.4	
11	2378-TCDD	319.8965	26.71	10402.678	1.049	0.403	0.403	0.69	0.77	NO	49.9	
41	Total-tetradoxins	319.8965	26.33	0.000	1.049	0.000	0.330	0.65	0.77	YES	38.6	
41	Total-tetradoxins	319.8965	26.03	0.000	1.049	0.000	0.058	1.09	0.77	YES	10.0	
41	Total-tetradoxins	319.8965	25.90	0.000	1.049	0.000	0.245	0.92	0.77	YES	43.0	
41	Total-tetradoxins	319.8965	25.69	5040.575	1.049	0.195	0.195	0.74	0.77	NO	27.5	
41	Total-tetradoxins	319.8965	25.59	2082.827	1.049	0.081	0.081	0.75	0.77	NO	10.6	

**PD**

#	Name	Total	RT	Amount	RP	EMPC	RF	RF	RF	RF	RF	SN
42	Total-pentadioxins	355.8546	32.21	9412.043	0.998	0.493	0.493	1.62	1.55	NO	37.7	
12	12378-PeCDD	355.8546	31.81	48773.313	0.998	2.556	2.556	1.52	1.55	NO	164.9	
42	Total-pentadioxins	355.8546	31.13	7065.291	0.998	0.370	0.370	1.74	1.55	NO	25.4	
42	Total-pentadioxins	355.8546	30.75	26975.399	0.998	1.414	1.414	1.53	1.55	NO	65.2	
42	Total-pentadioxins	355.8546	30.57	22193.984	0.998	1.163	1.163	1.54	1.55	NO	80.4	
42	Total-pentadioxins	355.8546	30.43	36513.426	0.998	1.914	1.914	1.52	1.55	NO	129.0	
42	Total-pentadioxins	355.8546	30.22	28822.141	0.998	1.511	1.511	1.41	1.55	NO	102.4	
42	Total-pentadioxins	355.8546	29.60	18604.934	0.998	0.975	0.975	1.63	1.55	NO	73.3	
42	Total-pentadioxins	355.8546	29.13	67561.609	0.998	3.541	3.541	1.64	1.55	NO	165.4	

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HD

Peak	Name	Time	RT	Abs. Resp	Response	Area	Height	Width	Area%	Height%	SN
15	123789-HxCDD	389.8157	37.03	164513.375	0.932	9.007	9.007	1.20	1.24	NO	548.1
43	Total-hexadioxins	389.8157	36.79	32325.244	0.940	1.755	1.755	1.24	1.24	NO	104.9
14	123678-HxCDD	389.8157	36.61	362146.906	0.918	19.451	19.451	1.23	1.24	NO	1195.6
13	123478-HxCDD	389.8157	36.48	76269.285	0.971	4.157	4.157	1.26	1.24	NO	266.3
43	Total-hexadioxins	389.8157	35.62	36088.639	0.940	1.959	1.959	1.18	1.24	NO	128.7
43	Total-hexadioxins	389.8157	35.52	663737.594	0.940	36.029	36.029	1.26	1.24	NO	1532.7
43	Total-hexadioxins	389.8157	35.12	89267.418	0.940	4.846	4.846	1.24	1.24	NO	290.3
43	Total-hexadioxins	389.8157	34.31	414259.828	0.940	22.487	22.487	1.21	1.24	NO	1385.7

HPD

Peak	Name	Time	RT	Abs. Resp	Response	Area	Height	Width	Area%	Height%	SN
16	1234678-HpCDD	423.7766	41.35	6875967.750	1.017	385.554	385....	1.03	1.05	NO	3732.7
44	Total-heptadioxins	423.7766	40.09	6314127.250	1.017	354.050	354....	1.03	1.05	NO	3693.4

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Dioxins,TD,PD,HD,HPD,OD

41	Total-tetradiioxins	319.8965	25.33	13014.614	1.049	0.504	0.504	0.76	0.77	NO	67.2
41	Total-tetradiioxins	319.8965	25.05	6505.406	1.049	0.252	0.252	0.80	0.77	NO	31.9
41	Total-tetradiioxins	319.8965	24.84	0.000	1.049	0.000	0.262	0.89	0.77	YES	42.0
41	Total-tetradiioxins	319.8965	24.33	0.000	1.049	0.000	0.228	0.92	0.77	YES	41.0
41	Total-tetradiioxins	319.8965	24.12	19144.799	1.049	0.741	0.741	0.76	0.77	NO	105.6
41	Total-tetradiioxins	319.8965	23.85	27668.495	1.049	1.071	1.071	0.79	0.77	NO	156.9
45	Total-Dioxins	319.8965	21.83	0.000	0.985	0.000	0.008	1.10	0.77	YES	1.8
45	Total-Dioxins	319.8965	27.60	0.000	0.985	0.000	0.006	1.30	0.77	YES	1.4
41	Total-tetradiioxins	319.8965	27.29	2143.044	1.049	0.083	0.083	0.78	0.77	NO	8.3
41	Total-tetradiioxins	319.8965	26.84	5826.212	1.049	0.226	0.226	0.89	0.77	NO	28.4
11	2378-TCDD	319.8965	26.71	10402.678	1.049	0.403	0.403	0.69	0.77	NO	49.9
41	Total-tetradiioxins	319.8965	26.33	0.000	1.049	0.000	0.330	0.65	0.77	YES	38.6
41	Total-tetradiioxins	319.8965	26.03	0.000	1.049	0.000	0.058	1.09	0.77	YES	10.0
41	Total-tetradiioxins	319.8965	25.90	0.000	1.049	0.000	0.245	0.92	0.77	YES	43.0
41	Total-tetradiioxins	319.8965	25.69	5040.575	1.049	0.195	0.195	0.74	0.77	NO	27.5
41	Total-tetradiioxins	319.8965	25.59	2082.827	1.049	0.081	0.081	0.75	0.77	NO	10.6
42	Total-pentadiioxins	355.8546	32.21	9412.043	0.998	0.493	0.493	1.62	1.55	NO	37.7
12	12378-PeCDD	355.8546	31.81	48773.313	0.998	2.556	2.556	1.52	1.55	NO	164.9
42	Total-pentadiioxins	355.8546	31.13	7065.291	0.998	0.370	0.370	1.74	1.55	NO	25.4
42	Total-pentadiioxins	355.8546	30.75	26975.399	0.998	1.414	1.414	1.53	1.55	NO	65.2
42	Total-pentadiioxins	355.8546	30.57	22193.984	0.998	1.163	1.163	1.54	1.55	NO	80.4
42	Total-pentadiioxins	355.8546	30.43	36513.426	0.998	1.914	1.914	1.52	1.55	NO	129.0
42	Total-pentadiioxins	355.8546	30.22	28822.141	0.998	1.511	1.511	1.41	1.55	NO	102.4
42	Total-pentadiioxins	355.8546	29.60	18604.934	0.998	0.975	0.975	1.63	1.55	NO	73.3
42	Total-pentadiioxins	355.8546	29.13	67561.609	0.998	3.541	3.541	1.64	1.55	NO	165.4
15	123789-HxCDD	389.8157	37.03	164513.375	0.932	9.007	9.007	1.20	1.24	NO	548.1
43	Total-hexadiioxins	389.8157	36.79	32325.244	0.940	1.755	1.755	1.24	1.24	NO	104.9
14	123678-HxCDD	389.8157	36.61	362146.906	0.918	19.451	19.451	1.23	1.24	NO	1195.6
13	123478-HxCDD	389.8157	36.48	76269.285	0.971	4.157	4.157	1.26	1.24	NO	266.3
43	Total-hexadiioxins	389.8157	35.62	36088.639	0.940	1.959	1.959	1.18	1.24	NO	128.7
43	Total-hexadiioxins	389.8157	35.52	663737.594	0.940	36.029	36.029	1.26	1.24	NO	1532.7
43	Total-hexadiioxins	389.8157	35.12	89267.418	0.940	4.846	4.846	1.24	1.24	NO	290.3
43	Total-hexadiioxins	389.8157	34.31	414259.828	0.940	22.487	22.487	1.21	1.24	NO	1385.7
16	1234678-HpCDD	423.7766	41.35	6875967.750	1.017	385.554	385....	1.03	1.05	NO	3732.7
44	Total-heptadiioxins	423.7766	40.09	6314127.250	1.017	354.050	354....	1.03	1.05	NO	3693.4
17	OCDD	457.7377	47.28	42478420....	1.008	3238.4...	3238...	0.88	0.89	NO	20025.5

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TotalTEQ,Furans,Dioxins

Sample	Concentration	Reference	TEQ	Abundance	TEQ	TEQ	TEQ	TEQ	TEQ	TEQ	TEQ	TEQ
35 Total-tetrafurans	303.9016	24.73	26445.123	0.877	0.824	0.824	0.69	0.77	NO	96.5		
35 Total-tetrafurans	303.9016	24.58	0.000	0.877	0.000	0.021	0.94	0.77	YES	5.3		
35 Total-tetrafurans	303.9016	24.32	18875.691	0.877	0.588	0.588	0.71	0.77	NO	90.6		
35 Total-tetrafurans	303.9016	24.18	0.000	0.877	0.000	0.427	0.61	0.77	YES	68.7		
35 Total-tetrafurans	303.9016	24.06	33815.762	0.877	1.054	1.054	0.75	0.77	NO	169.5		
35 Total-tetrafurans	303.9016	23.91	8318.460	0.877	0.259	0.259	0.70	0.77	NO	45.5		
35 Total-tetrafurans	303.9016	23.82	32155.076	0.877	1.002	1.002	0.74	0.77	NO	142.5		
35 Total-tetrafurans	303.9016	23.72	15622.501	0.877	0.487	0.487	0.86	0.77	NO	72.5		
35 Total-tetrafurans	303.9016	23.57	0.000	0.877	0.000	0.807	0.70	0.77	NO	63.1		
35 Total-tetrafurans	303.9016	23.42	72796.092	0.877	2.269	2.269	0.74	0.77	NO	340.4		
35 Total-tetrafurans	303.9016	22.84	15557.084	0.877	0.485	0.485	0.66	0.77	NO	74.1		
35 Total-tetrafurans	303.9016	22.58	10321.539	0.877	0.322	0.322	0.72	0.77	NO	53.2		
35 Total-tetrafurans	303.9016	27.50	13268.096	0.877	0.414	0.414	0.85	0.77	NO	49.1		
35 Total-tetrafurans	303.9016	26.59	0.000	0.877	0.000	0.014	0.49	0.77	YES	3.4		
35 Total-tetrafurans	303.9016	26.30	32156.422	0.877	1.002	1.002	0.78	0.77	NO	163.1		
35 Total-tetrafurans	303.9016	26.20	11050.185	0.877	0.344	0.344	0.67	0.77	NO	48.3		
1 2378-TCDF	303.9016	26.06	34624.740	0.877	1.079	1.079	0.68	0.77	NO	162.7		
35 Total-tetrafurans	303.9016	25.88	0.000	0.877	0.000	0.192	1.14	0.77	YES	47.6		
35 Total-tetrafurans	303.9016	25.70	0.000	0.877	0.000	0.028	0.56	0.77	YES	5.3		
35 Total-tetrafurans	303.9016	25.57	7085.883	0.877	0.221	0.221	0.80	0.77	NO	35.6		
35 Total-tetrafurans	303.9016	25.38	0.000	0.877	0.000	0.322	0.65	0.77	YES	50.4		
35 Total-tetrafurans	303.9016	25.15	27024.901	0.877	0.842	0.842	0.74	0.77	NO	126.2		
35 Total-tetrafurans	303.9016	24.97	43626.328	0.877	1.360	1.360	0.81	0.77	NO	202.6		
35 Total-tetrafurans	303.9016	24.82	11651.165	0.877	0.363	0.363	0.71	0.77	NO	57.9		
37 Total-pentafurans	339.8597	29.07	47651.734	0.911	1.786	1.786	1.47	1.55	NO	143.8		
37 Total-pentafurans	339.8597	28.95	27143.694	0.911	1.017	1.017	1.52	1.55	NO	51.8		
37 Total-pentafurans	339.8597	32.59	5118.285	0.911	0.192	0.192	1.73	1.55	NO	15.0		
3 23478-PeCDF	339.8597	31.56	34806.002	0.926	0.000	1.204	1.32	1.55	YES	91.7		
37 Total-pentafurans	339.8597	31.41	0.000	0.911	0.000	1.374	1.32	1.55	YES	94.6		
37 Total-pentafurans	339.8597	31.29	0.000	0.911	0.000	0.407	1.30	1.55	YES	33.1		
37 Total-pentafurans	339.8597	31.03	1429.849	0.911	0.054	0.054	1.70	1.55	NO	3.7		
37 Total-pentafurans	339.8597	30.52	0.000	0.911	0.000	0.212	1.20	1.55	YES	16.7		
37 Total-pentafurans	339.8597	30.41	34390.799	0.911	1.289	1.289	1.39	1.55	NO	91.3		
2 12378-PeCDF	339.8597	30.21	37882.615	0.896	1.437	1.437	1.39	1.55	NO	101.0		
37 Total-pentafurans	339.8597	29.93	0.000	0.911	0.000	0.402	2.01	1.55	YES	43.9		
37 Total-pentafurans	339.8597	29.85	46181.809	0.911	1.731	1.731	1.37	1.55	NO	114.7		
37 Total-pentafurans	339.8597	29.74	0.000	0.911	0.000	0.371	1.24	1.55	YES	25.7		
37 Total-pentafurans	339.8597	29.63	6495.304	0.911	0.243	0.243	1.68	1.55	NO	12.6		
37 Total-pentafurans	339.8597	29.43	0.000	0.911	0.000	0.072	1.25	1.55	YES	6.7		
37 Total-pentafurans	339.8597	29.26	0.000	0.911	0.000	0.051	1.98	1.55	YES	4.8		
37 Total-pentafurans	339.8597	29.14	93656.688	0.911	3.510	3.510	1.42	1.55	NO	256.2		
5 234678-HxCDF	373.8208	36.33	95320.176	1.037	4.020	4.020	1.16	1.24	NO	131.3		
38 Total-hexafurans	373.8208	35.75	0.000	1.032	0.000	0.183	0.86	1.24	YES	9.8		
6 123678-HxCDF	373.8208	35.39	61684.109	1.035	2.581	2.581	1.15	1.24	NO	125.9		
4 123478-HxCDF	373.8208	35.23	77357.281	1.068	3.212	3.212	1.19	1.24	NO	158.1		
38 Total-hexafurans	373.8208	35.08	16651.459	1.032	0.694	0.694	1.22	1.24	NO	34.2		
38 Total-hexafurans	373.8208	34.59	939818.187	1.032	39.178	39.178	1.18	1.24	NO	2040.8		
38 Total-hexafurans	373.8208	34.27	0.000	1.032	0.000	0.445	0.99	1.24	YES	22.0		
38 Total-hexafurans	373.8208	34.02	0.000	1.032	0.000	0.030	3.47	1.24	YES	14.6		

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Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

Item	Concentration	TEQ	Furans	Dioxins	TEQ/Furans	Dioxins/Furans	TEQ/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins
38 Total-hexafurans	373.8208	33.72	739366.562	1.032	30.822	30.822	1.19	1.24	NO	1597.7	
38 Total-hexafurans	373.8208	33.51	338423.047	1.032	14.108	14.108	1.17	1.24	NO	741.1	
7 123789-HxCDF	373.8208	37.45	35867.375	0.987	1.484	1.484	1.15	1.24	NO	68.2	
9 1234789-HpCDF	407.7818	42.24	56323.068	1.215	3.010	3.010	0.96	1.05	NO	104.5	
39 Total-heptafurans	407.7818	41.35	3668.871	1.223	0.176	0.176	1.12	1.05	NO	8.2	
39 Total-heptafurans	407.7818	40.33	2454773.375	1.223	117.911	117.911	0.99	1.05	NO	4898.6	
39 Total-heptafurans	407.7818	40.03	26131.178	1.223	1.255	1.255	1.08	1.05	NO	48.0	
8 1234678-HpCDF	407.7818	39.54	1191385.313	1.232	51.907	51.907	0.99	1.05	NO	2435.1	
10 OCDF	441.7428	47.55	2645498.500	1.138	178.782	178.782	0.85	0.89	NO	3923.8	
36 Total-penta1	339.8597	27.48	601065.265		22.380	22.380	1.53	1.55	NO	3861.1	
35 Total-tetrafurans	303.9016	25.84	0.000	0.877	0.000	0.169	0.48	0.77	YES	35.1	
41 Total-tetradiioxins	319.8965	25.33	13014.614	1.049	0.504	0.504	0.76	0.77	NO	67.2	
41 Total-tetradiioxins	319.8965	25.05	6505.406	1.049	0.252	0.252	0.80	0.77	NO	31.9	
41 Total-tetradiioxins	319.8965	24.84	0.000	1.049	0.000	0.262	0.89	0.77	YES	42.0	
41 Total-tetradiioxins	319.8965	24.33	0.000	1.049	0.000	0.228	0.92	0.77	YES	41.0	
41 Total-tetradiioxins	319.8965	24.12	19144.799	1.049	0.741	0.741	0.76	0.77	NO	105.6	
41 Total-tetradiioxins	319.8965	23.85	27668.495	1.049	1.071	1.071	0.79	0.77	NO	156.9	
45 Total-Dioxins	319.8965	21.83	0.000	0.985	0.000	0.008	1.10	0.77	YES	1.8	
45 Total-Dioxins	319.8965	27.60	0.000	0.985	0.000	0.006	1.30	0.77	YES	1.4	
41 Total-tetradiioxins	319.8965	27.29	2143.044	1.049	0.083	0.083	0.78	0.77	NO	8.3	
41 Total-tetradiioxins	319.8965	26.84	5826.212	1.049	0.226	0.226	0.89	0.77	NO	28.4	
11 2378-TCDD	319.8965	26.71	10402.678	1.049	0.403	0.403	0.69	0.77	NO	49.9	
41 Total-tetradiioxins	319.8965	26.33	0.000	1.049	0.000	0.330	0.65	0.77	YES	38.6	
41 Total-tetradiioxins	319.8965	26.03	0.000	1.049	0.000	0.058	1.09	0.77	YES	10.0	
41 Total-tetradiioxins	319.8965	25.90	0.000	1.049	0.000	0.245	0.92	0.77	YES	43.0	
41 Total-tetradiioxins	319.8965	25.69	5040.575	1.049	0.195	0.195	0.74	0.77	NO	27.5	
41 Total-tetradiioxins	319.8965	25.59	2082.827	1.049	0.081	0.081	0.75	0.77	NO	10.6	
42 Total-pentadiioxins	355.8546	32.21	9412.043	0.998	0.493	0.493	1.62	1.55	NO	37.7	
12 12378-PeCDD	355.8546	31.81	48773.313	0.998	2.556	2.556	1.52	1.55	NO	164.9	
42 Total-pentadiioxins	355.8546	31.13	7065.291	0.998	0.370	0.370	1.74	1.55	NO	25.4	
42 Total-pentadiioxins	355.8546	30.75	26975.399	0.998	1.414	1.414	1.53	1.55	NO	65.2	
42 Total-pentadiioxins	355.8546	30.57	22193.984	0.998	1.163	1.163	1.54	1.55	NO	80.4	
42 Total-pentadiioxins	355.8546	30.43	36513.426	0.998	1.914	1.914	1.52	1.55	NO	129.0	
42 Total-pentadiioxins	355.8546	30.22	28822.141	0.998	1.511	1.511	1.41	1.55	NO	102.4	
42 Total-pentadiioxins	355.8546	29.60	18604.934	0.998	0.975	0.975	1.63	1.55	NO	73.3	
42 Total-pentadiioxins	355.8546	29.13	67561.609	0.998	3.541	3.541	1.64	1.55	NO	165.4	
15 123789-HxCDD	389.8157	37.03	164513.375	0.932	9.007	9.007	1.20	1.24	NO	548.1	
43 Total-hexadiioxins	389.8157	36.79	32325.244	0.940	1.755	1.755	1.24	1.24	NO	104.9	
14 123678-HxCDD	389.8157	36.61	362146.906	0.918	19.451	19.451	1.23	1.24	NO	1195.6	
13 123478-HxCDD	389.8157	36.48	76269.285	0.971	4.157	4.157	1.26	1.24	NO	266.3	
43 Total-hexadiioxins	389.8157	35.62	36088.639	0.940	1.959	1.959	1.18	1.24	NO	128.7	
43 Total-hexadiioxins	389.8157	35.52	663737.594	0.940	36.029	36.029	1.26	1.24	NO	1532.7	
43 Total-hexadiioxins	389.8157	35.12	89267.418	0.940	4.846	4.846	1.24	1.24	NO	290.3	
43 Total-hexadiioxins	389.8157	34.31	414259.828	0.940	22.487	22.487	1.21	1.24	NO	1385.7	
16 1234678-HpCDD	423.7766	41.35	6875967.750	1.017	385.554	385.554	1.03	1.05	NO	3732.7	
44 Total-heptadiioxins	423.7766	40.09	6314127.250	1.017	354.050	354.050	1.03	1.05	NO	3693.4	
17 OCDD	457.7377	47.28	42478420.000	1.008	3238.400	3238.400	0.88	0.89	NO	20025.5	



Quantify Totals Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld
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Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

PFK1

Table with 6 columns: Peak Number, Name, Area, Height, Width, and Abundance. Contains 30 rows of data for PFK1 peaks.

**Quantify Totals Report MassLynx 4.1 SCN 714**

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**Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk**

**PFK2**

Peak	Name	Area	RT	Abs Resp	RFEM	SN
49	FUNCTION2 PFK	366.9792	29.10	0.000	0.000	1.6
49	FUNCTION2 PFK	366.9792	28.78	0.000	0.000	0.7
49	FUNCTION2 PFK	366.9792	31.29	0.000	0.000	1.5
49	FUNCTION2 PFK	366.9792	31.01	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	30.76	0.000	0.000	1.3
49	FUNCTION2 PFK	366.9792	29.63	0.000	0.000	3.8
49	FUNCTION2 PFK	366.9792	29.36	0.000	0.000	0.6

**PFK3**

Peak	Name	Area	RT	Abs Resp	RFEM	SN
50	FUNCTION3 PFK	380.9760	35.09	0.000	0.000	2.7
50	FUNCTION3 PFK	380.9760	34.54	0.000	0.000	0.3
50	FUNCTION3 PFK	380.9760	34.21	0.000	0.000	1.2
50	FUNCTION3 PFK	380.9760	34.17	0.000	0.000	3.1
50	FUNCTION3 PFK	380.9760	34.14	0.000	0.000	3.2
50	FUNCTION3 PFK	380.9760	33.96	0.000	0.000	1.7
50	FUNCTION3 PFK	380.9760	33.81	0.000	0.000	2.1
50	FUNCTION3 PFK	380.9760	33.42	0.000	0.000	2.9
50	FUNCTION3 PFK	380.9760	33.37	0.000	0.000	5.2
50	FUNCTION3 PFK	380.9760	33.31	0.000	0.000	7.6
50	FUNCTION3 PFK	380.9760	38.38	0.000	0.000	0.8
50	FUNCTION3 PFK	380.9760	37.81	0.000	0.000	11.9
50	FUNCTION3 PFK	380.9760	37.57	0.000	0.000	20.4
50	FUNCTION3 PFK	380.9760	37.46	0.000	0.000	24.6
50	FUNCTION3 PFK	380.9760	37.34	0.000	0.000	23.2
50	FUNCTION3 PFK	380.9760	37.26	0.000	0.000	17.6
50	FUNCTION3 PFK	380.9760	36.24	0.000	0.000	1.1
50	FUNCTION3 PFK	380.9760	35.39	0.000	0.000	1.2
50	FUNCTION3 PFK	380.9760	35.23	0.000	0.000	1.6

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PFK4

Sample	Area	Height	Area%	Height%	Ratio
51 FUNCTION4 PFK	430.9728	38.88	0.000		1.5
51 FUNCTION4 PFK	430.9728	38.84	0.000		1.2
51 FUNCTION4 PFK	430.9728	38.75	0.000		1.2
51 FUNCTION4 PFK	430.9728	38.67	0.000		1.5
51 FUNCTION4 PFK	430.9728	38.63	0.000		1.1
51 FUNCTION4 PFK	430.9728	38.58	0.000		0.8
51 FUNCTION4 PFK	430.9728	40.03	0.000		1.6
51 FUNCTION4 PFK	430.9728	39.90	0.000		0.7
51 FUNCTION4 PFK	430.9728	39.87	0.000		1.2
51 FUNCTION4 PFK	430.9728	39.65	0.000		0.7
51 FUNCTION4 PFK	430.9728	39.61	0.000		1.4
51 FUNCTION4 PFK	430.9728	39.57	0.000		0.8
51 FUNCTION4 PFK	430.9728	39.50	0.000		1.4
51 FUNCTION4 PFK	430.9728	39.43	0.000		0.5
51 FUNCTION4 PFK	430.9728	39.39	0.000		1.0
51 FUNCTION4 PFK	430.9728	39.32	0.000		1.5
51 FUNCTION4 PFK	430.9728	39.24	0.000		1.5
51 FUNCTION4 PFK	430.9728	39.19	0.000		0.9
51 FUNCTION4 PFK	430.9728	39.15	0.000		1.4
51 FUNCTION4 PFK	430.9728	39.08	0.000		2.7
51 FUNCTION4 PFK	430.9728	39.01	0.000		1.1
51 FUNCTION4 PFK	430.9728	38.93	0.000		1.4
51 FUNCTION4 PFK	430.9728	42.11	0.000		1.3
51 FUNCTION4 PFK	430.9728	41.86	0.000		0.7
51 FUNCTION4 PFK	430.9728	41.80	0.000		0.8
51 FUNCTION4 PFK	430.9728	41.72	0.000		2.0
51 FUNCTION4 PFK	430.9728	41.55	0.000		0.5
51 FUNCTION4 PFK	430.9728	41.49	0.000		1.9
51 FUNCTION4 PFK	430.9728	41.34	0.000		2.0
51 FUNCTION4 PFK	430.9728	41.18	0.000		0.9
51 FUNCTION4 PFK	430.9728	41.06	0.000		0.9
51 FUNCTION4 PFK	430.9728	40.97	0.000		0.9
51 FUNCTION4 PFK	430.9728	40.88	0.000		1.5
51 FUNCTION4 PFK	430.9728	40.83	0.000		1.6
51 FUNCTION4 PFK	430.9728	40.78	0.000		1.1
51 FUNCTION4 PFK	430.9728	40.19	0.000		1.3
51 FUNCTION4 PFK	430.9728	40.12	0.000		1.3
51 FUNCTION4 PFK	430.9728	40.08	0.000		2.0
51 FUNCTION4 PFK	430.9728	44.05	0.000		2.2
51 FUNCTION4 PFK	430.9728	43.86	0.000		1.0
51 FUNCTION4 PFK	430.9728	43.72	0.000		0.9
51 FUNCTION4 PFK	430.9728	43.45	0.000		0.8
51 FUNCTION4 PFK	430.9728	43.39	0.000		1.6
51 FUNCTION4 PFK	430.9728	43.34	0.000		1.0
51 FUNCTION4 PFK	430.9728	43.21	0.000		1.2
51 FUNCTION4 PFK	430.9728	43.16	0.000		1.8
51 FUNCTION4 PFK	430.9728	43.07	0.000		0.5
51 FUNCTION4 PFK	430.9728	42.94	0.000		1.1
51 FUNCTION4 PFK	430.9728	42.67	0.000		1.6

Quantify Totals Report MassLynx 4.1 SCN 714

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PFK4

Table with 6 columns: Name, Amount, Conc, Abs, Resp, TIC, and a final numerical column. Contains 16 rows of data for PFK4.

PFK5

Table with 6 columns: Name, Amount, Conc, Abs, Resp, TIC, and a final numerical column. Contains 28 rows of data for PFK5.

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ETHERS1

Name	Area	RT	Abs Resp	RFU	EMPC	SN
53 FUNCTION1 HXCD...	375.8364	27.63	0.000	0.000		3.5
53 FUNCTION1 HXCD...	375.8364	27.23	0.000	0.000		3.5
53 FUNCTION1 HXCD...	375.8364	26.72	0.000	0.000		2.1
53 FUNCTION1 HXCD...	375.8364	25.91	0.000	0.000		4.7
53 FUNCTION1 HXCD...	375.8364	25.70	0.000	0.000		5.5
53 FUNCTION1 HXCD...	375.8364	23.93	0.000	0.000		27.5
53 FUNCTION1 HXCD...	375.8364	21.34	0.000	0.000		2.1
53 FUNCTION1 HXCD...	375.8364	28.05	0.000	0.000		1.8

ETHERS2

Name	Area	RT	Abs Resp	RFU	EMPC	SN
54 FUNCTION1 HPCD...	409.7974	27.98	0.000	0.000		1.7
54 FUNCTION1 HPCD...	409.7974	26.91	0.000	0.000		2.4
54 FUNCTION1 HPCD...	409.7974	25.90	0.000	0.000		1.7
54 FUNCTION1 HPCD...	409.7974	25.82	0.000	0.000		2.0
54 FUNCTION1 HPCD...	409.7974	24.73	0.000	0.000		2.0
54 FUNCTION1 HPCD...	409.7974	24.32	0.000	0.000		1.4
54 FUNCTION1 HPCD...	409.7974	23.88	0.000	0.000		1.5
54 FUNCTION1 HPCD...	409.7974	23.16	0.000	0.000		1.5
54 FUNCTION1 HPCD...	409.7974	22.15	0.000	0.000		2.9
54 FUNCTION1 HPCD...	409.7974	21.37	0.000	0.000		1.8
54 FUNCTION1 HPCD...	409.7974	21.33	0.000	0.000		1.9
54 FUNCTION1 HPCD...	409.7974	21.28	0.000	0.000		1.8

ETHERS3

Name	Area	RT	Abs Resp	RFU	EMPC	SN
55 FUNCTION2 HPCD...	409.7974	29.59	0.000	0.000		2.1
55 FUNCTION2 HPCD...	409.7974	32.16	0.000	0.000		2.6
55 FUNCTION2 HPCD...	409.7974	31.41	0.000	0.000		3.0
55 FUNCTION2 HPCD...	409.7974	31.37	0.000	0.000		2.9
55 FUNCTION2 HPCD...	409.7974	31.14	0.000	0.000		3.0
55 FUNCTION2 HPCD...	409.7974	30.63	0.000	0.000		2.6
55 FUNCTION2 HPCD...	409.7974	30.56	0.000	0.000		2.0
55 FUNCTION2 HPCD...	409.7974	30.18	0.000	0.000		2.8
55 FUNCTION2 HPCD...	409.7974	29.92	0.000	0.000		2.1
55 FUNCTION2 HPCD...	409.7974	29.84	0.000	0.000		4.2

ETHERS4

Name	Area	RT	Abs Resp	RFU	EMPC	SN
56 FUNCTION3 OCDPE	445.7555	37.08	0.000	0.000		2.0

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ETHERS5

#	Name	RT	Abs Peak	Area	Conc	EMPC	1st Peak	2nd Peak	3rd Peak
57	FUNCTION4 NCDPE	479.7165	41.57	0.000	0.000				2.9
57	FUNCTION4 NCDPE	479.7165	41.36	0.000	0.000				3.8
57	FUNCTION4 NCDPE	479.7165	40.29	0.000	0.000				2.9
57	FUNCTION4 NCDPE	479.7165	39.12	0.000	0.000				836.2
57	FUNCTION4 NCDPE	479.7165	42.91	0.000	0.000				3.6

ETHERS6

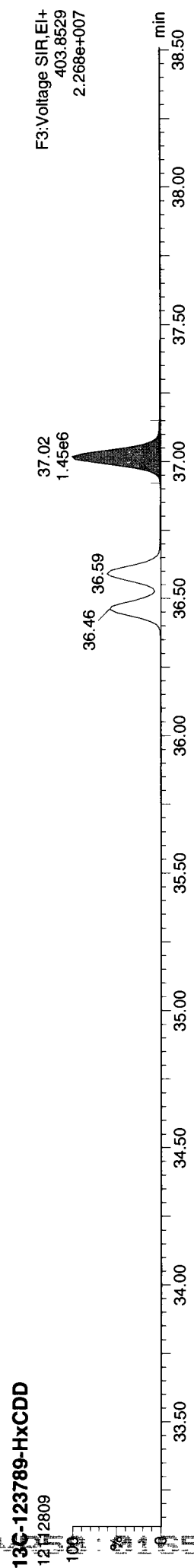
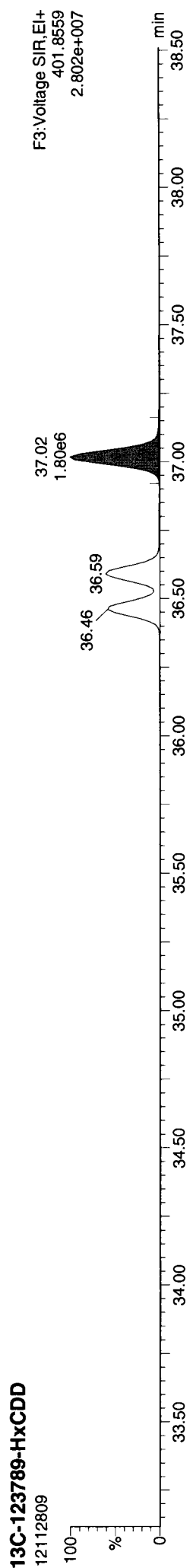
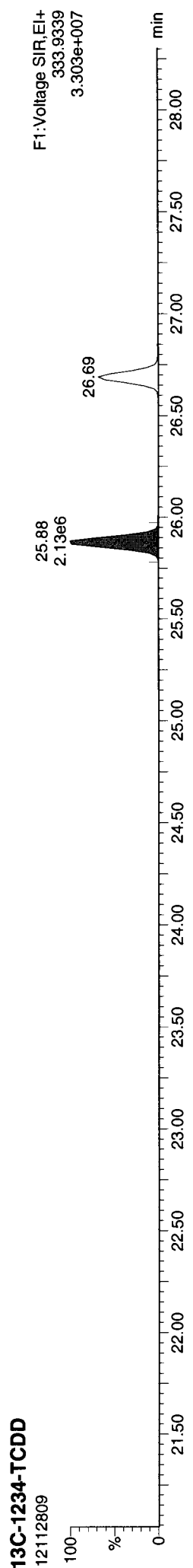
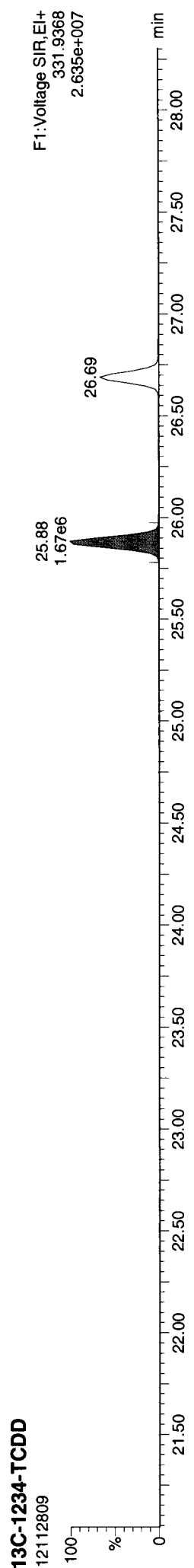
#	Name	RT	Abs Peak	Area	Conc	EMPC	1st Peak	2nd Peak	3rd Peak
58	FUNCTION5 DCDPE	513.6775	47.29	0.000	0.000				4.9

Quantify Sample Report MassLynx 4.1 SCN 714

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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

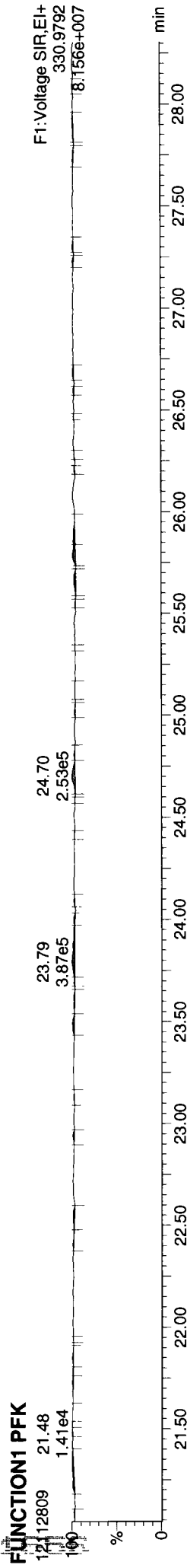
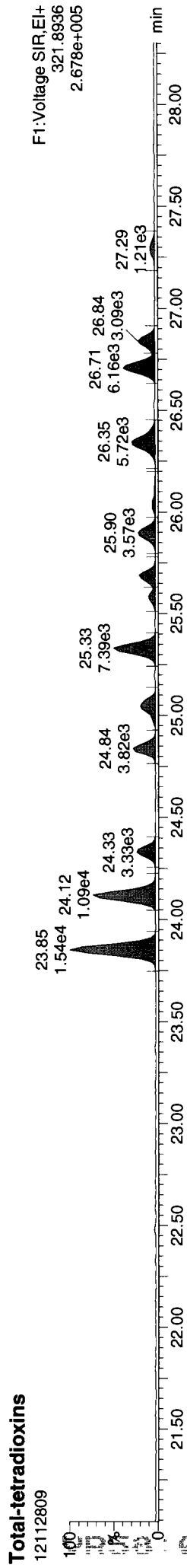
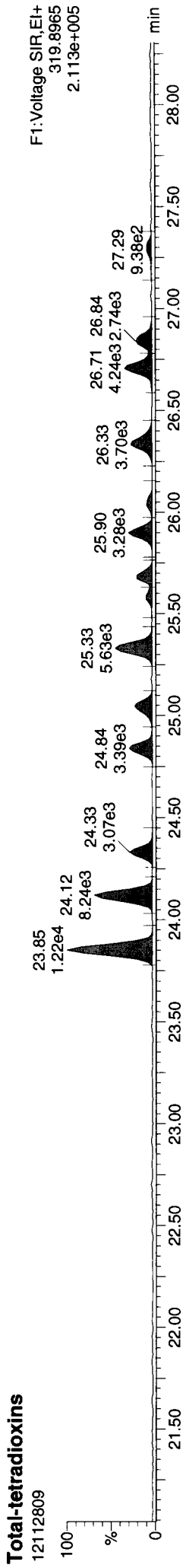
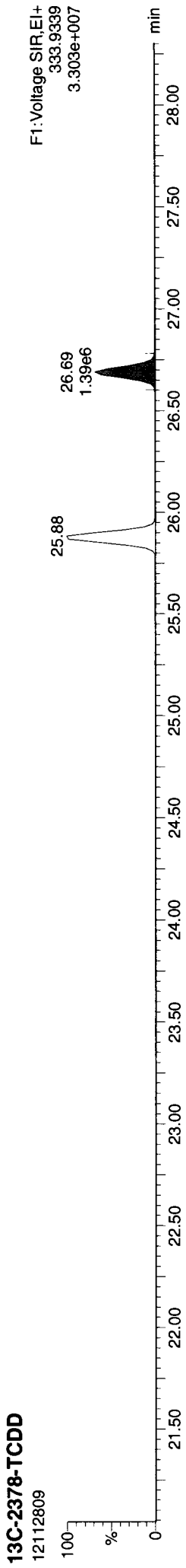
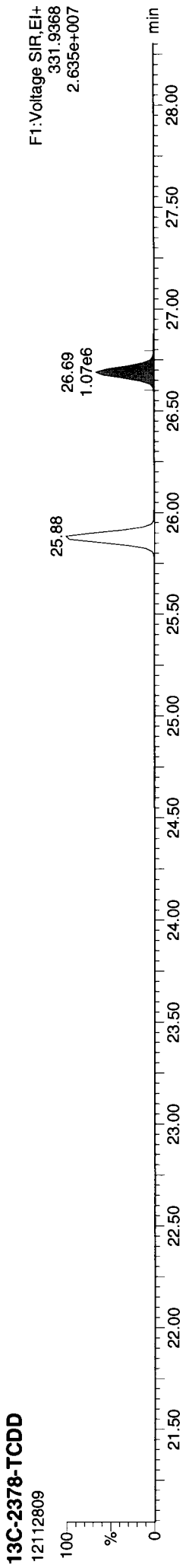
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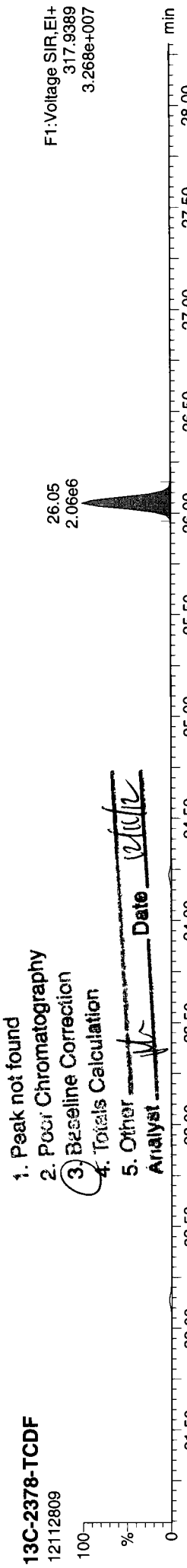
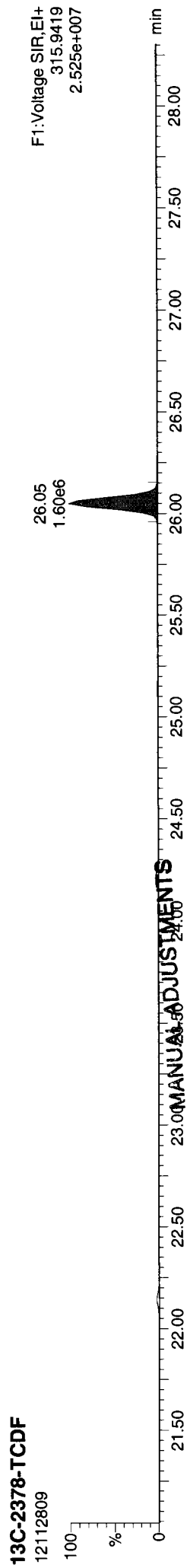
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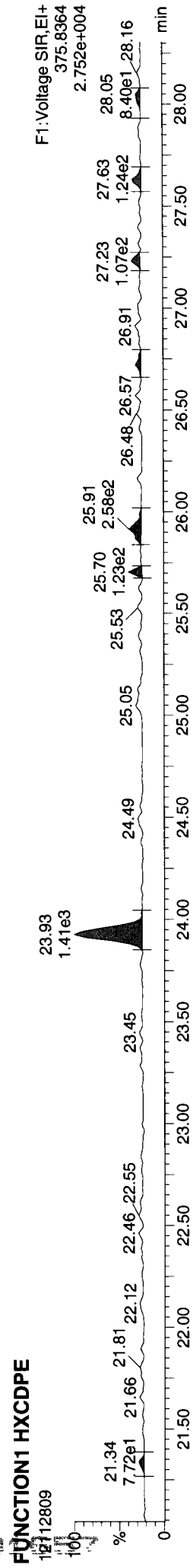
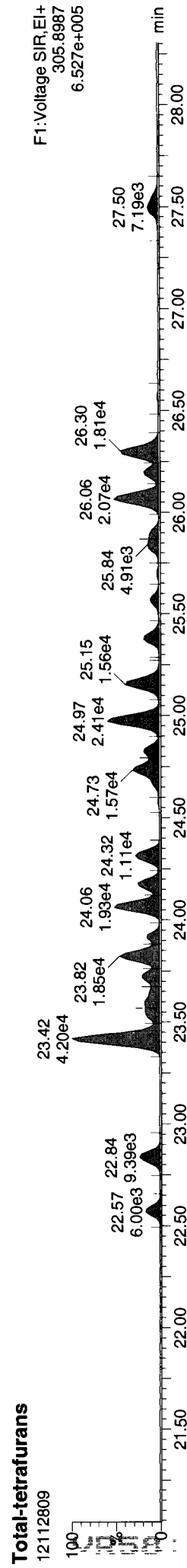
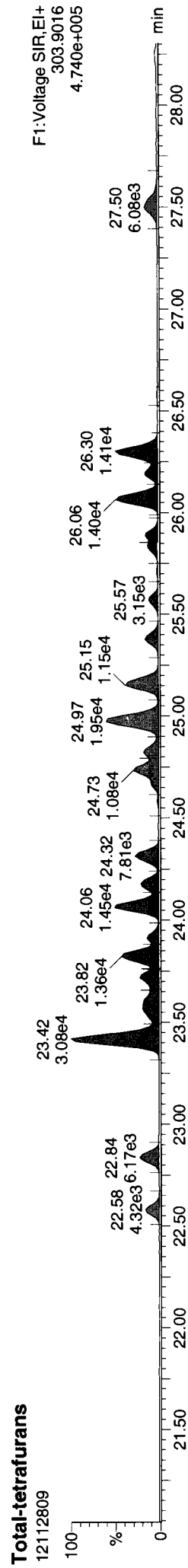


Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk



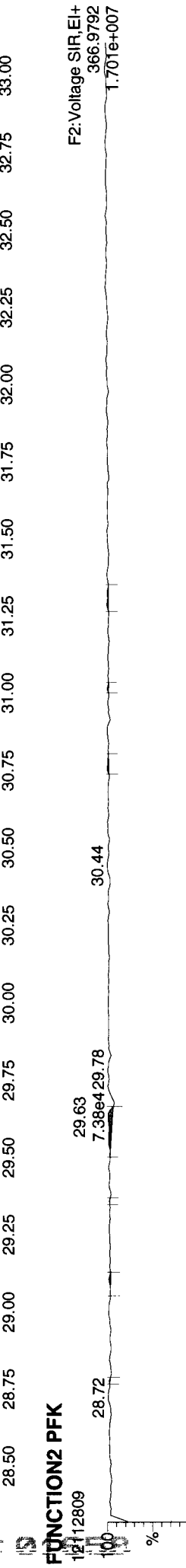
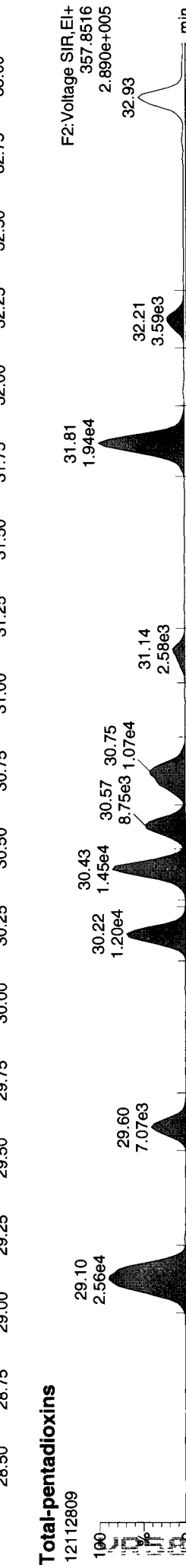
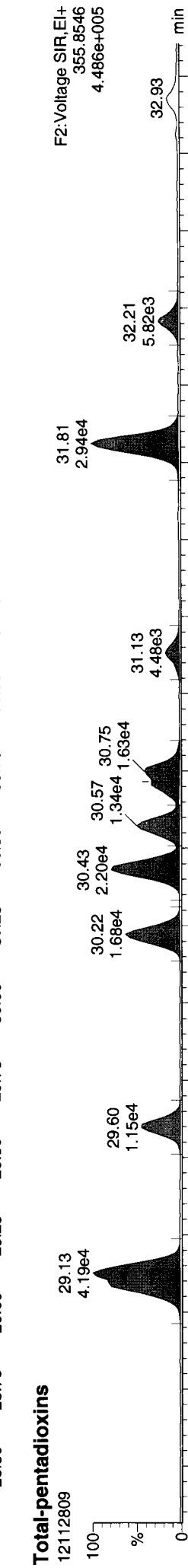
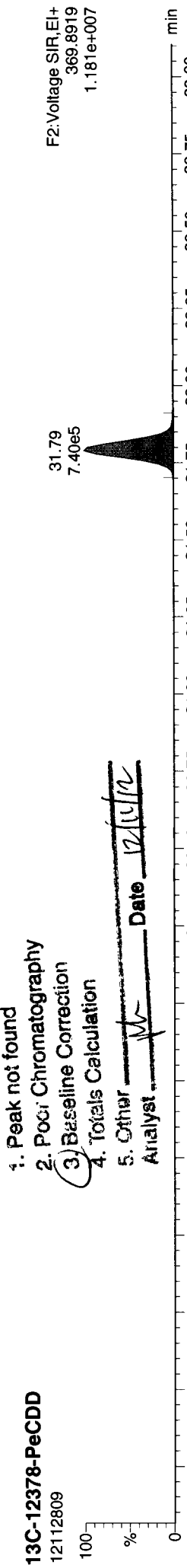
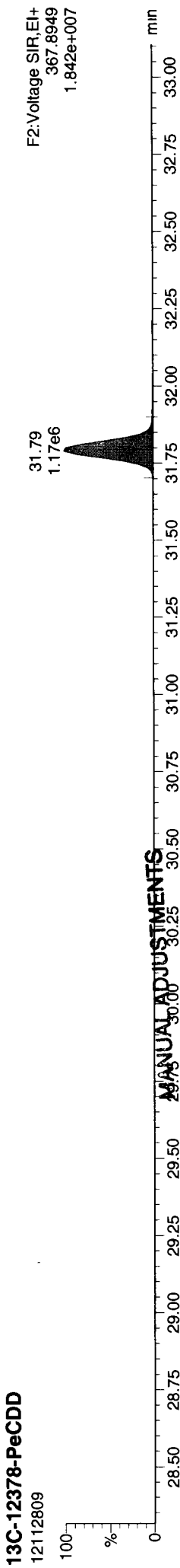
1. Peak not found
  2. Poor Chromatography
  3. Baseline Correction
  4. Totals Calculation
  5. Other
- Analyst: *[Signature]* Date: *[Signature]*



Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

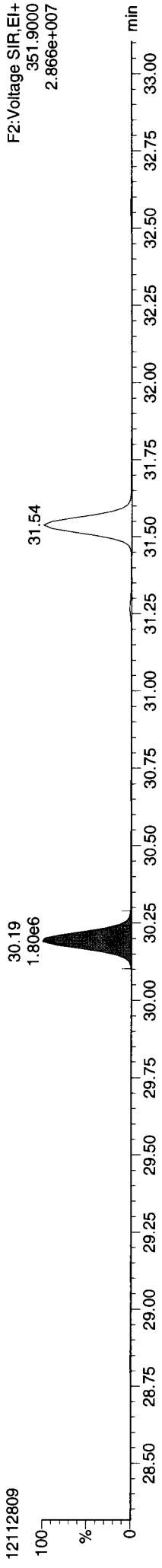
Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk



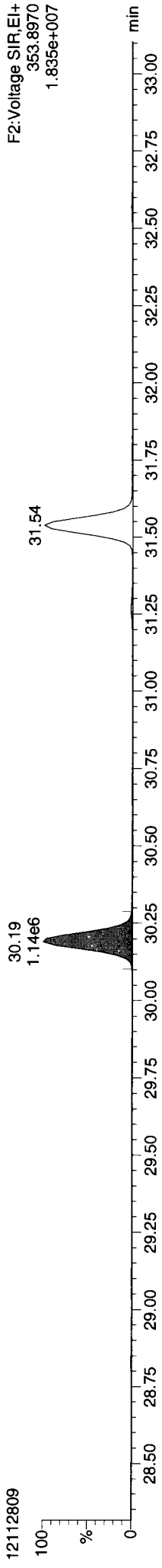
Quantify Sample Report Masalynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

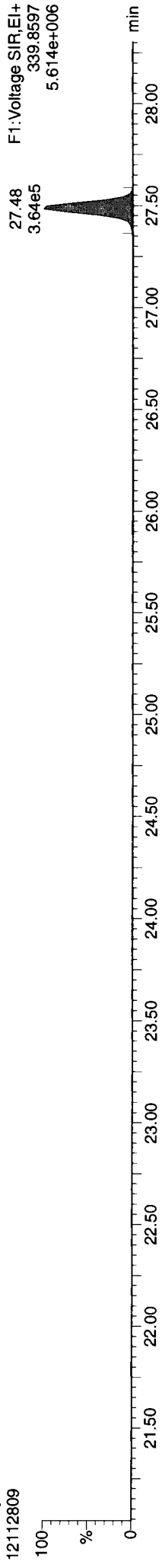
13C-12378-PeCDF



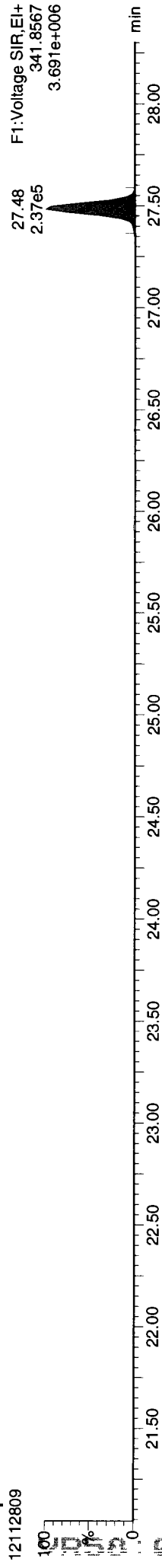
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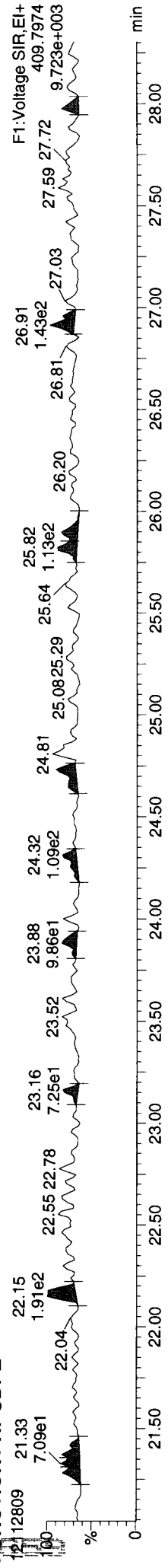
Total-penta1



Total-penta1

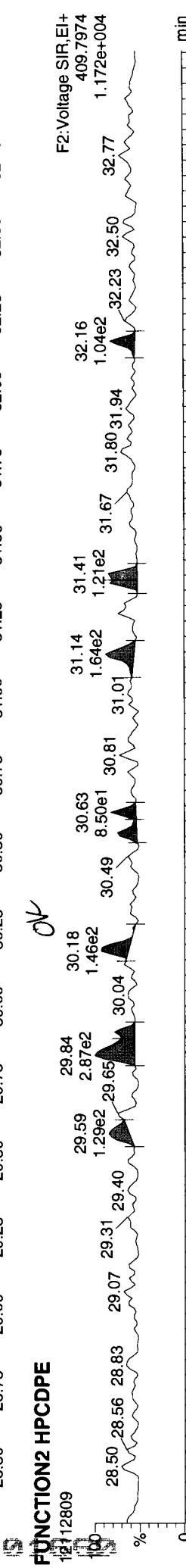
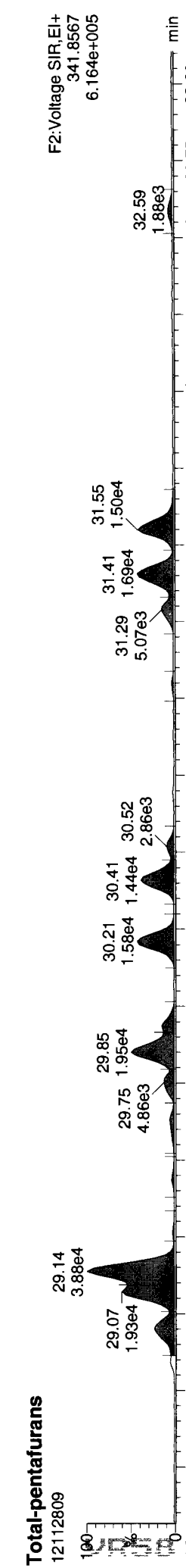
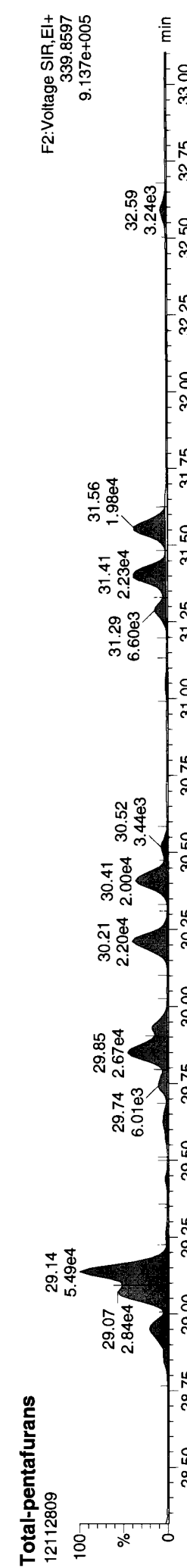
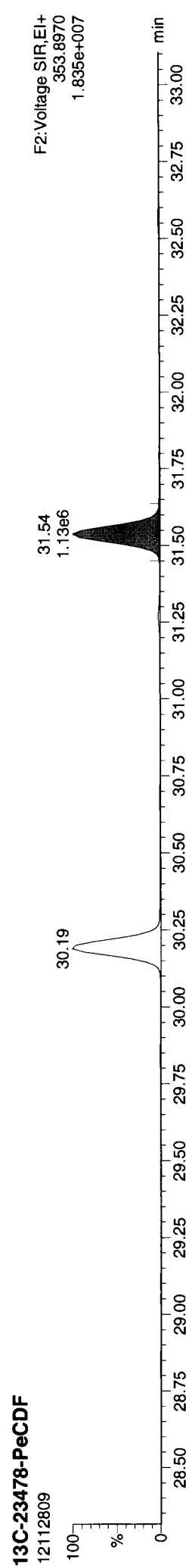
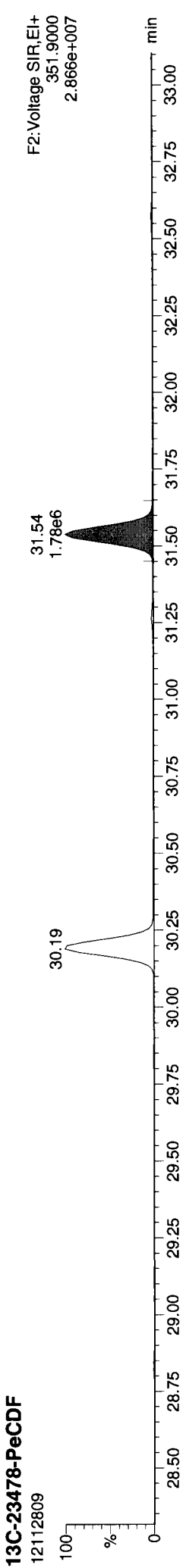


FUNCTION1 HPCDPE



Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk



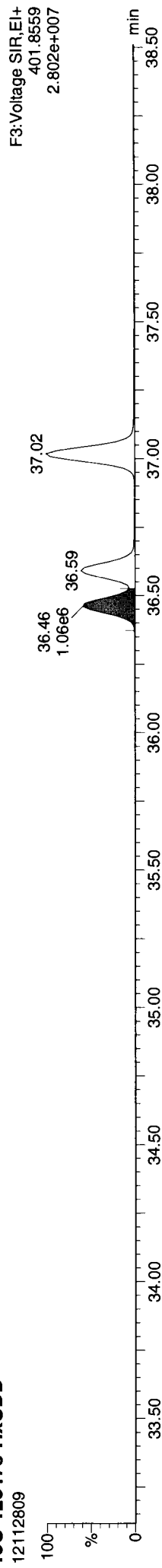
OK

Quantity Sample Report MassLynx 4.1 SCN 714

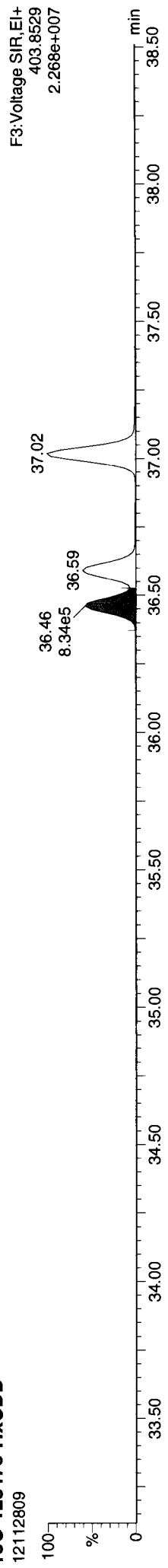
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

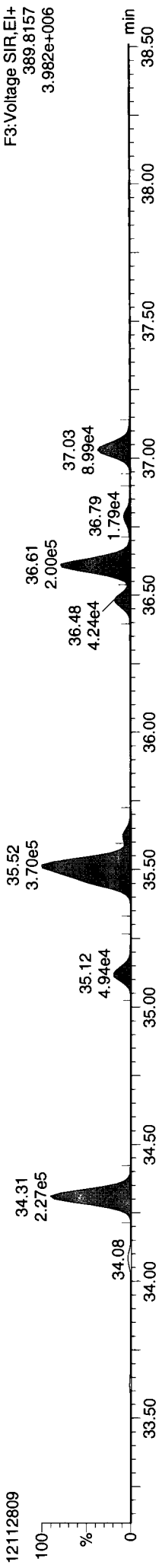
13C-123478-HxCDD  
12112809



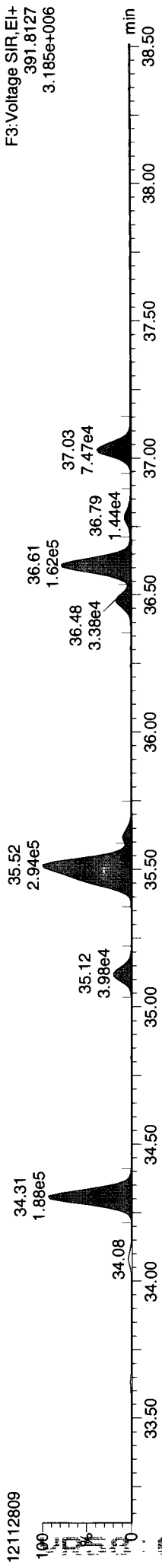
13C-123478-HxCDD  
12112809



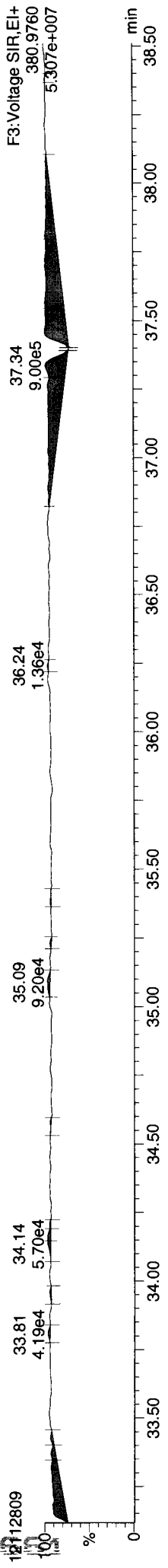
Total-hexadioxins  
12112809



Total-hexadioxins  
12112809

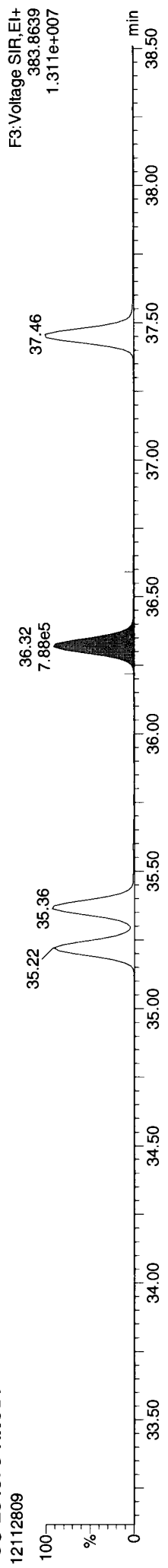


FUNCTION3 PFK  
12112809

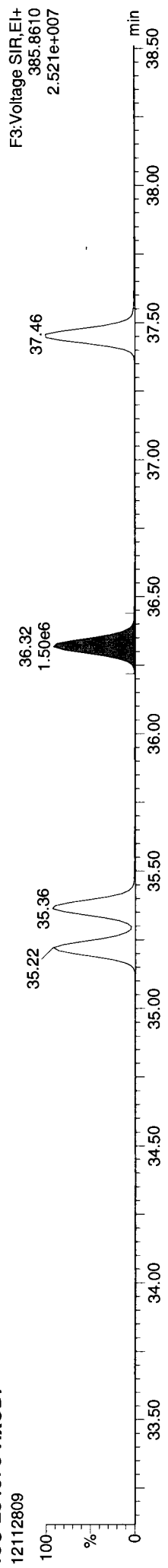


Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

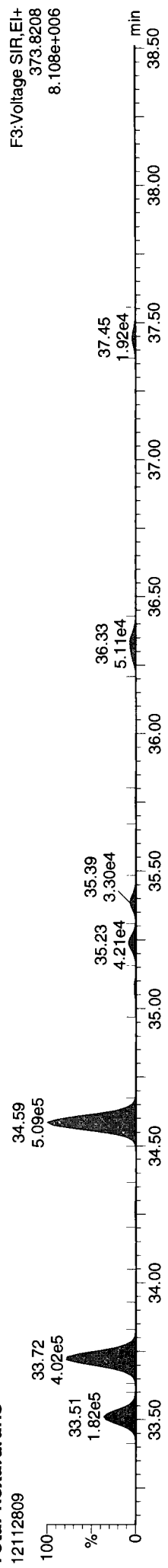
13C-234678-HxCDF



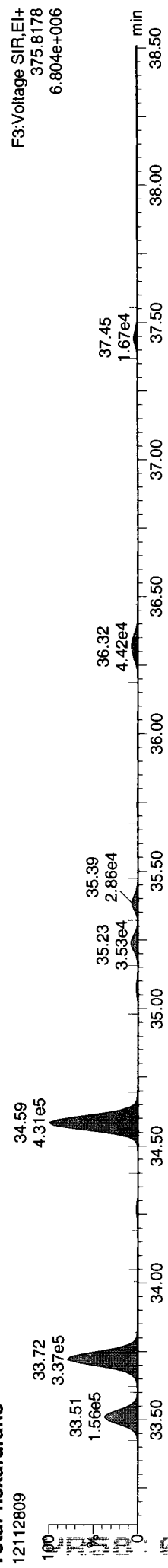
13C-234678-HxCDF



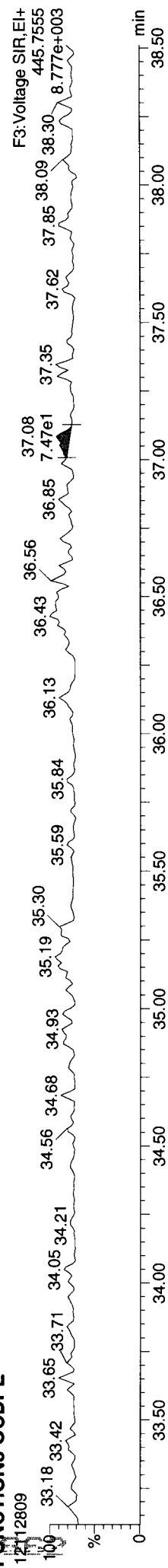
Total-hexafurans



Total-hexafurans



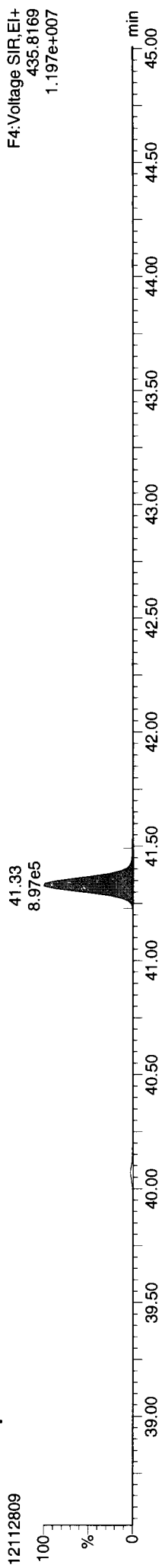
FUNCTION3 OCDFE



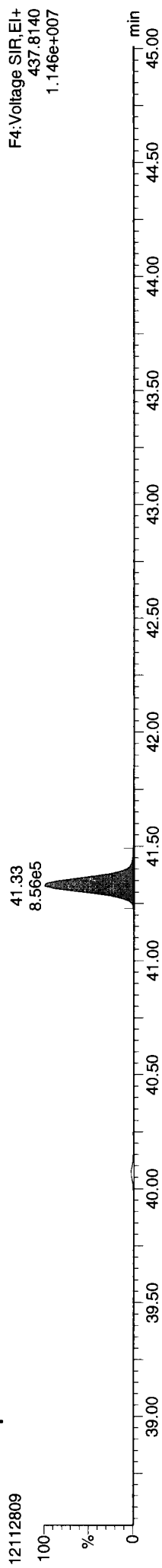
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

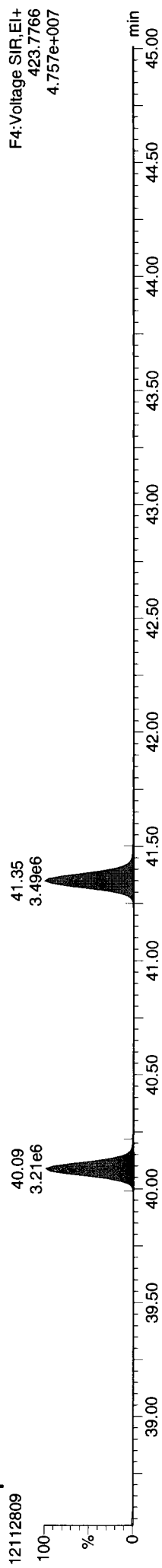
13C-1234678-HpCDD



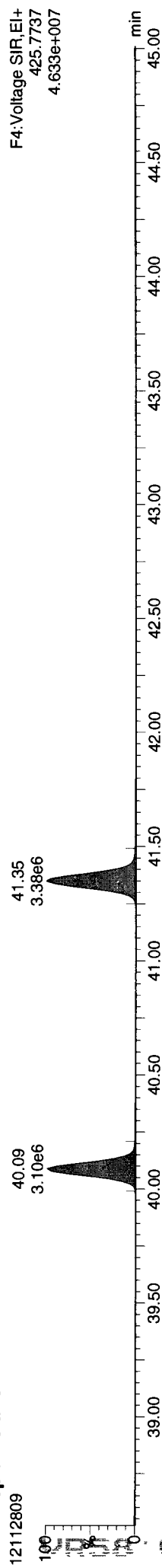
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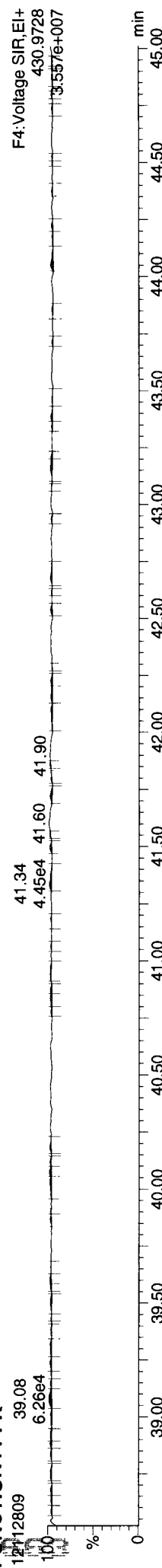
Total-heptadioxins



Total-heptadioxins



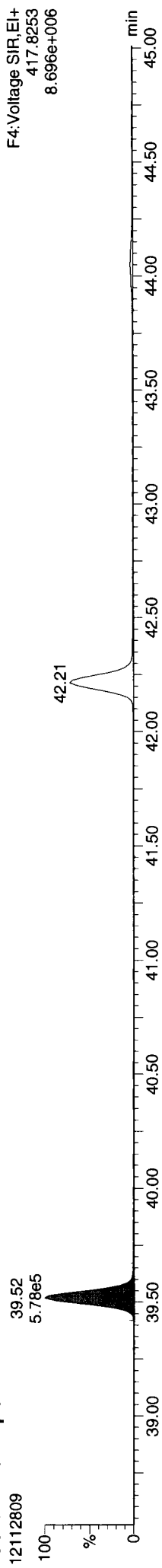
FUNCTION4 PFK



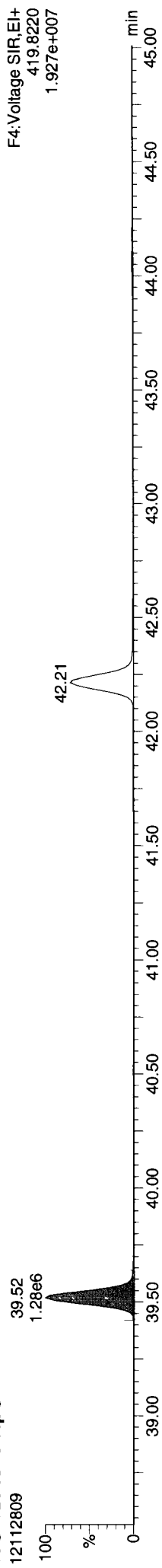
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

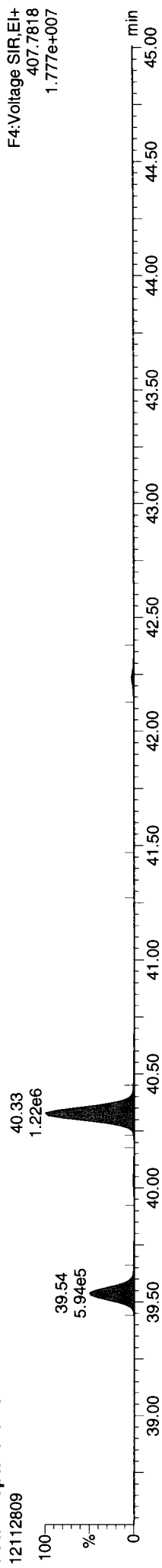
13C-1234678-HpCDF



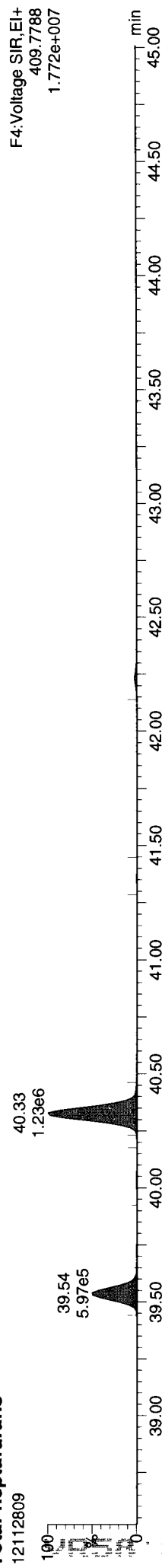
13C-1234678-HpCDF



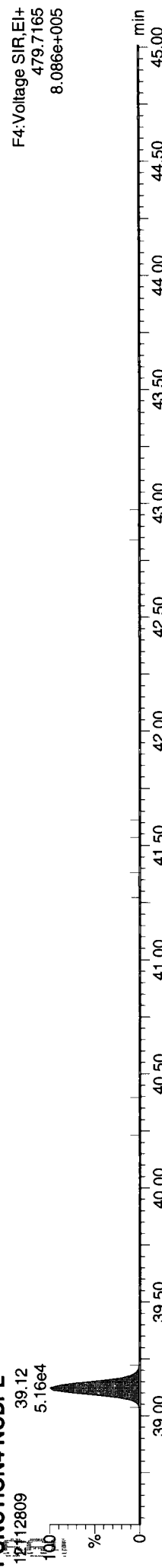
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



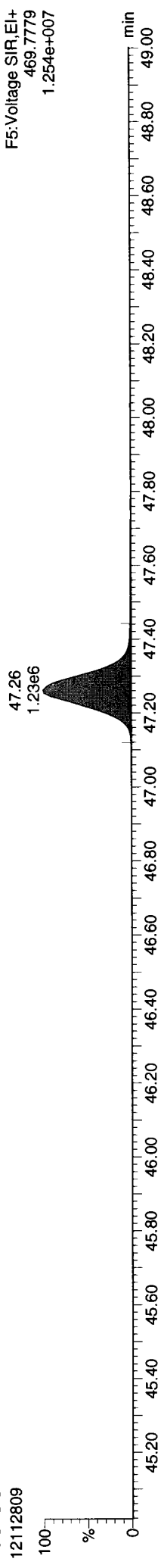


Quantify Sample Report MassLynx 4.1 SCN 714

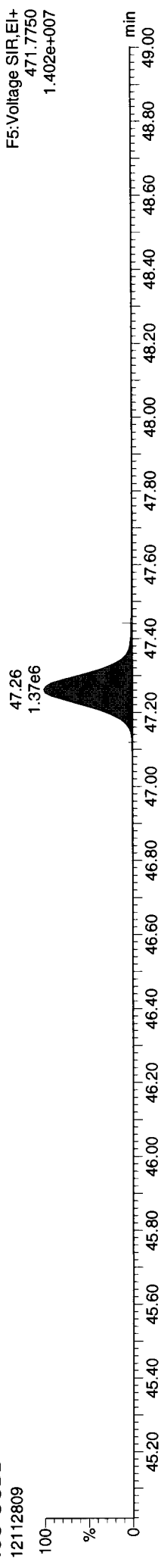
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

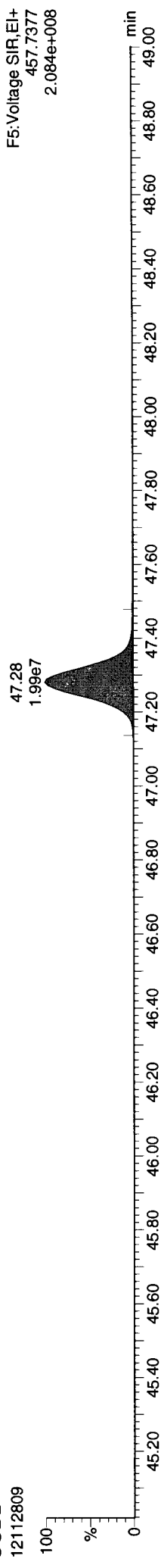
13C-OCDD



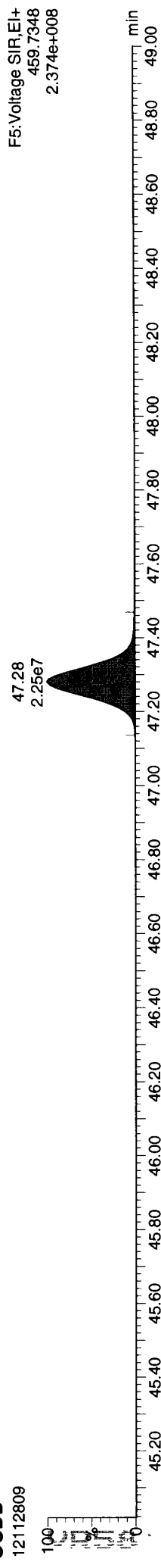
13C-OCDD



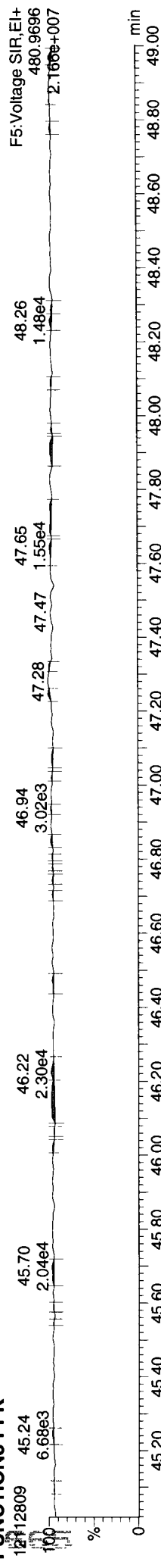
OCDD



OCDD



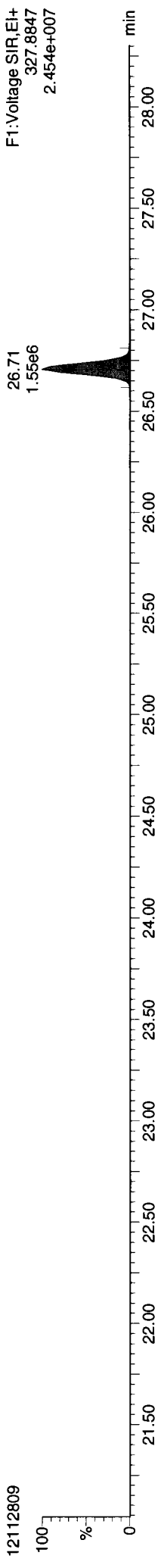
FUNCTION5 PFK



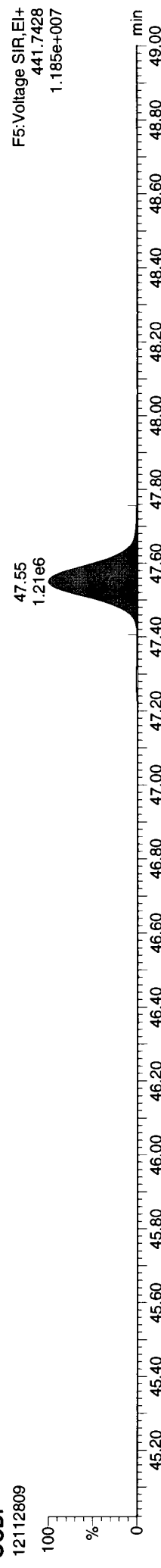
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:07 Pacific Standard Time

Name: 12112809, Date: 28-Nov-2012, Time: 16:48:47, ID: VR58C, Conditions: AUTOSPEC01, User: pk

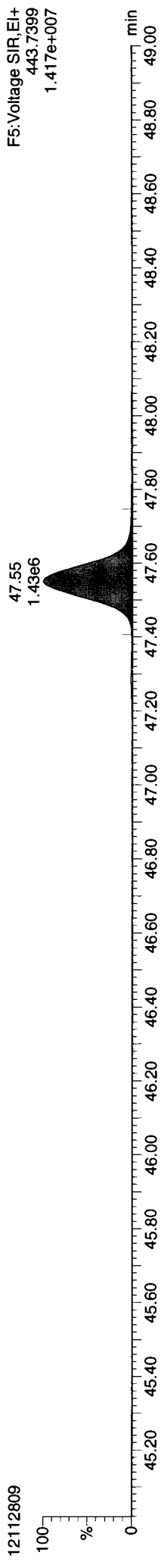
37CL-2378-TCDD



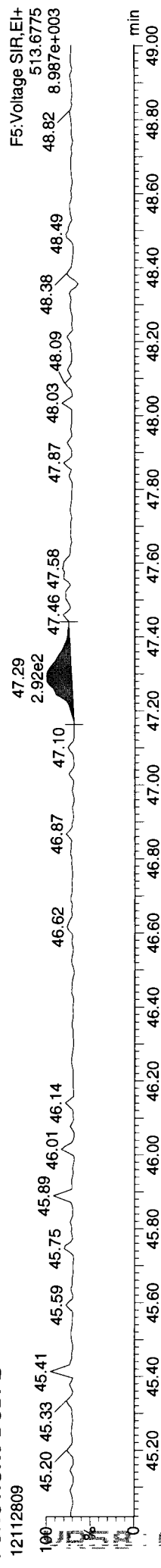
OCDF



OCDF



FUNCTION5 DCDPE



*Mr 12/10/12*

**Quantify Sample Summary Report** MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

**Method:** P:\DIOXIN8290.PRO\MethDB\DiDioxin121123.mdb 23 Nov 2012 12:31:40  
**Calibration:** P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

**Name:** 12112810, **Date:** 28-Nov-2012, **Time:** 17:41:07, **ID:** VR58D, **Conditions:** AUTOSPEC01, **User:** pk

2378-TCDF	26.063	1.001	2.45e4	3.83e4	0.877	0.640	0.770	201.6	1831	2440	3.69e5	5.90e5	YES	1.278	1.425
12378-PeCDF	30.212	1.001	6.10e4	4.34e4	0.896	1.406	1.550	361.9	2703	4652	9.78e5	6.97e5	NO	2.655	2.655 X
23478-PeCDF	31.549	1.000	5.89e4	4.19e4	0.926	1.406	1.550	339.6	2703	4652	9.18e5	6.52e5	NO	2.360	2.360
123478-HxCDF	35.244	1.001	1.32e5	1.17e5	1.068	1.131	1.240	423.2	4754	4328	2.01e6	1.81e6	NO	6.622	6.622
234678-HxCDF	36.340	1.000	1.55e5	1.34e5	1.037	1.156	1.240	337.0	4754	4328	1.60e6	1.41e6	NO	7.703	7.703
123678-HxCDF	35.386	1.000	8.55e4	7.11e4	1.035	1.203	1.240	272.5	4754	4328	1.30e6	1.12e6	NO	4.128	4.128
123789-HxCDF	37.447	1.000	7.36e4	6.21e4	0.987	1.184	1.240	230.5	4754	4328	1.10e6	9.22e5	NO	3.821	3.821
1234678-HpCDF	39.541	1.000	2.10e6	2.12e6	1.232	0.991	1.050	5977.9	5246	6344	3.14e7	3.16e7	NO	115.086	115.086
1234789-HpCDF	42.248	1.001	7.82e4	8.15e4	1.215	0.959	1.050	196.4	5246	6344	1.03e6	1.06e6	NO	5.312	5.312
OCDF	47.575	1.006	5.22e6	6.15e6	1.138	0.849	0.890	9292.0	5626	3168	5.23e7	6.15e7	NO	419.361	419.361
2378-TCDD	26.706	1.001	5.01e3	8.36e3	1.049	0.599	0.770	83.8	915	1374	7.67e4	1.37e5	YES	0.310	0.360
12378-PeCDD	31.813	1.001	4.93e4	3.21e4	0.998	1.534	1.550	376.7	1891	1028	7.12e5	4.61e5	NO	2.835	2.835
123478-HxCDD	36.482	1.001	9.49e4	7.77e4	0.971	1.222	1.240	317.0	4838	5472	1.53e6	1.22e6	NO	5.900	5.900
123678-HxCDD	36.614	1.001	8.05e5	6.49e5	0.918	1.239	1.240	2476.0	4838	5472	1.20e7	9.76e6	NO	48.784	48.784
123789-HxCDD	37.030	1.012	2.08e5	1.68e5	0.932	1.230	1.240	665.0	4838	5472	3.22e6	2.64e6	NO	12.804	12.804
1234678-HpCDD	41.360	1.001	1.29e7	1.25e7	1.017	1.031	1.050	10021.2	17715	16327	1.78e8	1.72e8	NO	865.948	865.948
OCDD	47.315	1.000	8.10e7	9.11e7	1.008	0.889	0.890	91231.9	9196	13134	8.39e8	9.39e8	NO	7157.504	7157.504
13C-2378-TCDF	26.049	1.007	2.19e6	2.84e6	1.473	0.774	0.770	9490.3	3622	2260	3.44e7	4.44e7	NO	73.413	73.413
13C-12378-PeCDF	30.190	1.167	2.67e6	1.71e6	1.148	1.561	1.550	13556.6	3144	3040	4.26e7	2.75e7	NO	82.137	82.137
13C-23478-PeCDF	31.538	1.219	2.82e6	1.79e6	1.113	1.571	1.550	14571.2	3144	3040	4.58e7	2.91e7	NO	89.070	89.070
13C-123478-HxCDF	35.222	0.951	1.20e6	2.32e6	1.209	0.517	0.510	3743.9	5048	5328	1.89e7	3.65e7	NO	73.534	73.534
13C-123678-HxCDF	35.375	0.956	1.29e6	2.40e6	1.289	0.525	0.510	3793.5	5048	5328	1.92e7	3.64e7	NO	73.081	73.081
13C-234678-HxCDF	36.329	0.981	1.23e6	2.39e6	1.236	0.516	0.510	3658.5	5048	5328	1.85e7	3.58e7	NO	74.113	74.113
13C-123789-HxCDF	37.458	1.012	1.23e6	2.37e6	1.107	0.520	0.510	3881.2	5048	5328	1.96e7	3.71e7	NO	82.227	82.227
13C-1234678-HpCDF	39.530	1.068	9.19e5	2.06e6	1.051	0.446	0.440	4544.4	2999	4304	1.36e7	3.04e7	NO	71.707	71.707
13C-1234789-HpCDF	42.226	1.141	7.75e5	1.70e6	0.815	0.456	0.440	3268.3	2999	4304	9.80e6	2.19e7	NO	76.790	76.790
13C-1234-TCDD	25.869	0.000	2.05e6	2.60e6	1.000	0.790	0.770	7836.9	4053	2058	3.18e7	4.00e7	NO	100.000	100.000
13C-2378-TCDD	26.691	1.032	1.55e6	1.99e6	0.946	0.776	0.770	6120.4	4053	2058	2.48e7	3.18e7	NO	80.448	80.448
13C-12378-PeCDD	31.791	1.229	1.76e6	1.11e6	0.721	1.582	1.550	10866.3	2598	1270	2.82e7	1.78e7	NO	85.855	85.855
13C-123478-HxCDD	36.460	0.985	1.68e6	1.34e6	0.991	1.254	1.240	10565.6	2462	2918	2.60e7	2.08e7	NO	76.925	76.925
13C-123678-HxCDD	36.592	0.988	1.80e6	1.44e6	1.025	1.247	1.240	11184.2	2462	2918	2.75e7	2.22e7	NO	80.123	80.123
13C-1234678-HpCDD	41.338	1.117	1.48e6	1.41e6	0.866	1.049	1.050	6902.3	2928	3156	2.02e7	1.94e7	NO	84.464	84.464
13C-OCDD	47.297	1.278	2.24e6	2.53e6	0.769	0.887	0.890	5446.3	4112	2649	2.24e7	2.54e7	NO	156.799	156.799

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
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Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

Label	37.019	0.000	2.19e6	1.76e6	1.000	1.245	1.240	13849.4	2462	2918	3.41e7	2.73e7	NO	100.000
13C-123789-HXCDD														14.067
Total-tetrafurans			2.59e5		0.877				1831		3.90e6		16.216	40.550
Total-penta1			1.01e6						1240		1.59e7		40.556	23.625
Total-pentafurans			5.68e5		0.911				2703		8.88e6		23.898	219.187
Total-hexafurans			4.40e6		1.032				4754		6.85e7		219.646	405.366
Total-heptafurans			6.91e6		1.223				5246		9.99e7		405.366	1122.157
Total-Furans			1.84e7		1.041				1831		2.49e8		1125.050	4.469
Total-tetraoxins			7.32e4		1.049				915		1.14e6		5.237	15.767
Total-pentadioxins			2.74e5		0.998				1891		3.59e6		15.767	176.710
Total-hexadioxins			2.88e6		0.940				4838		4.07e7		176.710	1601.266
Total-heptadioxins			2.39e7		1.017				17715		3.40e8		1601.266	8955.716
Total-Dioxins			1.08e8		0.985				915		1.22e9		8955.716	10077.873
Total-TEQ			1.27e8						915		1.47e9		10081.534	35.205
37CL-2378-TCDD	26.706	1.032	1.71e6		1.044			13687.8	1986		2.72e7			
FUNCTION1 PFK			1.96e6						747799		2.81e7			0.000
FUNCTION2 PFK			2.57e5					204451			6.74e6			0.000
FUNCTION3 PFK			7.36e6					572081			1.75e7			
FUNCTION4 PFK			2.83e5					347782			8.79e6			
FUNCTION5 PFK			4.17e5					243880			1.26e7			
FUNCTION1 HXCDPE			3.06e3					789			5.18e4			0.000
FUNCTION1 HPCDPE			7.61e2					929			1.60e4			0.000
FUNCTION2 HPCDPE			2.28e3					1440			5.27e4			0.000
FUNCTION3 OCDPE			9.49e2					1006			1.93e4			0.000
FUNCTION4 NCDPE			9.57e4					1202			1.51e6			0.000
FUNCTION5 DCDPE			1.65e3					330			1.78e4			0.000

CHIRP

12 07 02 09 14 07 07 09

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
 Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

TF

RT	Area	Height	Width	Area%	Height%	Width%	Area%	Height%	Width%	Area%	Height%	Width%
35	Total-tetrafurans	303.9016	24.73	39767.713	0.877	0.902	0.902	0.70	0.77	NO	117.3	
35	Total-tetrafurans	303.9016	24.32	27600.707	0.877	0.626	0.626	0.78	0.77	NO	106.7	
35	Total-tetrafurans	303.9016	24.18	0.000	0.877	0.000	0.486	0.65	0.77	YES	78.4	
35	Total-tetrafurans	303.9016	24.06	39500.578	0.877	0.896	0.896	0.73	0.77	NO	149.0	
35	Total-tetrafurans	303.9016	23.91	12337.885	0.877	0.280	0.280	0.75	0.77	NO	59.1	
35	Total-tetrafurans	303.9016	23.82	39051.840	0.877	0.886	0.886	0.70	0.77	NO	140.9	
35	Total-tetrafurans	303.9016	23.72	21319.097	0.877	0.484	0.484	0.80	0.77	NO	73.5	
35	Total-tetrafurans	303.9016	23.60	40126.238	0.877	0.910	0.910	0.68	0.77	NO	81.6	
35	Total-tetrafurans	303.9016	23.42	112084.680	0.877	2.543	2.543	0.70	0.77	NO	388.6	
35	Total-tetrafurans	303.9016	22.84	23996.575	0.877	0.544	0.544	0.66	0.77	NO	83.7	
35	Total-tetrafurans	303.9016	22.58	15763.295	0.877	0.358	0.358	0.69	0.77	NO	57.6	
35	Total-tetrafurans	303.9016	27.50	32012.195	0.877	0.726	0.726	0.79	0.77	NO	92.7	
35	Total-tetrafurans	303.9016	26.57	0.000	0.877	0.000	0.014	1.05	0.77	YES	3.3	
35	Total-tetrafurans	303.9016	26.30	48073.459	0.877	1.091	1.091	0.70	0.77	NO	162.5	
35	Total-tetrafurans	303.9016	26.20	20048.212	0.877	0.455	0.455	0.75	0.77	NO	73.0	
1	2378-TCDF	303.9016	26.06	62803.156	0.877	0.000	1.278	0.64	0.77	YES	201.6	
35	Total-tetrafurans	303.9016	25.87	12780.985	0.877	0.290	0.290	0.67	0.77	NO	45.7	
35	Total-tetrafurans	303.9016	25.82	11815.807	0.877	0.268	0.268	0.68	0.77	NO	46.5	
35	Total-tetrafurans	303.9016	25.69	2514.937	0.877	0.057	0.057	0.66	0.77	NO	10.0	
35	Total-tetrafurans	303.9016	25.57	10509.998	0.877	0.238	0.238	0.69	0.77	NO	36.7	
35	Total-tetrafurans	303.9016	25.38	14757.541	0.877	0.335	0.335	0.79	0.77	NO	60.6	
35	Total-tetrafurans	303.9016	25.15	36799.935	0.877	0.835	0.835	0.77	0.77	NO	137.7	
35	Total-tetrafurans	303.9016	24.97	59219.978	0.877	1.343	1.343	0.71	0.77	NO	206.9	
35	Total-tetrafurans	303.9016	24.84	0.000	0.877	0.000	0.371	0.96	0.77	YES	69.0	

PP

RT	Area	Height	Width	Area%	Height%	Width%	Area%	Height%	Width%	Area%	Height%	Width%
36	Total-penta1	339.8597	27.74	0.000	0.000	0.006	0.82	1.55	YES	3.5		
36	Total-penta1	339.8597	27.48	1672426.813	40.550	40.550	1.54	1.55	NO	12807.8		

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PF

Sample	Compound	Area	Conc	Response	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
37	Total-pentafurans	339.8597	29.93	33706.283	0.911	0.822	0.822	1.47	1.55	NO	125.8
37	Total-pentafurans	339.8597	29.85	91364.137	0.911	2.229	2.229	1.50	1.55	NO	294.7
37	Total-pentafurans	339.8597	29.75	30023.047	0.911	0.733	0.733	1.35	1.55	NO	108.7
37	Total-pentafurans	339.8597	29.64	10069.472	0.911	0.246	0.246	1.70	1.55	NO	26.0
37	Total-pentafurans	339.8597	29.43	4891.372	0.911	0.119	0.119	1.55	1.55	NO	16.9
37	Total-pentafurans	339.8597	29.26	0.000	0.911	0.000	0.068	1.24	1.55	YES	8.8
37	Total-pentafurans	339.8597	29.14	208104.094	0.911	5.078	5.078	1.45	1.55	NO	704.9
37	Total-pentafurans	339.8597	29.07	102357.922	0.911	2.498	2.498	1.40	1.55	NO	395.0
37	Total-pentafurans	339.8597	28.95	48620.764	0.911	1.186	1.186	1.48	1.55	NO	129.8
37	Total-pentafurans	339.8597	28.85	0.000	0.911	0.000	0.140	1.91	1.55	YES	29.7
37	Total-pentafurans	339.8597	32.58	13760.367	0.911	0.336	0.336	1.45	1.55	NO	52.0
3	23478-PeCDF	339.8597	31.55	100774.402	0.926	2.360	2.360	1.41	1.55	NO	339.6
37	Total-pentafurans	339.8597	31.41	106612.242	0.911	2.602	2.602	1.36	1.55	NO	344.8
37	Total-pentafurans	339.8597	31.29	20985.690	0.911	0.512	0.512	1.41	1.55	NO	70.7
37	Total-pentafurans	339.8597	31.03	0.000	0.911	0.000	0.064	1.21	1.55	YES	9.7
37	Total-pentafurans	339.8597	30.52	12521.133	0.911	0.306	0.306	1.36	1.55	NO	43.1
37	Total-pentafurans	339.8597	30.41	79596.719	0.911	1.942	1.942	1.37	1.55	NO	272.9
2	12378-PeCDF	339.8597	30.21	104347.738	0.896	2.655	2.655	1.41	1.55	NO	361.9

HF

Sample	Compound	Area	Conc	Response	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
5	234678-HxCDF	373.8208	36.34	289227.750	1.037	7.703	7.703	1.16	1.24	NO	337.0
38	Total-hexafurans	373.8208	35.97	4267.854	1.032	0.115	0.115	1.09	1.24	NO	8.3
38	Total-hexafurans	373.8208	35.75	0.000	1.032	0.000	0.404	1.45	1.24	YES	30.2
6	123678-HxCDF	373.8208	35.39	156548.297	1.035	4.128	4.128	1.20	1.24	NO	272.5
4	123478-HxCDF	373.8208	35.24	248671.657	1.068	6.622	6.622	1.13	1.24	NO	423.2
38	Total-hexafurans	373.8208	35.07	35432.804	1.032	0.954	0.954	1.08	1.24	NO	59.1
38	Total-hexafurans	373.8208	34.59	3706024.625	1.032	99.790	99.790	1.18	1.24	NO	6711.5
38	Total-hexafurans	373.8208	34.27	33346.988	1.032	0.898	0.898	1.17	1.24	NO	60.6
38	Total-hexafurans	373.8208	34.01	0.000	1.032	0.000	0.055	0.71	1.24	YES	4.9
38	Total-hexafurans	373.8208	33.73	2397661.625	1.032	64.560	64.560	1.19	1.24	NO	4235.9
38	Total-hexafurans	373.8208	33.51	1136265.688	1.032	30.595	30.595	1.17	1.24	NO	2080.5
7	123789-HxCDF	373.8208	37.45	135662.000	0.987	3.821	3.821	1.18	1.24	NO	230.5

HPF

Sample	Compound	Area	Conc	Response	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
9	1234789-HpCDF	407.7818	42.25	159674.031	1.215	5.312	5.312	0.96	1.05	NO	196.4
39	Total-heptafurans	407.7818	41.37	14198.201	1.223	0.426	0.426	1.09	1.05	NO	17.7
39	Total-heptafurans	407.7818	40.33	9431026.000	1.223	282.666	282....	0.99	1.05	NO	12770.8
39	Total-heptafurans	407.7818	40.03	62597.545	1.223	1.876	1.876	0.96	1.05	NO	73.0
8	1234678-HpCDF	407.7818	39.54	4225375.750	1.232	115.086	115....	0.99	1.05	NO	5977.9

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Furans,TF,PP,PF,HF,HPF,OF

Sample	Compound	RT	Area	Conc	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
35	Total-tetrafurans	303.9016	24.73	39767.713	0.877	0.902	0.902	0.70	0.77	NO	117.3	
35	Total-tetrafurans	303.9016	24.32	27600.707	0.877	0.626	0.626	0.78	0.77	NO	106.7	
35	Total-tetrafurans	303.9016	24.18	0.000	0.877	0.000	0.486	0.65	0.77	YES	78.4	
35	Total-tetrafurans	303.9016	24.06	39500.578	0.877	0.896	0.896	0.73	0.77	NO	149.0	
35	Total-tetrafurans	303.9016	23.91	12337.885	0.877	0.280	0.280	0.75	0.77	NO	59.1	
35	Total-tetrafurans	303.9016	23.82	39051.840	0.877	0.886	0.886	0.70	0.77	NO	140.9	
35	Total-tetrafurans	303.9016	23.72	21319.097	0.877	0.484	0.484	0.80	0.77	NO	73.5	
35	Total-tetrafurans	303.9016	23.60	40126.238	0.877	0.910	0.910	0.68	0.77	NO	81.6	
35	Total-tetrafurans	303.9016	23.42	112084.680	0.877	2.543	2.543	0.70	0.77	NO	388.6	
35	Total-tetrafurans	303.9016	22.84	23996.575	0.877	0.544	0.544	0.66	0.77	NO	83.7	
35	Total-tetrafurans	303.9016	22.58	15763.295	0.877	0.358	0.358	0.69	0.77	NO	57.6	
35	Total-tetrafurans	303.9016	27.50	32012.195	0.877	0.726	0.726	0.79	0.77	NO	92.7	
35	Total-tetrafurans	303.9016	26.57	0.000	0.877	0.000	0.014	1.05	0.77	YES	3.3	
35	Total-tetrafurans	303.9016	26.30	48073.459	0.877	1.091	1.091	0.70	0.77	NO	162.5	
35	Total-tetrafurans	303.9016	26.20	20048.212	0.877	0.455	0.455	0.75	0.77	NO	73.0	
1	2378-TCDF	303.9016	26.06	62803.156	0.877	0.000	1.278	0.64	0.77	YES	201.6	
35	Total-tetrafurans	303.9016	25.87	12780.985	0.877	0.290	0.290	0.67	0.77	NO	45.7	
35	Total-tetrafurans	303.9016	25.82	11815.807	0.877	0.268	0.268	0.68	0.77	NO	46.5	
35	Total-tetrafurans	303.9016	25.69	2514.937	0.877	0.057	0.057	0.66	0.77	NO	10.0	
35	Total-tetrafurans	303.9016	25.57	10509.998	0.877	0.238	0.238	0.69	0.77	NO	36.7	
35	Total-tetrafurans	303.9016	25.38	14757.541	0.877	0.335	0.335	0.79	0.77	NO	60.6	
35	Total-tetrafurans	303.9016	25.15	36799.935	0.877	0.835	0.835	0.77	0.77	NO	137.7	
35	Total-tetrafurans	303.9016	24.97	59219.978	0.877	1.343	1.343	0.71	0.77	NO	206.9	
35	Total-tetrafurans	303.9016	24.84	0.000	0.877	0.000	0.371	0.96	0.77	YES	69.0	
40	Total-Furans	303.9016	28.26	0.000	1.041	0.000	0.006	1.23	0.77	YES	2.2	
37	Total-pentafurans	339.8597	29.93	33706.283	0.911	0.822	0.822	1.47	1.55	NO	125.8	
37	Total-pentafurans	339.8597	29.85	91364.137	0.911	2.229	2.229	1.50	1.55	NO	294.7	
37	Total-pentafurans	339.8597	29.75	30023.047	0.911	0.733	0.733	1.35	1.55	NO	108.7	
37	Total-pentafurans	339.8597	29.64	10069.472	0.911	0.246	0.246	1.70	1.55	NO	26.0	
37	Total-pentafurans	339.8597	29.43	4891.372	0.911	0.119	0.119	1.55	1.55	NO	16.9	
37	Total-pentafurans	339.8597	29.26	0.000	0.911	0.000	0.068	1.24	1.55	YES	8.8	
37	Total-pentafurans	339.8597	29.14	208104.094	0.911	5.078	5.078	1.45	1.55	NO	704.9	
37	Total-pentafurans	339.8597	29.07	102357.922	0.911	2.498	2.498	1.40	1.55	NO	395.0	
37	Total-pentafurans	339.8597	28.95	48620.764	0.911	1.186	1.186	1.48	1.55	NO	129.8	
37	Total-pentafurans	339.8597	28.85	0.000	0.911	0.000	0.140	1.91	1.55	YES	29.7	
37	Total-pentafurans	339.8597	32.58	13760.367	0.911	0.336	0.336	1.45	1.55	NO	52.0	
3	23478-PeCDF	339.8597	31.55	100774.402	0.926	2.360	2.360	1.41	1.55	NO	339.6	
37	Total-pentafurans	339.8597	31.41	106612.242	0.911	2.602	2.602	1.36	1.55	NO	344.8	
37	Total-pentafurans	339.8597	31.29	20985.690	0.911	0.512	0.512	1.41	1.55	NO	70.7	
37	Total-pentafurans	339.8597	31.03	0.000	0.911	0.000	0.064	1.21	1.55	YES	9.7	
37	Total-pentafurans	339.8597	30.52	12521.133	0.911	0.306	0.306	1.36	1.55	NO	43.1	
37	Total-pentafurans	339.8597	30.41	79596.719	0.911	1.942	1.942	1.37	1.55	NO	272.9	
2	12378-PeCDF	339.8597	30.21	104347.738	0.896	2.655	2.655	1.41	1.55	NO	361.9	
5	234678-HxCDF	373.8208	36.34	289227.750	1.037	7.703	7.703	1.16	1.24	NO	337.0	
38	Total-hexafurans	373.8208	35.97	4267.854	1.032	0.115	0.115	1.09	1.24	NO	8.3	
38	Total-hexafurans	373.8208	35.75	0.000	1.032	0.000	0.404	1.45	1.24	YES	30.2	
6	123678-HxCDF	373.8208	35.39	156548.297	1.035	4.128	4.128	1.20	1.24	NO	272.5	
4	123478-HxCDF	373.8208	35.24	248671.657	1.068	6.622	6.622	1.13	1.24	NO	423.2	
38	Total-hexafurans	373.8208	35.07	35432.804	1.032	0.954	0.954	1.08	1.24	NO	59.1	

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Furans,TF,PP,PF,HF,HPF,OF

ID	Name	Concentration	Area	Response	Retention	Mass	Mass	Mass	Mass	Mass	Mass	Mass
38	Total-hexafurans	373.8208	34.59	3706024.625	1.032	99.790	99.790	1.18	1.24	NO	6711.5	
38	Total-hexafurans	373.8208	34.27	33346.988	1.032	0.898	0.898	1.17	1.24	NO	60.6	
38	Total-hexafurans	373.8208	34.01	0.000	1.032	0.000	0.055	0.71	1.24	YES	4.9	
38	Total-hexafurans	373.8208	33.73	2397661.625	1.032	64.560	64.560	1.19	1.24	NO	4235.9	
38	Total-hexafurans	373.8208	33.51	1136265.688	1.032	30.595	30.595	1.17	1.24	NO	2080.5	
7	123789-HxCDF	373.8208	37.45	135662.000	0.987	3.821	3.821	1.18	1.24	NO	230.5	
9	1234789-HpCDF	407.7818	42.25	159674.031	1.215	5.312	5.312	0.96	1.05	NO	196.4	
39	Total-heptafurans	407.7818	41.37	14198.201	1.223	0.426	0.426	1.09	1.05	NO	17.7	
39	Total-heptafurans	407.7818	40.33	9431026.000	1.223	282.666	282....	0.99	1.05	NO	12770.8	
39	Total-heptafurans	407.7818	40.03	62597.545	1.223	1.876	1.876	0.96	1.05	NO	73.0	
8	1234678-HpCDF	407.7818	39.54	4225375.750	1.232	115.086	115....	0.99	1.05	NO	5977.9	
10	OCDF	441.7428	47.58	11374601....	1.138	419.361	419....	0.85	0.89	NO	9292.0	
36	Total-penta1	339.8597	27.74	0.000		0.000	0.006	0.82	1.55	YES	3.5	
36	Total-penta1	339.8597	27.48	1672426.813		40.550	40.550	1.54	1.55	NO	12807.8	

TD

ID	Name	Concentration	Area	Response	Retention	Mass	Mass	Mass	Mass	Mass	Mass
41	Total-tetradoxins	319.8965	25.05	12408.173	1.049	0.334	0.334	0.76	0.77	NO	85.0
41	Total-tetradoxins	319.8965	24.84	12950.969	1.049	0.349	0.349	0.88	0.77	NO	100.8
41	Total-tetradoxins	319.8965	24.33	10006.030	1.049	0.269	0.269	0.73	0.77	NO	68.9
41	Total-tetradoxins	319.8965	24.12	32981.184	1.049	0.888	0.888	0.85	0.77	NO	267.1
41	Total-tetradoxins	319.8965	23.85	46578.539	1.049	1.255	1.255	0.73	0.77	NO	358.9
41	Total-tetradoxins	319.8965	27.29	0.000	1.049	0.000	0.077	0.95	0.77	YES	26.1
41	Total-tetradoxins	319.8965	26.83	9205.897	1.049	0.248	0.248	0.82	0.77	NO	64.7
11	2378-TCDD	319.8965	26.71	13367.532	1.049	0.000	0.310	0.60	0.77	YES	83.8
41	Total-tetradoxins	319.8965	26.33	13457.536	1.049	0.362	0.362	0.85	0.77	NO	97.7
41	Total-tetradoxins	319.8965	26.05	0.000	1.049	0.000	0.055	0.94	0.77	YES	16.9
41	Total-tetradoxins	319.8965	25.90	0.000	1.049	0.000	0.237	0.56	0.77	YES	61.7
41	Total-tetradoxins	319.8965	25.69	7587.296	1.049	0.204	0.204	0.76	0.77	NO	55.8
41	Total-tetradoxins	319.8965	25.59	0.000	1.049	0.000	0.089	0.95	0.77	YES	29.0
41	Total-tetradoxins	319.8965	25.32	20737.626	1.049	0.559	0.559	0.79	0.77	NO	151.4

PD

ID	Name	Concentration	Area	Response	Retention	Mass	Mass	Mass	Mass	Mass	Mass
42	Total-pentadioxins	355.8546	32.21	15377.512	0.998	0.535	0.535	1.55	1.55	NO	76.9
12	12378-PeCDD	355.8546	31.81	81419.920	0.998	2.835	2.835	1.53	1.55	NO	376.7
42	Total-pentadioxins	355.8546	31.14	12099.118	0.998	0.421	0.421	1.62	1.55	NO	50.9
42	Total-pentadioxins	355.8546	30.73	40900.625	0.998	1.424	1.424	1.47	1.55	NO	131.2
42	Total-pentadioxins	355.8546	30.56	37115.523	0.998	1.292	1.292	1.44	1.55	NO	183.2
42	Total-pentadioxins	355.8546	30.43	56654.043	0.998	1.972	1.972	1.45	1.55	NO	278.5
42	Total-pentadioxins	355.8546	30.22	49195.875	0.998	1.713	1.713	1.52	1.55	NO	249.6
42	Total-pentadioxins	355.8546	29.60	29363.952	0.998	1.022	1.022	1.60	1.55	NO	157.2
42	Total-pentadioxins	355.8546	29.13	130759.957	0.998	4.552	4.552	1.57	1.55	NO	392.5



Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
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Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

HD

Peak #	Name	Area	Height	Retention	Abundance	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
43	Total-hexadioxins	389.8157	35.62	69522.488	0.940	2.362	2.362	1.26	1.24	NO	139.1
43	Total-hexadioxins	389.8157	35.52	1905489.750	0.940	64.732	64.732	1.23	1.24	NO	2602.1
43	Total-hexadioxins	389.8157	35.12	191560.476	0.940	6.508	6.508	1.26	1.24	NO	357.8
43	Total-hexadioxins	389.8157	34.31	986909.344	0.940	33.527	33.527	1.22	1.24	NO	1759.0
15	123789-HxCDD	389.8157	37.03	373684.688	0.932	12.804	12.804	1.23	1.24	NO	665.0
43	Total-hexadioxins	389.8157	36.78	61617.869	0.940	2.093	2.093	1.31	1.24	NO	106.9
14	123678-HxCDD	389.8157	36.61	1454024.875	0.918	48.784	48.784	1.24	1.24	NO	2476.0
13	123478-HxCDD	389.8157	36.48	172631.016	0.971	5.900	5.900	1.22	1.24	NO	317.0

HPD

Peak #	Name	Area	Height	Retention	Abundance	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
16	1234678-HpCDD	423.7766	41.36	25473353....	1.017	865.948	865....	1.03	1.05	NO	10021.2
44	Total-heptadioxins	423.7766	40.10	21630666....	1.017	735.318	735....	1.04	1.05	NO	9153.0

Quantify Totals Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld
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Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

Table with 12 columns: ID, Name, Conc, RT, Abs Peak, D1, D2, D3, D4, D5, D6, D7, D8. Rows include various dioxin and furan compounds like Total-tetradoxins, 2378-TCDD, 12378-PeCDD, Total-pentadioxins, Total-hexadioxins, 123789-HxCDD, 123678-HxCDD, 123478-HxCDD, 1234678-HpCDD, and OCDD.

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld
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Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

Table with 12 columns: ID, Name, ID, TEQ, Furans, Dioxins, TEQ, Furans, Dioxins, TEQ, Furans, Dioxins. Rows include various chemical compounds like Total-tetrafurans, Total-pentafurans, Total-hexafurans, and TCDF, PeCDF, HxCDF, HxCDF, HxCDF.

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
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## TotalTEQ,Furans,Dioxins

Item	Concentration	TEQ	TEQ	TEQ	TEQ	TEQ	TEQ	TEQ	TEQ	TEQ	TEQ	TEQ
38 Total-hexafurans	373.8208	34.59	3706024.625	1.032	99.790	99.790	1.18	1.24	NO	6711.5		
38 Total-hexafurans	373.8208	34.27	33346.988	1.032	0.898	0.898	1.17	1.24	NO	60.6		
38 Total-hexafurans	373.8208	34.01	0.000	1.032	0.000	0.055	0.71	1.24	YES	4.9		
38 Total-hexafurans	373.8208	33.73	2397661.625	1.032	64.560	64.560	1.19	1.24	NO	4235.9		
38 Total-hexafurans	373.8208	33.51	1136265.688	1.032	30.595	30.595	1.17	1.24	NO	2080.5		
7 123789-HxCDF	373.8208	37.45	135662.000	0.987	3.821	3.821	1.18	1.24	NO	230.5		
9 1234789-HpCDF	407.7818	42.25	159674.031	1.215	5.312	5.312	0.96	1.05	NO	196.4		
39 Total-heptafurans	407.7818	41.37	14198.201	1.223	0.426	0.426	1.09	1.05	NO	17.7		
39 Total-heptafurans	407.7818	40.33	9431026.000	1.223	282.666	282....	0.99	1.05	NO	12770.8		
39 Total-heptafurans	407.7818	40.03	62597.545	1.223	1.876	1.876	0.96	1.05	NO	73.0		
8 1234678-HpCDF	407.7818	39.54	4225375.750	1.232	115.086	115....	0.99	1.05	NO	5977.9		
10 OCDF	441.7428	47.58	11374601....	1.138	419.361	419....	0.85	0.89	NO	9292.0		
36 Total-penta1	339.8597	27.74	0.000		0.000	0.006	0.82	1.55	YES	3.5		
36 Total-penta1	339.8597	27.48	1672426.813		40.550	40.550	1.54	1.55	NO	12807.8		
41 Total-tetradiioxins	319.8965	25.05	12408.173	1.049	0.334	0.334	0.76	0.77	NO	85.0		
41 Total-tetradiioxins	319.8965	24.84	12950.969	1.049	0.349	0.349	0.88	0.77	NO	100.8		
41 Total-tetradiioxins	319.8965	24.33	10006.030	1.049	0.269	0.269	0.73	0.77	NO	68.9		
41 Total-tetradiioxins	319.8965	24.12	32981.184	1.049	0.888	0.888	0.85	0.77	NO	267.1		
41 Total-tetradiioxins	319.8965	23.85	46578.539	1.049	1.255	1.255	0.73	0.77	NO	358.9		
41 Total-tetradiioxins	319.8965	27.29	0.000	1.049	0.000	0.077	0.95	0.77	YES	26.1		
41 Total-tetradiioxins	319.8965	26.83	9205.897	1.049	0.248	0.248	0.82	0.77	NO	64.7		
11 2378-TCDD	319.8965	26.71	13367.532	1.049	0.000	0.310	0.60	0.77	YES	83.8		
41 Total-tetradiioxins	319.8965	26.33	13457.536	1.049	0.362	0.362	0.85	0.77	NO	97.7		
41 Total-tetradiioxins	319.8965	26.05	0.000	1.049	0.000	0.055	0.94	0.77	YES	16.9		
41 Total-tetradiioxins	319.8965	25.90	0.000	1.049	0.000	0.237	0.56	0.77	YES	61.7		
41 Total-tetradiioxins	319.8965	25.69	7587.296	1.049	0.204	0.204	0.76	0.77	NO	55.8		
41 Total-tetradiioxins	319.8965	25.59	0.000	1.049	0.000	0.089	0.95	0.77	YES	29.0		
41 Total-tetradiioxins	319.8965	25.32	20737.626	1.049	0.559	0.559	0.79	0.77	NO	151.4		
42 Total-pentadiioxins	355.8546	32.21	15377.512	0.998	0.535	0.535	1.55	1.55	NO	76.9		
12 12378-PeCDD	355.8546	31.81	81419.920	0.998	2.835	2.835	1.53	1.55	NO	376.7		
42 Total-pentadiioxins	355.8546	31.14	12099.118	0.998	0.421	0.421	1.62	1.55	NO	50.9		
42 Total-pentadiioxins	355.8546	30.73	40900.625	0.998	1.424	1.424	1.47	1.55	NO	131.2		
42 Total-pentadiioxins	355.8546	30.56	37115.523	0.998	1.292	1.292	1.44	1.55	NO	183.2		
42 Total-pentadiioxins	355.8546	30.43	56654.043	0.998	1.972	1.972	1.45	1.55	NO	278.5		
42 Total-pentadiioxins	355.8546	30.22	49195.875	0.998	1.713	1.713	1.52	1.55	NO	249.6		
42 Total-pentadiioxins	355.8546	29.60	29363.952	0.998	1.022	1.022	1.60	1.55	NO	157.2		
42 Total-pentadiioxins	355.8546	29.13	130759.957	0.998	4.552	4.552	1.57	1.55	NO	392.5		
43 Total-hexadiioxins	389.8157	35.62	69522.488	0.940	2.362	2.362	1.26	1.24	NO	139.1		
43 Total-hexadiioxins	389.8157	35.52	1905489.750	0.940	64.732	64.732	1.23	1.24	NO	2602.1		
43 Total-hexadiioxins	389.8157	35.12	191560.476	0.940	6.508	6.508	1.26	1.24	NO	357.8		
43 Total-hexadiioxins	389.8157	34.31	986909.344	0.940	33.527	33.527	1.22	1.24	NO	1759.0		
15 123789-HxCDD	389.8157	37.03	373684.688	0.932	12.804	12.804	1.23	1.24	NO	665.0		
43 Total-hexadiioxins	389.8157	36.78	61617.869	0.940	2.093	2.093	1.31	1.24	NO	106.9		
14 123678-HxCDD	389.8157	36.61	1454024.875	0.918	48.784	48.784	1.24	1.24	NO	2476.0		
13 123478-HxCDD	389.8157	36.48	172631.016	0.971	5.900	5.900	1.22	1.24	NO	317.0		
16 1234678-HpCDD	423.7766	41.36	25473353....	1.017	865.948	865....	1.03	1.05	NO	10021.2		
44 Total-heptadiioxins	423.7766	40.10	21630666....	1.017	735.318	735....	1.04	1.05	NO	9153.0		
17 OCDD	457.7377	47.31	172088448....	1.008	7157.5...	7157....	0.89	0.89	NO	91231.9		

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
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PFK1

#	Name	Time	RT	Abn. Ratio	RF	SN
48	FUNCTION1 PFK	330.9792	21.73	0.000		4.9
48	FUNCTION1 PFK	330.9792	21.63	0.000		6.9
48	FUNCTION1 PFK	330.9792	21.43	0.000		4.2
48	FUNCTION1 PFK	330.9792	21.21	0.000		3.1
48	FUNCTION1 PFK	330.9792	27.47	0.000		2.3
48	FUNCTION1 PFK	330.9792	27.36	0.000		1.6
48	FUNCTION1 PFK	330.9792	26.12	0.000		2.1
48	FUNCTION1 PFK	330.9792	24.57	0.000		1.8
48	FUNCTION1 PFK	330.9792	24.14	0.000		0.6
48	FUNCTION1 PFK	330.9792	24.08	0.000		0.8
48	FUNCTION1 PFK	330.9792	24.02	0.000		1.6
48	FUNCTION1 PFK	330.9792	23.49	0.000		2.7
48	FUNCTION1 PFK	330.9792	23.17	0.000		1.7
48	FUNCTION1 PFK	330.9792	22.48	0.000		1.5
48	FUNCTION1 PFK	330.9792	22.07	0.000		0.9
48	FUNCTION1 PFK	330.9792	21.88	0.000		0.9

PFK2

#	Name	Time	RT	Abn. Ratio	RF	SN
49	FUNCTION2 PFK	366.9792	28.74	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	28.44	0.000	0.000	2.3
49	FUNCTION2 PFK	366.9792	28.37	0.000	0.000	4.4
49	FUNCTION2 PFK	366.9792	32.36	0.000	0.000	1.3
49	FUNCTION2 PFK	366.9792	32.01	0.000	0.000	1.5
49	FUNCTION2 PFK	366.9792	31.95	0.000	0.000	2.0
49	FUNCTION2 PFK	366.9792	31.89	0.000	0.000	1.4
49	FUNCTION2 PFK	366.9792	31.82	0.000	0.000	1.7
49	FUNCTION2 PFK	366.9792	31.63	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	31.37	0.000	0.000	2.0
49	FUNCTION2 PFK	366.9792	31.28	0.000	0.000	1.8
49	FUNCTION2 PFK	366.9792	30.92	0.000	0.000	0.5
49	FUNCTION2 PFK	366.9792	30.80	0.000	0.000	0.7
49	FUNCTION2 PFK	366.9792	30.45	0.000	0.000	1.8
49	FUNCTION2 PFK	366.9792	30.10	0.000	0.000	1.5
49	FUNCTION2 PFK	366.9792	29.72	0.000	0.000	1.5
49	FUNCTION2 PFK	366.9792	29.64	0.000	0.000	2.8
49	FUNCTION2 PFK	366.9792	29.46	0.000	0.000	0.9
49	FUNCTION2 PFK	366.9792	29.01	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	32.59	0.000	0.000	1.6

PFK3

#	Name	Time	RT	Abn. Ratio	RF	SN
50	FUNCTION3 PFK	380.9760	37.91	0.000	0.000	7.8
50	FUNCTION3 PFK	380.9760	37.33	0.000	0.000	21.1
50	FUNCTION3 PFK	380.9760	35.36	0.000	0.000	1.6

Quantify Totals Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
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Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

PFK4

Area	Time	RT	Abs Resp	PPM	SN
51 FUNCTION4 PFK	430.9728	41.25	0.000		0.9
51 FUNCTION4 PFK	430.9728	40.80	0.000		0.8
51 FUNCTION4 PFK	430.9728	39.92	0.000		1.0
51 FUNCTION4 PFK	430.9728	39.66	0.000		0.8
51 FUNCTION4 PFK	430.9728	39.61	0.000		0.7
51 FUNCTION4 PFK	430.9728	39.35	0.000		1.0
51 FUNCTION4 PFK	430.9728	39.26	0.000		1.2
51 FUNCTION4 PFK	430.9728	39.08	0.000		1.0
51 FUNCTION4 PFK	430.9728	39.04	0.000		1.3
51 FUNCTION4 PFK	430.9728	38.95	0.000		0.5
51 FUNCTION4 PFK	430.9728	44.87	0.000		0.6
51 FUNCTION4 PFK	430.9728	44.59	0.000		0.6
51 FUNCTION4 PFK	430.9728	44.41	0.000		1.6
51 FUNCTION4 PFK	430.9728	44.09	0.000		0.9
51 FUNCTION4 PFK	430.9728	44.01	0.000		1.1
51 FUNCTION4 PFK	430.9728	43.70	0.000		1.4
51 FUNCTION4 PFK	430.9728	43.16	0.000		1.8
51 FUNCTION4 PFK	430.9728	43.11	0.000		1.9
51 FUNCTION4 PFK	430.9728	43.05	0.000		2.5
51 FUNCTION4 PFK	430.9728	42.60	0.000		0.6
51 FUNCTION4 PFK	430.9728	42.38	0.000		1.6
51 FUNCTION4 PFK	430.9728	42.28	0.000		1.8

Quantify Totals Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld
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PFK5

Table with 6 columns: Peak Number, Name, Area, Retention Time, Abundance, and Response. Contains 30 rows of data for PFK5 peaks.

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ETHERS1

ID	Name	Time	RT	Area	Area	Area	Area	Area	Area	Area
53	FUNCTION1 HXCD...	375.8364	27.80	0.000	0.000					3.2
53	FUNCTION1 HXCD...	375.8364	26.57	0.000	0.000					2.1
53	FUNCTION1 HXCD...	375.8364	26.45	0.000	0.000					3.7
53	FUNCTION1 HXCD...	375.8364	26.24	0.000	0.000					2.9
53	FUNCTION1 HXCD...	375.8364	26.12	0.000	0.000					3.9
53	FUNCTION1 HXCD...	375.8364	25.91	0.000	0.000					3.9
53	FUNCTION1 HXCD...	375.8364	25.85	0.000	0.000					5.0
53	FUNCTION1 HXCD...	375.8364	24.09	0.000	0.000					2.3
53	FUNCTION1 HXCD...	375.8364	23.93	0.000	0.000					35.4
53	FUNCTION1 HXCD...	375.8364	23.69	0.000	0.000					3.2

ETHERS2

ID	Name	Time	RT	Area	Area	Area	Area	Area	Area	Area
54	FUNCTION1 HPCD...	409.7974	21.27	0.000	0.000					3.1
54	FUNCTION1 HPCD...	409.7974	28.23	0.000	0.000					2.5
54	FUNCTION1 HPCD...	409.7974	25.70	0.000	0.000					2.0
54	FUNCTION1 HPCD...	409.7974	25.48	0.000	0.000					1.9
54	FUNCTION1 HPCD...	409.7974	24.08	0.000	0.000					1.7
54	FUNCTION1 HPCD...	409.7974	23.63	0.000	0.000					1.3
54	FUNCTION1 HPCD...	409.7974	22.49	0.000	0.000					3.4
54	FUNCTION1 HPCD...	409.7974	21.67	0.000	0.000					1.4

ETHERS3

ID	Name	Time	RT	Area	Area	Area	Area	Area	Area	Area
55	FUNCTION2 HPCD...	409.7974	30.21	0.000	0.000					5.0
55	FUNCTION2 HPCD...	409.7974	30.18	0.000	0.000					7.0
55	FUNCTION2 HPCD...	409.7974	29.89	0.000	0.000					3.3
55	FUNCTION2 HPCD...	409.7974	29.85	0.000	0.000					3.4
55	FUNCTION2 HPCD...	409.7974	29.64	0.000	0.000					2.0
55	FUNCTION2 HPCD...	409.7974	29.58	0.000	0.000					2.1
55	FUNCTION2 HPCD...	409.7974	29.41	0.000	0.000					3.7
55	FUNCTION2 HPCD...	409.7974	29.28	0.000	0.000					3.1
55	FUNCTION2 HPCD...	409.7974	32.53	0.000	0.000					2.0
55	FUNCTION2 HPCD...	409.7974	31.07	0.000	0.000					2.9
55	FUNCTION2 HPCD...	409.7974	30.51	0.000	0.000					2.1

ETHERS4

ID	Name	Time	RT	Area	Area	Area	Area	Area	Area	Area
56	FUNCTION3 OCDPE	445.7555	37.80	0.000	0.000					2.7
56	FUNCTION3 OCDPE	445.7555	36.27	0.000	0.000					1.6
56	FUNCTION3 OCDPE	445.7555	35.27	0.000	0.000					3.0
56	FUNCTION3 OCDPE	445.7555	35.16	0.000	0.000					3.2
56	FUNCTION3 OCDPE	445.7555	34.56	0.000	0.000					5.7
56	FUNCTION3 OCDPE	445.7555	33.42	0.000	0.000					2.8



Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
 Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

ETHERS5

RT	Area	Height	Area%	Height%	Area	Height	Area%	Height%
57	FUNCTION4 NCDPE	479.7165	42.07	0.000	0.000			2.6
57	FUNCTION4 NCDPE	479.7165	41.37	0.000	0.000			4.9
57	FUNCTION4 NCDPE	479.7165	41.14	0.000	0.000			2.6
57	FUNCTION4 NCDPE	479.7165	39.12	0.000	0.000			1231.3
57	FUNCTION4 NCDPE	479.7165	38.75	0.000	0.000			3.2
57	FUNCTION4 NCDPE	479.7165	44.46	0.000	0.000			2.4
57	FUNCTION4 NCDPE	479.7165	42.93	0.000	0.000			2.1
57	FUNCTION4 NCDPE	479.7165	42.75	0.000	0.000			3.3
57	FUNCTION4 NCDPE	479.7165	42.66	0.000	0.000			2.8

ETHERS6

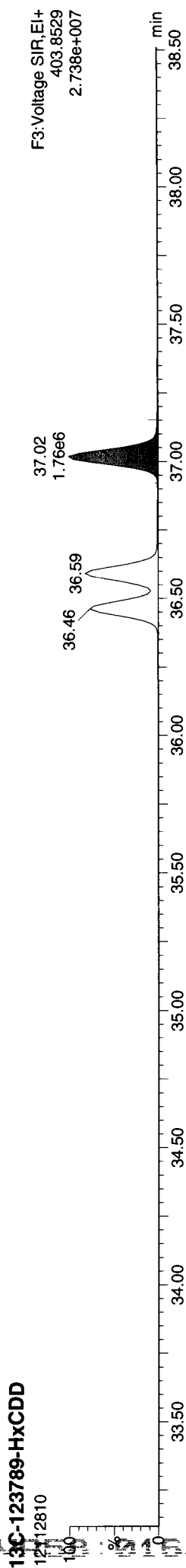
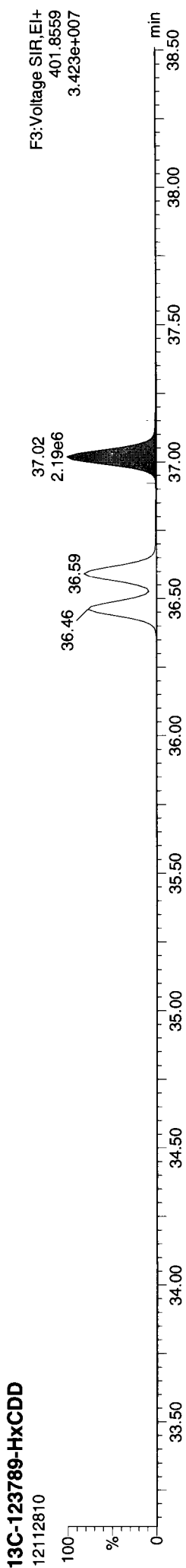
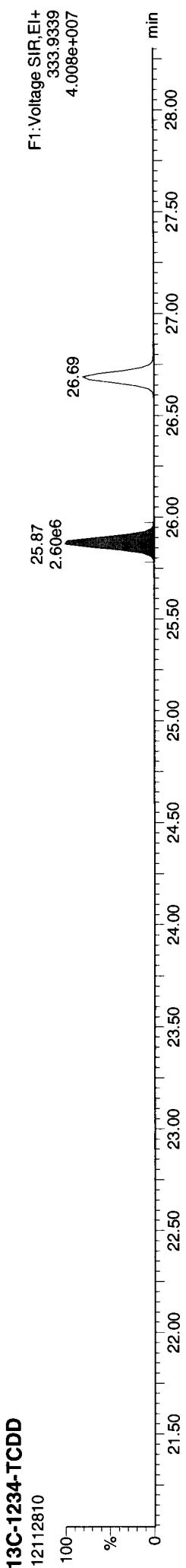
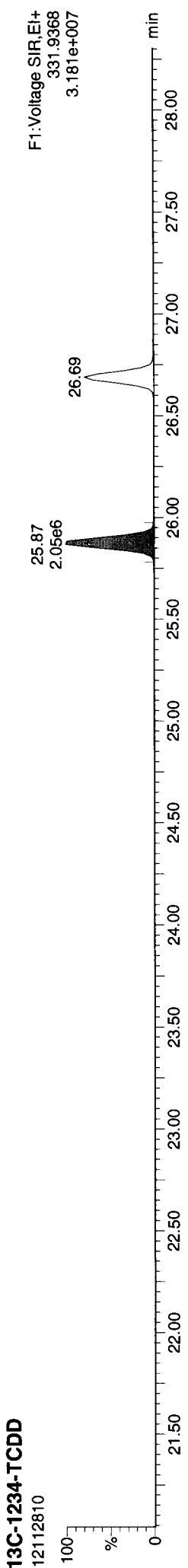
58	FUNCTION5 DCDPE	513.6775	47.32	0.000	0.000			53.9
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Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128\DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

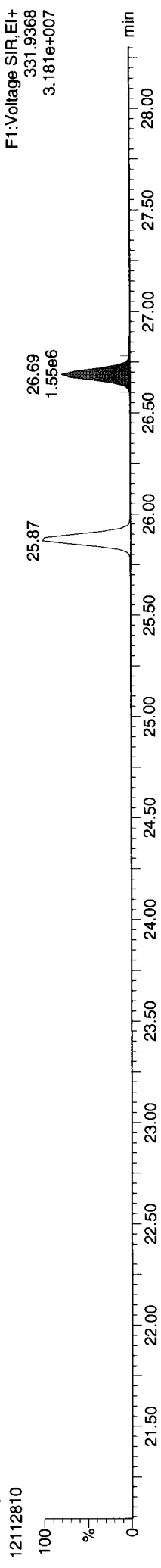
Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk



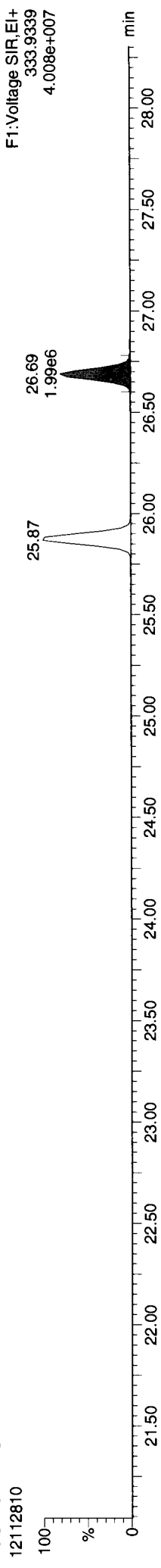
**Quantify Sample Report** MassLynx 4.1 SCN 714  
 Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
 Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

**Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk**

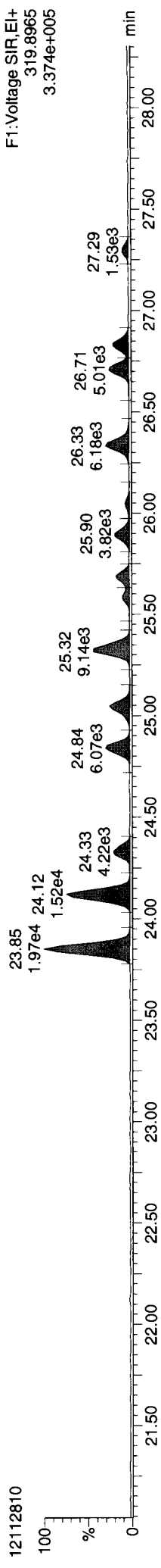
**13C-2378-TCDD**



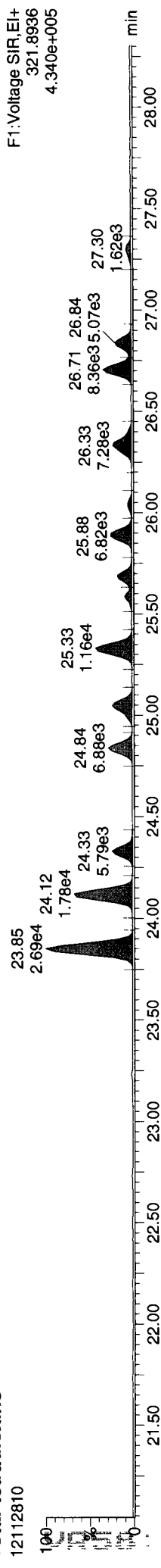
**13C-2378-TCDD**



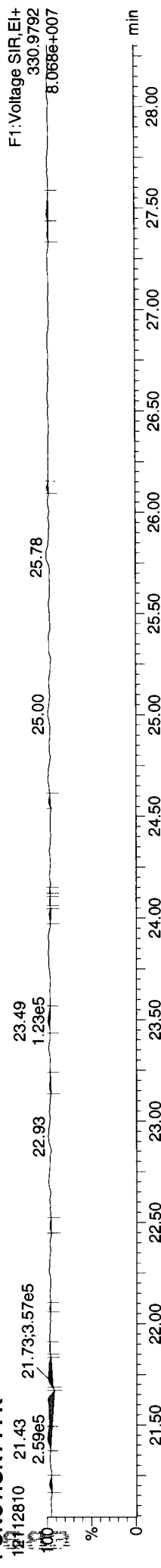
**Total-tetradoxins**



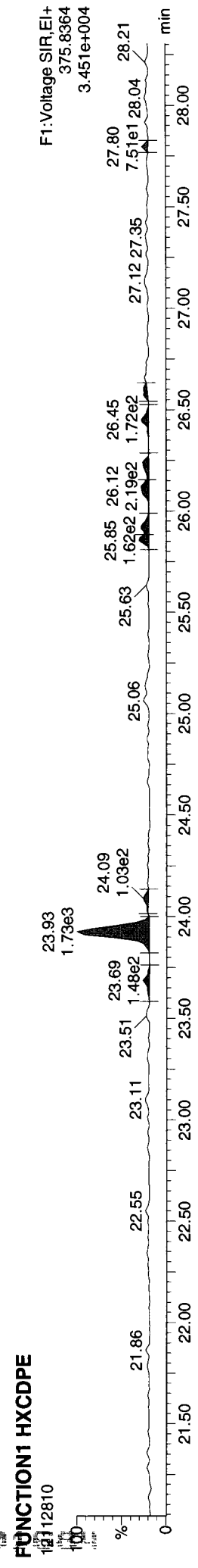
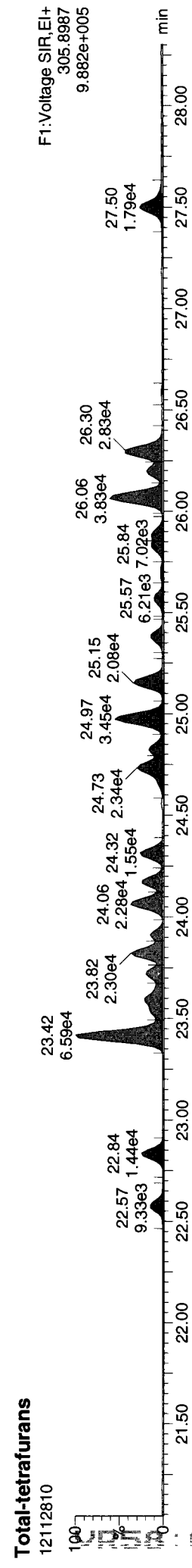
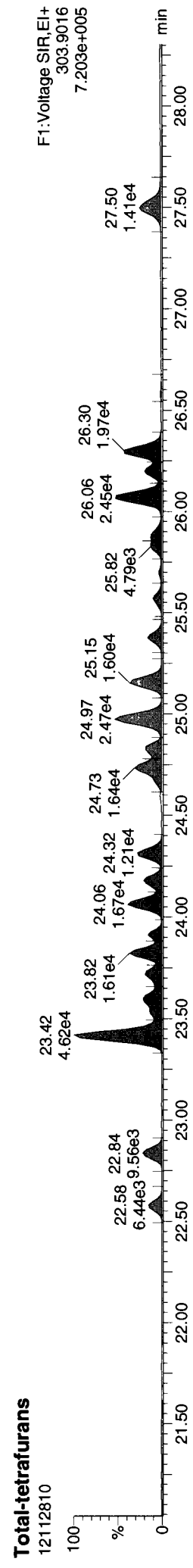
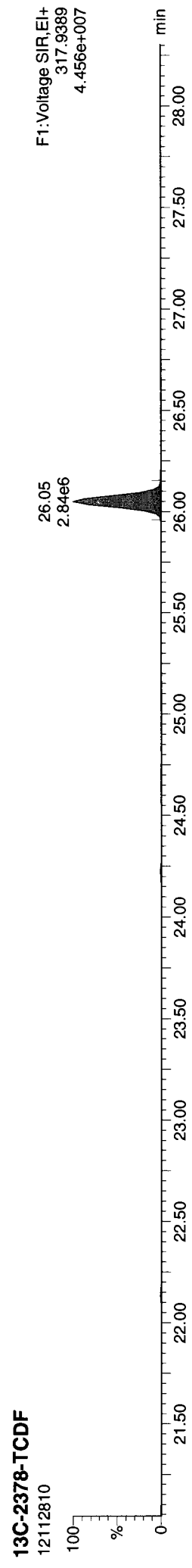
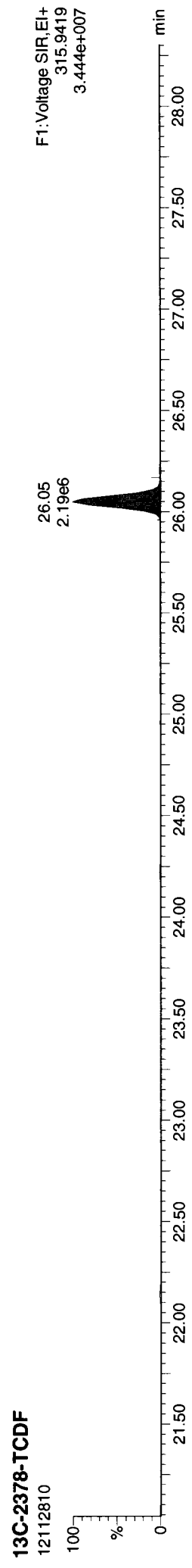
**Total-tetradoxins**



**FUNCTION1 PFK**



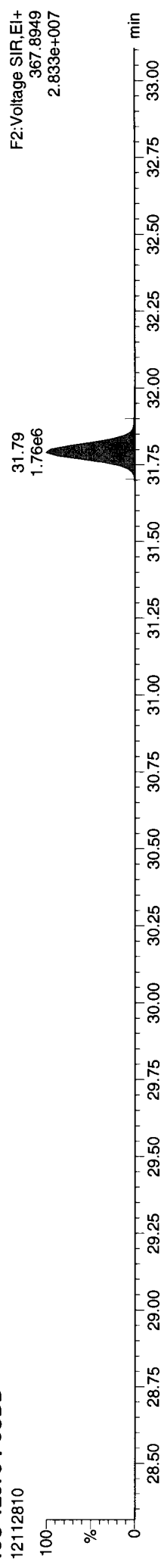
Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk



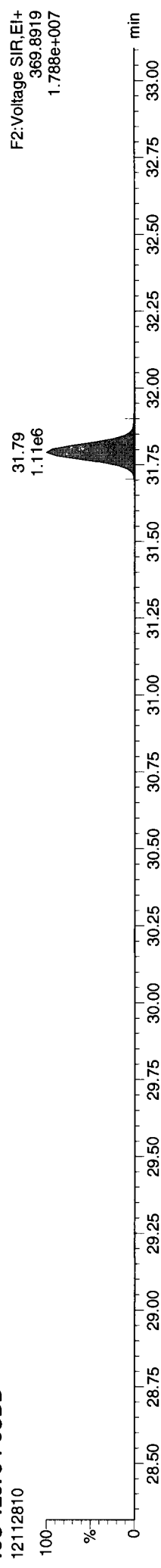
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

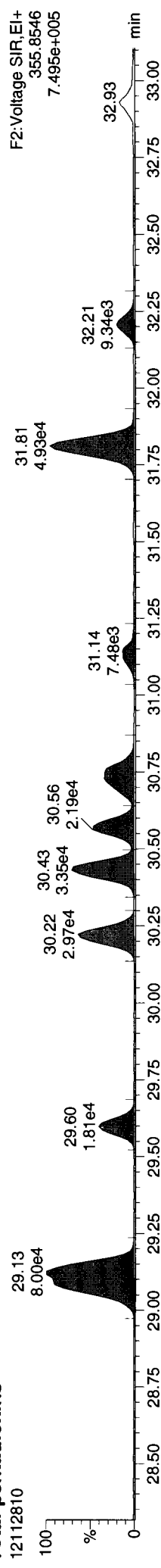
13C-12378-PeCDD



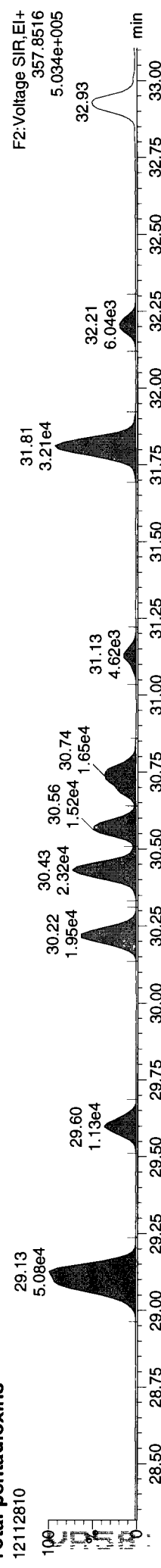
13C-12378-PeCDD



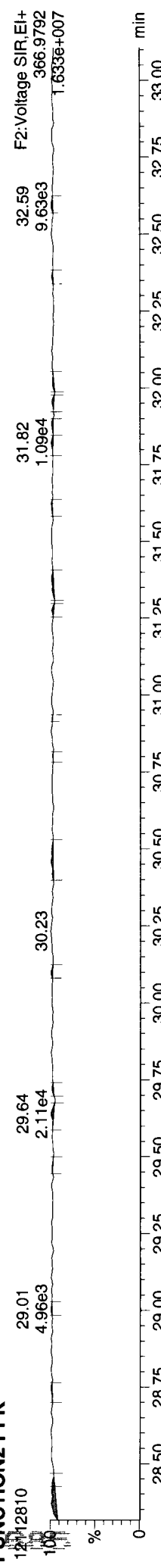
Total-pentadioxins



Total-pentadioxins



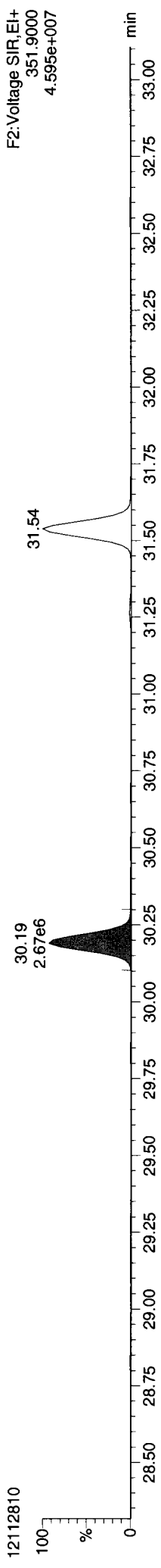
FUNCTION2 PFK



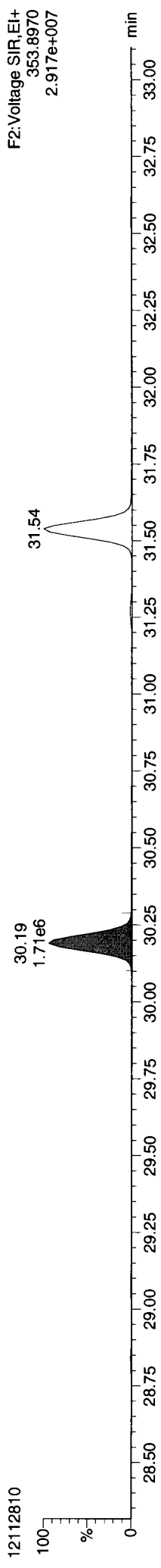
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

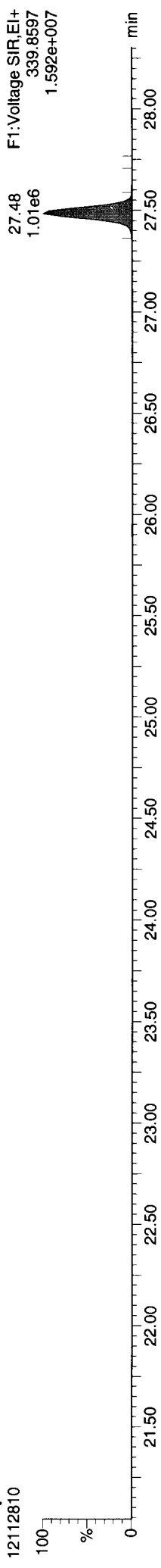
13C-12378-PeCDF



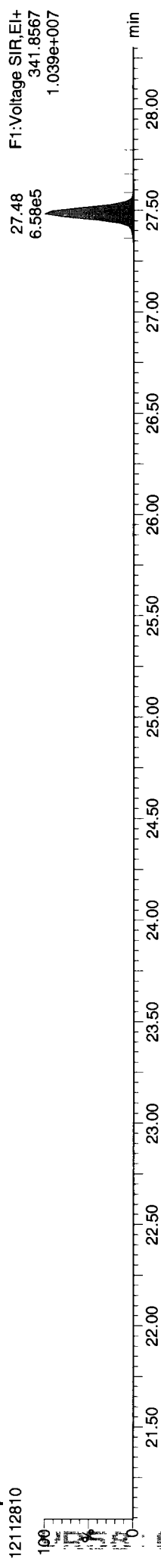
13C-12378-PeCDF



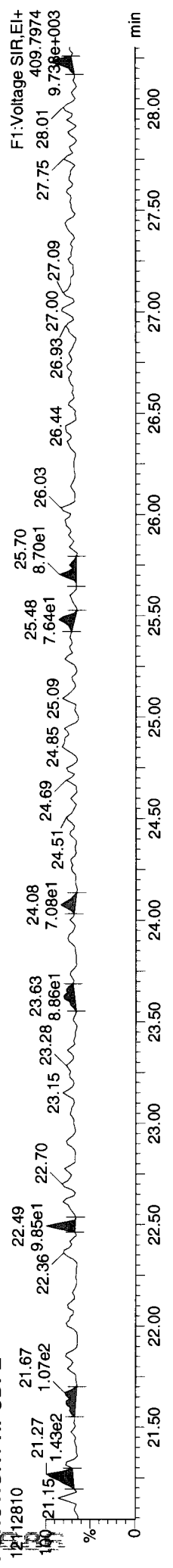
Total-penta1



Total-penta1

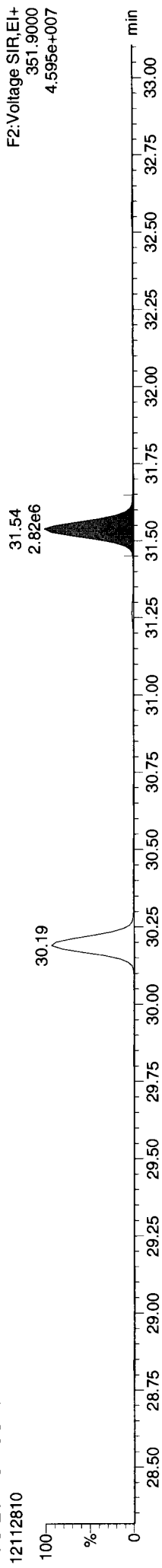


FUNCTION1 HPCDPE

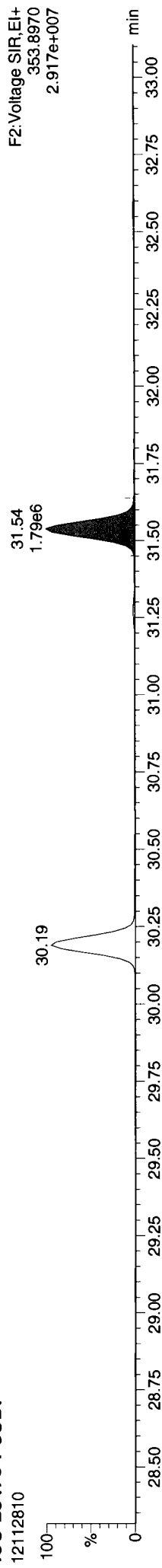


Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

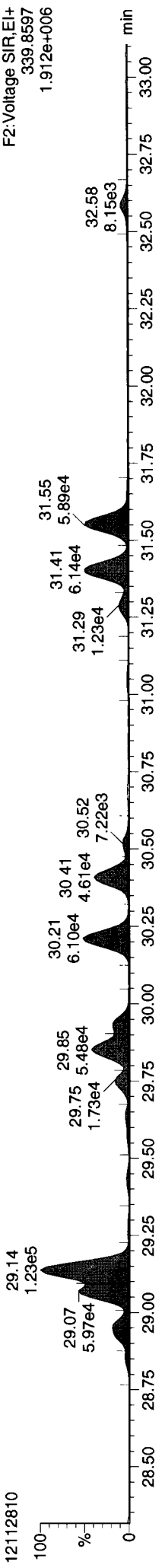
13C-23478-PeCDF



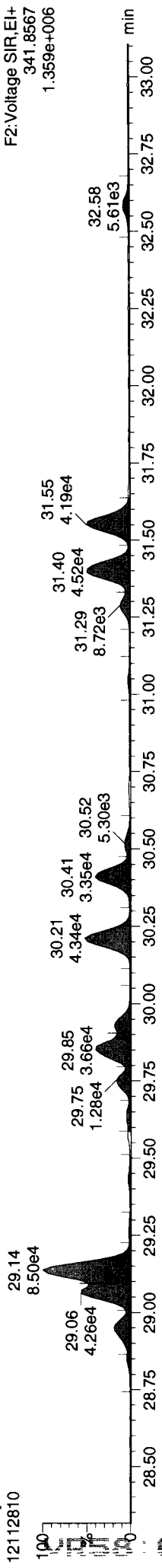
13C-23478-PeCDF



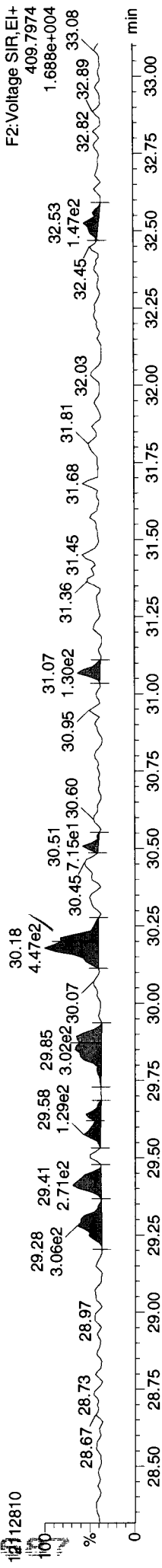
Total-pentafurans



Total-pentafurans



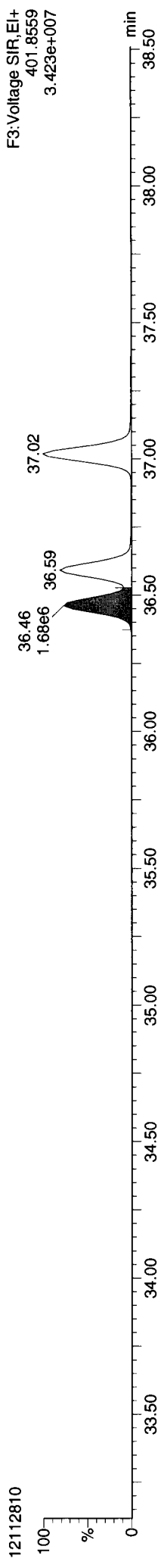
FUNCTION2 HPCDPE



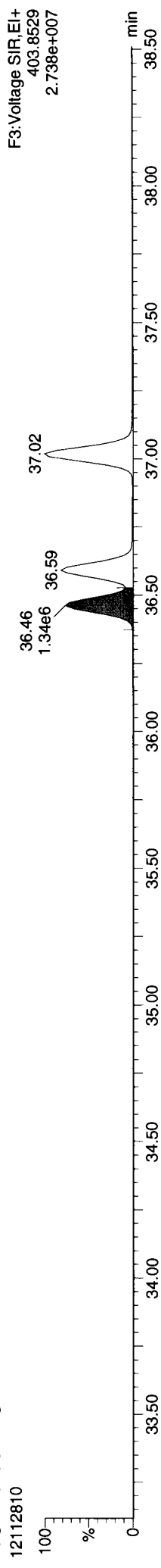
**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
 Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
 Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

**Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk**

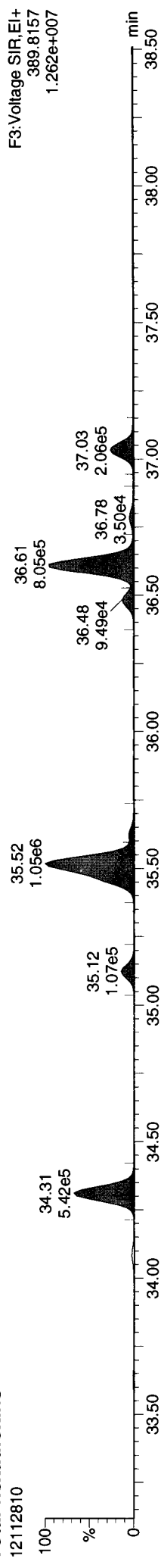
**13C-123478-HxCDD**



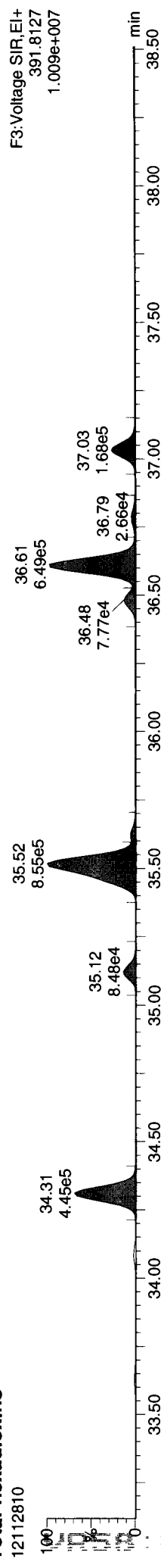
**13C-123478-HxCDD**



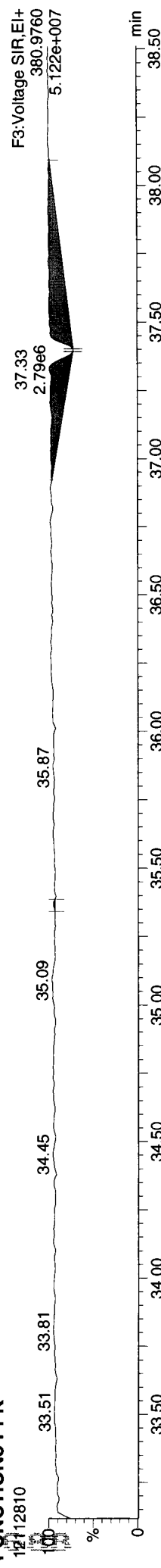
**Total-hexadioxins**



**Total-hexadioxins**



**FUNCTION3 PFK**

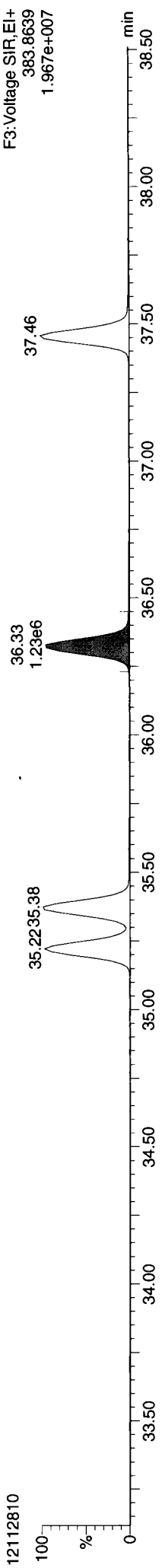




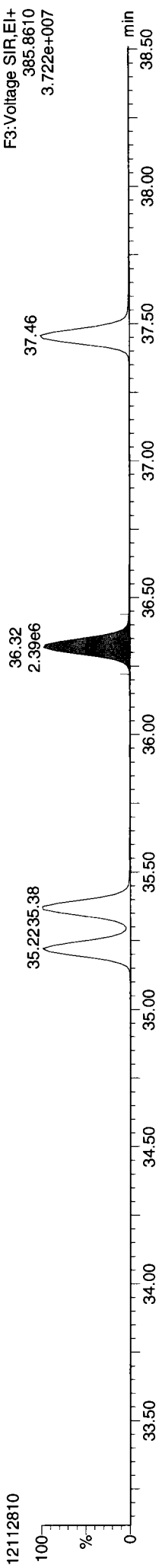
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

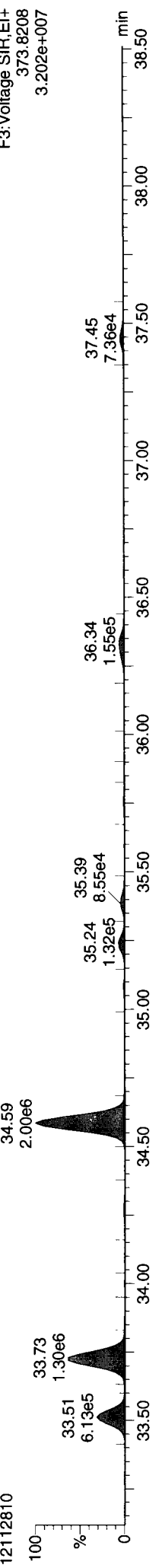
13C-234678-HxCDF



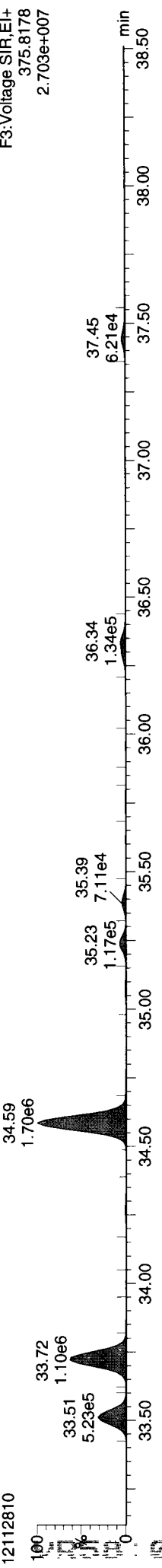
13C-234678-HxCDF



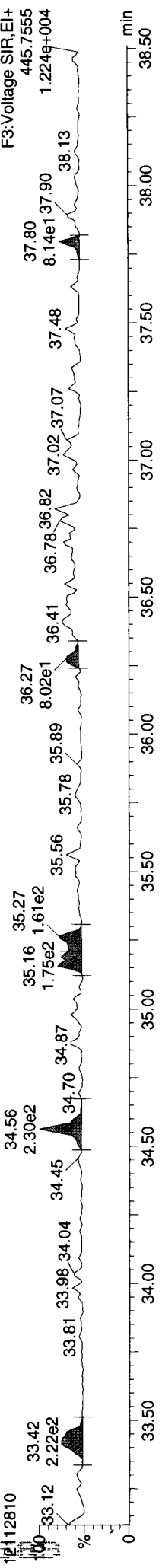
Total-hexafurans



Total-hexafurans



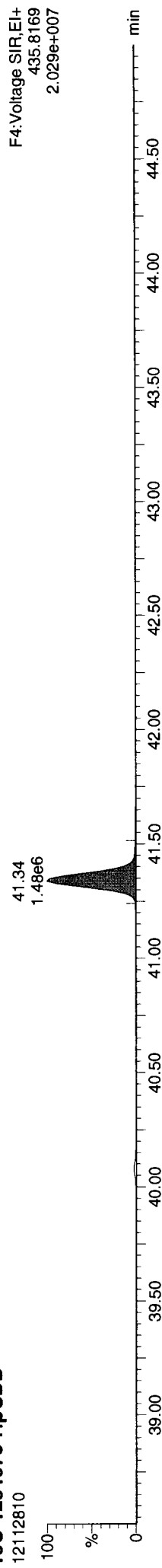
FUNCTION3 OCDFE



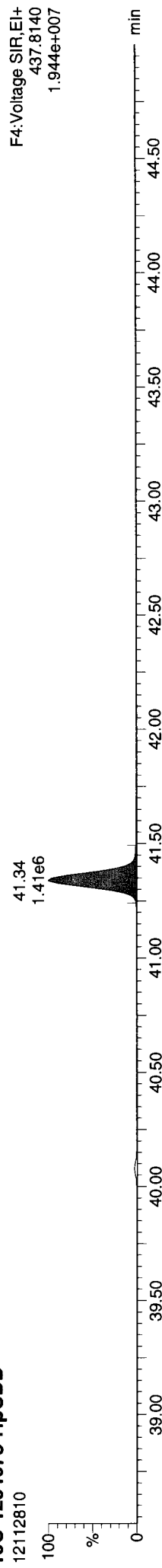
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

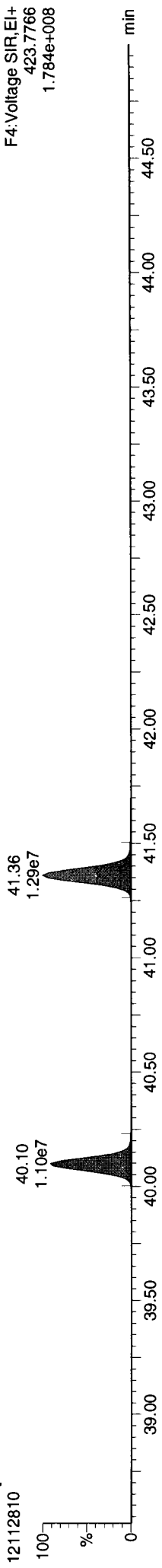
13C-1234678-HpCDD



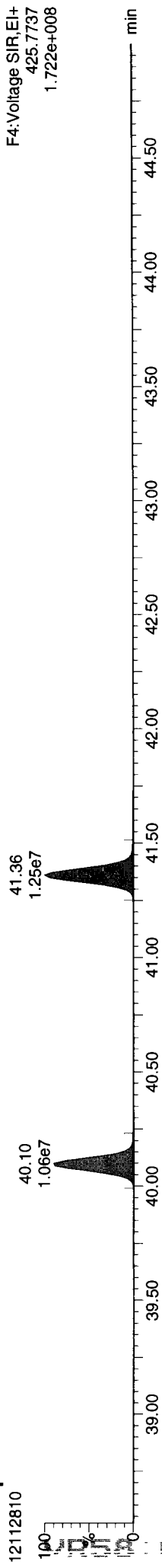
13C-1234678-HpCDD



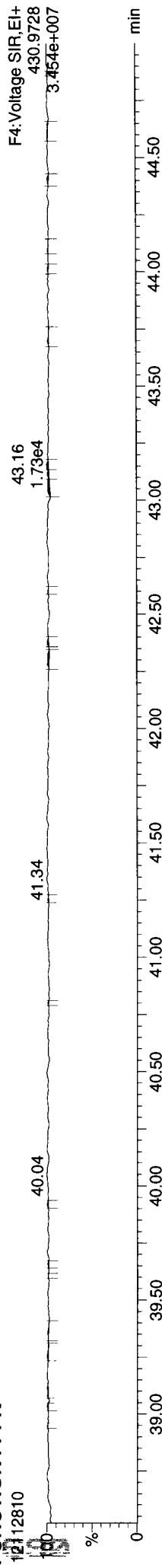
Total-heptadioxins



Total-heptadioxins

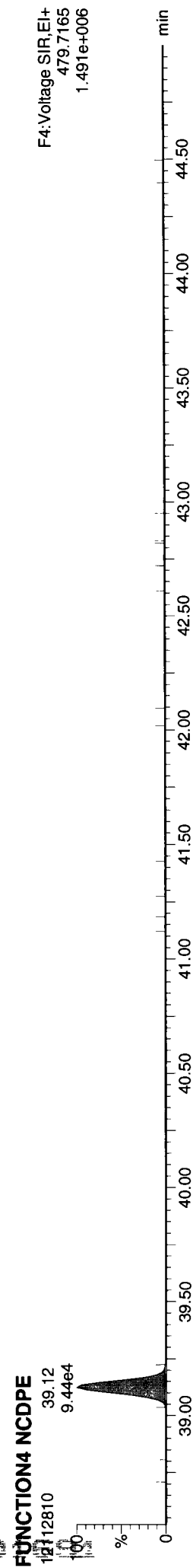
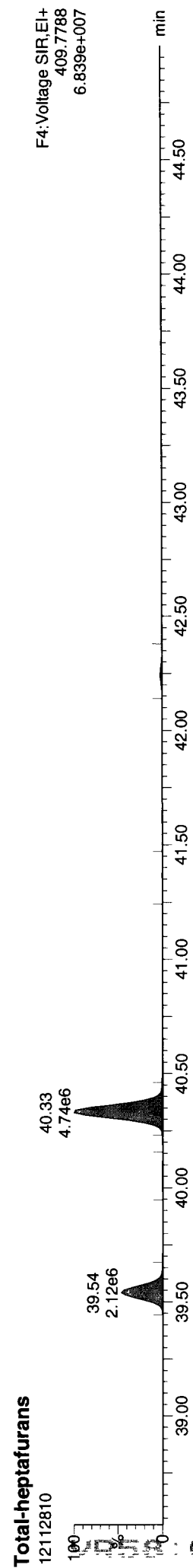
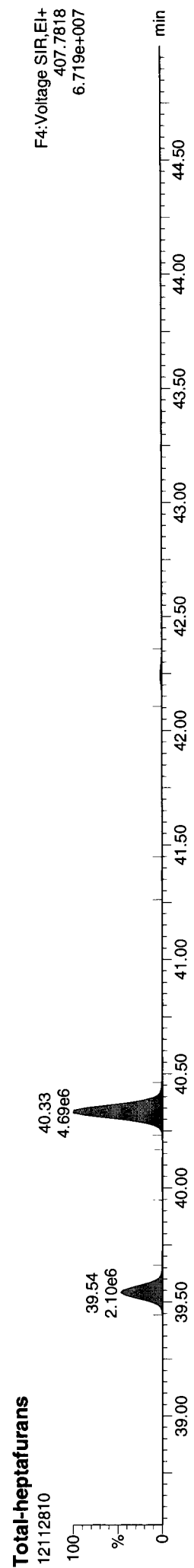
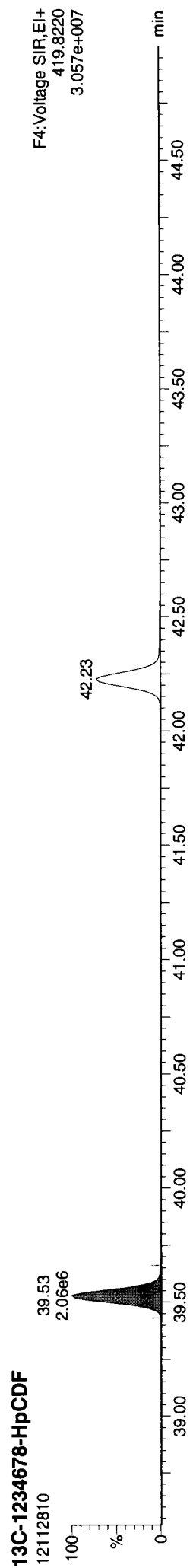
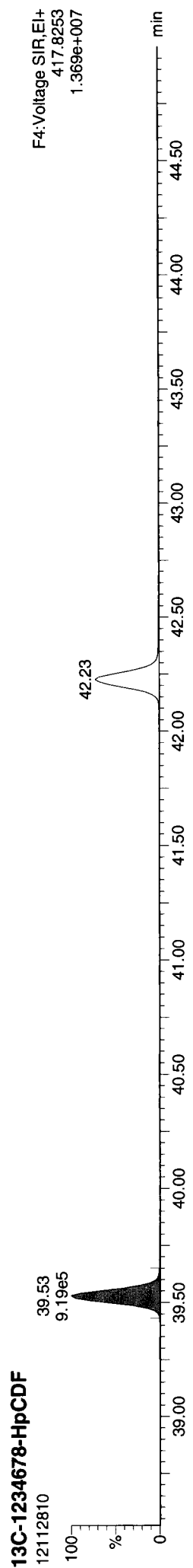


FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

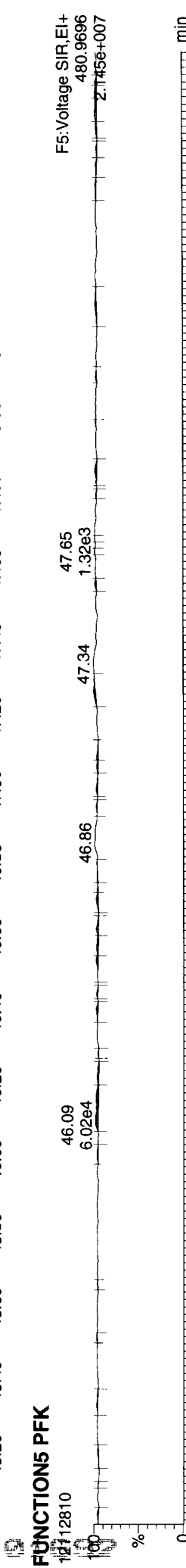
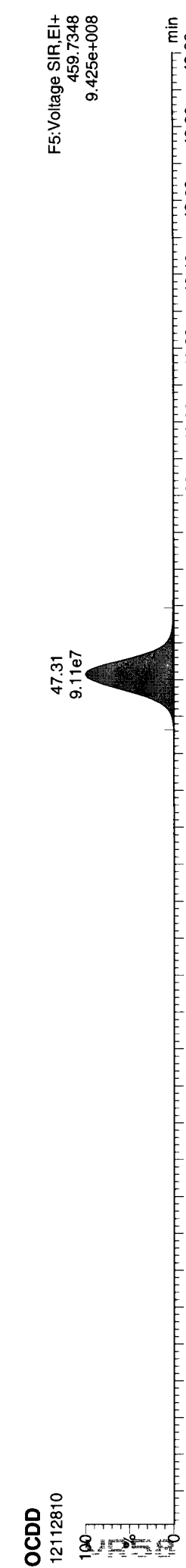
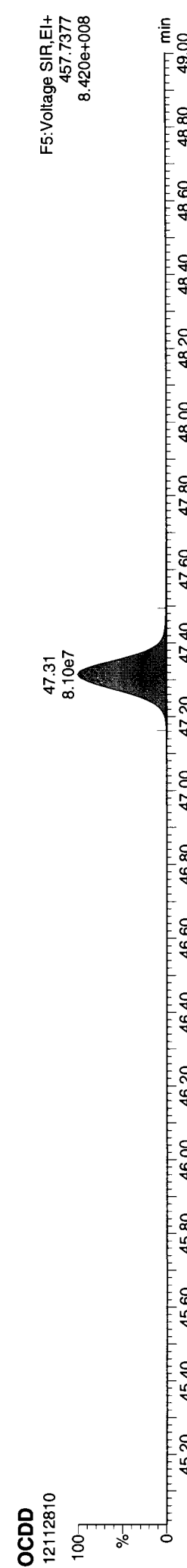
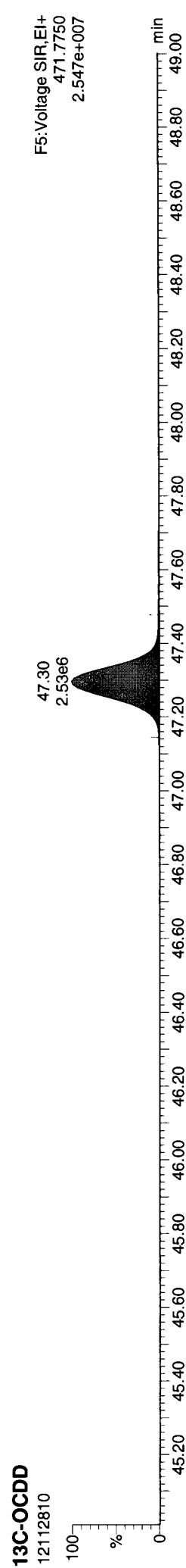
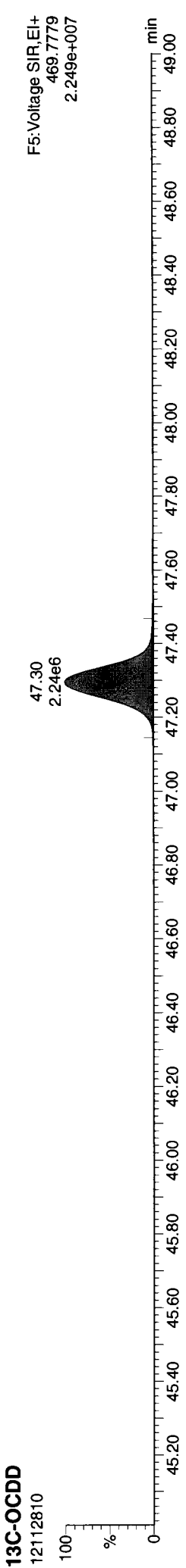
Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report  
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

MassLynx 4.1 SCN 714

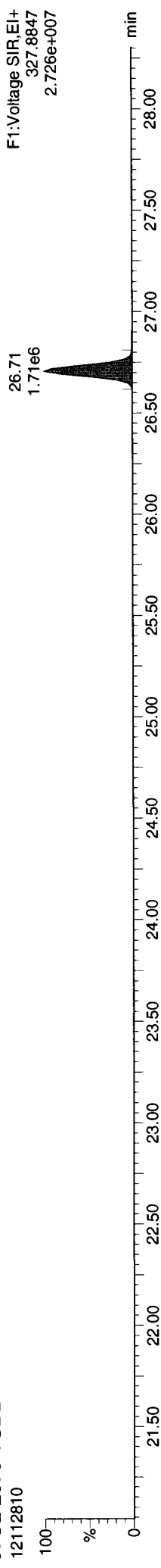
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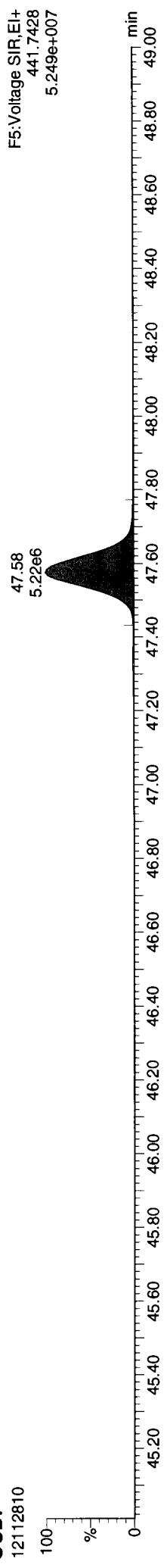
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:39:32 Pacific Standard Time

Name: 12112810, Date: 28-Nov-2012, Time: 17:41:07, ID: VR58D, Conditions: AUTOSPEC01, User: pk

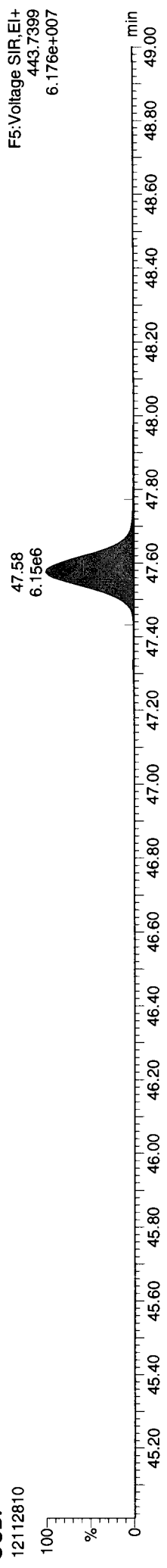
37CL-2378-TCDD



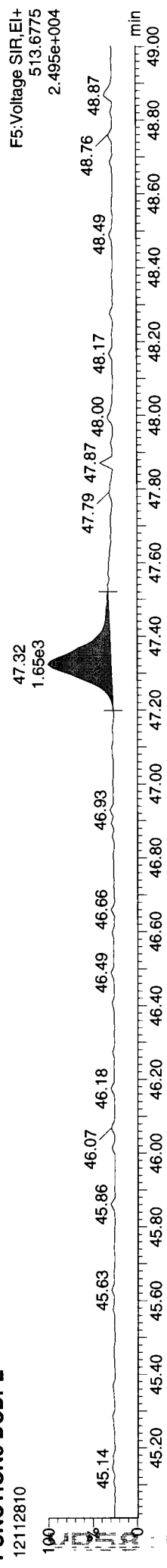
OCDF



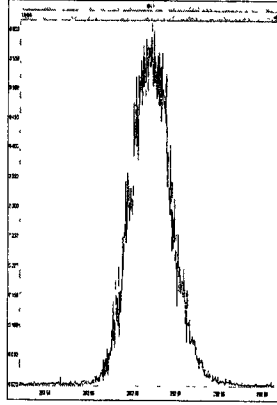
OCDF



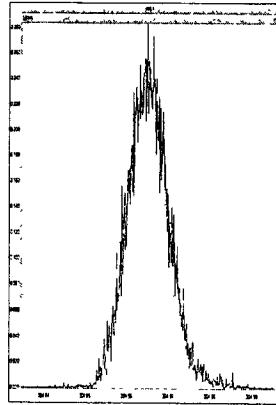
FUNCTION5 DCDPE



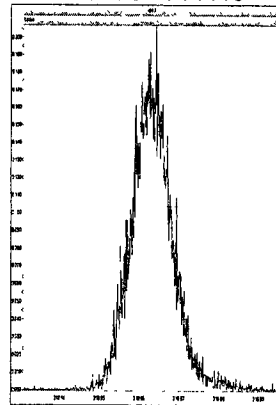
M 292.9824 R 13670



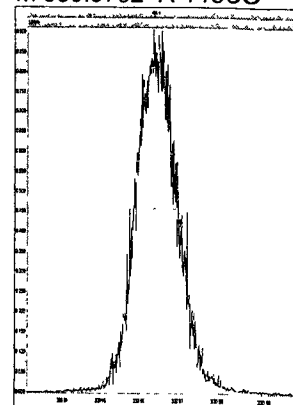
M 304.9824 R 14253



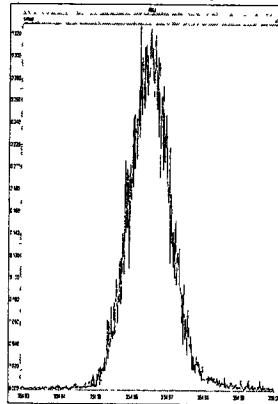
M 318.9792 R 14418



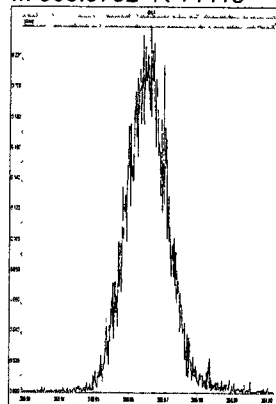
M 330.9792 R 14005



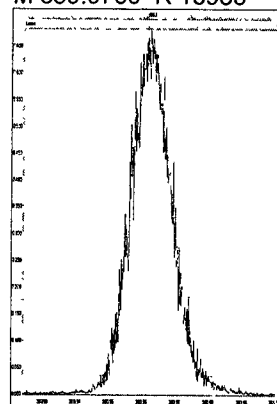
M 354.9792 R 13977



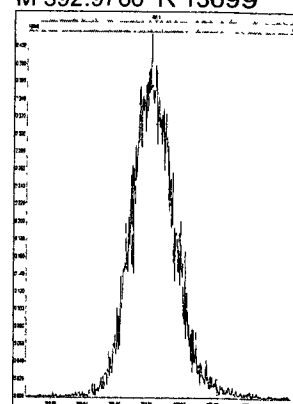
M 366.9792 R 14418



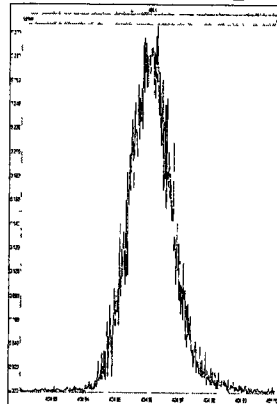
M 380.9760 R 13935



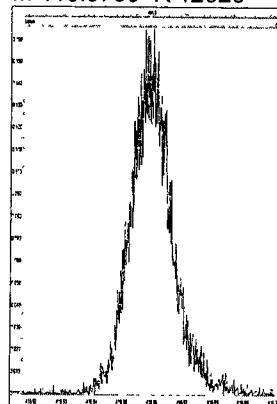
M 392.9760 R 13699



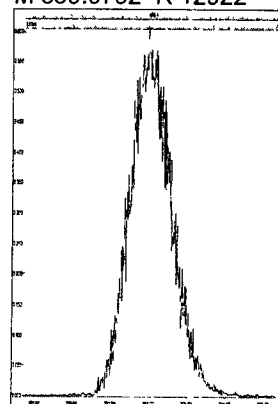
M 404.9760 R 13272



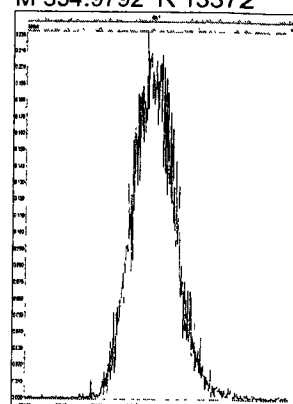
M 416.9760 R 12920



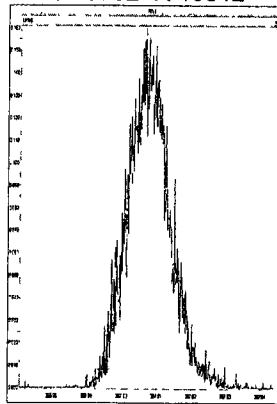
M 330.9792 R 12922



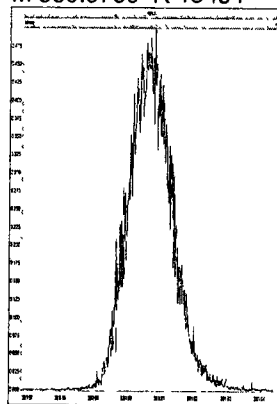
M 354.9792 R 13372



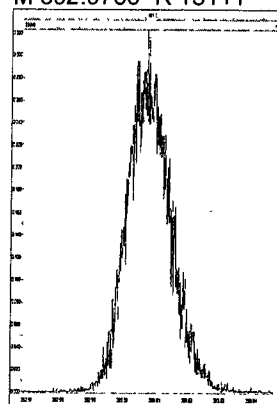
M 366.9792 R 13812



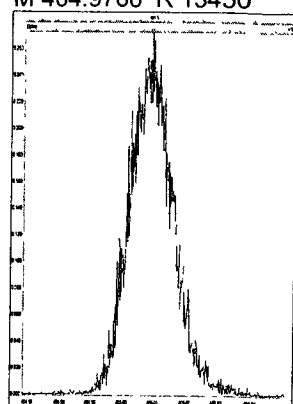
M 380.9760 R 13454



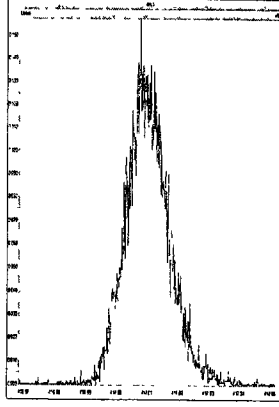
M 392.9760 R 13111



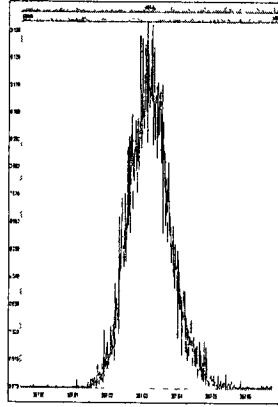
M 404.9760 R 13450



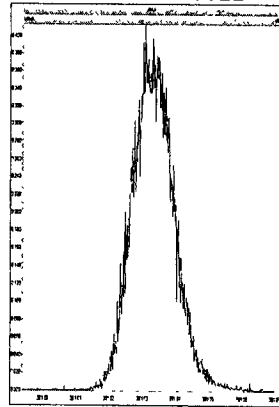
M 416.9760 R 14226



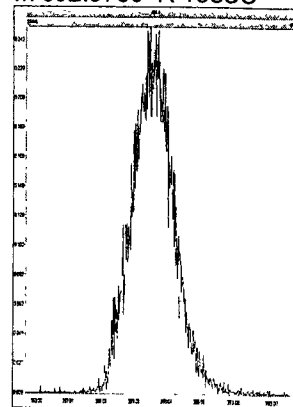
M 366.9792 R 13928



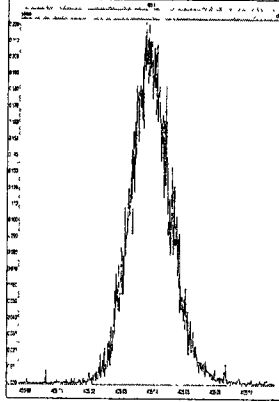
M 380.9760 R 13522



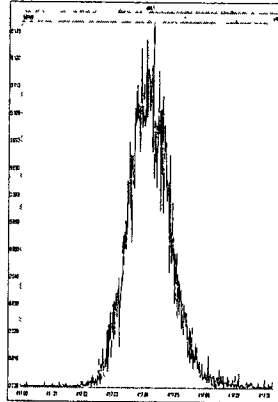
M 392.9760 R 13895



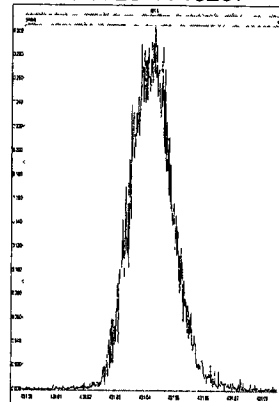
M 404.9760 R 13892



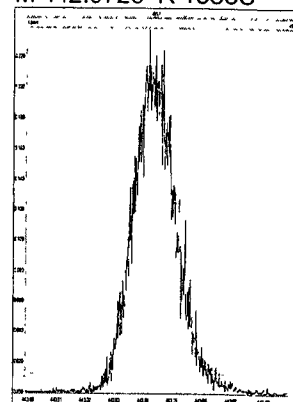
M 416.9760 R 13296



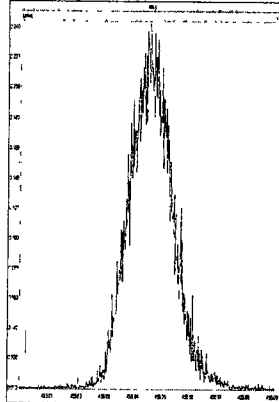
M 430.9728 R 13297



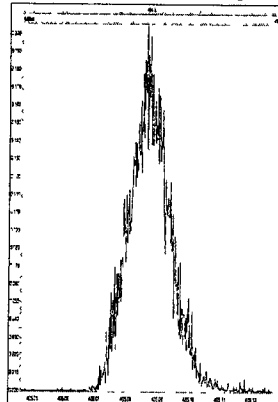
M 442.9728 R 13868



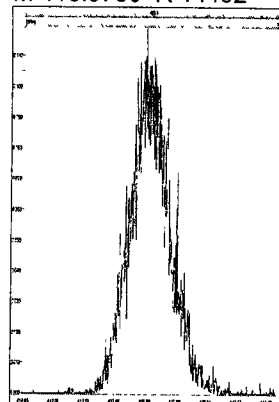
M 454.9728 R 13786



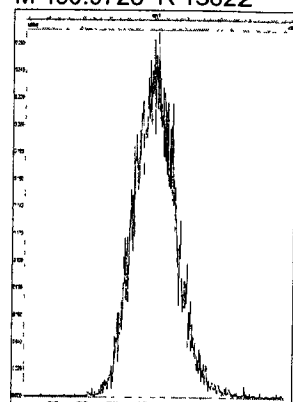
M 404.9760 R 14492



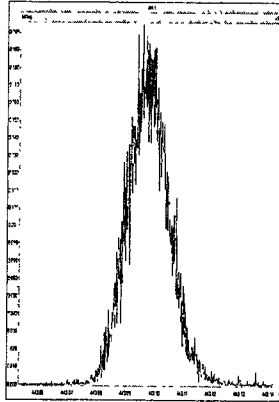
M 416.9760 R 14492



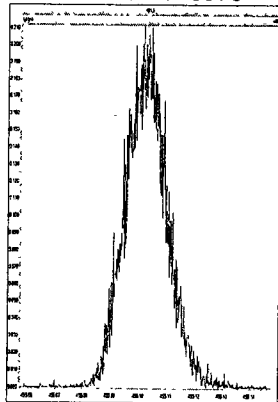
M 430.9728 R 13622



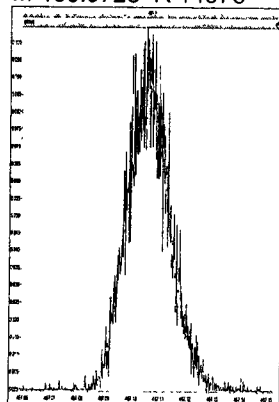
M 442.9728 R 13442



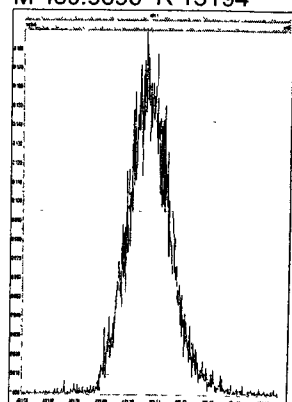
M 454.9728 R 13973



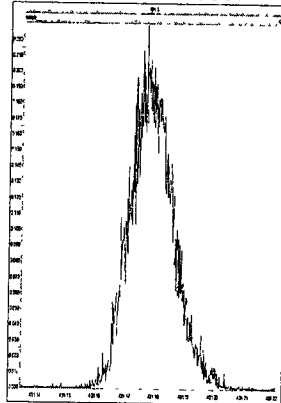
M 466.9728 R 14978



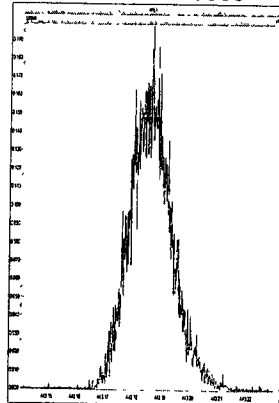
M 480.9696 R 13194



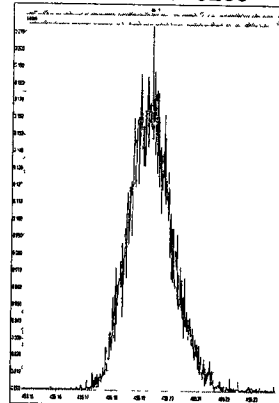
M 430.9728 R 13037



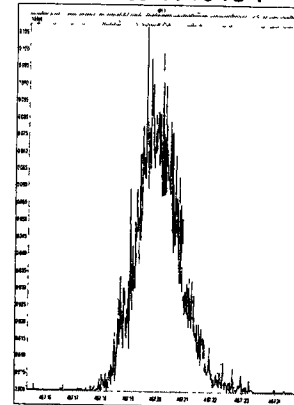
M 442.9728 R 13303



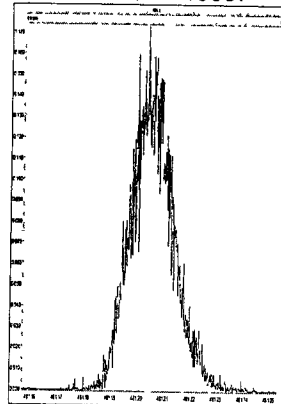
M 454.9728 R 13233



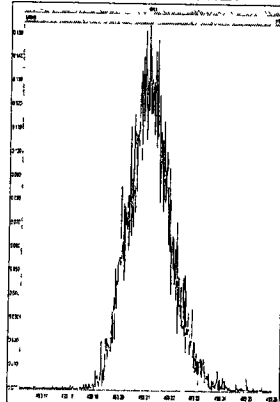
M 466.9728 R 13404



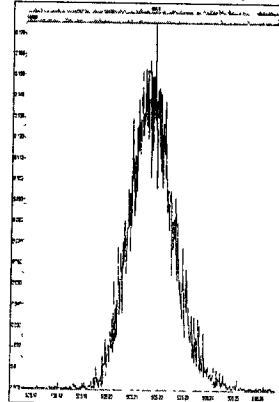
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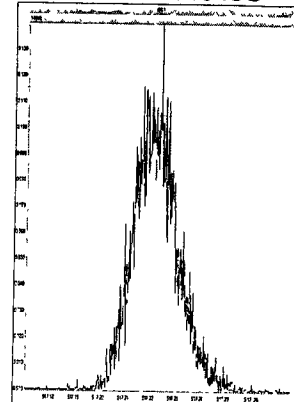
M 492.9696 R 13227



M 504.9696 R 12140



M 516.9697 R 13498





Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40

Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.063	1.001	2.73e5	3.79e5	0.877	0.721	0.770	1419.0	NO	9.838	9.838
12378-PeCDF	30.212	1.001	1.62e6	1.09e6	0.896	1.489	1.550	7998.6	NO	50.085	50.085
23478-PeCDF	31.560	1.001	1.62e6	1.10e6	0.926	1.473	1.550	7695.8	NO	49.209	49.209
123478-HxCDF	35.232	1.001	1.44e6	1.22e6	1.068	1.181	1.240	4495.5	NO	49.940	49.940
234678-HxCDF	36.328	1.001	1.44e6	1.23e6	1.037	1.177	1.240	4375.1	NO	50.608	50.608
123678-HxCDF	35.386	1.001	1.44e6	1.23e6	1.035	1.169	1.240	4407.8	NO	49.886	49.886
123789-HxCDF	37.468	1.001	1.28e6	1.09e6	0.987	1.179	1.240	4014.6	NO	50.080	50.080
1234678-HpCDF	39.529	1.000	1.31e6	1.32e6	1.232	0.990	1.050	5228.9	NO	49.145	49.145
1234789-HpCDF	42.226	1.000	1.05e6	1.08e6	1.215	0.971	1.050	3562.1	NO	50.089	50.089
OCDF	47.531	1.006	1.61e6	1.87e6	1.138	0.862	0.890	4409.3	NO	98.828	98.828
2378-TCDD	26.706	1.001	2.13e5	2.76e5	1.049	0.771	0.770	1757.9	NO	9.586	9.586
12378-PeCDD	31.812	1.001	1.19e6	7.57e5	0.998	1.566	1.550	5631.0	NO	49.007	49.007
123478-HxCDD	36.460	1.000	1.11e6	8.89e5	0.971	1.246	1.240	5747.0	NO	49.856	49.856
123678-HxCDD	36.591	1.000	1.08e6	8.80e5	0.918	1.232	1.240	5552.4	NO	50.855	50.855
123789-HxCDD	37.019	1.012	1.13e6	9.19e5	0.932	1.230	1.240	5732.1	NO	52.795	52.795
1234678-HpCDD	41.349	1.000	9.56e5	9.06e5	1.017	1.055	1.050	3801.6	NO	49.445	49.445
OCDD	47.262	1.000	1.47e6	1.63e6	1.008	0.901	0.890	4745.7	NO	98.942	98.942
13C-2378-TCDF	26.048	1.006	3.33e6	4.23e6	1.473	0.786	0.770	14273.1	NO	105.146	105.146
13C-12378-PeCDF	30.190	1.166	3.69e6	2.35e6	1.148	1.569	1.550	19195.9	NO	107.827	107.827
13C-23478-PeCDF	31.538	1.218	3.64e6	2.32e6	1.113	1.571	1.550	19350.0	NO	109.794	109.794
13C-123478-HxCDF	35.210	0.952	1.70e6	3.29e6	1.209	0.517	0.510	10248.2	NO	95.233	95.233
13C-123678-HxCDF	35.364	0.956	1.77e6	3.42e6	1.269	0.518	0.510	10828.5	NO	94.504	94.504
13C-234678-HxCDF	36.306	0.981	1.76e6	3.33e6	1.236	0.527	0.510	10628.0	NO	95.126	95.126
13C-123789-HxCDF	37.446	1.012	1.64e6	3.15e6	1.107	0.522	0.510	9990.1	NO	99.932	99.932
13C-1234678-HpCDF	39.518	1.068	1.34e6	3.00e6	1.051	0.448	0.440	7199.9	NO	95.477	95.477
13C-1234789-HpCDF	42.215	1.141	1.08e6	2.43e6	0.815	0.446	0.440	4946.9	NO	99.460	99.460
13C-1234-TCDD	25.884	0.000	2.16e6	2.73e6	1.000	0.791	0.770	10851.7	NO	100.000	100.000
13C-2378-TCDD	26.691	1.031	2.14e6	2.73e6	0.946	0.785	0.770	10735.6	NO	105.365	105.365
13C-12378-PeCDD	31.790	1.228	2.43e6	1.55e6	0.721	1.568	1.550	20557.3	NO	112.870	112.870
13C-123478-HxCDD	36.449	0.985	2.30e6	1.83e6	0.991	1.258	1.240	17233.1	NO	96.175	96.175
13C-123678-HxCDD	36.581	0.989	2.33e6	1.87e6	1.025	1.244	1.240	17452.5	NO	94.811	94.811
13C-1234678-HpCDD	41.327	1.117	1.89e6	1.81e6	0.866	1.042	1.050	6924.8	NO	98.763	98.763
13C-OCDD	47.244	1.277	2.93e6	3.27e6	0.769	0.897	0.890	11081.3	NO	186.278	186.278

Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld

Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time

Printed: Monday, December 10, 2012 14:35:07 Pacific Standard Time

Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

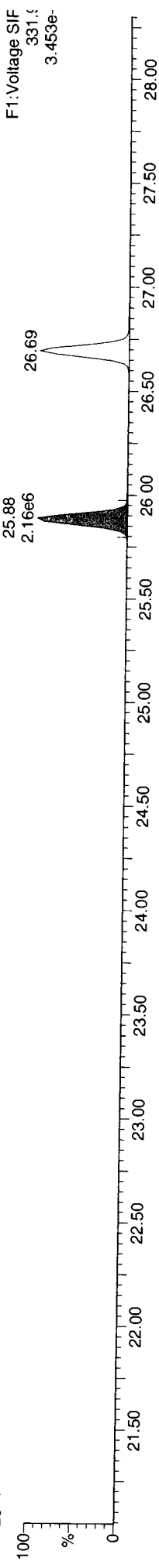
Compound	36.997	0.000	2.40e6	1.93e6	1.000	1.247	1.240	1.7730.1	NO
13C-123789-HxCDD	36.997	0.000	2.40e6	1.93e6	1.000	1.247	1.240	1.7730.1	NO
Total-tetrafurans			8.52e5		0.877				30.383
Total-penta1			2.12e6						63.356
Total-pentafurans			4.98e6		0.911				152.608
Total-hexafurans			7.21e6		1.032				257.489
Total-heptafurans			2.36e6		1.223				99.430
Total-Furans			1.91e7		1.041				702.279
Total-tetradioxins			1.18e6		1.049				53.174
Total-pentadioxins			4.12e6		0.998				170.547
Total-hexadioxins			4.70e6		0.940				218.110
Total-heptadioxins			2.04e6		1.017				105.991
Total-Dioxins			1.35e7		0.985				646.917
Total-TEQ			3.26e7						1346.751
37CL-2378-TCDD	26.706	1.032	5.43e5		1.044			3835.1	
FUNCTION1 PFK			2.41e6						0.000
FUNCTION2 PFK			3.34e5						0.000
FUNCTION3 PFK			8.60e6						0.000
FUNCTION4 PFK			3.72e5						0.000
FUNCTION5 PFK			3.23e5						0.000
FUNCTION1 HXCDPE			8.45e2						0.000
FUNCTION1 HPCDPE			1.84e3						0.000
FUNCTION2 HPCDPE			2.82e3						0.000
FUNCTION3 OCDPE			1.41e2						0.000
FUNCTION4 NCDPE			0.00e0						0.000
FUNCTION5 DCDPE			0.00e0						0.000

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 23 Nov 2012 12:31:40  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

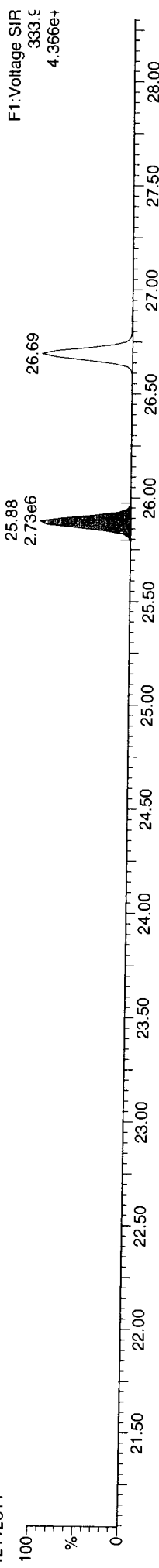
13C-1234-TCDD

12112811



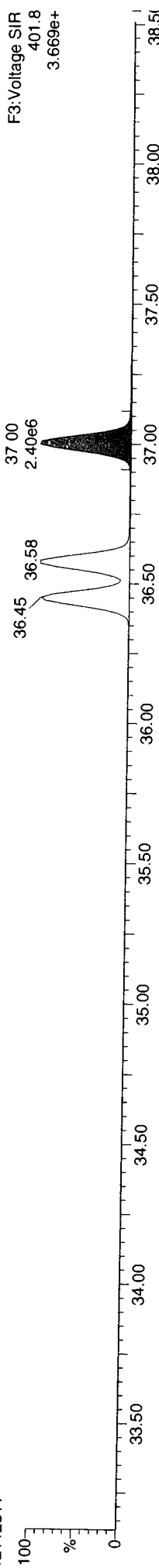
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12112811



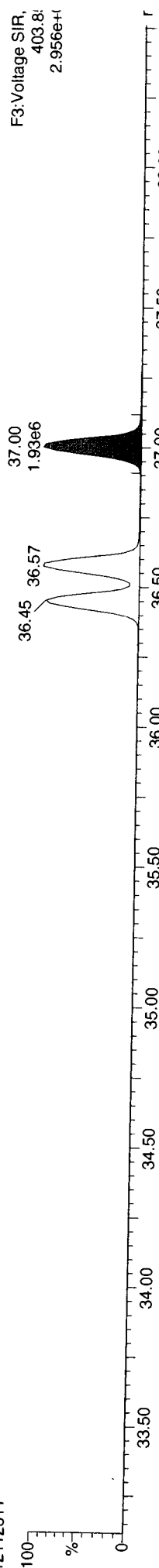
13C-123789-HxCDD

12112811



13C-123789-HxCDD

12112811

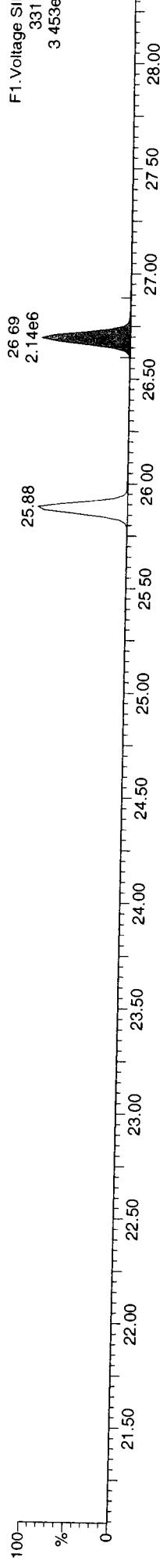


5055 : 91000

Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

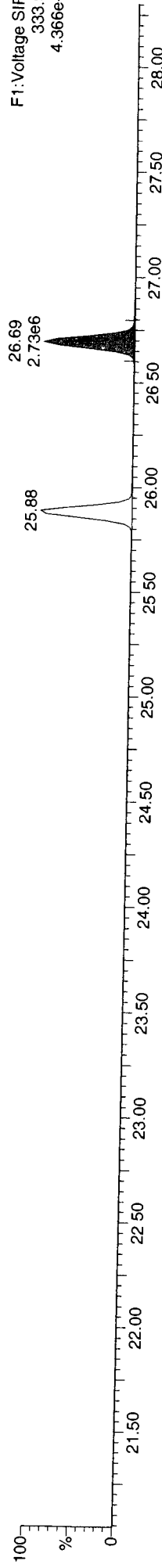
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12112811



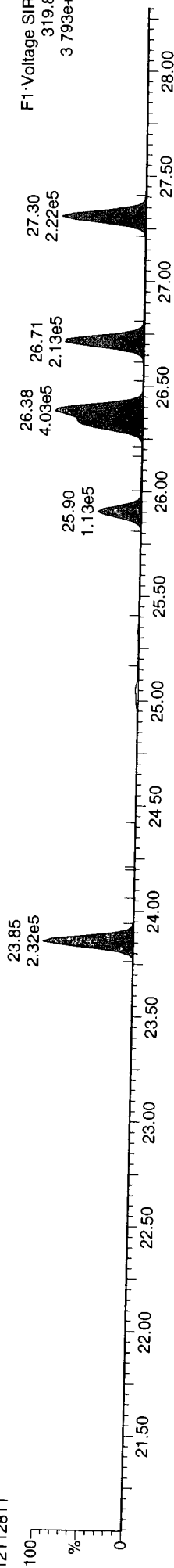
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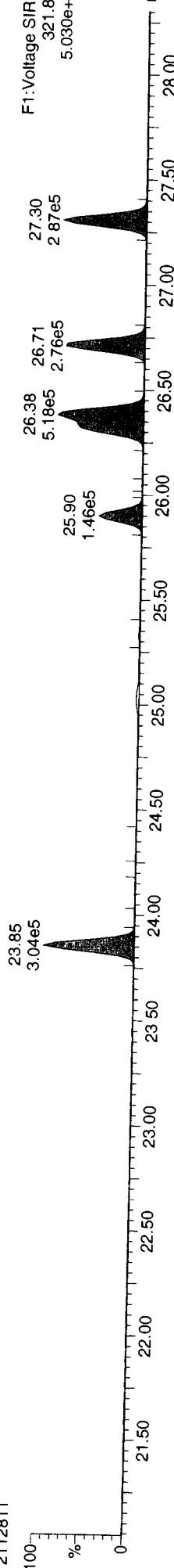
Total-tetradoxins

12112811



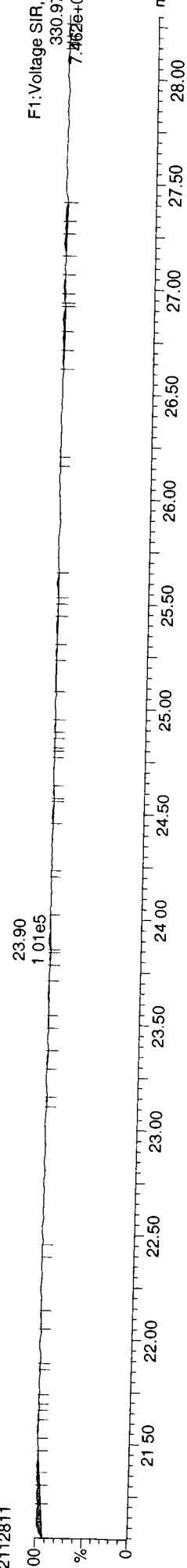
Total-tetradoxins

12112811



FUNCTION1 PFK

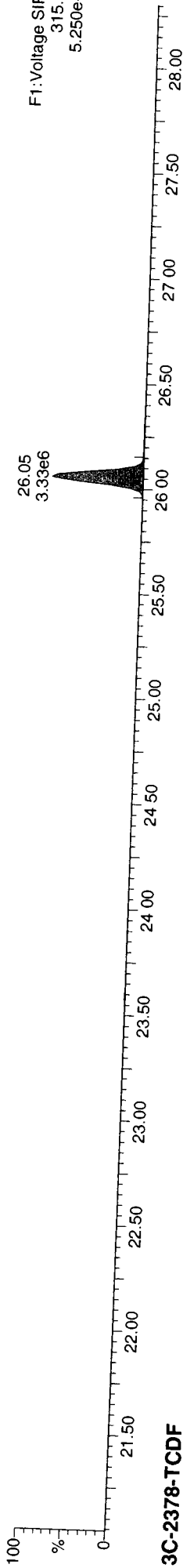
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Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

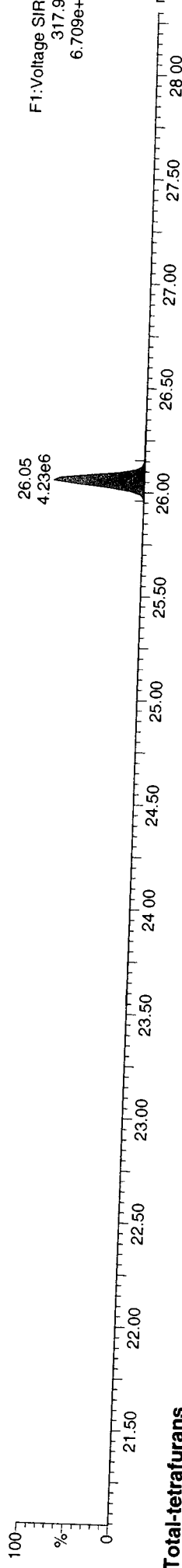
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12112811



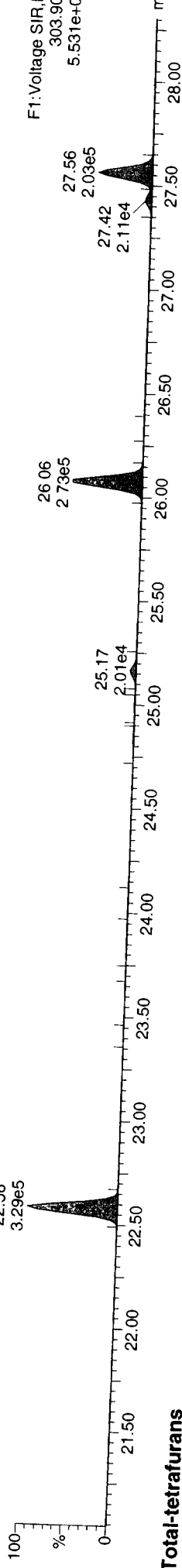
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12112811



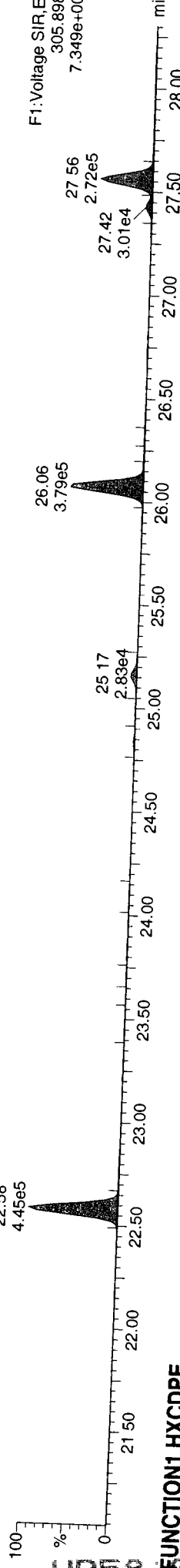
Total-tetrafurans

12112811



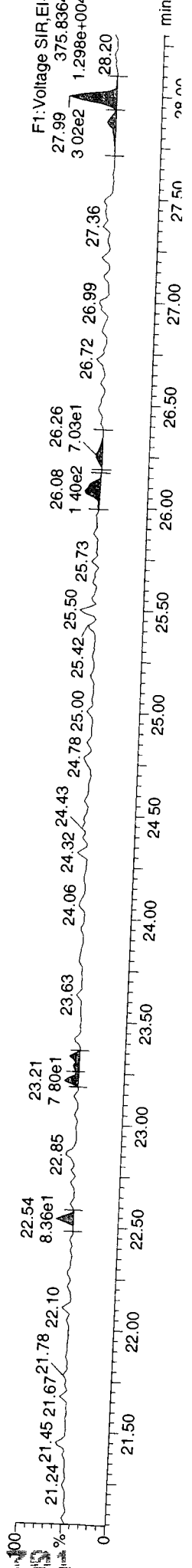
Total-tetrafurans

12112811



FUNCTION1 HXCDFE

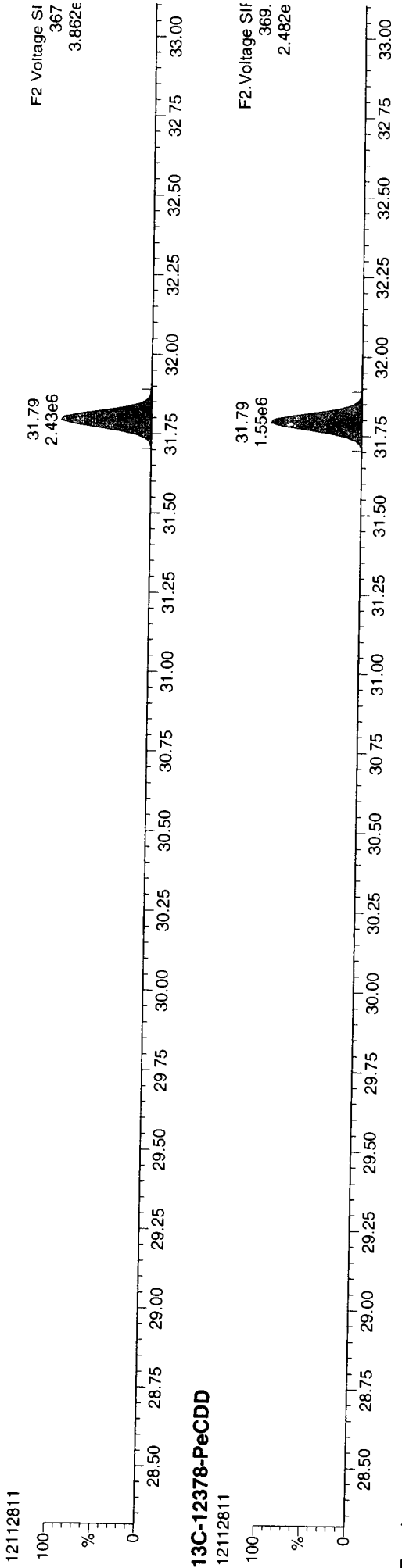
12112811



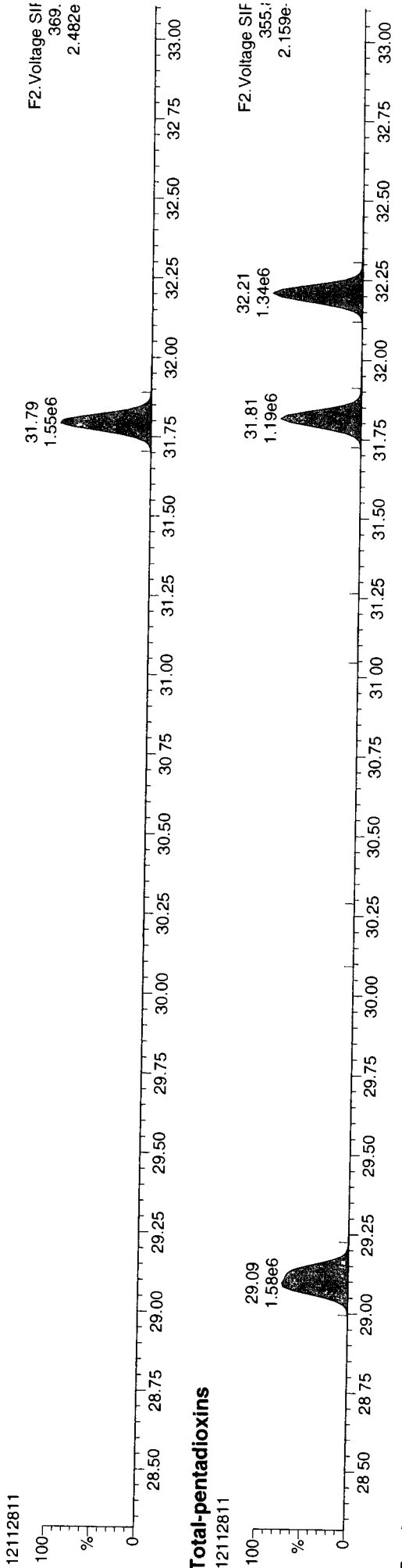
Dataset: F:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:35:07 Pacific Standard Time

Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

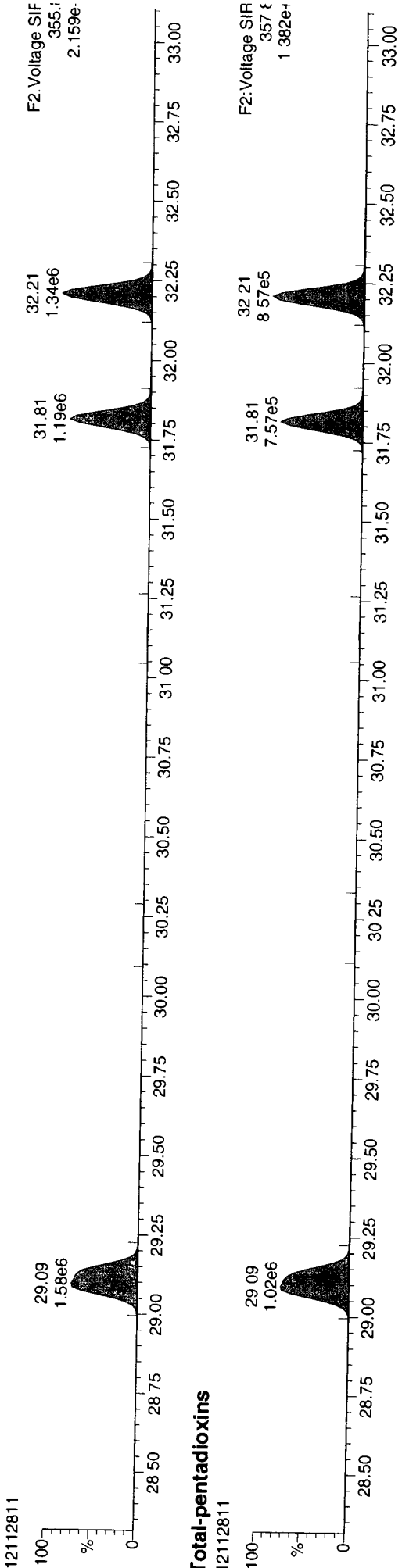
13C-12378-PeCDD



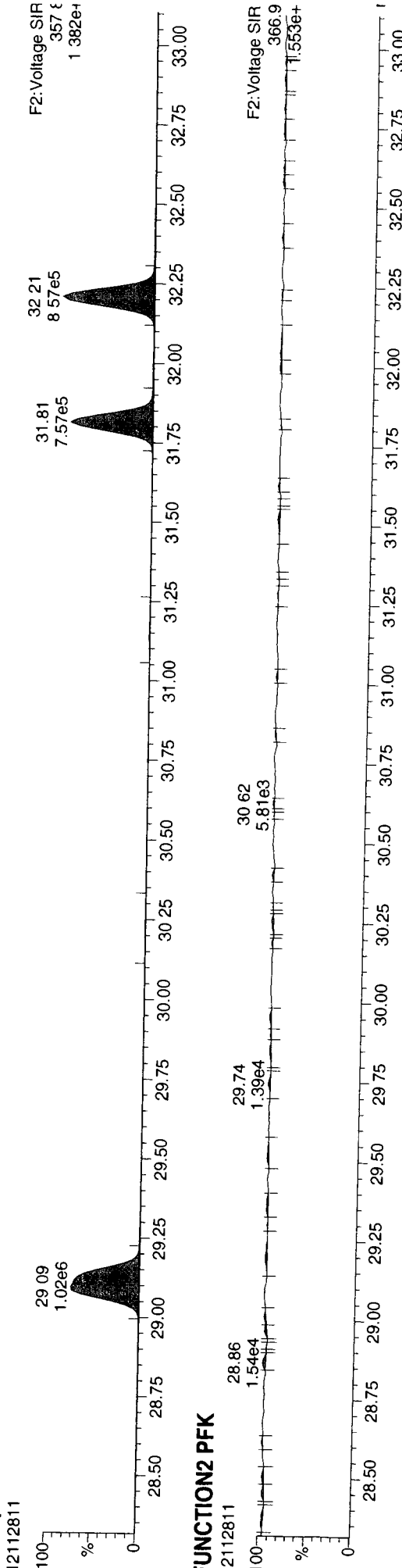
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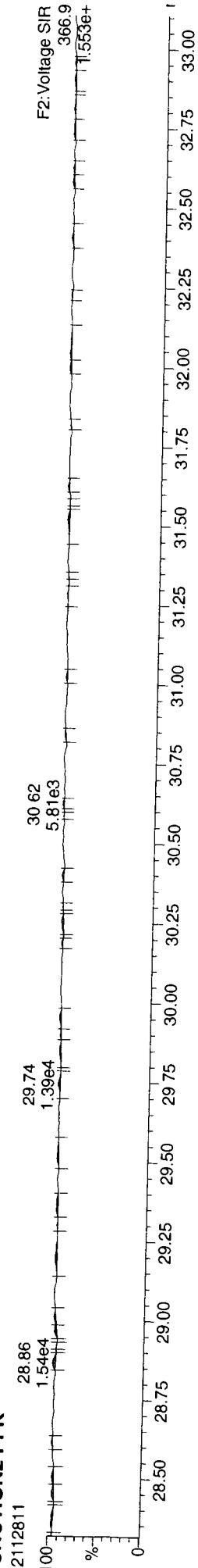
Total-pentadioxins



Total-pentadioxins

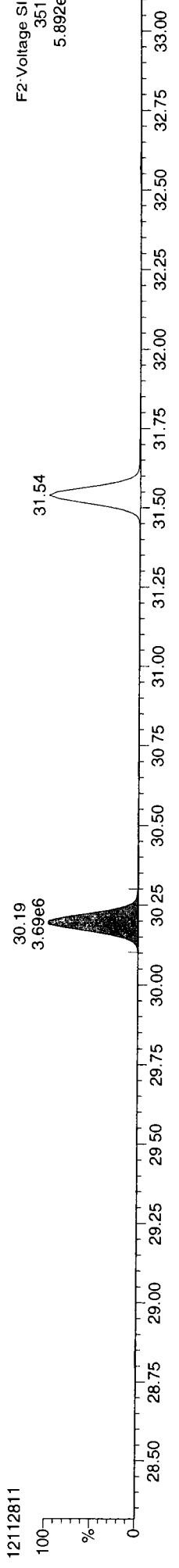


FUNCTION2 PFK

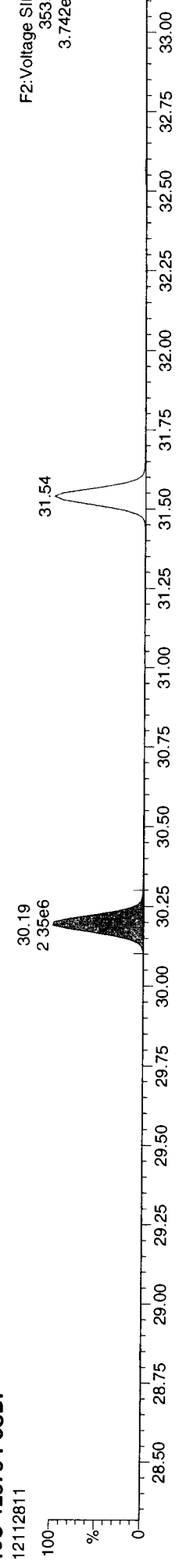


Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

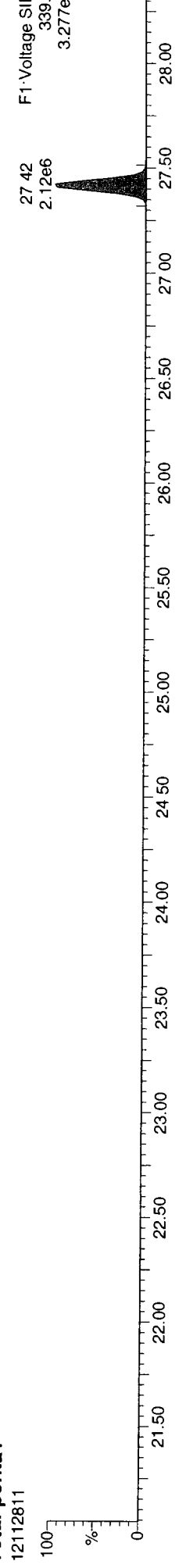
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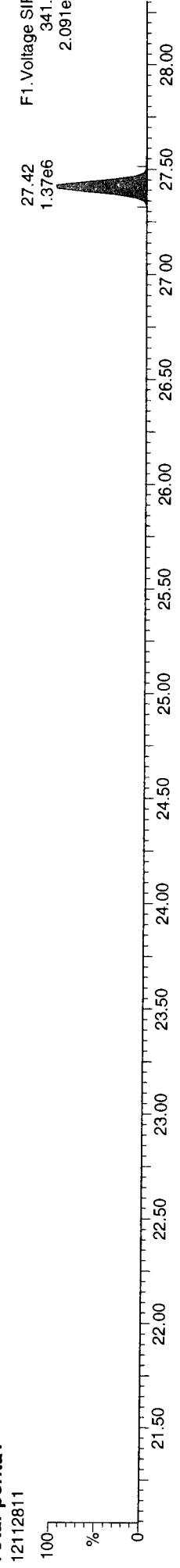
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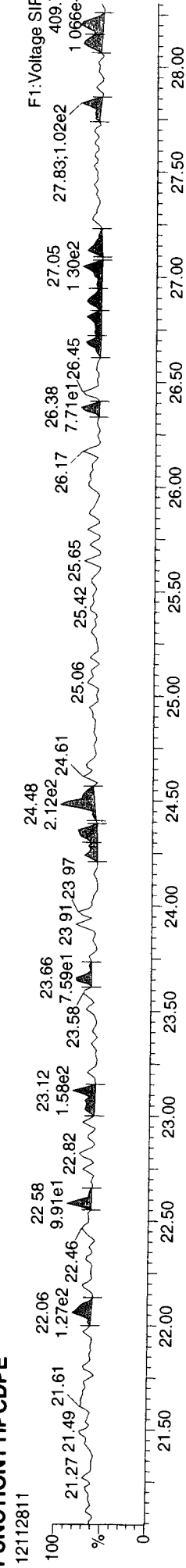
Total-penta1



Total-penta1

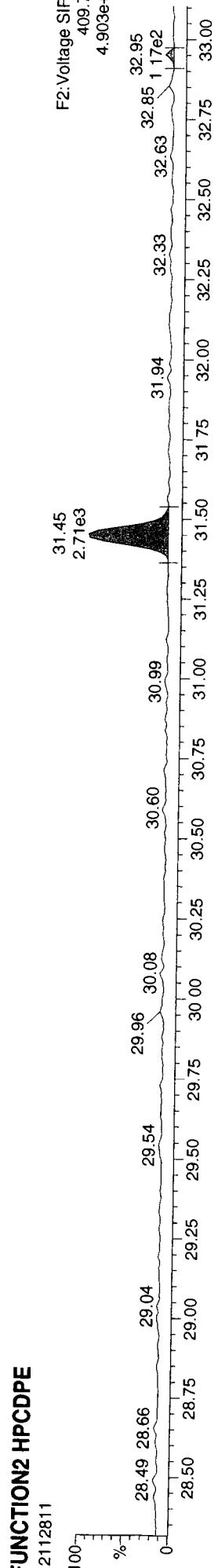
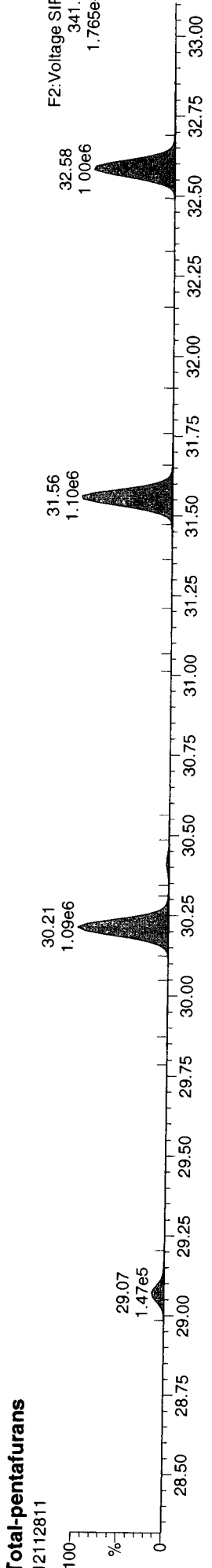
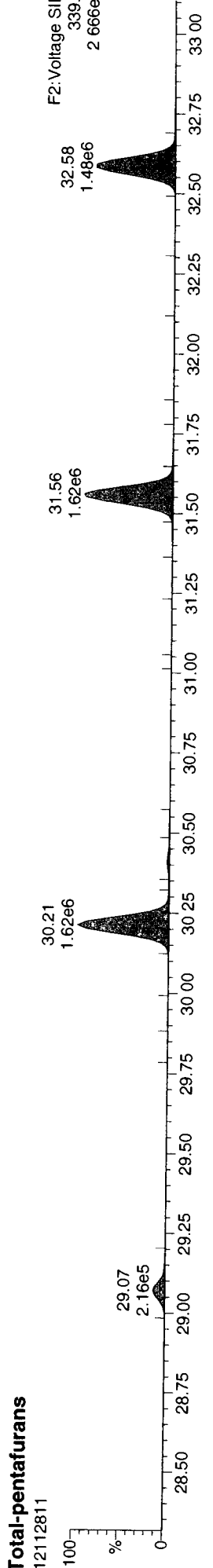
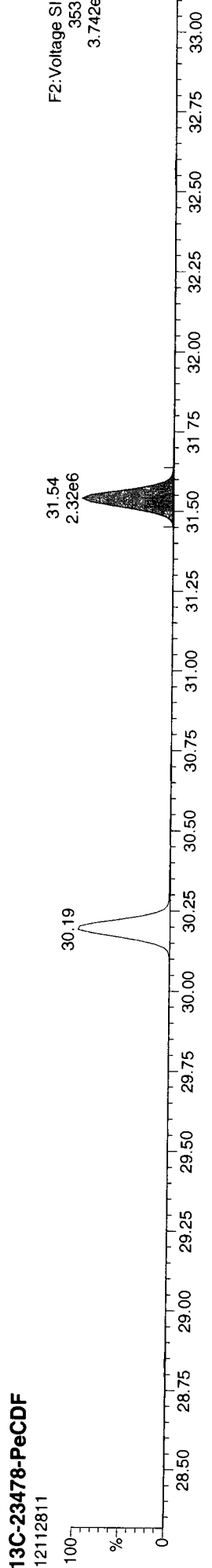
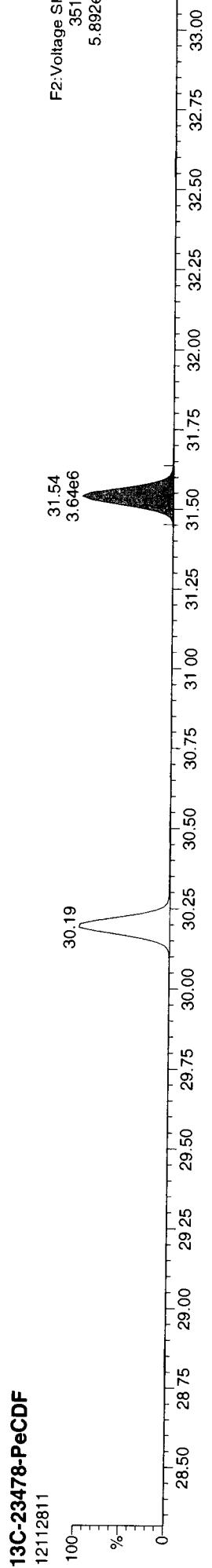


FUNCTION1 HPCDPE



Quantity Sample Report  
masslynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:35:07 Pacific Standard Time

Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk





Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld

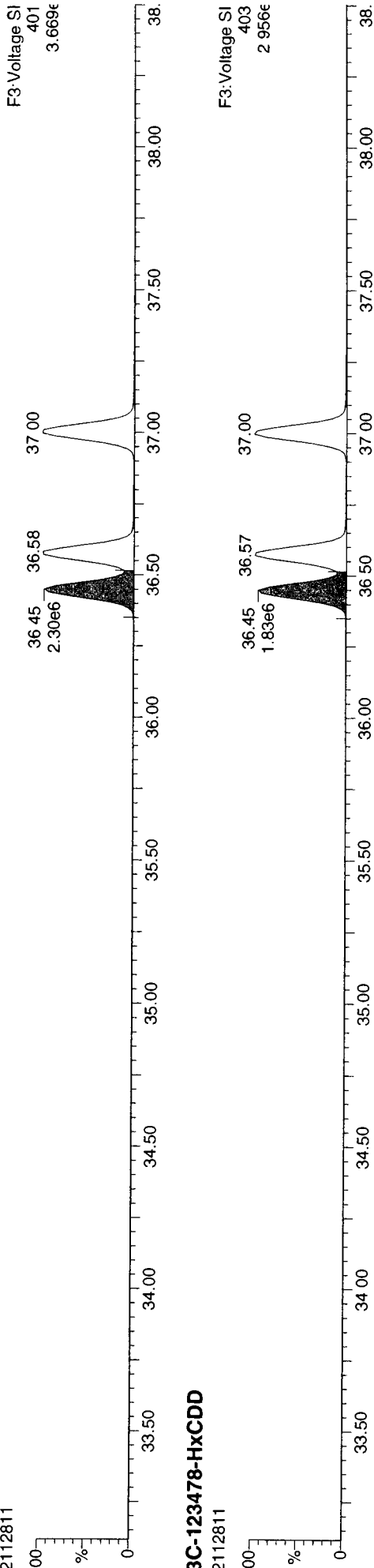
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time

Printed: Monday, December 10, 2012 14:35:07 Pacific Standard Time

Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

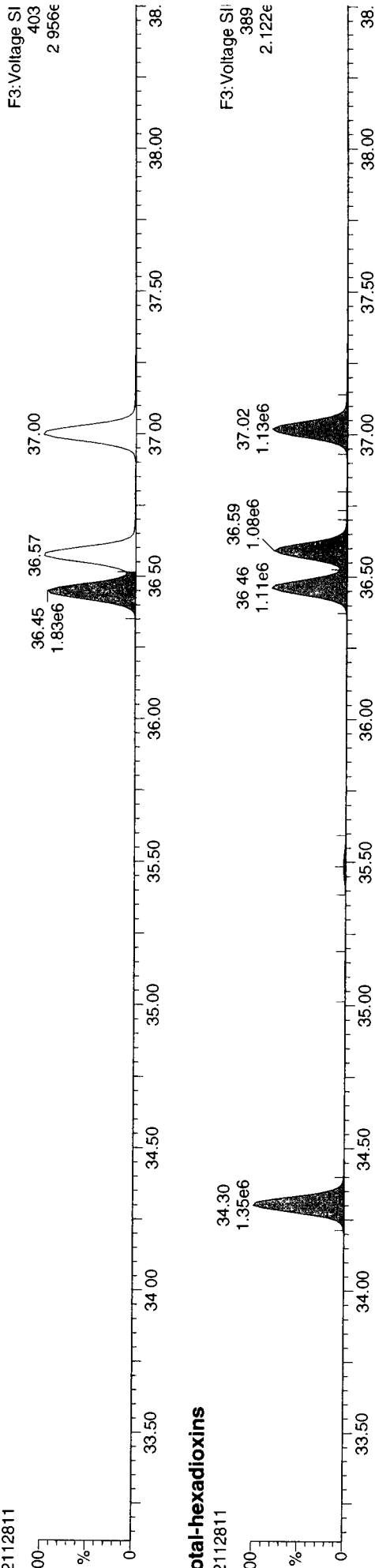
13C-123478-HxCDD

12112811



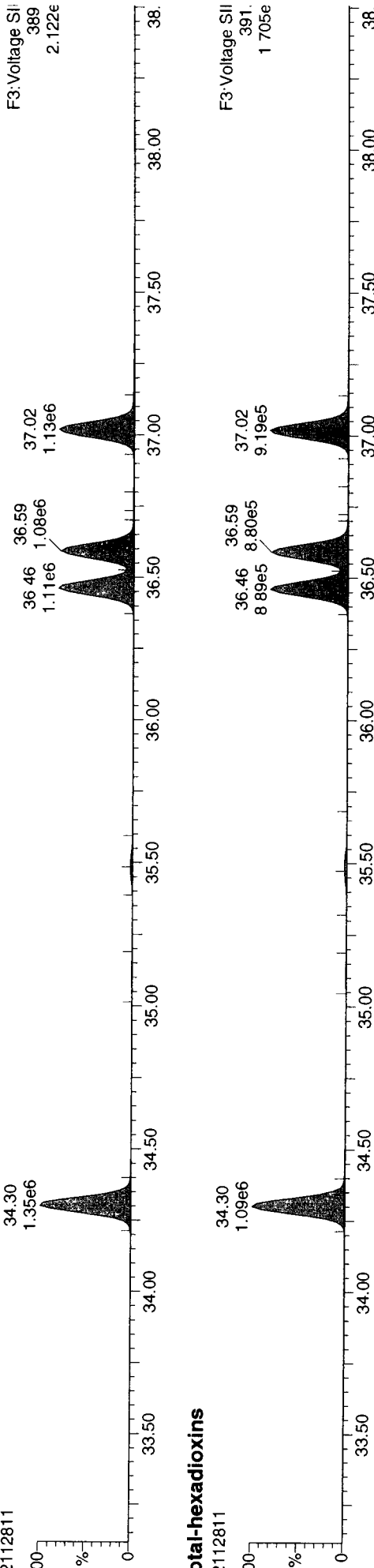
13C-123478-HxCDD

12112811



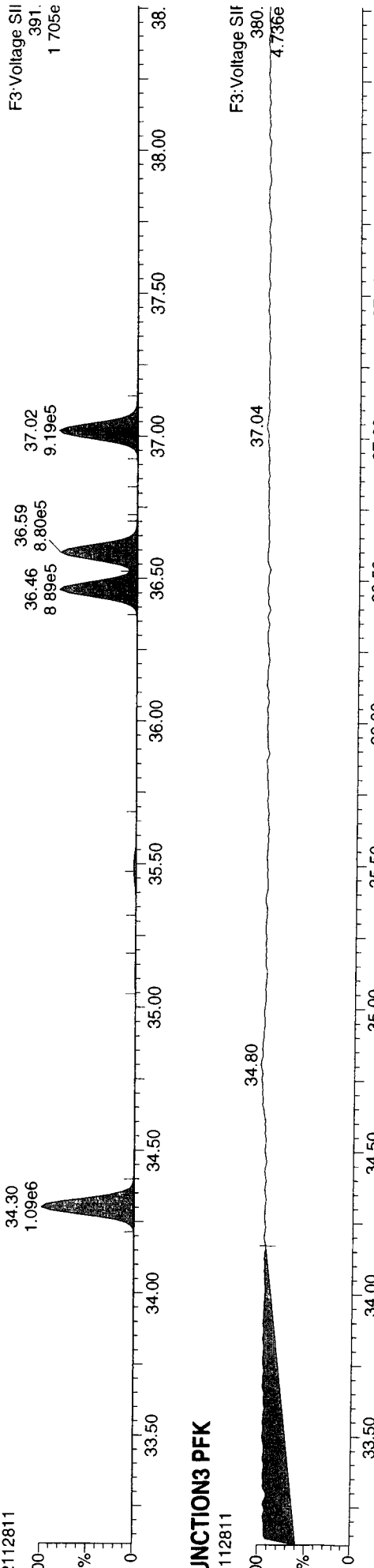
Total-hexadioxins

12112811



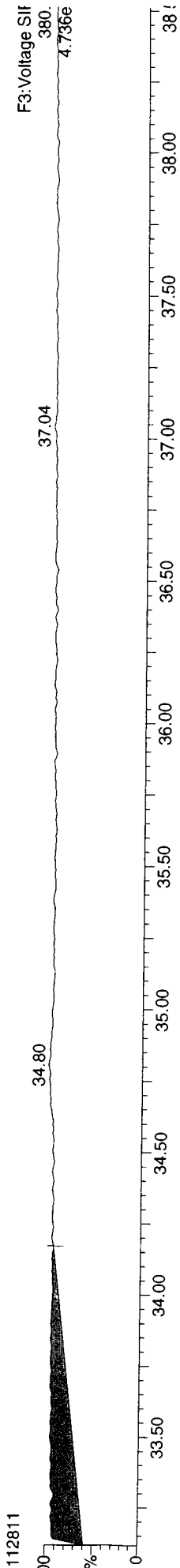
Total-hexadioxins

12112811



FUNCTION3 PFK

12112811



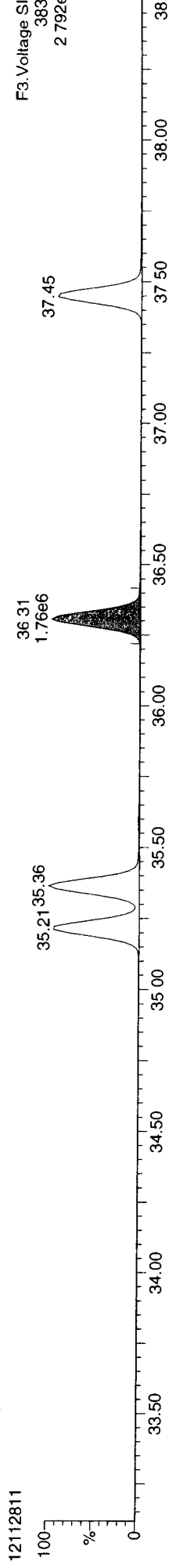
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qid

Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time

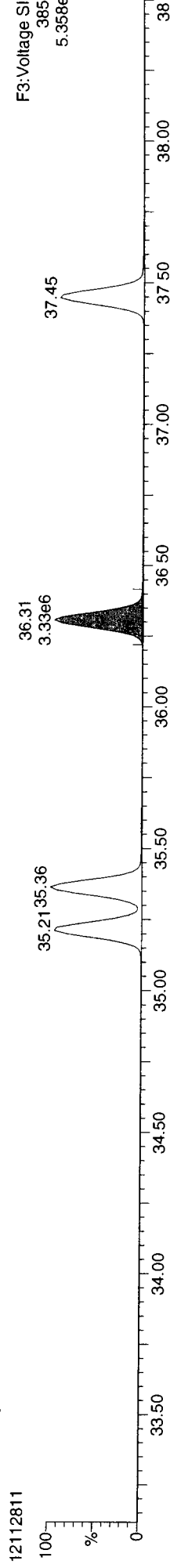
Printed: Monday, December 10, 2012 14:35:07 Pacific Standard Time

Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

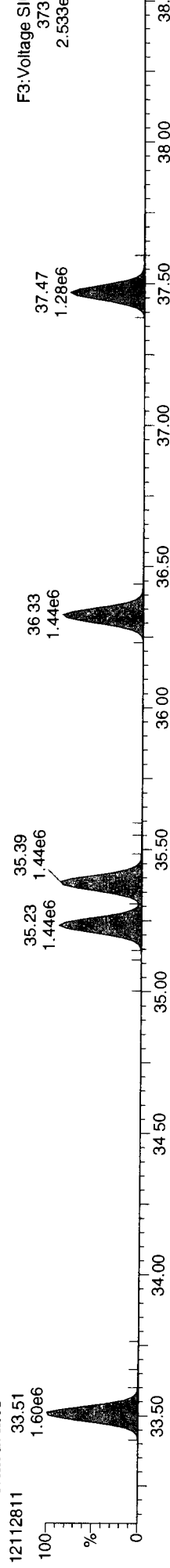
13C-234678-HxCDF



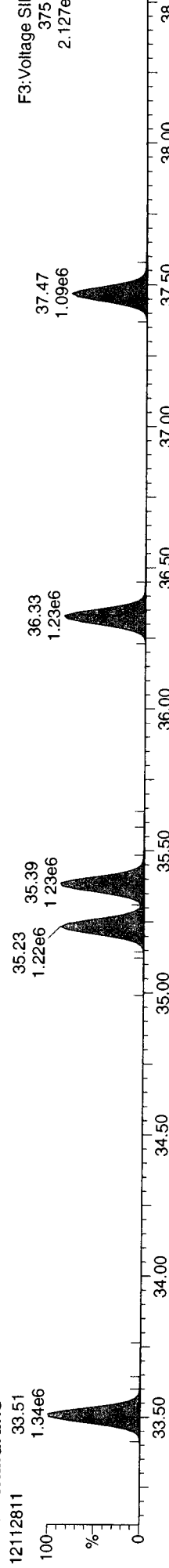
13C-234678-HxCDF



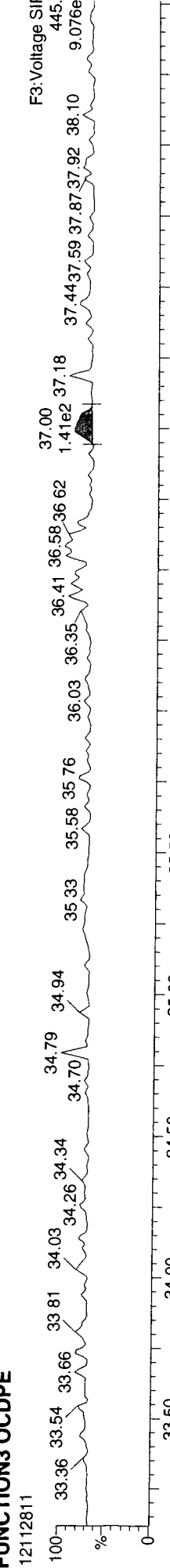
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDFE

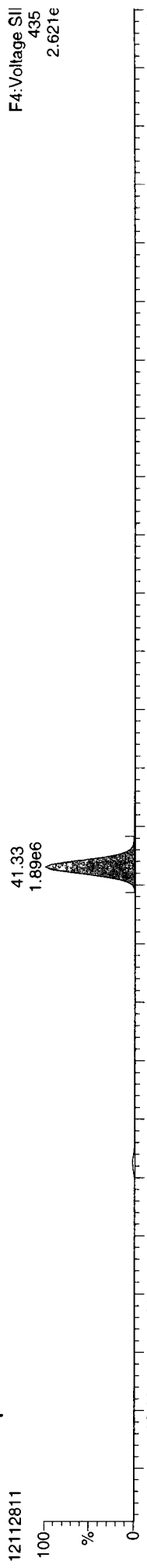


4059 : 91798

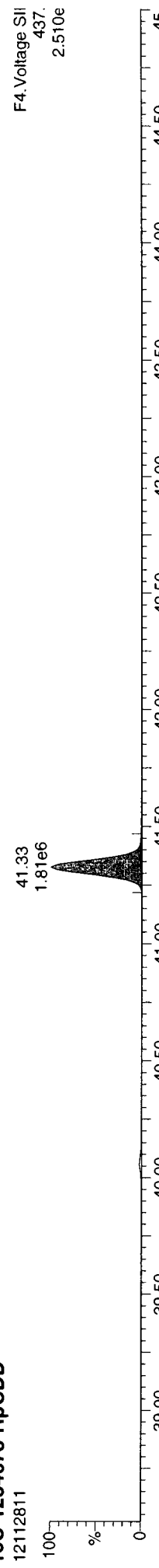
Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:35:07 Pacific Standard Time

Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

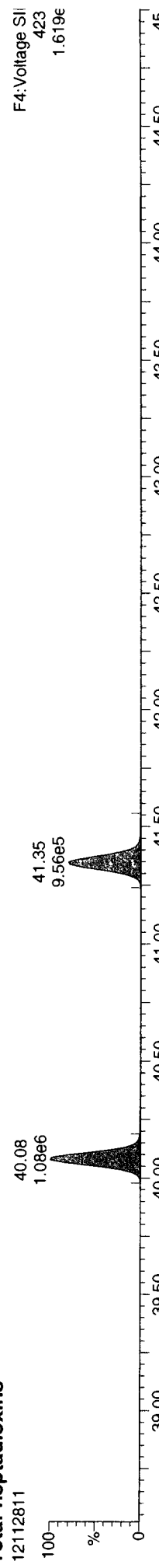
13C-1234678-HpCDD



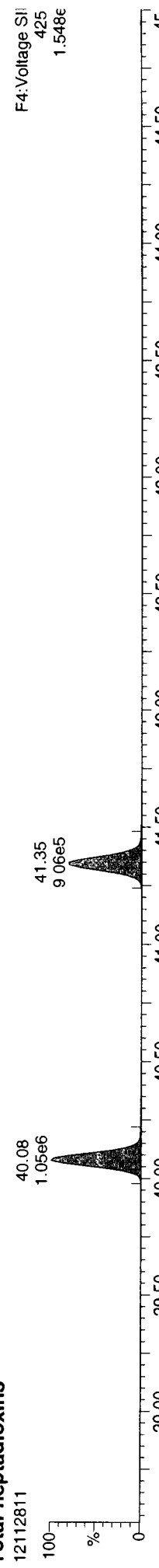
13C-1234678-HpCDD



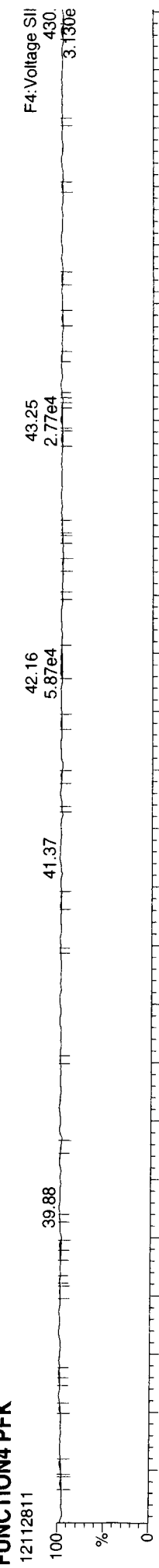
Total-heptadioxins



Total-heptadioxins



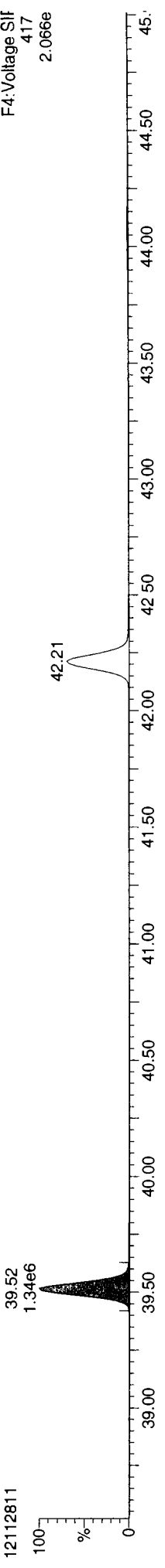
FUNCTION4 PFK



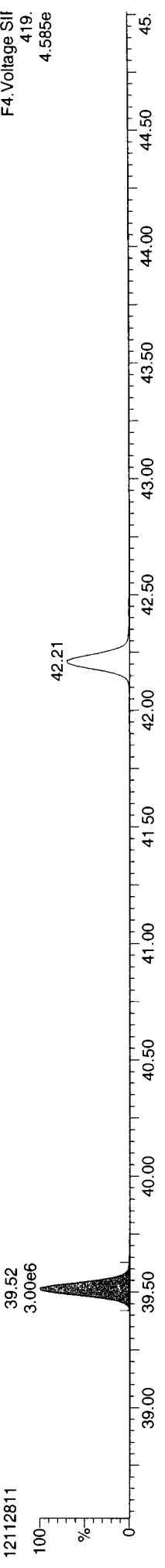
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:35:07 Pacific Standard Time

Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk

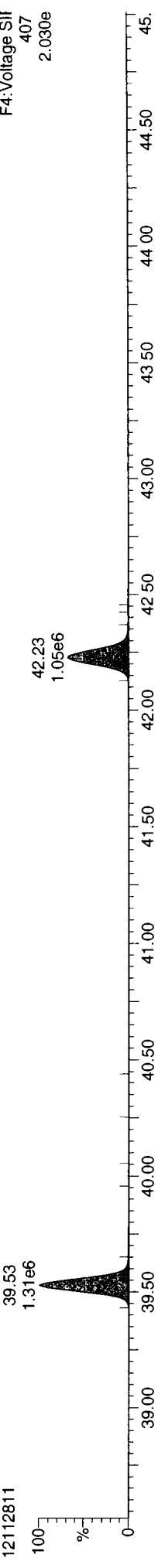
13C-1234678-HpCDF



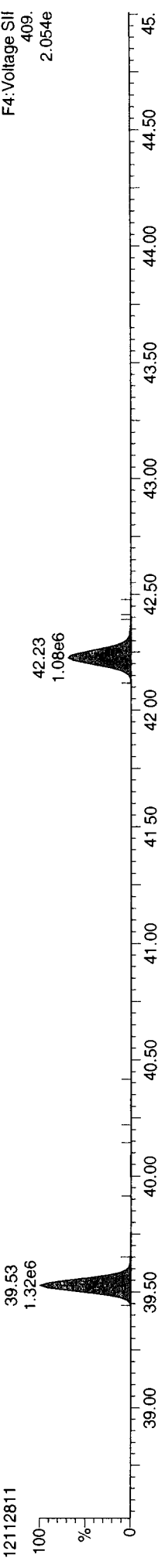
13C-1234678-HpCDF



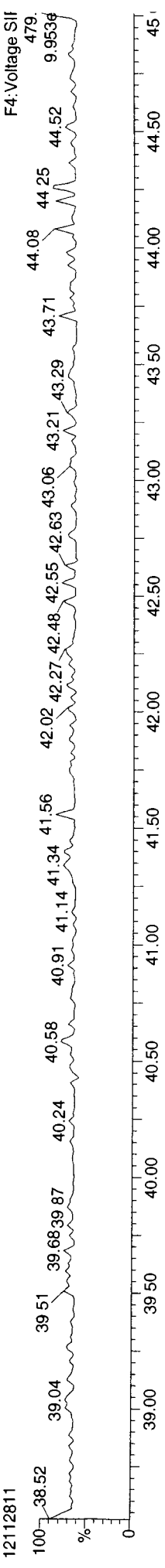
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE

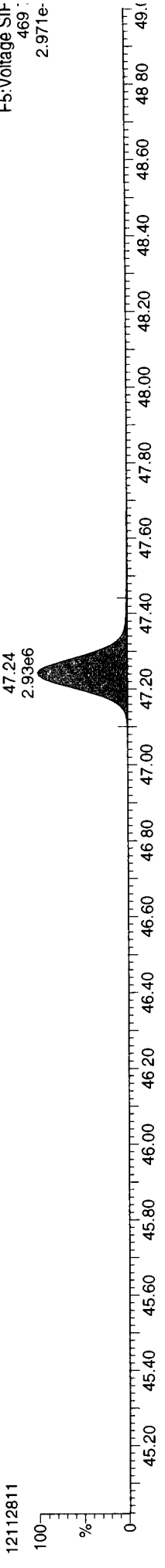


CS3 12112811

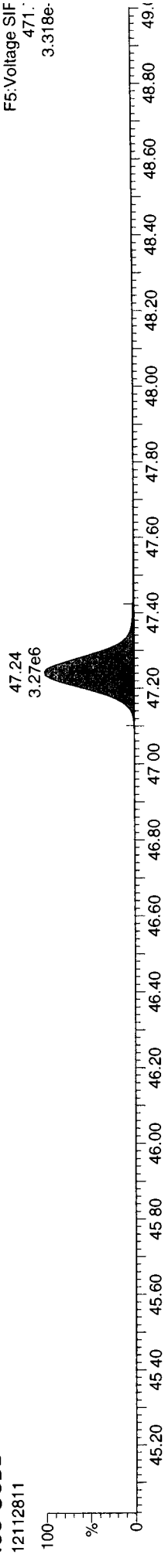
**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
Printed: Monday, December 10, 2012 14:35:07 Pacific Standard Time

**Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk**

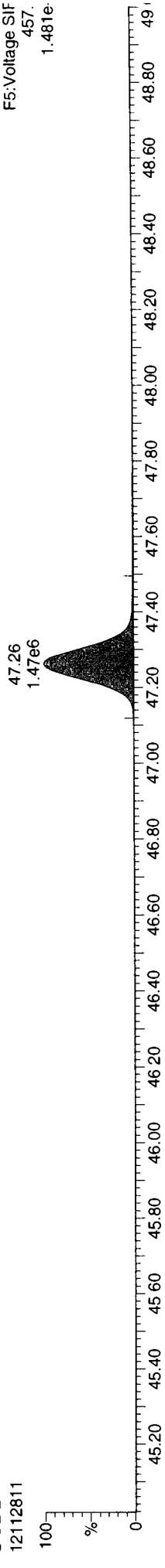
**13C-OCDD**



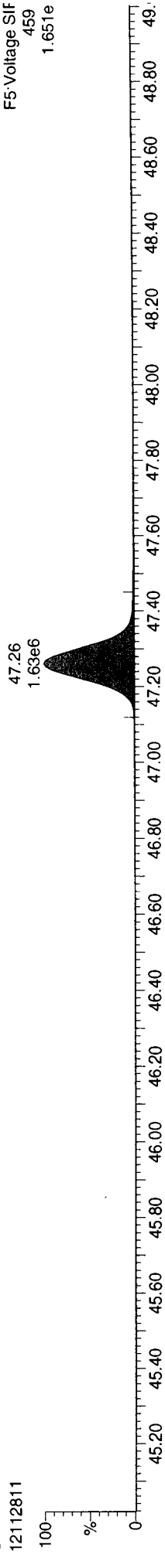
**13C-OCDD**



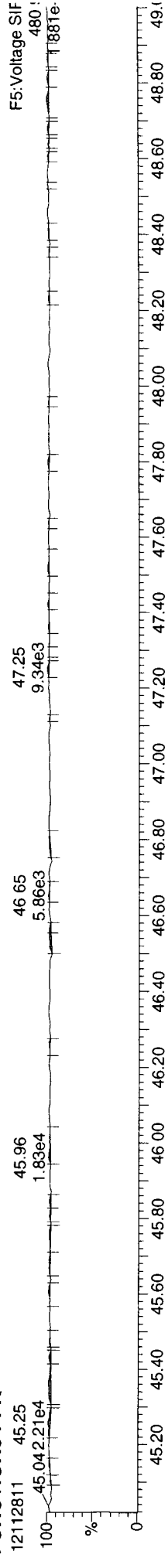
**OCDD**



**OCDD**



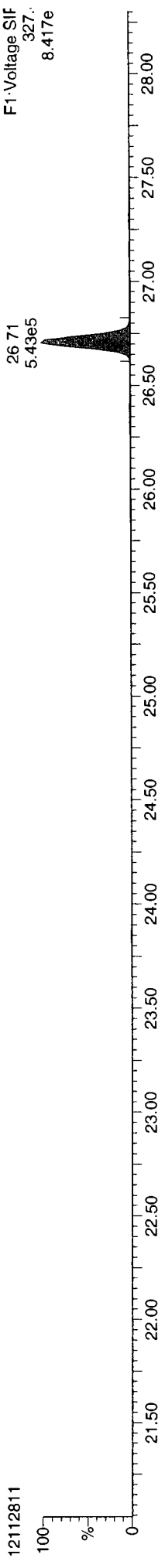
**FUNCTION5 PFK**



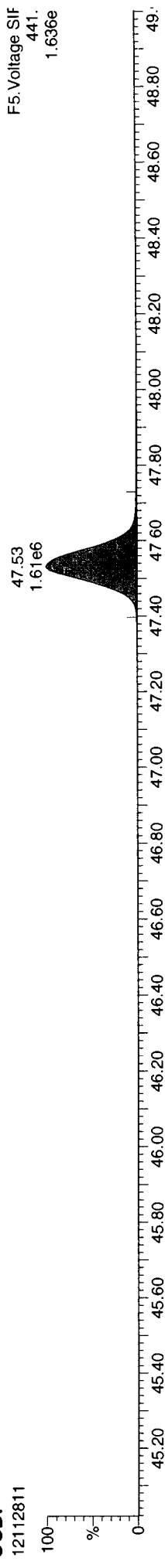
**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
 Dataset: P:\DIOXIN8290.PRO\121128DATA1.qld  
 Last Altered: Monday, December 10, 2012 14:32:13 Pacific Standard Time  
 Printed: Monday, December 10, 2012 14:35:07 Pacific Standard Time

**Name: 12112811, Date: 28-Nov-2012, Time: 18:33:14, ID: CS3, Conditions: AUTOSPEC01, User: pk**

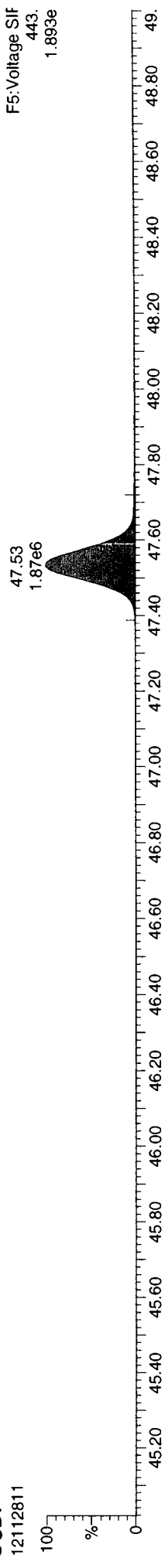
**37CL-2378-TCDD**



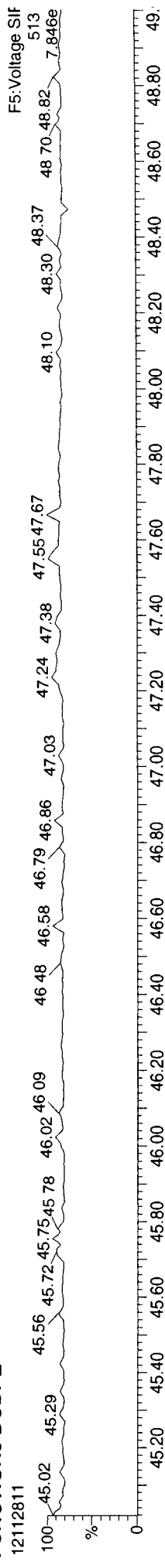
**OCDF**



**OCDF**



**FUNCTION5 DCDPE**



MassLynx 4.1 SCN 714

Quantify Sample Summary Report

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:39:44 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 11:57:42 Pacific Standard Time

NA 12/11/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurvedB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.078	1.001	5.77e3	7.56e3	0.877	0.763	0.770	58.9	1462	1887	8.61e4	1.14e5	NO	0.611	0.611
12378-PeCDF	30.222	1.000	1.07e4	7.72e3	0.896	1.388	1.550	46.5	3882	1699	1.81e5	1.38e5	NO	1.030	1.030
23478-PeCDF	31.571	1.001	1.04e4	6.17e3	0.926	1.678	1.550	40.4	3882	1699	1.57e5	9.32e4	NO	0.910	0.910
123478-HxCDF	35.243	1.001	2.16e4	1.89e4	1.068	1.146	1.240	106.5	3061	2349	3.26e5	3.03e5	NO	2.471	2.471
234678-HxCDF	36.317	1.000	2.31e4	2.07e4	1.037	1.119	1.240	82.6	3061	2349	2.53e5	2.22e5	NO	2.890	2.890
123678-HxCDF	35.396	1.001	1.53e4	1.29e4	1.035	1.182	1.240	74.3	3061	2349	2.27e5	2.03e5	NO	1.696	1.696
123789-HxCDF	37.457	1.000	1.16e4	9.77e3	0.987	1.183	1.240	53.2	3061	2349	1.63e5	1.48e5	NO	1.409	1.409
1234678-HpCDF	39.540	1.000	3.52e5	3.62e5	1.232	0.972	1.050	1929.1	2800	2411	5.40e6	5.46e6	NO	46.613	46.613
1234789-HpCDF	42.236	1.000	1.47e4	1.53e4	1.215	0.959	1.050	69.3	2800	2411	1.94e5	2.05e5	NO	2.485	2.485
OCDF	47.548	1.006	8.35e5	1.01e6	1.138	0.830	0.890	5888.6	1437	1835	8.46e6	1.01e7	NO	189.750	189.750
2378-TCDD	26.721	1.001	1.37e3	3.31e3	1.049	0.415	0.770	21.5	961	1684	2.06e4	5.15e4	YES	0.176	0.261
12378-PeCDD	31.823	1.001	9.26e3	6.80e3	0.998	1.362	1.550	84.6	1592	1127	1.35e5	9.35e4	NO	1.256	1.256
123478-HxCDD	36.470	1.000	1.79e4	1.45e4	0.971	1.236	1.240	108.6	2463	2059	2.67e5	2.35e5	NO	2.642	2.642
123678-HxCDD	36.602	1.000	1.11e5	8.87e4	0.918	1.255	1.240	709.7	2463	2059	1.75e6	1.33e6	NO	16.289	16.289
123789-HxCDD	37.029	1.012	3.59e4	2.98e4	0.932	1.206	1.240	222.3	2463	2059	5.47e5	4.71e5	NO	5.423	5.423
1234678-HpCDD	41.359	1.000	1.78e6	1.72e6	1.017	1.033	1.050	3537.9	6829	6823	2.42e7	2.33e7	NO	300.303	300.303
OCDD	47.279	1.001	9.75e6	1.10e7	1.008	0.886	0.890	25893.7	3839	3976	9.94e7	1.12e8	NO	2414.977	2414.977
13C-2378-TCDF	26.063	1.006	1.08e6	1.41e6	1.473	0.771	0.770	5600.0	2949	1783	1.65e7	2.17e7	NO	40.359	40.359
13C-12378-PeCDF	30.212	1.166	1.22e6	7.76e5	1.148	1.574	1.550	5592.2	3478	3056	1.95e7	1.24e7	NO	41.525	41.525
13C-23478-PeCDF	31.549	1.218	1.20e6	7.66e5	1.113	1.562	1.550	5587.7	3478	3056	1.94e7	1.24e7	NO	42.081	42.081
13C-123478-HxCDF	35.221	0.951	5.19e5	1.01e6	1.209	0.511	0.510	2792.7	2881	4327	8.05e6	1.57e7	NO	41.599	41.599
13C-123678-HxCDF	35.374	0.956	5.43e5	1.06e6	1.269	0.510	0.510	2978.6	2881	4327	8.58e6	1.66e7	NO	41.558	41.558
13C-234678-HxCDF	36.317	0.981	4.99e5	9.63e5	1.236	0.519	0.510	2665.1	2881	4327	7.68e6	1.48e7	NO	38.809	38.809
13C-123789-HxCDF	37.457	1.012	5.29e5	1.00e6	1.107	0.527	0.510	2898.1	2881	4327	8.35e6	1.59e7	NO	45.460	45.460
13C-1234678-HpCDF	39.528	1.068	3.86e5	8.56e5	1.051	0.450	0.440	3144.2	1813	1863	5.70e6	1.25e7	NO	38.771	38.771
13C-1234789-HpCDF	42.225	1.141	3.06e5	6.89e5	0.815	0.444	0.440	2163.3	1813	1863	3.92e6	8.85e6	NO	40.055	40.055
13C-1234-TCDD	25.899	0.000	1.86e6	2.33e6	1.000	0.795	0.770	8423.5	3502	2470	2.95e7	3.67e7	NO	100.000	100.000
13C-2378-TCDD	26.706	1.031	7.53e5	9.55e5	0.946	0.788	0.770	3418.2	3502	2470	1.20e7	1.53e7	NO	43.101	43.101
13C-12378-PeCDD	31.801	1.228	7.82e5	5.00e5	0.721	1.563	1.550	7465.3	1672	1135	1.25e7	8.09e6	NO	42.461	42.461
13C-123478-HxCDD	36.459	0.985	7.06e5	5.56e5	0.991	1.270	1.240	2985.2	3608	1886	1.08e7	8.62e6	NO	41.800	41.800
13C-123678-HxCDD	36.591	0.988	7.42e5	5.94e5	1.025	1.250	1.240	3186.6	3608	1886	1.15e7	9.30e6	NO	42.793	42.793
13C-1234678-HpCDD	41.337	1.117	5.83e5	5.62e5	0.866	1.038	1.050	2741.5	2934	1962	8.04e6	7.73e6	NO	43.374	43.374
13C-OCDD	47.252	1.276	8.04e5	9.01e5	0.769	0.893	0.890	4242.7	1886	1569	8.00e6	8.98e6	NO	72.725	72.725

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:39:44 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 11:57:42 Pacific Standard Time

Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

	37.018	0.000	1.69e6	1.36e6	1.000	1.240	1.240	7115.0	3608	1886	2.57e7	2.06e7	NO	100.000
13C-123789-HxCDD	37.018	0.000	1.69e6	1.36e6	1.000	1.240	1.240	7115.0	3608	1886	2.57e7	2.06e7	NO	100.000
Total-tetrafurans			5.32e4		0.877				1462		8.13e5			5.522
Total-penta1			1.82e5						958		2.79e6			16.525
Total-pentafurans			5.60e4		0.911				3882		8.61e5			5.192
Total-hexafurans			6.87e5		1.032				3061		1.06e7			80.825
Total-heptafurans			1.09e6		1.223				2800		1.61e7			156.312
Total-Furans			2.90e6		1.041				1462		3.96e7			454.126
Total-tetra-dioxins			1.37e4		1.049				961		2.16e5			1.722
Total-penta-dioxins			3.66e4		0.998				1592		5.67e5			4.139
Total-hexa-dioxins			4.62e5		0.940				2463		6.53e6			67.973
Total-hepta-dioxins			3.32e6		1.017				6829		4.70e7			560.549
Total-Dioxins			9.58e7		0.985				961		1.31e9			454.126
Total-TEQ			9.87e7						961		1.35e9			908.251
37CL-2378-TCDD	26.721	1.032	1.54e6		1.044			11377.3	2135		2.43e7			35.189
FUNCTION1 PFK			1.89e6						560786		2.83e7			0.000
FUNCTION2 PFK			3.05e5						176925		7.65e6			0.000
FUNCTION3 PFK			2.11e5						409296		4.76e6			
FUNCTION4 PFK			6.22e5						338372		1.75e7			
FUNCTION5 PFK			1.37e5						288296		5.27e6			
FUNCTION1 HXCDPE			6.58e2						577		1.37e4			0.000
FUNCTION1 HPCDPE			1.23e3						836		2.66e4			0.000
FUNCTION2 HPCDPE			5.11e2						1217		1.80e4			0.000
FUNCTION3 OGDPE			1.44e2						560		3.63e3			0.000
FUNCTION4 NCDPE			2.08e4						614		3.15e5			0.000
FUNCTION5 DCDPE			0.00e0						359		0.00e0			0.000

VR58E : 28 7 14 2



Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:29:37 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
 Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

TF

35 Total-tetrafurans	303.9016	24.99	15552.841	0.877	0.713	0.713	0.78	0.77	NO	72.1
35 Total-tetrafurans	303.9016	24.84	7172.220	0.877	0.329	0.329	0.67	0.77	NO	31.8
35 Total-tetrafurans	303.9016	24.76	8486.553	0.877	0.389	0.389	0.66	0.77	NO	33.3
35 Total-tetrafurans	303.9016	24.33	7261.965	0.877	0.333	0.333	0.73	0.77	NO	36.3
35 Total-tetrafurans	303.9016	24.20	0.000	0.877	0.000	0.249	0.64	0.77	YES	32.1
35 Total-tetrafurans	303.9016	24.09	11331.526	0.877	0.519	0.519	0.84	0.77	NO	56.6
35 Total-tetrafurans	303.9016	23.93	0.000	0.877	0.000	0.149	0.60	0.77	YES	19.0
35 Total-tetrafurans	303.9016	23.84	11481.837	0.877	0.526	0.526	0.70	0.77	NO	51.2
35 Total-tetrafurans	303.9016	23.75	6907.775	0.877	0.316	0.316	0.67	0.77	NO	26.7
35 Total-tetrafurans	303.9016	23.63	0.000	0.877	0.000	0.259	0.64	0.77	YES	23.0
35 Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.204	0.80	0.77	NO	18.2
35 Total-tetrafurans	303.9016	23.43	26473.638	0.877	1.213	1.213	0.76	0.77	NO	122.5
35 Total-tetrafurans	303.9016	22.85	0.000	0.877	0.000	0.233	0.90	0.77	YES	24.1
35 Total-tetrafurans	303.9016	22.60	0.000	0.877	0.000	0.172	0.64	0.77	YES	21.1
35 Total-tetrafurans	303.9016	27.53	6048.310	0.877	0.277	0.277	0.69	0.77	NO	17.4
35 Total-tetrafurans	303.9016	26.32	0.000	0.877	0.000	0.400	0.60	0.77	YES	36.9
35 Total-tetrafurans	303.9016	26.21	0.000	0.877	0.000	0.170	1.03	0.77	YES	24.6
1 2378-TCDF	303.9016	26.08	13329.736	0.877	0.611	0.611	0.76	0.77	NO	58.9
35 Total-tetrafurans	303.9016	25.90	3670.149	0.877	0.168	0.168	0.77	0.77	NO	17.3
35 Total-tetrafurans	303.9016	25.85	0.000	0.877	0.000	0.095	0.63	0.77	YES	13.5
35 Total-tetrafurans	303.9016	25.60	2804.625	0.877	0.128	0.128	0.75	0.77	NO	13.4
35 Total-tetrafurans	303.9016	25.41	0.000	0.877	0.000	0.189	0.61	0.77	YES	17.8
35 Total-tetrafurans	303.9016	25.18	0.000	0.877	0.000	0.313	0.51	0.77	YES	32.7

PP

36 Total-penta1	339.8597	27.50	299928.594		16.525	16.525	1.54	1.55	NO	2913.2
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PF

37 Total-pentafurans	339.8597	29.95	0.000	0.911	0.000	0.301	1.21	1.55	YES	18.1
37 Total-pentafurans	339.8597	29.86	18406.145	0.911	1.021	1.021	1.44	1.55	NO	38.6
37 Total-pentafurans	339.8597	29.76	4905.969	0.911	0.272	0.272	1.73	1.55	NO	12.9
37 Total-pentafurans	339.8597	29.59	0.000	0.911	0.000	0.034	1.88	1.55	YES	3.5
37 Total-pentafurans	339.8597	29.15	0.000	0.911	0.000	2.018	1.24	1.55	YES	88.2
37 Total-pentafurans	339.8597	29.08	0.000	0.911	0.000	0.808	1.90	1.55	YES	52.5
37 Total-pentafurans	339.8597	28.96	11185.263	0.911	0.620	0.620	1.45	1.55	NO	21.1
37 Total-pentafurans	339.8597	32.59	3432.722	0.911	0.190	0.190	1.34	1.55	NO	8.1
3 23478-PeCDF	339.8597	31.57	16533.085	0.926	0.910	0.910	1.68	1.55	NO	40.4
37 Total-pentafurans	339.8597	31.42	18614.959	0.911	1.032	1.032	1.49	1.55	NO	47.6
37 Total-pentafurans	339.8597	31.29	0.000	0.911	0.000	0.198	1.04	1.55	YES	7.2
37 Total-pentafurans	339.8597	30.53	2099.727	0.911	0.116	0.116	1.44	1.55	NO	6.4
37 Total-pentafurans	339.8597	30.42	0.000	0.911	0.000	0.749	1.27	1.55	YES	35.3
2 12378-PeCDF	339.8597	30.22	18434.622	0.896	1.030	1.030	1.39	1.55	NO	46.5

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HF

#	Name	Area	Height	Area%	Height%	Area	Area	Area	Area	Area	Area	Area
7	123789-HxCDF	373.8208	37.46	21323.783	0.987	1.409	1.409	1.18	1.24	NO	53.2	
5	234678-HxCDF	373.8208	36.32	43791.670	1.037	2.890	2.890	1.12	1.24	NO	82.6	
38	Total-hexafurans	373.8208	35.97	1028.089	1.032	0.065	0.065	1.24	1.24	NO	4.0	
38	Total-hexafurans	373.8208	35.76	2574.745	1.032	0.163	0.163	1.25	1.24	NO	8.5	
6	123678-HxCDF	373.8208	35.40	28190.932	1.035	1.696	1.696	1.18	1.24	NO	74.3	
4	123478-HxCDF	373.8208	35.24	40456.109	1.068	2.471	2.471	1.15	1.24	NO	106.5	
38	Total-hexafurans	373.8208	35.07	6589.041	1.032	0.416	0.416	1.30	1.24	NO	20.3	
38	Total-hexafurans	373.8208	34.60	555589.969	1.032	35.117	35.117	1.16	1.24	NO	1521.3	
38	Total-hexafurans	373.8208	34.27	5940.444	1.032	0.375	0.375	1.29	1.24	NO	15.7	
38	Total-hexafurans	373.8208	33.73	390062.906	1.032	24.655	24.655	1.15	1.24	NO	1061.2	
38	Total-hexafurans	373.8208	33.52	183020.750	1.032	11.568	11.568	1.19	1.24	NO	505.7	

HPF

#	Name	Area	Height	Area%	Height%	Area	Area	Area	Area	Area	Area	Area
9	1234789-HpCDF	407.7818	42.24	30025.378	1.215	2.485	2.485	0.96	1.05	NO	69.3	
39	Total-heptafurans	407.7818	41.37	0.000	1.223	0.000	0.088	0.56	1.05	YES	4.0	
39	Total-heptafurans	407.7818	40.58	0.000	1.223	0.000	0.017	2.15	1.05	YES	2.8	
39	Total-heptafurans	407.7818	40.33	1466973.688	1.223	107.214	107....	0.97	1.05	NO	3738.6	
39	Total-heptafurans	407.7818	40.02	0.000	1.223	0.000	0.858	0.88	1.05	YES	27.9	
8	1234678-HpCDF	407.7818	39.54	713252.907	1.232	46.613	46.613	0.97	1.05	NO	1929.1	

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Furans,TF,PP,PF,HF,HPF,OF

Sample	Compound	Area	Height	Area%	Height%	EM	EM	EM	EM	EM	EM
35	Total-tetrafurans	303.9016	24.99	15552.841	0.877	0.713	0.713	0.78	0.77	NO	72.1
35	Total-tetrafurans	303.9016	24.84	7172.220	0.877	0.329	0.329	0.67	0.77	NO	31.8
35	Total-tetrafurans	303.9016	24.76	8486.553	0.877	0.389	0.389	0.66	0.77	NO	33.3
35	Total-tetrafurans	303.9016	24.33	7261.965	0.877	0.333	0.333	0.73	0.77	NO	36.3
35	Total-tetrafurans	303.9016	24.20	0.000	0.877	0.000	0.249	0.64	0.77	YES	32.1
35	Total-tetrafurans	303.9016	24.09	11331.526	0.877	0.519	0.519	0.84	0.77	NO	56.6
35	Total-tetrafurans	303.9016	23.93	0.000	0.877	0.000	0.149	0.60	0.77	YES	19.0
35	Total-tetrafurans	303.9016	23.84	11481.837	0.877	0.526	0.526	0.70	0.77	NO	51.2
35	Total-tetrafurans	303.9016	23.75	6907.775	0.877	0.316	0.316	0.67	0.77	NO	26.7
35	Total-tetrafurans	303.9016	23.63	0.000	0.877	0.000	0.259	0.64	0.77	YES	23.0
35	Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.204	0.80	0.77	NO	18.2
35	Total-tetrafurans	303.9016	23.43	26473.638	0.877	1.213	1.213	0.76	0.77	NO	122.5
35	Total-tetrafurans	303.9016	22.85	0.000	0.877	0.000	0.233	0.90	0.77	YES	24.1
35	Total-tetrafurans	303.9016	22.60	0.000	0.877	0.000	0.172	0.64	0.77	YES	21.1
35	Total-tetrafurans	303.9016	27.53	6048.310	0.877	0.277	0.277	0.69	0.77	NO	17.4
35	Total-tetrafurans	303.9016	26.32	0.000	0.877	0.000	0.400	0.60	0.77	YES	36.9
35	Total-tetrafurans	303.9016	26.21	0.000	0.877	0.000	0.170	1.03	0.77	YES	24.6
1	2378-TCDF	303.9016	26.08	13329.736	0.877	0.611	0.611	0.76	0.77	NO	58.9
35	Total-tetrafurans	303.9016	25.90	3670.149	0.877	0.168	0.168	0.77	0.77	NO	17.3
35	Total-tetrafurans	303.9016	25.85	0.000	0.877	0.000	0.095	0.63	0.77	YES	13.5
35	Total-tetrafurans	303.9016	25.60	2804.625	0.877	0.128	0.128	0.75	0.77	NO	13.4
35	Total-tetrafurans	303.9016	25.41	0.000	0.877	0.000	0.189	0.61	0.77	YES	17.8
35	Total-tetrafurans	303.9016	25.18	0.000	0.877	0.000	0.313	0.51	0.77	YES	32.7
37	Total-pentafurans	339.8597	29.95	0.000	0.911	0.000	0.301	1.21	1.55	YES	18.1
37	Total-pentafurans	339.8597	29.86	18406.145	0.911	1.021	1.021	1.44	1.55	NO	38.6
37	Total-pentafurans	339.8597	29.76	4905.969	0.911	0.272	0.272	1.73	1.55	NO	12.9
37	Total-pentafurans	339.8597	29.59	0.000	0.911	0.000	0.034	1.88	1.55	YES	3.5
37	Total-pentafurans	339.8597	29.15	0.000	0.911	0.000	2.018	1.24	1.55	YES	88.2
37	Total-pentafurans	339.8597	29.08	0.000	0.911	0.000	0.808	1.90	1.55	YES	52.5
37	Total-pentafurans	339.8597	28.96	11185.263	0.911	0.620	0.620	1.45	1.55	NO	21.1
37	Total-pentafurans	339.8597	32.59	3432.722	0.911	0.190	0.190	1.34	1.55	NO	8.1
3	23478-PeCDF	339.8597	31.57	16533.085	0.926	0.910	0.910	1.68	1.55	NO	40.4
37	Total-pentafurans	339.8597	31.42	18614.959	0.911	1.032	1.032	1.49	1.55	NO	47.6
37	Total-pentafurans	339.8597	31.29	0.000	0.911	0.000	0.198	1.04	1.55	YES	7.2
37	Total-pentafurans	339.8597	30.53	2099.727	0.911	0.116	0.116	1.44	1.55	NO	6.4
37	Total-pentafurans	339.8597	30.42	0.000	0.911	0.000	0.749	1.27	1.55	YES	35.3
2	12378-PeCDF	339.8597	30.22	18434.622	0.896	1.030	1.030	1.39	1.55	NO	46.5
7	123789-HxCDF	373.8208	37.46	21323.783	0.987	1.409	1.409	1.18	1.24	NO	53.2
5	234678-HxCDF	373.8208	36.32	43791.670	1.037	2.890	2.890	1.12	1.24	NO	82.6
38	Total-hexafurans	373.8208	35.97	1028.089	1.032	0.065	0.065	1.24	1.24	NO	4.0
38	Total-hexafurans	373.8208	35.76	2574.745	1.032	0.163	0.163	1.25	1.24	NO	8.5
6	123678-HxCDF	373.8208	35.40	28190.932	1.035	1.696	1.696	1.18	1.24	NO	74.3
4	123478-HxCDF	373.8208	35.24	40456.109	1.068	2.471	2.471	1.15	1.24	NO	106.5
38	Total-hexafurans	373.8208	35.07	6589.041	1.032	0.416	0.416	1.30	1.24	NO	20.3
38	Total-hexafurans	373.8208	34.60	555589.969	1.032	35.117	35.117	1.16	1.24	NO	1521.3
38	Total-hexafurans	373.8208	34.27	5940.444	1.032	0.375	0.375	1.29	1.24	NO	15.7
38	Total-hexafurans	373.8208	33.73	390062.906	1.032	24.655	24.655	1.15	1.24	NO	1061.2
38	Total-hexafurans	373.8208	33.52	183020.750	1.032	11.568	11.568	1.19	1.24	NO	505.7
9	1234789-HpCDF	407.7818	42.24	30025.378	1.215	2.485	2.485	0.96	1.05	NO	69.3

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Furans,TF,PP,PF,HF,HPF,OF

Count	Name	Area	Height	Area%	Height%	Area	Height	Area%	Height%	Identified	Area
39	Total-heptafurans	407.7818	41.37	0.000	1.223	0.000	0.088	0.56	1.05	YES	4.0
39	Total-heptafurans	407.7818	40.58	0.000	1.223	0.000	0.017	2.15	1.05	YES	2.8
39	Total-heptafurans	407.7818	40.33	1466973.688	1.223	107.214	107....	0.97	1.05	NO	3738.6
39	Total-heptafurans	407.7818	40.02	0.000	1.223	0.000	0.858	0.88	1.05	YES	27.9
8	1234678-HpCDF	407.7818	39.54	713252.907	1.232	46.613	46.613	0.97	1.05	NO	1929.1
10	OCDF	441.7428	47.55	1839994.313	1.138	189.750	189....	0.83	0.89	NO	5888.6
36	Total-penta1	339.8597	27.50	299928.594		16.525	16.525	1.54	1.55	NO	2913.2

TD

Count	Name	Area	Height	Area%	Height%	Area	Height	Area%	Height%	Identified	Area
41	Total-tetradoxins	319.8965	26.84	2015.960	1.049	0.113	0.113	0.88	0.77	NO	13.9
11	2378-TCDD	319.8965	26.72	4678.670	1.049	0.000	0.176	0.41	0.77	YES	21.5
41	Total-tetradoxins	319.8965	26.35	0.000	1.049	0.000	0.149	1.02	0.77	YES	16.1
41	Total-tetradoxins	319.8965	25.91	0.000	1.049	0.000	0.089	1.57	0.77	YES	22.4
41	Total-tetradoxins	319.8965	25.70	1787.215	1.049	0.100	0.100	0.70	0.77	NO	9.7
41	Total-tetradoxins	319.8965	25.60	1322.260	1.049	0.074	0.074	0.67	0.77	NO	8.7
41	Total-tetradoxins	319.8965	25.35	4784.481	1.049	0.267	0.267	0.79	0.77	NO	36.2
41	Total-tetradoxins	319.8965	25.08	2566.682	1.049	0.143	0.143	0.83	0.77	NO	16.2
41	Total-tetradoxins	319.8965	24.85	0.000	1.049	0.000	0.160	0.98	0.77	YES	22.3
41	Total-tetradoxins	319.8965	24.35	0.000	1.049	0.000	0.151	0.98	0.77	YES	25.1
41	Total-tetradoxins	319.8965	24.14	6906.630	1.049	0.385	0.385	0.88	0.77	NO	56.6
41	Total-tetradoxins	319.8965	23.87	11471.590	1.049	0.640	0.640	0.78	0.77	NO	83.2

PD

Count	Name	Area	Height	Area%	Height%	Area	Height	Area%	Height%	Identified	Area
42	Total-pentadioxins	355.8546	30.75	0.000	0.998	0.000	0.657	1.54	1.55	NO	33.6
42	Total-pentadioxins	355.8546	30.58	6678.273	0.998	0.522	0.522	1.53	1.55	NO	41.1
42	Total-pentadioxins	355.8546	30.44	12025.576	0.998	0.940	0.940	1.59	1.55	NO	78.0
42	Total-pentadioxins	355.8546	30.23	9081.018	0.998	0.710	0.710	1.57	1.55	NO	59.7
42	Total-pentadioxins	355.8546	29.61	6079.864	0.998	0.475	0.475	1.36	1.55	NO	40.7
42	Total-pentadioxins	355.8546	29.14	0.000	0.998	0.000	0.825	2.03	1.55	YES	93.1
42	Total-pentadioxins	355.8546	29.10	0.000	0.998	0.000	0.795	1.15	1.55	YES	79.8
42	Total-pentadioxins	355.8546	32.22	3028.239	0.998	0.237	0.237	1.41	1.55	NO	18.3
12	12378-PeCDD	355.8546	31.82	16064.351	0.998	1.256	1.256	1.36	1.55	NO	84.6
42	Total-pentadioxins	355.8546	31.14	0.000	0.998	0.000	0.153	2.02	1.55	YES	16.0

HD

Count	Name	Area	Height	Area%	Height%	Area	Height	Area%	Height%	Identified	Area
14	123678-HxCDD	389.8157	36.60	199876.031	0.918	16.289	16.289	1.25	1.24	NO	709.7
13	123478-HxCDD	389.8157	36.47	32373.062	0.971	2.642	2.642	1.24	1.24	NO	108.6
43	Total-hexadioxins	389.8157	35.63	11848.490	0.940	0.970	0.970	1.37	1.24	NO	46.9
43	Total-hexadioxins	389.8157	35.52	309711.875	0.940	25.345	25.345	1.27	1.24	NO	823.8
43	Total-hexadioxins	389.8157	35.12	31572.486	0.940	2.584	2.584	1.14	1.24	NO	100.7
43	Total-hexadioxins	389.8157	34.31	167354.774	0.940	13.695	13.695	1.25	1.24	NO	598.6
15	123789-HxCDD	389.8157	37.03	65698.177	0.932	5.423	5.423	1.21	1.24	NO	222.3
43	Total-hexadioxins	389.8157	36.79	12540.435	0.940	1.026	1.026	1.13	1.24	NO	42.5

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HPD

16	1234678-HpCDD	423.7766	41.36	3496653.125	1.017	300.303	300....	1.03	1.05	NO	3537.9
44	Total-heptadioxins	423.7766	40.09	3030252.000	1.017	260.247	260....	1.04	1.05	NO	3345.8

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TotalTEQ,Furans,Dioxins

35 Total-tetrafurans	303.9016	24.99	15552.841	0.877	0.713	0.713	0.78	0.77	NO	72.1	
35 Total-tetrafurans	303.9016	24.84	7172.220	0.877	0.329	0.329	0.67	0.77	NO	31.8	
35 Total-tetrafurans	303.9016	24.76	8486.553	0.877	0.389	0.389	0.66	0.77	NO	33.3	
35 Total-tetrafurans	303.9016	24.33	7261.965	0.877	0.333	0.333	0.73	0.77	NO	36.3	
35 Total-tetrafurans	303.9016	24.20	0.000	0.877	0.000	0.249	0.64	0.77	YES	32.1	
35 Total-tetrafurans	303.9016	24.09	11331.526	0.877	0.519	0.519	0.84	0.77	NO	56.6	
35 Total-tetrafurans	303.9016	23.93	0.000	0.877	0.000	0.149	0.60	0.77	YES	19.0	
35 Total-tetrafurans	303.9016	23.84	11481.837	0.877	0.526	0.526	0.70	0.77	NO	51.2	
35 Total-tetrafurans	303.9016	23.75	6907.775	0.877	0.316	0.316	0.67	0.77	NO	26.7	
35 Total-tetrafurans	303.9016	23.63	0.000	0.877	0.000	0.259	0.64	0.77	YES	23.0	
35 Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.204	0.80	0.77	NO	18.2	
35 Total-tetrafurans	303.9016	23.43	26473.638	0.877	1.213	1.213	0.76	0.77	NO	122.5	
35 Total-tetrafurans	303.9016	22.85	0.000	0.877	0.000	0.233	0.90	0.77	YES	24.1	
35 Total-tetrafurans	303.9016	22.60	0.000	0.877	0.000	0.172	0.64	0.77	YES	21.1	
35 Total-tetrafurans	303.9016	27.53	6048.310	0.877	0.277	0.277	0.69	0.77	NO	17.4	
35 Total-tetrafurans	303.9016	26.32	0.000	0.877	0.000	0.400	0.60	0.77	YES	36.9	
35 Total-tetrafurans	303.9016	26.21	0.000	0.877	0.000	0.170	1.03	0.77	YES	24.6	
1 2378-TCDF	303.9016	26.08	13329.736	0.877	0.611	0.611	0.76	0.77	NO	58.9	
35 Total-tetrafurans	303.9016	25.90	3670.149	0.877	0.168	0.168	0.77	0.77	NO	17.3	
35 Total-tetrafurans	303.9016	25.85	0.000	0.877	0.000	0.095	0.63	0.77	YES	13.5	
35 Total-tetrafurans	303.9016	25.60	2804.625	0.877	0.128	0.128	0.75	0.77	NO	13.4	
35 Total-tetrafurans	303.9016	25.41	0.000	0.877	0.000	0.189	0.61	0.77	YES	17.8	
35 Total-tetrafurans	303.9016	25.18	0.000	0.877	0.000	0.313	0.51	0.77	YES	32.7	
37 Total-pentafurans	339.8597	29.95	0.000	0.911	0.000	0.301	1.21	1.55	YES	18.1	
37 Total-pentafurans	339.8597	29.86	18406.145	0.911	1.021	1.021	1.44	1.55	NO	38.6	
37 Total-pentafurans	339.8597	29.76	4905.969	0.911	0.272	0.272	1.73	1.55	NO	12.9	
37 Total-pentafurans	339.8597	29.59	0.000	0.911	0.000	0.034	1.88	1.55	YES	3.5	
37 Total-pentafurans	339.8597	29.15	0.000	0.911	0.000	2.018	1.24	1.55	YES	88.2	
37 Total-pentafurans	339.8597	29.08	0.000	0.911	0.000	0.808	1.90	1.55	YES	52.5	
37 Total-pentafurans	339.8597	28.96	11185.263	0.911	0.620	0.620	1.45	1.55	NO	21.1	
37 Total-pentafurans	339.8597	32.59	3432.722	0.911	0.190	0.190	1.34	1.55	NO	8.1	
3 23478-PeCDF	339.8597	31.57	16533.085	0.926	0.910	0.910	1.68	1.55	NO	40.4	
37 Total-pentafurans	339.8597	31.42	18614.959	0.911	1.032	1.032	1.49	1.55	NO	47.6	
37 Total-pentafurans	339.8597	31.29	0.000	0.911	0.000	0.198	1.04	1.55	YES	7.2	
37 Total-pentafurans	339.8597	30.53	2099.727	0.911	0.116	0.116	1.44	1.55	NO	6.4	
37 Total-pentafurans	339.8597	30.42	0.000	0.911	0.000	0.749	1.27	1.55	YES	35.3	
2 12378-PeCDF	339.8597	30.22	18434.622	0.896	1.030	1.030	1.39	1.55	NO	46.5	
7 123789-HxCDF	373.8208	37.46	21323.783	0.987	1.409	1.409	1.18	1.24	NO	53.2	
5 234678-HxCDF	373.8208	36.32	43791.670	1.037	2.890	2.890	1.12	1.24	NO	82.6	
38 Total-hexafurans	373.8208	35.97	1028.089	1.032	0.065	0.065	1.24	1.24	NO	4.0	
38 Total-hexafurans	373.8208	35.76	2574.745	1.032	0.163	0.163	1.25	1.24	NO	8.5	
6 123678-HxCDF	373.8208	35.40	28190.932	1.035	1.696	1.696	1.18	1.24	NO	74.3	
4 123478-HxCDF	373.8208	35.24	40456.109	1.068	2.471	2.471	1.15	1.24	NO	106.5	
38 Total-hexafurans	373.8208	35.07	6589.041	1.032	0.416	0.416	1.30	1.24	NO	20.3	
38 Total-hexafurans	373.8208	34.60	555589.969	1.032	35.117	35.117	1.16	1.24	NO	1521.3	
38 Total-hexafurans	373.8208	34.27	5940.444	1.032	0.375	0.375	1.29	1.24	NO	15.7	
38 Total-hexafurans	373.8208	33.73	390062.906	1.032	24.655	24.655	1.15	1.24	NO	1061.2	
38 Total-hexafurans	373.8208	33.52	183020.750	1.032	11.568	11.568	1.19	1.24	NO	505.7	
9 1234789-HpCDF	407.7818	42.24	30025.378	1.215	2.485	2.485	0.96	1.05	NO	69.3	

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
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TotalTEQ,Furans,Dioxins

39	Total-heptafurans	407.7818	41.37	0.000	1.223	0.000	0.088	0.56	1.05	YES	4.0
39	Total-heptafurans	407.7818	40.58	0.000	1.223	0.000	0.017	2.15	1.05	YES	2.8
39	Total-heptafurans	407.7818	40.33	1466973.688	1.223	107.214	107....	0.97	1.05	NO	3738.6
39	Total-heptafurans	407.7818	40.02	0.000	1.223	0.000	0.858	0.88	1.05	YES	27.9
8	1234678-HpCDF	407.7818	39.54	713252.907	1.232	46.613	46.613	0.97	1.05	NO	1929.1
10	OCDF	441.7428	47.55	1839994.313	1.138	189.750	189....	0.83	0.89	NO	5888.6
36	Total-penta1	339.8597	27.50	299928.594		16.525	16.525	1.54	1.55	NO	2913.2

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TotalTEQ,Furans,Dioxins

Sample	Concentration	TEQ	Furans	Dioxins	TEQ/Furans	Dioxins/Furans	TEQ/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins
35 Total-tetrafurans	303.9016	24.99	15552.841	0.877	0.713	0.713	0.78	0.77	NO	72.1	
35 Total-tetrafurans	303.9016	24.84	7172.220	0.877	0.329	0.329	0.67	0.77	NO	31.8	
35 Total-tetrafurans	303.9016	24.76	8486.553	0.877	0.389	0.389	0.66	0.77	NO	33.3	
35 Total-tetrafurans	303.9016	24.33	7261.965	0.877	0.333	0.333	0.73	0.77	NO	36.3	
35 Total-tetrafurans	303.9016	24.20	0.000	0.877	0.000	0.249	0.64	0.77	YES	32.1	
35 Total-tetrafurans	303.9016	24.09	11331.526	0.877	0.519	0.519	0.84	0.77	NO	56.6	
35 Total-tetrafurans	303.9016	23.93	0.000	0.877	0.000	0.149	0.60	0.77	YES	19.0	
35 Total-tetrafurans	303.9016	23.84	11481.837	0.877	0.526	0.526	0.70	0.77	NO	51.2	
35 Total-tetrafurans	303.9016	23.75	6907.775	0.877	0.316	0.316	0.67	0.77	NO	26.7	
35 Total-tetrafurans	303.9016	23.63	0.000	0.877	0.000	0.259	0.64	0.77	YES	23.0	
35 Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.204	0.80	0.77	NO	18.2	
35 Total-tetrafurans	303.9016	23.43	26473.638	0.877	1.213	1.213	0.76	0.77	NO	122.5	
35 Total-tetrafurans	303.9016	22.85	0.000	0.877	0.000	0.233	0.90	0.77	YES	24.1	
35 Total-tetrafurans	303.9016	22.60	0.000	0.877	0.000	0.172	0.64	0.77	YES	21.1	
35 Total-tetrafurans	303.9016	27.53	6048.310	0.877	0.277	0.277	0.69	0.77	NO	17.4	
35 Total-tetrafurans	303.9016	26.32	0.000	0.877	0.000	0.400	0.60	0.77	YES	36.9	
35 Total-tetrafurans	303.9016	26.21	0.000	0.877	0.000	0.170	1.03	0.77	YES	24.6	
1 2378-TCDF	303.9016	26.08	13329.736	0.877	0.611	0.611	0.76	0.77	NO	58.9	
35 Total-tetrafurans	303.9016	25.90	3670.149	0.877	0.168	0.168	0.77	0.77	NO	17.3	
35 Total-tetrafurans	303.9016	25.85	0.000	0.877	0.000	0.095	0.63	0.77	YES	13.5	
35 Total-tetrafurans	303.9016	25.60	2804.625	0.877	0.128	0.128	0.75	0.77	NO	13.4	
35 Total-tetrafurans	303.9016	25.41	0.000	0.877	0.000	0.189	0.61	0.77	YES	17.8	
35 Total-tetrafurans	303.9016	25.18	0.000	0.877	0.000	0.313	0.51	0.77	YES	32.7	
37 Total-penta furans	339.8597	29.95	0.000	0.911	0.000	0.301	1.21	1.55	YES	18.1	
37 Total-penta furans	339.8597	29.86	18406.145	0.911	1.021	1.021	1.44	1.55	NO	38.6	
37 Total-penta furans	339.8597	29.76	4905.969	0.911	0.272	0.272	1.73	1.55	NO	12.9	
37 Total-penta furans	339.8597	29.59	0.000	0.911	0.000	0.034	1.88	1.55	YES	3.5	
37 Total-penta furans	339.8597	29.15	0.000	0.911	0.000	2.018	1.24	1.55	YES	88.2	
37 Total-penta furans	339.8597	29.08	0.000	0.911	0.000	0.808	1.90	1.55	YES	52.5	
37 Total-penta furans	339.8597	28.96	11185.263	0.911	0.620	0.620	1.45	1.55	NO	21.1	
37 Total-penta furans	339.8597	32.59	3432.722	0.911	0.190	0.190	1.34	1.55	NO	8.1	
3 23478-PeCDF	339.8597	31.57	16533.085	0.926	0.910	0.910	1.68	1.55	NO	40.4	
37 Total-penta furans	339.8597	31.42	18614.959	0.911	1.032	1.032	1.49	1.55	NO	47.6	
37 Total-penta furans	339.8597	31.29	0.000	0.911	0.000	0.198	1.04	1.55	YES	7.2	
37 Total-penta furans	339.8597	30.53	2099.727	0.911	0.116	0.116	1.44	1.55	NO	6.4	
37 Total-penta furans	339.8597	30.42	0.000	0.911	0.000	0.749	1.27	1.55	YES	35.3	
2 12378-PeCDF	339.8597	30.22	18434.622	0.896	1.030	1.030	1.39	1.55	NO	46.5	
7 123789-HxCDF	373.8208	37.46	21323.783	0.987	1.409	1.409	1.18	1.24	NO	53.2	
5 234678-HxCDF	373.8208	36.32	43791.670	1.037	2.890	2.890	1.12	1.24	NO	82.6	
38 Total-hexa furans	373.8208	35.97	1028.089	1.032	0.065	0.065	1.24	1.24	NO	4.0	
38 Total-hexa furans	373.8208	35.76	2574.745	1.032	0.163	0.163	1.25	1.24	NO	8.5	
6 123678-HxCDF	373.8208	35.40	28190.932	1.035	1.696	1.696	1.18	1.24	NO	74.3	
4 123478-HxCDF	373.8208	35.24	40456.109	1.068	2.471	2.471	1.15	1.24	NO	106.5	
38 Total-hexa furans	373.8208	35.07	6589.041	1.032	0.416	0.416	1.30	1.24	NO	20.3	
38 Total-hexa furans	373.8208	34.60	555589.969	1.032	35.117	35.117	1.16	1.24	NO	1521.3	
38 Total-hexa furans	373.8208	34.27	5940.444	1.032	0.375	0.375	1.29	1.24	NO	15.7	
38 Total-hexa furans	373.8208	33.73	390062.906	1.032	24.655	24.655	1.15	1.24	NO	1061.2	
38 Total-hexa furans	373.8208	33.52	183020.750	1.032	11.568	11.568	1.19	1.24	NO	505.7	
9 1234789-HpCDF	407.7818	42.24	30025.378	1.215	2.485	2.485	0.96	1.05	NO	69.3	



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TotalTEQ,Furans,Dioxins

39	Total-heptafurans	407.7818	41.37	0.000	1.223	0.000	0.088	0.56	1.05	YES	4.0
39	Total-heptafurans	407.7818	40.58	0.000	1.223	0.000	0.017	2.15	1.05	YES	2.8
39	Total-heptafurans	407.7818	40.33	1466973.688	1.223	107.214	107....	0.97	1.05	NO	3738.6
39	Total-heptafurans	407.7818	40.02	0.000	1.223	0.000	0.858	0.88	1.05	YES	27.9
8	1234678-HpCDF	407.7818	39.54	713252.907	1.232	46.613	46.613	0.97	1.05	NO	1929.1
10	OCDF	441.7428	47.55	1839994.313	1.138	189.750	189....	0.83	0.89	NO	5888.6
36	Total-penta1	339.8597	27.50	299928.594		16.525	16.525	1.54	1.55	NO	2913.2
35	Total-tetrafurans	303.9016	24.99	15552.841	0.877	0.713	0.713	0.78	0.77	NO	72.1
35	Total-tetrafurans	303.9016	24.84	7172.220	0.877	0.329	0.329	0.67	0.77	NO	31.8
35	Total-tetrafurans	303.9016	24.76	8486.553	0.877	0.389	0.389	0.66	0.77	NO	33.3
35	Total-tetrafurans	303.9016	24.33	7261.965	0.877	0.333	0.333	0.73	0.77	NO	36.3
35	Total-tetrafurans	303.9016	24.20	0.000	0.877	0.000	0.249	0.64	0.77	YES	32.1
35	Total-tetrafurans	303.9016	24.09	11331.526	0.877	0.519	0.519	0.84	0.77	NO	56.6
35	Total-tetrafurans	303.9016	23.93	0.000	0.877	0.000	0.149	0.60	0.77	YES	19.0
35	Total-tetrafurans	303.9016	23.84	11481.837	0.877	0.526	0.526	0.70	0.77	NO	51.2
35	Total-tetrafurans	303.9016	23.75	6907.775	0.877	0.316	0.316	0.67	0.77	NO	26.7
35	Total-tetrafurans	303.9016	23.63	0.000	0.877	0.000	0.259	0.64	0.77	YES	23.0
35	Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.204	0.80	0.77	NO	18.2
35	Total-tetrafurans	303.9016	23.43	26473.638	0.877	1.213	1.213	0.76	0.77	NO	122.5
35	Total-tetrafurans	303.9016	22.85	0.000	0.877	0.000	0.233	0.90	0.77	YES	24.1
35	Total-tetrafurans	303.9016	22.60	0.000	0.877	0.000	0.172	0.64	0.77	YES	21.1
35	Total-tetrafurans	303.9016	27.53	6048.310	0.877	0.277	0.277	0.69	0.77	NO	17.4
35	Total-tetrafurans	303.9016	26.32	0.000	0.877	0.000	0.400	0.60	0.77	YES	36.9
35	Total-tetrafurans	303.9016	26.21	0.000	0.877	0.000	0.170	1.03	0.77	YES	24.6
1	2378-TCDF	303.9016	26.08	13329.736	0.877	0.611	0.611	0.76	0.77	NO	58.9
35	Total-tetrafurans	303.9016	25.90	3670.149	0.877	0.168	0.168	0.77	0.77	NO	17.3
35	Total-tetrafurans	303.9016	25.85	0.000	0.877	0.000	0.095	0.63	0.77	YES	13.5
35	Total-tetrafurans	303.9016	25.60	2804.625	0.877	0.128	0.128	0.75	0.77	NO	13.4
35	Total-tetrafurans	303.9016	25.41	0.000	0.877	0.000	0.189	0.61	0.77	YES	17.8
35	Total-tetrafurans	303.9016	25.18	0.000	0.877	0.000	0.313	0.51	0.77	YES	32.7
37	Total-pentafurans	339.8597	29.95	0.000	0.911	0.000	0.301	1.21	1.55	YES	18.1
37	Total-pentafurans	339.8597	29.86	18406.145	0.911	1.021	1.021	1.44	1.55	NO	38.6
37	Total-pentafurans	339.8597	29.76	4905.969	0.911	0.272	0.272	1.73	1.55	NO	12.9
37	Total-pentafurans	339.8597	29.59	0.000	0.911	0.000	0.034	1.88	1.55	YES	3.5
37	Total-pentafurans	339.8597	29.15	0.000	0.911	0.000	2.018	1.24	1.55	YES	88.2
37	Total-pentafurans	339.8597	29.08	0.000	0.911	0.000	0.808	1.90	1.55	YES	52.5
37	Total-pentafurans	339.8597	28.96	11185.263	0.911	0.620	0.620	1.45	1.55	NO	21.1
37	Total-pentafurans	339.8597	32.59	3432.722	0.911	0.190	0.190	1.34	1.55	NO	8.1
3	23478-PeCDF	339.8597	31.57	16533.085	0.926	0.910	0.910	1.68	1.55	NO	40.4
37	Total-pentafurans	339.8597	31.42	18614.959	0.911	1.032	1.032	1.49	1.55	NO	47.6
37	Total-pentafurans	339.8597	31.29	0.000	0.911	0.000	0.198	1.04	1.55	YES	7.2
37	Total-pentafurans	339.8597	30.53	2099.727	0.911	0.116	0.116	1.44	1.55	NO	6.4
37	Total-pentafurans	339.8597	30.42	0.000	0.911	0.000	0.749	1.27	1.55	YES	35.3
2	12378-PeCDF	339.8597	30.22	18434.622	0.896	1.030	1.030	1.39	1.55	NO	46.5
7	123789-HxCDF	373.8208	37.46	21323.783	0.987	1.409	1.409	1.18	1.24	NO	53.2
5	234678-HxCDF	373.8208	36.32	43791.670	1.037	2.890	2.890	1.12	1.24	NO	82.6
38	Total-hexafurans	373.8208	35.97	1028.089	1.032	0.065	0.065	1.24	1.24	NO	4.0
38	Total-hexafurans	373.8208	35.76	2574.745	1.032	0.163	0.163	1.25	1.24	NO	8.5
6	123678-HxCDF	373.8208	35.40	28190.932	1.035	1.696	1.696	1.18	1.24	NO	74.3

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TotalTEQ,Furans,Dioxins

4	123478-HxCDF	373.8208	35.24	40456.109	1.068	2.471	2.471	1.15	1.24	NO	106.5
38	Total-hexafurans	373.8208	35.07	6589.041	1.032	0.416	0.416	1.30	1.24	NO	20.3
38	Total-hexafurans	373.8208	34.60	555589.969	1.032	35.117	35.117	1.16	1.24	NO	1521.3
38	Total-hexafurans	373.8208	34.27	5940.444	1.032	0.375	0.375	1.29	1.24	NO	15.7
38	Total-hexafurans	373.8208	33.73	390062.906	1.032	24.655	24.655	1.15	1.24	NO	1061.2
38	Total-hexafurans	373.8208	33.52	183020.750	1.032	11.568	11.568	1.19	1.24	NO	505.7
9	1234789-HpCDF	407.7818	42.24	30025.378	1.215	2.485	2.485	0.96	1.05	NO	69.3
39	Total-heptafurans	407.7818	41.37	0.000	1.223	0.000	0.088	0.56	1.05	YES	4.0
39	Total-heptafurans	407.7818	40.58	0.000	1.223	0.000	0.017	2.15	1.05	YES	2.8
39	Total-heptafurans	407.7818	40.33	1466973.688	1.223	107.214	107....	0.97	1.05	NO	3738.6
39	Total-heptafurans	407.7818	40.02	0.000	1.223	0.000	0.858	0.88	1.05	YES	27.9
8	1234678-HpCDF	407.7818	39.54	713252.907	1.232	46.613	46.613	0.97	1.05	NO	1929.1
10	OCDF	441.7428	47.55	1839994.313	1.138	189.750	189....	0.83	0.89	NO	5888.6
36	Total-penta1	339.8597	27.50	299928.594		16.525	16.525	1.54	1.55	NO	2913.2

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
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Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

PFK1

48 FUNCTION1 PFK	330.9792	23.93	0.000	2.4
48 FUNCTION1 PFK	330.9792	23.78	0.000	1.7
48 FUNCTION1 PFK	330.9792	23.52	0.000	2.2
48 FUNCTION1 PFK	330.9792	23.37	0.000	1.7
48 FUNCTION1 PFK	330.9792	23.09	0.000	1.6
48 FUNCTION1 PFK	330.9792	23.05	0.000	1.2
48 FUNCTION1 PFK	330.9792	22.82	0.000	1.0
48 FUNCTION1 PFK	330.9792	22.48	0.000	0.7
48 FUNCTION1 PFK	330.9792	22.42	0.000	0.7
48 FUNCTION1 PFK	330.9792	22.33	0.000	1.1
48 FUNCTION1 PFK	330.9792	21.85	0.000	1.7
48 FUNCTION1 PFK	330.9792	21.72	0.000	2.2
48 FUNCTION1 PFK	330.9792	21.33	0.000	1.9
48 FUNCTION1 PFK	330.9792	21.25	0.000	0.8
48 FUNCTION1 PFK	330.9792	21.19	0.000	0.5
48 FUNCTION1 PFK	330.9792	27.36	0.000	0.6
48 FUNCTION1 PFK	330.9792	27.30	0.000	1.4
48 FUNCTION1 PFK	330.9792	27.17	0.000	0.7
48 FUNCTION1 PFK	330.9792	27.11	0.000	0.6
48 FUNCTION1 PFK	330.9792	26.81	0.000	0.4
48 FUNCTION1 PFK	330.9792	26.66	0.000	1.8
48 FUNCTION1 PFK	330.9792	26.11	0.000	4.2
48 FUNCTION1 PFK	330.9792	26.00	0.000	1.7
48 FUNCTION1 PFK	330.9792	25.94	0.000	2.7
48 FUNCTION1 PFK	330.9792	25.81	0.000	4.2
48 FUNCTION1 PFK	330.9792	25.30	0.000	1.4
48 FUNCTION1 PFK	330.9792	24.81	0.000	0.9
48 FUNCTION1 PFK	330.9792	24.70	0.000	2.0
48 FUNCTION1 PFK	330.9792	24.24	0.000	0.4
48 FUNCTION1 PFK	330.9792	24.11	0.000	1.2
48 FUNCTION1 PFK	330.9792	24.05	0.000	0.5
48 FUNCTION1 PFK	330.9792	28.17	0.000	1.2
48 FUNCTION1 PFK	330.9792	28.11	0.000	0.7
48 FUNCTION1 PFK	330.9792	27.69	0.000	0.9
48 FUNCTION1 PFK	330.9792	27.56	0.000	1.6

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
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Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

PFK2

49	FUNCTION2 PFK	366.9792	30.54	0.000	0.000	0.6
49	FUNCTION2 PFK	366.9792	29.84	0.000	0.000	1.6
49	FUNCTION2 PFK	366.9792	29.72	0.000	0.000	1.2
49	FUNCTION2 PFK	366.9792	29.69	0.000	0.000	2.0
49	FUNCTION2 PFK	366.9792	29.58	0.000	0.000	2.0
49	FUNCTION2 PFK	366.9792	29.20	0.000	0.000	2.2
49	FUNCTION2 PFK	366.9792	29.05	0.000	0.000	1.5
49	FUNCTION2 PFK	366.9792	28.85	0.000	0.000	0.7
49	FUNCTION2 PFK	366.9792	28.59	0.000	0.000	0.7
49	FUNCTION2 PFK	366.9792	28.39	0.000	0.000	3.3
49	FUNCTION2 PFK	366.9792	28.35	0.000	0.000	2.7
49	FUNCTION2 PFK	366.9792	32.68	0.000	0.000	0.4
49	FUNCTION2 PFK	366.9792	32.62	0.000	0.000	1.4
49	FUNCTION2 PFK	366.9792	32.50	0.000	0.000	0.6
49	FUNCTION2 PFK	366.9792	32.29	0.000	0.000	1.3
49	FUNCTION2 PFK	366.9792	32.02	0.000	0.000	1.3
49	FUNCTION2 PFK	366.9792	31.97	0.000	0.000	1.0
49	FUNCTION2 PFK	366.9792	31.91	0.000	0.000	0.5
49	FUNCTION2 PFK	366.9792	31.66	0.000	0.000	1.3
49	FUNCTION2 PFK	366.9792	31.61	0.000	0.000	1.9
49	FUNCTION2 PFK	366.9792	31.49	0.000	0.000	1.8
49	FUNCTION2 PFK	366.9792	31.45	0.000	0.000	1.4
49	FUNCTION2 PFK	366.9792	31.38	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	31.32	0.000	0.000	1.4
49	FUNCTION2 PFK	366.9792	30.81	0.000	0.000	1.6
49	FUNCTION2 PFK	366.9792	30.72	0.000	0.000	1.4
49	FUNCTION2 PFK	366.9792	30.65	0.000	0.000	1.2
49	FUNCTION2 PFK	366.9792	33.08	0.000	0.000	0.8
49	FUNCTION2 PFK	366.9792	33.02	0.000	0.000	2.4
49	FUNCTION2 PFK	366.9792	32.94	0.000	0.000	2.0

PFK3

50	FUNCTION3 PFK	380.9760	37.42	0.000	0.000	5.6
50	FUNCTION3 PFK	380.9760	37.37	0.000	0.000	6.0

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
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Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

PFK4

51	FUNCTION4 PFK	430.9728	39.52	0.000	1.3
51	FUNCTION4 PFK	430.9728	39.34	0.000	1.1
51	FUNCTION4 PFK	430.9728	39.31	0.000	2.0
51	FUNCTION4 PFK	430.9728	39.04	0.000	1.9
51	FUNCTION4 PFK	430.9728	38.99	0.000	0.9
51	FUNCTION4 PFK	430.9728	38.95	0.000	0.4
51	FUNCTION4 PFK	430.9728	38.78	0.000	1.5
51	FUNCTION4 PFK	430.9728	38.65	0.000	1.3
51	FUNCTION4 PFK	430.9728	38.62	0.000	1.8
51	FUNCTION4 PFK	430.9728	42.28	0.000	1.2
51	FUNCTION4 PFK	430.9728	42.17	0.000	0.7
51	FUNCTION4 PFK	430.9728	42.06	0.000	2.1
51	FUNCTION4 PFK	430.9728	41.96	0.000	2.5
51	FUNCTION4 PFK	430.9728	41.92	0.000	2.1
51	FUNCTION4 PFK	430.9728	41.60	0.000	0.5
51	FUNCTION4 PFK	430.9728	41.55	0.000	1.5
51	FUNCTION4 PFK	430.9728	41.06	0.000	1.3
51	FUNCTION4 PFK	430.9728	41.00	0.000	0.8
51	FUNCTION4 PFK	430.9728	40.73	0.000	1.4
51	FUNCTION4 PFK	430.9728	40.33	0.000	1.1
51	FUNCTION4 PFK	430.9728	40.22	0.000	0.5
51	FUNCTION4 PFK	430.9728	39.96	0.000	0.6
51	FUNCTION4 PFK	430.9728	39.91	0.000	1.2
51	FUNCTION4 PFK	430.9728	39.88	0.000	1.8
51	FUNCTION4 PFK	430.9728	39.81	0.000	0.5
51	FUNCTION4 PFK	430.9728	44.40	0.000	1.5
51	FUNCTION4 PFK	430.9728	44.34	0.000	0.6
51	FUNCTION4 PFK	430.9728	44.30	0.000	0.7
51	FUNCTION4 PFK	430.9728	44.00	0.000	0.6
51	FUNCTION4 PFK	430.9728	43.91	0.000	1.4
51	FUNCTION4 PFK	430.9728	43.87	0.000	2.0
51	FUNCTION4 PFK	430.9728	43.75	0.000	0.4
51	FUNCTION4 PFK	430.9728	43.70	0.000	1.0
51	FUNCTION4 PFK	430.9728	43.36	0.000	1.5
51	FUNCTION4 PFK	430.9728	43.22	0.000	0.4
51	FUNCTION4 PFK	430.9728	42.93	0.000	0.8
51	FUNCTION4 PFK	430.9728	42.82	0.000	1.1
51	FUNCTION4 PFK	430.9728	42.66	0.000	1.0
51	FUNCTION4 PFK	430.9728	42.51	0.000	1.9
51	FUNCTION4 PFK	430.9728	42.41	0.000	0.4
51	FUNCTION4 PFK	430.9728	42.37	0.000	1.3
51	FUNCTION4 PFK	430.9728	44.79	0.000	1.5
51	FUNCTION4 PFK	430.9728	44.76	0.000	1.9

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
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Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

PFK5

ID	Name	Time	Area	Height	Width	Area/Height	Area/Width
52	FUNCTION5 PFK	480.9696	47.45	0.000			0.9
52	FUNCTION5 PFK	480.9696	47.24	0.000			1.4
52	FUNCTION5 PFK	480.9696	47.14	0.000			1.3
52	FUNCTION5 PFK	480.9696	47.05	0.000			0.8
52	FUNCTION5 PFK	480.9696	46.69	0.000			0.9
52	FUNCTION5 PFK	480.9696	46.64	0.000			0.8
52	FUNCTION5 PFK	480.9696	46.61	0.000			0.6
52	FUNCTION5 PFK	480.9696	46.13	0.000			0.7
52	FUNCTION5 PFK	480.9696	45.94	0.000			0.0
52	FUNCTION5 PFK	480.9696	45.83	0.000			1.1
52	FUNCTION5 PFK	480.9696	45.77	0.000			0.5
52	FUNCTION5 PFK	480.9696	45.43	0.000			0.4
52	FUNCTION5 PFK	480.9696	45.18	0.000			1.8
52	FUNCTION5 PFK	480.9696	48.97	0.000			1.6
52	FUNCTION5 PFK	480.9696	48.84	0.000			1.9
52	FUNCTION5 PFK	480.9696	48.25	0.000			1.8
52	FUNCTION5 PFK	480.9696	47.76	0.000			0.8
52	FUNCTION5 PFK	480.9696	47.60	0.000			0.8

ETHERS1

ID	Name	Time	Area	Height	Width	Area/Height	Area/Width
53	FUNCTION1 HXCD...	375.8364	27.27	0.000	0.000		3.6
53	FUNCTION1 HXCD...	375.8364	23.94	0.000	0.000		15.1
53	FUNCTION1 HXCD...	375.8364	22.07	0.000	0.000		5.1

ETHERS2

ID	Name	Time	Area	Height	Width	Area/Height	Area/Width
54	FUNCTION1 HPCD...	409.7974	22.42	0.000	0.000		1.9
54	FUNCTION1 HPCD...	409.7974	22.31	0.000	0.000		2.8
54	FUNCTION1 HPCD...	409.7974	22.10	0.000	0.000		2.3
54	FUNCTION1 HPCD...	409.7974	22.00	0.000	0.000		2.2
54	FUNCTION1 HPCD...	409.7974	21.81	0.000	0.000		2.9
54	FUNCTION1 HPCD...	409.7974	21.48	0.000	0.000		2.6
54	FUNCTION1 HPCD...	409.7974	28.05	0.000	0.000		2.7
54	FUNCTION1 HPCD...	409.7974	27.81	0.000	0.000		3.2
54	FUNCTION1 HPCD...	409.7974	27.57	0.000	0.000		2.0
54	FUNCTION1 HPCD...	409.7974	27.14	0.000	0.000		1.7
54	FUNCTION1 HPCD...	409.7974	25.23	0.000	0.000		2.1
54	FUNCTION1 HPCD...	409.7974	24.97	0.000	0.000		3.2
54	FUNCTION1 HPCD...	409.7974	24.05	0.000	0.000		2.2

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
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Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

ETHERS3

Peak #	Name	Retention	Area	Abundance	Height	Width	Area%
55	FUNCTION2 HPCD...	409.7974	32.49	0.000	0.000		3.2
55	FUNCTION2 HPCD...	409.7974	30.67	0.000	0.000		3.1
55	FUNCTION2 HPCD...	409.7974	30.23	0.000	0.000		1.8
55	FUNCTION2 HPCD...	409.7974	30.17	0.000	0.000		1.4
55	FUNCTION2 HPCD...	409.7974	29.85	0.000	0.000		2.4
55	FUNCTION2 HPCD...	409.7974	29.46	0.000	0.000		2.9

ETHERS4

Peak #	Name	Retention	Area	Abundance	Height	Width	Area%
56	FUNCTION3 OCDPE	445.7555	35.14	0.000	0.000		2.8
56	FUNCTION3 OCDPE	445.7555	35.24	0.000	0.000		3.7

ETHERS5

Peak #	Name	Retention	Area	Abundance	Height	Width	Area%
57	FUNCTION4 NCDPE	479.7165	44.33	0.000	0.000		6.7
57	FUNCTION4 NCDPE	479.7165	42.64	0.000	0.000		3.9
57	FUNCTION4 NCDPE	479.7165	39.12	0.000	0.000		498.5
57	FUNCTION4 NCDPE	479.7165	38.71	0.000	0.000		4.3

ETHERS6

Peak #	Name	Retention	Area	Abundance	Height	Width	Area%

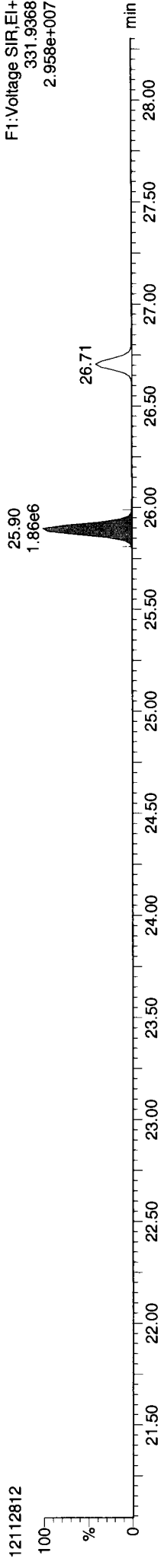
Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:29:37 Pacific Standard Time

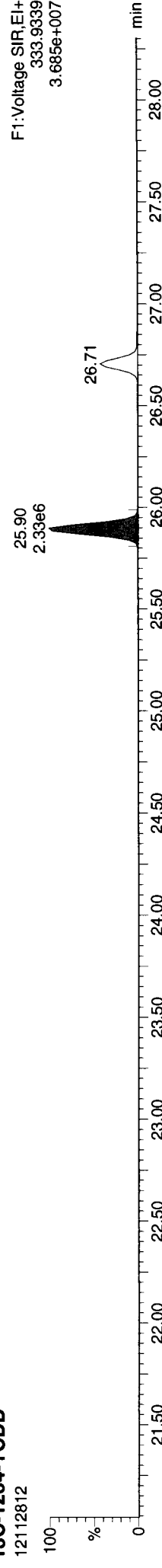
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Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

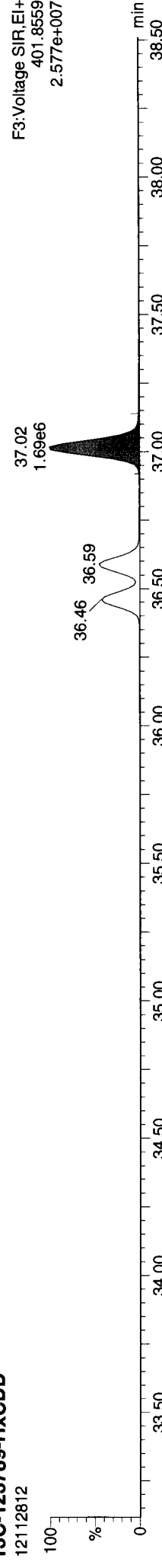
13C-1234-TCDD



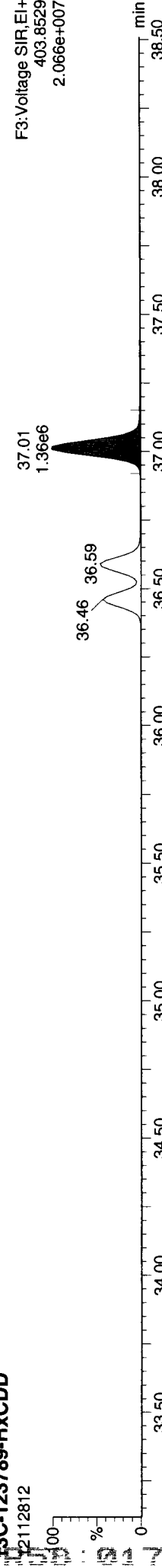
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13C-123789-HxCDD



13C-123789-HxCDD



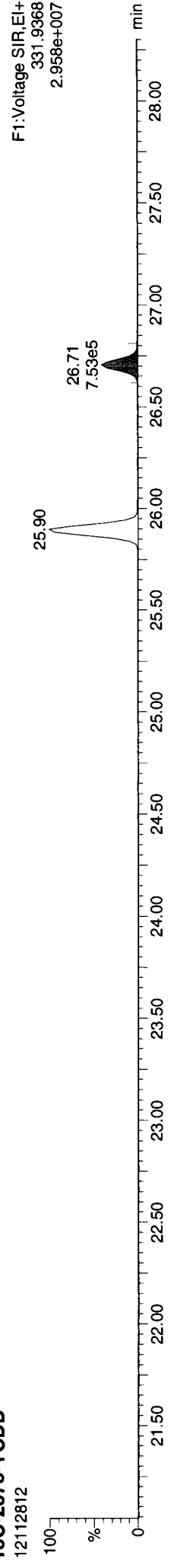
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12112812  
12112812



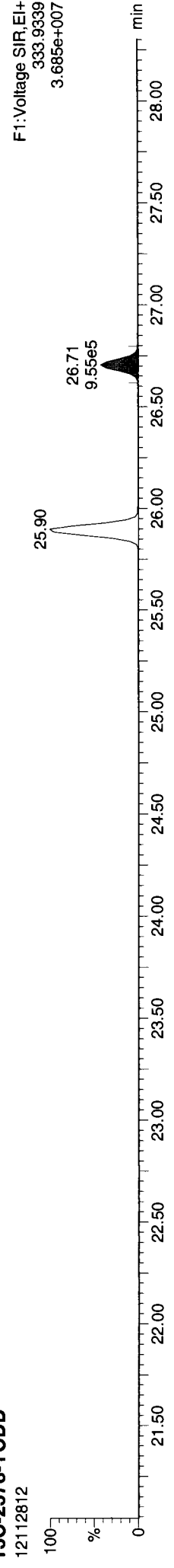
**Quantify Sample Report** MassLynx 4.1 SCN 714  
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 Printed: Monday, December 10, 2012 15:29:37 Pacific Standard Time

Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

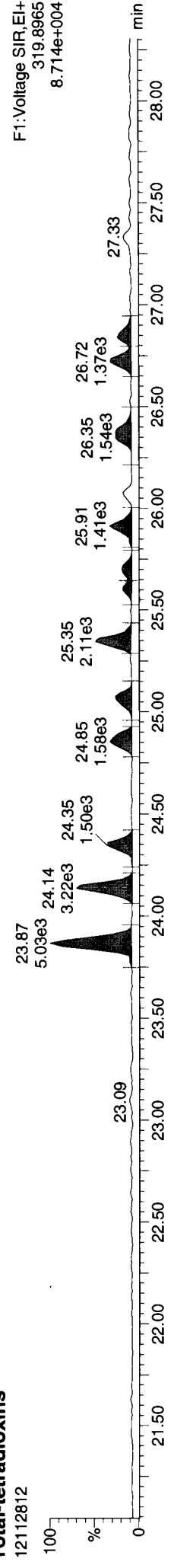
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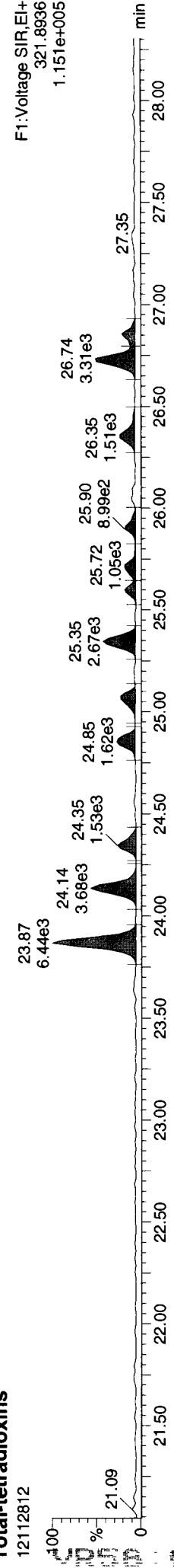
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12112812



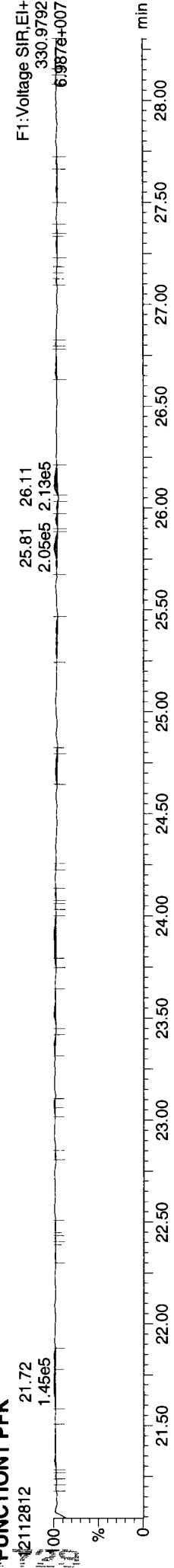
**Total-tetraoxins**  
12112812



**Total-tetraoxins**  
12112812

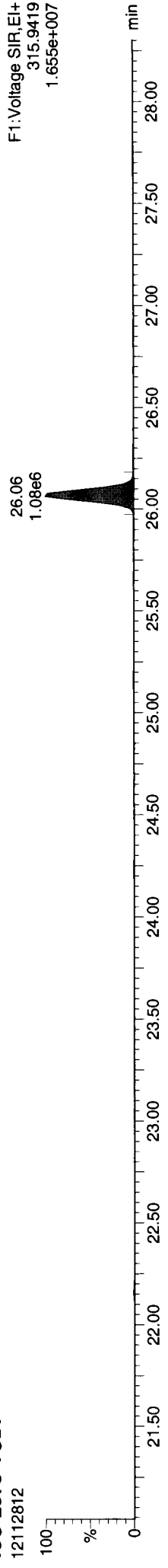


**FUNCTION1 PFK**  
12112812

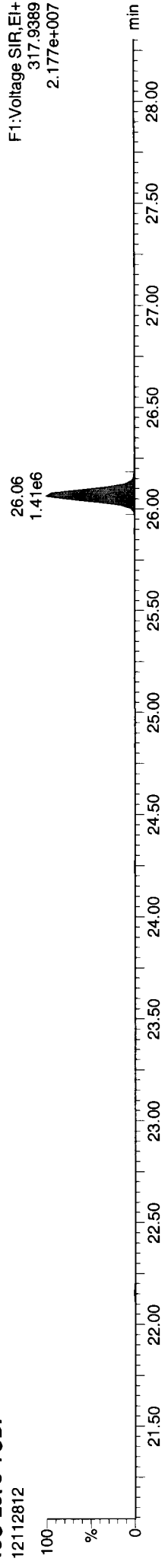


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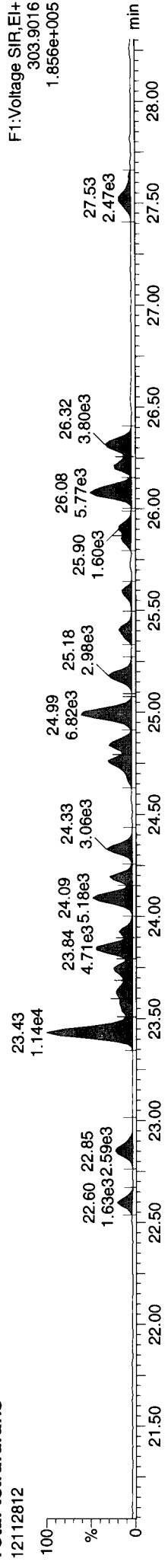
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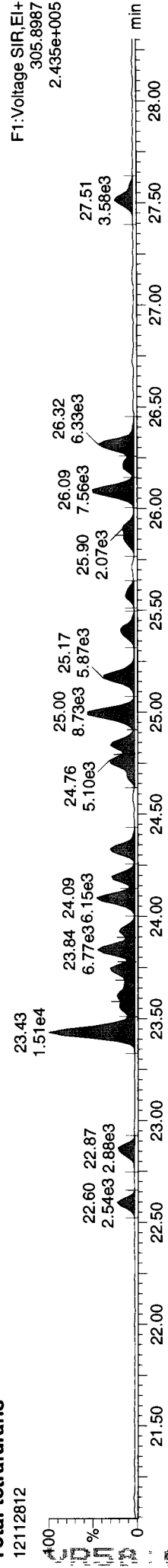
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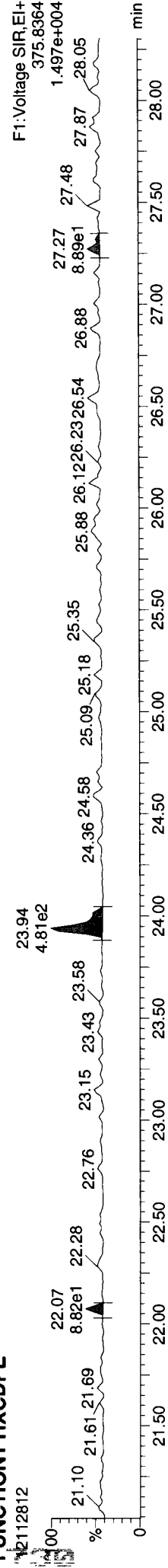
**Total-tetrafurans**



**Total-tetrafurans**



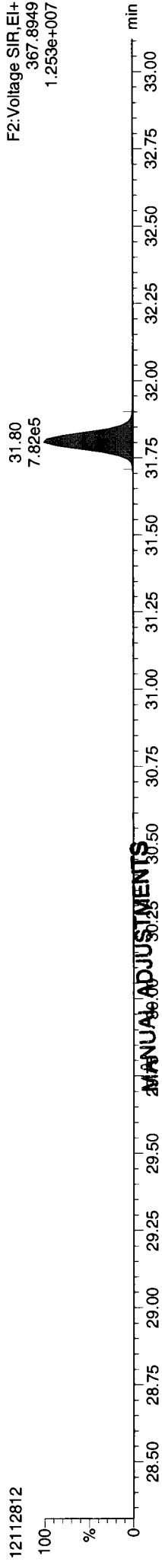
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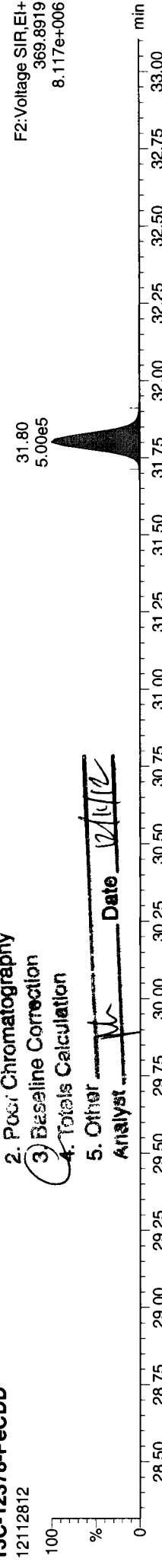
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MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:29:37 Pacific Standard Time

Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD  
12112812

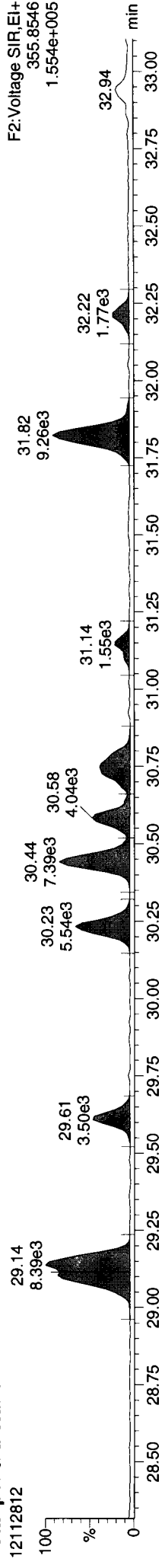


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12112812

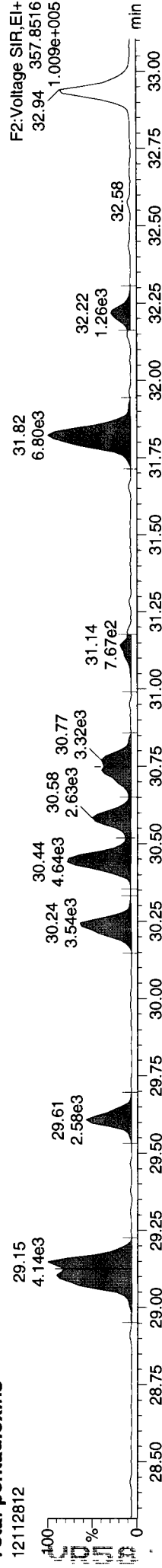


1. Peak not found
  2. Poor Chromatography
  3. Baseline Correction
  4. Totals Calculation
  5. Other
- Analyst: MLR Date: 12/10

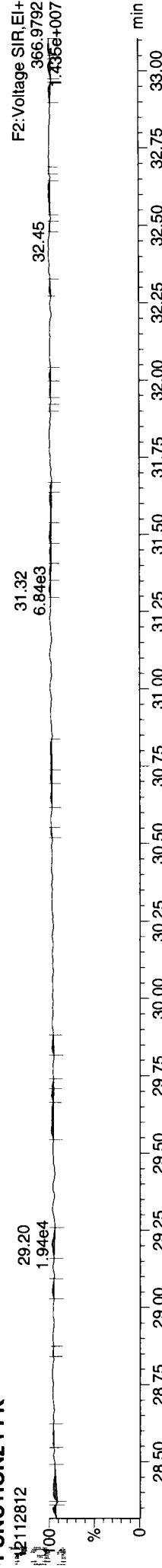
Total-pentadioxins  
12112812



Total-pentadioxins  
12112812



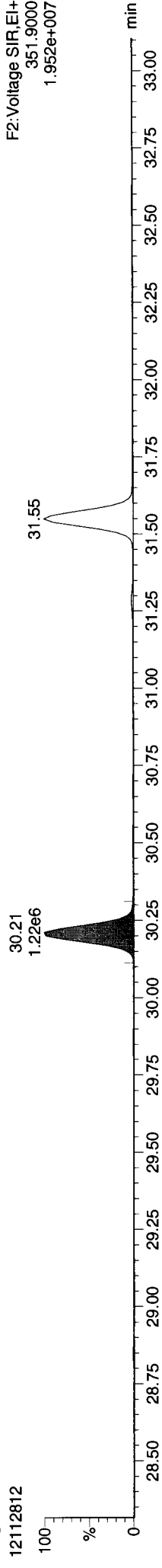
FUNCTION2 PFK  
12112812



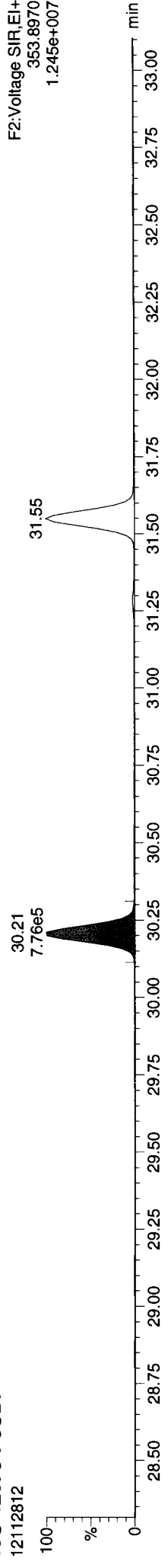
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Dataset: P:\DIOX\IN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
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Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

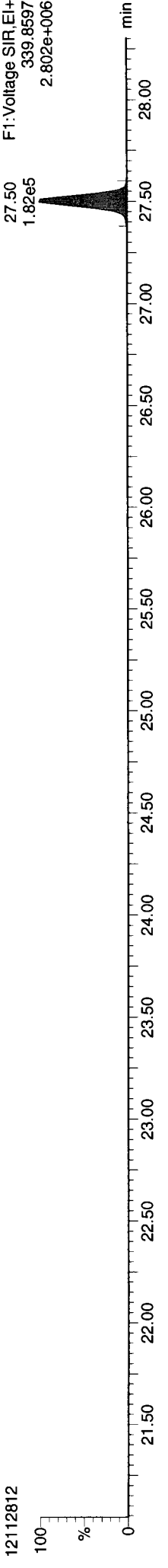
**13C-12378-PeCDF**



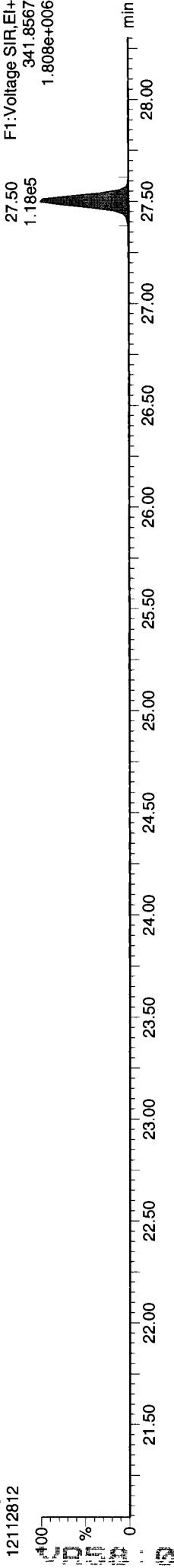
**13C-12378-PeCDF**



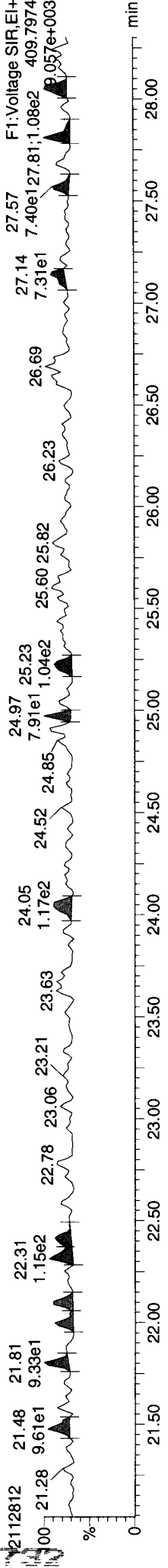
**Total-penta1**



**Total-penta1**

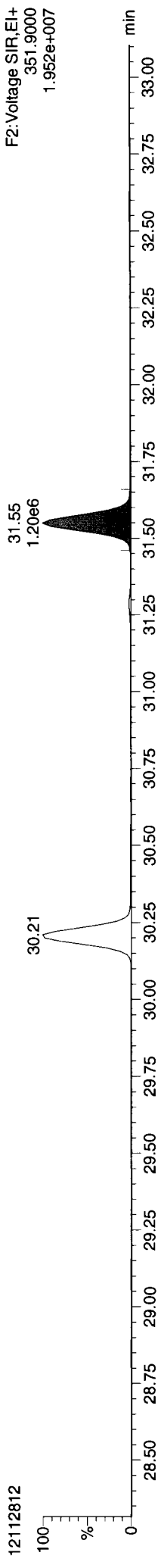


**FUNCTION1 HPCDPE**

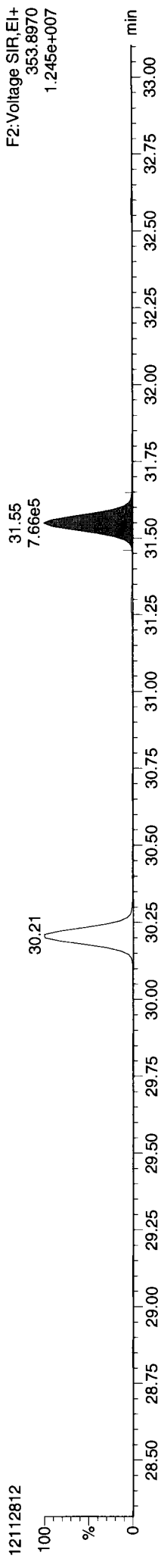


Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

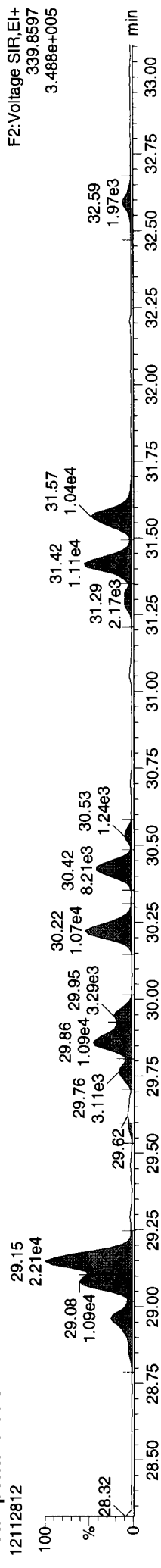
13C-23478-PeCDF



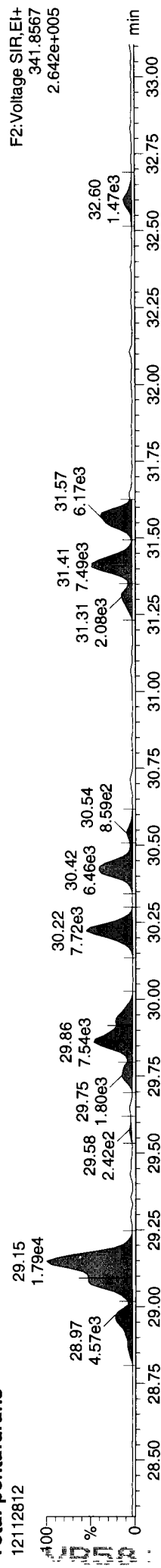
13C-23478-PeCDF



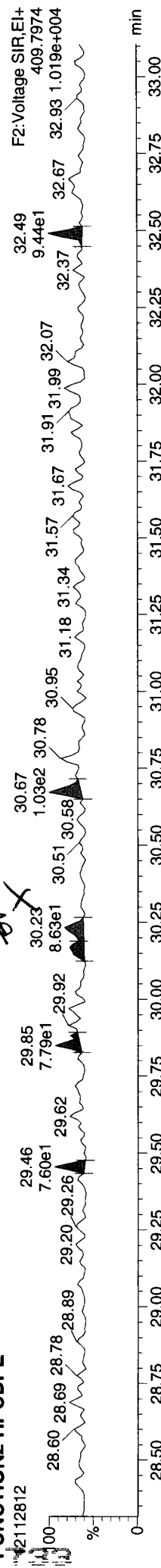
Total-pentafurans



Total-pentafurans



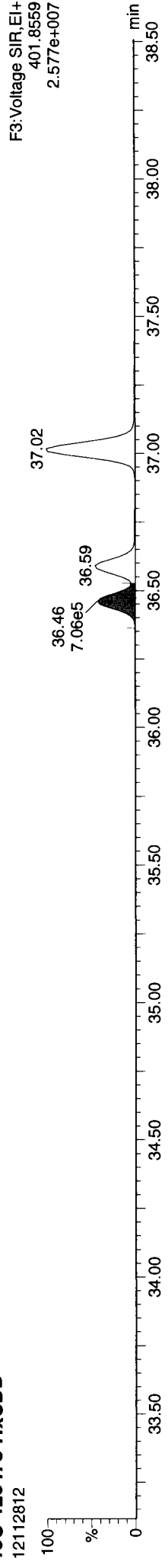
FUNCTION2 HPCDFE



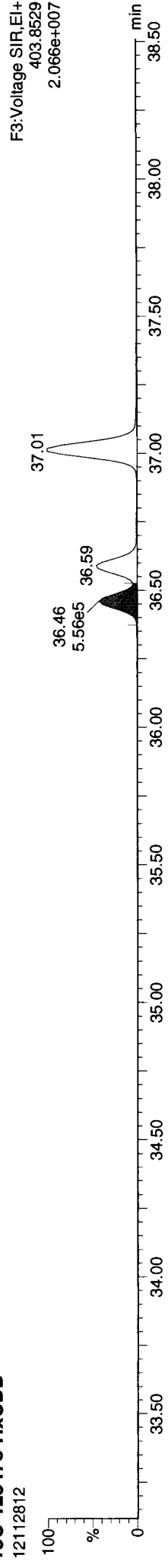
Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:29:37 Pacific Standard Time

Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

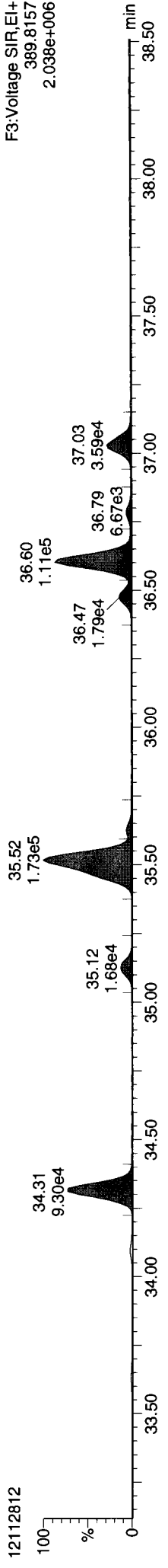
13C-123478-HxCDD  
12112812



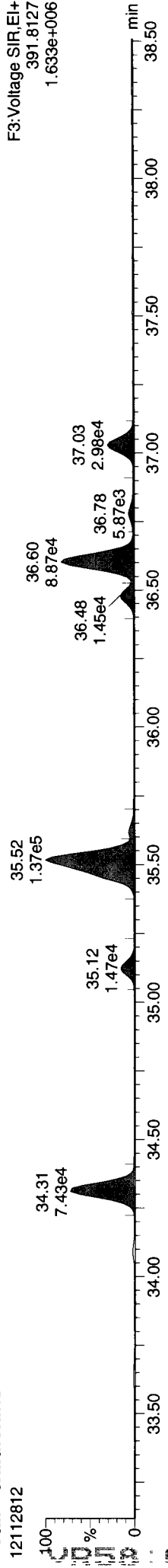
13C-123478-HxCDD  
12112812



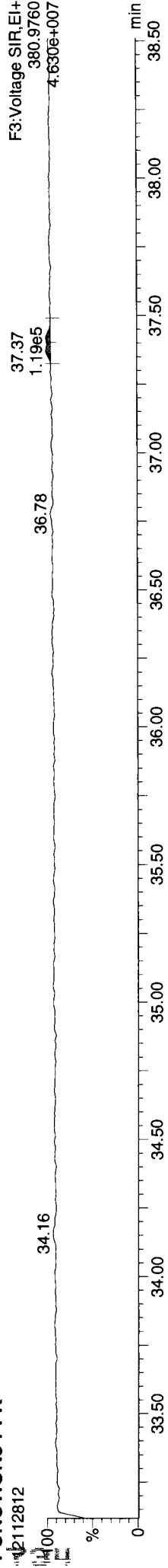
Total-hexadioxins  
12112812



Total-hexadioxins  
12112812



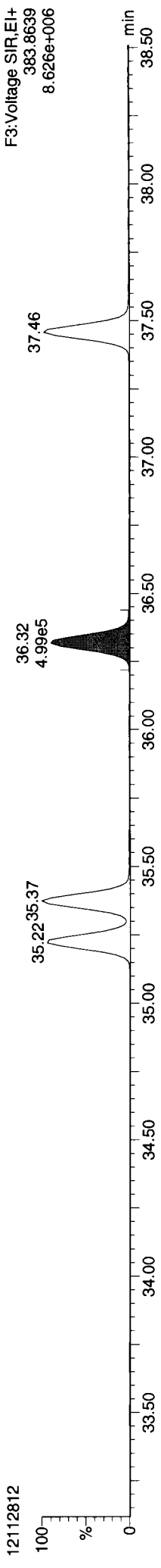
FUNCTION3 PFK  
12112812



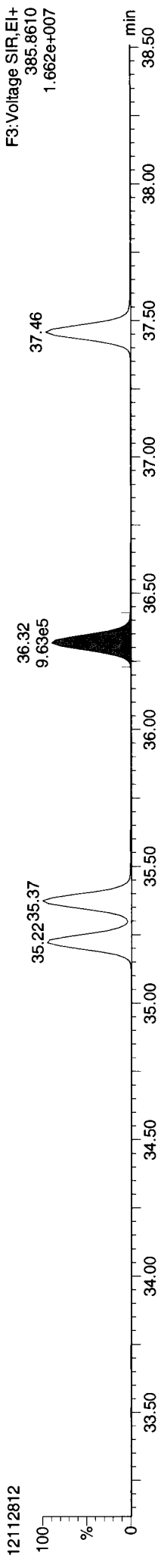
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:29:37 Pacific Standard Time

Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

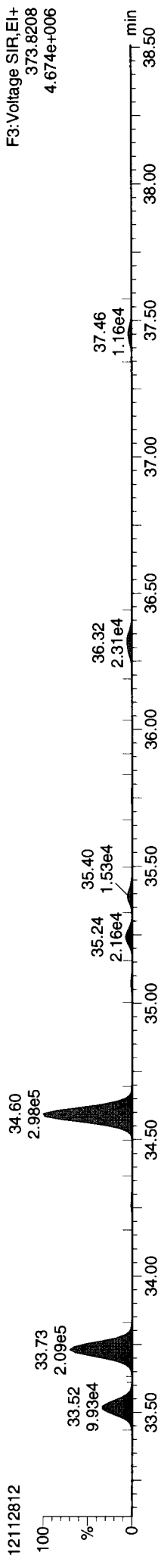
13C-234678-HxCDF



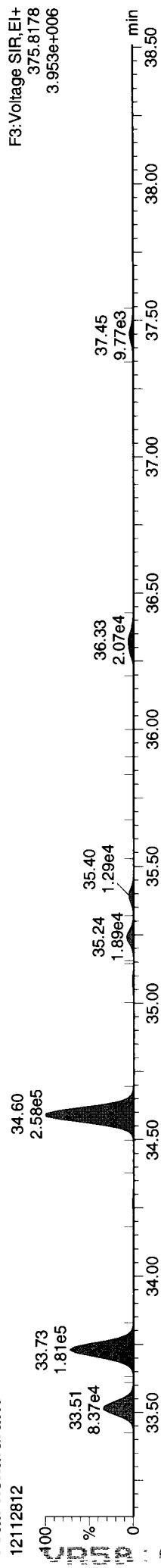
13C-234678-HxCDF



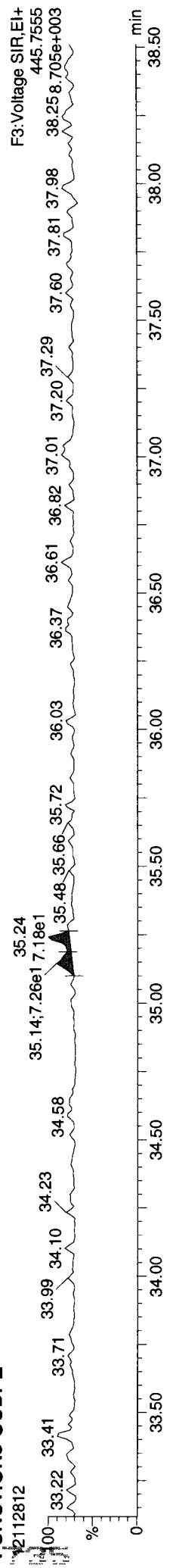
Total-hexafurans



Total-hexafurans



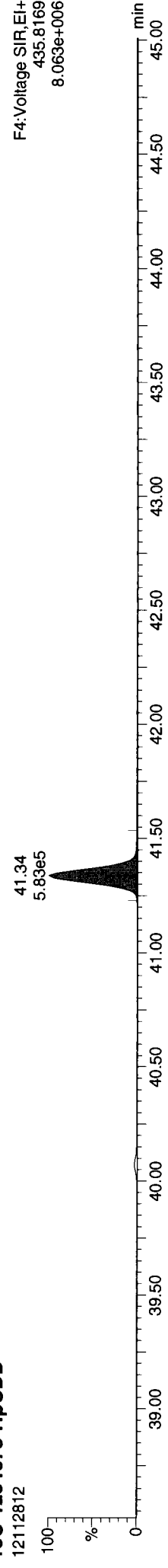
FUNCTION3 OCDPE



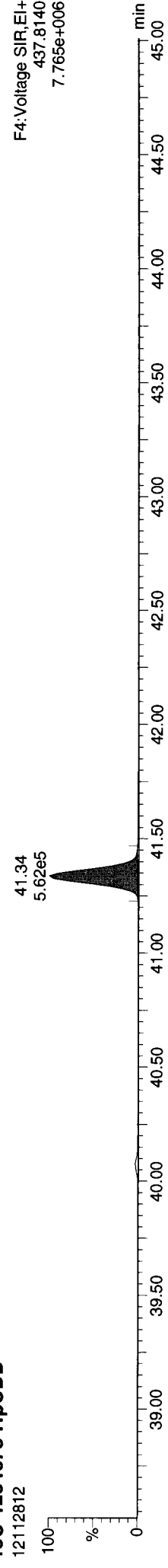
**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:29:37 Pacific Standard Time

**Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk**

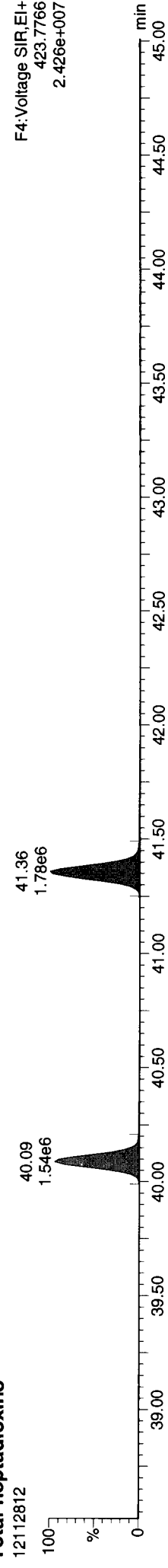
**13C-1234678-HpCDD**  
12112812



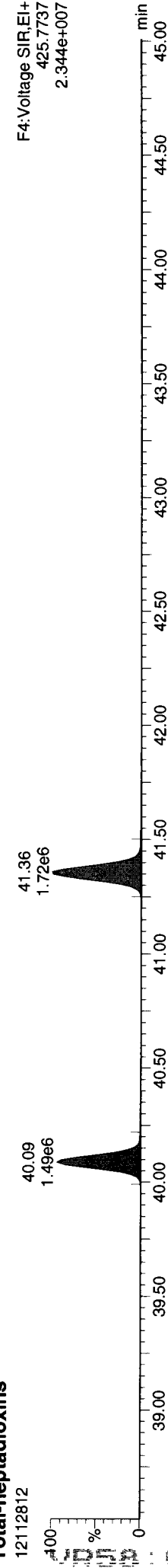
**13C-1234678-HpCDD**  
12112812



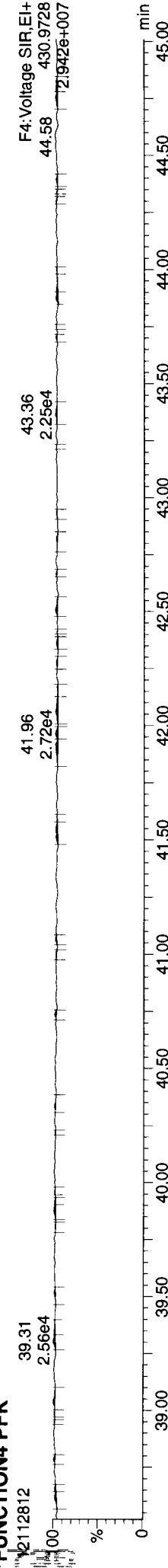
**Total-heptadioxins**  
12112812



**Total-heptadioxins**  
12112812



**FUNCTION4 PFK**  
12112812

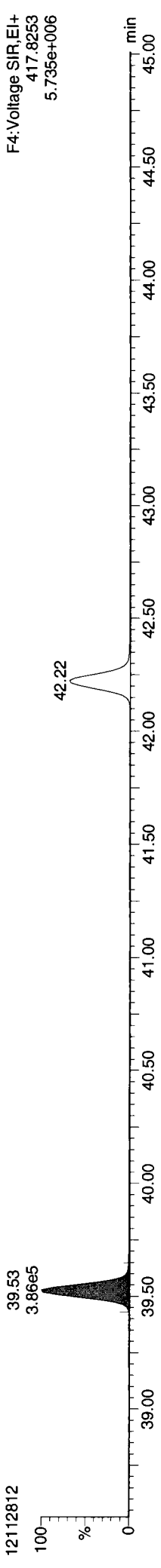




**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
**Dataset:** P:\DIOXIN8290.PRO\121128DATA2.qld  
**Last Altered:** Monday, December 10, 2012 15:27:44 Pacific Standard Time  
**Printed:** Monday, December 10, 2012 15:29:37 Pacific Standard Time

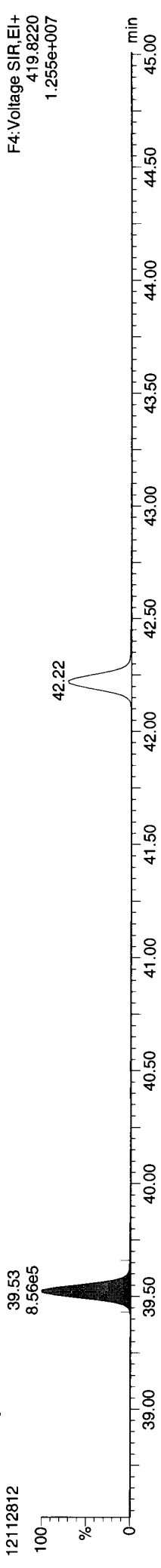
**Name:** 12112812, **Date:** 28-Nov-2012, **Time:** 19:33:45, **ID:** VR58E, **Conditions:** AUTOSPEC01, **User:** pk

**13C-1234678-HpCDF**



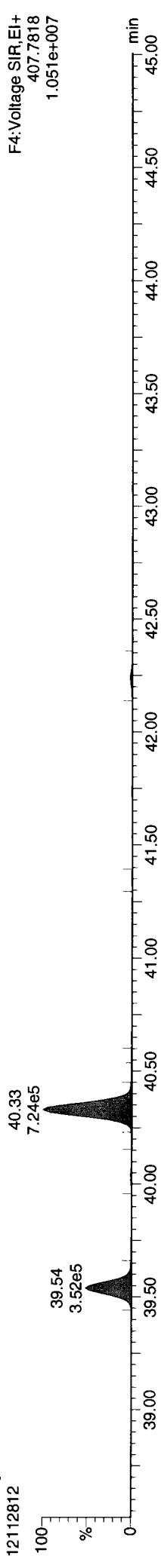
F4: Voltage SIR, EI+  
417.8253  
5.735e+006

**13C-1234678-HpCDF**



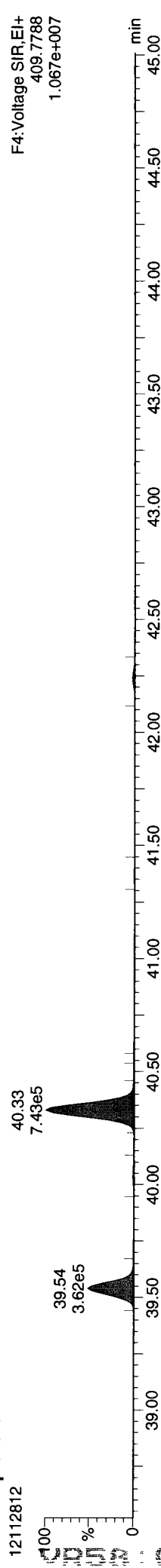
F4: Voltage SIR, EI+  
419.8220  
1.255e+007

**Total-heptafurans**



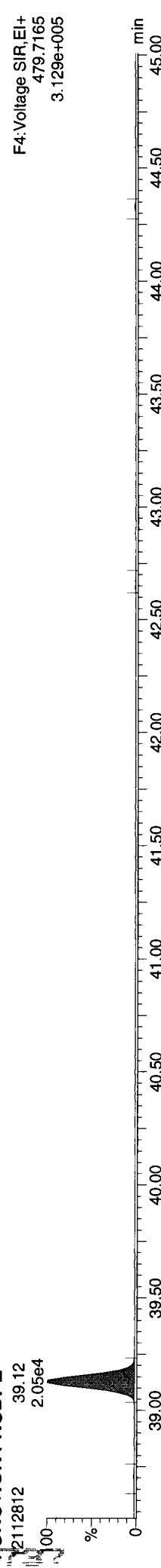
F4: Voltage SIR, EI+  
407.7818  
1.051e+007

**Total-heptafurans**



F4: Voltage SIR, EI+  
409.7788  
1.067e+007

**FUNCTION4 NCDPE**

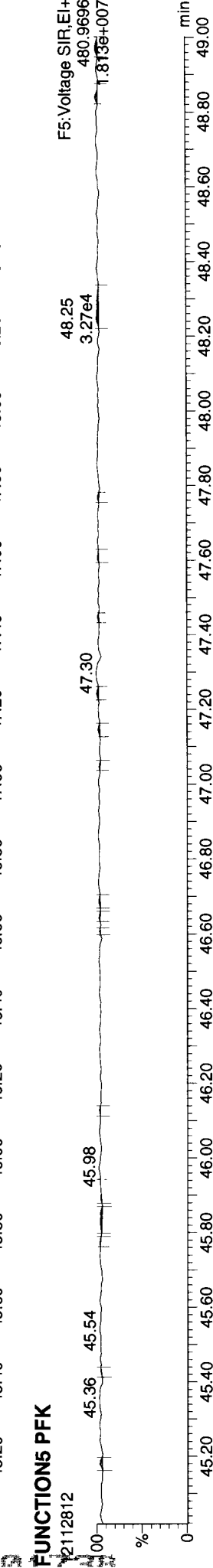
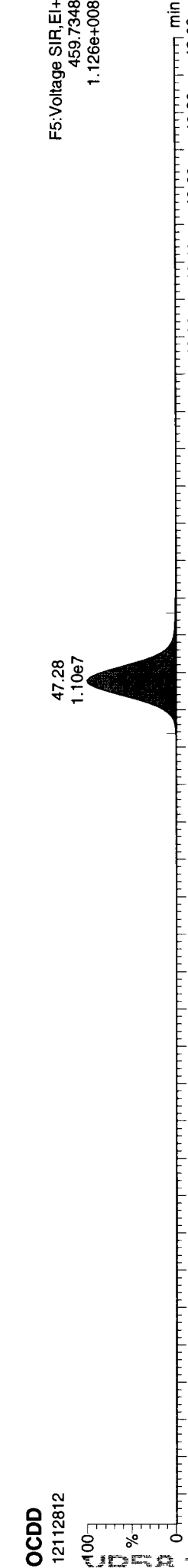
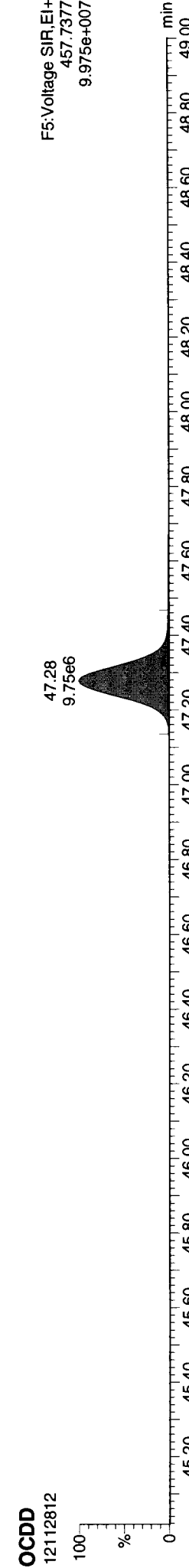
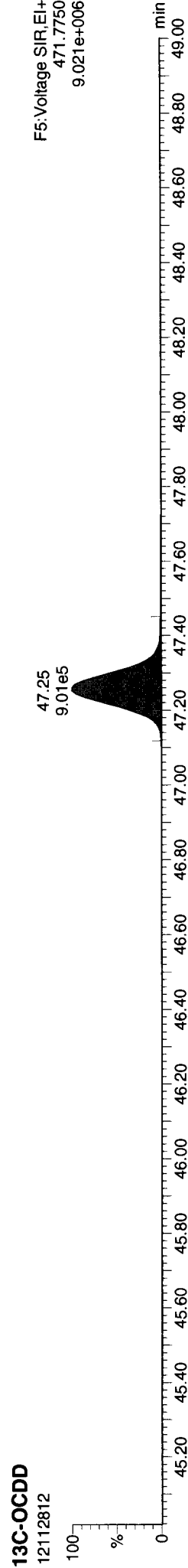
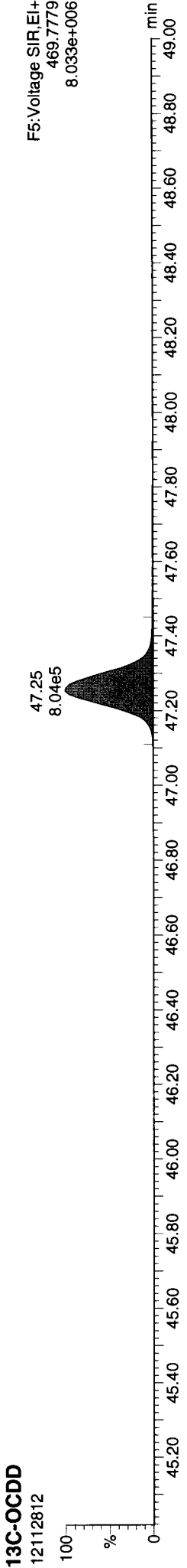


F4: Voltage SIR, EI+  
479.7165  
3.129e+005

Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:29:37 Pacific Standard Time

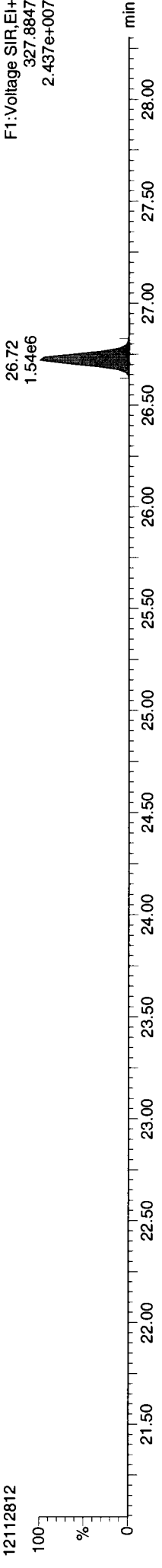
Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk



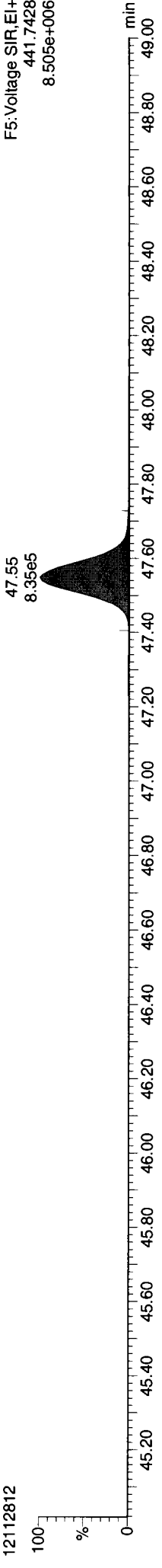
Quantify Sample Report  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:29:37 Pacific Standard Time

Name: 12112812, Date: 28-Nov-2012, Time: 19:33:45, ID: VR58E, Conditions: AUTOSPEC01, User: pk

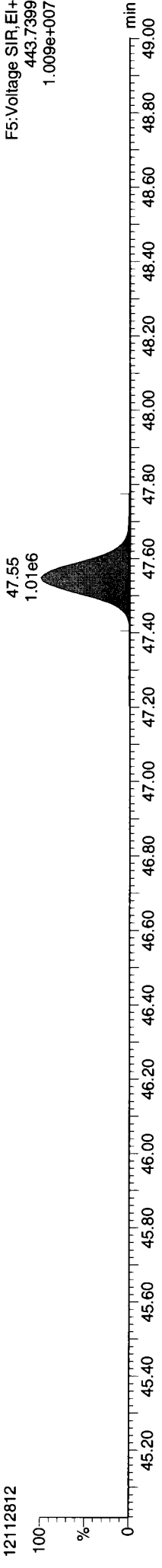
37CL-2378-TCDD



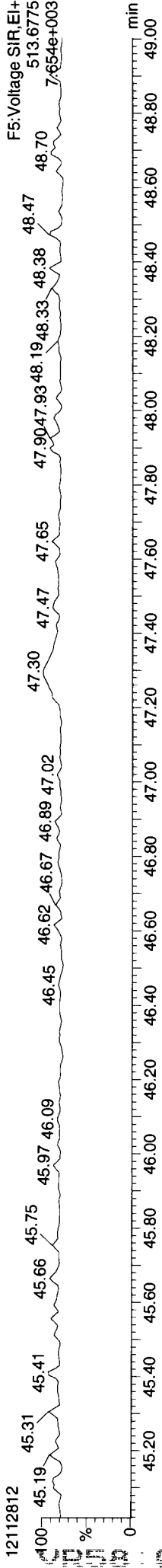
OCDF



OCDF



FUNCTION5 DCDPE



12112812

Quantify Sample Summary Report

Maslynx 4.1 SCN 714

P:\DIOXIN8290.PRO\121128DATA2.qld

Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time

Printed: Monday, December 10, 2012 15:30:03 Pacific Standard Time

*Handwritten signature*

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk

Compound	26.063	1.001	1.08e4	1.49e4	0.877	0.721	0.770	135.7	1242	2123	1.69e5	2.39e5	NO	0.549
2378-TCDF	26.063	1.001	1.08e4	1.49e4	0.877	0.721	0.770	135.7	1242	2123	1.69e5	2.39e5	NO	0.549
12378-PeCDF	30.212	1.000	1.07e4	7.35e3	0.896	1.459	1.550	136.4	1200	2331	1.64e5	1.20e5	NO	0.400
23478-PeCDF	31.560	1.001	1.37e4	8.66e3	0.926	1.576	1.550	177.3	1200	2331	2.13e5	1.34e5	NO	0.481
123478-HxCDF	35.265	1.001	2.66e4	2.26e4	1.068	1.178	1.240	112.6	3652	3220	4.11e5	3.36e5	NO	1.137
234678-HxCDF	36.383	1.000	3.16e4	2.75e4	1.037	1.150	1.240	75.2	3652	3220	2.75e5	2.37e5	NO	1.455
123678-HxCDF	35.418	1.001	2.44e4	2.06e4	1.035	1.184	1.240	99.1	3652	3220	3.62e5	2.88e5	NO	1.045
123789-HxCDF	37.468	1.000	6.35e3	5.94e3	0.987	1.069	1.240	31.0	3652	3220	1.13e5	1.10e5	NO	0.410
1234678-HpCDF	39.550	1.001	3.78e5	3.88e5	1.232	0.974	1.050	2383.1	2289	2054	5.46e6	5.71e6	NO	18.177
1234789-HpCDF	42.236	1.000	2.06e4	2.31e4	1.215	0.892	1.050	123.1	2289	2054	2.82e5	2.92e5	YES	1.176
OCDF	47.557	1.006	6.77e5	7.99e5	1.138	0.847	0.890	4666.1	1446	1398	6.75e6	7.85e6	NO	53.485
2378-TCDD	26.721	1.001	2.71e3	5.55e3	1.049	0.489	0.770	33.8	1175	1299	3.97e4	9.41e4	YES	0.154
12378-PeCDD	31.812	1.000	1.88e4	1.32e4	0.998	1.417	1.550	146.5	1826	1674	2.68e5	1.86e5	NO	0.998
123478-HxCDD	36.525	1.000	2.89e4	2.33e4	0.971	1.238	1.240	125.0	3407	4475	4.26e5	3.57e5	NO	1.539
123678-HxCDD	36.657	1.000	1.15e5	9.22e4	0.918	1.248	1.240	482.6	3407	4475	1.64e6	1.36e6	NO	6.278
123789-HxCDD	37.084	1.012	6.25e4	5.15e4	0.932	1.214	1.240	285.9	3407	4475	9.74e5	7.67e5	NO	3.447
1234678-HpCDD	41.359	1.001	2.57e6	2.49e6	1.017	1.032	1.050	3251.1	10862	6491	3.53e7	3.45e7	NO	152.863
OCDD	47.288	1.000	1.44e7	1.62e7	1.008	0.885	0.890	32142.9	4595	3716	1.48e8	1.67e8	NO	1250.717
13C-2378-TCDF	26.048	1.007	2.33e6	3.01e6	1.473	0.774	0.770	13604.0	2675	2927	3.64e7	4.72e7	NO	78.292
13C-12378-PeCDF	30.201	1.167	3.06e6	1.97e6	1.148	1.551	1.550	14662.2	3336	3485	4.89e7	3.13e7	NO	94.799
13C-23478-PeCDF	31.538	1.219	3.06e6	1.95e6	1.113	1.572	1.550	14172.9	3336	3485	4.73e7	3.03e7	NO	97.206
13C-123478-HxCDF	35.243	0.951	1.38e6	2.66e6	1.209	0.519	0.510	3821.2	5399	5387	2.06e7	3.97e7	NO	85.958
13C-123678-HxCDF	35.396	0.955	1.43e6	2.74e6	1.289	0.523	0.510	3928.4	5399	5387	2.12e7	4.03e7	NO	84.456
13C-234678-HxCDF	36.372	0.981	1.33e6	2.59e6	1.236	0.515	0.510	3531.6	5399	5387	1.91e7	3.69e7	NO	81.539
13C-123789-HxCDF	37.468	1.011	1.04e6	2.00e6	1.107	0.520	0.510	4125.1	5399	5387	2.23e7	4.31e7	NO	70.489
13C-1234678-HpCDF	39.528	1.066	1.06e6	2.36e6	1.051	0.448	0.440	5688.0	2737	3256	1.56e7	3.48e7	NO	83.575
13C-1234789-HpCDF	42.225	1.139	8.68e5	1.94e6	0.815	0.447	0.440	4062.8	2737	3256	1.11e7	2.49e7	NO	88.600
13C-1234-TCDD	25.869	0.000	2.05e6	2.58e6	1.000	0.793	0.770	9175.0	3504	2666	3.21e7	4.08e7	NO	100.000
13C-2378-TCDD	26.691	1.032	1.70e6	2.18e6	0.946	0.780	0.770	7730.3	3504	2666	2.71e7	3.46e7	NO	88.484
13C-12378-PeCDD	31.801	1.229	1.96e6	1.25e6	0.721	1.571	1.550	13945.5	2196	1686	3.06e7	1.96e7	NO	96.402
13C-123478-HxCDD	36.514	0.985	1.95e6	1.54e6	0.991	1.265	1.240	11215.4	2574	2772	2.89e7	2.28e7	NO	90.622
13C-123678-HxCDD	36.646	0.988	2.01e6	1.59e6	1.025	1.262	1.240	11278.1	2574	2772	2.90e7	2.31e7	NO	90.133
13C-1234678-HpCDD	41.337	1.115	1.67e6	1.59e6	0.866	1.050	1.050	5996.3	3773	3273	2.26e7	2.15e7	NO	96.496
13C-OCDD	47.270	1.275	2.29e6	2.56e6	0.769	0.893	0.890	9870.2	2387	1937	2.36e7	2.63e7	NO	162.050

Quantity Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:03 Pacific Standard Time

Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk

	13C-123789-HxCDD	37.073	0.000	2.16e6	1.73e6	1.000	1.252	1.240	12390.9	2574	2772	3.19e7	2.56e7	NO	
Total-tetrafurans			1.27e5		0.877				1242			1.95e6		7.726	100.000
Total-penta1			2.30e5						780			3.51e6		8.122	6.574
Total-pentafurans			1.34e5		0.911				1200			2.00e6		6.399	8.122
Total-hexafurans			6.80e5		1.032				3652			1.02e7		32.193	4.907
Total-heptafurans			1.10e6		1.223				2289			1.58e7		57.856	31.955
Total-Furans			2.95e6		1.041				1242			4.02e7		165.781	56.638
Total-tetraioxins			3.71e4		1.049				1175			5.86e5		2.649	161.681
Total-pentadioxins			1.27e5		0.998				1826			1.66e6		6.776	2.141
Total-hexadioxins			9.41e5		0.940				3407			1.25e7		51.200	6.552
Total-heptadioxins			7.43e6		1.017				10862			1.07e8		440.648	51.200
Total-Dioxins			6.19e7		0.985				1175			8.43e8		165.781	440.648
Total-TEQ			6.49e7						1175			8.83e8		331.562	161.681
37CL-2378-TCDD		26.706	1.032		1.044				13163.8			2.84e7		37.418	323.363
FUNCTION1 PFK			4.83e6						735370			4.79e7			
FUNCTION2 PFK			1.98e6						231686			5.27e6			0.000
FUNCTION3 PFK			1.75e7						516757			6.64e7			0.000
FUNCTION4 PFK			6.87e5						337620			8.25e6			
FUNCTION5 PFK			1.47e4						306484			5.58e5			
FUNCTION1 HXCDPE			7.76e2						800			1.14e4			0.000
FUNCTION1 HPCDPE			1.17e3						1071			2.63e4			0.000
FUNCTION2 HPCDPE			8.24e2						1277			2.20e4			0.000
FUNCTION3 OCDPE			0.00e0						728			0.00e0			0.000
FUNCTION4 NCDPE			2.81e4						808			4.83e5			0.000
FUNCTION5 DCDPE			7.38e1						335			1.01e3			0.000

12112813

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:30:03 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
 Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

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TF

#	Name	Mass	Area	Height	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
35	Total-tetrafurans	303.9016	24.97	29238.183	0.877	0.625	0.625	0.69	0.77	NO	143.0	
35	Total-tetrafurans	303.9016	24.82	8058.502	0.877	0.172	0.172	0.71	0.77	NO	49.3	
35	Total-tetrafurans	303.9016	24.73	22188.747	0.877	0.474	0.474	0.74	0.77	NO	104.4	
35	Total-tetrafurans	303.9016	24.55	0.000	0.877	0.000	0.006	1.29	0.77	YES	2.9	
35	Total-tetrafurans	303.9016	24.30	0.000	0.877	0.000	0.242	0.59	0.77	YES	64.8	
35	Total-tetrafurans	303.9016	24.17	14151.176	0.877	0.303	0.303	0.66	0.77	NO	73.3	
35	Total-tetrafurans	303.9016	24.06	21028.303	0.877	0.450	0.450	0.69	0.77	NO	114.0	
35	Total-tetrafurans	303.9016	23.91	5731.521	0.877	0.123	0.123	0.71	0.77	NO	38.8	
35	Total-tetrafurans	303.9016	23.82	18491.700	0.877	0.395	0.395	0.67	0.77	NO	88.2	
35	Total-tetrafurans	303.9016	23.72	11770.586	0.877	0.252	0.252	0.87	0.77	NO	59.9	
35	Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.343	0.63	0.77	YES	52.5	
35	Total-tetrafurans	303.9016	23.42	64074.681	0.877	1.370	1.370	0.66	0.77	NO	308.7	
35	Total-tetrafurans	303.9016	22.84	11597.377	0.877	0.248	0.248	0.74	0.77	NO	64.4	
35	Total-tetrafurans	303.9016	22.58	8058.073	0.877	0.172	0.172	0.70	0.77	NO	46.3	
35	Total-tetrafurans	303.9016	27.50	8487.176	0.877	0.181	0.181	0.81	0.77	NO	37.3	
35	Total-tetrafurans	303.9016	26.60	423.422	0.877	0.009	0.009	0.84	0.77	NO	3.5	
35	Total-tetrafurans	303.9016	26.29	28544.751	0.877	0.610	0.610	0.74	0.77	NO	144.6	
35	Total-tetrafurans	303.9016	26.20	12188.605	0.877	0.261	0.261	0.66	0.77	NO	59.2	
1	2378-TCDF	303.9016	26.06	25664.189	0.877	0.549	0.549	0.72	0.77	NO	135.7	
35	Total-tetrafurans	303.9016	25.84	0.000	0.877	0.000	0.292	0.63	0.77	YES	40.9	
35	Total-tetrafurans	303.9016	25.69	1011.493	0.877	0.022	0.022	0.73	0.77	NO	7.1	
35	Total-tetrafurans	303.9016	25.57	0.000	0.877	0.000	0.109	0.60	0.77	YES	29.1	
35	Total-tetrafurans	303.9016	25.39	0.000	0.877	0.000	0.160	0.65	0.77	YES	38.0	
35	Total-tetrafurans	303.9016	25.15	16779.445	0.877	0.359	0.359	0.77	0.77	NO	89.8	

PP

#	Name	Mass	Area	Height	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
36	Total-penta1	339.8597	27.48	373931.235		8.122	8.122	1.59	1.55	NO	4493.2

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
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PF

37	Total-pentafurans	339.8597	29.75	6748.342	0.911	0.148	0.148	1.48	1.55	NO	56.5
37	Total-pentafurans	339.8597	29.64	0.000	0.911	0.000	0.116	1.80	1.55	YES	38.8
37	Total-pentafurans	339.8597	29.44	0.000	0.911	0.000	0.038	0.97	1.55	YES	15.2
37	Total-pentafurans	339.8597	29.14	68740.789	0.911	1.503	1.503	1.41	1.55	NO	540.6
37	Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.807	1.84	1.55	YES	361.9
37	Total-pentafurans	339.8597	28.95	23320.194	0.911	0.510	0.510	1.46	1.55	NO	142.3
37	Total-pentafurans	339.8597	28.85	0.000	0.911	0.000	0.059	2.14	1.55	YES	39.4
37	Total-pentafurans	339.8597	32.58	0.000	0.911	0.000	0.066	1.21	1.55	YES	28.0
3	23478-PeCDF	339.8597	31.56	22312.566	0.926	0.481	0.481	1.58	1.55	NO	177.3
37	Total-pentafurans	339.8597	31.41	23185.198	0.911	0.507	0.507	1.65	1.55	NO	194.7
37	Total-pentafurans	339.8597	31.30	12177.358	0.911	0.266	0.266	1.53	1.55	NO	100.4
37	Total-pentafurans	339.8597	31.04	0.000	0.911	0.000	0.021	2.22	1.55	YES	10.2
37	Total-pentafurans	339.8597	30.52	6082.048	0.911	0.133	0.133	1.62	1.55	NO	50.2
37	Total-pentafurans	339.8597	30.41	0.000	0.911	0.000	0.384	1.28	1.55	YES	132.0
2	12378-PeCDF	339.8597	30.21	18059.108	0.896	0.400	0.400	1.46	1.55	NO	136.4
37	Total-pentafurans	339.8597	29.86	43912.955	0.911	0.960	0.960	1.42	1.55	NO	264.7

HF

4	123478-HxCDF	373.8208	35.26	49150.027	1.068	1.137	1.137	1.18	1.24	NO	112.6
38	Total-hexafurans	373.8208	35.09	12507.266	1.032	0.320	0.320	1.29	1.24	NO	29.0
38	Total-hexafurans	373.8208	34.61	456164.610	1.032	11.656	11.656	1.19	1.24	NO	1032.6
38	Total-hexafurans	373.8208	34.28	0.000	1.032	0.000	0.187	1.62	1.24	YES	19.1
38	Total-hexafurans	373.8208	34.01	0.000	1.032	0.000	0.030	1.62	1.24	YES	4.6
38	Total-hexafurans	373.8208	33.74	451424.844	1.032	11.535	11.535	1.17	1.24	NO	998.3
38	Total-hexafurans	373.8208	33.52	166838.844	1.032	4.263	4.263	1.16	1.24	NO	401.1
7	123789-HxCDF	373.8208	37.47	12293.753	0.987	0.410	0.410	1.07	1.24	NO	31.0
5	234678-HxCDF	373.8208	36.38	59173.096	1.037	1.455	1.455	1.15	1.24	NO	75.2
38	Total-hexafurans	373.8208	35.99	1675.853	1.032	0.043	0.043	1.20	1.24	NO	5.4
38	Total-hexafurans	373.8208	35.78	3582.820	1.032	0.092	0.092	1.31	1.24	NO	11.0
38	Total-hexafurans	373.8208	35.62	0.000	1.032	0.000	0.021	1.69	1.24	YES	3.9
6	123678-HxCDF	373.8208	35.42	45085.860	1.035	1.045	1.045	1.18	1.24	NO	99.1

HPF

9	1234789-HpCDF	407.7818	42.24	43616.561	1.215	0.000	1.176	0.89	1.05	YES	123.1
39	Total-heptafurans	407.7818	41.38	0.000	1.223	0.000	0.042	0.61	1.05	YES	5.1
39	Total-heptafurans	407.7818	40.33	1443672.501	1.223	37.882	37.882	0.98	1.05	NO	4458.5
39	Total-heptafurans	407.7818	40.04	22042.062	1.223	0.578	0.578	0.93	1.05	NO	50.1
8	1234678-HpCDF	407.7818	39.55	765775.000	1.232	18.177	18.177	0.97	1.05	NO	2383.1

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Furans,TF,PP,PF,HF,HPF,OF

Peak #	Compound	Area	Height	Retention	Abundance	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio	Ratio
35	Total-tetrafurans	303.9016	24.97	29238.183	0.877	0.625	0.625	0.69	0.77	NO	143.0	
35	Total-tetrafurans	303.9016	24.82	8058.502	0.877	0.172	0.172	0.71	0.77	NO	49.3	
35	Total-tetrafurans	303.9016	24.73	22188.747	0.877	0.474	0.474	0.74	0.77	NO	104.4	
35	Total-tetrafurans	303.9016	24.55	0.000	0.877	0.000	0.006	1.29	0.77	YES	2.9	
35	Total-tetrafurans	303.9016	24.30	0.000	0.877	0.000	0.242	0.59	0.77	YES	64.8	
35	Total-tetrafurans	303.9016	24.17	14151.176	0.877	0.303	0.303	0.66	0.77	NO	73.3	
35	Total-tetrafurans	303.9016	24.06	21028.303	0.877	0.450	0.450	0.69	0.77	NO	114.0	
35	Total-tetrafurans	303.9016	23.91	5731.521	0.877	0.123	0.123	0.71	0.77	NO	38.8	
35	Total-tetrafurans	303.9016	23.82	18491.700	0.877	0.395	0.395	0.67	0.77	NO	88.2	
35	Total-tetrafurans	303.9016	23.72	11770.586	0.877	0.252	0.252	0.87	0.77	NO	59.9	
35	Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.343	0.63	0.77	YES	52.5	
35	Total-tetrafurans	303.9016	23.42	64074.681	0.877	1.370	1.370	0.66	0.77	NO	308.7	
35	Total-tetrafurans	303.9016	22.84	11597.377	0.877	0.248	0.248	0.74	0.77	NO	64.4	
35	Total-tetrafurans	303.9016	22.58	8058.073	0.877	0.172	0.172	0.70	0.77	NO	46.3	
35	Total-tetrafurans	303.9016	27.50	8487.176	0.877	0.181	0.181	0.81	0.77	NO	37.3	
35	Total-tetrafurans	303.9016	26.60	423.422	0.877	0.009	0.009	0.84	0.77	NO	3.5	
35	Total-tetrafurans	303.9016	26.29	28544.751	0.877	0.610	0.610	0.74	0.77	NO	144.6	
35	Total-tetrafurans	303.9016	26.20	12188.605	0.877	0.261	0.261	0.66	0.77	NO	59.2	
1	2378-TCDF	303.9016	26.06	25664.189	0.877	0.549	0.549	0.72	0.77	NO	135.7	
35	Total-tetrafurans	303.9016	25.84	0.000	0.877	0.000	0.292	0.63	0.77	YES	40.9	
35	Total-tetrafurans	303.9016	25.69	1011.493	0.877	0.022	0.022	0.73	0.77	NO	7.1	
35	Total-tetrafurans	303.9016	25.57	0.000	0.877	0.000	0.109	0.60	0.77	YES	29.1	
35	Total-tetrafurans	303.9016	25.39	0.000	0.877	0.000	0.160	0.65	0.77	YES	38.0	
35	Total-tetrafurans	303.9016	25.15	16779.445	0.877	0.359	0.359	0.77	0.77	NO	89.8	
37	Total-pentafurans	339.8597	29.75	6748.342	0.911	0.148	0.148	1.48	1.55	NO	56.5	
37	Total-pentafurans	339.8597	29.64	0.000	0.911	0.000	0.116	1.80	1.55	YES	38.8	
37	Total-pentafurans	339.8597	29.44	0.000	0.911	0.000	0.038	0.97	1.55	YES	15.2	
37	Total-pentafurans	339.8597	29.14	68740.789	0.911	1.503	1.503	1.41	1.55	NO	540.6	
37	Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.807	1.84	1.55	YES	361.9	
37	Total-pentafurans	339.8597	28.95	23320.194	0.911	0.510	0.510	1.46	1.55	NO	142.3	
37	Total-pentafurans	339.8597	28.85	0.000	0.911	0.000	0.059	2.14	1.55	YES	39.4	
37	Total-pentafurans	339.8597	32.58	0.000	0.911	0.000	0.066	1.21	1.55	YES	28.0	
3	23478-PeCDF	339.8597	31.56	22312.566	0.926	0.481	0.481	1.58	1.55	NO	177.3	
37	Total-pentafurans	339.8597	31.41	23185.198	0.911	0.507	0.507	1.65	1.55	NO	194.7	
37	Total-pentafurans	339.8597	31.30	12177.358	0.911	0.266	0.266	1.53	1.55	NO	100.4	
37	Total-pentafurans	339.8597	31.04	0.000	0.911	0.000	0.021	2.22	1.55	YES	10.2	
37	Total-pentafurans	339.8597	30.52	6082.048	0.911	0.133	0.133	1.62	1.55	NO	50.2	
37	Total-pentafurans	339.8597	30.41	0.000	0.911	0.000	0.384	1.28	1.55	YES	132.0	
2	12378-PeCDF	339.8597	30.21	18059.108	0.896	0.400	0.400	1.46	1.55	NO	136.4	
37	Total-pentafurans	339.8597	29.86	43912.955	0.911	0.960	0.960	1.42	1.55	NO	264.7	
4	123478-HxCDF	373.8208	35.26	49150.027	1.068	1.137	1.137	1.18	1.24	NO	112.6	
38	Total-hexafurans	373.8208	35.09	12507.266	1.032	0.320	0.320	1.29	1.24	NO	29.0	
38	Total-hexafurans	373.8208	34.61	456164.610	1.032	11.656	11.656	1.19	1.24	NO	1032.6	
38	Total-hexafurans	373.8208	34.28	0.000	1.032	0.000	0.187	1.62	1.24	YES	19.1	
38	Total-hexafurans	373.8208	34.01	0.000	1.032	0.000	0.030	1.62	1.24	YES	4.6	
38	Total-hexafurans	373.8208	33.74	451424.844	1.032	11.535	11.535	1.17	1.24	NO	998.3	
38	Total-hexafurans	373.8208	33.52	166838.844	1.032	4.263	4.263	1.16	1.24	NO	401.1	
7	123789-HxCDF	373.8208	37.47	12293.753	0.987	0.410	0.410	1.07	1.24	NO	31.0	
5	234678-HxCDF	373.8208	36.38	59173.096	1.037	1.455	1.455	1.15	1.24	NO	75.2	



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Furans,TF,PP,PF,HF,HPF,OF

ID	Name	Total	FT	Abn-Peak	Ratio	PO	EMPC	1st Peak	Ratio	Ratio	Ratio	Ratio
38	Total-hexafurans	373.8208	35.99	1675.853	1.032	0.043	0.043	1.20	1.24	NO	5.4	
38	Total-hexafurans	373.8208	35.78	3582.820	1.032	0.092	0.092	1.31	1.24	NO	11.0	
38	Total-hexafurans	373.8208	35.62	0.000	1.032	0.000	0.021	1.69	1.24	YES	3.9	
6	123678-HxCDF	373.8208	35.42	45085.860	1.035	1.045	1.045	1.18	1.24	NO	99.1	
9	1234789-HpCDF	407.7818	42.24	43616.561	1.215	0.000	1.176	0.89	1.05	YES	123.1	
39	Total-heptafurans	407.7818	41.38	0.000	1.223	0.000	0.042	0.61	1.05	YES	5.1	
39	Total-heptafurans	407.7818	40.33	1443672.501	1.223	37.882	37.882	0.98	1.05	NO	4458.5	
39	Total-heptafurans	407.7818	40.04	22042.062	1.223	0.578	0.578	0.93	1.05	NO	50.1	
8	1234678-HpCDF	407.7818	39.55	765775.000	1.232	18.177	18.177	0.97	1.05	NO	2383.1	
10	OCDF	441.7428	47.56	1476051.500	1.138	53.485	53.485	0.85	0.89	NO	4666.1	
36	Total-penta1	339.8597	27.48	373931.235		8.122	8.122	1.59	1.55	NO	4493.2	

TD

ID	Name	Total	FT	Abn-Peak	Ratio	PO	EMPC	1st Peak	Ratio	Ratio	Ratio	Ratio
41	Total-tetradoxins	319.8965	24.12	17811.280	1.049	0.438	0.438	0.76	0.77	NO	103.8	
41	Total-tetradoxins	319.8965	23.85	24923.701	1.049	0.613	0.613	0.71	0.77	NO	143.9	
41	Total-tetradoxins	319.8965	27.30	1819.349	1.049	0.045	0.045	0.68	0.77	NO	9.0	
41	Total-tetradoxins	319.8965	26.83	4891.855	1.049	0.120	0.120	0.79	0.77	NO	25.0	
11	2378-TCDD	319.8965	26.72	8265.206	1.049	0.000	0.154	0.49	0.77	YES	33.8	
41	Total-tetradoxins	319.8965	26.32	0.000	1.049	0.000	0.168	1.05	0.77	YES	36.9	
41	Total-tetradoxins	319.8965	26.05	0.000	1.049	0.000	0.030	1.86	0.77	YES	16.0	
41	Total-tetradoxins	319.8965	25.90	5210.883	1.049	0.128	0.128	0.69	0.77	NO	25.4	
41	Total-tetradoxins	319.8965	25.67	4255.616	1.049	0.105	0.105	0.82	0.77	NO	22.4	
41	Total-tetradoxins	319.8965	25.60	2348.825	1.049	0.058	0.058	0.67	0.77	NO	12.9	
41	Total-tetradoxins	319.8965	25.33	11607.071	1.049	0.286	0.286	0.78	0.77	NO	68.8	
41	Total-tetradoxins	319.8965	25.05	0.000	1.049	0.000	0.156	0.93	0.77	YES	41.1	
41	Total-tetradoxins	319.8965	24.84	7515.328	1.049	0.185	0.185	0.80	0.77	NO	49.0	
41	Total-tetradoxins	319.8965	24.33	6619.693	1.049	0.163	0.163	0.70	0.77	NO	38.5	

PD

ID	Name	Total	FT	Abn-Peak	Ratio	PO	EMPC	1st Peak	Ratio	Ratio	Ratio	Ratio
42	Total-pentadioxins	355.8546	32.22	0.000	0.998	0.000	0.223	1.26	1.55	YES	32.7	
12	12378-PeCDD	355.8546	31.81	32011.174	0.998	0.998	0.998	1.42	1.55	NO	146.5	
42	Total-pentadioxins	355.8546	31.14	7036.345	0.998	0.219	0.219	1.40	1.55	NO	29.9	
42	Total-pentadioxins	355.8546	30.74	23704.087	0.998	0.739	0.739	1.45	1.55	NO	84.4	
42	Total-pentadioxins	355.8546	30.58	19495.333	0.998	0.608	0.608	1.55	1.55	NO	96.8	
42	Total-pentadioxins	355.8546	30.44	25945.765	0.998	0.809	0.809	1.58	1.55	NO	132.6	
42	Total-pentadioxins	355.8546	30.22	24248.870	0.998	0.756	0.756	1.54	1.55	NO	121.0	
42	Total-pentadioxins	355.8546	29.61	18799.426	0.998	0.586	0.586	1.58	1.55	NO	105.9	
42	Total-pentadioxins	355.8546	29.14	59014.188	0.998	1.839	1.839	1.53	1.55	NO	189.4	

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HD

15	123789-HxCDD	389.8157	37.08	113941.878	0.932	3.447	3.447	1.21	1.24	NO	285.9
43	Total-hexadioxins	389.8157	36.84	39668.082	0.940	1.190	1.190	1.17	1.24	NO	88.9
14	123678-HxCDD	389.8157	36.66	207243.415	0.918	6.278	6.278	1.25	1.24	NO	482.6
13	123478-HxCDD	389.8157	36.53	52225.175	0.971	1.539	1.539	1.24	1.24	NO	125.0
43	Total-hexadioxins	389.8157	35.66	80703.211	0.940	2.420	2.420	1.25	1.24	NO	203.6
43	Total-hexadioxins	389.8157	35.54	572178.359	0.940	17.161	17.161	1.25	1.24	NO	891.2
43	Total-hexadioxins	389.8157	35.14	108326.730	0.940	3.249	3.249	1.20	1.24	NO	263.0
43	Total-hexadioxins	389.8157	34.32	530654.703	0.940	15.916	15.916	1.22	1.24	NO	1324.3

HPD

16	1234678-HpCDD	423.7766	41.36	5057669.500	1.017	152.863	152....	1.03	1.05	NO	3251.1
44	Total-heptadioxins	423.7766	40.10	9521761.500	1.017	287.785	287....	1.04	1.05	NO	6632.9

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TotalTEQ,Furans,Dioxins

Sample	Concentration	TEQ	Furans	Dioxins	TEQ/Furans	Dioxins/Furans	TEQ/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins
35 Total-tetrafurans	303.9016	24.97	29238.183	0.877	0.625	0.625	0.69	0.77	NO	143.0	
35 Total-tetrafurans	303.9016	24.82	8058.502	0.877	0.172	0.172	0.71	0.77	NO	49.3	
35 Total-tetrafurans	303.9016	24.73	22188.747	0.877	0.474	0.474	0.74	0.77	NO	104.4	
35 Total-tetrafurans	303.9016	24.55	0.000	0.877	0.000	0.006	1.29	0.77	YES	2.9	
35 Total-tetrafurans	303.9016	24.30	0.000	0.877	0.000	0.242	0.59	0.77	YES	64.8	
35 Total-tetrafurans	303.9016	24.17	14151.176	0.877	0.303	0.303	0.66	0.77	NO	73.3	
35 Total-tetrafurans	303.9016	24.06	21028.303	0.877	0.450	0.450	0.69	0.77	NO	114.0	
35 Total-tetrafurans	303.9016	23.91	5731.521	0.877	0.123	0.123	0.71	0.77	NO	38.8	
35 Total-tetrafurans	303.9016	23.82	18491.700	0.877	0.395	0.395	0.67	0.77	NO	88.2	
35 Total-tetrafurans	303.9016	23.72	11770.586	0.877	0.252	0.252	0.87	0.77	NO	59.9	
35 Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.343	0.63	0.77	YES	52.5	
35 Total-tetrafurans	303.9016	23.42	64074.681	0.877	1.370	1.370	0.66	0.77	NO	308.7	
35 Total-tetrafurans	303.9016	22.84	11597.377	0.877	0.248	0.248	0.74	0.77	NO	64.4	
35 Total-tetrafurans	303.9016	22.58	8058.073	0.877	0.172	0.172	0.70	0.77	NO	46.3	
35 Total-tetrafurans	303.9016	27.50	8487.176	0.877	0.181	0.181	0.81	0.77	NO	37.3	
35 Total-tetrafurans	303.9016	26.60	423.422	0.877	0.009	0.009	0.84	0.77	NO	3.5	
35 Total-tetrafurans	303.9016	26.29	28544.751	0.877	0.610	0.610	0.74	0.77	NO	144.6	
35 Total-tetrafurans	303.9016	26.20	12188.605	0.877	0.261	0.261	0.66	0.77	NO	59.2	
1 2378-TCDF	303.9016	26.06	25664.189	0.877	0.549	0.549	0.72	0.77	NO	135.7	
35 Total-tetrafurans	303.9016	25.84	0.000	0.877	0.000	0.292	0.63	0.77	YES	40.9	
35 Total-tetrafurans	303.9016	25.69	1011.493	0.877	0.022	0.022	0.73	0.77	NO	7.1	
35 Total-tetrafurans	303.9016	25.57	0.000	0.877	0.000	0.109	0.60	0.77	YES	29.1	
35 Total-tetrafurans	303.9016	25.39	0.000	0.877	0.000	0.160	0.65	0.77	YES	38.0	
35 Total-tetrafurans	303.9016	25.15	16779.445	0.877	0.359	0.359	0.77	0.77	NO	89.8	
37 Total-pentafurans	339.8597	29.75	6748.342	0.911	0.148	0.148	1.48	1.55	NO	56.5	
37 Total-pentafurans	339.8597	29.64	0.000	0.911	0.000	0.116	1.80	1.55	YES	38.8	
37 Total-pentafurans	339.8597	29.44	0.000	0.911	0.000	0.038	0.97	1.55	YES	15.2	
37 Total-pentafurans	339.8597	29.14	68740.789	0.911	1.503	1.503	1.41	1.55	NO	540.6	
37 Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.807	1.84	1.55	YES	361.9	
37 Total-pentafurans	339.8597	28.95	23320.194	0.911	0.510	0.510	1.46	1.55	NO	142.3	
37 Total-pentafurans	339.8597	28.85	0.000	0.911	0.000	0.059	2.14	1.55	YES	39.4	
37 Total-pentafurans	339.8597	32.58	0.000	0.911	0.000	0.066	1.21	1.55	YES	28.0	
3 23478-PeCDF	339.8597	31.56	22312.566	0.926	0.481	0.481	1.58	1.55	NO	177.3	
37 Total-pentafurans	339.8597	31.41	23185.198	0.911	0.507	0.507	1.65	1.55	NO	194.7	
37 Total-pentafurans	339.8597	31.30	12177.358	0.911	0.266	0.266	1.53	1.55	NO	100.4	
37 Total-pentafurans	339.8597	31.04	0.000	0.911	0.000	0.021	2.22	1.55	YES	10.2	
37 Total-pentafurans	339.8597	30.52	6082.048	0.911	0.133	0.133	1.62	1.55	NO	50.2	
37 Total-pentafurans	339.8597	30.41	0.000	0.911	0.000	0.384	1.28	1.55	YES	132.0	
2 12378-PeCDF	339.8597	30.21	18059.108	0.896	0.400	0.400	1.46	1.55	NO	136.4	
37 Total-pentafurans	339.8597	29.86	43912.955	0.911	0.960	0.960	1.42	1.55	NO	264.7	
4 123478-HxCDF	373.8208	35.26	49150.027	1.068	1.137	1.137	1.18	1.24	NO	112.6	
38 Total-hexa-furans	373.8208	35.09	12507.266	1.032	0.320	0.320	1.29	1.24	NO	29.0	
38 Total-hexa-furans	373.8208	34.61	456164.610	1.032	11.656	11.656	1.19	1.24	NO	1032.6	
38 Total-hexa-furans	373.8208	34.28	0.000	1.032	0.000	0.187	1.62	1.24	YES	19.1	
38 Total-hexa-furans	373.8208	34.01	0.000	1.032	0.000	0.030	1.62	1.24	YES	4.6	
38 Total-hexa-furans	373.8208	33.74	451424.844	1.032	11.535	11.535	1.17	1.24	NO	998.3	
38 Total-hexa-furans	373.8208	33.52	166838.844	1.032	4.263	4.263	1.16	1.24	NO	401.1	
7 123789-HxCDF	373.8208	37.47	12293.753	0.987	0.410	0.410	1.07	1.24	NO	31.0	
5 234678-HxCDF	373.8208	36.38	59173.096	1.037	1.455	1.455	1.15	1.24	NO	75.2	

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TotalTEQ,Furans,Dioxins

38	Total-hexafurans	373.8208	35.99	1675.853	1.032	0.043	0.043	1.20	1.24	NO	5.4
38	Total-hexafurans	373.8208	35.78	3582.820	1.032	0.092	0.092	1.31	1.24	NO	11.0
38	Total-hexafurans	373.8208	35.62	0.000	1.032	0.000	0.021	1.69	1.24	YES	3.9
6	123678-HxCDF	373.8208	35.42	45085.860	1.035	1.045	1.045	1.18	1.24	NO	99.1
9	1234789-HpCDF	407.7818	42.24	43616.561	1.215	1.278	1.176	0.89	1.05	YES	123.1
39	Total-heptafurans	407.7818	41.38	0.000	1.223	0.000	0.042	0.61	1.05	YES	5.1
39	Total-heptafurans	407.7818	40.33	1443672.501	1.223	37.882	37.882	0.98	1.05	NO	4458.5
39	Total-heptafurans	407.7818	40.04	22042.062	1.223	0.578	0.578	0.93	1.05	NO	50.1
8	1234678-HpCDF	407.7818	39.55	765775.000	1.232	18.177	18.177	0.97	1.05	NO	2383.1
10	OCDF	441.7428	47.56	1476051.500	1.138	53.485	53.485	0.85	0.89	NO	4666.1
36	Total-penta1	339.8597	27.48	373931.235		8.122	8.122	1.59	1.55	NO	4493.2

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TotalTEQ,Furans,Dioxins

		Time	RT	Area	Peak	Area	Area	Area	Area	Area	Area	Area
35	Total-tetrafurans	303.9016	24.97	29238.183	0.877	0.625	0.625	0.69	0.77	NO	143.0	
35	Total-tetrafurans	303.9016	24.82	8058.502	0.877	0.172	0.172	0.71	0.77	NO	49.3	
35	Total-tetrafurans	303.9016	24.73	22188.747	0.877	0.474	0.474	0.74	0.77	NO	104.4	
35	Total-tetrafurans	303.9016	24.55	0.000	0.877	0.000	0.006	1.29	0.77	YES	2.9	
35	Total-tetrafurans	303.9016	24.30	0.000	0.877	0.000	0.242	0.59	0.77	YES	64.8	
35	Total-tetrafurans	303.9016	24.17	14151.176	0.877	0.303	0.303	0.66	0.77	NO	73.3	
35	Total-tetrafurans	303.9016	24.06	21028.303	0.877	0.450	0.450	0.69	0.77	NO	114.0	
35	Total-tetrafurans	303.9016	23.91	5731.521	0.877	0.123	0.123	0.71	0.77	NO	38.8	
35	Total-tetrafurans	303.9016	23.82	18491.700	0.877	0.395	0.395	0.67	0.77	NO	88.2	
35	Total-tetrafurans	303.9016	23.72	11770.586	0.877	0.252	0.252	0.87	0.77	NO	59.9	
35	Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.343	0.63	0.77	YES	52.5	
35	Total-tetrafurans	303.9016	23.42	64074.681	0.877	1.370	1.370	0.66	0.77	NO	308.7	
35	Total-tetrafurans	303.9016	22.84	11597.377	0.877	0.248	0.248	0.74	0.77	NO	64.4	
35	Total-tetrafurans	303.9016	22.58	8058.073	0.877	0.172	0.172	0.70	0.77	NO	46.3	
35	Total-tetrafurans	303.9016	27.50	8487.176	0.877	0.181	0.181	0.81	0.77	NO	37.3	
35	Total-tetrafurans	303.9016	26.60	423.422	0.877	0.009	0.009	0.84	0.77	NO	3.5	
35	Total-tetrafurans	303.9016	26.29	28544.751	0.877	0.610	0.610	0.74	0.77	NO	144.6	
35	Total-tetrafurans	303.9016	26.20	12188.605	0.877	0.261	0.261	0.66	0.77	NO	59.2	
1	2378-TCDF	303.9016	26.06	25664.189	0.877	0.549	0.549	0.72	0.77	NO	135.7	
35	Total-tetrafurans	303.9016	25.84	0.000	0.877	0.000	0.292	0.63	0.77	YES	40.9	
35	Total-tetrafurans	303.9016	25.69	1011.493	0.877	0.022	0.022	0.73	0.77	NO	7.1	
35	Total-tetrafurans	303.9016	25.57	0.000	0.877	0.000	0.109	0.60	0.77	YES	29.1	
35	Total-tetrafurans	303.9016	25.39	0.000	0.877	0.000	0.160	0.65	0.77	YES	38.0	
35	Total-tetrafurans	303.9016	25.15	16779.445	0.877	0.359	0.359	0.77	0.77	NO	89.8	
37	Total-pentafurans	339.8597	29.75	6748.342	0.911	0.148	0.148	1.48	1.55	NO	56.5	
37	Total-pentafurans	339.8597	29.64	0.000	0.911	0.000	0.116	1.80	1.55	YES	38.8	
37	Total-pentafurans	339.8597	29.44	0.000	0.911	0.000	0.038	0.97	1.55	YES	15.2	
37	Total-pentafurans	339.8597	29.14	68740.789	0.911	1.503	1.503	1.41	1.55	NO	540.6	
37	Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.807	1.84	1.55	YES	361.9	
37	Total-pentafurans	339.8597	28.95	23320.194	0.911	0.510	0.510	1.46	1.55	NO	142.3	
37	Total-pentafurans	339.8597	28.85	0.000	0.911	0.000	0.059	2.14	1.55	YES	39.4	
37	Total-pentafurans	339.8597	32.58	0.000	0.911	0.000	0.066	1.21	1.55	YES	28.0	
3	23478-PeCDF	339.8597	31.56	22312.566	0.926	0.481	0.481	1.58	1.55	NO	177.3	
37	Total-pentafurans	339.8597	31.41	23185.198	0.911	0.507	0.507	1.65	1.55	NO	194.7	
37	Total-pentafurans	339.8597	31.30	12177.358	0.911	0.266	0.266	1.53	1.55	NO	100.4	
37	Total-pentafurans	339.8597	31.04	0.000	0.911	0.000	0.021	2.22	1.55	YES	10.2	
37	Total-pentafurans	339.8597	30.52	6082.048	0.911	0.133	0.133	1.62	1.55	NO	50.2	
37	Total-pentafurans	339.8597	30.41	0.000	0.911	0.000	0.384	1.28	1.55	YES	132.0	
2	12378-PeCDF	339.8597	30.21	18059.108	0.896	0.400	0.400	1.46	1.55	NO	136.4	
37	Total-pentafurans	339.8597	29.86	43912.955	0.911	0.960	0.960	1.42	1.55	NO	264.7	
4	123478-HxCDF	373.8208	35.26	49150.027	1.068	1.137	1.137	1.18	1.24	NO	112.6	
38	Total-hexa furans	373.8208	35.09	12507.266	1.032	0.320	0.320	1.29	1.24	NO	29.0	
38	Total-hexa furans	373.8208	34.61	456164.610	1.032	11.656	11.656	1.19	1.24	NO	1032.6	
38	Total-hexa furans	373.8208	34.28	0.000	1.032	0.000	0.187	1.62	1.24	YES	19.1	
38	Total-hexa furans	373.8208	34.01	0.000	1.032	0.000	0.030	1.62	1.24	YES	4.6	
38	Total-hexa furans	373.8208	33.74	451424.844	1.032	11.535	11.535	1.17	1.24	NO	998.3	
38	Total-hexa furans	373.8208	33.52	166838.844	1.032	4.263	4.263	1.16	1.24	NO	401.1	
7	123789-HxCDF	373.8208	37.47	12293.753	0.987	0.410	0.410	1.07	1.24	NO	31.0	
5	234678-HxCDF	373.8208	36.38	59173.096	1.037	1.455	1.455	1.15	1.24	NO	75.2	

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TotalTEQ,Furans,Dioxins

Sample	Concentration	TEQ	Furans	Dioxins	TEQ	Furans	Dioxins	TEQ	Furans	Dioxins	TEQ	Furans	Dioxins
38 Total-hexafurans	373.8208	35.99	1675.853	1.032	0.043	0.043	1.20	1.24	NO	5.4			
38 Total-hexafurans	373.8208	35.78	3582.820	1.032	0.092	0.092	1.31	1.24	NO	11.0			
38 Total-hexafurans	373.8208	35.62	0.000	1.032	0.000	0.021	1.69	1.24	YES	3.9			
6 123678-HxCDF	373.8208	35.42	45085.860	1.035	1.045	1.045	1.18	1.24	NO	99.1			
9 1234789-HpCDF	407.7818	42.24	43616.561	1.215	0.000	1.176	0.89	1.05	YES	123.1			
39 Total-heptafurans	407.7818	41.38	0.000	1.223	0.000	0.042	0.61	1.05	YES	5.1			
39 Total-heptafurans	407.7818	40.33	1443672.501	1.223	37.882	37.882	0.98	1.05	NO	4458.5			
39 Total-heptafurans	407.7818	40.04	22042.062	1.223	0.578	0.578	0.93	1.05	NO	50.1			
8 1234678-HpCDF	407.7818	39.55	765775.000	1.232	18.177	18.177	0.97	1.05	NO	2383.1			
10 OCDF	441.7428	47.56	1476051.500	1.138	53.485	53.485	0.85	0.89	NO	4666.1			
36 Total-penta1	339.8597	27.48	373931.235		8.122	8.122	1.59	1.55	NO	4493.2			
35 Total-tetrafurans	303.9016	24.97	29238.183	0.877	0.625	0.625	0.69	0.77	NO	143.0			
35 Total-tetrafurans	303.9016	24.82	8058.502	0.877	0.172	0.172	0.71	0.77	NO	49.3			
35 Total-tetrafurans	303.9016	24.73	22188.747	0.877	0.474	0.474	0.74	0.77	NO	104.4			
35 Total-tetrafurans	303.9016	24.55	0.000	0.877	0.000	0.006	1.29	0.77	YES	2.9			
35 Total-tetrafurans	303.9016	24.30	0.000	0.877	0.000	0.242	0.59	0.77	YES	64.8			
35 Total-tetrafurans	303.9016	24.17	14151.176	0.877	0.303	0.303	0.66	0.77	NO	73.3			
35 Total-tetrafurans	303.9016	24.06	21028.303	0.877	0.450	0.450	0.69	0.77	NO	114.0			
35 Total-tetrafurans	303.9016	23.91	5731.521	0.877	0.123	0.123	0.71	0.77	NO	38.8			
35 Total-tetrafurans	303.9016	23.82	18491.700	0.877	0.395	0.395	0.67	0.77	NO	88.2			
35 Total-tetrafurans	303.9016	23.72	11770.586	0.877	0.252	0.252	0.87	0.77	NO	59.9			
35 Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.343	0.63	0.77	YES	52.5			
35 Total-tetrafurans	303.9016	23.42	64074.681	0.877	1.370	1.370	0.66	0.77	NO	308.7			
35 Total-tetrafurans	303.9016	22.84	11597.377	0.877	0.248	0.248	0.74	0.77	NO	64.4			
35 Total-tetrafurans	303.9016	22.58	8058.073	0.877	0.172	0.172	0.70	0.77	NO	46.3			
35 Total-tetrafurans	303.9016	27.50	8487.176	0.877	0.181	0.181	0.81	0.77	NO	37.3			
35 Total-tetrafurans	303.9016	26.60	423.422	0.877	0.009	0.009	0.84	0.77	NO	3.5			
35 Total-tetrafurans	303.9016	26.29	28544.751	0.877	0.610	0.610	0.74	0.77	NO	144.6			
35 Total-tetrafurans	303.9016	26.20	12188.605	0.877	0.261	0.261	0.66	0.77	NO	59.2			
1 2378-TCDF	303.9016	26.06	25664.189	0.877	0.549	0.549	0.72	0.77	NO	135.7			
35 Total-tetrafurans	303.9016	25.84	0.000	0.877	0.000	0.292	0.63	0.77	YES	40.9			
35 Total-tetrafurans	303.9016	25.69	1011.493	0.877	0.022	0.022	0.73	0.77	NO	7.1			
35 Total-tetrafurans	303.9016	25.57	0.000	0.877	0.000	0.109	0.60	0.77	YES	29.1			
35 Total-tetrafurans	303.9016	25.39	0.000	0.877	0.000	0.160	0.65	0.77	YES	38.0			
35 Total-tetrafurans	303.9016	25.15	16779.445	0.877	0.359	0.359	0.77	0.77	NO	89.8			
37 Total-pentafurans	339.8597	29.75	6748.342	0.911	0.148	0.148	1.48	1.55	NO	56.5			
37 Total-pentafurans	339.8597	29.64	0.000	0.911	0.000	0.116	1.80	1.55	YES	38.8			
37 Total-pentafurans	339.8597	29.44	0.000	0.911	0.000	0.038	0.97	1.55	YES	15.2			
37 Total-pentafurans	339.8597	29.14	68740.789	0.911	1.503	1.503	1.41	1.55	NO	540.6			
37 Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.807	1.84	1.55	YES	361.9			
37 Total-pentafurans	339.8597	28.95	23320.194	0.911	0.510	0.510	1.46	1.55	NO	142.3			
37 Total-pentafurans	339.8597	28.85	0.000	0.911	0.000	0.059	2.14	1.55	YES	39.4			
37 Total-pentafurans	339.8597	32.58	0.000	0.911	0.000	0.066	1.21	1.55	YES	28.0			
3 23478-PeCDF	339.8597	31.56	22312.566	0.926	0.481	0.481	1.58	1.55	NO	177.3			
37 Total-pentafurans	339.8597	31.41	23185.198	0.911	0.507	0.507	1.65	1.55	NO	194.7			
37 Total-pentafurans	339.8597	31.30	12177.358	0.911	0.266	0.266	1.53	1.55	NO	100.4			
37 Total-pentafurans	339.8597	31.04	0.000	0.911	0.000	0.021	2.22	1.55	YES	10.2			
37 Total-pentafurans	339.8597	30.52	6082.048	0.911	0.133	0.133	1.62	1.55	NO	50.2			
37 Total-pentafurans	339.8597	30.41	0.000	0.911	0.000	0.384	1.28	1.55	YES	132.0			

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
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Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

Peak	Name	Trace	Area	Height	Width	EMD	EMD	EMD	EMD	EMD	EMD	EMD
2	12378-PeCDF	339.8597	30.21	18059.108	0.896	0.400	0.400	1.46	1.55	NO	136.4	
37	Total-pentafurans	339.8597	29.86	43912.955	0.911	0.960	0.960	1.42	1.55	NO	264.7	
4	123478-HxCDF	373.8208	35.26	49150.027	1.068	1.137	1.137	1.18	1.24	NO	112.6	
38	Total-hexafurans	373.8208	35.09	12507.266	1.032	0.320	0.320	1.29	1.24	NO	29.0	
38	Total-hexafurans	373.8208	34.61	456164.610	1.032	11.656	11.656	1.19	1.24	NO	1032.6	
38	Total-hexafurans	373.8208	34.28	0.000	1.032	0.000	0.187	1.62	1.24	YES	19.1	
38	Total-hexafurans	373.8208	34.01	0.000	1.032	0.000	0.030	1.62	1.24	YES	4.6	
38	Total-hexafurans	373.8208	33.74	451424.844	1.032	11.535	11.535	1.17	1.24	NO	998.3	
38	Total-hexafurans	373.8208	33.52	166838.844	1.032	4.263	4.263	1.16	1.24	NO	401.1	
7	123789-HxCDF	373.8208	37.47	12293.753	0.987	0.410	0.410	1.07	1.24	NO	31.0	
5	234678-HxCDF	373.8208	36.38	59173.096	1.037	1.455	1.455	1.15	1.24	NO	75.2	
38	Total-hexafurans	373.8208	35.99	1675.853	1.032	0.043	0.043	1.20	1.24	NO	5.4	
38	Total-hexafurans	373.8208	35.78	3582.820	1.032	0.092	0.092	1.31	1.24	NO	11.0	
38	Total-hexafurans	373.8208	35.62	0.000	1.032	0.000	0.021	1.69	1.24	YES	3.9	
6	123678-HxCDF	373.8208	35.42	45085.860	1.035	1.045	1.045	1.18	1.24	NO	99.1	
9	1234789-HpCDF	407.7818	42.24	43616.561	1.215	0.000	1.176	0.89	1.05	YES	123.1	
39	Total-heptafurans	407.7818	41.38	0.000	1.223	0.000	0.042	0.61	1.05	YES	5.1	
39	Total-heptafurans	407.7818	40.33	1443672.501	1.223	37.882	37.882	0.98	1.05	NO	4458.5	
39	Total-heptafurans	407.7818	40.04	22042.062	1.223	0.578	0.578	0.93	1.05	NO	50.1	
8	1234678-HpCDF	407.7818	39.55	765775.000	1.232	18.177	18.177	0.97	1.05	NO	2383.1	
10	OCDF	441.7428	47.56	1476051.500	1.138	53.485	53.485	0.85	0.89	NO	4666.1	
36	Total-penta1	339.8597	27.48	373931.235		8.122	8.122	1.59	1.55	NO	4493.2	

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PFK1

Name	Time	Area	Height	Area	Area	Area	Area
48 FUNCTION1 PFK	330.9792	21.10	0.000				11.6
48 FUNCTION1 PFK	330.9792	25.79	0.000				3.4
48 FUNCTION1 PFK	330.9792	25.06	0.000				1.7
48 FUNCTION1 PFK	330.9792	24.94	0.000				1.2
48 FUNCTION1 PFK	330.9792	24.69	0.000				4.3
48 FUNCTION1 PFK	330.9792	24.58	0.000				1.6
48 FUNCTION1 PFK	330.9792	24.49	0.000				2.0
48 FUNCTION1 PFK	330.9792	23.84	0.000				3.2
48 FUNCTION1 PFK	330.9792	23.49	0.000				2.4
48 FUNCTION1 PFK	330.9792	23.37	0.000				0.9
48 FUNCTION1 PFK	330.9792	23.02	0.000				0.6
48 FUNCTION1 PFK	330.9792	22.96	0.000				0.4
48 FUNCTION1 PFK	330.9792	22.40	0.000				0.8
48 FUNCTION1 PFK	330.9792	22.22	0.000				0.6
48 FUNCTION1 PFK	330.9792	21.67	0.000				3.5
48 FUNCTION1 PFK	330.9792	21.52	0.000				5.0
48 FUNCTION1 PFK	330.9792	21.42	0.000				7.2
48 FUNCTION1 PFK	330.9792	28.11	0.000				1.4
48 FUNCTION1 PFK	330.9792	28.04	0.000				2.0
48 FUNCTION1 PFK	330.9792	27.69	0.000				0.8
48 FUNCTION1 PFK	330.9792	27.59	0.000				1.7
48 FUNCTION1 PFK	330.9792	27.50	0.000				2.5
48 FUNCTION1 PFK	330.9792	27.42	0.000				1.4
48 FUNCTION1 PFK	330.9792	27.05	0.000				2.5
48 FUNCTION1 PFK	330.9792	26.78	0.000				0.6
48 FUNCTION1 PFK	330.9792	26.63	0.000				1.8

PFK2

Name	Time	Area	Height	Area	Area	Area	Area
49 FUNCTION2 PFK	366.9792	29.78	0.000	0.000			16.3
49 FUNCTION2 PFK	366.9792	29.47	0.000	0.000			6.4

PFK3

Name	Time	Area	Height	Area	Area	Area	Area
50 FUNCTION3 PFK	380.9760	34.42	0.000	0.000			1.8
50 FUNCTION3 PFK	380.9760	34.16	0.000	0.000			4.1
50 FUNCTION3 PFK	380.9760	33.64	0.000	0.000			3.3
50 FUNCTION3 PFK	380.9760	38.47	0.000	0.000			8.8
50 FUNCTION3 PFK	380.9760	38.37	0.000	0.000			11.7
50 FUNCTION3 PFK	380.9760	37.90	0.000	0.000			28.0
50 FUNCTION3 PFK	380.9760	37.54	0.000	0.000			36.0
50 FUNCTION3 PFK	380.9760	37.33	0.000	0.000			34.8



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PFK4

ID	Name	Time	RT	Abs Peak	PPM	EMPC	Area	Height	FWHM	SN
51	FUNCTION4 PFK	430.9728	41.07	0.000						0.8
51	FUNCTION4 PFK	430.9728	40.80	0.000						1.6
51	FUNCTION4 PFK	430.9728	40.76	0.000						1.6
51	FUNCTION4 PFK	430.9728	40.38	0.000						1.3
51	FUNCTION4 PFK	430.9728	40.15	0.000						0.5
51	FUNCTION4 PFK	430.9728	40.02	0.000						0.5
51	FUNCTION4 PFK	430.9728	39.65	0.000						1.3
51	FUNCTION4 PFK	430.9728	39.59	0.000						1.6
51	FUNCTION4 PFK	430.9728	39.51	0.000						1.4
51	FUNCTION4 PFK	430.9728	38.74	0.000						3.9
51	FUNCTION4 PFK	430.9728	44.46	0.000						1.2
51	FUNCTION4 PFK	430.9728	44.34	0.000						1.3
51	FUNCTION4 PFK	430.9728	43.97	0.000						0.6
51	FUNCTION4 PFK	430.9728	43.00	0.000						0.6
51	FUNCTION4 PFK	430.9728	42.75	0.000						0.8
51	FUNCTION4 PFK	430.9728	42.40	0.000						1.4
51	FUNCTION4 PFK	430.9728	42.30	0.000						0.9
51	FUNCTION4 PFK	430.9728	41.57	0.000						0.5
51	FUNCTION4 PFK	430.9728	41.12	0.000						2.5

PFK5

ID	Name	Time	RT	Abs Peak	PPM	EMPC	Area	Height	FWHM	SN
52	FUNCTION5 PFK	480.9696	46.37	0.000						1.8

ETHERS1

ID	Name	Time	RT	Abs Peak	PPM	EMPC	Area	Height	FWHM	SN
53	FUNCTION1 HXCD...	375.8364	27.60	0.000		0.000				2.8
53	FUNCTION1 HXCD...	375.8364	26.18	0.000		0.000				3.0
53	FUNCTION1 HXCD...	375.8364	23.93	0.000		0.000				7.3
53	FUNCTION1 HXCD...	375.8364	21.57	0.000		0.000				1.1

ETHERS2

ID	Name	Time	RT	Abs Peak	PPM	EMPC	Area	Height	FWHM	SN
54	FUNCTION1 HPCD...	409.7974	28.07	0.000		0.000				1.6
54	FUNCTION1 HPCD...	409.7974	26.68	0.000		0.000				1.7
54	FUNCTION1 HPCD...	409.7974	26.09	0.000		0.000				1.2
54	FUNCTION1 HPCD...	409.7974	25.82	0.000		0.000				2.3
54	FUNCTION1 HPCD...	409.7974	25.63	0.000		0.000				2.2
54	FUNCTION1 HPCD...	409.7974	25.42	0.000		0.000				2.7
54	FUNCTION1 HPCD...	409.7974	24.67	0.000		0.000				2.3
54	FUNCTION1 HPCD...	409.7974	24.23	0.000		0.000				4.3
54	FUNCTION1 HPCD...	409.7974	23.76	0.000		0.000				2.0
54	FUNCTION1 HPCD...	409.7974	22.58	0.000		0.000				1.9
54	FUNCTION1 HPCD...	409.7974	22.51	0.000		0.000				2.4

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ETHERS3

Name	Area	Height	Area%	Height%	Area%	Height%
55 FUNCTION2 HPCD...	409.7974	29.85	0.000	0.000		2.3
55 FUNCTION2 HPCD...	409.7974	29.62	0.000	0.000		2.7
55 FUNCTION2 HPCD...	409.7974	28.64	0.000	0.000		2.7
55 FUNCTION2 HPCD...	409.7974	32.97	0.000	0.000		2.2
55 FUNCTION2 HPCD...	409.7974	31.10	0.000	0.000		3.1
55 FUNCTION2 HPCD...	409.7974	30.19	0.000	0.000		4.2

ETHERS4

Name	Area	Height	Area%	Height%	Area%	Height%

ETHERS5

Name	Area	Height	Area%	Height%	Area%	Height%
57 FUNCTION4 NCDPE	479.7165	42.92	0.000	0.000		2.8
57 FUNCTION4 NCDPE	479.7165	41.55	0.000	0.000		3.8
57 FUNCTION4 NCDPE	479.7165	41.35	0.000	0.000		4.6
57 FUNCTION4 NCDPE	479.7165	39.98	0.000	0.000		3.7
57 FUNCTION4 NCDPE	479.7165	39.12	0.000	0.000		579.7
57 FUNCTION4 NCDPE	479.7165	38.72	0.000	0.000		2.5

ETHERS6

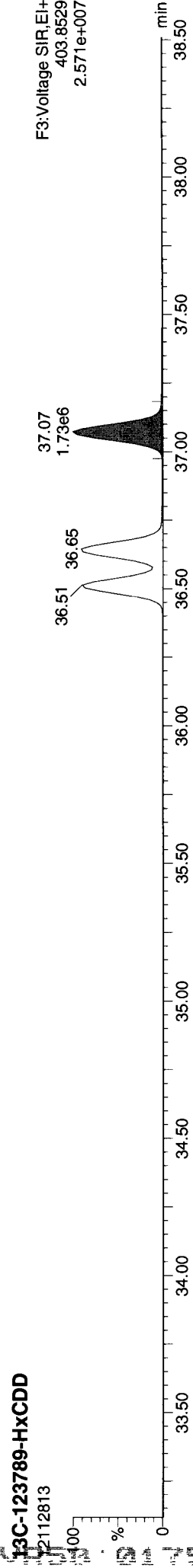
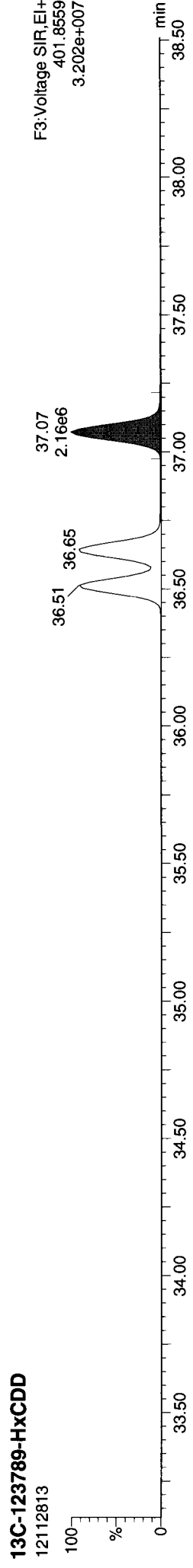
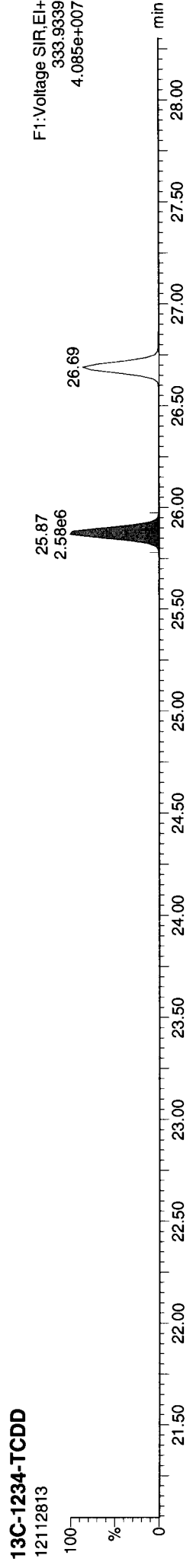
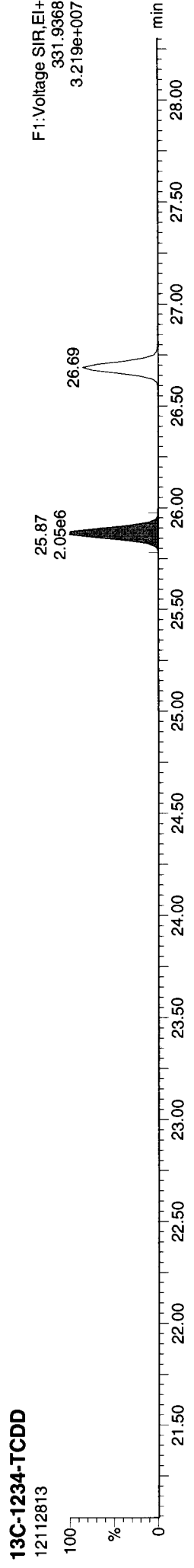
Name	Area	Height	Area%	Height%	Area%	Height%
58 FUNCTION5 DCDPE	513.6775	47.30	0.000	0.000		3.0

Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
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Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

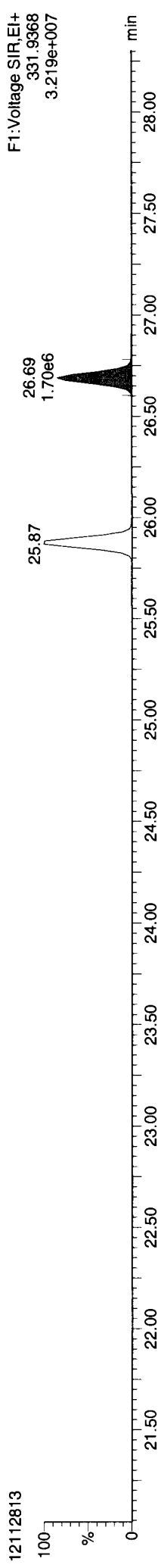
Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk



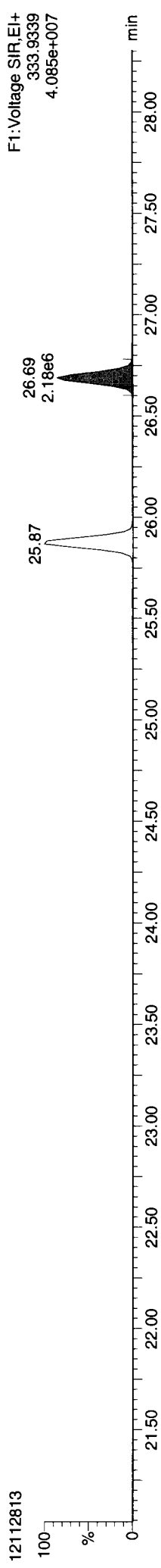
**Quantify Sample Report** MassLynx 4.1 SCN 714  
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 Printed: Monday, December 10, 2012 15:30:03 Pacific Standard Time

**Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk**

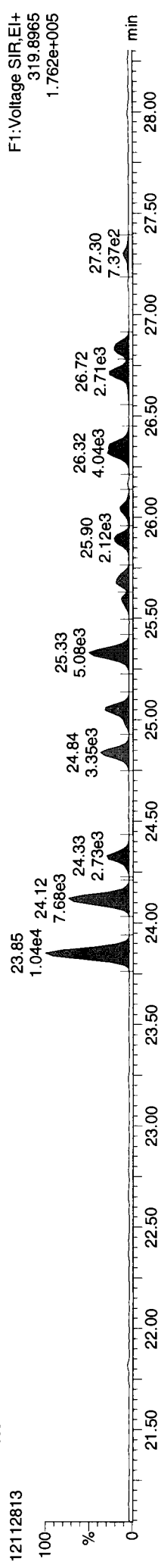
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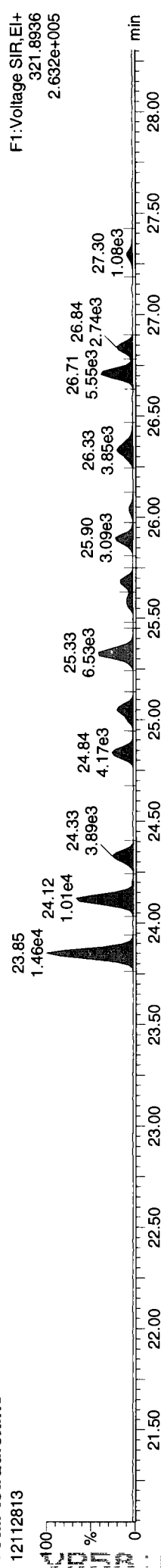
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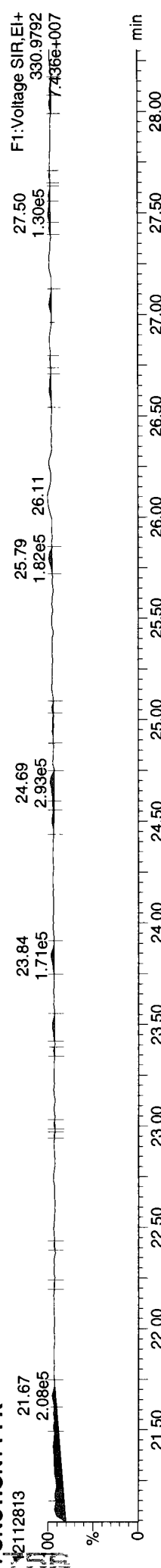
**Total-tetradoxins**



**Total-tetradoxins**



**FUNCTION1 PFK**

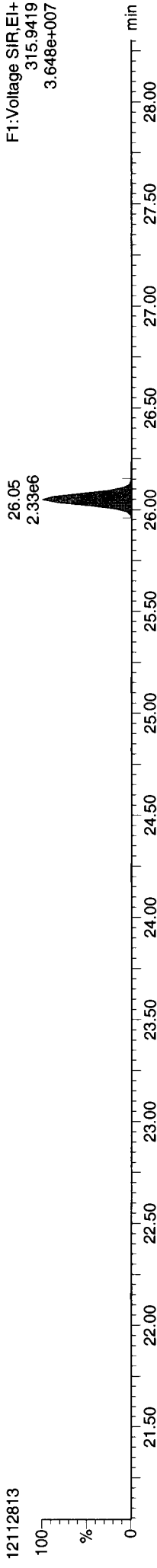


Quantify Sample Report MassLynx 4.1 SCN 714

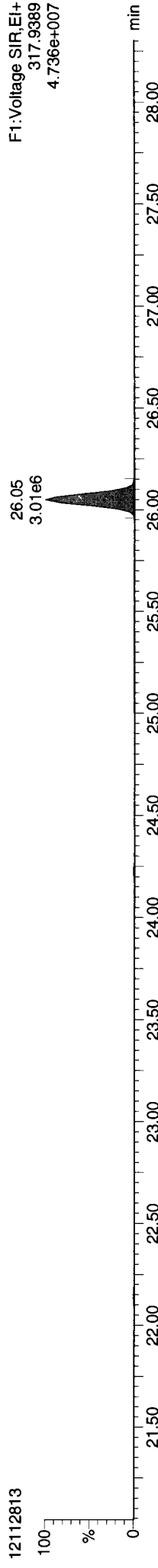
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Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk

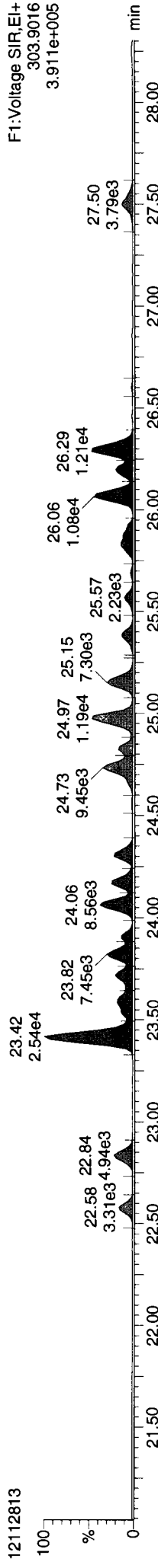
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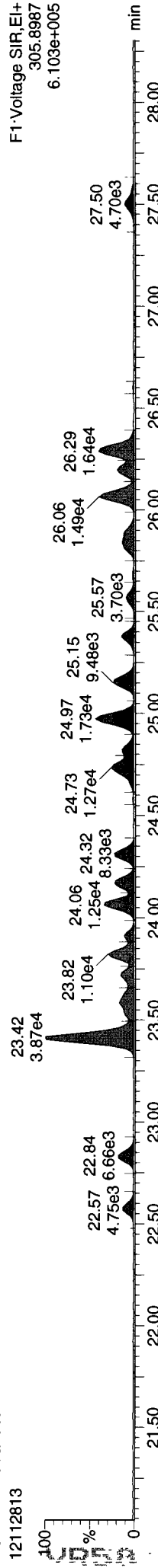
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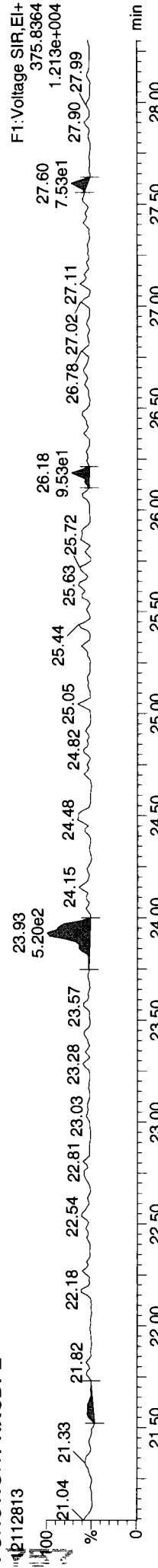
Total-tetrafurans



Total-tetrafurans

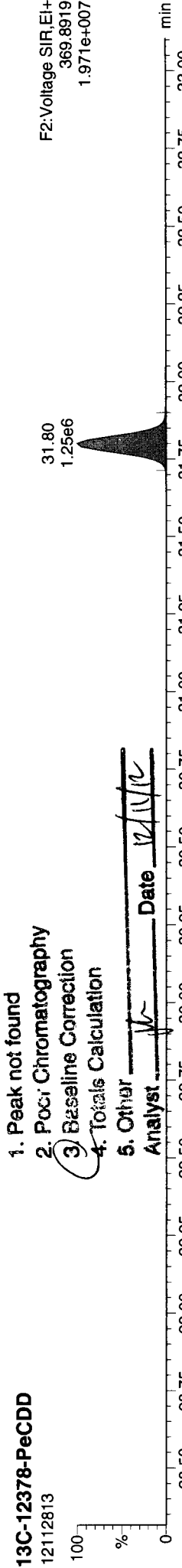
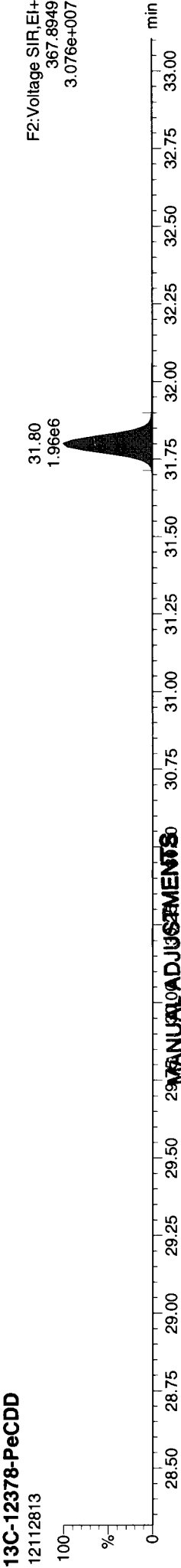


FUNCTION1 HXCDPE

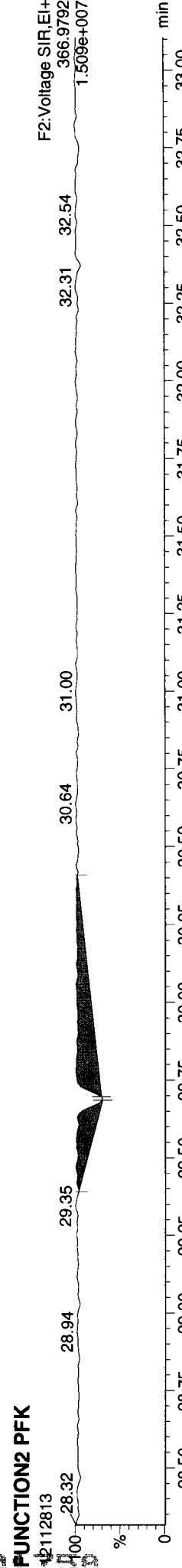
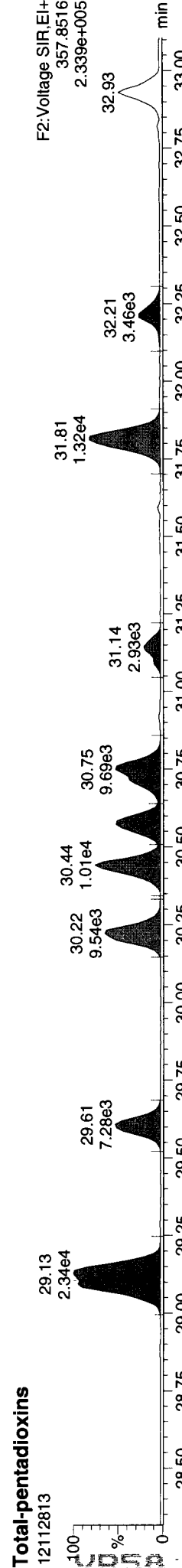
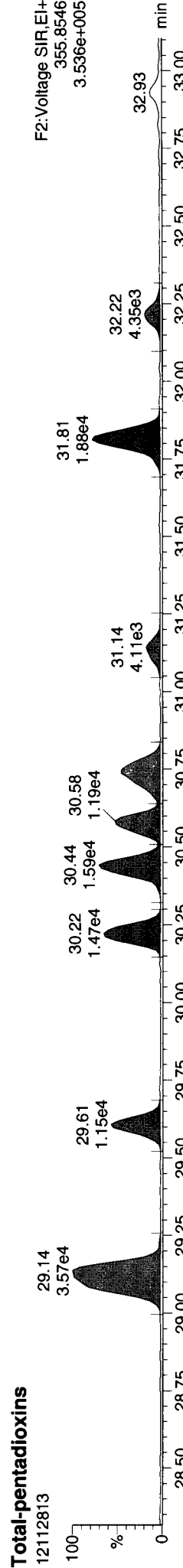


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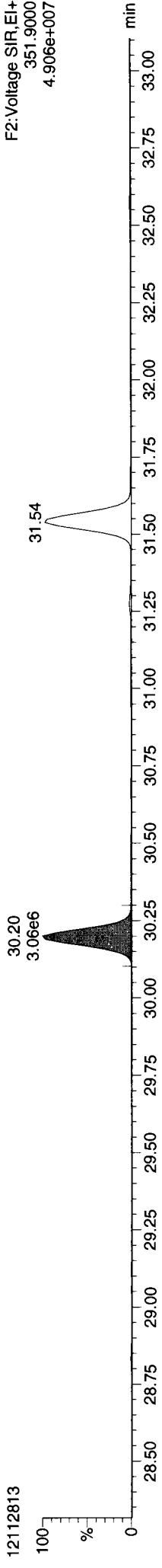
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  3. Baseline Correction
  4. Totals Calculation
  5. Other
- Analyst: *[Signature]* Date: *12/11/12*



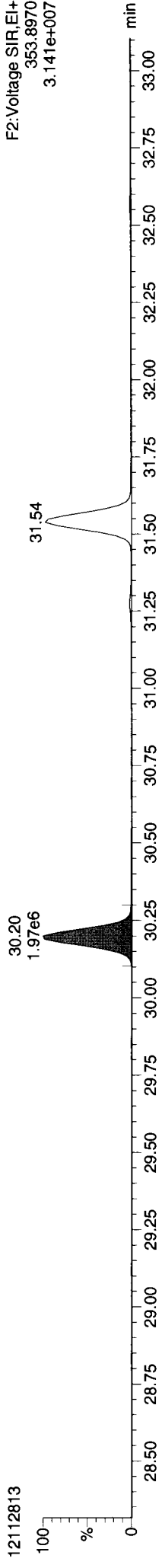
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN6290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
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Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk

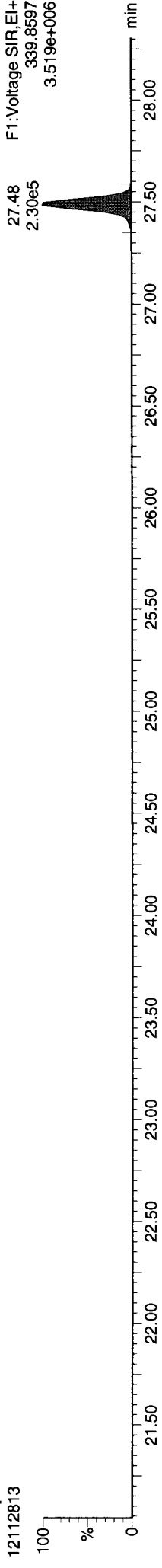
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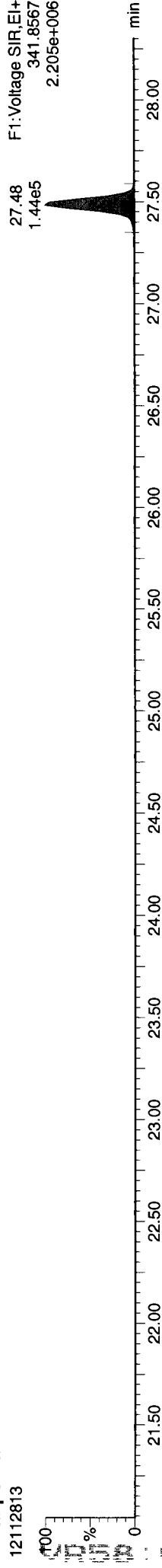
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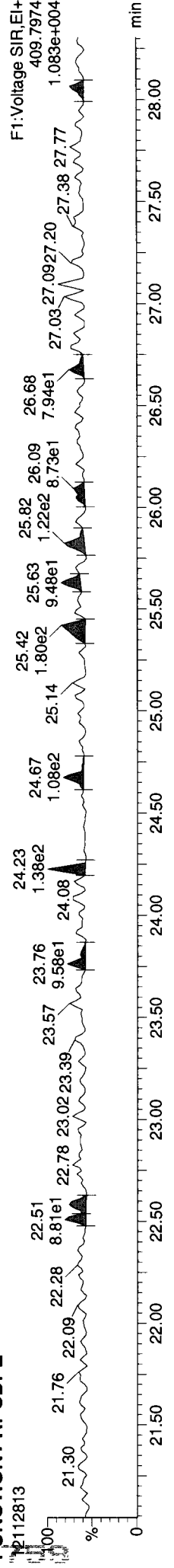
Total-penta1



Total-penta1



FUNCTION1 HPCDPE

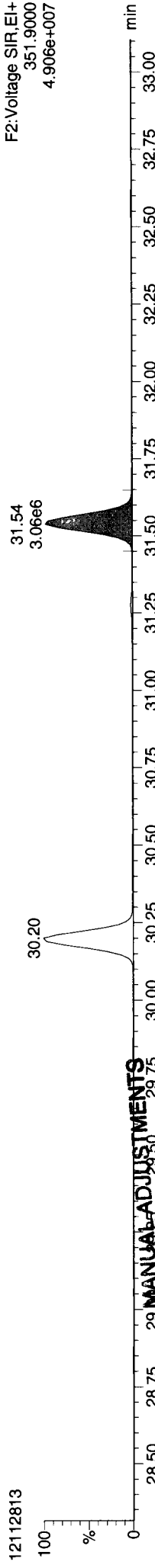


Quantify Sample Report MassLynx 4.1 SCN 714

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Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF

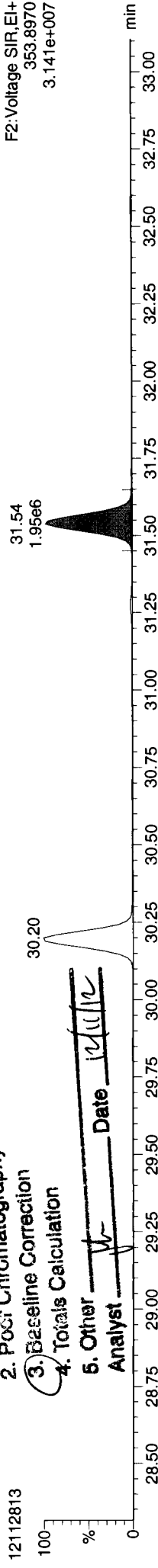


MANUAL ADJUSTMENTS

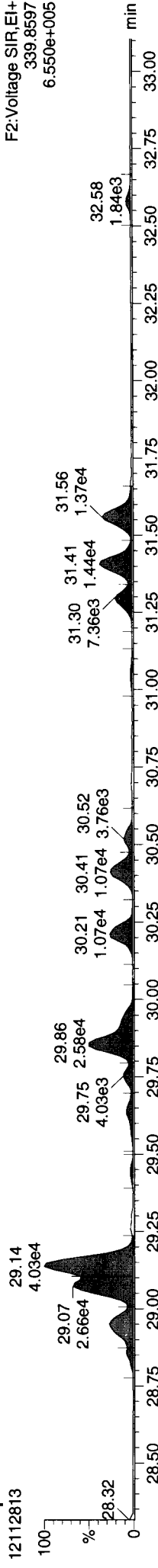
- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other

Analyst pk Date 12/10/12

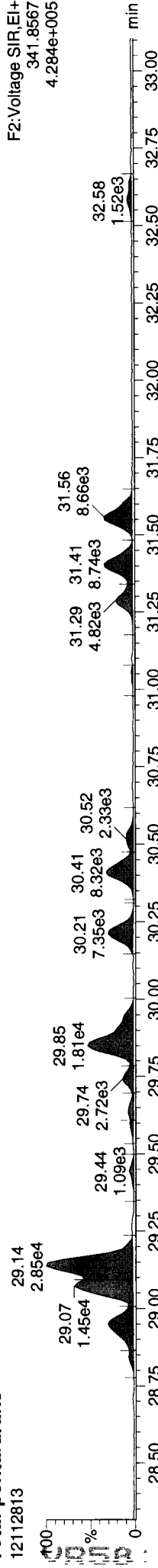
13C-23478-PeCDF



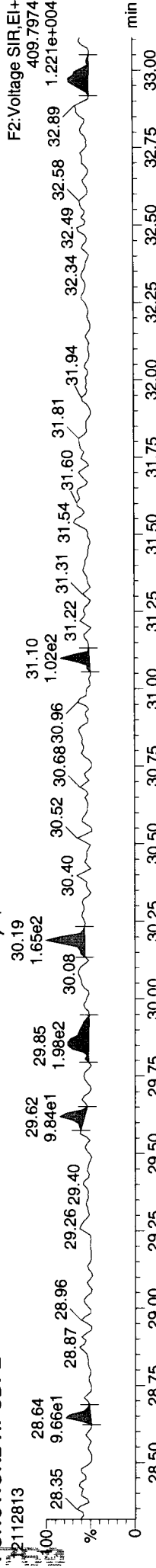
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE

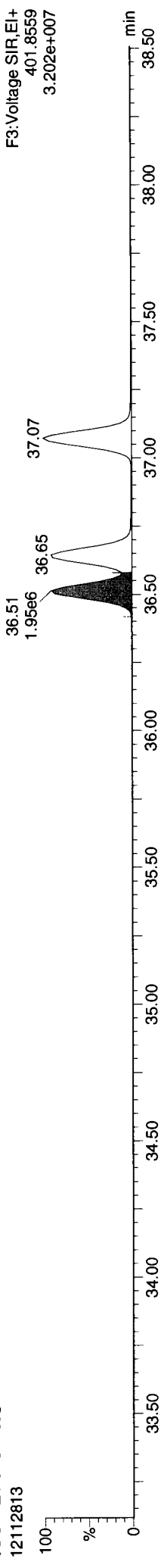




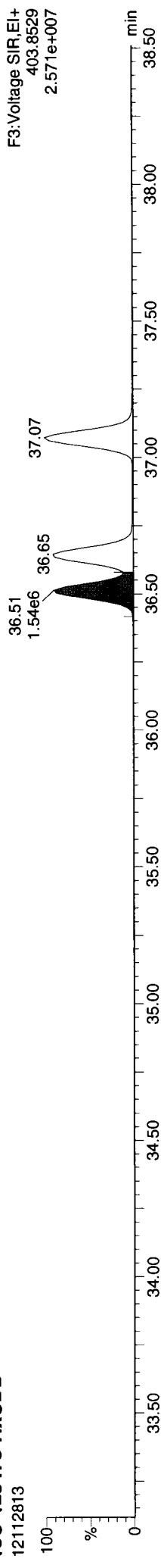
**Quantify Sample Report** MassLynx 4.1 SCN 714  
Dataset: P:\DIOX\IN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:03 Pacific Standard Time

Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk

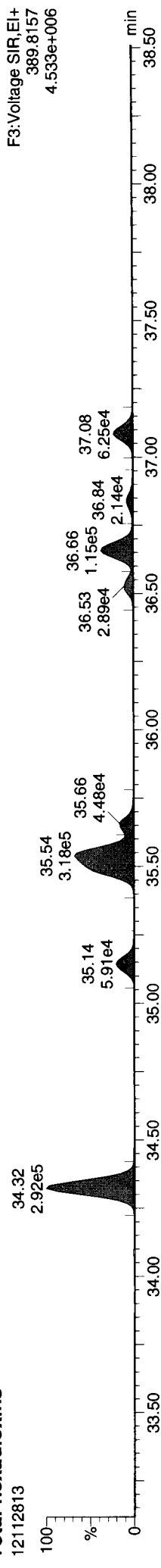
**13C-123478-HxCDD**



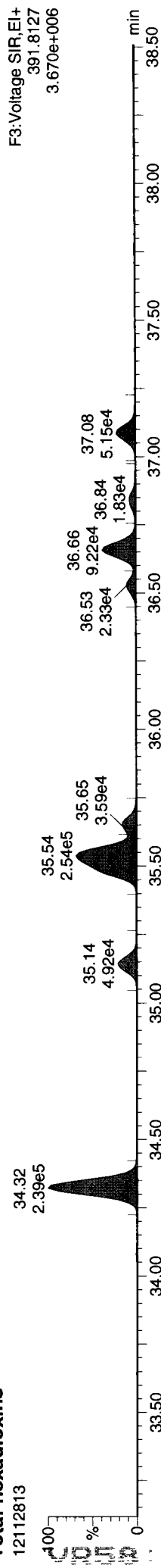
**13C-123478-HxCDD**



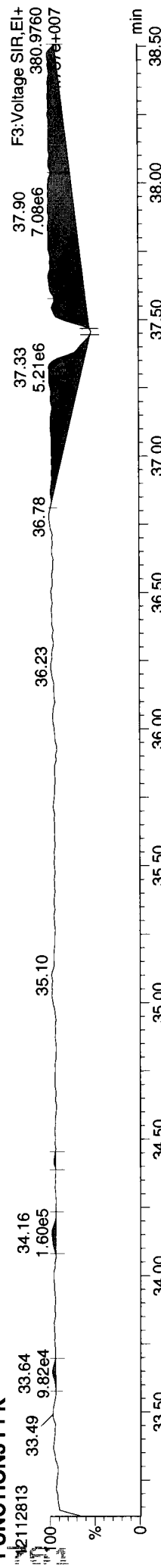
**Total-hexadioxins**



**Total-hexadioxins**



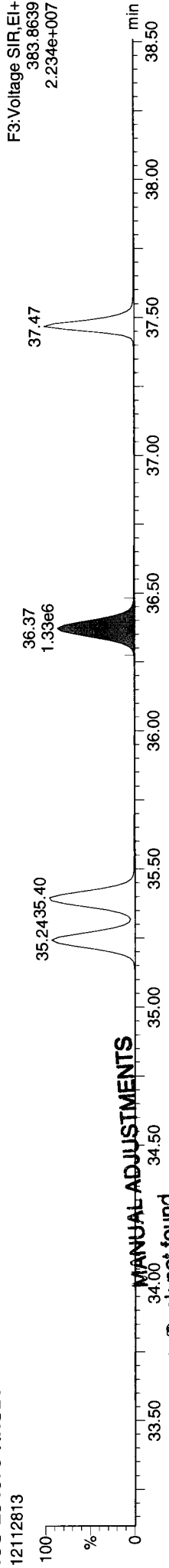
**FUNCTION3 PFK**



Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:03 Pacific Standard Time

Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk

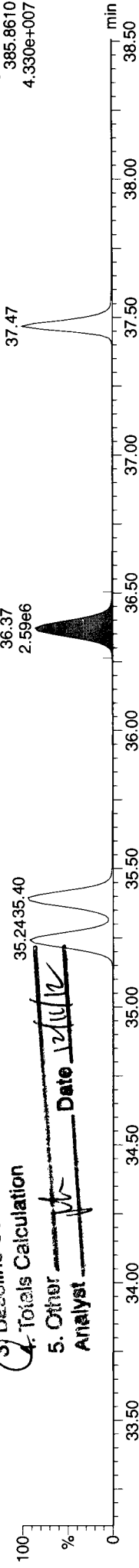
13C-234678-HxCDF



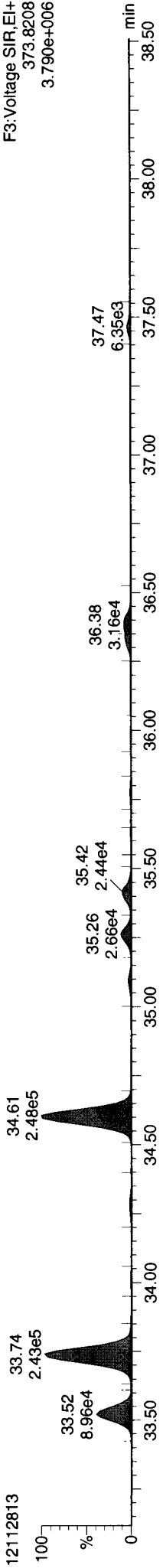
MANUAL ADJUSTMENTS

- 1. Peak not found
- 2. Pgc: Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other *pk* Date *12/10/12*

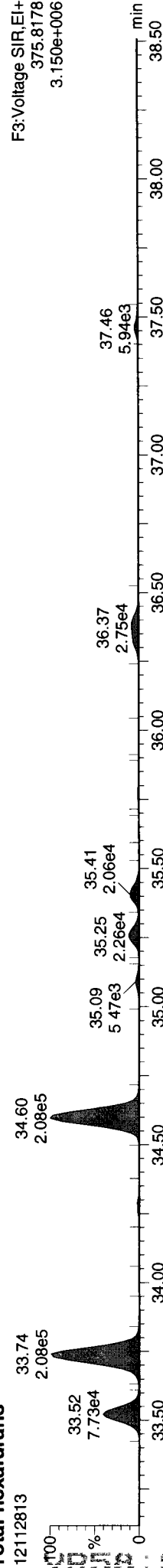
13C-234678-HxCDF



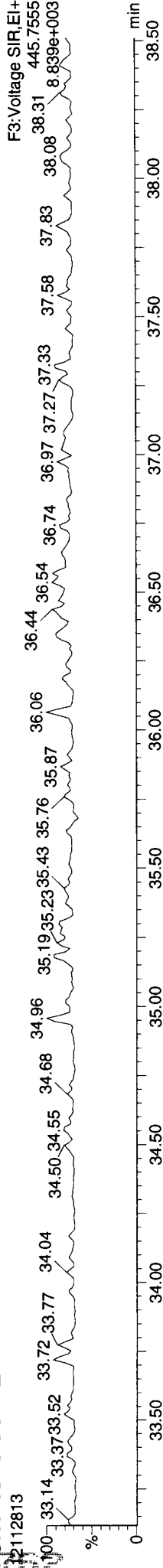
Total-hexafurans



Total-hexafurans



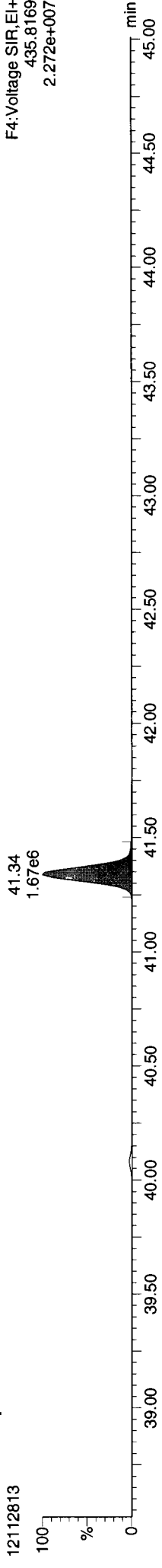
FUNCTION3 OCDFE



**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:03 Pacific Standard Time

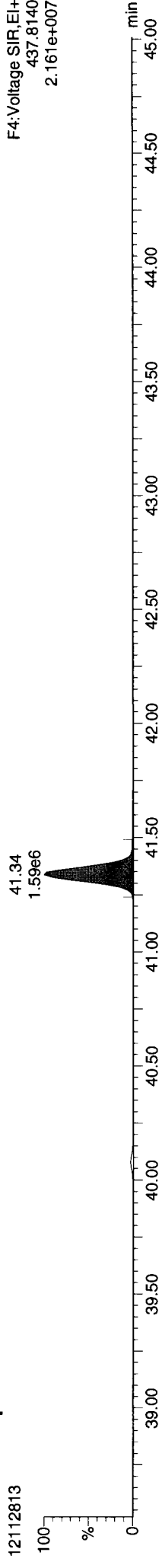
**Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk**

**13C-1234678-HpCDD**



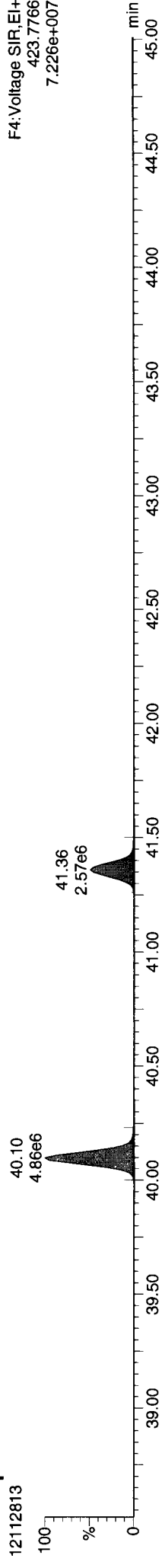
F4: Voltage SIR, EI+  
435.8169  
2.272e+007

**13C-1234678-HpCDD**



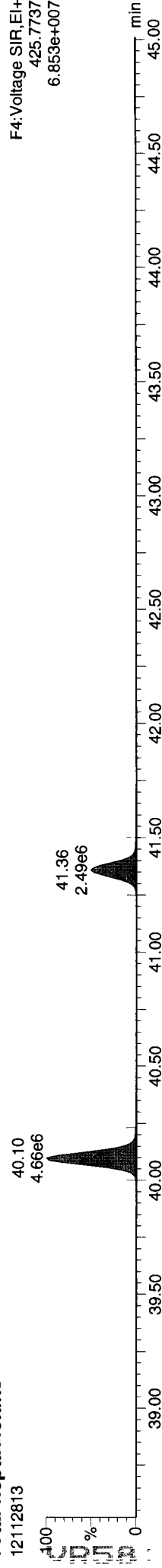
F4: Voltage SIR, EI+  
437.8140  
2.161e+007

**Total-heptadioxins**



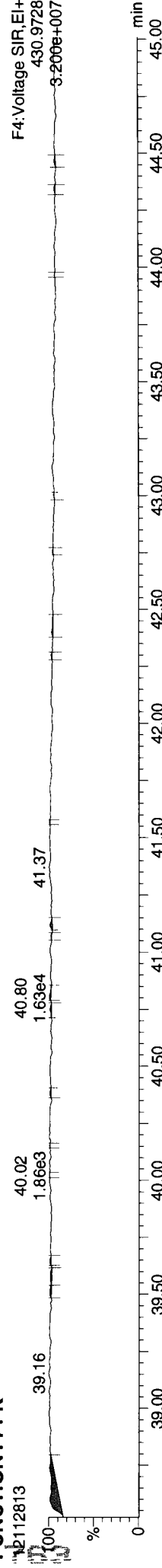
F4: Voltage SIR, EI+  
423.7766  
7.226e+007

**Total-heptadioxins**



F4: Voltage SIR, EI+  
425.7737  
6.853e+007

**FUNCTION4 PFK**

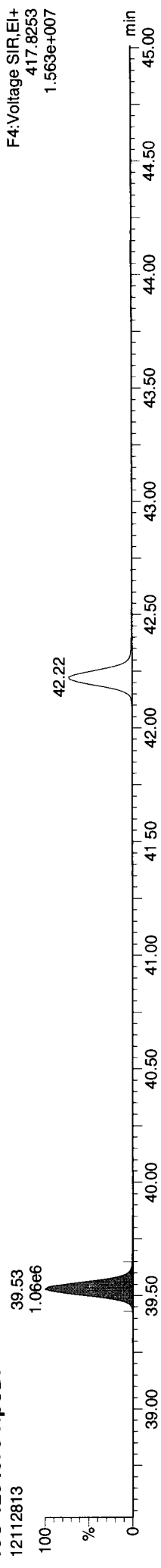


F4: Voltage SIR, EI+  
430.9728  
3.200e+007

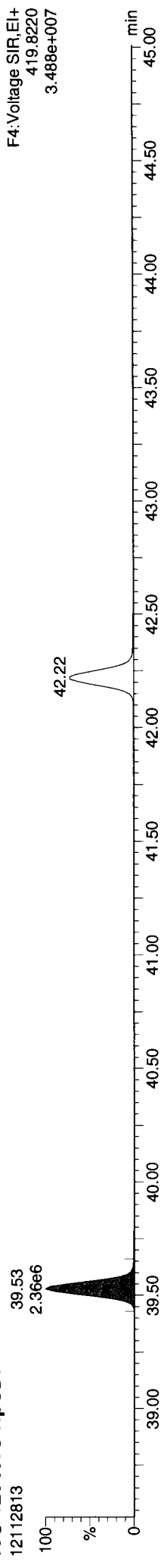
Quantify Sample Report **MassLynx 4.1 SCN 714**  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:03 Pacific Standard Time

Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk

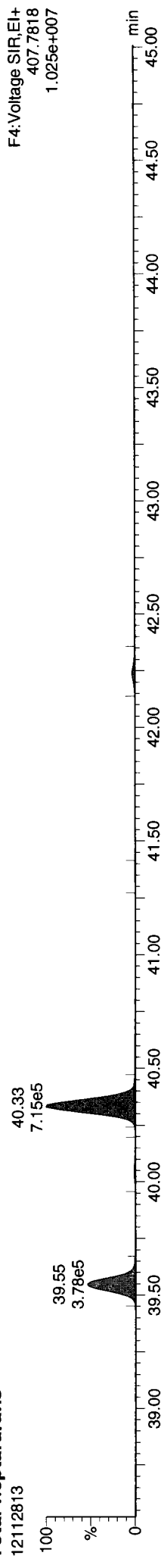
**13C-1234678-HpCDF**



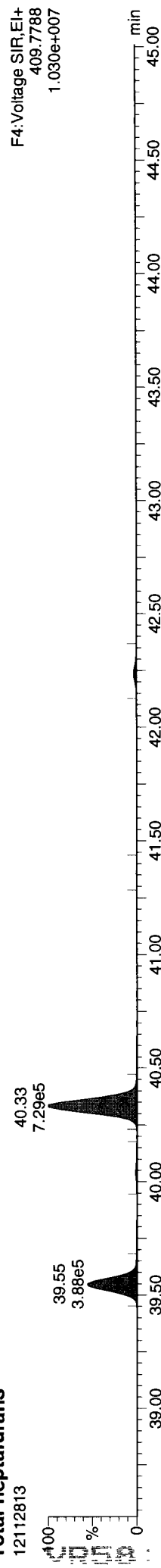
**13C-1234678-HpCDF**



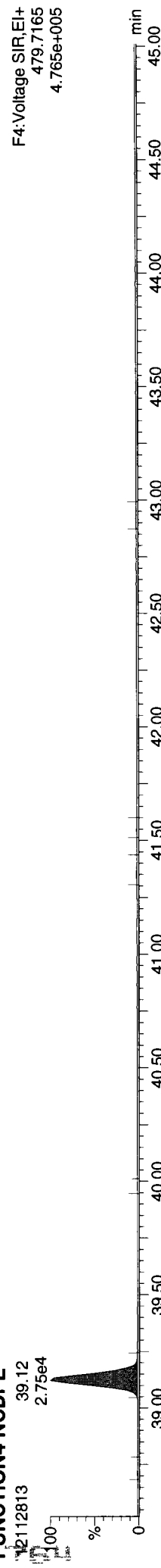
**Total-heptafurans**



**Total-heptafurans**



**FUNCTION4 NCDPE**

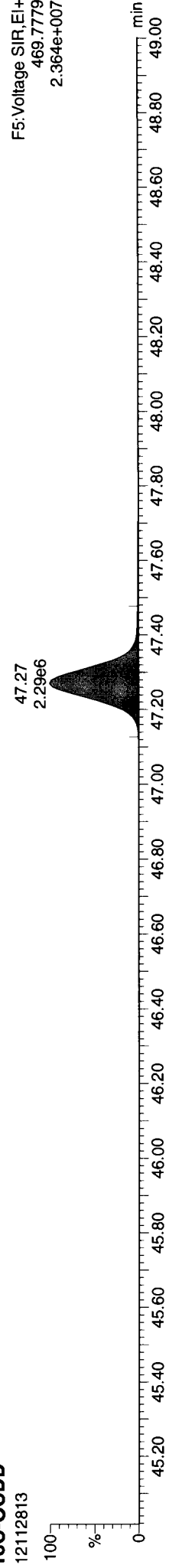


Quantify Sample Report **Masslynx 4.1 SCN 714**

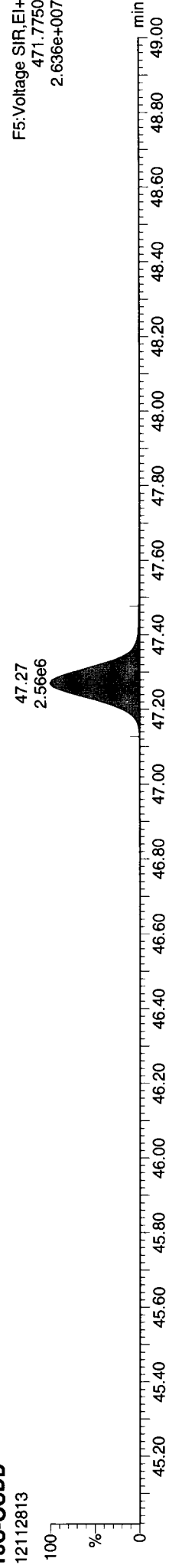
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:03 Pacific Standard Time

Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk

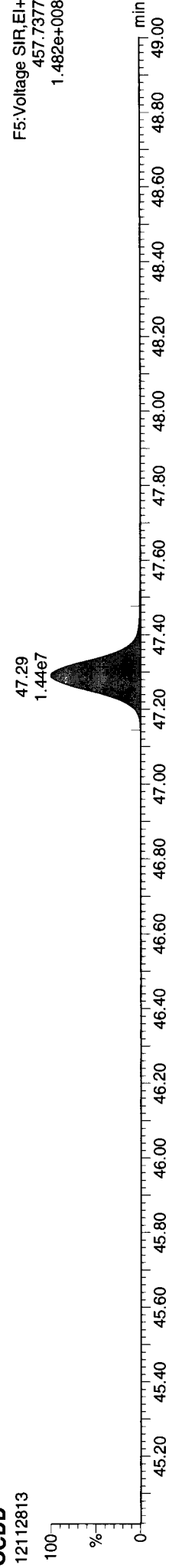
**13C-OCDD**  
12112813



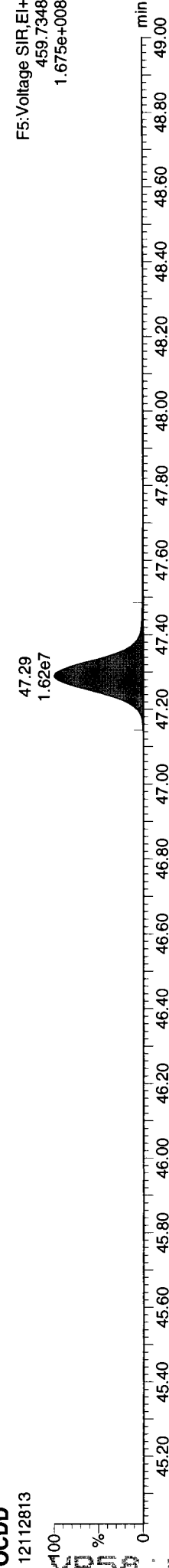
**13C-OCDD**  
12112813



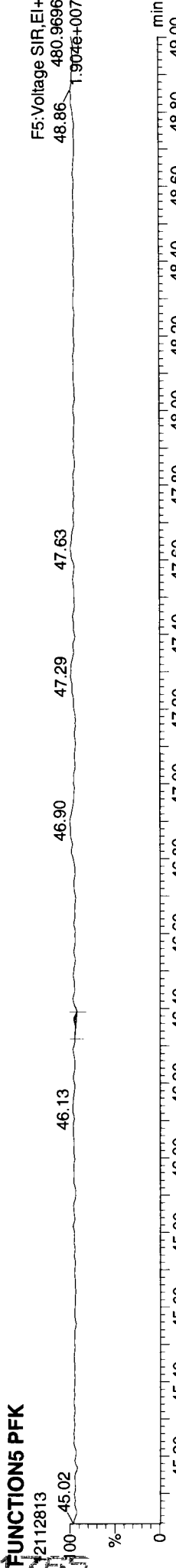
**OCDD**  
12112813



**OCDD**  
12112813



**FUNCTION5 PFK**  
12112813



Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld

Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time

Printed: Monday, December 10, 2012 15:30:03 Pacific Standard Time

Name: 12112813, Date: 28-Nov-2012, Time: 20:29:18, ID: VR58F, Conditions: AUTOSPEC01, User: pk

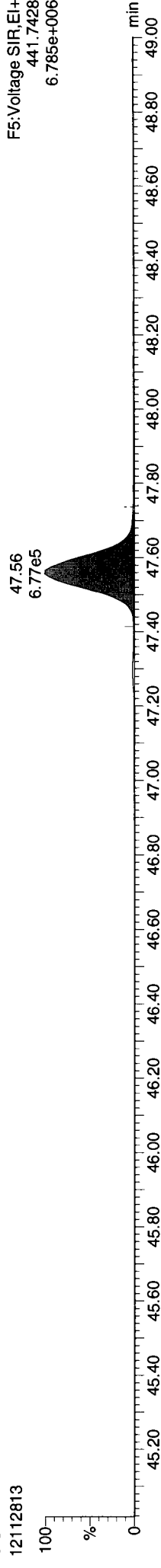
37CL-2378-TCDD

12112813



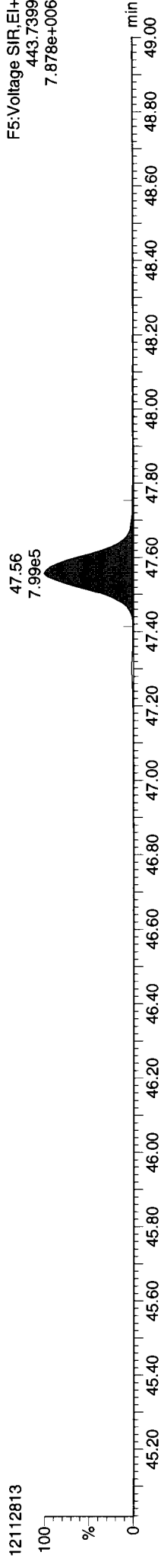
OCDF

12112813



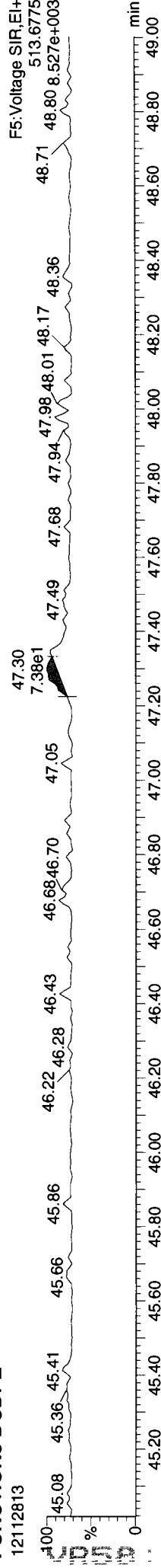
OCDF

12112813



FUNCTION5 DCDPE

12112813



Quantify Sample Summary Report Maeslynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Ma 12/10/12

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

Compound	26.049	1.000	8.07e2	1.37e3	0.877	0.587	0.770	3.9	2284	2313	8.99e3	2.06e4	0.044	0.052
2378-TCDF	26.049	1.000	8.07e2	1.37e3	0.877	0.587	0.770	3.9	2284	2313	8.99e3	2.06e4	0.044	0.052
12378-PeCDF	30.212	1.001	1.06e3	7.09e2	0.896	1.490	1.550	10.3	1702	1996	1.75e4	9.90e3	0.046	0.046
23478-PeCDF	31.561	1.001	7.62e2	6.70e2	0.926	1.136	1.550	8.3	1702	1996	1.41e4	1.05e4	0.033	0.038
123478-HxCDF	35.222	1.001	1.70e3	1.57e3	1.068	1.086	1.240	9.4	2304	1260	2.18e4	2.04e4	0.089	0.089
234678-HxCDF	36.285	1.000	1.70e3	1.46e3	1.037	1.161	1.240	8.9	2304	1260	2.06e4	1.62e4	0.096	0.096
123678-HxCDF	35.375	1.001	1.07e3	8.84e2	1.035	1.213	1.240	6.4	2304	1260	1.47e4	1.55e4	0.052	0.052
123789-HxCDF	37.436	1.000	4.95e2	4.80e2	0.987	1.032	1.240	4.1	2304	1260	9.36e3	7.40e3	0.031	0.033
1234678-HpCDF	39.519	1.000	1.59e4	1.69e4	1.232	0.940	1.050	278.3	877	1288	2.44e5	2.66e5	1.035	1.035
1234789-HpCDF	42.204	1.000	4.04e2	4.76e2	1.215	0.848	1.050	9.3	877	1288	8.17e3	1.12e4	0.032	0.036
OCDF	47.523	1.006	2.54e4	2.96e4	1.138	0.858	0.890	351.3	773	1101	2.72e5	3.08e5	2.970	2.970
2378-TCDD	26.721	1.002	4.73e2	2.32e3	1.049	0.204	0.770	3.7	2005	1385	7.32e3	3.76e4	0.030	0.078
12378-PeCDD	31.802	1.001	8.43e2	4.02e2	0.998	2.095	1.550	7.4	2310	1037	1.71e4	8.29e3	0.037	0.045
123478-HxCDD	36.450	1.000	1.05e3	8.89e2	0.971	1.183	1.240	13.7	1178	1464	1.62e4	1.20e4	0.072	0.072
123678-HxCDD	36.581	1.000	5.77e3	5.13e3	0.918	1.124	1.240	79.0	1178	1464	9.31e4	7.73e4	0.413	0.413
123789-HxCDD	37.009	1.012	2.20e3	2.46e3	0.932	0.895	1.240	27.8	1178	1464	3.28e4	3.45e4	0.151	0.177
1234678-HpCDD	41.328	1.000	8.69e4	8.16e4	1.017	1.065	1.050	646.3	1793	1988	1.16e6	1.15e6	7.037	7.037
OCDD	47.254	1.000	4.07e5	4.61e5	1.008	0.882	0.890	4571.5	930	1274	4.25e6	4.73e6	52.851	52.851
13C-2378-TCDF	26.049	1.007	2.09e6	2.69e6	1.473	0.775	0.770	8050.2	4083	3366	3.29e7	4.23e7	76.514	76.514
13C-12378-PeCDF	30.190	1.167	2.62e6	1.68e6	1.148	1.564	1.550	15255.2	2706	2671	4.13e7	2.62e7	88.243	88.243
13C-23478-PeCDF	31.528	1.219	2.52e6	1.61e6	1.113	1.566	1.550	15006.0	2706	2671	4.06e7	2.61e7	87.315	87.315
13C-123478-HxCDF	35.200	0.951	1.18e6	2.27e6	1.209	0.520	0.510	5097.8	3579	4505	1.82e7	3.55e7	88.998	88.998
13C-123678-HxCDF	35.354	0.956	1.23e6	2.37e6	1.269	0.520	0.510	5396.4	3579	4505	1.93e7	3.72e7	88.862	88.862
13C-234678-HxCDF	36.296	0.981	1.08e6	2.08e6	1.236	0.518	0.510	4707.7	3579	4505	1.68e7	3.24e7	79.851	79.851
13C-123789-HxCDF	37.447	1.012	1.01e6	1.93e6	1.107	0.524	0.510	4354.9	3579	4505	1.56e7	2.96e7	83.265	83.265
13C-1234678-HpCDF	39.508	1.068	7.96e5	1.78e6	1.051	0.447	0.440	3927.8	3110	2304	1.22e7	2.71e7	76.616	76.616
13C-1234789-HpCDF	42.194	1.140	6.21e5	1.39e6	0.815	0.446	0.440	2599.0	3110	2304	8.08e6	1.81e7	77.198	77.198
13C-1234-TCDD	25.869	0.000	1.87e6	2.37e6	1.000	0.791	0.770	8834.5	3395	1696	3.00e7	3.83e7	100.000	100.000
13C-2378-TCDD	26.676	1.031	1.51e6	1.92e6	0.946	0.785	0.770	6859.3	3395	1696	2.33e7	2.99e7	85.434	85.434
13C-12378-PeCDD	31.780	1.228	1.69e6	1.08e6	0.721	1.568	1.550	12237.1	2184	1642	2.67e7	1.71e7	90.703	90.703
13C-123478-HxCDD	36.439	0.985	1.54e6	1.22e6	0.991	1.260	1.240	7305.6	3303	2327	2.41e7	1.92e7	86.996	86.996
13C-123678-HxCDD	36.570	0.988	1.60e6	1.27e6	1.025	1.258	1.240	7528.2	3303	2327	2.49e7	1.99e7	87.622	87.622
13C-1234678-HpCDD	41.317	1.117	1.21e6	1.15e6	0.866	1.049	1.050	5377.9	3052	2939	1.64e7	1.55e7	84.930	84.930
13C-OCDD	47.236	1.277	1.54e6	1.72e6	0.769	0.897	0.890	10004.9	1589	2317	1.59e7	1.77e7	132.368	132.368

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

	13C-123789-HxCDD	36.998	0.000	1.78e6	1.42e6	1.000	1.247	1.240	8240.4	3303	2327	2.72e7	2.17e7	NO	
Total-tetrafurans			5.00e3		0.877					2284		8.44e4		0.536	100.000
Total-penta1			1.46e4							1032		2.20e5		0.637	0.271
Total-pentafurans			5.48e3		0.911					1702		9.44e4		0.637	0.637
Total-hexafurans			3.57e4		1.032					2304		5.70e5		0.372	0.236
Total-heptafurans			4.49e4		1.223					877		6.60e5		1.946	1.915
Total-Furans			1.31e5		1.041					2284		1.90e6		3.115	3.047
Total-tetra-dioxins			1.82e3		1.049					2005		3.08e4		9.576	9.075
Total-penta-dioxins			2.19e3		0.998					2310		3.49e4		0.225	0.119
Total-hexa-dioxins			2.75e4		0.940					1178		3.65e5		0.319	0.042
Total-hepta-dioxins			1.69e5		1.017					1793		2.34e6		2.074	1.892
Total-Dioxins			7.48e6		0.985					2005		1.08e8		13.768	13.768
Total-TEQ			7.61e6							2005		1.10e8		9.576	9.075
37CL-2378-TCDD		26.706	1.032		1.044				13928.8	1788		2.49e7		19.152	18.151
FUNCTION1 PFK			2.05e6							619600		3.17e7		2.074	35.566
FUNCTION2 PFK			2.68e5							191255		8.39e6			0.000
FUNCTION3 PFK			1.17e5							471654		1.59e6			0.000
FUNCTION4 PFK			4.36e5							315983		9.40e6			
FUNCTION5 PFK			5.03e5							297978		1.75e7			
FUNCTION1 HxCDPE			1.52e2							671		4.14e3			0.000
FUNCTION1 HPCDPE			1.69e3							1079		3.70e4			0.000
FUNCTION2 HPCDPE			4.91e2							907		1.49e4			0.000
FUNCTION3 OCDPE			2.89e2							723		6.56e3			0.000
FUNCTION4 NCDPE			3.04e3							672		5.49e4			0.000
FUNCTION5 DCDCPE			0.00e0							353		0.00e0			0.000

7000 181 700



Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
 Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

TF

#	Name	Time	RT	Abundance	RF	RF	RF	RF	RF	RF	RF	RF
35	Total-tetrafurans	303.9016	23.81	0.000	0.877	0.000	0.029	0.38	0.77	YES	4.5	
35	Total-tetrafurans	303.9016	23.40	5684.687	0.877	0.136	0.136	0.78	0.77	NO	18.2	
35	Total-tetrafurans	303.9016	22.82	0.000	0.877	0.000	0.023	0.51	0.77	YES	3.7	
35	Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.020	1.07	0.77	YES	2.8	
35	Total-tetrafurans	303.9016	26.29	0.000	0.877	0.000	0.035	0.49	0.77	YES	4.2	
35	Total-tetrafurans	303.9016	26.20	746.212	0.877	0.018	0.018	0.75	0.77	NO	2.0	
1	2378-TCDF	303.9016	26.05	2181.235	0.877	0.000	0.044	0.59	0.77	YES	3.9	
35	Total-tetrafurans	303.9016	25.15	861.558	0.877	0.021	0.021	0.74	0.77	NO	3.2	
35	Total-tetrafurans	303.9016	24.97	2793.754	0.877	0.067	0.067	0.80	0.77	NO	9.9	
35	Total-tetrafurans	303.9016	24.81	0.000	0.877	0.000	0.021	0.64	0.77	YES	3.5	
35	Total-tetrafurans	303.9016	24.73	0.000	0.877	0.000	0.034	0.59	0.77	YES	3.1	
35	Total-tetrafurans	303.9016	24.32	1261.965	0.877	0.030	0.030	0.83	0.77	NO	3.7	
35	Total-tetrafurans	303.9016	24.17	0.000	0.877	0.000	0.015	0.54	0.77	YES	2.6	
35	Total-tetrafurans	303.9016	24.06	0.000	0.877	0.000	0.044	0.59	0.77	YES	7.0	

PP

#	Name	Time	RT	Abundance	RF	RF	RF	RF	RF	RF	RF
36	Total-penta1	339.8597	27.48	24602.001		0.637	0.637	1.45	1.55	NO	213.0

PF

#	Name	Time	RT	Abundance	RF	RF	RF	RF	RF	RF	RF
3	23478-PeCDF	339.8597	31.56	1431.969	0.926	0.000	0.033	1.14	1.55	YES	8.3
37	Total-pentafurans	339.8597	31.39	0.000	0.911	0.000	0.028	2.04	1.55	YES	9.6
37	Total-pentafurans	339.8597	30.42	0.000	0.911	0.000	0.019	0.86	1.55	YES	6.6
2	12378-PeCDF	339.8597	30.21	1765.538	0.896	0.046	0.046	1.49	1.55	NO	10.3
37	Total-pentafurans	339.8597	29.83	2172.490	0.911	0.057	0.057	1.40	1.55	NO	10.7
37	Total-pentafurans	339.8597	29.73	0.000	0.911	0.000	0.010	0.93	1.55	YES	2.9
37	Total-pentafurans	339.8597	29.14	5123.023	0.911	0.134	0.134	1.61	1.55	NO	34.5
37	Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.045	2.03	1.55	YES	16.1

HF

#	Name	Time	RT	Abundance	RF	RF	RF	RF	RF	RF	RF
38	Total-hexafurans	373.8208	33.49	8540.586	1.032	0.252	0.252	1.26	1.24	NO	34.2
7	123789-HxCDF	373.8208	37.44	974.557	0.987	0.000	0.031	1.03	1.24	YES	4.1
5	234678-HxCDF	373.8208	36.29	3156.973	1.037	0.096	0.096	1.16	1.24	NO	8.9
6	123678-HxCDF	373.8208	35.38	1956.640	1.035	0.052	0.052	1.21	1.24	NO	6.4
4	123478-HxCDF	373.8208	35.22	3268.847	1.068	0.089	0.089	1.09	1.24	NO	9.4
38	Total-hexafurans	373.8208	34.58	25371.615	1.032	0.748	0.748	1.21	1.24	NO	94.2
38	Total-hexafurans	373.8208	33.71	23004.566	1.032	0.678	0.678	1.21	1.24	NO	94.4

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HPF

39	Total-heptafurans	407.7818	42.25	0.000	1.223	0.000	0.021	0.47	1.05	YES	7.9
9	1234789-HpCDF	407.7818	42.20	879.752	1.215	0.000	0.032	0.85	1.05	YES	9.3
39	Total-heptafurans	407.7818	40.31	56494.531	1.223	2.012	2.012	1.06	1.05	NO	474.6
39	Total-heptafurans	407.7818	40.00	0.000	1.223	0.000	0.016	1.32	1.05	YES	7.4
8	1234678-HpCDF	407.7818	39.52	32860.607	1.232	1.035	1.035	0.94	1.05	NO	278.3

Furans,TF,PP,PF,HF,HPF,OF

35	Total-tetrafurans	303.9016	23.81	0.000	0.877	0.000	0.029	0.38	0.77	YES	4.5
35	Total-tetrafurans	303.9016	23.40	5684.687	0.877	0.136	0.136	0.78	0.77	NO	18.2
35	Total-tetrafurans	303.9016	22.82	0.000	0.877	0.000	0.023	0.51	0.77	YES	3.7
35	Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.020	1.07	0.77	YES	2.8
35	Total-tetrafurans	303.9016	26.29	0.000	0.877	0.000	0.035	0.49	0.77	YES	4.2
35	Total-tetrafurans	303.9016	26.20	746.212	0.877	0.018	0.018	0.75	0.77	NO	2.0
1	2378-TCDF	303.9016	26.05	2181.235	0.877	0.000	0.044	0.59	0.77	YES	3.9
35	Total-tetrafurans	303.9016	25.15	861.558	0.877	0.021	0.021	0.74	0.77	NO	3.2
35	Total-tetrafurans	303.9016	24.97	2793.754	0.877	0.067	0.067	0.80	0.77	NO	9.9
35	Total-tetrafurans	303.9016	24.81	0.000	0.877	0.000	0.021	0.64	0.77	YES	3.5
35	Total-tetrafurans	303.9016	24.73	0.000	0.877	0.000	0.034	0.59	0.77	YES	3.1
35	Total-tetrafurans	303.9016	24.32	1261.965	0.877	0.030	0.030	0.83	0.77	NO	3.7
35	Total-tetrafurans	303.9016	24.17	0.000	0.877	0.000	0.015	0.54	0.77	YES	2.6
35	Total-tetrafurans	303.9016	24.06	0.000	0.877	0.000	0.044	0.59	0.77	YES	7.0
3	23478-PeCDF	339.8597	31.56	1431.969	0.926	0.000	0.033	1.14	1.55	YES	8.3
37	Total-pentafurans	339.8597	31.39	0.000	0.911	0.000	0.028	2.04	1.55	YES	9.6
37	Total-pentafurans	339.8597	30.42	0.000	0.911	0.000	0.019	0.86	1.55	YES	6.6
2	12378-PeCDF	339.8597	30.21	1765.538	0.896	0.046	0.046	1.49	1.55	NO	10.3
37	Total-pentafurans	339.8597	29.83	2172.490	0.911	0.057	0.057	1.40	1.55	NO	10.7
37	Total-pentafurans	339.8597	29.73	0.000	0.911	0.000	0.010	0.93	1.55	YES	2.9
37	Total-pentafurans	339.8597	29.14	5123.023	0.911	0.134	0.134	1.61	1.55	NO	34.5
37	Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.045	2.03	1.55	YES	16.1
38	Total-hexafurans	373.8208	33.49	8540.586	1.032	0.252	0.252	1.26	1.24	NO	34.2
7	123789-HxCDF	373.8208	37.44	974.557	0.987	0.000	0.031	1.03	1.24	YES	4.1
5	234678-HxCDF	373.8208	36.29	3156.973	1.037	0.096	0.096	1.16	1.24	NO	8.9
6	123678-HxCDF	373.8208	35.38	1956.640	1.035	0.052	0.052	1.21	1.24	NO	6.4
4	123478-HxCDF	373.8208	35.22	3268.847	1.068	0.089	0.089	1.09	1.24	NO	9.4
38	Total-hexafurans	373.8208	34.58	25371.615	1.032	0.748	0.748	1.21	1.24	NO	94.2
38	Total-hexafurans	373.8208	33.71	23004.566	1.032	0.678	0.678	1.21	1.24	NO	94.4
39	Total-heptafurans	407.7818	42.25	0.000	1.223	0.000	0.021	0.47	1.05	YES	7.9
9	1234789-HpCDF	407.7818	42.20	879.752	1.215	0.000	0.032	0.85	1.05	YES	9.3
39	Total-heptafurans	407.7818	40.31	56494.531	1.223	2.012	2.012	1.06	1.05	NO	474.6
39	Total-heptafurans	407.7818	40.00	0.000	1.223	0.000	0.016	1.32	1.05	YES	7.4
8	1234678-HpCDF	407.7818	39.52	32860.607	1.232	1.035	1.035	0.94	1.05	NO	278.3
10	OCDF	441.7428	47.52	55054.022	1.138	2.970	2.970	0.86	0.89	NO	351.3
36	Total-penta1	339.8597	27.48	24602.001		0.637	0.637	1.45	1.55	NO	213.0

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TD

#	Name	Trace	RT	Abs Peak	RRF M	EMPC	IC Fail	IC Pass	IC R	Y/N	SN
11	2378-TCDD	319.8965	26.72	2796.120	1.049	0.000	0.030	0.20	0.77	YES	3.7
41	Total-tetradoxins	319.8965	24.84	4291.516	1.049	0.119	0.119	0.74	0.77	NO	15.4
41	Total-tetradoxins	319.8965	24.11	0.000	1.049	0.000	0.031	0.61	0.77	YES	4.1
41	Total-tetradoxins	319.8965	23.85	0.000	1.049	0.000	0.044	0.96	0.77	YES	7.0

PD

#	Name	Trace	RT	Abs Peak	RRF M	EMPC	IC Fail	IC Pass	IC R	Y/N	SN
42	Total-pentadoxins	355.8546	30.73	0.000	0.998	0.000	0.046	1.35	1.55	NO	3.9
42	Total-pentadoxins	355.8546	30.55	0.000	0.998	0.000	0.025	1.18	1.55	YES	3.4
42	Total-pentadoxins	355.8546	30.42	0.000	0.998	0.000	0.038	0.88	1.55	YES	3.8
42	Total-pentadoxins	355.8546	30.21	0.000	0.998	0.000	0.046	1.73	1.55	NO	6.2
42	Total-pentadoxins	355.8546	29.60	1156.457	0.998	0.042	0.042	1.32	1.55	NO	5.0
42	Total-pentadoxins	355.8546	29.10	0.000	0.998	0.000	0.086	1.78	1.55	YES	7.8
12	12378-PeCDD	355.8546	31.80	1244.837	0.998	0.000	0.037	2.09	1.55	YES	7.4

HD

#	Name	Trace	RT	Abs Peak	RRF M	EMPC	IC Fail	IC Pass	IC R	Y/N	SN
43	Total-hexadoxins	389.8157	35.50	20227.036	0.940	0.764	0.764	1.29	1.24	NO	100.5
43	Total-hexadoxins	389.8157	35.11	3236.071	0.940	0.122	0.122	1.42	1.24	NO	22.5
43	Total-hexadoxins	389.8157	34.30	13785.250	0.940	0.520	0.520	1.18	1.24	NO	93.8
15	123789-HxCDD	389.8157	37.01	4652.956	0.932	0.000	0.151	0.89	1.24	YES	27.8
43	Total-hexadoxins	389.8157	36.75	0.000	0.940	0.000	0.032	1.77	1.24	YES	8.1
14	123678-HxCDD	389.8157	36.58	10893.344	0.918	0.413	0.413	1.12	1.24	NO	79.0
13	123478-HxCDD	389.8157	36.45	1939.727	0.971	0.072	0.072	1.18	1.24	NO	13.7

HPD

#	Name	Trace	RT	Abs Peak	RRF M	EMPC	IC Fail	IC Pass	IC R	Y/N	SN
16	1234678-HpCDD	423.7766	41.33	168496.891	1.017	7.037	7.037	1.06	1.05	NO	646.3
44	Total-heptadoxins	423.7766	40.07	161143.399	1.017	6.730	6.730	1.04	1.05	NO	656.9

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TotalTEQ,Furans,Dioxins

Sample	Concentration	TEQ	Furans	Dioxins	TEQ/Furans	Dioxins/Furans	TEQ/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins	TEQ/Furans/Dioxins
35 Total-tetrafurans	303.9016	23.81	0.000	0.877	0.000	0.029	0.38	0.77	YES	4.5	
35 Total-tetrafurans	303.9016	23.40	5684.687	0.877	0.136	0.136	0.78	0.77	NO	18.2	
35 Total-tetrafurans	303.9016	22.82	0.000	0.877	0.000	0.023	0.51	0.77	YES	3.7	
35 Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.020	1.07	0.77	YES	2.8	
35 Total-tetrafurans	303.9016	26.29	0.000	0.877	0.000	0.035	0.49	0.77	YES	4.2	
35 Total-tetrafurans	303.9016	26.20	746.212	0.877	0.018	0.018	0.75	0.77	NO	2.0	
1 2378-TCDF	303.9016	26.05	2181.235	0.877	0.052	0.044	0.59	0.77	YES	3.9	
35 Total-tetrafurans	303.9016	25.15	861.558	0.877	0.021	0.021	0.74	0.77	NO	3.2	
35 Total-tetrafurans	303.9016	24.97	2793.754	0.877	0.067	0.067	0.80	0.77	NO	9.9	
35 Total-tetrafurans	303.9016	24.81	0.000	0.877	0.000	0.021	0.64	0.77	YES	3.5	
35 Total-tetrafurans	303.9016	24.73	0.000	0.877	0.000	0.034	0.59	0.77	YES	3.1	
35 Total-tetrafurans	303.9016	24.32	1261.965	0.877	0.030	0.030	0.83	0.77	NO	3.7	
35 Total-tetrafurans	303.9016	24.17	0.000	0.877	0.000	0.015	0.54	0.77	YES	2.6	
35 Total-tetrafurans	303.9016	24.06	0.000	0.877	0.000	0.044	0.59	0.77	YES	7.0	
3 23478-PeCDF	339.8597	31.56	1431.969	0.926	0.038	0.033	1.14	1.55	YES	8.3	
37 Total-pentafurans	339.8597	31.39	0.000	0.911	0.000	0.028	2.04	1.55	YES	9.6	
37 Total-pentafurans	339.8597	30.42	0.000	0.911	0.000	0.019	0.86	1.55	YES	6.6	
2 12378-PeCDF	339.8597	30.21	1765.538	0.896	0.046	0.046	1.49	1.55	NO	10.3	
37 Total-pentafurans	339.8597	29.83	2172.490	0.911	0.057	0.057	1.40	1.55	NO	10.7	
37 Total-pentafurans	339.8597	29.73	0.000	0.911	0.000	0.010	0.93	1.55	YES	2.9	
37 Total-pentafurans	339.8597	29.14	5123.023	0.911	0.134	0.134	1.61	1.55	NO	34.5	
37 Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.045	2.03	1.55	YES	16.1	
38 Total-hexafurans	373.8208	33.49	8540.586	1.032	0.252	0.252	1.26	1.24	NO	34.2	
7 123789-HxCDF	373.8208	37.44	974.557	0.987	0.033	0.031	1.03	1.24	YES	4.1	
5 234678-HxCDF	373.8208	36.29	3156.973	1.037	0.096	0.096	1.16	1.24	NO	8.9	
6 123678-HxCDF	373.8208	35.38	1956.640	1.035	0.052	0.052	1.21	1.24	NO	6.4	
4 123478-HxCDF	373.8208	35.22	3268.847	1.068	0.089	0.089	1.09	1.24	NO	9.4	
38 Total-hexafurans	373.8208	34.58	25371.615	1.032	0.748	0.748	1.21	1.24	NO	94.2	
38 Total-hexafurans	373.8208	33.71	23004.566	1.032	0.678	0.678	1.21	1.24	NO	94.4	
39 Total-heptafurans	407.7818	42.25	0.000	1.223	0.000	0.021	0.47	1.05	YES	7.9	
9 1234789-HpCDF	407.7818	42.20	879.752	1.215	0.036	0.032	0.85	1.05	YES	9.3	
39 Total-heptafurans	407.7818	40.31	56494.531	1.223	2.012	2.012	1.06	1.05	NO	474.6	
39 Total-heptafurans	407.7818	40.00	0.000	1.223	0.000	0.016	1.32	1.05	YES	7.4	
8 1234678-HpCDF	407.7818	39.52	32860.607	1.232	1.035	1.035	0.94	1.05	NO	278.3	
10 OCDF	441.7428	47.52	55054.022	1.138	2.970	2.970	0.86	0.89	NO	351.3	
36 Total-penta1	339.8597	27.48	24602.001		0.637	0.637	1.45	1.55	NO	213.0	

**Quantify Totals Report MassLynx 4.1 SCN 714**

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**TotalTEQ,Furans,Dioxins**

Sample	Component	Mass	TEQ	Furans	Dioxins	TCDF	PeCDF	HxCDF	HxCDF	HpCDF	OCDF	Other	Yield	Pass/Fail	Value
35	Total-tetrafurans	303.9016	23.81	0.000	0.877	0.000	0.029	0.38	0.77	YES			4.5		
35	Total-tetrafurans	303.9016	23.40	5684.687	0.877	0.136	0.136	0.78	0.77	NO			18.2		
35	Total-tetrafurans	303.9016	22.82	0.000	0.877	0.000	0.023	0.51	0.77	YES			3.7		
35	Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.020	1.07	0.77	YES			2.8		
35	Total-tetrafurans	303.9016	26.29	0.000	0.877	0.000	0.035	0.49	0.77	YES			4.2		
35	Total-tetrafurans	303.9016	26.20	746.212	0.877	0.018	0.018	0.75	0.77	NO			2.0		
1	2378-TCDF	303.9016	26.05	2181.235	0.877	0.000	0.044	0.59	0.77	YES			3.9		
35	Total-tetrafurans	303.9016	25.15	861.558	0.877	0.021	0.021	0.74	0.77	NO			3.2		
35	Total-tetrafurans	303.9016	24.97	2793.754	0.877	0.067	0.067	0.80	0.77	NO			9.9		
35	Total-tetrafurans	303.9016	24.81	0.000	0.877	0.000	0.021	0.64	0.77	YES			3.5		
35	Total-tetrafurans	303.9016	24.73	0.000	0.877	0.000	0.034	0.59	0.77	YES			3.1		
35	Total-tetrafurans	303.9016	24.32	1261.965	0.877	0.030	0.030	0.83	0.77	NO			3.7		
35	Total-tetrafurans	303.9016	24.17	0.000	0.877	0.000	0.015	0.54	0.77	YES			2.6		
35	Total-tetrafurans	303.9016	24.06	0.000	0.877	0.000	0.044	0.59	0.77	YES			7.0		
3	23478-PeCDF	339.8597	31.56	1431.969	0.926	0.000	0.033	1.14	1.55	YES			8.3		
37	Total-penta furans	339.8597	31.39	0.000	0.911	0.000	0.028	2.04	1.55	YES			9.6		
37	Total-penta furans	339.8597	30.42	0.000	0.911	0.000	0.019	0.86	1.55	YES			6.6		
2	12378-PeCDF	339.8597	30.21	1765.538	0.896	0.046	0.046	1.49	1.55	NO			10.3		
37	Total-penta furans	339.8597	29.83	2172.490	0.911	0.057	0.057	1.40	1.55	NO			10.7		
37	Total-penta furans	339.8597	29.73	0.000	0.911	0.000	0.010	0.93	1.55	YES			2.9		
37	Total-penta furans	339.8597	29.14	5123.023	0.911	0.134	0.134	1.61	1.55	NO			34.5		
37	Total-penta furans	339.8597	29.07	0.000	0.911	0.000	0.045	2.03	1.55	YES			16.1		
38	Total-hexa furans	373.8208	33.49	8540.586	1.032	0.252	0.252	1.26	1.24	NO			34.2		
7	123789-HxCDF	373.8208	37.44	974.557	0.987	0.000	0.031	1.03	1.24	YES			4.1		
5	234678-HxCDF	373.8208	36.29	3156.973	1.037	0.096	0.096	1.16	1.24	NO			8.9		
6	123678-HxCDF	373.8208	35.38	1956.640	1.035	0.052	0.052	1.21	1.24	NO			6.4		
4	123478-HxCDF	373.8208	35.22	3268.847	1.068	0.089	0.089	1.09	1.24	NO			9.4		
38	Total-hexa furans	373.8208	34.58	25371.615	1.032	0.748	0.748	1.21	1.24	NO			94.2		
38	Total-hexa furans	373.8208	33.71	23004.566	1.032	0.678	0.678	1.21	1.24	NO			94.4		
39	Total-hepta furans	407.7818	42.25	0.000	1.223	0.000	0.021	0.47	1.05	YES			7.9		
9	1234789-HpCDF	407.7818	42.20	879.752	1.215	0.000	0.032	0.85	1.05	YES			9.3		
39	Total-hepta furans	407.7818	40.31	56494.531	1.223	2.012	2.012	1.06	1.05	NO			474.6		
39	Total-hepta furans	407.7818	40.00	0.000	1.223	0.000	0.016	1.32	1.05	YES			7.4		
8	1234678-HpCDF	407.7818	39.52	32860.607	1.232	1.035	1.035	0.94	1.05	NO			278.3		
10	OCDF	441.7428	47.52	55054.022	1.138	2.970	2.970	0.86	0.89	NO			351.3		
36	Total-penta1	339.8597	27.48	24602.001		0.637	0.637	1.45	1.55	NO			213.0		
35	Total-tetra furans	303.9016	23.81	0.000	0.877	0.000	0.029	0.38	0.77	YES			4.5		
35	Total-tetra furans	303.9016	23.40	5684.687	0.877	0.136	0.136	0.78	0.77	NO			18.2		
35	Total-tetra furans	303.9016	22.82	0.000	0.877	0.000	0.023	0.51	0.77	YES			3.7		
35	Total-tetra furans	303.9016	22.57	0.000	0.877	0.000	0.020	1.07	0.77	YES			2.8		
35	Total-tetra furans	303.9016	26.29	0.000	0.877	0.000	0.035	0.49	0.77	YES			4.2		
35	Total-tetra furans	303.9016	26.20	746.212	0.877	0.018	0.018	0.75	0.77	NO			2.0		
1	2378-TCDF	303.9016	26.05	2181.235	0.877	0.000	0.044	0.59	0.77	YES			3.9		
35	Total-tetra furans	303.9016	25.15	861.558	0.877	0.021	0.021	0.74	0.77	NO			3.2		
35	Total-tetra furans	303.9016	24.97	2793.754	0.877	0.067	0.067	0.80	0.77	NO			9.9		
35	Total-tetra furans	303.9016	24.81	0.000	0.877	0.000	0.021	0.64	0.77	YES			3.5		
35	Total-tetra furans	303.9016	24.73	0.000	0.877	0.000	0.034	0.59	0.77	YES			3.1		
35	Total-tetra furans	303.9016	24.32	1261.965	0.877	0.030	0.030	0.83	0.77	NO			3.7		
35	Total-tetra furans	303.9016	24.17	0.000	0.877	0.000	0.015	0.54	0.77	YES			2.6		

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TotalTEQ,Furans,Dioxins

35	Total-tetrafurans	303.9016	24.06	0.000	0.877	0.000	0.044	0.59	0.77	YES	7.0
3	23478-PeCDF	339.8597	31.56	1431.969	0.926	0.000	0.033	1.14	1.55	YES	8.3
37	Total-pentafurans	339.8597	31.39	0.000	0.911	0.000	0.028	2.04	1.55	YES	9.6
37	Total-pentafurans	339.8597	30.42	0.000	0.911	0.000	0.019	0.86	1.55	YES	6.6
2	12378-PeCDF	339.8597	30.21	1765.538	0.896	0.046	0.046	1.49	1.55	NO	10.3
37	Total-pentafurans	339.8597	29.83	2172.490	0.911	0.057	0.057	1.40	1.55	NO	10.7
37	Total-pentafurans	339.8597	29.73	0.000	0.911	0.000	0.010	0.93	1.55	YES	2.9
37	Total-pentafurans	339.8597	29.14	5123.023	0.911	0.134	0.134	1.61	1.55	NO	34.5
37	Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.045	2.03	1.55	YES	16.1
38	Total-hexafurans	373.8208	33.49	8540.586	1.032	0.252	0.252	1.26	1.24	NO	34.2
7	123789-HxCDF	373.8208	37.44	974.557	0.987	0.000	0.031	1.03	1.24	YES	4.1
5	234678-HxCDF	373.8208	36.29	3156.973	1.037	0.096	0.096	1.16	1.24	NO	8.9
6	123678-HxCDF	373.8208	35.38	1956.640	1.035	0.052	0.052	1.21	1.24	NO	6.4
4	123478-HxCDF	373.8208	35.22	3268.847	1.068	0.089	0.089	1.09	1.24	NO	9.4
38	Total-hexafurans	373.8208	34.58	25371.615	1.032	0.748	0.748	1.21	1.24	NO	94.2
38	Total-hexafurans	373.8208	33.71	23004.566	1.032	0.678	0.678	1.21	1.24	NO	94.4
39	Total-heptafurans	407.7818	42.25	0.000	1.223	0.000	0.021	0.47	1.05	YES	7.9
9	1234789-HpCDF	407.7818	42.20	879.752	1.215	0.000	0.032	0.85	1.05	YES	9.3
39	Total-heptafurans	407.7818	40.31	56494.531	1.223	2.012	2.012	1.06	1.05	NO	474.6
39	Total-heptafurans	407.7818	40.00	0.000	1.223	0.000	0.016	1.32	1.05	YES	7.4
8	1234678-HpCDF	407.7818	39.52	32860.607	1.232	1.035	1.035	0.94	1.05	NO	278.3
10	OCDF	441.7428	47.52	55054.022	1.138	2.970	2.970	0.86	0.89	NO	351.3
36	Total-penta1	339.8597	27.48	24602.001		0.637	0.637	1.45	1.55	NO	213.0

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PFK1

Peak #	Name	Area	Height	Abundance	Retention Time (min)	Response
48	FUNCTION1 PFK	330.9792	22.99	0.000		1.1
48	FUNCTION1 PFK	330.9792	22.91	0.000		0.7
48	FUNCTION1 PFK	330.9792	22.78	0.000		1.6
48	FUNCTION1 PFK	330.9792	22.70	0.000		0.8
48	FUNCTION1 PFK	330.9792	22.46	0.000		1.2
48	FUNCTION1 PFK	330.9792	22.33	0.000		0.6
48	FUNCTION1 PFK	330.9792	22.13	0.000		1.9
48	FUNCTION1 PFK	330.9792	22.04	0.000		0.8
48	FUNCTION1 PFK	330.9792	21.82	0.000		1.4
48	FUNCTION1 PFK	330.9792	21.69	0.000		1.9
48	FUNCTION1 PFK	330.9792	21.60	0.000		1.1
48	FUNCTION1 PFK	330.9792	21.45	0.000		2.9
48	FUNCTION1 PFK	330.9792	21.10	0.000		8.1
48	FUNCTION1 PFK	330.9792	25.73	0.000		0.4
48	FUNCTION1 PFK	330.9792	25.57	0.000		0.4
48	FUNCTION1 PFK	330.9792	25.45	0.000		0.8
48	FUNCTION1 PFK	330.9792	25.32	0.000		1.2
48	FUNCTION1 PFK	330.9792	25.20	0.000		1.5
48	FUNCTION1 PFK	330.9792	25.14	0.000		0.7
48	FUNCTION1 PFK	330.9792	25.09	0.000		1.0
48	FUNCTION1 PFK	330.9792	25.00	0.000		2.0
48	FUNCTION1 PFK	330.9792	24.90	0.000		1.0
48	FUNCTION1 PFK	330.9792	24.48	0.000		0.8
48	FUNCTION1 PFK	330.9792	24.23	0.000		0.6
48	FUNCTION1 PFK	330.9792	24.18	0.000		0.6
48	FUNCTION1 PFK	330.9792	24.12	0.000		0.5
48	FUNCTION1 PFK	330.9792	23.72	0.000		0.8
48	FUNCTION1 PFK	330.9792	23.60	0.000		1.1
48	FUNCTION1 PFK	330.9792	23.49	0.000		1.4
48	FUNCTION1 PFK	330.9792	28.08	0.000		2.5
48	FUNCTION1 PFK	330.9792	27.99	0.000		1.6
48	FUNCTION1 PFK	330.9792	27.87	0.000		1.4
48	FUNCTION1 PFK	330.9792	27.56	0.000		1.5
48	FUNCTION1 PFK	330.9792	27.35	0.000		0.9
48	FUNCTION1 PFK	330.9792	26.23	0.000		1.7
48	FUNCTION1 PFK	330.9792	26.14	0.000		1.5
48	FUNCTION1 PFK	330.9792	25.79	0.000		1.1

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PFK2

Peak	Name	Time	Area	Height	Area Ratio	Height Ratio
49	FUNCTION2 PFK	366.9792	28.78	0.000	0.000	0.6
49	FUNCTION2 PFK	366.9792	28.64	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	28.62	0.000	0.000	0.9
49	FUNCTION2 PFK	366.9792	28.53	0.000	0.000	1.4
49	FUNCTION2 PFK	366.9792	28.48	0.000	0.000	0.5
49	FUNCTION2 PFK	366.9792	28.43	0.000	0.000	1.9
49	FUNCTION2 PFK	366.9792	28.34	0.000	0.000	0.9
49	FUNCTION2 PFK	366.9792	30.60	0.000	0.000	1.7
49	FUNCTION2 PFK	366.9792	30.50	0.000	0.000	1.7
49	FUNCTION2 PFK	366.9792	30.34	0.000	0.000	1.4
49	FUNCTION2 PFK	366.9792	30.12	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	30.06	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	29.84	0.000	0.000	1.0
49	FUNCTION2 PFK	366.9792	29.74	0.000	0.000	0.9
49	FUNCTION2 PFK	366.9792	29.69	0.000	0.000	2.2
49	FUNCTION2 PFK	366.9792	29.64	0.000	0.000	1.7
49	FUNCTION2 PFK	366.9792	29.61	0.000	0.000	2.1
49	FUNCTION2 PFK	366.9792	29.54	0.000	0.000	1.9
49	FUNCTION2 PFK	366.9792	29.49	0.000	0.000	0.6
49	FUNCTION2 PFK	366.9792	29.39	0.000	0.000	1.0
49	FUNCTION2 PFK	366.9792	29.07	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	28.97	0.000	0.000	1.4
49	FUNCTION2 PFK	366.9792	28.90	0.000	0.000	1.0
49	FUNCTION2 PFK	366.9792	32.74	0.000	0.000	1.2
49	FUNCTION2 PFK	366.9792	32.70	0.000	0.000	0.4
49	FUNCTION2 PFK	366.9792	32.51	0.000	0.000	1.2
49	FUNCTION2 PFK	366.9792	32.29	0.000	0.000	1.5
49	FUNCTION2 PFK	366.9792	31.90	0.000	0.000	0.7
49	FUNCTION2 PFK	366.9792	31.82	0.000	0.000	1.4
49	FUNCTION2 PFK	366.9792	31.24	0.000	0.000	1.8
49	FUNCTION2 PFK	366.9792	31.11	0.000	0.000	1.3
49	FUNCTION2 PFK	366.9792	30.99	0.000	0.000	0.9
49	FUNCTION2 PFK	366.9792	30.92	0.000	0.000	1.4
49	FUNCTION2 PFK	366.9792	30.67	0.000	0.000	2.1
49	FUNCTION2 PFK	366.9792	30.63	0.000	0.000	1.1

PFK3

Peak	Name	Time	Area	Height	Area Ratio	Height Ratio
50	FUNCTION3 PFK	380.9760	37.36	0.000	0.000	3.4



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PFK4

#	Name	Area	RT	Abs Resp	RFEM	dg	EMPC	Y. Rat.	X. Rat.	Y. N.	SA
51	FUNCTION4 PFK	430.9728	38.67	0.000							2.2
51	FUNCTION4 PFK	430.9728	43.76	0.000							2.1
51	FUNCTION4 PFK	430.9728	43.52	0.000							0.8
51	FUNCTION4 PFK	430.9728	43.21	0.000							0.7
51	FUNCTION4 PFK	430.9728	43.14	0.000							1.6
51	FUNCTION4 PFK	430.9728	42.59	0.000							0.9
51	FUNCTION4 PFK	430.9728	42.50	0.000							0.8
51	FUNCTION4 PFK	430.9728	42.05	0.000							2.4
51	FUNCTION4 PFK	430.9728	40.26	0.000							0.7
51	FUNCTION4 PFK	430.9728	39.88	0.000							1.2
51	FUNCTION4 PFK	430.9728	39.65	0.000							0.8
51	FUNCTION4 PFK	430.9728	39.47	0.000							1.1
51	FUNCTION4 PFK	430.9728	39.12	0.000							0.5
51	FUNCTION4 PFK	430.9728	39.08	0.000							0.8
51	FUNCTION4 PFK	430.9728	39.04	0.000							2.6
51	FUNCTION4 PFK	430.9728	38.83	0.000							1.4
51	FUNCTION4 PFK	430.9728	38.73	0.000							2.1
51	FUNCTION4 PFK	430.9728	44.98	0.000							0.7
51	FUNCTION4 PFK	430.9728	44.42	0.000							1.1
51	FUNCTION4 PFK	430.9728	44.17	0.000							1.7
51	FUNCTION4 PFK	430.9728	44.12	0.000							1.8
51	FUNCTION4 PFK	430.9728	43.78	0.000							1.7

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PFK5

Scan	Name	Time	RT	Abundance	Area	SN
52	FUNCTION5 PFK	480.9696	45.76	0.000		0.6
52	FUNCTION5 PFK	480.9696	45.67	0.000		0.9
52	FUNCTION5 PFK	480.9696	45.61	0.000		0.9
52	FUNCTION5 PFK	480.9696	45.47	0.000		1.2
52	FUNCTION5 PFK	480.9696	45.40	0.000		0.9
52	FUNCTION5 PFK	480.9696	45.37	0.000		1.1
52	FUNCTION5 PFK	480.9696	45.28	0.000		0.9
52	FUNCTION5 PFK	480.9696	45.25	0.000		1.8
52	FUNCTION5 PFK	480.9696	45.17	0.000		1.6
52	FUNCTION5 PFK	480.9696	45.14	0.000		0.9
52	FUNCTION5 PFK	480.9696	47.00	0.000		1.5
52	FUNCTION5 PFK	480.9696	46.77	0.000		1.1
52	FUNCTION5 PFK	480.9696	46.64	0.000		1.0
52	FUNCTION5 PFK	480.9696	46.60	0.000		0.8
52	FUNCTION5 PFK	480.9696	46.55	0.000		0.5
52	FUNCTION5 PFK	480.9696	46.41	0.000		0.8
52	FUNCTION5 PFK	480.9696	46.38	0.000		1.0
52	FUNCTION5 PFK	480.9696	46.34	0.000		1.3
52	FUNCTION5 PFK	480.9696	46.29	0.000		1.2
52	FUNCTION5 PFK	480.9696	46.20	0.000		0.5
52	FUNCTION5 PFK	480.9696	46.18	0.000		0.9
52	FUNCTION5 PFK	480.9696	46.14	0.000		0.9
52	FUNCTION5 PFK	480.9696	46.08	0.000		0.6
52	FUNCTION5 PFK	480.9696	45.94	0.000		1.1
52	FUNCTION5 PFK	480.9696	45.85	0.000		0.3
52	FUNCTION5 PFK	480.9696	45.81	0.000		1.1
52	FUNCTION5 PFK	480.9696	47.79	0.000		1.1
52	FUNCTION5 PFK	480.9696	47.76	0.000		1.2
52	FUNCTION5 PFK	480.9696	47.68	0.000		0.6
52	FUNCTION5 PFK	480.9696	47.64	0.000		1.5
52	FUNCTION5 PFK	480.9696	47.61	0.000		1.9
52	FUNCTION5 PFK	480.9696	47.57	0.000		1.5
52	FUNCTION5 PFK	480.9696	47.52	0.000		0.9
52	FUNCTION5 PFK	480.9696	47.49	0.000		1.5
52	FUNCTION5 PFK	480.9696	47.44	0.000		1.5
52	FUNCTION5 PFK	480.9696	47.38	0.000		1.9
52	FUNCTION5 PFK	480.9696	47.34	0.000		1.3
52	FUNCTION5 PFK	480.9696	47.29	0.000		1.3
52	FUNCTION5 PFK	480.9696	47.23	0.000		1.5
52	FUNCTION5 PFK	480.9696	47.16	0.000		0.9
52	FUNCTION5 PFK	480.9696	47.14	0.000		1.5
52	FUNCTION5 PFK	480.9696	47.09	0.000		1.0
52	FUNCTION5 PFK	480.9696	48.86	0.000		0.2
52	FUNCTION5 PFK	480.9696	48.75	0.000		1.5
52	FUNCTION5 PFK	480.9696	48.68	0.000		0.8
52	FUNCTION5 PFK	480.9696	48.64	0.000		1.3
52	FUNCTION5 PFK	480.9696	48.51	0.000		1.1
52	FUNCTION5 PFK	480.9696	48.47	0.000		1.5
52	FUNCTION5 PFK	480.9696	48.38	0.000		0.3

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PFK5

#	Name	Area	RT	Abundance	Ref. M.	EMPC	T. Ret.	T. Ret.	T. Ret.	SN
52	FUNCTION5 PFK	480.9696	48.33	0.000						0.6
52	FUNCTION5 PFK	480.9696	48.29	0.000						0.6
52	FUNCTION5 PFK	480.9696	48.27	0.000						0.3
52	FUNCTION5 PFK	480.9696	48.23	0.000						0.6
52	FUNCTION5 PFK	480.9696	48.19	0.000						1.2
52	FUNCTION5 PFK	480.9696	48.12	0.000						1.0
52	FUNCTION5 PFK	480.9696	47.85	0.000						0.9

ETHERS1

#	Name	Area	RT	Abundance	Ref. M.	EMPC	T. Ret.	T. Ret.	T. Ret.	SN
53	FUNCTION1 HXCD...	375.8364	23.97	0.000		0.000				3.3
53	FUNCTION1 HXCD...	375.8364	27.62	0.000		0.000				2.8

ETHERS2

#	Name	Area	RT	Abundance	Ref. M.	EMPC	T. Ret.	T. Ret.	T. Ret.	SN
54	FUNCTION1 HPCD...	409.7974	27.17	0.000		0.000				1.8
54	FUNCTION1 HPCD...	409.7974	26.65	0.000		0.000				1.3
54	FUNCTION1 HPCD...	409.7974	25.82	0.000		0.000				1.7
54	FUNCTION1 HPCD...	409.7974	25.75	0.000		0.000				1.4
54	FUNCTION1 HPCD...	409.7974	25.39	0.000		0.000				1.9
54	FUNCTION1 HPCD...	409.7974	25.29	0.000		0.000				1.6
54	FUNCTION1 HPCD...	409.7974	24.46	0.000		0.000				2.3
54	FUNCTION1 HPCD...	409.7974	24.15	0.000		0.000				2.8
54	FUNCTION1 HPCD...	409.7974	23.96	0.000		0.000				2.8
54	FUNCTION1 HPCD...	409.7974	23.88	0.000		0.000				1.9
54	FUNCTION1 HPCD...	409.7974	23.64	0.000		0.000				2.3
54	FUNCTION1 HPCD...	409.7974	23.51	0.000		0.000				2.1
54	FUNCTION1 HPCD...	409.7974	22.79	0.000		0.000				2.2
54	FUNCTION1 HPCD...	409.7974	21.21	0.000		0.000				2.7
54	FUNCTION1 HPCD...	409.7974	28.13	0.000		0.000				1.5
54	FUNCTION1 HPCD...	409.7974	27.56	0.000		0.000				2.1
54	FUNCTION1 HPCD...	409.7974	27.29	0.000		0.000				2.1

ETHERS3

#	Name	Area	RT	Abundance	Ref. M.	EMPC	T. Ret.	T. Ret.	T. Ret.	SN
55	FUNCTION2 HPCD...	409.7974	32.78	0.000		0.000				3.4
55	FUNCTION2 HPCD...	409.7974	32.60	0.000		0.000				1.9
55	FUNCTION2 HPCD...	409.7974	31.92	0.000		0.000				2.5
55	FUNCTION2 HPCD...	409.7974	30.51	0.000		0.000				2.9
55	FUNCTION2 HPCD...	409.7974	28.63	0.000		0.000				2.5
55	FUNCTION2 HPCD...	409.7974	28.36	0.000		0.000				3.2

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

ETHERS4

RT	Label	Area	RT	Area	Area	Area	Area	Area
56	FUNCTION3 OCDPE	445.7555	36.96	0.000	0.000			2.4
56	FUNCTION3 OCDPE	445.7555	34.68	0.000	0.000			3.8
56	FUNCTION3 OCDPE	445.7555	33.38	0.000	0.000			2.9

ETHERS5

RT	Label	Area	RT	Area	Area	Area	Area	Area
57	FUNCTION4 NCDPE	479.7165	39.11	0.000	0.000			77.2
57	FUNCTION4 NCDPE	479.7165	43.76	0.000	0.000			4.5

ETHERS6

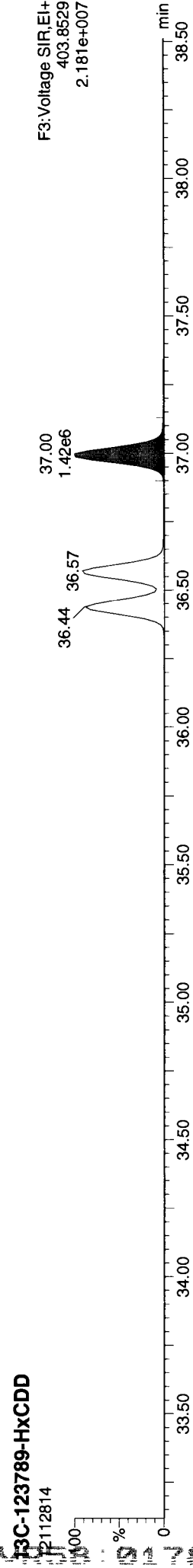
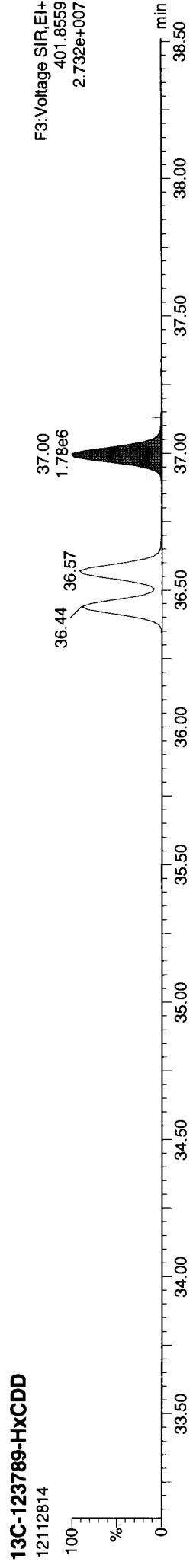
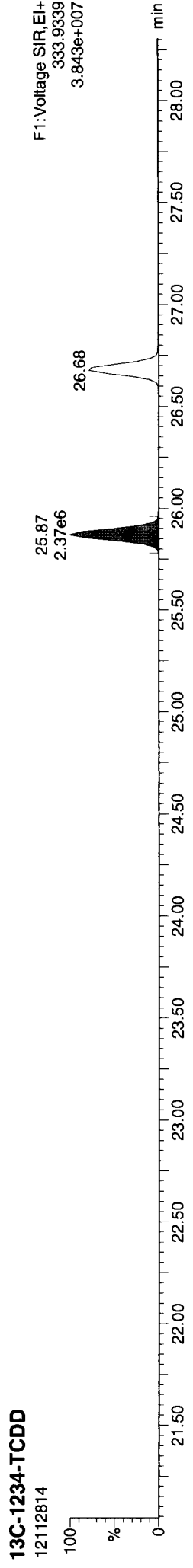
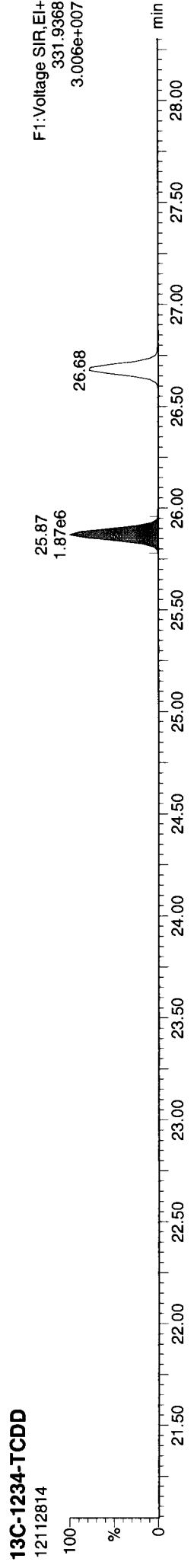
RT	Label	Area	RT	Area	Area	Area	Area	Area

Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

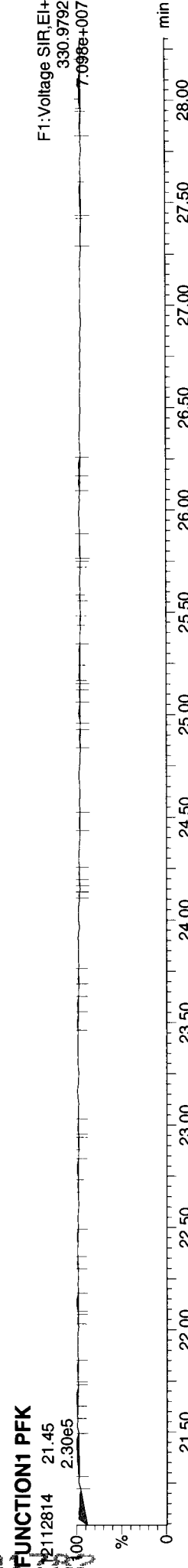
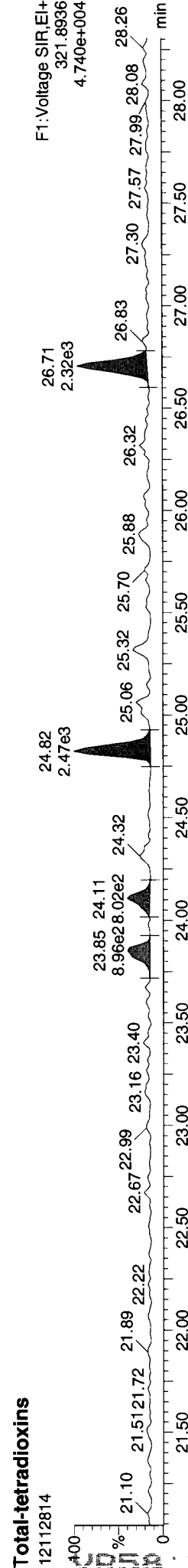
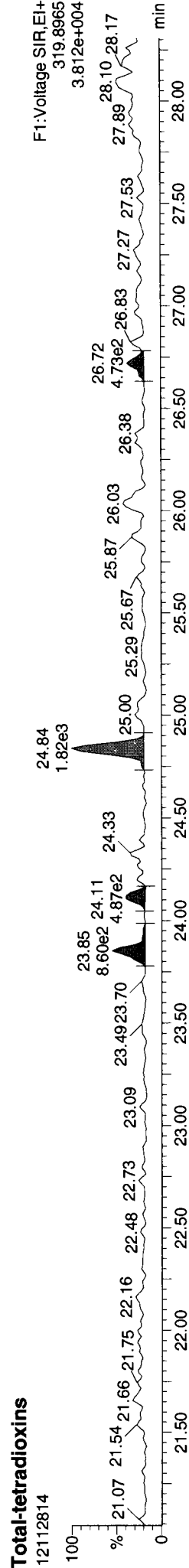
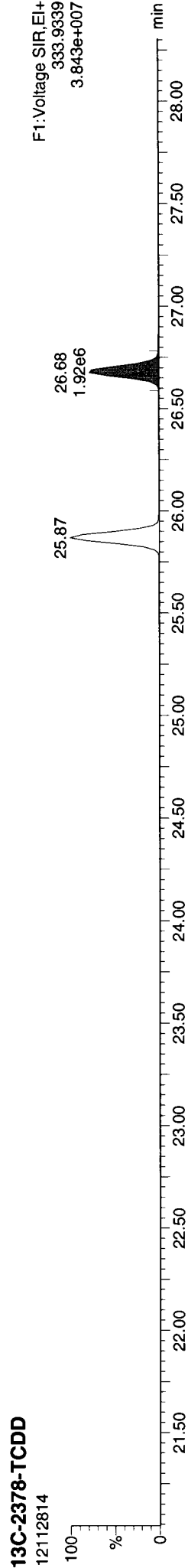
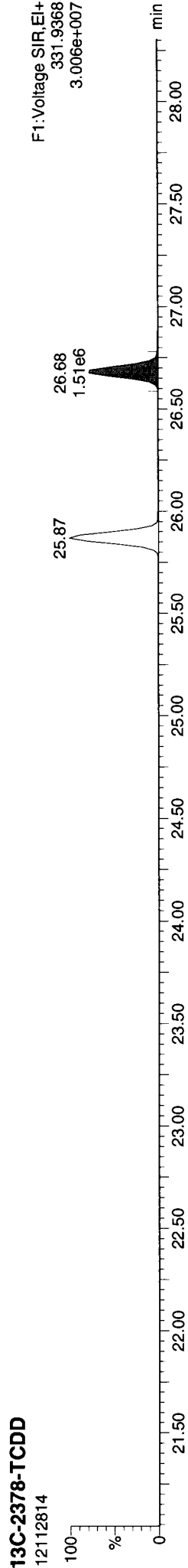
Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report

MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.dld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

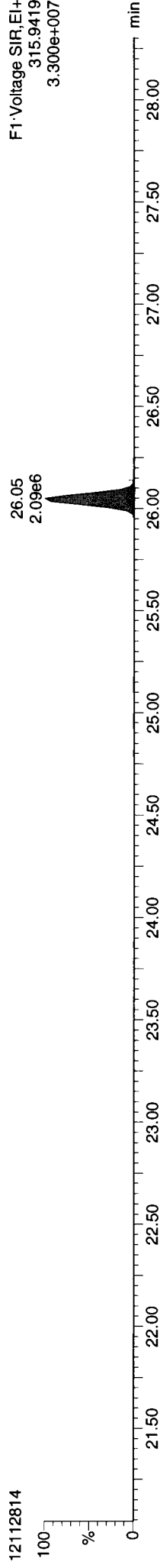


Quantify Sample Report MassLynx 4.1 SCN 714

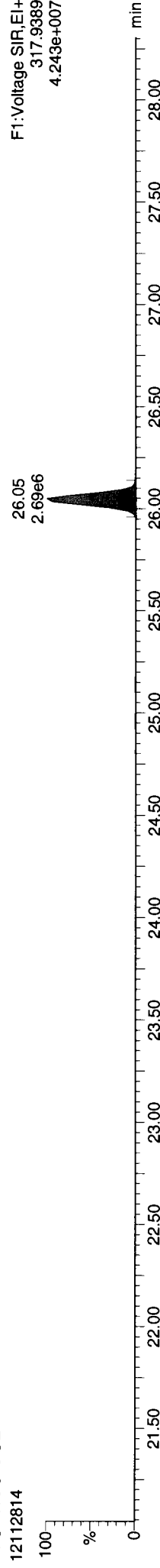
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR59G, Conditions: AUTOSPEC01, User: pk

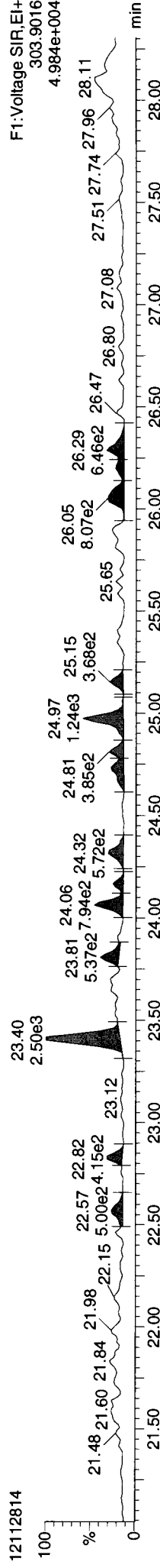
13C-2378-TCDF



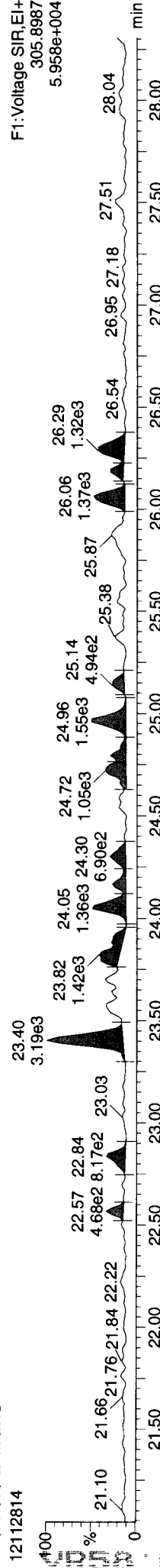
13C-2378-TCDF



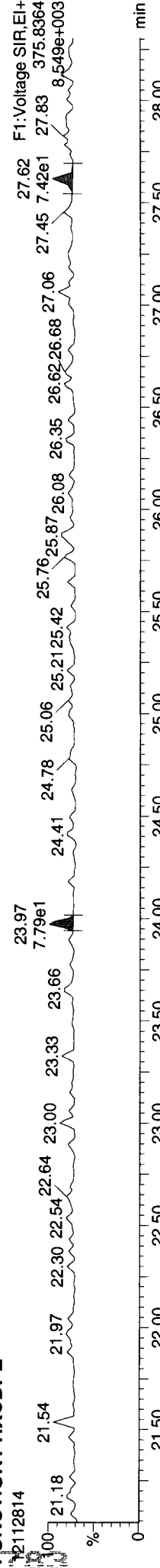
Total-tetrafurans



Total-tetrafurans



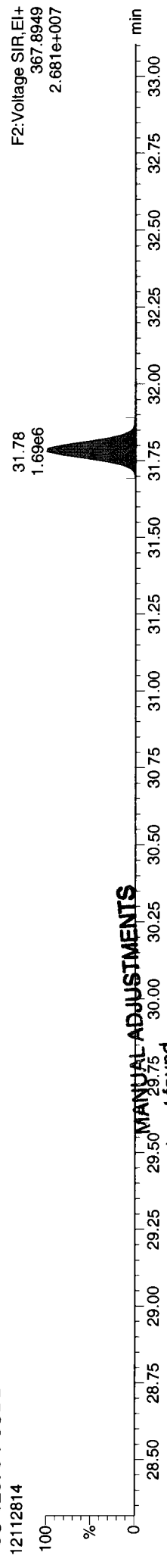
FUNCTION1 HXCDPE



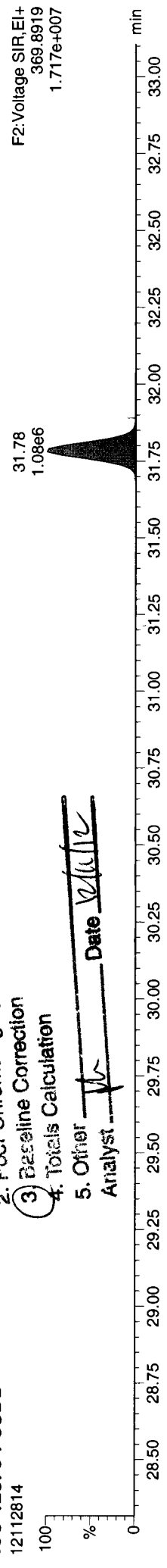
Quantify Sample Report  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD  
12112814



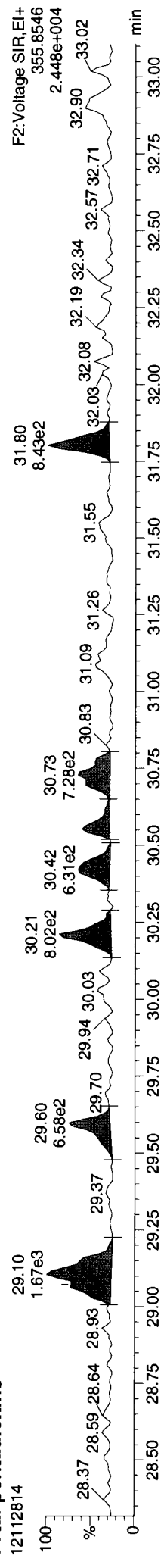
13C-12378-PeCDD  
12112814



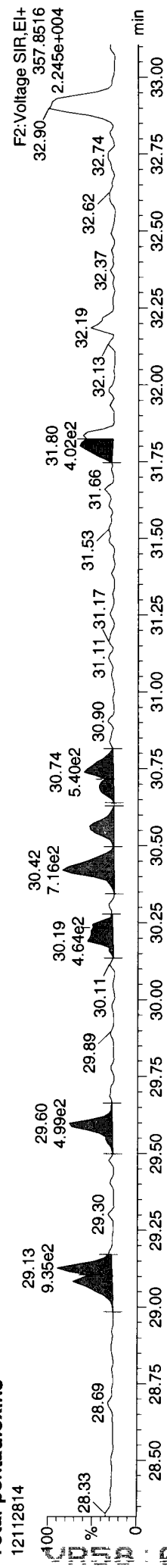
MANUAL ADJUSTMENTS

- 1. Peak not found
  - 2. Poor Chromatography
  - 3. Baseline Correction
  - 4. Totals Calculation
  - 5. Other
- Analyst: pk Date: 12/10/12

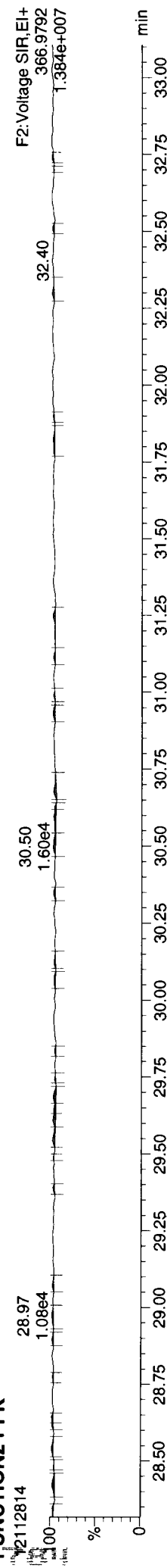
Total-pentadioxins  
12112814



Total-pentadioxins  
12112814



FUNCTION2 PFK  
12112814



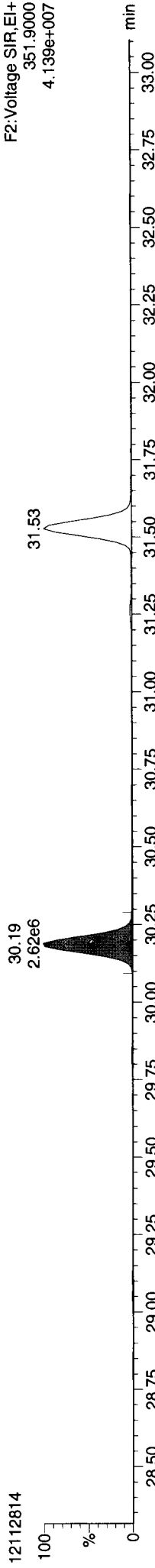


Quantify Sample Report MassLynx 4.1 SCN 714

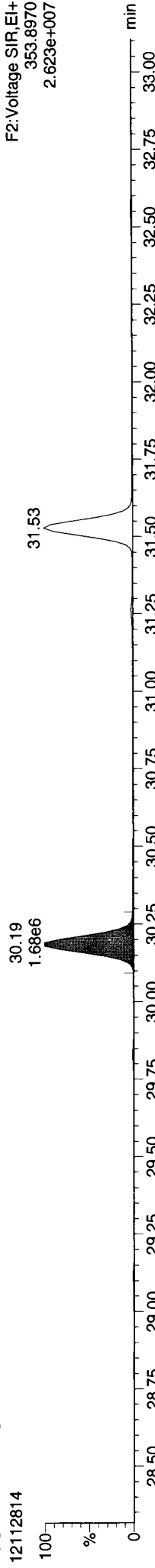
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

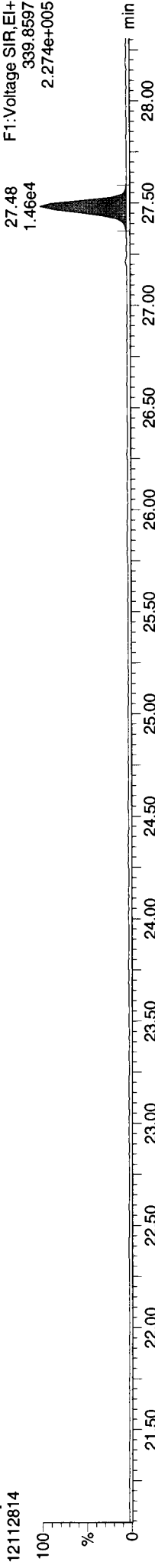
13C-12378-PeCDF



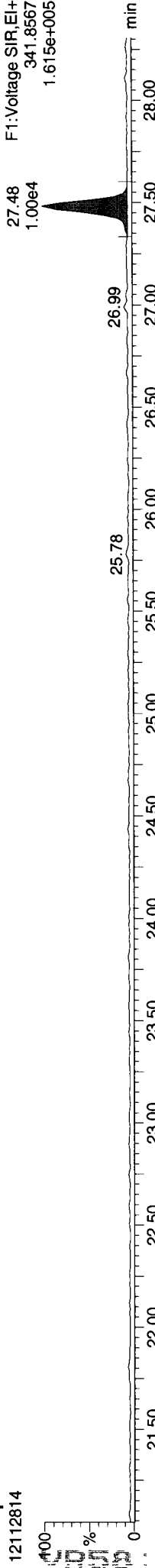
13C-12378-PeCDF



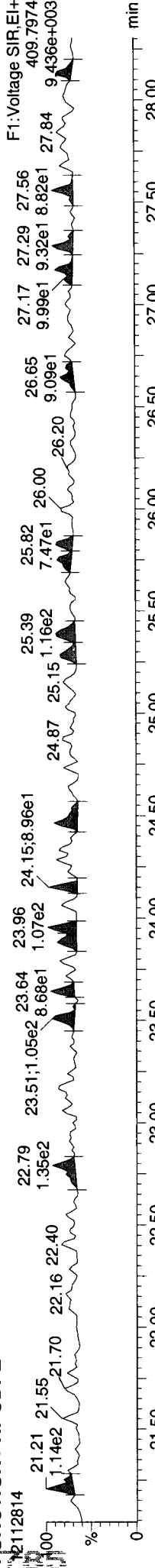
Total-penta1



Total-penta1

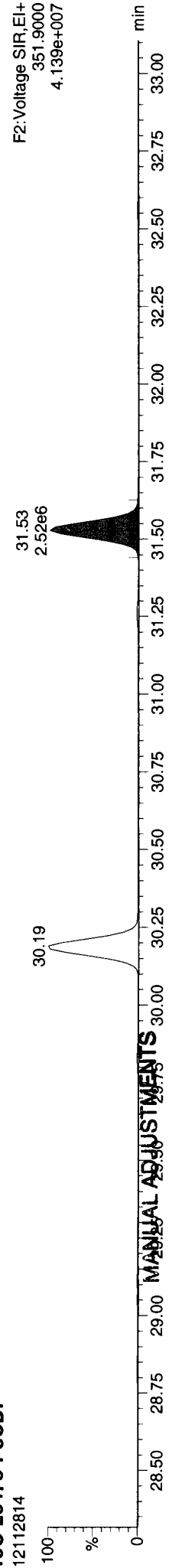


FUNCTION1 HPCDPE



Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

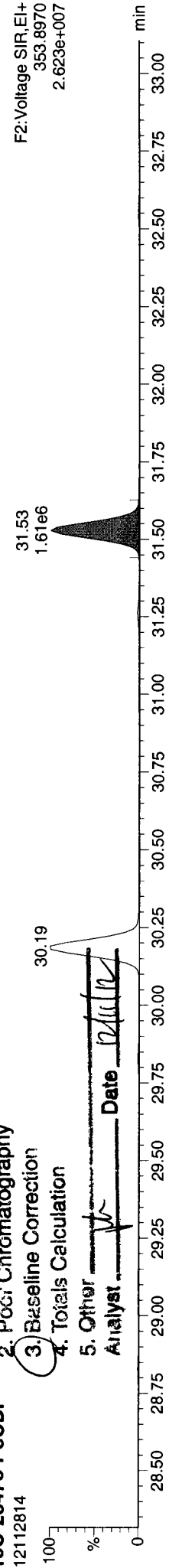
13C-23478-PeCDF  
12112814



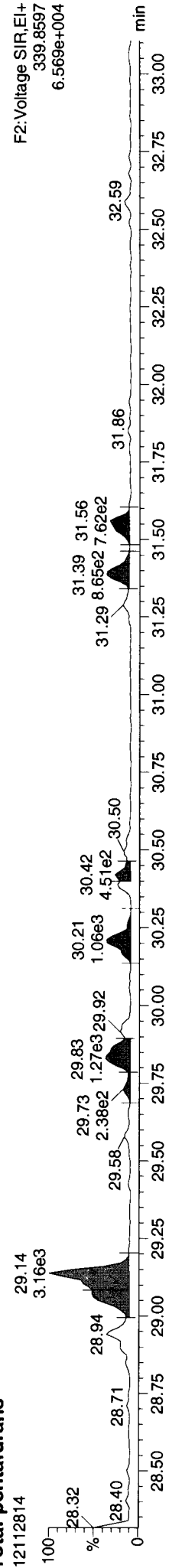
MANUAL ADJUSTMENTS

1. Peak not found
  2. Poor Chromatography
  3. Baseline Correction
  4. Totals Calculation
  5. Other
- Analyst: *[Signature]* Date: *12/10/12*

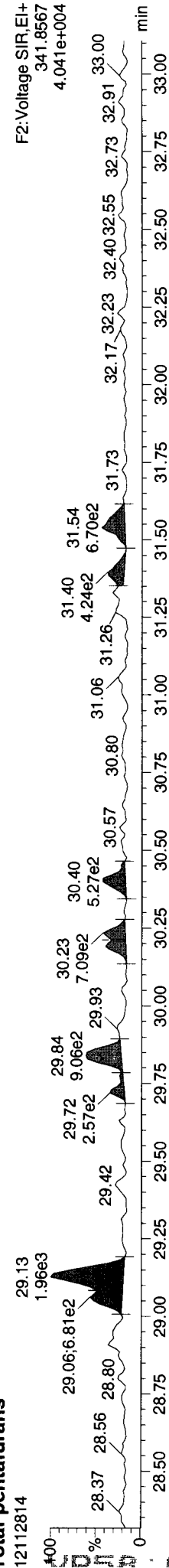
13C-23478-PeCDF  
12112814



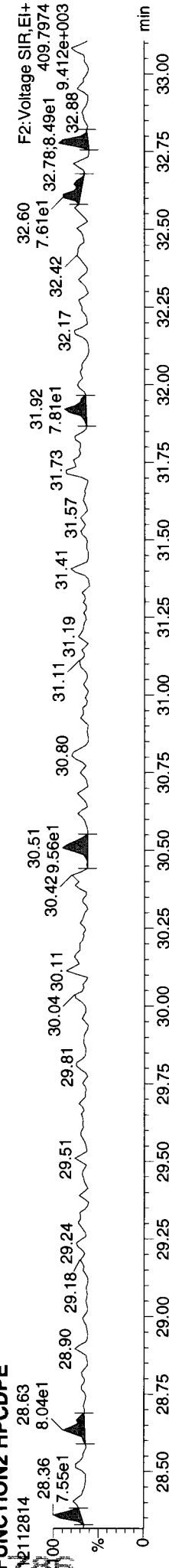
Total-pentafurans  
12112814



Total-pentafurans  
12112814



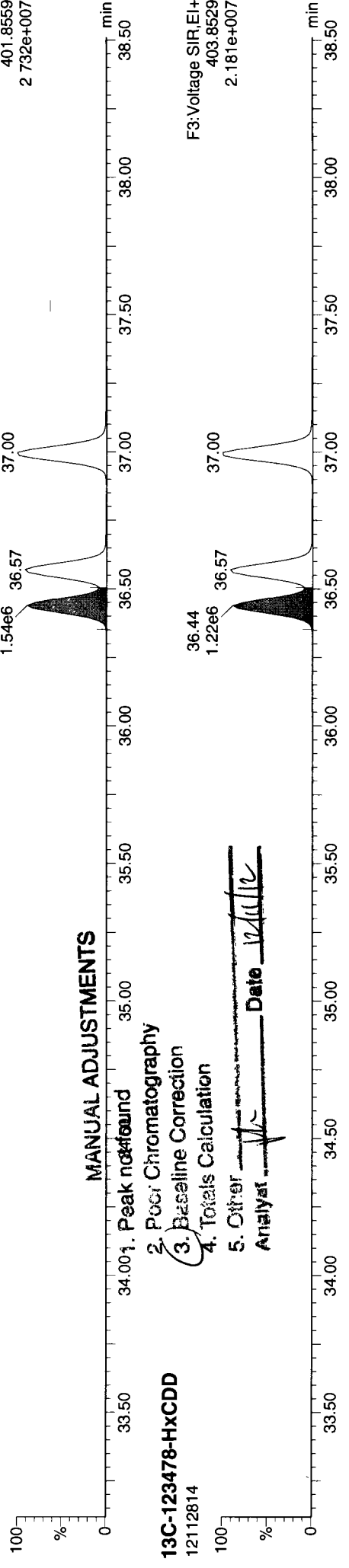
FUNCTION2 HPCDPE  
12112814



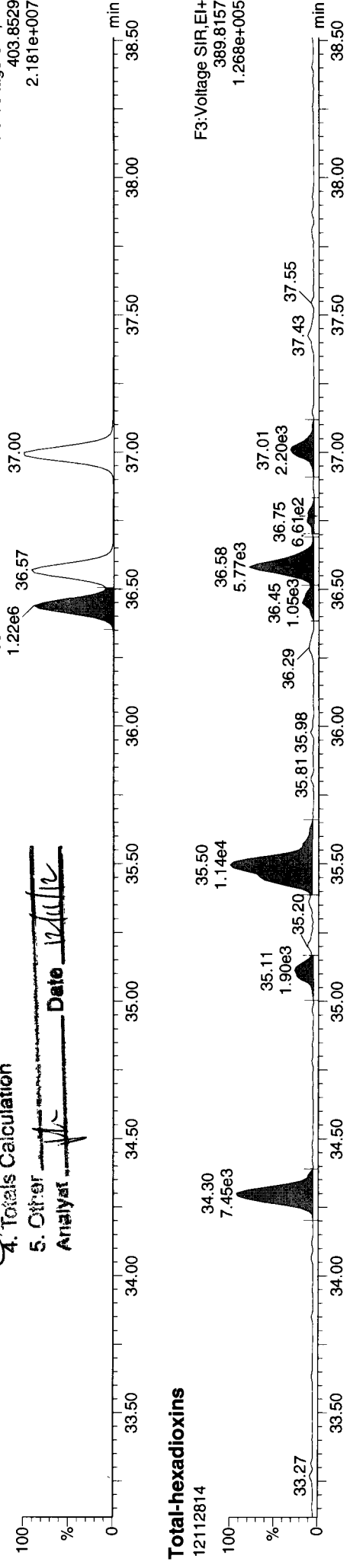
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qid  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

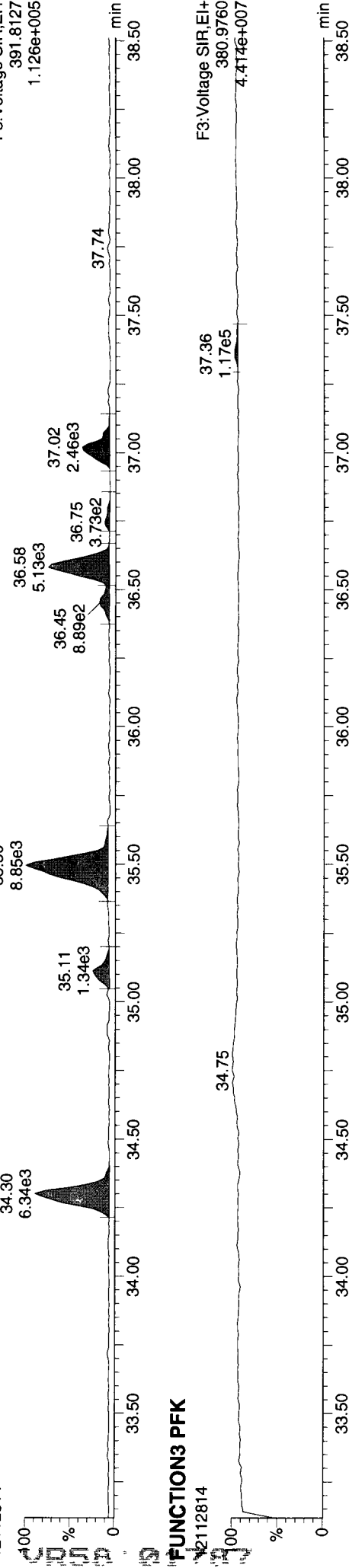
13C-123478-HxCDD  
12112814



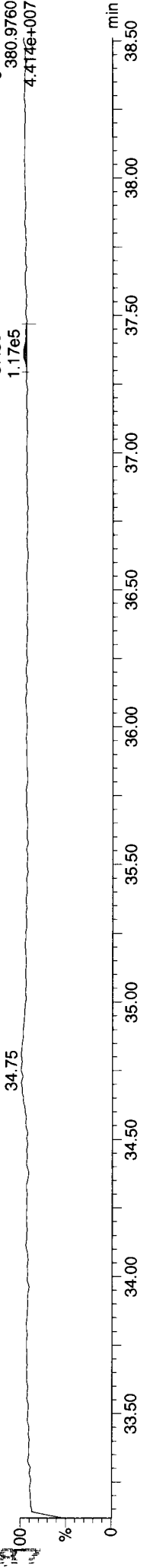
13C-123478-HxCDD  
12112814



Total-hexadioxins  
12112814



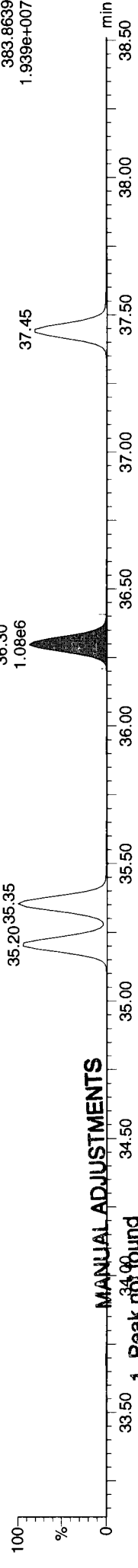
FUNCTION3 PFK  
12112814



Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

13C-234678-HxCDF  
12112814



MANUAL ADJUSTMENTS

1. Peak not found

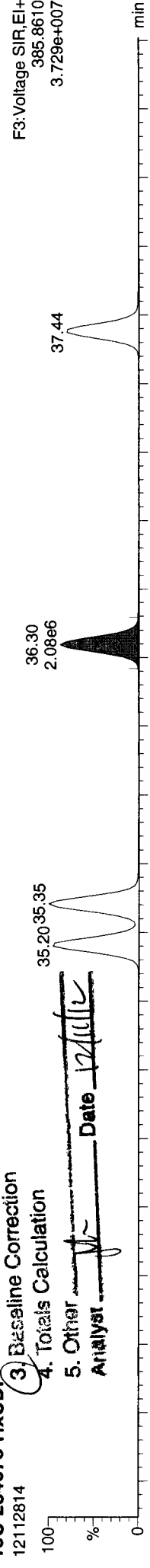
13C-234678-HxCDF2. Poor Chromatography

3. Baseline Correction

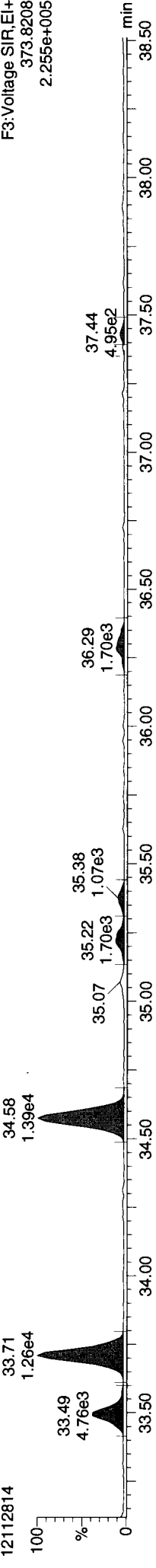
4. Totals Calculation

5. Other

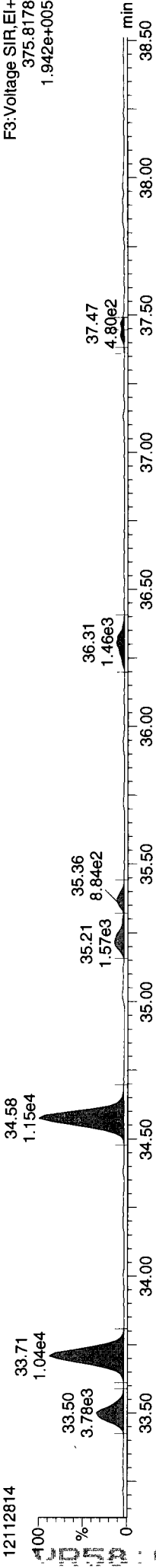
Analyst [Signature] Date 12/10/12



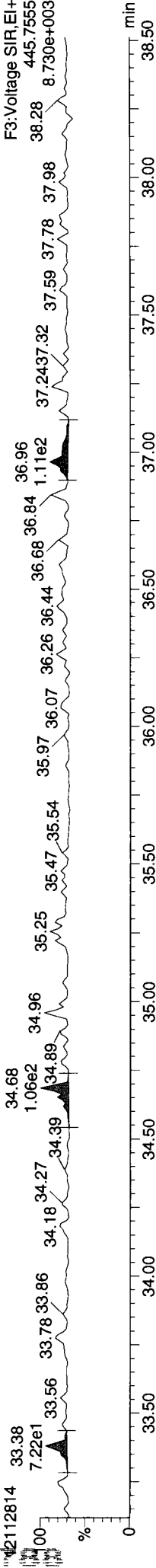
Total-hexafurans  
12112814



Total-hexafurans  
12112814



FUNCTION3 OCDPE  
12112814



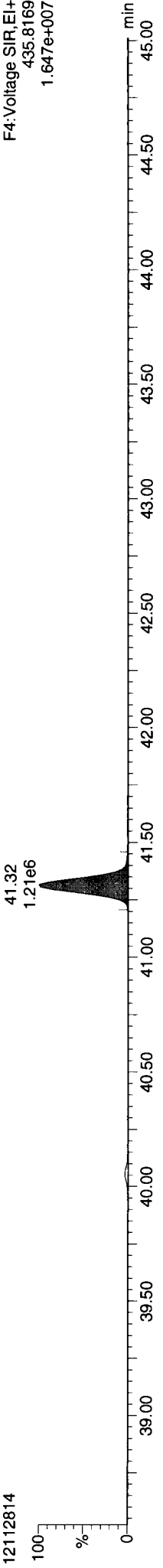
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld

Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time

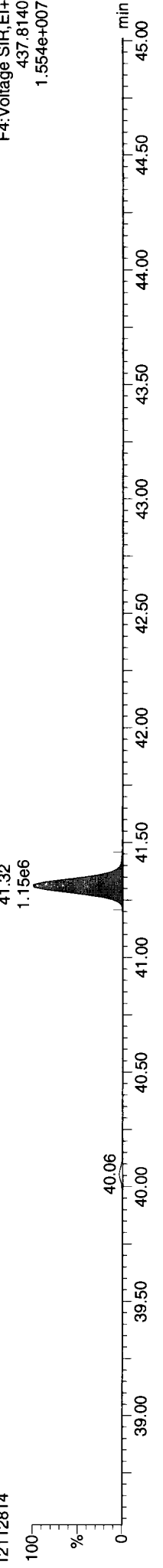
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

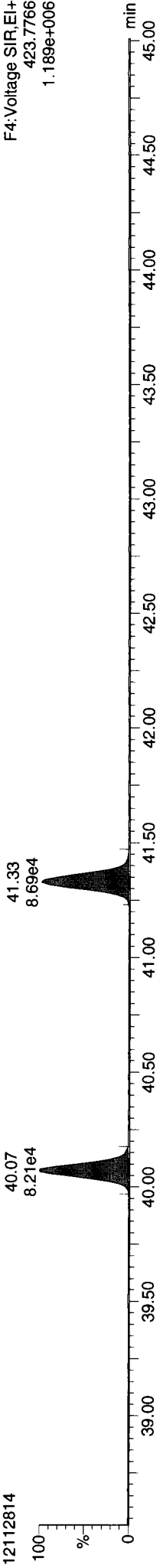
13C-1234678-HpCDD



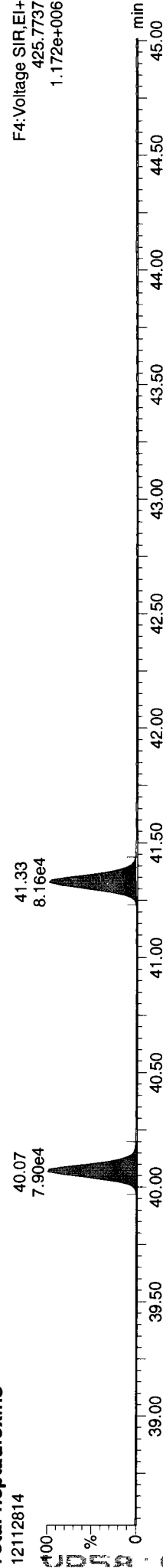
13C-1234678-HpCDD



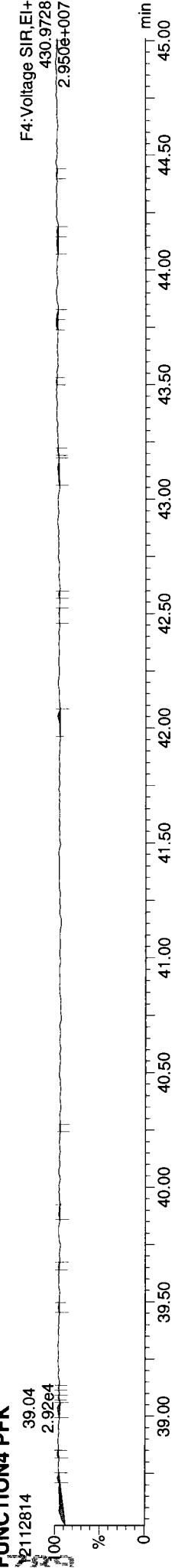
Total-heptadioxins



Total-heptadioxins



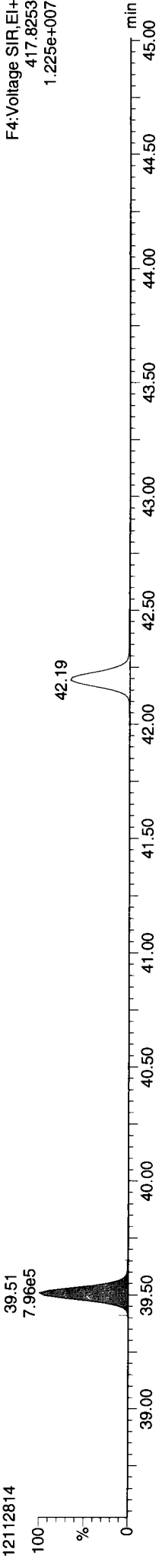
FUNCTION4 PFK



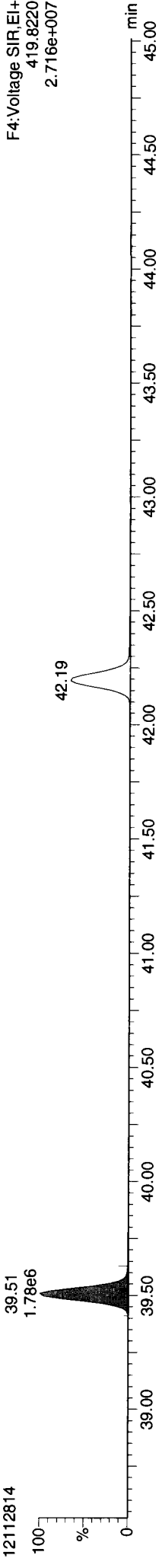
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

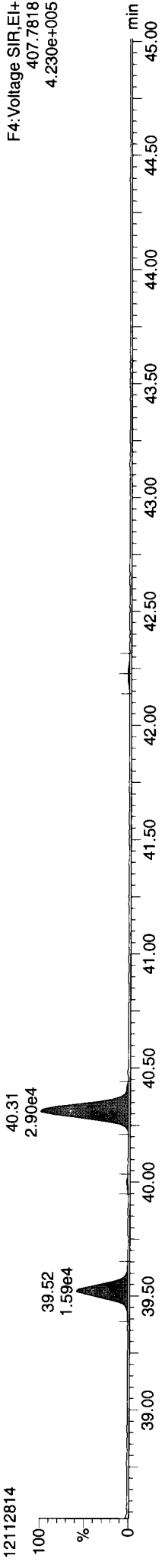
13C-1234678-HpCDF



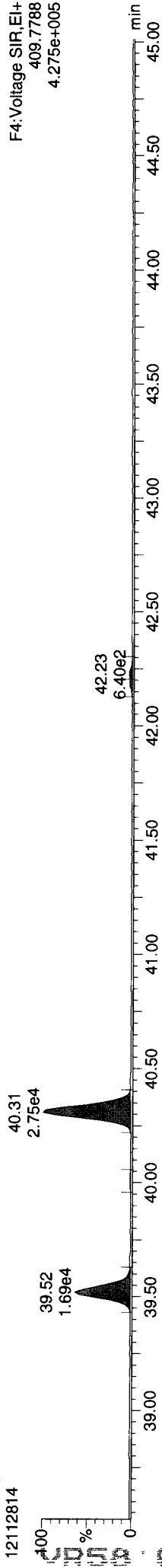
13C-1234678-HpCDF



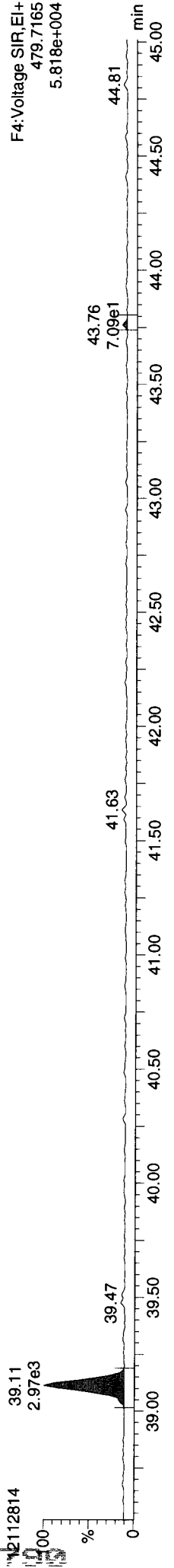
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld

Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time

Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

**13C-OCDD**

12112814



**13C-OCDD**

12112814



**OCDD**

12112814



**OCDD**

12112814



**FUNCTION5 PFK**

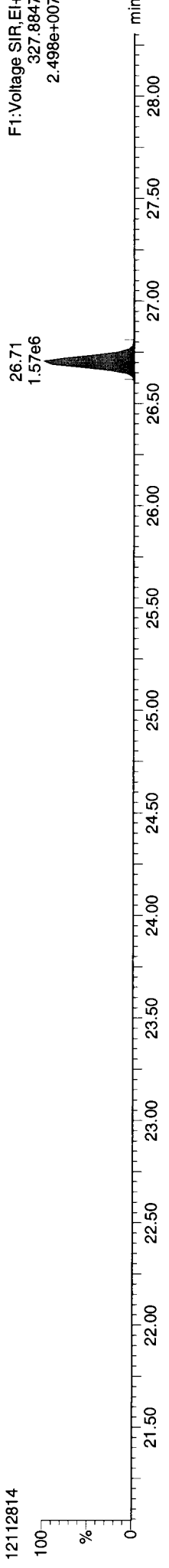
12112814



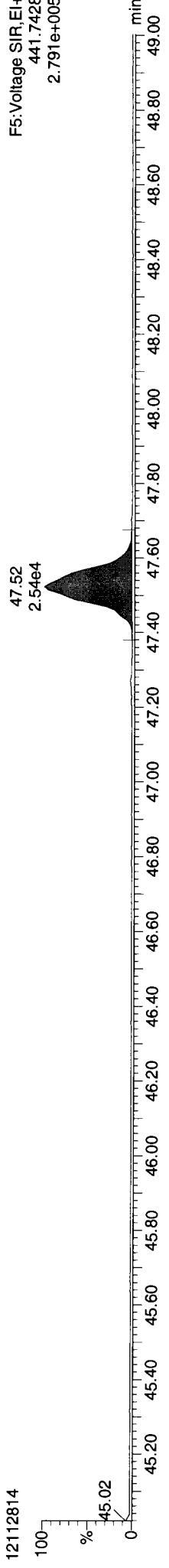
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:27 Pacific Standard Time

Name: 12112814, Date: 28-Nov-2012, Time: 21:21:25, ID: VR58G, Conditions: AUTOSPEC01, User: pk

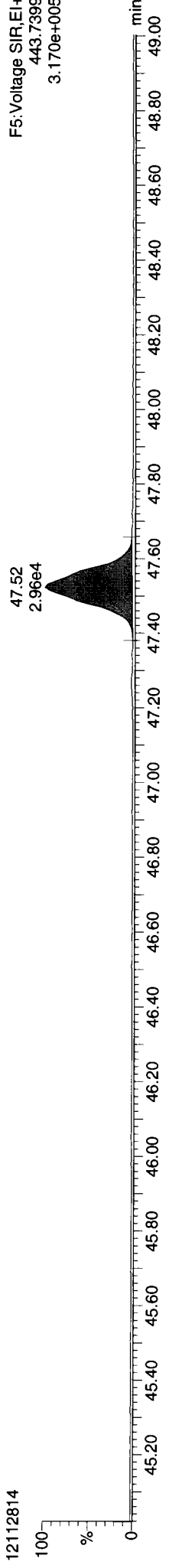
37CL-2378-TCDD



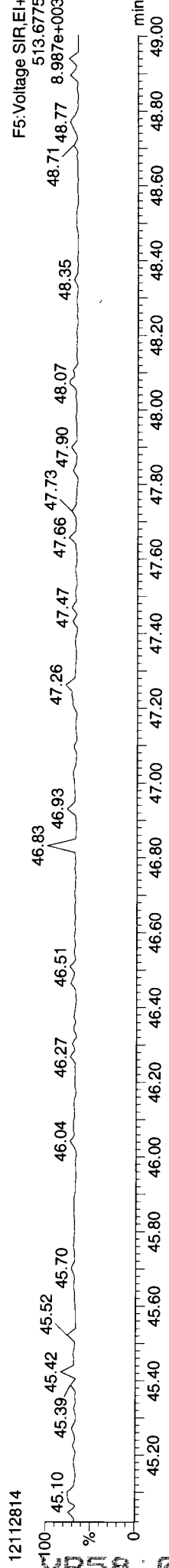
OCDF



OCDF



FUNCTION5 DCDPE





**ARI  
CDD/CDF EDL DATA  
HIGH RESOLUTION**

Lab.Sample ID: VR58H  
 Lab.File ID: 12112815  
 Date Analysed: 28-Nov-12

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	26.74	0.0723	0.0170	
12378-PeCDD	356/358	31.82	0.0377	0.0350	
123478-HxCDD	390/392	36.47	0.0344	0.0290	
123678-HxCDD	390/392	36.59	0.101	0.0860	
123789-HxCDD	390/392	37.02	0.0841		
1234678-HpCDD	424/426	41.34	2.12		
OCDD	458/460	47.26	16.0		
2378-TCDF	304/306	0.00			0.011
12378-PeCDF	340/342	30.22	0.0384		
23478-PeCDF	340/342	0.00			0.022
123478-HxCDF	374/376	35.24	0.0455	0.0390	
234678-HxCDF	374/376	36.33	0.0282	0.0230	
123678-HxCDF	374/376	35.37	0.0372	0.0260	
123789-HxCDF	374/376	37.46	0.0131		
1234678-HpCDF	408/410	39.53	0.445		
1234789-HpCDF	408/410	42.23	0.0318		
OCDF	442/444	47.53	0.879		

Note: EDL values as listed are based on 1ul injection. Final EDL values will be corrected for final volume of the extract (normally 20ul).

MassLynx 4.1 SCN 714

Quantify Sample Summary Report

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time
Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time
Method: P:\DIOXIN8290.PRO\MethDB\DiDioxin121123.mdb 05 Dec 2012 15:26:14
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

12/10/12

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

Table with columns for compound name, retention time, peak area, concentration, and other analytical data. Includes entries for TCDF, PeCDF, HxCDF, HxCDD, and OCDD.

6

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.007	0.000	1.49e3	1.19e6	1.000	0.877	6396.8	3616	3261	2.31e7	1.85e7	NO	100.000
Total-tetrafurans			1.57e3			0.877		851		2.61e4		0.341	0.082
Total-penta1			7.04e3					982		1.16e5		0.317	0.317
Total-pentafurans			8.69e2		0.911		2354			1.28e4		0.159	0.038
Total-hexafurans			5.75e3		1.032		1534			9.23e4		0.781	0.343
Total-heptafurans			1.64e4		1.223		874			2.46e5		1.207	1.190
Total-Furans			3.92e4		1.041		851			5.69e5		3.684	2.849
Total-tetradioxins			3.19e2		1.049		1304			4.31e3		0.241	0.020
Total-pentadioxins			1.15e3		0.998		2082			2.38e4		0.221	0.070
Total-hexadioxins			9.79e3		0.940		1271			1.36e5		0.933	0.724
Total-heptadioxins			4.64e4		1.017		1647			6.38e5		4.097	4.097
Total-Dioxins			3.66e6		0.985		1304			5.33e7		3.684	2.849
Total-TEQ			3.70e6				1304			5.39e7		7.368	5.698
37CL-2378-TCDD	26.721	1.032	1.55e6		1.044		11382.4	2069		2.35e7		39.370	
FUNCTION1 PFK			2.82e6				750855			1.92e7		0.000	0.000
FUNCTION2 PFK			4.23e4				216423			1.76e6		0.000	0.000
FUNCTION3 PFK			1.04e7				467930			1.09e8		0.000	0.000
FUNCTION4 PFK			3.08e5				255691			1.01e7		0.000	0.000
FUNCTION5 PFK			1.52e4				234355			8.33e5		0.000	0.000
FUNCTION1 HXCDPE			7.74e1				620			2.47e3		0.000	0.000
FUNCTION1 HPCDPE			8.55e2				928			1.75e4		0.000	0.000
FUNCTION2 HPCDPE			2.98e2				1138			7.36e3		0.000	0.000
FUNCTION3 OCDPE			0.00e0				477			0.00e0		0.000	0.000
FUNCTION4 NCDPE			2.92e3				784			4.66e4		0.000	0.000
FUNCTION5 DCDPE			0.00e0				271			0.00e0		0.000	0.000

416  
355

12112815

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
 Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

TF

#	Name	Time	RT	Area	Height	Area%	EMPA	EMPA	EMPA	EMPA	EMPA	EMPA	SN
35	Total-tetrafurans	303.9016	24.99	0.000	0.877	0.000	0.031	0.50	0.77	YES		12.2	
35	Total-tetrafurans	303.9016	24.75	0.000	0.877	0.000	0.013	0.95	0.77	YES		5.1	
35	Total-tetrafurans	303.9016	24.30	664.264	0.877	0.015	0.015	0.70	0.77	NO		5.5	
35	Total-tetrafurans	303.9016	24.18	489.591	0.877	0.011	0.011	0.72	0.77	NO		5.1	
35	Total-tetrafurans	303.9016	24.06	1704.504	0.877	0.039	0.039	0.81	0.77	NO		14.1	
35	Total-tetrafurans	303.9016	23.82	0.000	0.877	0.000	0.022	0.64	0.77	YES		11.2	
35	Total-tetrafurans	303.9016	23.73	0.000	0.877	0.000	0.010	1.61	0.77	YES		6.4	
35	Total-tetrafurans	303.9016	23.60	0.000	0.877	0.000	0.017	1.07	0.77	YES		8.9	
35	Total-tetrafurans	303.9016	23.52	0.000	0.877	0.000	0.015	0.89	0.77	YES		6.0	
35	Total-tetrafurans	303.9016	23.42	0.000	0.877	0.000	0.074	0.60	0.77	YES		24.1	
35	Total-tetrafurans	303.9016	22.84	731.828	0.877	0.017	0.017	0.83	0.77	NO		5.9	
35	Total-tetrafurans	303.9016	22.58	0.000	0.877	0.000	0.010	0.55	0.77	YES		3.5	
35	Total-tetrafurans	303.9016	27.53	0.000	0.877	0.000	0.009	0.59	0.77	YES		3.7	
35	Total-tetrafurans	303.9016	26.30	0.000	0.877	0.000	0.026	0.52	0.77	YES		9.3	
35	Total-tetrafurans	303.9016	25.82	0.000	0.877	0.000	0.008	0.22	0.77	YES		3.8	
35	Total-tetrafurans	303.9016	25.39	0.000	0.877	0.000	0.008	0.30	0.77	YES		3.7	
35	Total-tetrafurans	303.9016	25.18	0.000	0.877	0.000	0.013	0.49	0.77	YES		4.4	
35	Total-tetrafurans	303.9016	25.09	0.000	0.877	0.000	0.003	0.98	0.77	YES		2.5	

PP

36	Total-penta1	339.8597	27.50	12040.436		0.317	0.317	1.41	1.55	NO		118.0
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PF

37	Total-pentafurans	339.8597	30.41	0.000	0.911	0.000	0.011	2.48	1.55	YES		3.3
2	12378-PeCDF	339.8597	30.22	1489.522	0.896	0.038	0.038	1.40	1.55	NO		5.5
37	Total-pentafurans	339.8597	29.86	0.000	0.911	0.000	0.021	0.70	1.55	YES		4.1
37	Total-pentafurans	339.8597	29.15	0.000	0.911	0.000	0.061	2.30	1.55	YES		12.6
37	Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.027	1.08	1.55	YES		6.1

HF

38	Total-hexafurans	373.8208	36.28	0.000	1.032	0.000	0.016	0.96	1.24	YES		4.6
6	123678-HxCDF	373.8208	35.37	1258.614	1.035	0.000	0.026	2.17	1.24	YES		7.5
4	123478-HxCDF	373.8208	35.24	1473.991	1.068	0.000	0.039	0.89	1.24	YES		8.3
38	Total-hexafurans	373.8208	34.58	0.000	1.032	0.000	0.239	1.03	1.24	YES		44.3
38	Total-hexafurans	373.8208	34.26	374.111	1.032	0.012	0.012	1.30	1.24	NO		3.3
38	Total-hexafurans	373.8208	33.73	9791.579	1.032	0.318	0.318	1.20	1.24	NO		53.4
38	Total-hexafurans	373.8208	33.52	0.000	1.032	0.000	0.096	1.05	1.24	YES		16.3
7	123789-HxCDF	373.8208	37.46	361.392	0.987	0.013	0.013	1.28	1.24	NO		3.5
5	234678-HxCDF	373.8208	36.33	833.590	1.037	0.000	0.023	0.79	1.24	YES		5.5

Quantify Totals Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

HPF

9	1234789-HpCDF	407.7818	42.23	748.032	1.215	0.032	0.032	1.03	1.05	NO	8.3
39	Total-heptafurans	407.7818	40.32	18854.986	1.223	0.713	0.713	1.04	1.05	NO	157.5
39	Total-heptafurans	407.7818	40.01	0.000	1.223	0.000	0.018	1.60	1.05	YES	9.4
8	1234678-HpCDF	407.7818	39.53	13084.681	1.232	0.445	0.445	0.97	1.05	NO	115.5

Furans,TF,PP,PF,HF,HPF,OF

35	Total-tetrafurans	303.9016	24.99	0.000	0.877	0.000	0.031	0.50	0.77	YES	12.2
35	Total-tetrafurans	303.9016	24.75	0.000	0.877	0.000	0.013	0.95	0.77	YES	5.1
35	Total-tetrafurans	303.9016	24.30	664.264	0.877	0.015	0.015	0.70	0.77	NO	5.5
35	Total-tetrafurans	303.9016	24.18	489.591	0.877	0.011	0.011	0.72	0.77	NO	5.1
35	Total-tetrafurans	303.9016	24.06	1704.504	0.877	0.039	0.039	0.81	0.77	NO	14.1
35	Total-tetrafurans	303.9016	23.82	0.000	0.877	0.000	0.022	0.64	0.77	YES	11.2
35	Total-tetrafurans	303.9016	23.73	0.000	0.877	0.000	0.010	1.61	0.77	YES	6.4
35	Total-tetrafurans	303.9016	23.60	0.000	0.877	0.000	0.017	1.07	0.77	YES	8.9
35	Total-tetrafurans	303.9016	23.52	0.000	0.877	0.000	0.015	0.89	0.77	YES	6.0
35	Total-tetrafurans	303.9016	23.42	0.000	0.877	0.000	0.074	0.60	0.77	YES	24.1
35	Total-tetrafurans	303.9016	22.84	731.828	0.877	0.017	0.017	0.83	0.77	NO	5.9
35	Total-tetrafurans	303.9016	22.58	0.000	0.877	0.000	0.010	0.55	0.77	YES	3.5
35	Total-tetrafurans	303.9016	27.53	0.000	0.877	0.000	0.009	0.59	0.77	YES	3.7
35	Total-tetrafurans	303.9016	26.30	0.000	0.877	0.000	0.026	0.52	0.77	YES	9.3
35	Total-tetrafurans	303.9016	25.82	0.000	0.877	0.000	0.008	0.22	0.77	YES	3.8
35	Total-tetrafurans	303.9016	25.39	0.000	0.877	0.000	0.008	0.30	0.77	YES	3.7
35	Total-tetrafurans	303.9016	25.18	0.000	0.877	0.000	0.013	0.49	0.77	YES	4.4
35	Total-tetrafurans	303.9016	25.09	0.000	0.877	0.000	0.003	0.98	0.77	YES	2.5
37	Total-pentafurans	339.8597	30.41	0.000	0.911	0.000	0.011	2.48	1.55	YES	3.3
2	12378-PeCDF	339.8597	30.22	1489.522	0.896	0.038	0.038	1.40	1.55	NO	5.5
37	Total-pentafurans	339.8597	29.86	0.000	0.911	0.000	0.021	0.70	1.55	YES	4.1
37	Total-pentafurans	339.8597	29.15	0.000	0.911	0.000	0.061	2.30	1.55	YES	12.6
37	Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.027	1.08	1.55	YES	6.1
38	Total-hexafurans	373.8208	36.28	0.000	1.032	0.000	0.016	0.96	1.24	YES	4.6
6	123678-HxCDF	373.8208	35.37	1258.614	1.035	0.000	0.026	2.17	1.24	YES	7.5
4	123478-HxCDF	373.8208	35.24	1473.991	1.068	0.000	0.039	0.89	1.24	YES	8.3
38	Total-hexafurans	373.8208	34.58	0.000	1.032	0.000	0.239	1.03	1.24	YES	44.3
38	Total-hexafurans	373.8208	34.26	374.111	1.032	0.012	0.012	1.30	1.24	NO	3.3
38	Total-hexafurans	373.8208	33.73	9791.579	1.032	0.318	0.318	1.20	1.24	NO	53.4
38	Total-hexafurans	373.8208	33.52	0.000	1.032	0.000	0.096	1.05	1.24	YES	16.3
7	123789-HxCDF	373.8208	37.46	361.392	0.987	0.013	0.013	1.28	1.24	NO	3.5
5	234678-HxCDF	373.8208	36.33	833.590	1.037	0.000	0.023	0.79	1.24	YES	5.5
9	1234789-HpCDF	407.7818	42.23	748.032	1.215	0.032	0.032	1.03	1.05	NO	8.3
39	Total-heptafurans	407.7818	40.32	18854.986	1.223	0.713	0.713	1.04	1.05	NO	157.5
39	Total-heptafurans	407.7818	40.01	0.000	1.223	0.000	0.018	1.60	1.05	YES	9.4
8	1234678-HpCDF	407.7818	39.53	13084.681	1.232	0.445	0.445	0.97	1.05	NO	115.5
10	OCDF	441.7428	47.53	15722.808	1.138	0.879	0.879	0.93	0.89	NO	80.9
36	Total-penta1	339.8597	27.50	12040.436		0.317	0.317	1.41	1.55	NO	118.0

**Quantify Totals Report MassLynx 4.1 SCN 714**

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

**TD**

#	Name	Time	FT	Abs Resp	RFR M.	Q	EMPC	T.P.M.	T.P.M.	Y/N	SN
11	2378-TCDD	319.8965	26.74	2549.134	1.049	0.000	0.017	0.11	0.77	YES	2.7
41	Total-tetradoxins	319.8965	26.06	0.000	1.049	0.000	0.012	2.46	0.77	YES	6.0
41	Total-tetradoxins	319.8965	25.91	0.000	1.049	0.000	0.015	0.98	0.77	YES	5.1
41	Total-tetradoxins	319.8965	25.33	707.627	1.049	0.020	0.020	0.82	0.77	NO	3.3
41	Total-tetradoxins	319.8965	24.85	0.000	1.049	0.000	0.123	0.90	0.77	YES	29.3
41	Total-tetradoxins	319.8965	24.12	0.000	1.049	0.000	0.024	0.54	0.77	YES	5.5
41	Total-tetradoxins	319.8965	23.85	0.000	1.049	0.000	0.031	0.50	0.77	YES	5.8

**PD**

#	Name	Time	FT	Abs Resp	RFR M.	Q	EMPC	T.P.M.	T.P.M.	Y/N	SN
42	Total-pentadoxins	355.8546	29.13	0.000	0.998	0.000	0.031	2.43	1.55	YES	6.1
42	Total-pentadoxins	355.8546	29.07	941.384	0.998	0.036	0.036	1.62	1.55	NO	6.4
42	Total-pentadoxins	355.8546	30.81	178.699	0.998	0.007	0.007	1.51	1.55	NO	1.8
42	Total-pentadoxins	355.8546	30.75	0.000	0.998	0.000	0.013	3.53	1.55	YES	3.6
42	Total-pentadoxins	355.8546	30.70	0.000	0.998	0.000	0.006	0.36	1.55	YES	2.4
42	Total-pentadoxins	355.8546	30.55	731.147	0.998	0.028	0.028	1.73	1.55	NO	3.3
42	Total-pentadoxins	355.8546	30.44	0.000	0.998	0.000	0.013	3.61	1.55	YES	5.7
42	Total-pentadoxins	355.8546	30.21	0.000	0.998	0.000	0.027	2.58	1.55	YES	6.8
42	Total-pentadoxins	355.8546	29.63	0.000	0.998	0.000	0.012	2.33	1.55	YES	4.2
42	Total-pentadoxins	355.8546	29.59	0.000	0.998	0.000	0.014	2.15	1.55	YES	4.1
12	12378-PeCDD	355.8546	31.82	995.422	0.998	0.000	0.035	1.27	1.55	YES	4.4

**HD**

#	Name	Time	FT	Abs Resp	RFR M.	Q	EMPC	T.P.M.	T.P.M.	Y/N	SN
14	123678-HxCDD	389.8157	36.59	2447.715	0.918	0.000	0.086	0.89	1.24	YES	15.8
13	123478-HxCDD	389.8157	36.47	838.827	0.971	0.000	0.029	1.62	1.24	YES	8.7
43	Total-hexadoxins	389.8157	35.62	0.000	0.940	0.000	0.007	0.45	1.24	YES	2.6
43	Total-hexadoxins	389.8157	35.51	8968.444	0.940	0.370	0.370	1.33	1.24	NO	47.4
43	Total-hexadoxins	389.8157	35.36	0.000	0.940	0.000	0.009	1.92	1.24	YES	3.5
43	Total-hexadoxins	389.8157	35.11	0.000	0.940	0.000	0.053	1.04	1.24	YES	8.7
43	Total-hexadoxins	389.8157	34.31	6545.859	0.940	0.270	0.270	1.21	1.24	NO	46.0
15	123789-HxCDD	389.8157	37.02	2020.387	0.932	0.084	0.084	1.15	1.24	NO	13.4
43	Total-hexadoxins	389.8157	36.77	0.000	0.940	0.000	0.025	0.77	1.24	YES	3.5

**HPD**

#	Name	Time	FT	Abs Resp	RFR M.	Q	EMPC	T.P.M.	T.P.M.	Y/N	SN
16	1234678-HpCDD	423.7766	41.34	47465.123	1.017	2.122	2.122	0.98	1.05	NO	189.1
44	Total-heptadoxins	423.7766	40.08	44182.166	1.017	1.975	1.975	1.07	1.05	NO	198.5

Quantify Totals Report MassLynx 4.1 SCN 714

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Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

Sample	Component	Concentration	TEQ	Furans	Dioxins	Other	Sum	TEQ	Furans	Dioxins	Other	Sum	Y/N	Sum
35	Total-tetrafurans	303.9016	24.99	0.000	0.877	0.000	0.031	0.50	0.77	YES		12.2		
35	Total-tetrafurans	303.9016	24.75	0.000	0.877	0.000	0.013	0.95	0.77	YES		5.1		
35	Total-tetrafurans	303.9016	24.30	664.264	0.877	0.015	0.015	0.70	0.77	NO		5.5		
35	Total-tetrafurans	303.9016	24.18	489.591	0.877	0.011	0.011	0.72	0.77	NO		5.1		
35	Total-tetrafurans	303.9016	24.06	1704.504	0.877	0.039	0.039	0.81	0.77	NO		14.1		
35	Total-tetrafurans	303.9016	23.82	0.000	0.877	0.000	0.022	0.64	0.77	YES		11.2		
35	Total-tetrafurans	303.9016	23.73	0.000	0.877	0.000	0.010	1.61	0.77	YES		6.4		
35	Total-tetrafurans	303.9016	23.60	0.000	0.877	0.000	0.017	1.07	0.77	YES		8.9		
35	Total-tetrafurans	303.9016	23.52	0.000	0.877	0.000	0.015	0.89	0.77	YES		6.0		
35	Total-tetrafurans	303.9016	23.42	0.000	0.877	0.000	0.074	0.60	0.77	YES		24.1		
35	Total-tetrafurans	303.9016	22.84	731.828	0.877	0.017	0.017	0.83	0.77	NO		5.9		
35	Total-tetrafurans	303.9016	22.58	0.000	0.877	0.000	0.010	0.55	0.77	YES		3.5		
35	Total-tetrafurans	303.9016	27.53	0.000	0.877	0.000	0.009	0.59	0.77	YES		3.7		
35	Total-tetrafurans	303.9016	26.30	0.000	0.877	0.000	0.026	0.52	0.77	YES		9.3		
35	Total-tetrafurans	303.9016	25.82	0.000	0.877	0.000	0.008	0.22	0.77	YES		3.8		
35	Total-tetrafurans	303.9016	25.39	0.000	0.877	0.000	0.008	0.30	0.77	YES		3.7		
35	Total-tetrafurans	303.9016	25.18	0.000	0.877	0.000	0.013	0.49	0.77	YES		4.4		
35	Total-tetrafurans	303.9016	25.09	0.000	0.877	0.000	0.003	0.98	0.77	YES		2.5		
37	Total-pentafurans	339.8597	30.41	0.000	0.911	0.000	0.011	2.48	1.55	YES		3.3		
2	12378-PeCDF	339.8597	30.22	1489.522	0.896	0.038	0.038	1.40	1.55	NO		5.5		
37	Total-pentafurans	339.8597	29.86	0.000	0.911	0.000	0.021	0.70	1.55	YES		4.1		
37	Total-pentafurans	339.8597	29.15	0.000	0.911	0.000	0.061	2.30	1.55	YES		12.6		
37	Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.027	1.08	1.55	YES		6.1		
38	Total-hexafurans	373.8208	36.28	0.000	1.032	0.000	0.016	0.96	1.24	YES		4.6		
6	123678-HxCDF	373.8208	35.37	1258.614	1.035	0.037	0.026	2.17	1.24	YES		7.5		
4	123478-HxCDF	373.8208	35.24	1473.991	1.068	0.046	0.039	0.89	1.24	YES		8.3		
38	Total-hexafurans	373.8208	34.58	0.000	1.032	0.000	0.239	1.03	1.24	YES		44.3		
38	Total-hexafurans	373.8208	34.26	374.111	1.032	0.012	0.012	1.30	1.24	NO		3.3		
38	Total-hexafurans	373.8208	33.73	9791.579	1.032	0.318	0.318	1.20	1.24	NO		53.4		
38	Total-hexafurans	373.8208	33.52	0.000	1.032	0.000	0.096	1.05	1.24	YES		16.3		
7	123789-HxCDF	373.8208	37.46	361.392	0.987	0.013	0.013	1.28	1.24	NO		3.5		
5	234678-HxCDF	373.8208	36.33	833.590	1.037	0.028	0.023	0.79	1.24	YES		5.5		
9	1234789-HpCDF	407.7818	42.23	748.032	1.215	0.032	0.032	1.03	1.05	NO		8.3		
39	Total-heptafurans	407.7818	40.32	18854.986	1.223	0.713	0.713	1.04	1.05	NO		157.5		
39	Total-heptafurans	407.7818	40.01	0.000	1.223	0.000	0.018	1.60	1.05	YES		9.4		
8	1234678-HpCDF	407.7818	39.53	13084.681	1.232	0.445	0.445	0.97	1.05	NO		115.5		
10	OCDF	441.7428	47.53	15722.808	1.138	0.879	0.879	0.93	0.89	NO		80.9		
36	Total-penta1	339.8597	27.50	12040.436		0.317	0.317	1.41	1.55	NO		118.0		

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld

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TotalTEQ,Furans,Dioxins

Sample	Concentration	Mass	Area	Response	Retention	Time	Mass	Area	Response	Retention	Time	Mass	Area	Response	Retention	Time	Mass	Area	Response	Retention	Time	Mass	Area	Response	Retention	Time
35 Total-tetrafurans	303.9016	24.99	0.000	0.877	0.000	0.031	0.50	0.77	YES	12.2																
35 Total-tetrafurans	303.9016	24.75	0.000	0.877	0.000	0.013	0.95	0.77	YES	5.1																
35 Total-tetrafurans	303.9016	24.30	664.264	0.877	0.015	0.015	0.70	0.77	NO	5.5																
35 Total-tetrafurans	303.9016	24.18	489.591	0.877	0.011	0.011	0.72	0.77	NO	5.1																
35 Total-tetrafurans	303.9016	24.06	1704.504	0.877	0.039	0.039	0.81	0.77	NO	14.1																
35 Total-tetrafurans	303.9016	23.82	0.000	0.877	0.000	0.022	0.64	0.77	YES	11.2																
35 Total-tetrafurans	303.9016	23.73	0.000	0.877	0.000	0.010	1.61	0.77	YES	6.4																
35 Total-tetrafurans	303.9016	23.60	0.000	0.877	0.000	0.017	1.07	0.77	YES	8.9																
35 Total-tetrafurans	303.9016	23.52	0.000	0.877	0.000	0.015	0.89	0.77	YES	6.0																
35 Total-tetrafurans	303.9016	23.42	0.000	0.877	0.000	0.074	0.60	0.77	YES	24.1																
35 Total-tetrafurans	303.9016	22.84	731.828	0.877	0.017	0.017	0.83	0.77	NO	5.9																
35 Total-tetrafurans	303.9016	22.58	0.000	0.877	0.000	0.010	0.55	0.77	YES	3.5																
35 Total-tetrafurans	303.9016	27.53	0.000	0.877	0.000	0.009	0.59	0.77	YES	3.7																
35 Total-tetrafurans	303.9016	26.30	0.000	0.877	0.000	0.026	0.52	0.77	YES	9.3																
35 Total-tetrafurans	303.9016	25.82	0.000	0.877	0.000	0.008	0.22	0.77	YES	3.8																
35 Total-tetrafurans	303.9016	25.39	0.000	0.877	0.000	0.008	0.30	0.77	YES	3.7																
35 Total-tetrafurans	303.9016	25.18	0.000	0.877	0.000	0.013	0.49	0.77	YES	4.4																
35 Total-tetrafurans	303.9016	25.09	0.000	0.877	0.000	0.003	0.98	0.77	YES	2.5																
37 Total-pentafurans	339.8597	30.41	0.000	0.911	0.000	0.011	2.48	1.55	YES	3.3																
2 12378-PeCDF	339.8597	30.22	1489.522	0.896	0.038	0.038	1.40	1.55	NO	5.5																
37 Total-pentafurans	339.8597	29.86	0.000	0.911	0.000	0.021	0.70	1.55	YES	4.1																
37 Total-pentafurans	339.8597	29.15	0.000	0.911	0.000	0.061	2.30	1.55	YES	12.6																
37 Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.027	1.08	1.55	YES	6.1																
38 Total-hexafurans	373.8208	36.28	0.000	1.032	0.000	0.016	0.96	1.24	YES	4.6																
6 123678-HxCDF	373.8208	35.37	1258.614	1.035	0.000	0.026	2.17	1.24	YES	7.5																
4 123478-HxCDF	373.8208	35.24	1473.991	1.068	0.000	0.039	0.89	1.24	YES	8.3																
38 Total-hexafurans	373.8208	34.58	0.000	1.032	0.000	0.239	1.03	1.24	YES	44.3																
38 Total-hexafurans	373.8208	34.26	374.111	1.032	0.012	0.012	1.30	1.24	NO	3.3																
38 Total-hexafurans	373.8208	33.73	9791.579	1.032	0.318	0.318	1.20	1.24	NO	53.4																
38 Total-hexafurans	373.8208	33.52	0.000	1.032	0.000	0.096	1.05	1.24	YES	16.3																
7 123789-HxCDF	373.8208	37.46	361.392	0.987	0.013	0.013	1.28	1.24	NO	3.5																
5 234678-HxCDF	373.8208	36.33	833.590	1.037	0.000	0.023	0.79	1.24	YES	5.5																
9 1234789-HpCDF	407.7818	42.23	748.032	1.215	0.032	0.032	1.03	1.05	NO	8.3																
39 Total-heptafurans	407.7818	40.32	18854.986	1.223	0.713	0.713	1.04	1.05	NO	157.5																
39 Total-heptafurans	407.7818	40.01	0.000	1.223	0.000	0.018	1.60	1.05	YES	9.4																
8 1234678-HpCDF	407.7818	39.53	13084.681	1.232	0.445	0.445	0.97	1.05	NO	115.5																
10 OCDF	441.7428	47.53	15722.808	1.138	0.879	0.879	0.93	0.89	NO	80.9																
36 Total-penta1	339.8597	27.50	12040.436		0.317	0.317	1.41	1.55	NO	118.0																
35 Total-tetrafurans	303.9016	24.99	0.000	0.877	0.000	0.031	0.50	0.77	YES	12.2																
35 Total-tetrafurans	303.9016	24.75	0.000	0.877	0.000	0.013	0.95	0.77	YES	5.1																
35 Total-tetrafurans	303.9016	24.30	664.264	0.877	0.015	0.015	0.70	0.77	NO	5.5																
35 Total-tetrafurans	303.9016	24.18	489.591	0.877	0.011	0.011	0.72	0.77	NO	5.1																
35 Total-tetrafurans	303.9016	24.06	1704.504	0.877	0.039	0.039	0.81	0.77	NO	14.1																
35 Total-tetrafurans	303.9016	23.82	0.000	0.877	0.000	0.022	0.64	0.77	YES	11.2																
35 Total-tetrafurans	303.9016	23.73	0.000	0.877	0.000	0.010	1.61	0.77	YES	6.4																
35 Total-tetrafurans	303.9016	23.60	0.000	0.877	0.000	0.017	1.07	0.77	YES	8.9																
35 Total-tetrafurans	303.9016	23.52	0.000	0.877	0.000	0.015	0.89	0.77	YES	6.0																
35 Total-tetrafurans	303.9016	23.42	0.000	0.877	0.000	0.074	0.60	0.77	YES	24.1																
35 Total-tetrafurans	303.9016	22.84	731.828	0.877	0.017	0.017	0.83	0.77	NO	5.9																

VR58 : 01800



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TotalTEQ,Furans,Dioxins

Sample	Name	Trace	RT	Abs. Sum	MRM	DU	EMPC	1° Fall	2° Fall	1° Fall	2° Fall	SN
35	Total-tetrafurans	303.9016	22.58	0.000	0.877	0.000	0.010	0.55	0.77	YES		3.5
35	Total-tetrafurans	303.9016	27.53	0.000	0.877	0.000	0.009	0.59	0.77	YES		3.7
35	Total-tetrafurans	303.9016	26.30	0.000	0.877	0.000	0.026	0.52	0.77	YES		9.3
35	Total-tetrafurans	303.9016	25.82	0.000	0.877	0.000	0.008	0.22	0.77	YES		3.8
35	Total-tetrafurans	303.9016	25.39	0.000	0.877	0.000	0.008	0.30	0.77	YES		3.7
35	Total-tetrafurans	303.9016	25.18	0.000	0.877	0.000	0.013	0.49	0.77	YES		4.4
35	Total-tetrafurans	303.9016	25.09	0.000	0.877	0.000	0.003	0.98	0.77	YES		2.5
37	Total-pentafurans	339.8597	30.41	0.000	0.911	0.000	0.011	2.48	1.55	YES		3.3
2	12378-PeCDF	339.8597	30.22	1489.522	0.896	0.038	0.038	1.40	1.55	NO		5.5
37	Total-pentafurans	339.8597	29.86	0.000	0.911	0.000	0.021	0.70	1.55	YES		4.1
37	Total-pentafurans	339.8597	29.15	0.000	0.911	0.000	0.061	2.30	1.55	YES		12.6
37	Total-pentafurans	339.8597	29.07	0.000	0.911	0.000	0.027	1.08	1.55	YES		6.1
38	Total-hexafurans	373.8208	36.28	0.000	1.032	0.000	0.016	0.96	1.24	YES		4.6
6	123678-HxCDF	373.8208	35.37	1258.614	1.035	0.000	0.026	2.17	1.24	YES		7.5
4	123478-HxCDF	373.8208	35.24	1473.991	1.068	0.000	0.039	0.89	1.24	YES		8.3
38	Total-hexafurans	373.8208	34.58	0.000	1.032	0.000	0.239	1.03	1.24	YES		44.3
38	Total-hexafurans	373.8208	34.26	374.111	1.032	0.012	0.012	1.30	1.24	NO		3.3
38	Total-hexafurans	373.8208	33.73	9791.579	1.032	0.318	0.318	1.20	1.24	NO		53.4
38	Total-hexafurans	373.8208	33.52	0.000	1.032	0.000	0.096	1.05	1.24	YES		16.3
7	123789-HxCDF	373.8208	37.46	361.392	0.987	0.013	0.013	1.28	1.24	NO		3.5
5	234678-HxCDF	373.8208	36.33	833.590	1.037	0.000	0.023	0.79	1.24	YES		5.5
9	1234789-HpCDF	407.7818	42.23	748.032	1.215	0.032	0.032	1.03	1.05	NO		8.3
39	Total-heptafurans	407.7818	40.32	18854.986	1.223	0.713	0.713	1.04	1.05	NO		157.5
39	Total-heptafurans	407.7818	40.01	0.000	1.223	0.000	0.018	1.60	1.05	YES		9.4
8	1234678-HpCDF	407.7818	39.53	13084.681	1.232	0.445	0.445	0.97	1.05	NO		115.5
10	OCDF	441.7428	47.53	15722.808	1.138	0.879	0.879	0.93	0.89	NO		80.9
36	Total-penta1	339.8597	27.50	12040.436		0.317	0.317	1.41	1.55	NO		118.0

PFK1

Sample	Name	Trace	RT	Abs. Sum	MRM	DU	EMPC	1° Fall	2° Fall	1° Fall	2° Fall	SN
48	FUNCTION1 PFK	330.9792	27.78	0.000								3.2
48	FUNCTION1 PFK	330.9792	27.60	0.000								2.7
48	FUNCTION1 PFK	330.9792	24.33	0.000								3.1
48	FUNCTION1 PFK	330.9792	23.85	0.000								1.8
48	FUNCTION1 PFK	330.9792	21.73	0.000								8.5
48	FUNCTION1 PFK	330.9792	21.46	0.000								6.3

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PFK2

Peak	Name	Time	RT	Abundance	Area	Area%
49	FUNCTION2 PFK	366.9792	32.81	0.000	0.000	0.5
49	FUNCTION2 PFK	366.9792	32.50	0.000	0.000	1.0
49	FUNCTION2 PFK	366.9792	32.39	0.000	0.000	0.6
49	FUNCTION2 PFK	366.9792	32.04	0.000	0.000	1.3
49	FUNCTION2 PFK	366.9792	31.77	0.000	0.000	1.2
49	FUNCTION2 PFK	366.9792	31.49	0.000	0.000	0.8
49	FUNCTION2 PFK	366.9792	31.23	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	29.79	0.000	0.000	0.6
49	FUNCTION2 PFK	366.9792	29.07	0.000	0.000	1.0

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PFK3

#	Name	Trace	Area	Height	EMPC	100% Ref	100% Ref	100% Ref	Area
50	FUNCTION3 PFK	380.9760	33.71	0.000	0.000				17.2
50	FUNCTION3 PFK	380.9760	33.65	0.000	0.000				19.4
50	FUNCTION3 PFK	380.9760	33.40	0.000	0.000				30.3
50	FUNCTION3 PFK	380.9760	33.34	0.000	0.000				32.1
50	FUNCTION3 PFK	380.9760	33.26	0.000	0.000				36.0
50	FUNCTION3 PFK	380.9760	33.16	0.000	0.000				39.2
50	FUNCTION3 PFK	380.9760	35.99	0.000	0.000				1.8
50	FUNCTION3 PFK	380.9760	35.88	0.000	0.000				5.0
50	FUNCTION3 PFK	380.9760	35.85	0.000	0.000				5.0
50	FUNCTION3 PFK	380.9760	35.77	0.000	0.000				3.8
50	FUNCTION3 PFK	380.9760	35.71	0.000	0.000				3.3
50	FUNCTION3 PFK	380.9760	35.64	0.000	0.000				2.5
50	FUNCTION3 PFK	380.9760	35.55	0.000	0.000				2.1
50	FUNCTION3 PFK	380.9760	35.43	0.000	0.000				0.6
50	FUNCTION3 PFK	380.9760	35.35	0.000	0.000				1.4
50	FUNCTION3 PFK	380.9760	35.29	0.000	0.000				0.6
50	FUNCTION3 PFK	380.9760	34.99	0.000	0.000				1.5
50	FUNCTION3 PFK	380.9760	34.96	0.000	0.000				1.6
50	FUNCTION3 PFK	380.9760	34.82	0.000	0.000				0.9
50	FUNCTION3 PFK	380.9760	34.78	0.000	0.000				0.8
50	FUNCTION3 PFK	380.9760	34.72	0.000	0.000				0.6
50	FUNCTION3 PFK	380.9760	34.48	0.000	0.000				0.9
50	FUNCTION3 PFK	380.9760	37.86	0.000	0.000				0.7
50	FUNCTION3 PFK	380.9760	37.80	0.000	0.000				0.4
50	FUNCTION3 PFK	380.9760	37.67	0.000	0.000				0.4
50	FUNCTION3 PFK	380.9760	37.52	0.000	0.000				1.3
50	FUNCTION3 PFK	380.9760	37.37	0.000	0.000				5.3
50	FUNCTION3 PFK	380.9760	37.23	0.000	0.000				1.0
50	FUNCTION3 PFK	380.9760	37.17	0.000	0.000				1.9
50	FUNCTION3 PFK	380.9760	37.14	0.000	0.000				1.7
50	FUNCTION3 PFK	380.9760	36.92	0.000	0.000				0.8
50	FUNCTION3 PFK	380.9760	36.76	0.000	0.000				0.9
50	FUNCTION3 PFK	380.9760	36.72	0.000	0.000				0.5
50	FUNCTION3 PFK	380.9760	36.57	0.000	0.000				0.9
50	FUNCTION3 PFK	380.9760	36.51	0.000	0.000				0.8
50	FUNCTION3 PFK	380.9760	36.42	0.000	0.000				0.9
50	FUNCTION3 PFK	380.9760	36.38	0.000	0.000				1.2
50	FUNCTION3 PFK	380.9760	36.32	0.000	0.000				1.6
50	FUNCTION3 PFK	380.9760	38.40	0.000	0.000				1.6
50	FUNCTION3 PFK	380.9760	38.24	0.000	0.000				1.8
50	FUNCTION3 PFK	380.9760	38.16	0.000	0.000				2.2
50	FUNCTION3 PFK	380.9760	38.04	0.000	0.000				1.3

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PFK4

#	Name	Time	RT	Abs Resp	RFI	pg	EMPG	1st Ret	1st Ret	1st Ret	SN
51	FUNCTION4 PFK	430.9728	40.70	0.000							1.1
51	FUNCTION4 PFK	430.9728	40.65	0.000							2.3
51	FUNCTION4 PFK	430.9728	40.56	0.000							2.7
51	FUNCTION4 PFK	430.9728	40.19	0.000							0.7
51	FUNCTION4 PFK	430.9728	40.02	0.000							1.9
51	FUNCTION4 PFK	430.9728	39.85	0.000							0.6
51	FUNCTION4 PFK	430.9728	39.80	0.000							1.1
51	FUNCTION4 PFK	430.9728	39.40	0.000							1.7
51	FUNCTION4 PFK	430.9728	38.85	0.000							1.5
51	FUNCTION4 PFK	430.9728	38.62	0.000							2.2
51	FUNCTION4 PFK	430.9728	38.59	0.000							1.0
51	FUNCTION4 PFK	430.9728	44.08	0.000							1.2
51	FUNCTION4 PFK	430.9728	43.65	0.000							1.5
51	FUNCTION4 PFK	430.9728	43.57	0.000							0.7
51	FUNCTION4 PFK	430.9728	43.21	0.000							0.5
51	FUNCTION4 PFK	430.9728	42.99	0.000							0.9
51	FUNCTION4 PFK	430.9728	42.88	0.000							0.6
51	FUNCTION4 PFK	430.9728	42.69	0.000							1.0
51	FUNCTION4 PFK	430.9728	42.54	0.000							0.9
51	FUNCTION4 PFK	430.9728	42.48	0.000							1.3
51	FUNCTION4 PFK	430.9728	42.43	0.000							2.5
51	FUNCTION4 PFK	430.9728	42.24	0.000							1.9
51	FUNCTION4 PFK	430.9728	42.06	0.000							1.3
51	FUNCTION4 PFK	430.9728	41.61	0.000							1.4
51	FUNCTION4 PFK	430.9728	41.27	0.000							1.2
51	FUNCTION4 PFK	430.9728	40.96	0.000							1.5
51	FUNCTION4 PFK	430.9728	40.83	0.000							0.9
51	FUNCTION4 PFK	430.9728	44.42	0.000							0.8
51	FUNCTION4 PFK	430.9728	44.34	0.000							2.6

PFK5

#	Name	Time	RT	Abs Resp	RFI	pg	EMPG	1st Ret	1st Ret	1st Ret	SN
52	FUNCTION5 PFK	480.9696	48.78	0.000							2.2
52	FUNCTION5 PFK	480.9696	46.72	0.000							1.4

ETHERS1

#	Name	Time	RT	Abs Resp	RFI	pg	EMPG	1st Ret	1st Ret	1st Ret	SN
53	FUNCTION1 HXCD...	375.8364	21.69	0.000		0.000					4.0

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ETHERS2

ID	Name	Trace	RT	Abundance	Area	EMPC	1st Peak	1st Peak	1st Peak	SN
54	FUNCTION1 HPCD...	409.7974	25.64	0.000	0.000					1.8
54	FUNCTION1 HPCD...	409.7974	25.41	0.000	0.000					1.3
54	FUNCTION1 HPCD...	409.7974	25.27	0.000	0.000					1.3
54	FUNCTION1 HPCD...	409.7974	24.78	0.000	0.000					2.0
54	FUNCTION1 HPCD...	409.7974	23.31	0.000	0.000					1.0
54	FUNCTION1 HPCD...	409.7974	22.94	0.000	0.000					2.6
54	FUNCTION1 HPCD...	409.7974	22.84	0.000	0.000					2.2
54	FUNCTION1 HPCD...	409.7974	21.70	0.000	0.000					2.8
54	FUNCTION1 HPCD...	409.7974	26.39	0.000	0.000					1.1
54	FUNCTION1 HPCD...	409.7974	25.82	0.000	0.000					2.7

ETHERS3

ID	Name	Trace	RT	Abundance	Area	EMPC	1st Peak	1st Peak	1st Peak	SN
55	FUNCTION2 HPCD...	409.7974	31.42	0.000	0.000					3.0
55	FUNCTION2 HPCD...	409.7974	30.16	0.000	0.000					1.3
55	FUNCTION2 HPCD...	409.7974	28.38	0.000	0.000					2.2

ETHERS4

ID	Name	Trace	RT	Abundance	Area	EMPC	1st Peak	1st Peak	1st Peak	SN

ETHERS5

ID	Name	Trace	RT	Abundance	Area	EMPC	1st Peak	1st Peak	1st Peak	SN
57	FUNCTION4 NCDPE	479.7165	39.12	0.000	0.000					59.5

ETHERS6

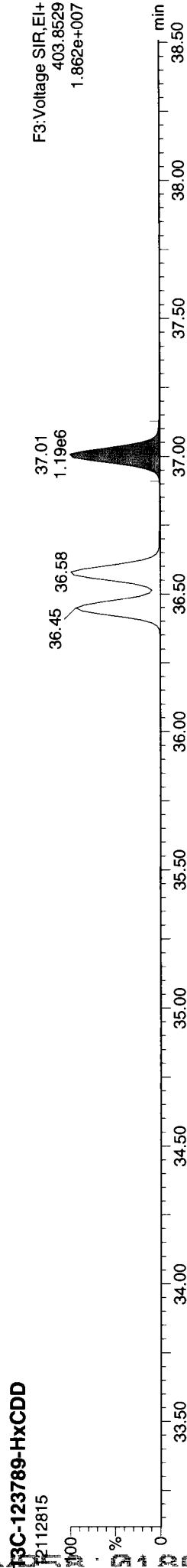
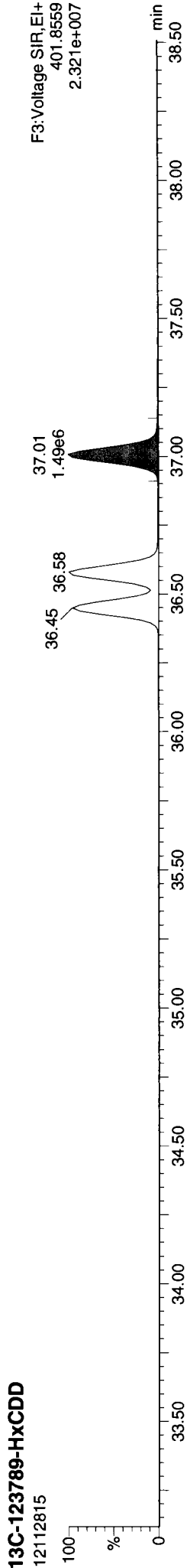
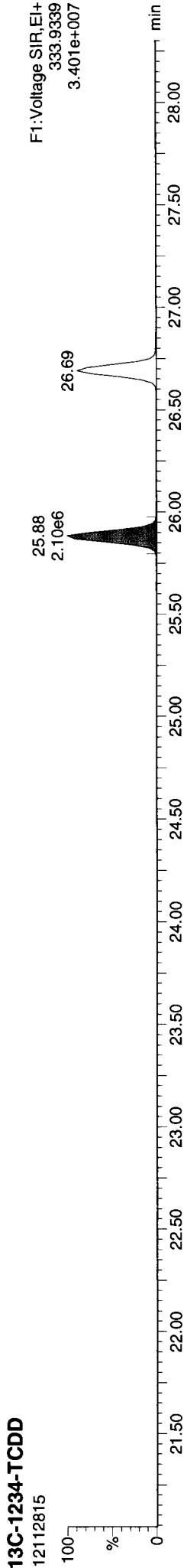
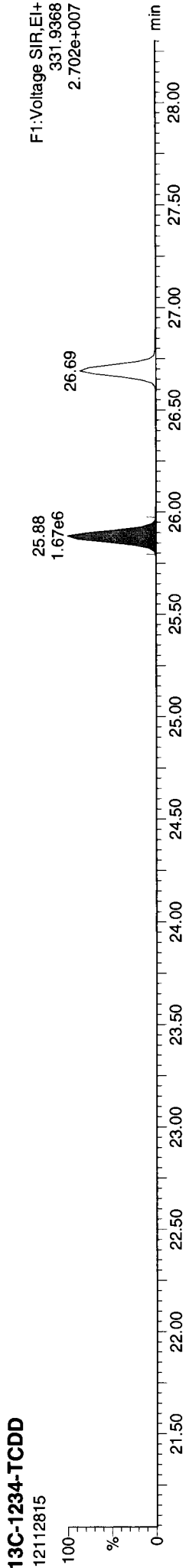
ID	Name	Trace	RT	Abundance	Area	EMPC	1st Peak	1st Peak	1st Peak	SN

Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

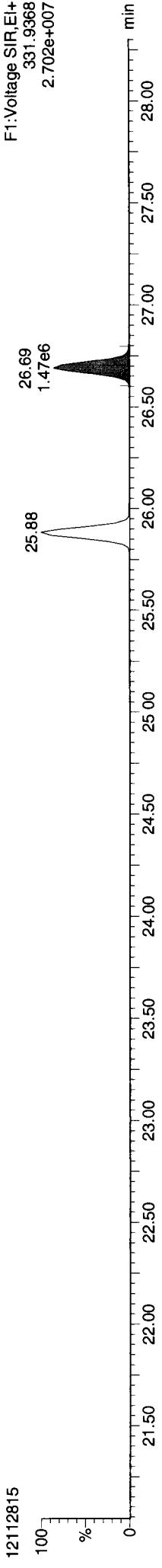
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

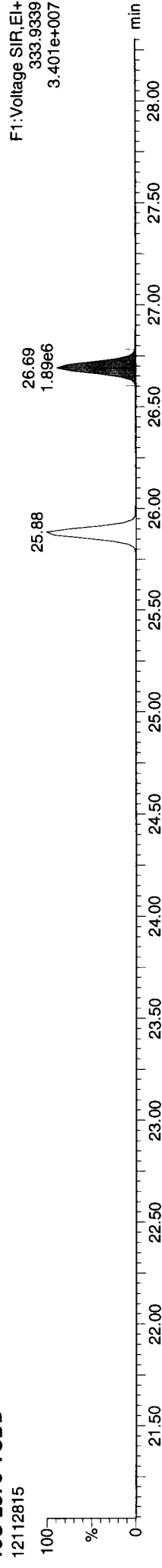


Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

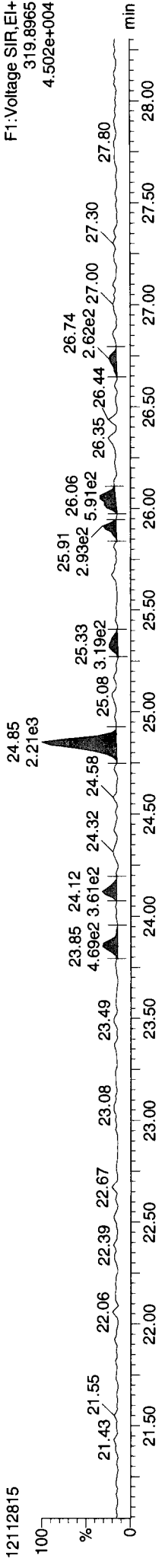
13C-2378-TCDD



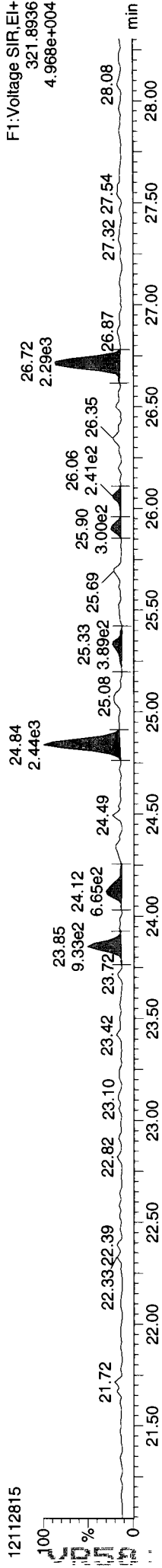
13C-2378-TCDD



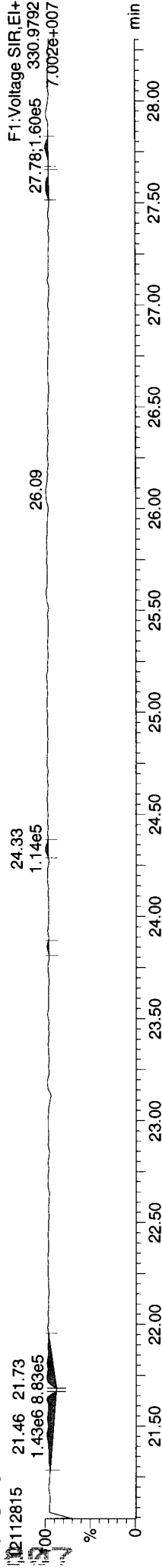
Total-tetradoxins



Total-tetradoxins

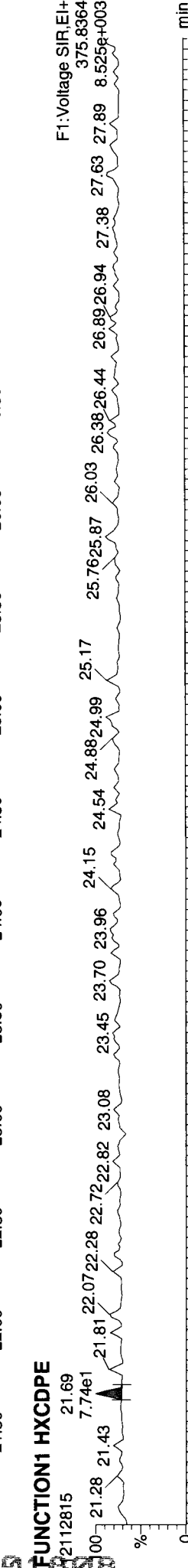
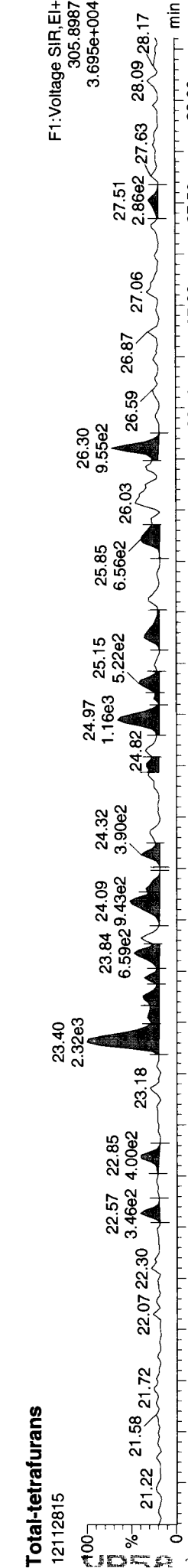
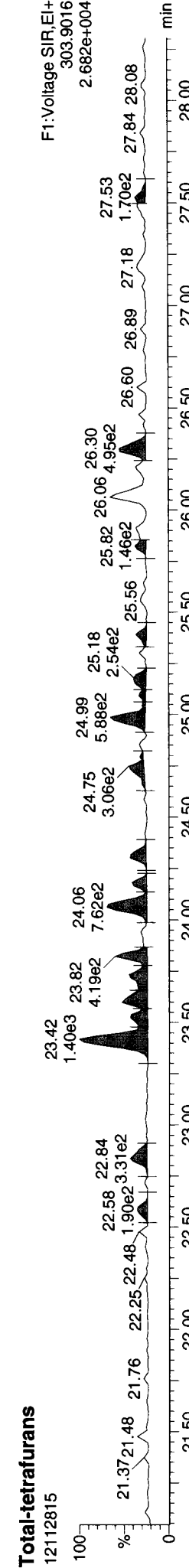
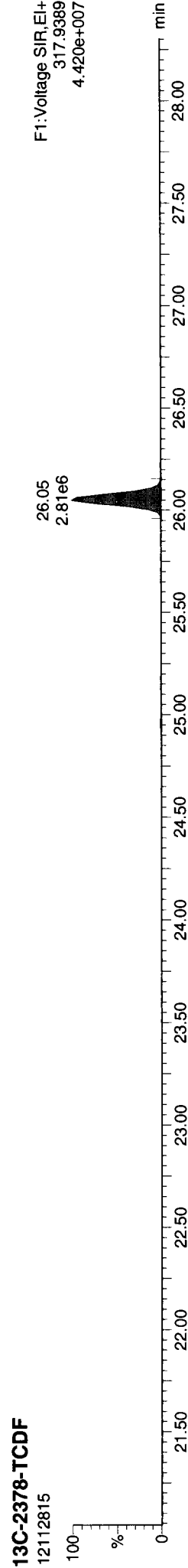
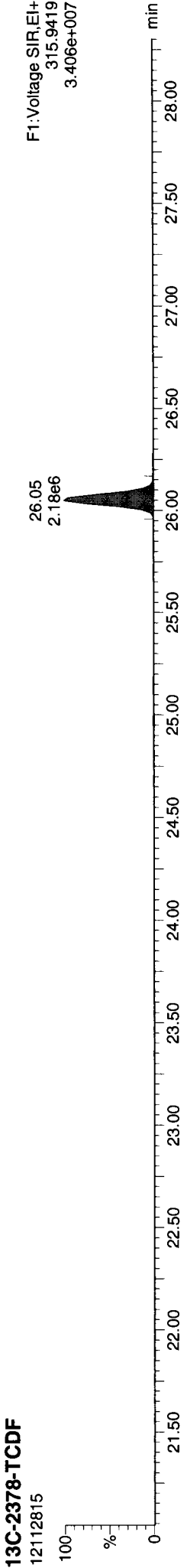


FUNCTION1 PFK



Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

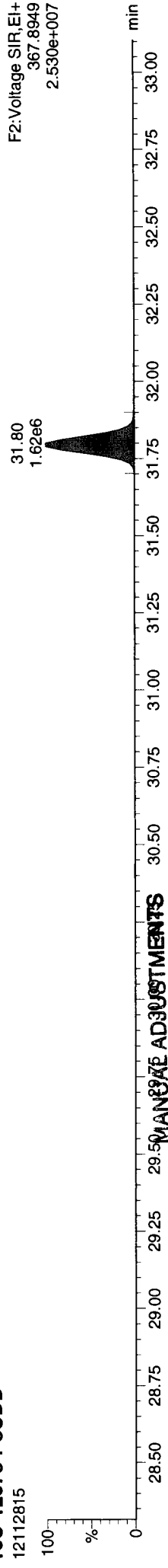




Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

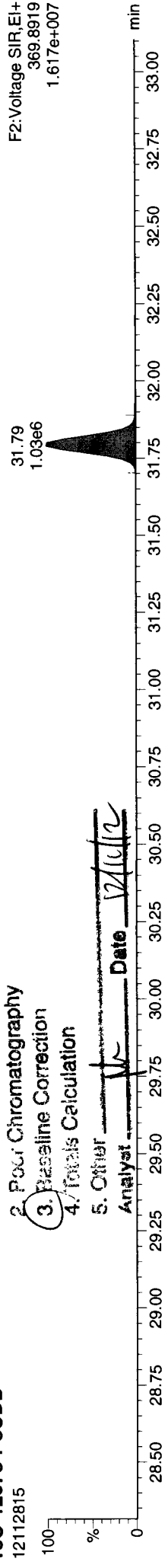
Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD  
12112815

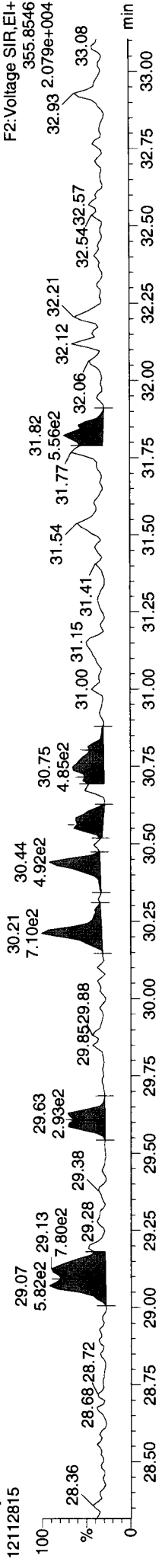


13C-12378-PeCDD  
12112815

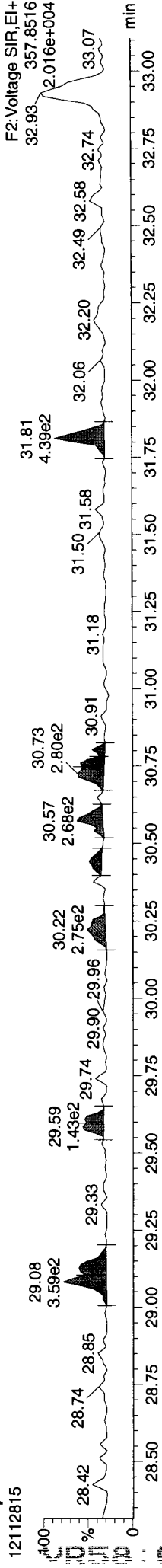
- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other



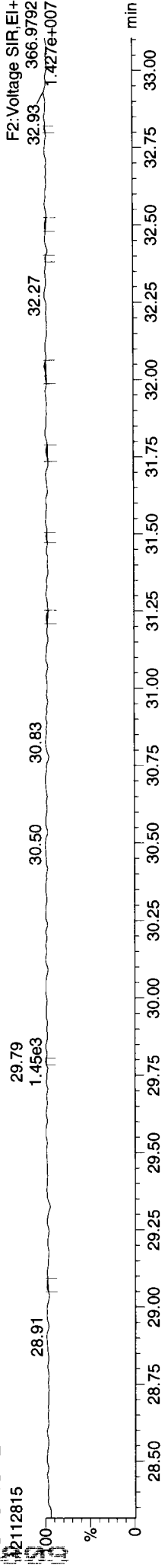
Total-pentadioxins  
12112815



Total-pentadioxins  
12112815

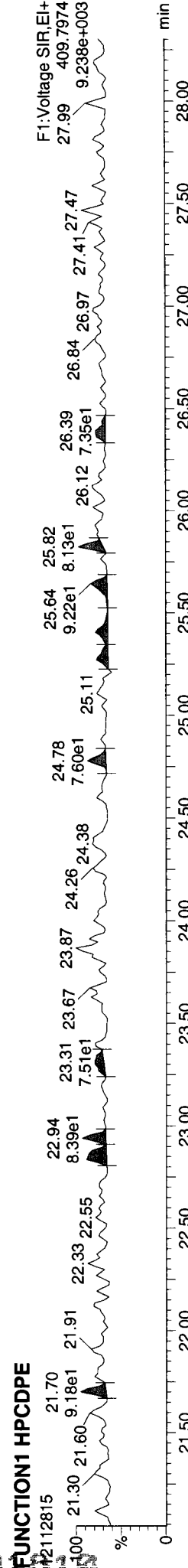
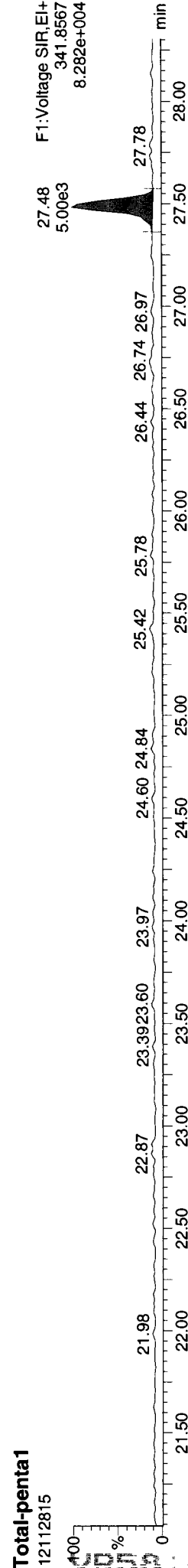
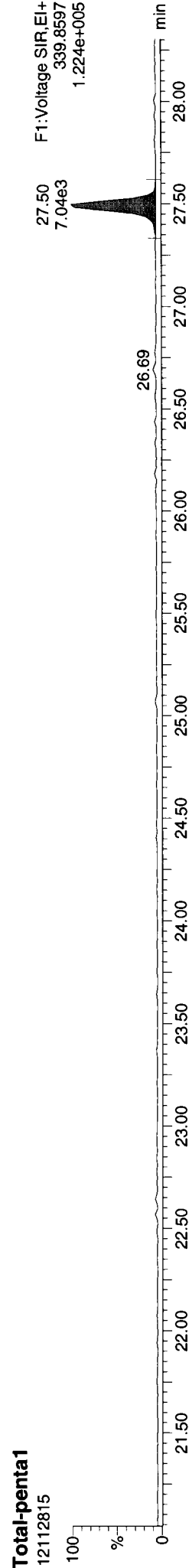
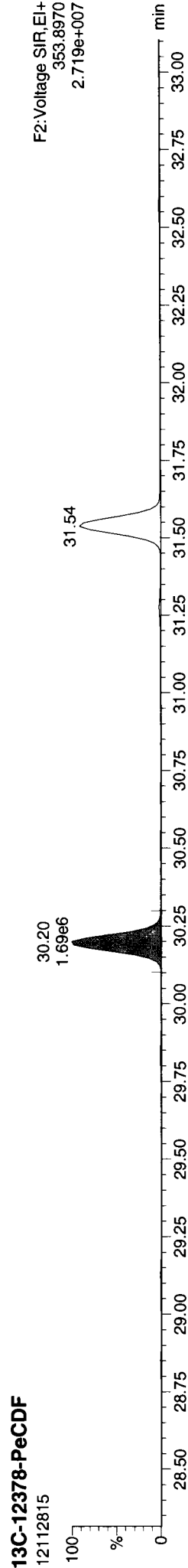
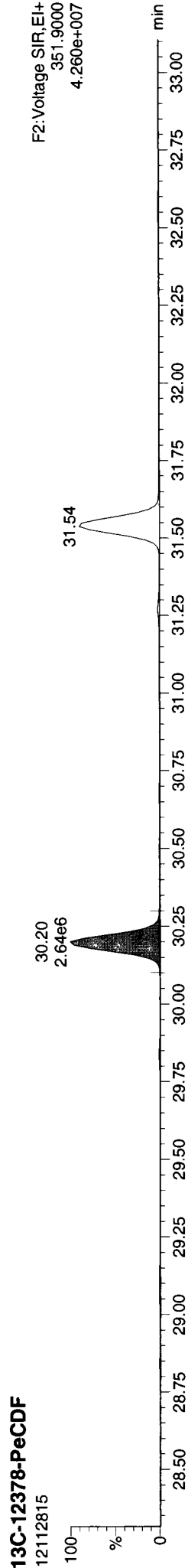


FUNCTION2 PFK  
12112815



Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

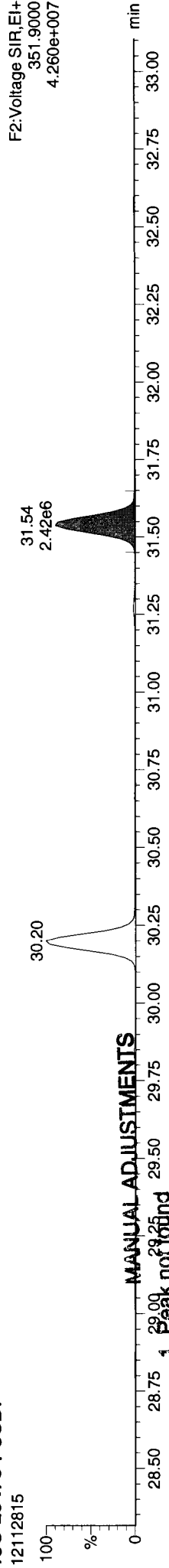


Quantify Sample Report MassLynx 4.1 SCN 714

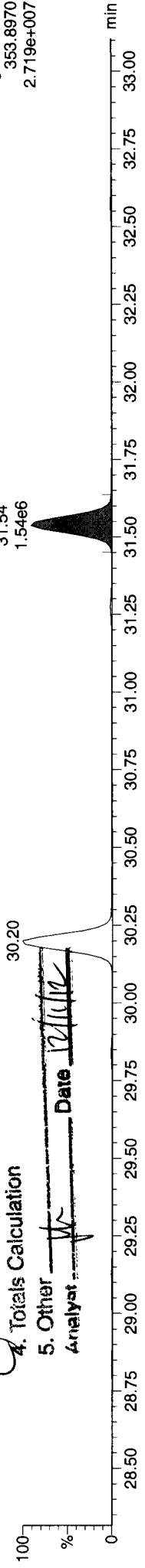
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



13C-23478-PeCDF

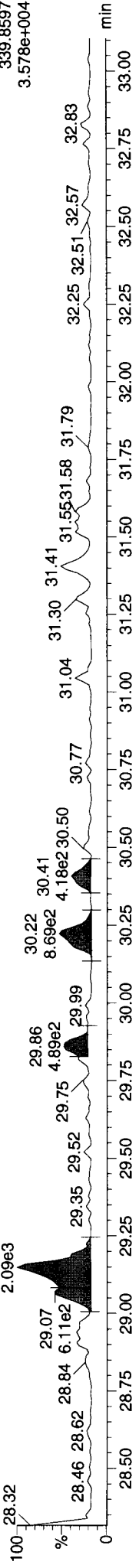


MANUAL ADJUSTMENTS

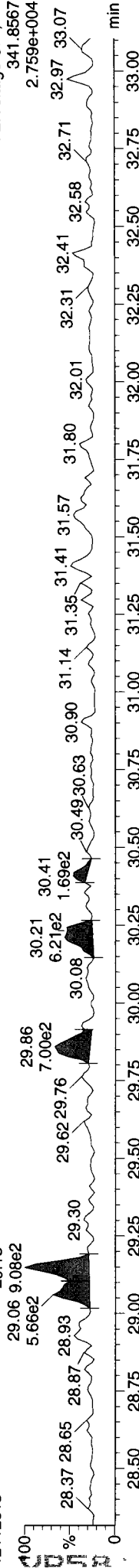
- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other

Analyst: *[Signature]* Date: 12/10/12

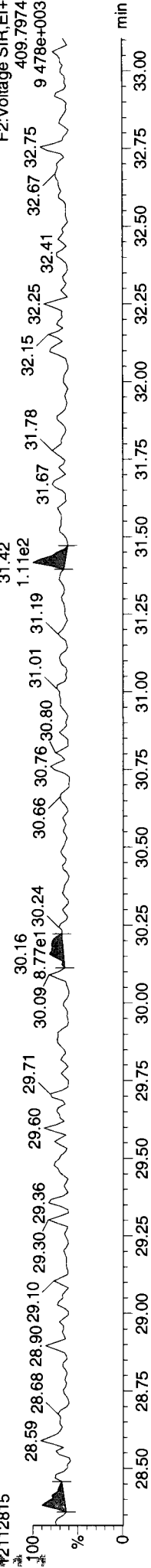
Total-pentafurans



Total-pentafurans



FUNCTION2 HPCDPE



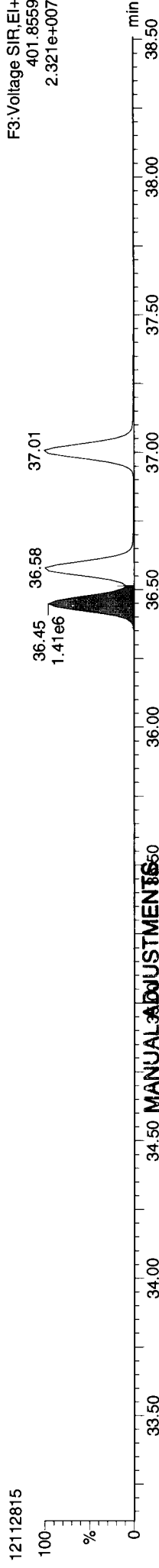
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld

Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time

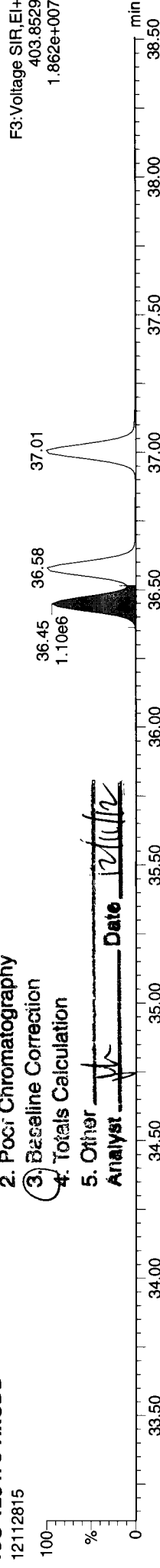
Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

**13C-123478-HxCDD**



**13C-123478-HxCDD**



1. Peak not found

2. Poci Chromatography

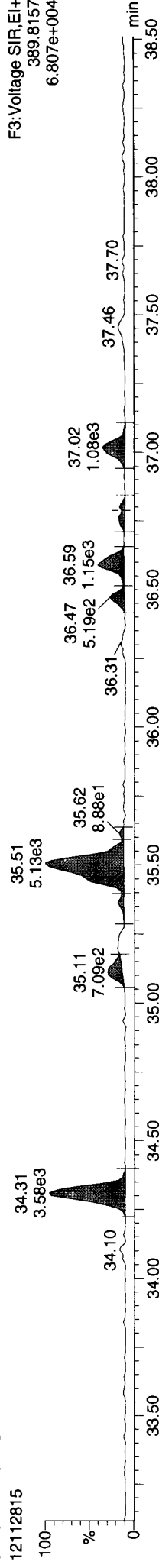
3. Baseline Correction

4. Totals Calculation

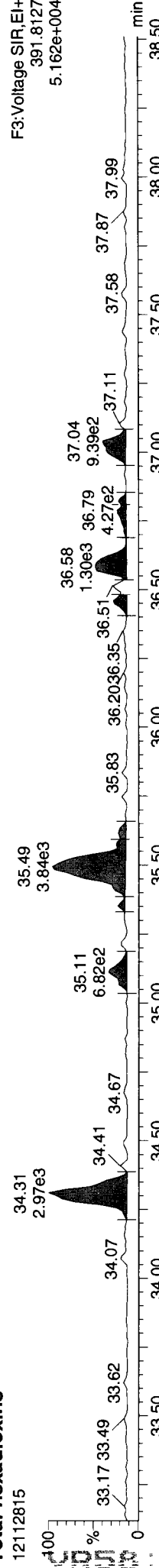
5. Other

Analyst *[Signature]* Date *12/11/12*

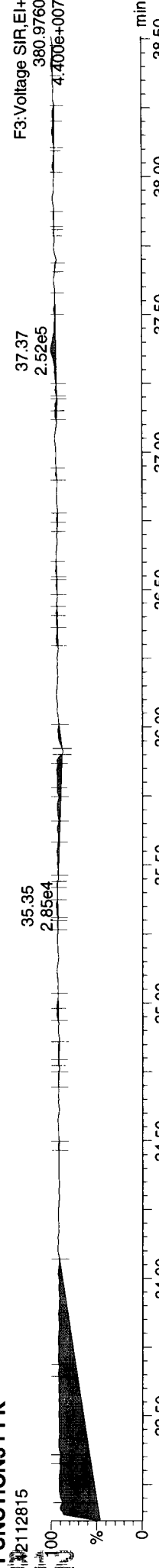
**Total-hexadioxins**



**Total-hexadioxins**



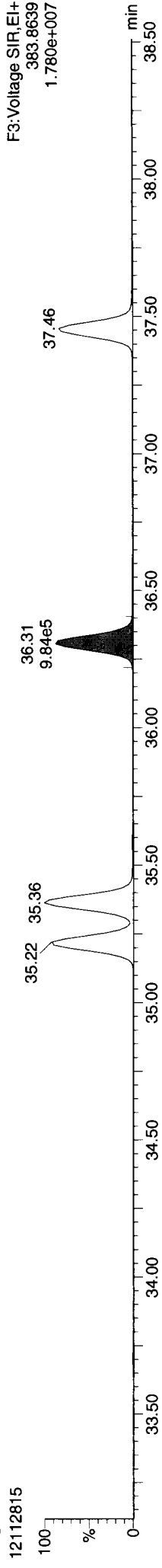
**FUNCTION3 PFK**



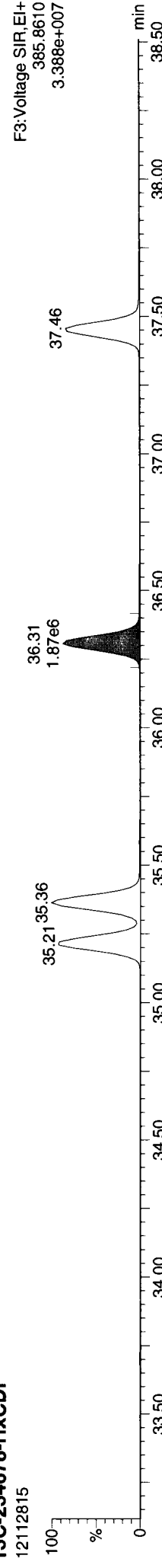
Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

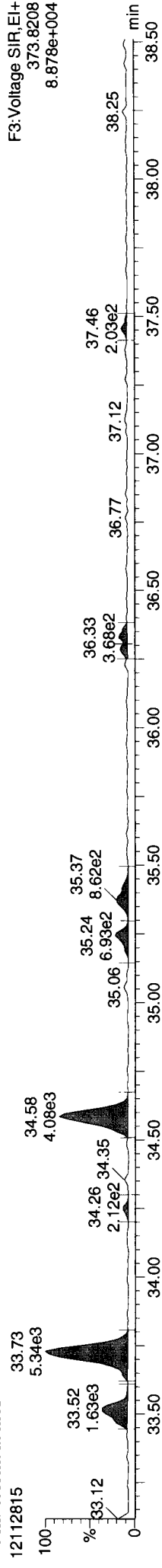
13C-234678-HxCDF



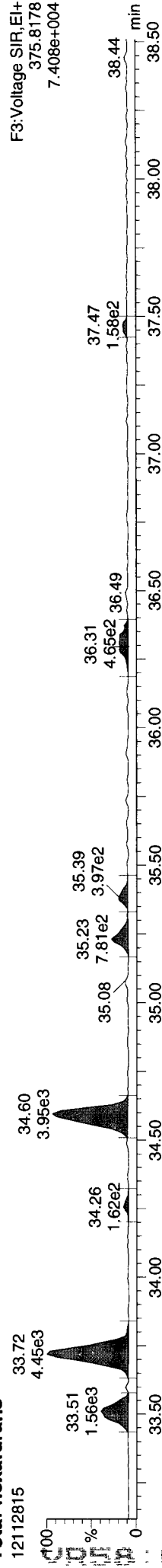
13C-234678-HxCDF



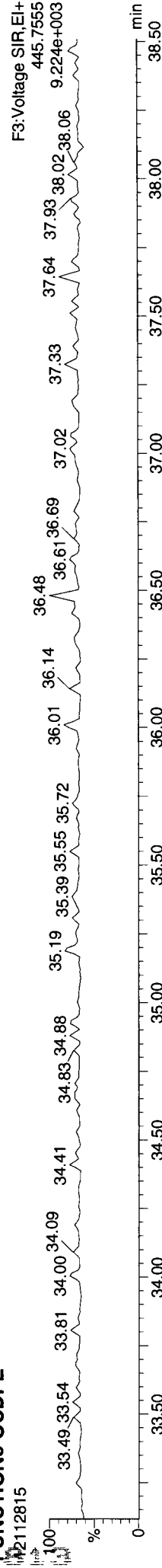
Total-hexafurans



Total-hexafurans



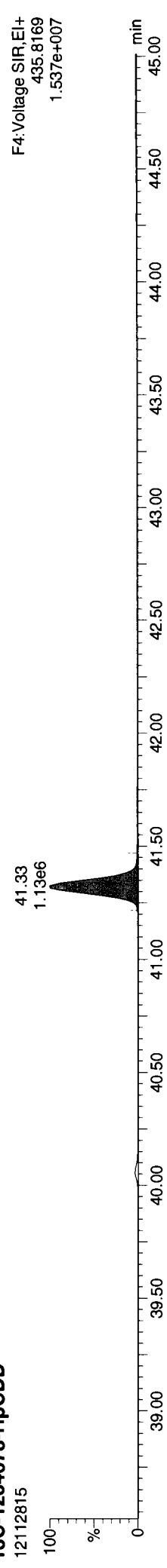
FUNCTION3 OCDFE



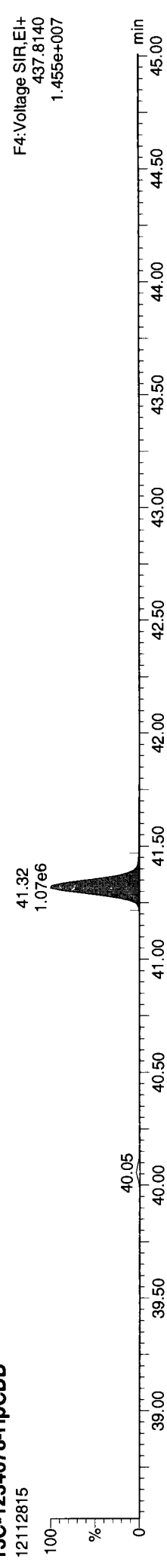
**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

**Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk**

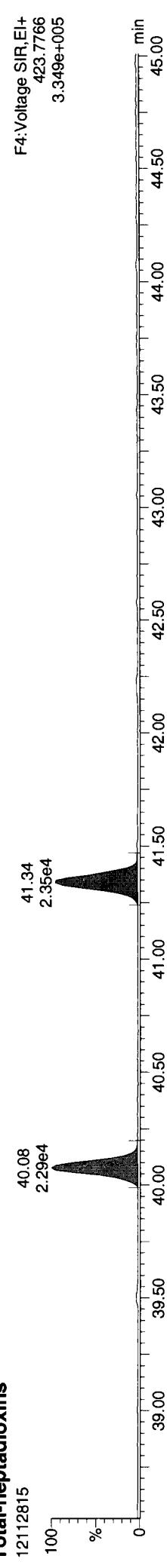
**13C-1234678-HpCDD**  
12112815



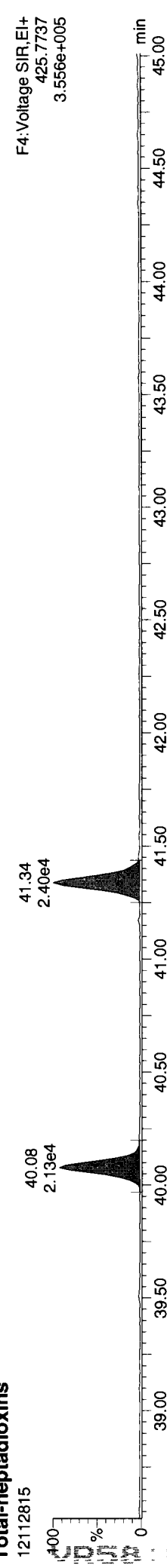
**13C-1234678-HpCDD**  
12112815



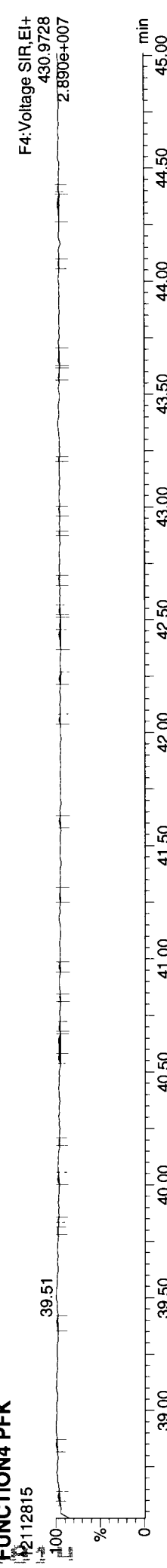
**Total-heptadioxins**  
12112815



**Total-heptadioxins**  
12112815



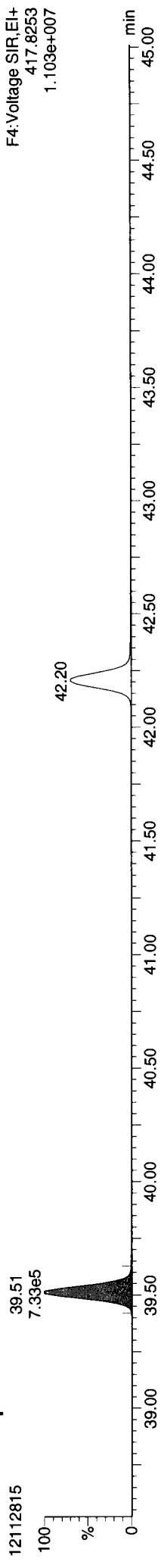
**FUNCTION4 PFK**  
12112815



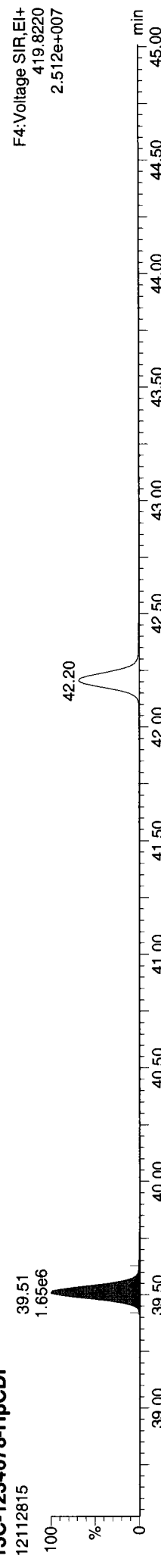
**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
 Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

**Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk**

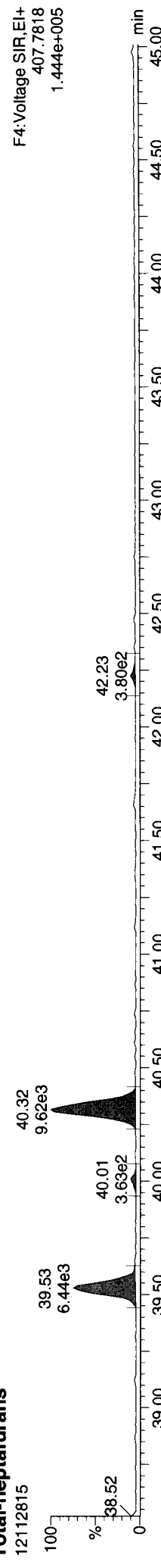
**13C-1234678-HpCDF**



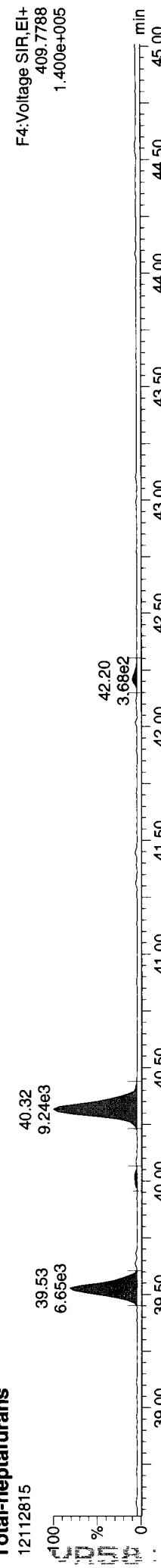
**13C-1234678-HpCDF**



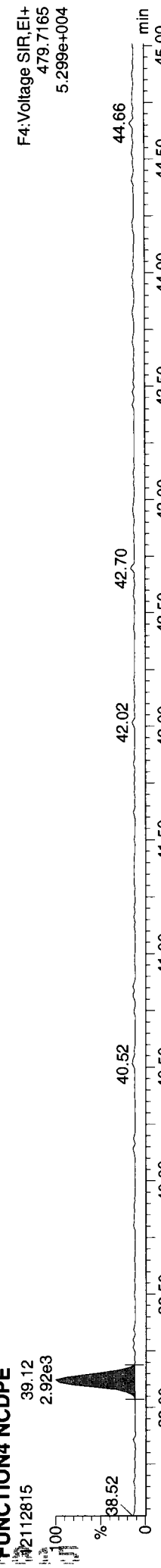
**Total-heptafurans**



**Total-heptafurans**



**FUNCTION4 NCDPE**



Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld

Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time

Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

13C-OCDD

12112815



13C-OCDD

12112815



OCDD

12112815



OCDD

12112815



FUNCTION5 PFK

12112815

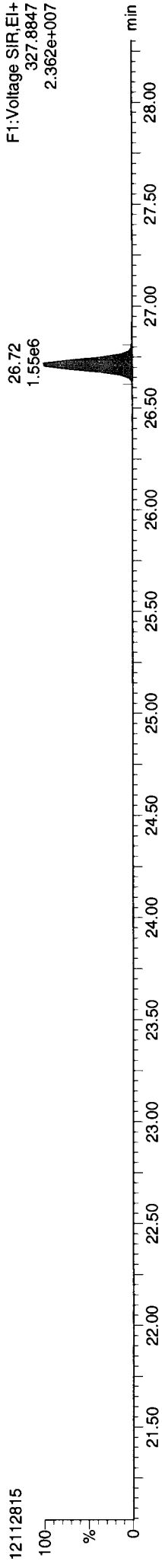




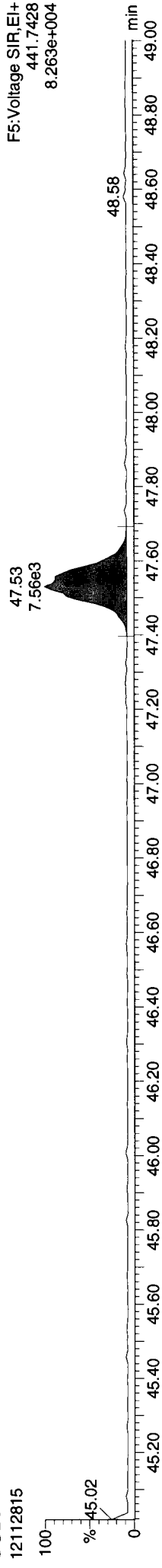
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:30:50 Pacific Standard Time

Name: 12112815, Date: 28-Nov-2012, Time: 22:13:45, ID: VR58H, Conditions: AUTOSPEC01, User: pk

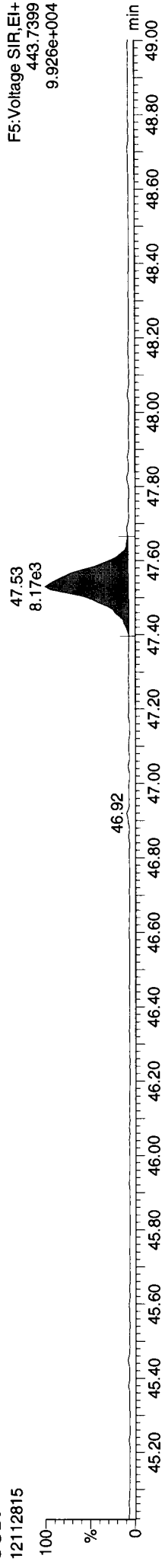
37CL-2378-TCDD



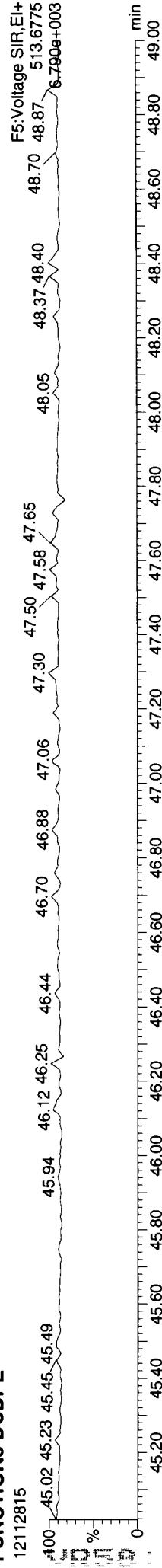
OCDF



OCDF



FUNCTION5 DCDPE



12112815

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

*12/10/12*

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR581, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.078	1.001	7.77e2	1.11e3	0.877	0.702	0.770	7.7	1293	2153	1.00e4	1.68e4	NO	0.068
12378-PeCDF	30.201	1.000	8.90e2	7.54e2	0.896	1.181	1.550	7.9	1910	1962	1.51e4	1.07e4	YES	0.056
23478-PeCDF	31.570	1.001	9.95e2	7.52e2	0.926	1.324	1.550	12.1	1910	1962	2.32e4	1.24e4	NO	0.068
123478-HxCDF	35.243	1.001	4.13e3	2.97e3	1.068	1.391	1.240	34.9	1916	1671	6.69e4	5.22e4	NO	0.313
234678-HxCDF	36.306	1.000	6.07e3	4.82e3	1.037	1.259	1.240	34.9	1916	1671	6.68e4	5.52e4	NO	0.530
123678-HxCDF	35.374	1.000	4.16e3	4.22e3	1.035	0.985	1.240	30.3	1916	1671	5.80e4	6.84e4	YES	0.363
123789-HxCDF	37.457	1.000	5.57e2	5.94e2	0.987	0.939	1.240	4.4	1916	1671	8.42e3	9.79e3	YES	0.048
1234678-HpCDF	39.529	1.001	7.23e4	7.67e4	1.232	0.942	1.050	898.3	1221	1805	1.10e6	1.20e6	NO	7.223
1234789-HpCDF	42.225	1.001	3.72e3	4.15e3	1.215	0.897	1.050	45.3	1221	1805	5.53e4	5.83e4	NO	0.476
OCDF	47.539	1.006	6.88e4	8.14e4	1.138	0.845	0.890	467.8	1491	10243	6.98e5	8.32e5	NO	12.262
2378-TCDD	26.691	1.000	3.25e2	2.46e3	1.049	0.132	0.770	3.9	1302	1717	5.02e3	3.83e4	YES	0.113
12378-PeCDD	31.812	1.001	2.66e3	1.78e3	0.998	1.493	1.550	27.3	1336	1042	3.65e4	2.82e4	NO	0.246
123478-HxCDD	36.459	1.000	4.18e3	4.26e3	0.971	0.982	1.240	71.4	903	1228	6.45e4	6.92e4	YES	0.460
123678-HxCDD	36.591	1.000	9.54e3	7.90e3	0.918	1.208	1.240	159.1	903	1228	1.44e5	1.15e5	NO	1.064
123789-HxCDD	37.019	1.012	1.05e4	8.40e3	0.932	1.248	1.240	178.7	903	1228	1.61e5	1.24e5	NO	1.165
1234678-HpCDD	41.337	1.000	1.90e5	1.88e5	1.017	1.010	1.050	1050.8	2509	2247	2.64e6	2.53e6	NO	25.177
OCDD	47.261	1.000	6.43e5	7.29e5	1.008	0.883	0.890	5275.1	1242	2790	6.55e6	7.39e6	NO	126.375
13C-2378-TCDF	26.048	1.006	1.37e6	1.77e6	1.473	0.777	0.770	7040.5	3105	1830	2.19e7	2.82e7	NO	54.347
13C-12378-PeCDF	30.190	1.166	1.77e6	1.13e6	1.148	1.559	1.550	6146.4	4533	2934	2.79e7	1.80e7	NO	64.407
13C-23478-PeCDF	31.538	1.218	1.69e6	1.07e6	1.113	1.574	1.550	5945.4	4533	2934	2.70e7	1.72e7	NO	63.252
13C-123478-HxCDF	35.210	0.951	7.19e5	1.40e6	1.209	0.513	0.510	2661.2	4159	4344	1.11e7	2.18e7	NO	62.192
13C-123678-HxCDF	35.363	0.956	7.68e5	1.46e6	1.269	0.526	0.510	2904.1	4159	4344	1.21e7	2.27e7	NO	62.314
13C-234678-HxCDF	36.306	0.981	6.81e5	1.30e6	1.236	0.523	0.510	2594.3	4159	4344	1.08e7	2.05e7	NO	56.878
13C-123789-HxCDF	37.446	1.012	7.27e5	1.39e6	1.107	0.522	0.510	2631.7	4159	4344	1.09e7	2.15e7	NO	67.920
13C-1234678-HpCDF	39.507	1.068	5.16e5	1.16e6	1.051	0.445	0.440	4032.6	1946	2395	7.85e6	1.75e7	NO	56.503
13C-1234789-HpCDF	42.203	1.140	4.18e5	9.43e5	0.815	0.443	0.440	2779.5	1946	2395	5.41e6	1.21e7	NO	59.248
13C-1234-TCDD	25.884	0.000	1.73e6	2.19e6	1.000	0.792	0.770	10334.6	2679	1902	2.77e7	3.46e7	NO	100.000
13C-2378-TCDD	26.691	1.031	1.03e6	1.32e6	0.946	0.786	0.770	6228.4	2679	1902	1.67e7	2.11e7	NO	63.348
13C-12378-PeCDD	31.790	1.228	1.11e6	6.99e5	0.721	1.590	1.550	7797.1	2266	1308	1.77e7	1.11e7	NO	63.969
13C-123478-HxCDD	36.448	0.985	9.48e5	7.42e5	0.991	1.278	1.240	6457.9	2325	3281	1.50e7	1.18e7	NO	60.513
13C-123678-HxCDD	36.580	0.988	9.90e5	7.96e5	1.025	1.244	1.240	6668.4	2325	3281	1.55e7	1.24e7	NO	61.823
13C-1234678-HpCDD	41.326	1.117	7.57e5	7.22e5	0.866	1.048	1.050	3790.2	2672	2972	1.01e7	9.69e6	NO	60.565
13C-OCDD	47.243	1.277	1.01e6	1.14e6	0.769	0.882	0.890	5013.2	2007	2040	1.01e7	1.15e7	NO	99.316

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58l, Conditions: AUTOSPEC01, User: pk

	37.007	0.000	1.5666	1.2666	1.000	1.241	1.240	10339.6	2325	3281	2.40e7	1.94e7	NO	
13C-123789-HxCDD	37.007	0.000	1.5666	1.2666	1.000	1.241	1.240	10339.6	2325	3281	2.40e7	1.94e7	NO	100.000
Total-tetrafurans			1.05e4		0.877				1293		1.75e5			1.253
Total-penta1			2.63e4						672		3.91e5			1.654
Total-pentafurans			1.34e4		0.911				1910		2.39e5			0.958
Total-hexafurans			1.00e5		1.032				1916		1.55e6			8.909
Total-heptafurans			1.51e5		1.223				1221		2.27e6			15.771
Total-Furans			3.70e5		1.041				1293		5.32e6			40.807
Total-tetradioxins			4.15e3		1.049				1302		6.66e4			0.554
Total-pentadioxins			3.78e3		0.998				1336		5.84e4			1.016
Total-hexadioxins			6.05e4		0.940				903		7.97e5			7.460
Total-heptadioxins			3.10e5		1.017				2509		4.43e6			41.088
Total-Dioxins			1.52e7		0.985				1302		2.18e8			40.807
Total-TEQ			1.56e7						1302		2.23e8			81.615
37CL-2378-TCDD	26.706	1.032	1.53e6		1.044			12361.9	1926		2.38e7			37.405
FUNCTION1 PFK			1.87e7						720309		1.33e8			0.000
FUNCTION2 PFK			3.29e5						192922		8.48e6			0.000
FUNCTION3 PFK			3.59e5						469005		5.54e6			0.000
FUNCTION4 PFK			2.13e5						329345		6.93e6			0.000
FUNCTION5 PFK			1.44e5						255841		4.99e6			0.000
FUNCTION1 HXCDPE			5.13e2						1241		1.23e4			0.000
FUNCTION1 HPCDPE			5.63e2						954		1.59e4			0.000
FUNCTION2 HPCDPE			2.26e2						1023		5.81e3			0.000
FUNCTION3 OCDPE			0.00e0						420		0.00e0			0.000
FUNCTION4 NCDPE			7.86e3						644		1.33e5			0.000
FUNCTION5 DCDPE			0.00e0						292		0.00e0			0.000

2.524

2.102

**Quantify Totals Report MassLynx 4.1 SCN 714**

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
 Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk

**TF**

Sample	Retention	Area	Height	Area%	Height%	EMPC	IC-FAIL	REMARKS	STATUS	CONF
35 Total-tetrafurans	303.9016	24.73	1676.681	0.877	0.061	0.061	0.76	0.77	NO	9.8
35 Total-tetrafurans	303.9016	24.32	1103.676	0.877	0.040	0.040	0.69	0.77	NO	6.3
35 Total-tetrafurans	303.9016	24.18	762.569	0.877	0.028	0.028	0.84	0.77	NO	5.0
35 Total-tetrafurans	303.9016	24.08	1713.817	0.877	0.062	0.062	0.70	0.77	NO	9.5
35 Total-tetrafurans	303.9016	23.91	0.000	0.877	0.000	0.022	1.24	0.77	YES	6.2
35 Total-tetrafurans	303.9016	23.82	1701.718	0.877	0.062	0.062	0.79	0.77	NO	13.5
35 Total-tetrafurans	303.9016	23.72	0.000	0.877	0.000	0.035	1.37	0.77	YES	8.5
35 Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.049	0.45	0.77	YES	7.1
35 Total-tetrafurans	303.9016	23.42	11108.070	0.877	0.403	0.403	0.76	0.77	NO	59.0
35 Total-tetrafurans	303.9016	22.84	0.000	0.877	0.000	0.044	0.56	0.77	YES	6.4
35 Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.067	0.65	0.77	YES	11.8
35 Total-tetrafurans	303.9016	27.51	0.000	0.877	0.000	0.019	0.36	0.77	YES	4.5
35 Total-tetrafurans	303.9016	26.30	1819.947	0.877	0.066	0.066	0.79	0.77	NO	10.1
35 Total-tetrafurans	303.9016	26.21	0.000	0.877	0.000	0.026	0.53	0.77	YES	5.7
1 2378-TCDF	303.9016	26.08	1884.469	0.877	0.068	0.068	0.70	0.77	NO	7.7
35 Total-tetrafurans	303.9016	25.39	737.596	0.877	0.027	0.027	0.83	0.77	NO	4.3
35 Total-tetrafurans	303.9016	25.15	1186.996	0.877	0.043	0.043	0.66	0.77	NO	5.0
35 Total-tetrafurans	303.9016	24.97	0.000	0.877	0.000	0.097	0.61	0.77	YES	10.9
35 Total-tetrafurans	303.9016	24.84	943.952	0.877	0.034	0.034	0.75	0.77	NO	5.1

**PP**

Sample	Retention	Area	Height	Area%	Height%	EMPC	IC-FAIL	REMARKS	STATUS	CONF
36 Total-penta1	339.8597	27.48	42946.131	1.654	1.654	1.58	1.55	NO		581.6

**PF**

Sample	Retention	Area	Height	Area%	Height%	EMPC	IC-FAIL	REMARKS	STATUS	CONF
37 Total-pentafurans	339.8597	31.42	1216.240	0.911	0.047	0.047	1.45	1.55	NO	6.2
37 Total-pentafurans	339.8597	30.51	0.000	0.911	0.000	0.013	0.74	1.55	YES	2.9
37 Total-pentafurans	339.8597	30.41	1630.137	0.911	0.063	0.063	1.38	1.55	NO	8.6
2 12378-PeCDF	339.8597	30.20	1644.102	0.896	0.000	0.056	1.18	1.55	YES	7.9
37 Total-pentafurans	339.8597	29.94	0.000	0.911	0.000	0.017	1.10	1.55	YES	2.9
37 Total-pentafurans	339.8597	29.85	3619.838	0.911	0.140	0.140	1.36	1.55	NO	19.2
37 Total-pentafurans	339.8597	29.14	8071.517	0.911	0.313	0.313	1.61	1.55	NO	45.7
37 Total-pentafurans	339.8597	29.07	3882.010	0.911	0.150	0.150	1.60	1.55	NO	23.9
37 Total-pentafurans	339.8597	28.95	2327.044	0.911	0.090	0.090	1.33	1.55	NO	9.4
3 23478-PeCDF	339.8597	31.57	1746.572	0.926	0.068	0.068	1.32	1.55	NO	12.1

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Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk

HF

#	Name	Area	Height	Area	Height	Area	Height	Area	Height	Area	Height	Area	Height
38	Total-hexafurans	373.8208	34.26	0.000	1.032	0.000	0.064	0.99	1.24	YES	6.6		
38	Total-hexafurans	373.8208	33.72	92483.574	1.032	4.245	4.245	1.17	1.24	NO	400.7		
38	Total-hexafurans	373.8208	33.51	23674.079	1.032	1.087	1.087	1.20	1.24	NO	107.4		
7	123789-HxCDF	373.8208	37.46	1150.772	0.987	0.000	0.048	0.94	1.24	YES	4.4		
5	234678-HxCDF	373.8208	36.31	10884.520	1.037	0.530	0.530	1.26	1.24	NO	34.9		
6	123678-HxCDF	373.8208	35.37	8379.313	1.035	0.000	0.326	0.99	1.24	YES	30.3		
4	123478-HxCDF	373.8208	35.24	7098.131	1.068	0.313	0.313	1.39	1.24	NO	34.9		
38	Total-hexafurans	373.8208	35.06	2050.048	1.032	0.094	0.094	1.28	1.24	NO	9.8		
38	Total-hexafurans	373.8208	34.59	48001.670	1.032	2.203	2.203	1.21	1.24	NO	220.4		

HPF

#	Name	Area	Height	Area	Height	Area	Height	Area	Height	Area	Height	Area	Height
9	1234789-HpCDF	407.7818	42.22	7865.324	1.215	0.476	0.476	0.90	1.05	NO	45.3		
39	Total-heptafurans	407.7818	40.32	147134.641	1.223	7.924	7.924	1.00	1.05	NO	893.5		
39	Total-heptafurans	407.7818	40.01	2742.993	1.223	0.148	0.148	1.05	1.05	NO	18.0		
8	1234678-HpCDF	407.7818	39.53	148982.266	1.232	7.223	7.223	0.94	1.05	NO	898.3		

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Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

Sample	Compound	Area	Height	Area%	Height%	EMPC	EMPC	EMPC	EMPC	EMPC	EMPC
35	Total-tetrafurans	303.9016	24.73	1676.681	0.877	0.061	0.061	0.76	0.77	NO	9.8
35	Total-tetrafurans	303.9016	24.32	1103.676	0.877	0.040	0.040	0.69	0.77	NO	6.3
35	Total-tetrafurans	303.9016	24.18	762.569	0.877	0.028	0.028	0.84	0.77	NO	5.0
35	Total-tetrafurans	303.9016	24.08	1713.817	0.877	0.062	0.062	0.70	0.77	NO	9.5
35	Total-tetrafurans	303.9016	23.91	0.000	0.877	0.000	0.022	1.24	0.77	YES	6.2
35	Total-tetrafurans	303.9016	23.82	1701.718	0.877	0.062	0.062	0.79	0.77	NO	13.5
35	Total-tetrafurans	303.9016	23.72	0.000	0.877	0.000	0.035	1.37	0.77	YES	8.5
35	Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.049	0.45	0.77	YES	7.1
35	Total-tetrafurans	303.9016	23.42	11108.070	0.877	0.403	0.403	0.76	0.77	NO	59.0
35	Total-tetrafurans	303.9016	22.84	0.000	0.877	0.000	0.044	0.56	0.77	YES	6.4
35	Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.067	0.65	0.77	YES	11.8
35	Total-tetrafurans	303.9016	27.51	0.000	0.877	0.000	0.019	0.36	0.77	YES	4.5
35	Total-tetrafurans	303.9016	26.30	1819.947	0.877	0.066	0.066	0.79	0.77	NO	10.1
35	Total-tetrafurans	303.9016	26.21	0.000	0.877	0.000	0.026	0.53	0.77	YES	5.7
1	2378-TCDF	303.9016	26.08	1884.469	0.877	0.068	0.068	0.70	0.77	NO	7.7
35	Total-tetrafurans	303.9016	25.39	737.596	0.877	0.027	0.027	0.83	0.77	NO	4.3
35	Total-tetrafurans	303.9016	25.15	1186.996	0.877	0.043	0.043	0.66	0.77	NO	5.0
35	Total-tetrafurans	303.9016	24.97	0.000	0.877	0.000	0.097	0.61	0.77	YES	10.9
35	Total-tetrafurans	303.9016	24.84	943.952	0.877	0.034	0.034	0.75	0.77	NO	5.1
37	Total-pentafurans	339.8597	31.42	1216.240	0.911	0.047	0.047	1.45	1.55	NO	6.2
37	Total-pentafurans	339.8597	30.51	0.000	0.911	0.000	0.013	0.74	1.55	YES	2.9
37	Total-pentafurans	339.8597	30.41	1630.137	0.911	0.063	0.063	1.38	1.55	NO	8.6
2	12378-PeCDF	339.8597	30.20	1644.102	0.896	0.000	0.056	1.18	1.55	YES	7.9
37	Total-pentafurans	339.8597	29.94	0.000	0.911	0.000	0.017	1.10	1.55	YES	2.9
37	Total-pentafurans	339.8597	29.85	3619.838	0.911	0.140	0.140	1.36	1.55	NO	19.2
37	Total-pentafurans	339.8597	29.14	8071.517	0.911	0.313	0.313	1.61	1.55	NO	45.7
37	Total-pentafurans	339.8597	29.07	3882.010	0.911	0.150	0.150	1.60	1.55	NO	23.9
37	Total-pentafurans	339.8597	28.95	2327.044	0.911	0.090	0.090	1.33	1.55	NO	9.4
3	23478-PeCDF	339.8597	31.57	1746.572	0.926	0.068	0.068	1.32	1.55	NO	12.1
38	Total-hexafurans	373.8208	34.26	0.000	1.032	0.000	0.064	0.99	1.24	YES	6.6
38	Total-hexafurans	373.8208	33.72	92483.574	1.032	4.245	4.245	1.17	1.24	NO	400.7
38	Total-hexafurans	373.8208	33.51	23674.079	1.032	1.087	1.087	1.20	1.24	NO	107.4
7	123789-HxCDF	373.8208	37.46	1150.772	0.987	0.000	0.048	0.94	1.24	YES	4.4
5	234678-HxCDF	373.8208	36.31	10884.520	1.037	0.530	0.530	1.26	1.24	NO	34.9
6	123678-HxCDF	373.8208	35.37	8379.313	1.035	0.000	0.326	0.99	1.24	YES	30.3
4	123478-HxCDF	373.8208	35.24	7098.131	1.068	0.313	0.313	1.39	1.24	NO	34.9
38	Total-hexafurans	373.8208	35.06	2050.048	1.032	0.094	0.094	1.28	1.24	NO	9.8
38	Total-hexafurans	373.8208	34.59	48001.670	1.032	2.203	2.203	1.21	1.24	NO	220.4
9	1234789-HpCDF	407.7818	42.22	7865.324	1.215	0.476	0.476	0.90	1.05	NO	45.3
39	Total-heptafurans	407.7818	40.32	147134.641	1.223	7.924	7.924	1.00	1.05	NO	893.5
39	Total-heptafurans	407.7818	40.01	2742.993	1.223	0.148	0.148	1.05	1.05	NO	18.0
8	1234678-HpCDF	407.7818	39.53	148982.266	1.232	7.223	7.223	0.94	1.05	NO	898.3
10	OCDF	441.7428	47.54	150199.414	1.138	12.262	12.262	0.85	0.89	NO	467.8
36	Total-penta1	339.8597	27.48	42946.131		1.654	1.654	1.58	1.55	NO	581.6

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Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk

TD

ID	Name	Concn	RT	Acq-Comp	RRM	DI	EMPC	CP	CP	IR	SN
41	Total-tetradoxins	319.8965	24.34	0.000	1.049	0.000	0.048	0.56	0.77	YES	6.4
41	Total-tetradoxins	319.8965	24.12	2175.174	1.049	0.088	0.088	0.75	0.77	NO	13.4
41	Total-tetradoxins	319.8965	23.85	2371.001	1.049	0.096	0.096	0.80	0.77	NO	13.7
41	Total-tetradoxins	319.8965	26.88	0.000	1.049	0.000	0.015	0.44	0.77	YES	3.5
11	2378-TCDD	319.8965	26.69	2785.788	1.049	0.000	0.030	0.13	0.77	YES	3.9
41	Total-tetradoxins	319.8965	25.90	0.000	1.049	0.000	0.041	1.27	0.77	YES	9.1
41	Total-tetradoxins	319.8965	25.33	0.000	1.049	0.000	0.041	0.63	0.77	YES	6.1
41	Total-tetradoxins	319.8965	25.03	552.302	1.049	0.022	0.022	0.70	0.77	NO	2.9
41	Total-tetradoxins	319.8965	24.85	4240.824	1.049	0.172	0.172	0.84	0.77	NO	21.2

PD

ID	Name	Concn	RT	Acq-Comp	RRM	DI	EMPC	CP	CP	IR	SN
42	Total-pentadoxins	355.8546	29.10	0.000	0.998	0.000	0.259	1.31	1.55	YES	25.3
42	Total-pentadoxins	355.8546	32.23	0.000	0.998	0.000	0.012	2.81	1.55	YES	5.1
12	12378-PeCDD	355.8546	31.81	4434.294	0.998	0.246	0.246	1.49	1.55	NO	27.3
42	Total-pentadoxins	355.8546	30.77	0.000	0.998	0.000	0.106	1.92	1.55	YES	13.1
42	Total-pentadoxins	355.8546	30.56	0.000	0.998	0.000	0.071	1.90	1.55	YES	12.3
42	Total-pentadoxins	355.8546	30.43	0.000	0.998	0.000	0.113	2.26	1.55	YES	21.3
42	Total-pentadoxins	355.8546	30.21	1900.896	0.998	0.105	0.105	1.45	1.55	NO	16.4
42	Total-pentadoxins	355.8546	29.60	0.000	0.998	0.000	0.104	2.13	1.55	YES	18.2

HD

ID	Name	Concn	RT	Acq-Comp	RRM	DI	EMPC	CP	CP	IR	SN
15	123789-HxCDD	389.8157	37.02	18880.056	0.932	1.165	1.165	1.25	1.24	NO	178.7
43	Total-hexadoxins	389.8157	36.77	0.000	0.940	0.000	0.130	1.05	1.24	YES	15.9
14	123678-HxCDD	389.8157	36.59	17445.901	0.918	1.064	1.064	1.21	1.24	NO	159.1
13	123478-HxCDD	389.8157	36.46	8436.687	0.971	0.000	0.460	0.98	1.24	YES	71.4
43	Total-hexadoxins	389.8157	35.63	0.000	0.940	0.000	0.061	0.84	1.24	YES	15.6
43	Total-hexadoxins	389.8157	35.51	43959.834	0.940	2.689	2.689	1.20	1.24	NO	263.2
43	Total-hexadoxins	389.8157	35.11	4858.040	0.940	0.297	0.297	1.23	1.24	NO	46.5
43	Total-hexadoxins	389.8157	34.30	26052.422	0.940	1.594	1.594	1.13	1.24	NO	234.8

HPD

ID	Name	Concn	RT	Acq-Comp	RRM	DI	EMPC	CP	CP	IR	SN
16	1234678-HpCDD	423.7766	41.34	378634.547	1.017	25.177	25.177	1.01	1.05	NO	1050.8
44	Total-heptadoxins	423.7766	40.08	239287.508	1.017	15.911	15.911	1.01	1.05	NO	714.0

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TotalTEQ,Furans,Dioxins

35	Total-tetrafurans	303.9016	24.73	1676.681	0.877	0.061	0.061	0.76	0.77	NO	9.8
35	Total-tetrafurans	303.9016	24.32	1103.676	0.877	0.040	0.040	0.69	0.77	NO	6.3
35	Total-tetrafurans	303.9016	24.18	762.569	0.877	0.028	0.028	0.84	0.77	NO	5.0
35	Total-tetrafurans	303.9016	24.08	1713.817	0.877	0.062	0.062	0.70	0.77	NO	9.5
35	Total-tetrafurans	303.9016	23.91	0.000	0.877	0.000	0.022	1.24	0.77	YES	6.2
35	Total-tetrafurans	303.9016	23.82	1701.718	0.877	0.062	0.062	0.79	0.77	NO	13.5
35	Total-tetrafurans	303.9016	23.72	0.000	0.877	0.000	0.035	1.37	0.77	YES	8.5
35	Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.049	0.45	0.77	YES	7.1
35	Total-tetrafurans	303.9016	23.42	11108.070	0.877	0.403	0.403	0.76	0.77	NO	59.0
35	Total-tetrafurans	303.9016	22.84	0.000	0.877	0.000	0.044	0.56	0.77	YES	6.4
35	Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.067	0.65	0.77	YES	11.8
35	Total-tetrafurans	303.9016	27.51	0.000	0.877	0.000	0.019	0.36	0.77	YES	4.5
35	Total-tetrafurans	303.9016	26.30	1819.947	0.877	0.066	0.066	0.79	0.77	NO	10.1
35	Total-tetrafurans	303.9016	26.21	0.000	0.877	0.000	0.026	0.53	0.77	YES	5.7
1	2378-TCDF	303.9016	26.08	1884.469	0.877	0.068	0.068	0.70	0.77	NO	7.7
35	Total-tetrafurans	303.9016	25.39	737.596	0.877	0.027	0.027	0.83	0.77	NO	4.3
35	Total-tetrafurans	303.9016	25.15	1186.996	0.877	0.043	0.043	0.66	0.77	NO	5.0
35	Total-tetrafurans	303.9016	24.97	0.000	0.877	0.000	0.097	0.61	0.77	YES	10.9
35	Total-tetrafurans	303.9016	24.84	943.952	0.877	0.034	0.034	0.75	0.77	NO	5.1
37	Total-pentafurans	339.8597	31.42	1216.240	0.911	0.047	0.047	1.45	1.55	NO	6.2
37	Total-pentafurans	339.8597	30.51	0.000	0.911	0.000	0.013	0.74	1.55	YES	2.9
37	Total-pentafurans	339.8597	30.41	1630.137	0.911	0.063	0.063	1.38	1.55	NO	8.6
2	12378-PeCDF	339.8597	30.20	1644.102	0.896	0.063	0.056	1.18	1.55	YES	7.9
37	Total-pentafurans	339.8597	29.94	0.000	0.911	0.000	0.017	1.10	1.55	YES	2.9
37	Total-pentafurans	339.8597	29.85	3619.838	0.911	0.140	0.140	1.36	1.55	NO	19.2
37	Total-pentafurans	339.8597	29.14	8071.517	0.911	0.313	0.313	1.61	1.55	NO	45.7
37	Total-pentafurans	339.8597	29.07	3882.010	0.911	0.150	0.150	1.60	1.55	NO	23.9
37	Total-pentafurans	339.8597	28.95	2327.044	0.911	0.090	0.090	1.33	1.55	NO	9.4
3	23478-PeCDF	339.8597	31.57	1746.572	0.926	0.068	0.068	1.32	1.55	NO	12.1
38	Total-hexafurans	373.8208	34.26	0.000	1.032	0.000	0.064	0.99	1.24	YES	6.6
38	Total-hexafurans	373.8208	33.72	92483.574	1.032	4.245	4.245	1.17	1.24	NO	400.7
38	Total-hexafurans	373.8208	33.51	23674.079	1.032	1.087	1.087	1.20	1.24	NO	107.4
7	123789-HxCDF	373.8208	37.46	1150.772	0.987	0.055	0.048	0.94	1.24	YES	4.4
5	234678-HxCDF	373.8208	36.31	10884.520	1.037	0.530	0.530	1.26	1.24	NO	34.9
6	123678-HxCDF	373.8208	35.37	8379.313	1.035	0.363	0.326	0.99	1.24	YES	30.3
4	123478-HxCDF	373.8208	35.24	7098.131	1.068	0.313	0.313	1.39	1.24	NO	34.9
38	Total-hexafurans	373.8208	35.06	2050.048	1.032	0.094	0.094	1.28	1.24	NO	9.8
38	Total-hexafurans	373.8208	34.59	48001.670	1.032	2.203	2.203	1.21	1.24	NO	220.4
9	1234789-HpCDF	407.7818	42.22	7865.324	1.215	0.476	0.476	0.90	1.05	NO	45.3
39	Total-heptafurans	407.7818	40.32	147134.641	1.223	7.924	7.924	1.00	1.05	NO	893.5
39	Total-heptafurans	407.7818	40.01	2742.993	1.223	0.148	0.148	1.05	1.05	NO	18.0
8	1234678-HpCDF	407.7818	39.53	148982.266	1.232	7.223	7.223	0.94	1.05	NO	898.3
10	OCDF	441.7428	47.54	150199.414	1.138	12.262	12.262	0.85	0.89	NO	467.8
36	Total-penta1	339.8597	27.48	42946.131		1.654	1.654	1.58	1.55	NO	581.6



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TotalTEQ,Furans,Dioxins

35 Total-tetrafurans	303.9016	24.73	1676.681	0.877	0.061	0.061	0.76	0.77	NO	9.8
35 Total-tetrafurans	303.9016	24.32	1103.676	0.877	0.040	0.040	0.69	0.77	NO	6.3
35 Total-tetrafurans	303.9016	24.18	762.569	0.877	0.028	0.028	0.84	0.77	NO	5.0
35 Total-tetrafurans	303.9016	24.08	1713.817	0.877	0.062	0.062	0.70	0.77	NO	9.5
35 Total-tetrafurans	303.9016	23.91	0.000	0.877	0.000	0.022	1.24	0.77	YES	6.2
35 Total-tetrafurans	303.9016	23.82	1701.718	0.877	0.062	0.062	0.79	0.77	NO	13.5
35 Total-tetrafurans	303.9016	23.72	0.000	0.877	0.000	0.035	1.37	0.77	YES	8.5
35 Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.049	0.45	0.77	YES	7.1
35 Total-tetrafurans	303.9016	23.42	11108.070	0.877	0.403	0.403	0.76	0.77	NO	59.0
35 Total-tetrafurans	303.9016	22.84	0.000	0.877	0.000	0.044	0.56	0.77	YES	6.4
35 Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.067	0.65	0.77	YES	11.8
35 Total-tetrafurans	303.9016	27.51	0.000	0.877	0.000	0.019	0.36	0.77	YES	4.5
35 Total-tetrafurans	303.9016	26.30	1819.947	0.877	0.066	0.066	0.79	0.77	NO	10.1
35 Total-tetrafurans	303.9016	26.21	0.000	0.877	0.000	0.026	0.53	0.77	YES	5.7
1 2378-TCDF	303.9016	26.08	1884.469	0.877	0.068	0.068	0.70	0.77	NO	7.7
35 Total-tetrafurans	303.9016	25.39	737.596	0.877	0.027	0.027	0.83	0.77	NO	4.3
35 Total-tetrafurans	303.9016	25.15	1186.996	0.877	0.043	0.043	0.66	0.77	NO	5.0
35 Total-tetrafurans	303.9016	24.97	0.000	0.877	0.000	0.097	0.61	0.77	YES	10.9
35 Total-tetrafurans	303.9016	24.84	943.952	0.877	0.034	0.034	0.75	0.77	NO	5.1
37 Total-pentafurans	339.8597	31.42	1216.240	0.911	0.047	0.047	1.45	1.55	NO	6.2
37 Total-pentafurans	339.8597	30.51	0.000	0.911	0.000	0.013	0.74	1.55	YES	2.9
37 Total-pentafurans	339.8597	30.41	1630.137	0.911	0.063	0.063	1.38	1.55	NO	8.6
2 12378-PeCDF	339.8597	30.20	1644.102	0.896	0.000	0.056	1.18	1.55	YES	7.9
37 Total-pentafurans	339.8597	29.94	0.000	0.911	0.000	0.017	1.10	1.55	YES	2.9
37 Total-pentafurans	339.8597	29.85	3619.838	0.911	0.140	0.140	1.36	1.55	NO	19.2
37 Total-pentafurans	339.8597	29.14	8071.517	0.911	0.313	0.313	1.61	1.55	NO	45.7
37 Total-pentafurans	339.8597	29.07	3882.010	0.911	0.150	0.150	1.60	1.55	NO	23.9
37 Total-pentafurans	339.8597	28.95	2327.044	0.911	0.090	0.090	1.33	1.55	NO	9.4
3 23478-PeCDF	339.8597	31.57	1746.572	0.926	0.068	0.068	1.32	1.55	NO	12.1
38 Total-hexafurans	373.8208	34.26	0.000	1.032	0.000	0.064	0.99	1.24	YES	6.6
38 Total-hexafurans	373.8208	33.72	92483.574	1.032	4.245	4.245	1.17	1.24	NO	400.7
38 Total-hexafurans	373.8208	33.51	23674.079	1.032	1.087	1.087	1.20	1.24	NO	107.4
7 123789-HxCDF	373.8208	37.46	1150.772	0.987	0.000	0.048	0.94	1.24	YES	4.4
5 234678-HxCDF	373.8208	36.31	10884.520	1.037	0.530	0.530	1.26	1.24	NO	34.9
6 123678-HxCDF	373.8208	35.37	8379.313	1.035	0.000	0.326	0.99	1.24	YES	30.3
4 123478-HxCDF	373.8208	35.24	7098.131	1.068	0.313	0.313	1.39	1.24	NO	34.9
38 Total-hexafurans	373.8208	35.06	2050.048	1.032	0.094	0.094	1.28	1.24	NO	9.8
38 Total-hexafurans	373.8208	34.59	48001.670	1.032	2.203	2.203	1.21	1.24	NO	220.4
9 1234789-HpCDF	407.7818	42.22	7865.324	1.215	0.476	0.476	0.90	1.05	NO	45.3
39 Total-heptafurans	407.7818	40.32	147134.641	1.223	7.924	7.924	1.00	1.05	NO	893.5
39 Total-heptafurans	407.7818	40.01	2742.993	1.223	0.148	0.148	1.05	1.05	NO	18.0
8 1234678-HpCDF	407.7818	39.53	148982.266	1.232	7.223	7.223	0.94	1.05	NO	898.3
10 OCDF	441.7428	47.54	150199.414	1.138	12.262	12.262	0.85	0.89	NO	467.8
36 Total-penta1	339.8597	27.48	42946.131		1.654	1.654	1.58	1.55	NO	581.6
35 Total-tetrafurans	303.9016	24.73	1676.681	0.877	0.061	0.061	0.76	0.77	NO	9.8
35 Total-tetrafurans	303.9016	24.32	1103.676	0.877	0.040	0.040	0.69	0.77	NO	6.3
35 Total-tetrafurans	303.9016	24.18	762.569	0.877	0.028	0.028	0.84	0.77	NO	5.0
35 Total-tetrafurans	303.9016	24.08	1713.817	0.877	0.062	0.062	0.70	0.77	NO	9.5
35 Total-tetrafurans	303.9016	23.91	0.000	0.877	0.000	0.022	1.24	0.77	YES	6.2

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TotalTEQ,Furans,Dioxins

35	Total-tetrafurans	303.9016	23.82	1701.718	0.877	0.062	0.062	0.79	0.77	NO	13.5
35	Total-tetrafurans	303.9016	23.72	0.000	0.877	0.000	0.035	1.37	0.77	YES	8.5
35	Total-tetrafurans	303.9016	23.58	0.000	0.877	0.000	0.049	0.45	0.77	YES	7.1
35	Total-tetrafurans	303.9016	23.42	11108.070	0.877	0.403	0.403	0.76	0.77	NO	59.0
35	Total-tetrafurans	303.9016	22.84	0.000	0.877	0.000	0.044	0.56	0.77	YES	6.4
35	Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.067	0.65	0.77	YES	11.8
35	Total-tetrafurans	303.9016	27.51	0.000	0.877	0.000	0.019	0.36	0.77	YES	4.5
35	Total-tetrafurans	303.9016	26.30	1819.947	0.877	0.066	0.066	0.79	0.77	NO	10.1
35	Total-tetrafurans	303.9016	26.21	0.000	0.877	0.000	0.026	0.53	0.77	YES	5.7
1	2378-TCDF	303.9016	26.08	1884.469	0.877	0.068	0.068	0.70	0.77	NO	7.7
35	Total-tetrafurans	303.9016	25.39	737.596	0.877	0.027	0.027	0.83	0.77	NO	4.3
35	Total-tetrafurans	303.9016	25.15	1186.996	0.877	0.043	0.043	0.66	0.77	NO	5.0
35	Total-tetrafurans	303.9016	24.97	0.000	0.877	0.000	0.097	0.61	0.77	YES	10.9
35	Total-tetrafurans	303.9016	24.84	943.952	0.877	0.034	0.034	0.75	0.77	NO	5.1
37	Total-pentafurans	339.8597	31.42	1216.240	0.911	0.047	0.047	1.45	1.55	NO	6.2
37	Total-pentafurans	339.8597	30.51	0.000	0.911	0.000	0.013	0.74	1.55	YES	2.9
37	Total-pentafurans	339.8597	30.41	1630.137	0.911	0.063	0.063	1.38	1.55	NO	8.6
2	12378-PeCDF	339.8597	30.20	1644.102	0.896	0.000	0.056	1.18	1.55	YES	7.9
37	Total-pentafurans	339.8597	29.94	0.000	0.911	0.000	0.017	1.10	1.55	YES	2.9
37	Total-pentafurans	339.8597	29.85	3619.838	0.911	0.140	0.140	1.36	1.55	NO	19.2
37	Total-pentafurans	339.8597	29.14	8071.517	0.911	0.313	0.313	1.61	1.55	NO	45.7
37	Total-pentafurans	339.8597	29.07	3882.010	0.911	0.150	0.150	1.60	1.55	NO	23.9
37	Total-pentafurans	339.8597	28.95	2327.044	0.911	0.090	0.090	1.33	1.55	NO	9.4
3	23478-PeCDF	339.8597	31.57	1746.572	0.926	0.068	0.068	1.32	1.55	NO	12.1
38	Total-hexafurans	373.8208	34.26	0.000	1.032	0.000	0.064	0.99	1.24	YES	6.6
38	Total-hexafurans	373.8208	33.72	92483.574	1.032	4.245	4.245	1.17	1.24	NO	400.7
38	Total-hexafurans	373.8208	33.51	23674.079	1.032	1.087	1.087	1.20	1.24	NO	107.4
7	123789-HxCDF	373.8208	37.46	1150.772	0.987	0.000	0.048	0.94	1.24	YES	4.4
5	234678-HxCDF	373.8208	36.31	10884.520	1.037	0.530	0.530	1.26	1.24	NO	34.9
6	123678-HxCDF	373.8208	35.37	8379.313	1.035	0.000	0.326	0.99	1.24	YES	30.3
4	123478-HxCDF	373.8208	35.24	7098.131	1.068	0.313	0.313	1.39	1.24	NO	34.9
38	Total-hexafurans	373.8208	35.06	2050.048	1.032	0.094	0.094	1.28	1.24	NO	9.8
38	Total-hexafurans	373.8208	34.59	48001.670	1.032	2.203	2.203	1.21	1.24	NO	220.4
9	1234789-HpCDF	407.7818	42.22	7865.324	1.215	0.476	0.476	0.90	1.05	NO	45.3
39	Total-hepta furans	407.7818	40.32	147134.641	1.223	7.924	7.924	1.00	1.05	NO	893.5
39	Total-hepta furans	407.7818	40.01	2742.993	1.223	0.148	0.148	1.05	1.05	NO	18.0
8	1234678-HpCDF	407.7818	39.53	148982.266	1.232	7.223	7.223	0.94	1.05	NO	898.3
10	OCDF	441.7428	47.54	150199.414	1.138	12.262	12.262	0.85	0.89	NO	467.8
36	Total-penta1	339.8597	27.48	42946.131		1.654	1.654	1.58	1.55	NO	581.6

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PFK1

48 FUNCTION1 PFK	330.9792	21.10	0.000	24.9
48 FUNCTION1 PFK	330.9792	23.49	0.000	0.7
48 FUNCTION1 PFK	330.9792	23.27	0.000	1.2
48 FUNCTION1 PFK	330.9792	23.16	0.000	0.9
48 FUNCTION1 PFK	330.9792	22.88	0.000	2.5
48 FUNCTION1 PFK	330.9792	22.76	0.000	3.8
48 FUNCTION1 PFK	330.9792	22.64	0.000	5.5
48 FUNCTION1 PFK	330.9792	22.60	0.000	6.3
48 FUNCTION1 PFK	330.9792	22.54	0.000	6.5
48 FUNCTION1 PFK	330.9792	22.42	0.000	8.6
48 FUNCTION1 PFK	330.9792	22.36	0.000	9.0
48 FUNCTION1 PFK	330.9792	22.25	0.000	10.7
48 FUNCTION1 PFK	330.9792	22.13	0.000	12.1
48 FUNCTION1 PFK	330.9792	22.06	0.000	13.0
48 FUNCTION1 PFK	330.9792	21.69	0.000	18.7
48 FUNCTION1 PFK	330.9792	21.63	0.000	19.4
48 FUNCTION1 PFK	330.9792	21.39	0.000	22.2
48 FUNCTION1 PFK	330.9792	26.72	0.000	0.8
48 FUNCTION1 PFK	330.9792	26.60	0.000	1.3
48 FUNCTION1 PFK	330.9792	26.53	0.000	1.0
48 FUNCTION1 PFK	330.9792	26.42	0.000	1.1
48 FUNCTION1 PFK	330.9792	26.36	0.000	0.8
48 FUNCTION1 PFK	330.9792	26.24	0.000	1.0
48 FUNCTION1 PFK	330.9792	26.18	0.000	0.7
48 FUNCTION1 PFK	330.9792	25.94	0.000	0.8
48 FUNCTION1 PFK	330.9792	25.87	0.000	0.5
48 FUNCTION1 PFK	330.9792	25.75	0.000	0.3
48 FUNCTION1 PFK	330.9792	24.97	0.000	0.5
48 FUNCTION1 PFK	330.9792	24.39	0.000	0.9
48 FUNCTION1 PFK	330.9792	24.34	0.000	1.0
48 FUNCTION1 PFK	330.9792	24.21	0.000	0.8
48 FUNCTION1 PFK	330.9792	24.05	0.000	0.5
48 FUNCTION1 PFK	330.9792	23.99	0.000	1.3
48 FUNCTION1 PFK	330.9792	27.87	0.000	0.5
48 FUNCTION1 PFK	330.9792	27.80	0.000	1.0
48 FUNCTION1 PFK	330.9792	27.63	0.000	0.8
48 FUNCTION1 PFK	330.9792	27.53	0.000	0.9
48 FUNCTION1 PFK	330.9792	27.35	0.000	0.4
48 FUNCTION1 PFK	330.9792	27.14	0.000	0.7
48 FUNCTION1 PFK	330.9792	26.78	0.000	0.9

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk

PFK2

ID	Name	Time	Area	Height	Area%	Height%
49	FUNCTION2 PFK	366.9792	29.55	0.000	0.000	1.5
49	FUNCTION2 PFK	366.9792	29.52	0.000	0.000	1.8
49	FUNCTION2 PFK	366.9792	29.14	0.000	0.000	0.8
49	FUNCTION2 PFK	366.9792	29.04	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	28.85	0.000	0.000	1.5
49	FUNCTION2 PFK	366.9792	28.53	0.000	0.000	2.1
49	FUNCTION2 PFK	366.9792	28.44	0.000	0.000	1.9
49	FUNCTION2 PFK	366.9792	28.37	0.000	0.000	0.8
49	FUNCTION2 PFK	366.9792	31.56	0.000	0.000	1.7
49	FUNCTION2 PFK	366.9792	31.53	0.000	0.000	1.7
49	FUNCTION2 PFK	366.9792	31.27	0.000	0.000	1.8
49	FUNCTION2 PFK	366.9792	31.19	0.000	0.000	2.0
49	FUNCTION2 PFK	366.9792	31.14	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	31.10	0.000	0.000	1.5
49	FUNCTION2 PFK	366.9792	30.90	0.000	0.000	1.4
49	FUNCTION2 PFK	366.9792	30.69	0.000	0.000	1.0
49	FUNCTION2 PFK	366.9792	30.55	0.000	0.000	0.5
49	FUNCTION2 PFK	366.9792	30.41	0.000	0.000	1.6
49	FUNCTION2 PFK	366.9792	30.36	0.000	0.000	0.7
49	FUNCTION2 PFK	366.9792	30.09	0.000	0.000	1.2
49	FUNCTION2 PFK	366.9792	29.96	0.000	0.000	1.3
49	FUNCTION2 PFK	366.9792	29.93	0.000	0.000	1.1
49	FUNCTION2 PFK	366.9792	29.82	0.000	0.000	1.6
49	FUNCTION2 PFK	366.9792	29.61	0.000	0.000	1.7
49	FUNCTION2 PFK	366.9792	33.09	0.000	0.000	0.3
49	FUNCTION2 PFK	366.9792	33.03	0.000	0.000	0.6
49	FUNCTION2 PFK	366.9792	32.96	0.000	0.000	2.0
49	FUNCTION2 PFK	366.9792	32.83	0.000	0.000	0.4
49	FUNCTION2 PFK	366.9792	32.78	0.000	0.000	1.6
49	FUNCTION2 PFK	366.9792	32.54	0.000	0.000	1.5
49	FUNCTION2 PFK	366.9792	32.36	0.000	0.000	1.2
49	FUNCTION2 PFK	366.9792	32.28	0.000	0.000	0.5
49	FUNCTION2 PFK	366.9792	31.89	0.000	0.000	1.7
49	FUNCTION2 PFK	366.9792	31.83	0.000	0.000	1.0

PFK3

ID	Name	Time	Area	Height	Area%	Height%
50	FUNCTION3 PFK	380.9760	37.39	0.000	0.000	10.0
50	FUNCTION3 PFK	380.9760	36.72	0.000	0.000	1.9

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk

PFK4

Sample	Retention	Area	Height	Abn. Peak	SN
51 FUNCTION4 PFK	430.9728	38.73	0.000		1.8
51 FUNCTION4 PFK	430.9728	38.65	0.000		2.4
51 FUNCTION4 PFK	430.9728	44.94	0.000		1.2
51 FUNCTION4 PFK	430.9728	44.87	0.000		1.5
51 FUNCTION4 PFK	430.9728	44.72	0.000		0.6
51 FUNCTION4 PFK	430.9728	44.40	0.000		0.6
51 FUNCTION4 PFK	430.9728	44.35	0.000		1.8
51 FUNCTION4 PFK	430.9728	44.31	0.000		2.3
51 FUNCTION4 PFK	430.9728	43.37	0.000		0.8
51 FUNCTION4 PFK	430.9728	42.87	0.000		1.0
51 FUNCTION4 PFK	430.9728	42.43	0.000		0.6
51 FUNCTION4 PFK	430.9728	42.08	0.000		1.0
51 FUNCTION4 PFK	430.9728	41.72	0.000		0.9
51 FUNCTION4 PFK	430.9728	40.94	0.000		1.0
51 FUNCTION4 PFK	430.9728	40.85	0.000		0.8
51 FUNCTION4 PFK	430.9728	40.09	0.000		0.5
51 FUNCTION4 PFK	430.9728	39.89	0.000		1.2
51 FUNCTION4 PFK	430.9728	39.07	0.000		0.9

PFK5

Sample	Retention	Area	Height	Abn. Peak	SN
52 FUNCTION5 PFK	480.9696	48.66	0.000		1.4
52 FUNCTION5 PFK	480.9696	48.59	0.000		1.9
52 FUNCTION5 PFK	480.9696	48.55	0.000		0.9
52 FUNCTION5 PFK	480.9696	48.51	0.000		1.0
52 FUNCTION5 PFK	480.9696	48.11	0.000		1.5
52 FUNCTION5 PFK	480.9696	47.92	0.000		1.4
52 FUNCTION5 PFK	480.9696	46.84	0.000		1.1
52 FUNCTION5 PFK	480.9696	46.79	0.000		1.2
52 FUNCTION5 PFK	480.9696	46.61	0.000		0.9
52 FUNCTION5 PFK	480.9696	46.43	0.000		1.8
52 FUNCTION5 PFK	480.9696	45.66	0.000		1.2
52 FUNCTION5 PFK	480.9696	45.45	0.000		1.5
52 FUNCTION5 PFK	480.9696	45.41	0.000		1.1
52 FUNCTION5 PFK	480.9696	45.11	0.000		1.6
52 FUNCTION5 PFK	480.9696	45.07	0.000		1.1

ETHERS1

Sample	Retention	Area	Height	Abn. Peak	SN
53 FUNCTION1 HXCD...	375.8364	26.51	0.000	0.000	1.0
53 FUNCTION1 HXCD...	375.8364	25.93	0.000	0.000	1.4
53 FUNCTION1 HXCD...	375.8364	25.00	0.000	0.000	5.3
53 FUNCTION1 HXCD...	375.8364	21.69	0.000	0.000	2.2

Quantify Totals Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time
Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk

ETHERS2

Table with 7 columns: Name, Trace, RT, Abs Resp, RRF M, EMPC, SN. Contains 6 rows of data for FUNCTION1 HPCD...

ETHERS3

Table with 7 columns: Name, Trace, RT, Abs Resp, RRF M, EMPC, SN. Contains 3 rows of data for FUNCTION2 HPCD...

ETHERS4

Table with 7 columns: Name, Trace, RT, Abs Resp, RRF M, EMPC, SN. Contains 1 row of data.

ETHERS5

Table with 7 columns: Name, Trace, RT, Abs Resp, RRF M, EMPC, SN. Contains 2 rows of data for FUNCTION4 NCDPE.

ETHERS6

Table with 7 columns: Name, Trace, RT, Abs Resp, RRF M, EMPC, SN. Contains 1 row of data.

Quantify Sample Report MassLynx 4.1 SCN 714

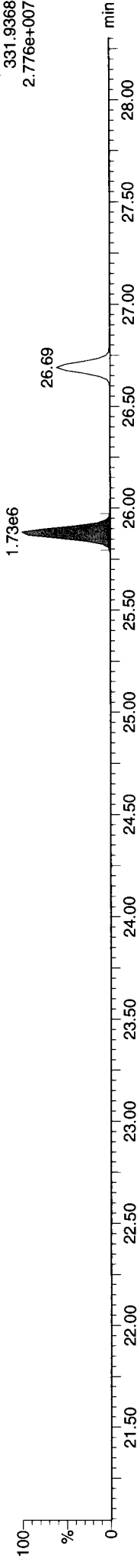
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Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR581, Conditions: AUTOSPEC01, User: pk

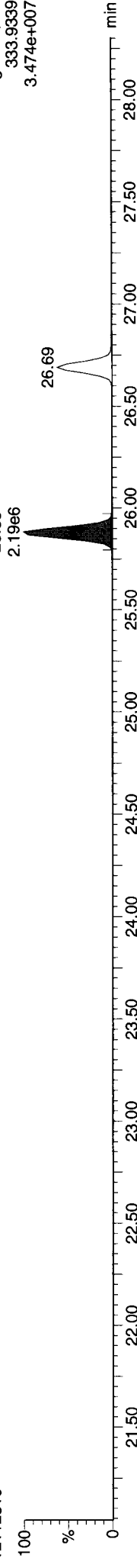
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12112816



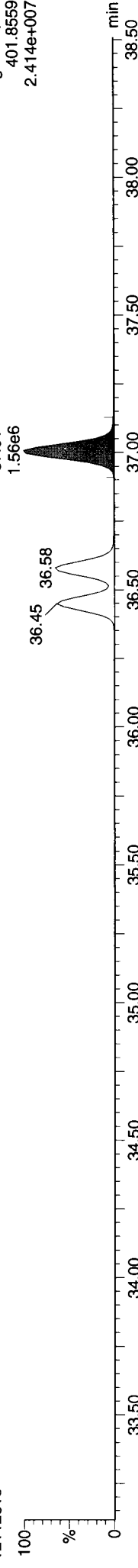
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12112816



13C-123789-HxCDD

12112816



13C-123789-HxCDD

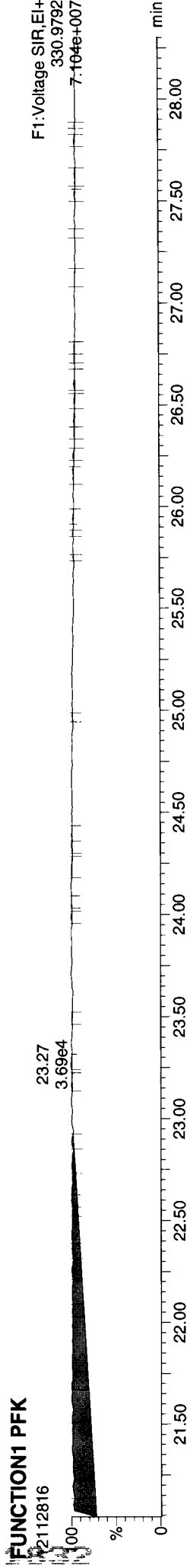
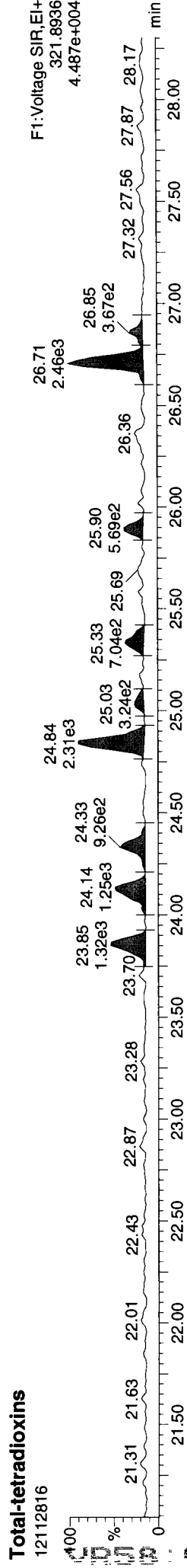
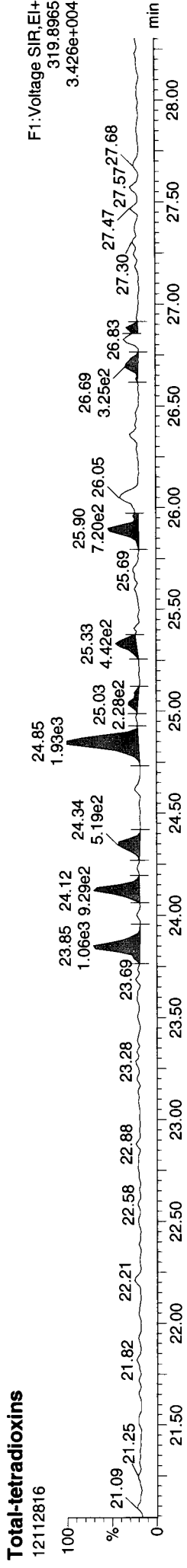
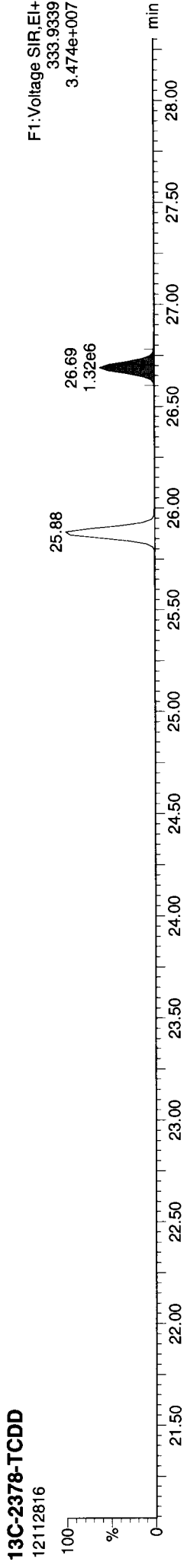
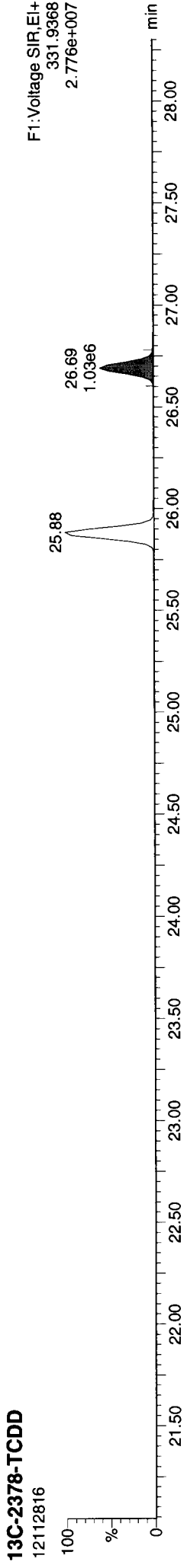
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Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk

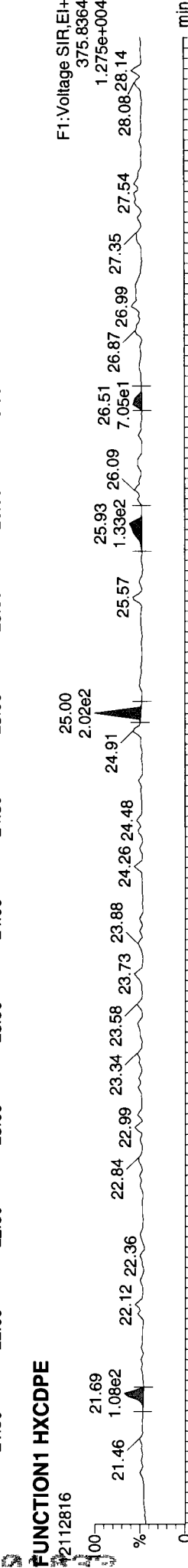
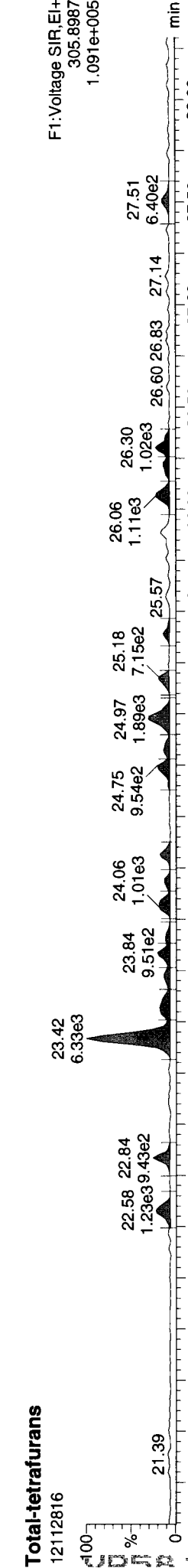
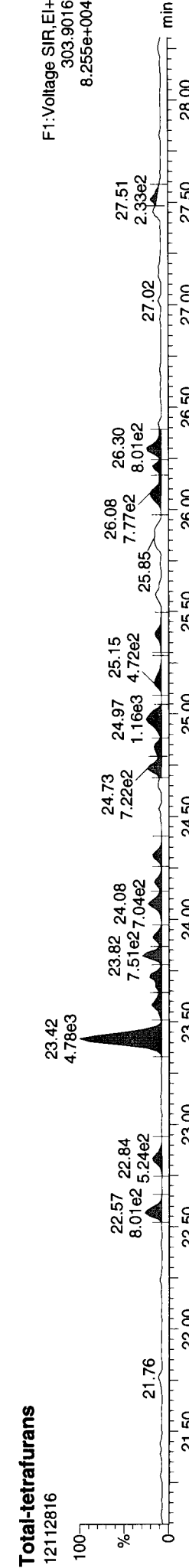
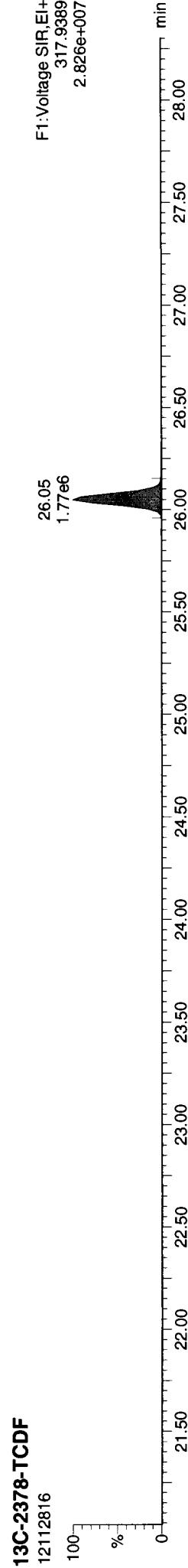
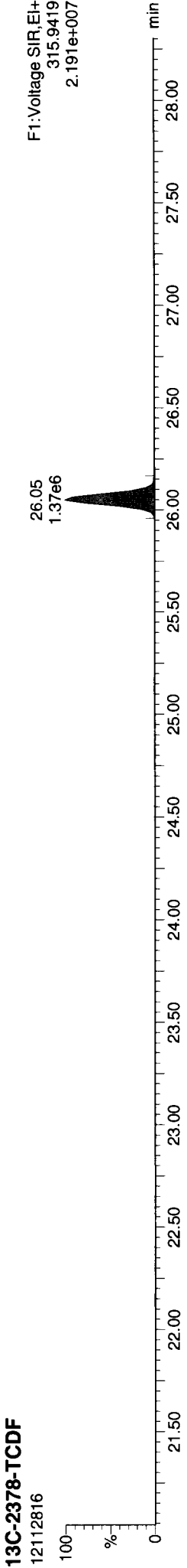




Quantify Sample Report MassLynx 4.1 SCN 714

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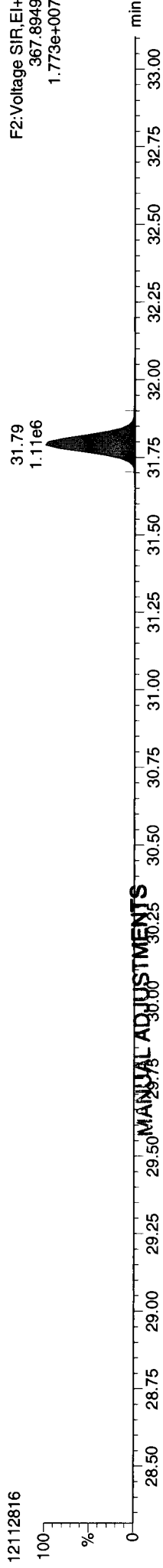
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Quantify Sample Report MassLynx 4.1 SCN 714  
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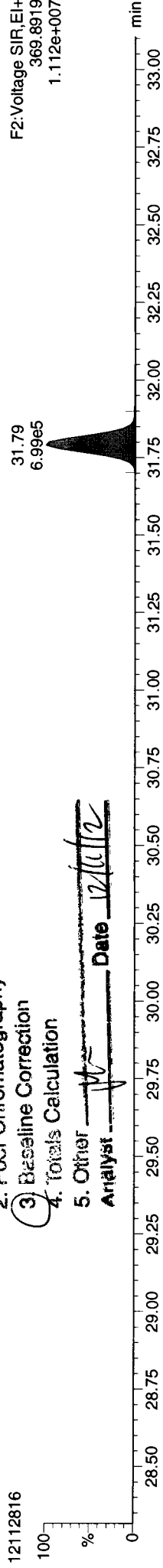
Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR581, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD  
12112816



F2:Voltage SIR, EI+  
367.8949  
1.773e+007

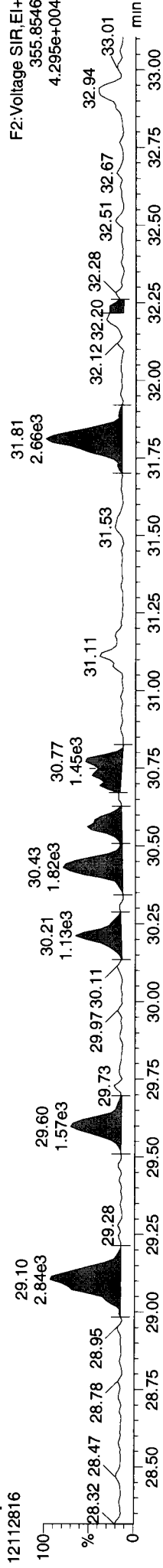
13C-12378-PeCDD  
12112816



F2:Voltage SIR, EI+  
369.8919  
1.112e+007

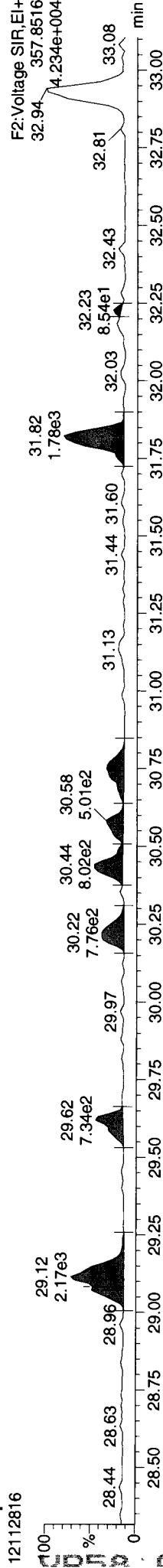
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  3. Baseline Correction
  4. Totals Calculation
  5. Other
- Analyst M Date 12/10/12

Total-pentadioxins  
12112816



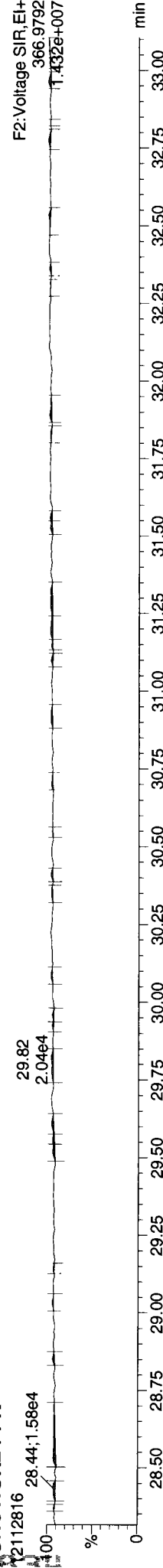
F2:Voltage SIR, EI+  
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4.295e+004

Total-pentadioxins  
12112816



F2:Voltage SIR, EI+  
357.8516  
4.234e+004

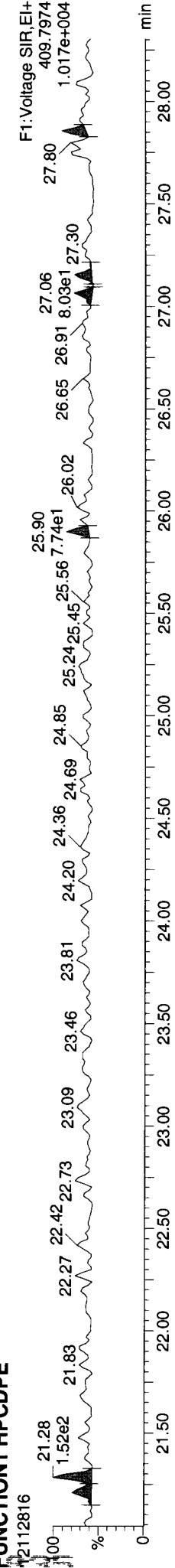
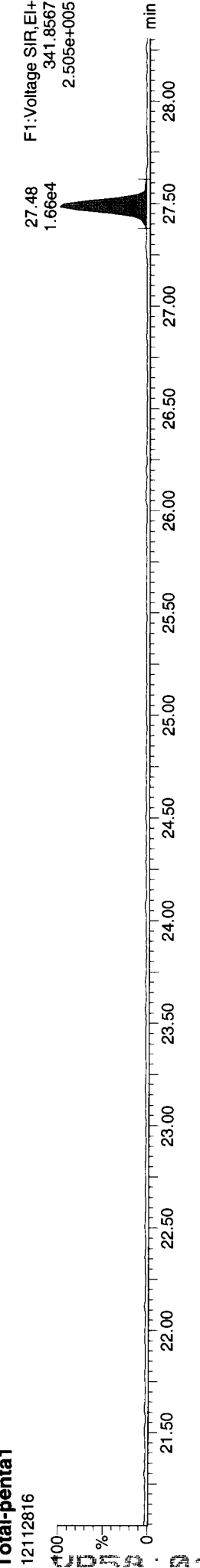
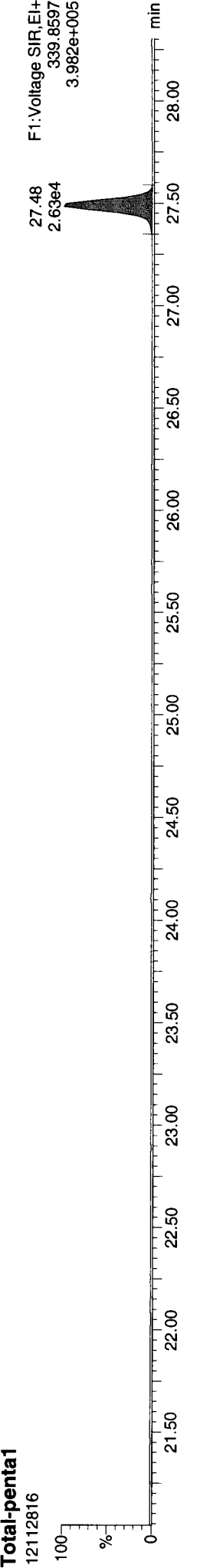
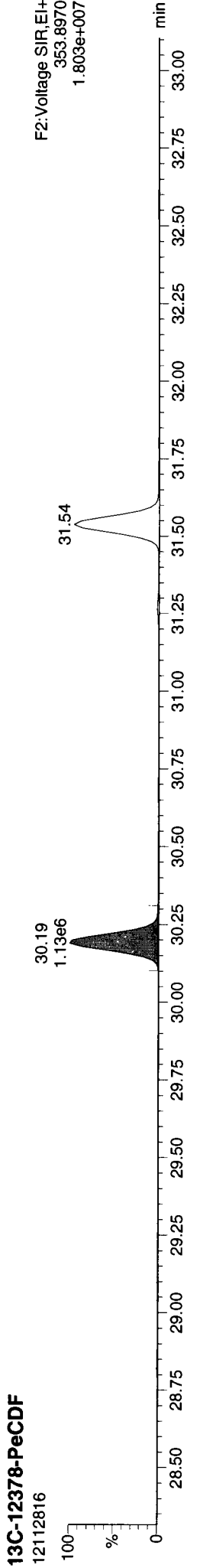
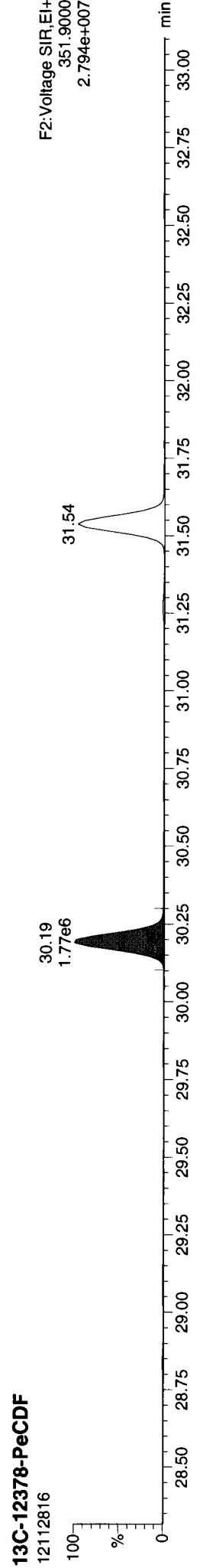
FUNCTION2 PFK  
12112816



F2:Voltage SIR, EI+  
366.9792  
1.432e+007

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

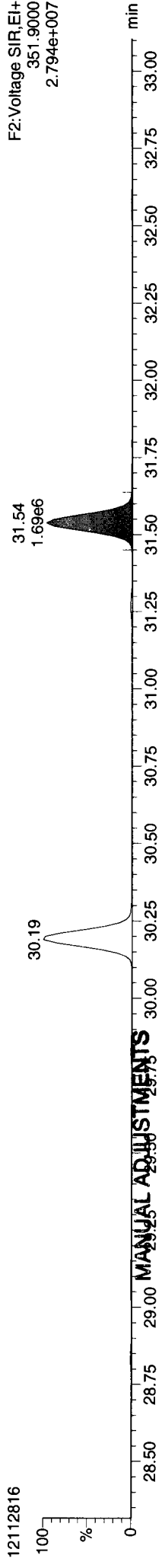
Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report MassLynx 4.1 SCN 714  
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Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR581, Conditions: AUTOSPEC01, User: pk

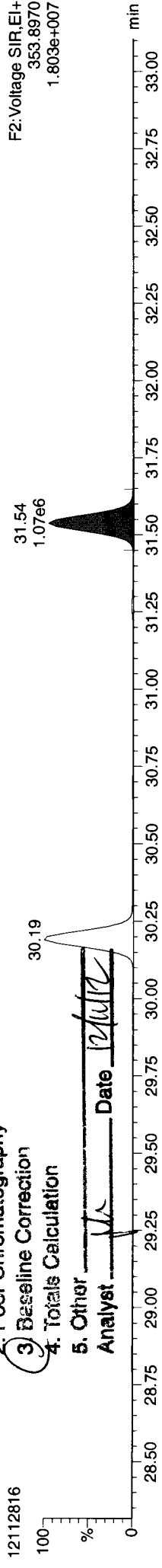
13C-23478-PeCDF  
12112816



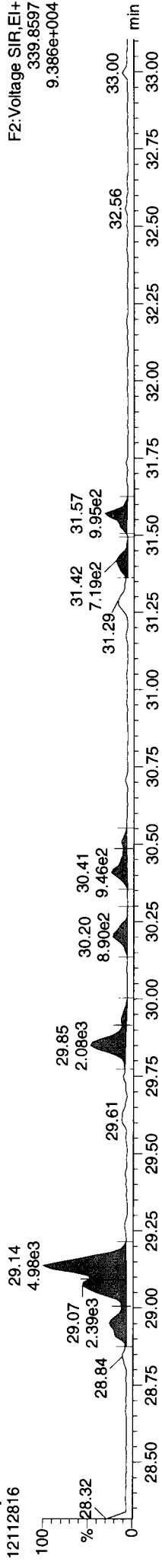
MANUAL ADJUSTMENTS

- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other

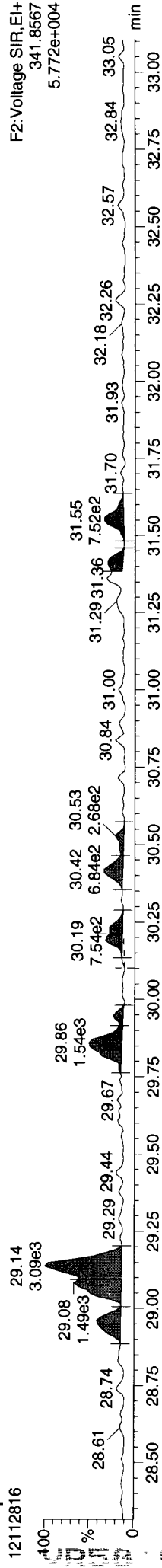
13C-23478-PeCDF  
12112816



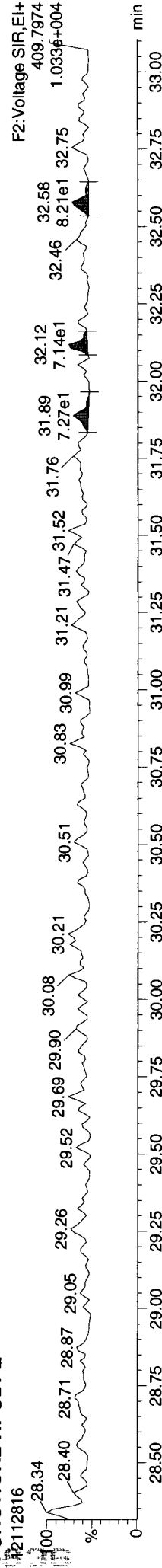
Total-pentafurans  
12112816



Total-pentafurans  
12112816



FUNCTION2 HPCDPE  
12112816

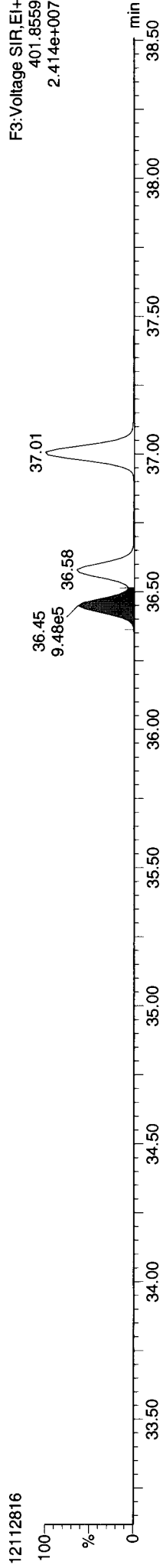


Quantify Sample Report MassLynx 4.1 SCN 714

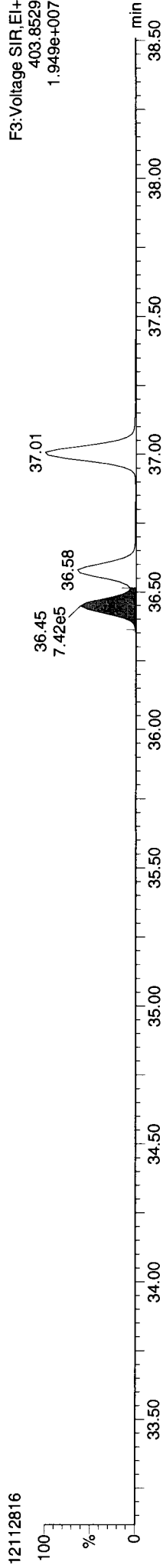
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Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk

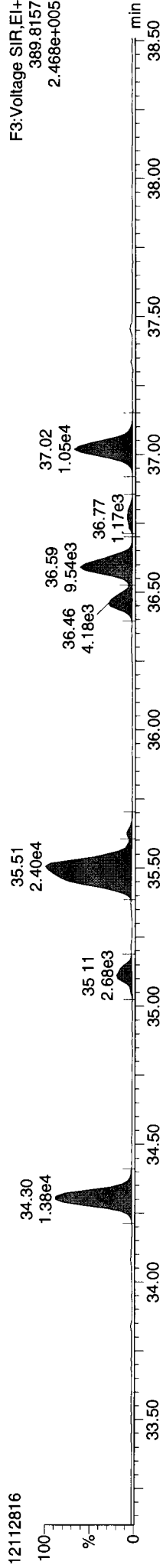
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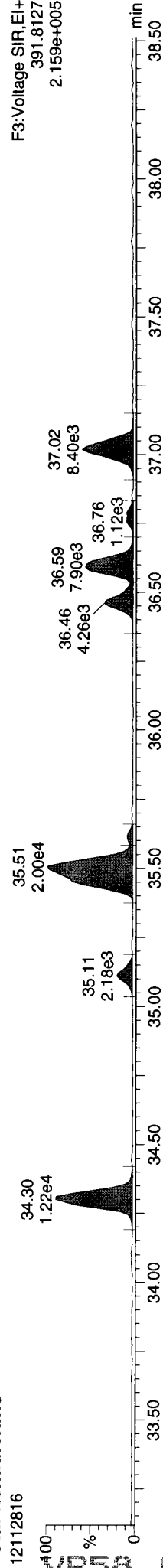
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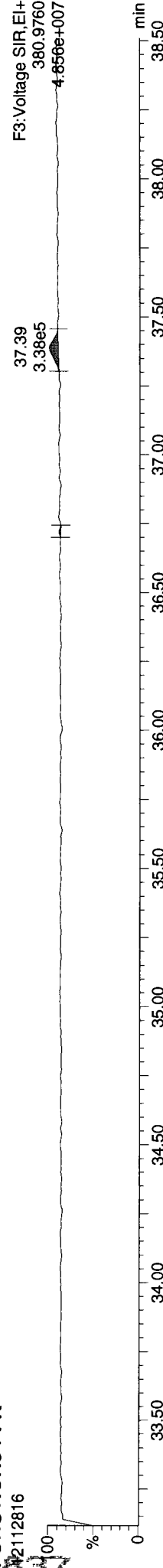
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

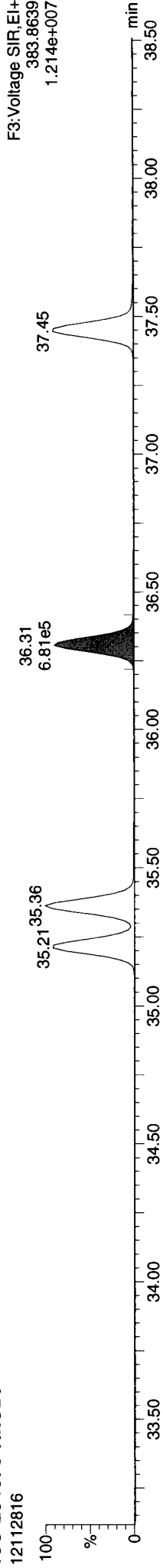


Quantify Sample Report MassLynx 4.1 SCN 714

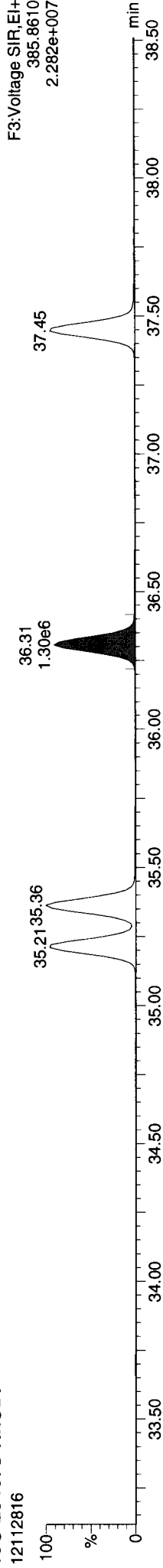
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Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR581, Conditions: AUTOSPEC01, User: pk

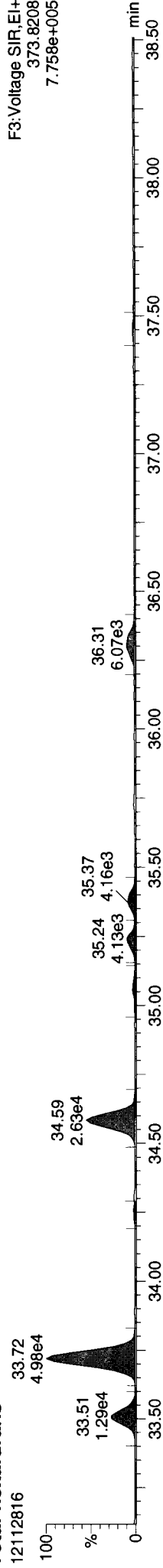
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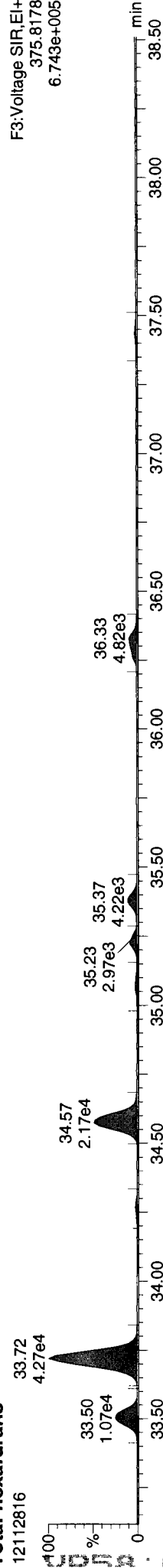
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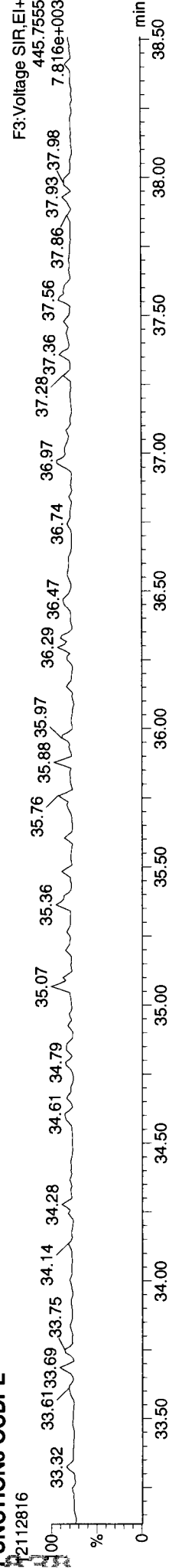
Total-hexafurans



Total-hexafurans



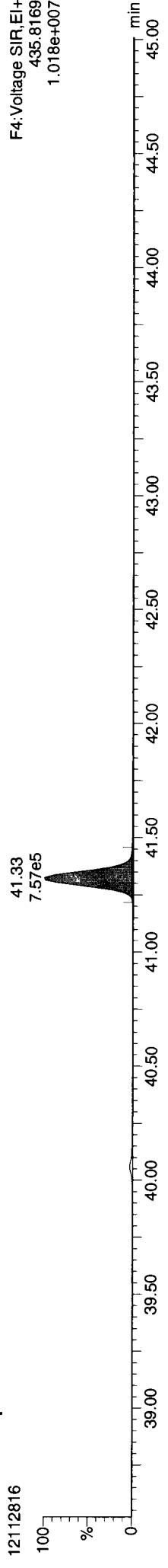
FUNCTION3 OCDFE



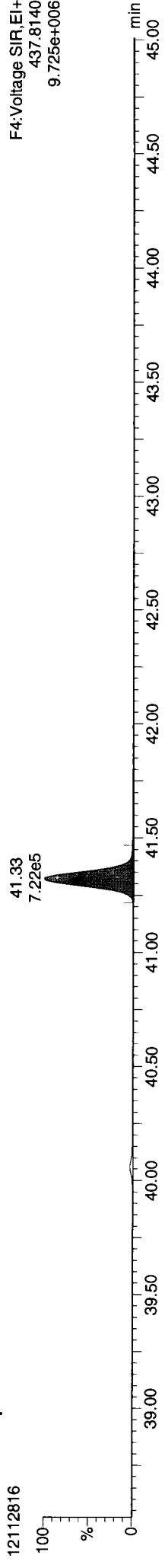
Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk

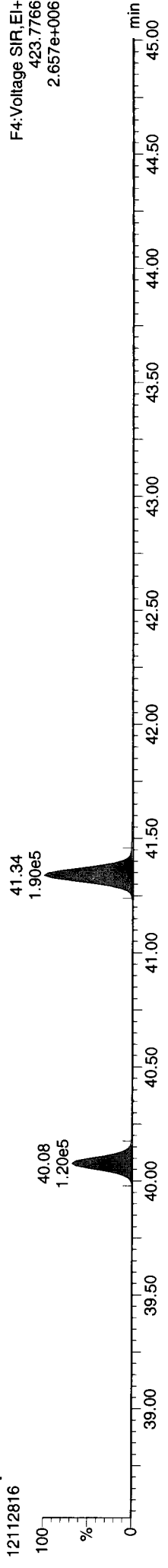
13C-1234678-HpCDD



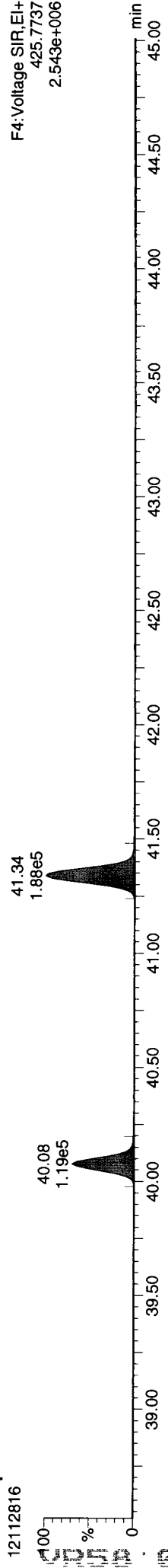
13C-1234678-HpCDD



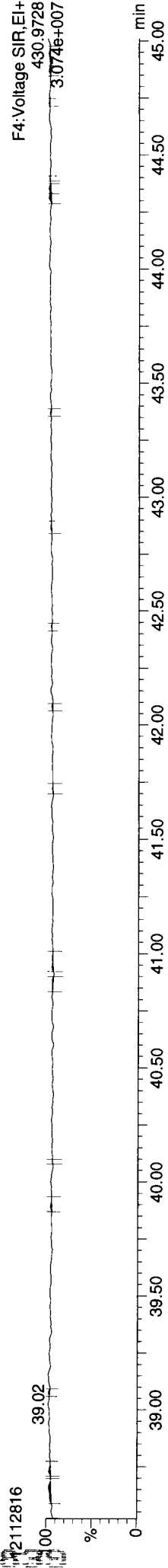
Total-heptadioxins



Total-heptadioxins

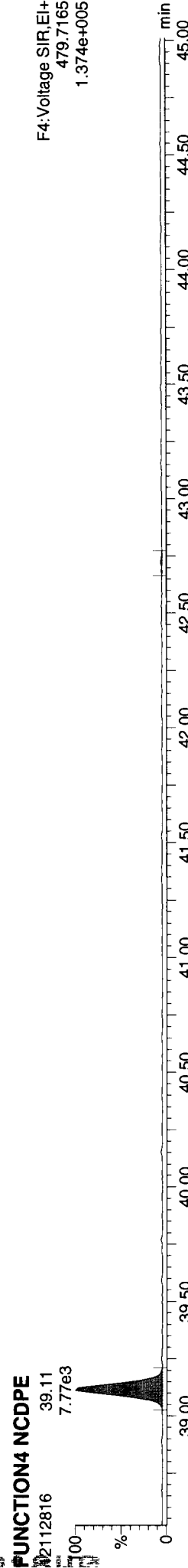
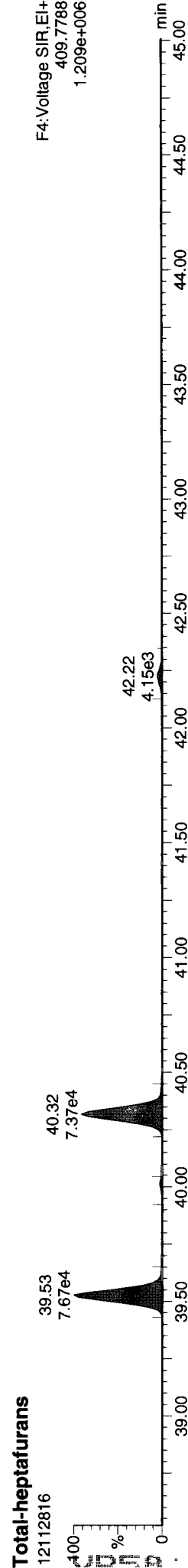
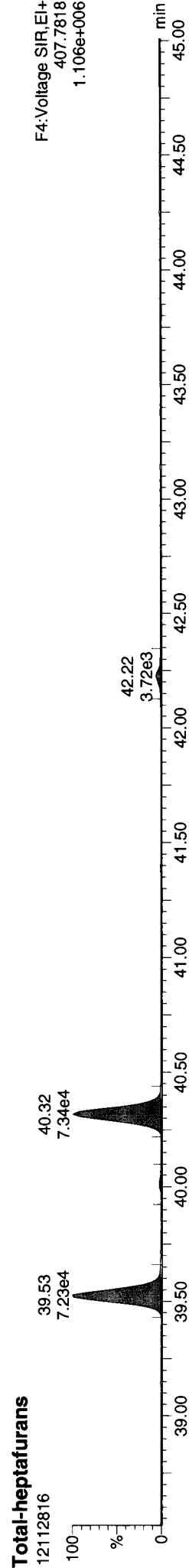
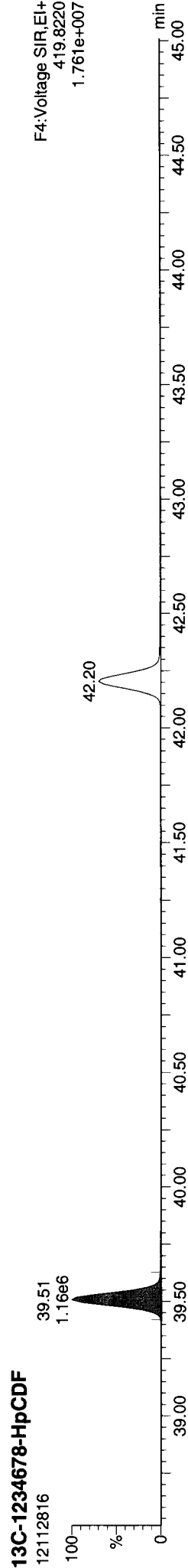
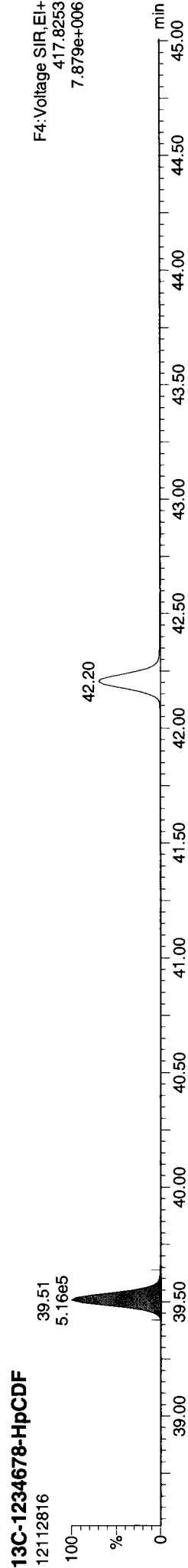


FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

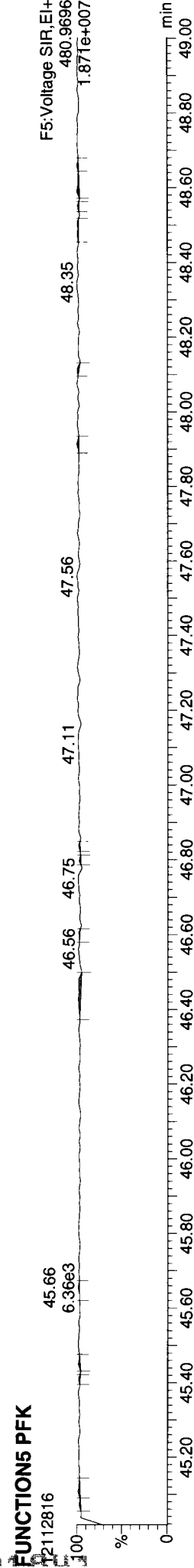
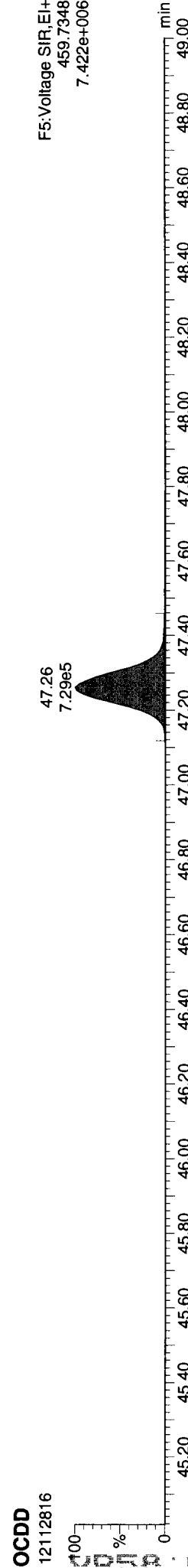
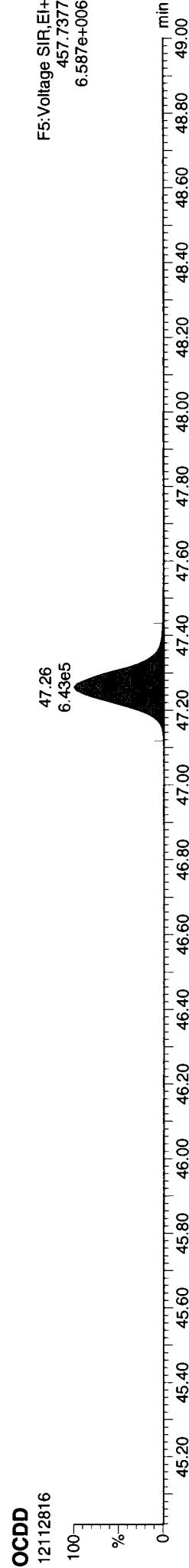
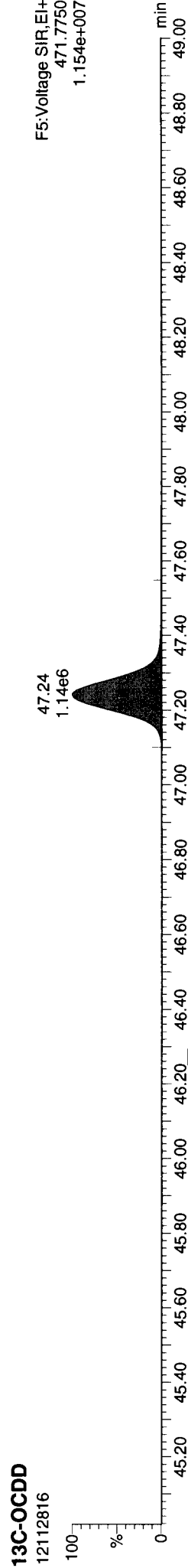
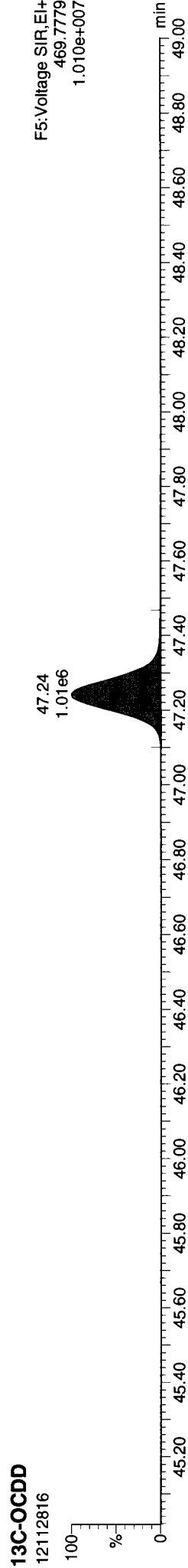
Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk





Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

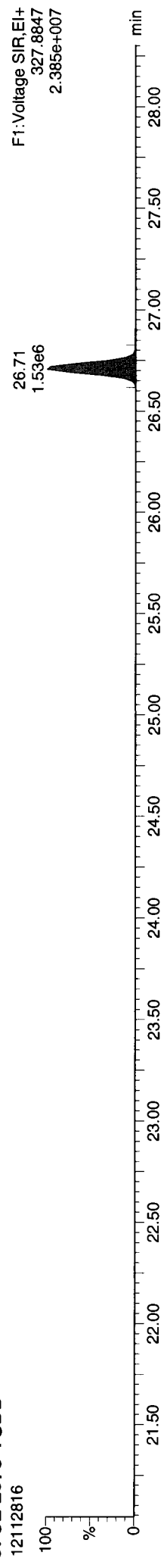
Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report    **MassLynx 4.1 SCN 714**  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:07 Pacific Standard Time

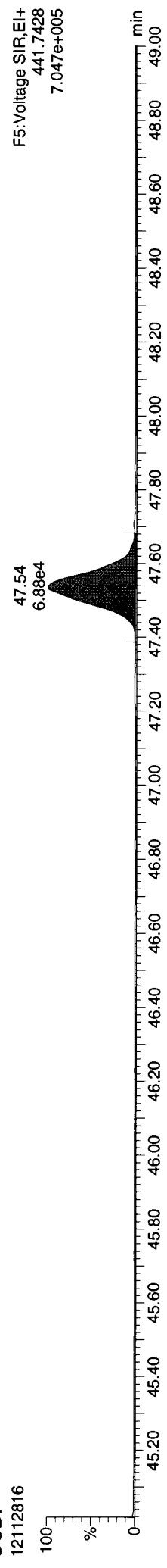
**Name: 12112816, Date: 28-Nov-2012, Time: 23:06:00, ID: VR58I, Conditions: AUTOSPEC01, User: pk**

**37CL-2378-TCDD**  
12112816



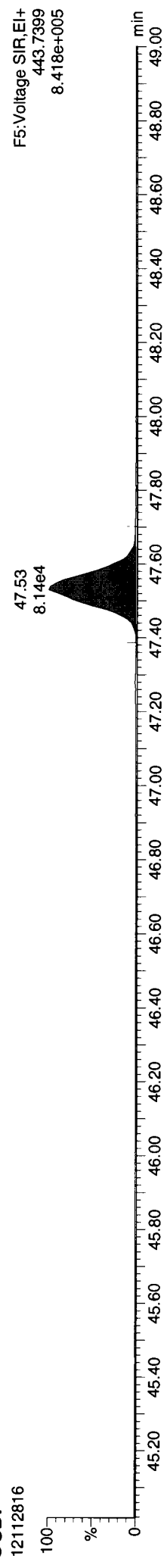
F1: Voltage SIR, EI+  
327.8847  
2.385e+007

**OCDF**  
12112816



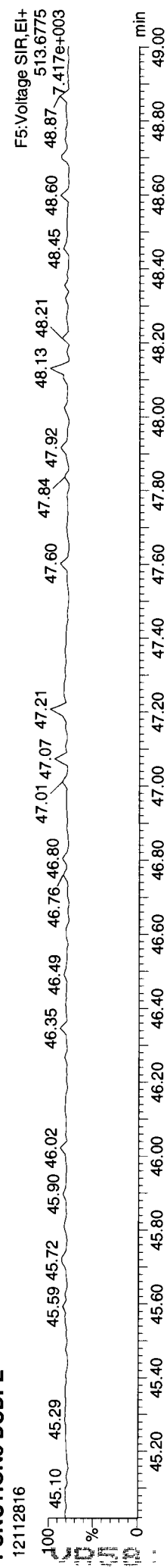
F5: Voltage SIR, EI+  
441.7428  
7.047e+005

**OCDF**  
12112816



F5: Voltage SIR, EI+  
443.7399  
8.418e+005

**FUNCTION5 DCDPE**  
12112816



F5: Voltage SIR, EI+  
513.6775  
7.417e+003

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\12128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

*Mr. 12/10/12*

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

Compound	26.063	1.001	5.89e2	8.10e2	0.877	0.727	0.770	6.6	1399	1995	9.30e3	1.21e4	NO	0.035
2378-TCDF	26.063	1.001	5.89e2	8.10e2	0.877	0.727	0.770	6.6	1399	1995	9.30e3	1.21e4	NO	0.035
12378-PeCDF	30.179	1.000	7.28e2	5.26e2	0.896	1.383	1.550	4.8	2177	2382	1.05e4	8.97e3	NO	0.039
23478-PeCDF	31.538	1.000	4.69e2	4.82e2	0.926	0.974	1.550	6.1	2177	2382	1.32e4	8.07e3	YES	0.025
123478-HxCDF	35.221	1.001	1.11e3	1.11e3	1.068	1.006	1.240	10.9	1730	1172	1.89e4	1.79e4	YES	0.071
234678-HxCDF	36.339	1.001	2.56e2	4.71e2	1.037	0.543	1.240	3.3	1730	1172	5.71e3	1.02e4	YES	0.018
123678-HxCDF	35.386	1.001	5.35e2	2.97e2	1.035	1.799	1.240	7.7	1730	1172	1.32e4	8.63e3	YES	0.023
123789-HxCDF	37.413	0.999	4.30e2	2.62e2	0.987	1.646	1.240	4.3	1730	1172	7.51e3	4.41e3	YES	0.024
1234678-HpCDF	39.518	1.001	7.62e3	7.70e3	1.232	0.990	1.050	162.5	692	705	1.12e5	1.15e5	NO	0.601
1234789-HpCDF	42.193	1.000	1.56e2	3.02e2	1.215	0.515	1.050	7.2	692	705	4.96e3	7.76e3	YES	0.015
OCDF	47.522	1.006	8.94e3	1.12e4	1.138	0.796	0.890	97.8	840	864	8.22e4	1.24e5	NO	1.350
2378-TCDD	26.706	1.001	3.73e2	2.30e3	1.049	0.162	0.770	5.3	1406	1918	7.47e3	3.35e4	YES	0.027
12378-PeCDD	31.801	1.001	7.58e2	4.36e2	0.998	1.740	1.550	4.0	2792	930	1.12e4	9.25e3	NO	0.054
123478-HxCDD	36.427	1.000	5.29e2	3.23e2	0.971	1.635	1.240	5.6	1542	1876	8.66e3	9.68e3	YES	0.035
123678-HxCDD	36.580	1.001	1.87e3	1.40e3	0.918	1.332	1.240	19.0	1542	1876	2.93e4	2.29e4	NO	0.157
123789-HxCDD	37.008	1.012	1.28e3	1.00e3	0.932	1.275	1.240	10.6	1542	1876	1.63e4	1.91e4	NO	0.111
1234678-HpCDD	41.327	1.000	2.84e4	2.58e4	1.017	1.100	1.050	335.8	1228	1013	4.12e5	3.63e5	NO	2.888
OCDD	47.244	1.000	1.28e5	1.44e5	1.008	0.884	0.890	1049.6	1202	1031	1.26e6	1.45e6	NO	20.522
13C-2378-TCDF	26.034	1.006	1.98e6	2.56e6	1.473	0.772	0.770	8907.7	3473	1793	3.09e7	4.03e7	NO	81.893
13C-12378-PeCDF	30.179	1.167	2.18e6	1.40e6	1.148	1.553	1.550	7659.9	4624	4785	3.54e7	2.28e7	NO	82.871
13C-23478-PeCDF	31.527	1.219	2.07e6	1.32e6	1.113	1.570	1.550	7220.8	4624	4785	3.34e7	2.12e7	NO	80.917
13C-123478-HxCDF	35.199	0.952	9.03e5	1.75e6	1.209	0.517	0.510	4847.4	2916	4214	1.41e7	2.72e7	NO	85.936
13C-123678-HxCDF	35.353	0.956	9.57e5	1.84e6	1.269	0.520	0.510	5073.7	2916	4214	1.48e7	2.86e7	NO	86.586
13C-234678-HxCDF	36.295	0.981	8.53e5	1.64e6	1.236	0.520	0.510	4617.0	2916	4214	1.35e7	2.56e7	NO	79.122
13C-123789-HxCDF	37.435	1.012	8.29e5	1.60e6	1.107	0.519	0.510	4502.8	2916	4214	1.31e7	2.52e7	NO	86.029
13C-1234678-HpCDF	39.496	1.068	6.45e5	1.43e6	1.051	0.453	0.440	4055.7	2364	2187	9.59e6	2.14e7	NO	77.280
13C-1234789-HpCDF	42.193	1.141	5.04e5	1.14e6	0.815	0.441	0.440	2852.6	2364	2187	6.74e6	1.49e7	NO	79.283
13C-1234-TCDD	25.869	0.000	1.67e6	2.10e6	1.000	0.792	0.770	8885.3	3027	1916	2.69e7	3.37e7	NO	100.000
13C-2378-TCDD	26.676	1.031	1.34e6	1.73e6	0.946	0.774	0.770	7021.0	3027	1916	2.12e7	2.76e7	NO	86.148
13C-12378-PeCDD	31.779	1.228	1.37e6	8.68e5	0.721	1.576	1.550	12079.3	1824	1207	2.20e7	1.40e7	NO	82.334
13C-123478-HxCDD	36.438	0.985	1.21e6	9.40e5	0.991	1.288	1.240	6017.4	3088	2632	1.86e7	1.46e7	NO	85.171
13C-123678-HxCDD	36.558	0.988	1.25e6	1.02e6	1.025	1.231	1.240	6335.5	3088	2632	1.96e7	1.57e7	NO	87.081
13C-1234678-HpCDD	41.316	1.117	9.43e5	9.01e5	0.866	1.046	1.050	4014.4	3296	2879	1.32e7	1.26e7	NO	83.513
13C-OCDD	47.226	1.277	1.24e6	1.39e6	0.769	0.892	0.890	5670.4	2202	2238	1.25e7	1.39e7	NO	134.008

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

	36.986	0.000	1.42e6	1.13e6	1.000	1.249	1.240	6974.4	3088	2632	2.15e7	1.74e7	NO	
13C-123789-HxCDD									3088	2632	2.15e7	1.74e7		100.000
Total-tetrafurans			3.29e3		0.877				1399		4.57e4		0.344	0.191
Total-penta1			7.08e3						494		1.10e5		0.370	0.370
Total-pentafurans			2.48e3		0.911				2177		4.25e4		0.279	0.130
Total-hexafurans			1.53e4		1.032				1730		2.51e5		1.229	1.074
Total-heptafurans			1.94e4		1.223				692		2.88e5		1.663	1.648
Total-Furans			5.65e4		1.041				1399		8.19e5		5.235	4.762
Total-tetradioxins			1.00e3		1.049				1406		1.45e4		0.200	0.023
Total-pentadioxins			7.58e2		0.998				2792		1.12e4		0.198	0.054
Total-hexadioxins			7.64e3		0.940				1542		1.16e5		1.049	0.677
Total-heptadioxins			5.26e4		1.017				1228		7.60e5		5.498	5.498
Total-Dioxins			5.68e6		0.985				1406		8.24e7		5.235	4.762
Total-TEQ			5.74e6						1406		8.33e7		10.469	9.524
37CL-2378-TCDD	26.706	1.032	1.41e6		1.044			11040.9	1948		2.15e7			35.952
FUNCTION1 PFK			1.59e6						645962		3.09e7			0.000
FUNCTION2 PFK			2.16e5						231559		6.18e6			0.000
FUNCTION3 PFK			4.73e5						479547		1.29e7			
FUNCTION4 PFK			1.90e6						341428		3.67e7			
FUNCTION5 PFK			3.71e4						256505		9.71e5			
FUNCTION1 HXCDPE			3.58e2						505		8.99e3			0.000
FUNCTION1 HPCDPE			5.78e2						821		1.20e4			0.000
FUNCTION2 HPCDPE			5.47e2						1238		1.48e4			0.000
FUNCTION3 OCDPE			7.24e1						496		2.91e3			0.000
FUNCTION4 NCDPE			3.79e3						561		5.99e4			0.000
FUNCTION5 DCDPE			0.00e0						340		0.00e0			0.000

500

649

12112817.D

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
 Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

TF

35	Total-tetrafurans	303.9016	25.82	0.000	0.877	0.000	0.021	0.91	0.77	YES	3.6
35	Total-tetrafurans	303.9016	25.14	762.068	0.877	0.019	0.019	0.70	0.77	NO	3.5
35	Total-tetrafurans	303.9016	24.96	1780.909	0.877	0.045	0.045	0.72	0.77	NO	7.6
35	Total-tetrafurans	303.9016	24.81	0.000	0.877	0.000	0.018	1.18	0.77	YES	5.1
35	Total-tetrafurans	303.9016	24.30	0.000	0.877	0.000	0.013	1.50	0.77	YES	3.7
35	Total-tetrafurans	303.9016	24.17	0.000	0.877	0.000	0.013	1.15	0.77	YES	3.8
35	Total-tetrafurans	303.9016	24.06	0.000	0.877	0.000	0.025	0.65	0.77	YES	4.8
35	Total-tetrafurans	303.9016	23.82	0.000	0.877	0.000	0.009	0.28	0.77	YES	3.1
35	Total-tetrafurans	303.9016	23.57	0.000	0.877	0.000	0.009	1.59	0.77	YES	3.2
35	Total-tetrafurans	303.9016	23.40	3673.996	0.877	0.092	0.092	0.81	0.77	NO	14.9
35	Total-tetrafurans	303.9016	22.81	0.000	0.877	0.000	0.012	0.24	0.77	YES	2.6
35	Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.014	0.94	0.77	YES	3.3
35	Total-tetrafurans	303.9016	26.30	0.000	0.877	0.000	0.018	0.35	0.77	YES	3.8
1	2378-TCDF	303.9016	26.06	1399.319	0.877	0.035	0.035	0.73	0.77	NO	6.6

PP

36	Total-penta1	339.8597	27.47	11830.539		0.370	0.370	1.49	1.55	NO	221.5
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PF

37	Total-pentafurans	339.8597	28.93	0.000	0.911	0.000	0.031	1.31	1.55	YES	3.6
3	23478-PeCDF	339.8597	31.54	951.276	0.926	0.000	0.025	0.97	1.55	YES	6.1
2	12378-PeCDF	339.8597	30.18	1254.625	0.896	0.039	0.039	1.38	1.55	NO	4.8
37	Total-pentafurans	339.8597	29.84	1334.697	0.911	0.042	0.042	1.36	1.55	NO	5.4
37	Total-pentafurans	339.8597	29.12	0.000	0.911	0.000	0.094	1.21	1.55	YES	13.8
37	Total-pentafurans	339.8597	29.07	1547.370	0.911	0.049	0.049	1.75	1.55	NO	9.2

HF

6	123678-HxCDF	373.8208	35.39	831.715	1.035	0.000	0.023	1.80	1.24	YES	7.7
38	Total-hexafurans	373.8208	35.34	646.928	1.032	0.024	0.024	1.28	1.24	NO	5.5
4	123478-HxCDF	373.8208	35.22	2216.869	1.068	0.000	0.071	1.01	1.24	YES	10.9
38	Total-hexafurans	373.8208	35.05	0.000	1.032	0.000	0.019	1.68	1.24	YES	3.3
38	Total-hexafurans	373.8208	34.56	11199.920	1.032	0.419	0.419	1.11	1.24	NO	53.1
38	Total-hexafurans	373.8208	33.71	11810.651	1.032	0.442	0.442	1.11	1.24	NO	58.4
38	Total-hexafurans	373.8208	33.50	3940.689	1.032	0.147	0.147	1.27	1.24	NO	21.4
7	123789-HxCDF	373.8208	37.41	691.873	0.987	0.000	0.024	1.65	1.24	YES	4.3
5	234678-HxCDF	373.8208	36.34	727.146	1.037	0.000	0.018	0.54	1.24	YES	3.3
38	Total-hexafurans	373.8208	36.27	1099.508	1.032	0.041	0.041	1.24	1.24	NO	6.4

## Quantify Totals Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR5&J, Conditions: AUTOSPEC01, User: pk

## HPF

9	1234789-HpCDF	407.7818	42.19	457.899	1.215	0.000	0.015	0.52	1.05	YES	7.2
39	Total-heptafurans	407.7818	40.31	23806.969	1.223	1.047	1.047	0.98	1.05	NO	253.9
8	1234678-HpCDF	407.7818	39.52	15321.331	1.232	0.601	0.601	0.99	1.05	NO	162.5

## Furans,TF,PP,PF,HF,HPF,OF

35	Total-tetrafurans	303.9016	25.82	0.000	0.877	0.000	0.021	0.91	0.77	YES	3.6
35	Total-tetrafurans	303.9016	25.14	762.068	0.877	0.019	0.019	0.70	0.77	NO	3.5
35	Total-tetrafurans	303.9016	24.96	1780.909	0.877	0.045	0.045	0.72	0.77	NO	7.6
35	Total-tetrafurans	303.9016	24.81	0.000	0.877	0.000	0.018	1.18	0.77	YES	5.1
35	Total-tetrafurans	303.9016	24.30	0.000	0.877	0.000	0.013	1.50	0.77	YES	3.7
35	Total-tetrafurans	303.9016	24.17	0.000	0.877	0.000	0.013	1.15	0.77	YES	3.8
35	Total-tetrafurans	303.9016	24.06	0.000	0.877	0.000	0.025	0.65	0.77	YES	4.8
35	Total-tetrafurans	303.9016	23.82	0.000	0.877	0.000	0.009	0.28	0.77	YES	3.1
35	Total-tetrafurans	303.9016	23.57	0.000	0.877	0.000	0.009	1.59	0.77	YES	3.2
35	Total-tetrafurans	303.9016	23.40	3673.996	0.877	0.092	0.092	0.81	0.77	NO	14.9
35	Total-tetrafurans	303.9016	22.81	0.000	0.877	0.000	0.012	0.24	0.77	YES	2.6
35	Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.014	0.94	0.77	YES	3.3
35	Total-tetrafurans	303.9016	26.30	0.000	0.877	0.000	0.018	0.35	0.77	YES	3.8
1	2378-TCDF	303.9016	26.06	1399.319	0.877	0.035	0.035	0.73	0.77	NO	6.6
37	Total-pentafurans	339.8597	28.93	0.000	0.911	0.000	0.031	1.31	1.55	YES	3.6
3	23478-PeCDF	339.8597	31.54	951.276	0.926	0.000	0.025	0.97	1.55	YES	6.1
2	12378-PeCDF	339.8597	30.18	1254.625	0.896	0.039	0.039	1.38	1.55	NO	4.8
37	Total-pentafurans	339.8597	29.84	1334.697	0.911	0.042	0.042	1.36	1.55	NO	5.4
37	Total-pentafurans	339.8597	29.12	0.000	0.911	0.000	0.094	1.21	1.55	YES	13.8
37	Total-pentafurans	339.8597	29.07	1547.370	0.911	0.049	0.049	1.75	1.55	NO	9.2
6	123678-HxCDF	373.8208	35.39	831.715	1.035	0.000	0.023	1.80	1.24	YES	7.7
38	Total-hexafurans	373.8208	35.34	646.928	1.032	0.024	0.024	1.28	1.24	NO	5.5
4	123478-HxCDF	373.8208	35.22	2216.869	1.068	0.000	0.071	1.01	1.24	YES	10.9
38	Total-hexafurans	373.8208	35.05	0.000	1.032	0.000	0.019	1.68	1.24	YES	3.3
38	Total-hexafurans	373.8208	34.56	11199.920	1.032	0.419	0.419	1.11	1.24	NO	53.1
38	Total-hexafurans	373.8208	33.71	11810.651	1.032	0.442	0.442	1.11	1.24	NO	58.4
38	Total-hexafurans	373.8208	33.50	3940.689	1.032	0.147	0.147	1.27	1.24	NO	21.4
7	123789-HxCDF	373.8208	37.41	691.873	0.987	0.000	0.024	1.65	1.24	YES	4.3
5	234678-HxCDF	373.8208	36.34	727.146	1.037	0.000	0.018	0.54	1.24	YES	3.3
38	Total-hexafurans	373.8208	36.27	1099.508	1.032	0.041	0.041	1.24	1.24	NO	6.4
9	1234789-HpCDF	407.7818	42.19	457.899	1.215	0.000	0.015	0.52	1.05	YES	7.2
39	Total-heptafurans	407.7818	40.31	23806.969	1.223	1.047	1.047	0.98	1.05	NO	253.9
8	1234678-HpCDF	407.7818	39.52	15321.331	1.232	0.601	0.601	0.99	1.05	NO	162.5
10	OCDF	441.7428	47.52	20165.098	1.138	1.350	1.350	0.80	0.89	NO	97.8
36	Total-penta1	339.8597	27.47	11830.539		0.370	0.370	1.49	1.55	NO	221.5

**Quantify Totals Report MassLynx 4.1 SCN 714**

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
 Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

**TD**

ID	Name	Time	RT	Abs Resp	RFU	RFU	RFU	RFU	RFU	RFU	RFU	RFU
11	2378-TCDD	319.8965	26.71	2670.357	1.049	0.000	0.027	0.16	0.77	YES	5.3	
41	Total-tetradoxins	319.8965	24.82	0.000	1.049	0.000	0.103	0.94	0.77	YES	19.7	
41	Total-tetradoxins	319.8965	24.11	755.587	1.049	0.023	0.023	0.79	0.77	NO	3.9	
41	Total-tetradoxins	319.8965	23.84	0.000	1.049	0.000	0.046	0.81	0.77	NO	6.5	

**PD**

ID	Name	Time	RT	Abs Resp	RFU	RFU	RFU	RFU	RFU	RFU	RFU
12	12378-PeCDD	355.8546	31.80	1194.200	0.998	0.054	0.054	1.74	1.55	NO	4.0
42	Total-pentadoxins	355.8546	30.42	0.000	0.998	0.000	0.036	2.19	1.55	YES	4.2
42	Total-pentadoxins	355.8546	30.19	0.000	0.998	0.000	0.040	1.98	1.55	YES	3.4
42	Total-pentadoxins	355.8546	29.13	0.000	0.998	0.000	0.024	0.78	1.55	YES	3.4
42	Total-pentadoxins	355.8546	29.08	0.000	0.998	0.000	0.043	0.64	1.55	YES	2.7

**HD**

ID	Name	Time	RT	Abs Resp	RFU	RFU	RFU	RFU	RFU	RFU	RFU
43	Total-hexadoxins	389.8157	36.74	0.000	0.940	0.000	0.028	2.24	1.24	YES	5.5
14	123678-HxCDD	389.8157	36.58	3273.713	0.918	0.157	0.157	1.33	1.24	NO	19.0
13	123478-HxCDD	389.8157	36.43	852.138	0.971	0.000	0.035	1.63	1.24	YES	5.6
43	Total-hexadoxins	389.8157	35.48	0.000	0.940	0.000	0.168	0.91	1.24	YES	25.0
43	Total-hexadoxins	389.8157	35.46	0.000	0.940	0.000	0.142	2.28	1.24	YES	29.9
43	Total-hexadoxins	389.8157	35.11	1908.503	0.940	0.092	0.092	1.15	1.24	NO	9.0
43	Total-hexadoxins	389.8157	34.29	6613.187	0.940	0.318	0.318	1.10	1.24	NO	36.5
15	123789-HxCDD	389.8157	37.01	2279.781	0.932	0.111	0.111	1.27	1.24	NO	10.6

**HPD**

ID	Name	Time	RT	Abs Resp	RFU	RFU	RFU	RFU	RFU	RFU	RFU
16	1234678-HpCDD	423.7766	41.33	54133.586	1.017	2.888	2.888	1.10	1.05	NO	335.8
44	Total-heptadoxins	423.7766	40.07	48926.328	1.017	2.610	2.610	0.98	1.05	NO	283.2

## Quantify Totals Report MassLynx 4.1 SCN 714

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Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

## TotalTEQ,Furans,Dioxins

35 Total-tetrafurans	303.9016	25.82	0.000	0.877	0.000	0.021	0.91	0.77	YES	3.6
35 Total-tetrafurans	303.9016	25.14	762.068	0.877	0.019	0.019	0.70	0.77	NO	3.5
35 Total-tetrafurans	303.9016	24.96	1780.909	0.877	0.045	0.045	0.72	0.77	NO	7.6
35 Total-tetrafurans	303.9016	24.81	0.000	0.877	0.000	0.018	1.18	0.77	YES	5.1
35 Total-tetrafurans	303.9016	24.30	0.000	0.877	0.000	0.013	1.50	0.77	YES	3.7
35 Total-tetrafurans	303.9016	24.17	0.000	0.877	0.000	0.013	1.15	0.77	YES	3.8
35 Total-tetrafurans	303.9016	24.06	0.000	0.877	0.000	0.025	0.65	0.77	YES	4.8
35 Total-tetrafurans	303.9016	23.82	0.000	0.877	0.000	0.009	0.28	0.77	YES	3.1
35 Total-tetrafurans	303.9016	23.57	0.000	0.877	0.000	0.009	1.59	0.77	YES	3.2
35 Total-tetrafurans	303.9016	23.40	3673.996	0.877	0.092	0.092	0.81	0.77	NO	14.9
35 Total-tetrafurans	303.9016	22.81	0.000	0.877	0.000	0.012	0.24	0.77	YES	2.6
35 Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.014	0.94	0.77	YES	3.3
35 Total-tetrafurans	303.9016	26.30	0.000	0.877	0.000	0.018	0.35	0.77	YES	3.8
1 2378-TCDF	303.9016	26.06	1399.319	0.877	0.035	0.035	0.73	0.77	NO	6.6
37 Total-pentafurans	339.8597	28.93	0.000	0.911	0.000	0.031	1.31	1.55	YES	3.6
3 23478-PeCDF	339.8597	31.54	951.276	0.926	0.030	0.025	0.97	1.55	YES	6.1
2 12378-PeCDF	339.8597	30.18	1254.625	0.896	0.039	0.039	1.38	1.55	NO	4.8
37 Total-pentafurans	339.8597	29.84	1334.697	0.911	0.042	0.042	1.36	1.55	NO	5.4
37 Total-pentafurans	339.8597	29.12	0.000	0.911	0.000	0.094	1.21	1.55	YES	13.8
37 Total-pentafurans	339.8597	29.07	1547.370	0.911	0.049	0.049	1.75	1.55	NO	9.2
6 123678-HxCDF	373.8208	35.39	831.715	1.035	0.029	0.023	1.80	1.24	YES	7.7
38 Total-hexafurans	373.8208	35.34	646.928	1.032	0.024	0.024	1.28	1.24	NO	5.5
4 123478-HxCDF	373.8208	35.22	2216.869	1.068	0.078	0.071	1.01	1.24	YES	10.9
38 Total-hexafurans	373.8208	35.05	0.000	1.032	0.000	0.019	1.68	1.24	YES	3.3
38 Total-hexafurans	373.8208	34.56	11199.920	1.032	0.419	0.419	1.11	1.24	NO	53.1
38 Total-hexafurans	373.8208	33.71	11810.651	1.032	0.442	0.442	1.11	1.24	NO	58.4
38 Total-hexafurans	373.8208	33.50	3940.689	1.032	0.147	0.147	1.27	1.24	NO	21.4
7 123789-HxCDF	373.8208	37.41	691.873	0.987	0.029	0.024	1.65	1.24	YES	4.3
5 234678-HxCDF	373.8208	36.34	727.146	1.037	0.028	0.018	0.54	1.24	YES	3.3
38 Total-hexafurans	373.8208	36.27	1099.508	1.032	0.041	0.041	1.24	1.24	NO	6.4
9 1234789-HpCDF	407.7818	42.19	457.899	1.215	0.023	0.015	0.52	1.05	YES	7.2
39 Total-heptafurans	407.7818	40.31	23806.969	1.223	1.047	1.047	0.98	1.05	NO	253.9
8 1234678-HpCDF	407.7818	39.52	15321.331	1.232	0.601	0.601	0.99	1.05	NO	162.5
10 OCDF	441.7428	47.52	20165.098	1.138	1.350	1.350	0.80	0.89	NO	97.8
36 Total-penta1	339.8597	27.47	11830.539		0.370	0.370	1.49	1.55	NO	221.5



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Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

35 Total-tetrafurans	303.9016	25.82	0.000	0.877	0.000	0.021	0.91	0.77	YES	3.6
35 Total-tetrafurans	303.9016	25.14	762.068	0.877	0.019	0.019	0.70	0.77	NO	3.5
35 Total-tetrafurans	303.9016	24.96	1780.909	0.877	0.045	0.045	0.72	0.77	NO	7.6
35 Total-tetrafurans	303.9016	24.81	0.000	0.877	0.000	0.018	1.18	0.77	YES	5.1
35 Total-tetrafurans	303.9016	24.30	0.000	0.877	0.000	0.013	1.50	0.77	YES	3.7
35 Total-tetrafurans	303.9016	24.17	0.000	0.877	0.000	0.013	1.15	0.77	YES	3.8
35 Total-tetrafurans	303.9016	24.06	0.000	0.877	0.000	0.025	0.65	0.77	YES	4.8
35 Total-tetrafurans	303.9016	23.82	0.000	0.877	0.000	0.009	0.28	0.77	YES	3.1
35 Total-tetrafurans	303.9016	23.57	0.000	0.877	0.000	0.009	1.59	0.77	YES	3.2
35 Total-tetrafurans	303.9016	23.40	3673.996	0.877	0.092	0.092	0.81	0.77	NO	14.9
35 Total-tetrafurans	303.9016	22.81	0.000	0.877	0.000	0.012	0.24	0.77	YES	2.6
35 Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.014	0.94	0.77	YES	3.3
35 Total-tetrafurans	303.9016	26.30	0.000	0.877	0.000	0.018	0.35	0.77	YES	3.8
1 2378-TCDF	303.9016	26.06	1399.319	0.877	0.035	0.035	0.73	0.77	NO	6.6
37 Total-pentafurans	339.8597	28.93	0.000	0.911	0.000	0.031	1.31	1.55	YES	3.6
3 23478-PeCDF	339.8597	31.54	951.276	0.926	0.000	0.025	0.97	1.55	YES	6.1
2 12378-PeCDF	339.8597	30.18	1254.625	0.896	0.039	0.039	1.38	1.55	NO	4.8
37 Total-pentafurans	339.8597	29.84	1334.697	0.911	0.042	0.042	1.36	1.55	NO	5.4
37 Total-pentafurans	339.8597	29.12	0.000	0.911	0.000	0.094	1.21	1.55	YES	13.8
37 Total-pentafurans	339.8597	29.07	1547.370	0.911	0.049	0.049	1.75	1.55	NO	9.2
6 123678-HxCDF	373.8208	35.39	831.715	1.035	0.000	0.023	1.80	1.24	YES	7.7
38 Total-hexafurans	373.8208	35.34	646.928	1.032	0.024	0.024	1.28	1.24	NO	5.5
4 123478-HxCDF	373.8208	35.22	2216.869	1.068	0.000	0.071	1.01	1.24	YES	10.9
38 Total-hexafurans	373.8208	35.05	0.000	1.032	0.000	0.019	1.68	1.24	YES	3.3
38 Total-hexafurans	373.8208	34.56	11199.920	1.032	0.419	0.419	1.11	1.24	NO	53.1
38 Total-hexafurans	373.8208	33.71	11810.651	1.032	0.442	0.442	1.11	1.24	NO	58.4
38 Total-hexafurans	373.8208	33.50	3940.689	1.032	0.147	0.147	1.27	1.24	NO	21.4
7 123789-HxCDF	373.8208	37.41	691.873	0.987	0.000	0.024	1.65	1.24	YES	4.3
5 234678-HxCDF	373.8208	36.34	727.146	1.037	0.000	0.018	0.54	1.24	YES	3.3
38 Total-hexafurans	373.8208	36.27	1099.508	1.032	0.041	0.041	1.24	1.24	NO	6.4
9 1234789-HpCDF	407.7818	42.19	457.899	1.215	0.000	0.015	0.52	1.05	YES	7.2
39 Total-heptafurans	407.7818	40.31	23806.969	1.223	1.047	1.047	0.98	1.05	NO	253.9
8 1234678-HpCDF	407.7818	39.52	15321.331	1.232	0.601	0.601	0.99	1.05	NO	162.5
10 OCDF	441.7428	47.52	20165.098	1.138	1.350	1.350	0.80	0.89	NO	97.8
36 Total-penta1	339.8597	27.47	11830.539		0.370	0.370	1.49	1.55	NO	221.5
35 Total-tetrafurans	303.9016	25.82	0.000	0.877	0.000	0.021	0.91	0.77	YES	3.6
35 Total-tetrafurans	303.9016	25.14	762.068	0.877	0.019	0.019	0.70	0.77	NO	3.5
35 Total-tetrafurans	303.9016	24.96	1780.909	0.877	0.045	0.045	0.72	0.77	NO	7.6
35 Total-tetrafurans	303.9016	24.81	0.000	0.877	0.000	0.018	1.18	0.77	YES	5.1
35 Total-tetrafurans	303.9016	24.30	0.000	0.877	0.000	0.013	1.50	0.77	YES	3.7
35 Total-tetrafurans	303.9016	24.17	0.000	0.877	0.000	0.013	1.15	0.77	YES	3.8
35 Total-tetrafurans	303.9016	24.06	0.000	0.877	0.000	0.025	0.65	0.77	YES	4.8
35 Total-tetrafurans	303.9016	23.82	0.000	0.877	0.000	0.009	0.28	0.77	YES	3.1
35 Total-tetrafurans	303.9016	23.57	0.000	0.877	0.000	0.009	1.59	0.77	YES	3.2
35 Total-tetrafurans	303.9016	23.40	3673.996	0.877	0.092	0.092	0.81	0.77	NO	14.9
35 Total-tetrafurans	303.9016	22.81	0.000	0.877	0.000	0.012	0.24	0.77	YES	2.6
35 Total-tetrafurans	303.9016	22.57	0.000	0.877	0.000	0.014	0.94	0.77	YES	3.3
35 Total-tetrafurans	303.9016	26.30	0.000	0.877	0.000	0.018	0.35	0.77	YES	3.8
1 2378-TCDF	303.9016	26.06	1399.319	0.877	0.035	0.035	0.73	0.77	NO	6.6

Quantify Totals Report MassLynx 4.1 SCN 714

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TotalTEQ,Furans,Dioxins

Table with 12 columns: ID, Name, TEQ, Furans, Dioxins, and other parameters. Rows include Total-pentafurans, PeCDF, HxCDF, HxCDF, HpCDF, and OCDF.

Quantify Totals Report MassLynx 4.1 SCN 714

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PFK1

Peak #	Retention Time (min)	Area	Height	Width	Integration
48	23.48	330.9792	23.48	0.000	1.6
48	23.40	330.9792	23.40	0.000	1.0
48	23.34	330.9792	23.34	0.000	0.6
48	22.93	330.9792	22.93	0.000	0.7
48	22.67	330.9792	22.67	0.000	1.0
48	22.60	330.9792	22.60	0.000	1.0
48	22.48	330.9792	22.48	0.000	1.0
48	22.33	330.9792	22.33	0.000	1.1
48	22.16	330.9792	22.16	0.000	0.6
48	22.10	330.9792	22.10	0.000	0.4
48	22.04	330.9792	22.04	0.000	1.5
48	21.81	330.9792	21.81	0.000	0.9
48	21.55	330.9792	21.55	0.000	1.3
48	21.33	330.9792	21.33	0.000	1.1
48	21.27	330.9792	21.27	0.000	0.4
48	21.16	330.9792	21.16	0.000	1.3
48	26.05	330.9792	26.05	0.000	2.1
48	25.90	330.9792	25.90	0.000	1.8
48	25.81	330.9792	25.81	0.000	1.1
48	25.72	330.9792	25.72	0.000	1.2
48	25.59	330.9792	25.59	0.000	1.2
48	25.27	330.9792	25.27	0.000	0.6
48	25.18	330.9792	25.18	0.000	0.6
48	24.72	330.9792	24.72	0.000	1.7
48	24.63	330.9792	24.63	0.000	0.5
48	24.29	330.9792	24.29	0.000	1.4
48	24.17	330.9792	24.17	0.000	0.3
48	24.05	330.9792	24.05	0.000	1.0
48	23.91	330.9792	23.91	0.000	1.4
48	23.88	330.9792	23.88	0.000	0.7
48	23.72	330.9792	23.72	0.000	1.0
48	23.60	330.9792	23.60	0.000	1.1
48	28.24	330.9792	28.24	0.000	0.9
48	28.05	330.9792	28.05	0.000	0.8
48	27.92	330.9792	27.92	0.000	1.1
48	27.84	330.9792	27.84	0.000	0.9
48	27.77	330.9792	27.77	0.000	2.3
48	27.57	330.9792	27.57	0.000	1.1
48	27.08	330.9792	27.08	0.000	1.2
48	26.96	330.9792	26.96	0.000	1.0
48	26.71	330.9792	26.71	0.000	0.8
48	26.62	330.9792	26.62	0.000	1.3
48	26.50	330.9792	26.50	0.000	1.0
48	26.14	330.9792	26.14	0.000	2.1

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
 Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
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Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

PFK2

Retention Time	Abundance	Mass	Area	Height	Width	Integration	Integration
49	FUNCTION2 PFK	366.9792	28.68	0.000	0.000		1.5
49	FUNCTION2 PFK	366.9792	28.56	0.000	0.000		1.0
49	FUNCTION2 PFK	366.9792	28.50	0.000	0.000		0.9
49	FUNCTION2 PFK	366.9792	30.64	0.000	0.000		1.3
49	FUNCTION2 PFK	366.9792	30.58	0.000	0.000		0.9
49	FUNCTION2 PFK	366.9792	30.34	0.000	0.000		0.7
49	FUNCTION2 PFK	366.9792	30.31	0.000	0.000		1.2
49	FUNCTION2 PFK	366.9792	30.21	0.000	0.000		1.9
49	FUNCTION2 PFK	366.9792	30.05	0.000	0.000		0.4
49	FUNCTION2 PFK	366.9792	29.87	0.000	0.000		1.4
49	FUNCTION2 PFK	366.9792	29.84	0.000	0.000		0.5
49	FUNCTION2 PFK	366.9792	29.76	0.000	0.000		0.8
49	FUNCTION2 PFK	366.9792	29.71	0.000	0.000		0.7
49	FUNCTION2 PFK	366.9792	29.58	0.000	0.000		0.5
49	FUNCTION2 PFK	366.9792	29.48	0.000	0.000		0.8
49	FUNCTION2 PFK	366.9792	29.24	0.000	0.000		0.6
49	FUNCTION2 PFK	366.9792	29.00	0.000	0.000		0.5
49	FUNCTION2 PFK	366.9792	28.80	0.000	0.000		1.3
49	FUNCTION2 PFK	366.9792	28.75	0.000	0.000		0.5
49	FUNCTION2 PFK	366.9792	32.86	0.000	0.000		0.8
49	FUNCTION2 PFK	366.9792	32.77	0.000	0.000		0.7
49	FUNCTION2 PFK	366.9792	32.61	0.000	0.000		0.5
49	FUNCTION2 PFK	366.9792	32.22	0.000	0.000		0.9
49	FUNCTION2 PFK	366.9792	31.80	0.000	0.000		1.3
49	FUNCTION2 PFK	366.9792	31.72	0.000	0.000		0.9
49	FUNCTION2 PFK	366.9792	31.59	0.000	0.000		0.5
49	FUNCTION2 PFK	366.9792	31.55	0.000	0.000		1.1
49	FUNCTION2 PFK	366.9792	30.99	0.000	0.000		0.7
49	FUNCTION2 PFK	366.9792	30.86	0.000	0.000		0.8
49	FUNCTION2 PFK	366.9792	30.68	0.000	0.000		1.0

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
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Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

PFK3

Sample	Name	Area	Height	Width	EMPC	Response
50	FUNCTION3 PFK	380.9760	33.84	0.000	0.000	1.0
50	FUNCTION3 PFK	380.9760	33.70	0.000	0.000	1.0
50	FUNCTION3 PFK	380.9760	33.30	0.000	0.000	0.8
50	FUNCTION3 PFK	380.9760	33.23	0.000	0.000	1.4
50	FUNCTION3 PFK	380.9760	37.00	0.000	0.000	0.6
50	FUNCTION3 PFK	380.9760	36.87	0.000	0.000	0.7
50	FUNCTION3 PFK	380.9760	36.64	0.000	0.000	1.1
50	FUNCTION3 PFK	380.9760	36.07	0.000	0.000	0.4
50	FUNCTION3 PFK	380.9760	35.67	0.000	0.000	0.6
50	FUNCTION3 PFK	380.9760	35.63	0.000	0.000	0.9
50	FUNCTION3 PFK	380.9760	35.33	0.000	0.000	0.9
50	FUNCTION3 PFK	380.9760	35.28	0.000	0.000	0.5
50	FUNCTION3 PFK	380.9760	35.20	0.000	0.000	1.9
50	FUNCTION3 PFK	380.9760	34.97	0.000	0.000	0.5
50	FUNCTION3 PFK	380.9760	34.93	0.000	0.000	0.6
50	FUNCTION3 PFK	380.9760	34.80	0.000	0.000	1.0
50	FUNCTION3 PFK	380.9760	34.55	0.000	0.000	0.7
50	FUNCTION3 PFK	380.9760	34.44	0.000	0.000	0.7
50	FUNCTION3 PFK	380.9760	34.32	0.000	0.000	1.2
50	FUNCTION3 PFK	380.9760	33.94	0.000	0.000	1.0
50	FUNCTION3 PFK	380.9760	38.28	0.000	0.000	1.3
50	FUNCTION3 PFK	380.9760	38.18	0.000	0.000	0.7
50	FUNCTION3 PFK	380.9760	38.14	0.000	0.000	1.2
50	FUNCTION3 PFK	380.9760	37.87	0.000	0.000	1.1
50	FUNCTION3 PFK	380.9760	37.79	0.000	0.000	1.0
50	FUNCTION3 PFK	380.9760	37.37	0.000	0.000	3.2
50	FUNCTION3 PFK	380.9760	37.18	0.000	0.000	1.0
28	FUNCTION3 PFK	380.9760	37.04	0.000	0.000	0.4

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
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Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

PFK4

Sample	Area	Height	Retention Time	Abundance	Integration	Response
51	FUNCTION4 PFK	430.9728	39.01	0.000		2.9
51	FUNCTION4 PFK	430.9728	38.93	0.000		4.8
51	FUNCTION4 PFK	430.9728	38.88	0.000		6.0
51	FUNCTION4 PFK	430.9728	38.83	0.000		7.6
51	FUNCTION4 PFK	430.9728	38.76	0.000		8.7
51	FUNCTION4 PFK	430.9728	38.60	0.000		11.2
51	FUNCTION4 PFK	430.9728	38.56	0.000		11.6
51	FUNCTION4 PFK	430.9728	40.86	0.000		1.0
51	FUNCTION4 PFK	430.9728	40.64	0.000		0.6
51	FUNCTION4 PFK	430.9728	40.60	0.000		0.6
51	FUNCTION4 PFK	430.9728	40.55	0.000		0.8
51	FUNCTION4 PFK	430.9728	40.38	0.000		0.7
51	FUNCTION4 PFK	430.9728	40.13	0.000		0.8
51	FUNCTION4 PFK	430.9728	40.11	0.000		0.7
51	FUNCTION4 PFK	430.9728	40.06	0.000		1.7
51	FUNCTION4 PFK	430.9728	40.00	0.000		1.0
51	FUNCTION4 PFK	430.9728	39.86	0.000		1.2
51	FUNCTION4 PFK	430.9728	39.78	0.000		0.6
51	FUNCTION4 PFK	430.9728	39.55	0.000		0.6
51	FUNCTION4 PFK	430.9728	39.52	0.000		0.7
51	FUNCTION4 PFK	430.9728	39.22	0.000		0.5
51	FUNCTION4 PFK	430.9728	39.18	0.000		1.5
51	FUNCTION4 PFK	430.9728	39.07	0.000		2.0
51	FUNCTION4 PFK	430.9728	42.84	0.000		1.1
51	FUNCTION4 PFK	430.9728	42.76	0.000		1.7
51	FUNCTION4 PFK	430.9728	42.67	0.000		1.2
51	FUNCTION4 PFK	430.9728	42.54	0.000		1.6
51	FUNCTION4 PFK	430.9728	42.51	0.000		0.6
51	FUNCTION4 PFK	430.9728	42.44	0.000		0.9
51	FUNCTION4 PFK	430.9728	42.39	0.000		1.3
51	FUNCTION4 PFK	430.9728	42.34	0.000		1.1
51	FUNCTION4 PFK	430.9728	42.24	0.000		0.8
51	FUNCTION4 PFK	430.9728	42.06	0.000		0.3
51	FUNCTION4 PFK	430.9728	41.84	0.000		1.0
51	FUNCTION4 PFK	430.9728	41.59	0.000		1.7
51	FUNCTION4 PFK	430.9728	41.55	0.000		1.3
51	FUNCTION4 PFK	430.9728	41.49	0.000		1.5
51	FUNCTION4 PFK	430.9728	41.04	0.000		1.0
51	FUNCTION4 PFK	430.9728	40.90	0.000		1.5
51	FUNCTION4 PFK	430.9728	44.69	0.000		1.6
51	FUNCTION4 PFK	430.9728	44.63	0.000		2.3
51	FUNCTION4 PFK	430.9728	44.53	0.000		1.4
51	FUNCTION4 PFK	430.9728	44.37	0.000		0.7
51	FUNCTION4 PFK	430.9728	44.22	0.000		0.6
51	FUNCTION4 PFK	430.9728	44.19	0.000		0.7
51	FUNCTION4 PFK	430.9728	43.85	0.000		0.5
51	FUNCTION4 PFK	430.9728	43.63	0.000		1.3
51	FUNCTION4 PFK	430.9728	43.58	0.000		0.9
51	FUNCTION4 PFK	430.9728	43.52	0.000		1.7

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## PFK4

#	Name	Time	RT	Abs Resp	HFPEAK	IN	EMPG	IFAIL	IFB	SN
51	FUNCTION4 PFK	430.9728	43.40	0.000						0.8
51	FUNCTION4 PFK	430.9728	43.30	0.000						1.2
51	FUNCTION4 PFK	430.9728	43.27	0.000						0.9
51	FUNCTION4 PFK	430.9728	43.22	0.000						3.0
51	FUNCTION4 PFK	430.9728	43.03	0.000						0.4
51	FUNCTION4 PFK	430.9728	42.95	0.000						1.1
51	FUNCTION4 PFK	430.9728	44.98	0.000						0.7
51	FUNCTION4 PFK	430.9728	44.77	0.000						1.3

## PFK5

#	Name	Time	RT	Abs Resp	HFPEAK	IN	EMPG	IFAIL	IFB	SN
52	FUNCTION5 PFK	480.9696	48.36	0.000						1.3
52	FUNCTION5 PFK	480.9696	45.26	0.000						2.5

## ETHERS1

#	Name	Time	RT	Abs Resp	HFPEAK	IN	EMPG	IFAIL	IFB	SN
53	FUNCTION1 HXCD...	375.8364	28.02	0.000			0.000			3.4
53	FUNCTION1 HXCD...	375.8364	26.74	0.000			0.000			11.6
53	FUNCTION1 HXCD...	375.8364	23.36	0.000			0.000			2.8

## ETHERS2

#	Name	Time	RT	Abs Resp	HFPEAK	IN	EMPG	IFAIL	IFB	SN
54	FUNCTION1 HPCD...	409.7974	27.89	0.000			0.000			1.8
54	FUNCTION1 HPCD...	409.7974	26.02	0.000			0.000			3.9
54	FUNCTION1 HPCD...	409.7974	25.59	0.000			0.000			1.9
54	FUNCTION1 HPCD...	409.7974	23.61	0.000			0.000			1.4
54	FUNCTION1 HPCD...	409.7974	23.42	0.000			0.000			2.5
54	FUNCTION1 HPCD...	409.7974	22.75	0.000			0.000			3.1

## ETHERS3

#	Name	Time	RT	Abs Resp	HFPEAK	IN	EMPG	IFAIL	IFB	SN
55	FUNCTION2 HPCD...	409.7974	32.65	0.000			0.000			1.7
55	FUNCTION2 HPCD...	409.7974	31.12	0.000			0.000			1.4
55	FUNCTION2 HPCD...	409.7974	30.72	0.000			0.000			1.3
55	FUNCTION2 HPCD...	409.7974	29.39	0.000			0.000			2.8
55	FUNCTION2 HPCD...	409.7974	29.00	0.000			0.000			3.0
55	FUNCTION2 HPCD...	409.7974	28.50	0.000			0.000			1.7

## ETHERS4

#	Name	Time	RT	Abs Resp	HFPEAK	IN	EMPG	IFAIL	IFB	SN
56	FUNCTION3 OCDPE	445.7555	38.01	0.000			0.000			5.9

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ETHERS5

Name	Area	RT	Abs Resp	RFU M	Area	Area	Area	Area	Area
57 FUNCTION4 NCDPE	479.7165	41.32	0.000	0.000					5.4
57 FUNCTION4 NCDPE	479.7165	39.10	0.000	0.000					101.5

ETHERS6

Name	Area	RT	Abs Resp	RFU M	Area	Area	Area	Area	Area
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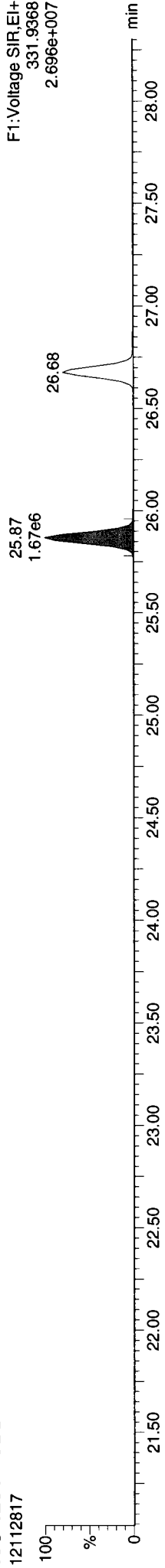
Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
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Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

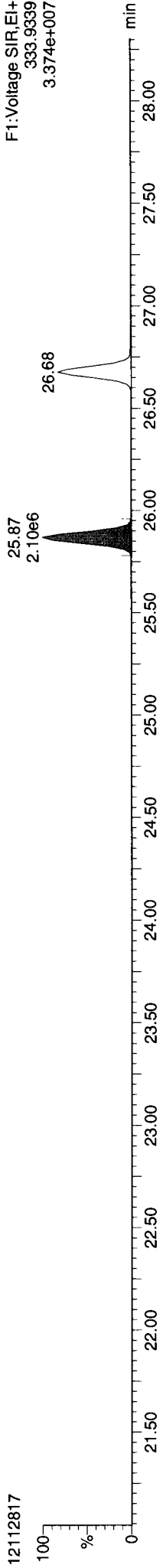
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Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

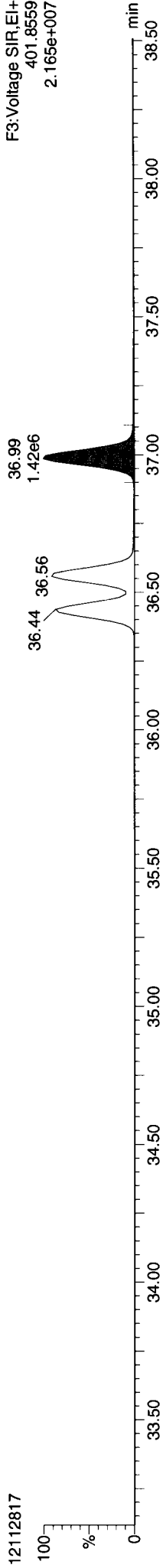
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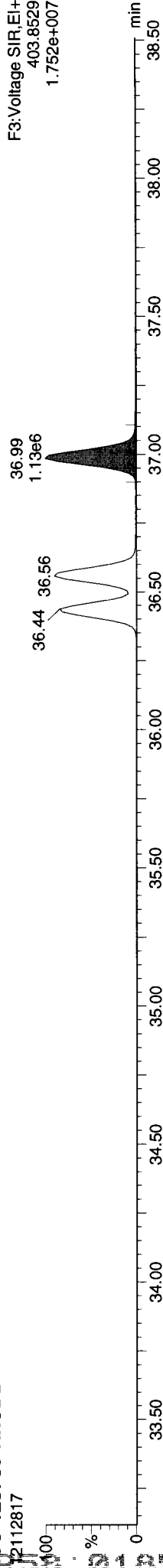
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13C-123789-HxCDD



13C-123789-HxCDD

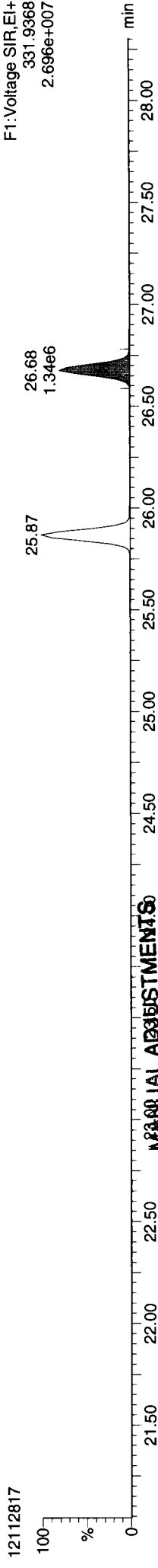


Quantify Sample Report MassLynx 4.1 SCN 714

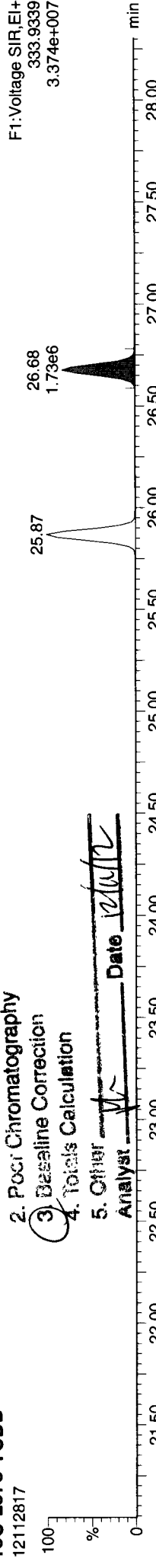
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Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

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13C-2378-TCDD

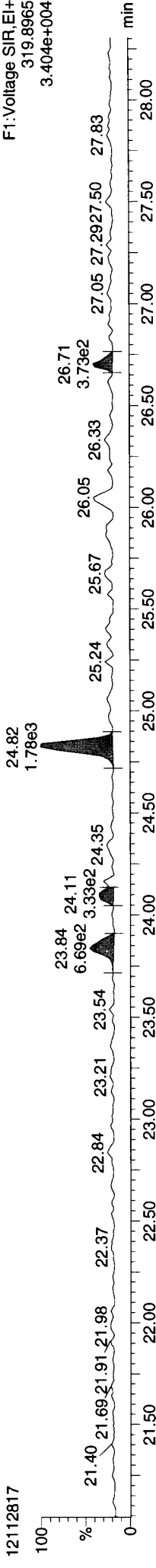


13C-2378-TCDD

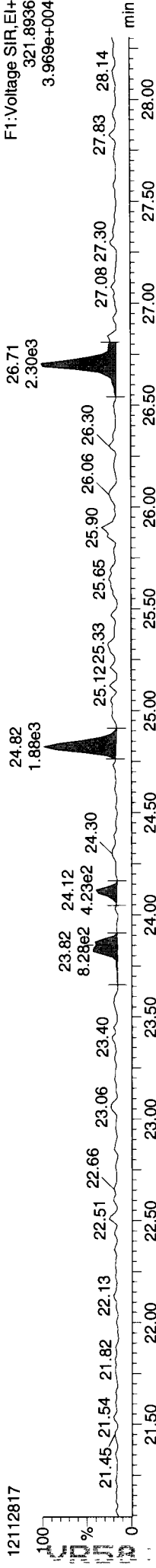


1. Peak not found
  2. Poor Chromatography
  3. Baseline Correction
  4. Totals Calculation
  5. Other
- Analyst: *[Signature]* Date: *12/10/12*

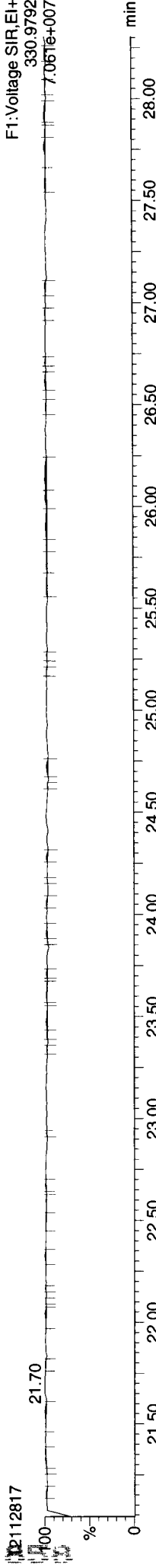
Total-tetraoxins



Total-tetraoxins



FUNCTION1 PFK



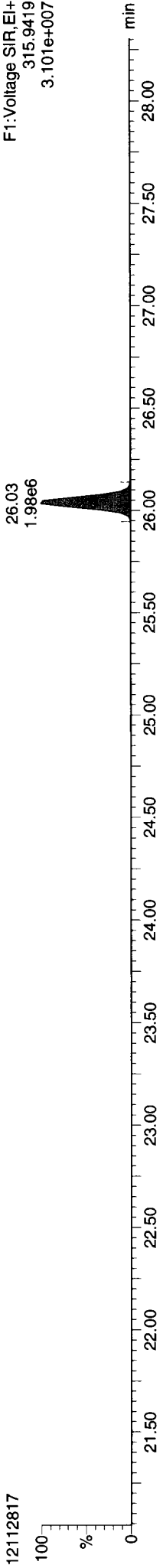
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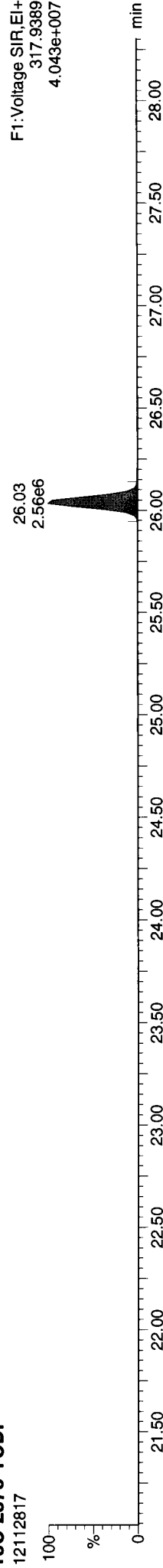
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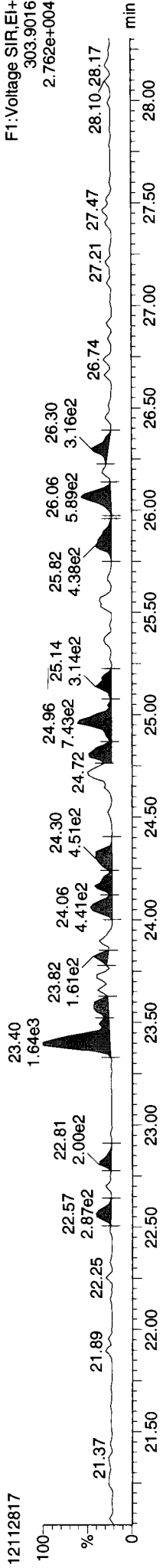
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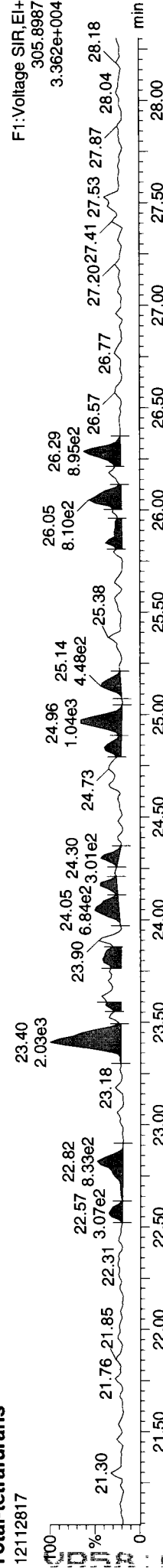
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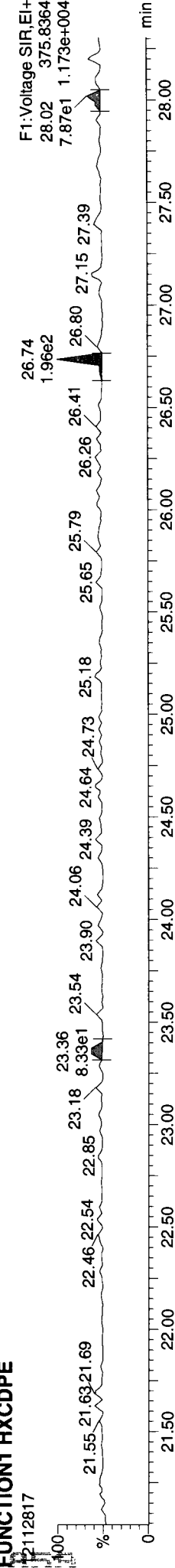
Total-tetrafurans



Total-tetrafurans



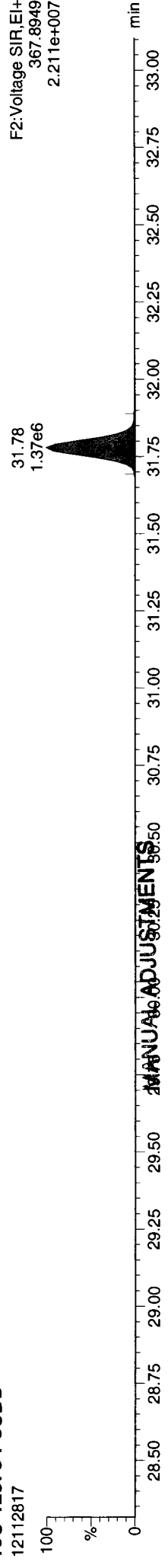
FUNCTION1 HXCDPE



Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
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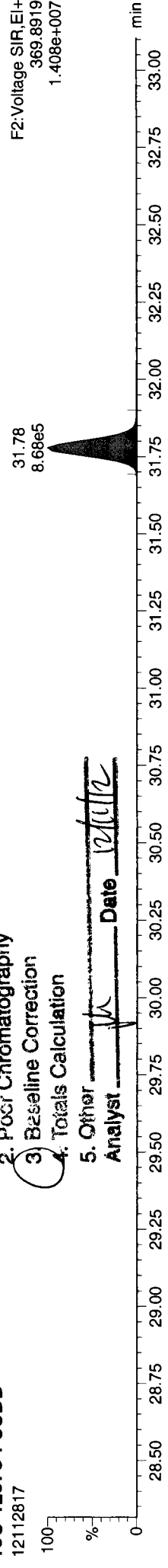
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13C-12378-PeCDD  
12112817

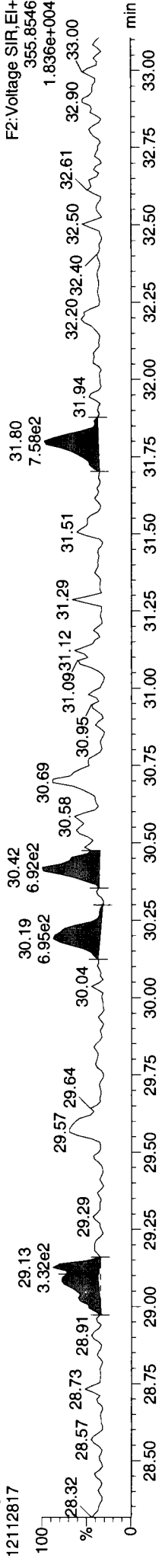


- 1. Peak not found
- 2. Poor Chromatography
- 3. Baseline Correction
- 4. Totals Calculation
- 5. Other

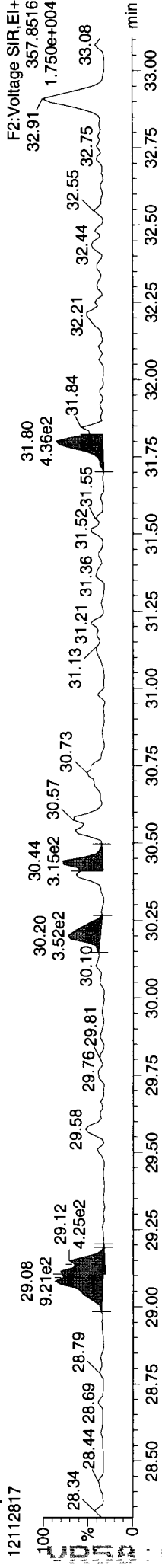
13C-12378-PeCDD  
12112817



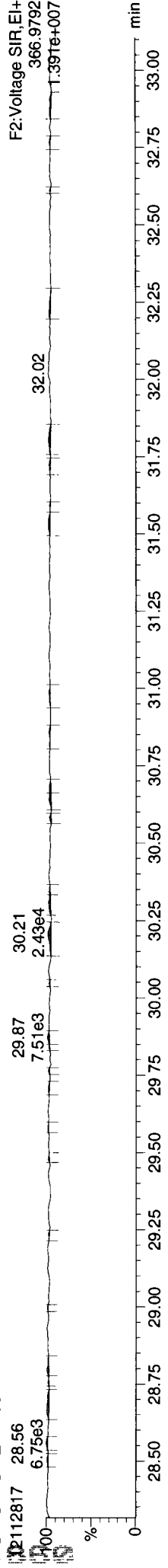
Total-pentadioxins  
12112817



Total-pentadioxins  
12112817



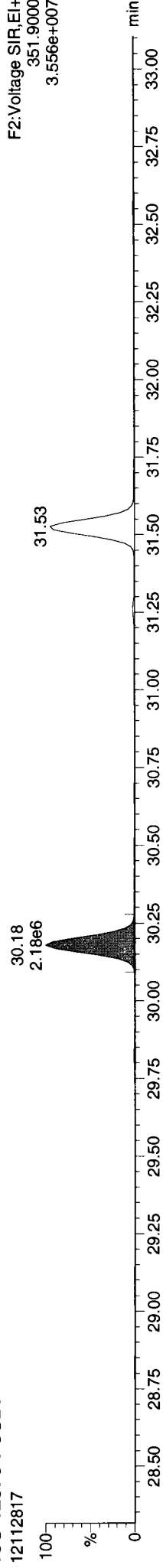
FUNCTION2 PFK  
12112817



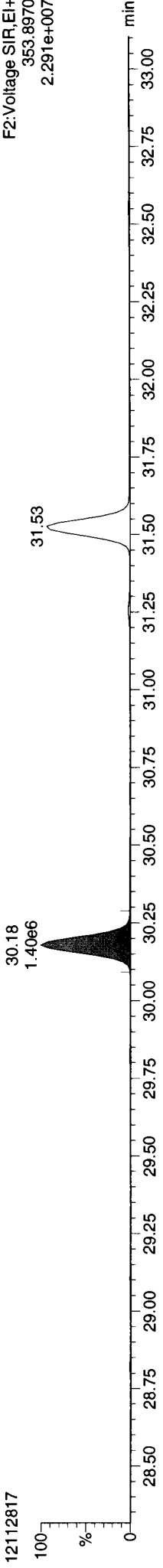
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Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

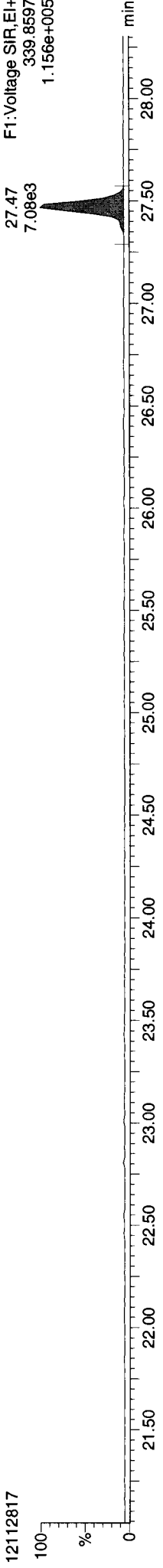
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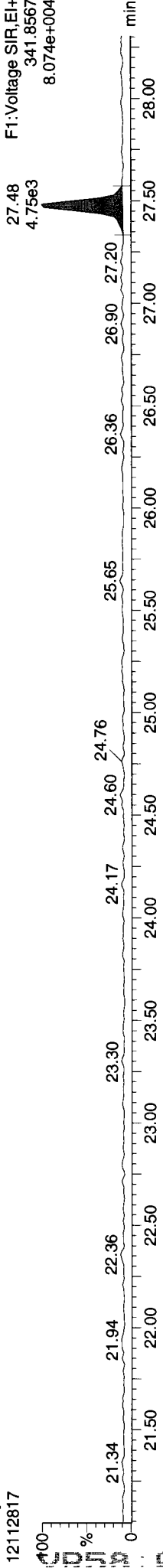
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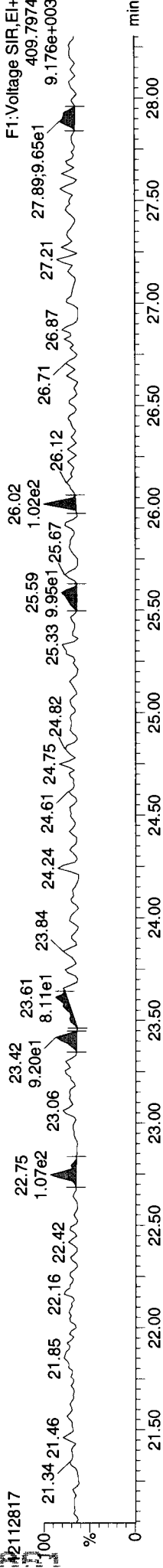
Total-penta1



Total-penta1



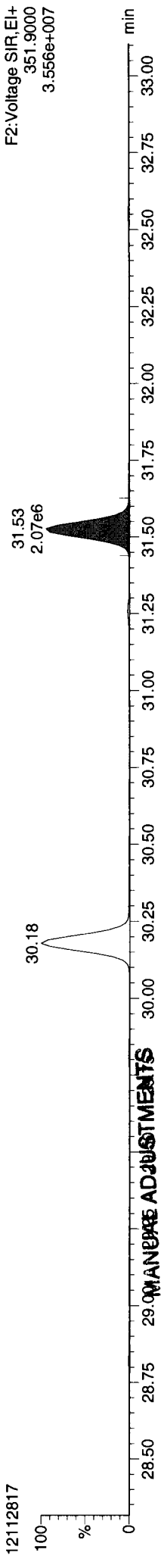
FUNCTION1 HPCDPE



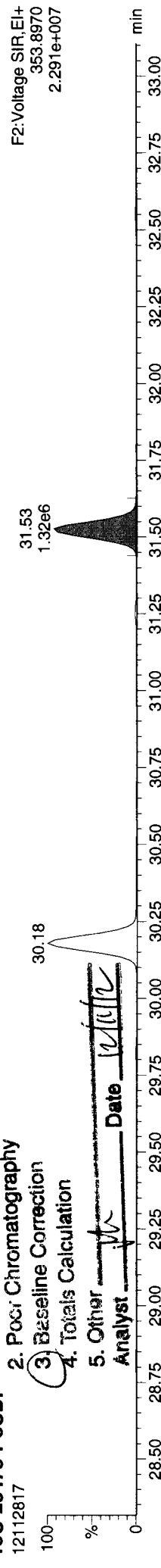
Quantify Sample Report MaselLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF

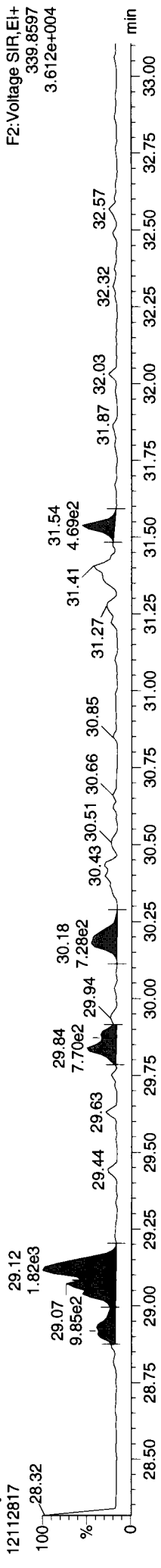


13C-23478-PeCDF

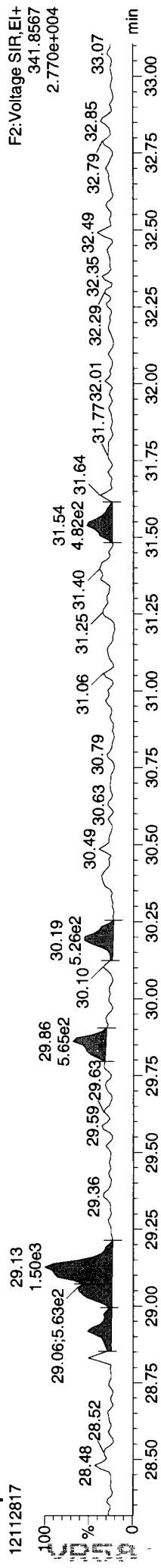


- 1. Peak not found
  - 2. Pocr Chromatography
  - 3. Baseline Correction
  - 4. Totals Calculation
  - 5. Other
- Analyst: *[Signature]* Date: *[Signature]*

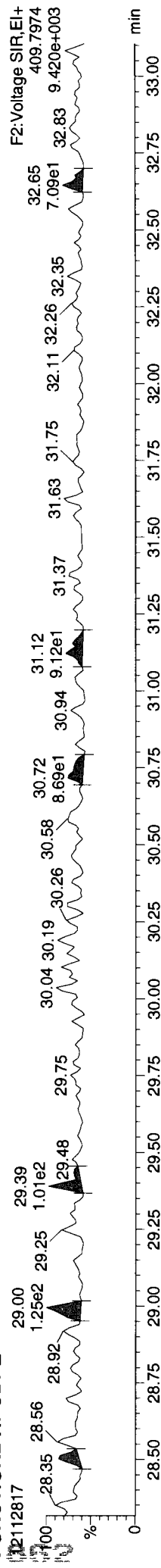
Total-pentafurans



Total-pentafurans



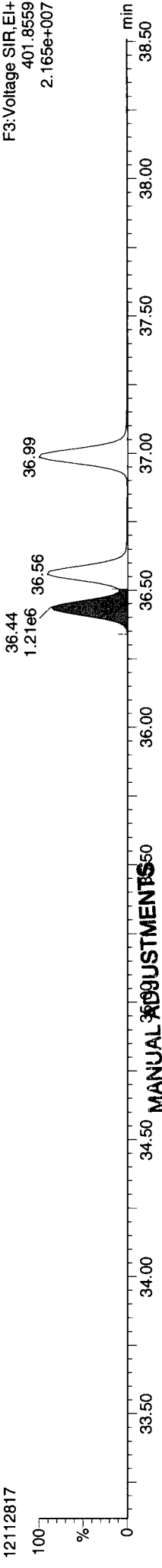
FUNCTION2 HPCDPE



Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

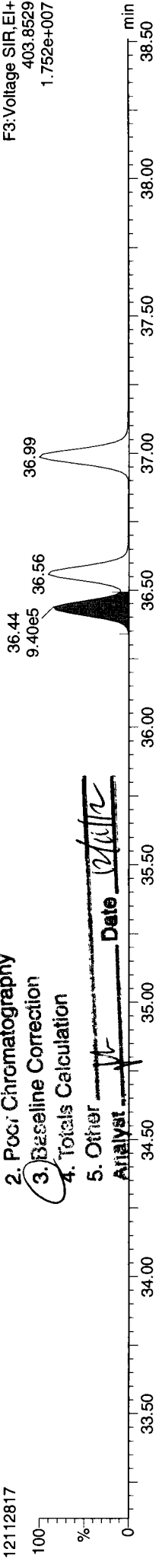
Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD



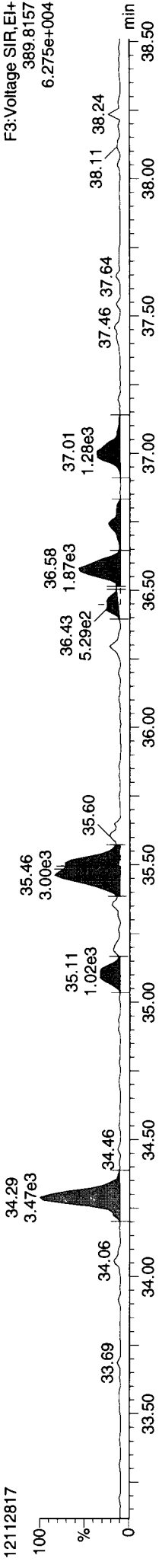
F3: Voltage SIR, EI+  
401.8559  
2.165e+007

13C-123478-HxCDD



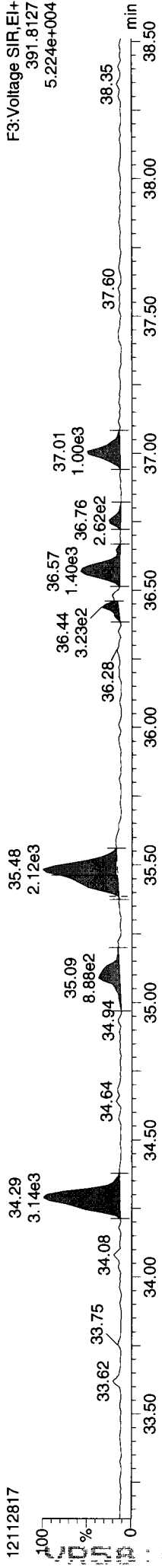
F3: Voltage SIR, EI+  
403.8529  
1.752e+007

Total-hexadioxins



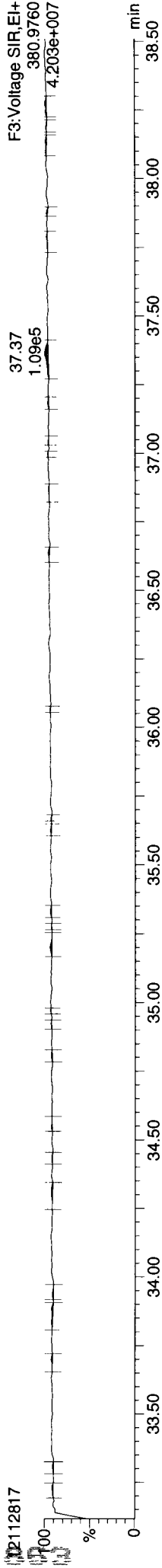
F3: Voltage SIR, EI+  
389.8157  
6.275e+004

Total-hexadioxins



F3: Voltage SIR, EI+  
391.8127  
5.224e+004

FUNCTION3 PFK

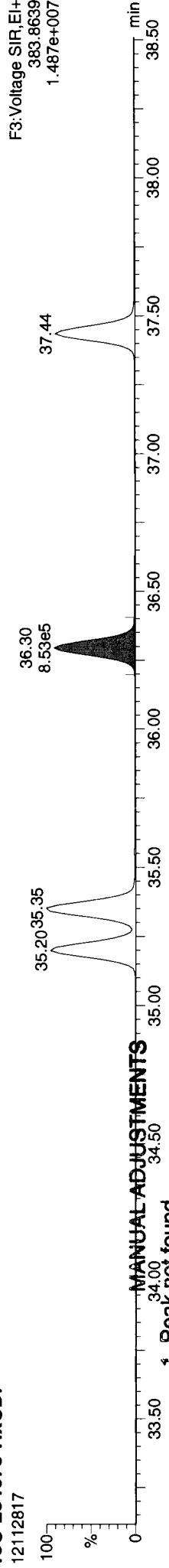


F3: Voltage SIR, EI+  
380.9760  
4.203e+007

Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

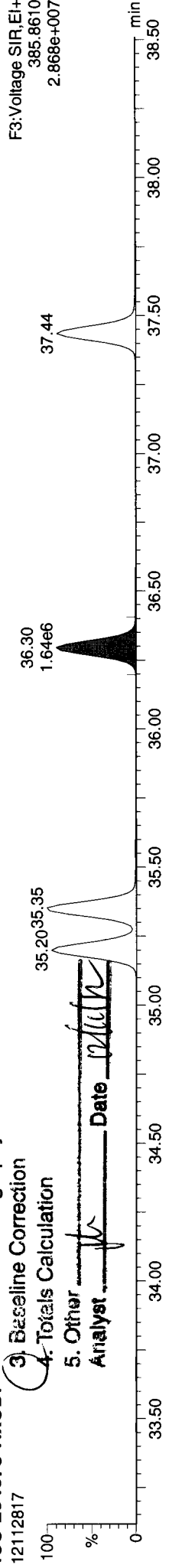
13C-234678-HxCDF



MANUAL ADJUSTMENTS

1. Peak not found

13C-234678-HxCDF



2. Pocr Chromatography

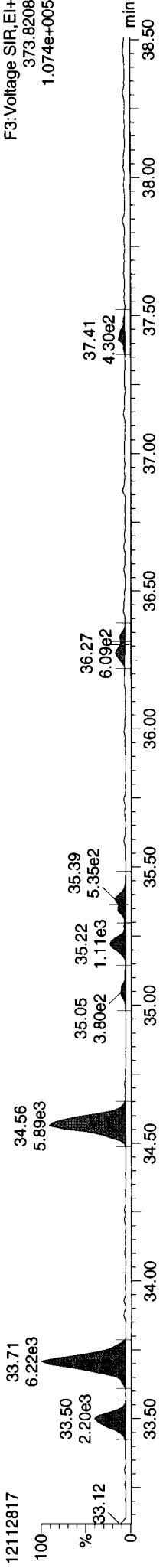
3. Baseline Correction

4. Totals Calculation

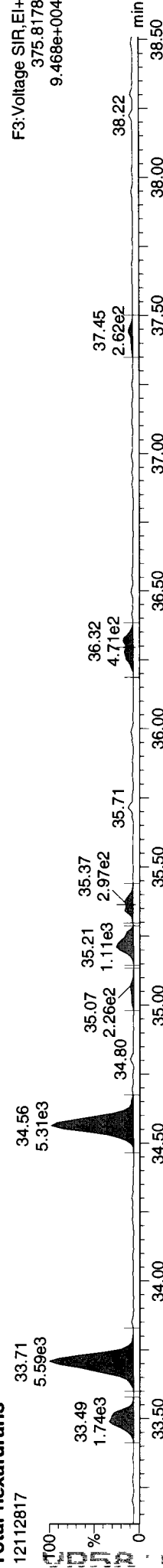
5. Other

Analyst: *[Signature]* Date: *[Signature]*

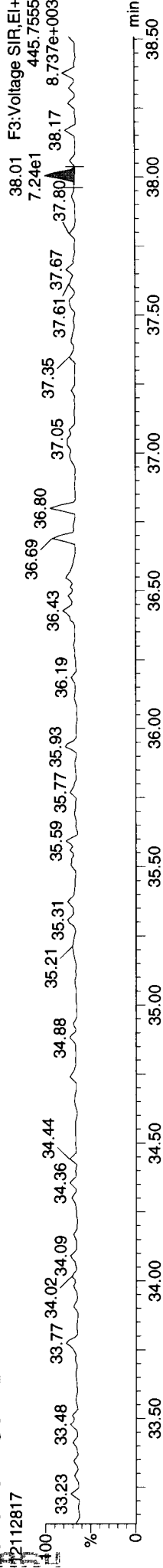
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDFE





Quantify Sample Report MassLynx 4.1 SCN 714

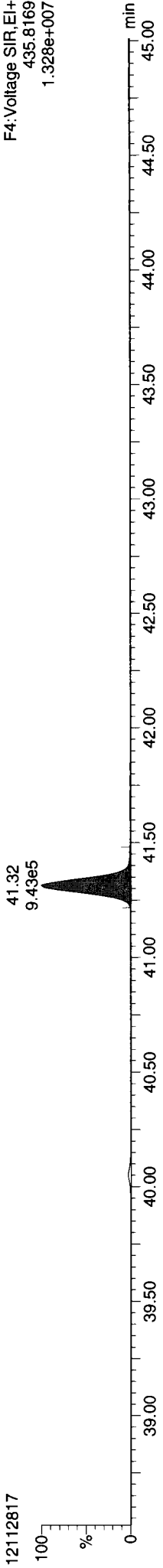
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld

Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time

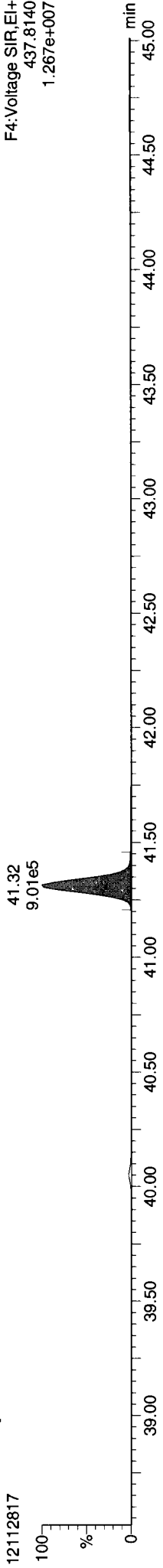
Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

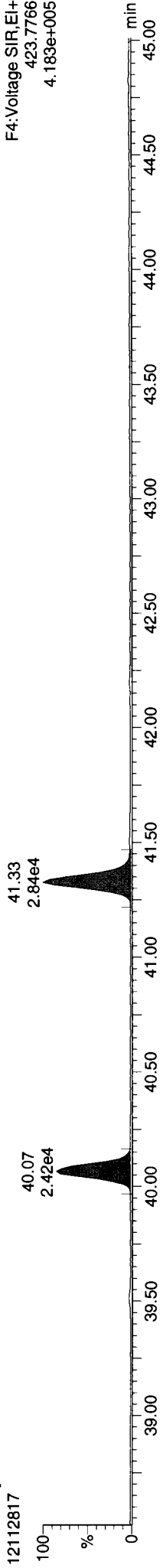
13C-1234678-HpCDD



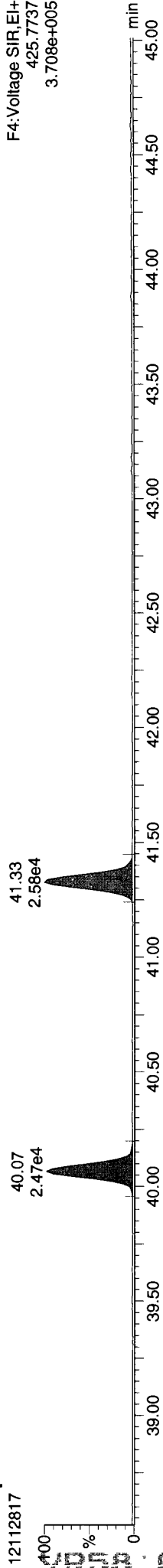
13C-1234678-HpCDD



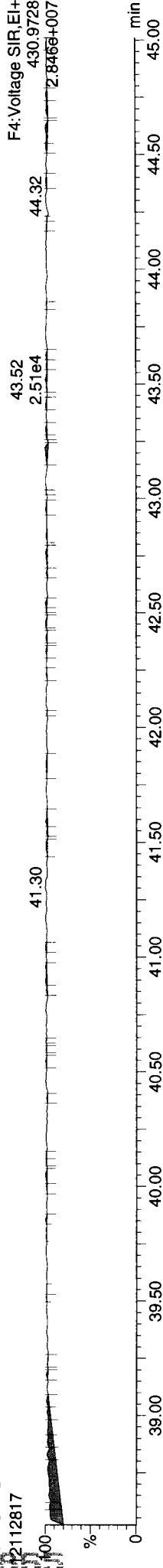
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



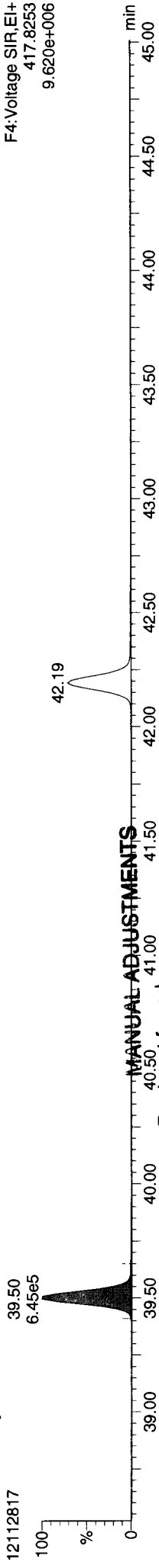
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld

Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time

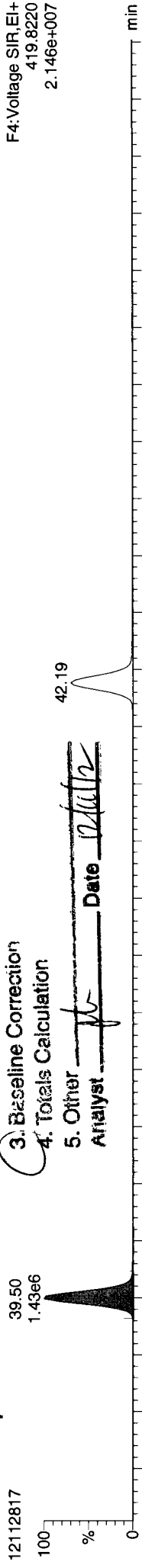
Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

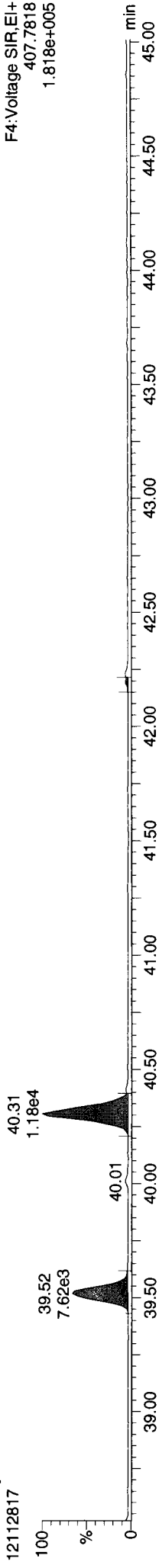
13C-1234678-HpCDF



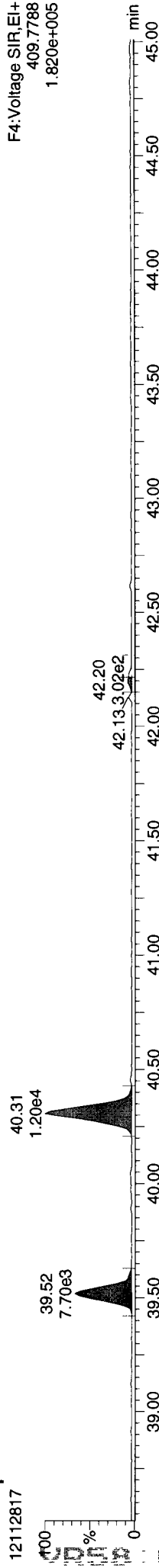
13C-1234678-HpCDF



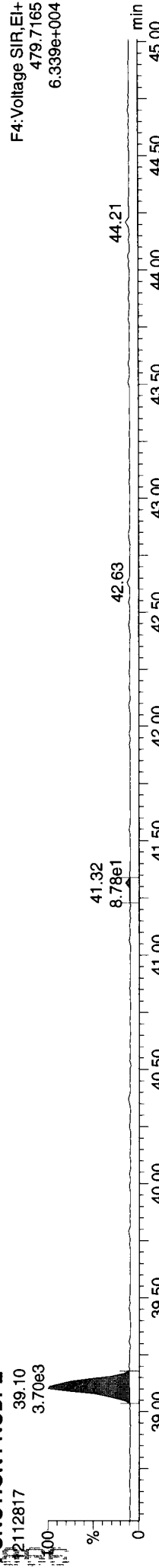
Total-heptafurans



Total-heptafurans



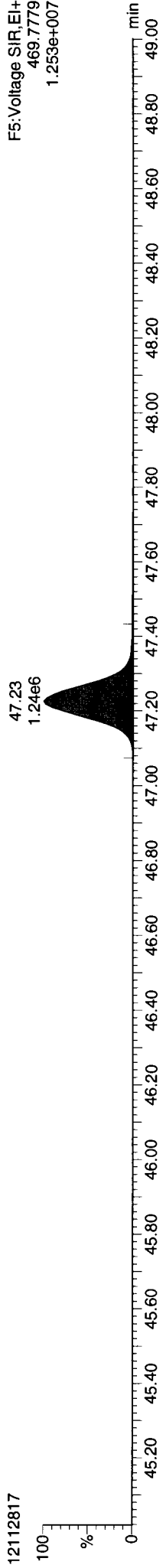
FUNCTION4 NCDPE



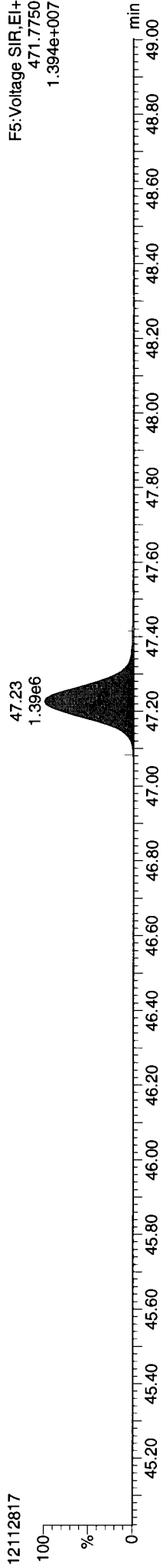
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

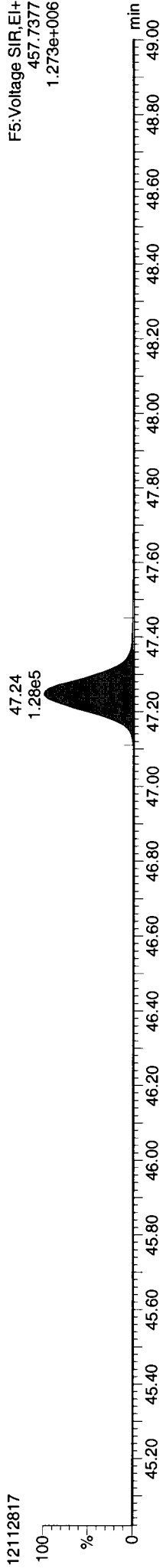
13C-OCDD  
12112817



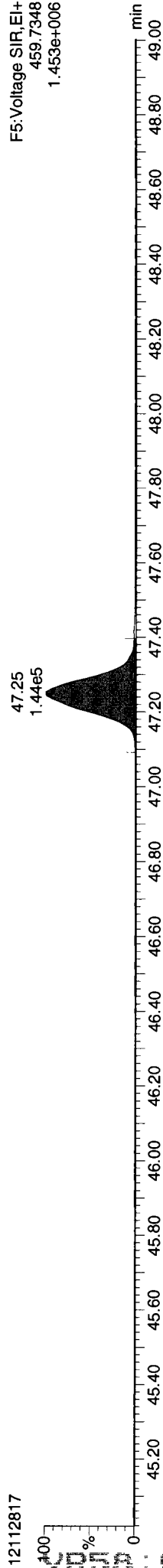
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12112817



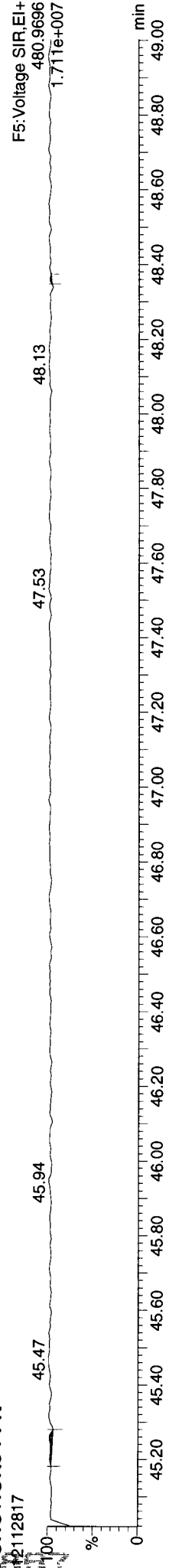
OCDD  
12112817



OCDD  
12112817



FUNCTION5 PFK  
12112817

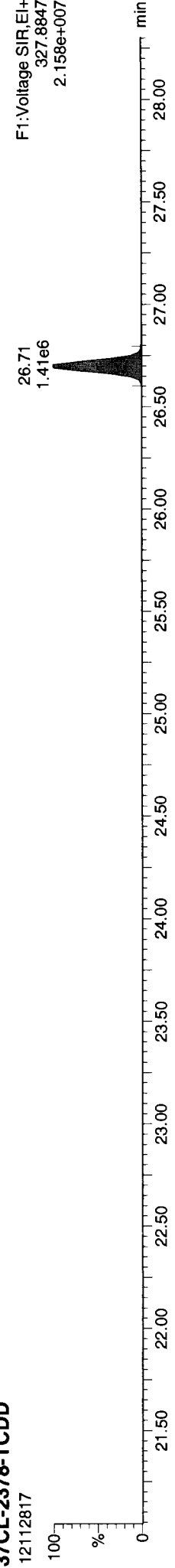


Quantify Sample Report MassLynx 4.1 SCN 714

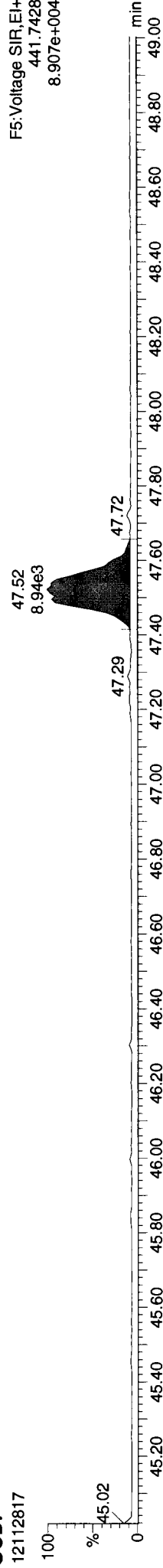
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:37:29 Pacific Standard Time

Name: 12112817, Date: 28-Nov-2012, Time: 23:58:20, ID: VR58J, Conditions: AUTOSPEC01, User: pk

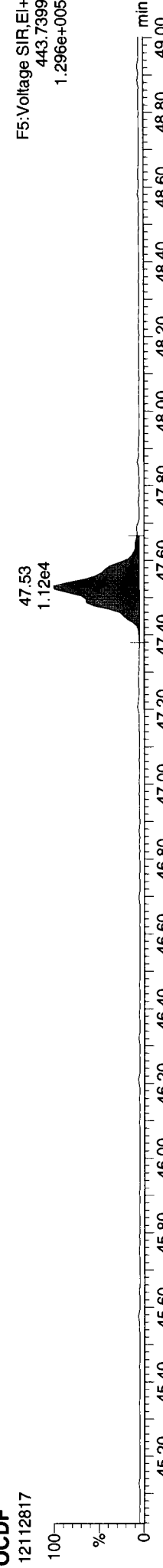
37CL-2378-TCDD  
12112817



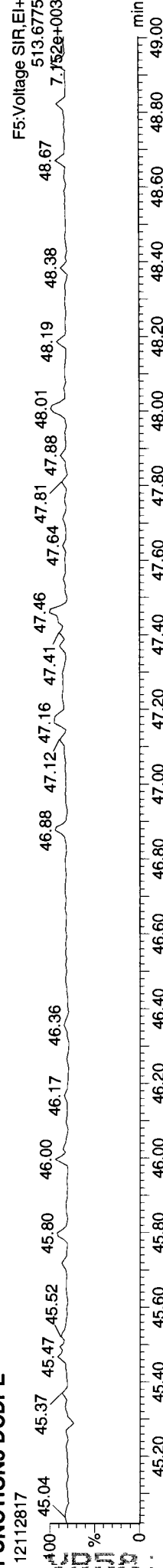
OCDF  
12112817



OCDF  
12112817

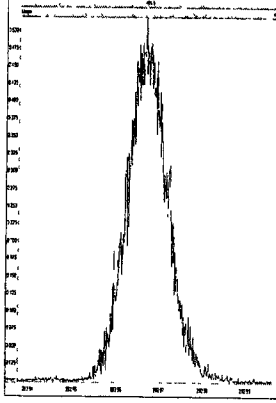


FUNCTION5 DCDPE  
12112817

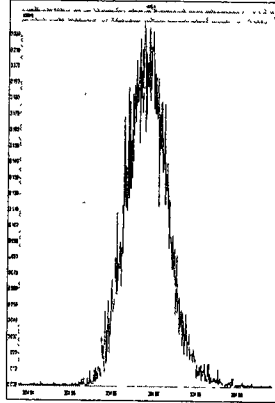


12112817

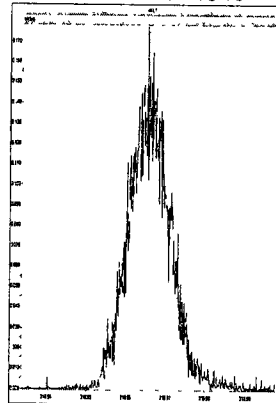
M 292.9824 R 13786



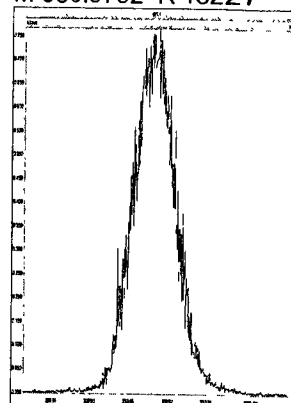
M 304.9824 R 13667



M 318.9792 R 14045



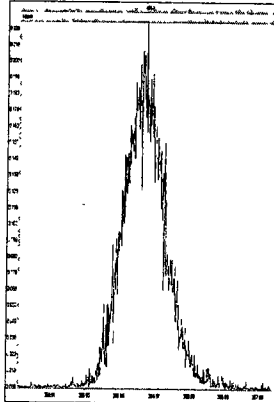
M 330.9792 R 13227



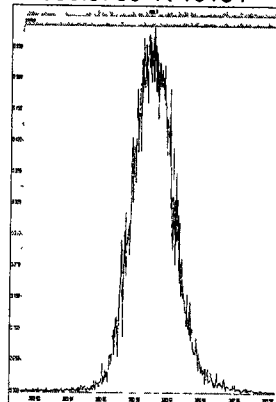
M 354.9792 R 13855



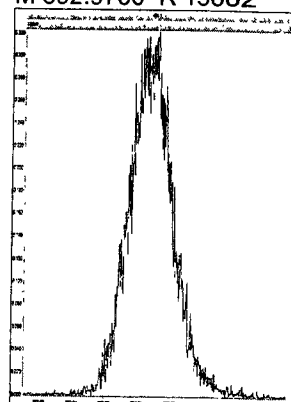
M 366.9792 R 13251



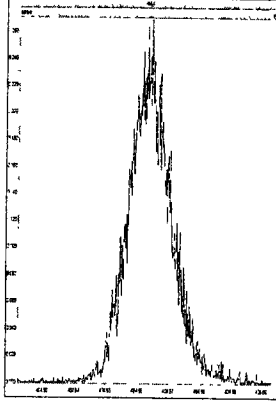
M 380.9760 R 13194



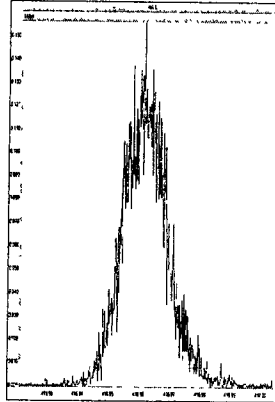
M 392.9760 R 13662



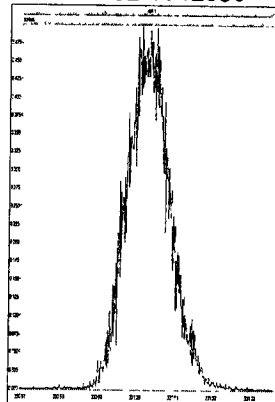
M 404.9760 R 12986



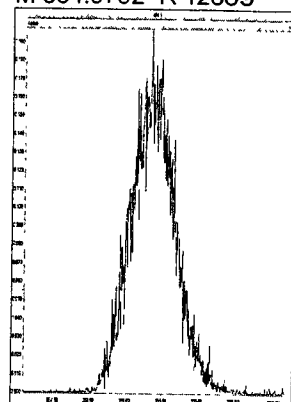
M 416.9760 R 14885



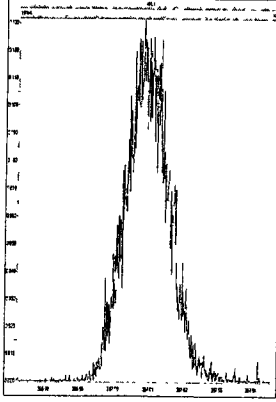
M 330.9792 R 12600



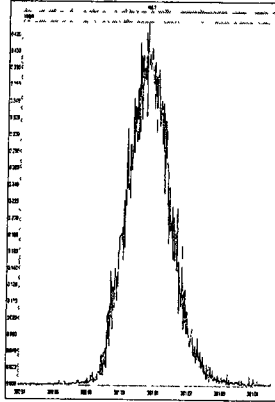
M 354.9792 R 12889



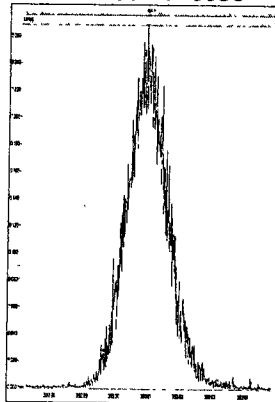
M 366.9792 R 14089



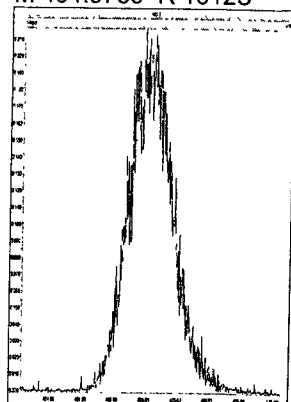
M 380.9760 R 13399



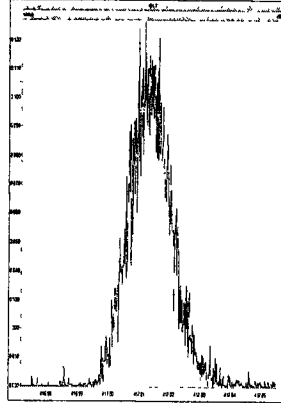
M 392.9760 R 13333



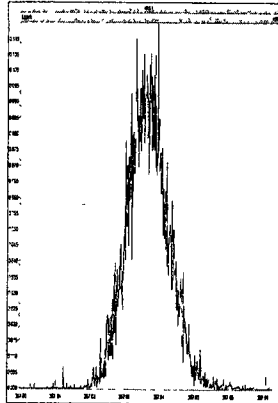
M 404.9760 R 13125



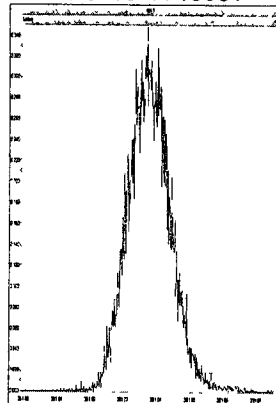
M 416.9760 R 13762



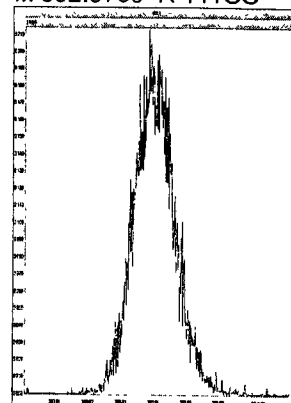
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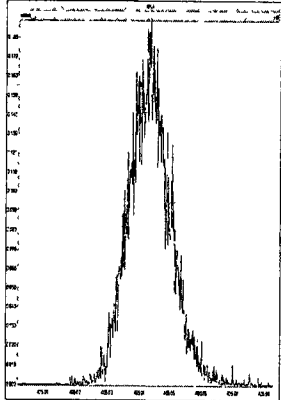
M 380.9760 R 13661



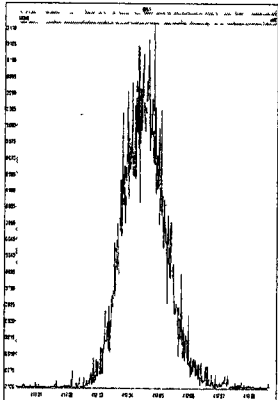
M 392.9760 R 14183



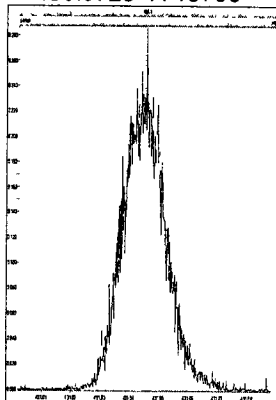
M 404.9760 R 13301



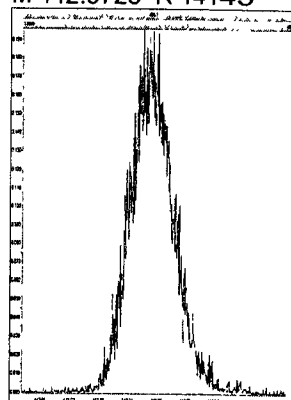
M 416.9760 R 14534



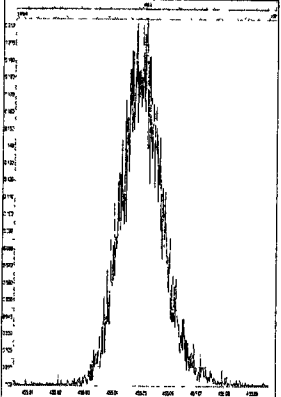
M 430.9728 R 13706



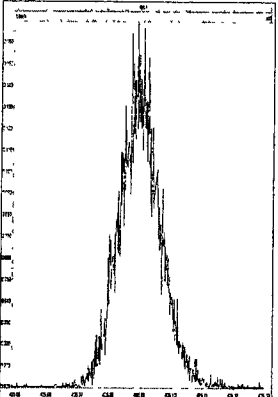
M 442.9728 R 14145



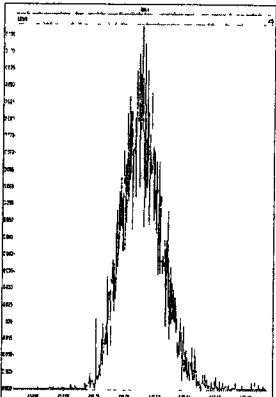
M 454.9728 R 13444



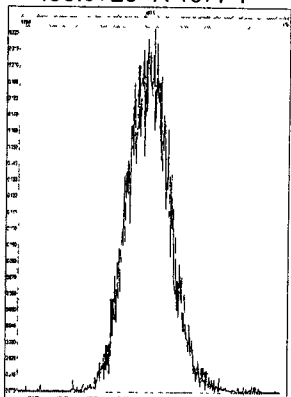
M 404.9760 R 13899



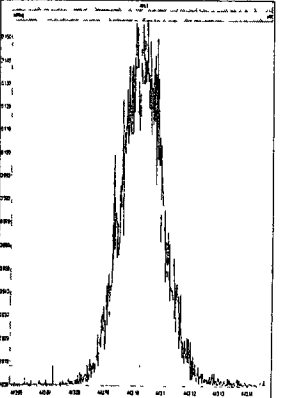
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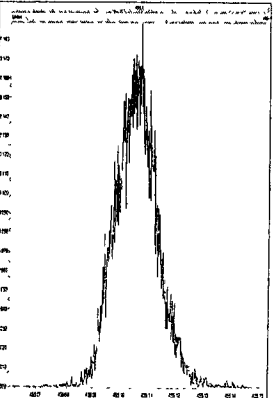
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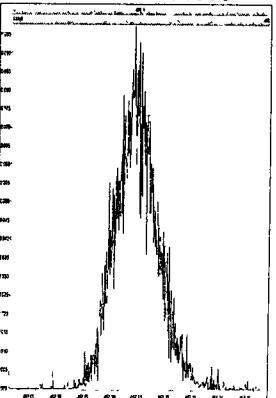
M 442.9728 R 13404



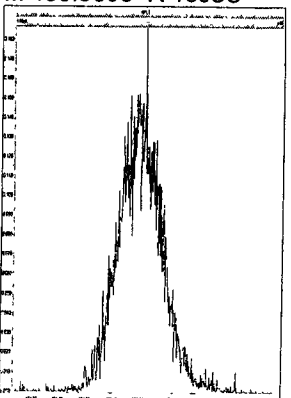
M 454.9728 R 13333



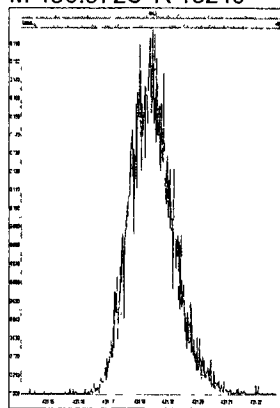
M 466.9728 R 14009



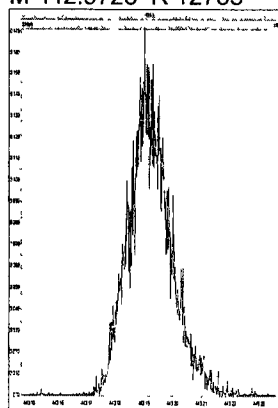
M 480.9696 R 13930



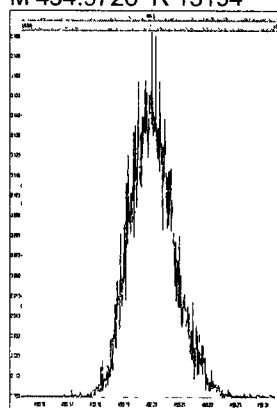
M 430.9728 R 13240



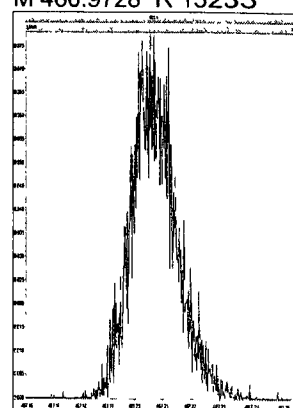
M 442.9728 R 12755



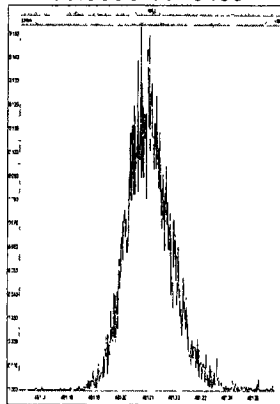
M 454.9728 R 13194



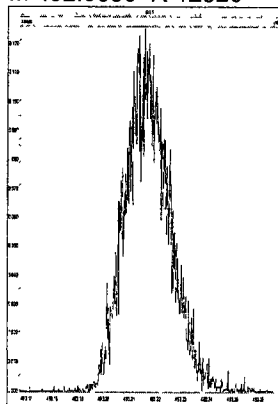
M 466.9728 R 13233



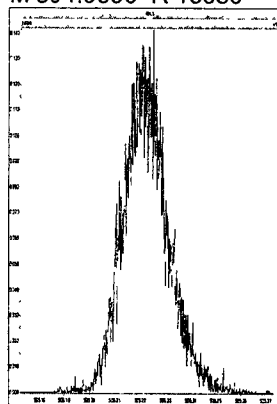
M 480.9696 R 13459



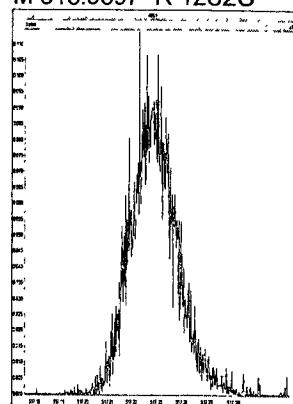
M 492.9696 R 12920



M 504.9696 R 13680



M 516.9697 R 12828



Method: P:\DIOXIN8290.PRO\MethDB\Dioxin\121123.mdb 05 Dec 2012 15:26:14

Calibration: P:\DIOXIN8290.PRO\CurvedB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

Retention Time (min)	Abundance	Peak Label	Area	Height	Width	Resolution	Signal-to-Noise	Integration	Identification			
26.063	1.001	2378-TCDF	26.063	1.001	2.51e5	3.46e5	0.877	0.725	1965.1	NO	9.790	
30.212	1.001	12378-PeCDF	30.212	1.001	1.40e6	9.39e5	0.896	1.493	1.550	6436.3	NO	49.792
31.550	1.000	23478-PeCDF	31.550	1.000	1.42e6	9.65e5	0.926	1.472	1.550	6510.0	NO	49.197
35.233	1.001	123478-HxCDF	35.233	1.001	1.26e6	1.05e6	1.068	1.195	1.240	4613.9	NO	49.874
36.318	1.000	234678-HxCDF	36.318	1.000	1.25e6	1.05e6	1.037	1.191	1.240	4399.6	NO	50.005
35.375	1.000	123678-HxCDF	35.375	1.000	1.26e6	1.07e6	1.035	1.171	1.240	4574.2	NO	50.064
37.469	1.001	123789-HxCDF	37.469	1.001	1.07e6	8.97e5	0.987	1.197	1.240	3922.0	NO	50.616
39.530	1.001	1234678-HpCDF	39.530	1.001	1.08e6	1.08e6	1.232	0.994	1.050	5570.4	NO	48.860
42.227	1.001	1234789-HpCDF	42.227	1.001	8.63e5	8.69e5	1.215	0.993	1.050	3775.4	NO	49.694
47.521	1.006	OCDF	47.521	1.006	1.32e6	1.53e6	1.138	0.861	0.890	2777.4	NO	98.677
26.706	1.001	2378-TCDD	26.706	1.001	1.96e5	2.52e5	1.049	0.777	0.770	1392.9	NO	9.851
31.813	1.001	12378-PeCDD	31.813	1.001	1.03e6	6.65e5	0.998	1.547	1.550	5322.4	NO	49.552
36.461	1.001	123478-HxCDD	36.461	1.001	9.64e5	7.70e5	0.971	1.252	1.240	3726.9	NO	50.631
36.592	1.001	123678-HxCDD	36.592	1.001	9.25e5	7.46e5	0.918	1.240	1.240	3463.3	NO	49.728
37.020	1.012	123789-HxCDD	37.020	1.012	9.36e5	7.58e5	0.932	1.235	1.240	3529.0	NO	50.541
41.339	1.000	1234678-HpCDD	41.339	1.000	7.66e5	7.36e5	1.017	1.040	1.050	4050.0	NO	48.842
47.252	1.000	OCDD	47.252	1.000	1.20e6	1.35e6	1.008	0.889	0.890	4611.5	NO	99.187
26.049	1.006	13C-2378-TCDF	26.049	1.006	3.05e6	3.89e6	1.473	0.784	0.770	17469.7	NO	105.569
30.190	1.166	13C-12378-PeCDF	30.190	1.166	3.20e6	2.04e6	1.148	1.569	1.550	9016.7	NO	102.292
31.539	1.218	13C-23478-PeCDF	31.539	1.218	3.19e6	2.05e6	1.113	1.558	1.550	9127.3	NO	105.287
35.211	0.952	13C-123478-HxCDF	35.211	0.952	1.47e6	2.86e6	1.209	0.514	0.510	4353.0	NO	99.449
35.364	0.956	13C-123678-HxCDF	35.364	0.956	1.55e6	2.96e6	1.269	0.523	0.510	4528.3	NO	98.558
36.307	0.981	13C-234678-HxCDF	36.307	0.981	1.52e6	2.92e6	1.236	0.519	0.510	4371.9	NO	99.690
37.447	1.012	13C-123789-HxCDF	37.447	1.012	1.35e6	2.59e6	1.107	0.521	0.510	4013.0	NO	98.903
39.508	1.068	13C-1234678-HpCDF	39.508	1.068	1.11e6	2.48e6	1.051	0.449	0.440	7337.2	NO	94.766
42.205	1.141	13C-1234789-HpCDF	42.205	1.141	8.85e5	1.98e6	0.815	0.446	0.440	4978.9	NO	97.691
25.884	0.000	13C-1234-TCDD	25.884	0.000	1.95e6	2.52e6	1.000	0.776	0.770	8849.7	NO	100.000
26.691	1.031	13C-2378-TCDD	26.691	1.031	1.90e6	2.44e6	0.946	0.778	0.770	8641.3	NO	102.601
31.791	1.228	13C-12378-PeCDD	31.791	1.228	2.09e6	1.33e6	0.721	1.573	1.550	14347.7	NO	106.391
36.439	0.985	13C-123478-HxCDD	36.439	0.985	1.96e6	1.56e6	0.991	1.255	1.240	11802.2	NO	98.793
36.570	0.988	13C-123678-HxCDD	36.570	0.988	2.03e6	1.63e6	1.025	1.242	1.240	11978.9	NO	99.061
41.328	1.117	13C-1234678-HpCDD	41.328	1.117	1.54e6	1.49e6	0.866	1.031	1.050	7808.6	NO	96.887
47.235	1.277	13C-OCDD	47.235	1.277	2.39e6	2.69e6	0.769	0.889	0.890	9934.6	NO	183.372



Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld

Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time

Printed: Monday, December 10, 2012 15:28:45 Pacific Standard Time

Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

Component	36.998	0.000	1.99e6	1.61e6	1.000	1.239	1.240	11828.4	NO	100.000
13C-123789-HxCDD	36.998	0.000	1.99e6	1.61e6	1.000	1.239	1.240	11828.4	NO	100.000
Total-tetraturans		7.76e5			0.877					30.253
Total-penta1		1.92e6								65.898
Total-pentaturans		4.30e6			0.911					151.234
Total-hexaturans		6.20e6			1.032					256.946
Total-heptaturans		1.94e6			1.223					98.691
Total-Furans		1.65e7			1.041					701.718
Total-tetradiioxins		1.08e6			1.049					54.623
Total-pentadiioxins		3.57e6			0.998					171.633
Total-hexadiioxins		3.99e6			0.940					214.002
Total-heptadiioxins		1.66e6			1.017					105.283
Total-Dioxins		1.65e7			0.985					701.718
Total-TEQ		3.29e7								1403.437
37CL-2378-TCDD	26.706	1.032	4.80e5		1.044			3716.9		10.299
FUNCTION1 PFK		8.47e5								0.000
FUNCTION2 PFK		3.98e4								0.000
FUNCTION3 PFK		8.25e6								0.000
FUNCTION4 PFK		1.79e5								0.000
FUNCTION5 PFK		2.72e5								0.000
FUNCTION1 HXCDPE		4.15e2								0.000
FUNCTION1 HPCDPE		6.78e2								0.000
FUNCTION2 HPCDPE		2.31e3								0.000
FUNCTION3 OCDPE		0.00e0								0.000
FUNCTION4 NCDPE		8.59e1								0.000
FUNCTION5 DCDPE		0.00e0								0.000

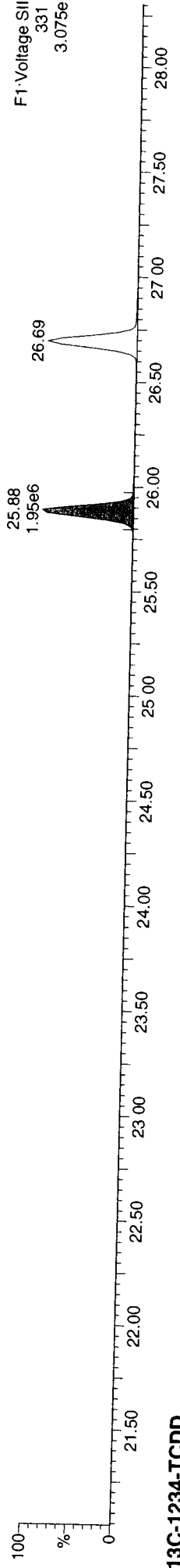
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Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:28:45 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethD\BIDioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

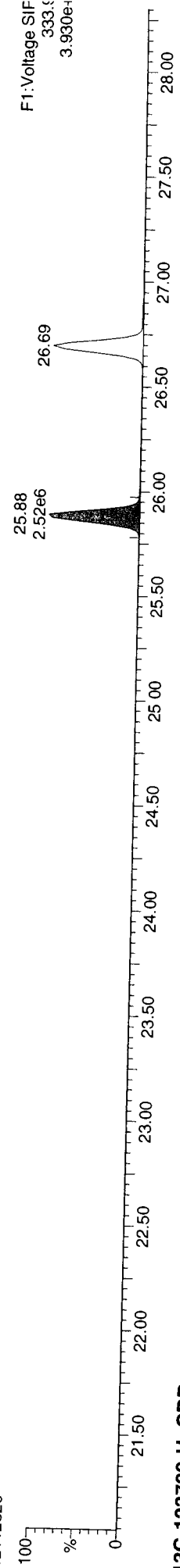
13C-1234-TCDD

12112820



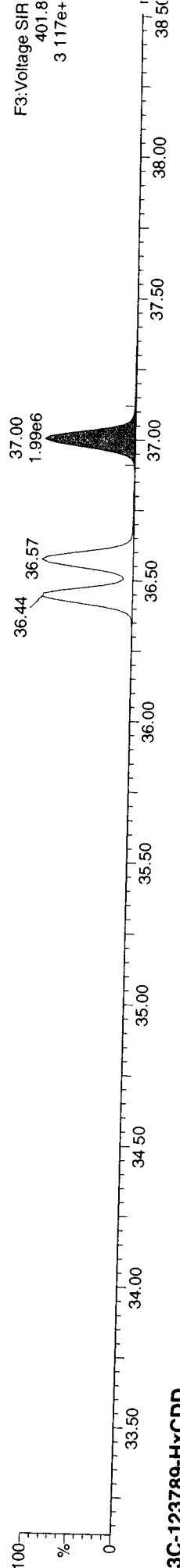
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12112820



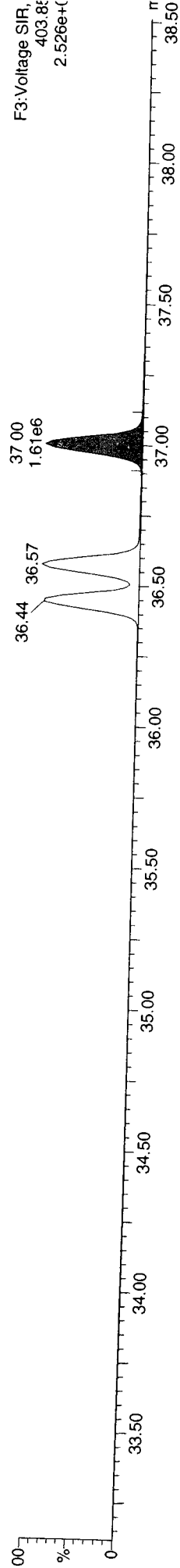
13C-123789-HxCDD

12112820



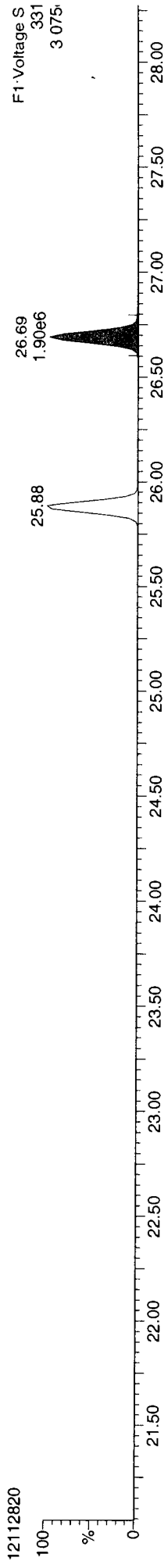
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12112820

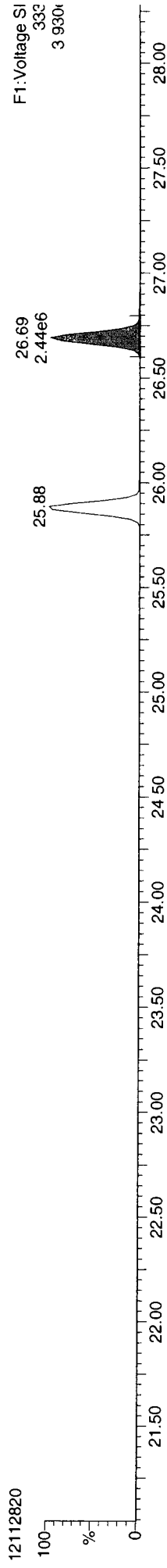


Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

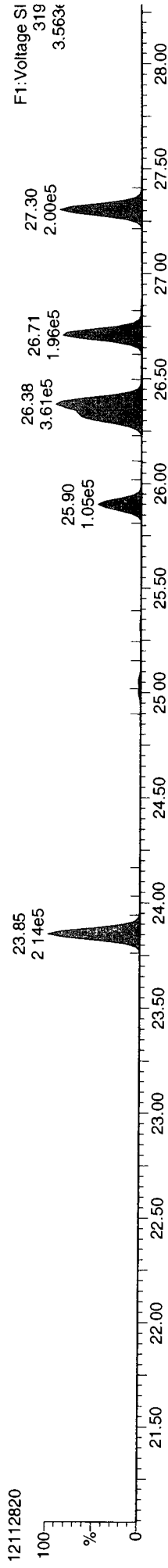
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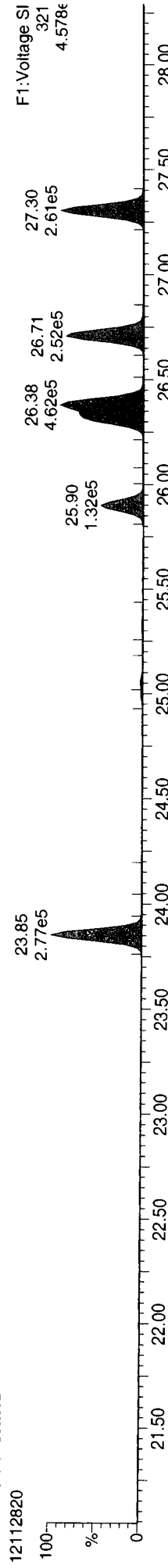
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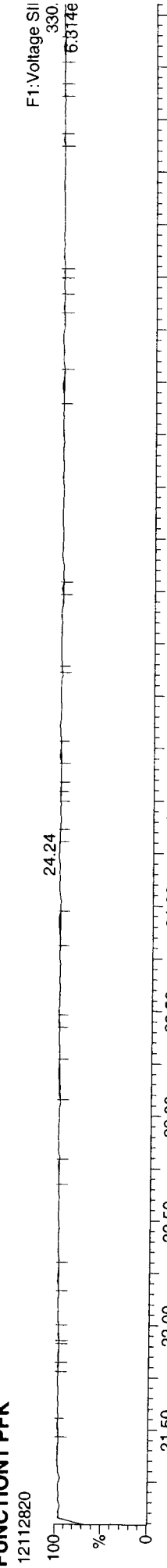
Total-tetradoxins



Total-tetradoxins



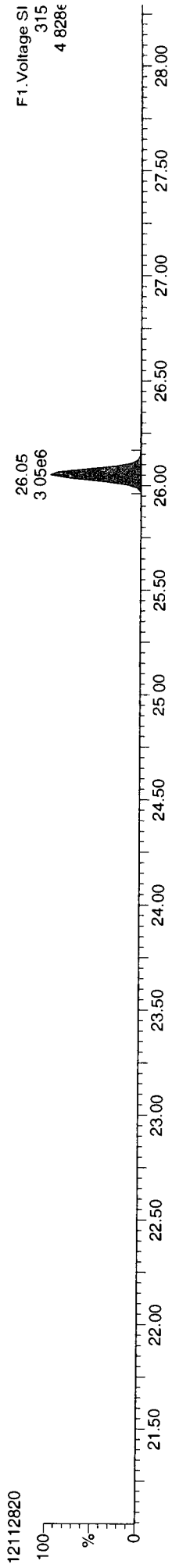
FUNCTION1 PFK



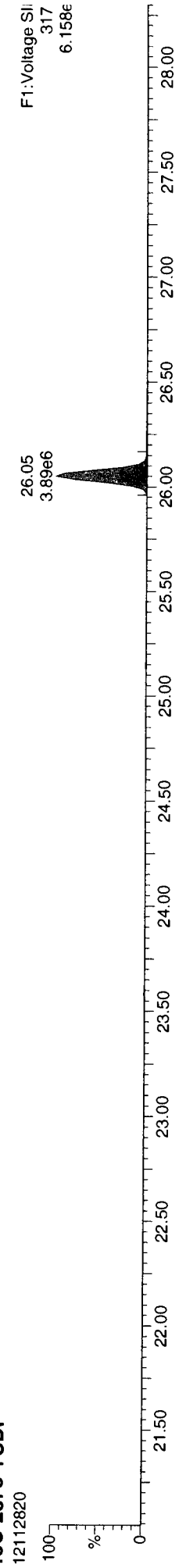
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:28:45 Pacific Standard Time

Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

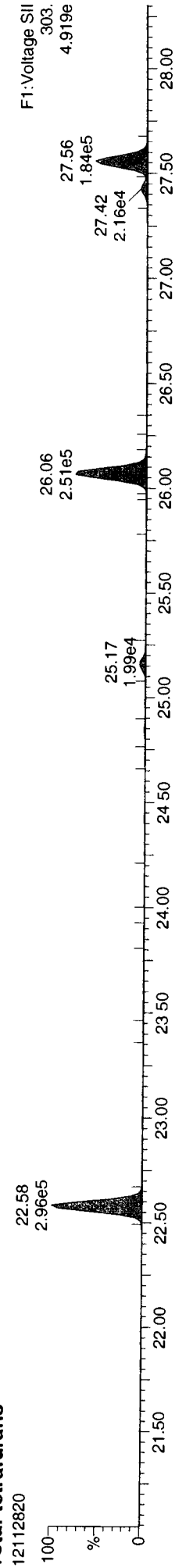
13C-2378-TCDF



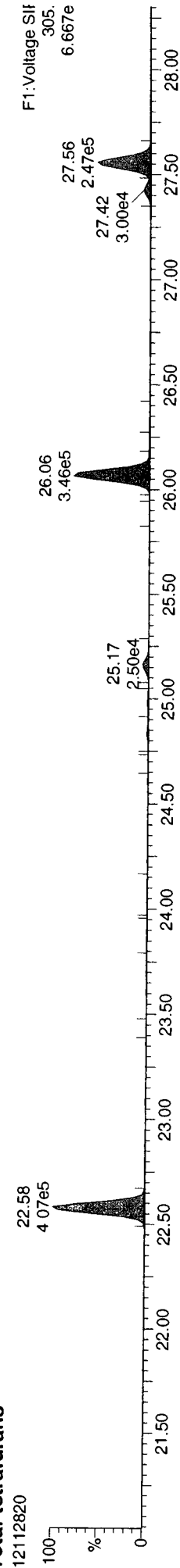
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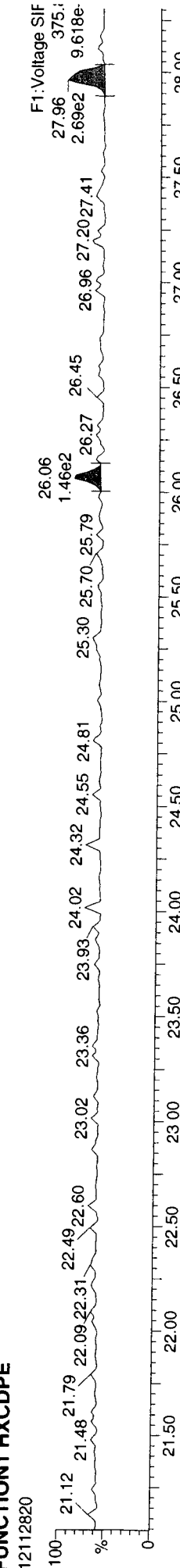
Total-tetrafurans



Total-tetrafurans

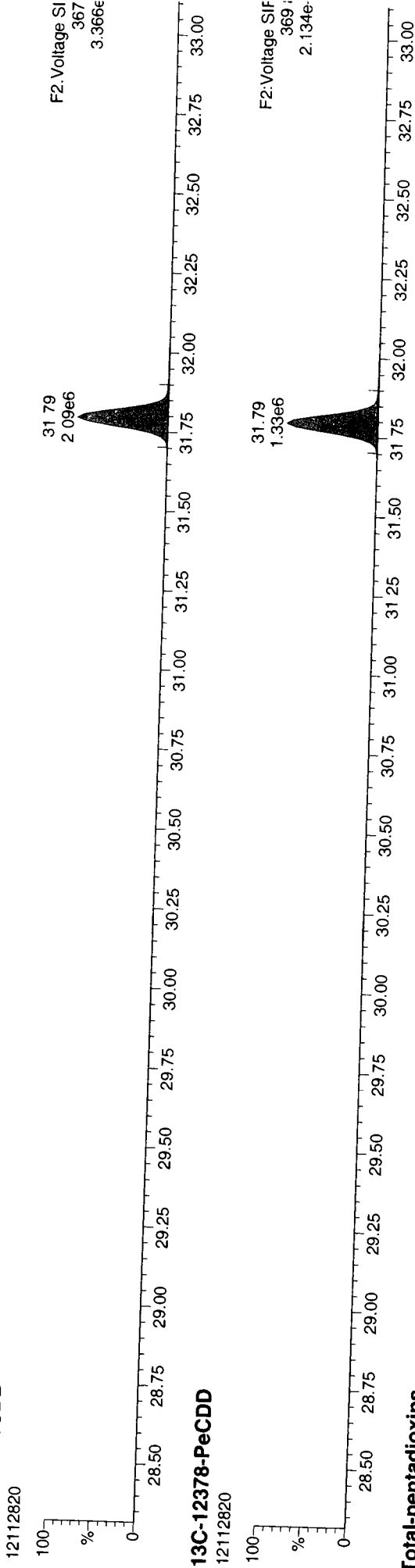


FUNCTION1 HXCDPE

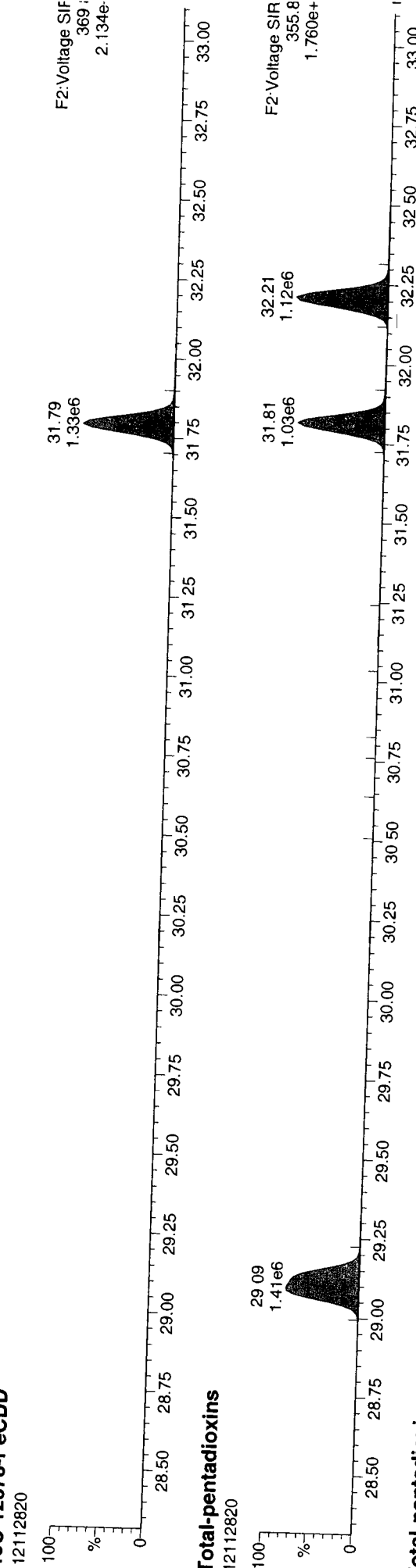


Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

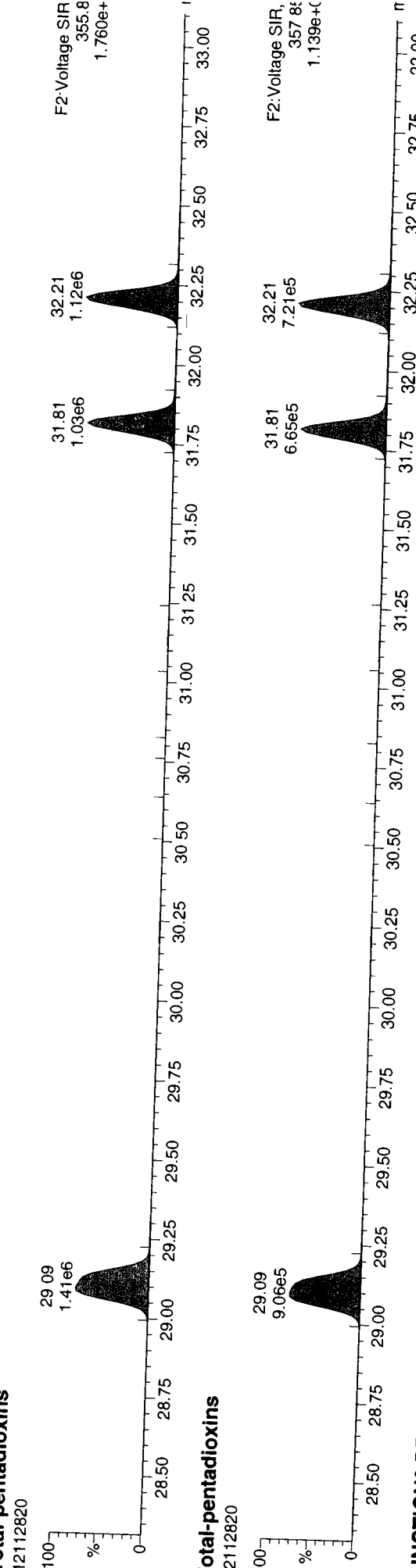
13C-12378-PeCDD



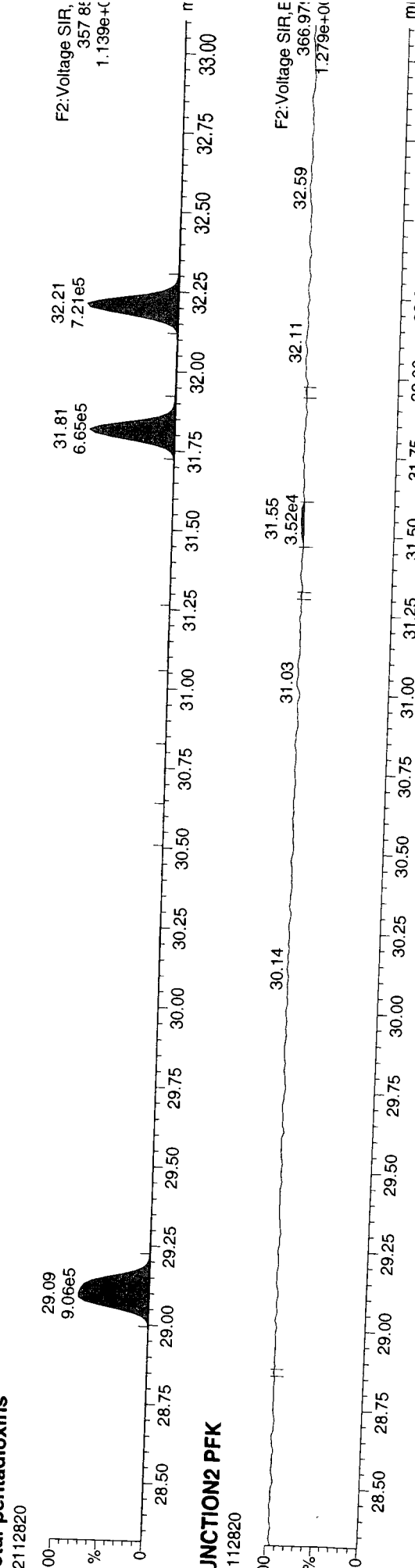
13C-12378-PeCDD



Total-pentadioxins



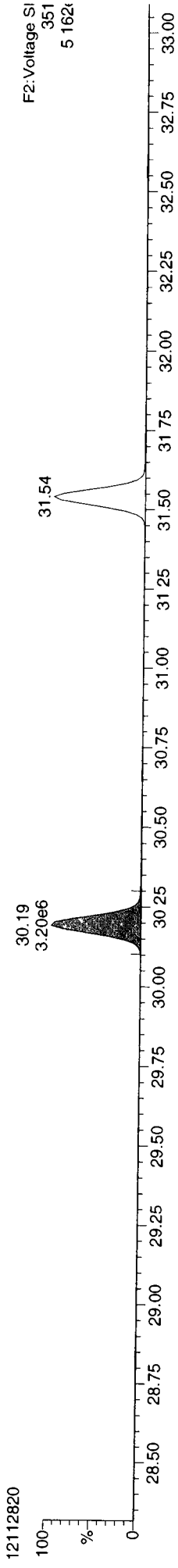
Total-pentadioxins



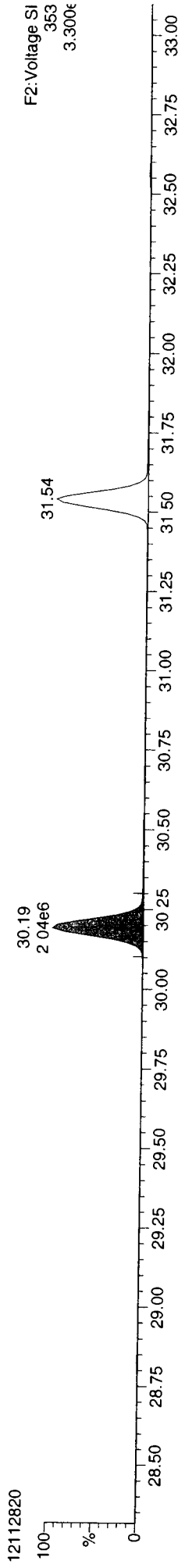
FUNCTION2 PFK

Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

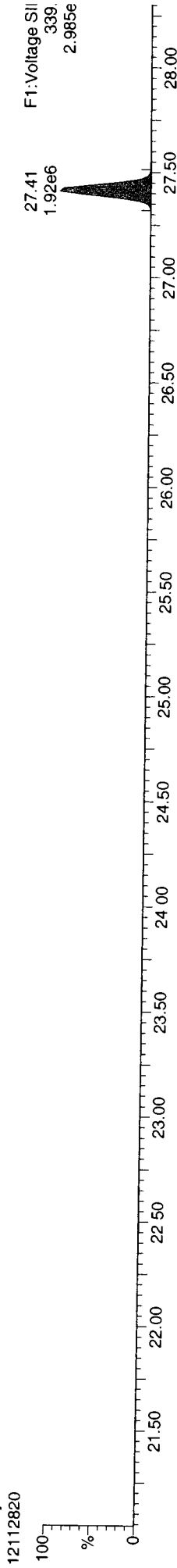
13C-12378-PeCDF



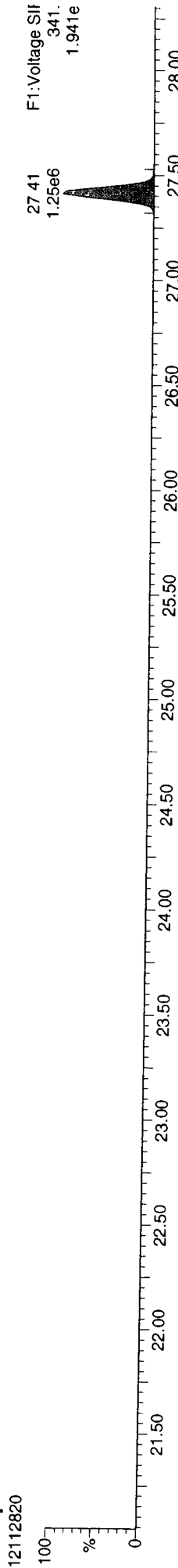
13C-12378-PeCDF



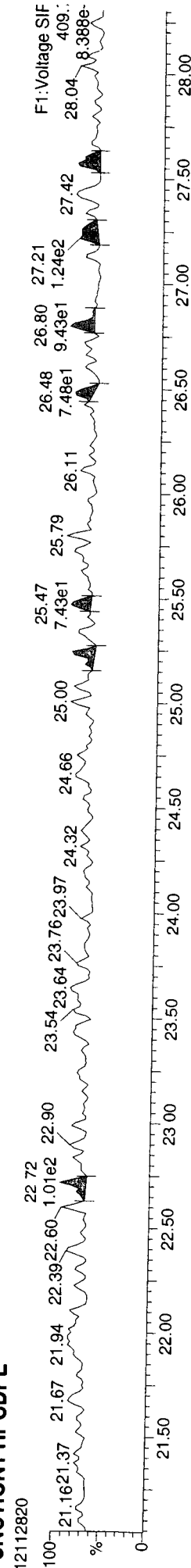
Total-penta1



Total-penta1



FUNCTION1 HPCDPE



Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



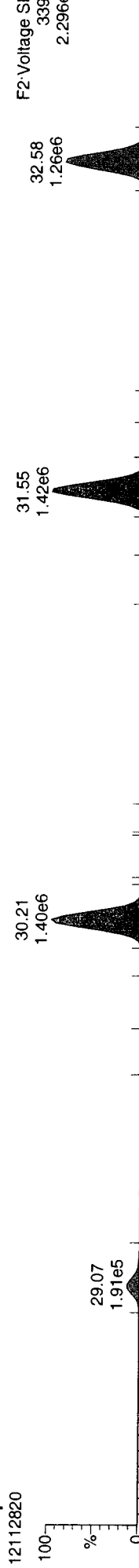
F2: Voltage Si  
351  
5 162

13C-23478-PeCDF



F2: Voltage Si  
353  
3 300k

Total-pentafurans



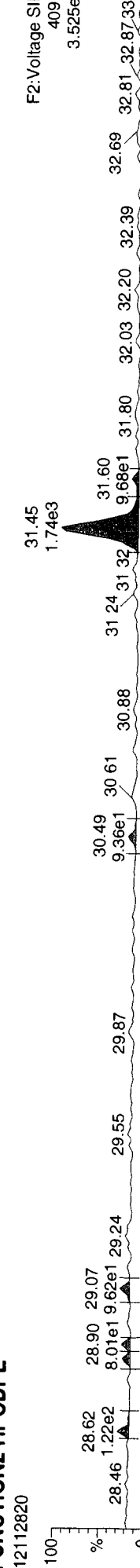
F2: Voltage Si  
339  
2.296k

Total-pentafurans



F2: Voltage Si  
341  
1.557k

FUNCTION2 HPCDPE



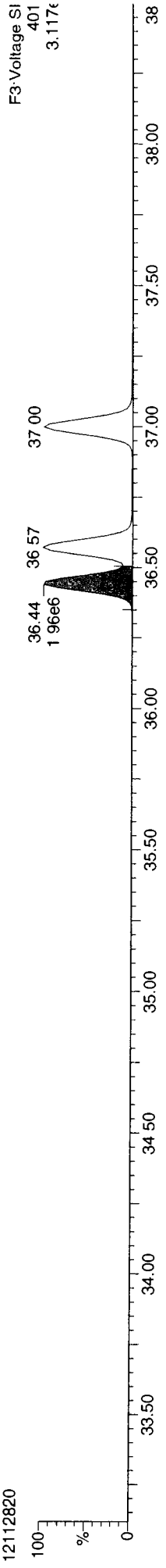
F2: Voltage Si  
409  
3.525e

12112820.D

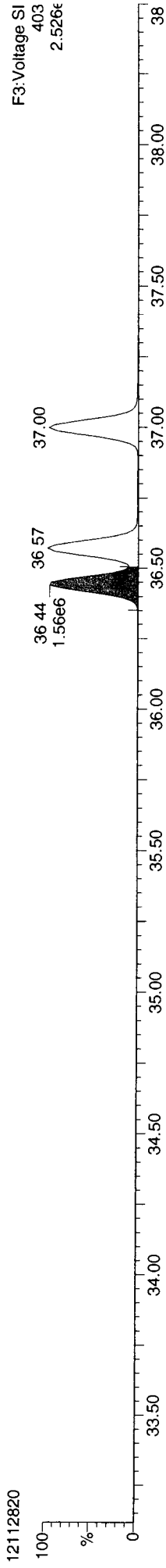
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:28:45 Pacific Standard Time

Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

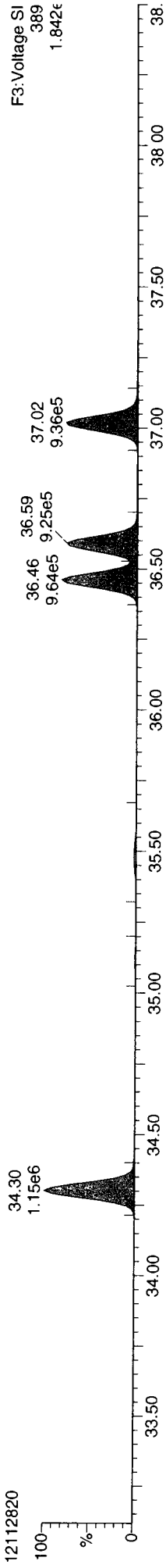
13C-123478-HxCDD



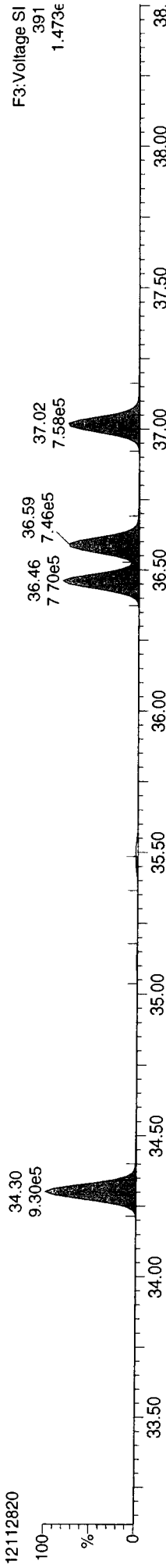
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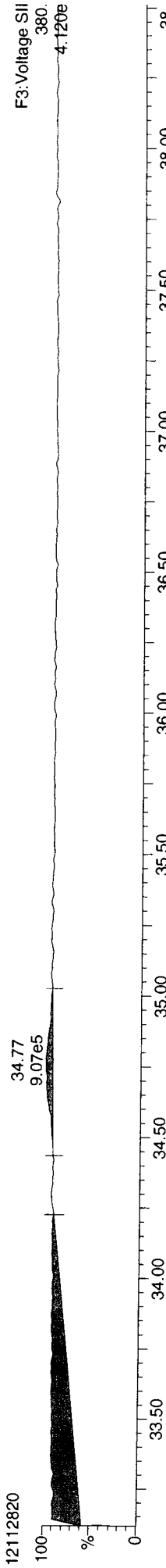
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK



12112820 12112820

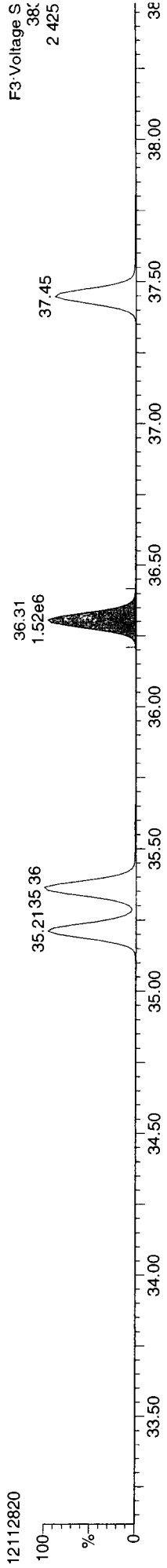


Quantify Sample Report MassLynx 4.1 SCN 714

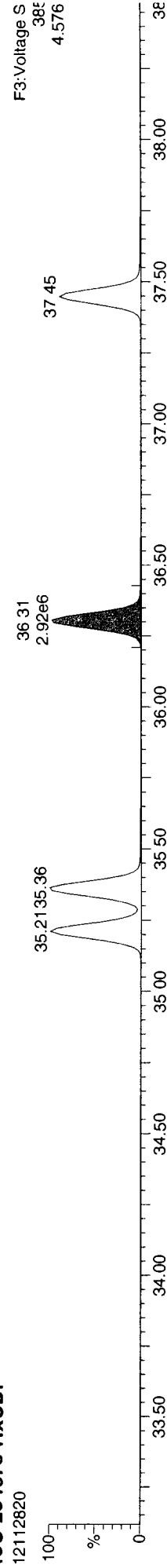
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Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
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Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

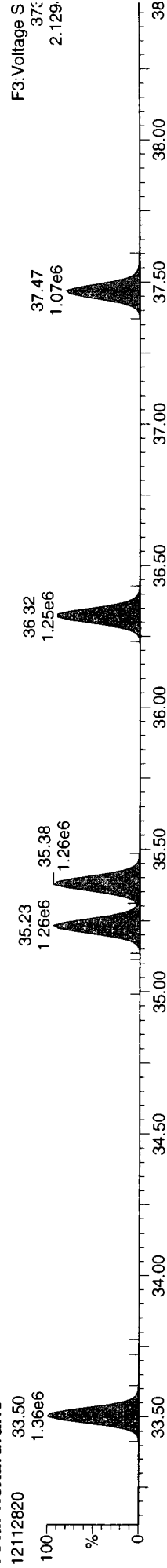
13C-234678-HxCDF



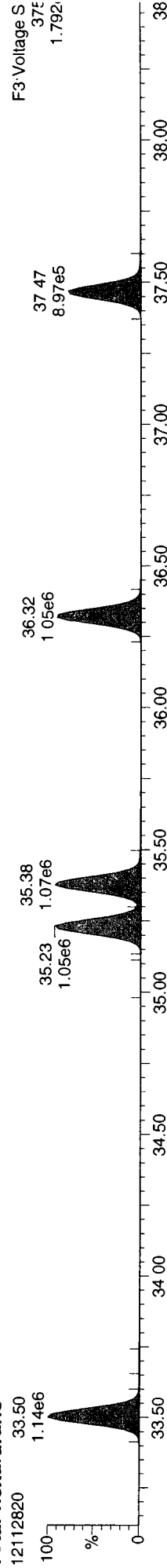
13C-234678-HxCDF



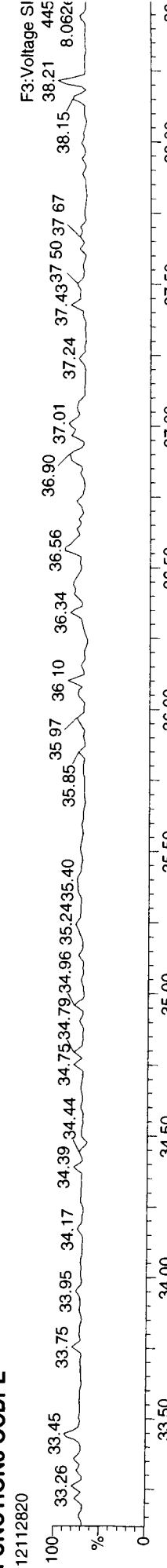
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDFE



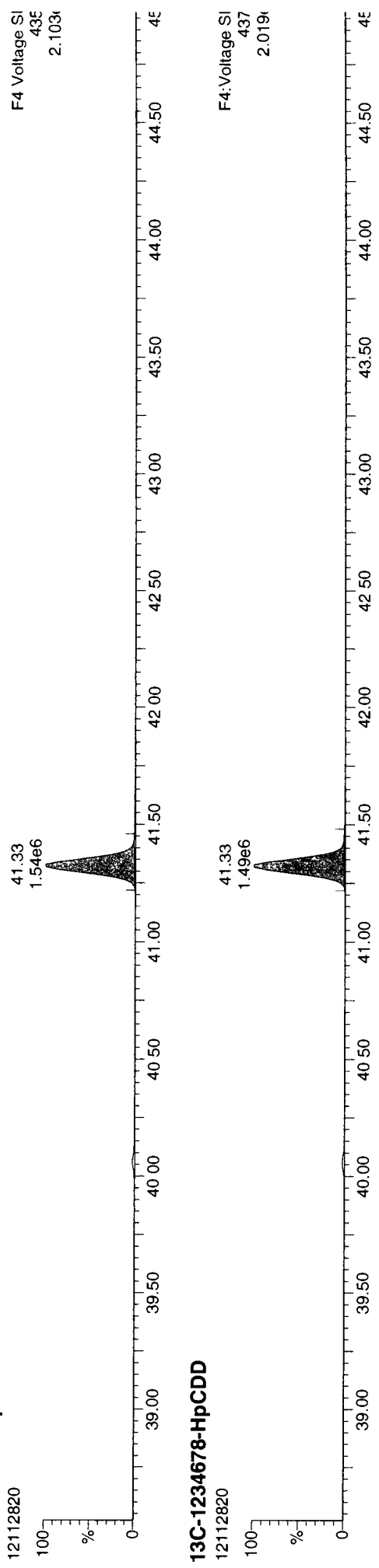
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Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time

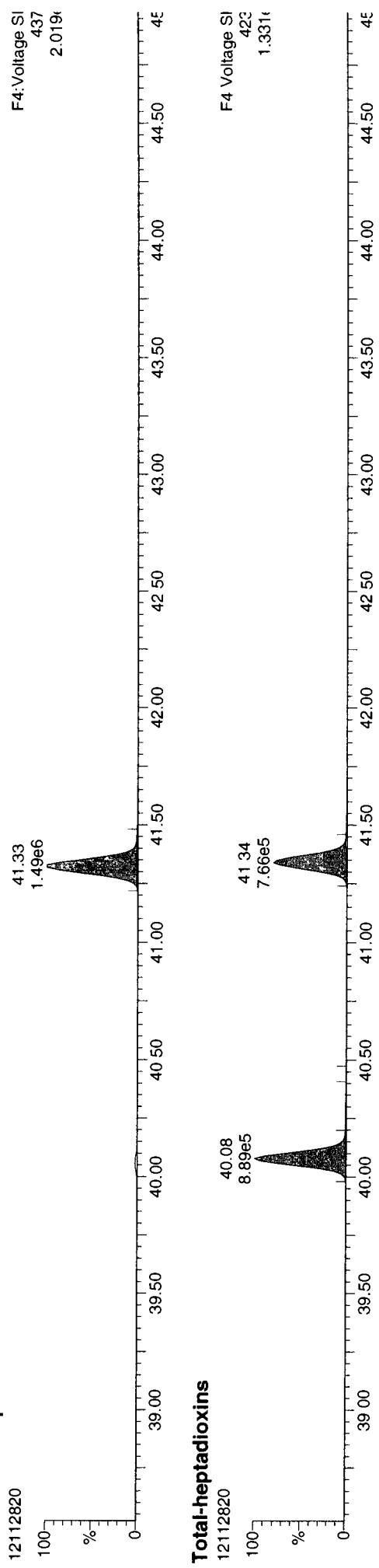
Printed: Monday, December 10, 2012 15:28:45 Pacific Standard Time

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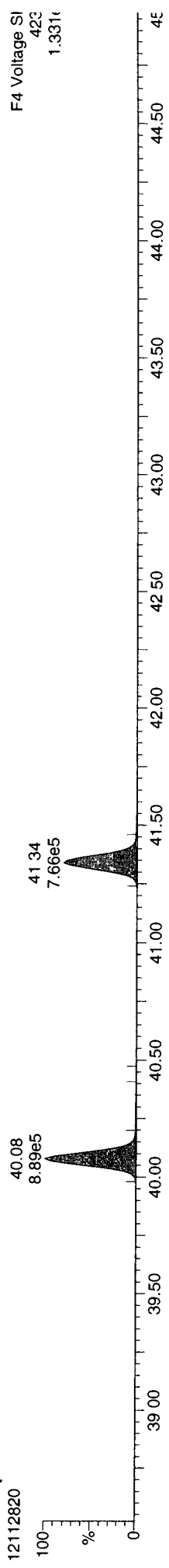
13C-1234678-HpCDD



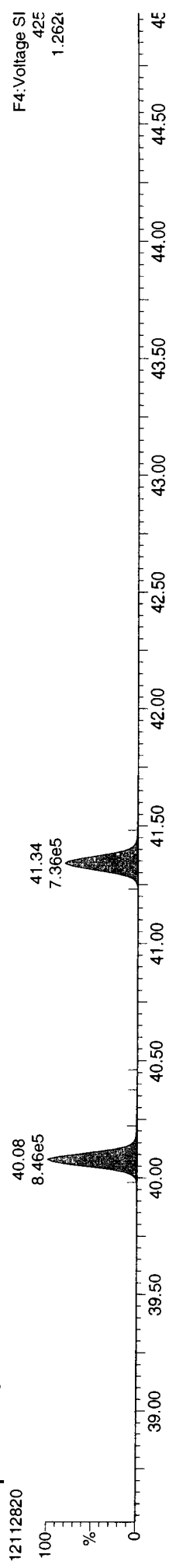
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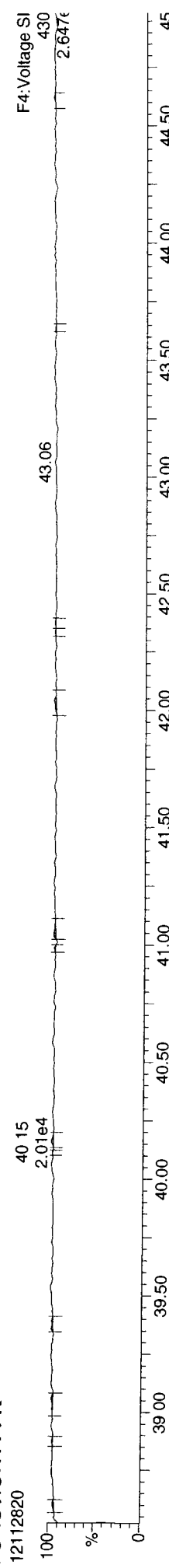
Total-heptadioxins



Total-heptadioxins



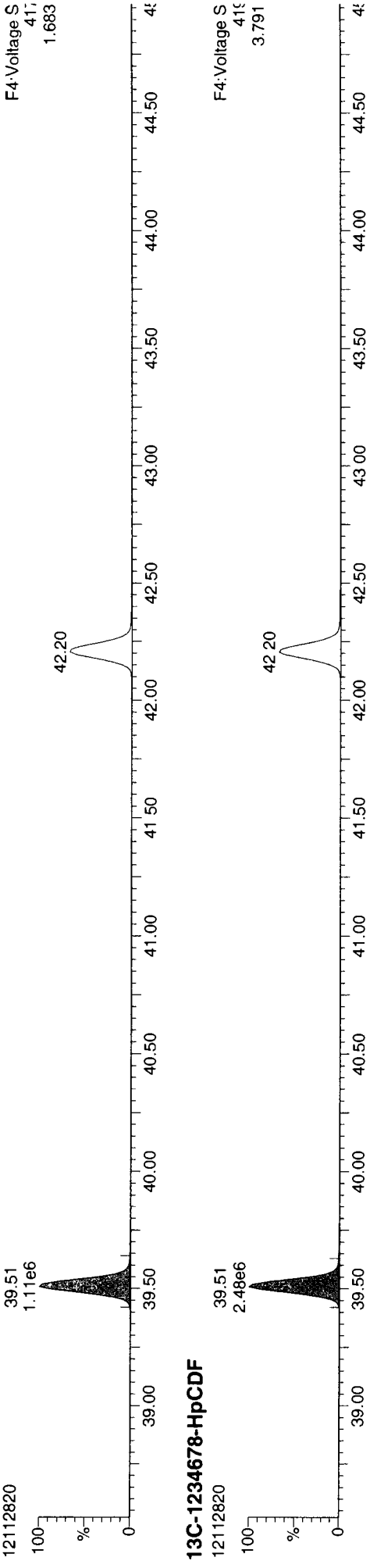
FUNCTION4 PFK



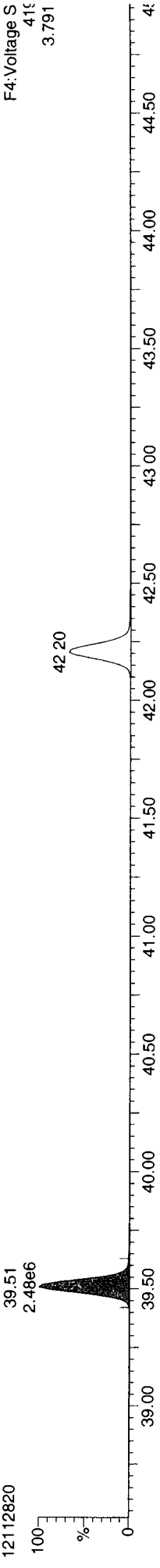
**Quantify Sample Report**     **MassLynx 4.1 SCN 714**  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:28:45 Pacific Standard Time

**Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk**

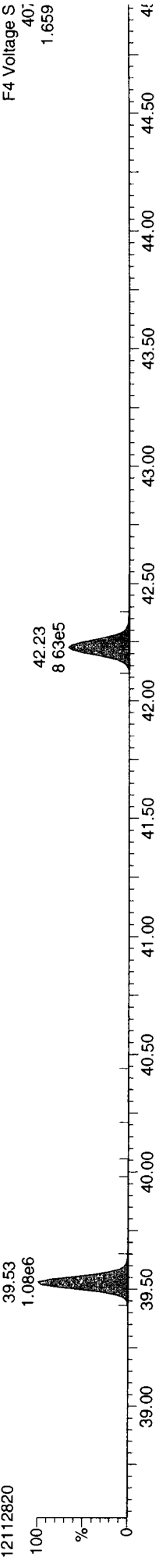
**13C-1234678-HpCDF**



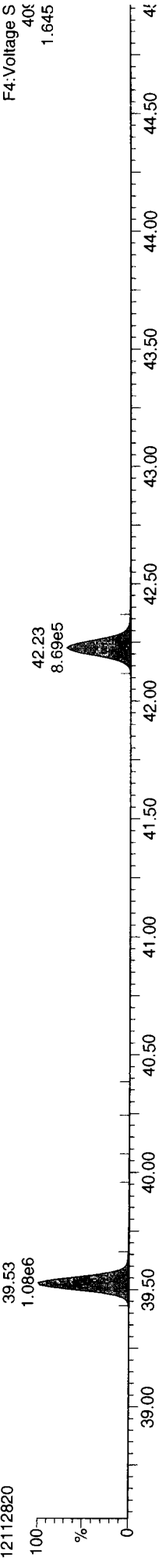
**13C-1234678-HpCDF**



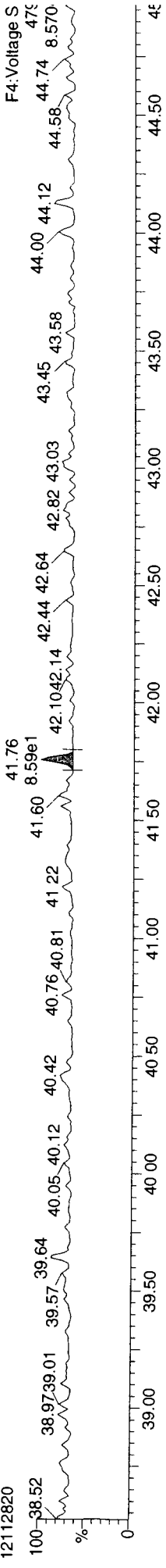
**Total-heptafulurans**



**Total-heptafulurans**



**FUNCTION4 NCDPE**

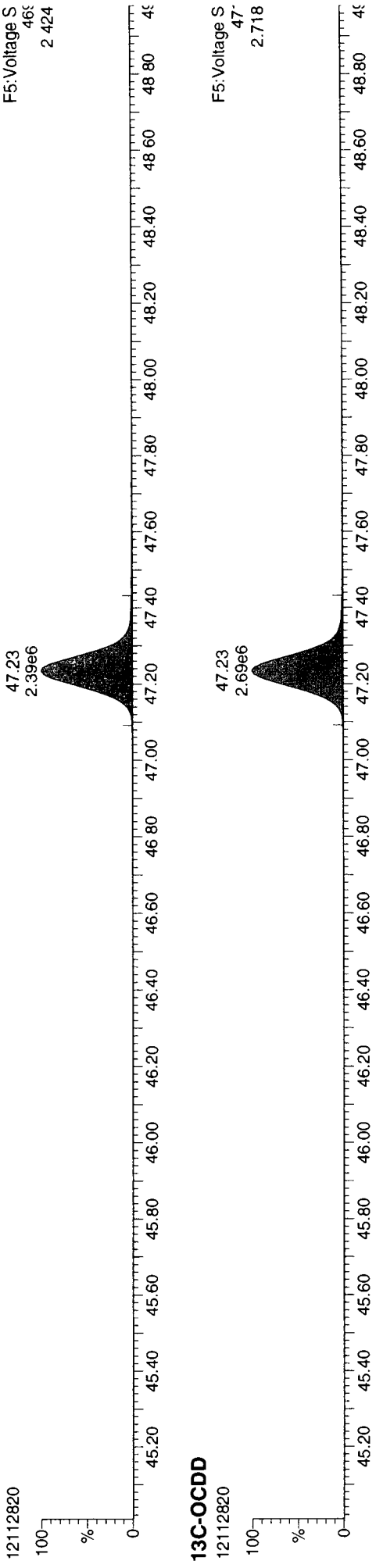


Quantify Sample Report

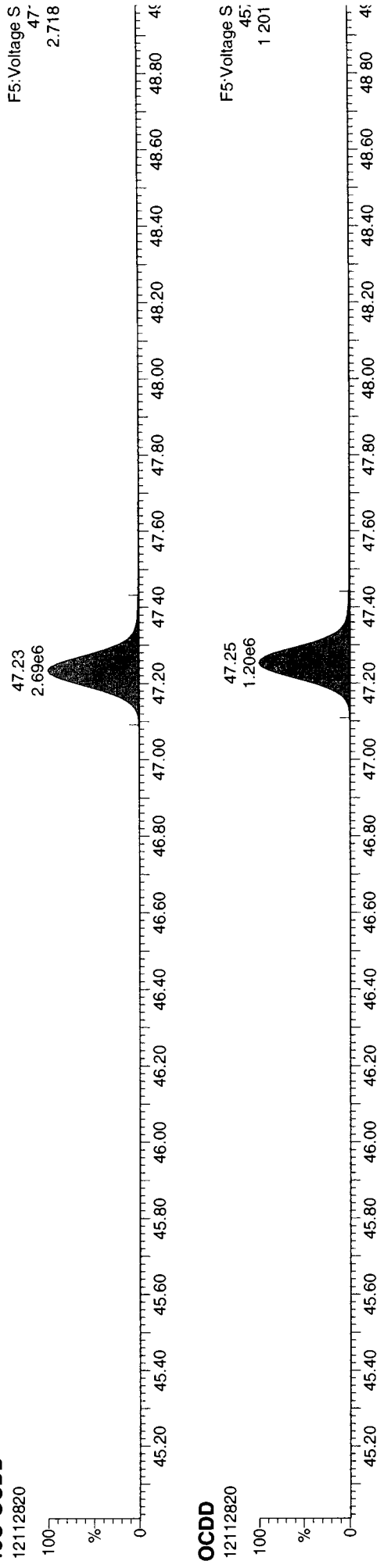
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:28:45 Pacific Standard Time

Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

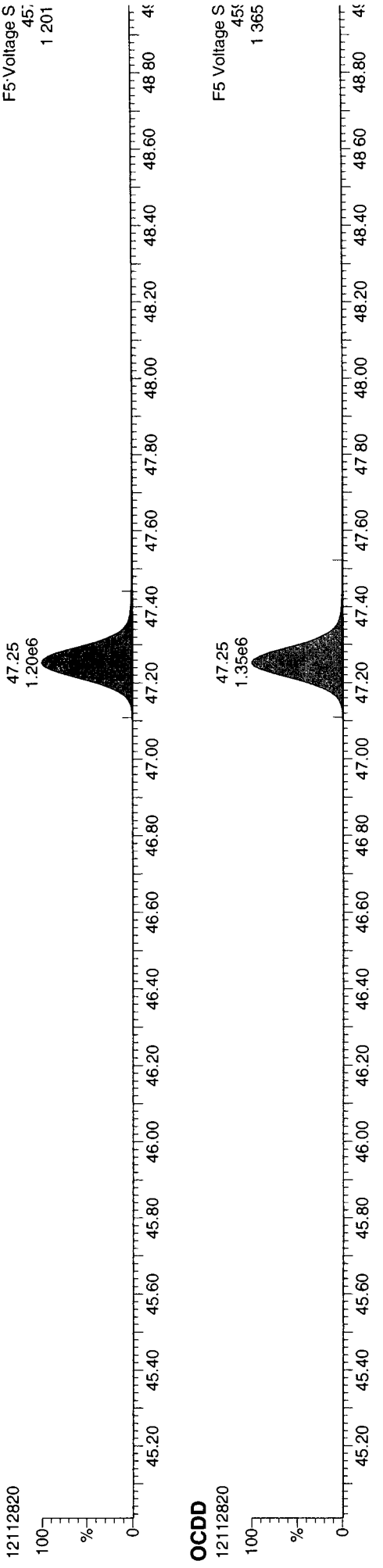
13C-OCDD



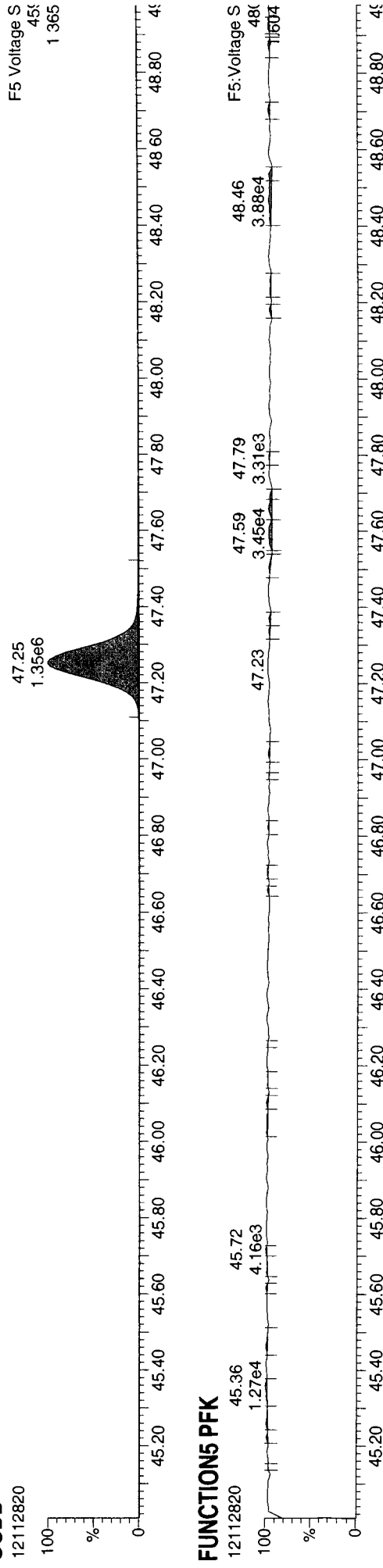
13C-OCDD



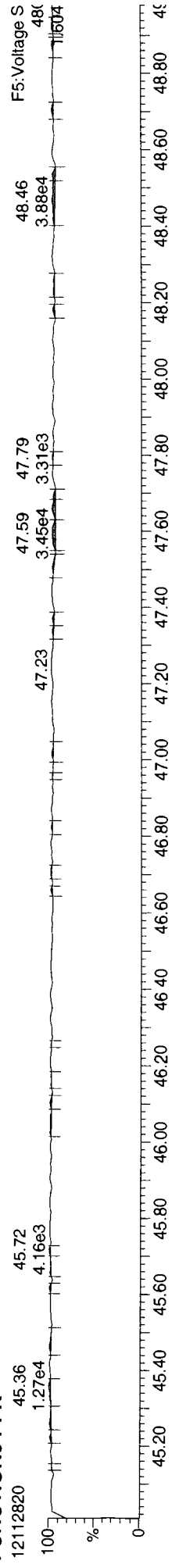
OCDD



OCDD



FUNCTION5 PFK

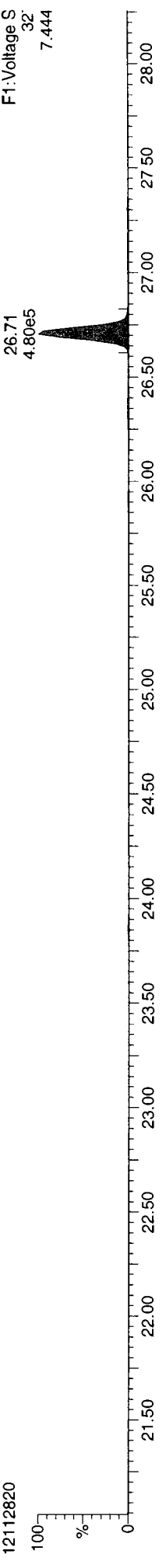


Quantify Sample Report  
Dataset: P:\DIOXIN8290.PRO\121128DATA2.qld  
Last Altered: Monday, December 10, 2012 15:27:44 Pacific Standard Time  
Printed: Monday, December 10, 2012 15:28:45 Pacific Standard Time

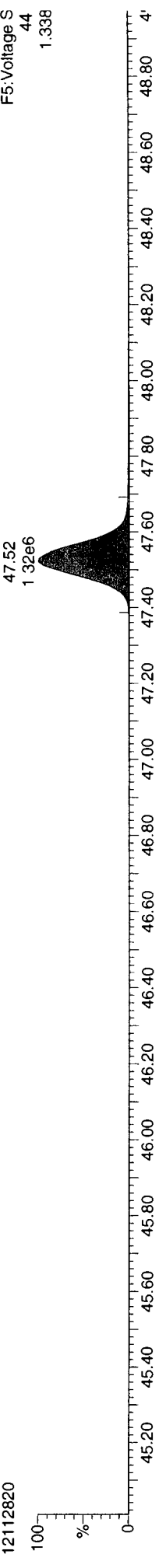
MassLynx 4.1 SCN 714

Name: 12112820, Date: 29-Nov-2012, Time: 02:35:10, ID: CS3, Conditions: AUTOSPEC01, User: pk

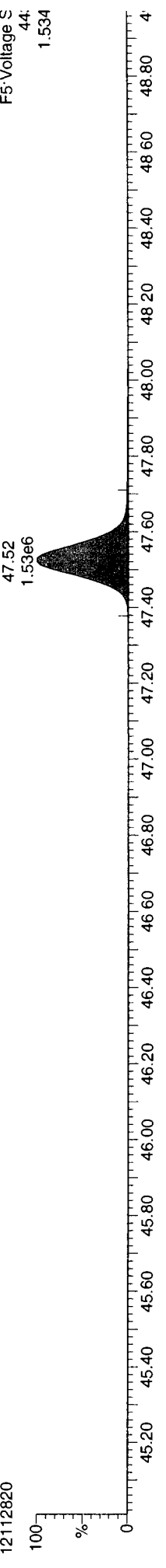
37CL-2378-TCDD



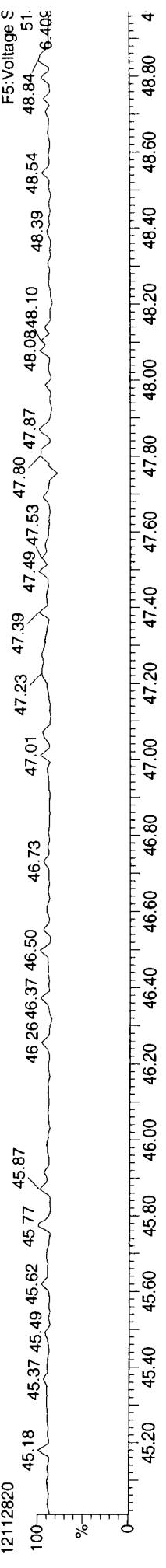
OCDF



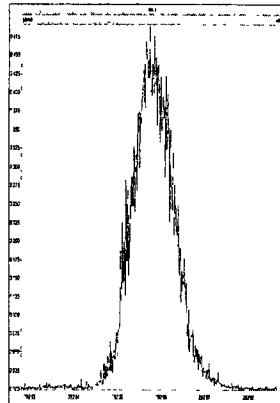
OCDF



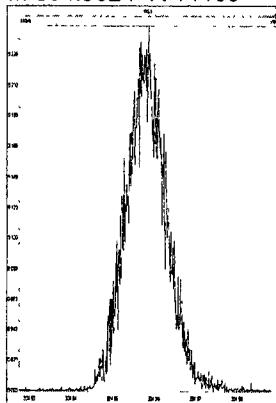
FUNCTION5 DCDPE



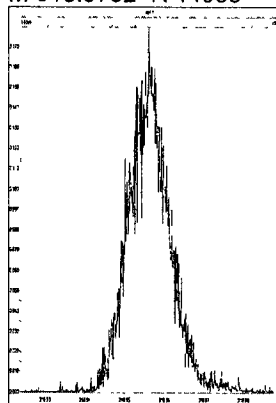
M 292.9824 R 13298



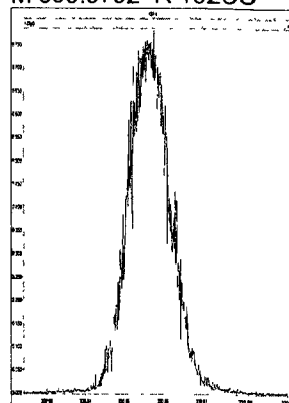
M 304.9824 R 14169



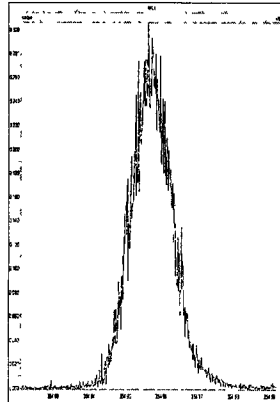
M 318.9792 R 14085



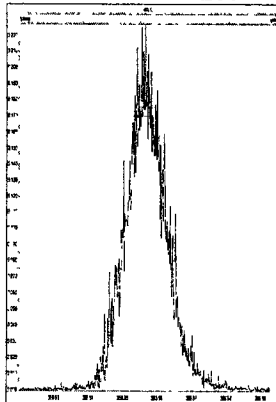
M 330.9792 R 13298



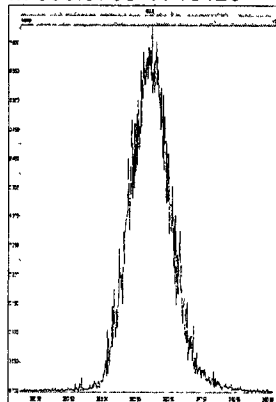
M 354.9792 R 13532



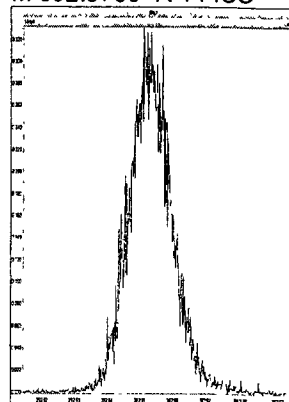
M 366.9792 R 14208



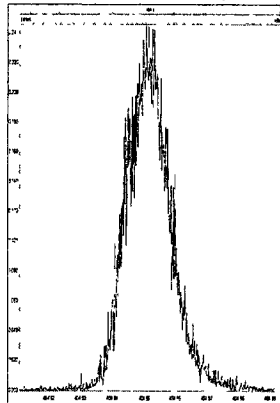
M 380.9760 R 13426



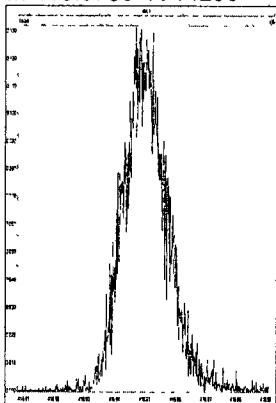
M 392.9760 R 14483



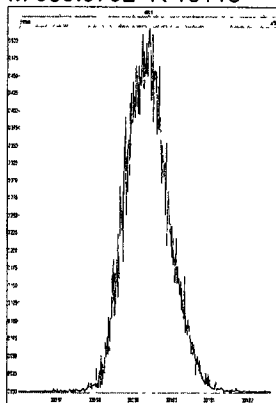
M 404.9760 R 13262



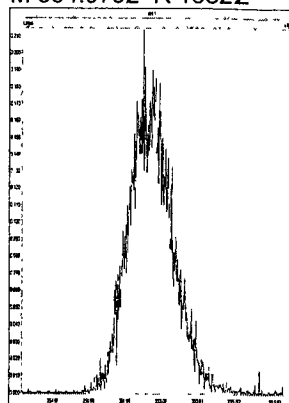
M 416.9760 R 14296



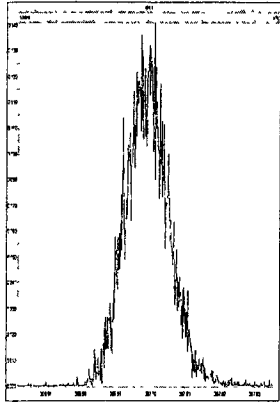
M 330.9792 R 13118



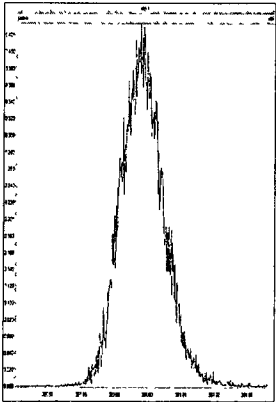
M 354.9792 R 13522



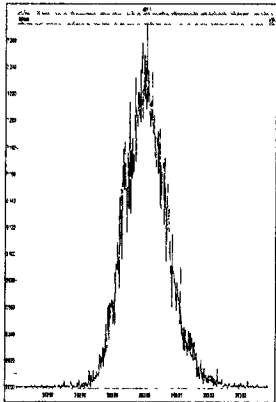
M 366.9792 R 14125



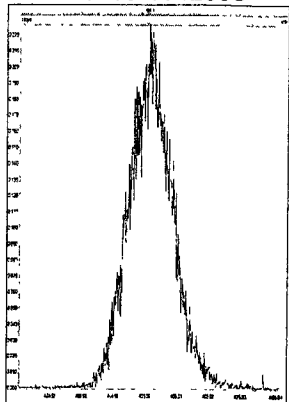
M 380.9760 R 12986



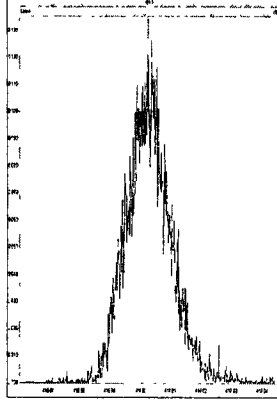
M 392.9760 R 13498



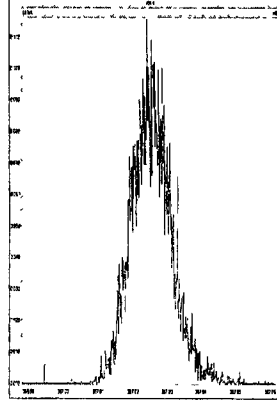
M 404.9760 R 12886



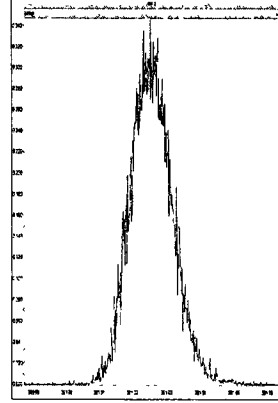
M 416.9760 R 13736



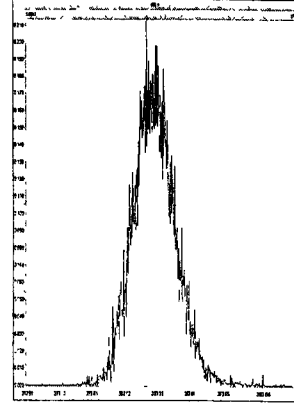
M 366.9792 R 14792



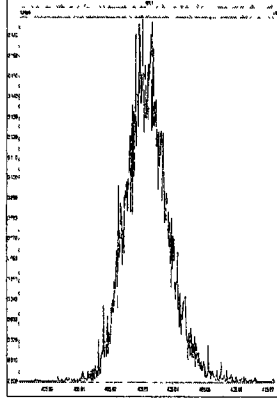
M 380.9760 R 13262



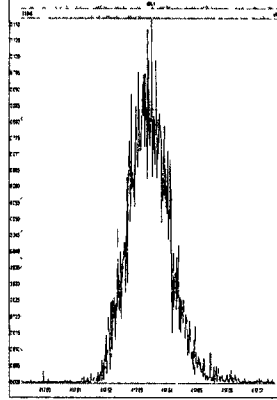
M 392.9760 R 13930



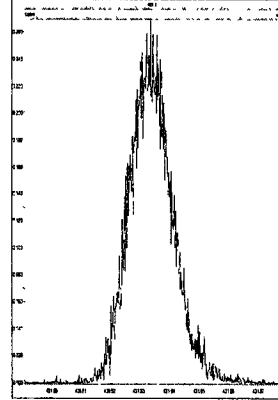
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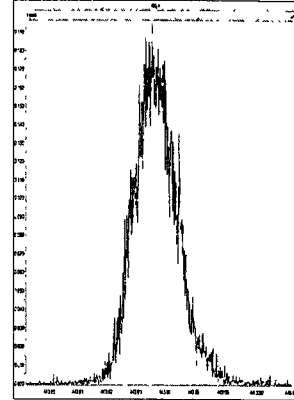
M 416.9760 R 14450



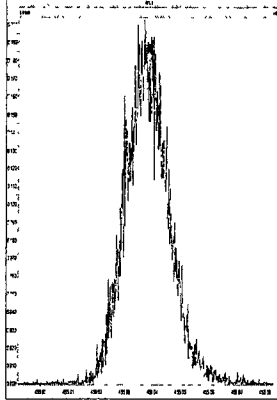
M 430.9728 R 13927



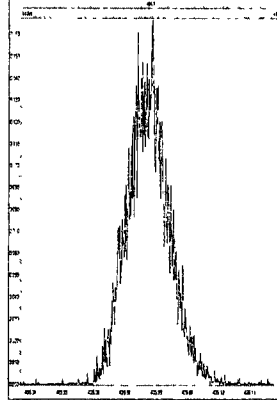
M 442.9728 R 13838



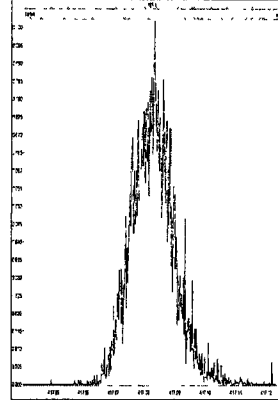
M 454.9728 R 14127



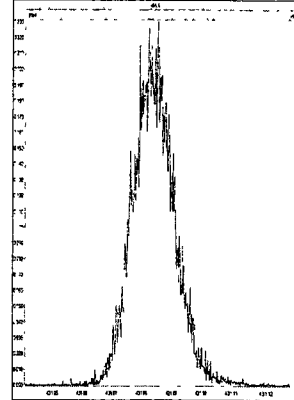
M 404.9760 R 14520



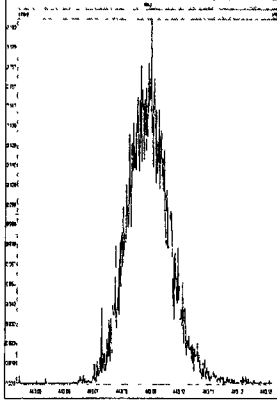
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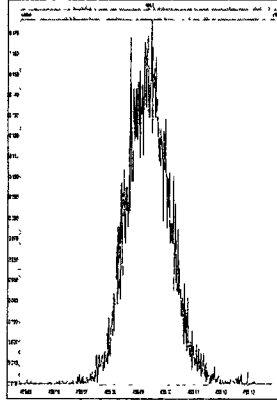
M 430.9728 R 13298



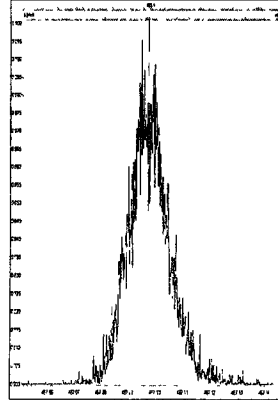
M 442.9728 R 14166



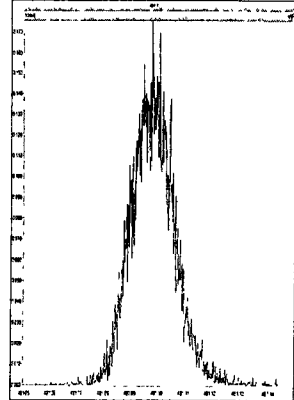
M 454.9728 R 13880



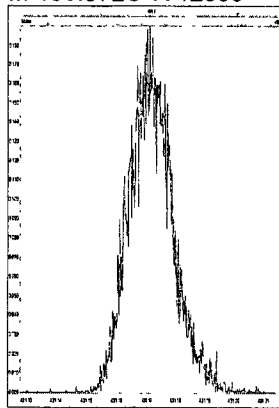
M 466.9728 R 14164



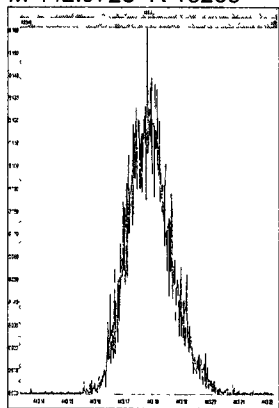
M 480.9696 R 13513



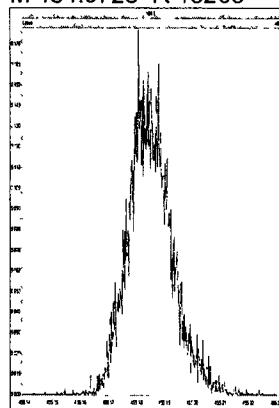
M 430.9728 R 12986



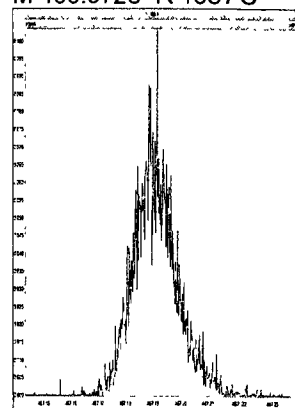
M 442.9728 R 13263



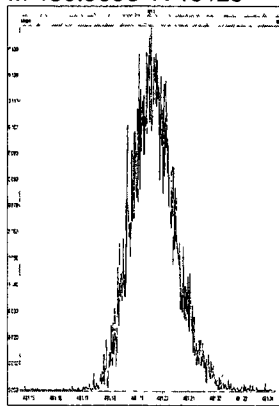
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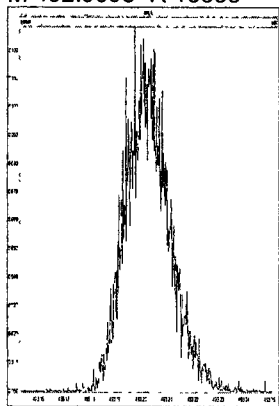
M 466.9728 R 13976



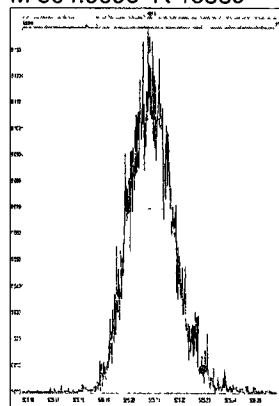
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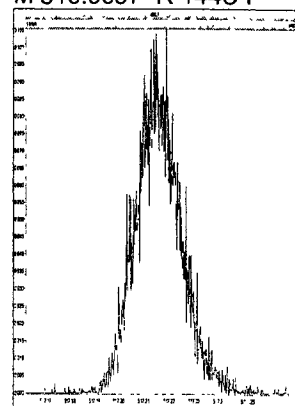
M 492.9696 R 13333



M 504.9696 R 13889



M 516.9697 R 14481





Dataset: P:\DIOXIN8290.PRO\121128DATA3.qld  
Last Altered: Monday, December 10, 2012 16:32:24 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 09:18:04 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.078	1.001	2.28e5	3.19e5	0.877	0.714	0.770	2387.2	NO	9.729	9.729
12378-PeCDF	30.212	1.000	1.24e6	8.49e5	0.896	1.466	1.550	4771.0	NO	49.499	49.499
23478-PeCDF	31.560	1.001	1.26e6	8.56e5	0.926	1.471	1.550	4728.6	NO	49.184	49.184
123478-HxCDF	35.232	1.001	1.03e6	8.78e5	1.068	1.171	1.240	4263.0	NO	49.277	49.277
234678-HxCDF	36.317	1.000	1.02e6	8.70e5	1.037	1.171	1.240	4070.4	NO	49.767	49.767
123678-HxCDF	35.375	1.000	1.07e6	8.92e5	1.035	1.196	1.240	4252.9	NO	49.944	49.944
123789-HxCDF	37.468	1.001	8.60e5	7.36e5	0.987	1.168	1.240	3542.4	NO	49.900	49.900
1234678-HpCDF	39.529	1.000	9.03e5	9.08e5	1.232	0.994	1.050	5091.0	NO	49.601	49.601
1234789-HpCDF	42.225	1.000	6.87e5	7.20e5	1.215	0.954	1.050	3343.2	NO	49.905	49.905
OCDF	47.531	1.006	1.05e6	1.21e6	1.138	0.865	0.890	7629.4	NO	98.756	98.756
2378-TCDD	26.706	1.001	1.81e5	2.33e5	1.049	0.777	0.770	1827.4	NO	9.817	9.817
12378-PeCDD	31.812	1.001	8.97e5	5.78e5	0.998	1.551	1.550	4412.4	NO	48.760	48.760
123478-HxCDD	36.460	1.000	7.92e5	6.34e5	0.971	1.248	1.240	4866.1	NO	50.701	50.701
123678-HxCDD	36.591	1.001	7.66e5	6.19e5	0.918	1.238	1.240	4681.6	NO	50.129	50.129
123789-HxCDD	37.019	1.012	7.55e5	6.22e5	0.932	1.213	1.240	4476.6	NO	50.025	50.025
1234678-HpCDD	41.338	1.000	6.35e5	6.04e5	1.017	1.052	1.050	3384.8	NO	49.385	49.385
OCDD	47.253	1.000	9.44e5	1.05e6	1.008	0.896	0.890	6159.8	NO	98.728	98.728
13C-2378-TCDF	26.048	1.006	2.81e6	3.61e6	1.473	0.779	0.770	9938.8	NO	106.092	106.092
13C-12378-PeCDF	30.201	1.167	2.87e6	1.84e6	1.148	1.562	1.550	10807.6	NO	99.816	99.816
13C-23478-PeCDF	31.538	1.218	2.85e6	1.80e6	1.113	1.586	1.550	10874.4	NO	101.596	101.596
13C-123478-HxCDF	35.210	0.952	1.22e6	2.40e6	1.209	0.507	0.510	4980.6	NO	101.826	101.826
13C-123678-HxCDF	35.363	0.956	1.31e6	2.49e6	1.269	0.525	0.510	5399.9	NO	101.716	101.716
13C-234678-HxCDF	36.306	0.981	1.24e6	2.42e6	1.236	0.513	0.510	5126.2	NO	100.716	100.716
13C-123789-HxCDF	37.446	1.012	1.12e6	2.12e6	1.107	0.531	0.510	4561.1	NO	99.674	99.674
13C-1234678-HpCDF	39.518	1.068	9.23e5	2.04e6	1.051	0.452	0.440	4826.5	NO	95.904	95.904
13C-1234789-HpCDF	42.215	1.141	7.20e5	1.60e6	0.815	0.450	0.440	3331.2	NO	96.846	96.846
13C-1234-TCDD	25.984	0.000	1.81e6	2.29e6	1.000	0.790	0.770	8150.6	NO	100.000	100.000
13C-2378-TCDD	26.691	1.031	1.76e6	2.25e6	0.946	0.780	0.770	7750.9	NO	103.323	103.323
13C-12378-PeCDD	31.790	1.228	1.85e6	1.18e6	0.721	1.572	1.550	18983.3	NO	102.402	102.402
13C-123478-HxCDD	36.449	0.985	1.63e6	1.27e6	0.991	1.278	1.240	9981.4	NO	99.453	99.453
13C-123678-HxCDD	36.569	0.988	1.66e6	1.35e6	1.025	1.228	1.240	9952.5	NO	99.935	99.935
13C-1234678-HpCDD	41.327	1.117	1.26e6	1.20e6	0.866	1.050	1.050	6264.2	NO	96.924	96.924
13C-OCDD	47.235	1.277	1.89e6	2.12e6	0.769	0.889	0.890	8764.5	NO	177.425	177.425

**Quantify Sample Summary Report**  
 MassLynx 4.1 SCN 714  
 Dataset: P:\DIOXIN8290.PRO\121128DATA3.qld  
 Last Altered: Monday, December 10, 2012 16:32:24 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 09:18:04 Pacific Standard Time

**Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk**

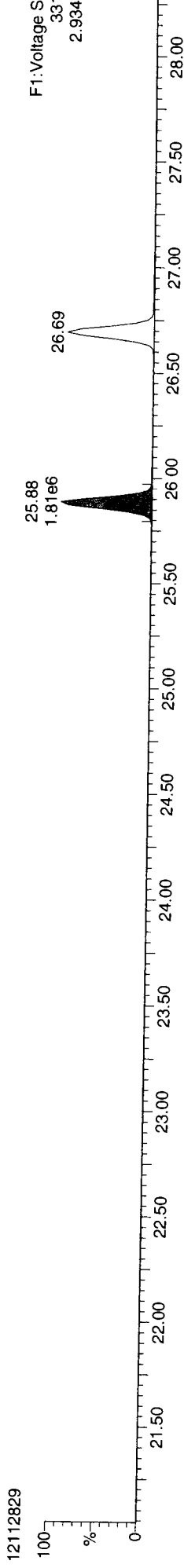
13C-123789-HxCDD	36.997	0.000	1.63e6	1.31e6	1.000	1.247	1.240	9669.1	NO	100.000
Total-tetrafurans			7.17e5		0.877					30.465
Total-penta1			1.79e6							69.042
Total-pentafurans			3.80e6		0.911					150.044
Total-hexafurans			5.16e6		1.032					258.057
Total-heptafurans			1.59e6		1.223					99.730
Total-Furans			1.41e7		1.041					706.119
Total-tetradiioxins			9.98e5		1.049					54.314
Total-pentadiioxins			3.16e6		0.998					171.657
Total-hexadiioxins			3.30e6		0.940					216.011
Total-heptadiioxins			1.36e6		1.017					105.614
Total-Dioxins			1.41e7		0.985					706.119
Total-TEQ			2.82e7							1412.237
37CL-2378-TCDD	26.706	1.032	4.48e5		1.044			3401.2		10.461
FUNCTION1 PFK			6.55e5							
FUNCTION2 PFK			0.00e0							0.000
FUNCTION3 PFK			2.60e4							
FUNCTION4 PFK			8.74e5							
FUNCTION5 PFK			5.38e5							
FUNCTION1 HXCDPE			3.35e2							0.000
FUNCTION1 HPCDPE			6.54e2							0.000
FUNCTION2 HPCDPE			2.00e3							0.000
FUNCTION3 OCDPE			0.00e0							0.000
FUNCTION4 NCDPE			0.00e0							
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\121128DATA3.qld  
Last Altered: Monday, December 10, 2012 16:32:24 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 09:18:04 Pacific Standard Time

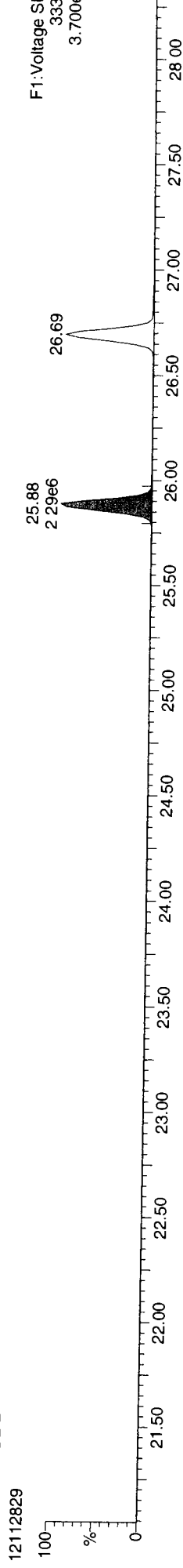
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin\121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

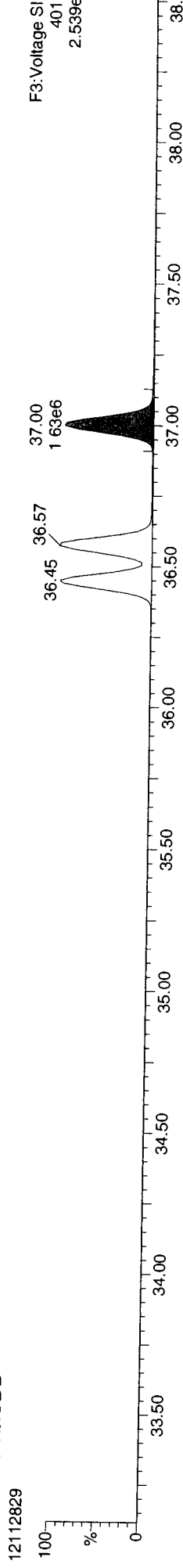
13C-1234-TCDD



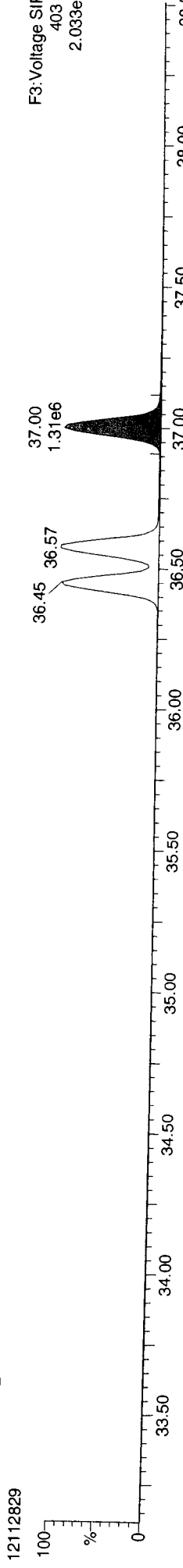
13C-1234-TCDD



13C-123789-HxCDD

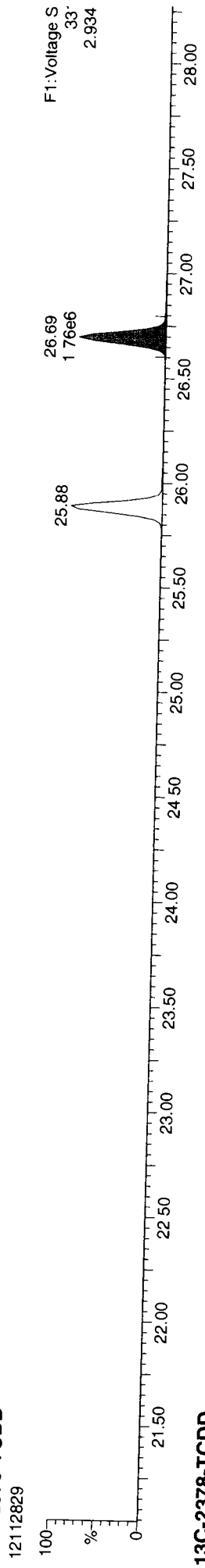


13C-123789-HxCDD

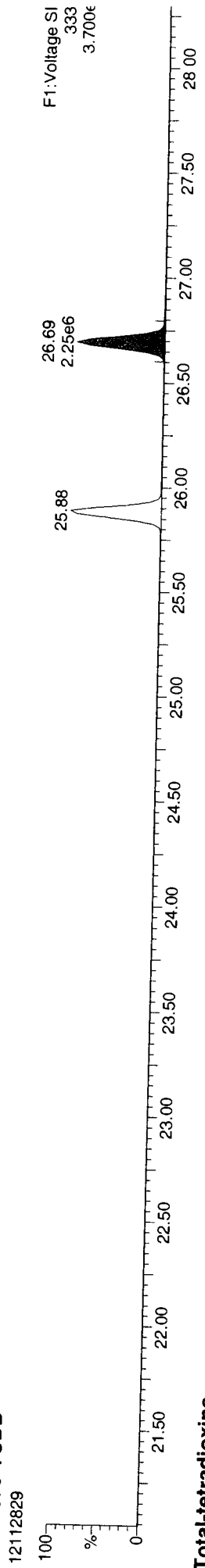


Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

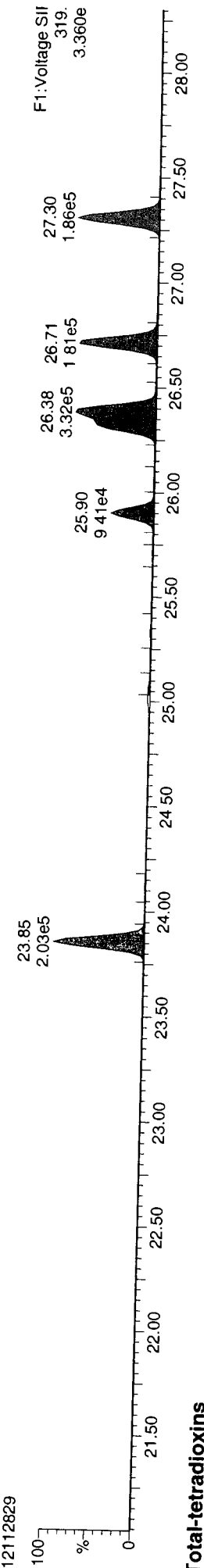
13C-2378-TCDD



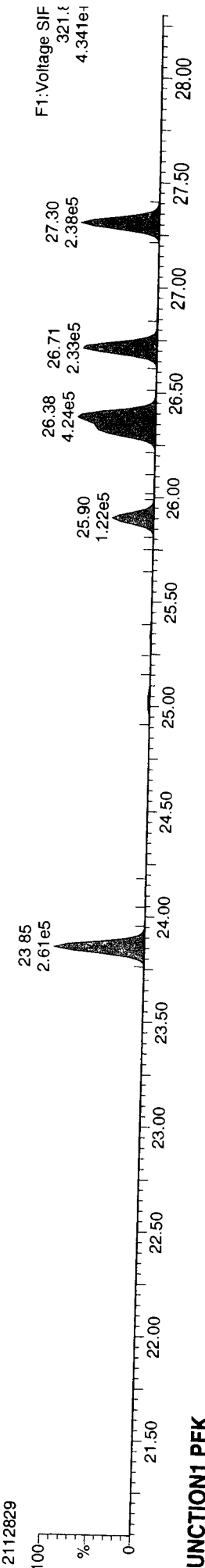
13C-2378-TCDD



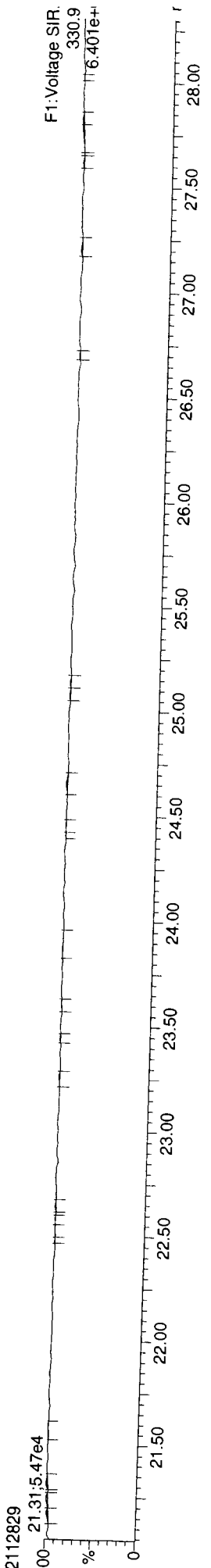
Total-tetradioxins



Total-tetradioxins



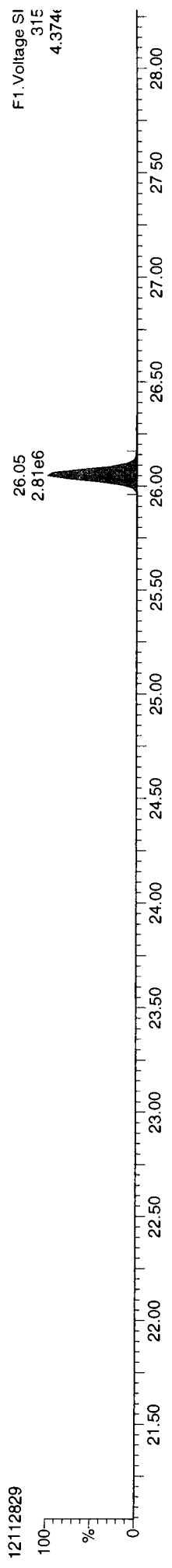
FUNCTION1 PFK



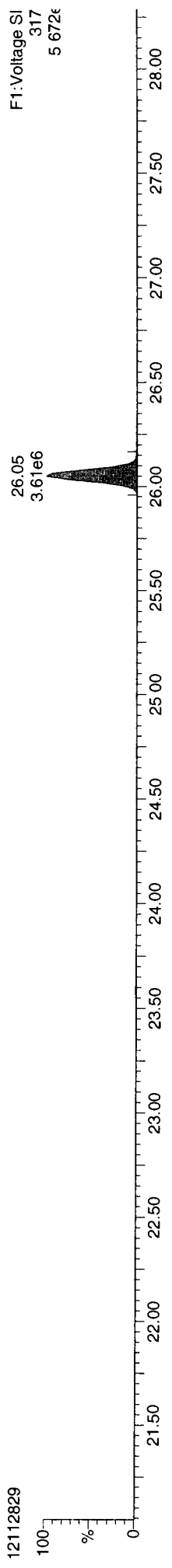
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA3.qld  
Last Altered: Monday, December 10, 2012 16:32:24 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 09:18:04 Pacific Standard Time

Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

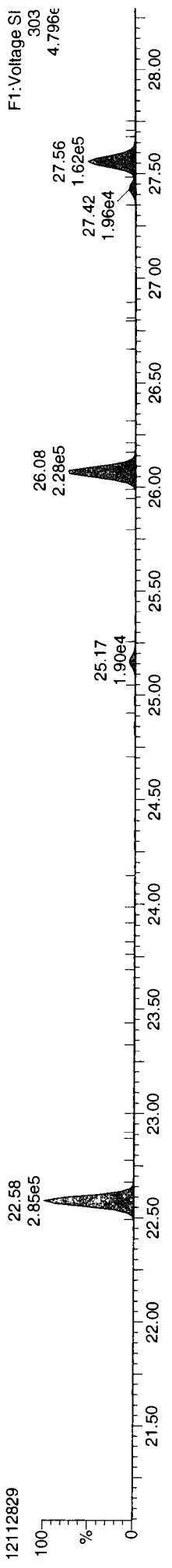
13C-2378-TCDF



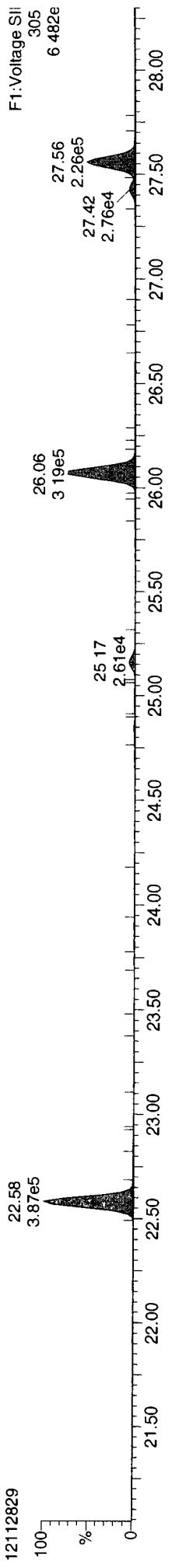
13C-2378-TCDF



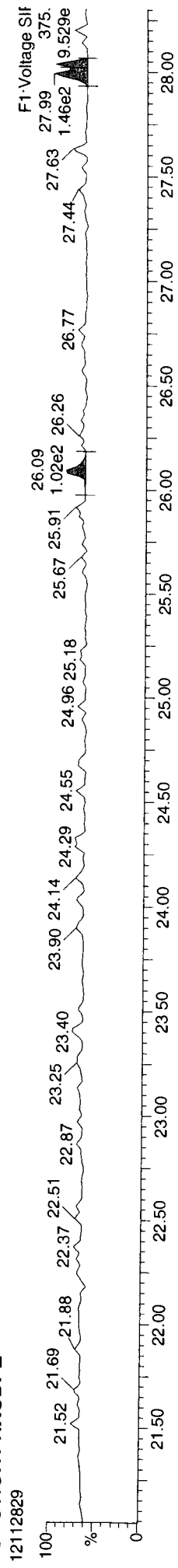
Total-tetrafurans



Total-tetrafurans



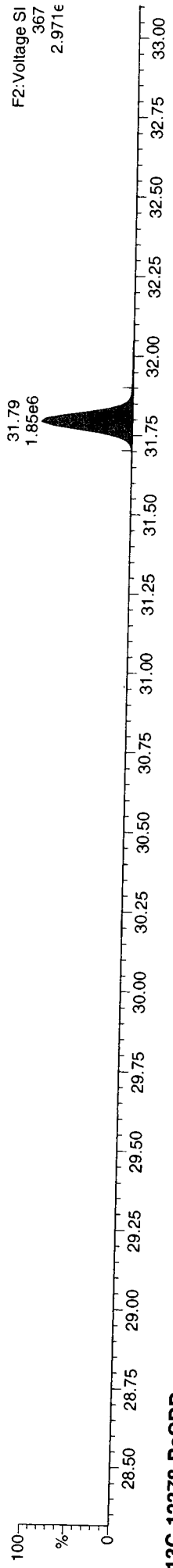
FUNCTION1 HXCDFE



Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

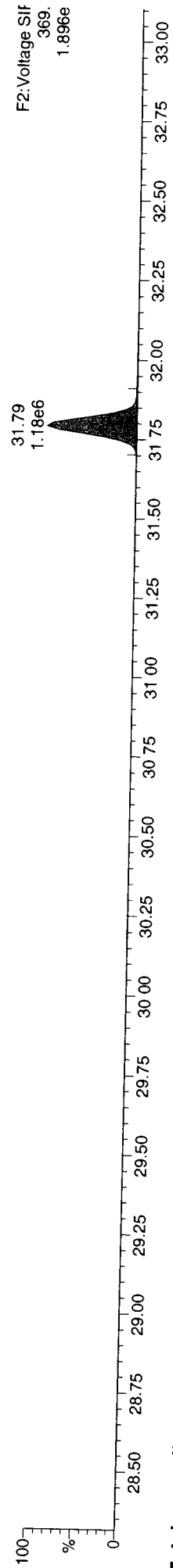
13C-12378-PeCDD

12112829



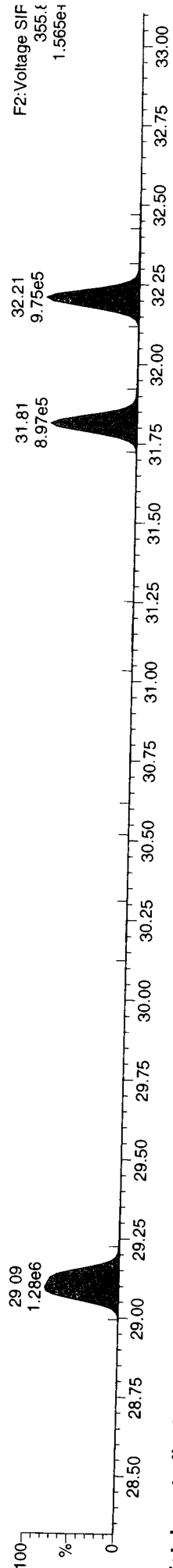
13C-12378-PeCDD

12112829



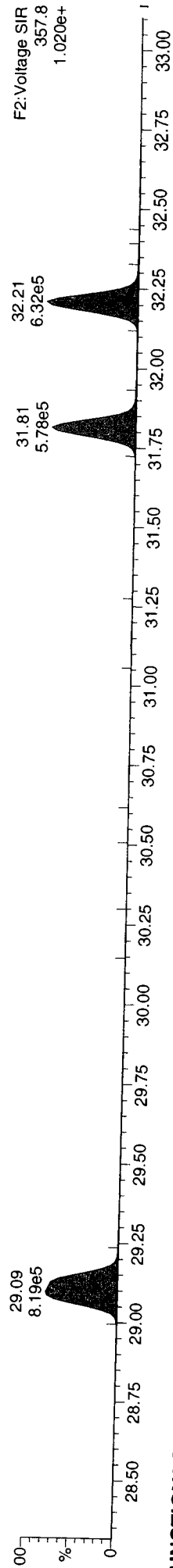
Total-pentadioxins

12112829



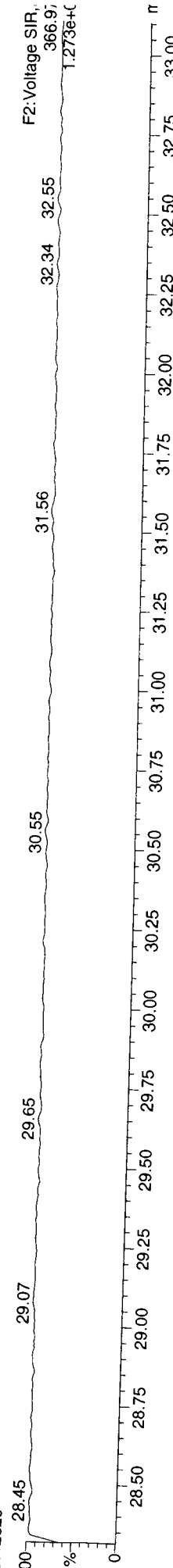
Total-pentadioxins

12112829



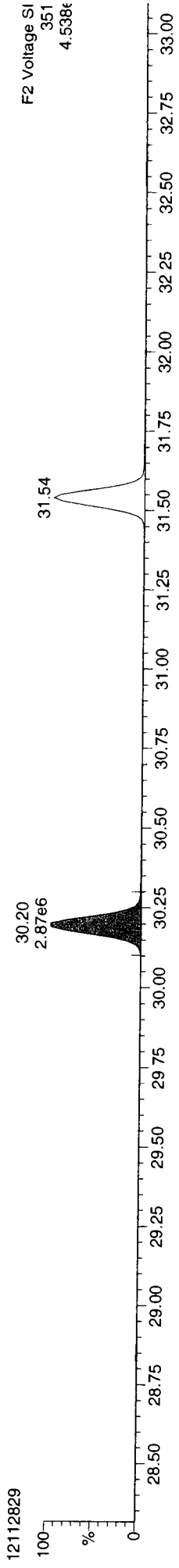
FUNCTION2 PFK

12112829

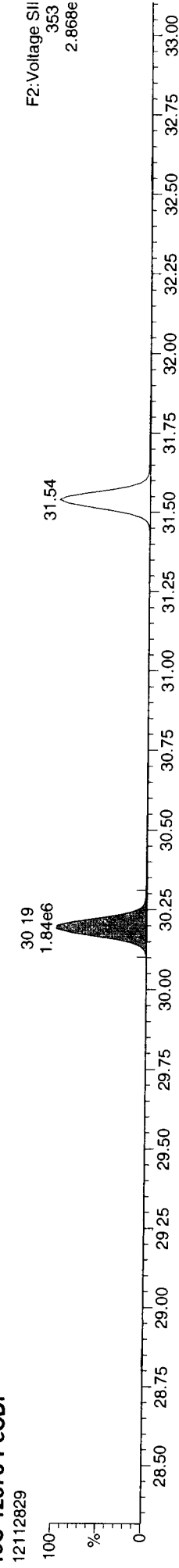


Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

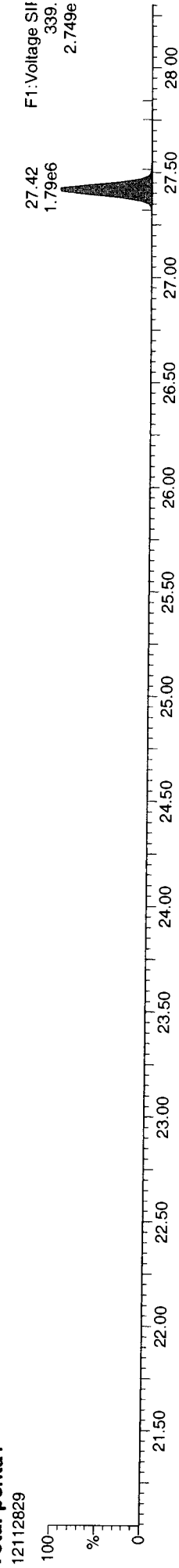
13C-12378-PeCDF



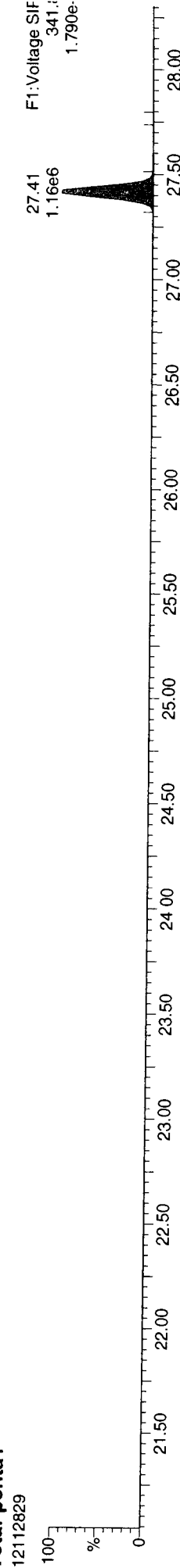
13C-12378-PeCDF



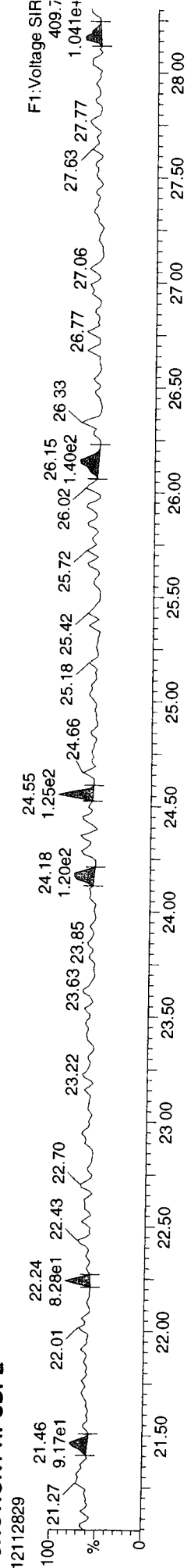
Total-penta1



Total-penta1



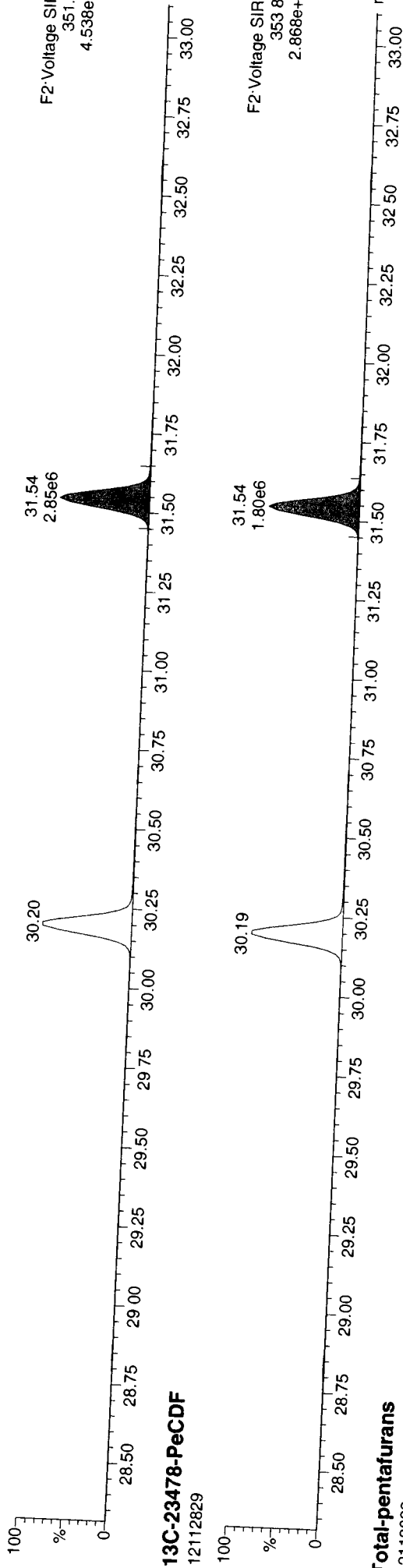
FUNCTION1 HPCDPE



12112829

Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk  
13C-23478-PeCDF

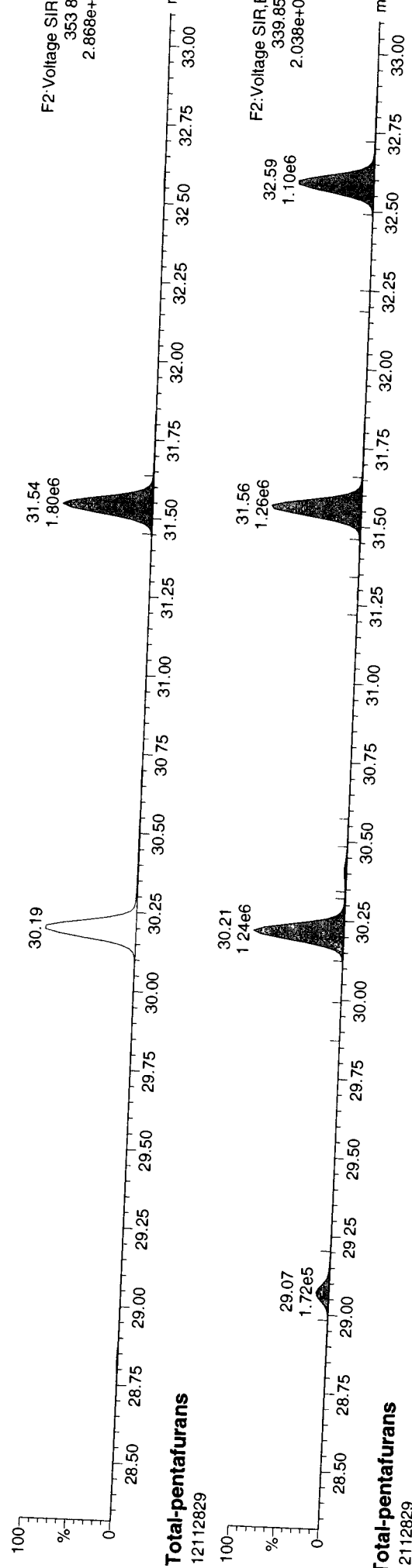
12112829



F2: Voltage SIF  
351.8  
4.538e1

13C-23478-PeCDF

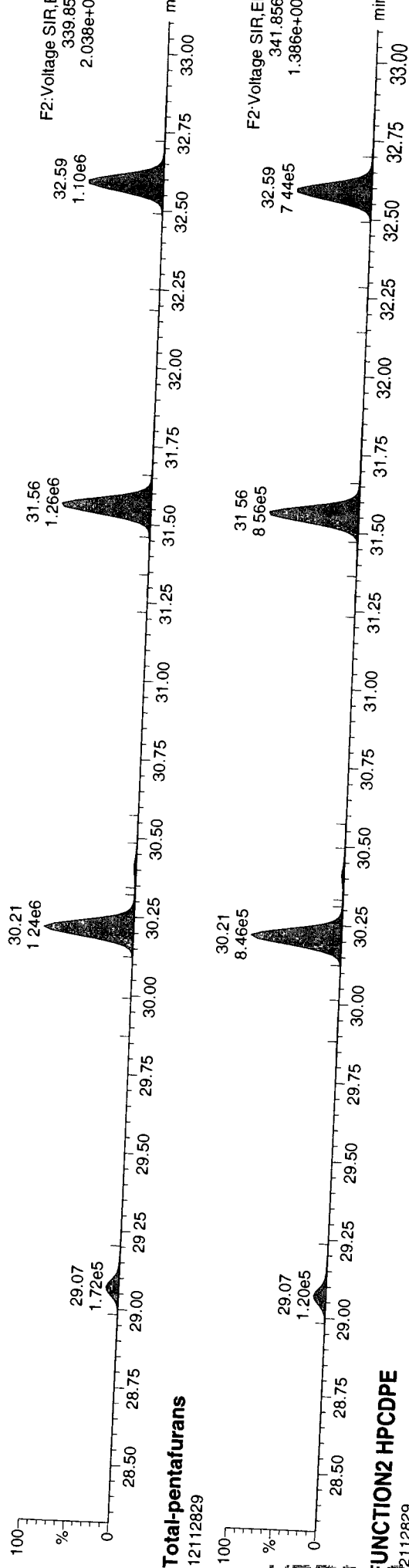
12112829



F2: Voltage SIR,  
353.8  
2.868e+0

Total-pentafurans

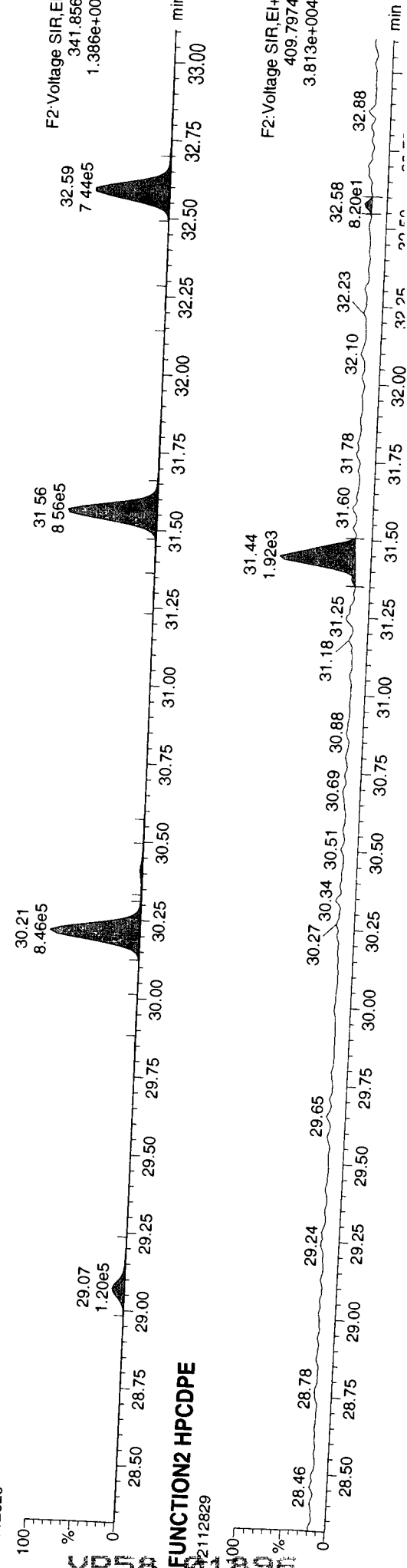
12112829



F2: Voltage SIR,E  
339.85  
2.038e+0

Total-pentafurans

12112829



F2: Voltage SIR, EI-  
341.856  
1.386e+007

FUNCTION2 HPCDPE

12112829

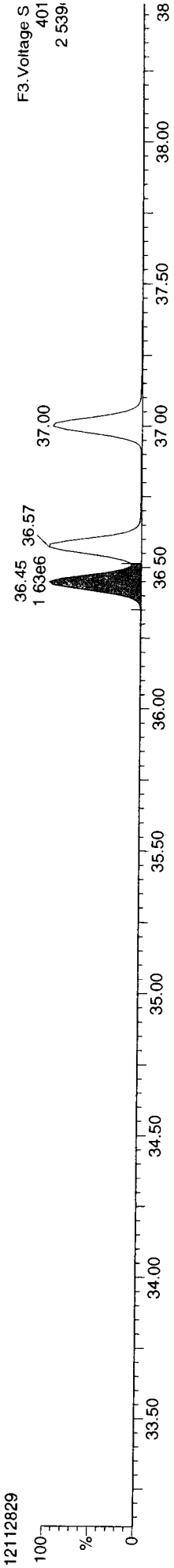
F2: Voltage SIR, EI+  
409.7974  
3.813e+004



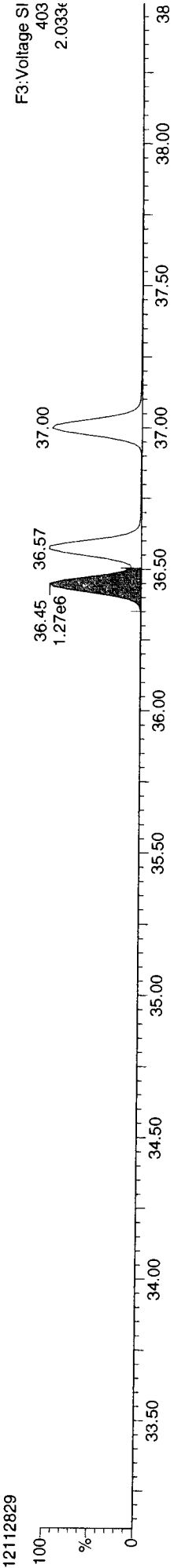
Dataset: P:\DIOXIN8290.PRO\121128DATA3.qld  
Last Altered: Monday, December 10, 2012 16:32:24 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 09:18:04 Pacific Standard Time

Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

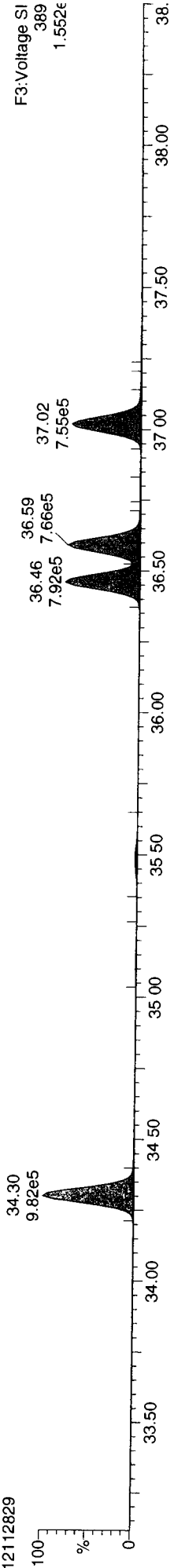
13C-123478-HxCDD



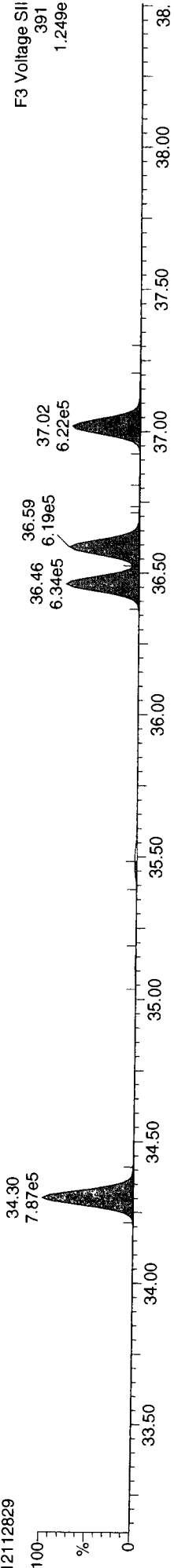
13C-123478-HxCDD



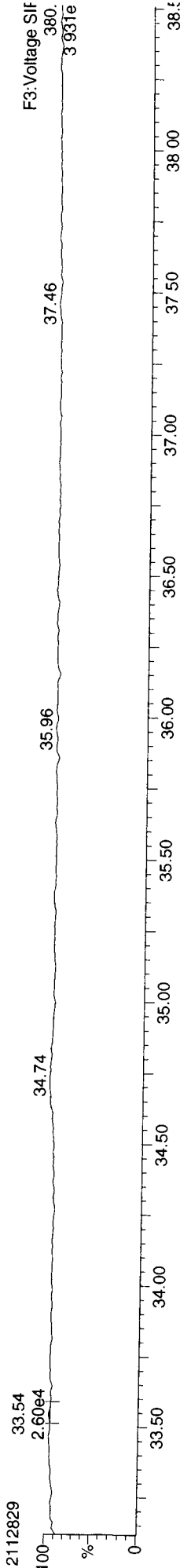
Total-hexadioxins



Total-hexadioxins



FUNCTION3 PFK

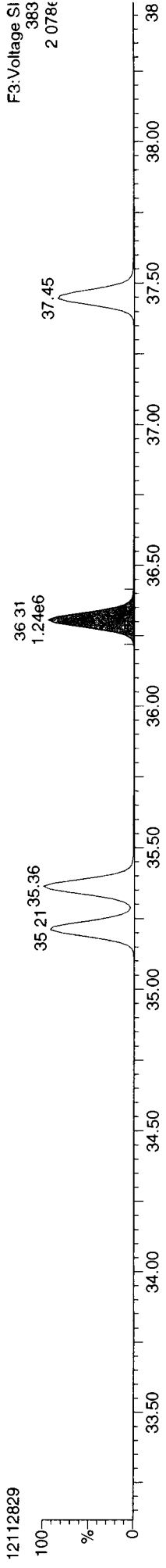


500000 12112829

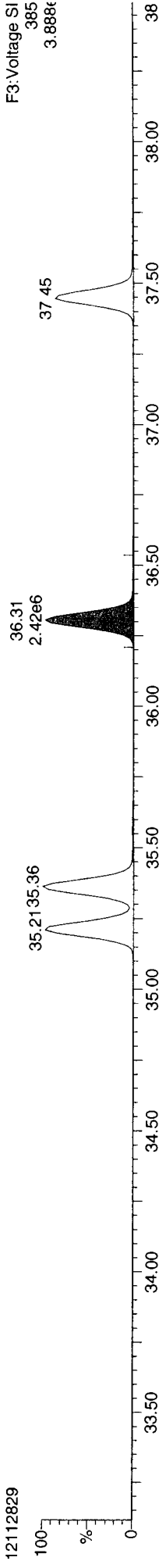
Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA3.qld  
Last Altered: Monday, December 10, 2012 16:32:24 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 09:18:04 Pacific Standard Time

Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

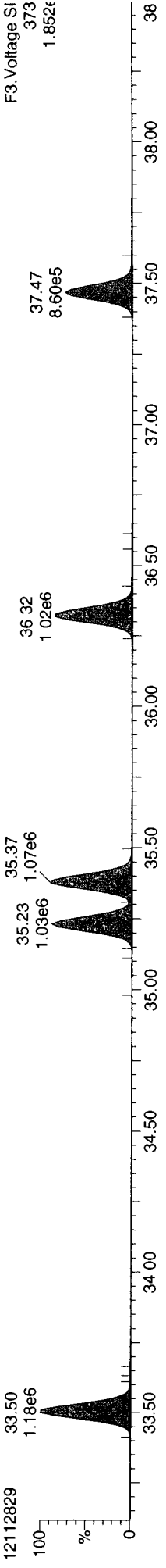
13C-234678-HxCDF



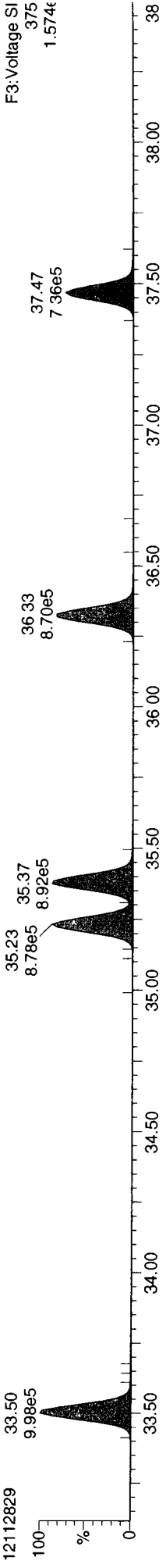
13C-234678-HxCDF



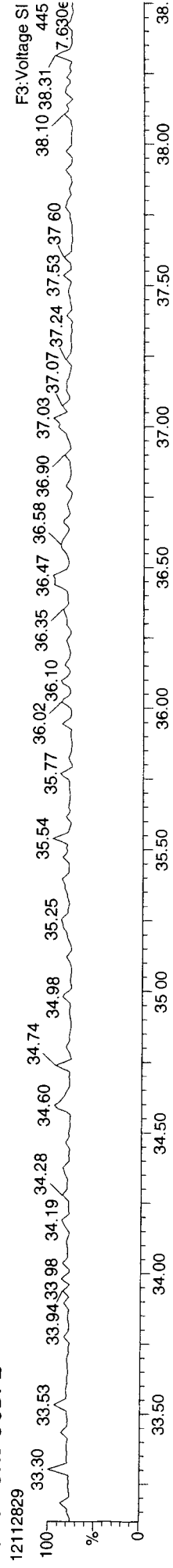
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDFE



12112829 12112829 12112829 12112829 12112829

Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD



13C-1234678-HpCDD



Total-heptadioxins



Total-heptadioxins



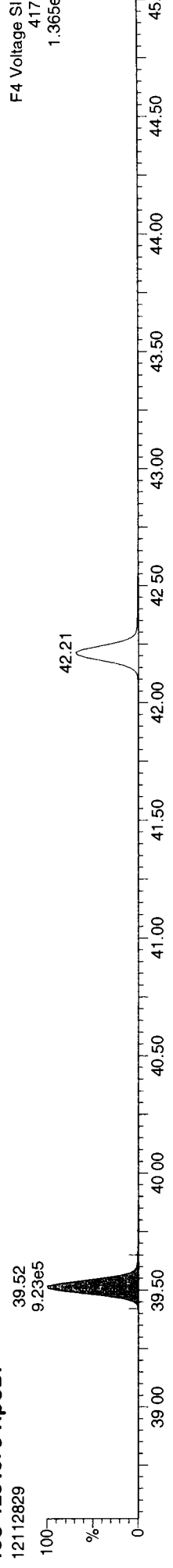
FUNCTION4 PFK



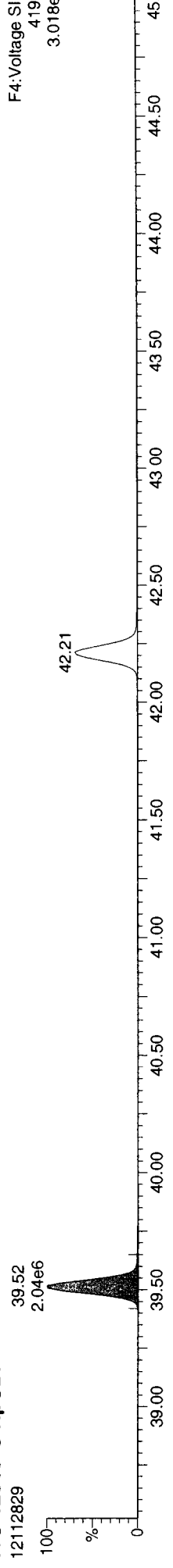
Dataset: P:\DIOXIN8290.PRO\121128DATA3.qld  
Last Altered: Monday, December 10, 2012 16:32:24 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 09:18:04 Pacific Standard Time

Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

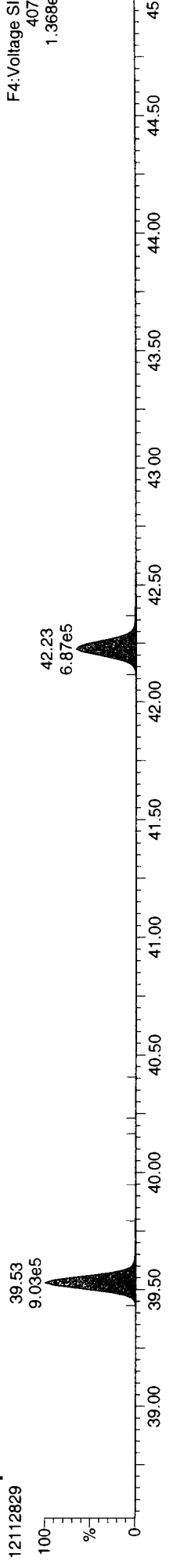
13C-1234678-HpCDF



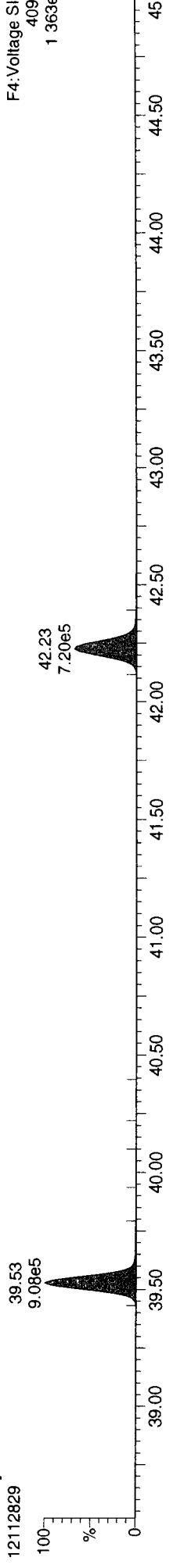
13C-1234678-HpCDF



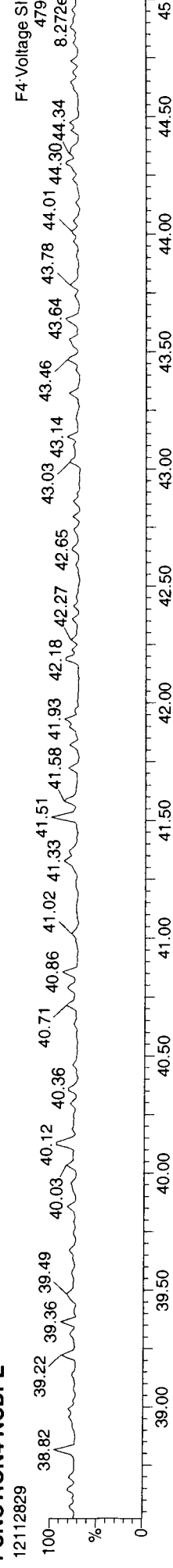
Total-heptafurans



Total-heptafurans



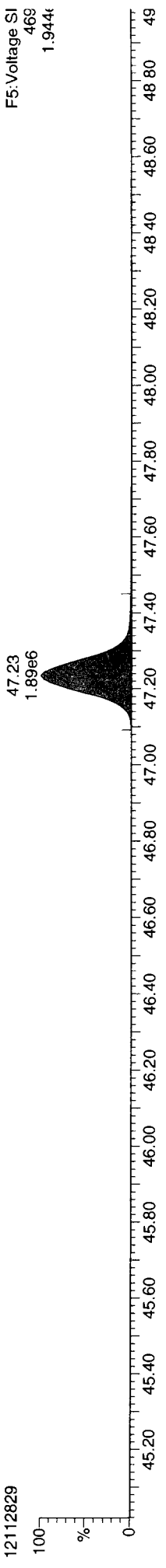
FUNCTION4 NCDPE



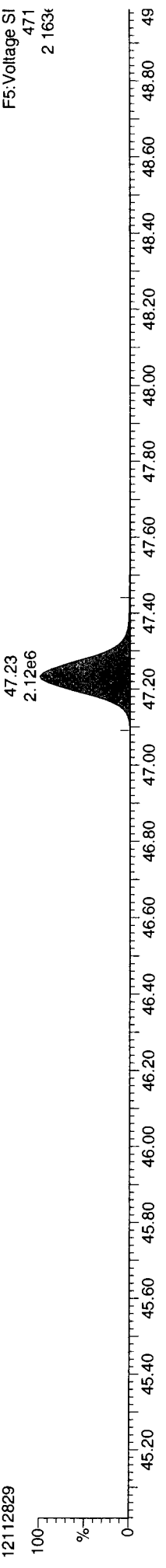
Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA3.qld  
Last Altered: Monday, December 10, 2012 16:32:24 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 09:18:04 Pacific Standard Time

Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

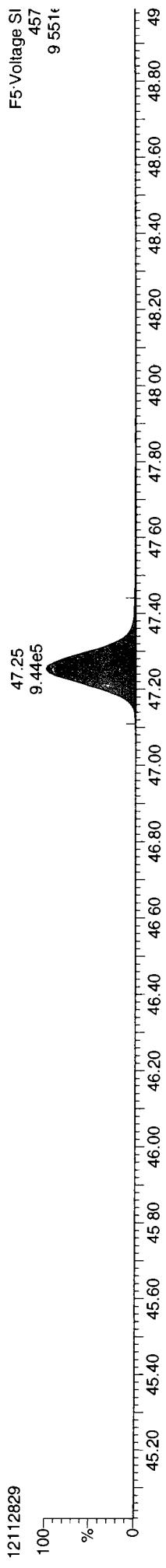
13C-OCDD



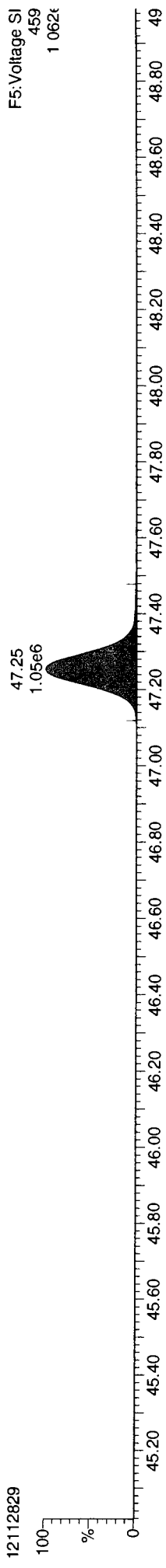
13C-OCDD



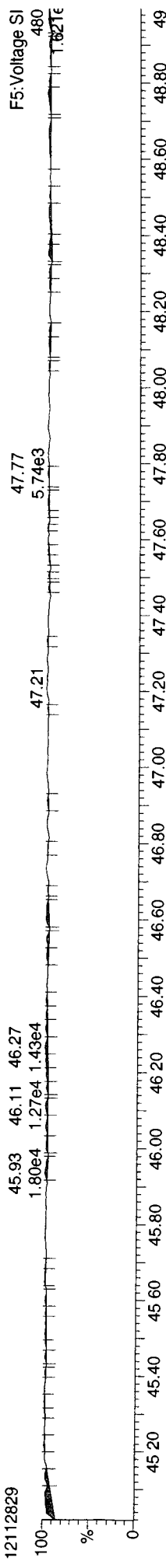
OCDD



OCDD



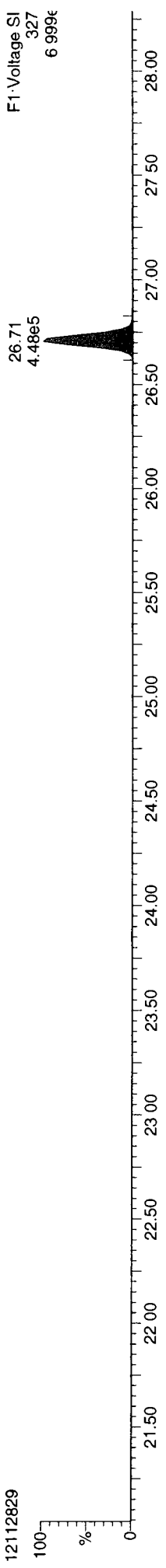
FUNCTION5 PFK



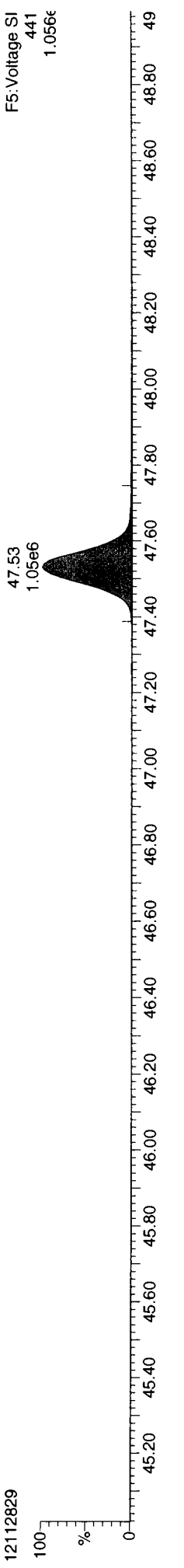
Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA3.qld  
Last Altered: Monday, December 10, 2012 16:32:24 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 09:18:04 Pacific Standard Time

Name: 12112829, Date: 29-Nov-2012, Time: 10:37:05, ID: CS3, Conditions: AUTOSPEC01, User: pk

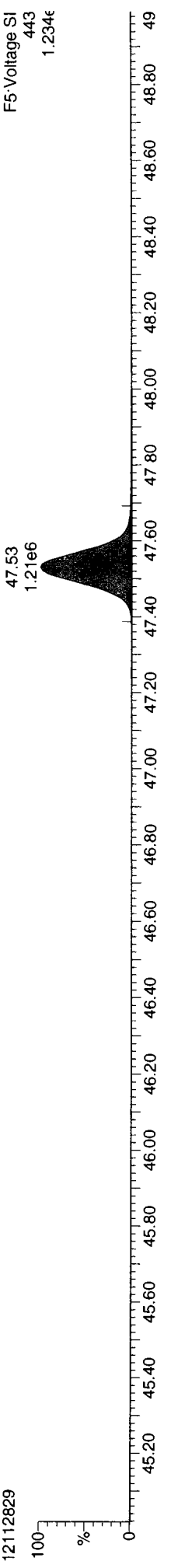
37CL-2378-TCDD



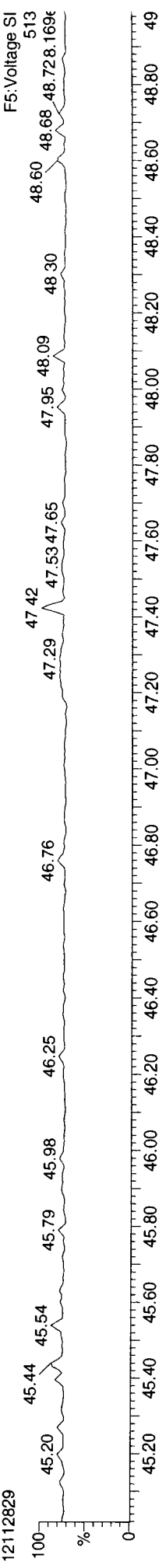
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

*Handwritten signature*

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR585 5X, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.093	1.001	5.23e3	6.95e3	0.877	0.752	0.770	52.4	NO	1.708	1.708
12378-PeCDF	30.222	1.000	9.22e3	6.35e3	0.896	1.451	1.550	137.0	NO	2.687	2.687
23478-PeCDF	31.571	1.001	9.86e3	6.80e3	0.926	1.451	1.550	142.2	NO	2.577	2.577
123478-HxCDF	35.243	1.001	2.18e4	1.91e4	1.068	1.142	1.240	167.1	NO	7.629	7.629
234678-HxCDF	36.317	1.000	3.02e4	2.42e4	1.037	1.250	1.240	157.7	NO	10.445	10.445
123678-HxCDF	35.396	1.001	2.01e4	1.63e4	1.035	1.238	1.240	140.7	NO	6.683	6.683
123789-HxCDF	37.446	1.000	9.21e3	7.68e3	0.987	1.199	1.240	58.1	NO	3.789	3.789
1234678-HpCDF	39.529	1.000	3.43e5	3.49e5	1.232	0.983	1.050	2719.4	NO	139.520	139.520
1234789-HpCDF	42.236	1.000	1.48e4	1.29e4	1.215	1.146	1.050	107.4	NO	7.159	7.159
OCDF	47.539	1.006	6.90e5	8.18e5	1.138	0.844	0.890	3184.3	NO	459.102	459.102
2378-TCDD	26.721	1.001	1.72e3	2.37e3	1.049	0.725	0.770	19.7	NO	0.672	0.672
12378-PeCDD	31.823	1.001	1.58e4	1.03e4	0.998	1.526	1.550	153.6	NO	6.057	6.057
123478-HxCDD	36.471	1.001	2.75e4	2.41e4	0.971	1.143	1.240	211.4	NO	12.671	12.671
123678-HxCDD	36.602	1.001	1.36e5	1.08e5	0.918	1.260	1.240	998.9	NO	59.104	59.104
123789-HxCDD	37.029	1.012	5.89e4	4.67e4	0.932	1.262	1.240	435.5	NO	26.087	26.087
1234678-HpCDD	41.348	1.000	2.14e6	2.03e6	1.017	1.054	1.050	4731.4	NO	1062.820	1062.820
OCDD	47.270	1.001	1.13e7	1.28e7	1.008	0.885	0.890	23201.5	NO	8277.299	8277.299
13C-2378-TCDF	26.063	1.006	3.55e5	4.59e5	1.473	0.776	0.770	1939.3	NO	15.761	15.761
13C-12378-PeCDF	30.212	1.166	3.95e5	2.52e5	1.148	1.565	1.550	1910.2	NO	16.072	16.072
13C-23478-PeCDF	31.549	1.218	4.29e5	2.69e5	1.113	1.599	1.550	2085.4	NO	17.890	17.890
13C-123478-HxCDF	35.221	0.952	1.73e5	3.28e5	1.209	0.527	0.510	1319.3	NO	15.923	15.923
13C-123678-HxCDF	35.375	0.956	1.85e5	3.41e5	1.269	0.543	0.510	1390.4	NO	15.926	15.926
13C-234678-HxCDF	36.317	0.981	1.72e5	3.30e5	1.236	0.521	0.510	1307.7	NO	15.592	15.592
13C-123789-HxCDF	37.457	1.012	1.53e5	2.99e5	1.107	0.513	0.510	1182.9	NO	15.665	15.665
13C-1234678-HpCDF	39.518	1.068	1.27e5	2.76e5	1.051	0.460	0.440	977.8	NO	14.713	14.713
13C-1234789-HpCDF	42.214	1.141	9.77e4	2.21e5	0.815	0.441	0.440	665.9	NO	15.031	15.031
13C-1234-TCDD	25.899	0.000	1.55e6	1.96e6	1.000	0.789	0.770	6770.7	NO	100.000	100.000
13C-2378-TCDD	26.706	1.031	2.54e5	3.24e5	0.946	0.784	0.770	1112.5	NO	17.453	17.453
13C-12378-PeCDD	31.801	1.228	2.67e5	1.64e5	0.721	1.625	1.550	2798.0	NO	17.089	17.089
13C-123478-HxCDD	36.449	0.985	2.37e5	1.83e5	0.991	1.294	1.240	1290.4	NO	16.267	16.267
13C-123678-HxCDD	36.580	0.988	2.50e5	1.98e5	1.025	1.258	1.240	1323.7	NO	16.792	16.792
13C-1234678-HpCDD	41.326	1.117	1.96e5	1.91e5	0.866	1.026	1.050	1807.0	NO	17.128	17.128
13C-OCDD	47.243	1.277	2.75e5	3.03e5	0.769	0.908	0.890	2244.7	NO	28.809	28.809

MassLynx 4.1 SCN 714

Quantify Sample Summary Report

Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
 Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk

Component	37.008	0.000	1.45e6	1.16e6	1.000	1.248	1.240	7894.7	NO	
13C-123789-HxCDD	37.008	0.000	1.45e6	1.16e6	1.000	1.248	1.240	7894.7	NO	100.000
Total-tetrafurans			6.83e4		0.877					27.163
Total-penta1			1.78e5							47.693
Total-pentafurans			9.39e4		0.911					30.590
Total-hexafurans			6.66e5		1.032					242.083
Total-heptafurans			9.74e5		1.223					435.234
Total-Furans			2.67e6		1.041					1241.880
Total-tetra-dioxins			1.72e4		1.049					7.718
Total-penta-dioxins			7.24e4		0.998					29.560
Total-hexa-dioxins			6.31e5		0.940					282.702
Total-hepta-dioxins			3.97e6		1.017					1972.810
Total-Dioxins			2.67e6		0.985					1241.880
Total-TEQ			5.34e6							2483.760
37CL-2378-TCDD	26.721	1.032	2.79e5		1.044			2261.8		7.613
FUNCTION1 PFK			2.19e6							0.000
FUNCTION2 PFK			4.53e5							0.000
FUNCTION3 PFK			3.31e5							0.000
FUNCTION4 PFK			1.54e5							0.000
FUNCTION5 PFK			9.75e5							0.000
FUNCTION1 HXCDPE			1.89e3							0.000
FUNCTION1 HPCDPE			1.78e3							0.000
FUNCTION2 HPCDPE			9.32e2							0.000
FUNCTION3 OCDPE			3.93e2							0.000
FUNCTION4 NCDPE			1.24e4							0.000
FUNCTION5 DCDPE			0.00e0							0.000

12112830.D



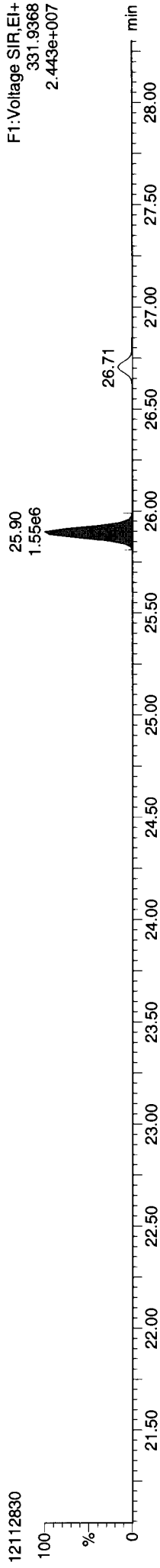
Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

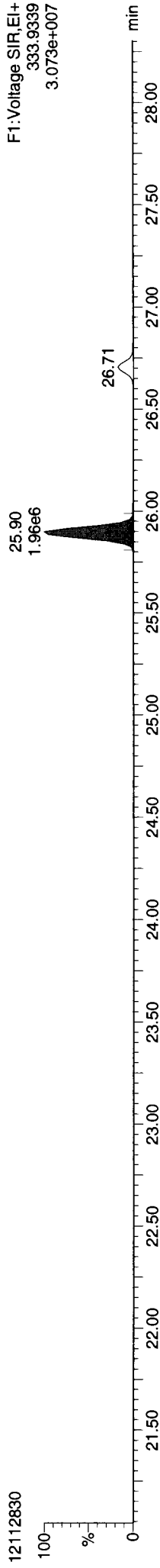
Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk

13C-1234-TCDD



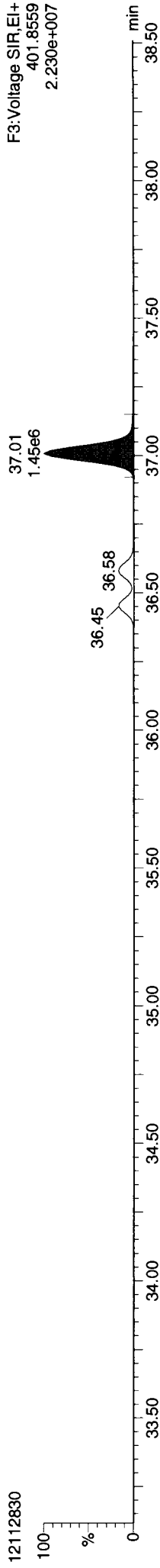
F1: Voltage SIR, EI+  
331.9368  
2.443e+007

13C-1234-TCDD



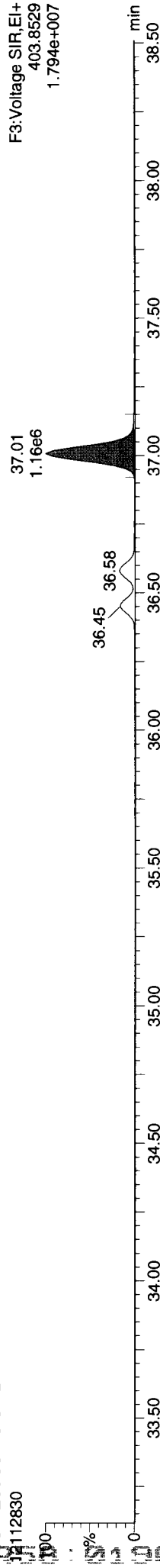
F1: Voltage SIR, EI+  
333.9339  
3.073e+007

13C-123789-HxCDD



F3: Voltage SIR, EI+  
401.8559  
2.230e+007

13C-123789-HxCDD

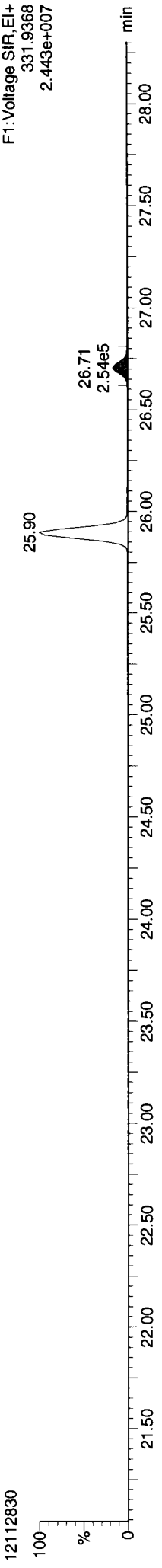


F3: Voltage SIR, EI+  
403.8529  
1.794e+007

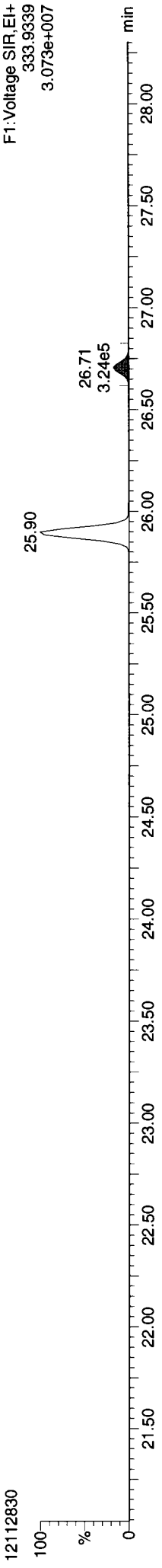
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk

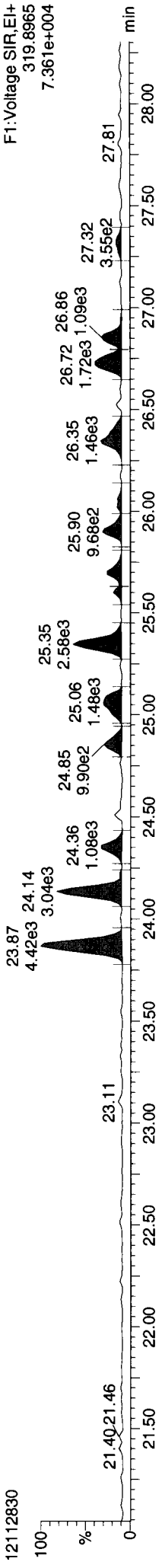
13C-2378-TCDD



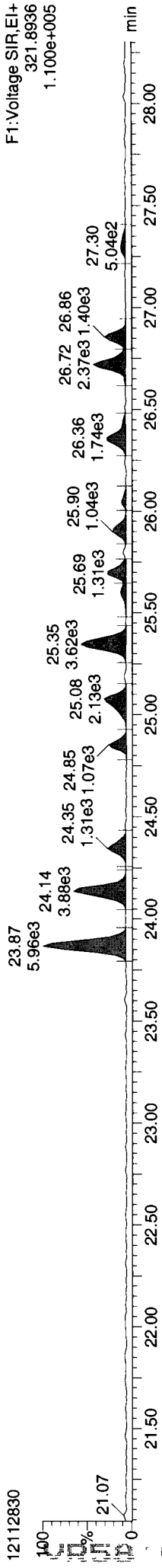
13C-2378-TCDD



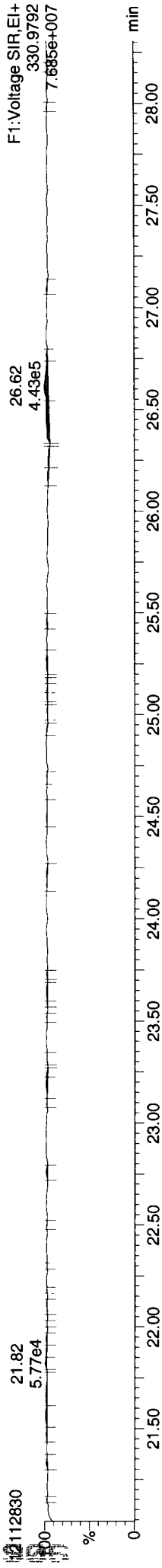
Total-tetradioxins



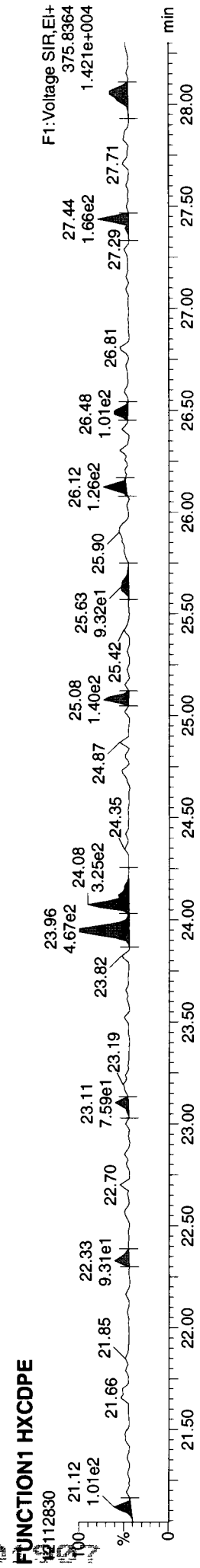
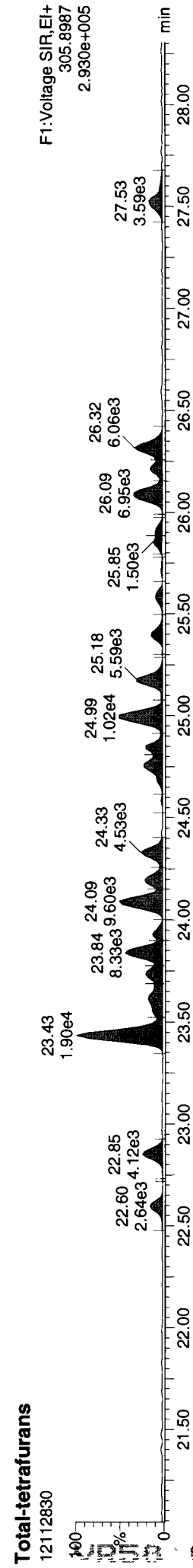
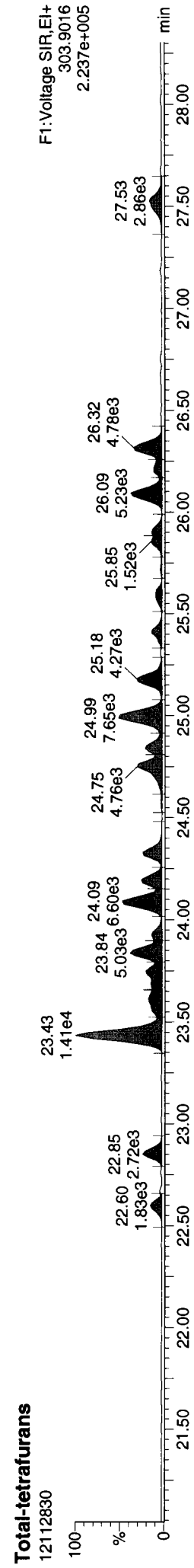
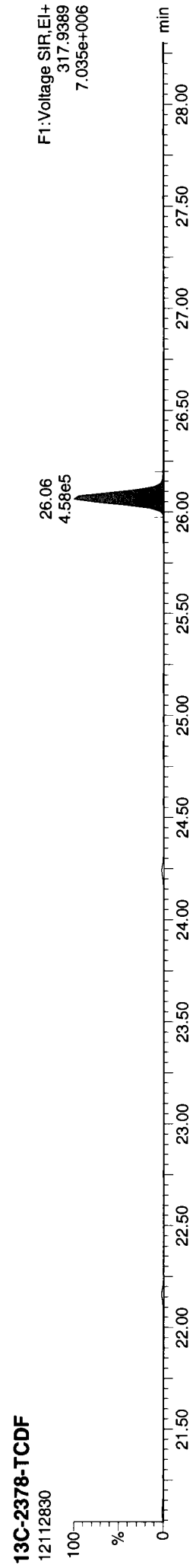
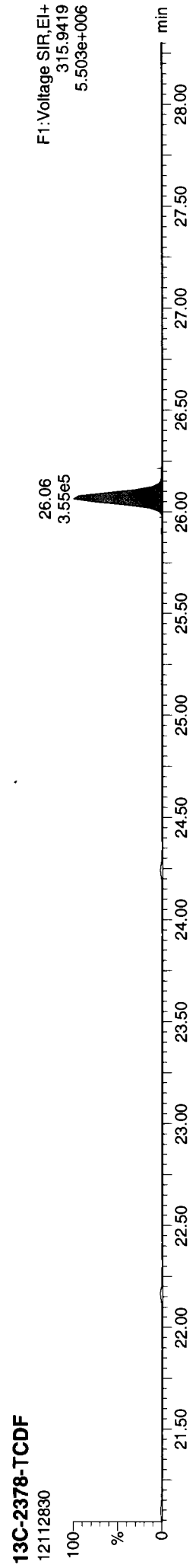
Total-tetradioxins



FUNCTION1 PFK



Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk

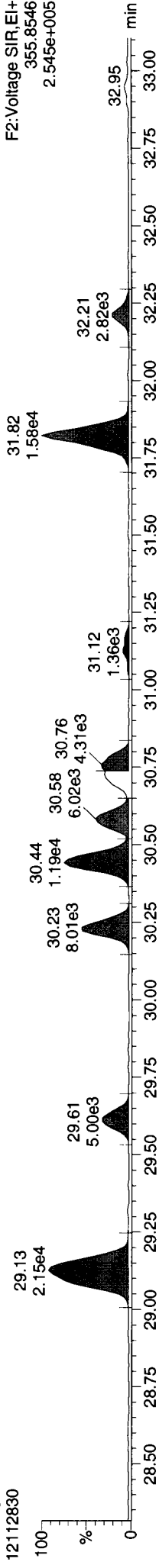
13C-12378-PeCDD



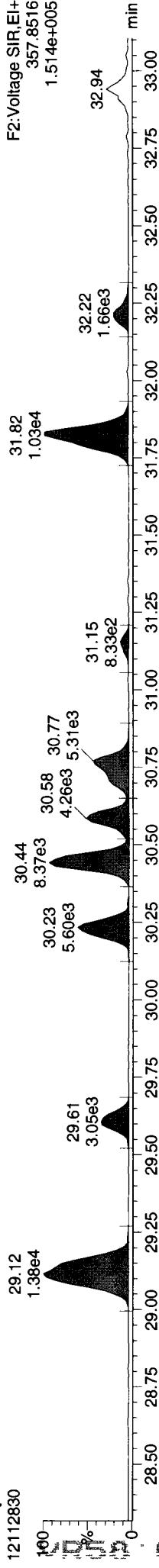
13C-12378-PeCDD



Total-pentadioxins



Total-pentadioxins



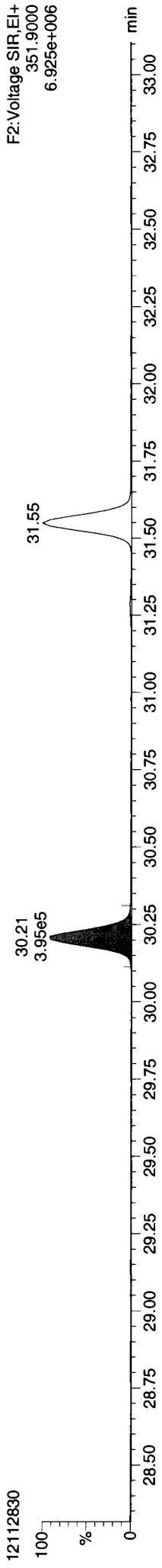
FUNCTION2 PFK



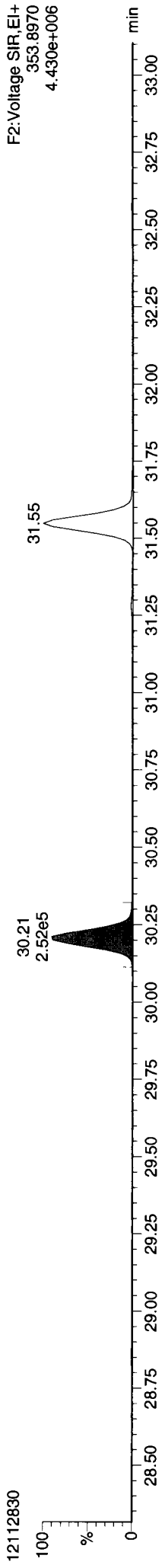
**Quantify Sample Report** MassLynx 4.1 SCN 714  
 Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
 Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

**Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk**

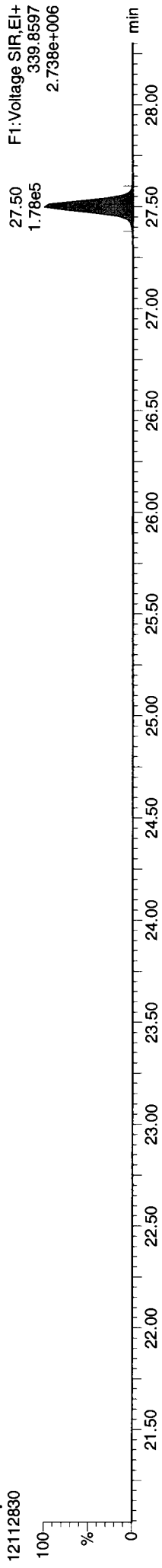
**13C-12378-PeCDF**



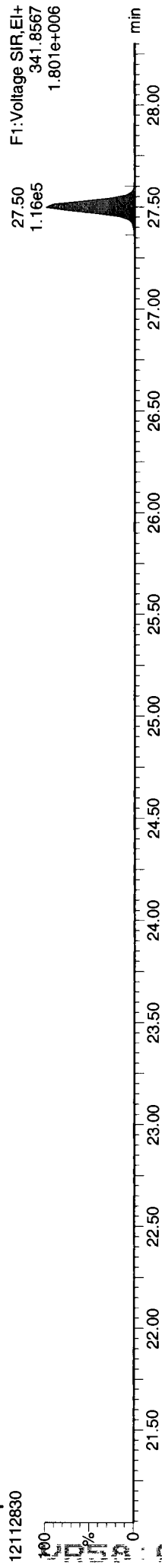
**13C-12378-PeCDF**



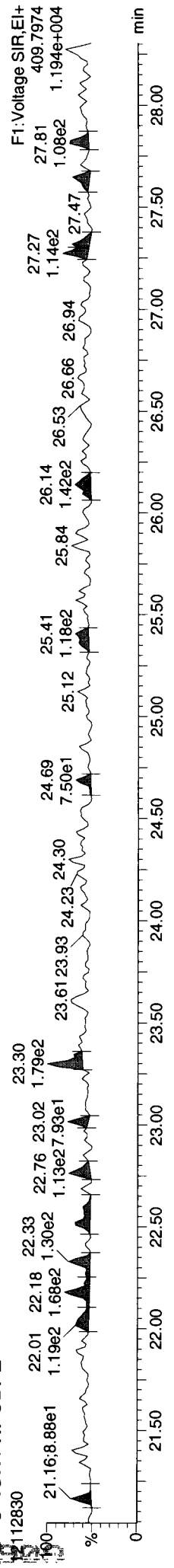
**Total-penta1**



**Total-penta1**



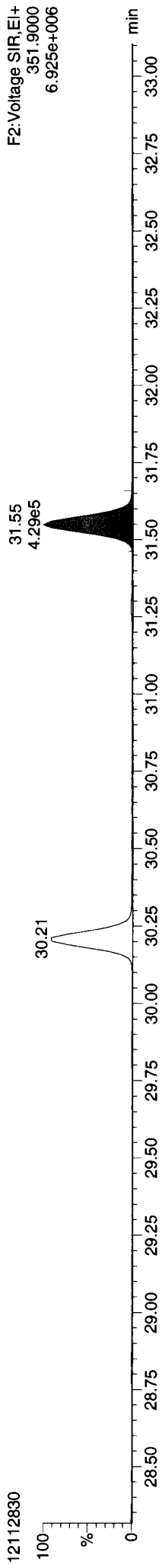
**FUNCTION1 HPCDPE**



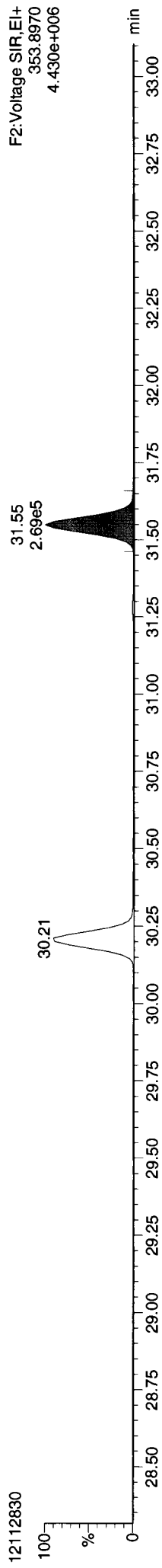
**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
 Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
 Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

**Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk**

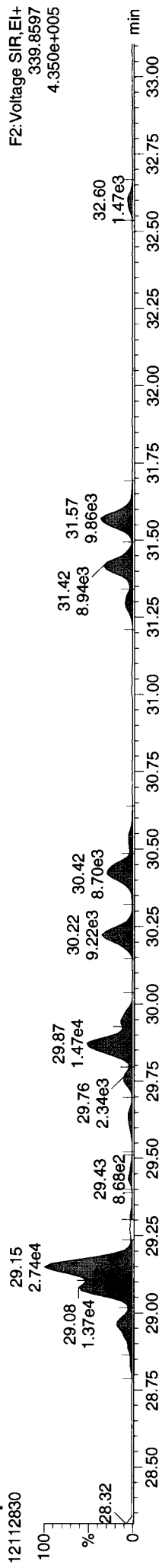
**13C-23478-PeCDF**



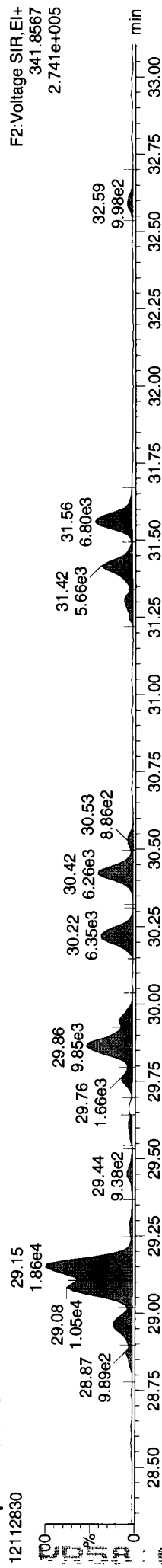
**13C-23478-PeCDF**



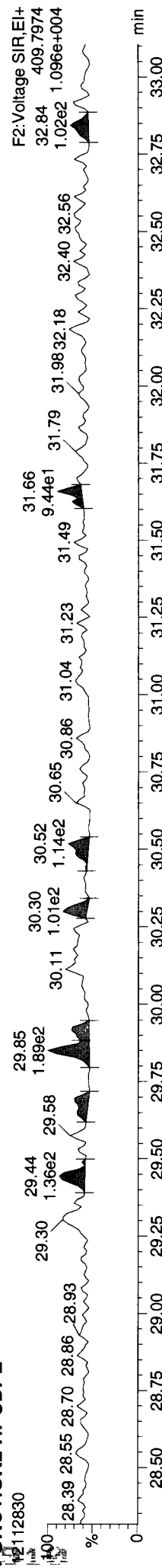
**Total-penta-furans**



**Total-penta-furans**



**FUNCTION2 HPCDPE**



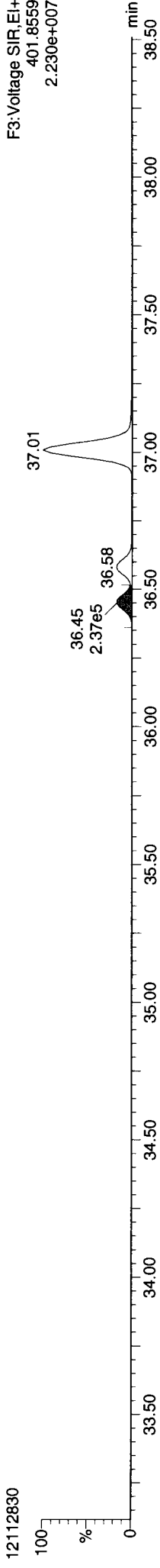
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld

Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time

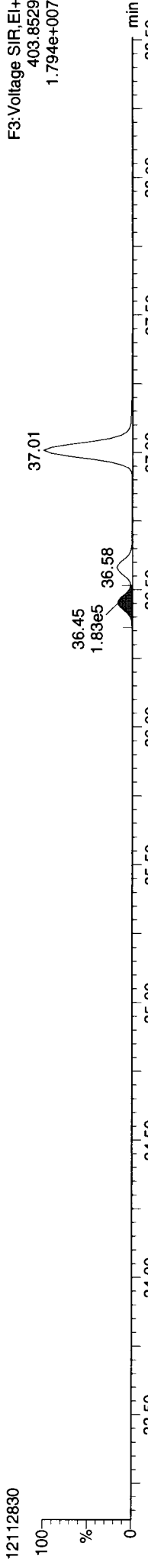
Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk

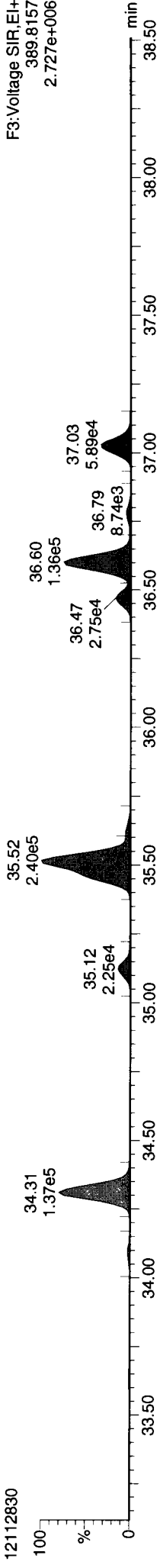
13C-123478-HxCDD



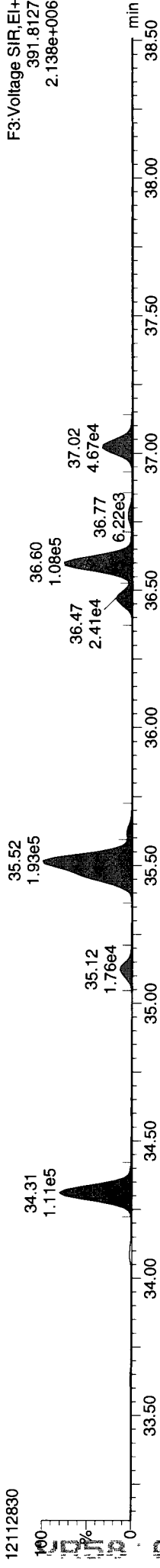
13C-123478-HxCDD



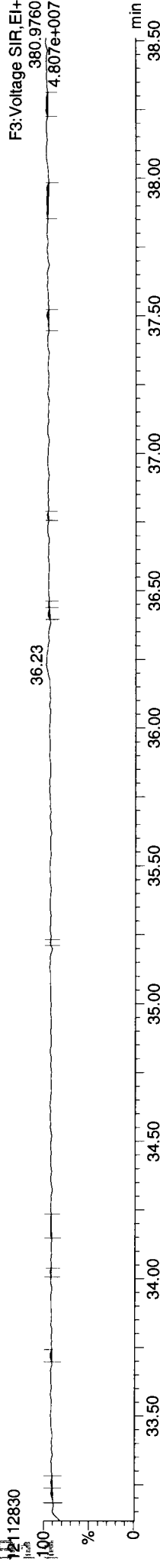
Total-hexadioxins



Total-hexadioxins



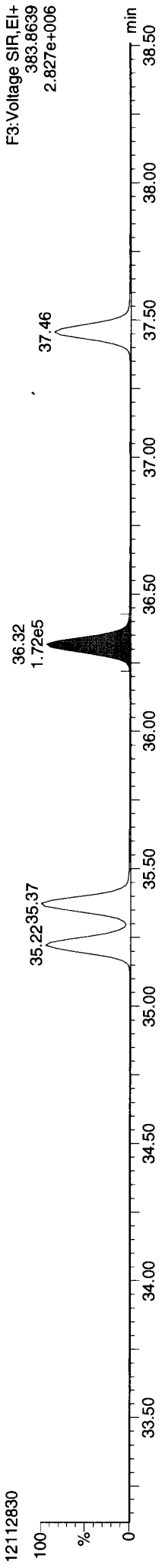
FUNCTION3 PFK



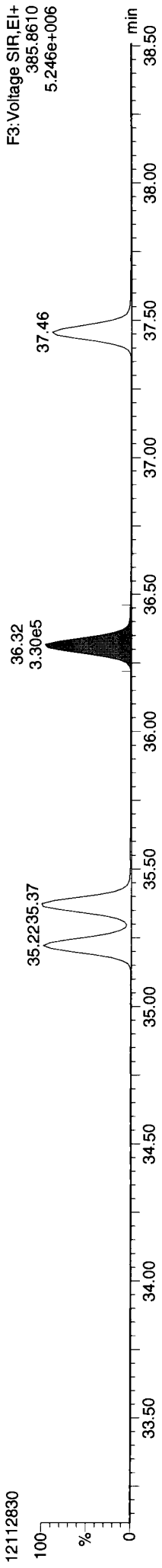
Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk

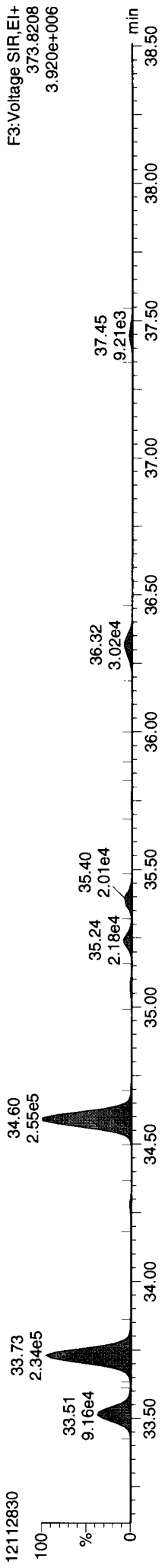
13C-234678-HxCDF



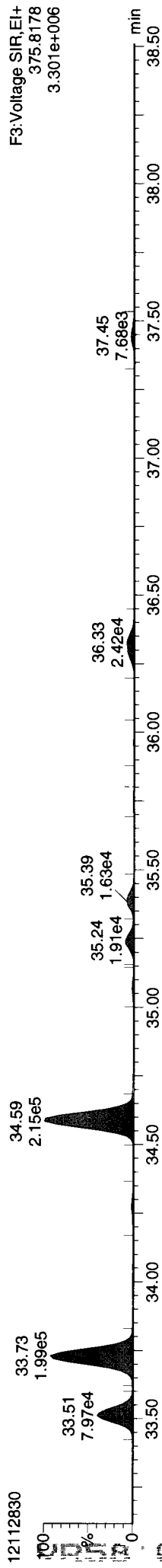
13C-234678-HxCDF



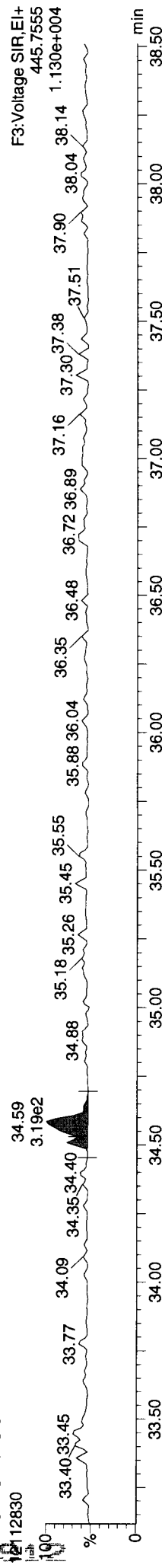
Total-hexafurans



Total-hexafurans



FUNCTION3 OCDPE





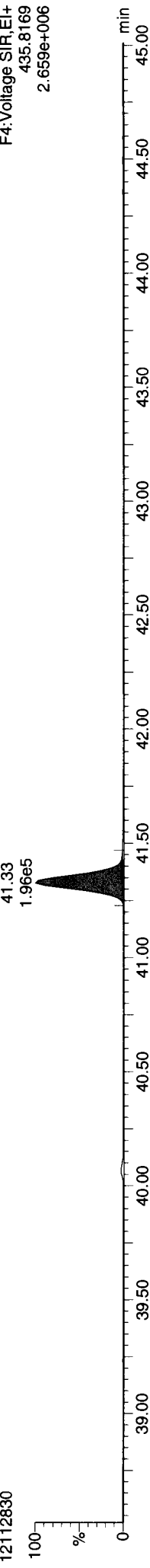
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld

Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time

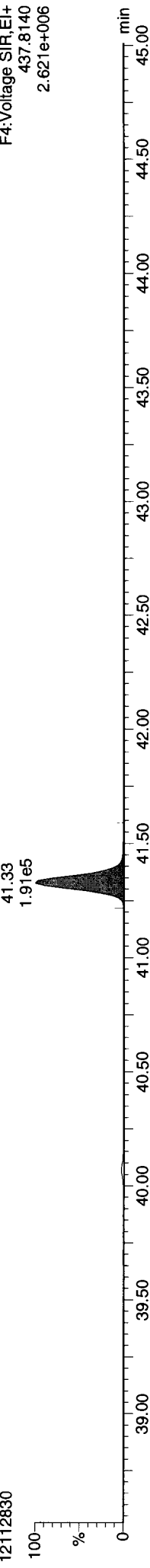
Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk

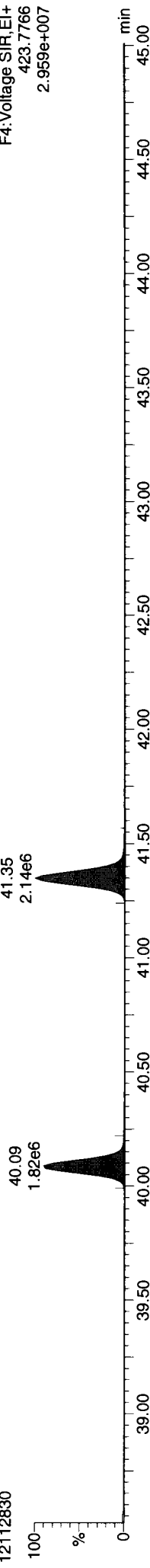
13C-1234678-HpCDD



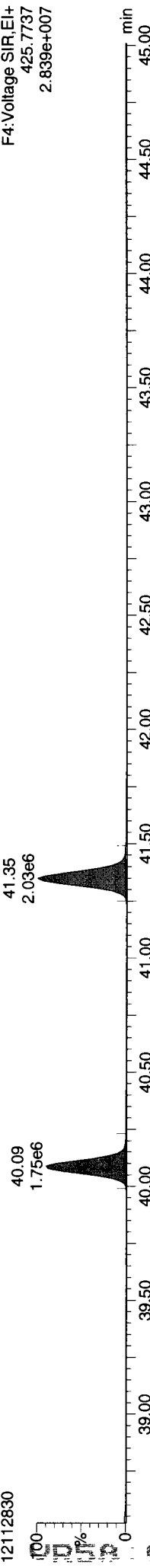
13C-1234678-HpCDD



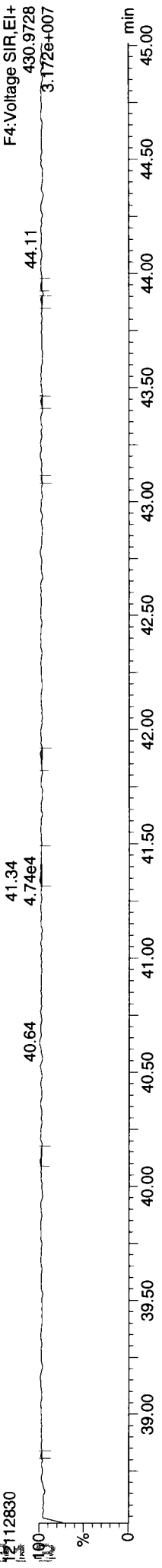
Total-heptadioxins



Total-heptadioxins

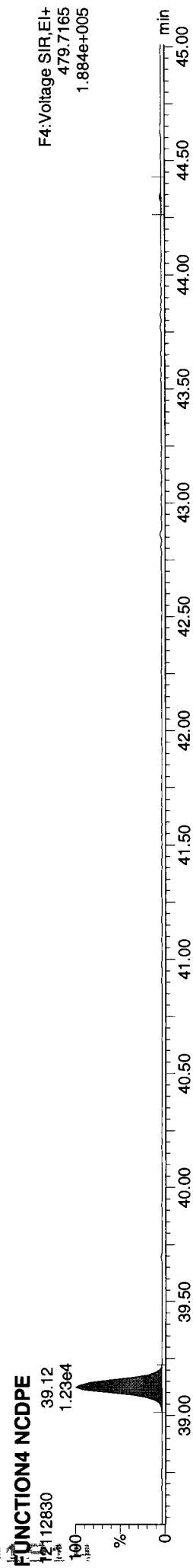
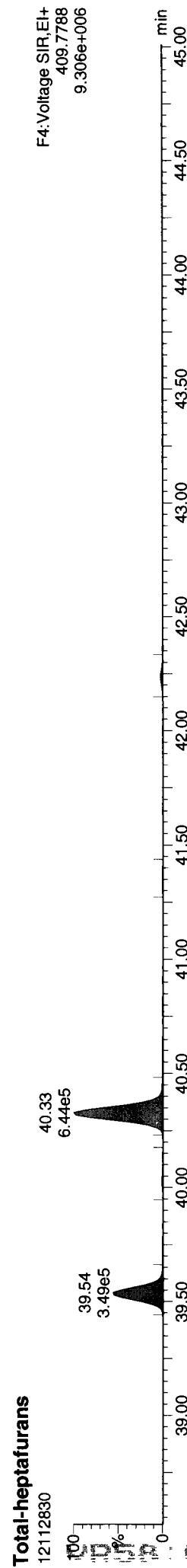
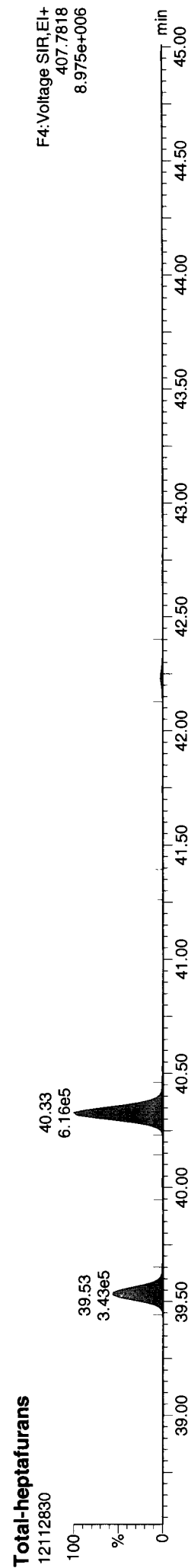
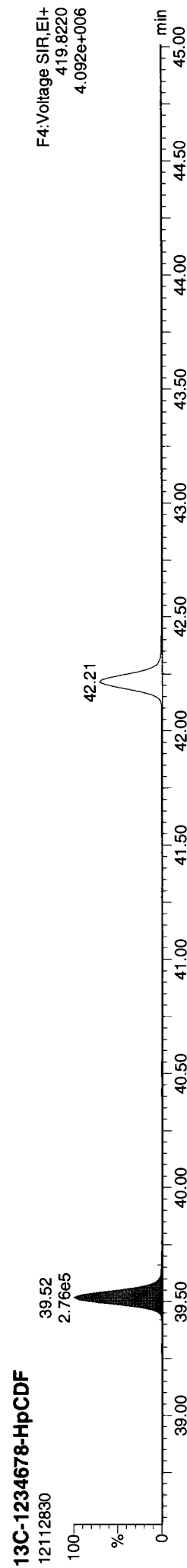
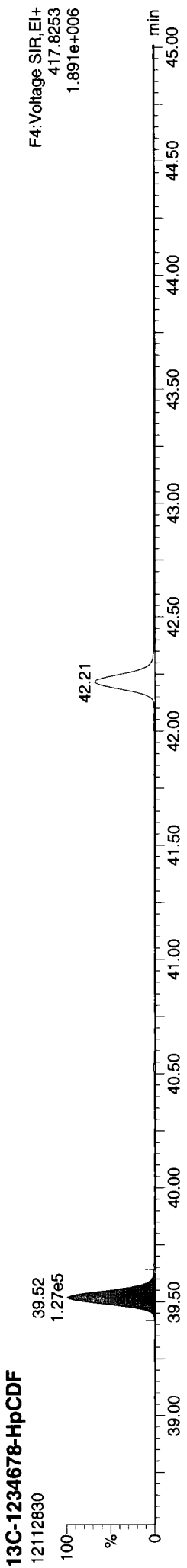


FUNCTION4 PFK



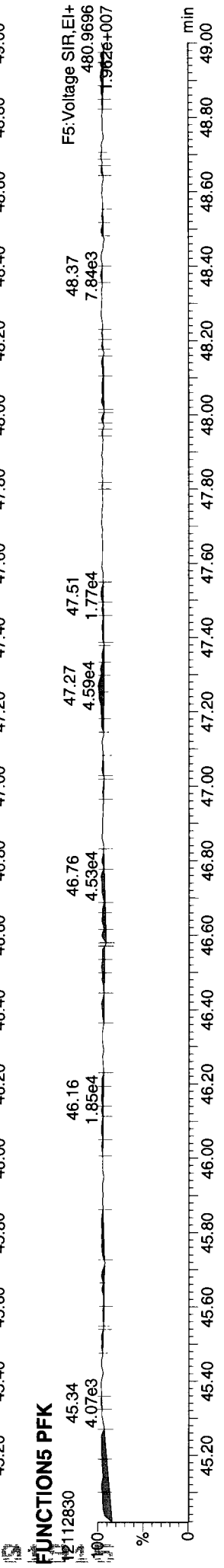
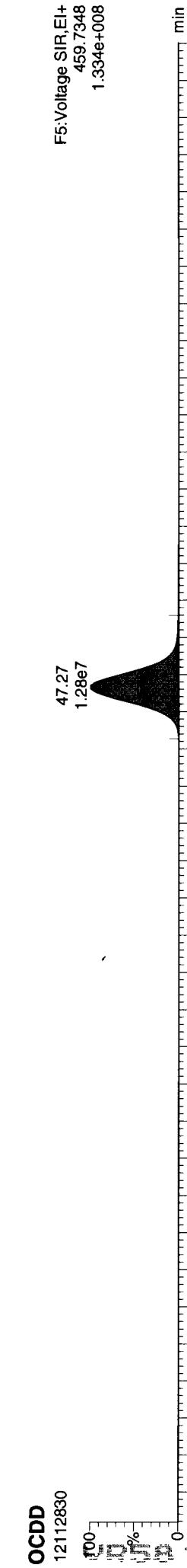
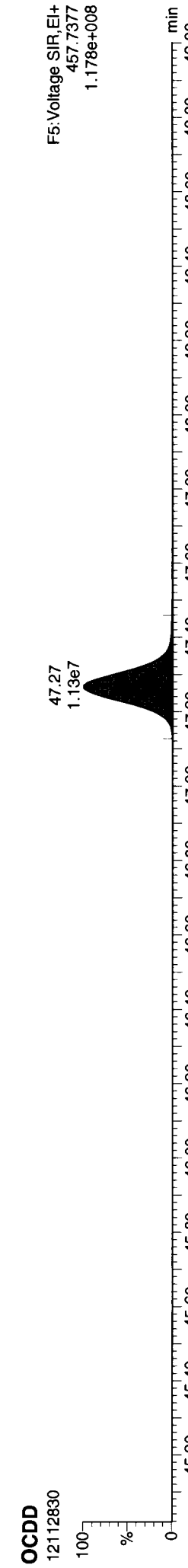
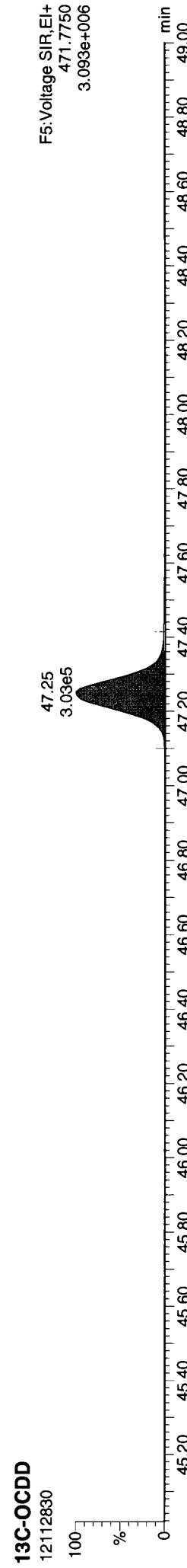
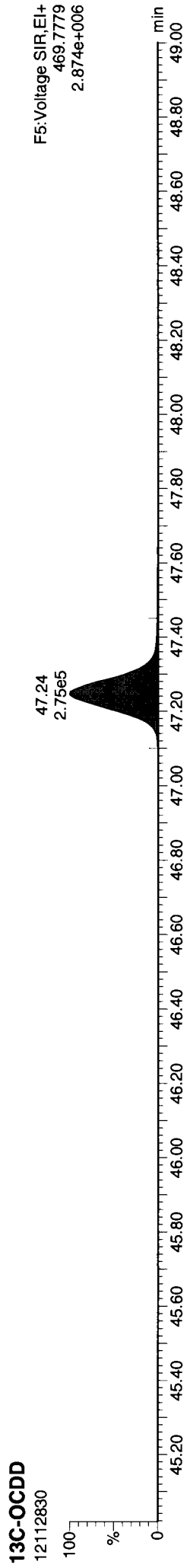
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk



Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

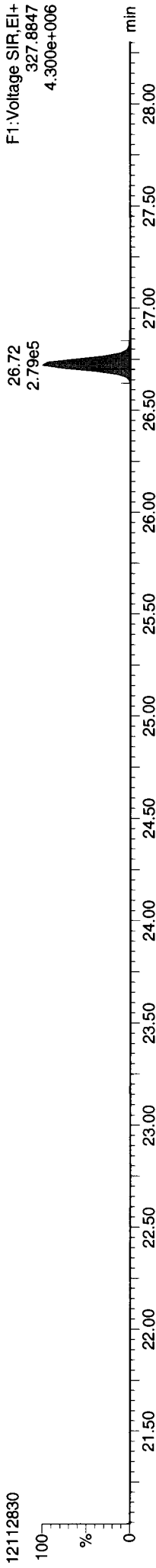
Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk



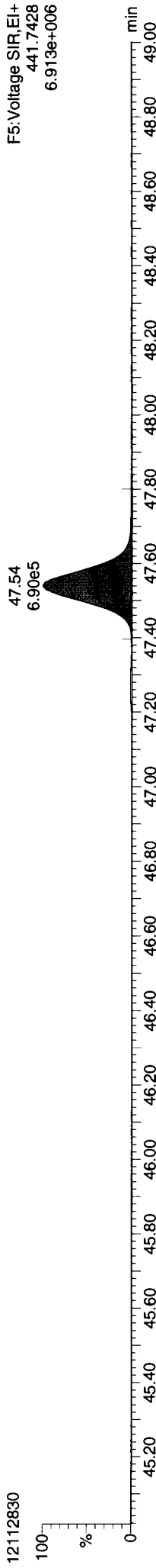
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:58:52 Pacific Standard Time

Name: 12112830, Date: 29-Nov-2012, Time: 12:00:42, ID: VR58B 5X, Conditions: AUTOSPEC01, User: pk

37CL-2378-TCDD



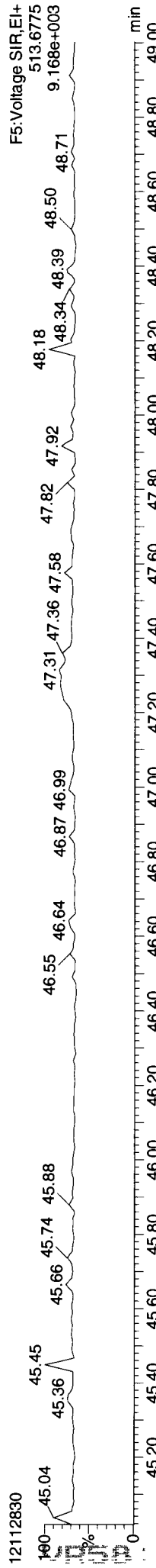
OCDF



OCDF



FUNCTION5 DCDPE



MassLynx 4.1 SCN 714

Quantify Sample Summary Report

Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

*pk 12/11/12*

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.078	1.001	2.96e3	3.76e3	0.877	0.786	0.770	33.5	NO	1.131	1.131
12378-PeCDF	30.201	1.000	4.14e3	2.98e3	0.896	1.390	1.550	29.2	NO	1.551	1.551
23478-PeCDF	31.560	1.001	3.63e3	2.70e3	0.926	1.344	1.550	26.6	NO	1.356	1.356
123478-HxCDF	35.221	1.000	7.05e3	6.19e3	1.068	1.139	1.240	46.1	NO	3.299	3.299
234678-HxCDF	36.306	1.000	8.93e3	8.08e3	1.037	1.106	1.240	41.9	NO	4.439	4.439
123678-HxCDF	35.375	1.000	5.20e3	4.86e3	1.035	1.069	1.240	35.5	NO	2.466	2.466
123789-HxCDF	37.446	1.000	3.72e3	3.15e3	0.987	1.183	1.240	23.0	NO	1.785	1.785
1234678-HpCDF	39.529	1.001	9.57e4	9.84e4	1.232	0.972	1.050	1012.8	NO	52.235	52.235
1234789-HpCDF	42.225	1.000	4.65e3	5.14e3	1.215	0.904	1.050	39.6	NO	3.287	3.287
OCDF	47.530	1.006	1.87e5	2.29e5	1.138	0.819	0.890	1382.9	NO	189.219	189.219
2378-TCDD	26.721	1.001	7.75e2	1.61e3	1.049	0.483	0.770	11.0	YES	0.379	0.507
12378-PeCDD	31.801	1.000	5.18e3	2.94e3	0.998	1.761	1.550	23.0	NO	2.452	2.452
123478-HxCDD	36.459	1.000	6.96e3	5.74e3	0.971	1.213	1.240	89.5	NO	4.322	4.322
123678-HxCDD	36.591	1.001	3.10e4	2.67e4	0.918	1.162	1.240	394.7	NO	18.562	18.562
123789-HxCDD	37.019	1.012	1.50e4	1.24e4	0.932	1.204	1.240	181.1	NO	9.176	9.176
1234678-HpCDD	41.337	1.000	5.40e5	5.20e5	1.017	1.038	1.050	2333.1	NO	356.664	356.664
OCDD	47.252	1.000	2.95e6	3.31e6	1.008	0.891	0.890	6261.5	NO	3213.573	3213.573
13C-2378-TCDF	26.048	1.007	2.95e5	3.82e5	1.473	0.772	0.770	1783.4	NO	12.898	12.898
13C-12378-PeCDF	30.190	1.167	3.13e5	1.99e5	1.148	1.577	1.550	2473.8	NO	12.512	12.512
13C-23478-PeCDF	31.538	1.219	3.08e5	1.97e5	1.113	1.564	1.550	2285.9	NO	12.715	12.715
13C-123478-HxCDF	35.210	0.952	1.31e5	2.45e5	1.209	0.535	0.510	926.8	NO	11.888	11.888
13C-123678-HxCDF	35.363	0.956	1.35e5	2.59e5	1.269	0.522	0.510	945.9	NO	11.893	11.893
13C-234678-HxCDF	36.306	0.981	1.26e5	2.43e5	1.236	0.518	0.510	881.1	NO	11.447	11.447
13C-123789-HxCDF	37.446	1.012	1.35e5	2.55e5	1.107	0.529	0.510	922.5	NO	13.492	13.492
13C-1234678-HpCDF	39.507	1.068	9.26e4	2.09e5	1.051	0.443	0.440	808.9	NO	10.982	10.982
13C-1234789-HpCDF	42.203	1.141	7.63e4	1.69e5	0.815	0.452	0.440	564.9	NO	11.519	11.519
13C-1234-TCDD	25.869	0.000	1.57e6	1.99e6	1.000	0.789	0.770	7367.3	NO	100.000	100.000
13C-2378-TCDD	26.691	1.032	1.97e5	2.51e5	0.946	0.786	0.770	932.0	NO	13.287	13.287
13C-12378-PeCDD	31.790	1.229	2.05e5	1.27e5	0.721	1.612	1.550	2110.6	NO	12.927	12.927
13C-123478-HxCDD	36.449	0.985	1.69e5	1.33e5	0.991	1.267	1.240	921.7	NO	11.689	11.689
13C-123678-HxCDD	36.569	0.988	1.87e5	1.52e5	1.025	1.229	1.240	971.8	NO	12.639	12.639
13C-1234678-HpCDD	41.326	1.117	1.50e5	1.42e5	0.866	1.051	1.050	1394.6	NO	12.909	12.909
13C-OCDD	47.294	1.277	1.83e5	2.04e5	0.769	0.899	0.890	1315.7	NO	19.241	19.241

**Quantify Sample Summary Report**    **MassLynx 4.1 SCN 714**

Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
 Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

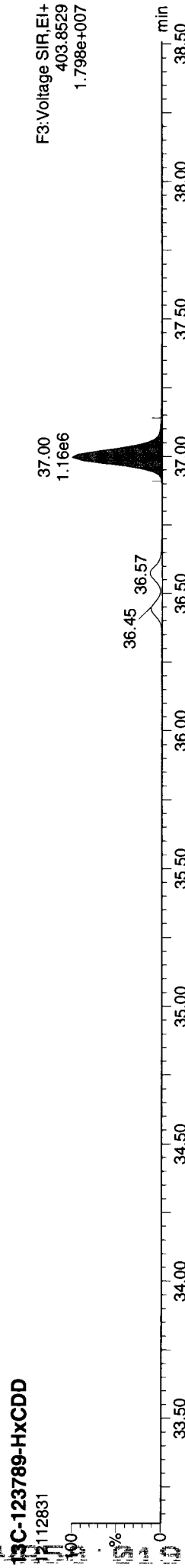
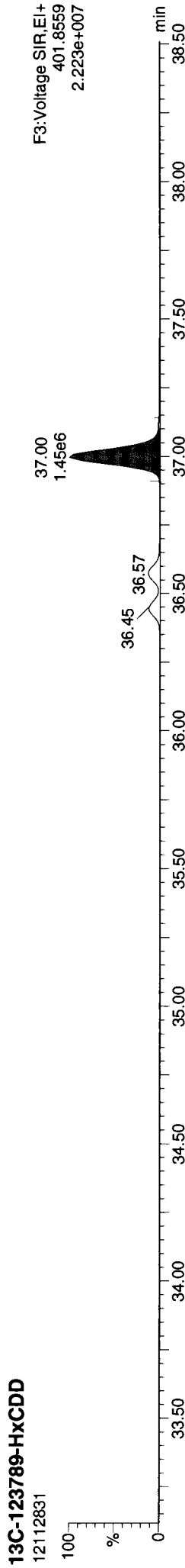
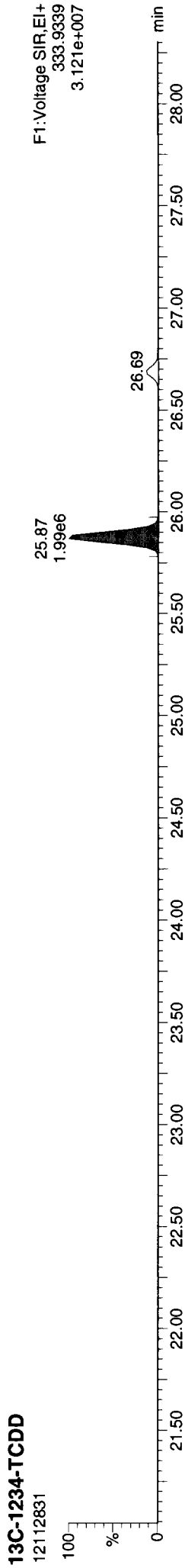
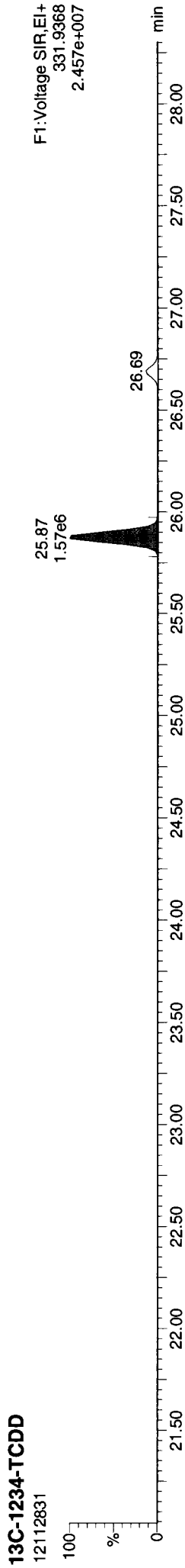
**Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk**

13C-123789-HXCDD	36.997	0.000	1.45e6	1.16e6	1.000	1.245	1.240	7859.6	NO	14,297	100.000
Total-tetrafurans			1.94e4		0.877					24,424	7.653
Total-penta1			7.06e4							13,558	24,424
Total-pentafurans			2.11e4		0.911					102,841	7,779
Total-hexafurans			2.15e5		1.032					176,392	102,316
Total-heptafurans			3.02e5		1.223					520,749	176,121
Total-Furans			8.15e5		1.041					4,820	507,513
Total-tetra-dioxins			6.63e3		1.049					13,033	3,309
Total-penta-dioxins			1.81e4		0.998					100,095	8,810
Total-hexa-dioxins			1.63e5		0.940					690,743	98,490
Total-hepta-dioxins			1.05e6		1.017					520,749	690,743
Total-Dioxins			8.15e5		0.985					1041,499	507,513
Total-TEQ			1.63e6								1015,026
37CL-2378-TCDD	26.706	1.032	2.82e5		1.044			2489.0			7.573
FUNCTION1 PFK			1.01e6								0.000
FUNCTION2 PFK			1.34e4								0.000
FUNCTION3 PFK			9.65e5								0.000
FUNCTION4 PFK			4.58e5								0.000
FUNCTION5 PFK			1.39e5								0.000
FUNCTION1 HXCDPE			4.21e2								0.000
FUNCTION1 HPCDPE			9.61e2								0.000
FUNCTION2 HPCDPE			8.11e2								0.000
FUNCTION3 OCDPE			0.00e0								0.000
FUNCTION4 NCDPE			8.26e3								0.000
FUNCTION5 DCDPE			0.00e0								0.000

Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

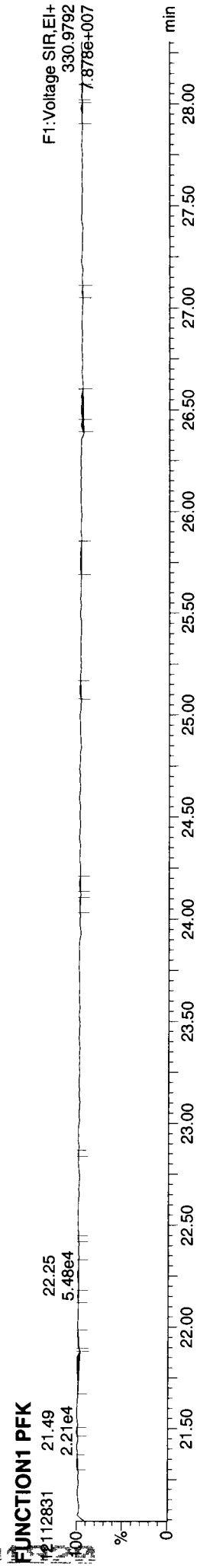
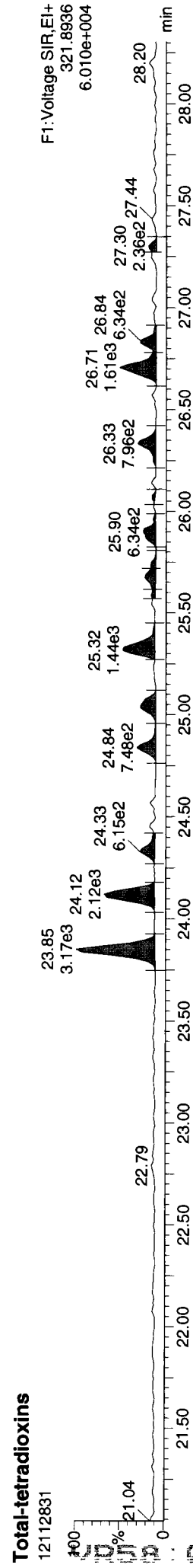
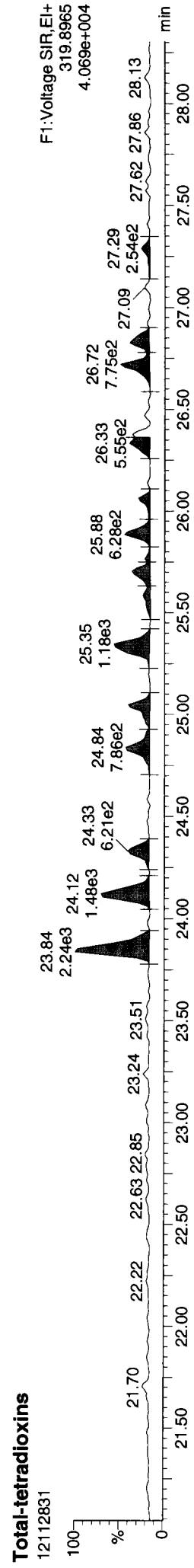
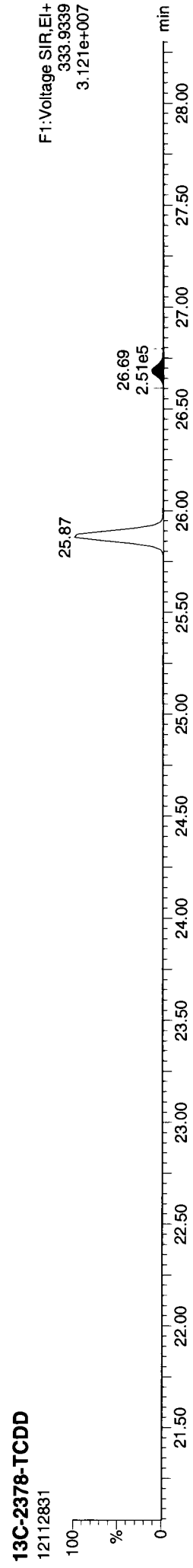
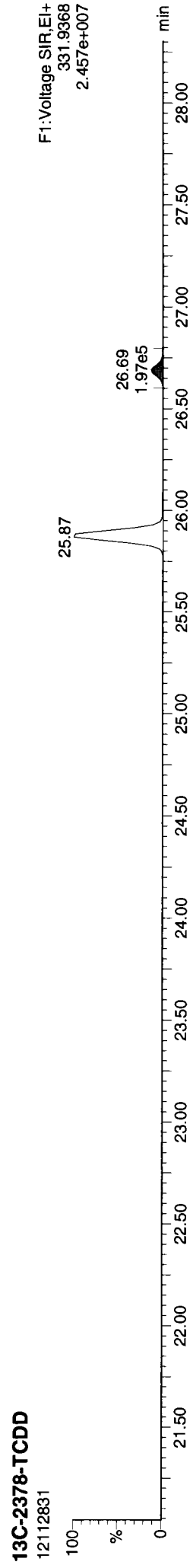
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123ICAL.cdb 26 Nov 2012 09:23:13

Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk



Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

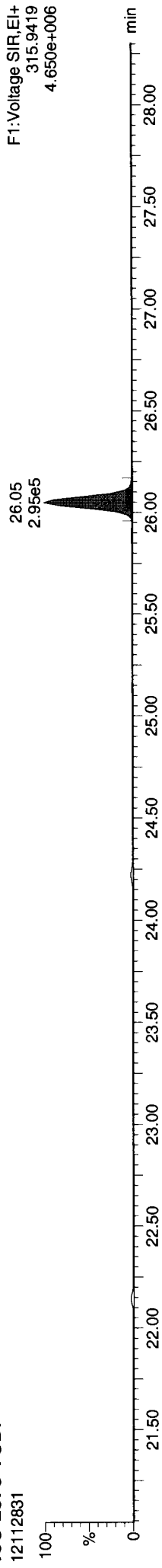
Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk



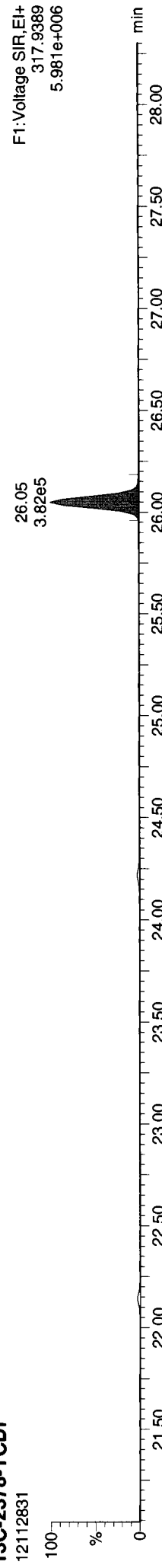


Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk

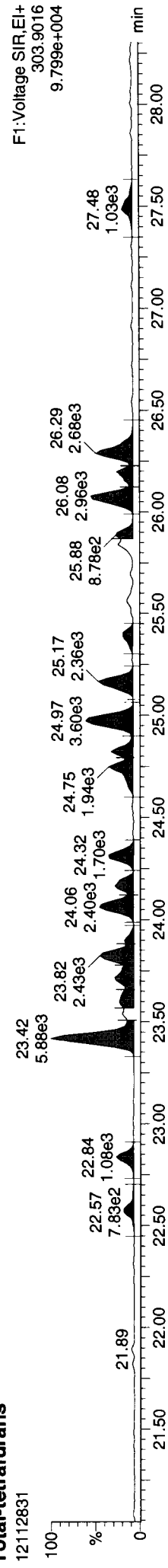
13C-2378-TCDF



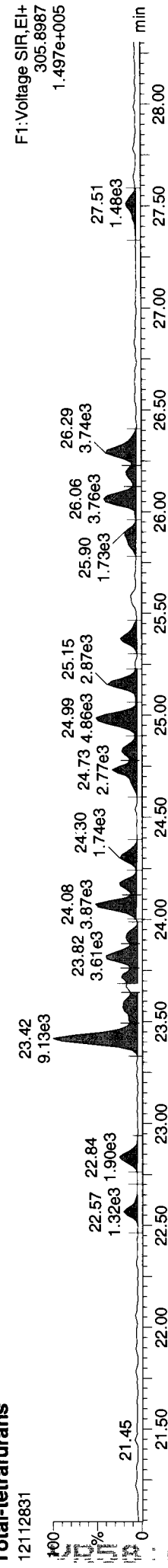
13C-2378-TCDF



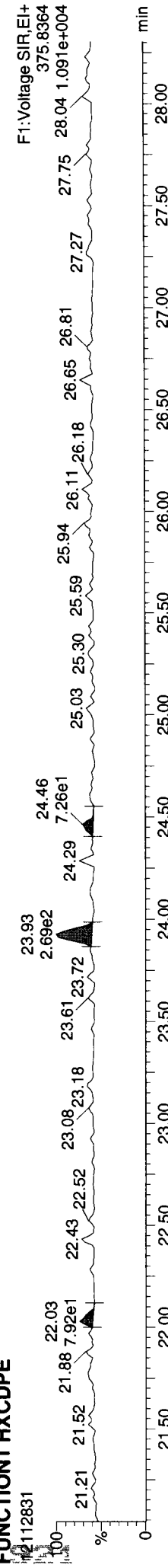
Total-tetrafurans



Total-tetrafurans



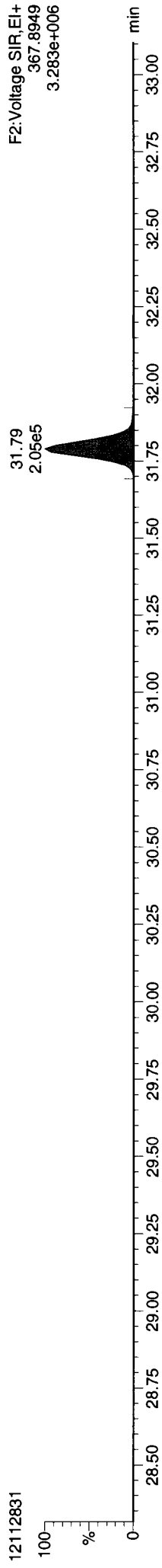
FUNCTION1 HXCDFE



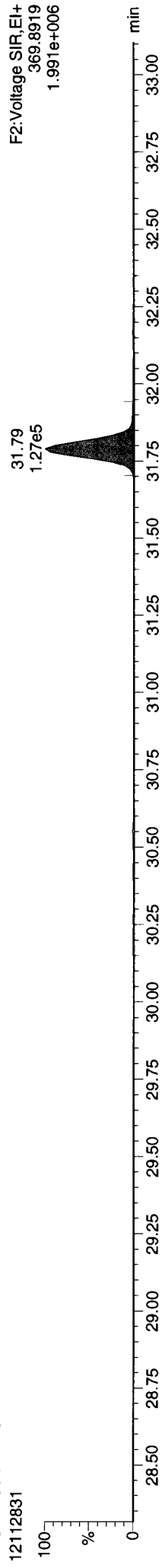
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk

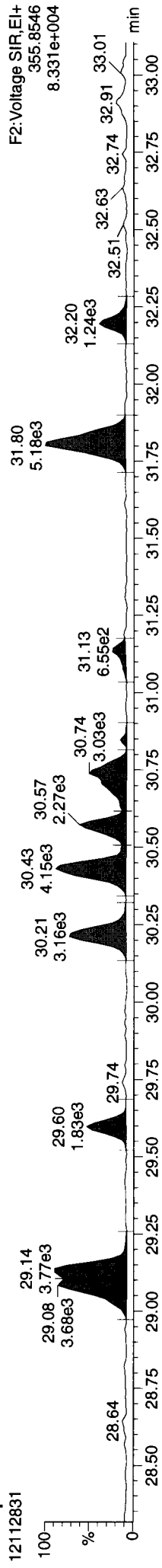
13C-12378-PeCDD



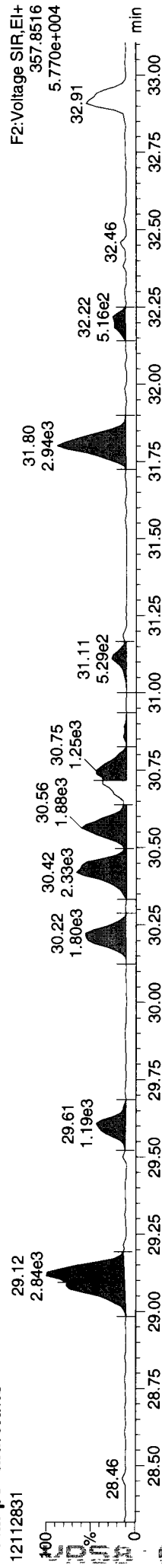
13C-12378-PeCDD



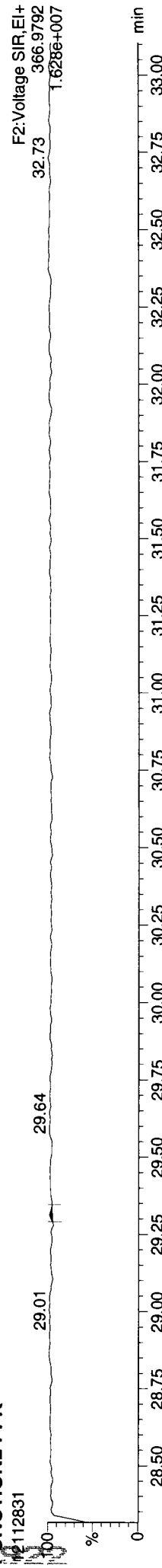
Total-pentadioxins



Total-pentadioxins

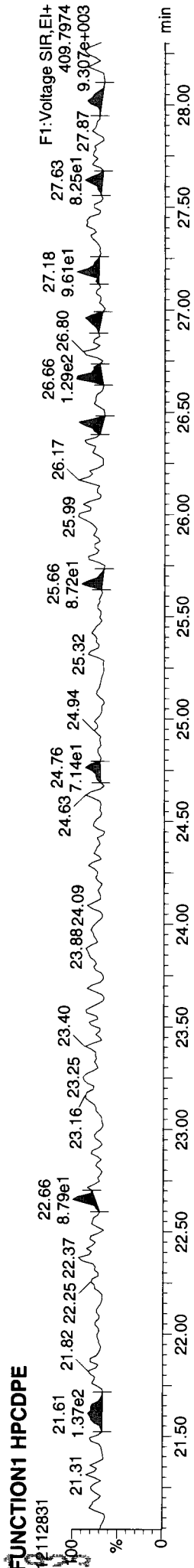
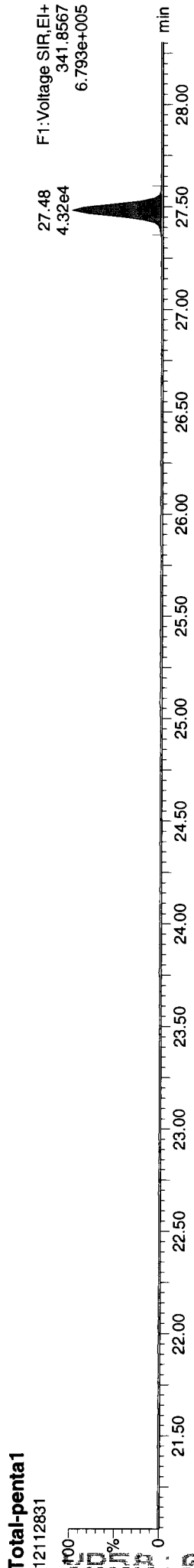
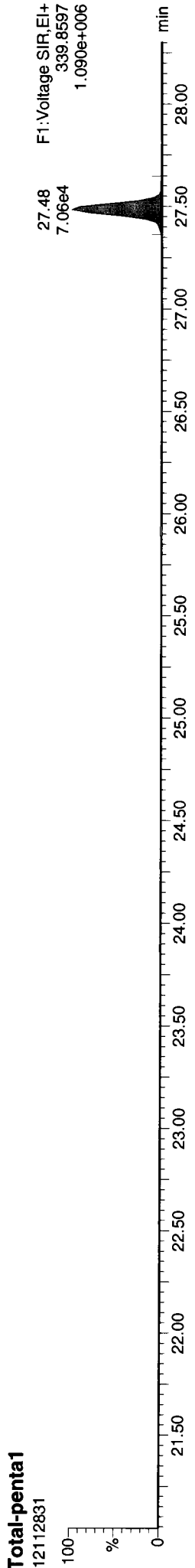
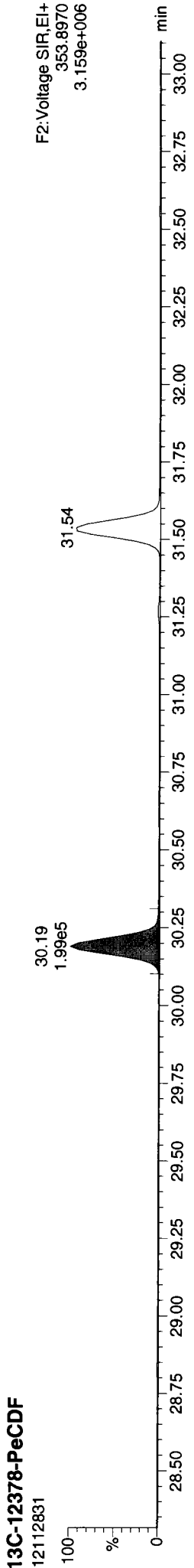
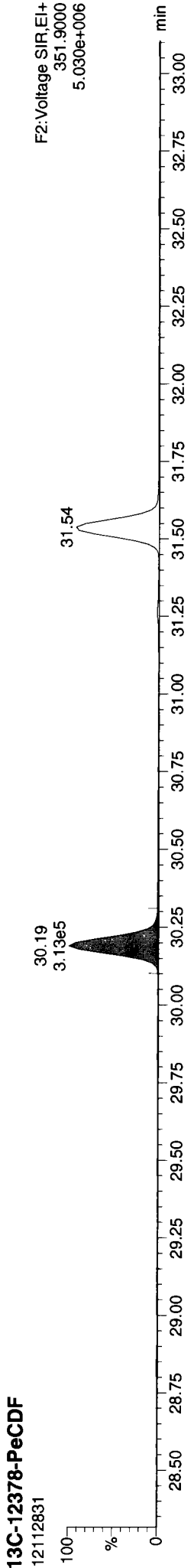


FUNCTION2 PFK



Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

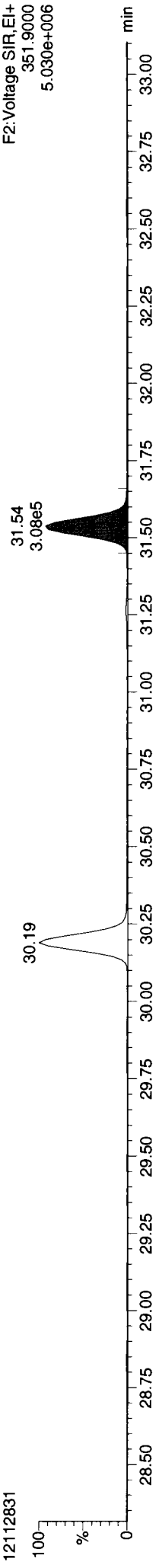
Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk



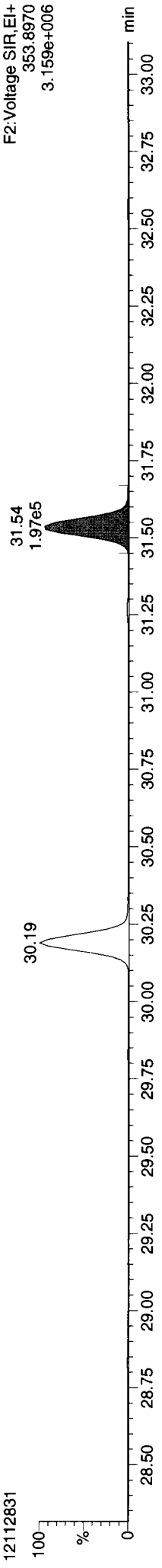
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk

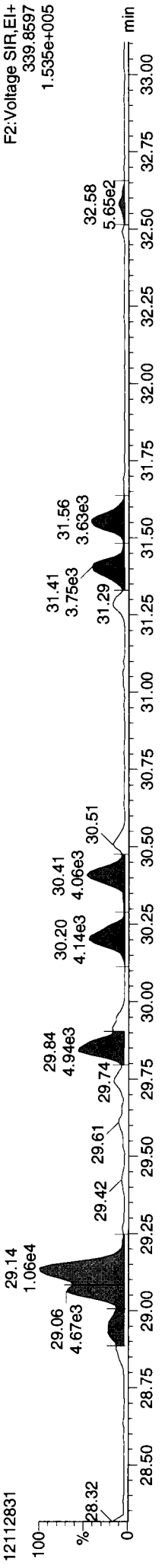
13C-23478-PeCDF



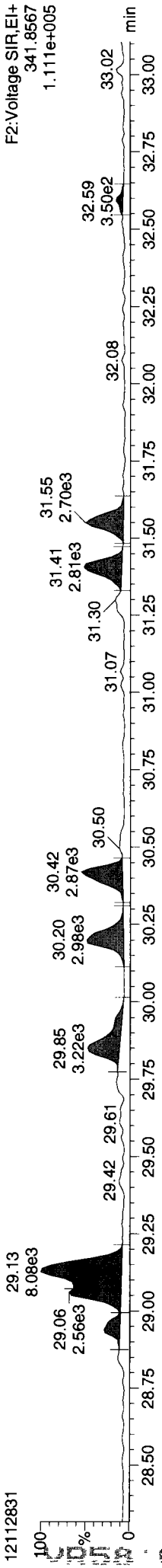
13C-23478-PeCDF



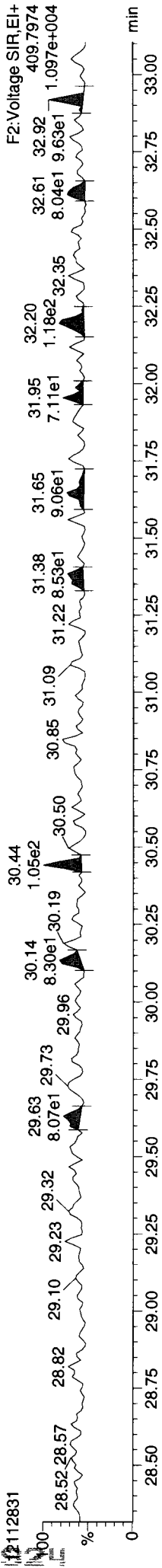
Total-pentafurans



Total-pentafurans

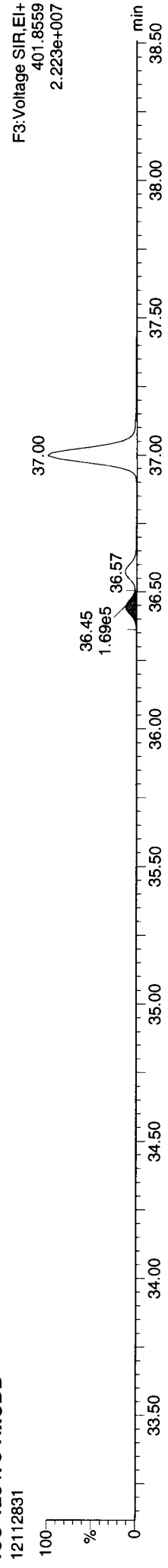


FUNCTION2 HPCDPE

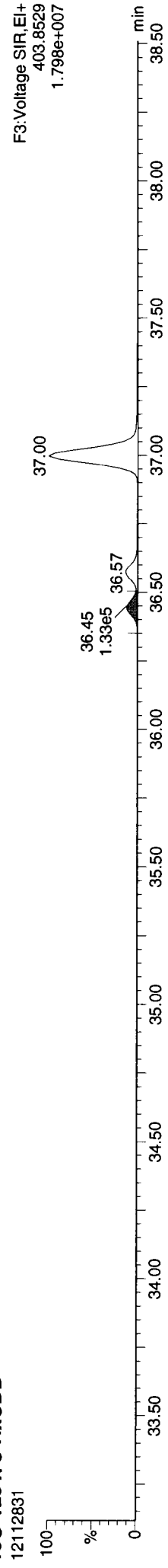


Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk

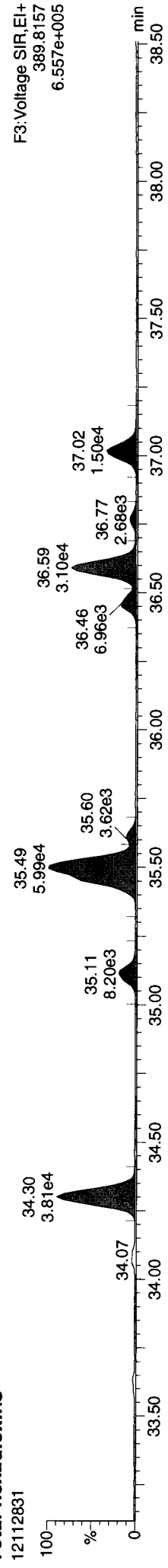
13C-123478-HxCDD  
12112831



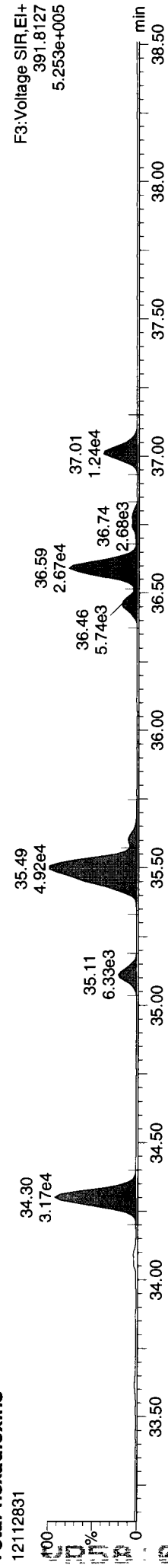
13C-123478-HxCDD  
12112831



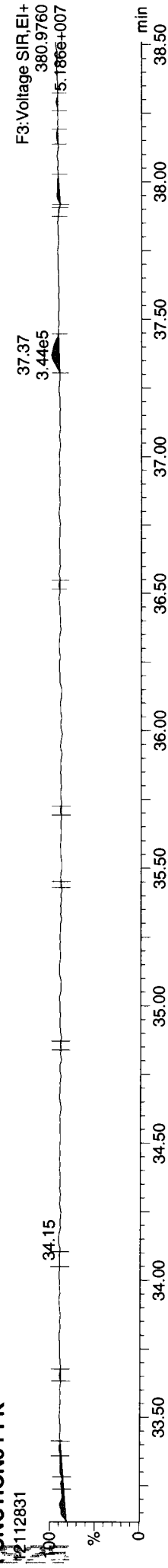
Total-hexadioxins  
12112831



Total-hexadioxins  
12112831



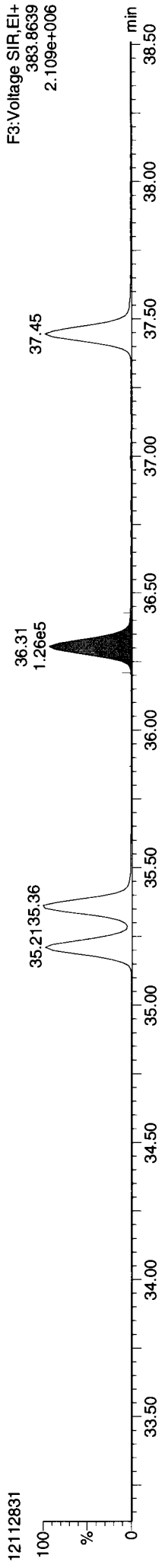
FUNCTION3 PFK  
12112831



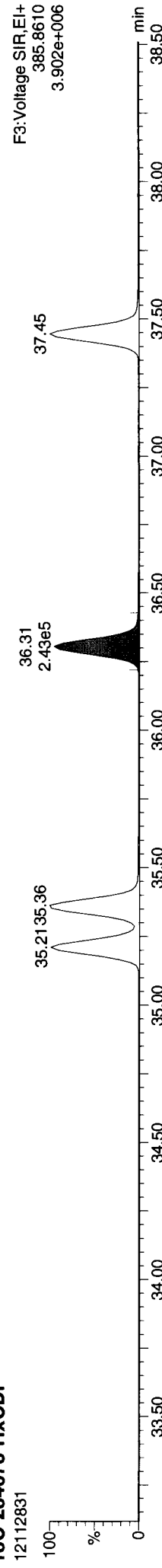
**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
 Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
 Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

**Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk**

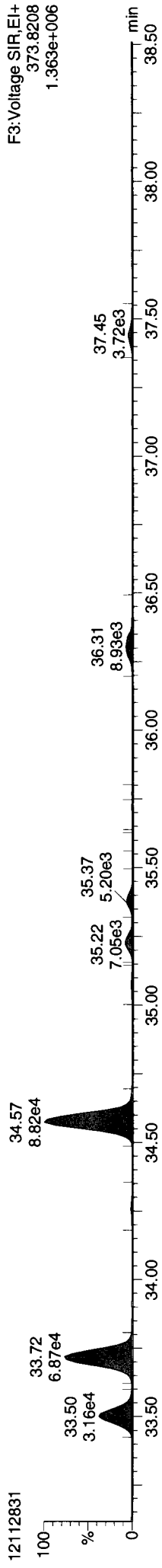
**13C-234678-HxCDF**



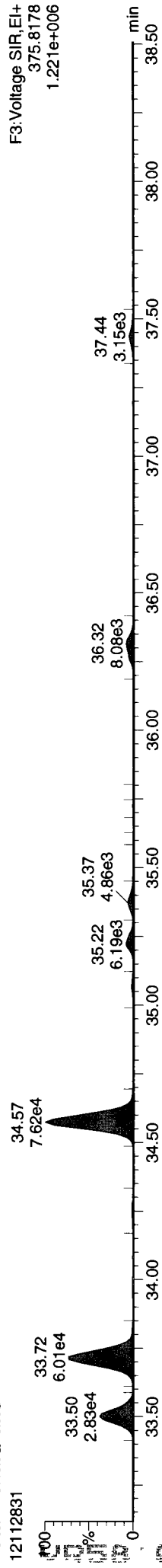
**13C-234678-HxCDF**



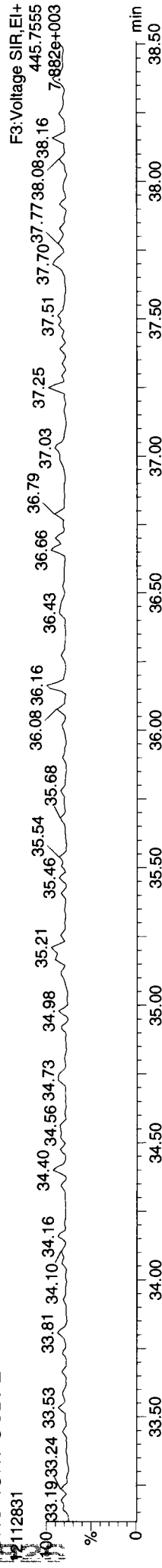
**Total-hexafurans**



**Total-hexafurans**



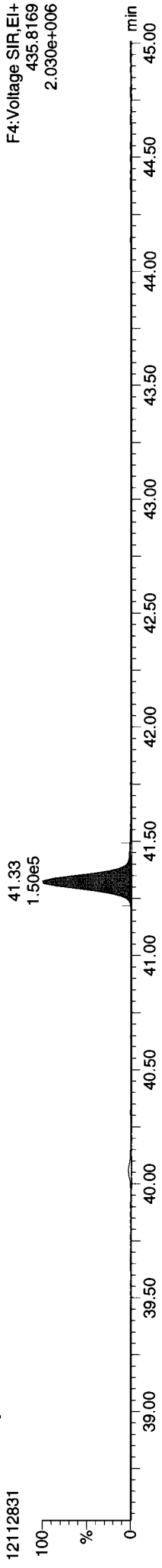
**FUNCTION3 OCDPE**



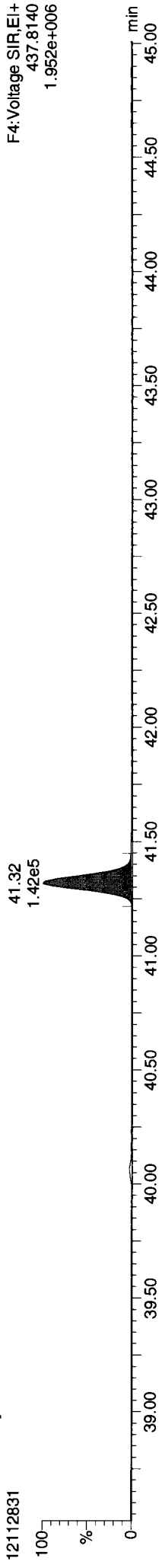
Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk

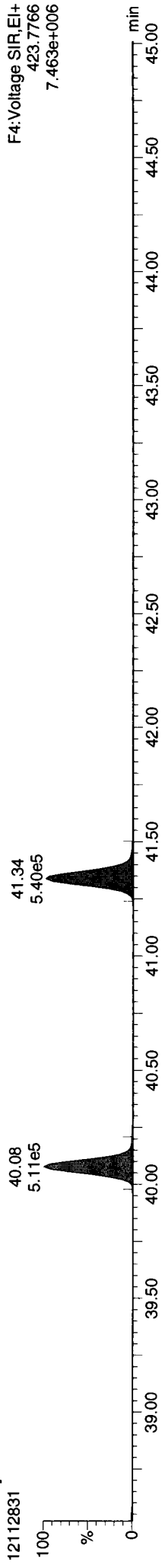
13C-1234678-HpCDD



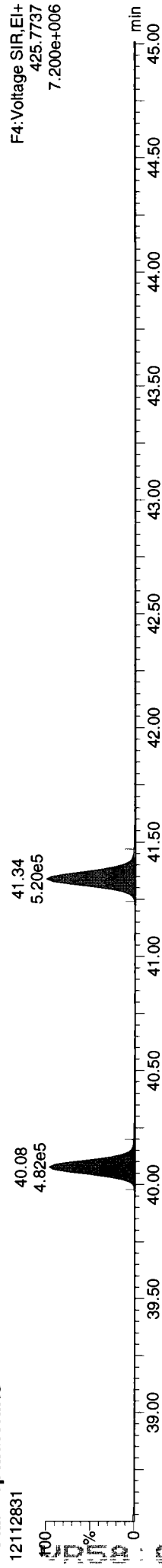
13C-1234678-HpCDD



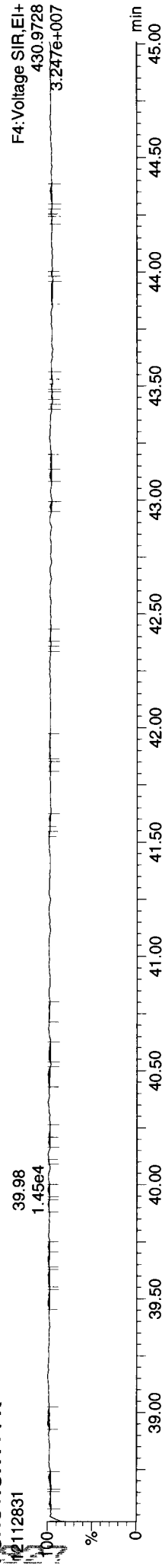
Total-heptadioxins



Total-heptadioxins



FUNCTION4 PFK



F4: Voltage SIR, EI+  
435.8169  
2.030e+006

F4: Voltage SIR, EI+  
437.8140  
1.952e+006

F4: Voltage SIR, EI+  
423.7766  
7.463e+006

F4: Voltage SIR, EI+  
425.7737  
7.200e+006

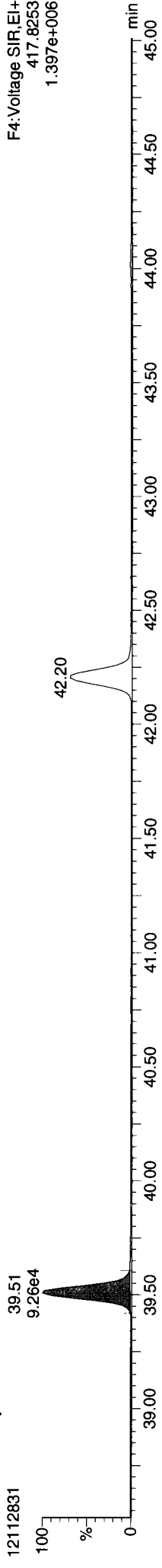
F4: Voltage SIR, EI+  
430.9728  
3.247e+007

**Quantify Sample Report** MassLynx 4.1 SCN 714

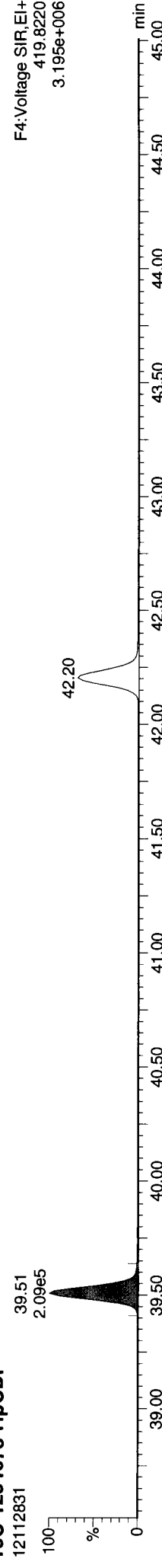
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Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

**Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk**

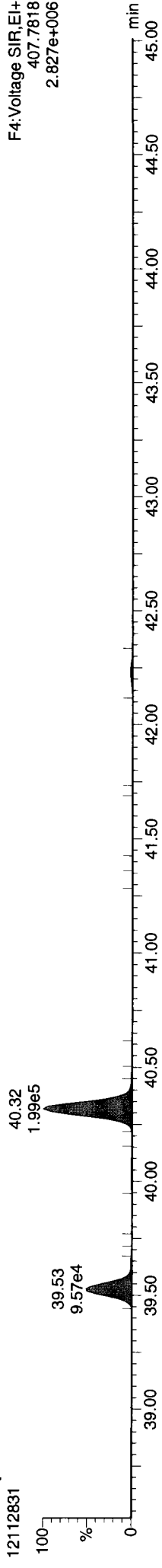
**13C-1234678-HpCDF**



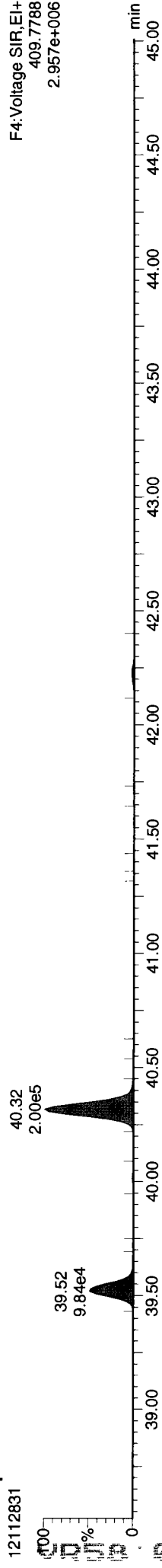
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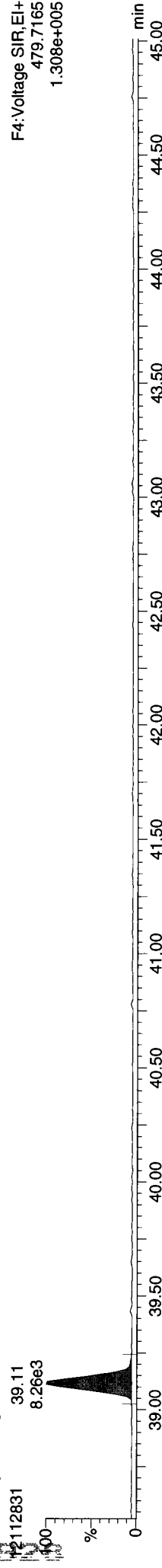
**Total-heptafurans**



**Total-heptafurans**



**FUNCTION4 NCDPE**





Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld

Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time

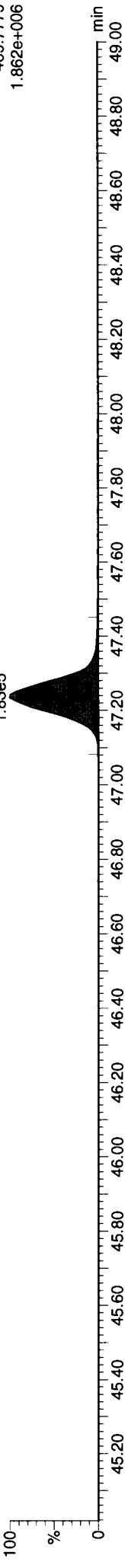
Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk

13C-OCDD

12112831

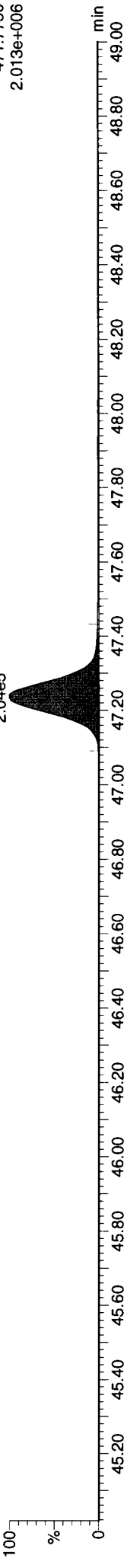
F5:Voltage SIR,EI+  
469.7779  
1.862e+006



13C-OCDD

12112831

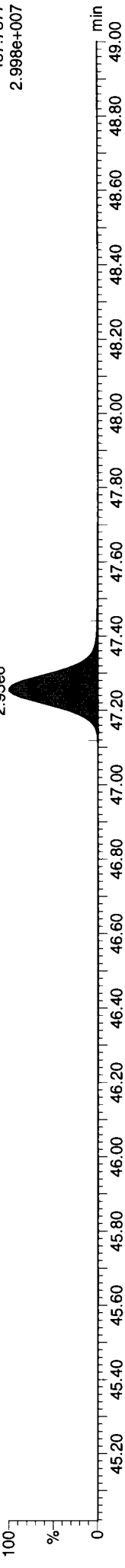
F5:Voltage SIR,EI+  
471.7750  
2.013e+006



OCDD

12112831

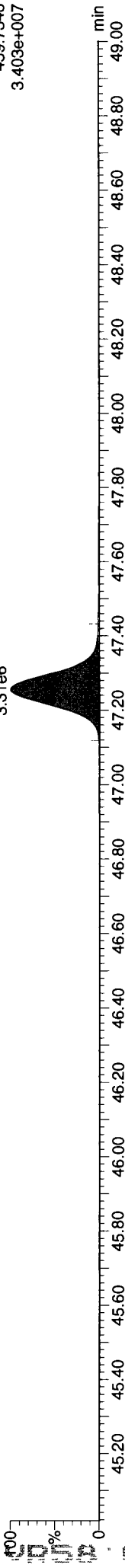
F5:Voltage SIR,EI+  
457.7377  
2.998e+007



OCDD

12112831

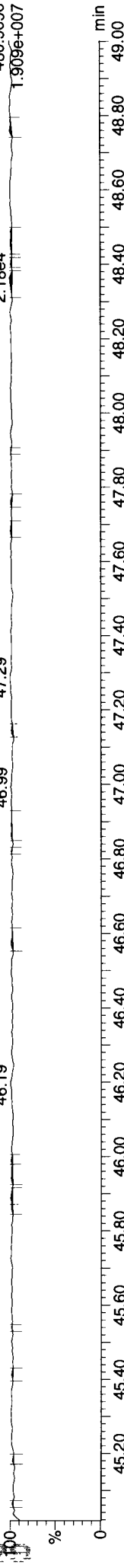
F5:Voltage SIR,EI+  
459.7348  
3.403e+007



FUNCTION5 PFK

12112831

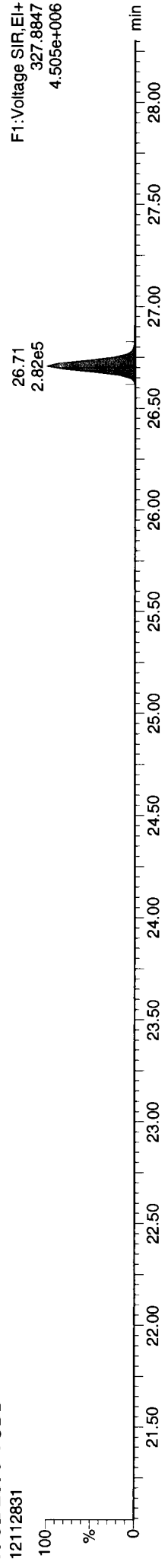
F5:Voltage SIR,EI+  
480.9696  
1.909e+007



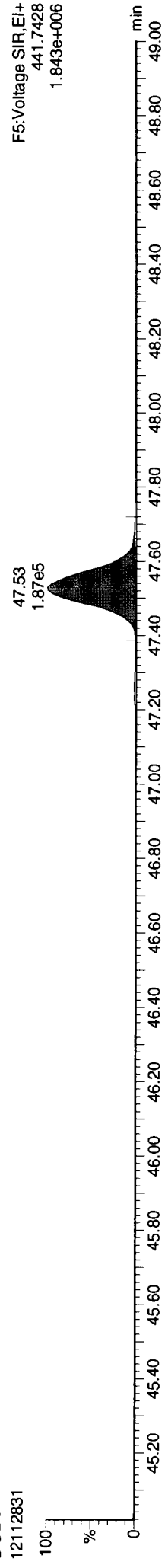
Quantify Sample Report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:02 Pacific Standard Time

Name: 12112831, Date: 29-Nov-2012, Time: 12:51:00, ID: VR58C 5X, Conditions: AUTOSPEC01, User: pk

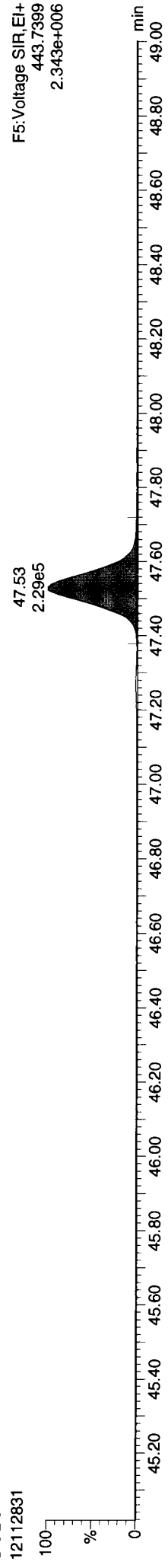
37CL-2378-TCDD  
12112831



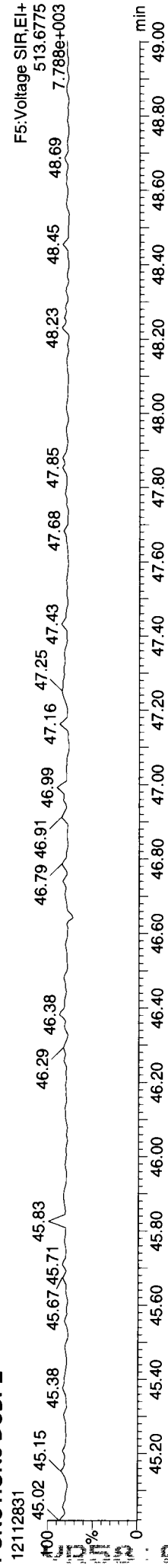
OCDF  
12112831



OCDF  
12112831



FUNCTION5 DCDPE  
12112831



12112831

Quantify Sample Summary Report MassLynx 4.1 SCN 714

Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

*pk 2/11/12*

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR59D 5X, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.078	1.001	5.26e3	6.93e3	0.877	0.759	0.770	38.9	NO	1.548	1.548
12378-PeCDF	30.211	1.000	1.03e4	7.72e3	0.896	1.338	1.550	102.8	NO	2.633	2.633
23478-PeCDF	31.559	1.001	1.01e4	7.02e3	0.926	1.438	1.550	105.3	NO	2.399	2.399
123478-HxCDF	35.231	1.000	2.40e4	2.00e4	1.068	1.201	1.240	156.3	NO	6.909	6.909
234678-HxCDF	36.327	1.000	2.63e4	2.22e4	1.037	1.184	1.240	112.1	NO	7.695	7.695
123678-HxCDF	35.385	1.001	1.46e4	1.33e4	1.035	1.099	1.240	89.0	NO	4.251	4.251
123789-HxCDF	37.435	0.999	1.38e4	1.12e4	0.987	1.232	1.240	75.2	NO	4.046	4.046
1234678-HpCDF	39.539	1.001	3.61e5	3.68e5	1.232	0.982	1.050	2159.0	NO	116.429	116.429
1234789-HpCDF	42.224	1.000	1.36e4	1.40e4	1.215	0.971	1.050	71.7	NO	5.351	5.351
OCDF	47.539	1.006	9.02e5	1.07e6	1.138	0.841	0.890	4902.4	NO	429.781	429.781
2378-TCDD	26.705	1.001	8.51e2	1.48e3	1.049	0.575	0.770	10.5	YES	0.293	0.349
12378-PeCDD	31.812	1.000	7.43e3	5.89e3	0.998	1.269	1.550	83.5	YES	2.459	2.673
123478-HxCDD	36.470	1.001	1.65e4	1.29e4	0.971	1.280	1.240	101.3	NO	6.093	6.093
123678-HxCDD	36.602	1.001	1.33e5	1.06e5	0.918	1.257	1.240	731.6	NO	47.797	47.797
123789-HxCDD	37.018	1.012	3.54e4	2.93e4	0.932	1.211	1.240	200.6	NO	13.311	13.311
1234678-HpCDD	41.348	1.000	2.15e6	2.08e6	1.017	1.036	1.050	3911.2	NO	814.478	814.478
OCDD	47.270	1.000	1.38e7	1.56e7	1.008	0.883	0.890	38293.5	NO	7220.119	7220.119
13C-2378-TCDF	26.063	1.007	3.89e5	5.10e5	1.473	0.764	0.770	2383.7	NO	15.033	15.033
13C-12378-PeCDF	30.200	1.167	4.66e5	2.99e5	1.148	1.558	1.550	3603.8	NO	16.410	16.410
13C-23478-PeCDF	31.538	1.218	4.68e5	3.02e5	1.113	1.550	1.550	3655.4	NO	17.051	17.051
13C-123478-HxCDF	35.221	0.952	2.03e5	3.92e5	1.209	0.519	0.510	1359.0	NO	15.467	15.467
13C-123678-HxCDF	35.363	0.956	2.16e5	4.19e5	1.269	0.516	0.510	1444.7	NO	15.731	15.731
13C-234678-HxCDF	36.317	0.981	2.07e5	4.02e5	1.236	0.514	0.510	1366.4	NO	15.464	15.464
13C-123789-HxCDF	37.457	1.012	2.18e5	4.09e5	1.107	0.532	0.510	1398.2	NO	17.799	17.799
13C-1234678-HpCDF	39.517	1.068	1.56e5	3.52e5	1.051	0.442	0.440	1169.0	NO	15.185	15.185
13C-1234789-HpCDF	42.214	1.141	1.33e5	2.92e5	0.815	0.456	0.440	855.0	NO	16.401	16.401
13C-1234-TCDD	25.884	0.000	1.78e6	2.28e6	1.000	0.780	0.770	8344.5	NO	100.000	100.000
13C-2378-TCDD	26.691	1.031	2.76e5	3.61e5	0.946	0.765	0.770	1305.8	NO	16.585	16.585
13C-12378-PeCDD	31.801	1.229	3.01e5	1.97e5	0.721	1.531	1.550	3760.9	NO	17.036	17.036
13C-123478-HxCDD	36.448	0.985	2.77e5	2.21e5	0.991	1.256	1.240	1851.8	NO	15.774	15.774
13C-123678-HxCDD	36.580	0.988	3.04e5	2.41e5	1.025	1.263	1.240	1972.9	NO	16.686	16.686
13C-1234678-HpCDD	41.326	1.117	2.61e5	2.50e5	0.866	1.043	1.050	2113.4	NO	18.516	18.516
13C-OCDD	47.252	1.277	3.85e5	4.23e5	0.769	0.911	0.890	2296.8	NO	32.975	32.975

MassLynx 4.1 SCN 714

Quantify Sample Summary Report

Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk

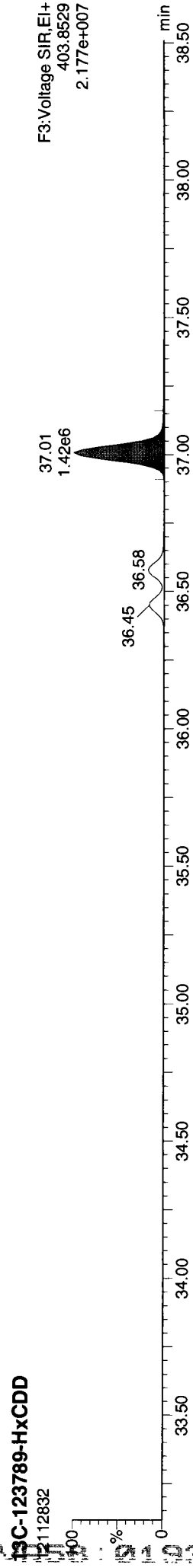
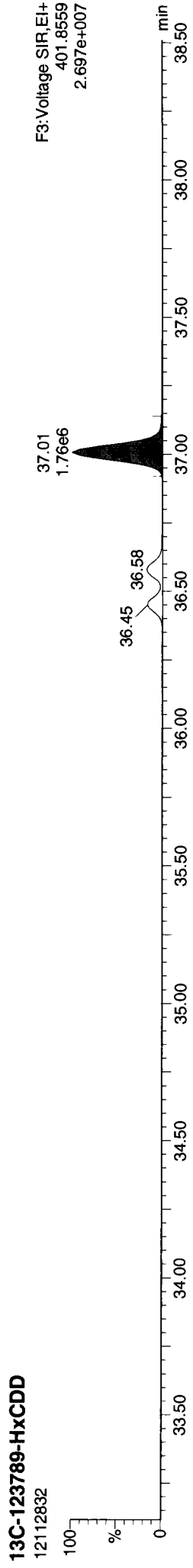
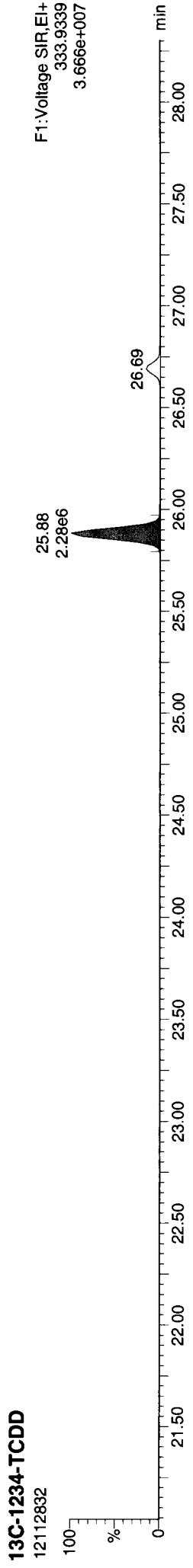
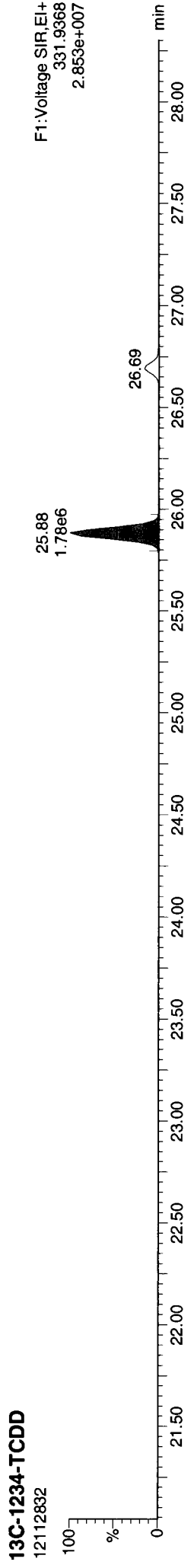
13C-123789-HxCDD	37.007	0.000	1.76e6	1.42e6	1.000	1.236	1.240	11659.1	NO	100.000
Total-tetraturans			3.80e4		0.877					16.851
Total-penta1			1.83e5							42.860
Total-pentaturans			8.32e4		0.911					20.223
Total-hexaturans			7.59e5		1.032					221.592
Total-heptaturans			1.18e6		1.223					405.573
Total-Furans			3.15e6		1.041					1142.969
Total-tetradiioxins			9.10e3		1.049					5.245
Total-pentadiioxins			2.84e4		0.998					14.458
Total-hexadiioxins			4.87e5		0.940					178.799
Total-heptadiioxins			3.99e6		1.017					1508.779
Total-Dioxins			3.15e6		0.985					1142.969
Total-TEQ			6.29e6							2285.939
37CL-2378-TCDD	26.721	1.032	3.03e5		1.044			2312.7		7.162
FUNCTION1 PFK			1.49e6							
FUNCTION2 PFK			1.73e6							0.000
FUNCTION3 PFK			7.31e5							0.000
FUNCTION4 PFK			1.01e5							
FUNCTION5 PFK			1.10e4							
FUNCTION1 HXCDPE			5.35e2							0.000
FUNCTION1 HPCDPE			9.11e2							0.000
FUNCTION2 HPCDPE			5.66e2							0.000
FUNCTION3 OCDPE			7.98e1							0.000
FUNCTION4 NCDPE			1.57e4							0.000
FUNCTION5 DCDPE			0.00e0							0.000

12112832

Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

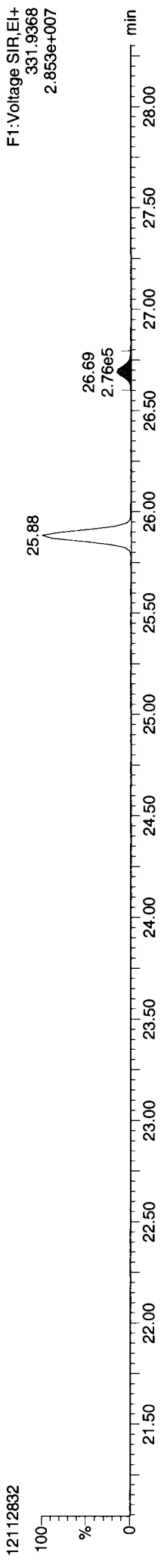
Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk



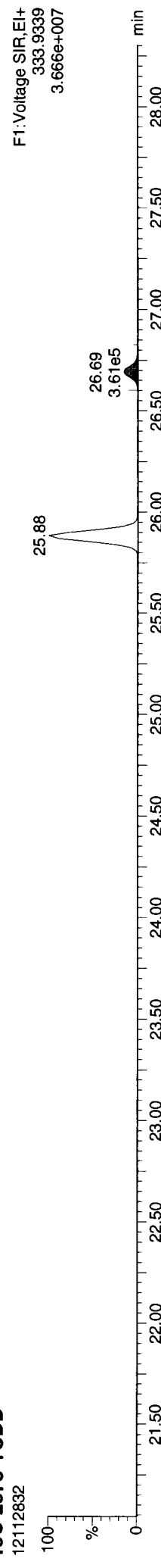
**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
 Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
 Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

**Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk**

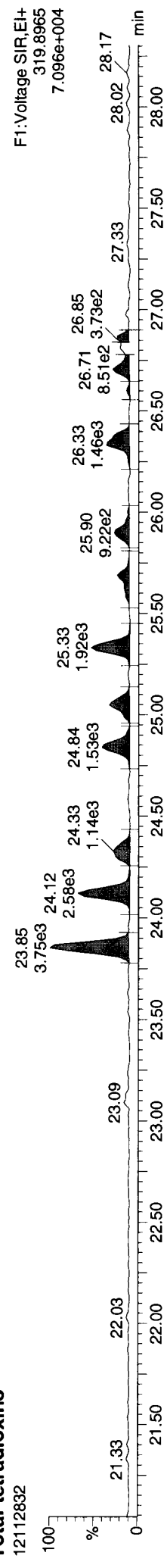
**13C-2378-TCDD**  
12112832



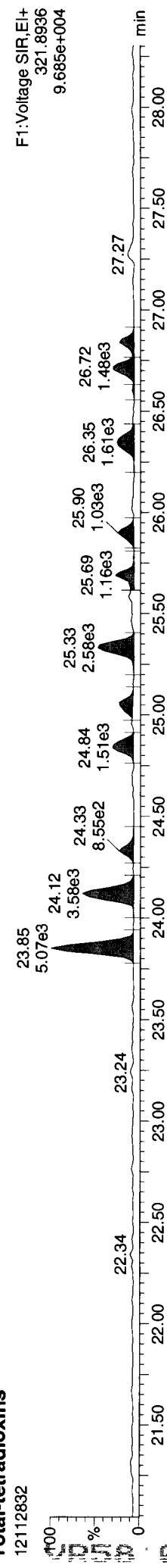
**13C-2378-TCDD**  
12112832



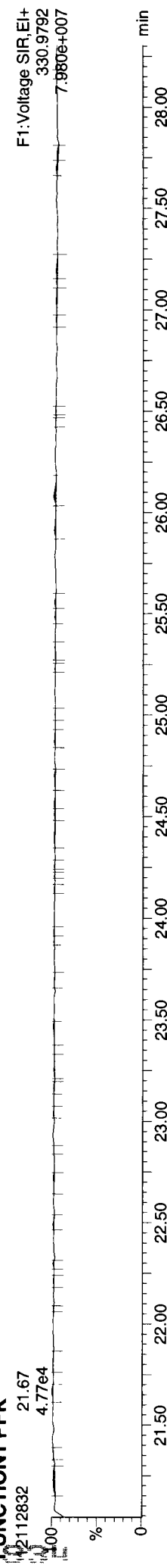
**Total-tetradoxins**  
12112832



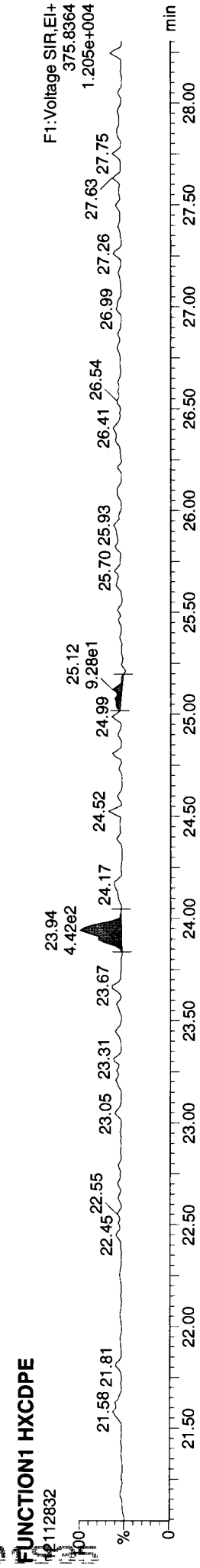
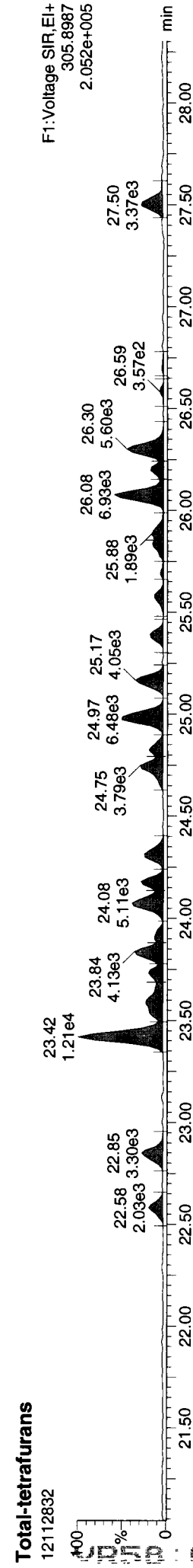
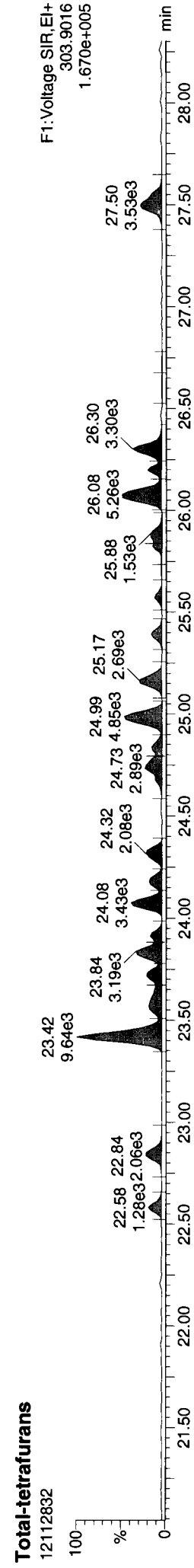
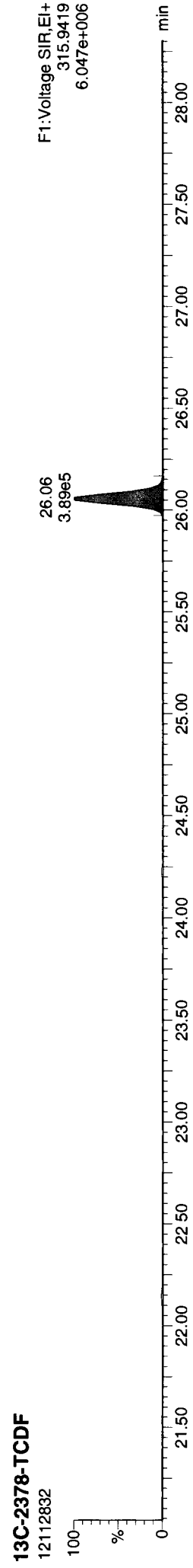
**Total-tetradoxins**  
12112832



**FUNCTION1 PFK**  
12112832



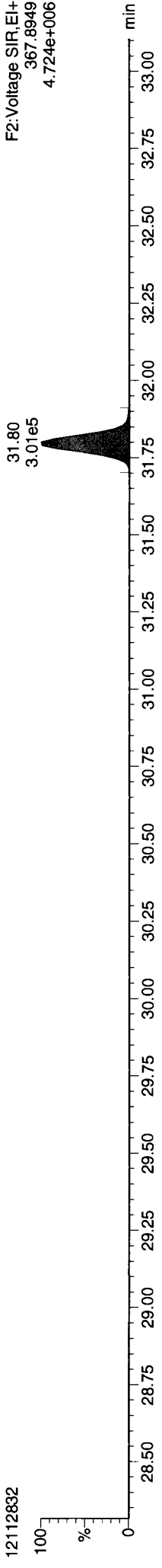
Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk



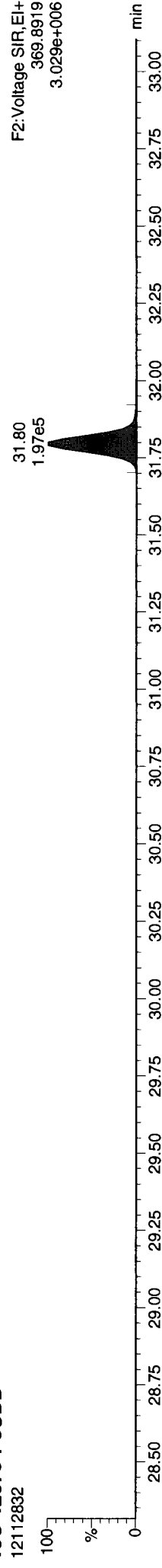
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk

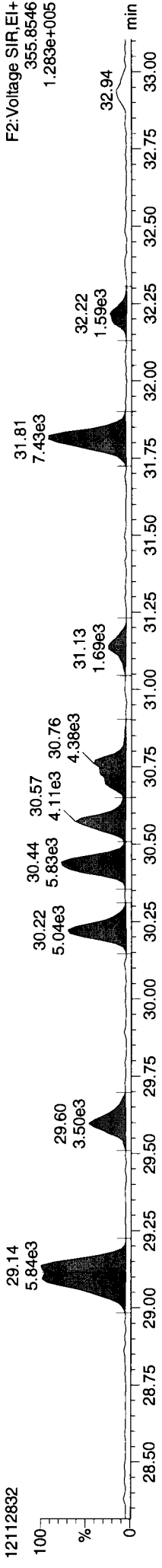
13C-12378-PeCDD



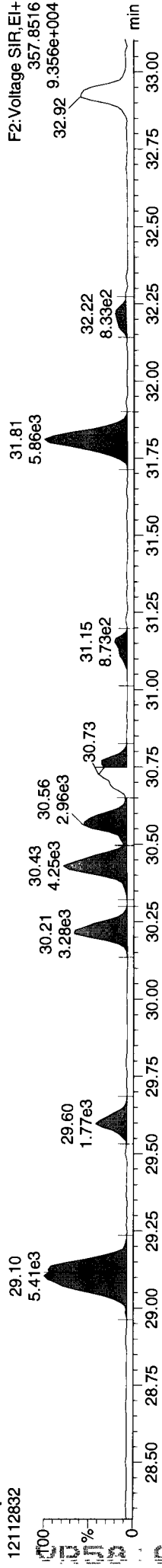
13C-12378-PeCDD



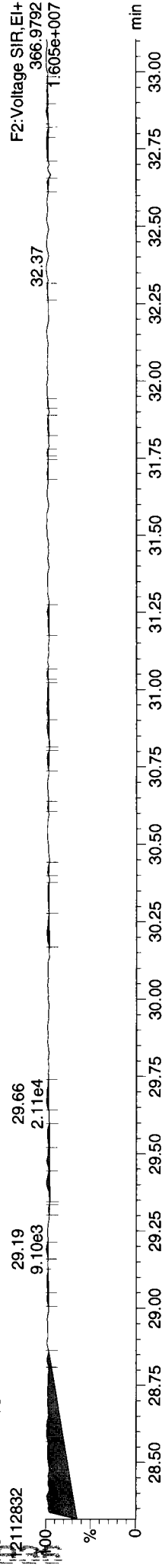
Total-pentadioxins



Total-pentadioxins



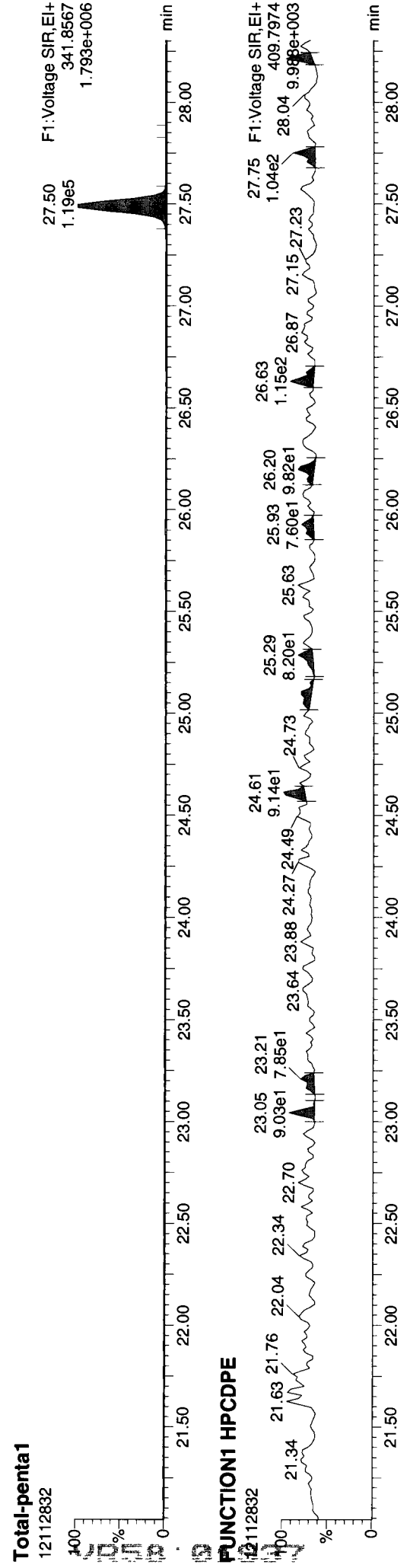
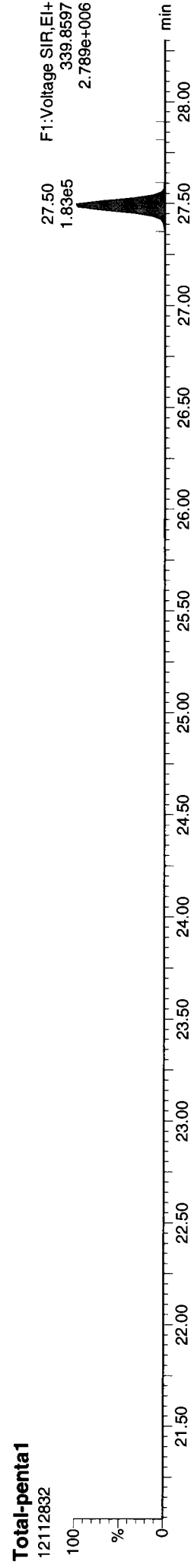
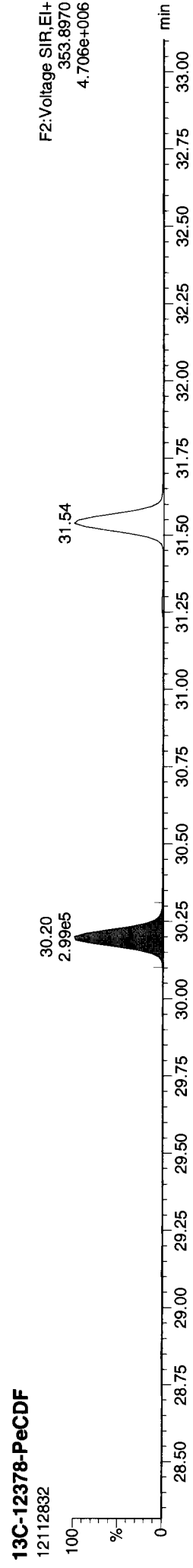
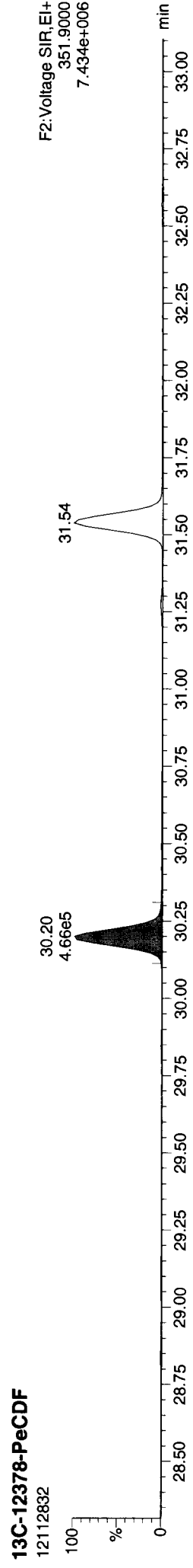
FUNCTION2 PFK





Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

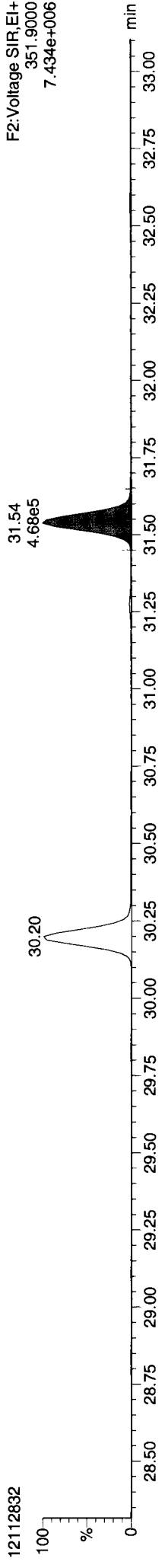
Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk



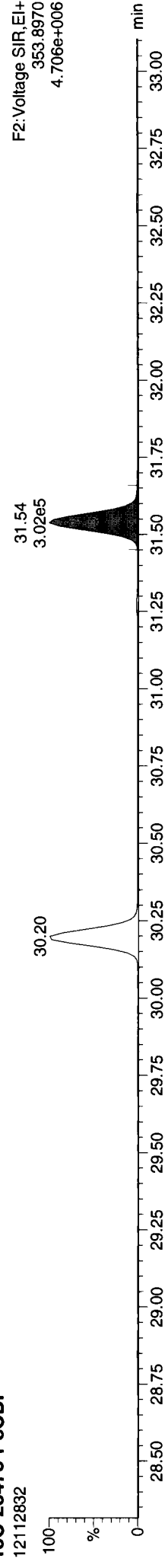
**Quantify Sample Report**    **MassLynx 4.1 SCN 714**  
 Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
 Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

**Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk**

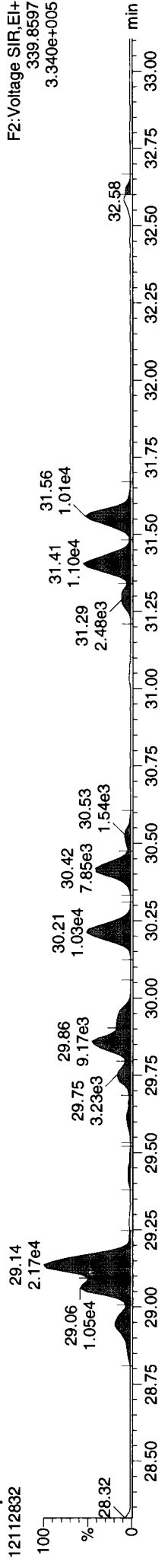
**13C-23478-PeCDF**



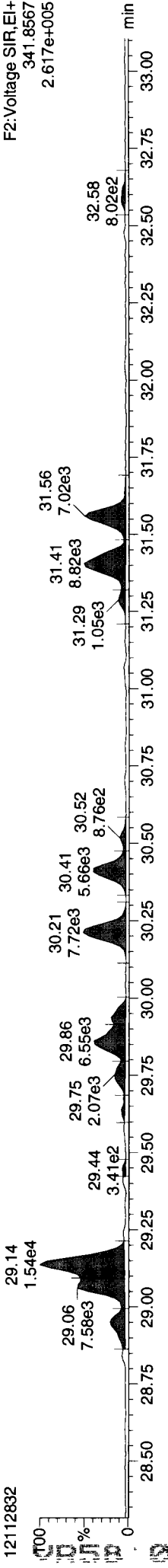
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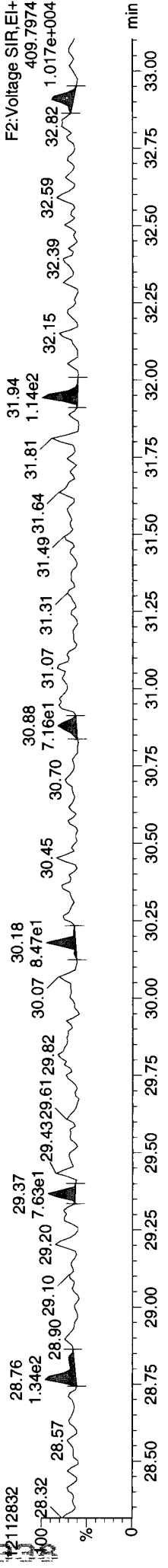
**Total-pentafurans**



**Total-pentafurans**



**FUNCTION2 HPCDPE**

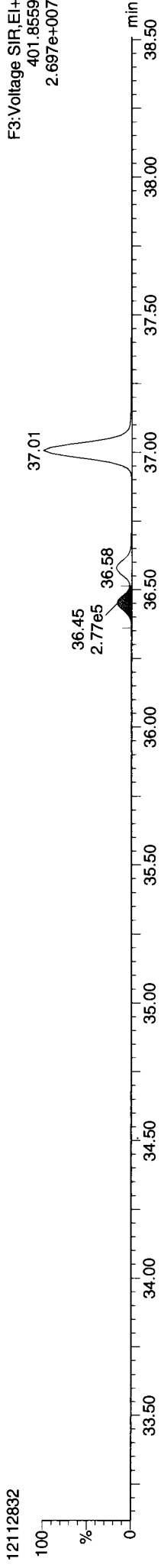


Quantify Sample Report MassLynx 4.1 SCN 714

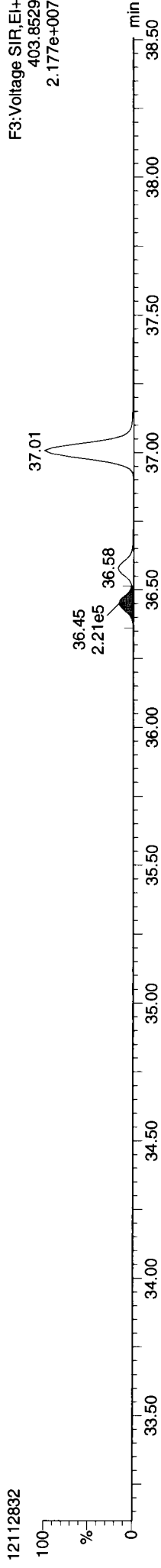
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk

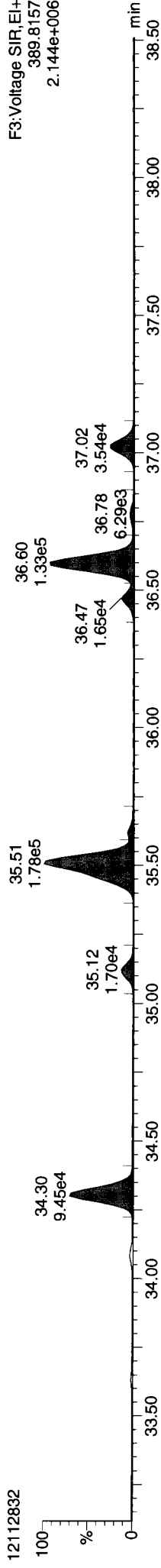
13C-123478-HxCDD



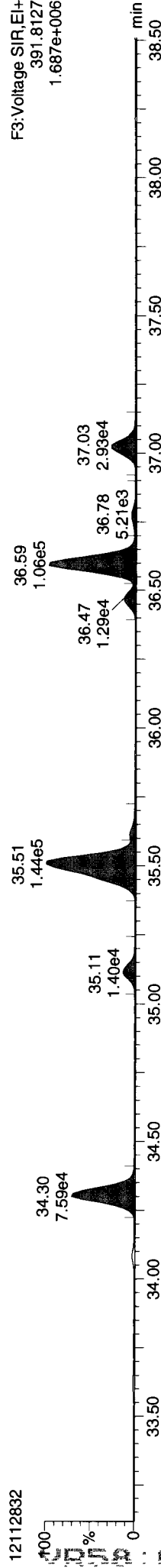
13C-123478-HxCDD



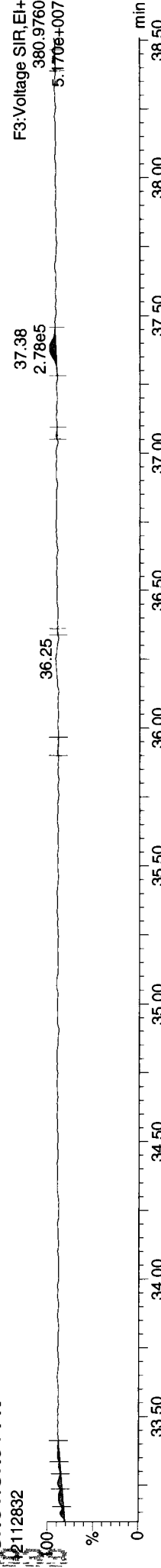
Total-hexadioxins



Total-hexadioxins



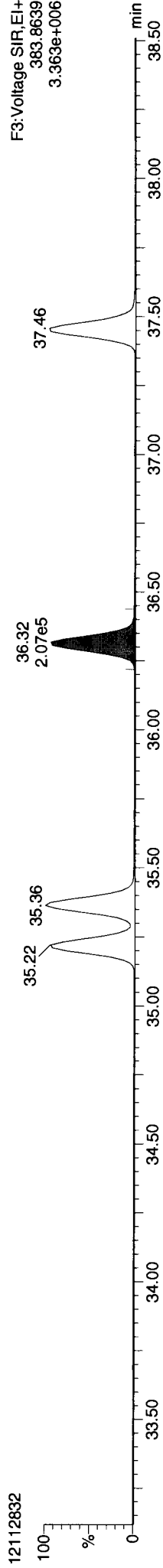
FUNCTION3 PFK



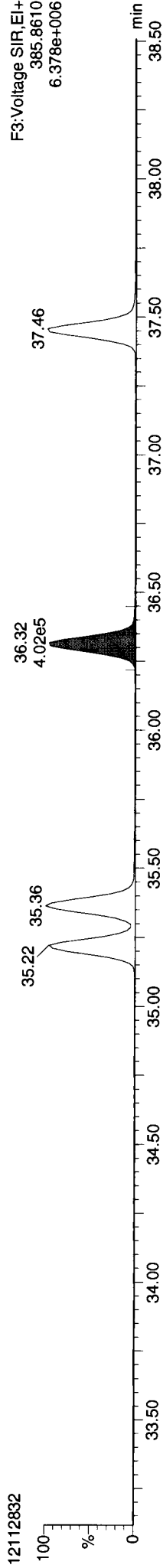
**Quantify Sample Report** MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk

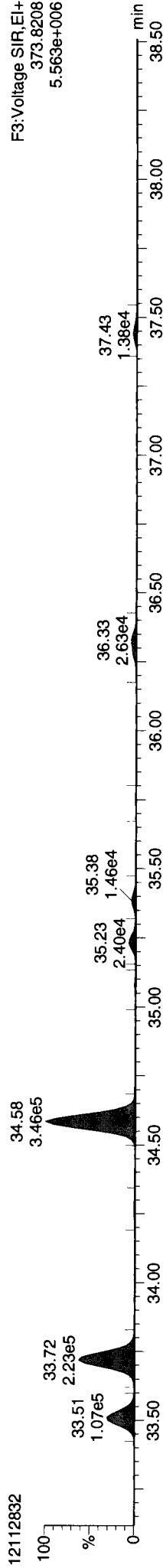
**13C-234678-HxCDF**



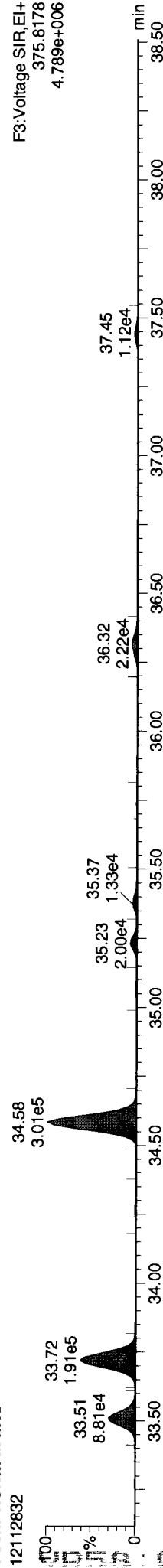
**13C-234678-HxCDF**



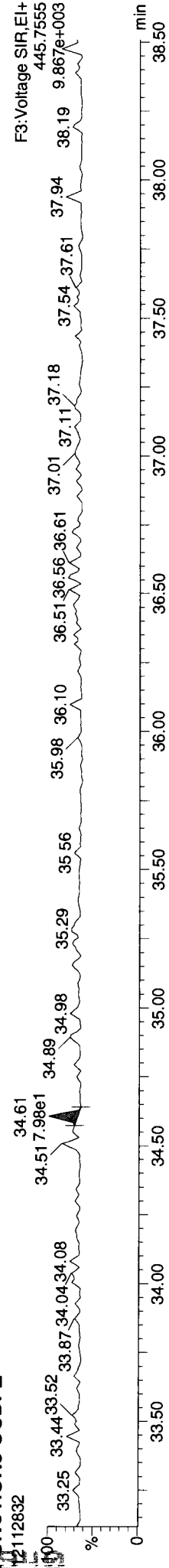
**Total-hexafurans**



**Total-hexafurans**



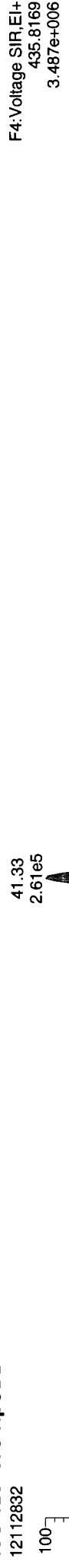
**FUNCTION3 OCDPE**



Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD  
12112832



13C-1234678-HpCDD  
12112832



Total-heptadioxins  
12112832



Total-heptadioxins  
12112832



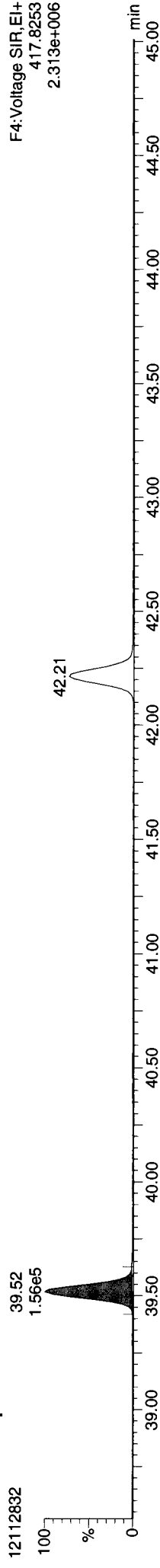
FUNCTION4 PFK  
12112832



Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

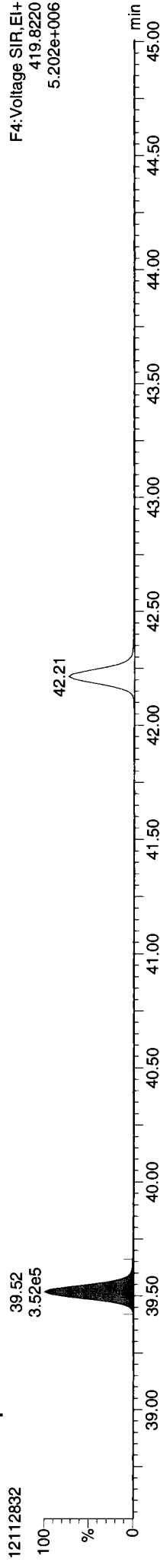
Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF



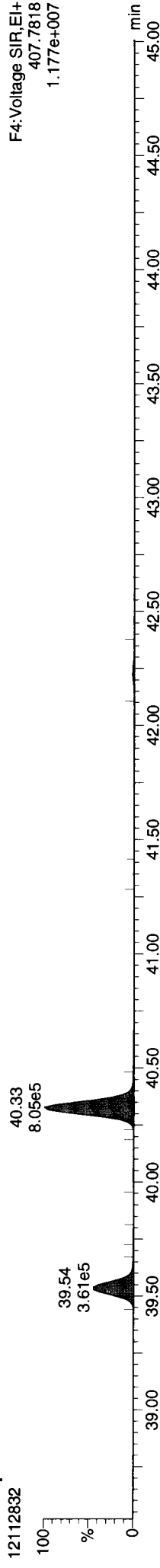
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2.313e+006

13C-1234678-HpCDF



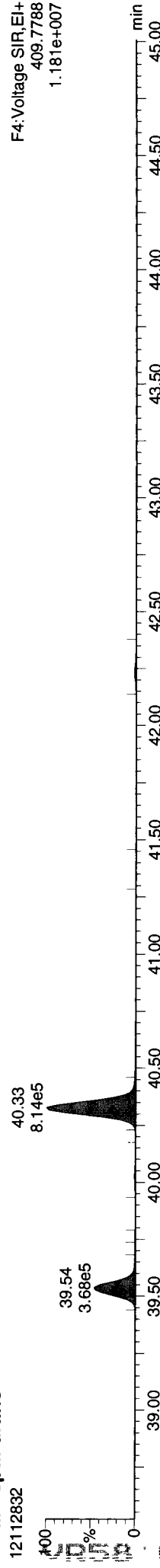
F4: Voltage SIR, EI+  
419.8220  
5.202e+006

Total-heptafurans



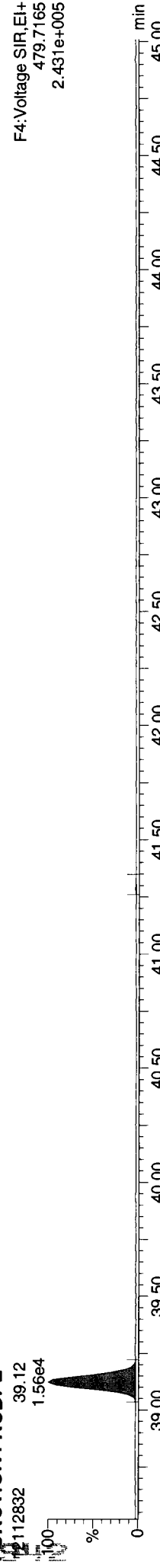
F4: Voltage SIR, EI+  
407.7818  
1.177e+007

Total-heptafurans



F4: Voltage SIR, EI+  
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1.181e+007

FUNCTION4 NCDPE

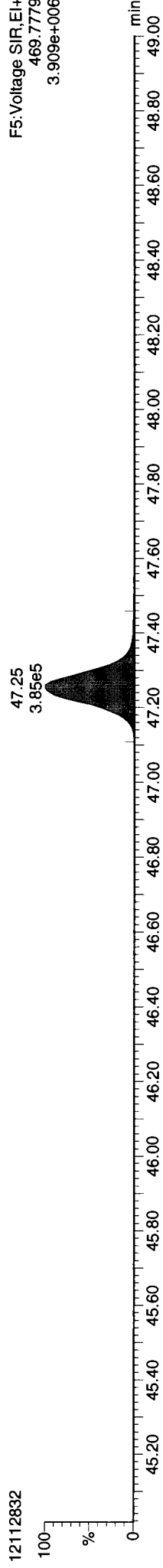


F4: Voltage SIR, EI+  
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2.431e+005

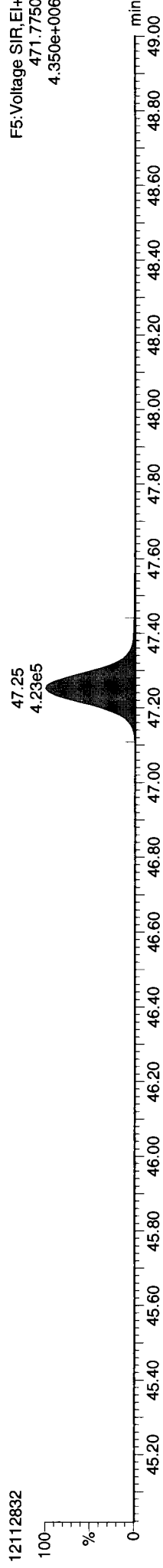
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Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk

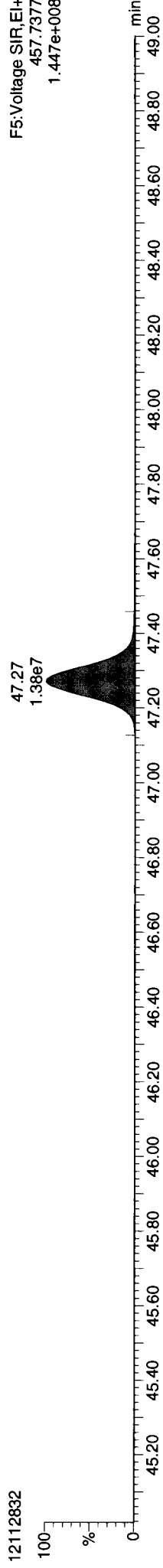
13C-OCDD



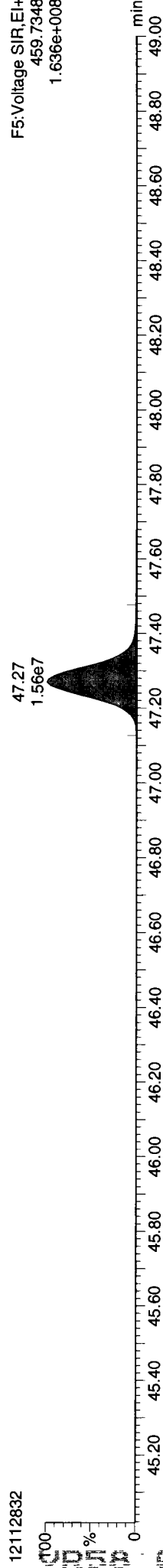
13C-OCDD



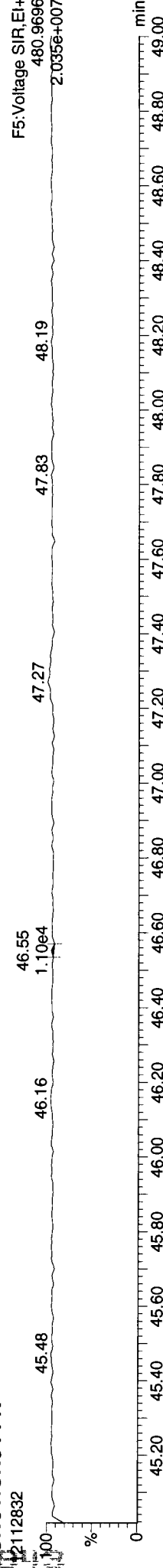
OCDD



OCDD



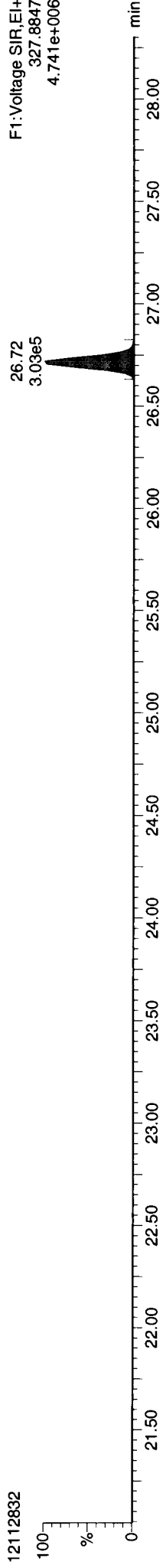
FUNCTION5 PFK



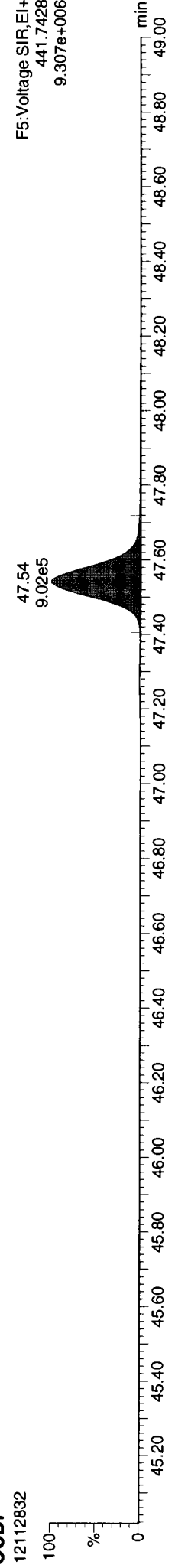
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Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 12:59:12 Pacific Standard Time

Name: 12112832, Date: 29-Nov-2012, Time: 13:43:29, ID: VR58D 5X, Conditions: AUTOSPEC01, User: pk

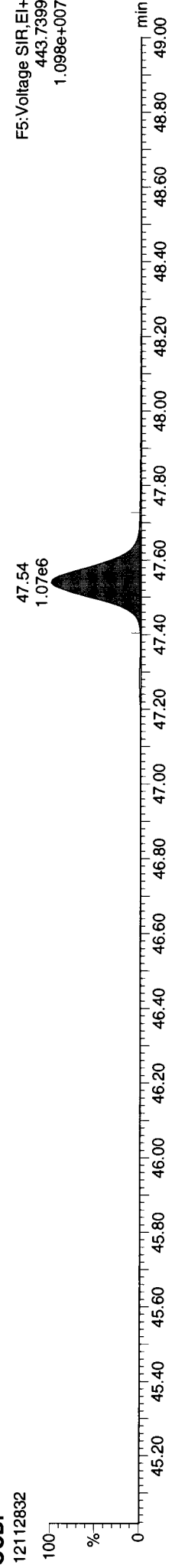
37CL-2378-TCDD



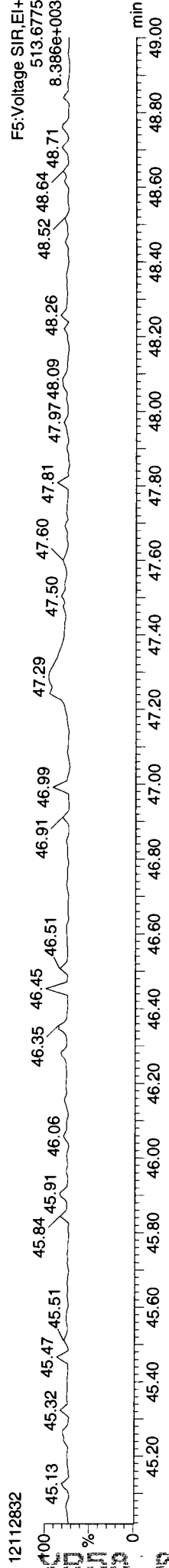
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OCDF

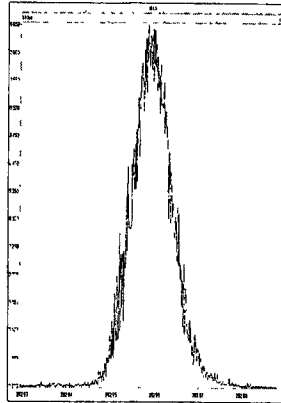


FUNCTION5 DCDPE

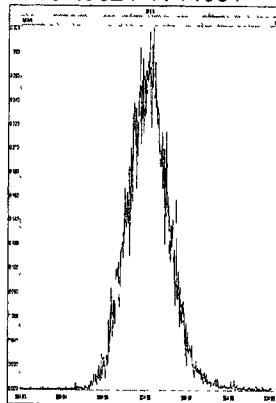




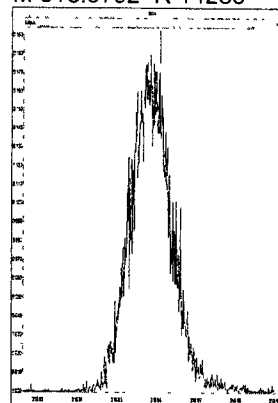
M 292.9824 R 13516



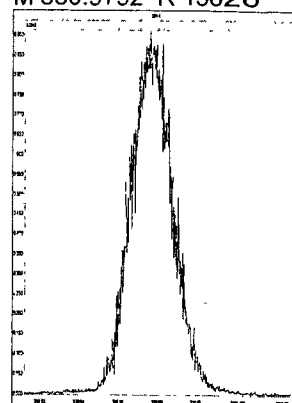
M 304.9824 R 14051



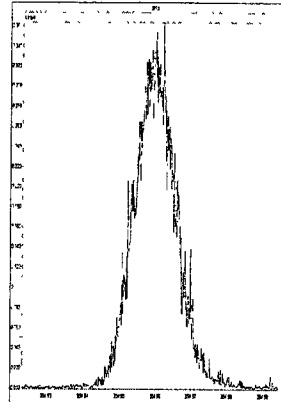
M 318.9792 R 14285



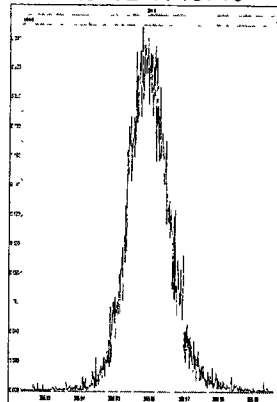
M 330.9792 R 13626



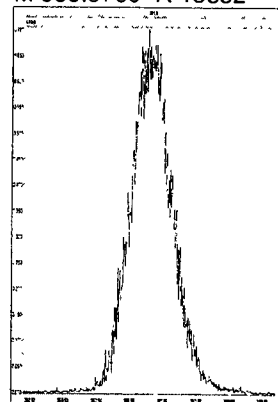
M 354.9792 R 13481



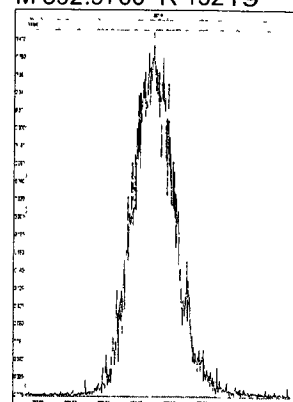
M 366.9792 R 13710



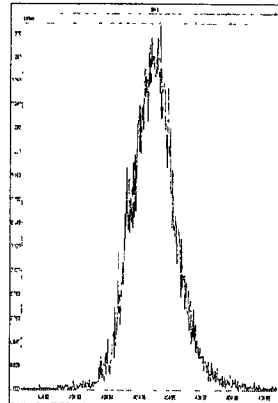
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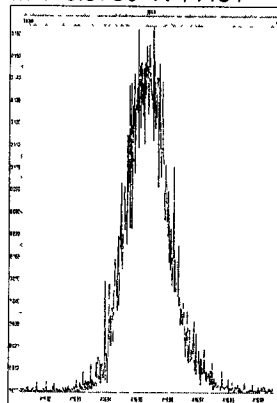
M 392.9760 R 13219



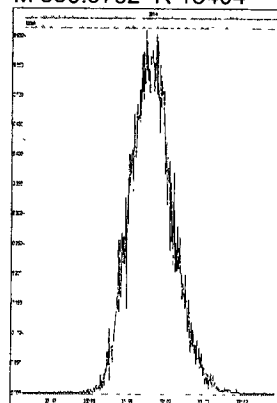
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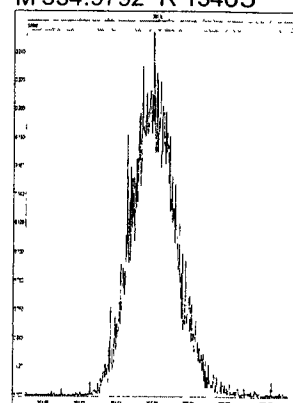
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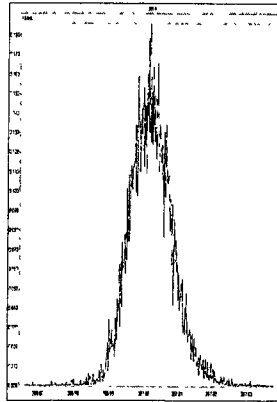
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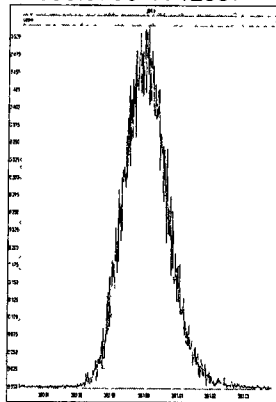
M 354.9792 R 13405



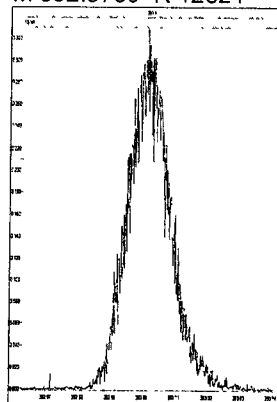
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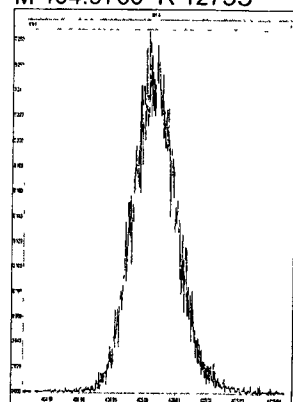
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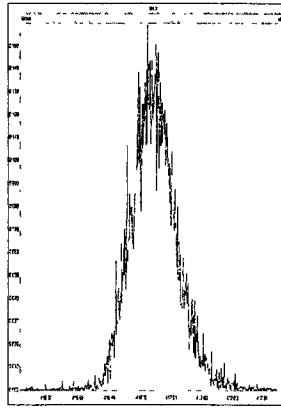
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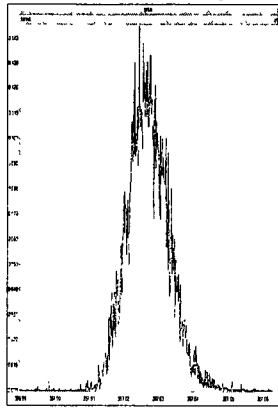
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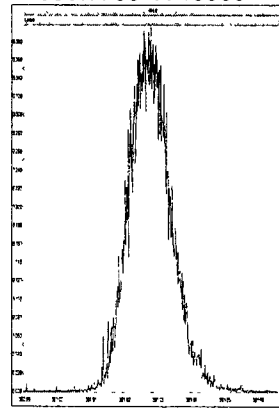
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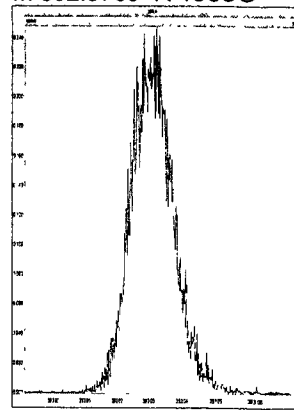
M 366.9792 R 14205



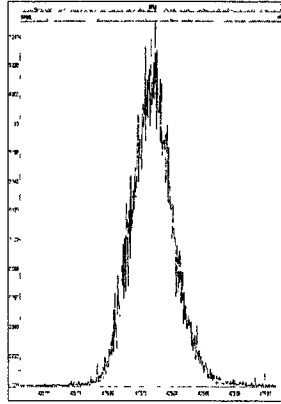
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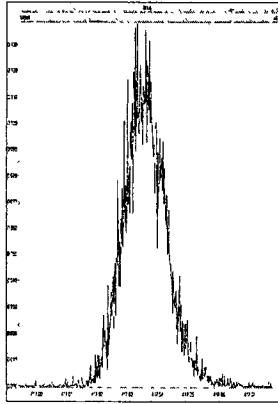
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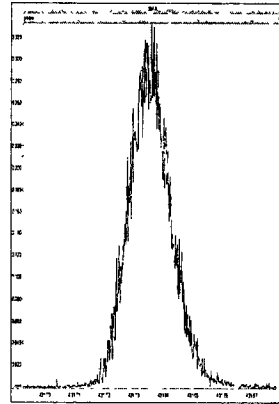
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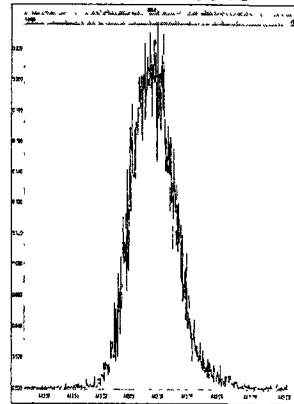
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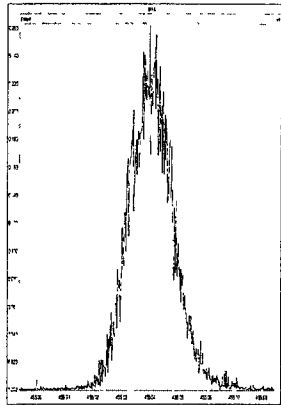
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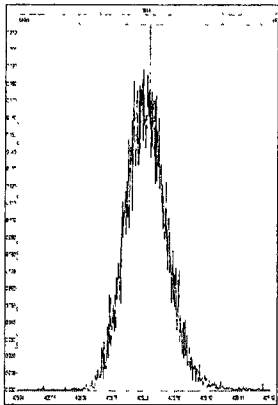
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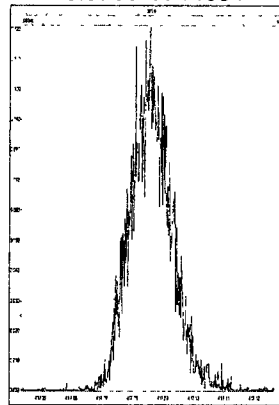
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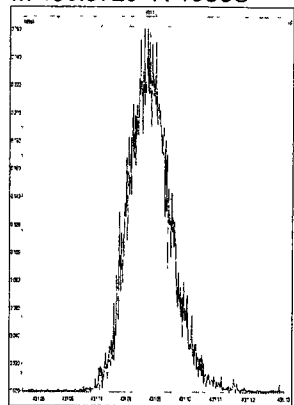
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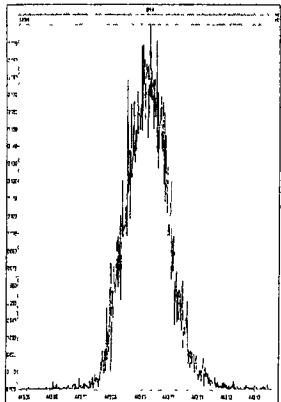
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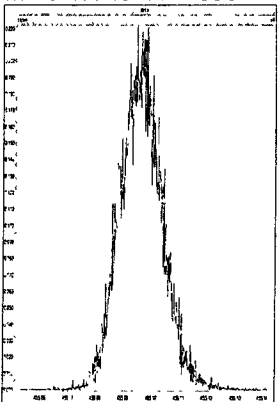
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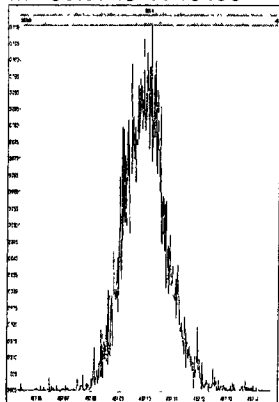
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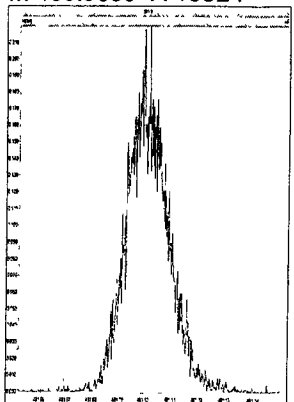
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M 466.9728 R 13493

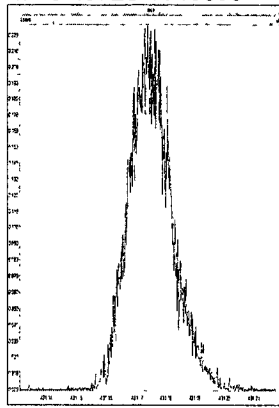


M 480.9696 R 13021

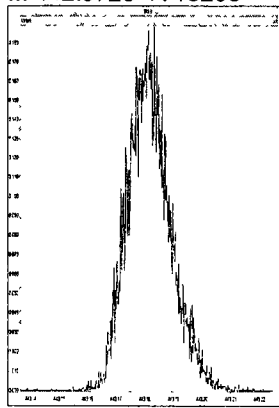


Printed: Thursday, November 29, 2012 17:20:40 Pacific Standard Time

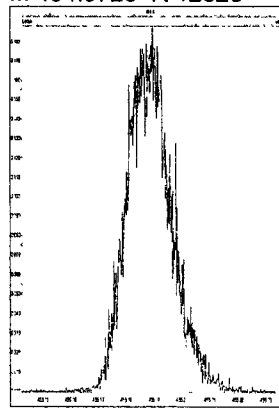
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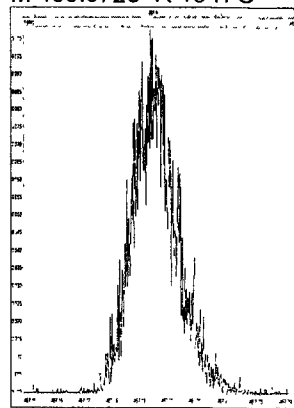
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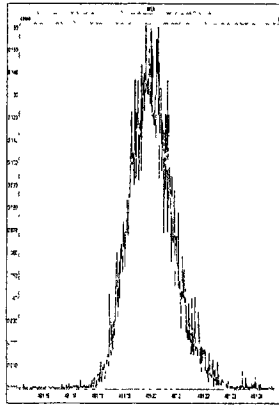
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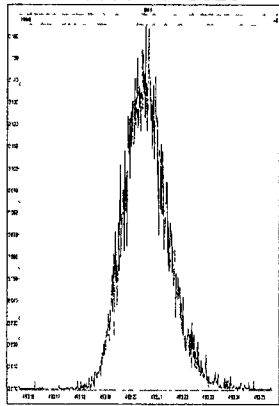
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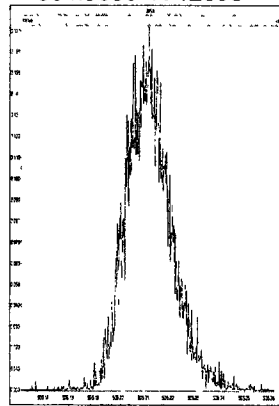
M 480.9696 R 13118



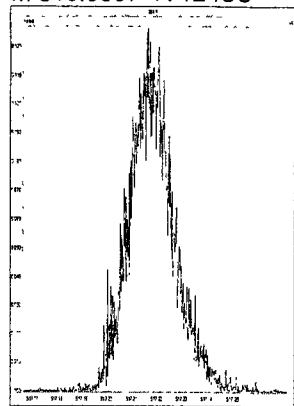
M 492.9696 R 13023



M 504.9696 R 12695



M 516.9697 R 12486



Method: P:\DIOXIN8290.PRO\MethDB\Dioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13

Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

Retention Time (min)	Peak Label	Area	Height	Width	Resolution	Abundance	Signal-to-Noise	Quality		
26.078	2378-TCDF	1.001	2.48e5	3.28e5	0.877	0.755	0.770	3219.4	NO	9.786
30.212	12378-PeCDF	1.000	1.32e6	8.90e5	0.896	1.480	1.550	4878.3	NO	49.889
31.560	23478-PeCDF	1.001	1.31e6	9.01e5	0.926	1.449	1.550	4817.1	NO	49.538
35.232	123478-HxCDF	1.001	1.09e6	9.29e5	1.068	1.178	1.240	5308.3	NO	50.157
36.328	234678-HxCDF	1.001	1.09e6	9.36e5	1.037	1.168	1.240	5361.4	NO	50.581
35.385	123678-HxCDF	1.001	1.15e6	9.63e5	1.035	1.198	1.240	5399.3	NO	50.901
37.467	123789-HxCDF	1.000	9.42e5	7.90e5	0.987	1.193	1.240	4477.3	NO	50.237
39.528	1234678-HpCDF	1.000	9.63e5	9.77e5	1.232	0.986	1.050	5332.0	NO	49.386
42.224	1234789-HpCDF	1.000	7.45e5	7.65e5	1.215	0.974	1.050	3535.8	NO	49.866
47.530	OCDF	1.006	1.13e6	1.33e6	1.138	0.852	0.890	7015.3	NO	98.821
26.721	2378-TCDD	1.001	1.89e5	2.40e5	1.049	0.788	0.770	1526.7	NO	9.676
31.812	12378-PeCDD	1.001	9.38e5	6.01e5	0.998	1.561	1.550	3754.1	NO	49.508
36.459	123478-HxCDD	1.000	8.26e5	6.75e5	0.971	1.223	1.240	4524.7	NO	49.563
36.591	123678-HxCDD	1.000	8.23e5	6.68e5	0.918	1.233	1.240	4454.7	NO	50.188
37.018	123789-HxCDD	1.012	8.08e5	6.64e5	0.932	1.217	1.240	4368.7	NO	49.699
41.347	1234678-HpCDD	1.000	6.71e5	6.47e5	1.017	1.037	1.050	3583.6	NO	49.333
47.261	OCDD	1.001	1.03e6	1.15e6	1.008	0.898	0.890	5333.8	NO	98.857
26.048	13C-2378-TCDF	1.006	2.93e6	3.78e6	1.473	0.774	0.770	12329.5	NO	105.025
30.201	13C-12378-PeCDF	1.167	3.01e6	1.92e6	1.148	1.567	1.550	7599.1	NO	99.178
31.538	13C-23478-PeCDF	1.218	2.93e6	1.88e6	1.113	1.560	1.550	7389.6	NO	99.675
35.210	13C-123478-HxCDF	0.952	1.29e6	2.49e6	1.209	0.518	0.510	8497.8	NO	98.502
35.363	13C-123678-HxCDF	0.956	1.38e6	2.64e6	1.269	0.521	0.510	9185.4	NO	99.966
36.306	13C-234678-HxCDF	0.981	1.33e6	2.54e6	1.236	0.523	0.510	8875.4	NO	98.795
37.457	13C-123789-HxCDF	1.012	1.20e6	2.30e6	1.107	0.521	0.510	7757.7	NO	99.622
39.517	13C-1234678-HpCDF	1.068	9.91e5	2.20e6	1.051	0.451	0.440	5807.4	NO	95.774
42.214	13C-1234789-HpCDF	1.141	7.74e5	1.72e6	0.815	0.451	0.440	4003.3	NO	96.548
25.884	13C-1234-TCDD	0.000	1.91e6	2.43e6	1.000	0.786	0.770	8777.9	NO	100.000
26.691	13C-2378-TCDD	1.031	1.85e6	2.38e6	0.946	0.776	0.770	8451.3	NO	103.215
31.790	13C-12378-PeCDD	1.228	1.91e6	1.21e6	0.721	1.582	1.550	16552.3	NO	99.582
36.448	13C-123478-HxCDD	0.985	1.74e6	1.38e6	0.991	1.257	1.240	8183.7	NO	99.322
36.580	13C-123678-HxCDD	0.989	1.80e6	1.43e6	1.025	1.258	1.240	8139.4	NO	99.638
41.326	13C-1234678-HpCDD	1.117	1.35e6	1.28e6	0.866	1.059	1.050	6095.0	NO	95.699
47.234	13C-OCDD	1.277	2.06e6	2.31e6	0.769	0.894	0.890	6433.8	NO	179.339

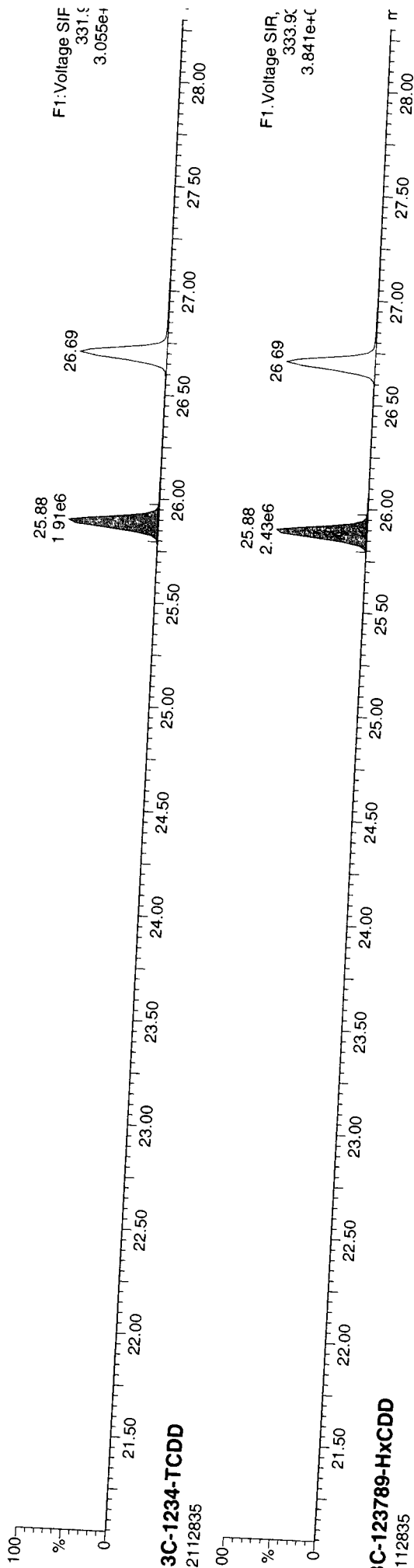
Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

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Total-tetrafurans			7.59e5		0.877					30.493
Total-penta 1			1.88e6							69.009
Total-pentafurans			3.95e6		0.911					149.726
Total-hexafurans			5.54e6		1.032					261.378
Total-heptafurans			1.71e6		1.223					99.323
Total-Furans			1.50e7		1.041					708.771
Total-tetraioxins			1.05e6		1.049					54.297
Total-pentadioxins			3.24e6		0.998					171.305
Total-hexadioxins			3.50e6		0.940					212.471
Total-heptadioxins			1.45e6		1.017					106.685
Total-Dioxins			1.50e7		0.985					708.771
Total-TEQ			2.99e7							1417.924
37CL-2378-TCDD	26.706	1.032	4.70e5		1.044		3143.0			10.392
FUNCTION1 PFK			9.54e5							0.000
FUNCTION2 PFK			2.55e5							0.000
FUNCTION3 PFK			3.25e5							0.000
FUNCTION4 PFK			4.51e5							0.000
FUNCTION5 PFK			3.40e5							0.000
FUNCTION1 HXCDPE			5.76e2							0.000
FUNCTION1 HPCDPE			1.34e3							0.000
FUNCTION2 HPCDPE			2.21e3							0.000
FUNCTION3 OCDPE			0.00e0							0.000
FUNCTION4 NCDPE			7.88e1							0.000
FUNCTION5 DCDPE			0.00e0							0.000

Method: P:\DIOXIN8290.PRO\MethDB\IDioxin121123.mdb 05 Dec 2012 15:26:14  
Calibration: P:\DIOXIN8290.PRO\CurveDB\121123\CAL.cdb 26 Nov 2012 09:23:13  
Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

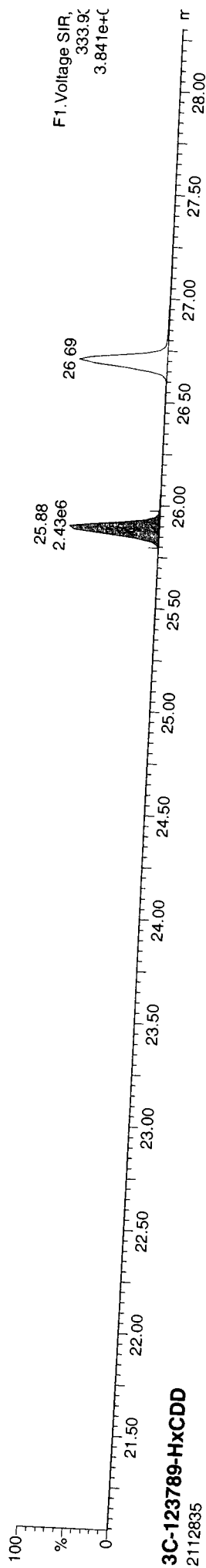
13C-1234-TCDD

12112835



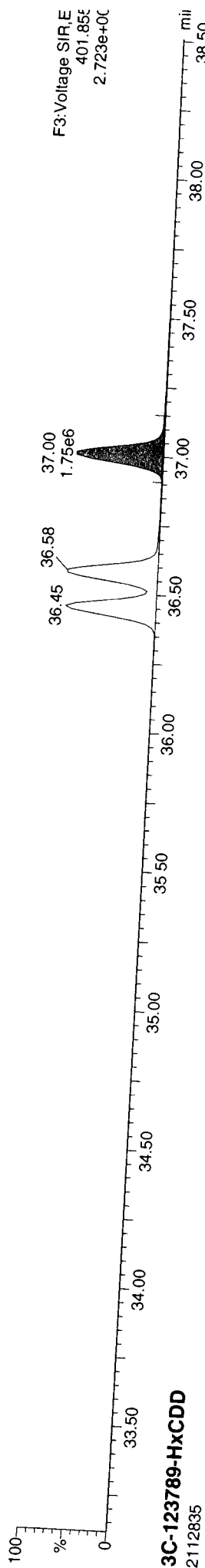
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12112835



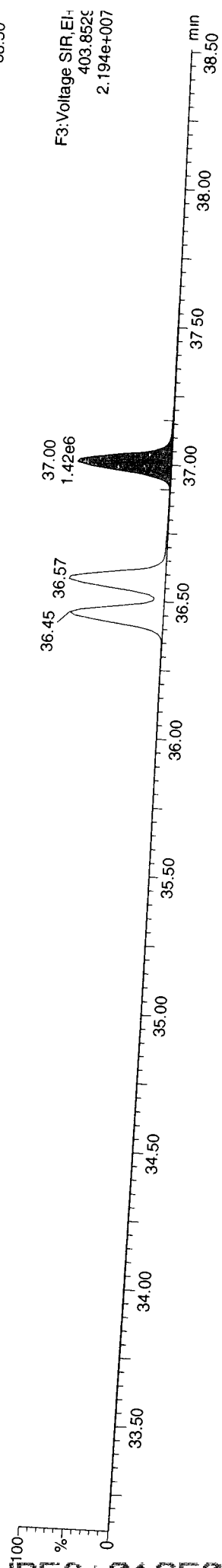
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12112835



13C-123789-HxCDD

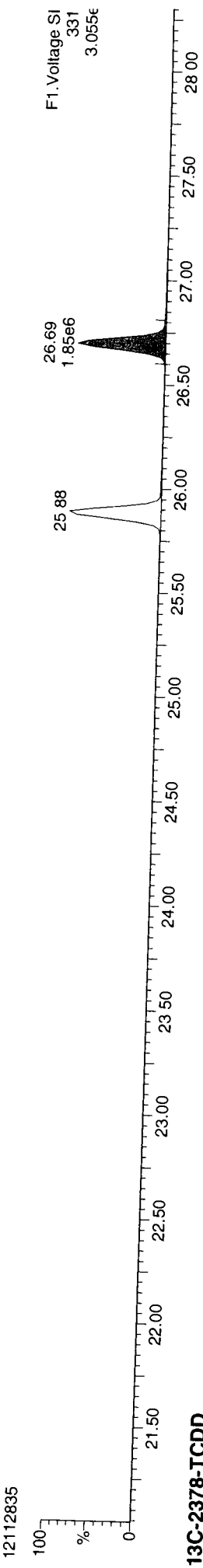
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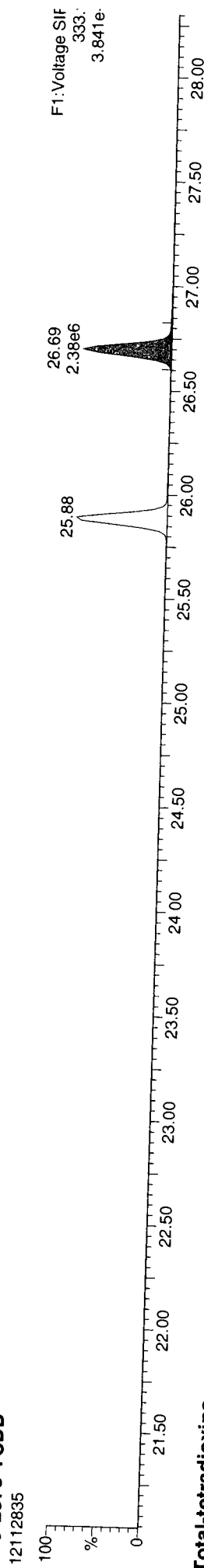
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Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 13:00:01 Pacific Standard Time

Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

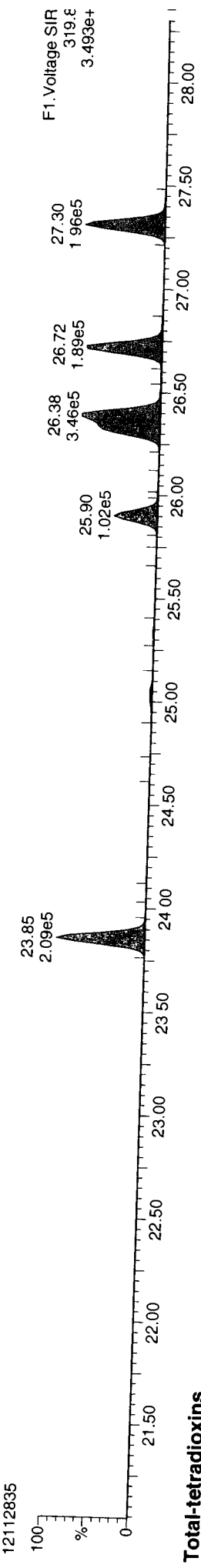
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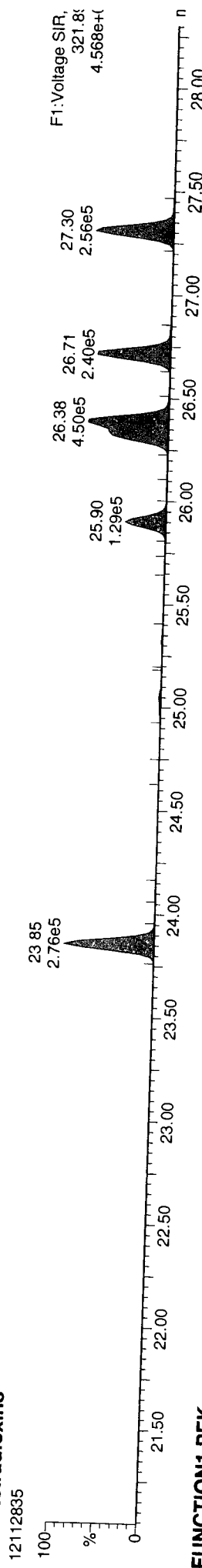
13C-2378-TCDD



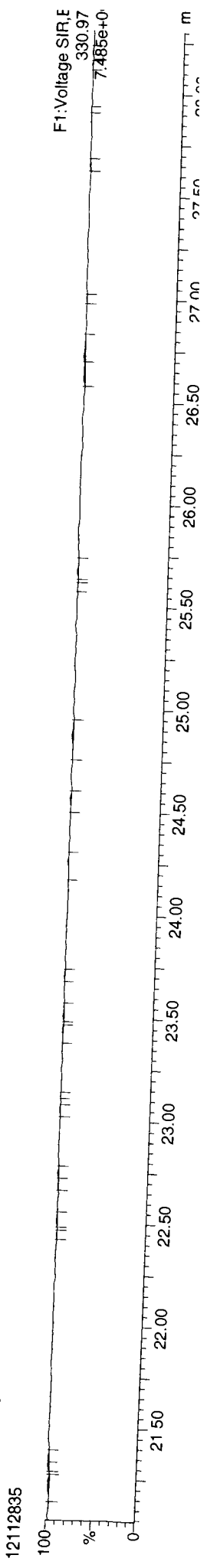
Total-tetradoxins



Total-tetradoxins

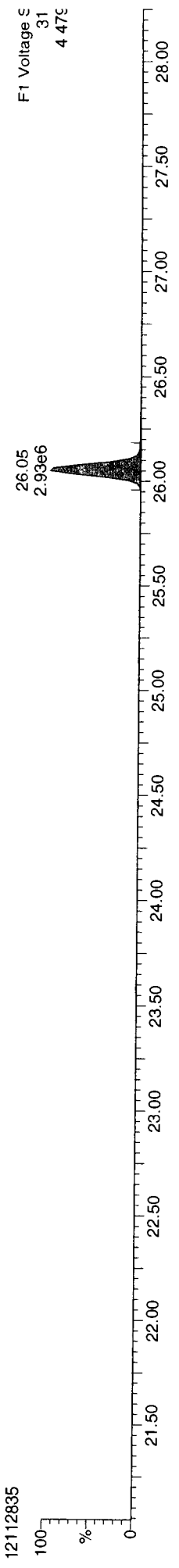


FUNCTION1 PFK

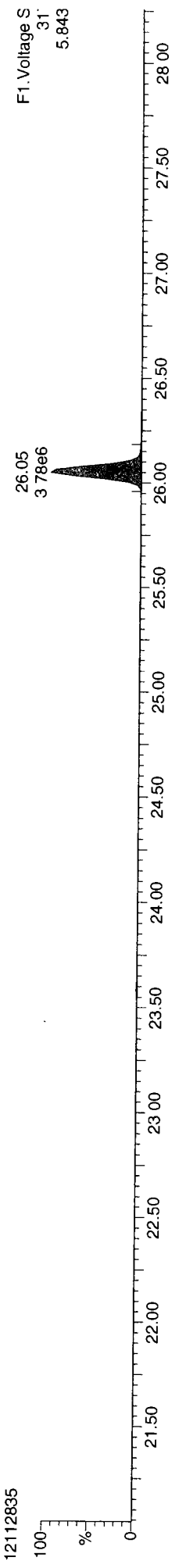


Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

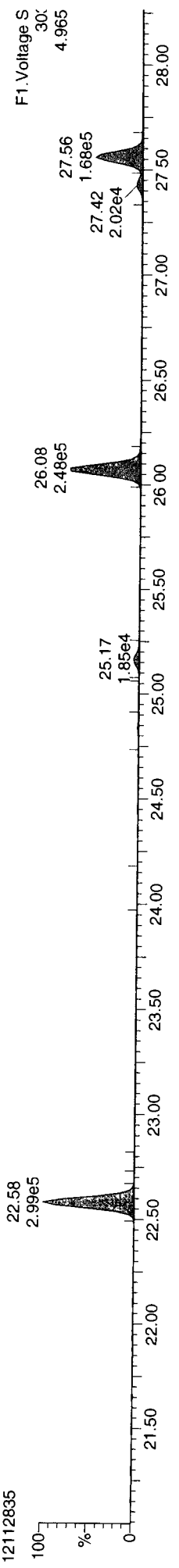
13C-2378-TCDF



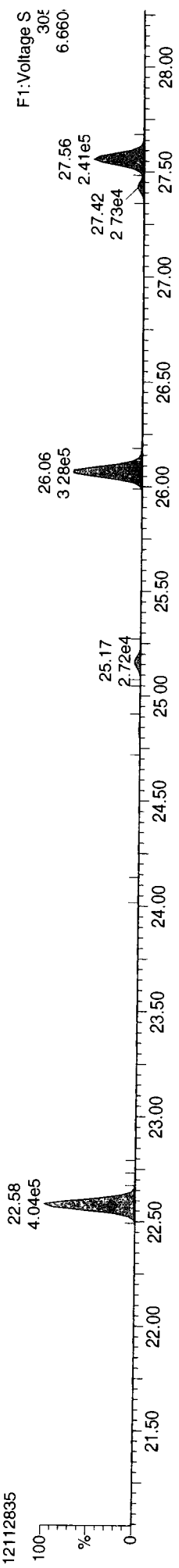
13C-2378-TCDF



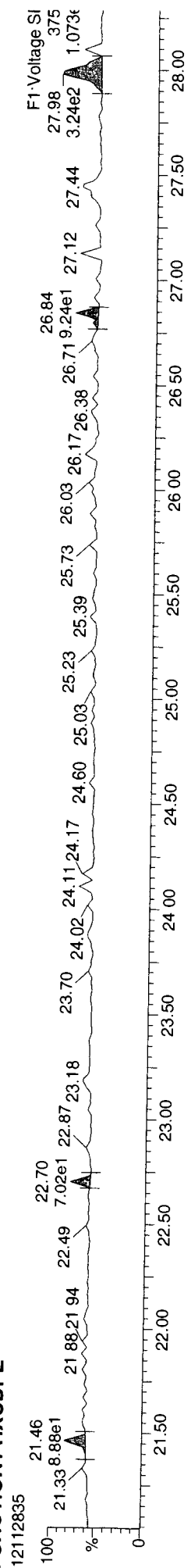
Total-tetrafurans



Total-tetrafurans



FUNCTION1 HXCDPE

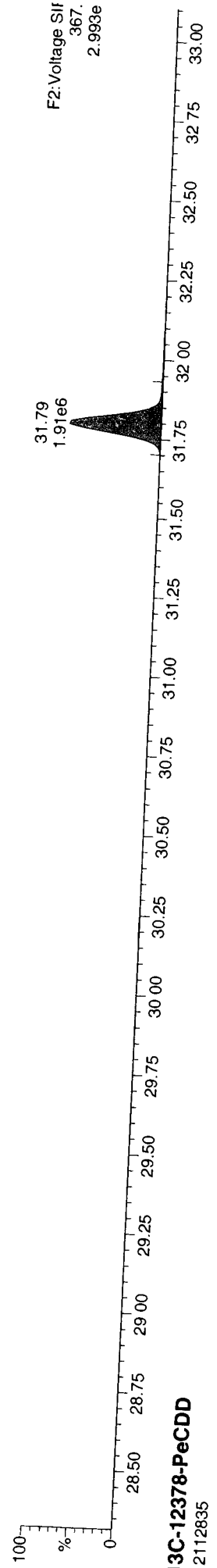




Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

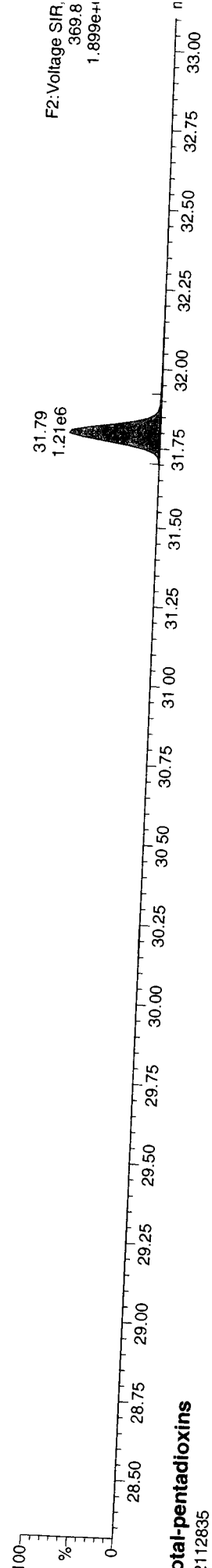
13C-12378-PeCDD

12112835



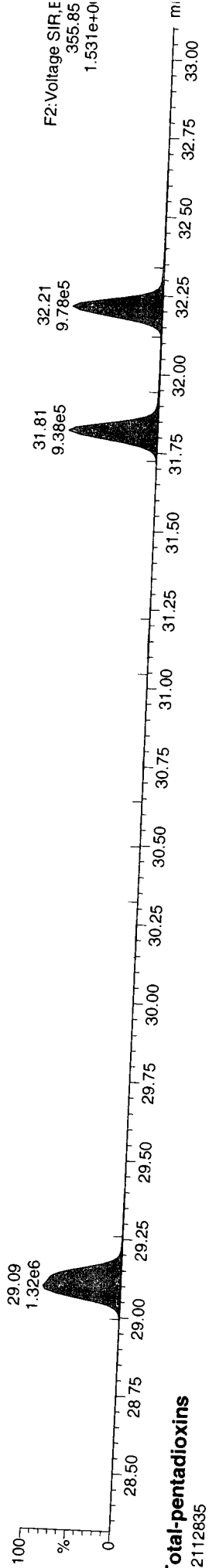
13C-12378-PeCDD

12112835



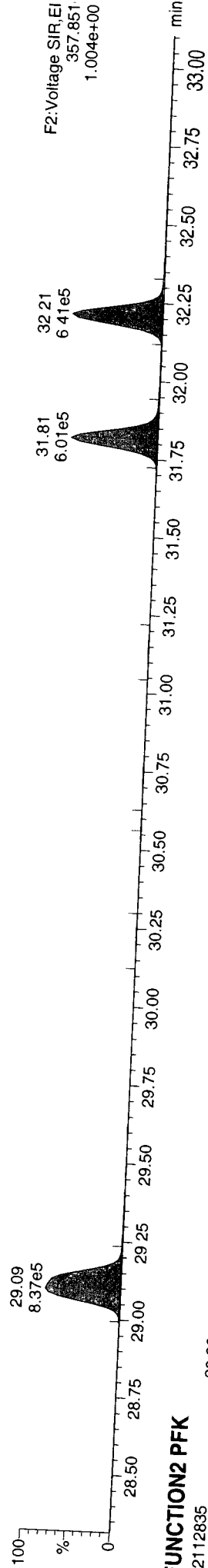
Total-pentadioxins

12112835



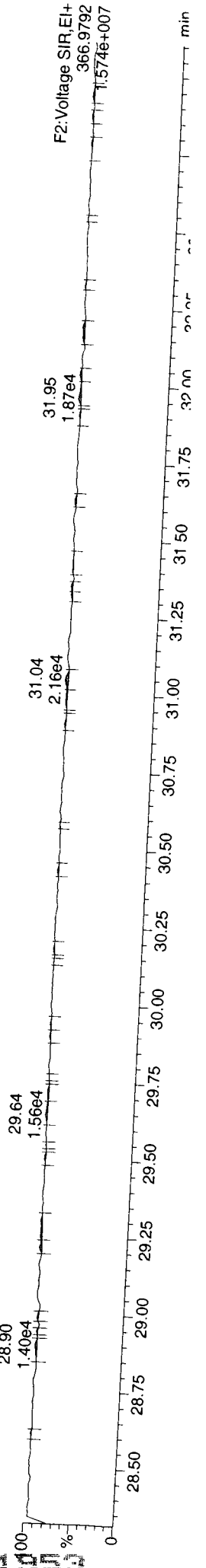
Total-pentadioxins

12112835



FUNCTION2 PFK

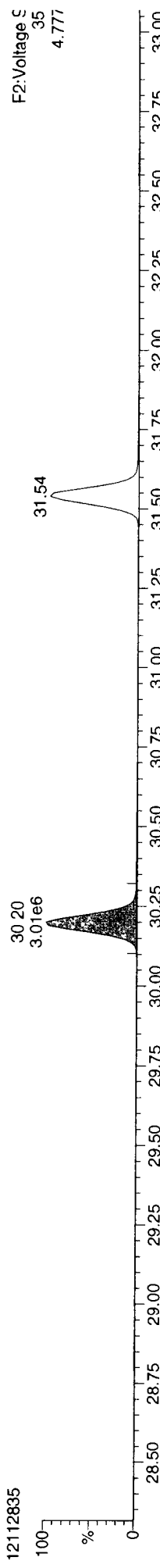
12112835



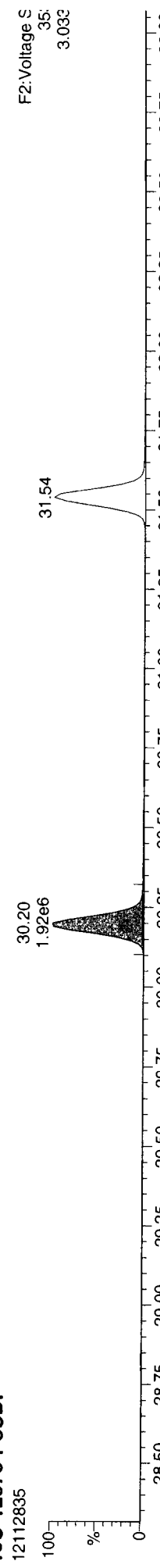
Quantify Sample Report  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 13:00:01 Pacific Standard Time

Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

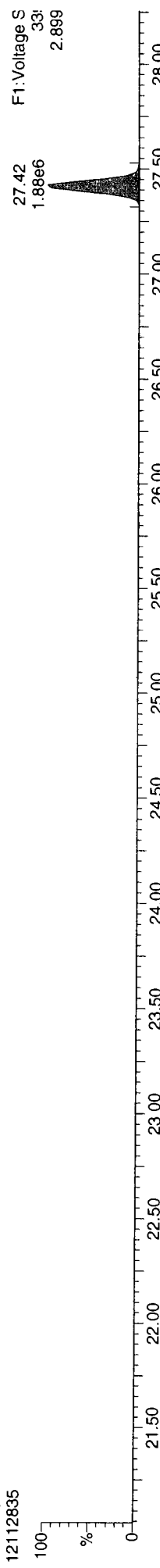
13C-12378-PeCDF



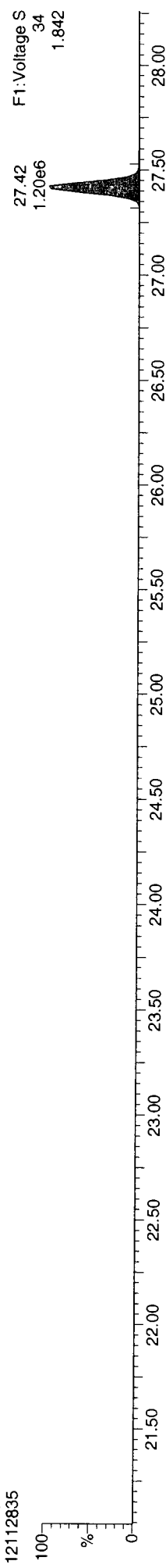
13C-12378-PeCDF



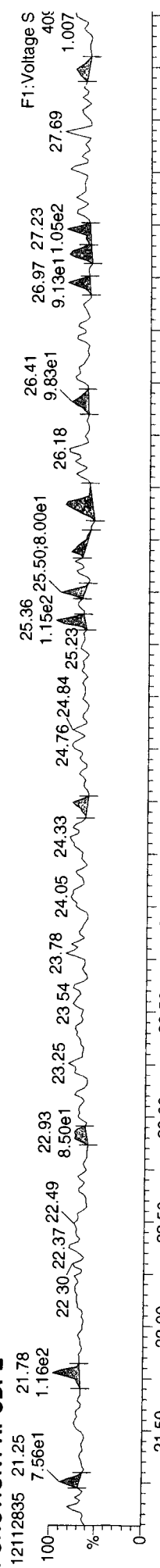
Total-penta1



Total-penta1

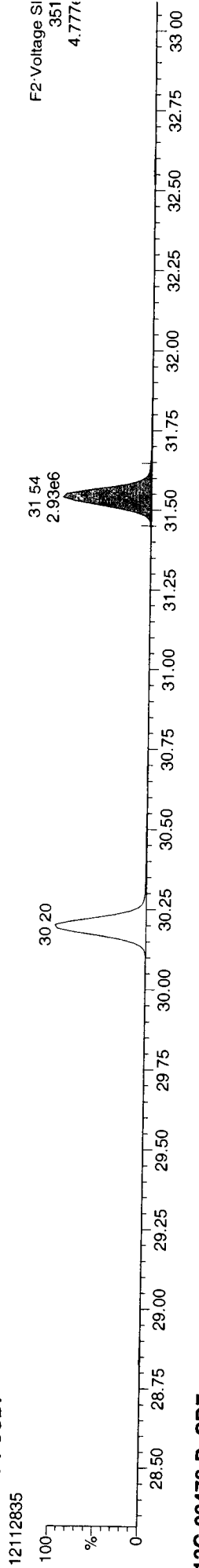


FUNCTION1 HPCDPE

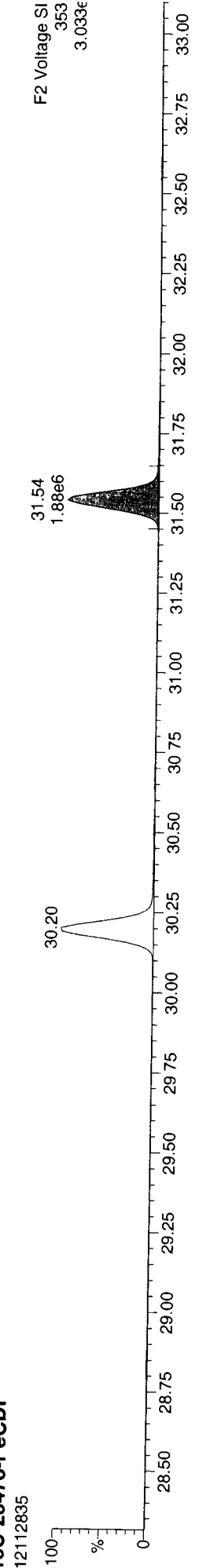


Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

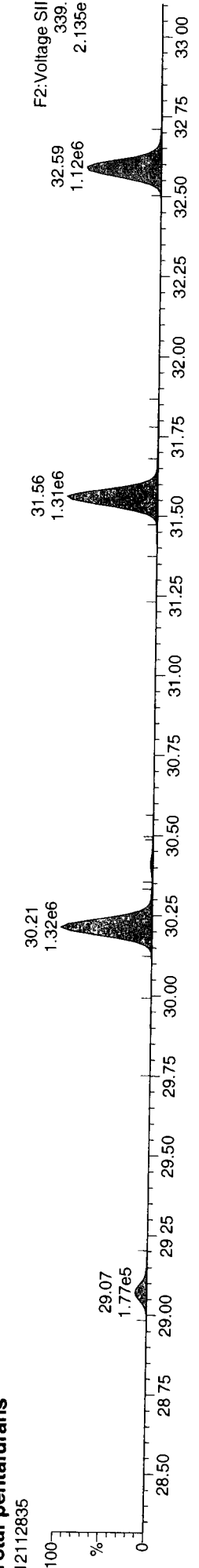
13C-23478-PeCDF



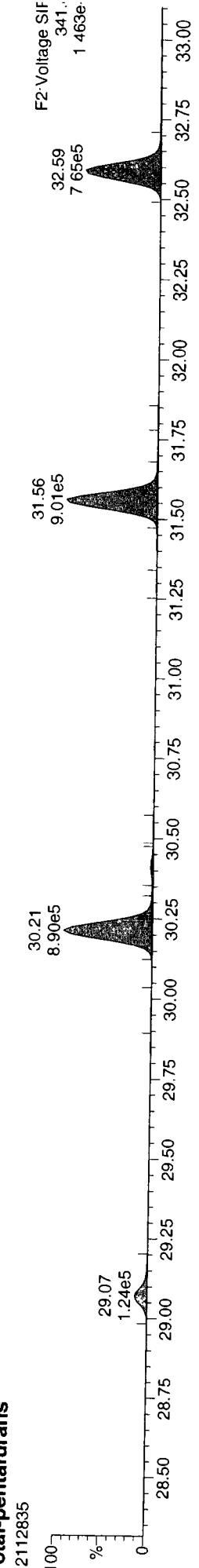
13C-23478-PeCDF



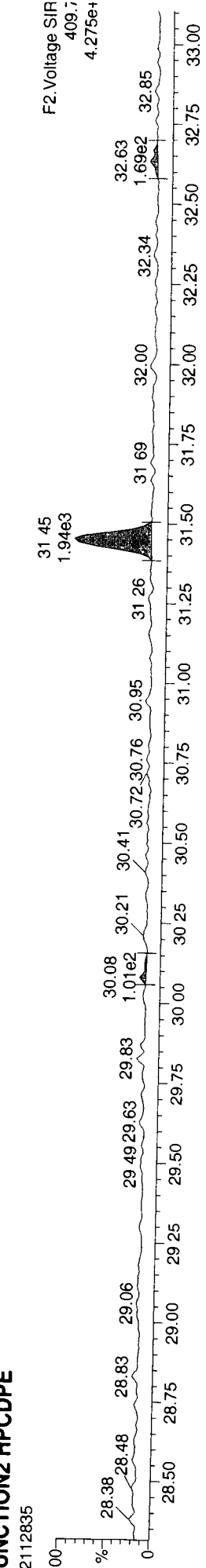
Total-pentafurans



Total-pentafurans



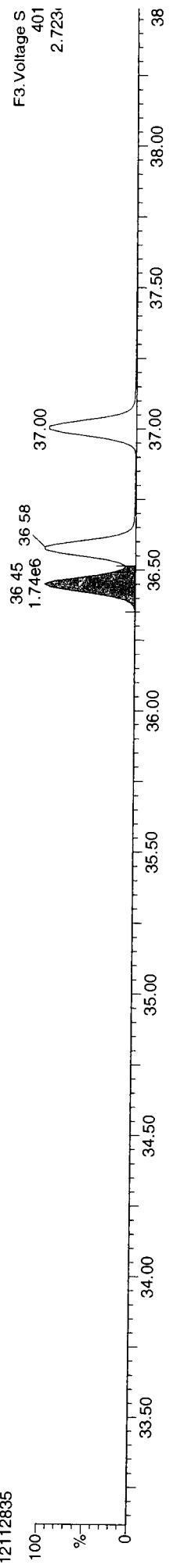
FUNCTION2 HPCDPE



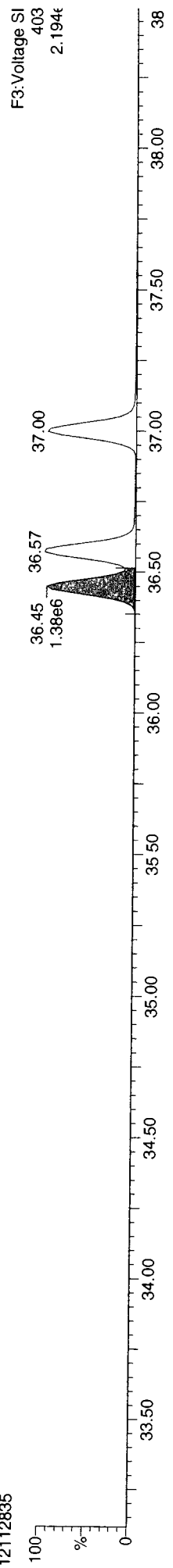
Quantity Sample report MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 13:00:01 Pacific Standard Time

Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

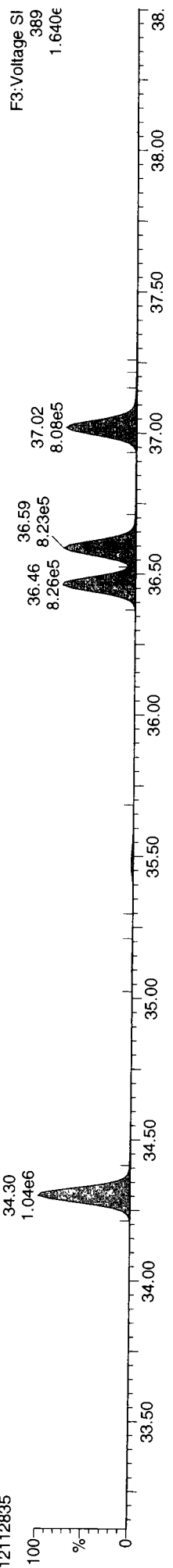
13C-123478-HxCDD



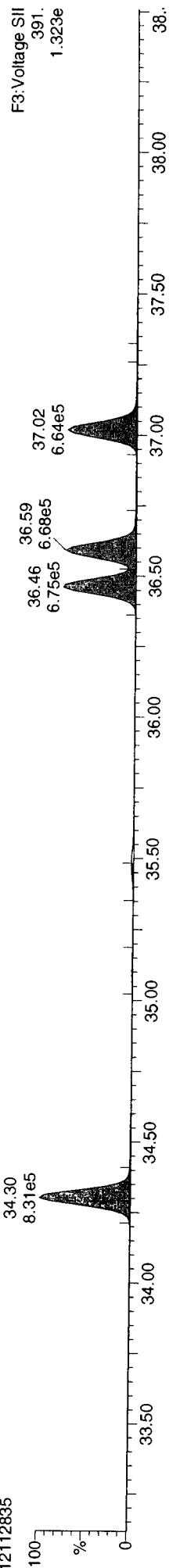
13C-123478-HxCDD



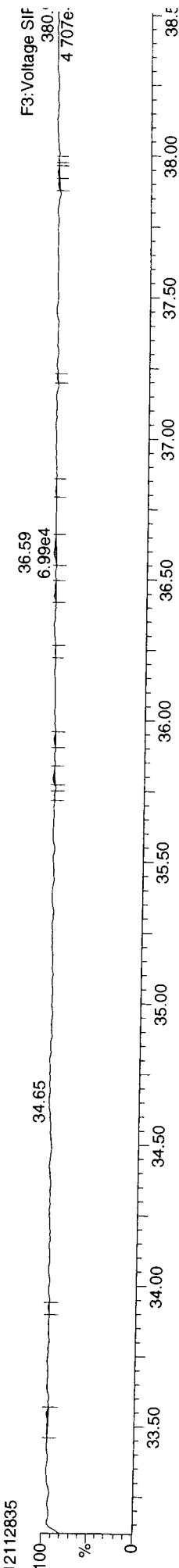
Total-hexadioxins



Total-hexadioxins



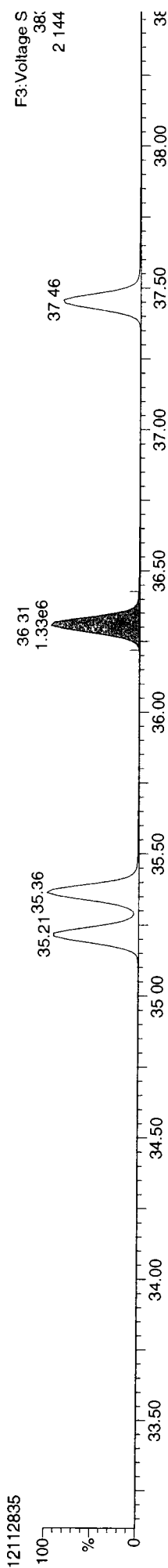
FUNCTION3 PFK



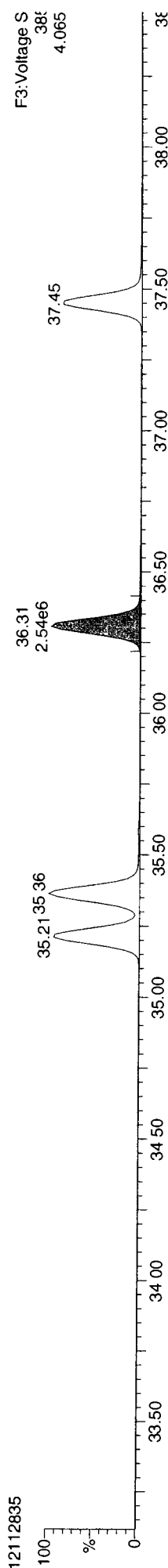
**Quantify Sample Report**  
 MassLynx 4.1 SCN 714  
 Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
 Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
 Printed: Tuesday, December 11, 2012 13:00:01 Pacific Standard Time

**Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk**

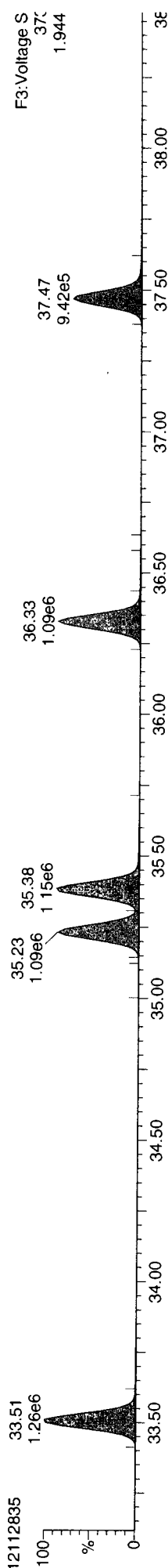
**13C-234678-HxCDF**



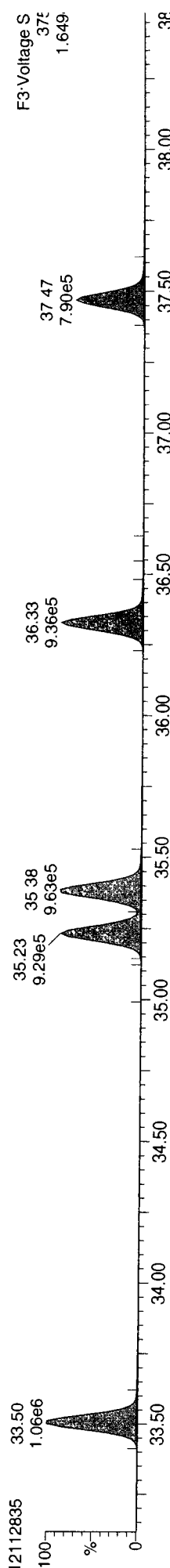
**13C-234678-HxCDF**



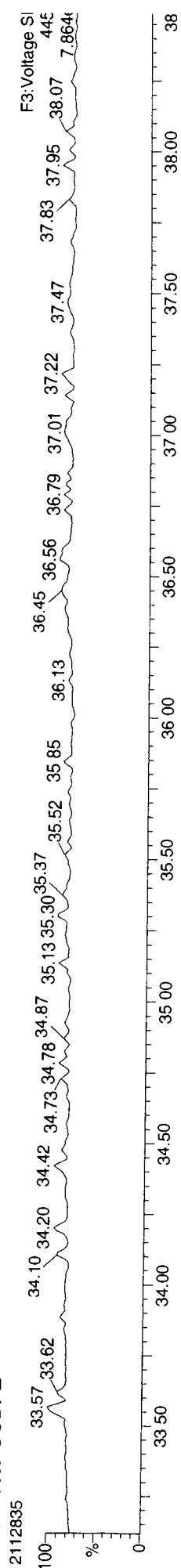
**Total-hexafurans**



**Total-hexafurans**



**FUNCTION3 OCDFE**

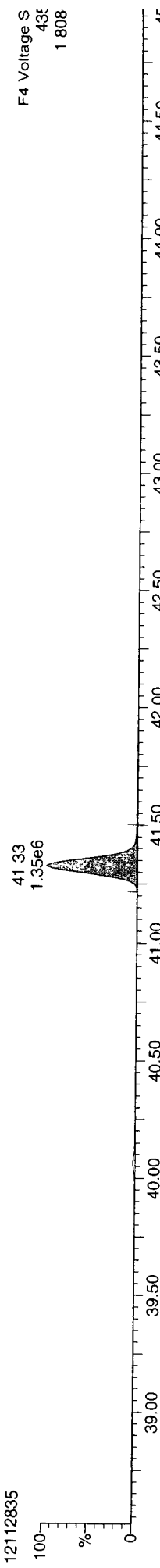


0059 : 91 0077

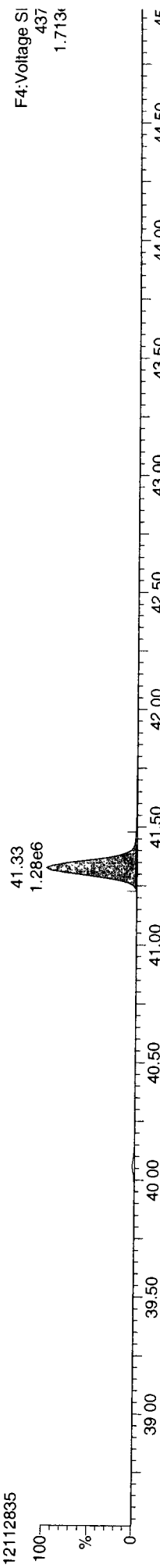
Quantity Sample Report  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 13:00:01 Pacific Standard Time

Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

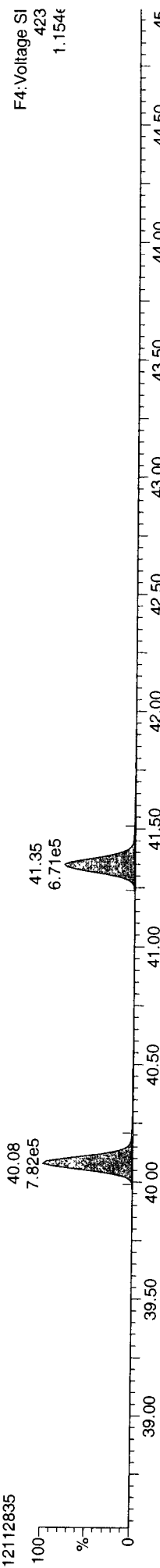
13C-1234678-HpCDD



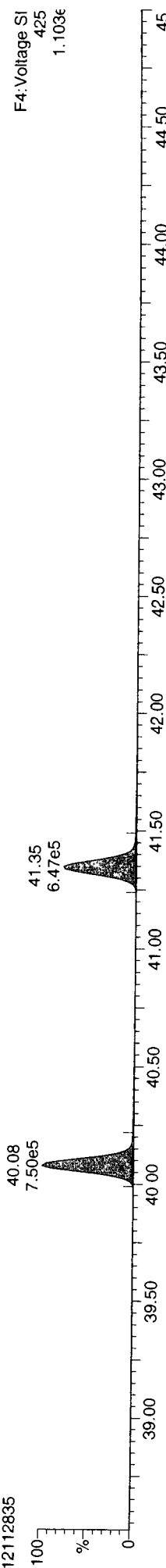
13C-1234678-HpCDD



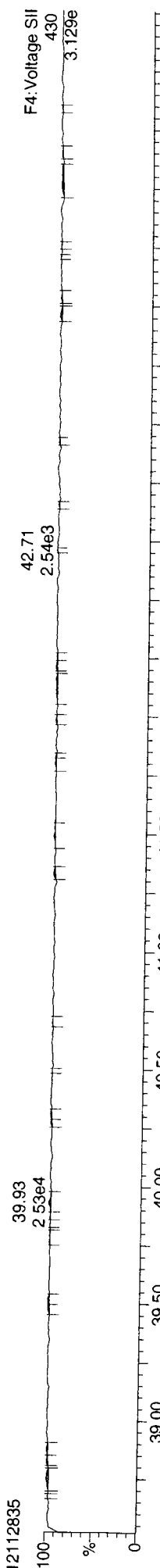
Total-heptadioxins



Total-heptadioxins



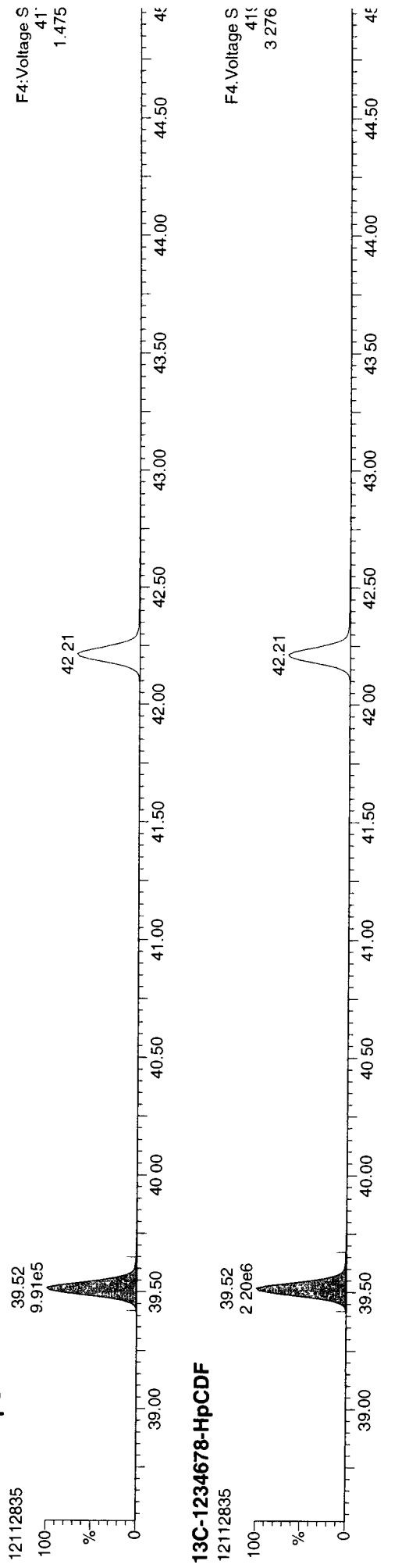
FUNCTION4 PFK



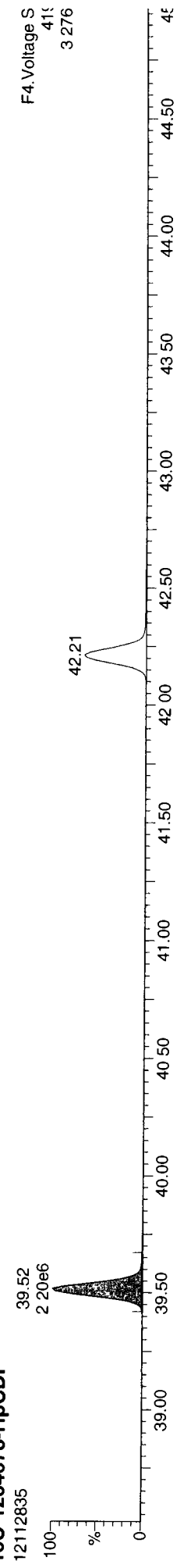
Quantify Sample Report  
MassLynx 4.1 SCN 714  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 13:00:01 Pacific Standard Time

Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

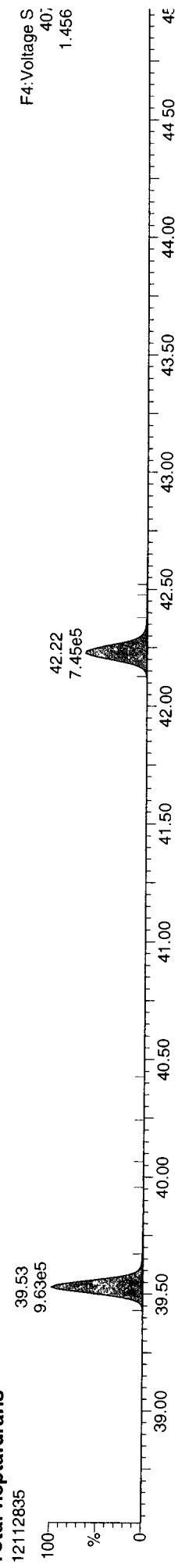
13C-1234678-HpCDF



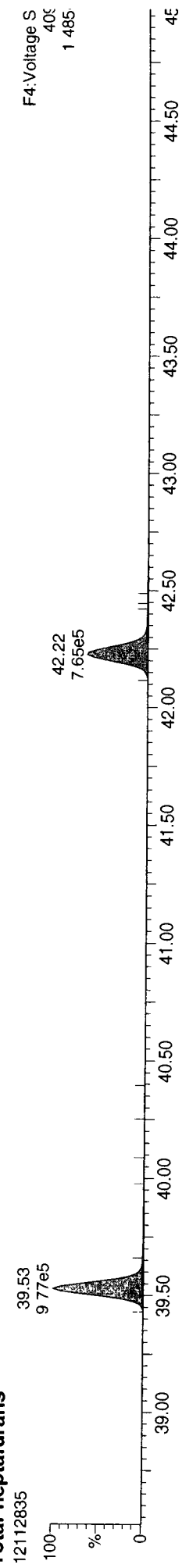
13C-1234678-HpCDF



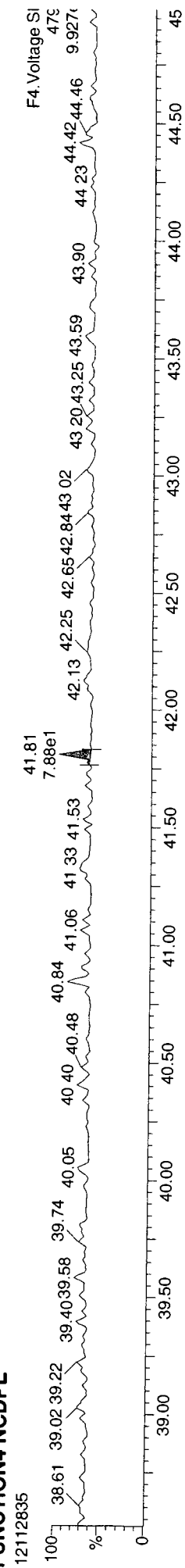
Total-heptafurans



Total-heptafurans



FUNCTION4 NCDPE



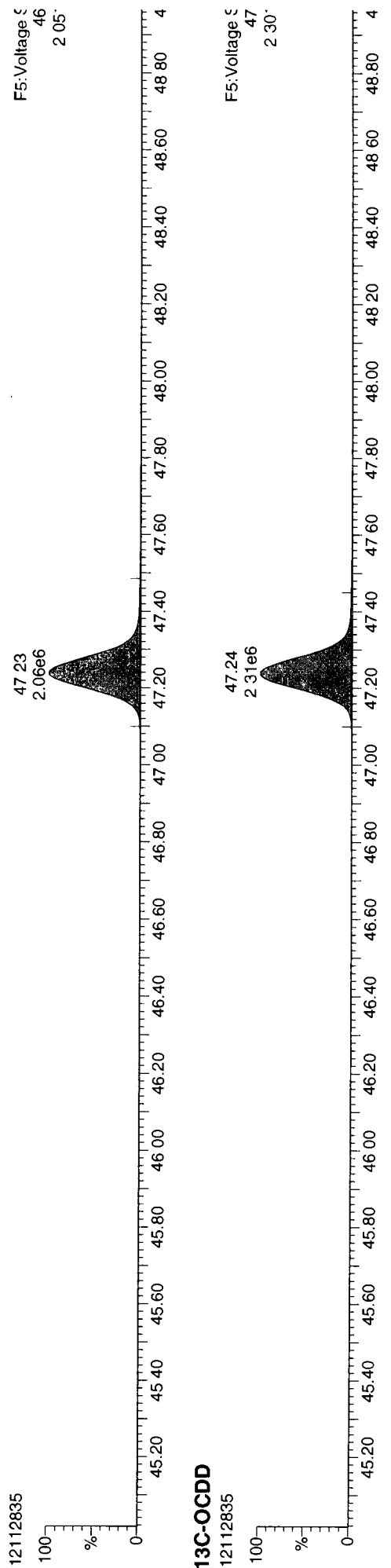
5000 : 94 0000

Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 13:00:01 Pacific Standard Time

Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

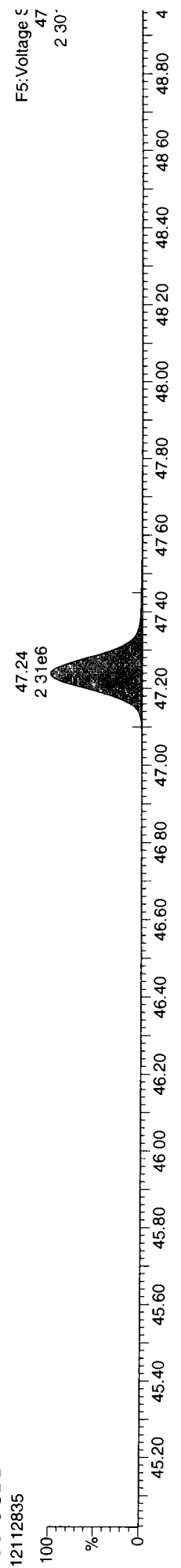
13C-OCDD

12112835



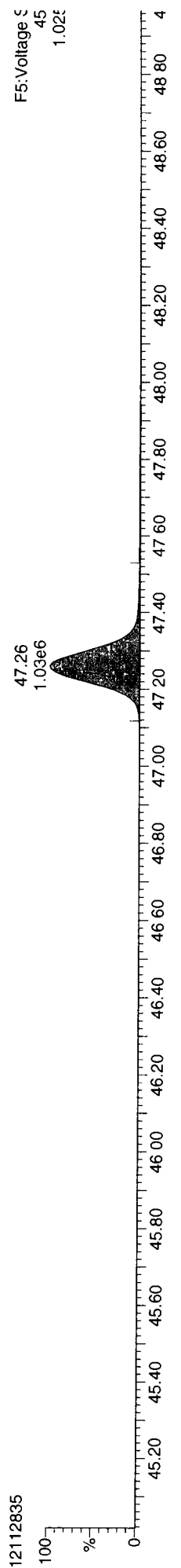
13C-OCDD

12112835



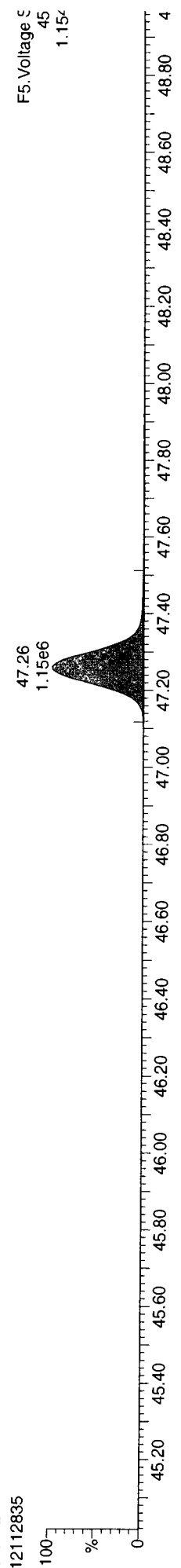
OCDD

12112835



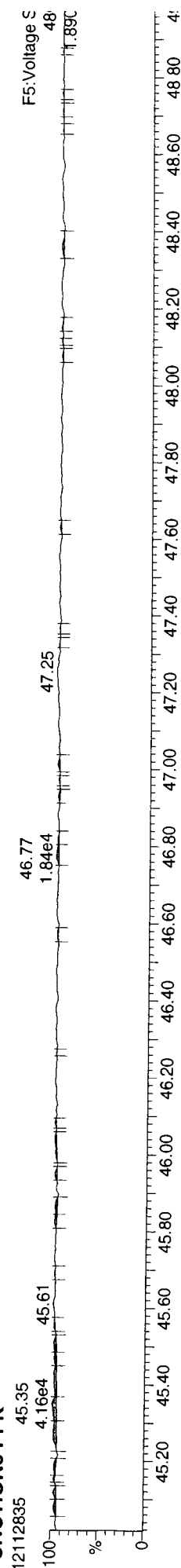
OCDD

12112835



FUNCTION5 PFK

12112835



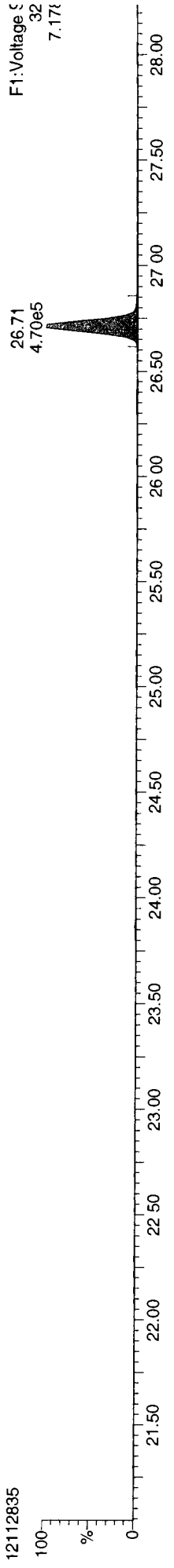


Quantity Sample Report  
Dataset: P:\DIOXIN8290.PRO\121128DATA4.qld  
Last Altered: Tuesday, December 11, 2012 10:56:23 Pacific Standard Time  
Printed: Tuesday, December 11, 2012 13:00:01 Pacific Standard Time

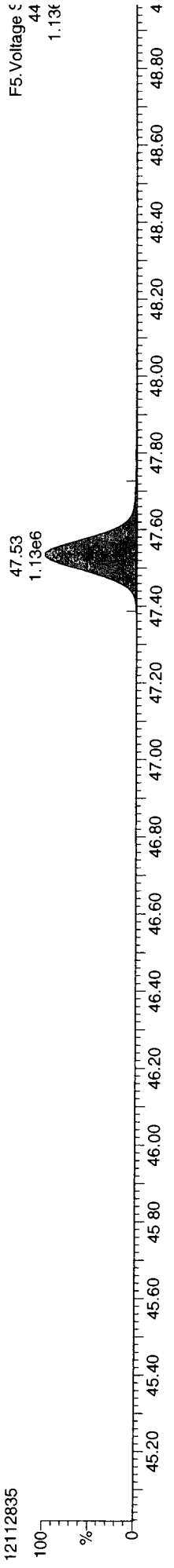
MassLynx 4.1 SCN 714

Name: 12112835, Date: 29-Nov-2012, Time: 16:20:15, ID: CS3, Conditions: AUTOSPEC01, User: pk

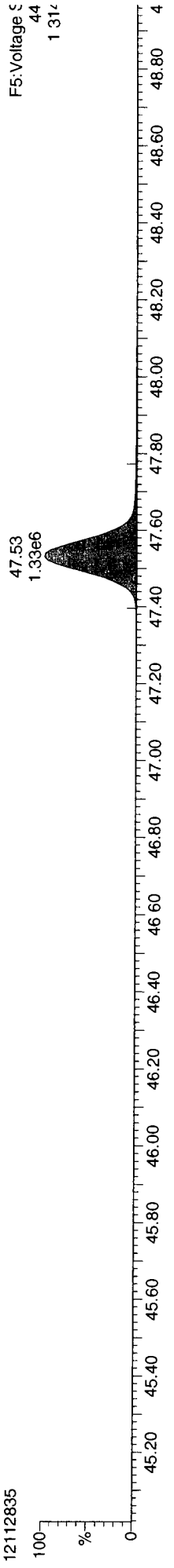
37CL-2378-TCDD



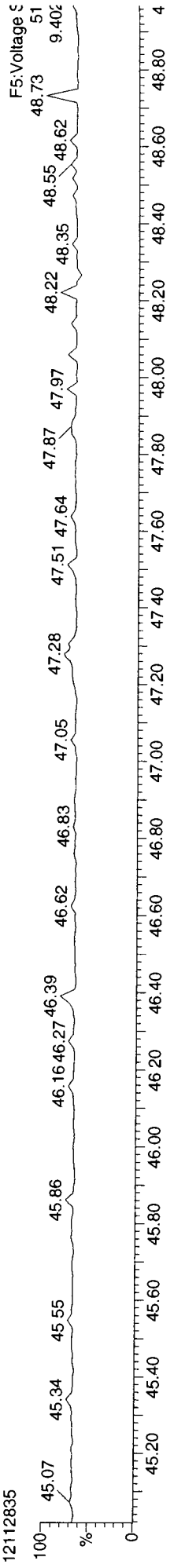
OCDF



OCDF



FUNCTION5 DCDPE



**Pesticide Raw Data  
Extraction Bench Sheets and Notes**

**ARI Job ID: VR58**



Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5 dry wt)	(REQ) Sulfur Clean 2mL+0.5mL Ethyl Acetate	(REQ) Silica Gel Clean (1:2.5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID
	VR38 MBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	M 11/15/12
	↓ SBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	M 11/15/12
	<del>SBS Dup.</del>	<del>12.5g</del>	<del>2.5mL</del>	<del>(1:2.5) 1mL</del>	<del>2.5mL</del>	<del>1mL</del>	<del>(10g Actual Wt)</del>	
5	<del>VR38 J</del>	<del>12.5g</del>	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	KD 100°C
5	↓ K	15.26	2.5mL	(1:2.5) 1mL	2.5mL	1mL		Hexane Exchange (2 X 20mL)
5	VR58 A	22.14	2.5mL	(1:2.5) 1mL	2.5mL	1mL		YL R
5	B	80.09	2.5mL	(1:2.5) 1mL	2.5mL	1mL	see Analyst note	11/16/12
5	C	42.35	2.5mL	(1:2.5) 1mL	2.5mL	1mL	see Analyst note	TurboVap 123 Pre-Cleanups
5	D	53.06	2.5mL	(1:2.5) 1mL	2.5mL	1mL	see Analyst note	
5	E	53.14	2.5mL	(1:2.5) 1mL	2.5mL	1mL	see Analyst note	
5	F	27.18	2.5mL	(1:2.5) 1mL	2.5mL	1mL		11-19-12
5	G	17.11	2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 123 Post Cleanups
5	GMS	17.18	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
5	↓ GMSD	17.15	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
Analyst/Date			11-19-12	11-19-12	11-19-12	11-19-12		11-19-12

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (2035-2)	2µg/mL	50µL	5/16/13	M	SP
Spike	3 (1983-1)	0.5/3/5µg/mL	100µL	12/13/12	M	SP
<del>QLS Spike</del>	<del>10</del>	<del>0.25-2.5µg/mL</del>	<del>25µL</del>			

Extraction Time: 1035 Balance ID: B14642614

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3<sup>rd</sup> 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. 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 2<sup>nd</sup> 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 (Small or 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)



ARI Job No.: VR58

Client ID: Ancher GEA, LLC

Parameter: PSDDA Post

Client Project: City of Kenmare Sediment

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
<input type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)= <u>ABCDEFGHIIT</u>	<u>ET 11/1/12</u>
<input type="checkbox"/> Standing Water Decanted (Not shared)= <u>ABCDEFGHIIT</u>	<u>ET 11/2/12</u>
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=	
<input checked="" type="checkbox"/> Rocks (%+size)? <u>F<sub>1</sub> 29% small rocks</u>	<u>ET 11/2/12</u>
<input checked="" type="checkbox"/> Organics (Leaves/sticks/grass)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input checked="" type="checkbox"/> Other (Details)= <u>B-E - samples &amp; surrogates has to be split into multi vessels prior to microwave due to heavy weight of sample. can't will be combined after 2nd microwaved</u>	<u>M 11/15/12</u>
Aqueous:	
<input type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
<input type="checkbox"/> Emulsions (%)=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Other Notes/Comments=(Note problems, concerns, corrective actions).	
<input checked="" type="checkbox"/> Centrifuge #1 used for all Centrifugations)	

**Pesticide Raw Data  
Initial Calibration**

**ARI Job ID: VR58**



# 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): 10/3/2012 Internal Standard ID 2006-1 Expiration 7/26/2013

Endrin/DDT Breakdown <15%? **YES** / NO / NA ICV Exceeding ±20%? YES **NO**  
 ICal Meets %RSD & r<sup>2</sup> 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
<u>DS</u>	<u>1991-1</u>	<u>1/14/2013</u>	<u>INDA ICV</u>	<u>1987-3</u>	<u>10/4/2012</u>
<u>IB</u>	<u>1982-2</u>	<u>5/16/2013</u>	<u>WND ICV</u>	<u>1988-1</u>	<u>11/30/2012</u>
<u>INDA</u>	<u>1982-1</u>	<u>12/13/2012</u>	<u>HCB/HCBD ICV</u>	<u>1870-2E</u>	<u>6/20/2012</u>
<u>WND</u>	<u>1982-3</u>	<u>1/21/2013</u>			
<u>Toxaphene</u>	<u>1984-3</u>	<u>12/4/2012</u>			
<u>Techlorodane</u>	<u>1985-1</u>	<u>5/16/2013</u>			

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

*Toxaphene, T-ecordane single points were added on 10/2/12.*

*Keponone single point was added on 10/13/12.*

Analyst: [Signature] Date: 10/4/2012  
 Reviewer: [Signature] Date: 10/4/12

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20121003PEST.b/ical-2.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	03-OCT-2012 15:10	1003A009.d	1	DS	
2	03-OCT-2012 15:27	1003A010.d	1	IB	
3	03-OCT-2012 15:45	1003A011.d	1	INDAE	
4	03-OCT-2012 16:03	1003A012.d	1	WNDE	
5	03-OCT-2012 16:21	1003A013.d	1	TOXAPH	
6	03-OCT-2012 16:39	1003A014.d	1	INDAE	
7	03-OCT-2012 16:56	1003A015.d	1	INDAA	
8	03-OCT-2012 17:14	1003A016.d	1	INDAB	
9	03-OCT-2012 17:32	1003A017.d	1	INDAC	
10	03-OCT-2012 17:50	1003A018.d	1	INDAD	
11	03-OCT-2012 18:08	1003A019.d	1	INDAF	
12	03-OCT-2012 18:26	1003A020.d	1	INDAG	
13	03-OCT-2012 18:43	1003A021.d	1	INDA ICV	
14	03-OCT-2012 19:01	1003A022.d	1	HCB/HCBD ICV	
15	03-OCT-2012 19:19	1003A023.d	1	WNDE	
16	03-OCT-2012 19:37	1003A024.d	1	WNDA	
17	03-OCT-2012 19:55	1003A025.d	1	WNDB	
18	03-OCT-2012 20:12	1003A026.d	1	WNDC	
19	03-OCT-2012 20:30	1003A027.d	1	WNDD	
20	03-OCT-2012 20:48	1003A028.d	1	WNDF	
21	03-OCT-2012 21:06	1003A029.d	1	WNDG	
22	03-OCT-2012 21:24	1003A030.d	1	WND ICV ← air inject	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2012 16:21  
 End Cal Date : 03-OCT-2012 21:06  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
 Cal Date : 04-Oct-2012 10:27 aron  
 Curve Type : Average

Calibration File Names:

Level 1: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A024.d  
 Level 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A025.d  
 Level 3: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A026.d  
 Level 4: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A027.d  
 Level 5: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A023.d  
 Level 6: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A028.d  
 Level 7: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A029.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							
1 Hexachlorobutadiene	1.96452 1.50700	1.88941	1.85758	1.72561	1.65924	1.55490	1.73689	10.021
3 Hexachlorobenzene	1.77740 1.24119	1.66369	1.61105	1.49324	1.40813	1.31793	1.50180	12.885
4 alpha-BHC	1.70683 1.70994	1.73283	1.80435	1.77722	1.76123	1.72410	1.74521	2.105
5 gamma-BHC (Lindane)	1.60945 1.49096	1.60439	1.63753	1.59885	1.57117	1.53148	1.57769	3.216
6 beta-BHC	0.78856 0.62743	0.75069	0.74994	0.70069	0.67462	0.65247	0.70634	8.334
7 delta-BHC	1.33552 1.38744	1.36638	1.41057	1.38376	1.41291	1.39443	1.38443	1.938



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
 Cal Date : 04-Oct-2012 10:27 aron  
 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							
8 Heptachlor	1.58565 1.21233	1.54846	1.55095	1.48197	1.41549	1.31649	1.44448	9.568
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
9 Aldrin	1.51600 1.22122	1.49789	1.51234	1.46276	1.40832	1.32410	1.42038	7.844
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
11 Heptachlor epoxide b	1.44761 1.04907	1.40029	1.37924	1.30458	1.23837	1.14382	1.28042	11.345
12 gamma-Chlordane	1.49549 1.15225	1.43152	1.40996	1.33982	1.29674	1.22454	1.33576	9.055
13 alpha-Chlordane	1.37398 1.08079	1.33392	1.32102	1.25634	1.20478	1.14711	1.24542	8.587
14 Endosulfan I	1.26978 0.96428	1.24395	1.23358	1.17303	1.11763	1.04639	1.14981	9.850
15 4,4'-DDE	1.29981 0.93083	1.27916	1.27711	1.20080	1.11468	1.01602	1.15977	12.417

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2012 16:21  
 End Cal Date : 03-OCT-2012 21:06  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
 Cal Date : 04-Oct-2012 10:27 aron  
 Curve Type : Average

Compound	1.250	2.500	5.000	10.000	20.000	40.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	80.000							
	Level 7							
16 Dieldrin	1.35910 0.99399	1.33841	1.33147	1.25422	1.16627	1.07097	1.21635	11.774
17 Endrin	1.59095 1.11612	1.53734	1.49373	1.40919	1.32841	1.18568	1.38020	12.998
18 4,4'-DDD	1.43433 1.11604	1.40840	1.39214	1.33378	1.27120	1.16860	1.30350	9.462
19 Endosulfan II	1.58713 1.14354	1.52275	1.48555	1.39752	1.31774	1.20302	1.37961	12.051
20 4,4'-DDT	1.34644 1.11143	1.31004	1.30034	1.25878	1.21281	1.14333	1.24045	7.123
21 Endrin aldehyde	1.25867 0.91023	1.19525	1.15283	1.09374	1.03694	0.95492	1.08608	11.693
22 Endosulfan sulfate	1.27852 1.01791	1.24336	1.21726	1.17793	1.13201	1.05347	1.16006	8.396
23 Methoxychlor	0.65922 +++++	0.60416	0.55266	0.49723	0.44948	0.41261	0.52923	17.734
24 Endrin ketone	1.34557 1.01204	1.26901	1.21268	1.15254	1.09245	1.02737	1.15881	10.754

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2012 16:21  
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 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
 Cal Date : 04-Oct-2012 10:27 aron  
 Curve Type : Average

Compound	1.250	2.500	5.000	10.000	20.000	40.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	80.000							
	Level 7							
(3)	++++	++++	++++	++++	++++	++++	++++	++++
(4)	++++	++++	++++	++++	++++	++++	++++	++++
(5)	++++	++++	++++	++++	++++	++++	++++	++++
34 Aroclor-1268 (1)	++++	++++	++++	++++	++++	++++	++++	++++
(2)	++++	++++	++++	++++	++++	++++	++++	++++
(3)	++++	++++	++++	++++	++++	++++	++++	++++
(4)	++++	++++	++++	++++	++++	++++	++++	++++
(5)	++++	++++	++++	++++	++++	++++	++++	++++
35 Toxaphene (1)	++++	++++	++++	++++	0.04805	++++	0.04805	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2012 16:21  
 End Cal Date : 03-OCT-2012 21:06  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
 Cal Date : 04-Oct-2012 10:27 aron  
 Curve Type : Average

Compound	1.250	2.500	5.000	10.000	20.000	40.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	80.000							
	Level 7							
(2)	++++	++++	++++	++++	0.07107	++++	0.07107	0.000
(3)	++++	++++	++++	++++	0.07967	++++	0.07967	0.000
(4)	++++	++++	++++	++++	0.05935	++++	0.05935	0.000
(5)	++++	++++	++++	++++	0.02785	++++	0.02785	0.000
38 2,4-DDE	0.97949 0.53372	0.83494	0.79987	0.73476	0.67624	0.60532	0.73776	20.309
39 2,4-DDD	1.13549 0.69140	0.97967	0.94479	0.89950	0.84410	0.77710	0.89601	16.137
40 2,4-DDT	1.21207 0.77228	1.05333	1.03069	0.98415	0.92238	0.86762	0.97750	14.520
41 Hexachloroethane	++++	++++	++++	++++	++++	++++	++++	++++
42 Oxychlorane	1.22760 0.83939	1.09508	1.08515	1.02028	0.96995	0.90368	1.02016	12.758

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2012 16:21  
 End Cal Date : 03-OCT-2012 21:06  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
 Cal Date : 04-Oct-2012 10:27 aron  
 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							
43 trans-Nonachlor	2.00494 1.35598	1.77062	1.75652	1.68455	1.58512	1.48614	1.66341	12.737
44 cis-Nonachlor	2.09733 1.45320	1.84381	1.81720	1.74905	1.64786	1.56613	1.73922	12.094
45 Mirex	1.27446 0.78316	1.05839	1.00141	0.92483	0.86110	0.82792	0.96161	17.505
46 bis-(2-ethylhexyl) Phthalate	++++ ++++	++++	++++	++++	++++	++++	++++	++++
56 Tech-Chlordane (1)	++++ ++++	++++	++++	++++	++++	++++	++++	++++
(2)	++++ ++++	++++	++++	++++	++++	++++	++++	++++
(3)	++++ ++++	++++	++++	++++	++++	++++	++++	++++
47 Trifluralin	++++ ++++	++++	++++	++++	++++	++++	++++	++++
48 Dacthal	++++ ++++	++++	++++	++++	++++	++++	++++	++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2012 16:21  
 End Cal Date : 03-OCT-2012 21:06  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
 Cal Date : 04-Oct-2012 10:27 aron  
 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	80.000 Level 7	RRF	% RSD
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
\$ 2 Tetrachloro-m-xylene	1.65121 1.09384	1.58336	1.53549	1.40581	1.29451	1.16920		1.39049	15.330
\$ 25 Decachlorobiphenyl	1.54270 1.01956	1.40157	1.29288	1.19023	1.11868	1.04550		1.23016	15.688

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20121003PEST.b/ical-2.b

ARI Job No.: DS Method: PEST1003B.m Instrument: ecd6.i Date: 03-OCT-2012

Time Filename LabID ClientId DF Manually Integrated Compounds

1510	1003A009.d	DS		1	NO MANUAL INTEGRATION
1527	1003A010.d	IB		1	NO MANUAL INTEGRATION
1545	1003A011.d	INDAE		1	NO MANUAL INTEGRATION
1603	1003A012.d	WNDE		1	NO MANUAL INTEGRATION
1621	1003A013.d	TOXAPH		1	Toxaphene,
1639	1003A014.d	INDAE		1	NO MANUAL INTEGRATION
1656	1003A015.d	INDAA		1	NO MANUAL INTEGRATION
1714	1003A016.d	INDAB		1	NO MANUAL INTEGRATION
1732	1003A017.d	INDAC		1	NO MANUAL INTEGRATION
1750	1003A018.d	INDAD		1	NO MANUAL INTEGRATION
1808	1003A019.d	INDAF		1	NO MANUAL INTEGRATION
1826	1003A020.d	INDAG		1	NO MANUAL INTEGRATION
1843	1003A021.d	INDA ICV		1	NO MANUAL INTEGRATION
1901	1003A022.d	HCB/HCEB ICV		1	NO MANUAL INTEGRATION
1919	1003A023.d	WNDE		1	NO MANUAL INTEGRATION
1937	1003A024.d	WNDA		1	NO MANUAL INTEGRATION
1955	1003A025.d	WNDB		1	NO MANUAL INTEGRATION
2012	1003A026.d	WNDC		1	NO MANUAL INTEGRATION
2030	1003A027.d	WNDD		1	NO MANUAL INTEGRATION
2048	1003A028.d	WNDF		1	NO MANUAL INTEGRATION





MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20121003PEST.b/ical-2.b

Time    Filename    LabID    ClientId    DF    Manually Integrated Compounds

2124 1003A030.d WND ICV    1    NO MANUAL INTEGRATION

0836 1003A031.d TECHLOR 200    1    NO MANUAL INTEGRATION

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
Batch File: /chem2/ecd6.i/20121003PEST.b/ical-2.b  
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME:	1003A014	1003A015	1003A016	1003A017	1003A018	1003A019	1003A020				
INJ. DATE:	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012				
INJ. TIME:	16:39	16:56	17:14	17:32	17:50	18:08	18:26				
Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.376	2.376	2.376	2.376	2.376	2.377	2.377	2.376	2.326-2.426	2.376	0.001
* 52 1Bromo-2nitrobenzene	3.195	3.195	3.195	3.195	3.195	3.195	3.195	3.195	3.145-3.245	3.195	0.000
* 55 Hexabromobiphenyl	10.105	10.106	10.106	10.106	10.107	10.106	10.107	10.105	10.055-10.155	10.106	0.001
\$ 2 Tetrachloro-m-xylene	4.007	4.006	4.007	4.006	4.007	4.007	4.008	4.007	3.957-4.057	4.007	0.000
3 Hexachlorobenzene	4.458	4.457	4.458	4.457	4.458	4.457	4.458	4.458	4.408-4.508	4.458	0.000
4 alpha-BHC	4.584	4.584	4.584	4.584	4.585	4.584	4.585	4.584	4.534-4.634	4.584	0.001
5 gamma-BHC (Lindane)	4.936	4.936	4.936	4.936	4.936	4.936	4.937	4.936	4.886-4.986	4.936	0.000
6 beta-BHC	5.007	5.006	5.006	5.006	5.007	5.006	5.007	5.007	4.957-5.057	5.006	0.000
7 delta-BHC	5.314	5.314	5.313	5.313	5.314	5.314	5.314	5.314	5.264-5.364	5.314	0.000
8 Heptachlor	5.397	5.396	5.396	5.396	5.397	5.396	5.397	5.397	5.347-5.447	5.396	0.001
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	5.735	5.734	5.734	5.734	5.735	5.735	5.736	5.735	5.685-5.785	5.735	0.001
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	6.293	6.292	6.292	6.292	6.293	6.292	6.293	6.293	6.243-6.343	6.293	0.001
12 gamma-Chlordane	6.475	6.475	6.475	6.474	6.475	6.475	6.476	6.475	6.425-6.525	6.475	0.001
13 alpha-Chlordane	6.614	6.613	6.613	6.613	6.614	6.613	6.615	6.614	6.564-6.664	6.614	0.001
14 Endosulfan I	6.680	6.679	6.679	6.679	6.679	6.679	6.680	6.680	6.630-6.730	6.679	0.000

Reviewer 1 AR Date: 10/4/2012  
Reviewer 2 RB Date: 10/4/11

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
Batch File: /chem2/ecd6.i/20121003PEST.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	6.744	6.744	6.744	6.744	6.744	6.744	6.745	6.744	6.694-6.794	6.744	0.001
16 Dieldrin	6.938	6.938	6.937	6.937	6.938	6.937	6.939	6.938	6.888-6.988	6.938	0.001
17 Endrin	7.228	7.227	7.227	7.227	7.228	7.227	7.228	7.228	7.178-7.278	7.227	0.000
18 4,4'-DDD	7.282	7.282	7.281	7.281	7.282	7.282	7.283	7.282	7.232-7.332	7.282	0.001
19 Endosulfan II	7.416	7.416	7.415	7.415	7.416	7.416	7.416	7.416	7.366-7.466	7.416	0.000
20 4,4'-DDT	7.571	7.571	7.570	7.570	7.571	7.570	7.571	7.571	7.521-7.621	7.570	0.000
21 Endrin aldehyde	7.715	7.715	7.714	7.714	7.715	7.714	7.715	7.715	7.665-7.765	7.715	0.000
22 Endosulfan sulfate	7.960	7.959	7.959	7.959	7.959	7.959	7.960	7.960	7.910-8.010	7.959	0.000
23 Methoxychlor	8.156	8.156	8.155	8.155	8.156	8.156	8.158	8.156	8.106-8.206	8.156	0.001
24 Endrin ketone	8.448	8.447	8.447	8.447	8.448	8.447	8.449	8.448	8.398-8.498	8.448	0.001
25 Decachlorobiphenyl	9.565	9.565	9.565	9.566	9.566	9.565	9.566	9.565	9.515-9.615	9.566	0.001
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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.164	7.114-7.214	+++++	+++++
38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.454	6.404-6.504	+++++	+++++

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
Batch File: /chem2/ecd6.i/20121003PEST.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	++++	++++	++++	++++	++++	++++	++++	6.939	6.889-6.989	++++	++++
40 2,4-DDT	++++	++++	++++	++++	++++	++++	++++	7.227	7.177-7.277	++++	++++
41 Hexachloroethane	++++	++++	++++	++++	++++	++++	++++	1.728	1.678-1.778	++++	++++
42 Oxychlorthane	++++	++++	++++	++++	++++	++++	++++	6.203	6.153-6.253	++++	++++
43 trans-Nonachlor	++++	++++	++++	++++	++++	++++	++++	6.560	6.510-6.610	++++	++++
44 cis-Nonachlor	++++	++++	++++	++++	++++	++++	++++	7.286	7.236-7.336	++++	++++
45 Mirex	++++	++++	++++	++++	++++	++++	++++	8.434	8.384-8.484	++++	++++
46 bis-(2-ethylhexyl) Pht	++++	++++	++++	++++	++++	++++	++++	21.499	21.449-21.549	++++	++++
56 Tech-Chlordane	++++	++++	++++	++++	++++	++++	++++	5.919	5.869-5.969	++++	++++
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	++++	++++

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
Batch File: /chem2/ecd6.i/20121003PEST.b/ical-2.b  
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME:	1003A023	1003A024	1003A025	1003A026	1003A027	1003A028	1003A029				
INJ. DATE:	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012				
INJ. TIME:	19:19	19:37	19:55	20:12	20:30	20:48	21:06				
Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.377	2.327-2.427	+++++	+++++
* 52 Bromo-nitrobenzene	3.195	3.195	3.195	3.195	3.195	3.195	3.195	3.195	3.145-3.245	3.195	0.000
* 55 Hexabromobiphenyl	10.105	10.106	10.106	10.106	10.106	10.106	10.106	10.105	10.055-10.155	10.106	0.000
§ 2 Tetrachloro-m-xylene	4.007	4.007	4.007	4.007	4.007	4.007	4.008	4.008	3.958-4.058	4.007	0.000
3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.458	4.408-4.508	+++++	+++++
4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.585	4.535-4.635	+++++	+++++
5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.937	4.887-4.987	+++++	+++++
6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.007	4.957-5.057	+++++	+++++
7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.314	5.264-5.364	+++++	+++++
8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.397	5.347-5.447	+++++	+++++
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.736	5.686-5.786	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.293	6.243-6.343	+++++	+++++
12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.476	6.426-6.526	+++++	+++++
13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.615	6.565-6.665	+++++	+++++
14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.680	6.630-6.730	+++++	+++++

Reviewer 1 AR Date: 10/4/2012  
Reviewer 2 [Signature] Date: [Signature]

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
Batch File: /chem2/ecd6.i/20121003PEST.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	++++	++++	++++	++++	++++	++++	++++	6.745	6.695-6.795	++++	++++
16 Dieldrin	++++	++++	++++	++++	++++	++++	++++	6.939	6.889-6.989	++++	++++
17 Endrin	++++	++++	++++	++++	++++	++++	++++	7.228	7.178-7.278	++++	++++
18 4,4'-DDD	++++	++++	++++	++++	++++	++++	++++	7.283	7.233-7.333	++++	++++
19 Endosulfan II	++++	++++	++++	++++	++++	++++	++++	7.416	7.366-7.466	++++	++++
20 4,4'-DDT	++++	++++	++++	++++	++++	++++	++++	7.571	7.521-7.621	++++	++++
21 Endrin aldehyde	++++	++++	++++	++++	++++	++++	++++	7.715	7.665-7.765	++++	++++
22 Endosulfan sulfate	++++	++++	++++	++++	++++	++++	++++	7.960	7.910-8.010	++++	++++
23 Methoxychlor	++++	++++	++++	++++	++++	++++	++++	8.158	8.108-8.208	++++	++++
24 Endrin ketone	++++	++++	++++	++++	++++	++++	++++	8.449	8.399-8.499	++++	++++
25 Decachlorobiphenyl	9.565	9.565	9.565	9.565	9.566	9.566	9.565	9.566	9.516-9.616	9.565	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	++++	++++	++++	++++	++++	++++	++++	7.164	7.114-7.214	++++	++++
38 2,4-DDE	6.454	6.453	6.453	6.453	6.453	6.454	6.453	6.454	6.404-6.504	6.453	0.000

0000 01000

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003B.m  
Batch File: /chem2/ecd6.i/20121003PEST.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	6.939	6.939	6.939	6.939	6.939	6.939	6.939	6.939	6.889-6.989	6.939	0.000
40 2,4-DDT	7.227	7.227	7.227	7.227	7.227	7.227	7.227	7.227	7.177-7.277	7.227	0.000
41 Hexachloroethane	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.728	1.678-1.778	0.000	0.000
42 Oxychlorthane	6.203	6.202	6.203	6.202	6.203	6.203	6.203	6.203	6.153-6.253	6.203	0.000
43 trans-Nonachlor	6.560	6.560	6.560	6.560	6.560	6.561	6.561	6.560	6.510-6.610	6.560	0.000
44 cis-Nonachlor	7.286	7.286	7.286	7.285	7.286	7.286	7.286	7.286	7.236-7.336	7.286	0.000
45 Mirex	8.433	8.433	8.433	8.433	8.434	8.434	8.434	8.433	8.383-8.483	8.434	0.000
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.919	5.869-5.969	+++++	+++++
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	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2012 16:21  
 End Cal Date : 03-OCT-2012 21:06  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
 Cal Date : 04-Oct-2012 10:53 aron  
 Curve Type : Average

Calibration File Names:

Level 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A024.d  
 Level 2: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A025.d  
 Level 3: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A026.d  
 Level 4: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A027.d  
 Level 5: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A023.d  
 Level 6: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A028.d  
 Level 7: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A029.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
1 Hexachlorobutadiene	2.08122 1.63666	1.94023	1.88041	1.76338	1.70361	1.64246	1.80685	9.234
3 Hexachlorobenzene	1.59035 1.12008	1.45330	1.36965	1.26348	1.19689	1.13240	1.30374	13.468
4 alpha-BHC	1.48360 1.51994	1.46155	1.49380	1.48821	1.49848	1.49064	1.49089	1.172
5 gamma-BHC (Lindane)	1.42027 1.36284	1.37361	1.37657	1.35654	1.35517	1.34310	1.36973	1.827
6 beta-BHC	0.75152 0.55679	0.69280	0.65689	0.60737	0.58368	0.56247	0.63022	11.590
7 delta-BHC	1.20266 1.24776	1.17048	1.17866	1.18779	1.20882	1.21617	1.20176	2.170



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
 Cal Date : 04-Oct-2012 10:53 aron  
 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	80.000 Level 7	RRF	% RSD
8 Heptachlor	1.37096 1.16397	1.29380	1.26529	1.22345	1.20404	1.17174		1.24189	5.941
9 Aldrin	1.38830 1.19792	1.30944	1.28954	1.25093	1.23693	1.20472		1.26825	5.272
38 Chlorthalonil	++++ ++++	++++	++++	++++	++++	++++		++++	++++
10 Heptachlor Epoxide a	++++ ++++	++++	++++	++++	++++	++++		++++	++++
11 Heptachlor epoxide b	1.41113 1.08846	1.31130	1.26157	1.19952	1.17085	1.11494		1.22254	9.310
12 gamma-Chlordane	1.37924 1.13348	1.28112	1.23666	1.18606	1.16066	1.13221		1.21563	7.442
13 alpha-Chlordane	1.34294 1.07773	1.24571	1.19997	1.14614	1.11500	1.08492		1.17320	8.221
14 Endosulfan I	1.30064 1.01555	1.21267	1.16698	1.11141	1.07734	1.03495		1.13136	9.025
15 4,4'-DDE	1.15090 1.01565	1.10895	1.10913	1.08332	1.06301	1.02741		1.07977	4.461

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2012 16:21  
 End Cal Date : 03-OCT-2012 21:06  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
 Cal Date : 04-Oct-2012 10:53 aron  
 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	80.000 Level 7	RRF	% RSD
16 Dieldrin	1.26962 1.07520	1.22036	1.21488	1.17193	1.14024	1.09397		1.16946	6.059
17 Endrin	1.18550 1.02212	1.13729	1.12312	1.08787	1.07574	1.01997		1.09309	5.553
18 4,4'-DDD	1.03194 0.90115	0.99156	0.97503	0.94745	0.93552	0.89862		0.95447	5.092
19 Endosulfan II	1.18813 0.95522	1.12694	1.09574	1.04233	1.01705	0.96342		1.05555	8.159
20 4,4'-DDT	1.01190 0.93269	0.98009	0.97205	0.95041	0.94668	0.92402		0.95969	3.169
21 Endrin aldehyde	0.98487 0.76300	0.92248	0.88072	0.83463	0.80715	0.76588		0.85125	9.722
22 Methoxychlor	0.55785 0.41454	0.52375	0.49243	0.45541	0.43083	0.40961		0.46920	12.174
23 Endosulfan sulfate	0.98577 0.82672	0.93736	0.90840	0.87882	0.85578	0.82638		0.88846	6.672
24 Endrin ketone	1.22441 0.95438	1.11557	1.06066	1.00861	0.96767	0.94155		1.03898	9.892

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2012 16:21  
 End Cal Date : 03-OCT-2012 21:06  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
 Cal Date : 04-Oct-2012 10:53 aron  
 Curve Type : Average

Compound	1.250	2.500	5.000	10.000	20.000	40.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	80.000							
	Level 7							
=====	=====	=====	=====	=====	=====	=====	=====	=====
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.02494	+++++		
	+++++						0.02494	0.000
-----	-----	-----	-----	-----	-----	-----	-----	-----
(2)	+++++	+++++	+++++	+++++	0.03398	+++++		
	+++++						0.03398	0.000
-----	-----	-----	-----	-----	-----	-----	-----	-----
(3)	+++++	+++++	+++++	+++++	0.02866	+++++		
	+++++						0.02866	0.000
-----	-----	-----	-----	-----	-----	-----	-----	-----
(4)	+++++	+++++	+++++	+++++	0.03669	+++++		
	+++++						0.03669	0.000
-----	-----	-----	-----	-----	-----	-----	-----	-----
(5)	+++++	+++++	+++++	+++++	0.03125	+++++		
	+++++						0.03125	0.000
-----	-----	-----	-----	-----	-----	-----	-----	-----
(6)	+++++	+++++	+++++	+++++	0.02327	+++++		
	+++++						0.02327	0.000
-----	-----	-----	-----	-----	-----	-----	-----	-----
39 2,4-DDE	0.88094	0.75976	0.74096	0.72970	0.70472	0.67437		
	0.62740						0.73112	10.891
-----	-----	-----	-----	-----	-----	-----	-----	-----
40 2,4-DDD	0.80172	0.69242	0.66336	0.63593	0.62037	0.60087		
	0.57003						0.65496	11.613
-----	-----	-----	-----	-----	-----	-----	-----	-----
41 2,4-DDT	0.89394	0.77741	0.74942	0.72250	0.70393	0.69236		
	0.65022						0.74140	10.608
-----	-----	-----	-----	-----	-----	-----	-----	-----

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2012 16:21  
 End Cal Date : 03-OCT-2012 21:06  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
 Cal Date : 04-Oct-2012 10:53 aron  
 Curve Type : Average

Compound	1.250	2.500	5.000	10.000	20.000	40.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	80.000							
	Level 7							
42 Hexachloroethane	++++ ++++	++++	++++	++++	++++	++++	++++	++++
43 Oxychlordane	1.20752 0.86792	1.03897	1.01070	0.96914	0.94973	0.91913	0.99473	11.010
44 trans-Nonachlor	1.39750 1.06434	1.22359	1.19551	1.15838	1.13889	1.11496	1.18474	9.055
45 cis-Nonachlor	1.44929 1.15379	1.27172	1.25939	1.22765	1.21920	1.20345	1.25493	7.488
46 Mirex	1.09310 0.70039	0.90433	0.85442	0.79518	0.76223	0.73762	0.83532	15.933
47 bis-(2-ethylhexyl) Phthalate	++++ ++++	++++	++++	++++	++++	++++	++++	++++
59 Tech-Chlordane (1)	++++ ++++	++++	++++	++++	++++	++++	++++	++++
(2)	++++ ++++	++++	++++	++++	++++	++++	++++	++++
(3)	++++ ++++	++++	++++	++++	++++	++++	++++	++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-OCT-2012 16:21  
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 Quant Method : ISTD  
 Origin : Disabled  
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 Method file : /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
 Cal Date : 04-Oct-2012 10:53 aron  
 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							
48 Trifluralin	++++ ++++	++++	++++	++++	++++	++++	++++	++++
49 Dacthal	++++ ++++	++++	++++	++++	++++	++++	++++	++++
50 Oxadiazon	++++ ++++	++++	++++	++++	++++	++++	++++	++++
51 Kelthane	++++ ++++	++++	++++	++++	++++	++++	++++	++++
53 Chlorpyrifos	++++ ++++	++++	++++	++++	++++	++++	++++	++++
55 Methyl Parathion	++++ ++++	++++	++++	++++	++++	++++	++++	++++
56 Ethyl Parathion	++++ ++++	++++	++++	++++	++++	++++	++++	++++
\$ 2 Tetrachloro-m-xylene	1.34597 1.05358	1.27986	1.24584	1.17341	1.12866	1.07044	1.18539	9.261
\$ 25 Decachlorobiphenyl	1.38903 0.87835	1.22428	1.12392	1.02051	0.95315	0.89483	1.06915	17.581

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20121003PEST.b/ical-1.b  
ARI Job No.: DS Method: PEST1003.m Instrument: ecd6.i Date: 03-OCT-2012

Time Filename LabID ClientId DF Manually Integrated Compounds

1510 1003A009.d DS 1 NO MANUAL INTEGRATION

1527 1003A010.d IB 1 NO MANUAL INTEGRATION

1545 1003A011.d INDAE 1 NO MANUAL INTEGRATION

1603 1003A012.d WNDE 1 NO MANUAL INTEGRATION

1621 1003A013.d TOXAPH 1 Toxaphene,

1639 1003A014.d INDAE 1 NO MANUAL INTEGRATION

1656 1003A015.d INDAA 1 NO MANUAL INTEGRATION

1714 1003A016.d INDAE 1 NO MANUAL INTEGRATION

1732 1003A017.d INDAC 1 NO MANUAL INTEGRATION

1750 1003A018.d INDAD 1 NO MANUAL INTEGRATION

1808 1003A019.d INDAF 1 NO MANUAL INTEGRATION

1826 1003A020.d INDAG 1 NO MANUAL INTEGRATION

1843 1003A021.d INDA ICV 1 NO MANUAL INTEGRATION

1901 1003A022.d HCB/HCBED ICV 1 NO MANUAL INTEGRATION

1919 1003A023.d WNDE 1 NO MANUAL INTEGRATION

1937 1003A024.d WNDA 1 NO MANUAL INTEGRATION

1955 1003A025.d WNDB 1 NO MANUAL INTEGRATION

2012 1003A026.d WNDC 1 NO MANUAL INTEGRATION

2030 1003A027.d WNDD 1 NO MANUAL INTEGRATION

2048 1003A028.d WNDF 1 NO MANUAL INTEGRATION



MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd6.i/20121003PEST.b/ical-1.1.b

Time    Filename    LabID    ClientId    DF    Manually Integrated Compounds

2124 1003A030.d WND ICV    1    NO MANUAL INTEGRATION

0836 1003A031.d TECHLOR 200    1    NO MANUAL INTEGRATION



Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
Batch File: /chem2/ecd6.i/20121003PEST.b/ical-1.b  
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
FILENAME:	1003A015	1003A016	1003A017	1003A018	1003A019	1003A020					
INJ.DATE:	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012	03-OCT-2012
INJ.TIME:	16:39	16:56	17:14	17:32	17:50	18:08	18:26				
Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.210	2.209	2.210	2.209	2.210	2.210	2.210	2.210	2.160-2.260	2.210	0.000
* 54 1Bromo-2nitrobenzene	3.015	3.015	3.015	3.015	3.015	3.015	3.015	3.015	2.965-3.065	3.015	0.000
* 58 Hexabromobiphenyl	8.750	8.750	8.750	8.750	8.750	8.750	8.750	8.750	8.700-8.800	8.750	0.000
\$ 2 Tetrachloro-m-xylene	3.670	3.670	3.670	3.669	3.670	3.670	3.670	3.670	3.620-3.720	3.670	0.000
3 Hexachlorobenzene	4.002	4.002	4.001	4.001	4.001	4.001	4.002	4.002	3.952-4.052	4.002	0.000
4 alpha-BHC	4.147	4.146	4.147	4.146	4.147	4.147	4.147	4.147	4.097-4.197	4.147	0.000
5 gamma-BHC (Lindane)	4.424	4.424	4.424	4.424	4.424	4.424	4.424	4.424	4.374-4.474	4.424	0.000
6 beta-BHC	4.497	4.497	4.497	4.497	4.497	4.497	4.497	4.497	4.447-4.547	4.497	0.000
7 delta-BHC	4.663	4.663	4.662	4.662	4.663	4.662	4.663	4.663	4.613-4.713	4.663	0.000
8 Heptachlor	4.862	4.861	4.861	4.861	4.861	4.861	4.862	4.862	4.812-4.912	4.861	0.000
9 Aldrin	5.148	5.148	5.148	5.147	5.148	5.148	5.149	5.149	5.098-5.199	5.148	0.000
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627-13.677	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.819-10.919	+++++	+++++
11 Heptachlor epoxide b	5.723	5.723	5.722	5.722	5.722	5.722	5.723	5.723	5.673-5.773	5.722	0.000
12 gamma-Chlordane	5.843	5.842	5.842	5.842	5.842	5.842	5.842	5.842	5.792-5.892	5.842	0.000
13 alpha-Chlordane	5.967	5.966	5.967	5.966	5.966	5.966	5.967	5.967	5.917-6.017	5.967	0.000
14 Endosulfan I	6.099	6.099	6.099	6.098	6.099	6.098	6.099	6.099	6.049-6.149	6.099	0.000

Reviewer 1 AR Date: 10/4/2012  
Reviewer 2 Date:

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
Batch File: /chem2/ecd6.i/20121003PEST.b/ical-1.b  
Inst ID: ecd6.1

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
15 4,4'-DDE	6.027	6.026	6.026	6.026	6.027	6.026	6.027	6.027	5.977-6.077	6.027	0.000
16 Dieldrin	6.322	6.322	6.322	6.322	6.322	6.322	6.322	6.322	6.272-6.372	6.322	0.000
17 Endrin	6.540	6.541	6.540	6.539	6.540	6.539	6.540	6.540	6.490-6.590	6.540	0.000
18 4,4'-DDD	6.584	6.583	6.583	6.583	6.583	6.583	6.584	6.584	6.534-6.634	6.583	0.000
19 Endosulfan II	6.745	6.746	6.746	6.745	6.745	6.745	6.746	6.746	6.696-6.796	6.746	0.001
20 4,4'-DDT	6.841	6.842	6.841	6.841	6.841	6.841	6.842	6.842	6.792-6.892	6.841	0.001
21 Endrin aldehyde	7.123	7.124	7.123	7.123	7.124	7.123	7.123	7.123	7.073-7.173	7.123	0.000
22 Methoxychlor	7.271	7.271	7.270	7.270	7.271	7.270	7.271	7.271	7.221-7.321	7.270	0.000
23 Endosulfan sulfate	7.513	7.514	7.513	7.513	7.514	7.513	7.514	7.514	7.464-7.564	7.513	0.000
24 Endrin ketone	7.766	7.767	7.767	7.766	7.767	7.766	7.766	7.766	7.716-7.816	7.766	0.000
25 Decachlorobiphenyl	8.610	8.610	8.610	8.610	8.611	8.610	8.610	8.610	8.560-8.660	8.610	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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.496	6.446-6.546	+++++	+++++
39 2,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.703	5.653-5.753	+++++	+++++

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Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
Batch File: /chem2/ecd6.i/20121003PEST.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	++++	++++	++++	++++	++++	++++	++++	6.190	6.140-6.240	++++	++++
41 2,4-DDT	++++	++++	++++	++++	++++	++++	++++	6.429	6.379-6.479	++++	++++
42 Hexachloroethane	++++	++++	++++	++++	++++	++++	++++	1.738	1.688-1.788	++++	++++
43 Oxychlordane	++++	++++	++++	++++	++++	++++	++++	5.627	5.577-5.677	++++	++++
44 trans-Nonachlor	++++	++++	++++	++++	++++	++++	++++	5.951	5.901-6.001	++++	++++
45 cis-Nonachlor	++++	++++	++++	++++	++++	++++	++++	6.566	6.516-6.616	++++	++++
46 Mirex	++++	++++	++++	++++	++++	++++	++++	7.437	7.387-7.487	++++	++++
47 bis-(2-ethylhexyl) Pht	++++	++++	++++	++++	++++	++++	++++	20.156	20.106-20.206	++++	++++
59 Tech-Chlordane	++++	++++	++++	++++	++++	++++	++++	4.518	4.468-4.568	++++	++++
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	++++	++++

04 OCT 2012 11:01

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
Batch File: /chem2/ecd6.i/20121003PEST.b/ical-1.b  
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.210	2.160-2.260	+++++	+++++
* 54 1Bromo-2nitrobenzene	3.015	3.015	3.015	3.015	3.015	3.015	3.015	3.015	2.965-3.065	3.015	0.000
* 58 Hexabromobiphenyl	8.750	8.750	8.750	8.750	8.750	8.750	8.750	8.750	8.700-8.800	8.750	0.000
§ 2 Tetrachloro-m-xylene	3.670	3.670	3.670	3.670	3.670	3.670	3.670	3.670	3.620-3.720	3.670	0.000
3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.002	3.952-4.052	+++++	+++++
4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.147	4.097-4.197	+++++	+++++
5 gamma-BHC (lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.424	4.374-4.474	+++++	+++++
6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.497	4.447-4.547	+++++	+++++
7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.663	4.613-4.713	+++++	+++++
8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.862	4.812-4.912	+++++	+++++
9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.149	5.098-5.199	+++++	+++++
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.723	5.673-5.773	+++++	+++++
12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.842	5.792-5.892	+++++	+++++
13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.967	5.917-6.017	+++++	+++++
14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.099	6.049-6.149	+++++	+++++

Reviewer 1 AR Date: 10/4/2012  
Reviewer 2 \_\_\_\_\_ Date: \_\_\_\_\_

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
Batch File: /chem2/ecd6.i/20121003PEST.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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.027	5.977-6.077	+++++	+++++
16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.322	6.272-6.372	+++++	+++++
17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.540	6.490-6.590	+++++	+++++
18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.584	6.534-6.634	+++++	+++++
19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.746	6.696-6.796	+++++	+++++
20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.842	6.792-6.892	+++++	+++++
21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.123	7.073-7.173	+++++	+++++
22 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.271	7.221-7.321	+++++	+++++
23 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.514	7.464-7.564	+++++	+++++
24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.766	7.716-7.816	+++++	+++++
25 Decachlorobiphenyl	8.610	8.610	8.610	8.610	8.610	8.610	8.610	8.610	8.560-8.660	8.610	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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.496	6.446-6.546	+++++	+++++
39 2,4-DDE	5.704	5.704	5.704	5.703	5.703	5.704	5.703	5.703	5.653-5.753	5.703	0.000

04 OCT 2012 11:01

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20121003PEST.b/PEST1003.m  
Batch File: /chem2/ecd6.i/20121003PEST.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	6.191	6.191	6.191	6.191	6.191	6.190	6.190	6.190	6.140-6.240	6.191	0.000
41 2,4-DDT	6.429	6.429	6.429	6.429	6.429	6.429	6.429	6.429	6.379-6.479	6.429	0.000
42 Hexachloroethane	0.000	0.000	0.000	1.738	0.000	0.000	0.000	1.738	1.688-1.788	0.248	0.657
43 Oxychlorthane	5.627	5.627	5.627	5.627	5.627	5.627	5.627	5.627	5.577-5.677	5.627	0.000
44 trans-Nonachlor	5.951	5.951	5.951	5.951	5.950	5.951	5.951	5.951	5.901-6.001	5.951	0.000
45 cis-Nonachlor	6.567	6.567	6.567	6.566	6.567	6.566	6.566	6.566	6.516-6.616	6.567	0.000
46 Mirex	7.437	7.437	7.437	7.437	7.437	7.437	7.437	7.437	7.387-7.487	7.437	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.518	4.468-4.568	+++++	+++++
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	+++++	+++++

## INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5287634	4060064	-23.2
Hexabromobiphenyl	5848031	3748709	-35.9

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	23737838	21032891	-11.4
Hexabromobiphenyl	17554181	14864285	-15.3

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										

7E  
8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS

ARI Job No.: 20121003PEST

Analysis Date: 03-OCT-2012 15:10

Init. Calib. Date: 03-OCT-2012

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

COMPOUND	RT	AREA
4,4'-DDE	6.028	129828
Endrin	6.540	4737698
4,4'-DDD	6.583	154711
4,4'-DDT	6.842	4383976
Endrin ketone	7.767	279182
Endrin aldehyde	7.124	83451

DDT Percent Breakdown = 6.1 %  
((129828+154711) \* 100) / (129828+154711+4383976)

Endrin Percent Breakdown = 7.1 %  
((83451+279182) \* 100) / (83451+279182+4737698)

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

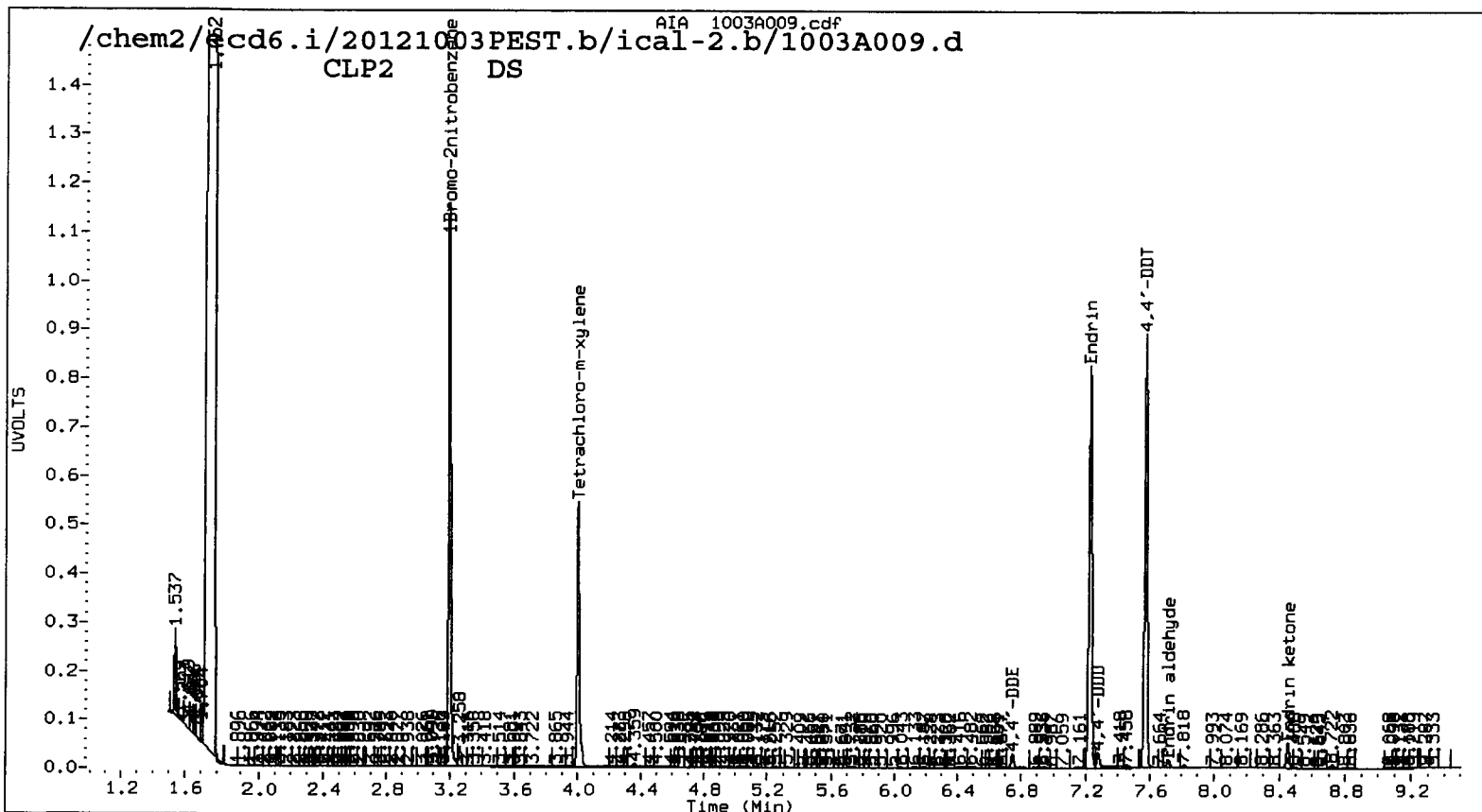
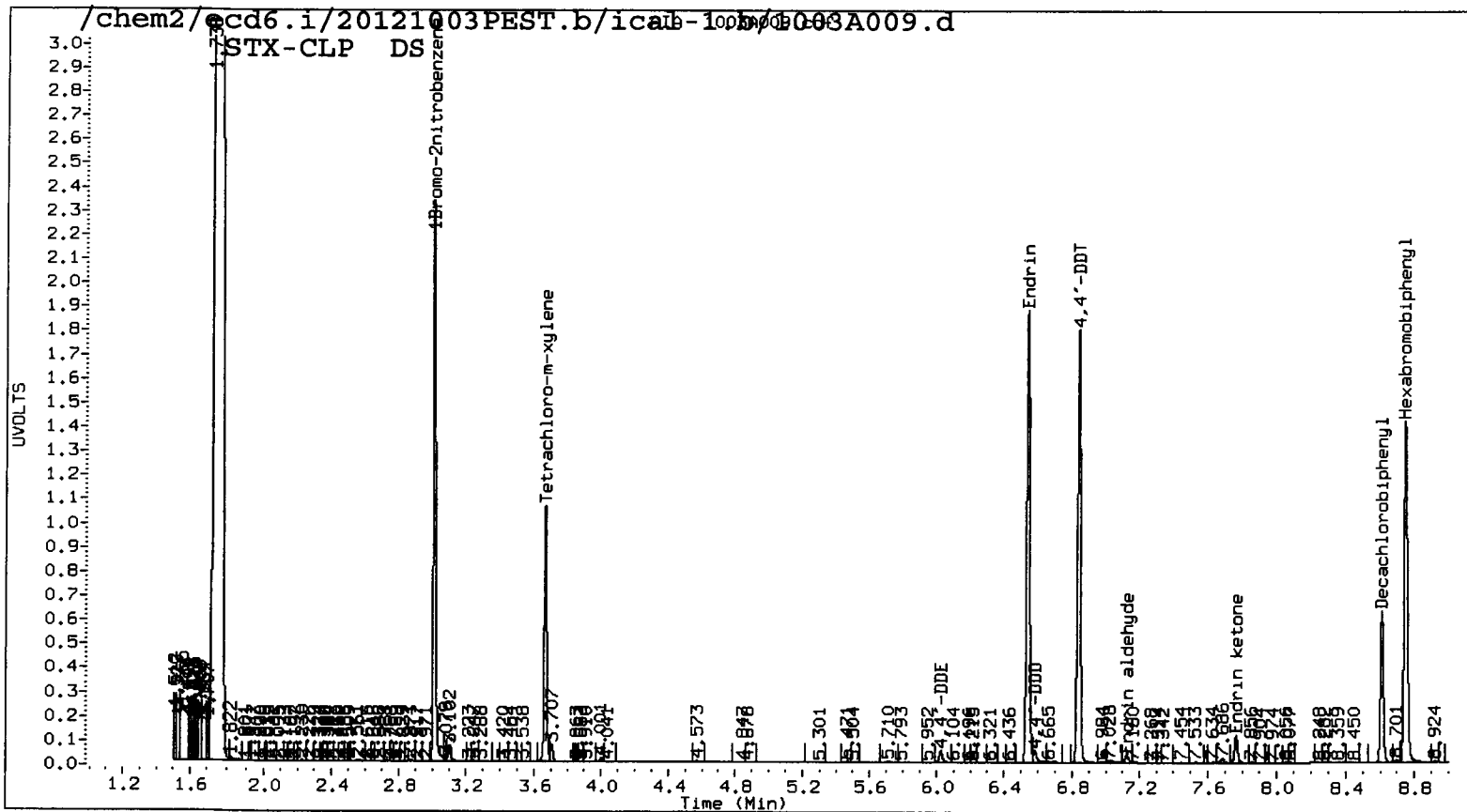
COMPOUND	RT	AREA
4,4'-DDE	6.744	694290
Endrin	7.227	20939129
4,4'-DDD	7.282	1150787
4,4'-DDT	7.570	21036406
Endrin ketone	8.447	1215962
Endrin aldehyde	7.715	480634

DDT Percent Breakdown = 8.1 %  
((694290+1150787) \* 100) / (694290+1150787+21036406)

Endrin Percent Breakdown = 7.5 %  
((480634+1215962) \* 100) / (480634+1215962+20939129)

Form VII Pest-1





Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A010.d ARI ID: IB  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A010.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 15:27  
 Compound Sublist: wpest Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.015	0.001	4103626	3.195	0.000	20811653	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
----			4.606	0.021	1044	0.0000	0.0023	---	alpha-BHC
----			5.050	0.043	7493	0.0000	0.0408	---	beta-BHC
----			5.327	0.013	3004	0.0000	0.0083	---	delta-BHC
----			4.925	-0.011	4608	0.0000	0.0112	---	gamma-BHC (Lindane)
4.847	-0.014	1134	----			0.0178	0.0000	---	Heptachlor
----			5.732	-0.003	56026	0.0000	0.1516	---	Aldrin
----			6.311	0.017	4705	0.0000	0.0141	---	Heptachlor epoxide b
----			6.648	-0.032	2563	0.0000	0.0086	---	Endosulfan I
----			6.967	0.028	1742	0.0000	0.0055	---	Dieldrin
----			6.744	-0.002	6369	0.0000	0.0211	---	4,4'-DDE
----			7.199	-0.029	2168	0.0000	0.0085	---	Endrin
----			7.421	0.005	1443	0.0000	0.0056	---	Endosulfan II
----			7.281	-0.002	4668	0.0000	0.0193	---	4,4'-DDD
----			7.994	0.034	1856	0.0000	0.0086	---	Endosulfan sulfate
----			7.573	0.002	10627	0.0000	0.0463	---	4,4'-DDT
----			8.183	0.025	3290	0.0000	0.0336	---	Methoxychlor
7.762	-0.004	12452	8.451	0.002	2651	0.2547	0.0124	181.5*	Endrin ketone
7.125	0.001	1590	7.708	-0.007	3978	0.0397	0.0198	67.0*	Endrin aldehyde
5.794	-0.048	5701	6.484	0.008	17598	0.0914	0.0506	57.4*	gamma-Chlordane
----			6.625	0.010	2169	0.0000	0.0067	---	alpha-Chlordane
2.229	0.019	5725	2.368	-0.009	2576	0.0618	0.0057	166.2*	Hexachlorobutadiene
4.001	-0.001	27480	4.458	0.001	5327	0.4109	0.0136	187.2*	Hexachlorobenzene
----			6.231	0.028	4801	0.0000	0.0181	---	Oxychlordane
----			6.440	-0.014	1990	0.0000	0.0104	---	2,4-DDE
5.956	0.005	1123	6.570	0.009	1716	0.0202	0.0056	113.4*	trans-Nonachlor
----			6.936	-0.003	1182	0.0000	0.0071	---	2,4-DDD
----			7.225	-0.002	6574	0.0000	0.0363	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
----			8.423	-0.011	6159	0.0000	0.0346	---	Mirex
8.750	0.000	3763922	10.106	0.001	14817201	80.0000	80.0000	0.0	Hexabromobiphenyl
1.738	0.000	778151	1.701	-0.027	1065269	0.0000	0.0000	---	Hexachloroethane
3.670	0.000	2058750	4.007	0.000	12255032	33.8582	33.8790	0.1	Tetrachloro-m-xylen
8.610	0.000	1611572	9.566	0.000	7450885	32.0375	32.7016	2.1	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

UR58 02002

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	84.6	84.7	84.6~	130- 0
Decachlorobiphenyl	80.1	81.8	80.1~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

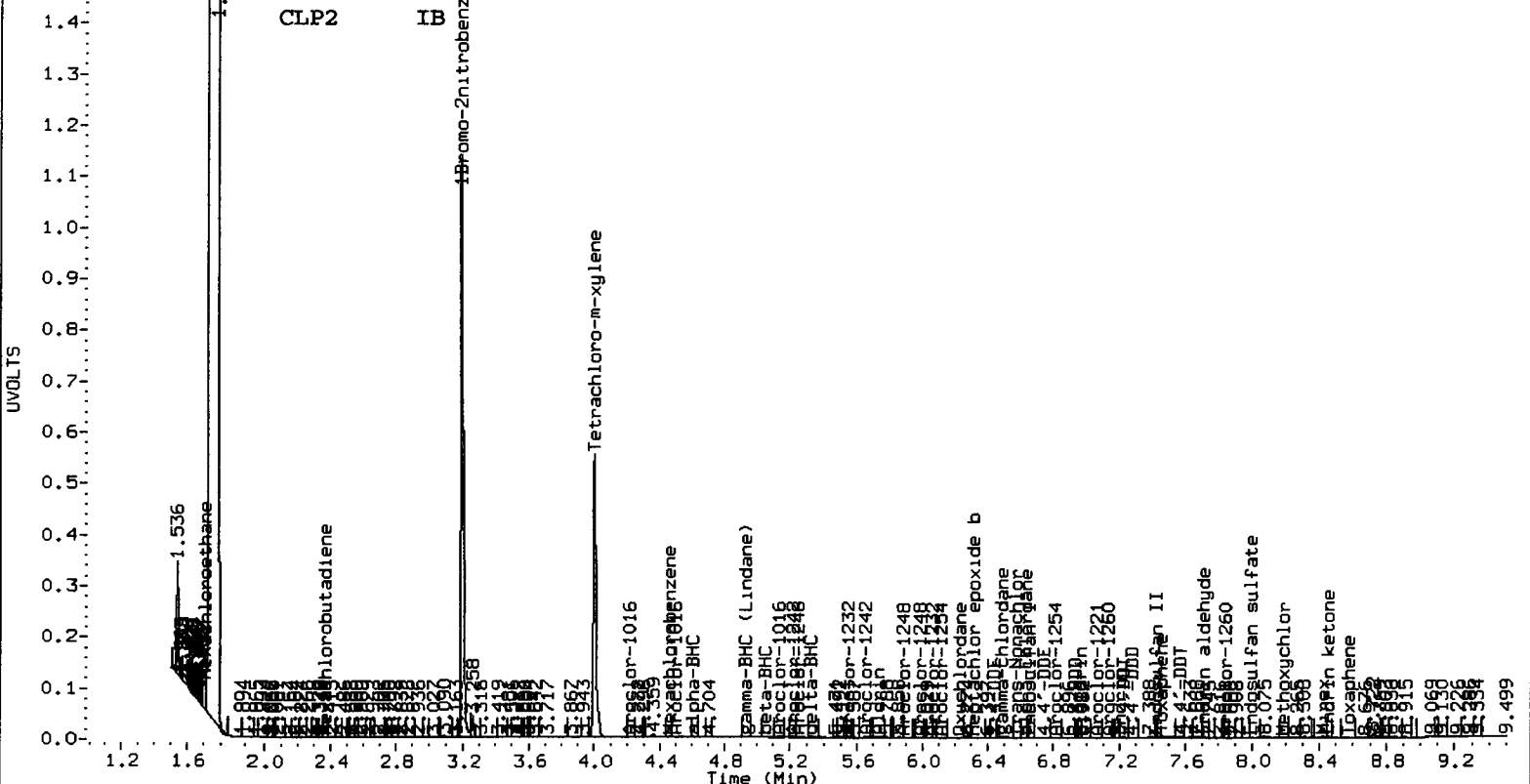
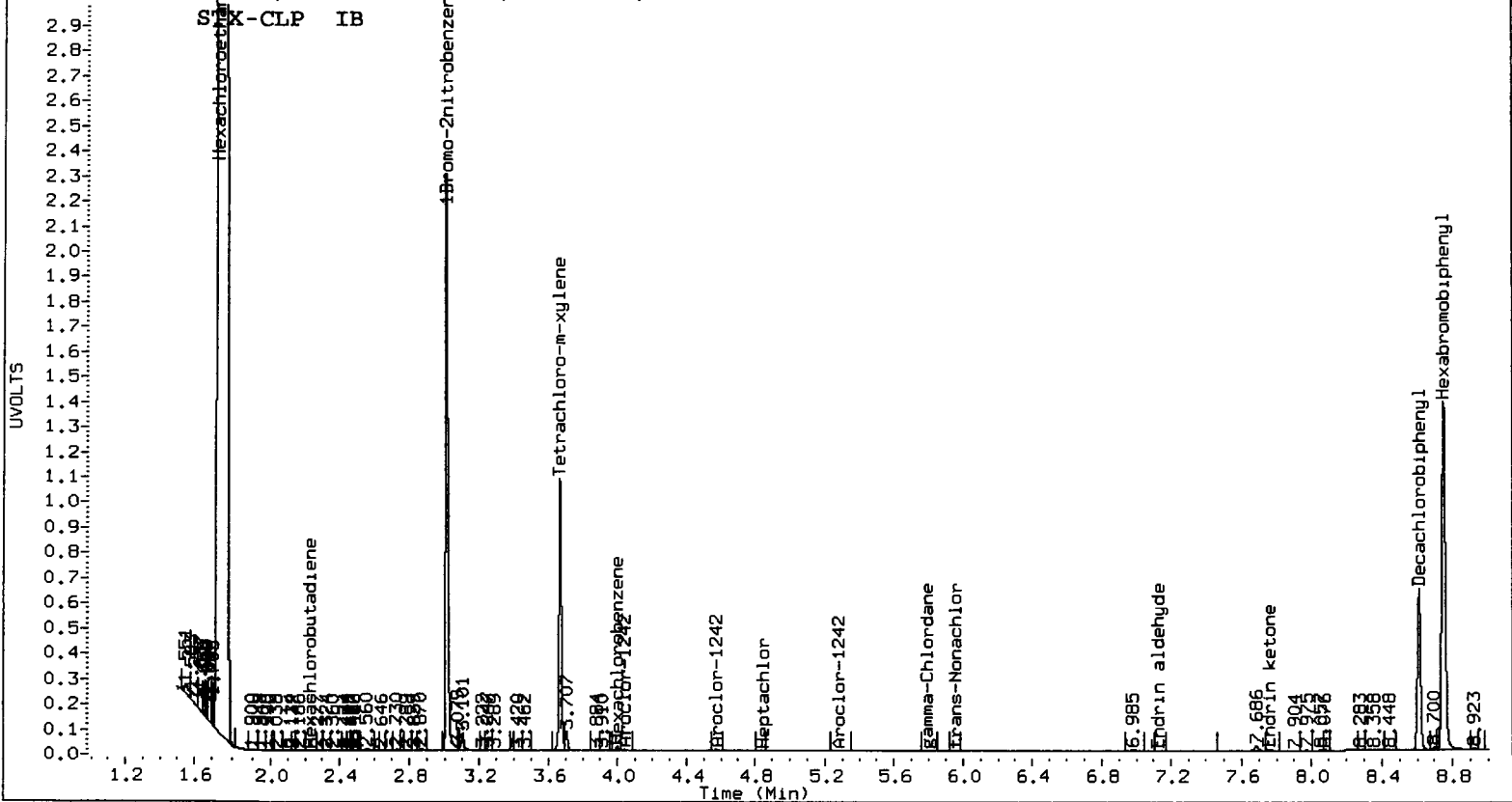
Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4103626	1.1
Hexabromobiphenyl	3748709	3763922	0.4

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	20811653	-1.1
Hexabromobiphenyl	14864285	14817201	-0.3

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
Toxaphene	1	---			0.000	1	7.134	-0.030	3928	0.441
Toxaphene	2	---			0.000	2	7.459	-0.029	100077	7.603
Toxaphene	3	---			0.000	3	7.708	-0.011	3978	0.270
Toxaphene	4	---			0.000	4	8.183	-0.002	3290	0.299
Toxaphene	5	---			0.000	5	8.575	0.042	2632	0.510
Toxaphene	6	---			0.000	NS	---			---
STX-CLPAve: <3 Quant Peaks					CLP2Ave: 1.825					
Aroclor-1016	1	---			0.000	1	---			0.000
Aroclor-1016	2	---			0.000	2	---			0.000
Aroclor-1016	3	---			0.000	3	---			0.000
Aroclor-1016	4	---			0.000	4	---			0.000
Aroclor-1016	5	---			0.000	5	---			0.000
STX-CLPAve: <3 Quant Peaks					CLP2Ave: <3 Quant Peaks					
Aroclor-1221	1	---			0.000	1	---			0.000
Aroclor-1221	2	---			0.000	2	---			0.000
Aroclor-1221	3	---			0.000	3	---			0.000
Aroclor-1221	4	---			0.000	4	---			0.000
STX-CLPAve: <3 Quant Peaks					CLP2Ave: <3 Quant Peaks					
Aroclor-1232	1	---			0.000	1	---			0.000
Aroclor-1232	2	---			0.000	2	---			0.000
Aroclor-1232	3	---			0.000	3	---			0.000
Aroclor-1232	4	---			0.000	4	---			0.000
Aroclor-1232	5	---			0.000	5	---			0.000
STX-CLPAve: <3 Quant Peaks					CLP2Ave: <3 Quant Peaks					
Aroclor-1242	1	---			0.000	1	---			0.000
Aroclor-1242	2	---			0.000	2	---			0.000
Aroclor-1242	3	---			0.000	3	---			0.000
Aroclor-1242	4	---			0.000	4	---			0.000
Aroclor-1242	5	---			0.000	5	---			0.000
Aroclor-1242	6	---			0.000	NS	---			---

STX-CLPAve: <3 Quant Peaks			CLP2Ave: <3 Quant Peaks		
Aroclor-1248 1	---	0.000	1	---	0.000
Aroclor-1248 2	---	0.000	2	---	0.000
Aroclor-1248 3	---	0.000	3	---	0.000
Aroclor-1248 4	---	0.000	4	---	0.000
Aroclor-1248 5	---	0.000	5	---	0.000
STX-CLPAve: <3 Quant Peaks			CLP2Ave: <3 Quant Peaks		
Aroclor-1254 1	---	0.000	1	---	0.000
Aroclor-1254 2	---	0.000	2	---	0.000
Aroclor-1254 3	---	0.000	3	---	0.000
Aroclor-1254 4	---	0.000	4	---	0.000
Aroclor-1254 5	---	0.000	5	---	0.000
STX-CLPAve: <3 Quant Peaks			CLP2Ave: <3 Quant Peaks		
Aroclor-1260 1	---	0.000	1	---	0.000
Aroclor-1260 2	---	0.000	2	---	0.000
Aroclor-1260 3	---	0.000	3	---	0.000
Aroclor-1260 4	---	0.000	4	---	0.000
Aroclor-1260 5	---	0.000	5	---	0.000
STX-CLPAve: <3 Quant Peaks			CLP2Ave: <3 Quant Peaks		
Aroclor-1262 1	---	0.000	1	---	0.000
Aroclor-1262 2	---	0.000	2	---	0.000
Aroclor-1262 3	---	0.000	3	---	0.000
Aroclor-1262 4	---	0.000	4	---	0.000
Aroclor-1262 5	---	0.000	5	---	0.000
STX-CLPAve: <3 Quant Peaks			CLP2Ave: <3 Quant Peaks		
Aroclor-1268 1	---	0.000	1	---	0.000
Aroclor-1268 2	---	0.000	2	---	0.000
Aroclor-1268 3	---	0.000	3	---	0.000
Aroclor-1268 4	---	0.000	4	---	0.000
Aroclor-1268 5	---	0.000	5	---	0.000
STX-CLPAve: <3 Quant Peaks			CLP2Ave: <3 Quant Peaks		



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A011.d ARI ID: INDAE  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A011.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 15:45  
 Compound Sublist: INDA Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.001 4243841	3.195 0.000 21862472	3.195	0.000 21862472	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.147	0.000 1535379	4.585 -0.001 9334218	4.585	-0.001 9334218	19.4134	19.5713	0.8	alpha-BHC
4.497	0.000 596591	5.006 -0.001 3588059	5.006	-0.001 3588059	17.8451	18.5881	4.1	beta-BHC
4.663	0.000 1239100	5.314 0.000 7494896	5.314	0.000 7494896	19.4365	19.8100	1.9	delta-BHC
4.424	0.000 1386207	4.936 0.000 8315328	4.936	0.000 8315328	19.0776	19.2863	1.1	gamma-BHC (Lindane)
4.862	0.000 1226891	5.396 -0.001 7484260	5.396	-0.001 7484260	18.6231	18.9596	1.8	Heptachlor
5.148	0.000 1262811	5.735 0.000 7333340	5.735	0.000 7333340	18.7699	18.8925	0.7	Aldrin
5.723	0.000 1184994	6.293 0.000 6529772	6.293	0.000 6529772	18.2719	18.6610	2.1	Heptachlor epoxide b
6.100	0.000 1099475	6.680 -0.001 5919132	6.680	-0.001 5919132	18.3195	18.8375	2.8	Endosulfan I
6.322	0.000 2324426	6.938 -0.001 12283565	6.938	-0.001 12283565	37.4681	36.9536	1.4	Dieldrin
6.027	0.000 2169789	6.744 -0.001 11760541	6.744	-0.001 11760541	37.8807	37.1061	2.1	4,4'-DDE
6.540	0.000 2029056	7.227 -0.001 9904255	7.227	-0.001 9904255	37.9835	37.1704	2.2	Endrin
6.746	0.000 1884435	7.416 -0.001 9816223	7.416	-0.001 9816223	36.5308	36.8560	0.9	Endosulfan II
6.583	-0.001 1762343	7.282 -0.001 9472208	7.282	-0.001 9472208	37.7821	37.6409	0.4	4,4'-DDD
7.514	0.000 1614928	7.959 -0.001 8479989	7.959	-0.001 8479989	37.1938	37.8644	1.8	Endosulfan sulfate
6.842	-0.001 1782695	7.570 -0.001 8981049	7.570	-0.001 8981049	38.0103	37.5030	1.3	4,4'-DDT
7.271	0.000 4047645	8.156 -0.003 16738737	8.156	-0.003 16738737	176.5215	163.8318	7.5	Methoxychlor
7.767	0.000 1835612	8.447 -0.001 8111794	8.447	-0.001 8111794	36.1518	36.2597	0.3	Endrin ketone
7.124	0.000 1530357	7.715 0.000 7757642	7.715	0.000 7757642	36.7869	36.9986	0.6	Endrin aldehyde
5.843	0.000 1188786	6.475 -0.001 6799397	6.475	-0.001 6799397	18.4345	18.6266	1.0	gamma-Chlordane
5.967	0.000 1137815	6.614 -0.001 6371726	6.614	-0.001 6371726	18.2823	18.7211	2.4	alpha-Chlordane
2.210	0.000 1744880	2.376 -0.001 8172185	2.376	-0.001 8172185	18.2043	17.2169	5.6	Hexachlorobutadiene
4.002	0.000 1221989	4.458 0.000 7455036	4.458	0.000 7455036	17.6689	18.1647	2.8	Hexachlorobenzene
8.750	0.000 3909614	10.105 0.000 15444423	10.105	0.000 15444423	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	0.000 2292564	4.007 -0.001 13637228	4.007	-0.001 13637228	36.4578	35.8881	1.6	Tetrachloro-m-xylene
8.610	0.000 1795027	9.565 -0.001 8328108	9.565	-0.001 8328108	34.3548	35.0673	2.1	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	91.1	89.7	89.7~	115- 0
Decachlorobiphenyl	85.9	87.7	85.9~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	4060064	4243841	4.5
Hexabromobiphenyl	3748709	3909614	4.3

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	21862472	3.9
Hexabromobiphenyl	14864285	15444423	3.9

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col			
			Shift	Height	Amount			Shift	Height	Amount	
=====											





Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A012.d ARI ID: WNDE  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A012.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 16:03  
 Compound Sublist: WND Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
---			1.735	0.007 79644381	0.0000	0.0000	---	Hexachloroethane
3.015	0.000 3953778		3.195	0.000 20286067	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.628	0.000 1783657		6.203	0.000 10156774	39.2013	39.2626	0.2	Oxychlorthane
5.704	0.001 1320612		6.454	0.000 7104051	39.4894	37.9736	3.9	2,4-DDE
5.951	0.000 2146506		6.560	-0.001 11964879	39.6099	39.4503	0.4	trans-Nonachlor
6.191	0.001 1168742		6.939	0.001 6346802	39.0122	38.8494	0.4	2,4-DDD
6.430	0.001 1318802		7.227	0.000 6909377	38.8886	38.7669	0.3	2,4-DDT
6.567	0.001 2299347		7.286	0.000 12452499	40.0572	39.2683	2.0	cis-Nonachlor
7.438	0.001 1439082		8.434	0.001 6440095	37.6639	36.7312	2.5	Mirex
8.751	0.001 3659278		10.106	0.001 14586432	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	0.000 1919385		4.007	-0.001 11829871	32.7625	33.5510	2.4	Tetrachloro-m-xylene
8.610	0.000 1534597		9.566	0.000 7180154	31.3797	32.0120	2.0	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	81.9	83.9	81.9~	150- 0
Decachlorobiphenyl	78.4	80.0	78.4~	150- 0

~ Indicates recovery outside QC Limits

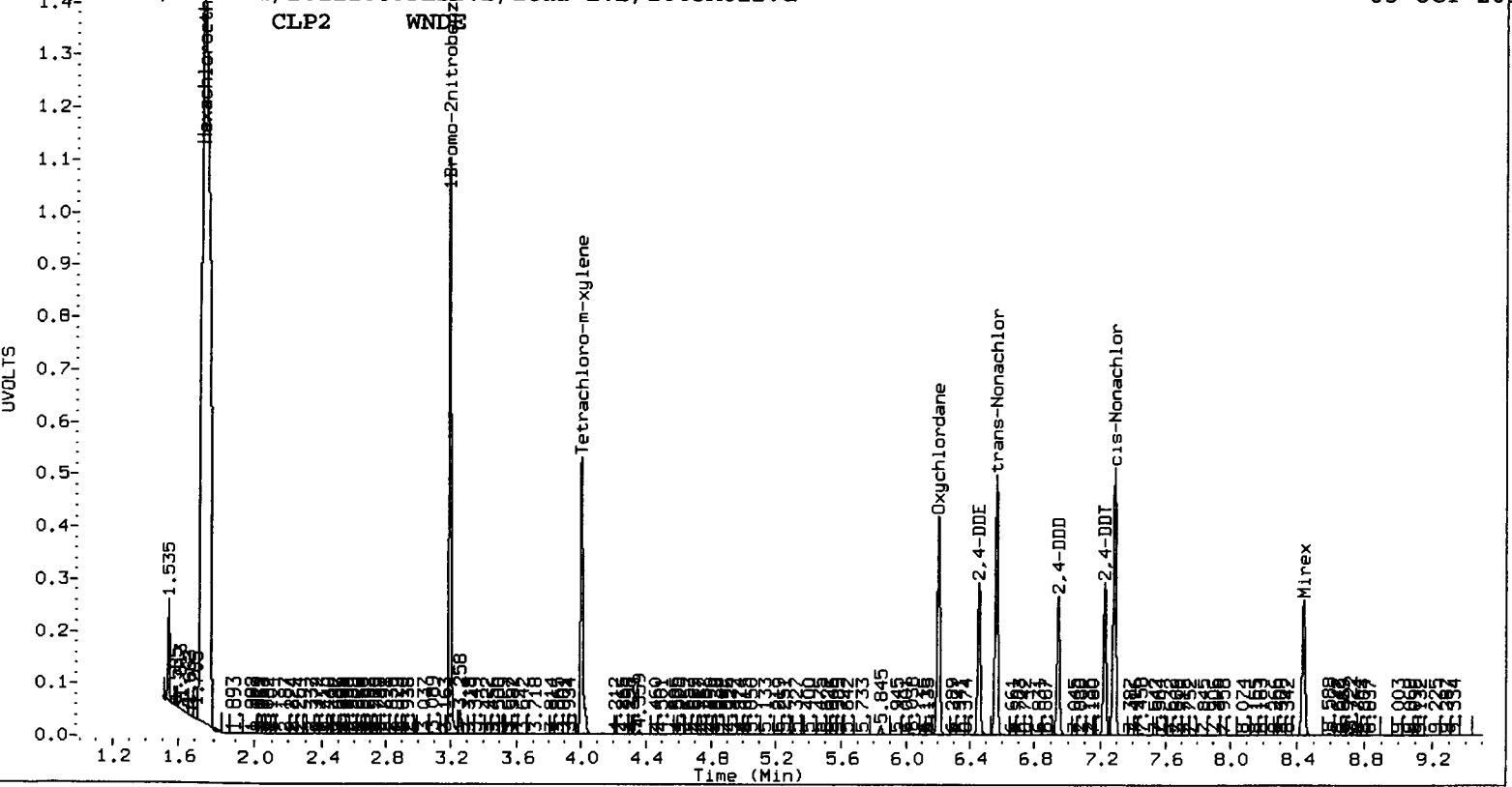
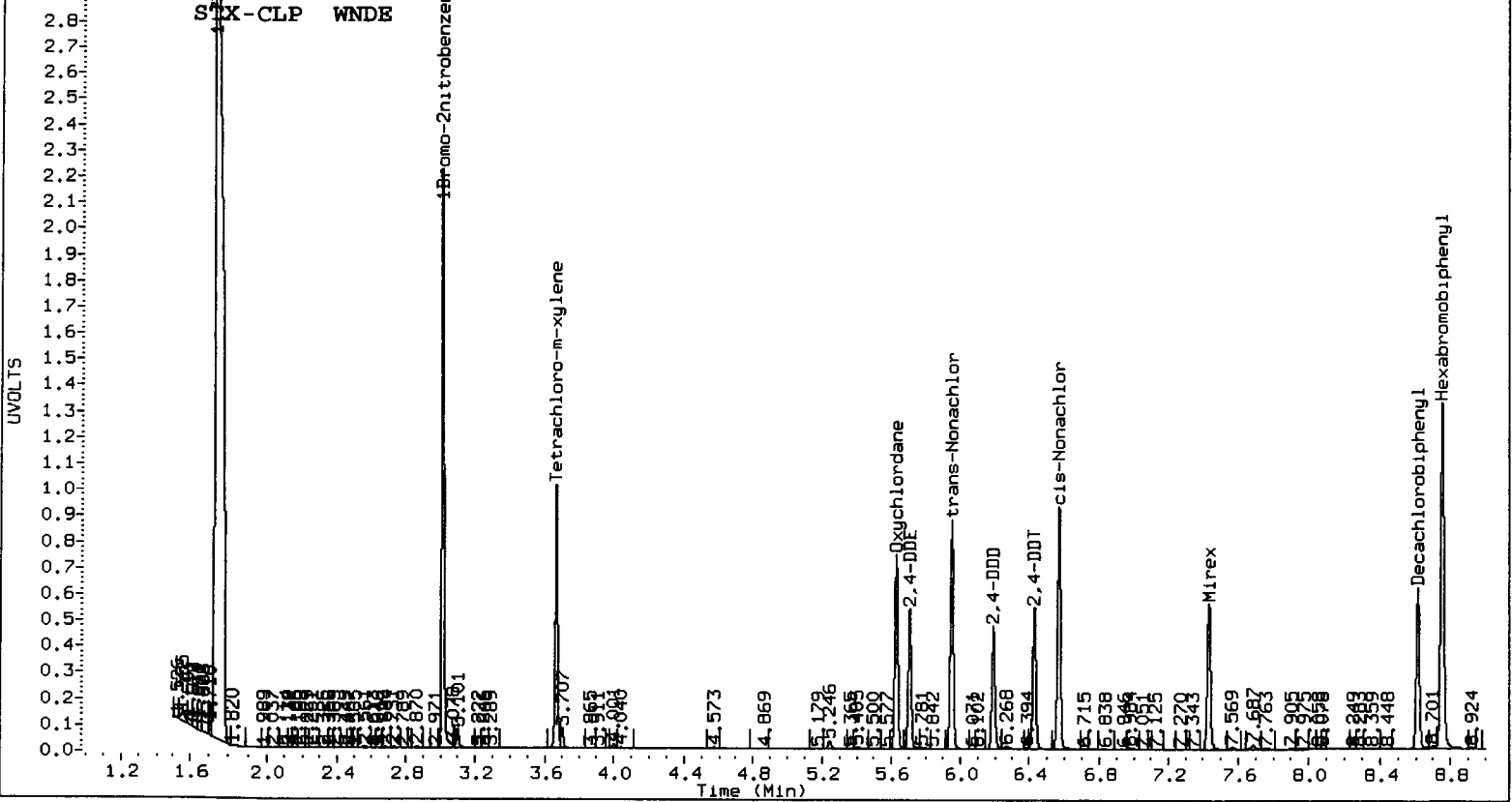
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	3953778	-2.6
Hexabromobiphenyl	3748709	3659278	-2.4

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	20286067	-3.6
Hexabromobiphenyl	14864285	14586432	-1.9

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	STX-CLP Col					CLP2 Col				
	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
=====										



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A014.d ARI ID: INDAE  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A014.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 16:39  
 Compound Sublist: INDA Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4060064	3.195	0.000 21032891	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.147	0.000 1520984	4.584	-0.001 9260940	20.1019	20.1835	0.4	alpha-BHC
4.497	0.000 592449	5.007	0.000 3547307	18.5233	19.1018	3.1	beta-BHC
4.663	0.000 1226976	5.314	-0.001 7429371	20.1175	20.4114	1.5	delta-BHC
4.424	0.000 1375521	4.936	0.000 8261538	19.7874	19.9173	0.7	gamma-BHC (Lindane)
4.862	0.000 1222118	5.397	0.000 7442945	19.3904	19.5986	1.1	Heptachlor
5.148	0.000 1255499	5.735	0.000 7405273	19.5059	19.8303	1.6	Aldrin
5.723	0.000 1188428	6.293	0.000 6511616	19.1544	19.3431	1.0	Heptachlor epoxide b
6.099	0.000 1093516	6.680	-0.001 5876753	19.0450	19.4404	2.1	Endosulfan I
6.322	0.000 2314732	6.938	-0.001 12264975	39.0008	38.3530	1.7	Dieldrin
6.027	0.000 2157945	6.744	-0.001 11722458	39.3792	38.4447	2.4	4,4'-DDE
6.540	0.000 2016318	7.228	0.000 9872960	39.3652	38.4991	2.2	Endrin
6.745	-0.001 1906317	7.416	-0.001 9793607	38.5412	38.2062	0.9	Endosulfan II
6.584	0.000 1753499	7.282	-0.001 9447717	39.2061	39.0088	0.5	4,4'-DDD
7.513	0.000 1604029	7.960	0.000 8413226	38.5285	39.0325	1.3	Endosulfan sulfate
6.841	-0.001 1774418	7.571	0.000 9013742	39.4578	39.1085	0.9	4,4'-DDT
7.271	0.000 4037595	8.156	-0.003 16702852	183.6412	169.8610	7.8	Methoxychlor
7.766	0.000 1813756	8.448	-0.001 8119226	37.2546	37.7094	1.2	Endrin ketone
7.123	0.000 1512891	7.715	0.000 7706684	37.9281	38.1901	0.7	Endrin aldehyde
5.843	0.000 1178085	6.475	-0.001 6818550	19.0955	19.4158	1.7	gamma-Chlordane
5.967	0.000 1131738	6.614	-0.001 6335027	19.0077	19.3474	1.8	alpha-Chlordane
2.210	0.000 1729192	2.376	-0.001 8724669	18.8572	19.1059	1.3	Hexachlorobutadiene
4.002	-0.001 1214867	4.458	0.000 7404274	18.3610	18.7525	2.1	Hexachlorobenzene
8.750	0.000 3748709	10.105	0.000 14864285	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	0.000 2291209	4.007	-0.001 13613609	38.0855	37.2389	2.2	Tetrachloro-m-xylen
8.610	0.000 1786536	9.565	-0.001 8314170	35.6599	36.3750	2.0	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	95.2	93.1	93.1~	115- 0
Decachlorobiphenyl	89.1	90.9	89.1~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	4060064	4060064	0.0
Hexabromobiphenyl	3748709	3748709	0.0

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	21032891	0.0
Hexabromobiphenyl	14864285	14864285	0.0

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

STX-CLP Col					CLP2 Col					
Aroclor	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
=====										



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A015.d ARI ID: INDAA  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A015.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 16:56  
 Compound Sublist: INDA Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col	Shift	Response	RT	CLP2 Col	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000		4049993	3.195	0.000		21107593	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.146	-0.001		93884	4.584	-0.002		562924	1.2439	1.2225	1.7	alpha-BHC
4.497	0.000		47557	5.006	0.000		260073	1.4906	1.3955	6.6	beta-BHC
4.663	0.000		76106	5.314	-0.001		440464	1.2509	1.2058	3.7	delta-BHC
4.424	0.000		89876	4.936	-0.001		530805	1.2961	1.2752	1.6	gamma-BHC (Lindane)
4.861	-0.001		86756	5.396	-0.001		522957	1.3799	1.3722	0.6	Heptachlor
5.148	-0.001		87853	5.734	-0.002		499986	1.3683	1.3342	2.5	Aldrin
5.723	-0.001		89298	6.292	-0.001		477430	1.4428	1.4132	2.1	Heptachlor epoxide b
6.099	0.000		82306	6.679	-0.001		418782	1.4370	1.3804	4.0	Endosulfan I
6.322	0.000		160686	6.938	-0.001		896482	2.7141	2.7934	2.9	Dieldrin
6.026	-0.001		145661	6.744	-0.002		857369	2.6647	2.8019	5.0	4,4'-DDE
6.541	0.000		138350	7.227	-0.001		729719	2.7114	2.8817	6.1	Endrin
6.746	0.000		138657	7.416	0.000		727966	2.8140	2.8760	2.2	Endosulfan II
6.583	-0.001		120429	7.282	-0.001		657884	2.7029	2.7509	1.8	4,4'-DDD
7.514	0.000		115041	7.959	-0.001		586419	2.7738	2.7553	0.7	Endosulfan sulfate
6.842	0.000		118090	7.571	0.000		617572	2.6360	2.7136	2.9	4,4'-DDT
7.271	0.000		325509	8.156	-0.003		1511810	14.8616	15.5702	4.7	Methoxychlor
7.767	0.000		142891	8.447	-0.001		617171	2.9462	2.9029	1.5	Endrin ketone
7.124	0.001		114936	7.715	0.000		577314	2.8924	2.8973	0.2	Endrin aldehyde
5.842	0.000		87280	6.475	-0.001		493222	1.4182	1.3995	1.3	gamma-Chlordane
5.966	-0.001		84983	6.613	-0.002		453148	1.4309	1.3790	3.7	alpha-Chlordane
2.209	-0.001		131702	2.376	-0.002		647910	1.4398	1.4138	1.8	Hexachlorobutadiene
4.002	-0.001		100639	4.457	-0.001		586197	1.5248	1.4794	3.0	Hexachlorobenzene
8.750	0.000		3734455	10.106	0.000		14677423	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	-0.001		170349	4.006	-0.001		1089161	2.8387	2.9688	4.5	Tetrachloro-m-xylene
8.610	0.000		162102	9.565	-0.001		707591	3.2480	3.1352	3.5	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	7.1	7.4	7.1~	115- 0
Decachlorobiphenyl	8.1	7.8	7.8~	115- 0

~ Indicates recovery outside QC Limits



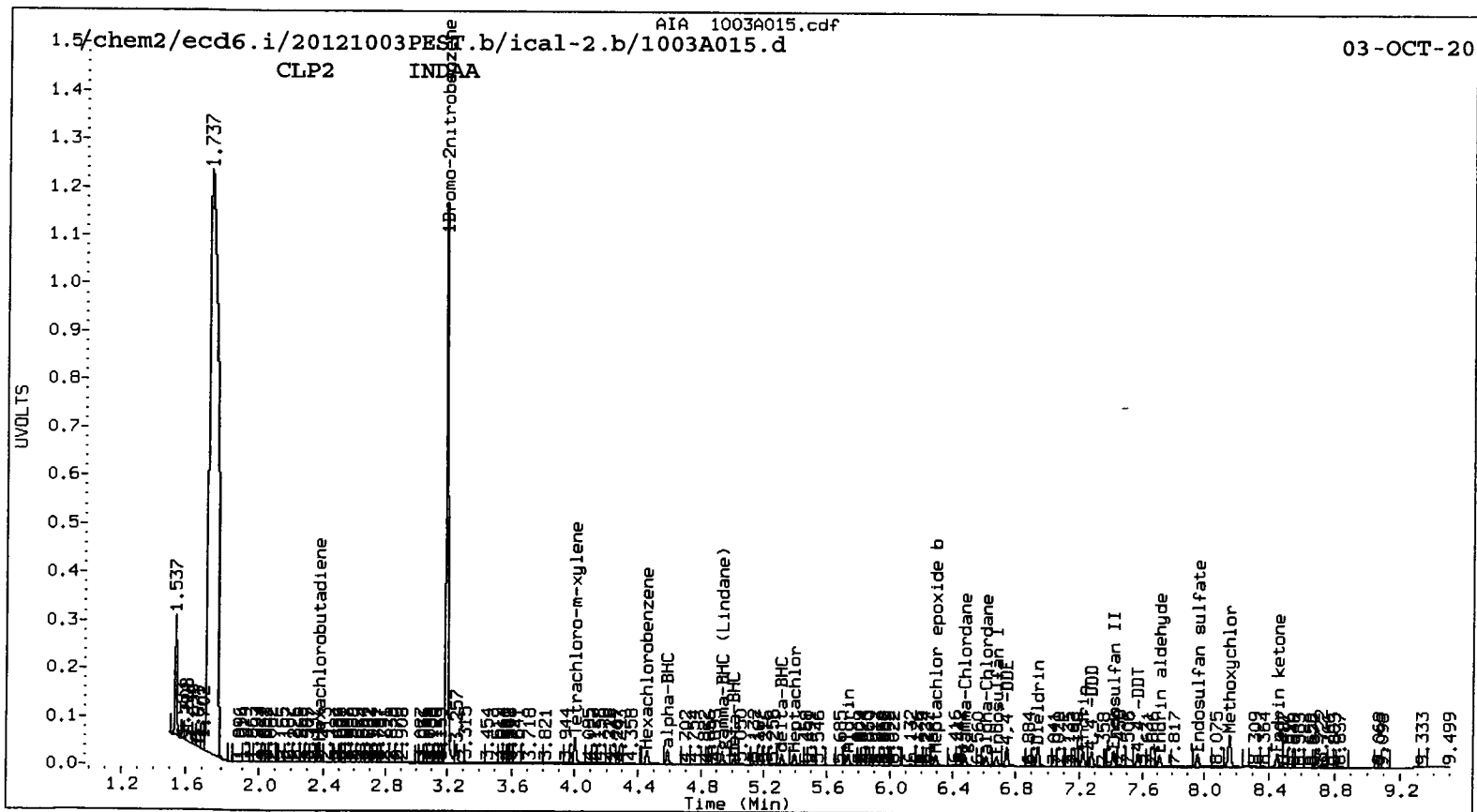
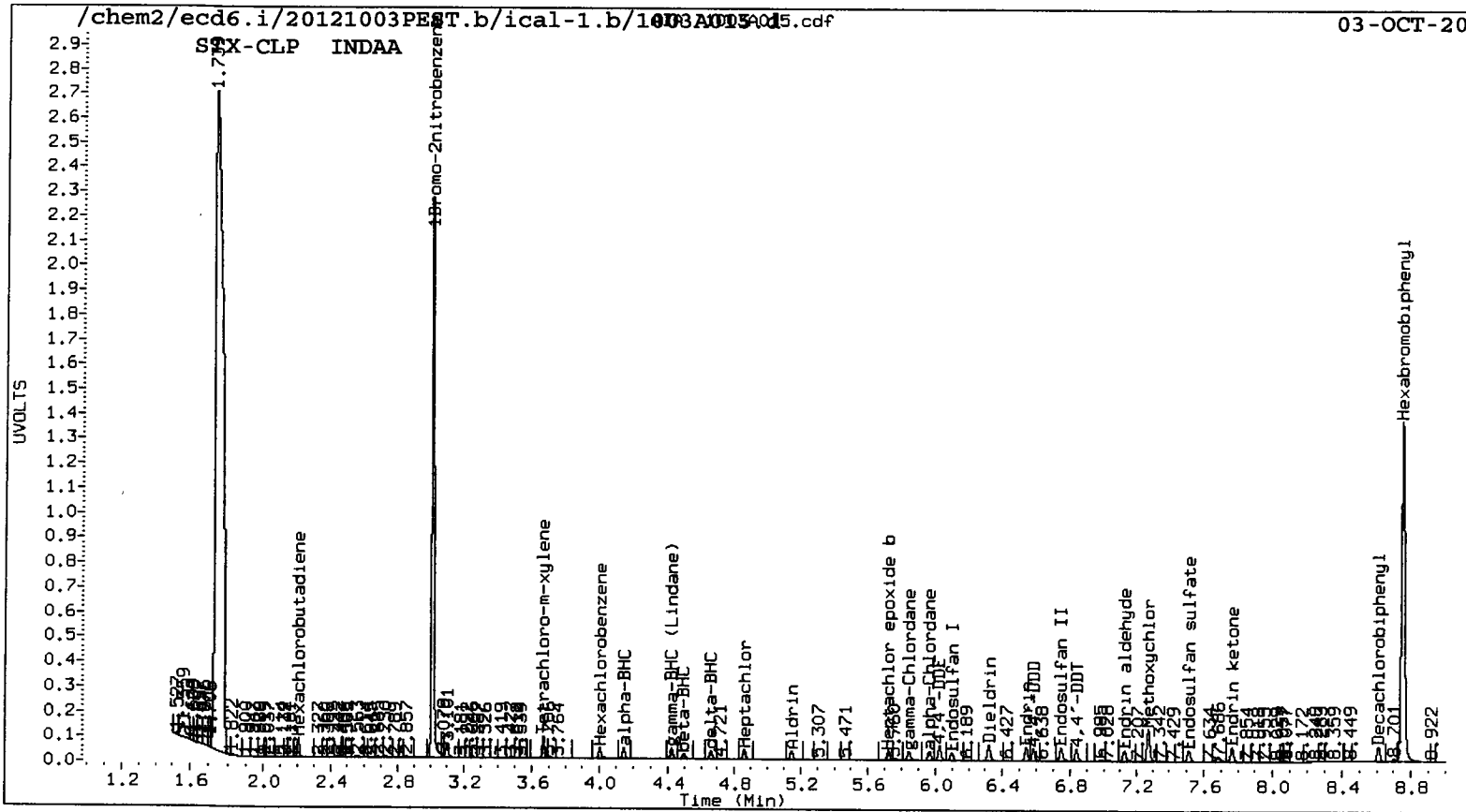
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4049993	-0.2
Hexabromobiphenyl	3748709	3734455	-0.4

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	21107593	0.4
Hexabromobiphenyl	14864285	14677423	-1.3

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col			
			Shift	Height	Amount			Shift	Height	Amount	
=====											



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A016.d ARI ID: INDAB  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A016.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 17:14  
 Compound Sublist: INDA Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4090558	3.195 0.000 21416427	3.195	0.000 21416427	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.147	0.000 186830	4.584 -0.001 1159721	4.584	-0.001 1159721	2.4508	2.4823	1.3	alpha-BHC
4.497	0.000 88560	5.006 0.000 502406	5.006	0.000 502406	2.7482	2.6569	3.4	beta-BHC
4.662	0.000 149622	5.313 -0.001 914469	5.313	-0.001 914469	2.4349	2.4674	1.3	delta-BHC
4.424	0.000 175589	4.936 -0.001 1073758	4.936	-0.001 1073758	2.5071	2.5423	1.4	gamma-BHC (Lindane)
4.861	-0.001 165386	5.396 -0.002 1036329	5.396	-0.002 1036329	2.6045	2.6800	2.9	Heptachlor
5.148	-0.001 167386	5.734 -0.001 1002480	5.734	-0.001 1002480	2.5812	2.6364	2.1	Aldrin
5.722	-0.001 167624	6.292 -0.001 937162	6.292	-0.001 937162	2.6815	2.7340	1.9	Heptachlor epoxide b
6.099	0.000 155015	6.679 -0.001 832530	6.679	-0.001 832530	2.6797	2.7047	0.9	Endosulfan I
6.322	0.000 311998	6.937 -0.002 1791502	6.937	-0.002 1791502	5.2176	5.5018	5.3	Dieldrin
6.026	-0.001 283514	6.744 -0.002 1712186	6.744	-0.002 1712186	5.1351	5.5147	7.1	4,4'-DDE
6.540	0.000 268106	7.227 -0.001 1445065	7.227	-0.001 1445065	5.2022	5.5693	6.8	Endrin
6.746	0.000 265666	7.415 -0.001 1431354	7.415	-0.001 1431354	5.3382	5.5188	3.3	Endosulfan II
6.583	-0.001 233750	7.281 -0.002 1323868	7.281	-0.002 1323868	5.1943	5.4024	3.9	4,4'-DDD
7.513	0.000 220973	7.959 -0.001 1168728	7.959	-0.001 1168728	5.2752	5.3590	1.6	Endosulfan sulfate
6.841	-0.001 231047	7.570 -0.001 1231411	7.570	-0.001 1231411	5.1063	5.2805	3.4	4,4'-DDT
7.270	0.000 617347	8.155 -0.003 2839505	8.155	-0.003 2839505	27.9065	28.5399	2.2	Methoxychlor
7.767	0.000 262984	8.447 -0.002 1192839	8.447	-0.002 1192839	5.3686	5.4755	2.0	Endrin ketone
7.123	0.000 217465	7.714 -0.001 1123507	7.714	-0.001 1123507	5.4184	5.5026	1.5	Endrin aldehyde
5.842	0.000 163766	6.475 -0.001 958063	6.475	-0.001 958063	2.6347	2.6792	1.7	gamma-Chlordane
5.967	0.000 159239	6.613 -0.001 892745	6.613	-0.001 892745	2.6545	2.6777	0.9	alpha-Chlordane
2.210	0.000 248019	2.376 -0.001 1264510	2.376	-0.001 1264510	2.6845	2.7195	1.3	Hexachlorobutadiene
4.001	-0.001 185775	4.458 0.000 1113449	4.458	0.000 1113449	2.7868	2.7695	0.6	Hexachlorobenzene
8.750	0.000 3771845	10.106 0.001 15039648	10.106	0.001 15039648	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	0.000 327208	4.007 -0.001 2119369	4.007	-0.001 2119369	5.3984	5.6935	5.3	Tetrachloro-m-xylene
8.610	0.000 288613	9.565 -0.001 1317447	9.565	-0.001 1317447	5.7255	5.6967	0.5	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	13.5	14.2	13.5~	115- 0
Decachlorobiphenyl	14.3	14.2	14.2~	115- 0

~ Indicates recovery outside QC Limits

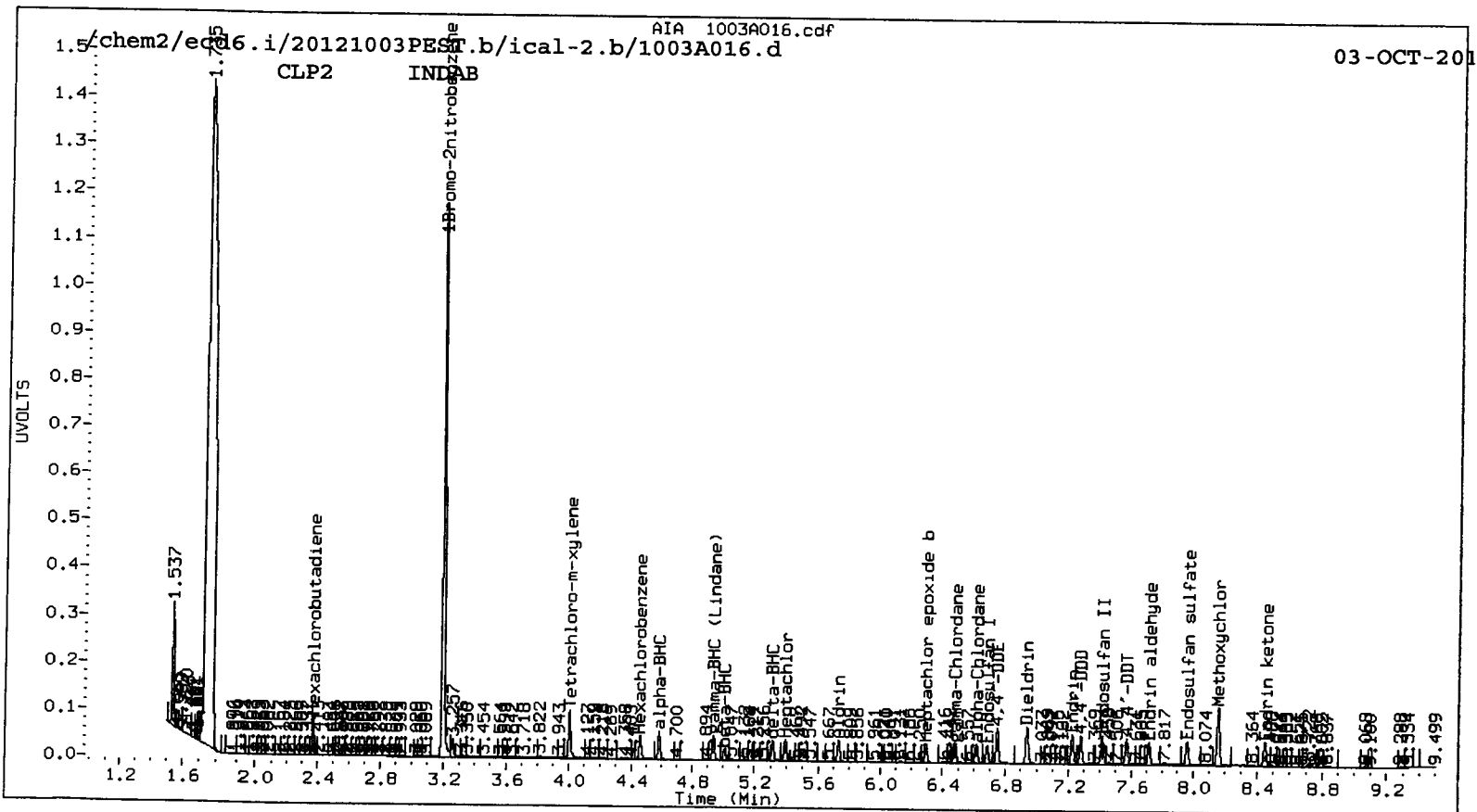
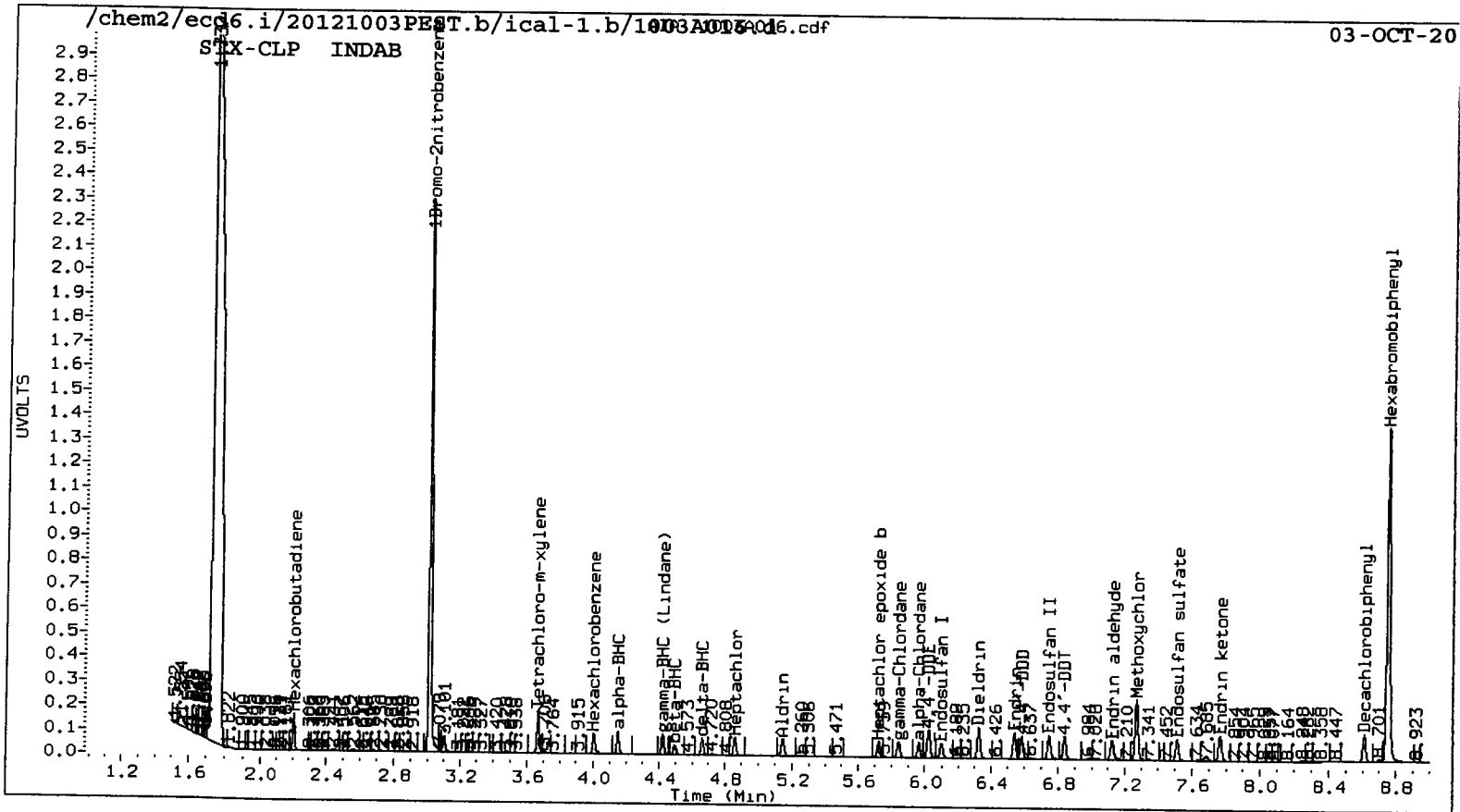
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4090558	0.8
Hexabromobiphenyl	3748709	3771845	0.6

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	21416427	1.8
Hexabromobiphenyl	14864285	15039648	1.2

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A017.d ARI ID: INDAC  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A017.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 17:32  
 Compound Sublist: INDA Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4021073	3.195 0.000 21029129	3.195	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.146	-0.001 375418	4.584 -0.002 2371492	4.584	5.0098	5.1694	3.1	alpha-BHC
4.497	0.000 165087	5.006 -0.001 985656	5.006	5.2116	5.3086	1.8	beta-BHC
4.662	0.000 296217	5.313 -0.001 1853943	5.313	4.9039	5.0944	3.8	delta-BHC
4.424	0.000 345955	4.936 -0.001 2152238	4.936	5.0250	5.1896	3.2	gamma-BHC (Lindane)
4.861	-0.001 317990	5.396 -0.001 2038451	5.396	5.0942	5.3686	5.2	Heptachlor
5.147	-0.001 324084	5.734 -0.002 1987702	5.734	5.0839	5.3237	4.6	Aldrin
5.722	-0.001 317055	6.292 -0.001 1812761	6.292	5.1596	5.3859	4.3	Heptachlor epoxide b
6.098	-0.001 293283	6.679 -0.001 1621321	6.679	5.1574	5.3643	3.9	Endosulfan I
6.322	-0.001 610639	6.937 -0.002 3499950	6.937	10.3884	10.9464	5.2	Dieldrin
6.026	-0.001 557488	6.744 -0.002 3357060	6.744	10.2720	11.0117	7.0	4,4'-DDE
6.539	-0.001 522854	7.227 -0.001 2803750	7.227	10.2748	10.8226	5.2	Endrin
6.745	-0.001 510105	7.415 -0.001 2788388	7.415	10.3807	10.7679	3.7	Endosulfan II
6.583	-0.001 453913	7.281 -0.002 2613050	7.281	10.2155	10.6800	4.4	4,4'-DDD
7.513	0.000 422893	7.959 -0.001 2284803	7.959	10.2244	10.4930	2.6	Endosulfan sulfate
6.841	-0.002 452523	7.570 -0.001 2440748	7.570	10.1287	10.4828	3.4	4,4'-DDT
7.270	-0.001 1146231	8.155 -0.003 5186781	8.155	52.4757	52.2142	0.5	Methoxychlor
7.766	-0.001 493774	8.447 -0.001 2276202	8.447	10.2086	10.4649	2.5	Endrin ketone
7.123	0.000 410006	7.714 -0.001 2163872	7.714	10.3462	10.6146	2.6	Endrin aldehyde
5.842	-0.001 310794	6.474 -0.002 1853134	6.474	5.0865	5.2777	3.7	gamma-Chlordane
5.966	-0.001 301572	6.613 -0.002 1736249	6.613	5.1141	5.3035	3.6	alpha-Chlordane
2.209	-0.001 472580	2.376 -0.001 2441459	2.376	5.2036	5.3474	2.7	Hexachlorobutadiene
4.001	-0.001 344216	4.457 0.000 2117430	4.457	5.2528	5.3637	2.1	Hexachlorobenzene
8.750	0.000 3724289	10.106 0.001 15016060	10.106	80.0000	80.0000	0.0	Hexabromobiphenyl
3.669	-0.001 626204	4.006 -0.001 4036246	4.006	10.5100	11.0428	4.9	Tetrachloro-m-xylene
8.610	-0.001 523224	9.566 0.000 2426746	9.566	10.5122	10.5098	0.0	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	26.3	27.6	26.3~	115- 0
Decachlorobiphenyl	26.3	26.3	26.3~	115- 0

~ Indicates recovery outside QC Limits

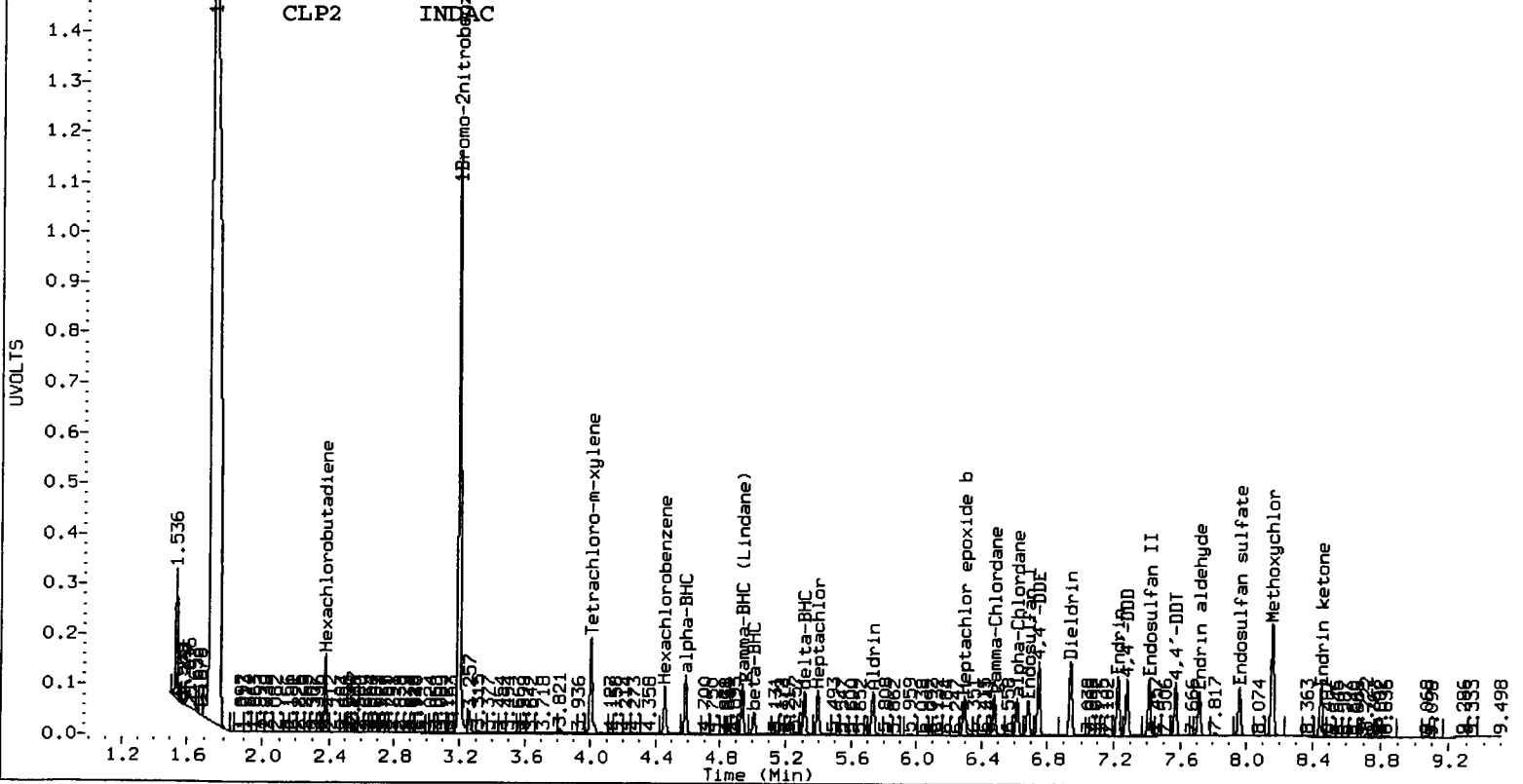
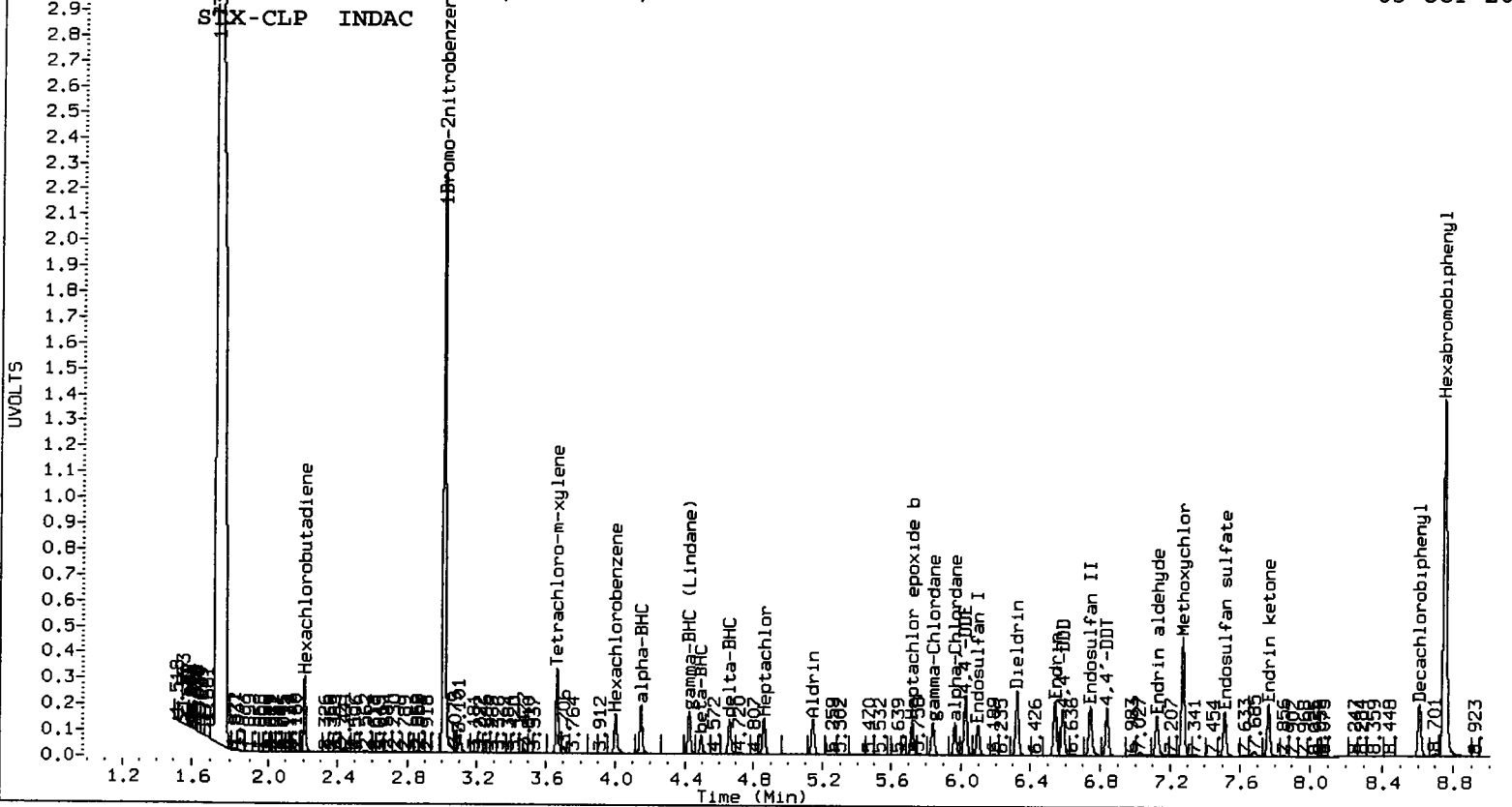
INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	4060064	4021073	-1.0
Hexabromobiphenyl	3748709	3724289	-0.7

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	21029129	0.0
Hexabromobiphenyl	14864285	15016060	1.0

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										





Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A018.d ARI ID: INDDAD  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A018.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 17:50  
 Compound Sublist: INDA Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4048036	3.195 0.000 21297295	3.195	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.147	-0.001 753043	4.585 -0.001 4731242	4.585	9.9821	10.1834	2.0	alpha-BHC
4.497	-0.001 307333	5.007 0.000 1865344	5.007	9.6375	9.9199	2.9	beta-BHC
4.663	0.000 601026	5.314 -0.001 3683804	5.314	9.8837	9.9952	1.1	delta-BHC
4.424	0.000 686414	4.936 0.000 4256403	4.936	9.9037	10.1341	2.3	gamma-BHC (Lindane)
4.861	-0.001 619072	5.397 0.000 3945231	5.397	9.8515	10.2595	4.1	Heptachlor
5.148	-0.001 632975	5.735 -0.001 3894113	5.735	9.8634	10.2984	4.3	Aldrin
5.722	-0.001 606961	6.293 0.000 3472997	6.293	9.8117	10.1886	3.8	Heptachlor epoxide b
6.099	0.000 562379	6.679 -0.001 3122784	6.679	9.8237	10.2019	3.8	Endosulfan I
6.322	0.000 1186002	6.938 -0.001 6677897	6.938	20.0422	20.6228	2.9	Dieldrin
6.027	-0.001 1096331	6.744 -0.001 6393429	6.744	20.0658	20.7074	3.1	4,4'-DDE
6.540	0.000 1028622	7.228 0.000 5354567	7.228	19.9045	20.4200	2.6	Endrin
6.745	-0.001 985564	7.416 0.000 5310240	7.416	19.7496	20.2597	2.6	Endosulfan II
6.583	-0.001 895847	7.282 -0.001 5068029	7.282	19.8529	20.4646	3.0	4,4'-DDD
7.514	0.000 830963	7.959 -0.001 4475850	7.959	19.7831	20.3080	2.6	Endosulfan sulfate
6.841	-0.001 898651	7.571 0.000 4783044	7.571	19.8066	20.2954	2.4	4,4'-DDT
7.271	0.000 2153053	8.156 -0.003 9446850	8.156	97.0609	93.9546	3.3	Methoxychlor
7.767	0.000 953680	8.448 -0.001 4379362	8.448	19.4154	19.8918	2.4	Endrin ketone
7.124	0.000 789175	7.715 0.000 4155941	7.715	19.6096	20.1410	2.7	Endrin aldehyde
5.842	0.000 600154	6.475 -0.001 3566810	6.475	9.7568	10.0304	2.8	gamma-Chlordane
5.966	-0.001 579953	6.614 -0.001 3344571	6.614	9.7694	10.0876	3.2	alpha-Chlordane
2.210	0.000 892276	2.376 -0.001 4593851	2.376	9.7594	9.9350	1.8	Hexachlorobutadiene
4.001	-0.001 639325	4.458 0.000 3975246	4.458	9.6912	9.9430	2.6	Hexachlorobenzene
8.750	0.000 3782157	10.107 0.001 15199043	10.107	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	-0.001 1187501	4.007 -0.001 7484963	4.007	19.7978	20.2203	2.1	Tetrachloro-m-xylene
8.611	0.000 964936	9.566 0.000 4522605	9.566	19.0901	19.3509	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

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	49.5	50.6	49.5~	115- 0
Decachlorobiphenyl	47.7	48.4	47.7~	115- 0

~ Indicates recovery outside QC Limits

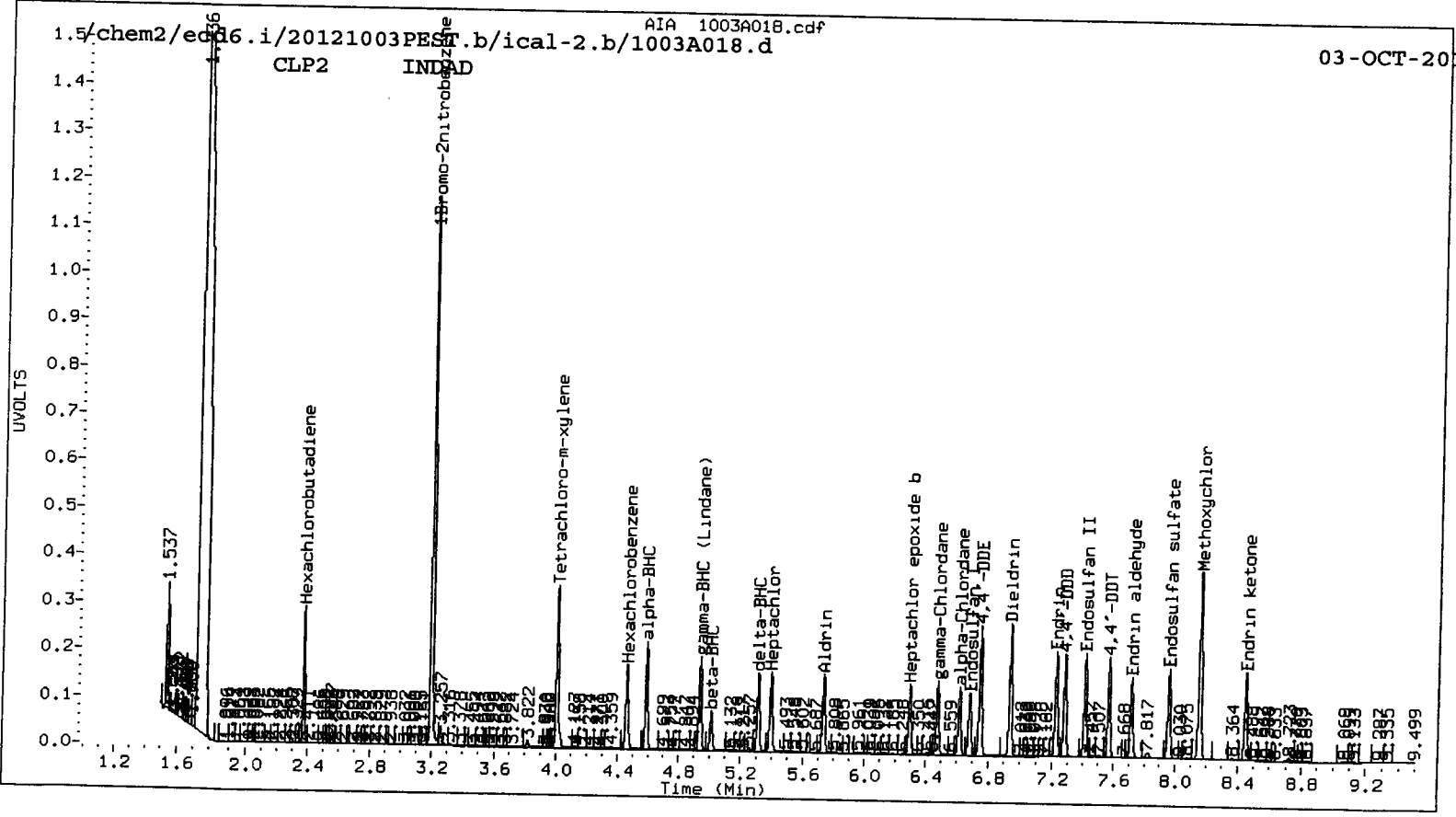
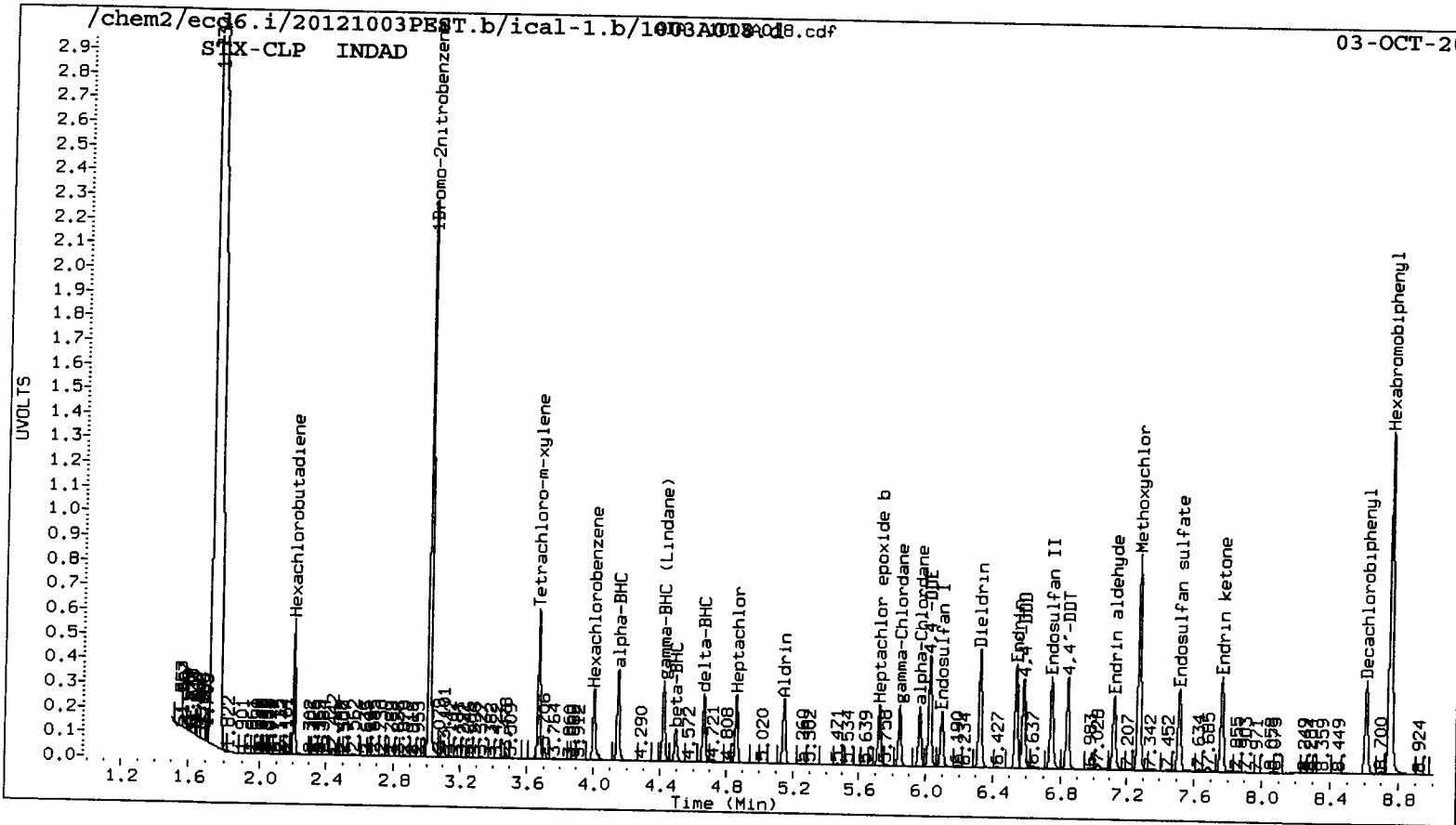
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4048036	-0.3
Hexabromobiphenyl	3748709	3782157	0.9

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	21297295	1.3
Hexabromobiphenyl	14864285	15199043	2.3

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 03-OCT-2012  
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A019.d ARI ID: INDAF  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A019.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 18:08  
 Compound Sublist: INDA Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4083237	3.195 0.000 21266311	3.195	0.000 21266311	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.147	-0.001 3043309	4.584 -0.001 18332619	4.584	-0.001 18332619	39.9932	39.5161	1.2	alpha-BHC
4.497	-0.001 1148351	5.006 -0.001 6937835	5.006	-0.001 6937835	35.7002	36.9493	3.4	beta-BHC
4.662	0.000 2482953	5.314 -0.001 14827162	5.314	-0.001 14827162	40.4795	40.2888	0.5	delta-BHC
4.424	0.000 2742105	4.936 0.000 16284513	4.936	0.000 16284513	39.2225	38.8286	1.0	gamma-BHC (Lindane)
4.861	-0.001 2392248	5.396 -0.001 13998475	5.396	-0.001 13998475	37.7405	36.4559	3.5	Heptachlor
5.148	-0.001 2459585	5.735 0.000 14079333	5.735	0.000 14079333	37.9963	37.2886	1.9	Aldrin
5.722	-0.001 2276278	6.292 -0.001 12162441	6.292	-0.001 12162441	36.4794	35.7326	2.1	Heptachlor epoxide
6.098	-0.001 2112972	6.679 -0.001 11126423	6.679	-0.001 11126423	36.5913	36.4023	0.5	Endosulfan I
6.322	-0.001 4466945	6.937 -0.002 22775652	6.937	-0.002 22775652	74.8361	70.4386	6.1	Dieldrin
6.026	-0.001 4195148	6.744 -0.002 21607101	6.744	-0.002 21607101	76.1207	70.0844	8.3	4,4'-DDE
6.539	-0.001 3902111	7.227 -0.001 18268145	7.227	-0.001 18268145	74.6489	68.7251	8.3	Endrin
6.745	-0.001 3685750	7.416 -0.001 18535218	7.416	-0.001 18535218	73.0175	69.7600	4.6	Endosulfan II
6.583	-0.001 3437840	7.282 -0.001 18004957	7.282	-0.001 18004957	75.3189	71.7209	4.9	4,4'-DDD
7.513	-0.001 3161471	7.959 -0.001 16231153	7.959	-0.001 16231153	74.4097	72.6492	2.4	Endosulfan sulfate
6.841	-0.001 3535041	7.570 -0.001 17615590	7.570	-0.001 17615590	77.0267	73.7363	4.4	4,4'-DDT
7.270	-0.001 7835237	8.156 -0.003 31786309	8.156	-0.003 31786309	349.1966	311.8609	11.3	Methoxychlor
7.766	0.000 3602102	8.447 -0.002 15829007	8.447	-0.002 15829007	72.4983	70.9261	2.2	Endrin ketone
7.123	-0.001 2930013	7.714 -0.001 14712763	7.714	-0.001 14712763	71.9769	70.3388	2.3	Endrin aldehyde
5.842	-0.001 2311547	6.475 -0.001 13020726	6.475	-0.001 13020726	37.2551	36.6695	1.6	gamma-Chlordane
5.966	-0.001 2215001	6.613 -0.002 12197419	6.613	-0.002 12197419	36.9902	36.8425	0.4	alpha-Chlordane
2.210	0.000 3353279	2.377 0.000 16533462	2.377	0.000 16533462	36.3607	35.8087	1.5	Hexachlorobutadiene
4.001	-0.001 2311938	4.457 0.000 14013718	4.457	0.000 14013718	34.7434	35.1025	1.0	Hexachlorobenzene
8.750	0.000 3825703	10.106 0.000 15407292	10.106	0.000 15407292	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	0.000 4370852	4.007 -0.001 24864526	4.007	-0.001 24864526	72.2419	67.2684	7.1	Tetrachloro-m-xylene
8.610	-0.001 3423358	9.565 -0.001 16108381	9.565	-0.001 16108381	66.9562	67.9913	1.5	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	180.6	168.2	168.2~	115- 0
Decachlorobiphenyl	167.4	170.0	167.4~	115- 0

~ Indicates recovery outside QC Limits

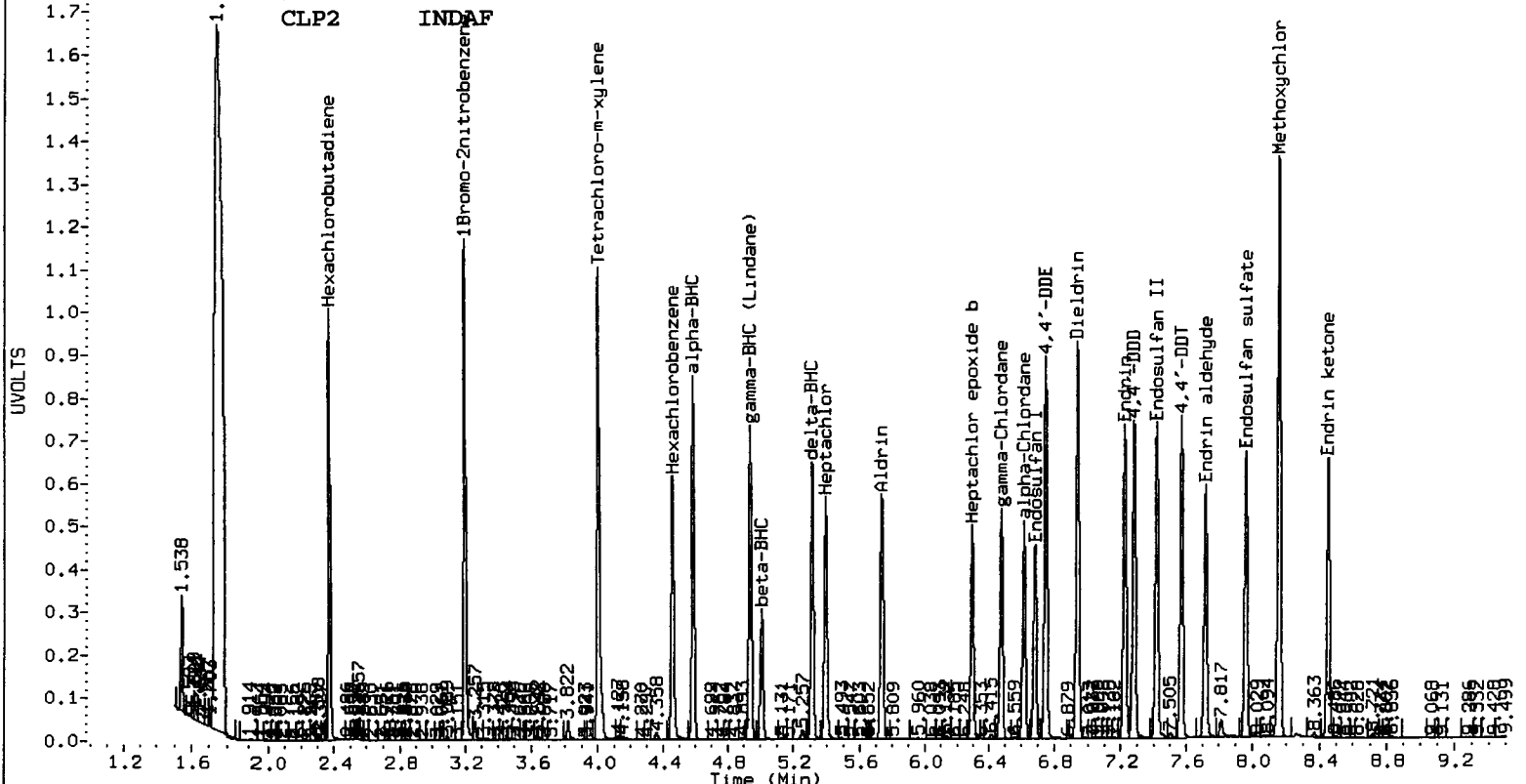
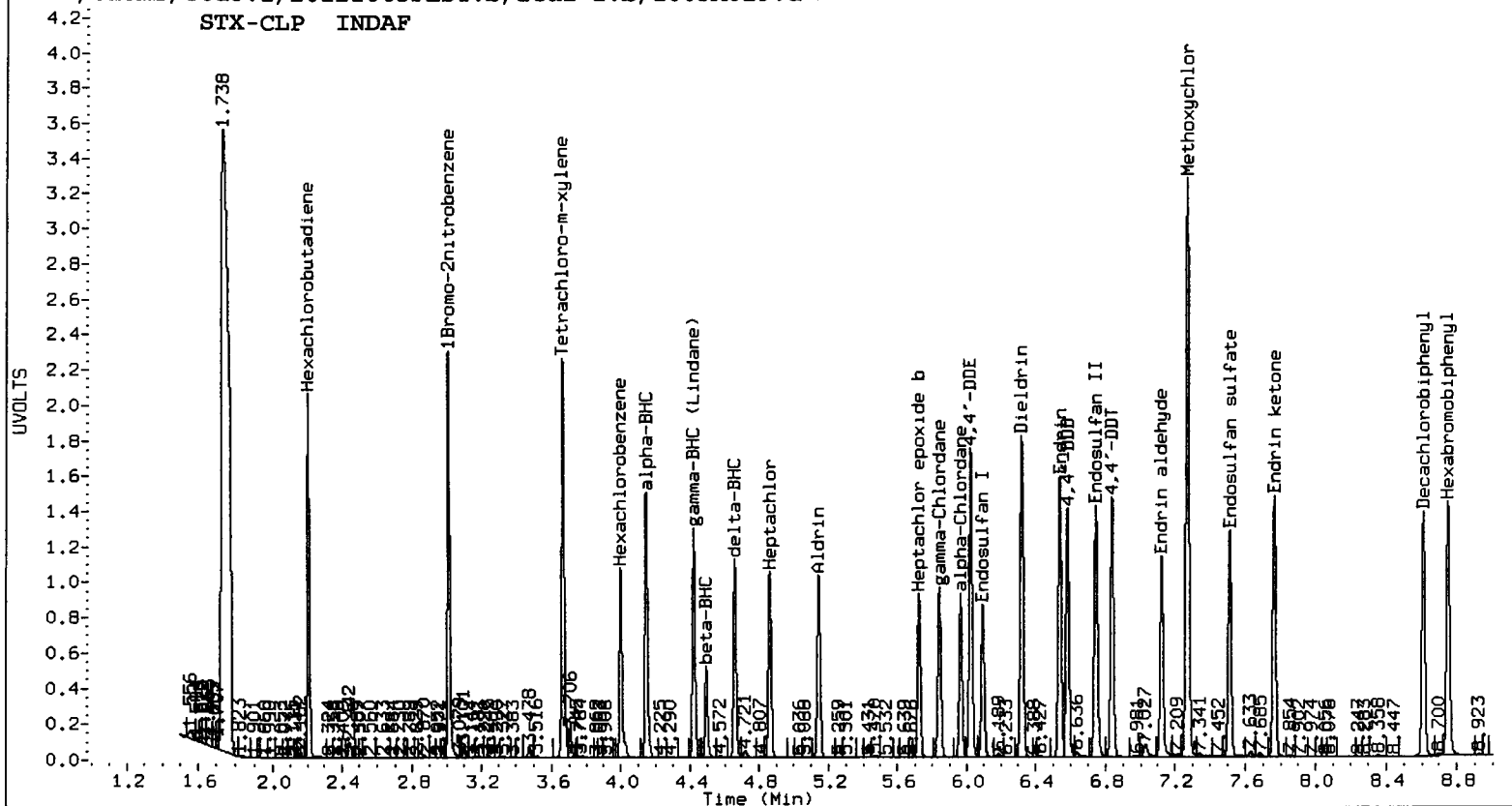
## INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4083237	0.6
Hexabromobiphenyl	3748709	3825703	2.1

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	21266311	1.1
Hexabromobiphenyl	14864285	15407292	3.7

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 03-OCT-2012  
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A020.d ARI ID: INDAG  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A020.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 18:26  
 Compound Sublist: INDA Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4094375	3.195 0.000 21395806	3.195	0.000 21395806	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.147	0.000 6223208	4.585 0.000 36585525	4.585	0.000 36585525	81.5589	78.3830	4.0	alpha-BHC
4.497	0.000 2279688	5.007 0.000 13424435	5.007	0.000 13424435	70.6786	71.0627	0.5	beta-BHC
4.663	0.000 5108787	5.314 0.000 29685366	5.314	0.000 29685366	83.0618	80.1738	3.5	delta-BHC
4.424	0.000 5579992	4.937 0.000 31900211	4.937	0.000 31900211	79.5978	75.6021	5.1	gamma-BHC (Lindane)
4.862	0.000 4765732	5.397 0.000 25938815	5.397	0.000 25938815	74.9804	67.1430	11.0	Heptachlor
5.149	0.000 4904752	5.736 0.000 26129016	5.736	0.000 26129016	75.5637	68.7830	9.4	Aldrin
5.723	0.000 4456552	6.293 0.000 22445619	6.293	0.000 22445619	71.2260	65.5449	8.3	Heptachlor epoxide
6.099	0.000 4158031	6.680 0.000 20631522	6.680	0.000 20631522	71.8106	67.0916	6.8	Endosulfan I
6.322	0.000 8804565	6.939 0.000 42534449	6.939	0.000 42534449	147.1044	130.7507	11.8	Dieldrin
6.027	0.000 8316867	6.745 0.000 39831881	6.745	0.000 39831881	150.4984	128.4161	15.8	4,4'-DDE
6.540	0.000 7740338	7.228 0.000 34059169	7.228	0.000 34059169	149.6120	129.3858	14.5	Endrin
6.746	0.000 7233710	7.416 0.000 34895917	7.416	0.000 34895917	144.7922	132.6219	8.8	Endosulfan II
6.584	0.000 6824279	7.283 0.000 34056690	7.283	0.000 34056690	151.0629	136.9897	9.8	4,4'-DDD
7.514	0.000 6260618	7.960 0.000 31062282	7.960	0.000 31062282	148.8814	140.3934	5.9	Endosulfan sulfate
6.842	0.000 7063105	7.571 0.000 33916089	7.571	0.000 33916089	155.4983	143.3578	8.1	4,4'-DDT
7.271	0.000 15696181	8.158 0.000 57718760	8.158	0.000 57718760	706.7971	571.8336	21.1	Methoxychlor
7.766	0.000 7227390	8.449 0.000 30883210	8.449	0.000 30883210	146.9726	139.7356	5.0	Endrin ketone
7.123	0.000 5778071	7.715 0.000 27776354	7.715	0.000 27776354	143.4133	134.0935	6.7	Endrin aldehyde
5.842	0.000 4640873	6.476 0.000 24653279	6.476	0.000 24653279	74.5932	69.0094	7.8	gamma-Chlordane
5.967	0.000 4412614	6.615 0.000 23124370	6.615	0.000 23124370	73.4896	69.4248	5.7	alpha-Chlordane
2.210	0.000 6701087	2.377 0.000 32243507	2.377	0.000 32243507	72.4645	69.4113	4.3	Hexachlorobutadiene
4.002	0.000 4586041	4.458 0.000 26556350	4.458	0.000 26556350	68.7307	66.1175	3.9	Hexachlorobenzene
8.750	0.000 3786416	10.107 0.001 15257890	10.107	0.001 15257890	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	0.000 8627475	4.008 0.000 46807054	4.008	0.000 46807054	142.2079	125.8652	12.2	Tetrachloro-m-xyle
8.610	0.000 6651608	9.566 0.000 31112739	9.566	0.000 31112739	131.4463	132.6085	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

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	355.5	314.7	314.7~	115- 0
Decachlorobiphenyl	328.6	331.5	328.6~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4094375	0.8
Hexabromobiphenyl	3748709	3786416	1.0

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	21395806	1.7
Hexabromobiphenyl	14864285	15257890	2.6

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 03-OCT-2012  
<- Indicates standard response outside Limits (-50 to +100%)

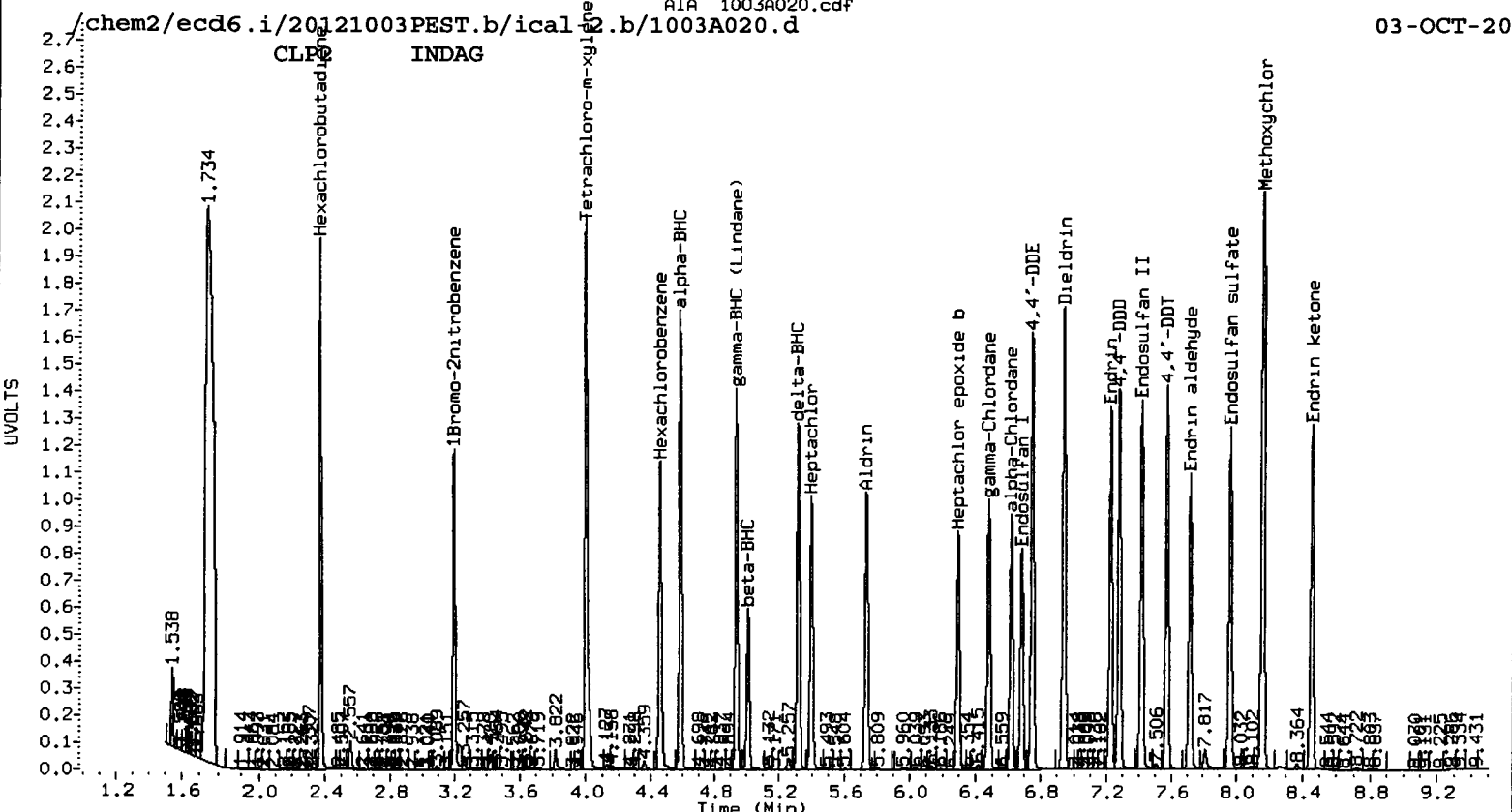
Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



STX-CLP INDAG



CLP INDAG



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A023.d ARI ID: WNDE  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A023.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 19:19  
 Compound Sublist: WND Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4208844	3.195 0.000 22225166	3.195	0.000 22225166	80.0000	80.0000	0.0	Hexachloroethane
5.627	0.000 1875340	6.203 0.001 10778662	6.203	0.001 10778662	38.1904	38.0313	0.4	1Bromo-2nitrobenzen
5.704	0.000 1391551	6.454 0.000 7514802	6.454	0.000 7514802	38.5558	36.6646	5.0	Oxychlorthane
5.951	0.000 2248854	6.560 0.000 12647727	6.560	0.000 12647727	38.4519	38.1173	0.9	2,4-DDE
6.191	0.001 1224989	6.939 0.000 6735117	6.939	0.000 6735117	37.8878	37.6828	0.5	trans-Nonachlor
6.429	0.000 1389976	7.227 0.000 7359721	7.227	0.000 7359721	37.9783	37.7443	0.6	2,4-DDD
6.567	0.000 2407444	7.286 0.000 13148364	7.286	0.000 13148364	37.9783	37.7443	0.6	2,4-DDT
7.437	0.000 1505103	8.433 0.000 6870727	8.433	0.000 6870727	38.8613	37.8988	2.5	cis-Nonachlor
8.750	0.000 3949210	10.105 0.000 15958085	10.105	0.000 15958085	36.4998	35.8190	1.9	Mirex
3.670	0.000 2032471	4.007 -0.001 12490067	4.007	-0.001 12490067	80.0000	80.0000	0.0	Hexabromobiphenyl
8.610	-0.001 1622558	9.565 -0.001 7671404	9.565	-0.001 7671404	32.5904	32.3328	0.8	Tetrachloro-m-xylene
					30.7426	31.2624	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

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	81.5	80.8	80.8~	150- 0
Decachlorobiphenyl	76.9	78.2	76.9~	150- 0

~ Indicates recovery outside QC Limits

## INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4208844	3.7
Hexabromobiphenyl	3748709	3949210	5.3

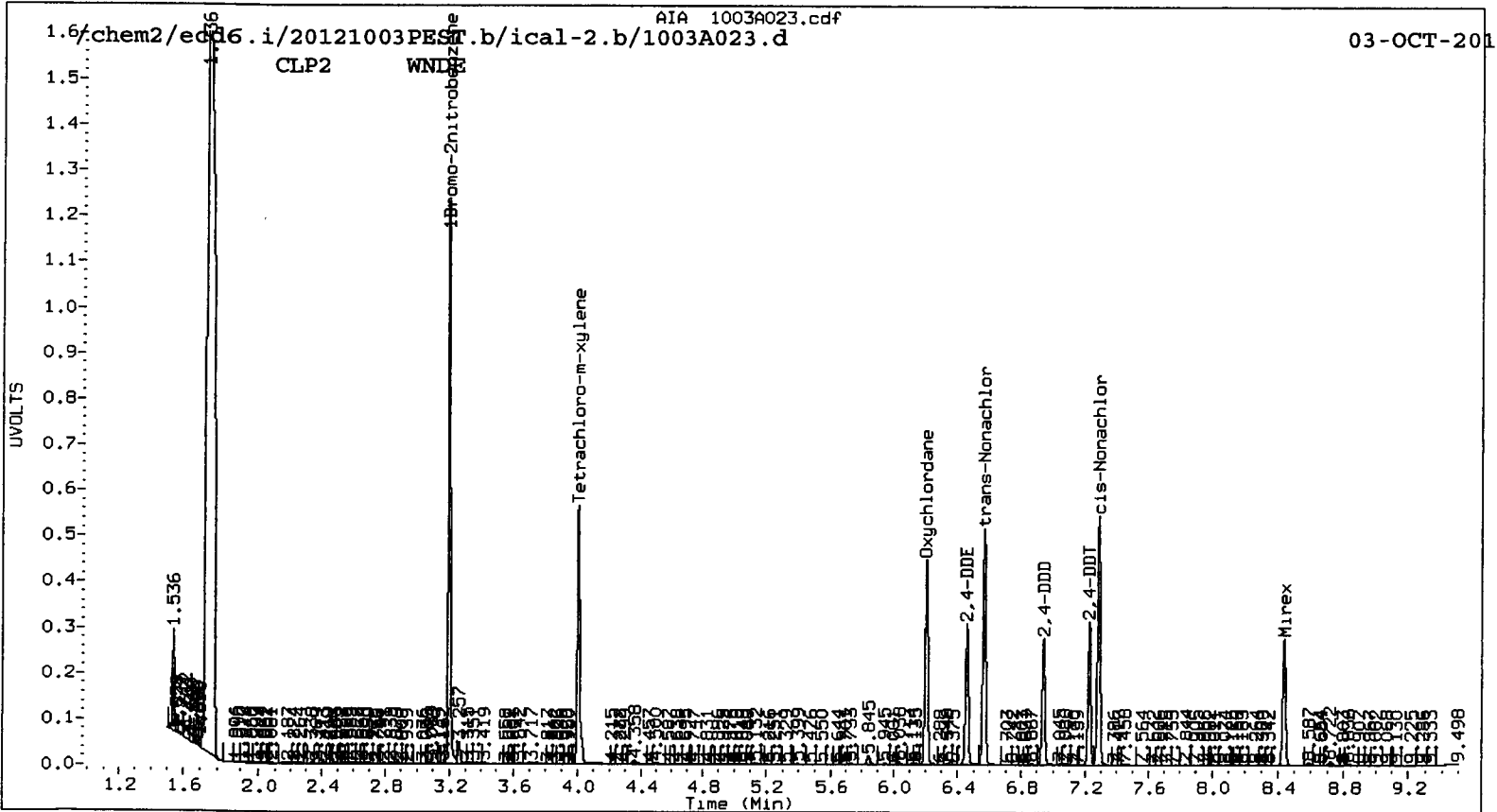
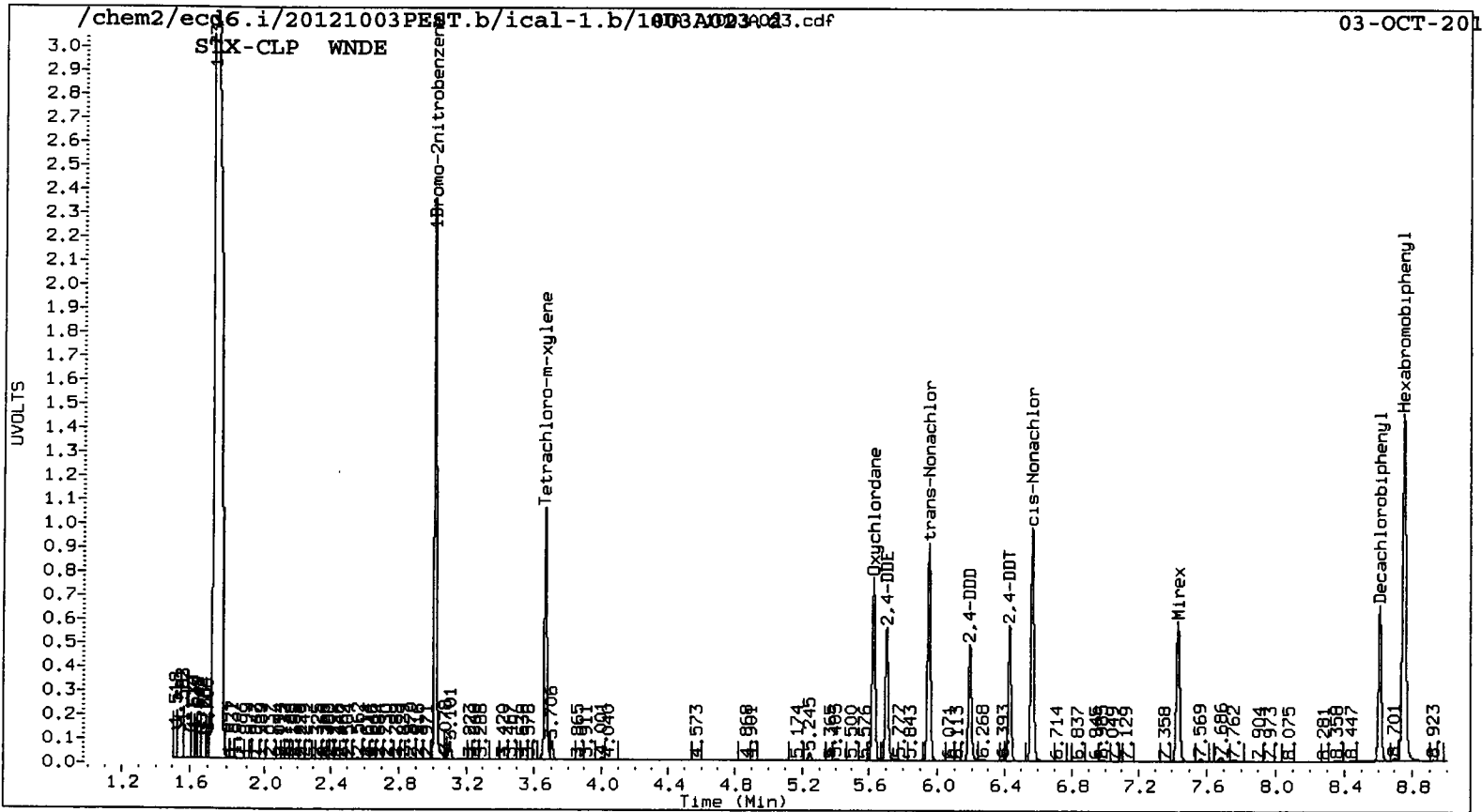
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	22225166	5.7
Hexabromobiphenyl	14864285	15958085	7.4

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 03-OCT-2012

<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A024.d ARI ID: WNDA  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A024.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 19:37  
 Compound Sublist: WND Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 3929689	3.195 0.000 20878006	3.195	0.000 20878006	80.0000	80.0000	0.0	Hexachloroethane
5.627	0.000 138855	6.202 0.000 800932	6.202	0.000 800932	3.0348	3.0083	0.9	1Bromo-2nitrobenzen
5.704	0.000 101301	6.453 -0.001 639055	6.453	-0.001 639055	3.0123	3.3191	9.7	Oxychlorthane
5.951	0.000 160701	6.560 -0.001 927576	6.560	-0.001 927576	2.9490	3.0133	2.2	2,4-DDE
6.191	0.001 92191	6.939 0.000 525330	6.939	0.000 525330	3.0602	3.1682	3.5	trans-Nonachlor
6.429	0.000 102796	7.227 0.000 560760	7.227	0.000 560760	3.0144	3.0999	2.8	2,4-DDD
6.567	0.000 166656	7.286 0.000 970320	7.286	0.000 970320	2.8872	3.0147	4.3	2,4-DDT
7.437	0.000 125697	8.433 0.000 589624	8.433	0.000 589624	3.2715	3.3134	1.3	cis-Nonachlor
8.750	0.000 3679733	10.106 0.000 14804646	10.106	0.000 14804646	3.2715	3.3134	1.3	Mirex
3.670	0.000 147970	4.007 -0.001 963502	4.007	-0.001 963502	80.0000	80.0000	0.0	Hexabromobiphenyl
8.610	0.000 147100	9.565 -0.001 634421	9.565	-0.001 634421	2.5412	2.6551	4.4	Tetrachloro-m-xylene
					2.9912	2.7868	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	6.4	6.6	6.4~	150- 0
Decachlorobiphenyl	7.5	7.0	7.0~	150- 0

~ Indicates recovery outside QC Limits

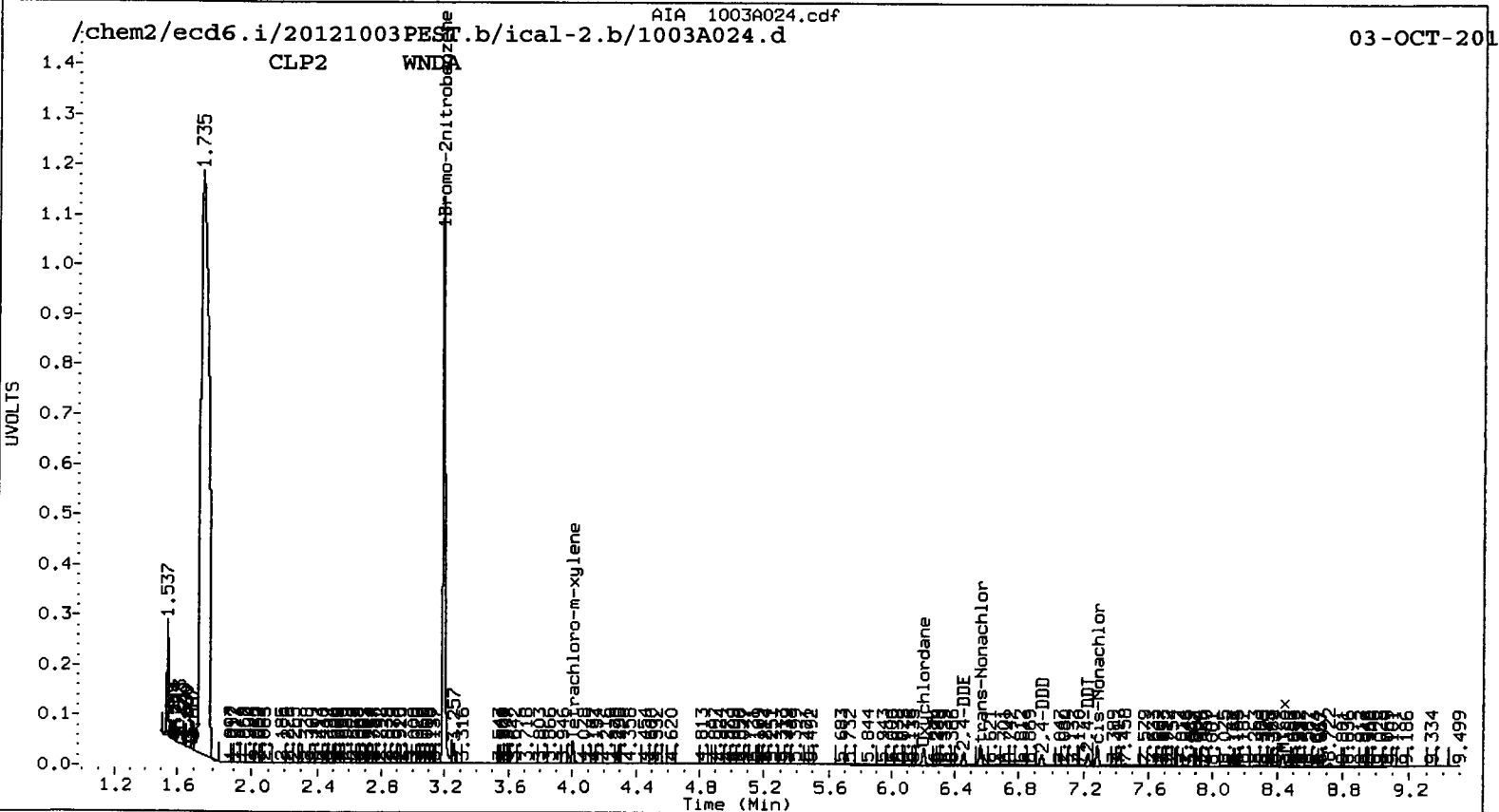
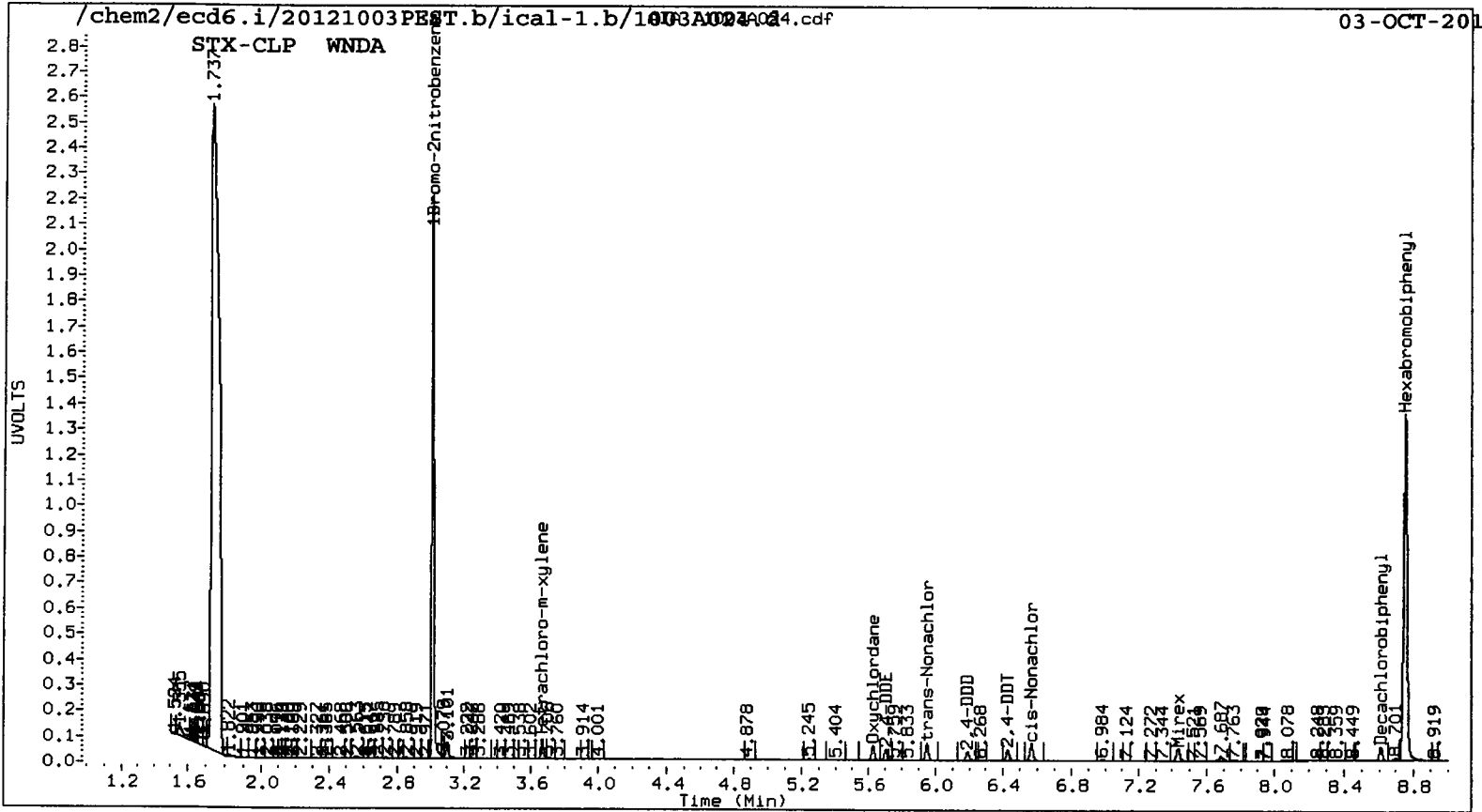
## INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	3929689	-3.2
Hexabromobiphenyl	3748709	3679733	-1.8

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	20878006	-0.7
Hexabromobiphenyl	14864285	14804646	-0.4

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 03-OCT-2012  
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A025.d ARI ID: WNDB  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A025.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 19:55  
 Compound Sublist: WND Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4316718	3.195 0.000 22757667	3.195	80.0000	80.0000	0.0	Hexachloroethane
5.627	0.000 260671	6.203 0.000 1557587	6.203	5.2224	5.3672	2.7	1Bromo-2nitrobenzen
5.704	0.001 190617	6.453 0.000 1187579	6.453	5.1958	5.6586	8.5	Oxychlorane
5.951	0.000 306991	6.560 -0.001 1806081	6.560	5.1640	5.3223	3.0	2,4-DDE
6.191	0.001 173722	6.939 0.001 999286	6.939	5.2860	5.4669	3.4	trans-Nonachlor
6.429	0.000 195046	7.227 0.000 1074427	7.227	5.2429	5.3879	2.7	2,4-DDD
6.567	0.000 319064	7.286 0.000 1880730	7.286	5.0669	5.3007	4.5	2,4-DDT
7.437	0.000 226889	8.433 0.000 1079584	8.433	5.4130	5.5032	1.7	cis-Nonachlor
8.750	0.000 4014283	10.106 0.000 16320408	10.106	80.0000	80.0000	0.0	Mirex
3.670	-0.001 278019	4.007 -0.001 1859583	4.007	4.3466	4.7012	7.8	Hexabromobiphenyl
8.610	0.000 254923	9.565 -0.001 1167913	9.565	4.7517	4.6538	2.1	Tetrachloro-m-xylene
							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	10.9	11.8	10.9~	150- 0
Decachlorobiphenyl	11.9	11.6	11.6~	150- 0

~ Indicates recovery outside QC Limits



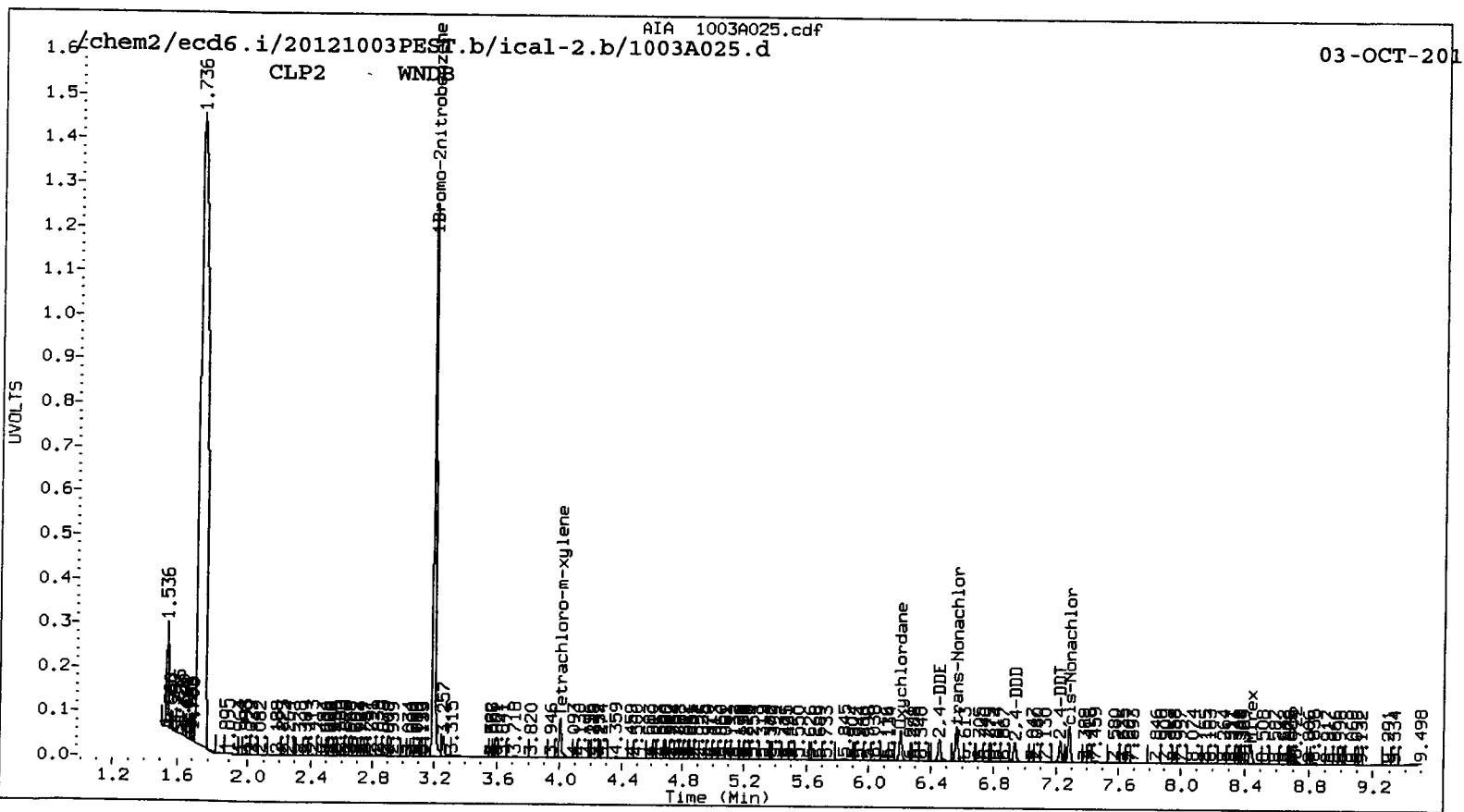
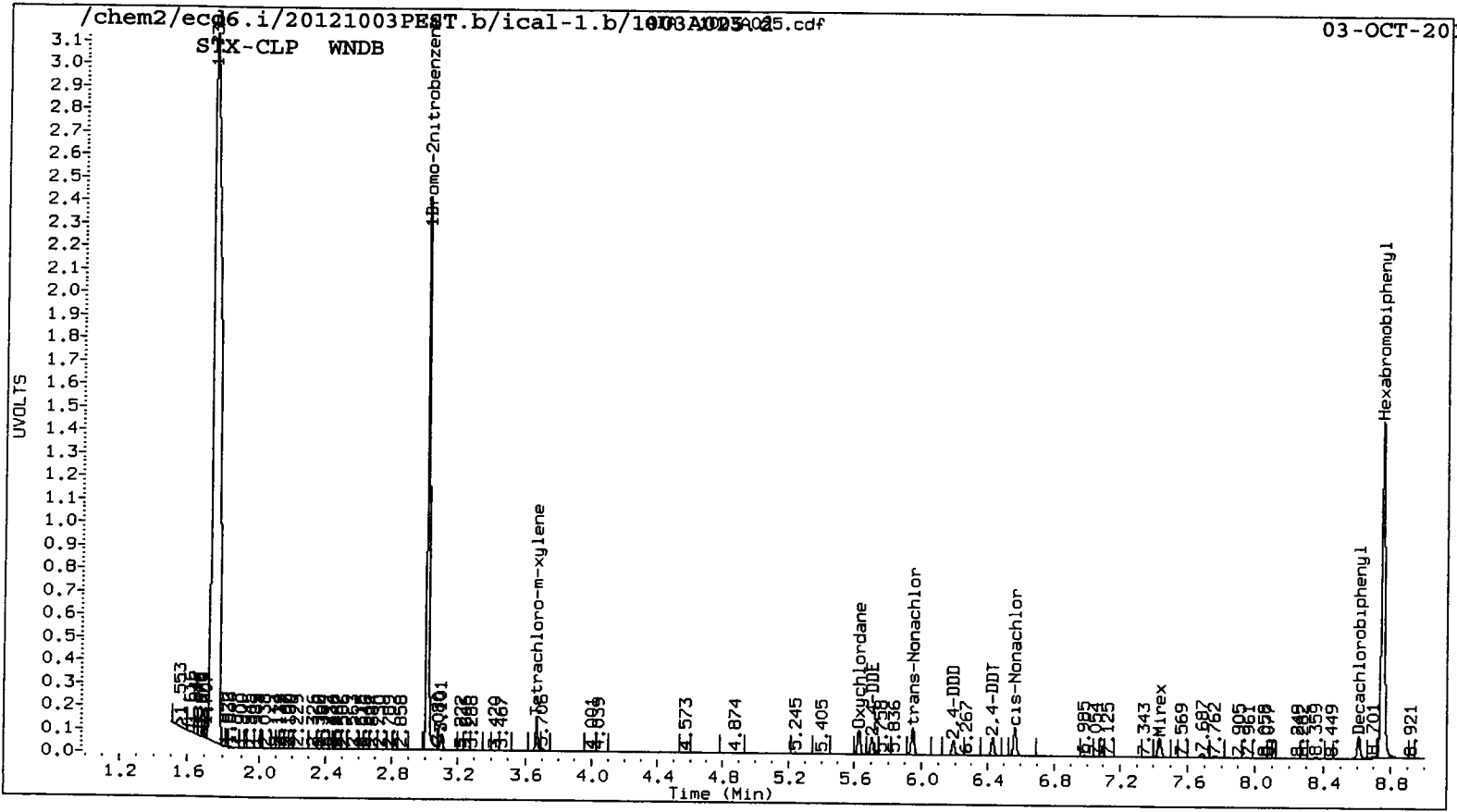
## INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4316718	6.3
Hexabromobiphenyl	3748709	4014283	7.1

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	22757667	8.2
Hexabromobiphenyl	14864285	16320408	9.8

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A026.d ARI ID: WNDC  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A026.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 20:12  
 Compound Sublist: WND Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
1.738	0.000	312812	----			0.0000	0.0000	---	Hexachloroethane
3.015	0.000	4166737	3.195	0.000	22095258	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.627	0.000	496713	6.202	0.000	2997096	10.1605	10.6371	4.6	Oxychlorane
5.703	0.000	364148	6.453	0.000	2209166	10.1346	10.8418	6.7	2,4-DDE
5.951	0.000	587539	6.560	-0.001	3520113	10.0909	10.5597	4.5	trans-Nonachlor
6.191	0.001	326012	6.939	0.000	1893386	10.1283	10.5444	4.0	2,4-DDD
6.429	0.000	368308	7.227	0.000	2065543	10.1083	10.5441	4.2	2,4-DDT
6.566	0.000	618933	7.285	0.000	3641716	10.0356	10.4483	4.0	cis-Nonachlor
7.437	0.000	419909	8.433	0.000	2006865	10.2286	10.4139	1.8	Mirex
8.750	0.000	3931640	10.106	0.000	16032237	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	0.000	534193	4.007	-0.001	3549008	8.6523	9.2413	6.6	Tetrachloro-m-xylene
8.610	-0.001	464604	9.565	-0.001	2180729	8.8422	8.8458	0.0	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	21.6	23.1	21.6~	150- 0
Decachlorobiphenyl	22.1	22.1	22.1~	150- 0

~ Indicates recovery outside QC Limits

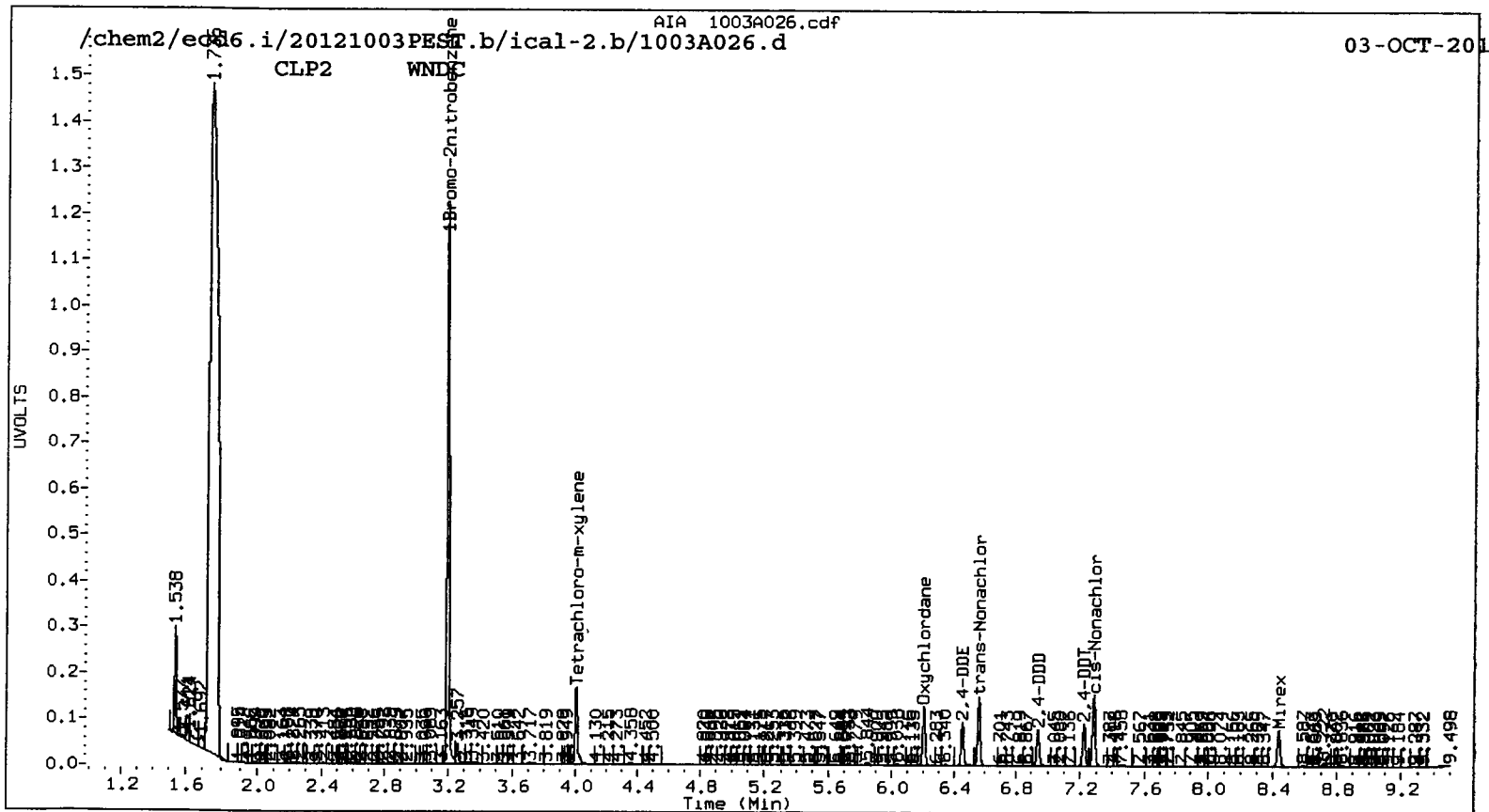
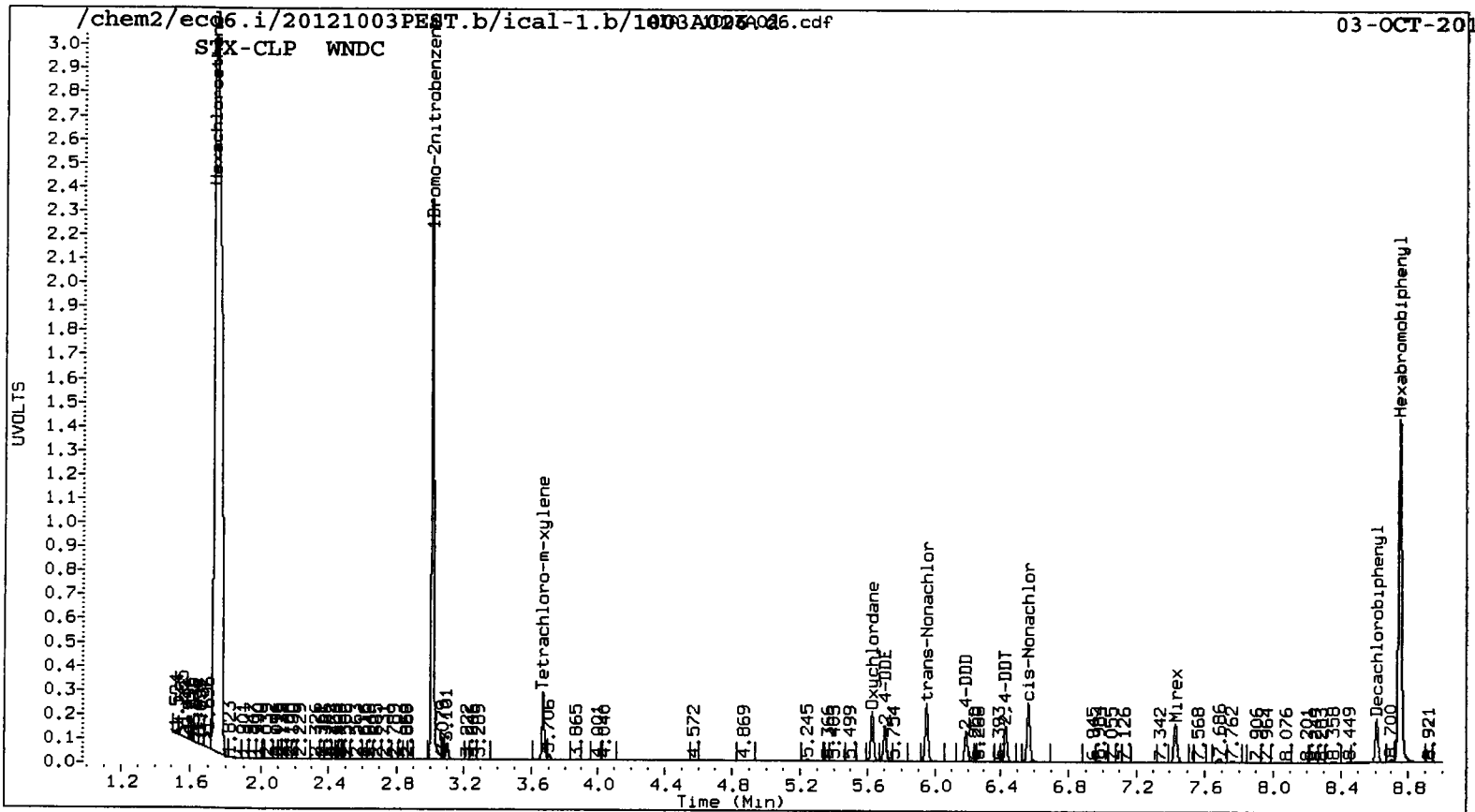
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4166737	2.6
Hexabromobiphenyl	3748709	3931640	4.9

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	22095258	5.1
Hexabromobiphenyl	14864285	16032237	7.9

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



UVOLTS 02045

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A027.d ARI ID: WNDD  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A027.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 20:30  
 Compound Sublist: WND Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4291231	3.195 0.000 22892989	3.195	0.0000	80.0000	0.0	Hexachloroethane
5.627	0.000 972585	6.203 0.000 5839339	6.203	19.4854	20.0024	2.6	1Bromo-2nitrobenzen
5.703	0.000 732301	6.453 -0.001 4205191	6.453	19.9612	19.9185	0.2	Oxychlorane
5.950	0.000 1162501	6.560 -0.001 6856105	6.560	19.5550	20.2541	3.5	2,4-DDE
6.191	0.001 638188	6.939 0.000 3660949	6.939	19.4189	20.0779	3.3	trans-Nonachlor
6.429	0.000 725071	7.227 0.000 4005489	7.227	19.4902	20.1360	3.3	2,4-DDD
6.567	0.001 1232021	7.286 0.000 7118628	7.286	19.5653	20.1130	2.8	2,4-DDT
7.437	0.000 798012	8.434 0.001 3764042	8.434	19.0389	19.2350	1.0	cis-Nonachlor
8.750	0.000 4014232	10.106 0.001 16280005	10.106	80.0000	80.0000	0.0	Mirex
3.670	0.000 1053390	4.007 -0.001 6858299	4.007	16.5667	17.2360	4.0	Hexabromobiphenyl
8.610	-0.001 864083	9.566 -0.001 4117495	9.566	16.1066	16.4477	2.1	Tetrachloro-m-xylene
							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	41.4	43.1	41.4~	150- 0
Decachlorobiphenyl	40.3	41.1	40.3~	150- 0

~ Indicates recovery outside QC Limits

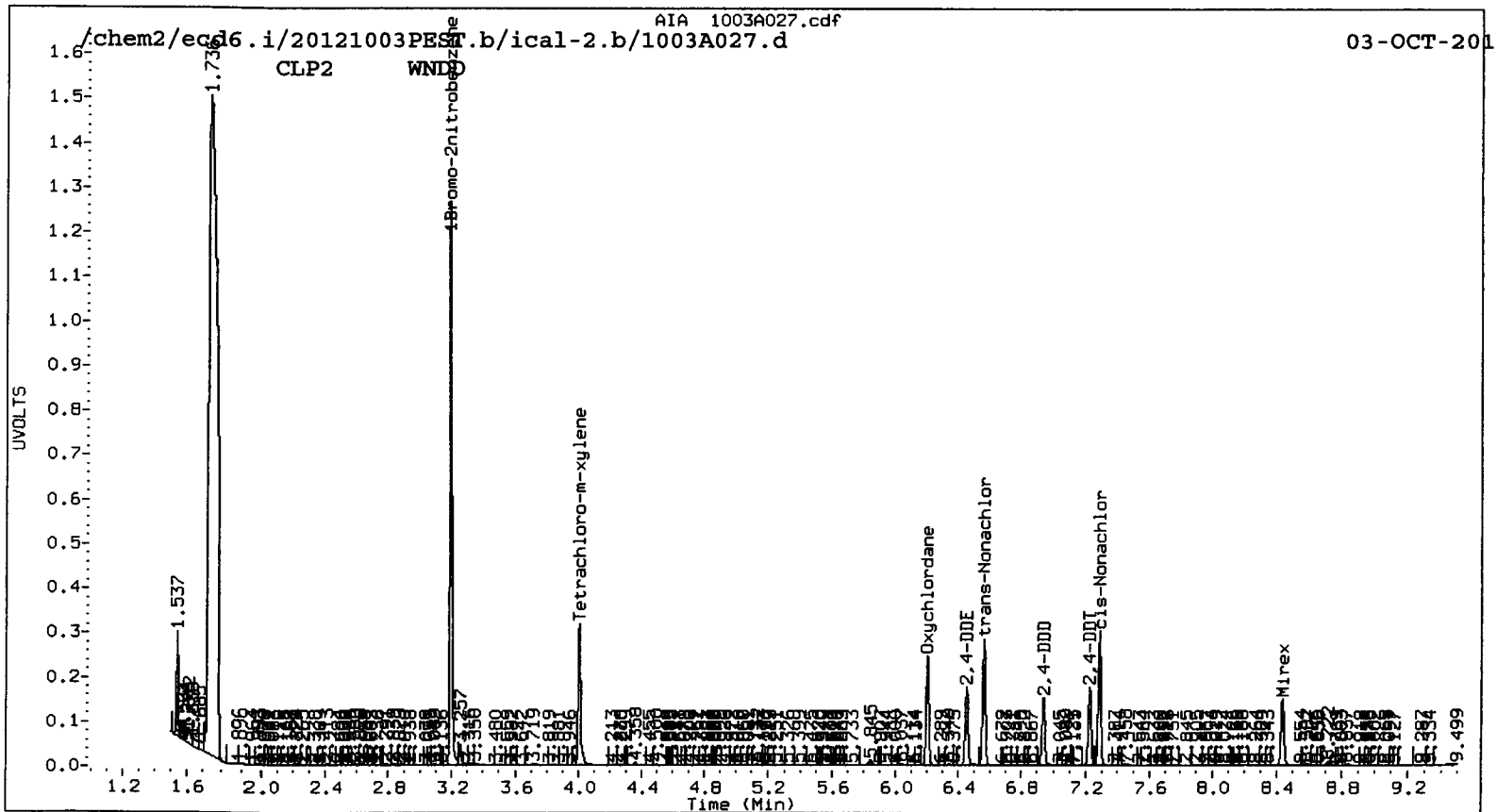
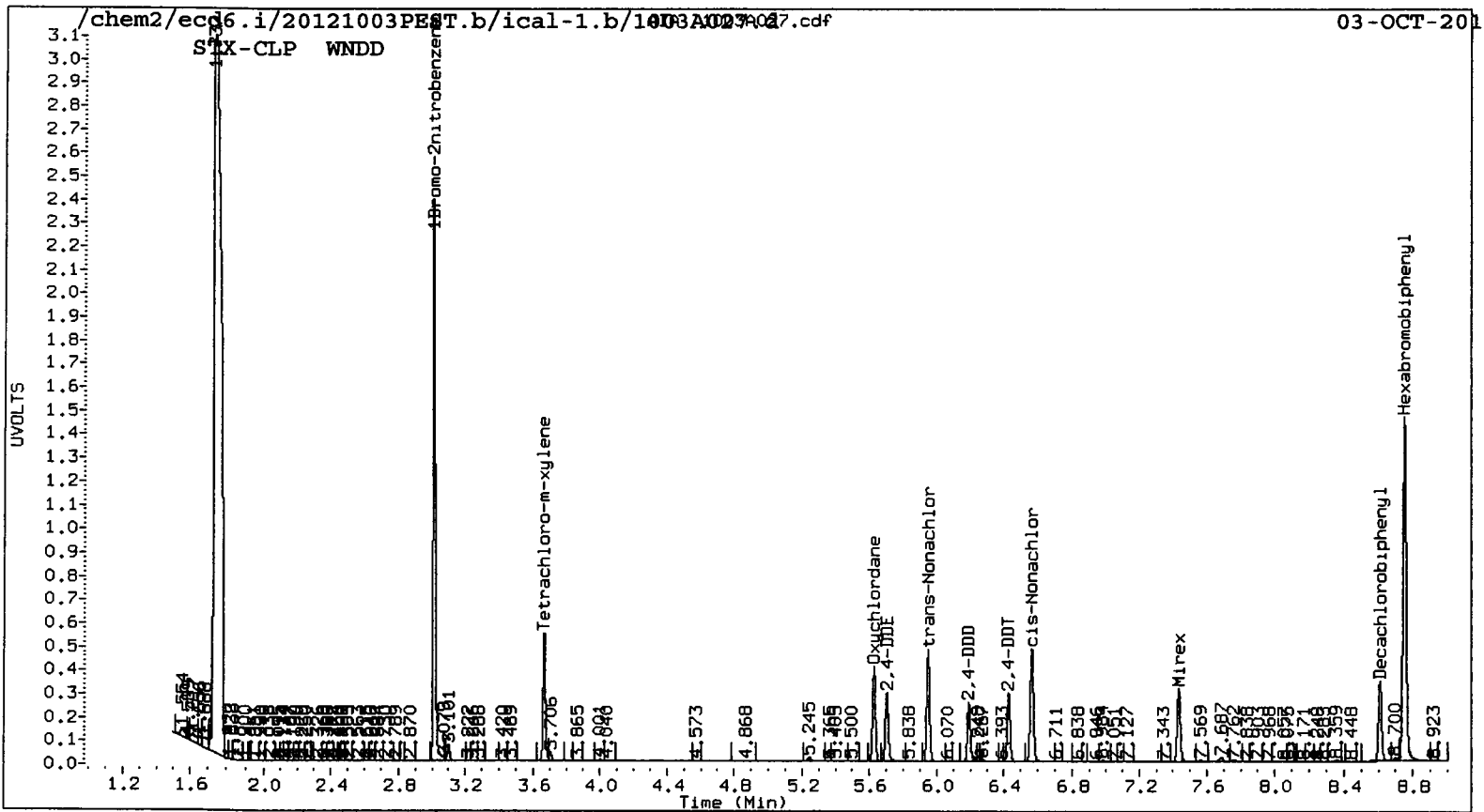
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4291231	5.7
Hexabromobiphenyl	3748709	4014232	7.1

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	22892989	8.8
Hexabromobiphenyl	14864285	16280005	9.5

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 03-OCT-2012  
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										





Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A028.d ARI ID: WNDP  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A028.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 20:48  
 Compound Sublist: WND Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4252342	3.195 0.000 22617896	80.0000	80.0000	0.0	Hexachloroethane
5.627	0.000 3629742	6.203 0.000 20439310	73.9199	70.8655	4.2	1Bromo-2nitrobenzen
5.704	0.000 2663149	6.454 0.000 13690989	73.7899	65.6382	11.7	Oxychlorthane
5.951	0.000 4403117	6.561 0.000 24239783	75.2884	71.4744	5.2	2,4-DDE
6.190	0.000 2372915	6.939 0.000 12674971	73.3940	69.3836	5.6	trans-Nonachlor
6.429	0.000 2734214	7.227 0.000 14151386	74.7088	71.0070	5.1	2,4-DDD
6.566	0.000 4752551	7.286 0.000 25544471	76.7184	72.0381	6.3	2,4-DDT
7.437	0.000 2912958	8.434 0.001 13503834	70.6431	68.8779	2.5	cis-Nonachlor
8.750	0.000 3949109	10.106 0.000 16310554	80.0000	80.0000	0.0	Mirex
3.670	0.000 3955027	4.007 -0.001 23250554	62.7695	59.1431	5.9	Hexabromobiphenyl
8.610	0.000 3084459	9.566 0.000 14901486	58.4426	59.4140	1.6	Tetrachloro-m-xylene
						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	156.9	147.9	147.9~	150- 0
Decachlorobiphenyl	146.1	148.5	146.1~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4252342	4.7
Hexabromobiphenyl	3748709	3949109	5.3

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	22617896	7.5
Hexabromobiphenyl	14864285	16310554	9.7

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col			
			Shift	Height	Amount			Shift	Height	Amount	
=====											

UVOLTS

3.1  
3.0  
2.9  
2.8  
2.7  
2.6  
2.5  
2.4  
2.3  
2.2  
2.1  
2.0  
1.9  
1.8  
1.7  
1.6  
1.5  
1.4

SIX-CLP WNDP

1-bromo-2nitrobenzene

Tetrachloro-m-xylene

DE  
Oxychlorane

trans-Nonachlor

DDT  
cis-Nonachlor

x

1,2-dichlorobiphenyl  
Hexabromobiphenyl

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A028.d ARI ID: WNDF  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A028.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 20:48  
 Compound Sublist: WND Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4252342	3.195	0.000 22617896	0.0000	0.0000	---	Hexachloroethane
5.627	0.000 3629742	6.203	0.000 20439310	80.0000	80.0000	0.0	1Bromo-2nitrobenzer
5.704	0.000 2663149	6.454	0.000 13690989	73.9199	70.8655	4.2	Oxychlorthane
5.951	0.000 4403117	6.561	0.000 24239783	73.7899	65.6382	11.7	2,4-DDE
6.190	0.000 2372915	6.939	0.000 12674971	75.2884	71.4744	5.2	trans-Nonachlor
6.429	0.000 2734214	7.227	0.000 14151386	73.3940	69.3836	5.6	2,4-DDD
6.566	0.000 4752551	7.286	0.000 25544471	74.7088	71.0070	5.1	2,4-DDT
7.437	0.000 2912958	8.434	0.001 13503834	76.7184	72.0381	6.3	cis-Nonachlor
8.750	0.000 3949109	10.106	0.000 16310554	70.6431	68.8779	2.5	Mirex
3.670	0.000 3955027	4.007	-0.001 23250554	80.0000	80.0000	0.0	Hexabromobiphenyl
8.610	0.000 3084459	9.566	0.000 14901486	62.7695	59.1431	5.9	Tetrachloro-m-xylene
				58.4426	59.4140	1.6	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

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	156.9	147.9	147.9~	150- 0
Decachlorobiphenyl	146.1	148.5	146.1~	150- 0

~ Indicates recovery outside QC Limits

## INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4252342	4.7
Hexabromobiphenyl	3748709	3949109	5.3

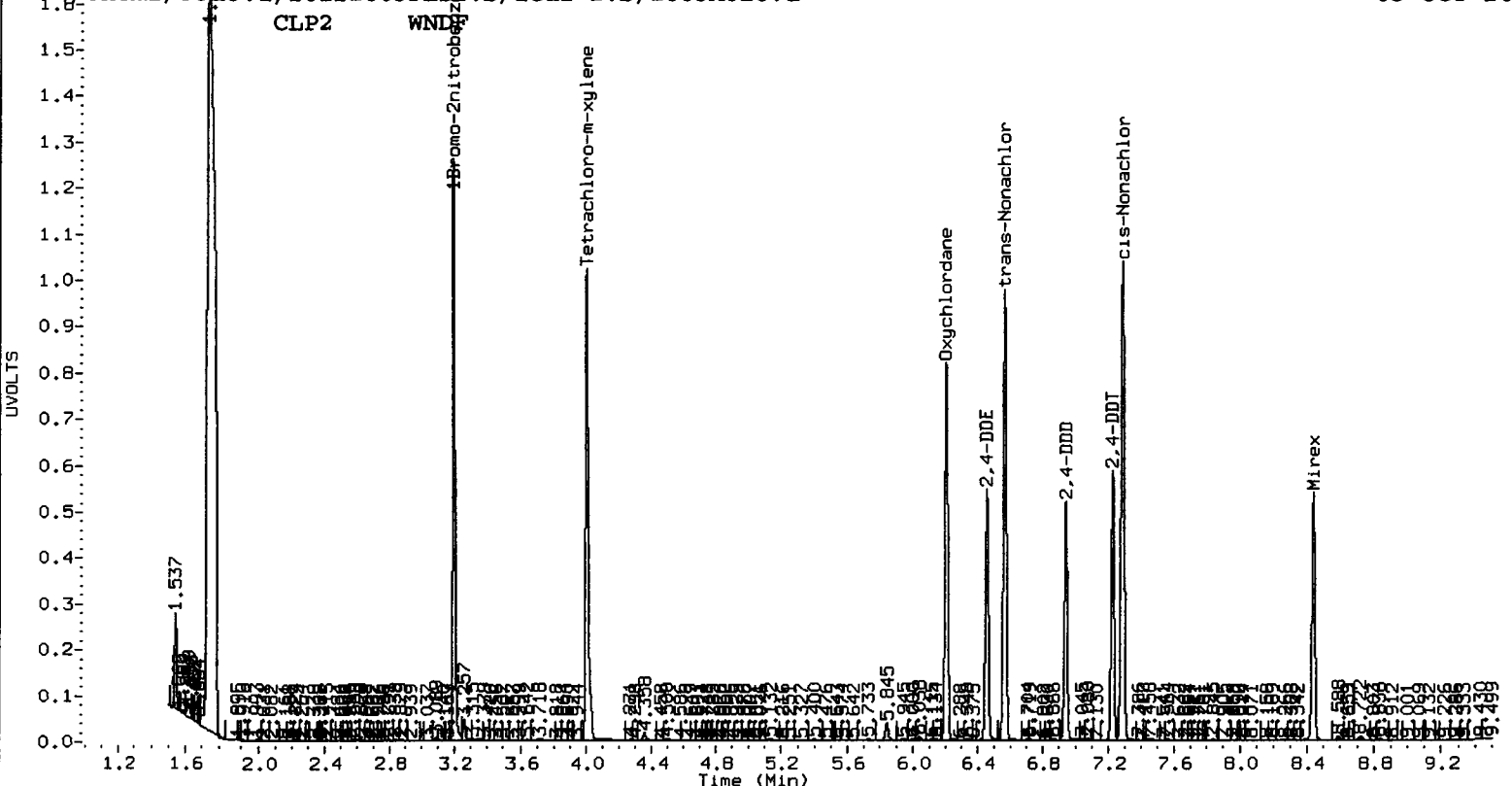
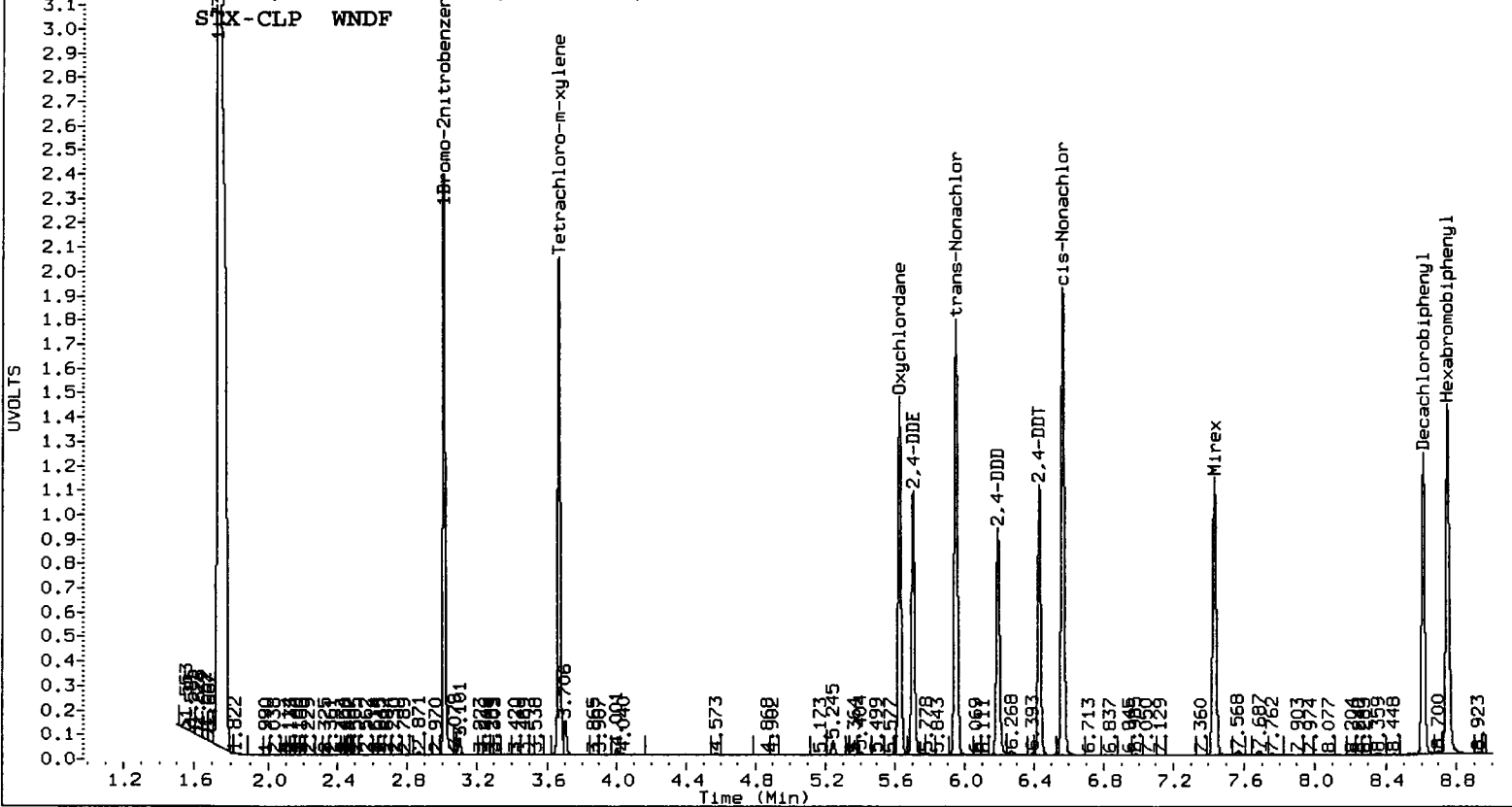
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	22617896	7.5
Hexabromobiphenyl	14864285	16310554	9.7

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 03-OCT-2012

<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A029.d ARI ID: WNDG  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A029.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 21:06  
 Compound Sublist: WND Report Date: 10/04/2012 11:00  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
---			---			0.0000	0.0000	---	Hexachloroethane
3.015	0.000	4304026	3.195	0.000	22734029	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.627	0.000	7041455	6.203	0.000	38165297	139.6029	131.6477	5.9	Oxychlorane
5.703	0.000	5090109	6.453	0.000	24267144	137.3013	115.7487	17.0	2,4-DDE
5.951	0.000	8634989	6.561	0.000	45482509	143.7395	130.4290	9.7	trans-Nonachlor
6.190	0.000	4624679	6.939	0.000	23191118	139.2535	123.4636	12.0	2,4-DDD
6.429	0.000	5275270	7.227	0.000	25903884	140.3235	126.4081	10.4	2,4-DDT
6.566	0.000	9360729	7.286	0.000	48743350	147.1053	133.6868	9.6	cis-Nonachlor
7.437	0.000	5682283	8.434	0.000	26268749	134.1544	130.3075	2.9	Mirex
8.750	0.000	4056513	10.106	0.000	16771085	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	0.000	7659739	4.008	0.000	43193350	120.1065	109.3109	9.4	Tetrachloro-m-xyle
8.610	-0.001	6024511	9.565	-0.001	28926907	111.1268	112.1679	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

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	300.3	273.3	273.3~	150- 0
Decachlorobiphenyl	277.8	280.4	277.8~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4304026	6.0
Hexabromobiphenyl	3748709	4056513	8.2

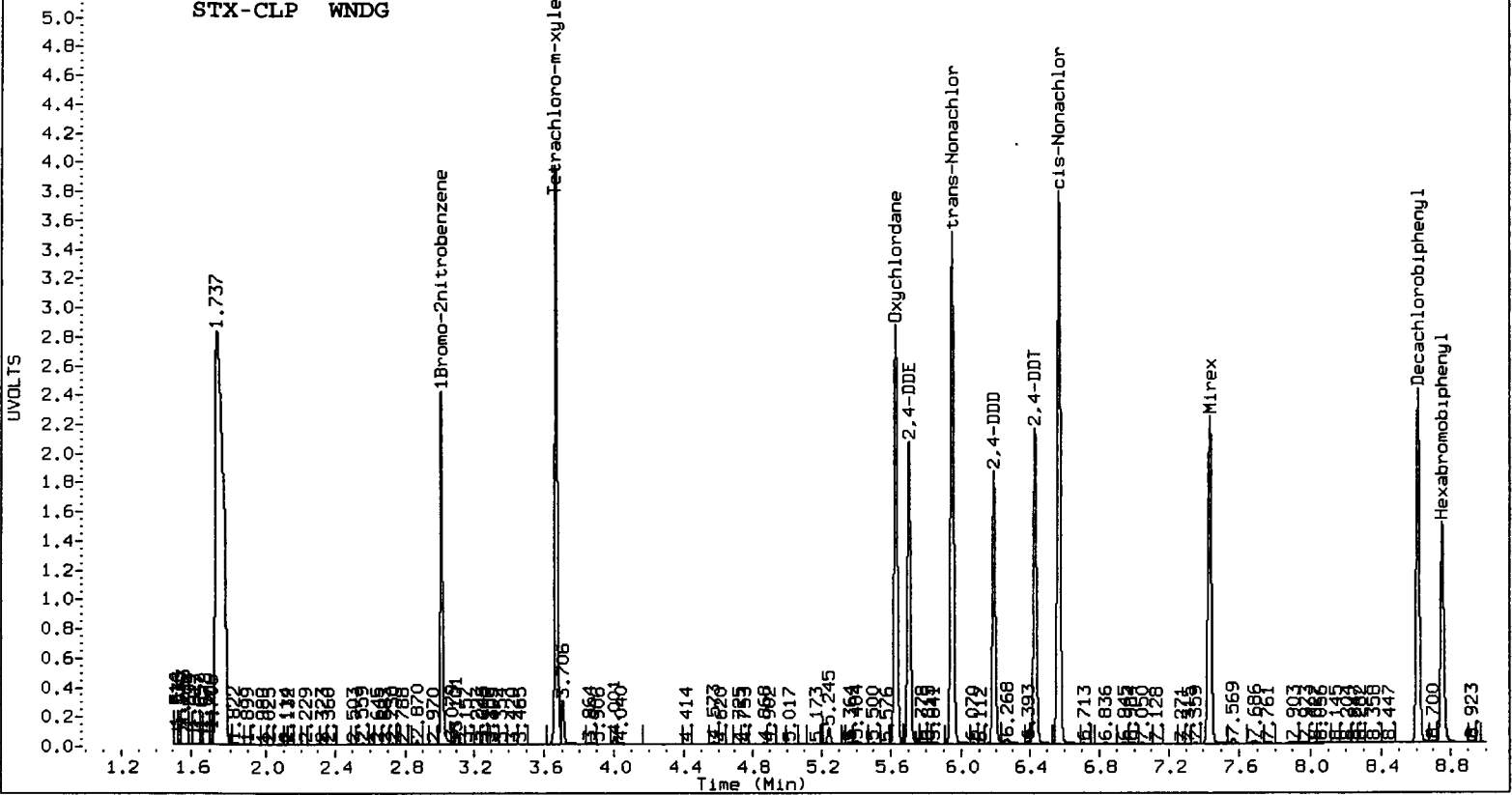
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	22734029	8.1
Hexabromobiphenyl	14864285	16771085	12.8

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

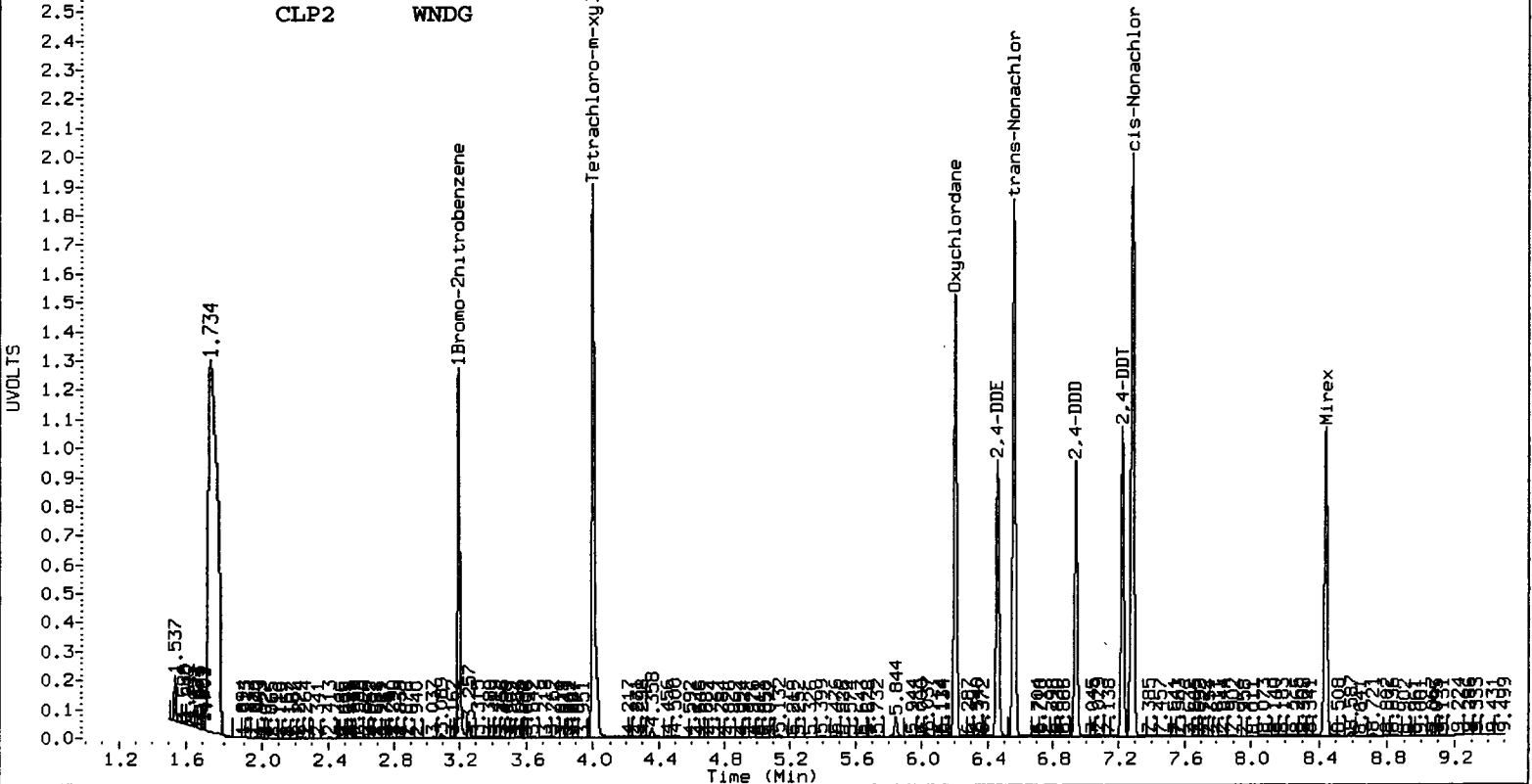
Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



STX-CLP WNDG



CLP2 WNDG



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A031.d ARI ID: TECHLOR 200  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A031.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 04-OCT-2012 08:36  
 Compound Sublist: wpest Report Date: 10/04/2012 11:00  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.024	0.010	3448624	3.204	0.009	23792648	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.136	-0.011	1617	4.559	-0.027	404237	0.0252	0.7788	187.5*	alpha-BHC
4.497	0.000	13042	5.027	0.021	56550	0.4801	0.2692	56.3*	beta-BHC
4.708	0.046	12613	5.333	0.018	56186	0.2435	0.1365	56.3*	delta-BHC
4.419	-0.005	19605	4.970	0.033	220612	0.3320	0.4702	34.4	gamma-BHC (Lindane)
4.883	0.021	446809	5.413	0.015	3870545	8.3461	9.0097	7.6	Heptachlor
5.185	0.037	4629	5.748	0.012	119583	0.0847	0.2831	107.9*	Aldrin
5.747	0.024	128873	6.330	0.037	334622	2.4454	0.8787	94.3*	Heptachlor epoxide b
6.135	0.036	28170	6.687	0.007	228537	0.5776	0.6683	14.6	Endosulfan I
6.356	0.034	39153	6.953	0.014	1095591	0.7766	3.0286	118.4*	Dieldrin
6.026	-0.002	16581	6.753	0.007	273520	0.3562	0.7930	76.0*	4,4'-DDE
6.529	-0.011	15914	----	----	----	0.3685	0.0000	---	Endrin
6.761	0.015	22133	7.411	-0.006	465373	0.5308	1.5877	99.8*	Endosulfan II
----	----	----	7.267	-0.016	118481	0.0000	0.4278	---	4,4'-DDD
7.532	0.018	12372	7.964	0.004	17402	0.3525	0.0706	133.3*	Endosulfan sulfate
6.854	0.012	8836	7.568	-0.002	188084	0.2331	0.7137	101.5*	4,4'-DDT
7.291	0.020	5011	8.135	-0.023	54825	0.2704	0.4876	57.3*	Methoxychlor
7.775	0.009	9195	8.457	0.008	71514	0.2240	0.2905	25.8	Endrin ketone
7.166	0.043	5424	7.730	0.015	86779	0.1613	0.3761	79.9*	Endrin aldehyde
5.862	0.020	1224025	6.488	0.012	8926279	23.3578	22.4693	3.9	gamma-Chlordane
5.984	0.016	1876835	6.627	0.012	7155992	37.1106	19.3197	63.1*	alpha-Chlordane
2.231	0.021	8444	2.368	-0.009	5727	0.1084	0.0111	162.9*	Hexachlorobutadiene
4.019	0.017	23403	4.472	0.014	49799	0.4164	0.1115	115.5*	Hexachlorobenzene
5.639	0.012	7086	6.193	-0.010	164574	0.1803	0.5424	100.2*	Oxychlorane
5.680	-0.023	210668	6.411	-0.043	751696	7.2941	3.4259	72.2*	2,4-DDE
----	----	----	6.573	0.013	7048336	0.0000	19.9435	---	trans-Nonachlor
6.213	0.023	29847	6.929	-0.010	189136	1.1536	0.9935	14.9	2,4-DDD
6.414	-0.015	103725	7.208	-0.019	675609	3.5416	3.2531	8.5	2,4-DDT
6.584	0.018	232235	7.297	0.012	1615553	4.6846	4.3720	6.9	cis-Nonachlor
7.402	-0.035	1920	8.430	-0.003	32494	0.0582	0.1590	92.9*	Mirex
8.764	0.014	3160274	10.118	0.012	16997105	80.0000	80.0000	0.0	Hexabromobiphenyl
1.736	-0.001	135102	1.735	0.007	43351241	0.0000	0.0000	---	Hexachloroethane
3.686	0.016	1699027	4.022	0.014	13977002	33.2493	33.7983	1.6	Tetrachloro-m-xylene
8.623	0.012	1353174	9.576	0.010	8595161	32.0390	32.8857	2.6	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

SURROGATE/SPIKE PERCENT RECOVERY

UR5A 0205A

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	83.1	84.5	83.1~	130- 0
Decachlorobiphenyl	80.1	82.2	80.1~	130- 0

~ Indicates recovery outside QC Limits

## INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	4060064	3448624	-15.1
Hexabromobiphenyl	3748709	3160274	-15.7

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	23792648	13.1
Hexabromobiphenyl	14864285	16997105	14.3

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

STX-CLP Col						CLP2 Col						
Aroclor	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount		
Toxaphene	1	6.498	0.002	51727	52.498	1	7.159	-0.004	187027	18.319		
Toxaphene	2	6.854	0.005	8836	6.583	2	7.473	-0.015	2253758	149.256		
Toxaphene	3	7.220	0.002	5437	4.802	3	7.730	0.011	86779	5.127		
Toxaphene	4	7.501	0.030	9982	6.887	4	8.207	0.022	23733	1.882		
Toxaphene	5	7.775	0.026	9195	7.447	5	8.569	0.036	96833	16.365		
Toxaphene	6	---	---	---	0.000	NS	---	---	---	---		
Total STX-CLPAve (5 peaks):					15.644	Total CLP2Ave (5 peaks):					38.190	RPD = 84*
Corrected Ave (4 peaks):					6.430	Corrected Ave (4 peaks):					10.423	RPD = 47*

Aroclor-1016	1	---	---	---	0.000	1	---	---	---	0.000
Aroclor-1016	2	---	---	---	0.000	2	---	---	---	0.000
Aroclor-1016	3	---	---	---	0.000	3	---	---	---	0.000
Aroclor-1016	4	---	---	---	0.000	4	---	---	---	0.000
Aroclor-1016	5	---	---	---	0.000	5	---	---	---	0.000
STX-CLPAve: <3 Quant Peaks					CLP2Ave: <3 Quant Peaks					

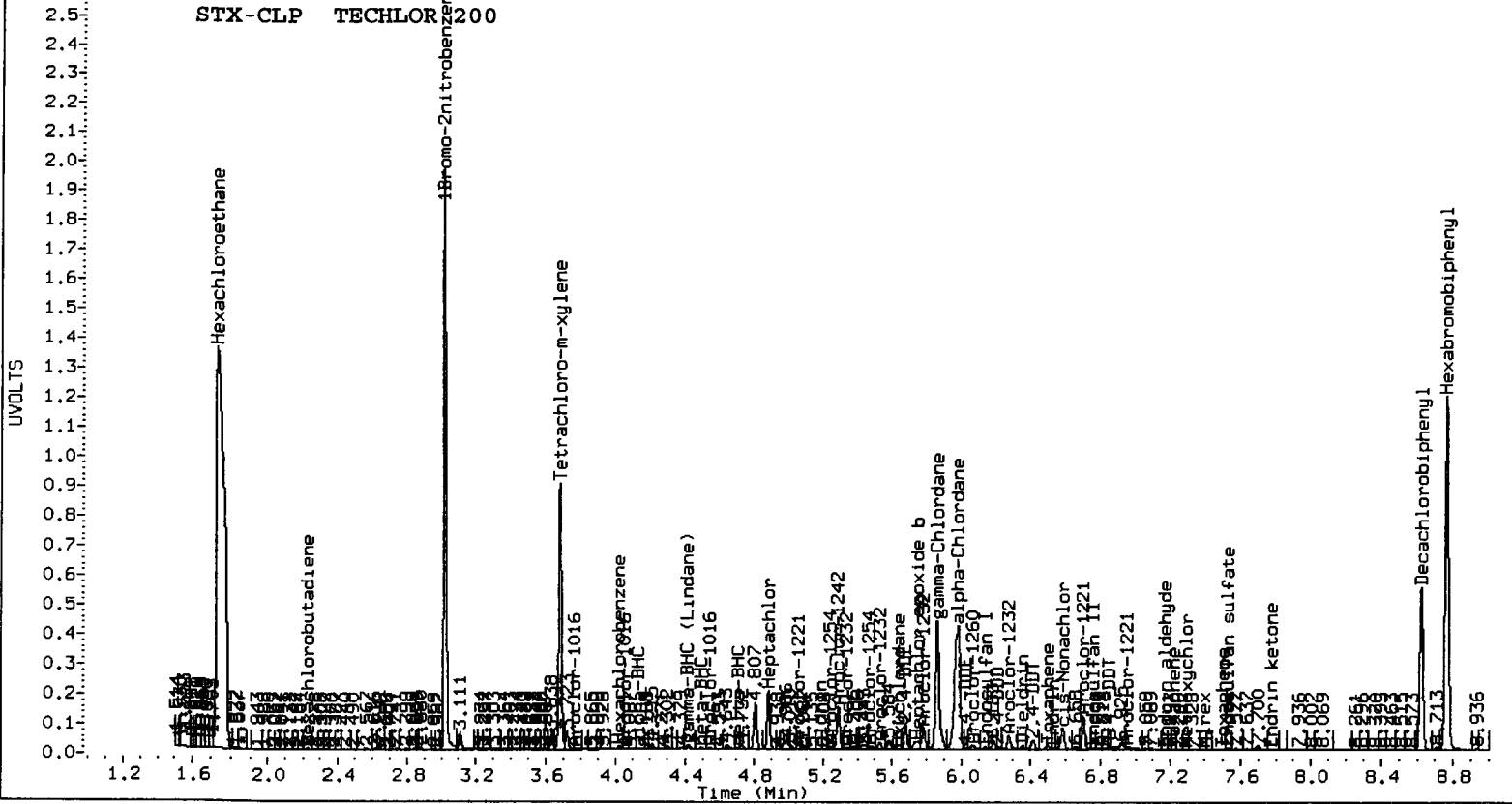
Aroclor-1221	1	---	---	---	0.000	1	---	---	---	0.000
Aroclor-1221	2	---	---	---	0.000	2	---	---	---	0.000
Aroclor-1221	3	---	---	---	0.000	3	---	---	---	0.000
Aroclor-1221	4	---	---	---	0.000	4	---	---	---	0.000
STX-CLPAve: <3 Quant Peaks					CLP2Ave: <3 Quant Peaks					

Aroclor-1232	1	---	---	---	0.000	1	---	---	---	0.000
Aroclor-1232	2	---	---	---	0.000	2	---	---	---	0.000
Aroclor-1232	3	---	---	---	0.000	3	---	---	---	0.000
Aroclor-1232	4	---	---	---	0.000	4	---	---	---	0.000
Aroclor-1232	5	---	---	---	0.000	5	---	---	---	0.000
STX-CLPAve: <3 Quant Peaks					CLP2Ave: <3 Quant Peaks					

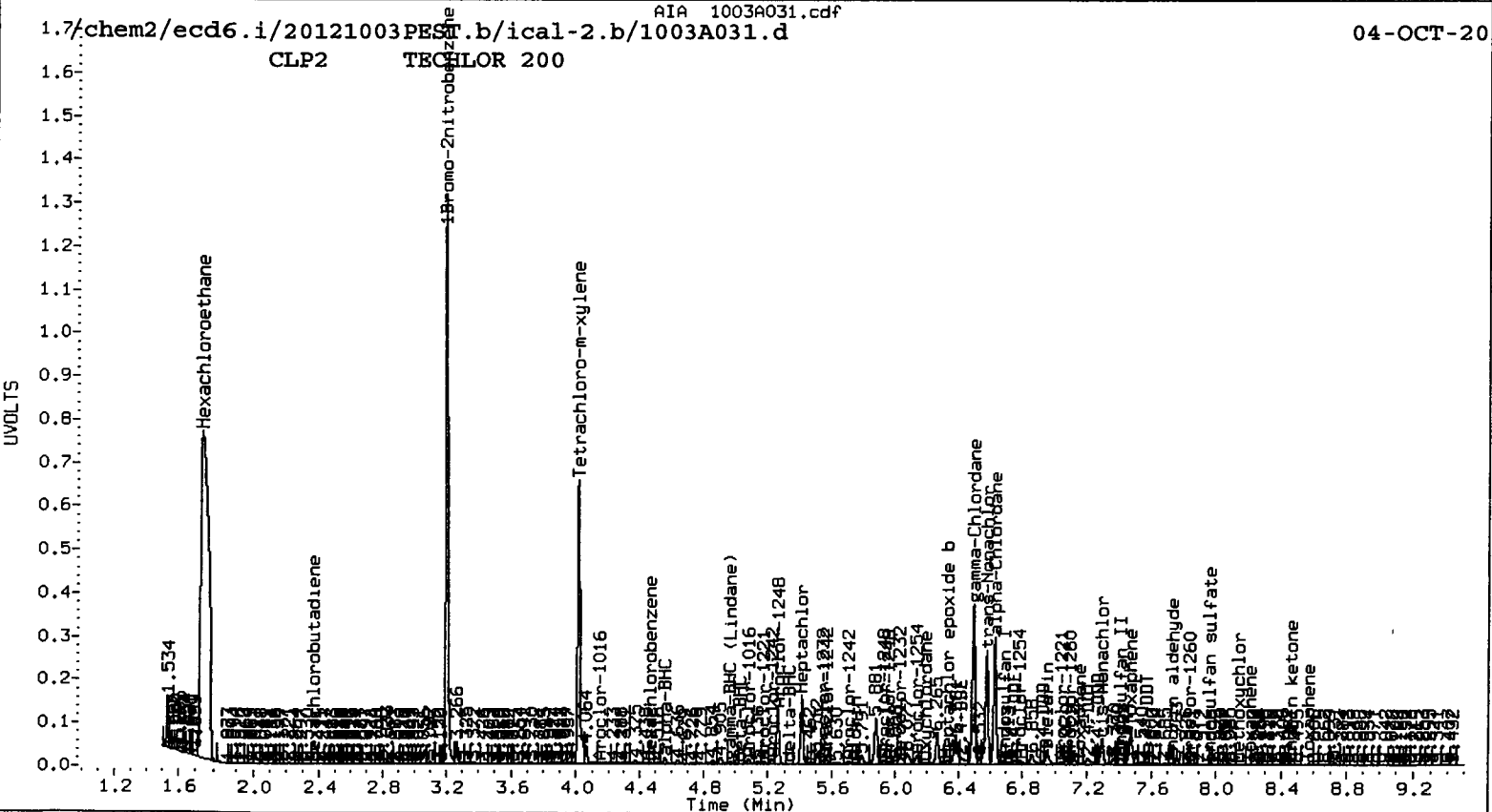
Aroclor-1242	1	---	---	---	0.000	1	---	---	---	0.000
Aroclor-1242	2	---	---	---	0.000	2	---	---	---	0.000
Aroclor-1242	3	---	---	---	0.000	3	---	---	---	0.000
Aroclor-1242	4	---	---	---	0.000	4	---	---	---	0.000
Aroclor-1242	5	---	---	---	0.000	5	---	---	---	0.000

Aroclor-1242 6	---	0.000	NS	---	----
STX-CLPAve: <3 Quant Peaks				CLP2Ave: <3 Quant Peaks	
Aroclor-1248 1	---	0.000	1	---	0.000
Aroclor-1248 2	---	0.000	2	---	0.000
Aroclor-1248 3	---	0.000	3	---	0.000
Aroclor-1248 4	---	0.000	4	---	0.000
Aroclor-1248 5	---	0.000	5	---	0.000
STX-CLPAve: <3 Quant Peaks				CLP2Ave: <3 Quant Peaks	
Aroclor-1254 1	---	0.000	1	---	0.000
Aroclor-1254 2	---	0.000	2	---	0.000
Aroclor-1254 3	---	0.000	3	---	0.000
Aroclor-1254 4	---	0.000	4	---	0.000
Aroclor-1254 5	---	0.000	5	---	0.000
STX-CLPAve: <3 Quant Peaks				CLP2Ave: <3 Quant Peaks	
Aroclor-1260 1	---	0.000	1	---	0.000
Aroclor-1260 2	---	0.000	2	---	0.000
Aroclor-1260 3	---	0.000	3	---	0.000
Aroclor-1260 4	---	0.000	4	---	0.000
Aroclor-1260 5	---	0.000	5	---	0.000
STX-CLPAve: <3 Quant Peaks				CLP2Ave: <3 Quant Peaks	
Aroclor-1262 1	---	0.000	1	---	0.000
Aroclor-1262 2	---	0.000	2	---	0.000
Aroclor-1262 3	---	0.000	3	---	0.000
Aroclor-1262 4	---	0.000	4	---	0.000
Aroclor-1262 5	---	0.000	5	---	0.000
STX-CLPAve: <3 Quant Peaks				CLP2Ave: <3 Quant Peaks	
Aroclor-1268 1	---	0.000	1	---	0.000
Aroclor-1268 2	---	0.000	2	---	0.000
Aroclor-1268 3	---	0.000	3	---	0.000
Aroclor-1268 4	---	0.000	4	---	0.000
Aroclor-1268 5	---	0.000	5	---	0.000
STX-CLPAve: <3 Quant Peaks				CLP2Ave: <3 Quant Peaks	

STX-CLP TECHLOR 200



CLP2 TECHLOR 200



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

AR 10/4/2012

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A021.d ARI ID: INDA ICV  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A021.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 18:43  
 Compound Sublist: INDA Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

40 ppb

RT	STX-CLP Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4057143	3.195	0.000 21138967	80.0000	80.0000	0.0	1Bromo-2nitrobenzene
4.147	-0.001 3074429	4.584	-0.001 18378917	40.6620	39.8545	2.0	alpha-BHC
4.497	0.000 1181624	5.006	-0.001 7143929	36.9708	38.2761	3.5	beta-BHC
4.662	0.000 2598439	5.313	-0.001 15223038	42.6347	41.6137	2.4	delta-BHC
4.424	0.000 2763631	4.936	-0.001 16461350	39.7846	39.4867	0.8	gamma-BHC (Lindane)
4.861	0.000 2411687	5.396	-0.001 14146924	38.2918	37.0644	3.3	Heptachlor
5.148	-0.001 2504153	5.735	-0.001 14254020	38.9336	37.9787	2.5	Aldrin
5.723	-0.001 2279591	6.293	0.000 12345356	36.7675	36.4885	0.8	Heptachlor epoxide
6.099	-0.001 2102230	6.680	0.000 11120271	36.6394	36.6014	0.1	Endosulfan I
6.322	0.000 2297277	6.938	-0.001 12314179	38.7345	38.3137	1.1	Dieldrin
6.027	-0.001 2146388	6.744	-0.001 11909930	39.1965	38.8636	0.9	4,4'-DDE
6.540	-0.001 1978483	7.227	-0.001 9856102	38.3376	37.3808	2.5	Endrin
6.746	-0.001 1842501	7.416	-0.001 9864604	36.9724	37.4293	1.2	Endosulfan II
6.583	-0.001 1790520	7.282	-0.001 9641482	39.7344	38.7187	2.6	4,4'-DDD
7.514	0.000 1598781	7.959	-0.001 8601713	38.1152	38.8141	1.8	Endosulfan sulfate
6.841	-0.001 1739237	7.570	-0.001 9110601	38.3862	38.4462	0.2	4,4'-DDT
7.271	0.000 880087	8.155	-0.003 4022159	39.7294	39.7835	0.1	Methoxychlor
7.766	0.000 1760424	8.448	-0.001 8124724	35.8888	36.7015	2.2	Endrin ketone
7.123	0.000 1474731	7.714	-0.001 7615275	36.6949	36.7037	0.0	Endrin aldehyde
5.842	0.000 2349214	6.475	-0.001 13162359	38.1057	37.2917	2.2	gamma-Chlordane
5.967	0.000 2273043	6.614	-0.001 12506328	38.2037	38.0032	0.5	alpha-Chlordane
2.193	-0.017 1807	2.362	-0.015 12546	<del>0.0197</del>	<del>0.0273</del>	<del>32.4</del>	Hexachlorobutadiene
4.001	-0.001 27205	4.461	0.003 8832	<del>0.4115</del>	<del>0.0223</del>	<del>179.5*</del>	Hexachlorobenzene
8.750	0.000 3776958	10.107	0.001 15282817	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	0.000 2032190	4.007	-0.001 12372043	33.8043	33.6729	0.4	Tetrachloro-m-xylene
8.610	0.000 1603716	9.566	0.000 7614502	31.7713	32.4016	2.0	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	84.5	84.2	84.2~	115- 0
Decachlorobiphenyl	79.4	81.0	79.4~	115- 0

~ Indicates recovery outside QC Limits

## INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4057143	-0.1
Hexabromobiphenyl	3748709	3776958	0.8

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	21138967	0.5
Hexabromobiphenyl	14864285	15282817	2.8

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col			
			Shift	Height	Amount			Shift	Height	Amount	
=====											





Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

AR 10/4/2012

Data file 1: /chem2/ecd6.i/20121003PEST.b/ical-1.b/1003A022.d ARI ID: HCB/HCBD ICV  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/ical-2.b/1003A022.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 03-OCT-2012 19:01  
 Compound Sublist: INDA Report Date: 10/04/2012 10:59  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

HCB 40.8  
HCBD 46.8

RT	STX-CLP Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.015	0.000 4108826	3.195	0.000 21570699	80.0000	80.0000	0.0	1Bromo-2nitrobenze
4.132	-0.016 9833	---	---	<del>0.1284</del>	<del>0.0000</del>	---	alpha-BHC
4.490	-0.007 1200	5.011	0.004 13461	0.0371	0.0707	62.4*	beta-BHC
4.658	-0.005 2560	5.328	0.014 31315	0.0415	0.0839	67.7*	delta-BHC
4.424	0.000 1900	4.923	-0.014 21577	0.0270	0.0507	61.0*	gamma-BHC (Lindane)
4.874	0.013 1770	5.380	-0.017 31575	0.0277	0.0811	98.0*	Heptachlor
5.165	0.017 3506	5.731	-0.005 120740	0.0538	0.3153	141.7*	Aldrin
5.713	-0.010 3276	6.268	-0.025 19629	0.0522	0.0569	8.6	Heptachlor epoxide I
6.099	-0.001 1520	6.678	-0.002 16574	0.0262	0.0535	68.6*	Endosulfan I
6.305	-0.018 1350	6.935	-0.004 16280	0.0225	0.0496	75.3*	Dieldrin
6.024	-0.003 5681	6.743	-0.003 35432	0.1024	0.1133	10.1	4,4'-DDE
---	---	7.245	0.017 19495	0.0000	0.0730	---	Endrin
6.747	0.001 1486	7.416	-0.001 11073	0.0292	0.0415	34.7	Endosulfan II
6.579	-0.005 4901	7.281	-0.002 25853	0.1066	0.1025	3.9	4,4'-DDD
---	---	7.957	-0.003 10971	0.0000	0.0489	---	Endosulfan sulfate
6.839	-0.003 1785	7.574	0.003 35374	0.0386	0.1473	117.0*	4,4'-DDT
7.268	-0.003 1244	8.151	-0.008 8904	0.0550	0.0869	44.9*	Methoxychlor
7.761	-0.005 14192	8.450	0.002 12561	0.0835	0.0560	134.0*	Endrin ketone
7.122	-0.001 2341	7.714	-0.001 18760	0.0571	0.0892	44.0*	Endrin aldehyde
5.820	-0.022 15975	6.480	0.004 160896	0.2559	0.4467	54.3*	gamma-Chlordane
5.962	-0.005 5682	6.629	0.014 15054	<del>0.0943</del>	<del>0.0448</del>	<del>72.1*</del>	alpha-Chlordane
2.210	0.000 3888916	2.377	-0.001 19016015	41.9062	40.6043✓	3.2	Hexachlorobutadiene
4.001	-0.001 2344205	4.457	0.000 13237431	35.0089	32.6901✓	6.9	Hexachlorobenzene
8.750	0.000 3854595	10.106	0.000 15483729	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	-0.001 2238016	4.007	-0.001 13288246	36.7598	35.4427	3.6	Tetrachloro-m-xylene
8.610	-0.001 1843167	9.565	-0.001 8743377	35.7796	36.7224 ✓	2.6	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

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	91.9	88.6 ✓	88.6~	115- 0
Decachlorobiphenyl	89.4	91.8 ✓	89.4~	115- 0

~ Indicates recovery outside QC Limits

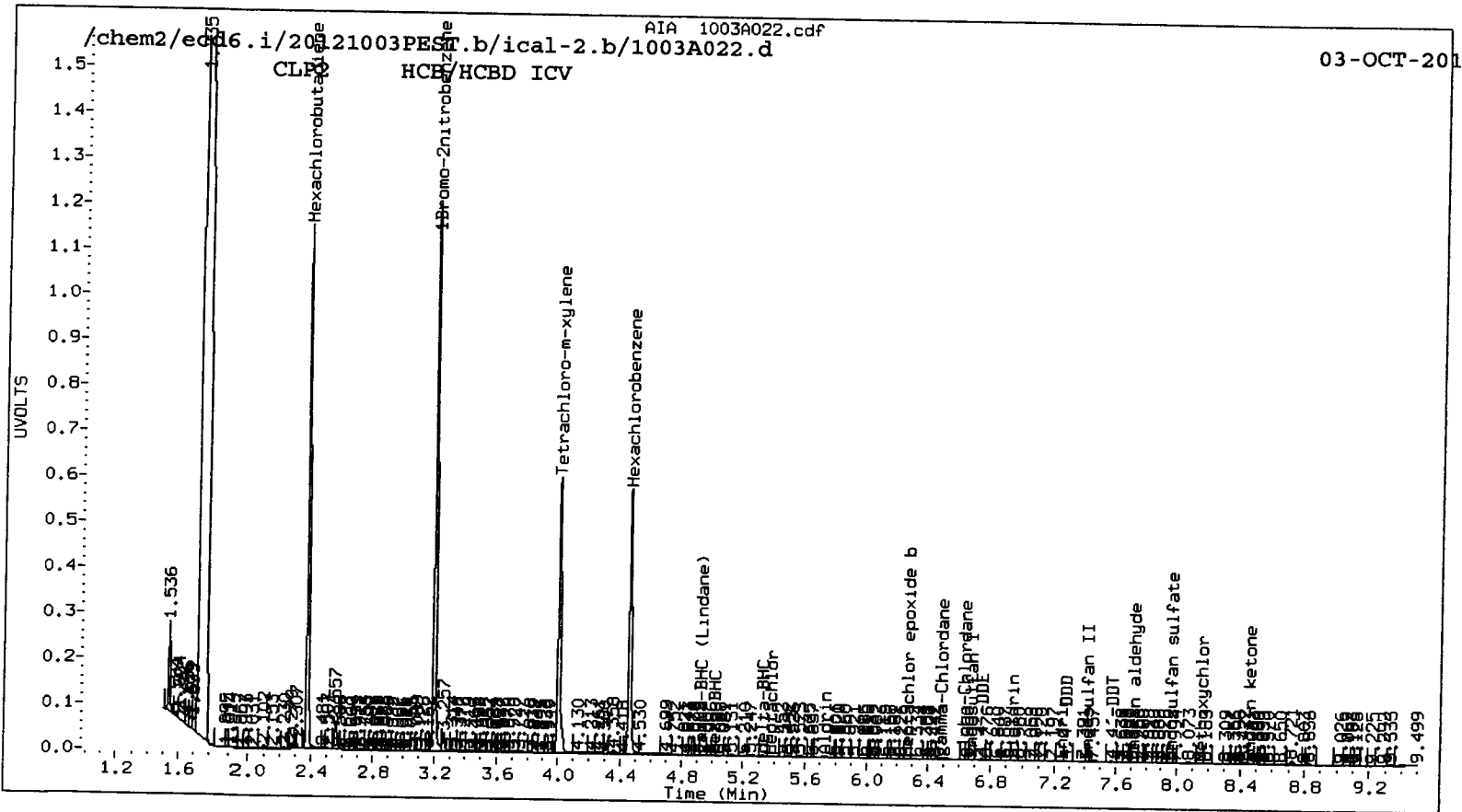
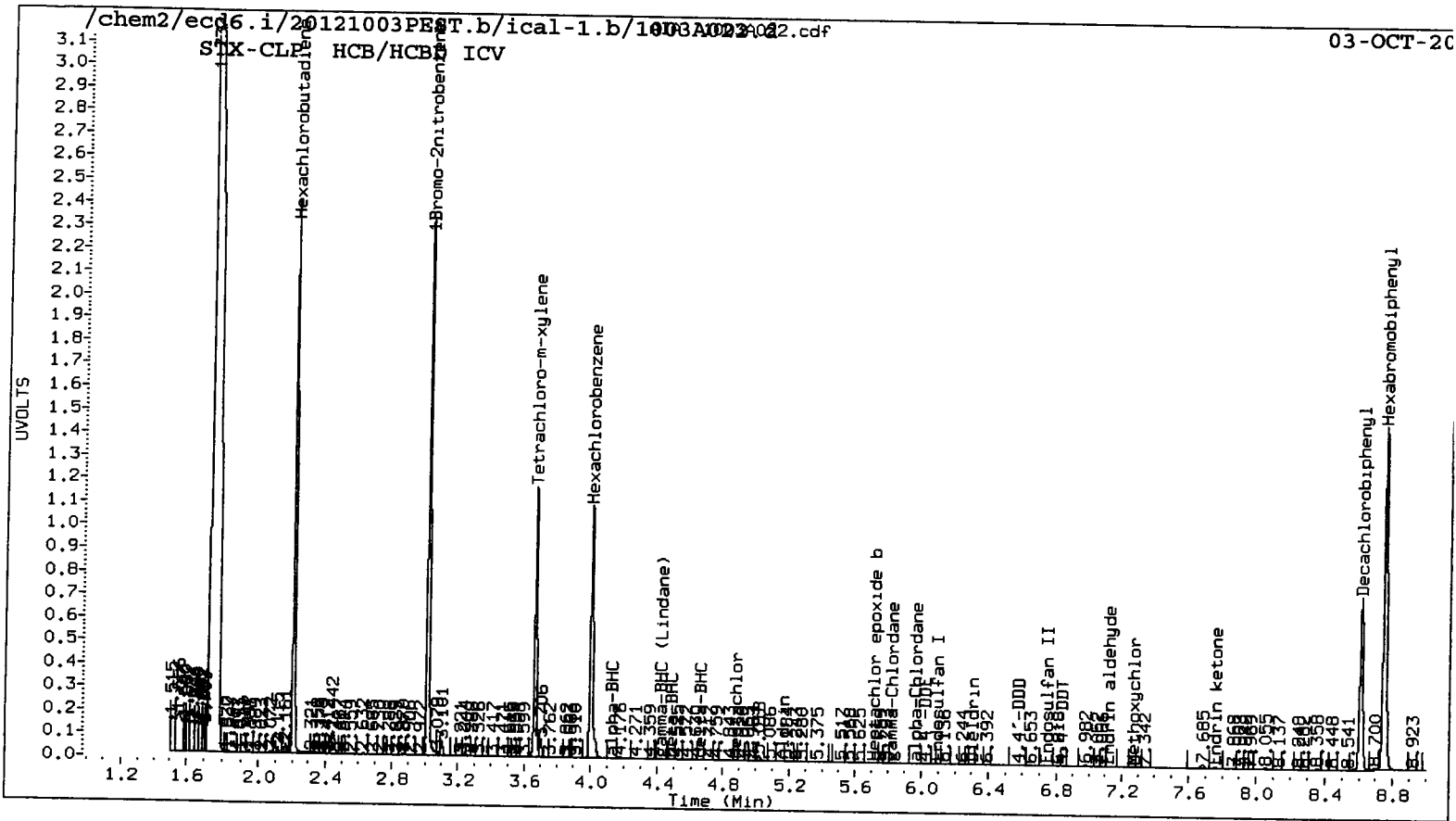
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4108826	1.2
Hexabromobiphenyl	3748709	3854595	2.8

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	21570699	2.6
Hexabromobiphenyl	14864285	15483729	4.2

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col			
			Shift	Height	Amount			Shift	Height	Amount	
=====											



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

AR 10/4/2012

Data file 1: /chem2/ecd6.i/20121003PEST.b/1004-1.b/1004A005.d ARI ID: WND ICV  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1004-2.b/1004A005.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 04-OCT-2012 10:37  
 Compound Sublist: WND Report Date: 10/04/2012 11:22  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

Soppb

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.736	-0.002 365401	1.735 0.007 101180093	0.0000	0.0000	---	Hexachloroethane
3.015	0.000 3999972	3.195 0.001 21702262	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.627	0.000 2271967	6.203 0.000 13502749	48.5760	48.7908	0.4	Oxychlorthane
5.703	0.000 1639088	6.453 0.000 9289814	47.6801	46.4169	2.7	2,4-DDE
5.951	0.000 2637069	6.560 -0.001 15419993	47.3395	46.6591	1.4	trans-Nonachlor
6.191	0.000 1478651	6.939 0.001 8326433	48.0151	46.7734	2.6	2,4-DDD
6.429	0.000 1715418	7.227 0.001 9477142	49.2089	48.7989	0.8	2,4-DDT
6.566	0.000 2798568	7.286 0.000 15975934	47.4288	46.2341	2.6	cis-Nonachlor
7.437	0.000 1794119	8.433 0.000 8682821	45.6794	45.4479	0.5	Mirex
8.750	0.000 3761538	10.106 0.000 15894190	80.0000	80.0000	0.0	Hexabromobiphenyl
3.670	0.000 1999464	4.007 0.000 12936536	33.7353	34.2954	1.6	Tetrachloro-m-xylene
8.610	0.000 1604074	9.565 -0.001 7956634	31.9087	32.5551	2.0	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	84.3	85.7	84.3~	150- 0
Decachlorobiphenyl	79.8	81.4	79.8~	150- 0

~ Indicates recovery outside QC Limits

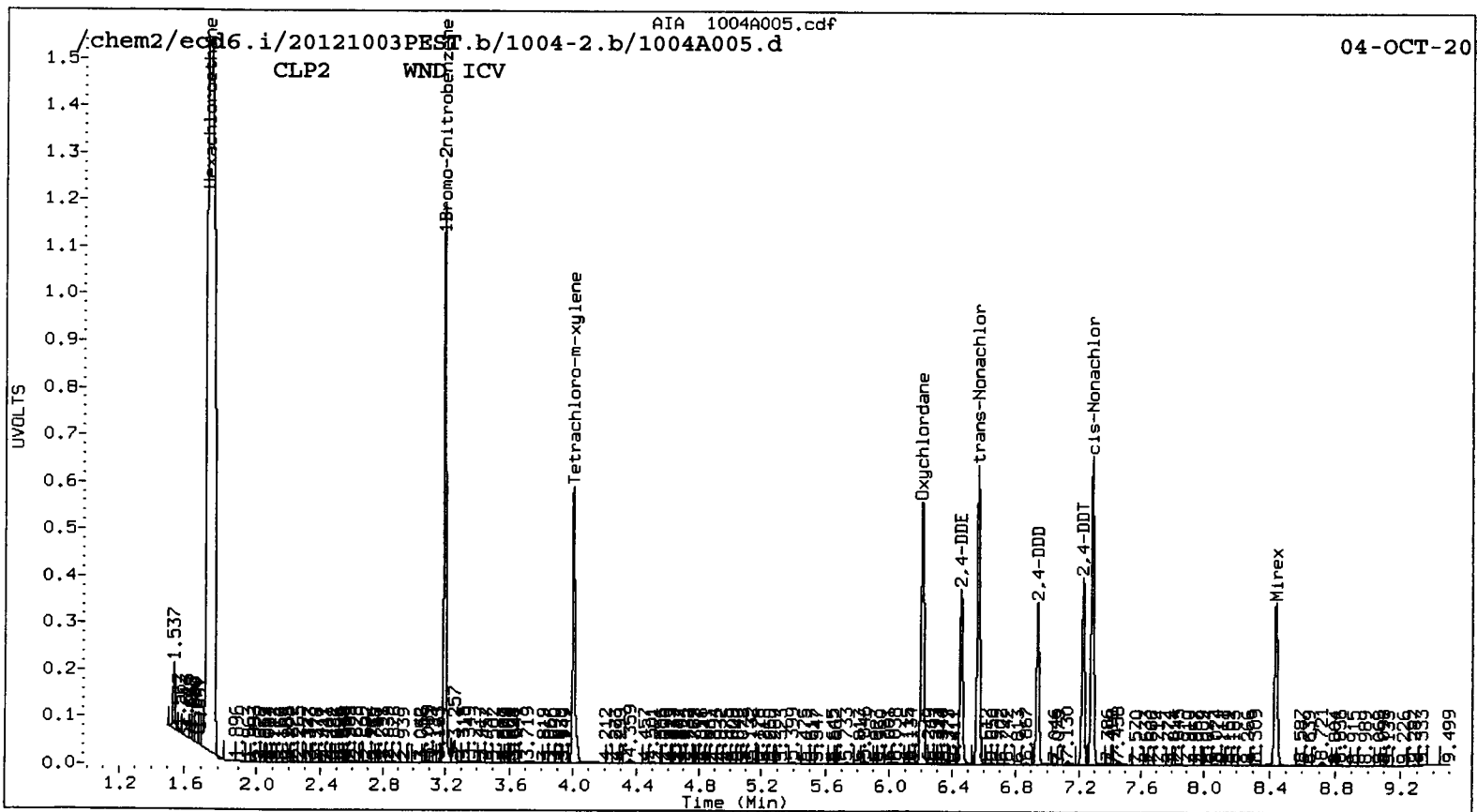
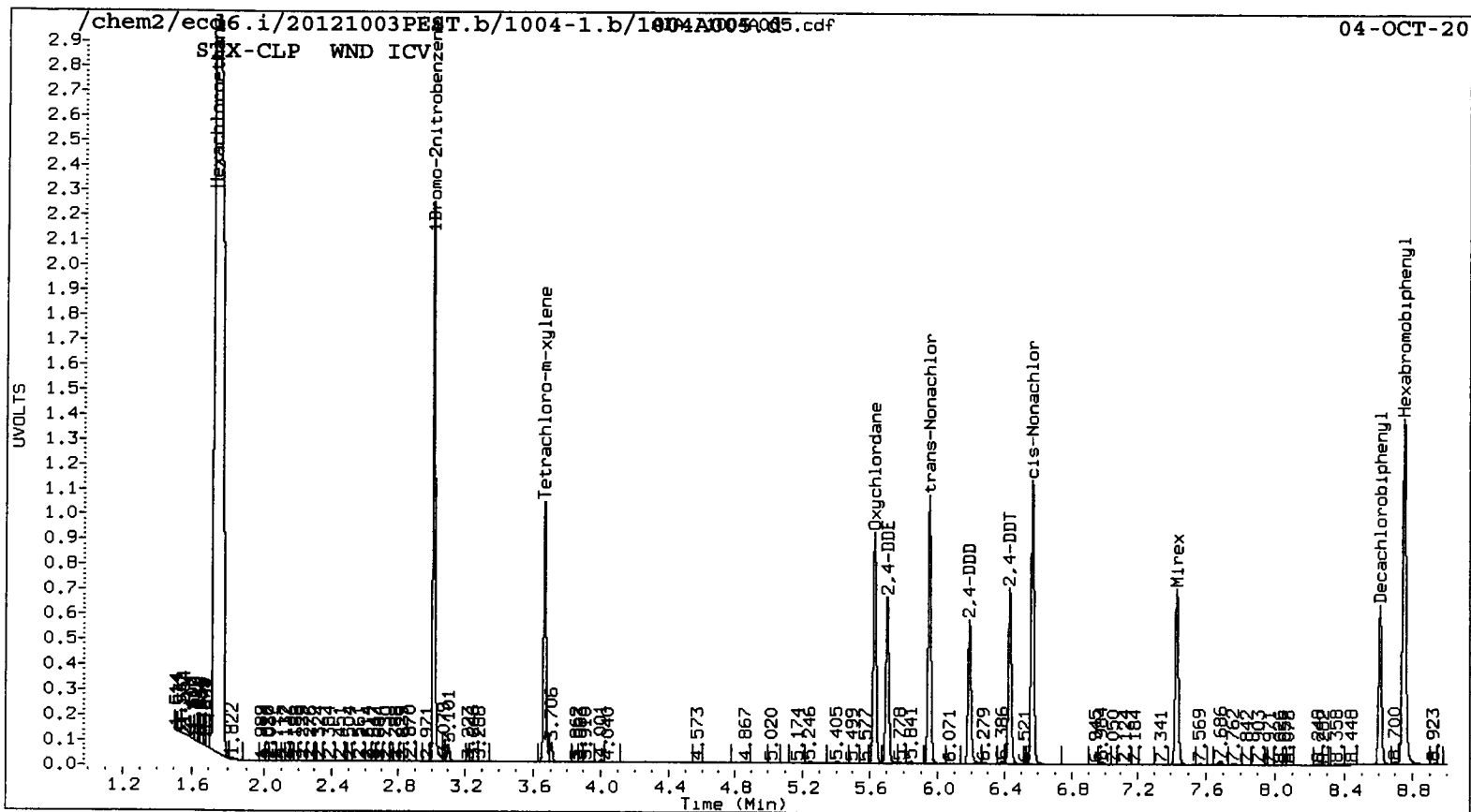
## INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	3999972	-1.5
Hexabromobiphenyl	3748709	3761538	0.3

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	21702262	3.2
Hexabromobiphenyl	14864285	15894190	6.9

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



UP58: 02071

AR 10/4/2012

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

INDA ICV

Data file 1: /chem2/ecd6.i/20121003PEST.b/1004-1.b/1004A015.d ARI ID: 2023-1 ASSAY  
Data file 2: /chem2/ecd6.i/20121003PEST.b/1004-2.b/1004A015.d Client ID:  
Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 04-OCT-2012 13:35  
Compound Sublist: INDA Report Date: 10/04/2012 15:44  
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
Operator: ar Dilution Factor: 1.000

40ppb

RT	STX-CLP Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.014	0.000 4336099	3.195	0.000 21737033	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.146	-0.001 3389959	4.584	-0.001 19607978	41.9508	41.3498	1.4	alpha-BHC
4.496	-0.001 1354216	5.006	-0.001 7868358	39.6451	40.9976	3.4	beta-BHC
4.662	-0.001 3173342	5.313	-0.001 18048951	48.7180	47.9811	1.5	delta-BHC
4.423	-0.001 3082889	4.936	-0.001 17527645	41.5254	40.8876	1.5	gamma-BHC (Lindane)
4.861	-0.001 2626366	5.396	-0.001 14723586	39.0177	37.5139	3.9	Heptachlor
5.147	-0.002 2765436	5.734	-0.001 15097733	40.2298	39.1199	2.8	Aldrin
5.722	-0.001 2511875	6.292	-0.001 12972153	37.9076	37.2862	1.7	Heptachlor epoxide
6.098	-0.001 2296090	6.679	-0.001 11388982	37.4436	36.4544	2.7	Endosulfan I
6.321	-0.001 2517394	6.937	-0.002 12624368	39.7153	38.1981	3.9	Dieldrin
6.026	-0.001 2318442	6.743	-0.002 12039917	39.6147	38.2068	3.6	4,4'-DDE
6.539	-0.001 2147321	7.226	-0.002 9854111	39.0054	39.0490	0.1	Endrin
6.745	-0.001 2094741	7.415	-0.001 10265980	39.4035	40.6987	3.2	Endosulfan II
6.583	-0.001 1943198	7.282	-0.001 9732622	40.4240	40.8371	1.0	4,4'-DDD
7.513	-0.001 1774757	7.959	-0.001 8684657	39.6628	40.9454	3.2	Endosulfan sulfate
6.840	-0.002 1852136	7.570	-0.001 8863356	38.3198	39.0799	2.0	4,4'-DDT
7.270	-0.001 1037293	8.155	-0.004 3896702	43.8958	40.2707	8.6	Methoxychlor
7.766	0.000 2013651	8.447	-0.002 8217450	38.4822	38.7848	0.8	Endrin ketone
7.123	0.000 1679565	7.714	-0.001 7942323	39.1764	39.9963	2.1	Endrin aldehyde
5.842	-0.001 2581745	6.474	-0.002 13702530	39.1833	37.7540	3.7	gamma-Chlordane
5.966	-0.001 2480664	6.613	-0.002 12856138	39.0109	37.9913	2.6	alpha-Chlordane
2.192	-0.019 2569	2.362	-0.015 6076	<del>0.0262</del>	<del>0.0129</del>	68.3*	Hexachlorobutadiene
4.000	-0.002 28731	4.458	0.000 5427	<del>0.4066</del>	<del>0.0133</del>	187.3*	Hexachlorobenzene
8.750	0.000 4029095	10.105	0.000 14626985	80.0000	80.0000	0.0	Hexabromobiphenyl
3.669	-0.001 2185035	4.006	-0.001 13004752	34.0084	34.4211	1.2	Tetrachloro-m-xylen
8.610	-0.001 1722941	9.565	-0.002 7427466	31.9973	33.0228	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	85.0	86.1	85.0~	115- 0
Decachlorobiphenyl	80.0	82.6	80.0~	115- 0

~ Indicates recovery outside QC Limits



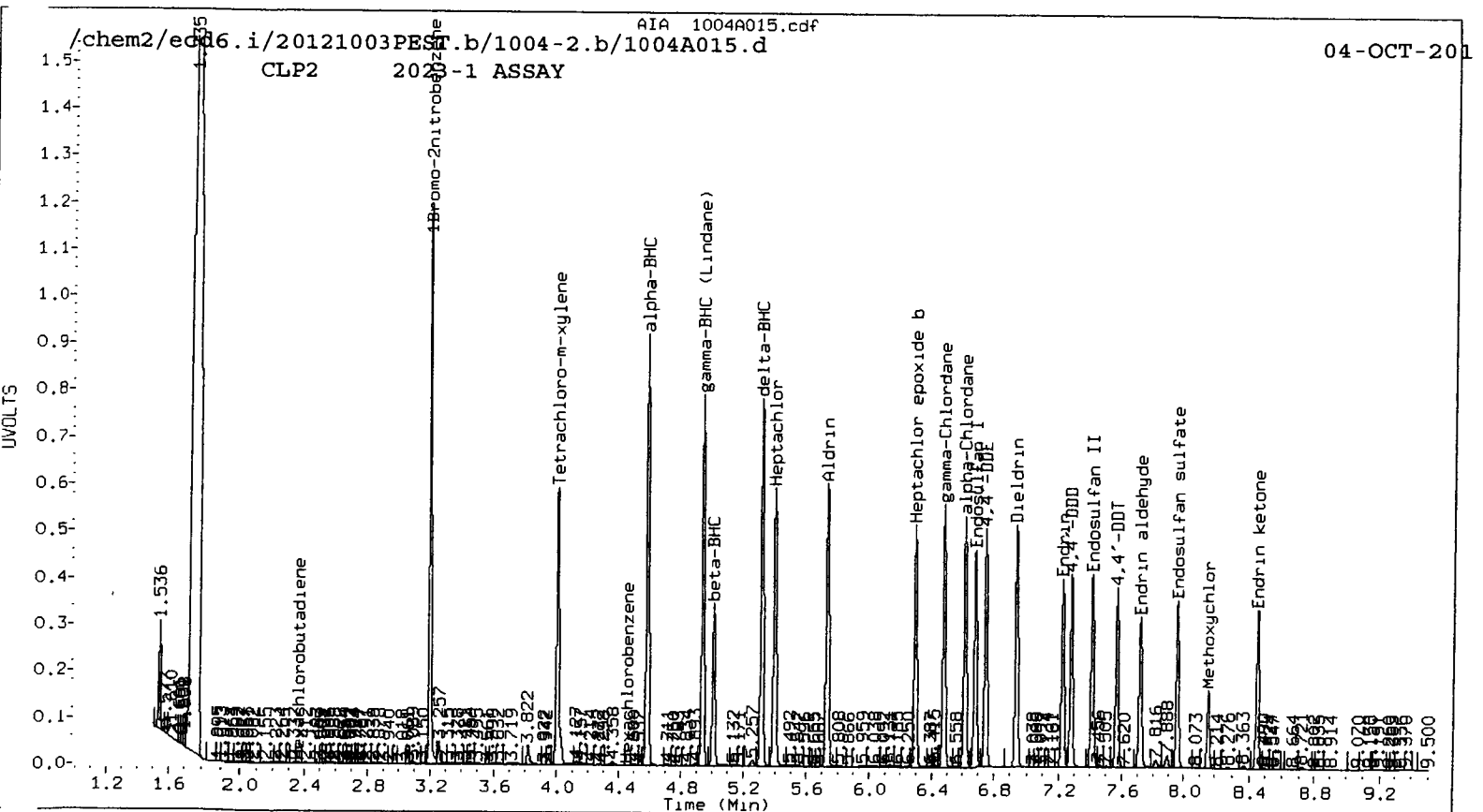
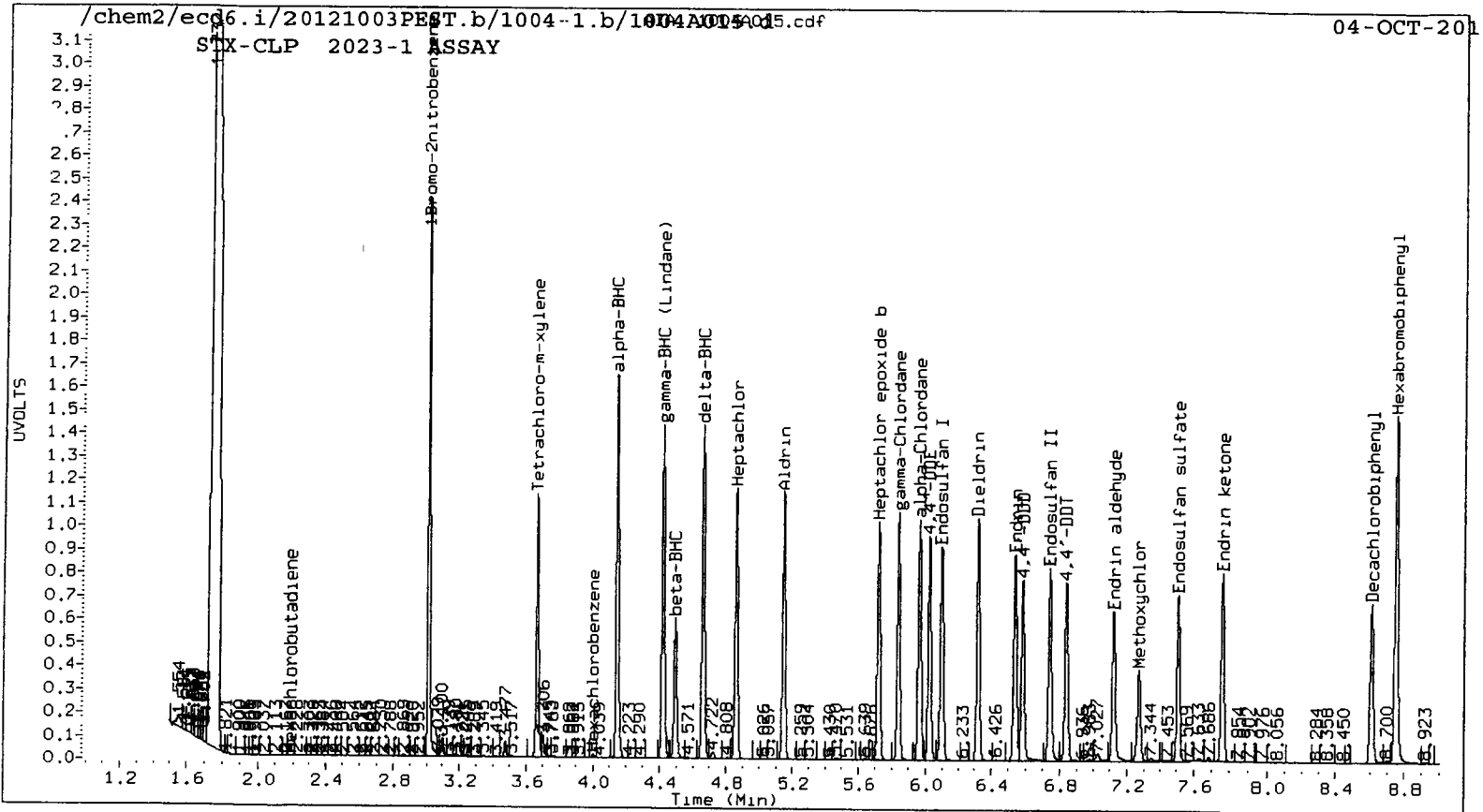
## INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4336099	6.8
Hexabromobiphenyl	3748709	4029095	7.5

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	21737033	3.3
Hexabromobiphenyl	14864285	14626985	-1.6

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/1012-1.b/1012A006.d ARI ID: TOXAPH  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1012-2.b/1012A006.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 12-OCT-2012 12:41  
 Compound Sublist: TOXAPH Report Date: 10/17/2012 14:45  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

*YZ 10/17/12*

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.009	0.000 5080195	3.190 0.000 25258671	3.190	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.746	0.000 4970606	10.098 -0.002 15955179	10.098	80.0000	80.0000	0.0	Hexabromobiphenyl
3.666	-0.004 1976212	4.003 -0.005 11619834	4.003	26.2531	26.4675	0.8	Tetrachloro-m-xylen
8.606	-0.005 1739918	9.559 -0.008 7008012	9.559	26.1920	28.5641	8.7	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	65.6	66.2	65.6~	150- 0
Decachlorobiphenyl	65.5	71.4	65.5~	150- 0

~ Indicates recovery outside QC Limits

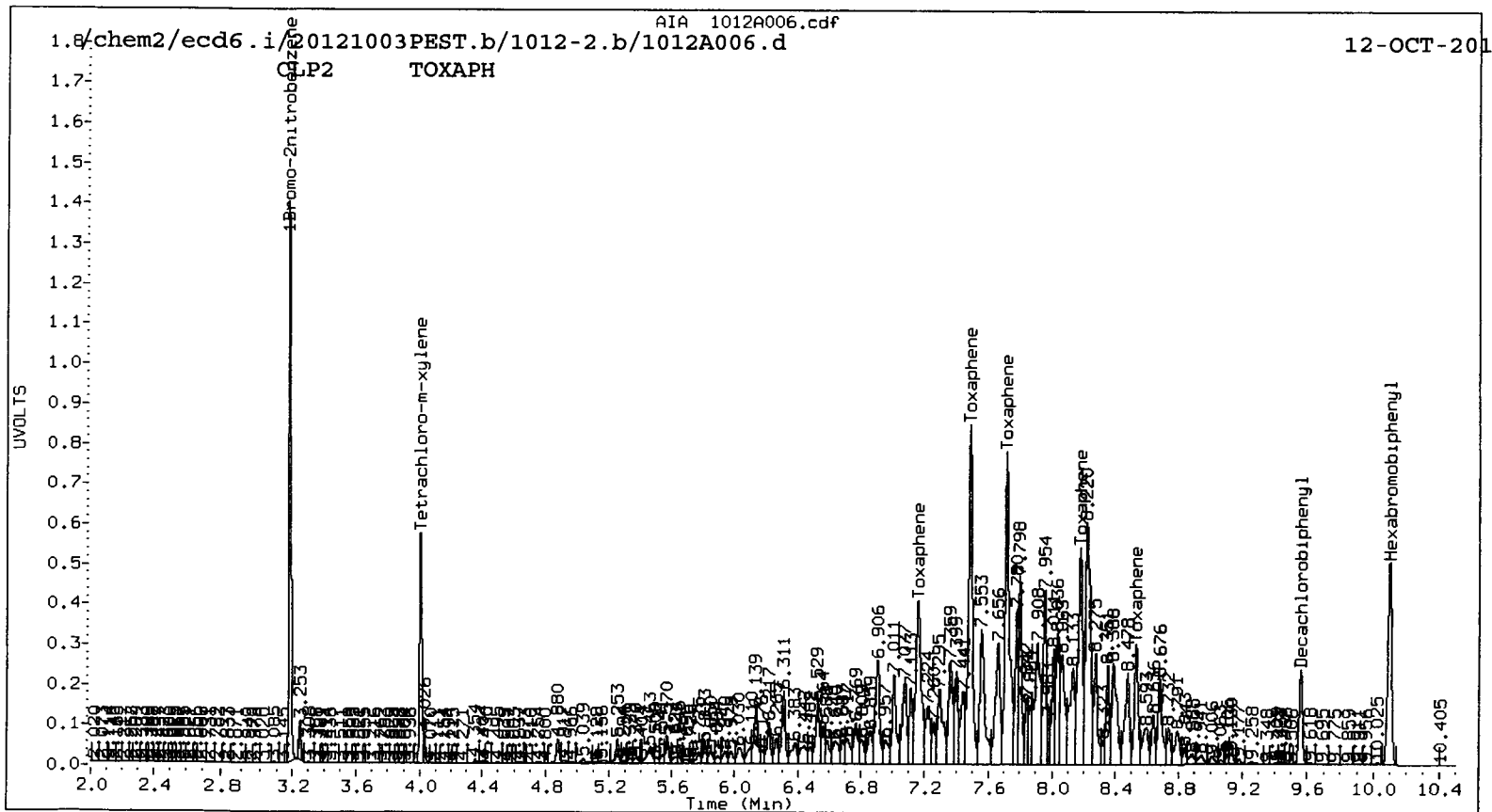
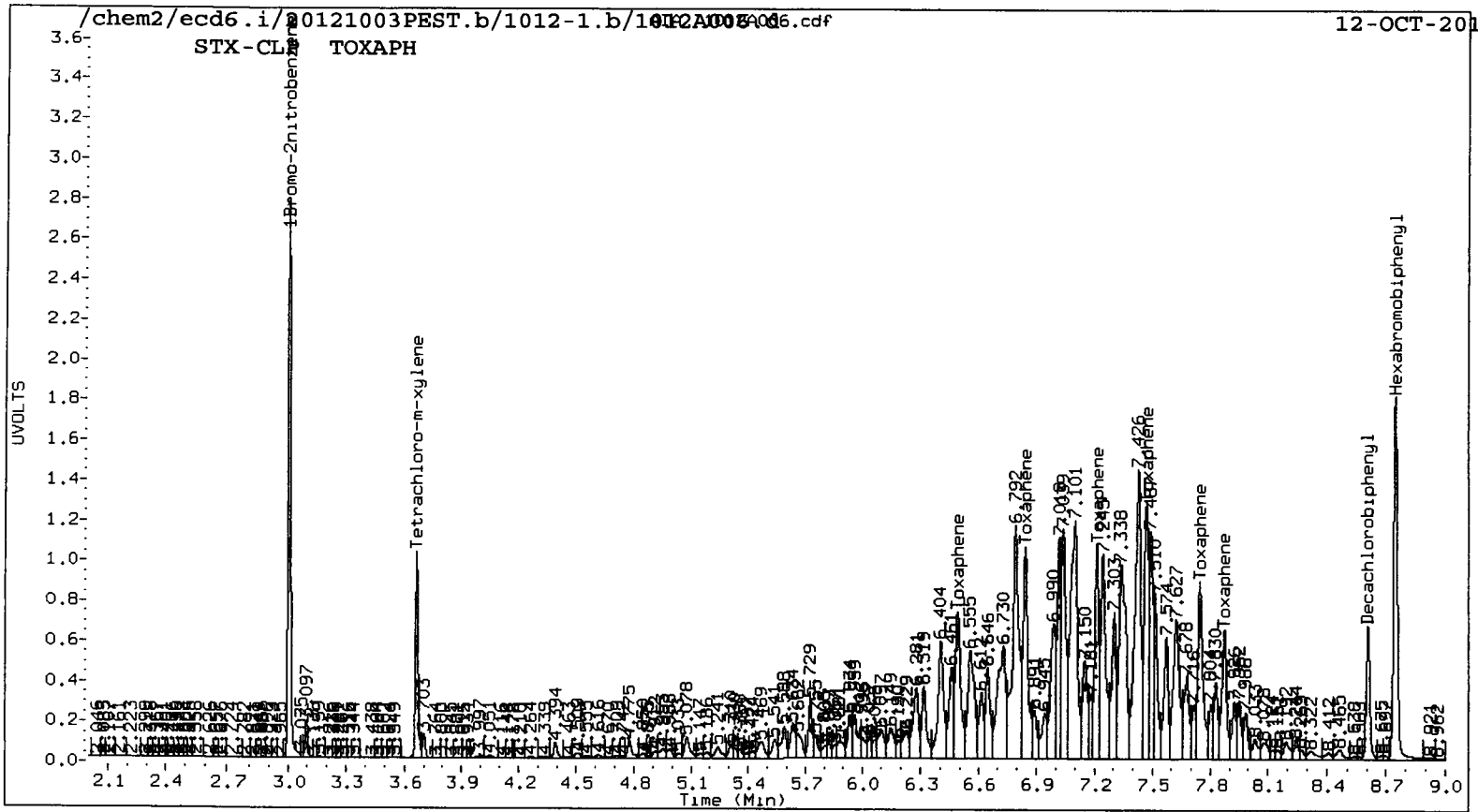
## INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	5080195	25.1
Hexabromobiphenyl	3748709	4970606	32.6

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	25258671	20.1
Hexabromobiphenyl	14864285	15955179	7.3

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
====	====	====	====	====	====	====	====	====	====	====
Toxaphene	1	6.490	0.000	2836464	2500.000	1	7.158	0.000	19673196	2500.000
Toxaphene	2	6.843	0.000	3787438	2500.000	2	7.483	0.000	28530140	2500.000
Toxaphene	3	7.212	0.000	3066487	2500.000	3	7.713	0.000	30831903	2500.000
Toxaphene	4	7.466	0.000	3757792	2500.000	4	8.180	0.000	21297174	2500.000
Toxaphene	5	7.745	0.000	3214489	2500.000	5	8.527	0.000	9514481	2500.000
Toxaphene	6	7.874	0.000	2200771	2500.000	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



**Pesticide Raw Data  
Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: VR58**

**GC Analyst Notes / Corrective Action Log**

RI Project ID: VR38/VR58 Client ID: Another DEA

RI SOP: 403S(PCB) 405S(Herb) 407S(TPH-D) 409S(HCID) 412S(PCP) 423S(Pest)  
427S(Dir Inj) 428S(EPH) 432S(EDB) Other

Parameter(s): Pest

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8  
FID-9 ECD-1 ECD-5 ECD-6 ECD-7

Dates: Curve: 10/03/12 Analysis Start: 11/20/12

Method Blank In Control? YES / NO

Cal Meets RF & %RSD Criteria? YES / NO LCS/LCSD Recovery In Control? YES / NO

Cal Meets RF & %RSD Criteria? YES / NO Surrogate Recovery In Control? YES / NO

Manual Integrations for ICal? YES / NO Manual Integrations for Samples? YES / NO

Internal Standard Meets Criteria? YES / NO / NA Special Analysis Criteria Met? YES / NO / NA

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):**

- Samples were run @ 5x dilution due to very dark color of the extracts
  - CALs: HCB & DDEP were high on C18 column in opening conc. C18 values reported.
  - Samples were run twice, on 11/20/12 and 11/21/12. Both times closing concs and DDT breakdown failed due to matrix interference.  
DDT break down = 69%.  
First run reported due to better opening concs.
  - Sample E: HCB IS failed conc on C18 column, C18 values reported.
- Additional Details on Reverse: Yes / No Site 6 MS/MSD - DDT BKG Evidence from matrix in DDT - wide RPDs.

Analyst: YZ Date: 11/27/12

Reviewer: B Date: 11/27/12





Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

*YE 11/27/12*

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A048.d ARI ID: INDAE  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A048.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 01:37  
 Compound Sublist: INDA Report Date: 11/27/2012 12:33  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.003	-0.007 4398580	3.185 -0.006 24031979	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.135	-0.013 1784919	4.573 -0.012 10650290	21.7746	20.3148	6.9	alpha-BHC
4.499	0.002 702533	5.003 -0.004 3983059	20.2747	18.7716	7.7	beta-BHC
4.663	0.000 1421148	5.308 -0.007 8203457	21.5079	19.7254	8.6	delta-BHC
4.412	-0.012 1557348	4.924 -0.013 9316163	20.6790	19.6570	5.1	gamma-BHC (Lindane)
4.846	-0.016 1392326	5.382 -0.016 8302703	20.3908	19.1342	6.4	Heptachlor
5.131	-0.017 1470288	5.720 -0.016 8480694	21.0850	19.8760	5.9	Aldrin
5.704	-0.019 1364917	6.277 -0.016 7338876	20.3059	19.0799	6.2	Heptachlor epoxide b
6.081	-0.019 1368768	6.664 -0.016 6554967	22.0042	18.9778	14.8	Endosulfan I
6.303	-0.020 2696838	6.922 -0.017 13557633	41.9419	37.1045	12.2	Dieldrin
6.016	-0.011 2397787	6.733 -0.013 13148474	40.3885	37.7401	6.8	4,4'-DDE
6.520	-0.020 2088764	7.211 -0.017 9678393	37.1442	40.2347	8.0	Endrin
6.729	-0.017 2216822	7.402 -0.015 10629095	40.8234	44.2061	8.0	Endosulfan II
6.572	-0.012 2059188	7.272 -0.011 10266476	41.9365	45.1910	7.5	4,4'-DDD
7.494	-0.020 1824947	7.945 -0.015 8525189	39.9272	42.1660	5.5	Endosulfan sulfate
6.827	-0.015 1884258	7.558 -0.013 8472914	38.1650	39.1916	2.7	4,4'-DDT
7.257	-0.013 4325241	8.143 -0.016 16621519	179.1867	180.2056	0.6	Methoxychlor
7.747	-0.020 2548198	8.432 -0.017 10200616	47.6741	50.5075	5.8	Endrin ketone
7.104	-0.019 1753817	7.700 -0.015 8195097	40.0484	43.2944	7.8	Endrin aldehyde
5.827	-0.015 1375378	6.461 -0.015 7342248	20.5777	18.2979	11.7	gamma-Chlordane
5.950	-0.017 1297869	6.599 -0.016 6805245	20.1204	18.1898	10.1	alpha-Chlordane
2.199	-0.011 2214288	2.367 -0.010 10170983	22.2889	19.4935	13.4	Hexachlorobutadiene
3.998	-0.004 1521000	4.452 -0.006 11385117	21.2186	25.2362 ✓	17.3	Hexachlorobenzene
8.741	-0.005 4115604	10.087 -0.011 13942788	80.0000	80.0000	0.0	Hexabromobiphenyl
3.662	-0.008 2413275	3.999 -0.008 16851553	37.0273	40.3435	8.6	Tetrachloro-m-xylene
8.593	-0.017 2174248	9.546 -0.020 10421241	39.5299	48.6069 ✓	20.6	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

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	92.6	100.9	92.6~	115- 0
Decachlorobiphenyl	98.8	121.5	98.8~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

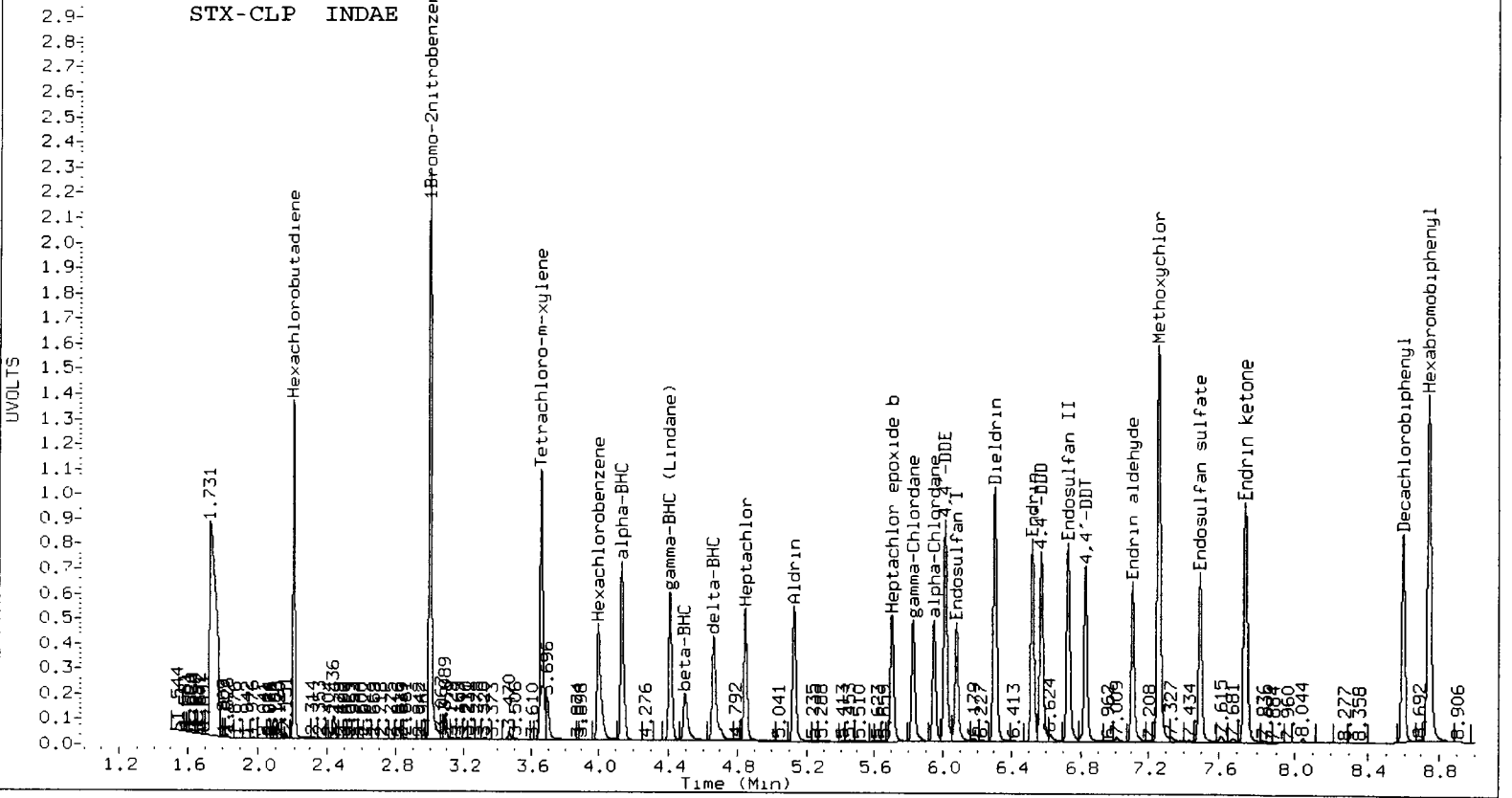
Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4398580	8.3
Hexabromobiphenyl	3748709	4115604	9.8

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	24031979	14.3
Hexabromobiphenyl	14864285	13942788	-6.2

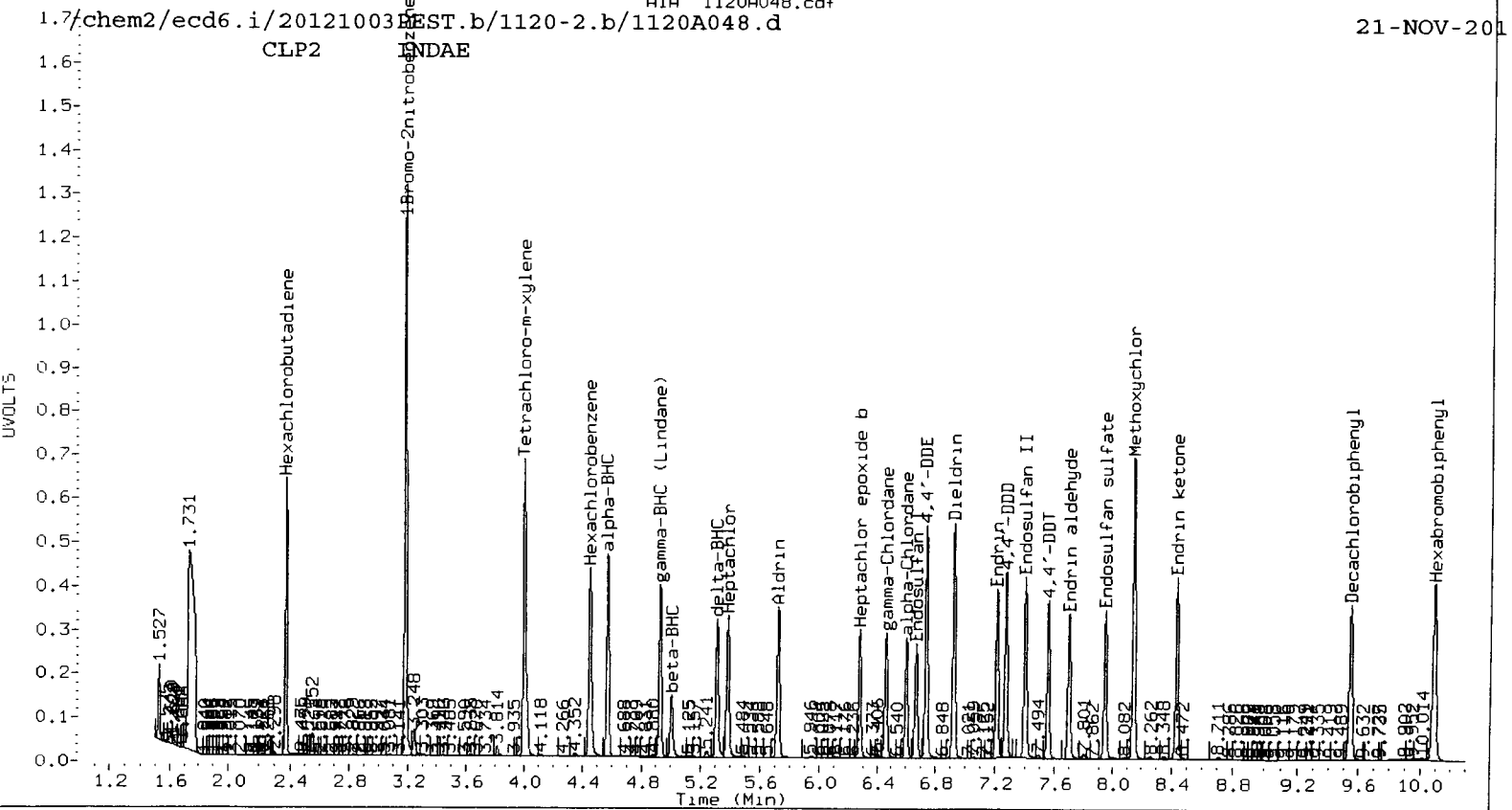
\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 03-OCT-2012  
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										

STX-CLP INDAE



CLP2 INDAE



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A050.d ARI ID: WNDE  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A050.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 02:13  
 Compound Sublist: WND Report Date: 11/27/2012 12:33  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.731	-0.007 58109	1.730 0.002 21340427	1.730	0.002 21340427	0.0000	0.0000	---	Hexachloroethane
3.003	-0.007 4307713	3.185 -0.006 23669772	3.185	-0.006 23669772	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.610	-0.017 1893804	6.188 -0.015 10743765	6.188	-0.015 10743765	37.5728	35.5945	5.4	Oxychlorane
5.694	-0.009 1567901	6.442 -0.011 8087468	6.442	-0.011 8087468	42.3226	37.0504	13.3	2,4-DDE
5.935	-0.016 2404615	6.546 -0.014 12210529	6.546	-0.014 12210529	40.0559	41.7183	4.1	trans-Nonachlor
6.182	-0.008 1335664	6.929 -0.010 7153947	6.929	-0.010 7153947	40.2465	45.3759	12.0	2,4-DDD
6.417	-0.012 1330541	7.215 -0.012 6375999	7.215	-0.012 6375999	35.4177	37.0698	4.6	2,4-DDT
6.551	-0.015 2565278	7.272 -0.014 12175142	7.272	-0.014 12175142	40.3422	39.7841	1.4	cis-Nonachlor
7.419	-0.017 1608777	8.418 -0.016 6215810	8.418	-0.016 6215810	38.0088	36.7358	3.4	Mirex
8.741	-0.005 4053655	10.087 -0.011 14076646	10.087	-0.011 14076646	80.0000	80.0000	0.0	Hexabromobiphenyl
3.663	-0.007 1918716	4.000 -0.008 13894209	4.000	-0.008 13894209	30.0602	33.7725	11.6	Tetrachloro-m-xylene
8.594	-0.017 1774201	9.546 -0.020 8666199	9.546	-0.020 8666199	32.7496	40.0366	20.0	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	75.2	84.4	75.2~	150- 0
Decachlorobiphenyl	81.9	100.1	81.9~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

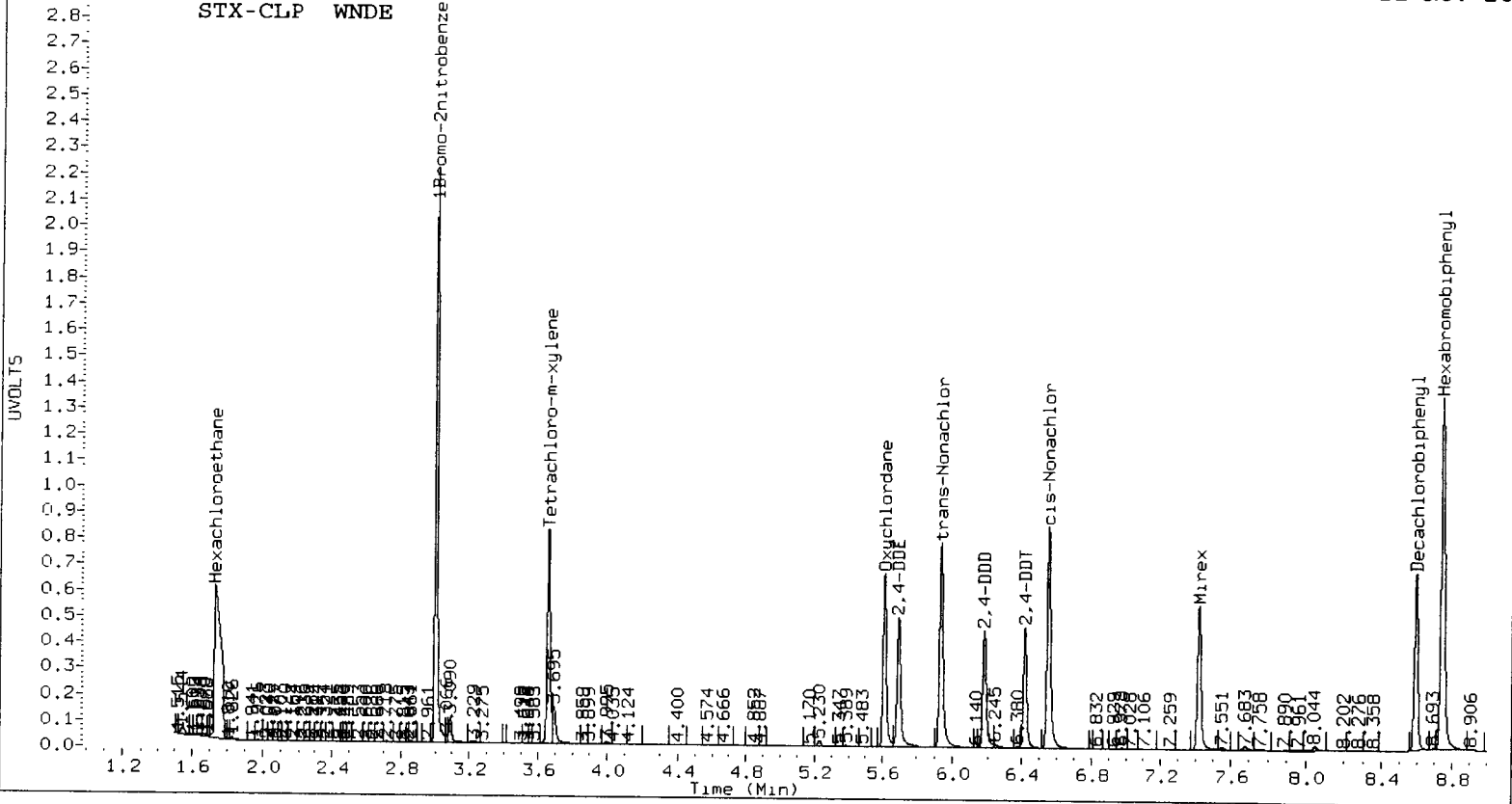
Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4307713	6.1
Hexabromobiphenyl	3748709	4053655	8.1

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	23669772	12.5
Hexabromobiphenyl	14864285	14076646	-5.3

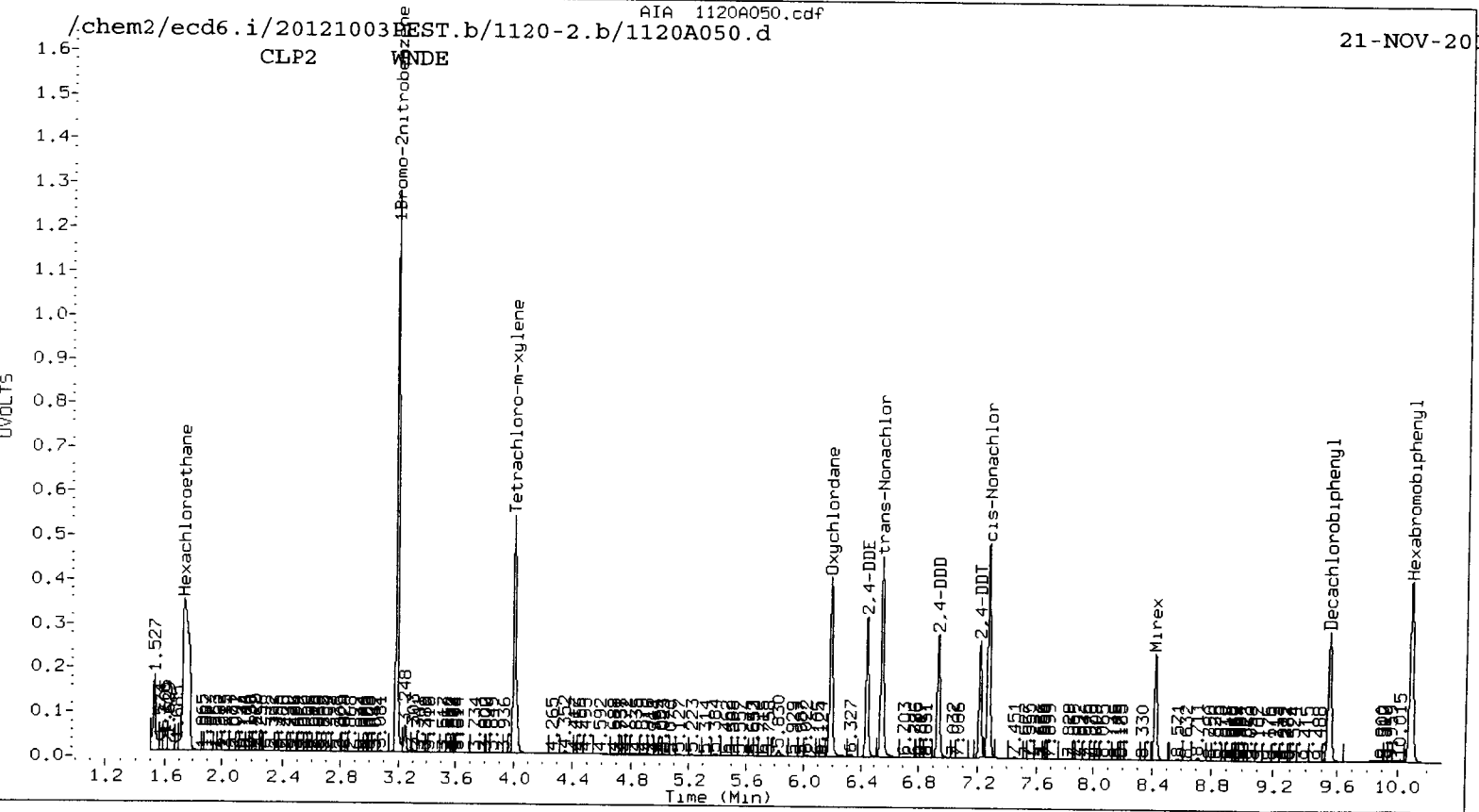
\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										

STX-CLP WNDE



CLP2 WNDE



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A053.d ARI ID: VR38MBS1  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A053.d Client ID: VR38MBS1  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 03:06  
 Compound Sublist: wpest Report Date: 11/27/2012 11:47  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL  
 Operator: ar Dilution Factor: 1.000

Y2 11/27/12

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.001	-0.009 4041180	3.183 -0.007 18893460	3.183	-0.007 18893460	80.0000	80.0000	IS 0.0	1Bromo-2nitrobenzen
4.117	-0.030 8485	4.577 -0.008 51082	4.577	-0.008 51082	<del>0.1127</del>	<del>0.1239</del>	9.5	alpha-BHC
4.497	0.000 17527	5.032 0.026 94862	5.032	0.026 94862	0.5506	0.5687	3.2	beta-BHC
4.644	-0.019 2003	5.315 0.001 48691	5.315	0.001 48691	0.0330	0.1489	127.5*	delta-BHC
4.403	-0.021 7746	4.903 -0.033 163183	4.903	-0.033 163183	0.1120	0.4380	118.6*	gamma-BHC (Lindane)
4.866	0.005 2735	----	----	----	0.0436	0.0000	---	Heptachlor
5.153	0.005 3801	5.704 -0.032 785430	5.704	-0.032 785430	0.0593	2.3414	190.1*	Aldrin
5.722	-0.001 3453	6.244 -0.050 106916	6.244	-0.050 106916	0.0559	0.3536	145.4*	Heptachlor epoxide b
6.071	-0.029 3249	6.659 -0.021 65609	6.659	-0.021 65609	0.0568	0.2416	123.8*	Endosulfan I
6.281	-0.041 5935	6.910 -0.029 73281	6.910	-0.029 73281	0.1005	0.2551	87.0*	Dieldrin
6.009	-0.018 3533	6.753 0.008 64035	6.753	0.008 64035	0.0648	0.2338	113.2*	4,4'-DDE
6.539	-0.002 8003	7.232 0.004 135652	7.232	0.004 135652	0.1468	0.6422	125.6*	Endrin
----	----	7.376 -0.040 115158	7.376	-0.040 115158	0.0000	0.5454	---	Endosulfan II
6.585	0.001 7807	----	----	----	0.1640	0.0000	---	4,4'-DDD
7.502	-0.012 2673	7.941 -0.019 46152	7.941	-0.019 46152	0.0603	0.2600	124.7*	Endosulfan sulfate
6.841	-0.001 4413	7.563 -0.008 139836	7.563	-0.008 139836	0.0922	0.7366	155.5*	4,4'-DDT
7.235	-0.036 11099	8.170 0.012 79973	8.170	0.012 79973	0.4742	0.9874	70.2*	Methoxychlor
7.745	-0.021 20559	8.443 -0.006 194526	8.443	-0.006 194526	0.3967	1.0969	93.8*	Endrin ketone
7.099	-0.024 2880	7.720 0.005 82713	7.720	0.005 82713	0.0678	0.4976	152.0*	Endrin aldehyde
5.825	-0.018 27505	6.467 -0.009 130410	6.467	-0.009 130410	0.4479	0.4134	8.0	gamma-Chlordane
5.946	-0.021 3665	6.576 -0.039 48794	6.576	-0.039 48794	0.0618	0.1659	91.4*	alpha-Chlordane
2.211	0.001 49009	2.338 -0.039 1328340	2.338	-0.039 1328340	0.5370	3.2383	143.1*	Hexachlorobutadiene
3.989	-0.013 59335	4.444 -0.013 91271	4.444	-0.013 91271	0.9010	0.2573	111.1*	Hexachlorobenzene
5.604	-0.023 7847	6.215 0.012 28636	6.215	0.012 28636	0.1581	0.1189	28.4	Oxychlorane
----	----	6.425 -0.029 57059	6.425	-0.029 57059	0.0000	0.3275	---	2,4-DDE
5.977	0.026 3586	6.554 -0.007 45028	6.554	-0.007 45028	0.0607	0.1769	97.8*	trans-Nonachlor
6.153	-0.037 3302	6.930 -0.009 62299	6.930	-0.009 62299	0.1011	0.4543	127.2*	2,4-DDD
6.430	0.001 2170	----	----	----	0.0587	0.0000	---	2,4-DDT
----	----	----	----	----	0.0000	0.0000	---	cis-Nonachlor
7.428	-0.009 2485	8.407 -0.027 532995	8.407	-0.027 532995	0.0596	3.6219	193.5*	Mirex
8.732	-0.014 3990867	10.083 -0.015 12242758	10.083	-0.015 12242758	80.0000	80.0000	IS 0.0	Hexabromobiphenyl
----	----	1.691 -0.037 19681744	1.691	-0.037 19681744	<del>0.0000</del>	<del>0.0000</del>	---	Hexachloroethane
----	----	7.315 -0.021 53097	7.315	-0.021 53097	0.0000	3.1878	---	Kepona
3.658	-0.012 1595670	3.996 -0.012 9021135	3.996	-0.012 9021135	26.6479	27.4709	3.0	Tetrachloro-m-xylene
8.590	-0.021 1820710	9.543 -0.023 8139707	9.543	-0.023 8139707	34.1369	43.2372	23.5	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	66.6	68.7	66.6	42-112
Decachlorobiphenyl	85.3	108.1	85.3	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	4060064	4041180	-0.5
Hexabromobiphenyl	3748709	3990867	6.5

Column 2

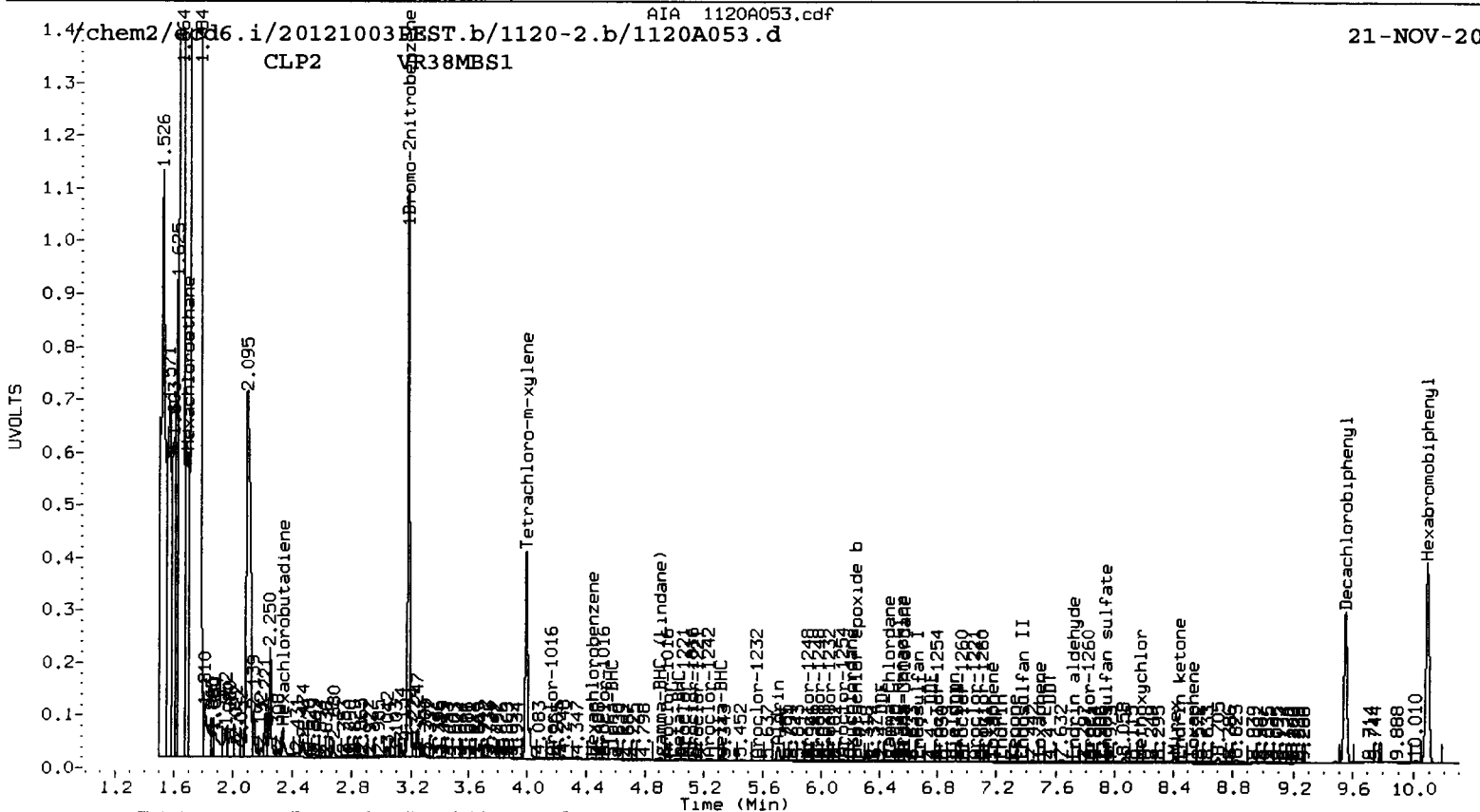
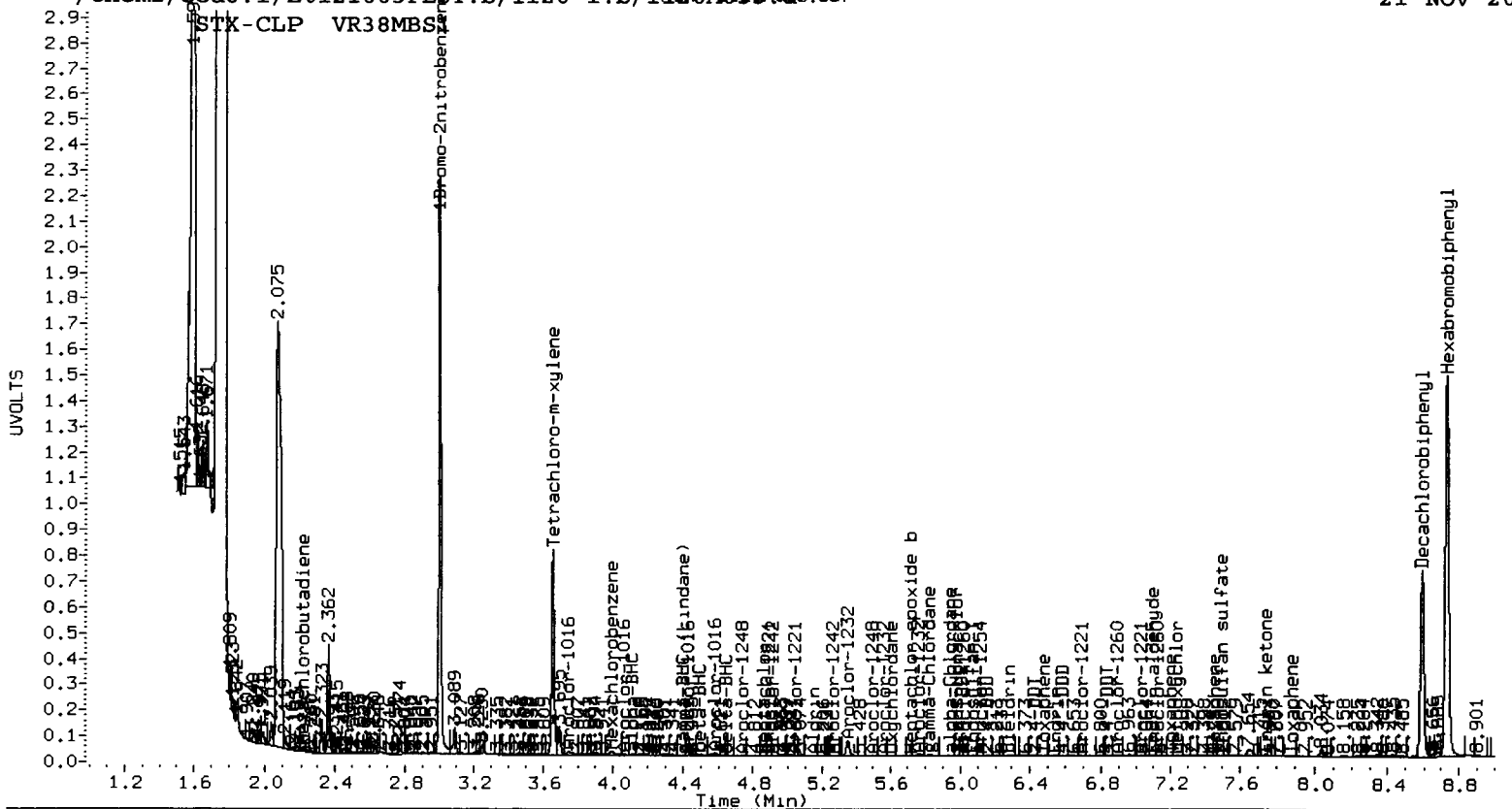
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	18893460	-10.2
Hexabromobiphenyl	14864285	12242758	-17.6

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 03-OCT-2012

<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col			
			Shift	Height	Amount			Shift	Height	Amount	
Toxaphene	1	6.476	-0.015	4312	4.7	1	7.174	0.015	66924	11.1	
Toxaphene	2	6.841	-0.002	4413	3.6	2	7.494	0.011	64999	7.4	
Toxaphene	3	7.198	-0.014	3137	3.2	3	7.720	0.007	82713	8.7	
Toxaphene	4	7.458	-0.008	1036	0.9	4	8.170	-0.009	79973	12.2	
Toxaphene	5	7.745	0.000	20559	19.9	5	8.532	0.005	246706	84.5	
Toxaphene	6	7.884	0.010	9375	13.3	NS	---			----	
Total STX-CLPAve (6 peaks): 7.597					Total CLP2Ave (5 peaks): 24.792					RPD = 106*	
Corrected Ave (4 peaks): 3.101					Corrected Ave (4 peaks): 9.870					RPD = 104*	





Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

YZ 11/27/12

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A054.d ARI ID: VR38LCSS1  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A054.d Client ID: VR38LCSS1  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 03:24  
 Compound Sublist: wpest Report Date: 11/27/2012 11:47  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	RT	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.001	-0.009 4278361	3.183 -0.007 20484734	3.183	-0.007 20484734	80.0000	80.0000	IS 0.0	1Bromo-2nitrobenzen
4.131	-0.016 1190998	4.570 -0.015 6638320	4.570	-0.015 6638320	14.9375	14.8549	0.6	alpha-BHC
4.487	-0.010 552400	4.996 -0.011 2976878	4.996	-0.011 2976878	16.3899	16.4591	0.4	beta-BHC
4.651	-0.011 455127	5.301 -0.013 2666978	5.301	-0.013 2666978	7.0815	7.5233	6.0	delta-BHC
4.407	-0.017 1179768	4.921 -0.015 6437098	4.921	-0.015 6437098	16.1055	15.9341	1.1	gamma-BHC (Lindane)
4.843	-0.019 1062971	5.379 -0.018 5891730	5.379	-0.018 5891730	16.0048	15.9291	0.5	Heptachlor
5.129	-0.020 1110073	5.718 -0.017 5841449	5.718	-0.017 5841449	16.3666	16.0612	1.9	Aldrin
5.701	-0.022 1203860	6.276 -0.018 6086416	6.276	-0.018 6086416	18.4131	18.5638	0.8	Heptachlor epoxide b
6.077	-0.022 1118739	6.662 -0.018 5416180	6.662	-0.018 5416180	18.4901	18.3962	0.5	Endosulfan I
6.300	-0.022 2366024	6.920 -0.019 11207407	6.920	-0.019 11207407	37.8309	35.9838	5.0	Dieldrin
6.009	-0.018 2191100	6.729 -0.017 10985399	6.729	-0.017 10985399	37.9441	36.9916	2.5	4,4'-DDE
6.517	-0.023 1989266	7.210 -0.018 8775129	7.210	-0.018 8775129	34.5308	38.7078	11.4	Endrin N
6.724	-0.022 2020528	7.399 -0.017 9308737	7.399	-0.017 9308737	36.3209	41.0794	12.3	Endosulfan II
6.565	-0.019 1826557	7.267 -0.016 8968436	7.267	-0.016 8968436	36.3113	41.8885	14.3	4,4'-DDD M
7.490	-0.023 1294337	7.942 -0.018 6058413	7.942	-0.018 6058413	27.6426	31.7954	14.0	Endosulfan sulfate
6.822	-0.020 1673289	7.555 -0.016 7398244	7.555	-0.016 7398244	33.0833	36.3109	9.3	4,4'-DDT
7.251	-0.020 4158185	8.140 -0.018 14387848	8.140	-0.018 14387848	168.1560	165.5163	1.6	Methoxychlor
7.743	-0.024 2336594	8.430 -0.019 9200931	8.430	-0.019 9200931	42.6723	48.3402	12.5	Endrin ketone
7.100	-0.023 1054552	7.697 -0.018 5013599	7.697	-0.018 5013599	23.5062	28.1044	17.8	Endrin aldehyde
5.823	-0.020 1171024	6.459 -0.017 6035042	6.459	-0.017 6035042	18.0126	17.6446	2.1	gamma-Chlordane
5.946	-0.021 1113575	6.597 -0.018 5529619	6.597	-0.018 5529619	17.7484	17.3396	2.3	alpha-Chlordane
2.197	-0.013 1212563	2.365 -0.012 5101133	2.365	-0.012 5101133	12.5486	11.4697	9.0	Hexachlorobutadiene
3.991	-0.012 895295	4.447 -0.011 7236778	4.447	-0.011 7236778	12.8407	18.8188	37.8	Hexachlorobenzene
5.614	-0.013 10179	6.213 0.010 37036	6.213	0.010 37036	0.1942	0.1418	31.2	Oxychlorane
----	----	----	----	----	0.0000	0.0000	---	2,4-DDE
----	----	6.528 -0.033 168396	6.528	-0.033 168396	0.0000	0.6163	---	trans-Nonachlor
6.171	-0.019 30092	----	----	----	0.8718	0.0000	---	2,4-DDD
6.407	-0.022 12757	7.210 -0.017 8775129	7.210	-0.017 8775129	0.3265	54.6541	197.6*	2,4-DDT
----	----	----	----	----	0.0060	0.0000	---	cis-Nonachlor
7.430	-0.006 16645	8.471 0.037 237774	8.471	0.037 237774	0.3781	1.5054	119.7*	Mirex
8.731	-0.015 4216194	10.082 -0.016 13140209	10.082	-0.016 13140209	80.0000	80.0000	IS 0.0	Hexabromobiphenyl
1.701	-0.037 3000	1.696 -0.032 532869	1.696	-0.032 532869	0.0000	0.0000	---	Hexachloroethane
6.565	-0.016 1826557	----	----	----	316.2185	0.0000	---	Kepone
3.658	-0.012 1549308	3.996 -0.012 8002925	3.996	-0.012 8002925	24.4393	22.4772	8.4	Tetrachloro-m-xylene
8.589	-0.021 1776157	9.544 -0.023 8365360	9.544	-0.023 8365360	31.5218	41.4009	27.1	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	61.1	56.2	56.2	42-112	
Decachlorobiphenyl	78.8	103.5	78.8	59-123	
4,4'-DDE	0.0	0.0	0.0	0- 0	
Endrin	1381233.4	967694.8	967694.8	10-200	
4,4'-DDD	0.0	0.0	0.0	0- 0	
4,4'-DDT	1323331.5	907771.5	907771.5	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

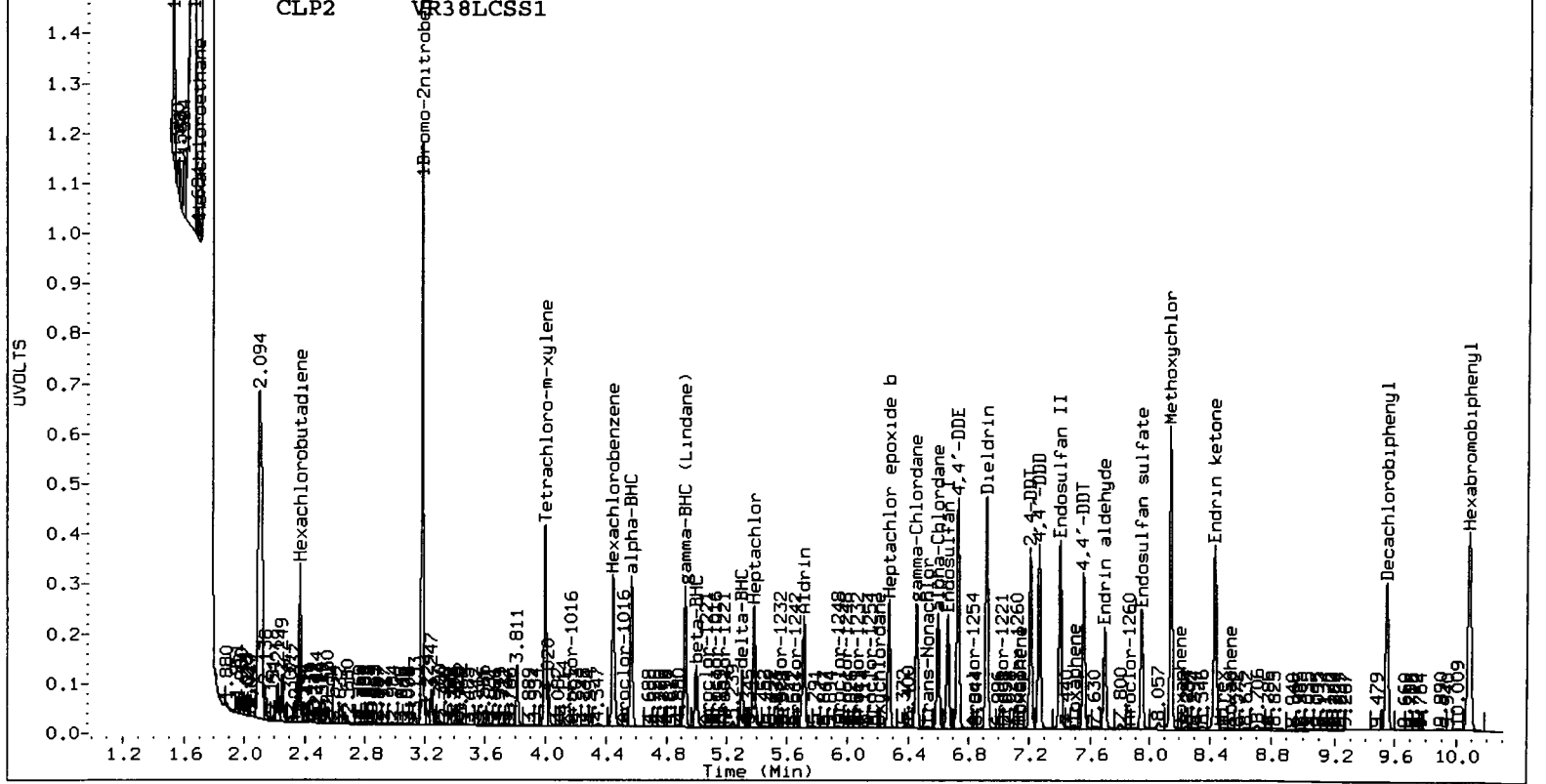
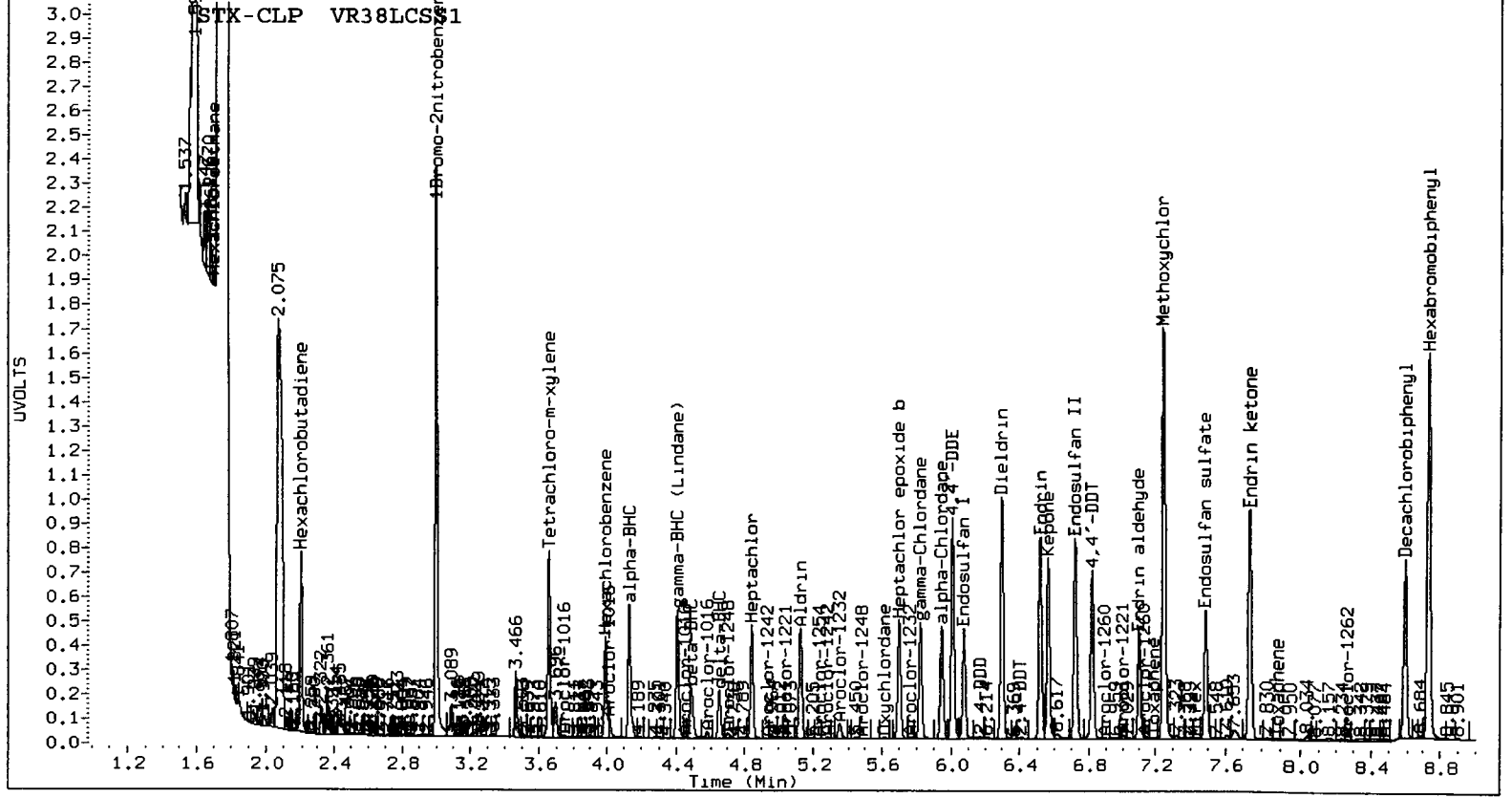
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4278361	5.4
Hexabromobiphenyl	3748709	4216194	12.5

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	20484734	-2.6
Hexabromobiphenyl	14864285	13140209	-11.6

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col				
			Shift	Height	Amount			Shift	Height	Amount		
Toxaphene	1	6.517	0.027	1989266	2067.0	1	7.145	-0.013	103697	16.0		
Toxaphene	2	6.822	-0.022	1673289	1302.1	2	7.490	0.007	313027	33.3		
Toxaphene	3	7.188	-0.024	21093	20.3	3	7.697	-0.016	5013599	493.6		
Toxaphene	4	7.490	0.025	1294337	1015.2	4	8.202	0.023	81517	11.6		
Toxaphene	5	7.743	-0.002	2336594	2142.4	5	8.529	0.003	191694	61.2		
Toxaphene	6	7.883	0.009	6251	8.4	NS	---			----		
Total STX-CLPAve (6 peaks):					1092.562	Total CLP2Ave (5 peaks):					123.140	RPD = 159*
Corrected Ave (4 peaks):					586.489	Corrected Ave (4 peaks):					30.521	RPD = 180*



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A057.d ARI ID: VR58A  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A057.d Client ID: SG-10-S-E-121107  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 04:17  
 Compound Sublist: wpest Report Date: 11/27/2012 12:10  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL  
 Operator: ar Dilution Factor: 5.000

*YE 11/27/12*

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.001	-0.009	4379518	3.184	-0.007	20078989	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.151	0.004	93992	4.571	-0.014	468567	1.1516	1.0697	7.4	alpha-BHC
4.479	-0.019	19336	5.001	-0.006	183596	0.5605	1.0356	59.5*	beta-BHC
4.661	-0.002	47571	5.311	-0.003	5886068	0.7231	16.9396	183.6*	delta-BHC
4.408	-0.016	27823	4.887	-0.049	566800	0.3711	1.4314	117.7*	gamma-BHC (Lindane)
----			5.384	-0.013	145607	0.0000	0.4016	---	Heptachlor
5.142	-0.007	19368	5.693	-0.042	728960	0.2790	2.0448	152.0*	Aldrin
5.719	-0.004	495380	6.294	0.000	1097696	7.4018	3.4157	73.7*	Heptachlor epoxide b
6.085	-0.014	13927	6.664	-0.016	47363	0.2249	0.1641	31.2	Endosulfan I
6.293	-0.029	46592	6.920	-0.019	232002	0.7278	0.7599	4.3	Dieldrin
6.006	-0.021	138765	6.727	-0.018	551607	2.3475	1.8950	21.3	4,4'-DDE
----			----			0.0000	0.0000	---	Endrin
6.740	-0.006	30602	7.387	-0.029	256583	0.6153	1.5771	87.7*	Endosulfan II
6.630	0.046	23428	7.266	-0.017	718435	0.5209	4.6736	159.9*	4,4'-DDD
7.500	-0.014	24507	7.991	0.031	9494702	0.5854	69.4023	196.7*	Endosulfan sulfate
6.801	-0.041	101393	7.559	-0.012	401340	2.2421	2.7435	20.1	4,4'-DDT
7.245	-0.026	1230212	8.115	-0.044	215149	55.6417	3.4472	176.7*	Methoxychlor
7.799	0.033	34514	8.440	-0.009	248161	0.7050	1.8159	88.1*	Endrin ketone
7.161	0.037	3366278	7.690	-0.025	131853	83.9221	1.0294	195.2*	Endrin aldehyde
5.819	-0.023	113059	6.459	-0.017	565382	1.6989	1.6864	0.7	gamma-Chlordane
----			6.595	-0.020	338512	0.0000	1.0829	---	alpha-Chlordane
2.213	0.003	13238	2.354	-0.023	79061	0.1338	0.1814	30.2	Hexachlorobutadiene
3.988	-0.014	59148	4.445	-0.012	283201	0.8287	0.7513	9.8	Hexachlorobenzene
5.606	-0.021	11629	6.204	0.001	242718	0.2481	0.9479	117.0*	Oxychlorthane
5.749	0.046	260498	6.486	0.032	139441	7.5613	0.7530	163.8*	2,4-DDE
5.918	-0.033	271766	6.543	-0.018	945231	4.8680	4.8185	1.0	trans-Nonachlor
6.170	-0.020	24666	6.967	0.029	88157	0.7902	0.8343	4.3	2,4-DDD
6.419	-0.010	123004	7.182	-0.045	592262	3.5209	5.1377	37.3	2,4-DDT
6.562	-0.004	157413	----			2.6620	0.0000	---	cis-Nonachlor
7.437	0.000	56727	----			1.4412	0.0000	---	Mirex
8.733	-0.013	3769713	10.083	-0.015	9434421	80.0000	80.0000	0.0	Hexabromobiphenyl
1.731	-0.006	1475621	1.692	-0.036	3064466	0.0000	0.0000	---	Hexachloroethane
----			7.318	-0.019	200238	0.0000	15.6005	---	Kepone
3.658	-0.013	467755	3.995	-0.013	2163700	7.2081	6.1998	15.0	Tetrachloro-m-xylene
8.590	-0.020	400444	9.546	-0.020	1499755	7.9485	10.3379	26.1	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	18.0	15.5	15.5~	42-112
Decachlorobiphenyl	19.9	25.8	19.9~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4379518	7.9
Hexabromobiphenyl	3748709	3769713	0.6

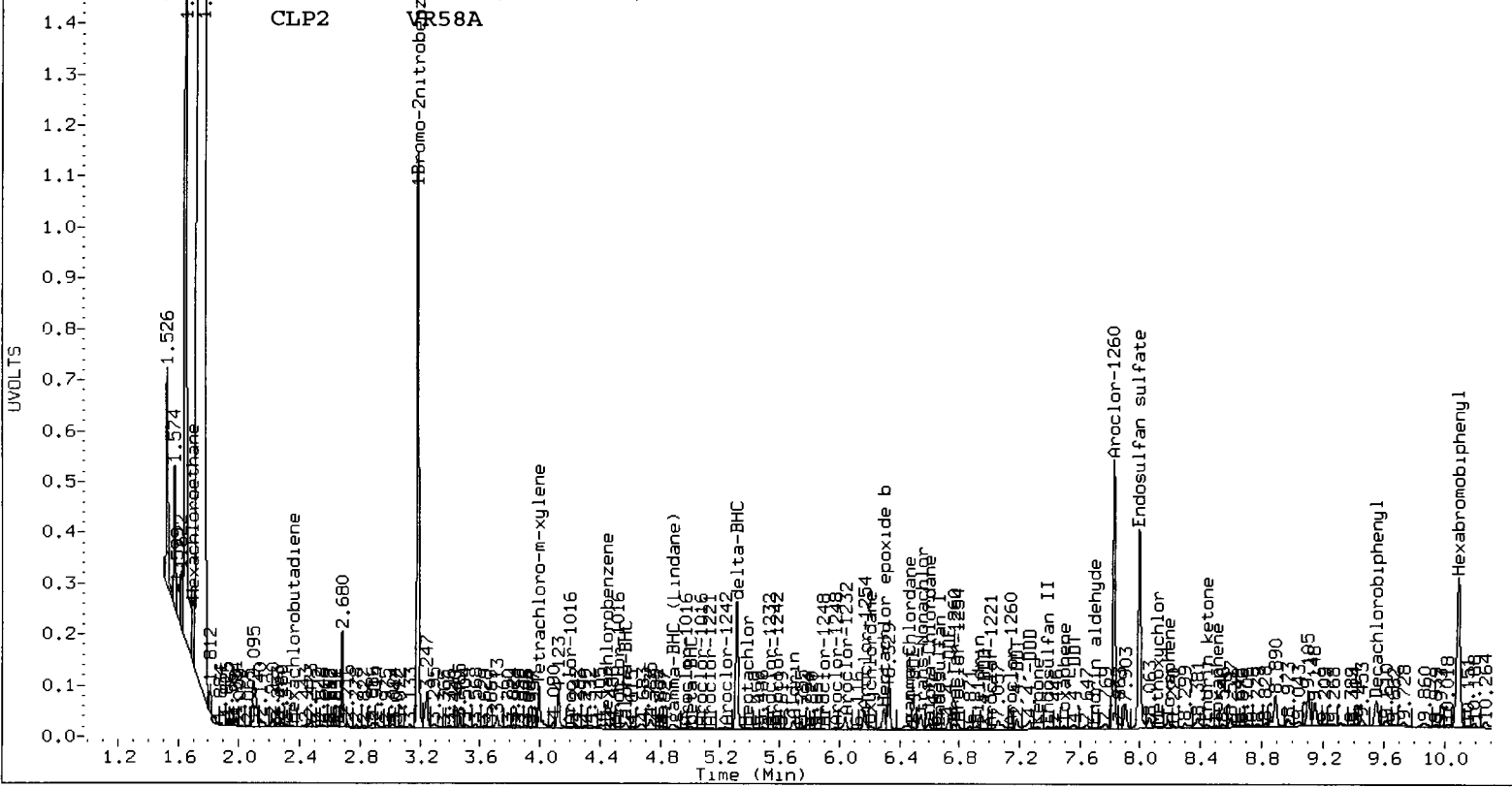
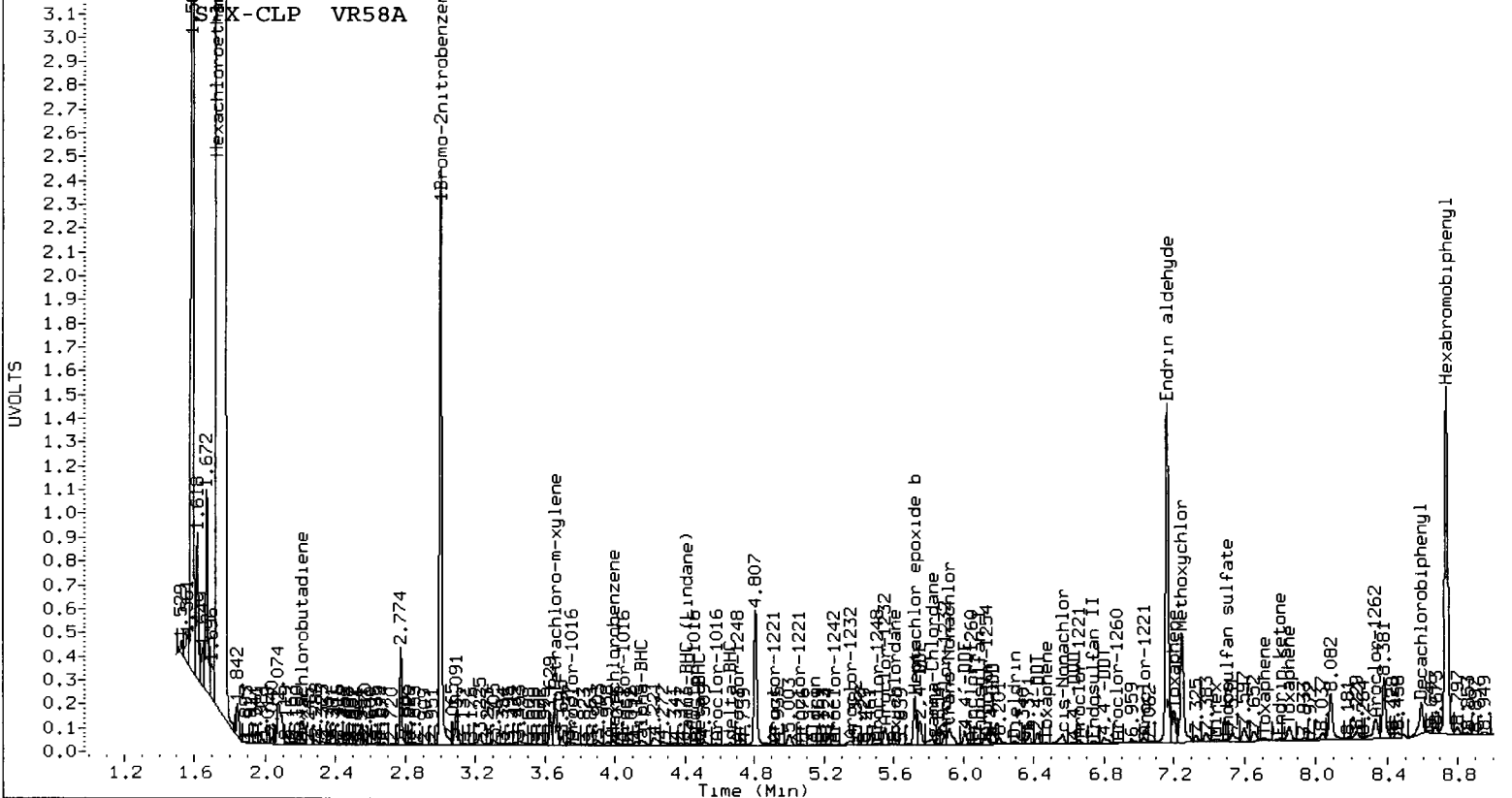
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	20078989	-4.5
Hexabromobiphenyl	14864285	9434421	-36.5

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 03-OCT-2012

<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col			Amount	
			Shift	Height	Amount			Shift	Height			
Toxaphene	1	6.471	-0.020	12651	14.7	1	7.139	-0.019	124245	26.7		
Toxaphene	2	6.873	0.029	19507	17.0	2	7.493	0.010	225966	33.5		
Toxaphene	3	7.199	-0.013	369276	397.0	3	7.690	-0.023	131853	18.1		
Toxaphene	4	7.437	-0.029	56727	49.8	4	8.188	0.009	499424	99.1		
Toxaphene	5	7.709	-0.036	45027	46.2	5	8.508	-0.019	71606	31.8		
Toxaphene	6	7.850	-0.024	196191	293.9	NS	---			----		
Total STX-CLPAve (6 peaks):					136.407	Total CLP2Ave (5 peaks):					41.847	RPD = 106*
Corrected Ave (4 peaks):					31.904	Corrected Ave (4 peaks):					27.522	RPD = 15



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A058.d ARI ID: VR58B  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A058.d Client ID: SG-11-S-E-121107  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 04:35  
 Compound Sublist: wpest Report Date: 11/27/2012 12:10  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL  
 Operator: ar Dilution Factor: 5.000

yz 11/27/12

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.000	-0.010	4188612	3.183	-0.008	14658009	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.117	-0.030	154944	4.573	-0.012	1884461	1.9849	<del>5.8932</del>	99.2*	alpha-BHC
4.480	-0.017	84063	5.001	-0.006	777725	2.5476	6.0093	80.9*	beta-BHC
4.640	-0.022	63502	5.311	-0.003	7321907	<del>1.0092</del>	<del>28.8648</del>	186.5*	delta-BHC
4.411	-0.013	77091	4.911	-0.025	553064	1.0750	1.9132	56.1*	gamma-BHC (Lindane)
4.871	0.009	158239	5.389	-0.008	531419	2.4336	2.0079	19.2	Heptachlor
5.128	-0.021	157958	5.692	-0.043	1623186	2.3788	6.2371	89.6*	Aldrin
5.719	-0.005	621250	6.294	0.001	2412100	9.7056	10.2815	5.8	Heptachlor epoxide b
6.083	-0.016	72089	6.687	0.007	356470	<del>1.2170</del>	<del>1.6921</del>	32.7	Endosulfan I
6.293	-0.029	122368	6.901	-0.038	513849	<del>1.9985</del>	<del>2.3056</del>	14.3	Dieldrin
6.008	-0.020	519619	6.729	-0.016	1451784	9.1913	6.8319	29.4	4,4'-DDE
6.515	-0.025	40386	----	----	----	0.8413	0.0000	---	Endrin
6.743	-0.003	67319	7.416	0.000	489999	1.4523	3.5943	84.9*	Endosulfan II
6.634	0.050	67965	7.267	-0.016	1497312	1.6215	11.6245	151.0*	4,4'-DDD
7.532	0.018	557743	7.993	0.033	13862347	14.2951	120.9284	157.7*	Endosulfan sulfate
6.869	0.027	326941	7.562	-0.009	578187	<del>7.7576</del>	<del>4.7170</del>	48.7*	4,4'-DDT
7.247	-0.024	1856315	8.118	-0.041	745299	<del>90.0911</del>	<del>14.2515</del>	145.4*	Methoxychlor
7.751	-0.016	11192	8.441	-0.008	1418538	0.2453	12.3881	192.2*	Endrin ketone
7.106	-0.018	50027	7.695	-0.020	133641	1.3383	1.2452	7.2	Endrin aldehyde
5.821	-0.021	258063	6.460	-0.016	1721165	4.0546	7.0325	53.7*	gamma-Chlordane
5.919	-0.048	733829	6.595	-0.020	1142820	11.9465	5.0081	81.8*	alpha-Chlordane (RT, RPD)
2.211	0.001	23898	2.356	-0.022	259545	<del>0.2526</del>	<del>0.8156</del>	105.4*	Hexachlorobutadiene
3.987	-0.015	123351	4.445	-0.013	719591	<del>1.8071</del>	<del>2.6151</del>	36.5	Hexachlorobenzene
5.613	-0.014	53212	6.205	0.002	1027445	<del>1.2181</del>	<del>5.4967</del>	127.4*	Oxychlordane
5.750	0.047	575001	----	----	----	<del>17.9090</del>	<del>0.0000</del>	---	2,4-DDE
----	----	----	6.544	-0.017	1830140	0.0000	11.1342	---	trans-Nonachlor
6.174	-0.017	151627	6.958	0.019	452624	5.2718	5.1121	3.1	2,4-DDD
6.420	-0.009	72252	7.184	-0.043	226627	<del>2.2192</del>	<del>2.3462</del>	5.6	2,4-DDT
6.565	-0.002	474456	----	----	----	<del>8.6093</del>	<del>0.0000</del>	---	cis-Nonachlor
7.438	0.001	98803	8.392	-0.042	1874150	<del>2.6934</del>	<del>19.7233</del>	151.9*	Mirex
8.741	-0.004	3513167	10.090	-0.008	7905264	80.0000	80.0000	0.0	Hexabromobiphenyl
1.730	-0.008	1417524	1.692	-0.036	6084746	0.0000	0.0000	---	Hexachloroethane
----	----	----	7.315	-0.022	598775	0.0000	55.6742	---	Kepone
3.661	-0.009	672356	3.995	-0.013	1619419	10.8332	6.3563	52.1*	Tetrachloro-m-xylene
8.595	-0.016	243650	9.553	-0.013	4549651	5.1894	37.4274	151.3*	Decachlorobiphenyl

NR

- \* 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	27.1	15.9	15.9~	42-112
Decachlorobiphenyl	13.0	93.6	13.0~	59-123

~ Indicates recovery outside QC Limits

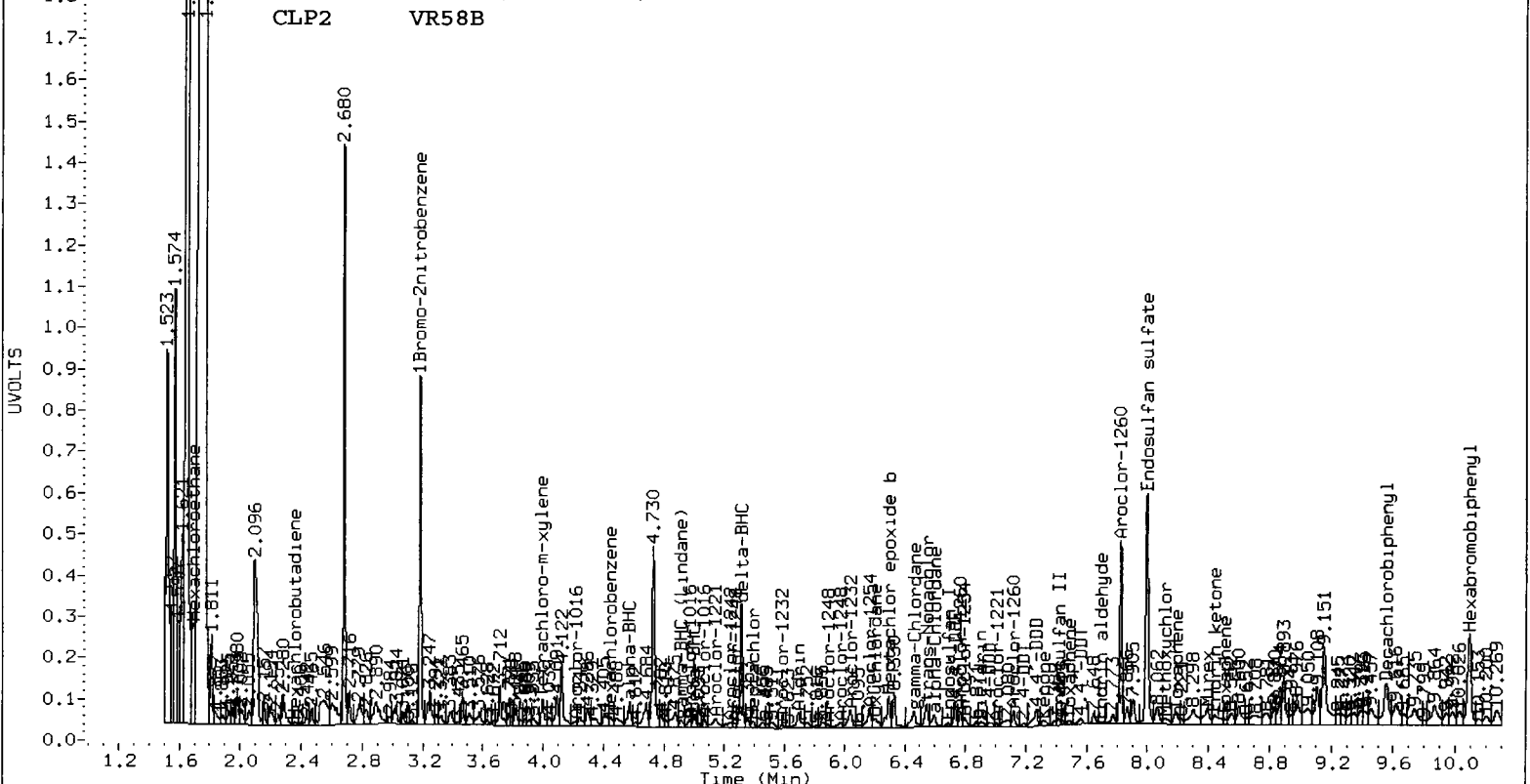
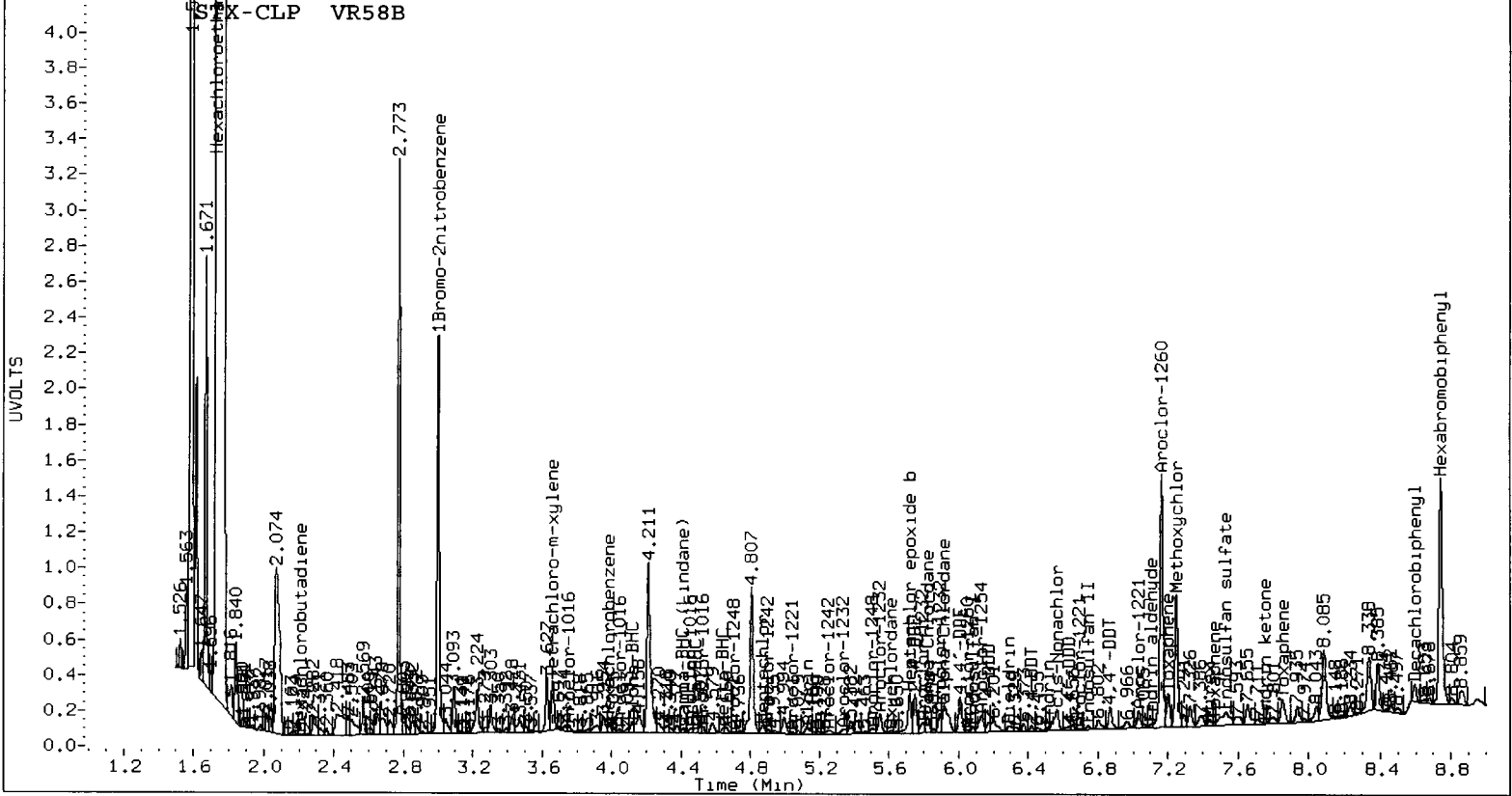
INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	4060064	4188612	3.2
Hexabromobiphenyl	3748709	3513167	-6.3

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	14658009	-30.3
Hexabromobiphenyl	14864285	7905264	-46.8

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Amount	Peak#	RT	CLP2 Col			
			Shift	Height	Amount				Shift	Height	Amount	
Toxaphene	1	6.515	0.025	40386	50.4	1	7.184	0.025	226627	58.1		
Toxaphene	2	6.869	0.026	326941	305.3	2	7.483	0.001	336665	59.5		
Toxaphene	3	7.201	-0.011	480648	554.4	3	7.695	-0.018	133641	21.9		
Toxaphene	4	7.466	0.000	37049	34.9	4	8.186	0.007	1130678	267.9		
Toxaphene	5	7.751	0.006	11192	12.3	5	8.508	-0.019	359353	190.6		
Toxaphene	6	7.852	-0.022	446021	716.9	NS	---	---	---	---		
Total STX-CLPAve (6 peaks):					279.026	Total CLP2Ave (5 peaks):					119.598	RPD = 80*
Corrected Ave (4 peaks):					100.721	Corrected Ave (4 peaks):					82.528	RPD = 20



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A059.d ARI ID: VR58C  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A059.d Client ID: SG-12-S-E-121107  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 04:53  
 Compound Sublist: wpest Report Date: 11/27/2012 12:11  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL  
 Operator: ar Dilution Factor: 5.000

YZ 11/27/12

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.001	-0.009 4041498	3.183 -0.008 11761598	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.118	-0.030 117162	4.573 -0.012 760495	1.5556	2.9640	62.3*	alpha-BHC
4.480	-0.017 37404	5.000 -0.007 290122	1.1748	2.7938	81.6*	beta-BHC
4.659	-0.004 86648	5.311 -0.003 1581025	1.4272	7.7677	137.9*	delta-BHC
4.406	-0.018 72250	4.912 -0.024 274065	1.0441	1.1816	12.4	gamma-BHC (Lindane)
4.869	0.007 28595	5.387 -0.011 73927	0.4558	0.3481	26.8	Heptachlor
5.136	-0.013 37693	5.694 -0.042 562931	0.5883	2.6957	128.3*	Aldrin
5.718	-0.005 177403	6.269 -0.025 297604	2.8724	1.5809	58.0*	Heptachlor epoxide b
6.082	-0.017 57994	6.682 0.002 334991	1.0147	1.9817	64.5*	Endosulfan I
6.290	-0.033 55386	6.923 -0.016 193085	0.9375	1.0797	14.1	Dieldrin
6.007	-0.020 213715	6.728 -0.017 696492	3.9179	4.0848	4.2	4,4'-DDE
6.514	-0.027 18586	----	0.4096	0.0000	---	Endrin
6.747	0.001 47528	7.387 -0.029 531005	1.0848	4.0878	116.1*	Endosulfan II
6.618	0.034 19583	7.267 -0.016 487011	0.4943	3.9680	155.7*	4,4'-DDD
7.491	-0.023 60618	7.993 0.032 4473782	1.6437	40.9580	184.6*	Endosulfan sulfate
6.827	-0.015 28417	7.562 -0.009 777119	0.7134	6.6536	161.3*	4,4'-DDT
7.246	-0.025 580680	8.112 -0.047 280350	29.8152	5.6261	136.5*	Methoxychlor
7.736	-0.031 5226	8.441 -0.007 460073	0.1212	4.2166	188.8*	Endrin ketone
7.161	0.038 1140888	7.690 -0.025 330502	32.2886	3.2319	163.6*	Endrin aldehyde
5.821	-0.022 99489	6.460 -0.016 693038	1.6200	3.5290	74.1*	gamma-Chlordane
----	----	6.594 -0.021 560380	0.0000	3.0605	---	alpha-Chlordane
2.208	-0.002 9918	2.355 -0.022 228827	0.1087	0.8961	156.7*	Hexachlorobutadiene
3.988	-0.014 139521	4.445 -0.012 738666	2.1183	3.3455	44.9*	Hexachlorobenzene
5.613	-0.014 19453	6.167 -0.036 975057	0.4711	6.5011	173.0*	Oxychlorane
5.690	-0.013 29255	6.489 0.035 95626	0.9640	0.8816	8.9	2,4-DDE
5.923	-0.028 214701	6.541 -0.019 765809	4.3658	4.8895	11.3	trans-Nonachlor
6.172	-0.018 74100	6.954 0.015 431979	2.7256	5.1203	61.0*	2,4-DDD
6.419	-0.010 32182	7.183 -0.044 86625	1.0457	0.9412	10.5	2,4-DDT
6.563	-0.003 211388	----	4.0581	0.0000	---	cis-Nonachlor
7.435	-0.001 70098	8.388 -0.046 1127309	2.0217	12.4506	144.1*	Mirex
8.734	-0.011 3320691	10.084 -0.014 7532577	80.0000	80.0000	0.0	Hexabromobiphenyl
1.730	-0.008 309389	1.729 0.001 77262074	0.0000	0.0000	---	Hexachloroethane
----	----	7.316 -0.020 488399	0.0000	47.6583	---	Kepone
3.661	-0.010 542611	3.995 -0.013 1084704	9.0610	5.3060	52.3*	Tetrachloro-m-xylene
8.592	-0.019 387144	9.548 -0.018 1345359	8.7236	11.6151	28.4	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	22.7	13.3	13.3~	42-112
Decachlorobiphenyl	21.8	29.0	21.8~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4041498	-0.5
Hexabromobiphenyl	3748709	3320691	-11.4

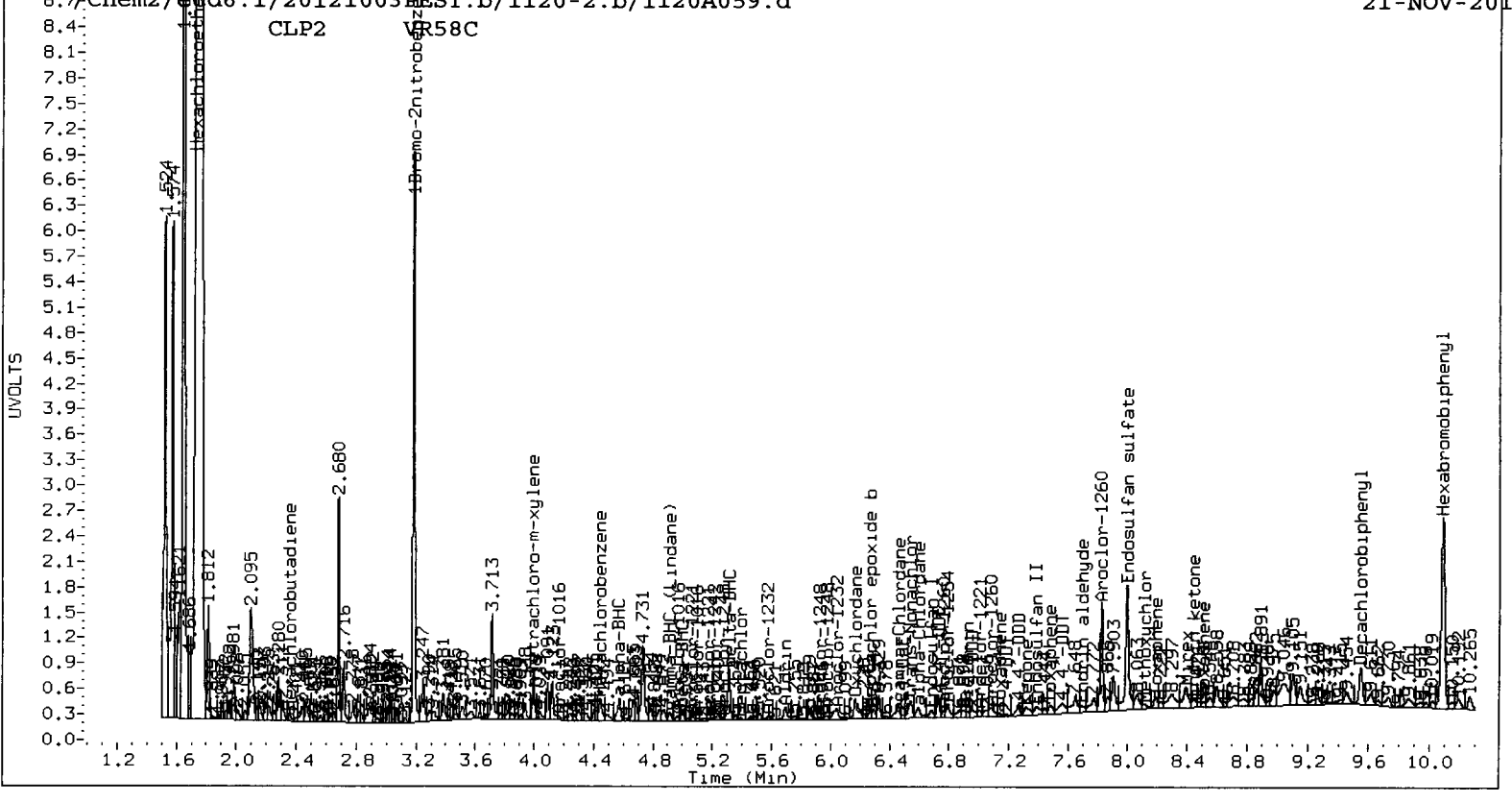
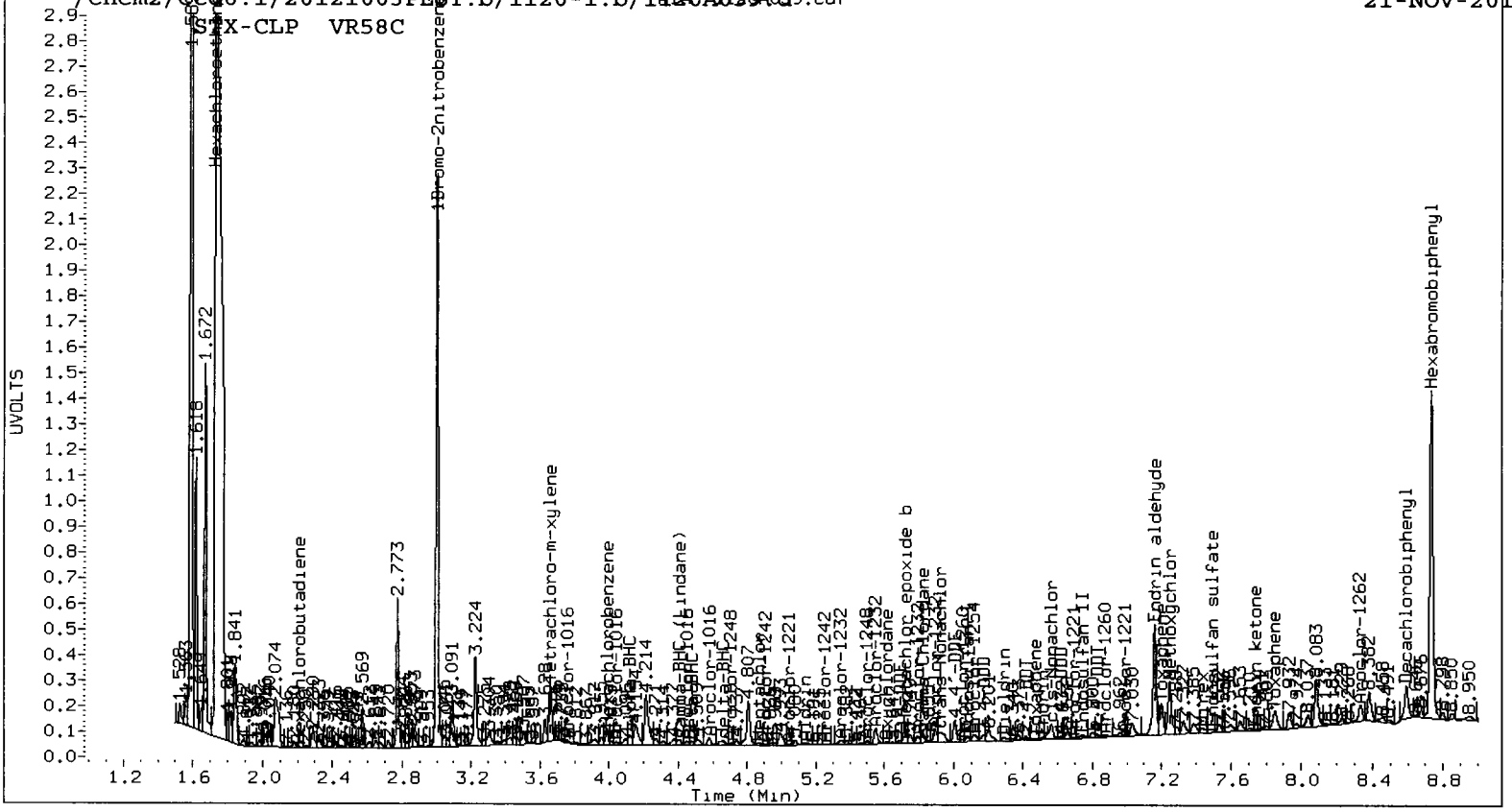
Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	11761598	-44.1
Hexabromobiphenyl	14864285	7532577	-49.3

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 03-OCT-2012

<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col			Amount
			Shift	Height	Amount			Shift	Height		
Toxaphene	1	6.469	-0.021	16959	22.4	1	7.137	-0.021	114620	30.9	
Toxaphene	2	6.827	-0.016	28417	28.1	2	7.480	-0.003	416932	77.4	
Toxaphene	3	7.199	-0.013	333344	406.8	3	7.690	-0.023	330502	56.8	
Toxaphene	4	7.491	0.025	60618	60.4	4	8.187	0.008	456941	113.6	
Toxaphene	5	7.736	-0.009	5226	6.1	5	8.508	-0.019	201853	112.3	
Toxaphene	6	7.850	-0.024	255517	434.5	NS	---	---	---	---	
Total STX-CLPAve (6 peaks): 159.695					Total CLP2Ave (5 peaks): 78.192					RPD = 69*	
Corrected Ave (4 peaks): 29.225					Corrected Ave (5 peaks): 78.192					RPD = 91*	



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A060.d ARI ID: VR58D  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A060.d Client ID: SG-13-S-E-121107  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 05:11  
 Compound Sublist: wpest Report Date: 11/27/2012 12:11  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL  
 Operator: ar Dilution Factor: 5.000

*YZ 11/27/12*

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.001	-0.009	4391869	3.183	-0.008	15081701	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.132	-0.015	39385	4.574	-0.012	1122690	0.4812	3.4123	150.6*	alpha-BHC
4.480	-0.017	39453	5.000	-0.006	487662	1.1403	3.6622	105.0*	beta-BHC
4.641	-0.022	50655	5.310	-0.004	1347013	0.7678	5.1611	148.2*	delta-BHC
4.411	-0.013	75125	4.911	-0.025	327800	0.9991	1.1021	9.8	gamma-BHC (Lindane)
4.865	0.003	73370	5.392	-0.005	36931	1.0762	0.1356	155.2*	Heptachlor
5.133	-0.016	30405	5.693	-0.042	813803	0.4367	3.0392	149.7*	Aldrin
5.719	-0.004	119568	6.269	-0.024	710632	1.7815	2.9440	49.2*	Heptachlor epoxide b
6.081	-0.019	64733	6.688	0.008	391734	1.0422	1.8072	53.7*	Endosulfan I
6.310	-0.012	117793	6.921	-0.018	124551	1.8347	0.5432	108.6*	Dieldrin
6.007	-0.020	228270	6.729	-0.017	784616	3.8509	3.5886	7.1	4,4'-DDE
6.514	-0.026	35459	----	----	----	0.7402	0.0000	---	Endrin
6.738	-0.008	34663	7.414	-0.003	129314	0.7493	0.9367	22.2	Endosulfan II
----	----	----	7.267	-0.016	809411	0.0000	6.2053	---	4,4'-DDD
7.493	-0.021	73551	7.993	0.033	2130019	1.8890	18.3486	162.7*	Endosulfan sulfate
6.826	-0.017	26440	7.561	-0.009	488923	0.6286	3.9388	144.9*	4,4'-DDT
7.246	-0.025	309683	8.114	-0.044	355115	15.0601	6.7054	76.8*	Methoxychlor
7.784	0.018	34132	8.441	-0.008	500173	0.7496	4.3133	140.8*	Endrin ketone
7.099	-0.024	14771	7.709	-0.006	131733	0.3959	1.2121	101.5*	Endrin aldehyde
5.821	-0.022	170284	6.459	-0.017	877929	2.5516	3.4864	31.0	gamma-Chlordane
----	----	----	6.586	-0.028	629959	0.0000	2.6831	---	alpha-Chlordane
2.208	-0.002	14815	2.355	-0.022	201619	0.1494	0.6157	121.9*	Hexachlorobutadiene
3.988	-0.014	66577	4.420	-0.038	926537	0.9302	3.2726	111.5*	Hexachlorobenzene
5.614	-0.013	26882	6.191	-0.012	653241	0.6166	3.3966	138.5*	Oxychlorthane
5.690	-0.013	36397	----	----	----	1.1359	0.0000	---	2,4-DDE
5.944	-0.007	199771	6.540	-0.021	692918	3.8475	4.1628	7.9	trans-Nonachlor
6.175	-0.015	172573	6.954	0.016	355080	6.0122	3.9602	41.2*	2,4-DDD
6.419	-0.010	15022	7.185	-0.042	72078	0.4623	0.7369	45.8*	2,4-DDT
6.564	-0.002	234088	----	----	----	4.2563	0.0000	---	cis-Nonachlor
7.435	-0.002	57685	8.390	-0.044	1031812	1.5757	10.7227	148.8*	Mirex
8.737	-0.009	3506059	10.086	-0.012	8005512	80.0000	80.0000	0.0	Hexabromobiphenyl
1.730	-0.007	1336779	1.770	0.042	165596119	0.0000	0.0000	---	Hexachloroethane
----	----	----	7.318	-0.019	296309	0.0000	27.2059	---	Kepone
3.661	-0.010	573263	3.995	-0.012	1780829	8.8091	6.7935	25.8	Tetrachloro-m-xylene
8.592	-0.018	441158	9.549	-0.018	2666770	9.4151	21.6633	78.8*	Decachlorobiphenyl

*NR*

- \* 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	22.0	17.0	17.0~	42-112
Decachlorobiphenyl	23.5	54.2	23.5~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	4060064	4391869	8.2
Hexabromobiphenyl	3748709	3506059	-6.5

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	15081701	-28.3
Hexabromobiphenyl	14864285	8005512	-46.1

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 03-OCT-2012

<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col				
			Shift	Height	Amount			Shift	Height	Amount		
Toxaphene	1	6.470	-0.020	24649	30.8	1	7.140	-0.019	67914	17.2		
Toxaphene	2	6.826	-0.018	26440	24.7	2	7.480	-0.003	312363	54.6		
Toxaphene	3	7.200	-0.012	308008	356.0	3	7.709	-0.004	131733	21.3		
Toxaphene	4	7.493	0.027	73551	69.4	4	8.184	0.004	691670	161.8		
Toxaphene	5	7.710	-0.035	54257	59.8	5	8.507	-0.020	277893	145.5		
Toxaphene	6	7.851	-0.023	286174	460.9	NS	---	---	---	---		
Total STX-CLPAve (6 peaks):					166.936	Total CLP2Ave (5 peaks):					80.077	RPD = 70*
Corrected Ave (4 peaks):					46.185	Corrected Ave (3 peaks):					31.014	RPD = 39





Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A061.d ARI ID: VR58E  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A061.d Client ID: SG-13-S-E-dup-12110  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 05:29  
 Compound Sublist: wpest Report Date: 11/27/2012 12:11  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL  
 Operator: ar Dilution Factor: 5.000

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STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.002	-0.008	3764319	3.184	-0.007	13166590	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.119	-0.028	151248	4.574	-0.012	1314494	2.1560	4.5764	71.9*	alpha-BHC
4.481	-0.016	45817	5.001	-0.006	515118	1.5450	4.4311	96.6*	beta-BHC
4.661	-0.002	122421	5.311	-0.003	2068190	2.1649	9.0769	123.0*	delta-BHC
4.412	-0.012	78903	4.912	-0.025	416781	1.2242	1.6051	26.9	gamma-BHC (Lindane)
4.866	0.004	74743	5.391	-0.006	65975	1.2791	0.2775	128.7*	Heptachlor
5.134	-0.014	39207	5.694	-0.042	687900	0.6570	2.9427	127.0*	Aldrin
5.719	-0.004	163950	6.269	-0.024	419583	2.8501	1.9910	35.5	Heptachlor epoxide b
6.081	-0.018	61480	6.687	0.007	289360	1.1549	1.5291	27.9	Endosulfan I
6.307	-0.016	31087	6.922	-0.017	138552	0.5649	0.6921	20.2	Dieldrin
6.008	-0.019	226457	6.729	-0.016	760573	4.4572	3.9846	11.2	4,4'-DDE
6.542	0.002	93304	----	----	----	2.2722	0.0000	---	Endrin
6.747	0.001	42566	7.415	-0.001	155747	1.0735	1.2769	17.3	Endosulfan II
----	----	----	7.267	-0.016	752919	0.0000	6.5333	---	4,4'-DDD
7.490	-0.024	90228	7.963	0.003	131208	2.7034	1.2793	71.5*	Endosulfan sulfate
6.826	-0.016	34921	7.562	-0.009	279264	0.9686	2.5464	89.8*	4,4'-DDT
7.246	-0.024	536183	8.184	0.025	830459	30.4199	17.7488	52.6*	Methoxychlor
7.736	-0.030	16609	8.440	-0.009	690802	0.4255	6.7427	176.3*	Endrin ketone
7.100	-0.024	18582	7.707	-0.008	88138	0.5811	0.9179	44.9*	Endrin aldehyde
5.822	-0.021	130282	6.461	-0.015	777430	2.2776	3.5363	43.3*	gamma-Chlordane
5.926	-0.041	89808	6.587	-0.028	620628	1.6268	3.0278	60.2*	alpha-Chlordane
2.208	-0.002	15028	2.356	-0.021	221676	0.1768	0.7755	125.7*	Hexachlorobutadiene
3.990	-0.012	123457	4.446	-0.012	645075	2.0125	2.6098	25.8	Hexachlorobenzene
5.614	-0.013	19800	6.193	-0.010	454368	0.5299	2.7062	134.5*	Oxychlorane
5.689	-0.014	30647	6.487	0.034	156935	1.1158	1.2925	14.7	2,4-DDE
5.945	-0.006	108948	6.542	-0.018	691119	2.4479	4.6994	63.0*	trans-Nonachlor
6.174	-0.016	133512	6.955	0.016	266193	5.4264	3.3603	47.0*	2,4-DDD
6.420	-0.009	22145	7.184	-0.043	72890	0.7951	0.8434	5.9	2,4-DDT
6.565	-0.002	174953	----	----	----	3.7111	0.0000	---	cis-Nonachlor
7.435	-0.002	76305	8.391	-0.043	1427774	2.4317	16.7940	149.4*	Mirex
8.738	-0.008	3005279	10.087	-0.010	7072899	80.0000	80.0000	0.0	Hexabromobiphenyl
1.730	-0.008	291132	1.729	0.001	54689121	0.0000	0.0000	---	Hexachloroethane
----	----	----	7.317	-0.019	357523	0.0000	37.1547	---	Kepone
3.662	-0.009	604810	3.996	-0.012	1428060	10.8433	6.2402	53.9*	Tetrachloro-m-xylene
8.593	-0.017	310963	9.549	-0.017	2562588	7.7424	23.5618	101.1*	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	27.1	15.6	15.6~	42-112
Decachlorobiphenyl	19.4	58.9	19.4~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	4060064	3764319	-7.3
Hexabromobiphenyl	3748709	3005279	-19.8

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	13166590	-37.4
Hexabromobiphenyl	14864285	7072899	-52.4 <-

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
Toxaphene	1	6.471	-0.019	20455	29.8	1	7.139	-0.019	72217	20.7
Toxaphene	2	6.826	-0.017	34921	38.1	2	7.480	-0.003	269560	53.3
Toxaphene	3	7.200	-0.012	326165	439.8	3	7.707	-0.006	88138	16.1
Toxaphene	4	7.490	0.024	90228	99.3	4	8.184	0.004	830459	219.9
Toxaphene	5	7.736	-0.009	16609	21.4	5	8.508	-0.019	287181	170.2
Toxaphene	6	7.851	-0.023	304066	571.3	NS	---	---	---	---
Total STX-CLPAve (6 peaks): 199.948					Total CLP2Ave (5 peaks): 96.047					RPD = 70*
Corrected Ave (4 peaks): 47.148					Corrected Ave (3 peaks): 30.036					RPD = 44*



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A062.d ARI ID: VR58F  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A062.d Client ID: SG-14-S-E-121107  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 05:46  
 Compound Sublist: wpest Report Date: 11/27/2012 12:11  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL  
 Operator: ar Dilution Factor: 5.000

*yz 11/27/12*

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag
RT Shift Response	RT Shift Response	on col on col	on col on col	RPD	Compound/Flag
3.001 -0.009 4102144	3.184 -0.007 14677208	80.0000 80.0000	IS 0.0	0.0	1Bromo-2nitrobenzen
4.132 -0.015 76471	4.569 -0.016 677142	<del>1.0003</del> 2.1148		71.6*	alpha-BHC
4.481 -0.016 21142	5.001 -0.006 147900	0.6542 1.1413		54.3*	beta-BHC
4.659 -0.004 59689	5.309 -0.005 299996	0.9686 1.1811		19.8	delta-BHC
4.403 -0.021 49579	4.910 -0.026 225899	0.7059 0.7804		10.0	gamma-BHC (Lindane)
4.866 0.004 28386	5.382 -0.015 105720	0.4458 0.3989		11.1	Heptachlor
5.144 -0.004 41004	5.696 -0.040 501246	0.6305 1.9235		101.3*	Aldrin
5.740 0.017 213405	6.256 -0.037 615255	3.4042 2.6191		26.1	Heptachlor epoxide b
6.083 -0.016 13308	6.705 0.025 267154	0.2294 1.2664		138.7*	Endosulfan I
6.286 -0.037 107828	6.901 -0.038 157691	1.7981 0.7066		87.2*	Dieldrin
6.006 -0.022 202662	6.729 -0.017 335670	<del>3.6603</del> 1.5776		79.5*	4,4'-DDE
6.539 -0.001 281608	7.231 0.003 323846	5.8329 2.1120		93.7*	Endrin
6.748 0.002 25565	7.384 -0.032 671456	0.5484 4.3808		155.5*	Endosulfan II
6.632 0.048 84252	7.267 -0.016 8374	1.9985 0.0578		188.8*	4,4'-DDD
7.493 -0.021 40404	7.960 0.000 371651	1.0296 2.8837		94.8*	Endosulfan sulfate
6.798 -0.044 286424	7.565 -0.006 998075	6.7572 <u>7.2423</u>		6.9	4,4'-DDT
7.246 -0.025 198211	8.117 -0.042 666210	<del>9.5644</del> 11.3309		16.9	Methoxychlor
7.732 -0.035 26234	8.440 -0.009 790549	0.5717 6.1406		165.9*	Endrin ketone
7.094 -0.029 7928	7.692 -0.023 233285	0.2109 1.9334		160.7*	Endrin aldehyde
5.821 -0.022 66160	6.461 -0.015 226773	1.0614 0.9254		13.7	gamma-Chlordane
5.963 -0.004 123376	6.583 -0.032 460783	2.0509 2.0166		1.7	alpha-Chlordane
2.212 0.002 3618	2.377 -0.001 15897	0.0391 0.0499		24.4	Hexachlorobutadiene
3.989 -0.013 22872	4.463 0.005 119431	0.3421 0.4335		23.6	Hexachlorobenzene
5.614 -0.013 8161	6.207 0.004 289089	0.1858 1.5446		157.1*	Oxychlordane
5.693 -0.010 44407	6.427 -0.026 399825	1.3752 2.9539		72.9*	2,4-DDE
----	6.534 -0.027 571405	0.0000 3.0920		---	trans-Nonachlor
6.172 -0.018 135701	6.957 0.018 152545	4.6910 1.5324		101.5*	2,4-DDD
6.425 -0.004 16091	7.204 -0.023 60022	0.4914 0.5527		11.7	2,4-DDT
----	7.318 0.032 50157	0.0000 0.2596		---	cis-Nonachlor
7.435 -0.001 78761	8.388 -0.046 745513	<del>2.1348</del> 6.9783		106.3*	Mirex
8.734 -0.012 3533449	10.083 -0.014 8887827	80.0000 80.0000		0.0	Hexabromobiphenyl
1.730 -0.008 707993	1.748 0.020 147030366	0.0000 0.0000		---	Hexachloroethane
----	7.330 -0.007 58926	0.0000 4.8732		---	Kepone
3.658 -0.012 340489	3.995 -0.012 1377272	5.6017 5.3988		3.7	Tetrachloro-m-xylene
8.591 -0.020 402022	9.547 -0.019 2196470	8.5134 16.0715		61.5*	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	14.0	13.5	13.5~	42-112
Decachlorobiphenyl	21.3	40.2	21.3~	59-123

~ Indicates recovery outside QC Limits

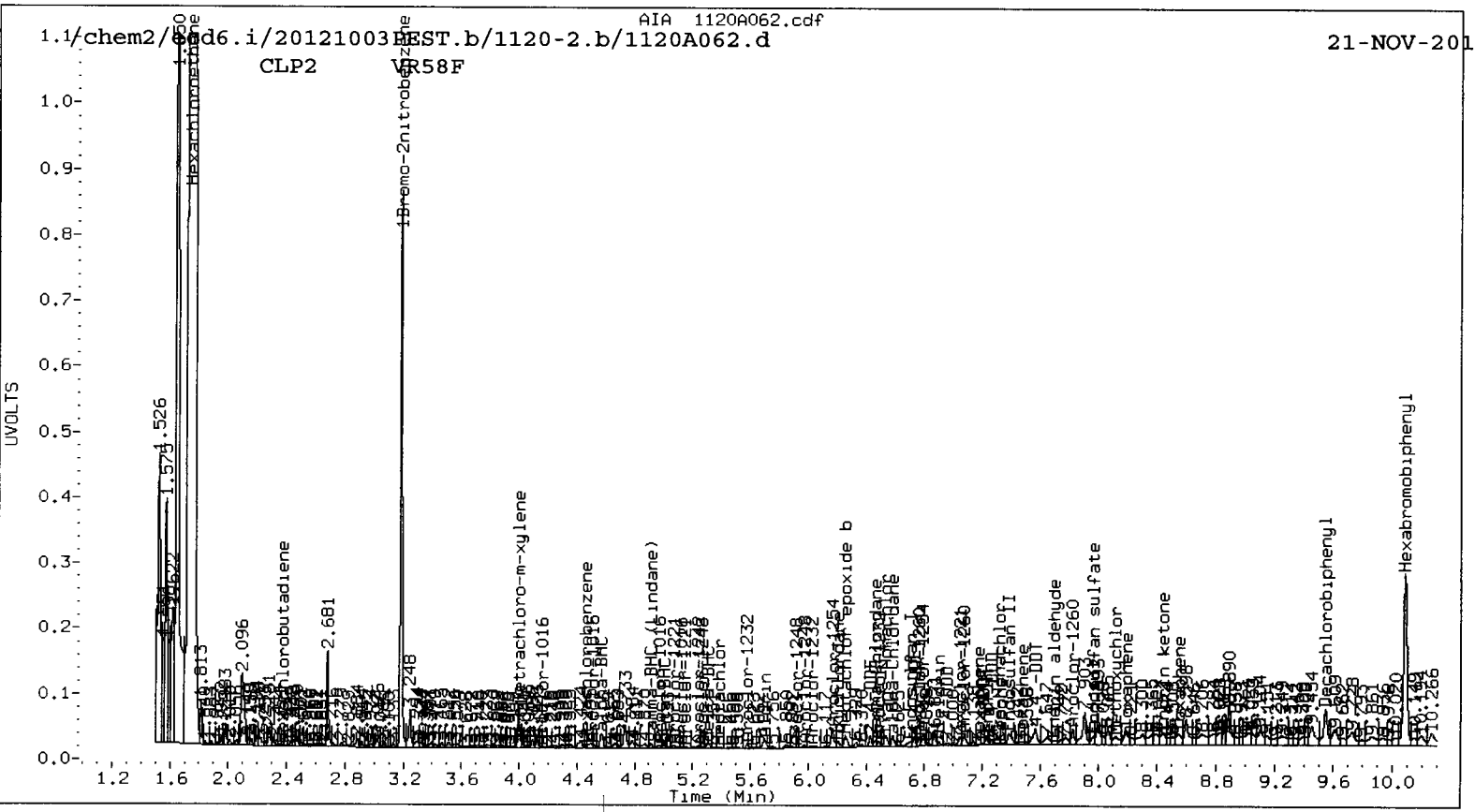
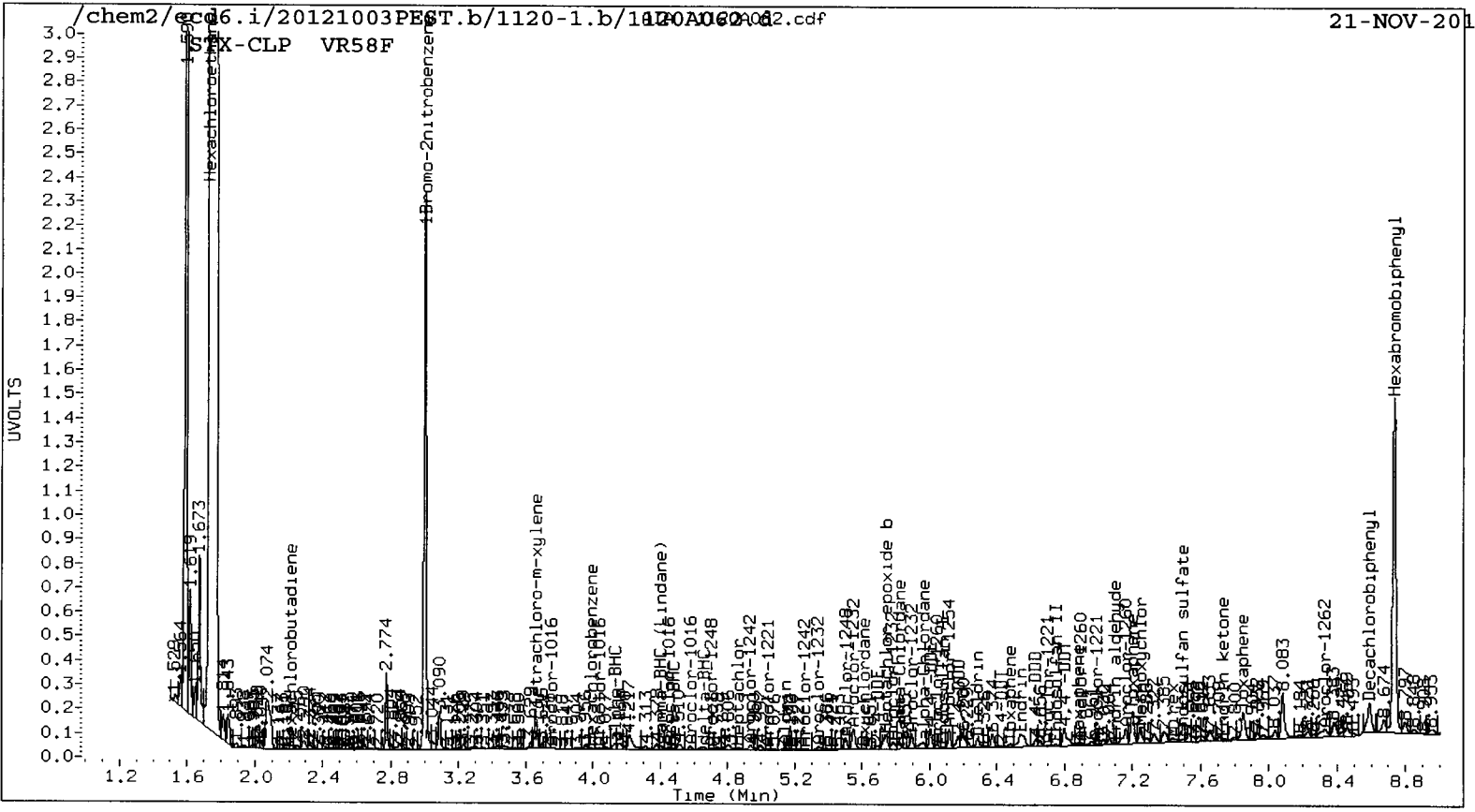
INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4102144	1.0
Hexabromobiphenyl	3748709	3533449	-5.7

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	14677208	-30.2
Hexabromobiphenyl	14864285	8887827	-40.2

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col			
			Shift	Height	Amount			Shift	Height	Amount	
Toxaphene	1	6.479	-0.012	40605	50.3	1	7.175	0.017	34569	7.9	
Toxaphene	2	6.878	0.034	27146	25.2	2	7.476	-0.007	154026	24.2	
Toxaphene	3	7.200	-0.012	351639	403.3	3	7.692	-0.021	233285	34.0	
Toxaphene	4	7.493	0.027	40404	37.8	4	8.189	0.009	842696	177.6	
Toxaphene	5	7.732	-0.013	26234	28.7	5	8.545	0.019	862696	406.9	
Toxaphene	6	7.849	-0.025	366930	586.4	NS	---	---	---	---	
Total STX-CLPAve (6 peaks): 188.616						Total CLP2Ave (5 peaks): 130.116					RPD = 37
Corrected Ave (4 peaks): 35.516						Corrected Ave (4 peaks): 60.913					RPD = 53*



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

*11/27/12*

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A063.d ARI ID: VR58G  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A063.d Client ID: SG-15-S-E-121107  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 06:04  
 Compound Sublist: wpest Report Date: 11/27/2012 11:48  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL  
 Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.001	-0.009	4276013	3.183	-0.007	17778163	80.0000	80.0000	IS 0.0	1Bromo-2nitrobenzen
4.133	-0.015	151071	4.574	-0.012	620727	1.8958	1.6005	16.9	alpha-BHC
4.506	0.009	92437	5.011	0.004	268240	2.7441	1.7089	46.5*	beta-BHC
4.657	-0.006	115982	5.309	-0.006	250435	1.8056	0.8140	75.7*	delta-BHC
4.406	-0.018	56412	4.960	0.023	385527	0.7705	1.0996	35.2	gamma-BHC (Lindane)
4.885	0.024	32320	5.395	-0.003	43220	0.4869	0.1346	113.3*	Heptachlor
5.146	-0.003	10891	5.707	-0.029	1067353	0.1607	3.3815	181.9*	Aldrin
5.719	-0.004	65619	6.269	-0.024	594722	1.0042	2.0901	70.2*	Heptachlor epoxide b
6.085	-0.014	16898	6.687	0.007	404369	0.2794	1.5825	140.0*	Endosulfan I
6.310	-0.012	84430	6.920	-0.019	65403	1.3507	0.2420	139.2*	Dieldrin
6.007	-0.021	46749	6.728	-0.017	172456	0.8100	0.6691	19.0	4,4'-DDE
6.517	-0.023	50950	7.230	0.002	104472	1.0173	0.6632	42.1*	Endrin
6.733	-0.013	2527	7.414	-0.002	63473	0.0523	0.4031	154.1*	Endosulfan II
----			7.267	-0.016	195349	0.0000	1.3130	---	4,4'-DDD
7.492	-0.022	7460	7.945	-0.015	154846	0.1833	1.1695	145.8*	Endosulfan sulfate
6.826	-0.016	11726	7.561	-0.010	315918	0.2667	2.2314	157.3*	4,4'-DDT
7.257	-0.014	72753	8.193	0.035	200657	3.3842	3.3219	1.9	Methoxychlor
7.743	-0.023	12692	8.438	-0.011	259619	0.2666	1.9629	152.2*	Endrin ketone
7.119	-0.004	12186	7.692	-0.023	186877	0.3124	1.5075	131.3*	Endrin aldehyde
5.820	-0.022	109363	6.453	-0.023	374789	1.6831	1.2626	28.6	gamma-Chlordane
----			6.621	0.006	142509	0.0000	0.5149	---	alpha-Chlordane
2.211	0.001	31368	2.353	-0.024	754732	0.3248	1.9553	143.0*	Hexachlorobutadiene
3.989	-0.014	96347	4.424	-0.034	1379210	1.3826	4.1326	99.7*	Hexachlorobenzene
5.586	-0.041	3415	6.190	-0.013	1036221	0.0749	4.5707	193.5*	Oxychlordane
----			----			0.0000	0.0000	---	2,4-DDE
5.944	-0.007	110342	6.537	-0.024	147302	2.0327	0.7759	89.5*	trans-Nonachlor
6.186	-0.004	120055	6.972	0.033	51622	4.0006	0.5048	155.2*	2,4-DDD
6.439	0.010	11645	----			0.3428	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.434	-0.003	26256	8.407	-0.027	393546	<del>0.6860</del>	<del>3.5857</del>	135.8*	Mirex
8.732	-0.014	3665474	10.083	-0.015	9130901	80.0000	80.0000	IS 0.0	Hexabromobiphenyl
----			1.684	-0.044	11908602	0.0000	0.0000	---	Hexachloroethane
6.563	-0.018	52515	7.322	-0.014	195400	10.4575	15.7296	40.3*	Kepon
3.657	-0.013	1682765	3.996	-0.012	8332216	26.5590	26.9648	1.5	Tetrachloro-m-xylene
8.590	-0.021	1457601	9.545	-0.021	5979250	29.7549	42.5854	35.5	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	66.4	67.4	66.4	42-112
Decachlorobiphenyl	74.4	106.5	74.4	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	4060064	4276013	5.3
Hexabromobiphenyl	3748709	3665474	-2.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	17778163	-15.5
Hexabromobiphenyl	14864285	9130901	-38.6

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	STX-CLP Col				CLP2 Col				
		RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.517	0.027	50950	60.9	1	7.140	-0.019	57684	12.8
Toxaphene	2	6.826	-0.017	11726	10.5	2	7.493	0.010	96017	14.7
Toxaphene	3	7.201	-0.011	64886	71.7	3	7.692	-0.022	186877	26.5
Toxaphene	4	7.460	-0.006	9364	8.4	4	8.193	0.014	200657	41.2
Toxaphene	5	7.743	-0.002	12692	13.4	5	8.552	0.026	412527	189.4
Toxaphene	6	7.850	-0.024	78485	120.9	NS	---			----
Total STX-CLPAve (6 peaks): 47.644					Total CLP2Ave (5 peaks): 56.911					RPD = 18
Corrected Ave (5 peaks): 32.992					Corrected Ave (4 peaks): 23.787					RPD = 32





Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

YZ 11/27/12

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A064.d ARI ID: VR58GMS  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A064.d Client ID: SG-15-S-E-12110 MS  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 06:22  
 Compound Sublist: wpest Report Date: 11/27/2012 11:48  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL  
 Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.001	-0.009	4141098	3.184	-0.007	18288862	80.0000	80.0000 <sup>IS</sup>	0.0	1Bromo-2nitrobenzen
4.131	-0.016	1318192	4.571	-0.014	5114332	17.0808	12.8187	28.5	alpha-BHC
4.485	-0.012	534367	4.995	-0.011	2060925	16.3804	12.7629	24.8	beta-BHC
4.649	-0.013	501919	5.301	-0.013	2020761	8.0684	6.3848	23.3	delta-BHC
4.408	-0.017	1031380	4.922	-0.015	3888178	14.5465	10.7802	29.7	gamma-BHC (Lindane)
4.843	-0.019	761302	5.380	-0.017	2444755	11.8426	7.4033	46.1*	Heptachlor
5.129	-0.020	1086964	5.718	-0.017	4940533	16.5571	15.2151	8.4	Aldrin
5.701	-0.022	881018	6.276	-0.018	3575459	13.9218	12.2147	13.1	Heptachlor epoxide b
6.078	-0.022	990062	6.662	-0.018	3047241	16.9058	11.5927	37.3	Endosulfan I
6.301	-0.022	2075804	6.921	-0.018	6790803	34.2907	24.4212	33.6	Dieldrin
6.008	-0.019	2000274	6.729	-0.017	6755423	35.7877	25.4790	33.7	4,4'-DDE
6.518	-0.022	1456928	7.210	-0.018	6103581	28.4807	40.1765	34.1	Endrin N
6.724	-0.022	2580779	7.400	-0.016	6519843	52.2445	42.9351	19.6	Endosulfan II
6.565	-0.019	1995106	7.268	-0.015	7564714	44.6655	52.7245	16.5	4,4'-DDD M
7.490	-0.024	1169394	7.943	-0.017	4186099	28.1248	32.7837	15.3	Endosulfan sulfate
6.821	-0.021	859668	7.555	-0.015	2979133	19.1411	21.8193	13.1	4,4'-DDT
7.253	-0.018	2232618	8.140	-0.018	4043641	101.6765	69.4160	37.7	Methoxychlor
7.743	-0.023	1392680	8.430	-0.018	3892082	28.6425	30.5141	6.3	Endrin ketone
7.100	-0.023	822505	7.696	-0.019	4632824	20.6467	38.7537	61.0*	Endrin aldehyde
5.823	-0.020	1086991	6.459	-0.017	3794274	17.2742	12.4252	32.7	gamma-Chlordane
5.947	-0.020	913642	6.597	-0.018	3665100	15.0445	12.8728	15.6	alpha-Chlordane
2.198	-0.012	1064052	2.366	-0.011	4045850	11.3767	10.1892	11.0	Hexachlorobutadiene
3.990	-0.013	944246	4.447	-0.011	6854179	13.9917	19.9639	35.2	Hexachlorobenzene
5.614	-0.013	6971	6.192	-0.010	599817	0.1497	2.5719	178.0*	Oxychlorthane
----			----			0.0000	0.0000	---	2,4-DDE
----			6.536	-0.025	211123	0.0000	1.1531	---	trans-Nonachlor
6.185	-0.005	78190	6.975	0.037	75704	2.5510	0.7676	107.5*	2,4-DDD
6.442	0.013	104600	7.210	-0.017	6103581	3.0147	56.7278	179.8*	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.438	0.001	190252	8.472	0.038	709930	4.8668	6.7073	31.8	Mirex
8.733	-0.013	3743889	10.084	-0.014	8805618	80.0000	80.0000 <sup>IS</sup>	0.0	Hexabromobiphenyl
1.700	-0.037	4713	1.697	-0.031	177320	0.0000	0.0000	---	Hexachloroethane
6.565	-0.016	1995106	7.319	-0.018	1867637	388.9714	155.8977	85.6*	Kepone
3.658	-0.013	1649295	3.996	-0.011	6386821	25.8788	20.0919	28.9	Tetrachloro-m-xylene
8.591	-0.020	1490159	9.545	-0.021	5700507	29.7824	42.0999	34.3	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	67.2	50.2	50.2	42-112
Decachlorobiphenyl	74.5	105.2	74.5	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1139226.1	1004412.3	1004412.3~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	765642.6	545481.8	545481.8~	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

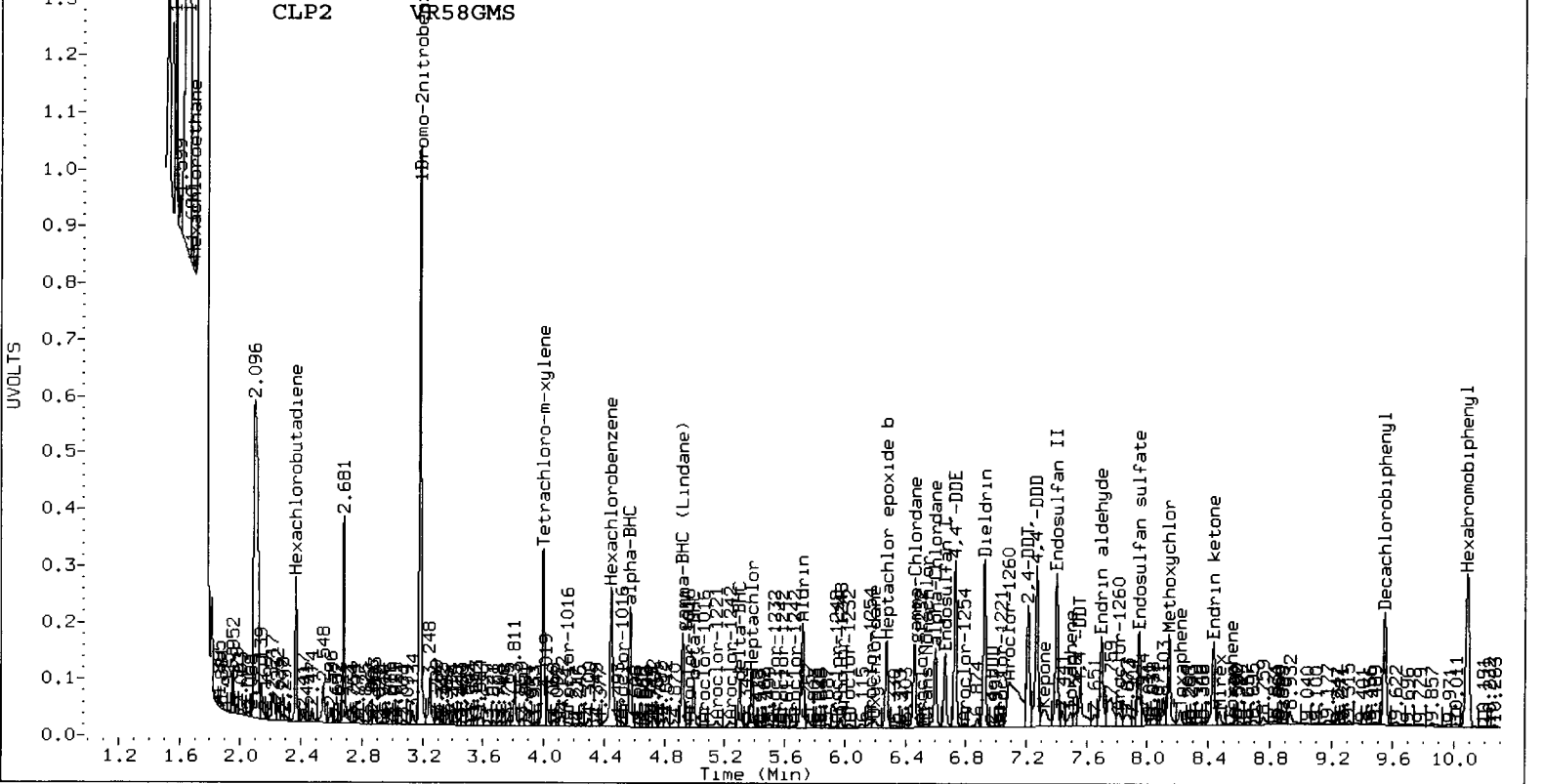
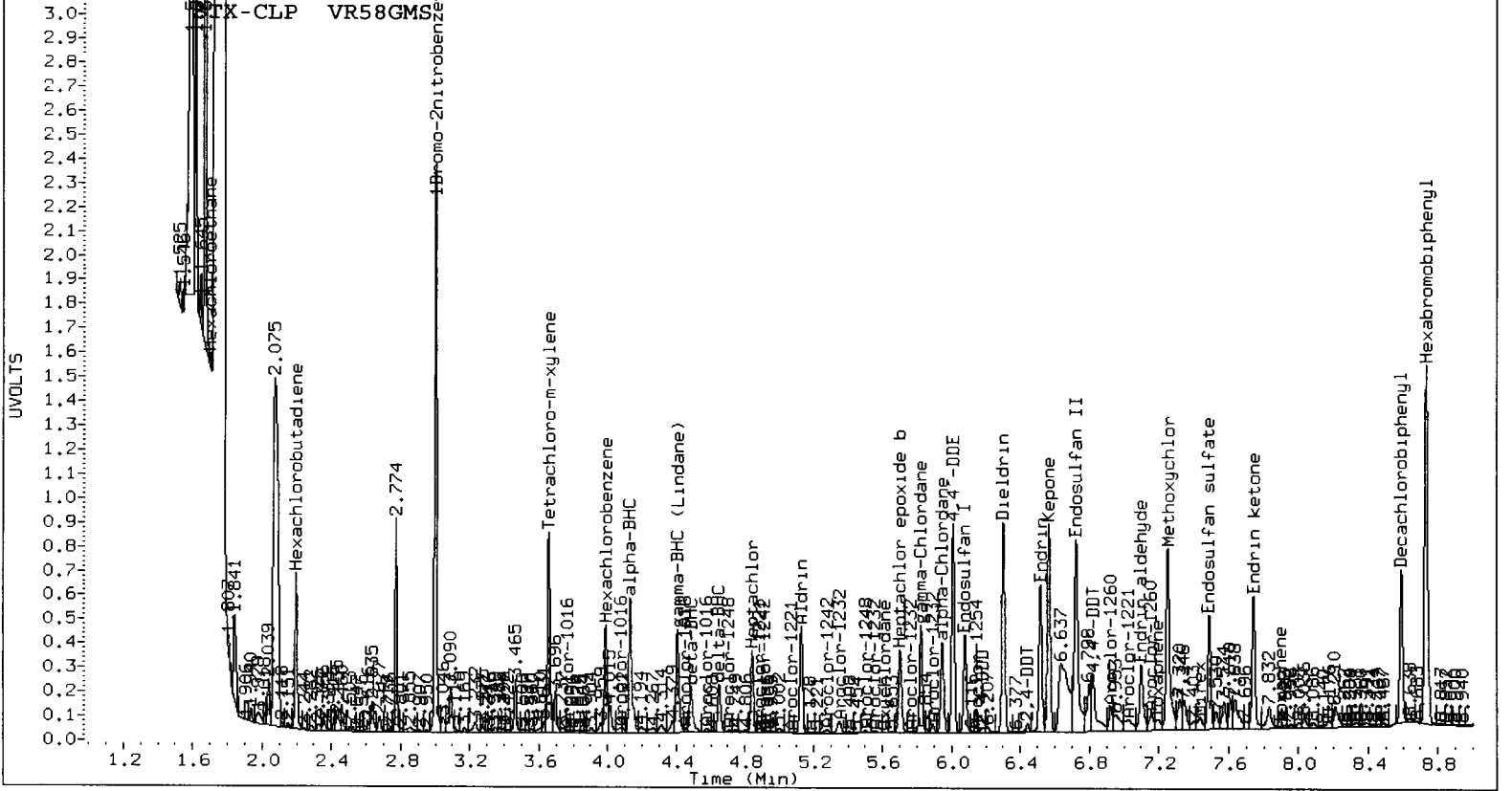
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	4060064	4141098	2.0
Hexabromobiphenyl	3748709	3743889	-0.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	18288862	-13.0
Hexabromobiphenyl	14864285	8805618	-40.8

\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col				
			Shift	Height	Amount			Shift	Height	Amount		
Toxaphene	1	6.518	0.028	1456928	1704.9	1	---			0.0		
Toxaphene	2	6.821	-0.023	859668	753.4	2	7.494	0.011	931086	147.8		
Toxaphene	3	7.193	-0.019	202427	219.1	3	7.696	-0.018	4632824	680.7		
Toxaphene	4	7.490	0.024	1169394	1032.9	4	8.214	0.034	851236	181.1		
Toxaphene	5	7.743	-0.002	1392680	1438.0	5	8.552	0.025	163753	78.0		
Toxaphene	6	7.895	0.021	21485	32.4	NS	---			---		
Total STX-CLPAve (6 peaks):					863.442	Total CLP2Ave (4 peaks):					271.876	RPD = 104*
Corrected Ave (5 peaks):					695.160	Corrected Ave (3 peaks):					135.616	RPD = 135*



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

YZ 11/27/12

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A065.d ARI ID: VR58GMSD  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A065.d Client ID: SG-15-S-E-12110 MSD  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 06:40  
 Compound Sublist: wpest Report Date: 11/27/2012 11:48  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL  
 Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
3.001	-0.009	4111009	3.184	-0.007	17980117	80.0000	80.0000	IS 0.0	1Bromo-2nitrobenzen
4.131	-0.016	1371400	4.571	-0.014	5261149	17.9003	13.4131	28.7	alpha-BHC
4.485	-0.012	527645	4.995	-0.011	2268036	16.2927	14.2867	13.1	beta-BHC
4.649	-0.014	549673	5.302	-0.013	2039062	8.9008	6.5533	30.4	delta-BHC
4.408	-0.016	1035279	4.922	-0.014	3949824	14.7084	11.1392	27.6	gamma-BHC (Lindane)
4.843	-0.019	717229	5.381	-0.017	2451652	11.2387	7.5517	39.2	Heptachlor
5.129	-0.020	1082388	5.718	-0.017	5201652	16.6080	16.2943	1.9	Aldrin
5.701	-0.022	985683	6.276	-0.018	4422083	15.6898	15.3663	2.1	Heptachlor epoxide b
6.078	-0.022	986327	6.663	-0.018	3729323	16.9653	14.4312	16.1	Endosulfan I
6.300	-0.022	2136280	6.920	-0.019	7368572	35.5480	26.9540	27.5	Dieldrin
6.008	-0.019	2015232	6.729	-0.017	7409538	36.3192	28.4260	24.4	4,4'-DDE
6.517	-0.023	1462423	----	----	----	29.1276	0.0000	---	Endrin
6.724	-0.022	1703937	7.400	-0.016	6663578	35.1449	42.6546	19.3	Endosulfan II
6.564	-0.020	2031576	7.268	-0.015	6679119	46.3403	45.2504	2.4	4,4'-DDD M
7.490	-0.023	1068520	7.943	-0.017	3386736	26.1837	25.7818	1.5	Endosulfan sulfate
6.821	-0.021	346458	7.555	-0.016	1423742	7.8597	10.1360	25.3	4,4'-DDT
7.252	-0.019	1145000	8.141	-0.018	2853306	53.1290	47.6123	11.0	Methoxychlor
7.743	-0.023	1148464	8.431	-0.018	3217806	24.0656	24.5224	1.9	Endrin ketone
7.100	-0.023	709529	7.698	-0.017	2682260	18.1469	21.8098	18.3	Endrin aldehyde
5.823	-0.020	1083445	6.459	-0.017	4175286	17.3439	13.9077	22.0	gamma-Chlordane
5.947	-0.021	1030929	6.597	-0.018	4076690	17.1001	14.5643	16.0	alpha-Chlordane
2.198	-0.012	1023530	2.366	-0.011	4743436	11.0235	12.1511	9.7	Hexachlorobutadiene
3.990	-0.013	965760	4.447	-0.011	7540603	14.4152	22.3404	43.1*	Hexachlorobenzene
5.618	-0.009	10348	6.193	-0.010	922417	0.2265	4.0231	178.7*	Oxychlordane
----	----	----	----	----	----	0.0000	0.0000	---	2,4-DDE
----	----	----	6.538	-0.023	229414	0.0000	2.2180	---	trans-Nonachlor
6.185	-0.005	90966	6.972	0.033	95795	3.0238	0.9442	104.8*	2,4-DDD
6.419	-0.010	13290	7.210	-0.017	4318429	0.3903	39.0140	196.0*	2,4-DDT
----	----	----	----	----	----	0.0000	0.0000	---	cis-Nonachlor
7.432	-0.005	54110	8.472	0.038	545649	<1.4103	5.0110	112.1*	Mirex
8.733	-0.013	3674542	10.084	-0.014	9058917	80.0000	80.0000	0.0	Hexabromobiphenyl
----	----	----	1.684	-0.044	14234332	0.0000	0.0000	---	Hexachloroethane
6.564	-0.017	2031576	7.321	-0.016	347706	403.5566	28.2126	173.9*	Kepon
3.658	-0.013	1586809	3.996	-0.011	7428079	26.0498	23.7688	9.2	Tetrachloro-m-xylene
8.591	-0.020	1476167	9.545	-0.021	6135720	30.0595	44.0471	37.7	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	65.1	59.4	59.4	42-112
Decachlorobiphenyl	75.1	110.1	75.1	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1165103.8	0.0	0.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	314387.8	253399.2	253399.2~	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	4060064	4111009	1.3
Hexabromobiphenyl	3748709	3674542	-2.0

Column 2

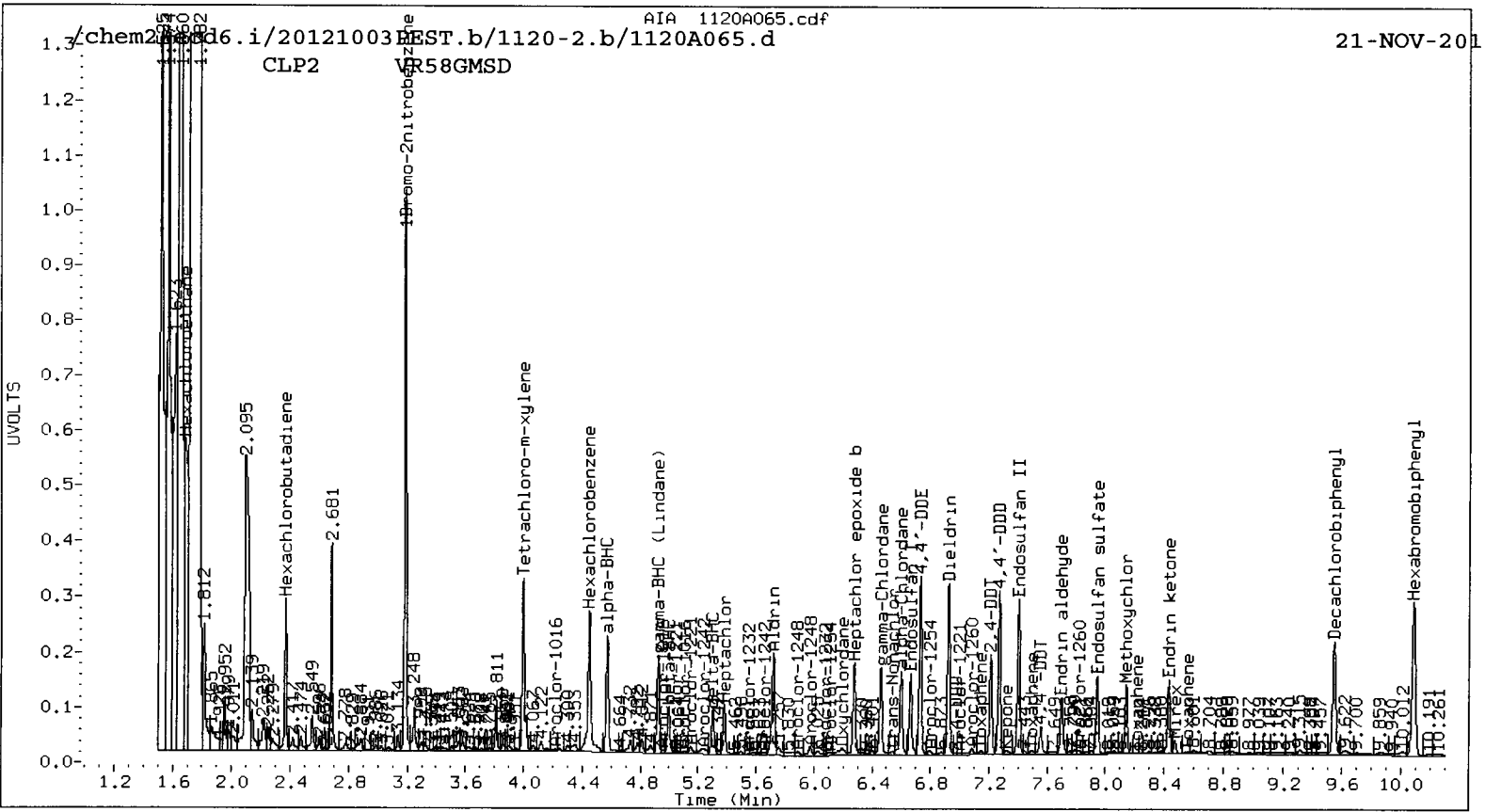
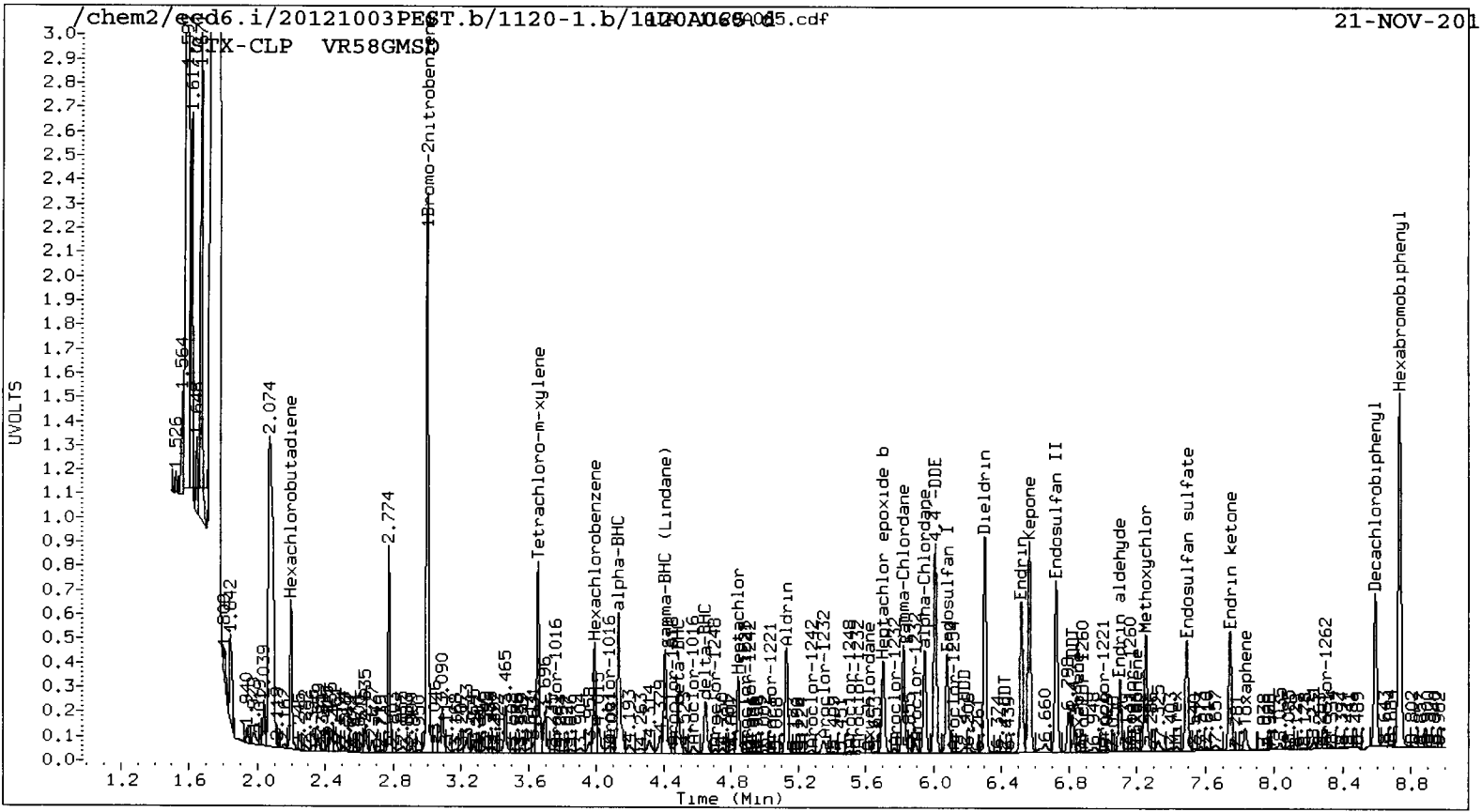
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	17980117	-14.5
Hexabromobiphenyl	14864285	9058917	-39.1

\* Standard Areas taken from Initial Cal Level 3

Initial Calibration Date: 03-OCT-2012

<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	STX-CLP Col				CLP2 Col				
		RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.517	0.027	1462423	1743.6	1	7.146	-0.013	302771	67.8
Toxaphene	2	6.853	0.009	10488	9.4	2	7.493	0.010	294193	45.4
Toxaphene	3	7.201	-0.011	47905	52.8	3	7.698	-0.016	2682260	383.1
Toxaphene	4	7.490	0.025	1068520	961.6	4	8.214	0.034	19650	4.1
Toxaphene	5	7.743	-0.002	1148464	1208.2	5	8.557	0.031	74426	34.4
Toxaphene	6	7.832	-0.042	248645	382.1	NS	---			----
Total STX-CLPAve (6 peaks): 726.282					Total CLP2Ave (5 peaks): 106.947					RPD = 149*
Corrected Ave (5 peaks): 522.822					Corrected Ave (4 peaks): 37.919					RPD = 173*



UVOLTS : 021110

Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

YZ 11/27/12

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A067.d ARI ID: INDAE  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A067.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 07:16  
 Compound Sublist: INDA Report Date: 11/27/2012 12:33  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

STX-CLP Col	CLP2 Col	STX-CLP	CLP2	RPD	Compound/Flag
RT Shift Response	RT Shift Response	on col on col			
3.003 -0.007 4411805	3.185 -0.005 23839242	80.0000 80.0000		0.0	1Bromo-2nitrobenzen
4.134 -0.014 1762633	4.572 -0.013 10183459	21.4383 19.5814		9.1	alpha-BHC
4.491 -0.006 586842	4.999 -0.008 3330104	16.8852 15.8212		6.5	beta-BHC
4.656 -0.007 1302721	5.304 -0.010 7678217	19.6565 18.6117		5.5	delta-BHC
4.410 -0.014 1357378	4.923 -0.013 7543759	17.9697 16.0459		11.3	gamma-BHC (Lindane)
4.844 -0.018 1006742	5.381 -0.017 5628064	14.6997 13.0751		11.7	Heptachlor
5.130 -0.019 1461973	5.719 -0.016 7802820	20.9029 18.4351		12.5	Aldrin
5.702 -0.021 1321813	6.276 -0.017 6406403	19.6056 16.7903		15.5	Heptachlor epoxide b
6.078 -0.021 1317355	6.663 -0.017 5699730	21.1142 16.6352		23.7	Endosulfan I
6.301 -0.021 2708503	6.921 -0.018 11767440	41.9970 32.4655		25.6	Dieldrin
6.011 -0.016 2449826	6.731 -0.015 11424500	41.1414 33.0569		21.8	4,4'-DDE
6.518 -0.022 1812296	7.210 -0.018 6816412	33.1280 33.3711		0.7	Endrin
6.725 -0.021 2081616	7.400 -0.016 10284132	39.4044 50.3698		24.4	Endosulfan II
6.567 -0.017 2537269	7.269 -0.014 10241583	53.1162 53.0902		0.0	4,4'-DDD
7.491 -0.022 1685014	7.943 -0.017 6497143	37.8954 37.8440		0.1	Endosulfan sulfate
6.823 -0.019 526854	7.556 -0.015 1841298	10.9693 10.0300		8.9	4,4'-DDT
7.253 -0.018 1428420	8.141 -0.018 4738266	60.8298 60.4970		0.5	Methoxychlor
7.744 -0.022 1331128	8.431 -0.018 4393130	25.5997 25.6165		0.1	Endrin ketone
7.101 -0.022 1662167	7.698 -0.017 6670223	39.0158 41.4987		6.2	Endrin aldehyde
5.824 -0.019 1303433	6.460 -0.016 6320269	19.4428 15.8783		20.2	gamma-Chlordane
5.948 -0.020 1254635	6.598 -0.017 5763124	19.3918 15.5288		22.1	alpha-Chlordane
2.199 -0.011 2203819	2.367 -0.010 9738272	22.1170 18.8151		16.1	Hexachlorobutadiene
3.994 -0.008 1524395	4.450 -0.008 11016245	21.2022 24.6160		14.9	Hexachlorobenzene
8.733 -0.012 4003766	10.084 -0.014 11839489	80.0000 80.0000		0.0	Hexabromobiphenyl
3.661 -0.009 2410654	3.998 -0.009 16519901	36.8762 39.8693		7.8	Tetrachloro-m-xylene
8.591 -0.020 2048176	9.545 -0.021 8565662	38.2779 47.0496		20.6	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

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	92.2	99.7	92.2~	115- 0
Decachlorobiphenyl	95.7	117.6	95.7~	115- 0



~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

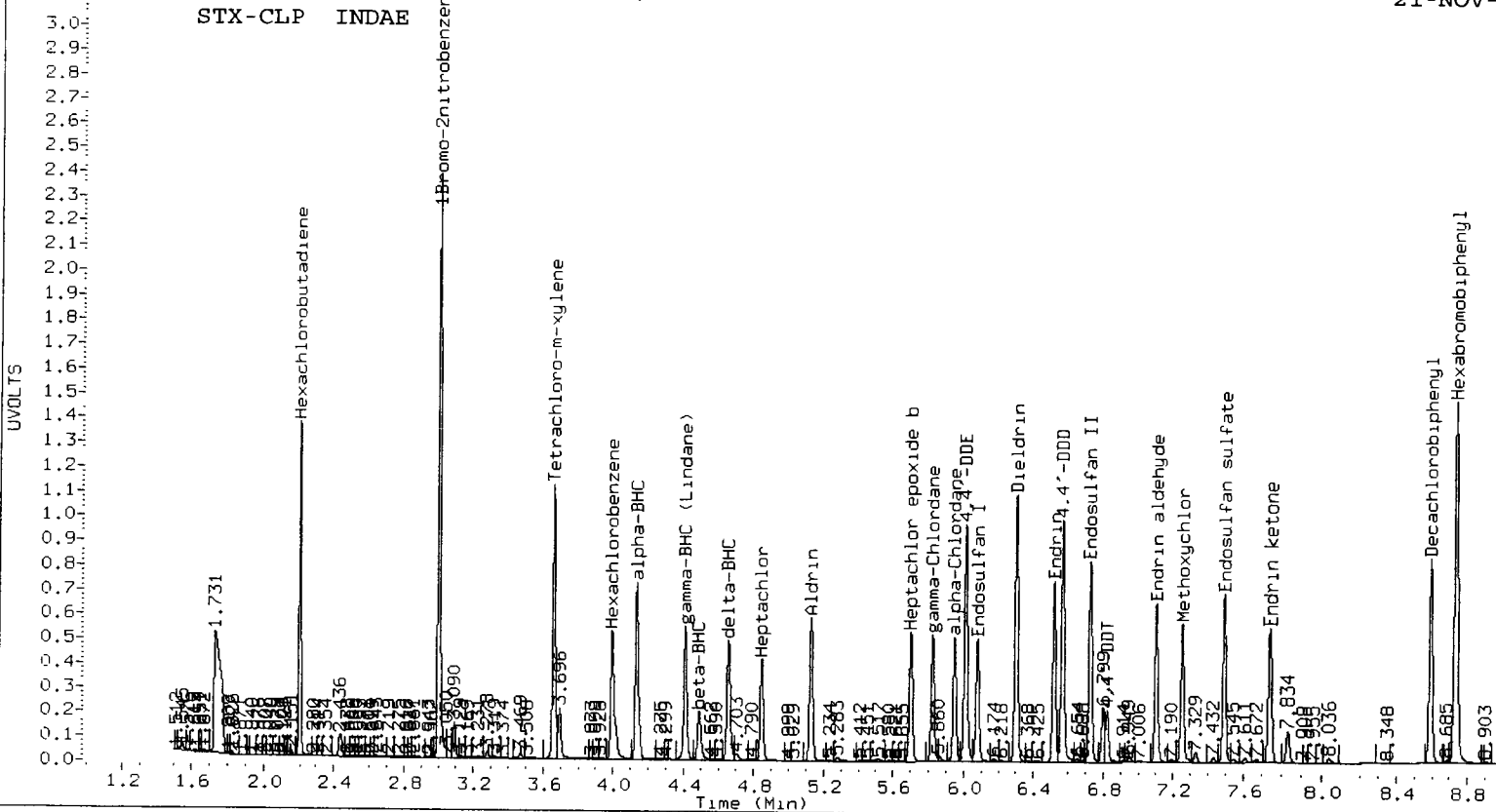
Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4411805	8.7
Hexabromobiphenyl	3748709	4003766	6.8

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	21032891	23839242	13.3
Hexabromobiphenyl	14864285	11839489	-20.3

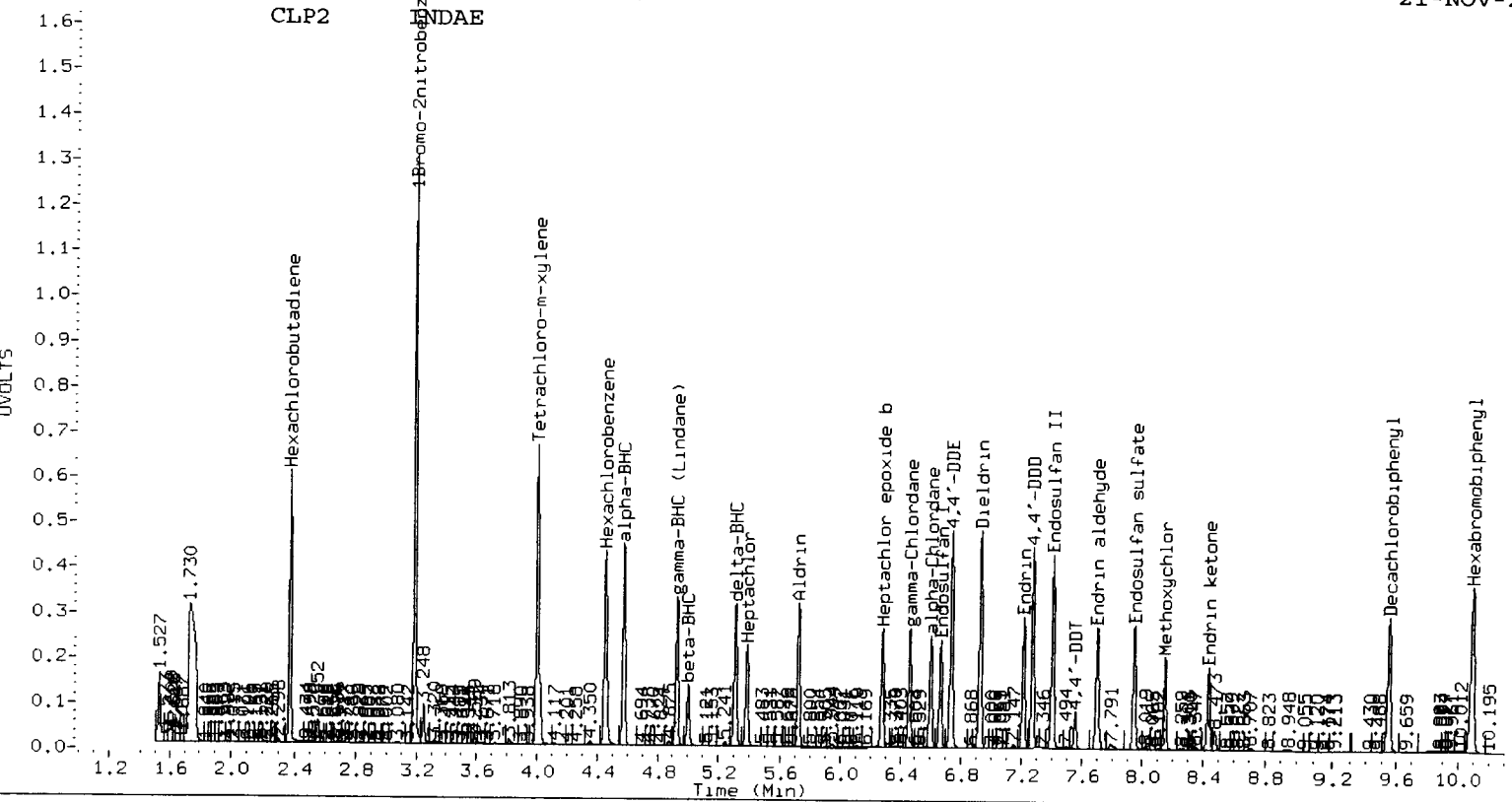
\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 03-OCT-2012  
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										

STX-CLP INDAE



CLP2 INDAE



Analytical Resources Inc.  
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20121003PEST.b/1120-1.b/1120A068.d ARI ID: WNDE  
 Data file 2: /chem2/ecd6.i/20121003PEST.b/1120-2.b/1120A068.d Client ID:  
 Method: /chem2/ecd6.i/20121003PEST.b/PEST1003.m Injection Date: 21-NOV-2012 07:33  
 Compound Sublist: WND Report Date: 11/27/2012 12:33  
 Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE  
 Operator: ar Dilution Factor: 1.000

RT	STX-CLP Col Shift Response	CLP2 Col Shift Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.731	-0.006 39577	1.731 0.003 16150338	0.0000	0.0000	---	Hexachloroethane
3.003	-0.007 4363763	3.185 -0.005 23688082	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.608	-0.019 1805172	6.186 -0.016 9476045	36.7585	31.3703	15.8	Oxychlorthane
5.688	-0.015 1488581	6.439 -0.014 7516962	41.2409	34.4101	18.1	2,4-DDE
5.933	-0.018 2260815	6.545 -0.016 10389543	38.6534	41.0020	5.9	trans-Nonachlor
6.175	-0.015 1581440	6.925 -0.014 7440104	48.9086	54.5099	10.8	2,4-DDD
6.412	-0.017 540216	7.212 -0.015 2225268	14.7591	14.9442	1.2	2,4-DDT
6.547	-0.019 2445676	7.270 -0.015 10214730	39.4753	38.5549	2.4	cis-Nonachlor
7.417	-0.020 1208237	8.417 -0.017 4013595	29.2983	27.3995	6.7	Mirex
8.734	-0.012 3949527	10.084 -0.014 12186581	80.0000	80.0000	0.0	Hexabromobiphenyl
3.661	-0.009 1951684	3.999 -0.009 13511878	30.1839	32.8178	8.4	Tetrachloro-m-xylene
8.591	-0.020 1673722	9.545 -0.021 7267570	31.7094	38.7824	20.1	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	75.5	82.0	75.5~	150- 0
Decachlorobiphenyl	79.3	97.0	79.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

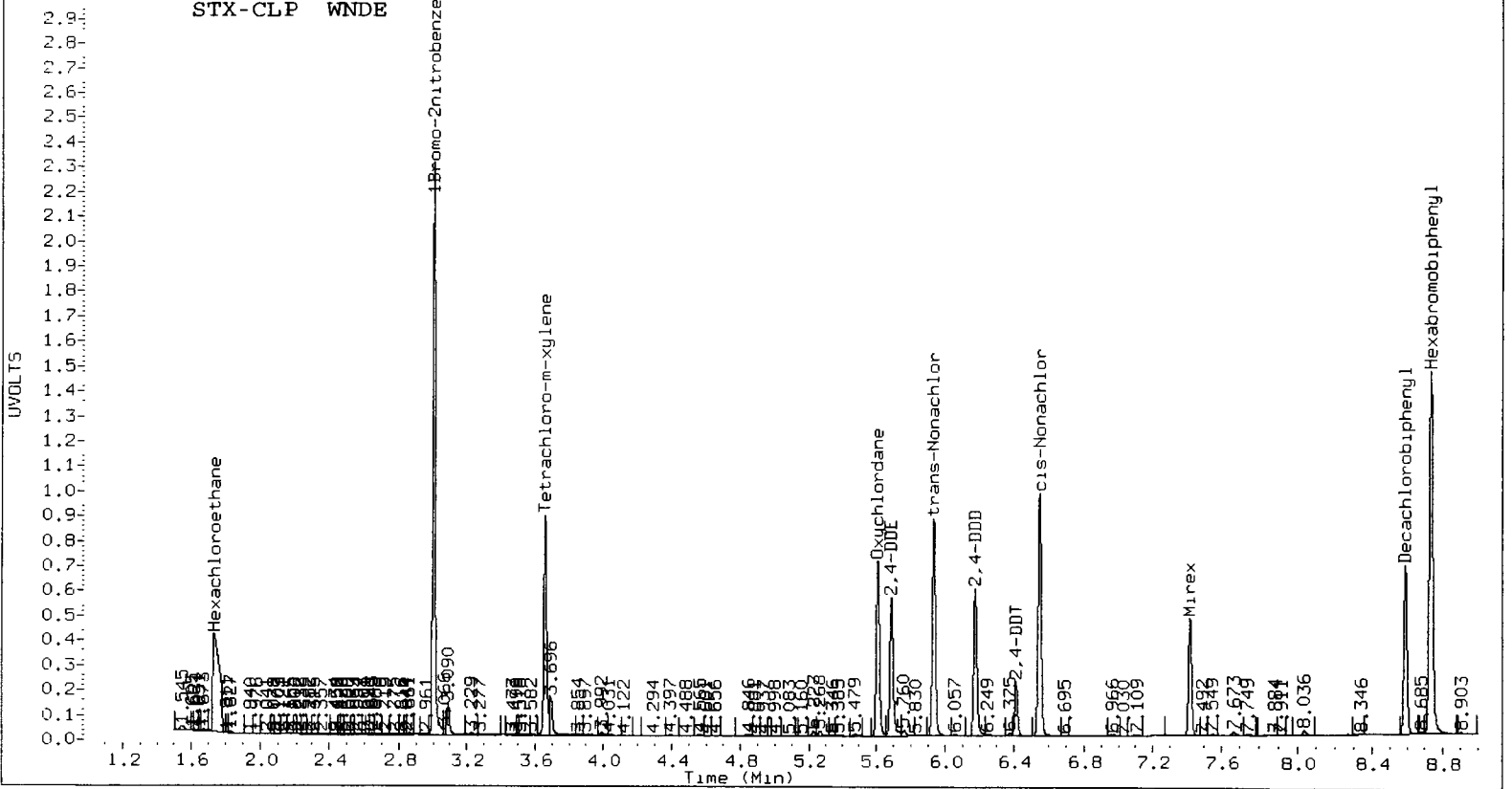
Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	4060064	4363763	7.5
Hexabromobiphenyl	3748709	3949527	5.4

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	21032891	23688082	12.6
Hexabromobiphenyl	14864285	12186581	-18.0

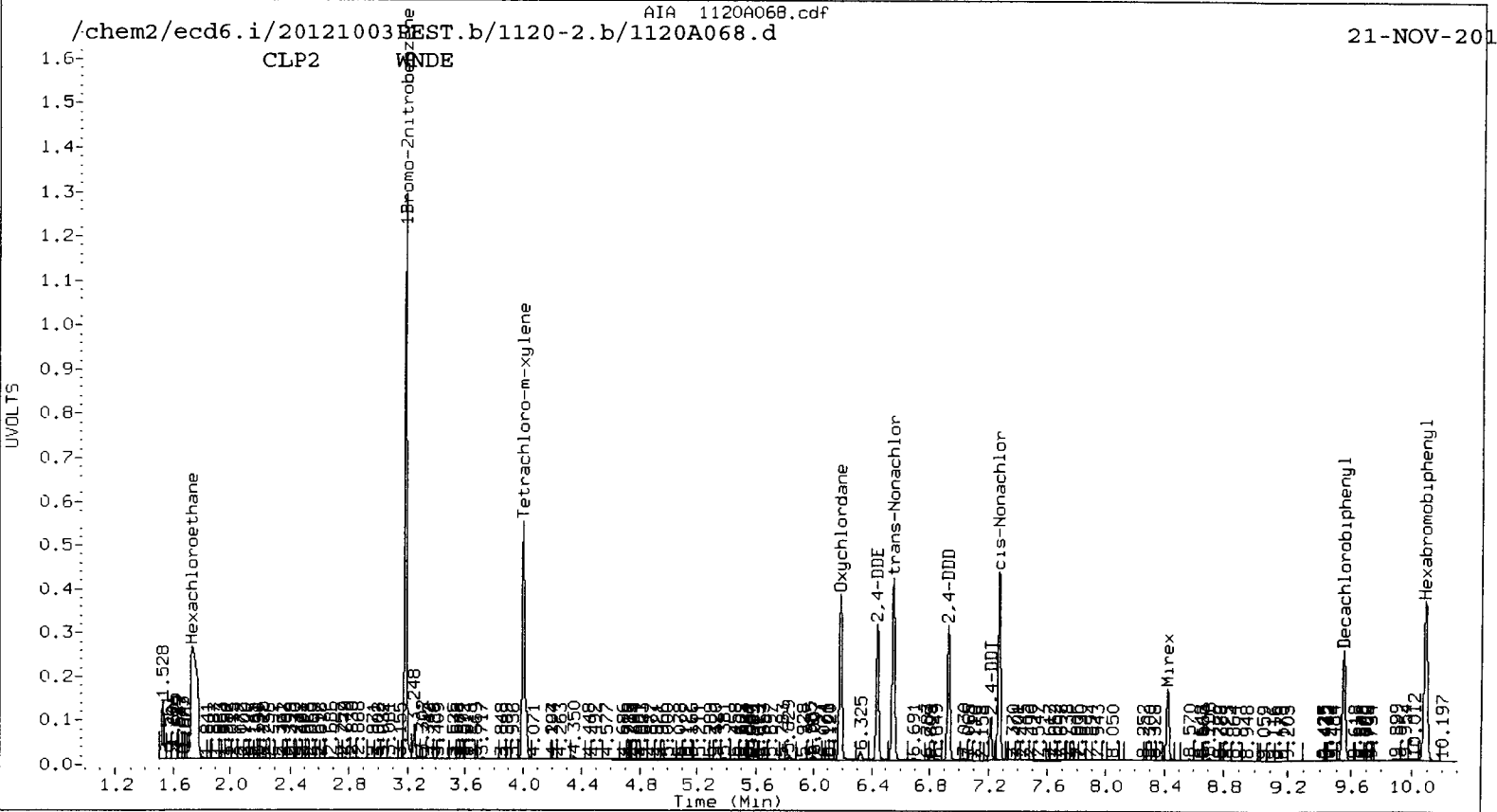
\* Standard Areas taken from Initial Cal Level 3  
 Initial Calibration Date: 03-OCT-2012  
 <- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	RT	STX-CLP Col			Peak#	RT	CLP2 Col		
			Shift	Height	Amount			Shift	Height	Amount
=====										

STX-CLP WNDE



CLP2 WNDE



**PCB Raw Data  
Extraction Bench Sheets and Notes**

**ARI Job ID: VR58**



Preparation Test PCB PSDDA # 5 (PCBSDMP20)

ARI Job No(s) VR 58, VR 82

Page 1 of 2

PSDDA (20ppb)  
Batch set up by: SP

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 5.0g dry wt)	(REQ) Acid Clean (5mL)	(REQ) Sulfur Clean (5mL)	(Opt) Silica - Gel Clean (1:5)	Extraction Final Volume	Volume to Lab	Comments	Verify Client ID
	MBS	5.00g	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		NG 11/16/12
	SBS	5.00g	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		NG 11/16/12
	<del>CSBS Dup</del>	<del>5.00g</del>	<del>5.0mL</del>	<del>5.0mL</del>	<del>1mL Y/N</del>	<del>5.0mL</del>	<del>1mL</del>		
	<del>QLS</del>	<del>5.00g</del>	<del>5.0mL</del>	<del>5.0mL</del>	<del>1mL Y/N</del>	<del>5.0mL</del>	<del>1mL</del>		
	<del>VR 58 A</del>	<del>9.16</del>	<del>5.0mL</del>	<del>5.0mL</del>	<del>1mL Y/N</del>	<del>5.0mL</del>	<del>1mL</del>		
5	VR 58 A	9.16	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		Exchange to Hexane (2 X 20mL)
5	B	26.06	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		25/12
5	C	17.15	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		11/23/12
5	D	21.04	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		Analyst/Date
5	E	21.09	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		TurboVap 123 Pre-Cleanups
5	F	11.20	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		
5	G	7.22	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		SP 11/23/12
4	H	7.23	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		Analyst/Date
4	I	11.07	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		TurboVap 123 Post Cleanups
4	J	7.24	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		
4	SMS	7.17	5.0mL	5.0mL	1mL Y/N	5.0mL	1mL		
Analyst/Date		NG 11/16/12	SP 11/23/12	SP 11/23/12	SP 11/23/12	WW 11/23/12			Analyst/Date

Standard Surrogate	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
	N(2035-2)	2µg/mL	100µL	5/16/13	M	TC
	1(2012-2)	20µg/mL	125µL	8/28/13	M	AC
<del>QLS Spike</del>	<del>5</del>	<del>2µg/mL</del>	<del>50µL</del>			

Extraction Time: 12:45 Balance ID: B239298002

- 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 2/3<sup>rd</sup> 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.
  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 2<sup>nd</sup> time.
  10. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane.
  11. KD (Small or 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 (if Silica Clean).
  16. Vial with Hexane.
- A. Need Total Solids Y/N B. Archive/Freeze Y/N







ARI Job No.: VR58

Client ID: Anches SEA, LLC

Parameter: FSDDA PCB

Client Project: City of Ken. Kenmore <sup>SP 1.5</sup> <sup>Sediment</sup>

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
<input checked="" type="checkbox"/> No Anomalies (standard soil/wet sediment/sand/gravel)= <u>ABCDEFGHIJ</u>	<u>CT 11/12</u>
<input checked="" type="checkbox"/> Standing Water Decanted (Not shared)= <u>ABCDEFGHIJ</u>	<u>CT 11/12</u>
<input type="checkbox"/> Standing Water Homogenized (Shared samples)=	
<input type="checkbox"/> Clay/Clumps (Difficult to homogenize)=	
<input checked="" type="checkbox"/> Rocks (%+size)? <u>F, 24% small rocks</u>	<u>CT 11/12</u>
<input checked="" type="checkbox"/> Organics (Leaves/sticks/grass)=	
<input type="checkbox"/> Oily, obvious fuel/sulfur odors=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Aqueous:	
<input type="checkbox"/> No Anomalies	
<input type="checkbox"/> Turbid/Color=	
<input type="checkbox"/> Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
<input type="checkbox"/> Emulsions (%)=	
<input type="checkbox"/> Other (Details)=	
<input type="checkbox"/> Other Notes/Comments=(Note problems, concerns, corrective actions).	
Centrifuge#1 used for all Centrifugations)	

**PCB Raw Data  
Initial Calibration**

**ARI Job ID: VR58**



## 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): 11/02/12 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<sup>2</sup> 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
<u>AR1660</u>	<u>1980-1</u>	<u>05/16/13</u>	<u>AR1660</u>	<u>2009-2</u>	<u>05/16/13</u>
<u>AR1247</u>	<u>1980-6</u>		<u>AR1247</u>	<u>2009-5</u>	
<u>AR1248</u>	<u>1980-3</u>		<u>AR1248</u>	<u>2009-6</u>	
<u>AR2162</u>	<u>1980-2</u>		<u>AR1254</u>	<u>2009-7</u>	
<u>A3268</u>	<u>1980-4</u>		<u>AR3268</u>	<u>2009-4</u>	
<u>DDT</u>	<u>1991-2</u>	<u>01/21/13</u>	<u>AR2162</u>	<u>2009-3</u>	
<u>BD</u>	<u>1991-1</u>	<u>01/14/13</u>			
<u>IB</u>	<u>1982-2</u>	<u>05/16/13</u>			
<u>AR1254</u>	<u>1980-5</u>	<u>05/16/13</u>			

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

I

Analyst: [Signature] Date: 11/02/12

Reviewer: [Signature] Date: 11/7

Report Date : 07-Nov-2012 08:23

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Page 1

Method File: /chem2/ecds.i/20121102.B/PCBI.M  
Batch File: /chem2/ecds.i/20121102.B/ical-1.b  
Inst ID: ecd5.i

ID: RT01 RT02 RT03 RT04 RT05 RT06  
FILENAME: 1102A012 1102A013 1102A014 1102A015 1102A016 1102A017  
INJ DATE: 02-NOV-2012 02-NOV-2012 02-NOV-2012 03-NOV-2012 02-NOV-2012 02-NOV-2012  
INJ TIME: 20:37 20:58 21:18 21:38 21:58 22:18

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPERC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.274	2.277	2.275	2.275	2.274	2.273	2.274	2.174-2.374	2.275	0.001
\$ 1 Tetrachloro-m-Xylene	4.444	4.444	4.444	4.445	4.443	4.444	4.444	4.344-4.544	4.444	0.001
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	4.817	4.717-4.917	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.093	5.993-6.193	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.094	5.994-6.194	+++++	+++++
7 Aroclor-1016	6.093	6.093	6.093	6.092	6.092	6.092	6.093	5.993-6.193	6.093	0.000
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.494	6.394-6.594	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.222	8.122-8.322	+++++	+++++
9 Aroclor-1260	9.995	9.996	9.995	9.995	9.995	9.995	9.995	9.895-10.095	9.995	0.000
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	9.996	9.896-10.096	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.203	11.103-11.303	+++++	+++++
\$ 13 Decachlorobiphenyl	12.855	12.855	12.854	12.855	12.854	12.855	12.855	12.755-12.955	12.854	0.001
* 12 IS-HBBP	13.214	13.214	13.214	13.214	13.214	13.214	13.214	13.114-13.314	13.214	0.000
42 2,4-DBS	+++++	+++++	+++++	+++++	+++++	+++++	8.188	8.138-8.238	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	8.737	8.687-8.787	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.261	9.211-9.311	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.620	8.520-8.720	+++++	+++++

Reviewer 1  
Reviewer 2

Date: 11/06/12  
Date:

Report Date : 07-Nov-2012 08:23

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecds.i/20121102.B/PCB1.m  
Batch File: /chem2/ecds.i/20121102.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	+++++	+++++	+++++	+++++	+++++	+++++	9.242	9.142-9.342	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.704	9.604-9.804	+++++	+++++

Report Date : 07-Nov-2012 08:23

Page 1

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecds.i/20121102.B/PCB2.m  
Batch File: /chem2/ecds.i/20121102.B/1cal-2.b  
Inst ID: ecd5.i

ID: RT01 RT02 RT03 RT04 RT05 RT06  
FILENAME: 1102A012 1102A013 1102A014 1102A015 1102A016 1102A017  
INJ. DATE: 02-NOV-2012 02-NOV-2012 02-NOV-2012 02-NOV-2012 02-NOV-2012 02-NOV-2012  
INJ. TIME: 20:37 20:58 21:18 21:38 21:58 22:18

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BMB	2.761	2.763	2.761	2.761	2.763	2.761	2.765	2.665-2.865	2.762	0.001
\$ 2 Tetrachloro-m-xylene	4.454	4.454	4.453	4.454	4.455	4.454	4.456	4.356-4.556	4.454	0.001
1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	5.141	5.041-5.241	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	6.210	6.110-6.310	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.208	6.108-6.308	+++++	+++++
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.837	6.737-6.937	+++++	+++++
7 Aroclor-1016	6.208	6.209	6.208	6.208	6.209	6.209	6.109-6.309	6.209	6.209	0.000
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.341	8.241-8.441	+++++	+++++
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.302	10.202-10.402	+++++	+++++
9 Aroclor-1260	10.302	10.301	10.301	10.301	10.302	10.302	10.202-10.402	10.301	10.301	0.001
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.547	11.447-11.647	+++++	+++++
\$ 13 Decachlorobiphenyl	13.248	13.247	13.247	13.247	13.248	13.247	13.248	13.148-13.348	13.247	0.000
* 12 IS-BBP	14.115	14.116	14.115	14.115	14.115	14.114	14.017-14.217	14.115	14.115	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.604	8.554-8.654	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.290	9.240-9.340	+++++	+++++
44 4,4-DDR	+++++	+++++	+++++	+++++	+++++	+++++	8.992	8.892-9.092	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.753	9.653-9.853	+++++	+++++

Reviewer 1  
Reviewer 2

Date: 11/06/12

11/06/12 08:23

Report Date : 07-Nov-2012 08:23

Analytical Resources, Inc.  
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecds.i/20121102.B/PCB2.m  
Batch File: /chem2/ecds.i/20121102.B/1cal-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	+++++	+++++	+++++	+++++	+++++	+++++	10.192	10.092-10.292	+++++	+++++

11/07/2012 08:23

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecds.i/20121102.B/ical-2.b  
 ARI Job No.: IB Method: PCB2.m Instrument: ecd5.i Date: 02-NOV-2012

Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
2017	1102A011.d	IB		1	NO MANUAL INTEGRATION
2037	1102A012.d	0.25PPMARI660		1	NO MANUAL INTEGRATION
2058	1102A013.d	0.02PPMARI660		1	NO MANUAL INTEGRATION
2118	1102A014.d	0.05PPMARI660		1	NO MANUAL INTEGRATION
2138	1102A015.d	1PPMARI660		1	NO MANUAL INTEGRATION
2158	1102A016.d	0.1PPMARI660		1	NO MANUAL INTEGRATION
2218	1102A017.d	0.5PPMARI660		1	NO MANUAL INTEGRATION
2238	1102A018.d	ARI242		1	NO MANUAL INTEGRATION
2259	1102A019.d	ARI248		1	NO MANUAL INTEGRATION
2319	1102A020.d	ARI254		1	NO MANUAL INTEGRATION
2340	1102A021.d	ARI2162		1	NO MANUAL INTEGRATION
0000	1102A022.d	ARI3268		1	NO MANUAL INTEGRATION
0020	1102A023.d	ARI660ICV		1	NO MANUAL INTEGRATION
0041	1102A024.d	ARI243ICV		1	NO MANUAL INTEGRATION
0101	1102A025.d	ARI248ICV		1	NO MANUAL INTEGRATION
0121	1102A026.d	ARI254ICV		1	NO MANUAL INTEGRATION
0142	1102A027.d	ARI262ICV		1	NO MANUAL INTEGRATION
0202	1102A028.d	ARI268ICV		1	NO MANUAL INTEGRATION
2017	1102A011.d	IB		1	NO MANUAL INTEGRATION
2037	1102A012.d	0.25PPMARI660		1	NO MANUAL INTEGRATION

11 07 09 10 11 12



2058 1102A013 d 0.02PPMRL660

1

NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATAATCH - /chem2/ecds.i/20121102.B/ical-2.b

Time	Filename	LabID	ClientID	DF	Manually Integrated Compounds
2118	1102A014.d	0.05PPMAR1660		1	NO MANUAL INTEGRATION
2138	1102A015.d	1PPMAR1660		1	NO MANUAL INTEGRATION
2158	1102A016.d	0.1PPMAR1660		1	NO MANUAL INTEGRATION
2218	1102A017.d	0.5PPMAR1660		1	NO MANUAL INTEGRATION
2238	1102A018.d	AR1242		1	NO MANUAL INTEGRATION
2259	1102A019.d	AR1248		1	NO MANUAL INTEGRATION
2319	1102A020.d	AR1254		1	NO MANUAL INTEGRATION
2340	1102A021.d	AR2162		1	NO MANUAL INTEGRATION
0000	1102A022.d	AR3268		1	NO MANUAL INTEGRATION
0020	1102A023.d	AR1660ICV		1	NO MANUAL INTEGRATION
0041	1102A024.d	AR1242ICV		1	NO MANUAL INTEGRATION
0101	1102A025.d	AR1248ICV		1	NO MANUAL INTEGRATION
0121	1102A026.d	AR1254ICV		1	NO MANUAL INTEGRATION
0142	1102A027.d	AR2162ICV		1	NO MANUAL INTEGRATION
0202	1102A028.d	AR3268ICV		1	NO MANUAL INTEGRATION

00 01 02 03 04 05

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB2.m  
 Cal Date : 07-Nov-2012 07:35 j rains  
 Curve Type : Average

Calibration File Names:

Level 1: /chem2/ecd5.i/20121102.B/ical-2.b/1102A013.d  
 Level 2: /chem2/ecd5.i/20121102.B/ical-2.b/1102A014.d  
 Level 3: /chem2/ecd5.i/20121102.B/ical-2.b/1102A016.d  
 Level 4: /chem2/ecd5.i/20121102.B/ical-2.b/1102A012.d  
 Level 5: /chem2/ecd5.i/20121102.B/ical-2.b/1102A017.d  
 Level 6: /chem2/ecd5.i/20121102.B/ical-2.b/1102A015.d  
 Level 7: /chem2/ecd5.i/20121102.B/ical-2.b/1102A022.d  
 Level 8: /chem2/ecd5.i/20121102.B/ddt-2.b/1102A029.d

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
1 Aroclor-1221 (1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01355	+++++					0.01355	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00798	+++++					0.00798	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.02510	+++++					0.02510	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.00433	+++++					0.00433	0.000
4 Aroclor-1232 (1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.01985	+++++					0.01985	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03912	+++++					0.03912	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB2.m  
 Cal Date : 07-Nov-2012 07:35 j rains  
 Curve Type : Average

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
(3)	++++ 0.01635	++++ ++++	++++	++++	++++	++++	0.01635	0.000
(4)	++++ 0.01389	++++ ++++	++++	++++	++++	++++	0.01389	0.000
3 Aroclor-1242(1)	++++ 0.03416	++++ ++++	++++	++++	++++	++++	0.03416	0.000
(2)	++++ 0.07272	++++ ++++	++++	++++	++++	++++	0.07272	0.000
(3)	++++ 0.03022	++++ ++++	++++	++++	++++	++++	0.03022	0.000
(4)	++++ 0.02545	++++ ++++	++++	++++	++++	++++	0.02545	0.000
6 Aroclor-1248(1)	++++ 0.04749	++++ ++++	++++	++++	++++	++++	0.04749	0.000
(2)	++++ 0.03939	++++ ++++	++++	++++	++++	++++	0.03939	0.000
(3)	++++ 0.04070	++++ ++++	++++	++++	++++	++++	0.04070	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB2.m  
 Cal Date : 07-Nov-2012 07:35 jrains  
 Curve Type : Average

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
(4)	++++	++++	++++	++++	++++	++++		
	0.05034	++++					0.05034	0.000
7 Aroclor-1016(1)	0.05414	0.04961	0.04814	0.04282	0.03901	0.03516		
	++++	++++					0.04481	15.835
(2)	0.11185	0.10248	0.10098	0.09159	0.08474	0.07727		
	++++	++++					0.09482	13.397
(3)	0.02757	0.02640	0.02633	0.02415	0.02257	0.02085		
	++++	++++					0.02466	10.572
(4)	0.03250	0.03030	0.02963	0.02678	0.02467	0.02255		
	++++	++++					0.02774	13.491
8 Aroclor-1254(1)	++++	++++	++++	++++	++++	++++		
	0.03474	++++					0.03474	0.000
(2)	++++	++++	++++	++++	++++	++++		
	0.04387	++++					0.04387	0.000
(3)	++++	++++	++++	++++	++++	++++		
	0.03370	++++					0.03370	0.000
(4)	++++	++++	++++	++++	++++	++++		
	0.07393	++++					0.07393	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB2.m  
 Cal Date : 07-Nov-2012 07:35 j rains  
 Curve Type : Average

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04454	+++++					0.04454	0.000
10 Aroclor-1262 (1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06977	+++++					0.06977	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06199	+++++					0.06199	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13603	+++++					0.13603	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05505	+++++					0.05505	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05291	+++++					0.05291	0.000
9 Aroclor-1260 (1)	0.05095	0.04631	0.04553	0.04102	0.03791	0.03452		
	+++++	+++++					0.04271	14.120
(2)	0.06048	0.05750	0.05613	0.05086	0.04681	0.04271		
	+++++	+++++					0.05241	13.017
(3)	0.11796	0.11377	0.11113	0.10159	0.09448	0.08678		
	+++++	+++++					0.10428	11.617

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB2.m  
 Cal Date : 07-Nov-2012 07:35 jrains  
 Curve Type : Average

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
(4)	0.03951	0.03322	0.03270	0.02987	0.02786	0.02539	0.03143	15.703
11 Aroclor-1268(1)	0.13895	++++	++++	++++	++++	++++	0.13895	0.000
(2)	0.13513	++++	++++	++++	++++	++++	0.13513	0.000
(3)	0.11296	++++	++++	++++	++++	++++	0.11296	0.000
(4)	0.33487	++++	++++	++++	++++	++++	0.33487	0.000
41 2,4-DDE	++++	++++	++++	++++	++++	++++	698	0.000
42 2,4-DDD	++++	++++	++++	++++	++++	++++	651	0.000
44 4,4-DDE	++++	++++	++++	++++	++++	++++	1118	0.000
45 4,4-DDD/2,4-DDT	++++	++++	++++	++++	++++	++++	844	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB2.m  
 Cal Date : 07-Nov-2012 07:35 jrains  
 Curve Type : Average

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	1043	0.000
\$ 2 Tetrachloro-m-xylene	1.19470	1.15056	1.18893	1.15884	1.10662	1.04277	1.14040	5.025
\$ 13 Decachlorobiphenyl	1.28874	1.18422	1.14387	1.04322	0.96994	0.89234	1.08706	13.451



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB1.m  
 Cal Date : 07-Nov-2012 07:38 j rains  
 Curve Type : Average

Calibration File Names:

Level 1: /chem2/ecd5.i/20121102.B/ical-1.b/1102A013.d/1102A013.cdf  
 Level 2: /chem2/ecd5.i/20121102.B/ical-1.b/1102A014.d/1102A014.cdf  
 Level 3: /chem2/ecd5.i/20121102.B/ical-1.b/1102A016.d  
 Level 4: /chem2/ecd5.i/20121102.B/ical-1.b/1102A012.d  
 Level 5: /chem2/ecd5.i/20121102.B/ical-1.b/1102A017.d  
 Level 6: /chem2/ecd5.i/20121102.B/ical-1.b/1102A015.d  
 Level 7: /chem2/ecd5.i/20121102.B/ical-1.b/1102A022.d  
 Level 8: /chem2/ecd5.i/20121102.B/ddt-1.b/1102A029.d

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
2 Aroclor-1221 (1)	++++	++++	++++	++++	++++	++++		
	0.01953	++++					0.01953	0.000
(2)	++++	++++	++++	++++	++++	++++		
	0.01337	++++					0.01337	0.000
(3)	++++	++++	++++	++++	++++	++++		
	0.04356	++++					0.04356	0.000
3 Aroclor-1242 (1)	++++	++++	++++	++++	++++	++++		
	0.03480	++++					0.03480	0.000
(2)	++++	++++	++++	++++	++++	++++		
	0.10781	++++					0.10781	0.000
(3)	++++	++++	++++	++++	++++	++++		
	0.04681	++++					0.04681	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB1.m  
 Cal Date : 07-Nov-2012 07:38 jrains  
 Curve Type : Average

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
(4)	++++ 0.05490	++++ ++++	++++	++++	++++	++++	0.05490	0.000
4 Aroclor-1232 (1)	++++ 0.01822	++++ ++++	++++	++++	++++	++++	0.01822	0.000
(2)	++++ 0.05697	++++ ++++	++++	++++	++++	++++	0.05697	0.000
(3)	++++ 0.02485	++++ ++++	++++	++++	++++	++++	0.02485	0.000
(4)	++++ 0.03114	++++ ++++	++++	++++	++++	++++	0.03114	0.000
7 Aroclor-1016 (1)	0.05261 ++++	0.04924 ++++	0.04799	0.04313	0.03985	0.03555	0.04473	14.270
(2)	0.16770 ++++	0.15454 ++++	0.15129	0.13340	0.12204	0.10734	0.13939	16.159
(3)	0.07176 ++++	0.06700 ++++	0.06517	0.05778	0.05274	0.04639	0.06014	15.892
(4)	0.05053 ++++	0.04712 ++++	0.04624	0.04170	0.03848	0.03405	0.04302	14.194

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB1.m  
 Cal Date : 07-Nov-2012 07:38 jrains  
 Curve Type : Average

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
6 Aroclor-1248(1)	++++ 0.07048	++++ ++++	++++	++++	++++	++++	0.07048	0.000
(2)	++++ 0.07420	++++ ++++	++++	++++	++++	++++	0.07420	0.000
(3)	++++ 0.09369	++++ ++++	++++	++++	++++	++++	0.09369	0.000
(4)	++++ 0.07222	++++ ++++	++++	++++	++++	++++	0.07222	0.000
8 Aroclor-1254(1)	++++ 0.09552	++++ ++++	++++	++++	++++	++++	0.09552	0.000
(2)	++++ 0.06279	++++ ++++	++++	++++	++++	++++	0.06279	0.000
(3)	++++ 0.12204	++++ ++++	++++	++++	++++	++++	0.12204	0.000
(4)	++++ 0.13358	++++ ++++	++++	++++	++++	++++	0.13358	0.000
(5)	++++ 0.08400	++++ ++++	++++	++++	++++	++++	0.08400	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB1.m  
 Cal Date : 07-Nov-2012 07:38 jrains  
 Curve Type : Average

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	* RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
9 Aroclor-1260 (1)	0.05365	0.04934	0.04789	0.04279	0.03879	++++	0.04649	12.461
	++++	++++						
(2)	0.05323	0.04942	0.04830	0.04331	0.03943	++++	0.04674	11.572
	++++	++++						
(3)	0.12980	0.11729	0.11408	0.10108	0.09182	++++	0.11081	13.300
	++++	++++						
(4)	0.07539	0.06654	0.06475	0.05812	0.05271	++++	0.06350	13.586
	++++	++++						
(5)	0.03455	0.03192	0.03171	0.02923	0.02687	++++	0.03086	9.459
	++++	++++						
10 Aroclor-1262 (1)	++++	++++	++++	++++	++++	++++		
	0.06957	++++					0.06957	0.000
(2)	++++	++++	++++	++++	++++	++++		
	0.05282	++++					0.05282	0.000
(3)	++++	++++	++++	++++	++++	++++		
	0.13695	++++					0.13695	0.000
(4)	++++	++++	++++	++++	++++	++++		
	0.05159	++++					0.05159	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB1.m  
 Cal Date : 07-Nov-2012 07:38 jrains  
 Curve Type : Average

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
(5)	++++ 0.05664	++++ ++++	++++	++++	++++	++++	0.05664	0.000
11 Aroclor-1268 (1)	++++ 0.13880	++++ ++++	++++	++++	++++	++++	0.13880	0.000
(2)	++++ 0.13349	++++ ++++	++++	++++	++++	++++	0.13349	0.000
(3)	++++ 0.11731	++++ ++++	++++	++++	++++	++++	0.11731	0.000
(4)	++++ 0.33525	++++ ++++	++++	++++	++++	++++	0.33525	0.000
42 2,4-DDE	++++ ++++	++++ 1061	++++	++++	++++	++++	1061	0.000
43 2,4-DDD	++++ ++++	++++ 991	++++	++++	++++	++++	991	0.000
44 2,4-DDT	++++ ++++	++++ ++++	++++	++++	++++	++++	++++	++++
46 4,4-DDE	++++ ++++	++++ 1666	++++	++++	++++	++++	1666	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 02-NOV-2012 20:37  
 End Cal Date : 03-NOV-2012 02:22  
 Quant Method : ISTD  
 Origin : Disabled  
 Target Version : 3.50  
 Integrator : HP Genie  
 Method file : /chem2/ecd5.i/20121102.B/PCB1.m  
 Cal Date : 07-Nov-2012 07:38 j rains  
 Curve Type : Average

Compound	20.000	50.000	100.000	250.000	500.000	1000.000	RRF	% RSD
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6		
	250.000	0.000e+00						
	Level 7	Level 8						
47 4,4-DDD	++++	++++	++++	++++	++++	++++		
	++++	1112					1112	0.000
48 4,4-DDT	++++	++++	++++	++++	++++	++++		
	++++	1436					1436	0.000
\$ 1 Tetrachloro-m-xylene	1.74629	1.73665	1.79189	1.68846	1.59898	1.46176		
	++++	++++					1.67067	7.275
\$ 13 Decachlorobiphenyl	1.44190	1.35420	1.32554	1.15683	1.03719	0.91644		
	++++	++++					1.20535	16.867

Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A011.d  
Data file 2: 20121102.B/ical-2.b/1102A011.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: IB  
Client ID:  
Injection Date: 02-NOV-2012 20:17  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.445	0.001	25150401	4.455	0.000	8210320	37.1	39.1	5.4	Tetrachloro-m-xylene
12.854	0.000	33469883	13.248	0.000	7776577	35.3	35.6	0.9	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	92.7	97.9
Decachlorobiphenyl	88.2	88.9

*11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	32121330	2.8
Hexabromobiphenyl	64198300	65627042	2.2

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	14713535	1.2
Hexabromobiphenyl	15789428	16088294	1.9

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012  
<- 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	6.096	0.002	27540	1.6	1	---			0.0
Aroclor-1016	2	6.501	0.003	27993	0.5	2	---			0.0
Aroclor-1016	3	6.649	0.002	10551	0.5	3	---			0.0
Aroclor-1016	4	6.760	0.002	11272	0.7	4	---			0.0
Total CollAve (4 peaks):				0.8		Col2Ave: <3 Quant Peaks				

Aroclor-1221	1	---			0.0	1	5.157	0.016	104535	41.9
Aroclor-1221	2	---			0.0	2	---			0.0
Aroclor-1221	3	---			0.0	3	5.509	0.003	19616	4.2
Aroclor-1221	NS	---			----	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Aroclor-1232	1	---			0.0	1	---			0.0
Aroclor-1232	2	---			0.0	2	---			0.0
Aroclor-1232	3	---			0.0	3	---			0.0
Aroclor-1232	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Aroclor-1242	1	---			0.0	1	---			0.0
Aroclor-1242	2	---			0.0	2	---			0.0
Aroclor-1242	3	---			0.0	3	---			0.0
Aroclor-1242	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Aroclor-1248	1	---			0.0	1	---			0.0
Aroclor-1248	2	---			0.0	2	---			0.0
Aroclor-1248	3	---			0.0	3	---			0.0
Aroclor-1248	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Aroclor-1254	1	---			0.0	1	---			0.0
Aroclor-1254	2	---			0.0	2	---			0.0
Aroclor-1254	3	---			0.0	3	---			0.0
Aroclor-1254	4	---			0.0	4	---			0.0
Aroclor-1254	5	---			0.0	5	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Aroclor-1260	1	9.996	0.000	29293	0.8	1	---			0.0
Aroclor-1260	2	10.315	0.004	28175	0.8	2	10.811	0.060	323645	30.7
Aroclor-1260	3	10.722	0.037	122110	1.5	3	11.025	-0.001	19440	0.9
Aroclor-1260	4	11.080	-0.004	113820	2.4	4	11.497	-0.051	21348	3.4
Aroclor-1260	5	11.273	-0.002	20829	0.9	NS	---			----
Total CollAve (5 peaks):				1.3		Total Col2Ave (3 peaks): 11.7 RPD = 161*				
Corrected Ave (4 peaks):				1.0		Corrected Ave: < 3 Peaks				

Aroclor-1262	1	---			0.0	1	---			0.0
Aroclor-1262	2	---			0.0	2	10.811	0.059	323645	26.0
Aroclor-1262	3	---			0.0	3	11.025	0.000	19440	0.7
Aroclor-1262	4	---			0.0	4	11.497	-0.050	21348	1.9
Aroclor-1262	5	---			0.0	5	12.387	0.040	28688	2.7
CollAve: <3 Quant Peaks						Col2Ave: 7.8				

Aroclor-1268	1	---			0.0	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	---			0.0	4	---			0.0
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				

Total PCB Area Coll (4.544 - 12.755) = 8256578

Coll Total PCB = 0.0 ppm\*



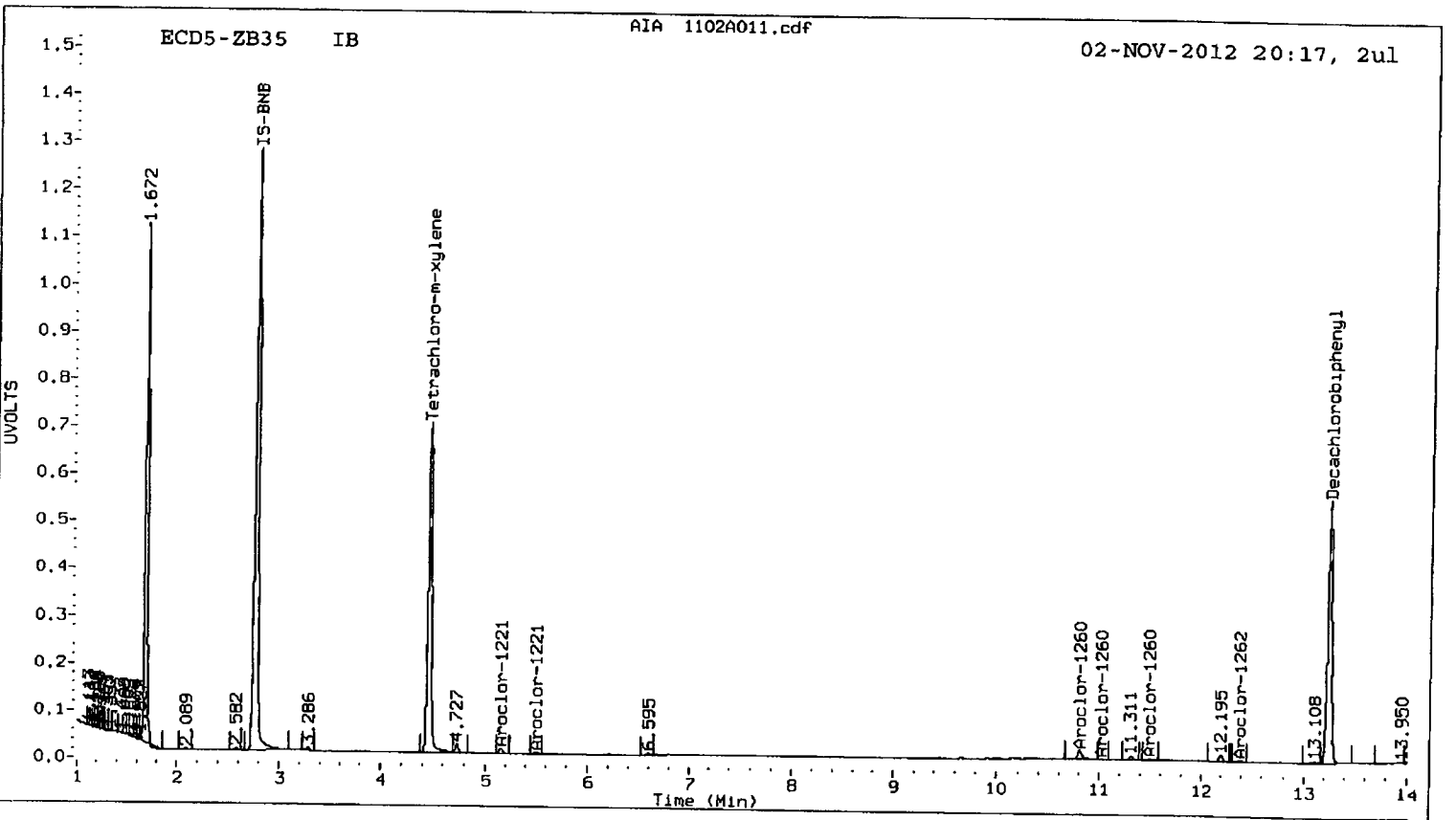
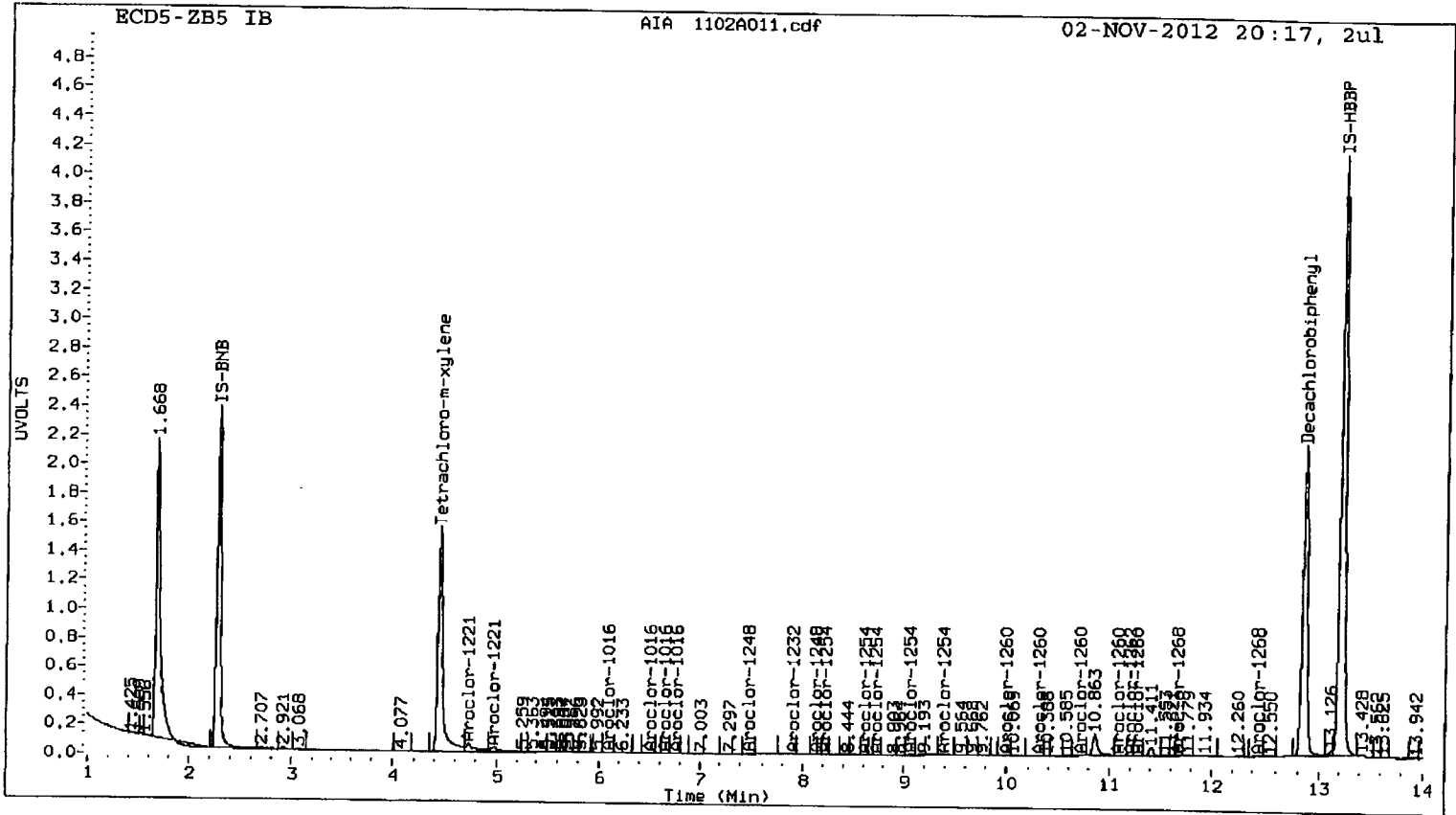
Total PCB Area Col2 (4.556 - 13.148) = 1026615

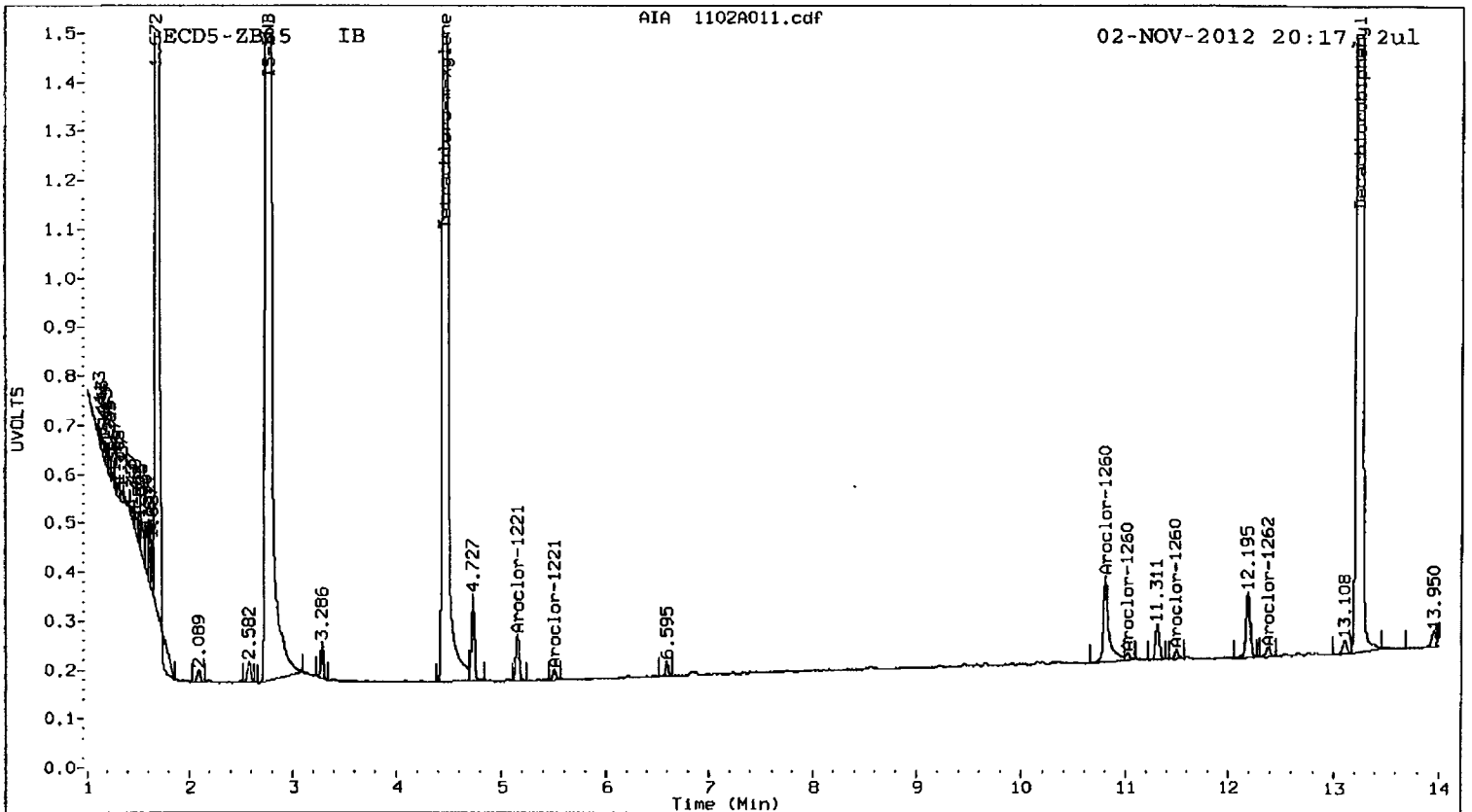
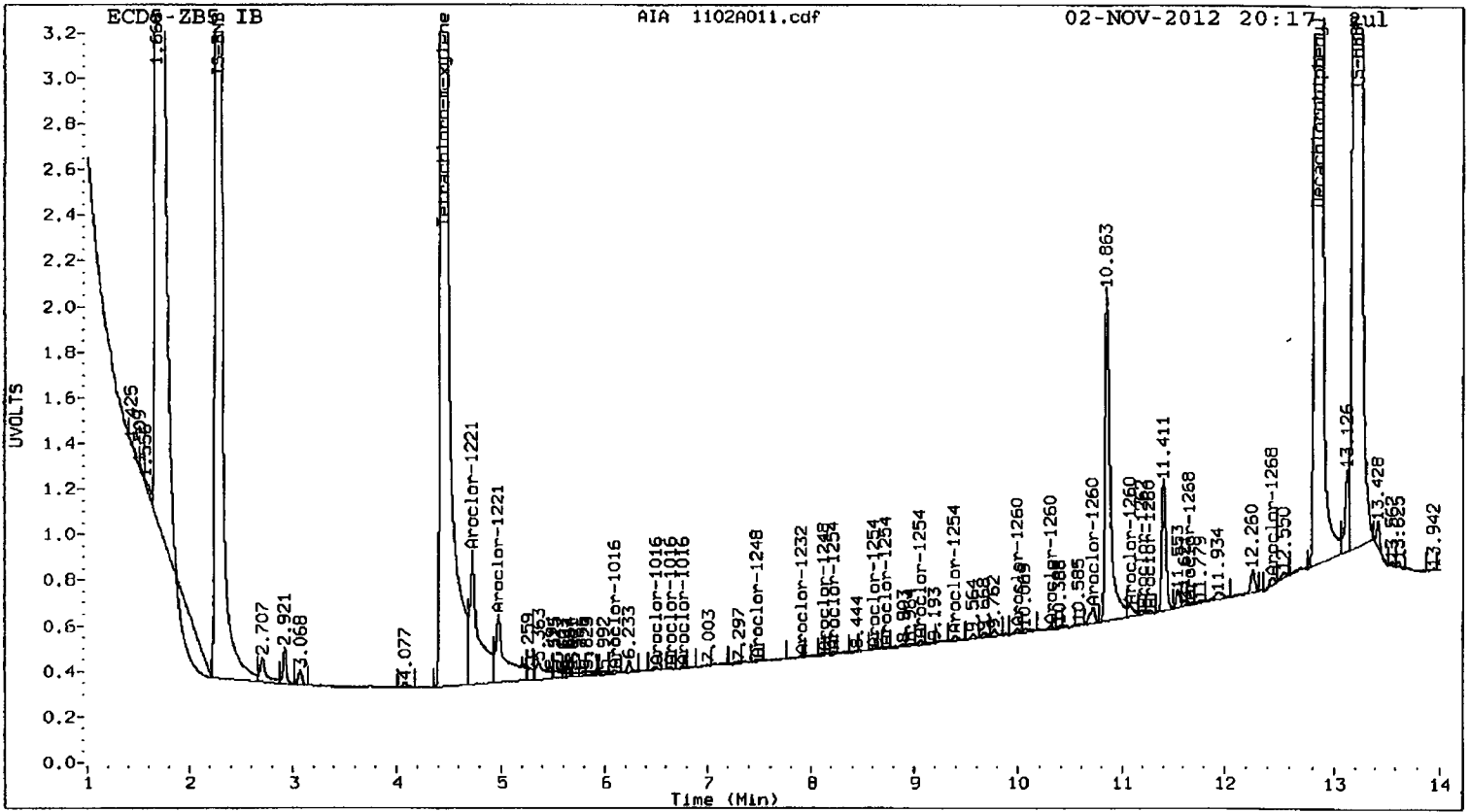
Col2 Total PCB = 0.0 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

VR59 : 02152





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A012.d  
Data file 2: 20121102.B/ical-2.b/1102A012.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1660  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.25PPMAR1660  
Client ID:  
Injection Date: 02-NOV-2012 20:37  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.444	0.000	13188927	4.454	-0.002	4211382	20.0	20.3	1.6	Tetrachloro-m-xylene
12.855	0.000	18566640	13.248	-0.001	4117975	20.0	19.2	4.1	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	50.0	50.8
Decachlorobiphenyl	50.0	48.0

*11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	31244918	0.0
Hexabromobiphenyl	64198300	64198300	0.0

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	14536489	0.0
Hexabromobiphenyl	15789428	15789428	0.0

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.093	0.000	4211212	250.0	1	6.208	0.000	1945115	238.9
Aroclor-1016	2	6.497	-0.001	13025166	250.0	2	6.840	-0.001	4160448	241.5
Aroclor-1016	3	6.647	0.000	5641539	250.0	3	7.226	0.001	1097271	244.8
Aroclor-1016	4	6.758	0.000	4071261	250.0	4	7.334	0.000	1216560	241.4
Total Col1Ave (4 peaks):				250.0		Total Col2Ave (4 peaks):				241.6 RPD = 3
Corrected Ave (3 peaks):				250.0		Corrected Ave (3 peaks):				240.6 RPD = 4
Aroclor-1260	1	9.995	0.000	8584650	250.0	1	10.302	0.001	2023892	240.1
Aroclor-1260	2	10.312	0.001	8689092	250.0	2	10.751	-0.001	2509338	242.6
Aroclor-1260	3	10.686	0.000	20277766	250.0	3	11.026	0.000	5012746	243.5
Aroclor-1260	4	11.085	0.001	11660581	250.0	4	11.547	0.000	1473650	237.6
Aroclor-1260	5	11.275	0.000	5863610	250.0	NS	---			----
Total Col1Ave (5 peaks):				250.0		Total Col2Ave (4 peaks):				241.0 RPD = 4
Corrected Ave (4 peaks):				250.0		Corrected Ave (3 peaks):				240.1 RPD = 4

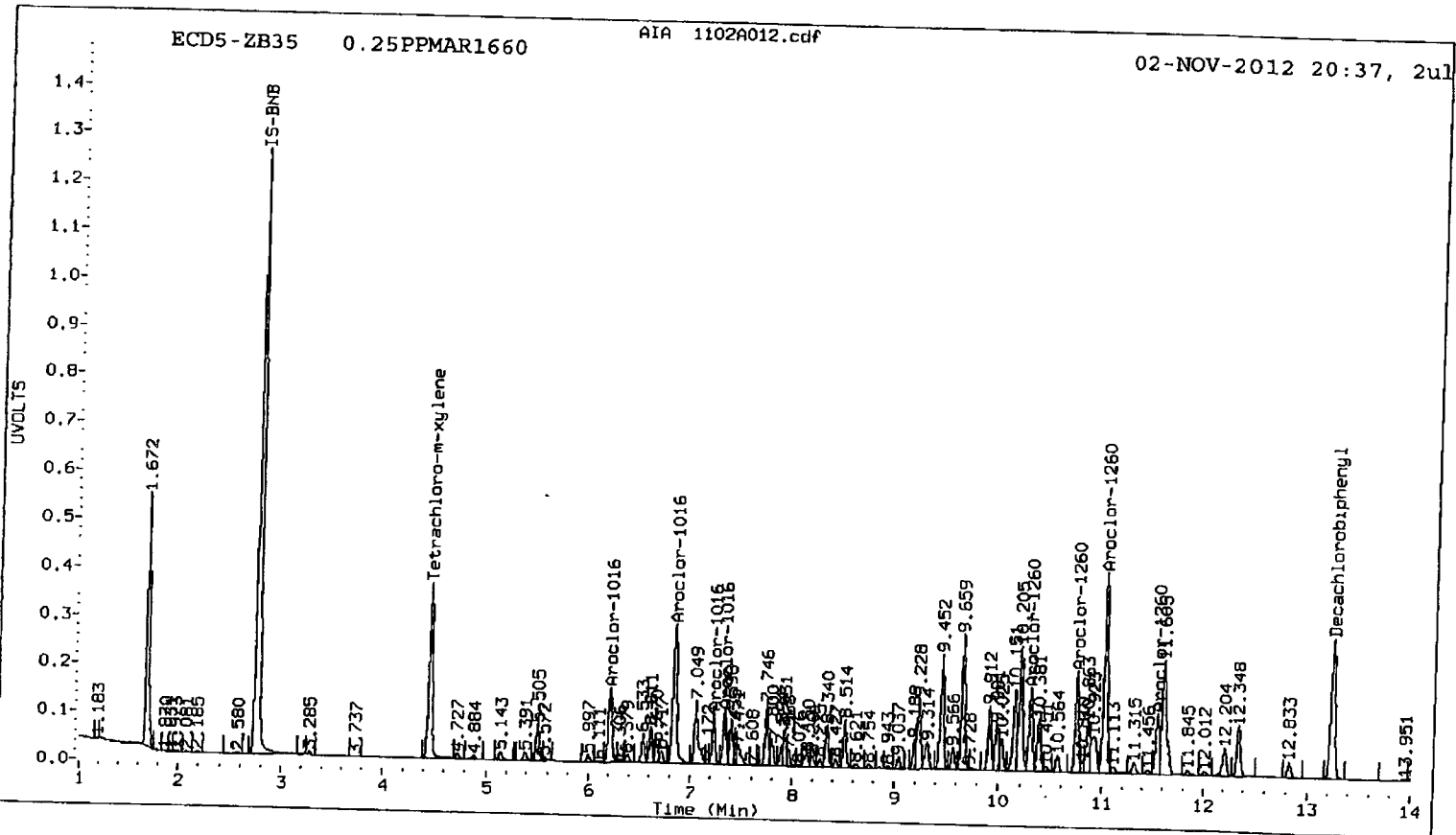
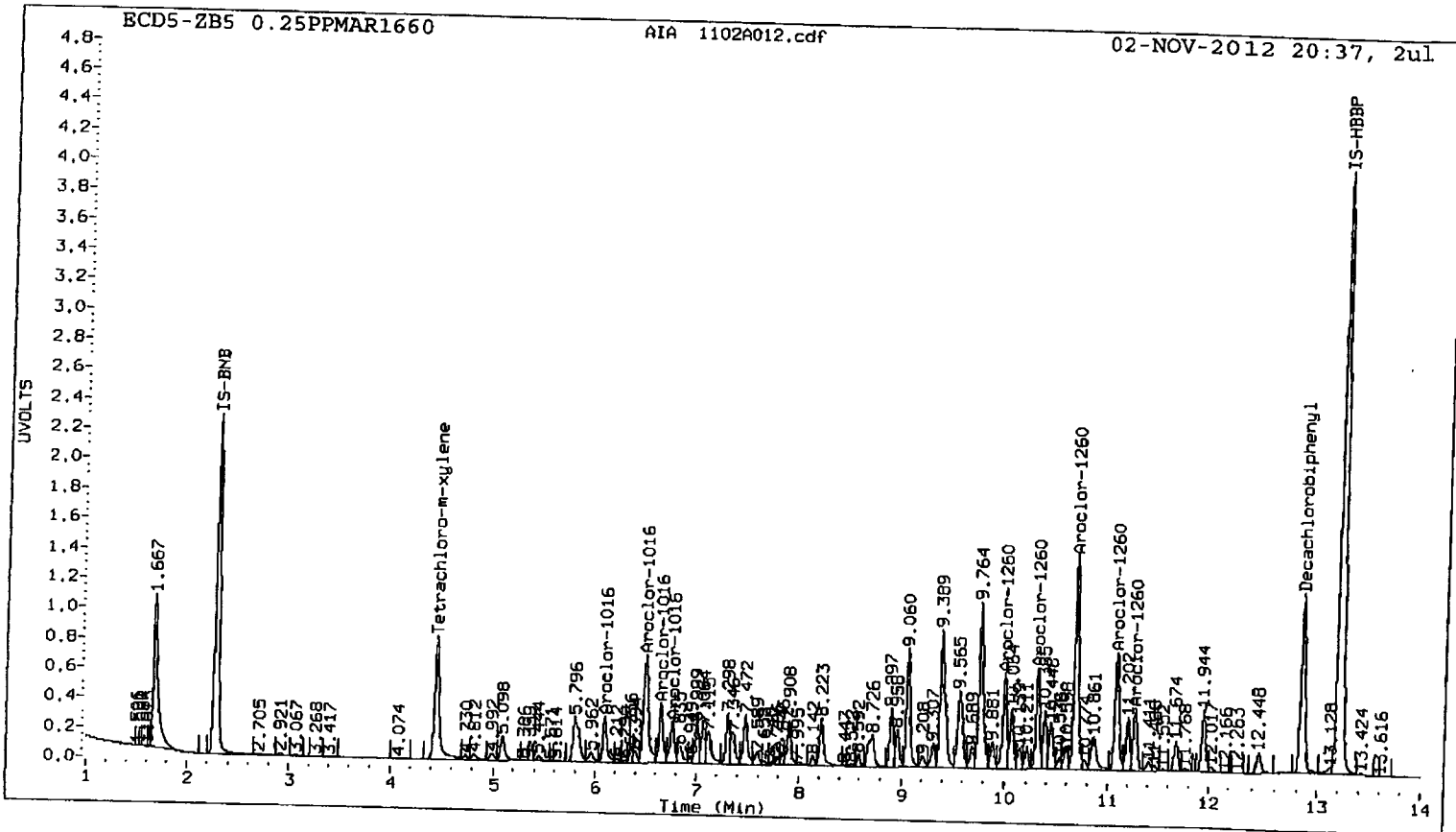
Total PCB Area Col1 (4.544 - 12.755) = 252981101 Col1 Total PCB = 0.5 ppm\*

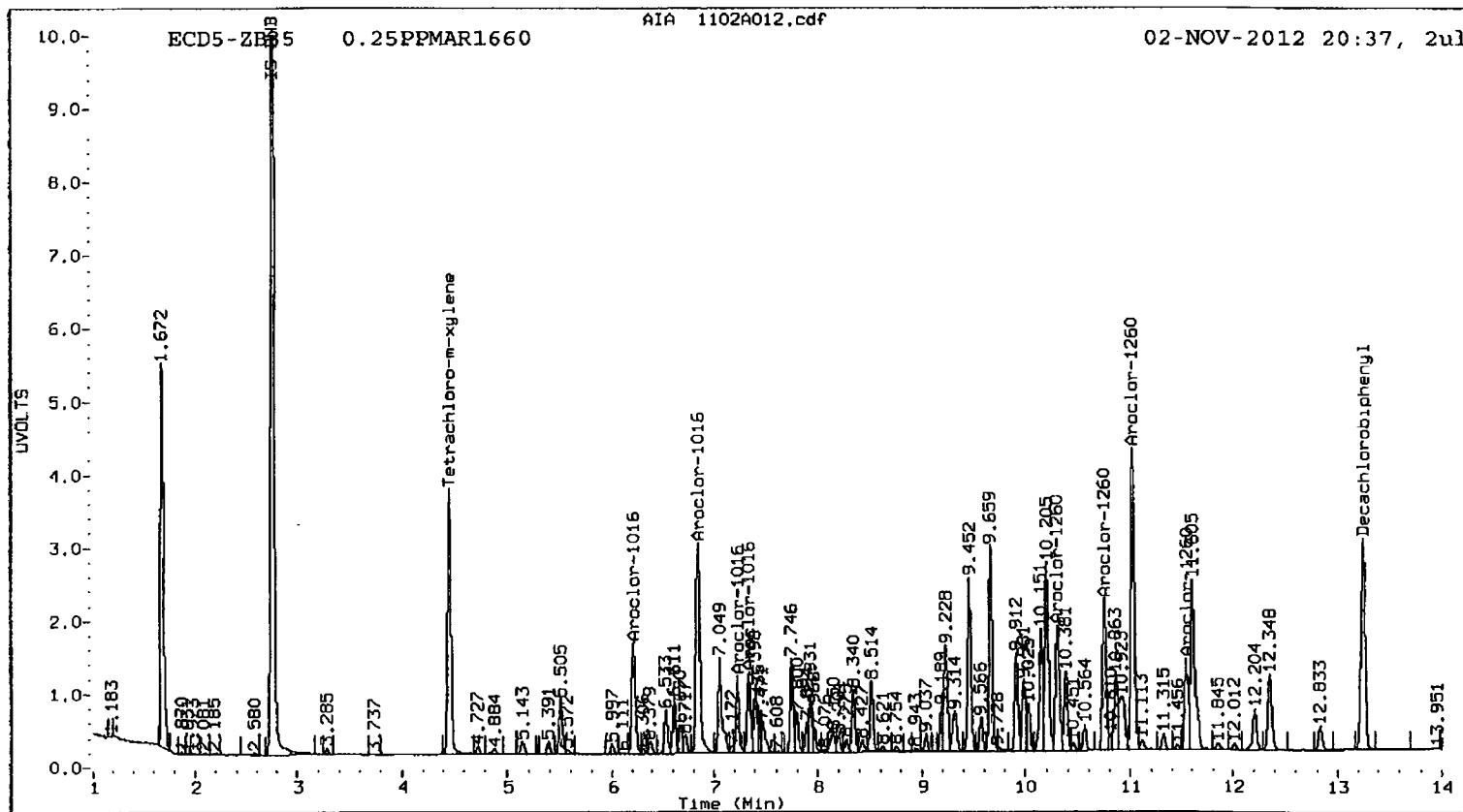
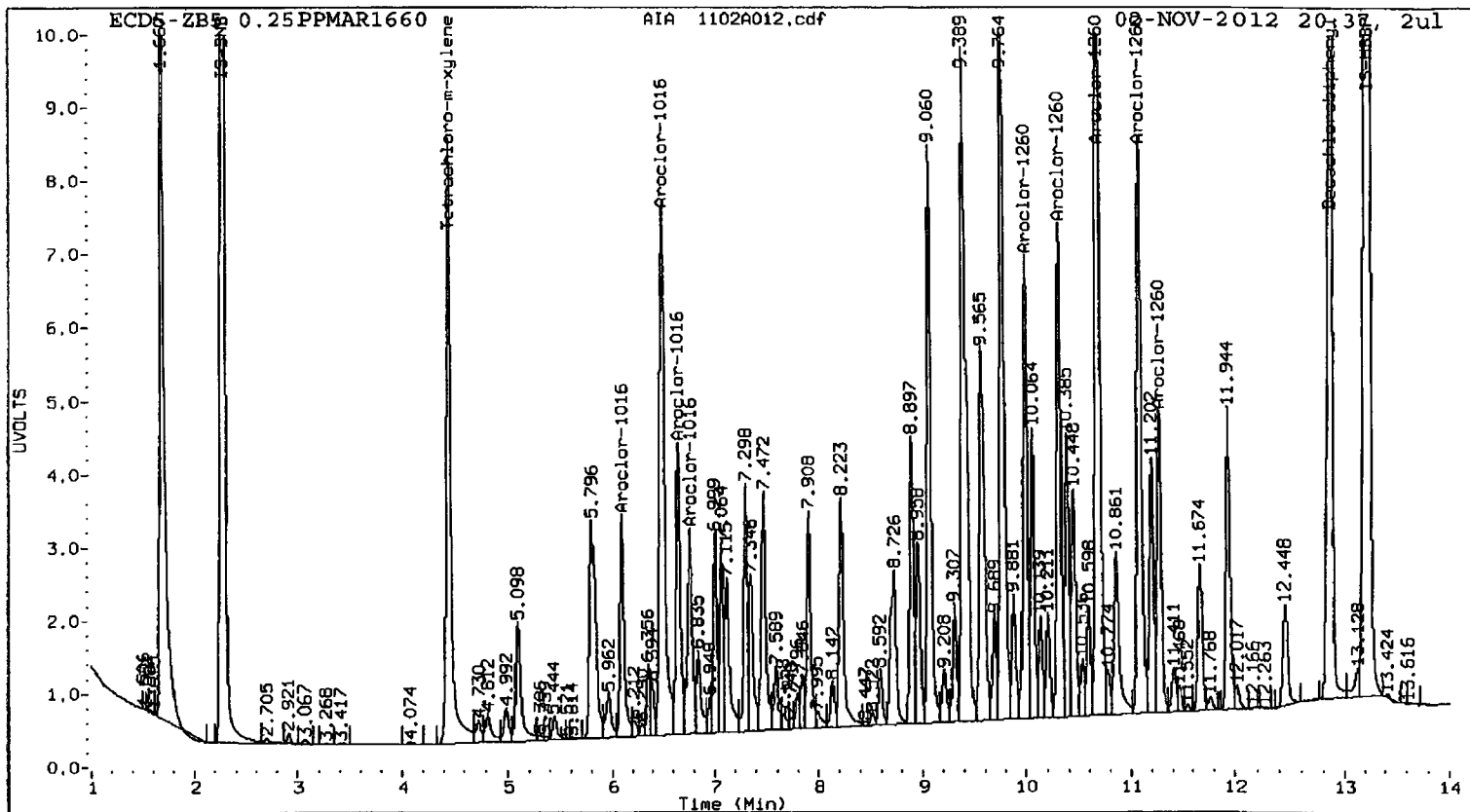
Total PCB Area Col2 (4.556 - 13.148) = 63430307 Col2 Total PCB = 0.5 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58 02158







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A013.d  
Data file 2: 20121102.B/ical-2.b/1102A013.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1660  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.02PPMAR1660  
Client ID:  
Injection Date: 02-NOV-2012 20:58  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.444	0.000	1108412	4.454	-0.002	350346	1.7	1.7	0.2	Tetrachloro-m-xylene
12.855	0.000	1903673	13.247	-0.001	417446	1.9	1.9	0.9	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	4.2	4.2
Decachlorobiphenyl	4.8	4.7

*M 11/20/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	31736267	1.6
Hexabromobiphenyl	64198300	66012881	2.8

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	14662512	0.9
Hexabromobiphenyl	15789428	16195930	2.6

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.093	0.000	417384	23.5	1	6.209	0.000	198448	24.2
Aroclor-1016	2	6.498	0.000	1330508	24.1	2	6.840	0.000	410009	23.6
Aroclor-1016	3	6.647	0.000	569344	23.9	3	7.226	0.001	101420	22.4
Aroclor-1016	4	6.758	0.000	400893	23.5	4	7.334	0.000	119148	23.4
Total Col1Ave (4 peaks):				23.7	Total Col2Ave (4 peaks):				23.4	RPD = 1
Corrected Ave (3 peaks):				23.6	Corrected Ave (3 peaks):				23.2	RPD = 2
Aroclor-1260	1	9.996	0.000	885381	23.1	1	10.301	-0.001	206311	23.9
Aroclor-1260	2	10.311	0.000	878506	22.8	2	10.752	0.000	244878	23.1
Aroclor-1260	3	10.685	0.000	2142145	23.4	3	11.025	-0.001	477633	22.6
Aroclor-1260	4	11.085	0.000	1244258	23.7	4	11.547	-0.001	159986	25.1
Aroclor-1260	5	11.275	0.000	570228	22.4	NS	---			----
Total Col1Ave (5 peaks):				23.1	Total Col2Ave (4 peaks):				23.7	RPD = 3
Corrected Ave (4 peaks):				22.9	Corrected Ave (3 peaks):				23.2	RPD = 1

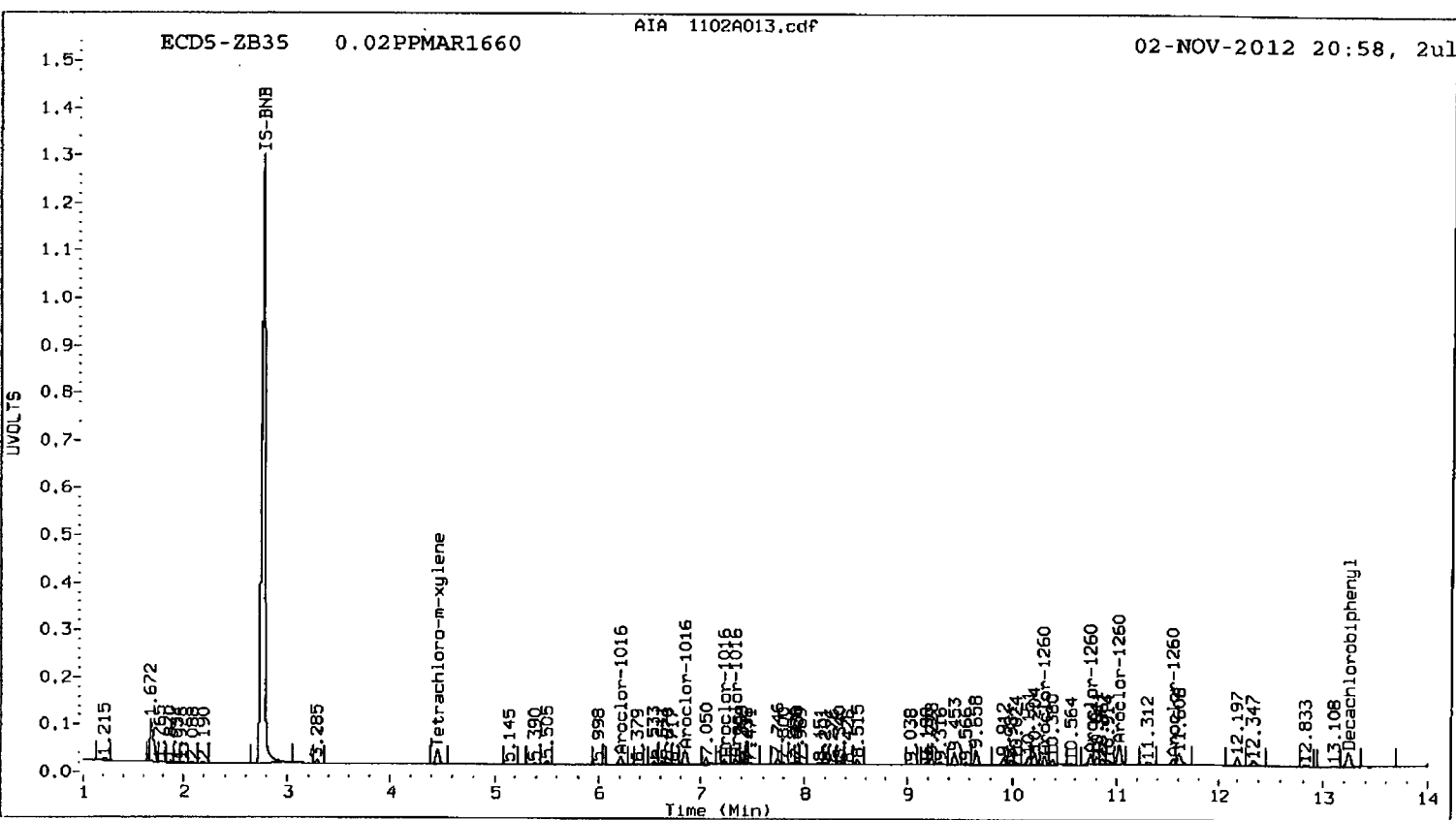
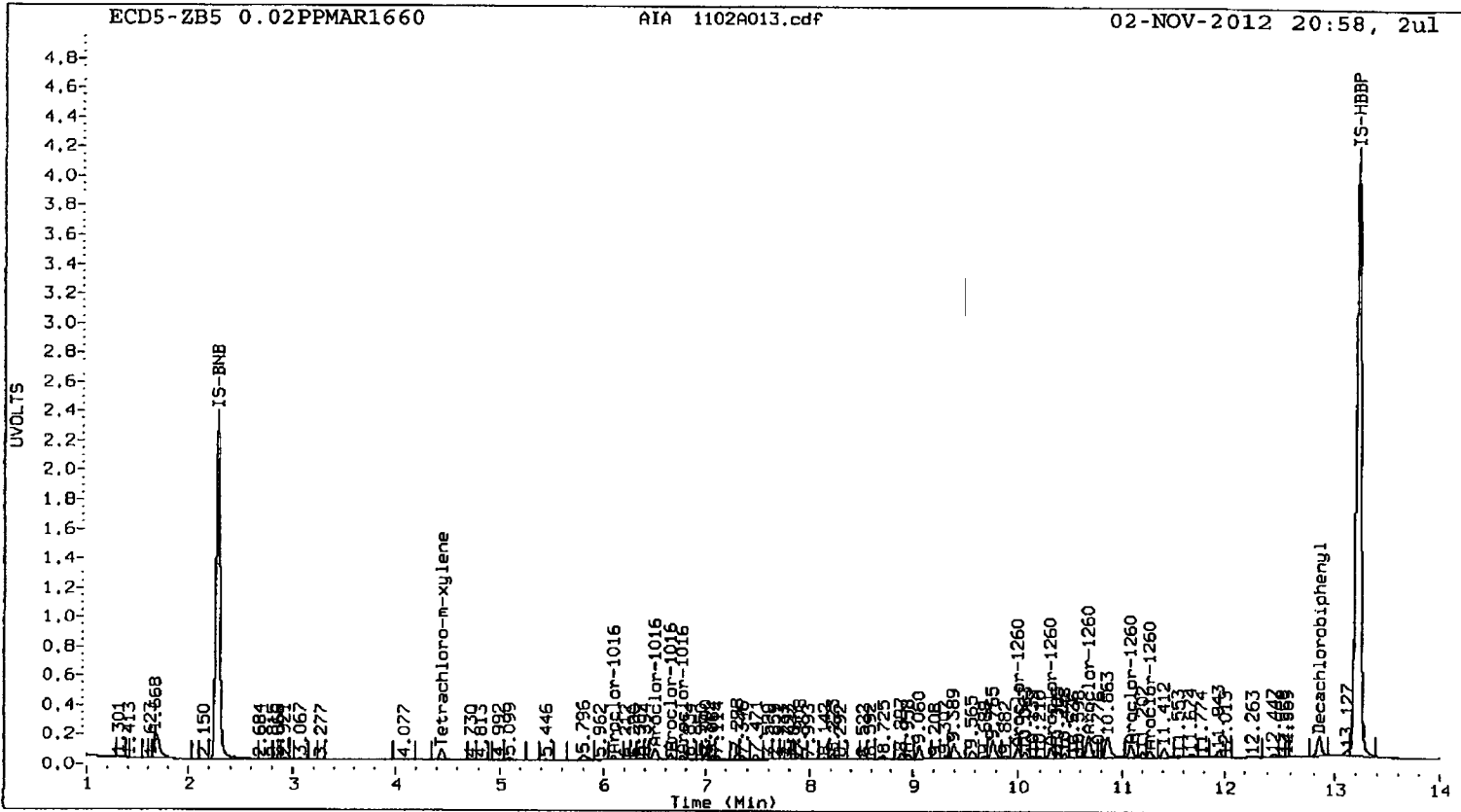
Total PCB Area Col1 (4.544 - 12.755) = 28512374 Col1 Total PCB = 0.1 ppm\*

Total PCB Area Col2 (4.556 - 13.148) = 6518944 Col2 Total PCB = 0.1 ppm\*

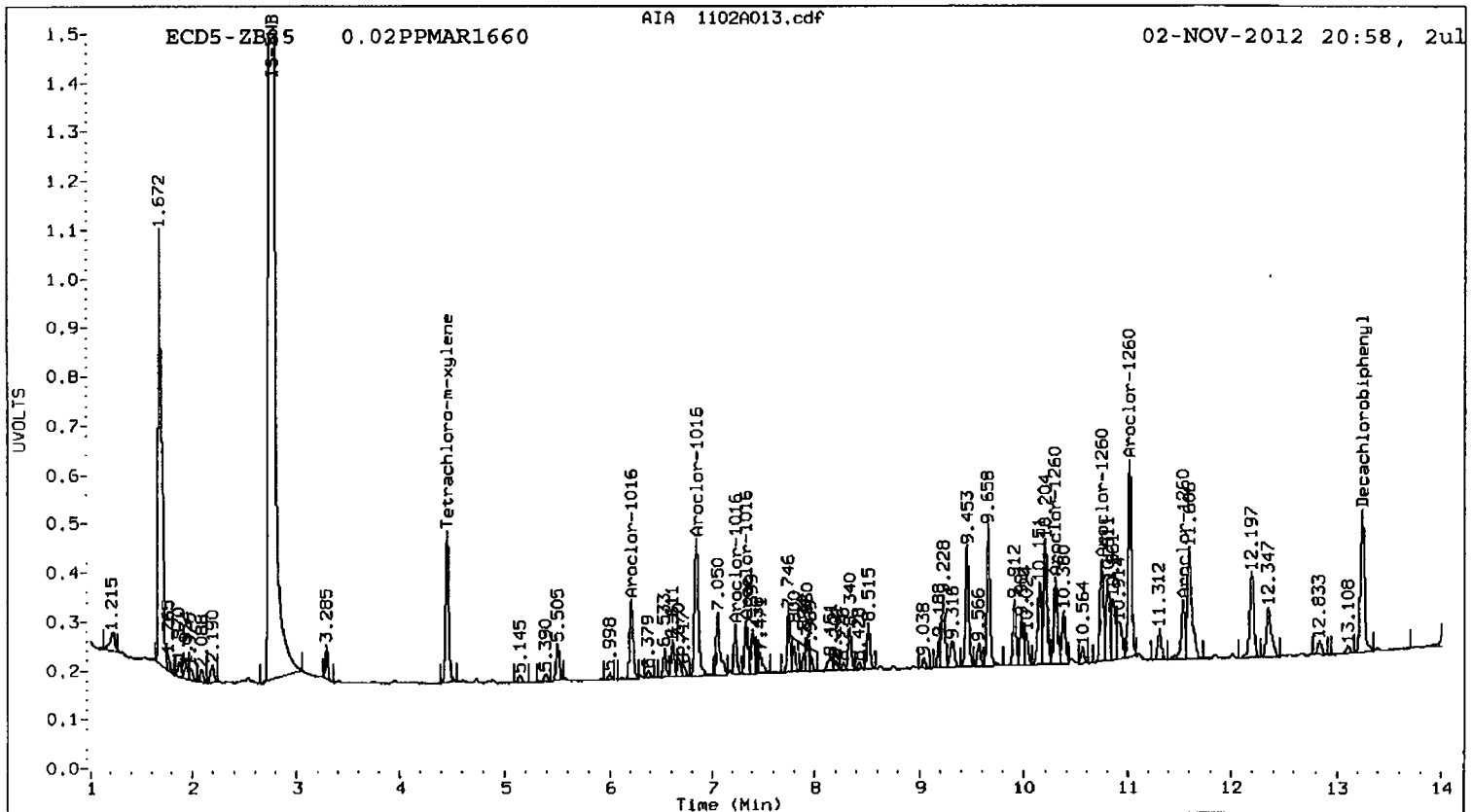
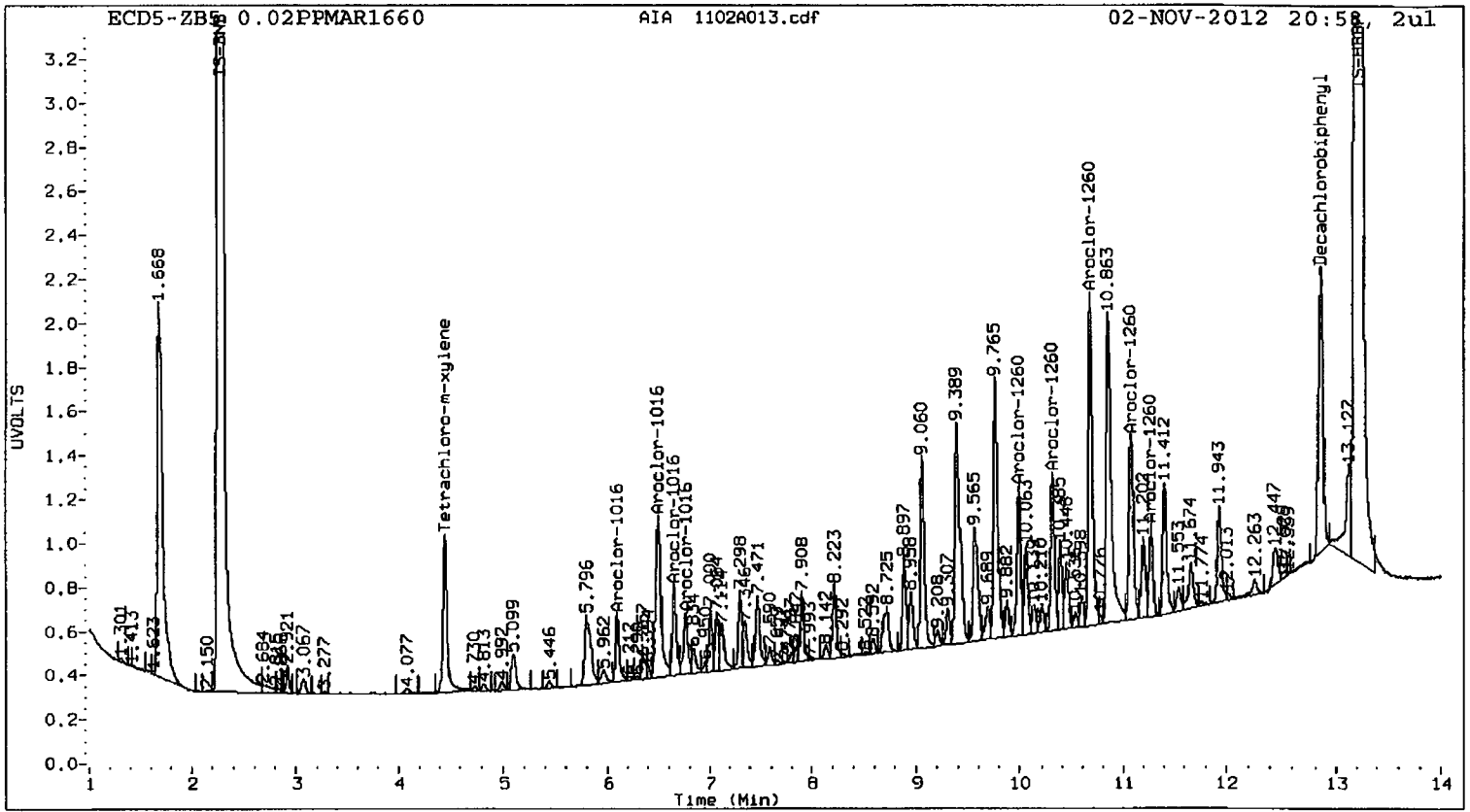
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58-02163



0958:02164



Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A014.d  
Data file 2: 20121102.B/ical-2.b/1102A014.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1660  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.05PPMAR1660  
Client ID:  
Injection Date: 02-NOV-2012 21:18  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

RT	ZB5 Col Shift Response	ZB35 Col Shift Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.444	-0.001 2698672	4.453 -0.002 829889	4.2	4.0	3.0	Tetrachloro-m-xylene
12.854	-0.001 4379836	13.247 -0.001 935814	4.5	4.4	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	10.4	10.1
Decachlorobiphenyl	11.2	10.9

*Handwritten signature*  
11/26/12

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	31079093	-0.5
Hexabromobiphenyl	64198300	64685135	0.8

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	14425871	-0.8
Hexabromobiphenyl	15789428	15804667	0.1

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.093	-0.001	956493	55.0	1	6.208	0.000	447300	55.4
Aroclor-1016	2	6.497	-0.001	3001931	55.4	2	6.840	-0.001	924001	54.0
Aroclor-1016	3	6.647	0.000	1301472	55.7	3	7.225	0.000	238070	53.5
Aroclor-1016	4	6.757	-0.001	915266	54.8	4	7.334	0.000	273158	54.6
Total Col1Ave (4 peaks):				55.2	Total Col2Ave (4 peaks):				54.4	RPD = 2
Corrected Ave (3 peaks):				55.1	Corrected Ave (3 peaks):				54.1	RPD = 2
Aroclor-1260	1	9.995	-0.001	1994646	53.1	1	10.301	-0.001	457444	54.2
Aroclor-1260	2	10.311	0.000	1997918	52.9	2	10.751	-0.001	567951	54.8
Aroclor-1260	3	10.685	0.000	4742000	52.9	3	11.025	0.000	1123794	54.5
Aroclor-1260	4	11.085	0.000	2690276	52.4	4	11.547	0.000	328134	52.9
Aroclor-1260	5	11.275	-0.001	1290626	51.7	NS	---			----
Total Col1Ave (5 peaks):				52.6	Total Col2Ave (4 peaks):				54.1	RPD = 3
Corrected Ave (4 peaks):				52.5	Corrected Ave (3 peaks):				53.9	RPD = 3

Total PCB Area Col1 (4.544 - 12.755) = 59007535

Col1 Total PCB = 0.1 ppm\*

Total PCB Area Col2 (4.556 - 13.148) = 14341578

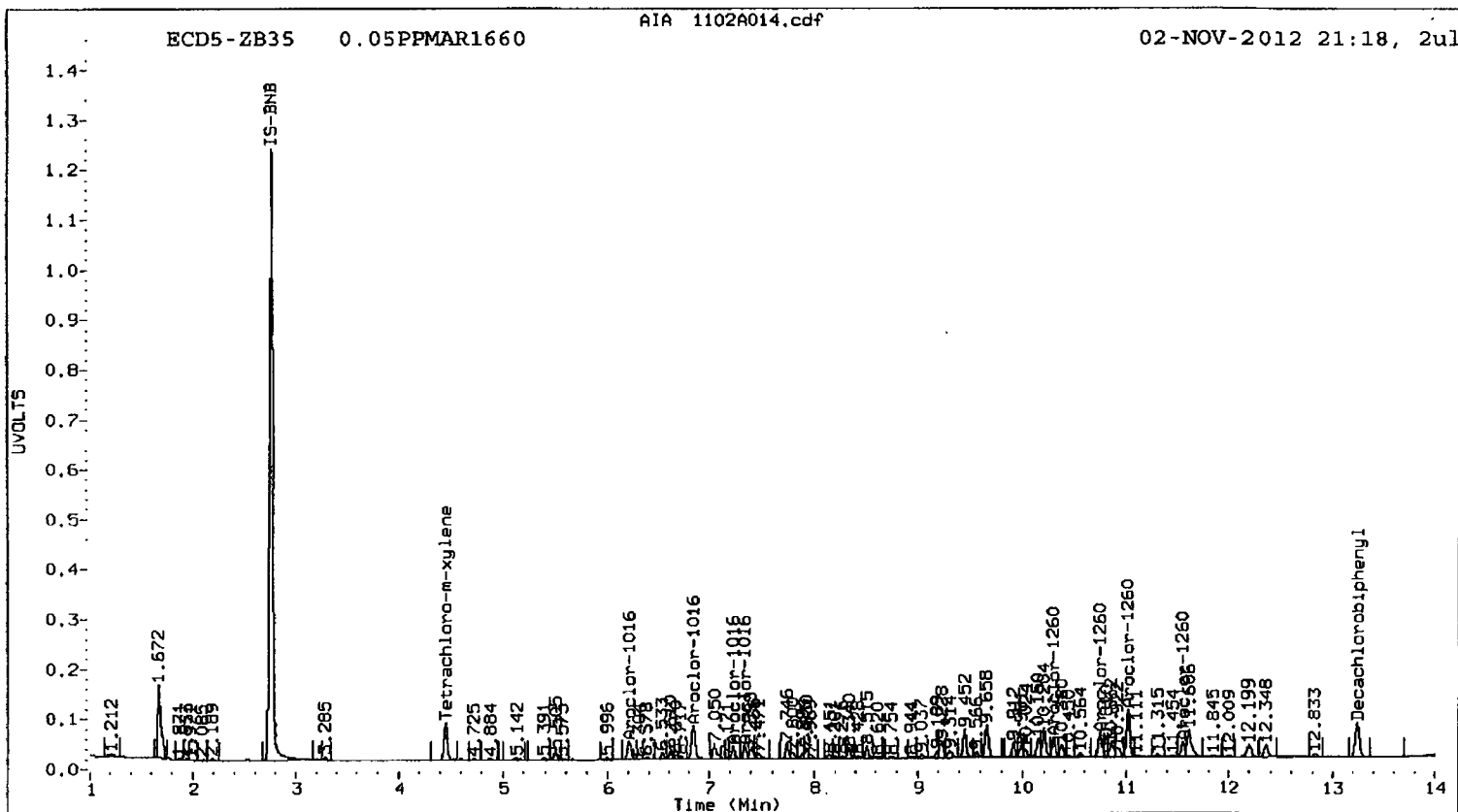
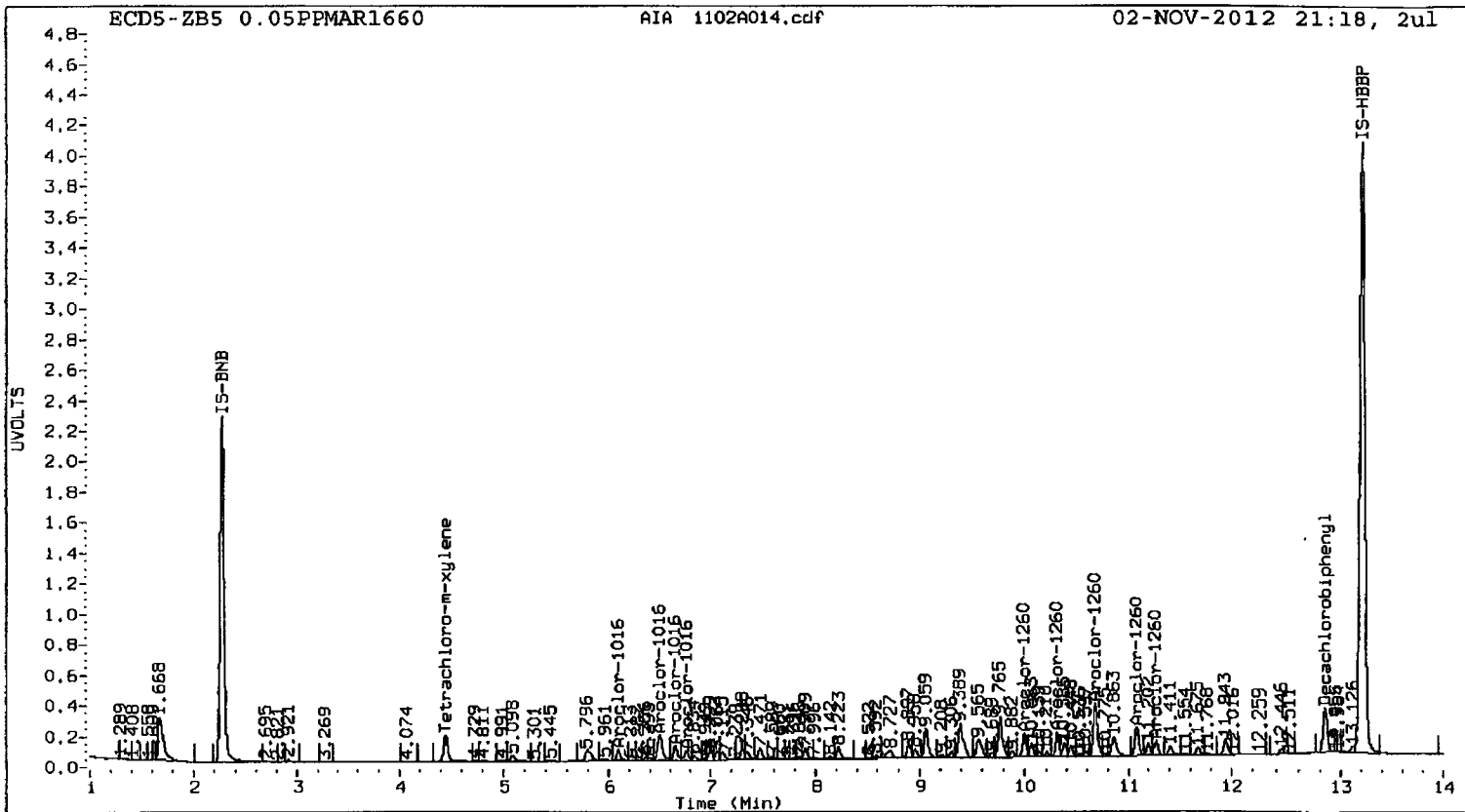
Col2 Total PCB = 0.1 ppm\*

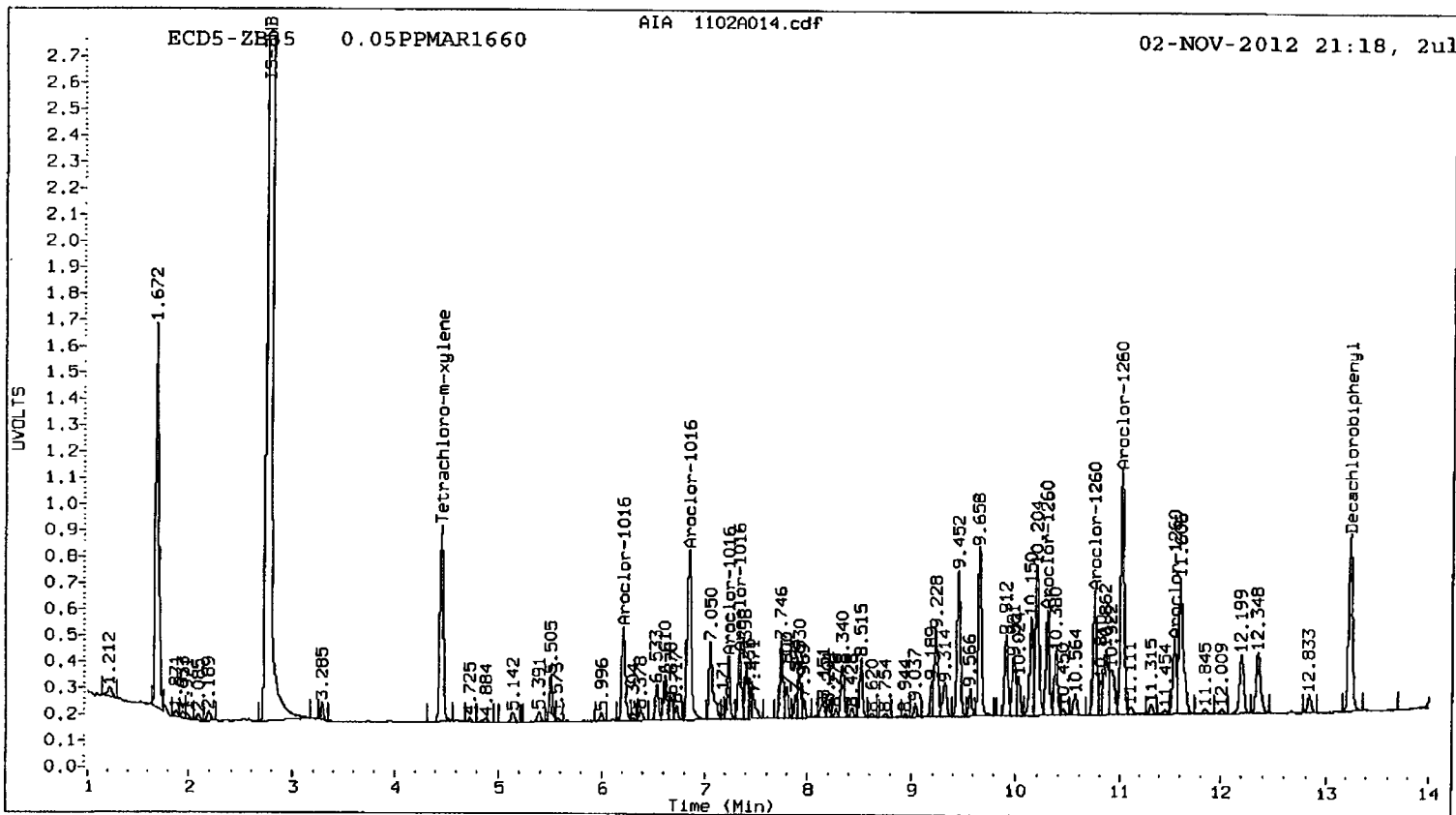
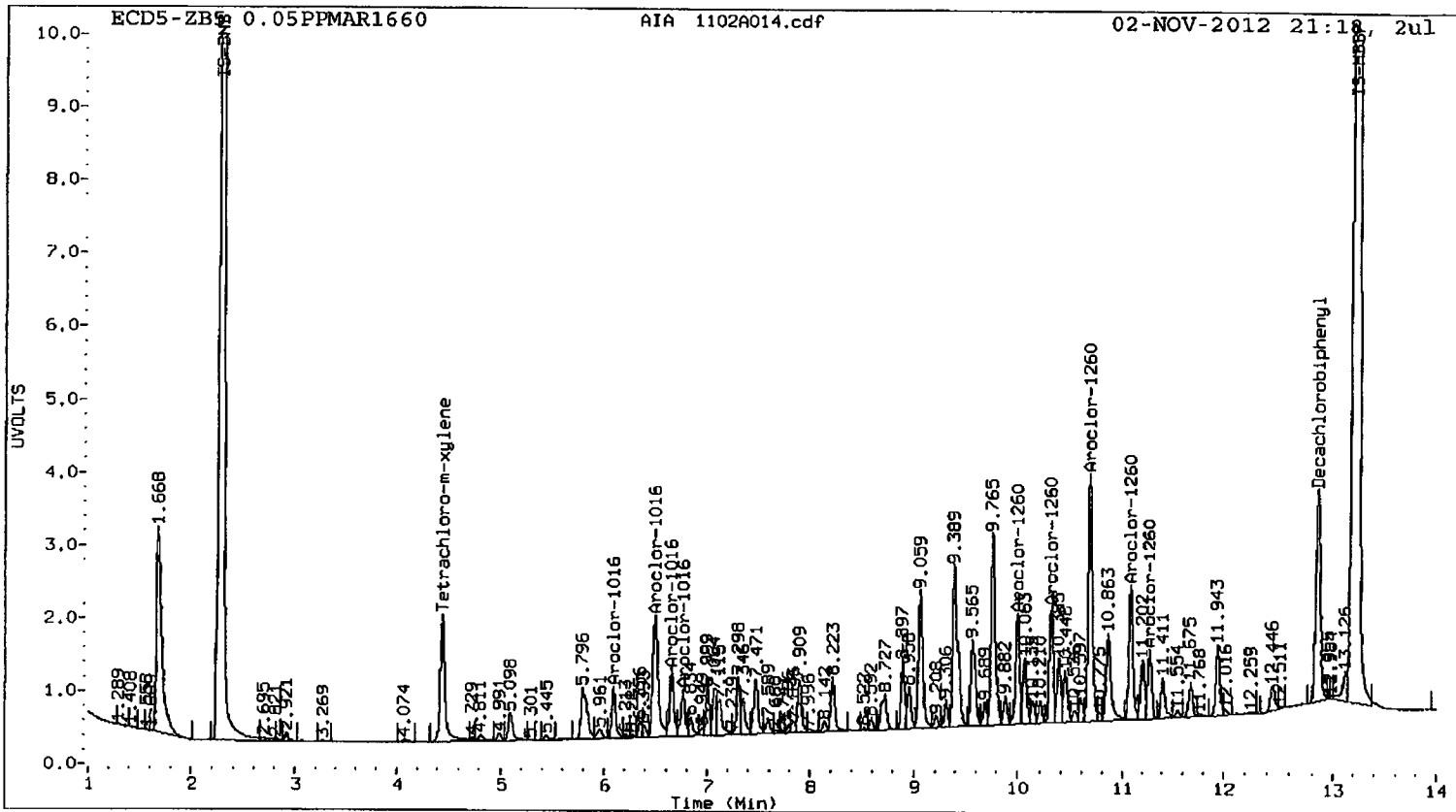
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

VR58 02168







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A015.d  
Data file 2: 20121102.B/ical-2.b/1102A015.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1660  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: 1PPMAR1660  
Client ID:  
Injection Date: 02-NOV-2012 21:38  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.445	0.000	47595978	4.454	-0.002	15296268	70.5	73.2	3.7	Tetrachloro-m-xylene
12.855	0.001	61828474	13.247	-0.001	14509436	57.8	65.7	12.7	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	176.3	182.9
Decachlorobiphenyl	144.6	164.2

*A 11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	32560778	4.2
Hexabromobiphenyl	64198300	67466235	5.1

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	14668819	0.9
Hexabromobiphenyl	15789428	16259905	3.0

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.092	-0.001	14468062	787.6	1	6.208	0.000	6447286	784.6
Aroclor-1016	2	6.497	-0.001	43689731	762.7	2	6.840	-0.001	14167692	814.9
Aroclor-1016	3	6.646	-0.001	18882070	763.9	3	7.225	0.000	3823581	845.4
Aroclor-1016	4	6.757	-0.001	13858164	785.5	4	7.334	0.000	4135428	813.0
Total CollAve (4 peaks):				774.9		Total Col2Ave (4 peaks):				814.5 RPD = 5
Corrected Ave (3 peaks):				770.7		Corrected Ave (3 peaks):				804.2 RPD = 4
Aroclor-1260	1	9.995	0.000	29097548	708.2	1	10.301	0.000	7017005	808.4
Aroclor-1260	2	10.312	0.001	29615112	719.9	2	10.751	-0.001	8680312	814.8
Aroclor-1260	3	10.686	0.000	69214613	705.3	3	11.025	-0.001	17637268	832.1
Aroclor-1260	4	11.085	0.000	39737436	704.7	4	11.546	-0.001	5161043	808.0
Aroclor-1260	5	11.275	-0.001	20556577	762.1	NS	---			----
Total CollAve (5 peaks):				720.0		Total Col2Ave (4 peaks):				815.8 RPD = 12
Corrected Ave (4 peaks):				709.5		Corrected Ave (3 peaks):				810.4 RPD = 13

Total PCB Area Coll (4.544 - 12.755) = 866088203

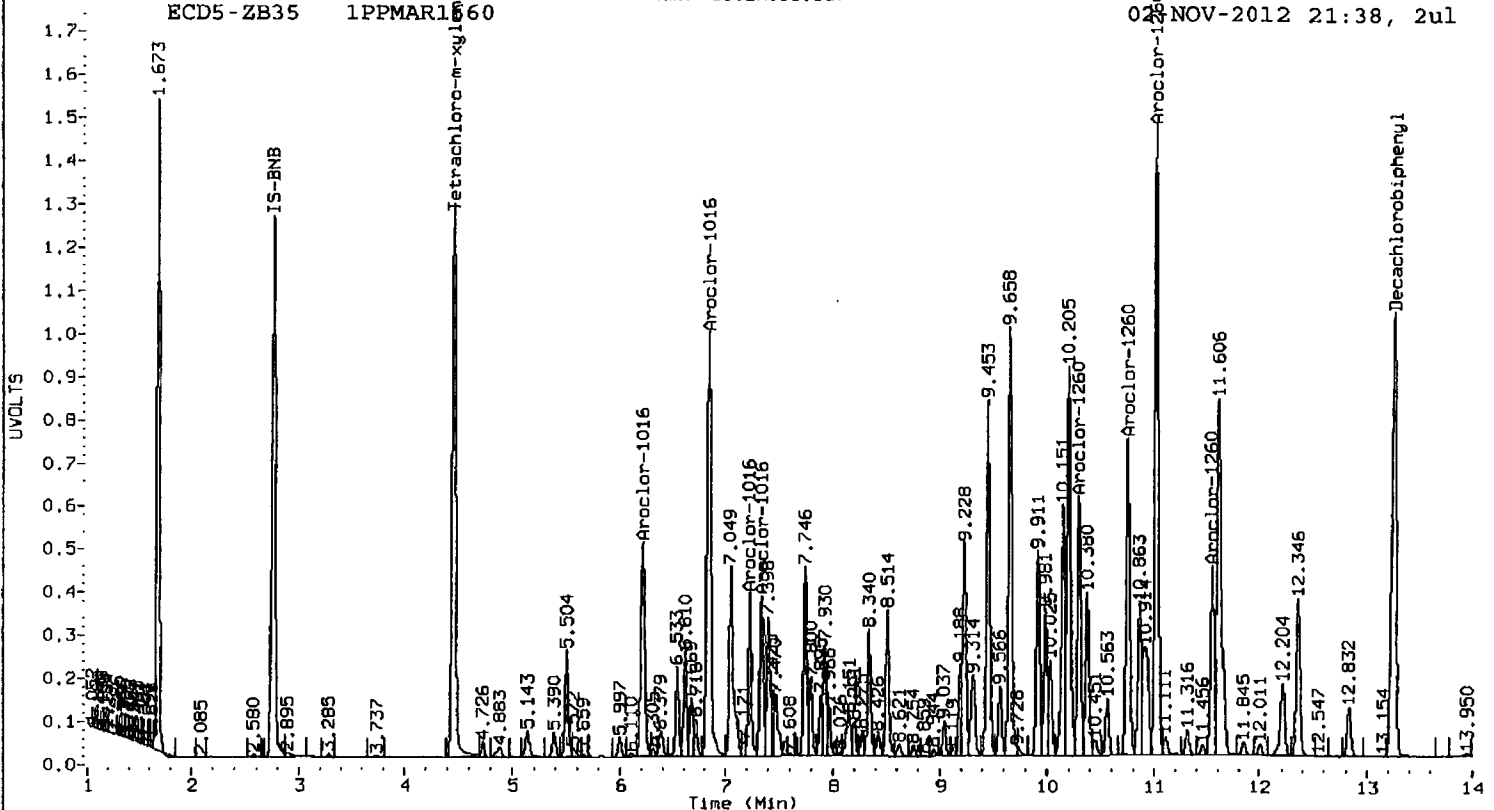
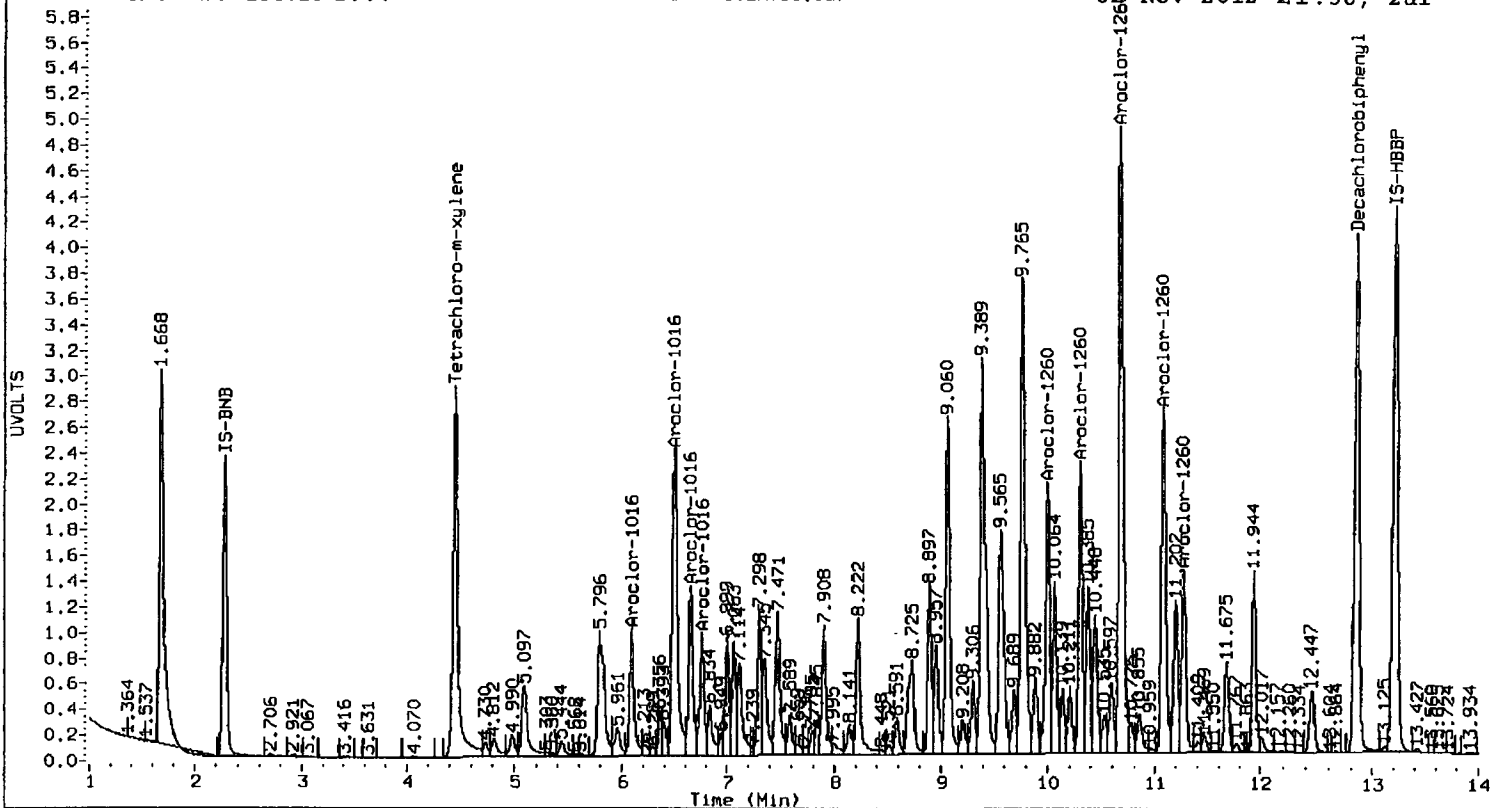
Coll Total PCB = 1.6 ppm\*

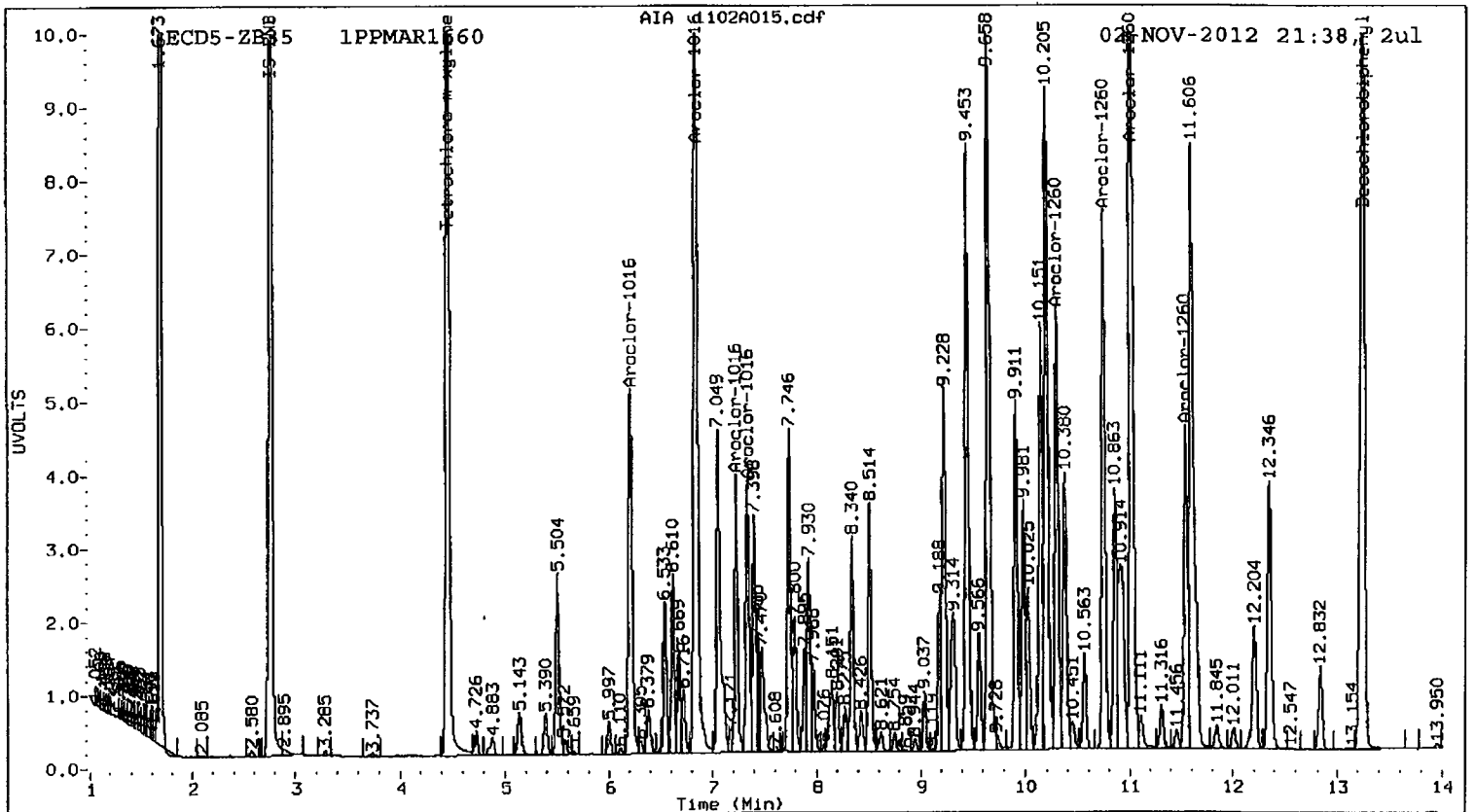
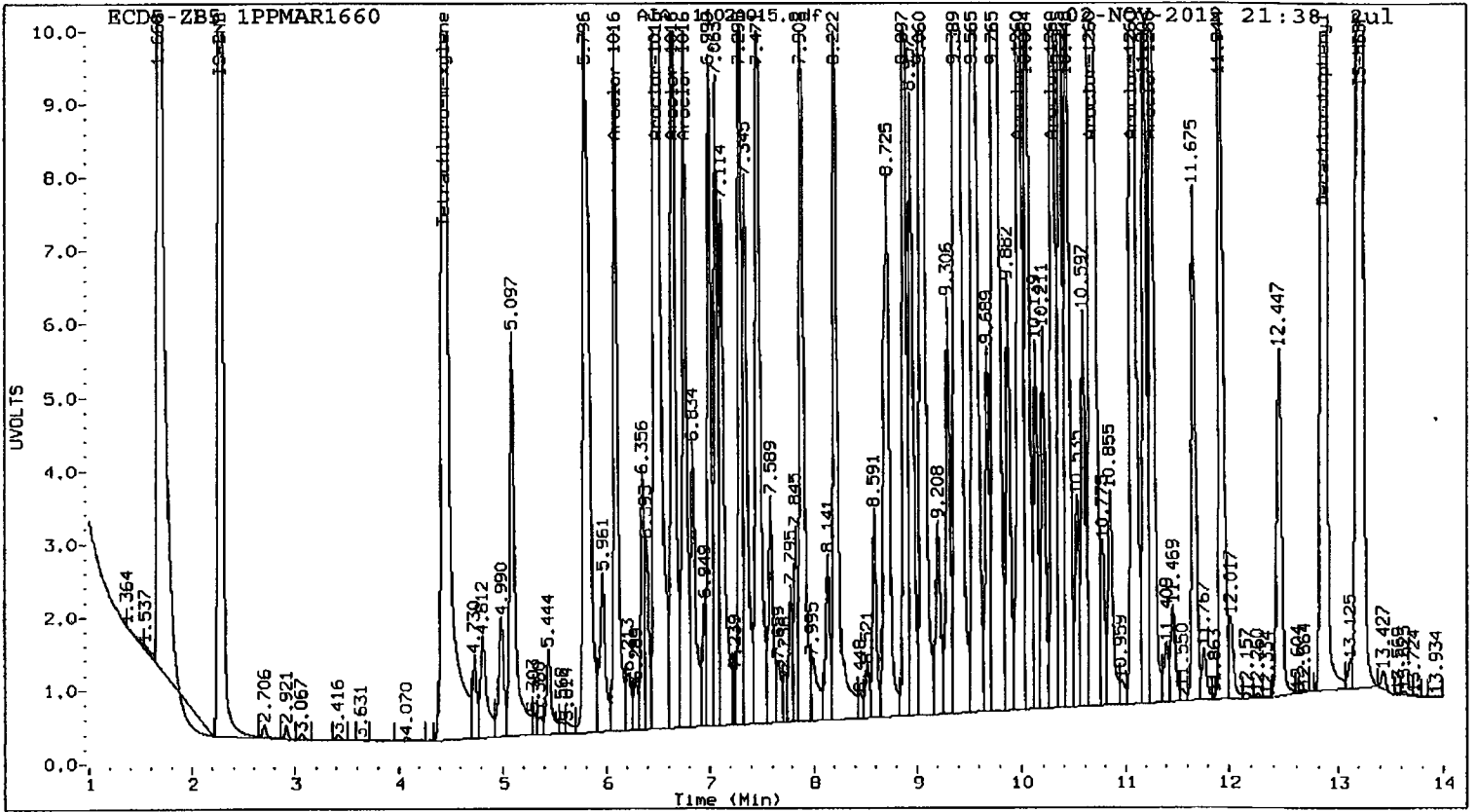
Total PCB Area Col2 (4.556 - 13.148) = 219154507

Col2 Total PCB = 1.7 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A016.d  
Data file 2: 20121102.B/ical-2.b/1102A016.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1660  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.1PPMAR1660  
Client ID:  
Injection Date: 02-NOV-2012 21:58  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

RT	ZB5 Col Shift Response	ZB35 Col Shift Response	RT	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.443	-0.002 5655629	4.455 0.000 1730158	4.455	8.5	8.3	2.0	Tetrachloro-m-xylene
12.854	-0.001 8756996	13.248 0.000 1827328	13.248	8.3	8.4	1.6	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	21.3	20.9
Decachlorobiphenyl	20.7	21.0

*11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	31562437	1.0
Hexabromobiphenyl	64198300	66063497	2.9

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	14552241	0.1
Hexabromobiphenyl	15789428	15974909	1.2

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.092	-0.001	1893217	105.0	1	6.209	0.000	875642	107.4
Aroclor-1016	2	6.496	-0.001	5969040	105.9	2	6.842	0.001	1836774	106.5
Aroclor-1016	3	6.646	-0.001	2571001	105.8	3	7.226	0.002	479038	106.8
Aroclor-1016	4	6.756	-0.001	1824304	105.3	4	7.335	0.001	539029	106.8
Total CollAve (4 peaks):				105.5		Total Col2Ave (4 peaks):				106.9 RPD = 1
Corrected Ave (3 peaks):				105.3		Corrected Ave (3 peaks):				106.7 RPD = 1
Aroclor-1260	1	9.995	-0.001	3954611	98.7	1	10.302	0.000	909167	106.6
Aroclor-1260	2	10.311	0.000	3988453	99.3	2	10.752	0.000	1120883	107.1
Aroclor-1260	3	10.685	0.000	9420553	98.5	3	11.025	0.000	2219033	106.6
Aroclor-1260	4	11.084	0.000	5347196	97.6	4	11.546	-0.001	652983	104.1
Aroclor-1260	5	11.274	-0.001	2618756	99.4	NS	---			----
Total CollAve (5 peaks):				98.7		Total Col2Ave (4 peaks):				106.1 RPD = 7
Corrected Ave (4 peaks):				98.5		Corrected Ave (3 peaks):				105.7 RPD = 7

Total PCB Area Col1 (4.544 - 12.755) = 115293780

Col1 Total PCB = 0.2 ppm\*

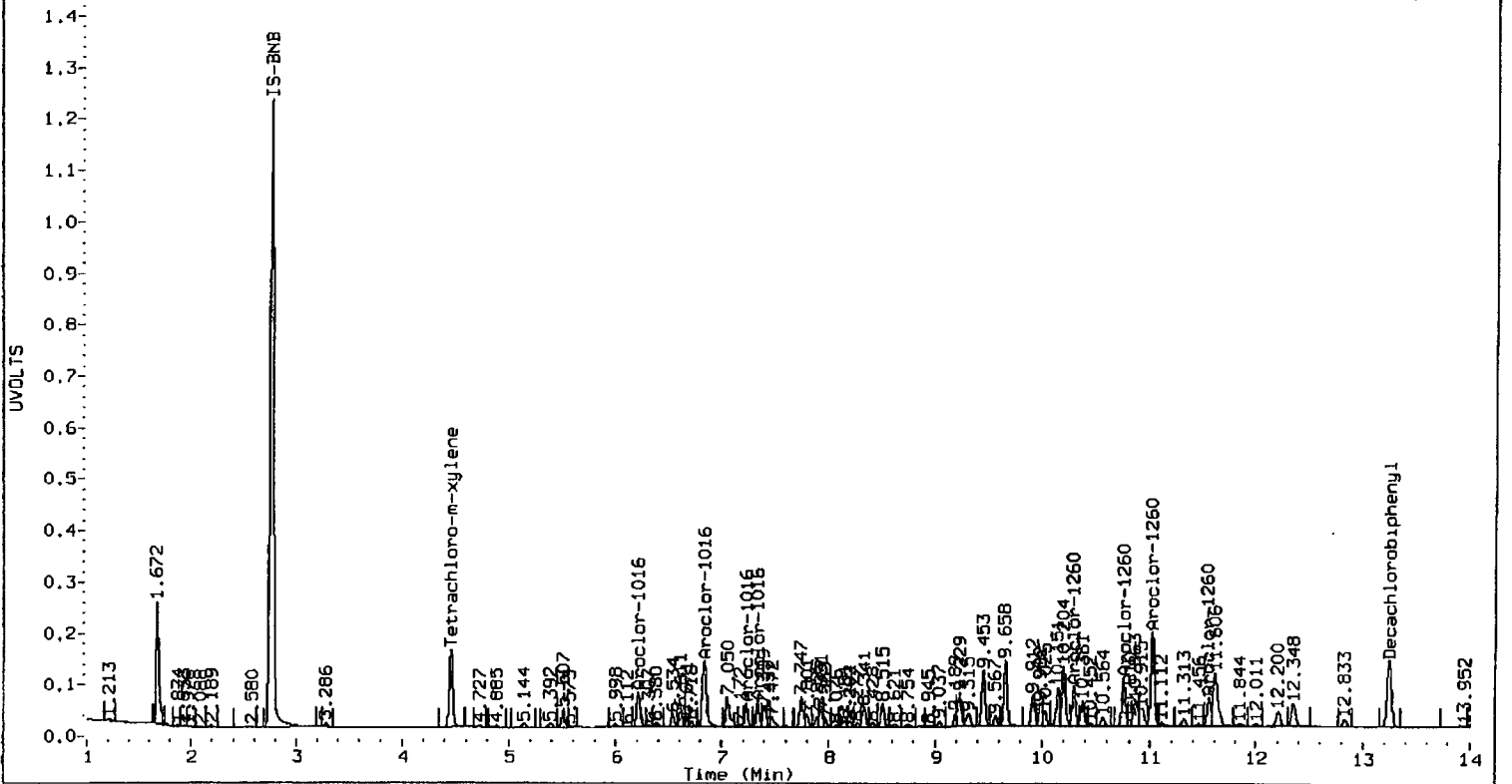
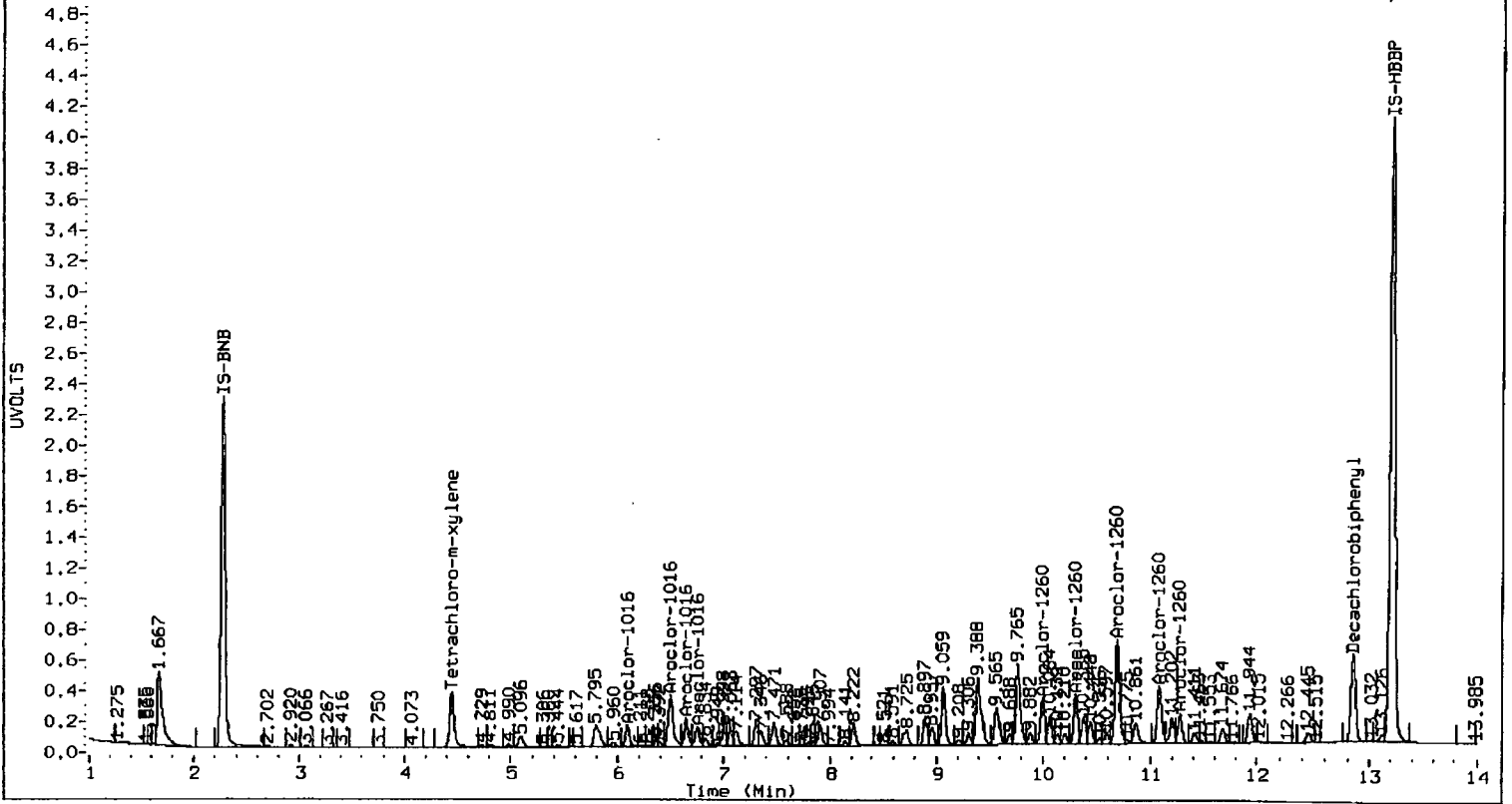
Total PCB Area Col2 (4.556 - 13.148) = 28372185

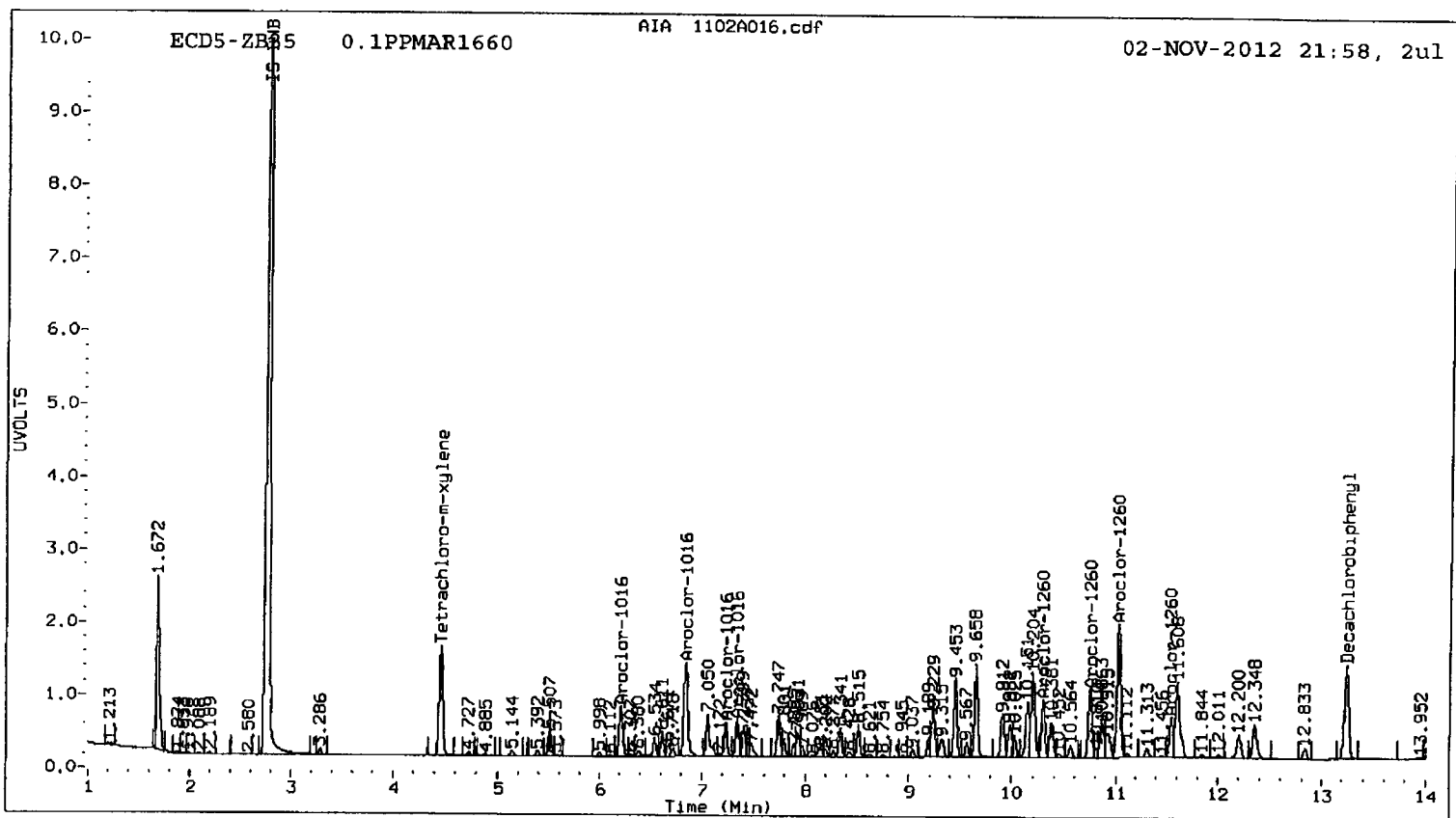
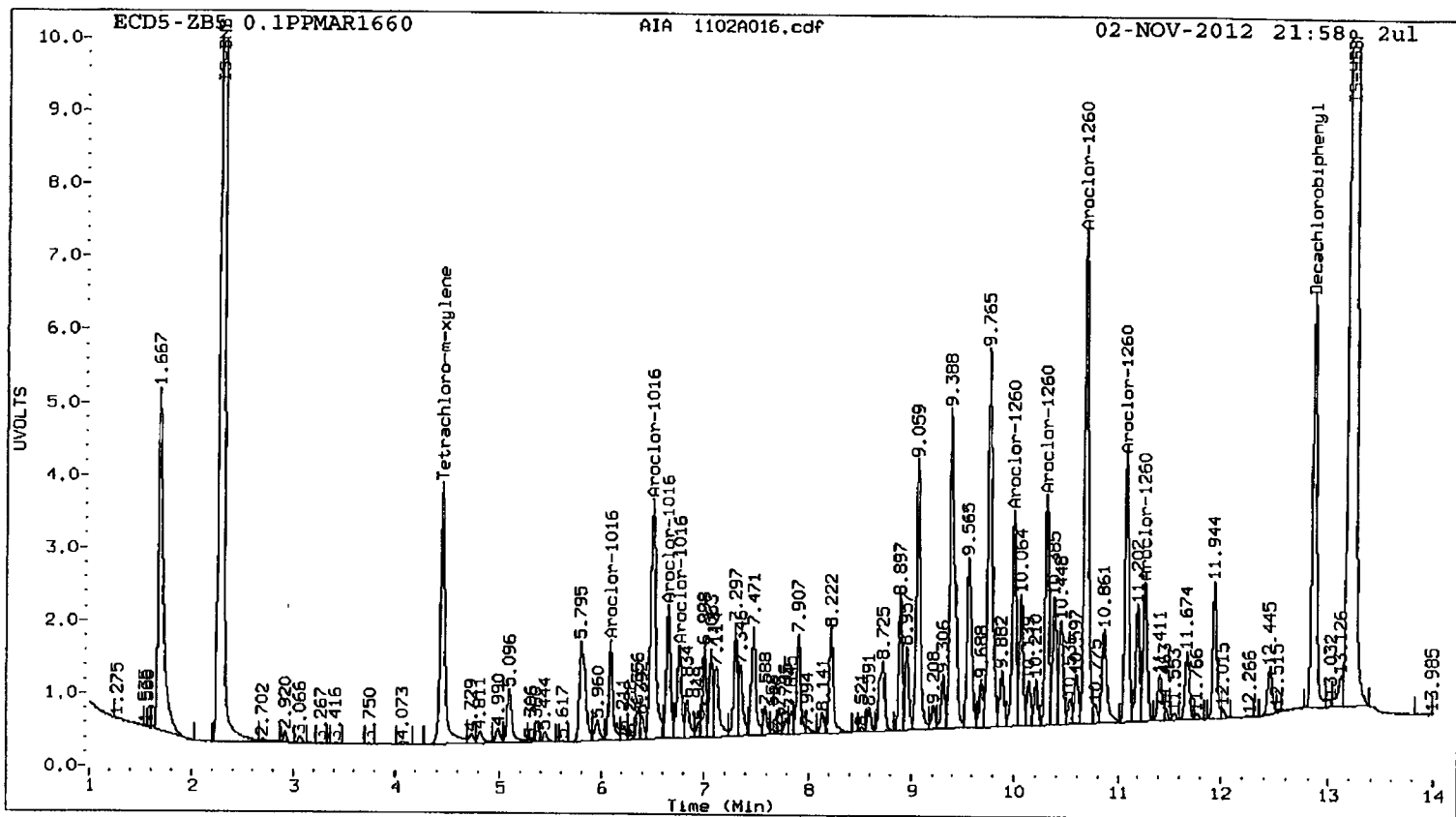
Col2 Total PCB = 0.2 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58: 02178





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A017.d  
Data file 2: 20121102.B/ical-2.b/1102A017.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1660  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: 0.5PPMAR1660  
Client ID:  
Injection Date: 02-NOV-2012 22:18  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.444	-0.001	25958998	4.454	-0.002	8195360	38.3	38.8	1.4	Tetrachloro-m-xylene
12.855	0.000	34947124	13.247	-0.001	7841701	33.5	35.7	6.4	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	95.7	97.0
Decachlorobiphenyl	83.7	89.2

*11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	32469455	3.9
Hexabromobiphenyl	64198300	67388285	5.0

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	14811515	1.9
Hexabromobiphenyl	15789428	16169446	2.4

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- < Indicates standard response outside Limits (-50 to +100%)

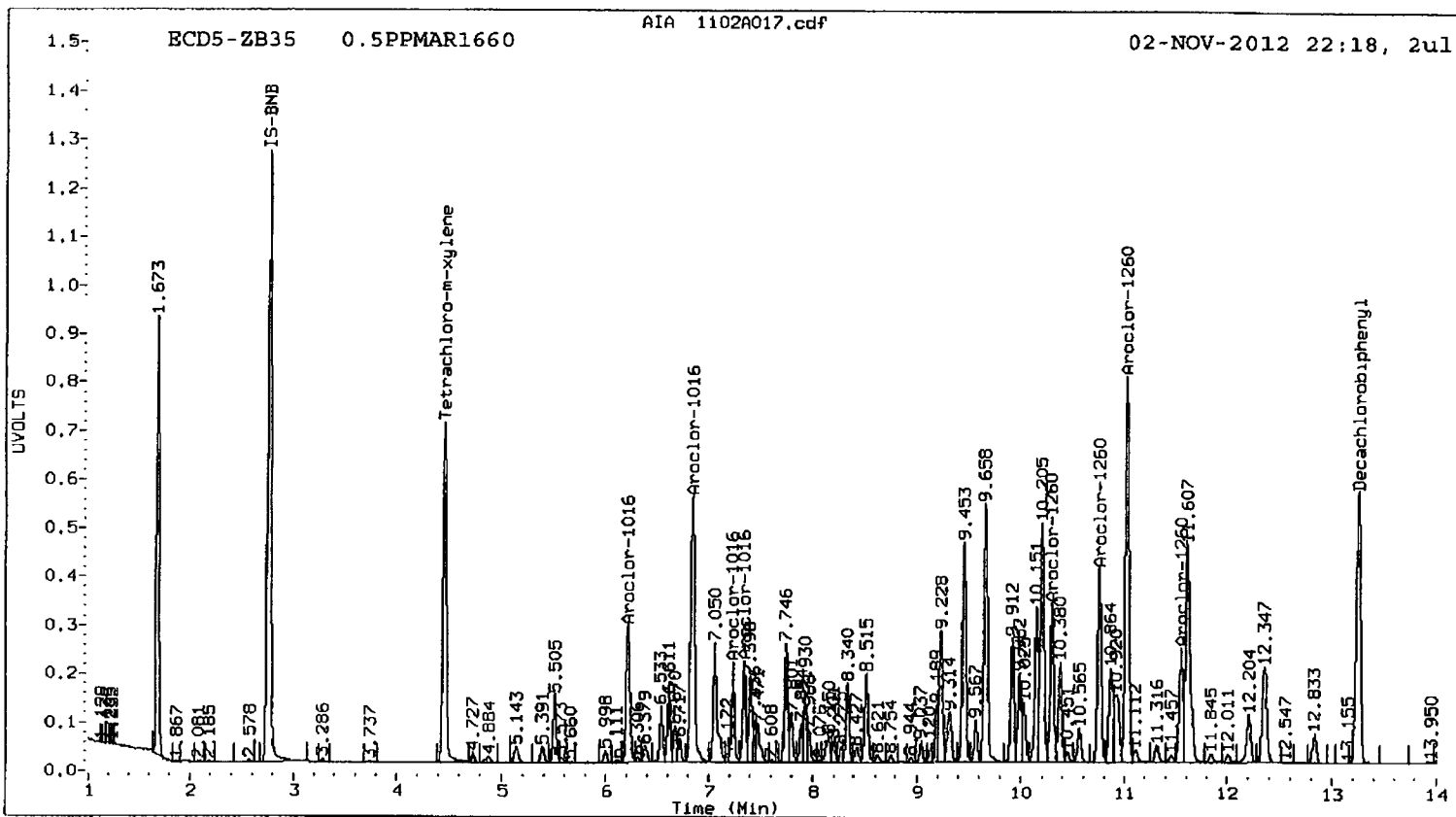
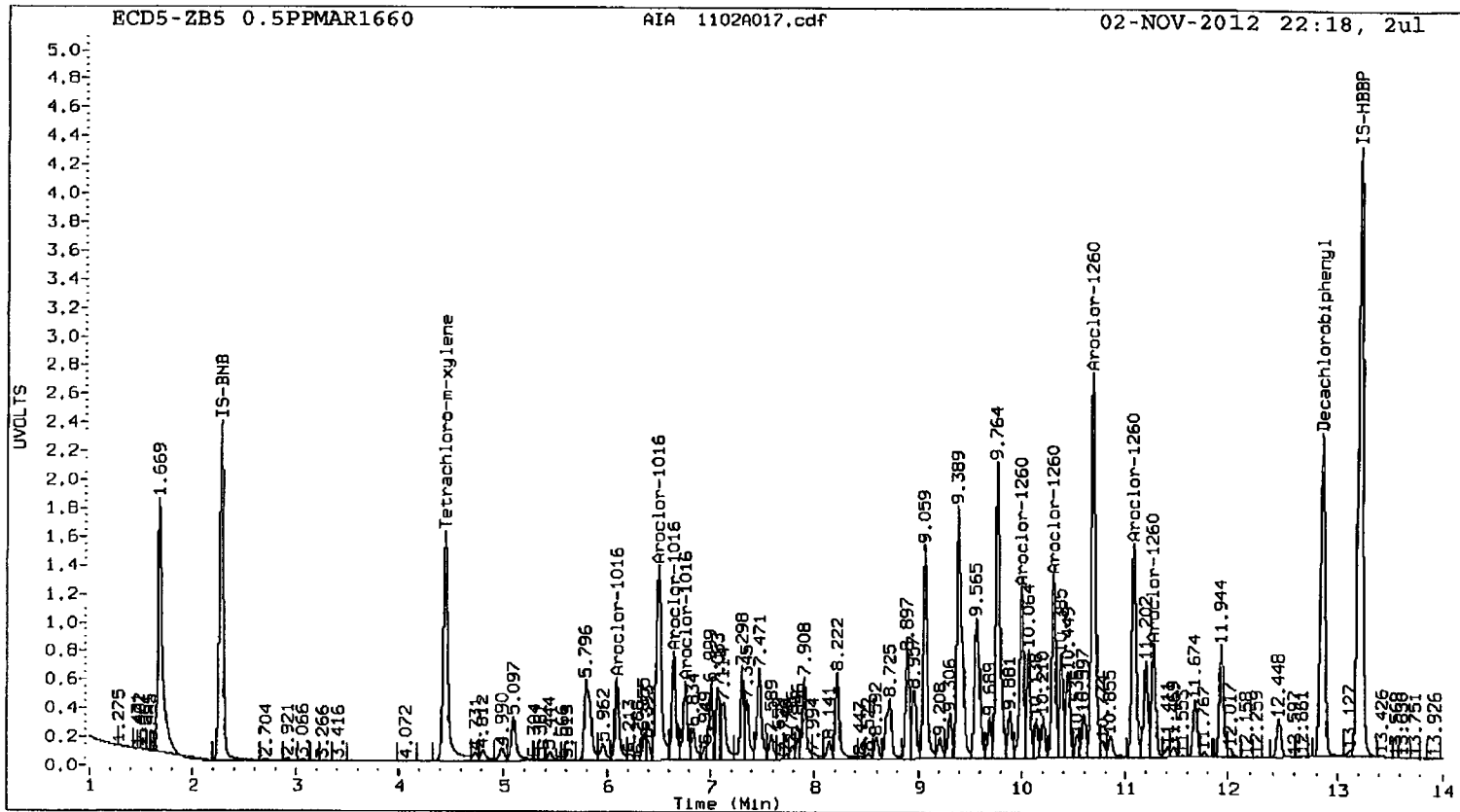
ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.092	-0.001	8087231	445.5	1	6.209	0.000	3611465	435.3
Aroclor-1016	2	6.497	-0.001	24766570	437.8	2	6.840	0.000	7844846	446.9
Aroclor-1016	3	6.646	-0.001	10702771	438.5	3	7.225	0.000	2089747	457.6
Aroclor-1016	4	6.757	-0.001	7808473	447.2	4	7.334	0.000	2284137	444.7
Total Col1Ave (4 peaks):				442.2		Total Col2Ave (4 peaks):				446.1 RPD = 1
Corrected Ave (3 peaks):				440.6		Corrected Ave (3 peaks):				442.3 RPD = 0
Aroclor-1260	1	9.995	0.000	16338550	416.5	1	10.302	0.000	3830719	443.8
Aroclor-1260	2	10.312	0.000	16605271	421.1	2	10.752	0.000	4730699	446.6
Aroclor-1260	3	10.686	0.000	38671574	413.6	3	11.025	0.000	9547787	453.0
Aroclor-1260	4	11.086	0.001	22198886	414.3	4	11.547	0.000	2815861	443.3
Aroclor-1260	5	11.276	0.000	11317084	434.7	NS	---			----
Total Col1Ave (5 peaks):				420.0		Total Col2Ave (4 peaks):				446.7 RPD = 6
Corrected Ave (4 peaks):				416.4		Corrected Ave (3 peaks):				444.6 RPD = 7

Total PCB Area Col1 (4.544 - 12.755) = 481213514      Col1 Total PCB = 0.9 ppm\*

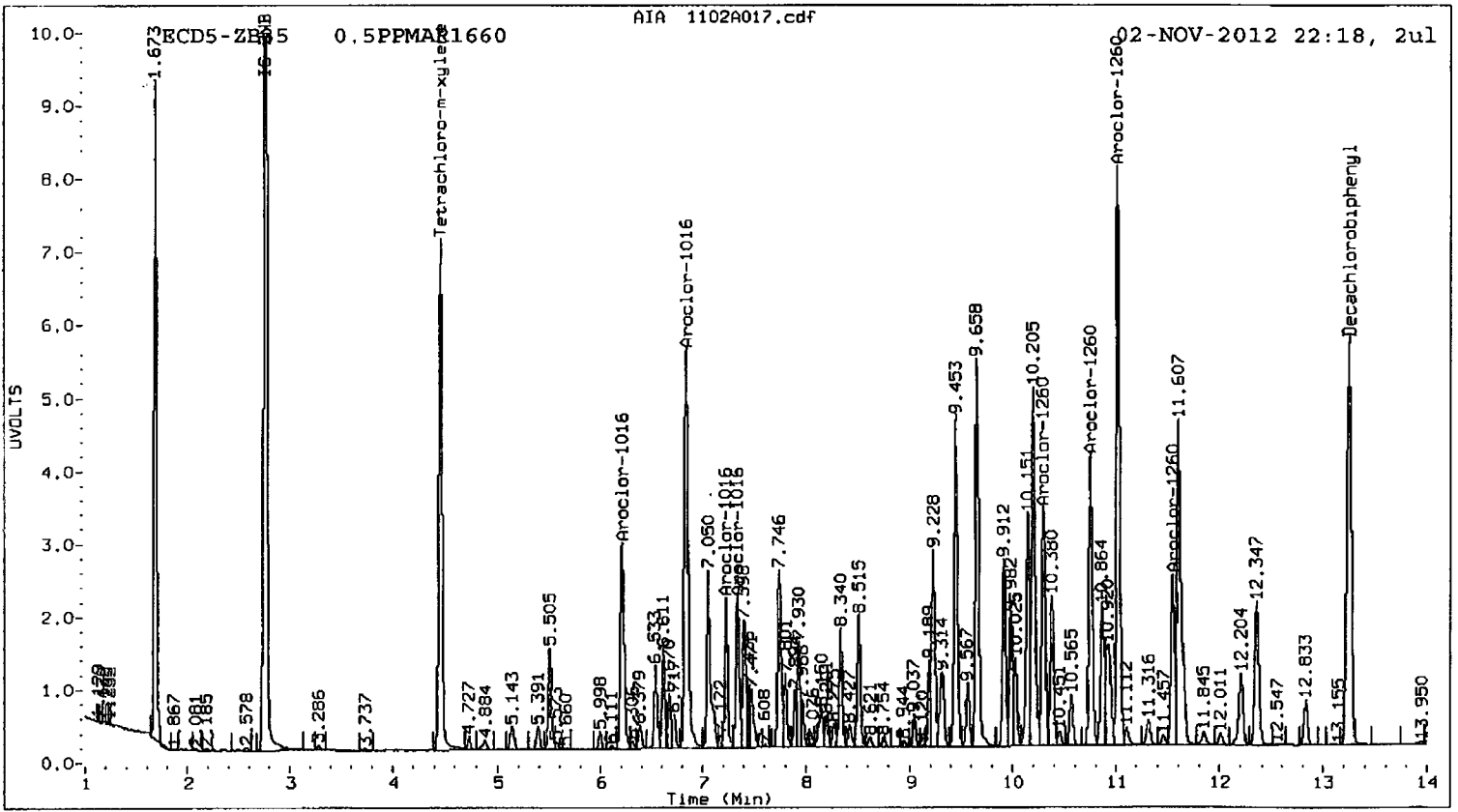
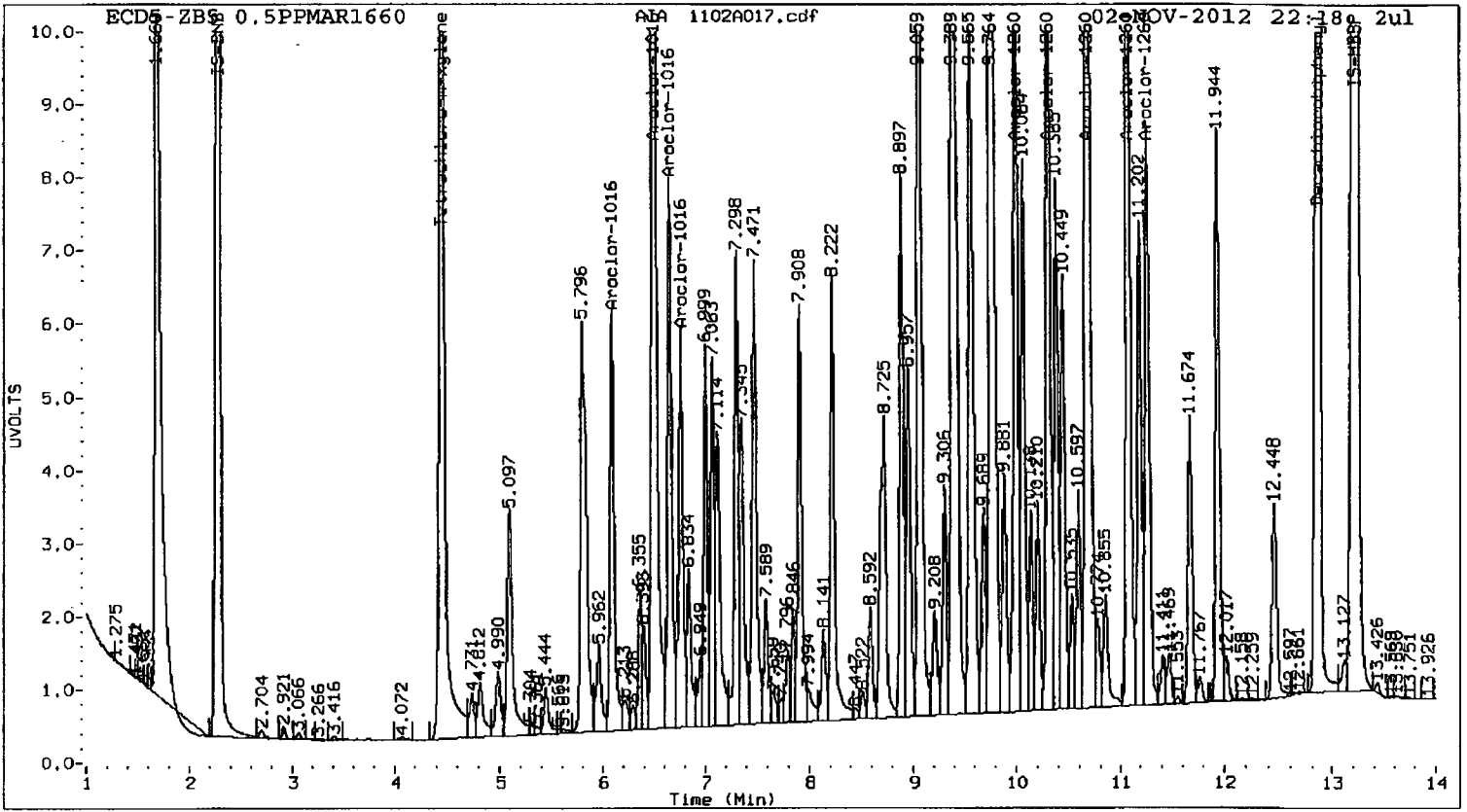
Total PCB Area Col2 (4.556 - 13.148) = 119882466      Col2 Total PCB = 0.9 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical









4058 02101

Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A018.d  
Data file 2: 20121102.B/ical-2.b/1102A018.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1242  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1242  
Client ID:  
Injection Date: 02-NOV-2012 22:38  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.444	-0.001	13817189	4.454	-0.002	4260289	20.2	20.1	0.5	Tetrachloro-m-xylene
12.854	0.000	19265336	13.247	-0.001	4189078	18.3	19.1	4.0	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	50.5	50.2
Decachlorobiphenyl	45.9	47.7

*11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	32779971	4.9
Hexabromobiphenyl	64198300	67800793	5.6

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	14876946	2.3
Hexabromobiphenyl	15789428	16149950	2.3

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- Indicates standard response outside Limits (-50 to +100%)

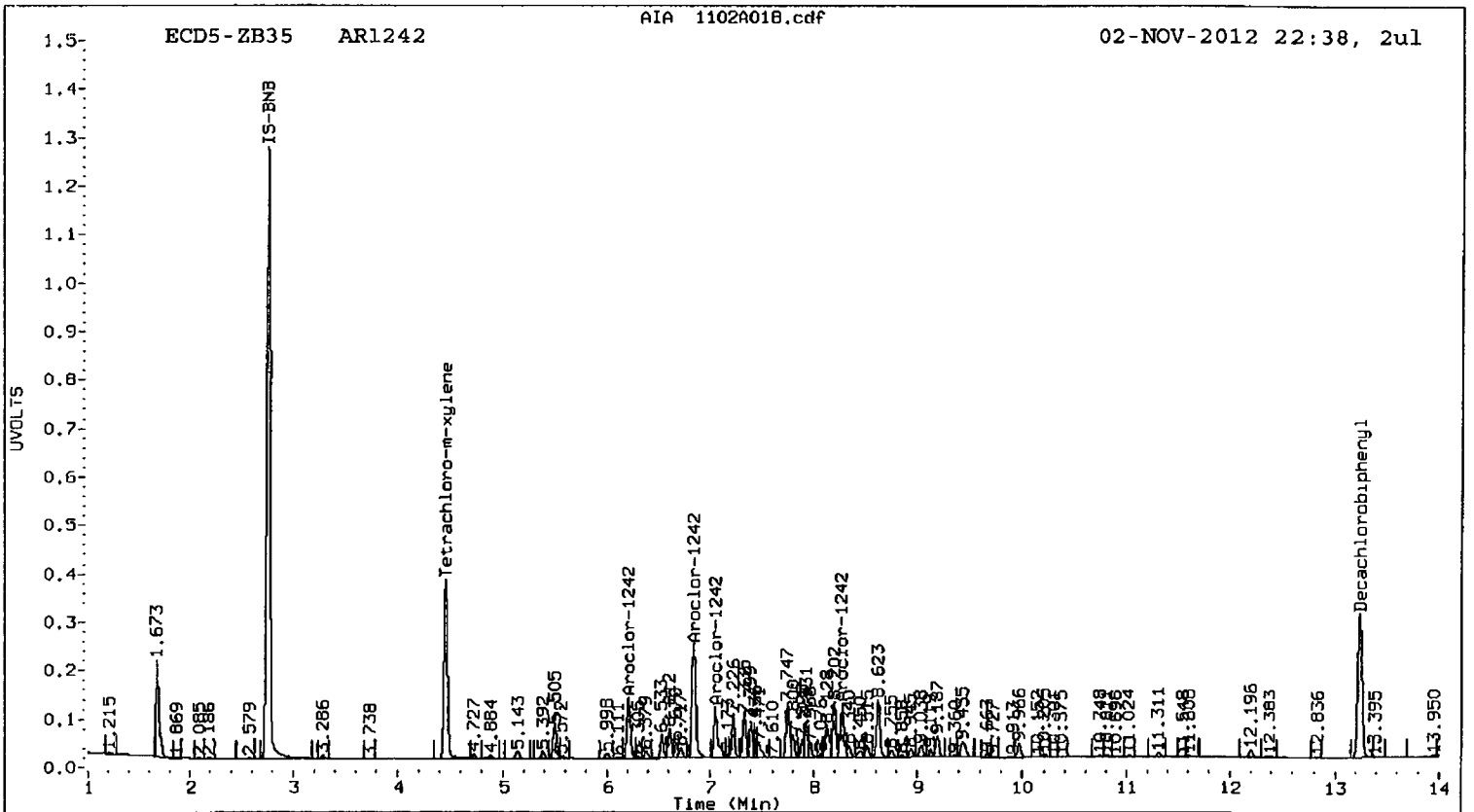
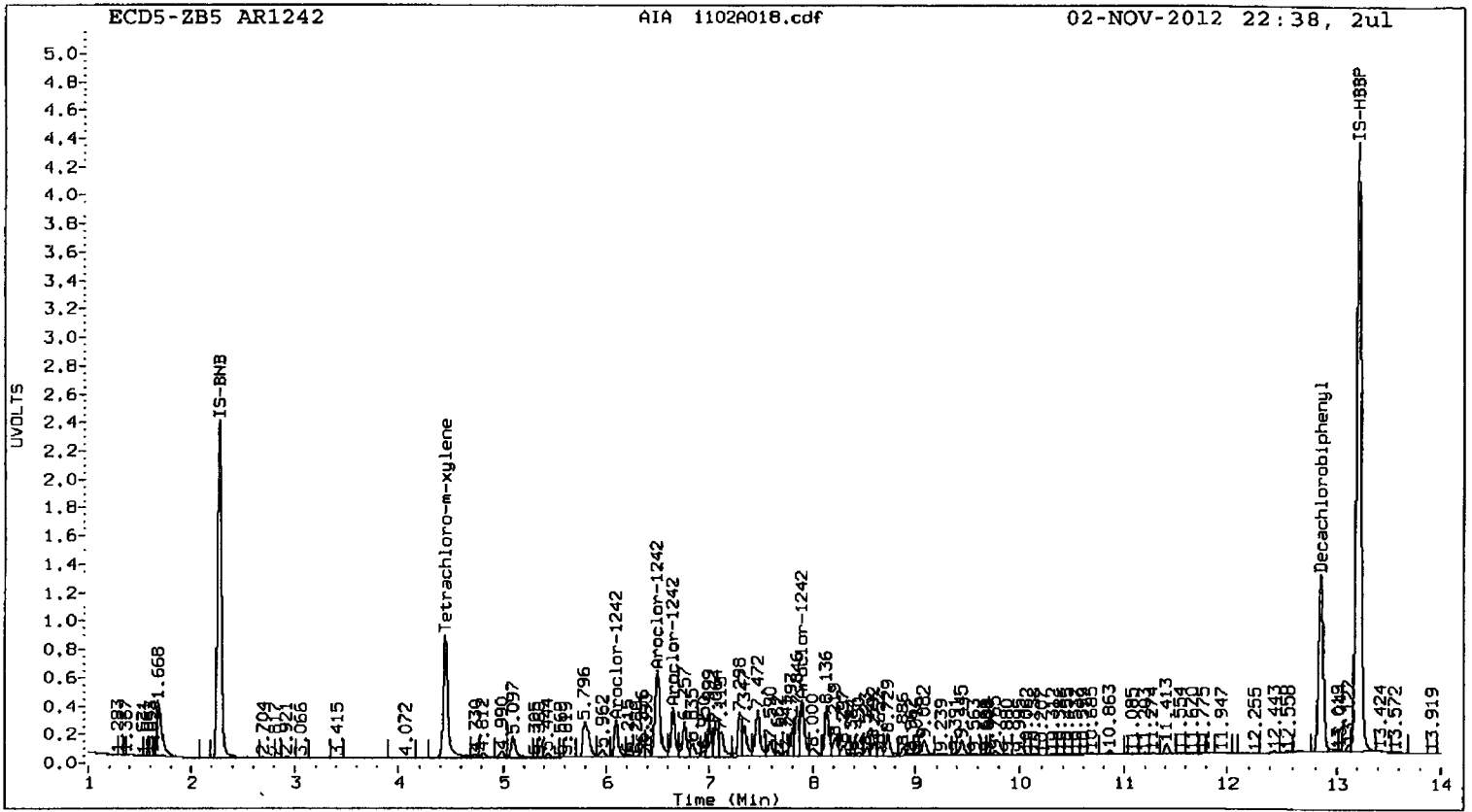
ZB5 Col						ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.093	0.000	3565021	250.0	1	6.208	0.000	1588183	250.0
Aroclor-1242	2	6.497	0.000	11043842	250.0	2	6.840	0.000	3380637	250.0
Aroclor-1242	3	6.647	0.000	4795570	250.0	3	7.051	0.000	1404821	250.0
Aroclor-1242	4	7.899	0.000	5623530	250.0	4	8.276	0.000	1183327	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

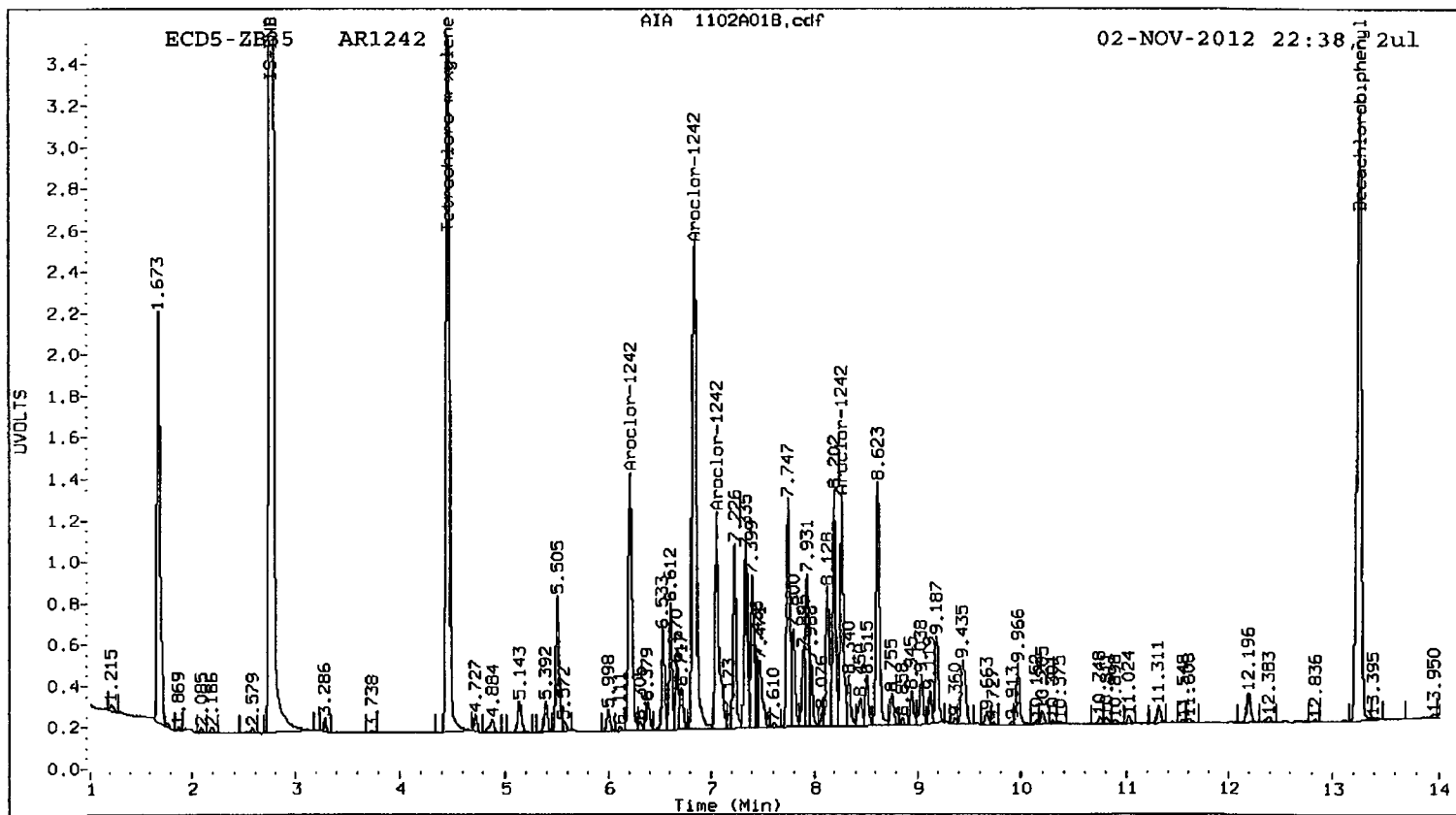
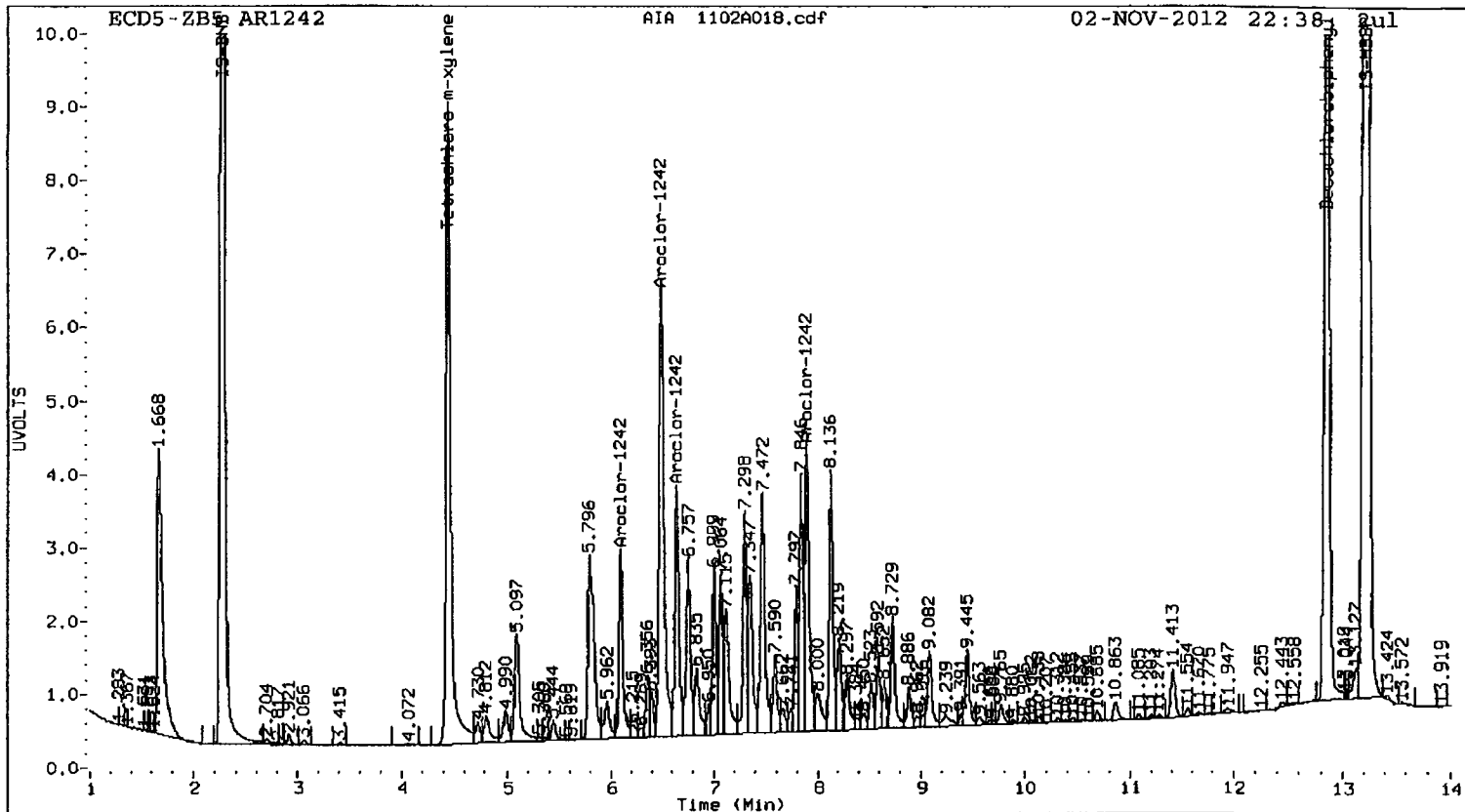
Total PCB Area Col1 (4.544 - 12.755) = 96069806 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (4.556 - 13.148) = 24764849 Col2 Total PCB = 0.2 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A019.d  
Data file 2: 20121102.B/ical-2.b/1102A019.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1248  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1248  
Client ID:  
Injection Date: 02-NOV-2012 22:59  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.447	0.002	13966170	4.456	0.000	4380779	20.0	20.3	1.6	Tetrachloro-m-xylene
12.855	0.000	19830475	13.248	0.000	4286593	18.6	19.3	3.6	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	49.9	50.8
Decachlorobiphenyl	46.5	48.2

*Handwritten signature*  
11/26/12

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	33486089	7.2
Hexabromobiphenyl	64198300	68805737	7.2

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	15137931	4.1
Hexabromobiphenyl	15789428	16358718	3.6

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.494	0.000	7375044	250.0	1	6.837	0.000	2246391	250.0	
Aroclor-1248	2	7.472	0.000	7764360	250.0	2	7.746	0.000	1863320	250.0	
Aroclor-1248	3	7.901	0.000	9804548	250.0	3	8.275	0.000	1925133	250.0	
Aroclor-1248	4	8.136	0.000	7557882	250.0	4	8.622	0.000	2381436	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 (4.544 - 12.755) = 127025734

Col1 Total PCB = 0.2 ppm\*

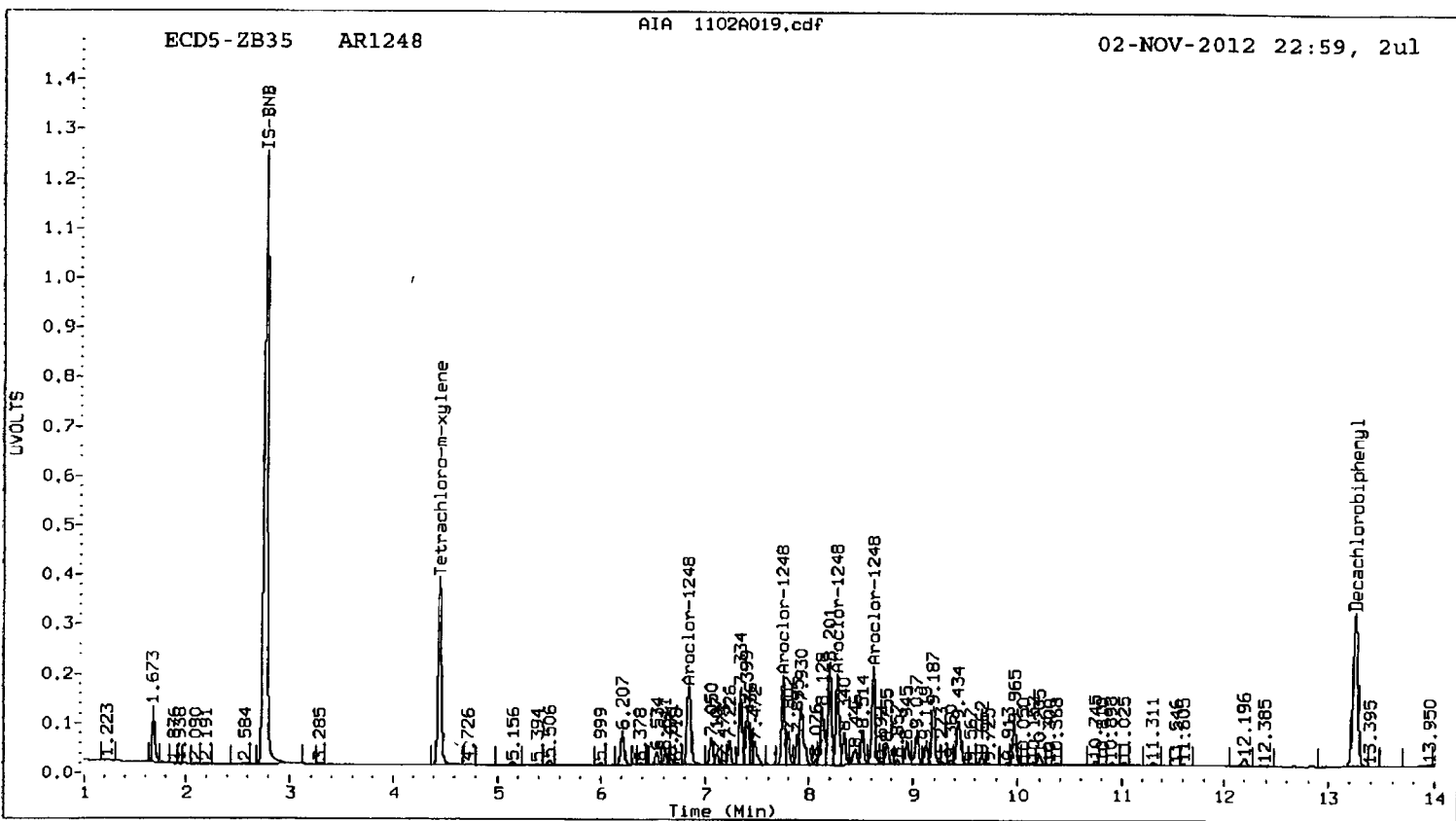
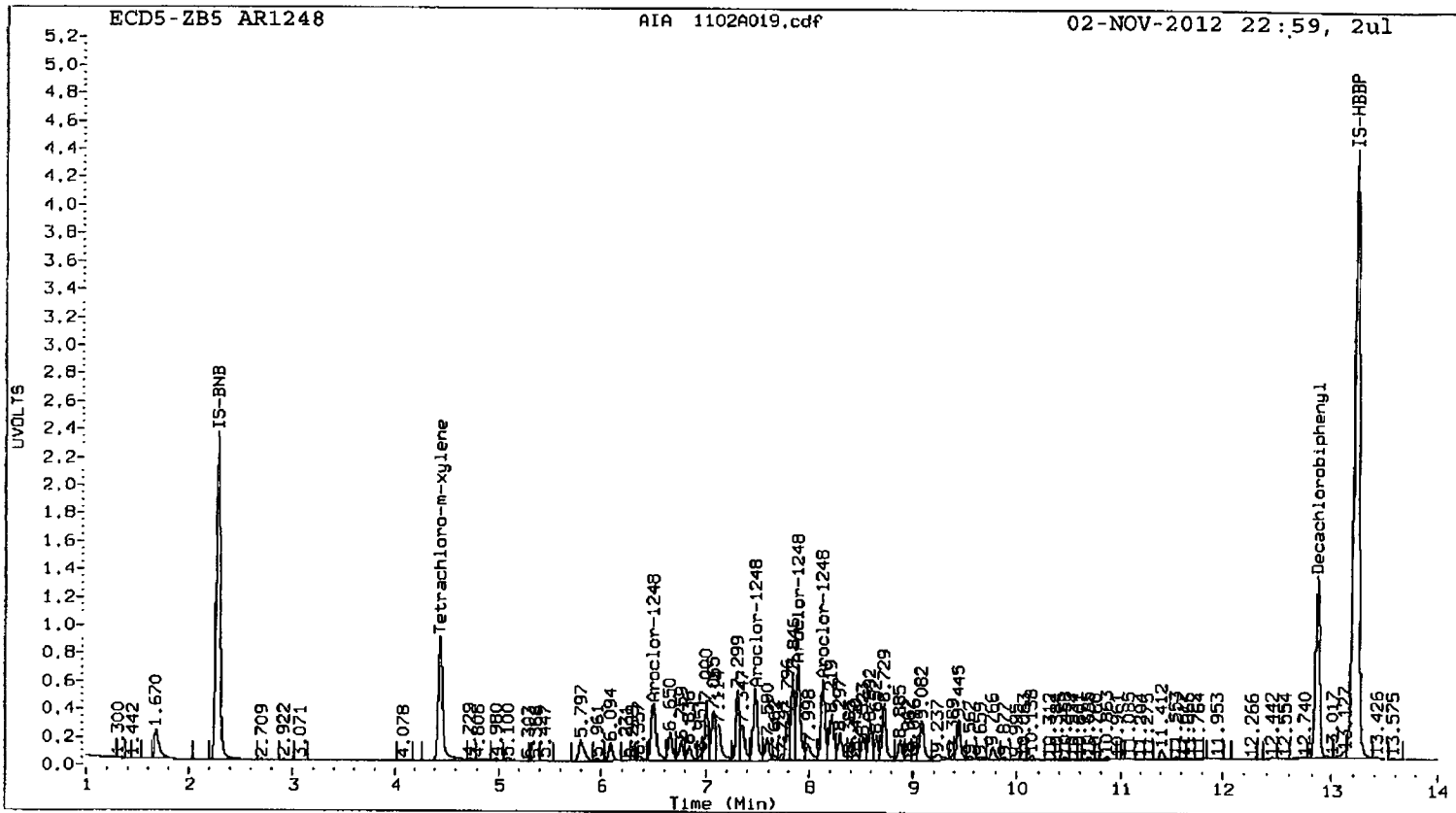
Total PCB Area Col2 (4.556 - 13.148) = 31448043

Col2 Total PCB = 0.2 ppm\*

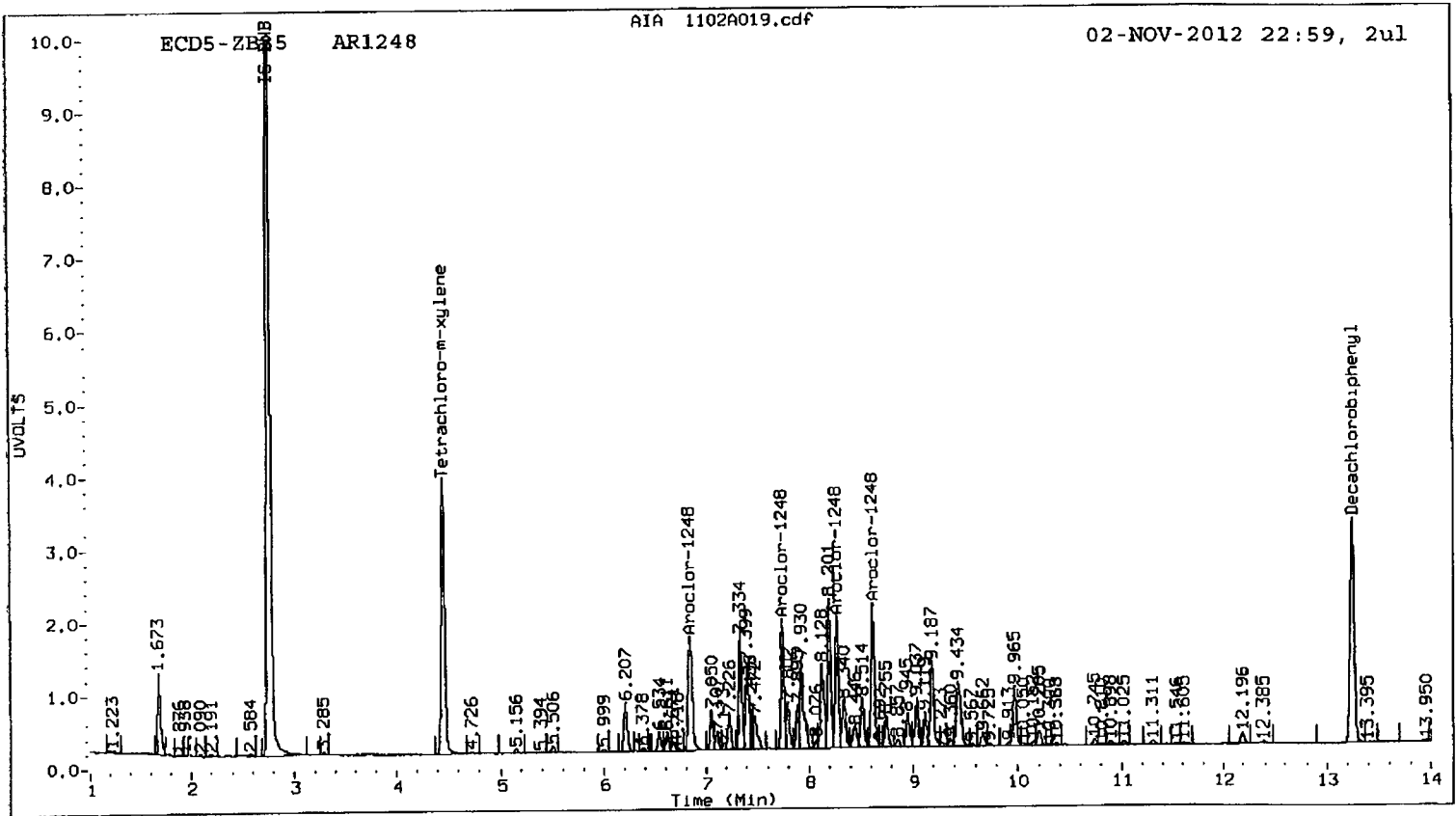
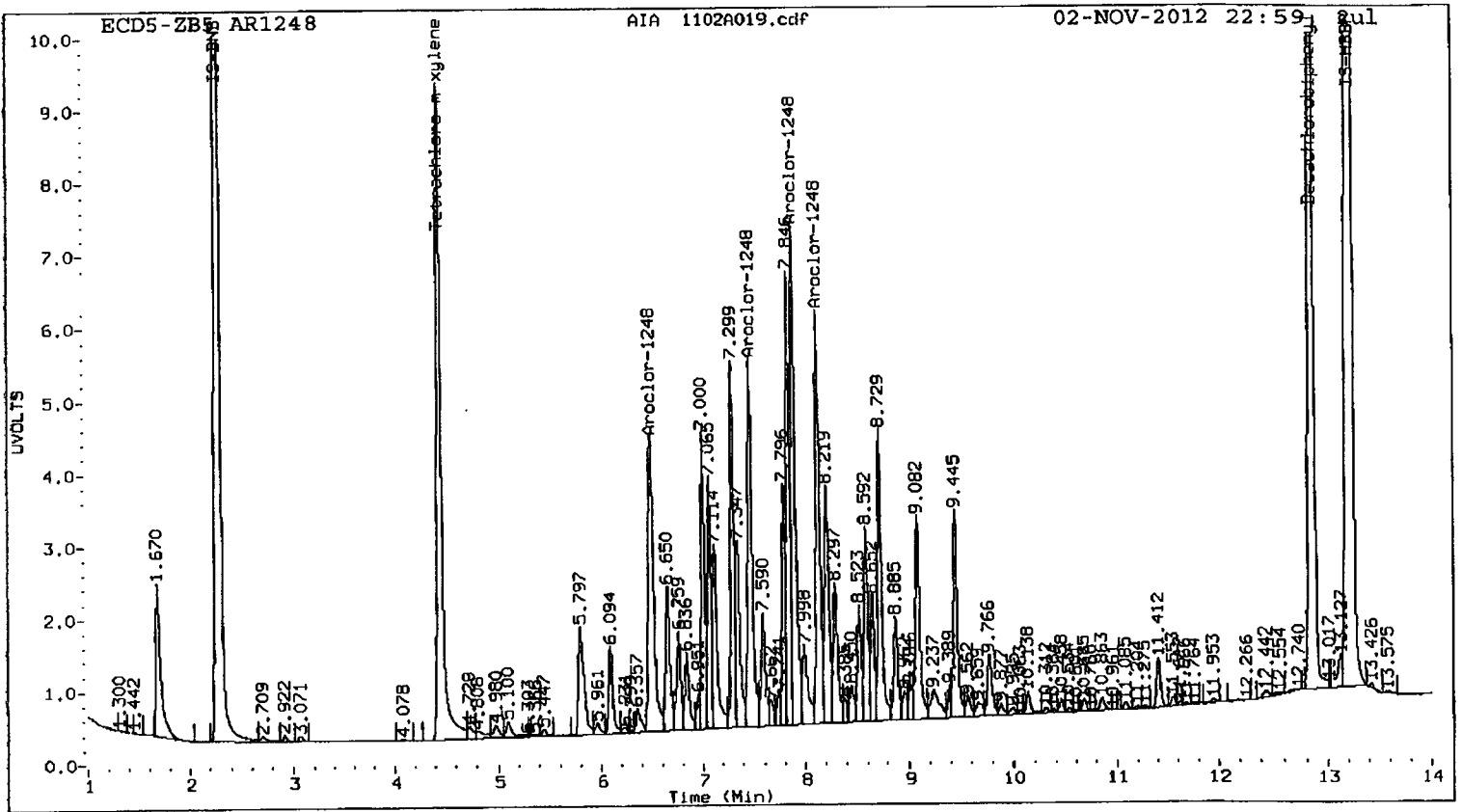
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR5A-02101







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A020.d  
Data file 2: 20121102.B/ical-2.b/1102A020.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1254  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254  
Client ID:  
Injection Date: 02-NOV-2012 23:19  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.445	0.001	13706465	4.455	-0.001	4318007	20.0	20.6	2.9	Tetrachloro-m-xylene
12.856	0.001	19363201	13.247	-0.001	4156330	18.4	19.2	3.9	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	49.9	51.4
Decachlorobiphenyl	46.1	47.9

*J 11/26/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	32866846	5.2
Hexabromobiphenyl	64198300	67839772	5.7

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	14737446	1.4
Hexabromobiphenyl	15789428	15955858	1.1

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col

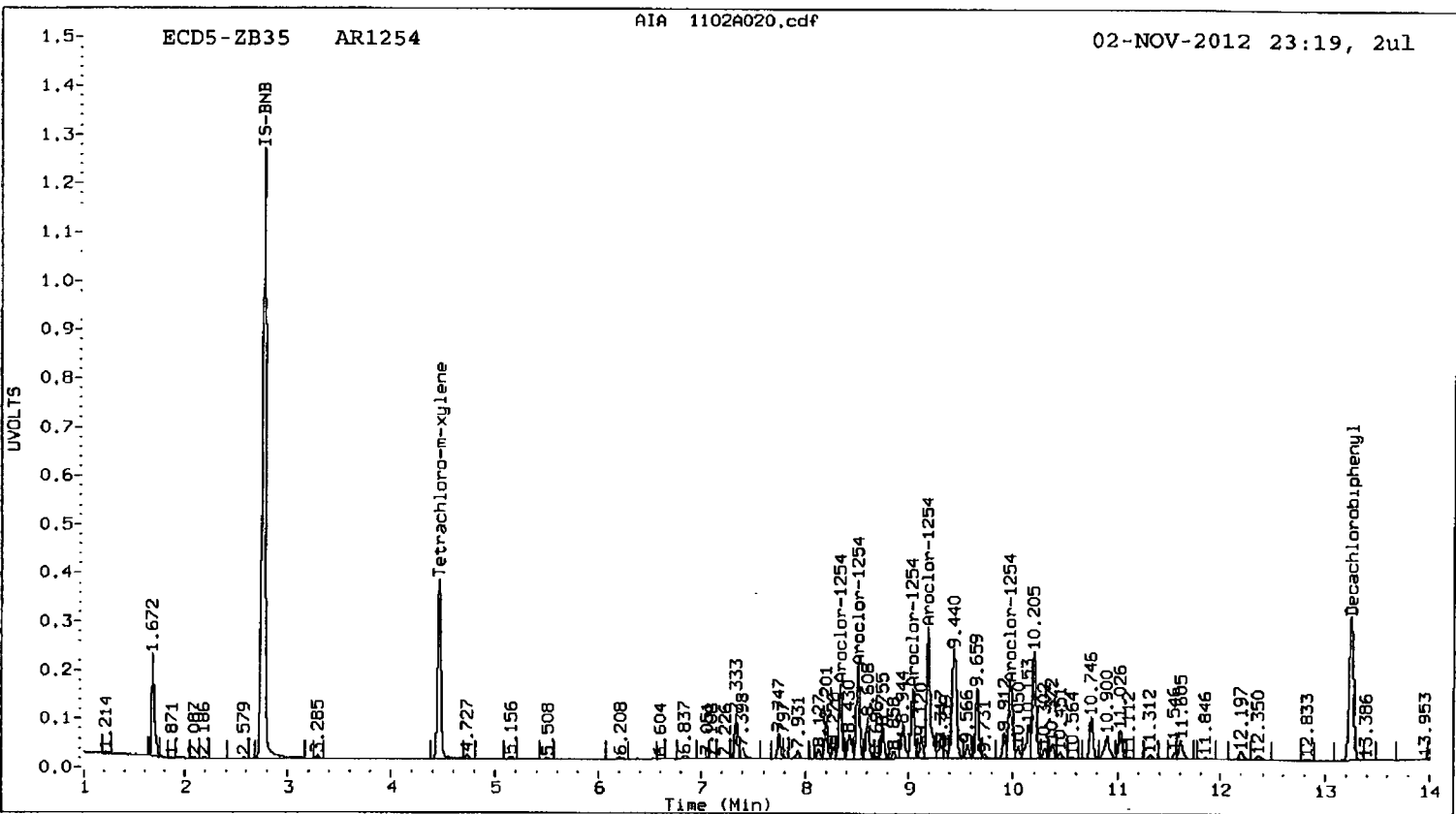
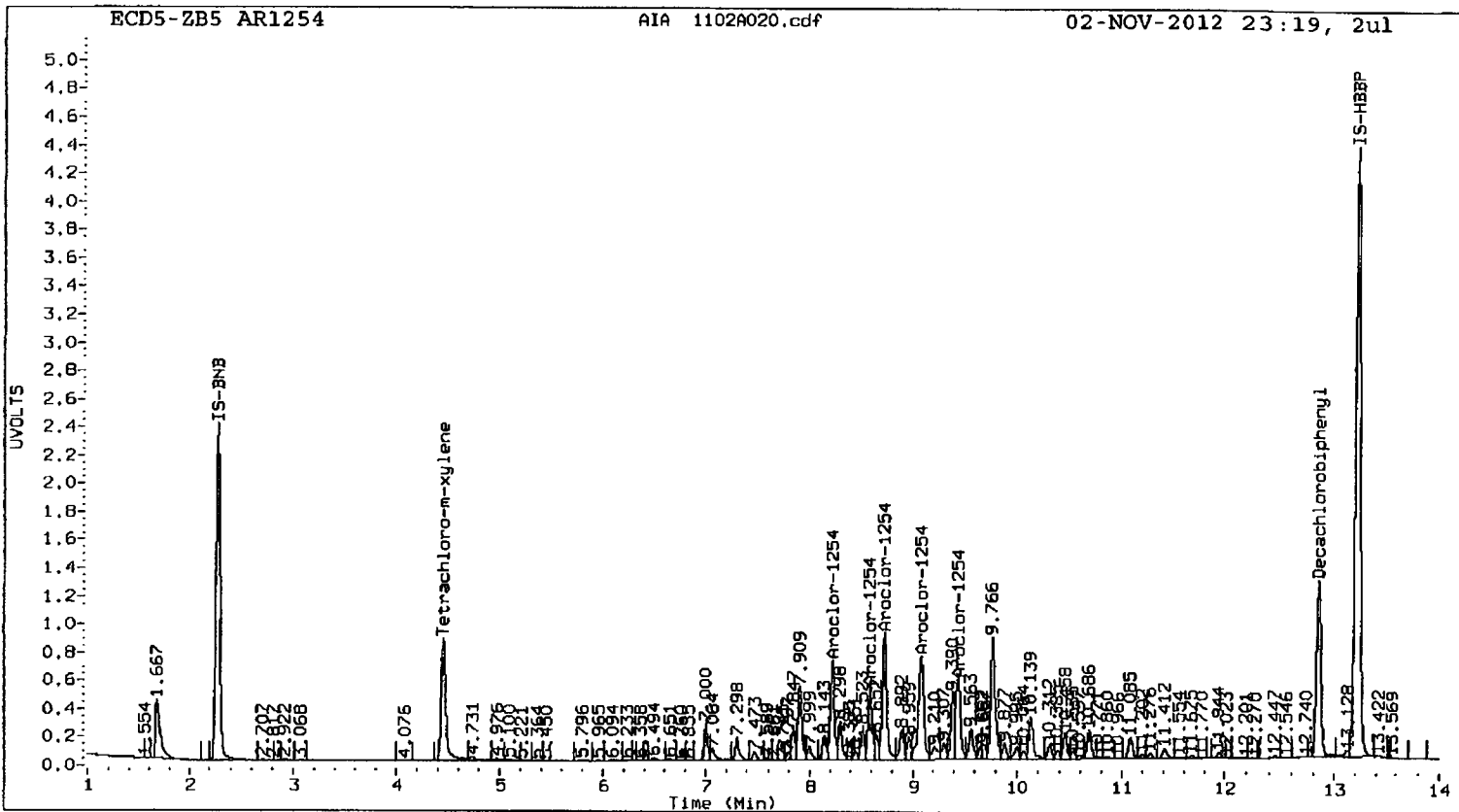
ZB35 Col

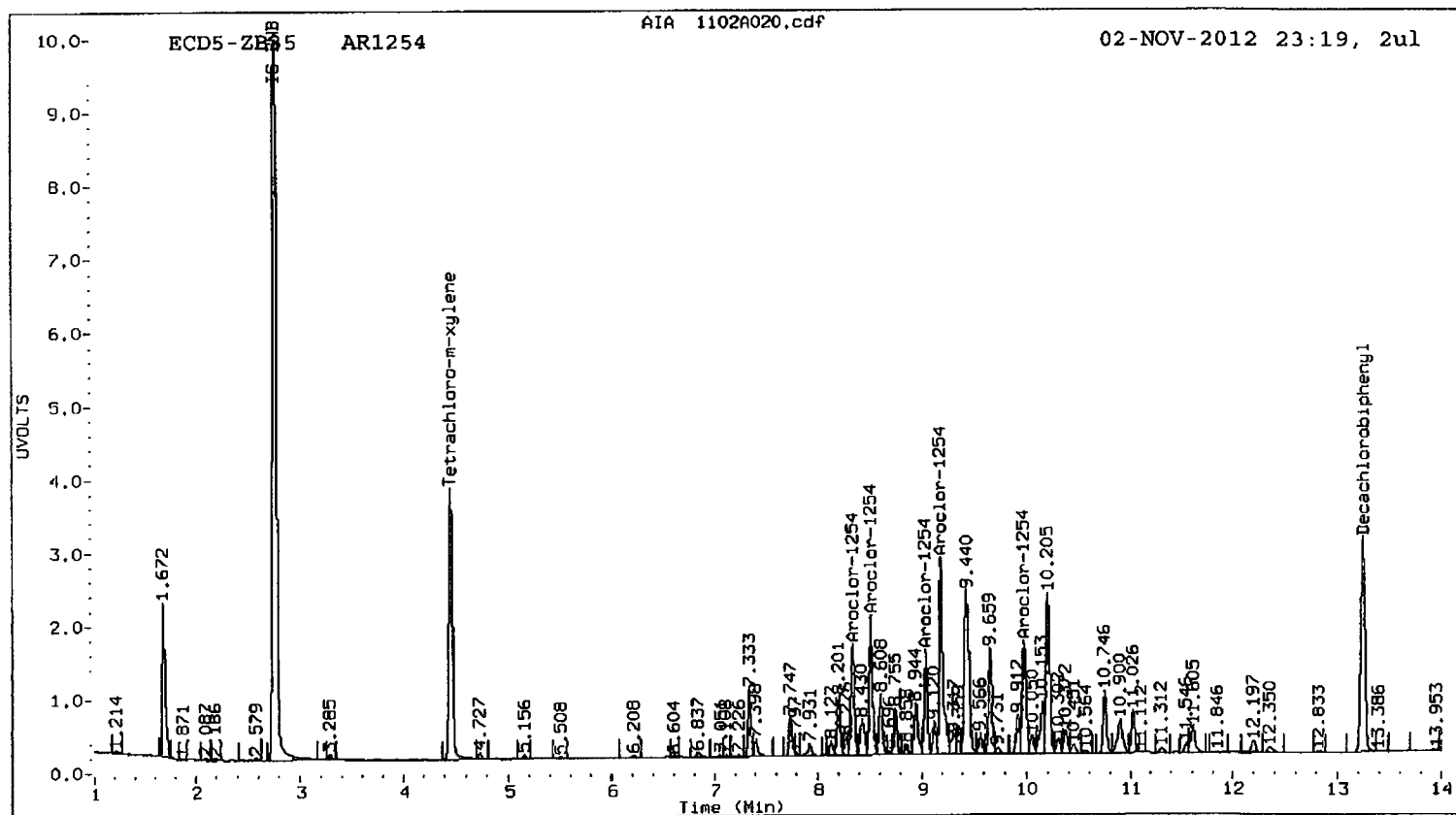
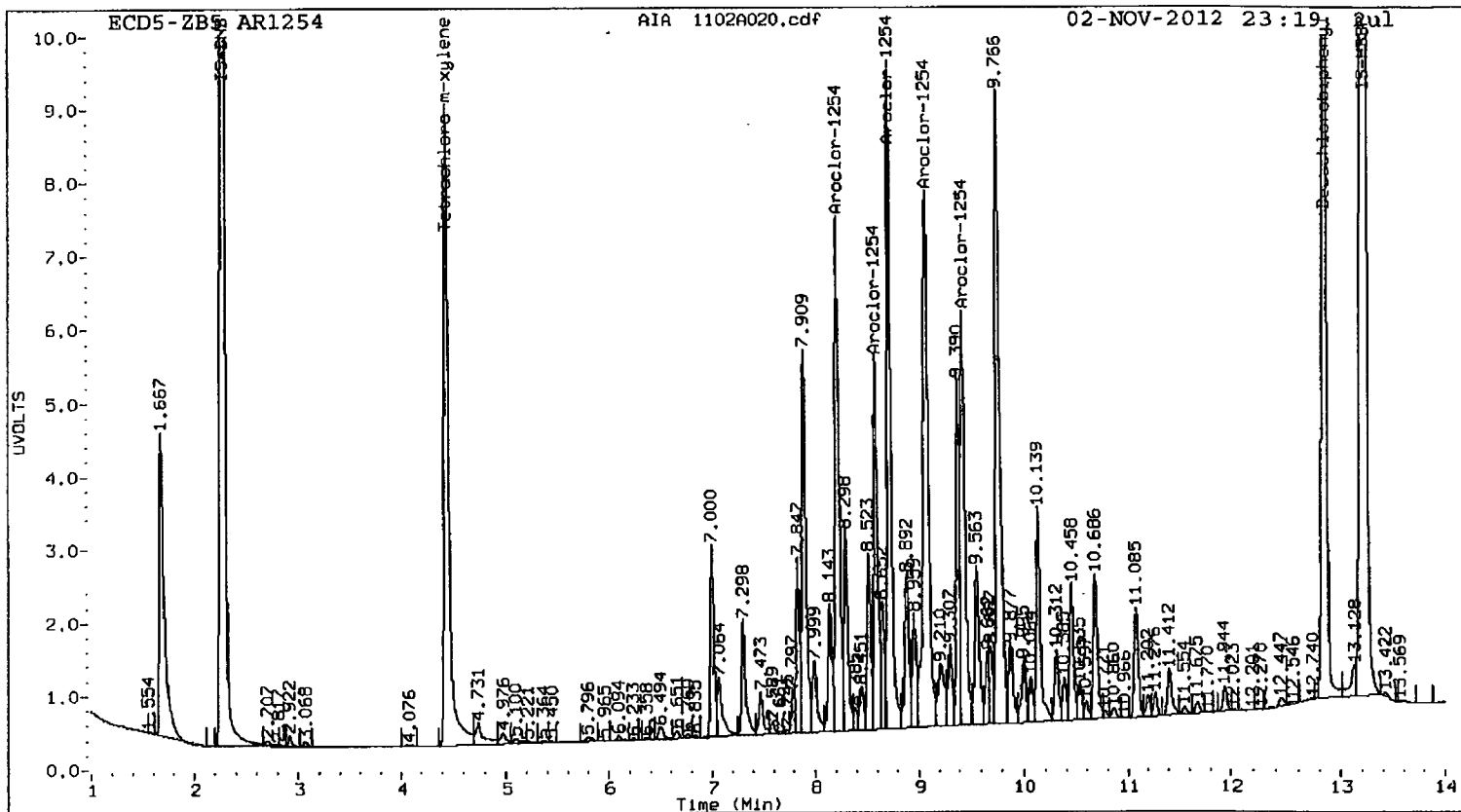
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1254	1	8.222	0.000	9810274	250.0	1	8.341	0.000	1599790	250.0	
Aroclor-1254	2	8.593	0.000	6449287	250.0	2	8.515	0.000	2020577	250.0	
Aroclor-1254	3	8.729	0.000	12534963	250.0	3	9.037	0.000	1552259	250.0	
Aroclor-1254	4	9.078	0.000	13720020	250.0	4	9.187	0.000	3404941	250.0	
Aroclor-1254	5	9.439	0.000	8627992	250.0	5	9.972	0.000	2051286	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 (4.544 - 12.755) = 139587028 Col1 Total PCB = 0.3 ppm\*

Total PCB Area Col2 (4.556 - 13.148) = 32975674 Col2 Total PCB = 0.3 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A021.d  
Data file 2: 20121102.B/ical-2.b/1102A021.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR2162  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR2162  
Client ID:  
Injection Date: 02-NOV-2012 23:40  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.447	0.003	13991914	4.457	0.002	4297388	20.9	21.3	1.7	Tetrachloro-m-xylene
12.855	0.001	19678714	13.247	-0.001	4215388	19.1	19.8	3.7	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	52.3	53.2
Decachlorobiphenyl	47.7	49.5

*Handwritten signature*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	32037907	2.5
Hexabromobiphenyl	64198300	66658077	3.8

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	14169986	-2.5
Hexabromobiphenyl	15789428	15683025	-0.7

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	4.817	0.000	1955059	250.0	1	5.141	0.000	600189	250.0	
Aroclor-1221	2	4.995	0.000	1338848	250.0	2	5.393	0.000	353488	250.0	
Aroclor-1221	3	5.101	0.000	4360682	250.0	3	5.507	0.000	1111277	250.0	
Aroclor-1221 NS	---					4	5.576	0.000	191816	250.0	
Total CollAve (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	9.996	0.000	14491157	250.0	1	10.302	0.000	3419212	250.0	
Aroclor-1262	2	10.312	0.000	11002550	250.0	2	10.752	0.000	3037869	250.0	
Aroclor-1262	3	10.687	0.000	28527516	250.0	3	11.025	0.000	6666677	250.0	
Aroclor-1262	4	11.202	0.000	10746741	250.0	4	11.547	0.000	2698127	250.0	
Aroclor-1262	5	11.275	0.000	11799249	250.0	5	12.347	0.000	2593001	250.0	
Total CollAve (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	

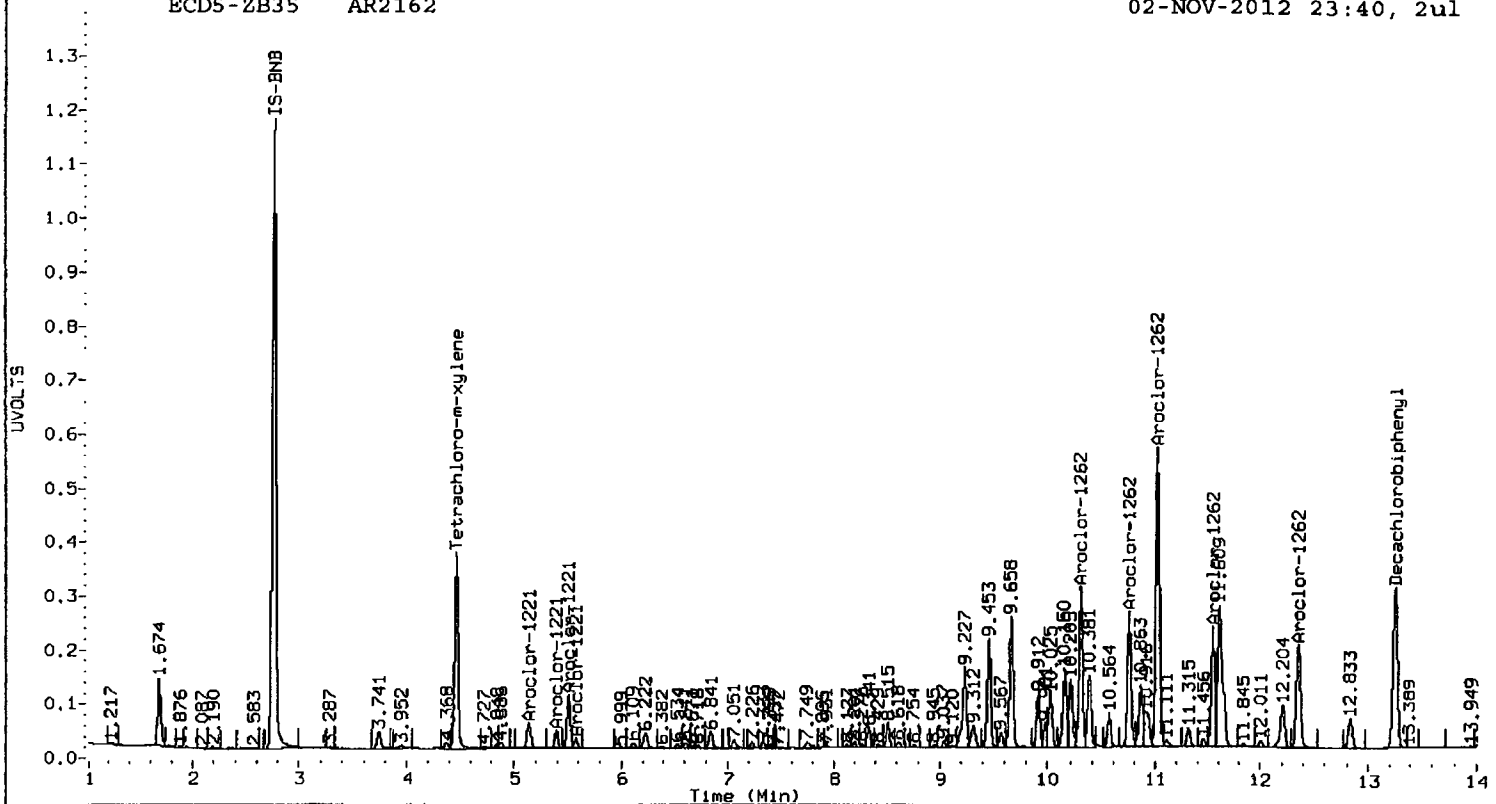
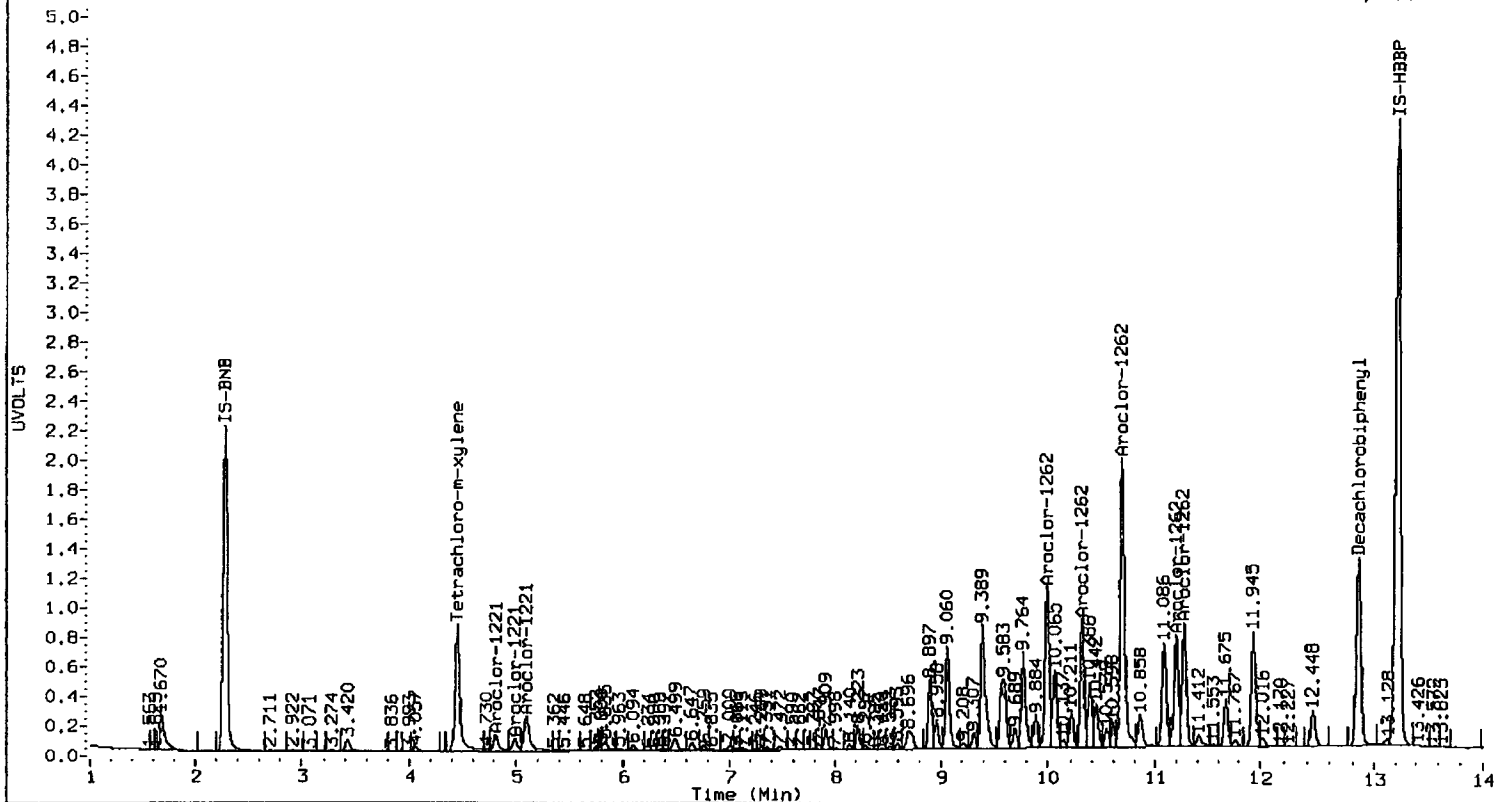
Total PCB Area Coll (4.544 - 12.755) = 214801420 Coll Total PCB = 0.4 ppm\*

Total PCB Area Col2 (4.556 - 13.148) = 50408807 Col2 Total PCB = 0.4 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A022.d  
Data file 2: 20121102.B/ical-2.b/1102A022.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR3268  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR3268  
Client ID:  
Injection Date: 03-NOV-2012 00:00  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.447	0.002	13985500	4.456	0.000	4278938	20.1	20.4	1.5	Tetrachloro-m-xylene
12.855	0.001	34063776	13.248	0.000	7494445	31.8	34.0	6.7	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	50.3	51.0
Decachlorobiphenyl	79.5	85.0

*Handwritten signature and date: 11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	33288564	6.5
Hexabromobiphenyl	64198300	69153536	7.7

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	14704019	1.2
Hexabromobiphenyl	15789428	16219252	2.7

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- Indicates standard response outside Limits (-50 to +100%)

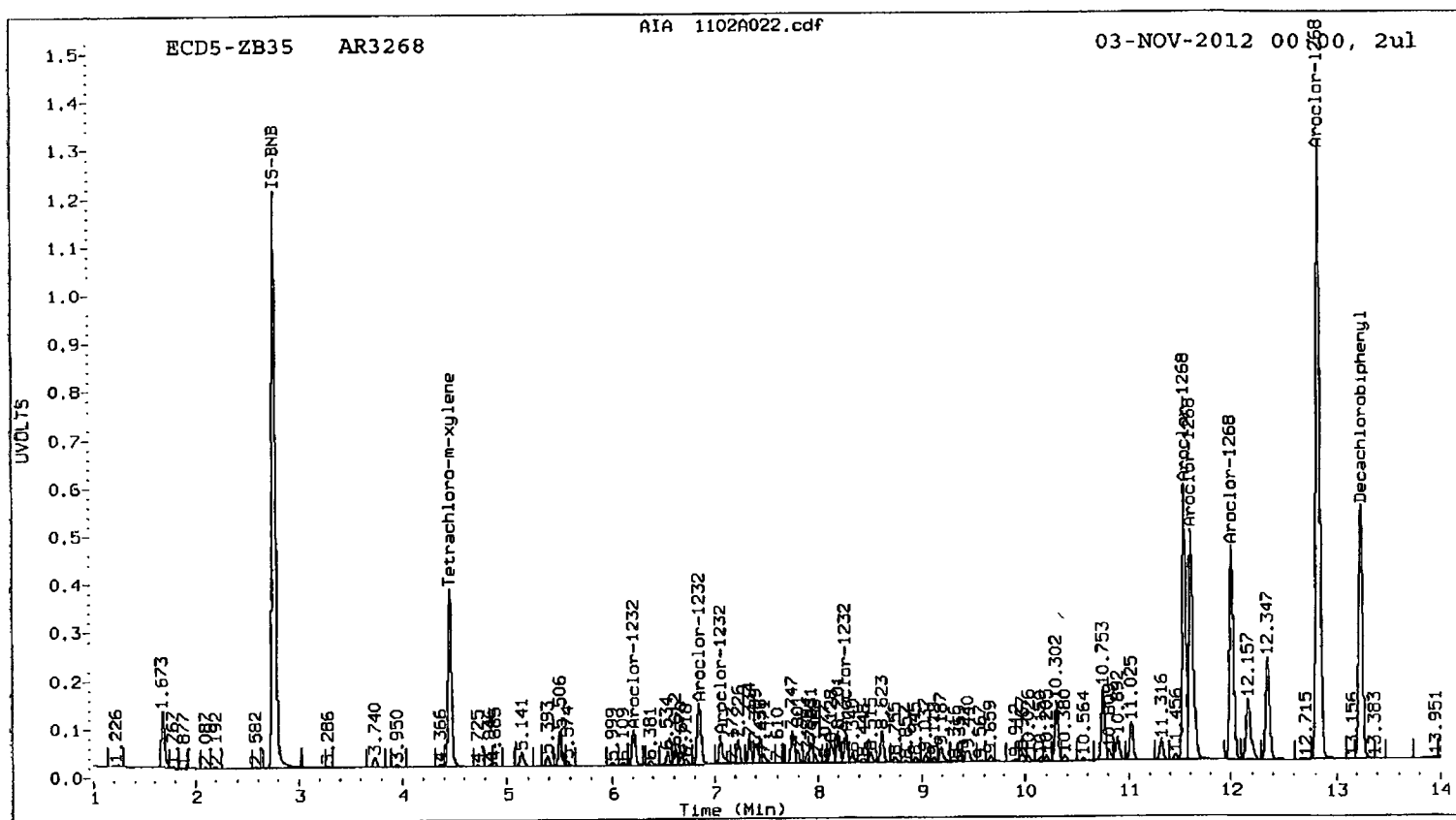
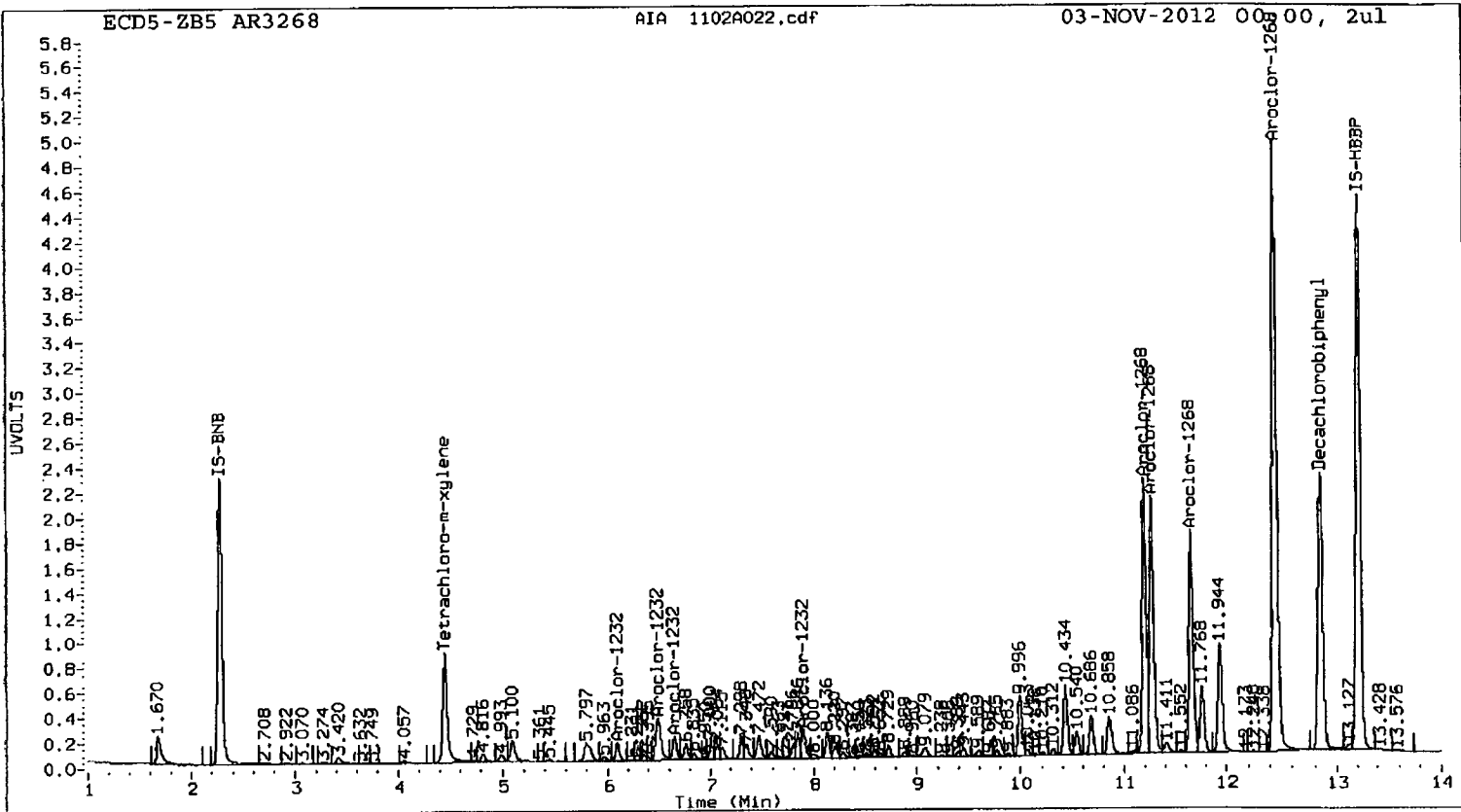
ZB5 Col					ZB35 Col					
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1232	1	6.094	0.000	1895483	250.0	1	6.210	0.000	912267	250.0
Aroclor-1232	2	6.497	0.000	5926512	250.0	2	6.841	0.000	1797558	250.0
Aroclor-1232	3	6.647	0.000	2584617	250.0	3	7.050	0.000	751459	250.0
Aroclor-1232	4	7.901	0.000	3238914	250.0	4	8.276	0.000	638021	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	11.203	0.000	29995015	250.0	1	11.547	0.000	7042487	250.0
Aroclor-1268	2	11.275	0.000	28848730	250.0	2	11.613	0.000	6848989	250.0
Aroclor-1268	3	11.661	0.000	25351576	250.0	3	12.011	0.000	5725345	250.0
Aroclor-1268	4	12.449	0.000	72450022	250.0	4	12.834	0.000	16973079	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 (4.544 - 12.755) = 261786385      Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (4.556 - 13.148) = 62286369      Col2 Total PCB = 0.5 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A023.d  
Data file 2: 20121102.B/ical-2.b/1102A023.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660ICV  
Client ID:  
Injection Date: 03-NOV-2012 00:20  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.445	0.001	13940705	4.455	-0.001	4345658	20.7	21.1	1.9	Tetrachloro-m-xylene
12.856	0.002	19831335	13.249	0.001	4223731	18.6	19.6	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	51.7	52.7
Decachlorobiphenyl	46.4	49.1

*a 11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	32275358	3.3
Hexabromobiphenyl	64198300	69016020	7.5

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	14465214	-0.5
Hexabromobiphenyl	15789428	15841317	0.3

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.093	0.000	4280543	237.2	1	6.208	0.000	1932648	238.5	
Aroclor-1016	2	6.497	0.000	13430249	238.8	2	6.841	0.001	3973964	231.8	
Aroclor-1016	3	6.647	0.000	5787080	238.5	3	7.225	0.001	1079387	242.0	
Aroclor-1016	4	6.757	0.000	4231785	243.8	4	7.334	0.000	1173971	234.1	
Total CollAve (4 peaks):					239.6	Total Col2Ave (4 peaks):					236.6 RPD = 1
Corrected Ave (3 peaks):					238.2	Corrected Ave (3 peaks):					234.8 RPD = 1
Aroclor-1221	1	4.813	-0.004	790817	100.4	1	5.143	0.002	235889	96.3	
Aroclor-1221	2	4.992	-0.003	770925	142.9	2	5.392	-0.001	191998	133.0	
Aroclor-1221	3	5.099	-0.002	3024672	172.1	3	5.505	-0.001	868293	191.4	
Aroclor-1221	NS	---	---	---	---	4	5.573	-0.002	62612	79.9	
Total CollAve (3 peaks):					138.5	Total Col2Ave (4 peaks):					125.1 RPD = 10
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):					103.1
Aroclor-1232	1	6.093	0.000	4280543	582.3	1	6.208	-0.002	1932648	538.4	
Aroclor-1232	2	6.497	0.000	13430249	584.3	2	6.841	0.001	3973964	561.8	
Aroclor-1232	3	6.647	0.000	5787080	577.3	3	7.050	0.000	1691899	572.2	
Aroclor-1232	4	7.909	0.008	3815684	303.8	4	8.276	-0.001	185332	73.8	
Total CollAve (4 peaks):					511.9	Total Col2Ave (4 peaks):					436.5 RPD = 16
Corrected Ave (3 peaks):					487.8	Corrected Ave (3 peaks):					391.3 RPD = 22
Aroclor-1242	1	6.093	0.001	4280543	304.9	1	6.208	0.000	1932648	312.9	
Aroclor-1242	2	6.497	0.001	13430249	308.8	2	6.841	0.001	3973964	302.2	
Aroclor-1242	3	6.647	0.000	5787080	306.4	3	7.050	-0.001	1691899	309.7	
Aroclor-1242	4	7.909	0.009	3815684	172.3	4	8.276	0.000	185332	40.3	
Total CollAve (4 peaks):					273.1	Total Col2Ave (4 peaks):					241.3 RPD = 12
Corrected Ave (3 peaks):					261.2	Corrected Ave (3 peaks):					217.4 RPD = 18
Aroclor-1248	1	6.497	0.003	13430249	472.3	1	6.841	0.005	3973964	462.8	
Aroclor-1248	2	7.472	0.000	5898726	197.1	2	7.747	0.000	1434191	201.4	
Aroclor-1248	3	7.909	0.008	3815684	100.9	3	8.276	0.000	185332	25.2	
Aroclor-1248	4	8.142	0.006	690422	23.7	4	8.622	0.000	68725	7.6	
Total CollAve (4 peaks):					198.5	Total Col2Ave (4 peaks):					174.2 RPD = 13
Corrected Ave (3 peaks):					107.2	Corrected Ave (3 peaks):					78.0 RPD = 32
Aroclor-1254	1	8.223	0.001	3604030	93.5	1	8.341	0.000	786695	125.3	
Aroclor-1254	2	8.593	0.001	525149	20.7	2	8.515	0.000	823123	103.8	
Aroclor-1254	3	8.724	-0.004	1870068	38.0	3	9.037	0.000	135015	22.2	
Aroclor-1254	4	9.060	-0.019	11067395	205.4	4	9.228	0.041	2129113	159.3	
Aroclor-1254	5	9.390	-0.049	16407464	484.1	5	9.982	0.010	935419	116.1	
Total CollAve (5 peaks):					168.3	Total Col2Ave (5 peaks):					105.3 RPD = 46*
Corrected Ave (4 peaks):					89.4	Corrected Ave (4 peaks):					91.8 RPD = 3
Aroclor-1260	1	9.996	0.001	10639114	264.8	1	10.301	0.000	2419901	286.2	
Aroclor-1260	2	10.312	0.001	10541403	261.0	2	10.752	0.000	2796120	269.4	
Aroclor-1260	3	10.686	0.001	24556924	256.4	3	11.025	-0.001	5805269	281.1	
Aroclor-1260	4	11.086	0.001	13134466	239.3	4	11.547	0.000	1761624	283.1	
Aroclor-1260	5	11.276	0.000	7656367	287.1	NS	---	---	---	---	
Total CollAve (5 peaks):					261.8	Total Col2Ave (4 peaks):					279.9 RPD = 7
Corrected Ave (4 peaks):					255.4	Corrected Ave (3 peaks):					277.9 RPD = 8
Aroclor-1262	1	9.996	0.000	10639114	177.3	1	10.301	0.000	2419901	175.2	
Aroclor-1262	2	10.312	0.000	10541403	231.3	2	10.752	0.000	2796120	227.8	
Aroclor-1262	3	10.686	0.000	24556924	207.9	3	11.025	0.000	5805269	215.5	
Aroclor-1262	4	11.203	0.000	6344559	142.6	4	11.547	0.000	1761624	161.6	
Aroclor-1262	5	11.276	0.001	7656367	156.7	5	12.348	0.002	1694015	161.7	
Total CollAve (5 peaks):					183.1	Total Col2Ave (5 peaks):					188.4 RPD = 3
Corrected Ave (4 peaks):					171.1	Corrected Ave (4 peaks):					178.5 RPD = 4
Aroclor-1268	1	11.203	0.000	6344559	53.0	1	11.547	0.000	1761624	64.0	
Aroclor-1268	2	11.276	0.001	7656367	66.5	2	11.607	-0.006	4060621	151.8	

Aroclor-1268 3	11.677	0.016	3579548	35.4	3	12.013	0.001	64775	2.9
Aroclor-1268 4	12.449	0.000	1938966	6.7	4	12.835	0.001	356034	5.4
Total Col1Ave (4 peaks):			40.4			Total Col2Ave (4 peaks):		56.0	RPD = 32
Corrected Ave (3 peaks):			31.7			Corrected Ave (3 peaks):		24.1	RPD = 27

Total PCB Area Col1 (4.544 - 12.755) = 272520507      Col1 Total PCB = 0.5 ppm\*

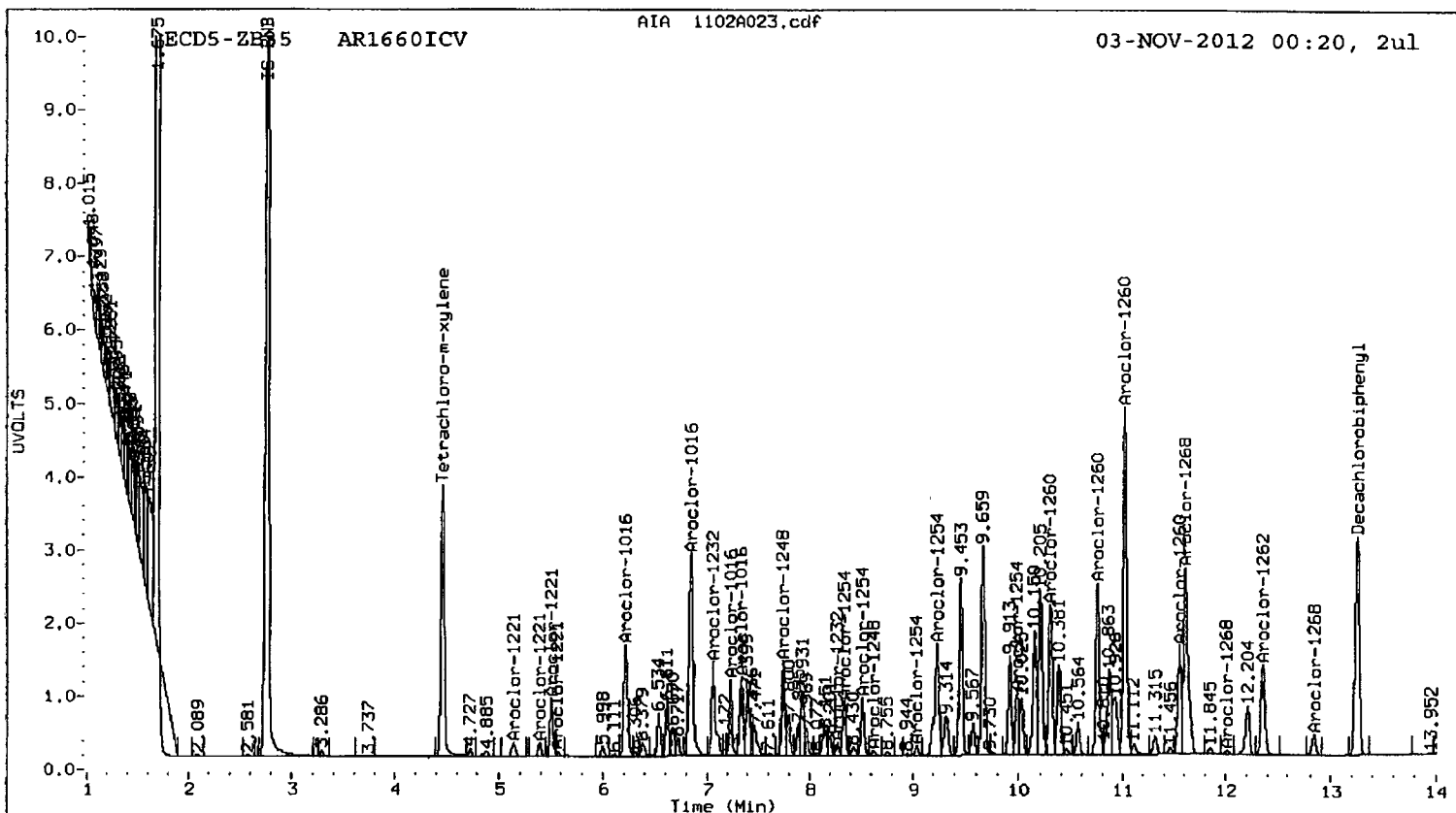
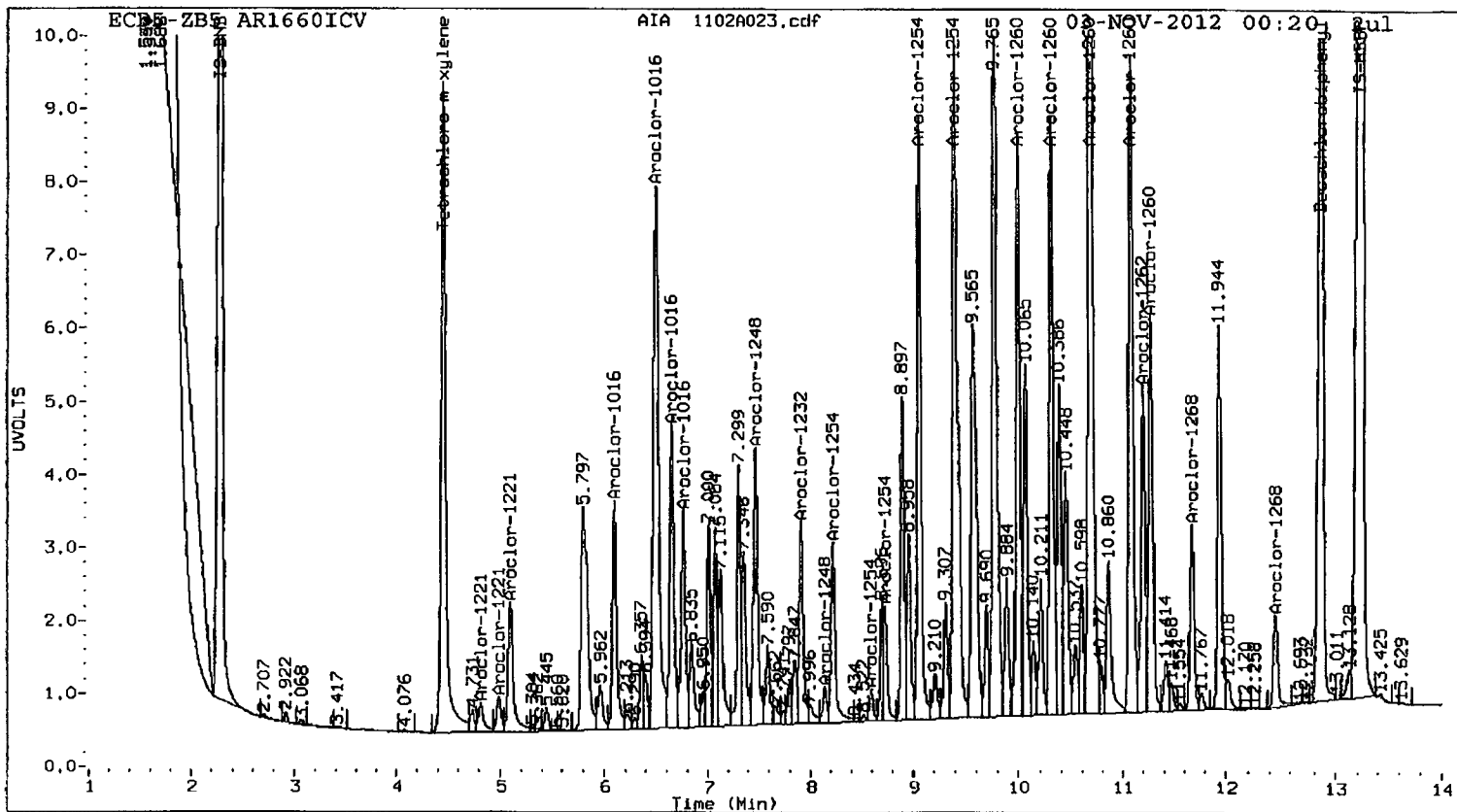
Total PCB Area Col2 (4.556 - 13.148) = 65457959      Col2 Total PCB = 0.5 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

VP58 : 02210





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A024.d  
Data file 2: 20121102.B/ical-2.b/1102A024.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1242ICV  
Client ID:  
Injection Date: 03-NOV-2012 00:41  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

RT	ZB5 Col Shift Response	ZB35 Col Shift Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.447	0.002 14470649	4.456 0.000 4419887	19.8	20.7	4.3	Tetrachloro-m-xylene
12.856	0.001 20367318	13.248 0.000 4343511	18.5	19.7	6.3	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	49.5	51.7
Decachlorobiphenyl	46.3	49.3

*Handwritten signature*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	34992364	12.0
Hexabromobiphenyl	64198300	71027100	10.6

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	15000485	3.2
Hexabromobiphenyl	15789428	16204591	2.6

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012  
<- 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	6.094	0.001	3559162	181.9	1	6.210	0.001	1574075	187.3
Aroclor-1016	2	6.498	0.000	10979379	180.1	2	6.841	0.001	3271536	184.0
Aroclor-1016	3	6.648	0.001	4799602	182.5	3	7.226	0.001	868645	187.8
Aroclor-1016	4	6.759	0.001	3458469	183.8	4	7.335	0.000	993474	191.0
Total CollAve (4 peaks):				182.1		Total Col2Ave (4 peaks):				187.5 RPD = 3
Corrected Ave (3 peaks):				181.5		Corrected Ave (3 peaks):				186.4 RPD = 3
Aroclor-1221	1	4.815	-0.002	749650	87.8	1	5.145	0.004	200259	78.8
Aroclor-1221	2	4.993	-0.002	733931	125.5	2	5.392	0.000	153470	102.5
Aroclor-1221	3	5.100	-0.001	2551914	133.9	3	5.506	0.000	702850	149.4
Aroclor-1221	NS	---	---	---	---	4	5.574	-0.001	49121	60.5
Total CollAve (3 peaks):				115.7		Total Col2Ave (4 peaks):				97.8 RPD = 17
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				80.6
Aroclor-1232	1	6.094	0.000	3559162	446.6	1	6.210	0.000	1574075	422.8
Aroclor-1232	2	6.498	0.000	10979379	440.6	2	6.841	0.001	3271536	446.0
Aroclor-1232	3	6.648	0.000	4799602	441.6	3	7.051	0.000	1369598	446.6
Aroclor-1232	4	7.901	0.000	5648735	414.8	4	8.276	0.000	1083675	416.2
Total CollAve (4 peaks):				435.9		Total Col2Ave (4 peaks):				432.9 RPD = 1
Corrected Ave (3 peaks):				432.3		Corrected Ave (3 peaks):				428.4 RPD = 1
Aroclor-1242	1	6.094	0.002	3559162	233.8	1	6.210	0.001	1574075	245.7
Aroclor-1242	2	6.498	0.001	10979379	232.8	2	6.841	0.001	3271536	239.9
Aroclor-1242	3	6.648	0.001	4799602	234.4	3	7.051	0.000	1369598	241.7
Aroclor-1242	4	7.901	0.002	5648735	235.2	4	8.276	0.000	1083675	227.1
Total CollAve (4 peaks):				234.1		Total Col2Ave (4 peaks):				238.6 RPD = 2
Corrected Ave (3 peaks):				233.7		Corrected Ave (3 peaks):				236.2 RPD = 1
Aroclor-1248	1	6.498	0.003	10979379	356.2	1	6.841	0.005	3271536	367.4
Aroclor-1248	2	7.473	0.000	5112547	157.5	2	7.747	0.001	1268707	171.8
Aroclor-1248	3	7.901	0.000	5648735	137.8	3	8.276	0.001	1083675	142.0
Aroclor-1248	4	8.137	0.001	4569738	144.7	4	8.623	0.001	1343107	142.3
Total CollAve (4 peaks):				199.0		Total Col2Ave (4 peaks):				205.9 RPD = 3
Corrected Ave (3 peaks):				146.7		Corrected Ave (3 peaks):				152.0 RPD = 4
Aroclor-1254	1	8.221	-0.001	2582031	61.8	1	8.341	0.000	364106	55.9
Aroclor-1254	2	8.593	0.000	1658279	80.4	2	8.515	-0.001	388226	47.2
Aroclor-1254	3	8.729	0.001	2804595	52.5	3	9.037	0.000	373411	59.1
Aroclor-1254	4	9.082	0.004	2388367	40.9	4	9.187	0.000	650516	46.9
Aroclor-1254	5	9.444	0.005	1884135	51.3	5	9.968	-0.005	427656	51.2
Total CollAve (5 peaks):				53.4		Total Col2Ave (5 peaks):				52.1 RPD = 2
Corrected Ave (4 peaks):				51.3		Corrected Ave (4 peaks):				50.3 RPD = 2
Aroclor-1260	1	9.995	-0.001	118205	2.9	1	10.301	-0.001	16952	2.0
Aroclor-1260	2	10.313	0.002	88814	2.1	2	10.747	-0.005	90847	8.6
Aroclor-1260	3	10.686	0.001	211099	2.1	3	11.025	0.000	54689	2.6
Aroclor-1260	4	11.085	0.000	194214	3.4	4	11.547	0.000	19981	3.1
Aroclor-1260	5	11.276	0.001	47651	1.7	NS	---	---	---	---
Total CollAve (5 peaks):				2.5		Total Col2Ave (4 peaks):				4.1 RPD = 49*
Corrected Ave (4 peaks):				2.2		Corrected Ave (3 peaks):				2.6 RPD = 14
Aroclor-1262	1	9.995	-0.002	118205	1.9	1	10.301	-0.001	16952	1.2
Aroclor-1262	2	10.313	0.001	88814	1.9	2	10.747	-0.006	90847	7.2
Aroclor-1262	3	10.686	-0.001	211099	1.7	3	11.025	0.000	54689	2.0
Aroclor-1262	4	11.202	0.000	56174	1.2	4	11.547	0.001	19981	1.8
Aroclor-1262	5	11.276	0.001	47651	0.9	5	12.385	0.039	37016	3.5
Total CollAve (5 peaks):				1.5		Total Col2Ave (5 peaks):				3.1 RPD = 68*
Corrected Ave (4 peaks):				1.5		Corrected Ave (4 peaks):				2.1 RPD = 37
Aroclor-1268	1	11.202	0.000	56174	0.5	1	11.547	0.000	19981	0.7
Aroclor-1268	2	11.276	0.001	47651	0.4	2	11.606	-0.007	37684	1.4

Aroclor-1268 3	11.664	0.003	58198	0.6	3	---		0.0
Aroclor-1268 4	12.446	-0.003	116207	0.4	4	12.832	-0.002	12333
Total Col1Ave (4 peaks):		0.5	Total Col2Ave (3 peaks):		0.8	RPD = 50*		
Corrected Ave (3 peaks):		0.4	Corrected Ave: < 3 Peaks					

Total PCB Area Col1 (4.544 - 12.755) = 102808218      Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (4.556 - 13.148) = 25713682      Col2 Total PCB = 0.2 ppm\*

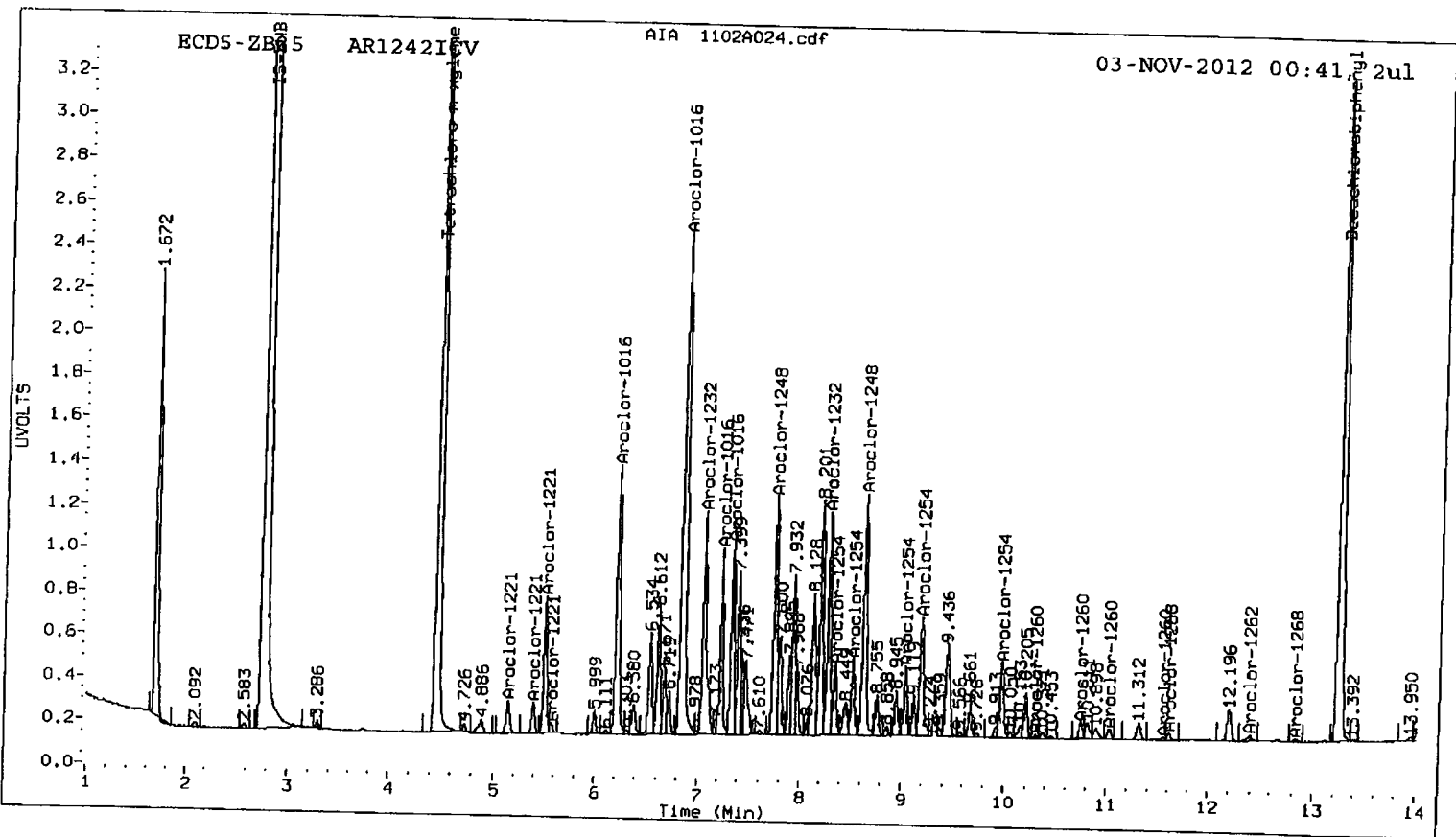
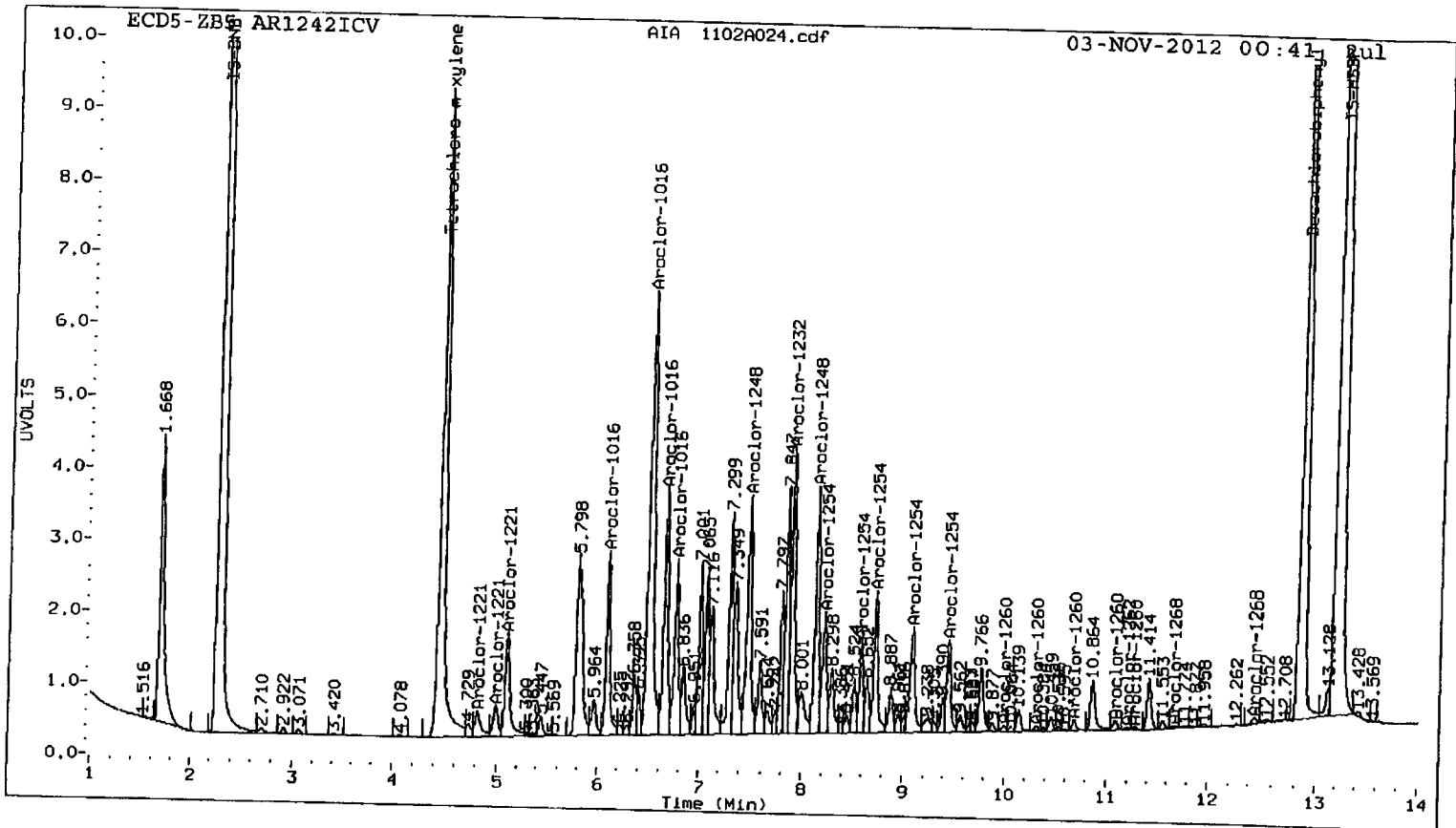
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58:02215







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A025.d  
Data file 2: 20121102.B/ical-2.b/1102A025.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1248ICV  
Client ID:  
Injection Date: 03-NOV-2012 01:01  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.446	0.001	14009082	4.455	-0.001	4264845	19.9	21.0	5.2	Tetrachloro-m-xylene
12.855	0.000	19906077	13.248	0.000	4209767	18.6	19.8	6.1	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	49.7	52.4
Decachlorobiphenyl	46.5	49.4

*JK 11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	33719935	7.9
Hexabromobiphenyl	64198300	69100267	7.6

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	14278309	-1.8
Hexabromobiphenyl	15789428	15675954	-0.7

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.094	0.001	1753905	93.0	1	6.207	-0.001	829143	103.7
Aroclor-1016	2	6.495	-0.002	7350284	125.1	2	6.837	-0.003	2183705	129.0
Aroclor-1016	3	6.650	0.003	2872827	113.3	3	7.226	0.001	478562	108.7
Aroclor-1016	4	6.758	0.000	2110055	116.4	4	7.334	0.000	1512423	305.5
Total CollAve (4 peaks):				112.0		Total Col2Ave (4 peaks):				161.7 RPD = 36
Corrected Ave (3 peaks):				107.6		Corrected Ave (3 peaks):				113.8 RPD = 6
Aroclor-1221	1	4.812	-0.004	357677	43.5	1	5.153	0.011	77900	32.2
Aroclor-1221	2	4.981	-0.013	372195	66.0	2	5.393	0.000	30242	21.2
Aroclor-1221	3	5.099	-0.002	676136	96.8	3	5.506	0.000	160480	35.8
Aroclor-1221	NS	---	---	---	---	4	---	---	---	0.0
Total CollAve (3 peaks):				48.8		Total Col2Ave (3 peaks):				29.8 RPD = 48*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.094	0.000	1753905	228.4	1	6.207	-0.003	829143	234.0
Aroclor-1232	2	6.495	-0.002	7350284	306.1	2	6.837	-0.003	2183705	312.8
Aroclor-1232	3	6.650	0.003	2872827	274.3	3	7.050	0.000	562917	192.9
Aroclor-1232	4	7.902	0.001	9041242	688.9	4	8.276	-0.001	1694183	683.6
Total CollAve (4 peaks):				374.4		Total Col2Ave (4 peaks):				355.8 RPD = 5
Corrected Ave (3 peaks):				269.6		Corrected Ave (3 peaks):				246.5 RPD = 9
Aroclor-1242	1	6.094	0.001	1753905	119.6	1	6.207	-0.001	829143	136.0
Aroclor-1242	2	6.495	-0.001	7350284	161.8	2	6.837	-0.003	2183705	168.3
Aroclor-1242	3	6.650	0.003	2872827	145.6	3	7.050	0.000	562917	104.4
Aroclor-1242	4	7.902	0.003	9041242	390.7	4	8.276	0.000	1694183	372.9
Total CollAve (4 peaks):				204.4		Total Col2Ave (4 peaks):				195.4 RPD = 5
Corrected Ave (3 peaks):				142.3		Corrected Ave (3 peaks):				136.2 RPD = 4
Aroclor-1248	1	6.495	0.001	7350284	247.4	1	6.837	0.001	2183705	257.7
Aroclor-1248	2	7.473	0.000	7164021	229.1	2	7.747	0.000	1715400	244.0
Aroclor-1248	3	7.902	0.001	9041242	228.9	3	8.276	0.000	1694183	233.3
Aroclor-1248	4	8.137	0.001	6887223	226.2	4	8.623	0.000	2108996	234.7
Total CollAve (4 peaks):				232.9		Total Col2Ave (4 peaks):				242.4 RPD = 4
Corrected Ave (3 peaks):				228.1		Corrected Ave (3 peaks):				237.3 RPD = 4
Aroclor-1254	1	8.220	-0.002	4701389	116.8	1	8.341	0.000	678148	109.4
Aroclor-1254	2	8.593	0.001	3121411	117.9	2	8.516	0.001	697164	89.0
Aroclor-1254	3	8.729	0.001	5220225	101.5	3	9.038	0.000	714380	118.8
Aroclor-1254	4	9.083	0.005	4034514	71.7	4	9.188	0.001	1199452	90.9
Aroclor-1254	5	9.445	0.007	3606329	101.9	5	9.967	-0.005	826446	104.0
Total CollAve (5 peaks):				101.9		Total Col2Ave (5 peaks):				102.4 RPD = 0
Corrected Ave (4 peaks):				97.9		Corrected Ave (4 peaks):				98.3 RPD = 0
Aroclor-1260	1	9.995	0.000	251090	6.2	1	10.303	0.001	38657	4.6
Aroclor-1260	2	10.313	0.002	171073	4.2	2	10.748	-0.004	105599	10.3
Aroclor-1260	3	10.686	0.001	368199	3.8	3	11.025	0.000	86914	4.3
Aroclor-1260	4	11.085	0.001	179624	3.3	4	11.548	0.000	39361	6.4
Aroclor-1260	5	11.275	0.000	144632	5.4	NS	---	---	---	---
Total CollAve (5 peaks):				4.6		Total Col2Ave (4 peaks):				6.4 RPD = 33
Corrected Ave (4 peaks):				4.2		Corrected Ave (3 peaks):				5.1 RPD = 19
Aroclor-1262	1	9.995	-0.001	251090	4.2	1	10.303	0.001	38657	2.8
Aroclor-1262	2	10.313	0.000	171073	3.7	2	10.748	-0.005	105599	8.7
Aroclor-1262	3	10.686	-0.001	368199	3.1	3	11.025	0.001	86914	3.3
Aroclor-1262	4	11.203	0.001	145388	3.3	4	11.548	0.001	39361	3.6
Aroclor-1262	5	11.275	0.000	144632	3.0	5	12.381	0.035	54712	5.3
Total CollAve (5 peaks):				3.5		Total Col2Ave (5 peaks):				4.7 RPD = 31
Corrected Ave (4 peaks):				3.3		Corrected Ave (4 peaks):				3.8 RPD = 14
Aroclor-1268	1	11.203	0.000	145388	1.2	1	11.548	0.000	39361	1.4
Aroclor-1268	2	11.275	0.000	144632	1.3	2	11.608	-0.005	56919	2.1

Aroclor-1268 3	11.674	0.013	92708	0.9	3	---		0.0
Aroclor-1268 4	12.446	-0.003	125978	0.4	4	12.832	-0.002	14621
Total Col1Ave (4 peaks):			1.0	Total Col2Ave (3 peaks):			1.3	RPD = 29
Corrected Ave (3 peaks):			0.9	Corrected Ave: < 3 Peaks				

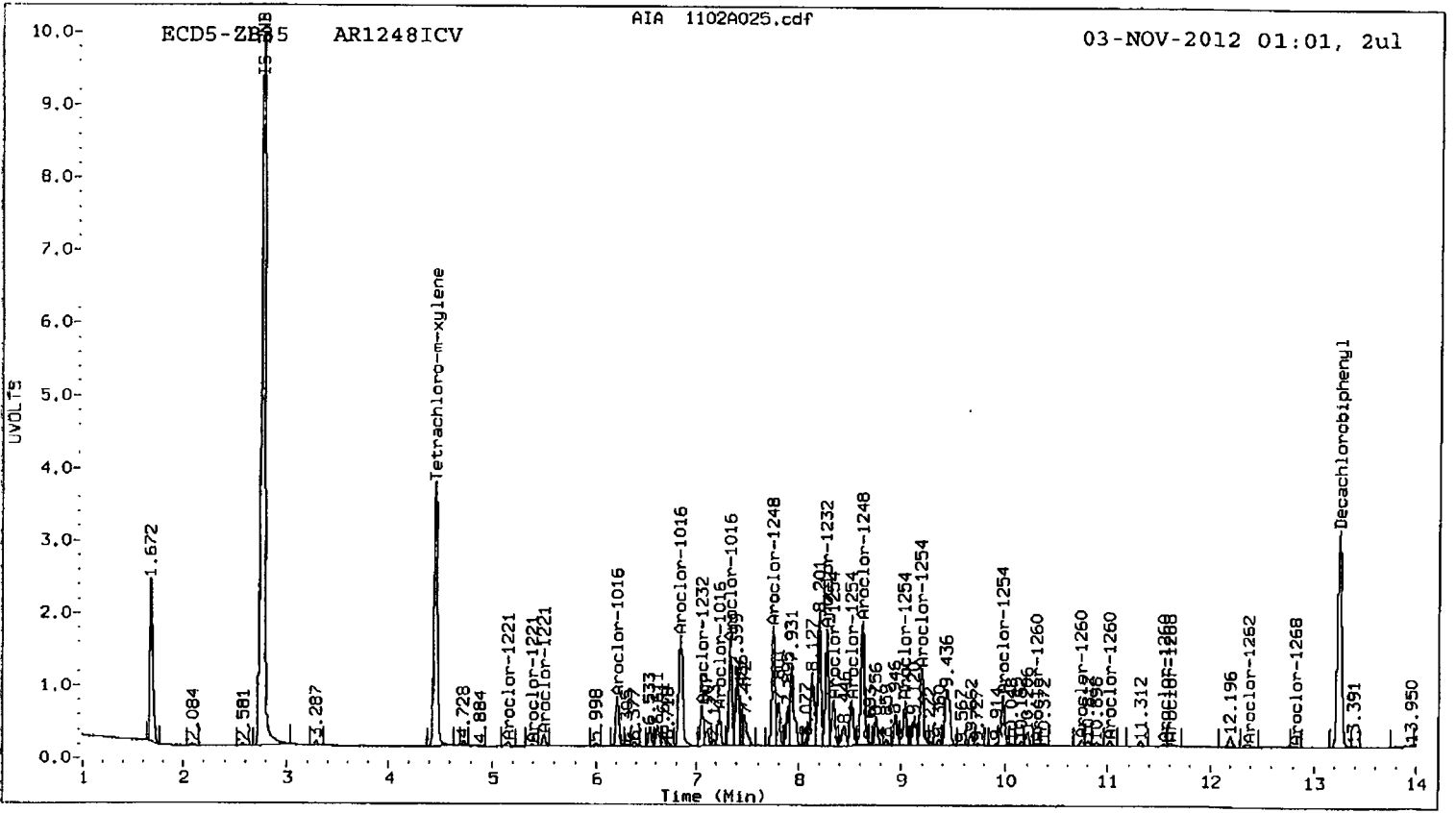
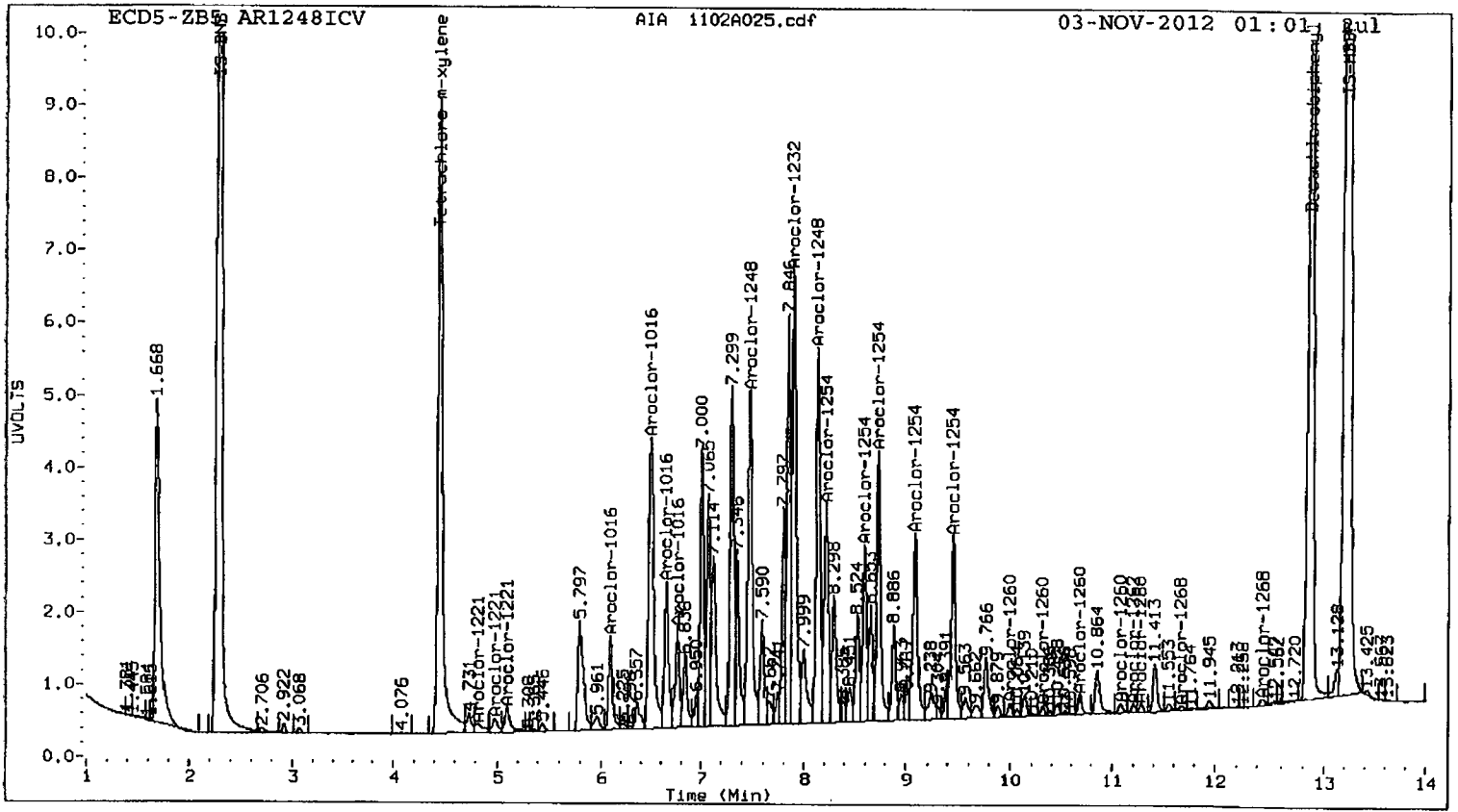
Total PCB Area Col1 (4.544 - 12.755) = 120967349      Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (4.556 - 13.148) = 29384732      Col2 Total PCB = 0.2 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.





0555 : 82222

Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A026.d  
Data file 2: 20121102.B/ical-2.b/1102A026.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254ICV  
Client ID:  
Injection Date: 03-NOV-2012 01:21  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

RT	ZB5 Col Shift Response	ZB35 Col Shift Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.446	0.002 14015902	4.456 0.000 4327461	19.6	20.8	6.0	Tetrachloro-m-xylene
12.855	0.000 20342130	13.248 0.000 4314093	18.7	19.9	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	49.0	52.0
Decachlorobiphenyl	46.7	49.9

*pc 11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	34274216	9.7
Hexabromobiphenyl	64198300	70290566	9.5

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	14593306	0.4
Hexabromobiphenyl	15789428	15921593	0.8

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.094	0.001	68143	3.6	1	6.210	0.001	32190	3.9	
Aroclor-1016	2	6.492	-0.006	312233	5.2	2	6.835	-0.005	96451	5.6	
Aroclor-1016	3	6.654	0.008	168555	6.5	3	7.227	0.002	17081	3.8	
Aroclor-1016	4	6.758	0.001	73666	4.0	4	7.333	-0.001	1035217	204.6	
Total CollAve (4 peaks):				4.8	Total Col2Ave (4 peaks):				54.5	RPD = 167*	
Corrected Ave (3 peaks):				4.3	Corrected Ave (3 peaks):				4.4	RPD = 4	
Aroclor-1221	1	4.731	-0.086	668106	79.9	1	5.158	0.017	56435	22.8	
Aroclor-1221	2	4.978	-0.017	316182	55.2	2	---	---	---	0.0	
Aroclor-1221	3	5.100	-0.001	170791	9.2	3	5.509	0.003	20495	4.5	
Aroclor-1221	NS	---	---	---	---	4	---	---	---	0.0	
Total CollAve (3 peaks):				48.1	Col2Ave: <3 Quant Peaks						
Aroclor-1232	1	6.094	0.001	68143	8.7	1	6.210	0.000	32190	8.9	
Aroclor-1232	2	6.492	-0.005	312233	12.8	2	6.835	-0.005	96451	13.5	
Aroclor-1232	3	6.654	0.007	168555	15.8	3	7.052	0.002	22880	7.7	
Aroclor-1232	4	7.910	0.009	8182055	613.4	4	8.276	0.000	347282	137.1	
Total CollAve (4 peaks):				162.7	Total Col2Ave (4 peaks):				41.8	RPD = 118*	
Corrected Ave (3 peaks):				12.5	Corrected Ave (3 peaks):				10.0	RPD = 22	
Aroclor-1242	1	6.094	0.002	68143	4.6	1	6.210	0.002	32190	5.2	
Aroclor-1242	2	6.492	-0.005	312233	6.8	2	6.835	-0.005	96451	7.3	
Aroclor-1242	3	6.654	0.008	168555	8.4	3	7.052	0.001	22880	4.2	
Aroclor-1242	4	7.910	0.010	8182055	347.9	4	8.276	0.000	347282	74.8	
Total CollAve (4 peaks):				91.9	Total Col2Ave (4 peaks):				22.8	RPD = 120*	
Corrected Ave (3 peaks):				6.6	Corrected Ave (3 peaks):				5.5	RPD = 17	
Aroclor-1248	1	6.492	-0.002	312233	10.3	1	6.835	-0.001	96451	11.1	
Aroclor-1248	2	7.473	0.001	1195479	37.6	2	7.748	0.002	622359	86.6	
Aroclor-1248	3	7.910	0.009	8182055	203.8	3	8.276	0.001	347282	46.8	
Aroclor-1248	4	8.143	0.007	2765782	89.4	4	8.609	-0.013	1207729	131.5	
Total CollAve (4 peaks):				85.3	Total Col2Ave (4 peaks):				69.0	RPD = 21	
Corrected Ave (3 peaks):				45.8	Corrected Ave (3 peaks):				48.2	RPD = 5	
Aroclor-1254	1	8.222	0.000	11350739	277.4	1	8.341	0.000	1788794	282.3	
Aroclor-1254	2	8.593	0.001	7753435	288.2	2	8.515	0.000	2302071	287.6	
Aroclor-1254	3	8.729	0.001	14367869	274.8	3	9.038	0.001	1844022	299.9	
Aroclor-1254	4	9.079	0.001	15236514	283.7	4	9.188	0.001	3803344	282.0	
Aroclor-1254	5	9.440	0.001	10433548	289.9	5	9.973	0.000	2434983	299.7	
Total CollAve (5 peaks):				282.8	Total Col2Ave (5 peaks):				290.3	RPD = 3	
Corrected Ave (4 peaks):				281.0	Corrected Ave (4 peaks):				287.9	RPD = 2	
Aroclor-1260	1	9.995	0.000	1243711	30.4	1	10.302	0.000	192716	22.7	
Aroclor-1260	2	10.313	0.002	1181297	28.7	2	10.746	-0.006	1125472	107.9	
Aroclor-1260	3	10.687	0.001	2417318	24.8	3	11.026	0.000	651482	31.4	
Aroclor-1260	4	11.086	0.001	2240856	40.1	4	11.548	0.001	126059	20.2	
Aroclor-1260	5	11.275	0.000	345302	12.7	NS	---	---	---	---	
Total CollAve (5 peaks):				27.3	Total Col2Ave (4 peaks):				45.5	RPD = 50*	
Corrected Ave (4 peaks):				24.2	Corrected Ave (3 peaks):				24.7	RPD = 2	
Aroclor-1262	1	9.995	-0.001	1243711	20.3	1	10.302	0.000	192716	13.9	
Aroclor-1262	2	10.313	0.001	1181297	25.5	2	10.746	-0.006	1125472	91.2	
Aroclor-1262	3	10.687	0.000	2417318	20.1	3	11.026	0.001	651482	24.1	
Aroclor-1262	4	11.202	0.000	346639	7.6	4	11.548	0.001	126059	11.5	
Aroclor-1262	5	11.275	0.000	345302	6.9	5	12.350	0.003	77649	7.4	
Total CollAve (5 peaks):				16.1	Total Col2Ave (5 peaks):				29.6	RPD = 59*	
Corrected Ave (4 peaks):				13.8	Corrected Ave (4 peaks):				14.2	RPD = 3	
Aroclor-1268	1	11.202	-0.001	346639	2.8	1	11.548	0.001	126059	4.6	
Aroclor-1268	2	11.275	0.000	345302	2.9	2	11.606	-0.007	479959	17.8	
Aroclor-1268	3	11.666	0.005	234454	2.3	3	12.012	0.001	29535	1.3	



Aroclor-1268 4 12.447 -0.001 502277 1.7 4 12.833 -0.001 82112 1.2  
Total Col1Ave (4 peaks): 2.4 Total Col2Ave (4 peaks): 6.2 RPD = 87\*  
Corrected Ave (3 peaks): 2.3 Corrected Ave (3 peaks): 2.4 RPD = 4

Total PCB Area Col1 (4.544 - 12.755) = 164382250 Col1 Total PCB = 0.3 ppm\*

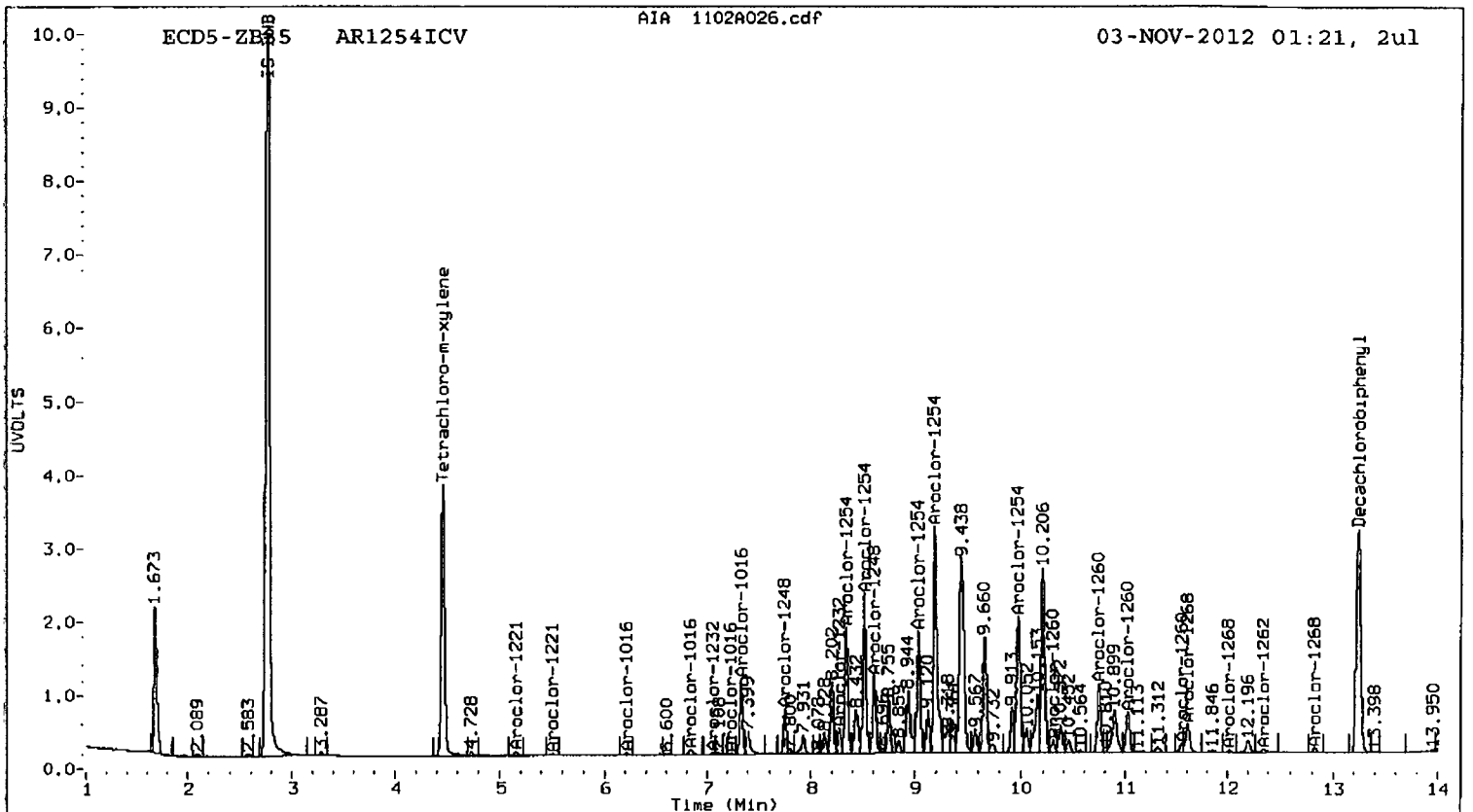
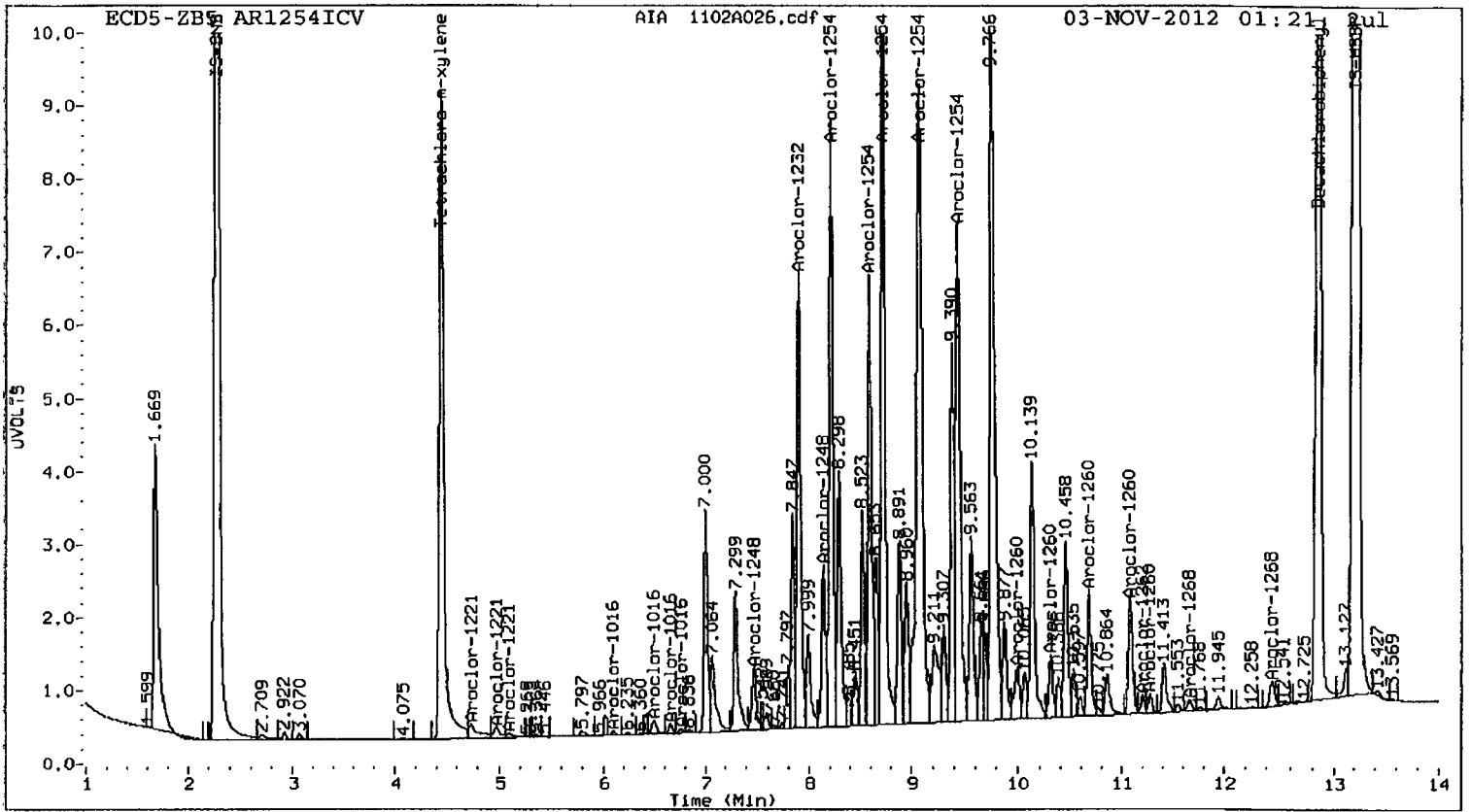
Total PCB Area Col2 (4.556 - 13.148) = 38240804 Col2 Total PCB = 0.3 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

URS 02225





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A027.d  
Data file 2: 20121102.B/ical-2.b/1102A027.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR2162ICV  
Client ID:  
Injection Date: 03-NOV-2012 01:42  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.444	0.000	14265334	4.454	-0.001	4249414	20.4	21.3	4.3	Tetrachloro-m-xylene
12.855	0.000	19775640	13.248	0.000	4157722	18.4	19.6	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	50.9	53.2
Decachlorobiphenyl	46.1	48.9

*Handwritten signature and date: 11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	33531129	7.3
Hexabromobiphenyl	64198300	69260863	7.9

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	14012549	-3.6
Hexabromobiphenyl	15789428	15630049	-1.0

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.093	0.000	458282	24.4	1	6.222	0.013	358740	45.7
Aroclor-1016	2	6.498	0.001	1122858	19.2	2	6.841	0.001	321991	19.4
Aroclor-1016	3	6.647	0.000	531736	21.1	3	7.226	0.001	89719	20.8
Aroclor-1016	4	6.759	0.001	354097	19.6	4	7.334	-0.001	82674	17.0
Total CollAve (4 peaks):				21.1		Total Col2Ave (4 peaks):				25.7 RPD = 20
Corrected Ave (3 peaks):				20.0		Corrected Ave (3 peaks):				19.1 RPD = 5
Aroclor-1221	1	4.815	-0.002	2060583	251.8	1	5.140	-0.001	606516	255.5
Aroclor-1221	2	4.993	-0.002	1397991	249.4	2	5.392	-0.001	356039	254.6
Aroclor-1221	3	5.099	-0.002	4508891	247.0	3	5.505	-0.001	1099970	250.2
Aroclor-1221	NS	---			----	4	5.574	-0.002	1922.1	253.4
Total CollAve (3 peaks):				249.4		Total Col2Ave (4 peaks):				253.4 RPD = 2
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				252.7
Aroclor-1232	1	6.093	-0.001	458282	60.0	1	6.222	0.012	358740	103.2
Aroclor-1232	2	6.498	0.001	1122858	47.0	2	6.841	0.000	321991	47.0
Aroclor-1232	3	6.647	0.000	531736	51.1	3	7.051	0.000	148471	51.8
Aroclor-1232	4	7.909	0.008	1596139	122.3	4	8.276	-0.001	52722	21.7
Total CollAve (4 peaks):				70.1		Total Col2Ave (4 peaks):				55.9 RPD = 23
Corrected Ave (3 peaks):				52.7		Corrected Ave (3 peaks):				40.2 RPD = 27
Aroclor-1242	1	6.093	0.000	458282	31.4	1	6.222	0.014	358740	60.0
Aroclor-1242	2	6.498	0.002	1122858	24.8	2	6.841	0.001	321991	25.3
Aroclor-1242	3	6.647	0.000	531736	27.1	3	7.051	0.000	148471	28.1
Aroclor-1242	4	7.909	0.010	1596139	69.4	4	8.276	0.000	52722	11.8
Total CollAve (4 peaks):				38.2		Total Col2Ave (4 peaks):				31.3 RPD = 20
Corrected Ave (3 peaks):				27.8		Corrected Ave (3 peaks):				21.7 RPD = 25
Aroclor-1248	1	6.498	0.004	1122858	38.0	1	6.841	0.004	321991	38.7
Aroclor-1248	2	7.472	-0.001	239812	7.7	2	7.748	0.002	114856	16.6
Aroclor-1248	3	7.909	0.008	1596139	40.6	3	8.276	0.000	52722	7.4
Aroclor-1248	4	8.141	0.005	340779	11.3	4	8.618	-0.005	92544	10.5
Total CollAve (4 peaks):				24.4		Total Col2Ave (4 peaks):				18.3 RPD = 29
Corrected Ave (3 peaks):				19.0		Corrected Ave (3 peaks):				11.5 RPD = 49*
Aroclor-1254	1	8.223	0.001	1769407	44.2	1	8.340	0.000	354063	58.2
Aroclor-1254	2	8.592	0.000	336843	12.8	2	8.515	0.000	417777	54.4
Aroclor-1254	3	8.694	-0.034	2422617	47.4	3	9.037	0.000	87584	14.8
Aroclor-1254	4	9.059	-0.019	8913969	159.2	4	9.228	0.040	1792258	138.4
Aroclor-1254	5	9.389	-0.050	11938346	339.1	5	9.982	0.009	439675	56.4
Total CollAve (5 peaks):				120.5		Total Col2Ave (5 peaks):				64.4 RPD = 61*
Corrected Ave (4 peaks):				65.9		Corrected Ave (4 peaks):				45.9 RPD = 36
Aroclor-1260	1	9.996	0.000	14330919	355.5	1	10.302	0.000	3293314	394.7
Aroclor-1260	2	10.312	0.001	12161194	300.1	2	10.753	0.001	3223310	314.8
Aroclor-1260	3	10.686	0.000	26854955	279.5	3	11.025	0.000	6078545	298.3
Aroclor-1260	4	11.087	0.002	9854236	178.9	4	11.547	0.000	2921454	475.8
Aroclor-1260	5	11.276	0.000	12713532	475.1	NS	---			----
Total CollAve (5 peaks):				317.8		Total Col2Ave (4 peaks):				370.9 RPD = 15
Corrected Ave (4 peaks):				278.5		Corrected Ave (3 peaks):				335.9 RPD = 19
Aroclor-1262	1	9.996	0.000	14330919	237.9	1	10.302	0.000	3293314	241.6
Aroclor-1262	2	10.312	0.000	12161194	265.9	2	10.753	0.000	3223310	266.2
Aroclor-1262	3	10.686	-0.001	26854955	226.5	3	11.025	0.000	6078545	228.7
Aroclor-1262	4	11.203	0.001	12181237	272.7	4	11.547	0.001	2921454	271.6
Aroclor-1262	5	11.276	0.000	12713532	259.2	5	12.348	0.001	2484368	240.3
Total CollAve (5 peaks):				252.5		Total Col2Ave (5 peaks):				249.7 RPD = 1
Corrected Ave (4 peaks):				247.4		Corrected Ave (4 peaks):				244.2 RPD = 1
Aroclor-1268	1	11.203	0.000	12181237	101.4	1	11.547	0.000	2921454	107.6
Aroclor-1268	2	11.276	0.001	12713532	110.0	2	11.609	-0.004	4412348	167.1

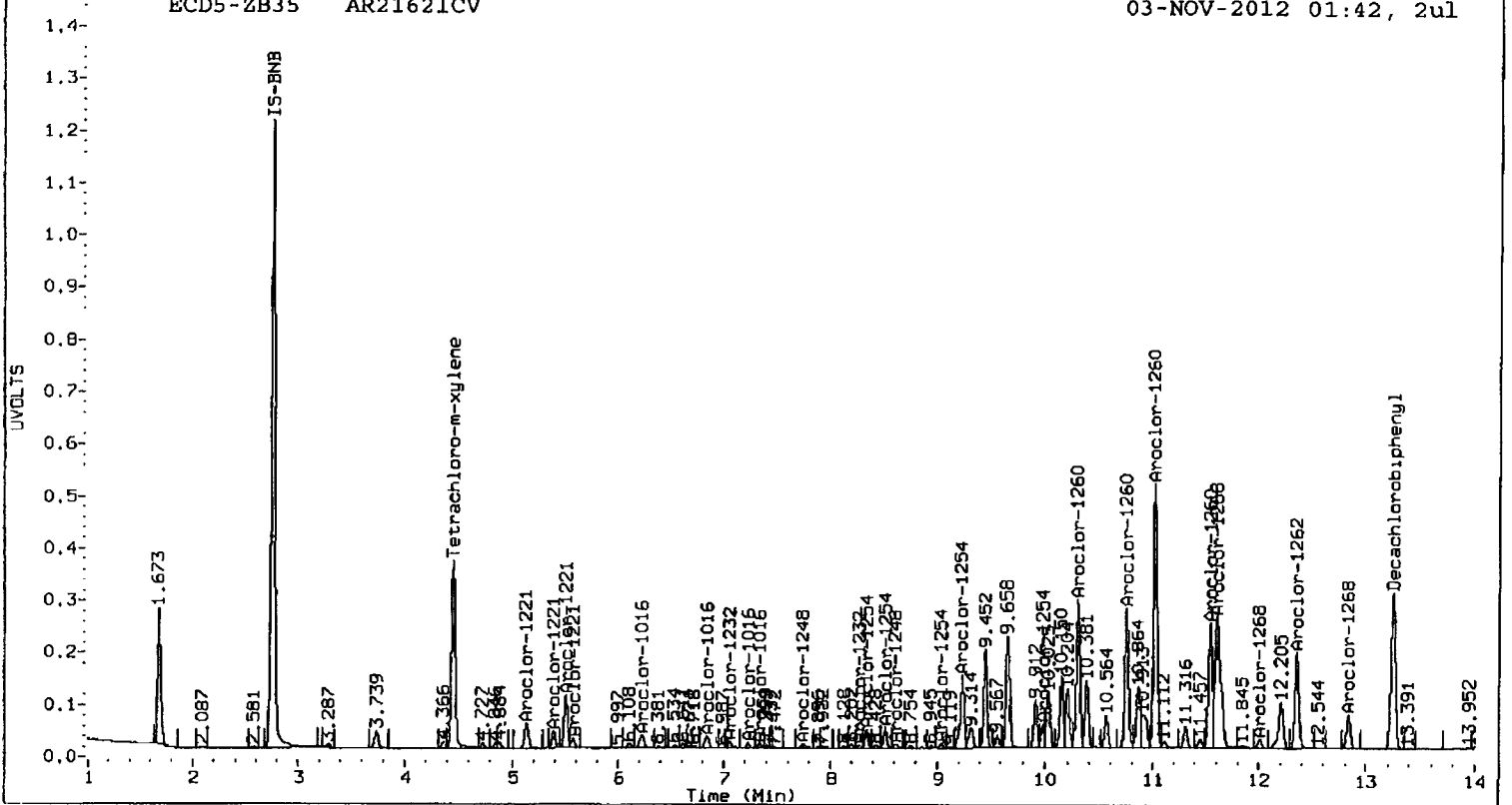
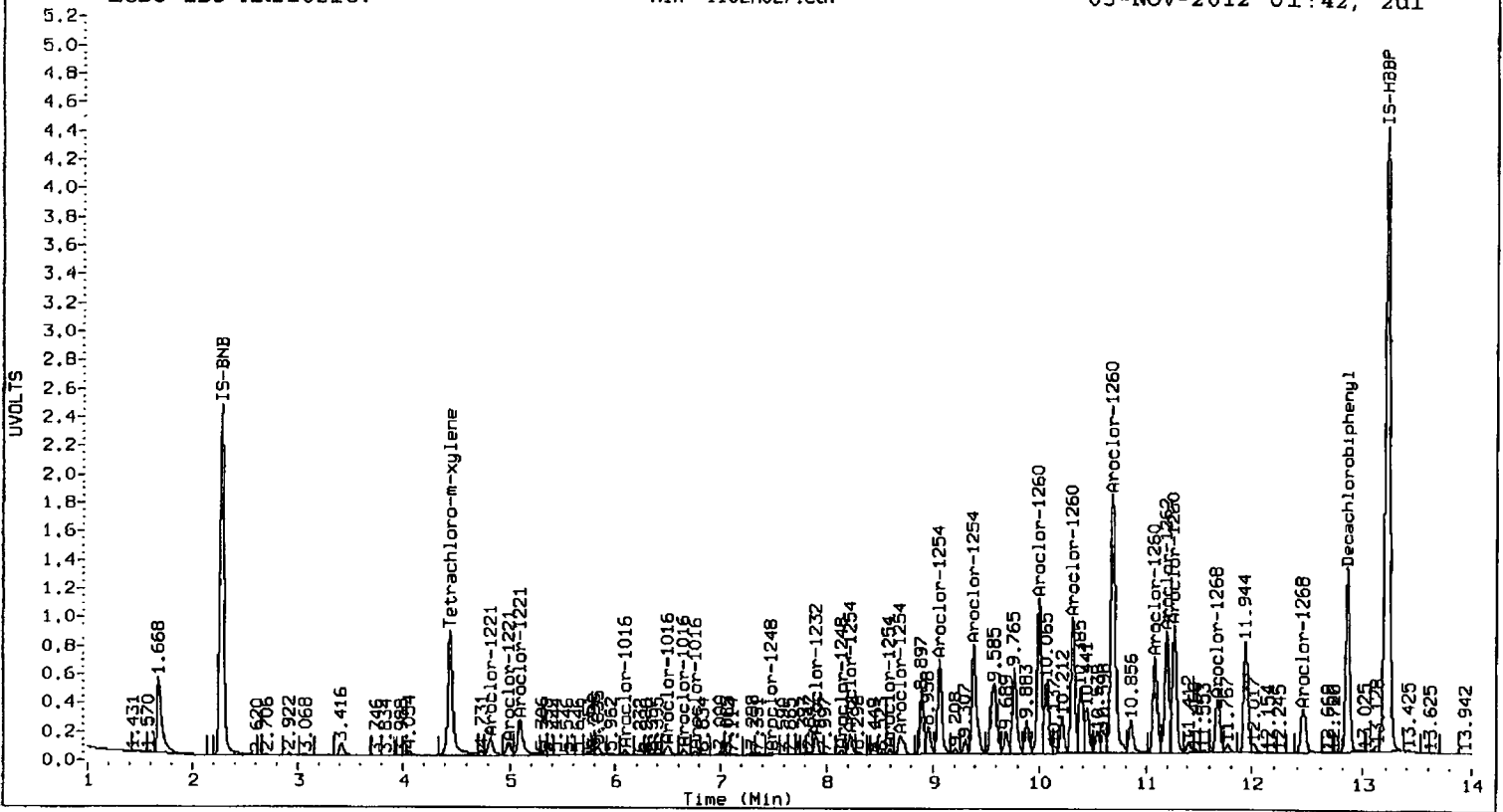
Aroclor-1268 3	11.675	0.015	5371544	52.9	3	12.011	0.000	200194	9.1
Aroclor-1268 4	12.448	-0.001	4545991	15.7	4	12.834	-0.001	878866	13.4
Total Col1Ave (4 peaks):			70.0	Total Col2Ave (4 peaks):			74.3	RPD = 6	
Corrected Ave (3 peaks):			56.6	Corrected Ave (3 peaks):			43.4	RPD = 27	

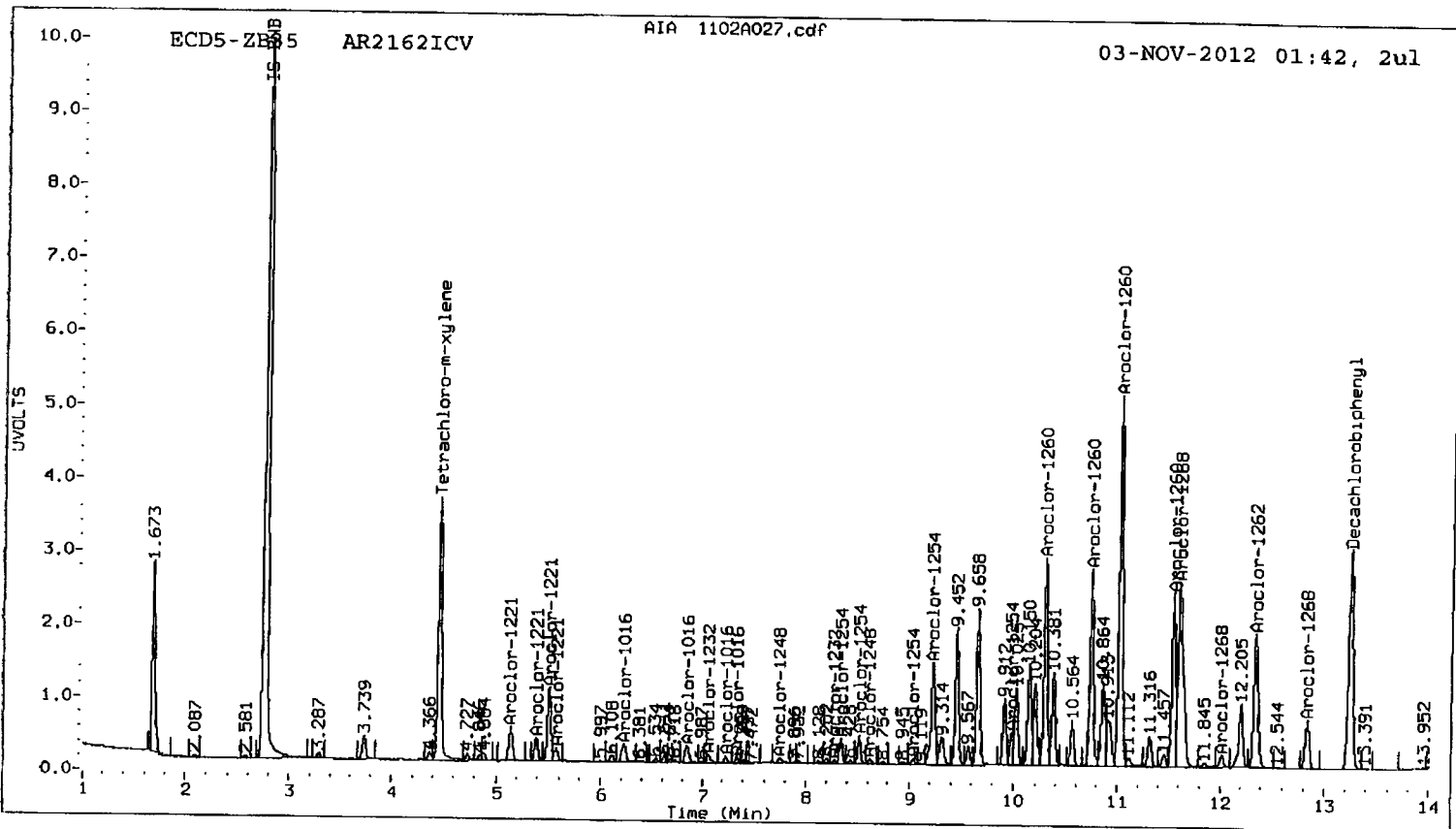
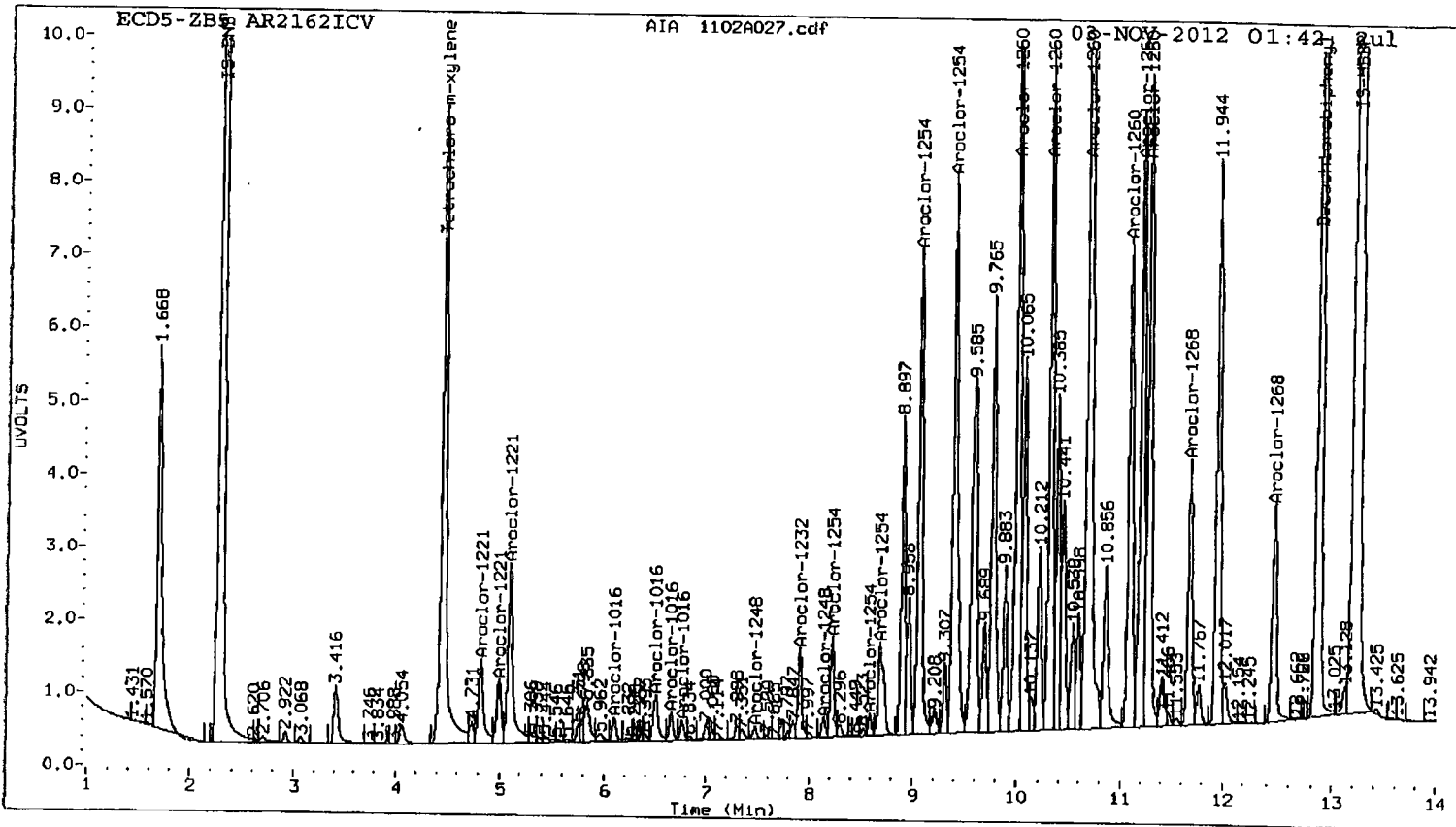
Total PCB Area Col1 (4.544 - 12.755) = 215912408      Col1 Total PCB = 0.4 ppm\*

Total PCB Area Col2 (4.556 - 13.148) = 48847228      Col2 Total PCB = 0.4 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/ical-1.b/1102A028.d  
Data file 2: 20121102.B/ical-2.b/1102A028.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR3268ICV  
Client ID:  
Injection Date: 03-NOV-2012 02:02  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

RT	ZB5 Col Shift Response	ZB35 Col Shift Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.446	0.001 13904281	4.454 -0.001 4205751	19.9	21.2	6.0	Tetrachloro-m-xylene
12.856	0.001 30528333	13.247 -0.001 6547329	28.2	30.6	8.0	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	49.9	52.9
Decachlorobiphenyl	70.6	76.4

*11/06/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	33384825	6.8
Hexabromobiphenyl	64198300	69841459	8.8
Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	13930274	-4.2
Hexabromobiphenyl	15789428	15765289	-0.2

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.094	0.001	2054334	110.1	1	6.209	0.001	957858	122.8	
Aroclor-1016	2	6.498	0.000	6321165	108.7	2	6.840	0.000	1845496	111.8	
Aroclor-1016	3	6.647	0.000	2723371	108.5	3	7.226	0.002	500574	116.6	
Aroclor-1016	4	6.758	0.001	1991425	110.9	4	7.335	0.001	489391	101.3	
Total CollAve (4 peaks):					109.5	Total Col2Ave (4 peaks):					113.1 RPD = 3
Corrected Ave (3 peaks):					109.1	Corrected Ave (3 peaks):					109.9 RPD = 1
Aroclor-1221	1	4.815	-0.001	1292859	158.7	1	5.140	-0.001	371929	157.6	
Aroclor-1221	2	4.993	-0.002	977058	175.1	2	5.392	0.000	231393	166.5	
Aroclor-1221	3	5.099	-0.002	3344323	184.0	3	5.506	-0.001	854902	195.6	
Aroclor-1221	NS	---	---	---	---	4	5.574	-0.001	108483	143.8	
Total CollAve (3 peaks):					172.6	Total Col2Ave (4 peaks):					165.9 RPD = 4
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):					156.0
Aroclor-1232	1	6.094	0.000	2054334	270.2	1	6.209	-0.001	957858	277.1	
Aroclor-1232	2	6.498	0.001	6321165	265.9	2	6.840	0.000	1845496	270.9	
Aroclor-1232	3	6.647	0.000	2723371	262.7	3	7.051	0.000	776617	272.7	
Aroclor-1232	4	7.901	0.000	2857479	219.9	4	8.277	0.000	575763	238.1	
Total CollAve (4 peaks):					254.7	Total Col2Ave (4 peaks):					264.7 RPD = 4
Corrected Ave (3 peaks):					249.5	Corrected Ave (3 peaks):					260.6 RPD = 4
Aroclor-1242	1	6.094	0.001	2054334	141.5	1	6.209	0.001	957858	161.0	
Aroclor-1242	2	6.498	0.001	6321165	140.5	2	6.840	0.000	1845496	145.8	
Aroclor-1242	3	6.647	0.000	2723371	139.4	3	7.051	0.000	776617	147.6	
Aroclor-1242	4	7.901	0.002	2857479	124.7	4	8.277	0.001	575763	129.9	
Total CollAve (4 peaks):					136.5	Total Col2Ave (4 peaks):					146.1 RPD = 7
Corrected Ave (3 peaks):					134.9	Corrected Ave (3 peaks):					141.1 RPD = 4
Aroclor-1248	1	6.498	0.004	6321165	214.9	1	6.840	0.004	1845496	223.2	
Aroclor-1248	2	7.473	0.000	2615546	84.5	2	7.747	0.001	677062	98.7	
Aroclor-1248	3	7.901	0.000	2857479	73.1	3	8.277	0.001	575763	81.3	
Aroclor-1248	4	8.137	0.001	2383872	79.1	4	8.624	0.002	667512	76.1	
Total CollAve (4 peaks):					112.9	Total Col2Ave (4 peaks):					119.8 RPD = 6
Corrected Ave (3 peaks):					78.9	Corrected Ave (3 peaks):					85.4 RPD = 8
Aroclor-1254	1	8.220	-0.002	960856	24.1	1	8.340	-0.001	134602	22.3	
Aroclor-1254	2	8.593	0.001	542372	20.7	2	8.515	0.000	132432	17.3	
Aroclor-1254	3	8.730	0.001	962901	18.9	3	9.037	0.000	120258	20.5	
Aroclor-1254	4	9.080	0.002	821496	14.7	4	9.186	-0.001	256169	19.9	
Aroclor-1254	5	9.444	0.005	552952	15.8	5	9.968	-0.004	121935	15.7	
Total CollAve (5 peaks):					18.8	Total Col2Ave (5 peaks):					19.1 RPD = 2
Corrected Ave (4 peaks):					17.5	Corrected Ave (4 peaks):					18.4 RPD = 5
Aroclor-1260	1	9.997	0.001	7647756	188.1	1	10.302	0.001	1751670	208.1	
Aroclor-1260	2	10.312	0.001	799540	19.6	2	10.754	0.002	2066946	200.1	
Aroclor-1260	3	10.686	0.000	5412054	55.8	3	11.026	0.000	1186120	57.7	
Aroclor-1260	4	11.087	0.003	203003	3.7	4	11.549	0.001	7041028	1136.9	
Aroclor-1260	5	11.274	-0.001	32073531	1188.7	NS	---	---	---	---	
Total CollAve (5 peaks):					291.2	Total Col2Ave (4 peaks):					400.7 RPD = 32
Corrected Ave (4 peaks):					66.8	Corrected Ave (3 peaks):					155.3 RPD = 80*
Aroclor-1262	1	9.997	0.000	7647756	125.9	1	10.302	0.001	1751670	127.4	
Aroclor-1262	2	10.312	0.000	799540	17.3	2	10.754	0.001	2066946	169.2	
Aroclor-1262	3	10.686	-0.001	5412054	45.3	3	11.026	0.001	1186120	44.2	
Aroclor-1262	4	11.204	0.002	30679792	681.2	4	11.549	0.002	7041028	649.0	
Aroclor-1262	5	11.274	-0.001	32073531	648.6	5	12.347	0.000	2757403	264.5	
Total CollAve (5 peaks):					303.7	Total Col2Ave (5 peaks):					250.9 RPD = 19
Corrected Ave (4 peaks):					209.3	Corrected Ave (4 peaks):					151.3 RPD = 32
Aroclor-1268	1	11.204	0.001	30679792	253.2	1	11.549	0.001	7041028	257.1	
Aroclor-1268	2	11.274	0.000	32073531	275.2	2	11.615	0.002	7521051	282.4	

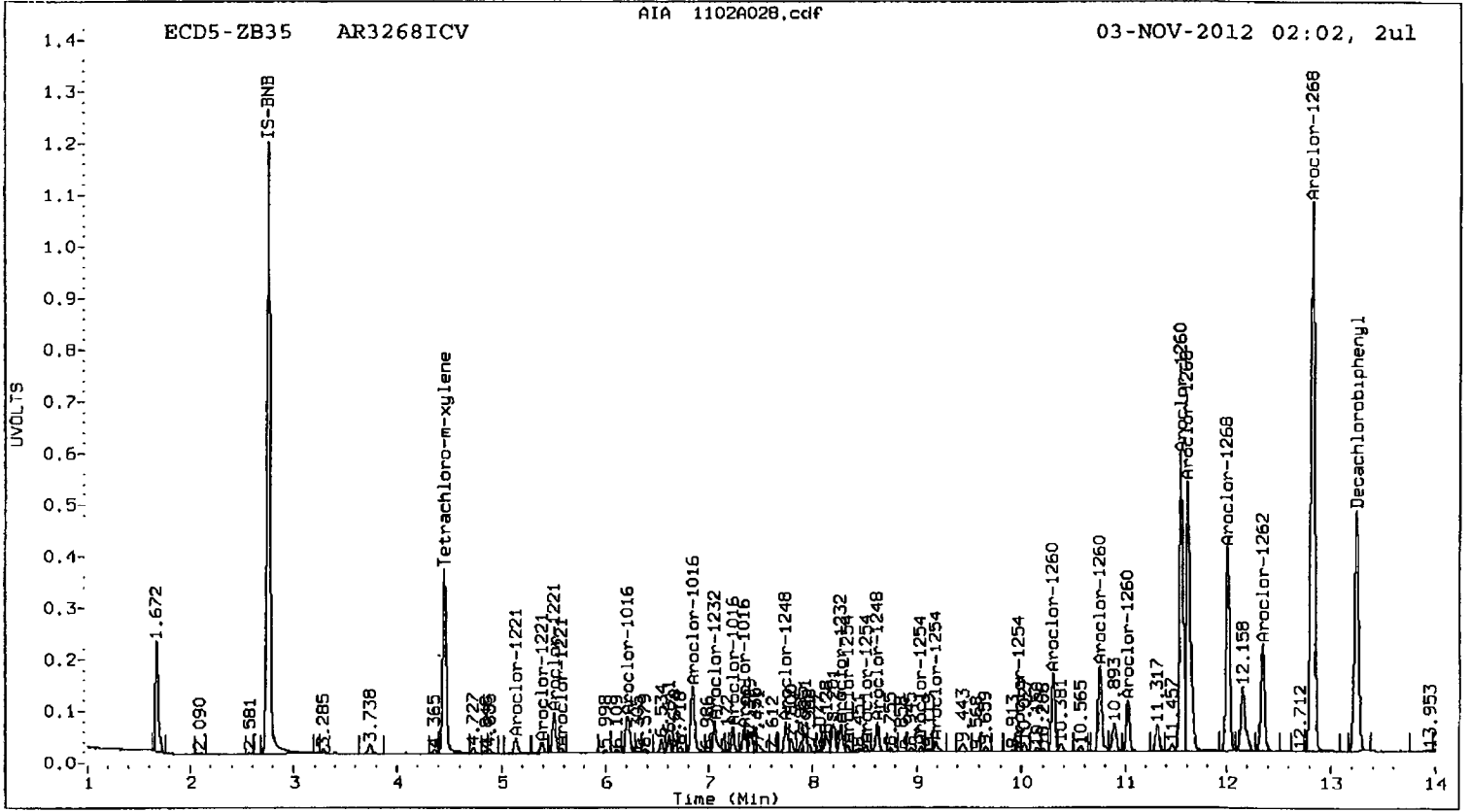
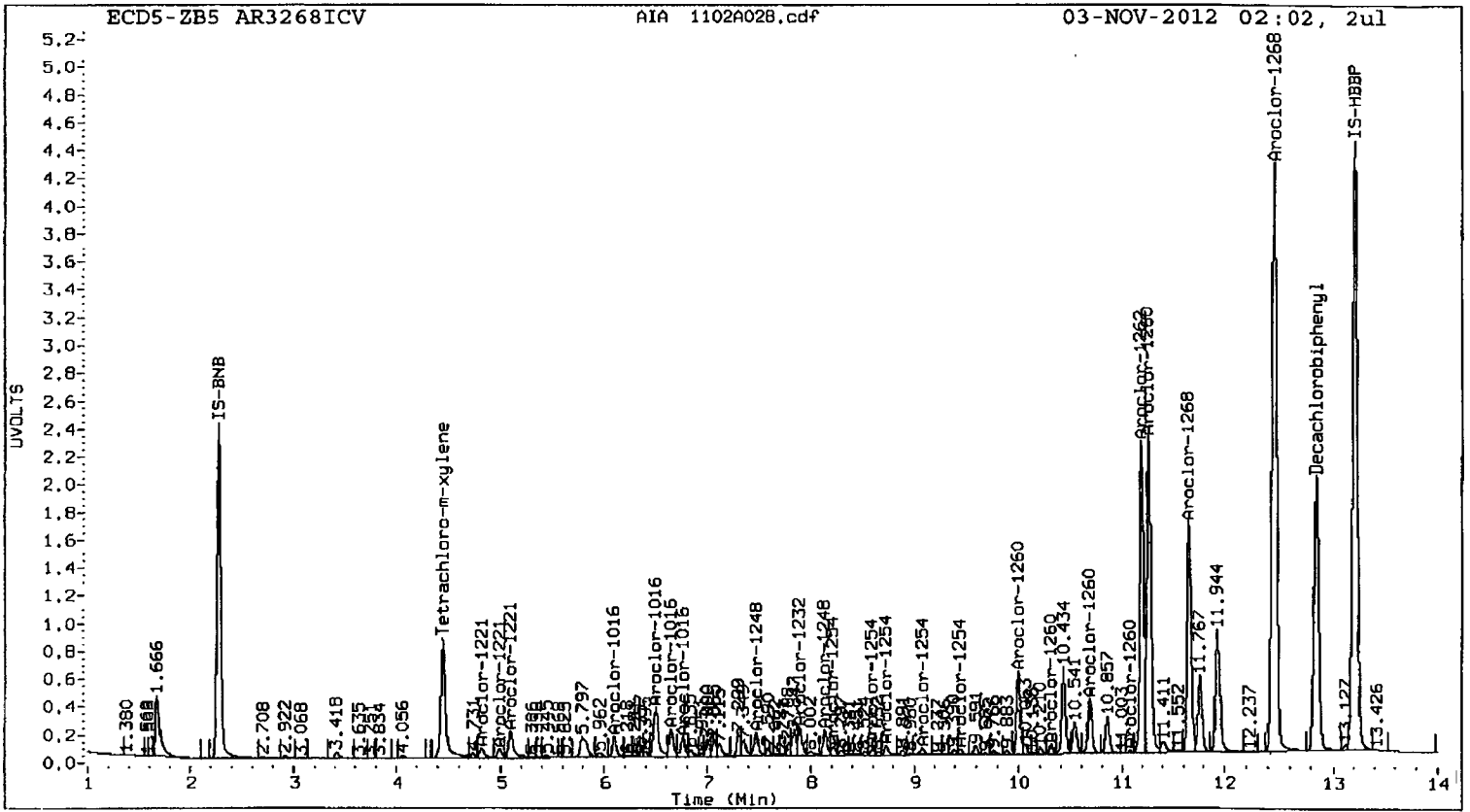
Aroclor-1268 3	11.660	-0.001	23560684	230.1	3	12.012	0.001	5142436	231.0
Aroclor-1268 4	12.448	0.000	63546069	217.1	4	12.834	0.000	14474338	219.3
Total Col1Ave (4 peaks):			243.9			Total Col2Ave (4 peaks):		247.5	RPD = 1
Corrected Ave (3 peaks):			233.5			Corrected Ave (3 peaks):		235.8	RPD = 1

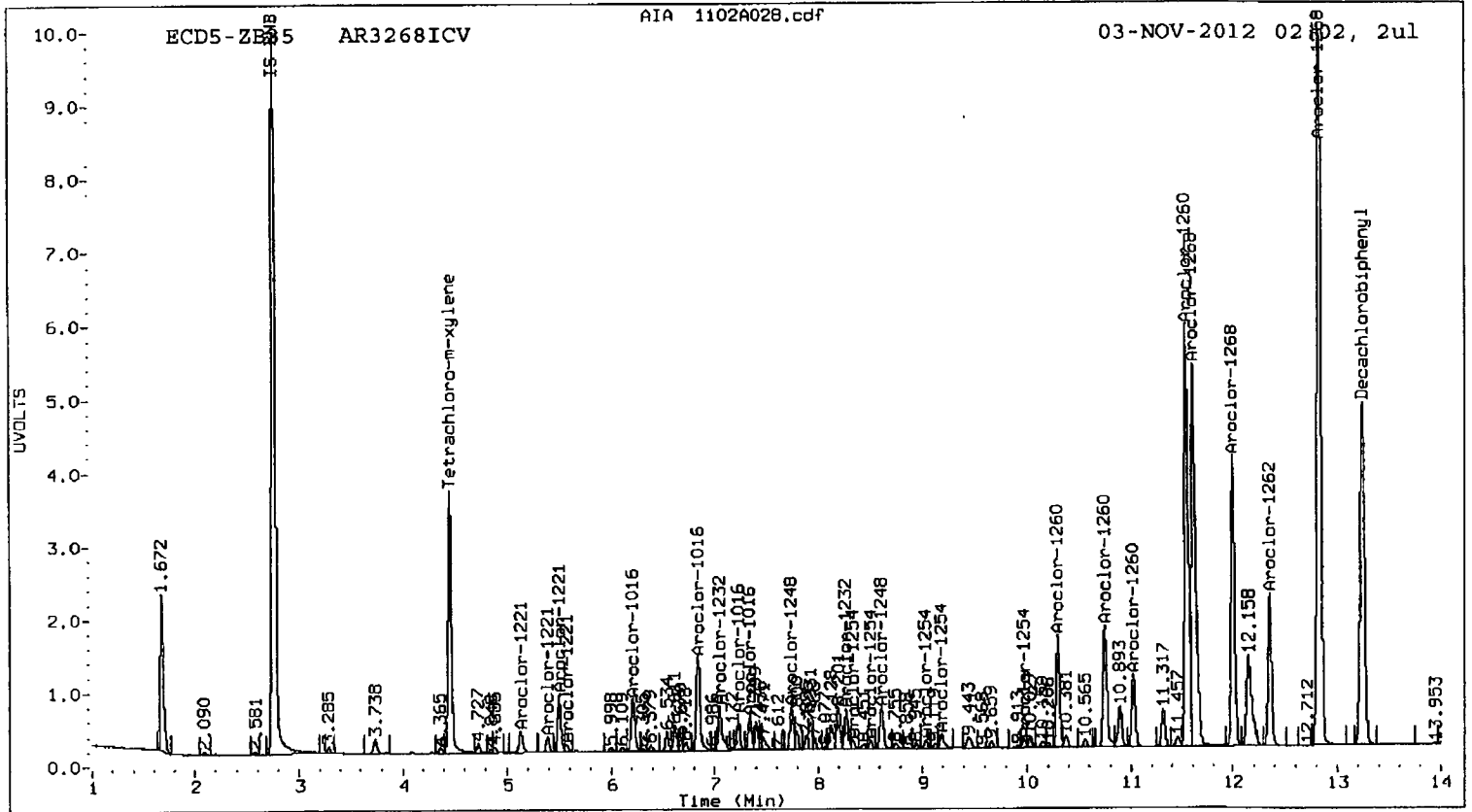
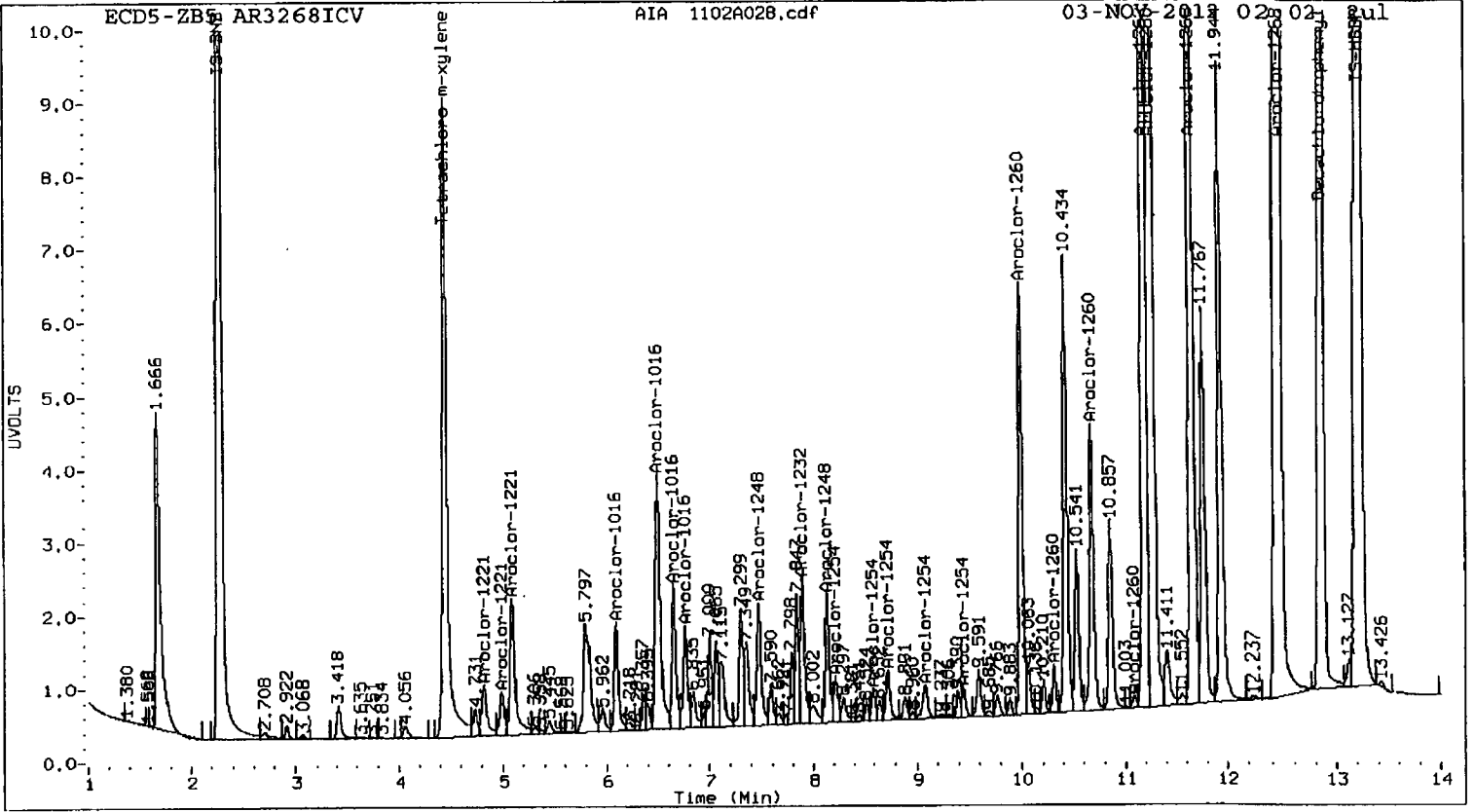
Total PCB Area Col1 (4.544 - 12.755) =	257662349	Col1 Total PCB =	0.5 ppm*
Total PCB Area Col2 (4.556 - 13.148) =	59852858	Col2 Total PCB =	0.5 ppm*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58 02235





Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: 20121102.B/ddt-1.b/1102A029.d

ARI ID: DDT

RT	ZB5 Col Shift Response	ZB35 Col Shift Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
8.188	0.000 47799168	8.604 0.000 13319692	0.100	0.100	0.0	2,4-DDE
8.737	0.000 44666420	9.290 0.000 12421033	0.100	0.100	0.0	2,4-DDD
0.000	-9.261 0	9.753 0.000 32207927	0.000	0.200#	----	2,4-DDT
8.620	0.000 75089060	8.992 0.000 21334050	0.100	0.100	0.0	4,4-DDE
9.242	0.000 50085729	9.753 0.000 32207927	0.100	0.200#	66.7*	4,4-DDD
9.704	0.000 64721324	10.192 0.000 19909045	0.100	0.100	0.0	4,4-DDT

# Indicates value is from co-eluting peaks  
\* Indicates RPD > 40%

*R 11/06/12*

Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: 20121102.B/ddt-1.b/1102A030.d

ARI ID: BD

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
8.187	-0.001	122278	8.604	0.000	32884	0.000	0.000	2.2	2,4-DDE
8.736	-0.001	121477	9.290	0.000	25803	0.000	0.000	25.4	2,4-DDD
0.000	-9.261	0	9.763	0.010	572430	0.000	0.004#	----	2,4-DDT
8.622	0.002	398935	8.993	0.001	85279	0.001	0.000	26.9	4,4-DDE
9.201	-0.040	2331803	9.763	0.010	572430	0.005	0.004#	25.5	4,4-DDD
9.705	0.000	62005592	10.192	0.000	18898672	0.101	0.102	0.4	4,4-DDT

# Indicates value is from co-eluting peaks

\* Indicates RPD > 40%

**PCB Raw Data**  
**Run Logs, Continuing Calibrations, and Raw Data**

**ARI Job ID: VR58**





**GC Analyst Notes / Corrective Action Log**

ARI Project ID: VR58/VR82 Client ID: City of Kenmore

ARI SOP: 403S(PCB) 405S(Herb) 407S(TPH-D) 409S(HCID) 412S(PCP) 423S(Pest)  
427S(Dir Inj) 428S(EPH) 432S(EDB) Other

Parameter(s): PCB TCMX DCB

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8  
FID-9 ECD-1 ECD-5 ECD-6 ECD-7

Dates: Curve: 11/02/12 Analysis Start: 11/24/12

Endrin/DDT Breakdown <15%? YES / NO / NA YES Method Blank In Control? YES / NO  
ICal Meets RF & %RSD Criteria? YES / NO LCS/LCSD Recovery In Control? YES / NO  
CCal Meets RF & %RSD Criteria? YES / NO Surrogate Recovery In Control? YES / NO  
Manual Integrations for ICal? YES / NO Manual Integrations for Samples? YES / NO  
Internal Standard Meets Criteria? YES / NO / NA Special Analysis Criteria Met? YES / NO / NA

**Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):** MISC peak throughout samples, see DDT screens. went w best fit w/ regards to y-flags. y-flags are for ranges of 11/16/12

Additional Details on Reverse: Yes / No  
Analyst: [Signature] Date: 11/26/12  
Reviewer: [Signature] Date: 11/26/12

# Analytical Resources Inc.: Organics Instrument Log

ECD-5 Serial No.: US00034118

Date: 11/24/12 Analysis: PCB's Analyst: A  
 Column 1 Serial No.: 190208 Column Type: 905  
 Column 2 Serial No.: 182209 Column Type: 905  
 GC Method: PCB2 ICal Date: 11/07/12 Injection Volume: 2µl

IS	Ical/Ccal	ICV
<u>2006-1</u>	<u>190-1,2,3,4,5,6</u>	<u>2009-2,3,4,5,6,7</u>

## Document All Maintenance Tasks In StarLIMS

Inject	Date/Time	Filename	DF	LabID
1	24-NOV-2012 16:43	1124A001.d	1	RINSE
2	24-NOV-2012 17:03	1124A002.d	1	AR1254
3	24-NOV-2012 17:23	1124A003.d	1	AR1660
4	24-NOV-2012 17:44	1124A004.d	1	VR58MBS
5	24-NOV-2012 18:04	1124A005.d	1	VR58LCS
6	24-NOV-2012 18:24	1124A006.d	1	VR58SRM
7	24-NOV-2012 18:45	1124A007.d	1	VR58A
8	24-NOV-2012 19:05	1124A008.d	1	VR58B
9	24-NOV-2012 19:25	1124A009.d	1	BR58C
10	24-NOV-2012 19:46	1124A010.d	1	VR58D
11	24-NOV-2012 20:06	1124A011.d	1	VR58E
12	24-NOV-2012 20:26	1124A012.d	1	VR58F
13	24-NOV-2012 20:47	1124A013.d	1	AR1248
14	24-NOV-2012 21:07	1124A014.d	1	AR1660
15	24-NOV-2012 21:27	1124A015.d	1	VR58G
16	24-NOV-2012 21:48	1124A016.d	1	VR58H
17	24-NOV-2012 22:08	1124A017.d	1	VR58I
18	24-NOV-2012 22:28	1124A018.d	1	VR58J
19	24-NOV-2012 22:49	1124A019.d	1	VR58JMS
20	24-NOV-2012 23:09	1124A020.d	1	VR58JMS
21	24-NOV-2012 23:29	1124A021.d	1	VR82A
22	24-NOV-2012 23:50	1124A022.d	1	VR82B
23	25-NOV-2012 00:10	1124A023.d	1	VR82C
24	25-NOV-2012 00:30	1124A024.d	1	AR1242
25	25-NOV-2012 00:51	1124A025.d	1	AR1660
26	25-NOV-2012 01:11	1124A026.d	1	VR82D
27	25-NOV-2012 01:31	1124A027.d	1	VR82E
28	25-NOV-2012 01:52	1124A028.d	1	VR82F
29	25-NOV-2012 02:12	1124A029.d	1	VR82G
30	25-NOV-2012 02:33	1124A030.d	1	VR82H
31	25-NOV-2012 02:53	1124A031.d	1	VR82I
32	25-NOV-2012 03:13	1124A032.d	50	VS17J
33	25-NOV-2012 03:34	1124A033.d	5	VS17K
34	25-NOV-2012 03:54	1124A034.d	1	AR1254 rLIMS
35	25-NOV-2012 04:14	1124A035.d	1	AR1660
36	25-NOV-2012 04:35	1124A036.d	1	DDT
37	25-NOV-2012 04:55	1124A037.d	1	DDTBD

11/26/12

Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A002.d  
Data file 2: 20121102.B/1124-2.b/1124A002.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1254  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1254  
Client ID:  
Injection Date: 24-NOV-2012 17:03  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.452	0.003	19839047	4.456	-0.001	5527247	20.9	21.0	0.4	Tetrachloro-m-xylene
12.860	0.002	23541849	13.248	-0.001	4997416	19.4	20.4	4.8	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	52.2	52.4
Decachlorobiphenyl	48.5	50.9

*11/26/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	45463451	45.5
Hexabromobiphenyl	64198300	80484425	25.4

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	18490011	27.2
Hexabromobiphenyl	15789428	18053345	14.3

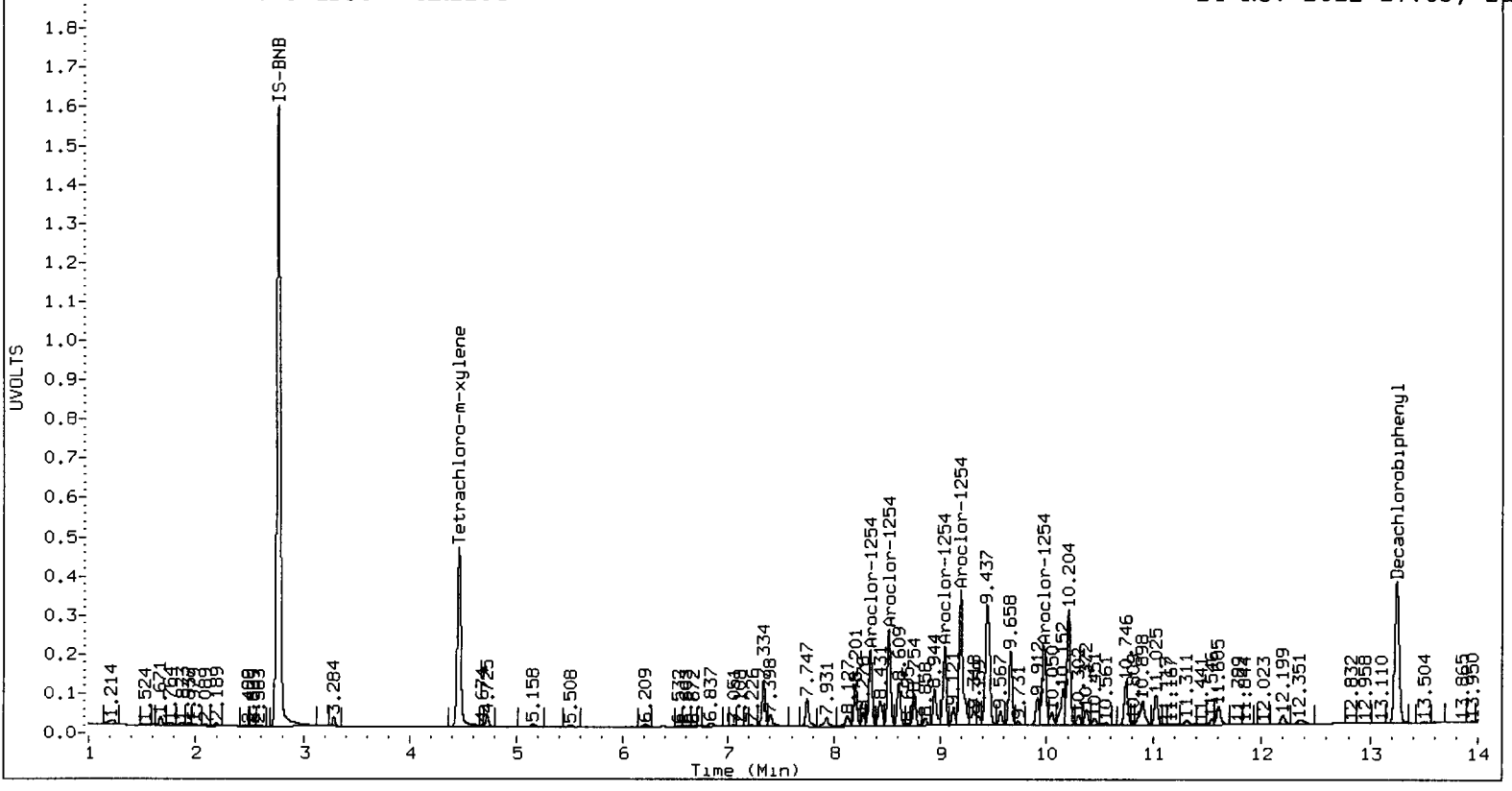
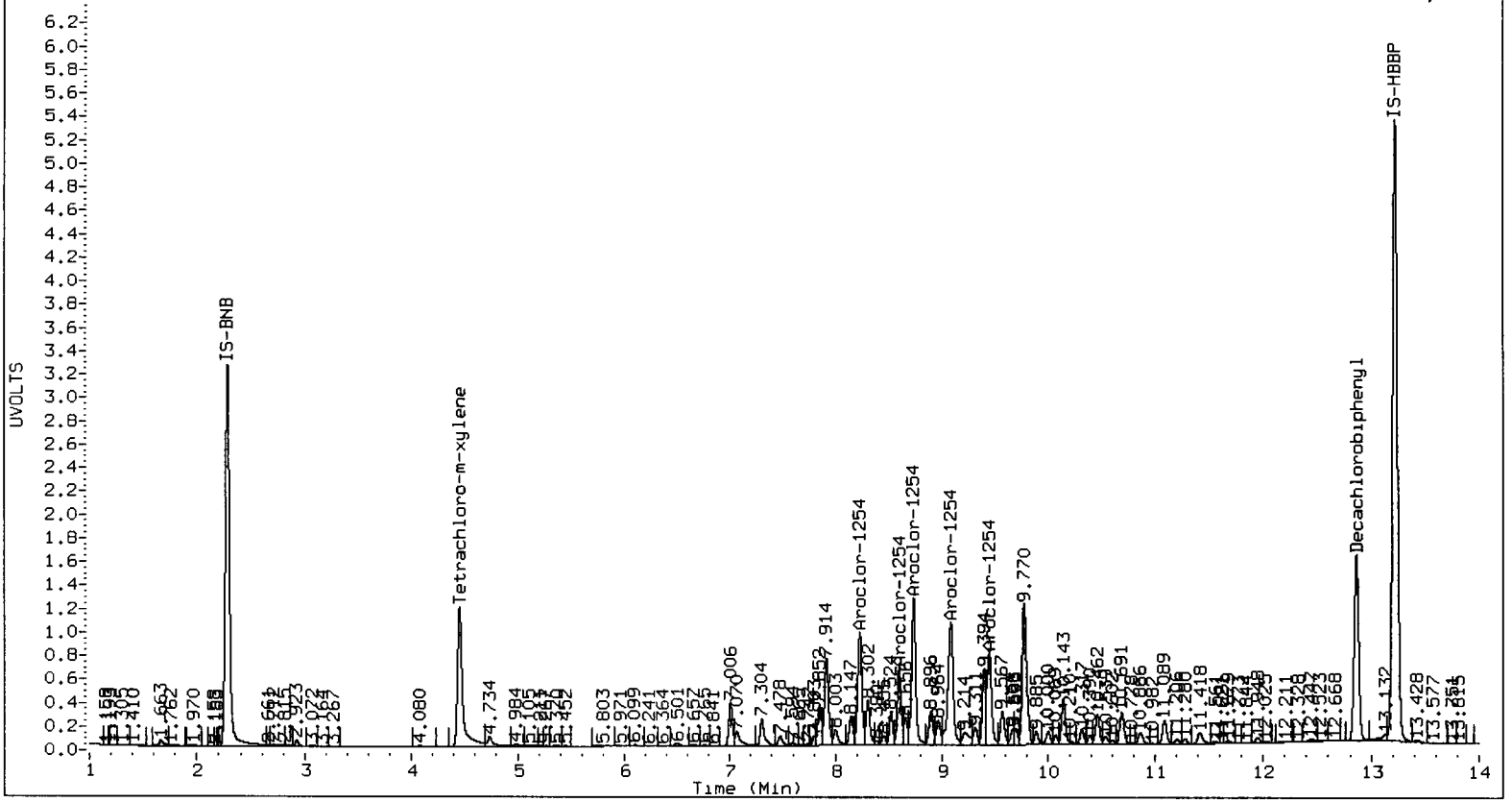
- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.226	0.002	13396429	246.8	1	8.340	-0.002	2099244	261.5
Aroclor-1254	2	8.599	0.002	7744923	217.0	2	8.515	0.000	2647302	261.1
Aroclor-1254	3	8.733	0.002	16977391	244.8	3	9.038	-0.001	2134245	274.0
Aroclor-1254	4	9.082	0.002	18481418	243.5	4	9.187	-0.001	4316584	252.6
Aroclor-1254	5	9.443	0.002	11443407	239.7	5	9.972	0.000	2672680	259.6
Total Col1Ave (5 peaks):				238.4	Total Col2Ave (5 peaks):				261.7	RPD = 9
Corrected Ave (4 peaks):				236.2	Corrected Ave (4 peaks):				258.7	RPD = 9

Total PCB Area Col1 (4.549 - 12.758) = 186641277      Col1 Total PCB = 0.3 ppm\*

Total PCB Area Col2 (4.556 - 13.149) = 43862349      Col2 Total PCB = 0.3 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical



Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A003.d  
Data file 2: 20121102.B/1124-2.b/1124A003.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1660  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660  
Client ID:  
Injection Date: 24-NOV-2012 17:23  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.450	0.001	14192757	4.456	0.000	3713150	20.7	20.1	3.1	Tetrachloro-m-xylene
12.858	0.001	17400532	13.248	-0.001	3673615	19.1	20.3	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	51.7	50.2
Decachlorobiphenyl	47.6	50.8

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	32837024	5.1
Hexabromobiphenyl	64198300	60613002	-5.6

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	12977204	-10.7
Hexabromobiphenyl	15789428	13302157	-15.8

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.097	0.001	4587254	249.9	1	6.210	0.000	1777585	244.5
Aroclor-1016	2	6.502	0.001	14348412	250.8	2	6.842	-0.001	3782319	245.9
Aroclor-1016	3	6.651	0.001	6133849	248.5	3	7.227	0.000	1017814	254.4
Aroclor-1016	4	6.762	0.001	4531308	256.6	4	7.335	-0.002	1122326	249.4
Total CollAve (4 peaks):				251.4		Total Col2Ave (4 peaks):				248.6 RPD = 1
Corrected Ave (3 peaks):				249.7		Corrected Ave (3 peaks):				246.6 RPD = 1
Aroclor-1260	1	9.998	0.000	8759129	248.7	1	10.301	0.000	1915804	269.8
Aroclor-1260	2	10.315	0.000	8903673	251.4	2	10.752	-0.001	2361103	270.9
Aroclor-1260	3	10.690	0.002	21403046	254.9	3	11.025	-0.001	4703427	271.2
Aroclor-1260	4	11.088	0.000	12087106	251.2	4	11.547	-0.001	1369268	262.0
Aroclor-1260	5	11.278	0.001	5878991	251.5	NS	---			----
Total CollAve (5 peaks):				251.5		Total Col2Ave (4 peaks):				268.5 RPD = 7
Corrected Ave (4 peaks):				250.7		Corrected Ave (3 peaks):				267.6 RPD = 7

Total PCB Area Col1 (4.549 - 12.758) = 272536763      Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (4.556 - 13.149) = 60341149      Col2 Total PCB = 0.5 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A004.d  
Data file 2: 20121102.B/1124-2.b/1124A004.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58MBS1  
Client ID: VR58MBS1  
Injection Date: 24-NOV-2012 17:44  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.450	0.001	24953926	4.457	0.000	6783094	42.5	40.2	5.5	Tetrachloro-m-xylene
12.857	-0.001	31809665	13.248	-0.001	6743053	37.5	41.5	10.1	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	106.1	100.5
Decachlorobiphenyl	93.8	103.8

*11/26/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	28148612	-9.9
Hexabromobiphenyl	64198300	56257900	-12.4

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	11838370	-18.6
Hexabromobiphenyl	15789428	11948908	-24.3

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012  
<- 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	6.104	0.008	13881	0.9	1	6.203	-0.007	15625	2.4
Aroclor-1016	2	6.489	-0.012	56718	1.2	2	---	---	---	0.0
Aroclor-1016	3	6.609	-0.041	26516	1.3	3	7.200	-0.026	35958	9.9
Aroclor-1016	4	6.771	0.010	18214	1.2	4	7.354	0.017	135612	33.0
Total CollAve (4 peaks):				1.1		Total Col2Ave (3 peaks):				15.1 RPD = 172*
Corrected Ave (3 peaks):				1.1		Corrected Ave: < 3 Peaks				
Aroclor-1221	1	4.732	-0.085	2247873	327.2	1	5.159	0.018	101810	50.8
Aroclor-1221	2	4.979	-0.015	495403	105.3	2	5.416	0.023	36085	30.5
Aroclor-1221	3	5.168	0.066	88986	5.8	3	5.513	0.006	18117	4.9
Aroclor-1221	NS	---	---	---	---	4	---	---	---	0.0
Total CollAve (3 peaks):				146.1		Total Col2Ave (3 peaks):				28.7 RPD = 134*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.104	0.010	13881	2.2	1	---	---	---	0.0
Aroclor-1232	2	6.489	-0.008	56718	2.8	2	---	---	---	0.0
Aroclor-1232	3	6.609	-0.038	26516	3.0	3	---	---	---	0.0
Aroclor-1232	4	7.921	0.020	47249	4.3	4	---	---	---	0.0
Total CollAve (4 peaks):				3.1		Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.104	0.008	13881	1.1	1	---	---	---	0.0
Aroclor-1242	2	6.489	-0.012	56718	1.5	2	---	---	---	0.0
Aroclor-1242	3	6.609	-0.040	26516	1.6	3	---	---	---	0.0
Aroclor-1242	4	7.921	0.018	47249	2.4	4	---	---	---	0.0
Total CollAve (4 peaks):				1.7		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.489	-0.008	56718	2.3	1	---	---	---	0.0
Aroclor-1248	2	7.457	-0.016	26342	1.0	2	---	---	---	0.0
Aroclor-1248	3	7.921	0.019	47249	1.4	3	---	---	---	0.0
Aroclor-1248	4	8.117	-0.020	249714	9.8	4	---	---	---	0.0
Total CollAve (4 peaks):				3.6		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.226	0.001	64204	1.9	1	---	---	---	0.0
Aroclor-1254	2	8.616	0.019	35059	1.6	2	---	---	---	0.0
Aroclor-1254	3	8.736	0.005	31371	0.7	3	---	---	---	0.0
Aroclor-1254	4	9.079	-0.001	44129	0.9	4	---	---	---	0.0
Aroclor-1254	5	9.437	-0.005	50981	1.7	5	---	---	---	0.0
Total CollAve (5 peaks):				1.4		Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	---	---	---	0.0	1	---	---	---	0.0
Aroclor-1260	2	---	---	---	0.0	2	---	---	---	0.0
Aroclor-1260	3	10.724	0.036	55339	0.7	3	---	---	---	0.0
Aroclor-1260	4	11.031	-0.057	111822	2.5	4	---	---	---	0.0
Aroclor-1260	5	11.186	-0.091	18320	0.8	NS	---	---	---	---
Total CollAve (3 peaks):				1.4		Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	---	---	---	0.0	1	---	---	---	0.0
Aroclor-1262	2	---	---	---	0.0	2	---	---	---	0.0
Aroclor-1262	3	10.724	0.038	55339	0.6	3	---	---	---	0.0
Aroclor-1262	4	11.186	-0.016	18320	0.5	4	11.485	-0.062	17854	2.2
Aroclor-1262	5	---	---	---	0.0	5	12.380	0.034	26764	3.4
CollAve: <3 Quant Peaks						Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	11.186	-0.017	18320	0.2	1	11.485	-0.063	17854	0.9
Aroclor-1268	2	---	---	---	0.0	2	---	---	---	0.0
Aroclor-1268	3	11.676	0.015	52725	0.6	3	12.040	0.029	36109	2.1
Aroclor-1268	4	12.387	-0.062	36112	0.2	4	---	---	---	0.0
Total CollAve (3 peaks):				0.3		Col2Ave: <3 Quant Peaks				

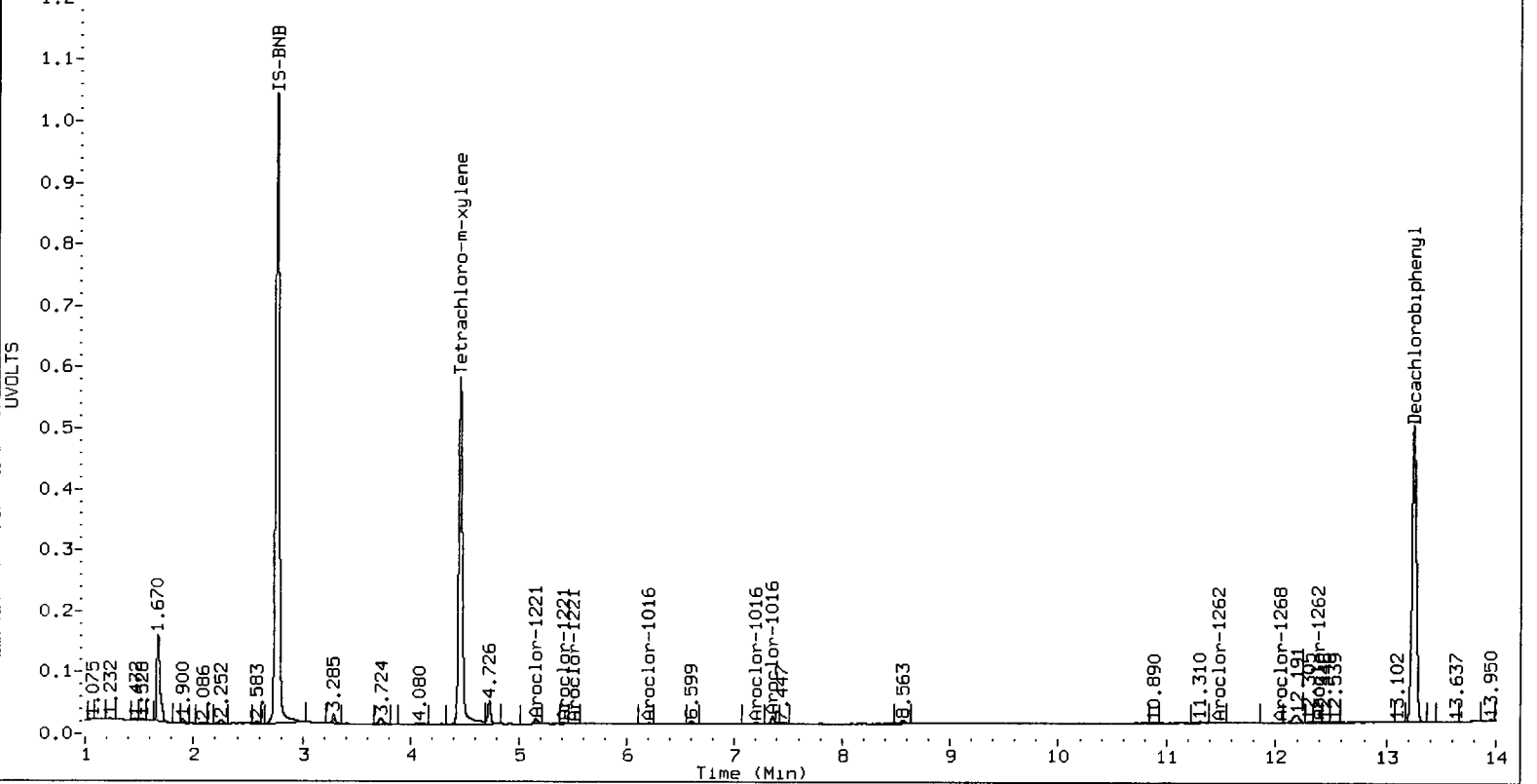
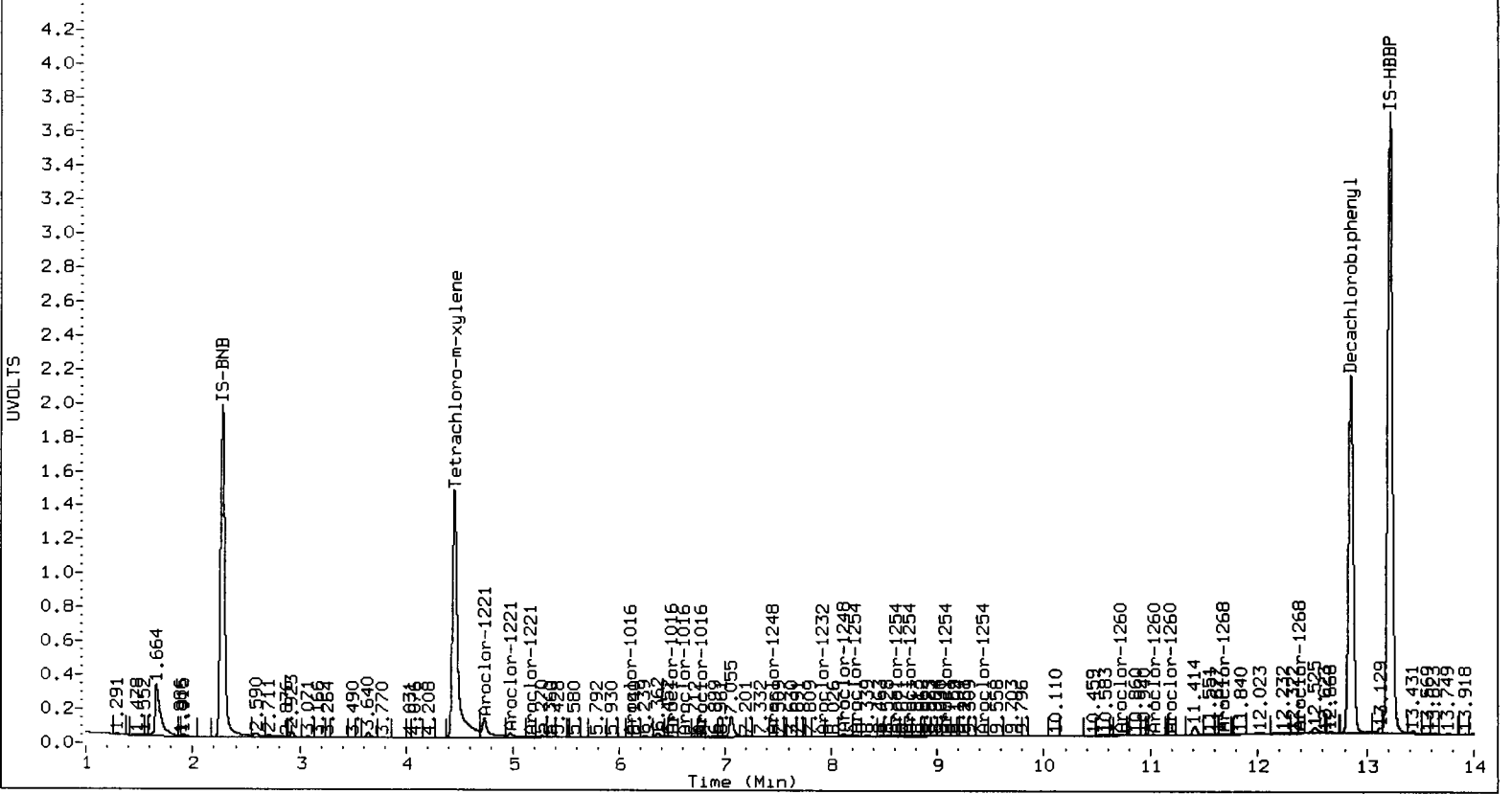
Total PCB Area Col1 (4.549 - 12.758) = 9867571 Col1 Total PCB = 0.0 ppm\*

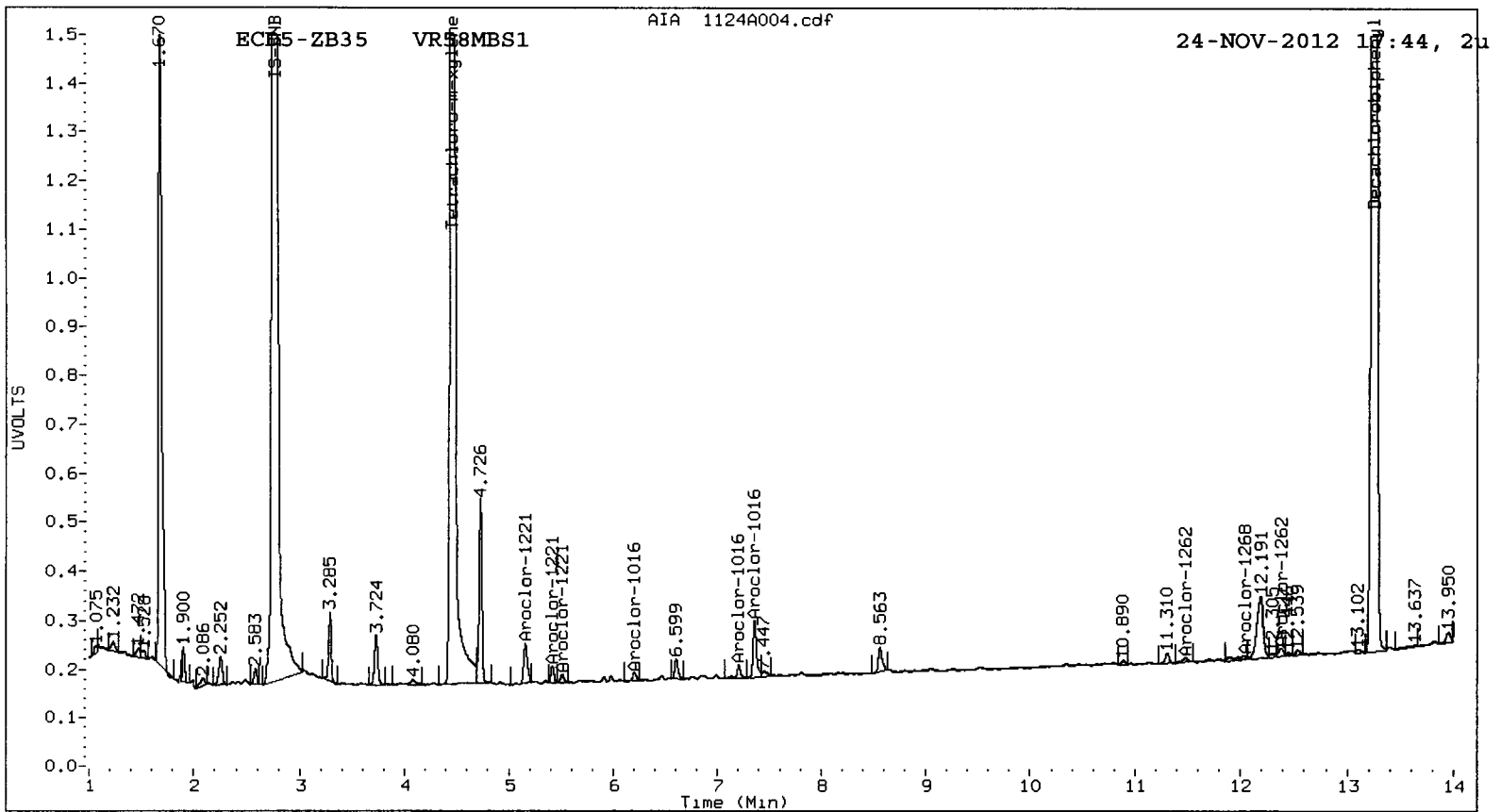
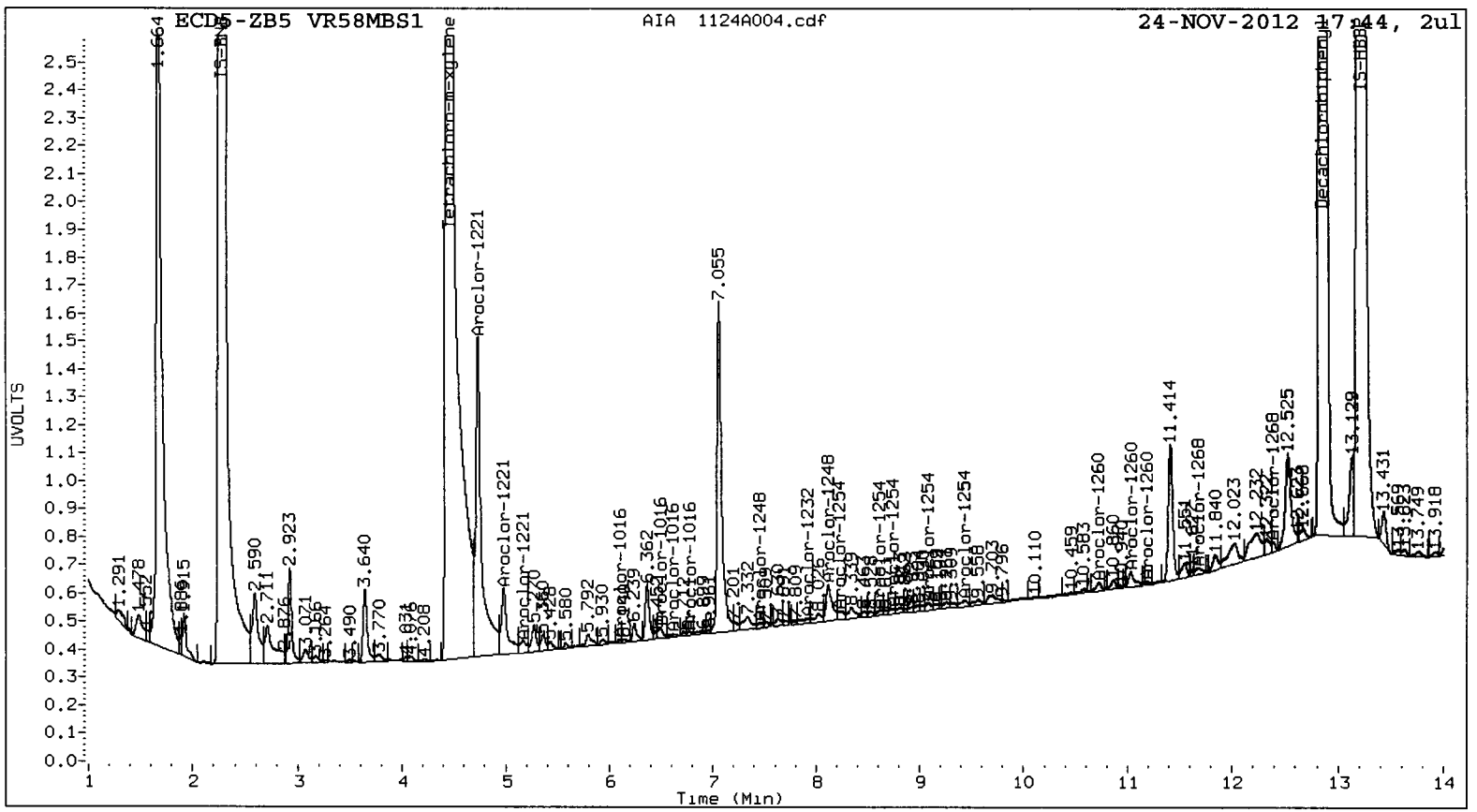
Total PCB Area Col2 (4.556 - 13.149) = 1253759 Col2 Total PCB = 0.0 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UP58 : 02251





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A005.d  
Data file 2: 20121102.B/1124-2.b/1124A005.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58LCSS1  
Client ID: VR58LCSS1  
Injection Date: 24-NOV-2012 18:04  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.448	0.000	25378736	4.456	0.000	6802551	39.2	37.4	4.9	Tetrachloro-m-xylene
12.857	0.000	31871129	13.247	-0.002	6647039	36.4	39.9	9.1	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	98.1	93.5
Decachlorobiphenyl	91.0	99.7

*11/26/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	30967556	-0.9
Hexabromobiphenyl	64198300	58108697	-9.5

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	12766259	-12.2
Hexabromobiphenyl	15789428	12268470	-22.3

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.095	-0.001	8171201	472.0	1	6.209	-0.001	3157802	441.6	
Aroclor-1016	2	6.500	-0.001	25794457	478.1	2	6.840	-0.003	7010724	463.3	
Aroclor-1016	3	6.649	-0.001	11000580	472.5	3	7.226	-0.001	1893587	481.1	
Aroclor-1016	4	6.760	-0.001	8268407	496.5	4	7.334	-0.002	1962848	443.4	
Total CollAve (4 peaks):					479.8	Total Col2Ave (4 peaks):					457.4 RPD = 5
Corrected Ave (3 peaks):					474.2	Corrected Ave (3 peaks):					449.4 RPD = 5
Aroclor-1221	1	4.815	-0.001	1432769	189.5	1	5.143	0.002	382707	176.9	
Aroclor-1221	2	4.994	-0.001	1298574	250.9	2	5.392	-0.001	303708	238.4	
Aroclor-1221	3	5.100	-0.001	5399305	320.2	3	5.505	-0.001	1331850	332.6	
Aroclor-1221	NS	---	---	---	---	4	5.572	-0.003	109852	158.9	
Total CollAve (3 peaks):					253.6	Total Col2Ave (4 peaks):					226.7 RPD = 11
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):					191.4
Aroclor-1232	1	6.095	0.002	8171201	1158.5	1	6.209	-0.001	3157802	996.7	
Aroclor-1232	2	6.500	0.003	25794457	1169.6	2	6.840	0.000	7010724	1123.0	
Aroclor-1232	3	6.649	0.002	11000580	1143.8	3	7.050	0.000	2905943	1113.5	
Aroclor-1232	4	7.910	0.009	8056372	668.4	4	8.275	-0.001	300437	135.6	
Total CollAve (4 peaks):					1035.1	Total Col2Ave (4 peaks):					842.2 RPD = 21
Corrected Ave (3 peaks):					990.2	Corrected Ave (3 peaks):					748.6 RPD = 28
Aroclor-1242	1	6.095	-0.001	8171201	606.5	1	6.209	-0.001	3157802	579.3	
Aroclor-1242	2	6.500	-0.001	25794457	618.1	2	6.840	-0.002	7010724	604.2	
Aroclor-1242	3	6.649	-0.001	11000580	607.0	3	7.050	-0.002	2905943	602.6	
Aroclor-1242	4	7.910	0.008	8056372	379.1	4	8.275	-0.001	300437	74.0	
Total CollAve (4 peaks):					552.7	Total Col2Ave (4 peaks):					465.0 RPD = 17
Corrected Ave (3 peaks):					530.9	Corrected Ave (3 peaks):					418.6 RPD = 24
Aroclor-1248	1	6.500	0.003	25794457	945.5	1	6.840	0.000	7010724	925.2	
Aroclor-1248	2	7.474	0.001	10517708	366.2	2	7.746	0.000	2410162	383.4	
Aroclor-1248	3	7.910	0.008	8056372	222.1	3	8.275	0.000	300437	46.3	
Aroclor-1248	4	8.143	0.006	1909448	68.3	4	8.621	-0.001	156687	19.5	
Total CollAve (4 peaks):					400.5	Total Col2Ave (4 peaks):					343.6 RPD = 15
Corrected Ave (3 peaks):					218.9	Corrected Ave (3 peaks):					149.7 RPD = 38
Aroclor-1254	1	8.224	0.000	9270755	250.7	1	8.340	-0.001	1573767	283.9	
Aroclor-1254	2	8.594	-0.003	1956200	80.5	2	8.514	-0.001	1847092	263.8	
Aroclor-1254	3	8.728	-0.003	8745784	185.1	3	9.037	-0.002	427182	79.4	
Aroclor-1254	4	9.061	-0.019	21703734	419.7	4	9.189	0.000	911186	77.2	
Aroclor-1254	5	9.391	-0.050	31587585	971.4	5	9.981	0.009	1940157	273.0	
Total CollAve (5 peaks):					381.5	Total Col2Ave (5 peaks):					195.5 RPD = 64*
Corrected Ave (4 peaks):					234.0	Corrected Ave (4 peaks):					173.4 RPD = 30
Aroclor-1260	1	9.997	-0.001	16361587	484.5	1	10.301	-0.001	3576040	546.0	
Aroclor-1260	2	10.313	-0.001	16617561	489.5	2	10.751	-0.002	4413235	549.0	
Aroclor-1260	3	10.688	0.000	39683294	493.0	3	11.025	-0.001	9005092	563.1	
Aroclor-1260	4	11.087	-0.001	22582469	489.6	4	11.547	0.000	2583888	536.2	
Aroclor-1260	5	11.277	0.000	11358452	506.8	NS	---	---	---	---	
Total CollAve (5 peaks):					492.7	Total Col2Ave (4 peaks):					548.6 RPD = 11
Corrected Ave (4 peaks):					489.1	Corrected Ave (3 peaks):					543.7 RPD = 11
Aroclor-1262	1	9.997	0.001	16361587	323.8	1	10.301	-0.001	3576040	334.2	
Aroclor-1262	2	10.313	0.001	16617561	433.1	2	10.751	-0.002	4413235	464.3	
Aroclor-1262	3	10.688	0.001	39683294	398.9	3	11.025	0.001	9005092	431.7	
Aroclor-1262	4	11.204	0.002	9398918	250.8	4	11.547	0.000	2583888	306.0	
Aroclor-1262	5	11.277	0.002	11358452	276.1	5	12.348	0.001	2368231	291.9	
Total CollAve (5 peaks):					336.5	Total Col2Ave (5 peaks):					365.6 RPD = 8
Corrected Ave (4 peaks):					312.4	Corrected Ave (4 peaks):					341.0 RPD = 9
Aroclor-1268	1	11.204	0.001	9398918	93.2	1	11.547	0.000	2583888	121.3	

Aroclor-1268	2	11.277	0.002	11358452	117.1	2	11.606	-0.007	6244652	301.3	
Aroclor-1268	3	11.677	0.016	5480706	64.3	3	12.012	0.000	168928	9.8	
Aroclor-1268	4	12.449	0.001	3515218	14.4	4	12.833	-0.001	697940	13.6	
Total Col1Ave (4 peaks):				72.3	Total Col2Ave (4 peaks):				111.5	RPD = 43*	
Corrected Ave (3 peaks):				57.3	Corrected Ave (3 peaks):				48.2	RPD = 17	

Total PCB Area Col1 (4.549 - 12.758) = 490773424      Col1 Total PCB = 1.0 ppm\*

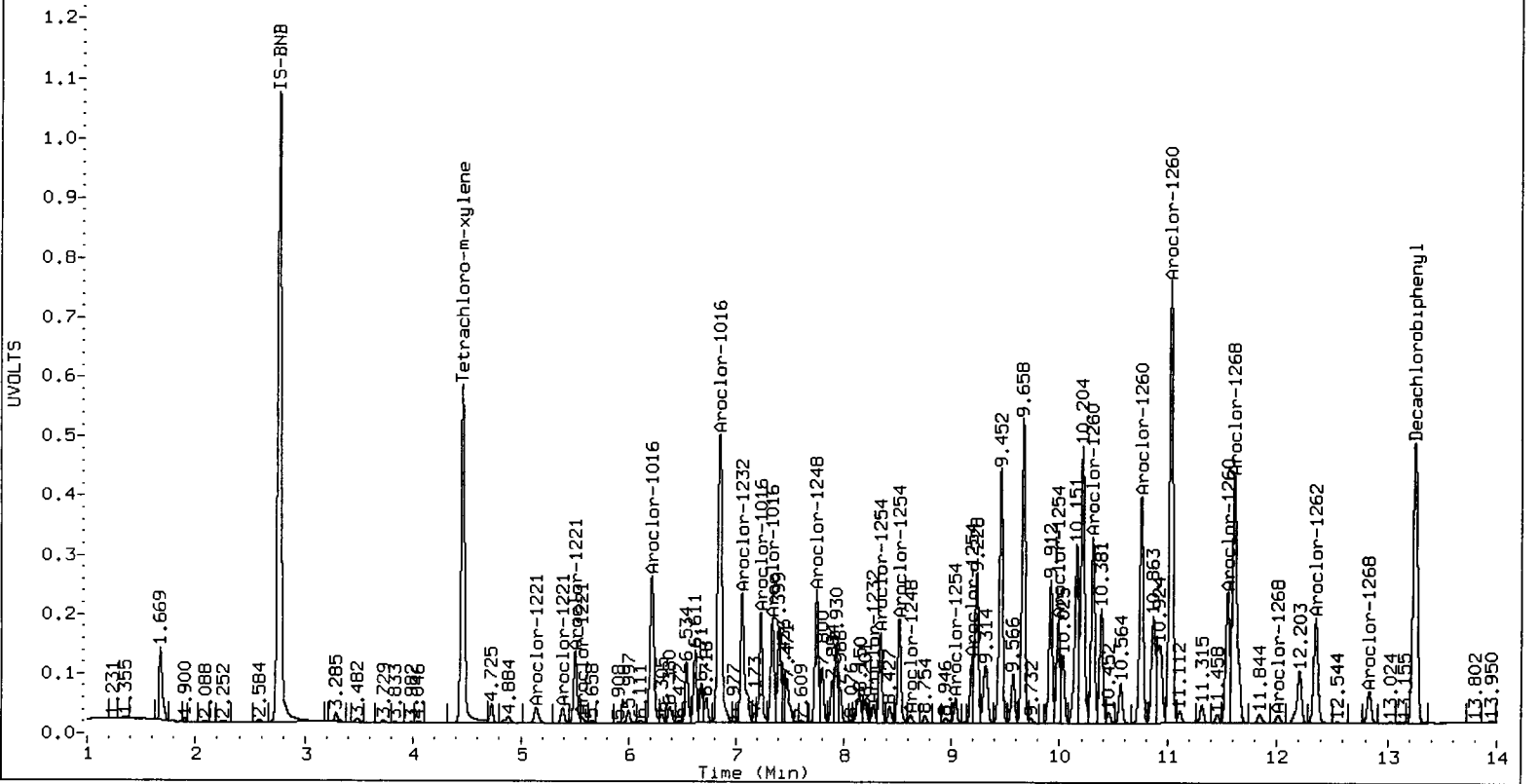
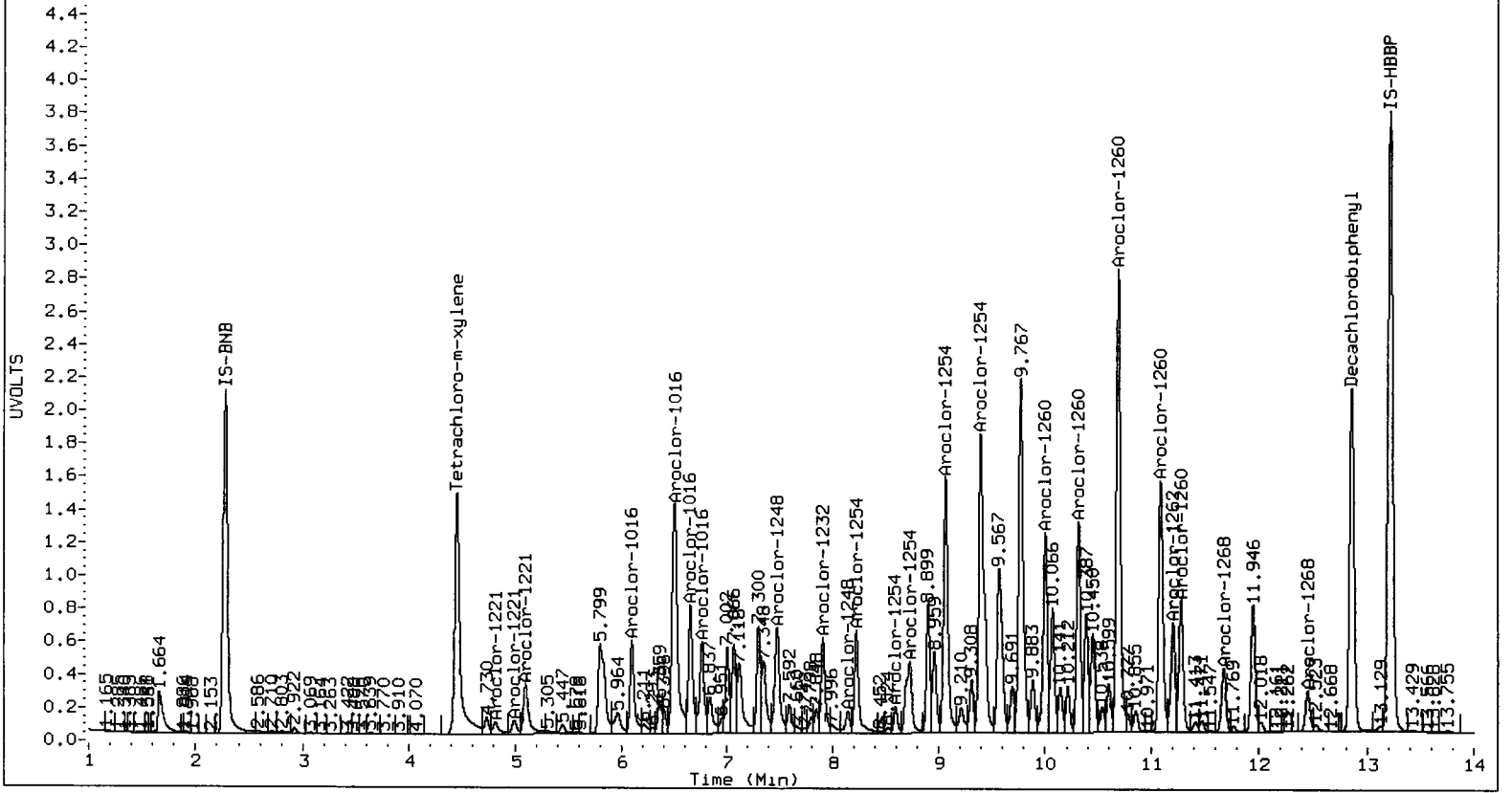
Total PCB Area Col2 (4.556 - 13.149) = 109913770      Col2 Total PCB = 1.0 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

VP58 : 02256







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A006.d  
Data file 2: 20121102.B/1124-2.b/1124A006.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58SRM1  
Client ID: PSR  
Injection Date: 24-NOV-2012 18:24  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	25391320	4.456	0.000	6652778	38.6	36.9	4.5	Tetrachloro-m-xylene
12.857	0.000	29737412	13.248	0.000	6463798	33.9	36.8	8.3	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	96.4	92.2
Decachlorobiphenyl	84.8	92.1

*Handwritten signature*  
11/26/12

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	31528912	0.9
Hexabromobiphenyl	64198300	58199791	-9.3

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	12656028	-12.9
Hexabromobiphenyl	15789428	12912350	-18.2

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012  
<- 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	6.094	-0.002	405796	23.0	1	6.207	-0.003	254802	35.9
Aroclor-1016	2	6.500	-0.001	1497084	27.3	2	6.840	-0.002	386720	25.8
Aroclor-1016	3	6.650	0.000	531013	22.4	3	7.224	-0.003	112535	28.8
Aroclor-1016	4	6.761	0.000	525233	31.0	4	7.335	-0.001	349718	79.7
Total CollAve (4 peaks):				25.9		Total Col2Ave (4 peaks):				42.6 RPD = 49*
Corrected Ave (3 peaks):				24.2		Corrected Ave (3 peaks):				30.2 RPD = 22
Aroclor-1221	1	4.730	-0.087	1915528	248.9	1	5.160	0.019	194683	90.8
Aroclor-1221	2	4.980	-0.015	442141	83.9	2	5.414	0.021	194434	154.0
Aroclor-1221	3	5.100	-0.001	234410	13.7	3	5.509	0.002	65754	16.6
Aroclor-1221	NS	---	---	---	---	4	---	---	---	0.0
Total CollAve (3 peaks):				115.5		Total Col2Ave (3 peaks):				87.1 RPD = 28
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.094	0.000	405796	56.5	1	6.207	-0.003	254802	81.1
Aroclor-1232	2	6.500	0.003	1497084	66.7	2	6.840	0.000	386720	62.5
Aroclor-1232	3	6.650	0.002	531013	54.2	3	7.051	0.001	148455	57.4
Aroclor-1232	4	7.909	0.008	2878678	234.6	4	8.275	-0.002	204802	93.2
Total CollAve (4 peaks):				103.0		Total Col2Ave (4 peaks):				73.6 RPD = 33
Corrected Ave (3 peaks):				59.1		Corrected Ave (3 peaks):				67.0 RPD = 12
Aroclor-1242	1	6.094	-0.002	405796	29.6	1	6.207	-0.003	254802	47.1
Aroclor-1242	2	6.500	-0.001	1497084	35.2	2	6.840	-0.002	386720	33.6
Aroclor-1242	3	6.650	0.000	531013	28.8	3	7.051	0.000	148455	31.1
Aroclor-1242	4	7.909	0.007	2878678	133.1	4	8.275	-0.002	204802	50.9
Total CollAve (4 peaks):				56.7		Total Col2Ave (4 peaks):				40.7 RPD = 33
Corrected Ave (3 peaks):				31.2		Corrected Ave (3 peaks):				37.3 RPD = 18
Aroclor-1248	1	6.500	0.003	1497084	53.9	1	6.840	0.000	386720	51.5
Aroclor-1248	2	7.473	-0.001	782861	26.8	2	7.747	0.001	236934	38.0
Aroclor-1248	3	7.909	0.007	2878678	78.0	3	8.275	-0.001	204802	31.8
Aroclor-1248	4	8.138	0.001	1549395	54.4	4	8.610	-0.012	406913	51.1
Total CollAve (4 peaks):				53.3		Total Col2Ave (4 peaks):				43.1 RPD = 21
Corrected Ave (3 peaks):				45.0		Corrected Ave (3 peaks):				40.3 RPD = 11
Aroclor-1254	1	8.223	-0.002	3326410	88.4	1	8.340	-0.002	537848	97.9
Aroclor-1254	2	8.597	0.000	2078182	84.0	2	8.515	-0.001	829255	119.5
Aroclor-1254	3	8.729	-0.002	4601668	95.7	3	9.036	-0.002	309143	58.0
Aroclor-1254	4	9.063	-0.017	7663809	145.6	4	9.187	-0.002	755870	64.6
Aroclor-1254	5	9.390	-0.051	10521888	217.8	5	9.978	0.006	786287	111.6
Total CollAve (5 peaks):				146.3		Total Col2Ave (5 peaks):				90.3 RPD = 47*
Corrected Ave (4 peaks):				103.4		Corrected Ave (4 peaks):				83.0 RPD = 22
Aroclor-1260	1	9.997	-0.002	4645660	137.4	1	10.301	-0.001	1003851	145.6
Aroclor-1260	2	10.312	-0.003	4076046	119.9	2	10.750	-0.002	1307688	154.6
Aroclor-1260	3	10.688	-0.001	12584277	156.1	3	11.026	-0.001	2560562	152.1
Aroclor-1260	4	11.088	0.000	6684209	144.7	4	11.548	0.000	776413	153.1
Aroclor-1260	5	11.277	-0.001	3287459	146.4	NS	---	---	---	---
Total CollAve (5 peaks):				140.5		Total Col2Ave (4 peaks):				151.4 RPD = 7
Corrected Ave (4 peaks):				137.1		Corrected Ave (3 peaks):				150.3 RPD = 9
Aroclor-1262	1	9.997	0.000	4645660	91.8	1	10.301	-0.001	1003851	89.1
Aroclor-1262	2	10.312	-0.001	4076046	106.1	2	10.750	-0.002	1307688	130.7
Aroclor-1262	3	10.688	0.001	12584277	126.3	3	11.026	0.001	2560562	116.6
Aroclor-1262	4	11.204	0.001	2751169	73.3	4	11.548	0.001	776413	87.4
Aroclor-1262	5	11.277	0.002	3287459	79.8	5	12.347	0.000	792749	92.8
Total CollAve (5 peaks):				95.5		Total Col2Ave (5 peaks):				103.3 RPD = 8
Corrected Ave (4 peaks):				87.7		Corrected Ave (4 peaks):				96.5 RPD = 10
Aroclor-1268	1	11.204	0.001	2751169	27.2	1	11.548	0.000	776413	34.6

Aroclor-1268 2	11.277	0.002	3287459	33.9	2	11.606	-0.007	1822296	83.6
Aroclor-1268 3	11.677	0.016	1531763	17.9	3	12.015	0.004	56270	3.1
Aroclor-1268 4	12.451	0.003	800690	3.3	4	12.833	-0.001	156336	2.9
Total Col1Ave (4 peaks):			20.6	Total Col2Ave (4 peaks):			31.0	RPD = 41*	
Corrected Ave (3 peaks):			16.2	Corrected Ave (3 peaks):			13.5	RPD = 18	

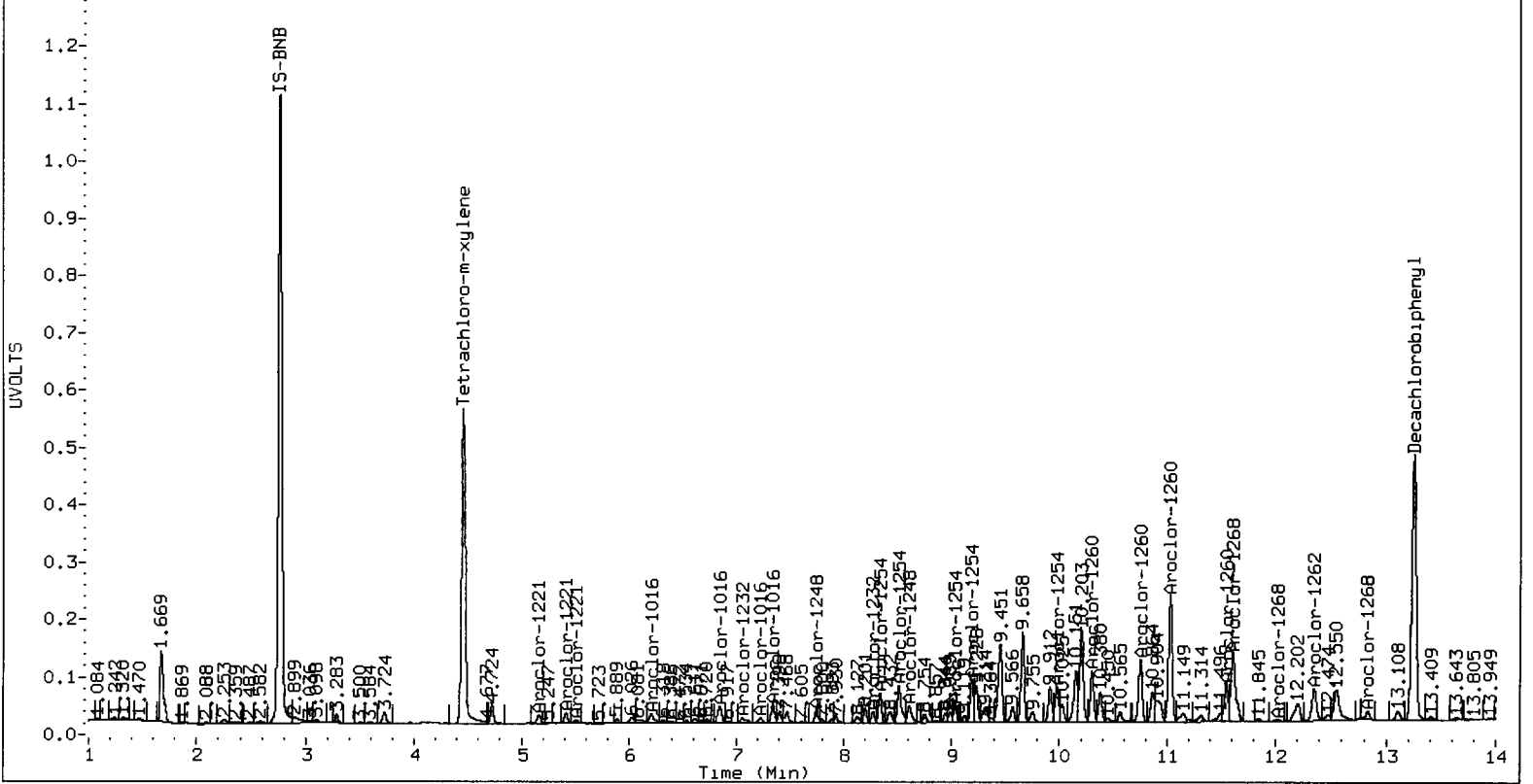
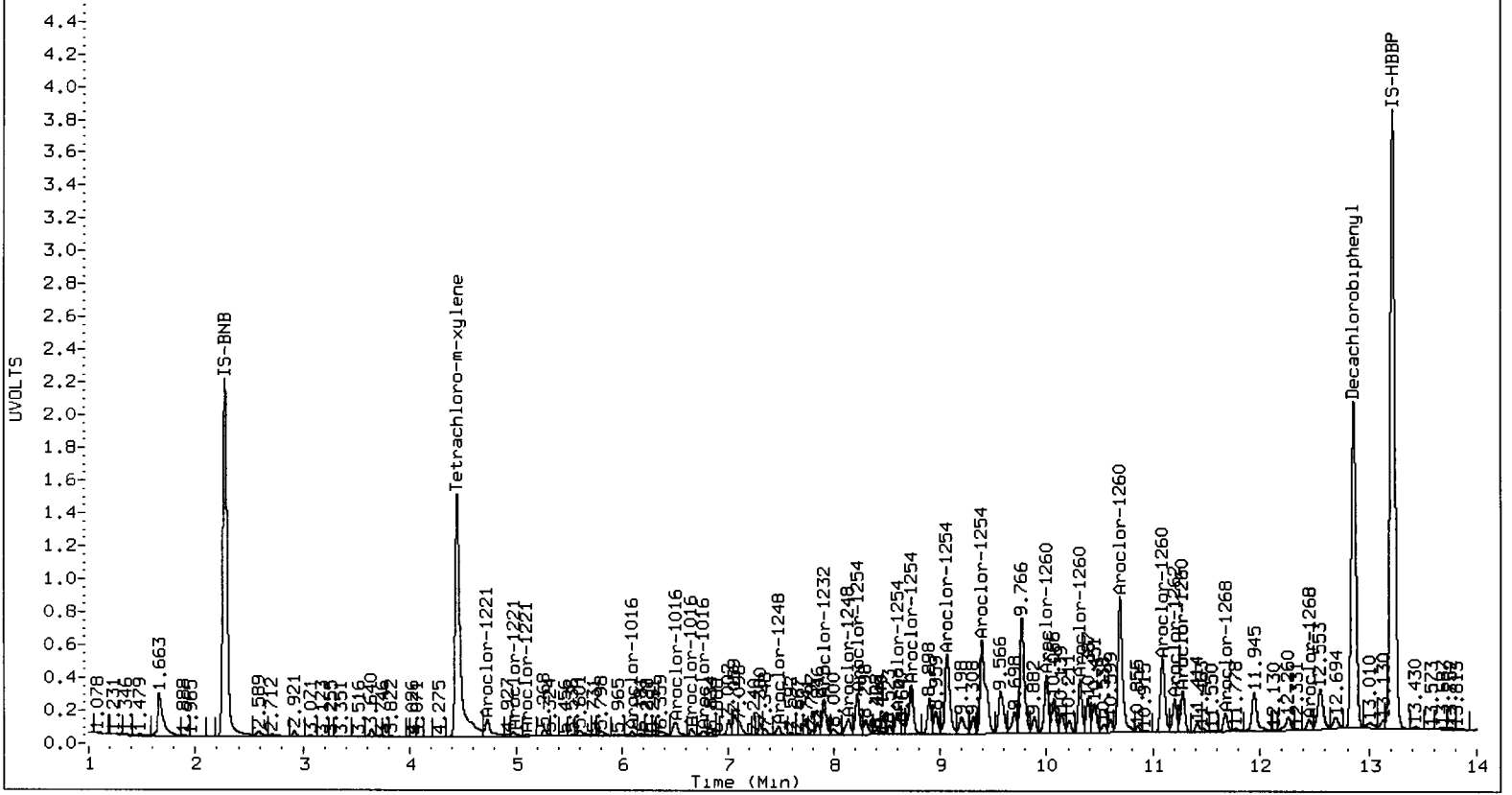
Total PCB Area Col1 (4.549 - 12.758) = 139391070      Col1 Total PCB = 0.3 ppm\*

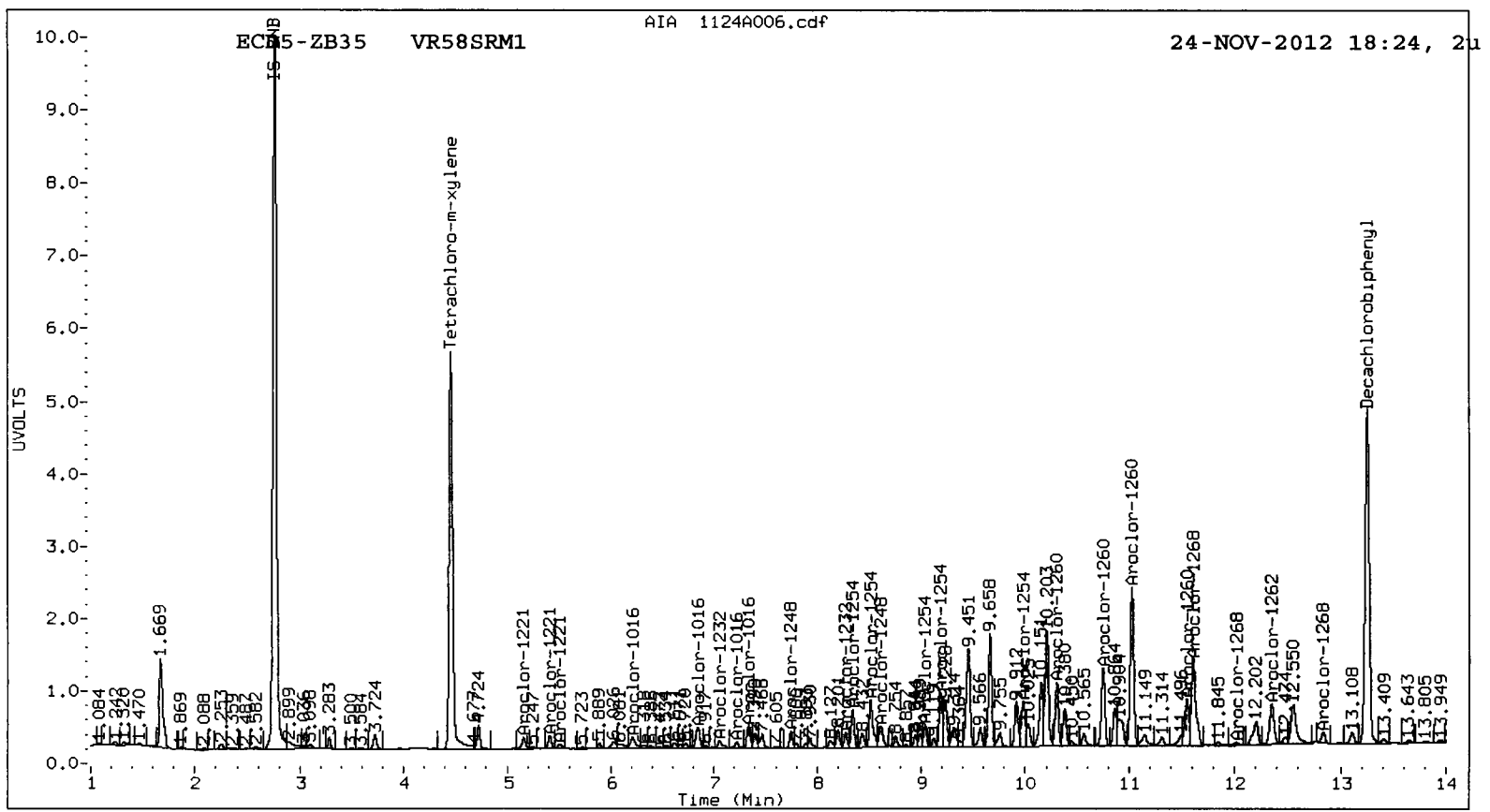
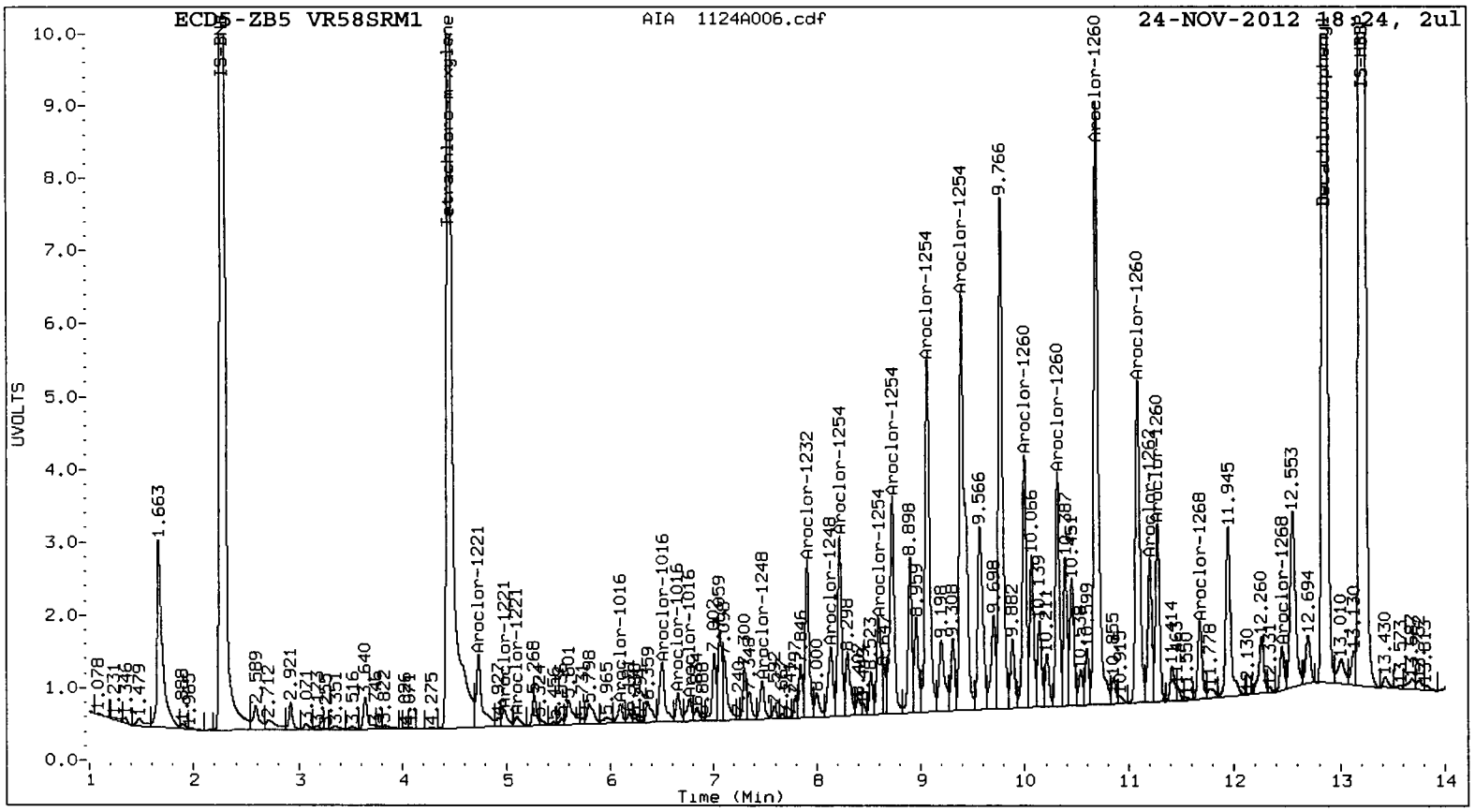
Total PCB Area Col2 (4.556 - 13.149) = 31428155      Col2 Total PCB = 0.3 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58: 02261





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A007.d  
Data file 2: 20121102.B/1124-2.b/1124A007.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58A  
Client ID: SG-10-S-E-121107  
Injection Date: 24-NOV-2012 18:45  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	24359624	4.456	0.000	6430487	36.1	36.1	0.0	Tetrachloro-m-xylene
12.858	0.000	27640190	13.248	-0.001	6291673	32.0	36.3	12.6	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	90.3	90.3
Decachlorobiphenyl	80.0	90.7

*J* 11/26/12

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	32305335	3.4
Hexabromobiphenyl	64198300	57343458	-10.7

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	12488984	-14.1
Hexabromobiphenyl	15789428	12758907	-19.2

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.088	-0.008	127979	7.1	1	6.192	-0.018	230940	33.0	
Aroclor-1016	2	6.502	0.001	216854	3.9	2	6.837	-0.006	49507	3.3	
Aroclor-1016	3	6.650	0.000	34023	1.4	3	7.270	0.043	161229	41.9	
Aroclor-1016	4	6.764	0.003	62690	3.6	4	7.351	0.014	213180	49.2	
Total CollAve (4 peaks):				4.0		Total Col2Ave (4 peaks):				31.9	RPD = 156*
Corrected Ave (3 peaks):				3.0		Corrected Ave (3 peaks):				26.1	RPD = 159*
Aroclor-1221	1	4.730	-0.087	2000410	258.7	1	5.158	0.016	116831	55.2	
Aroclor-1221	2	4.979	-0.015	376193	69.7	2	5.414	0.021	239399	192.1	
Aroclor-1221	3	5.113	0.012	51045	2.9	3	5.524	0.018	76025	19.4	
Aroclor-1221	NS	---	---	---	---	4	5.577	0.002	20467	30.3	
Total CollAve (3 peaks):				108.7		Total Col2Ave (4 peaks):				74.2	RPD = 38
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				35.0	
Aroclor-1232	1	6.088	-0.006	127979	17.4	1	6.192	-0.018	230940	74.5	
Aroclor-1232	2	6.502	0.004	216854	9.4	2	6.837	-0.004	49507	8.1	
Aroclor-1232	3	6.650	0.003	34023	3.4	3	7.057	0.007	33158	13.0	
Aroclor-1232	4	7.907	0.006	516989	41.1	4	8.272	-0.004	45953	21.2	
Total CollAve (4 peaks):				17.8		Total Col2Ave (4 peaks):				29.2	RPD = 48*
Corrected Ave (3 peaks):				10.1		Corrected Ave (3 peaks):				14.1	RPD = 33
Aroclor-1242	1	6.088	-0.008	127979	9.1	1	6.192	-0.018	230940	43.3	
Aroclor-1242	2	6.502	0.001	216854	5.0	2	6.837	-0.005	49507	4.4	
Aroclor-1242	3	6.650	0.000	34023	1.8	3	7.057	0.006	33158	7.0	
Aroclor-1242	4	7.907	0.005	516989	23.3	4	8.272	-0.004	45953	11.6	
Total CollAve (4 peaks):				9.8		Total Col2Ave (4 peaks):				16.6	RPD = 51*
Corrected Ave (3 peaks):				5.3		Corrected Ave (3 peaks):				7.7	RPD = 36
Aroclor-1248	1	6.502	0.005	216854	7.6	1	6.837	-0.003	49507	6.7	
Aroclor-1248	2	7.472	-0.001	198665	6.6	2	7.750	0.004	62267	10.1	
Aroclor-1248	3	7.907	0.005	516989	13.7	3	8.272	-0.003	45953	7.2	
Aroclor-1248	4	8.122	-0.016	1378139	47.3	4	8.649	0.027	245652	31.3	
Total CollAve (4 peaks):				18.8		Total Col2Ave (4 peaks):				13.8	RPD = 30
Corrected Ave (3 peaks):				9.3		Corrected Ave (3 peaks):				8.0	RPD = 15
Aroclor-1254	1	8.215	-0.010	915801	23.7	1	8.340	-0.002	74567	13.8	
Aroclor-1254	2	8.618	0.021	2728054	107.6	2	8.539	0.024	651657	95.1	
Aroclor-1254	3	8.730	-0.001	1149737	23.3	3	9.043	0.004	5907558	1122.7	
Aroclor-1254	4	9.077	-0.003	952947	17.7	4	9.186	-0.003	177460	15.4	
Aroclor-1254	5	9.440	-0.001	595704	17.6	5	9.972	0.000	153792	22.1	
Total CollAve (5 peaks):				38.0		Total Col2Ave (5 peaks):				252.8	RPD = 148*
Corrected Ave (4 peaks):				30.6		Corrected Ave (4 peaks):				36.6	RPD = 56*
Aroclor-1260	1	9.993	-0.005	144509	4.3	1	10.298	-0.004	59181	8.7	
Aroclor-1260	2	10.314	-0.001	347031	10.4	2	10.746	-0.006	63381	7.6	
Aroclor-1260	3	10.721	0.033	3083300	38.8	3	11.026	-0.001	96066	5.8	
Aroclor-1260	4	11.087	0.000	521066	11.4	4	11.495	-0.052	272905	54.5	
Aroclor-1260	5	11.276	0.001	216848	9.8	NS	---	---	---	---	
Total CollAve (5 peaks):				15.0		Total Col2Ave (4 peaks):				19.1	RPD = 24
Corrected Ave (4 peaks):				9.0		Corrected Ave (3 peaks):				7.3	RPD = 20
Aroclor-1262	1	9.993	-0.003	144509	2.9	1	10.298	-0.004	59181	5.3	
Aroclor-1262	2	10.314	0.001	347031	9.2	2	10.746	-0.006	63381	6.4	
Aroclor-1262	3	10.721	0.035	3083300	31.4	3	11.026	0.001	96066	4.4	
Aroclor-1262	4	11.197	-0.005	210768	5.7	4	11.495	-0.052	272905	31.1	
Aroclor-1262	5	11.276	0.001	216848	5.3	5	12.374	0.027	123637	14.7	
Total CollAve (5 peaks):				10.9		Total Col2Ave (5 peaks):				12.4	RPD = 13
Corrected Ave (4 peaks):				5.8		Corrected Ave (4 peaks):				7.7	RPD = 29
Aroclor-1268	1	11.197	-0.006	210768	2.1	1	11.495	-0.052	272905	12.3	

Aroclor-1268 2	11.276	0.001	216848	2.3	2	11.602	-0.011	32797	1.5
Aroclor-1268 3	11.722	0.061	885204	10.5	3	12.071	0.059	46945	2.6
Aroclor-1268 4	---			0.0	4	12.926	0.092	24241	0.5
Total Col1Ave (3 peaks):			5.0	Total Col2Ave (4 peaks):			4.2	RPD = 16	
Corrected Ave: < 3 Peaks				Corrected Ave (3 peaks):			1.5		

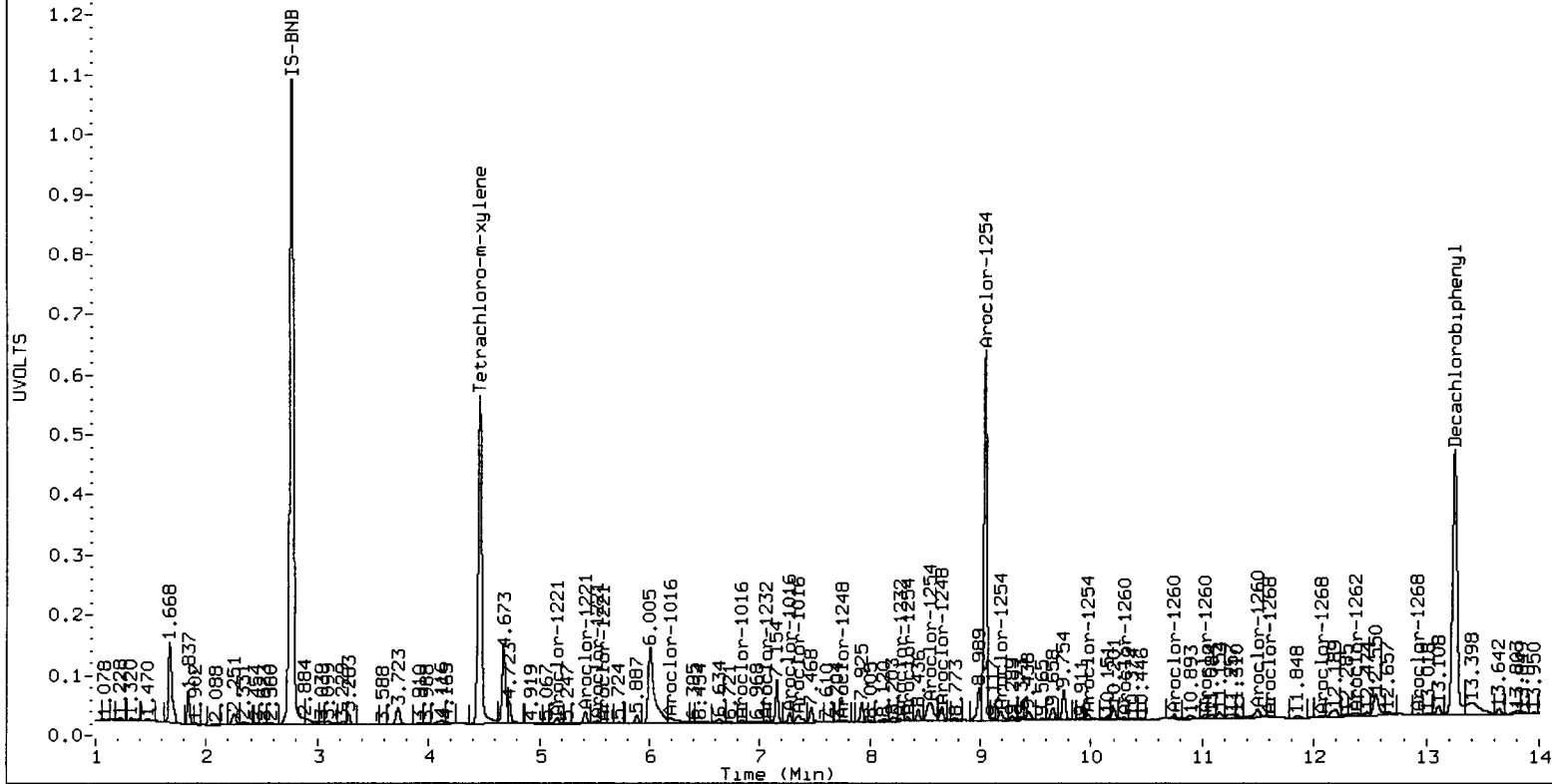
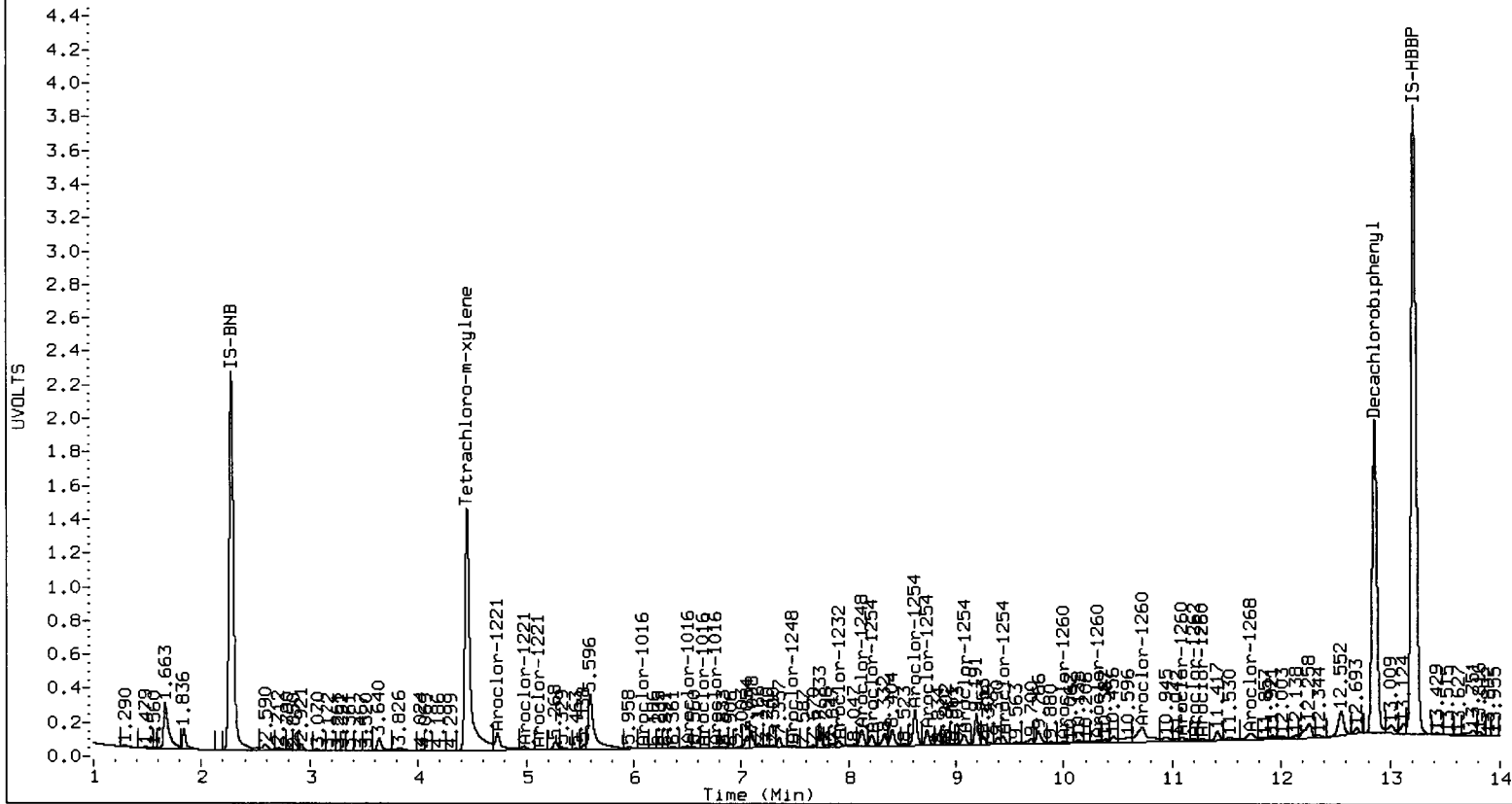
Total PCB Area Col1 (4.549 - 12.758) = 50139303      Col1 Total PCB = 0.1 ppm\*

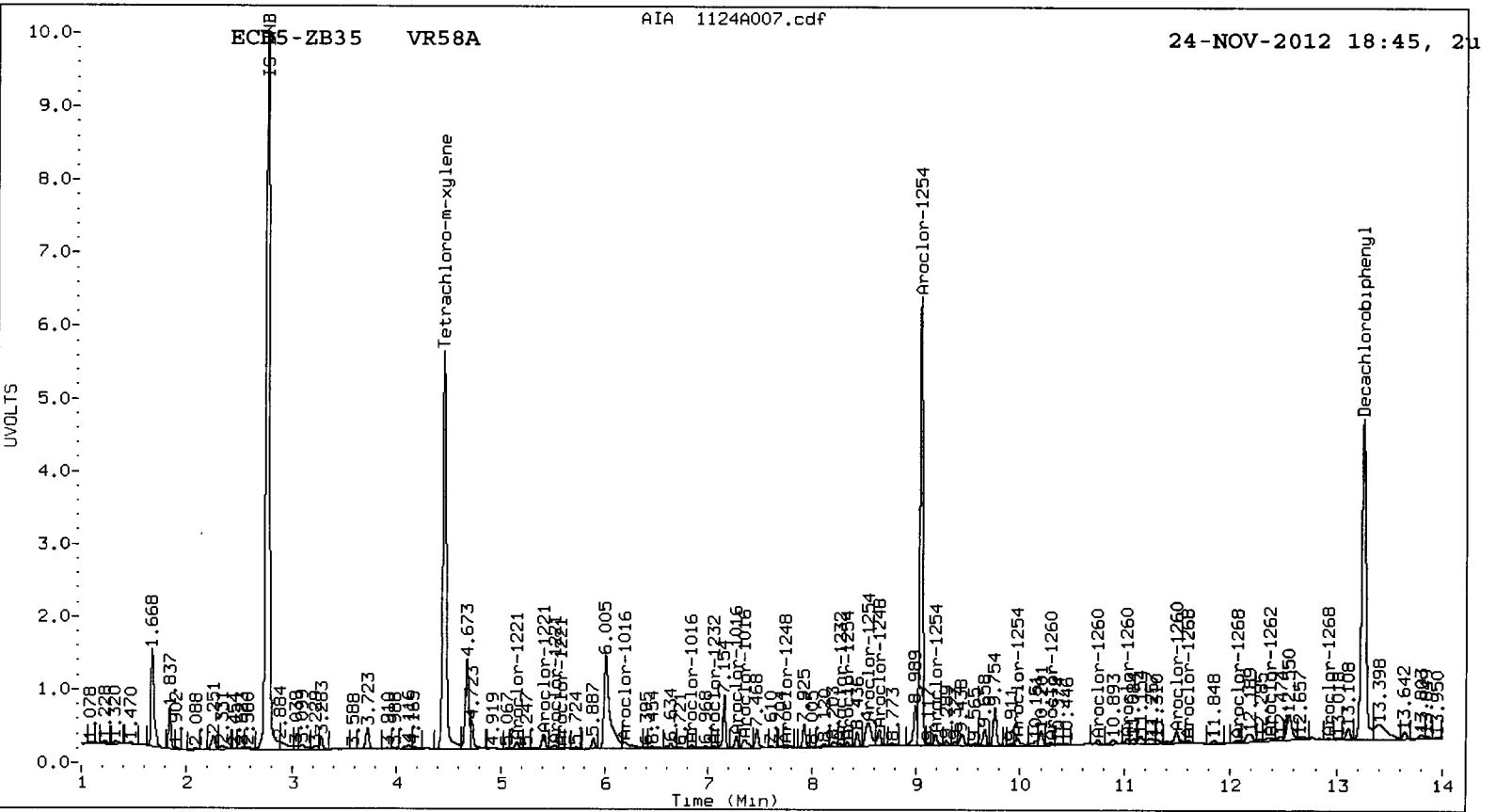
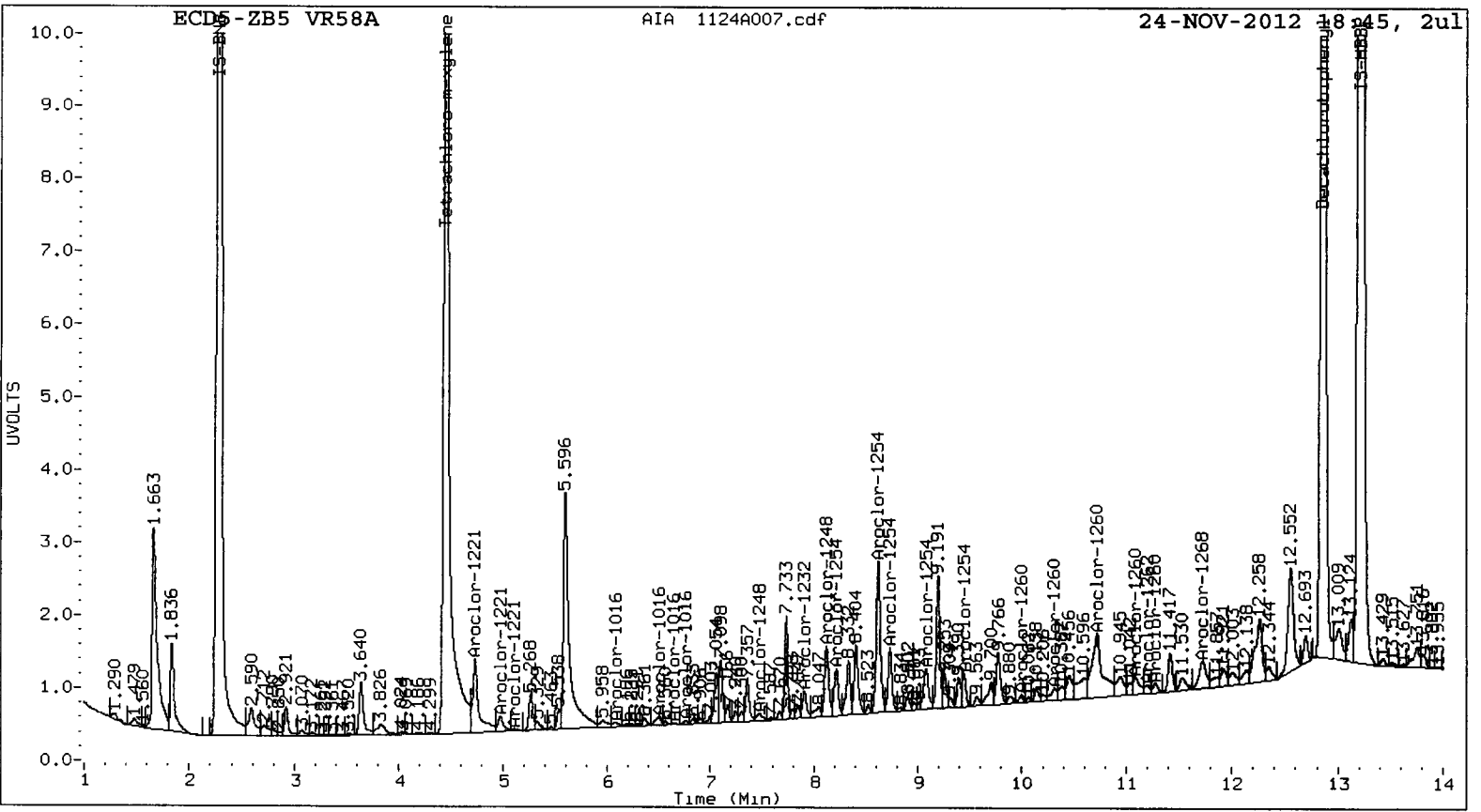
Total PCB Area Col2 (4.556 - 13.149) = 19572024      Col2 Total PCB = 0.2 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

URS 02266





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A008.d  
Data file 2: 20121102.B/1124-2.b/1124A008.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58B  
Client ID: SG-11-S-E-121107  
Injection Date: 24-NOV-2012 19:05  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	20934599	4.456	0.000	6118789	31.6	35.2	10.7	Tetrachloro-m-xylene
12.857	-0.001	23603613	13.247	-0.002	7260156	27.0	43.6	47.0*	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	79.1	88.0
Decachlorobiphenyl	67.6	109.0

*A 11/26/12*

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	31692925	1.4
Hexabromobiphenyl	64198300	57970825	-9.7

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	12197488	-16.1
Hexabromobiphenyl	15789428	12249194	-22.4

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012  
<- 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	6.063	-0.033	702133	39.6	1	6.190	-0.019	279811	41.0	
Aroclor-1016	2	6.501	0.001	706445	12.8	2	6.834	-0.009	88167	6.1	
Aroclor-1016	3	6.658	0.008	247331	10.4	3	7.272	0.045	937981	249.4	
Aroclor-1016	4	6.767	0.006	278620	16.3	4	7.368	0.031	359025	84.9	
Total CollAve (4 peaks):				19.8		Total Col2Ave (4 peaks):				95.3	RPD = 131*
Corrected Ave (3 peaks):				13.2		Corrected Ave (3 peaks):				44.0	RPD = 108*
Aroclor-1221	1	4.730	-0.087	1865596	241.2	1	5.159	0.018	601148	290.9	
Aroclor-1221	2	4.982	-0.013	492188	92.9	2	5.414	0.022	510192	419.2	
Aroclor-1221	3	5.118	0.017	69050	4.0	3	5.528	0.021	224902	58.8	
Aroclor-1221	NS	---	---	---	---	4	---	---	---	0.0	
Total CollAve (3 peaks):				112.7		Total Col2Ave (3 peaks):				256.3	RPD = 78*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks					
Aroclor-1232	1	6.063	-0.030	702133	97.3	1	6.190	-0.020	279811	92.4	
Aroclor-1232	2	6.501	0.004	706445	31.3	2	6.834	-0.007	88167	14.8	
Aroclor-1232	3	6.658	0.011	247331	25.1	3	7.060	0.010	95548	38.3	
Aroclor-1232	4	7.908	0.008	940495	76.2	4	8.341	0.065	200665	94.8	
Total CollAve (4 peaks):				57.5		Total Col2Ave (4 peaks):				60.1	RPD = 4
Corrected Ave (3 peaks):				44.2		Corrected Ave (3 peaks):				48.5	RPD = 9
Aroclor-1242	1	6.063	-0.033	702133	50.9	1	6.190	-0.020	279811	53.7	
Aroclor-1242	2	6.501	0.001	706445	16.5	2	6.834	-0.009	88167	8.0	
Aroclor-1242	3	6.658	0.008	247331	13.3	3	7.060	0.009	95548	20.7	
Aroclor-1242	4	7.908	0.006	940495	43.2	4	8.212	-0.065	501357	129.2	
Total CollAve (4 peaks):				31.0		Total Col2Ave (4 peaks):				52.9	RPD = 52*
Corrected Ave (3 peaks):				24.4		Corrected Ave (3 peaks):				27.5	RPD = 12
Aroclor-1248	1	6.501	0.004	706445	25.3	1	6.834	-0.006	88167	12.2	
Aroclor-1248	2	7.471	-0.003	344772	11.7	2	7.772	0.026	134945	22.5	
Aroclor-1248	3	7.908	0.007	940495	25.3	3	8.212	-0.064	501357	80.8	
Aroclor-1248	4	8.122	-0.015	3609434	126.1	4	8.650	0.028	611832	79.7	
Total CollAve (4 peaks):				47.1		Total Col2Ave (4 peaks):				48.8	RPD = 3
Corrected Ave (3 peaks):				20.8		Corrected Ave (3 peaks):				38.1	RPD = 59*
Aroclor-1254	1	8.215	-0.010	2140417	56.6	1	8.341	-0.001	200665	37.9	
Aroclor-1254	2	8.619	0.023	7386619	296.9	2	8.541	0.026	1650080	246.7	
Aroclor-1254	3	8.730	-0.001	2569052	53.1	3	9.044	0.006	1908945	371.5	
Aroclor-1254	4	9.076	-0.004	1822687	34.4	4	9.186	-0.002	434804	38.6	
Aroclor-1254	5	9.440	-0.001	1214524	36.5	5	9.972	0.001	313624	46.2	
Total CollAve (5 peaks):				85.5		Total Col2Ave (5 peaks):				148.2	RPD = 43*
Corrected Ave (4 peaks):				45.2		Corrected Ave (4 peaks):				92.3	RPD = 69*
Aroclor-1260	1	9.995	-0.003	357622	10.6	1	10.306	0.005	206097	31.5	
Aroclor-1260	2	10.312	-0.002	469385	13.9	2	10.748	-0.005	276863	34.5	
Aroclor-1260	3	10.722	0.034	5004213	62.3	3	11.028	0.001	396124	24.8	
Aroclor-1260	4	11.089	0.001	993015	21.6	4	11.496	-0.051	865682	179.9	
Aroclor-1260	5	11.274	-0.003	645723	28.9	NS	---	---	---	---	
Total CollAve (5 peaks):				77.5		Total Col2Ave (4 peaks):				67.7	RPD = 85*
Corrected Ave (4 peaks):				18.7		Corrected Ave (3 peaks):				30.3	RPD = 47*
Aroclor-1262	1	9.995	-0.001	357622	7.1	1	10.306	0.004	206097	19.3	
Aroclor-1262	2	10.312	0.000	469385	12.3	2	10.748	-0.005	276863	29.2	
Aroclor-1262	3	10.722	0.036	5004213	50.4	3	11.028	0.003	396124	19.0	
Aroclor-1262	4	11.203	0.001	422643	11.3	4	11.496	-0.051	865682	102.7	
Aroclor-1262	5	11.274	-0.001	645723	15.7	5	12.380	0.034	322449	39.8	
Total CollAve (5 peaks):				19.4		Total Col2Ave (5 peaks):				42.0	RPD = 74*
Corrected Ave (4 peaks):				11.6		Corrected Ave (4 peaks):				26.8	RPD = 79*
Aroclor-1268	1	11.203	0.000	422643	4.2	1	11.496	-0.051	865682	40.7	

Aroclor-1268 2	11.274	-0.001	645723	6.7	2	11.606	-0.008	220414	10.7
Aroclor-1268 3	11.720	0.059	6582652	77.4	3	11.981	-0.030	80064	4.6
Aroclor-1268 4	12.454	0.005	120140	0.5	4	---			0.0
Total Col1Ave (4 peaks):			22.2	Total Col2Ave (3 peaks):			18.7	RPD = 17	
Corrected Ave (3 peaks):			3.8	Corrected Ave: < 3 Peaks					

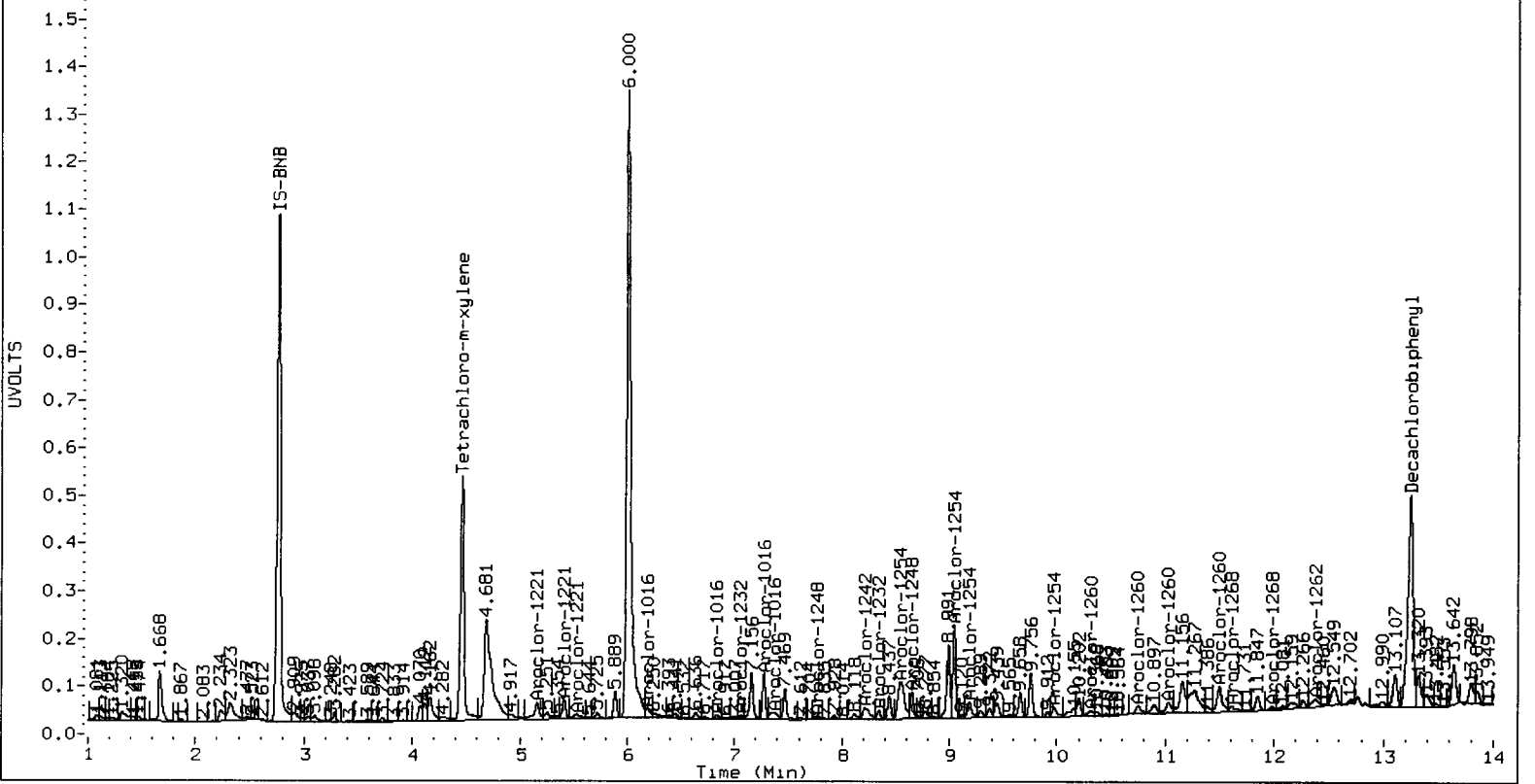
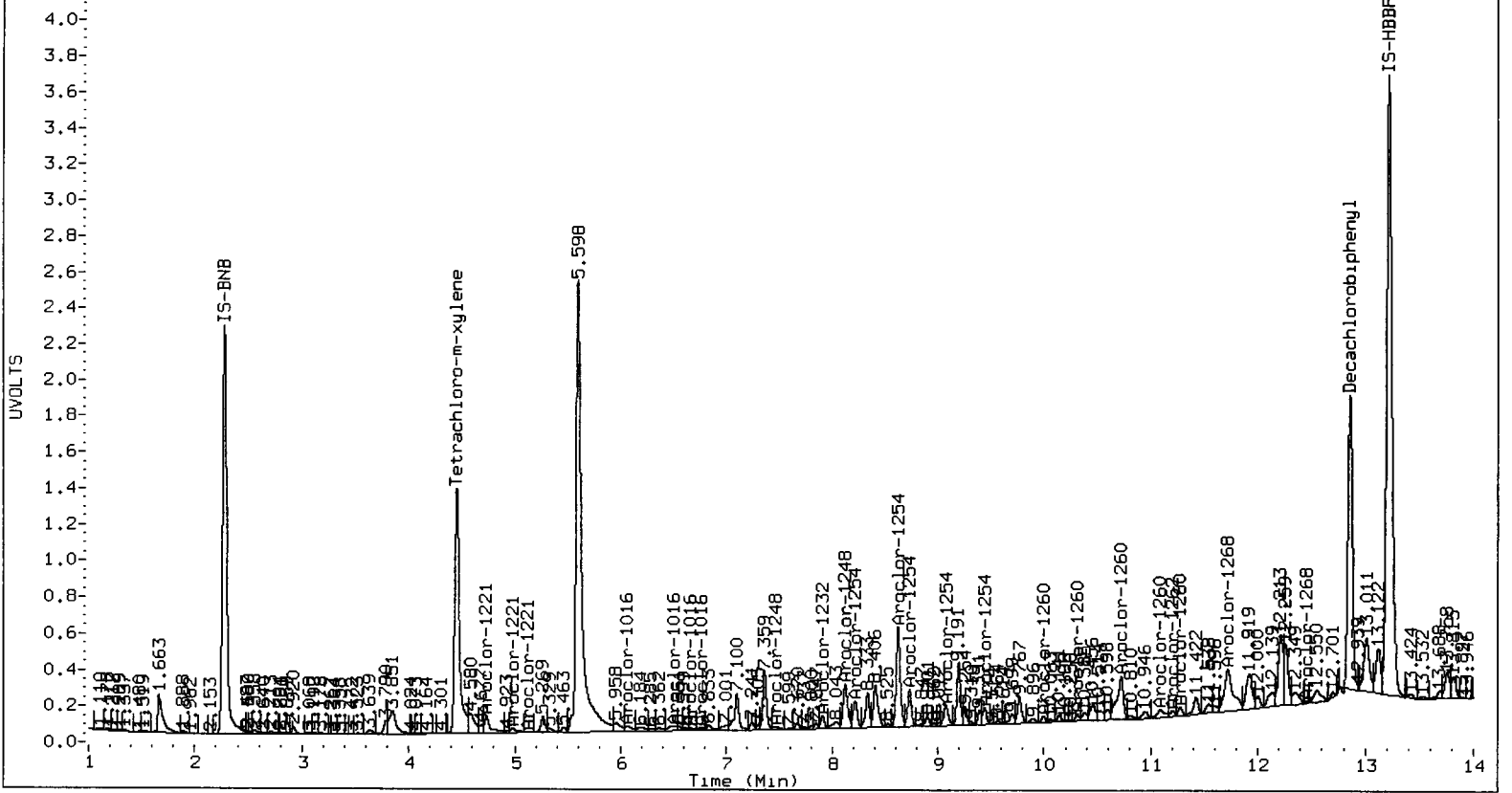
Total PCB Area Col1 (4.549 - 12.758) = 150996561      Col1 Total PCB = 0.3 ppm\*

Total PCB Area Col2 (4.556 - 13.149) = 51028750      Col2 Total PCB = 0.5 ppm\*

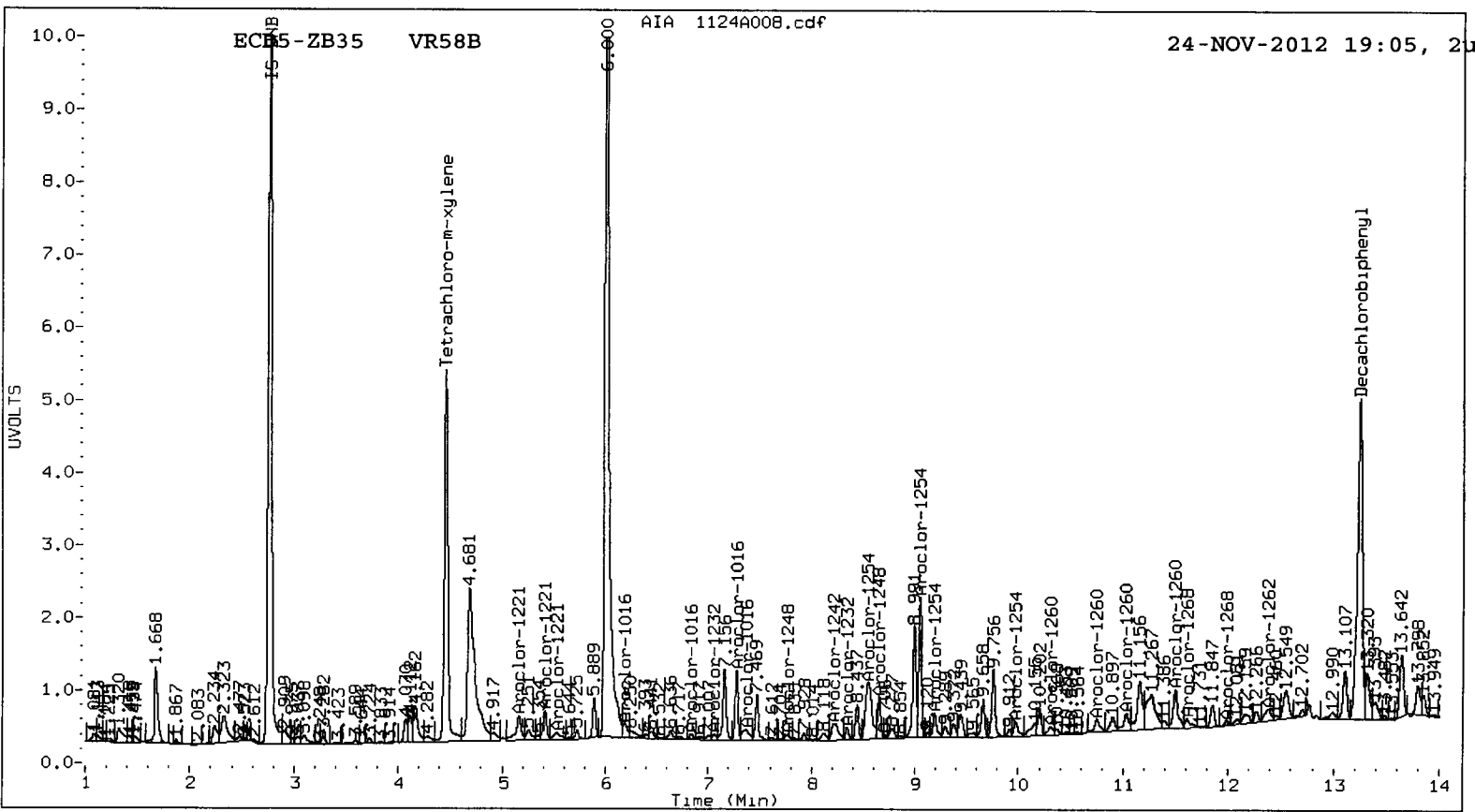
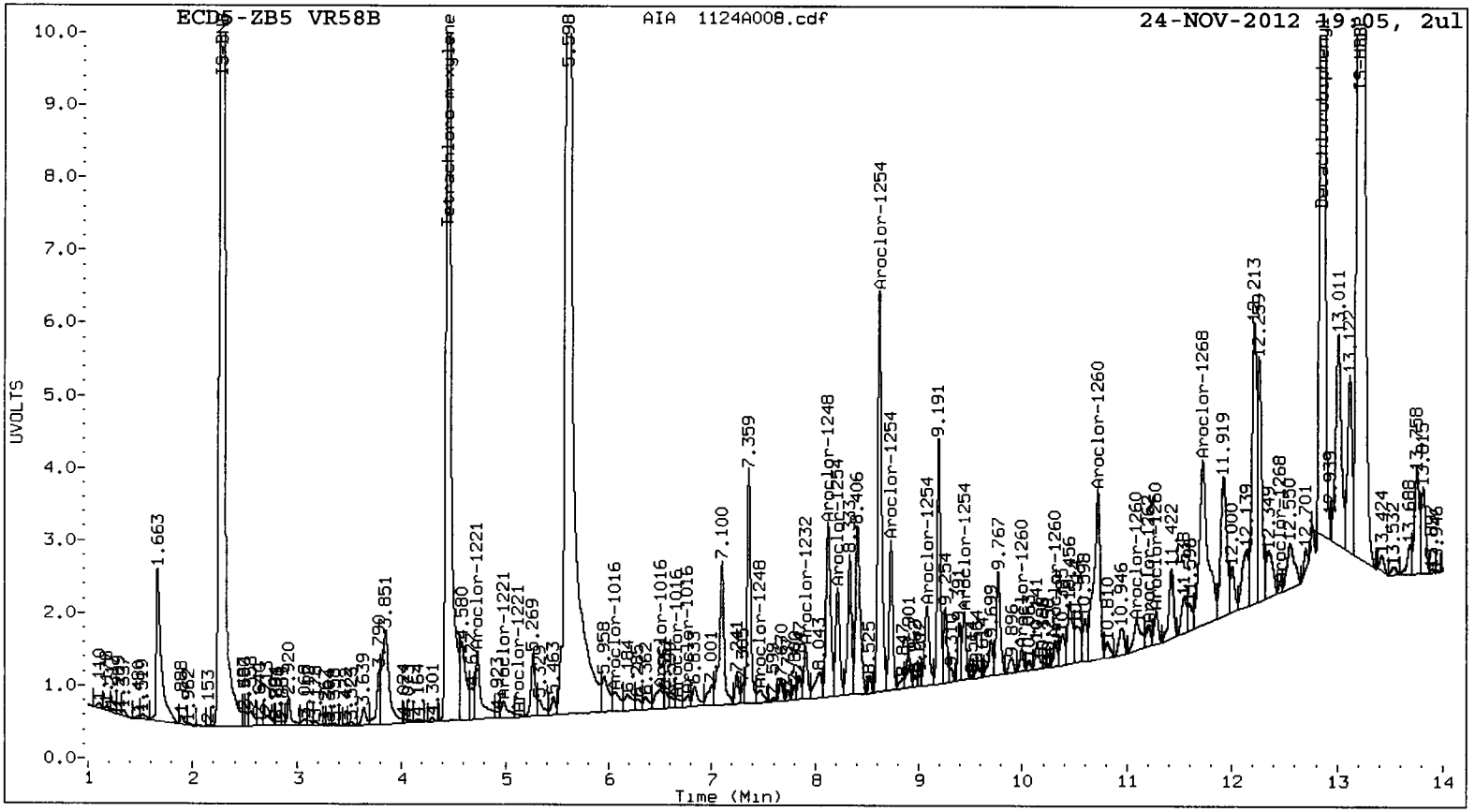
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58 : 02271







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A009.d  
Data file 2: 20121102.B/1124-2.b/1124A009.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58C  
Client ID: SG-12-S-E-121107  
Injection Date: 24-NOV-2012 19:25  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.447	-0.002	21226565	4.455	-0.001	6224087	31.4	35.2	11.5	Tetrachloro-m-xylene
12.857	-0.001	24872659	13.236	-0.012	5414277	29.3	32.4	10.3	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	78.5	88.1
Decachlorobiphenyl	73.2	81.1

*PK 11/26/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	32355475	3.6
Hexabromobiphenyl	64198300	56395505	-12.2

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	12389319	-14.8
Hexabromobiphenyl	15789428	12283962	-22.2

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.066	-0.030	276525	15.3	1	6.191	-0.019	167256	24.1
Aroclor-1016	2	6.531	0.030	1374560	24.4	2	6.830	-0.012	332923	22.7
Aroclor-1016	3	6.673	0.023	329326	13.5	3	7.270	0.044	241142	63.1
Aroclor-1016	4	6.768	0.007	156726	9.0	4	7.352	0.016	209516	48.8
Total CollAve (4 peaks):				15.6		Total Col2Ave (4 peaks):				39.7 RPD = 87*
Corrected Ave (3 peaks):				12.6		Corrected Ave (3 peaks):				31.8 RPD = 87*
Aroclor-1221	1	4.729	-0.087	1864960	236.1	1	5.158	0.017	329342	156.9
Aroclor-1221	2	4.978	-0.017	341395	63.1	2	5.415	0.022	661179	534.8
Aroclor-1221	3	5.121	0.019	41844	2.4	3	5.524	0.017	95522	24.6
Aroclor-1221	NS	---	---	---	---	4	5.581	0.006	47618	71.0
Total CollAve (3 peaks):				100.5		Total Col2Ave (4 peaks):				196.8 RPD = 65*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				84.2
Aroclor-1232	1	6.066	-0.028	276525	37.5	1	6.191	-0.019	167256	54.4
Aroclor-1232	2	6.531	0.033	1374560	59.7	2	6.830	-0.010	332923	55.0
Aroclor-1232	3	6.673	0.026	329326	32.8	3	7.058	0.008	49587	19.6
Aroclor-1232	4	7.907	0.007	444289	35.3	4	8.273	-0.003	39271	18.3
Total CollAve (4 peaks):				41.3		Total Col2Ave (4 peaks):				36.8 RPD = 12
Corrected Ave (3 peaks):				35.2		Corrected Ave (3 peaks):				30.7 RPD = 13
Aroclor-1242	1	6.066	-0.031	276525	19.6	1	6.191	-0.019	167256	31.6
Aroclor-1242	2	6.531	0.030	1374560	31.5	2	6.830	-0.012	332923	29.6
Aroclor-1242	3	6.673	0.023	329326	17.4	3	7.058	0.007	49587	10.6
Aroclor-1242	4	7.907	0.005	444289	20.0	4	8.273	-0.003	39271	10.0
Total CollAve (4 peaks):				22.1		Total Col2Ave (4 peaks):				20.4 RPD = 8
Corrected Ave (3 peaks):				19.0		Corrected Ave (3 peaks):				16.7 RPD = 13
Aroclor-1248	1	6.531	0.034	1374560	48.2	1	6.830	-0.009	332923	45.3
Aroclor-1248	2	7.472	-0.002	171087	5.7	2	7.745	-0.001	78803	12.9
Aroclor-1248	3	7.907	0.006	444289	11.7	3	8.273	-0.002	39271	6.2
Aroclor-1248	4	8.118	-0.020	2198400	75.3	4	8.650	0.028	355674	45.6
Total CollAve (4 peaks):				35.2		Total Col2Ave (4 peaks):				27.5 RPD = 25
Corrected Ave (3 peaks):				21.9		Corrected Ave (3 peaks):				21.5 RPD = 2
Aroclor-1254	1	8.214	-0.011	1095215	28.4	1	8.340	-0.002	69840	13.0
Aroclor-1254	2	8.619	0.023	4427227	174.3	2	8.553	0.038	966007	142.2
Aroclor-1254	3	8.728	-0.003	1794121	36.3	3	9.043	0.005	726082	139.1
Aroclor-1254	4	9.077	-0.004	950741	17.6	4	9.186	-0.003	300616	26.3
Aroclor-1254	5	9.439	-0.002	665073	19.6	5	9.972	0.000	153502	22.3
Total CollAve (5 peaks):				55.2		Total Col2Ave (5 peaks):				88.6 RPD = 22
Corrected Ave (4 peaks):				28.5		Corrected Ave (4 peaks):				56.1 RPD = 65*
Aroclor-1260	1	9.995	-0.004	190594	5.8	1	10.301	0.000	115061	17.5
Aroclor-1260	2	10.315	0.000	345596	10.5	2	10.747	-0.006	140878	17.5
Aroclor-1260	3	10.721	0.033	1201218	15.4	3	11.025	-0.001	206717	12.9
Aroclor-1260	4	11.109	0.021	1040433	23.2	4	11.490	-0.058	426043	88.3
Aroclor-1260	5	11.275	0.002	389926	17.9	NS	---	---	---	---
Total CollAve (5 peaks):				14.6		Total Col2Ave (4 peaks):				34.1 RPD = 80*
Corrected Ave (4 peaks):				12.4		Corrected Ave (3 peaks):				16.0 RPD = 25
Aroclor-1262	1	9.995	-0.002	190594	3.9	1	10.301	-0.001	115061	10.7
Aroclor-1262	2	10.315	0.002	345596	9.3	2	10.747	-0.006	140878	14.8
Aroclor-1262	3	10.721	0.034	1201218	12.4	3	11.025	0.001	206717	9.9
Aroclor-1262	4	11.203	0.001	195298	5.4	4	11.490	-0.057	426043	50.4
Aroclor-1262	5	11.275	0.000	389926	9.8	5	12.384	0.038	292548	36.0
Total CollAve (5 peaks):				8.1		Total Col2Ave (5 peaks):				24.4 RPD = 100*
Corrected Ave (4 peaks):				7.1		Corrected Ave (4 peaks):				17.9 RPD = 87*
Aroclor-1268	1	11.203	0.000	195298	2.0	1	11.490	-0.058	426043	20.0

Aroclor-1268 2	11.275	0.001	389926	4.1	2	11.613	0.000	146134	7.0
Aroclor-1268 3	11.720	0.059	2475942	29.9	3	11.982	-0.030	67205	3.9
Aroclor-1268 4	12.452	0.004	138341	0.6	4	12.929	0.095	83138	1.6
Total Col1Ave (4 peaks):			9.2	Total Col2Ave (4 peaks):			8.1	RPD = 12	
Corrected Ave (3 peaks):			2.2	Corrected Ave (3 peaks):			4.2	RPD = 60*	

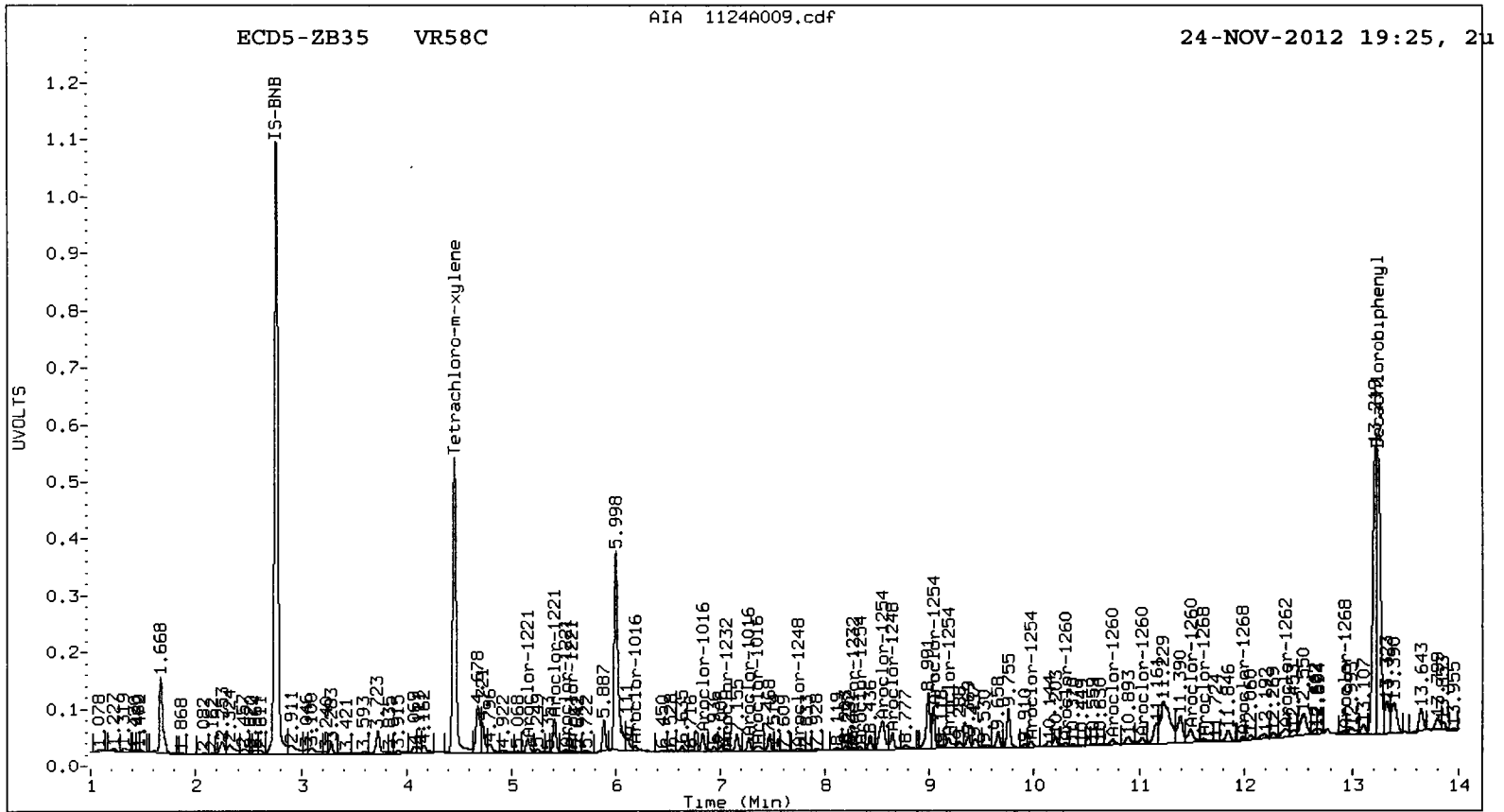
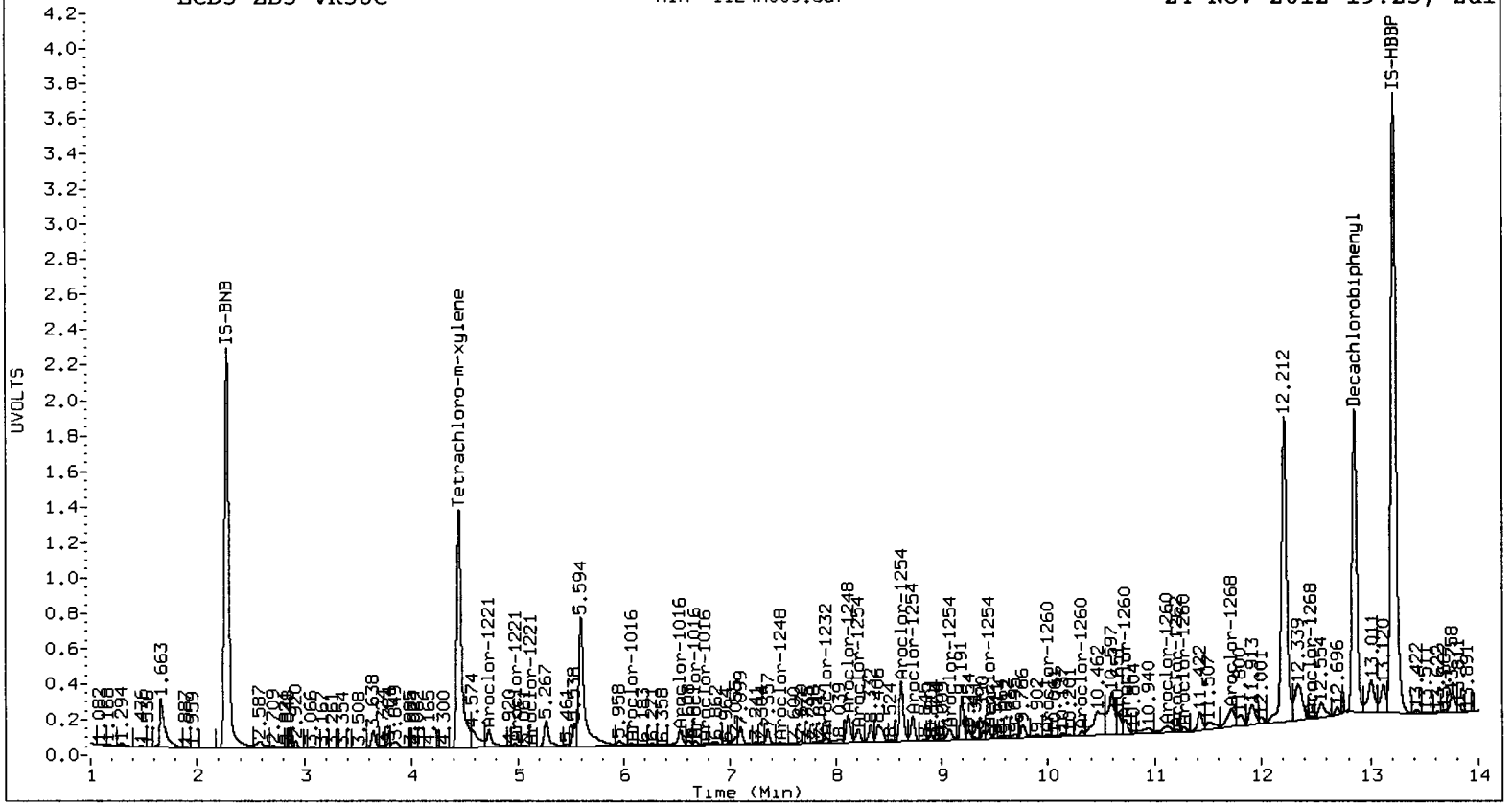
Total PCB Area Col1 (4.549 - 12.758) = 114359416      Col1 Total PCB = 0.2 ppm\*

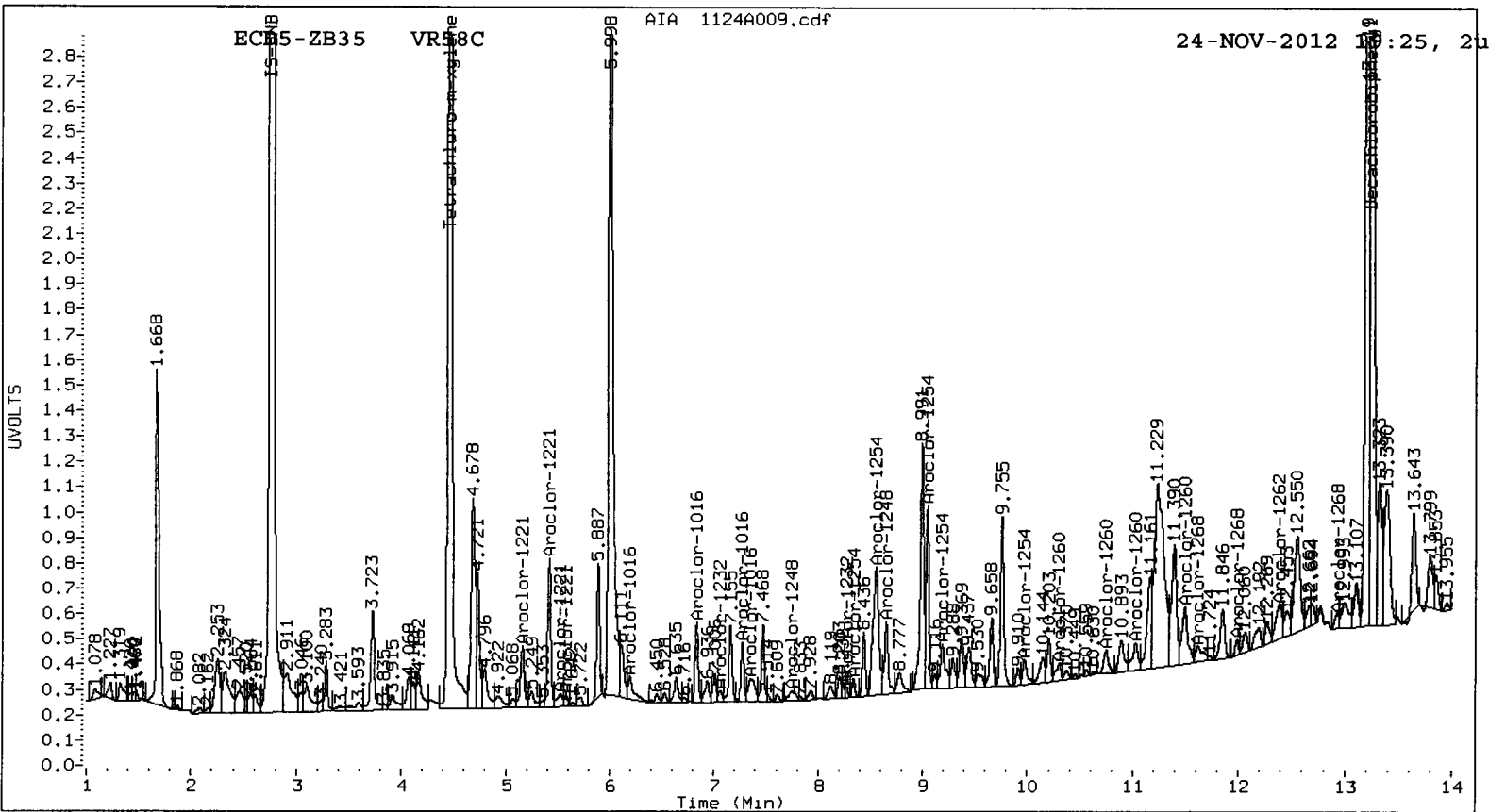
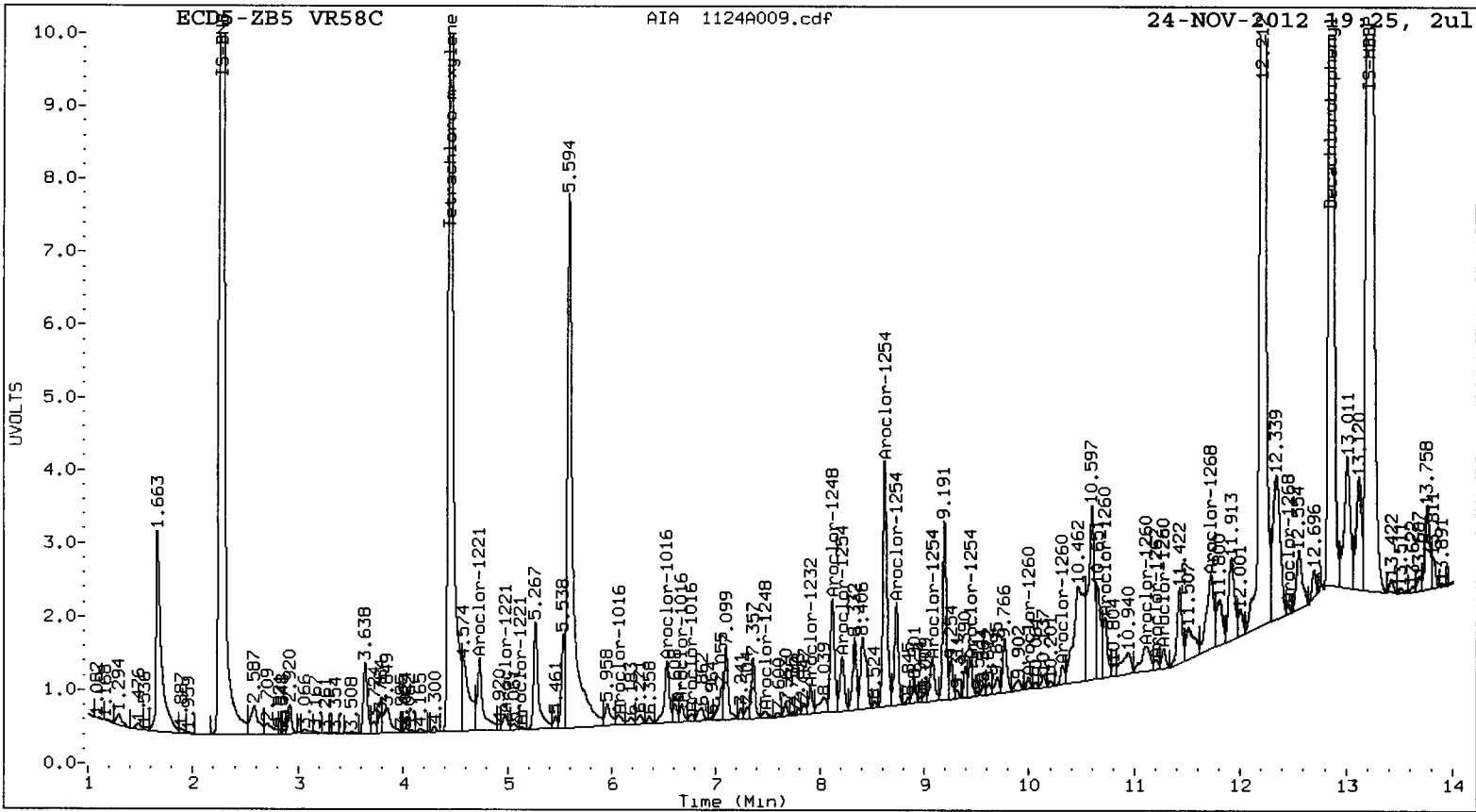
Total PCB Area Col2 (4.556 - 13.149) = 25737896      Col2 Total PCB = 0.2 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58 02276





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A010.d  
Data file 2: 20121102.B/1124-2.b/1124A010.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58D  
Client ID: SG-13-S-E-121107  
Injection Date: 24-NOV-2012 19:46  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	21986170	4.455	-0.001	5654868	32.8	31.3	4.6	Tetrachloro-m-xylene
12.857	-0.001	23062464	13.247	-0.002	5852734	26.7	35.6	28.5	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	82.0	78.3
Decachlorobiphenyl	66.8	89.1

*J 11/26/12*

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	32098055	2.7
Hexabromobiphenyl	64198300	57268908	-10.8

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	12659152	-12.9
Hexabromobiphenyl	15789428	12089064	-23.4

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.064	-0.032	468607	26.1	1	6.191	-0.019	207323	29.2	
Aroclor-1016	2	6.498	-0.002	411641	7.4	2	6.832	-0.011	70683	4.7	
Aroclor-1016	3	6.655	0.005	92756	3.8	3	7.270	0.044	223785	57.3	
Aroclor-1016	4	6.770	0.009	217568	12.6	4	7.345	0.008	246268	56.1	
Total CollAve (4 peaks):				12.5		Total Col2Ave (4 peaks):				36.8	RPD = 99*
Corrected Ave (3 peaks):				7.9		Corrected Ave (3 peaks):				30.0	RPD = 116*
Aroclor-1221	1	4.730	-0.087	1698216	216.7	1	5.158	0.017	247406	115.4	
Aroclor-1221	2	4.980	-0.015	397061	74.0	2	5.413	0.021	219816	174.0	
Aroclor-1221	3	5.127	0.026	68672	3.9	3	5.492	-0.015	42416	10.7	
Aroclor-1221	NS	---	---	---	---	4	5.525	-0.051	44553	65.0	
Total CollAve (3 peaks):				98.2		Total Col2Ave (4 peaks):				91.3	RPD = 7
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				63.7	
Aroclor-1232	1	6.064	-0.030	468607	64.1	1	6.191	-0.019	207323	66.0	
Aroclor-1232	2	6.498	0.001	411641	18.0	2	6.832	-0.009	70683	11.4	
Aroclor-1232	3	6.655	0.008	92756	9.3	3	7.058	0.008	37668	14.6	
Aroclor-1232	4	7.909	0.008	791688	63.4	4	8.271	-0.006	75311	34.3	
Total CollAve (4 peaks):				38.7		Total Col2Ave (4 peaks):				31.6	RPD = 20
Corrected Ave (3 peaks):				30.2		Corrected Ave (3 peaks):				20.1	RPD = 40*
Aroclor-1242	1	6.064	-0.032	468607	33.6	1	6.191	-0.019	207323	38.4	
Aroclor-1242	2	6.498	-0.002	411641	9.5	2	6.832	-0.010	70683	6.1	
Aroclor-1242	3	6.655	0.005	92756	4.9	3	7.058	0.006	37668	7.9	
Aroclor-1242	4	7.909	0.007	791688	35.9	4	8.271	-0.006	75311	18.7	
Total CollAve (4 peaks):				21.0		Total Col2Ave (4 peaks):				17.8	RPD = 17
Corrected Ave (3 peaks):				16.0		Corrected Ave (3 peaks):				10.9	RPD = 38
Aroclor-1248	1	6.498	0.002	411641	14.6	1	6.832	-0.008	70683	9.4	
Aroclor-1248	2	7.471	-0.002	278370	9.4	2	7.748	0.002	65865	10.6	
Aroclor-1248	3	7.909	0.007	791688	21.1	3	8.271	-0.005	75311	11.7	
Aroclor-1248	4	8.121	-0.016	2679795	92.5	4	8.605	-0.017	90371	11.3	
Total CollAve (4 peaks):				34.4		Total Col2Ave (4 peaks):				10.8	RPD = 105*
Corrected Ave (3 peaks):				15.0		Corrected Ave (3 peaks):				10.4	RPD = 36
Aroclor-1254	1	8.217	-0.007	1354042	35.3	1	8.340	-0.001	152258	27.7	
Aroclor-1254	2	8.619	0.022	4338427	172.2	2	8.549	0.034	914466	131.7	
Aroclor-1254	3	8.729	-0.002	2327485	47.5	3	9.043	0.005	7897776	1480.8	
Aroclor-1254	4	9.076	-0.004	1481701	27.6	4	9.187	-0.002	380717	32.5	
Aroclor-1254	5	9.439	-0.002	1017790	30.2	5	9.973	0.001	241518	34.3	
Total CollAve (5 peaks):				62.6		Total Col2Ave (5 peaks):				341.4	RPD = 138*
Corrected Ave (4 peaks):				35.2		Corrected Ave (4 peaks):				56.6	RPD = 47*
Aroclor-1260	1	9.996	-0.002	252819	7.6	1	10.303	0.001	111557	17.3	
Aroclor-1260	2	10.314	0.000	280353	8.4	2	10.748	-0.005	169789	21.4	
Aroclor-1260	3	10.718	0.030	1309902	16.5	3	11.026	0.000	222695	14.1	
Aroclor-1260	4	11.089	0.002	861727	19.0	4	11.492	-0.055	378270	79.7	
Aroclor-1260	5	11.274	-0.004	413539	18.7	NS	---	---	---	---	
Total CollAve (5 peaks):				14.0		Total Col2Ave (4 peaks):				33.1	RPD = 81*
Corrected Ave (4 peaks):				12.8		Corrected Ave (3 peaks):				17.6	RPD = 32
Aroclor-1262	1	9.996	0.000	252819	5.1	1	10.303	0.001	111557	10.6	
Aroclor-1262	2	10.314	0.002	280353	7.4	2	10.748	-0.005	169789	18.1	
Aroclor-1262	3	10.718	0.031	1309902	13.4	3	11.026	0.002	222695	10.8	
Aroclor-1262	4	11.203	0.001	201931	5.5	4	11.492	-0.055	378270	45.5	
Aroclor-1262	5	11.274	-0.002	413539	10.2	5	12.391	0.044	419879	52.5	
Total CollAve (5 peaks):				8.3		Total Col2Ave (5 peaks):				27.5	RPD = 107*
Corrected Ave (4 peaks):				7.0		Corrected Ave (4 peaks):				21.3	RPD = 100*
Aroclor-1268	1	11.203	0.000	201931	2.0	1	11.492	-0.055	378270	18.0	



Aroclor-1268 2	11.274	-0.001	413539	4.3	2	11.607	-0.007	100560	4.9
Aroclor-1268 3	11.719	0.058	2014885	24.0	3	11.982	-0.030	85211	5.0
Aroclor-1268 4	12.452	0.003	131738	0.5	4	12.926	0.092	79921	1.6
Total Col1Ave (4 peaks):			7.7	Total Col2Ave (4 peaks):			7.4	RPD = 5	
Corrected Ave (3 peaks):			2.3	Corrected Ave (3 peaks):			3.8	RPD = 50*	

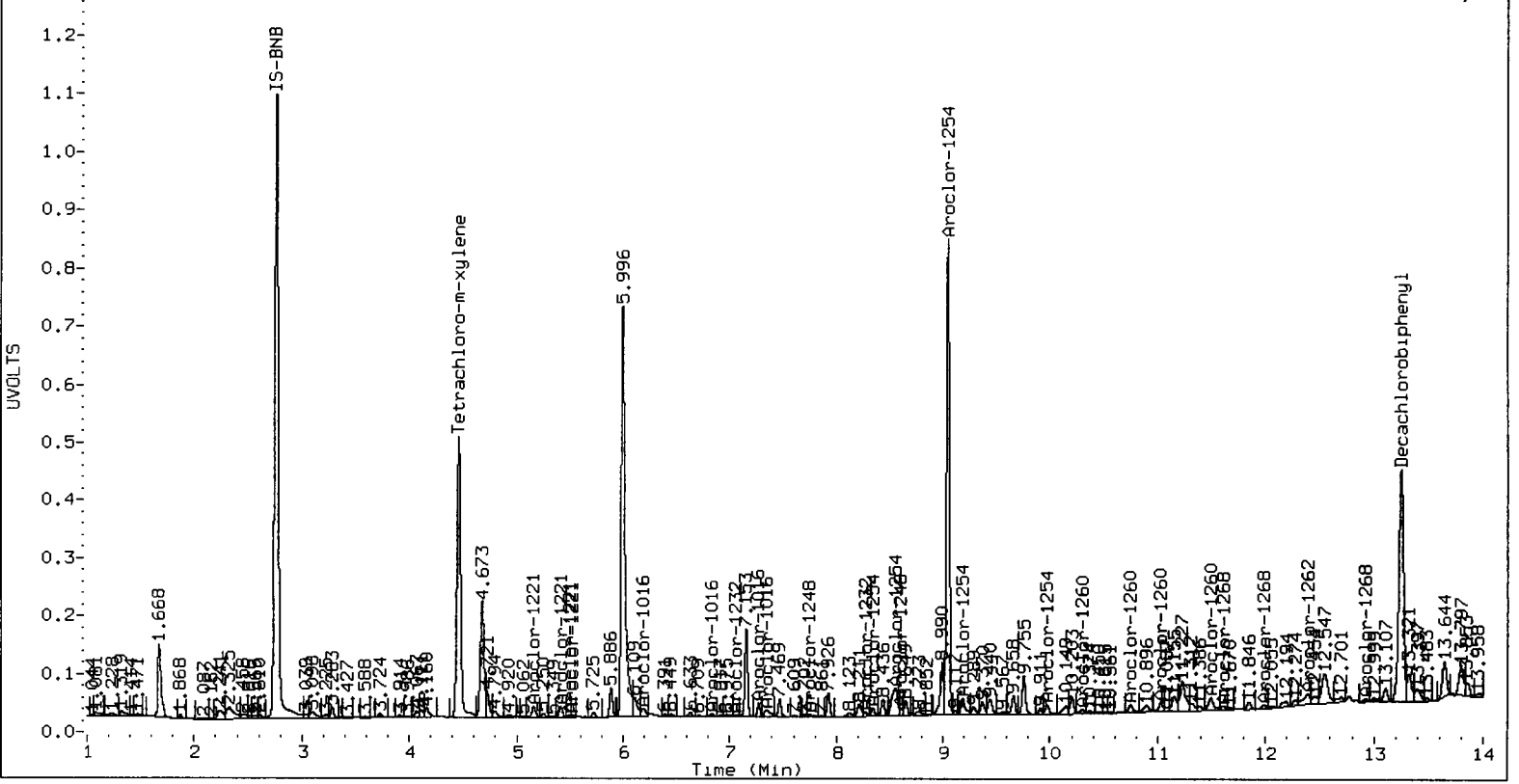
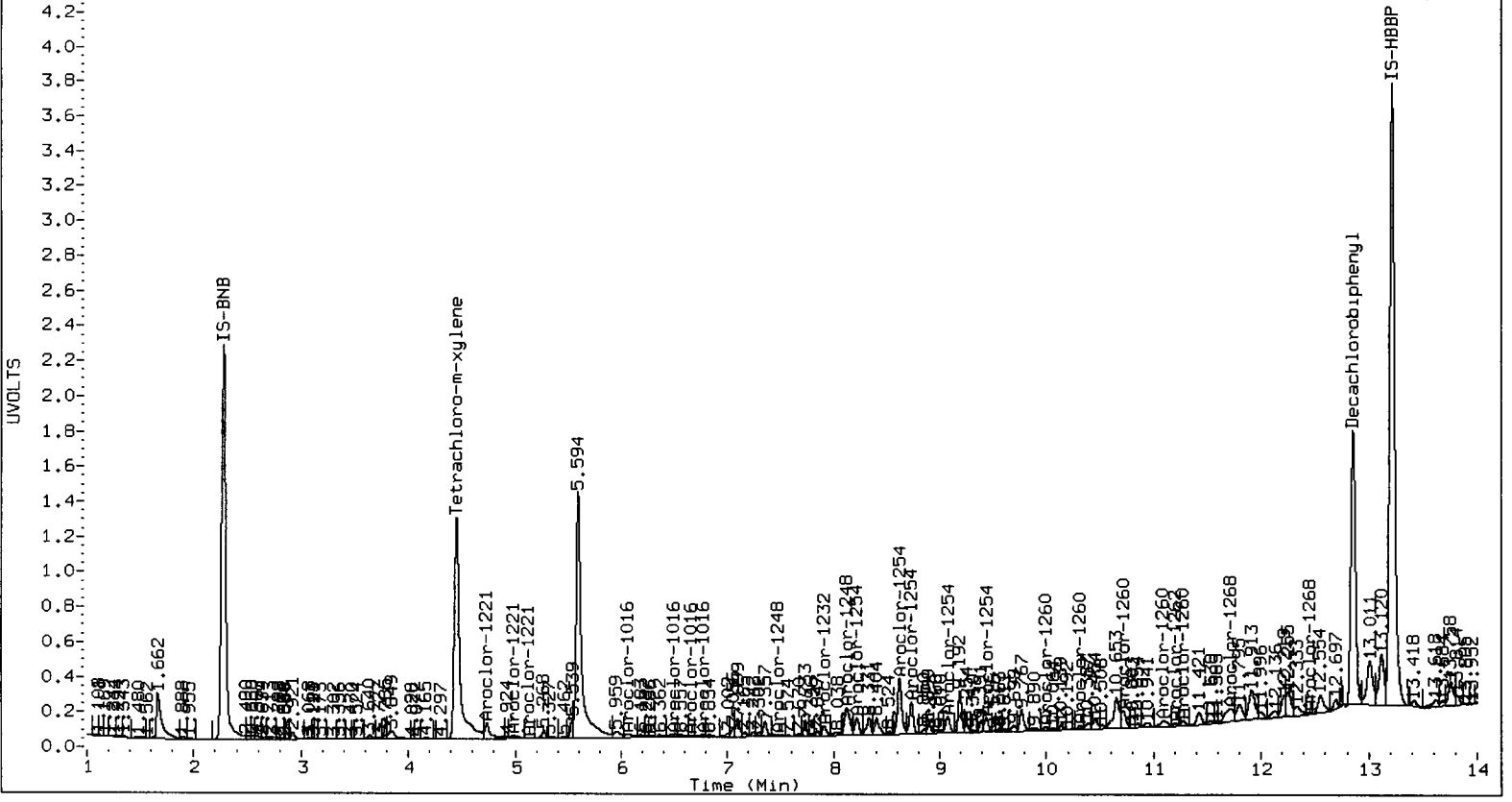
Total PCB Area Col1 (4.549 - 12.758) = 91668648      Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (4.556 - 13.149) = 37503226      Col2 Total PCB = 0.3 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58 02281





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A011.d  
Data file 2: 20121102.B/1124-2.b/1124A011.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58E  
Client ID: SG-13-S-E-dup-12110  
Injection Date: 24-NOV-2012 20:06  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	23376754	4.456	0.000	5909681	34.5	33.1	4.1	Tetrachloro-m-xylene
12.858	0.000	23941837	13.248	-0.001	5964399	27.5	36.0	26.7	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	86.3	82.8
Decachlorobiphenyl	68.7	89.9

*A 11/26/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	32438437	3.8
Hexabromobiphenyl	64198300	57844569	-9.9

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	12514514	-13.9
Hexabromobiphenyl	15789428	12209536	-22.7

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.063	-0.033	872871	48.1	1	6.191	-0.019	395381	56.4	
Aroclor-1016	2	6.499	-0.002	741882	13.1	2	6.830	-0.012	68960	4.6	
Aroclor-1016	3	6.646	-0.004	256361	10.5	3	7.271	0.044	466530	120.9	
Aroclor-1016	4	6.773	0.012	441901	25.3	4	7.355	0.018	220823	50.9	
Total CollAve (4 peaks):				24.3	Total Col2Ave (4 peaks):				58.2	RPD = 82*	
Corrected Ave (3 peaks):				16.3	Corrected Ave (3 peaks):				37.3	RPD = 78*	
Aroclor-1221	1	4.873	0.056	458443	57.9	1	5.158	0.017	307302	144.9	
Aroclor-1221	2	4.980	-0.015	869993	160.4	2	5.414	0.021	224310	179.6	
Aroclor-1221	3	5.115	0.014	448183	25.4	3	5.524	0.018	106169	27.0	
Aroclor-1221	NS	---	---	---	---	4	5.572	-0.003	32222	47.6	
Total CollAve (3 peaks):				81.2	Total Col2Ave (4 peaks):				99.8	RPD = 20	
Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				73.2		
Aroclor-1232	1	6.063	-0.031	872871	118.1	1	6.191	-0.019	395381	127.3	
Aroclor-1232	2	6.499	0.001	741882	32.1	2	6.830	-0.010	68960	11.3	
Aroclor-1232	3	6.646	-0.001	256361	25.4	3	7.057	0.007	41265	16.1	
Aroclor-1232	4	7.908	0.007	561364	44.5	4	8.231	-0.045	143261	66.0	
Total CollAve (4 peaks):				55.0	Total Col2Ave (4 peaks):				55.2	RPD = 0	
Corrected Ave (3 peaks):				34.0	Corrected Ave (3 peaks):				41.1	RPD = 9	
Aroclor-1242	1	6.063	-0.033	872871	61.9	1	6.191	-0.019	395381	74.0	
Aroclor-1242	2	6.499	-0.002	741882	17.0	2	6.830	-0.012	68960	6.1	
Aroclor-1242	3	6.646	-0.004	256361	13.5	3	7.057	0.005	41265	8.7	
Aroclor-1242	4	7.908	0.006	561364	25.2	4	8.231	-0.046	143261	36.0	
Total CollAve (4 peaks):				29.4	Total Col2Ave (4 peaks):				31.2	RPD = 6	
Corrected Ave (3 peaks):				18.6	Corrected Ave (3 peaks):				16.9	RPD = 9	
Aroclor-1248	1	6.499	0.002	741882	26.0	1	6.830	-0.010	68960	9.3	
Aroclor-1248	2	7.470	-0.004	287785	9.6	2	7.751	0.005	42463	6.9	
Aroclor-1248	3	7.908	0.006	561364	14.8	3	8.231	-0.045	143261	22.5	
Aroclor-1248	4	8.120	-0.017	2369994	80.9	4	8.648	0.027	268231	34.1	
Total CollAve (4 peaks):				32.8	Total Col2Ave (4 peaks):				18.2	RPD = 57*	
Corrected Ave (3 peaks):				16.8	Corrected Ave (3 peaks):				12.9	RPD = 26	
Aroclor-1254	1	8.216	-0.009	1027759	26.5	1	8.340	-0.001	69808	12.8	
Aroclor-1254	2	8.620	0.024	5435180	213.5	2	8.551	0.036	887377	129.3	
Aroclor-1254	3	8.729	-0.003	1895953	38.3	3	9.046	0.007	561664	106.5	
Aroclor-1254	4	9.075	-0.005	1007280	18.6	4	9.187	-0.002	240094	20.8	
Aroclor-1254	5	9.439	-0.003	718634	21.1	5	9.973	0.001	129434	18.6	
Total CollAve (5 peaks):				63.6	Total Col2Ave (5 peaks):				87.6	RPD = 10	
Corrected Ave (4 peaks):				36.1	Corrected Ave (4 peaks):				39.7	RPD = 41*	
Aroclor-1260	1	9.995	-0.003	271332	8.1	1	10.302	0.001	112051	17.2	
Aroclor-1260	2	10.312	-0.003	272895	8.1	2	10.745	-0.007	113716	14.2	
Aroclor-1260	3	10.720	0.032	1404581	17.5	3	11.026	0.000	308508	19.4	
Aroclor-1260	4	11.131	0.043	1088801	23.7	4	11.495	-0.052	543839	113.4	
Aroclor-1260	5	11.274	-0.003	448369	20.1	NS	---	---	---	---	
Total CollAve (5 peaks):				15.5	Total Col2Ave (4 peaks):				41.0	RPD = 90*	
Corrected Ave (4 peaks):				13.4	Corrected Ave (3 peaks):				16.9	RPD = 23	
Aroclor-1262	1	9.995	-0.001	271332	5.4	1	10.302	0.001	112051	10.5	
Aroclor-1262	2	10.312	0.000	272895	7.1	2	10.745	-0.007	113716	12.0	
Aroclor-1262	3	10.720	0.034	1404581	14.2	3	11.026	0.002	308508	14.9	
Aroclor-1262	4	11.200	-0.002	297463	8.0	4	11.495	-0.052	543839	64.7	
Aroclor-1262	5	11.274	-0.001	448369	10.9	5	12.392	0.045	335412	41.5	
Total CollAve (5 peaks):				9.1	Total Col2Ave (5 peaks):				28.7	RPD = 104*	
Corrected Ave (4 peaks):				7.9	Corrected Ave (4 peaks):				19.7	RPD = 86*	
Aroclor-1268	1	11.200	-0.003	297463	3.0	1	11.495	-0.052	543839	25.6	

Aroclor-1268 2	11.274	-0.001	448369	4.6	2	11.604	-0.009	95755	4.6
Aroclor-1268 3	11.719	0.058	2798471	33.0	3	11.981	-0.031	85965	5.0
Aroclor-1268 4	12.449	0.000	182027	0.8	4	12.929	0.095	46576	0.9
Total Col1Ave (4 peaks):			10.3	Total Col2Ave (4 peaks):			9.0	RPD = 13	
Corrected Ave (3 peaks):			2.8	Corrected Ave (3 peaks):			3.5	RPD = 23	

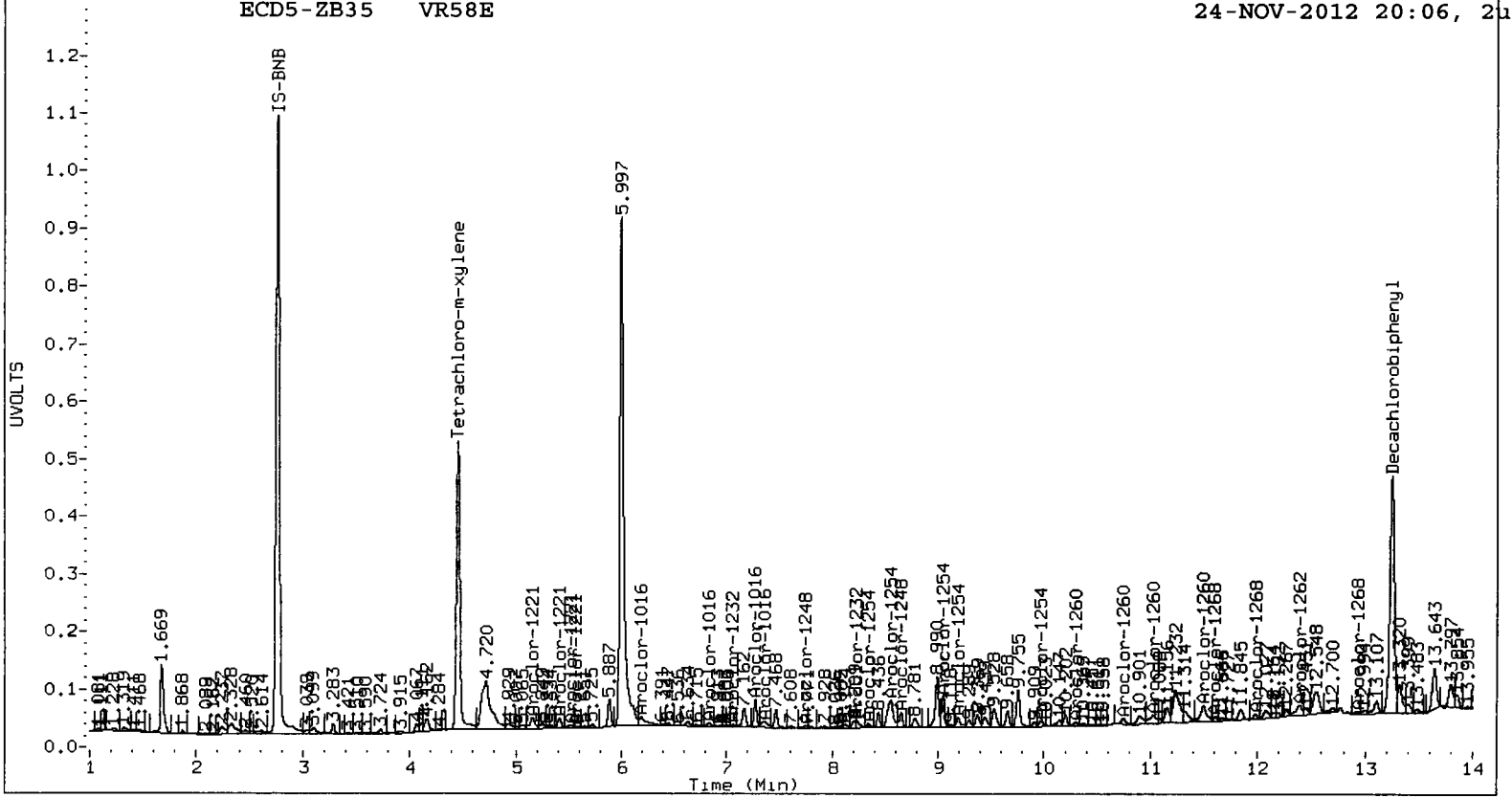
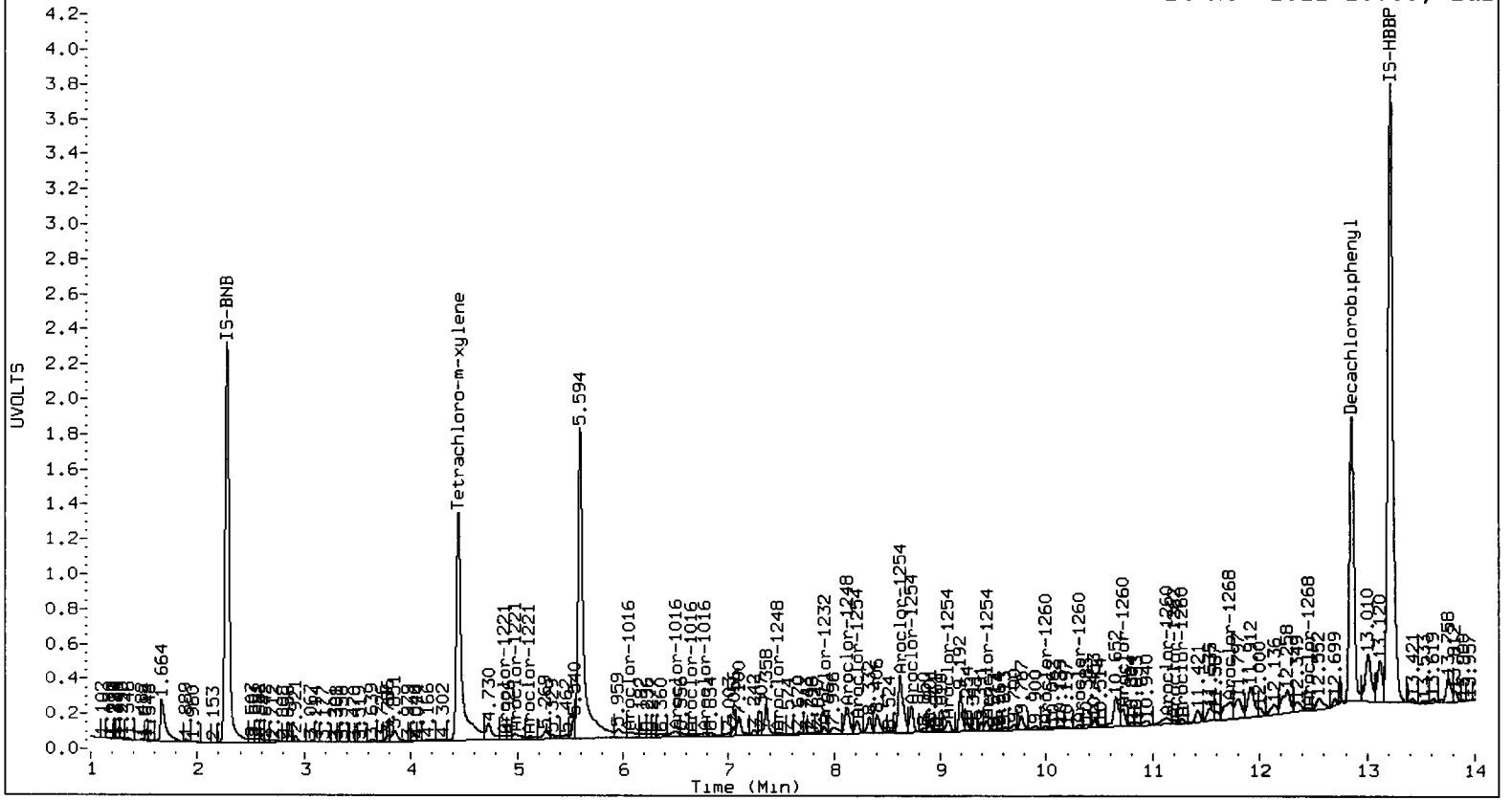
Total PCB Area Col1 (4.549 - 12.758) = 105525271      Col1 Total PCB = 0.2 ppm\*

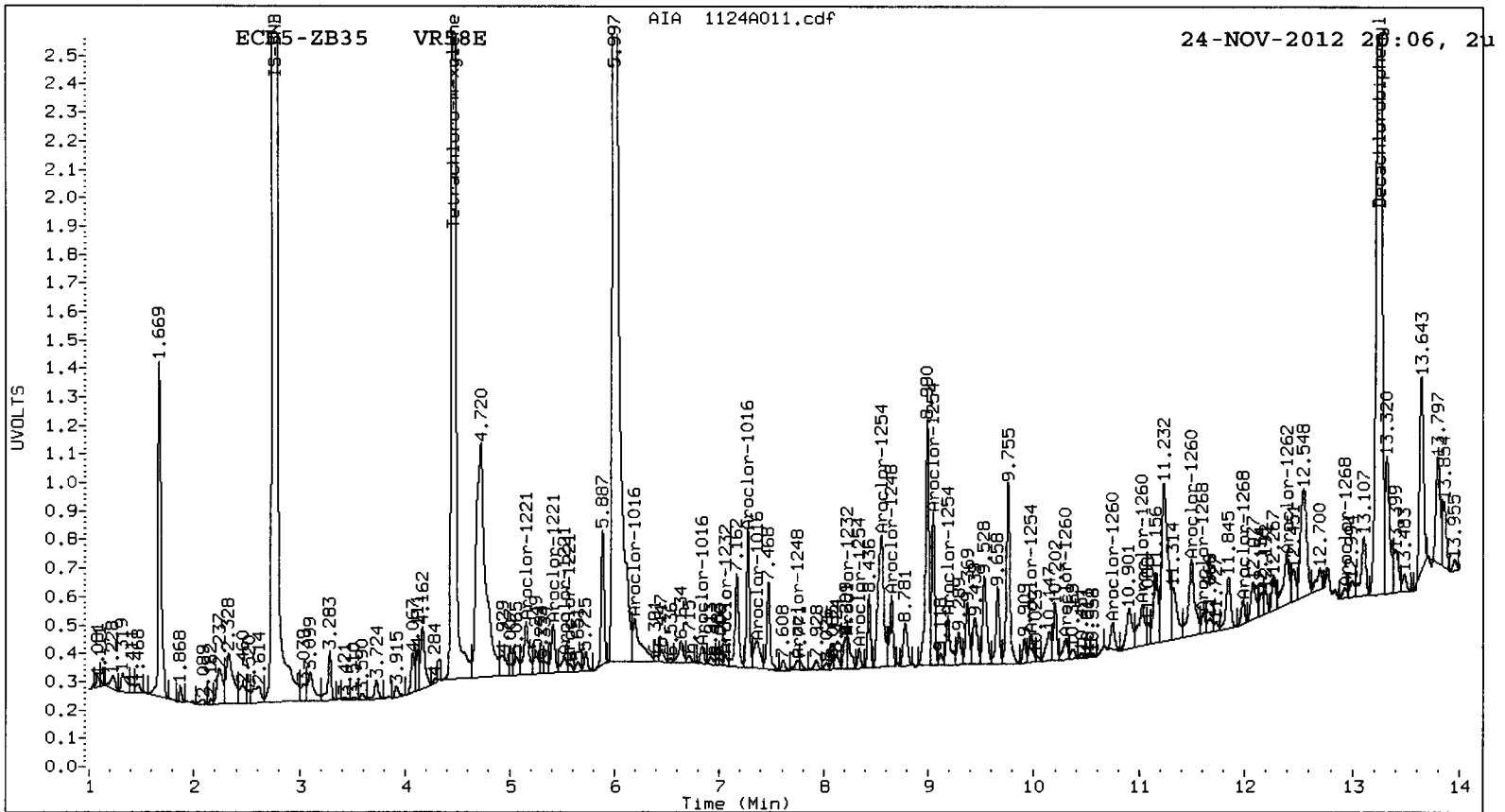
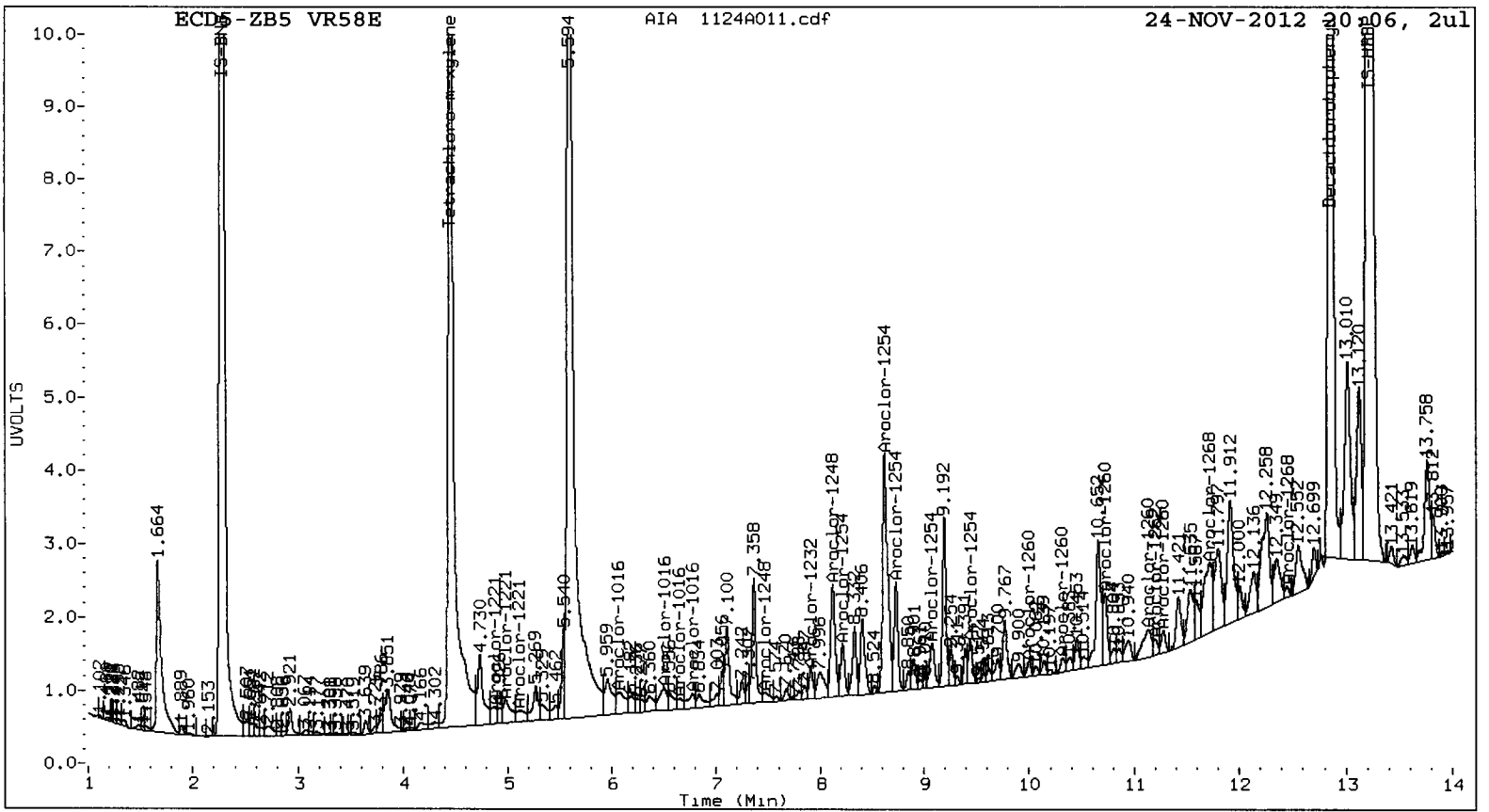
Total PCB Area Col2 (4.556 - 13.149) = 31485886      Col2 Total PCB = 0.3 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58 02286







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A012.d  
Data file 2: 20121102.B/1124-2.b/1124A012.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58F  
Client ID: SG-14-S-E-121107  
Injection Date: 24-NOV-2012 20:26  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.448	-0.001	21403294	4.456	0.000	5662596	30.6	32.0	4.5	Tetrachloro-m-xylene
12.856	-0.001	25505904	13.247	-0.002	5663132	30.6	33.5	9.1	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	76.6	80.1
Decachlorobiphenyl	76.4	83.7

*Handwritten signature*  
11/26/12

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	33468339	7.1
Hexabromobiphenyl	64198300	55373451	-13.7

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	12402171	-14.7
Hexabromobiphenyl	15789428	12443760	-21.2

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.070	-0.026	372824	19.9	1	6.195	-0.015	88617	12.8
Aroclor-1016	2	6.500	-0.001	439667	7.5	2	6.838	-0.005	84544	5.8
Aroclor-1016	3	6.658	0.008	244242	9.7	3	7.225	-0.002	12702	3.3
Aroclor-1016	4	6.768	0.007	202431	11.2	4	7.347	0.010	130108	30.3
Total CollAve (4 peaks):				12.1	Total Col2Ave (4 peaks):				13.0	RPD = 7
Corrected Ave (3 peaks):				9.5	Corrected Ave (3 peaks):				7.3	RPD = 26
Aroclor-1221	1	4.811	-0.006	239949	29.4	1	5.159	0.017	177785	84.6
Aroclor-1221	2	4.981	-0.014	331645	59.3	2	5.406	0.013	194664	157.3
Aroclor-1221	3	5.108	0.006	55591	3.1	3	5.488	-0.018	292407	75.2
Aroclor-1221	NS	---	---	---	---	4	5.570	-0.005	21496	32.0
Total CollAve (3 peaks):				30.6	Total Col2Ave (4 peaks):				87.3	RPD = 96*
Corrected Ave: 3 Peaks					Corrected Ave (3 peaks):				63.9	
Aroclor-1232	1	6.070	-0.024	372824	48.9	1	6.195	-0.015	88617	28.8
Aroclor-1232	2	6.500	0.003	439667	18.4	2	6.838	-0.003	84544	13.9
Aroclor-1232	3	6.658	0.011	244242	23.5	3	7.025	-0.025	58417	23.0
Aroclor-1232	4	7.908	0.007	476085	36.5	4	8.273	-0.004	43306	20.1
Total CollAve (4 peaks):				31.9	Total Col2Ave (4 peaks):				21.5	RPD = 39
Corrected Ave (3 peaks):				26.7	Corrected Ave (3 peaks):				19.8	RPD = 32
Aroclor-1242	1	6.070	-0.027	372824	25.6	1	6.195	-0.015	88617	16.7
Aroclor-1242	2	6.500	-0.001	439667	9.7	2	6.838	-0.004	84544	7.5
Aroclor-1242	3	6.658	0.008	244242	12.5	3	7.025	-0.026	58417	12.5
Aroclor-1242	4	7.908	0.005	476085	20.7	4	8.273	-0.004	43306	11.0
Total CollAve (4 peaks):				17.1	Total Col2Ave (4 peaks):				11.9	RPD = 36
Corrected Ave (3 peaks):				14.3	Corrected Ave (3 peaks):				10.3	RPD = 32
Aroclor-1248	1	6.500	0.003	439667	14.9	1	6.838	-0.002	84544	11.5
Aroclor-1248	2	7.471	-0.002	151816	4.9	2	7.747	0.001	44984	7.4
Aroclor-1248	3	7.908	0.006	476085	12.1	3	8.273	-0.003	43306	6.9
Aroclor-1248	4	8.117	-0.020	1010135	33.4	4	8.607	-0.015	68224	8.7
Total CollAve (4 peaks):				16.3	Total Col2Ave (4 peaks):				8.6	RPD = 62*
Corrected Ave (3 peaks):				10.6	Corrected Ave (3 peaks):				7.7	RPD = 33
Aroclor-1254	1	8.220	-0.004	705150	17.6	1	8.340	-0.002	79015	14.7
Aroclor-1254	2	8.619	0.022	2316506	89.2	2	8.548	0.032	477503	78.2
Aroclor-1254	3	8.730	-0.002	1076363	21.1	3	9.039	0.001	153079	29.3
Aroclor-1254	4	9.074	-0.006	1002370	17.9	4	9.186	-0.002	255680	22.3
Aroclor-1254	5	9.437	-0.004	612184	17.4	5	9.973	0.001	125576	18.2
Total CollAve (5 peaks):				32.5	Total Col2Ave (5 peaks):				30.9	RPD = 5
Corrected Ave (4 peaks):				18.5	Corrected Ave (4 peaks):				21.1	RPD = 13
Aroclor-1260	1	9.995	-0.003	250153	7.8	1	10.301	-0.001	68328	10.3
Aroclor-1260	2	10.314	-0.001	244666	7.6	2	10.748	-0.005	129046	15.8
Aroclor-1260	3	10.689	0.001	1172707	15.3	3	11.025	-0.001	194033	12.0
Aroclor-1260	4	11.090	0.002	546135	12.4	4	11.542	-0.005	37616	7.7
Aroclor-1260	5	11.275	-0.002	245057	11.5	NS	---	---	---	---
Total CollAve (5 peaks):				10.9	Total Col2Ave (4 peaks):				11.4	RPD = 5
Corrected Ave (4 peaks):				9.8	Corrected Ave (3 peaks):				10.0	RPD = 2
Aroclor-1262	1	9.995	-0.001	250153	5.2	1	10.301	-0.001	68328	6.3
Aroclor-1262	2	10.314	0.001	244666	6.7	2	10.748	-0.004	129046	13.4
Aroclor-1262	3	10.689	0.002	1172707	12.4	3	11.025	0.001	194033	9.2
Aroclor-1262	4	11.201	-0.001	180894	5.1	4	11.542	-0.005	37616	4.4
Aroclor-1262	5	11.275	0.000	245057	6.3	5	12.385	0.038	217524	26.4
Total CollAve (5 peaks):				7.1	Total Col2Ave (5 peaks):				11.9	RPD = 51*
Corrected Ave (4 peaks):				5.8	Corrected Ave (4 peaks):				8.3	RPD = 36
Aroclor-1268	1	11.201	-0.002	180894	1.9	1	11.542	-0.005	37616	1.7

Aroclor-1268 2	11.275	0.001	245057	2.7	2	11.607	-0.007	137130	6.5
Aroclor-1268 3	11.721	0.061	833845	10.3	3	11.984	-0.027	23916	1.4
Aroclor-1268 4	12.452	0.003	128138	0.6	4	12.925	0.091	32573	0.6
Total Col1Ave (4 peaks):			3.8	Total Col2Ave (4 peaks):			2.6	RPD = 40	
Corrected Ave (3 peaks):			1.7	Corrected Ave (3 peaks):			1.2	RPD = 31	

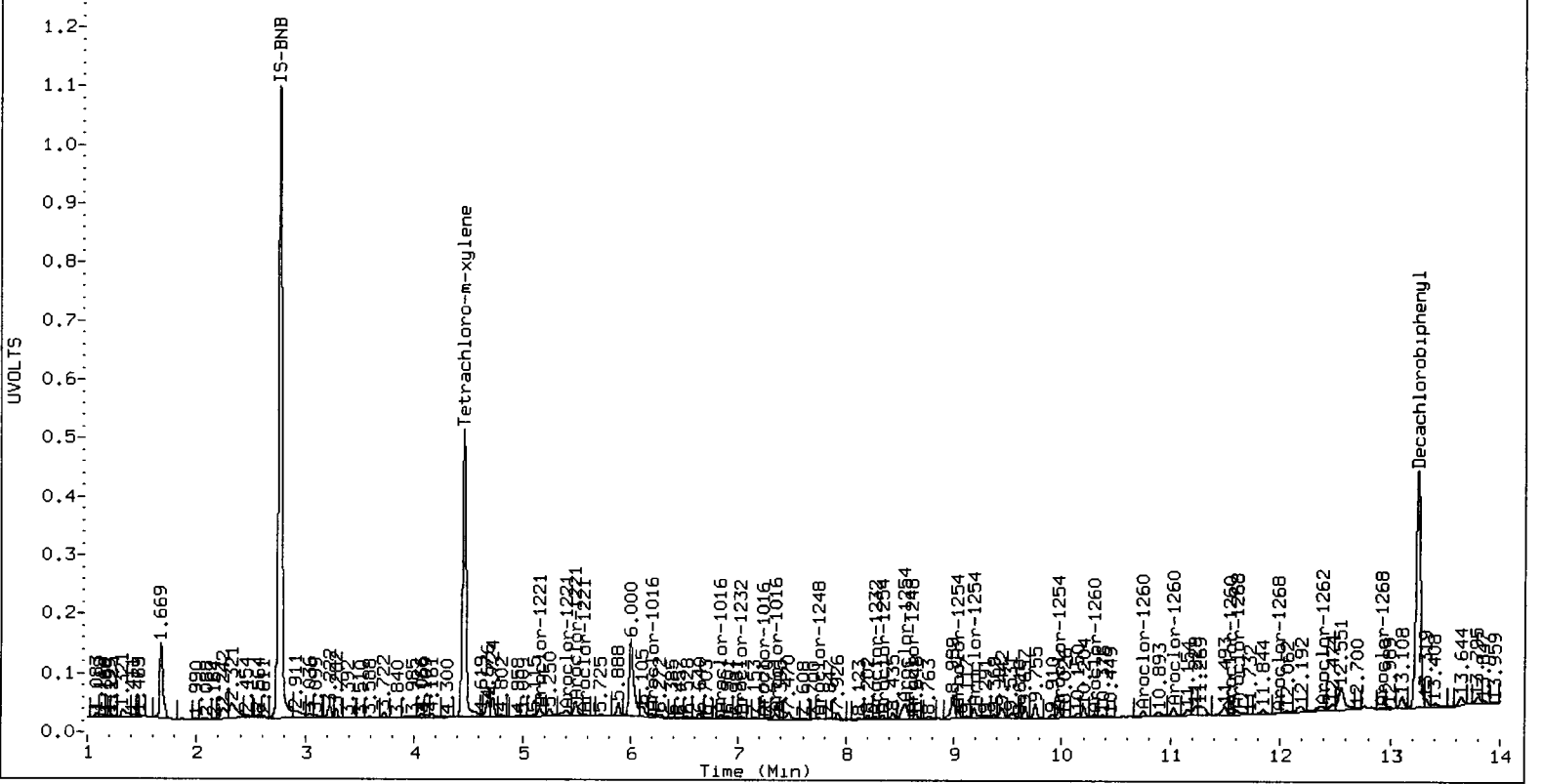
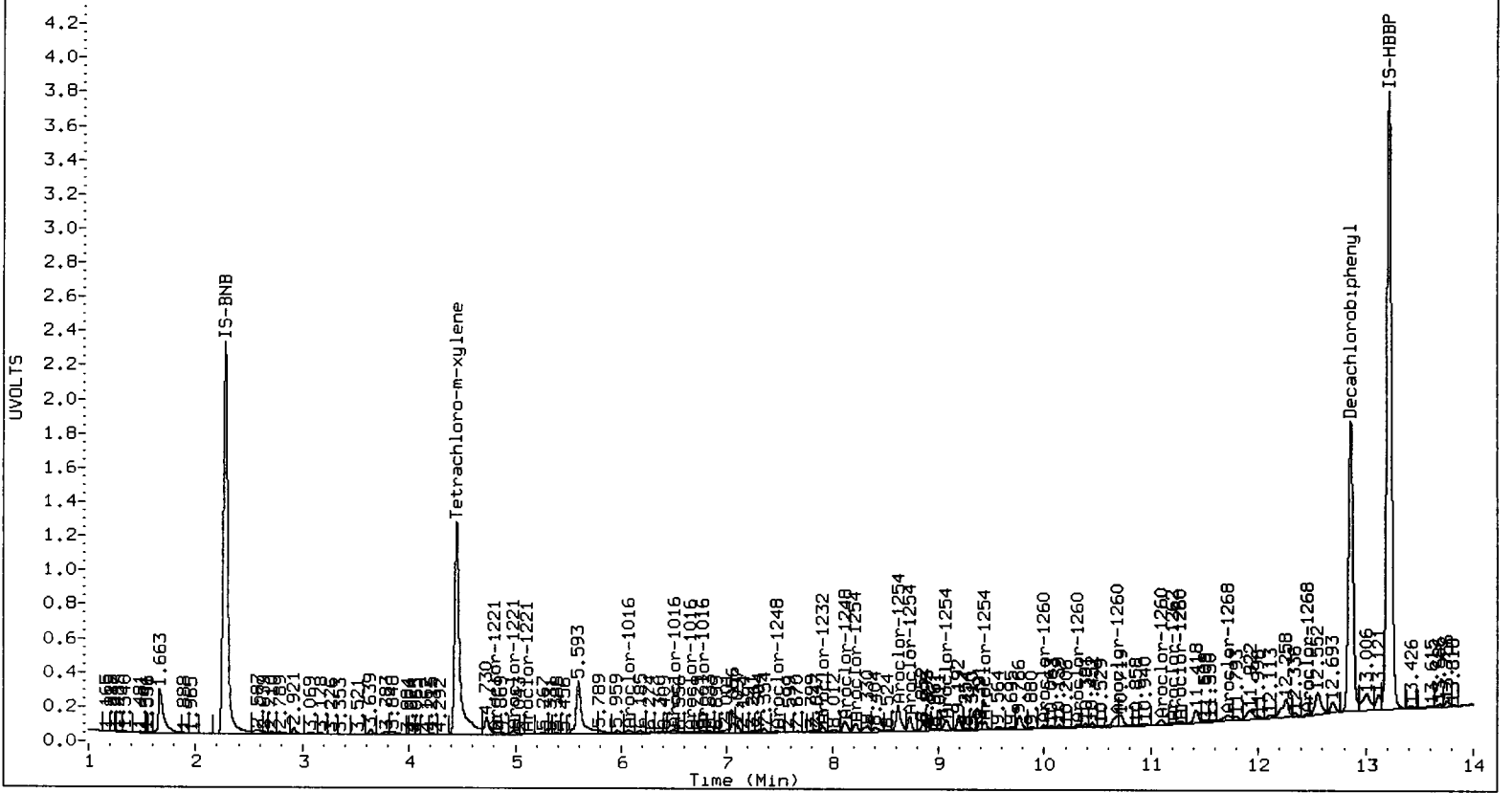
Total PCB Area Col1 (4.549 - 12.758) = 44098442      Col1 Total PCB = 0.1 ppm\*

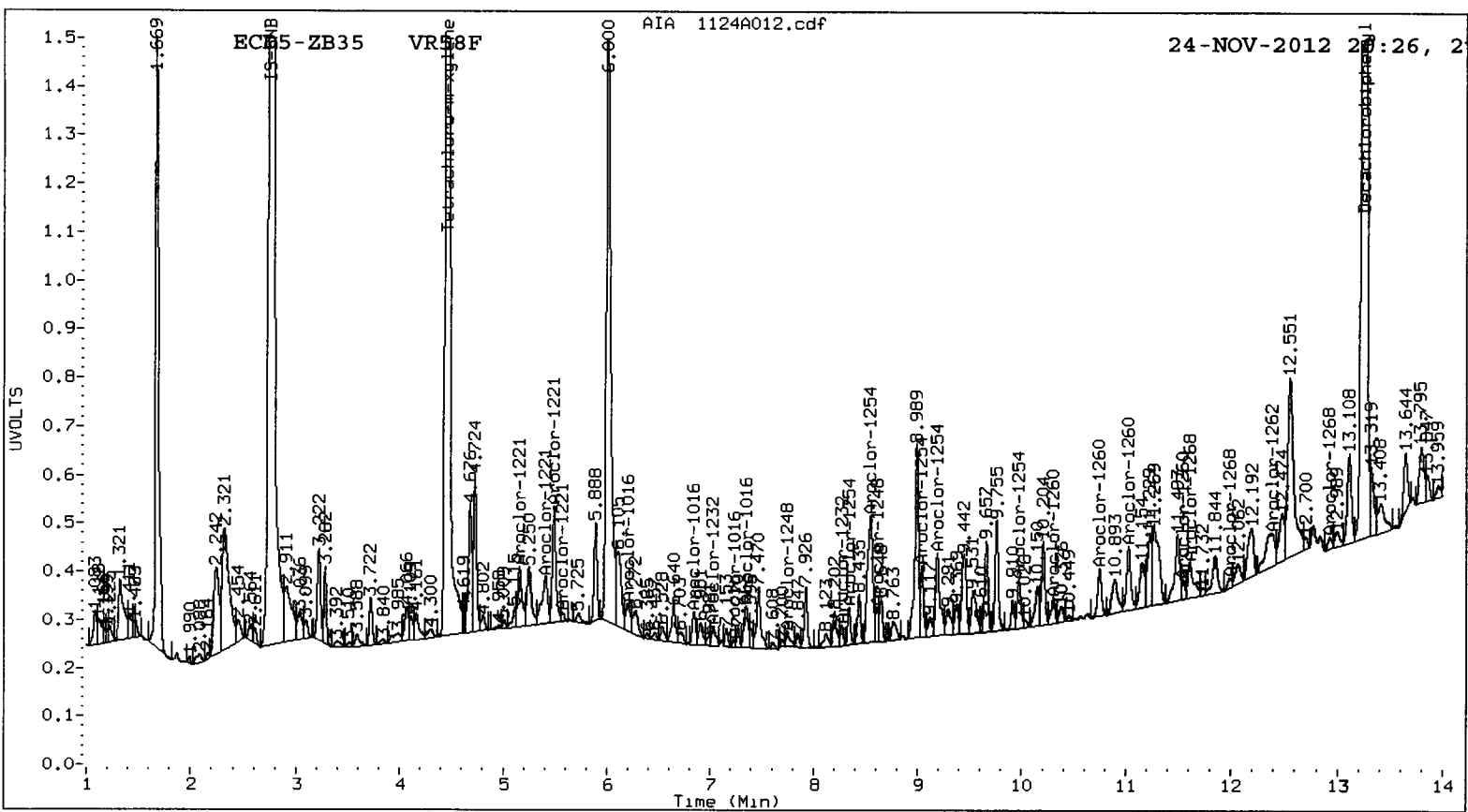
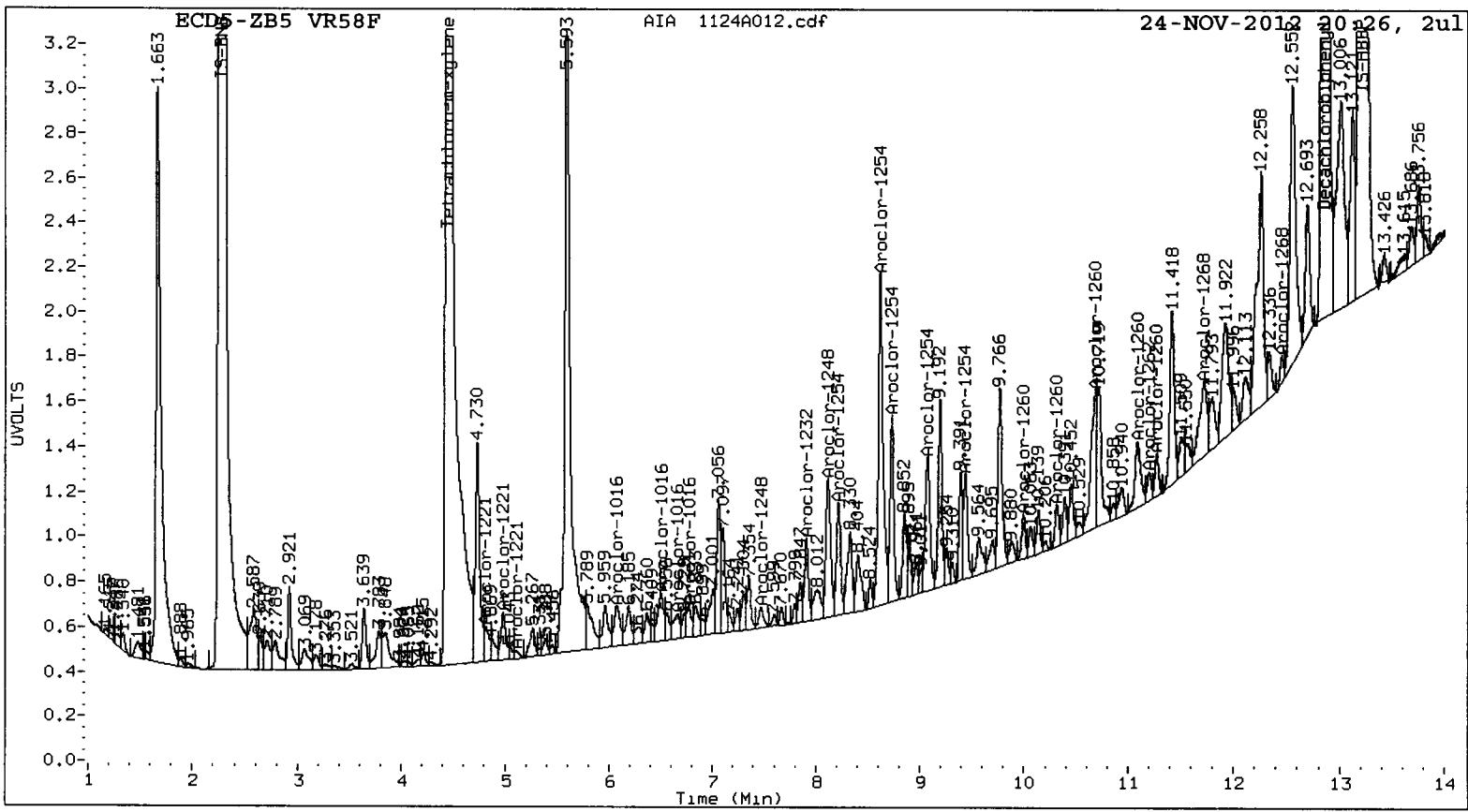
Total PCB Area Col2 (4.556 - 13.149) = 12580737      Col2 Total PCB = 0.1 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58:02291





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A013.d  
Data file 2: 20121102.B/1124-2.b/1124A013.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1248  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1248  
Client ID:  
Injection Date: 24-NOV-2012 20:47  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.448	-0.001	18683013	4.456	-0.001	4972071	19.6	20.9	6.3	Tetrachloro-m-xylene
12.857	-0.001	21314030	13.248	-0.001	4347965	18.9	19.6	3.6	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	49.1	52.3
Decachlorobiphenyl	47.2	48.9

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	45534261	45.7
Hexabromobiphenyl	64198300	74975377	16.8

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	16671907	14.7
Hexabromobiphenyl	15789428	16359032	3.6

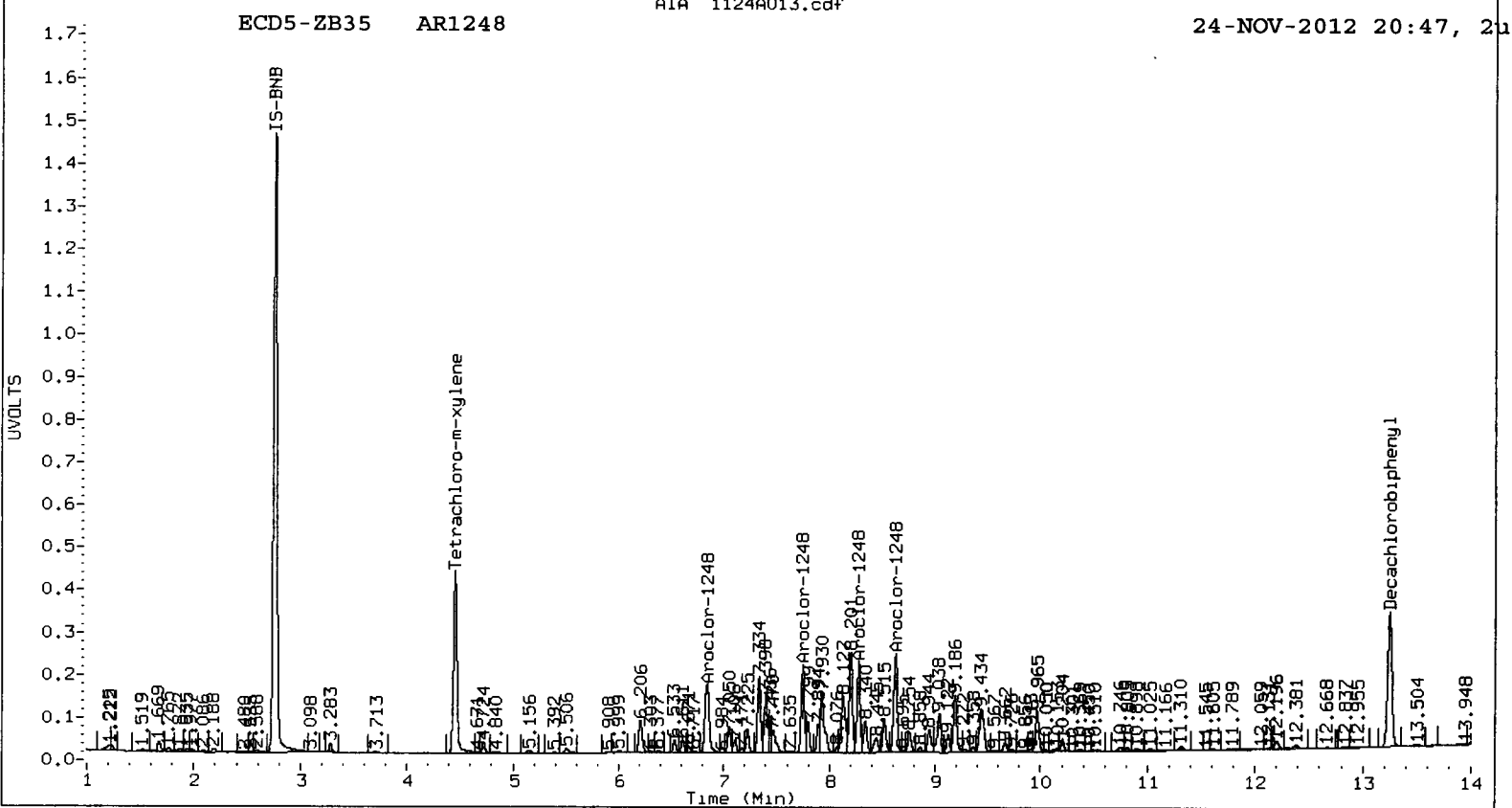
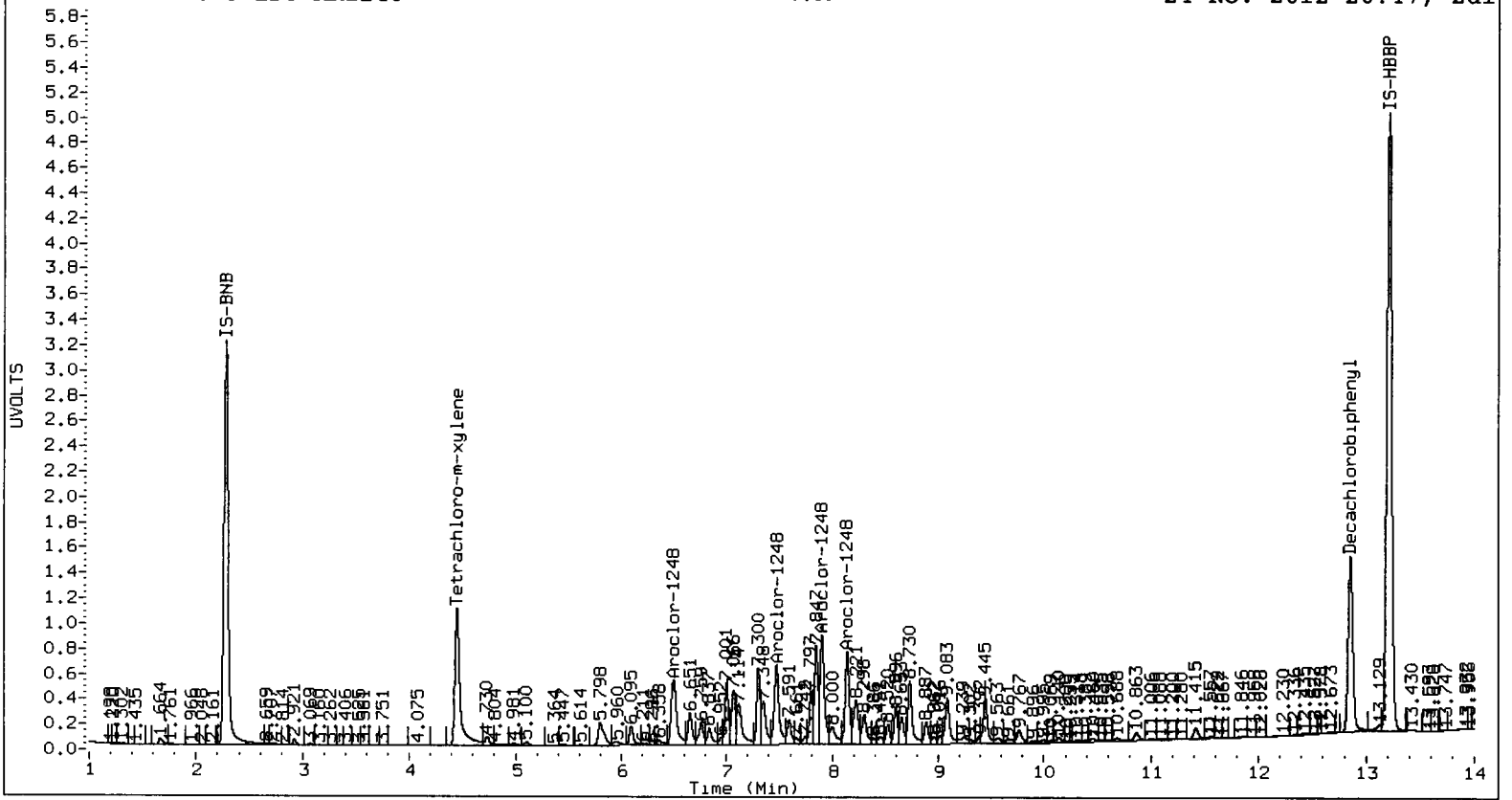
\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	6.497	0.000	9655592	240.7	1	6.840	0.000	2353428	237.8
Aroclor-1248	2	7.473	0.000	10060940	238.2	2	7.746	0.000	2145557	261.4
Aroclor-1248	3	7.902	0.000	12644578	237.1	3	8.276	0.000	2196999	259.1
Aroclor-1248	4	8.137	0.000	9800685	238.4	4	8.622	0.000	2714057	258.7
Total Col1Ave (4 peaks):				238.6		Total Col2Ave (4 peaks):				254.2 RPD = 6
Corrected Ave (3 peaks):				237.9		Corrected Ave (3 peaks):				251.9 RPD = 6

Total PCB Area Col1 (4.549 - 12.758) = 165462760 Col1 Total PCB = 0.2 ppm\*

Total PCB Area Col2 (4.556 - 13.149) = 36739458 Col2 Total PCB = 0.3 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A014.d  
Data file 2: 20121102.B/1124-2.b/1124A014.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1660  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660  
Client ID:  
Injection Date: 24-NOV-2012 21:07  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	14563464	4.456	0.000	3680750	19.4	20.0	2.6	Tetrachloro-m-xylen
12.857	-0.001	17620351	13.247	-0.002	3520534	19.0	19.8	3.7	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	48.6	49.9
Decachlorobiphenyl	47.6	49.4

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	35866199	14.8
Hexabromobiphenyl	64198300	61427637	-4.3

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	12941087	-11.0
Hexabromobiphenyl	15789428	13112388	-17.0

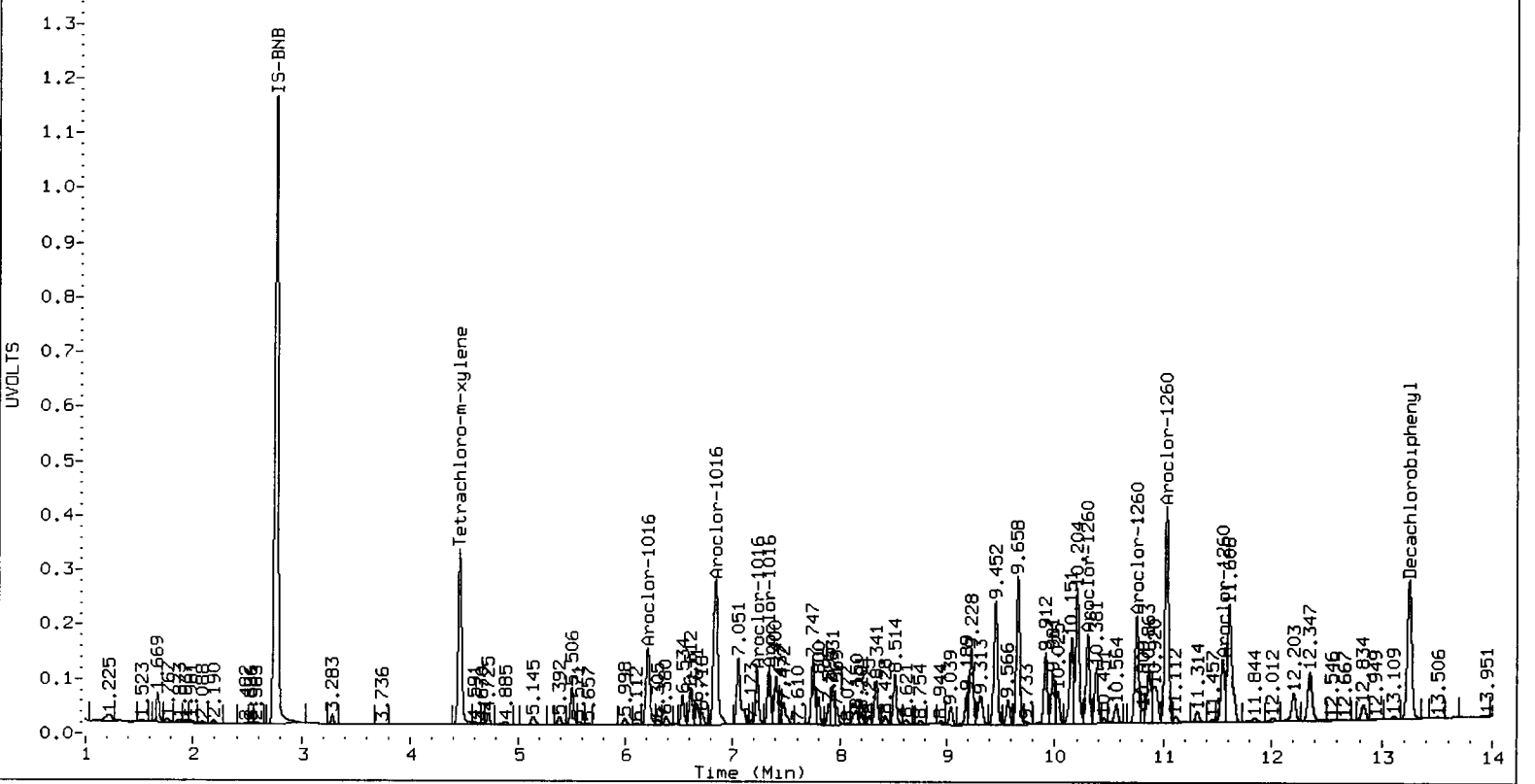
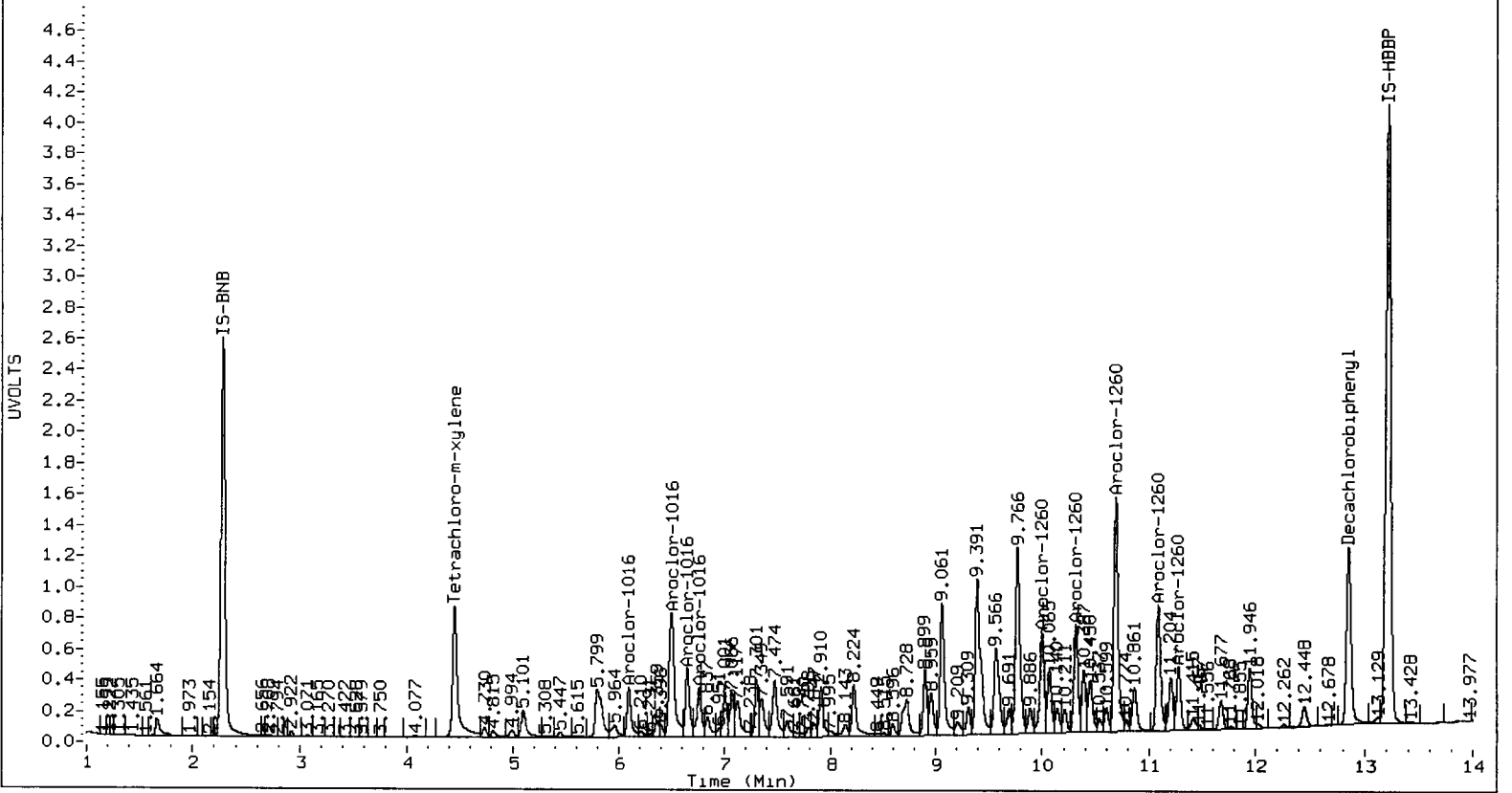
\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012  
<- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col					ZB35 Col						
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount	
Aroclor-1016	1	6.095	-0.001	4571206	228.0	1	6.210	0.000	1768384	243.9	
Aroclor-1016	2	6.500	-0.001	14812656	237.0	2	6.841	-0.002	3771514	245.9	
Aroclor-1016	3	6.649	-0.001	6298436	233.6	3	7.226	-0.001	1003866	251.6	
Aroclor-1016	4	6.760	-0.001	4706609	244.0	4	7.335	-0.002	1105953	246.5	
Total CollAve (4 peaks):				235.7	Total Col2Ave (4 peaks):				247.0	RPD = 5	
Corrected Ave (3 peaks):				232.9	Corrected Ave (3 peaks):				245.4	RPD = 5	
Aroclor-1260	1	9.997	-0.002	9128861	255.7	1	10.302	0.000	1865984	266.6	
Aroclor-1260	2	10.313	-0.001	8997523	250.7	2	10.751	-0.001	2324550	270.6	
Aroclor-1260	3	10.688	0.000	21618935	254.1	3	11.026	-0.001	4688204	274.3	
Aroclor-1260	4	11.087	-0.001	11601471	237.9	4	11.547	-0.001	1356100	263.3	
Aroclor-1260	5	11.277	-0.001	5797120	244.7	NS	---			----	
Total CollAve (5 peaks):				248.6	Total Col2Ave (4 peaks):				268.7	RPD = 8	
Corrected Ave (4 peaks):				246.8	Corrected Ave (3 peaks):				266.8	RPD = 8	

Total PCB Area Col1 (4.549 - 12.758) = 276981595      Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (4.556 - 13.149) = 59552265      Col2 Total PCB = 0.5 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical



Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A015.d  
Data file 2: 20121102.B/1124-2.b/1124A015.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58G  
Client ID: SG-15-S-E-121107  
Injection Date: 24-NOV-2012 21:27  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.448	-0.001	26107533	4.455	-0.001	6818299	35.5	35.7	0.6	Tetrachloro-m-xylene
12.857	-0.001	31482777	13.247	-0.002	6297964	33.6	35.7	6.1	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	88.6	89.2
Decachlorobiphenyl	84.0	89.3

*JK 11/26/12*

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	35265301	12.9
Hexabromobiphenyl	64198300	62207942	-3.1
Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	13409482	-7.8
Hexabromobiphenyl	15789428	12978594	-17.8

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.089	-0.007	271914	13.8	1	6.215	0.005	60583	8.1	
Aroclor-1016	2	6.490	-0.010	355414	5.8	2	6.831	-0.011	40827	2.6	
Aroclor-1016	3	6.654	0.004	145329	5.5	3	7.227	0.000	11434	2.8	
Aroclor-1016	4	6.763	0.003	176618	9.3	4	7.351	0.014	125550	27.0	
Total CollAve (4 peaks):				8.6		Total Col2Ave (4 peaks):				10.1	RPD = 16
Corrected Ave (3 peaks):				6.9		Corrected Ave (3 peaks):				4.5	RPD = 42*
Aroclor-1221	1	4.730	-0.087	2106057	244.7	1	5.159	0.018	177317	78.0	
Aroclor-1221	2	4.979	-0.016	437246	74.2	2	5.411	0.019	67490	50.4	
Aroclor-1221	3	5.098	-0.003	189651	9.9	3	5.508	0.001	62347	14.8	
Aroclor-1221	NS	---	---	---	---	4	---	---	---	0.0	
Total CollAve (3 peaks):				109.6		Total Col2Ave (3 peaks):				47.8	RPD = 79*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks					
Aroclor-1232	1	6.089	-0.005	271914	33.9	1	6.215	0.005	60583	18.2	
Aroclor-1232	2	6.490	-0.007	355414	14.2	2	6.831	-0.009	40827	6.2	
Aroclor-1232	3	6.654	0.007	145329	13.3	3	7.030	-0.020	17558	6.4	
Aroclor-1232	4	7.911	0.010	158149	11.5	4	8.201	-0.075	10087	4.3	
Total CollAve (4 peaks):				18.2		Total Col2Ave (4 peaks):				8.8	RPD = 70*
Corrected Ave (3 peaks):				13.0		Corrected Ave (3 peaks):				5.7	RPD = 79*
Aroclor-1242	1	6.089	-0.007	271914	17.7	1	6.215	0.005	60583	10.6	
Aroclor-1242	2	6.490	-0.010	355414	7.5	2	6.831	-0.011	40827	3.3	
Aroclor-1242	3	6.654	0.004	145329	7.0	3	7.030	-0.021	17558	3.5	
Aroclor-1242	4	7.911	0.008	158149	6.5	4	8.201	-0.075	10087	2.4	
Total CollAve (4 peaks):				9.7		Total Col2Ave (4 peaks):				4.9	RPD = 65*
Corrected Ave (3 peaks):				7.0		Corrected Ave (3 peaks):				3.1	RPD = 79*
Aroclor-1248	1	6.490	-0.007	355414	11.4	1	6.831	-0.008	40827	5.1	
Aroclor-1248	2	7.490	0.017	296904	9.1	2	---	---	---	0.0	
Aroclor-1248	3	7.911	0.009	158149	3.8	3	8.201	-0.074	10087	1.5	
Aroclor-1248	4	8.108	-0.029	464711	14.6	4	8.650	0.028	13577	1.6	
Total CollAve (4 peaks):				9.7		Total Col2Ave (3 peaks):				2.7	RPD = 112*
Corrected Ave (3 peaks):				8.1		Corrected Ave: < 3 Peaks					
Aroclor-1254	1	8.216	-0.008	157860	3.7	1	8.437	0.095	11661	2.0	
Aroclor-1254	2	8.616	0.019	256664	9.3	2	8.557	0.042	100313	13.6	
Aroclor-1254	3	8.729	-0.002	256751	4.8	3	9.043	0.005	15586	2.8	
Aroclor-1254	4	9.079	-0.001	171553	2.9	4	9.186	-0.002	14304	1.2	
Aroclor-1254	5	9.441	-0.001	76130	2.1	5	9.971	-0.001	11211	1.5	
Total CollAve (5 peaks):				4.6		Total Col2Ave (5 peaks):				4.2	RPD = 8
Corrected Ave (4 peaks):				3.4		Corrected Ave (4 peaks):				1.9	RPD = 58*
Aroclor-1260	1	9.995	-0.004	53652	1.5	1	10.343	0.042	14317	2.1	
Aroclor-1260	2	10.305	-0.009	40267	1.1	2	---	---	---	0.0	
Aroclor-1260	3	10.722	0.034	299290	3.5	3	11.024	-0.002	12322	0.7	
Aroclor-1260	4	11.097	0.009	57742	1.2	4	11.494	-0.053	63112	12.4	
Aroclor-1260	5	11.283	0.005	27657	1.2	NS	---	---	---	---	
Total CollAve (5 peaks):				1.7		Total Col2Ave (3 peaks):				5.1	RPD = 100*
Corrected Ave (4 peaks):				1.2		Corrected Ave: < 3 Peaks					
Aroclor-1262	1	9.995	-0.002	53652	1.0	1	10.343	0.042	14317	1.3	
Aroclor-1262	2	10.305	-0.007	40267	1.0	2	---	---	---	0.0	
Aroclor-1262	3	10.722	0.035	299290	2.8	3	11.024	0.000	12322	0.6	
Aroclor-1262	4	11.186	-0.016	100241	2.5	4	11.494	-0.053	63112	7.1	
Aroclor-1262	5	11.283	0.007	27657	0.6	5	12.329	-0.017	75125	8.8	
Total CollAve (5 peaks):				1.6		Total Col2Ave (4 peaks):				4.4	RPD = 94*
Corrected Ave (4 peaks):				1.3		Corrected Ave (3 peaks):				3.0	RPD = 80*
Aroclor-1268	1	11.186	-0.017	100241	0.9	1	---	---	---	0.0	

Aroclor-1268 2	11.283	0.008	27657	0.3	2	---	0.0
Aroclor-1268 3	11.720	0.060	130124	1.4	3	---	0.0
Aroclor-1268 4	---			0.0	4	---	0.0
Total CollAve (3 peaks):				0.9	Col2Ave: <3 Quant Peaks		

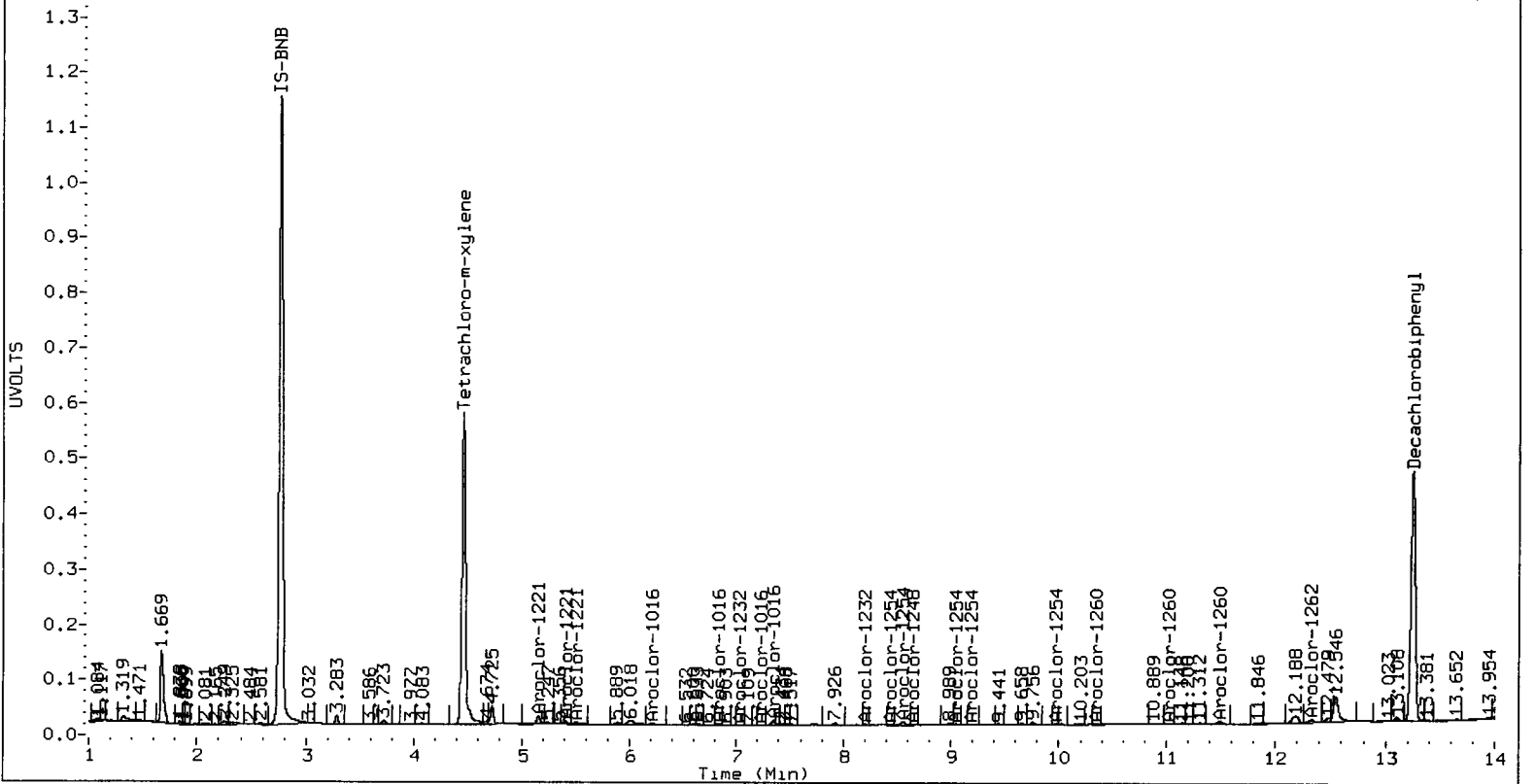
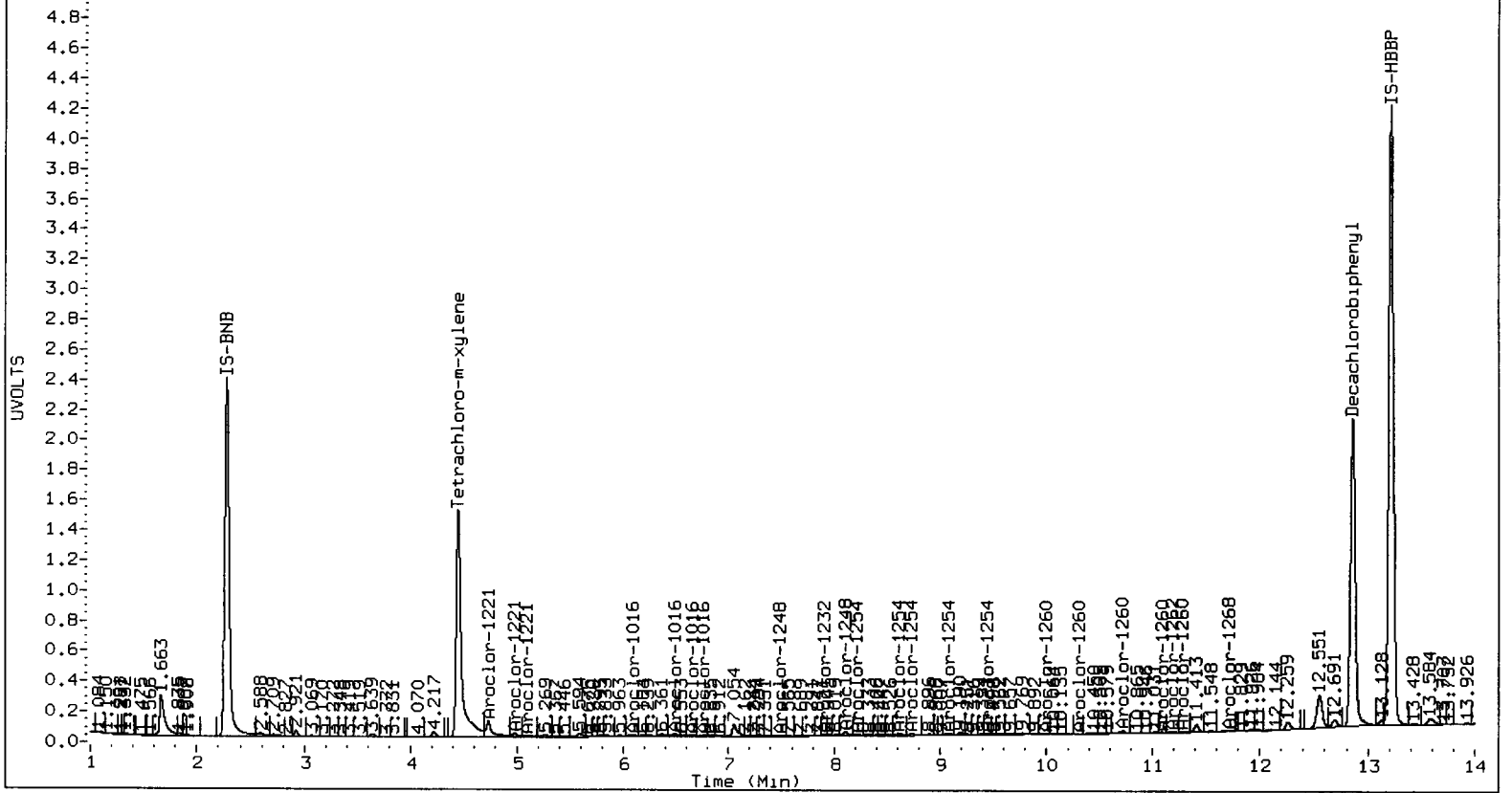
Total PCB Area Col1 (4.549 - 12.758) = 19401926      Col1 Total PCB = 0.0 ppm\*

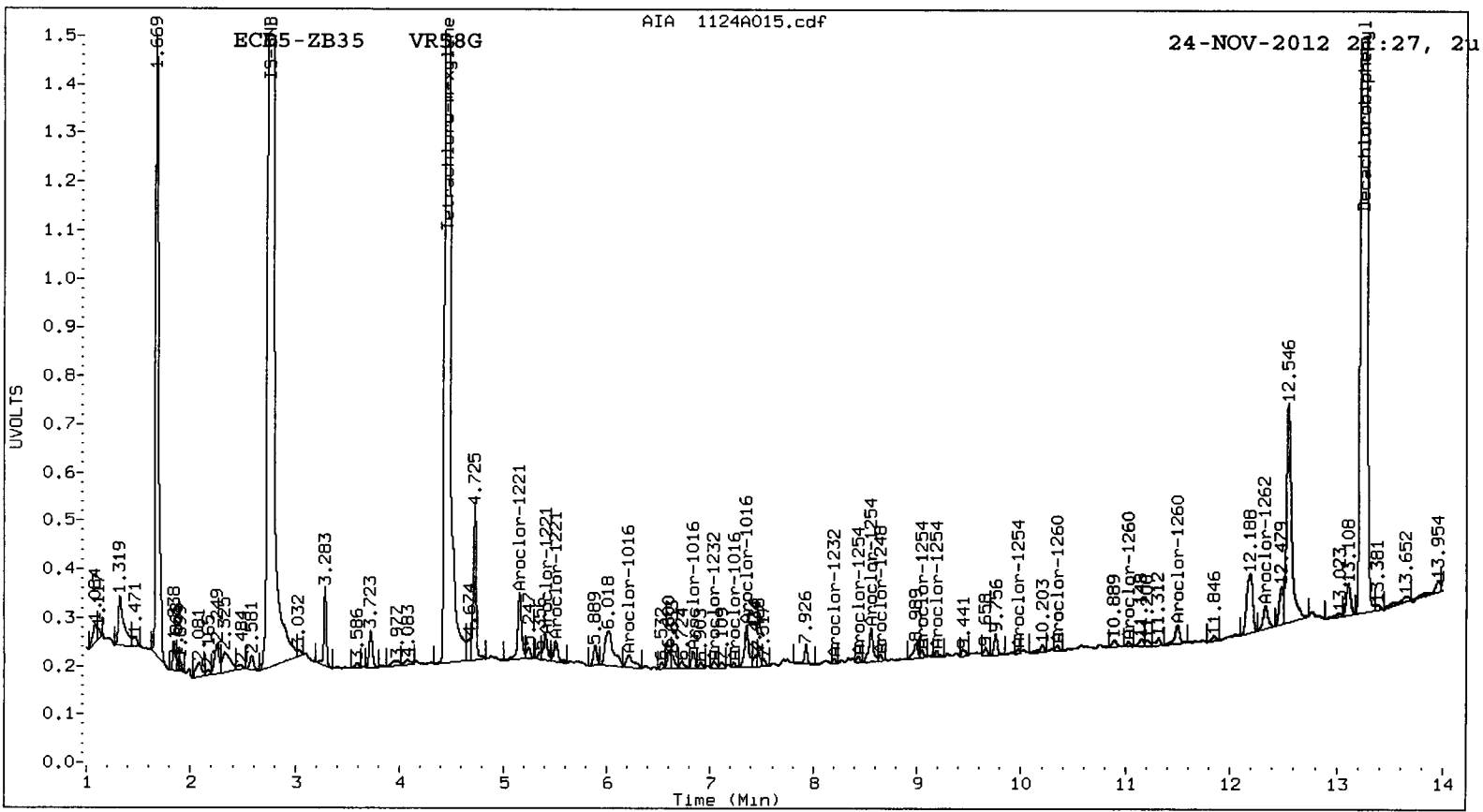
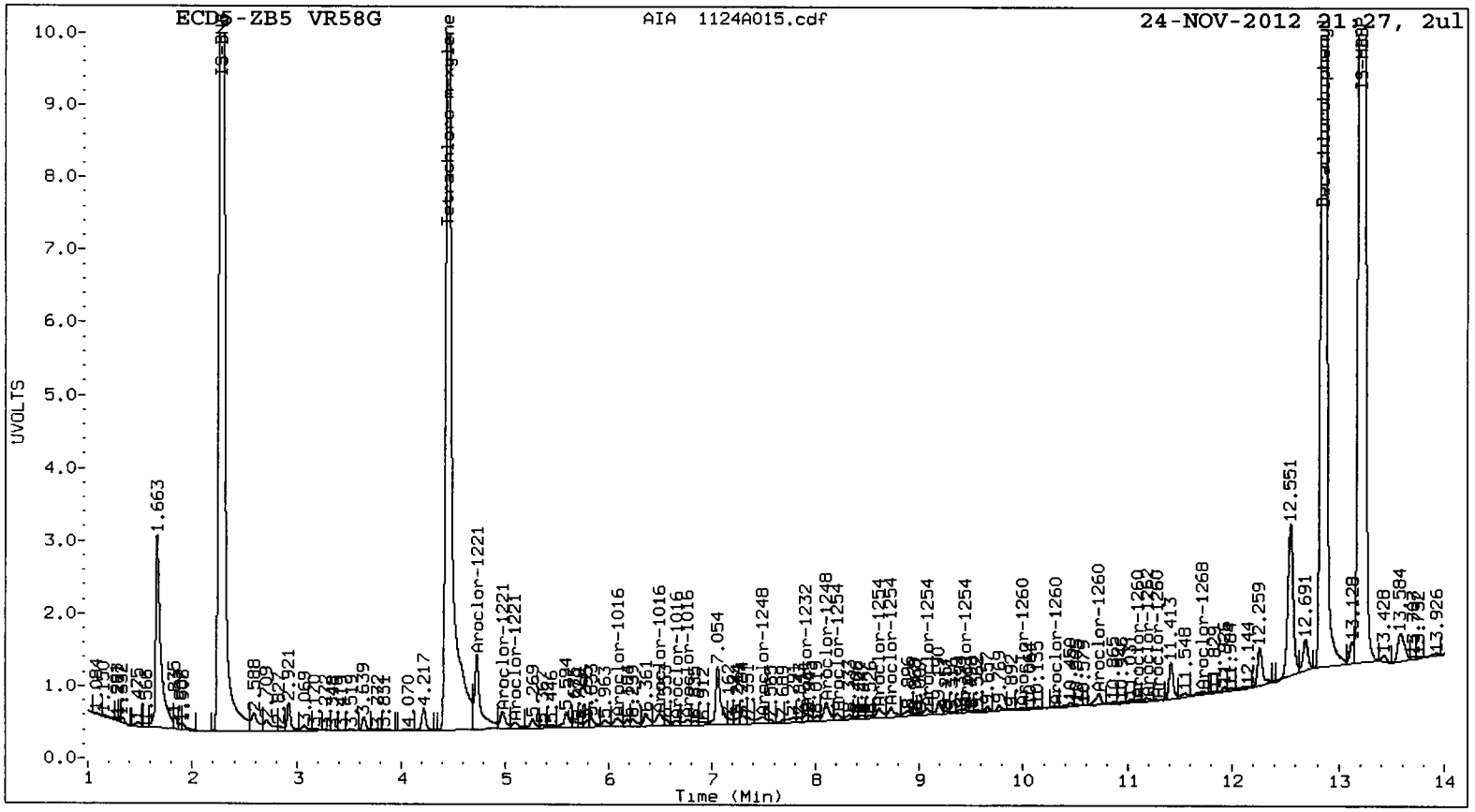
Total PCB Area Col2 (4.556 - 13.149) = 3261195      Col2 Total PCB = 0.0 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58 : 02302







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A016.d  
Data file 2: 20121102.B/1124-2.b/1124A016.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58H  
Client ID: SG-16-S-E-121107  
Injection Date: 24-NOV-2012 21:48  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	26899370	4.456	0.000	6641200	34.6	32.8	5.5	Tetrachloro-m-xylene
12.857	-0.001	32853014	13.248	-0.001	6481725	32.6	34.6	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	86.6	81.9
Decachlorobiphenyl	81.5	86.5

*JR 11/26/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	37175336	19.0
Hexabromobiphenyl	64198300	66877600	4.2

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	14213105	-2.2
Hexabromobiphenyl	15789428	13779894	-12.7

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.071	-0.025	220798	10.6	1	6.256	0.046	33823	4.2	
Aroclor-1016	2	6.475	-0.026	148990	2.3	2	6.831	-0.012	16811	1.0	
Aroclor-1016	3	6.672	0.022	42250	1.5	3	---	---	---	0.0	
Aroclor-1016	4	6.767	0.006	49014	2.5	4	7.353	0.016	118273	24.0	
Total CollAve (4 peaks):				4.2	Total Col2Ave (3 peaks):				9.7	RPD = 79*	
Corrected Ave (3 peaks):				2.1	Corrected Ave: < 3 Peaks						
Aroclor-1221	1	4.731	-0.086	2151409	237.1	1	5.160	0.018	161056	66.9	
Aroclor-1221	2	4.980	-0.015	489754	78.8	2	5.412	0.020	92406	65.2	
Aroclor-1221	3	---	---	---	0.0	3	5.515	0.008	42964	9.6	
Aroclor-1221	NS	---	---	---	---	4	---	---	---	0.0	
CollAve: <3 Quant Peaks				Col2Ave: 47.2							
Aroclor-1232	1	6.071	-0.023	220798	26.1	1	6.256	0.046	33823	9.6	
Aroclor-1232	2	6.475	-0.022	148990	5.6	2	6.831	-0.010	16811	2.4	
Aroclor-1232	3	6.672	0.025	42250	3.7	3	7.024	-0.026	26375	9.1	
Aroclor-1232	4	7.954	0.054	173104	12.0	4	---	---	---	0.0	
Total CollAve (4 peaks):				11.8	Total Col2Ave (3 peaks):				7.0	RPD = 51*	
Corrected Ave (3 peaks):				7.1	Corrected Ave: < 3 Peaks						
Aroclor-1242	1	6.071	-0.025	220798	13.7	1	6.256	0.046	33823	5.6	
Aroclor-1242	2	6.475	-0.026	148990	3.0	2	6.831	-0.011	16811	1.3	
Aroclor-1242	3	6.672	0.022	42250	1.9	3	7.024	-0.028	26375	4.9	
Aroclor-1242	4	7.954	0.052	173104	6.8	4	---	---	---	0.0	
Total CollAve (4 peaks):				6.3	Total Col2Ave (3 peaks):				3.9	RPD = 47*	
Corrected Ave (3 peaks):				3.9	Corrected Ave: < 3 Peaks						
Aroclor-1248	1	6.475	-0.022	148990	4.5	1	6.831	-0.009	16811	2.0	
Aroclor-1248	2	7.500	0.026	110986	3.2	2	---	---	---	0.0	
Aroclor-1248	3	7.954	0.053	173104	4.0	3	---	---	---	0.0	
Aroclor-1248	4	8.111	-0.026	690938	20.6	4	8.649	0.027	12741	1.4	
Total CollAve (4 peaks):				8.1	Col2Ave: <3 Quant Peaks						
Aroclor-1254	1	8.213	-0.011	101251	2.3	1	8.381	0.039	17484	2.8	
Aroclor-1254	2	8.619	0.022	195602	6.7	2	8.558	0.043	196740	25.2	
Aroclor-1254	3	8.729	-0.002	163056	2.9	3	9.044	0.005	10733	1.8	
Aroclor-1254	4	9.076	-0.004	96918	1.6	4	9.281	0.092	11665	0.9	
Aroclor-1254	5	9.437	-0.005	41581	1.1	5	---	---	---	0.0	
Total CollAve (5 peaks):				2.9	Total Col2Ave (4 peaks):				7.7	RPD = 91*	
Corrected Ave (4 peaks):				1.9	Corrected Ave (3 peaks):				1.8	RPD = 6	
Aroclor-1260	1	9.998	-0.001	38976	1.0	1	---	---	---	0.0	
Aroclor-1260	2	10.322	0.008	20534	0.5	2	---	---	---	0.0	
Aroclor-1260	3	10.723	0.035	314968	3.4	3	---	---	---	0.0	
Aroclor-1260	4	11.103	0.015	35336	0.7	4	---	---	---	0.0	
Aroclor-1260	5	11.289	0.011	17269	0.7	NS	---	---	---	---	
Total CollAve (5 peaks):				1.3	Col2Ave: <3 Quant Peaks						
Aroclor-1262	1	9.998	0.001	38976	0.7	1	---	---	---	0.0	
Aroclor-1262	2	10.322	0.010	20534	0.5	2	---	---	---	0.0	
Aroclor-1262	3	10.723	0.036	314968	2.8	3	---	---	---	0.0	
Aroclor-1262	4	11.189	-0.013	31182	0.7	4	11.495	-0.052	77001	8.1	
Aroclor-1262	5	11.289	0.013	17269	0.4	5	12.329	-0.017	76278	8.4	
Total CollAve (5 peaks):				1.0	Col2Ave: <3 Quant Peaks						
Aroclor-1268	1	11.189	-0.014	31182	0.3	1	11.495	-0.053	77001	3.2	
Aroclor-1268	2	11.289	0.014	17269	0.2	2	---	---	---	0.0	
Aroclor-1268	3	11.677	0.017	53708	0.5	3	12.038	0.026	20035	1.0	
Aroclor-1268	4	12.385	-0.064	36341	0.1	4	---	---	---	0.0	
Total CollAve (4 peaks):				0.3	Col2Ave: <3 Quant Peaks						

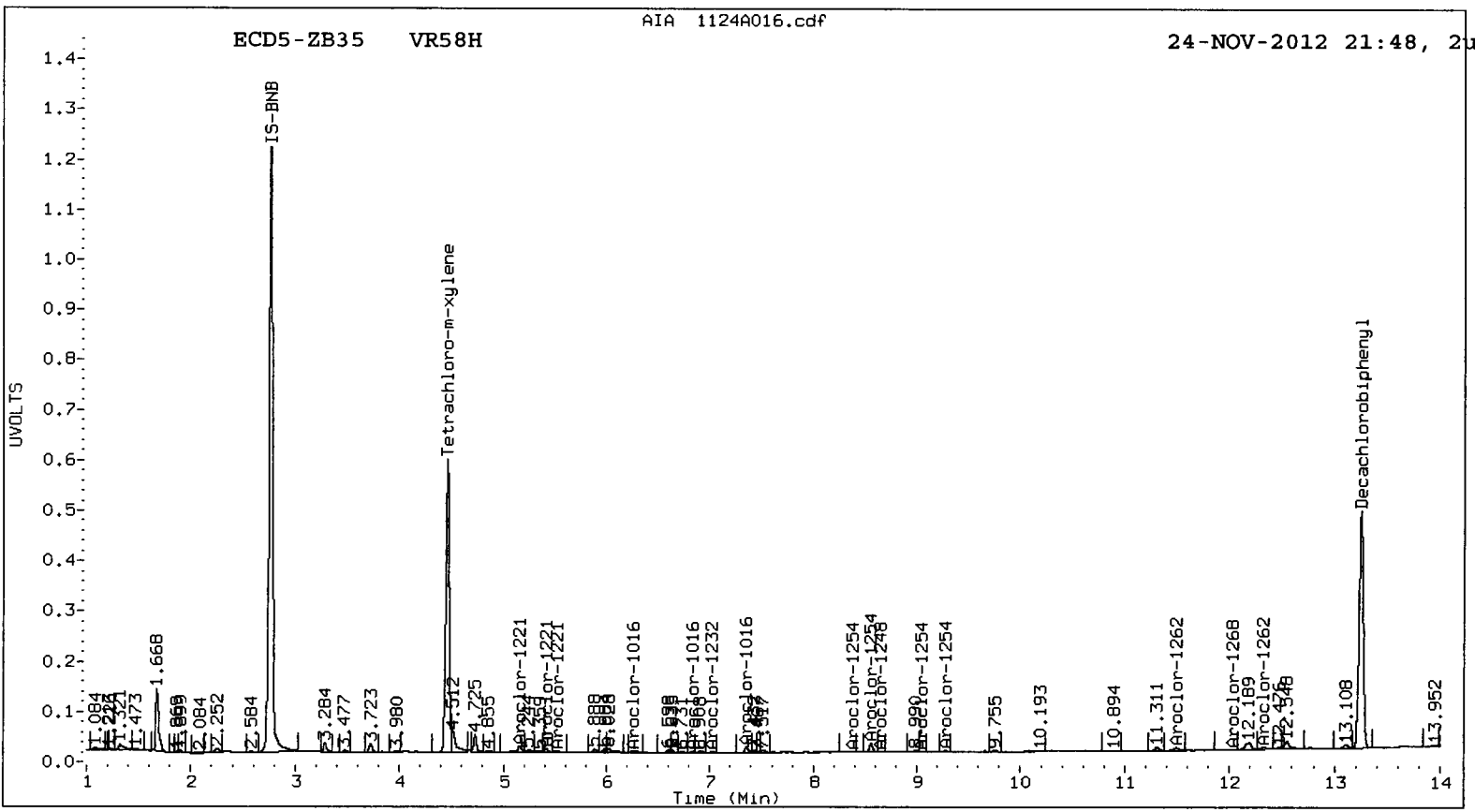
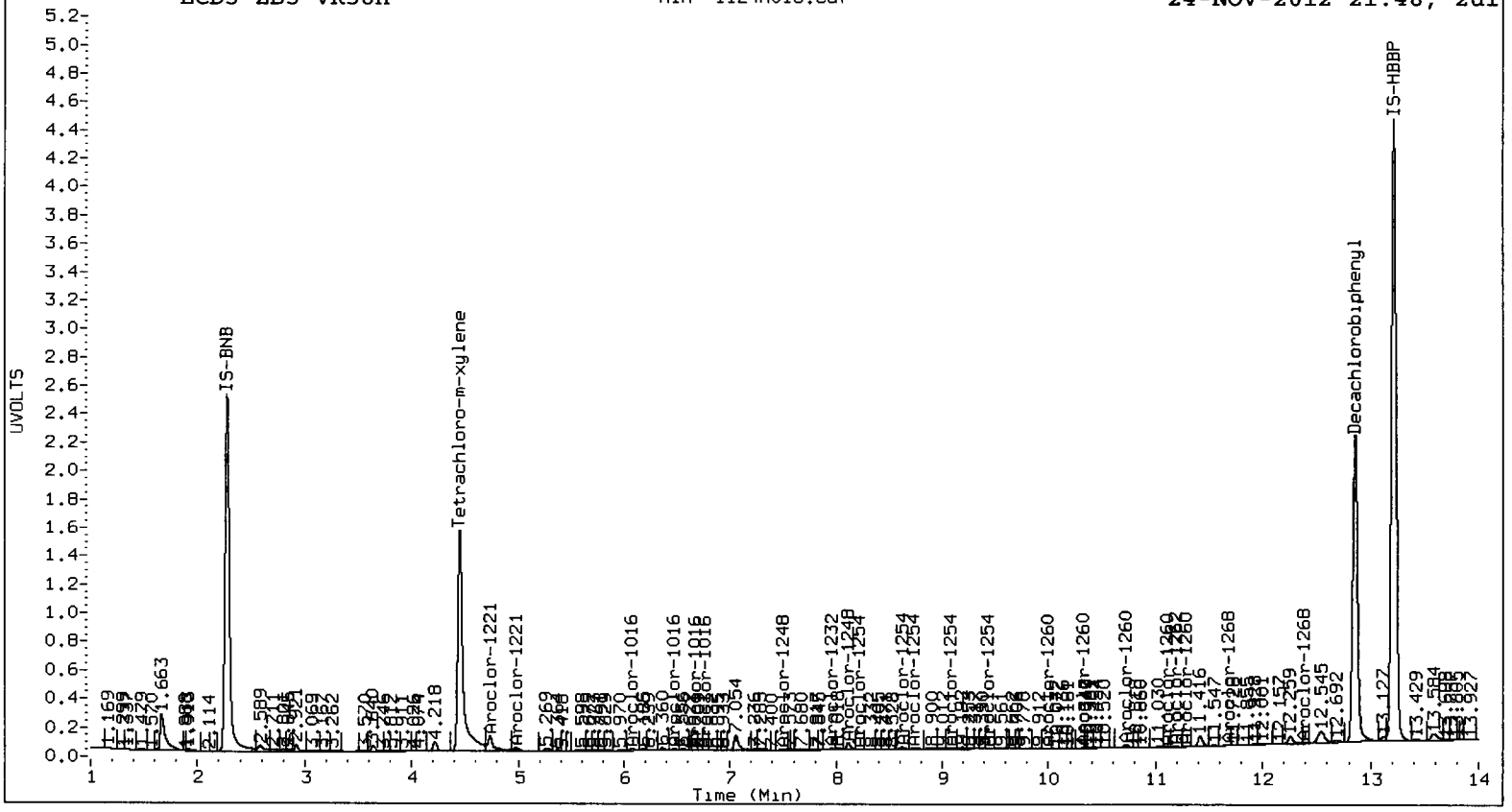
Total PCB Area Col1 (4.549 - 12.758) = 14578716 Col1 Total PCB = 0.0 ppm\*

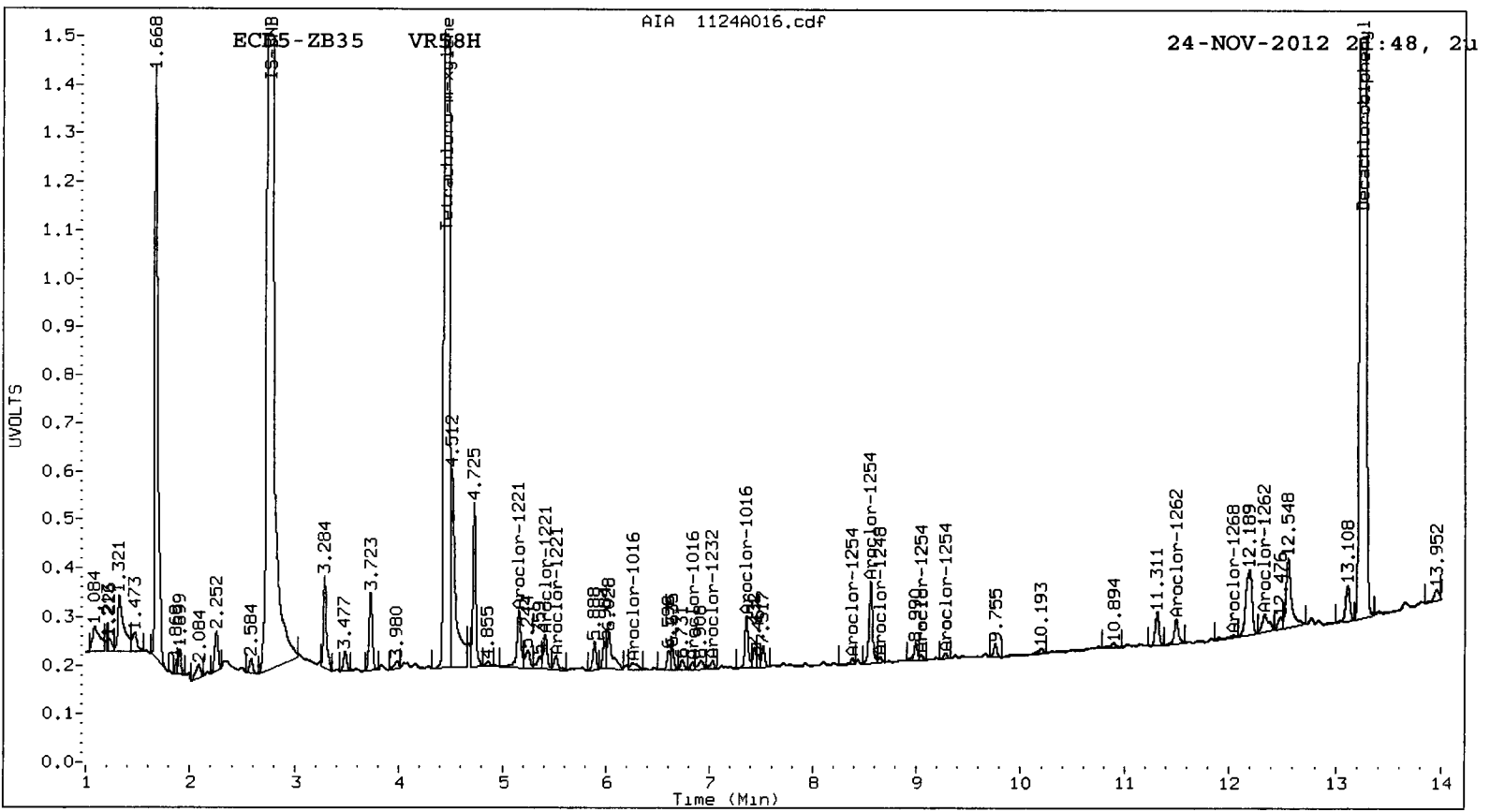
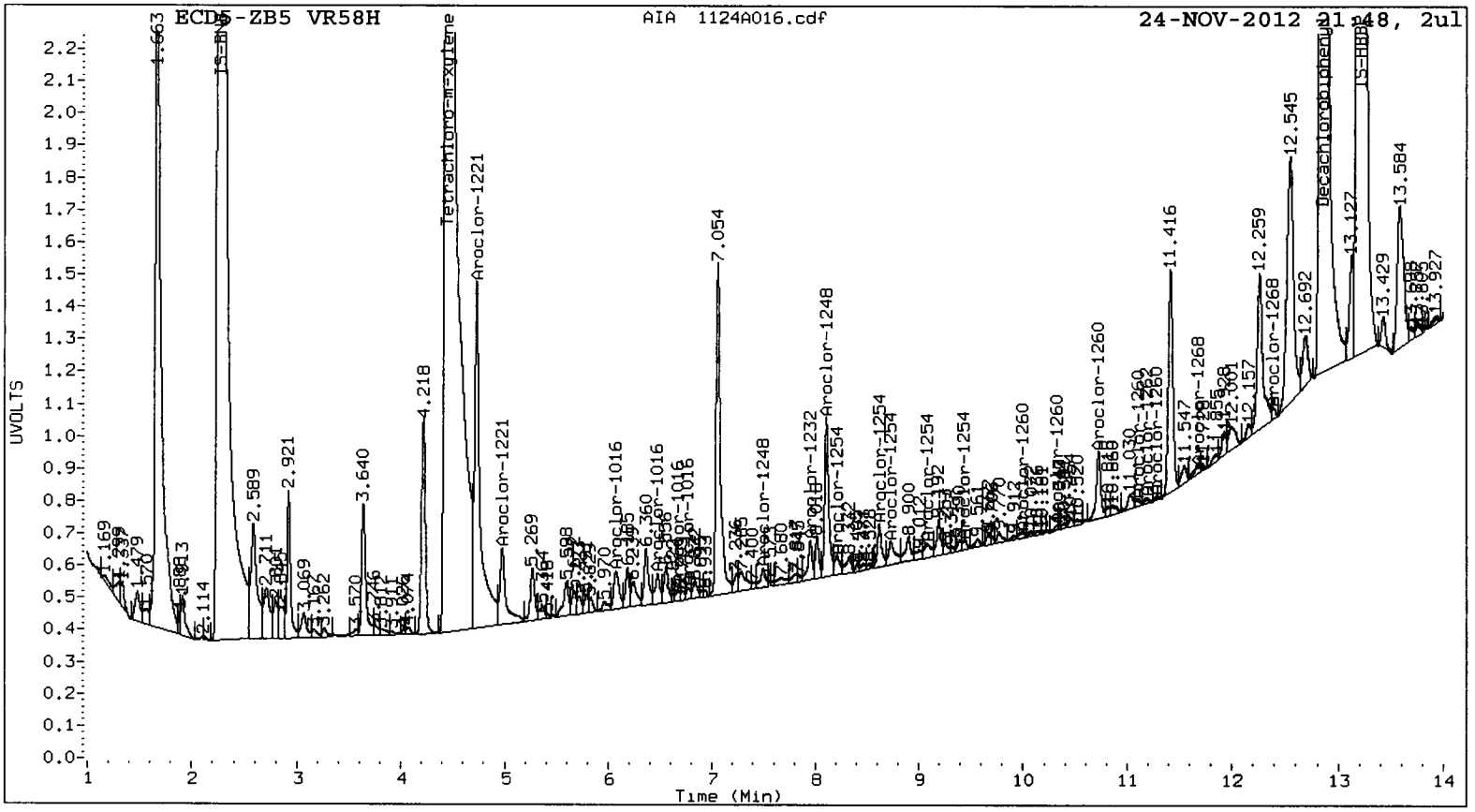
Total PCB Area Col2 (4.556 - 13.149) = 2744671 Col2 Total PCB = 0.0 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58 02307





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A017.d  
Data file 2: 20121102.B/1124-2.b/1124A017.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58I  
Client ID: SG-17-S-E-121107  
Injection Date: 24-NOV-2012 22:08  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	25365027	4.457	0.000	6677611	33.8	35.5	5.0	Tetrachloro-m-xylene
12.857	0.000	28916296	13.249	0.000	5979234	31.6	34.5	8.6	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	84.4	88.8
Decachlorobiphenyl	79.1	86.2

*A 11/20/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	35966133	15.1
Hexabromobiphenyl	64198300	60650954	-5.5

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	13194988	-9.2
Hexabromobiphenyl	15789428	12764772	-19.2

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.067	-0.029	320277	15.9	1	6.195	-0.015	31387	4.2	
Aroclor-1016	2	6.531	0.030	491749	7.8	2	6.830	-0.013	72567	4.6	
Aroclor-1016	3	6.673	0.023	181869	6.7	3	7.168	-0.059	62870	15.5	
Aroclor-1016	4	6.769	0.008	133058	6.9	4	7.354	0.017	139745	30.5	
Total CollAve (4 peaks):				9.3		Total Col2Ave (4 peaks):				13.7	RPD = 38
Corrected Ave (3 peaks):				7.2		Corrected Ave (3 peaks):				8.1	RPD = 13
Aroclor-1221	1	4.731	-0.086	1953554	222.5	1	5.160	0.019	149244	66.8	
Aroclor-1221	2	4.980	-0.015	439935	73.2	2	5.411	0.018	105330	80.0	
Aroclor-1221	3	5.126	0.025	43155	2.2	3	5.524	0.017	93538	22.6	
Aroclor-1221	NS	---	---	---	---	4	---	---	---	0.0	
Total CollAve (3 peaks):				99.3		Total Col2Ave (3 peaks):				56.5	RPD = 55*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks					
Aroclor-1232	1	6.067	-0.027	320277	39.1	1	6.195	-0.015	31387	9.6	
Aroclor-1232	2	6.531	0.034	491749	19.2	2	6.830	-0.011	72567	11.2	
Aroclor-1232	3	6.622	-0.025	67725	6.1	3	7.010	-0.041	52590	19.5	
Aroclor-1232	4	7.905	0.004	315020	22.5	4	8.283	0.007	936228	408.8	
Total CollAve (4 peaks):				21.7		Total Col2Ave (4 peaks):				112.3	RPD = 135*
Corrected Ave (3 peaks):				15.9		Corrected Ave (3 peaks):				13.4	RPD = 17
Aroclor-1242	1	6.067	-0.030	320277	20.5	1	6.195	-0.015	31387	5.6	
Aroclor-1242	2	6.531	0.030	491749	10.1	2	6.830	-0.012	72567	6.1	
Aroclor-1242	3	6.673	0.023	181869	8.6	3	7.010	-0.042	52590	10.6	
Aroclor-1242	4	7.905	0.002	315020	12.8	4	8.283	0.007	936228	223.0	
Total CollAve (4 peaks):				13.0		Total Col2Ave (4 peaks):				61.3	RPD = 130*
Corrected Ave (3 peaks):				10.5		Corrected Ave (3 peaks):				7.4	RPD = 35
Aroclor-1248	1	6.531	0.034	491749	15.5	1	6.830	-0.010	72567	9.3	
Aroclor-1248	2	7.440	-0.033	1388388	41.6	2	---	---	---	0.0	
Aroclor-1248	3	7.905	0.003	315020	7.5	3	8.283	0.007	936228	139.5	
Aroclor-1248	4	8.114	-0.023	667893	20.6	4	8.650	0.028	60587	7.3	
Total CollAve (4 peaks):				21.3		Total Col2Ave (3 peaks):				52.0	RPD = 84*
Corrected Ave (3 peaks):				14.5		Corrected Ave: < 3 Peaks					
Aroclor-1254	1	8.214	-0.010	147025	3.4	1	8.283	-0.059	936228	163.4	
Aroclor-1254	2	8.620	0.023	728592	25.8	2	8.557	0.042	370372	51.2	
Aroclor-1254	3	8.728	-0.003	439382	8.0	3	9.059	0.021	115653	20.8	
Aroclor-1254	4	9.075	-0.005	265137	4.4	4	9.185	-0.003	50056	4.1	
Aroclor-1254	5	9.448	0.007	160035	4.2	5	9.974	0.002	14290	1.9	
Total CollAve (5 peaks):				9.2		Total Col2Ave (5 peaks):				48.3	RPD = 136*
Corrected Ave (4 peaks):				5.0		Corrected Ave (4 peaks):				19.5	RPD = 118*
Aroclor-1260	1	9.962	-0.036	106333	3.0	1	10.299	-0.003	19121	2.8	
Aroclor-1260	2	10.388	0.073	582014	16.4	2	10.747	-0.005	65645	7.8	
Aroclor-1260	3	10.721	0.033	748332	8.9	3	11.022	-0.004	67662	4.1	
Aroclor-1260	4	11.109	0.021	293262	6.1	4	11.569	0.021	63645	12.7	
Aroclor-1260	5	11.272	-0.006	460463	19.7	NS	---	---	---	---	
Total CollAve (5 peaks):				10.8		Total Col2Ave (4 peaks):				6.9	RPD = 45*
Corrected Ave (4 peaks):				8.6		Corrected Ave (3 peaks):				4.9	RPD = 55*
Aroclor-1262	1	9.962	-0.034	106333	2.0	1	10.299	-0.003	19121	1.7	
Aroclor-1262	2	10.388	0.075	582014	14.5	2	10.747	-0.005	65645	6.6	
Aroclor-1262	3	10.721	0.034	748332	7.2	3	11.022	-0.002	67662	3.1	
Aroclor-1262	4	11.272	0.069	460463	11.8	4	11.569	0.022	63645	7.2	
Aroclor-1262	5	---	---	---	0.0	5	12.374	0.028	228243	27.0	
Total CollAve (4 peaks):				8.9		Total Col2Ave (5 peaks):				9.2	RPD = 3
Corrected Ave (3 peaks):				7.0		Corrected Ave (4 peaks):				4.7	RPD = 40
Aroclor-1268	1	11.272	0.069	460463	4.4	1	11.569	0.021	63645	2.9	

Aroclor-1268 2	---			0.0	2	---			0.0
Aroclor-1268 3	11.720	0.059	1667463	18.7	3	12.015	0.003	21462	1.2
Aroclor-1268 4	---			0.0	4	12.911	0.077	40178	0.8
CollAve: <3 Quant Peaks					Col2Ave: 1.6				

Total PCB Area Col1 (4.549 - 12.758) = 37246168      Col1 Total PCB = 0.1 ppm\*

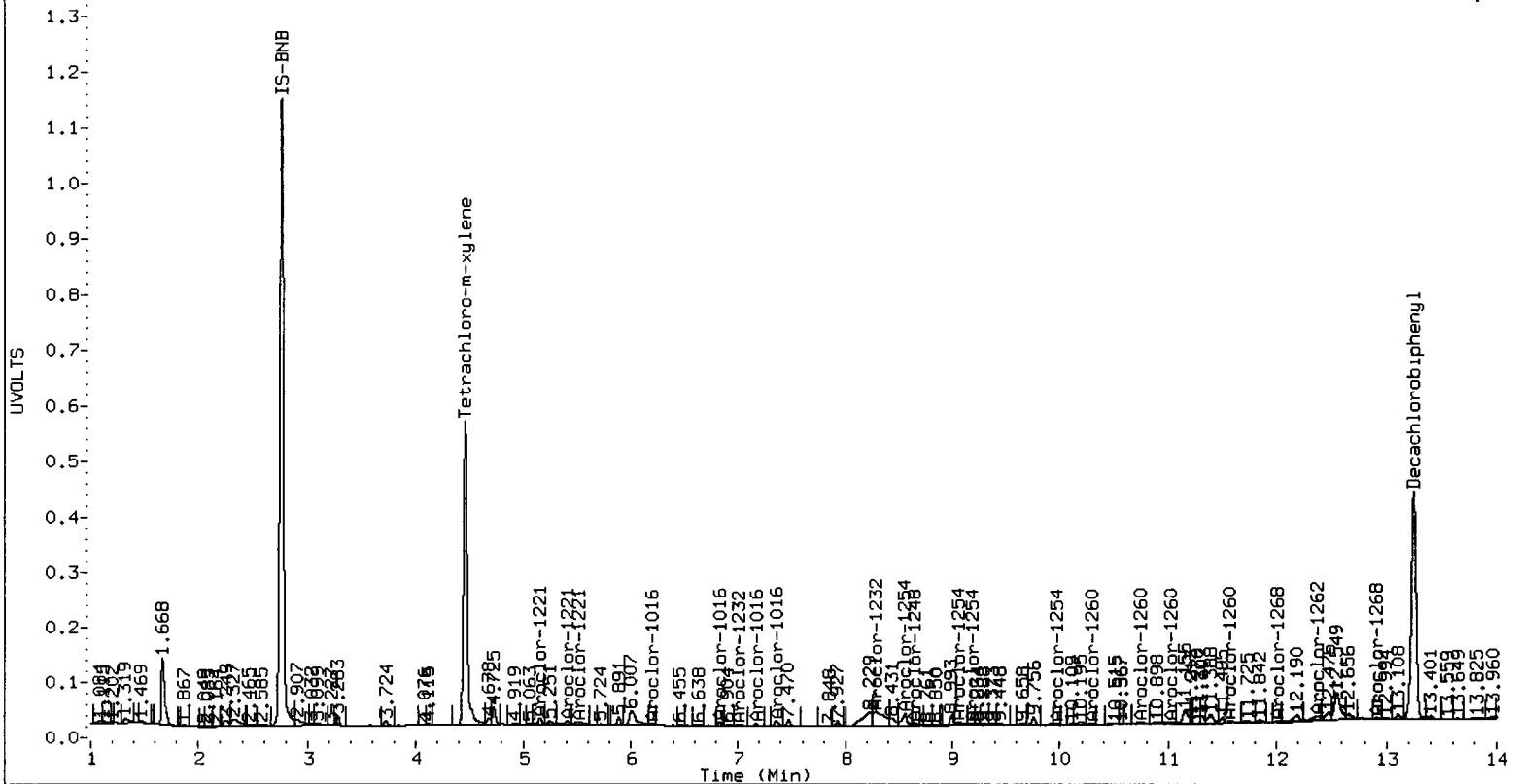
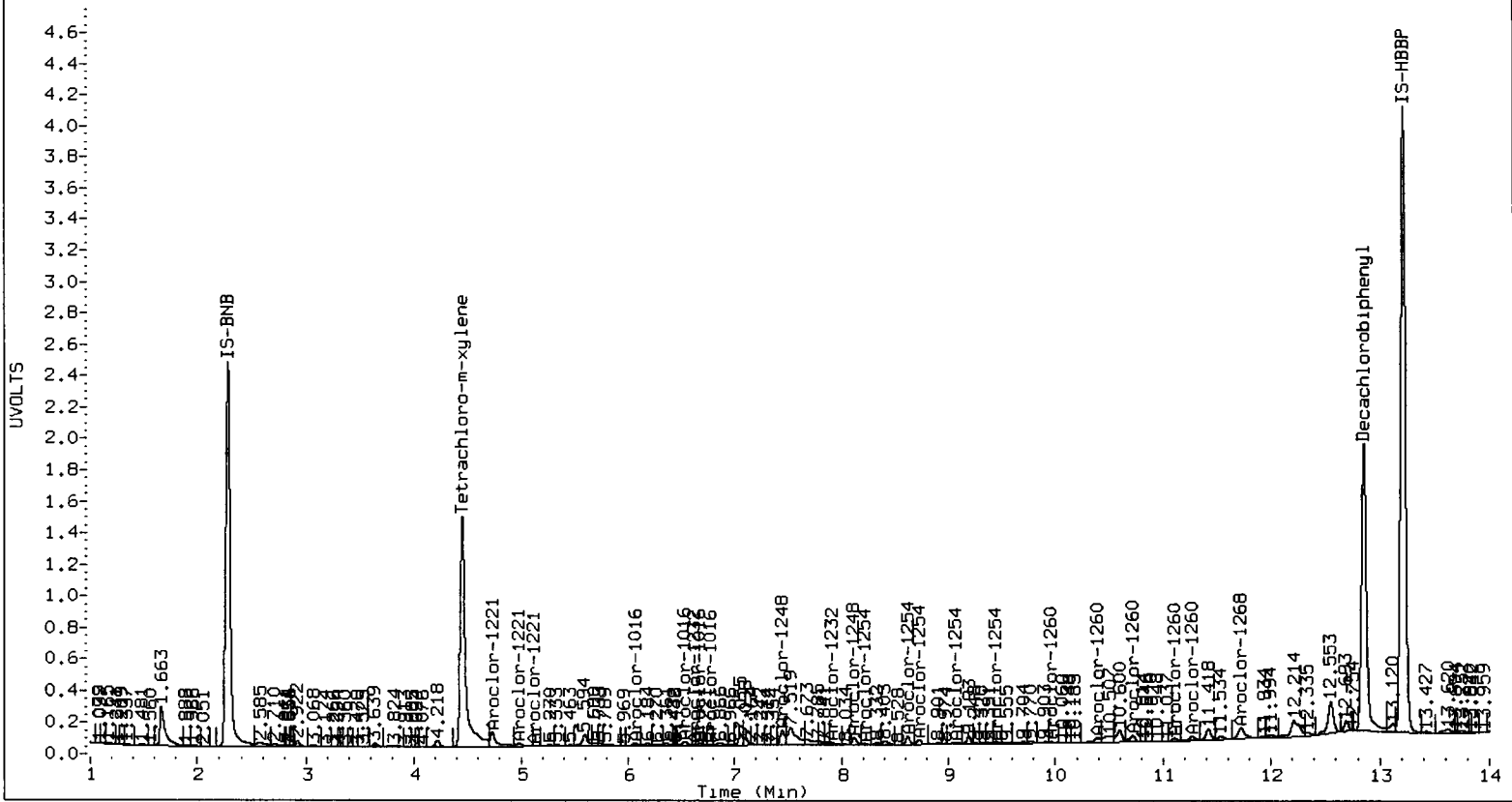
Total PCB Area Col2 (4.556 - 13.149) = 9259101      Col2 Total PCB = 0.1 ppm\*

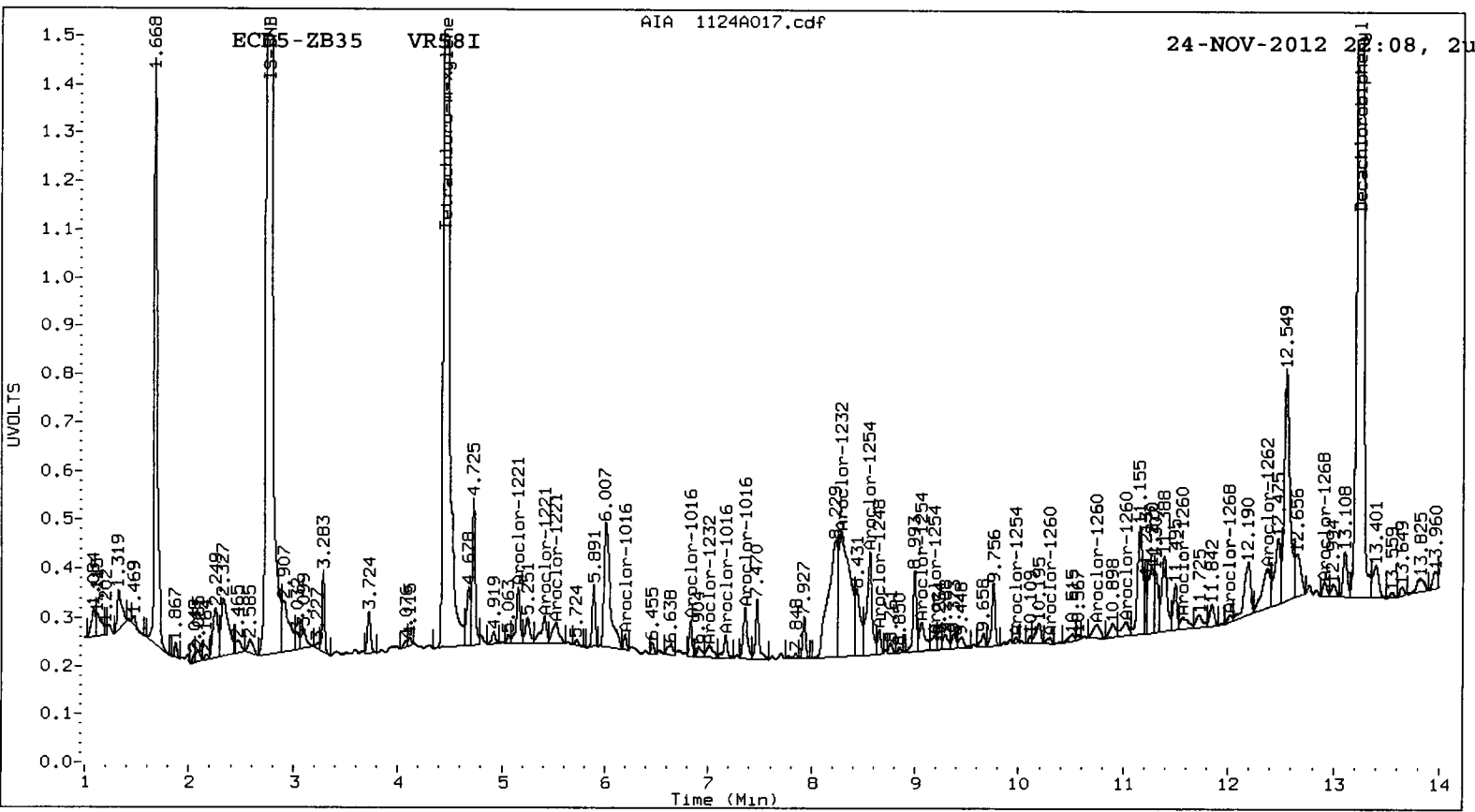
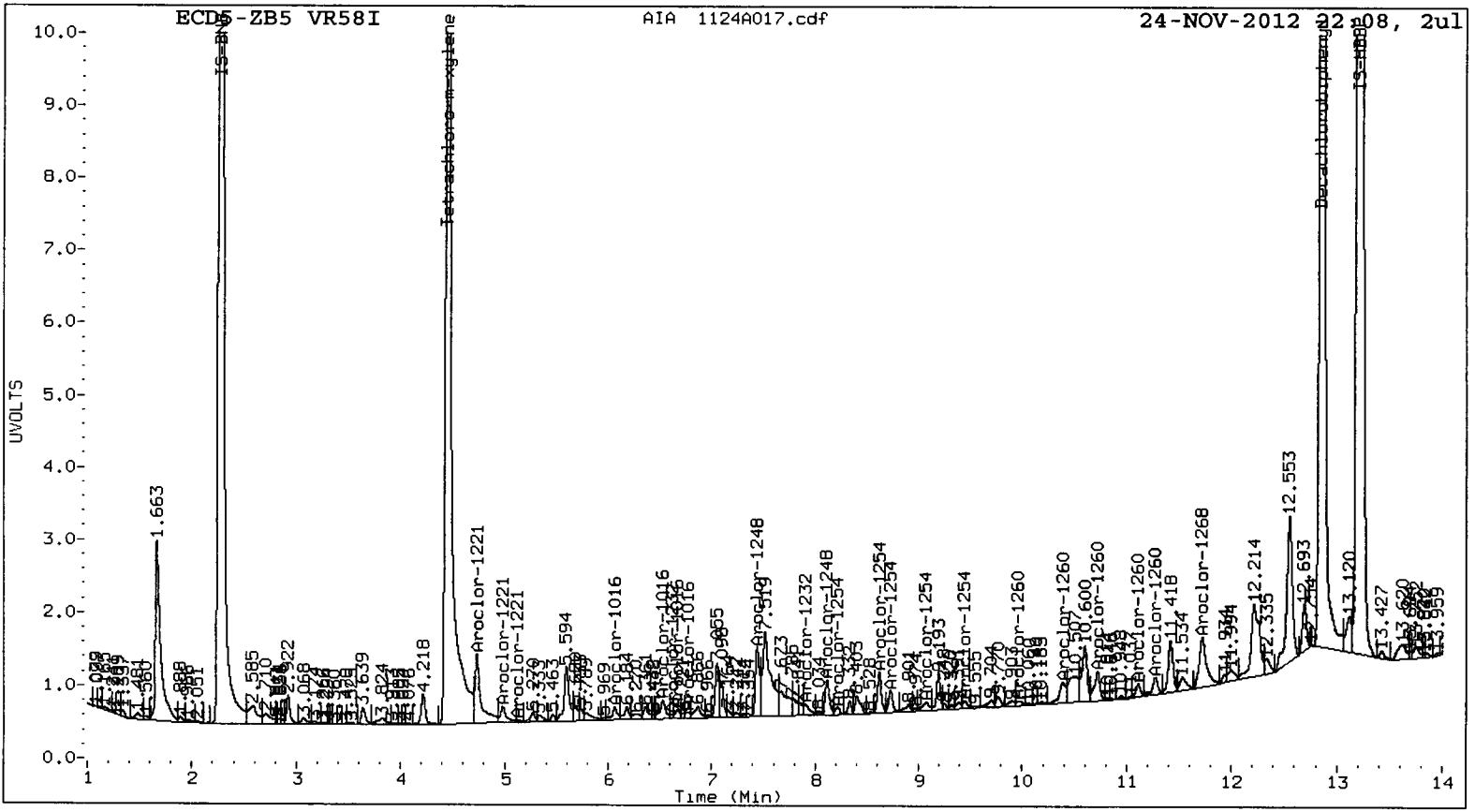
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58: 02312







Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A018.d  
Data file 2: 20121102.B/1124-2.b/1124A018.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58J  
Client ID: SG-01-S-C-121107  
Injection Date: 24-NOV-2012 22:28  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.448	0.000	26204019	4.456	-0.001	6366464	34.6	33.8	2.4	Tetrachloro-m-xylene
12.857	-0.001	31939661	13.248	0.000	6310421	32.4	34.3	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	86.4	84.4
Decachlorobiphenyl	81.0	85.7

*J* 11/26/12

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	31244918	36292769	16.2
Hexabromobiphenyl	64198300	65416983	1.9

Standard Cpnd	Column 2		%D
	Standard Area*	Sample Area	
Bromo-Nitrobenzene	14536489	13227066	-9.0
Hexabromobiphenyl	15789428	13546685	-14.2

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012  
<- 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	6.087	-0.009	102910	5.1	1	---	---	---	0.0
Aroclor-1016	2	6.474	-0.027	170679	2.7	2	---	---	---	0.0
Aroclor-1016	3	6.664	0.014	29992	1.1	3	---	---	---	0.0
Aroclor-1016	4	6.761	0.000	55673	2.9	4	---	---	---	0.0
Total CollAve (4 peaks):				2.9		Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	4.803	-0.014	854212	96.4	1	5.159	0.017	119542	53.3
Aroclor-1221	2	4.979	-0.016	579479	95.5	2	5.355	-0.037	184540	139.8
Aroclor-1221	3	---	---	---	0.0	3	5.510	0.004	77039	18.6
Aroclor-1221	NS	---	---	---	----	4	---	---	---	0.0
CollAve: <3 Quant Peaks						Col2Ave: 70.6				
Aroclor-1232	1	6.087	-0.006	102910	12.4	1	---	---	---	0.0
Aroclor-1232	2	6.474	-0.024	170679	6.6	2	---	---	---	0.0
Aroclor-1232	3	6.664	0.017	29992	2.7	3	---	---	---	0.0
Aroclor-1232	4	7.918	0.017	53814	3.8	4	---	---	---	0.0
Total CollAve (4 peaks):				6.4		Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.087	-0.009	102910	6.5	1	---	---	---	0.0
Aroclor-1242	2	6.474	-0.027	170679	3.5	2	---	---	---	0.0
Aroclor-1242	3	6.664	0.014	29992	1.4	3	---	---	---	0.0
Aroclor-1242	4	7.918	0.015	53814	2.2	4	---	---	---	0.0
Total CollAve (4 peaks):				3.4		Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.474	-0.023	170679	5.3	1	---	---	---	0.0
Aroclor-1248	2	7.499	0.026	149704	4.4	2	---	---	---	0.0
Aroclor-1248	3	7.918	0.016	53814	1.3	3	---	---	---	0.0
Aroclor-1248	4	8.108	-0.029	458380	14.0	4	---	---	---	0.0
Total CollAve (4 peaks):				6.3		Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.214	-0.010	82966	1.9	1	8.384	0.043	20012	3.5
Aroclor-1254	2	8.619	0.022	217806	7.6	2	8.557	0.042	111936	15.4
Aroclor-1254	3	8.730	-0.001	160703	2.9	3	9.044	0.006	327431	58.8
Aroclor-1254	4	9.077	-0.003	109471	1.8	4	---	---	---	0.0
Aroclor-1254	5	9.443	0.002	62274	1.6	5	---	---	---	0.0
Total CollAve (5 peaks):				3.2		Total Col2Ave (3 peaks): 25.9 RPD = 156*				
Corrected Ave (4 peaks):				2.1		Corrected Ave: < 3 Peaks				
Aroclor-1260	1	9.971	-0.028	95854	2.5	1	10.353	0.051	10881	1.5
Aroclor-1260	2	10.320	0.005	18526	0.5	2	---	---	---	0.0
Aroclor-1260	3	10.731	0.043	158621	1.8	3	11.025	-0.001	10059	0.6
Aroclor-1260	4	11.117	0.029	57327	1.1	4	11.494	-0.054	26292	4.9
Aroclor-1260	5	11.286	0.009	42112	1.7	NS	---	---	---	----
Total CollAve (5 peaks):				1.5		Total Col2Ave (3 peaks): 2.3 RPD = 43*				
Corrected Ave (4 peaks):				1.3		Corrected Ave: < 3 Peaks				
Aroclor-1262	1	9.971	-0.026	95854	1.7	1	10.353	0.051	10881	0.9
Aroclor-1262	2	10.320	0.008	18526	0.4	2	---	---	---	0.0
Aroclor-1262	3	10.731	0.045	158621	1.4	3	11.025	0.001	10059	0.4
Aroclor-1262	4	11.178	-0.024	22163	0.5	4	11.494	-0.053	26292	2.8
Aroclor-1262	5	11.286	0.011	42112	0.9	5	12.330	-0.016	84256	9.4
Total CollAve (5 peaks):				1.0		Total Col2Ave (4 peaks): 3.4 RPD = 109*				
Corrected Ave (4 peaks):				0.8		Corrected Ave (3 peaks): 1.4 RPD = 52*				
Aroclor-1268	1	11.178	-0.025	22163	0.2	1	---	---	---	0.0
Aroclor-1268	2	11.286	0.011	42112	0.4	2	---	---	---	0.0
Aroclor-1268	3	11.672	0.012	70178	0.7	3	---	---	---	0.0
Aroclor-1268	4	---	---	---	0.0	4	---	---	---	0.0
Total CollAve (3 peaks):				0.4		Col2Ave: <3 Quant Peaks				

Total PCB Area Col1 (4.549 - 12.758) = 15978610

Col1 Total PCB = 0.0 ppm\*

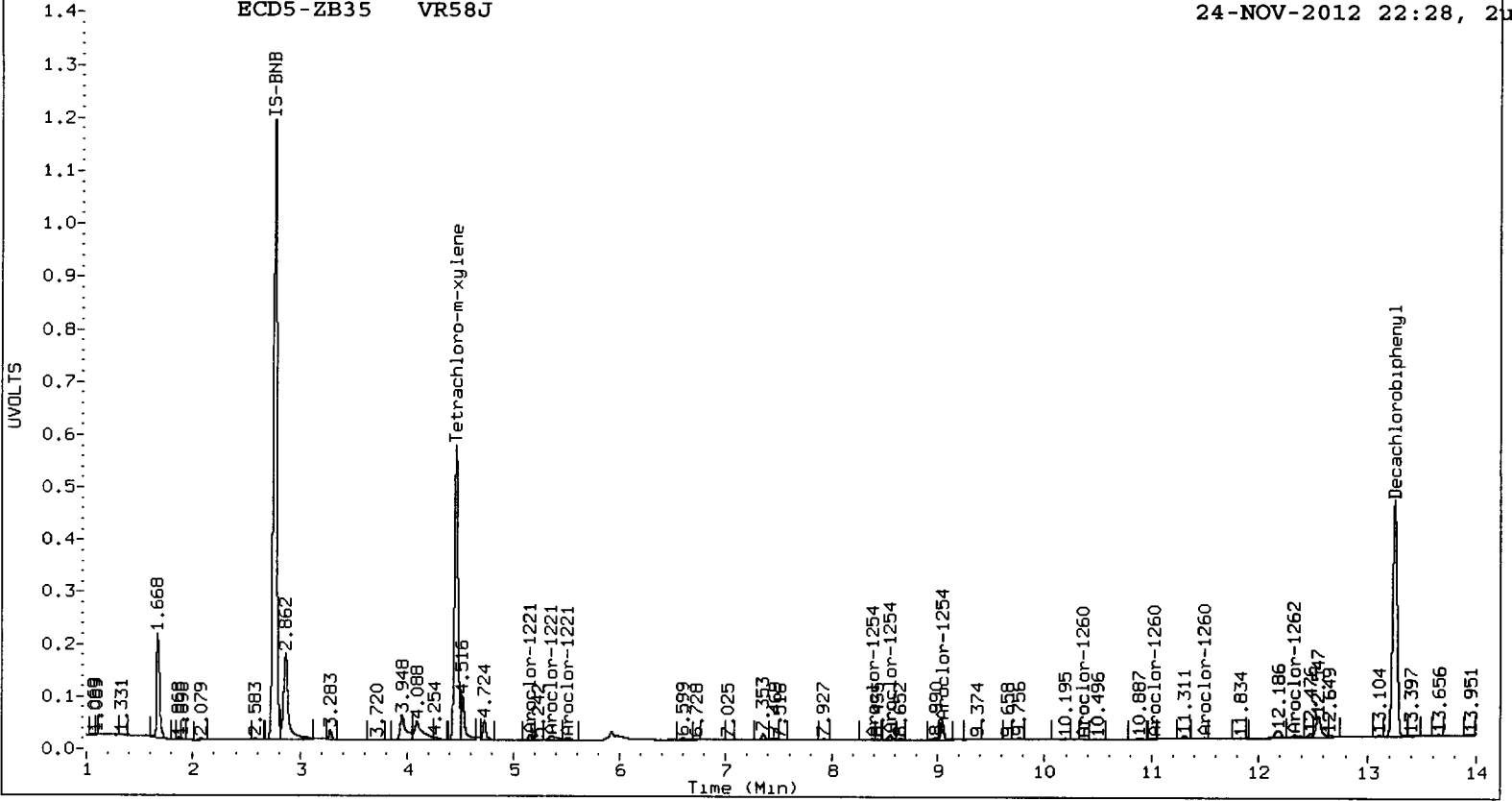
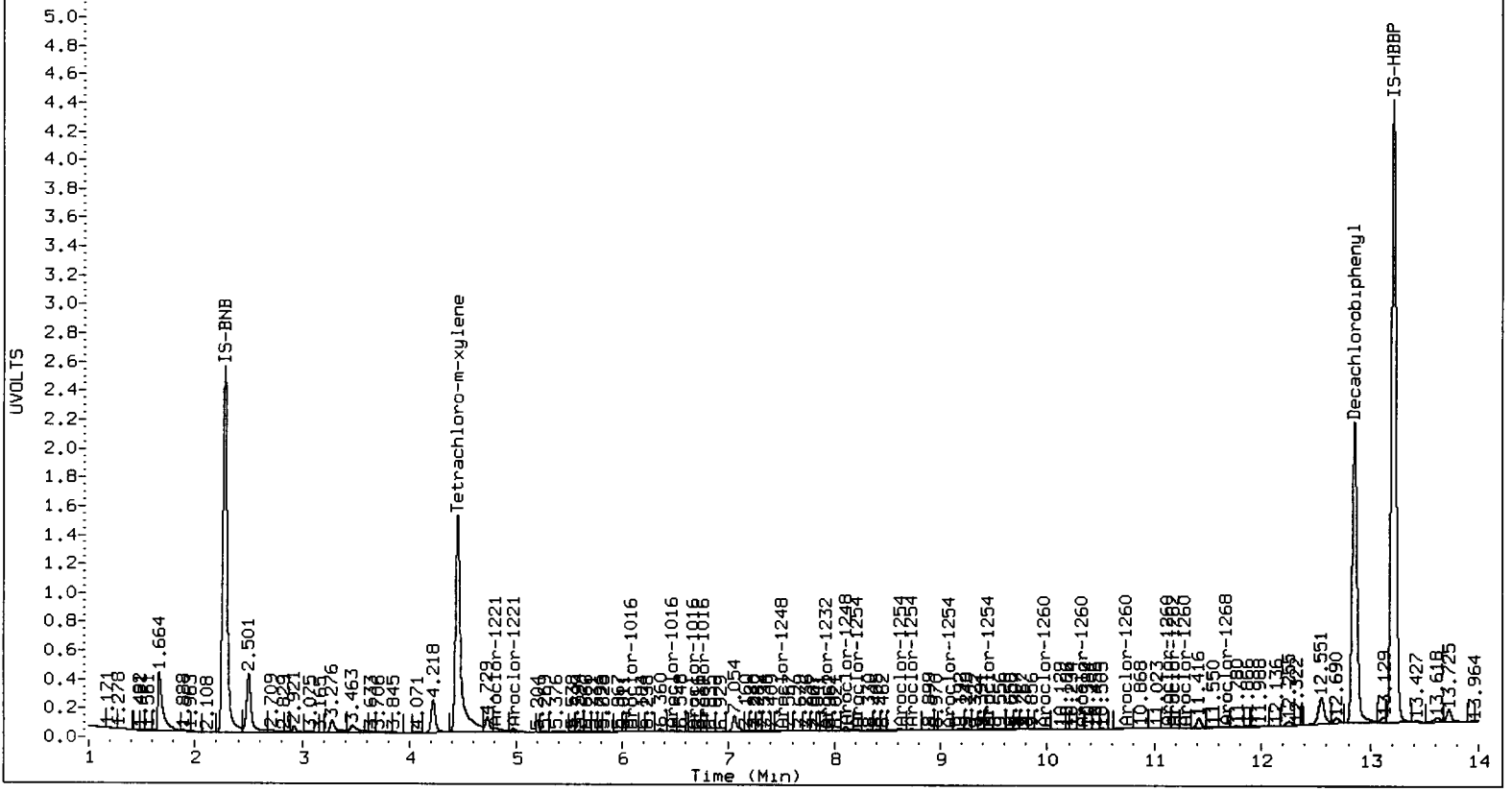
Total PCB Area Col2 (4.556 - 13.149) = 2981772

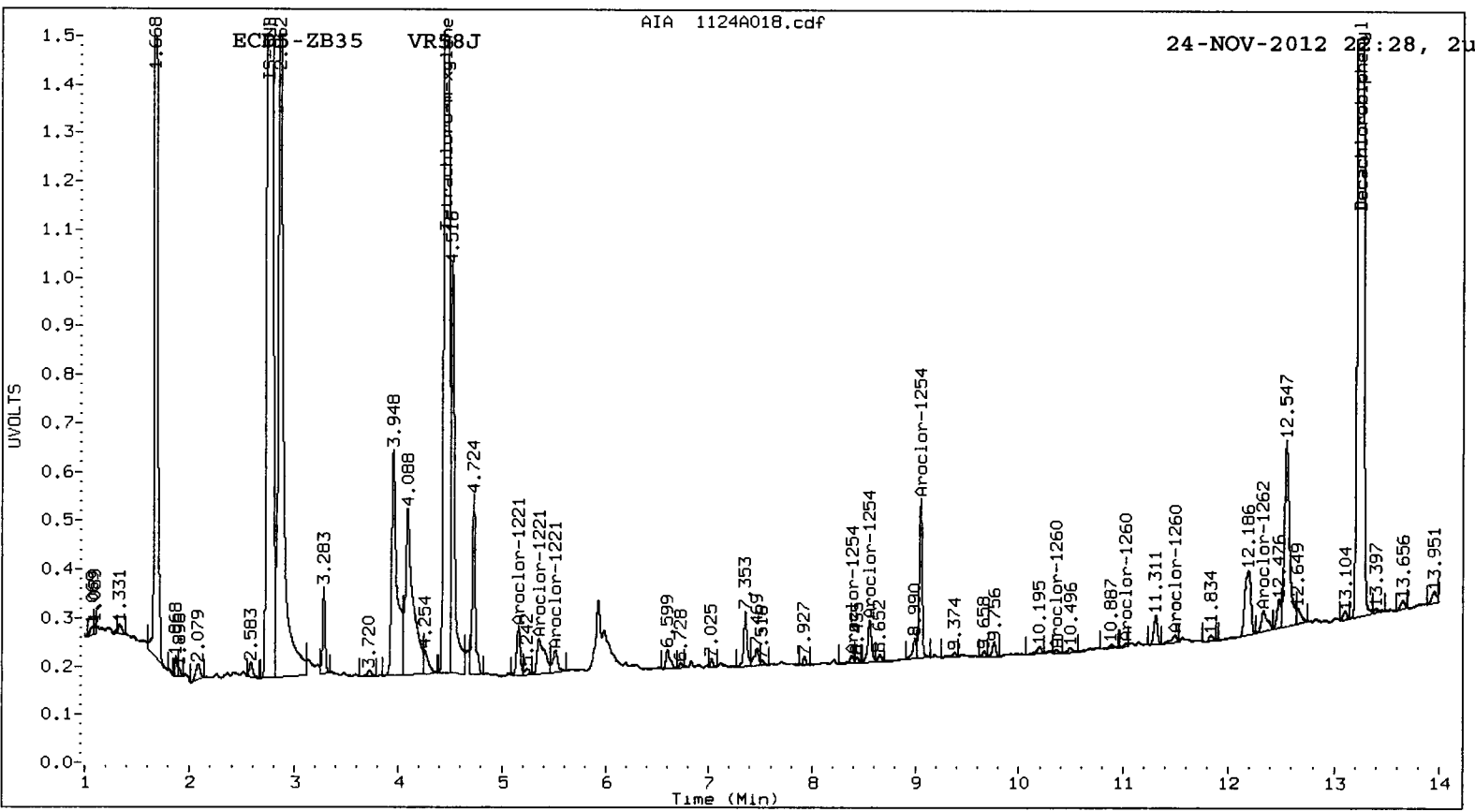
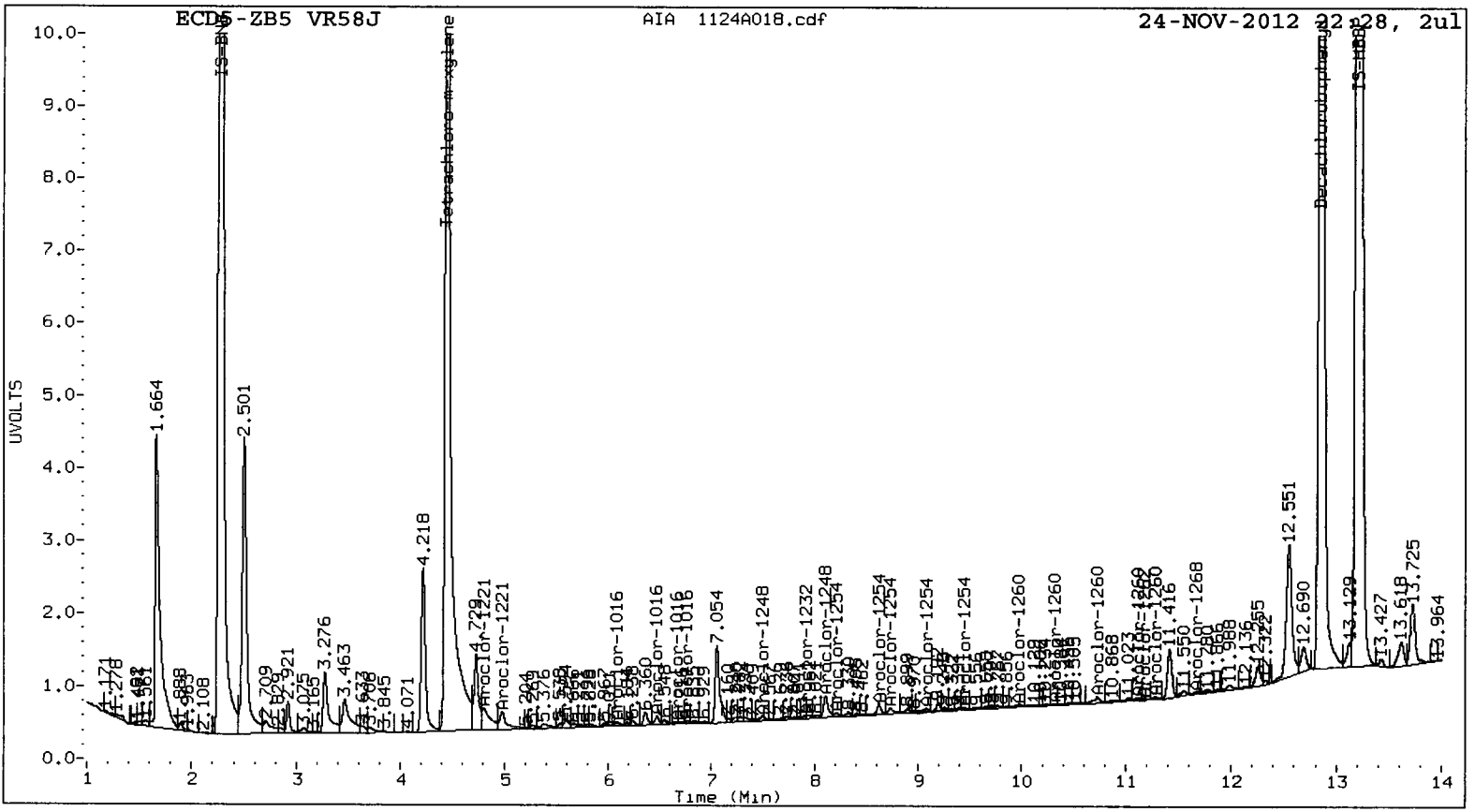
Col2 Total PCB = 0.0 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58 : 02317





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A019.d  
Data file 2: 20121102.B/1124-2.b/1124A019.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58JMS  
Client ID: SG-01-S-C-12110 MS  
Injection Date: 24-NOV-2012 22:49  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	27024850	4.457	0.001	6552646	35.3	33.3	5.7	Tetrachloro-m-xylene
12.857	0.000	33111378	13.248	-0.001	6526948	32.5	34.7	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	88.1	83.2
Decachlorobiphenyl	81.3	86.8

*A* 11/26/12

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	36706902	17.5
Hexabromobiphenyl	64198300	67566631	5.2

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	13803988	-5.0
Hexabromobiphenyl	15789428	13832386	-12.4

\* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012  
<- 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	6.096	0.000	8376379	408.2	1	6.209	0.000	3155555	408.1	
Aroclor-1016	2	6.500	-0.001	27121519	424.1	2	6.841	-0.002	6841091	418.1	
Aroclor-1016	3	6.649	-0.001	11371981	412.1	3	7.226	-0.001	1851209	435.0	
Aroclor-1016	4	6.760	-0.001	8542547	432.8	4	7.336	-0.001	1951544	407.7	
Total CollAve (4 peaks):				419.8		Total Col2Ave (4 peaks):				417.2	RPD = 0
Corrected Ave (3 peaks):				414.8		Corrected Ave (3 peaks):				411.3	RPD = 1
Aroclor-1221	1	4.815	-0.002	1459058	162.8	1	5.146	0.004	376314	160.9	
Aroclor-1221	2	4.994	0.000	1354059	220.7	2	5.393	0.000	332485	241.4	
Aroclor-1221	3	5.101	0.000	5409395	270.7	3	5.506	-0.001	1351383	312.1	
Aroclor-1221	NS	---	---	---	---	4	5.573	-0.003	111520	149.2	
Total CollAve (3 peaks):				218.1		Total Col2Ave (4 peaks):				215.9	RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				183.8	
Aroclor-1232	1	6.096	0.002	8376379	1001.9	1	6.209	-0.001	3155555	921.1	
Aroclor-1232	2	6.500	0.003	27121519	1037.5	2	6.841	0.000	6841091	1013.5	
Aroclor-1232	3	6.649	0.002	11371981	997.5	3	7.051	0.001	2867024	1016.0	
Aroclor-1232	4	7.911	0.010	8023289	561.6	4	8.275	-0.001	289907	121.0	
Total CollAve (4 peaks):				899.6		Total Col2Ave (4 peaks):				767.9	RPD = 16
Corrected Ave (3 peaks):				853.7		Corrected Ave (3 peaks):				685.2	RPD = 22
Aroclor-1242	1	6.096	0.000	8376379	524.6	1	6.209	-0.001	3155555	535.3	
Aroclor-1242	2	6.500	-0.001	27121519	548.3	2	6.841	-0.001	6841091	545.2	
Aroclor-1242	3	6.649	-0.001	11371981	529.4	3	7.051	0.000	2867024	549.9	
Aroclor-1242	4	7.911	0.009	8023289	318.5	4	8.275	-0.001	289907	66.0	
Total CollAve (4 peaks):				480.2		Total Col2Ave (4 peaks):				424.1	RPD = 12
Corrected Ave (3 peaks):				457.5		Corrected Ave (3 peaks):				382.2	RPD = 18
Aroclor-1248	1	6.500	0.003	27121519	838.7	1	6.841	0.001	6841091	834.9	
Aroclor-1248	2	7.475	0.001	10589591	311.1	2	7.747	0.001	2380235	350.2	
Aroclor-1248	3	7.911	0.009	8023289	186.6	3	8.275	0.000	289907	41.3	
Aroclor-1248	4	8.144	0.007	2020738	61.0	4	8.621	0.000	163335	18.8	
Total CollAve (4 peaks):				349.3		Total Col2Ave (4 peaks):				311.3	RPD = 12
Corrected Ave (3 peaks):				186.2		Corrected Ave (3 peaks):				136.8	RPD = 31
Aroclor-1254	1	8.225	0.001	8880230	202.6	1	8.341	-0.001	1545626	257.9	
Aroclor-1254	2	8.595	-0.002	1980865	68.8	2	8.515	0.000	1839587	243.0	
Aroclor-1254	3	8.728	-0.003	8731197	155.9	3	9.037	-0.001	434268	74.7	
Aroclor-1254	4	9.062	-0.018	22632429	369.3	4	9.190	0.001	904239	70.9	
Aroclor-1254	5	9.391	-0.050	33072301	858.0	5	9.981	0.009	1908443	248.3	
Total CollAve (5 peaks):				330.9		Total Col2Ave (5 peaks):				178.9	RPD = 60*
Corrected Ave (4 peaks):				199.1		Corrected Ave (4 peaks):				159.2	RPD = 22
Aroclor-1260	1	9.998	-0.001	16999787	432.9	1	10.301	0.000	3520132	476.7	
Aroclor-1260	2	10.314	0.000	17172397	435.0	2	10.752	-0.001	4290861	473.5	
Aroclor-1260	3	10.689	0.000	41854502	447.2	3	11.026	0.000	8893361	493.2	
Aroclor-1260	4	11.088	0.000	22931712	427.6	4	11.548	0.000	2540558	467.6	
Aroclor-1260	5	11.278	0.000	11815531	453.4	NS	---	---	---	---	
Total CollAve (5 peaks):				439.2		Total Col2Ave (4 peaks):				477.7	RPD = 8
Corrected Ave (4 peaks):				435.7		Corrected Ave (3 peaks):				472.6	RPD = 8
Aroclor-1262	1	9.998	0.001	16999787	289.3	1	10.301	0.000	3520132	291.8	
Aroclor-1262	2	10.314	0.002	17172397	384.9	2	10.752	0.000	4290861	400.4	
Aroclor-1262	3	10.689	0.002	41854502	361.9	3	11.026	0.002	8893361	378.1	
Aroclor-1262	4	11.204	0.002	9623482	220.9	4	11.548	0.001	2540558	266.9	
Aroclor-1262	5	11.278	0.002	11815531	247.0	5	12.348	0.002	2377430	259.9	
Total CollAve (5 peaks):				300.8		Total Col2Ave (5 peaks):				319.4	RPD = 6
Corrected Ave (4 peaks):				279.8		Corrected Ave (4 peaks):				299.2	RPD = 7
Aroclor-1268	1	11.204	0.001	9623482	82.1	1	11.548	0.000	2540558	105.7	

Aroclor-1268 2	11.278	0.003	11815531	104.8	2	11.607	-0.007	6107982	261.4
Aroclor-1268 3	11.677	0.016	5352526	54.0	3	12.012	0.001	157190	8.0
Aroclor-1268 4	12.450	0.001	3337843	11.8	4	12.834	0.000	673137	11.6
Total Col1Ave (4 peaks):			63.2	Total Col2Ave (4 peaks):			96.7	RPD = 42*	
Corrected Ave (3 peaks):			49.3	Corrected Ave (3 peaks):			41.8	RPD = 16	

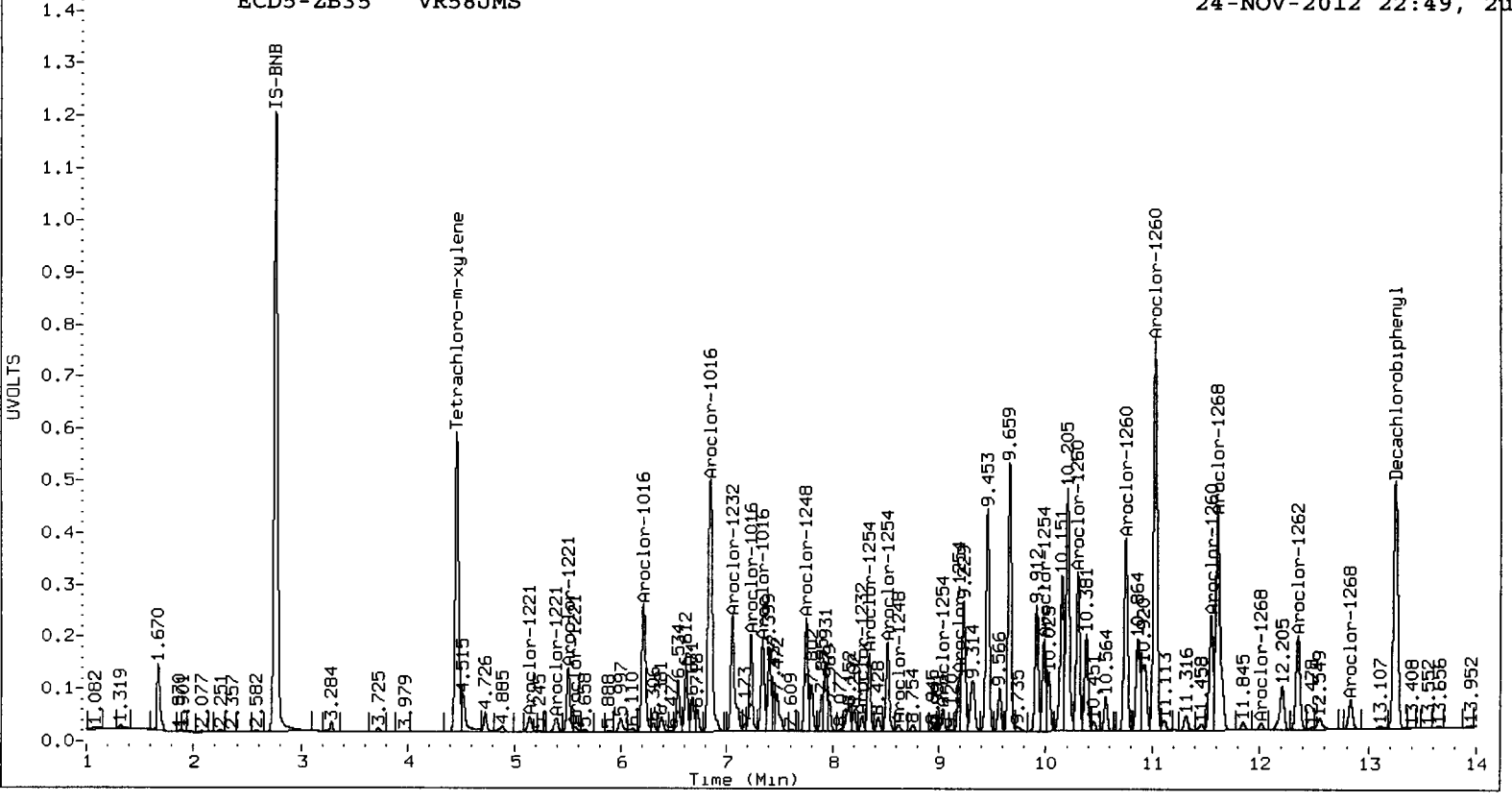
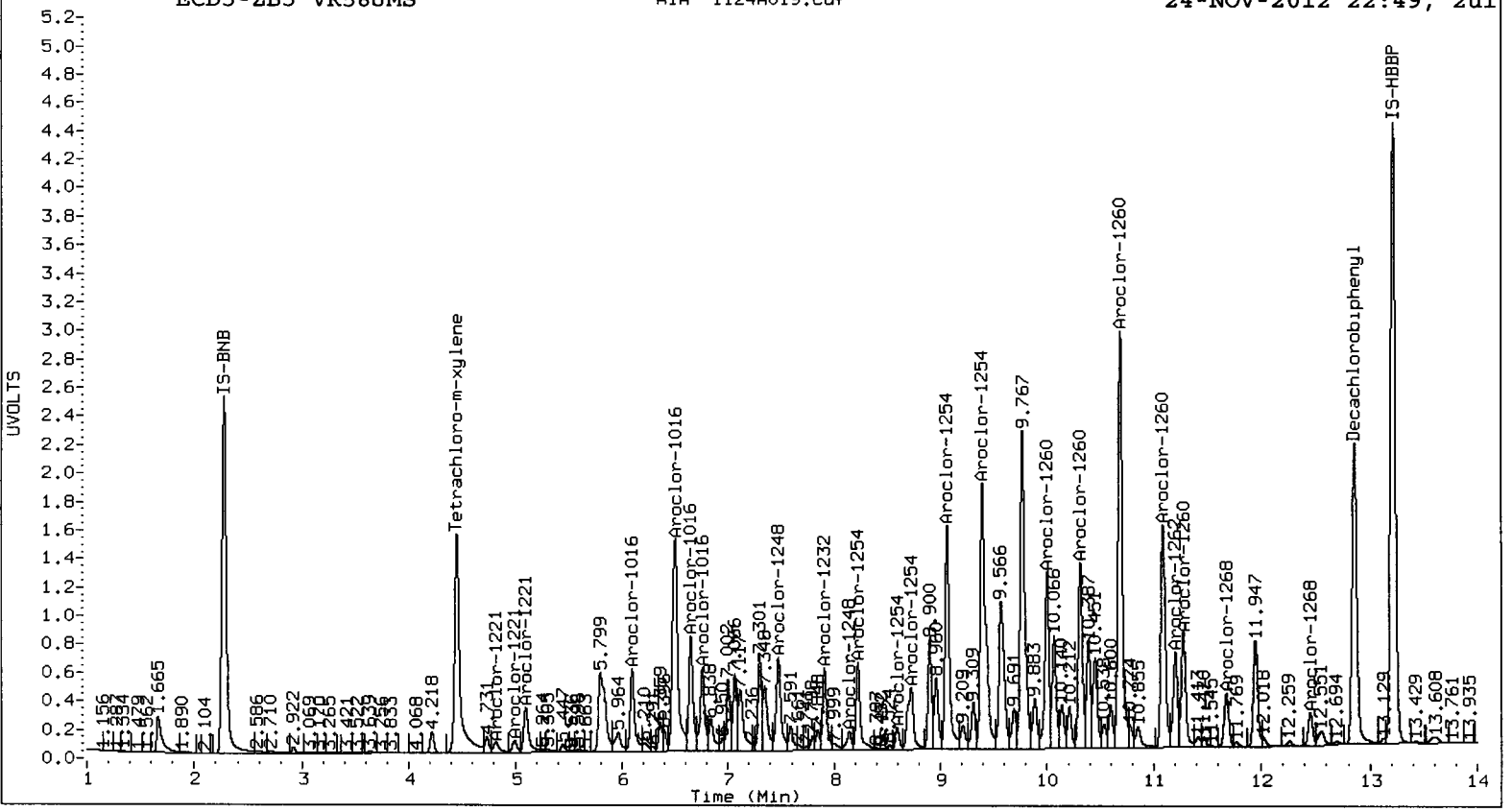
Total PCB Area Col1 (4.549 - 12.758) = 510479866      Col1 Total PCB = 0.9 ppm\*

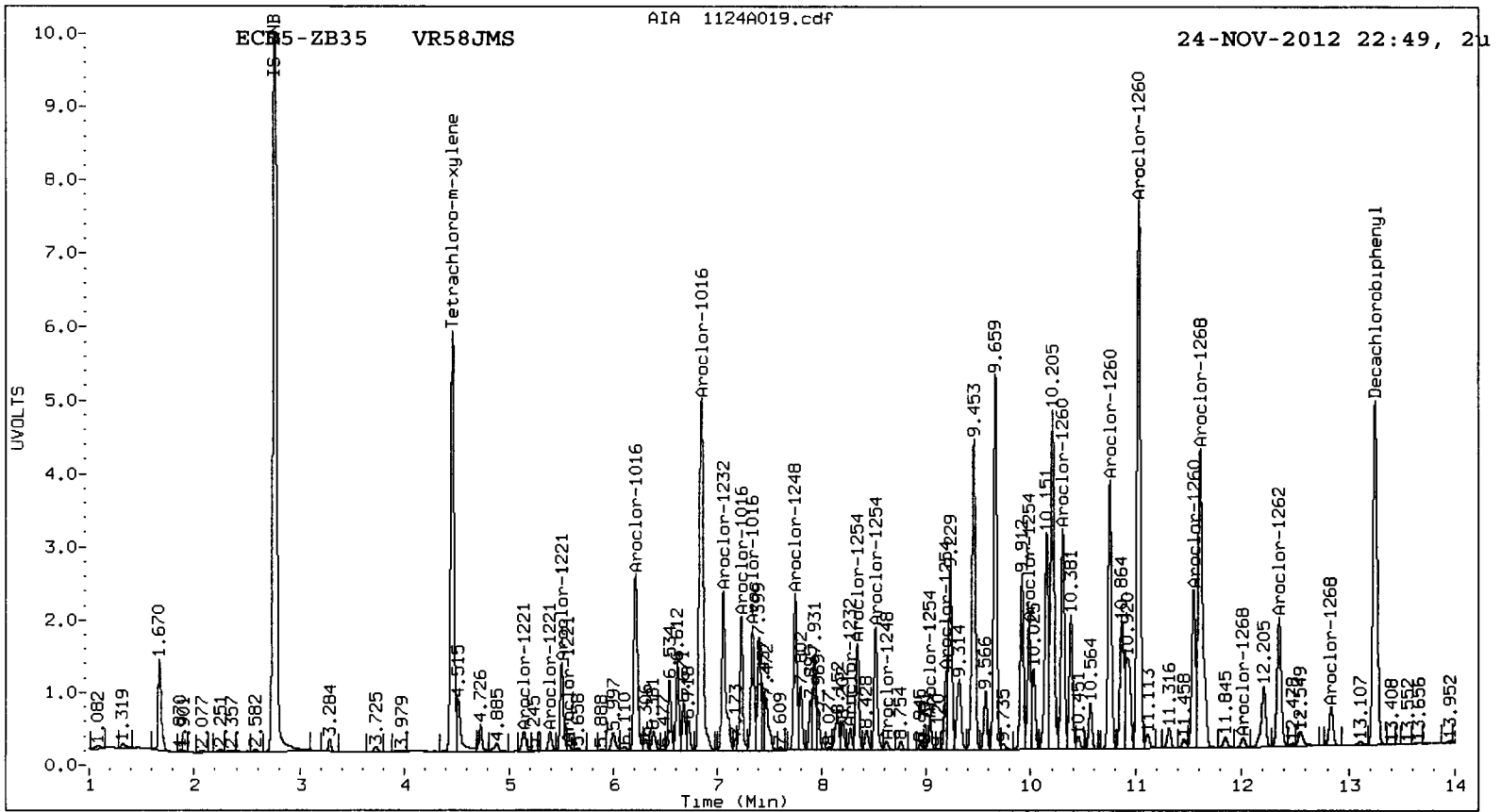
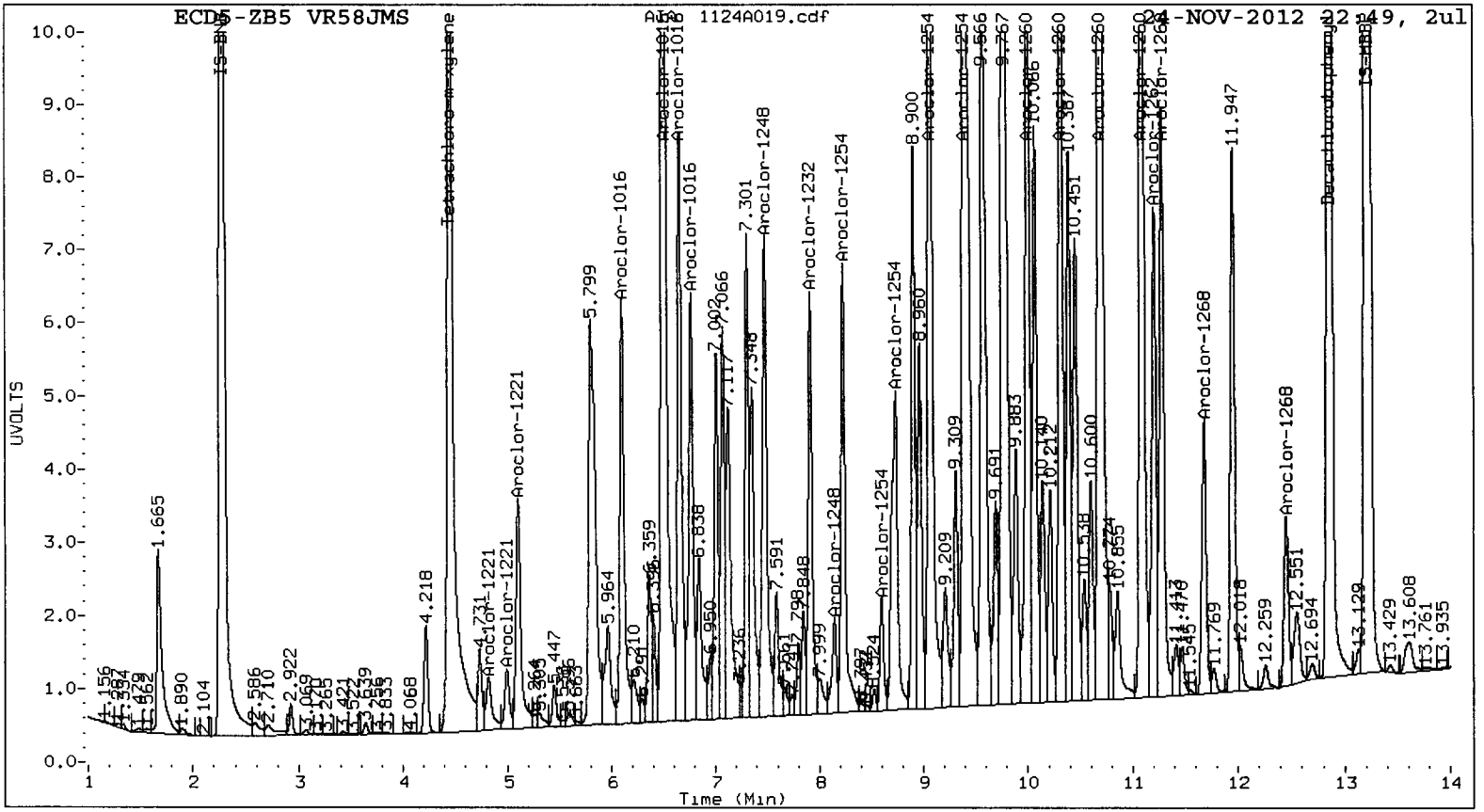
Total PCB Area Col2 (4.556 - 13.149) = 108931644      Col2 Total PCB = 0.9 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

VR58 · 02022





Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A020.d  
Data file 2: 20121102.B/1124-2.b/1124A020.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: PCB  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: VR58JMSD  
Client ID: SG-01-S-C-12110 MSD  
Injection Date: 24-NOV-2012 23:09  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	27318848	4.457	0.001	6572698	35.0	33.1	5.4	Tetrachloro-m-xylene
12.857	-0.001	34255159	13.249	0.000	6712040	32.7	34.9	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	87.4	82.8
Decachlorobiphenyl	81.8	87.3

*J 11/24/12*

INTERNAL STANDARD SUMMARY

Standard Cpnd	Column 1		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	37419688	19.8
Hexabromobiphenyl	64198300	69484798	8.2

Standard Cpnd	Column 2		
	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	13916028	-4.3
Hexabromobiphenyl	15789428	14152051	-10.4

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.096	0.000	8549036	408.6	1	6.209	0.000	3175626	407.4	
Aroclor-1016	2	6.500	-0.001	27487311	421.6	2	6.841	-0.001	6923849	419.8	
Aroclor-1016	3	6.650	0.000	11491120	408.5	3	7.226	0.000	1871906	436.3	
Aroclor-1016	4	6.761	0.000	8672136	431.0	4	7.335	-0.001	1968573	408.0	
Total CollAve (4 peaks):				417.4	Total Col2Ave (4 peaks):				417.9	RPD = 0	
Corrected Ave (3 peaks):				412.9	Corrected Ave (3 peaks):				411.7	RPD = 0	
Aroclor-1221	1	4.816	-0.001	1498916	164.1	1	5.145	0.003	380420	161.4	
Aroclor-1221	2	4.995	0.000	1350587	215.9	2	5.392	-0.001	311327	224.2	
Aroclor-1221	3	5.101	0.000	5656036	277.6	3	5.506	-0.001	1350599	309.4	
Aroclor-1221	NS	---	---	---	---	4	5.573	-0.003	105738	140.3	
Total CollAve (3 peaks):				219.2	Total Col2Ave (4 peaks):				208.8	RPD = 5	
Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):				175.3		
Aroclor-1232	1	6.096	0.003	8549036	1003.1	1	6.209	-0.001	3175626	919.5	
Aroclor-1232	2	6.500	0.003	27487311	1031.5	2	6.841	0.001	6923849	1017.5	
Aroclor-1232	3	6.650	0.003	11491120	988.8	3	7.051	0.001	2887708	1015.1	
Aroclor-1232	4	7.911	0.010	8117474	557.4	4	8.276	0.000	293336	121.4	
Total CollAve (4 peaks):				895.2	Total Col2Ave (4 peaks):				768.4	RPD = 15	
Corrected Ave (3 peaks):				849.7	Corrected Ave (3 peaks):				685.4	RPD = 21	
Aroclor-1242	1	6.096	0.000	8549036	525.2	1	6.209	-0.001	3175626	534.4	
Aroclor-1242	2	6.500	-0.001	27487311	545.1	2	6.841	-0.001	6923849	547.4	
Aroclor-1242	3	6.650	0.000	11491120	524.8	3	7.051	-0.001	2887708	549.4	
Aroclor-1242	4	7.911	0.009	8117474	316.1	4	8.276	0.000	293336	66.3	
Total CollAve (4 peaks):				477.8	Total Col2Ave (4 peaks):				424.4	RPD = 12	
Corrected Ave (3 peaks):				455.4	Corrected Ave (3 peaks):				382.7	RPD = 17	
Aroclor-1248	1	6.500	0.003	27487311	833.8	1	6.841	0.001	6923849	838.2	
Aroclor-1248	2	7.475	0.001	10725385	309.0	2	7.748	0.002	2397453	349.9	
Aroclor-1248	3	7.911	0.009	8117474	185.2	3	8.276	0.001	293336	41.4	
Aroclor-1248	4	8.144	0.007	2234612	66.1	4	8.621	-0.001	169577	19.4	
Total CollAve (4 peaks):				348.6	Total Col2Ave (4 peaks):				312.2	RPD = 11	
Corrected Ave (3 peaks):				186.8	Corrected Ave (3 peaks):				136.9	RPD = 31	
Aroclor-1254	1	8.225	0.001	8997340	201.4	1	8.341	-0.001	1564620	258.9	
Aroclor-1254	2	8.594	-0.002	2032911	69.2	2	8.515	0.000	1922371	251.9	
Aroclor-1254	3	8.728	-0.003	8937599	156.6	3	9.038	0.000	441078	75.2	
Aroclor-1254	4	9.062	-0.019	23120016	370.0	4	9.190	0.001	923080	71.8	
Aroclor-1254	5	9.391	-0.050	33768893	859.4	5	9.982	0.010	1920676	247.9	
Total CollAve (5 peaks):				331.3	Total Col2Ave (5 peaks):				181.1	RPD = 59*	
Corrected Ave (4 peaks):				199.3	Corrected Ave (4 peaks):				161.7	RPD = 21	
Aroclor-1260	1	9.998	0.000	17429963	431.6	1	10.302	0.001	3561550	471.4	
Aroclor-1260	2	10.315	0.000	17486016	430.8	2	10.753	0.000	4358352	470.1	
Aroclor-1260	3	10.689	0.000	42288660	439.4	3	11.027	0.001	9011334	488.5	
Aroclor-1260	4	11.087	0.000	23334972	423.1	4	11.548	0.001	2561008	460.7	
Aroclor-1260	5	11.278	0.001	12037571	449.1	NS	---	---	---	---	
Total CollAve (5 peaks):				434.8	Total Col2Ave (4 peaks):				472.7	RPD = 8	
Corrected Ave (4 peaks):				431.2	Corrected Ave (3 peaks):				467.4	RPD = 8	
Aroclor-1262	1	9.998	0.002	17429963	288.5	1	10.302	0.001	3561550	288.6	
Aroclor-1262	2	10.315	0.003	17486016	381.2	2	10.753	0.000	4358352	397.5	
Aroclor-1262	3	10.689	0.002	42288660	355.5	3	11.027	0.002	9011334	374.5	
Aroclor-1262	4	11.204	0.002	9811901	219.0	4	11.548	0.001	2561008	263.0	
Aroclor-1262	5	11.278	0.003	12037571	244.7	5	12.349	0.002	2399591	256.4	
Total CollAve (5 peaks):				297.8	Total Col2Ave (5 peaks):				316.0	RPD = 6	
Corrected Ave (4 peaks):				276.9	Corrected Ave (4 peaks):				295.6	RPD = 7	
Aroclor-1268	1	11.204	0.001	9811901	81.4	1	11.548	0.001	2561008	104.2	

Aroclor-1268	2	11.278	0.003	12037571	103.8	2	11.607	-0.007	6203744	259.5	
Aroclor-1268	3	11.677	0.017	5476900	53.8	3	12.012	0.000	159756	8.0	
Aroclor-1268	4	12.450	0.001	3428999	11.8	4	12.835	0.001	684019	11.5	
Total Col1Ave (4 peaks):				62.7	Total Col2Ave (4 peaks):				95.8	RPD = 42*	
Corrected Ave (3 peaks):				49.0	Corrected Ave (3 peaks):				41.2	RPD = 17	

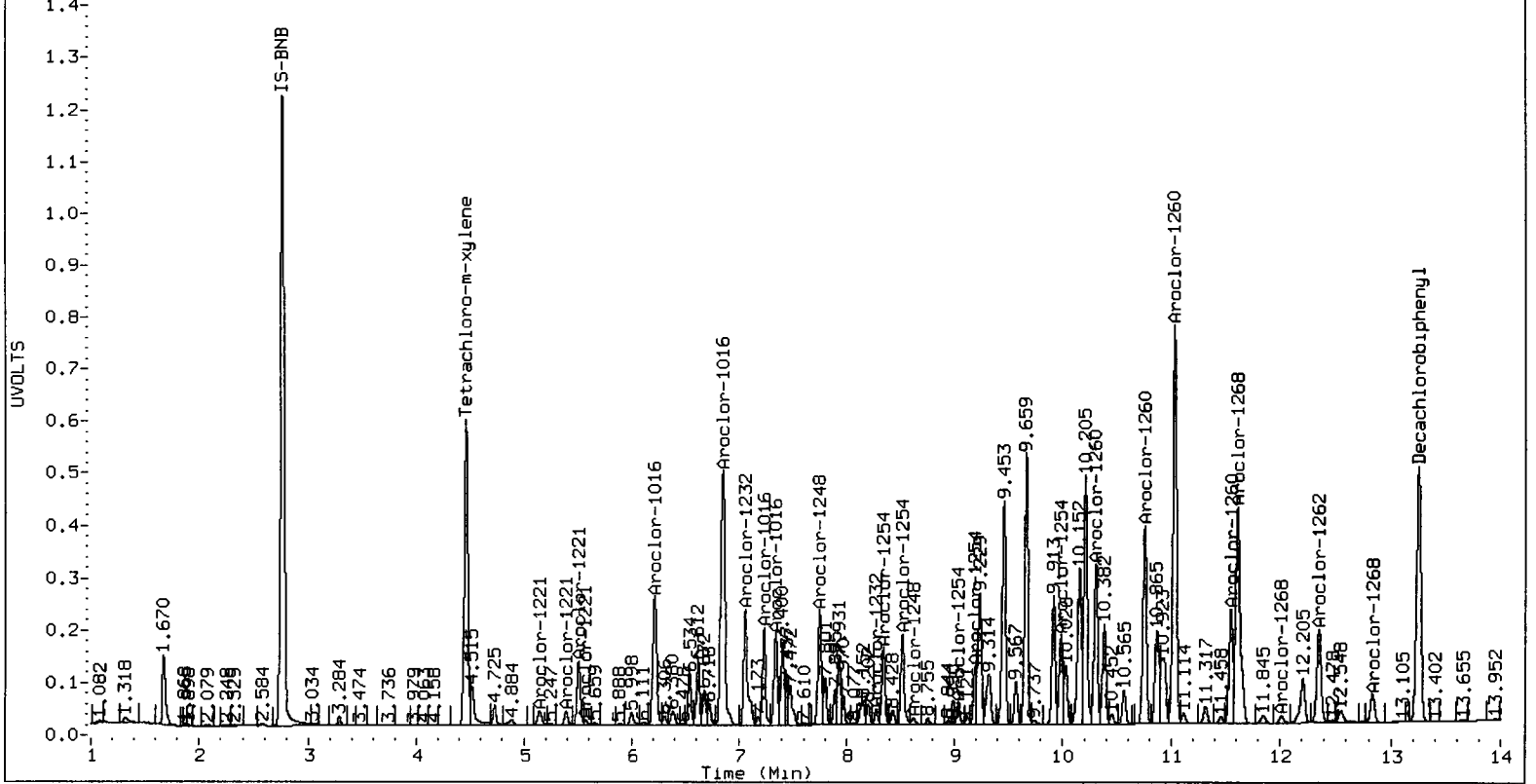
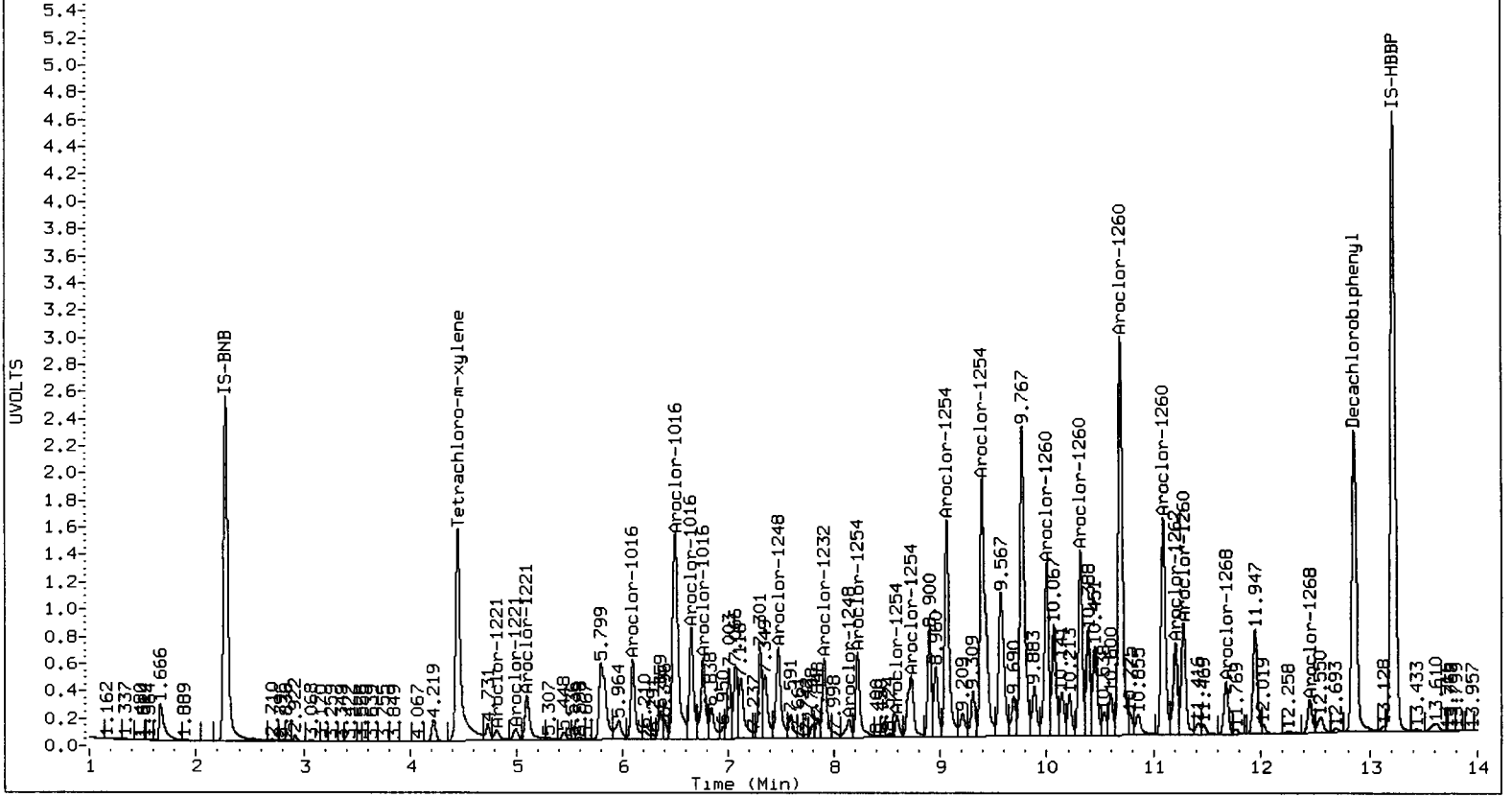
Total PCB Area Col1 (4.549 - 12.758) = 520395671      Col1 Total PCB = 0.9 ppm\*

Total PCB Area Col2 (4.556 - 13.149) = 110141670      Col2 Total PCB = 0.9 ppm\*

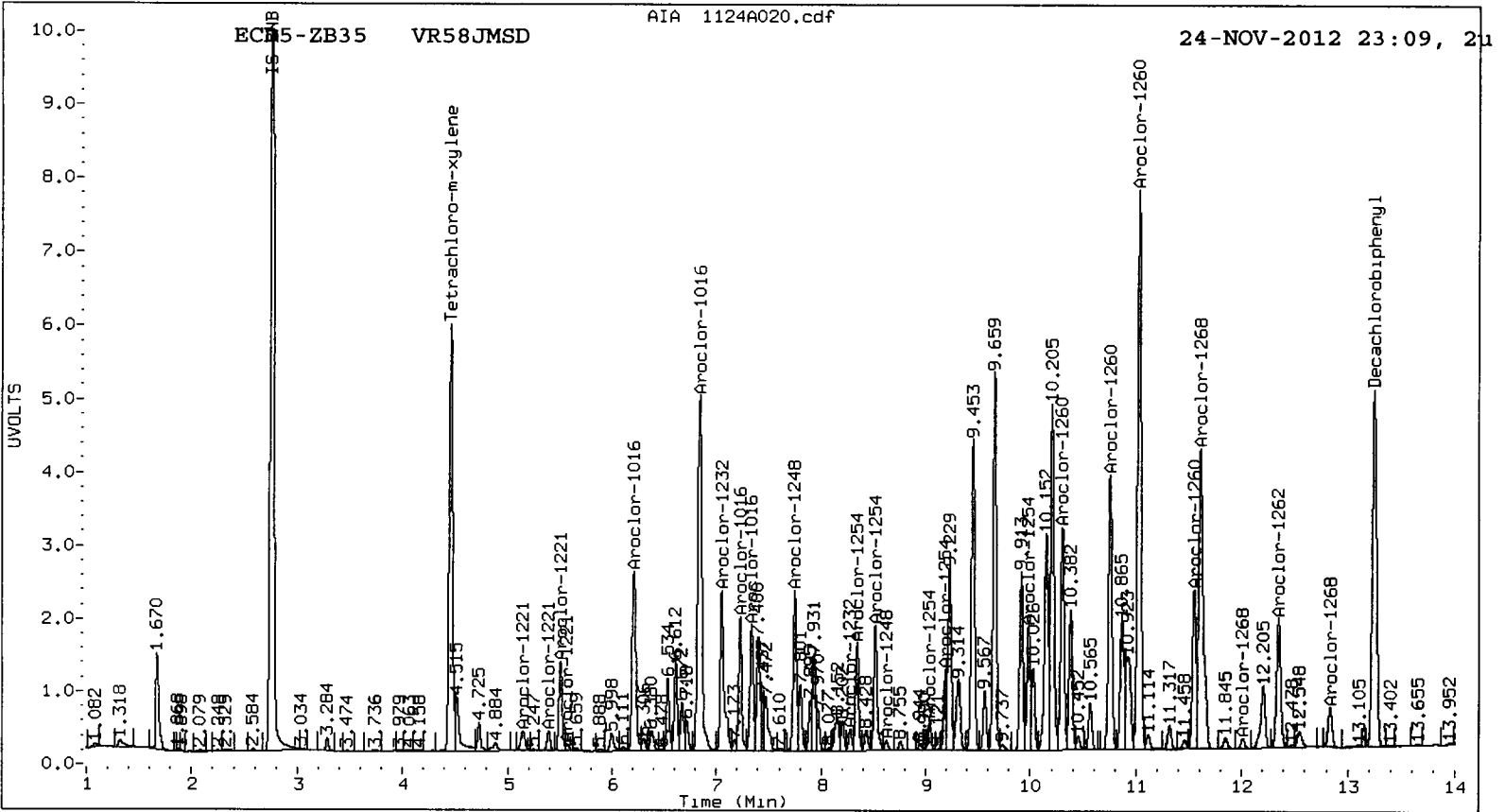
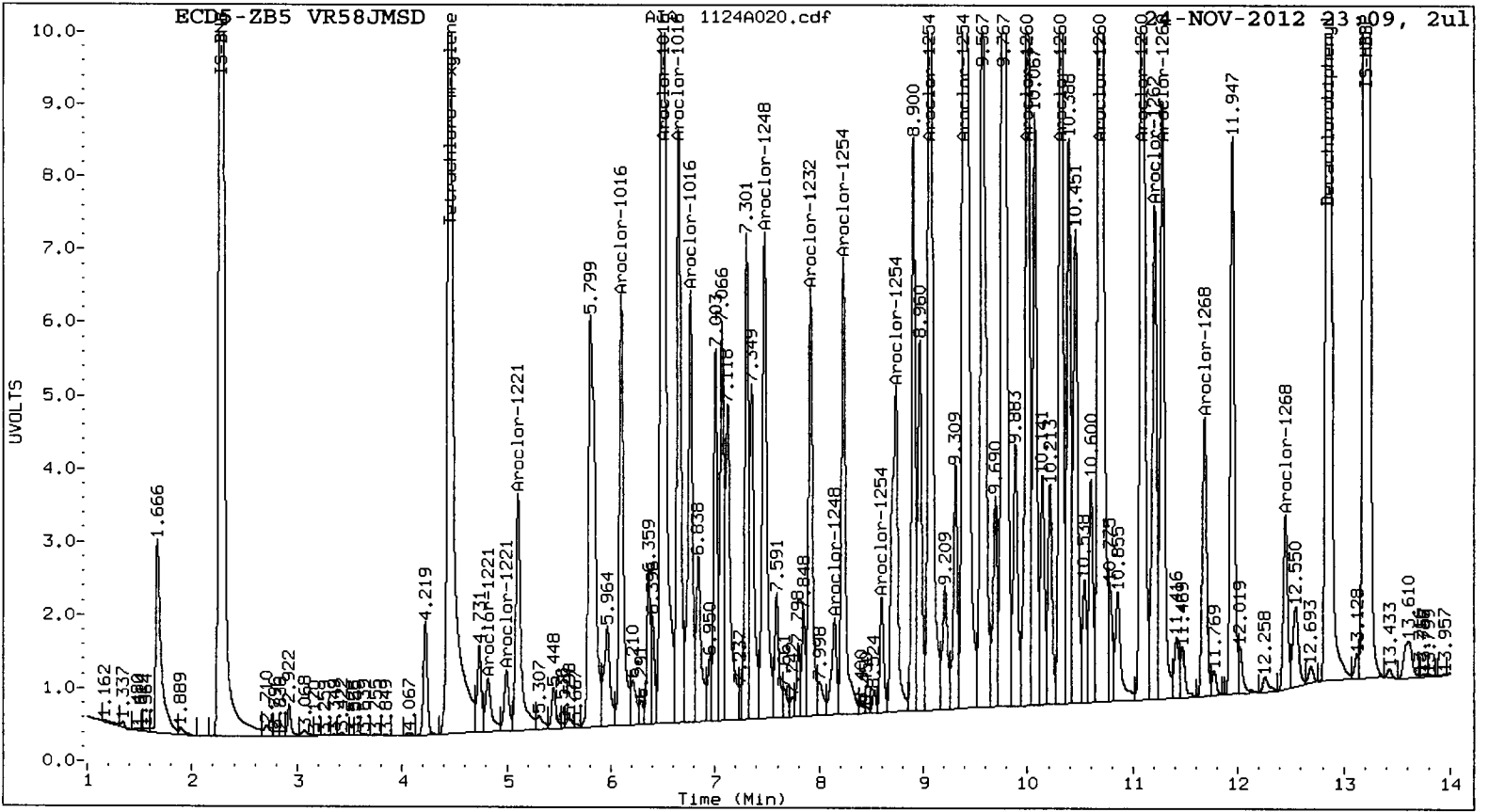
\* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.

UR58 : 02327







NOV 20 2012

Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A024.d  
Data file 2: 20121102.B/1124-2.b/1124A024.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1242  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1242  
Client ID:  
Injection Date: 25-NOV-2012 00:30  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	13935956	4.456	0.000	3573384	17.4	20.1	14.4	Tetrachloro-m-xylene
12.858	0.000	16407886	13.248	-0.001	3168531	18.3	19.5	6.1	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	43.5	50.3
Decachlorobiphenyl	45.9	48.8

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	38319146	22.6
Hexabromobiphenyl	64198300	59353496	-7.5

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	12454774	-14.3
Hexabromobiphenyl	15789428	11955012	-24.3

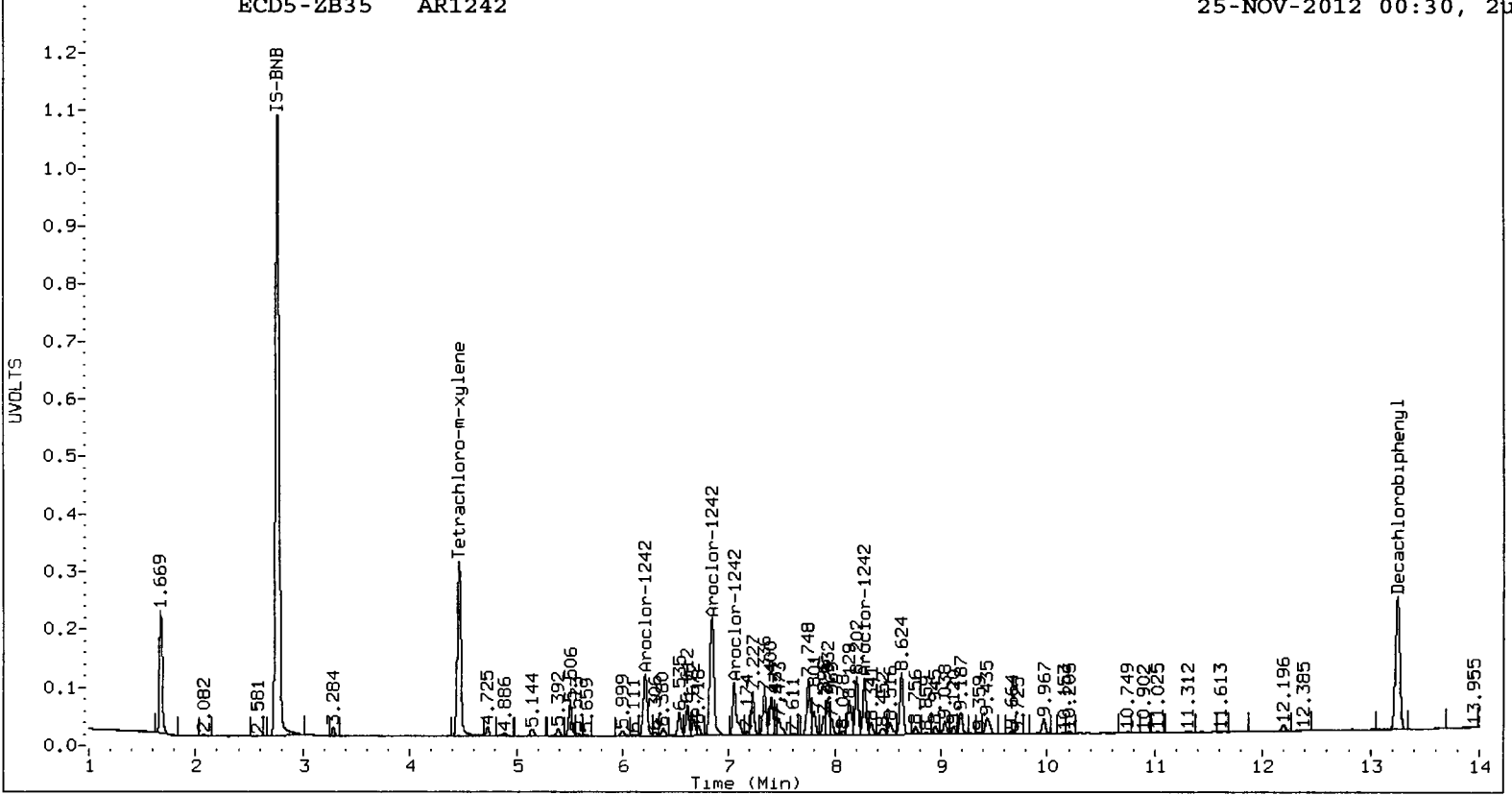
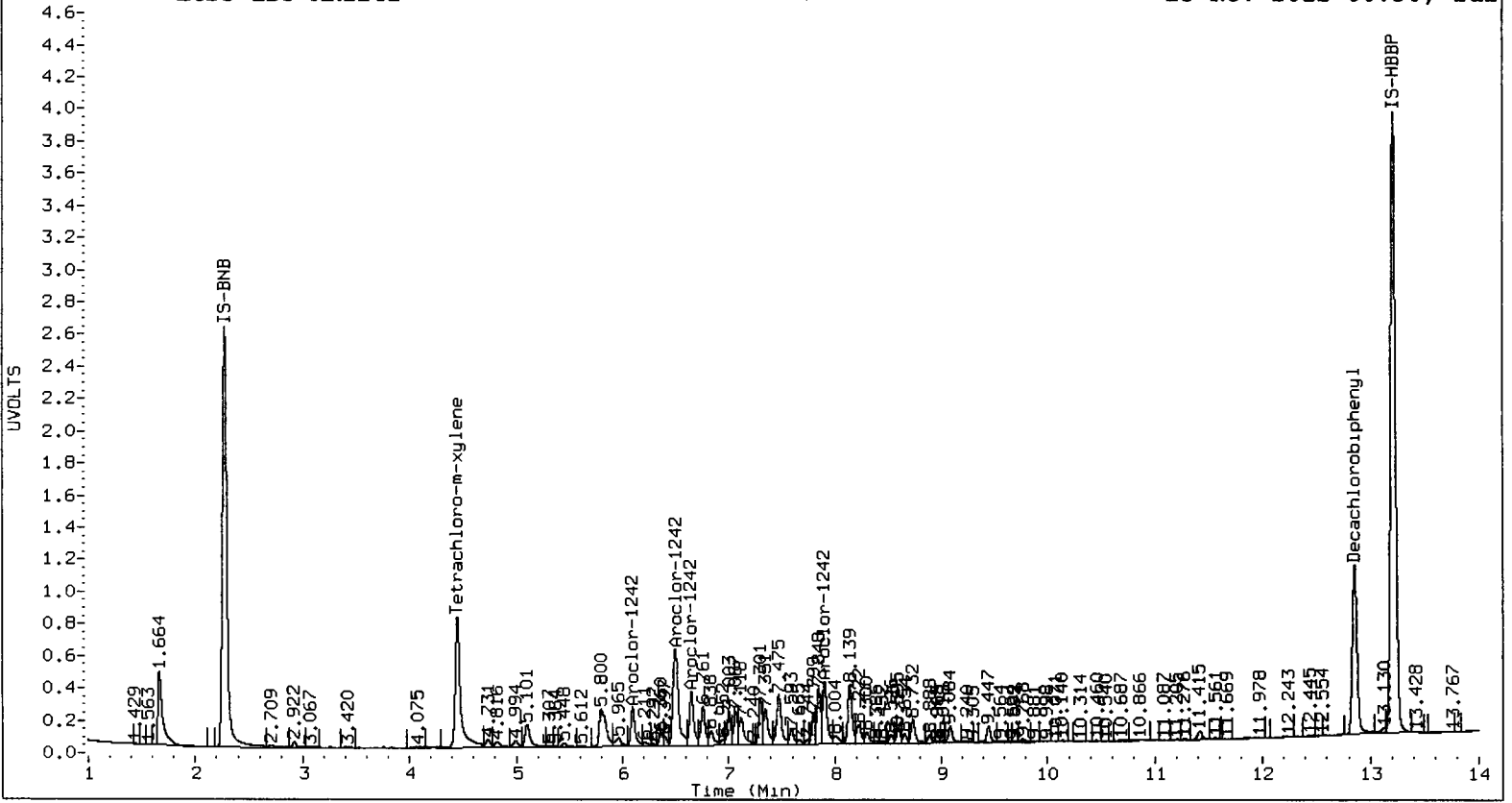
- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- Indicates standard response outside Limits (-50 to +100%)

ZB5 Col						ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.096	0.000	3419785	205.1	1	6.210	0.000	1324816	249.1
Aroclor-1242	2	6.500	0.000	11065123	214.3	2	6.842	0.000	2865449	253.1
Aroclor-1242	3	6.650	0.000	4675187	208.5	3	7.052	0.000	1177354	250.3
Aroclor-1242	4	7.902	0.000	5587313	212.5	4	8.276	0.000	1013465	255.8
Total Col1Ave (4 peaks):				210.1		Total Col2Ave (4 peaks):				252.1 RPD = 18
Corrected Ave (3 peaks):				208.7		Corrected Ave (3 peaks):				250.8 RPD = 18

Total PCB Area Col1 (4.549 - 12.758) = 91405985 Col1 Total PCB = 0.1 ppm\*

Total PCB Area Col2 (4.556 - 13.149) = 20801414 Col2 Total PCB = 0.2 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical



Analytical Resources Inc.  
Dual Column PCBs by SW8082

Data file 1: 20121102.B/1124-1.b/1124A025.d  
Data file 2: 20121102.B/1124-2.b/1124A025.d  
Method: /chem2/ecd5.i/20121102.B/PCB1.m  
Compound Sublist: AR1660  
Instrument, Inj. Vol.: ecd5.i, 2ul  
Quant Method: Internal Std

ARI ID: AR1660  
Client ID:  
Injection Date: 25-NOV-2012 00:51  
Ical Date: 02-NOV-2012  
Matrix: SOIL  
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
4.449	0.000	15480503	4.457	0.000	3830013	19.2	20.0	3.8	Tetrachloro-m-xylene
12.857	-0.001	19206163	13.248	-0.001	3686981	19.7	20.4	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	48.0	49.9
Decachlorobiphenyl	49.3	51.0

INTERNAL STANDARD SUMMARY

Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	31244918	38570575	23.4
Hexabromobiphenyl	64198300	64670405	0.7

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	14536489	13458196	-7.4
Hexabromobiphenyl	15789428	13291576	-15.8

- \* Standard Areas taken from Initial Cal Level 3  
Initial Calibration Date: 02-NOV-2012
- <- 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	6.096	0.000	4884905	226.5	1	6.210	0.000	1825408	242.1
Aroclor-1016	2	6.500	0.000	15627916	232.5	2	6.843	0.000	3869632	242.6
Aroclor-1016	3	6.650	0.000	6697661	231.0	3	7.226	-0.001	1035818	249.6
Aroclor-1016	4	6.761	0.000	4993875	240.8	4	7.336	-0.001	1142083	244.7
Total CollAve (4 peaks):				232.7		Total Col2Ave (4 peaks):				244.8 RPD = 5
Corrected Ave (3 peaks):				230.0		Corrected Ave (3 peaks):				243.2 RPD = 6
Aroclor-1260	1	9.998	0.000	9820523	261.3	1	10.302	0.001	1956507	275.7
Aroclor-1260	2	10.315	0.000	9710327	257.0	2	10.753	0.001	2452858	281.7
Aroclor-1260	3	10.688	0.000	24307761	271.4	3	11.026	0.000	4915991	283.7
Aroclor-1260	4	11.088	0.000	12630224	246.0	4	11.547	0.000	1427228	273.4
Aroclor-1260	5	11.277	0.000	6459656	259.0	NS	---			----
Total CollAve (5 peaks):				258.9		Total Col2Ave (4 peaks):				278.6 RPD = 7
Corrected Ave (4 peaks):				255.8		Corrected Ave (3 peaks):				276.9 RPD = 8

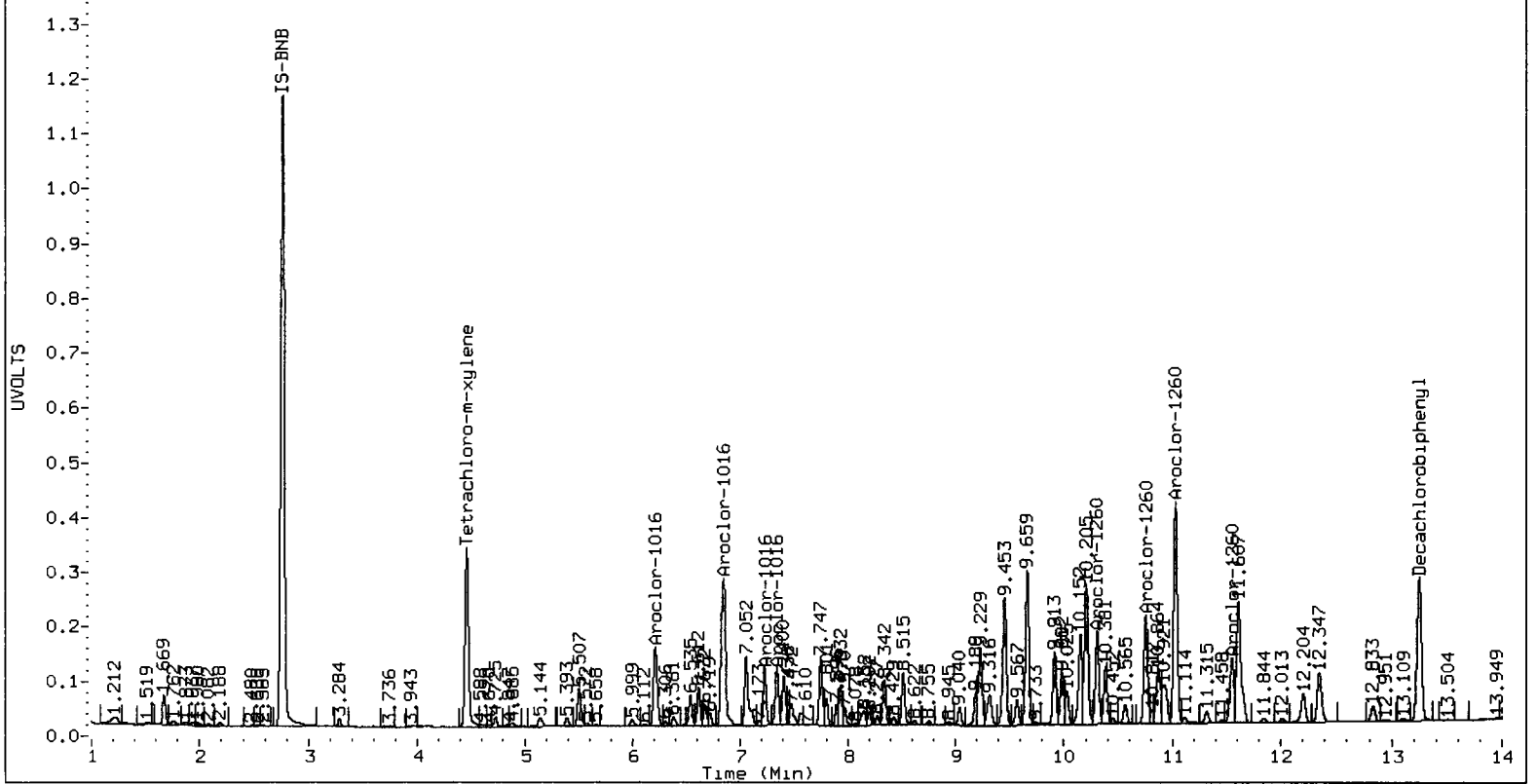
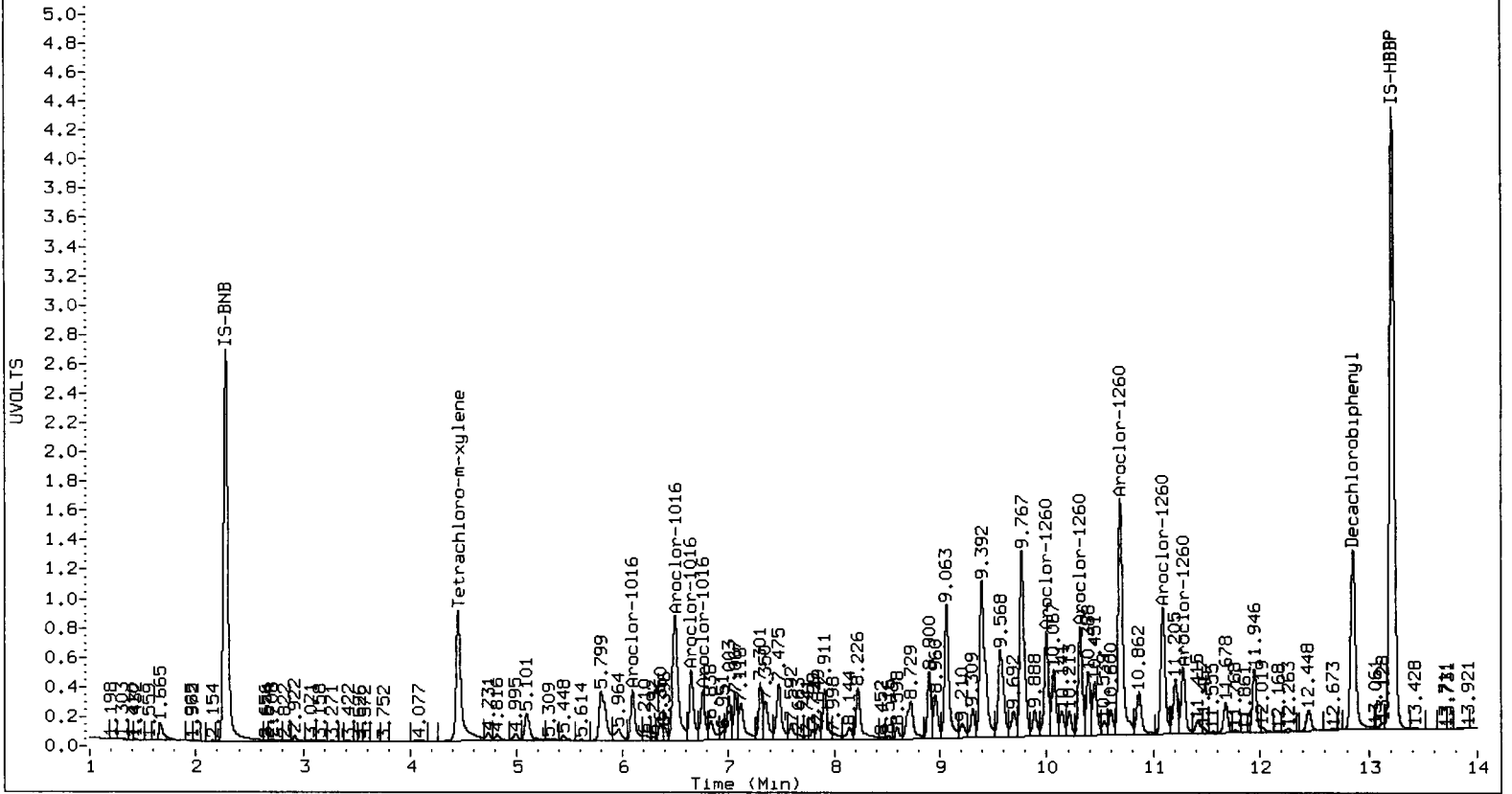
Total PCB Area Col1 (4.549 - 12.758) = 298862505

Col1 Total PCB = 0.5 ppm\*

Total PCB Area Col2 (4.556 - 13.149) = 61768281

Col2 Total PCB = 0.5 ppm\*

\* Quantitated against AR1660 0.25ppm in Ical



Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: 20121102.B/ddt-1.b/1124A021.d

ARI ID: VR82A

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
8.222	0.034	3809381	8.611	0.007	693465	0.008	0.006	23.9	2,4-DDE
8.730	-0.007	5298494	9.292	0.001	229598	0.012	0.002	136.8*	2,4-DDD
9.255	-0.006	659134	9.756	0.003	566010	0.000	0.004#	----	2,4-DDT
8.618	-0.002	6291727	9.045	0.053	17172307	0.008	0.096	168.2*	4,4-DDE
9.193	-0.049	2323467	9.756	0.003	566010	0.005	0.004#	9.2	4,4-DDD
9.767	0.062	5207609	10.205	0.013	880158	0.008	0.005	40.8*	4,4-DDT

# Indicates value is from co-eluting peaks

\* Indicates RPD > 40%



Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: 20121102.B/ddt-1.b/1124A022.d

ARI ID: VR82B

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
8.222	0.034	1970976	8.608	0.004	220550	0.004	0.002	69.6*	2,4-DDE
8.730	-0.007	3344108	9.288	-0.002	209981	0.008	0.002	114.5*	2,4-DDD
9.254	-0.007	443359	9.756	0.003	609594	0.000	0.005#	----	2,4-DDT
8.620	0.000	5104502	8.991	-0.001	1013923	0.007	0.006	17.2	4,4-DDE
9.193	-0.049	2297061	9.756	0.003	609594	0.005	0.005#	0.6	4,4-DDD
9.693	-0.012	537467	10.205	0.013	470676	0.001	0.003	109.7*	4,4-DDT

# Indicates value is from co-eluting peaks

\* Indicates RPD > 40%

Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: 20121102.B/ddt-1.b/1124A023.d

ARI ID: VR82C

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
8.220	0.032	149887	8.555	-0.049	190153	0.000	0.002	136.7*	2,4-DDE
8.731	-0.007	223970	0.000	-9.290	0	0.000	0.000	----	2,4-DDD
9.256	-0.005	53636	9.757	0.003	64949	0.000	0.000#	----	2,4-DDT
8.620	0.001	426044	8.991	-0.001	85124	0.001	0.000	19.6	4,4-DDE
9.192	-0.050	239620	9.757	0.003	64949	0.000	0.000#	1.6	4,4-DDD
9.703	-0.001	25061	10.203	0.011	36384	0.000	0.000	138.6*	4,4-DDT

# Indicates value is from co-eluting peaks

\* Indicates RPD > 40%

Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: 20121102.B/ddt-1.b/1124A026.d

ARI ID: VR82D

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
8.219	0.031	1184365	8.608	0.004	93083	0.002	0.001	100.1*	2,4-DDE
8.731	-0.007	2023925	9.290	0.000	128748	0.004	0.001	114.9*	2,4-DDD
9.255	-0.006	462585	9.756	0.003	658682	0.000	0.005#	----	2,4-DDT
8.620	0.001	3961333	8.992	0.000	748496	0.005	0.004	24.1	4,4-DDE
9.193	-0.049	2715040	9.756	0.003	658682	0.005	0.005#	11.5	4,4-DDD
9.698	-0.007	399526	10.204	0.012	283801	0.001	0.002	92.7*	4,4-DDT

# Indicates value is from co-eluting peaks

\* Indicates RPD > 40%

Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: 20121102.B/ddt-1.b/1124A027.d

ARI ID: VR82E

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
8.217	0.029	1130762	8.557	-0.047	1251757	0.002	0.011	131.4*	2,4-DDE
8.730	-0.007	1922618	9.290	0.000	164702	0.004	0.002	90.9*	2,4-DDD
9.254	-0.007	521344	9.757	0.004	691535	0.000	0.005#	----	2,4-DDT
8.620	0.000	4365093	8.992	0.000	957249	0.006	0.005	6.2	4,4-DDE
9.192	-0.049	2722750	9.757	0.004	691535	0.005	0.005#	3.9	4,4-DDD
9.700	-0.005	463031	10.203	0.011	264693	0.001	0.002	77.4*	4,4-DDT

# Indicates value is from co-eluting peaks

\* Indicates RPD > 40%

Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: 20121102.B/ddt-1.b/1124A028.d

ARI ID: VR82F

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
8.215	0.027	791842	8.555	-0.049	772485	0.002	0.007	124.0*	2,4-DDE
8.731	-0.006	1617004	9.290	0.000	135670	0.004	0.001	92.5*	2,4-DDD
9.255	-0.006	522869	9.757	0.003	731879	0.000	0.005#	----	2,4-DDT
8.620	0.001	3397968	8.991	-0.001	788313	0.004	0.004	0.5	4,4-DDE
9.193	-0.049	3077713	9.757	0.003	731879	0.006	0.005#	10.4	4,4-DDD
9.699	-0.005	524372	10.202	0.010	155402	0.001	0.001	16.0	4,4-DDT

# Indicates value is from co-eluting peaks

\* Indicates RPD > 40%

Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: 20121102.B/ddt-1.b/1124A029.d

ARI ID: VR82G

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
8.215	0.028	939792	8.555	-0.049	969298	0.002	0.009	127.5*	2,4-DDE
8.731	-0.006	1858203	9.290	0.000	174430	0.004	0.002	83.3*	2,4-DDD
9.255	-0.006	667612	9.757	0.004	772365	0.000	0.006#	----	2,4-DDT
8.621	0.001	3786227	8.992	0.000	845651	0.005	0.005	4.2	4,4-DDE
9.193	-0.048	3323238	9.757	0.004	772365	0.007	0.006#	12.6	4,4-DDD
9.702	-0.003	694977	10.201	0.009	199087	0.001	0.001	12.7	4,4-DDT

# Indicates value is from co-eluting peaks

\* Indicates RPD > 40%

Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: 20121102.B/ddt-1.b/1124A030.d

ARI ID: VR82H

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
8.216	0.029	880824	8.557	-0.047	816418	0.002	0.007	119.7*	2,4-DDE
8.732	-0.006	1422541	9.291	0.001	128243	0.003	0.001	88.2*	2,4-DDD
9.255	-0.006	478330	9.757	0.003	617518	0.000	0.005#	----	2,4-DDT
8.620	0.001	3104620	8.991	0.000	736126	0.004	0.004	0.2	4,4-DDE
9.193	-0.049	2642033	9.757	0.003	617518	0.005	0.005#	14.0	4,4-DDD
9.700	-0.005	321990	10.204	0.012	147849	0.000	0.001	56.4*	4,4-DDT

# Indicates value is from co-eluting peaks

\* Indicates RPD > 40%

Analytical Resources Inc.  
8082 DDT SCREEN REPORT

Data file 1: 20121102.B/ddt-1.b/1124A031.d

ARI ID: VR82I

ZB5 Col			ZB35 Col			ZB5	ZB35	RPD	Compound/Flag
RT	Shift	Response	RT	Shift	Response	on col	on col		
8.217	0.029	746779	8.557	-0.047	773513	0.002	0.007	127.6*	2,4-DDE
8.731	-0.007	1474303	9.289	-0.001	132997	0.003	0.001	86.8*	2,4-DDD
9.255	-0.006	307167	9.756	0.003	500090	0.000	0.004#	----	2,4-DDT
8.620	0.001	3400398	8.991	-0.001	713867	0.005	0.004	10.6	4,4-DDE
9.192	-0.049	2075426	9.756	0.003	500090	0.004	0.004#	9.2	4,4-DDD
9.698	-0.007	293614	10.205	0.013	138737	0.000	0.001	60.6*	4,4-DDT

# Indicates value is from co-eluting peaks

\* Indicates RPD > 40%



**Metals Raw Data  
Preparation Bench Sheets and Notes**

**ARI Job ID: VR58**



### SPIKING LOG

Analyst: NB      Date: 11-16-12      Sample ID VR58 APPK, MBSPK

Final Volume 50.0  
Final Volume (Hg): 50.0

Prepcode:	ICP Routine	ICP No. GFA	GFA
Spike Solution:	<u>SWC</u>		
Standard No.:	<u>2977-9</u>		
Vol Added (mL):	<u>1.0</u>		
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
<u>SWN</u>		
<u>2987-2</u>		
<u>1.0</u>		
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		
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	<u>SMM</u>	CVA	1.0	0.05	<u>2908-7</u>
Hg MBSPK	<u>SMM</u>	CVA	1.0	0.10	<u>2908-7</u>
Sb	<u>SWC</u>	ICP	2000	0.10	<u>2941-4</u>
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.

VR58 : 923450



# Digestion Log

Analyst: NB Date: 11-16-12 Time: 1628  
 Matrix: SOIL Block ID: <sup>SWN:</sup>#4 / <sup>SWC:</sup>#1 Block Temp: <sup>SWN:</sup>95°C / <sup>SWC:</sup>91°C Thermometer: <sup>SWN:</sup>MP44 / <sup>SWC:</sup>MP40

ARI Sample ID	Btl #	pH<2	Prep Code: <u>SWN</u>		Prep Code: <u>SWC</u>		Comments
			Initial Wt (g) Vol (mL)	Final Vol (mL)	Initial Wt (g) Vol (mL)	Final Vol (mL)	
VR58 A	2	-	1.068	50.0	1.071	50.0	}
" ADWP	2	-	1.072		1.070		
" ASPK	2	-	1.063		1.073		
" B	2	-	1.071		1.032		
" C	2	-	1.077		1.043		
" D	2	-	1.048		1.019		
" E	2	-	1.055		1.007		
" F	2	-	1.013		1.043		
" G	2	-	1.048		1.080		
" H	2	-	1.077		1.068		
" I	2	-	1.015		1.034		
" J	2	-	1.081		1.073	-Batch	
" M81	-	-	-		-		
" M85PK	-	-	-		-		
VR82 A	2	-	1.032		1.044		
" B	2	-	1.063		1.021		
" C	2	-	1.076		1.035		
" D	2	-	1.078		1.082		
" E	2	-	1.017		1.048		
" F	2	-	1.096		1.038		
" G	2	-	1.059		1.042		
" H	2	-	1.028	↓	1.044	↓	
" I	2	-	1.030	50.0	1.013	50.0	
NB 11-16-12							

Chemical/Reagent ID:

HNO<sub>3</sub>: MP2392/I7833 HCl: I7676 H<sub>2</sub>O<sub>2</sub>: I7845 Tube Lot #: 1207143



Analytical Resources, Incorporated  
Analytical Chemists and Consultants

# Mercury Digestion Log

Prep Code: SMM

Matrix: SOIL

Analyst: NB

Date: 11-16-12

Bath Temp: 91°C

Start Time: 1755

End Time: 1825

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# KMnO <sub>4</sub> Aliquots	CLP	Comments	
VR58 A	2	-	0.284	50.0	11-24   1	YES	}	
" ADIP	2	-	0.282		1			
" ASPK	2	-	0.288		1			
" B	2	-	0.271		1			
" C	2	-	0.217		1			
" D	2	-	0.221		1			
" E	2	-	0.231		1			
" F	2	-	0.206		1			
" G	2	-	0.260		1			
" H	2	-	0.238		1			
" I	2	-	0.247		1			- Batch
" J	2	-	0.219		1			
" MBI	-	-	-		1			
" MBISPK	-	-	-		1			
VR82 A	2	-	0.262		11-27   1			
" B	2	-	0.215		1			
" C	2	-	0.271		1			
" D	2	-	0.225		1			
" E	2	-	0.268		1			
" F	2	-	0.218		1			
" G	2	-	0.236		1			
" H	2	-	0.219	↓	1			
" I	2	-	0.217	50.0	1	↓		
			NB	11-16-12				

Chemical/Reagent ID:

HNO<sub>3</sub>: I7833

H<sub>2</sub>SO<sub>4</sub>: I7677

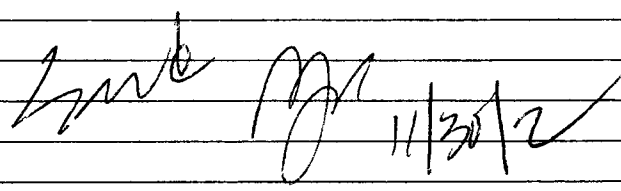
HCl: -

5% K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>: MP2375

5% KMnO<sub>4</sub>: MP2376

Digest Tube Lot: 1205258



<b>Criteria Flagged:</b>  Unacceptable Blank: <input type="checkbox"/> Unacceptable Duplicate: <input checked="" type="checkbox"/> Unacceptable Spike: <input checked="" type="checkbox"/> Unacceptable Reference: <input type="checkbox"/>	ARI Job No.: <u>VR58</u>  Date of Event: <u>11-27-12</u>  Client ID: <u>Anchor QE</u>  Method/Element: <u>ICP</u>  Prep Code: <u>SWC</u>
<b>Details of Problem/Recommended Corrective Action:</b> <u>Sb ↓ (38%) in ASPK. APOST recovery good at 109%.</u>  <u>ADUP: wide RPD for Cu (75%), Zn (85%).</u> <u>Sb 71 RL D. PP'</u>	
<b>Samples Affected:</b> _____ _____ _____	
<b>Corrective Action Taken:</b> _____ _____ <div style="text-align: center; margin-top: 20px;">  </div>	

**Analyst Initials:** BA  
**Date:** 11/28/12

**Supervisor:** \_\_\_\_\_  
**Date:** \_\_\_\_\_

**Metals Raw Data  
Run Logs, Calibrations, and Raw Data**

**ARI Job ID: VR58**



IEC Date: 11-12-12

Analysis Date: 11-27-12

Analyst: BA

LR Date: 7-30-12

Page: 1 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			2994-8
		↓ 2			↓ -11
		↓ 3			↓ -12
		↓ 4			↓ -13
		↓ 5			↓ -14
		ICV			Si ↑ (NR) 2988-6
		ICB			
		CR I			
		ICSA			
		ICSAB			
		CCV 1			Si, Ti ↑ (NR)
		<del>CCB 1</del> BA 11/29/12			
		VR58 MBI	SWC	2	
		↓ B			
		↓ C			
		↓ D			
		↓ E			Self analysis sl. noisy
✓		ADUP			↓ - Rescan
		↓ A			
		↓ ASPK			SB ↓ (CAF)
		↓ APOST			✓ 0.08 mL ICP Spike 2977-9 0.016 mL Sp 1499 2938-7 SB OK
		↓ MBISPK			✓
		CCV 2			Si ↑ (NR)
		CCB 2			
		VR58 F	SWC	2	



IEC Date:     

Analysis Date: 11-27-12

Analyst: BA

LR Date:     

Page: 2 of 5

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VR58 G	SWC	2	
		↓ H	↓	↓	
		↓ I	↓	↓	
		↓ J	↓	↓	
		VR82 A			
		↓ B			
		↓ C			
		↓ D			
		↓ E	↓	↓	
		CCV3			Si ↑ (NR)
		CCB3			
	✓	VR82 F	SWC	2	Failing CCV
	✓	↓ G	↓	↓	↓
	✓	↓ H	↓	↓	
	✓	↓ I	↓	↓	↓
		CCV4			(Fe, Na, Sb) Si, Ti ↑
		CCV5			(Fe, Sb) Si, Ti ↑
		CCB4			
		STD4			
		↓ 5			
		CCV6			(Sb) ↑
		CCB5			
	✓	VS22 MBI	SWC	2	Failing CCV
	✓	↓ B	↓	5	↓





IEC Date:           

Analysis Date: 11-27-12

Analyst: BA

LR Date:           

Page: 3 of 5

All corrections made by analyst unless otherwise noted. BA 11-28-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
	✓	VS22 C	SWC	5	Failing CCV
	✓	↓	↓	↓	↓
	✓	D <del>ZZZZZZ</del> A-L	↓	25	
	✓	A	↓	5	
	✓	ADUP	↓	↓	
	✓	ASPK	↓	↓	
	✓	<del>ZZZZZZ</del> <del>APOST</del>	↓	↓	
	✓	↓ MBISPK	↓	2	↓
		CCV7			Multiple failures - Noisy (Air bubble?)
		CCV8			↓
		CCV9			
		CCB6			Cu > -RL
		VS22 E	SWC	5	
		↓ F	↓	↓	
		G	↓	↓	
		H	↓	↓	
		I	↓	↓	
		J	↓	↓	
		K	↓	↓	
		↓ L	↓	↓	
		CCV10			
		CCB7			Cu > -RL
		CRI			Cu < 50% (NR)
		ICSA			



IEC Date:           

Analysis Date: 11-27-12

Analyst: BA

LR Date:           

Page: 4 of 5

All corrections made by analyst unless otherwise noted. BA 11/29/12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		ICSA B			
		CCV 11			
		CCB 8			Cu > -RL
		VS22 MBI	SWC	2	
		B		5	
		C		↓	
		D		↓	
		A-L		25	✓
		A		5	
		ADUP		↓	✓
		ASPK		↓	✓
		APOST		↓	0.08 mL ICP Spike 2977-9
		↓ MBISPK	↓	2	Mg OK (112%)
		CCV 12			
		CCB 9			Cu > -RL
		CBI			Cu < 50% (NR)
		ICSA			
		ICSA B			
		CCV 13			
		CCB 10			Cu > -RL
		VR80 C	TWC		End VS22
✓		VR82 F	SWC	2	
✓		↓ G	↓	↓	
✓		↓ H	↓	↓	



IEC Date: \_\_\_\_\_  
LR Date: \_\_\_\_\_

Analysis Date: 11-27-12

Analyst: BA

Page: 5 of 5

All corrections made by analyst unless otherwise noted. BA 11/29/12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
	✓	VR82 I	SWC	2	
		CCV14			
		CCB11			Cu > - RL <span style="float:right">End Pkg</span>
		Binse/DI			

BA  
11/28/12

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 11-27-12

ICP - 2	Analyst BA 11/29/12	Peer	Comment
<b>Logbook</b>			
Analyst, Date, Method info	✓		
Sample ID's	✓		
Standard/QC solution ID's recorded	✓		
Prep codes	✓		
Dilution factors	✓		
Crossouts/Corrections/Deletions	✓		
<b>Calibration</b>			
Blank & Standard intensities	✓		
Standard deviations	✓		
Curve fit	✓		
<b>Calibration Verification</b>			
ICV/CCV	✓		See log
ICB/CCB	✓		↓
<b>Samples</b>			
RSD's & SD's	✓		See log
Internal Standards	✓		↓
Carry-over	✓		
<b>Method QC</b>			
CRI/CRA	✓		See log
ICSA/ICSAB	✓		
Post Spikes/Serial Dilutions	✓		See log
Analytic Spikes	✓		
<b>Matrix QC</b>			
SRM/LCS	✓		
Matrix Spikes	✓		See log
Matrix Duplicates	✓		↓
Method Blanks	✓		
<b>Data Distribution</b>			
Requested elements/isotope identified	✓		
Correct samples identified for distribution	✓		
Raw data match distributed data	✓		
Data filename correct	✓		
Necessary Analysis Notes and CAF's	✓		CAF - VR58, VS22

=====  
Analysis Begun

Start Time: 11/27/2012 10:20:59 AM

Plasma On Time: 11/27/2012 8:08:35 AM

Logged In Analyst: Metals

Technique: ICP Continuous

Spectrometer: Optima 7300 DV, S/N 077C8121202

Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISSET1.sif

Batch ID:

Results Data Set: I2121127

Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb  
=====

Sequence No.: 1

Autosampler Location: 1

Sample ID: Calib Blank 1

Date Collected: 11/27/2012 10:21:00 AM

Data Type: Original  
-----

## Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

-----  
Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2210891.9	17020.28	0.77%	100.0	%
ScR 361.383	274661.2	3538.17	1.29%	100.0	%
Ag 328.068†	-132.5	30.87	23.29%	[0.00]	mg/L
Al 308.215†	191.6	6.20	3.24%	[0.00]	mg/L
As 188.979†	-14.7	0.79	5.36%	[0.00]	mg/L
B 249.677†	27.5	3.60	13.08%	[0.00]	mg/L
Ba 233.527†	27.7	1.73	6.24%	[0.00]	mg/L
Be 313.042†	753.3	15.10	2.00%	[0.00]	mg/L
Ca 317.933†	161.1	11.40	7.08%	[0.00]	mg/L
Cd 228.802†	261.7	1.17	0.45%	[0.00]	mg/L
Co 228.616†	-95.7	6.35	6.64%	[0.00]	mg/L
Cr 267.716†	-131.6	7.01	5.33%	[0.00]	mg/L
Cu 324.752†	2619.1	23.55	0.90%	[0.00]	mg/L
Fe 273.955†	23.7	1.15	4.83%	[0.00]	mg/L
K 766.490†	517.8	21.01	4.06%	[0.00]	mg/L
Mg 279.077†	80.2	5.41	6.75%	[0.00]	mg/L
Mn 257.610†	183.1	5.46	2.98%	[0.00]	mg/L
Mo 202.031†	77.1	2.73	3.54%	[0.00]	mg/L
Na 589.592†	-498.1	32.89	6.60%	[0.00]	mg/L
Na 330.237†	-221.8	2.87	1.30%	[0.00]	mg/L
Ni 231.604†	-19.0	1.35	7.10%	[0.00]	mg/L
Pb 220.353†	57.4	1.77	3.09%	[0.00]	mg/L
Sb 206.836†	82.0	1.13	1.38%	[0.00]	mg/L
Se 196.026†	-45.0	2.79	6.21%	[0.00]	mg/L
Si 288.158†	47.8	7.07	14.81%	[0.00]	mg/L
Sn 189.927†	-6.2	2.03	32.94%	[0.00]	mg/L
Sr 421.552†	351.6	38.50	10.95%	[0.00]	mg/L
Tl 334.903†	-52.7	14.43	27.37%	[0.00]	mg/L
Tl 190.801†	-51.2	4.63	9.04%	[0.00]	mg/L
V 292.402†	132.7	22.87	17.24%	[0.00]	mg/L
Zn 206.200†	14.4	1.60	11.11%	[0.00]	mg/L

Sequence No.: 2

Autosampler Location: 2

Sample ID: STD2

Date Collected: 11/27/2012 10:25:17 AM

Data Type: Original  
-----

## Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

-----  
Mean Data: STD2

Mean Corrected

Calib

T1 334.903† 165326.6 1707.31 1.03% [10] mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 11/27/2012 10:31:32 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte Back Pressure Flow
All 217.0 kPa 0.75 L/min

Mean Data: STD5

Table with 5 columns: Analyte, Mean Corrected Intensity, Std.Dev., RSD, Conc. Units. Lists elements like ScA, ScR, Al, Ca, Fe, K, Mg, Na with their respective values.

Calibration Summary

Table with 8 columns: Analyte, Stds., Equation, Intercept, Slope, Curvature, Corr. Coef., Reslope. Lists calibration data for various elements from Ag to Zn.

=====  
**Analysis Begun**

Start Time: 11/27/2012 10:34:36 AM  
 Logged In Analyst: Metals  
 Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 11/27/2012 8:08:35 AM  
 Technique: ICP Continuous  
 Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISSET1.sif  
 Batch ID:  
 Results Data Set: I2121127  
 Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1  
 Sample ID: ICV

=====  
 Autosampler Location: 7  
 Date Collected: 11/27/2012 10:34:37 AM  
 Data Type: Original

Dilution: 1.000000X

-----  
**Nebulizer Parameters: CV**

<b>Analyte</b>	<b>Back Pressure</b>	<b>Flow</b>
All	219.0 kPa	0.75 L/min

-----  
**Mean Data: CV**

<b>Analyte</b>	<b>Mean Corrected Intensity</b>	<b>Conc. Units</b>	<b>Calib. Units</b>	<b>Std.Dev.</b>	<b>Sample Conc. Units</b>	<b>Std.Dev.</b>	<b>RSD</b>
ScA 357.253	2251366.5	101.8	%	0.66			0.65%
ScR 361.383	278076.9	101.2	%	0.91			0.90%
Ag 328.068†	156155.1	1.049	mg/L	0.0109	1.049 mg/L	0.0109	1.04%
Al 308.215†	2814.4	2.040	mg/L	0.0200	2.040 mg/L	0.0200	0.98%
As 188.979†	3151.9	2.050	mg/L	0.0127	2.050 mg/L	0.0127	0.62%
B 249.677†	6328.8	0.9662	mg/L	0.00589	0.9662 mg/L	0.00589	0.61%
Ba 233.527†	3967.6	1.003	mg/L	0.0068	1.003 mg/L	0.0068	0.67%
Be 313.042†	503953.3	0.9637	mg/L	0.00344	0.9637 mg/L	0.00344	0.36%
Ca 317.933†	23242.7	1.999	mg/L	0.0109	1.999 mg/L	0.0109	0.54%
Cd 228.802†	26095.2	1.022	mg/L	0.0095	1.022 mg/L	0.0095	0.93%
Co 228.616†	33602.5	1.001	mg/L	0.0104	1.001 mg/L	0.0104	1.04%
Cr 267.716†	5562.7	1.000	mg/L	0.0080	1.000 mg/L	0.0080	0.80%
Cu 324.752†	226700.7	1.030	mg/L	0.0111	1.030 mg/L	0.0111	1.07%
Fe 273.955†	2478.5	2.100	mg/L	0.0131	2.100 mg/L	0.0131	0.63%
K 766.490†	34298.2	20.22	mg/L	0.087	20.22 mg/L	0.087	0.43%
Mg 279.077†	2344.7	2.073	mg/L	0.0050	2.073 mg/L	0.0050	0.24%
Mn 257.610†	31586.7	0.9644	mg/L	0.00725	0.9644 mg/L	0.00725	0.75%
Mo 202.031†	17749.5	1.025	mg/L	0.0117	1.025 mg/L	0.0117	1.14%
Na 589.592†	498399.5	48.93	mg/L	0.096	48.93 mg/L	0.096	0.20%
Na 330.237†	1299.6	53.22	mg/L	0.224	53.22 mg/L	0.224	0.42%
Ni 231.604†	3593.7	0.9695	mg/L	0.00613	0.9695 mg/L	0.00613	0.63%
Pb 220.353†	14049.7	1.978	mg/L	0.0184	1.978 mg/L	0.0184	0.93%
Sb 206.836†	6182.9	2.181	mg/L	0.0127	2.181 mg/L	0.0127	0.58%
Se 196.026†	2576.7	2.000	mg/L	0.0133	2.000 mg/L	0.0133	0.67%
Si 288.158†	3671.0	2.214	mg/L	0.0196	2.214 mg/L	0.0196	0.88%
Sn 189.927†	3408.6	1.038	mg/L	0.0072	1.038 mg/L	0.0072	0.70%
Sr 421.552†	700900.0	0.9606	mg/L	0.00232	0.9606 mg/L	0.00232	0.24%
Ti 334.903†	17890.7	1.081	mg/L	0.0033	1.081 mg/L	0.0033	0.31%
Tl 190.801†	4325.3	2.015	mg/L	0.0139	2.015 mg/L	0.0139	0.69%
V 292.402†	107862.5	1.023	mg/L	0.0104	1.023 mg/L	0.0104	1.01%
Zn 206.200†	3437.2	1.003	mg/L	0.0052	1.003 mg/L	0.0052	0.52%

Sequence No.: 2  
 Sample ID: ICB

Autosampler Location: 1  
 Date Collected: 11/27/2012 10:38:39 AM  
 Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 217.0 kPa 0.75 L/min

Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2260087.7	102.2	%	0.29			0.29%
ScR 361.383	278429.3	101.4	%	0.97			0.95%
Ag 328.068†	-23.6	-0.00016	mg/L	0.000045	-0.00016	mg/L	0.000045 28.21%
Al 308.215†	-2.8	-0.00210	mg/L	0.004889	-0.00210	mg/L	0.004889 233.25%
As 188.979†	0.1	0.00005	mg/L	0.001034	0.00005	mg/L	0.001034 >999.9%
B 249.677†	18.0	0.00276	mg/L	0.001526	0.00276	mg/L	0.001526 55.34%
Ba 233.527†	-1.0	-0.00025	mg/L	0.000341	-0.00025	mg/L	0.000341 138.72%
Be 313.042†	29.3	0.00006	mg/L	0.000003	0.00006	mg/L	0.000003 6.16%
Ca 317.933†	5.9	0.00050	mg/L	0.001287	0.00050	mg/L	0.001287 255.20%
Cd 228.802†	0.3	0.00001	mg/L	0.000287	0.00001	mg/L	0.000287 >999.9%
Co 228.616†	-1.5	-0.00004	mg/L	0.000078	-0.00004	mg/L	0.000078 175.38%
Cr 267.716†	5.2	0.00093	mg/L	0.001380	0.00093	mg/L	0.001380 148.74%
Cu 324.752†	-23.9	-0.00011	mg/L	0.000030	-0.00011	mg/L	0.000030 27.91%
Fe 273.955†	0.9	0.00077	mg/L	0.003219	0.00077	mg/L	0.003219 419.45%
K 766.490†	-32.9	-0.01938	mg/L	0.007108	-0.01938	mg/L	0.007108 36.67%
Mg 279.077†	-1.2	-0.00109	mg/L	0.002102	-0.00109	mg/L	0.002102 192.69%
Mn 257.610†	7.1	0.00022	mg/L	0.000113	0.00022	mg/L	0.000113 52.14%
Mo 202.031†	28.8	0.00166	mg/L	0.000119	0.00166	mg/L	0.000119 7.13%
Na 589.592†	80.6	0.00791	mg/L	0.003963	0.00791	mg/L	0.003963 50.10%
Na 330.237†	0.3	0.01009	mg/L	0.359633	0.01009	mg/L	0.359633 >999.9%
Ni 231.604†	2.2	0.00059	mg/L	0.000778	0.00059	mg/L	0.000778 132.77%
Pb 220.353†	4.7	0.00067	mg/L	0.000916	0.00067	mg/L	0.000916 136.92%
Sb 206.836†	5.7	0.00201	mg/L	0.000506	0.00201	mg/L	0.000506 25.25%
Se 196.026†	-6.2	-0.00481	mg/L	0.002926	-0.00481	mg/L	0.002926 60.83%
Si 288.158†	0.1	0.00006	mg/L	0.001105	0.00006	mg/L	0.001105 >999.9%
Sn 189.927†	7.4	0.00226	mg/L	0.000268	0.00226	mg/L	0.000268 11.88%
Sr 421.552†	79.8	0.00011	mg/L	0.000028	0.00011	mg/L	0.000028 25.77%
Ti 334.903†	4.2	0.00025	mg/L	0.000642	0.00025	mg/L	0.000642 252.12%
Tl 190.801†	8.2	0.00382	mg/L	0.001099	0.00382	mg/L	0.001099 28.77%
V 292.402†	11.2	0.00011	mg/L	0.000075	0.00011	mg/L	0.000075 68.56%
Zn 206.200†	2.9	0.00085	mg/L	0.000538	0.00085	mg/L	0.000538 63.15%



Sequence No.: 3  
Sample ID: CRI

Autosampler Location: 301  
Date Collected: 11/27/2012 10:42:54 AM  
Data Type: Original

Dilution: 1.000000X

-----  
Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

-----  
Mean Data: CRI

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2289037.1	103.5	%	0.50			0.48%
ScR 361.383	280700.7	102.2	%	0.14			0.14%
Ag 328.068†	438.4	0.00295	mg/L	0.000082	0.00295 mg/L	0.000082	2.78%
Al 308.215†	68.7	0.05049	mg/L	0.004149	0.05049 mg/L	0.004149	8.22%
As 188.979†	76.8	0.04942	mg/L	0.001997	0.04942 mg/L	0.001997	4.04%
B 249.677†	142.7	0.02180	mg/L	0.000396	0.02180 mg/L	0.000396	1.81%
Ba 233.527†	13.2	0.00333	mg/L	0.000749	0.00333 mg/L	0.000749	22.51%
Be 313.042†	479.2	0.00092	mg/L	0.000055	0.00092 mg/L	0.000055	6.06%
Ca 317.933†	577.4	0.04966	mg/L	0.001477	0.04966 mg/L	0.001477	2.97%
Cd 228.802†	56.5	0.00192	mg/L	0.000036	0.00192 mg/L	0.000036	1.89%
Co 228.616†	110.1	0.00328	mg/L	0.000114	0.00328 mg/L	0.000114	3.48%
Cr 267.716†	29.3	0.00526	mg/L	0.001262	0.00526 mg/L	0.001262	23.97%
Cu 324.752†	358.4	0.00163	mg/L	0.000130	0.00163 mg/L	0.000130	8.00%
Fe 273.955†	61.1	0.05190	mg/L	0.003619	0.05190 mg/L	0.003619	6.97%
K 766.490†	848.3	0.5001	mg/L	0.00475	0.5001 mg/L	0.00475	0.95%
Mg 279.077†	58.2	0.05127	mg/L	0.004770	0.05127 mg/L	0.004770	9.30%
Mn 257.610†	39.5	0.00121	mg/L	0.000059	0.00121 mg/L	0.000059	4.89%
Mo 202.031†	90.9	0.00525	mg/L	0.000413	0.00525 mg/L	0.000413	7.86%
Na 589.592†	4742.8	0.4656	mg/L	0.00136	0.4656 mg/L	0.00136	0.29%
Na 330.237†	16.9	0.6928	mg/L	0.28545	0.6928 mg/L	0.28545	41.20%
Ni 231.604†	41.2	0.01113	mg/L	0.001367	0.01113 mg/L	0.001367	12.28%
Pb 220.353†	146.6	0.02065	mg/L	0.000501	0.02065 mg/L	0.000501	2.43%
Sb 206.836†	149.0	0.05260	mg/L	0.003256	0.05260 mg/L	0.003256	6.19%
Se 196.026†	58.4	0.04534	mg/L	0.000766	0.04534 mg/L	0.000766	1.69%
Si 288.158†	117.2	0.07070	mg/L	0.002833	0.07070 mg/L	0.002833	4.01%
Sn 189.927†	31.7	0.00967	mg/L	0.001261	0.00967 mg/L	0.001261	13.04%
Sr 421.552†	732.8	0.00100	mg/L	0.000041	0.00100 mg/L	0.000041	4.10%
Ti 334.903†	64.9	0.00392	mg/L	0.000668	0.00392 mg/L	0.000668	17.05%
Tl 190.801†	106.5	0.04983	mg/L	0.000736	0.04983 mg/L	0.000736	1.48%
V 292.402†	317.3	0.00302	mg/L	0.000053	0.00302 mg/L	0.000053	1.77%
Zn 206.200†	33.6	0.00982	mg/L	0.000977	0.00982 mg/L	0.000977	9.95%

Sequence No.: 4  
Sample ID: ICSA

Autosampler Location: 302  
Date Collected: 11/27/2012 10:47:10 AM  
Data Type: Original

Dilution: 1.000000X

-----  
Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

-----  
Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2214904.4	100.2	%	0.19			0.18%
ScR 361.383	268393.2	97.72	%	0.520			0.53%
Ag 328.068†	-176.6	-0.00118	mg/L	0.000448	-0.00118 mg/L	0.000448	37.85%
Al 308.215†	283234.5	208.8	mg/L	0.63	208.8 mg/L	0.63	0.30%
As 188.979†	32.8	0.01508	mg/L	0.001863	0.01508 mg/L	0.001863	12.35%
B 249.677†	-30.9	-0.00472	mg/L	0.001002	-0.00472 mg/L	0.001002	21.21%
Ba 233.527†	118.5	-0.00386	mg/L	0.000588	-0.00386 mg/L	0.000588	15.25%
Be 313.042†	77.1	0.00015	mg/L	0.000025	0.00015 mg/L	0.000025	17.05%
Ca 317.933†	1222697.5	105.2	mg/L	0.92	105.2 mg/L	0.92	0.87%
Cd 228.802†	58.2	0.00020	mg/L	0.000084	0.00020 mg/L	0.000084	41.58%
Co 228.616†	61.1	-0.00088	mg/L	0.000025	-0.00088 mg/L	0.000025	2.81%
Cr 267.716†	8.6	-0.00073	mg/L	0.000487	-0.00073 mg/L	0.000487	67.01%
Cu 324.752†	-1843.8	-0.00017	mg/L	0.000124	-0.00017 mg/L	0.000124	73.64%
Fe 273.955†	242977.5	206.6	mg/L	1.82	206.6 mg/L	1.82	0.88%
K 766.490†	32.3	0.01907	mg/L	0.031428	0.01907 mg/L	0.031428	164.79%
Mg 279.077†	123891.1	109.0	mg/L	0.72	109.0 mg/L	0.72	0.66%
Mn 257.610†	48.7	0.00146	mg/L	0.000289	0.00146 mg/L	0.000289	19.82%
Mo 202.031†	74.9	0.00319	mg/L	0.000617	0.00319 mg/L	0.000617	19.35%
Na 589.592†	122.4	0.01202	mg/L	0.003519	0.01202 mg/L	0.003519	29.28%
Na 330.237†	-10.7	-0.4405	mg/L	0.18901	-0.4405 mg/L	0.18901	42.91%
Ni 231.604†	0.9	0.00026	mg/L	0.001575	0.00026 mg/L	0.001575	611.57%
Pb 220.353†	-299.6	-0.00069	mg/L	0.000569	-0.00069 mg/L	0.000569	82.42%
Sb 206.836†	37.8	0.01315	mg/L	0.001968	0.01315 mg/L	0.001968	14.97%
Se 196.026†	5.9	0.00456	mg/L	0.004295	0.00456 mg/L	0.004295	94.17%
Si 288.158†	-22.3	-0.00024	mg/L	0.008616	-0.00024 mg/L	0.008616	>999.9%
Sr 189.927†	-71.0	-0.00859	mg/L	0.000628	-0.00859 mg/L	0.000628	7.31%
Sr 421.552†	2985.3	0.00409	mg/L	0.000036	0.00409 mg/L	0.000036	0.89%
Ti 334.903†	100.8	0.00107	mg/L	0.000363	0.00107 mg/L	0.000363	33.84%
Tl 190.801†	-40.1	0.00328	mg/L	0.005340	0.00328 mg/L	0.005340	162.88%
V 292.402†	1165.7	0.00379	mg/L	0.000377	0.00379 mg/L	0.000377	9.94%
Zn 206.200†	10.2	0.00299	mg/L	0.000509	0.00299 mg/L	0.000509	17.03%

Sequence No.: 5  
Sample ID: ICSAB

Autosampler Location: 303  
Date Collected: 11/27/2012 10:51:26 AM  
Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

## Mean Data: ICSAB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2269187.4	102.6	%	0.27			0.26%
ScR 361.383	277546.2	101.1	%	0.36			0.35%
Ag 328.068†	150158.8	1.009	mg/L	0.0034	1.009	mg/L	0.0034 0.34%
Al 308.215†	273761.0	201.8	mg/L	0.47	201.8	mg/L	0.47 0.23%
As 188.979†	1589.0	1.014	mg/L	0.0029	1.014	mg/L	0.0029 0.29%
B 249.677†	-5.7	-0.00286	mg/L	0.000300	-0.00286	mg/L	0.000300 10.48%
Ba 233.527†	4102.8	1.004	mg/L	0.0032	1.004	mg/L	0.0032 0.32%
Be 313.042†	508207.6	0.9719	mg/L	0.00434	0.9719	mg/L	0.00434 0.45%
Ca 317.933†	1203152.6	103.5	mg/L	0.19	103.5	mg/L	0.19 0.19%
Cd 228.802†	25409.9	1.000	mg/L	0.0042	1.000	mg/L	0.0042 0.42%
Co 228.616†	32523.8	0.9682	mg/L	0.00300	0.9682	mg/L	0.00300 0.31%
Cr 267.716†	5619.5	1.009	mg/L	0.0042	1.009	mg/L	0.0042 0.41%
Cu 324.752†	218552.4	1.002	mg/L	0.0021	1.002	mg/L	0.0021 0.21%
Fe 273.955†	238691.7	203.0	mg/L	0.47	203.0	mg/L	0.47 0.23%
K 766.490†	-81.4	-0.04800	mg/L	0.029065	-0.04800	mg/L	0.029065 60.56%
Mg 279.077†	116315.8	102.4	mg/L	0.17	102.4	mg/L	0.17 0.17%
Mn 257.610†	31435.4	0.9596	mg/L	0.00375	0.9596	mg/L	0.00375 0.39%
Mo 202.031†	69.0	0.00281	mg/L	0.000217	0.00281	mg/L	0.000217 7.70%
Na 589.592†	235.6	0.02314	mg/L	0.000818	0.02314	mg/L	0.000818 3.53%
Na 330.237†	8.7	0.04351	mg/L	0.064991	0.04351	mg/L	0.064991 149.36%
Ni 231.604†	3532.5	0.9528	mg/L	0.00296	0.9528	mg/L	0.00296 0.31%
Pb 220.353†	6577.3	0.9660	mg/L	0.00204	0.9660	mg/L	0.00204 0.21%
Sb 206.836†	2948.4	1.029	mg/L	0.0028	1.029	mg/L	0.0028 0.28%
Se 196.026†	1276.5	0.9903	mg/L	0.00398	0.9903	mg/L	0.00398 0.40%
Si 288.158†	-29.5	-0.00180	mg/L	0.000598	-0.00180	mg/L	0.000598 33.24%
Sn 189.927†	-70.0	-0.00800	mg/L	0.000557	-0.00800	mg/L	0.000557 6.96%
Sr 421.552†	2868.5	0.00393	mg/L	0.000032	0.00393	mg/L	0.000032 0.81%
Ti 334.903†	96.9	0.00072	mg/L	0.000352	0.00072	mg/L	0.000352 48.87%
Tl 190.801†	1976.5	0.9373	mg/L	0.00340	0.9373	mg/L	0.00340 0.36%
V 292.402†	102131.1	0.9616	mg/L	0.00212	0.9616	mg/L	0.00212 0.22%
Zn 206.200†	3269.1	0.9540	mg/L	0.00501	0.9540	mg/L	0.00501 0.53%

Sequence No.: 6  
Sample ID: CV 1

Autosampler Location: 7  
Date Collected: 11/27/2012 10:56:17 AM  
Data Type: Original

Dilution: 1.000000X

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Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

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Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2299680.7	104.0 %	2.52			2.43%
ScR 361.383	274908.6	100.1 %	1.61			1.61%
Ag 328.068†	154294.9	1.037 mg/L	0.0226	1.037 mg/L	0.0226	2.18%
Al 308.215†	2925.6	2.122 mg/L	0.0377	2.122 mg/L	0.0377	1.78%
As 188.979†	3132.4	2.039 mg/L	0.0594	2.039 mg/L	0.0594	2.91%
B 249.677†	6483.3	0.9898 mg/L	0.01467	0.9898 mg/L	0.01467	1.48%
Ba 233.527†	4110.6	1.039 mg/L	0.0176	1.039 mg/L	0.0176	1.70%
Be 313.042†	522277.0	0.9988 mg/L	0.01938	0.9988 mg/L	0.01938	1.94%
Ca 317.933†	24220.0	2.083 mg/L	0.0377	2.083 mg/L	0.0377	1.81%
Cd 228.802†	26005.5	1.019 mg/L	0.0241	1.019 mg/L	0.0241	2.37%
Co 228.616†	33573.2	1.000 mg/L	0.0228	1.000 mg/L	0.0228	2.28%
Cr 267.716†	5749.8	1.034 mg/L	0.0128	1.034 mg/L	0.0128	1.24%
Cu 324.752†	223344.3	1.015 mg/L	0.0229	1.015 mg/L	0.0229	2.26%
Fe 273.955†	2568.7	2.177 mg/L	0.0325	2.177 mg/L	0.0325	1.49%
K 766.490†	35314.0	20.82 mg/L	0.391	20.82 mg/L	0.391	1.88%
Mg 279.077†	2443.7	2.160 mg/L	0.0310	2.160 mg/L	0.0310	1.44%
Mn 257.610†	32650.2	0.9969 mg/L	0.01635	0.9969 mg/L	0.01635	1.64%
Mo 202.031†	17636.2	1.019 mg/L	0.0240	1.019 mg/L	0.0240	2.36%
Na 589.592†	510641.7	50.13 mg/L	0.895	50.13 mg/L	0.895	1.79%
Na 330.237†	1324.3	54.23 mg/L	0.722	54.23 mg/L	0.722	1.33%
Ni 231.604†	3725.2	1.005 mg/L	0.0141	1.005 mg/L	0.0141	1.40%
Pb 220.353†	14089.9	1.984 mg/L	0.0446	1.984 mg/L	0.0446	2.25%
Sb 206.836†	6120.5	2.159 mg/L	0.0594	2.159 mg/L	0.0594	2.75%
Se 196.026†	2556.7	1.984 mg/L	0.0581	1.984 mg/L	0.0581	2.93%
Si 288.158†	3778.6	2.279 mg/L	0.0308	2.279 mg/L	0.0308	1.35%
Sn 189.927†	3391.4	1.033 mg/L	0.0297	1.033 mg/L	0.0297	2.87%
Sr 421.552†	719851.4	0.9866 mg/L	0.01731	0.9866 mg/L	0.01731	1.75%
Ti 334.903†	18421.3	1.113 mg/L	0.0205	1.113 mg/L	0.0205	1.84%
Tl 190.801†	4292.0	2.000 mg/L	0.0530	2.000 mg/L	0.0530	2.65%
V 292.402†	106991.1	1.015 mg/L	0.0230	1.015 mg/L	0.0230	2.26%
Zn 206.200†	3580.3	1.045 mg/L	0.0170	1.045 mg/L	0.0170	1.63%

Sequence No.: 7  
 Sample ID: CB

Autosampler Location: 1  
 Date Collected: 11/27/2012 11:01:22 AM  
 Data Type: Original

Dilution: 1.000000X

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 Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

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 Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2270615.9	102.7	%	1.51				1.47%
ScR 361.383	284073.7	103.4	%	1.38				1.33%
Ag 328.068†	-16.4	-0.00011	mg/L	0.000043	-0.00011	mg/L	0.000043	38.82%
Al 308.215†	-10.8	-0.00795	mg/L	0.007651	-0.00795	mg/L	0.007651	96.18%
As 188.979†	1.0	0.00065	mg/L	0.000646	0.00065	mg/L	0.000646	99.68%
B 249.677†	9.1	0.00139	mg/L	0.000498	0.00139	mg/L	0.000498	35.91%
Ba 233.527†	0.1	0.00002	mg/L	0.000425	0.00002	mg/L	0.000425	>999.9%
Be 313.042†	8.3	0.00002	mg/L	0.000038	0.00002	mg/L	0.000038	239.25%
Ca 317.933†	18.6	0.00160	mg/L	0.001037	0.00160	mg/L	0.001037	64.70%
Cd 228.802†	-1.6	-0.00007	mg/L	0.000171	-0.00007	mg/L	0.000171	257.94%
Co 228.616†	-0.3	-0.00001	mg/L	0.000083	-0.00001	mg/L	0.000083	>999.9%
Cr 267.716†	3.2	0.00058	mg/L	0.000250	0.00058	mg/L	0.000250	42.87%
Cu 324.752†	-80.7	-0.00037	mg/L	0.000220	-0.00037	mg/L	0.000220	60.08%
Fe 273.955†	-0.7	-0.00056	mg/L	0.002616	-0.00056	mg/L	0.002616	468.71%
K 766.490†	-40.0	-0.02358	mg/L	0.020779	-0.02358	mg/L	0.020779	88.14%
Mg 279.077†	-0.6	-0.00055	mg/L	0.010402	-0.00055	mg/L	0.010402	>999.9%
Mn 257.610†	-0.1	-0.00000	mg/L	0.000041	-0.00000	mg/L	0.000041	>999.9%
Mo 202.031†	18.2	0.00105	mg/L	0.000217	0.00105	mg/L	0.000217	20.66%
Na 589.592†	69.5	0.00682	mg/L	0.002485	0.00682	mg/L	0.002485	36.42%
Na 330.237†	-0.4	-0.01557	mg/L	0.568685	-0.01557	mg/L	0.568685	>999.9%
Ni 231.604†	0.5	0.00014	mg/L	0.000763	0.00014	mg/L	0.000763	536.13%
Pb 220.353†	4.6	0.00064	mg/L	0.000253	0.00064	mg/L	0.000253	39.37%
Sb 206.836†	5.3	0.00187	mg/L	0.002013	0.00187	mg/L	0.002013	107.60%
Se 196.026†	-5.2	-0.00400	mg/L	0.002013	-0.00400	mg/L	0.002013	50.33%
Si 288.158†	-0.1	-0.00007	mg/L	0.002735	-0.00007	mg/L	0.002735	>999.9%
Sn 189.927†	0.7	0.00020	mg/L	0.000488	0.00020	mg/L	0.000488	244.60%
Sr 421.552†	70.8	0.00010	mg/L	0.000041	0.00010	mg/L	0.000041	42.23%
Ti 334.903†	-8.0	-0.00049	mg/L	0.000596	-0.00049	mg/L	0.000596	122.37%
Tl 190.801†	5.6	0.00261	mg/L	0.000936	0.00261	mg/L	0.000936	35.86%
V 292.402†	10.3	0.00010	mg/L	0.000175	0.00010	mg/L	0.000175	173.67%
Zn 206.200†	-0.9	-0.00026	mg/L	0.000186	-0.00026	mg/L	0.000186	72.22%

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Analysis Begun

Start Time: 11/27/2012 11:08:14 AM

Plasma On Time: 11/27/2012 8:08:35 AM

Logged In Analyst: Metals

Technique: ICP Continuous

Spectrometer: Optima 7300 DV, S/N 077C8121202

Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1127.sif

Batch ID:

Results Data Set: I2121127

Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb  
=====

Sequence No.: 1

Autosampler Location: 304

Sample ID: VR58 MB1 SWC

Date Collected: 11/27/2012 11:08:15 AM

Data Type: Original

Dilution: 2.000000X  
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Nebulizer Parameters: VR58 MB1 SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

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Mean Data: VR58 MB1 SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2364572.2	107.0	%	0.25			0.24%
ScR 361.383	291062.4	106.0	%	0.46			0.44%
Ag 328.068†	-13.1	-0.00009	mg/L	0.000425	-0.00018 mg/L	0.000850	483.10%
Al 308.215†	4.7	0.00346	mg/L	0.002560	0.00691 mg/L	0.005120	74.04%
As 188.979†	1.8	0.00118	mg/L	0.001372	0.00237 mg/L	0.002744	115.82%
B 249.677†	-1.1	-0.00017	mg/L	0.000605	-0.00034 mg/L	0.001210	356.54%
Ba 233.527†	-2.4	-0.00061	mg/L	0.000422	-0.00122 mg/L	0.000843	69.08%
Be 313.042†	-25.7	-0.00005	mg/L	0.000026	-0.00010 mg/L	0.000053	53.82%
Ca 317.933†	148.5	0.01277	mg/L	0.000822	0.02555 mg/L	0.001645	6.44%
Cd 228.802†	-2.5	-0.00011	mg/L	0.000177	-0.00021 mg/L	0.000354	166.52%
Co 228.616†	12.6	0.00038	mg/L	0.000062	0.00075 mg/L	0.000124	16.53%
Cr 267.716†	8.3	0.00149	mg/L	0.000626	0.00298 mg/L	0.001252	42.03%
Cu 324.752†	-152.1	-0.00069	mg/L	0.000050	-0.00138 mg/L	0.000100	7.23%
Fe 273.955†	13.1	0.01116	mg/L	0.000956	0.02231 mg/L	0.001912	8.57%
K 766.490†	-25.7	-0.01513	mg/L	0.004231	-0.03027 mg/L	0.008463	27.96%
Mg 279.077†	2.2	0.00193	mg/L	0.004171	0.00387 mg/L	0.008342	215.63%
Mn 257.610†	-1.0	-0.00003	mg/L	0.000101	-0.00006 mg/L	0.000202	320.30%
Mo 202.031†	-2.2	-0.00013	mg/L	0.000162	-0.00026 mg/L	0.000323	126.37%
Na 589.592†	-0.5	-0.00005	mg/L	0.004882	-0.00009 mg/L	0.009765	>999.9%
Na 330.237†	-3.4	-0.1388	mg/L	0.35783	-0.2777 mg/L	0.71567	257.75%
Ni 231.604†	6.0	0.00161	mg/L	0.001505	0.00321 mg/L	0.003010	93.66%
Pb 220.353†	0.9	0.00013	mg/L	0.000207	0.00026 mg/L	0.000413	158.16%
Sb 206.836†	-3.4	-0.00122	mg/L	0.001137	-0.00244 mg/L	0.002273	93.08%
Se 196.026†	-5.5	-0.00426	mg/L	0.001809	-0.00851 mg/L	0.003619	42.52%
Si 288.158†	4.1	0.00246	mg/L	0.004676	0.00492 mg/L	0.009351	189.99%
Sn 189.927†	-1.1	-0.00034	mg/L	0.001056	-0.00068 mg/L	0.002111	310.32%
Sr 421.552†	43.1	0.00006	mg/L	0.000041	0.00012 mg/L	0.000082	69.17%
Ti 334.903†	0.1	0.00001	mg/L	0.001690	0.00002 mg/L	0.003379	>999.9%
Tl 190.801†	8.6	0.00403	mg/L	0.001718	0.00805 mg/L	0.003436	42.67%
V 292.402†	-9.1	-0.00008	mg/L	0.000061	-0.00016 mg/L	0.000122	76.14%
Zn 206.200†	11.0	0.00321	mg/L	0.000473	0.00642 mg/L	0.000947	14.75%

Sequence No.: 2  
Sample ID: VR58 B SWC

Autosampler Location: 305  
Date Collected: 11/27/2012 11:12:31 AM  
Data Type: Original

Dilution: 2.000000X

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Nebulizer Parameters: VR58 B SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

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Mean Data: VR58 B SWC

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	2371794.2	107.3	%	1.59				1.48%
ScR 361.383	292162.9	106.4	%	0.17				0.16%
Ag 328.068†	-33.2	-0.00020	mg/L	0.000348	-0.00039	mg/L	0.000697	177.82%
Al 308.215†	38501.1	28.38	mg/L	0.232	56.75	mg/L	0.463	0.82%
As 188.979†	-41.0	0.02805	mg/L	0.001322	0.05610	mg/L	0.002644	4.71%
B 249.677†	69.6	0.01059	mg/L	0.001002	0.02118	mg/L	0.002004	9.46%
Ba 233.527†	1087.0	0.2653	mg/L	0.00189	0.5307	mg/L	0.00377	0.71%
Be 313.042†	261.0	0.00046	mg/L	0.000016	0.00091	mg/L	0.000032	3.52%
Ca 317.933†	163912.2	14.10	mg/L	0.142	28.19	mg/L	0.284	1.01%
Cd 228.802†	44.8	0.00147	mg/L	0.000098	0.00294	mg/L	0.000195	6.65%
Co 228.616†	792.8	0.01914	mg/L	0.000319	0.03829	mg/L	0.000638	1.67%
Cr 267.716†	473.7	0.08632	mg/L	0.000353	0.1726	mg/L	0.00071	0.41%
Cu 324.752†	35045.3	0.1614	mg/L	0.00345	0.3228	mg/L	0.00689	2.14%
Fe 273.955†	68343.6	58.11	mg/L	0.498	116.2	mg/L	1.00	0.86%
K 766.490†	2703.6	1.594	mg/L	0.0141	3.188	mg/L	0.0282	0.89%
Mg 279.077†	10661.1	9.361	mg/L	0.0023	18.72	mg/L	0.005	0.02%
Mn 257.610†	65923.7	2.012	mg/L	0.0151	4.025	mg/L	0.0303	0.75%
Mo 202.031†	37.9	0.00203	mg/L	0.000192	0.00406	mg/L	0.000385	9.47%
Na 589.592†	7262.5	0.7130	mg/L	0.00281	1.426	mg/L	0.0056	0.39%
Na 330.237†	21.2	1.104	mg/L	0.0892	2.209	mg/L	0.1784	8.08%
Ni 231.604†	289.4	0.07804	mg/L	0.001013	0.1561	mg/L	0.00203	1.30%
Pb 220.353†	556.1	0.08258	mg/L	0.002012	0.1652	mg/L	0.00402	2.44%
Sb 206.836†	7.4	0.00256	mg/L	0.000887	0.00513	mg/L	0.001775	34.63%
Se 196.026†	-4.0	-0.00316	mg/L	0.001921	-0.00632	mg/L	0.003841	60.80%
Si 288.158†	6866.3	4.145	mg/L	0.0035	8.289	mg/L	0.0070	0.08%
Sn 189.927†	-8.8	-0.00064	mg/L	0.001249	-0.00128	mg/L	0.002498	195.93%
Sr 421.552†	60774.8	0.08329	mg/L	0.000553	0.1666	mg/L	0.00111	0.66%
Ti 334.903†	31959.5	1.932	mg/L	0.0159	3.865	mg/L	0.0318	0.82%
Tl 190.801†	-1.4	0.00507	mg/L	0.001605	0.01014	mg/L	0.003211	31.65%
V 292.402†	9904.3	0.09106	mg/L	0.002079	0.1821	mg/L	0.00416	2.28%
Zn 206.200†	2140.6	0.6247	mg/L	0.00276	1.249	mg/L	0.0055	0.44%

Sequence No.: 3

Sample ID: VR58 C SWC

Autosampler Location: 306

Date Collected: 11/27/2012 11:16:30 AM

Data Type: Original

Dilution: 2.000000X

## Nebulizer Parameters: VR58 C SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

## Mean Data: VR58 C SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2336500.1	105.7	%	1.23				1.17%
ScR 361.383	290898.9	105.9	%	1.38				1.30%
Ag 328.068†	-47.0	-0.00028	mg/L	0.000240	-0.00055	mg/L	0.000480	87.12%
Al 308.215†	56814.9	41.87	mg/L	0.211	83.75	mg/L	0.422	0.50%
As 188.979†	-105.9	0.02234	mg/L	0.002643	0.04467	mg/L	0.005286	11.83%
B 249.677†	74.5	0.01132	mg/L	0.000637	0.02264	mg/L	0.001274	5.63%
Ba 233.527†	1371.3	0.3367	mg/L	0.00344	0.6735	mg/L	0.00687	1.02%
Be 313.042†	345.8	0.00060	mg/L	0.000053	0.00119	mg/L	0.000107	8.99%
Ca 317.933†	210849.0	18.13	mg/L	0.062	36.27	mg/L	0.124	0.34%
Cd 228.802†	50.6	0.00198	mg/L	0.000190	0.00395	mg/L	0.000379	9.60%
Co 228.616†	1128.0	0.02666	mg/L	0.000527	0.05331	mg/L	0.001053	1.98%
Cr 267.716†	668.7	0.1210	mg/L	0.00125	0.2420	mg/L	0.00251	1.04%
Cu 324.752†	28657.3	0.1322	mg/L	0.00231	0.2644	mg/L	0.00462	1.75%
Fe 273.955†	71690.7	60.96	mg/L	0.259	121.9	mg/L	0.52	0.43%
K 766.490†	3803.7	2.243	mg/L	0.0261	4.485	mg/L	0.0522	1.16%
Mg 279.077†	17300.8	15.21	mg/L	0.119	30.42	mg/L	0.238	0.78%
Mn 257.610†	53082.1	1.620	mg/L	0.0058	3.241	mg/L	0.0117	0.36%
Mo 202.031†	46.2	0.00247	mg/L	0.000094	0.00494	mg/L	0.000189	3.82%
Na 589.592†	11372.0	1.116	mg/L	0.0019	2.233	mg/L	0.0037	0.17%
Na 330.237†	25.3	1.595	mg/L	0.1317	3.190	mg/L	0.2634	8.26%
Ni 231.604†	418.4	0.1128	mg/L	0.00263	0.2257	mg/L	0.00526	2.33%
Pb 220.353†	478.2	0.07484	mg/L	0.001191	0.1497	mg/L	0.00238	1.59%
Sb 206.836†	4.2	0.00165	mg/L	0.001646	0.00330	mg/L	0.003292	99.76%
Se 196.026†	-2.3	-0.00187	mg/L	0.004824	-0.00375	mg/L	0.009649	257.46%
Si 288.158†	8807.6	5.317	mg/L	0.0442	10.63	mg/L	0.088	0.83%
Sn 189.927†	-15.7	-0.00208	mg/L	0.001348	-0.00416	mg/L	0.002696	64.86%
Sr 421.552†	81164.1	0.1112	mg/L	0.00053	0.2225	mg/L	0.00107	0.48%
Tl 334.903†	52886.3	3.198	mg/L	0.0107	6.396	mg/L	0.0215	0.34%
Tl 190.801†	0.2	0.00592	mg/L	0.002003	0.01183	mg/L	0.004005	33.85%
V 292.402†	14679.7	0.1354	mg/L	0.00202	0.2709	mg/L	0.00403	1.49%
Zn 206.200†	1766.1	0.5154	mg/L	0.00517	1.031	mg/L	0.0103	1.00%



Sequence No.: 4

Autosampler Location: 307

Sample ID: VR58 D SWC

Date Collected: 11/27/2012 11:20:29 AM

Data Type: Original

Dilution: 2.000000X

## Nebulizer Parameters: VR58 D SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

## Mean Data: VR58 D SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2326400.3	105.2	%	0.35				0.33%
ScR 361.383	288893.9	105.2	%	0.37				0.35%
Ag 328.068†	-32.3	-0.00018	mg/L	0.000112	-0.00036	mg/L	0.000223	61.79%
Al 308.215†	56902.7	41.94	mg/L	0.046	83.88	mg/L	0.093	0.11%
As 188.979†	-83.7	0.01768	mg/L	0.002546	0.03537	mg/L	0.005093	14.40%
B 249.677†	65.5	0.00995	mg/L	0.000634	0.01991	mg/L	0.001267	6.36%
Ba 233.527†	1267.1	0.3094	mg/L	0.00347	0.6188	mg/L	0.00693	1.12%
Be 313.042†	350.4	0.00061	mg/L	0.000046	0.00123	mg/L	0.000091	7.41%
Ca 317.933†	165971.2	14.27	mg/L	0.091	28.55	mg/L	0.182	0.64%
Cd 228.802†	53.4	0.00193	mg/L	0.000157	0.00385	mg/L	0.000314	8.15%
Co 228.616†	985.8	0.02363	mg/L	0.000079	0.04727	mg/L	0.000159	0.34%
Cr 267.716†	651.6	0.1183	mg/L	0.00098	0.2365	mg/L	0.00195	0.83%
Cu 324.752†	29430.9	0.1361	mg/L	0.00048	0.2722	mg/L	0.00096	0.35%
Fe 273.955†	78694.5	66.91	mg/L	0.417	133.8	mg/L	0.83	0.62%
K 766.490†	3831.3	2.259	mg/L	0.0194	4.518	mg/L	0.0389	0.86%
Mg 279.077†	16380.7	14.39	mg/L	0.119	28.79	mg/L	0.237	0.82%
Mn 257.610†	60876.8	1.858	mg/L	0.0104	3.716	mg/L	0.0207	0.56%
Mo 202.031†	41.0	0.00221	mg/L	0.000177	0.00441	mg/L	0.000354	8.02%
Na 589.592†	8490.6	0.8336	mg/L	0.00831	1.667	mg/L	0.0166	1.00%
Na 330.237†	13.8	0.9952	mg/L	0.17083	1.990	mg/L	0.3417	17.16%
Ni 231.604†	372.0	0.1003	mg/L	0.00161	0.2007	mg/L	0.00322	1.60%
Pb 220.353†	440.0	0.06922	mg/L	0.000961	0.1384	mg/L	0.00192	1.39%
Sb 206.836†	7.1	0.00237	mg/L	0.001049	0.00474	mg/L	0.002099	44.24%
Se 196.026†	-0.2	-0.00024	mg/L	0.002060	-0.00047	mg/L	0.004120	873.17%
Si 288.158†	11161.2	6.737	mg/L	0.0427	13.47	mg/L	0.085	0.63%
Sn 189.927†	-12.0	-0.00151	mg/L	0.000782	-0.00301	mg/L	0.001564	51.97%
Sr 421.552†	68501.4	0.09388	mg/L	0.000244	0.1878	mg/L	0.00049	0.26%
Ti 334.903†	41812.9	2.528	mg/L	0.0094	5.057	mg/L	0.0189	0.37%
Tl 190.801†	-11.4	0.00119	mg/L	0.003981	0.00239	mg/L	0.007962	333.26%
V 292.402†	13332.1	0.1229	mg/L	0.00024	0.2458	mg/L	0.00048	0.20%
Zn 206.200†	1541.3	0.4498	mg/L	0.00325	0.8996	mg/L	0.00650	0.72%

Sequence No.: 5  
Sample ID: VR58 E SWC

Autosampler Location: 308  
Date Collected: 11/27/2012 11:24:28 AM  
Data Type: Original

Dilution: 2.000000X

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Nebulizer Parameters: VR58 E SWC

Analyte Back Pressure Flow  
All 218.0 kPa 0.75 L/min

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Mean Data: VR58 E SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	2306648.5	104.3 %	%	0.61			0.59%
ScR 361.383	290390.1	105.7 %	%	3.66			3.46%
Ag 328.068†	-28.3	-0.00015 mg/L	mg/L	0.000213	-0.00030 mg/L	0.000425	139.53%
Al 308.215†	59497.2	43.85 mg/L	mg/L	1.801	87.70 mg/L	3.601	4.11%
As 188.979†	-89.5	0.01882 mg/L	mg/L	0.002622	0.03764 mg/L	0.005244	13.93%
B 249.677†	81.9	0.01245 mg/L	mg/L	0.001137	0.02490 mg/L	0.002274	9.13%
Ba 233.527†	1303.9	0.3186 mg/L	mg/L	0.01137	0.6373 mg/L	0.02273	3.57%
Be 313.042†	362.2	0.00063 mg/L	mg/L	0.000098	0.00127 mg/L	0.000196	15.48%
Ca 317.933†	173666.6	14.94 mg/L	mg/L	0.577	29.87 mg/L	1.154	3.86%
Cd 228.802†	54.2	0.00197 mg/L	mg/L	0.000034	0.00395 mg/L	0.000069	1.74%
Co 228.616†	1012.6	0.02409 mg/L	mg/L	0.000409	0.04819 mg/L	0.000819	1.70%
Cr 267.716†	670.1	0.1216 mg/L	mg/L	0.00449	0.2433 mg/L	0.00898	3.69%
Cu 324.752†	29990.5	0.1386 mg/L	mg/L	0.00046	0.2773 mg/L	0.00092	0.33%
Fe 273.955†	79351.9	67.47 mg/L	mg/L	2.554	134.9 mg/L	5.11	3.78%
K 766.490†	4121.1	2.430 mg/L	mg/L	0.1024	4.859 mg/L	0.2047	4.21%
Mg 279.077†	15845.5	13.92 mg/L	mg/L	0.546	27.85 mg/L	1.091	3.92%
Mn 257.610†	61340.8	1.872 mg/L	mg/L	0.0713	3.745 mg/L	0.1425	3.81%
Mo 202.031†	45.8	0.00248 mg/L	mg/L	0.000300	0.00495 mg/L	0.000599	12.10%
Na 589.592†	9327.6	0.9158 mg/L	mg/L	0.03281	1.832 mg/L	0.0656	3.58%
Na 330.237†	17.9	1.200 mg/L	mg/L	0.3066	2.399 mg/L	0.6132	25.56%
Ni 231.604†	372.0	0.1003 mg/L	mg/L	0.00450	0.2006 mg/L	0.00899	4.48%
Pb 220.353†	446.8	0.07062 mg/L	mg/L	0.001687	0.1412 mg/L	0.00337	2.39%
Sb 206.836†	5.7	0.00192 mg/L	mg/L	0.001503	0.00385 mg/L	0.003006	78.12%
Se 196.026†	3.3	0.00249 mg/L	mg/L	0.001388	0.00497 mg/L	0.002775	55.84%
Si 288.158†	9269.6	5.596 mg/L	mg/L	0.1846	11.19 mg/L	0.369	3.30%
Sn 189.927†	-16.0	-0.00263 mg/L	mg/L	0.001097	-0.00527 mg/L	0.002193	41.62%
Sr 421.552†	72105.6	0.09882 mg/L	mg/L	0.003935	0.1976 mg/L	0.00787	3.98%
Ti 334.903†	44663.1	2.701 mg/L	mg/L	0.1040	5.402 mg/L	0.2080	3.85%
Tl 190.801†	-9.4	0.00216 mg/L	mg/L	0.000897	0.00432 mg/L	0.001795	41.57%
V 292.402†	13928.9	0.1284 mg/L	mg/L	0.00055	0.2569 mg/L	0.00110	0.43%
Zn 206.200†	1550.1	0.4524 mg/L	mg/L	0.01653	0.9048 mg/L	0.03306	3.65%

Sequence No.: 6  
Sample ID: VR58 ADUP SWC

Autosampler Location: 309  
Date Collected: 11/27/2012 11:28:27 AM  
Data Type: Original

Dilution: 2.000000X

*Del*

Nebulizer Parameters: VR58 ADUP SWC

Analyte Back Pressure Flow  
All 219.0 kPa 0.75 L/min

Mean Data: VR58 ADUP SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2344993.8	106.1	%	0.34				0.32%
ScR 361.383	290103.9	105.6	%	3.92				3.71%
Ag 328.068†	2.3	0.00007	mg/L	0.000375	0.00015	mg/L	0.000750	515.22%
Al 308.215†	79478.6	58.58	mg/L	2.760	117.2	mg/L	5.52	4.71%
As 188.979†	265.0	0.3010	mg/L	0.00444	0.6019	mg/L	0.00888	1.48%
B 249.677†	94.3	0.01433	mg/L	0.000732	0.02866	mg/L	0.001464	5.11%
Ba 233.527†	1459.5	0.3533	mg/L	0.01326	0.7067	mg/L	0.02652	3.75%
Be 313.042†	531.4	0.00092	mg/L	0.000084	0.00184	mg/L	0.000167	9.08%
Ca 317.933†	317647.7	27.32	mg/L	1.332	54.64	mg/L	2.664	4.88%
Cd 228.802†	97.1	0.00198	mg/L	0.000245	0.00395	mg/L	0.000490	12.41%
Co 228.616†	1828.0	0.04432	mg/L	0.000807	0.08863	mg/L	0.001614	1.82%
Cr 267.716†	1044.4	0.1886	mg/L	0.00609	0.3772	mg/L	0.01219	3.23%
Cu 324.752†	51501.8	0.2371	mg/L	0.00082	0.4743	mg/L	0.00164	0.35%
Fe 273.955†	112565.3	95.71	mg/L	4.890	191.4	mg/L	9.78	5.11%
K 766.490†	5886.3	3.470	mg/L	0.1723	6.941	mg/L	0.3446	4.96%
Mg 279.077†	32998.0	29.02	mg/L	1.055	58.04	mg/L	2.109	3.63%
Mn 257.610†	59876.4	1.828	mg/L	0.0901	3.656	mg/L	0.1802	4.93%
Mo 202.031†	455.7	0.02601	mg/L	0.000172	0.05203	mg/L	0.000344	0.66%
Na 589.592†	19187.8	1.884	mg/L	0.0887	3.768	mg/L	0.1774	4.71%
Na 330.237†	37.3	2.139	mg/L	0.4997	4.279	mg/L	0.9993	23.35%
Ni 231.604†	710.7	0.1917	mg/L	0.00678	0.3835	mg/L	0.01355	3.53%
Pb 220.353†	2479.4	0.3590	mg/L	0.00150	0.7179	mg/L	0.00301	0.42%
Sb 206.836†	320.4	0.1134	mg/L	0.00142	0.2268	mg/L	0.00284	1.25%
Se 196.026†	-1.6	-0.00141	mg/L	0.003584	-0.00281	mg/L	0.007167	254.79%
Si 288.158†	9404.2	5.678	mg/L	0.2019	11.36	mg/L	0.404	3.55%
Sn 189.927†	84.2	0.02972	mg/L	0.000901	0.05945	mg/L	0.001801	3.03%
Sr 421.552†	109514.4	0.1501	mg/L	0.00710	0.3002	mg/L	0.01421	4.73%
Ti 334.903†	76645.6	4.635	mg/L	0.2158	9.269	mg/L	0.4316	4.66%
Tl 190.801†	-11.6	0.00376	mg/L	0.000748	0.00753	mg/L	0.001497	19.88%
V 292.402†	21123.1	0.1946	mg/L	0.00089	0.3891	mg/L	0.00179	0.46%
Zn 206.200†	4626.6	1.350	mg/L	0.0486	2.700	mg/L	0.0972	3.60%

Sequence No.: 7

Sample ID: VR58 A SWC

Autosampler Location: 310

Date Collected: 11/27/2012 11:32:26 AM

Data Type: Original

Dilution: 2.000000X

## Nebulizer Parameters: VR58 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

## Mean Data: VR58 A SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2338771.8	105.8	%	0.58			0.55%
ScR 361.383	289664.8	105.5	%	2.87			2.72%
Ag 328.068†	-37.1	-0.00019	mg/L	0.000050	-0.00038 mg/L	0.000100	26.52%
Al 308.215†	83416.3	61.48	mg/L	2.174	123.0 mg/L	4.35	3.54%
As 188.979†	-213.0	0.00894	mg/L	0.003667	0.01789 mg/L	0.007334	41.01%
B 249.677†	82.3	0.01246	mg/L	0.000617	0.02492 mg/L	0.001234	4.95%
Ba 233.527†	1308.4	0.3155	mg/L	0.00941	0.6310 mg/L	0.01882	2.98%
Be 313.042†	549.1	0.00095	mg/L	0.000076	0.00189 mg/L	0.000152	8.02%
Ca 317.933†	364561.9	31.35	mg/L	1.199	62.70 mg/L	2.399	3.83%
Cd 228.802†	54.0	0.00233	mg/L	0.000120	0.00467 mg/L	0.000240	5.15%
Co 228.616†	1836.7	0.04359	mg/L	0.000580	0.08718 mg/L	0.001160	1.33%
Cr 267.716†	967.1	0.1746	mg/L	0.00382	0.3491 mg/L	0.00763	2.19%
Cu 324.752†	23602.4	0.1101	mg/L	0.00032	0.2202 mg/L	0.00065	0.29%
Fe 273.955†	109677.3	93.26	mg/L	3.435	186.5 mg/L	6.87	3.68%
K 766.490†	5119.5	3.018	mg/L	0.1238	6.037 mg/L	0.2475	4.10%
Mg 279.077†	33295.5	29.28	mg/L	0.802	58.56 mg/L	1.603	2.74%
Mn 257.610†	59547.4	1.818	mg/L	0.0679	3.635 mg/L	0.1358	3.73%
Mo 202.031†	59.8	0.00310	mg/L	0.000167	0.00621 mg/L	0.000333	5.37%
Na 589.592†	13872.0	1.362	mg/L	0.0476	2.724 mg/L	0.0952	3.49%
Na 330.237†	18.1	1.729	mg/L	0.3032	3.458 mg/L	0.6063	17.53%
Ni 231.604†	725.4	0.1956	mg/L	0.00590	0.3912 mg/L	0.01180	3.02%
Pb 220.353†	710.2	0.1110	mg/L	0.00088	0.2220 mg/L	0.00175	0.79%
Sb 206.836†	7.9	0.00326	mg/L	0.001576	0.00653 mg/L	0.003153	48.29%
Se 196.026†	-1.7	-0.00148	mg/L	0.003109	-0.00295 mg/L	0.006217	210.45%
Si 288.158†	11039.3	6.665	mg/L	0.1750	13.33 mg/L	0.350	2.63%
Sn 189.927†	-30.0	-0.00450	mg/L	0.000892	-0.00899 mg/L	0.001785	19.85%
Sr 421.552†	100961.0	0.1384	mg/L	0.00487	0.2767 mg/L	0.00975	3.52%
Ti 334.903†	85328.5	5.160	mg/L	0.1868	10.32 mg/L	0.374	3.62%
Tl 190.801†	-9.3	0.00456	mg/L	0.001525	0.00911 mg/L	0.003049	33.46%
V 292.402†	21982.9	0.2024	mg/L	0.00035	0.4048 mg/L	0.00069	0.17%
Zn 206.200†	1950.8	0.5693	mg/L	0.01568	1.139 mg/L	0.0314	2.76%

Sequence No.: 8

Autosampler Location: 311

Sample ID: VR58 ASPK SWC

Date Collected: 11/27/2012 11:36:25 AM

Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR58 ASPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR58 ASPK SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2364661.1	107.0	%	0.76			0.71%
ScR 361.383	293652.3	106.9	%	0.58			0.54%
Ag 328.068†	73160.9	0.4916	mg/L	0.00481	0.9833 mg/L	0.00962	0.98%
Al 308.215†	78539.8	57.88	mg/L	0.074	115.8 mg/L	0.15	0.13%
As 188.979†	2944.3	2.004	mg/L	0.0226	4.008 mg/L	0.0452	1.13%
B 249.677†	92.7	0.01306	mg/L	0.001221	0.02611 mg/L	0.002442	9.35%
Ba 233.527†	8980.7	2.257	mg/L	0.0181	4.514 mg/L	0.0363	0.80%
Be 313.042†	254187.8	0.4860	mg/L	0.00062	0.9720 mg/L	0.00123	0.13%
Ca 317.933†	581459.3	50.01	mg/L	0.046	100.0 mg/L	0.09	0.09%
Cd 228.802†	13425.9	0.5197	mg/L	0.00453	1.039 mg/L	0.0091	0.87%
Co 228.616†	18091.7	0.5309	mg/L	0.00510	1.062 mg/L	0.0102	0.96%
Cr 267.716†	3559.7	0.6396	mg/L	0.00830	1.279 mg/L	0.0166	1.30%
Cu 324.752†	131806.0	0.6018	mg/L	0.00506	1.204 mg/L	0.0101	0.84%
Fe 273.955†	100221.2	85.21	mg/L	0.088	170.4 mg/L	0.18	0.10%
K 766.490†	21207.4	12.50	mg/L	0.021	25.01 mg/L	0.042	0.17%
Mg 279.077†	42717.0	37.59	mg/L	0.274	75.17 mg/L	0.547	0.73%
Mn 257.610†	71393.4	2.180	mg/L	0.0012	4.359 mg/L	0.0025	0.06%
Mo 202.031†	78.1	0.00394	mg/L	0.000338	0.00787 mg/L	0.000676	8.59%
Na 589.592†	112266.0	11.02	mg/L	0.008	22.04 mg/L	0.017	0.08%
Na 330.237†	281.9	12.15	mg/L	0.490	24.29 mg/L	0.979	4.03%
Ni 231.604†	2395.6	0.6456	mg/L	0.00279	1.291 mg/L	0.0056	0.43%
Pb 220.353†	14410.8	2.038	mg/L	0.0200	4.077 mg/L	0.0400	0.98%
Sb 206.836†	2184.6	0.7658	mg/L	0.00899	1.532 mg/L	0.0180	1.17%
Se 196.026†	2578.9	2.002	mg/L	0.0198	4.004 mg/L	0.0396	0.99%
Si 288.158†	9544.1	5.766	mg/L	0.0409	11.53 mg/L	0.082	0.71%
Sn 189.927†	-37.7	-0.00429	mg/L	0.000852	-0.00858 mg/L	0.001705	19.87%
Sr 421.552†	467519.7	0.6407	mg/L	0.00041	1.281 mg/L	0.0008	0.06%
Ti 334.903†	67554.4	4.084	mg/L	0.0005	8.167 mg/L	0.0009	0.01%
Tl 190.801†	4066.7	1.906	mg/L	0.0155	3.813 mg/L	0.0311	0.81%
V 292.402†	69412.5	0.6531	mg/L	0.00706	1.306 mg/L	0.0141	1.08%
Zn 206.200†	3591.4	1.048	mg/L	0.0052	2.096 mg/L	0.0105	0.50%

Sequence No.: 9

Autosampler Location: 312

Sample ID: VR58 APOST SWC

Date Collected: 11/27/2012 11:39:26 AM

Data Type: Original

Dilution: 2.000000X

## Nebulizer Parameters: VR58 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: VR58 APOST SWC

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample		RSD
	Intensity	Conc. Units			Conc. Units	Std.Dev.	
ScA 357.253	2353764.4	106.5 %	%	0.31			0.29%
ScR 361.383	292669.3	106.6 %	%	0.61			0.57%
Ag 328.068†	69545.6	0.4674 mg/L	mg/L	0.00134	0.9347 mg/L	0.00268	0.29%
Al 308.215†	85401.1	62.93 mg/L	mg/L	0.098	125.9 mg/L	0.20	0.16%
As 188.979†	2847.6	1.972 mg/L	mg/L	0.0019	3.943 mg/L	0.0039	0.10%
B 249.677†	84.8	0.01185 mg/L	mg/L	0.001767	0.02369 mg/L	0.003533	14.91%
Ba 233.527†	8923.9	2.241 mg/L	mg/L	0.0123	4.482 mg/L	0.0247	0.55%
Be 313.042†	250172.4	0.4783 mg/L	mg/L	0.00068	0.9566 mg/L	0.00137	0.14%
Ca 317.933†	479128.8	41.21 mg/L	mg/L	0.036	82.41 mg/L	0.072	0.09%
Cd 228.802†	13255.1	0.5133 mg/L	mg/L	0.00100	1.027 mg/L	0.0020	0.20%
Co 228.616†	18220.3	0.5326 mg/L	mg/L	0.00068	1.065 mg/L	0.0014	0.13%
Cr 267.716†	3621.3	0.6510 mg/L	mg/L	0.00317	1.302 mg/L	0.0063	0.49%
Cu 324.752†	130974.9	0.5982 mg/L	mg/L	0.00090	1.196 mg/L	0.0018	0.15%
Fe 273.955†	110706.8	94.13 mg/L	mg/L	0.185	188.3 mg/L	0.37	0.20%
K 766.490†	21833.2	12.87 mg/L	mg/L	0.014	25.74 mg/L	0.028	0.11%
Mg 279.077†	44307.1	38.98 mg/L	mg/L	0.243	77.97 mg/L	0.487	0.62%
Mn 257.610†	74382.4	2.271 mg/L	mg/L	0.0038	4.542 mg/L	0.0077	0.17%
Mo 202.031†	72.8	0.00373 mg/L	mg/L	0.000060	0.00745 mg/L	0.000119	1.60%
Na 589.592†	109121.8	10.71 mg/L	mg/L	0.021	21.43 mg/L	0.042	0.20%
Na 330.237†	261.8	11.56 mg/L	mg/L	0.429	23.13 mg/L	0.858	3.71%
Ni 231.604†	2401.7	0.6481 mg/L	mg/L	0.00236	1.296 mg/L	0.0047	0.36%
Pb 220.353†	14359.1	2.032 mg/L	mg/L	0.0021	4.064 mg/L	0.0041	0.10%
Sb 206.836†	6175.3	2.174 mg/L	mg/L	0.0038	4.348 mg/L	0.0077	0.18%
Se 196.026†	2555.7	1.984 mg/L	mg/L	0.0052	3.968 mg/L	0.0105	0.26%
Si 288.158†	10860.9	6.561 mg/L	mg/L	0.0646	13.12 mg/L	0.129	0.98%
Sn 189.927†	-44.7	-0.00671 mg/L	mg/L	0.001415	-0.01343 mg/L	0.002829	21.07%
Sr 421.552†	445173.2	0.6101 mg/L	mg/L	0.00115	1.220 mg/L	0.0023	0.19%
Ti 334.903†	84553.3	5.112 mg/L	mg/L	0.0135	10.22 mg/L	0.027	0.26%
Tl 190.801†	4037.7	1.894 mg/L	mg/L	0.0030	3.787 mg/L	0.0060	0.16%
V 292.402†	71094.5	0.6682 mg/L	mg/L	0.00052	1.336 mg/L	0.0010	0.08%
Zn 206.200†	3501.5	1.022 mg/L	mg/L	0.0082	2.044 mg/L	0.0163	0.80%

Sequence No.: 10

Autosampler Location: 313

Sample ID: VR58 MB1SPK SWC

Date Collected: 11/27/2012 11:42:27 AM

Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR58 MB1SPK SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

Mean Data: VR58 MB1SPK SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2319981.8	104.9	%	0.48				0.46%
ScR 361.383	284472.6	103.6	%	0.62				0.60%
Ag 328.068†	79239.0	0.5324	mg/L	0.00077	1.065	mg/L	0.0015	0.15%
Al 308.215†	2831.7	2.080	mg/L	0.0212	4.160	mg/L	0.0423	1.02%
As 188.979†	3199.9	2.054	mg/L	0.0144	4.107	mg/L	0.0289	0.70%
B 249.677†	12.0	0.00079	mg/L	0.000882	0.00158	mg/L	0.001764	111.35%
Ba 233.527†	8039.6	2.033	mg/L	0.0245	4.065	mg/L	0.0489	1.20%
Be 313.042†	259548.0	0.4963	mg/L	0.00423	0.9927	mg/L	0.00845	0.85%
Ca 317.933†	118954.3	10.23	mg/L	0.107	20.46	mg/L	0.213	1.04%
Cd 228.802†	13450.4	0.5203	mg/L	0.00130	1.041	mg/L	0.0026	0.25%
Co 228.616†	17061.2	0.5091	mg/L	0.00079	1.018	mg/L	0.0016	0.15%
Cr 267.716†	2852.2	0.5119	mg/L	0.00494	1.024	mg/L	0.0099	0.97%
Cu 324.752†	108532.4	0.4934	mg/L	0.00145	0.9869	mg/L	0.00290	0.29%
Fe 273.955†	2529.2	2.147	mg/L	0.0175	4.294	mg/L	0.0350	0.81%
K 766.490†	17260.5	10.18	mg/L	0.090	20.35	mg/L	0.181	0.89%
Mg 279.077†	12120.6	10.68	mg/L	0.126	21.36	mg/L	0.252	1.18%
Mn 257.610†	16583.1	0.5065	mg/L	0.00443	1.013	mg/L	0.0089	0.88%
Mo 202.031†	17.7	0.00089	mg/L	0.000403	0.00177	mg/L	0.000806	45.49%
Na 589.592†	98227.4	9.644	mg/L	0.0536	19.29	mg/L	0.107	0.56%
Na 330.237†	258.5	10.44	mg/L	0.151	20.88	mg/L	0.301	1.44%
Ni 231.604†	1833.4	0.4947	mg/L	0.00635	0.9895	mg/L	0.01270	1.28%
Pb 220.353†	14138.2	1.990	mg/L	0.0019	3.980	mg/L	0.0038	0.10%
Sb 206.836†	6082.7	2.141	mg/L	0.0146	4.281	mg/L	0.0292	0.68%
Se 196.026†	2632.2	2.043	mg/L	0.0081	4.087	mg/L	0.0162	0.40%
Si 288.158†	-0.9	0.00269	mg/L	0.001038	0.00538	mg/L	0.002076	38.59%
Sn 189.927†	-18.1	-0.00319	mg/L	0.000530	-0.00639	mg/L	0.001060	16.60%
Sr 421.552†	358641.6	0.4915	mg/L	0.00360	0.9830	mg/L	0.00721	0.73%
Ti 334.903†	37.3	0.00167	mg/L	0.000102	0.00333	mg/L	0.000204	6.11%
Tl 190.801†	4289.1	2.002	mg/L	0.0098	4.005	mg/L	0.0196	0.49%
V 292.402†	53700.3	0.5092	mg/L	0.00064	1.018	mg/L	0.0013	0.13%
Zn 206.200†	1717.8	0.5014	mg/L	0.00617	1.003	mg/L	0.0123	1.23%

Sequence No.: 11

Sample ID: CV 2

Autosampler Location: 7

Date Collected: 11/27/2012 11:46:26 AM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD	
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2304737.8	104.2	%	0.47			0.45%	
ScR 361.383	283599.2	103.3	%	1.75			1.70%	
Ag 328.068†	152737.5	1.026	mg/L	0.0044	1.026	mg/L	0.0044	0.43%
Al 308.215†	2811.5	2.038	mg/L	0.0396	2.038	mg/L	0.0396	1.94%
As 188.979†	3115.8	2.027	mg/L	0.0117	2.027	mg/L	0.0117	0.58%
B 249.677†	6293.1	0.9608	mg/L	0.01625	0.9608	mg/L	0.01625	1.69%
Ba 233.527†	3945.0	0.9971	mg/L	0.01725	0.9971	mg/L	0.01725	1.73%
Be 313.042†	502279.7	0.9605	mg/L	0.01887	0.9605	mg/L	0.01887	1.96%
Ca 317.933†	23081.9	1.985	mg/L	0.0357	1.985	mg/L	0.0357	1.80%
Cd 228.802†	25709.1	1.007	mg/L	0.0053	1.007	mg/L	0.0053	0.53%
Co 228.616†	33092.8	0.9859	mg/L	0.00533	0.9859	mg/L	0.00533	0.54%
Cr 267.716†	5571.3	1.002	mg/L	0.0162	1.002	mg/L	0.0162	1.61%
Cu 324.752†	221787.5	1.008	mg/L	0.0055	1.008	mg/L	0.0055	0.55%
Fe 273.955†	2485.7	2.107	mg/L	0.0352	2.107	mg/L	0.0352	1.67%
K 766.490†	34106.7	20.11	mg/L	0.497	20.11	mg/L	0.497	2.47%
Mg 279.077†	2347.6	2.075	mg/L	0.0388	2.075	mg/L	0.0388	1.87%
Mn 257.610†	31551.9	0.9634	mg/L	0.01703	0.9634	mg/L	0.01703	1.77%
Mo 202.031†	17430.8	1.007	mg/L	0.0066	1.007	mg/L	0.0066	0.66%
Na 589.592†	491899.5	48.29	mg/L	0.980	48.29	mg/L	0.980	2.03%
Na 330.237†	1297.9	53.15	mg/L	0.865	53.15	mg/L	0.865	1.63%
Ni 231.604†	3590.5	0.9686	mg/L	0.01514	0.9686	mg/L	0.01514	1.56%
Pb 220.353†	13898.8	1.957	mg/L	0.0136	1.957	mg/L	0.0136	0.70%
Sb 206.836†	6116.3	2.157	mg/L	0.0114	2.157	mg/L	0.0114	0.53%
Se 196.026†	2556.4	1.984	mg/L	0.0084	1.984	mg/L	0.0084	0.42%
Si 288.158†	3666.3	2.212	mg/L	0.0382	2.212	mg/L	0.0382	1.73%
Sn 189.927†	3388.0	1.032	mg/L	0.0026	1.032	mg/L	0.0026	0.26%
Sr 421.552†	694492.9	0.9518	mg/L	0.01870	0.9518	mg/L	0.01870	1.96%
Ti 334.903†	17761.6	1.073	mg/L	0.0220	1.073	mg/L	0.0220	2.05%
Tl 190.801†	4264.9	1.987	mg/L	0.0110	1.987	mg/L	0.0110	0.55%
V 292.402†	105507.4	1.000	mg/L	0.0048	1.000	mg/L	0.0048	0.48%
Zn 206.200†	3441.7	1.004	mg/L	0.0201	1.004	mg/L	0.0201	2.00%



Sequence No.: 12

Sample ID: CB 2

Autosampler Location: 1

Date Collected: 11/27/2012 11:51:30 AM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2312045.3	104.6	%	0.30				0.29%
ScR 361.383	285840.4	104.1	%	0.40				0.39%
Ag 328.068†	-0.9	-0.00001	mg/L	0.000268	-0.00001	mg/L	0.000268	>999.9%
Al 308.215†	-4.8	-0.00356	mg/L	0.002879	-0.00356	mg/L	0.002879	80.90%
As 188.979†	-0.2	-0.00014	mg/L	0.000550	-0.00014	mg/L	0.000550	390.47%
B 249.677†	15.2	0.00233	mg/L	0.000428	0.00233	mg/L	0.000428	18.41%
Ba 233.527†	-0.6	-0.00016	mg/L	0.001663	-0.00016	mg/L	0.001663	>999.9%
Be 313.042†	20.9	0.00004	mg/L	0.000048	0.00004	mg/L	0.000048	120.80%
Ca 317.933†	-4.3	-0.00037	mg/L	0.000156	-0.00037	mg/L	0.000156	42.42%
Cd 228.802†	-1.5	-0.00006	mg/L	0.000016	-0.00006	mg/L	0.000016	27.64%
Co 228.616†	-1.5	-0.00004	mg/L	0.000066	-0.00004	mg/L	0.000066	154.88%
Cr 267.716†	1.5	0.00027	mg/L	0.001200	0.00027	mg/L	0.001200	450.39%
Cu 324.752†	-135.3	-0.00062	mg/L	0.000199	-0.00062	mg/L	0.000199	32.37%
Fe 273.955†	0.6	0.00052	mg/L	0.001489	0.00052	mg/L	0.001489	286.07%
K 766.490†	-16.1	-0.00951	mg/L	0.010206	-0.00951	mg/L	0.010206	107.32%
Mg 279.077†	2.1	0.00184	mg/L	0.007421	0.00184	mg/L	0.007421	402.35%
Mn 257.610†	6.2	0.00019	mg/L	0.000040	0.00019	mg/L	0.000040	21.02%
Mo 202.031†	14.0	0.00081	mg/L	0.000267	0.00081	mg/L	0.000267	33.02%
Na 589.592†	45.8	0.00450	mg/L	0.003517	0.00450	mg/L	0.003517	78.16%
Na 330.237†	10.5	0.4290	mg/L	0.47023	0.4290	mg/L	0.47023	109.62%
Ni 231.604†	1.9	0.00051	mg/L	0.000245	0.00051	mg/L	0.000245	48.11%
Pb 220.353†	9.0	0.00127	mg/L	0.000748	0.00127	mg/L	0.000748	58.95%
Sb 206.836†	6.8	0.00240	mg/L	0.001394	0.00240	mg/L	0.001394	58.00%
Se 196.026†	-8.4	-0.00650	mg/L	0.003997	-0.00650	mg/L	0.003997	61.54%
Si 288.158†	2.5	0.00150	mg/L	0.004567	0.00150	mg/L	0.004567	303.82%
Sn 189.927†	2.3	0.00070	mg/L	0.000906	0.00070	mg/L	0.000906	130.30%
Sr 421.552†	50.6	0.00007	mg/L	0.000047	0.00007	mg/L	0.000047	68.24%
Ti 334.903†	-22.4	-0.00136	mg/L	0.000860	-0.00136	mg/L	0.000860	63.34%
Tl 190.801†	6.9	0.00325	mg/L	0.002539	0.00325	mg/L	0.002539	78.13%
V 292.402†	14.5	0.00014	mg/L	0.000182	0.00014	mg/L	0.000182	130.93%
Zn 206.200†	1.2	0.00034	mg/L	0.000296	0.00034	mg/L	0.000296	87.00%

Sequence No.: 13  
Sample ID: VR58 F SWC

Autosampler Location: 314  
Date Collected: 11/27/2012 11:55:45 AM  
Data Type: Original

Dilution: 2.000000X

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Nebulizer Parameters: VR58 F SWC

Analyte Back Pressure Flow  
All 219.0 kPa 0.75 L/min

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Mean Data: VR58 F SWC

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
ScA 357.253	2371495.1	107.3	%	0.21			0.19%
ScR 361.383	293651.8	106.9	%	0.96			0.90%
Ag 328.068†	5.3	0.00009	mg/L	0.000187	0.00018	mg/L	0.000375 208.10%
Al 308.215†	90400.3	66.63	mg/L	0.077	133.3	mg/L	0.15 0.12%
As 188.979†	-147.0	0.03089	mg/L	0.003301	0.06177	mg/L	0.006602 10.69%
B 249.677†	90.3	0.01371	mg/L	0.001442	0.02741	mg/L	0.002885 10.52%
Ba 233.527†	1594.5	0.3864	mg/L	0.00238	0.7729	mg/L	0.00476 0.62%
Be 313.042†	519.9	0.00090	mg/L	0.000022	0.00181	mg/L	0.000044 2.46%
Ca 317.933†	336360.1	28.93	mg/L	0.137	57.85	mg/L	0.274 0.47%
Cd 228.802†	80.7	0.00299	mg/L	0.000112	0.00598	mg/L	0.000224 3.75%
Co 228.616†	1666.8	0.03980	mg/L	0.000130	0.07960	mg/L	0.000260 0.33%
Cr 267.716†	884.6	0.1603	mg/L	0.00087	0.3206	mg/L	0.00174 0.54%
Cu 324.752†	107191.2	0.4906	mg/L	0.00216	0.9813	mg/L	0.00431 0.44%
Fe 273.955†	120142.0	102.2	mg/L	0.81	204.3	mg/L	1.62 0.79%
K 766.490†	6560.7	3.868	mg/L	0.0197	7.736	mg/L	0.0394 0.51%
Mg 279.077†	30643.3	26.94	mg/L	0.198	53.88	mg/L	0.396 0.74%
Mn 257.610†	54271.3	1.657	mg/L	0.0114	3.313	mg/L	0.0229 0.69%
Mo 202.031†	55.6	0.00289	mg/L	0.000240	0.00577	mg/L	0.000481 8.32%
Na 589.592†	16659.4	1.636	mg/L	0.0047	3.271	mg/L	0.0094 0.29%
Na 330.237†	29.8	1.970	mg/L	0.0958	3.941	mg/L	0.1915 4.86%
Ni 231.604†	577.0	0.1556	mg/L	0.00082	0.3112	mg/L	0.00163 0.52%
Pb 220.353†	724.0	0.1132	mg/L	0.00069	0.2264	mg/L	0.00138 0.61%
Sb 206.836†	10.4	0.00398	mg/L	0.001286	0.00795	mg/L	0.002572 32.34%
Se 196.026†	4.0	0.00300	mg/L	0.006101	0.00601	mg/L	0.012203 203.14%
Si 288.158†	9107.4	5.499	mg/L	0.0387	11.00	mg/L	0.077 0.70%
Sn 189.927†	-23.7	-0.00300	mg/L	0.000446	-0.00601	mg/L	0.000891 14.84%
Sr 421.552†	130401.0	0.1787	mg/L	0.00015	0.3574	mg/L	0.00029 0.08%
Ti 334.903†	73424.2	4.440	mg/L	0.0159	8.879	mg/L	0.0317 0.36%
Tl 190.801†	-10.7	0.00493	mg/L	0.002625	0.00986	mg/L	0.005250 53.24%
V 292.402†	19888.8	0.1826	mg/L	0.00070	0.3653	mg/L	0.00140 0.38%
Zn 206.200†	2744.0	0.8008	mg/L	0.00531	1.602	mg/L	0.0106 0.66%

Sequence No.: 14  
Sample ID: VR58 G SWC

Autosampler Location: 315  
Date Collected: 11/27/2012 11:59:45 AM  
Data Type: Original

Dilution: 2.000000X

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Nebulizer Parameters: VR58 G SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

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Mean Data: VR58 G SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2375973.6	107.5	%	0.49			0.46%
ScR 361.383	294345.6	107.2	%	0.34			0.31%
Ag 328.068†	-108.2	-0.00067	mg/L	0.000136	-0.00134	mg/L	0.000271 20.24%
Al 308.215†	95113.4	70.10	mg/L	0.201	140.2	mg/L	0.40 0.29%
As 188.979†	-200.9	0.01436	mg/L	0.001737	0.02872	mg/L	0.003475 12.10%
B 249.677†	70.6	0.01067	mg/L	0.000084	0.02134	mg/L	0.000168 0.79%
Ba 233.527†	1447.7	0.3492	mg/L	0.00228	0.6985	mg/L	0.00456 0.65%
Be 313.042†	453.8	0.00077	mg/L	0.000010	0.00154	mg/L	0.000020 1.29%
Ca 317.933†	331490.0	28.51	mg/L	0.084	57.02	mg/L	0.169 0.30%
Cd 228.802†	40.8	0.00163	mg/L	0.000187	0.00326	mg/L	0.000374 11.46%
Co 228.616†	1862.3	0.04441	mg/L	0.000125	0.08882	mg/L	0.000250 0.28%
Cr 267.716†	893.5	0.1615	mg/L	0.00128	0.3230	mg/L	0.00256 0.79%
Cu 324.752†	8708.9	0.04282	mg/L	0.000373	0.08563	mg/L	0.000746 0.87%
Fe 273.955†	120764.9	102.7	mg/L	0.43	205.4	mg/L	0.85 0.41%
K 766.490†	5385.0	3.175	mg/L	0.0186	6.350	mg/L	0.0372 0.59%
Mg 279.077†	36718.3	32.29	mg/L	0.146	64.58	mg/L	0.292 0.45%
Mn 257.610†	45362.0	1.385	mg/L	0.0048	2.770	mg/L	0.0095 0.34%
Mo 202.031†	39.8	0.00198	mg/L	0.000171	0.00397	mg/L	0.000342 8.62%
Na 589.592†	18459.1	1.812	mg/L	0.0067	3.625	mg/L	0.0134 0.37%
Na 330.237†	27.9	2.154	mg/L	0.0522	4.307	mg/L	0.1044 2.42%
Ni 231.604†	579.0	0.1561	mg/L	0.00091	0.3123	mg/L	0.00181 0.58%
Pb 220.353†	302.5	0.05536	mg/L	0.000745	0.1107	mg/L	0.00149 1.35%
Sb 206.836†	3.0	0.00161	mg/L	0.001604	0.00323	mg/L	0.003209 99.40%
Se 196.026†	-3.0	-0.00251	mg/L	0.005713	-0.00501	mg/L	0.011427 227.93%
Si 288.158†	9573.5	5.781	mg/L	0.0303	11.56	mg/L	0.061 0.52%
Sn 189.927†	-36.4	-0.00683	mg/L	0.000541	-0.01365	mg/L	0.001081 7.92%
Sr 421.552†	89921.6	0.1232	mg/L	0.00047	0.2465	mg/L	0.00094 0.38%
Ti 334.903†	83863.3	5.071	mg/L	0.0191	10.14	mg/L	0.038 0.38%
Tl 190.801†	-8.7	0.00585	mg/L	0.001235	0.01170	mg/L	0.002470 21.11%
V 292.402†	20697.0	0.1899	mg/L	0.00115	0.3797	mg/L	0.00231 0.61%
Zn 206.200†	1502.7	0.4385	mg/L	0.00336	0.8771	mg/L	0.00672 0.77%

Sequence No.: 15  
Sample ID: VR58 H SWC

Autosampler Location: 316  
Date Collected: 11/27/2012 12:03:45 PM  
Data Type: Original

Dilution: 2.000000X

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Nebulizer Parameters: VR58 H SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

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Mean Data: VR58 H SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2360270.6	106.8	%	0.62			0.58%
ScR 361.383	288122.4	104.9	%	0.23			0.22%
Ag 328.068†	-144.9	-0.00090	mg/L	0.000411	-0.00181	mg/L	0.000823 45.47%
Al 308.215†	107562.4	79.27	mg/L	0.090	158.5	mg/L	0.18 0.11%
As 188.979†	-242.2	0.01146	mg/L	0.001727	0.02292	mg/L	0.003453 15.07%
B 249.677†	96.4	0.01460	mg/L	0.000552	0.02920	mg/L	0.001104 3.78%
Ba 233.527†	1299.4	0.3105	mg/L	0.00123	0.6211	mg/L	0.00247 0.40%
Be 313.042†	579.0	0.00099	mg/L	0.000007	0.00198	mg/L	0.000014 0.71%
Ca 317.933†	441316.9	37.95	mg/L	0.161	75.91	mg/L	0.323 0.43%
Cd 228.802†	34.3	0.00154	mg/L	0.000062	0.00307	mg/L	0.000124 4.04%
Co 228.616†	2088.0	0.04941	mg/L	0.000231	0.09883	mg/L	0.000463 0.47%
Cr 267.716†	1379.6	0.2483	mg/L	0.00138	0.4965	mg/L	0.00277 0.56%
Cu 324.752†	9206.7	0.04513	mg/L	0.000178	0.09026	mg/L	0.000356 0.39%
Fe 273.955†	129019.4	109.7	mg/L	0.20	219.4	mg/L	0.40 0.18%
K 766.490†	6136.6	3.618	mg/L	0.0073	7.236	mg/L	0.0147 0.20%
Mg 279.077†	48046.7	42.27	mg/L	0.143	84.54	mg/L	0.286 0.34%
Mn 257.610†	54938.8	1.677	mg/L	0.0018	3.354	mg/L	0.0036 0.11%
Mo 202.031†	45.6	0.00221	mg/L	0.000136	0.00442	mg/L	0.000272 6.15%
Na 589.592†	15203.7	1.493	mg/L	0.0017	2.985	mg/L	0.0034 0.11%
Na 330.237†	9.5	1.621	mg/L	0.2274	3.241	mg/L	0.4549 14.03%
Ni 231.604†	790.3	0.2131	mg/L	0.00134	0.4262	mg/L	0.00269 0.63%
Pb 220.353†	140.3	0.03460	mg/L	0.000375	0.06920	mg/L	0.000749 1.08%
Sb 206.836†	15.6	0.00530	mg/L	0.000875	0.01060	mg/L	0.001750 16.51%
Se 196.026†	1.7	0.00114	mg/L	0.004283	0.00228	mg/L	0.008567 375.66%
Si 288.158†	9803.5	5.921	mg/L	0.0085	11.84	mg/L	0.017 0.14%
Sn 189.927†	-45.1	-0.00818	mg/L	0.000978	-0.01637	mg/L	0.001956 11.95%
Sr 421.552†	99359.0	0.1362	mg/L	0.00009	0.2723	mg/L	0.00019 0.07%
Ti 334.903†	97880.9	5.919	mg/L	0.0075	11.84	mg/L	0.015 0.13%
Tl 190.801†	-11.0	0.00531	mg/L	0.002521	0.01063	mg/L	0.005041 47.43%
V 292.402†	25013.2	0.2303	mg/L	0.00066	0.4606	mg/L	0.00132 0.29%
Zn 206.200†	1213.1	0.3540	mg/L	0.00030	0.7080	mg/L	0.00060 0.09%

Sequence No.: 16  
Sample ID: VR58 I SWC

Autosampler Location: 317  
Date Collected: 11/27/2012 12:07:44 PM  
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR58 I SWC

Analyte Back Pressure Flow  
All 219.0 kPa 0.75 L/min

Mean Data: VR58 I SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity				Conc. Units	Std.Dev.	
ScA 357.253	2411021.5		109.1 %	0.54			0.49%
ScR 361.383	296446.9		107.9 %	0.60			0.55%
Ag 328.068†	-128.8	-0.00080	mg/L	0.000202	-0.00159	0.000403	25.32%
Al 308.215†	127620.0	94.06	mg/L	0.406	188.1	0.81	0.43%
As 188.979†	-219.6	0.01308	mg/L	0.003119	0.02616	0.006238	23.85%
B 249.677†	89.4	0.01358	mg/L	0.000997	0.02716	0.001993	7.34%
Ba 233.527†	2503.8	0.6179	mg/L	0.00462	1.236	0.0092	0.75%
Be 313.042†	672.9	0.00117	mg/L	0.000025	0.00235	0.000051	2.16%
Ca 317.933†	297877.2	25.62	mg/L	0.123	51.23	0.246	0.48%
Cd 228.802†	26.5	0.00124	mg/L	0.000120	0.00249	0.000239	9.61%
Co 228.616†	1443.4	0.03129	mg/L	0.000210	0.06259	0.000421	0.67%
Cr 267.716†	1393.5	0.2514	mg/L	0.00124	0.5028	0.00248	0.49%
Cu 324.752†	13250.4	0.06297	mg/L	0.000291	0.1259	0.00058	0.46%
Fe 273.955†	108725.5	92.45	mg/L	0.604	184.9	1.21	0.65%
K 766.490†	5062.5	2.985	mg/L	0.0131	5.969	0.0262	0.44%
Mg 279.077†	31239.4	27.47	mg/L	0.121	54.94	0.241	0.44%
Mn 257.610†	76295.3	2.329	mg/L	0.0132	4.657	0.0264	0.57%
Mo 202.031†	80.2	0.00434	mg/L	0.000252	0.00868	0.000505	5.81%
Na 589.592†	16140.8	1.585	mg/L	0.0109	3.169	0.0219	0.69%
Na 330.237†	15.4	1.771	mg/L	0.5537	3.543	1.1074	31.26%
Ni 231.604†	590.9	0.1594	mg/L	0.00166	0.3187	0.00332	1.04%
Pb 220.353†	83.5	0.03084	mg/L	0.000658	0.06167	0.001316	2.13%
Sb 206.836†	2.6	0.00052	mg/L	0.003619	0.00105	0.007238	690.89%
Se 196.026†	6.5	0.00487	mg/L	0.002705	0.00973	0.005410	55.59%
Si 288.158†	12497.5	7.545	mg/L	0.0523	15.09	0.105	0.69%
Sn 189.927†	-33.3	-0.00619	mg/L	0.001177	-0.01238	0.002353	19.01%
Sr 421.552†	120277.5	0.1648	mg/L	0.00065	0.3297	0.00130	0.40%
Tl 334.903†	90047.0	5.445	mg/L	0.0228	10.89	0.046	0.42%
Tl 190.801†	-10.6	0.00379	mg/L	0.005938	0.00757	0.011876	156.79%
V 292.402†	25113.2	0.2322	mg/L	0.00150	0.4645	0.00300	0.65%
Zn 206.200†	1027.6	0.2999	mg/L	0.00340	0.5998	0.00679	1.13%

Sequence No.: 17  
Sample ID: VR58 J SWC

Autosampler Location: 318  
Date Collected: 11/27/2012 12:11:43 PM  
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR58 J SWC

Analyte Back Pressure Flow  
All 219.0 kPa 0.75 L/min

Mean Data: VR58 J SWC

Analyte	Mean Corrected		Calib.	Std.Dev.	Sample	Std.Dev.	RSD
	Intensity	Conc.	Units		Conc. Units		
ScA 357.253	2366873.1	107.1	%	1.06			0.99%
ScR 361.383	290123.6	105.6	%	0.52			0.49%
Ag 328.068†	-107.2	-0.00066	mg/L	0.000086	-0.00131 mg/L	0.000173	13.16%
Al 308.215†	97766.6	72.06	mg/L	0.255	144.1 mg/L	0.51	0.35%
As 188.979†	-205.2	0.01551	mg/L	0.001629	0.03101 mg/L	0.003258	10.51%
B 249.677†	70.7	0.01069	mg/L	0.001052	0.02138 mg/L	0.002105	9.84%
Ba 233.527†	1264.0	0.3016	mg/L	0.00253	0.6033 mg/L	0.00505	0.84%
Be 313.042†	532.0	0.00091	mg/L	0.000035	0.00182 mg/L	0.000071	3.88%
Ca 317.933†	352093.3	30.28	mg/L	0.173	60.56 mg/L	0.346	0.57%
Cd 228.802†	30.6	0.00121	mg/L	0.000304	0.00242 mg/L	0.000608	25.14%
Co 228.616†	1914.8	0.04561	mg/L	0.000423	0.09122 mg/L	0.000846	0.93%
Cr 267.716†	1314.6	0.2371	mg/L	0.00212	0.4742 mg/L	0.00424	0.89%
Cu 324.752†	9819.3	0.04810	mg/L	0.000489	0.09621 mg/L	0.000979	1.02%
Fe 273.955†	128885.5	109.6	mg/L	0.95	219.2 mg/L	1.90	0.87%
K 766.490†	5848.1	3.448	mg/L	0.0134	6.896 mg/L	0.0269	0.39%
Mg 279.077†	41571.1	36.56	mg/L	0.225	73.13 mg/L	0.450	0.61%
Mn 257.610†	59850.8	1.827	mg/L	0.0108	3.654 mg/L	0.0216	0.59%
Mo 202.031†	44.1	0.00221	mg/L	0.000273	0.00441 mg/L	0.000547	12.40%
Na 589.592†	14397.4	1.414	mg/L	0.0071	2.827 mg/L	0.0141	0.50%
Na 330.237†	11.1	1.526	mg/L	0.1449	3.052 mg/L	0.2898	9.50%
Ni 231.604†	701.4	0.1891	mg/L	0.00141	0.3783 mg/L	0.00281	0.74%
Pb 220.353†	148.9	0.03407	mg/L	0.001183	0.06815 mg/L	0.002367	3.47%
Sb 206.836†	11.6	0.00370	mg/L	0.002569	0.00741 mg/L	0.005138	69.38%
Se 196.026†	3.5	0.00256	mg/L	0.001861	0.00511 mg/L	0.003722	72.81%
Si 288.158†	11293.4	6.820	mg/L	0.0521	13.64 mg/L	0.104	0.76%
Sn 189.927†	-39.3	-0.00746	mg/L	0.001030	-0.01492 mg/L	0.002060	13.81%
Sr 421.552†	95791.6	0.1313	mg/L	0.00025	0.2626 mg/L	0.00050	0.19%
Ti 334.903†	86229.9	5.214	mg/L	0.0203	10.43 mg/L	0.041	0.39%
Tl 190.801†	-13.2	0.00437	mg/L	0.001496	0.00873 mg/L	0.002992	34.26%
V 292.402†	23416.9	0.2156	mg/L	0.00198	0.4312 mg/L	0.00396	0.92%
Zn 206.200†	1194.4	0.3486	mg/L	0.00267	0.6971 mg/L	0.00535	0.77%

Sequence No.: 18  
Sample ID: VR82 A SWC

Autosampler Location: 319  
Date Collected: 11/27/2012 12:15:42 PM  
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR82 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VR82 A SWC

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	2373357.6	107.3	%	0.49				0.45%
ScR 361.383	292156.4	106.4	%	0.74				0.69%
Ag 328.068†	-60.3	-0.00036	mg/L	0.000169	-0.00073	mg/L	0.000338	46.29%
Al 308.215†	68678.8	50.62	mg/L	0.250	101.2	mg/L	0.50	0.49%
As 188.979†	-102.6	0.02722	mg/L	0.002044	0.05443	mg/L	0.004088	7.51%
B 249.677†	62.9	0.00954	mg/L	0.000937	0.01908	mg/L	0.001875	9.83%
Ba 233.527†	1331.1	0.3258	mg/L	0.00115	0.6517	mg/L	0.00230	0.35%
Be 313.042†	380.1	0.00066	mg/L	0.000025	0.00132	mg/L	0.000050	3.78%
Ca 317.933†	220150.6	18.93	mg/L	0.069	37.87	mg/L	0.138	0.36%
Cd 228.802†	86.4	0.00334	mg/L	0.000104	0.00668	mg/L	0.000207	3.10%
Co 228.616†	1180.0	0.02796	mg/L	0.000069	0.05592	mg/L	0.000137	0.25%
Cr 267.716†	766.5	0.1386	mg/L	0.00147	0.2772	mg/L	0.00295	1.06%
Cu 324.752†	50029.4	0.2295	mg/L	0.00176	0.4590	mg/L	0.00352	0.77%
Fe 273.955†	77136.7	65.59	mg/L	0.308	131.2	mg/L	0.62	0.47%
K 766.490†	4471.4	2.636	mg/L	0.0185	5.272	mg/L	0.0370	0.70%
Mg 279.077†	19178.5	16.86	mg/L	0.041	33.72	mg/L	0.081	0.24%
Mn 257.610†	60737.6	1.854	mg/L	0.0058	3.708	mg/L	0.0117	0.32%
Mo 202.031†	50.9	0.00273	mg/L	0.000370	0.00546	mg/L	0.000741	13.57%
Na 589.592†	10544.9	1.035	mg/L	0.0043	2.071	mg/L	0.0086	0.42%
Na 330.237†	16.5	1.238	mg/L	0.3748	2.476	mg/L	0.7497	30.28%
Ni 231.604†	438.4	0.1182	mg/L	0.00061	0.2364	mg/L	0.00122	0.51%
Pb 220.353†	1026.8	0.1538	mg/L	0.00112	0.3076	mg/L	0.00225	0.73%
Sb 206.836†	2.8	0.00097	mg/L	0.000624	0.00194	mg/L	0.001248	64.45%
Se 196.026†	0.3	0.00012	mg/L	0.001198	0.00025	mg/L	0.002396	973.20%
Si 288.158†	9705.3	5.859	mg/L	0.0198	11.72	mg/L	0.040	0.34%
Sn 189.927†	-6.6	0.00080	mg/L	0.001041	0.00161	mg/L	0.002082	129.55%
Sr 421.552†	81532.3	0.1117	mg/L	0.00051	0.2235	mg/L	0.00101	0.45%
Ti 334.903†	54521.5	3.297	mg/L	0.0115	6.594	mg/L	0.0230	0.35%
Tl 190.801†	-7.2	0.00294	mg/L	0.000964	0.00587	mg/L	0.001928	32.85%
V 292.402†	14825.4	0.1367	mg/L	0.00117	0.2734	mg/L	0.00233	0.85%
Zn 206.200†	1968.8	0.5746	mg/L	0.00140	1.149	mg/L	0.0028	0.24%

Sequence No.: 19

Autosampler Location: 320

Sample ID: VR82 B SWC

Date Collected: 11/27/2012 12:19:41 PM

Data Type: Original

Dilution: 2.000000X

## Nebulizer Parameters: VR82 B SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

## Mean Data: VR82 B SWC

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
ScA 357.253	2374866.4	107.4	%	0.06			0.06%
ScR 361.383	291380.8	106.1	%	0.87			0.82%
Ag 328.068†	-52.5	-0.00031	mg/L	0.000317	-0.00063	mg/L	0.000634 100.62%
Al 308.215†	59607.8	43.93	mg/L	0.140	87.86	mg/L	0.281 0.32%
As 188.979†	-88.7	0.02356	mg/L	0.001473	0.04711	mg/L	0.002945 6.25%
B 249.677†	70.5	0.01070	mg/L	0.001052	0.02140	mg/L	0.002105 9.83%
Ba 233.527†	1384.3	0.3386	mg/L	0.00263	0.6773	mg/L	0.00527 0.78%
Be 313.042†	359.0	0.00063	mg/L	0.000021	0.00125	mg/L	0.000043 3.41%
Ca 317.933†	202670.9	17.43	mg/L	0.082	34.86	mg/L	0.164 0.47%
Cd 228.802†	73.2	0.00271	mg/L	0.000088	0.00542	mg/L	0.000177 3.26%
Co 228.616†	1084.2	0.02591	mg/L	0.000223	0.05182	mg/L	0.000445 0.86%
Cr 267.716†	704.5	0.1278	mg/L	0.00087	0.2555	mg/L	0.00174 0.68%
Cu 324.752†	44769.1	0.2059	mg/L	0.00126	0.4117	mg/L	0.00252 0.61%
Fe 273.955†	81635.6	69.42	mg/L	0.441	138.8	mg/L	0.88 0.64%
K 766.490†	4146.4	2.445	mg/L	0.0171	4.889	mg/L	0.0343 0.70%
Mg 279.077†	16938.2	14.88	mg/L	0.149	29.77	mg/L	0.298 1.00%
Mn 257.610†	70859.3	2.163	mg/L	0.0096	4.326	mg/L	0.0192 0.44%
Mo 202.031†	46.0	0.00246	mg/L	0.000325	0.00492	mg/L	0.000649 13.19%
Na 589.592†	9917.4	0.9737	mg/L	0.00359	1.947	mg/L	0.0072 0.37%
Na 330.237†	15.2	1.068	mg/L	0.2577	2.137	mg/L	0.5155 24.12%
Ni 231.604†	393.6	0.1062	mg/L	0.00061	0.2123	mg/L	0.00123 0.58%
Pb 220.353†	650.5	0.09913	mg/L	0.000624	0.1983	mg/L	0.00125 0.63%
Sb 206.836†	4.5	0.00149	mg/L	0.002759	0.00298	mg/L	0.005519 185.11%
Se 196.026†	3.1	0.00233	mg/L	0.000240	0.00465	mg/L	0.000479 10.30%
Si 288.158†	9271.2	5.597	mg/L	0.0472	11.19	mg/L	0.094 0.84%
Sn 189.927†	-9.1	-0.00020	mg/L	0.001638	-0.00040	mg/L	0.003277 818.64%
Sr 421.552†	72470.9	0.09932	mg/L	0.000328	0.1986	mg/L	0.00066 0.33%
Ti 334.903†	47164.9	2.852	mg/L	0.0108	5.704	mg/L	0.0217 0.38%
Tl 190.801†	-2.4	0.00564	mg/L	0.001162	0.01128	mg/L	0.002325 20.62%
V 292.402†	13821.2	0.1273	mg/L	0.00046	0.2547	mg/L	0.00091 0.36%
Zn 206.200†	2138.7	0.6242	mg/L	0.00591	1.248	mg/L	0.0118 0.95%



Sequence No.: 20  
Sample ID: VR82 C SWC

Autosampler Location: 321  
Date Collected: 11/27/2012 12:23:40 PM  
Data Type: Original

Dilution: 2.000000X

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Nebulizer Parameters: VR82 C SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

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Mean Data: VR82 C SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2361657.1	106.8	%	0.64				0.60%
ScR 361.383	290221.0	105.7	%	0.83				0.79%
Ag 328.068†	-205.5	-0.00129	mg/L	0.000106	-0.00258	mg/L	0.000213	8.24%
Al 308.215†	158872.8	117.1	mg/L	0.08	234.2	mg/L	0.16	0.07%
As 188.979†	-245.5	0.02731	mg/L	0.001583	0.05461	mg/L	0.003165	5.80%
B 249.677†	75.9	0.01146	mg/L	0.001139	0.02292	mg/L	0.002277	9.93%
Ba 233.527†	1711.9	0.4084	mg/L	0.00365	0.8168	mg/L	0.00730	0.89%
Be 313.042†	804.2	0.00140	mg/L	0.000031	0.00279	mg/L	0.000062	2.23%
Ca 317.933†	671666.4	57.76	mg/L	0.281	115.5	mg/L	0.56	0.49%
Cd 228.802†	58.2	0.00215	mg/L	0.000142	0.00430	mg/L	0.000285	6.62%
Co 228.616†	2208.8	0.05119	mg/L	0.000416	0.1024	mg/L	0.00083	0.81%
Cr 267.716†	1620.3	0.2925	mg/L	0.00094	0.5850	mg/L	0.00188	0.32%
Cu 324.752†	25822.5	0.1222	mg/L	0.00056	0.2445	mg/L	0.00113	0.46%
Fe 273.955†	175411.1	149.2	mg/L	0.84	298.3	mg/L	1.68	0.56%
K 766.490†	10533.1	6.210	mg/L	0.0099	12.42	mg/L	0.020	0.16%
Mg 279.077†	52399.8	46.08	mg/L	0.137	92.16	mg/L	0.275	0.30%
Mn 257.610†	74697.7	2.280	mg/L	0.0079	4.560	mg/L	0.0159	0.35%
Mo 202.031†	65.3	0.00313	mg/L	0.000463	0.00627	mg/L	0.000926	14.77%
Na 589.592†	41848.7	4.109	mg/L	0.0039	8.217	mg/L	0.0078	0.10%
Na 330.237†	71.4	4.295	mg/L	0.1773	8.589	mg/L	0.3547	4.13%
Ni 231.604†	921.9	0.2486	mg/L	0.00214	0.4973	mg/L	0.00427	0.86%
Pb 220.353†	138.3	0.04173	mg/L	0.001019	0.08346	mg/L	0.002037	2.44%
Sb 206.836†	18.4	0.00623	mg/L	0.003698	0.01246	mg/L	0.007396	59.34%
Se 196.026†	6.6	0.00492	mg/L	0.002906	0.00984	mg/L	0.005811	59.04%
Si 288.158†	7159.0	4.326	mg/L	0.0262	8.652	mg/L	0.0524	0.61%
Sn 189.927†	-50.9	-0.00740	mg/L	0.002374	-0.01480	mg/L	0.004747	32.08%
Sr 421.552†	187150.2	0.2565	mg/L	0.00025	0.5130	mg/L	0.00050	0.10%
Ti 334.903†	108984.0	6.589	mg/L	0.0077	13.18	mg/L	0.015	0.12%
Tl 190.801†	-14.3	0.00770	mg/L	0.002826	0.01540	mg/L	0.005651	36.70%
V 292.402†	33111.7	0.3053	mg/L	0.00109	0.6106	mg/L	0.00217	0.36%
Zn 206.200†	1400.7	0.4088	mg/L	0.00322	0.8175	mg/L	0.00645	0.79%

Sequence No.: 21

Autosampler Location: 322

Sample ID: VR82 D SWC

Date Collected: 11/27/2012 12:27:26 PM

Data Type: Original

Dilution: 2.000000X

## Nebulizer Parameters: VR82 D SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

## Mean Data: VR82 D SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2375541.9	107.4	%	0.51			0.48%
ScR 361.383	292815.2	106.6	%	0.86			0.81%
Ag 328.068†	-56.4	-0.00033	mg/L	0.000176	-0.00067	mg/L	0.000352 52.80%
Al 308.215†	71961.3	53.04	mg/L	0.259	106.1	mg/L	0.52 0.49%
As 188.979†	-107.9	0.02569	mg/L	0.000820	0.05139	mg/L	0.001640 3.19%
B 249.677†	75.8	0.01151	mg/L	0.000666	0.02302	mg/L	0.001332 5.79%
Ba 233.527†	1432.8	0.3490	mg/L	0.00339	0.6979	mg/L	0.00679 0.97%
Be 313.042†	431.3	0.00075	mg/L	0.000011	0.00151	mg/L	0.000022 1.48%
Ca 317.933†	251103.1	21.59	mg/L	0.047	43.19	mg/L	0.095 0.22%
Cd 228.802†	66.0	0.00242	mg/L	0.000213	0.00484	mg/L	0.000425 8.79%
Co 228.616†	1360.2	0.03300	mg/L	0.000363	0.06599	mg/L	0.000726 1.10%
Cr 267.716†	827.3	0.1498	mg/L	0.00181	0.2996	mg/L	0.00361 1.21%
Cu 324.752†	26382.1	0.1227	mg/L	0.00043	0.2453	mg/L	0.00086 0.35%
Fe 273.955†	95677.7	81.35	mg/L	0.100	162.7	mg/L	0.20 0.12%
K 766.490†	4419.3	2.605	mg/L	0.0127	5.211	mg/L	0.0254 0.49%
Mg 279.077†	23466.7	20.63	mg/L	0.092	41.26	mg/L	0.184 0.45%
Mn 257.610†	59699.5	1.822	mg/L	0.0020	3.645	mg/L	0.0039 0.11%
Mo 202.031†	60.6	0.00326	mg/L	0.000170	0.00652	mg/L	0.000340 5.22%
Na 589.592†	10917.0	1.072	mg/L	0.0064	2.144	mg/L	0.0128 0.60%
Na 330.237†	14.7	1.207	mg/L	0.2480	2.415	mg/L	0.4959 20.54%
Ni 231.604†	494.2	0.1333	mg/L	0.00093	0.2666	mg/L	0.00185 0.70%
Pb 220.353†	630.4	0.09816	mg/L	0.001132	0.1963	mg/L	0.00226 1.15%
Sb 206.836†	6.7	0.00231	mg/L	0.001731	0.00462	mg/L	0.003461 74.98%
Se 196.026†	-0.8	-0.00073	mg/L	0.003852	-0.00147	mg/L	0.007703 525.20%
Si 288.158†	11684.9	7.054	mg/L	0.0425	14.11	mg/L	0.085 0.60%
Sn 189.927†	-4.8	0.00171	mg/L	0.001631	0.00343	mg/L	0.003262 95.21%
Sr 421.552†	95052.7	0.1303	mg/L	0.00048	0.2605	mg/L	0.00095 0.36%
Ti 334.903†	55678.0	3.367	mg/L	0.0105	6.733	mg/L	0.0210 0.31%
Tl 190.801†	-7.8	0.00421	mg/L	0.002041	0.00841	mg/L	0.004083 48.53%
V 292.402†	16714.9	0.1540	mg/L	0.00023	0.3080	mg/L	0.00045 0.15%
Zn 206.200†	1683.4	0.4913	mg/L	0.00390	0.9826	mg/L	0.00780 0.79%

Sequence No.: 22  
Sample ID: VR82 E SWC

Autosampler Location: 323  
Date Collected: 11/27/2012 12:31:25 PM  
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VR82 E SWC

Analyte Back Pressure Flow  
All 218.0 kPa 0.75 L/min

Mean Data: VR82 E SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2373263.9	107.3	%	0.38			0.36%
ScR 361.383	296102.6	107.8	%	1.19			1.10%
Ag 328.068†	-51.4	-0.00030	mg/L	0.000305	-0.00060	mg/L	0.000610 102.24%
Al 308.215†	74080.4	54.60	mg/L	0.826	109.2	mg/L	1.65 1.51%
As 188.979†	-104.8	0.02164	mg/L	0.000925	0.04329	mg/L	0.001850 4.27%
B 249.677†	72.2	0.01095	mg/L	0.000744	0.02190	mg/L	0.001488 6.79%
Ba 233.527†	1515.4	0.3694	mg/L	0.00355	0.7388	mg/L	0.00710 0.96%
Be 313.042†	443.4	0.00078	mg/L	0.000018	0.00156	mg/L	0.000036 2.32%
Ca 317.933†	215440.1	18.53	mg/L	0.289	37.06	mg/L	0.577 1.56%
Cd 228.802†	67.7	0.00245	mg/L	0.000072	0.00489	mg/L	0.000143 2.93%
Co 228.616†	1357.5	0.03329	mg/L	0.000150	0.06658	mg/L	0.000300 0.45%
Cr 267.716†	944.8	0.1712	mg/L	0.00170	0.3424	mg/L	0.00340 0.99%
Cu 324.752†	28041.8	0.1304	mg/L	0.00081	0.2608	mg/L	0.00163 0.62%
Fe 273.955†	99045.7	84.22	mg/L	1.022	168.4	mg/L	2.04 1.21%
K 766.490†	4365.7	2.574	mg/L	0.0360	5.148	mg/L	0.0721 1.40%
Mg 279.077†	21838.9	19.19	mg/L	0.191	38.39	mg/L	0.383 1.00%
Mn 257.610†	65334.1	1.994	mg/L	0.0256	3.989	mg/L	0.0512 1.28%
Mo 202.031†	57.5	0.00311	mg/L	0.000414	0.00622	mg/L	0.000828 13.32%
Na 589.592†	10240.2	1.005	mg/L	0.0179	2.011	mg/L	0.0359 1.79%
Na 330.237†	18.4	1.313	mg/L	0.1612	2.625	mg/L	0.3223 12.28%
Ni 231.604†	505.3	0.1363	mg/L	0.00197	0.2726	mg/L	0.00394 1.45%
Pb 220.353†	590.8	0.09286	mg/L	0.000792	0.1857	mg/L	0.00158 0.85%
Sb 206.836†	8.4	0.00248	mg/L	0.001486	0.00497	mg/L	0.002972 59.81%
Se 196.026†	-3.5	-0.00281	mg/L	0.004535	-0.00562	mg/L	0.009070 161.40%
Si 288.158†	10688.1	6.452	mg/L	0.0671	12.90	mg/L	0.134 1.04%
Sn 189.927†	-17.0	-0.00243	mg/L	0.000171	-0.00486	mg/L	0.000343 7.05%
Sr 421.552†	87932.6	0.1205	mg/L	0.00188	0.2410	mg/L	0.00376 1.56%
Ti 334.903†	52134.1	3.152	mg/L	0.0446	6.305	mg/L	0.0893 1.42%
Tl 190.801†	-9.8	0.00359	mg/L	0.000533	0.00719	mg/L	0.001066 14.83%
V 292.402†	17184.1	0.1586	mg/L	0.00098	0.3171	mg/L	0.00197 0.62%
Zn 206.200†	1676.8	0.4894	mg/L	0.00415	0.9787	mg/L	0.00831 0.85%

Sequence No.: 23  
 Sample ID: CV 3

Autosampler Location: 7  
 Date Collected: 11/27/2012 12:35:24 PM  
 Data Type: Original

Dilution: 1.000000X

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 Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

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 Mean Data: CV

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
ScA 357.253	2333586.5	105.5	%	0.78			0.74%
ScR 361.383	287417.7	104.6	%	1.47			1.41%
Ag 328.068†	154221.0	1.036	mg/L	0.0053	1.036	mg/L	0.0053
Al 308.215†	2831.9	2.053	mg/L	0.0292	2.053	mg/L	0.0292
As 188.979†	3182.9	2.070	mg/L	0.0170	2.070	mg/L	0.0170
B 249.677†	6330.7	0.9665	mg/L	0.01195	0.9665	mg/L	0.01195
Ba 233.527†	3973.0	1.004	mg/L	0.0164	1.004	mg/L	0.0164
Be 313.042†	514271.1	0.9834	mg/L	0.02288	0.9834	mg/L	0.02288
Ca 317.933†	23583.5	2.028	mg/L	0.0515	2.028	mg/L	0.0515
Cd 228.802†	26220.5	1.027	mg/L	0.0045	1.027	mg/L	0.0045
Co 228.616†	33848.9	1.008	mg/L	0.0039	1.008	mg/L	0.0039
Cr 267.716†	5659.8	1.018	mg/L	0.0124	1.018	mg/L	0.0124
Cu 324.752†	224015.3	1.018	mg/L	0.0071	1.018	mg/L	0.0071
Fe 273.955†	2558.1	2.168	mg/L	0.0232	2.168	mg/L	0.0232
K 766.490†	34177.1	20.15	mg/L	0.521	20.15	mg/L	0.521
Mg 279.077†	2389.7	2.112	mg/L	0.0315	2.112	mg/L	0.0315
Mn 257.610†	32221.2	0.9838	mg/L	0.02221	0.9838	mg/L	0.02221
Mo 202.031†	17855.8	1.031	mg/L	0.0064	1.031	mg/L	0.0064
Na 589.592†	492087.7	48.31	mg/L	1.188	48.31	mg/L	1.188
Na 330.237†	1303.1	53.36	mg/L	0.717	53.36	mg/L	0.717
Ni 231.604†	3651.8	0.9851	mg/L	0.01657	0.9851	mg/L	0.01657
Pb 220.353†	14259.1	2.007	mg/L	0.0042	2.007	mg/L	0.0042
Sb 206.836†	6192.6	2.184	mg/L	0.0149	2.184	mg/L	0.0149
Se 196.026†	2611.8	2.027	mg/L	0.0088	2.027	mg/L	0.0088
Si 288.158†	3718.5	2.243	mg/L	0.0336	2.243	mg/L	0.0336
Sn 189.927†	3475.8	1.059	mg/L	0.0076	1.059	mg/L	0.0076
Sr 421.552†	698206.5	0.9569	mg/L	0.02314	0.9569	mg/L	0.02314
Ti 334.903†	18008.4	1.088	mg/L	0.0270	1.088	mg/L	0.0270
Tl 190.801†	4316.9	2.012	mg/L	0.0118	2.012	mg/L	0.0118
V 292.402†	107333.8	1.018	mg/L	0.0048	1.018	mg/L	0.0048
Zn 206.200†	3552.5	1.037	mg/L	0.0144	1.037	mg/L	0.0144

Sequence No.: 24  
 Sample ID: CB 3

Autosampler Location: 1  
 Date Collected: 11/27/2012 12:40:28 PM  
 Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 219.0 kPa 0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2326126.8	105.2 %		0.35			0.33%
ScR 361.383	285643.8	104.0 %		0.86			0.82%
Ag 328.068†	-11.7	-0.00008 mg/L		0.000065	-0.00008 mg/L	0.000065	82.54%
Al 308.215†	3.2	0.00231 mg/L		0.001989	0.00231 mg/L	0.001989	86.13%
As 188.979†	2.7	0.00174 mg/L		0.000982	0.00174 mg/L	0.000982	56.43%
B 249.677†	5.8	0.00088 mg/L		0.000784	0.00088 mg/L	0.000784	88.61%
Ba 233.527†	3.6	0.00091 mg/L		0.000266	0.00091 mg/L	0.000266	29.27%
Be 313.042†	23.4	0.00004 mg/L		0.000043	0.00004 mg/L	0.000043	95.64%
Ca 317.933†	7.3	0.00063 mg/L		0.001253	0.00063 mg/L	0.001253	200.20%
Cd 228.802†	-0.3	-0.00002 mg/L		0.000189	-0.00002 mg/L	0.000189	827.74%
Co 228.616†	2.1	0.00006 mg/L		0.000117	0.00006 mg/L	0.000117	186.71%
Cr 267.716†	3.6	0.00065 mg/L		0.000759	0.00065 mg/L	0.000759	117.37%
Cu 324.752†	-138.2	-0.00063 mg/L		0.000136	-0.00063 mg/L	0.000136	21.65%
Fe 273.955†	2.9	0.00242 mg/L		0.001470	0.00242 mg/L	0.001470	60.65%
K 766.490†	-28.7	-0.01693 mg/L		0.013636	-0.01693 mg/L	0.013636	80.56%
Mg 279.077†	-2.9	-0.00258 mg/L		0.006385	-0.00258 mg/L	0.006385	247.92%
Mn 257.610†	5.7	0.00017 mg/L		0.000030	0.00017 mg/L	0.000030	17.49%
Mo 202.031†	12.4	0.00071 mg/L		0.000214	0.00071 mg/L	0.000214	30.00%
Na 589.592†	30.9	0.00303 mg/L		0.005370	0.00303 mg/L	0.005370	177.30%
Na 330.237†	2.7	0.1100 mg/L		0.22306	0.1100 mg/L	0.22306	202.75%
Ni 231.604†	5.2	0.00139 mg/L		0.001312	0.00139 mg/L	0.001312	94.16%
Pb 220.353†	4.3	0.00061 mg/L		0.000634	0.00061 mg/L	0.000634	104.07%
Sb 206.836†	6.4	0.00225 mg/L		0.001474	0.00225 mg/L	0.001474	65.49%
Se 196.026†	-7.8	-0.00603 mg/L		0.003677	-0.00603 mg/L	0.003677	60.94%
Si 288.158†	1.8	0.00110 mg/L		0.003970	0.00110 mg/L	0.003970	360.95%
Sn 189.927†	3.8	0.00116 mg/L		0.000308	0.00116 mg/L	0.000308	26.54%
Sr 421.552†	83.9	0.00012 mg/L		0.000035	0.00012 mg/L	0.000035	30.10%
Ti 334.903†	3.7	0.00022 mg/L		0.001865	0.00022 mg/L	0.001865	830.48%
Tl 190.801†	7.6	0.00357 mg/L		0.000719	0.00357 mg/L	0.000719	20.14%
V 292.402†	14.1	0.00014 mg/L		0.000228	0.00014 mg/L	0.000228	167.95%
Zn 206.200†	1.3	0.00037 mg/L		0.000110	0.00037 mg/L	0.000110	29.51%

Sequence No.: 25  
Sample ID: VR82 F SWC

Autosampler Location: 324  
Date Collected: 11/27/2012 12:44:42 PM  
Data Type: Original

Dilution: 2.000000X

*Del*

Nebulizer Parameters: VR82 F SWC

Analyte Back Pressure Flow  
All 219.0 kPa 0.75 L/min

Mean Data: VR82 F SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2391278.6	108.2	%	0.48			0.45%
ScR 361.383	294393.7	107.2	%	3.78			3.53%
Ag 328.068†	-86.3	-0.00053	mg/L	0.000177	-0.00106	mg/L	0.000354 33.29%
Al 308.215†	68483.7	50.47	mg/L	2.217	100.9	mg/L	4.43 4.39%
As 188.979†	-89.8	0.02925	mg/L	0.003557	0.05850	mg/L	0.007114 12.16%
B 249.677†	74.8	0.01135	mg/L	0.001007	0.02270	mg/L	0.002014 8.87%
Ba 233.527†	1360.8	0.3307	mg/L	0.01193	0.6614	mg/L	0.02386 3.61%
Be 313.042†	461.8	0.00081	mg/L	0.000062	0.00163	mg/L	0.000123 7.58%
Ca 317.933†	249940.0	21.49	mg/L	0.950	42.99	mg/L	1.900 4.42%
Cd 228.802†	52.1	0.00179	mg/L	0.000083	0.00358	mg/L	0.000166 4.64%
Co 228.616†	1441.2	0.03595	mg/L	0.000267	0.07191	mg/L	0.000534 0.74%
Cr 267.716†	800.8	0.1450	mg/L	0.00409	0.2900	mg/L	0.00817 2.82%
Cu 324.752†	21642.5	0.1012	mg/L	0.00051	0.2024	mg/L	0.00102 0.50%
Fe 273.955†	96177.2	81.78	mg/L	3.551	163.6	mg/L	7.10 4.34%
K 766.490†	4300.3	2.535	mg/L	0.1332	5.071	mg/L	0.2664 5.25%
Mg 279.077†	24138.1	21.22	mg/L	0.754	42.44	mg/L	1.508 3.55%
Mn 257.610†	63345.6	1.934	mg/L	0.0864	3.867	mg/L	0.1727 4.47%
Mo 202.031†	55.5	0.00296	mg/L	0.000313	0.00593	mg/L	0.000625 10.55%
Na 589.592†	9715.6	0.9539	mg/L	0.03603	1.908	mg/L	0.0721 3.78%
Na 330.237†	12.4	1.067	mg/L	0.1562	2.134	mg/L	0.3123 14.64%
Ni 231.604†	519.0	0.1400	mg/L	0.00368	0.2800	mg/L	0.00737 2.63%
Pb 220.353†	463.3	0.07403	mg/L	0.000054	0.1481	mg/L	0.00011 0.07%
Sb 206.836†	12.0	0.00411	mg/L	0.000563	0.00822	mg/L	0.001125 13.68%
Se 196.026†	0.5	0.00029	mg/L	0.003416	0.00057	mg/L	0.006831 >999.9%
Si 288.158†	12567.8	7.587	mg/L	0.2692	15.17	mg/L	0.538 3.55%
Sr 421.552†	-15.2	-0.00152	mg/L	0.001564	-0.00305	mg/L	0.003127 102.63%
Ti 334.903†	98433.0	0.1349	mg/L	0.00581	0.2698	mg/L	0.01162 4.31%
Tl 190.801†	51011.5	3.084	mg/L	0.1357	6.169	mg/L	0.2713 4.40%
V 292.402†	-6.6	0.00482	mg/L	0.000988	0.00964	mg/L	0.001976 20.50%
Zn 206.200†	17357.8	0.1602	mg/L	0.00087	0.3204	mg/L	0.00175 0.55%
	1491.7	0.4353	mg/L	0.01623	0.8707	mg/L	0.03247 3.73%

Sequence No.: 26  
Sample ID: VR82 G SWC

Autosampler Location: 325  
Date Collected: 11/27/2012 12:48:42 PM  
Data Type: Original

*Del*

Dilution: 2.000000X

Nebulizer Parameters: VR82 G SWC

Analyte Back Pressure Flow  
All 220.0 kPa 0.75 L/min

Mean Data: VR82 G SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. %	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	2335922.2	105.7	%	0.59			0.56%
ScR 361.383	292039.2	106.3	%	1.93			1.81%
Ag 328.068†	-62.2	-0.00037	mg/L	0.000186	-0.00073	0.000371	50.56%
Al 308.215†	73400.5	54.10	mg/L	1.217	108.2	2.43	2.25%
As 188.979†	-98.3	0.02764	mg/L	0.004839	0.05527	0.009677	17.51%
B 249.677†	75.6	0.01146	mg/L	0.000636	0.02293	0.001271	5.54%
Ba 233.527†	1473.9	0.3587	mg/L	0.00507	0.7174	0.01014	1.41%
Be 313.042†	506.1	0.00089	mg/L	0.000041	0.00179	0.000082	4.57%
Ca 317.933†	252841.3	21.74	mg/L	0.522	43.49	1.045	2.40%
Cd 228.802†	60.8	0.00215	mg/L	0.000205	0.00429	0.000410	9.54%
Co 228.616†	1524.4	0.03813	mg/L	0.000685	0.07626	0.001370	1.80%
Cr 267.716†	882.2	0.1596	mg/L	0.00302	0.3193	0.00604	1.89%
Cu 324.752†	21703.6	0.1016	mg/L	0.00061	0.2032	0.00122	0.60%
Fe 273.955†	100298.5	85.28	mg/L	2.182	170.6	4.36	2.56%
K 766.490†	4601.5	2.713	mg/L	0.0709	5.426	0.1418	2.61%
Mg 279.077†	25942.0	22.81	mg/L	0.440	45.62	0.880	1.93%
Mn 257.610†	64506.2	1.969	mg/L	0.0462	3.938	0.0923	2.34%
Mo 202.031†	53.6	0.00285	mg/L	0.000347	0.00570	0.000694	12.18%
Na 589.592†	10077.3	0.9894	mg/L	0.01800	1.979	0.0360	1.82%
Na 330.237†	9.9	0.9941	mg/L	0.24020	1.988	0.4804	24.16%
Ni 231.604†	550.1	0.1484	mg/L	0.00369	0.2967	0.00738	2.49%
Pb 220.353†	462.6	0.07468	mg/L	0.000422	0.1494	0.00084	0.56%
Sb 206.836†	10.8	0.00357	mg/L	0.002177	0.00714	0.004354	60.95%
Se 196.026†	3.9	0.00289	mg/L	0.001297	0.00578	0.002593	44.86%
Si 288.158†	12600.8	7.607	mg/L	0.1365	15.21	0.273	1.80%
Sn 189.927†	-19.1	-0.00264	mg/L	0.001729	-0.00529	0.003458	65.41%
Sr 421.552†	101608.0	0.1393	mg/L	0.00300	0.2785	0.00600	2.15%
Tl 334.903†	53250.0	3.220	mg/L	0.0748	6.440	0.1497	2.32%
Tl 190.801†	-9.2	0.00388	mg/L	0.002385	0.00776	0.004769	61.48%
V 292.402†	18616.6	0.1720	mg/L	0.00115	0.3439	0.00231	0.67%
Zn 206.200†	1512.3	0.4413	mg/L	0.00822	0.8827	0.01644	1.86%

Sequence No.: 27  
 Sample ID: VR82 H SWC

Autosampler Location: 326  
 Date Collected: 11/27/2012 12:52:41 PM  
 Data Type: Original

Dilution: 2.000000X

*Del*

Nebulizer Parameters: VR82 H SWC

Analyte Back Pressure Flow  
 All 219.0 kPa 0.75 L/min

Mean Data: VR82 H SWC

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
ScA 357.253	2337058.6	105.7	%	0.17			0.16%
ScR 361.383	290799.7	105.9	%	0.83			0.78%
Ag 328.068†	-69.5	-0.00041	mg/L	0.000320	-0.00082	mg/L	0.000640 78.24%
Al 308.215†	89294.4	65.81	mg/L	0.968	131.6	mg/L	1.94 1.47%
As 188.979†	-124.5	0.03025	mg/L	0.003133	0.06050	mg/L	0.006266 10.36%
B 249.677†	88.9	0.01348	mg/L	0.000753	0.02697	mg/L	0.001506 5.58%
Ba 233.527†	1612.3	0.3915	mg/L	0.00324	0.7831	mg/L	0.00647 0.83%
Be 313.042†	578.5	0.00102	mg/L	0.000004	0.00204	mg/L	0.000008 0.38%
Ca 317.933†	271388.7	23.34	mg/L	0.351	46.68	mg/L	0.703 1.51%
Cd 228.802†	70.4	0.00253	mg/L	0.000067	0.00507	mg/L	0.000134 2.64%
Co 228.616†	1707.4	0.04209	mg/L	0.000135	0.08418	mg/L	0.000270 0.32%
Cr 267.716†	1054.0	0.1907	mg/L	0.00072	0.3814	mg/L	0.00143 0.38%
Cu 324.752†	25046.8	0.1172	mg/L	0.00041	0.2344	mg/L	0.00082 0.35%
Fe 273.955†	115886.4	98.54	mg/L	1.501	197.1	mg/L	3.00 1.52%
K 766.490†	5339.0	3.148	mg/L	0.0452	6.295	mg/L	0.0904 1.44%
Mg 279.077†	30279.0	26.62	mg/L	0.227	53.24	mg/L	0.455 0.85%
Mn 257.610†	67857.8	2.071	mg/L	0.0322	4.143	mg/L	0.0644 1.55%
Mo 202.031†	63.0	0.00338	mg/L	0.000295	0.00675	mg/L	0.000591 8.75%
Na 589.592†	12176.1	1.195	mg/L	0.0174	2.391	mg/L	0.0348 1.46%
Na 330.237†	8.8	1.089	mg/L	0.1591	2.177	mg/L	0.3182 14.61%
Ni 231.604†	633.6	0.1709	mg/L	0.00072	0.3417	mg/L	0.00145 0.42%
Pb 220.353†	569.7	0.09205	mg/L	0.001612	0.1841	mg/L	0.00322 1.75%
Sb 206.836†	13.4	0.00441	mg/L	0.003088	0.00882	mg/L	0.006176 70.05%
Se 196.026†	-3.2	-0.00260	mg/L	0.004337	-0.00520	mg/L	0.008674 166.89%
Si 288.158†	13838.7	8.354	mg/L	0.0726	16.71	mg/L	0.145 0.87%
Sn 189.927†	-27.2	-0.00481	mg/L	0.001021	-0.00962	mg/L	0.002041 21.23%
Sr 421.552†	107591.6	0.1475	mg/L	0.00198	0.2949	mg/L	0.00397 1.34%
Ti 334.903†	64583.4	3.905	mg/L	0.0600	7.811	mg/L	0.1200 1.54%
Tl 190.801†	-12.3	0.00372	mg/L	0.000308	0.00745	mg/L	0.000615 8.26%
V 292.402†	21304.0	0.1966	mg/L	0.00074	0.3932	mg/L	0.00147 0.37%
Zn 206.200†	1674.8	0.4888	mg/L	0.00410	0.9776	mg/L	0.00821 0.84%



Sequence No.: 28  
Sample ID: VR82 I SWC

Autosampler Location: 327  
Date Collected: 11/27/2012 12:56:40 PM  
Data Type: Original

Dilution: 2.000000X

*Del*

Nebulizer Parameters: VR82 I SWC

Analyte Back Pressure Flow  
All 220.0 kPa 0.75 L/min

Mean Data: VR82 I SWC

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	2335660.1	105.6	%	0.52				0.50%
ScR 361.383	287700.9	104.7	%	0.52				0.49%
Ag 328.068†	-62.5	-0.00037	mg/L	0.000291	-0.00074	mg/L	0.000582	78.88%
Al 308.215†	79115.5	58.31	mg/L	0.171	116.6	mg/L	0.34	0.29%
As 188.979†	-111.7	0.02660	mg/L	0.002995	0.05319	mg/L	0.005990	11.26%
B 249.677†	68.6	0.01040	mg/L	0.001272	0.02080	mg/L	0.002545	12.23%
Ba 233.527†	1459.2	0.3547	mg/L	0.00177	0.7094	mg/L	0.00354	0.50%
Be 313.042†	526.3	0.00093	mg/L	0.000030	0.00186	mg/L	0.000060	3.25%
Ca 317.933†	253064.4	21.76	mg/L	0.126	43.53	mg/L	0.253	0.58%
Cd 228.802†	61.7	0.00222	mg/L	0.000094	0.00445	mg/L	0.000188	4.23%
Co 228.616†	1444.5	0.03521	mg/L	0.000281	0.07041	mg/L	0.000561	0.80%
Cr 267.716†	948.2	0.1716	mg/L	0.00140	0.3432	mg/L	0.00279	0.81%
Cu 324.752†	22584.8	0.1056	mg/L	0.00034	0.2112	mg/L	0.00068	0.32%
Fe 273.955†	102386.4	87.06	mg/L	0.474	174.1	mg/L	0.95	0.54%
K 766.490†	4948.2	2.917	mg/L	0.0270	5.835	mg/L	0.0540	0.93%
Mg 279.077†	26309.8	23.13	mg/L	0.243	46.26	mg/L	0.485	1.05%
Mn 257.610†	58600.1	1.789	mg/L	0.0083	3.578	mg/L	0.0166	0.46%
Mo 202.031†	55.7	0.00297	mg/L	0.000403	0.00594	mg/L	0.000807	13.57%
Na 589.592†	10744.2	1.055	mg/L	0.0024	2.110	mg/L	0.0047	0.22%
Na 330.237†	10.2	1.062	mg/L	0.2744	2.124	mg/L	0.5487	25.84%
Ni 231.604†	549.9	0.1483	mg/L	0.00264	0.2966	mg/L	0.00528	1.78%
Pb 220.353†	524.3	0.08431	mg/L	0.000320	0.1686	mg/L	0.00064	0.38%
Sb 206.836†	4.3	0.00120	mg/L	0.000972	0.00240	mg/L	0.001944	80.95%
Se 196.026†	5.4	0.00409	mg/L	0.003098	0.00819	mg/L	0.006197	75.69%
Si 288.158†	14013.2	8.459	mg/L	0.0826	16.92	mg/L	0.165	0.98%
Sn 189.927†	-24.9	-0.00437	mg/L	0.002583	-0.00874	mg/L	0.005166	59.08%
Sr 421.552†	99156.5	0.1359	mg/L	0.00039	0.2718	mg/L	0.00078	0.29%
Ti 334.903†	57646.9	3.486	mg/L	0.0145	6.972	mg/L	0.0290	0.42%
Tl 190.801†	-10.0	0.00372	mg/L	0.002943	0.00743	mg/L	0.005887	79.20%
V 292.402†	18837.9	0.1739	mg/L	0.00012	0.3477	mg/L	0.00023	0.07%
Zn 206.200†	1567.9	0.4576	mg/L	0.00453	0.9151	mg/L	0.00906	0.99%

Sequence No.: 29

Sample ID: CV 4

Autosampler Location: 7

Date Collected: 11/27/2012 1:00:39 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	2275044.8	102.9	%	0.79				0.77%
ScR 361.383	278400.2	101.4	%	1.32				1.30%
Ag 328.068†	158241.3	1.063	mg/L	0.0067	1.063	mg/L	0.0067	0.63%
Al 308.215†	2956.0	2.143	mg/L	0.0269	2.143	mg/L	0.0269	1.25%
As 188.979†	3266.2	2.125	mg/L	0.0082	2.125	mg/L	0.0082	0.38%
B 249.677†	6586.4	1.006	mg/L	0.0140	1.006	mg/L	0.0140	1.39%
Ba 233.527†	4122.5	1.042	mg/L	0.0141	1.042	mg/L	0.0141	1.35%
Be 313.042†	527548.6	1.009	mg/L	0.0150	1.009	mg/L	0.0150	1.49%
Ca 317.933†	24470.1	2.104	mg/L	0.0317	2.104	mg/L	0.0317	1.51%
Cd 228.802†	26917.2	1.055	mg/L	0.0091	1.055	mg/L	0.0091	0.86%
Co 228.616†	34648.6	1.032	mg/L	0.0095	1.032	mg/L	0.0095	0.92%
Cr 267.716†	5872.5	1.056	mg/L	0.0142	1.056	mg/L	0.0142	1.35%
Cu 324.752†	230766.8	1.049	mg/L	0.0071	1.049	mg/L	0.0071	0.68%
Fe 273.955†	2652.9	2.249	mg/L	0.0284	2.249	mg/L	0.0284	1.26%
K 766.490†	35715.5	21.06	mg/L	0.234	21.06	mg/L	0.234	1.11%
Mg 279.077†	2474.5	2.187	mg/L	0.0317	2.187	mg/L	0.0317	1.45%
Mn 257.610†	33447.1	1.021	mg/L	0.0129	1.021	mg/L	0.0129	1.26%
Mo 202.031†	18276.3	1.055	mg/L	0.0101	1.055	mg/L	0.0101	0.96%
Na 589.592†	514232.0	50.49	mg/L	0.811	50.49	mg/L	0.811	1.61%
Na 330.237†	1346.6	55.14	mg/L	0.829	55.14	mg/L	0.829	1.50%
Ni 231.604†	3790.5	1.023	mg/L	0.0140	1.023	mg/L	0.0140	1.37%
Pb 220.353†	14600.0	2.055	mg/L	0.0186	2.055	mg/L	0.0186	0.90%
Sb 206.836†	6376.4	2.249	mg/L	0.0127	2.249	mg/L	0.0127	0.57%
Se 196.026†	2669.4	2.072	mg/L	0.0162	2.072	mg/L	0.0162	0.78%
Si 288.158†	3857.8	2.327	mg/L	0.0321	2.327	mg/L	0.0321	1.38%
Sn 189.927†	3557.0	1.084	mg/L	0.0081	1.084	mg/L	0.0081	0.75%
Sr 421.552†	729571.3	0.9999	mg/L	0.01459	0.9999	mg/L	0.01459	1.46%
Ti 334.903†	18699.2	1.130	mg/L	0.0158	1.130	mg/L	0.0158	1.39%
Tl 190.801†	4426.7	2.063	mg/L	0.0100	2.063	mg/L	0.0100	0.49%
V 292.402†	110019.5	1.043	mg/L	0.0066	1.043	mg/L	0.0066	0.63%
Zn 206.200†	3657.3	1.067	mg/L	0.0156	1.067	mg/L	0.0156	1.46%

User canceled analysis.

=====  
Analysis Begun

Start Time: 11/27/2012 1:06:04 PM                      Plasma On Time: 11/27/2012 8:08:35 AM  
Logged In Analyst: Metals                                Technique: ICP Continuous  
Spectrometer: Optima 7300 DV, S/N 077C8121202        Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1127.sif  
Batch ID:  
Results Data Set: I2121127  
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

=====  
Sequence No.: 1    Autosampler Location: 304  
Sample ID: VR58 MB1 SWC                                   Date Collected: 11/27/2012 1:06:05 PM  
Data Type: Original

Dilution: 2.000000X  
User canceled analysis.

*11-29-12*

=====  
Analysis Begun

Start Time: 11/27/2012 1:07:01 PM  
 Logged In Analyst: Metals  
 Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 11/27/2012 8:08:35 AM  
 Technique: ICP Continuous  
 Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1127.sif

Batch ID:

Results Data Set: I2121127

Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

=====  
Sequence No.: 1

Sample ID: CV

Autosampler Location: 7

Date Collected: 11/27/2012 1:07:08 PM

Data Type: Original

Dilution: 1.000000X

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Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

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Mean Data: CV

Analyte	Mean Corrected Intensity	Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2282680.6	103.2 %	0.07			0.07%
ScR 361.383	281374.2	102.4 %	1.92			1.87%
Ag 328.068†	157748.0	1.060 mg/L	0.0020	1.060 mg/L	0.0020	0.19%
Al 308.215†	2913.6	2.112 mg/L	0.0420	2.112 mg/L	0.0420	1.99%
As 188.979†	3259.1	2.120 mg/L	0.0085	2.120 mg/L	0.0085	0.40%
B 249.677†	6524.1	0.9960 mg/L	0.01742	0.9960 mg/L	0.01742	1.75%
Ba 233.527†	4082.4	1.032 mg/L	0.0157	1.032 mg/L	0.0157	1.52%
Be 313.042†	529818.7	1.013 mg/L	0.0199	1.013 mg/L	0.0199	1.96%
Ca 317.933†	24257.6	2.086 mg/L	0.0384	2.086 mg/L	0.0384	1.84%
Cd 228.802†	26920.0	1.055 mg/L	0.0023	1.055 mg/L	0.0023	0.22%
Co 228.616†	34680.4	1.033 mg/L	0.0051	1.033 mg/L	0.0051	0.49%
Cr 267.716†	5822.8	1.047 mg/L	0.0165	1.047 mg/L	0.0165	1.57%
Cu 324.752†	229827.7	1.044 mg/L	0.0026	1.044 mg/L	0.0026	0.25%
Fe 273.955†	2621.3	2.222 mg/L	0.0385	2.222 mg/L	0.0385	1.73%
K 766.490†	35224.3	20.77 mg/L	0.470	20.77 mg/L	0.470	2.26%
Mg 279.077†	2447.7	2.164 mg/L	0.0403	2.164 mg/L	0.0403	1.86%
Mn 257.610†	33165.5	1.013 mg/L	0.0207	1.013 mg/L	0.0207	2.04%
Mo 202.031†	18312.9	1.058 mg/L	0.0031	1.058 mg/L	0.0031	0.30%
Na 589.592†	505727.6	49.65 mg/L	0.996	49.65 mg/L	0.996	2.01%
Na 330.237†	1339.3	54.84 mg/L	0.866	54.84 mg/L	0.866	1.58%
Ni 231.604†	3745.0	1.010 mg/L	0.0150	1.010 mg/L	0.0150	1.49%
Pb 220.353†	14581.4	2.053 mg/L	0.0062	2.053 mg/L	0.0062	0.30%
Sb 206.836†	6347.9	2.239 mg/L	0.0076	2.239 mg/L	0.0076	0.34%
Se 196.026†	2670.3	2.073 mg/L	0.0082	2.073 mg/L	0.0082	0.40%
Si 288.158†	3813.2	2.300 mg/L	0.0479	2.300 mg/L	0.0479	2.08%
Sn 189.927†	3552.7	1.082 mg/L	0.0043	1.082 mg/L	0.0043	0.39%
Sr 421.552†	718434.7	0.9846 mg/L	0.01874	0.9846 mg/L	0.01874	1.90%
Ti 334.903†	18518.3	1.119 mg/L	0.0214	1.119 mg/L	0.0214	1.91%
Tl 190.801†	4422.9	2.061 mg/L	0.0054	2.061 mg/L	0.0054	0.26%
V 292.402†	109790.9	1.041 mg/L	0.0029	1.041 mg/L	0.0029	0.27%
Zn 206.200†	3640.9	1.062 mg/L	0.0201	1.062 mg/L	0.0201	1.89%

Sequence No.: 2  
Sample ID: CB 4

Autosampler Location: 1  
Date Collected: 11/27/2012 1:12:17 PM  
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
All 220.0 kPa 0.75 L/min

Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2301991.2	104.1	%	0.23			0.22%
ScR 361.383	282876.7	103.0	%	0.71			0.69%
Ag 328.068†	26.5	0.00018	mg/L	0.000171	0.00018	mg/L	0.000171 95.88%
Al 308.215†	-1.0	-0.00078	mg/L	0.002136	-0.00078	mg/L	0.002136 273.60%
As 188.979†	-0.9	-0.00055	mg/L	0.001588	-0.00055	mg/L	0.001588 287.12%
B 249.677†	9.4	0.00143	mg/L	0.000853	0.00143	mg/L	0.000853 59.58%
Ba 233.527†	-1.0	-0.00025	mg/L	0.000592	-0.00025	mg/L	0.000592 235.91%
Be 313.042†	29.3	0.00006	mg/L	0.000059	0.00006	mg/L	0.000059 105.42%
Ca 317.933†	-0.1	-0.00001	mg/L	0.000303	-0.00001	mg/L	0.000303 >999.9%
Cd 228.802†	1.8	0.00008	mg/L	0.000113	0.00008	mg/L	0.000113 148.72%
Co 228.616†	2.0	0.00006	mg/L	0.000204	0.00006	mg/L	0.000204 355.32%
Cr 267.716†	1.1	0.00019	mg/L	0.000539	0.00019	mg/L	0.000539 279.64%
Cu 324.752†	-140.0	-0.00064	mg/L	0.000056	-0.00064	mg/L	0.000056 8.79%
Fe 273.955†	0.5	0.00046	mg/L	0.001731	0.00046	mg/L	0.001731 378.16%
K 766.490†	-28.2	-0.01660	mg/L	0.011198	-0.01660	mg/L	0.011198 67.45%
Mg 279.077†	4.0	0.00351	mg/L	0.010039	0.00351	mg/L	0.010039 285.92%
Mn 257.610†	10.8	0.00033	mg/L	0.000127	0.00033	mg/L	0.000127 38.36%
Mo 202.031†	15.1	0.00087	mg/L	0.000211	0.00087	mg/L	0.000211 24.17%
Na 589.592†	19.7	0.00193	mg/L	0.001653	0.00193	mg/L	0.001653 85.50%
Na 330.237†	-1.2	-0.05058	mg/L	0.701219	-0.05058	mg/L	0.701219 >999.9%
Ni 231.604†	0.3	0.00008	mg/L	0.000523	0.00008	mg/L	0.000523 643.31%
Pb 220.353†	11.8	0.00165	mg/L	0.000783	0.00165	mg/L	0.000783 47.33%
Sb 206.836†	8.8	0.00309	mg/L	0.001170	0.00309	mg/L	0.001170 37.82%
Se 196.026†	-4.1	-0.00320	mg/L	0.003559	-0.00320	mg/L	0.003559 111.18%
Si 288.158†	6.9	0.00419	mg/L	0.002748	0.00419	mg/L	0.002748 65.55%
Sn 189.927†	1.3	0.00039	mg/L	0.000648	0.00039	mg/L	0.000648 166.51%
Sr 421.552†	72.8	0.00010	mg/L	0.000033	0.00010	mg/L	0.000033 32.93%
Tl 334.903†	7.2	0.00044	mg/L	0.000296	0.00044	mg/L	0.000296 67.77%
Tl 190.801†	4.1	0.00194	mg/L	0.001633	0.00194	mg/L	0.001633 84.38%
V 292.402†	1.9	0.00002	mg/L	0.000178	0.00002	mg/L	0.000178 935.27%
Zn 206.200†	2.0	0.00059	mg/L	0.000588	0.00059	mg/L	0.000588 98.95%

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Analysis Begun

Start Time: 11/27/2012 1:22:48 PM                      Plasma On Time: 11/27/2012 8:08:35 AM  
Logged In Analyst: Metals                              Technique: ICP Continuous  
Spectrometer: Optima 7300 DV, S/N 077C8121202      Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1127.sif  
Batch ID:  
Results Data Set: I2121127  
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

=====  
Sequence No.: 1    Date Collected: 11/27/2012 1:22:49 PM  
Sample ID: STD4    Data Type: Original

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Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

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Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	2349239.7	14580.43	0.62%	106.3	%
ScR 361.383	289414.2	2164.64	0.75%	105.4	%
Mo 202.031†	175855.3	1839.47	1.05%	[10]	mg/L
Sb 206.836†	28628.7	298.50	1.04%	[10]	mg/L
Si 288.158†	17434.8	167.10	0.96%	[10]	mg/L
Sn 189.927†	33909.1	301.80	0.89%	[10]	mg/L
Tl 334.903†	175643.1	203.15	0.12%	[10]	mg/L

Sequence No.: 2  
Sample ID: STD5

Date Collected: 11/27/2012 1:25:04 PM  
Data Type: Original

## Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

## Mean Data: STD5

Analyte	Mean Corrected			Conc.	Units
	Intensity	Std.Dev.	RSD		
ScA 357.253	2158212.8	19942.70	0.92%	97.62	%
ScR 361.383	282290.3	2473.21	0.88%	102.8	%
Al 308.215†	41737.6	538.25	1.29%	[30]	mg/L
Ca 317.933†	365386.7	4892.01	1.34%	[30]	mg/L
Fe 273.955†	124443.3	1759.60	1.41%	[100]	mg/L
K 766.490†	174123.8	983.83	0.57%	[100]	mg/L
Mg 279.077†	35484.4	439.16	1.24%	[30]	mg/L
Na 330.237†	2498.7	30.72	1.23%	[100]	mg/L

## Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	148900	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1391	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1558	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	6544	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	3955	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	522800	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	12180	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	25210	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	33490	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	5559	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	220000	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1244	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	1741	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1183	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	32760	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	17590	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	10190	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	24.99	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	3708	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	7107	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	2863	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1288	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	1743	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3391	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	729700	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	17560	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2137	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	105900	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	3426	0.00000	1.000000	

=====  
Analysis Begun

Start Time: 11/27/2012 1:29:03 PM

Plasma On Time: 11/27/2012 8:08:35 AM

Logged In Analyst: Metals

Technique: ICP Continuous

Spectrometer: Optima 7300 DV, S/N 077C8121202

Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1127.sif

Batch ID:

Results Data Set: I2121127

Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

=====  
Sequence No.: 1

Autosampler Location: 7

Sample ID: CV 6

Date Collected: 11/27/2012 1:29:04 PM

Data Type: Original

Dilution: 1.000000X

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Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

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Mean Data: CV

Analyte	Mean Corrected Intensity	Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2266619.2	102.5 %	0.23			0.23%
ScR 361.383	281223.5	102.4 %	1.47			1.44%
Ag 328.068†	151922.0	1.021 mg/L	0.0023	1.021 mg/L	0.0023	0.22%
Al 308.215†	2905.6	2.053 mg/L	0.0324	2.053 mg/L	0.0324	1.58%
As 188.979†	3258.5	2.118 mg/L	0.0109	2.118 mg/L	0.0109	0.52%
B 249.677†	6498.2	0.9921 mg/L	0.01422	0.9921 mg/L	0.01422	1.43%
Ba 233.527†	4064.2	1.027 mg/L	0.0159	1.027 mg/L	0.0159	1.55%
Be 313.042†	529899.8	1.013 mg/L	0.0165	1.013 mg/L	0.0165	1.63%
Ca 317.933†	24234.7	1.990 mg/L	0.0367	1.990 mg/L	0.0367	1.84%
Cd 228.802†	26806.1	1.050 mg/L	0.0008	1.050 mg/L	0.0008	0.08%
Co 228.616†	34492.8	1.028 mg/L	0.0005	1.028 mg/L	0.0005	0.05%
Cr 267.716†	5807.5	1.044 mg/L	0.0108	1.044 mg/L	0.0108	1.03%
Cu 324.752†	223774.1	1.017 mg/L	0.0017	1.017 mg/L	0.0017	0.17%
Fe 273.955†	2625.3	2.103 mg/L	0.0171	2.103 mg/L	0.0171	0.81%
K 766.490†	35304.2	20.28 mg/L	0.329	20.28 mg/L	0.329	1.62%
Mg 279.077†	2448.5	2.078 mg/L	0.0328	2.078 mg/L	0.0328	1.58%
Mn 257.610†	33163.4	1.013 mg/L	0.0171	1.013 mg/L	0.0171	1.69%
Mo 202.031†	18780.0	1.068 mg/L	0.0045	1.068 mg/L	0.0045	0.42%
Na 589.592†	505745.6	49.65 mg/L	0.792	49.65 mg/L	0.792	1.60%
Na 330.237†	1329.3	53.09 mg/L	0.734	53.09 mg/L	0.734	1.38%
Ni 231.604†	3739.9	1.009 mg/L	0.0140	1.009 mg/L	0.0140	1.39%
Pb 220.353†	14974.1	2.108 mg/L	0.0088	2.108 mg/L	0.0088	0.42%
Sb 206.836†	6342.0	2.214 mg/L	0.0143	2.214 mg/L	0.0143	0.65%
Se 196.026†	2669.3	2.072 mg/L	0.0111	2.072 mg/L	0.0111	0.53%
Si 288.158†	3803.3	2.181 mg/L	0.0303	2.181 mg/L	0.0303	1.39%
Sn 189.927†	3563.4	1.052 mg/L	0.0043	1.052 mg/L	0.0043	0.40%
Sr 421.552†	719114.2	0.9855 mg/L	0.01762	0.9855 mg/L	0.01762	1.79%
Ti 334.903†	18521.6	1.053 mg/L	0.0175	1.053 mg/L	0.0175	1.66%
Tl 190.801†	4416.9	2.058 mg/L	0.0089	2.058 mg/L	0.0089	0.43%
V 292.402†	107379.0	1.018 mg/L	0.0017	1.018 mg/L	0.0017	0.17%
Zn 206.200†	3636.5	1.061 mg/L	0.0125	1.061 mg/L	0.0125	1.17%



Sequence No.: 2

Sample ID: CB 5

Autosampler Location: 1

Date Collected: 11/27/2012 1:33:54 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2269541.6	102.7 %	0.67			0.66%
ScR 361.383	279335.7	101.7 %	0.31			0.30%
Ag 328.068†	-24.4	-0.00016 mg/L	0.000295	-0.00016 mg/L	0.000295	179.78%
Al 308.215†	-0.9	-0.00064 mg/L	0.000756	-0.00064 mg/L	0.000756	118.55%
As 188.979†	-0.0	-0.00003 mg/L	0.001799	-0.00003 mg/L	0.001799	>999.9%
B 249.677†	8.8	0.00135 mg/L	0.000612	0.00135 mg/L	0.000612	45.17%
Ba 233.527†	2.6	0.00066 mg/L	0.000813	0.00066 mg/L	0.000813	122.28%
Be 313.042†	51.1	0.00010 mg/L	0.000036	0.00010 mg/L	0.000036	37.35%
Ca 317.933†	12.0	0.00098 mg/L	0.000420	0.00098 mg/L	0.000420	42.64%
Cd 228.802†	1.8	0.00007 mg/L	0.000229	0.00007 mg/L	0.000229	313.35%
Co 228.616†	-4.6	-0.00014 mg/L	0.000128	-0.00014 mg/L	0.000128	92.91%
Cr 267.716†	1.5	0.00027 mg/L	0.000157	0.00027 mg/L	0.000157	58.41%
Cu 324.752†	-103.6	-0.00047 mg/L	0.000068	-0.00047 mg/L	0.000068	14.34%
Fe 273.955†	-0.7	-0.00055 mg/L	0.001363	-0.00055 mg/L	0.001363	249.64%
K 766.490†	-7.2	-0.00411 mg/L	0.000223	-0.00411 mg/L	0.000223	5.43%
Mg 279.077†	5.6	0.00470 mg/L	0.001212	0.00470 mg/L	0.001212	25.78%
Mn 257.610†	8.2	0.00025 mg/L	0.000092	0.00025 mg/L	0.000092	36.90%
Mo 202.031†	24.8	0.00141 mg/L	0.000112	0.00141 mg/L	0.000112	7.92%
Na 589.592†	34.4	0.00338 mg/L	0.000477	0.00338 mg/L	0.000477	14.10%
Na 330.237†	-0.1	-0.00216 mg/L	0.457105	-0.00216 mg/L	0.457105	>999.9%
Ni 231.604†	4.0	0.00109 mg/L	0.001169	0.00109 mg/L	0.001169	107.35%
Pb 220.353†	5.6	0.00079 mg/L	0.001333	0.00079 mg/L	0.001333	167.93%
Sb 206.836†	10.8	0.00376 mg/L	0.002057	0.00376 mg/L	0.002057	54.70%
Se 196.026†	-3.0	-0.00235 mg/L	0.001661	-0.00235 mg/L	0.001661	70.65%
Si 288.158†	-0.5	-0.00030 mg/L	0.005410	-0.00030 mg/L	0.005410	>999.9%
Sn 189.927†	1.5	0.00043 mg/L	0.001156	0.00043 mg/L	0.001156	268.81%
Sr 421.552†	76.2	0.00010 mg/L	0.000025	0.00010 mg/L	0.000025	24.26%
Ti 334.903†	-0.5	-0.00003 mg/L	0.000658	-0.00003 mg/L	0.000658	>999.9%
Tl 190.801†	5.6	0.00263 mg/L	0.001639	0.00263 mg/L	0.001639	62.20%
V 292.402†	5.5	0.00005 mg/L	0.000134	0.00005 mg/L	0.000134	246.43%
Zn 206.200†	-0.7	-0.00019 mg/L	0.001443	-0.00019 mg/L	0.001443	758.12%

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Analysis Begun

Start Time: 11/27/2012 1:38:24 PM

Plasma On Time: 11/27/2012 8:08:35 AM

Logged In Analyst: Metals

Technique: ICP Continuous

Spectrometer: Optima 7300 DV, S/N 077C8121202

Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1127.sif

Batch ID:

Results Data Set: I2121127

Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

=====  
Sequence No.: 1

Autosampler Location: 328

Sample ID: VS22 MB1 SWC

Date Collected: 11/27/2012 1:38:26 PM

Dilution: 2.000000X

Data Type: Original

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Nebulizer Parameters: VS22 MB1 SWC

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

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Mean Data: VS22 MB1 SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2299077.5	104.0	%	1.04			1.00%
ScR 361.383	285414.2	103.9	%	0.51			0.50%
Ag 328.068†	-14.2	-0.00010	mg/L	0.000315	-0.00019 mg/L	0.000629	330.15%
Al 308.215†	2.8	0.00198	mg/L	0.000425	0.00396 mg/L	0.000851	21.48%
As 188.979†	0.9	0.00055	mg/L	0.001571	0.00110 mg/L	0.003143	284.92%
B 249.677†	11.7	0.00178	mg/L	0.000706	0.00356 mg/L	0.001412	39.62%
Ba 233.527†	0.7	0.00018	mg/L	0.001133	0.00036 mg/L	0.002265	622.38%
Be 313.042†	-10.0	-0.00002	mg/L	0.000014	-0.00004 mg/L	0.000029	75.52%
Ca 317.933†	83.1	0.00682	mg/L	0.001006	0.01364 mg/L	0.002013	14.76%
Cd 228.802†	-1.3	-0.00005	mg/L	0.000113	-0.00011 mg/L	0.000226	215.02%
Co 228.616†	5.1	0.00015	mg/L	0.000132	0.00031 mg/L	0.000264	86.44%
Cr 267.716†	5.3	0.00096	mg/L	0.001220	0.00192 mg/L	0.002440	127.16%
Cu 324.752†	-134.9	-0.00061	mg/L	0.000169	-0.00123 mg/L	0.000338	27.58%
Fe 273.955†	8.8	0.00708	mg/L	0.000987	0.01417 mg/L	0.001974	13.93%
K 766.490†	-12.8	-0.00732	mg/L	0.018989	-0.01465 mg/L	0.037977	259.25%
Mg 279.077†	1.9	0.00157	mg/L	0.008602	0.00314 mg/L	0.017203	547.78%
Mn 257.610†	12.1	0.00037	mg/L	0.000121	0.00074 mg/L	0.000242	32.87%
Mo 202.031†	10.0	0.00057	mg/L	0.000154	0.00113 mg/L	0.000307	27.07%
Na 589.592†	57.0	0.00559	mg/L	0.002744	0.01119 mg/L	0.005488	49.05%
Na 330.237†	5.3	0.2098	mg/L	0.32275	0.4196 mg/L	0.64551	153.83%
Ni 231.604†	5.6	0.00152	mg/L	0.000947	0.00305 mg/L	0.001893	62.16%
Pb 220.353†	5.7	0.00080	mg/L	0.000568	0.00161 mg/L	0.001136	70.69%
Sb 206.836†	4.3	0.00149	mg/L	0.001917	0.00299 mg/L	0.003834	128.24%
Se 196.026†	-10.4	-0.00805	mg/L	0.002742	-0.01609 mg/L	0.005485	34.08%
Si 288.158†	9.5	0.00545	mg/L	0.002567	0.01089 mg/L	0.005133	47.13%
Sn 189.927†	2.2	0.00065	mg/L	0.000454	0.00131 mg/L	0.000908	69.51%
Sr 421.552†	45.6	0.00006	mg/L	0.000011	0.00012 mg/L	0.000022	17.39%
Ti 334.903†	-17.9	-0.00102	mg/L	0.000335	-0.00204 mg/L	0.000669	32.87%
Tl 190.801†	4.7	0.00220	mg/L	0.001670	0.00441 mg/L	0.003341	75.79%
V 292.402†	-1.7	-0.00001	mg/L	0.000187	-0.00002 mg/L	0.000374	>999.9%
Zn 206.200†	6.4	0.00186	mg/L	0.000893	0.00371 mg/L	0.001786	48.07%

Sequence No.: 2  
 Sample ID: VS22 B SWC  
 Dilution: 5.000000X

*DJ*

Autosampler Location: 329  
 Date Collected: 11/27/2012 1:42:41 PM  
 Data Type: Original

## Nebulizer Parameters: VS22 B SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

## Mean Data: VS22 B SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2328160.0	105.3	%	0.34			0.32%
ScR 361.383	290683.0	105.8	%	0.76			0.72%
Ag 328.068†	-106.7	-0.00066	mg/L	0.000097	-0.00332	mg/L	0.000486 14.64%
Al 308.215†	112993.6	81.20	mg/L	0.309	406.0	mg/L	1.55 0.38%
As 188.979†	-170.8	0.01806	mg/L	0.001208	0.09031	mg/L	0.006039 6.69%
B 249.677†	49.3	0.00744	mg/L	0.001202	0.03722	mg/L	0.006012 16.15%
Ba 233.527†	2417.7	0.5964	mg/L	0.00907	2.982	mg/L	0.0454 1.52%
Be 313.042†	879.2	0.00159	mg/L	0.000041	0.00795	mg/L	0.000204 2.56%
Ca 317.933†	325242.4	26.70	mg/L	0.137	133.5	mg/L	0.69 0.51%
Cd 228.802†	256.7	0.01009	mg/L	0.000069	0.05044	mg/L	0.000344 0.68%
Co 228.616†	1607.6	0.03802	mg/L	0.000155	0.1901	mg/L	0.00078 0.41%
Cr 267.716†	539.6	0.09810	mg/L	0.001231	0.4905	mg/L	0.00615 1.25%
Cu 324.752†	13523.2	0.06439	mg/L	0.000537	0.3219	mg/L	0.00269 0.83%
Fe 273.955†	113646.5	91.32	mg/L	0.385	456.6	mg/L	1.92 0.42%
K 766.490†	8696.0	4.994	mg/L	0.0499	24.97	mg/L	0.249 1.00%
Mg 279.077†	27951.5	23.58	mg/L	0.135	117.9	mg/L	0.68 0.57%
Mn 257.610†	68754.4	2.099	mg/L	0.0084	10.49	mg/L	0.042 0.40%
Mo 202.031†	60.8	0.00316	mg/L	0.000127	0.01582	mg/L	0.000633 4.00%
Na 589.592†	13794.3	1.354	mg/L	0.0051	6.772	mg/L	0.0256 0.38%
Na 330.237†	12.3	1.273	mg/L	0.1378	6.363	mg/L	0.6891 10.83%
Ni 231.604†	245.5	0.06622	mg/L	0.001114	0.3311	mg/L	0.00557 1.68%
Pb 220.353†	1570.7	0.2368	mg/L	0.00070	1.184	mg/L	0.0035 0.29%
Sb 206.836†	17.4	0.00729	mg/L	0.001527	0.03645	mg/L	0.007634 20.94%
Se 196.026†	-0.9	-0.00081	mg/L	0.001225	-0.00405	mg/L	0.006126 151.35%
Si 288.158†	2512.9	1.444	mg/L	0.0260	7.221	mg/L	0.1301 1.80%
Sn 189.927†	-32.6	-0.00566	mg/L	0.001373	-0.02829	mg/L	0.006864 24.26%
Sr 421.552†	142743.5	0.1956	mg/L	0.00074	0.9781	mg/L	0.00369 0.38%
Ti 334.903†	79368.3	4.517	mg/L	0.0111	22.59	mg/L	0.055 0.24%
Tl 190.801†	-14.7	0.00197	mg/L	0.002899	0.00985	mg/L	0.014493 147.07%
V 292.402†	19275.7	0.1770	mg/L	0.00119	0.8849	mg/L	0.00593 0.67%
Zn 206.200†	2591.7	0.7564	mg/L	0.00870	3.782	mg/L	0.0435 1.15%

Sequence No.: 3  
Sample ID: VS22 C SWC

*Del*

Autosampler Location: 330  
Date Collected: 11/27/2012 1:46:40 PM  
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS22 C SWC

Analyte Back Pressure Flow  
All 219.0 kPa 0.75 L/min

Mean Data: VS22 C SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2324745.5	105.1	%	0.23			0.22%
ScR 361.383	287486.3	104.7	%	0.59			0.56%
Ag 328.068†	-190.2	-0.00123	mg/L	0.000248	-0.00615	mg/L	0.001241 20.17%
Al 308.215†	136923.8	98.41	mg/L	0.204	492.0	mg/L	1.02 0.21%
As 188.979†	-180.1	0.00643	mg/L	0.002963	0.03214	mg/L	0.014814 46.08%
B 249.677†	44.5	0.00670	mg/L	0.001263	0.03351	mg/L	0.006314 18.84%
Ba 233.527†	2313.9	0.5690	mg/L	0.00165	2.845	mg/L	0.0083 0.29%
Be 313.042†	1345.4	0.00249	mg/L	0.000021	0.01244	mg/L	0.000105 0.84%
Ca 317.933†	287714.5	23.62	mg/L	0.052	118.1	mg/L	0.26 0.22%
Cd 228.802†	53.2	0.00200	mg/L	0.000105	0.00999	mg/L	0.000524 5.25%
Co 228.616†	1741.9	0.04233	mg/L	0.000431	0.2117	mg/L	0.00216 1.02%
Cr 267.716†	566.3	0.1034	mg/L	0.00133	0.5169	mg/L	0.00666 1.29%
Cu 324.752†	15540.4	0.07391	mg/L	0.000518	0.3695	mg/L	0.00259 0.70%
Fe 273.955†	122146.6	98.15	mg/L	0.283	490.8	mg/L	1.41 0.29%
K 766.490†	9580.7	5.502	mg/L	0.0241	27.51	mg/L	0.121 0.44%
Mg 279.077†	27198.2	22.94	mg/L	0.040	114.7	mg/L	0.20 0.17%
Mn 257.610†	32118.6	0.9804	mg/L	0.00191	4.902	mg/L	0.0096 0.20%
Mo 202.031†	52.0	0.00270	mg/L	0.000475	0.01349	mg/L	0.002374 17.59%
Na 589.592†	17278.8	1.696	mg/L	0.0074	8.482	mg/L	0.0369 0.44%
Na 330.237†	11.9	1.377	mg/L	0.2046	6.887	mg/L	1.0229 14.85%
Ni 231.604†	272.2	0.07341	mg/L	0.001458	0.3670	mg/L	0.00729 1.99%
Pb 220.353†	204.0	0.04831	mg/L	0.000399	0.2415	mg/L	0.00199 0.83%
Sb 206.836†	8.6	0.00398	mg/L	0.001300	0.01989	mg/L	0.006500 32.68%
Se 196.026†	-4.8	-0.00386	mg/L	0.001500	-0.01929	mg/L	0.007499 38.87%
Si 288.158†	3467.9	1.992	mg/L	0.0117	9.960	mg/L	0.0584 0.59%
Sn 189.927†	-26.1	-0.00415	mg/L	0.000840	-0.02074	mg/L	0.004202 20.26%
Sr 421.552†	138567.9	0.1899	mg/L	0.00047	0.9495	mg/L	0.00237 0.25%
Ti 334.903†	75805.7	4.315	mg/L	0.0076	21.57	mg/L	0.038 0.18%
Tl 190.801†	-14.0	0.00307	mg/L	0.004801	0.01535	mg/L	0.024007 156.35%
V 292.402†	17257.9	0.1577	mg/L	0.00091	0.7883	mg/L	0.00453 0.57%
Zn 206.200†	843.6	0.2462	mg/L	0.00245	1.231	mg/L	0.0122 0.99%

Sequence No.: 4  
 Sample ID: VS22 D SWC  
 Dilution: 5.000000X

*Del*

Autosampler Location: 331  
 Date Collected: 11/27/2012 1:50:39 PM  
 Data Type: Original

## Nebulizer Parameters: VS22 D SWC

Analyte Back Pressure Flow  
 All 220.0 kPa 0.75 L/min

## Mean Data: VS22 D SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2350629.2	106.3	%	0.47				0.45%
ScR 361.383	289387.8	105.4	%	1.41				1.34%
Ag 328.068†	-385.2	-0.00253	mg/L	0.000197	-0.01264	mg/L	0.000984	7.79%
Al 308.215†	101917.4	73.24	mg/L	0.437	366.2	mg/L	2.19	0.60%
As 188.979†	-131.0	0.03591	mg/L	0.004378	0.1795	mg/L	0.02189	12.19%
B 249.677†	5.3	0.00071	mg/L	0.000581	0.00353	mg/L	0.002907	82.25%
Ba 233.527†	3272.1	0.8095	mg/L	0.01055	4.047	mg/L	0.0528	1.30%
Be 313.042†	1025.3	0.00186	mg/L	0.000036	0.00932	mg/L	0.000179	1.92%
Ca 317.933†	2741050.0	225.1	mg/L	2.67	1125	mg/L	13.34	1.19%
Cd 228.802†	60.6	0.00200	mg/L	0.000164	0.01000	mg/L	0.000822	8.22%
Co 228.616†	1797.4	0.04316	mg/L	0.000279	0.2158	mg/L	0.00140	0.65%
Cr 267.716†	772.3	0.1374	mg/L	0.00108	0.6871	mg/L	0.00541	0.79%
Cu 324.752†	26525.9	0.1241	mg/L	0.00017	0.6206	mg/L	0.00084	0.14%
Fe 273.955†	136217.6	109.5	mg/L	0.41	547.3	mg/L	2.05	0.37%
K 766.490†	13679.9	7.856	mg/L	0.0527	39.28	mg/L	0.263	0.67%
Mg 279.077†	48516.0	40.96	mg/L	0.154	204.8	mg/L	0.77	0.38%
Mn 257.610†	50942.7	1.555	mg/L	0.0054	7.773	mg/L	0.0269	0.35%
Mo 202.031†	111.8	0.00392	mg/L	0.000201	0.01959	mg/L	0.001006	5.13%
Na 589.592†	16960.1	1.665	mg/L	0.0121	8.326	mg/L	0.0605	0.73%
Na 330.237†	27.8	2.095	mg/L	0.0824	10.47	mg/L	0.412	3.94%
Ni 231.604†	383.5	0.1034	mg/L	0.00205	0.5171	mg/L	0.01023	1.98%
Pb 220.353†	173.9	0.03759	mg/L	0.001671	0.1879	mg/L	0.00835	4.44%
Sb 206.836†	3.3	0.00177	mg/L	0.002191	0.00885	mg/L	0.010956	123.85%
Se 196.026†	-21.4	-0.01679	mg/L	0.006088	-0.08394	mg/L	0.030438	36.26%
Si 288.158†	3030.9	1.744	mg/L	0.0299	8.718	mg/L	0.1495	1.71%
Sn 189.927†	-79.9	0.00494	mg/L	0.002283	0.02468	mg/L	0.011415	46.26%
Sr 421.552†	504247.3	0.6911	mg/L	0.00883	3.455	mg/L	0.0442	1.28%
Tl 334.903†	81770.6	4.645	mg/L	0.0222	23.22	mg/L	0.111	0.48%
Tl 190.801†	6.7	0.01379	mg/L	0.003196	0.06895	mg/L	0.015978	23.17%
V 292.402†	21921.5	0.2014	mg/L	0.00035	1.007	mg/L	0.0017	0.17%
Zn 206.200†	821.9	0.2399	mg/L	0.00270	1.199	mg/L	0.0135	1.13%

Sequence No.: 5 ~~222222~~  
 Sample ID: ~~VS22 A-L SWC~~ *PA 11/25/12*

Autosampler Location: 332  
 Date Collected: 11/27/2012 1:54:41 PM  
 Data Type: Original

Dilution: 25.000000X

*Del*

Nebulizer Parameters: VS22 A-L SWC

Analyte Back Pressure Flow  
 All 219.0 kPa 0.75 L/min

Mean Data: VS22 A-L SWC

Analyte	Mean Corrected		Calib.		Sample			RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	
ScA 357.253	2285899.9	103.4	%	0.39				0.38%
ScR 361.383	291233.2	106.0	%	3.25				3.07%
Ag 328.068†	6.8	0.00005	mg/L	0.000053	0.00130	mg/L	0.001334	102.91%
Al 308.215†	13271.4	9.538	mg/L	0.3700	238.4	mg/L	9.25	3.88%
As 188.979†	-9.9	0.00776	mg/L	0.000799	0.1941	mg/L	0.01997	10.29%
B 249.677†	12.8	0.00195	mg/L	0.000514	0.04871	mg/L	0.012843	26.37%
Ba 233.527†	524.5	0.1307	mg/L	0.00628	3.268	mg/L	0.1569	4.80%
Be 313.042†	121.0	0.00022	mg/L	0.000048	0.00552	mg/L	0.001205	21.82%
Ca 317.933†	75112.6	6.167	mg/L	0.2372	154.2	mg/L	5.93	3.85%
Cd 228.802†	119.5	0.00468	mg/L	0.000149	0.1170	mg/L	0.00373	3.19%
Co 228.616†	234.6	0.00586	mg/L	0.000162	0.1466	mg/L	0.00405	2.76%
Cr 267.716†	73.7	0.01332	mg/L	0.000611	0.3329	mg/L	0.01526	4.58%
Cu 324.752†	2909.7	0.01361	mg/L	0.000211	0.3402	mg/L	0.00527	1.55%
Fe 273.955†	14420.5	11.59	mg/L	0.490	289.7	mg/L	12.24	4.23%
K 766.490†	1553.1	0.8919	mg/L	0.03852	22.30	mg/L	0.963	4.32%
Mg 279.077†	3564.0	3.007	mg/L	0.1211	75.18	mg/L	3.028	4.03%
Mn 257.610†	23192.6	0.7079	mg/L	0.02854	17.70	mg/L	0.713	4.03%
Mo 202.031†	21.3	0.00114	mg/L	0.000375	0.02853	mg/L	0.009376	32.86%
Na 589.592†	1400.8	0.1375	mg/L	0.00702	3.438	mg/L	0.1756	5.11%
Na 330.237†	11.5	0.5079	mg/L	0.39787	12.70	mg/L	9.947	78.34%
Ni 231.604†	35.7	0.00964	mg/L	0.000852	0.2411	mg/L	0.02130	8.83%
Pb 220.353†	1353.5	0.1922	mg/L	0.00199	4.806	mg/L	0.0497	1.03%
Sb 206.836†	13.7	0.00488	mg/L	0.003239	0.1219	mg/L	0.08098	66.41%
Se 196.026†	-10.5	-0.00815	mg/L	0.002693	-0.2038	mg/L	0.06731	33.03%
Si 288.158†	297.2	0.1708	mg/L	0.01268	4.271	mg/L	0.3171	7.43%
Sn 189.927†	-3.1	-0.00008	mg/L	0.000353	-0.00199	mg/L	0.008825	444.49%
Sr 421.552†	30523.9	0.04183	mg/L	0.001653	1.046	mg/L	0.0413	3.95%
Ti 334.903†	8887.8	0.5057	mg/L	0.02108	12.64	mg/L	0.527	4.17%
Tl 190.801†	5.0	0.00346	mg/L	0.001259	0.08652	mg/L	0.031483	36.39%
V 292.402†	2375.4	0.02190	mg/L	0.000144	0.5476	mg/L	0.00359	0.66%
Zn 206.200†	699.4	0.2041	mg/L	0.00866	5.103	mg/L	0.2165	4.24%

Sequence No.: 6

Sample ID: VS22 A SWC

Dilution: 5.000000X

Autosampler Location: 333

Date Collected: 11/27/2012 1:58:39 PM

Data Type: Original

Nebulizer Parameters: VS22 A SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: VS22 A SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2386266.1	107.9	%	1.53				1.42%
ScR 361.383	305862.1	111.4	%	0.81				0.73%
Ag 328.068†	92.8	0.00065	mg/L	0.000282	0.00326	mg/L	0.001409	43.19%
Al 308.215†	62126.6	44.65	mg/L	0.387	223.2	mg/L	1.93	0.87%
As 188.979†	-53.4	0.03192	mg/L	0.000841	0.1596	mg/L	0.00421	2.63%
B 249.677†	64.2	0.00974	mg/L	0.000257	0.04871	mg/L	0.001286	2.64%
Ba 233.527†	2459.0	0.6129	mg/L	0.00605	3.064	mg/L	0.0302	0.99%
Be 313.042†	545.4	0.00099	mg/L	0.000034	0.00497	mg/L	0.000172	3.47%
Ca 317.933†	356774.3	29.29	mg/L	0.191	146.5	mg/L	0.95	0.65%
Cd 228.802†	547.5	0.02146	mg/L	0.000406	0.1073	mg/L	0.00203	1.89%
Co 228.616†	1059.6	0.02628	mg/L	0.000693	0.1314	mg/L	0.00347	2.64%
Cr 267.716†	330.0	0.05970	mg/L	0.000811	0.2985	mg/L	0.00405	1.36%
Cu 324.752†	14012.1	0.06550	mg/L	0.001261	0.3275	mg/L	0.00630	1.93%
Fe 273.955†	67705.1	54.41	mg/L	0.620	272.0	mg/L	3.10	1.14%
K 766.490†	7408.6	4.255	mg/L	0.0227	21.27	mg/L	0.114	0.53%
Mg 279.077†	15896.6	13.41	mg/L	0.101	67.05	mg/L	0.504	0.75%
Mn 257.610†	109301.3	3.336	mg/L	0.0408	16.68	mg/L	0.204	1.22%
Mo 202.031†	73.1	0.00383	mg/L	0.000491	0.01917	mg/L	0.002456	12.81%
Na 589.592†	6402.8	0.6286	mg/L	0.00631	3.143	mg/L	0.0315	1.00%
Na 330.237†	22.5	1.125	mg/L	0.1534	5.625	mg/L	0.7668	13.63%
Ni 231.604†	161.3	0.04351	mg/L	0.000591	0.2175	mg/L	0.00296	1.36%
Pb 220.353†	6217.2	0.8832	mg/L	0.01511	4.416	mg/L	0.0755	1.71%
Sb 206.836†	26.7	0.00987	mg/L	0.001729	0.04937	mg/L	0.008647	17.51%
Se 196.026†	4.6	0.00351	mg/L	0.003822	0.01754	mg/L	0.019109	108.92%
Si 288.158†	1417.6	0.8148	mg/L	0.01341	4.074	mg/L	0.0670	1.65%
Sn 189.927†	-17.0	-0.00101	mg/L	0.000498	-0.00506	mg/L	0.002489	49.19%
Sr 421.552†	142014.9	0.1946	mg/L	0.00149	0.9732	mg/L	0.00744	0.76%
Ti 334.903†	41705.6	2.373	mg/L	0.0236	11.87	mg/L	0.118	1.00%
Tl 190.801†	5.9	0.00805	mg/L	0.002526	0.04027	mg/L	0.012632	31.37%
V 292.402†	10790.6	0.09940	mg/L	0.001623	0.4970	mg/L	0.00811	1.63%
Zn 206.200†	3302.9	0.9640	mg/L	0.00776	4.820	mg/L	0.0388	0.80%

Sequence No.: 7  
 Sample ID: VS22 ADUP SWC

Autosampler Location: 334  
 Date Collected: 11/27/2012 2:02:39 PM  
 Data Type: Original

Dilution: 5.000000X

*Dal*

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 Nebulizer Parameters: VS22 ADUP SWC

Analyte Back Pressure Flow  
 All 219.0 kPa 0.75 L/min

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 Mean Data: VS22 ADUP SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2410458.8	109.0	%	0.53				0.48%
ScR 361.383	294470.5	107.2	%	1.10				1.03%
Ag 328.068†	72.5	0.00052	mg/L	0.000210	0.00259	mg/L	0.001049	40.47%
Al 308.215†	67203.2	48.30	mg/L	0.539	241.5	mg/L	2.69	1.12%
As 188.979†	-63.5	0.03370	mg/L	0.001709	0.1685	mg/L	0.00854	5.07%
B 249.677†	79.4	0.01207	mg/L	0.001080	0.06035	mg/L	0.005400	8.95%
Ba 233.527†	2638.4	0.6577	mg/L	0.00349	3.288	mg/L	0.0175	0.53%
Be 313.042†	590.4	0.00108	mg/L	0.000017	0.00538	mg/L	0.000087	1.62%
Ca 317.933†	385457.0	31.65	mg/L	0.347	158.2	mg/L	1.73	1.10%
Cd 228.802†	572.0	0.02244	mg/L	0.000248	0.1122	mg/L	0.00124	1.11%
Co 228.616†	1067.5	0.02590	mg/L	0.000285	0.1295	mg/L	0.00143	1.10%
Cr 267.716†	345.1	0.06244	mg/L	0.000579	0.3122	mg/L	0.00290	0.93%
Cu 324.752†	14311.2	0.06695	mg/L	0.000017	0.3347	mg/L	0.00009	0.03%
Fe 273.955†	72131.8	57.96	mg/L	0.522	289.8	mg/L	2.61	0.90%
K 766.490†	8196.2	4.707	mg/L	0.0676	23.54	mg/L	0.338	1.44%
Mg 279.077†	16945.4	14.30	mg/L	0.144	71.48	mg/L	0.722	1.01%
Mn 257.610†	117471.5	3.586	mg/L	0.0396	17.93	mg/L	0.198	1.10%
Mo 202.031†	63.9	0.00329	mg/L	0.000205	0.01645	mg/L	0.001025	6.23%
Na 589.592†	7377.1	0.7243	mg/L	0.00928	3.621	mg/L	0.0464	1.28%
Na 330.237†	17.9	0.9868	mg/L	0.07791	4.934	mg/L	0.3896	7.90%
Ni 231.604†	164.8	0.04445	mg/L	0.001341	0.2223	mg/L	0.00670	3.02%
Pb 220.353†	6290.5	0.8943	mg/L	0.00573	4.471	mg/L	0.0287	0.64%
Sb 206.836†	23.3	0.00877	mg/L	0.001345	0.04387	mg/L	0.006726	15.33%
Se 196.026†	-2.6	-0.00213	mg/L	0.006090	-0.01063	mg/L	0.030452	286.34%
Si 288.158†	1498.4	0.8613	mg/L	0.00831	4.306	mg/L	0.0415	0.96%
Sn 189.927†	-21.4	-0.00197	mg/L	0.001218	-0.00983	mg/L	0.006091	61.93%
Sr 421.552†	155225.8	0.2127	mg/L	0.00242	1.064	mg/L	0.0121	1.14%
Tl 334.903†	46881.9	2.668	mg/L	0.0281	13.34	mg/L	0.140	1.05%
Tl 190.801†	2.2	0.00666	mg/L	0.001465	0.03332	mg/L	0.007324	21.98%
V 292.402†	11433.4	0.1052	mg/L	0.00047	0.5262	mg/L	0.00234	0.45%
Zn 206.200†	3507.2	1.024	mg/L	0.0067	5.118	mg/L	0.0333	0.65%



Sequence No.: 8

Sample ID: VS22 ASPK SWC

Dilution: 5.000000X

Autosampler Location: 335

Date Collected: 11/27/2012 2:06:38 PM

Data Type: Original

Del

Nebulizer Parameters: VS22 ASPK SWC

Analyte	Back Pressure	Flow
All	220.0 kPa	0.75 L/min

Mean Data: VS22 ASPK SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2411209.9	109.1	%	0.48				0.44%
ScR 361.383	302231.3	110.0	%	0.51				0.46%
Ag 328.068†	29865.6	0.2007	mg/L	0.00108	1.004	mg/L	0.0054	0.54%
Al 308.215†	68994.5	49.58	mg/L	0.379	247.9	mg/L	1.89	0.76%
As 188.979†	1171.1	0.8261	mg/L	0.00413	4.130	mg/L	0.0206	0.50%
B 249.677†	80.0	0.01175	mg/L	0.000632	0.05873	mg/L	0.003159	5.38%
Ba 233.527†	5678.6	1.426	mg/L	0.0009	7.132	mg/L	0.0045	0.06%
Be 313.042†	103380.0	0.1976	mg/L	0.00144	0.9882	mg/L	0.00719	0.73%
Ca 317.933†	434202.8	35.65	mg/L	0.259	178.3	mg/L	1.30	0.73%
Cd 228.802†	5934.0	0.2300	mg/L	0.00120	1.150	mg/L	0.0060	0.52%
Co 228.616†	7827.8	0.2276	mg/L	0.00155	1.138	mg/L	0.0077	0.68%
Cr 267.716†	1453.8	0.2614	mg/L	0.00131	1.307	mg/L	0.0065	0.50%
Cu 324.752†	60013.7	0.2747	mg/L	0.00104	1.374	mg/L	0.0052	0.38%
Fe 273.955†	72537.0	58.29	mg/L	0.572	291.4	mg/L	2.86	0.98%
K 766.490†	14753.7	8.473	mg/L	0.0584	42.37	mg/L	0.292	0.69%
Mg 279.077†	22515.8	19.01	mg/L	0.022	95.03	mg/L	0.112	0.12%
Mn 257.610†	122673.8	3.744	mg/L	0.0336	18.72	mg/L	0.168	0.90%
Mo 202.031†	68.8	0.00351	mg/L	0.000196	0.01756	mg/L	0.000979	5.57%
Na 589.592†	45976.1	4.514	mg/L	0.0334	22.57	mg/L	0.167	0.74%
Na 330.237†	125.5	5.237	mg/L	0.1513	26.19	mg/L	0.757	2.89%
Ni 231.604†	868.1	0.2338	mg/L	0.00004	1.169	mg/L	0.0002	0.02%
Pb 220.353†	11927.6	1.688	mg/L	0.0129	8.439	mg/L	0.0646	0.77%
Sb 206.836†	27.0	0.00799	mg/L	0.000638	0.03994	mg/L	0.003188	7.98%
Se 196.026†	1023.7	0.7947	mg/L	0.01104	3.973	mg/L	0.0552	1.39%
Si 288.158†	1335.9	0.7694	mg/L	0.00533	3.847	mg/L	0.0267	0.69%
Sn 189.927†	-26.0	-0.00282	mg/L	0.000527	-0.01412	mg/L	0.002633	18.65%
Sr 421.552†	297342.7	0.4075	mg/L	0.00301	2.038	mg/L	0.0151	0.74%
Ti 334.903†	46913.9	2.669	mg/L	0.0204	13.35	mg/L	0.102	0.76%
Tl 190.801†	1631.7	0.7672	mg/L	0.00631	3.836	mg/L	0.0316	0.82%
V 292.402†	32429.3	0.3043	mg/L	0.00126	1.522	mg/L	0.0063	0.41%
Zn 206.200†	4074.4	1.189	mg/L	0.0024	5.946	mg/L	0.0122	0.21%

Sequence No.: 9 **ZZZZZZ**  
Sample ID: ~~VS22 APOST SWC~~ **BA**  
**11/28/12**

Autosampler Location: 336  
Date Collected: 11/27/2012 2:10:37 PM  
Data Type: Original

Dilution: 5.000000X

**Del**

Nebulizer Parameters: VS22 APOST SWC

Analyte Back Pressure Flow  
All 220.0 kPa 0.75 L/min

Mean Data: VS22 APOST SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2433828.2	110.1	%	0.73			0.66%
ScR 361.383	303834.7	110.6	%	0.57			0.52%
Ag 328.068†	67862.5	0.4560	mg/L	0.00231	2.280	mg/L	0.0115 0.51%
Al 308.215†	66584.2	47.85	mg/L	0.236	239.2	mg/L	1.18 0.49%
As 188.979†	3020.6	2.006	mg/L	0.0202	10.03	mg/L	0.101 1.01%
B 249.677†	70.4	0.00969	mg/L	0.000722	0.04845	mg/L	0.003610 7.45%
Ba 233.527†	9961.4	2.510	mg/L	0.0069	12.55	mg/L	0.034 0.27%
Be 313.042†	250983.4	0.4799	mg/L	0.00193	2.400	mg/L	0.0097 0.40%
Ca 317.933†	479078.7	39.33	mg/L	0.114	196.7	mg/L	0.57 0.29%
Cd 228.802†	13590.3	0.5261	mg/L	0.00474	2.630	mg/L	0.0237 0.90%
Co 228.616†	17387.3	0.5134	mg/L	0.00459	2.567	mg/L	0.0229 0.89%
Cr 267.716†	2997.2	0.5384	mg/L	0.00073	2.692	mg/L	0.0036 0.14%
Cu 324.752†	119943.9	0.5471	mg/L	0.00209	2.736	mg/L	0.0105 0.38%
Fe 273.955†	71334.2	57.32	mg/L	0.257	286.6	mg/L	1.28 0.45%
K 766.490†	24101.3	13.84	mg/L	0.023	69.21	mg/L	0.116 0.17%
Mg 279.077†	28562.6	24.12	mg/L	0.024	120.6	mg/L	0.12 0.10%
Mn 257.610†	126825.6	3.871	mg/L	0.0134	19.36	mg/L	0.067 0.35%
Mo 202.031†	75.9	0.00386	mg/L	0.000136	0.01930	mg/L	0.000681 3.53%
Na 589.592†	99563.7	9.775	mg/L	0.0307	48.88	mg/L	0.153 0.31%
Na 330.237†	268.0	10.81	mg/L	0.010	54.03	mg/L	0.048 0.09%
Ni 231.604†	1869.5	0.5034	mg/L	0.00042	2.517	mg/L	0.0021 0.08%
Pb 220.353†	19862.3	2.804	mg/L	0.0285	14.02	mg/L	0.143 1.02%
Sb 206.836†	37.7	0.00863	mg/L	0.004270	0.04314	mg/L	0.021348 49.49%
Se 196.026†	2555.7	1.984	mg/L	0.0234	9.920	mg/L	0.1171 1.18%
Si 288.158†	1435.5	0.8282	mg/L	0.01077	4.141	mg/L	0.0539 1.30%
Sn 189.927†	-27.9	-0.00292	mg/L	0.000810	-0.01461	mg/L	0.004051 27.73%
Sr 421.552†	484991.3	0.6647	mg/L	0.00224	3.323	mg/L	0.0112 0.34%
Tl 334.903†	42851.3	2.438	mg/L	0.0078	12.19	mg/L	0.039 0.32%
Tl 190.801†	4009.0	1.877	mg/L	0.0152	9.384	mg/L	0.0762 0.81%
V 292.402†	59879.9	0.5649	mg/L	0.00155	2.824	mg/L	0.0078 0.27%
Zn 206.200†	4937.4	1.441	mg/L	0.0013	7.205	mg/L	0.0063 0.09%

Sequence No.: 10  
 Sample ID: VS22 MB1SPK SWC  
 Dilution: 2.000000X

Autosampler Location: 337  
 Date Collected: 11/27/2012 2:14:23 PM  
 Data Type: Original

*D21*

## Nebulizer Parameters: VS22 MB1SPK SWC

Analyte Back Pressure Flow  
 All 220.0 kPa 0.75 L/min

## Mean Data: VS22 MB1SPK SWC

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	2434017.1	110.1	%	0.79				0.72%
ScR 361.383	301782.8	109.9	%	0.68				0.62%
Ag 328.068†	75651.2	0.5083	mg/L	0.00064	1.017	mg/L	0.0013	0.13%
Al 308.215†	2679.1	1.919	mg/L	0.0104	3.837	mg/L	0.0208	0.54%
As 188.979†	3089.8	1.983	mg/L	0.0186	3.966	mg/L	0.0372	0.94%
B 249.677†	15.4	0.00134	mg/L	0.000704	0.00268	mg/L	0.001408	52.52%
Ba 233.527†	7595.8	1.920	mg/L	0.0100	3.841	mg/L	0.0200	0.52%
Be 313.042†	254852.0	0.4874	mg/L	0.00265	0.9747	mg/L	0.00530	0.54%
Ca 317.933†	116476.2	9.563	mg/L	0.0359	19.13	mg/L	0.072	0.38%
Cd 228.802†	12949.4	0.5009	mg/L	0.00086	1.002	mg/L	0.0017	0.17%
Co 228.616†	16391.6	0.4892	mg/L	0.00044	0.9783	mg/L	0.00089	0.09%
Cr 267.716†	2750.0	0.4936	mg/L	0.00221	0.9873	mg/L	0.00443	0.45%
Cu 324.752†	103915.9	0.4725	mg/L	0.00120	0.9449	mg/L	0.00239	0.25%
Fe 273.955†	2463.0	1.976	mg/L	0.0073	3.952	mg/L	0.0145	0.37%
K 766.490†	16539.8	9.499	mg/L	0.0610	19.00	mg/L	0.122	0.64%
Mg 279.077†	11641.5	9.842	mg/L	0.0413	19.68	mg/L	0.083	0.42%
Mn 257.610†	16164.6	0.4937	mg/L	0.00167	0.9874	mg/L	0.00333	0.34%
Mo 202.031†	18.3	0.00091	mg/L	0.000377	0.00182	mg/L	0.000754	41.34%
Na 589.592†	93654.7	9.195	mg/L	0.0660	18.39	mg/L	0.132	0.72%
Na 330.237†	260.6	10.27	mg/L	0.178	20.54	mg/L	0.357	1.74%
Ni 231.604†	1755.0	0.4725	mg/L	0.00244	0.9449	mg/L	0.00489	0.52%
Pb 220.353†	13693.4	1.927	mg/L	0.0025	3.855	mg/L	0.0050	0.13%
Sb 206.836†	15.8	0.00029	mg/L	0.002493	0.00057	mg/L	0.004985	867.54%
Se 196.026†	2529.1	1.963	mg/L	0.0100	3.927	mg/L	0.0199	0.51%
Si 288.158†	4.4	0.00560	mg/L	0.001417	0.01119	mg/L	0.002834	25.32%
Sn 189.927†	-14.7	-0.00308	mg/L	0.000498	-0.00615	mg/L	0.000995	16.18%
Sr 421.552†	342443.0	0.4693	mg/L	0.00252	0.9386	mg/L	0.00504	0.54%
Ti 334.903†	27.2	0.00099	mg/L	0.000131	0.00198	mg/L	0.000263	13.25%
Tl 190.801†	4105.0	1.916	mg/L	0.0189	3.833	mg/L	0.0379	0.99%
V 292.402†	51472.0	0.4881	mg/L	0.00031	0.9762	mg/L	0.00063	0.06%
Zn 206.200†	1655.4	0.4832	mg/L	0.00172	0.9664	mg/L	0.00343	0.36%

Sequence No.: 11

Sample ID: CV 7

Autosampler Location: 7

Date Collected: 11/27/2012 2:18:22 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2386525.2	107.9 %	3.59			3.33%
ScR 361.383	19069.3	6.943 %	5.7178			82.36%
Saturated within auto integration window (code 4)						
Ag 328.068†	149452.5	1.004 mg/L	0.0464	1.004 mg/L	0.0464	4.62%
Al 308.215†	19044.3	13.66 mg/L	11.709	13.66 mg/L	11.709	85.74%
Saturated within auto integration window (code 4)						
As 188.979†	3149.6	2.018 mg/L	0.0846	2.018 mg/L	0.0846	4.19%
B 249.677†	13076.8	1.997 mg/L	2.8125	1.997 mg/L	2.8125	140.81%
Saturated within auto integration window (code 4)						
Ba 233.527†	11862.4	2.998 mg/L	3.8505	2.998 mg/L	3.8505	128.43%
Be 313.042†	70861.4	0.1353 mg/L	0.20763	0.1353 mg/L	0.20763	153.41%
Saturated within auto integration window (code 4)						
Ca 317.933†	55121.4	4.526 mg/L	6.3705	4.526 mg/L	6.3705	140.76%
Cd 228.802†	25557.1	1.002 mg/L	0.0512	1.002 mg/L	0.0512	5.11%
Co 228.616†	32832.8	0.9798 mg/L	0.04795	0.9798 mg/L	0.04795	4.89%
Cr 267.716†	2493.5	0.4473 mg/L	5.57932	0.4473 mg/L	5.57932	>999.9%
Saturated within auto integration window (code 4)						
Cu 324.752†	217736.4	0.9898 mg/L	0.04875	0.9898 mg/L	0.04875	4.93%
Fe 273.955†	9320.7	7.482 mg/L	8.2868	7.482 mg/L	8.2868	110.75%
K 766.490†	56498.7	32.45 mg/L	32.589	32.45 mg/L	32.589	100.44%
Saturated within auto integration window (code 4)						
Mg 279.077†	13468.1	11.39 mg/L	9.251	11.39 mg/L	9.251	81.22%
Mn 257.610†	30411.6	0.9285 mg/L	0.67578	0.9285 mg/L	0.67578	72.78%
Saturated within auto integration window (code 4)						
Mo 202.031†	17350.8	0.9866 mg/L	0.05120	0.9866 mg/L	0.05120	5.19%
Na 589.592†	-24927.5	-2.447 mg/L	8.1132	-2.447 mg/L	8.1132	331.51%
Saturated within auto integration window (code 4)						
Na 330.237†	-15629.4	-626.6 mg/L	1114.86	-626.6 mg/L	1114.86	177.91%
Saturated within auto integration window (code 4)						
Ni 231.604†	7947.1	2.143 mg/L	4.6789	2.143 mg/L	4.6789	218.29%
Saturated within auto integration window (code 4)						
Pb 220.353†	13905.2	1.959 mg/L	0.1043	1.959 mg/L	0.1043	5.32%
Sb 206.836†	6082.2	2.131 mg/L	0.0406	2.131 mg/L	0.0406	1.90%
Se 196.026†	2581.2	2.003 mg/L	0.0773	2.003 mg/L	0.0773	3.86%
Si 288.158†	14234.6	8.165 mg/L	7.3442	8.165 mg/L	7.3442	89.95%
Sn 189.927†	3436.6	1.015 mg/L	0.0408	1.015 mg/L	0.0408	4.02%
Sr 421.552†	75605.6	0.1036 mg/L	0.10266	0.1036 mg/L	0.10266	99.08%
Saturated within auto integration window (code 4)						
Ti 334.903†	-430.2	-0.02565 mg/L	0.424327	-0.02565 mg/L	0.424327	>999.9%
Saturated within auto integration window (code 4)						
Tl 190.801†	4243.4	1.978 mg/L	0.0800	1.978 mg/L	0.0800	4.04%
V 292.402†	104014.2	0.9844 mg/L	0.06970	0.9844 mg/L	0.06970	7.08%
Zn 206.200†	11718.6	3.420 mg/L	4.9921	3.420 mg/L	4.9921	145.98%

Sequence No.: 12  
Sample ID: CB

Autosampler Location: 1  
Date Collected: 11/27/2012 2:24:10 PM  
Data Type: Original

Dilution: 1.000000X  
User canceled analysis.

=====  
Analysis Begun

Start Time: 11/27/2012 2:27:04 PM  
Logged In Analyst: Metals  
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 11/27/2012 8:08:35 AM  
Technique: ICP Continuous  
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1127.sif

Batch ID:

Results Data Set: I2121127

Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

=====  
Sequence No.: 11  
Sample ID: CV 8

Autosampler Location: 7  
Date Collected: 11/27/2012 2:27:04 PM  
Data Type: Original

Dilution: 1.000000X

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Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

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Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2368646.4	107.1 %	0.48			0.45%
ScR 361.383	24475.8	8.911 %	2.9221			32.79%
Saturated within auto integration window (code 4)						
Ag 328.068†	149334.8	1.003 mg/L	0.0093	1.003 mg/L	0.0093	0.93%
Al 308.215†	14843.2	10.64 mg/L	7.432	10.64 mg/L	7.432	69.87%
Saturated within auto integration window (code 4)						
As 188.979†	3116.6	1.998 mg/L	0.0099	1.998 mg/L	0.0099	0.50%
B 249.677†	23242.9	3.551 mg/L	3.0097	3.551 mg/L	3.0097	84.76%
Saturated within auto integration window (code 4)						
Ba 233.527†	20213.2	5.109 mg/L	4.3051	5.109 mg/L	4.3051	84.27%
Be 313.042†	5675.8	0.01066 mg/L	0.010193	0.01066 mg/L	0.010193	95.64%
Saturated within auto integration window (code 4)						
Ca 317.933†	107740.4	8.846 mg/L	9.7434	8.846 mg/L	9.7434	110.14%
Cd 228.802†	25649.8	1.009 mg/L	0.0071	1.009 mg/L	0.0071	0.70%
Co 228.616†	32852.4	0.9793 mg/L	0.00501	0.9793 mg/L	0.00501	0.51%
Cr 267.716†	22767.4	4.094 mg/L	3.9032	4.094 mg/L	3.9032	95.33%
Saturated within auto integration window (code 4)						
Cu 324.752†	217975.5	0.9910 mg/L	0.00953	0.9910 mg/L	0.00953	0.96%
Fe 273.955†	14281.6	11.47 mg/L	9.685	11.47 mg/L	9.685	84.41%
K 766.490†	32057.0	18.41 mg/L	13.644	18.41 mg/L	13.644	74.11%
Saturated within auto integration window (code 4)						
Mg 279.077†	15529.0	13.13 mg/L	10.436	13.13 mg/L	10.436	79.45%
Mn 257.610†	31333.4	0.9567 mg/L	0.74809	0.9567 mg/L	0.74809	78.19%
Saturated within auto integration window (code 4)						
Mo 202.031†	17401.4	0.9892 mg/L	0.00800	0.9892 mg/L	0.00800	0.81%
Na 589.592†	24335.9	2.389 mg/L	2.6914	2.389 mg/L	2.6914	112.65%
Saturated within auto integration window (code 4)						
Na 330.237†	-609.8	-26.47 mg/L	68.654	-26.47 mg/L	68.654	259.34%
Saturated within auto integration window (code 4)						
Ni 231.604†	18725.0	5.050 mg/L	4.4287	5.050 mg/L	4.4287	87.70%
Saturated within auto integration window (code 4)						
Pb 220.353†	13911.1	1.966 mg/L	0.0166	1.966 mg/L	0.0166	0.84%
Sb 206.836†	6057.5	2.070 mg/L	0.0489	2.070 mg/L	0.0489	2.36%
Se 196.026†	2561.6	1.988 mg/L	0.0106	1.988 mg/L	0.0106	0.53%
Si 288.158†	19020.7	10.91 mg/L	9.030	10.91 mg/L	9.030	82.77%
Sn 189.927†	3419.3	1.011 mg/L	0.0047	1.011 mg/L	0.0047	0.46%
Sr 421.552†	93501.3	0.1281 mg/L	0.10606	0.1281 mg/L	0.10606	82.77%

Saturated within auto integration window (code 4)							
Ti 334.903†	3850.6	0.2171 mg/L	0.23480	0.2171 mg/L	0.23480	108.13%	
Saturated within auto integration window (code 4)							
Tl 190.801†	4208.4	1.961 mg/L	0.0164	1.961 mg/L	0.0164	0.83%	
V 292.402†	103958.9	0.9993 mg/L	0.01968	0.9993 mg/L	0.01968	1.97%	
Zn 206.200†	22047.2	6.434 mg/L	5.5193	6.434 mg/L	5.5193	85.79%	

User canceled analysis.

=====  
Analysis Begun

Start Time: 11/27/2012 2:37:49 PM

Plasma On Time: 11/27/2012 8:08:35 AM

Logged In Analyst: Metals

Technique: ICP Continuous

Spectrometer: Optima 7300 DV, S/N 077C8121202

Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1127.sif

Batch ID:

Results Data Set: I2121127

Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 11

Autosampler Location: 7

Sample ID: CV 9

Date Collected: 11/27/2012 2:37:50 PM

Data Type: Original

Dilution: 1.000000X

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Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	219.0 kPa	0.75 L/min

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Mean Data: CV

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2337991.9	105.7	%	0.32				0.31%
ScR 361.383	288110.8	104.9	%	1.08				1.03%
Ag 328.068†	153156.4	1.029	mg/L	0.0045	1.029	mg/L	0.0045	0.44%
Al 308.215†	2813.1	1.988	mg/L	0.0209	1.988	mg/L	0.0209	1.05%
As 188.979†	3194.7	2.076	mg/L	0.0153	2.076	mg/L	0.0153	0.74%
B 249.677†	6323.0	0.9653	mg/L	0.01265	0.9653	mg/L	0.01265	1.31%
Ba 233.527†	3913.5	0.9891	mg/L	0.00842	0.9891	mg/L	0.00842	0.85%
Be 313.042†	525227.9	1.004	mg/L	0.0077	1.004	mg/L	0.0077	0.77%
Ca 317.933†	23834.4	1.957	mg/L	0.0111	1.957	mg/L	0.0111	0.57%
Cd 228.802†	26132.9	1.024	mg/L	0.0048	1.024	mg/L	0.0048	0.47%
Co 228.616†	33599.8	1.001	mg/L	0.0061	1.001	mg/L	0.0061	0.61%
Cr 267.716†	5649.2	1.016	mg/L	0.0100	1.016	mg/L	0.0100	0.98%
Cu 324.752†	221813.4	1.008	mg/L	0.0021	1.008	mg/L	0.0021	0.21%
Fe 273.955†	2557.2	2.048	mg/L	0.0211	2.048	mg/L	0.0211	1.03%
K 766.490†	34862.2	20.02	mg/L	0.161	20.02	mg/L	0.161	0.80%
Mg 279.077†	2361.2	2.003	mg/L	0.0170	2.003	mg/L	0.0170	0.85%
Mn 257.610†	32753.0	1.000	mg/L	0.0055	1.000	mg/L	0.0055	0.55%
Mo 202.031†	17649.7	1.004	mg/L	0.0017	1.004	mg/L	0.0017	0.16%
Na 589.592†	495934.9	48.69	mg/L	0.532	48.69	mg/L	0.532	1.09%
Na 330.237†	1303.1	52.05	mg/L	0.335	52.05	mg/L	0.335	0.64%
Ni 231.604†	3615.4	0.9753	mg/L	0.00946	0.9753	mg/L	0.00946	0.97%
Pb 220.353†	14158.2	1.993	mg/L	0.0074	1.993	mg/L	0.0074	0.37%
Sb 206.836†	6101.6	2.131	mg/L	0.0065	2.131	mg/L	0.0065	0.30%
Se 196.026†	2583.5	2.005	mg/L	0.0050	2.005	mg/L	0.0050	0.25%
Si 288.158†	3690.5	2.116	mg/L	0.0215	2.116	mg/L	0.0215	1.02%
Sn 189.927†	3476.1	1.027	mg/L	0.0087	1.027	mg/L	0.0087	0.85%
Sr 421.552†	706618.4	0.9684	mg/L	0.00745	0.9684	mg/L	0.00745	0.77%
Ti 334.903†	18196.1	1.035	mg/L	0.0046	1.035	mg/L	0.0046	0.44%
Tl 190.801†	4281.0	1.995	mg/L	0.0113	1.995	mg/L	0.0113	0.57%
V 292.402†	104696.9	0.9929	mg/L	0.01309	0.9929	mg/L	0.01309	1.32%
Zn 206.200†	3535.7	1.032	mg/L	0.0106	1.032	mg/L	0.0106	1.03%

Sequence No.: 12

Sample ID: CB 6

Autosampler Location: 1

Date Collected: 11/27/2012 2:42:54 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2349712.4	106.3	%	0.48				0.45%
ScR 361.383	299222.3	108.9	%	0.32				0.29%
Ag 328.068†	28.5	0.00019	mg/L	0.000424	0.00019	mg/L	0.000424	221.51%
Al 308.215†	-9.3	-0.00671	mg/L	0.002988	-0.00671	mg/L	0.002988	44.52%
As 188.979†	3.3	0.00211	mg/L	0.001312	0.00211	mg/L	0.001312	62.07%
B 249.677†	14.3	0.00219	mg/L	0.001159	0.00219	mg/L	0.001159	52.98%
Ba 233.527†	-1.3	-0.00032	mg/L	0.000604	-0.00032	mg/L	0.000604	187.16%
Be 313.042†	-6.2	-0.00001	mg/L	0.000036	-0.00001	mg/L	0.000036	304.01%
Ca 317.933†	-12.9	-0.00106	mg/L	0.000410	-0.00106	mg/L	0.000410	38.65%
Cd 228.802†	-7.0	-0.00029	mg/L	0.000139	-0.00029	mg/L	0.000139	47.94%
Co 228.616†	9.4	0.00028	mg/L	0.000099	0.00028	mg/L	0.000099	35.34%
Cr 267.716†	3.5	0.00063	mg/L	0.001368	0.00063	mg/L	0.001368	215.60%
Cu 324.752†	-767.1	-0.00349	mg/L	0.000054	-0.00349	mg/L	0.000054	1.54%
Fe 273.955†	-2.4	-0.00191	mg/L	0.002227	-0.00191	mg/L	0.002227	116.48%
K 766.490†	-41.8	-0.02400	mg/L	0.007835	-0.02400	mg/L	0.007835	32.64%
Mg 279.077†	-8.1	-0.00681	mg/L	0.002065	-0.00681	mg/L	0.002065	30.31%
Mn 257.610†	0.3	0.00001	mg/L	0.000214	0.00001	mg/L	0.000214	>999.9%
Mo 202.031†	8.3	0.00047	mg/L	0.000361	0.00047	mg/L	0.000361	76.94%
Na 589.592†	23.3	0.00229	mg/L	0.002882	0.00229	mg/L	0.002882	125.73%
Na 330.237†	13.0	0.5186	mg/L	0.44411	0.5186	mg/L	0.44411	85.64%
Ni 231.604†	2.4	0.00064	mg/L	0.002513	0.00064	mg/L	0.002513	391.64%
Pb 220.353†	1.1	0.00016	mg/L	0.000255	0.00016	mg/L	0.000255	155.83%
Sb 206.836†	-2.2	-0.00078	mg/L	0.001074	-0.00078	mg/L	0.001074	137.44%
Se 196.026†	-1.7	-0.00133	mg/L	0.002053	-0.00133	mg/L	0.002053	154.92%
Si 288.158†	5.0	0.00289	mg/L	0.003423	0.00289	mg/L	0.003423	118.42%
Sn 189.927†	2.8	0.00082	mg/L	0.001181	0.00082	mg/L	0.001181	143.65%
Sr 421.552†	40.7	0.00006	mg/L	0.000036	0.00006	mg/L	0.000036	63.91%
Ti 334.903†	5.4	0.00031	mg/L	0.000670	0.00031	mg/L	0.000670	216.91%
Tl 190.801†	9.3	0.00437	mg/L	0.000795	0.00437	mg/L	0.000795	18.21%
V 292.402†	-10.1	-0.00009	mg/L	0.000096	-0.00009	mg/L	0.000096	103.92%
Zn 206.200†	-0.1	-0.00004	mg/L	0.000683	-0.00004	mg/L	0.000683	>999.9%



Sequence No.: 13  
Sample ID: VS22 E SWC

Autosampler Location: 338  
Date Collected: 11/27/2012 2:47:08 PM  
Data Type: Original

Dilution: 5.000000X

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Nebulizer Parameters: VS22 E SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

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Mean Data: VS22 E SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2351552.4	106.4	%	0.52				0.49%
ScR 361.383	307532.9	112.0	%	2.57				2.30%
Ag 328.068†	6.3	0.00008	mg/L	0.000209	0.00040	mg/L	0.001044	263.00%
Al 308.215†	92622.5	66.57	mg/L	1.903	332.8	mg/L	9.52	2.86%
As 188.979†	-43.4	0.03809	mg/L	0.005627	0.1904	mg/L	0.02814	14.78%
B 249.677†	74.0	0.01124	mg/L	0.001496	0.05621	mg/L	0.007478	13.30%
Ba 233.527†	6779.5	1.702	mg/L	0.0341	8.512	mg/L	0.1705	2.00%
Be 313.042†	981.1	0.00182	mg/L	0.000072	0.00911	mg/L	0.000361	3.96%
Ca 317.933†	337390.0	27.70	mg/L	0.844	138.5	mg/L	4.22	3.05%
Cd 228.802†	437.9	0.01692	mg/L	0.000267	0.08459	mg/L	0.001336	1.58%
Co 228.616†	1122.9	0.02786	mg/L	0.000416	0.1393	mg/L	0.00208	1.49%
Cr 267.716†	463.0	0.08412	mg/L	0.001123	0.4206	mg/L	0.00561	1.33%
Cu 324.752†	11834.6	0.05640	mg/L	0.000413	0.2820	mg/L	0.00207	0.73%
Fe 273.955†	90682.7	72.87	mg/L	2.137	364.3	mg/L	10.69	2.93%
K 766.490†	11041.8	6.341	mg/L	0.2114	31.71	mg/L	1.057	3.33%
Mg 279.077†	18568.3	15.66	mg/L	0.451	78.30	mg/L	2.256	2.88%
Mn 257.610†	126766.2	3.869	mg/L	0.1119	19.35	mg/L	0.559	2.89%
Mo 202.031†	58.9	0.00305	mg/L	0.000366	0.01523	mg/L	0.001830	12.02%
Na 589.592†	6585.8	0.6466	mg/L	0.01847	3.233	mg/L	0.0923	2.86%
Na 330.237†	21.2	1.059	mg/L	0.1562	5.297	mg/L	0.7811	14.75%
Ni 231.604†	267.0	0.07199	mg/L	0.001797	0.3600	mg/L	0.00899	2.50%
Pb 220.353†	5190.9	0.7434	mg/L	0.00586	3.717	mg/L	0.0293	0.79%
Sb 206.836†	11.2	0.00415	mg/L	0.001686	0.02077	mg/L	0.008430	40.58%
Se 196.026†	1.9	0.00136	mg/L	0.001287	0.00682	mg/L	0.006436	94.42%
Si 288.158†	1967.0	1.130	mg/L	0.0173	5.651	mg/L	0.0867	1.53%
Sn 189.927†	-33.3	-0.00603	mg/L	0.001347	-0.03017	mg/L	0.006735	22.33%
Sr 421.552†	188057.8	0.2577	mg/L	0.00732	1.289	mg/L	0.0366	2.84%
Ti 334.903†	41518.2	2.362	mg/L	0.0674	11.81	mg/L	0.337	2.85%
Tl 190.801†	3.8	0.00893	mg/L	0.000331	0.04466	mg/L	0.001654	3.70%
V 292.402†	13722.5	0.1266	mg/L	0.00109	0.6331	mg/L	0.00543	0.86%
Zn 206.200†	3418.2	0.9976	mg/L	0.01804	4.988	mg/L	0.0902	1.81%

Sequence No.: 14

Sample ID: VS22 F SWC

Autosampler Location: 339

Date Collected: 11/27/2012 2:51:09 PM

Data Type: Original

Dilution: 5.000000X

## Nebulizer Parameters: VS22 F SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: VS22 F SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2364852.3	107.0	%	0.40				0.38%
ScR 361.383	307168.6	111.8	%	1.03				0.92%
Ag 328.068†	-70.8	-0.00044	mg/L	0.000103	-0.00221	mg/L	0.000517	23.40%
Al 308.215†	130341.2	93.68	mg/L	1.164	468.4	mg/L	5.82	1.24%
As 188.979†	-67.1	0.04748	mg/L	0.001030	0.2374	mg/L	0.00515	2.17%
B 249.677†	66.2	0.01006	mg/L	0.001286	0.05028	mg/L	0.006430	12.79%
Ba 233.527†	5516.6	1.383	mg/L	0.0111	6.915	mg/L	0.0553	0.80%
Be 313.042†	3381.1	0.00641	mg/L	0.000091	0.03203	mg/L	0.000453	1.42%
Ca 317.933†	260337.0	21.37	mg/L	0.266	106.9	mg/L	1.33	1.25%
Cd 228.802†	365.7	0.01414	mg/L	0.000101	0.07068	mg/L	0.000507	0.72%
Co 228.616†	1124.5	0.02629	mg/L	0.000123	0.1315	mg/L	0.00062	0.47%
Cr 267.716†	365.4	0.06688	mg/L	0.001059	0.3344	mg/L	0.00529	1.58%
Cu 324.752†	34108.8	0.1575	mg/L	0.00088	0.7877	mg/L	0.00441	0.56%
Fe 273.955†	91651.2	73.65	mg/L	1.054	368.2	mg/L	5.27	1.43%
K 766.490†	8628.1	4.955	mg/L	0.0614	24.78	mg/L	0.307	1.24%
Mg 279.077†	14550.5	12.26	mg/L	0.156	61.31	mg/L	0.782	1.28%
Mn 257.610†	153121.2	4.673	mg/L	0.0666	23.37	mg/L	0.333	1.42%
Mo 202.031†	49.8	0.00260	mg/L	0.000443	0.01298	mg/L	0.002213	17.05%
Na 589.592†	8380.0	0.8227	mg/L	0.00972	4.114	mg/L	0.0486	1.18%
Na 330.237†	17.4	1.103	mg/L	0.3258	5.517	mg/L	1.6288	29.52%
Ni 231.604†	217.0	0.05852	mg/L	0.000707	0.2926	mg/L	0.00354	1.21%
Pb 220.353†	3242.4	0.4755	mg/L	0.00084	2.378	mg/L	0.0042	0.18%
Sb 206.836†	10.7	0.00460	mg/L	0.001143	0.02300	mg/L	0.005715	24.85%
Se 196.026†	2.7	0.00201	mg/L	0.005501	0.01003	mg/L	0.027507	274.23%
Si 288.158†	2173.5	1.248	mg/L	0.0115	6.241	mg/L	0.0575	0.92%
Sn 189.927†	-21.6	-0.00324	mg/L	0.001380	-0.01618	mg/L	0.006901	42.65%
Sr 421.552†	219423.5	0.3007	mg/L	0.00368	1.504	mg/L	0.0184	1.22%
Ti 334.903†	56382.3	3.209	mg/L	0.0424	16.05	mg/L	0.212	1.32%
Tl 190.801†	-2.5	0.00609	mg/L	0.000583	0.03045	mg/L	0.002915	9.57%
V 292.402†	12420.4	0.1139	mg/L	0.00017	0.5694	mg/L	0.00085	0.15%
Zn 206.200†	3352.5	0.9784	mg/L	0.00904	4.892	mg/L	0.0452	0.92%

Sequence No.: 15  
Sample ID: VS22 G SWC

Autosampler Location: 340  
Date Collected: 11/27/2012 2:55:08 PM  
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS22 G SWC

Analyte Back Pressure Flow  
All 217.0 kPa 0.75 L/min

Mean Data: VS22 G SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2387215.6	108.0 %	0.57			0.53%
ScR 361.383	307097.6	111.8 %	0.24			0.22%
Ag 328.068†	11.4	0.00013 mg/L	0.000243	0.00063 mg/L	0.001217	193.90%
Al 308.215†	136860.6	98.36 mg/L	1.072	491.8 mg/L	5.36	1.09%
As 188.979†	-51.0	0.05849 mg/L	0.004403	0.2925 mg/L	0.02202	7.53%
B 249.677†	75.3	0.01141 mg/L	0.000668	0.05704 mg/L	0.003338	5.85%
Ba 233.527†	9037.9	2.269 mg/L	0.0186	11.35 mg/L	0.093	0.82%
Be 313.042†	1219.3	0.00226 mg/L	0.000024	0.01130 mg/L	0.000119	1.05%
Ca 317.933†	317368.6	26.06 mg/L	0.344	130.3 mg/L	1.72	1.32%
Cd 228.802†	521.1	0.02003 mg/L	0.000277	0.1001 mg/L	0.00138	1.38%
Co 228.616†	1580.5	0.03945 mg/L	0.000045	0.1973 mg/L	0.00022	0.11%
Cr 267.716†	582.8	0.1055 mg/L	0.00074	0.5273 mg/L	0.00369	0.70%
Cu 324.752†	21189.2	0.09978 mg/L	0.000570	0.4989 mg/L	0.00285	0.57%
Fe 273.955†	121673.4	97.77 mg/L	1.291	488.9 mg/L	6.46	1.32%
K 766.490†	13440.4	7.719 mg/L	0.0877	38.59 mg/L	0.438	1.14%
Mg 279.077†	28503.3	24.05 mg/L	0.226	120.2 mg/L	1.13	0.94%
Mn 257.610†	299774.9	9.150 mg/L	0.1119	45.75 mg/L	0.560	1.22%
Mo 202.031†	67.8	0.00357 mg/L	0.000559	0.01785 mg/L	0.002793	15.65%
Na 589.592†	10661.2	1.047 mg/L	0.0098	5.234 mg/L	0.0488	0.93%
Na 330.237†	33.0	1.560 mg/L	0.2140	7.800 mg/L	1.0700	13.72%
Ni 231.604†	334.3	0.09015 mg/L	0.000488	0.4508 mg/L	0.00244	0.54%
Pb 220.353†	5412.5	0.7811 mg/L	0.00132	3.906 mg/L	0.0066	0.17%
Sb 206.836†	17.2	0.00651 mg/L	0.003691	0.03253 mg/L	0.018454	56.72%
Se 196.026†	8.9	0.00679 mg/L	0.007810	0.03397 mg/L	0.039050	114.96%
Si 288.158†	2526.5	1.452 mg/L	0.0069	7.261 mg/L	0.0344	0.47%
Sn 189.927†	-27.6	-0.00443 mg/L	0.000428	-0.02216 mg/L	0.002138	9.65%
Sr 421.552†	233889.6	0.3205 mg/L	0.00333	1.603 mg/L	0.0167	1.04%
Tl 334.903†	57000.5	3.244 mg/L	0.0393	16.22 mg/L	0.196	1.21%
Tl 190.801†	-7.6	0.00604 mg/L	0.000491	0.03019 mg/L	0.002455	8.13%
V 292.402†	17892.8	0.1655 mg/L	0.00033	0.8277 mg/L	0.00164	0.20%
Zn 206.200†	5209.1	1.520 mg/L	0.0159	7.601 mg/L	0.0797	1.05%

Sequence No.: 16

Autosampler Location: 341

Sample ID: VS22 H SWC

Date Collected: 11/27/2012 2:59:07 PM

Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS22 H SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VS22 H SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2394924.3	108.3	%	0.29			0.27%
ScR 361.383	305821.3	111.3	%	0.43			0.39%
Ag 328.068†	-80.7	-0.00050	mg/L	0.000285	-0.00249	mg/L	0.001424 57.11%
Al 308.215†	112659.5	80.97	mg/L	0.497	404.8	mg/L	2.49 0.61%
As 188.979†	-50.0	0.06267	mg/L	0.003557	0.3133	mg/L	0.01778 5.68%
B 249.677†	62.9	0.00952	mg/L	0.000873	0.04760	mg/L	0.004365 9.17%
Ba 233.527†	6094.7	1.527	mg/L	0.0120	7.633	mg/L	0.0598 0.78%
Be 313.042†	1009.8	0.00186	mg/L	0.000009	0.00931	mg/L	0.000043 0.47%
Ca 317.933†	232853.3	19.12	mg/L	0.138	95.59	mg/L	0.688 0.72%
Cd 228.802†	334.7	0.01270	mg/L	0.000096	0.06350	mg/L	0.000482 0.76%
Co 228.616†	1450.2	0.03552	mg/L	0.000108	0.1776	mg/L	0.00054 0.30%
Cr 267.716†	506.6	0.09227	mg/L	0.000750	0.4613	mg/L	0.00375 0.81%
Cu 324.752†	13290.7	0.06353	mg/L	0.000656	0.3176	mg/L	0.00328 1.03%
Fe 273.955†	111207.8	89.36	mg/L	0.765	446.8	mg/L	3.82 0.86%
K 766.490†	11272.5	6.474	mg/L	0.0375	32.37	mg/L	0.188 0.58%
Mg 279.077†	21879.7	18.45	mg/L	0.147	92.25	mg/L	0.737 0.80%
Mn 257.610†	189679.5	5.790	mg/L	0.0451	28.95	mg/L	0.226 0.78%
Mo 202.031†	51.7	0.00273	mg/L	0.000254	0.01364	mg/L	0.001272 9.33%
Na 589.592†	9772.3	0.9594	mg/L	0.00605	4.797	mg/L	0.0303 0.63%
Na 330.237†	30.8	1.659	mg/L	0.1705	8.295	mg/L	0.8527 10.28%
Ni 231.604†	278.5	0.07510	mg/L	0.000522	0.3755	mg/L	0.00261 0.69%
Pb 220.353†	7291.3	1.042	mg/L	0.0032	5.208	mg/L	0.0159 0.30%
Sb 206.836†	22.5	0.00854	mg/L	0.000600	0.04271	mg/L	0.002999 7.02%
Se 196.026†	8.0	0.00610	mg/L	0.002951	0.03052	mg/L	0.014757 48.34%
Si 288.158†	2130.7	1.224	mg/L	0.0056	6.122	mg/L	0.0282 0.46%
Sn 189.927†	-21.1	-0.00335	mg/L	0.000278	-0.01674	mg/L	0.001391 8.31%
Sr 421.552†	129633.4	0.1777	mg/L	0.00115	0.8883	mg/L	0.00573 0.65%
Ti 334.903†	58911.9	3.353	mg/L	0.0228	16.77	mg/L	0.114 0.68%
Tl 190.801†	0.1	0.00880	mg/L	0.002089	0.04401	mg/L	0.010445 23.73%
V 292.402†	15910.8	0.1465	mg/L	0.00111	0.7324	mg/L	0.00555 0.76%
Zn 206.200†	3507.3	1.024	mg/L	0.0085	5.118	mg/L	0.0425 0.83%

Sequence No.: 17  
 Sample ID: VS22 I SWC

Autosampler Location: 342  
 Date Collected: 11/27/2012 3:03:07 PM  
 Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS22 I SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

Mean Data: VS22 I SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		RSD
	Intensity				Conc. Units	Std.Dev.	
ScA 357.253	2392933.0		108.2 %	0.33			0.30%
ScR 361.383	305293.9		111.2 %	0.65			0.59%
Ag 328.068†	-19.7	-0.00009	mg/L	0.000126	-0.00045	mg/L	0.000631 139.07%
Al 308.215†	143781.5	103.3	mg/L	0.52	516.7	mg/L	2.60 0.50%
As 188.979†	-79.6	0.04498	mg/L	0.002199	0.2249	mg/L	0.01100 4.89%
B 249.677†	64.7	0.00978	mg/L	0.001321	0.04890	mg/L	0.006607 13.51%
Ba 233.527†	6409.1	1.604	mg/L	0.0165	8.018	mg/L	0.0826 1.03%
Be 313.042†	1424.8	0.00266	mg/L	0.000029	0.01328	mg/L	0.000146 1.10%
Ca 317.933†	225284.1	18.50	mg/L	0.122	92.48	mg/L	0.609 0.66%
Cd 228.802†	215.0	0.00799	mg/L	0.000013	0.03994	mg/L	0.000063 0.16%
Co 228.616†	1736.8	0.04378	mg/L	0.000298	0.2189	mg/L	0.00149 0.68%
Cr 267.716†	594.0	0.1082	mg/L	0.00170	0.5409	mg/L	0.00852 1.58%
Cu 324.752†	16343.2	0.07806	mg/L	0.000780	0.3903	mg/L	0.00390 1.00%
Fe 273.955†	130028.8	104.5	mg/L	0.72	522.4	mg/L	3.58 0.69%
K 766.490†	11115.6	6.384	mg/L	0.0500	31.92	mg/L	0.250 0.78%
Mg 279.077†	21719.6	18.31	mg/L	0.207	91.54	mg/L	1.036 1.13%
Mn 257.610†	355989.5	10.87	mg/L	0.066	54.33	mg/L	0.331 0.61%
Mo 202.031†	67.2	0.00361	mg/L	0.000102	0.01807	mg/L	0.000508 2.81%
Na 589.592†	7523.6	0.7387	mg/L	0.00261	3.693	mg/L	0.0131 0.35%
Na 330.237†	13.5	1.103	mg/L	0.1831	5.516	mg/L	0.9153 16.59%
Ni 231.604†	498.0	0.1343	mg/L	0.00226	0.6716	mg/L	0.01129 1.68%
Pb 220.353†	1849.5	0.2808	mg/L	0.00098	1.404	mg/L	0.0049 0.35%
Sb 206.836†	10.2	0.00401	mg/L	0.001290	0.02006	mg/L	0.006451 32.16%
Se 196.026†	14.4	0.01111	mg/L	0.002081	0.05556	mg/L	0.010403 18.72%
Si 288.158†	1681.8	0.9669	mg/L	0.01064	4.834	mg/L	0.0532 1.10%
Sn 189.927†	-23.5	-0.00416	mg/L	0.000486	-0.02079	mg/L	0.002430 11.69%
Sr 421.552†	151647.4	0.2078	mg/L	0.00096	1.039	mg/L	0.0048 0.46%
Ti 334.903†	59712.9	3.399	mg/L	0.0147	16.99	mg/L	0.073 0.43%
Tl 190.801†	-12.6	0.00447	mg/L	0.002263	0.02234	mg/L	0.011313 50.64%
V 292.402†	15140.9	0.1395	mg/L	0.00141	0.6975	mg/L	0.00703 1.01%
Zn 206.200†	2206.9	0.6441	mg/L	0.00682	3.220	mg/L	0.0341 1.06%

Sequence No.: 18

Autosampler Location: 343

Sample ID: VS22 J SWC

Date Collected: 11/27/2012 3:07:06 PM

Data Type: Original

Dilution: 5.000000X

## Nebulizer Parameters: VS22 J SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: VS22 J SWC

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
ScA 357.253	2401228.4	108.6	%	0.13			0.12%
ScR 361.383	307527.4	112.0	%	1.12			1.00%
Ag 328.068†	24.7	0.00021	mg/L	0.000220	0.00104	mg/L	0.001101 105.90%
Al 308.215†	129885.2	93.35	mg/L	0.495	466.7	mg/L	2.47 0.53%
As 188.979†	-30.9	0.06717	mg/L	0.001927	0.3359	mg/L	0.00964 2.87%
B 249.677†	39.7	0.00597	mg/L	0.000497	0.02985	mg/L	0.002483 8.32%
Ba 233.527†	6526.9	1.635	mg/L	0.0176	8.175	mg/L	0.0880 1.08%
Be 313.042†	1180.3	0.00219	mg/L	0.000043	0.01096	mg/L	0.000214 1.95%
Ca 317.933†	264356.5	21.70	mg/L	0.102	108.5	mg/L	0.51 0.47%
Cd 228.802†	494.8	0.01894	mg/L	0.000124	0.09468	mg/L	0.000621 0.66%
Co 228.616†	1527.9	0.03828	mg/L	0.000266	0.1914	mg/L	0.00133 0.69%
Cr 267.716†	528.8	0.09598	mg/L	0.001543	0.4799	mg/L	0.00771 1.61%
Cu 324.752†	16914.2	0.08023	mg/L	0.000505	0.4011	mg/L	0.00252 0.63%
Fe 273.955†	116948.6	93.98	mg/L	0.417	469.9	mg/L	2.08 0.44%
K 766.490†	10125.1	5.815	mg/L	0.0717	29.07	mg/L	0.359 1.23%
Mg 279.077†	25947.7	21.89	mg/L	0.261	109.4	mg/L	1.30 1.19%
Mn 257.610†	241159.9	7.361	mg/L	0.0315	36.80	mg/L	0.157 0.43%
Mo 202.031†	77.2	0.00415	mg/L	0.000067	0.02076	mg/L	0.000333 1.60%
Na 589.592†	7582.9	0.7445	mg/L	0.00402	3.722	mg/L	0.0201 0.54%
Na 330.237†	20.3	1.108	mg/L	0.2821	5.539	mg/L	1.4104 25.47%
Ni 231.604†	332.5	0.08967	mg/L	0.000782	0.4484	mg/L	0.00391 0.87%
Pb 220.353†	5745.0	0.8269	mg/L	0.00291	4.134	mg/L	0.0146 0.35%
Sb 206.836†	21.2	0.00790	mg/L	0.000647	0.03949	mg/L	0.003236 8.20%
Se 196.026†	1.6	0.00114	mg/L	0.004830	0.00569	mg/L	0.024150 424.24%
Si 288.158†	3552.8	2.040	mg/L	0.0314	10.20	mg/L	0.157 1.54%
Sn 189.927†	-23.3	-0.00371	mg/L	0.001372	-0.01857	mg/L	0.006859 36.93%
Sr 421.552†	170266.3	0.2333	mg/L	0.00139	1.167	mg/L	0.0069 0.59%
Ti 334.903†	54223.5	3.086	mg/L	0.0157	15.43	mg/L	0.079 0.51%
Tl 190.801†	-2.3	0.00817	mg/L	0.003417	0.04085	mg/L	0.017084 41.82%
V 292.402†	15474.8	0.1426	mg/L	0.00058	0.7131	mg/L	0.00289 0.40%
Zn 206.200†	4227.8	1.234	mg/L	0.0132	6.170	mg/L	0.0662 1.07%

Sequence No.: 19  
Sample ID: VS22 K SWC

Autosampler Location: 344  
Date Collected: 11/27/2012 3:11:05 PM  
Data Type: Original

Dilution: 5.000000X

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Nebulizer Parameters: VS22 K SWC

Analyte Back Pressure Flow  
All 218.0 kPa 0.75 L/min  
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Mean Data: VS22 K SWC

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2419803.8	109.4	%	0.33				0.30%
ScR 361.383	306853.0	111.7	%	0.86				0.77%
Ag 328.068†	-58.5	-0.00034	mg/L	0.000180	-0.00171	mg/L	0.000901	52.62%
Al 308.215†	115636.1	83.11	mg/L	0.539	415.5	mg/L	2.69	0.65%
As 188.979†	-133.3	0.01938	mg/L	0.001422	0.09691	mg/L	0.007111	7.34%
B 249.677†	48.3	0.00729	mg/L	0.000304	0.03645	mg/L	0.001522	4.17%
Ba 233.527†	4348.3	1.085	mg/L	0.00098	5.423	mg/L	0.0489	0.90%
Be 313.042†	1540.2	0.00287	mg/L	0.000041	0.01433	mg/L	0.000206	1.44%
Ca 317.933†	313460.3	25.74	mg/L	0.216	128.7	mg/L	1.08	0.84%
Cd 228.802†	239.7	0.00925	mg/L	0.000192	0.04627	mg/L	0.000958	2.07%
Co 228.616†	1437.3	0.03444	mg/L	0.000322	0.1722	mg/L	0.00161	0.94%
Cr 267.716†	522.8	0.09512	mg/L	0.000289	0.4756	mg/L	0.00144	0.30%
Cu 324.752†	19464.8	0.09157	mg/L	0.000445	0.4578	mg/L	0.00223	0.49%
Fe 273.955†	113576.3	91.27	mg/L	0.926	456.3	mg/L	4.63	1.02%
K 766.490†	8481.4	4.871	mg/L	0.0295	24.35	mg/L	0.148	0.61%
Mg 279.077†	25985.9	21.92	mg/L	0.145	109.6	mg/L	0.72	0.66%
Mn 257.610†	110436.3	3.371	mg/L	0.0318	16.85	mg/L	0.159	0.94%
Mo 202.031†	53.0	0.00273	mg/L	0.000048	0.01364	mg/L	0.000241	1.77%
Na 589.592†	7974.3	0.7829	mg/L	0.00540	3.915	mg/L	0.0270	0.69%
Na 330.237†	10.5	1.051	mg/L	0.1676	5.255	mg/L	0.8379	15.95%
Ni 231.604†	239.3	0.06455	mg/L	0.000210	0.3227	mg/L	0.00105	0.33%
Pb 220.353†	2675.5	0.3926	mg/L	0.00152	1.963	mg/L	0.0076	0.39%
Sb 206.836†	7.4	0.00343	mg/L	0.001753	0.01717	mg/L	0.008766	51.05%
Se 196.026†	10.5	0.00802	mg/L	0.003281	0.04008	mg/L	0.016403	40.92%
Si 288.158†	2375.8	1.365	mg/L	0.0104	6.827	mg/L	0.0520	0.76%
Sn 189.927†	-31.4	-0.00553	mg/L	0.000808	-0.02764	mg/L	0.004038	14.61%
Sr 421.552†	379107.5	0.5196	mg/L	0.00365	2.598	mg/L	0.0182	0.70%
Ti 334.903†	65376.7	3.721	mg/L	0.0247	18.60	mg/L	0.124	0.66%
Tl 190.801†	-7.1	0.00556	mg/L	0.000647	0.02781	mg/L	0.003237	11.64%
V 292.402†	18411.3	0.1695	mg/L	0.00083	0.8473	mg/L	0.00416	0.49%
Zn 206.200†	2233.4	0.6518	mg/L	0.00672	3.259	mg/L	0.0336	1.03%

Sequence No.: 20  
Sample ID: VS22 L SWC

Autosampler Location: 345  
Date Collected: 11/27/2012 3:15:05 PM  
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VS22 L SWC

Analyte Back Pressure Flow  
All 217.0 kPa 0.75 L/min

Mean Data: VS22 L SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2385751.4	107.9	%	0.64			0.59%
ScR 361.383	299584.2	109.1	%	0.25			0.23%
Ag 328.068†	-47.2	-0.00028	mg/L	0.000427	-0.00142	mg/L	0.002137 150.65%
Al 308.215†	71454.7	51.35	mg/L	0.290	256.8	mg/L	1.45 0.57%
As 188.979†	-62.1	0.02877	mg/L	0.000791	0.1439	mg/L	0.00395 2.75%
B 249.677†	164.9	0.02514	mg/L	0.000226	0.1257	mg/L	0.00113 0.90%
Ba 233.527†	4592.7	1.151	mg/L	0.0061	5.755	mg/L	0.0307 0.53%
Be 313.042†	1000.4	0.00186	mg/L	0.000016	0.00930	mg/L	0.000080 0.86%
Ca 317.933†	1105689.6	90.78	mg/L	0.246	453.9	mg/L	1.23 0.27%
Cd 228.802†	407.9	0.01589	mg/L	0.000213	0.07946	mg/L	0.001067 1.34%
Co 228.616†	1102.5	0.02699	mg/L	0.000427	0.1350	mg/L	0.00214 1.58%
Cr 267.716†	485.4	0.08695	mg/L	0.000394	0.4348	mg/L	0.00197 0.45%
Cu 324.752†	27469.1	0.1270	mg/L	0.00179	0.6350	mg/L	0.00896 1.41%
Fe 273.955†	79011.8	63.49	mg/L	0.364	317.5	mg/L	1.82 0.57%
K 766.490†	9472.3	5.440	mg/L	0.0445	27.20	mg/L	0.222 0.82%
Mg 279.077†	21050.5	17.76	mg/L	0.096	88.82	mg/L	0.482 0.54%
Mn 257.610†	153052.2	4.671	mg/L	0.0318	23.36	mg/L	0.159 0.68%
Mo 202.031†	96.1	0.00448	mg/L	0.000304	0.02240	mg/L	0.001520 6.79%
Na 589.592†	10784.6	1.059	mg/L	0.0032	5.294	mg/L	0.0162 0.31%
Na 330.237†	30.2	1.424	mg/L	0.2440	7.121	mg/L	1.2202 17.13%
Ni 231.604†	229.0	0.06176	mg/L	0.000246	0.3088	mg/L	0.00123 0.40%
Pb 220.353†	4582.9	0.6545	mg/L	0.00705	3.272	mg/L	0.0353 1.08%
Sb 206.836†	15.3	0.00553	mg/L	0.003832	0.02764	mg/L	0.019160 69.32%
Se 196.026†	-7.6	-0.00597	mg/L	0.005793	-0.02984	mg/L	0.028967 97.06%
Si 288.158†	2105.2	1.210	mg/L	0.0018	6.049	mg/L	0.0089 0.15%
Sr 189.927†	-52.2	-0.00376	mg/L	0.001115	-0.01882	mg/L	0.005574 29.61%
Sr 421.552†	666046.1	0.9128	mg/L	0.00142	4.564	mg/L	0.0071 0.16%
Ti 334.903†	45433.2	2.582	mg/L	0.0150	12.91	mg/L	0.075 0.58%
Tl 190.801†	12.2	0.01191	mg/L	0.002231	0.05955	mg/L	0.011153 18.73%
V 292.402†	12335.2	0.1139	mg/L	0.00159	0.5694	mg/L	0.00795 1.40%
Zn 206.200†	3862.7	1.127	mg/L	0.0047	5.637	mg/L	0.0237 0.42%



Sequence No.: 21

Sample ID: CV 10

Autosampler Location: 7

Date Collected: 11/27/2012 3:19:19 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
ScA 357.253	2351694.9	106.4	%	0.99			0.93%
ScR 361.383	297514.0	108.3	%	1.45			1.34%
Ag 328.068†	153080.2	1.029	mg/L	0.0108	1.029	mg/L	0.0108
Al 308.215†	2778.4	1.963	mg/L	0.0136	1.963	mg/L	0.0136
As 188.979†	3179.3	2.067	mg/L	0.0332	2.067	mg/L	0.0332
B 249.677†	6275.0	0.9580	mg/L	0.01414	0.9580	mg/L	0.01414
Ba 233.527†	3903.9	0.9867	mg/L	0.01214	0.9867	mg/L	0.01214
Be 313.042†	514447.6	0.9838	mg/L	0.01120	0.9838	mg/L	0.01120
Ca 317.933†	24896.9	2.044	mg/L	0.0299	2.044	mg/L	0.0299
Cd 228.802†	26151.7	1.025	mg/L	0.0130	1.025	mg/L	0.0130
Co 228.616†	33674.6	1.003	mg/L	0.0123	1.003	mg/L	0.0123
Cr 267.716†	5596.9	1.006	mg/L	0.0121	1.006	mg/L	0.0121
Cu 324.752†	221361.8	1.006	mg/L	0.0111	1.006	mg/L	0.0111
Fe 273.955†	2552.7	2.044	mg/L	0.0297	2.044	mg/L	0.0297
K 766.490†	34552.3	19.84	mg/L	0.328	19.84	mg/L	0.328
Mg 279.077†	2341.8	1.987	mg/L	0.0252	1.987	mg/L	0.0252
Mn 257.610†	33648.7	1.027	mg/L	0.0151	1.027	mg/L	0.0151
Mo 202.031†	17589.4	1.000	mg/L	0.0121	1.000	mg/L	0.0121
Na 589.592†	496393.0	48.74	mg/L	0.638	48.74	mg/L	0.638
Na 330.237†	1291.9	51.61	mg/L	0.957	51.61	mg/L	0.957
Ni 231.604†	3599.0	0.9709	mg/L	0.01182	0.9709	mg/L	0.01182
Pb 220.353†	14217.5	2.001	mg/L	0.0250	2.001	mg/L	0.0250
Sb 206.836†	6070.8	2.120	mg/L	0.0308	2.120	mg/L	0.0308
Se 196.026†	2555.2	1.983	mg/L	0.0308	1.983	mg/L	0.0308
Si 288.158†	3658.4	2.098	mg/L	0.0255	2.098	mg/L	0.0255
Sn 189.927†	3481.5	1.028	mg/L	0.0149	1.028	mg/L	0.0149
Sr 421.552†	704808.0	0.9659	mg/L	0.01382	0.9659	mg/L	0.01382
Tl 334.903†	18759.0	1.067	mg/L	0.0155	1.067	mg/L	0.0155
Tl 190.801†	4269.6	1.989	mg/L	0.0295	1.989	mg/L	0.0295
V 292.402†	103969.6	0.9860	mg/L	0.01217	0.9860	mg/L	0.01217
Zn 206.200†	3518.2	1.027	mg/L	0.0168	1.027	mg/L	0.0168

Sequence No.: 22

Sample ID: CB 7

Autosampler Location: 1

Date Collected: 11/27/2012 3:23:39 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2359509.2	106.7	%	0.30				0.28%
ScR 361.383	296045.4	107.8	%	0.82				0.76%
Ag 328.068†	-30.1	-0.00020	mg/L	0.000145	-0.00020	mg/L	0.000145	71.71%
Al 308.215†	-5.4	-0.00385	mg/L	0.002933	-0.00385	mg/L	0.002933	76.16%
As 188.979†	5.1	0.00324	mg/L	0.001315	0.00324	mg/L	0.001315	40.65%
B 249.677†	8.9	0.00136	mg/L	0.001624	0.00136	mg/L	0.001624	119.13%
Ba 233.527†	0.7	0.00017	mg/L	0.000835	0.00017	mg/L	0.000835	483.77%
Be 313.042†	-11.4	-0.00002	mg/L	0.000012	-0.00002	mg/L	0.000012	53.46%
Ca 317.933†	1.6	0.00013	mg/L	0.000945	0.00013	mg/L	0.000945	719.11%
Cd 228.802†	-6.7	-0.00029	mg/L	0.000107	-0.00029	mg/L	0.000107	37.06%
Co 228.616†	8.7	0.00026	mg/L	0.000158	0.00026	mg/L	0.000158	60.78%
Cr 267.716†	5.3	0.00096	mg/L	0.000526	0.00096	mg/L	0.000526	55.00%
Cu 324.752†	-797.7	-0.00363	mg/L	0.000043	-0.00363	mg/L	0.000043	1.18%
Fe 273.955†	-1.2	-0.00098	mg/L	0.000813	-0.00098	mg/L	0.000813	82.88%
K 766.490†	-32.3	-0.01853	mg/L	0.005040	-0.01853	mg/L	0.005040	27.19%
Mg 279.077†	-2.9	-0.00242	mg/L	0.003151	-0.00242	mg/L	0.003151	130.31%
Mn 257.610†	5.6	0.00017	mg/L	0.000037	0.00017	mg/L	0.000037	21.31%
Mo 202.031†	4.1	0.00023	mg/L	0.000332	0.00023	mg/L	0.000332	143.21%
Na 589.592†	58.4	0.00574	mg/L	0.005052	0.00574	mg/L	0.005052	88.09%
Na 330.237†	2.9	0.1164	mg/L	0.23288	0.1164	mg/L	0.23288	200.03%
Ni 231.604†	3.5	0.00094	mg/L	0.001483	0.00094	mg/L	0.001483	157.56%
Pb 220.353†	9.1	0.00128	mg/L	0.000550	0.00128	mg/L	0.000550	42.81%
Sb 206.836†	-1.3	-0.00046	mg/L	0.000837	-0.00046	mg/L	0.000837	182.15%
Se 196.026†	-4.7	-0.00363	mg/L	0.001580	-0.00363	mg/L	0.001580	43.55%
Si 288.158†	-3.7	-0.00210	mg/L	0.002617	-0.00210	mg/L	0.002617	124.49%
Sn 189.927†	2.7	0.00079	mg/L	0.001544	0.00079	mg/L	0.001544	195.28%
Sr 421.552†	80.7	0.00011	mg/L	0.000027	0.00011	mg/L	0.000027	24.67%
Ti 334.903†	-9.4	-0.00053	mg/L	0.000760	-0.00053	mg/L	0.000760	142.41%
Tl 190.801†	9.0	0.00422	mg/L	0.000937	0.00422	mg/L	0.000937	22.22%
V 292.402†	7.5	0.00008	mg/L	0.000084	0.00008	mg/L	0.000084	111.01%
Zn 206.200†	-1.4	-0.00041	mg/L	0.000751	-0.00041	mg/L	0.000751	183.32%

Sequence No.: 23

Autosampler Location: 301

Sample ID: CRI

Date Collected: 11/27/2012 3:27:53 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: CRI

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2347879.1	106.2	%	1.30				1.23%
ScR 361.383	298076.8	108.5	%	1.26				1.16%
Ag 328.068†	442.2	0.00297	mg/L	0.000022	0.00297	mg/L	0.000022	0.75%
Al 308.215†	58.3	0.04176	mg/L	0.003169	0.04176	mg/L	0.003169	7.59%
As 188.979†	78.4	0.05039	mg/L	0.000187	0.05039	mg/L	0.000187	0.37%
B 249.677†	129.2	0.01974	mg/L	0.001423	0.01974	mg/L	0.001423	7.21%
Ba 233.527†	11.3	0.00284	mg/L	0.000821	0.00284	mg/L	0.000821	28.87%
Be 313.042†	472.0	0.00090	mg/L	0.000013	0.00090	mg/L	0.000013	1.44%
Ca 317.933†	599.1	0.04919	mg/L	0.001144	0.04919	mg/L	0.001144	2.33%
Cd 228.802†	54.2	0.00183	mg/L	0.000231	0.00183	mg/L	0.000231	12.67%
Co 228.616†	127.1	0.00379	mg/L	0.000035	0.00379	mg/L	0.000035	0.92%
Cr 267.716†	31.5	0.00565	mg/L	0.000591	0.00565	mg/L	0.000591	10.45%
Cu 324.752†	-358.9	-0.00163	mg/L	0.000137	-0.00163	mg/L	0.000137	8.38%
Fe 273.955†	62.0	0.04980	mg/L	0.000618	0.04980	mg/L	0.000618	1.24%
K 766.490†	784.4	0.4505	mg/L	0.03770	0.4505	mg/L	0.03770	8.37%
Mg 279.077†	56.5	0.04776	mg/L	0.007262	0.04776	mg/L	0.007262	15.21%
Mn 257.610†	37.3	0.00114	mg/L	0.000156	0.00114	mg/L	0.000156	13.67%
Mo 202.031†	87.7	0.00499	mg/L	0.000100	0.00499	mg/L	0.000100	2.00%
Na 589.592†	4730.0	0.4644	mg/L	0.00398	0.4644	mg/L	0.00398	0.86%
Na 330.237†	16.4	0.6549	mg/L	0.59514	0.6549	mg/L	0.59514	90.88%
Ni 231.604†	38.0	0.01026	mg/L	0.002040	0.01026	mg/L	0.002040	19.87%
Pb 220.353†	147.0	0.02071	mg/L	0.000496	0.02071	mg/L	0.000496	2.39%
Sb 206.836†	140.8	0.04921	mg/L	0.000758	0.04921	mg/L	0.000758	1.54%
Se 196.026†	61.2	0.04753	mg/L	0.001930	0.04753	mg/L	0.001930	4.06%
Si 288.158†	110.1	0.06312	mg/L	0.002676	0.06312	mg/L	0.002676	4.24%
Sn 189.927†	34.6	0.01022	mg/L	0.000494	0.01022	mg/L	0.000494	4.84%
Sr 421.552†	699.7	0.00096	mg/L	0.000052	0.00096	mg/L	0.000052	5.44%
Ti 334.903†	55.1	0.00313	mg/L	0.001299	0.00313	mg/L	0.001299	41.48%
Tl 190.801†	111.9	0.05235	mg/L	0.001142	0.05235	mg/L	0.001142	2.18%
V 292.402†	317.1	0.00302	mg/L	0.000165	0.00302	mg/L	0.000165	5.47%
Zn 206.200†	33.3	0.00973	mg/L	0.000681	0.00973	mg/L	0.000681	7.00%

Sequence No.: 24  
Sample ID: ICSA

Autosampler Location: 302  
Date Collected: 11/27/2012 3:32:08 PM  
Data Type: Original

Dilution: 1.000000X

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Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

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Mean Data: ICSA

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2331685.5	105.5	%	0.66			0.63%
ScR 361.383	293622.7	106.9	%	0.20			0.19%
Ag 328.068†	-178.9	-0.00120	mg/L	0.000301	-0.00120	mg/L	0.000301 25.11%
Al 308.215†	272104.4	195.6	mg/L	0.96	195.6	mg/L	0.96 0.49%
As 188.979†	30.3	0.01385	mg/L	0.001543	0.01385	mg/L	0.001543 11.14%
B 249.677†	-33.7	-0.00515	mg/L	0.001699	-0.00515	mg/L	0.001699 33.01%
Ba 233.527†	113.1	-0.00342	mg/L	0.000052	-0.00342	mg/L	0.000052 1.52%
Be 313.042†	25.7	0.00005	mg/L	0.000016	0.00005	mg/L	0.000016 33.41%
Ca 317.933†	1199905.4	98.52	mg/L	0.928	98.52	mg/L	0.928 0.94%
Cd 228.802†	43.8	-0.00025	mg/L	0.000020	-0.00025	mg/L	0.000020 8.11%
Co 228.616†	67.2	-0.00055	mg/L	0.000148	-0.00055	mg/L	0.000148 26.89%
Cr 267.716†	13.0	0.00031	mg/L	0.000618	0.00031	mg/L	0.000618 201.67%
Cu 324.752†	-2566.4	-0.00388	mg/L	0.000039	-0.00388	mg/L	0.000039 1.00%
Fe 273.955†	243351.2	195.6	mg/L	2.58	195.6	mg/L	2.58 1.32%
K 766.490†	-22.4	-0.01288	mg/L	0.016615	-0.01288	mg/L	0.016615 128.98%
Mg 279.077†	120557.0	101.8	mg/L	0.31	101.8	mg/L	0.31 0.31%
Mn 257.610†	38.6	0.00116	mg/L	0.000293	0.00116	mg/L	0.000293 25.18%
Mo 202.031†	50.0	0.00178	mg/L	0.000294	0.00178	mg/L	0.000294 16.55%
Na 589.592†	138.8	0.01363	mg/L	0.003605	0.01363	mg/L	0.003605 26.45%
Na 330.237†	8.7	0.3486	mg/L	0.32708	0.3486	mg/L	0.32708 93.84%
Ni 231.604†	4.5	0.00122	mg/L	0.000795	0.00122	mg/L	0.000795 65.15%
Pb 220.353†	-304.6	-0.00409	mg/L	0.002380	-0.00409	mg/L	0.002380 58.20%
Sb 206.836†	29.7	0.01021	mg/L	0.001660	0.01021	mg/L	0.001660 16.25%
Se 196.026†	10.0	0.00774	mg/L	0.003799	0.00774	mg/L	0.003799 49.11%
Si 288.158†	-23.9	-0.00136	mg/L	0.001626	-0.00136	mg/L	0.001626 119.93%
Sn 189.927†	-67.1	-0.00760	mg/L	0.002590	-0.00760	mg/L	0.002590 34.05%
Sr 421.552†	2856.8	0.00392	mg/L	0.000019	0.00392	mg/L	0.000019 0.49%
Ti 334.903†	90.2	0.00043	mg/L	0.000281	0.00043	mg/L	0.000281 65.66%
Tl 190.801†	-32.1	0.00586	mg/L	0.002216	0.00586	mg/L	0.002216 37.84%
V 292.402†	1241.0	0.00489	mg/L	0.000165	0.00489	mg/L	0.000165 3.36%
Zn 206.200†	9.4	0.00274	mg/L	0.000479	0.00274	mg/L	0.000479 17.47%

Sequence No.: 25  
Sample ID: ICSAB

Autosampler Location: 303  
Date Collected: 11/27/2012 3:36:23 PM  
Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

## Mean Data: ICSAB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2362066.1	106.8	%	0.26				0.25%
ScR 361.383	296370.7	107.9	%	0.67				0.62%
Ag 328.068†	148327.3	0.9967	mg/L	0.00218	0.9967	mg/L	0.00218	0.22%
Al 308.215†	269907.1	194.0	mg/L	0.87	194.0	mg/L	0.87	0.45%
As 188.979†	1602.3	1.022	mg/L	0.0070	1.022	mg/L	0.0070	0.68%
B 249.677†	-8.7	-0.00327	mg/L	0.001180	-0.00327	mg/L	0.001180	36.12%
Ba 233.527†	4010.8	0.9821	mg/L	0.00330	0.9821	mg/L	0.00330	0.34%
Be 313.042†	515139.1	0.9851	mg/L	0.00462	0.9851	mg/L	0.00462	0.47%
Ca 317.933†	1198555.1	98.41	mg/L	0.486	98.41	mg/L	0.486	0.49%
Cd 228.802†	25432.3	1.001	mg/L	0.0021	1.001	mg/L	0.0021	0.21%
Co 228.616†	31584.6	0.9403	mg/L	0.00147	0.9403	mg/L	0.00147	0.16%
Cr 267.716†	5628.4	1.010	mg/L	0.0036	1.010	mg/L	0.0036	0.36%
Cu 324.752†	213762.0	0.9797	mg/L	0.00112	0.9797	mg/L	0.00112	0.11%
Fe 273.955†	242841.4	195.1	mg/L	0.93	195.1	mg/L	0.93	0.48%
K 766.490†	-116.6	-0.06695	mg/L	0.009025	-0.06695	mg/L	0.009025	13.48%
Mg 279.077†	115297.6	97.38	mg/L	0.537	97.38	mg/L	0.537	0.55%
Mn 257.610†	31846.7	0.9722	mg/L	0.00395	0.9722	mg/L	0.00395	0.41%
Mo 202.031†	47.3	0.00157	mg/L	0.000422	0.00157	mg/L	0.000422	26.86%
Na 589.592†	267.7	0.02628	mg/L	0.002256	0.02628	mg/L	0.002256	8.59%
Na 330.237†	23.0	0.6073	mg/L	0.18615	0.6073	mg/L	0.18615	30.65%
Ni 231.604†	3492.5	0.9420	mg/L	0.00370	0.9420	mg/L	0.00370	0.39%
Pb 220.353†	6572.8	0.9638	mg/L	0.00556	0.9638	mg/L	0.00556	0.58%
Sb 206.836†	2899.7	1.002	mg/L	0.0084	1.002	mg/L	0.0084	0.84%
Se 196.026†	1259.0	0.9767	mg/L	0.00513	0.9767	mg/L	0.00513	0.53%
Si 288.158†	-35.2	-0.00477	mg/L	0.000240	-0.00477	mg/L	0.000240	5.02%
Sn 189.927†	-71.1	-0.00829	mg/L	0.000713	-0.00829	mg/L	0.000713	8.60%
Sr 421.552†	2826.6	0.00387	mg/L	0.000047	0.00387	mg/L	0.000047	1.22%
Ti 334.903†	98.5	0.00071	mg/L	0.000050	0.00071	mg/L	0.000050	7.16%
Tl 190.801†	1934.7	0.9172	mg/L	0.00278	0.9172	mg/L	0.00278	0.30%
V 292.402†	99216.3	0.9344	mg/L	0.00028	0.9344	mg/L	0.00028	0.03%
Zn 206.200†	3282.6	0.9580	mg/L	0.00201	0.9580	mg/L	0.00201	0.21%

Sequence No.: 26

Sample ID: CV JJ

Autosampler Location: 7

Date Collected: 11/27/2012 3:40:12 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2376416.7	107.5 %	0.73			0.68%
ScR 361.383	299261.6	109.0 %	2.08			1.91%
Ag 328.068†	151962.4	1.021 mg/L	0.0054	1.021 mg/L	0.0054	0.53%
Al 308.215†	2819.6	1.993 mg/L	0.0328	1.993 mg/L	0.0328	1.65%
As 188.979†	3174.9	2.063 mg/L	0.0165	2.063 mg/L	0.0165	0.80%
B 249.677†	6312.5	0.9637 mg/L	0.02024	0.9637 mg/L	0.02024	2.10%
Ba 233.527†	3914.1	0.9893 mg/L	0.01918	0.9893 mg/L	0.01918	1.94%
Be 313.042†	514946.3	0.9847 mg/L	0.03423	0.9847 mg/L	0.03423	3.48%
Ca 317.933†	23571.4	1.935 mg/L	0.0611	1.935 mg/L	0.0611	3.16%
Cd 228.802†	25920.8	1.015 mg/L	0.0050	1.015 mg/L	0.0050	0.49%
Co 228.616†	33399.3	0.9951 mg/L	0.00329	0.9951 mg/L	0.00329	0.33%
Cr 267.716†	5622.8	1.011 mg/L	0.0198	1.011 mg/L	0.0198	1.96%
Cu 324.752†	218378.7	0.9923 mg/L	0.00728	0.9923 mg/L	0.00728	0.73%
Fe 273.955†	2580.5	2.067 mg/L	0.0334	2.067 mg/L	0.0334	1.62%
K 766.490†	33903.8	19.47 mg/L	0.587	19.47 mg/L	0.587	3.02%
Mg 279.077†	2377.5	2.017 mg/L	0.0427	2.017 mg/L	0.0427	2.12%
Mn 257.610†	32150.0	0.9816 mg/L	0.03034	0.9816 mg/L	0.03034	3.09%
Mo 202.031†	17435.3	0.9914 mg/L	0.00562	0.9914 mg/L	0.00562	0.57%
Na 589.592†	488534.6	47.96 mg/L	1.569	47.96 mg/L	1.569	3.27%
Na 330.237†	1297.6	51.82 mg/L	1.073	51.82 mg/L	1.073	2.07%
Ni 231.604†	3619.6	0.9764 mg/L	0.02088	0.9764 mg/L	0.02088	2.14%
Pb 220.353†	14086.1	1.983 mg/L	0.0059	1.983 mg/L	0.0059	0.30%
Sb 206.836†	6065.9	2.118 mg/L	0.0181	2.118 mg/L	0.0181	0.85%
Se 196.026†	2562.2	1.989 mg/L	0.0189	1.989 mg/L	0.0189	0.95%
Si 288.158†	3663.9	2.101 mg/L	0.0442	2.101 mg/L	0.0442	2.10%
Sn 189.927†	3481.7	1.028 mg/L	0.0079	1.028 mg/L	0.0079	0.76%
Sr 421.552†	692725.3	0.9494 mg/L	0.02969	0.9494 mg/L	0.02969	3.13%
Tl 334.903†	17875.6	1.017 mg/L	0.0314	1.017 mg/L	0.0314	3.09%
Tl 190.801†	4277.0	1.993 mg/L	0.0107	1.993 mg/L	0.0107	0.54%
V 292.402†	103119.3	0.9780 mg/L	0.00469	0.9780 mg/L	0.00469	0.48%
Zn 206.200†	3527.0	1.029 mg/L	0.0205	1.029 mg/L	0.0205	1.99%

Sequence No.: 27

Sample ID: CB 8

Autosampler Location: 1

Date Collected: 11/27/2012 3:45:16 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	2390919.7	108.1	%	0.54				0.50%
ScR 361.383	297583.6	108.3	%	0.55				0.50%
Ag 328.068†	8.0	0.00005	mg/L	0.000147	0.00005	mg/L	0.000147	271.70%
Al 308.215†	-2.6	-0.00190	mg/L	0.006848	-0.00190	mg/L	0.006848	360.34%
As 188.979†	0.9	0.00059	mg/L	0.002235	0.00059	mg/L	0.002235	381.60%
B 249.677†	6.0	0.00091	mg/L	0.000297	0.00091	mg/L	0.000297	32.52%
Ba 233.527†	0.7	0.00018	mg/L	0.001000	0.00018	mg/L	0.001000	554.75%
Be 313.042†	13.5	0.00003	mg/L	0.000057	0.00003	mg/L	0.000057	221.20%
Ca 317.933†	4.5	0.00037	mg/L	0.000218	0.00037	mg/L	0.000218	59.10%
Cd 228.802†	-4.1	-0.00016	mg/L	0.000104	-0.00016	mg/L	0.000104	63.70%
Co 228.616†	9.7	0.00029	mg/L	0.000213	0.00029	mg/L	0.000213	73.49%
Cr 267.716†	4.2	0.00076	mg/L	0.000580	0.00076	mg/L	0.000580	75.91%
Cu 324.752†	-717.1	-0.00326	mg/L	0.000056	-0.00326	mg/L	0.000056	1.71%
Fe 273.955†	1.6	0.00129	mg/L	0.002461	0.00129	mg/L	0.002461	190.68%
K 766.490†	-48.4	-0.02780	mg/L	0.011926	-0.02780	mg/L	0.011926	42.89%
Mg 279.077†	-5.1	-0.00433	mg/L	0.001782	-0.00433	mg/L	0.001782	41.15%
Mn 257.610†	7.4	0.00023	mg/L	0.000064	0.00023	mg/L	0.000064	28.23%
Mo 202.031†	2.5	0.00014	mg/L	0.000196	0.00014	mg/L	0.000196	140.32%
Na 589.592†	55.7	0.00547	mg/L	0.001632	0.00547	mg/L	0.001632	29.84%
Na 330.237†	16.5	0.6590	mg/L	0.43329	0.6590	mg/L	0.43329	65.75%
Ni 231.604†	5.1	0.00138	mg/L	0.001600	0.00138	mg/L	0.001600	115.93%
Pb 220.353†	4.9	0.00070	mg/L	0.001187	0.00070	mg/L	0.001187	170.27%
Sb 206.836†	1.1	0.00039	mg/L	0.001794	0.00039	mg/L	0.001794	460.32%
Se 196.026†	-3.7	-0.00291	mg/L	0.002524	-0.00291	mg/L	0.002524	86.71%
Si 288.158†	-4.7	-0.00272	mg/L	0.004363	-0.00272	mg/L	0.004363	160.70%
Sn 189.927†	4.3	0.00128	mg/L	0.001279	0.00128	mg/L	0.001279	99.93%
Sr 421.552†	52.5	0.00007	mg/L	0.000065	0.00007	mg/L	0.000065	90.54%
Ti 334.903†	-7.5	-0.00043	mg/L	0.000142	-0.00043	mg/L	0.000142	33.20%
Tl 190.801†	7.2	0.00335	mg/L	0.000645	0.00335	mg/L	0.000645	19.27%
V 292.402†	13.2	0.00013	mg/L	0.000142	0.00013	mg/L	0.000142	110.90%
Zn 206.200†	0.1	0.00002	mg/L	0.000067	0.00002	mg/L	0.000067	283.84%

Sequence No.: 28  
Sample ID: VS22 MB1 SWC

Autosampler Location: 346  
Date Collected: 11/27/2012 3:49:31 PM  
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VS22 MB1 SWC

Analyte Back Pressure Flow  
All 217.0 kPa 0.75 L/min

Mean Data: VS22 MB1 SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2388589.0	108.0	%	0.45				0.41%
ScR 361.383	300100.9	109.3	%	0.92				0.84%
Ag 328.068†	15.7	0.00011	mg/L	0.000083	0.00021	mg/L	0.000166	78.65%
Al 308.215†	-3.6	-0.00259	mg/L	0.006239	-0.00519	mg/L	0.012479	240.62%
As 188.979†	0.6	0.00037	mg/L	0.001375	0.00075	mg/L	0.002750	368.66%
B 249.677†	2.6	0.00040	mg/L	0.000876	0.00080	mg/L	0.001752	217.73%
Ba 233.527†	0.2	0.00005	mg/L	0.000587	0.00010	mg/L	0.001174	>999.9%
Be 313.042†	-39.6	-0.00008	mg/L	0.000040	-0.00015	mg/L	0.000080	52.86%
Ca 317.933†	76.9	0.00631	mg/L	0.001127	0.01262	mg/L	0.002254	17.86%
Cd 228.802†	-7.9	-0.00032	mg/L	0.000068	-0.00063	mg/L	0.000136	21.53%
Co 228.616†	6.2	0.00019	mg/L	0.000071	0.00037	mg/L	0.000142	38.38%
Cr 267.716†	5.5	0.00100	mg/L	0.001270	0.00199	mg/L	0.002539	127.55%
Cu 324.752†	-716.8	-0.00326	mg/L	0.000068	-0.00652	mg/L	0.000136	2.09%
Fe 273.955†	7.9	0.00632	mg/L	0.001822	0.01263	mg/L	0.003644	28.84%
K 766.490†	-45.0	-0.02585	mg/L	0.030900	-0.05171	mg/L	0.061801	119.52%
Mg 279.077†	-0.8	-0.00071	mg/L	0.000309	-0.00142	mg/L	0.000617	43.49%
Mn 257.610†	5.9	0.00018	mg/L	0.000076	0.00036	mg/L	0.000152	42.20%
Mo 202.031†	-0.2	-0.00001	mg/L	0.000154	-0.00003	mg/L	0.000308	>999.9%
Na 589.592†	33.4	0.00328	mg/L	0.001325	0.00655	mg/L	0.002649	40.44%
Na 330.237†	17.6	0.7051	mg/L	0.37633	1.410	mg/L	0.7527	53.37%
Ni 231.604†	3.1	0.00083	mg/L	0.001142	0.00165	mg/L	0.002283	138.26%
Pb 220.353†	6.5	0.00093	mg/L	0.000135	0.00185	mg/L	0.000269	14.53%
Sb 206.836†	-2.3	-0.00082	mg/L	0.000862	-0.00163	mg/L	0.001724	105.70%
Se 196.026†	-2.3	-0.00180	mg/L	0.003837	-0.00361	mg/L	0.007673	212.77%
Si 288.158†	7.6	0.00437	mg/L	0.002077	0.00873	mg/L	0.004153	47.56%
Sn 189.927†	4.2	0.00124	mg/L	0.000805	0.00249	mg/L	0.001609	64.71%
Sr 421.552†	14.7	0.00002	mg/L	0.000015	0.00004	mg/L	0.000030	74.50%
Ti 334.903†	-3.0	-0.00017	mg/L	0.000828	-0.00034	mg/L	0.001656	483.19%
Tl 190.801†	12.2	0.00571	mg/L	0.001565	0.01141	mg/L	0.003129	27.42%
V 292.402†	-5.1	-0.00004	mg/L	0.000045	-0.00009	mg/L	0.000091	104.00%
Zn 206.200†	3.1	0.00090	mg/L	0.000600	0.00180	mg/L	0.001200	66.81%



Sequence No.: 29  
Sample ID: VS22 B SWC

Autosampler Location: 347  
Date Collected: 11/27/2012 3:53:46 PM  
Data Type: Original

Dilution: 5.000000X

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Nebulizer Parameters: VS22 B SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

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Mean Data: VS22 B SWC

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	2361553.8	106.8	%	0.42				0.39%
ScR 361.383	302179.6	110.0	%	0.68				0.61%
Ag 328.068†	-103.7	-0.00065	mg/L	0.000258	-0.00324	mg/L	0.001288	39.82%
Al 308.215†	108013.8	77.63	mg/L	0.077	388.1	mg/L	0.39	0.10%
As 188.979†	-163.6	0.01633	mg/L	0.003491	0.08166	mg/L	0.017453	21.37%
B 249.677†	47.4	0.00715	mg/L	0.000959	0.03576	mg/L	0.004795	13.41%
Ba 233.527†	2310.4	0.5702	mg/L	0.00356	2.851	mg/L	0.0178	0.62%
Be 313.042†	794.3	0.00143	mg/L	0.000030	0.00717	mg/L	0.000149	2.08%
Ca 317.933†	306704.7	25.18	mg/L	0.107	125.9	mg/L	0.53	0.42%
Cd 228.802†	248.7	0.00980	mg/L	0.000285	0.04898	mg/L	0.001427	2.91%
Co 228.616†	1544.9	0.03666	mg/L	0.000431	0.1833	mg/L	0.00216	1.18%
Cr 267.716†	517.8	0.09410	mg/L	0.000786	0.4705	mg/L	0.00393	0.84%
Cu 324.752†	12418.6	0.05916	mg/L	0.000430	0.2958	mg/L	0.00215	0.73%
Fe 273.955†	106386.7	85.49	mg/L	0.353	427.4	mg/L	1.77	0.41%
K 766.490†	8366.4	4.805	mg/L	0.0188	24.02	mg/L	0.094	0.39%
Mg 279.077†	26367.0	22.25	mg/L	0.085	111.2	mg/L	0.42	0.38%
Mn 257.610†	64742.1	1.976	mg/L	0.0076	9.881	mg/L	0.0378	0.38%
Mo 202.031†	51.4	0.00265	mg/L	0.000494	0.01323	mg/L	0.002470	18.67%
Na 589.592†	13373.5	1.313	mg/L	0.0037	6.565	mg/L	0.0187	0.29%
Na 330.237†	25.7	1.772	mg/L	0.1257	8.861	mg/L	0.6287	7.10%
Ni 231.604†	235.3	0.06346	mg/L	0.001853	0.3173	mg/L	0.00927	2.92%
Pb 220.353†	1511.4	0.2278	mg/L	0.00127	1.139	mg/L	0.0063	0.56%
Sb 206.836†	4.3	0.00261	mg/L	0.001762	0.01305	mg/L	0.008808	67.51%
Se 196.026†	-0.1	-0.00021	mg/L	0.002517	-0.00103	mg/L	0.012584	>999.9%
Si 288.158†	2341.4	1.346	mg/L	0.0139	6.729	mg/L	0.0696	1.03%
Sn 189.927†	-35.5	-0.00674	mg/L	0.000327	-0.03371	mg/L	0.001634	4.85%
Sr 421.552†	136671.7	0.1873	mg/L	0.00022	0.9365	mg/L	0.00112	0.12%
Ti 334.903†	75418.5	4.293	mg/L	0.0122	21.46	mg/L	0.061	0.28%
Tl 190.801†	-5.9	0.00550	mg/L	0.002181	0.02752	mg/L	0.010907	39.63%
V 292.402†	18134.5	0.1665	mg/L	0.00152	0.8326	mg/L	0.00759	0.91%
Zn 206.200†	2435.4	0.7108	mg/L	0.00351	3.554	mg/L	0.0176	0.49%

Sequence No.: 30  
Sample ID: VS22 C SWC

Autosampler Location: 348  
Date Collected: 11/27/2012 3:57:45 PM  
Data Type: Original

Dilution: 5.000000X

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Nebulizer Parameters: VS22 C SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

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Mean Data: VS22 C SWC

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	2391514.9	108.2	%	0.75				0.69%
ScR 361.383	303944.2	110.7	%	0.50				0.45%
Ag 328.068†	-191.3	-0.00124	mg/L	0.000258	-0.00621	mg/L	0.001291	20.79%
Al 308.215†	130233.9	93.60	mg/L	0.126	468.0	mg/L	0.63	0.13%
As 188.979†	-170.5	0.00647	mg/L	0.002404	0.03233	mg/L	0.012020	37.18%
B 249.677†	35.1	0.00526	mg/L	0.000343	0.02629	mg/L	0.001716	6.53%
Ba 233.527†	2206.2	0.5427	mg/L	0.00367	2.714	mg/L	0.0184	0.68%
Be 313.042†	1228.0	0.00227	mg/L	0.000014	0.01135	mg/L	0.000069	0.61%
Ca 317.933†	273281.3	22.44	mg/L	0.018	112.2	mg/L	0.09	0.08%
Cd 228.802†	46.1	0.00173	mg/L	0.000110	0.00864	mg/L	0.000551	6.37%
Co 228.616†	1656.1	0.04026	mg/L	0.000440	0.2013	mg/L	0.00220	1.09%
Cr 267.716†	546.8	0.09976	mg/L	0.001075	0.4988	mg/L	0.00537	1.08%
Cu 324.752†	14099.8	0.06716	mg/L	0.000861	0.3358	mg/L	0.00430	1.28%
Fe 273.955†	115025.7	92.43	mg/L	0.057	462.2	mg/L	0.29	0.06%
K 766.490†	9149.9	5.255	mg/L	0.0030	26.27	mg/L	0.015	0.06%
Mg 279.077†	25829.1	21.79	mg/L	0.014	108.9	mg/L	0.07	0.07%
Mn 257.610†	30445.5	0.9293	mg/L	0.00178	4.646	mg/L	0.0089	0.19%
Mo 202.031†	37.3	0.00187	mg/L	0.000216	0.00936	mg/L	0.001082	11.56%
Na 589.592†	16503.4	1.620	mg/L	0.0035	8.101	mg/L	0.0173	0.21%
Na 330.237†	33.8	2.208	mg/L	0.1997	11.04	mg/L	0.999	9.04%
Ni 231.604†	257.0	0.06932	mg/L	0.001828	0.3466	mg/L	0.00914	2.64%
Pb 220.353†	191.8	0.04568	mg/L	0.001323	0.2284	mg/L	0.00662	2.90%
Sb 206.836†	-3.3	-0.00026	mg/L	0.001805	-0.00129	mg/L	0.009026	698.46%
Se 196.026†	3.3	0.00244	mg/L	0.003985	0.01218	mg/L	0.019926	163.65%
Si 288.158†	3306.1	1.899	mg/L	0.0145	9.495	mg/L	0.0723	0.76%
Sn 189.927†	-29.6	-0.00538	mg/L	0.002055	-0.02688	mg/L	0.010276	38.23%
Sr 421.552†	132006.1	0.1809	mg/L	0.00015	0.9046	mg/L	0.00075	0.08%
Ti 334.903†	72014.3	4.099	mg/L	0.0011	20.49	mg/L	0.005	0.03%
Tl 190.801†	-10.6	0.00411	mg/L	0.001745	0.02053	mg/L	0.008725	42.51%
V 292.402†	16015.1	0.1462	mg/L	0.00177	0.7311	mg/L	0.00883	1.21%
Zn 206.200†	799.6	0.2334	mg/L	0.00177	1.167	mg/L	0.0088	0.76%

Sequence No.: 31  
 Sample ID: VS22 D SWC

Autosampler Location: 349  
 Date Collected: 11/27/2012 4:01:44 PM  
 Data Type: Original

Dilution: 5.000000X

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 Nebulizer Parameters: VS22 D SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

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 Mean Data: VS22 D SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2352452.4	106.4	%	0.26				0.24%
ScR 361.383	292159.3	106.4	%	0.25				0.24%
Ag 328.068†	-375.0	-0.00246	mg/L	0.000187	-0.01230	mg/L	0.000937	7.62%
Al 308.215†	103126.2	74.11	mg/L	0.645	370.6	mg/L	3.22	0.87%
As 188.979†	-138.8	0.03185	mg/L	0.003936	0.1593	mg/L	0.01968	12.36%
B 249.677†	-1.8	-0.00038	mg/L	0.001597	-0.00190	mg/L	0.007987	420.92%
Ba 233.527†	3320.6	0.8217	mg/L	0.00930	4.108	mg/L	0.0465	1.13%
Be 313.042†	1031.9	0.00188	mg/L	0.000044	0.00938	mg/L	0.000222	2.36%
Ca 317.933†	2744447.7	225.3	mg/L	1.06	1127	mg/L	5.32	0.47%
Cd 228.802†	56.0	0.00185	mg/L	0.000192	0.00926	mg/L	0.000959	10.36%
Co 228.616†	1812.9	0.04355	mg/L	0.000240	0.2178	mg/L	0.00120	0.55%
Cr 267.716†	781.9	0.1392	mg/L	0.00094	0.6958	mg/L	0.00471	0.68%
Cu 324.752†	25981.9	0.1216	mg/L	0.00025	0.6082	mg/L	0.00124	0.20%
Fe 273.955†	136493.2	109.7	mg/L	1.17	548.4	mg/L	5.83	1.06%
K 766.490†	13790.9	7.920	mg/L	0.1247	39.60	mg/L	0.624	1.57%
Mg 279.077†	48590.0	41.02	mg/L	0.464	205.1	mg/L	2.32	1.13%
Mn 257.610†	51106.8	1.560	mg/L	0.0157	7.798	mg/L	0.0783	1.00%
Mo 202.031†	107.2	0.00365	mg/L	0.000415	0.01826	mg/L	0.002076	11.37%
Na 589.592†	17217.3	1.690	mg/L	0.0101	8.452	mg/L	0.0506	0.60%
Na 330.237†	33.1	2.312	mg/L	0.4490	11.56	mg/L	2.245	19.42%
Ni 231.604†	379.5	0.1024	mg/L	0.00114	0.5118	mg/L	0.00570	1.11%
Pb 220.353†	172.7	0.03762	mg/L	0.000478	0.1881	mg/L	0.00239	1.27%
Sb 206.836†	-0.3	0.00050	mg/L	0.001550	0.00248	mg/L	0.007750	312.49%
Se 196.026†	-20.9	-0.01635	mg/L	0.005354	-0.08175	mg/L	0.026772	32.75%
Si 288.158†	2980.3	1.714	mg/L	0.0241	8.572	mg/L	0.1205	1.41%
Sn 189.927†	-80.7	0.00476	mg/L	0.000673	0.02379	mg/L	0.003367	14.15%
Sr 421.552†	508300.3	0.6966	mg/L	0.00117	3.483	mg/L	0.0059	0.17%
Ti 334.903†	82371.2	4.679	mg/L	0.0447	23.39	mg/L	0.224	0.96%
Tl 190.801†	2.3	0.01178	mg/L	0.004084	0.05888	mg/L	0.020418	34.68%
V 292.402†	21639.9	0.1987	mg/L	0.00096	0.9934	mg/L	0.00481	0.48%
Zn 206.200†	826.7	0.2412	mg/L	0.00195	1.206	mg/L	0.0098	0.81%

Sequence No.: 32  
Sample ID: VS22 A-L SWC

Autosampler Location: 350  
Date Collected: 11/27/2012 4:05:45 PM  
Data Type: Original

Dilution: 25.000000X

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Nebulizer Parameters: VS22 A-L SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

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Mean Data: VS22 A-L SWC

Analyte	Mean Corrected		Calib.		Sample			RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	Std.Dev.	
ScA 357.253	2376157.7	107.5	%	0.63				0.58%
ScR 361.383	303148.5	110.4	%	0.30				0.27%
Ag 328.068†	3.4	0.00003	mg/L	0.000119	0.00071	mg/L	0.002978	418.47%
Al 308.215†	12441.8	8.942	mg/L	0.0075	223.5	mg/L	0.19	0.08%
As 188.979†	-9.3	0.00731	mg/L	0.001036	0.1827	mg/L	0.02590	14.18%
B 249.677†	11.8	0.00180	mg/L	0.000461	0.04493	mg/L	0.011532	25.66%
Ba 233.527†	497.9	0.1241	mg/L	0.00059	3.103	mg/L	0.0147	0.47%
Be 313.042†	89.9	0.00016	mg/L	0.000012	0.00406	mg/L	0.000294	7.25%
Ca 317.933†	70516.6	5.790	mg/L	0.0042	144.7	mg/L	0.10	0.07%
Cd 228.802†	102.7	0.00402	mg/L	0.000152	0.1005	mg/L	0.00380	3.78%
Co 228.616†	213.5	0.00530	mg/L	0.000139	0.1326	mg/L	0.00347	2.62%
Cr 267.716†	74.3	0.01342	mg/L	0.000462	0.3356	mg/L	0.01155	3.44%
Cu 324.752†	2059.8	0.00972	mg/L	0.000141	0.2430	mg/L	0.00353	1.45%
Fe 273.955†	13478.6	10.83	mg/L	0.039	270.8	mg/L	0.97	0.36%
K 766.490†	1428.6	0.8204	mg/L	0.02027	20.51	mg/L	0.507	2.47%
Mg 279.077†	3352.1	2.828	mg/L	0.0222	70.71	mg/L	0.556	0.79%
Mn 257.610†	21678.8	0.6617	mg/L	0.00149	16.54	mg/L	0.037	0.22%
Mo 202.031†	12.7	0.00066	mg/L	0.000257	0.01645	mg/L	0.006431	39.09%
Na 589.592†	1328.3	0.1304	mg/L	0.00078	3.260	mg/L	0.0196	0.60%
Na 330.237†	16.8	0.7190	mg/L	0.18392	17.97	mg/L	4.598	25.58%
Ni 231.604†	34.9	0.00942	mg/L	0.000762	0.2354	mg/L	0.01904	8.09%
Pb 220.353†	1228.0	0.1745	mg/L	0.00072	4.362	mg/L	0.0180	0.41%
Sb 206.836†	-3.0	-0.00098	mg/L	0.001486	-0.02447	mg/L	0.037144	151.77%
Se 196.026†	-4.4	-0.00340	mg/L	0.003363	-0.08494	mg/L	0.084068	98.97%
Si 288.158†	275.7	0.1585	mg/L	0.00732	3.963	mg/L	0.1829	4.62%
Sn 189.927†	-7.5	-0.00143	mg/L	0.000536	-0.03581	mg/L	0.013404	37.43%
Sr 421.552†	28745.2	0.03940	mg/L	0.000109	0.9849	mg/L	0.00272	0.28%
Ti 334.903†	8365.6	0.4760	mg/L	0.00178	11.90	mg/L	0.044	0.37%
Tl 190.801†	6.1	0.00392	mg/L	0.001040	0.09794	mg/L	0.026002	26.55%
V 292.402†	2083.4	0.01918	mg/L	0.000362	0.4796	mg/L	0.00906	1.89%
Zn 206.200†	656.1	0.1915	mg/L	0.00182	4.787	mg/L	0.0455	0.95%

Sequence No.: 33  
Sample ID: VS22 A SWC

Autosampler Location: 351  
Date Collected: 11/27/2012 4:09:44 PM  
Data Type: Original

Dilution: 5.000000X

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Nebulizer Parameters: VS22 A SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

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Mean Data: VS22 A SWC

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	2406168.3	108.8	%	0.77				0.71%
ScR 361.383	306079.9	111.4	%	0.83				0.74%
Ag 328.068†	98.5	0.00069	mg/L	0.000217	0.00345	mg/L	0.001084	31.41%
Al 308.215†	63831.7	45.87	mg/L	0.129	229.4	mg/L	0.64	0.28%
As 188.979†	-53.3	0.03351	mg/L	0.002446	0.1676	mg/L	0.01223	7.30%
B 249.677†	68.4	0.01038	mg/L	0.000495	0.05192	mg/L	0.002473	4.76%
Ba 233.527†	2559.5	0.6381	mg/L	0.00884	3.191	mg/L	0.0442	1.38%
Be 313.042†	555.8	0.00101	mg/L	0.000046	0.00507	mg/L	0.000228	4.50%
Ca 317.933†	365096.6	29.98	mg/L	0.129	149.9	mg/L	0.64	0.43%
Cd 228.802†	544.0	0.02131	mg/L	0.000272	0.1066	mg/L	0.00136	1.28%
Co 228.616†	1066.7	0.02637	mg/L	0.000309	0.1319	mg/L	0.00155	1.17%
Cr 267.716†	335.3	0.06067	mg/L	0.001701	0.3033	mg/L	0.00851	2.80%
Cu 324.752†	13433.4	0.06290	mg/L	0.000197	0.3145	mg/L	0.00099	0.31%
Fe 273.955†	68961.9	55.42	mg/L	0.186	277.1	mg/L	0.93	0.34%
K 766.490†	7685.6	4.414	mg/L	0.0323	22.07	mg/L	0.162	0.73%
Mg 279.077†	16265.3	13.72	mg/L	0.055	68.61	mg/L	0.275	0.40%
Mn 257.610†	111508.7	3.404	mg/L	0.0108	17.02	mg/L	0.054	0.32%
Mo 202.031†	60.8	0.00313	mg/L	0.000502	0.01565	mg/L	0.002511	16.04%
Na 589.592†	6592.6	0.6472	mg/L	0.00388	3.236	mg/L	0.0194	0.60%
Na 330.237†	21.3	1.078	mg/L	0.1896	5.389	mg/L	0.9479	17.59%
Ni 231.604†	169.9	0.04583	mg/L	0.000590	0.2292	mg/L	0.00295	1.29%
Pb 220.353†	6210.3	0.8825	mg/L	0.00799	4.413	mg/L	0.0399	0.90%
Sb 206.836†	24.7	0.00916	mg/L	0.002142	0.04579	mg/L	0.010709	23.39%
Se 196.026†	0.4	0.00024	mg/L	0.005986	0.00122	mg/L	0.029929	>999.9%
Si 288.158†	1426.6	0.8200	mg/L	0.01208	4.100	mg/L	0.0604	1.47%
Sn 189.927†	-20.6	-0.00200	mg/L	0.001251	-0.00999	mg/L	0.006255	62.60%
Sr 421.552†	146029.8	0.2001	mg/L	0.00084	1.001	mg/L	0.0042	0.42%
Ti 334.903†	42691.7	2.429	mg/L	0.0096	12.15	mg/L	0.048	0.39%
Tl 190.801†	9.4	0.00979	mg/L	0.001174	0.04896	mg/L	0.005868	11.99%
V 292.402†	10524.1	0.09683	mg/L	0.000045	0.4842	mg/L	0.00023	0.05%
Zn 206.200†	3415.9	0.9970	mg/L	0.01567	4.985	mg/L	0.0784	1.57%

Sequence No.: 34  
 Sample ID: VS22 ADUP SWC

Autosampler Location: 352  
 Date Collected: 11/27/2012 4:13:43 PM  
 Data Type: Original

Dilution: 5.000000X

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 Nebulizer Parameters: VS22 ADUP SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

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 Mean Data: VS22 ADUP SWC

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
ScA 357.253	2397117.4	108.4	%	0.61			0.57%
ScR 361.383	306990.9	111.8	%	0.07			0.07%
Ag 328.068†	92.0	0.00065	mg/L	0.000108	0.00324	mg/L	0.000538 16.59%
Al 308.215†	66130.1	47.53	mg/L	0.141	237.6	mg/L	0.71 0.30%
As 188.979†	-63.3	0.03275	mg/L	0.002432	0.1638	mg/L	0.01216 7.43%
B 249.677†	77.2	0.01174	mg/L	0.001074	0.05870	mg/L	0.005368 9.14%
Ba 233.527†	2618.1	0.6527	mg/L	0.00095	3.263	mg/L	0.0048 0.15%
Be 313.042†	564.5	0.00103	mg/L	0.000007	0.00513	mg/L	0.000037 0.72%
Ca 317.933†	383320.7	31.47	mg/L	0.105	157.4	mg/L	0.53 0.33%
Cd 228.802†	572.2	0.02246	mg/L	0.000193	0.1123	mg/L	0.00096 0.86%
Co 228.616†	1070.6	0.02608	mg/L	0.000197	0.1304	mg/L	0.00098 0.75%
Cr 267.716†	347.3	0.06284	mg/L	0.000632	0.3142	mg/L	0.00316 1.01%
Cu 324.752†	13849.5	0.06482	mg/L	0.000270	0.3241	mg/L	0.00135 0.42%
Fe 273.955†	70926.2	56.99	mg/L	0.248	285.0	mg/L	1.24 0.44%
K 766.490†	8076.4	4.638	mg/L	0.0083	23.19	mg/L	0.041 0.18%
Mg 279.077†	16682.8	14.07	mg/L	0.031	70.37	mg/L	0.153 0.22%
Mn 257.610†	115286.5	3.519	mg/L	0.0113	17.59	mg/L	0.057 0.32%
Mo 202.031†	63.1	0.00324	mg/L	0.000080	0.01621	mg/L	0.000402 2.48%
Na 589.592†	7321.5	0.7188	mg/L	0.00249	3.594	mg/L	0.0125 0.35%
Na 330.237†	25.8	1.301	mg/L	0.2481	6.504	mg/L	1.2407 19.08%
Ni 231.604†	168.0	0.04531	mg/L	0.000468	0.2266	mg/L	0.00234 1.03%
Pb 220.353†	6252.1	0.8887	mg/L	0.00230	4.444	mg/L	0.0115 0.26%
Sb 206.836†	27.7	0.01026	mg/L	0.000331	0.05131	mg/L	0.001656 3.23%
Se 196.026†	1.2	0.00087	mg/L	0.002873	0.00433	mg/L	0.014365 331.79%
Si 288.158†	1529.6	0.8792	mg/L	0.00591	4.396	mg/L	0.0296 0.67%
Sn 189.927†	-22.2	-0.00225	mg/L	0.000169	-0.01124	mg/L	0.000844 7.51%
Sr 421.552†	153375.3	0.2102	mg/L	0.00058	1.051	mg/L	0.0029 0.28%
Ti 334.903†	46195.8	2.629	mg/L	0.0093	13.14	mg/L	0.047 0.35%
Tl 190.801†	4.3	0.00754	mg/L	0.001299	0.03772	mg/L	0.006497 17.22%
V 292.402†	11223.0	0.1033	mg/L	0.00037	0.5165	mg/L	0.00185 0.36%
Zn 206.200†	3454.4	1.008	mg/L	0.0054	5.041	mg/L	0.0272 0.54%

Sequence No.: 35

Autosampler Location: 353

Sample ID: VS22 ASPK SWC

Date Collected: 11/27/2012 4:17:42 PM

Data Type: Original

Dilution: 5.000000X

## Nebulizer Parameters: VS22 ASPK SWC

Analyte	Back Pressure	Flow
All	218.0 kPa	0.75 L/min

## Mean Data: VS22 ASPK SWC

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
ScA 357.253	2406368.0	108.8	%	0.77			0.71%
ScR 361.383	302965.1	110.3	%	0.93			0.84%
Ag 328.068†	29922.6	0.2011	mg/L	0.00109	1.005	mg/L	0.0054
Al 308.215†	70115.0	50.39	mg/L	0.396	251.9	mg/L	1.98
As 188.979†	1173.0	0.8284	mg/L	0.00459	4.142	mg/L	0.0230
B 249.677†	83.3	0.01225	mg/L	0.001468	0.06127	mg/L	0.007339
Ba 233.527†	5813.7	1.460	mg/L	0.0118	7.302	mg/L	0.0589
Be 313.042†	104257.2	0.1993	mg/L	0.00208	0.9966	mg/L	0.01040
Ca 317.933†	440108.4	36.14	mg/L	0.322	180.7	mg/L	1.61
Cd 228.802†	5928.9	0.2298	mg/L	0.00147	1.149	mg/L	0.0074
Co 228.616†	7850.1	0.2282	mg/L	0.00150	1.141	mg/L	0.0075
Cr 267.716†	1478.4	0.2658	mg/L	0.00130	1.329	mg/L	0.0065
Cu 324.752†	58827.4	0.2693	mg/L	0.00167	1.347	mg/L	0.0083
Fe 273.955†	73139.0	58.77	mg/L	0.506	293.9	mg/L	2.53
K 766.490†	14958.2	8.591	mg/L	0.0728	42.95	mg/L	0.364
Mg 279.077†	22902.5	19.33	mg/L	0.141	96.66	mg/L	0.703
Mn 257.610†	123996.9	3.785	mg/L	0.0310	18.92	mg/L	0.155
Mo 202.031†	67.1	0.00341	mg/L	0.000322	0.01707	mg/L	0.001610
Na 589.592†	46712.4	4.586	mg/L	0.0395	22.93	mg/L	0.197
Na 330.237†	125.0	5.220	mg/L	0.0455	26.10	mg/L	0.228
Ni 231.604†	891.9	0.2402	mg/L	0.00044	1.201	mg/L	0.0022
Pb 220.353†	11946.2	1.691	mg/L	0.0099	8.453	mg/L	0.0496
Sb 206.836†	22.2	0.00621	mg/L	0.000516	0.03107	mg/L	0.002581
Se 196.026†	1007.7	0.7822	mg/L	0.01149	3.911	mg/L	0.0575
Si 288.158†	1389.1	0.7999	mg/L	0.00561	4.000	mg/L	0.0281
Sn 189.927†	-31.3	-0.00433	mg/L	0.001216	-0.02163	mg/L	0.006082
Sr 421.552†	302175.2	0.4141	mg/L	0.00350	2.071	mg/L	0.0175
Tl 334.903†	47621.5	2.709	mg/L	0.0251	13.55	mg/L	0.125
Tl 190.801†	1648.2	0.7750	mg/L	0.00323	3.875	mg/L	0.0161
V 292.402†	31658.0	0.2970	mg/L	0.00231	1.485	mg/L	0.0116
Zn 206.200†	4146.1	1.210	mg/L	0.0074	6.050	mg/L	0.0369

Sequence No.: 36

Autosampler Location: 354

Sample ID: VS22 APOST SWC

Date Collected: 11/27/2012 4:21:42 PM

Data Type: Original

Dilution: 5.000000X

## Nebulizer Parameters: VS22 APOST SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: VS22 APOST SWC

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	2376929.0	107.5	%	0.20				0.19%
ScR 361.383	303033.1	110.3	%	1.03				0.94%
Ag 328.068†	70599.2	0.4744	mg/L	0.00022	2.372	mg/L	0.0011	0.05%
Al 308.215†	68422.4	49.17	mg/L	0.542	245.8	mg/L	2.71	1.10%
As 188.979†	3109.7	2.065	mg/L	0.0081	10.33	mg/L	0.041	0.39%
B 249.677†	75.2	0.01038	mg/L	0.000618	0.05192	mg/L	0.003088	5.95%
Ba 233.527†	10439.5	2.630	mg/L	0.0242	13.15	mg/L	0.121	0.92%
Be 313.042†	259628.9	0.4965	mg/L	0.00503	2.482	mg/L	0.0252	1.01%
Ca 317.933†	493208.6	40.49	mg/L	0.446	202.5	mg/L	2.23	1.10%
Cd 228.802†	14033.0	0.5433	mg/L	0.00115	2.716	mg/L	0.0058	0.21%
Co 228.616†	18019.9	0.5322	mg/L	0.00077	2.661	mg/L	0.0039	0.15%
Cr 267.716†	3122.0	0.5608	mg/L	0.00311	2.804	mg/L	0.0155	0.55%
Cu 324.752†	122444.4	0.5585	mg/L	0.00077	2.793	mg/L	0.0038	0.14%
Fe 273.955†	72410.5	58.18	mg/L	0.585	290.9	mg/L	2.92	1.00%
K 766.490†	25003.5	14.36	mg/L	0.132	71.80	mg/L	0.662	0.92%
Mg 279.077†	29504.9	24.92	mg/L	0.190	124.6	mg/L	0.95	0.76%
Mn 257.610†	129238.6	3.945	mg/L	0.0364	19.73	mg/L	0.182	0.92%
Mo 202.031†	73.1	0.00369	mg/L	0.000146	0.01843	mg/L	0.000730	3.96%
Na 589.592†	103833.9	10.19	mg/L	0.118	50.97	mg/L	0.592	1.16%
Na 330.237†	277.5	11.18	mg/L	0.347	55.92	mg/L	1.734	3.10%
Ni 231.604†	1952.8	0.5258	mg/L	0.00441	2.629	mg/L	0.0221	0.84%
Pb 220.353†	20419.9	2.883	mg/L	0.0048	14.41	mg/L	0.024	0.17%
Sb 206.836†	39.5	0.00897	mg/L	0.003442	0.04485	mg/L	0.017212	38.38%
Se 196.026†	2574.3	1.998	mg/L	0.0128	9.992	mg/L	0.0640	0.64%
Si 288.158†	1446.9	0.8350	mg/L	0.00581	4.175	mg/L	0.0291	0.70%
Sn 189.927†	-29.4	-0.00320	mg/L	0.001134	-0.01599	mg/L	0.005670	35.45%
Sr 421.552†	502730.9	0.6890	mg/L	0.00701	3.445	mg/L	0.0350	1.02%
Ti 334.903†	43875.5	2.496	mg/L	0.0262	12.48	mg/L	0.131	1.05%
Tl 190.801†	4136.3	1.936	mg/L	0.0011	9.682	mg/L	0.0054	0.06%
V 292.402†	60345.7	0.5693	mg/L	0.00089	2.847	mg/L	0.0045	0.16%
Zn 206.200†	5089.0	1.485	mg/L	0.0107	7.427	mg/L	0.0536	0.72%



Sequence No.: 37

Autosampler Location: 355

Sample ID: VS22 MB1SPK SWC

Date Collected: 11/27/2012 4:25:27 PM

Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: VS22 MB1SPK SWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VS22 MB1SPK SWC

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
ScA 357.253	2369704.6	107.2	%	0.66			0.62%
ScR 361.383	302476.4	110.1	%	1.30			1.18%
Ag 328.068†	79404.4	0.5335	mg/L	0.00142	1.067	mg/L	0.0028 0.27%
Al 308.215†	2772.8	1.986	mg/L	0.0241	3.971	mg/L	0.0482 1.21%
As 188.979†	3210.2	2.060	mg/L	0.0177	4.120	mg/L	0.0354 0.86%
B 249.677†	4.8	-0.00033	mg/L	0.000780	-0.00066	mg/L	0.001560 238.12%
Ba 233.527†	7899.8	1.997	mg/L	0.0156	3.994	mg/L	0.0313 0.78%
Be 313.042†	263775.9	0.5044	mg/L	0.00492	1.009	mg/L	0.0098 0.98%
Ca 317.933†	120969.3	9.932	mg/L	0.0940	19.86	mg/L	0.188 0.95%
Cd 228.802†	13550.0	0.5242	mg/L	0.00192	1.048	mg/L	0.0038 0.37%
Co 228.616†	17189.6	0.5130	mg/L	0.00233	1.026	mg/L	0.0047 0.45%
Cr 267.716†	2836.6	0.5092	mg/L	0.00502	1.018	mg/L	0.0100 0.99%
Cu 324.752†	107271.8	0.4877	mg/L	0.00028	0.9754	mg/L	0.00056 0.06%
Fe 273.955†	2522.0	2.023	mg/L	0.0216	4.046	mg/L	0.0431 1.07%
K 766.490†	17150.8	9.850	mg/L	0.0962	19.70	mg/L	0.192 0.98%
Mg 279.077†	11994.2	10.14	mg/L	0.107	20.28	mg/L	0.215 1.06%
Mn 257.610†	16566.6	0.5060	mg/L	0.00532	1.012	mg/L	0.0106 1.05%
Mo 202.031†	15.2	0.00073	mg/L	0.000198	0.00145	mg/L	0.000396 27.24%
Na 589.592†	97449.6	9.567	mg/L	0.0885	19.13	mg/L	0.177 0.92%
Na 330.237†	269.5	10.62	mg/L	0.204	21.24	mg/L	0.408 1.92%
Ni 231.604†	1814.7	0.4885	mg/L	0.00343	0.9770	mg/L	0.00685 0.70%
Pb 220.353†	14286.8	2.011	mg/L	0.0117	4.022	mg/L	0.0235 0.58%
Sb 206.836†	8.0	-0.00260	mg/L	0.000388	-0.00520	mg/L	0.000777 14.94%
Se 196.026†	2575.0	1.999	mg/L	0.0185	3.998	mg/L	0.0369 0.92%
Si 288.158†	-5.0	0.00032	mg/L	0.002753	0.00064	mg/L	0.005505 856.57%
Sn 189.927†	-14.3	-0.00293	mg/L	0.001181	-0.00586	mg/L	0.002361 40.28%
Sr 421.552†	355913.8	0.4878	mg/L	0.00434	0.9756	mg/L	0.00867 0.89%
Tl 334.903†	21.4	0.00064	mg/L	0.000179	0.00129	mg/L	0.000358 27.81%
Tl 190.801†	4291.5	2.003	mg/L	0.0184	4.007	mg/L	0.0367 0.92%
V 292.402†	52628.2	0.4991	mg/L	0.00202	0.9981	mg/L	0.00403 0.40%
Zn 206.200†	1704.9	0.4976	mg/L	0.00436	0.9953	mg/L	0.00872 0.88%

Sequence No.: 38

Sample ID: CV 12

Autosampler Location: 7

Date Collected: 11/27/2012 4:29:27 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected		Calib. Conc. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity				Conc. Units			
ScA 357.253	2333714.6		105.6 %	0.79				0.75%
ScR 361.383	294363.3		107.2 %	1.22				1.14%
Ag 328.068†	153377.4		1.031 mg/L	0.0099	1.031 mg/L	0.0099		0.96%
Al 308.215†	2795.9		1.976 mg/L	0.0179	1.976 mg/L	0.0179		0.91%
As 188.979†	3123.4		2.030 mg/L	0.0273	2.030 mg/L	0.0273		1.34%
B 249.677†	6293.9		0.9609 mg/L	0.00954	0.9609 mg/L	0.00954		0.99%
Ba 233.527†	3909.3		0.9881 mg/L	0.00880	0.9881 mg/L	0.00880		0.89%
Be 313.042†	506145.5		0.9679 mg/L	0.01044	0.9679 mg/L	0.01044		1.08%
Ca 317.933†	23110.7		1.897 mg/L	0.0242	1.897 mg/L	0.0242		1.28%
Cd 228.802†	25881.3		1.014 mg/L	0.0081	1.014 mg/L	0.0081		0.80%
Co 228.616†	33403.9		0.9953 mg/L	0.00739	0.9953 mg/L	0.00739		0.74%
Cr 267.716†	5567.6		1.001 mg/L	0.0088	1.001 mg/L	0.0088		0.88%
Cu 324.752†	220357.1		1.001 mg/L	0.0096	1.001 mg/L	0.0096		0.95%
Fe 273.955†	2502.9		2.004 mg/L	0.0136	2.004 mg/L	0.0136		0.68%
K 766.490†	34103.0		19.59 mg/L	0.288	19.59 mg/L	0.288		1.47%
Mg 279.077†	2329.1		1.976 mg/L	0.0170	1.976 mg/L	0.0170		0.86%
Mn 257.610†	31697.6		0.9678 mg/L	0.01307	0.9678 mg/L	0.01307		1.35%
Mo 202.031†	17412.3		0.9901 mg/L	0.00798	0.9901 mg/L	0.00798		0.81%
Na 589.592†	493510.2		48.45 mg/L	0.567	48.45 mg/L	0.567		1.17%
Na 330.237†	1300.4		51.94 mg/L	0.628	51.94 mg/L	0.628		1.21%
Ni 231.604†	3574.2		0.9642 mg/L	0.00835	0.9642 mg/L	0.00835		0.87%
Pb 220.353†	14003.9		1.971 mg/L	0.0098	1.971 mg/L	0.0098		0.50%
Sb 206.836†	6005.4		2.097 mg/L	0.0253	2.097 mg/L	0.0253		1.21%
Se 196.026†	2515.4		1.952 mg/L	0.0219	1.952 mg/L	0.0219		1.12%
Si 288.158†	3645.2		2.090 mg/L	0.0262	2.090 mg/L	0.0262		1.26%
Sn 189.927†	3424.5		1.011 mg/L	0.0125	1.011 mg/L	0.0125		1.23%
Sr 421.552†	695837.8		0.9536 mg/L	0.01122	0.9536 mg/L	0.01122		1.18%
Ti 334.903†	17835.3		1.014 mg/L	0.0127	1.014 mg/L	0.0127		1.25%
Tl 190.801†	4249.6		1.980 mg/L	0.0203	1.980 mg/L	0.0203		1.03%
V 292.402†	103437.9		0.9810 mg/L	0.00939	0.9810 mg/L	0.00939		0.96%
Zn 206.200†	3448.3		1.006 mg/L	0.0104	1.006 mg/L	0.0104		1.03%

Sequence No.: 39

Sample ID: CB 9

Dilution: 1.000000X

Autosampler Location: 1

Date Collected: 11/27/2012 4:34:30 PM

Data Type: Original

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2363761.7	106.9	%	1.01				0.95%
ScR 361.383	298431.8	108.7	%	0.70				0.65%
Ag 328.068†	4.8	0.00003	mg/L	0.000270	0.00003	mg/L	0.000270	832.25%
Al 308.215†	-1.0	-0.00076	mg/L	0.006025	-0.00076	mg/L	0.006025	793.76%
As 188.979†	2.5	0.00161	mg/L	0.001429	0.00161	mg/L	0.001429	88.82%
B 249.677†	6.2	0.00095	mg/L	0.001146	0.00095	mg/L	0.001146	120.98%
Ba 233.527†	0.1	0.00003	mg/L	0.000552	0.00003	mg/L	0.000552	>999.9%
Be 313.042†	-3.8	-0.00001	mg/L	0.000015	-0.00001	mg/L	0.000015	206.18%
Ca 317.933†	-6.1	-0.00050	mg/L	0.000086	-0.00050	mg/L	0.000086	17.31%
Cd 228.802†	-3.4	-0.00015	mg/L	0.000059	-0.00015	mg/L	0.000059	40.57%
Co 228.616†	11.4	0.00034	mg/L	0.000119	0.00034	mg/L	0.000119	34.70%
Cr 267.716†	7.4	0.00133	mg/L	0.000255	0.00133	mg/L	0.000255	19.25%
Cu 324.752†	-751.4	-0.00342	mg/L	0.000043	-0.00342	mg/L	0.000043	1.26%
Fe 273.955†	0.5	0.00039	mg/L	0.001627	0.00039	mg/L	0.001627	422.09%
K 766.490†	-52.3	-0.03003	mg/L	0.020925	-0.03003	mg/L	0.020925	69.68%
Mg 279.077†	-0.7	-0.00059	mg/L	0.005879	-0.00059	mg/L	0.005879	991.50%
Mn 257.610†	1.0	0.00003	mg/L	0.000057	0.00003	mg/L	0.000057	179.92%
Mo 202.031†	6.2	0.00035	mg/L	0.000440	0.00035	mg/L	0.000440	125.45%
Na 589.592†	54.7	0.00537	mg/L	0.000521	0.00537	mg/L	0.000521	9.69%
Na 330.237†	10.5	0.4183	mg/L	0.13983	0.4183	mg/L	0.13983	33.43%
Ni 231.604†	6.6	0.00177	mg/L	0.000865	0.00177	mg/L	0.000865	48.94%
Pb 220.353†	10.5	0.00149	mg/L	0.000845	0.00149	mg/L	0.000845	56.77%
Sb 206.836†	3.0	0.00103	mg/L	0.001750	0.00103	mg/L	0.001750	170.56%
Se 196.026†	-4.8	-0.00371	mg/L	0.002360	-0.00371	mg/L	0.002360	63.56%
Si 288.158†	-2.5	-0.00147	mg/L	0.001373	-0.00147	mg/L	0.001373	93.62%
Sn 189.927†	2.4	0.00070	mg/L	0.000556	0.00070	mg/L	0.000556	79.23%
Sr 421.552†	35.9	0.00005	mg/L	0.000020	0.00005	mg/L	0.000020	40.98%
Tl 334.903†	-6.5	-0.00037	mg/L	0.000274	-0.00037	mg/L	0.000274	73.77%
Tl 190.801†	5.6	0.00260	mg/L	0.002060	0.00260	mg/L	0.002060	79.25%
V 292.402†	2.0	0.00003	mg/L	0.000142	0.00003	mg/L	0.000142	566.26%
Zn 206.200†	0.5	0.00014	mg/L	0.000981	0.00014	mg/L	0.000981	683.38%

Sequence No.: 40

Sample ID: CRI

Autosampler Location: 356

Date Collected: 11/27/2012 4:38:45 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: CRI

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2375100.0	107.4	%	0.25			0.23%
ScR 361.383	296834.1	108.1	%	0.42			0.39%
Ag 328.068†	442.6	0.00297	mg/L	0.000136	0.00297	mg/L	0.000136 4.56%
Al 308.215†	62.1	0.04447	mg/L	0.002662	0.04447	mg/L	0.002662 5.99%
As 188.979†	75.8	0.04877	mg/L	0.001780	0.04877	mg/L	0.001780 3.65%
B 249.677†	125.4	0.01917	mg/L	0.000559	0.01917	mg/L	0.000559 2.92%
Ba 233.527†	11.5	0.00290	mg/L	0.000721	0.00290	mg/L	0.000721 24.83%
Be 313.042†	476.2	0.00091	mg/L	0.000047	0.00091	mg/L	0.000047 5.13%
Ca 317.933†	581.0	0.04770	mg/L	0.001867	0.04770	mg/L	0.001867 3.91%
Cd 228.802†	54.6	0.00185	mg/L	0.000039	0.00185	mg/L	0.000039 2.13%
Co 228.616†	118.9	0.00354	mg/L	0.000051	0.00354	mg/L	0.000051 1.45%
Cr 267.716†	33.1	0.00594	mg/L	0.000764	0.00594	mg/L	0.000764 12.85%
Cu 324.752†	-334.0	-0.00152	mg/L	0.000061	-0.00152	mg/L	0.000061 4.00%
Fe 273.955†	60.8	0.04883	mg/L	0.003484	0.04883	mg/L	0.003484 7.13%
K 766.490†	805.3	0.4625	mg/L	0.03152	0.4625	mg/L	0.03152 6.81%
Mg 279.077†	56.1	0.04747	mg/L	0.003609	0.04747	mg/L	0.003609 7.60%
Mn 257.610†	31.7	0.00097	mg/L	0.000060	0.00097	mg/L	0.000060 6.20%
Mo 202.031†	85.4	0.00486	mg/L	0.000137	0.00486	mg/L	0.000137 2.82%
Na 589.592†	4735.1	0.4649	mg/L	0.00714	0.4649	mg/L	0.00714 1.54%
Na 330.237†	22.7	0.9075	mg/L	0.20289	0.9075	mg/L	0.20289 22.36%
Ni 231.604†	40.4	0.01090	mg/L	0.001154	0.01090	mg/L	0.001154 10.59%
Pb 220.353†	147.3	0.02074	mg/L	0.000682	0.02074	mg/L	0.000682 3.29%
Sb 206.836†	145.2	0.05074	mg/L	0.002269	0.05074	mg/L	0.002269 4.47%
Se 196.026†	58.8	0.04568	mg/L	0.001935	0.04568	mg/L	0.001935 4.24%
Si 288.158†	114.2	0.06545	mg/L	0.001262	0.06545	mg/L	0.001262 1.93%
Sn 189.927†	35.3	0.01044	mg/L	0.000821	0.01044	mg/L	0.000821 7.86%
Sr 421.552†	735.3	0.00101	mg/L	0.000014	0.00101	mg/L	0.000014 1.34%
Ti 334.903†	73.8	0.00419	mg/L	0.001188	0.00419	mg/L	0.001188 28.33%
Tl 190.801†	112.0	0.05239	mg/L	0.001664	0.05239	mg/L	0.001664 3.18%
V 292.402†	302.6	0.00288	mg/L	0.000141	0.00288	mg/L	0.000141 4.88%
Zn 206.200†	31.4	0.00918	mg/L	0.000543	0.00918	mg/L	0.000543 5.91%

Sequence No.: 41  
Sample ID: ICSA

Autosampler Location: 357  
Date Collected: 11/27/2012 4:42:59 PM  
Data Type: Original

Dilution: 1.000000X

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Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

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Mean Data: ICSA

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2321198.1	105.0	%	0.55				0.52%
ScR 361.383	291056.7	106.0	%	0.86				0.81%
Ag 328.068†	-186.6	-0.00125	mg/L	0.000482	-0.00125	mg/L	0.000482	38.56%
Al 308.215†	273117.7	196.3	mg/L	1.05	196.3	mg/L	1.05	0.53%
As 188.979†	40.1	0.02017	mg/L	0.002251	0.02017	mg/L	0.002251	11.16%
B 249.677†	-17.2	-0.00263	mg/L	0.002549	-0.00263	mg/L	0.002549	96.86%
Ba 233.527†	111.7	-0.00359	mg/L	0.001614	-0.00359	mg/L	0.001614	44.91%
Be 313.042†	27.0	0.00005	mg/L	0.000011	0.00005	mg/L	0.000011	21.94%
Ca 317.933†	1195557.1	98.16	mg/L	0.516	98.16	mg/L	0.516	0.53%
Cd 228.802†	43.7	-0.00029	mg/L	0.000282	-0.00029	mg/L	0.000282	97.73%
Co 228.616†	58.2	-0.00081	mg/L	0.000197	-0.00081	mg/L	0.000197	24.42%
Cr 267.716†	10.6	-0.00015	mg/L	0.001269	-0.00015	mg/L	0.001269	863.29%
Cu 324.752†	-2520.6	-0.00372	mg/L	0.000149	-0.00372	mg/L	0.000149	4.00%
Fe 273.955†	242024.4	194.5	mg/L	0.94	194.5	mg/L	0.94	0.48%
K 766.490†	-14.1	-0.00808	mg/L	0.011805	-0.00808	mg/L	0.011805	146.15%
Mg 279.077†	120330.0	101.6	mg/L	1.34	101.6	mg/L	1.34	1.32%
Mn 257.610†	40.7	0.00122	mg/L	0.000205	0.00122	mg/L	0.000205	16.86%
Mo 202.031†	58.8	0.00228	mg/L	0.000457	0.00228	mg/L	0.000457	20.02%
Na 589.592†	157.8	0.01549	mg/L	0.002066	0.01549	mg/L	0.002066	13.34%
Na 330.237†	8.8	0.3547	mg/L	0.15095	0.3547	mg/L	0.15095	42.56%
Ni 231.604†	1.8	0.00049	mg/L	0.000716	0.00049	mg/L	0.000716	145.23%
Pb 220.353†	-297.2	-0.00283	mg/L	0.001698	-0.00283	mg/L	0.001698	59.91%
Sb 206.836†	21.5	0.00737	mg/L	0.001153	0.00737	mg/L	0.001153	15.63%
Se 196.026†	3.1	0.00242	mg/L	0.004900	0.00242	mg/L	0.004900	202.11%
Si 288.158†	-29.0	-0.00434	mg/L	0.002642	-0.00434	mg/L	0.002642	60.92%
Sn 189.927†	-63.6	-0.00661	mg/L	0.000517	-0.00661	mg/L	0.000517	7.82%
Sr 421.552†	2885.1	0.00395	mg/L	0.000081	0.00395	mg/L	0.000081	2.04%
Ti 334.903†	103.3	0.00120	mg/L	0.000494	0.00120	mg/L	0.000494	41.30%
Tl 190.801†	-35.2	0.00427	mg/L	0.000619	0.00427	mg/L	0.000619	14.49%
V 292.402†	1180.1	0.00435	mg/L	0.000176	0.00435	mg/L	0.000176	4.05%
Zn 206.200†	6.0	0.00176	mg/L	0.000467	0.00176	mg/L	0.000467	26.57%

Sequence No.: 42  
Sample ID: ICSAB

Autosampler Location: 358  
Date Collected: 11/27/2012 4:47:15 PM  
Data Type: Original

Dilution: 1.000000X

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Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

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Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2339882.5	105.8 %	0.26			0.24%
ScR 361.383	290849.8	105.9 %	1.07			1.01%
Ag 328.068†	148248.6	0.9961 mg/L	0.00162	0.9961 mg/L	0.00162	0.16%
Al 308.215†	270755.9	194.6 mg/L	0.37	194.6 mg/L	0.37	0.19%
As 188.979†	1605.0	1.024 mg/L	0.0024	1.024 mg/L	0.0024	0.23%
B 249.677†	-13.5	-0.00406 mg/L	0.000295	-0.00406 mg/L	0.000295	7.25%
Ba 233.527†	4009.6	0.9819 mg/L	0.00767	0.9819 mg/L	0.00767	0.78%
Be 313.042†	513180.4	0.9814 mg/L	0.00268	0.9814 mg/L	0.00268	0.27%
Ca 317.933†	1202916.9	98.77 mg/L	0.201	98.77 mg/L	0.201	0.20%
Cd 228.802†	25440.2	1.001 mg/L	0.0011	1.001 mg/L	0.0011	0.11%
Co 228.616†	32536.2	0.9687 mg/L	0.00146	0.9687 mg/L	0.00146	0.15%
Cr 267.716†	5606.1	1.006 mg/L	0.0104	1.006 mg/L	0.0104	1.03%
Cu 324.752†	212785.8	0.9752 mg/L	0.00115	0.9752 mg/L	0.00115	0.12%
Fe 273.955†	242413.6	194.8 mg/L	0.11	194.8 mg/L	0.11	0.06%
K 766.490†	-76.1	-0.04371 mg/L	0.006144	-0.04371 mg/L	0.006144	14.06%
Mg 279.077†	115698.2	97.72 mg/L	0.183	97.72 mg/L	0.183	0.19%
Mn 257.610†	31763.1	0.9696 mg/L	0.00305	0.9696 mg/L	0.00305	0.31%
Mo 202.031†	59.2	0.00224 mg/L	0.000484	0.00224 mg/L	0.000484	21.57%
Na 589.592†	270.1	0.02652 mg/L	0.003384	0.02652 mg/L	0.003384	12.76%
Na 330.237†	17.5	0.3851 mg/L	0.29705	0.3851 mg/L	0.29705	77.13%
Ni 231.604†	3487.4	0.9406 mg/L	0.00441	0.9406 mg/L	0.00441	0.47%
Pb 220.353†	6623.4	0.9711 mg/L	0.00144	0.9711 mg/L	0.00144	0.15%
Sb 206.836†	2904.3	1.004 mg/L	0.0021	1.004 mg/L	0.0021	0.21%
Se 196.026†	1266.2	0.9823 mg/L	0.00844	0.9823 mg/L	0.00844	0.86%
Si 288.158†	-30.9	-0.00226 mg/L	0.005126	-0.00226 mg/L	0.005126	226.33%
Sn 189.927†	-65.5	-0.00660 mg/L	0.001836	-0.00660 mg/L	0.001836	27.81%
Sr 421.552†	2848.0	0.00390 mg/L	0.000038	0.00390 mg/L	0.000038	0.98%
Ti 334.903†	105.6	0.00109 mg/L	0.000284	0.00109 mg/L	0.000284	25.92%
Tl 190.801†	1949.8	0.9241 mg/L	0.00411	0.9241 mg/L	0.00411	0.45%
V 292.402†	99265.9	0.9349 mg/L	0.00222	0.9349 mg/L	0.00222	0.24%
Zn 206.200†	3273.0	0.9552 mg/L	0.00861	0.9552 mg/L	0.00861	0.90%

Sequence No.: 43

Sample ID: CV 13

Autosampler Location: 7

Date Collected: 11/27/2012 4:51:03 PM

Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected			Sample			RSD
	Intensity	Conc. Units	Calib.	Conc. Units	Std.Dev.	Std.Dev.	
ScA 357.253	2355692.6	106.5 %			0.30		0.28%
ScR 361.383	293543.5	106.9 %			0.98		0.92%
Ag 328.068†	152975.5	1.028 mg/L		1.028 mg/L	0.0051	0.0051	0.49%
Al 308.215†	2846.0	2.012 mg/L		2.012 mg/L	0.0170	0.0170	0.85%
As 188.979†	3121.3	2.029 mg/L		2.029 mg/L	0.0058	0.0058	0.28%
B 249.677†	6354.4	0.9701 mg/L		0.9701 mg/L	0.00690	0.00690	0.71%
Ba 233.527†	3939.2	0.9956 mg/L		0.9956 mg/L	0.00981	0.00981	0.99%
Be 313.042†	508213.0	0.9719 mg/L		0.9719 mg/L	0.01388	0.01388	1.43%
Ca 317.933†	23661.4	1.943 mg/L		1.943 mg/L	0.0250	0.0250	1.29%
Cd 228.802†	25927.4	1.016 mg/L		1.016 mg/L	0.0061	0.0061	0.60%
Co 228.616†	33401.9	0.9952 mg/L		0.9952 mg/L	0.00668	0.00668	0.67%
Cr 267.716†	5639.2	1.014 mg/L		1.014 mg/L	0.0098	0.0098	0.96%
Cu 324.752†	219940.3	0.9994 mg/L		0.9994 mg/L	0.00494	0.00494	0.49%
Fe 273.955†	2578.8	2.065 mg/L		2.065 mg/L	0.0223	0.0223	1.08%
K 766.490†	34596.2	19.87 mg/L		19.87 mg/L	0.249	0.249	1.26%
Mg 279.077†	2389.8	2.028 mg/L		2.028 mg/L	0.0178	0.0178	0.88%
Mn 257.610†	32314.0	0.9866 mg/L		0.9866 mg/L	0.01291	0.01291	1.31%
Mo 202.031†	17463.5	0.9930 mg/L		0.9930 mg/L	0.00732	0.00732	0.74%
Na 589.592†	497046.7	48.80 mg/L		48.80 mg/L	0.567	0.567	1.16%
Na 330.237†	1314.5	52.50 mg/L		52.50 mg/L	0.327	0.327	0.62%
Ni 231.604†	3623.2	0.9774 mg/L		0.9774 mg/L	0.00921	0.00921	0.94%
Pb 220.353†	14054.0	1.978 mg/L		1.978 mg/L	0.0121	0.0121	0.61%
Sb 206.836†	6001.7	2.096 mg/L		2.096 mg/L	0.0035	0.0035	0.17%
Se 196.026†	2518.1	1.954 mg/L		1.954 mg/L	0.0089	0.0089	0.46%
Si 288.158†	3693.0	2.117 mg/L		2.117 mg/L	0.0184	0.0184	0.87%
Sr 189.927†	3424.3	1.011 mg/L		1.011 mg/L	0.0025	0.0025	0.24%
Sr 421.552†	702984.6	0.9634 mg/L		0.9634 mg/L	0.01176	0.01176	1.22%
Ti 334.903†	17997.2	1.023 mg/L		1.023 mg/L	0.0126	0.0126	1.23%
Tl 190.801†	4238.9	1.975 mg/L		1.975 mg/L	0.0054	0.0054	0.27%
V 292.402†	103533.7	0.9819 mg/L		0.9819 mg/L	0.00606	0.00606	0.62%
Zn 206.200†	3526.3	1.029 mg/L		1.029 mg/L	0.0095	0.0095	0.92%

Sequence No.: 44  
 Sample ID: CB 10

Autosampler Location: 1  
 Date Collected: 11/27/2012 4:56:08 PM  
 Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 217.0 kPa 0.75 L/min

Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2360513.3	106.8	%	0.55				0.52%
ScR 361.383	294551.6	107.2	%	0.28				0.26%
Ag 328.068†	-22.7	-0.00015	mg/L	0.000237	-0.00015	mg/L	0.000237	155.72%
Al 308.215†	-0.4	-0.00027	mg/L	0.001294	-0.00027	mg/L	0.001294	483.41%
As 188.979†	2.8	0.00177	mg/L	0.001274	0.00177	mg/L	0.001274	71.94%
B 249.677†	5.9	0.00090	mg/L	0.001461	0.00090	mg/L	0.001461	161.80%
Ba 233.527†	-0.3	-0.00008	mg/L	0.000981	-0.00008	mg/L	0.000981	>999.9%
Be 313.042†	-2.5	-0.00000	mg/L	0.000009	-0.00000	mg/L	0.000009	192.79%
Ca 317.933†	8.6	0.00071	mg/L	0.001129	0.00071	mg/L	0.001129	160.02%
Cd 228.802†	-3.7	-0.00016	mg/L	0.000129	-0.00016	mg/L	0.000129	81.80%
Co 228.616†	10.2	0.00031	mg/L	0.000032	0.00031	mg/L	0.000032	10.53%
Cr 267.716†	4.2	0.00076	mg/L	0.001456	0.00076	mg/L	0.001456	191.69%
Cu 324.752†	-732.6	-0.00333	mg/L	0.000105	-0.00333	mg/L	0.000105	3.15%
Fe 273.955†	3.0	0.00239	mg/L	0.002316	0.00239	mg/L	0.002316	96.96%
K 766.490†	-47.8	-0.02746	mg/L	0.009601	-0.02746	mg/L	0.009601	34.96%
Mg 279.077†	-0.8	-0.00067	mg/L	0.002035	-0.00067	mg/L	0.002035	304.90%
Mn 257.610†	2.8	0.00009	mg/L	0.000087	0.00009	mg/L	0.000087	100.90%
Mo 202.031†	8.3	0.00047	mg/L	0.000329	0.00047	mg/L	0.000329	69.63%
Na 589.592†	6.5	0.00064	mg/L	0.004989	0.00064	mg/L	0.004989	779.63%
Na 330.237†	18.0	0.7205	mg/L	0.49021	0.7205	mg/L	0.49021	68.03%
Ni 231.604†	1.1	0.00030	mg/L	0.001041	0.00030	mg/L	0.001041	342.11%
Pb 220.353†	12.9	0.00182	mg/L	0.000997	0.00182	mg/L	0.000997	54.69%
Sb 206.836†	3.9	0.00135	mg/L	0.001237	0.00135	mg/L	0.001237	91.58%
Se 196.026†	2.6	0.00198	mg/L	0.002872	0.00198	mg/L	0.002872	144.89%
Si 288.158†	3.5	0.00200	mg/L	0.006138	0.00200	mg/L	0.006138	306.24%
Sn 189.927†	2.4	0.00070	mg/L	0.000555	0.00070	mg/L	0.000555	79.40%
Sr 421.552†	34.9	0.00005	mg/L	0.000043	0.00005	mg/L	0.000043	89.74%
Ti 334.903†	1.5	0.00009	mg/L	0.000209	0.00009	mg/L	0.000209	240.57%
Tl 190.801†	11.4	0.00531	mg/L	0.001210	0.00531	mg/L	0.001210	22.78%
V 292.402†	-5.1	-0.00004	mg/L	0.000046	-0.00004	mg/L	0.000046	103.06%
Zn 206.200†	0.6	0.00018	mg/L	0.000283	0.00018	mg/L	0.000283	155.54%



Sequence No.: 45  
Sample ID: VR80 C TWC

Autosampler Location: 359  
Date Collected: 11/27/2012 5:00:23 PM  
Data Type: Original

Dilution: 1.000000X

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Nebulizer Parameters: VR80 C TWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

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Mean Data: VR80 C TWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2364837.0	107.0	%	0.85				0.80%
ScR 361.383	297182.6	108.2	%	0.46				0.42%
Ag 328.068†	-13.1	-0.00009	mg/L	0.000336	-0.00009	mg/L	0.000336	382.22%
Al 308.215†	150.8	0.1084	mg/L	0.00302	0.1084	mg/L	0.00302	2.79%
As 188.979†	11.1	0.00656	mg/L	0.000936	0.00656	mg/L	0.000936	14.26%
B 249.677†	119.9	0.01833	mg/L	0.000764	0.01833	mg/L	0.000764	4.17%
Ba 233.527†	32.3	0.00810	mg/L	0.000530	0.00810	mg/L	0.000530	6.54%
Be 313.042†	-23.3	-0.00004	mg/L	0.000042	-0.00004	mg/L	0.000042	92.82%
Ca 317.933†	138389.9	11.36	mg/L	0.049	11.36	mg/L	0.049	0.43%
Cd 228.802†	-2.3	-0.00014	mg/L	0.000080	-0.00014	mg/L	0.000080	57.08%
Co 228.616†	9.6	0.00027	mg/L	0.000168	0.00027	mg/L	0.000168	61.69%
Cr 267.716†	10.5	0.00137	mg/L	0.000817	0.00137	mg/L	0.000817	59.46%
Cu 324.752†	195.9	0.00086	mg/L	0.000041	0.00086	mg/L	0.000041	4.79%
Fe 273.955†	497.7	0.4000	mg/L	0.00121	0.4000	mg/L	0.00121	0.30%
K 766.490†	3320.1	1.907	mg/L	0.0145	1.907	mg/L	0.0145	0.76%
Mg 279.077†	5882.8	4.973	mg/L	0.0544	4.973	mg/L	0.0544	1.09%
Mn 257.610†	1063.1	0.03242	mg/L	0.000235	0.03242	mg/L	0.000235	0.73%
Mo 202.031†	21.5	0.00110	mg/L	0.000122	0.00110	mg/L	0.000122	11.09%
Na 589.592†	53966.0	5.298	mg/L	0.0150	5.298	mg/L	0.0150	0.28%
Na 330.237†	154.3	6.175	mg/L	0.3784	6.175	mg/L	0.3784	6.13%
Ni 231.604†	11.2	0.00303	mg/L	0.000974	0.00303	mg/L	0.000974	32.17%
Pb 220.353†	4.3	0.00061	mg/L	0.000684	0.00061	mg/L	0.000684	111.45%
Sb 206.836†	-0.5	-0.00022	mg/L	0.001448	-0.00022	mg/L	0.001448	644.71%
Se 196.026†	-5.9	-0.00456	mg/L	0.001771	-0.00456	mg/L	0.001771	38.85%
Si 288.158†	9906.5	5.683	mg/L	0.0581	5.683	mg/L	0.0581	1.02%
Sn 189.927†	-16.7	-0.00352	mg/L	0.000709	-0.00352	mg/L	0.000709	20.11%
Sr 421.552†	50072.3	0.06862	mg/L	0.000296	0.06862	mg/L	0.000296	0.43%
Ti 334.903†	74.3	0.00369	mg/L	0.001449	0.00369	mg/L	0.001449	39.27%
Tl 190.801†	8.3	0.00393	mg/L	0.001738	0.00393	mg/L	0.001738	44.23%
V 292.402†	121.5	0.00114	mg/L	0.000065	0.00114	mg/L	0.000065	5.70%
Zn 206.200†	15.4	0.00449	mg/L	0.000546	0.00449	mg/L	0.000546	12.14%

Sequence No.: 46

Sample ID: VR82 F SWC

Dilution: 2.000000X

*Del*

Autosampler Location: 360

Date Collected: 11/27/2012 5:04:38 PM

Data Type: Original

Nebulizer Parameters: VR82 F SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VR82 F SWC

Analyte	Mean Corrected		Calib.		Sample		Std.Dev.	RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units		
ScA 357.253	2394232.2	108.3	%	0.70				0.64%
ScR 361.383	303121.2	110.4	%	0.70				0.64%
Ag 328.068†	-47.8	-0.00027	mg/L	0.000194	-0.00055	mg/L	0.000388	70.50%
Al 308.215†	67145.0	48.25	mg/L	0.379	96.51	mg/L	0.758	0.79%
As 188.979†	-87.5	0.02397	mg/L	0.002194	0.04795	mg/L	0.004388	9.15%
B 249.677†	75.5	0.01146	mg/L	0.000279	0.02292	mg/L	0.000558	2.43%
Ba 233.527†	1341.4	0.3268	mg/L	0.00206	0.6536	mg/L	0.00412	0.63%
Be 313.042†	438.6	0.00077	mg/L	0.000021	0.00155	mg/L	0.000042	2.73%
Ca 317.933†	242871.3	19.94	mg/L	0.207	39.88	mg/L	0.415	1.04%
Cd 228.802†	53.5	0.00190	mg/L	0.000109	0.00379	mg/L	0.000218	5.75%
Co 228.616†	1424.4	0.03600	mg/L	0.000284	0.07200	mg/L	0.000569	0.79%
Cr 267.716†	788.4	0.1426	mg/L	0.00188	0.2853	mg/L	0.00376	1.32%
Cu 324.752†	20926.0	0.09771	mg/L	0.000732	0.1954	mg/L	0.00146	0.75%
Fe 273.955†	93915.3	75.47	mg/L	0.573	150.9	mg/L	1.15	0.76%
K 766.490†	4219.0	2.423	mg/L	0.0470	4.846	mg/L	0.0940	1.94%
Mg 279.077†	23734.8	20.03	mg/L	0.128	40.05	mg/L	0.256	0.64%
Mn 257.610†	62009.5	1.893	mg/L	0.0142	3.786	mg/L	0.0285	0.75%
Mo 202.031†	49.2	0.00257	mg/L	0.000125	0.00515	mg/L	0.000250	4.85%
Na 589.592†	9656.4	0.9481	mg/L	0.00471	1.896	mg/L	0.0094	0.50%
Na 330.237†	23.5	1.449	mg/L	0.0634	2.897	mg/L	0.1267	4.37%
Ni 231.604†	513.1	0.1384	mg/L	0.00131	0.2767	mg/L	0.00262	0.95%
Pb 220.353†	454.2	0.07249	mg/L	0.001779	0.1450	mg/L	0.00356	2.45%
Sb 206.836†	6.4	0.00203	mg/L	0.000329	0.00406	mg/L	0.000658	16.18%
Se 196.026†	4.3	0.00326	mg/L	0.002005	0.00651	mg/L	0.004011	61.61%
Si 288.158†	12620.0	7.241	mg/L	0.0490	14.48	mg/L	0.098	0.68%
Sn 189.927†	-13.1	-0.00100	mg/L	0.001055	-0.00199	mg/L	0.002110	105.82%
Sr 421.552†	96748.3	0.1326	mg/L	0.00099	0.2652	mg/L	0.00199	0.75%
Tl 334.903†	49987.3	2.845	mg/L	0.0243	5.690	mg/L	0.0485	0.85%
Tl 190.801†	-3.9	0.00542	mg/L	0.000614	0.01083	mg/L	0.001227	11.33%
V 292.402†	16854.6	0.1558	mg/L	0.00092	0.3116	mg/L	0.00184	0.59%
Zn 206.200†	1465.5	0.4277	mg/L	0.00419	0.8554	mg/L	0.00838	0.98%

Sequence No.: 47  
Sample ID: VR82 G SWC

Autosampler Location: 361  
Date Collected: 11/27/2012 5:08:37 PM  
Data Type: Original

Dilution: 2.000000X

*Del*

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Nebulizer Parameters: VR82 G SWC

Analyte                      Back Pressure              Flow  
All                              217.0 kPa                      0.75 L/min

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Mean Data: VR82 G SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2397849.6	108.5	%	0.85			0.78%
ScR 361.383	302716.8	110.2	%	0.83			0.75%
Ag 328.068†	-67.2	-0.00040	mg/L	0.000055	-0.00081	mg/L	0.000109 13.48%
Al 308.215†	70561.6	50.71	mg/L	0.688	101.4	mg/L	1.38 1.36%
As 188.979†	-94.5	0.02137	mg/L	0.004160	0.04275	mg/L	0.008320 19.46%
B 249.677†	73.4	0.01114	mg/L	0.001974	0.02227	mg/L	0.003947 17.72%
Ba 233.527†	1422.7	0.3471	mg/L	0.00394	0.6941	mg/L	0.00788 1.13%
Be 313.042†	458.6	0.00081	mg/L	0.000031	0.00162	mg/L	0.000062 3.80%
Ca 317.933†	241937.2	19.86	mg/L	0.300	39.73	mg/L	0.600 1.51%
Cd 228.802†	50.7	0.00180	mg/L	0.000041	0.00361	mg/L	0.000083 2.29%
Co 228.616†	1440.4	0.03632	mg/L	0.000260	0.07264	mg/L	0.000521 0.72%
Cr 267.716†	853.0	0.1543	mg/L	0.00097	0.3085	mg/L	0.00195 0.63%
Cu 324.752†	19902.6	0.09312	mg/L	0.001259	0.1862	mg/L	0.00252 1.35%
Fe 273.955†	96192.5	77.30	mg/L	1.349	154.6	mg/L	2.70 1.74%
K 766.490†	4466.6	2.565	mg/L	0.0446	5.130	mg/L	0.0892 1.74%
Mg 279.077†	24872.6	20.99	mg/L	0.207	41.97	mg/L	0.414 0.99%
Mn 257.610†	61905.1	1.890	mg/L	0.0307	3.779	mg/L	0.0614 1.63%
Mo 202.031†	47.4	0.00247	mg/L	0.000081	0.00494	mg/L	0.000161 3.26%
Na 589.592†	9773.9	0.9596	mg/L	0.00979	1.919	mg/L	0.0196 1.02%
Na 330.237†	20.9	1.360	mg/L	0.2493	2.720	mg/L	0.4986 18.33%
Ni 231.604†	532.9	0.1437	mg/L	0.00205	0.2874	mg/L	0.00410 1.43%
Pb 220.353†	434.4	0.07023	mg/L	0.000239	0.1405	mg/L	0.00048 0.34%
Sb 206.836†	3.0	0.00068	mg/L	0.003176	0.00137	mg/L	0.006353 465.32%
Se 196.026†	1.2	0.00079	mg/L	0.003777	0.00157	mg/L	0.007554 480.51%
Si 288.158†	12223.6	7.014	mg/L	0.0673	14.03	mg/L	0.135 0.96%
Sn 189.927†	-25.5	-0.00466	mg/L	0.000827	-0.00931	mg/L	0.001653 17.76%
Sr 421.552†	97885.9	0.1342	mg/L	0.00184	0.2683	mg/L	0.00368 1.37%
Ti 334.903†	51182.3	2.913	mg/L	0.0438	5.826	mg/L	0.0877 1.51%
Tl 190.801†	-3.4	0.00583	mg/L	0.001034	0.01166	mg/L	0.002068 17.73%
V 292.402†	17284.4	0.1598	mg/L	0.00173	0.3196	mg/L	0.00345 1.08%
Zn 206.200†	1445.1	0.4217	mg/L	0.00542	0.8435	mg/L	0.01084 1.28%

Sequence No.: 48  
Sample ID: VR82 H SWC

Autosampler Location: 362  
Date Collected: 11/27/2012 5:12:37 PM  
Data Type: Original

Dilution: 2.000000X

*Del*

Nebulizer Parameters: VR82 H SWC  
Analyte Back Pressure Flow  
All 216.0 kPa 0.75 L/min

Mean Data: VR82 H SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2387165.7	108.0	%	0.32				0.30%
ScR 361.383	303951.5	110.7	%	0.47				0.42%
Ag 328.068†	-101.5	-0.00063	mg/L	0.000205	-0.00125	mg/L	0.000410	32.71%
Al 308.215†	86059.6	61.85	mg/L	0.165	123.7	mg/L	0.33	0.27%
As 188.979†	-120.8	0.02262	mg/L	0.001125	0.04524	mg/L	0.002250	4.97%
B 249.677†	80.4	0.01220	mg/L	0.000741	0.02439	mg/L	0.001481	6.07%
Ba 233.527†	1538.9	0.3744	mg/L	0.00396	0.7488	mg/L	0.00792	1.06%
Be 313.042†	514.6	0.00090	mg/L	0.000037	0.00181	mg/L	0.000073	4.06%
Ca 317.933†	261075.9	21.44	mg/L	0.075	42.87	mg/L	0.150	0.35%
Cd 228.802†	59.1	0.00215	mg/L	0.000135	0.00429	mg/L	0.000269	6.27%
Co 228.616†	1641.6	0.04092	mg/L	0.000418	0.08185	mg/L	0.000836	1.02%
Cr 267.716†	1021.8	0.1848	mg/L	0.00235	0.3696	mg/L	0.00469	1.27%
Cu 324.752†	23290.8	0.1089	mg/L	0.00027	0.2178	mg/L	0.00054	0.25%
Fe 273.955†	111758.3	89.81	mg/L	0.186	179.6	mg/L	0.37	0.21%
K 766.490†	5160.1	2.963	mg/L	0.0279	5.927	mg/L	0.0558	0.94%
Mg 279.077†	29027.4	24.49	mg/L	0.311	48.99	mg/L	0.622	1.27%
Mn 257.610†	65516.3	2.000	mg/L	0.0052	4.000	mg/L	0.0104	0.26%
Mo 202.031†	47.7	0.00247	mg/L	0.000153	0.00494	mg/L	0.000305	6.18%
Na 589.592†	11877.8	1.166	mg/L	0.0032	2.332	mg/L	0.0065	0.28%
Na 330.237†	20.1	1.458	mg/L	0.0635	2.917	mg/L	0.1270	4.35%
Ni 231.604†	612.2	0.1651	mg/L	0.00194	0.3302	mg/L	0.00388	1.18%
Pb 220.353†	534.7	0.08653	mg/L	0.000677	0.1731	mg/L	0.00135	0.78%
Sb 206.836†	5.7	0.00153	mg/L	0.002936	0.00307	mg/L	0.005871	191.45%
Se 196.026†	0.6	0.00037	mg/L	0.006047	0.00074	mg/L	0.012094	>999.9%
Si 288.158†	13437.4	7.710	mg/L	0.0968	15.42	mg/L	0.194	1.26%
Sn 189.927†	-28.8	-0.00533	mg/L	0.000430	-0.01066	mg/L	0.000859	8.06%
Sr 421.552†	103963.3	0.1425	mg/L	0.00044	0.2850	mg/L	0.00089	0.31%
Ti 334.903†	62400.2	3.552	mg/L	0.0088	7.103	mg/L	0.0176	0.25%
Tl 190.801†	-7.2	0.00524	mg/L	0.003135	0.01047	mg/L	0.006269	59.87%
V 292.402†	19931.5	0.1841	mg/L	0.00053	0.3683	mg/L	0.00107	0.29%
Zn 206.200†	1601.1	0.4673	mg/L	0.00624	0.9346	mg/L	0.01249	1.34%

Sequence No.: 49  
Sample ID: VR82 I SWC  
Dilution: 2.000000X

*Del*

Autosampler Location: 363  
Date Collected: 11/27/2012 5:16:36 PM  
Data Type: Original

Nebulizer Parameters: VR82 I SWC

Analyte Back Pressure Flow  
All 217.0 kPa 0.75 L/min

Mean Data: VR82 I SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2359279.0	106.7	%	0.49			0.46%
ScR 361.383	299897.2	109.2	%	0.38			0.35%
Ag 328.068†	-55.2	-0.00032	mg/L	0.000109	-0.00064	mg/L	0.000218 33.91%
Al 308.215†	76175.6	54.74	mg/L	0.249	109.5	mg/L	0.50 0.46%
As 188.979†	-105.7	0.02110	mg/L	0.000895	0.04221	mg/L	0.001789 4.24%
B 249.677†	67.9	0.01030	mg/L	0.000373	0.02060	mg/L	0.000747 3.63%
Ba 233.527†	1389.6	0.3384	mg/L	0.00199	0.6768	mg/L	0.00398 0.59%
Be 313.042†	483.2	0.00085	mg/L	0.000031	0.00170	mg/L	0.000061 3.59%
Ca 317.933†	242372.5	19.90	mg/L	0.117	39.80	mg/L	0.233 0.59%
Cd 228.802†	54.8	0.00199	mg/L	0.000250	0.00399	mg/L	0.000499 12.53%
Co 228.616†	1414.3	0.03505	mg/L	0.000161	0.07010	mg/L	0.000322 0.46%
Cr 267.716†	902.6	0.1633	mg/L	0.00144	0.3265	mg/L	0.00288 0.88%
Cu 324.752†	21254.0	0.09928	mg/L	0.000207	0.1986	mg/L	0.00041 0.21%
Fe 273.955†	98323.3	79.01	mg/L	0.599	158.0	mg/L	1.20 0.76%
K 766.490†	4770.1	2.739	mg/L	0.0406	5.479	mg/L	0.0812 1.48%
Mg 279.077†	25060.4	21.15	mg/L	0.076	42.29	mg/L	0.152 0.36%
Mn 257.610†	56315.3	1.719	mg/L	0.0110	3.438	mg/L	0.0221 0.64%
Mo 202.031†	46.1	0.00240	mg/L	0.000393	0.00480	mg/L	0.000787 16.41%
Na 589.592†	10408.7	1.022	mg/L	0.0074	2.044	mg/L	0.0149 0.73%
Na 330.237†	18.5	1.314	mg/L	0.0996	2.628	mg/L	0.1992 7.58%
Ni 231.604†	522.2	0.1408	mg/L	0.00097	0.2817	mg/L	0.00195 0.69%
Pb 220.353†	519.0	0.08305	mg/L	0.001268	0.1661	mg/L	0.00254 1.53%
Sb 206.836†	6.0	0.00174	mg/L	0.002032	0.00348	mg/L	0.004064 116.79%
Se 196.026†	7.7	0.00590	mg/L	0.004241	0.01179	mg/L	0.008482 71.93%
Si 288.158†	13480.9	7.735	mg/L	0.0109	15.47	mg/L	0.022 0.14%
Sn 189.927†	-21.5	-0.00342	mg/L	0.000916	-0.00685	mg/L	0.001833 26.76%
Sr 421.552†	95490.6	0.1309	mg/L	0.00058	0.2617	mg/L	0.00117 0.45%
Ti 334.903†	55443.6	3.156	mg/L	0.0179	6.311	mg/L	0.0359 0.57%
Tl 190.801†	-2.4	0.00644	mg/L	0.004983	0.01287	mg/L	0.009967 77.41%
V 292.402†	17896.5	0.1654	mg/L	0.00056	0.3308	mg/L	0.00113 0.34%
Zn 206.200†	1494.1	0.4360	mg/L	0.00280	0.8721	mg/L	0.00560 0.64%

Sequence No.: 50

Sample ID: CV 14

Autosampler Location: 7

Date Collected: 11/27/2012 5:20:35 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected		Calib.		Sample		RSD
	Intensity	Conc.	Units	Std.Dev.	Conc.	Units	
ScA 357.253	2318279.9	104.9	%	0.33			0.32%
ScR 361.383	292649.2	106.5	%	0.99			0.93%
Ag 328.068†	154195.5	1.036	mg/L	0.0038	1.036	mg/L	0.36%
Al 308.215†	2834.3	2.003	mg/L	0.0290	2.003	mg/L	1.45%
As 188.979†	3163.2	2.056	mg/L	0.0137	2.056	mg/L	0.67%
B 249.677†	6336.1	0.9673	mg/L	0.01407	0.9673	mg/L	1.45%
Ba 233.527†	3945.3	0.9972	mg/L	0.01424	0.9972	mg/L	1.43%
Be 313.042†	513495.9	0.9820	mg/L	0.01130	0.9820	mg/L	1.15%
Ca 317.933†	23520.0	1.931	mg/L	0.0211	1.931	mg/L	1.10%
Cd 228.802†	26126.3	1.024	mg/L	0.0059	1.024	mg/L	0.57%
Co 228.616†	33638.0	1.002	mg/L	0.0055	1.002	mg/L	0.55%
Cr 267.716†	5627.6	1.012	mg/L	0.0136	1.012	mg/L	1.34%
Cu 324.752†	221814.3	1.008	mg/L	0.0034	1.008	mg/L	0.34%
Fe 273.955†	2542.9	2.037	mg/L	0.0211	2.037	mg/L	1.03%
K 766.490†	34448.4	19.78	mg/L	0.127	19.78	mg/L	0.64%
Mg 279.077†	2373.2	2.014	mg/L	0.0208	2.014	mg/L	1.03%
Mn 257.610†	32256.3	0.9849	mg/L	0.01014	0.9849	mg/L	1.03%
Mo 202.031†	17591.5	1.000	mg/L	0.0073	1.000	mg/L	0.73%
Na 589.592†	495325.8	48.63	mg/L	0.452	48.63	mg/L	0.93%
Na 330.237†	1310.6	52.35	mg/L	0.576	52.35	mg/L	1.10%
Ni 231.604†	3625.2	0.9779	mg/L	0.01181	0.9779	mg/L	1.21%
Pb 220.353†	14133.4	1.990	mg/L	0.0125	1.990	mg/L	0.63%
Sb 206.836†	6064.2	2.118	mg/L	0.0104	2.118	mg/L	0.49%
Se 196.026†	2534.0	1.967	mg/L	0.0103	1.967	mg/L	0.52%
Si 288.158†	3701.6	2.122	mg/L	0.0290	2.122	mg/L	1.37%
Sn 189.927†	3471.5	1.025	mg/L	0.0067	1.025	mg/L	0.65%
Sr 421.552†	701280.8	0.9611	mg/L	0.00819	0.9611	mg/L	0.85%
Ti 334.903†	18044.5	1.026	mg/L	0.0112	1.026	mg/L	1.09%
Tl 190.801†	4288.0	1.998	mg/L	0.0122	1.998	mg/L	0.61%
V 292.402†	104073.3	0.9870	mg/L	0.00449	0.9870	mg/L	0.45%
Zn 206.200†	3509.9	1.024	mg/L	0.0141	1.024	mg/L	1.38%

Sequence No.: 51

Sample ID: CB 11

Autosampler Location: 1

Date Collected: 11/27/2012 5:25:40 PM

Data Type: Original

Dilution: 1.000000X

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2361506.7	106.8	%	0.86				0.80%
ScR 361.383	297716.5	108.4	%	0.74				0.68%
Ag 328.068†	-3.1	-0.00002	mg/L	0.000191	-0.00002	mg/L	0.000191	915.44%
Al 308.215†	-7.9	-0.00566	mg/L	0.001586	-0.00566	mg/L	0.001586	28.02%
As 188.979†	0.4	0.00028	mg/L	0.001045	0.00028	mg/L	0.001045	376.76%
B 249.677†	7.3	0.00112	mg/L	0.000595	0.00112	mg/L	0.000595	53.08%
Ba 233.527†	0.2	0.00006	mg/L	0.000372	0.00006	mg/L	0.000372	623.05%
Be 313.042†	1.8	0.00000	mg/L	0.000028	0.00000	mg/L	0.000028	839.67%
Ca 317.933†	0.2	0.00002	mg/L	0.000623	0.00002	mg/L	0.000623	>999.9%
Cd 228.802†	-3.3	-0.00013	mg/L	0.000119	-0.00013	mg/L	0.000119	89.78%
Co 228.616†	2.5	0.00007	mg/L	0.000091	0.00007	mg/L	0.000091	120.96%
Cr 267.716†	5.5	0.00100	mg/L	0.000851	0.00100	mg/L	0.000851	85.32%
Cu 324.752†	-747.0	-0.00340	mg/L	0.000072	-0.00340	mg/L	0.000072	2.13%
Fe 273.955†	2.4	0.00195	mg/L	0.000965	0.00195	mg/L	0.000965	49.50%
K 766.490†	-44.0	-0.02529	mg/L	0.023902	-0.02529	mg/L	0.023902	94.50%
Mg 279.077†	-5.2	-0.00437	mg/L	0.001219	-0.00437	mg/L	0.001219	27.91%
Mn 257.610†	2.8	0.00009	mg/L	0.000059	0.00009	mg/L	0.000059	67.52%
Mo 202.031†	1.7	0.00010	mg/L	0.000234	0.00010	mg/L	0.000234	242.71%
Na 589.592†	42.2	0.00415	mg/L	0.001319	0.00415	mg/L	0.001319	31.83%
Na 330.237†	11.6	0.4626	mg/L	0.35522	0.4626	mg/L	0.35522	76.79%
Ni 231.604†	1.9	0.00052	mg/L	0.000479	0.00052	mg/L	0.000479	91.65%
Pb 220.353†	3.9	0.00056	mg/L	0.000795	0.00056	mg/L	0.000795	142.13%
Sb 206.836†	3.8	0.00130	mg/L	0.001033	0.00130	mg/L	0.001033	79.66%
Se 196.026†	-4.7	-0.00362	mg/L	0.001437	-0.00362	mg/L	0.001437	39.73%
Si 288.158†	-1.1	-0.00066	mg/L	0.004280	-0.00066	mg/L	0.004280	650.84%
Sn 189.927†	0.3	0.00008	mg/L	0.000713	0.00008	mg/L	0.000713	866.42%
Sr 421.552†	29.9	0.00004	mg/L	0.000036	0.00004	mg/L	0.000036	87.20%
Tl 334.903†	7.6	0.00043	mg/L	0.000522	0.00043	mg/L	0.000522	120.75%
Tl 190.801†	11.3	0.00529	mg/L	0.002203	0.00529	mg/L	0.002203	41.62%
V 292.402†	-10.9	-0.00010	mg/L	0.000062	-0.00010	mg/L	0.000062	62.84%
Zn 206.200†	2.7	0.00080	mg/L	0.000535	0.00080	mg/L	0.000535	66.85%



**SAMPLE RUN LOG-ICP-OES-02**  
**Perkin Elmer OPTIMA 7500**  
**Serial No. - 077C8121202**

IEC Date: 11-12-12

Analysis Date: 11-28-12

Analyst: BA

LR Date: 7-30-12

Page: 1 of 6

All corrections made by analyst unless otherwise noted. BA 11-28-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			2994-10
		↓ 2			↓ -11
		3			-12
		↓ 4			↓ -13
		5			↓ -14
		ICV			2988-6
		ICB			
		CRI			
		ICSA			
		IC SAB			
		CCV1			
		CCB1			
		VSW1 MBI TWC			
		↓ B			
		C			
		A-L		5	✓
		A			
		ADWP			✓
		ASPK			✓
		<del>ZZZZZ</del>			✓
		<del>APST</del>			✓
		↓ MBISPK			✓
		CCV2			
		CCB2			
		CRI			

CaMg STL  
↓  
✓ 0.43 mL ICP  
Spike 2977-9





IEC Date: \_\_\_\_\_  
LR Date: \_\_\_\_\_

Analysis Date: 11-28-12

Analyst: BA  
Page: 2 of 6

All corrections made by analyst unless otherwise noted. BA 11-29-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		ICSA			
		ICSA B			
		CCV3			
		CCB3			End V561
		V580 MBI	TWC		
		B			
		C			
		A-L		S ✓	
		A			
		ADWP		✓	
		ASPK		✓	
		ZZZZZZ			
		APOST			Ca Mg STL
		↓ MBISPK	↓		✓ 0.108 ml ICP Spike 2977-9 ↓
		CCV4			
		CCB4			
		CRI			
		ICSA			
		ICSA B			
		CCV5			
		CCB5			End V580
		V582 MBI	SWC	2	
✓		A			Ca > LB
✓		B			
✓		D			



IEC Date: \_\_\_\_\_ Analysis Date: 11-28-12 Analyst: BA  
LR Date: \_\_\_\_\_ Page: 3 of 6

All corrections made by analyst unless otherwise noted. BA 11-29-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
	✓	<del>222222</del> VS82	SWC	10	Cc > LB
	✓	↓ C	↓	2	↓
	✓	↓ CDUP	↓	↓	↓
	✓	↓ CSPK	↓	↓	↓
	✓	<del>222222</del> ↓ <del>EPOST</del>	↓	↓	0.08 mL ICP Spike 2977-9
		↓ MBISPK	↓	↓	
		CCV6			
		CCB6			
		VS82 A	SWC	10	
		↓ B	↓	↓	
		↓ D	↓	↓	
	✓	↓ E	↓	↓	Overdiluted
	✓	↓ F	↓	↓	↓
		↓ C-L	↓	50 ✓	
		↓ C	↓	10	
		↓ CDUP	↓	↓	Cu > 20% dil. (CAF)
		↓ CSPK	↓	↓	
	✓	<del>222222</del> ↓ <del>EPOST</del>	↓	↓	0.08 mL ICP Spike 2977-9 No Sn added
		CCV7			
		CCB7			
		VS82 G	SWC	10	
	✓	↓ H	↓	↓	Overdiluted
	✓	↓ I	↓	↓	↓
		↓ J	↓	↓	



IEC Date:           

Analysis Date: 11-28-12

Analyst: BA

LR Date:           

Page: 4 of 6

All corrections made by analyst unless otherwise noted. BA 11-29-12

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
	✓	V582 K	SWC	10	Overdiluted
	✓	↓ L	↓	↓	↓
	✓	↓ M	↓	↓	
		↓ E	↓	5	
		↓ F	↓	↓	
		V58 ADUP	↓	2 ✓	
		CCV8			
		CCB8			
		V582 H	SWC	5	
		↓ I	↓	↓	
		ZZZZZ CPOST	↓	10	0.45ml ICP Sp. kit 2977-9 0.608ml SH Sol 2941-3
		↓ K	↓	5	
		↓ L	↓	2	
		↓ M	↓	↓	
		CCV9			
		CCB9			
		CRI			
		ICSA			
		ICSAB			
		CCV10			
		CCB10			
		V570 MB	TWC		
		V578 MB	↓		
		V574 MB	↓		

End  
Pkg

*11-29-12*

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 11-28-12

ICP - 2	Analyst BA 11/29/12	Peer H 11-29-12	Comment
<b>Logbook:</b>			
Analyst, Date, Method info	✓	/	
Sample ID's	✓	/	
Standard/QC solution ID's recorded	✓	/	
Prep codes	✓	/	
Dilution factors	✓	/	
Crossouts/Corrections/Deletions	✓	/	
<b>Calibration:</b>			
Blank & Standard intensities	✓	/	
Standard deviations	✓	/	
Curve fit	✓	/	
<b>Calibration Verification:</b>			
ICV/CCV	✓	/	
ICB/CCB	✓	/	
<b>Samples:</b>			
RSD's & SD's	✓	/	
Internal Standards	✓	/	
Carry-over	✓	/	
<b>Method QC:</b>			
CRI/CRA	✓	/	
ICSA/ICSAB	✓	/	
Post Spikes/Serial Dilutions	✓	/	
Analytic Spikes	—	—	
<b>Matrix QC:</b>			
SRM/LCS	✓	/	
Matrix Spikes	✓	/	See log
Matrix Duplicates	✓	/	See log
Method Blanks	✓	/	
<b>Data Distribution:</b>			
Requested elements/isotope identified	✓	/	
Correct samples identified for distribution	✓	/	
Raw data match distributed data	✓	/	
Data filename correct	✓	/	
Necessary Analysts Notes and CAF's	✓	/	CAF-V552, VR58

✓ # 11-29-12

Nebulizer Parameters: Hg ReAlign

Analyte Back Pressure Flow
All 212.0 kPa 0.75 L/min

11/28/2012 8:59:30 AM Hg ReAlign... Actual peak offset (nm): 0.004
Drift (nm): -0.001 Slit adjustment: -5

Analysis Begun

Start Time: 11/28/2012 9:02:56 AM Plasma On Time: 11/28/2012 8:01:35 AM
Logged In Analyst: Metals Technique: ICP Continuous
Spectrometer: Optima 7300 DV, S/N 077C8121202 Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: blanks
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded

Method Name: 7300bcESI2FAST Method Last Saved: 8/13/2012 7:13:22 AM
IEC File: IEC110912.iec MSF File:
Method Description: 12Axial Elements

Table with 6 columns: Analyte, Calibration Equation, Processing, View, Internal Standard, IEC. Lists elements from Ag to Zn and SCA/SCR with their respective calibration and processing details.

Sequence No.: 1 Autosampler Location: 1
Sample ID: B1 Date Collected: 11/28/2012 9:03:02 AM
Dilution: 1.000000X Data Type: Original

Nebulizer Parameters: B1
Analyte Back Pressure Flow
All 213.0 kPa 0.75 L/min

=====  
Analysis Begun

Start Time: 11/28/2012 9:27:09 AM

Plasma On Time: 11/28/2012 8:01:35 AM

Logged In Analyst: Metals

Technique: ICP Continuous

Spectrometer: Optima 7300 DV, S/N 077C8121202

Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRIS1.sif

Batch ID:

Results Data Set: I2121128

Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb  
=====

Sequence No.: 1

Autosampler Location: 1

Sample ID: Calib Blank 1

Date Collected: 11/28/2012 9:27:11 AM

Data Type: Original  
-----

## Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

-----  
Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2825310.2	21821.36	0.77%	100.0	%
ScR 361.383	377904.4	1359.77	0.36%	100.0	%
Ag 328.068†	-131.3	11.58	8.82%	[0.00]	mg/L
Al 308.215†	211.7	2.70	1.28%	[0.00]	mg/L
As 188.979†	-15.1	0.98	6.53%	[0.00]	mg/L
B 249.677†	26.0	6.11	23.54%	[0.00]	mg/L
Ba 233.527†	30.7	3.22	10.48%	[0.00]	mg/L
Be 313.042†	832.7	21.60	2.59%	[0.00]	mg/L
Ca 317.933†	185.2	5.52	2.98%	[0.00]	mg/L
Cd 228.802†	312.1	5.16	1.65%	[0.00]	mg/L
Co 228.616†	-97.3	2.34	2.40%	[0.00]	mg/L
Cr 267.716†	-140.3	3.93	2.80%	[0.00]	mg/L
Cu 324.752†	2317.5	4.22	0.18%	[0.00]	mg/L
Fe 273.955†	24.7	1.78	7.18%	[0.00]	mg/L
K 766.490†	505.0	49.52	9.80%	[0.00]	mg/L
Mg 279.077†	84.5	2.03	2.41%	[0.00]	mg/L
Mn 257.610†	197.2	2.16	1.09%	[0.00]	mg/L
Mo 202.031†	76.9	3.74	4.87%	[0.00]	mg/L
Na 589.592†	-536.7	41.26	7.69%	[0.00]	mg/L
Na 330.237†	-232.9	5.66	2.43%	[0.00]	mg/L
Ni 231.604†	-10.9	2.15	19.65%	[0.00]	mg/L
Pb 220.353†	65.0	7.87	12.12%	[0.00]	mg/L
Sb 206.836†	84.3	6.74	8.00%	[0.00]	mg/L
Se 196.026†	-57.3	3.67	6.40%	[0.00]	mg/L
Si 288.158†	57.2	1.38	2.41%	[0.00]	mg/L
Sn 189.927†	-4.1	5.61	137.00%	[0.00]	mg/L
Sr 421.552†	424.3	9.13	2.15%	[0.00]	mg/L
Ti 334.903†	-77.9	20.34	26.11%	[0.00]	mg/L
Tl 190.801†	-46.9	2.01	4.29%	[0.00]	mg/L
V 292.402†	122.7	10.14	8.26%	[0.00]	mg/L
Zn 206.200†	15.4	2.21	14.35%	[0.00]	mg/L

Sequence No.: 2

Autosampler Location: 2

Sample ID: STD2

Date Collected: 11/28/2012 9:31:27 AM

Data Type: Original  
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## Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

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Mean Data: STD2

Mean Corrected

Calib

Analyte	Intensity	Std.Dev.	RSD	Conc. Units
ScA 357.253	2861275.3	32566.49	1.14%	101.3 %
ScR 361.383	382498.5	1418.56	0.37%	101.2 %
Ba 233.527†	53954.6	300.90	0.56%	[10] mg/L
Cd 228.802†	317507.8	4080.10	1.29%	[10] mg/L
Co 228.616†	439792.2	4355.68	0.99%	[10] mg/L
Cr 267.716†	77117.6	307.11	0.40%	[10] mg/L
Cu 324.752†	2791870.8	35523.09	1.27%	[10] mg/L
Mn 257.610†	454791.9	975.24	0.21%	[10] mg/L
V 292.402†	1313870.2	15683.69	1.19%	[10] mg/L

Sequence No.: 3  
Sample ID: STD3

Autosampler Location: 3  
Date Collected: 11/28/2012 9:33:15 AM  
Data Type: Original

## Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

## Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib
ScA 357.253	2795167.8	9136.83	0.33%	98.93 %	
ScR 361.383	374331.1	720.72	0.19%	99.05 %	
Ag 328.068†	189861.9	714.81	0.38%	[1.0] mg/L	
As 188.979†	20922.0	107.77	0.52%	[10] mg/L	
B 249.677†	87042.4	346.38	0.40%	[10] mg/L	
Be 313.042†	3591019.1	34836.79	0.97%	[5.0] mg/L	
Na 589.592†	654866.7	2871.96	0.44%	[50] mg/L	
Ni 231.604†	49864.8	160.71	0.32%	[10] mg/L	
Pb 220.353†	90979.8	478.91	0.53%	[10] mg/L	
Se 196.026†	17020.2	75.41	0.44%	[10] mg/L	
Sr 421.552†	4809168.9	31659.73	0.66%	[5] mg/L	
Tl 190.801†	27602.3	149.30	0.54%	[10] mg/L	
Zn 206.200†	46802.7	141.97	0.30%	[10] mg/L	

Sequence No.: 4  
Sample ID: STD4

Autosampler Location: 4  
Date Collected: 11/28/2012 9:35:49 AM  
Data Type: Original

## Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

## Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc. Units	Calib
ScA 357.253	2842683.1	39945.76	1.41%	100.6 %	
ScR 361.383	375100.8	2348.88	0.63%	99.26 %	
Mo 202.031†	222783.0	3348.75	1.50%	[10] mg/L	
Sb 206.836†	36650.7	547.94	1.50%	[10] mg/L	
Si 288.158†	23715.8	270.28	1.14%	[10] mg/L	
Sn 189.927†	43468.0	572.73	1.32%	[10] mg/L	
Ti 334.903†	243228.5	792.23	0.33%	[10] mg/L	

Sequence No.: 5  
Sample ID: STD5

Autosampler Location: 5  
Date Collected: 11/28/2012 9:38:05 AM  
Data Type: Original

## Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2718218.5	11674.10	0.43%	96.21	%
ScR 361.383	380376.3	91.28	0.02%	100.7	%
Al 308.215†	54913.1	171.36	0.31%	[30]	mg/L
Ca 317.933†	496646.8	1713.50	0.35%	[30]	mg/L
Fe 273.955†	168352.1	1049.91	0.62%	[100]	mg/L
K 766.490†	231471.0	555.76	0.24%	[100]	mg/L
Mg 279.077†	47481.5	119.55	0.25%	[30]	mg/L
Na 330.237†	3323.7	17.10	0.51%	[100]	mg/L

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Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	189900	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1830	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	2092	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	8704	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	5395	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	718200	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	16550	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	31750	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	43980	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	7712	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	279200	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1684	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2315	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1583	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	45480	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	22280	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	13100	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	33.24	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4986	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	9098	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3665	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1702	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2372	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	4347	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	961800	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	24320	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2760	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	131400	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4680	0.00000	1.000000	



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Analysis Begun

Start Time: 11/28/2012 9:41:03 AM                      Plasma On Time: 11/28/2012 8:01:35 AM  
Logged In Analyst: Metals                              Technique: ICP Continuous  
Spectrometer: Optima 7300 DV, S/N 077C8121202      Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRIS1.sif  
Batch ID:  
Results Data Set: I2121128  
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

=====  
Sequence No.: 1    Autosampler Location: 7  
Sample ID: CV    Date Collected: 11/28/2012 9:41:04 AM  
Analyst: BA    Data Type: Original  
Dilution: 1.000000X  
User canceled analysis.

=====  
Analysis Begun

Start Time: 11/28/2012 9:41:31 AM                      Plasma On Time: 11/28/2012 8:01:35 AM  
Logged In Analyst: Metals                              Technique: ICP Continuous  
Spectrometer: Optima 7300 DV, S/N 077C8121202      Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRIS1.sif  
Batch ID:  
Results Data Set: I2121128  
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

=====  
Sequence No.: 1    Autosampler Location: 7  
Sample ID: CV    Date Collected: 11/28/2012 9:41:41 AM  
Analyst: BA    Data Type: Original  
Dilution: 1.000000X

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Nebulizer Parameters: CV

Analyte                      Back Pressure              Flow  
All                              213.0 kPa                      0.75 L/min

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Mean Data: CV

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2833935.8	100.3 %	0.80			0.79%
ScR 361.383	374164.9	99.01 %	0.425			0.43%
Ag 328.068†	196205.0	1.034 mg/L	0.0032	1.034 mg/L	0.0032	0.31%
Al 308.215†	3777.1	2.028 mg/L	0.0256	2.028 mg/L	0.0256	1.26%
As 188.979†	4166.7	2.016 mg/L	0.0093	2.016 mg/L	0.0093	0.46%
B 249.677†	8842.7	1.015 mg/L	0.0095	1.015 mg/L	0.0095	0.94%
Ba 233.527†	5496.3	1.018 mg/L	0.0082	1.018 mg/L	0.0082	0.81%
Be 313.042†	715586.2	0.9961 mg/L	0.00767	0.9961 mg/L	0.00767	0.77%
Ca 317.933†	34252.5	2.069 mg/L	0.0179	2.069 mg/L	0.0179	0.87%
Cd 228.802†	32646.8	1.016 mg/L	0.0058	1.016 mg/L	0.0058	0.57%
Co 228.616†	43512.6	0.9873 mg/L	0.00053	0.9873 mg/L	0.00053	0.05%
Cr 267.716†	7761.2	1.006 mg/L	0.0070	1.006 mg/L	0.0070	0.70%
Cu 324.752†	284865.4	1.020 mg/L	0.0034	1.020 mg/L	0.0034	0.33%
Fe 273.955†	3488.1	2.065 mg/L	0.0127	2.065 mg/L	0.0127	0.61%
K 766.490†	46817.7	20.23 mg/L	0.209	20.23 mg/L	0.209	1.04%
Mg 279.077†	3235.0	2.051 mg/L	0.0081	2.051 mg/L	0.0081	0.39%
Mn 257.610†	45965.5	1.011 mg/L	0.0064	1.011 mg/L	0.0064	0.63%
Mo 202.031†	23189.3	1.041 mg/L	0.0073	1.041 mg/L	0.0073	0.70%
Na 589.592†	673845.6	51.45 mg/L	0.447	51.45 mg/L	0.447	0.87%
Na 330.237†	1752.4	52.61 mg/L	0.755	52.61 mg/L	0.755	1.44%
Ni 231.604†	5047.8	1.013 mg/L	0.0052	1.013 mg/L	0.0052	0.52%
Pb 220.353†	18810.6	2.069 mg/L	0.0131	2.069 mg/L	0.0131	0.63%
Sb 206.836†	7838.3	2.138 mg/L	0.0138	2.138 mg/L	0.0138	0.64%
Se 196.026†	3371.8	1.980 mg/L	0.0104	1.980 mg/L	0.0104	0.53%
Si 288.158†	4951.7	2.087 mg/L	0.0168	2.087 mg/L	0.0168	0.80%

Sn 189.927†	4466.9	1.029 mg/L	0.0065	1.029 mg/L	0.0065	0.63%
Sr 421.552†	967201.5	1.006 mg/L	0.0081	1.006 mg/L	0.0081	0.81%
Ti 334.903†	24981.8	1.026 mg/L	0.0078	1.026 mg/L	0.0078	0.76%
Tl 190.801†	5519.1	1.991 mg/L	0.0120	1.991 mg/L	0.0120	0.60%
V 292.402†	133561.3	1.021 mg/L	0.0028	1.021 mg/L	0.0028	0.27%
Zn 206.200†	4908.5	1.049 mg/L	0.0079	1.049 mg/L	0.0079	0.75%

Sequence No.: 2  
 Sample ID: ICB  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 1  
 Date Collected: 11/28/2012 9:45:05 AM  
 Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2852358.2	101.0	%	0.42				0.42%
ScR 361.383	381000.8	100.8	%	0.32				0.31%
Ag 328.068†	24.9	0.00013	mg/L	0.000081	0.00013	mg/L	0.000081	61.80%
Al 308.215†	7.2	0.00393	mg/L	0.000710	0.00393	mg/L	0.000710	18.08%
As 188.979†	1.6	0.00076	mg/L	0.001415	0.00076	mg/L	0.001415	186.51%
B 249.677†	21.9	0.00252	mg/L	0.000593	0.00252	mg/L	0.000593	23.53%
Ba 233.527†	-1.2	-0.00022	mg/L	0.000857	-0.00022	mg/L	0.000857	395.12%
Be 313.042†	27.4	0.00004	mg/L	0.000014	0.00004	mg/L	0.000014	35.94%
Ca 317.933†	6.6	0.00040	mg/L	0.000423	0.00040	mg/L	0.000423	105.41%
Cd 228.802†	2.1	0.00006	mg/L	0.000046	0.00006	mg/L	0.000046	75.45%
Co 228.616†	-5.2	-0.00012	mg/L	0.000104	-0.00012	mg/L	0.000104	88.27%
Cr 267.716†	4.5	0.00058	mg/L	0.000708	0.00058	mg/L	0.000708	121.59%
Cu 324.752†	42.8	0.00015	mg/L	0.000038	0.00015	mg/L	0.000038	25.05%
Fe 273.955†	1.3	0.00074	mg/L	0.001452	0.00074	mg/L	0.001452	195.61%
K 766.490†	10.0	0.00430	mg/L	0.017286	0.00430	mg/L	0.017286	401.99%
Mg 279.077†	-0.8	-0.00048	mg/L	0.002358	-0.00048	mg/L	0.002358	491.10%
Mn 257.610†	6.8	0.00015	mg/L	0.000116	0.00015	mg/L	0.000116	76.90%
Mo 202.031†	34.5	0.00155	mg/L	0.000103	0.00155	mg/L	0.000103	6.67%
Na 589.592†	121.4	0.00927	mg/L	0.002922	0.00927	mg/L	0.002922	31.53%
Na 330.237†	13.0	0.3923	mg/L	0.25524	0.3923	mg/L	0.25524	65.05%
Ni 231.604†	-5.1	-0.00103	mg/L	0.000448	-0.00103	mg/L	0.000448	43.56%
Pb 220.353†	-4.5	-0.00050	mg/L	0.000679	-0.00050	mg/L	0.000679	136.81%
Sb 206.836†	10.2	0.00278	mg/L	0.000391	0.00278	mg/L	0.000391	14.03%
Se 196.026†	10.6	0.00625	mg/L	0.001733	0.00625	mg/L	0.001733	27.74%
Si 288.158†	2.9	0.00122	mg/L	0.001506	0.00122	mg/L	0.001506	123.05%
Sn 189.927†	-0.6	-0.00014	mg/L	0.000175	-0.00014	mg/L	0.000175	121.24%
Sr 421.552†	80.5	0.00008	mg/L	0.000032	0.00008	mg/L	0.000032	37.79%
Ti 334.903†	14.5	0.00059	mg/L	0.000484	0.00059	mg/L	0.000484	81.60%
Tl 190.801†	2.3	0.00085	mg/L	0.001247	0.00085	mg/L	0.001247	147.18%
V 292.402†	30.9	0.00024	mg/L	0.000126	0.00024	mg/L	0.000126	52.85%
Zn 206.200†	0.1	0.00002	mg/L	0.000350	0.00002	mg/L	0.000350	>999.9%

Sequence No.: 3

Autosampler Location: 301

Sample ID: CRI

Date Collected: 11/28/2012 9:49:21 AM

Analyst: BA

Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	2828356.7	100.1	%	0.16			0.16%
ScR 361.383	376521.5	99.63	%	0.515			0.52%
Ag 328.068†	579.9	0.00306	mg/L	0.000167	0.00306 mg/L	0.000167	5.48%
Al 308.215†	106.6	0.05811	mg/L	0.008758	0.05811 mg/L	0.008758	15.07%
As 188.979†	99.9	0.04788	mg/L	0.001465	0.04788 mg/L	0.001465	3.06%
B 249.677†	182.7	0.02099	mg/L	0.000634	0.02099 mg/L	0.000634	3.02%
Ba 233.527†	16.9	0.00311	mg/L	0.000689	0.00311 mg/L	0.000689	22.12%
Be 313.042†	736.5	0.00102	mg/L	0.000026	0.00102 mg/L	0.000026	2.50%
Ca 317.933†	798.9	0.04826	mg/L	0.000457	0.04826 mg/L	0.000457	0.95%
Cd 228.802†	80.1	0.00222	mg/L	0.000073	0.00222 mg/L	0.000073	3.28%
Co 228.616†	150.2	0.00340	mg/L	0.000069	0.00340 mg/L	0.000069	2.02%
Cr 267.716†	35.9	0.00465	mg/L	0.000942	0.00465 mg/L	0.000942	20.24%
Cu 324.752†	566.4	0.00203	mg/L	0.000063	0.00203 mg/L	0.000063	3.09%
Fe 273.955†	85.0	0.05045	mg/L	0.001162	0.05045 mg/L	0.001162	2.30%
K 766.490†	1131.6	0.4889	mg/L	0.00834	0.4889 mg/L	0.00834	1.71%
Mg 279.077†	84.1	0.05314	mg/L	0.004924	0.05314 mg/L	0.004924	9.27%
Mn 257.610†	50.3	0.00111	mg/L	0.000091	0.00111 mg/L	0.000091	8.17%
Mo 202.031†	122.8	0.00551	mg/L	0.000029	0.00551 mg/L	0.000029	0.53%
Na 589.592†	6362.8	0.4858	mg/L	0.00402	0.4858 mg/L	0.00402	0.83%
Na 330.237†	21.2	0.6373	mg/L	0.43232	0.6373 mg/L	0.43232	67.84%
Ni 231.604†	47.4	0.00952	mg/L	0.000576	0.00952 mg/L	0.000576	6.05%
Pb 220.353†	189.9	0.02090	mg/L	0.000162	0.02090 mg/L	0.000162	0.78%
Sb 206.836†	197.2	0.05384	mg/L	0.001421	0.05384 mg/L	0.001421	2.64%
Se 196.026†	89.3	0.05248	mg/L	0.002870	0.05248 mg/L	0.002870	5.47%
Si 288.158†	156.2	0.06582	mg/L	0.004664	0.06582 mg/L	0.004664	7.09%
Sn 189.927†	44.6	0.01029	mg/L	0.000323	0.01029 mg/L	0.000323	3.14%
Sr 421.552†	1011.6	0.00105	mg/L	0.000039	0.00105 mg/L	0.000039	3.72%
Tl 334.903†	128.3	0.00527	mg/L	0.000298	0.00527 mg/L	0.000298	5.65%
Tl 190.801†	132.2	0.04786	mg/L	0.001251	0.04786 mg/L	0.001251	2.61%
V 292.402†	426.7	0.00327	mg/L	0.000124	0.00327 mg/L	0.000124	3.79%
Zn 206.200†	46.0	0.00982	mg/L	0.000290	0.00982 mg/L	0.000290	2.95%

Sequence No.: 4  
 Sample ID: ICSA  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 302  
 Date Collected: 11/28/2012 9:53:38 AM  
 Data Type: Original

## Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2834377.4	100.3	%	0.05				0.05%
ScR 361.383	371789.2	98.38	%	0.315				0.32%
Ag 328.068†	-253.0	-0.00133	mg/L	0.000100	-0.00133	mg/L	0.000100	7.52%
Al 308.215†	367207.6	200.6	mg/L	0.42	200.6	mg/L	0.42	0.21%
As 188.979†	36.1	0.01157	mg/L	0.000890	0.01157	mg/L	0.000890	7.69%
B 249.677†	-43.9	-0.00505	mg/L	0.001330	-0.00505	mg/L	0.001330	26.35%
Ba 233.527†	160.7	-0.00265	mg/L	0.000610	-0.00265	mg/L	0.000610	23.02%
Be 313.042†	90.0	0.00012	mg/L	0.000019	0.00012	mg/L	0.000019	15.56%
Ca 317.933†	1665861.0	100.6	mg/L	0.46	100.6	mg/L	0.46	0.46%
Cd 228.802†	64.8	0.00004	mg/L	0.000282	0.00004	mg/L	0.000282	730.36%
Co 228.616†	67.7	-0.00105	mg/L	0.000088	-0.00105	mg/L	0.000088	8.39%
Cr 267.716†	1.7	-0.00155	mg/L	0.001244	-0.00155	mg/L	0.001244	80.08%
Cu 324.752†	-2223.6	-0.00005	mg/L	0.000067	-0.00005	mg/L	0.000067	138.15%
Fe 273.955†	333549.6	198.1	mg/L	0.73	198.1	mg/L	0.73	0.37%
K 766.490†	23.5	0.01014	mg/L	0.011461	0.01014	mg/L	0.011461	113.00%
Mg 279.077†	158242.3	99.88	mg/L	0.616	99.88	mg/L	0.616	0.62%
Mn 257.610†	68.2	0.00147	mg/L	0.000201	0.00147	mg/L	0.000201	13.69%
Mo 202.031†	74.2	0.00224	mg/L	0.000354	0.00224	mg/L	0.000354	15.80%
Na 589.592†	173.7	0.01327	mg/L	0.001466	0.01327	mg/L	0.001466	11.05%
Na 330.237†	0.1	0.00413	mg/L	0.149307	0.00413	mg/L	0.149307	>999.9%
Ni 231.604†	-13.4	-0.00266	mg/L	0.000477	-0.00266	mg/L	0.000477	17.89%
Pb 220.353†	-406.7	-0.00485	mg/L	0.000595	-0.00485	mg/L	0.000595	12.29%
Sb 206.836†	45.4	0.01228	mg/L	0.000465	0.01228	mg/L	0.000465	3.79%
Se 196.026†	24.5	0.01437	mg/L	0.004574	0.01437	mg/L	0.004574	31.84%
Si 288.158†	-32.8	-0.00175	mg/L	0.002420	-0.00175	mg/L	0.002420	138.52%
Sn 189.927†	-78.1	-0.00552	mg/L	0.001505	-0.00552	mg/L	0.001505	27.28%
Sr 421.552†	3970.0	0.00413	mg/L	0.000042	0.00413	mg/L	0.000042	1.01%
Ti 334.903†	155.7	0.00160	mg/L	0.000330	0.00160	mg/L	0.000330	20.65%
Tl 190.801†	-64.7	-0.00230	mg/L	0.001134	-0.00230	mg/L	0.001134	49.25%
V 292.402†	1554.3	0.00491	mg/L	0.000043	0.00491	mg/L	0.000043	0.88%
Zn 206.200†	12.2	0.00260	mg/L	0.000303	0.00260	mg/L	0.000303	11.65%

Sequence No.: 5  
 Sample ID: ICSAB  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 303  
 Date Collected: 11/28/2012 9:57:41 AM  
 Data Type: Original

## Nebulizer Parameters: ICSAB

Analyte Back Pressure Flow  
 All 212.0 kPa 0.75 L/min

## Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2821712.8	99.87	%	0.407			0.41%
ScR 361.383	372361.1	98.53	%	0.818			0.83%
Ag 328.068†	198933.4	1.048	mg/L	0.0093	1.048 mg/L	0.0093	0.89%
Al 308.215†	365379.3	199.6	mg/L	2.28	199.6 mg/L	2.28	1.14%
As 188.979†	2126.5	1.010	mg/L	0.0021	1.010 mg/L	0.0021	0.20%
B 249.677†	-15.1	-0.00367	mg/L	0.000749	-0.00367 mg/L	0.000749	20.43%
Ba 233.527†	5630.3	1.011	mg/L	0.0126	1.011 mg/L	0.0126	1.24%
Be 313.042†	718554.7	1.000	mg/L	0.0101	1.000 mg/L	0.0101	1.01%
Ca 317.933†	1668992.7	100.8	mg/L	1.27	100.8 mg/L	1.27	1.26%
Cd 228.802†	32302.4	1.010	mg/L	0.0093	1.010 mg/L	0.0093	0.92%
Co 228.616†	41432.9	0.9393	mg/L	0.00801	0.9393 mg/L	0.00801	0.85%
Cr 267.716†	7805.7	1.010	mg/L	0.0086	1.010 mg/L	0.0086	0.85%
Cu 324.752†	285322.7	1.030	mg/L	0.0083	1.030 mg/L	0.0083	0.81%
Fe 273.955†	332478.4	197.5	mg/L	2.21	197.5 mg/L	2.21	1.12%
K 766.490†	-100.4	-0.04337	mg/L	0.021589	-0.04337 mg/L	0.021589	49.77%
Mg 279.077†	158769.0	100.2	mg/L	1.36	100.2 mg/L	1.36	1.36%
Mn 257.610†	43432.4	0.9552	mg/L	0.00936	0.9552 mg/L	0.00936	0.98%
Mo 202.031†	66.1	0.00182	mg/L	0.000106	0.00182 mg/L	0.000106	5.79%
Na 589.592†	392.5	0.02997	mg/L	0.001717	0.02997 mg/L	0.001717	5.73%
Na 330.237†	18.3	0.2289	mg/L	0.13803	0.2289 mg/L	0.13803	60.30%
Ni 231.604†	4894.4	0.9817	mg/L	0.01186	0.9817 mg/L	0.01186	1.21%
Pb 220.353†	8626.9	0.9884	mg/L	0.00192	0.9884 mg/L	0.00192	0.19%
Sb 206.836†	3816.8	1.031	mg/L	0.0024	1.031 mg/L	0.0024	0.23%
Se 196.026†	1706.4	1.002	mg/L	0.0025	1.002 mg/L	0.0025	0.25%
Si 288.158†	-35.0	0.00102	mg/L	0.003560	0.00102 mg/L	0.003560	349.74%
Sn 189.927†	-86.0	-0.00680	mg/L	0.001681	-0.00680 mg/L	0.001681	24.72%
Sr 421.552†	3939.9	0.00410	mg/L	0.000047	0.00410 mg/L	0.000047	1.16%
Ti 334.903†	149.8	0.00114	mg/L	0.000064	0.00114 mg/L	0.000064	5.61%
Tl 190.801†	2522.3	0.9258	mg/L	0.00143	0.9258 mg/L	0.00143	0.15%
V 292.402†	131421.2	0.9978	mg/L	0.00957	0.9978 mg/L	0.00957	0.96%
Zn 206.200†	4582.4	0.9791	mg/L	0.01038	0.9791 mg/L	0.01038	1.06%

Sequence No.: 6  
 Sample ID: CV  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 7  
 Date Collected: 11/28/2012 10:02:47 AM  
 Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2871282.6	101.6 %		0.16			0.16%
ScR 361.383	376004.0	99.50 %		0.422			0.42%
Ag 328.068†	196388.3	1.035 mg/L		0.0008	1.035 mg/L	0.0008	0.07%
Al 308.215†	3820.7	2.052 mg/L		0.0040	2.052 mg/L	0.0040	0.19%
As 188.979†	4166.5	2.016 mg/L		0.0058	2.016 mg/L	0.0058	0.29%
B 249.677†	8844.4	1.015 mg/L		0.0033	1.015 mg/L	0.0033	0.33%
Ba 233.527†	5556.2	1.029 mg/L		0.0078	1.029 mg/L	0.0078	0.76%
Be 313.042†	723657.1	1.007 mg/L		0.0056	1.007 mg/L	0.0056	0.56%
Ca 317.933†	34754.5	2.099 mg/L		0.0038	2.099 mg/L	0.0038	0.18%
Cd 228.802†	32822.9	1.021 mg/L		0.0012	1.021 mg/L	0.0012	0.12%
Co 228.616†	43962.9	0.9975 mg/L		0.00169	0.9975 mg/L	0.00169	0.17%
Cr 267.716†	7835.1	1.015 mg/L		0.0035	1.015 mg/L	0.0035	0.35%
Cu 324.752†	285419.4	1.022 mg/L		0.0000	1.022 mg/L	0.0000	0.00%
Fe 273.955†	3525.5	2.087 mg/L		0.0008	2.087 mg/L	0.0008	0.04%
K 766.490†	47021.0	20.31 mg/L		0.096	20.31 mg/L	0.096	0.47%
Mg 279.077†	3278.8	2.079 mg/L		0.0150	2.079 mg/L	0.0150	0.72%
Mn 257.610†	46200.3	1.016 mg/L		0.0036	1.016 mg/L	0.0036	0.35%
Mo 202.031†	23134.3	1.038 mg/L		0.0023	1.038 mg/L	0.0023	0.22%
Na 589.592†	674546.7	51.50 mg/L		0.225	51.50 mg/L	0.225	0.44%
Na 330.237†	1742.5	52.31 mg/L		0.413	52.31 mg/L	0.413	0.79%
Ni 231.604†	5112.5	1.026 mg/L		0.0021	1.026 mg/L	0.0021	0.21%
Pb 220.353†	18832.8	2.071 mg/L		0.0030	2.071 mg/L	0.0030	0.15%
Sb 206.836†	7835.8	2.137 mg/L		0.0029	2.137 mg/L	0.0029	0.14%
Se 196.026†	3382.7	1.986 mg/L		0.0059	1.986 mg/L	0.0059	0.30%
Si 288.158†	4977.9	2.098 mg/L		0.0083	2.098 mg/L	0.0083	0.40%
Sn 189.927†	4478.4	1.032 mg/L		0.0028	1.032 mg/L	0.0028	0.27%
Sr 421.552†	969794.2	1.008 mg/L		0.0034	1.008 mg/L	0.0034	0.34%
Ti 334.903†	25147.4	1.033 mg/L		0.0049	1.033 mg/L	0.0049	0.47%
Tl 190.801†	5516.2	1.990 mg/L		0.0047	1.990 mg/L	0.0047	0.24%
V 292.402†	134238.2	1.026 mg/L		0.0005	1.026 mg/L	0.0005	0.05%
Zn 206.200†	4986.6	1.065 mg/L		0.0064	1.065 mg/L	0.0064	0.60%

Sequence No.: 7  
 Sample ID: CB  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 1  
 Date Collected: 11/28/2012 10:07:08 AM  
 Data Type: Original

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 213.0 kPa 0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	2855234.8	101.1	%	0.37			0.37%
ScR 361.383	379058.0	100.3	%	0.79			0.78%
Ag 328.068†	-26.6	-0.00014	mg/L	0.000091	-0.00014	0.000091	65.37%
Al 308.215†	13.9	0.00758	mg/L	0.003041	0.00758	0.003041	40.13%
As 188.979†	-2.5	-0.00121	mg/L	0.001131	-0.00121	0.001131	93.60%
B 249.677†	15.9	0.00183	mg/L	0.000474	0.00183	0.000474	25.90%
Ba 233.527†	2.5	0.00047	mg/L	0.000690	0.00047	0.000690	146.27%
Be 313.042†	63.8	0.00009	mg/L	0.000036	0.00009	0.000036	40.68%
Ca 317.933†	21.3	0.00129	mg/L	0.000771	0.00129	0.000771	60.01%
Cd 228.802†	8.7	0.00028	mg/L	0.000066	0.00028	0.000066	23.51%
Co 228.616†	-2.5	-0.00006	mg/L	0.000165	-0.00006	0.000165	294.12%
Cr 267.716†	-3.2	-0.00042	mg/L	0.000369	-0.00042	0.000369	87.97%
Cu 324.752†	63.1	0.00023	mg/L	0.000092	0.00023	0.000092	40.84%
Fe 273.955†	2.8	0.00166	mg/L	0.002941	0.00166	0.002941	177.44%
K 766.490†	-9.2	-0.00399	mg/L	0.018954	-0.00399	0.018954	475.53%
Mg 279.077†	8.1	0.00515	mg/L	0.007602	0.00515	0.007602	147.67%
Mn 257.610†	11.2	0.00025	mg/L	0.000180	0.00025	0.000180	72.86%
Mo 202.031†	15.1	0.00068	mg/L	0.000384	0.00068	0.000384	56.56%
Na 589.592†	68.0	0.00519	mg/L	0.003830	0.00519	0.003830	73.74%
Na 330.237†	3.8	0.1155	mg/L	0.19854	0.1155	0.19854	171.96%
Ni 231.604†	0.2	0.00005	mg/L	0.000523	0.00005	0.000523	>999.9%
Pb 220.353†	1.4	0.00016	mg/L	0.000328	0.00016	0.000328	208.40%
Sb 206.836†	12.1	0.00331	mg/L	0.001235	0.00331	0.001235	37.31%
Se 196.026†	1.4	0.00085	mg/L	0.000682	0.00085	0.000682	80.11%
Si 288.158†	4.4	0.00184	mg/L	0.002009	0.00184	0.002009	108.93%
Sn 189.927†	1.2	0.00028	mg/L	0.000965	0.00028	0.000965	339.75%
Sr 421.552†	49.8	0.00005	mg/L	0.000013	0.00005	0.000013	25.95%
Ti 334.903†	-15.2	-0.00063	mg/L	0.000835	-0.00063	0.000835	133.05%
Tl 190.801†	0.7	0.00025	mg/L	0.001706	0.00025	0.001706	686.12%
V 292.402†	8.1	0.00006	mg/L	0.000100	0.00006	0.000100	164.46%
Zn 206.200†	2.0	0.00043	mg/L	0.000129	0.00043	0.000129	29.90%



Sequence No.: 8  
 Sample ID: VS61 MB1 TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 304  
 Date Collected: 11/28/2012 10:11:24 AM  
 Data Type: Original

## Nebulizer Parameters: VS61 MB1 TWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: VS61 MB1 TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2864663.6	101.4	%	0.41				0.41%
ScR 361.383	379544.2	100.4	%	0.26				0.26%
Ag 328.068†	9.7	0.00005	mg/L	0.000088	0.00005	mg/L	0.000088	171.18%
Al 308.215†	8.1	0.00439	mg/L	0.003139	0.00439	mg/L	0.003139	71.49%
As 188.979†	2.3	0.00108	mg/L	0.000989	0.00108	mg/L	0.000989	91.32%
B 249.677†	10.9	0.00126	mg/L	0.000492	0.00126	mg/L	0.000492	39.16%
Ba 233.527†	-0.6	-0.00012	mg/L	0.000343	-0.00012	mg/L	0.000343	295.74%
Be 313.042†	41.2	0.00006	mg/L	0.000021	0.00006	mg/L	0.000021	36.48%
Ca 317.933†	74.6	0.00451	mg/L	0.000164	0.00451	mg/L	0.000164	3.64%
Cd 228.802†	1.0	0.00002	mg/L	0.000132	0.00002	mg/L	0.000132	574.81%
Co 228.616†	-0.7	-0.00002	mg/L	0.000165	-0.00002	mg/L	0.000165	>999.9%
Cr 267.716†	-1.7	-0.00021	mg/L	0.000338	-0.00021	mg/L	0.000338	157.17%
Cu 324.752†	107.0	0.00038	mg/L	0.000133	0.00038	mg/L	0.000133	34.67%
Fe 273.955†	3.6	0.00213	mg/L	0.000523	0.00213	mg/L	0.000523	24.51%
K 766.490†	17.1	0.00740	mg/L	0.004626	0.00740	mg/L	0.004626	62.51%
Mg 279.077†	-1.2	-0.00078	mg/L	0.003205	-0.00078	mg/L	0.003205	408.91%
Mn 257.610†	13.1	0.00029	mg/L	0.000082	0.00029	mg/L	0.000082	28.36%
Mo 202.031†	9.0	0.00040	mg/L	0.000101	0.00040	mg/L	0.000101	25.06%
Na 589.592†	77.3	0.00590	mg/L	0.004453	0.00590	mg/L	0.004453	75.44%
Na 330.237†	6.1	0.1839	mg/L	0.13101	0.1839	mg/L	0.13101	71.23%
Ni 231.604†	-0.7	-0.00015	mg/L	0.001010	-0.00015	mg/L	0.001010	677.04%
Pb 220.353†	6.8	0.00075	mg/L	0.000418	0.00075	mg/L	0.000418	55.94%
Sb 206.836†	0.3	0.00007	mg/L	0.002186	0.00007	mg/L	0.002186	>999.9%
Se 196.026†	3.8	0.00224	mg/L	0.003428	0.00224	mg/L	0.003428	153.21%
Si 288.158†	6.1	0.00257	mg/L	0.002244	0.00257	mg/L	0.002244	87.36%
Sn 189.927†	-2.2	-0.00051	mg/L	0.000566	-0.00051	mg/L	0.000566	110.22%
Sr 421.552†	70.0	0.00007	mg/L	0.000011	0.00007	mg/L	0.000011	14.52%
Ti 334.903†	-14.3	-0.00059	mg/L	0.000659	-0.00059	mg/L	0.000659	111.78%
Tl 190.801†	-0.9	-0.00034	mg/L	0.000625	-0.00034	mg/L	0.000625	184.07%
V 292.402†	20.7	0.00016	mg/L	0.000080	0.00016	mg/L	0.000080	50.75%
Zn 206.200†	5.8	0.00123	mg/L	0.000542	0.00123	mg/L	0.000542	43.91%

Sequence No.: 9  
 Sample ID: VS61 B TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 305  
 Date Collected: 11/28/2012 10:15:42 AM  
 Data Type: Original

## Nebulizer Parameters: VS61 B TWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: VS61 B TWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2816967.2	99.70	%	0.474			0.47%
ScR 361.383	373776.7	98.91	%	0.551			0.56%
Ag 328.068†	-63.0	-0.00033	mg/L	0.000088	-0.00033	mg/L	0.000088 26.59%
Al 308.215†	8.1	0.00433	mg/L	0.004337	0.00433	mg/L	0.004337 100.24%
As 188.979†	49.7	0.02067	mg/L	0.000700	0.02067	mg/L	0.000700 3.38%
B 249.677†	6134.2	0.7047	mg/L	0.00718	0.7047	mg/L	0.00718 1.02%
Ba 233.527†	1671.9	0.3095	mg/L	0.00420	0.3095	mg/L	0.00420 1.36%
Be 313.042†	29.1	0.00004	mg/L	0.000017	0.00004	mg/L	0.000017 43.16%
Ca 317.933†	906872.5	54.78	mg/L	0.233	54.78	mg/L	0.233 0.42%
Cd 228.802†	16.7	0.00035	mg/L	0.000048	0.00035	mg/L	0.000048 13.85%
Co 228.616†	10.3	0.00018	mg/L	0.000161	0.00018	mg/L	0.000161 90.89%
Cr 267.716†	21.8	-0.00002	mg/L	0.001610	-0.00002	mg/L	0.001610 >999.9%
Cu 324.752†	215.5	0.00062	mg/L	0.000143	0.00062	mg/L	0.000143 22.94%
Fe 273.955†	3433.2	2.039	mg/L	0.0209	2.039	mg/L	0.0209 1.03%
K 766.490†	4716.9	2.038	mg/L	0.0182	2.038	mg/L	0.0182 0.89%
Mg 279.077†	44215.7	27.94	mg/L	0.215	27.94	mg/L	0.215 0.77%
Mn 257.610†	5815.2	0.1277	mg/L	0.00115	0.1277	mg/L	0.00115 0.90%
Mo 202.031†	137.4	0.00558	mg/L	0.000455	0.00558	mg/L	0.000455 8.16%
Na 589.592†	374799.5	28.62	mg/L	0.072	28.62	mg/L	0.072 0.25%
Na 330.237†	973.2	29.28	mg/L	0.329	29.28	mg/L	0.329 1.12%
Ni 231.604†	4.3	0.00087	mg/L	0.001184	0.00087	mg/L	0.001184 136.62%
Pb 220.353†	-21.3	-0.00242	mg/L	0.000847	-0.00242	mg/L	0.000847 34.99%
Sb 206.836†	3.2	0.00070	mg/L	0.000558	0.00070	mg/L	0.000558 79.57%
Se 196.026†	-13.1	-0.00768	mg/L	0.000956	-0.00768	mg/L	0.000956 12.45%
Si 288.158†	19556.5	8.250	mg/L	0.0508	8.250	mg/L	0.0508 0.62%
Sn 189.927†	-68.6	-0.00901	mg/L	0.001208	-0.00901	mg/L	0.001208 13.42%
Sr 421.552†	1044128.2	1.086	mg/L	0.0044	1.086	mg/L	0.0044 0.40%
Ti 334.903†	91.3	0.00113	mg/L	0.000227	0.00113	mg/L	0.000227 20.00%
Tl 190.801†	7.1	0.00280	mg/L	0.000650	0.00280	mg/L	0.000650 23.24%
V 292.402†	46.9	0.00032	mg/L	0.000121	0.00032	mg/L	0.000121 37.87%
Zn 206.200†	-0.6	-0.00013	mg/L	0.000544	-0.00013	mg/L	0.000544 421.62%

Sequence No.: 10  
 Sample ID: VS61 C TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 306  
 Date Collected: 11/28/2012 10:19:59 AM  
 Data Type: Original

## Nebulizer Parameters: VS61 C TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

## Mean Data: VS61 C TWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	2835044.9	100.3 %		0.57			0.57%
ScR 361.383	377778.6	99.97 %		0.526			0.53%
Ag 328.068†	-26.0	-0.00014 mg/L		0.000187	-0.00014 mg/L	0.000187	136.76%
Al 308.215†	-2.5	-0.00140 mg/L		0.003804	-0.00140 mg/L	0.003804	271.99%
As 188.979†	18.9	0.00755 mg/L		0.002022	0.00755 mg/L	0.002022	26.78%
B 249.677†	915.1	0.1051 mg/L		0.00122	0.1051 mg/L	0.00122	1.16%
Ba 233.527†	607.7	0.1123 mg/L		0.00085	0.1123 mg/L	0.00085	0.76%
Be 313.042†	20.2	0.00003 mg/L		0.000005	0.00003 mg/L	0.000005	18.93%
Ca 317.933†	436194.1	26.35 mg/L		0.077	26.35 mg/L	0.077	0.29%
Cd 228.802†	6.4	0.00012 mg/L		0.000112	0.00012 mg/L	0.000112	93.02%
Co 228.616†	-1.1	-0.00006 mg/L		0.000089	-0.00006 mg/L	0.000089	137.63%
Cr 267.716†	6.9	-0.00045 mg/L		0.000151	-0.00045 mg/L	0.000151	33.57%
Cu 324.752†	95.7	0.00032 mg/L		0.000052	0.00032 mg/L	0.000052	16.29%
Fe 273.955†	3658.9	2.173 mg/L		0.0117	2.173 mg/L	0.0117	0.54%
K 766.490†	1600.6	0.6915 mg/L		0.01653	0.6915 mg/L	0.01653	2.39%
Mg 279.077†	21835.2	13.79 mg/L		0.051	13.79 mg/L	0.051	0.37%
Mn 257.610†	1423.2	0.03123 mg/L		0.000194	0.03123 mg/L	0.000194	0.62%
Mo 202.031†	49.2	0.00192 mg/L		0.000023	0.00192 mg/L	0.000023	1.18%
Na 589.592†	89707.1	6.849 mg/L		0.0334	6.849 mg/L	0.0334	0.49%
Na 330.237†	240.3	7.230 mg/L		0.4850	7.230 mg/L	0.4850	6.71%
Ni 231.604†	-7.4	-0.00148 mg/L		0.000629	-0.00148 mg/L	0.000629	42.52%
Pb 220.353†	-13.5	-0.00157 mg/L		0.000435	-0.00157 mg/L	0.000435	27.63%
Sb 206.836†	-5.3	-0.00157 mg/L		0.000773	-0.00157 mg/L	0.000773	49.36%
Se 196.026†	-4.4	-0.00256 mg/L		0.001841	-0.00256 mg/L	0.001841	71.90%
Si 288.158†	20051.1	8.456 mg/L		0.0170	8.456 mg/L	0.0170	0.20%
Sn 189.927†	-48.3	-0.00785 mg/L		0.000221	-0.00785 mg/L	0.000221	2.81%
Sr 421.552†	169263.4	0.1760 mg/L		0.00065	0.1760 mg/L	0.00065	0.37%
Tl 334.903†	53.8	0.00095 mg/L		0.000329	0.00095 mg/L	0.000329	34.59%
Tl 190.801†	6.3	0.00252 mg/L		0.000804	0.00252 mg/L	0.000804	31.84%
V 292.402†	27.9	0.00014 mg/L		0.000040	0.00014 mg/L	0.000040	27.61%
Zn 206.200†	5.6	0.00120 mg/L		0.000396	0.00120 mg/L	0.000396	33.10%

Sequence No.: 11  
 Sample ID: VS61 A-L TWC  
 Analyst: BA  
 Dilution: 5.000000X

Autosampler Location: 307  
 Date Collected: 11/28/2012 10:24:15 AM  
 Data Type: Original

Nebulizer Parameters: VS61 A-L TWC

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: VS61 A-L TWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2844780.1	100.7	%	0.87				0.86%
ScR 361.383	381921.5	101.1	%	0.67				0.67%
Ag 328.068†	-25.0	-0.00013	mg/L	0.000193	-0.00066	mg/L	0.000963	146.27%
Al 308.215†	2.1	0.00111	mg/L	0.003102	0.00554	mg/L	0.015510	280.03%
As 188.979†	13.9	0.00569	mg/L	0.001035	0.02845	mg/L	0.005176	18.20%
B 249.677†	1082.0	0.1243	mg/L	0.00040	0.6215	mg/L	0.00198	0.32%
Ba 233.527†	321.0	0.05944	mg/L	0.000382	0.2972	mg/L	0.00191	0.64%
Be 313.042†	14.5	0.00002	mg/L	0.000043	0.00010	mg/L	0.000214	212.13%
Ca 317.933†	272846.3	16.48	mg/L	0.075	82.41	mg/L	0.376	0.46%
Cd 228.802†	7.1	0.00018	mg/L	0.000111	0.00088	mg/L	0.000555	63.06%
Co 228.616†	-2.2	-0.00006	mg/L	0.000059	-0.00030	mg/L	0.000296	98.17%
Cr 267.716†	12.4	0.00068	mg/L	0.000292	0.00342	mg/L	0.001462	42.82%
Cu 324.752†	83.9	0.00024	mg/L	0.000078	0.00118	mg/L	0.000391	33.00%
Fe 273.955†	528.1	0.3137	mg/L	0.00294	1.569	mg/L	0.0147	0.94%
K 766.490†	1130.3	0.4883	mg/L	0.01315	2.441	mg/L	0.0657	2.69%
Mg 279.077†	14405.6	9.102	mg/L	0.0774	45.51	mg/L	0.387	0.85%
Mn 257.610†	1581.5	0.03473	mg/L	0.000386	0.1736	mg/L	0.00193	1.11%
Mo 202.031†	40.7	0.00165	mg/L	0.000067	0.00824	mg/L	0.000335	4.06%
Na 589.592†	41047.8	3.134	mg/L	0.0142	15.67	mg/L	0.071	0.45%
Na 330.237†	108.7	3.271	mg/L	0.1135	16.35	mg/L	0.567	3.47%
Ni 231.604†	-4.6	-0.00091	mg/L	0.000790	-0.00457	mg/L	0.003950	86.41%
Pb 220.353†	-4.2	-0.00047	mg/L	0.000281	-0.00234	mg/L	0.001406	60.20%
Sb 206.836†	-0.1	-0.00012	mg/L	0.001353	-0.00059	mg/L	0.006763	>999.9%
Se 196.026†	0.3	0.00020	mg/L	0.001826	0.00102	mg/L	0.009128	898.65%
Si 288.158†	3909.4	1.650	mg/L	0.0178	8.248	mg/L	0.0892	1.08%
Sn 189.927†	-30.9	-0.00508	mg/L	0.000940	-0.02541	mg/L	0.004700	18.50%
Sr 421.552†	240761.8	0.2503	mg/L	0.00110	1.252	mg/L	0.0055	0.44%
Ti 334.903†	11.0	-0.00034	mg/L	0.000890	-0.00168	mg/L	0.004451	264.76%
Tl 190.801†	0.6	0.00025	mg/L	0.000447	0.00125	mg/L	0.002234	178.79%
V 292.402†	27.2	0.00021	mg/L	0.000077	0.00105	mg/L	0.000384	36.66%
Zn 206.200†	4.0	0.00086	mg/L	0.000513	0.00429	mg/L	0.002567	59.87%

Sequence No.: 12  
 Sample ID: VS61 A TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 308  
 Date Collected: 11/28/2012 10:28:31 AM  
 Data Type: Original

## Nebulizer Parameters: VS61 A TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

## Mean Data: VS61 A TWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2791800.8	98.81	%	0.304			0.31%
ScR 361.383	370633.4	98.08	%	0.287			0.29%
Ag 328.068†	-94.9	-0.00050	mg/L	0.000204	-0.00050 mg/L	0.000204	40.91%
Al 308.215†	14.2	0.00764	mg/L	0.003125	0.00764 mg/L	0.003125	40.91%
As 188.979†	39.1	0.01402	mg/L	0.001333	0.01402 mg/L	0.001333	9.51%
B 249.677†	5464.6	0.6278	mg/L	0.00307	0.6278 mg/L	0.00307	0.49%
Ba 233.527†	1605.3	0.2973	mg/L	0.00087	0.2973 mg/L	0.00087	0.29%
Be 313.042†	72.5	0.00010	mg/L	0.000014	0.00010 mg/L	0.000014	14.23%
Ca 317.933†	1364173.1	82.40	mg/L	0.645	82.40 mg/L	0.645	0.78%
Cd 228.802†	6.4	0.00006	mg/L	0.000131	0.00006 mg/L	0.000131	210.34%
Co 228.616†	5.0	0.00006	mg/L	0.000134	0.00006 mg/L	0.000134	224.14%
Cr 267.716†	34.8	-0.00018	mg/L	0.000094	-0.00018 mg/L	0.000094	52.68%
Cu 324.752†	185.9	0.00034	mg/L	0.000088	0.00034 mg/L	0.000088	25.82%
Fe 273.955†	2609.8	1.550	mg/L	0.0071	1.550 mg/L	0.0071	0.46%
K 766.490†	5909.2	2.553	mg/L	0.0079	2.553 mg/L	0.0079	0.31%
Mg 279.077†	73099.4	46.19	mg/L	0.096	46.19 mg/L	0.096	0.21%
Mn 257.610†	7527.3	0.1653	mg/L	0.00036	0.1653 mg/L	0.00036	0.22%
Mo 202.031†	105.7	0.00385	mg/L	0.000125	0.00385 mg/L	0.000125	3.23%
Na 589.592†	210654.7	16.08	mg/L	0.126	16.08 mg/L	0.126	0.78%
Na 330.237†	560.9	16.88	mg/L	0.120	16.88 mg/L	0.120	0.71%
Ni 231.604†	-1.5	-0.00031	mg/L	0.000800	-0.00031 mg/L	0.000800	260.62%
Pb 220.353†	-25.1	-0.00282	mg/L	0.000684	-0.00282 mg/L	0.000684	24.29%
Sb 206.836†	-2.6	-0.00094	mg/L	0.001361	-0.00094 mg/L	0.001361	145.27%
Se 196.026†	-19.2	-0.01126	mg/L	0.003418	-0.01126 mg/L	0.003418	30.36%
Si 288.158†	19919.8	8.405	mg/L	0.0228	8.405 mg/L	0.0228	0.27%
Sn 189.927†	-76.5	-0.00741	mg/L	0.000249	-0.00741 mg/L	0.000249	3.36%
Sr 421.552†	1215317.0	1.264	mg/L	0.0118	1.264 mg/L	0.0118	0.93%
Ti 334.903†	128.7	0.00135	mg/L	0.000264	0.00135 mg/L	0.000264	19.48%
Tl 190.801†	11.4	0.00431	mg/L	0.002026	0.00431 mg/L	0.002026	47.04%
V 292.402†	60.3	0.00045	mg/L	0.000090	0.00045 mg/L	0.000090	20.04%
Zn 206.200†	13.3	0.00284	mg/L	0.000618	0.00284 mg/L	0.000618	21.76%

Sequence No.: 13  
 Sample ID: VS61 ADUP TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 309  
 Date Collected: 11/28/2012 10:32:48 AM  
 Data Type: Original

## Nebulizer Parameters: VS61 ADUP TWC

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

## Mean Data: VS61 ADUP TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2800337.6	99.12	%	0.217				0.22%
ScR 361.383	371809.1	98.39	%	1.068				1.09%
Ag 328.068†	-97.0	-0.00051	mg/L	0.000068	-0.00051	mg/L	0.000068	13.39%
Al 308.215†	2.2	0.00112	mg/L	0.004615	0.00112	mg/L	0.004615	413.28%
As 188.979†	41.4	0.01507	mg/L	0.001464	0.01507	mg/L	0.001464	9.71%
B 249.677†	5541.3	0.6366	mg/L	0.00563	0.6366	mg/L	0.00563	0.88%
Ba 233.527†	1610.7	0.2983	mg/L	0.00547	0.2983	mg/L	0.00547	1.83%
Be 313.042†	71.4	0.00010	mg/L	0.000018	0.00010	mg/L	0.000018	18.17%
Ca 317.933†	1373780.9	82.98	mg/L	1.194	82.98	mg/L	1.194	1.44%
Cd 228.802†	14.5	0.00031	mg/L	0.000102	0.00031	mg/L	0.000102	33.14%
Co 228.616†	-1.0	-0.00008	mg/L	0.000129	-0.00008	mg/L	0.000129	165.39%
Cr 267.716†	35.8	-0.00008	mg/L	0.000845	-0.00008	mg/L	0.000845	>999.9%
Cu 324.752†	202.5	0.00040	mg/L	0.000104	0.00040	mg/L	0.000104	26.11%
Fe 273.955†	2633.3	1.564	mg/L	0.0263	1.564	mg/L	0.0263	1.68%
K 766.490†	5947.5	2.569	mg/L	0.0196	2.569	mg/L	0.0196	0.76%
Mg 279.077†	73595.4	46.50	mg/L	0.326	46.50	mg/L	0.326	0.70%
Mn 257.610†	7584.2	0.1665	mg/L	0.00134	0.1665	mg/L	0.00134	0.81%
Mo 202.031†	105.1	0.00382	mg/L	0.000243	0.00382	mg/L	0.000243	6.36%
Na 589.592†	212167.5	16.20	mg/L	0.232	16.20	mg/L	0.232	1.43%
Na 330.237†	564.6	16.99	mg/L	0.159	16.99	mg/L	0.159	0.93%
Ni 231.604†	-0.2	-0.00005	mg/L	0.001564	-0.00005	mg/L	0.001564	>999.9%
Pb 220.353†	-18.0	-0.00203	mg/L	0.000972	-0.00203	mg/L	0.000972	47.80%
Sb 206.836†	3.3	0.00066	mg/L	0.001744	0.00066	mg/L	0.001744	262.83%
Se 196.026†	-16.4	-0.00965	mg/L	0.004556	-0.00965	mg/L	0.004556	47.22%
Si 288.158†	23531.0	9.928	mg/L	0.0638	9.928	mg/L	0.0638	0.64%
Sn 189.927†	-80.5	-0.00825	mg/L	0.000547	-0.00825	mg/L	0.000547	6.63%
Sr 421.552†	1222406.9	1.271	mg/L	0.0188	1.271	mg/L	0.0188	1.48%
Ti 334.903†	136.1	0.00163	mg/L	0.000437	0.00163	mg/L	0.000437	26.86%
Tl 190.801†	8.4	0.00320	mg/L	0.001699	0.00320	mg/L	0.001699	53.13%
V 292.402†	38.2	0.00028	mg/L	0.000262	0.00028	mg/L	0.000262	93.30%
Zn 206.200†	1.6	0.00035	mg/L	0.000281	0.00035	mg/L	0.000281	81.36%

Sequence No.: 14  
 Sample ID: VS61 ASPK TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 310  
 Date Collected: 11/28/2012 10:37:05 AM  
 Data Type: Original

## Nebulizer Parameters: VS61 ASPK TWC

Analyte Back Pressure Flow  
 All 213.0 kPa 0.75 L/min

## Mean Data: VS61 ASPK TWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2813380.0	99.58 %		0.635			0.64%
ScR 361.383	372504.4	98.57 %		1.060			1.08%
Ag 328.068†	99442.4	0.5239 mg/L		0.00391	0.5239 mg/L	0.00391	0.75%
Al 308.215†	3700.1	2.014 mg/L		0.0226	2.014 mg/L	0.0226	1.12%
As 188.979†	4186.5	1.995 mg/L		0.0209	1.995 mg/L	0.0209	1.05%
B 249.677†	5625.8	0.6454 mg/L		0.00558	0.6454 mg/L	0.00558	0.86%
Ba 233.527†	12362.2	2.291 mg/L		0.0230	2.291 mg/L	0.0230	1.01%
Be 313.042†	350840.5	0.4884 mg/L		0.00387	0.4884 mg/L	0.00387	0.79%
Ca 317.933†	1528342.9	92.32 mg/L		0.750	92.32 mg/L	0.750	0.81%
Cd 228.802†	16434.3	0.5047 mg/L		0.00354	0.5047 mg/L	0.00354	0.70%
Co 228.616†	20858.4	0.4740 mg/L		0.00437	0.4740 mg/L	0.00437	0.92%
Cr 267.716†	3857.8	0.4946 mg/L		0.00405	0.4946 mg/L	0.00405	0.82%
Cu 324.752†	141874.9	0.5079 mg/L		0.00300	0.5079 mg/L	0.00300	0.59%
Fe 273.955†	6082.5	3.609 mg/L		0.0347	3.609 mg/L	0.0347	0.96%
K 766.490†	29222.6	12.62 mg/L		0.111	12.62 mg/L	0.111	0.88%
Mg 279.077†	85933.6	54.29 mg/L		0.452	54.29 mg/L	0.452	0.83%
Mn 257.610†	28801.6	0.6334 mg/L		0.00363	0.6334 mg/L	0.00363	0.57%
Mo 202.031†	107.6	0.00381 mg/L		0.000300	0.00381 mg/L	0.000300	7.87%
Na 589.592†	343772.9	26.25 mg/L		0.203	26.25 mg/L	0.203	0.77%
Na 330.237†	919.8	27.52 mg/L		0.066	27.52 mg/L	0.066	0.24%
Ni 231.604†	2421.7	0.4848 mg/L		0.00542	0.4848 mg/L	0.00542	1.12%
Pb 220.353†	17602.9	1.935 mg/L		0.0175	1.935 mg/L	0.0175	0.91%
Sb 206.836†	16.1	-0.00099 mg/L		0.002994	-0.00099 mg/L	0.002994	302.45%
Se 196.026†	3350.4	1.968 mg/L		0.0173	1.968 mg/L	0.0173	0.88%
Si 288.158†	21573.3	9.105 mg/L		0.0819	9.105 mg/L	0.0819	0.90%
Sn 189.927†	-83.2	-0.00766 mg/L		0.000700	-0.00766 mg/L	0.000700	9.13%
Sr 421.552†	1694623.7	1.762 mg/L		0.0139	1.762 mg/L	0.0139	0.79%
Ti 334.903†	141.0	0.00129 mg/L		0.000233	0.00129 mg/L	0.000233	18.13%
Tl 190.801†	5306.1	1.918 mg/L		0.0165	1.918 mg/L	0.0165	0.86%
V 292.402†	65308.6	0.4992 mg/L		0.00351	0.4992 mg/L	0.00351	0.70%
Zn 206.200†	2266.2	0.4843 mg/L		0.00474	0.4843 mg/L	0.00474	0.98%

Sequence No.: 15 **222222**  
 Sample ID: ~~VS61 APOST TWC~~ **BA**  
 Analyst: BA  
 Dilution: 1.000000X **11/28/12**

Autosampler Location: 311  
 Date Collected: 11/28/2012 10:41:08 AM  
 Data Type: Original

Nebulizer Parameters: VS61 APOST TWC  
 Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

Mean Data: VS61 APOST TWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2785587.8	98.59	%	0.522			0.53%
ScR 361.383	370938.6	98.16	%	0.647			0.66%
Ag 328.068†	95939.3	0.5055	mg/L	0.00263	0.5055 mg/L	0.00263	0.52%
Al 308.215†	3834.6	2.087	mg/L	0.0059	2.087 mg/L	0.0059	0.28%
As 188.979†	4261.0	2.031	mg/L	0.0071	2.031 mg/L	0.0071	0.35%
B 249.677†	5570.1	0.6389	mg/L	0.00243	0.6389 mg/L	0.00243	0.38%
Ba 233.527†	12745.7	2.362	mg/L	0.0112	2.362 mg/L	0.0112	0.48%
Be 313.042†	362924.2	0.5052	mg/L	0.00546	0.5052 mg/L	0.00546	1.08%
Ca 317.933†	1531894.3	92.53	mg/L	0.958	92.53 mg/L	0.958	1.04%
Cd 228.802†	16777.4	0.5152	mg/L	0.00429	0.5152 mg/L	0.00429	0.83%
Co 228.616†	21426.3	0.4869	mg/L	0.00349	0.4869 mg/L	0.00349	0.72%
Cr 267.716†	3996.3	0.5125	mg/L	0.00228	0.5125 mg/L	0.00228	0.44%
Cu 324.752†	145281.7	0.5201	mg/L	0.00304	0.5201 mg/L	0.00304	0.58%
Fe 273.955†	6090.2	3.614	mg/L	0.0192	3.614 mg/L	0.0192	0.53%
K 766.490†	29701.5	12.83	mg/L	0.159	12.83 mg/L	0.159	1.24%
Mg 279.077†	86332.6	54.55	mg/L	0.588	54.55 mg/L	0.588	1.08%
Mn 257.610†	29360.3	0.6457	mg/L	0.00669	0.6457 mg/L	0.00669	1.04%
Mo 202.031†	111.2	0.00396	mg/L	0.000323	0.00396 mg/L	0.000323	8.15%
Na 589.592†	344579.5	26.31	mg/L	0.273	26.31 mg/L	0.273	1.04%
Na 330.237†	913.7	27.32	mg/L	0.198	27.32 mg/L	0.198	0.73%
Ni 231.604†	2511.6	0.5028	mg/L	0.00233	0.5028 mg/L	0.00233	0.46%
Pb 220.353†	17981.4	1.977	mg/L	0.0148	1.977 mg/L	0.0148	0.75%
Sb 206.836†	21.2	0.00020	mg/L	0.000864	0.00020 mg/L	0.000864	437.13%
Se 196.026†	3419.3	2.008	mg/L	0.0108	2.008 mg/L	0.0108	0.54%
Si 288.158†	20248.7	8.547	mg/L	0.0432	8.547 mg/L	0.0432	0.50%
Sn 189.927†	-79.2	-0.00671	mg/L	0.001190	-0.00671 mg/L	0.001190	17.75%
Sr 421.552†	1701515.8	1.769	mg/L	0.0179	1.769 mg/L	0.0179	1.01%
Ti 334.903†	158.6	0.00200	mg/L	0.000270	0.00200 mg/L	0.000270	13.52%
Tl 190.801†	5418.2	1.959	mg/L	0.0084	1.959 mg/L	0.0084	0.43%
V 292.402†	66954.3	0.5118	mg/L	0.00246	0.5118 mg/L	0.00246	0.48%
Zn 206.200†	2373.7	0.5072	mg/L	0.00112	0.5072 mg/L	0.00112	0.22%



Sequence No.: 16  
 Sample ID: VS61 MB1SPK TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 312  
 Date Collected: 11/28/2012 10:45:11 AM  
 Data Type: Original

## Nebulizer Parameters: VS61 MB1SPK TWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: VS61 MB1SPK TWC

Analyte	Mean Corrected Intensity	Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2834557.8	100.3 %	0.27			0.27%
ScR 361.383	379447.2	100.4 %	0.89			0.89%
Ag 328.068†	100806.4	0.5311 mg/L	0.00443	0.5311 mg/L	0.00443	0.83%
Al 308.215†	3731.7	2.031 mg/L	0.0169	2.031 mg/L	0.0169	0.83%
As 188.979†	4219.1	2.016 mg/L	0.0040	2.016 mg/L	0.0040	0.20%
B 249.677†	37.0	0.00321 mg/L	0.000715	0.00321 mg/L	0.000715	22.24%
Ba 233.527†	11003.5	2.039 mg/L	0.0208	2.039 mg/L	0.0208	1.02%
Be 313.042†	361729.0	0.5036 mg/L	0.00328	0.5036 mg/L	0.00328	0.65%
Ca 317.933†	163771.8	9.893 mg/L	0.0829	9.893 mg/L	0.0829	0.84%
Cd 228.802†	16803.3	0.5162 mg/L	0.00470	0.5162 mg/L	0.00470	0.91%
Co 228.616†	22130.3	0.5029 mg/L	0.00328	0.5029 mg/L	0.00328	0.65%
Cr 267.716†	3903.5	0.5050 mg/L	0.00424	0.5050 mg/L	0.00424	0.84%
Cu 324.752†	145294.5	0.5205 mg/L	0.00413	0.5205 mg/L	0.00413	0.79%
Fe 273.955†	3416.7	2.026 mg/L	0.0175	2.026 mg/L	0.0175	0.86%
K 766.490†	23234.7	10.04 mg/L	0.135	10.04 mg/L	0.135	1.34%
Mg 279.077†	16318.5	10.31 mg/L	0.104	10.31 mg/L	0.104	1.01%
Mn 257.610†	22628.2	0.4979 mg/L	0.00423	0.4979 mg/L	0.00423	0.85%
Mo 202.031†	31.1	0.00126 mg/L	0.000168	0.00126 mg/L	0.000168	13.30%
Na 589.592†	131475.3	10.04 mg/L	0.089	10.04 mg/L	0.089	0.89%
Na 330.237†	353.6	10.47 mg/L	0.083	10.47 mg/L	0.083	0.79%
Ni 231.604†	2520.9	0.5047 mg/L	0.00516	0.5047 mg/L	0.00516	1.02%
Pb 220.353†	18448.1	2.028 mg/L	0.0159	2.028 mg/L	0.0159	0.78%
Sb 206.836†	16.8	-0.00070 mg/L	0.001955	-0.00070 mg/L	0.001955	278.22%
Se 196.026†	3402.5	1.999 mg/L	0.0012	1.999 mg/L	0.0012	0.06%
Si 288.158†	18.3	0.01088 mg/L	0.002613	0.01088 mg/L	0.002613	24.02%
Sn 189.927†	-22.3	-0.00383 mg/L	0.001233	-0.00383 mg/L	0.001233	32.17%
Sr 421.552†	487973.2	0.5073 mg/L	0.00392	0.5073 mg/L	0.00392	0.77%
Ti 334.903†	17.9	0.00016 mg/L	0.000029	0.00016 mg/L	0.000029	17.91%
Tl 190.801†	5562.8	2.011 mg/L	0.0054	2.011 mg/L	0.0054	0.27%
V 292.402†	67344.1	0.5147 mg/L	0.00455	0.5147 mg/L	0.00455	0.88%
Zn 206.200†	2346.3	0.5014 mg/L	0.00605	0.5014 mg/L	0.00605	1.21%

Sequence No.: 17  
 Sample ID: CV 2  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 7  
 Date Collected: 11/28/2012 10:49:13 AM  
 Data Type: Original

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2831318.6	100.2 %		0.16			0.16%
ScR 361.383	375626.7	99.40 %		0.483			0.49%
Ag 328.068†	197746.4	1.042 mg/L		0.0023	1.042 mg/L	0.0023	0.22%
Al 308.215†	3757.7	2.018 mg/L		0.0091	2.018 mg/L	0.0091	0.45%
As 188.979†	4178.6	2.022 mg/L		0.0060	2.022 mg/L	0.0060	0.30%
B 249.677†	8829.7	1.014 mg/L		0.0059	1.014 mg/L	0.0059	0.58%
Ba 233.527†	5531.2	1.025 mg/L		0.0047	1.025 mg/L	0.0047	0.46%
Be 313.042†	716462.3	0.9974 mg/L		0.00727	0.9974 mg/L	0.00727	0.73%
Ca 317.933†	34352.7	2.075 mg/L		0.0091	2.075 mg/L	0.0091	0.44%
Cd 228.802†	32745.7	1.019 mg/L		0.0020	1.019 mg/L	0.0020	0.19%
Co 228.616†	44022.1	0.9989 mg/L		0.00147	0.9989 mg/L	0.00147	0.15%
Cr 267.716†	7786.8	1.009 mg/L		0.0031	1.009 mg/L	0.0031	0.31%
Cu 324.752†	287470.3	1.029 mg/L		0.0020	1.029 mg/L	0.0020	0.19%
Fe 273.955†	3464.4	2.051 mg/L		0.0132	2.051 mg/L	0.0132	0.65%
K 766.490†	46992.6	20.30 mg/L		0.145	20.30 mg/L	0.145	0.72%
Mg 279.077†	3196.2	2.027 mg/L		0.0076	2.027 mg/L	0.0076	0.38%
Mn 257.610†	45856.2	1.009 mg/L		0.0070	1.009 mg/L	0.0070	0.70%
Mo 202.031†	23275.5	1.045 mg/L		0.0011	1.045 mg/L	0.0011	0.10%
Na 589.592†	676084.2	51.62 mg/L		0.385	51.62 mg/L	0.385	0.74%
Na 330.237†	1747.5	52.47 mg/L		0.762	52.47 mg/L	0.762	1.45%
Ni 231.604†	5067.0	1.016 mg/L		0.0054	1.016 mg/L	0.0054	0.53%
Pb 220.353†	18860.1	2.074 mg/L		0.0039	2.074 mg/L	0.0039	0.19%
Sb 206.836†	7852.5	2.142 mg/L		0.0091	2.142 mg/L	0.0091	0.43%
Se 196.026†	3375.2	1.982 mg/L		0.0028	1.982 mg/L	0.0028	0.14%
Si 288.158†	4940.4	2.082 mg/L		0.0145	2.082 mg/L	0.0145	0.69%
Sn 189.927†	4472.6	1.030 mg/L		0.0025	1.030 mg/L	0.0025	0.24%
Sr 421.552†	971556.4	1.010 mg/L		0.0081	1.010 mg/L	0.0081	0.80%
Ti 334.903†	25018.3	1.027 mg/L		0.0087	1.027 mg/L	0.0087	0.85%
Tl 190.801†	5552.0	2.003 mg/L		0.0056	2.003 mg/L	0.0056	0.28%
V 292.402†	135025.8	1.032 mg/L		0.0021	1.032 mg/L	0.0021	0.21%
Zn 206.200†	4907.6	1.048 mg/L		0.0039	1.048 mg/L	0.0039	0.38%

Sequence No.: 18  
 Sample ID: CB 2  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 1  
 Date Collected: 11/28/2012 10:53:34 AM  
 Data Type: Original

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2857018.3	101.1	%	0.16			0.16%
ScR 361.383	379333.3	100.4	%	0.45			0.45%
Ag 328.068†	15.7	0.00008	mg/L	0.000209	0.00008 mg/L	0.000209	252.88%
Al 308.215†	-0.2	-0.00010	mg/L	0.002777	-0.00010 mg/L	0.002777	>999.9%
As 188.979†	1.1	0.00053	mg/L	0.001182	0.00053 mg/L	0.001182	224.60%
B 249.677†	23.5	0.00270	mg/L	0.000273	0.00270 mg/L	0.000273	10.13%
Ba 233.527†	1.6	0.00030	mg/L	0.000346	0.00030 mg/L	0.000346	114.66%
Be 313.042†	49.2	0.00007	mg/L	0.000009	0.00007 mg/L	0.000009	12.89%
Ca 317.933†	9.0	0.00054	mg/L	0.000836	0.00054 mg/L	0.000836	154.36%
Cd 228.802†	-0.3	-0.00001	mg/L	0.000035	-0.00001 mg/L	0.000035	274.37%
Co 228.616†	-1.9	-0.00004	mg/L	0.000177	-0.00004 mg/L	0.000177	405.04%
Cr 267.716†	-0.9	-0.00012	mg/L	0.000831	-0.00012 mg/L	0.000831	699.19%
Cu 324.752†	88.7	0.00032	mg/L	0.000022	0.00032 mg/L	0.000022	7.04%
Fe 273.955†	2.8	0.00165	mg/L	0.000258	0.00165 mg/L	0.000258	15.68%
K 766.490†	-1.8	-0.00077	mg/L	0.008632	-0.00077 mg/L	0.008632	>999.9%
Mg 279.077†	3.9	0.00247	mg/L	0.002482	0.00247 mg/L	0.002482	100.50%
Mn 257.610†	6.9	0.00015	mg/L	0.000106	0.00015 mg/L	0.000106	69.26%
Mo 202.031†	12.6	0.00057	mg/L	0.000249	0.00057 mg/L	0.000249	44.00%
Na 589.592†	107.2	0.00818	mg/L	0.001991	0.00818 mg/L	0.001991	24.34%
Na 330.237†	12.6	0.3786	mg/L	0.24351	0.3786 mg/L	0.24351	64.32%
Ni 231.604†	-6.2	-0.00125	mg/L	0.000566	-0.00125 mg/L	0.000566	45.24%
Pb 220.353†	5.5	0.00061	mg/L	0.000619	0.00061 mg/L	0.000619	101.99%
Sb 206.836†	1.9	0.00053	mg/L	0.000352	0.00053 mg/L	0.000352	66.78%
Se 196.026†	7.4	0.00437	mg/L	0.002330	0.00437 mg/L	0.002330	53.38%
Si 288.158†	16.7	0.00704	mg/L	0.004518	0.00704 mg/L	0.004518	64.16%
Sn 189.927†	3.1	0.00072	mg/L	0.000350	0.00072 mg/L	0.000350	48.66%
Sr 421.552†	86.4	0.00009	mg/L	0.000037	0.00009 mg/L	0.000037	41.49%
Ti 334.903†	4.2	0.00017	mg/L	0.000434	0.00017 mg/L	0.000434	250.23%
Tl 190.801†	3.3	0.00118	mg/L	0.001504	0.00118 mg/L	0.001504	126.96%
V 292.402†	7.2	0.00005	mg/L	0.000235	0.00005 mg/L	0.000235	429.29%
Zn 206.200†	0.4	0.00010	mg/L	0.000237	0.00010 mg/L	0.000237	247.78%

Sequence No.: 19  
 Sample ID: CRI  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 301  
 Date Collected: 11/28/2012 10:57:51 AM  
 Data Type: Original

## Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: CRI

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	2824416.2	99.97	%	0.358			0.36%
ScR 361.383	379418.6	100.4	%	0.66			0.65%
Ag 328.068†	552.4	0.00291	mg/L	0.000224	0.00291 mg/L	0.000224	7.71%
Al 308.215†	87.6	0.04773	mg/L	0.000896	0.04773 mg/L	0.000896	1.88%
As 188.979†	103.8	0.04974	mg/L	0.001495	0.04974 mg/L	0.001495	3.01%
B 249.677†	182.5	0.02097	mg/L	0.000303	0.02097 mg/L	0.000303	1.44%
Ba 233.527†	15.6	0.00288	mg/L	0.000353	0.00288 mg/L	0.000353	12.25%
Be 313.042†	708.3	0.00099	mg/L	0.000035	0.00099 mg/L	0.000035	3.53%
Ca 317.933†	801.9	0.04844	mg/L	0.000837	0.04844 mg/L	0.000837	1.73%
Cd 228.802†	80.4	0.00221	mg/L	0.000066	0.00221 mg/L	0.000066	2.98%
Co 228.616†	146.6	0.00332	mg/L	0.000064	0.00332 mg/L	0.000064	1.93%
Cr 267.716†	36.2	0.00469	mg/L	0.000497	0.00469 mg/L	0.000497	10.58%
Cu 324.752†	616.6	0.00221	mg/L	0.000088	0.00221 mg/L	0.000088	3.97%
Fe 273.955†	87.9	0.05220	mg/L	0.001828	0.05220 mg/L	0.001828	3.50%
K 766.490†	1145.7	0.4950	mg/L	0.01800	0.4950 mg/L	0.01800	3.64%
Mg 279.077†	80.4	0.05083	mg/L	0.001886	0.05083 mg/L	0.001886	3.71%
Mn 257.610†	48.8	0.00108	mg/L	0.000125	0.00108 mg/L	0.000125	11.57%
Mo 202.031†	120.0	0.00539	mg/L	0.000054	0.00539 mg/L	0.000054	1.00%
Na 589.592†	6350.0	0.4848	mg/L	0.00740	0.4848 mg/L	0.00740	1.53%
Na 330.237†	22.6	0.6783	mg/L	0.39829	0.6783 mg/L	0.39829	58.72%
Ni 231.604†	44.7	0.00897	mg/L	0.001253	0.00897 mg/L	0.001253	13.96%
Pb 220.353†	184.1	0.02026	mg/L	0.001068	0.02026 mg/L	0.001068	5.27%
Sb 206.836†	190.8	0.05211	mg/L	0.000702	0.05211 mg/L	0.000702	1.35%
Se 196.026†	90.3	0.05305	mg/L	0.001783	0.05305 mg/L	0.001783	3.36%
Si 288.158†	152.9	0.06442	mg/L	0.001585	0.06442 mg/L	0.001585	2.46%
Sn 189.927†	43.4	0.01002	mg/L	0.000568	0.01002 mg/L	0.000568	5.67%
Sr 421.552†	1038.1	0.00108	mg/L	0.000029	0.00108 mg/L	0.000029	2.72%
Ti 334.903†	128.3	0.00527	mg/L	0.000517	0.00527 mg/L	0.000517	9.81%
Tl 190.801†	133.6	0.04839	mg/L	0.001926	0.04839 mg/L	0.001926	3.98%
V 292.402†	416.4	0.00319	mg/L	0.000058	0.00319 mg/L	0.000058	1.82%
Zn 206.200†	45.3	0.00969	mg/L	0.000650	0.00969 mg/L	0.000650	6.71%

Sequence No.: 20  
 Sample ID: ICSA  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 302  
 Date Collected: 11/28/2012 11:02:08 AM  
 Data Type: Original

Nebulizer Parameters: ICSA

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2796601.1	98.98	%	0.758			0.77%
ScR 361.383	372164.7	98.48	%	0.483			0.49%
Ag 328.068†	-262.9	-0.00138	mg/L	0.000050	-0.00138 mg/L	0.000050	3.60%
Al 308.215†	371353.7	202.9	mg/L	0.89	202.9 mg/L	0.89	0.44%
As 188.979†	39.9	0.01333	mg/L	0.000736	0.01333 mg/L	0.000736	5.52%
B 249.677†	-50.3	-0.00577	mg/L	0.000995	-0.00577 mg/L	0.000995	17.23%
Ba 233.527†	155.4	-0.00390	mg/L	0.001414	-0.00390 mg/L	0.001414	36.23%
Be 313.042†	99.6	0.00014	mg/L	0.000010	0.00014 mg/L	0.000010	7.69%
Ca 317.933†	1688165.6	102.0	mg/L	0.91	102.0 mg/L	0.91	0.90%
Cd 228.802†	65.5	0.00003	mg/L	0.000220	0.00003 mg/L	0.000220	639.70%
Co 228.616†	76.4	-0.00087	mg/L	0.000163	-0.00087 mg/L	0.000163	18.67%
Cr 267.716†	-2.5	-0.00216	mg/L	0.001686	-0.00216 mg/L	0.001686	77.92%
Cu 324.752†	-2191.1	0.00013	mg/L	0.000027	0.00013 mg/L	0.000027	21.15%
Fe 273.955†	336198.2	199.7	mg/L	1.75	199.7 mg/L	1.75	0.88%
K 766.490†	-1.8	-0.00078	mg/L	0.018059	-0.00078 mg/L	0.018059	>999.9%
Mg 279.077†	160316.3	101.2	mg/L	1.07	101.2 mg/L	1.07	1.06%
Mn 257.610†	64.9	0.00139	mg/L	0.000273	0.00139 mg/L	0.000273	19.63%
Mo 202.031†	77.0	0.00235	mg/L	0.000374	0.00235 mg/L	0.000374	15.91%
Na 589.592†	223.4	0.01705	mg/L	0.003776	0.01705 mg/L	0.003776	22.14%
Na 330.237†	-5.8	-0.1740	mg/L	0.13813	-0.1740 mg/L	0.13813	79.37%
Ni 231.604†	-6.5	-0.00129	mg/L	0.001959	-0.00129 mg/L	0.001959	151.52%
Pb 220.353†	-411.5	-0.00490	mg/L	0.000816	-0.00490 mg/L	0.000816	16.65%
Sb 206.836†	41.2	0.01111	mg/L	0.001980	0.01111 mg/L	0.001980	17.83%
Se 196.026†	26.7	0.01566	mg/L	0.006614	0.01566 mg/L	0.006614	42.23%
Si 288.158†	-29.5	-0.00017	mg/L	0.003611	-0.00017 mg/L	0.003611	>999.9%
Sn 189.927†	-87.0	-0.00739	mg/L	0.000616	-0.00739 mg/L	0.000616	8.33%
Sr 421.552†	3965.6	0.00412	mg/L	0.000039	0.00412 mg/L	0.000039	0.95%
Ti 334.903†	156.4	0.00156	mg/L	0.000628	0.00156 mg/L	0.000628	40.22%
Tl 190.801†	-71.4	-0.00455	mg/L	0.003050	-0.00455 mg/L	0.003050	67.09%
V 292.402†	1534.9	0.00470	mg/L	0.000139	0.00470 mg/L	0.000139	2.96%
Zn 206.200†	9.0	0.00192	mg/L	0.000728	0.00192 mg/L	0.000728	38.02%

Sequence No.: 21  
 Sample ID: ICSAB  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 303  
 Date Collected: 11/28/2012 11:06:11 AM  
 Data Type: Original

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2793804.9	98.88 %		0.439			0.44%
ScR 361.383	371507.8	98.31 %		0.481			0.49%
Ag 328.068†	201569.7	1.062 mg/L		0.0085	1.062 mg/L	0.0085	0.80%
Al 308.215†	368137.7	201.1 mg/L		1.18	201.1 mg/L	1.18	0.58%
As 188.979†	2158.7	1.025 mg/L		0.0086	1.025 mg/L	0.0086	0.84%
B 249.677†	-16.3	-0.00383 mg/L		0.000242	-0.00383 mg/L	0.000242	6.32%
Ba 233.527†	5682.2	1.020 mg/L		0.0075	1.020 mg/L	0.0075	0.73%
Be 313.042†	725045.9	1.009 mg/L		0.0062	1.009 mg/L	0.0062	0.61%
Ca 317.933†	1685472.9	101.8 mg/L		0.59	101.8 mg/L	0.59	0.58%
Cd 228.802†	32656.0	1.021 mg/L		0.0041	1.021 mg/L	0.0041	0.41%
Co 228.616†	41971.3	0.9515 mg/L		0.00638	0.9515 mg/L	0.00638	0.67%
Cr 267.716†	7861.9	1.017 mg/L		0.0057	1.017 mg/L	0.0057	0.56%
Cu 324.752†	289423.0	1.045 mg/L		0.0078	1.045 mg/L	0.0078	0.75%
Fe 273.955†	335266.7	199.1 mg/L		0.99	199.1 mg/L	0.99	0.50%
K 766.490†	-72.6	-0.03137 mg/L		0.004735	-0.03137 mg/L	0.004735	15.09%
Mg 279.077†	160247.8	101.1 mg/L		0.56	101.1 mg/L	0.56	0.55%
Mn 257.610†	43803.0	0.9633 mg/L		0.00542	0.9633 mg/L	0.00542	0.56%
Mo 202.031†	74.4	0.00218 mg/L		0.000095	0.00218 mg/L	0.000095	4.35%
Na 589.592†	380.6	0.02906 mg/L		0.002972	0.02906 mg/L	0.002972	10.23%
Na 330.237†	12.7	0.05937 mg/L		0.241291	0.05937 mg/L	0.241291	406.42%
Ni 231.604†	4932.6	0.9894 mg/L		0.00569	0.9894 mg/L	0.00569	0.58%
Pb 220.353†	8743.9	1.002 mg/L		0.0059	1.002 mg/L	0.0059	0.58%
Sb 206.836†	3868.1	1.045 mg/L		0.0068	1.045 mg/L	0.0068	0.66%
Se 196.026†	1724.1	1.012 mg/L		0.0105	1.012 mg/L	0.0105	1.04%
Si 288.158†	-37.0	0.00035 mg/L		0.002897	0.00035 mg/L	0.002897	830.73%
Sn 189.927†	-85.4	-0.00653 mg/L		0.000230	-0.00653 mg/L	0.000230	3.52%
Sr 421.552†	3970.5	0.00413 mg/L	Cont.	0.000045	0.00413 mg/L	0.000045	1.10%
Ti 334.903†	154.6	0.00129 mg/L		0.000199	0.00129 mg/L	0.000199	15.40%
Tl 190.801†	2560.5	0.9398 mg/L		0.00615	0.9398 mg/L	0.00615	0.65%
V 292.402†	133213.4	1.011 mg/L		0.0069	1.011 mg/L	0.0069	0.68%
Zn 206.200†	4622.0	0.9875 mg/L		0.00653	0.9875 mg/L	0.00653	0.66%

Sequence No.: 22  
 Sample ID: CV 3  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 7  
 Date Collected: 11/28/2012 11:10:15 AM  
 Data Type: Original

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2863026.5	101.3	%	0.23			0.22%
ScR 361.383	379311.0	100.4	%	0.34			0.34%
Ag 328.068†	197329.8	1.040	mg/L	0.0109	1.040 mg/L	0.0109	1.05%
Al 308.215†	3850.7	2.068	mg/L	0.0138	2.068 mg/L	0.0138	0.67%
As 188.979†	4238.0	2.051	mg/L	0.0113	2.051 mg/L	0.0113	0.55%
B 249.677†	8918.1	1.024	mg/L	0.0021	1.024 mg/L	0.0021	0.21%
Ba 233.527†	5585.0	1.035	mg/L	0.0087	1.035 mg/L	0.0087	0.84%
Be 313.042†	725665.2	1.010	mg/L	0.0019	1.010 mg/L	0.0019	0.18%
Ca 317.933†	35165.2	2.124	mg/L	0.0118	2.124 mg/L	0.0118	0.55%
Cd 228.802†	33040.4	1.028	mg/L	0.0068	1.028 mg/L	0.0068	0.66%
Co 228.616†	44406.7	1.008	mg/L	0.0075	1.008 mg/L	0.0075	0.75%
Cr 267.716†	7908.5	1.025	mg/L	0.0041	1.025 mg/L	0.0041	0.40%
Cu 324.752†	286281.3	1.025	mg/L	0.0106	1.025 mg/L	0.0106	1.03%
Fe 273.955†	3597.8	2.130	mg/L	0.0116	2.130 mg/L	0.0116	0.55%
K 766.490†	47224.8	20.40	mg/L	0.006	20.40 mg/L	0.006	0.03%
Mg 279.077†	3316.6	2.103	mg/L	0.0105	2.103 mg/L	0.0105	0.50%
Mn 257.610†	46613.8	1.025	mg/L	0.0040	1.025 mg/L	0.0040	0.39%
Mo 202.031†	23494.3	1.055	mg/L	0.0027	1.055 mg/L	0.0027	0.26%
Na 589.592†	675763.1	51.60	mg/L	0.138	51.60 mg/L	0.138	0.27%
Na 330.237†	1757.1	52.75	mg/L	0.288	52.75 mg/L	0.288	0.55%
Ni 231.604†	5139.0	1.031	mg/L	0.0073	1.031 mg/L	0.0073	0.71%
Pb 220.353†	19132.7	2.104	mg/L	0.0075	2.104 mg/L	0.0075	0.36%
Sb 206.836†	7932.2	2.164	mg/L	0.0108	2.164 mg/L	0.0108	0.50%
Se 196.026†	3435.9	2.018	mg/L	0.0149	2.018 mg/L	0.0149	0.74%
Si 288.158†	4995.5	2.106	mg/L	0.0161	2.106 mg/L	0.0161	0.76%
Sn 189.927†	4563.7	1.051	mg/L	0.0060	1.051 mg/L	0.0060	0.57%
Sr 421.552†	971682.0	1.010	mg/L	0.0009	1.010 mg/L	0.0009	0.09%
Ti 334.903†	25237.4	1.036	mg/L	0.0032	1.036 mg/L	0.0032	0.31%
Tl 190.801†	5600.1	2.021	mg/L	0.0086	2.021 mg/L	0.0086	0.43%
V 292.402†	135309.6	1.034	mg/L	0.0089	1.034 mg/L	0.0089	0.86%
Zn 206.200†	5024.8	1.073	mg/L	0.0047	1.073 mg/L	0.0047	0.44%

Sequence No.: 23

Sample ID: CB-3

Analyst: BA

Dilution: 1.000000X

Autosampler Location: 1

Date Collected: 11/28/2012 11:14:36 AM

Data Type: Original

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
SCA 357.253	2873284.7	101.7	%	0.20				0.20%
ScR 361.383	378746.5	100.2	%	1.16				1.15%
Ag 328.068†	-54.6	-0.00029	mg/L	0.000161	-0.00029	mg/L	0.000161	55.89%
Al 308.215†	8.6	0.00466	mg/L	0.014999	0.00466	mg/L	0.014999	321.54%
As 188.979†	2.0	0.00096	mg/L	0.001559	0.00096	mg/L	0.001559	162.76%
B 249.677†	13.7	0.00157	mg/L	0.000170	0.00157	mg/L	0.000170	10.85%
Ba 233.527†	-0.3	-0.00006	mg/L	0.000646	-0.00006	mg/L	0.000646	>999.9%
Be 313.042†	64.9	0.00009	mg/L	0.000048	0.00009	mg/L	0.000048	53.46%
Ca 317.933†	27.4	0.00166	mg/L	0.001449	0.00166	mg/L	0.001449	87.48%
Cd 228.802†	0.2	-0.00000	mg/L	0.000096	-0.00000	mg/L	0.000096	>999.9%
Co 228.616†	2.3	0.00005	mg/L	0.000145	0.00005	mg/L	0.000145	282.89%
Cr 267.716†	2.1	0.00027	mg/L	0.000653	0.00027	mg/L	0.000653	238.51%
Cu 324.752†	0.2	0.00000	mg/L	0.000126	0.00000	mg/L	0.000126	>999.9%
Fe 273.955†	3.5	0.00210	mg/L	0.002378	0.00210	mg/L	0.002378	113.40%
K 766.490†	-36.4	-0.01571	mg/L	0.007130	-0.01571	mg/L	0.007130	45.39%
Mg 279.077†	-1.6	-0.00099	mg/L	0.005031	-0.00099	mg/L	0.005031	509.75%
Mn 257.610†	11.3	0.00025	mg/L	0.000127	0.00025	mg/L	0.000127	51.22%
Mo 202.031†	20.9	0.00094	mg/L	0.000243	0.00094	mg/L	0.000243	25.92%
Na 589.592†	44.9	0.00343	mg/L	0.003167	0.00343	mg/L	0.003167	92.38%
Na 330.237†	-2.9	-0.08647	mg/L	0.246002	-0.08647	mg/L	0.246002	284.50%
Ni 231.604†	-2.3	-0.00045	mg/L	0.001228	-0.00045	mg/L	0.001228	270.41%
Pb 220.353†	-5.0	-0.00055	mg/L	0.000628	-0.00055	mg/L	0.000628	113.93%
Sb 206.836†	8.8	0.00239	mg/L	0.001738	0.00239	mg/L	0.001738	72.64%
Se 196.026†	6.2	0.00365	mg/L	0.001833	0.00365	mg/L	0.001833	50.26%
Si 288.158†	2.9	0.00124	mg/L	0.002688	0.00124	mg/L	0.002688	216.15%
Sn 189.927†	1.1	0.00026	mg/L	0.000301	0.00026	mg/L	0.000301	115.72%
Sr 421.552†	48.9	0.00005	mg/L	0.000034	0.00005	mg/L	0.000034	67.30%
Ti 334.903†	7.1	0.00029	mg/L	0.000445	0.00029	mg/L	0.000445	152.55%
Tl 190.801†	2.0	0.00072	mg/L	0.001270	0.00072	mg/L	0.001270	177.52%
V 292.402†	8.6	0.00007	mg/L	0.000065	0.00007	mg/L	0.000065	97.88%
Zn 206.200†	-0.4	-0.00008	mg/L	0.000678	-0.00008	mg/L	0.000678	839.70%



Sequence No.: 24  
 Sample ID: VS80 MB1 TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 313  
 Date Collected: 11/28/2012 11:18:52 AM  
 Data Type: Original

Nebulizer Parameters: VS80 MB1 TWC

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

Mean Data: VS80 MB1 TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	2874978.8	101.8	%	0.88			0.87%
ScR 361.383	384109.6	101.6	%	0.31			0.31%
Ag 328.068†	-1.3	-0.00001	mg/L	0.000086	-0.00001 mg/L	0.000086	>999.9%
Al 308.215†	8.7	0.00474	mg/L	0.005847	0.00474 mg/L	0.005847	123.45%
As 188.979†	-1.9	-0.00089	mg/L	0.000503	-0.00089 mg/L	0.000503	56.67%
B 249.677†	8.1	0.00093	mg/L	0.000617	0.00093 mg/L	0.000617	66.62%
Ba 233.527†	-2.2	-0.00042	mg/L	0.000452	-0.00042 mg/L	0.000452	108.98%
Be 313.042†	14.7	0.00002	mg/L	0.000030	0.00002 mg/L	0.000030	147.28%
Ca 317.933†	70.0	0.00423	mg/L	0.001371	0.00423 mg/L	0.001371	32.42%
Cd 228.802†	0.2	0.00001	mg/L	0.000194	0.00001 mg/L	0.000194	>999.9%
Co 228.616†	-3.5	-0.00008	mg/L	0.000155	-0.00008 mg/L	0.000155	196.78%
Cr 267.716†	2.8	0.00037	mg/L	0.000332	0.00037 mg/L	0.000332	90.78%
Cu 324.752†	30.1	0.00011	mg/L	0.000104	0.00011 mg/L	0.000104	96.61%
Fe 273.955†	0.8	0.00047	mg/L	0.001310	0.00047 mg/L	0.001310	280.03%
K 766.490†	5.7	0.00248	mg/L	0.008417	0.00248 mg/L	0.008417	339.13%
Mg 279.077†	7.9	0.00500	mg/L	0.005348	0.00500 mg/L	0.005348	106.91%
Mn 257.610†	9.2	0.00020	mg/L	0.000046	0.00020 mg/L	0.000046	22.95%
Mo 202.031†	6.9	0.00031	mg/L	0.000348	0.00031 mg/L	0.000348	112.40%
Na 589.592†	108.9	0.00832	mg/L	0.001460	0.00832 mg/L	0.001460	17.56%
Na 330.237†	7.2	0.2151	mg/L	0.44318	0.2151 mg/L	0.44318	206.08%
Ni 231.604†	-5.5	-0.00110	mg/L	0.000890	-0.00110 mg/L	0.000890	81.10%
Pb 220.353†	7.1	0.00078	mg/L	0.000619	0.00078 mg/L	0.000619	78.98%
Sb 206.836†	2.3	0.00063	mg/L	0.001389	0.00063 mg/L	0.001389	220.20%
Se 196.026†	4.5	0.00263	mg/L	0.001218	0.00263 mg/L	0.001218	46.33%
Si 288.158†	8.6	0.00365	mg/L	0.001941	0.00365 mg/L	0.001941	53.16%
Sn 189.927†	-1.5	-0.00035	mg/L	0.000599	-0.00035 mg/L	0.000599	172.91%
Sr 421.552†	19.6	0.00002	mg/L	0.000025	0.00002 mg/L	0.000025	122.42%
Ti 334.903†	3.9	0.00016	mg/L	0.000988	0.00016 mg/L	0.000988	612.28%
Tl 190.801†	-0.9	-0.00032	mg/L	0.002070	-0.00032 mg/L	0.002070	647.79%
V 292.402†	5.6	0.00004	mg/L	0.000103	0.00004 mg/L	0.000103	230.94%
Zn 206.200†	7.5	0.00160	mg/L	0.000331	0.00160 mg/L	0.000331	20.61%

Sequence No.: 25  
 Sample ID: VS80 B TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 314  
 Date Collected: 11/28/2012 11:23:09 AM  
 Data Type: Original

## Nebulizer Parameters: VS80 B TWC

Analyte Back Pressure Flow  
 All 213.0 kPa 0.75 L/min

## Mean Data: VS80 B TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2808317.1	99.40	%	0.400			0.40%
ScR 361.383	372867.5	98.67	%	0.463			0.47%
Ag 328.068†	-104.6	-0.00055	mg/L	0.000136	-0.00055 mg/L	0.000136	24.63%
Al 308.215†	6.6	0.00350	mg/L	0.005621	0.00350 mg/L	0.005621	160.43%
As 188.979†	45.3	0.01546	mg/L	0.002166	0.01546 mg/L	0.002166	14.02%
B 249.677†	7142.8	0.8206	mg/L	0.00514	0.8206 mg/L	0.00514	0.63%
Ba 233.527†	1802.8	0.3339	mg/L	0.00052	0.3339 mg/L	0.00052	0.16%
Be 313.042†	72.1	0.00010	mg/L	0.000006	0.00010 mg/L	0.000006	5.51%
Ca 317.933†	1822440.0	110.1	mg/L	0.21	110.1 mg/L	0.21	0.19%
Cd 228.802†	12.9	0.00025	mg/L	0.000109	0.00025 mg/L	0.000109	43.82%
Co 228.616†	28.6	0.00060	mg/L	0.000141	0.00060 mg/L	0.000141	23.56%
Cr 267.716†	51.7	-0.00013	mg/L	0.000342	-0.00013 mg/L	0.000342	260.73%
Cu 324.752†	265.9	0.00042	mg/L	0.000009	0.00042 mg/L	0.000009	2.20%
Fe 273.955†	1843.9	1.095	mg/L	0.0014	1.095 mg/L	0.0014	0.12%
K 766.490†	8865.7	3.830	mg/L	0.0446	3.830 mg/L	0.0446	1.16%
Mg 279.077†	107327.1	67.81	mg/L	0.314	67.81 mg/L	0.314	0.46%
Mn 257.610†	7616.3	0.1672	mg/L	0.00071	0.1672 mg/L	0.00071	0.42%
Mo 202.031†	109.3	0.00372	mg/L	0.000130	0.00372 mg/L	0.000130	3.51%
Na 589.592†	373781.7	28.54	mg/L	0.037	28.54 mg/L	0.037	0.13%
Na 330.237†	998.6	30.05	mg/L	0.188	30.05 mg/L	0.188	0.63%
Ni 231.604†	-4.0	-0.00081	mg/L	0.000498	-0.00081 mg/L	0.000498	61.52%
Pb 220.353†	-18.9	-0.00211	mg/L	0.000227	-0.00211 mg/L	0.000227	10.78%
Sb 206.836†	0.1	-0.00023	mg/L	0.001320	-0.00023 mg/L	0.001320	570.95%
Se 196.026†	-18.5	-0.01087	mg/L	0.001297	-0.01087 mg/L	0.001297	11.93%
Si 288.158†	19460.7	8.214	mg/L	0.0540	8.214 mg/L	0.0540	0.66%
Sn 189.927†	-82.0	-0.00525	mg/L	0.000945	-0.00525 mg/L	0.000945	17.99%
Sr 421.552†	1573113.1	1.636	mg/L	0.0022	1.636 mg/L	0.0022	0.13%
Ti 334.903†	184.3	0.00232	mg/L	0.000693	0.00232 mg/L	0.000693	29.91%
Tl 190.801†	18.3	0.00675	mg/L	0.001851	0.00675 mg/L	0.001851	27.42%
V 292.402†	86.9	0.00068	mg/L	0.000122	0.00068 mg/L	0.000122	18.02%
Zn 206.200†	-4.3	-0.00091	mg/L	0.000539	-0.00091 mg/L	0.000539	58.92%

Sequence No.: 26  
 Sample ID: VS80 C TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 315  
 Date Collected: 11/28/2012 11:27:26 AM  
 Data Type: Original

Nebulizer Parameters: VS80 C TWC

Analyte Back Pressure Flow  
 All 213.0 kPa 0.75 L/min

Mean Data: VS80 C TWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2830546.5	100.2	%	0.14			0.14%
ScR 361.383	375892.4	99.47	%	0.414			0.42%
Ag 328.068†	10.2	0.00005	mg/L	0.000135	0.00005 mg/L	0.000135	249.48%
Al 308.215†	34.5	0.01880	mg/L	0.008051	0.01880 mg/L	0.008051	42.83%
As 188.979†	2.8	0.00098	mg/L	0.001387	0.00098 mg/L	0.001387	141.19%
B 249.677†	8512.7	0.9780	mg/L	0.00570	0.9780 mg/L	0.00570	0.58%
Ba 233.527†	180.0	0.03336	mg/L	0.000784	0.03336 mg/L	0.000784	2.35%
Be 313.042†	17.0	0.00002	mg/L	0.000034	0.00002 mg/L	0.000034	144.92%
Ca 317.933†	105401.9	6.367	mg/L	0.0219	6.367 mg/L	0.0219	0.34%
Cd 228.802†	6.0	0.00018	mg/L	0.000070	0.00018 mg/L	0.000070	39.32%
Co 228.616†	-2.7	-0.00007	mg/L	0.000124	-0.00007 mg/L	0.000124	189.13%
Cr 267.716†	3.8	0.00019	mg/L	0.001137	0.00019 mg/L	0.001137	594.63%
Cu 324.752†	101.8	0.00034	mg/L	0.000124	0.00034 mg/L	0.000124	36.33%
Fe 273.955†	76.3	0.04531	mg/L	0.001413	0.04531 mg/L	0.001413	3.12%
K 766.490†	2909.0	1.257	mg/L	0.0041	1.257 mg/L	0.0041	0.33%
Mg 279.077†	4434.9	2.802	mg/L	0.0267	2.802 mg/L	0.0267	0.95%
Mn 257.610†	388.7	0.00853	mg/L	0.000008	0.00853 mg/L	0.000008	0.10%
Mo 202.031†	45.3	0.00197	mg/L	0.000173	0.00197 mg/L	0.000173	8.80%
Na 589.592†	1028408.3	78.52	mg/L	0.350	78.52 mg/L	0.350	0.45%
Na 330.237†	2644.7	79.57	mg/L	0.686	79.57 mg/L	0.686	0.86%
Ni 231.604†	-2.2	-0.00044	mg/L	0.000628	-0.00044 mg/L	0.000628	143.45%
Pb 220.353†	0.4	0.00005	mg/L	0.001042	0.00005 mg/L	0.001042	>999.9%
Sb 206.836†	0.9	0.00021	mg/L	0.000429	0.00021 mg/L	0.000429	200.22%
Se 196.026†	1.6	0.00094	mg/L	0.004702	0.00094 mg/L	0.004702	501.06%
Si 288.158†	11412.1	4.812	mg/L	0.0281	4.812 mg/L	0.0281	0.58%
Sn 189.927†	-16.6	-0.00303	mg/L	0.000020	-0.00303 mg/L	0.000020	0.66%
Sr 421.552†	103937.8	0.1081	mg/L	0.00038	0.1081 mg/L	0.00038	0.35%
Ti 334.903†	17.0	0.00039	mg/L	0.000645	0.00039 mg/L	0.000645	164.45%
Tl 190.801†	2.8	0.00103	mg/L	0.001619	0.00103 mg/L	0.001619	156.62%
V 292.402†	30.7	0.00024	mg/L	0.000195	0.00024 mg/L	0.000195	82.55%
Zn 206.200†	7.1	0.00151	mg/L	0.000901	0.00151 mg/L	0.000901	59.51%

Sequence No.: 27  
 Sample ID: VS80 A-L TWC  
 Analyst: BA  
 Dilution: 5.000000X

Autosampler Location: 316  
 Date Collected: 11/28/2012 11:31:43 AM  
 Data Type: Original

## Nebulizer Parameters: VS80 A-L TWC

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: VS80 A-L TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2846113.1	100.7	%	0.29				0.29%
ScR 361.383	384445.3	101.7	%	0.49				0.48%
Ag 328.068†	6.0	0.00003	mg/L	0.000142	0.00016	mg/L	0.000710	447.28%
Al 308.215†	-6.2	-0.00343	mg/L	0.004496	-0.01717	mg/L	0.022478	130.95%
As 188.979†	14.8	0.00579	mg/L	0.002303	0.02894	mg/L	0.011514	39.78%
B 249.677†	1426.5	0.1639	mg/L	0.00217	0.8194	mg/L	0.01086	1.33%
Ba 233.527†	360.9	0.06689	mg/L	0.000259	0.3344	mg/L	0.00130	0.39%
Be 313.042†	-0.8	-0.00000	mg/L	0.000013	-0.00001	mg/L	0.000066	>999.9%
Ca 317.933†	381135.7	23.02	mg/L	0.091	115.1	mg/L	0.45	0.39%
Cd 228.802†	6.9	0.00017	mg/L	0.000158	0.00084	mg/L	0.000791	94.30%
Co 228.616†	2.0	0.00004	mg/L	0.000040	0.00018	mg/L	0.000201	110.31%
Cr 267.716†	13.9	0.00037	mg/L	0.000553	0.00187	mg/L	0.002766	147.65%
Cu 324.752†	76.3	0.00015	mg/L	0.000107	0.00077	mg/L	0.000536	69.59%
Fe 273.955†	49.4	0.02937	mg/L	0.001176	0.1468	mg/L	0.00588	4.00%
K 766.490†	1625.3	0.7021	mg/L	0.02616	3.511	mg/L	0.1308	3.73%
Mg 279.077†	22316.6	14.10	mg/L	0.071	70.50	mg/L	0.354	0.50%
Mn 257.610†	2100.6	0.04612	mg/L	0.000081	0.2306	mg/L	0.00040	0.17%
Mo 202.031†	50.7	0.00202	mg/L	0.000059	0.01012	mg/L	0.000295	2.92%
Na 589.592†	55029.9	4.202	mg/L	0.0093	21.01	mg/L	0.047	0.22%
Na 330.237†	159.6	4.802	mg/L	0.2598	24.01	mg/L	1.299	5.41%
Ni 231.604†	-7.0	-0.00141	mg/L	0.000523	-0.00705	mg/L	0.002616	37.13%
Pb 220.353†	-10.3	-0.00113	mg/L	0.000810	-0.00564	mg/L	0.004049	71.78%
Sb 206.836†	3.1	0.00073	mg/L	0.002438	0.00363	mg/L	0.012192	335.58%
Se 196.026†	-4.4	-0.00256	mg/L	0.003538	-0.01280	mg/L	0.017692	138.26%
Si 288.158†	4148.7	1.751	mg/L	0.0161	8.756	mg/L	0.0806	0.92%
Sn 189.927†	-44.4	-0.00737	mg/L	0.001379	-0.03685	mg/L	0.006893	18.71%
Sr 421.552†	320036.8	0.3327	mg/L	0.00017	1.664	mg/L	0.0009	0.05%
Ti 334.903†	37.3	0.00043	mg/L	0.000557	0.00217	mg/L	0.002785	128.34%
Tl 190.801†	13.0	0.00470	mg/L	0.000142	0.02352	mg/L	0.000709	3.01%
V 292.402†	8.4	0.00008	mg/L	0.000132	0.00039	mg/L	0.000661	168.85%
Zn 206.200†	2.9	0.00061	mg/L	0.000504	0.00305	mg/L	0.002519	82.68%

Sequence No.: 28  
 Sample ID: VS80 A TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 317  
 Date Collected: 11/28/2012 11:35:59 AM  
 Data Type: Original

## Nebulizer Parameters: VS80 A TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

## Mean Data: VS80 A TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2792739.3	98.85	%	0.252				0.25%
ScR 361.383	373175.7	98.75	%	0.288				0.29%
Ag 328.068†	-117.0	-0.00062	mg/L	0.000160	-0.00062	mg/L	0.000160	26.03%
Al 308.215†	8.8	0.00469	mg/L	0.001292	0.00469	mg/L	0.001292	27.57%
As 188.979†	44.6	0.01492	mg/L	0.002437	0.01492	mg/L	0.002437	16.33%
B 249.677†	7031.8	0.8079	mg/L	0.00149	0.8079	mg/L	0.00149	0.18%
Ba 233.527†	1789.2	0.3316	mg/L	0.00153	0.3316	mg/L	0.00153	0.46%
Be 313.042†	109.9	0.00015	mg/L	0.000002	0.00015	mg/L	0.000002	1.43%
Ca 317.933†	1881075.7	113.6	mg/L	0.34	113.6	mg/L	0.34	0.30%
Cd 228.802†	20.5	0.00050	mg/L	0.000118	0.00050	mg/L	0.000118	23.55%
Co 228.616†	7.1	0.00012	mg/L	0.000059	0.00012	mg/L	0.000059	48.92%
Cr 267.716†	55.3	-0.00001	mg/L	0.000557	-0.00001	mg/L	0.000557	>999.9%
Cu 324.752†	269.4	0.00037	mg/L	0.000042	0.00037	mg/L	0.000042	11.44%
Fe 273.955†	231.3	0.1374	mg/L	0.00243	0.1374	mg/L	0.00243	1.77%
K 766.490†	8404.3	3.631	mg/L	0.0207	3.631	mg/L	0.0207	0.57%
Mg 279.077†	112300.8	70.95	mg/L	0.102	70.95	mg/L	0.102	0.14%
Mn 257.610†	9936.3	0.2182	mg/L	0.00048	0.2182	mg/L	0.00048	0.22%
Mo 202.031†	110.3	0.00372	mg/L	0.000186	0.00372	mg/L	0.000186	4.99%
Na 589.592†	278046.2	21.23	mg/L	0.099	21.23	mg/L	0.099	0.47%
Na 330.237†	741.3	22.30	mg/L	0.377	22.30	mg/L	0.377	1.69%
Ni 231.604†	-4.0	-0.00080	mg/L	0.000701	-0.00080	mg/L	0.000701	87.42%
Pb 220.353†	-30.1	-0.00330	mg/L	0.000360	-0.00330	mg/L	0.000360	10.90%
Sb 206.836†	-6.6	-0.00209	mg/L	0.002209	-0.00209	mg/L	0.002209	105.87%
Se 196.026†	-15.8	-0.00930	mg/L	0.000494	-0.00930	mg/L	0.000494	5.32%
Si 288.158†	21006.4	8.866	mg/L	0.0065	8.866	mg/L	0.0065	0.07%
Sn 189.927†	-85.0	-0.00551	mg/L	0.000934	-0.00551	mg/L	0.000934	16.95%
Sr 421.552†	1590337.7	1.653	mg/L	0.0061	1.653	mg/L	0.0061	0.37%
Ti 334.903†	186.1	0.00222	mg/L	0.000428	0.00222	mg/L	0.000428	19.27%
Tl 190.801†	19.8	0.00718	mg/L	0.000921	0.00718	mg/L	0.000921	12.83%
V 292.402†	50.0	0.00044	mg/L	0.000081	0.00044	mg/L	0.000081	18.51%
Zn 206.200†	0.9	0.00019	mg/L	0.001004	0.00019	mg/L	0.001004	518.43%

Sequence No.: 29
Sample ID: VS80 ADUP TWC
Analyst: BA
Dilution: 1.000000X

Autosampler Location: 318
Date Collected: 11/28/2012 11:40:16 AM
Data Type: Original

Nebulizer Parameters: VS80 ADUP TWC
Analyte Back Pressure Flow
All 214.0 kPa 0.75 L/min

Mean Data: VS80 ADUP TWC

Table with 8 columns: Analyte, Mean Corrected Intensity, Conc. Units, Calib., Std.Dev., Sample Conc. Units, Std.Dev., RSD. Lists various elements like ScA, ScR, Ag, Al, As, B, Ba, Be, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, Pb, Sb, Se, Si, Sn, Sr, Ti, Tl, V, Zn with their respective values.

Sequence No.: 30  
 Sample ID: VS80 ASPK TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 319  
 Date Collected: 11/28/2012 11:44:33 AM  
 Data Type: Original

## Nebulizer Parameters: VS80 ASPK TWC

Analyte	Back Pressure	Flow
All	212.0 kPa	0.75 L/min

## Mean Data: VS80 ASPK TWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2774817.8	98.21	%	0.490			0.50%
ScR 361.383	379842.3	100.5	%	0.25			0.25%
Ag 328.068†	103691.4	0.5463	mg/L	0.00469	0.5463 mg/L	0.00469	0.86%
Al 308.215†	3751.5	2.042	mg/L	0.0040	2.042 mg/L	0.0040	0.19%
As 188.979†	4385.8	2.089	mg/L	0.0107	2.089 mg/L	0.0107	0.51%
B 249.677†	7091.1	0.8137	mg/L	0.00100	0.8137 mg/L	0.00100	0.12%
Ba 233.527†	12572.5	2.330	mg/L	0.0093	2.330 mg/L	0.0093	0.40%
Be 313.042†	368739.8	0.5133	mg/L	0.00168	0.5133 mg/L	0.00168	0.33%
Ca 317.933†	2003120.8	121.0	mg/L	1.00	121.0 mg/L	1.00	0.82%
Cd 228.802†	17153.3	0.5267	mg/L	0.00269	0.5267 mg/L	0.00269	0.51%
Co 228.616†	21548.8	0.4897	mg/L	0.00220	0.4897 mg/L	0.00220	0.45%
Cr 267.716†	3921.1	0.5004	mg/L	0.00040	0.5004 mg/L	0.00040	0.08%
Cu 324.752†	148469.4	0.5313	mg/L	0.00362	0.5313 mg/L	0.00362	0.68%
Fe 273.955†	3621.8	2.148	mg/L	0.0060	2.148 mg/L	0.0060	0.28%
K 766.490†	32230.2	13.92	mg/L	0.071	13.92 mg/L	0.071	0.51%
Mg 279.077†	123627.1	78.11	mg/L	0.191	78.11 mg/L	0.191	0.24%
Mn 257.610†	31638.8	0.6957	mg/L	0.00189	0.6957 mg/L	0.00189	0.27%
Mo 202.031†	119.0	0.00401	mg/L	0.000109	0.00401 mg/L	0.000109	2.71%
Na 589.592†	410109.8	31.31	mg/L	0.243	31.31 mg/L	0.243	0.78%
Na 330.237†	1096.3	32.82	mg/L	0.222	32.82 mg/L	0.222	0.68%
Ni 231.604†	2437.2	0.4879	mg/L	0.00064	0.4879 mg/L	0.00064	0.13%
Pb 220.353†	18302.6	2.012	mg/L	0.0130	2.012 mg/L	0.0130	0.64%
Sb 206.836†	20.8	0.00024	mg/L	0.001277	0.00024 mg/L	0.001277	541.86%
Se 196.026†	3482.2	2.045	mg/L	0.0071	2.045 mg/L	0.0071	0.35%
Si 288.158†	19575.7	8.266	mg/L	0.0263	8.266 mg/L	0.0263	0.32%
Sn 189.927†	-89.3	-0.00551	mg/L	0.001407	-0.00551 mg/L	0.001407	25.51%
Sr 421.552†	2054741.3	2.136	mg/L	0.0149	2.136 mg/L	0.0149	0.70%
Ti 334.903†	203.9	0.00250	mg/L	0.000447	0.00250 mg/L	0.000447	17.88%
Tl 190.801†	5474.7	1.979	mg/L	0.0095	1.979 mg/L	0.0095	0.48%
V 292.402†	67777.7	0.5181	mg/L	0.00374	0.5181 mg/L	0.00374	0.72%
Zn 206.200†	2288.5	0.4890	mg/L	0.00322	0.4890 mg/L	0.00322	0.66%

Sequence No.: 31  
 Sample ID: ~~VS80 APOST TWC~~  
 Analyst: BA  
 Dilution: 1.000000X

222222  
 BA  
 11/29/12

Autosampler Location: 320  
 Date Collected: 11/28/2012 11:48:52 AM  
 Data Type: Original

Nebulizer Parameters: VS80 APOST TWC  
 Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

Mean Data: VS80 APOST TWC

Analyte	Mean Corrected Intensity	Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2757102.0	97.59 %	0.440			0.45%
ScR 361.383	375931.4	99.48 %	0.452			0.45%
Ag 328.068†	95993.5	0.5057 mg/L	0.00197	0.5057 mg/L	0.00197	0.39%
Al 308.215†	3769.8	2.052 mg/L	0.0084	2.052 mg/L	0.0084	0.41%
As 188.979†	4301.2	2.049 mg/L	0.0170	2.049 mg/L	0.0170	0.83%
B 249.677†	7085.1	0.8130 mg/L	0.00343	0.8130 mg/L	0.00343	0.42%
Ba 233.527†	12555.7	2.327 mg/L	0.0132	2.327 mg/L	0.0132	0.57%
Be 313.042†	367949.7	0.5122 mg/L	0.00119	0.5122 mg/L	0.00119	0.23%
Ca 317.933†	2023402.5	122.2 mg/L	1.07	122.2 mg/L	1.07	0.88%
Cd 228.802†	16912.5	0.5194 mg/L	0.00266	0.5194 mg/L	0.00266	0.51%
Co 228.616†	21249.0	0.4829 mg/L	0.00131	0.4829 mg/L	0.00131	0.27%
Cr 267.716†	3928.1	0.5013 mg/L	0.00283	0.5013 mg/L	0.00283	0.56%
Cu 324.752†	146417.1	0.5239 mg/L	0.00230	0.5239 mg/L	0.00230	0.44%
Fe 273.955†	3632.4	2.154 mg/L	0.0144	2.154 mg/L	0.0144	0.67%
K 766.490†	31907.5	13.78 mg/L	0.055	13.78 mg/L	0.055	0.40%
Mg 279.077†	124238.0	78.50 mg/L	0.356	78.50 mg/L	0.356	0.45%
Mn 257.610†	31553.2	0.6938 mg/L	0.00336	0.6938 mg/L	0.00336	0.48%
Mo 202.031†	129.6	0.00447 mg/L	0.000136	0.00447 mg/L	0.000136	3.04%
Na 589.592†	409345.3	31.25 mg/L	0.244	31.25 mg/L	0.244	0.78%
Na 330.237†	1082.1	32.40 mg/L	0.428	32.40 mg/L	0.428	1.32%
Ni 231.604†	2434.2	0.4873 mg/L	0.00429	0.4873 mg/L	0.00429	0.88%
Pb 220.353†	18011.6	1.980 mg/L	0.0105	1.980 mg/L	0.0105	0.53%
Sb 206.836†	19.2	-0.00023 mg/L	0.000635	-0.00023 mg/L	0.000635	274.87%
Se 196.026†	3451.4	2.027 mg/L	0.0118	2.027 mg/L	0.0118	0.58%
Si 288.158†	21113.9	8.914 mg/L	0.0565	8.914 mg/L	0.0565	0.63%
Sn 189.927†	-87.4	-0.00493 mg/L	0.001981	-0.00493 mg/L	0.001981	40.19%
Sr 421.552†	2070264.0	2.152 mg/L	0.0192	2.152 mg/L	0.0192	0.89%
Ti 334.903†	195.4	0.00209 mg/L	0.000461	0.00209 mg/L	0.000461	22.01%
Tl 190.801†	5374.3	1.943 mg/L	0.0083	1.943 mg/L	0.0083	0.43%
V 292.402†	67003.0	0.5122 mg/L	0.00242	0.5122 mg/L	0.00242	0.47%
Zn 206.200†	2293.4	0.4901 mg/L	0.00347	0.4901 mg/L	0.00347	0.71%



Sequence No.: 32  
 Sample ID: VS80 MB1SPK TWC  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 321  
 Date Collected: 11/28/2012 11:53:11 AM  
 Data Type: Original

## Nebulizer Parameters: VS80 MB1SPK TWC

Analyte Back Pressure Flow  
 All 213.0 kPa 0.75 L/min

## Mean Data: VS80 MB1SPK TWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2837448.0	100.4 %	0.21			0.21%
ScR 361.383	375148.3	99.27 %	0.583			0.59%
Ag 328.068†	101727.7	0.5359 mg/L	0.00126	0.5359 mg/L	0.00126	0.23%
Al 308.215†	3839.8	2.090 mg/L	0.0066	2.090 mg/L	0.0066	0.32%
As 188.979†	4299.1	2.054 mg/L	0.0076	2.054 mg/L	0.0076	0.37%
B 249.677†	45.2	0.00414 mg/L	0.001664	0.00414 mg/L	0.001664	40.15%
Ba 233.527†	11245.1	2.084 mg/L	0.0066	2.084 mg/L	0.0066	0.32%
Be 313.042†	373746.4	0.5203 mg/L	0.00252	0.5203 mg/L	0.00252	0.48%
Ca 317.933†	168540.4	10.18 mg/L	0.035	10.18 mg/L	0.035	0.34%
Cd 228.802†	16940.7	0.5203 mg/L	0.00064	0.5203 mg/L	0.00064	0.12%
Co 228.616†	22363.0	0.5082 mg/L	0.00118	0.5082 mg/L	0.00118	0.23%
Cr 267.716†	4025.9	0.5209 mg/L	0.00229	0.5209 mg/L	0.00229	0.44%
Cu 324.752†	146625.0	0.5253 mg/L	0.00047	0.5253 mg/L	0.00047	0.09%
Fe 273.955†	3548.1	2.104 mg/L	0.0113	2.104 mg/L	0.0113	0.54%
K 766.490†	23906.1	10.33 mg/L	0.065	10.33 mg/L	0.065	0.63%
Mg 279.077†	16814.4	10.62 mg/L	0.042	10.62 mg/L	0.042	0.39%
Mn 257.610†	23425.1	0.5154 mg/L	0.00226	0.5154 mg/L	0.00226	0.44%
Mo 202.031†	34.0	0.00139 mg/L	0.000319	0.00139 mg/L	0.000319	23.00%
Na 589.592†	135127.8	10.32 mg/L	0.003	10.32 mg/L	0.003	0.02%
Na 330.237†	370.4	10.97 mg/L	0.119	10.97 mg/L	0.119	1.08%
Ni 231.604†	2582.6	0.5171 mg/L	0.00410	0.5171 mg/L	0.00410	0.79%
Pb 220.353†	18587.3	2.044 mg/L	0.0046	2.044 mg/L	0.0046	0.23%
Sb 206.836†	25.1	0.00135 mg/L	0.001603	0.00135 mg/L	0.001603	118.49%
Se 196.026†	3476.7	2.042 mg/L	0.0104	2.042 mg/L	0.0104	0.51%
Si 288.158†	27.6	0.01486 mg/L	0.003042	0.01486 mg/L	0.003042	20.46%
Sn 189.927†	-22.4	-0.00381 mg/L	0.000221	-0.00381 mg/L	0.000221	5.79%
Sr 421.552†	501775.7	0.5217 mg/L	0.00140	0.5217 mg/L	0.00140	0.27%
Ti 334.903†	14.2	-0.00001 mg/L	0.000286	-0.00001 mg/L	0.000286	>999.9%
Tl 190.801†	5626.5	2.034 mg/L	0.0025	2.034 mg/L	0.0025	0.12%
V 292.402†	67833.4	0.5185 mg/L	0.00184	0.5185 mg/L	0.00184	0.36%
Zn 206.200†	2422.5	0.5177 mg/L	0.00202	0.5177 mg/L	0.00202	0.39%

Sequence No.: 33  
 Sample ID: CV 4  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 7  
 Date Collected: 11/28/2012 11:57:13 AM  
 Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected			Std.Dev.	Sample		RSD
	Intensity	Conc.	Units		Conc.	Units	
ScA 357.253	2791344.4	98.80	%	0.264			0.27%
ScR 361.383	368412.4	97.49	%	0.285			0.29%
Ag 328.068†	199088.9	1.049	mg/L	0.0025	1.049	mg/L	0.24%
Al 308.215†	3858.3	2.072	mg/L	0.0198	2.072	mg/L	0.96%
As 188.979†	4246.9	2.055	mg/L	0.0093	2.055	mg/L	0.45%
B 249.677†	9035.1	1.037	mg/L	0.0110	1.037	mg/L	1.06%
Ba 233.527†	5571.3	1.032	mg/L	0.0131	1.032	mg/L	1.27%
Be 313.042†	732464.8	1.020	mg/L	0.0038	1.020	mg/L	0.37%
Ca 317.933†	35000.4	2.114	mg/L	0.0218	2.114	mg/L	1.03%
Cd 228.802†	33239.7	1.034	mg/L	0.0016	1.034	mg/L	0.15%
Co 228.616†	44342.5	1.006	mg/L	0.0004	1.006	mg/L	0.04%
Cr 267.716†	7970.3	1.033	mg/L	0.0093	1.033	mg/L	0.90%
Cu 324.752†	290250.1	1.039	mg/L	0.0042	1.039	mg/L	0.40%
Fe 273.955†	3583.7	2.121	mg/L	0.0087	2.121	mg/L	0.41%
K 766.490†	47843.4	20.67	mg/L	0.033	20.67	mg/L	0.16%
Mg 279.077†	3295.8	2.090	mg/L	0.0199	2.090	mg/L	0.95%
Mn 257.610†	47213.9	1.039	mg/L	0.0063	1.039	mg/L	0.61%
Mo 202.031†	23592.0	1.059	mg/L	0.0029	1.059	mg/L	0.28%
Na 589.592†	685263.5	52.32	mg/L	0.051	52.32	mg/L	0.10%
Na 330.237†	1792.6	53.82	mg/L	0.273	53.82	mg/L	0.51%
Ni 231.604†	5135.0	1.030	mg/L	0.0060	1.030	mg/L	0.58%
Pb 220.353†	19150.7	2.106	mg/L	0.0072	2.106	mg/L	0.34%
Sb 206.836†	7973.4	2.175	mg/L	0.0092	2.175	mg/L	0.42%
Se 196.026†	3438.9	2.019	mg/L	0.0124	2.019	mg/L	0.62%
Si 288.158†	5072.0	2.138	mg/L	0.0123	2.138	mg/L	0.58%
Sn 189.927†	4578.8	1.055	mg/L	0.0029	1.055	mg/L	0.27%
Sr 421.552†	988576.5	1.028	mg/L	0.0018	1.028	mg/L	0.17%
Ti 334.903†	25520.6	1.048	mg/L	0.0024	1.048	mg/L	0.23%
Tl 190.801†	5597.2	2.020	mg/L	0.0057	2.020	mg/L	0.28%
V 292.402†	135772.1	1.038	mg/L	0.0020	1.038	mg/L	0.19%
Zn 206.200†	4981.1	1.064	mg/L	0.0099	1.064	mg/L	0.93%

Sequence No.: 34  
 Sample ID: CB 4  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 1  
 Date Collected: 11/28/2012 12:01:35 PM  
 Data Type: Original

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2810860.1	99.49	%	0.123			0.12%
ScR 361.383	376808.0	99.71	%	0.392			0.39%
Ag 328.068†	-11.1	-0.00006	mg/L	0.000055	-0.00006 mg/L	0.000055	94.74%
Al 308.215†	6.6	0.00361	mg/L	0.005055	0.00361 mg/L	0.005055	140.06%
As 188.979†	0.8	0.00036	mg/L	0.001176	0.00036 mg/L	0.001176	323.96%
B 249.677†	21.0	0.00241	mg/L	0.000571	0.00241 mg/L	0.000571	23.66%
Ba 233.527†	1.0	0.00019	mg/L	0.000562	0.00019 mg/L	0.000562	294.09%
Be 313.042†	31.5	0.00004	mg/L	0.000022	0.00004 mg/L	0.000022	51.29%
Ca 317.933†	26.2	0.00158	mg/L	0.000580	0.00158 mg/L	0.000580	36.70%
Cd 228.802†	7.4	0.00023	mg/L	0.000087	0.00023 mg/L	0.000087	37.67%
Co 228.616†	-2.4	-0.00005	mg/L	0.000179	-0.00005 mg/L	0.000179	334.05%
Cr 267.716†	4.7	0.00061	mg/L	0.000629	0.00061 mg/L	0.000629	102.51%
Cu 324.752†	56.0	0.00020	mg/L	0.000028	0.00020 mg/L	0.000028	13.76%
Fe 273.955†	0.8	0.00046	mg/L	0.000400	0.00046 mg/L	0.000400	86.53%
K 766.490†	-23.2	-0.01004	mg/L	0.013931	-0.01004 mg/L	0.013931	138.82%
Mg 279.077†	4.3	0.00275	mg/L	0.002341	0.00275 mg/L	0.002341	85.12%
Mn 257.610†	8.9	0.00020	mg/L	0.000119	0.00020 mg/L	0.000119	60.96%
Mo 202.031†	20.6	0.00093	mg/L	0.000198	0.00093 mg/L	0.000198	21.41%
Na 589.592†	129.9	0.00992	mg/L	0.001277	0.00992 mg/L	0.001277	12.87%
Na 330.237†	8.7	0.2619	mg/L	0.40945	0.2619 mg/L	0.40945	156.36%
Ni 231.604†	-4.8	-0.00096	mg/L	0.001230	-0.00096 mg/L	0.001230	128.08%
Pb 220.353†	-0.3	-0.00003	mg/L	0.000917	-0.00003 mg/L	0.000917	>999.9%
Sb 206.836†	9.4	0.00256	mg/L	0.001330	0.00256 mg/L	0.001330	51.95%
Se 196.026†	5.6	0.00326	mg/L	0.000972	0.00326 mg/L	0.000972	29.80%
Si 288.158†	17.4	0.00732	mg/L	0.003756	0.00732 mg/L	0.003756	51.28%
Sn 189.927†	3.5	0.00080	mg/L	0.000184	0.00080 mg/L	0.000184	22.85%
Sr 421.552†	123.9	0.00013	mg/L	0.000035	0.00013 mg/L	0.000035	27.09%
Ti 334.903†	6.1	0.00025	mg/L	0.000516	0.00025 mg/L	0.000516	205.30%
Tl 190.801†	0.6	0.00021	mg/L	0.001191	0.00021 mg/L	0.001191	575.94%
V 292.402†	13.0	0.00010	mg/L	0.000094	0.00010 mg/L	0.000094	92.76%
Zn 206.200†	1.6	0.00034	mg/L	0.000283	0.00034 mg/L	0.000283	82.49%

Sequence No.: 35  
 Sample ID: CRI  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 301  
 Date Collected: 11/28/2012 12:05:51 PM  
 Data Type: Original

## Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: CRI

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Conc. Units	Sample	Std.Dev.	RSD
ScA 357.253	2798572.5	99.05 %		0.625				0.63%
ScR 361.383	374740.3	99.16 %		0.233				0.23%
Ag 328.068†	616.1	0.00325 mg/L		0.000253	0.00325 mg/L		0.000253	7.79%
Al 308.215†	103.0	0.05610 mg/L		0.003261	0.05610 mg/L		0.003261	5.81%
As 188.979†	101.9	0.04881 mg/L		0.001751	0.04881 mg/L		0.001751	3.59%
B 249.677†	197.1	0.02264 mg/L		0.000622	0.02264 mg/L		0.000622	2.75%
Ba 233.527†	17.9	0.00331 mg/L		0.000457	0.00331 mg/L		0.000457	13.81%
Be 313.042†	744.3	0.00104 mg/L		0.000019	0.00104 mg/L		0.000019	1.84%
Ca 317.933†	856.6	0.05174 mg/L		0.000656	0.05174 mg/L		0.000656	1.27%
Cd 228.802†	77.2	0.00211 mg/L		0.000090	0.00211 mg/L		0.000090	4.24%
Co 228.616†	151.7	0.00344 mg/L		0.000067	0.00344 mg/L		0.000067	1.95%
Cr 267.716†	40.4	0.00523 mg/L		0.001051	0.00523 mg/L		0.001051	20.09%
Cu 324.752†	606.0	0.00217 mg/L		0.000051	0.00217 mg/L		0.000051	2.36%
Fe 273.955†	88.7	0.05268 mg/L		0.001501	0.05268 mg/L		0.001501	2.85%
K 766.490†	1208.5	0.5221 mg/L		0.01632	0.5221 mg/L		0.01632	3.13%
Mg 279.077†	86.4	0.05460 mg/L		0.001264	0.05460 mg/L		0.001264	2.31%
Mn 257.610†	55.9	0.00123 mg/L		0.000051	0.00123 mg/L		0.000051	4.17%
Mo 202.031†	122.2	0.00548 mg/L		0.000276	0.00548 mg/L		0.000276	5.03%
Na 589.592†	6523.8	0.4981 mg/L		0.00195	0.4981 mg/L		0.00195	0.39%
Na 330.237†	19.9	0.5968 mg/L		0.14387	0.5968 mg/L		0.14387	24.11%
Ni 231.604†	46.0	0.00923 mg/L		0.000860	0.00923 mg/L		0.000860	9.32%
Pb 220.353†	189.2	0.02081 mg/L		0.000484	0.02081 mg/L		0.000484	2.32%
Sb 206.836†	198.8	0.05428 mg/L		0.001040	0.05428 mg/L		0.001040	1.92%
Se 196.026†	86.7	0.05093 mg/L		0.001955	0.05093 mg/L		0.001955	3.84%
Si 288.158†	160.0	0.06741 mg/L		0.000279	0.06741 mg/L		0.000279	0.41%
Sn 189.927†	45.6	0.01052 mg/L		0.000071	0.01052 mg/L		0.000071	0.67%
Sr 421.552†	1027.2	0.00107 mg/L		0.000030	0.00107 mg/L		0.000030	2.80%
Ti 334.903†	120.8	0.00496 mg/L		0.000143	0.00496 mg/L		0.000143	2.89%
Tl 190.801†	142.4	0.05157 mg/L		0.001932	0.05157 mg/L		0.001932	3.75%
V 292.402†	422.7	0.00324 mg/L		0.000135	0.00324 mg/L		0.000135	4.16%
Zn 206.200†	46.9	0.01002 mg/L		0.000558	0.01002 mg/L		0.000558	5.57%

Sequence No.: 36  
 Sample ID: ICSA  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 302  
 Date Collected: 11/28/2012 12:10:08 PM  
 Data Type: Original

## Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2773898.3	98.18	%	0.361			0.37%
ScR 361.383	368934.8	97.63	%	0.551			0.56%
Ag 328.068†	-235.5	-0.00124	mg/L	0.000132	-0.00124 mg/L	0.000132	10.65%
Al 308.215†	373976.2	204.3	mg/L	0.22	204.3 mg/L	0.22	0.11%
As 188.979†	37.6	0.01214	mg/L	0.000579	0.01214 mg/L	0.000579	4.77%
B 249.677†	-44.1	-0.00507	mg/L	0.003288	-0.00507 mg/L	0.003288	64.87%
Ba 233.527†	158.4	-0.00381	mg/L	0.001554	-0.00381 mg/L	0.001554	40.83%
Be 313.042†	97.0	0.00013	mg/L	0.000011	0.00013 mg/L	0.000011	7.93%
Ca 317.933†	1702305.6	102.8	mg/L	0.67	102.8 mg/L	0.67	0.65%
Cd 228.802†	58.9	-0.00019	mg/L	0.000132	-0.00019 mg/L	0.000132	68.38%
Co 228.616†	72.6	-0.00100	mg/L	0.000195	-0.00100 mg/L	0.000195	19.51%
Cr 267.716†	3.5	-0.00135	mg/L	0.000906	-0.00135 mg/L	0.000906	66.99%
Cu 324.752†	-2240.1	0.00007	mg/L	0.000050	0.00007 mg/L	0.000050	69.27%
Fe 273.955†	341075.3	202.6	mg/L	1.48	202.6 mg/L	1.48	0.73%
K 766.490†	42.7	0.01846	mg/L	0.004429	0.01846 mg/L	0.004429	24.00%
Mg 279.077†	161634.4	102.0	mg/L	0.81	102.0 mg/L	0.81	0.79%
Mn 257.610†	59.3	0.00128	mg/L	0.000223	0.00128 mg/L	0.000223	17.49%
Mo 202.031†	73.1	0.00217	mg/L	0.000454	0.00217 mg/L	0.000454	20.91%
Na 589.592†	215.6	0.01646	mg/L	0.001337	0.01646 mg/L	0.001337	8.12%
Na 330.237†	3.3	0.1000	mg/L	0.14585	0.1000 mg/L	0.14585	145.84%
Ni 231.604†	-8.3	-0.00165	mg/L	0.001382	-0.00165 mg/L	0.001382	83.52%
Pb 220.353†	-413.1	-0.00484	mg/L	0.001030	-0.00484 mg/L	0.001030	21.26%
Sb 206.836†	47.6	0.01286	mg/L	0.003023	0.01286 mg/L	0.003023	23.50%
Se 196.026†	19.9	0.01170	mg/L	0.002065	0.01170 mg/L	0.002065	17.65%
Si 288.158†	-27.3	0.00083	mg/L	0.001059	0.00083 mg/L	0.001059	127.15%
Sn 189.927†	-82.1	-0.00617	mg/L	0.000968	-0.00617 mg/L	0.000968	15.69%
Sr 421.552†	4009.0	0.00417	mg/L	0.000032	0.00417 mg/L	0.000032	0.76%
Ti 334.903†	145.3	0.00106	mg/L	0.000506	0.00106 mg/L	0.000506	47.56%
Tl 190.801†	-58.7	0.00036	mg/L	0.000826	0.00036 mg/L	0.000826	230.93%
V 292.402†	1572.9	0.00489	mg/L	0.000076	0.00489 mg/L	0.000076	1.56%
Zn 206.200†	9.1	0.00194	mg/L	0.000517	0.00194 mg/L	0.000517	26.63%

Sequence No.: 37  
 Sample ID: ICSAB  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 303  
 Date Collected: 11/28/2012 12:14:11 PM  
 Data Type: Original

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2777011.0	98.29 %	0.418			0.43%
ScR 361.383	367909.5	97.36 %	0.244			0.25%
Ag 328.068†	202695.7	1.068 mg/L	0.0077	1.068 mg/L	0.0077	0.72%
Al 308.215†	373538.9	204.1 mg/L	0.55	204.1 mg/L	0.55	0.27%
As 188.979†	2183.0	1.037 mg/L	0.0031	1.037 mg/L	0.0031	0.30%
B 249.677†	-25.8	-0.00494 mg/L	0.000793	-0.00494 mg/L	0.000793	16.06%
Ba 233.527†	5742.0	1.031 mg/L	0.0039	1.031 mg/L	0.0039	0.38%
Be 313.042†	739221.2	1.029 mg/L	0.0032	1.029 mg/L	0.0032	0.31%
Ca 317.933†	1712551.4	103.4 mg/L	0.19	103.4 mg/L	0.19	0.19%
Cd 228.802†	32883.9	1.028 mg/L	0.0070	1.028 mg/L	0.0070	0.68%
Co 228.616†	42367.5	0.9605 mg/L	0.00750	0.9605 mg/L	0.00750	0.78%
Cr 267.716†	7995.3	1.034 mg/L	0.0024	1.034 mg/L	0.0024	0.23%
Cu 324.752†	290993.0	1.051 mg/L	0.0074	1.051 mg/L	0.0074	0.70%
Fe 273.955†	342345.3	203.3 mg/L	0.99	203.3 mg/L	0.99	0.48%
K 766.490†	-55.5	-0.02397 mg/L	0.014451	-0.02397 mg/L	0.014451	60.30%
Mg 279.077†	162827.5	102.8 mg/L	0.35	102.8 mg/L	0.35	0.34%
Mn 257.610†	44650.7	0.9820 mg/L	0.00419	0.9820 mg/L	0.00419	0.43%
Mo 202.031†	75.5	0.00222 mg/L	0.000438	0.00222 mg/L	0.000438	19.79%
Na 589.592†	409.0	0.03123 mg/L	0.001603	0.03123 mg/L	0.001603	5.13%
Na 330.237†	7.5	-0.1032 mg/L	0.25245	-0.1032 mg/L	0.25245	244.70%
Ni 231.604†	5008.0	1.004 mg/L	0.0039	1.004 mg/L	0.0039	0.39%
Pb 220.353†	8825.7	1.011 mg/L	0.0032	1.011 mg/L	0.0032	0.31%
Sb 206.836†	3924.5	1.060 mg/L	0.0032	1.060 mg/L	0.0032	0.31%
Se 196.026†	1744.4	1.024 mg/L	0.0049	1.024 mg/L	0.0049	0.48%
Si 288.158†	-30.4	0.00335 mg/L	0.000175	0.00335 mg/L	0.000175	5.20%
Sn 189.927†	-90.0	-0.00738 mg/L	0.001262	-0.00738 mg/L	0.001262	17.09%
Sr 421.552†	4018.0	0.00418 mg/L	0.000031	0.00418 mg/L	0.000031	0.74%
Ti 334.903†	159.6	0.00142 mg/L	0.000245	0.00142 mg/L	0.000245	17.27%
Tl 190.801†	2585.8	0.9493 mg/L	0.00076	0.9493 mg/L	0.00076	0.08%
V 292.402†	134155.9	1.019 mg/L	0.0081	1.019 mg/L	0.0081	0.80%
Zn 206.200†	4697.7	1.004 mg/L	0.0009	1.004 mg/L	0.0009	0.09%

Sequence No.: 38  
 Sample ID: CV 5  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 7  
 Date Collected: 11/28/2012 12:18:15 PM  
 Data Type: Original

## Nebulizer Parameters: CV

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2840170.5	100.5 %	0.37			0.37%
ScR 361.383	375603.6	99.39 %	0.738			0.74%
Ag 328.068†	198314.7	1.045 mg/L	0.0071	1.045 mg/L	0.0071	0.68%
Al 308.215†	3878.5	2.083 mg/L	0.0313	2.083 mg/L	0.0313	1.50%
As 188.979†	4273.2	2.068 mg/L	0.0183	2.068 mg/L	0.0183	0.89%
B 249.677†	8946.6	1.027 mg/L	0.0107	1.027 mg/L	0.0107	1.04%
Ba 233.527†	5583.2	1.034 mg/L	0.0153	1.034 mg/L	0.0153	1.48%
Be 313.042†	738216.5	1.028 mg/L	0.0069	1.028 mg/L	0.0069	0.67%
Ca 317.933†	35342.1	2.135 mg/L	0.0298	2.135 mg/L	0.0298	1.40%
Cd 228.802†	33244.5	1.034 mg/L	0.0076	1.034 mg/L	0.0076	0.74%
Co 228.616†	44621.8	1.012 mg/L	0.0068	1.012 mg/L	0.0068	0.68%
Cr 267.716†	7935.5	1.028 mg/L	0.0140	1.028 mg/L	0.0140	1.37%
Cu 324.752†	287829.3	1.031 mg/L	0.0071	1.031 mg/L	0.0071	0.69%
Fe 273.955†	3632.5	2.150 mg/L	0.0353	2.150 mg/L	0.0353	1.64%
K 766.490†	47674.5	20.60 mg/L	0.144	20.60 mg/L	0.144	0.70%
Mg 279.077†	3309.9	2.099 mg/L	0.0330	2.099 mg/L	0.0330	1.57%
Mn 257.610†	46995.9	1.034 mg/L	0.0133	1.034 mg/L	0.0133	1.29%
Mo 202.031†	23597.0	1.059 mg/L	0.0063	1.059 mg/L	0.0063	0.60%
Na 589.592†	682075.5	52.08 mg/L	0.313	52.08 mg/L	0.313	0.60%
Na 330.237†	1762.9	52.92 mg/L	0.473	52.92 mg/L	0.473	0.89%
Ni 231.604†	5181.2	1.039 mg/L	0.0101	1.039 mg/L	0.0101	0.97%
Pb 220.353†	19276.9	2.120 mg/L	0.0173	2.120 mg/L	0.0173	0.81%
Sb 206.836†	7983.2	2.178 mg/L	0.0187	2.178 mg/L	0.0187	0.86%
Se 196.026†	3467.0	2.036 mg/L	0.0110	2.036 mg/L	0.0110	0.54%
Si 288.158†	5020.9	2.116 mg/L	0.0263	2.116 mg/L	0.0263	1.24%
Sn 189.927†	4606.5	1.061 mg/L	0.0082	1.061 mg/L	0.0082	0.77%
Sr 421.552†	983034.5	1.022 mg/L	0.0053	1.022 mg/L	0.0053	0.52%
Ti 334.903†	25510.0	1.048 mg/L	0.0048	1.048 mg/L	0.0048	0.46%
Tl 190.801†	5606.8	2.023 mg/L	0.0130	2.023 mg/L	0.0130	0.64%
V 292.402†	135740.9	1.038 mg/L	0.0066	1.038 mg/L	0.0066	0.64%
Zn 206.200†	5060.3	1.081 mg/L	0.0137	1.081 mg/L	0.0137	1.26%

Sequence No.: 39  
Sample ID: CB 5  
Analyst: BA  
Dilution: 1.000000X

Autosampler Location: 1  
Date Collected: 11/28/2012 12:22:36 PM  
Data Type: Original

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
All 213.0 kPa 0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	2856227.2	101.1	%	0.94			0.93%
ScR 361.383	379617.8	100.5	%	0.72			0.72%
Ag 328.068†	31.3	0.00016	mg/L	0.000037	0.00016	mg/L	0.000037 22.23%
Al 308.215†	15.6	0.00848	mg/L	0.003850	0.00848	mg/L	0.003850 45.42%
As 188.979†	-2.0	-0.00092	mg/L	0.002155	-0.00092	mg/L	0.002155 234.37%
B 249.677†	24.3	0.00279	mg/L	0.000490	0.00279	mg/L	0.000490 17.52%
Ba 233.527†	2.6	0.00048	mg/L	0.000612	0.00048	mg/L	0.000612 126.94%
Be 313.042†	75.7	0.00011	mg/L	0.000030	0.00011	mg/L	0.000030 28.84%
Ca 317.933†	30.2	0.00182	mg/L	0.000406	0.00182	mg/L	0.000406 22.27%
Cd 228.802†	0.9	0.00004	mg/L	0.000141	0.00004	mg/L	0.000141 398.76%
Co 228.616†	3.8	0.00008	mg/L	0.000053	0.00008	mg/L	0.000053 63.48%
Cr 267.716†	3.2	0.00041	mg/L	0.000572	0.00041	mg/L	0.000572 139.59%
Cu 324.752†	45.8	0.00016	mg/L	0.000156	0.00016	mg/L	0.000156 95.22%
Fe 273.955†	6.4	0.00378	mg/L	0.002793	0.00378	mg/L	0.002793 73.80%
K 766.490†	13.0	0.00561	mg/L	0.015015	0.00561	mg/L	0.015015 267.41%
Mg 279.077†	6.6	0.00419	mg/L	0.004766	0.00419	mg/L	0.004766 113.69%
Mn 257.610†	9.4	0.00021	mg/L	0.000132	0.00021	mg/L	0.000132 63.60%
Mo 202.031†	24.1	0.00108	mg/L	0.000100	0.00108	mg/L	0.000100 9.22%
Na 589.592†	128.0	0.00977	mg/L	0.003280	0.00977	mg/L	0.003280 33.56%
Na 330.237†	7.1	0.2132	mg/L	0.20865	0.2132	mg/L	0.20865 97.84%
Ni 231.604†	-0.8	-0.00015	mg/L	0.001529	-0.00015	mg/L	0.001529 >999.9%
Pb 220.353†	2.0	0.00022	mg/L	0.001051	0.00022	mg/L	0.001051 469.62%
Sb 206.836†	3.3	0.00088	mg/L	0.001163	0.00088	mg/L	0.001163 132.23%
Se 196.026†	10.3	0.00605	mg/L	0.001481	0.00605	mg/L	0.001481 24.47%
Si 288.158†	5.5	0.00233	mg/L	0.001572	0.00233	mg/L	0.001572 67.45%
Sn 189.927†	-3.2	-0.00075	mg/L	0.000497	-0.00075	mg/L	0.000497 66.60%
Sr 421.552†	93.2	0.00010	mg/L	0.000040	0.00010	mg/L	0.000040 41.15%
Ti 334.903†	18.2	0.00075	mg/L	0.000464	0.00075	mg/L	0.000464 62.06%
Tl 190.801†	3.7	0.00133	mg/L	0.001946	0.00133	mg/L	0.001946 146.34%
V 292.402†	20.5	0.00016	mg/L	0.000150	0.00016	mg/L	0.000150 94.95%
Zn 206.200†	-0.0	-0.00001	mg/L	0.000172	-0.00001	mg/L	0.000172 >999.9%



Sequence No.: 40  
 Sample ID: VS82 MB1 SWC  
 Analyst: BA  
 Dilution: 2.000000X

Autosampler Location: 322  
 Date Collected: 11/28/2012 12:26:52 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 MB1 SWC

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

## Mean Data: VS82 MB1 SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2877465.6	101.8	%	0.41			0.40%
ScR 361.383	384633.2	101.8	%	0.52			0.51%
Ag 328.068†	23.6	0.00012	mg/L	0.000111	0.00025 mg/L	0.000222	89.34%
Al 308.215†	19.1	0.01042	mg/L	0.007586	0.02085 mg/L	0.015173	72.79%
As 188.979†	-0.4	-0.00015	mg/L	0.000506	-0.00030 mg/L	0.001011	339.18%
B 249.677†	11.0	0.00127	mg/L	0.000856	0.00253 mg/L	0.001712	67.66%
Ba 233.527†	-0.9	-0.00017	mg/L	0.000520	-0.00035 mg/L	0.001039	301.19%
Be 313.042†	44.1	0.00006	mg/L	0.000006	0.00012 mg/L	0.000012	9.75%
Ca 317.933†	401.8	0.02427	mg/L	0.000601	0.04854 mg/L	0.001203	2.48%
Cd 228.802†	3.3	0.00011	mg/L	0.000114	0.00021 mg/L	0.000229	108.09%
Co 228.616†	-2.5	-0.00006	mg/L	0.000105	-0.00012 mg/L	0.000211	181.52%
Cr 267.716†	1.0	0.00013	mg/L	0.000205	0.00026 mg/L	0.000409	157.04%
Cu 324.752†	25.3	0.00009	mg/L	0.000069	0.00018 mg/L	0.000137	75.93%
Fe 273.955†	3.7	0.00220	mg/L	0.002152	0.00440 mg/L	0.004305	97.74%
K 766.490†	2.9	0.00127	mg/L	0.016544	0.00254 mg/L	0.033089	>999.9%
Mg 279.077†	11.9	0.00755	mg/L	0.000338	0.01509 mg/L	0.000676	4.48%
Mn 257.610†	12.1	0.00027	mg/L	0.000169	0.00053 mg/L	0.000337	63.54%
Mo 202.031†	6.1	0.00027	mg/L	0.000326	0.00055 mg/L	0.000651	118.71%
Na 589.592†	142.0	0.01084	mg/L	0.005046	0.02168 mg/L	0.010092	46.55%
Na 330.237†	8.4	0.2529	mg/L	0.39204	0.5057 mg/L	0.78408	155.04%
Ni 231.604†	5.6	0.00113	mg/L	0.001806	0.00225 mg/L	0.003612	160.53%
Pb 220.353†	-1.3	-0.00014	mg/L	0.000432	-0.00028 mg/L	0.000863	309.65%
Sb 206.836†	-4.2	-0.00116	mg/L	0.001545	-0.00231 mg/L	0.003091	133.56%
Se 196.026†	8.9	0.00521	mg/L	0.003150	0.01042 mg/L	0.006299	60.44%
Si 288.158†	0.3	0.00011	mg/L	0.005322	0.00023 mg/L	0.010644	>999.9%
Sn 189.927†	0.9	0.00021	mg/L	0.000390	0.00041 mg/L	0.000780	189.25%
Sr 421.552†	102.3	0.00011	mg/L	0.000009	0.00021 mg/L	0.000019	8.82%
Ti 334.903†	26.2	0.00108	mg/L	0.000802	0.00215 mg/L	0.001605	74.60%
Tl 190.801†	1.3	0.00049	mg/L	0.001176	0.00097 mg/L	0.002352	242.41%
V 292.402†	16.8	0.00013	mg/L	0.000075	0.00026 mg/L	0.000149	58.44%
Zn 206.200†	16.4	0.00351	mg/L	0.000370	0.00702 mg/L	0.000739	10.53%

Sequence No.: 41  
Sample ID: VS82 A SWC  
Analyst: BA  
Dilution: 2.000000X

*Del*

Autosampler Location: 323  
Date Collected: 11/28/2012 12:31:10 PM  
Data Type: Original

Nebulizer Parameters: VS82 A SWC

Analyte Back Pressure Flow  
All 214.0 kPa 0.75 L/min

Mean Data: VS82 A SWC

Analyte	Mean Corrected			Std.Dev.	Sample			RSD
	Intensity	Conc.	Calib. Units		Conc.	Units	Std.Dev.	
ScA 357.253	2555327.7	90.44	%	0.312				0.35%
ScR 361.383	353079.6	93.43	%	0.615				0.66%
Ag 328.068†	-1784.8	-0.00938	mg/L	0.000145	-0.01877	mg/L	0.000289	1.54%
Al 308.215†	24077.2	13.15	mg/L	0.018	26.30	mg/L	0.037	0.14%
As 188.979†	61.2	-0.06619	mg/L	0.002296	-0.1324	mg/L	0.00459	3.47%
B 249.677†	261.3	0.03001	mg/L	0.000388	0.06003	mg/L	0.000776	1.29%
Ba 233.527†	631.6	0.1132	mg/L	0.00081	0.2264	mg/L	0.00162	0.71%
Be 313.042†	379.5	0.00050	mg/L	0.000014	0.00100	mg/L	0.000028	2.75%
Ca 317.933†	38000627.9	2295	mg/L	4.19	4591	mg/L	8.39	0.18%
Cd 228.802†	226.2	0.00673	mg/L	0.000137	0.01347	mg/L	0.000274	2.03%
Co 228.616†	486.4	0.00816	mg/L	0.000091	0.01632	mg/L	0.000182	1.12%
Cr 267.716†	313.8	0.01798	mg/L	0.000296	0.03596	mg/L	0.000591	1.64%
Cu 324.752†	7231.5	0.02643	mg/L	0.000020	0.05286	mg/L	0.000040	0.08%
Fe 273.955†	39652.0	23.55	mg/L	0.129	47.11	mg/L	0.257	0.55%
K 766.490†	7743.5	3.345	mg/L	0.0116	6.691	mg/L	0.0232	0.35%
Mg 279.077†	44246.8	27.94	mg/L	0.035	55.89	mg/L	0.070	0.12%
Mn 257.610†	67147.3	1.470	mg/L	0.0058	2.940	mg/L	0.0116	0.39%
Mo 202.031†	294.3	-0.01161	mg/L	0.000092	-0.02321	mg/L	0.000183	0.79%
Na 589.592†	665758.3	50.83	mg/L	0.153	101.7	mg/L	0.31	0.30%
Na 330.237†	1680.3	50.83	mg/L	0.401	101.7	mg/L	0.80	0.79%
Ni 231.604†	171.4	0.03437	mg/L	0.000153	0.06873	mg/L	0.000306	0.44%
Pb 220.353†	-12.8	0.00082	mg/L	0.001732	0.00163	mg/L	0.003463	212.28%
Sb 206.836†	-3.4	-0.00147	mg/L	0.000158	-0.00294	mg/L	0.000316	10.75%
Se 196.026†	-50.3	-0.02961	mg/L	0.005007	-0.05922	mg/L	0.010013	16.91%
Si 288.158†	4290.6	1.813	mg/L	0.0149	3.626	mg/L	0.0298	0.82%
Sn 189.927†	-360.0	0.2013	mg/L	0.00123	0.4025	mg/L	0.00245	0.61%
Sr 421.552†	21880581.4	22.75	mg/L	0.161	45.50	mg/L	0.321	0.71%
Ti 334.903†	32473.6	1.226	mg/L	0.0005	2.451	mg/L	0.0011	0.04%
Tl 190.801†	29.5	0.01293	mg/L	0.002756	0.02587	mg/L	0.005513	21.31%
V 292.402†	7322.4	0.05456	mg/L	0.000333	0.1091	mg/L	0.00067	0.61%
Zn 206.200†	362.9	0.07752	mg/L	0.000456	0.1550	mg/L	0.00091	0.59%

Sequence No.: 42  
Sample ID: VS82 B SWC  
Analyst: BA  
Dilution: 2.000000X

*Del*

Autosampler Location: 324  
Date Collected: 11/28/2012 12:35:41 PM  
Data Type: Original

Nebulizer Parameters: VS82 B SWC

Analyte Back Pressure Flow  
All 213.0 kPa 0.75 L/min

Mean Data: VS82 B SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2574166.6	91.11	%	0.191			0.21%
ScR 361.383	354315.0	93.76	%	0.646			0.69%
Ag 328.068†	-1556.2	-0.00815	mg/L	0.000741	-0.01630 mg/L	0.001483	9.09%
Al 308.215†	67505.3	36.87	mg/L	0.161	73.74 mg/L	0.322	0.44%
As 188.979†	-0.8	-0.04040	mg/L	0.006146	-0.08079 mg/L	0.012291	15.21%
B 249.677†	428.5	0.04920	mg/L	0.001433	0.09840 mg/L	0.002865	2.91%
Ba 233.527†	722.7	0.1166	mg/L	0.00126	0.2333 mg/L	0.00252	1.08%
Be 313.042†	628.8	0.00082	mg/L	0.000020	0.00163 mg/L	0.000040	2.47%
Ca 317.933†	30630158.3	1850	mg/L	5.09	3700 mg/L	10.18	0.28%
Cd 228.802†	270.1	0.00760	mg/L	0.000108	0.01519 mg/L	0.000216	1.42%
Co 228.616†	1070.4	0.01836	mg/L	0.000155	0.03672 mg/L	0.000310	0.84%
Cr 267.716†	936.2	0.1050	mg/L	0.00102	0.2100 mg/L	0.00204	0.97%
Cu 324.752†	16908.1	0.06441	mg/L	0.000283	0.1288 mg/L	0.00057	0.44%
Fe 273.955†	177478.5	105.4	mg/L	0.46	210.8 mg/L	0.92	0.44%
K 766.490†	11000.9	4.753	mg/L	0.0273	9.505 mg/L	0.0547	0.58%
Mg 279.077†	61234.2	38.63	mg/L	0.176	77.27 mg/L	0.351	0.45%
Mn 257.610†	85960.5	1.885	mg/L	0.0065	3.771 mg/L	0.0130	0.34%
Mo 202.031†	297.2	-0.00666	mg/L	0.000378	-0.01333 mg/L	0.000756	5.67%
Na 589.592†	657049.1	50.17	mg/L	0.161	100.3 mg/L	0.32	0.32%
Na 330.237†	1671.0	50.74	mg/L	0.347	101.5 mg/L	0.69	0.68%
Ni 231.604†	531.0	0.1065	mg/L	0.00080	0.2130 mg/L	0.00160	0.75%
Pb 220.353†	137.6	0.01975	mg/L	0.000471	0.03950 mg/L	0.000943	2.39%
Sb 206.836†	14.7	0.00325	mg/L	0.000500	0.00651 mg/L	0.001000	15.37%
Se 196.026†	-44.4	-0.02621	mg/L	0.003099	-0.05242 mg/L	0.006198	11.82%
Si 288.158†	12005.7	5.067	mg/L	0.0241	10.13 mg/L	0.048	0.48%
Sn 189.927†	-307.9	0.1583	mg/L	0.00081	0.3167 mg/L	0.00162	0.51%
Sr 421.552†	17285820.9	17.97	mg/L	0.048	35.94 mg/L	0.095	0.27%
Ti 334.903†	57646.7	2.282	mg/L	0.0101	4.563 mg/L	0.0202	0.44%
Tl 190.801†	-14.3	0.00537	mg/L	0.002346	0.01073 mg/L	0.004691	43.70%
V 292.402†	20789.7	0.1540	mg/L	0.00012	0.3081 mg/L	0.00025	0.08%
Zn 206.200†	1081.1	0.2310	mg/L	0.00141	0.4620 mg/L	0.00283	0.61%

Sequence No.: 43  
 Sample ID: VS82 D SWC  
 Analyst: BA  
 Dilution: 2.000000X

*Del*

Autosampler Location: 325  
 Date Collected: 11/28/2012 12:40:15 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 D SWC

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

## Mean Data: VS82 D SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2667076.5	94.40 %		0.110			0.12%
ScR 361.383	363932.1	96.30 %		0.190			0.20%
Ag 328.068†	-1200.9	-0.00627 mg/L		0.000113	-0.01254 mg/L	0.000225	1.80%
Al 308.215†	102078.1	55.76 mg/L		0.132	111.5 mg/L	0.26	0.24%
As 188.979†	-64.6	-0.01875 mg/L		0.003925	-0.03751 mg/L	0.007849	20.93%
B 249.677†	339.7	0.03896 mg/L		0.000868	0.07792 mg/L	0.001736	2.23%
Ba 233.527†	822.2	0.1376 mg/L		0.00157	0.2751 mg/L	0.00314	1.14%
Be 313.042†	816.4	0.00106 mg/L		0.000006	0.00212 mg/L	0.000012	0.58%
Ca 317.933†	21567844.3	1303 mg/L		9.45	2606 mg/L	18.91	0.73%
Cd 228.802†	1718.5	0.05363 mg/L		0.000306	0.1073 mg/L	0.00061	0.57%
Co 228.616†	1565.6	0.02843 mg/L		0.000458	0.05687 mg/L	0.000916	1.61%
Cr 267.716†	1435.2	0.1737 mg/L		0.00116	0.3475 mg/L	0.00232	0.67%
Cu 324.752†	29662.9	0.1092 mg/L		0.00028	0.2185 mg/L	0.00056	0.26%
Fe 273.955†	151794.8	90.16 mg/L		0.174	180.3 mg/L	0.35	0.19%
K 766.490†	17956.0	7.757 mg/L		0.0202	15.51 mg/L	0.040	0.26%
Mg 279.077†	67950.7	42.89 mg/L		0.084	85.77 mg/L	0.169	0.20%
Mn 257.610†	86776.9	1.905 mg/L		0.0042	3.809 mg/L	0.0085	0.22%
Mo 202.031†	221.7	-0.00414 mg/L		0.000237	-0.00829 mg/L	0.000473	5.71%
Na 589.592†	644283.8	49.19 mg/L		0.229	98.38 mg/L	0.458	0.47%
Na 330.237†	1641.8	50.00 mg/L		0.194	100.0 mg/L	0.39	0.39%
Ni 231.604†	913.2	0.1831 mg/L		0.00050	0.3663 mg/L	0.00101	0.28%
Pb 220.353†	56.9	0.01609 mg/L		0.000861	0.03218 mg/L	0.001723	5.35%
Sb 206.836†	5.3	0.00033 mg/L		0.000666	0.00066 mg/L	0.001333	202.53%
Se 196.026†	-34.9	-0.02061 mg/L		0.002822	-0.04123 mg/L	0.005644	13.69%
Si 288.158†	6088.0	2.573 mg/L		0.0203	5.146 mg/L	0.0406	0.79%
Sn 189.927†	-242.0	0.1059 mg/L		0.00336	0.2118 mg/L	0.00673	3.18%
Sr 421.552†	11614732.5	12.08 mg/L		0.056	24.15 mg/L	0.111	0.46%
Ti 334.903†	74952.3	3.019 mg/L		0.0053	6.039 mg/L	0.0105	0.17%
Tl 190.801†	-11.5	0.00459 mg/L		0.002040	0.00918 mg/L	0.004080	44.45%
V 292.402†	24623.2	0.1836 mg/L		0.00095	0.3672 mg/L	0.00190	0.52%
Zn 206.200†	1369.7	0.2926 mg/L		0.00025	0.5853 mg/L	0.00051	0.09%

Sequence No.: 44  
 Sample ID: ~~VS82 C-L SWC~~  
 Analyst: BA  
 Dilution: 10.000000X

222222  
 BA  
 11/29/12

Autosampler Location: 326  
 Date Collected: 11/28/2012 12:44:42 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 C-L SWC

Analyte Back Pressure Flow  
 All 213.0 kPa 0.75 L/min

## Mean Data: VS82 C-L SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2785600.3	98.59 %		0.224			0.23%
ScR 361.383	380789.7	100.8 %		0.48			0.48%
Ag 328.068†	-358.2	-0.00188 mg/L		0.000171	-0.01879 mg/L	0.001710	9.10%
Al 308.215†	12117.0	6.618 mg/L		0.0120	66.18 mg/L	0.120	0.18%
As 188.979†	39.2	0.01264 mg/L		0.000278	0.1264 mg/L	0.00278	2.20%
B 249.677†	46.6	0.00535 mg/L		0.000256	0.05348 mg/L	0.002557	4.78%
Ba 233.527†	112.9	0.01862 mg/L		0.001274	0.1862 mg/L	0.01274	6.84%
Be 313.042†	139.2	0.00018 mg/L		0.000015	0.00183 mg/L	0.000154	8.44%
Ca 317.933†	5735578.1	346.5 mg/L		1.49	3465 mg/L	14.94	0.43%
Cd 228.802†	398.5	0.01231 mg/L		0.000138	0.1231 mg/L	0.00138	1.12%
Co 228.616†	217.8	0.00381 mg/L		0.000132	0.03813 mg/L	0.001322	3.47%
Cr 267.716†	285.8	0.03378 mg/L		0.000679	0.3378 mg/L	0.00679	2.01%
Cu 324.752†	3045.3	0.01137 mg/L		0.000164	0.1137 mg/L	0.00164	1.44%
Fe 273.955†	23728.8	14.09 mg/L		0.024	140.9 mg/L	0.24	0.17%
K 766.490†	2447.3	1.057 mg/L		0.0148	10.57 mg/L	0.148	1.40%
Mg 279.077†	11301.6	7.133 mg/L		0.0194	71.33 mg/L	0.194	0.27%
Mn 257.610†	15954.1	0.3499 mg/L		0.00047	3.499 mg/L	0.0047	0.13%
Mo 202.031†	132.6	0.00220 mg/L		0.000144	0.02204 mg/L	0.001441	6.54%
Na 589.592†	140871.3	10.76 mg/L		0.037	107.6 mg/L	0.37	0.34%
Na 330.237†	390.7	11.85 mg/L		0.258	118.5 mg/L	2.58	2.18%
Ni 231.604†	73.7	0.01478 mg/L		0.001778	0.1478 mg/L	0.01778	12.03%
Pb 220.353†	8.1	0.00194 mg/L		0.000763	0.01945 mg/L	0.007631	39.24%
Sb 206.836†	2.5	0.00023 mg/L		0.000593	0.00231 mg/L	0.005933	256.74%
Se 196.026†	-38.5	-0.02265 mg/L		0.002998	-0.2265 mg/L	0.02998	13.23%
Si 288.158†	1972.0	0.8326 mg/L		0.00070	8.326 mg/L	0.0070	0.08%
Sn 189.927†	-112.4	0.01707 mg/L		0.001601	0.1707 mg/L	0.01601	9.38%
Sr 421.552†	2979705.2	3.098 mg/L		0.0054	30.98 mg/L	0.054	0.17%
Ti 334.903†	11988.1	0.4763 mg/L		0.00231	4.763 mg/L	0.0231	0.49%
Tl 190.801†	27.3	0.01126 mg/L		0.001506	0.1126 mg/L	0.01506	13.38%
V 292.402†	3543.9	0.02642 mg/L		0.000110	0.2642 mg/L	0.00110	0.42%
Zn 206.200†	177.5	0.03792 mg/L		0.000552	0.3792 mg/L	0.00552	1.46%

Sequence No.: 45  
Sample ID: VS82 C SWC  
Analyst: BA  
Dilution: 2.000000X

*D21*

Autosampler Location: 327  
Date Collected: 11/28/2012 12:49:01 PM  
Data Type: Original

Nebulizer Parameters: VS82 C SWC

Analyte Back Pressure Flow  
All 214.0 kPa 0.75 L/min

Mean Data: VS82 C SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2594335.1	91.82 %	%	0.252			0.27%
ScR 361.383	361840.4	95.75 %	%	0.335			0.35%
Ag 328.068†	-1343.5	-0.00704 mg/L	mg/L	0.000206	-0.01408 mg/L	0.000413	2.93%
Al 308.215†	62229.5	33.99 mg/L	mg/L	0.274	67.98 mg/L	0.548	0.81%
As 188.979†	-10.8	-0.03210 mg/L	mg/L	0.001982	-0.06421 mg/L	0.003964	6.17%
B 249.677†	350.6	0.04025 mg/L	mg/L	0.001588	0.08050 mg/L	0.003176	3.95%
Ba 233.527†	600.7	0.10000 mg/L	mg/L	0.002374	0.2000 mg/L	0.00475	2.37%
Be 313.042†	586.8	0.00076 mg/L	mg/L	0.000042	0.00152 mg/L	0.000083	5.47%
Ca 317.933†	27188700.1	1642 mg/L	mg/L	3.95	3285 mg/L	7.90	0.24%
Cd 228.802†	1913.7	0.05971 mg/L	mg/L	0.000394	0.1194 mg/L	0.00079	0.66%
Co 228.616†	948.6	0.01600 mg/L	mg/L	0.000133	0.03201 mg/L	0.000266	0.83%
Cr 267.716†	1255.0	0.1471 mg/L	mg/L	0.00093	0.2943 mg/L	0.00185	0.63%
Cu 324.752†	14747.2	0.05508 mg/L	mg/L	0.000440	0.1102 mg/L	0.00088	0.80%
Fe 273.955†	116240.2	69.05 mg/L	mg/L	0.556	138.1 mg/L	1.11	0.81%
K 766.490†	12504.9	5.402 mg/L	mg/L	0.0176	10.80 mg/L	0.035	0.33%
Mg 279.077†	55691.5	35.15 mg/L	mg/L	0.221	70.30 mg/L	0.442	0.63%
Mn 257.610†	78268.3	1.717 mg/L	mg/L	0.0132	3.433 mg/L	0.0263	0.77%
Mo 202.031†	258.6	-0.00615 mg/L	mg/L	0.000294	-0.01231 mg/L	0.000588	4.78%
Na 589.592†	715241.7	54.61 mg/L	mg/L	0.072	109.2 mg/L	0.14	0.13%
Na 330.237†	1821.2	55.28 mg/L	mg/L	0.453	110.6 mg/L	0.91	0.82%
Ni 231.604†	373.5	0.07490 mg/L	mg/L	0.000999	0.1498 mg/L	0.00200	1.33%
Pb 220.353†	85.9	0.01495 mg/L	mg/L	0.001229	0.02990 mg/L	0.002458	8.22%
Sb 206.836†	9.2	0.00111 mg/L	mg/L	0.001012	0.00222 mg/L	0.002024	91.33%
Se 196.026†	-44.8	-0.02639 mg/L	mg/L	0.004144	-0.05278 mg/L	0.008288	15.70%
Si 288.158†	10003.9	4.223 mg/L	mg/L	0.0307	8.446 mg/L	0.0614	0.73%
Sn 189.927†	-289.7	0.1368 mg/L	mg/L	0.00089	0.2736 mg/L	0.00179	0.65%
Sr 421.552†	14732698.0	15.32 mg/L	mg/L	0.095	30.63 mg/L	0.189	0.62%
Ti 334.903†	58538.9	2.328 mg/L	mg/L	0.0156	4.657 mg/L	0.0312	0.67%
Tl 190.801†	3.3	0.00798 mg/L	mg/L	0.004996	0.01595 mg/L	0.009992	62.63%
V 292.402†	16959.2	0.1263 mg/L	mg/L	0.00013	0.2526 mg/L	0.00026	0.10%
Zn 206.200†	840.0	0.1795 mg/L	mg/L	0.00205	0.3589 mg/L	0.00409	1.14%

Sequence No.: 46  
 Sample ID: VS82 CDUP SWC  
 Analyst: BA  
 Dilution: 2.000000X

*Del*

Autosampler Location: 328  
 Date Collected: 11/28/2012 12:53:48 PM  
 Data Type: Original

Nebulizer Parameters: VS82 CDUP SWC

Analyte Back Pressure Flow  
 All 215.0 kPa 0.75 L/min

Mean Data: VS82 CDUP SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2622532.2	92.82	%	0.200			0.21%
ScR 361.383	360659.1	95.44	%	0.200			0.21%
Ag 328.068†	-1351.4	-0.00708	mg/L	0.000094	-0.01415 mg/L	0.000187	1.32%
Al 308.215†	67683.4	36.97	mg/L	0.101	73.93 mg/L	0.203	0.27%
As 188.979†	-63.1	-0.04075	mg/L	0.002681	-0.08151 mg/L	0.005361	6.58%
B 249.677†	258.1	0.02961	mg/L	0.000371	0.05922 mg/L	0.000743	1.25%
Ba 233.527†	448.9	0.07416	mg/L	0.001304	0.1483 mg/L	0.00261	1.76%
Be 313.042†	524.5	0.00066	mg/L	0.000024	0.00132 mg/L	0.000049	3.70%
Ca 317.933†	29657668.4	1791	mg/L	6.18	3583 mg/L	12.35	0.34%
Cd 228.802†	1867.2	0.05855	mg/L	0.000176	0.1171 mg/L	0.00035	0.30%
Co 228.616†	1094.3	0.01781	mg/L	0.000169	0.03563 mg/L	0.000339	0.95%
Cr 267.716†	956.9	0.1064	mg/L	0.00017	0.2129 mg/L	0.00035	0.16%
Cu 324.752†	18934.7	0.06927	mg/L	0.000276	0.1385 mg/L	0.00055	0.40%
Fe 273.955†	92538.7	54.97	mg/L	0.181	109.9 mg/L	0.36	0.33%
K 766.490†	10569.1	4.566	mg/L	0.0045	9.132 mg/L	0.0090	0.10%
Mg 279.077†	57743.3	36.45	mg/L	0.081	72.91 mg/L	0.162	0.22%
Mn 257.610†	82289.8	1.804	mg/L	0.0057	3.609 mg/L	0.0114	0.32%
Mo 202.031†	263.1	-0.00756	mg/L	0.000210	-0.01512 mg/L	0.000419	2.77%
Na 589.592†	707824.7	54.04	mg/L	0.251	108.1 mg/L	0.50	0.46%
Na 330.237†	1775.6	54.09	mg/L	0.440	108.2 mg/L	0.88	0.81%
Ni 231.604†	409.0	0.08202	mg/L	0.001238	0.1640 mg/L	0.00248	1.51%
Pb 220.353†	49.0	0.01210	mg/L	0.000005	0.02421 mg/L	0.000010	0.04%
Sb 206.836†	4.2	0.00070	mg/L	0.000585	0.00141 mg/L	0.001170	83.08%
Se 196.026†	-43.2	-0.02548	mg/L	0.002201	-0.05095 mg/L	0.004401	8.64%
Si 288.158†	9699.7	4.095	mg/L	0.0094	8.190 mg/L	0.0188	0.23%
Sn 189.927†	-298.0	0.1535	mg/L	0.00065	0.3070 mg/L	0.00130	0.42%
Sr 421.552†	14951986.8	15.55	mg/L	0.065	31.09 mg/L	0.130	0.42%
Ti 334.903†	79711.1	3.192	mg/L	0.0078	6.383 mg/L	0.0157	0.25%
Tl 190.801†	8.1	0.00816	mg/L	0.000522	0.01632 mg/L	0.001044	6.40%
V 292.402†	18670.8	0.1392	mg/L	0.00014	0.2783 mg/L	0.00027	0.10%
Zn 206.200†	1131.2	0.2417	mg/L	0.00135	0.4834 mg/L	0.00271	0.56%

Sequence No.: 47  
 Sample ID: VS82 CSPK SWC  
 Analyst: BA  
 Dilution: 2.000000X

*Del*

Autosampler Location: 329  
 Date Collected: 11/28/2012 12:58:07 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 CSPK SWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: VS82 CSPK SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2609131.7	92.35	%	0.061			0.07%
ScR 361.383	360417.3	95.37	%	0.330			0.35%
Ag 328.068†	107662.7	0.5673	mg/L	0.00311	1.135 mg/L	0.0062	0.55%
Al 308.215†	102764.7	56.12	mg/L	0.198	112.2 mg/L	0.40	0.35%
As 188.979†	4265.6	2.075	mg/L	0.0102	4.149 mg/L	0.0205	0.49%
B 249.677†	374.1	0.04195	mg/L	0.000974	0.08390 mg/L	0.001949	2.32%
Ba 233.527†	11785.5	2.172	mg/L	0.0050	4.343 mg/L	0.0100	0.23%
Be 313.042†	370343.7	0.5155	mg/L	0.00068	1.031 mg/L	0.0014	0.13%
Ca 317.933†	26789625.9	1618	mg/L	2.98	3236 mg/L	5.96	0.18%
Cd 228.802†	21527.9	0.6642	mg/L	0.00080	1.328 mg/L	0.0016	0.12%
Co 228.616†	22334.8	0.4978	mg/L	0.00152	0.9955 mg/L	0.00303	0.30%
Cr 267.716†	5633.6	0.7140	mg/L	0.00192	1.428 mg/L	0.0038	0.27%
Cu 324.752†	177392.0	0.6375	mg/L	0.00349	1.275 mg/L	0.0070	0.55%
Fe 273.955†	130625.7	77.59	mg/L	0.119	155.2 mg/L	0.24	0.15%
K 766.490†	39417.3	17.03	mg/L	0.055	34.06 mg/L	0.111	0.32%
Mg 279.077†	78223.0	49.38	mg/L	0.101	98.77 mg/L	0.201	0.20%
Mn 257.610†	104595.0	2.296	mg/L	0.0019	4.592 mg/L	0.0039	0.08%
Mo 202.031†	251.1	-0.00626	mg/L	0.000533	-0.01252 mg/L	0.001065	8.51%
Na 589.592†	831230.3	63.47	mg/L	0.189	126.9 mg/L	0.38	0.30%
Na 330.237†	2101.3	64.02	mg/L	0.235	128.0 mg/L	0.47	0.37%
Ni 231.604†	3004.7	0.6018	mg/L	0.00126	1.204 mg/L	0.0025	0.21%
Pb 220.353†	17915.8	1.980	mg/L	0.0038	3.960 mg/L	0.0076	0.19%
Sb 206.836†	10.3	0.00073	mg/L	0.002636	0.00147 mg/L	0.005273	359.66%
Se 196.026†	3515.7	2.065	mg/L	0.0099	4.130 mg/L	0.0198	0.48%
Si 288.158†	7815.2	3.301	mg/L	0.0079	6.602 mg/L	0.0157	0.24%
Sn 189.927†	1776.6	0.6096	mg/L	0.00225	1.219 mg/L	0.0045	0.37%
Sr 421.552†	15070390.7	15.67	mg/L	0.023	31.34 mg/L	0.045	0.14%
Ti 334.903†	111001.6	4.486	mg/L	0.0078	8.973 mg/L	0.0156	0.17%
Tl 190.801†	4891.3	1.775	mg/L	0.0069	3.550 mg/L	0.0139	0.39%
V 292.402†	88365.6	0.6708	mg/L	0.00299	1.342 mg/L	0.0060	0.45%
Zn 206.200†	3348.5	0.7155	mg/L	0.00084	1.431 mg/L	0.0017	0.12%



Sequence No.: 48 *ZZZZZZ BA 11/29/12* Autosampler Location: 330  
 Sample ID: ~~VS82 CPOST SWC~~ *Det* Date Collected: 11/28/2012 1:02:34 PM  
 Analyst: BA Data Type: Original  
 Dilution: 2.000000X

Nebulizer Parameters: VS82 CPOST SWC  
 Analyte Back Pressure Flow  
 All 215.0 kPa 0.75 L/min

Mean Data: VS82 CPOST SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		RSD
	Intensity	Conc.			Conc.	Units	
ScA 357.253	2614337.1	92.53	%	0.410			0.44%
ScR 361.383	364112.7	96.35	%	0.320			0.33%
Ag 328.068†	99699.8	0.5253	mg/L	0.00431	1.051	mg/L	0.0086 0.82%
Al 308.215†	65125.6	35.56	mg/L	0.083	71.13	mg/L	0.165 0.23%
As 188.979†	4457.7	2.102	mg/L	0.0095	4.205	mg/L	0.0189 0.45%
B 249.677†	348.8	0.03908	mg/L	0.001357	0.07815	mg/L	0.002715 3.47%
Ba 233.527†	11283.9	2.080	mg/L	0.0124	4.160	mg/L	0.0249 0.60%
Be 313.042†	360519.0	0.5018	mg/L	0.00106	1.004	mg/L	0.0021 0.21%
Ca 317.933†	27168379.4	1641	mg/L	18.67	3282	mg/L	37.34 1.14%
Cd 228.802†	19700.3	0.6061	mg/L	0.00222	1.212	mg/L	0.0044 0.37%
Co 228.616†	21592.2	0.4853	mg/L	0.00250	0.9705	mg/L	0.00500 0.52%
Cr 267.716†	5078.5	0.6419	mg/L	0.00269	1.284	mg/L	0.0054 0.42%
Cu 324.752†	166683.2	0.5993	mg/L	0.00371	1.199	mg/L	0.0074 0.62%
Fe 273.955†	116604.5	69.26	mg/L	0.168	138.5	mg/L	0.34 0.24%
K 766.490†	37696.0	16.29	mg/L	0.044	32.57	mg/L	0.087 0.27%
Mg 279.077†	70428.2	44.46	mg/L	0.114	88.93	mg/L	0.227 0.26%
Mn 257.610†	98300.0	2.157	mg/L	0.0045	4.315	mg/L	0.0089 0.21%
Mo 202.031†	258.2	-0.00619	mg/L	0.000598	-0.01237	mg/L	0.001197 9.68%
Na 589.592†	857596.2	65.48	mg/L	0.150	131.0	mg/L	0.30 0.23%
Na 330.237†	2179.2	65.89	mg/L	0.290	131.8	mg/L	0.58 0.44%
Ni 231.604†	2768.9	0.5545	mg/L	0.00171	1.109	mg/L	0.0034 0.31%
Pb 220.353†	17719.7	1.954	mg/L	0.0090	3.908	mg/L	0.0181 0.46%
Sb 206.836†	28.1	0.00111	mg/L	0.001284	0.00222	mg/L	0.002568 115.82%
Se 196.026†	3561.7	2.092	mg/L	0.0068	4.184	mg/L	0.0137 0.33%
Si 288.158†	9938.2	4.199	mg/L	0.0185	8.397	mg/L	0.0370 0.44%
Sn 189.927†	-285.7	0.1377	mg/L	0.00371	0.2753	mg/L	0.00743 2.70%
Sr 421.552†	15102583.1	15.70	mg/L	0.133	31.40	mg/L	0.266 0.85%
Ti 334.903†	57563.1	2.288	mg/L	0.0032	4.576	mg/L	0.0064 0.14%
Tl 190.801†	4840.4	1.756	mg/L	0.0025	3.512	mg/L	0.0051 0.14%
V 292.402†	82224.9	0.6252	mg/L	0.00494	1.250	mg/L	0.0099 0.79%
Zn 206.200†	3065.1	0.6549	mg/L	0.00568	1.310	mg/L	0.0114 0.87%

Sequence No.: 49  
 Sample ID: VS82 MB1SPK SWC  
 Analyst: BA  
 Dilution: 2.000000X

Autosampler Location: 331  
 Date Collected: 11/28/2012 1:07:09 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 MB1SPK SWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: VS82 MB1SPK SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	2900205.0	102.7	%	0.38			0.37%
ScR 361.383	385669.3	102.1	%	0.26			0.26%
Ag 328.068†	102592.9	0.5405	mg/L	0.00387	1.081	0.0077	0.72%
Al 308.215†	3834.2	2.087	mg/L	0.0054	4.174	0.0108	0.26%
As 188.979†	4382.4	2.094	mg/L	0.0047	4.187	0.0095	0.23%
B 249.677†	10.1	0.00009	mg/L	0.000399	0.00018	0.000799	442.20%
Ba 233.527†	11220.6	2.079	mg/L	0.0104	4.158	0.0208	0.50%
Be 313.042†	377113.6	0.5250	mg/L	0.00091	1.050	0.0018	0.17%
Ca 317.933†	174280.2	10.53	mg/L	0.020	21.05	0.041	0.19%
Cd 228.802†	17320.4	0.5320	mg/L	0.00272	1.064	0.0054	0.51%
Co 228.616†	22816.5	0.5185	mg/L	0.00404	1.037	0.0081	0.78%
Cr 267.716†	4036.2	0.5222	mg/L	0.00307	1.044	0.0061	0.59%
Cu 324.752†	147368.2	0.5279	mg/L	0.00341	1.056	0.0068	0.65%
Fe 273.955†	3601.9	2.136	mg/L	0.0086	4.272	0.0171	0.40%
K 766.490†	23701.6	10.24	mg/L	0.037	20.48	0.074	0.36%
Mg 279.077†	16919.9	10.69	mg/L	0.049	21.38	0.098	0.46%
Mn 257.610†	23494.7	0.5170	mg/L	0.00211	1.034	0.0042	0.41%
Mo 202.031†	29.4	0.00118	mg/L	0.000161	0.00236	0.000322	13.64%
Na 589.592†	133871.6	10.22	mg/L	0.011	20.44	0.023	0.11%
Na 330.237†	366.6	10.86	mg/L	0.231	21.72	0.463	2.13%
Ni 231.604†	2599.2	0.5204	mg/L	0.00265	1.041	0.0053	0.51%
Pb 220.353†	19056.9	2.095	mg/L	0.0109	4.191	0.0217	0.52%
Sb 206.836†	4.2	0.00052	mg/L	0.001194	0.00104	0.002387	230.60%
Se 196.026†	3553.3	2.087	mg/L	0.0051	4.174	0.0102	0.25%
Si 288.158†	-2.8	-0.00118	mg/L	0.002437	-0.00236	0.004875	206.75%
Sn 189.927†	2255.2	0.5202	mg/L	0.00249	1.040	0.0050	0.48%
Sr 421.552†	498505.2	0.5183	mg/L	0.00056	1.037	0.0011	0.11%
Ti 334.903†	61.9	0.00194	mg/L	0.000410	0.00387	0.000820	21.16%
Tl 190.801†	5721.1	2.068	mg/L	0.0023	4.136	0.0047	0.11%
V 292.402†	68603.2	0.5244	mg/L	0.00361	1.049	0.0072	0.69%
Zn 206.200†	2471.1	0.5281	mg/L	0.00353	1.056	0.0071	0.67%

Sequence No.: 50  
 Sample ID: CV 6  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 7  
 Date Collected: 11/28/2012 1:11:11 PM  
 Data Type: Original

## Nebulizer Parameters: CV

Analyte Back Pressure Flow  
 All 215.0 kPa 0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2868255.4	101.5	%	0.62			0.61%
ScR 361.383	379537.4	100.4	%	0.81			0.81%
Ag 328.068†	198137.3	1.044	mg/L	0.0060	1.044 mg/L	0.0060	0.57%
Al 308.215†	3797.2	2.039	mg/L	0.0184	2.039 mg/L	0.0184	0.90%
As 188.979†	4257.0	2.060	mg/L	0.0086	2.060 mg/L	0.0086	0.42%
B 249.677†	8849.9	1.016	mg/L	0.0118	1.016 mg/L	0.0118	1.17%
Ba 233.527†	5506.1	1.020	mg/L	0.0073	1.020 mg/L	0.0073	0.71%
Be 313.042†	734161.1	1.022	mg/L	0.0095	1.022 mg/L	0.0095	0.93%
Ca 317.933†	35794.0	2.162	mg/L	0.0156	2.162 mg/L	0.0156	0.72%
Cd 228.802†	33130.3	1.031	mg/L	0.0044	1.031 mg/L	0.0044	0.43%
Co 228.616†	44548.2	1.011	mg/L	0.0061	1.011 mg/L	0.0061	0.61%
Cr 267.716†	7878.6	1.021	mg/L	0.0067	1.021 mg/L	0.0067	0.66%
Cu 324.752†	287694.7	1.030	mg/L	0.0043	1.030 mg/L	0.0043	0.42%
Fe 273.955†	3547.4	2.100	mg/L	0.0233	2.100 mg/L	0.0233	1.11%
K 766.490†	47324.8	20.45	mg/L	0.248	20.45 mg/L	0.248	1.21%
Mg 279.077†	3259.5	2.067	mg/L	0.0195	2.067 mg/L	0.0195	0.94%
Mn 257.610†	46699.2	1.027	mg/L	0.0098	1.027 mg/L	0.0098	0.96%
Mo 202.031†	23602.0	1.059	mg/L	0.0058	1.059 mg/L	0.0058	0.55%
Na 589.592†	676553.1	51.66	mg/L	0.593	51.66 mg/L	0.593	1.15%
Na 330.237†	1768.4	53.09	mg/L	0.751	53.09 mg/L	0.751	1.42%
Ni 231.604†	5122.9	1.028	mg/L	0.0109	1.028 mg/L	0.0109	1.06%
Pb 220.353†	19252.3	2.117	mg/L	0.0081	2.117 mg/L	0.0081	0.38%
Sb 206.836†	7975.5	2.176	mg/L	0.0097	2.176 mg/L	0.0097	0.45%
Se 196.026†	3461.7	2.033	mg/L	0.0073	2.033 mg/L	0.0073	0.36%
Si 288.158†	4982.3	2.100	mg/L	0.0127	2.100 mg/L	0.0127	0.60%
Sn 189.927†	4603.6	1.061	mg/L	0.0040	1.061 mg/L	0.0040	0.38%
Sr 421.552†	976610.8	1.015	mg/L	0.0106	1.015 mg/L	0.0106	1.05%
Ti 334.903†	25413.8	1.044	mg/L	0.0104	1.044 mg/L	0.0104	0.99%
Tl 190.801†	5613.7	2.025	mg/L	0.0026	2.025 mg/L	0.0026	0.13%
V 292.402†	135638.8	1.037	mg/L	0.0059	1.037 mg/L	0.0059	0.57%
Zn 206.200†	5019.5	1.072	mg/L	0.0131	1.072 mg/L	0.0131	1.22%

Sequence No.: 51  
 Sample ID: CB **6**  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 1  
 Date Collected: 11/28/2012 1:15:32 PM  
 Data Type: Original

## Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2879686.5	101.9	%	0.58				0.57%
ScR 361.383	382215.9	101.1	%	0.57				0.56%
Ag 328.068†	46.8	0.00025	mg/L	0.000164	0.00025	mg/L	0.000164	66.60%
Al 308.215†	14.6	0.00796	mg/L	0.004534	0.00796	mg/L	0.004534	56.97%
As 188.979†	2.9	0.00137	mg/L	0.000791	0.00137	mg/L	0.000791	57.86%
B 249.677†	14.7	0.00169	mg/L	0.000429	0.00169	mg/L	0.000429	25.38%
Ba 233.527†	-1.1	-0.00020	mg/L	0.000972	-0.00020	mg/L	0.000972	493.79%
Be 313.042†	87.7	0.00012	mg/L	0.000014	0.00012	mg/L	0.000014	11.61%
Ca 317.933†	281.2	0.01699	mg/L	0.002804	0.01699	mg/L	0.002804	16.51%
Cd 228.802†	-0.1	-0.00001	mg/L	0.000057	-0.00001	mg/L	0.000057	389.79%
Co 228.616†	0.5	0.00001	mg/L	0.000116	0.00001	mg/L	0.000116	>999.9%
Cr 267.716†	-3.3	-0.00043	mg/L	0.000289	-0.00043	mg/L	0.000289	67.24%
Cu 324.752†	40.5	0.00014	mg/L	0.000134	0.00014	mg/L	0.000134	92.62%
Fe 273.955†	0.9	0.00055	mg/L	0.002750	0.00055	mg/L	0.002750	501.51%
K 766.490†	36.7	0.01584	mg/L	0.011130	0.01584	mg/L	0.011130	70.29%
Mg 279.077†	0.9	0.00054	mg/L	0.003453	0.00054	mg/L	0.003453	635.81%
Mn 257.610†	13.7	0.00030	mg/L	0.000099	0.00030	mg/L	0.000099	32.92%
Mo 202.031†	24.9	0.00112	mg/L	0.000144	0.00112	mg/L	0.000144	12.83%
Na 589.592†	281.5	0.02149	mg/L	0.002090	0.02149	mg/L	0.002090	9.72%
Na 330.237†	4.2	0.1253	mg/L	0.16317	0.1253	mg/L	0.16317	130.23%
Ni 231.604†	-9.3	-0.00186	mg/L	0.000626	-0.00186	mg/L	0.000626	33.67%
Pb 220.353†	5.2	0.00057	mg/L	0.000553	0.00057	mg/L	0.000553	97.41%
Sb 206.836†	6.4	0.00177	mg/L	0.001235	0.00177	mg/L	0.001235	69.78%
Se 196.026†	5.3	0.00312	mg/L	0.004318	0.00312	mg/L	0.004318	138.36%
Si 288.158†	16.2	0.00681	mg/L	0.002493	0.00681	mg/L	0.002493	36.60%
Sn 189.927†	2.4	0.00056	mg/L	0.000545	0.00056	mg/L	0.000545	96.86%
Sr 421.552†	267.6	0.00028	mg/L	0.000029	0.00028	mg/L	0.000029	10.43%
Ti 334.903†	5.3	0.00021	mg/L	0.000648	0.00021	mg/L	0.000648	302.32%
Tl 190.801†	4.4	0.00160	mg/L	0.000778	0.00160	mg/L	0.000778	48.64%
V 292.402†	56.3	0.00043	mg/L	0.000191	0.00043	mg/L	0.000191	44.60%
Zn 206.200†	2.8	0.00059	mg/L	0.000042	0.00059	mg/L	0.000042	7.20%

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Analysis Begun

Start Time: 11/28/2012 1:44:16 PM

Plasma On Time: 11/28/2012 8:01:35 AM

Logged In Analyst: Metals

Technique: ICP Continuous

Spectrometer: Optima 7300 DV, S/N 077C8121202

Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\1128.sif

Batch ID:

Results Data Set: I2121128

Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb  
=====

Sequence No.: 1

Autosampler Location: 332

Sample ID: VS82 A SWC

Date Collected: 11/28/2012 1:44:17 PM

Analyst: BA

Data Type: Original

Dilution: 10.000000X  
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## Nebulizer Parameters: VS82 A SWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

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Mean Data: VS82 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc. Units	Sample Std.Dev.	RSD
ScA 357.253	2718899.6	96.23	%	0.559			0.58%
ScR 361.383	372182.7	98.49	%	0.559			0.57%
Ag 328.068†	-472.2	-0.00248	mg/L	0.000072	-0.02484	0.000719	2.90%
Al 308.215†	4561.1	2.491	mg/L	0.0251	24.91	0.251	1.01%
As 188.979†	58.9	0.00800	mg/L	0.002294	0.07998	0.022943	28.69%
B 249.677†	9.6	0.00110	mg/L	0.000554	0.01102	0.005537	50.26%
Ba 233.527†	102.7	0.01826	mg/L	0.000576	0.1826	0.00576	3.16%
Be 313.042†	122.5	0.00017	mg/L	0.000015	0.00165	0.000147	8.92%
Ca 317.933†	7943555.9	479.8	mg/L	6.97	4798	69.68	1.45%
Cd 228.802†	61.1	0.00170	mg/L	0.000134	0.01697	0.001335	7.87%
Co 228.616†	111.5	0.00195	mg/L	0.000199	0.01946	0.001991	10.23%
Cr 267.716†	82.6	0.00599	mg/L	0.000471	0.05991	0.004714	7.87%
Cu 324.752†	1474.8	0.00539	mg/L	0.000118	0.05386	0.001180	2.19%
Fe 273.955†	7945.7	4.720	mg/L	0.0219	47.20	0.219	0.46%
K 766.490†	1416.2	0.6118	mg/L	0.01571	6.118	0.1571	2.57%
Mg 279.077†	8682.6	5.483	mg/L	0.0293	54.83	0.293	0.54%
Mn 257.610†	13324.9	0.2916	mg/L	0.00048	2.916	0.0048	0.16%
Mo 202.031†	152.2	0.00164	mg/L	0.000467	0.01645	0.004671	28.40%
Na 589.592†	125458.5	9.579	mg/L	0.0397	95.79	0.397	0.41%
Na 330.237†	351.9	10.64	mg/L	0.142	106.4	1.42	1.34%
Ni 231.604†	37.6	0.00753	mg/L	0.000557	0.07534	0.005574	7.40%
Pb 220.353†	-18.1	-0.00158	mg/L	0.000454	-0.01580	0.004540	28.74%
Sb 206.836†	-7.1	-0.00222	mg/L	0.000251	-0.02220	0.002507	11.29%
Se 196.026†	-38.0	-0.02232	mg/L	0.004377	-0.2232	0.04377	19.61%
Si 288.158†	844.9	0.3571	mg/L	0.00647	3.571	0.0647	1.81%
Sn 189.927†	-137.2	0.02781	mg/L	0.000583	0.2781	0.00583	2.10%
Sr 421.552†	4327973.7	4.500	mg/L	0.0567	45.00	0.567	1.26%
Ti 334.903†	6622.2	0.2494	mg/L	0.00110	2.494	0.0110	0.44%
Tl 190.801†	32.6	0.01225	mg/L	0.001249	0.1225	0.01249	10.19%
V 292.402†	1521.8	0.01136	mg/L	0.000045	0.1136	0.00045	0.39%
Zn 206.200†	76.0	0.01623	mg/L	0.001440	0.1623	0.01440	8.87%

Sequence No.: 2  
 Sample ID: VS82 B SWC  
 Analyst: BA  
 Dilution: 10.000000X

Autosampler Location: 333  
 Date Collected: 11/28/2012 1:48:38 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 B SWC

Analyte Back Pressure Flow  
 All 215.0 kPa 0.75 L/min

## Mean Data: VS82 B SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2755160.9	97.52	%	0.443			0.45%
ScR 361.383	378357.0	100.1	%	0.08			0.08%
Ag 328.068†	-362.3	-0.00190	mg/L	0.000316	-0.01899 mg/L	0.003160	16.64%
Al 308.215†	12905.7	7.049	mg/L	0.0243	70.49 mg/L	0.243	0.34%
As 188.979†	40.6	0.01092	mg/L	0.001740	0.1092 mg/L	0.01740	15.93%
B 249.677†	52.8	0.00606	mg/L	0.000161	0.06062 mg/L	0.001612	2.66%
Ba 233.527†	134.2	0.02134	mg/L	0.000296	0.2134 mg/L	0.00296	1.39%
Be 313.042†	170.0	0.00022	mg/L	0.000009	0.00225 mg/L	0.000089	3.98%
Ca 317.933†	6317196.6	381.6	mg/L	4.88	3816 mg/L	48.78	1.28%
Cd 228.802†	64.5	0.00172	mg/L	0.000011	0.01717 mg/L	0.000109	0.63%
Co 228.616†	239.3	0.00423	mg/L	0.000168	0.04229 mg/L	0.001677	3.97%
Cr 267.716†	204.0	0.02308	mg/L	0.000483	0.2308 mg/L	0.00483	2.09%
Cu 324.752†	3462.3	0.01319	mg/L	0.000225	0.1319 mg/L	0.00225	1.71%
Fe 273.955†	36163.7	21.48	mg/L	0.076	214.8 mg/L	0.76	0.35%
K 766.490†	2036.1	0.8796	mg/L	0.00978	8.796 mg/L	0.0978	1.11%
Mg 279.077†	12258.7	7.734	mg/L	0.0314	77.34 mg/L	0.314	0.41%
Mn 257.610†	17409.7	0.3818	mg/L	0.00110	3.818 mg/L	0.0110	0.29%
Mo 202.031†	147.9	0.00251	mg/L	0.000254	0.02514 mg/L	0.002541	10.10%
Na 589.592†	124428.6	9.500	mg/L	0.0271	95.00 mg/L	0.271	0.29%
Na 330.237†	346.8	10.53	mg/L	0.253	105.3 mg/L	2.53	2.41%
Ni 231.604†	107.6	0.02157	mg/L	0.000869	0.2157 mg/L	0.00869	4.03%
Pb 220.353†	24.5	0.00353	mg/L	0.000071	0.03526 mg/L	0.000707	2.01%
Sb 206.836†	-0.9	-0.00054	mg/L	0.001388	-0.00542 mg/L	0.013875	256.18%
Se 196.026†	-32.7	-0.01922	mg/L	0.001819	-0.1922 mg/L	0.01819	9.46%
Si 288.158†	2359.5	0.9960	mg/L	0.00838	9.960 mg/L	0.0838	0.84%
Sn 189.927†	-118.9	0.01990	mg/L	0.003002	0.1990 mg/L	0.03002	15.09%
Sr 421.552†	3392581.9	3.527	mg/L	0.0362	35.27 mg/L	0.362	1.03%
Ti 334.903†	11688.8	0.4623	mg/L	0.00227	4.623 mg/L	0.0227	0.49%
Tl 190.801†	21.8	0.01003	mg/L	0.002596	0.1003 mg/L	0.02596	25.87%
V 292.402†	4234.1	0.03138	mg/L	0.000314	0.3138 mg/L	0.00314	1.00%
Zn 206.200†	222.4	0.04752	mg/L	0.000404	0.4752 mg/L	0.00404	0.85%

Sequence No.: 3  
 Sample ID: VS82 D SWC  
 Analyst: BA  
 Dilution: 10.000000X

Autosampler Location: 334  
 Date Collected: 11/28/2012 1:52:57 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 D SWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: VS82 D SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2792597.4	98.84	%	0.493				0.50%
ScR 361.383	370444.0	98.03	%	0.385				0.39%
Ag 328.068†	-285.2	-0.00149	mg/L	0.000165	-0.01491	mg/L	0.001650	11.06%
Al 308.215†	20345.3	11.11	mg/L	0.052	111.1	mg/L	0.52	0.47%
As 188.979†	21.7	0.01285	mg/L	0.001790	0.1285	mg/L	0.01790	13.92%
B 249.677†	40.5	0.00464	mg/L	0.001308	0.04641	mg/L	0.013080	28.19%
Ba 233.527†	159.4	0.02646	mg/L	0.000837	0.2646	mg/L	0.00837	3.16%
Be 313.042†	221.5	0.00029	mg/L	0.000021	0.00293	mg/L	0.000209	7.12%
Ca 317.933†	4516072.0	272.8	mg/L	1.12	2728	mg/L	11.20	0.41%
Cd 228.802†	354.4	0.01095	mg/L	0.000235	0.1095	mg/L	0.00235	2.14%
Co 228.616†	342.9	0.00630	mg/L	0.000040	0.06301	mg/L	0.000402	0.64%
Cr 267.716†	316.5	0.03847	mg/L	0.000855	0.3847	mg/L	0.00855	2.22%
Cu 324.752†	5948.1	0.02193	mg/L	0.000111	0.2193	mg/L	0.00111	0.51%
Fe 273.955†	31640.2	18.79	mg/L	0.064	187.9	mg/L	0.64	0.34%
K 766.490†	3509.9	1.516	mg/L	0.0223	15.16	mg/L	0.223	1.47%
Mg 279.077†	13898.4	8.771	mg/L	0.0367	87.71	mg/L	0.367	0.42%
Mn 257.610†	18004.1	0.3952	mg/L	0.00119	3.952	mg/L	0.0119	0.30%
Mo 202.031†	123.0	0.00257	mg/L	0.000394	0.02569	mg/L	0.003938	15.33%
Na 589.592†	126683.1	9.672	mg/L	0.0543	96.72	mg/L	0.543	0.56%
Na 330.237†	339.5	10.34	mg/L	0.074	103.4	mg/L	0.74	0.72%
Ni 231.604†	194.0	0.03889	mg/L	0.000304	0.3889	mg/L	0.00304	0.78%
Pb 220.353†	3.6	0.00233	mg/L	0.000852	0.02328	mg/L	0.008521	36.60%
Sb 206.836†	-2.0	-0.00092	mg/L	0.001813	-0.00915	mg/L	0.018130	198.14%
Se 196.026†	-32.7	-0.01924	mg/L	0.002595	-0.1924	mg/L	0.02595	13.49%
Si 288.158†	1327.7	0.5611	mg/L	0.00659	5.611	mg/L	0.0659	1.18%
Sn 189.927†	-103.6	0.01001	mg/L	0.001364	0.1001	mg/L	0.01364	13.63%
Sr 421.552†	2381787.8	2.476	mg/L	0.0047	24.76	mg/L	0.047	0.19%
Ti 334.903†	15652.5	0.6305	mg/L	0.00288	6.305	mg/L	0.0288	0.46%
Tl 190.801†	23.8	0.01046	mg/L	0.001991	0.1046	mg/L	0.01991	19.04%
V 292.402†	5007.0	0.03733	mg/L	0.000262	0.3733	mg/L	0.00262	0.70%
Zn 206.200†	288.5	0.06164	mg/L	0.001087	0.6164	mg/L	0.01087	1.76%

Sequence No.: 4  
 Sample ID: VS82 E SWC  
 Analyst: BA  
 Dilution: 10.000000X

*Del*

Autosampler Location: 335  
 Date Collected: 11/28/2012 1:57:15 PM  
 Data Type: Original

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 Nebulizer Parameters: VS82 E SWC

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

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 Mean Data: VS82 E SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2852718.1	101.0	%	0.21			0.21%
ScR 361.383	379121.9	100.3	%	0.24			0.24%
Ag 328.068†	-133.7	-0.00069	mg/L	0.000177	-0.00690 mg/L	0.001770	25.66%
Al 308.215†	25189.2	13.76	mg/L	0.108	137.6 mg/L	1.08	0.78%
As 188.979†	0.5	0.01747	mg/L	0.000276	0.1747 mg/L	0.00276	1.58%
B 249.677†	60.4	0.00693	mg/L	0.000309	0.06928 mg/L	0.003089	4.46%
Ba 233.527†	192.2	0.03246	mg/L	0.000573	0.3246 mg/L	0.00573	1.77%
Be 313.042†	232.9	0.00030	mg/L	0.000018	0.00303 mg/L	0.000183	6.04%
Ca 317.933†	2922370.1	176.5	mg/L	1.17	1765 mg/L	11.66	0.66%
Cd 228.802†	65.1	0.00190	mg/L	0.000135	0.01895 mg/L	0.001351	7.13%
Co 228.616†	371.9	0.00633	mg/L	0.000216	0.06335 mg/L	0.002157	3.40%
Cr 267.716†	300.6	0.03732	mg/L	0.000570	0.3732 mg/L	0.00570	1.53%
Cu 324.752†	4165.4	0.01550	mg/L	0.000235	0.1550 mg/L	0.00235	1.52%
Fe 273.955†	32416.3	19.25	mg/L	0.101	192.5 mg/L	1.01	0.53%
K 766.490†	3400.7	1.469	mg/L	0.0085	14.69 mg/L	0.085	0.58%
Mg 279.077†	13852.0	8.742	mg/L	0.0666	87.42 mg/L	0.666	0.76%
Mn 257.610†	16204.5	0.3559	mg/L	0.00273	3.559 mg/L	0.0273	0.77%
Mo 202.031†	103.2	0.00272	mg/L	0.000152	0.02721 mg/L	0.001519	5.58%
Na 589.592†	84301.3	6.437	mg/L	0.0579	64.37 mg/L	0.579	0.90%
Na 330.237†	225.5	6.984	mg/L	0.2325	69.84 mg/L	2.325	3.33%
Ni 231.604†	170.6	0.03421	mg/L	0.001129	0.3421 mg/L	0.01129	3.30%
Pb 220.353†	11.3	0.00379	mg/L	0.000687	0.03791 mg/L	0.006869	18.12%
Sb 206.836†	-5.0	-0.00149	mg/L	0.001519	-0.01487 mg/L	0.015187	102.12%
Se 196.026†	-23.3	-0.01373	mg/L	0.001848	-0.1373 mg/L	0.01848	13.45%
Si 288.158†	1547.7	0.6538	mg/L	0.00758	6.538 mg/L	0.0758	1.16%
Sn 189.927†	-88.4	0.00164	mg/L	0.000261	0.01635 mg/L	0.002611	15.97%
Sr 421.552†	1422334.1	1.479	mg/L	0.0108	14.79 mg/L	0.108	0.73%
Ti 334.903†	23440.0	0.9553	mg/L	0.00573	9.553 mg/L	0.0573	0.60%
Tl 190.801†	25.0	0.01087	mg/L	0.002909	0.1087 mg/L	0.02909	26.76%
V 292.402†	6555.8	0.04891	mg/L	0.000605	0.4891 mg/L	0.00605	1.24%
Zn 206.200†	274.4	0.05863	mg/L	0.000879	0.5863 mg/L	0.00879	1.50%



Sequence No.: 5  
 Sample ID: VS82 F SWC  
 Analyst: BA  
 Dilution: 10.000000X

*Del*

Autosampler Location: 336  
 Date Collected: 11/28/2012 2:01:33 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 F SWC

Analyte Back Pressure Flow  
 All 213.0 kPa 0.75 L/min

## Mean Data: VS82 F SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2844439.9	100.7	%	0.15			0.15%
ScR 361.383	376634.7	99.66	%	0.715			0.72%
Ag 328.068†	-109.2	-0.00056	mg/L	0.000083	-0.00560 mg/L	0.000833	14.86%
Al 308.215†	23554.7	12.87	mg/L	0.189	128.7 mg/L	1.89	1.47%
As 188.979†	-4.0	0.01543	mg/L	0.000625	0.1543 mg/L	0.00625	4.05%
B 249.677†	47.6	0.00546	mg/L	0.000498	0.05456 mg/L	0.004982	9.13%
Ba 233.527†	147.9	0.02417	mg/L	0.000500	0.2417 mg/L	0.00500	2.07%
Be 313.042†	192.7	0.00025	mg/L	0.000032	0.00246 mg/L	0.000321	13.07%
Ca 317.933†	3439123.3	207.7	mg/L	1.17	2077 mg/L	11.70	0.56%
Cd 228.802†	392.7	0.01222	mg/L	0.000039	0.1222 mg/L	0.00039	0.32%
Co 228.616†	354.6	0.00581	mg/L	0.000190	0.05810 mg/L	0.001899	3.27%
Cr 267.716†	348.0	0.04313	mg/L	0.001659	0.4313 mg/L	0.01659	3.85%
Cu 324.752†	3943.6	0.01470	mg/L	0.000149	0.1470 mg/L	0.00149	1.01%
Fe 273.955†	33142.0	19.69	mg/L	0.368	196.9 mg/L	3.68	1.87%
K 766.490†	3103.8	1.341	mg/L	0.0288	13.41 mg/L	0.288	2.15%
Mg 279.077†	14787.4	9.333	mg/L	0.1667	93.33 mg/L	1.667	1.79%
Mn 257.610†	17078.0	0.3750	mg/L	0.00668	3.750 mg/L	0.0668	1.78%
Mo 202.031†	110.0	0.00269	mg/L	0.000186	0.02690 mg/L	0.001859	6.91%
Na 589.592†	104919.0	8.011	mg/L	0.0969	80.11 mg/L	0.969	1.21%
Na 330.237†	280.4	8.651	mg/L	0.0866	86.51 mg/L	0.866	1.00%
Ni 231.604†	149.4	0.02995	mg/L	0.000509	0.2995 mg/L	0.00509	1.70%
Pb 220.353†	9.0	0.00333	mg/L	0.000925	0.03326 mg/L	0.009254	27.82%
Sb 206.836†	-5.2	-0.00162	mg/L	0.000889	-0.01619 mg/L	0.008892	54.94%
Se 196.026†	-24.9	-0.01468	mg/L	0.001870	-0.1468 mg/L	0.01870	12.74%
Si 288.158†	1684.2	0.7114	mg/L	0.00234	7.114 mg/L	0.0234	0.33%
Sn 189.927†	-88.9	0.00540	mg/L	0.000676	0.05395 mg/L	0.006761	12.53%
Sr 421.552†	1781724.0	1.852	mg/L	0.0080	18.52 mg/L	0.080	0.43%
Ti 334.903†	25050.7	1.020	mg/L	0.0172	10.20 mg/L	0.172	1.68%
Tl 190.801†	17.3	0.00813	mg/L	0.001458	0.08130 mg/L	0.014579	17.93%
V 292.402†	6685.8	0.04987	mg/L	0.000234	0.4987 mg/L	0.00234	0.47%
Zn 206.200†	280.9	0.06001	mg/L	0.000535	0.6001 mg/L	0.00535	0.89%

Sequence No.: 6  
 Sample ID: VS82 C-L SWC  
 Analyst: BA  
 Dilution: 50.000000X

Autosampler Location: 337  
 Date Collected: 11/28/2012 2:05:51 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 C-L SWC

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: VS82 C-L SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2873629.4	101.7	%	0.74			0.73%
ScR 361.383	380069.0	100.6	%	0.72			0.72%
Ag 328.068†	-82.6	-0.00043	mg/L	0.000263	-0.02169 mg/L	0.013168	60.70%
Al 308.215†	2339.9	1.278	mg/L	0.0191	63.90 mg/L	0.953	1.49%
As 188.979†	30.9	0.01365	mg/L	0.000457	0.6823 mg/L	0.02286	3.35%
B 249.677†	8.4	0.00096	mg/L	0.001011	0.04817 mg/L	0.050566	104.98%
Ba 233.527†	22.0	0.00361	mg/L	0.000137	0.1805 mg/L	0.00684	3.79%
Be 313.042†	39.4	0.00005	mg/L	0.000009	0.00263 mg/L	0.000465	17.66%
Ca 317.933†	1123316.6	67.85	mg/L	0.195	3393 mg/L	9.73	0.29%
Cd 228.802†	80.3	0.00241	mg/L	0.000235	0.1203 mg/L	0.01176	9.77%
Co 228.616†	51.3	0.00094	mg/L	0.000095	0.04682 mg/L	0.004731	10.11%
Cr 267.716†	58.2	0.00691	mg/L	0.000257	0.3455 mg/L	0.01285	3.72%
Cu 324.752†	574.7	0.00215	mg/L	0.000195	0.1075 mg/L	0.00977	9.09%
Fe 273.955†	4755.2	2.825	mg/L	0.0245	141.2 mg/L	1.23	0.87%
K 766.490†	447.9	0.1935	mg/L	0.01053	9.675 mg/L	0.5263	5.44%
Mg 279.077†	2225.3	1.405	mg/L	0.0066	70.23 mg/L	0.332	0.47%
Mn 257.610†	3187.2	0.06990	mg/L	0.000533	3.495 mg/L	0.0266	0.76%
Mo 202.031†	79.5	0.00284	mg/L	0.000174	0.1418 mg/L	0.00869	6.13%
Na 589.592†	26839.3	2.049	mg/L	0.0176	102.5 mg/L	0.88	0.86%
Na 330.237†	89.5	2.712	mg/L	0.3065	135.6 mg/L	15.33	11.30%
Ni 231.604†	13.5	0.00271	mg/L	0.001248	0.1355 mg/L	0.06242	46.06%
Pb 220.353†	-9.2	-0.00081	mg/L	0.000554	-0.04028 mg/L	0.027712	68.80%
Sb 206.836†	-0.8	-0.00040	mg/L	0.001087	-0.01980 mg/L	0.054366	274.57%
Se 196.026†	-20.4	-0.01201	mg/L	0.001616	-0.6005 mg/L	0.08079	13.45%
Si 288.158†	406.3	0.1716	mg/L	0.00048	8.581 mg/L	0.0242	0.28%
Sn 189.927†	-67.4	-0.00710	mg/L	0.000312	-0.3551 mg/L	0.01559	4.39%
Sr 421.552†	583299.4	0.6064	mg/L	0.00138	30.32 mg/L	0.069	0.23%
Ti 334.903†	2423.0	0.09638	mg/L	0.001010	4.819 mg/L	0.0505	1.05%
Tl 190.801†	16.9	0.00639	mg/L	0.001438	0.3197 mg/L	0.07189	22.49%
V 292.402†	646.1	0.00481	mg/L	0.000175	0.2404 mg/L	0.00875	3.64%
Zn 206.200†	37.6	0.00804	mg/L	0.000016	0.4021 mg/L	0.00082	0.20%

Sequence No.: 7  
 Sample ID: VS82 C SWC  
 Analyst: BA  
 Dilution: 10.000000X

Autosampler Location: 338  
 Date Collected: 11/28/2012 2:10:08 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 C SWC

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

## Mean Data: VS82 C SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2794947.2	98.93	%	0.257			0.26%
ScR 361.383	383348.9	101.4	%	0.63			0.62%
Ag 328.068†	-375.5	-0.00197	mg/L	0.000160	-0.01970 mg/L	0.001599	8.11%
Al 308.215†	11616.8	6.345	mg/L	0.0249	63.45 mg/L	0.249	0.39%
As 188.979†	37.5	0.01205	mg/L	0.001008	0.1205 mg/L	0.01008	8.36%
B 249.677†	40.5	0.00465	mg/L	0.000453	0.04646 mg/L	0.004533	9.76%
Ba 233.527†	105.1	0.01726	mg/L	0.001060	0.1726 mg/L	0.01060	6.14%
Be 313.042†	141.8	0.00019	mg/L	0.000017	0.00187 mg/L	0.000166	8.91%
Ca 317.933†	5500288.5	332.2	mg/L	4.00	3322 mg/L	40.02	1.20%
Cd 228.802†	380.4	0.01175	mg/L	0.000020	0.1175 mg/L	0.00020	0.17%
Co 228.616†	211.8	0.00372	mg/L	0.000023	0.03723 mg/L	0.000230	0.62%
Cr 267.716†	273.1	0.03226	mg/L	0.000352	0.3226 mg/L	0.00352	1.09%
Cu 324.752†	2914.6	0.01088	mg/L	0.000118	0.1088 mg/L	0.00118	1.08%
Fe 273.955†	22777.3	13.53	mg/L	0.083	135.3 mg/L	0.83	0.61%
K 766.490†	2287.2	0.9881	mg/L	0.01677	9.881 mg/L	0.1677	1.70%
Mg 279.077†	10779.9	6.804	mg/L	0.0302	68.04 mg/L	0.302	0.44%
Mn 257.610†	15315.2	0.3359	mg/L	0.00190	3.359 mg/L	0.0190	0.56%
Mo 202.031†	126.8	0.00210	mg/L	0.000226	0.02100 mg/L	0.002255	10.74%
Na 589.592†	134865.6	10.30	mg/L	0.021	103.0 mg/L	0.21	0.20%
Na 330.237†	374.7	11.37	mg/L	0.102	113.7 mg/L	1.02	0.90%
Ni 231.604†	70.3	0.01410	mg/L	0.000535	0.1410 mg/L	0.00535	3.79%
Pb 220.353†	2.3	0.00126	mg/L	0.001191	0.01260 mg/L	0.011908	94.51%
Sb 206.836†	-12.1	-0.00373	mg/L	0.002572	-0.03731 mg/L	0.025719	68.93%
Se 196.026†	-32.8	-0.01929	mg/L	0.005111	-0.1929 mg/L	0.05111	26.50%
Si 288.158†	1932.3	0.8158	mg/L	0.00855	8.158 mg/L	0.0855	1.05%
Sn 189.927†	-112.0	0.01540	mg/L	0.001569	0.1540 mg/L	0.01569	10.19%
Sr 421.552†	2870563.6	2.984	mg/L	0.0342	29.84 mg/L	0.342	1.15%
Ti 334.903†	11500.2	0.4569	mg/L	0.00118	4.569 mg/L	0.0118	0.26%
Tl 190.801†	25.5	0.01056	mg/L	0.001516	0.1056 mg/L	0.01516	14.36%
V 292.402†	3403.3	0.02537	mg/L	0.000132	0.2537 mg/L	0.00132	0.52%
Zn 206.200†	171.4	0.03662	mg/L	0.000504	0.3662 mg/L	0.00504	1.38%

Sequence No.: 8  
 Sample ID: VS82 CDUP SWC  
 Analyst: BA  
 Dilution: 10.000000X

Autosampler Location: 339  
 Date Collected: 11/28/2012 2:14:27 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 CDUP SWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: VS82 CDUP SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2787314.8	98.66	%	0.469			0.48%
ScR 361.383	382501.9	101.2	%	0.93			0.92%
Ag 328.068†	-382.4	-0.00201	mg/L	0.000096	-0.02006 mg/L	0.000959	4.78%
Al 308.215†	12821.0	7.002	mg/L	0.0281	70.02 mg/L	0.281	0.40%
As 188.979†	26.3	0.00991	mg/L	0.000949	0.09910 mg/L	0.009489	9.57%
B 249.677†	14.7	0.00169	mg/L	0.000515	0.01690 mg/L	0.005150	30.47%
Ba 233.527†	78.3	0.01270	mg/L	0.000551	0.1270 mg/L	0.00551	4.34%
Be 313.042†	134.5	0.00017	mg/L	0.000019	0.00174 mg/L	0.000188	10.83%
Ca 317.933†	6075887.5	367.0	mg/L	1.85	3670 mg/L	18.52	0.50%
Cd 228.802†	383.8	0.01191	mg/L	0.000064	0.1191 mg/L	0.00064	0.54%
Co 228.616†	244.7	0.00415	mg/L	0.000133	0.04152 mg/L	0.001330	3.20%
Cr 267.716†	212.0	0.02389	mg/L	0.000830	0.2389 mg/L	0.00830	3.47%
Cu 324.752†	3843.5	0.01406	mg/L	0.000165	0.1406 mg/L	0.00165	1.17%
Fe 273.955†	18613.9	11.06	mg/L	0.042	110.6 mg/L	0.42	0.38%
K 766.490†	1975.8	0.8536	mg/L	0.01032	8.536 mg/L	0.1032	1.21%
Mg 279.077†	11394.4	7.193	mg/L	0.0271	71.93 mg/L	0.271	0.38%
Mn 257.610†	16500.7	0.3618	mg/L	0.00127	3.618 mg/L	0.0127	0.35%
Mo 202.031†	136.0	0.00214	mg/L	0.000347	0.02137 mg/L	0.003474	16.26%
Na 589.592†	132611.2	10.13	mg/L	0.056	101.3 mg/L	0.56	0.56%
Na 330.237†	369.3	11.25	mg/L	0.105	112.5 mg/L	1.05	0.93%
Ni 231.604†	84.0	0.01684	mg/L	0.000608	0.1684 mg/L	0.00608	3.61%
Pb 220.353†	2.1	0.00149	mg/L	0.000119	0.01488 mg/L	0.001188	7.98%
Sb 206.836†	-10.9	-0.00322	mg/L	0.001121	-0.03219 mg/L	0.011207	34.81%
Se 196.026†	-29.9	-0.01760	mg/L	0.001682	-0.1760 mg/L	0.01682	9.56%
Si 288.158†	1896.9	0.8009	mg/L	0.00745	8.009 mg/L	0.0745	0.93%
Sn 189.927†	-120.7	0.01771	mg/L	0.001256	0.1771 mg/L	0.01256	7.10%
Sr 421.552†	2931362.3	3.048	mg/L	0.0127	30.48 mg/L	0.127	0.42%
Ti 334.903†	15913.2	0.6367	mg/L	0.00377	6.367 mg/L	0.0377	0.59%
Tl 190.801†	30.0	0.01191	mg/L	0.001255	0.1191 mg/L	0.01255	10.54%
V 292.402†	3825.8	0.02854	mg/L	0.000248	0.2854 mg/L	0.00248	0.87%
Zn 206.200†	230.9	0.04933	mg/L	0.000798	0.4933 mg/L	0.00798	1.62%

Sequence No.: 9  
 Sample ID: VS82 CSPK SWC  
 Analyst: BA  
 Dilution: 10.000000X

Autosampler Location: 340  
 Date Collected: 11/28/2012 2:18:46 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 CSPK SWC

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: VS82 CSPK SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2818493.6	99.76 %		0.122			0.12%
ScR 361.383	386949.5	102.4 %		0.21			0.21%
Ag 328.068†	20119.1	0.1060 mg/L		0.00056	1.060 mg/L	0.0056	0.53%
Al 308.215†	19457.5	10.63 mg/L		0.015	106.3 mg/L	0.15	0.14%
As 188.979†	860.0	0.4178 mg/L		0.00060	4.178 mg/L	0.0060	0.14%
B 249.677†	48.9	0.00541 mg/L		0.000499	0.05408 mg/L	0.004987	9.22%
Ba 233.527†	2339.9	0.4311 mg/L		0.00186	4.311 mg/L	0.0186	0.43%
Be 313.042†	73559.7	0.1024 mg/L		0.00064	1.024 mg/L	0.0064	0.63%
Ca 317.933†	5457028.3	329.6 mg/L		2.08	3296 mg/L	20.79	0.63%
Cd 228.802†	4202.2	0.1296 mg/L		0.00011	1.296 mg/L	0.0011	0.08%
Co 228.616†	4755.3	0.1061 mg/L		0.00025	1.061 mg/L	0.0025	0.23%
Cr 267.716†	1150.1	0.1458 mg/L		0.00081	1.458 mg/L	0.0081	0.56%
Cu 324.752†	33947.1	0.1220 mg/L		0.00045	1.220 mg/L	0.0045	0.37%
Fe 273.955†	26479.5	15.73 mg/L		0.043	157.3 mg/L	0.43	0.27%
K 766.490†	7318.9	3.162 mg/L		0.0154	31.62 mg/L	0.154	0.49%
Mg 279.077†	15529.0	9.804 mg/L		0.0496	98.04 mg/L	0.496	0.51%
Mn 257.610†	21043.5	0.4619 mg/L		0.00211	4.619 mg/L	0.0211	0.46%
Mo 202.031†	128.5	0.00220 mg/L		0.000075	0.02199 mg/L	0.000747	3.40%
Na 589.592†	155625.9	11.88 mg/L		0.045	118.8 mg/L	0.45	0.38%
Na 330.237†	430.0	13.10 mg/L		0.089	131.0 mg/L	0.89	0.68%
Ni 231.604†	618.4	0.1238 mg/L		0.00170	1.238 mg/L	0.0170	1.37%
Pb 220.353†	3772.9	0.4167 mg/L		0.00141	4.167 mg/L	0.0141	0.34%
Sb 206.836†	-2.2	-0.00115 mg/L		0.001032	-0.01151 mg/L	0.010317	89.60%
Se 196.026†	664.7	0.3904 mg/L		0.00390	3.904 mg/L	0.0390	1.00%
Si 288.158†	1573.8	0.6648 mg/L		0.00207	6.648 mg/L	0.0207	0.31%
Sn 189.927†	315.2	0.1134 mg/L		0.00161	1.134 mg/L	0.0161	1.42%
Sr 421.552†	2958781.4	3.076 mg/L		0.0084	30.76 mg/L	0.084	0.27%
Ti 334.903†	22126.3	0.8939 mg/L		0.00330	8.939 mg/L	0.0330	0.37%
Tl 190.801†	1100.1	0.3991 mg/L		0.00129	3.991 mg/L	0.0129	0.32%
V 292.402†	17594.8	0.1336 mg/L		0.00069	1.336 mg/L	0.0069	0.52%
Zn 206.200†	691.1	0.1477 mg/L		0.00117	1.477 mg/L	0.0117	0.79%

Sequence No.: 10  
 Sample ID: VS82 CPOST SWC  
 Analyst: BA  
 Dilution: 10.000000X

Autosampler Location: 341  
 Date Collected: 11/28/2012 2:23:06 PM  
 Data Type: Original

*Del*

## Nebulizer Parameters: VS82 CPOST SWC

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

## Mean Data: VS82 CPOST SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2792050.1	98.82 %		0.234			0.24%
ScR 361.383	381180.4	100.9 %		0.12			0.12%
Ag 328.068†	93714.7	0.4937 mg/L		0.00056	4.937 mg/L	0.0056	0.11%
Al 308.215†	15811.4	8.629 mg/L		0.0077	86.29 mg/L	0.077	0.09%
As 188.979†	4245.7	2.023 mg/L		0.0051	20.23 mg/L	0.051	0.25%
B 249.677†	44.0	0.00406 mg/L		0.001032	0.04060 mg/L	0.010315	25.41%
Ba 233.527†	10592.7	1.961 mg/L		0.0025	19.61 mg/L	0.025	0.13%
Be 313.042†	355703.2	0.4952 mg/L		0.00137	4.952 mg/L	0.0137	0.28%
Ca 317.933†	5676430.9	342.9 mg/L		2.51	3429 mg/L	25.05	0.73%
Cd 228.802†	17426.7	0.5356 mg/L		0.00126	5.356 mg/L	0.0126	0.24%
Co 228.616†	21515.6	0.4879 mg/L		0.00091	4.879 mg/L	0.0091	0.19%
Cr 267.716†	4015.7	0.5164 mg/L		0.00206	5.164 mg/L	0.0206	0.40%
Cu 324.752†	147189.1	0.5277 mg/L		0.00108	5.277 mg/L	0.0108	0.21%
Fe 273.955†	25901.6	15.38 mg/L		0.028	153.8 mg/L	0.28	0.18%
K 766.490†	25675.2	11.09 mg/L		0.067	110.9 mg/L	0.67	0.61%
Mg 279.077†	27217.7	17.19 mg/L		0.018	171.9 mg/L	0.18	0.10%
Mn 257.610†	36570.9	0.8036 mg/L		0.00077	8.036 mg/L	0.0077	0.10%
Mo 202.031†	138.6	0.00249 mg/L		0.000175	0.02485 mg/L	0.001745	7.02%
Na 589.592†	267761.2	20.44 mg/L		0.039	204.4 mg/L	0.39	0.19%
Na 330.237†	718.5	21.56 mg/L		0.241	215.6 mg/L	2.41	1.12%
Ni 231.604†	2470.4	0.4946 mg/L		0.00063	4.946 mg/L	0.0063	0.13%
Pb 220.353†	18149.2	1.997 mg/L		0.0044	19.97 mg/L	0.044	0.22%
Sb 206.836†	18.8	-0.00032 mg/L		0.001889	-0.00323 mg/L	0.018893	585.24%
Se 196.026†	3408.2	2.002 mg/L		0.0066	20.02 mg/L	0.066	0.33%
Si 288.158†	1917.7	0.8128 mg/L		0.00285	8.128 mg/L	0.0285	0.35%
Sn 189.927†	-110.4	0.01714 mg/L		0.000894	0.1714 mg/L	0.00894	5.22%
Sr 421.552†	3358966.7	3.492 mg/L		0.0187	34.92 mg/L	0.187	0.53%
Ti 334.903†	11512.1	0.4568 mg/L		0.00073	4.568 mg/L	0.0073	0.16%
Tl 190.801†	5207.7	1.884 mg/L		0.0019	18.84 mg/L	0.019	0.10%
V 292.402†	68017.5	0.5192 mg/L		0.00089	5.192 mg/L	0.0089	0.17%
Zn 206.200†	2397.8	0.5124 mg/L		0.00130	5.124 mg/L	0.0130	0.25%

Sequence No.: 11  
 Sample ID: CV 7  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 7  
 Date Collected: 11/28/2012 2:27:26 PM  
 Data Type: Original

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected Intensity	Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2888508.7	102.2 %	0.59			0.58%
ScR 361.383	383804.2	101.6 %	0.49			0.48%
Ag 328.068†	193067.1	1.017 mg/L	0.0058	1.017 mg/L	0.0058	0.57%
Al 308.215†	3687.0	1.980 mg/L	0.0058	1.980 mg/L	0.0058	0.29%
As 188.979†	4162.5	2.014 mg/L	0.0085	2.014 mg/L	0.0085	0.42%
B 249.677†	8645.2	0.9924 mg/L	0.00179	0.9924 mg/L	0.00179	0.18%
Ba 233.527†	5382.1	0.9970 mg/L	0.00267	0.9970 mg/L	0.00267	0.27%
Be 313.042†	712000.1	0.9911 mg/L	0.00173	0.9911 mg/L	0.00173	0.17%
Ca 317.933†	34814.2	2.103 mg/L	0.0071	2.103 mg/L	0.0071	0.34%
Cd 228.802†	32286.1	1.004 mg/L	0.0059	1.004 mg/L	0.0059	0.59%
Co 228.616†	43293.9	0.9823 mg/L	0.00421	0.9823 mg/L	0.00421	0.43%
Cr 267.716†	7690.6	0.9967 mg/L	0.00271	0.9967 mg/L	0.00271	0.27%
Cu 324.752†	280435.4	1.004 mg/L	0.0062	1.004 mg/L	0.0062	0.61%
Fe 273.955†	3481.2	2.061 mg/L	0.0084	2.061 mg/L	0.0084	0.41%
K 766.490†	46154.4	19.94 mg/L	0.046	19.94 mg/L	0.046	0.23%
Mg 279.077†	3172.7	2.012 mg/L	0.0105	2.012 mg/L	0.0105	0.52%
Mn 257.610†	45711.4	1.006 mg/L	0.0032	1.006 mg/L	0.0032	0.32%
Mo 202.031†	23033.9	1.034 mg/L	0.0036	1.034 mg/L	0.0036	0.35%
Na 589.592†	660338.1	50.42 mg/L	0.090	50.42 mg/L	0.090	0.18%
Na 330.237†	1726.5	51.83 mg/L	0.189	51.83 mg/L	0.189	0.36%
Ni 231.604†	4986.6	1.000 mg/L	0.0017	1.000 mg/L	0.0017	0.17%
Pb 220.353†	18777.3	2.065 mg/L	0.0051	2.065 mg/L	0.0051	0.25%
Sb 206.836†	7782.0	2.123 mg/L	0.0049	2.123 mg/L	0.0049	0.23%
Se 196.026†	3379.0	1.984 mg/L	0.0045	1.984 mg/L	0.0045	0.23%
Si 288.158†	4876.7	2.056 mg/L	0.0137	2.056 mg/L	0.0137	0.67%
Sn 189.927†	4486.6	1.034 mg/L	0.0025	1.034 mg/L	0.0025	0.24%
Sr 421.552†	951030.5	0.9888 mg/L	0.00161	0.9888 mg/L	0.00161	0.16%
Ti 334.903†	24667.4	1.013 mg/L	0.0024	1.013 mg/L	0.0024	0.23%
Tl 190.801†	5469.9	1.974 mg/L	0.0035	1.974 mg/L	0.0035	0.18%
V 292.402†	131869.4	1.008 mg/L	0.0051	1.008 mg/L	0.0051	0.51%
Zn 206.200†	4884.1	1.043 mg/L	0.0060	1.043 mg/L	0.0060	0.57%

Sequence No.: 12  
Sample ID: CB 7  
Analyst: BA  
Dilution: 1.000000X

Autosampler Location: 1  
Date Collected: 11/28/2012 2:31:47 PM  
Data Type: Original

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
All 213.0 kPa 0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2922679.3	103.4 %	%	0.40			0.38%
ScR 361.383	390453.6	103.3 %	%	0.94			0.91%
Ag 328.068†	5.3	0.00003 mg/L	mg/L	0.000274	0.00003 mg/L	0.000274	974.65%
Al 308.215†	13.6	0.00741 mg/L	mg/L	0.005487	0.00741 mg/L	0.005487	74.00%
As 188.979†	1.1	0.00056 mg/L	mg/L	0.003026	0.00056 mg/L	0.003026	543.70%
B 249.677†	7.7	0.00089 mg/L	mg/L	0.001045	0.00089 mg/L	0.001045	117.89%
Ba 233.527†	2.5	0.00047 mg/L	mg/L	0.000772	0.00047 mg/L	0.000772	165.47%
Be 313.042†	41.7	0.00006 mg/L	mg/L	0.000034	0.00006 mg/L	0.000034	58.33%
Ca 317.933†	69.0	0.00417 mg/L	mg/L	0.000542	0.00417 mg/L	0.000542	13.00%
Cd 228.802†	-2.4	-0.00008 mg/L	mg/L	0.000086	-0.00008 mg/L	0.000086	105.78%
Co 228.616†	6.8	0.00015 mg/L	mg/L	0.000048	0.00015 mg/L	0.000048	31.31%
Cr 267.716†	-0.1	-0.00002 mg/L	mg/L	0.000834	-0.00002 mg/L	0.000834	>999.9%
Cu 324.752†	-6.1	-0.00002 mg/L	mg/L	0.000078	-0.00002 mg/L	0.000078	350.51%
Fe 273.955†	1.6	0.00095 mg/L	mg/L	0.001553	0.00095 mg/L	0.001553	164.11%
K 766.490†	-8.9	-0.00383 mg/L	mg/L	0.009058	-0.00383 mg/L	0.009058	236.44%
Mg 279.077†	5.2	0.00331 mg/L	mg/L	0.004115	0.00331 mg/L	0.004115	124.44%
Mn 257.610†	4.9	0.00011 mg/L	mg/L	0.000056	0.00011 mg/L	0.000056	51.90%
Mo 202.031†	19.0	0.00085 mg/L	mg/L	0.000058	0.00085 mg/L	0.000058	6.86%
Na 589.592†	209.5	0.01600 mg/L	mg/L	0.001811	0.01600 mg/L	0.001811	11.32%
Na 330.237†	15.7	0.4714 mg/L	mg/L	0.23039	0.4714 mg/L	0.23039	48.87%
Ni 231.604†	-9.1	-0.00182 mg/L	mg/L	0.000453	-0.00182 mg/L	0.000453	24.88%
Pb 220.353†	-2.3	-0.00025 mg/L	mg/L	0.000608	-0.00025 mg/L	0.000608	247.44%
Sb 206.836†	-0.1	-0.00004 mg/L	mg/L	0.000944	-0.00004 mg/L	0.000944	>999.9%
Se 196.026†	4.3	0.00254 mg/L	mg/L	0.001853	0.00254 mg/L	0.001853	73.06%
Si 288.158†	2.2	0.00093 mg/L	mg/L	0.003431	0.00093 mg/L	0.003431	368.84%
Sn 189.927†	-1.8	-0.00042 mg/L	mg/L	0.000663	-0.00042 mg/L	0.000663	158.26%
Sr 421.552†	148.8	0.00015 mg/L	mg/L	0.000027	0.00015 mg/L	0.000027	17.42%
Ti 334.903†	10.9	0.00045 mg/L	mg/L	0.000348	0.00045 mg/L	0.000348	77.93%
Tl 190.801†	6.1	0.00221 mg/L	mg/L	0.000933	0.00221 mg/L	0.000933	42.14%
V 292.402†	8.6	0.00007 mg/L	mg/L	0.000104	0.00007 mg/L	0.000104	158.51%
Zn 206.200†	-1.1	-0.00024 mg/L	mg/L	0.000187	-0.00024 mg/L	0.000187	77.83%



Sequence No.: 13  
 Sample ID: VS82 G SWC  
 Analyst: BA  
 Dilution: 10.000000x

Autosampler Location: 342  
 Date Collected: 11/28/2012 2:36:03 PM  
 Data Type: Original

Nebulizer Parameters: VS82 G SWC

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: VS82 G SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2801549.1	99.16	%	0.147			0.15%
ScR 361.383	385112.0	101.9	%	0.32			0.32%
Ag 328.068†	-269.0	-0.00141	mg/L	0.000307	-0.01405 mg/L	0.003073	21.86%
Al 308.215†	18330.9	10.01	mg/L	0.011	100.1 mg/L	0.11	0.11%
As 188.979†	13.6	0.01266	mg/L	0.002369	0.1266 mg/L	0.02369	18.72%
B 249.677†	61.2	0.00703	mg/L	0.000906	0.07029 mg/L	0.009060	12.89%
Ba 233.527†	129.7	0.02153	mg/L	0.000388	0.2153 mg/L	0.00388	1.80%
Be 313.042†	194.6	0.00025	mg/L	0.000010	0.00253 mg/L	0.000101	3.99%
Ca 317.933†	4850498.4	293.0	mg/L	1.91	2930 mg/L	19.07	0.65%
Cd 228.802†	350.3	0.01087	mg/L	0.000103	0.1087 mg/L	0.00103	0.95%
Co 228.616†	320.0	0.00550	mg/L	0.000203	0.05501 mg/L	0.002032	3.69%
Cr 267.716†	341.4	0.04143	mg/L	0.000944	0.4143 mg/L	0.00944	2.28%
Cu 324.752†	3599.6	0.01333	mg/L	0.000080	0.1333 mg/L	0.00080	0.60%
Fe 273.955†	25688.8	15.26	mg/L	0.003	152.6 mg/L	0.03	0.02%
K 766.490†	2929.9	1.266	mg/L	0.0130	12.66 mg/L	0.130	1.02%
Mg 279.077†	12833.1	8.100	mg/L	0.0149	81.00 mg/L	0.149	0.18%
Mn 257.610†	15657.3	0.3435	mg/L	0.00047	3.435 mg/L	0.0047	0.14%
Mo 202.031†	131.4	0.00273	mg/L	0.000161	0.02728 mg/L	0.001612	5.91%
Na 589.592†	125789.7	9.604	mg/L	0.0365	96.04 mg/L	0.365	0.38%
Na 330.237†	353.4	10.80	mg/L	0.216	108.0 mg/L	2.16	2.00%
Ni 231.604†	133.1	0.02670	mg/L	0.000220	0.2670 mg/L	0.00220	0.82%
Pb 220.353†	9.8	0.00290	mg/L	0.000419	0.02904 mg/L	0.004188	14.42%
Sb 206.836†	-3.4	-0.00128	mg/L	0.001256	-0.01277 mg/L	0.012560	98.34%
Se 196.026†	-28.9	-0.01700	mg/L	0.000937	-0.1700 mg/L	0.00937	5.51%
Si 288.158†	1631.6	0.6892	mg/L	0.00312	6.892 mg/L	0.0312	0.45%
Sn 189.927†	-100.4	0.01325	mg/L	0.000990	0.1325 mg/L	0.00990	7.47%
Sr 421.552†	2604272.1	2.708	mg/L	0.0124	27.08 mg/L	0.124	0.46%
Ti 334.903†	19791.4	0.7997	mg/L	0.00155	7.997 mg/L	0.0155	0.19%
Tl 190.801†	25.2	0.01057	mg/L	0.001754	0.1057 mg/L	0.01754	16.59%
V 292.402†	5313.7	0.03970	mg/L	0.000128	0.3970 mg/L	0.00128	0.32%
Zn 206.200†	231.4	0.04944	mg/L	0.000850	0.4944 mg/L	0.00850	1.72%

Sequence No.: 14  
 Sample ID: VS82 H SWC  
 Analyst: BA  
 Dilution: 10.000000X

*Del*

Autosampler Location: 343  
 Date Collected: 11/28/2012 2:40:24 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 H SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: VS82 H SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2868944.2	101.5	%	0.25			0.24%
ScR 361.383	381421.1	100.9	%	0.55			0.55%
Ag 328.068†	-112.4	-0.00058	mg/L	0.000238	-0.00577 mg/L	0.002383	41.32%
Al 308.215†	26813.4	14.65	mg/L	0.089	146.5 mg/L	0.89	0.60%
As 188.979†	-22.1	0.01374	mg/L	0.001226	0.1374 mg/L	0.01226	8.92%
B 249.677†	58.7	0.00673	mg/L	0.000364	0.06733 mg/L	0.003639	5.41%
Ba 233.527†	213.9	0.03617	mg/L	0.000621	0.3617 mg/L	0.00621	1.72%
Be 313.042†	238.8	0.00031	mg/L	0.000021	0.00307 mg/L	0.000210	6.83%
Ca 317.933†	2895283.7	174.9	mg/L	0.33	1749 mg/L	3.32	0.19%
Cd 228.802†	68.6	0.00206	mg/L	0.000068	0.02060 mg/L	0.000678	3.29%
Co 228.616†	442.8	0.00745	mg/L	0.000118	0.07450 mg/L	0.001184	1.59%
Cr 267.716†	475.0	0.05995	mg/L	0.000776	0.5995 mg/L	0.00776	1.29%
Cu 324.752†	4692.7	0.01742	mg/L	0.000176	0.1742 mg/L	0.00176	1.01%
Fe 273.955†	35688.7	21.20	mg/L	0.058	212.0 mg/L	0.58	0.27%
K 766.490†	3089.3	1.335	mg/L	0.0056	13.35 mg/L	0.056	0.42%
Mg 279.077†	15004.6	9.469	mg/L	0.0678	94.69 mg/L	0.678	0.72%
Mn 257.610†	16005.6	0.3515	mg/L	0.00183	3.515 mg/L	0.0183	0.52%
Mo 202.031†	107.4	0.00293	mg/L	0.000134	0.02926 mg/L	0.001338	4.57%
Na 589.592†	84215.8	6.430	mg/L	0.0340	64.30 mg/L	0.340	0.53%
Na 330.237†	227.1	7.086	mg/L	0.3068	70.86 mg/L	3.068	4.33%
Ni 231.604†	177.0	0.03550	mg/L	0.001623	0.3550 mg/L	0.01623	4.57%
Pb 220.353†	1926.4	0.2145	mg/L	0.00037	2.145 mg/L	0.0037	0.17%
Sb 206.836†	5.2	0.00117	mg/L	0.000664	0.01167 mg/L	0.006635	56.87%
Se 196.026†	-17.5	-0.01033	mg/L	0.004787	-0.1033 mg/L	0.04787	46.33%
Si 288.158†	1646.3	0.6954	mg/L	0.00434	6.954 mg/L	0.0434	0.62%
Sn 189.927†	-49.1	0.01051	mg/L	0.000530	0.1051 mg/L	0.00530	5.05%
Sr 421.552†	1488749.1	1.548	mg/L	0.0010	15.48 mg/L	0.010	0.06%
Ti 334.903†	29374.2	1.199	mg/L	0.0079	11.99 mg/L	0.079	0.66%
Tl 190.801†	19.2	0.00898	mg/L	0.000949	0.08979 mg/L	0.009488	10.57%
V 292.402†	7002.2	0.05219	mg/L	0.000186	0.5219 mg/L	0.00186	0.36%
Zn 206.200†	295.0	0.06303	mg/L	0.001171	0.6303 mg/L	0.01171	1.86%

Sequence No.: 15  
 Sample ID: VS82 I SWC  
 Analyst: BA  
 Dilution: 10.000000X

Autosampler Location: 344  
 Date Collected: 11/28/2012 2:44:42 PM  
 Data Type: Original

*Del*

## Nebulizer Parameters: VS82 I SWC

Analyte Back Pressure Flow  
 All 213.0 kPa 0.75 L/min

## Mean Data: VS82 I SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2871235.6	101.6	%	0.51			0.51%
ScR 361.383	381675.2	101.0	%	0.45			0.45%
Ag 328.068†	-97.6	-0.00050	mg/L	0.000130	-0.00499 mg/L	0.001304	26.16%
Al 308.215†	25544.4	13.95	mg/L	0.149	139.5 mg/L	1.49	1.07%
As 188.979†	-4.9	0.01635	mg/L	0.001891	0.1635 mg/L	0.01891	11.57%
B 249.677†	63.0	0.00722	mg/L	0.000136	0.07223 mg/L	0.001362	1.89%
Ba 233.527†	244.4	0.04181	mg/L	0.000770	0.4181 mg/L	0.00770	1.84%
Be 313.042†	217.2	0.00028	mg/L	0.000012	0.00280 mg/L	0.000123	4.38%
Ca 317.933†	2647733.4	159.9	mg/L	0.27	1599 mg/L	2.73	0.17%
Cd 228.802†	205.2	0.00631	mg/L	0.000126	0.06307 mg/L	0.001259	2.00%
Co 228.616†	427.7	0.00754	mg/L	0.000219	0.07544 mg/L	0.002192	2.90%
Cr 267.716†	437.8	0.05527	mg/L	0.001130	0.5527 mg/L	0.01130	2.04%
Cu 324.752†	4866.7	0.01809	mg/L	0.000167	0.1809 mg/L	0.00167	0.92%
Fe 273.955†	35684.6	21.20	mg/L	0.203	212.0 mg/L	2.03	0.96%
K 766.490†	3213.5	1.388	mg/L	0.0092	13.88 mg/L	0.092	0.66%
Mg 279.077†	14952.2	9.436	mg/L	0.0765	94.36 mg/L	0.765	0.81%
Mn 257.610†	15077.6	0.3311	mg/L	0.00252	3.311 mg/L	0.0252	0.76%
Mo 202.031†	102.1	0.00285	mg/L	0.000305	0.02853 mg/L	0.003051	10.69%
Na 589.592†	99640.7	7.608	mg/L	0.0415	76.08 mg/L	0.415	0.55%
Na 330.237†	268.1	8.269	mg/L	0.0960	82.69 mg/L	0.960	1.16%
Ni 231.604†	182.6	0.03662	mg/L	0.000459	0.3662 mg/L	0.00459	1.25%
Pb 220.353†	14.2	0.00411	mg/L	0.000170	0.04110 mg/L	0.001698	4.13%
Sb 206.836†	-3.0	-0.00117	mg/L	0.001319	-0.01166 mg/L	0.013194	113.15%
Se 196.026†	-21.2	-0.01247	mg/L	0.001296	-0.1247 mg/L	0.01296	10.40%
Si 288.158†	1798.4	0.7596	mg/L	0.00107	7.596 mg/L	0.0107	0.14%
Sn 189.927†	-84.1	0.00058	mg/L	0.000921	0.00576 mg/L	0.009214	160.00%
Sr 421.552†	1352703.7	1.406	mg/L	0.0043	14.06 mg/L	0.043	0.30%
Ti 334.903†	23875.7	0.9740	mg/L	0.00923	9.740 mg/L	0.0923	0.95%
Tl 190.801†	17.4	0.00832	mg/L	0.001882	0.08316 mg/L	0.018821	22.63%
V 292.402†	7056.6	0.05271	mg/L	0.000256	0.5271 mg/L	0.00256	0.48%
Zn 206.200†	291.9	0.06237	mg/L	0.000416	0.6237 mg/L	0.00416	0.67%

Sequence No.: 16  
 Sample ID: VS82 J SWC  
 Analyst: BA  
 Dilution: 10.000000X

Autosampler Location: 345  
 Date Collected: 11/28/2012 2:48:59 PM  
 Data Type: Original

Nebulizer Parameters: VS82 J SWC  
 Analyte Back Pressure Flow  
 All 215.0 kPa 0.75 L/min

## Mean Data: VS82 J SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2815982.2	99.67 %		0.575			0.58%
ScR 361.383	390098.3	103.2 %		0.18			0.17%
Ag 328.068†	-279.3	-0.00146 mg/L		0.000365	-0.01465 mg/L	0.003648	24.90%
Al 308.215†	9589.9	5.238 mg/L		0.0099	52.38 mg/L	0.099	0.19%
As 188.979†	36.9	0.01252 mg/L		0.001374	0.1252 mg/L	0.01374	10.98%
B 249.677†	30.5	0.00350 mg/L		0.001043	0.03504 mg/L	0.010434	29.78%
Ba 233.527†	78.9	0.01339 mg/L		0.000300	0.1339 mg/L	0.00300	2.24%
Be 313.042†	110.2	0.00014 mg/L		0.000024	0.00144 mg/L	0.000243	16.91%
Ca 317.933†	5348823.9	323.1 mg/L		0.14	3231 mg/L	1.45	0.04%
Cd 228.802†	536.1	0.01671 mg/L		0.000152	0.1671 mg/L	0.00152	0.91%
Co 228.616†	170.7	0.00285 mg/L		0.000092	0.02854 mg/L	0.000925	3.24%
Cr 267.716†	344.2	0.04137 mg/L		0.000145	0.4137 mg/L	0.00145	0.35%
Cu 324.752†	2406.3	0.00879 mg/L		0.000277	0.08791 mg/L	0.002772	3.15%
Fe 273.955†	12488.7	7.418 mg/L		0.0146	74.18 mg/L	0.146	0.20%
K 766.490†	1923.6	0.8310 mg/L		0.00733	8.310 mg/L	0.0733	0.88%
Mg 279.077†	10249.5	6.472 mg/L		0.0142	64.72 mg/L	0.142	0.22%
Mn 257.610†	8503.5	0.1861 mg/L		0.00079	1.861 mg/L	0.0079	0.43%
Mo 202.031†	126.5	0.00218 mg/L		0.000070	0.02182 mg/L	0.000699	3.20%
Na 589.592†	137334.4	10.49 mg/L		0.011	104.9 mg/L	0.11	0.10%
Na 330.237†	383.1	11.63 mg/L		0.292	116.3 mg/L	2.92	2.51%
Ni 231.604†	81.5	0.01633 mg/L		0.000509	0.1633 mg/L	0.00509	3.12%
Pb 220.353†	-4.6	0.00051 mg/L		0.000777	0.00507 mg/L	0.007769	153.27%
Sb 206.836†	-3.7	-0.00160 mg/L		0.000679	-0.01604 mg/L	0.006793	42.35%
Se 196.026†	-36.4	-0.02141 mg/L		0.003001	-0.2141 mg/L	0.03001	14.02%
Si 288.158†	1455.2	0.6146 mg/L		0.00195	6.146 mg/L	0.0195	0.32%
Sn 189.927†	-108.7	0.01502 mg/L		0.001439	0.1502 mg/L	0.01439	9.58%
Sr 421.552†	2856943.0	2.970 mg/L		0.0044	29.70 mg/L	0.044	0.15%
Ti 334.903†	11698.6	0.4655 mg/L		0.00026	4.655 mg/L	0.0026	0.06%
Tl 190.801†	29.5	0.01138 mg/L		0.002622	0.1138 mg/L	0.02622	23.05%
V 292.402†	2720.4	0.02040 mg/L		0.000086	0.2040 mg/L	0.00086	0.42%
Zn 206.200†	143.0	0.03054 mg/L		0.000504	0.3054 mg/L	0.00504	1.65%

Sequence No.: 17  
 Sample ID: VS82 K SWC  
 Analyst: BA  
 Dilution: 10.000000X

*Del*

Autosampler Location: 346  
 Date Collected: 11/28/2012 2:53:18 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 K SWC

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: VS82 K SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2904259.7	102.8	%	0.67			0.65%
ScR 361.383	386673.0	102.3	%	0.43			0.42%
Ag 328.068†	-105.3	-0.00054	mg/L	0.000164	-0.00539 mg/L	0.001636	30.37%
Al 308.215†	24132.4	13.18	mg/L	0.058	131.8 mg/L	0.58	0.44%
As 188.979†	-26.5	0.01442	mg/L	0.002102	0.1442 mg/L	0.02102	14.58%
B 249.677†	96.6	0.01108	mg/L	0.000695	0.1108 mg/L	0.00695	6.27%
Ba 233.527†	207.4	0.03494	mg/L	0.000407	0.3494 mg/L	0.00407	1.17%
Be 313.042†	204.1	0.00026	mg/L	0.000006	0.00259 mg/L	0.000063	2.44%
Ca 317.933†	1699286.6	102.6	mg/L	0.18	1026 mg/L	1.77	0.17%
Cd 228.802†	24.5	0.00068	mg/L	0.000141	0.00681 mg/L	0.001412	20.74%
Co 228.616†	411.3	0.00683	mg/L	0.000070	0.06832 mg/L	0.000703	1.03%
Cr 267.716†	323.1	0.04101	mg/L	0.000358	0.4101 mg/L	0.00358	0.87%
Cu 324.752†	3973.8	0.01486	mg/L	0.000035	0.1486 mg/L	0.00035	0.24%
Fe 273.955†	35743.0	21.23	mg/L	0.025	212.3 mg/L	0.25	0.12%
K 766.490†	3526.9	1.524	mg/L	0.0095	15.24 mg/L	0.095	0.62%
Mg 279.077†	13425.9	8.472	mg/L	0.0364	84.72 mg/L	0.364	0.43%
Mn 257.610†	13591.6	0.2986	mg/L	0.00056	2.986 mg/L	0.0056	0.19%
Mo 202.031†	85.7	0.00274	mg/L	0.000245	0.02737 mg/L	0.002450	8.95%
Na 589.592†	89458.7	6.830	mg/L	0.0040	68.30 mg/L	0.040	0.06%
Na 330.237†	245.3	7.626	mg/L	0.1880	76.26 mg/L	1.880	2.47%
Ni 231.604†	160.8	0.03225	mg/L	0.000420	0.3225 mg/L	0.00420	1.30%
Pb 220.353†	49.3	0.00775	mg/L	0.000212	0.07754 mg/L	0.002116	2.73%
Sb 206.836†	-0.9	-0.00028	mg/L	0.000933	-0.00278 mg/L	0.009328	335.90%
Se 196.026†	-14.9	-0.00881	mg/L	0.000904	-0.08811 mg/L	0.009045	10.27%
Si 288.158†	2231.9	0.9422	mg/L	0.00344	9.422 mg/L	0.0344	0.36%
Sn 189.927†	-68.6	-0.00293	mg/L	0.001382	-0.02931 mg/L	0.013818	47.14%
Sr 421.552†	818473.0	0.8510	mg/L	0.00112	8.510 mg/L	0.0112	0.13%
Ti 334.903†	28139.0	1.152	mg/L	0.0045	11.52 mg/L	0.045	0.39%
Tl 190.801†	15.4	0.00758	mg/L	0.002059	0.07579 mg/L	0.020586	27.16%
V 292.402†	7275.8	0.05421	mg/L	0.000029	0.5421 mg/L	0.00029	0.05%
Zn 206.200†	265.1	0.05663	mg/L	0.000441	0.5663 mg/L	0.00441	0.78%

Sequence No.: 18  
 Sample ID: VS82 L SWC  
 Analyst: BA  
 Dilution: 10.000000X

*Dal*

Autosampler Location: 347  
 Date Collected: 11/28/2012 2:57:36 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 L SWC

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

## Mean Data: VS82 L SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Conc. Units	Sample Units	Std.Dev.	RSD
ScA 357.253	2860330.6	101.2 %	%	0.49				0.48%
ScR 361.383	383773.5	101.6 %	%	0.62				0.61%
Ag 328.068†	155.2	0.00083 mg/L	mg/L	0.000112	0.00833 mg/L	mg/L	0.001121	13.46%
Al 308.215†	22433.4	12.25 mg/L	mg/L	0.066	122.5 mg/L	mg/L	0.66	0.54%
As 188.979†	-36.5	0.01238 mg/L	mg/L	0.001691	0.1238 mg/L	mg/L	0.01691	13.65%
B 249.677†	127.7	0.01466 mg/L	mg/L	0.000334	0.1466 mg/L	mg/L	0.00334	2.28%
Ba 233.527†	148.4	0.02405 mg/L	mg/L	0.000344	0.2405 mg/L	mg/L	0.00344	1.43%
Be 313.042†	203.3	0.00026 mg/L	mg/L	0.000004	0.00258 mg/L	mg/L	0.000038	1.49%
Ca 317.933†	1099956.2	66.44 mg/L	mg/L	0.209	664.4 mg/L	mg/L	2.09	0.31%
Cd 228.802†	208.1	0.00650 mg/L	mg/L	0.000075	0.06500 mg/L	mg/L	0.000749	1.15%
Co 228.616†	408.9	0.00673 mg/L	mg/L	0.000099	0.06733 mg/L	mg/L	0.000988	1.47%
Cr 267.716†	699.6	0.09015 mg/L	mg/L	0.001463	0.9015 mg/L	mg/L	0.01463	1.62%
Cu 324.752†	4838.4	0.01794 mg/L	mg/L	0.000082	0.1794 mg/L	mg/L	0.00082	0.46%
Fe 273.955†	35357.8	21.00 mg/L	mg/L	0.109	210.0 mg/L	mg/L	1.09	0.52%
K 766.490†	3555.8	1.536 mg/L	mg/L	0.0229	15.36 mg/L	mg/L	0.229	1.49%
Mg 279.077†	13440.0	8.481 mg/L	mg/L	0.0509	84.81 mg/L	mg/L	0.509	0.60%
Mn 257.610†	11686.7	0.2569 mg/L	mg/L	0.00193	2.569 mg/L	mg/L	0.0193	0.75%
Mo 202.031†	77.8	0.00277 mg/L	mg/L	0.000395	0.02769 mg/L	mg/L	0.003952	14.27%
Na 589.592†	102221.9	7.805 mg/L	mg/L	0.0245	78.05 mg/L	mg/L	0.245	0.31%
Na 330.237†	269.7	8.362 mg/L	mg/L	0.2554	83.62 mg/L	mg/L	2.554	3.05%
Ni 231.604†	177.3	0.03555 mg/L	mg/L	0.000587	0.3555 mg/L	mg/L	0.00587	1.65%
Pb 220.353†	56.9	0.00846 mg/L	mg/L	0.001196	0.08462 mg/L	mg/L	0.011962	14.14%
Sb 206.836†	-3.8	-0.00174 mg/L	mg/L	0.001217	-0.01744 mg/L	mg/L	0.012171	69.78%
Se 196.026†	-10.6	-0.00628 mg/L	mg/L	0.003000	-0.06279 mg/L	mg/L	0.030003	47.78%
Si 288.158†	3242.9	1.369 mg/L	mg/L	0.0128	13.69 mg/L	mg/L	0.128	0.94%
Sn 189.927†	-59.6	-0.00533 mg/L	mg/L	0.000150	-0.05333 mg/L	mg/L	0.001502	2.82%
Sr 421.552†	493761.4	0.5134 mg/L	mg/L	0.00192	5.134 mg/L	mg/L	0.0192	0.37%
Ti 334.903†	28767.3	1.180 mg/L	mg/L	0.0064	11.80 mg/L	mg/L	0.064	0.55%
Tl 190.801†	12.1	0.00638 mg/L	mg/L	0.000433	0.06377 mg/L	mg/L	0.004332	6.79%
V 292.402†	6985.0	0.05219 mg/L	mg/L	0.000408	0.5219 mg/L	mg/L	0.00408	0.78%
Zn 206.200†	308.4	0.06588 mg/L	mg/L	0.000597	0.6588 mg/L	mg/L	0.00597	0.91%

Sequence No.: 19  
 Sample ID: VS82 M SWC  
 Analyst: BA  
 Dilution: 10.000000X

*Del*

Autosampler Location: 348  
 Date Collected: 11/28/2012 3:01:53 PM  
 Data Type: Original

## Nebulizer Parameters: VS82 M SWC

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

## Mean Data: VS82 M SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2883986.5	102.1	%	0.34			0.33%
ScR 361.383	384666.2	101.8	%	1.08			1.06%
Ag 328.068†	-15.6	-0.00007	mg/L	0.000139	-0.00067 mg/L	0.001387	206.16%
Al 308.215†	24294.5	13.27	mg/L	0.112	132.7 mg/L	1.12	0.85%
As 188.979†	-30.1	0.01437	mg/L	0.000367	0.1437 mg/L	0.00367	2.55%
B 249.677†	115.0	0.01320	mg/L	0.000701	0.1320 mg/L	0.00701	5.31%
Ba 233.527†	156.1	0.02548	mg/L	0.000038	0.2548 mg/L	0.00038	0.15%
Be 313.042†	209.0	0.00027	mg/L	0.000022	0.00266 mg/L	0.000224	8.43%
Ca 317.933†	1491868.8	90.12	mg/L	0.359	901.2 mg/L	3.59	0.40%
Cd 228.802†	151.2	0.00469	mg/L	0.000162	0.04688 mg/L	0.001621	3.46%
Co 228.616†	398.0	0.00646	mg/L	0.000190	0.06462 mg/L	0.001900	2.94%
Cr 267.716†	1083.5	0.1397	mg/L	0.00216	1.397 mg/L	0.0216	1.55%
Cu 324.752†	4905.0	0.01818	mg/L	0.000069	0.1818 mg/L	0.00069	0.38%
Fe 273.955†	35289.0	20.96	mg/L	0.181	209.6 mg/L	1.81	0.86%
K 766.490†	3765.6	1.627	mg/L	0.0189	16.27 mg/L	0.189	1.16%
Mg 279.077†	13351.0	8.425	mg/L	0.0654	84.25 mg/L	0.654	0.78%
Mn 257.610†	13020.5	0.2861	mg/L	0.00245	2.861 mg/L	0.0245	0.86%
Mo 202.031†	89.4	0.00303	mg/L	0.000122	0.03030 mg/L	0.001216	4.01%
Na 589.592†	90275.9	6.893	mg/L	0.0084	68.93 mg/L	0.084	0.12%
Na 330.237†	244.1	7.593	mg/L	0.0857	75.93 mg/L	0.857	1.13%
Ni 231.604†	173.5	0.03478	mg/L	0.001388	0.3478 mg/L	0.01388	3.99%
Pb 220.353†	47.5	0.00777	mg/L	0.000813	0.07769 mg/L	0.008134	10.47%
Sb 206.836†	0.1	-0.00142	mg/L	0.000362	-0.01420 mg/L	0.003620	25.50%
Se 196.026†	-14.9	-0.00878	mg/L	0.001243	-0.08777 mg/L	0.012430	14.16%
Si 288.158†	2369.9	1.000	mg/L	0.0120	10.00 mg/L	0.120	1.20%
Sn 189.927†	-64.8	-0.00358	mg/L	0.000514	-0.03584 mg/L	0.005141	14.34%
Sr 421.552†	692455.1	0.7199	mg/L	0.00187	7.199 mg/L	0.0187	0.26%
Ti 334.903†	29079.3	1.191	mg/L	0.0110	11.91 mg/L	0.110	0.92%
Tl 190.801†	20.1	0.00925	mg/L	0.001099	0.09253 mg/L	0.010985	11.87%
V 292.402†	6880.8	0.05161	mg/L	0.000139	0.5161 mg/L	0.00139	0.27%
Zn 206.200†	321.9	0.06878	mg/L	0.000441	0.6878 mg/L	0.00441	0.64%

Sequence No.: 20  
Sample ID: VS82 E SWC  
Analyst: BA  
Dilution: 5.000000X

Autosampler Location: 349  
Date Collected: 11/28/2012 3:06:10 PM  
Data Type: Original

Nebulizer Parameters: VS82 E SWC

Analyte Back Pressure Flow  
All 213.0 kPa 0.75 L/min

Mean Data: VS82 E SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2770728.5	98.07 %		0.058			0.06%
ScR 361.383	382704.7	101.3 %		1.04			1.03%
Ag 328.068†	-299.4	-0.00155 mg/L		0.000123	-0.00774 mg/L	0.000614	7.92%
Al 308.215†	51676.0	28.23 mg/L		0.237	141.1 mg/L	1.18	0.84%
As 188.979†	-45.9	0.01346 mg/L		0.002084	0.06731 mg/L	0.010419	15.48%
B 249.677†	110.7	0.01269 mg/L		0.001295	0.06345 mg/L	0.006473	10.20%
Ba 233.527†	392.1	0.06627 mg/L		0.001132	0.3313 mg/L	0.00566	1.71%
Be 313.042†	393.7	0.00051 mg/L		0.000016	0.00253 mg/L	0.000080	3.19%
Ca 317.933†	5889158.6	355.7 mg/L		5.70	1779 mg/L	28.48	1.60%
Cd 228.802†	126.8	0.00383 mg/L		0.000057	0.01914 mg/L	0.000286	1.50%
Co 228.616†	733.2	0.01235 mg/L		0.000158	0.06177 mg/L	0.000790	1.28%
Cr 267.716†	598.1	0.07420 mg/L		0.001558	0.3710 mg/L	0.00779	2.10%
Cu 324.752†	8568.1	0.03186 mg/L		0.000548	0.1593 mg/L	0.00274	1.72%
Fe 273.955†	65608.0	38.97 mg/L		0.355	194.8 mg/L	1.78	0.91%
K 766.490†	7022.7	3.034 mg/L		0.0325	15.17 mg/L	0.162	1.07%
Mg 279.077†	27969.2	17.65 mg/L		0.139	88.26 mg/L	0.693	0.79%
Mn 257.610†	32768.6	0.7196 mg/L		0.00723	3.598 mg/L	0.0361	1.00%
Mo 202.031†	132.8	0.00211 mg/L		0.000386	0.01057 mg/L	0.001930	18.26%
Na 589.592†	173737.3	13.27 mg/L		0.075	66.33 mg/L	0.374	0.56%
Na 330.237†	456.4	14.14 mg/L		0.251	70.69 mg/L	1.257	1.78%
Ni 231.604†	351.8	0.07054 mg/L		0.000948	0.3527 mg/L	0.00474	1.34%
Pb 220.353†	41.6	0.00982 mg/L		0.000385	0.04912 mg/L	0.001926	3.92%
Sb 206.836†	0.3	-0.00003 mg/L		0.000717	-0.00013 mg/L	0.003586	>999.9%
Se 196.026†	-28.5	-0.01683 mg/L		0.001276	-0.08415 mg/L	0.006379	7.58%
Si 288.158†	3350.6	1.415 mg/L		0.0218	7.076 mg/L	0.1090	1.54%
Sn 189.927†	-112.4	0.01842 mg/L		0.001802	0.09211 mg/L	0.009009	9.78%
Sr 421.552†	2888015.5	3.003 mg/L		0.0476	15.01 mg/L	0.238	1.58%
Ti 334.903†	47752.1	1.946 mg/L		0.0144	9.731 mg/L	0.0722	0.74%
Tl 190.801†	19.8	0.01090 mg/L		0.003395	0.05450 mg/L	0.016977	31.15%
V 292.402†	12854.1	0.09581 mg/L		0.001649	0.4791 mg/L	0.00824	1.72%
Zn 206.200†	550.4	0.1176 mg/L		0.00159	0.5879 mg/L	0.00795	1.35%



Sequence No.: 21  
 Sample ID: VS82 F SWC  
 Analyst: BA  
 Dilution: 5.000000X

Autosampler Location: 350  
 Date Collected: 11/28/2012 3:10:29 PM  
 Data Type: Original

Nebulizer Parameters: VS82 F SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VS82 F SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2775382.8	98.23 %		0.589			0.60%
ScR 361.383	384845.3	101.8 %		0.21			0.20%
Ag 328.068†	-284.4	-0.00147 mg/L		0.000191	-0.00735 mg/L	0.000954	12.99%
Al 308.215†	46723.7	25.52 mg/L		0.060	127.6 mg/L	0.30	0.23%
As 188.979†	-53.2	0.00896 mg/L		0.000324	0.04480 mg/L	0.001621	3.62%
B 249.677†	106.3	0.01219 mg/L		0.001383	0.06097 mg/L	0.006916	11.34%
Ba 233.527†	294.7	0.04824 mg/L		0.001124	0.2412 mg/L	0.00562	2.33%
Be 313.042†	324.6	0.00041 mg/L		0.000004	0.00204 mg/L	0.000019	0.93%
Ca 317.933†	6730585.7	406.6 mg/L		2.67	2033 mg/L	13.35	0.66%
Cd 228.802†	804.0	0.02517 mg/L		0.000270	0.1259 mg/L	0.00135	1.07%
Co 228.616†	702.3	0.01152 mg/L		0.000209	0.05761 mg/L	0.001044	1.81%
Cr 267.716†	664.6	0.08229 mg/L		0.000739	0.4115 mg/L	0.00370	0.90%
Cu 324.752†	8168.0	0.03040 mg/L		0.000216	0.1520 mg/L	0.00108	0.71%
Fe 273.955†	65379.1	38.83 mg/L		0.230	194.2 mg/L	1.15	0.59%
K 766.490†	6088.9	2.631 mg/L		0.0160	13.15 mg/L	0.080	0.61%
Mg 279.077†	29020.0	18.32 mg/L		0.054	91.58 mg/L	0.269	0.29%
Mn 257.610†	33614.0	0.7381 mg/L		0.00356	3.690 mg/L	0.0178	0.48%
Mo 202.031†	148.6	0.00227 mg/L		0.000375	0.01136 mg/L	0.001876	16.52%
Na 589.592†	209132.7	15.97 mg/L		0.049	79.84 mg/L	0.246	0.31%
Na 330.237†	552.2	17.04 mg/L		0.017	85.18 mg/L	0.085	0.10%
Ni 231.604†	299.1	0.05998 mg/L		0.000829	0.2999 mg/L	0.00414	1.38%
Pb 220.353†	26.5	0.00754 mg/L		0.000477	0.03771 mg/L	0.002386	6.33%
Sb 206.836†	-0.6	-0.00038 mg/L		0.000462	-0.00192 mg/L	0.002308	120.27%
Se 196.026†	-27.6	-0.01627 mg/L		0.003218	-0.08134 mg/L	0.016088	19.78%
Si 288.158†	3499.4	1.478 mg/L		0.0071	7.390 mg/L	0.0357	0.48%
Sn 189.927†	-124.5	0.02194 mg/L		0.000998	0.1097 mg/L	0.00499	4.55%
Sr 421.552†	3497375.8	3.636 mg/L		0.0174	18.18 mg/L	0.087	0.48%
Ti 334.903†	49444.4	2.013 mg/L		0.0060	10.07 mg/L	0.030	0.30%
Tl 190.801†	23.7	0.01228 mg/L		0.001733	0.06142 mg/L	0.008663	14.10%
V 292.402†	13087.8	0.09760 mg/L		0.001134	0.4880 mg/L	0.00567	1.16%
Zn 206.200†	551.8	0.1179 mg/L		0.00059	0.5894 mg/L	0.00294	0.50%

Sequence No.: 22  
 Sample ID: VR58 ADUP SWC  
 Analyst: BA  
 Dilution: 2.000000X

Autosampler Location: 351  
 Date Collected: 11/28/2012 3:14:48 PM  
 Data Type: Original

## Nebulizer Parameters: VR58 ADUP SWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: VR58 ADUP SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2893520.8	102.4	%	0.37				0.36%
ScR 361.383	391229.4	103.5	%	0.89				0.86%
Ag 328.068†	-1.1	0.00005	mg/L	0.000040	0.00011	mg/L	0.000081	75.64%
Al 308.215†	106590.8	58.22	mg/L	0.206	116.4	mg/L	0.41	0.35%
As 188.979†	363.4	0.2983	mg/L	0.00088	0.5965	mg/L	0.00177	0.30%
B 249.677†	122.9	0.01404	mg/L	0.000858	0.02807	mg/L	0.001716	6.11%
Ba 233.527†	1989.0	0.3530	mg/L	0.00301	0.7061	mg/L	0.00602	0.85%
Be 313.042†	785.3	0.00100	mg/L	0.000020	0.00200	mg/L	0.000040	2.00%
Ca 317.933†	449525.1	27.15	mg/L	0.086	54.31	mg/L	0.173	0.32%
Cd 228.802†	119.0	0.00186	mg/L	0.000110	0.00372	mg/L	0.000220	5.90%
Co 228.616†	2382.3	0.04434	mg/L	0.000143	0.08867	mg/L	0.000285	0.32%
Cr 267.716†	1444.2	0.1881	mg/L	0.00097	0.3762	mg/L	0.00193	0.51%
Cu 324.752†	66551.0	0.2414	mg/L	0.00148	0.4829	mg/L	0.00296	0.61%
Fe 273.955†	159949.1	95.01	mg/L	0.255	190.0	mg/L	0.51	0.27%
K 766.490†	8012.6	3.462	mg/L	0.0149	6.923	mg/L	0.0298	0.43%
Mg 279.077†	43297.2	27.31	mg/L	0.099	54.61	mg/L	0.198	0.36%
Mn 257.610†	84344.8	1.855	mg/L	0.0048	3.710	mg/L	0.0096	0.26%
Mo 202.031†	596.1	0.02645	mg/L	0.000328	0.05290	mg/L	0.000656	1.24%
Na 589.592†	26039.1	1.988	mg/L	0.0087	3.976	mg/L	0.0174	0.44%
Na 330.237†	50.5	2.063	mg/L	0.2037	4.126	mg/L	0.4073	9.87%
Ni 231.604†	974.1	0.1954	mg/L	0.00273	0.3908	mg/L	0.00547	1.40%
Pb 220.353†	3282.3	0.3708	mg/L	0.00131	0.7416	mg/L	0.00261	0.35%
Sb 206.836†	427.2	0.1168	mg/L	0.00273	0.2337	mg/L	0.00546	2.34%
Se 196.026†	7.6	0.00434	mg/L	0.002934	0.00868	mg/L	0.005869	67.58%
Si 288.158†	13587.5	5.732	mg/L	0.0407	11.46	mg/L	0.081	0.71%
Sn 189.927†	119.9	0.03163	mg/L	0.002076	0.06326	mg/L	0.004152	6.56%
Sr 421.552†	151270.3	0.1573	mg/L	0.00039	0.3145	mg/L	0.00078	0.25%
Ti 334.903†	107485.8	4.418	mg/L	0.0122	8.836	mg/L	0.0243	0.28%
Tl 190.801†	-25.4	-0.00009	mg/L	0.001266	-0.00019	mg/L	0.002532	>999.9%
V 292.402†	26917.9	0.2002	mg/L	0.00107	0.4003	mg/L	0.00214	0.54%
Zn 206.200†	6558.6	1.401	mg/L	0.0128	2.803	mg/L	0.0255	0.91%

Sequence No.: 23  
 Sample ID: CV 8  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 7  
 Date Collected: 11/28/2012 3:18:50 PM  
 Data Type: Original

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2875120.9	101.8	%	0.59			0.58%
ScR 361.383	381503.4	101.0	%	0.20			0.20%
Ag 328.068†	195558.2	1.030	mg/L	0.0033	1.030 mg/L	0.0033	0.32%
Al 308.215†	3768.6	2.024	mg/L	0.0095	2.024 mg/L	0.0095	0.47%
As 188.979†	4230.9	2.047	mg/L	0.0120	2.047 mg/L	0.0120	0.59%
B 249.677†	8759.6	1.006	mg/L	0.0058	1.006 mg/L	0.0058	0.58%
Ba 233.527†	5420.3	1.004	mg/L	0.0009	1.004 mg/L	0.0009	0.09%
Be 313.042†	729043.9	1.015	mg/L	0.0066	1.015 mg/L	0.0066	0.65%
Ca 317.933†	34685.1	2.095	mg/L	0.0110	2.095 mg/L	0.0110	0.52%
Cd 228.802†	32931.9	1.025	mg/L	0.0064	1.025 mg/L	0.0064	0.63%
Co 228.616†	44107.2	1.001	mg/L	0.0032	1.001 mg/L	0.0032	0.32%
Cr 267.716†	7821.6	1.014	mg/L	0.0049	1.014 mg/L	0.0049	0.49%
Cu 324.752†	285038.6	1.021	mg/L	0.0037	1.021 mg/L	0.0037	0.36%
Fe 273.955†	3562.0	2.109	mg/L	0.0118	2.109 mg/L	0.0118	0.56%
K 766.490†	47004.6	20.31	mg/L	0.136	20.31 mg/L	0.136	0.67%
Mg 279.077†	3234.4	2.051	mg/L	0.0117	2.051 mg/L	0.0117	0.57%
Mn 257.610†	46674.2	1.027	mg/L	0.0068	1.027 mg/L	0.0068	0.66%
Mo 202.031†	23371.9	1.049	mg/L	0.0059	1.049 mg/L	0.0059	0.56%
Na 589.592†	670469.0	51.19	mg/L	0.308	51.19 mg/L	0.308	0.60%
Na 330.237†	1741.4	52.28	mg/L	0.552	52.28 mg/L	0.552	1.06%
Ni 231.604†	5053.1	1.014	mg/L	0.0045	1.014 mg/L	0.0045	0.45%
Pb 220.353†	19077.5	2.098	mg/L	0.0112	2.098 mg/L	0.0112	0.53%
Sb 206.836†	7905.4	2.157	mg/L	0.0135	2.157 mg/L	0.0135	0.63%
Se 196.026†	3432.0	2.015	mg/L	0.0136	2.015 mg/L	0.0136	0.68%
Si 288.158†	4946.1	2.085	mg/L	0.0156	2.085 mg/L	0.0156	0.75%
Sn 189.927†	4574.8	1.054	mg/L	0.0060	1.054 mg/L	0.0060	0.56%
Sr 421.552†	967686.1	1.006	mg/L	0.0051	1.006 mg/L	0.0051	0.50%
Ti 334.903†	25190.2	1.034	mg/L	0.0034	1.034 mg/L	0.0034	0.33%
Tl 190.801†	5551.8	2.003	mg/L	0.0099	2.003 mg/L	0.0099	0.50%
V 292.402†	134065.8	1.025	mg/L	0.0042	1.025 mg/L	0.0042	0.41%
Zn 206.200†	4991.7	1.066	mg/L	0.0066	1.066 mg/L	0.0066	0.62%

Sequence No.: 24

Sample ID: CB 8

Analyst: BA

Dilution: 1.00000X

Autosampler Location: 1

Date Collected: 11/28/2012 3:23:12 PM

Data Type: Original

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2898835.3	102.6	%	0.11			0.10%
ScR 361.383	386807.4	102.4	%	0.64			0.62%
Ag 328.068†	-0.7	-0.00000	mg/L	0.000164	-0.00000 mg/L	0.000164	>999.9%
Al 308.215†	12.3	0.00671	mg/L	0.006239	0.00671 mg/L	0.006239	92.98%
As 188.979†	0.6	0.00028	mg/L	0.001071	0.00028 mg/L	0.001071	389.36%
B 249.677†	5.5	0.00064	mg/L	0.000947	0.00064 mg/L	0.000947	148.50%
Ba 233.527†	-1.9	-0.00035	mg/L	0.000632	-0.00035 mg/L	0.000632	180.62%
Be 313.042†	43.0	0.00006	mg/L	0.000007	0.00006 mg/L	0.000007	12.17%
Ca 317.933†	19.9	0.00120	mg/L	0.000085	0.00120 mg/L	0.000085	7.10%
Cd 228.802†	-0.6	-0.00002	mg/L	0.000086	-0.00002 mg/L	0.000086	397.98%
Co 228.616†	6.7	0.00015	mg/L	0.000150	0.00015 mg/L	0.000150	98.81%
Cr 267.716†	-3.0	-0.00039	mg/L	0.000744	-0.00039 mg/L	0.000744	192.71%
Cu 324.752†	-26.4	-0.00009	mg/L	0.000076	-0.00009 mg/L	0.000076	80.18%
Fe 273.955†	1.4	0.00081	mg/L	0.000544	0.00081 mg/L	0.000544	67.00%
K 766.490†	-23.5	-0.01017	mg/L	0.006652	-0.01017 mg/L	0.006652	65.39%
Mg 279.077†	3.8	0.00241	mg/L	0.003893	0.00241 mg/L	0.003893	161.33%
Mn 257.610†	8.0	0.00018	mg/L	0.000062	0.00018 mg/L	0.000062	35.05%
Mo 202.031†	17.3	0.00078	mg/L	0.000178	0.00078 mg/L	0.000178	22.89%
Na 589.592†	164.9	0.01259	mg/L	0.000914	0.01259 mg/L	0.000914	7.26%
Na 330.237†	-7.7	-0.2331	mg/L	0.23846	-0.2331 mg/L	0.23846	102.29%
Ni 231.604†	-5.1	-0.00103	mg/L	0.000795	-0.00103 mg/L	0.000795	77.50%
Pb 220.353†	6.6	0.00072	mg/L	0.000161	0.00072 mg/L	0.000161	22.32%
Sb 206.836†	5.2	0.00143	mg/L	0.000230	0.00143 mg/L	0.000230	16.07%
Se 196.026†	3.1	0.00183	mg/L	0.002408	0.00183 mg/L	0.002408	131.74%
Si 288.158†	7.6	0.00321	mg/L	0.002791	0.00321 mg/L	0.002791	86.92%
Sn 189.927†	1.6	0.00038	mg/L	0.000666	0.00038 mg/L	0.000666	176.36%
Sr 421.552†	104.3	0.00011	mg/L	0.000040	0.00011 mg/L	0.000040	37.22%
Ti 334.903†	4.8	0.00020	mg/L	0.000691	0.00020 mg/L	0.000691	352.28%
Tl 190.801†	2.9	0.00104	mg/L	0.000730	0.00104 mg/L	0.000730	69.98%
V 292.402†	24.5	0.00019	mg/L	0.000106	0.00019 mg/L	0.000106	57.37%
Zn 206.200†	0.3	0.00006	mg/L	0.000315	0.00006 mg/L	0.000315	520.92%



IEC Date: 11-12-12

Analysis Date: 11-29-12

Analyst: BA

LR Date: 7-30-12

Page: 1 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			2994-10
		2			-11
		3			-12
		4			-13
		↓ 5			↓ -14
		ICV			2988-6
		ICB			
		CRI			
		JCSA			
		JCSAB			
		CCV1			
		CCB1			
		VT85 MB	SWC	2	
		VR82 F			
		G			
		H			
		↓ I		↓	
		VT85 ADUP		5 ✓	
		A			
		ASPK		↓ ✓	
		↓ MBSPK	↓	2 ✓	
		CCV2			
		CCB2			
		<del>VT10 MB</del>	<del>SWC</del>	<del>2</del>	

*Eng PKA*  
*[Signature]* 12/4/12

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 11-29-12

ICP - 2	Analyst BA 11/30/12	Peer # 11-30-12	Comment
<b>Logbook</b>			
Analyst, Date, Method info	✓	/	
Sample ID's	✓	/	
Standard/QC solution ID's recorded	✓	/	
Prep codes	✓	/	
Dilution factors	✓	/	
Crossouts/Corrections/Deletions	✓	/	
<b>Calibration</b>			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	/	
Curve fit	✓	/	
<b>Calibration Verification</b>			
ICV/CCV	✓	/	
ICB/CCB	✓	/	
<b>Samples</b>			
RSD's & SD's	✓	/	
Internal Standards	✓	/	
Carry-over	✓	/	
<b>Method QC</b>			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	/	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
<b>Matrix QC</b>			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	/	
Method Blanks	✓	/	
<b>Data Distribution</b>			
Requested elements/isotope identified	✓	/	
Correct samples identified for distribution	✓	/	
Raw data match distributed data	✓	/	
Data filename correct	✓	/	
Necessary Analysis Notes and CAP's	✓	/	

11.30.12

=====  
Analysis Begun

Start Time: 11/29/2012 10:13:49 AM

Plasma On Time: 11/29/2012 8:24:26 AM

Logged In Analyst: Metals

Technique: ICP Continuous

Spectrometer: Optima 7300 DV, S/N 077C8121202

Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRIS11.sif

Batch ID:

Results Data Set: I2121129

Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

=====  
Method Loaded

Method Name: 7300bcESI2FAST

Method Last Saved: 11/29/2012 9:56:06 AM

IEC File: IEC110912.iec

MSF File:

Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

=====  
Sequence No.: 1

Autosampler Location: 1

Sample ID: Calib Blank 1

Date Collected: 11/29/2012 10:13:49 AM

Data Type: Original

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Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

=====  
Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	2909282.8	15595.11	0.54%	100.0	%
ScR 361.383	387720.7	886.73	0.23%	100.0	%
Ag 328.068†	-144.8	59.94	41.38%	[0.00]	mg/L
Al 308.215†	227.0	3.02	1.33%	[0.00]	mg/L
As 188.979†	-16.8	3.18	18.99%	[0.00]	mg/L
B 249.677†	25.1	2.66	10.59%	[0.00]	mg/L

Ba 233.527†	34.1	3.63	10.65%	[0.00]	mg/L
Be 313.042†	887.9	18.65	2.10%	[0.00]	mg/L
Ca 317.933†	196.1	6.47	3.30%	[0.00]	mg/L
Cd 228.802†	317.6	4.30	1.35%	[0.00]	mg/L
Co 228.616†	-103.0	3.76	3.66%	[0.00]	mg/L
Cr 267.716†	-147.1	8.15	5.54%	[0.00]	mg/L
Cu 324.752†	2459.1	17.96	0.73%	[0.00]	mg/L
Fe 273.955†	28.8	2.76	9.57%	[0.00]	mg/L
K 766.490†	543.2	47.57	8.76%	[0.00]	mg/L
Mg 279.077†	92.4	2.34	2.53%	[0.00]	mg/L
Mn 257.610†	213.5	1.93	0.90%	[0.00]	mg/L
Mo 202.031†	85.9	3.26	3.80%	[0.00]	mg/L
Na 589.592†	-423.8	63.15	14.90%	[0.00]	mg/L
Na 330.237†	-211.9	12.47	5.89%	[0.00]	mg/L
Ni 231.604†	-14.4	0.15	1.03%	[0.00]	mg/L
Pb 220.353†	66.4	4.02	6.05%	[0.00]	mg/L
Sb 206.836†	88.0	3.55	4.03%	[0.00]	mg/L
Se 196.026†	-53.7	6.43	11.97%	[0.00]	mg/L
Si 288.158†	66.4	4.15	6.25%	[0.00]	mg/L
Sn 189.927†	-4.6	5.37	117.58%	[0.00]	mg/L
Sr 421.552†	509.0	19.71	3.87%	[0.00]	mg/L
Ti 334.903†	-93.9	9.96	10.61%	[0.00]	mg/L
Tl 190.801†	-46.5	3.71	7.97%	[0.00]	mg/L
V 292.402†	125.3	28.75	22.95%	[0.00]	mg/L
Zn 206.200†	13.6	0.99	7.31%	[0.00]	mg/L

Sequence No.: 2  
Sample ID: STD2

Autosampler Location: 2  
Date Collected: 11/29/2012 10:18:06 AM  
Data Type: Original

## Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: STD2

Analyte	Mean Corrected		RSD	Calib	
	Intensity	Std.Dev.		Conc.	Units
ScA 357.253	2933605.5	11924.21	0.41%	100.8	%
ScR 361.383	391542.9	1726.27	0.44%	101.0	%
Ba 233.527†	55417.6	85.84	0.15%	[10]	mg/L
Cd 228.802†	316219.4	1174.57	0.37%	[10]	mg/L
Co 228.616†	448263.6	1178.33	0.26%	[10]	mg/L
Cr 267.716†	78407.6	361.12	0.46%	[10]	mg/L
Cu 324.752†	2806224.3	12956.38	0.46%	[10]	mg/L
Mn 257.610†	457787.3	2377.96	0.52%	[10]	mg/L
V 292.402†	1326274.0	1891.34	0.14%	[10]	mg/L

Sequence No.: 3  
Sample ID: STD3

Autosampler Location: 3  
Date Collected: 11/29/2012 10:19:52 AM  
Data Type: Original

## Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: STD3

Analyte	Mean Corrected		RSD	Calib	
	Intensity	Std.Dev.		Conc.	Units
ScA 357.253	2895151.3	10356.46	0.36%	99.51	%
ScR 361.383	387336.5	8936.96	2.31%	99.90	%
Ag 328.068†	192136.0	198.18	0.10%	[1.0]	mg/L
As 188.979†	21167.5	152.17	0.72%	[10]	mg/L
B 249.677†	88397.1	2298.12	2.60%	[10]	mg/L
Be 313.042†	3580844.8	76810.05	2.15%	[5.0]	mg/L
Na 589.592†	660611.4	17612.37	2.67%	[50]	mg/L
Ni 231.604†	51327.4	1280.96	2.50%	[10]	mg/L



Pb 220.353†	92453.6	43.76	0.05%	[10] mg/L
Se 196.026†	17232.1	116.75	0.68%	[10] mg/L
Sr 421.552†	4786777.5	107389.92	2.24%	[5] mg/L
Tl 190.801†	28025.0	182.95	0.65%	[10] mg/L
Zn 206.200†	47995.2	1138.36	2.37%	[10] mg/L

Sequence No.: 4  
Sample ID: STD4

Autosampler Location: 4  
Date Collected: 11/29/2012 10:22:26 AM  
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2933828.3	8942.35	0.30%	100.8	%
ScR 361.383	392673.1	1738.10	0.44%	101.3	%
Mo 202.031†	228170.5	683.38	0.30%	[10]	mg/L
Sb 206.836†	37571.3	66.84	0.18%	[10]	mg/L
Si 288.158†	23258.4	142.15	0.61%	[10]	mg/L
Sn 189.927†	44944.5	20.89	0.05%	[10]	mg/L
Ti 334.903†	240873.8	476.32	0.20%	[10]	mg/L

Sequence No.: 5  
Sample ID: STD5

Autosampler Location: 5  
Date Collected: 11/29/2012 10:24:40 AM  
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2765258.0	15417.74	0.56%	95.05	%
ScR 361.383	387195.9	1001.88	0.26%	99.86	%
Al 308.215†	55224.9	340.59	0.62%	[30]	mg/L
Ca 317.933†	504896.9	2508.32	0.50%	[30]	mg/L
Fe 273.955†	169632.7	1447.91	0.85%	[100]	mg/L
K 766.490†	235228.1	755.35	0.32%	[100]	mg/L
Mg 279.077†	48272.0	387.08	0.80%	[30]	mg/L
Na 330.237†	3336.4	26.60	0.80%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	192100	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1841	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	2117	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	8840	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	5542	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	716200	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	16830	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	31620	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	44830	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	7841	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	280600	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1696	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2352	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1609	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	45780	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	22820	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	13210	0.00000	1.000000	

Na 330.237	1	Lin Thru 0	0.0	33.36	0.00000	1.000000
Ni 231.604	1	Lin Thru 0	0.0	5133	0.00000	1.000000
Pb 220.353	1	Lin Thru 0	0.0	9245	0.00000	1.000000
Sb 206.836	1	Lin Thru 0	0.0	3757	0.00000	1.000000
Se 196.026	1	Lin Thru 0	0.0	1723	0.00000	1.000000
Si 288.158	1	Lin Thru 0	0.0	2326	0.00000	1.000000
Sn 189.927	1	Lin Thru 0	0.0	4494	0.00000	1.000000
Sr 421.552	1	Lin Thru 0	0.0	957400	0.00000	1.000000
Ti 334.903	1	Lin Thru 0	0.0	24090	0.00000	1.000000
Tl 190.801	1	Lin Thru 0	0.0	2802	0.00000	1.000000
V 292.402	1	Lin Thru 0	0.0	132600	0.00000	1.000000
Zn 206.200	1	Lin Thru 0	0.0	4800	0.00000	1.000000

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Analysis Begun

Start Time: 11/29/2012 10:27:57 AM

Plasma On Time: 11/29/2012 8:24:26 AM

Logged In Analyst: Metals

Technique: ICP Continuous

Spectrometer: Optima 7300 DV, S/N 077C8121202

Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISSET1.sif

Batch ID:

Results Data Set: I2121129

Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb  
=====

Sequence No.: 1

Autosampler Location: 7

Sample ID: CV

Date Collected: 11/29/2012 10:27:58 AM

Analyst: BA

Data Type: Original

Dilution: 1.000000X  
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## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

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Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2908921.2	99.99 %	0.473			0.47%
ScR 361.383	384436.4	99.15 %	0.170			0.17%
Ag 328.068†	200040.2	1.041 mg/L	0.0088	1.041 mg/L	0.0088	0.85%
Al 308.215†	3769.2	2.013 mg/L	0.0079	2.013 mg/L	0.0079	0.39%
As 188.979†	4224.3	2.021 mg/L	0.0155	2.021 mg/L	0.0155	0.77%
B 249.677†	8968.1	1.014 mg/L	0.0046	1.014 mg/L	0.0046	0.46%
Ba 233.527†	5603.3	1.011 mg/L	0.0099	1.011 mg/L	0.0099	0.98%
Be 313.042†	722176.1	1.008 mg/L	0.0042	1.008 mg/L	0.0042	0.41%
Ca 317.933†	34949.5	2.077 mg/L	0.0054	2.077 mg/L	0.0054	0.26%
Cd 228.802†	32698.3	1.022 mg/L	0.0092	1.022 mg/L	0.0092	0.90%
Co 228.616†	44634.9	0.9936 mg/L	0.00837	0.9936 mg/L	0.00837	0.84%
Cr 267.716†	7927.3	1.010 mg/L	0.0032	1.010 mg/L	0.0032	0.32%
Cu 324.752†	288393.1	1.027 mg/L	0.0095	1.027 mg/L	0.0095	0.93%
Fe 273.955†	3531.2	2.074 mg/L	0.0096	2.074 mg/L	0.0096	0.46%
K 766.490†	47494.4	20.19 mg/L	0.075	20.19 mg/L	0.075	0.37%
Mg 279.077†	3242.1	2.022 mg/L	0.0092	2.022 mg/L	0.0092	0.46%
Mn 257.610†	46576.0	1.018 mg/L	0.0032	1.018 mg/L	0.0032	0.32%
Mo 202.031†	23493.4	1.030 mg/L	0.0063	1.030 mg/L	0.0063	0.62%
Na 589.592†	682171.8	51.63 mg/L	0.246	51.63 mg/L	0.246	0.48%
Na 330.237†	1749.5	52.33 mg/L	0.309	52.33 mg/L	0.309	0.59%
Ni 231.604†	5190.5	1.012 mg/L	0.0055	1.012 mg/L	0.0055	0.54%
Pb 220.353†	19181.3	2.076 mg/L	0.0114	2.076 mg/L	0.0114	0.55%
Sb 206.836†	7946.4	2.114 mg/L	0.0117	2.114 mg/L	0.0117	0.55%
Se 196.026†	3425.3	1.987 mg/L	0.0157	1.987 mg/L	0.0157	0.79%
Si 288.158†	4954.5	2.130 mg/L	0.0037	2.130 mg/L	0.0037	0.17%
Sn 189.927†	4544.3	1.013 mg/L	0.0037	1.013 mg/L	0.0037	0.37%
Sr 421.552†	972408.2	1.016 mg/L	0.0048	1.016 mg/L	0.0048	0.47%
Ti 334.903†	25268.5	1.048 mg/L	0.0016	1.048 mg/L	0.0016	0.15%
Tl 190.801†	5596.6	1.989 mg/L	0.0132	1.989 mg/L	0.0132	0.66%
V 292.402†	135238.1	1.024 mg/L	0.0089	1.024 mg/L	0.0089	0.87%
Zn 206.200†	5016.3	1.045 mg/L	0.0060	1.045 mg/L	0.0060	0.57%

Sequence No.: 2  
 Sample ID: ICB  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 1  
 Date Collected: 11/29/2012 10:31:15 AM  
 Data Type: Original

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: ICB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2915582.5	100.2	%	0.13				0.13%
ScR 361.383	390319.9	100.7	%	0.68				0.67%
Ag 328.068†	23.7	0.00012	mg/L	0.000094	0.00012	mg/L	0.000094	75.75%
Al 308.215†	-8.6	-0.00468	mg/L	0.009654	-0.00468	mg/L	0.009654	206.33%
As 188.979†	-0.9	-0.00039	mg/L	0.001071	-0.00039	mg/L	0.001071	277.63%
B 249.677†	35.9	0.00406	mg/L	0.000542	0.00406	mg/L	0.000542	13.34%
Ba 233.527†	-2.1	-0.00038	mg/L	0.000381	-0.00038	mg/L	0.000381	100.64%
Be 313.042†	78.6	0.00011	mg/L	0.000012	0.00011	mg/L	0.000012	10.54%
Ca 317.933†	-9.8	-0.00058	mg/L	0.000612	-0.00058	mg/L	0.000612	105.22%
Cd 228.802†	1.4	0.00005	mg/L	0.000051	0.00005	mg/L	0.000051	111.36%
Co 228.616†	7.3	0.00016	mg/L	0.000043	0.00016	mg/L	0.000043	26.93%
Cr 267.716†	1.4	0.00017	mg/L	0.000616	0.00017	mg/L	0.000616	354.52%
Cu 324.752†	61.3	0.00022	mg/L	0.000199	0.00022	mg/L	0.000199	91.57%
Fe 273.955†	-2.2	-0.00130	mg/L	0.001943	-0.00130	mg/L	0.001943	149.03%
K 766.490†	-23.8	-0.01011	mg/L	0.025742	-0.01011	mg/L	0.025742	254.55%
Mg 279.077†	2.5	0.00155	mg/L	0.002734	0.00155	mg/L	0.002734	176.71%
Mn 257.610†	-0.8	-0.00002	mg/L	0.000113	-0.00002	mg/L	0.000113	646.55%
Mo 202.031†	30.4	0.00133	mg/L	0.000146	0.00133	mg/L	0.000146	10.96%
Na 589.592†	122.7	0.00929	mg/L	0.004527	0.00929	mg/L	0.004527	48.74%
Na 330.237†	-25.7	-0.7695	mg/L	0.24796	-0.7695	mg/L	0.24796	32.22%
Ni 231.604†	-3.5	-0.00068	mg/L	0.000777	-0.00068	mg/L	0.000777	113.69%
Pb 220.353†	-0.9	-0.00010	mg/L	0.001066	-0.00010	mg/L	0.001066	>999.9%
Sb 206.836†	8.6	0.00228	mg/L	0.001365	0.00228	mg/L	0.001365	59.81%
Se 196.026†	-1.4	-0.00079	mg/L	0.001746	-0.00079	mg/L	0.001746	222.26%
Si 288.158†	-1.8	-0.00078	mg/L	0.001640	-0.00078	mg/L	0.001640	209.14%
Sn 189.927†	2.7	0.00061	mg/L	0.000670	0.00061	mg/L	0.000670	109.57%
Sr 421.552†	90.1	0.00009	mg/L	0.000013	0.00009	mg/L	0.000013	13.89%
Ti 334.903†	29.3	0.00122	mg/L	0.000196	0.00122	mg/L	0.000196	16.09%
Tl 190.801†	2.3	0.00082	mg/L	0.001770	0.00082	mg/L	0.001770	216.10%
V 292.402†	6.9	0.00005	mg/L	0.000063	0.00005	mg/L	0.000063	118.02%
Zn 206.200†	1.5	0.00032	mg/L	0.000307	0.00032	mg/L	0.000307	95.53%

Sequence No.: 3  
 Sample ID: CRI  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 301  
 Date Collected: 11/29/2012 10:35:30 AM  
 Data Type: Original

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 Nebulizer Parameters: CRI

Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

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 Mean Data: CRI

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2918658.6	100.3	%	0.59			0.59%
ScR 361.383	388880.9	100.3	%	1.11			1.11%
Ag 328.068†	605.8	0.00315	mg/L	0.000271	0.00315 mg/L	0.000271	8.60%
Al 308.215†	69.7	0.03773	mg/L	0.012242	0.03773 mg/L	0.012242	32.45%
As 188.979†	103.1	0.04883	mg/L	0.001100	0.04883 mg/L	0.001100	2.25%
B 249.677†	193.2	0.02185	mg/L	0.000712	0.02185 mg/L	0.000712	3.26%
Ba 233.527†	11.3	0.00202	mg/L	0.001051	0.00202 mg/L	0.001051	51.99%
Be 313.042†	711.8	0.00099	mg/L	0.000032	0.00099 mg/L	0.000032	3.22%
Ca 317.933†	809.4	0.04809	mg/L	0.000576	0.04809 mg/L	0.000576	1.20%
Cd 228.802†	79.2	0.00219	mg/L	0.000051	0.00219 mg/L	0.000051	2.32%
Co 228.616†	155.3	0.00345	mg/L	0.000089	0.00345 mg/L	0.000089	2.58%
Cr 267.716†	43.3	0.00551	mg/L	0.000789	0.00551 mg/L	0.000789	14.31%
Cu 324.752†	591.4	0.00211	mg/L	0.000073	0.00211 mg/L	0.000073	3.44%
Fe 273.955†	82.3	0.04851	mg/L	0.001656	0.04851 mg/L	0.001656	3.41%
K 766.490†	1099.8	0.4675	mg/L	0.01372	0.4675 mg/L	0.01372	2.94%
Mg 279.077†	75.0	0.04662	mg/L	0.009450	0.04662 mg/L	0.009450	20.27%
Mn 257.610†	39.1	0.00086	mg/L	0.000162	0.00086 mg/L	0.000162	18.83%
Mo 202.031†	115.6	0.00507	mg/L	0.000314	0.00507 mg/L	0.000314	6.20%
Na 589.592†	6388.9	0.4836	mg/L	0.00428	0.4836 mg/L	0.00428	0.88%
Na 330.237†	10.3	0.3077	mg/L	0.16621	0.3077 mg/L	0.16621	54.01%
Ni 231.604†	50.0	0.00976	mg/L	0.000215	0.00976 mg/L	0.000215	2.20%
Pb 220.353†	184.7	0.01999	mg/L	0.000575	0.01999 mg/L	0.000575	2.87%
Sb 206.836†	193.4	0.05151	mg/L	0.001244	0.05151 mg/L	0.001244	2.42%
Se 196.026†	84.2	0.04886	mg/L	0.001731	0.04886 mg/L	0.001731	3.54%
Si 288.158†	152.9	0.06571	mg/L	0.002972	0.06571 mg/L	0.002972	4.52%
Sn 189.927†	44.7	0.00998	mg/L	0.000704	0.00998 mg/L	0.000704	7.06%
Sr 421.552†	937.8	0.00098	mg/L	0.000014	0.00098 mg/L	0.000014	1.41%
Ti 334.903†	120.9	0.00501	mg/L	0.000588	0.00501 mg/L	0.000588	11.73%
Tl 190.801†	137.0	0.04885	mg/L	0.001136	0.04885 mg/L	0.001136	2.33%
V 292.402†	404.3	0.00307	mg/L	0.000106	0.00307 mg/L	0.000106	3.46%
Zn 206.200†	50.4	0.01049	mg/L	0.000589	0.01049 mg/L	0.000589	5.61%

Sequence No.: 4  
 Sample ID: ICSA  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 302  
 Date Collected: 11/29/2012 10:39:47 AM  
 Data Type: Original

## Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2877015.0	98.89	%	0.272			0.28%
ScR 361.383	384662.0	99.21	%	0.219			0.22%
Ag 328.068†	-217.3	-0.00113	mg/L	0.000212	-0.00113 mg/L	0.000212	18.75%
Al 308.215†	362775.8	197.1	mg/L	0.44	197.1 mg/L	0.44	0.22%
As 188.979†	43.2	0.01484	mg/L	0.002481	0.01484 mg/L	0.002481	16.71%
B 249.677†	-62.7	-0.00710	mg/L	0.002022	-0.00710 mg/L	0.002022	28.50%
Ba 233.527†	156.0	-0.00404	mg/L	0.000676	-0.00404 mg/L	0.000676	16.74%
Be 313.042†	57.5	0.00008	mg/L	0.000021	0.00008 mg/L	0.000021	26.81%
Ca 317.933†	1670996.4	99.29	mg/L	0.610	99.29 mg/L	0.610	0.61%
Cd 228.802†	59.4	-0.00013	mg/L	0.000184	-0.00013 mg/L	0.000184	142.51%
Co 228.616†	78.1	-0.00083	mg/L	0.000175	-0.00083 mg/L	0.000175	21.01%
Cr 267.716†	5.9	-0.00089	mg/L	0.001133	-0.00089 mg/L	0.001133	126.94%
Cu 324.752†	-2175.3	0.00011	mg/L	0.000091	0.00011 mg/L	0.000091	79.63%
Fe 273.955†	333523.4	196.6	mg/L	0.90	196.6 mg/L	0.90	0.46%
K 766.490†	8.4	0.00357	mg/L	0.004739	0.00357 mg/L	0.004739	132.91%
Mg 279.077†	157523.4	97.79	mg/L	0.524	97.79 mg/L	0.524	0.54%
Mn 257.610†	56.1	0.00121	mg/L	0.000224	0.00121 mg/L	0.000224	18.57%
Mo 202.031†	75.3	0.00223	mg/L	0.000118	0.00223 mg/L	0.000118	5.29%
Na 589.592†	243.3	0.01841	mg/L	0.002063	0.01841 mg/L	0.002063	11.21%
Na 330.237†	-16.7	-0.5027	mg/L	0.02782	-0.5027 mg/L	0.02782	5.54%
Ni 231.604†	-2.0	-0.00038	mg/L	0.001244	-0.00038 mg/L	0.001244	328.02%
Pb 220.353†	-407.3	-0.00498	mg/L	0.002198	-0.00498 mg/L	0.002198	44.13%
Sb 206.836†	43.5	0.01144	mg/L	0.002566	0.01144 mg/L	0.002566	22.42%
Se 196.026†	18.1	0.01052	mg/L	0.009384	0.01052 mg/L	0.009384	89.17%
Si 288.158†	-35.4	-0.00339	mg/L	0.001641	-0.00339 mg/L	0.001641	48.36%
Sn 189.927†	-78.4	-0.00515	mg/L	0.000317	-0.00515 mg/L	0.000317	6.15%
Sr 421.552†	3858.9	0.00403	mg/L	0.000018	0.00403 mg/L	0.000018	0.45%
Ti 334.903†	172.7	0.00243	mg/L	0.000281	0.00243 mg/L	0.000281	11.59%
Tl 190.801†	-56.8	0.00071	mg/L	0.000970	0.00071 mg/L	0.000970	136.30%
V 292.402†	1445.1	0.00403	mg/L	0.000172	0.00403 mg/L	0.000172	4.28%
Zn 206.200†	56.9	0.01185	mg/L	0.000649	0.01185 mg/L	0.000649	5.48%

Sequence No.: 5  
 Sample ID: ICSAB  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 303  
 Date Collected: 11/29/2012 10:43:49 AM  
 Data Type: Original

## Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2896012.7	99.54	%	0.250				0.25%
ScR 361.383	384203.3	99.09	%	0.247				0.25%
Ag 328.068†	201394.7	1.048	mg/L	0.0029	1.048	mg/L	0.0029	0.28%
Al 308.215†	361882.3	196.6	mg/L	0.92	196.6	mg/L	0.92	0.47%
As 188.979†	2149.4	1.009	mg/L	0.0033	1.009	mg/L	0.0033	0.33%
B 249.677†	-14.9	-0.00360	mg/L	0.000709	-0.00360	mg/L	0.000709	19.67%
Ba 233.527†	5666.0	0.9901	mg/L	0.00437	0.9901	mg/L	0.00437	0.44%
Be 313.042†	718335.6	1.003	mg/L	0.0063	1.003	mg/L	0.0063	0.63%
Ca 317.933†	1673861.0	99.46	mg/L	0.534	99.46	mg/L	0.534	0.54%
Cd 228.802†	32049.5	1.006	mg/L	0.0032	1.006	mg/L	0.0032	0.31%
Co 228.616†	42021.5	0.9347	mg/L	0.00403	0.9347	mg/L	0.00403	0.43%
Cr 267.716†	7842.0	0.9980	mg/L	0.00521	0.9980	mg/L	0.00521	0.52%
Cu 324.752†	286907.7	1.030	mg/L	0.0019	1.030	mg/L	0.0019	0.18%
Fe 273.955†	333164.8	196.4	mg/L	0.93	196.4	mg/L	0.93	0.47%
K 766.490†	-102.6	-0.04361	mg/L	0.007327	-0.04361	mg/L	0.007327	16.80%
Mg 279.077†	158078.1	98.14	mg/L	0.507	98.14	mg/L	0.507	0.52%
Mn 257.610†	43478.5	0.9499	mg/L	0.00417	0.9499	mg/L	0.00417	0.44%
Mo 202.031†	74.0	0.00212	mg/L	0.000056	0.00212	mg/L	0.000056	2.66%
Na 589.592†	395.1	0.02990	mg/L	0.001925	0.02990	mg/L	0.001925	6.44%
Na 330.237†	-9.0	-0.5831	mg/L	0.45230	-0.5831	mg/L	0.45230	77.56%
Ni 231.604†	4936.5	0.9619	mg/L	0.00600	0.9619	mg/L	0.00600	0.62%
Pb 220.353†	8720.6	0.9828	mg/L	0.00411	0.9828	mg/L	0.00411	0.42%
Sb 206.836†	3846.2	1.013	mg/L	0.0041	1.013	mg/L	0.0041	0.40%
Se 196.026†	1719.7	0.9969	mg/L	0.00260	0.9969	mg/L	0.00260	0.26%
Si 288.158†	-40.8	-0.00200	mg/L	0.001362	-0.00200	mg/L	0.001362	68.07%
Sn 189.927†	-83.2	-0.00571	mg/L	0.002780	-0.00571	mg/L	0.002780	48.73%
Sr 421.552†	3819.9	0.00399	mg/L	0.000013	0.00399	mg/L	0.000013	0.34%
Ti 334.903†	169.8	0.00210	mg/L	0.000211	0.00210	mg/L	0.000211	10.03%
Tl 190.801†	2547.9	0.9212	mg/L	0.00362	0.9212	mg/L	0.00362	0.39%
V 292.402†	131893.1	0.9920	mg/L	0.00321	0.9920	mg/L	0.00321	0.32%
Zn 206.200†	4592.1	0.9568	mg/L	0.00632	0.9568	mg/L	0.00632	0.66%

Sequence No.: 6  
 Sample ID: CV  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 7  
 Date Collected: 11/29/2012 10:48:55 AM  
 Data Type: Original

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2948282.3	101.3 %	0.48			0.47%
ScR 361.383	388676.3	100.2 %	0.64			0.64%
Ag 328.068†	197446.6	1.028 mg/L	0.0106	1.028 mg/L	0.0106	1.03%
Al 308.215†	3779.6	2.019 mg/L	0.0018	2.019 mg/L	0.0018	0.09%
As 188.979†	4204.7	2.012 mg/L	0.0062	2.012 mg/L	0.0062	0.31%
B 249.677†	8897.2	1.006 mg/L	0.0050	1.006 mg/L	0.0050	0.50%
Ba 233.527†	5599.1	1.010 mg/L	0.0090	1.010 mg/L	0.0090	0.89%
Be 313.042†	719383.4	1.004 mg/L	0.0024	1.004 mg/L	0.0024	0.24%
Ca 317.933†	35184.7	2.091 mg/L	0.0092	2.091 mg/L	0.0092	0.44%
Cd 228.802†	32342.8	1.010 mg/L	0.0079	1.010 mg/L	0.0079	0.78%
Co 228.616†	44208.6	0.9841 mg/L	0.01137	0.9841 mg/L	0.01137	1.16%
Cr 267.716†	7921.5	1.010 mg/L	0.0038	1.010 mg/L	0.0038	0.38%
Cu 324.752†	284162.7	1.012 mg/L	0.0097	1.012 mg/L	0.0097	0.95%
Fe 273.955†	3570.4	2.098 mg/L	0.0081	2.098 mg/L	0.0081	0.39%
K 766.490†	47334.0	20.12 mg/L	0.027	20.12 mg/L	0.027	0.14%
Mg 279.077†	3254.1	2.029 mg/L	0.0133	2.029 mg/L	0.0133	0.66%
Mn 257.610†	46607.1	1.019 mg/L	0.0048	1.019 mg/L	0.0048	0.47%
Mo 202.031†	23302.5	1.021 mg/L	0.0020	1.021 mg/L	0.0020	0.20%
Na 589.592†	674171.6	51.03 mg/L	0.151	51.03 mg/L	0.151	0.30%
Na 330.237†	1733.9	51.86 mg/L	0.424	51.86 mg/L	0.424	0.82%
Ni 231.604†	5215.2	1.016 mg/L	0.0083	1.016 mg/L	0.0083	0.82%
Pb 220.353†	19108.6	2.068 mg/L	0.0074	2.068 mg/L	0.0074	0.36%
Sb 206.836†	7882.4	2.097 mg/L	0.0051	2.097 mg/L	0.0051	0.24%
Se 196.026†	3417.4	1.982 mg/L	0.0074	1.982 mg/L	0.0074	0.37%
Si 288.158†	4954.1	2.129 mg/L	0.0157	2.129 mg/L	0.0157	0.74%
Sn 189.927†	4526.1	1.008 mg/L	0.0032	1.008 mg/L	0.0032	0.32%
Sr 421.552†	962572.9	1.005 mg/L	0.0015	1.005 mg/L	0.0015	0.15%
Ti 334.903†	25052.7	1.039 mg/L	0.0030	1.039 mg/L	0.0030	0.29%
Tl 190.801†	5567.7	1.979 mg/L	0.0014	1.979 mg/L	0.0014	0.07%
V 292.402†	133655.0	1.012 mg/L	0.0105	1.012 mg/L	0.0105	1.04%
Zn 206.200†	5032.7	1.048 mg/L	0.0061	1.048 mg/L	0.0061	0.58%



Sequence No.: 7  
 Sample ID: CB  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 1  
 Date Collected: 11/29/2012 10:53:16 AM  
 Data Type: Original

Nebulizer Parameters: CB

Analyte Back Pressure Flow  
 All 215.0 kPa 0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2932835.1	100.8	%	0.45			0.45%
ScR 361.383	393907.4	101.6	%	1.52			1.49%
Ag 328.068†	18.8	0.00010	mg/L	0.000121	0.00010 mg/L	0.000121	123.30%
Al 308.215†	-8.4	-0.00458	mg/L	0.011621	-0.00458 mg/L	0.011621	253.51%
As 188.979†	-0.1	-0.00002	mg/L	0.000558	-0.00002 mg/L	0.000558	>999.9%
B 249.677†	14.1	0.00160	mg/L	0.000696	0.00160 mg/L	0.000696	43.49%
Ba 233.527†	-1.5	-0.00028	mg/L	0.000416	-0.00028 mg/L	0.000416	149.89%
Be 313.042†	52.9	0.00007	mg/L	0.000027	0.00007 mg/L	0.000027	36.17%
Ca 317.933†	-5.2	-0.00031	mg/L	0.000165	-0.00031 mg/L	0.000165	53.06%
Cd 228.802†	1.1	0.00004	mg/L	0.000077	0.00004 mg/L	0.000077	212.13%
Co 228.616†	5.1	0.00011	mg/L	0.000068	0.00011 mg/L	0.000068	59.82%
Cr 267.716†	-3.4	-0.00043	mg/L	0.000952	-0.00043 mg/L	0.000952	221.58%
Cu 324.752†	20.2	0.00007	mg/L	0.000087	0.00007 mg/L	0.000087	120.94%
Fe 273.955†	1.9	0.00113	mg/L	0.001161	0.00113 mg/L	0.001161	102.49%
K 766.490†	-21.6	-0.00917	mg/L	0.004598	-0.00917 mg/L	0.004598	50.17%
Mg 279.077†	-8.2	-0.00511	mg/L	0.000553	-0.00511 mg/L	0.000553	10.81%
Mn 257.610†	0.2	0.00000	mg/L	0.000088	0.00000 mg/L	0.000088	>999.9%
Mo 202.031†	17.0	0.00074	mg/L	0.000049	0.00074 mg/L	0.000049	6.60%
Na 589.592†	72.5	0.00549	mg/L	0.001363	0.00549 mg/L	0.001363	24.85%
Na 330.237†	-8.3	-0.2475	mg/L	0.47889	-0.2475 mg/L	0.47889	193.50%
Ni 231.604†	1.1	0.00021	mg/L	0.000578	0.00021 mg/L	0.000578	271.47%
Pb 220.353†	-7.0	-0.00076	mg/L	0.000936	-0.00076 mg/L	0.000936	122.53%
Sb 206.836†	3.9	0.00106	mg/L	0.000706	0.00106 mg/L	0.000706	66.36%
Se 196.026†	-1.1	-0.00064	mg/L	0.002666	-0.00064 mg/L	0.002666	417.23%
Si 288.158†	-0.7	-0.00032	mg/L	0.001351	-0.00032 mg/L	0.001351	416.14%
Sn 189.927†	3.5	0.00078	mg/L	0.001217	0.00078 mg/L	0.001217	155.58%
Sr 421.552†	19.7	0.00002	mg/L	0.000041	0.00002 mg/L	0.000041	199.06%
Ti 334.903†	17.4	0.00072	mg/L	0.000724	0.00072 mg/L	0.000724	100.32%
Tl 190.801†	0.4	0.00013	mg/L	0.001850	0.00013 mg/L	0.001850	>999.9%
V 292.402†	6.9	0.00005	mg/L	0.000138	0.00005 mg/L	0.000138	276.34%
Zn 206.200†	1.1	0.00022	mg/L	0.000456	0.00022 mg/L	0.000456	208.25%

Sequence No.: 8

Sample ID: VT85 MB SWC

Analyst: BA

Dilution: 2.000000X

Autosampler Location: 304

Date Collected: 11/29/2012 10:57:31 AM

Data Type: Original

## Nebulizer Parameters: VT85 MB SWC

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: VT85 MB SWC

Analyte	Mean Corrected		Calib. Units	Std.Dev.	Sample		Std.Dev.	RSD
	Intensity	Conc.			Conc.	Units		
ScA 357.253	2955615.3	101.6	%	0.44				0.43%
ScR 361.383	392319.1	101.2	%	0.88				0.87%
Ag 328.068†	-9.7	-0.00005	mg/L	0.000217	-0.00010	mg/L	0.000434	429.49%
Al 308.215†	-5.9	-0.00319	mg/L	0.004545	-0.00639	mg/L	0.009090	142.31%
As 188.979†	0.2	0.00012	mg/L	0.000457	0.00024	mg/L	0.000915	380.40%
B 249.677†	11.9	0.00134	mg/L	0.000646	0.00269	mg/L	0.001293	48.10%
Ba 233.527†	-4.6	-0.00083	mg/L	0.000081	-0.00167	mg/L	0.000163	9.77%
Be 313.042†	8.2	0.00001	mg/L	0.000021	0.00002	mg/L	0.000043	188.44%
Ca 317.933†	95.5	0.00568	mg/L	0.000434	0.01135	mg/L	0.000867	7.64%
Cd 228.802†	-0.2	-0.00001	mg/L	0.000130	-0.00002	mg/L	0.000259	>999.9%
Co 228.616†	7.6	0.00017	mg/L	0.000032	0.00033	mg/L	0.000063	19.07%
Cr 267.716†	0.1	0.00002	mg/L	0.001340	0.00004	mg/L	0.002681	>999.9%
Cu 324.752†	18.9	0.00007	mg/L	0.000038	0.00013	mg/L	0.000077	57.17%
Fe 273.955†	-1.0	-0.00056	mg/L	0.000953	-0.00113	mg/L	0.001905	169.34%
K 766.490†	-44.0	-0.01870	mg/L	0.005698	-0.03740	mg/L	0.011396	30.47%
Mg 279.077†	-7.0	-0.00435	mg/L	0.003154	-0.00871	mg/L	0.006307	72.44%
Mn 257.610†	-5.5	-0.00012	mg/L	0.000122	-0.00024	mg/L	0.000244	101.51%
Mo 202.031†	-3.9	-0.00017	mg/L	0.000119	-0.00034	mg/L	0.000238	70.33%
Na 589.592†	47.6	0.00360	mg/L	0.002077	0.00721	mg/L	0.004154	57.65%
Na 330.237†	-7.1	-0.2180	mg/L	0.50329	-0.4360	mg/L	1.00659	230.86%
Ni 231.604†	-0.7	-0.00014	mg/L	0.001089	-0.00027	mg/L	0.002177	795.65%
Pb 220.353†	0.5	0.00006	mg/L	0.000414	0.00012	mg/L	0.000828	712.06%
Sb 206.836†	2.5	0.00068	mg/L	0.002130	0.00136	mg/L	0.004260	314.07%
Se 196.026†	2.0	0.00118	mg/L	0.002263	0.00237	mg/L	0.004526	191.07%
Si 288.158†	-0.3	-0.00014	mg/L	0.001853	-0.00027	mg/L	0.003707	>999.9%
Sn 189.927†	0.6	0.00014	mg/L	0.000826	0.00028	mg/L	0.001652	594.09%
Sr 421.552†	0.1	0.00000	mg/L	0.000017	0.00000	mg/L	0.000033	>999.9%
Ti 334.903†	35.7	0.00148	mg/L	0.000638	0.00296	mg/L	0.001275	43.03%
Tl 190.801†	-0.6	-0.00021	mg/L	0.002088	-0.00041	mg/L	0.004177	>999.9%
V 292.402†	22.4	0.00017	mg/L	0.000138	0.00034	mg/L	0.000277	82.44%
Zn 206.200†	87.5	0.01823	mg/L	0.000563	0.03646	mg/L	0.001126	3.09%

Sequence No.: 9  
 Sample ID: VR82 F SWC  
 Analyst: BA  
 Dilution: 2.000000X

Autosampler Location: 305  
 Date Collected: 11/29/2012 11:01:47 AM  
 Data Type: Original

## Nebulizer Parameters: VR82 F SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: VR82 F SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib.	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2953001.2	101.5 %		0.57			0.56%
ScR 361.383	397483.7	102.5 %		0.55			0.53%
Ag 328.068†	-15.7	-0.00003 mg/L		0.000063	-0.00007 mg/L	0.000126	186.63%
Al 308.215†	90872.6	49.36 mg/L		0.387	98.71 mg/L	0.774	0.78%
As 188.979†	-116.5	0.02754 mg/L		0.002145	0.05509 mg/L	0.004290	7.79%
B 249.677†	113.0	0.01270 mg/L		0.000890	0.02540 mg/L	0.001780	7.01%
Ba 233.527†	1904.9	0.3308 mg/L		0.00137	0.6617 mg/L	0.00274	0.41%
Be 313.042†	665.6	0.00086 mg/L		0.000010	0.00172 mg/L	0.000020	1.16%
Ca 317.933†	346345.9	20.58 mg/L		0.127	41.16 mg/L	0.254	0.62%
Cd 228.802†	75.3	0.00212 mg/L		0.000007	0.00425 mg/L	0.000014	0.32%
Co 228.616†	1910.3	0.03588 mg/L		0.000276	0.07175 mg/L	0.000551	0.77%
Cr 267.716†	1105.1	0.1418 mg/L		0.00093	0.2837 mg/L	0.00185	0.65%
Cu 324.752†	28480.1	0.1042 mg/L		0.00076	0.2084 mg/L	0.00152	0.73%
Fe 273.955†	133201.2	78.52 mg/L		0.614	157.0 mg/L	1.23	0.78%
K 766.490†	5836.2	2.481 mg/L		0.0203	4.962 mg/L	0.0406	0.82%
Mg 279.077†	32767.1	20.32 mg/L		0.089	40.64 mg/L	0.178	0.44%
Mn 257.610†	87170.9	1.904 mg/L		0.0141	3.809 mg/L	0.0282	0.74%
Mo 202.031†	64.4	0.00259 mg/L		0.000089	0.00518 mg/L	0.000179	3.45%
Na 589.592†	13519.0	1.023 mg/L		0.0058	2.046 mg/L	0.0117	0.57%
Na 330.237†	2.3	0.5916 mg/L		0.08101	1.183 mg/L	0.1620	13.69%
Ni 231.604†	728.9	0.1420 mg/L		0.00097	0.2840 mg/L	0.00195	0.69%
Pb 220.353†	594.4	0.07300 mg/L		0.000216	0.1460 mg/L	0.00043	0.30%
Sb 206.836†	11.9	0.00301 mg/L		0.001796	0.00601 mg/L	0.003591	59.75%
Se 196.026†	15.1	0.00866 mg/L		0.004430	0.01732 mg/L	0.008860	51.16%
Si 288.158†	20246.0	8.707 mg/L		0.0450	17.41 mg/L	0.090	0.52%
Sn 189.927†	-27.4	-0.00312 mg/L		0.000067	-0.00624 mg/L	0.000134	2.15%
Sr 421.552†	134266.8	0.1402 mg/L		0.00106	0.2805 mg/L	0.00213	0.76%
Ti 334.903†	70636.2	2.931 mg/L		0.0220	5.863 mg/L	0.0439	0.75%
Tl 190.801†	-17.9	0.00115 mg/L		0.001855	0.00230 mg/L	0.003710	161.36%
V 292.402†	22108.2	0.1632 mg/L		0.00143	0.3264 mg/L	0.00287	0.88%
Zn 206.200†	2095.1	0.4365 mg/L		0.00165	0.8730 mg/L	0.00330	0.38%

Sequence No.: 10  
 Sample ID: VR82 G SWC  
 Analyst: BA  
 Dilution: 2.000000X

Autosampler Location: 306  
 Date Collected: 11/29/2012 11:05:47 AM  
 Data Type: Original

Nebulizer Parameters: VR82 G SWC  
 Analyte Back Pressure Flow  
 All 214.0 kPa 0.75 L/min

## Mean Data: VR82 G SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2933032.7	100.8	%	0.28			0.28%
ScR 361.383	395497.3	102.0	%	0.82			0.80%
Ag 328.068†	-34.4	-0.00013	mg/L	0.000061	-0.00026 mg/L	0.000122	47.32%
Al 308.215†	96764.1	52.56	mg/L	0.383	105.1 mg/L	0.77	0.73%
As 188.979†	-126.3	0.02598	mg/L	0.001699	0.05195 mg/L	0.003398	6.54%
B 249.677†	102.4	0.01150	mg/L	0.000857	0.02300 mg/L	0.001714	7.45%
Ba 233.527†	2052.1	0.3570	mg/L	0.00317	0.7140 mg/L	0.00633	0.89%
Be 313.042†	700.3	0.00091	mg/L	0.000023	0.00181 mg/L	0.000046	2.56%
Ca 317.933†	349113.0	20.74	mg/L	0.108	41.49 mg/L	0.216	0.52%
Cd 228.802†	79.6	0.00227	mg/L	0.000093	0.00454 mg/L	0.000186	4.09%
Co 228.616†	1963.2	0.03681	mg/L	0.000122	0.07363 mg/L	0.000245	0.33%
Cr 267.716†	1212.3	0.1555	mg/L	0.00039	0.3110 mg/L	0.00078	0.25%
Cu 324.752†	27732.5	0.1016	mg/L	0.00025	0.2032 mg/L	0.00050	0.25%
Fe 273.955†	137461.8	81.03	mg/L	0.453	162.1 mg/L	0.91	0.56%
K 766.490†	6255.5	2.659	mg/L	0.0127	5.319 mg/L	0.0254	0.48%
Mg 279.077†	34849.7	21.62	mg/L	0.175	43.23 mg/L	0.350	0.81%
Mn 257.610†	87938.0	1.921	mg/L	0.0086	3.842 mg/L	0.0172	0.45%
Mo 202.031†	61.1	0.00244	mg/L	0.000162	0.00489 mg/L	0.000323	6.61%
Na 589.592†	13862.4	1.049	mg/L	0.0052	2.098 mg/L	0.0105	0.50%
Na 330.237†	1.4	0.5909	mg/L	0.04703	1.182 mg/L	0.0941	7.96%
Ni 231.604†	763.3	0.1487	mg/L	0.00075	0.2974 mg/L	0.00151	0.51%
Pb 220.353†	596.3	0.07389	mg/L	0.000229	0.1478 mg/L	0.00046	0.31%
Sb 206.836†	13.7	0.00336	mg/L	0.001397	0.00672 mg/L	0.002793	41.58%
Se 196.026†	10.2	0.00582	mg/L	0.002465	0.01164 mg/L	0.004931	42.35%
Si 288.158†	20499.2	8.816	mg/L	0.0611	17.63 mg/L	0.122	0.69%
Sn 189.927†	-35.5	-0.00489	mg/L	0.001120	-0.00977 mg/L	0.002240	22.91%
Sr 421.552†	138070.7	0.1442	mg/L	0.00076	0.2884 mg/L	0.00152	0.53%
Ti 334.903†	73251.5	3.040	mg/L	0.0156	6.080 mg/L	0.0312	0.51%
Tl 190.801†	-19.0	0.00098	mg/L	0.001019	0.00196 mg/L	0.002037	103.92%
V 292.402†	23068.7	0.1703	mg/L	0.00084	0.3407 mg/L	0.00168	0.49%
Zn 206.200†	2094.1	0.4363	mg/L	0.00485	0.8726 mg/L	0.00969	1.11%

Sequence No.: 11  
Sample ID: VR82 H SWC  
Analyst: BA  
Dilution: 2.000000X

Autosampler Location: 307  
Date Collected: 11/29/2012 11:09:47 AM  
Data Type: Original

Nebulizer Parameters: VR82 H SWC  
Analyte Back Pressure Flow  
All 215.0 kPa 0.75 L/min

Mean Data: VR82 H SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2959136.0	101.7	%	0.69			0.67%
ScR 361.383	404107.5	104.2	%	0.90			0.86%
Ag 328.068†	-58.0	-0.00024	mg/L	0.000315	-0.00049 mg/L	0.000630	128.70%
Al 308.215†	114831.3	62.37	mg/L	0.142	124.7 mg/L	0.28	0.23%
As 188.979†	-160.6	0.02587	mg/L	0.000244	0.05174 mg/L	0.000487	0.94%
B 249.677†	102.5	0.01150	mg/L	0.000139	0.02299 mg/L	0.000277	1.21%
Ba 233.527†	2161.9	0.3751	mg/L	0.00266	0.7501 mg/L	0.00533	0.71%
Be 313.042†	745.0	0.00096	mg/L	0.000025	0.00191 mg/L	0.000050	2.60%
Ca 317.933†	366076.3	21.75	mg/L	0.073	43.50 mg/L	0.146	0.34%
Cd 228.802†	86.1	0.00250	mg/L	0.000144	0.00500 mg/L	0.000287	5.75%
Co 228.616†	2202.6	0.04092	mg/L	0.000120	0.08184 mg/L	0.000240	0.29%
Cr 267.716†	1417.7	0.1819	mg/L	0.00235	0.3638 mg/L	0.00470	1.29%
Cu 324.752†	31818.5	0.1165	mg/L	0.000079	0.2330 mg/L	0.00157	0.67%
Fe 273.955†	155219.7	91.50	mg/L	0.539	183.0 mg/L	1.08	0.59%
K 766.490†	7082.7	3.011	mg/L	0.0093	6.022 mg/L	0.0186	0.31%
Mg 279.077†	37926.5	23.52	mg/L	0.112	47.04 mg/L	0.224	0.48%
Mn 257.610†	90534.2	1.978	mg/L	0.0109	3.956 mg/L	0.0219	0.55%
Mo 202.031†	69.6	0.00280	mg/L	0.000142	0.00561 mg/L	0.000284	5.07%
Na 589.592†	16338.4	1.237	mg/L	0.0042	2.473 mg/L	0.0084	0.34%
Na 330.237†	3.7	0.7777	mg/L	0.04632	1.555 mg/L	0.0926	5.96%
Ni 231.604†	856.1	0.1668	mg/L	0.00130	0.3336 mg/L	0.00259	0.78%
Pb 220.353†	707.6	0.08788	mg/L	0.000142	0.1758 mg/L	0.00028	0.16%
Sb 206.836†	10.8	0.00255	mg/L	0.000727	0.00511 mg/L	0.001455	28.48%
Se 196.026†	3.7	0.00203	mg/L	0.005535	0.00406 mg/L	0.011070	272.70%
Si 288.158†	21512.6	9.252	mg/L	0.0834	18.50 mg/L	0.167	0.90%
Sn 189.927†	-35.2	-0.00461	mg/L	0.000756	-0.00922 mg/L	0.001512	16.40%
Sr 421.552†	142535.4	0.1489	mg/L	0.00037	0.2978 mg/L	0.00075	0.25%
Ti 334.903†	86881.5	3.606	mg/L	0.0108	7.212 mg/L	0.0215	0.30%
Tl 190.801†	-24.5	0.00004	mg/L	0.003687	0.00007 mg/L	0.007374	>999.9%
V 292.402†	26272.3	0.1939	mg/L	0.00145	0.3879 mg/L	0.00290	0.75%
Zn 206.200†	2264.1	0.4717	mg/L	0.00349	0.9434 mg/L	0.00699	0.74%

Sequence No.: 12  
 Sample ID: VR82 I SWC  
 Analyst: BA  
 Dilution: 2.000000X

Autosampler Location: 308  
 Date Collected: 11/29/2012 11:13:47 AM  
 Data Type: Original

## Nebulizer Parameters: VR82 I SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: VR82 I SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2956549.8	101.6	%	0.49				0.48%
ScR 361.383	397830.8	102.6	%	0.41				0.40%
Ag 328.068†	-41.7	-0.00017	mg/L	0.000169	-0.00033	mg/L	0.000339	101.79%
Al 308.215†	101849.5	55.32	mg/L	0.038	110.6	mg/L	0.08	0.07%
As 188.979†	-148.0	0.02051	mg/L	0.000533	0.04101	mg/L	0.001066	2.60%
B 249.677†	98.0	0.01100	mg/L	0.000786	0.02201	mg/L	0.001572	7.14%
Ba 233.527†	1963.8	0.3412	mg/L	0.00115	0.6823	mg/L	0.00231	0.34%
Be 313.042†	694.1	0.00090	mg/L	0.000014	0.00179	mg/L	0.000028	1.56%
Ca 317.933†	339543.5	20.18	mg/L	0.017	40.35	mg/L	0.035	0.09%
Cd 228.802†	73.9	0.00216	mg/L	0.000116	0.00432	mg/L	0.000233	5.39%
Co 228.616†	1868.2	0.03438	mg/L	0.000309	0.06877	mg/L	0.000617	0.90%
Cr 267.716†	1274.1	0.1634	mg/L	0.00027	0.3268	mg/L	0.00053	0.16%
Cu 324.752†	28909.4	0.1057	mg/L	0.00138	0.2115	mg/L	0.00275	1.30%
Fe 273.955†	136280.8	80.34	mg/L	0.184	160.7	mg/L	0.37	0.23%
K 766.490†	6596.8	2.804	mg/L	0.0101	5.609	mg/L	0.0202	0.36%
Mg 279.077†	34396.6	21.33	mg/L	0.050	42.67	mg/L	0.101	0.24%
Mn 257.610†	77827.8	1.700	mg/L	0.0019	3.401	mg/L	0.0039	0.11%
Mo 202.031†	63.8	0.00257	mg/L	0.000072	0.00514	mg/L	0.000144	2.81%
Na 589.592†	14413.5	1.091	mg/L	0.0047	2.182	mg/L	0.0094	0.43%
Na 330.237†	-1.3	0.5471	mg/L	0.09821	1.094	mg/L	0.1964	17.95%
Ni 231.604†	744.1	0.1450	mg/L	0.00188	0.2900	mg/L	0.00376	1.30%
Pb 220.353†	671.2	0.08270	mg/L	0.000698	0.1654	mg/L	0.00140	0.84%
Sb 206.836†	12.3	0.00293	mg/L	0.000537	0.00587	mg/L	0.001075	18.32%
Se 196.026†	8.9	0.00502	mg/L	0.002925	0.01003	mg/L	0.005851	58.31%
Si 288.158†	20955.8	9.013	mg/L	0.0259	18.03	mg/L	0.052	0.29%
Sn 189.927†	-35.8	-0.00501	mg/L	0.000500	-0.01003	mg/L	0.001000	9.97%
Sr 421.552†	131225.8	0.1371	mg/L	0.00013	0.2741	mg/L	0.00026	0.09%
Ti 334.903†	77279.0	3.207	mg/L	0.0037	6.415	mg/L	0.0073	0.11%
Tl 190.801†	-16.5	0.00182	mg/L	0.000783	0.00364	mg/L	0.001565	43.00%
V 292.402†	23268.7	0.1718	mg/L	0.00218	0.3436	mg/L	0.00436	1.27%
Zn 206.200†	2113.0	0.4403	mg/L	0.00181	0.8805	mg/L	0.00362	0.41%

Sequence No.: 13

Autosampler Location: 309

Sample ID: VT85 ADUP SWC

Date Collected: 11/29/2012 11:17:47 AM

Analyst: BA

Data Type: Original

Dilution: 5.000000X

## Nebulizer Parameters: VT85 ADUP SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: VT85 ADUP SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2966552.3	102.0	%	0.25			0.25%
ScR 361.383	404035.2	104.2	%	1.13			1.08%
Ag 328.068†	-100.7	-0.00047	mg/L	0.000303	-0.00236 mg/L	0.001517	64.15%
Al 308.215†	175557.0	95.36	mg/L	1.155	476.8 mg/L	5.78	1.21%
As 188.979†	-64.7	0.02008	mg/L	0.002169	0.1004 mg/L	0.01085	10.81%
B 249.677†	40.9	0.00453	mg/L	0.000314	0.02264 mg/L	0.001572	6.94%
Ba 233.527†	2429.0	0.4230	mg/L	0.00240	2.115 mg/L	0.0120	0.57%
Be 313.042†	1280.7	0.00173	mg/L	0.000021	0.00866 mg/L	0.000103	1.19%
Ca 317.933†	130100.6	7.730	mg/L	0.1120	38.65 mg/L	0.560	1.45%
Cd 228.802†	36.3	0.00054	mg/L	0.000056	0.00272 mg/L	0.000280	10.31%
Co 228.616†	2096.2	0.04204	mg/L	0.000599	0.2102 mg/L	0.00299	1.42%
Cr 267.716†	699.9	0.09081	mg/L	0.001532	0.4540 mg/L	0.00766	1.69%
Cu 324.752†	46818.8	0.1704	mg/L	0.00208	0.8521 mg/L	0.01038	1.22%
Fe 273.955†	158272.9	93.30	mg/L	0.960	466.5 mg/L	4.80	1.03%
K 766.490†	6404.5	2.723	mg/L	0.0438	.13.61 mg/L	0.219	1.61%
Mg 279.077†	33326.7	20.66	mg/L	0.249	103.3 mg/L	1.24	1.20%
Mn 257.610†	103997.5	2.272	mg/L	0.0274	11.36 mg/L	0.137	1.21%
Mo 202.031†	26.9	0.00109	mg/L	0.000381	0.00545 mg/L	0.001905	34.97%
Na 589.592†	5864.7	0.4439	mg/L	0.00471	2.219 mg/L	0.0235	1.06%
Na 330.237†	-13.3	-0.06231	mg/L	0.216829	-0.3116 mg/L	1.08415	347.98%
Ni 231.604†	504.0	0.09821	mg/L	0.000963	0.4910 mg/L	0.00481	0.98%
Pb 220.353†	3433.5	0.3903	mg/L	0.00303	1.951 mg/L	0.0152	0.78%
Sb 206.836†	15.1	0.00417	mg/L	0.001546	0.02085 mg/L	0.007728	37.07%
Se 196.026†	22.4	0.01285	mg/L	0.001310	0.06427 mg/L	0.006551	10.19%
Si 288.158†	2500.3	1.078	mg/L	0.0078	5.388 mg/L	0.0389	0.72%
Sn 189.927†	-19.9	-0.00319	mg/L	0.000483	-0.01595 mg/L	0.002417	15.15%
Sr 421.552†	58486.9	0.06109	mg/L	0.000740	0.3055 mg/L	0.00370	1.21%
Ti 334.903†	43082.3	1.788	mg/L	0.0210	8.941 mg/L	0.1052	1.18%
Tl 190.801†	-30.2	-0.00171	mg/L	0.000801	-0.00857 mg/L	0.004006	46.76%
V 292.402†	23595.6	0.1744	mg/L	0.00214	0.8719 mg/L	0.01069	1.23%
Zn 206.200†	1042.6	0.2172	mg/L	0.00107	1.086 mg/L	0.0053	0.49%

Sequence No.: 14  
 Sample ID: VT85 A SWC  
 Analyst: BA  
 Dilution: 5.000000X

Autosampler Location: 310  
 Date Collected: 11/29/2012 11:21:47 AM  
 Data Type: Original

## Nebulizer Parameters: VT85 A SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: VT85 A SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2963125.0	101.9	%	0.59			0.57%
ScR 361.383	400026.7	103.2	%	1.00			0.97%
Ag 328.068†	-115.2	-0.00055	mg/L	0.000177	-0.00273 mg/L	0.000887	32.45%
Al 308.215†	184380.6	100.2	mg/L	0.34	500.8 mg/L	1.71	0.34%
As 188.979†	-70.3	0.02327	mg/L	0.002299	0.1163 mg/L	0.01150	9.88%
B 249.677†	42.6	0.00473	mg/L	0.000580	0.02363 mg/L	0.002900	12.27%
Ba 233.527†	2477.2	0.4309	mg/L	0.00418	2.155 mg/L	0.0209	0.97%
Be 313.042†	1573.4	0.00214	mg/L	0.000036	0.01068 mg/L	0.000178	1.67%
Ca 317.933†	125553.9	7.460	mg/L	0.0404	37.30 mg/L	0.202	0.54%
Cd 228.802†	38.7	0.00059	mg/L	0.000175	0.00293 mg/L	0.000874	29.86%
Co 228.616†	1989.4	0.03921	mg/L	0.000252	0.1960 mg/L	0.00126	0.64%
Cr 267.716†	711.3	0.09244	mg/L	0.000452	0.4622 mg/L	0.00226	0.49%
Cu 324.752†	45336.0	0.1653	mg/L	0.00119	0.8266 mg/L	0.00596	0.72%
Fe 273.955†	166254.2	98.01	mg/L	0.534	490.0 mg/L	2.67	0.55%
K 766.490†	5532.1	2.352	mg/L	0.0126	11.76 mg/L	0.063	0.54%
Mg 279.077†	32912.6	20.40	mg/L	0.081	102.0 mg/L	0.41	0.40%
Mn 257.610†	117982.7	2.577	mg/L	0.0129	12.89 mg/L	0.064	0.50%
Mo 202.031†	41.2	0.00172	mg/L	0.000188	0.00860 mg/L	0.000941	10.93%
Na 589.592†	5920.6	0.4481	mg/L	0.00263	2.241 mg/L	0.0132	0.59%
Na 330.237†	-17.2	-0.1336	mg/L	0.30155	-0.6678 mg/L	1.50776	225.79%
Ni 231.604†	475.9	0.09272	mg/L	0.001448	0.4636 mg/L	0.00724	1.56%
Pb 220.353†	2888.3	0.3323	mg/L	0.00134	1.661 mg/L	0.0067	0.40%
Sb 206.836†	17.9	0.00503	mg/L	0.001776	0.02515 mg/L	0.008879	35.31%
Se 196.026†	20.5	0.01177	mg/L	0.000348	0.05884 mg/L	0.001740	2.96%
Si 288.158†	2148.6	0.9263	mg/L	0.01065	4.631 mg/L	0.0532	1.15%
Sn 189.927†	-18.9	-0.00299	mg/L	0.000483	-0.01493 mg/L	0.002414	16.16%
Sr 421.552†	60449.2	0.06314	mg/L	0.000272	0.3157 mg/L	0.00136	0.43%
Ti 334.903†	47972.5	1.991	mg/L	0.0079	9.956 mg/L	0.0393	0.40%
Tl 190.801†	-29.9	-0.00109	mg/L	0.001140	-0.00543 mg/L	0.005702	104.94%
V 292.402†	24357.1	0.1799	mg/L	0.00152	0.8994 mg/L	0.00761	0.85%
Zn 206.200†	1021.4	0.2128	mg/L	0.00182	1.064 mg/L	0.0091	0.86%



Sequence No.: 15

Autosampler Location: 311

Sample ID: VT85 ASPK SWC

Date Collected: 11/29/2012 11:25:47 AM

Analyst: BA

Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: VT85 ASPK SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VT85 ASPK SWC

Analyte	Mean Corrected Intensity	Conc. Units	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2962051.8	101.8	%	0.59			0.57%
ScR 361.383	400022.4	103.2	%	0.97			0.94%
Ag 328.068†	40014.0	0.2084	mg/L	0.00104	1.042 mg/L	0.0052	0.50%
Al 308.215†	187813.5	102.0	mg/L	0.88	510.1 mg/L	4.40	0.86%
As 188.979†	1603.2	0.8147	mg/L	0.00704	4.074 mg/L	0.0352	0.86%
B 249.677†	36.3	0.00359	mg/L	0.000969	0.01796 mg/L	0.004845	26.97%
Ba 233.527†	6912.3	1.231	mg/L	0.0135	6.156 mg/L	0.0677	1.10%
Be 313.042†	150531.0	0.2101	mg/L	0.00160	1.050 mg/L	0.0080	0.76%
Ca 317.933†	190613.2	11.33	mg/L	0.092	56.63 mg/L	0.458	0.81%
Cd 228.802†	7009.4	0.2159	mg/L	0.00164	1.080 mg/L	0.0082	0.76%
Co 228.616†	11391.0	0.2488	mg/L	0.00220	1.244 mg/L	0.0110	0.89%
Cr 267.716†	2361.0	0.3022	mg/L	0.00297	1.511 mg/L	0.0148	0.98%
Cu 324.752†	104874.2	0.3774	mg/L	0.00216	1.887 mg/L	0.0108	0.57%
Fe 273.955†	166246.9	98.00	mg/L	0.951	490.0 mg/L	4.75	0.97%
K 766.490†	17321.2	7.364	mg/L	0.0366	36.82 mg/L	0.183	0.50%
Mg 279.077†	43190.9	26.79	mg/L	0.246	134.0 mg/L	1.23	0.92%
Mn 257.610†	114728.2	2.506	mg/L	0.0216	12.53 mg/L	0.108	0.86%
Mo 202.031†	67.5	0.00282	mg/L	0.000178	0.01410 mg/L	0.000891	6.32%
Na 589.592†	60148.5	4.552	mg/L	0.0388	22.76 mg/L	0.194	0.85%
Na 330.237†	125.4	4.081	mg/L	0.1301	20.40 mg/L	0.651	3.19%
Ni 231.604†	1548.4	0.3013	mg/L	0.00362	1.507 mg/L	0.0181	1.20%
Pb 220.353†	10923.5	1.202	mg/L	0.0083	6.010 mg/L	0.0413	0.69%
Sb 206.836†	21.1	0.00370	mg/L	0.000600	0.01850 mg/L	0.003002	16.23%
Se 196.026†	1405.5	0.8153	mg/L	0.00726	4.076 mg/L	0.0363	0.89%
Si 288.158†	2269.4	0.9798	mg/L	0.00791	4.899 mg/L	0.0396	0.81%
Sn 189.927†	-30.7	-0.00509	mg/L	0.000486	-0.02544 mg/L	0.002432	9.56%
Sr 421.552†	258047.9	0.2695	mg/L	0.00218	1.348 mg/L	0.0109	0.81%
Ti 334.903†	49015.9	2.034	mg/L	0.0172	10.17 mg/L	0.086	0.85%
Tl 190.801†	2186.7	0.7879	mg/L	0.00832	3.939 mg/L	0.0416	1.06%
V 292.402†	52747.6	0.3948	mg/L	0.00283	1.974 mg/L	0.0142	0.72%
Zn 206.200†	2048.4	0.4268	mg/L	0.00452	2.134 mg/L	0.0226	1.06%

Sequence No.: 16  
 Sample ID: VT85 MBSPK SWC  
 Analyst: BA  
 Dilution: 2.000000X

Autosampler Location: 312  
 Date Collected: 11/29/2012 11:29:47 AM  
 Data Type: Original

Nebulizer Parameters: VT85 MBSPK SWC

Analyte Back Pressure Flow  
 All 216.0 kPa 0.75 L/min

Mean Data: VT85 MBSPK SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2935463.1	100.9	%	0.20			0.20%
ScR 361.383	398577.2	102.8	%	0.92			0.90%
Ag 328.068†	102744.4	0.5349	mg/L	0.00186	1.070 mg/L	0.0037	0.35%
Al 308.215†	3718.4	2.012	mg/L	0.0155	4.025 mg/L	0.0310	0.77%
As 188.979†	4344.6	2.052	mg/L	0.0115	4.103 mg/L	0.0229	0.56%
B 249.677†	7.8	-0.00016	mg/L	0.000508	-0.00032 mg/L	0.001016	315.62%
Ba 233.527†	11103.1	2.003	mg/L	0.0153	4.006 mg/L	0.0306	0.76%
Be 313.042†	367465.4	0.5130	mg/L	0.00452	1.026 mg/L	0.0090	0.88%
Ca 317.933†	166559.9	9.897	mg/L	0.0620	19.79 mg/L	0.124	0.63%
Cd 228.802†	16916.0	0.5217	mg/L	0.00266	1.043 mg/L	0.0053	0.51%
Co 228.616†	22727.8	0.5068	mg/L	0.00247	1.014 mg/L	0.0049	0.49%
Cr 267.716†	3963.5	0.5044	mg/L	0.00345	1.009 mg/L	0.0069	0.68%
Cu 324.752†	145733.3	0.5194	mg/L	0.00194	1.039 mg/L	0.0039	0.37%
Fe 273.955†	3542.4	2.085	mg/L	0.0191	4.169 mg/L	0.0381	0.91%
K 766.490†	23360.2	9.931	mg/L	0.0445	19.86 mg/L	0.089	0.45%
Mg 279.077†	16385.5	10.18	mg/L	0.081	20.37 mg/L	0.162	0.80%
Mn 257.610†	22895.0	0.5005	mg/L	0.00390	1.001 mg/L	0.0078	0.78%
Mo 202.031†	20.0	0.00074	mg/L	0.000258	0.00149 mg/L	0.000517	34.78%
Na 589.592†	131323.1	9.940	mg/L	0.0355	19.88 mg/L	0.071	0.36%
Na 330.237†	334.2	9.853	mg/L	0.1855	19.71 mg/L	0.371	1.88%
Ni 231.604†	2567.1	0.4993	mg/L	0.00452	0.9985 mg/L	0.00903	0.90%
Pb 220.353†	18946.8	2.050	mg/L	0.0105	4.100 mg/L	0.0211	0.51%
Sb 206.836†	13.0	-0.00182	mg/L	0.000056	-0.00364 mg/L	0.000112	3.07%
Se 196.026†	3537.1	2.052	mg/L	0.0046	4.104 mg/L	0.0092	0.22%
Si 288.158†	-5.8	0.00066	mg/L	0.002409	0.00132 mg/L	0.004819	364.37%
Sn 189.927†	-24.0	-0.00406	mg/L	0.000192	-0.00811 mg/L	0.000385	4.74%
Sr 421.552†	485972.5	0.5076	mg/L	0.00266	1.015 mg/L	0.0053	0.52%
Ti 334.903†	52.2	0.00159	mg/L	0.000396	0.00319 mg/L	0.000793	24.87%
Tl 190.801†	5654.9	2.013	mg/L	0.0133	4.027 mg/L	0.0265	0.66%
V 292.402†	67631.5	0.5121	mg/L	0.00188	1.024 mg/L	0.0038	0.37%
Zn 206.200†	2416.7	0.5036	mg/L	0.00479	1.007 mg/L	0.0096	0.95%

Sequence No.: 17  
 Sample ID: CV 2  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 7  
 Date Collected: 11/29/2012 11:33:47 AM  
 Data Type: Original

## Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

## Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2918655.3	100.3 %	0.59			0.59%
ScR 361.383	386134.5	99.59 %	0.444			0.45%
Ag 328.068†	200936.4	1.046 mg/L	0.0058	1.046 mg/L	0.0058	0.56%
Al 308.215†	3768.2	2.012 mg/L	0.0242	2.012 mg/L	0.0242	1.20%
As 188.979†	4273.3	2.044 mg/L	0.0130	2.044 mg/L	0.0130	0.64%
B 249.677†	8944.7	1.011 mg/L	0.0041	1.011 mg/L	0.0041	0.40%
Ba 233.527†	5642.9	1.018 mg/L	0.0047	1.018 mg/L	0.0047	0.46%
Be 313.042†	725934.6	1.013 mg/L	0.0052	1.013 mg/L	0.0052	0.51%
Ca 317.933†	35139.0	2.088 mg/L	0.0114	2.088 mg/L	0.0114	0.55%
Cd 228.802†	32836.7	1.026 mg/L	0.0091	1.026 mg/L	0.0091	0.89%
Co 228.616†	45001.3	1.002 mg/L	0.0061	1.002 mg/L	0.0061	0.60%
Cr 267.716†	7955.3	1.014 mg/L	0.0013	1.014 mg/L	0.0013	0.13%
Cu 324.752†	288929.4	1.029 mg/L	0.0070	1.029 mg/L	0.0070	0.68%
Fe 273.955†	3552.4	2.087 mg/L	0.0085	2.087 mg/L	0.0085	0.41%
K 766.490†	47719.4	20.29 mg/L	0.139	20.29 mg/L	0.139	0.69%
Mg 279.077†	3245.9	2.025 mg/L	0.0146	2.025 mg/L	0.0146	0.72%
Mn 257.610†	46797.7	1.023 mg/L	0.0049	1.023 mg/L	0.0049	0.48%
Mo 202.031†	23572.6	1.033 mg/L	0.0040	1.033 mg/L	0.0040	0.39%
Na 589.592†	681155.2	51.55 mg/L	0.246	51.55 mg/L	0.246	0.48%
Na 330.237†	1741.1	52.08 mg/L	0.334	52.08 mg/L	0.334	0.64%
Ni 231.604†	5212.5	1.016 mg/L	0.0064	1.016 mg/L	0.0064	0.63%
Pb 220.353†	19337.6	2.093 mg/L	0.0127	2.093 mg/L	0.0127	0.61%
Sb 206.836†	7991.7	2.127 mg/L	0.0095	2.127 mg/L	0.0095	0.45%
Se 196.026†	3462.6	2.008 mg/L	0.0088	2.008 mg/L	0.0088	0.44%
Si 288.158†	4978.0	2.140 mg/L	0.0142	2.140 mg/L	0.0142	0.66%
Sn 189.927†	4590.4	1.023 mg/L	0.0047	1.023 mg/L	0.0047	0.46%
Sr 421.552†	973310.8	1.017 mg/L	0.0042	1.017 mg/L	0.0042	0.41%
Ti 334.903†	25308.2	1.049 mg/L	0.0057	1.049 mg/L	0.0057	0.54%
Tl 190.801†	5646.1	2.006 mg/L	0.0104	2.006 mg/L	0.0104	0.52%
V 292.402†	135931.6	1.029 mg/L	0.0065	1.029 mg/L	0.0065	0.63%
Zn 206.200†	5046.1	1.051 mg/L	0.0069	1.051 mg/L	0.0069	0.66%

Sequence No.: 18  
 Sample ID: CB 2  
 Analyst: BA  
 Dilution: 1.000000X

Autosampler Location: 1  
 Date Collected: 11/29/2012 11:38:08 AM  
 Data Type: Original

## Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

## Mean Data: CB

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc. Units	Std.Dev.	RSD
ScA 357.253	2955614.4	101.6	%	1.23			1.21%
ScR 361.383	400969.0	103.4	%	0.46			0.45%
Ag 328.068†	8.3	0.00004	mg/L	0.000032	0.00004 mg/L	0.000032	73.16%
Al 308.215†	-3.7	-0.00203	mg/L	0.007365	-0.00203 mg/L	0.007365	362.07%
As 188.979†	5.3	0.00255	mg/L	0.001595	0.00255 mg/L	0.001595	62.60%
B 249.677†	7.7	0.00087	mg/L	0.001459	0.00087 mg/L	0.001459	167.03%
Ba 233.527†	-2.8	-0.00050	mg/L	0.000687	-0.00050 mg/L	0.000687	137.47%
Be 313.042†	31.9	0.00004	mg/L	0.000024	0.00004 mg/L	0.000024	53.72%
Ca 317.933†	5.4	0.00032	mg/L	0.000946	0.00032 mg/L	0.000946	294.85%
Cd 228.802†	0.4	-0.00001	mg/L	0.000205	-0.00001 mg/L	0.000205	>999.9%
Co 228.616†	3.6	0.00008	mg/L	0.000046	0.00008 mg/L	0.000046	58.41%
Cr 267.716†	4.0	0.00052	mg/L	0.000532	0.00052 mg/L	0.000532	103.20%
Cu 324.752†	47.3	0.00017	mg/L	0.000063	0.00017 mg/L	0.000063	37.45%
Fe 273.955†	-1.5	-0.00090	mg/L	0.002355	-0.00090 mg/L	0.002355	262.35%
K 766.490†	-54.1	-0.02299	mg/L	0.008931	-0.02299 mg/L	0.008931	38.84%
Mg 279.077†	-5.1	-0.00319	mg/L	0.001476	-0.00319 mg/L	0.001476	46.29%
Mn 257.610†	-2.6	-0.00006	mg/L	0.000115	-0.00006 mg/L	0.000115	205.44%
Mo 202.031†	8.6	0.00038	mg/L	0.000150	0.00038 mg/L	0.000150	39.57%
Na 589.592†	37.0	0.00280	mg/L	0.003002	0.00280 mg/L	0.003002	107.22%
Na 330.237†	1.8	0.05274	mg/L	0.211620	0.05274 mg/L	0.211620	401.24%
Ni 231.604†	-1.2	-0.00024	mg/L	0.001259	-0.00024 mg/L	0.001259	529.98%
Pb 220.353†	-4.7	-0.00050	mg/L	0.000597	-0.00050 mg/L	0.000597	118.45%
Sb 206.836†	-0.1	-0.00002	mg/L	0.001625	-0.00002 mg/L	0.001625	>999.9%
Se 196.026†	-1.4	-0.00079	mg/L	0.000759	-0.00079 mg/L	0.000759	96.27%
Si 288.158†	-0.9	-0.00037	mg/L	0.002201	-0.00037 mg/L	0.002201	591.58%
Sn 189.927†	1.3	0.00028	mg/L	0.000697	0.00028 mg/L	0.000697	249.52%
Sr 421.552†	25.1	0.00003	mg/L	0.000029	0.00003 mg/L	0.000029	110.37%
Ti 334.903†	20.4	0.00085	mg/L	0.000736	0.00085 mg/L	0.000736	87.13%
Tl 190.801†	1.0	0.00037	mg/L	0.001418	0.00037 mg/L	0.001418	379.37%
V 292.402†	3.7	0.00003	mg/L	0.000140	0.00003 mg/L	0.000140	465.06%
Zn 206.200†	4.5	0.00093	mg/L	0.000663	0.00093 mg/L	0.000663	71.43%



# ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 11-27-12 Analyst: JA Page: 1 of 6

All corrections made by analyst unless otherwise noted. 11-27-12

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		ST00			2991-10
		1			2990-12
		2			2994-14
		3			2995-1
		4			2994-3
		5			2995-2
		Rinse Sample			
		ST00			
		ICV			2976-7
		ICB			
		CCV1			
		CCB1			
		<del>ZZZZZZ</del>			62 Ni low
		ICSA			
		ICSA3			
		LR200			Ag high
		LR300			<sup>137</sup> Ba high
		B1			
		B2			
		B3			
		CCV2			ST00 CCV3 CCB3
		CCB2			
		Low Check			
		VST1 MBI	REN	2	



# ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 11-27-12

Analyst: HA

Page: 2 of 6

All corrections made by analyst unless otherwise noted.

HA 11-27-12

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		VS17 MB1spl	REN	Z	
		MB2spl			
		A Dup			Cu high RPD
		A			(CAR)
		A spl			
		E Dup			Cu High RPD
		E			(CAR)
		E spl			
		OCV4			The low
		OCV4			The high #11-28
		VS17 BAB2	REN	Z	
		B			
		C			
		D			
		E			
		F			
		G			
		H			
		H			
		VT58 D	SWN	20/100	#11-28-12
		E			
		F			
		OCV5			
		OCV5			The low
✓		VS20 MB1	SWN	20	Ag CV out
↓		MB1spl			



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Analytical Chemists and Consultants

# ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 11-27-12

Analyst: HA

Page: 3 of 6

All corrections made by analyst unless otherwise noted.

~~HA~~ 11-28-12

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	VS20 B	SWW	20	Ag CV out
	↓	C	↓	↓	↓
	↓	D	↓	↓	↓
		D	↓	500	Pb
	✓	E	↓	20	Ag CV out
	↓	G	↓	↓	↓
	↓	H	↓	↓	↓
SWW	↓	I	↓	↓	↓
		CCNB			Ag high
		CCB6			<sup>62</sup> Ni low
		VS21 A-L	SWW	500	✓ Pb Zn
		A	↓	100	↓
		ADup	↓	↓	✓
		Asplc	↓	↓	✓
zzz		<del>Post</del>	↓	↓	↓
		B	↓	200	↓
		D	↓	100	Zn, Pb
		E	↓	↓	✓ Zn
		G	↓	50	✓ Cr Co
		H	↓	↓	↓
		CCr7			Ag high
		CCrB7			<sup>62</sup> Ni low
		VS21 I	SWW	100	Pb Zn
		J	↓	50	✓ Cr Co Zn



# ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 11-27-12 Analyst: MA Page: 4 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	VSZ1 J:	SwN	100	use 807
		VR02 C		20	
		D:			
		E:			
		F:			
		G:			
		H:			
		I:			
		CCV8			Ag high
		CCB0			<sup>62</sup> Ni low
	✓	VSZ1 MB1	SwN	20	Clout (Ag)
	↓	MB1spk		↓	↓
		A-L		100	✓ RR Ag See 800 for <del>Ag</del> Pb Z
		A		20	100 ↓
		ADup			✓ CAF ↓
		Aspl			↓ Sb low % R ↓
		APost			0.106 ml sol # 2 1/2 0.106 ml sol # 1 1/2 Sb
	✓	B			Clout (Ag)
	↓	C			↓
	↓	D			↓
		CCV9			Ag high
		CCB9			<sup>62</sup> Ni ↓
	✓	VR88 MB2spk	REN	2	Clout (Ag)
	↓	I		5	↓





# ICP/MS SAMPLE RUN LOG

PE Nexlon ICP-MS Serial No. 81DN1050201

Analysis Date: 11-27-12 Analyst: JA Page: 5 of 6

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
	✓	VS21 E	SWN	20	Out (Ag)
		F			
		G			
		H			
		I			
		J			
		K			
		L			
		CCV10			
		QCB10			bc Ni low
MSI		VR58 MAX1	SWN	20	
		↳ MS1 splk	↓	↓ ✓	
		VR58 B	RESN	10	Ag
		↳ C	↓	↓	↓
		↳ D	↓	↓	↓
		VR58 ADup	SWN	20	✓
		↳ A	↓	↓	↓
		↳ ASpl	↓	↓	↓ ✓
		↳ B	↓	↓	↓
		↳ C	↓	↓	↓
		CCV4			
		QCB11			
		VR58 D	SWN	20	
		↳ E	↓	↓	



Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 11-27-12

	Analyst H-11-ZE	Peer MJT 11.28.12	Comment
<b>Logbook</b>			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
<b>Calibration</b>			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
<b>Calibration Verification</b>			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	b
<b>Samples</b>			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
<b>Method QC</b>			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	✓	✓	
<b>Matrix QC</b>			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	VS21
Matrix Duplicates	✓	✓	VS17
Method Blanks	✓	✓	
<b>Data Distribution</b>			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAP's	✓	✓	CAF VS17 VS21

## Daily Performance Report

### Sample ID: Daily Performance Check

Sample Date/Time: Tuesday, November 27, 2012 10:33:19

Sample Description:

Method File: C:\NexIONData\Method\Daily Performancenew.mth

Dataset File: C:\NexIONData\Dataset\Default\Daily Performance Check.1336

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		6203.4		6203.375	25.244	0.4	Standard			
Mg	24.0		44252.9		44252.930	414.582	0.9	Standard			
In	114.9		81469.2		81469.237	363.087	0.4	Standard			
Pb	208.0		34913.9		34913.921	209.815	0.6	Standard			
U	238.1		62797.3		62797.269	550.689	0.9	Standard			
[	CeO	155.9		1686.6		0.022		6.9	Standard		
>	Ce	139.9		76796.6		76796.576		256.936	0.3	Standard	
[	Ce++	70.0		1531.6		0.020		0.000		2.1	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
1300.00	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
1.06	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

## SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 11/27/2012 10:28:15 AM

End Time: 11/27/2012 10:32:26 AM

AutoLens STD/DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.996; Intercept = -12.09

## SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 11/27/2012 10:22:45 AM

End Time: 11/27/2012 10:24:58 AM

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A

Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.693)

Target/Obtained mass (23.985/23.975), Target/Obtained resolution (0.7/0.712)

Target/Obtained mass (114.904/114.925), Target/Obtained resolution (0.7/0.720)

Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.713)

## SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 11/27/2012 10:14:45 AM

End Time: 11/27/2012 10:22:06 AM

Quality Performance Check - [Passed] Optimum value(s): N/A

Obtained Intensity (Be 9.0122): 4641.23

Obtained Intensity (Mg 23.985): 35091.60

Obtained Intensity (In 114.904): 63970.60

Obtained Intensity (Pb 207.977): 28835.54

Obtained Intensity (U 238.05): 50953.17

Obtained Intensity (Bkgd 220): 0.00

Obtained Formula (CeO 155.9 / Ce 139.905): 0.014 (=917.58 / 64557.70)

Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.016 (=1005.99 / 64557.70)

Search Alignment - [Passed]

Vertical	Horizontal	Intensity
0.41 mm	0.86 mm	83649.74

## ICP-MS Quantitative Analysis - Summary Report

**Sample ID:** Blank

**Sample Dil Factor:**

**Comments:**

**Sample Date/Time:** Tuesday, November 27, 2012 11:11:54

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\112612b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
> Li	6		ug/L				1748871	0
Be	9		ug/L				12	4
C	13		ug/L				135150	2
Cl	37		ug/L				4700084	2
> Sc	45		ug/L				1248950	3
V	51		ug/L				9366	3
V-1	51		ug/L				95	5
Cr	52		ug/L				27600	3
Cr	53		ug/L				154	5
Mn	55		ug/L				744	3
Co	59		ug/L				85	13
> Ge	72		ug/L				653857	1
Ni	60		ug/L				88	12
Ni	62		ug/L				1029	0
Cu	63		ug/L				1305	4
Cu	65		ug/L				124	2
Zn	66		ug/L				746	8
Zn	67		ug/L				102	13
Zn	68		ug/L				566	2
As	75		ug/L				290	4
As-1	75		ug/L				10162	0
Se	82		ug/L				3	284
Se	78		ug/L				10335	0
Mo	98		ug/L				10	33
Y	89		ug/L				409313	3
Kr	83		ug/L				616	3
> In	115		ug/L				974648	1
Ag	107		ug/L				16	27
Cd	111		ug/L				86	14
Cd	114		ug/L				30	39
Sb	121		ug/L				27	29
Sb	123		ug/L				23	6
Ba	135		ug/L				36	6
Ba	137		ug/L				59	9
> Tb	159		ug/L				1103082	1
Tl	205		ug/L				38	8
Pb	208		ug/L				557	2
Bi	209		ug/L				2721879	0
Th	232		ug/L				38	14
U	238		ug/L				2	78



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 11:16:03

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\112612b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas Intens.	Intens. RSD
> Li	6		ug/L			1748871	1754959	0
Be	9	0.200	ug/L	0.004	1	12	977	1
C	13		ug/L			135150	136685	3
Cl	37		ug/L			4700084	4680214	1
> Sc	45		ug/L			1248950	1249024	0
V	51	0.200	ug/L	0.007	3	9366	14318	1
V-1	51	0.200	ug/L	0.002	0	95	5161	0
Cr	52	0.500	ug/L	0.019	3	27600	37842	1
Cr	53	0.500	ug/L	0.012	2	154	1348	2
Mn	55	0.500	ug/L	0.011	2	744	14491	1
Co	59	0.200	ug/L	0.001	0	85	4279	1
> Ge	72		ug/L			653857	656244	1
Ni	60	0.500	ug/L	0.011	2	88	2259	3
Ni	62	0.500	ug/L	0.119	23	1029	1307	4
Cu	63	0.500	ug/L	0.004	0	1305	6220	1
Cu	65	0.500	ug/L	0.013	2	124	2398	1
Zn	66	4.000	ug/L	0.029	0	746	12356	1
Zn	67	4.000	ug/L	0.105	2	102	1885	2
Zn	68	4.000	ug/L	0.047	1	566	8527	0
As	75	0.200	ug/L	0.006	3	290	771	2
As-1	75	0.200	ug/L	0.040	19	10162	10702	0
Se	82	0.500	ug/L	0.044	8	3	139	9
Se	78	0.500	ug/L	0.133	26	10335	10742	0
Mo	98	0.200	ug/L	0.010	5	10	1013	4
Y	89		ug/L			409313	404442	0
Kr	83		ug/L			616	619	4
> In	115		ug/L			974648	975026	1
Ag	107	0.200	ug/L	0.002	0	16	2449	2
Cd	111	0.100	ug/L	0.001	1	86	574	1
Cd	114	0.100	ug/L	0.003	2	30	1330	3
Sb	121	0.200	ug/L	0.006	2	27	2807	2
Sb	123	0.200	ug/L	0.009	4	23	2077	4
Ba	135	0.500	ug/L	0.025	5	36	2128	3
Ba	137	0.500	ug/L	0.016	3	59	3668	2
> Tb	159		ug/L			1103082	1111470	0
Tl	205	0.200	ug/L	0.003	1	38	7636	1
Pb	208	0.100	ug/L	0.001	1	557	5595	0
Bi	209		ug/L			2721879	2723686	0
Th	232	0.200	ug/L	0.028	13	38	5452	14
U	238	0.200	ug/L	0.002	1	2	9463	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 11:20:12

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\112612b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1748871	1787527	1
Be	9	10.000	ug/L	0.137	1	12	48753	1
C	13		ug/L			135150	137100	5
Cl	37		ug/L			4700084	4891482	1
> Sc	45		ug/L			1248950	1289925	1
V	51	10.000	ug/L	0.190	1	9366	252299	0
V-1	51	10.000	ug/L	0.193	1	95	242681	0
Cr	52	10.000	ug/L	0.150	1	27600	240702	0
Cr	53	9.999	ug/L	0.160	1	154	24123	0
Mn	55	10.000	ug/L	0.284	2	744	287554	1
Co	59	10.000	ug/L	0.195	1	85	209425	1
> Ge	72		ug/L			653857	683707	1
Ni	60	10.000	ug/L	0.071	0	88	44862	2
Ni	62	10.002	ug/L	0.178	1	1029	7264	0
Cu	63	9.999	ug/L	0.211	2	1305	100752	1
Cu	65	9.999	ug/L	0.166	1	124	45585	0
Zn	66	9.851	ug/L	0.419	4	746	28019	2
Zn	67	9.974	ug/L	0.247	2	102	4664	2
Zn	68	9.918	ug/L	0.379	3	566	20149	2
As	75	10.000	ug/L	0.169	1	290	23456	0
As-1	75	9.999	ug/L	0.223	2	10162	33831	1
Se	82	9.997	ug/L	0.147	1	3	2529	0
Se	78	9.995	ug/L	0.347	3	10335	17283	1
Mo	98	10.000	ug/L	0.219	2	10	50914	0
Y	89		ug/L			409313	423475	0
Kr	83		ug/L			616	657	5
> In	115		ug/L			974648	995207	1
Ag	107	10.000	ug/L	0.055	0	16	118992	1
Cd	111	10.000	ug/L	0.218	2	86	49726	1
Cd	114	10.000	ug/L	0.072	0	30	124992	0
Sb	121	10.000	ug/L	0.117	1	27	143428	0
Sb	123	10.000	ug/L	0.198	1	23	109688	1
Ba	135	10.000	ug/L	0.245	2	36	42669	1
Ba	137	10.000	ug/L	0.172	1	59	73096	0
> Tb	159		ug/L			1103082	1145258	0
Tl	205	10.000	ug/L	0.077	0	38	376703	0
Pb	208	10.000	ug/L	0.074	0	557	496459	0
Bi	209		ug/L			2721879	2767601	1
Th	232	10.001	ug/L	0.133	1	38	428108	0
U	238	10.000	ug/L	0.091	0	2	487248	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 11:24:35

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\112612b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1748871	1757767	1
[ Be	9	20.020	ug/L	0.404	2	12	96327	0
C	13		ug/L			135150	133191	2
Cl	37		ug/L			4700084	5104790	3
> Sc	45		ug/L			1248950	1269346	1
V	51	20.028	ug/L	0.336	1	9366	490475	1
V-1	51	20.048	ug/L	0.390	1	95	483355	0
Cr	52	19.988	ug/L	0.152	0	27600	444511	1
Cr	53	20.053	ug/L	0.416	2	154	47952	1
Mn	55	20.056	ug/L	0.338	1	744	573187	0
Co	59	20.056	ug/L	0.512	2	85	417887	1
> Ge	72		ug/L			653857	670934	0
Ni	60	19.984	ug/L	0.203	1	88	87596	0
Ni	62	20.068	ug/L	0.126	0	1029	13410	0
Cu	63	20.005	ug/L	0.366	1	1305	196677	1
Cu	65	20.057	ug/L	0.243	1	124	90643	1
Zn	66	19.973	ug/L	0.336	1	746	54736	2
Zn	67	20.128	ug/L	0.106	0	102	9335	0
Zn	68	20.033	ug/L	0.482	2	566	39580	2
As	75	20.062	ug/L	0.115	0	290	46457	0
As-1	75	20.092	ug/L	0.100	0	10162	57050	0
Se	82	20.098	ug/L	0.109	0	3	5087	0
Se	78	20.192	ug/L	0.123	0	10335	23960	0
Mo	98	20.095	ug/L	0.254	1	10	102360	0
Y	89		ug/L			409313	418479	2
Kr	83		ug/L			616	611	1
> In	115		ug/L			974648	989497	0
Ag	107	20.014	ug/L	0.556	2	16	237434	2
Cd	111	20.011	ug/L	0.094	0	86	99068	0
Cd	114	19.966	ug/L	0.181	0	30	246424	0
Sb	121	19.978	ug/L	0.065	0	27	283646	0
Sb	123	19.964	ug/L	0.156	0	23	216193	0
Ba	135	19.993	ug/L	0.370	1	36	84672	1
Ba	137	20.004	ug/L	0.260	1	59	145454	0
> Tb	159		ug/L			1103082	1127022	0
Tl	205	20.033	ug/L	0.243	1	38	747506	1
Pb	208	20.023	ug/L	0.049	0	557	982245	0
Bi	209		ug/L			2721879	2755571	0
Th	232	20.183	ug/L	0.139	0	38	882409	0
U	238	20.054	ug/L	0.165	0	2	972124	0

# ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 11:29:07

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\112612b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1748871	1731648	3
Be	9	49.785	ug/L	1.995	4	12	230862	2
C	13		ug/L			135150	133248	0
Cl	37		ug/L			4700084	5205492	2
> Sc	45		ug/L			1248950	1256917	1
V	51	49.978	ug/L	1.241	2	9366	1195030	1
V-1	51	50.022	ug/L	1.568	3	95	1196507	1
Cr	52	49.841	ug/L	0.993	1	27600	1039809	0
Cr	53	49.989	ug/L	2.317	4	154	117970	3
Mn	55	50.022	ug/L	0.684	1	744	1417670	0
Co	59	49.816	ug/L	0.875	1	85	1009169	0
> Ge	72		ug/L			653857	650758	1
Ni	60	50.074	ug/L	1.227	2	88	214326	1
Ni	62	49.915	ug/L	0.794	1	1029	30574	0
Cu	63	49.932	ug/L	1.465	2	1305	470924	1
Cu	65	49.715	ug/L	1.112	2	124	211681	1
Zn	66	49.929	ug/L	0.793	1	746	130696	0
Zn	67	49.864	ug/L	0.947	1	102	21990	0
Zn	68	50.005	ug/L	0.724	1	566	95025	0
As	75	50.041	ug/L	0.532	1	290	112417	0
As-1	75	50.031	ug/L	0.810	1	10162	123054	0
Se	82	50.162	ug/L	0.549	1	3	12511	1
Se	78	50.136	ug/L	1.254	2	10335	42887	1
Mo	98	50.241	ug/L	0.166	0	10	254341	1
Y	89		ug/L			409313	411900	1
Kr	83		ug/L			616	646	2
> In	115		ug/L			974648	959690	1
Ag	107	49.930	ug/L	0.491	0	16	570499	0
Cd	111	49.945	ug/L	0.412	0	86	238375	0
Cd	114	49.962	ug/L	0.879	1	30	595805	2
Sb	121	50.145	ug/L	0.237	0	27	700643	0
Sb	123	50.036	ug/L	0.669	1	23	527339	0
Ba	135	50.074	ug/L	0.704	1	36	207158	0
Ba	137	50.155	ug/L	0.244	0	59	359182	0
> Tb	159		ug/L			1103082	1111649	1
Tl	205	49.935	ug/L	0.594	1	38	1825901	0
Pb	208	49.852	ug/L	0.520	1	557	2375934	1
Bi	209		ug/L			2721879	2633749	0
Th	232	50.940	ug/L	0.877	1	38	2424247	0
U	238	50.683	ug/L	0.627	1	2	2600720	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 11:35:19

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\112612b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1748871	1774113	0
Be	9	99.312	ug/L	1.162	1	12	461590	1
C	13		ug/L			135150	131596	2
Cl	37		ug/L			4700084	5124632	3
> Sc	45		ug/L			1248950	1276987	2
V	51	101.202	ug/L	2.936	2	9366	2550115	2
V-1	51	100.649	ug/L	3.070	3	95	2499809	2
Cr	52	100.876	ug/L	2.800	2	27600	2171249	0
Cr	53	98.969	ug/L	2.662	2	154	229263	0
Mn	55	100.096	ug/L	3.266	3	744	2889390	1
Co	59	100.408	ug/L	7.229	7	85	2093797	6
> Ge	72		ug/L			653857	645580	1
Ni	60	99.195	ug/L	2.233	2	88	410079	0
Ni	62	99.568	ug/L	1.990	1	1029	58657	0
Cu	63	99.545	ug/L	2.582	2	1305	916197	1
Cu	65	99.520	ug/L	0.863	0	124	413660	0
Zn	66	99.611	ug/L	1.133	1	746	254659	0
Zn	67	99.186	ug/L	1.850	1	102	42160	1
Zn	68	99.456	ug/L	2.998	3	566	183616	2
As	75	99.834	ug/L	0.976	0	290	220986	0
As-1	75	99.926	ug/L	0.941	0	10162	233265	0
Se	82	99.312	ug/L	1.918	1	3	24014	0
Se	78	99.671	ug/L	2.317	2	10335	73799	0
Mo	98	99.841	ug/L	1.017	1	10	498711	0
Y	89		ug/L			409313	404729	1
Kr	83		ug/L			616	722	2
> In	115		ug/L			974648	950599	0
Ag	107	99.942	ug/L	3.145	3	16	1128794	2
Cd	111	99.263	ug/L	1.652	1	86	457918	0
Cd	114	99.644	ug/L	1.180	1	30	1163084	0
Sb	121	99.616	ug/L	0.751	0	27	1361223	0
Sb	123	99.723	ug/L	1.111	1	23	1031515	0
Ba	135	99.928	ug/L	2.264	2	36	408449	1
Ba	137	99.969	ug/L	1.705	1	59	708333	1
> Tb	159		ug/L			1103082	1109709	0
Tl	205	101.445	ug/L	0.785	0	38	3890674	0
Pb	208	100.649	ug/L	0.518	0	557	4894125	0
Bi	209		ug/L			2721879	2553005	0
Th	232	100.071	ug/L	0.830	0	38	4766240	1
U	238	100.118	ug/L	0.381	0	2	5149172	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 11:42:12

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\112612b.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
Li	6		ug/L			1748871	1747440	2
Be	9	0.001	ug/L	0.001	92	12	16	21
C	13		ug/L			135150	133018	4
Cl	37		ug/L			4700084	5008380	1
Sc	45		ug/L			1248950	1257424	1
V	51	-0.001	ug/L	0.013	1049	9366	9397	1
V-1	51	0.001	ug/L	0.001	90	95	116	16
Cr	52	0.002	ug/L	0.039	1924	27600	27822	1
Cr	53	0.009	ug/L	0.005	60	154	175	8
Mn	55	-0.006	ug/L	0.001	13	744	588	3
Co	59	0.000	ug/L	0.001	143	85	93	13
Ge	72		ug/L			653857	661902	1
Ni	60	-0.014	ug/L	0.001	7	88	31	11
Ni	62	-0.410	ug/L	0.127	30	1029	799	9
Cu	63	-0.040	ug/L	0.009	21	1305	944	7
Cu	65	-0.012	ug/L	0.002	18	124	76	12
Zn	66	-0.180	ug/L	0.008	4	746	286	8
Zn	67	-0.123	ug/L	0.002	2	102	49	3
Zn	68	-0.150	ug/L	0.016	10	566	291	11
As	75	-0.003	ug/L	0.010	314	290	286	7
As-1	75	0.039	ug/L	0.047	120	10162	10376	0
Se	82	-0.019	ug/L	0.031	158	3	0	790
Se	78	0.128	ug/L	0.153	119	10335	10545	0
Mo	98	0.022	ug/L	0.004	20	10	121	17
Y	89		ug/L			409313	411333	1
Kr	83		ug/L			616	623	2
In	115		ug/L			974648	960487	0
Ag	107	0.006	ug/L	0.006	100	16	79	79
Cd	111	0.005	ug/L	0.007	150	86	107	30
Cd	114	0.004	ug/L	0.005	130	30	72	76
Sb	121	0.125	ug/L	0.006	4	27	1756	5
Sb	123	0.126	ug/L	0.005	3	23	1341	4
Ba	135	-0.002	ug/L	0.003	204	36	28	49
Ba	137	-0.002	ug/L	0.002	64	59	41	26
Tb	159		ug/L			1103082	1092855	1
Tl	205	0.020	ug/L	0.007	34	38	795	32
Pb	208	-0.000	ug/L	0.002	351	557	531	13
Bi	209		ug/L			2721879	2728117	0
Th	232	0.237	ug/L	0.020	8	38	11148	8
U	238	0.004	ug/L	0.001	17	2	220	17

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 11:57:01

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L				1765270	2
Be	9		ug/L				15	38
C	13		ug/L				135652	1
Cl	37		ug/L				4937799	2
> Sc	45		ug/L				1259345	0
V	51		ug/L				9617	0
V-1	51		ug/L				89	11
Cr	52		ug/L				28547	0
Cr	53		ug/L				178	2
Mn	55		ug/L				554	7
Co	59		ug/L				85	13
> Ge	72		ug/L				658458	1
Ni	60		ug/L				39	31
Ni	62		ug/L				675	3
Cu	63		ug/L				740	5
Cu	65		ug/L				68	2
Zn	66		ug/L				249	3
Zn	67		ug/L				35	30
Zn	68		ug/L				261	4
As	75		ug/L				273	4
As-1	75		ug/L				10384	0
Se	82		ug/L				-5	234
Se	78		ug/L				10570	0
Mo	98		ug/L				27	9
Y	89		ug/L				411113	1
Kr	83		ug/L				642	5
> In	115		ug/L				961280	1
Ag	107		ug/L				29	24
Cd	111		ug/L				85	2
Cd	114		ug/L				29	31
Sb	121		ug/L				475	19
Sb	123		ug/L				362	13
Ba	135		ug/L				21	4
Ba	137		ug/L				28	15
> Tb	159		ug/L				1095087	0
Tl	205		ug/L				336	45
Pb	208		ug/L				458	1
Bi	209		ug/L				2703449	1
Th	232		ug/L				2412	23
U	238		ug/L				41	21

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 12:01:10

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1765270	1785027	1
[ Be	9	50.554	ug/L	1.814	3	15	236387	3
C	13		ug/L			135652	138688	3
Cl	37		ug/L			4937799	5209957	2
> Sc	45		ug/L			1259345	1280804	1
V	51	49.643	ug/L	1.337	2	9617	1259926	1
V-1	51	50.026	ug/L	1.269	2	89	1246441	1
Cr	52	49.101	ug/L	0.625	1	28547	1075708	1
Cr	53	50.395	ug/L	0.767	1	178	117242	1
Mn	55	49.655	ug/L	0.674	1	554	1438427	0
Co	59	49.905	ug/L	2.282	4	85	1044223	3
> Ge	72		ug/L			658458	661454	1
Ni	60	51.110	ug/L	1.182	2	39	216468	0
Ni	62	50.588	ug/L	0.812	1	675	30685	1
Cu	63	50.826	ug/L	0.905	1	740	479472	2
Cu	65	51.403	ug/L	0.732	1	68	218894	0
Zn	66	50.142	ug/L	0.945	1	249	131216	2
Zn	67	50.524	ug/L	0.846	1	35	21985	1
Zn	68	50.082	ug/L	0.332	0	261	94722	1
As	75	49.988	ug/L	0.752	1	273	113487	0
As-1	75	50.390	ug/L	1.032	2	10384	125751	0
Se	82	78.055	ug/L	0.647	0	-5	19332	1
Se	78	78.396	ug/L	1.539	1	10570	61867	0
Mo	98	49.358	ug/L	1.112	2	27	252593	1
Y	89		ug/L			411113	417054	0
Kr	83		ug/L			642	690	2
> In	115		ug/L			961280	977377	0
Ag	107	50.813	ug/L	1.024	2	29	590209	2
Cd	111	49.975	ug/L	0.364	0	85	237099	0
Cd	114	49.236	ug/L	0.499	1	29	590924	0
Sb	121	48.893	ug/L	0.321	0	475	687395	0
Sb	123	49.139	ug/L	0.144	0	362	523000	0
Ba	135	50.293	ug/L	0.435	0	21	211384	0
Ba	137	49.934	ug/L	0.327	0	28	363786	0
> Tb	159		ug/L			1095087	1118185	1
Tl	205	48.366	ug/L	1.223	2	336	1868906	0
Pb	208	49.316	ug/L	0.622	1	458	2416236	0
Bi	209		ug/L			2703449	2676799	0
Th	232	51.930	ug/L	0.835	1	2412	2494195	0
U	238	52.137	ug/L	0.834	1	41	2701483	0



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 12:08:02

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1765270	1748642	0
[ Be	9	0.001	ug/L	0.001	50	15	22	15
C	13		ug/L			135652	139886	3
Cl	37		ug/L			4937799	5137510	3
> Sc	45		ug/L			1259345	1255689	2
V	51	-0.006	ug/L	0.010	160	9617	9432	1
V-1	51	0.001	ug/L	0.001	70	89	120	17
Cr	52	-0.032	ug/L	0.034	108	28547	27794	1
Cr	53	-0.007	ug/L	0.007	107	178	162	8
Mn	55	0.001	ug/L	0.001	182	554	567	4
Co	59	0.000	ug/L	0.001	178	85	92	14
> Ge	72		ug/L			658458	653990	2
Ni	60	-0.002	ug/L	0.001	67	39	32	15
Ni	62	-0.198	ug/L	0.061	30	675	554	6
Cu	63	-0.008	ug/L	0.001	17	740	661	4
Cu	65	-0.001	ug/L	0.002	152	68	62	12
Zn	66	0.003	ug/L	0.009	325	249	254	9
Zn	67	-0.000	ug/L	0.012	4462	35	35	15
Zn	68	-0.005	ug/L	0.006	126	261	250	5
As	75	0.008	ug/L	0.003	40	273	290	4
As-1	75	0.040	ug/L	0.118	293	10384	10401	0
Se	82	-0.009	ug/L	0.081	900	-5	-6	285
Se	78	0.119	ug/L	0.409	343	10570	10572	0
Mo	98	0.006	ug/L	0.001	14	27	58	5
Y	89		ug/L			411113	404657	1
Kr	83		ug/L			642	649	5
> In	115		ug/L			961280	955963	0
Ag	107	0.001	ug/L	0.001	117	29	37	24
Cd	111	0.004	ug/L	0.001	15	85	104	2
Cd	114	0.001	ug/L	0.000	28	29	37	5
Sb	121	0.002	ug/L	0.007	452	475	495	20
Sb	123	0.000	ug/L	0.005	1274	362	364	13
Ba	135	0.000	ug/L	0.001	3614	21	21	24
Ba	137	0.002	ug/L	0.002	99	28	39	28
> Tb	159		ug/L			1095087	1079236	0
Tl	205	-0.003	ug/L	0.002	78	336	223	37
Pb	208	0.001	ug/L	0.001	110	458	488	7
Bi	209		ug/L			2703449	2717260	0
Th	232	0.073	ug/L	0.011	14	2412	5751	7
U	238	0.002	ug/L	0.000	12	41	118	7

## Sample Information

Sample Date/Time: Tuesday, November 27, 2012 12:08:02

Method File: C:\NexIONData\Method\200.8nomin.mth

Mass Calibration File: C:\NexIONData\MassCal\Default.tun

Conditions File: C:\NexIONData\Conditions\Default.dac

Calibration File: C:\NexIONData\System\112712.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	<b>0.9999</b>	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	<b>0.9998</b>	0.020	0.20	10	20	50	100
V-1	51	<b>0.9999</b>	0.019	0.20	10	20	50	100
Cr	52	<b>0.9999</b>	0.017	0.50	10	20	50	100
Cr	53	<b>0.9998</b>	0.002	0.50	10	20	50	100
Mn	55	<b>1.0000</b>	0.023	0.50	10	20	50	100
Co	59	<b>1.0000</b>	0.016	0.20	10	20	50	100
Ge	72							
Ni	60	<b>0.9999</b>	0.006	0.50	10	20	50	100
Ni	62	<b>1.0000</b>	0.001	0.50	10	20	50	100
Cu	63	<b>1.0000</b>	0.014	0.50	10	20	50	100
Cu	65	<b>0.9999</b>	0.006	0.50	10	20	50	100
Zn	66	<b>1.0000</b>	0.004	4.00	10	20	50	100
Zn	67	<b>0.9999</b>	0.001	4.00	10	20	50	100
Zn	68	<b>0.9999</b>	0.003	4.00	10	20	50	100
As	75	<b>1.0000</b>	0.003	0.20	10	20	50	100
As-1	75	<b>1.0000</b>	0.003	0.20	10	20	50	100
Se	82	<b>0.9999</b>	0.000	0.50	10	20	50	100
Se	78	<b>1.0000</b>	0.001	0.50	10	20	50	100
Mo	98	<b>1.0000</b>	0.008	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	<b>1.0000</b>	0.012	0.20	10	20	50	100
Cd	111	<b>0.9999</b>	0.005	0.10	10	20	50	100
Cd	114	<b>1.0000</b>	0.012	0.10	10	20	50	100
Sb	121	<b>1.0000</b>	0.014	0.20	10	20	50	100
Sb	123	<b>1.0000</b>	0.011	0.20	10	20	50	100
Ba	135	<b>1.0000</b>	0.004	0.50	10	20	50	100
Ba	137	<b>1.0000</b>	0.007	0.50	10	20	50	100
Tb	159							
Tl	205	<b>0.9997</b>	0.035	0.20	10	20	50	100
Pb	208	<b>0.9999</b>	0.044	0.10	10	20	50	100
Bi	209							
Th	232	<b>0.9998</b>	0.043	0.20	10	20	50	100
U	238	<b>0.9999</b>	0.046	0.20	10	20	50	100

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 12:18:46

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: C:\NexIONData\System\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1765270	1777355	1
[ Be	9	51.135	ug/L	1.526	2	15	238057	1
C	13		ug/L			135652	135627	3
Cl	37		ug/L			4937799	5147273	2
> Sc	45		ug/L			1259345	1298192	1
V	51	47.632	ug/L	0.716	1	9617	1225768	0
V-1	51	48.104	ug/L	0.451	0	89	1214946	0
Cr	52	48.035	ug/L	1.242	2	28547	1067081	1
Cr	53	49.671	ug/L	0.749	1	178	117119	1
Mn	55	48.177	ug/L	0.950	1	554	1414461	0
Co	59	48.157	ug/L	0.752	1	85	1021518	1
> Ge	72		ug/L			658458	662066	1
Ni	60	50.504	ug/L	1.543	3	39	214095	1
Ni	62	51.210	ug/L	1.959	3	675	31077	2
Cu	63	50.824	ug/L	1.341	2	740	479772	1
Cu	65	50.822	ug/L	2.494	4	68	216556	3
Zn	66	50.790	ug/L	2.044	4	249	132988	2
Zn	67	51.442	ug/L	1.486	2	35	22402	1
Zn	68	50.440	ug/L	0.906	1	261	95476	0
As	75	49.948	ug/L	0.371	0	273	113512	0
As-1	75	49.801	ug/L	0.216	0	10384	124542	1
Se	82	50.511	ug/L	0.661	1	-5	12519	0
Se	78	49.970	ug/L	0.153	0	10570	43332	1
Mo	98	49.668	ug/L	0.651	1	27	254454	1
Y	89		ug/L			411113	412794	1
Kr	83		ug/L			642	688	2
> In	115		ug/L			961280	970287	0
Ag	107	49.815	ug/L	1.376	2	29	574437	3
Cd	111	50.969	ug/L	0.401	0	85	240061	0
Cd	114	49.891	ug/L	0.906	1	29	594457	1
Sb	121	49.924	ug/L	0.396	0	475	696808	0
Sb	123	49.860	ug/L	0.201	0	362	526815	0
Ba	135	50.135	ug/L	0.884	1	21	209195	1
Ba	137	49.726	ug/L	0.901	1	28	359639	1
> Tb	159		ug/L			1095087	1128899	0
Tl	205	46.712	ug/L	0.369	0	336	1822757	0
Pb	208	48.137	ug/L	0.570	1	458	2381274	0
Bi	209		ug/L			2703449	2675349	1
Th	232	49.958	ug/L	0.455	0	2412	2422923	0
U	238	50.310	ug/L	0.525	1	41	2632087	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 12:25:18

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
> Li	6		ug/L			1765270	1727319	1
[ Be	9	0.001	ug/L	0.001	187	15	18	37
C	13		ug/L			135652	138730	1
Cl	37		ug/L			4937799	4918244	1
> Sc	45		ug/L			1259345	1248197	0
V	51	0.002	ug/L	0.013	611	9617	9583	3
V-1	51	0.002	ug/L	0.002	98	89	125	30
Cr	52	-0.003	ug/L	0.034	1238	28547	28238	2
Cr	53	-0.005	ug/L	0.008	168	178	166	10
Mn	55	0.001	ug/L	0.001	122	554	581	7
Co	59	0.001	ug/L	0.001	126	85	105	24
> Ge	72		ug/L			658458	645470	2
Ni	60	-0.002	ug/L	0.000	17	39	28	8
Ni	62	-0.314	ug/L	0.030	9	675	480	2
Cu	63	-0.019	ug/L	0.002	11	740	553	1
Cu	65	-0.001	ug/L	0.002	148	68	61	11
Zn	66	0.003	ug/L	0.006	181	249	252	6
Zn	67	0.014	ug/L	0.020	145	35	40	18
Zn	68	0.009	ug/L	0.010	109	261	272	8
As	75	0.014	ug/L	0.006	42	273	299	2
As-1	75	0.079	ug/L	0.122	155	10384	10351	0
Se	82	0.061	ug/L	0.042	69	-5	9	104
Se	78	0.278	ug/L	0.433	156	10570	10535	0
Mo	98	0.007	ug/L	0.001	13	27	63	8
Y	89		ug/L			411113	406945	0
Kr	83		ug/L			642	623	1
> In	115		ug/L			961280	952611	0
Ag	107	0.001	ug/L	0.001	71	29	43	23
Cd	111	-0.000	ug/L	0.001	616	85	84	8
Cd	114	0.001	ug/L	0.000	48	29	40	13
Sb	121	0.034	ug/L	0.005	15	475	933	7
Sb	123	0.034	ug/L	0.007	20	362	712	10
Ba	135	0.000	ug/L	0.001	528	21	21	20
Ba	137	0.002	ug/L	0.000	19	28	40	5
> Tb	159		ug/L			1095087	1083274	0
Tl	205	0.002	ug/L	0.004	228	336	403	39
Pb	208	0.001	ug/L	0.001	87	458	486	6
Bi	209		ug/L			2703449	2700642	0
Th	232	0.138	ug/L	0.019	13	2412	8809	9
U	238	0.002	ug/L	0.000	16	41	160	11

# ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~LOW CHECK~~ 22222

Sample Dil Factor: #11 -27-12

Comments:

Sample Date/Time: Tuesday, November 27, 2012 12:29:26

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1765270	1743373	1
Be	9	0.215 ✓	ug/L	0.002	0	15	995	2
C	13		ug/L			135652	139713	1
Cl	37		ug/L			4937799	4986873	2
Sc	45		ug/L			1259345	1281834	1
V	51	0.197 ✓	ug/L	0.007	3	9617	14761	0
V-1	51	0.203	ug/L	0.002	0	89	5154	1
Cr	52	0.458 ✓	ug/L	0.029	6	28547	38822	0
Cr	53	0.487 ✓	ug/L	0.011	2	178	1314	1
Mn	55	0.494 ✓	ug/L	0.003	0	554	14879	0
Co	59	0.203 ✓	ug/L	0.000	0	85	4341	1
Ge	72		ug/L			658458	665139	2
Ni	60	0.516 ✓	ug/L	0.004	0	39	2235	1
Ni	62	0.154 ✓	ug/L <i>baseline</i>	0.055	36	675	774	3
Cu	63	0.507 ✓	ug/L	0.026	5	740	5549	2
Cu	65	0.517 ✓	ug/L	0.029	5	68	2281	3
Zn	66	4.539 ✓	ug/L	0.167	3	249	12169	3
Zn	67	4.181	ug/L	0.175	4	35	1861	1
Zn	68	4.356	ug/L	0.121	2	261	8524	1
As	75	0.212 ✓	ug/L	0.007	3	273	759	1
As-1	75	0.148	ug/L	0.065	44	10384	10827	1
Se	82	0.529 ✓	ug/L	0.045	8	-5	126	9
Se	78	0.323	ug/L	0.220	68	10570	10888	1
Mo	98	0.196 ✓	ug/L	0.004	1	27	1037	1
Y	89		ug/L			411113	412006	1
Kr	83		ug/L			642	674	1
In	115		ug/L			961280	969137	1
Ag	107	0.208 ✓	ug/L	0.003	1	29	2427	2
Cd	111	0.109	ug/L	0.011	9	85	599	9
Cd	114	0.106 ✓	ug/L	0.001	0	29	1294	1
Sb	121	0.184 ✓	ug/L	0.003	1	475	3040	0
Sb	123	0.185 ✓	ug/L	0.005	2	362	2318	2
Ba	135	0.490 ✓	ug/L	0.006	1	21	2064	0
Ba	137	0.494 ✓	ug/L	0.010	2	28	3594	1
Tb	159		ug/L			1095087	1094432	0
Tl	205	0.195 ✓	ug/L	0.002	1	336	7715	0
Pb	208	0.103 ✓	ug/L	0.002	1	458	5406	1
Bi	209		ug/L			2703449	2724842	0
Th	232	0.149 ✓	ug/L	0.006	3	2412	9417	2
U	238	0.189 ✓	ug/L	0.003	1	41	9642	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 12:33:34

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1765270	1794970	2
Be	9	-0.000	ug/L	0.001	398	15	14	35
C	13		ug/L			135652	235656	2
Cl	37		ug/L			4937799	15121651	2
Sc	45		ug/L			1259345	1275034	2
V	51	0.085	ug/L	0.011	13	9617	11853	0
V-1	51	<del>0.652</del>	ug/L	0.010	1	89	16509	3
Cr	52	0.482	ug/L	0.055	11	28547	39121	1
Cr	53	<del>2.477</del>	ug/L	0.004	0	178	5909	2
Mn	55	0.070	ug/L	0.002	2	554	2572	4
Co	59	0.026	ug/L	0.002	6	85	632	3
Ge	72		ug/L			658458	662302	0
Ni	60	0.340	ug/L	0.015	4	39	1483	4
Ni	62	<del>3.314</del>	ug/L	0.469	14	675	2648	10
Cu	63	0.945	ug/L	0.048	5	740	9654	5
Cu	65	0.351	ug/L	0.019	5	68	1566	4
Zn	66	0.932	ug/L	0.038	4	249	2686	3
Zn	67	5.410	ug/L	0.105	1	35	2389	2
Zn	68	0.366	ug/L	0.018	4	261	954	3
As	75	0.074	ug/L	0.017	23	273	442	8
As-1	75	0.126	ug/L	0.020	15	10384	10733	0
Se	82	-0.222	ug/L	0.094	42	-5	-60	39
Se	78	0.312	ug/L	0.120	38	10570	10836	0
Mo	98	425.554	ug/L	4.102	0	27	2180929	1
Y	89		ug/L			411113	411986	2
Kr	83		ug/L			642	927	6
In	115		ug/L			961280	936622	1
Ag	107	0.019	ug/L	0.001	7	29	235	8
Cd	111	0.124	ug/L	0.022	17	85	647	15
Cd	114	<del>0.238</del>	ug/L	0.003	1	29	2764	2
Sb	121	0.042	ug/L	0.001	1	475	1029	2
Sb	123	0.043	ug/L	0.006	14	362	786	8
Ba	135	0.048	ug/L	0.003	6	21	212	5
Ba	137	0.040	ug/L	0.002	5	28	306	4
Tb	159		ug/L			1095087	1110691	1
Tl	205	0.038	ug/L	0.003	8	336	1798	7
Pb	208	0.030	ug/L	0.001	1	458	1931	1
Bi	209		ug/L			2703449	2461279	0
Th	232	0.195	ug/L	0.071	36	2412	11706	27
U	238	0.000	ug/L	0.000	79	41	57	20

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 12:40:05

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			1765270	1785995	1
Be	9	0.001	ug/L	0.001	114	15	18	16
C	13		ug/L			135652	246610	3
Cl	37		ug/L			4937799	14503251	4
Sc	45		ug/L			1259345	1256932	0
V	51	0.009	ug/L	0.111	1267	9617	9825	28
V-1	51	0.673	ug/L	0.024	3	89	16552	3
Cr	52	20.437	ug/L	0.096	0	28547	456052	1
Cr	53	23.473	ug/L	0.456	1	178	53685	1
Mn	55	19.955	ug/L	0.334	1	554	567639	1
Co	59	19.592	ug/L	0.934	4	85	402422	4
Ge	72		ug/L			658458	648701	2
Ni	60	20.647	ug/L	0.804	3	39	85761	2
Ni	62	23.727	ug/L	0.534	2	675	14465	1
Cu	63	20.789	ug/L	0.655	3	740	192660	0
Cu	65	20.610	ug/L	0.489	2	68	86095	1
Zn	66	20.065	ug/L	0.951	4	249	51601	2
Zn	67	22.067	ug/L	1.083	4	35	9430	2
Zn	68	18.665	ug/L	0.834	4	261	34758	1
As	75	19.900	ug/L	0.406	2	273	44460	0
As-1	75	19.777	ug/L	0.517	2	10384	54608	0
Se	82	-0.209	ug/L	0.043	20	-5	-55	16
Se	78	0.470	ug/L	0.455	96	10570	10710	1
Mo	98	444.632	ug/L	13.982	3	27	2230603	0
Y	89		ug/L			411113	409557	0
Kr	83		ug/L			642	934	4
In	115		ug/L			961280	954366	0
Ag	107	21.121	ug/L	0.745	3	29	239537	3
Cd	111	20.047	ug/L	0.302	1	85	92923	1
Cd	114	19.914	ug/L	0.149	0	29	233398	0
Sb	121	0.037	ug/L	0.004	10	475	984	5
Sb	123	0.039	ug/L	0.007	16	362	759	8
Ba	135	0.047	ug/L	0.005	11	21	211	10
Ba	137	0.041	ug/L	0.004	10	28	317	9
Tb	159		ug/L			1095087	1120147	0
Tl	205	0.026	ug/L	0.001	5	336	1340	3
Pb	208	0.029	ug/L	0.001	4	458	1888	2
Bi	209		ug/L			2703449	2467067	0
Th	232	0.042	ug/L	0.006	13	2412	4482	6
U	238	-0.000	ug/L	0.000	112	41	31	36

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 12:46:57

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1765270	1755141	1
Be	9	200.897	ug/L	2.495	1	15	923731	1
C	13		ug/L			135652	143205	0
Cl	37		ug/L			4937799	5396704	2
Sc	45		ug/L			1259345	1221392	0
V	51	204.393	ug/L	4.163	2	9617	4918440	1
V-1	51	204.604	ug/L	4.149	2	89	4861789	1
Cr	52	201.630	ug/L	2.765	1	28547	4126378	0
Cr	53	202.253	ug/L	3.400	1	178	448163	1
Mn	55	203.897	ug/L	2.855	1	554	5631564	1
Co	59	203.165	ug/L	4.108	2	85	4054639	1
Ge	72		ug/L			658458	616126	1
Ni	60	199.853	ug/L	3.459	1	39	788455	0
Ni	62	202.173	ug/L	2.439	1	675	112345	0
Cu	63	198.962	ug/L	0.479	0	740	1746281	0
Cu	65	200.974	ug/L	3.189	1	68	797056	0
Zn	66	194.071	ug/L	1.456	0	249	472397	0
Zn	67	194.039	ug/L	3.420	1	35	78560	1
Zn	68	194.724	ug/L	5.288	2	261	342307	1
As	75	201.261	ug/L	2.274	1	273	424885	0
As-1	75	198.679	ug/L	3.323	1	10384	433316	1
Se	82	202.985	ug/L	1.819	0	-5	46838	0
Se	78	194.064	ug/L	4.528	2	10570	128076	1
Mo	98	215.162	ug/L	2.006	0	27	1025812	1
Y	89		ug/L			411113	394238	2
Kr	83		ug/L			642	907	2
In	115		ug/L			961280	933930	0
Ag	107	225.021	ug/L	2.809	1	29	2497252	1
Cd	111	200.242	ug/L	3.316	1	85	907474	0
Cd	114	215.779	ug/L	1.731	0	29	2474580	0
Sb	121	217.959	ug/L	2.615	1	475	2926429	0
Sb	123	221.421	ug/L	3.353	1	362	2250447	0
Ba	135	204.636	ug/L	1.756	0	21	821800	0
Ba	137	203.903	ug/L	3.525	1	28	1419382	1
Tb	159		ug/L			1095087	1107940	0
Tl	205	197.484	ug/L	2.832	1	336	7561644	0
Pb	208	201.195	ug/L	1.797	0	458	9766971	0
Bi	209		ug/L			2703449	2440239	0
Th	232	200.138	ug/L	1.240	0	2412	9519002	0
U	238	198.544	ug/L	1.179	0	41	10194879	0



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 12:53:48

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1765270	1733708	1
[ Be	9	286.467	ug/L	6.959	2	15	1300828	1
C	13		ug/L			135652	140093	1
Cl	37		ug/L			4937799	5233317	3
> Sc	45		ug/L			1259345	1207855	1
V	51	305.282	ug/L	5.245	1	9617	7259450	0
V-1	51	304.230	ug/L	5.423	1	89	7147984	0
Cr	52	302.848	ug/L	7.976	2	28547	6114070	1
Cr	53	299.147	ug/L	9.595	3	178	655243	1
Mn	55	296.840	ug/L	4.743	1	554	8106075	0
Co	59	297.534	ug/L	3.433	1	85	5871956	1
> Ge	72		ug/L			658458	605530	0
Ni	60	296.423	ug/L	3.442	1	39	1149375	0
Ni	62	300.203	ug/L	8.569	2	675	163647	2
Cu	63	309.846	ug/L	1.147	0	740	2672429	1
Cu	65	287.075	ug/L	3.142	1	68	1119087	1
Zn	66	282.529	ug/L	3.154	1	249	675853	1
Zn	67	281.546	ug/L	1.734	0	35	112028	1
Zn	68	275.690	ug/L	1.573	0	261	476276	0
As	75	291.008	ug/L	1.239	0	273	603697	0
As-1	75	289.854	ug/L	1.967	0	10384	616942	0
Se	82	284.581	ug/L	2.674	0	-5	64539	0
Se	78	281.053	ug/L	3.874	1	10570	177944	0
Mo	98	318.344	ug/L	6.934	2	27	1491451	1
Y	89		ug/L			411113	388634	2
Kr	83		ug/L			642	1050	1
> In	115		ug/L			961280	910600	0
Ag	107	321.184	ug/L	7.750	2	29	3475661	2
Cd	111	291.159	ug/L	3.395	1	85	1286629	1
Cd	114	313.181	ug/L	4.026	1	29	3501935	1
Sb	121	321.311	ug/L	1.326	0	475	4206454	0
Sb	123	323.536	ug/L	1.887	0	362	3206244	0
Ba	135	308.065	ug/L	4.906	1	21	1206268	1
Ba	137	335.880	ug/L	3.033	0	28	2279701	0
> Tb	159		ug/L			1095087	1100013	0
Tl	205	293.081	ug/L	3.785	1	336	11142365	1
Pb	208	296.734	ug/L	1.817	0	458	14301667	0
Bi	209		ug/L			2703449	2347468	0
Th	232	294.214	ug/L	2.783	0	2412	13892641	1
U	238	293.274	ug/L	2.731	0	41	14951808	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 13:00:40

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
> Li	6		ug/L			1765270	1780284	1
[ Be	9	0.005	ug/L	0.002	45	15	38	28
C	13		ug/L			135652	145279	2
Cl	37		ug/L			4937799	5185995	2
> Sc	45		ug/L			1259345	1244588	0
V	51	0.003	ug/L	0.009	287	9617	9585	2
V-1	51	0.011	ug/L	0.003	28	89	360	20
Cr	52	-0.007	ug/L	0.028	433	28547	28079	2
Cr	53	0.020	ug/L	0.009	44	178	222	8
Mn	55	0.036	ug/L	0.008	22	554	1560	15
Co	59	0.014	ug/L	0.016	115	85	369	90
> Ge	72		ug/L			658458	655120	1
Ni	60	0.037	ug/L	0.022	60	39	194	48
Ni	62	0.292	ug/L	0.064	22	675	844	5
Cu	63	0.054	ug/L	0.021	39	740	1242	16
Cu	65	0.041	ug/L	0.026	64	68	240	46
Zn	66	1.333	ug/L	0.044	3	249	3696	1
Zn	67	1.190	ug/L	0.015	1	35	547	0
Zn	68	1.220	ug/L	0.042	3	261	2540	4
As	75	0.056	ug/L	0.031	55	273	398	18
As-1	75	-0.026	ug/L	0.079	299	10384	10270	0
Se	82	0.017	ug/L	0.014	79	-5	0	439
Se	78	-0.233	ug/L	0.338	145	10570	10364	0
Mo	98	0.083	ug/L	0.005	6	27	446	6
Y	89		ug/L			411113	402849	0
Kr	83		ug/L			642	668	2
> In	115		ug/L			961280	988637	0
Ag	107	0.030	ug/L	0.007	22	29	380	20
Cd	111	0.017	ug/L	0.012	70	85	172	34
Cd	114	0.010	ug/L	0.005	53	29	150	43
Sb	121	0.627	ug/L	0.126	20	475	9398	18
Sb	123	0.634	ug/L	0.129	20	362	7192	19
Ba	135	0.011	ug/L	0.005	40	21	70	28
Ba	137	0.013	ug/L	0.002	18	28	121	14
> Tb	159		ug/L			1095087	1106257	0
Tl	205	0.069	ug/L	0.028	41	336	2955	36
Pb	208	0.011	ug/L	0.004	33	458	973	18
Bi	209		ug/L			2703449	2730340	0
Th	232	0.657	ug/L	0.166	25	2412	33602	22
U	238	0.017	ug/L	0.002	10	41	896	9

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: B2

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 13:06:41

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
> Li	6		ug/L			1765270	1802168	2
[ Be	9	0.003	ug/L	0.000	10	15	31	3
C	13		ug/L			135652	145275	1
Cl	37		ug/L			4937799	5141659	3
> Sc	45		ug/L			1259345	1261919	3
V	51	-0.013	ug/L	0.015	112	9617	9294	1
V-1	51	0.003	ug/L	0.000	8	89	157	0
Cr	52	-0.040	ug/L	0.048	120	28547	27741	1
Cr	53	0.015	ug/L	0.005	35	178	213	6
Mn	55	0.014	ug/L	0.001	6	554	943	2
Co	59	0.000	ug/L	0.000	99	85	94	6
> Ge	72		ug/L			658458	658929	2
Ni	60	0.011	ug/L	0.005	47	39	88	26
Ni	62	-0.084	ug/L	0.074	87	675	626	8
Cu	63	0.000	ug/L	0.003	824	740	744	4
Cu	65	0.009	ug/L	0.002	17	68	107	5
Zn	66	0.160	ug/L	0.009	5	249	666	5
Zn	67	0.174	ug/L	0.020	11	35	110	8
Zn	68	0.153	ug/L	0.019	12	261	548	4
As	75	0.006	ug/L	0.006	90	273	287	2
As-1	75	-0.118	ug/L	0.164	138	10384	10116	1
Se	82	-0.033	ug/L	0.033	98	-5	-13	59
Se	78	-0.443	ug/L	0.568	128	10570	10284	1
Mo	98	0.011	ug/L	0.002	17	27	83	9
Y	89		ug/L			411113	412550	2
Kr	83		ug/L			642	662	3
> In	115		ug/L			961280	986749	1
Ag	107	0.008	ug/L	0.001	16	29	124	12
Cd	111	0.004	ug/L	0.002	41	85	106	7
Cd	114	0.003	ug/L	0.000	15	29	61	8
Sb	121	0.116	ug/L	0.032	27	475	2129	21
Sb	123	0.115	ug/L	0.025	22	362	1608	16
Ba	135	0.004	ug/L	0.001	17	21	36	6
Ba	137	0.005	ug/L	0.001	18	28	63	9
> Tb	159		ug/L			1095087	1101037	1
Tl	205	0.052	ug/L	0.031	58	336	2319	49
Pb	208	0.006	ug/L	0.001	16	458	735	5
Bi	209		ug/L			2703449	2780859	0
Th	232	0.114	ug/L	0.038	33	2412	7823	22
U	238	0.002	ug/L	0.000	23	41	139	15

# ICP-MS Quantitative Analysis - Summary Report

Sample ID: B3

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 13:12:13

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1765270	1799263	0
[ Be	9	0.002	ug/L	0.001	58	15	23	19
C	13		ug/L			135652	153054	1
Cl	37		ug/L			4937799	5089872	0
> Sc	45		ug/L			1259345	1243856	2
V	51	0.001	ug/L	0.015	1614	9617	9516	1
V-1	51	0.001	ug/L	0.000	25	89	118	6
Cr	52	0.000	ug/L	0.041	11228	28547	28191	0
Cr	53	0.002	ug/L	0.011	677	178	180	15
Mn	55	0.008	ug/L	0.001	13	554	775	3
Co	59	0.000	ug/L	0.001	236	85	89	12
> Ge	72		ug/L			658458	653324	2
Ni	60	0.015	ug/L	0.005	33	39	102	21
Ni	62	-0.237	ug/L	0.044	18	675	532	6
Cu	63	0.036	ug/L	0.006	16	740	1065	3
Cu	65	0.050	ug/L	0.003	5	68	279	4
Zn	66	0.278	ug/L	0.009	3	249	963	4
Zn	67	0.223	ug/L	0.014	6	35	130	2
Zn	68	0.274	ug/L	0.022	8	261	770	5
As	75	0.010	ug/L	0.011	111	273	293	8
As-1	75	-0.045	ug/L	0.089	198	10384	10199	0
Se	82	-0.015	ug/L	0.075	514	-5	-8	208
Se	78	-0.203	ug/L	0.329	162	10570	10354	0
Mo	98	0.006	ug/L	0.003	39	27	59	20
Y	89		ug/L			411113	407889	1
Kr	83		ug/L			642	639	7
> In	115		ug/L			961280	991751	0
Ag	107	0.005	ug/L	0.001	16	29	93	10
Cd	111	0.000	ug/L	0.001	512	85	90	8
Cd	114	0.002	ug/L	0.000	21	29	56	10
Sb	121	0.039	ug/L	0.015	38	475	1039	20
Sb	123	0.039	ug/L	0.016	40	362	791	21
Ba	135	0.010	ug/L	0.003	30	21	65	20
Ba	137	0.010	ug/L	0.001	7	28	101	5
> Tb	159		ug/L			1095087	1106019	0
Tl	205	0.033	ug/L	0.024	71	336	1611	56
Pb	208	0.002	ug/L	0.001	41	458	559	7
Bi	209		ug/L			2703449	2734128	0
Th	232	0.022	ug/L	0.015	65	2412	3495	19
U	238	0.000	ug/L	0.000	52	41	57	14

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 13:16:22

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1765270	1825222	0
[ Be	9	50.885	ug/L	1.261	2	15	243332	2
C	13		ug/L			135652	139779	1
Cl	37		ug/L			4937799	5212384	1
> Sc	45		ug/L			1259345	1282916	2
V	51	47.225	ug/L	0.350	0	9617	1201158	1
V-1	51	48.003	ug/L	0.498	1	89	1198135	1
Cr	52	47.292	ug/L	1.416	2	28547	1038619	2
Cr	53	49.962	ug/L	1.031	2	178	116397	0
Mn	55	47.560	ug/L	0.427	0	554	1380062	1
Co	59	47.934	ug/L	1.094	2	85	1004788	2
> Ge	72		ug/L			658458	662128	1
Ni	60	49.448	ug/L	0.212	0	39	209699	1
Ni	62	48.895	ug/L	0.652	1	675	29717	2
Cu	63	50.009	ug/L	0.513	1	740	472264	2
Cu	65	48.586	ug/L	1.138	2	68	207141	2
Zn	66	49.854	ug/L	1.466	2	249	130561	1
Zn	67	49.954	ug/L	0.856	1	35	21760	1
Zn	68	49.796	ug/L	0.344	0	261	94286	1
As	75	48.899	ug/L	0.094	0	273	111151	1
As-1	75	48.793	ug/L	0.173	0	10384	122244	1
Se	82	49.042	ug/L	0.738	1	-5	12157	1
Se	78	48.640	ug/L	0.487	1	10570	42462	0
Mo	98	48.190	ug/L	0.516	1	27	246951	2
Y	89		ug/L			411113	411067	0
Kr	83		ug/L			642	671	5
> In	115		ug/L			961280	965881	1
Ag	107	51.026	ug/L	1.082	2	29	585566	1
Cd	111	51.151	ug/L	0.493	0	85	239812	1
Cd	114	50.194	ug/L	0.613	1	29	595295	1
Sb	121	50.435	ug/L	0.755	1	475	700664	1
Sb	123	50.352	ug/L	0.598	1	362	529534	0
Ba	135	49.955	ug/L	0.269	0	21	207495	1
Ba	137	49.911	ug/L	0.258	0	28	359335	1
> Tb	159		ug/L			1095087	1134868	1
Tl	205	46.081	ug/L	0.216	0	336	1807669	0
Pb	208	47.733	ug/L	0.464	0	458	2373847	1
Bi	209		ug/L			2703449	2705203	1
Th	232	49.618	ug/L	0.399	0	2412	2419080	0
U	238	50.100	ug/L	0.773	1	41	2634878	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 13:23:15

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
> Li	6		ug/L			1765270	1792279	0
Be	9	0.003	ug/L	0.000	19	15	27	9
C	13		ug/L			135652	143559	2
Cl	37		ug/L			4937799	5090633	2
> Sc	45		ug/L			1259345	1254679	2
V	51	-0.012	ug/L	0.010	82	9617	9272	0
V-1	51	0.003	ug/L	0.000	13	89	152	7
Cr	52	-0.052	ug/L	0.035	66	28547	27349	0
Cr	53	-0.002	ug/L	0.000	25	178	174	2
Mn	55	0.005	ug/L	0.000	10	554	685	3
Co	59	0.000	ug/L	0.001	144	85	92	12
> Ge	72		ug/L			658458	644023	0
Ni	60	-0.000	ug/L	0.003	2753	39	38	32
Ni	62	-0.309	ug/L	0.038	12	675	482	5
Cu	63	-0.017	ug/L	0.004	22	740	571	6
Cu	65	0.001	ug/L	0.001	160	68	70	7
Zn	66	0.020	ug/L	0.026	134	249	293	23
Zn	67	0.034	ug/L	0.009	26	35	49	7
Zn	68	0.025	ug/L	0.020	82	261	301	12
As	75	0.018	ug/L	0.010	54	273	306	6
As-1	75	-0.015	ug/L	0.051	336	10384	10122	0
Se	82	-0.013	ug/L	0.070	546	-5	-8	208
Se	78	-0.093	ug/L	0.194	208	10570	10279	0
Mo	98	0.020	ug/L	0.006	27	27	125	21
Y	89		ug/L			411113	404988	1
Kr	83		ug/L			642	655	2
> In	115		ug/L			961280	965950	0
Ag	107	0.005	ug/L	0.001	12	29	90	7
Cd	111	0.002	ug/L	0.002	93	85	98	11
Cd	114	0.001	ug/L	0.001	48	29	44	16
Sb	121	0.134	ug/L	0.040	29	475	2336	23
Sb	123	0.138	ug/L	0.040	28	362	1818	22
Ba	135	-0.001	ug/L	0.002	272	21	17	52
Ba	137	0.002	ug/L	0.001	40	28	40	11
> Tb	159		ug/L			1095087	1091849	0
Tl	205	0.021	ug/L	0.015	71	336	1111	49
Pb	208	0.002	ug/L	0.001	42	458	544	6
Bi	209		ug/L			2703449	2721455	1
Th	232	0.398	ug/L	0.136	34	2412	21028	29
U	238	0.005	ug/L	0.001	23	41	276	18

# ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 13:31:53

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[> Li	6		ug/L				1766731	1
[ Be	9		ug/L				22	10
C	13		ug/L				143235	1
Cl	37		ug/L				4954439	2
[> Sc	45		ug/L				1218098	1
V	51		ug/L				9170	0
V-1	51		ug/L				105	12
Cr	52		ug/L				27160	0
Cr	53		ug/L				170	0
Mn	55		ug/L				674	3
Co	59		ug/L				88	4
[> Ge	72		ug/L				652831	1
Ni	60		ug/L				35	17
Ni	62		ug/L				471	3
Cu	63		ug/L				514	6
Cu	65		ug/L				55	9
Zn	66		ug/L				255	7
Zn	67		ug/L				38	13
Zn	68		ug/L				241	5
As	75		ug/L				310	4
As-1	75		ug/L				9967	1
Se	82		ug/L				4	244
Se	78		ug/L				10138	1
Mo	98		ug/L				31	18
Y	89		ug/L				399449	1
Kr	83		ug/L				635	6
[> In	115		ug/L				965468	0
Ag	107		ug/L				54	8
Cd	111		ug/L				102	4
Cd	114		ug/L				36	13
Sb	121		ug/L				768	18
Sb	123		ug/L				575	25
Ba	135		ug/L				23	16
Ba	137		ug/L				42	10
[> Tb	159		ug/L				1098939	0
Tl	205		ug/L				811	65
Pb	208		ug/L				507	5
Bi	209		ug/L				2742152	1
Th	232		ug/L				5672	23
U	238		ug/L				50	27

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 13:36:02

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1766731	1867260	1
[ Be	9	49.300	ug/L	0.876	1	22	241140	0
C	13		ug/L			143235	143176	1
Cl	37		ug/L			4954439	5233159	1
> Sc	45		ug/L			1218098	1286556	1
V	51	46.999	ug/L	1.006	2	9170	1198531	0
V-1	51	47.329	ug/L	1.010	2	105	1184521	0
Cr	52	47.864	ug/L	0.982	2	27160	1053398	0
Cr	53	49.027	ug/L	0.880	1	170	114553	0
Mn	55	47.585	ug/L	1.387	2	674	1384506	1
Co	59	47.357	ug/L	0.642	1	88	995582	1
> Ge	72		ug/L			652831	661702	1
Ni	60	48.998	ug/L	0.924	1	35	207642	1
Ni	62	48.800	ug/L	0.838	1	471	29437	1
Cu	63	48.448	ug/L	0.541	1	514	456992	0
Cu	65	49.148	ug/L	0.503	1	55	209381	0
Zn	66	49.253	ug/L	1.547	3	255	128942	2
Zn	67	49.693	ug/L	0.718	1	38	21637	1
Zn	68	50.049	ug/L	1.235	2	241	94663	1
As	75	49.058	ug/L	0.823	1	310	111467	0
As-1	75	48.644	ug/L	0.744	1	9967	121479	0
Se	82	50.093	ug/L	1.266	2	4	12418	1
Se	78	48.591	ug/L	0.812	1	10138	42055	0
Mo	98	49.215	ug/L	0.298	0	31	252031	1
Y	89		ug/L			399449	416907	1
Kr	83		ug/L			635	680	7
> In	115		ug/L			965468	988704	1
Ag	107	49.355	ug/L	1.007	2	54	579816	1
Cd	111	50.013	ug/L	0.634	1	102	240018	0
Cd	114	49.133	ug/L	0.605	1	36	596475	0
Sb	121	49.146	ug/L	0.767	1	768	699163	0
Sb	123	49.326	ug/L	1.063	2	575	531175	1
Ba	135	48.072	ug/L	0.816	1	23	204368	0
Ba	137	48.123	ug/L	0.293	0	42	354660	1
> Tb	159		ug/L			1098939	1135668	0
Tl	205	46.219	ug/L	0.432	0	811	1814848	0
Pb	208	47.275	ug/L	0.420	0	507	2352734	0
Bi	209		ug/L			2742152	2697554	0
Th	232	49.590	ug/L	0.631	1	5672	2422812	0
U	238	50.040	ug/L	0.608	1	50	2633696	0



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 13:42:55

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\112712.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1808504	2
[ Be	9	0.001	ug/L	0.001	96	22	28	15
C	13		ug/L			143235	148106	1
Cl	37		ug/L			4954439	5091337	1
> Sc	45		ug/L			1218098	1256431	1
V	51	-0.017	ug/L	0.009	53	9170	9031	2
V-1	51	0.002	ug/L	0.001	30	105	151	9
Cr	52	-0.068	ug/L	0.032	46	27160	26586	2
Cr	53	-0.005	ug/L	0.001	28	170	164	1
Mn	55	0.001	ug/L	0.001	104	674	736	7
Co	59	0.001	ug/L	0.001	111	88	101	9
> Ge	72		ug/L			652831	647534	1
Ni	60	0.001	ug/L	0.002	275	35	38	26
Ni	62	-0.084	ug/L	0.061	72	471	418	7
Cu	63	-0.005	ug/L	0.003	63	514	465	4
Cu	65	0.003	ug/L	0.001	21	55	68	4
Zn	66	-0.002	ug/L	0.009	549	255	248	7
Zn	67	0.009	ug/L	0.021	230	38	42	22
Zn	68	0.019	ug/L	0.008	42	241	275	4
As	75	-0.002	ug/L	0.014	733	310	303	8
As-1	75	0.104	ug/L	0.048	45	9967	10118	0
Se	82	-0.042	ug/L	0.013	30	4	-5	53
Se	78	0.347	ug/L	0.160	46	10138	10277	0
Mo	98	0.016	ug/L	0.003	21	31	110	17
Y	89		ug/L			399449	411156	0
Kr	83		ug/L			635	646	4
> In	115		ug/L			965468	973529	1
Ag	107	0.004	ug/L	0.004	87	54	105	41
Cd	111	-0.001	ug/L	0.003	285	102	98	12
Cd	114	0.002	ug/L	0.002	101	36	60	38
Sb	121	0.091	ug/L	0.031	33	768	2045	20
Sb	123	0.092	ug/L	0.027	29	575	1550	18
Ba	135	0.001	ug/L	0.001	195	23	26	17
Ba	137	0.002	ug/L	0.001	32	42	55	6
> Tb	159		ug/L			1098939	1095219	0
Tl	205	0.001	ug/L	0.011	1734	811	829	47
Pb	208	0.002	ug/L	0.000	30	507	581	3
Bi	209		ug/L			2742152	2725556	0
Th	232	0.286	ug/L	0.111	38	5672	19071	26
U	238	0.005	ug/L	0.001	15	50	293	11

## Sample Information

Sample Date/Time: Tuesday, November 27, 2012 13:42:55

Method File: C:\NexIONData\Method\200.8nomin.mth

Mass Calibration File: C:\NexIONData\MassCal\Default.tun

Conditions File: C:\NexIONData\Conditions\Default.dac

Calibration File: C:\NexIONData\System\112712a.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	<b>0.9999</b>	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	<b>0.9998</b>	0.020	0.20	10	20	50	100
V-1	51	<b>0.9999</b>	0.019	0.20	10	20	50	100
Cr	52	<b>0.9999</b>	0.017	0.50	10	20	50	100
Cr	53	<b>0.9998</b>	0.002	0.50	10	20	50	100
Mn	55	<b>1.0000</b>	0.023	0.50	10	20	50	100
Co	59	<b>1.0000</b>	0.016	0.20	10	20	50	100
Ge	72							
Ni	60	<b>0.9999</b>	0.006	0.50	10	20	50	100
Ni	62	<b>1.0000</b>	0.001	0.50	10	20	50	100
Cu	63	<b>1.0000</b>	0.014	0.50	10	20	50	100
Cu	65	<b>0.9999</b>	0.006	0.50	10	20	50	100
Zn	66	<b>1.0000</b>	0.004	4.00	10	20	50	100
Zn	67	<b>0.9999</b>	0.001	4.00	10	20	50	100
Zn	68	<b>0.9999</b>	0.003	4.00	10	20	50	100
As	75	<b>1.0000</b>	0.003	0.20	10	20	50	100
As-1	75	<b>1.0000</b>	0.003	0.20	10	20	50	100
Se	82	<b>0.9999</b>	0.000	0.50	10	20	50	100
Se	78	<b>1.0000</b>	0.001	0.50	10	20	50	100
Mo	98	<b>1.0000</b>	0.008	0.20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	<b>1.0000</b>	0.012	0.20	10	20	50	100
Cd	111	<b>0.9999</b>	0.005	0.10	10	20	50	100
Cd	114	<b>1.0000</b>	0.012	0.10	10	20	50	100
Sb	121	<b>1.0000</b>	0.014	0.20	10	20	50	100
Sb	123	<b>1.0000</b>	0.011	0.20	10	20	50	100
Ba	135	<b>1.0000</b>	0.004	0.50	10	20	50	100
Ba	137	<b>1.0000</b>	0.007	0.50	10	20	50	100
Tb	159							
Tl	205	<b>0.9997</b>	0.035	0.20	10	20	50	100
Pb	208	<b>0.9999</b>	0.044	0.10	10	20	50	100
Bi	209							
Th	232	<b>0.9998</b>	0.043	0.20	10	20	50	100
U	238	<b>0.9999</b>	0.046	0.20	10	20	50	100

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:04:59

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1802276	1
[ Be	9	0.203	ug/L	0.005	2	22	980	1
C	13		ug/L			143235	147582	1
Cl	37		ug/L			4954439	4959680	3
> Sc	45		ug/L			1218098	1267477	1
V	51	0.200	ug/L	0.016	8	9170	14526	1
V-1	51	0.204	ug/L	0.005	2	105	5145	0
Cr	52	0.480	ug/L	0.041	8	27160	38380	0
Cr	53	0.505	ug/L	0.023	4	170	1336	3
Mn	55	0.483	ug/L	0.008	1	674	14534	0
Co	59	0.199	ug/L	0.007	3	88	4211	1
> Ge	72		ug/L			652831	650782	1
Ni	60	0.521	ug/L	0.013	2	35	2208	3
Ni	62	0.494	ug/L	0.043	8	471	757	3
Cu	63	0.519	ug/L	0.021	4	514	5320	2
Cu	65	0.535	ug/L	0.015	2	55	2297	2
Zn	66	4.579	ug/L	0.087	1	255	12022	3
Zn	67	4.244	ug/L	0.237	5	38	1851	4
Zn	68	4.397	ug/L	0.108	2	241	8398	1
As	75	0.196	ug/L	0.015	7	310	745	2
As-1	75	0.290	ug/L	0.093	31	9967	10587	0
Se	82	0.512	ug/L	0.025	4	4	129	4
Se	78	0.848	ug/L	0.290	34	10138	10649	0
Mo	98	0.183	ug/L	0.008	4	31	952	4
Y	89		ug/L			399449	401839	1
Kr	83		ug/L			635	648	1
> In	115		ug/L			965468	963650	0
Ag	107	0.215	ug/L	0.004	2	54	2520	1
Cd	111	0.107	ug/L	0.008	7	102	605	5
Cd	114	0.107	ug/L	0.004	3	36	1301	4
Sb	121	0.192	ug/L	0.011	5	768	3433	4
Sb	123	0.190	ug/L	0.015	7	575	2563	6
Ba	135	0.501	ug/L	0.009	1	23	2097	1
Ba	137	0.486	ug/L	0.008	1	42	3530	1
> Tb	159		ug/L			1098939	1100287	0
Tl	205	0.188	ug/L	0.011	5	811	7955	4
Pb	208	0.102	ug/L	0.002	2	507	5418	1
Bi	209		ug/L			2742152	2732544	0
Th	232	0.115	ug/L	0.024	21	5672	11124	10
U	238	0.184	ug/L	0.003	1	50	9422	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 MB1 REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:09:06

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1841735	1
Be	9	0.002	ug/L	0.001	67	22	31	17
C	13		ug/L			143235	153503	2
Cl	37		ug/L			4954439	5121372	2
Sc	45		ug/L			1218098	1296345	1
V	51	0.007	ug/L	0.005	73	9170	9927	1
V-1	51	0.003	ug/L	0.001	16	105	197	8
Cr	52	0.013	ug/L	0.012	91	27160	29194	1
Cr	53	0.002	ug/L	0.008	323	170	187	11
Mn	55	0.304	ug/L	0.011	3	674	9630	4
Co	59	0.001	ug/L	0.001	86	88	115	14
Ge	72		ug/L			652831	677498	1
Ni	60	0.007	ug/L	0.002	27	35	68	12
Ni	62	-0.098	ug/L	0.038	38	471	429	6
Cu	63	0.094	ug/L	0.002	1	514	1439	1
Cu	65	0.102	ug/L	0.009	8	55	501	6
Zn	66	0.947	ug/L	0.030	3	255	2797	1
Zn	67	0.910	ug/L	0.029	3	38	445	3
Zn	68	0.958	ug/L	0.057	5	241	2099	4
As	75	-0.009	ug/L	0.009	103	310	301	7
As-1	75	-0.007	ug/L	0.060	824	9967	10326	0
Se	82	-0.045	ug/L	0.031	68	4	-6	116
Se	78	-0.020	ug/L	0.206	1038	10138	10507	0
Mo	98	0.008	ug/L	0.004	42	31	76	25
Y	89		ug/L			399449	422433	1
Kr	83		ug/L			635	675	2
In	115		ug/L			965468	1004476	1
Ag	107	-0.001	ug/L	0.001	57	54	44	17
Cd	111	-0.001	ug/L	0.002	165	102	101	10
Cd	114	0.002	ug/L	0.001	36	36	57	11
Sb	121	-0.035	ug/L	0.004	11	768	289	19
Sb	123	-0.034	ug/L	0.005	14	575	227	24
Ba	135	0.022	ug/L	0.002	10	23	119	9
Ba	137	0.020	ug/L	0.002	11	42	197	8
Tb	159		ug/L			1098939	1134970	1
Tl	205	-0.000	ug/L	0.014	3450	811	815	63
Pb	208	0.004	ug/L	0.000	9	507	742	1
Bi	209		ug/L			2742152	2776107	1
Th	232	-0.002	ug/L	0.023	1329	5672	5760	17
U	238	0.000	ug/L	0.001	1312	50	54	60

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 MB1SPK REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:13:14

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
> Li	6		ug/L			1766731	1860182	1
[ Be	9	24.740	ug/L	0.659	2	22	120553	1
C	13		ug/L			143235	159429	1
Cl	37		ug/L			4954439	5093921	1
> Sc	45		ug/L			1218098	1308215	1
V	51	23.905	ug/L	0.501	2	9170	624795	1
V-1	51	24.411	ug/L	0.385	1	105	621422	1
Cr	52	23.944	ug/L	0.385	1	27160	550448	0
Cr	53	25.681	ug/L	0.345	1	170	61122	2
Mn	55	24.513	ug/L	0.530	2	674	725698	1
Co	59	24.422	ug/L	0.591	2	88	522054	1
> Ge	72		ug/L			652831	655549	1
Ni	60	26.647	ug/L	0.359	1	35	111879	0
Ni	62	26.293	ug/L	0.484	1	471	15929	1
Cu	63	26.743	ug/L	0.711	2	514	250085	1
Cu	65	27.369	ug/L	0.345	1	55	115535	1
Zn	66	84.574	ug/L	2.188	2	255	219123	0
Zn	67	77.338	ug/L	2.106	2	38	33332	1
Zn	68	81.069	ug/L	1.321	1	241	151761	0
As	75	24.949	ug/L	0.610	2	310	56304	0
As-1	75	25.039	ug/L	0.280	1	9967	66804	0
Se	82	79.711	ug/L	2.173	2	4	19571	0
Se	78	77.996	ug/L	1.035	1	10138	60717	1
Mo	98	0.009	ug/L	0.004	37	31	79	24
Y	89		ug/L			399449	409613	0
Kr	83		ug/L			635	692	5
> In	115		ug/L			965468	991619	0
Ag	107	26.590	ug/L	0.375	1	54	313376	1
Cd	111	24.854	ug/L	0.206	0	102	119698	0
Cd	114	24.496	ug/L	0.192	0	36	298312	0
Sb	121	-0.038	ug/L	0.004	10	768	250	23
Sb	123	-0.038	ug/L	0.003	7	575	177	18
Ba	135	24.891	ug/L	0.221	0	23	106157	0
Ba	137	24.715	ug/L	0.212	0	42	182714	0
> Tb	159		ug/L			1098939	1117254	0
Tl	205	24.742	ug/L	0.180	0	811	956136	0
Pb	208	25.505	ug/L	0.245	0	507	1248994	0
Bi	209		ug/L			2742152	2757547	0
Th	232	23.360	ug/L	0.200	0	5672	1125887	0
U	238	23.281	ug/L	0.208	0	50	1205573	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 MB2SPK REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:17:21

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
Li	6		ug/L			1766731	1881597		2
Be	9	23.759	ug/L	0.842	3	22	117086		2
C	13		ug/L			143235	155735		2
Cl	37		ug/L			4954439	5050662		2
Sc	45		ug/L			1218098	1308674		1
V	51	23.743	ug/L	0.329	1	9170	620839		0
V-1	51	24.033	ug/L	0.514	2	105	611901		0
Cr	52	24.159	ug/L	0.263	1	27160	555356		0
Cr	53	25.167	ug/L	0.879	3	170	59896		2
Mn	55	24.769	ug/L	0.554	2	674	733540		1
Co	59	24.081	ug/L	0.567	2	88	514952		0
Ge	72		ug/L			652831	659033		1
Ni	60	26.573	ug/L	0.399	1	35	112166		0
Ni	62	26.052	ug/L	0.691	2	471	15871		1
Cu	63	26.573	ug/L	0.678	2	514	249829		1
Cu	65	26.464	ug/L	0.439	1	55	112307		1
Zn	66	78.117	ug/L	0.037	0	255	203555		1
Zn	67	74.082	ug/L	1.788	2	38	32109		2
Zn	68	77.169	ug/L	0.111	0	241	145271		1
As	75	23.656	ug/L	0.389	1	310	53694		0
As-1	75	23.993	ug/L	0.689	2	9967	64774		1
Se	82	74.428	ug/L	1.640	2	4	18374		1
Se	78	73.720	ug/L	1.442	1	10138	58252		0
Mo	98	0.007	ug/L	0.002	22	31	65		10
Y	89		ug/L			399449	422648		2
Kr	83		ug/L			635	686		6
In	115		ug/L			965468	995384		1
Ag	107	26.603	ug/L	0.398	1	54	314711		1
Cd	111	24.219	ug/L	0.292	1	102	117083		1
Cd	114	23.708	ug/L	0.431	1	36	289778		0
Sb	121	-0.041	ug/L	0.004	9	768	202		28
Sb	123	-0.040	ug/L	0.003	7	575	161		20
Ba	135	24.749	ug/L	0.382	1	23	105943		0
Ba	137	24.398	ug/L	0.391	1	42	181037		0
Tb	159		ug/L			1098939	1129052		1
Tl	205	24.086	ug/L	0.243	1	811	940610		0
Pb	208	24.861	ug/L	0.264	1	507	1230260		0
Bi	209		ug/L			2742152	2761858		0
Th	232	23.158	ug/L	0.263	1	5672	1127925		0
U	238	22.909	ug/L	0.431	1	50	1198638		0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 ADUP REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:21:29

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1867158	1
Be	9	0.005	ug/L	0.001	18	22	48	8
C	13		ug/L			143235	162577	2
Cl	37		ug/L			4954439	5399762	1
Sc	45		ug/L			1218098	1337854	1
V	51	1.401	ug/L	0.021	1	9170	46936	0
V-1	51	1.486	ug/L	0.029	1	105	38779	1
Cr	52	0.450	ug/L	0.007	1	27160	39850	1
Cr	53	0.704	ug/L	0.021	2	170	1894	1
Mn	55	164.424	ug/L	3.726	2	674	4973934	1
Co	59	0.202	ug/L	0.003	1	88	4508	0
Ge	72		ug/L			652831	672065	2
Ni	60	1.338	ug/L	0.039	2	35	5792	2
Ni	62	1.246	ug/L	0.064	5	471	1235	1
Cu	63	2.428	ug/L	0.059	2	514	23755	1
Cu	65	2.220	ug/L	0.080	3	55	9657	1
Zn	66	28.064	ug/L	0.423	1	255	74726	0
Zn	67	24.955	ug/L	0.771	3	38	11052	1
Zn	68	27.397	ug/L	0.465	1	241	52745	1
As	75	0.553	ug/L	0.028	5	310	1590	2
As-1	75	0.516	ug/L	0.090	17	9967	11457	0
Se	82	-0.014	ug/L	0.082	566	4	0	2528
Se	78	-0.067	ug/L	0.294	441	10138	10390	0
Mo	98	1.056	ug/L	0.061	5	31	5519	3
Y	89		ug/L			399449	423562	0
Kr	83		ug/L			635	701	2
In	115		ug/L			965468	1021741	1
Ag	107	0.005	ug/L	0.001	23	54	119	13
Cd	111	0.103	ug/L	0.003	3	102	617	1
Cd	114	0.100	ug/L	0.004	3	36	1295	3
Sb	121	0.802	ug/L	0.009	1	768	12596	0
Sb	123	0.800	ug/L	0.021	2	575	9501	1
Ba	135	4.755	ug/L	0.035	0	23	20916	1
Ba	137	4.756	ug/L	0.056	1	42	36265	1
Tb	159		ug/L			1098939	1166539	0
Tl	205	-0.002	ug/L	0.005	251	811	782	25
Pb	208	0.497	ug/L	0.008	1	507	25915	1
Bi	209		ug/L			2742152	2738644	1
Th	232	0.344	ug/L	0.001	0	5672	23228	0
U	238	0.015	ug/L	0.000	1	50	886	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 A REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:25:36

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			1766731	1879662	0
Be	9	0.024	ug/L	0.002	9	22	144	7
C	13		ug/L			143235	161289	1
Cl	37		ug/L			4954439	5535051	1
Sc	45		ug/L			1218098	1343849	0
V	51	1.419	ug/L	0.018	1	9170	47623	0
V-1	51	1.496	ug/L	0.018	1	105	39241	0
Cr	52	0.515	ug/L	0.042	8	27160	41476	2
Cr	53	0.746	ug/L	0.044	5	170	2006	4
Mn	55	163.307	ug/L	0.822	0	674	4963088	1
Co	59	0.137	ug/L	0.001	1	88	3103	1
Ge	72		ug/L			652831	668790	0
Ni	60	1.320	ug/L	0.019	1	35	5688	0
Ni	62	1.214	ug/L	0.057	4	471	1211	3
Cu	63	3.606	ug/L	0.132	3	514	34868	3
Cu	65	3.436	ug/L	0.053	1	55	14846	1
Zn	66	28.941	ug/L	0.701	2	255	76685	1
Zn	67	26.089	ug/L	0.452	1	38	11502	2
Zn	68	28.229	ug/L	0.714	2	241	54075	1
As	75	0.553	ug/L	0.012	2	310	1583	2
As-1	75	0.557	ug/L	0.061	10	9967	11500	0
Se	82	0.006	ug/L	0.016	251	4	6	62
Se	78	0.075	ug/L	0.241	322	10138	10434	0
Mo	98	1.093	ug/L	0.019	1	31	5686	1
Y	89		ug/L			399449	428783	2
Kr	83		ug/L			635	678	2
In	115		ug/L			965468	1020105	0
Ag	107	0.003	ug/L	0.000	9	54	96	4
Cd	111	0.102	ug/L	0.006	5	102	615	4
Cd	114	0.103	ug/L	0.005	4	36	1325	4
Sb	121	0.816	ug/L	0.005	0	768	12783	0
Sb	123	0.815	ug/L	0.013	1	575	9660	1
Ba	135	4.881	ug/L	0.026	0	23	21434	0
Ba	137	4.862	ug/L	0.021	0	42	37016	0
Tb	159		ug/L			1098939	1169814	1
Tl	205	-0.010	ug/L	0.001	10	811	459	9
Pb	208	0.501	ug/L	0.004	0	507	26235	0
Bi	209		ug/L			2742152	2779039	0
Th	232	0.005	ug/L	0.007	145	5672	6288	6
U	238	0.011	ug/L	0.000	1	50	653	2



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 ASPK REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:29:44

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1894386	2
[ Be	9	23.602	ug/L	0.767	3	22	117109	2
C	13		ug/L			143235	159264	1
Cl	37		ug/L			4954439	5541440	1
> Sc	45		ug/L			1218098	1366599	1
V	51	24.582	ug/L	0.633	2	9170	670837	1
V-1	51	25.022	ug/L	0.633	2	105	665307	1
Cr	52	23.752	ug/L	0.449	1	27160	570710	1
Cr	53	25.232	ug/L	0.430	1	170	62721	0
Mn	55	184.293	ug/L	4.290	2	674	5694595	1
Co	59	23.588	ug/L	0.453	1	88	526796	1
> Ge	72		ug/L			652831	668853	1
Ni	60	27.849	ug/L	0.250	0	35	119325	2
Ni	62	27.027	ug/L	1.255	4	471	16688	2
Cu	63	27.695	ug/L	0.813	2	514	264298	3
Cu	65	27.769	ug/L	0.941	3	55	119577	2
Zn	66	103.574	ug/L	0.424	0	255	273816	1
Zn	67	97.333	ug/L	2.761	2	38	42794	1
Zn	68	101.963	ug/L	1.612	1	241	194703	1
As	75	25.039	ug/L	0.413	1	310	57662	0
As-1	75	24.816	ug/L	0.588	2	9967	67643	1
Se	82	75.464	ug/L	2.111	2	4	18907	2
Se	78	72.795	ug/L	1.563	2	10138	58507	0
Mo	98	1.100	ug/L	0.026	2	31	5726	0
Y	89		ug/L			399449	431774	1
Kr	83		ug/L			635	683	4
> In	115		ug/L			965468	1015727	1
Ag	107	25.982	ug/L	0.256	0	54	313672	2
Cd	111	24.201	ug/L	0.316	1	102	119380	0
Cd	114	23.695	ug/L	0.359	1	36	295542	0
Sb	121	0.807	ug/L	0.013	1	768	12597	1
Sb	123	0.821	ug/L	0.012	1	575	9675	1
Ba	135	29.679	ug/L	0.202	0	23	129649	0
Ba	137	29.586	ug/L	0.031	0	42	224035	1
> Tb	159		ug/L			1098939	1159668	1
Tl	205	23.850	ug/L	0.052	0	811	956738	0
Pb	208	24.880	ug/L	0.315	1	507	1264602	0
Bi	209		ug/L			2742152	2735539	0
Th	232	22.701	ug/L	0.271	1	5672	1135739	0
U	238	23.087	ug/L	0.299	1	50	1240770	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 EDUP REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:33:51

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1942620	0
Be	9	0.001	ug/L	0.001	89	22	32	20
C	13		ug/L			143235	166319	2
Cl	37		ug/L			4954439	5621483	3
Sc	45		ug/L			1218098	1337900	1
V	51	0.317	ug/L	0.026	8	9170	18415	3
V-1	51	0.398	ug/L	0.015	3	105	10483	2
Cr	52	0.176	ug/L	0.049	27	27160	33745	2
Cr	53	0.449	ug/L	0.027	5	170	1276	4
Mn	55	142.248	ug/L	0.833	0	674	4303876	1
Co	59	0.092	ug/L	0.003	3	88	2118	3
Ge	72		ug/L			652831	671231	0
Ni	60	1.131	ug/L	0.010	0	35	4896	1
Ni	62	0.949	ug/L	0.083	8	471	1055	4
Cu	63	1.509	ug/L	0.030	2	514	14951	1
Cu	65	1.288	ug/L	0.022	1	55	5622	1
Zn	66	16.458	ug/L	0.407	2	255	43880	1
Zn	67	14.778	ug/L	0.149	1	38	6556	1
Zn	68	15.975	ug/L	0.265	1	241	30823	1
As	75	0.250	ug/L	0.010	4	310	894	1
As-1	75	0.173	ug/L	0.058	33	9967	10650	0
Se	82	0.007	ug/L	0.023	344	4	6	90
Se	78	-0.229	ug/L	0.189	82	10138	10271	0
Mo	98	0.980	ug/L	0.037	3	31	5121	3
Y	89		ug/L			399449	432789	0
Kr	83		ug/L			635	674	4
In	115		ug/L			965468	1023098	0
Ag	107	0.003	ug/L	0.000	5	54	92	1
Cd	111	0.034	ug/L	0.002	4	102	278	3
Cd	114	0.038	ug/L	0.003	7	36	512	6
Sb	121	0.676	ug/L	0.005	0	768	10756	0
Sb	123	0.674	ug/L	0.007	1	575	8111	0
Ba	135	1.848	ug/L	0.008	0	23	8153	0
Ba	137	1.830	ug/L	0.011	0	42	13996	0
Tb	159		ug/L			1098939	1172128	0
Tl	205	-0.009	ug/L	0.001	11	811	481	9
Pb	208	0.092	ug/L	0.003	2	507	5257	2
Bi	209		ug/L			2742152	2777370	0
Th	232	0.088	ug/L	0.005	5	5672	10495	2
U	238	0.009	ug/L	0.001	7	50	540	5

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 E REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:39:03

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
Li	6		ug/L			1766731	1892710	1
Be	9	0.017	ug/L	0.001	8	22	107	6
C	13		ug/L			143235	166473	1
Cl	37		ug/L			4954439	5374191	3
Sc	45		ug/L			1218098	1322336	1
V	51	0.362	ug/L	0.008	2	9170	19364	0
V-1	51	0.435	ug/L	0.011	2	105	11295	2
Cr	52	0.277	ug/L	0.009	3	27160	35575	0
Cr	53	0.523	ug/L	0.016	3	170	1439	3
Mn	55	146.264	ug/L	3.292	2	674	4373382	1
Co	59	0.100	ug/L	0.002	1	88	2255	1
Ge	72		ug/L			652831	666422	1
Ni	60	1.194	ug/L	0.019	1	35	5132	0
Ni	62	0.931	ug/L	0.098	10	471	1036	4
Cu	63	2.413	ug/L	0.105	4	514	23418	3
Cu	65	2.123	ug/L	0.024	1	55	9165	2
Zn	66	17.251	ug/L	0.093	0	255	45659	1
Zn	67	15.218	ug/L	0.177	1	38	6702	2
Zn	68	16.730	ug/L	0.194	1	241	32040	2
As	75	0.273	ug/L	0.025	9	310	939	6
As-1	75	0.248	ug/L	0.074	29	9967	10744	0
Se	82	0.035	ug/L	0.016	45	4	13	30
Se	78	-0.006	ug/L	0.252	4019	10138	10344	0
Mo	98	1.041	ug/L	0.015	1	31	5398	0
Y	89		ug/L			399449	418555	1
Kr	83		ug/L			635	681	4
In	115		ug/L			965468	1009137	1
Ag	107	0.000	ug/L	0.001	296	54	60	20
Cd	111	0.034	ug/L	0.003	8	102	276	4
Cd	114	0.038	ug/L	0.002	5	36	508	5
Sb	121	0.700	ug/L	0.006	0	768	10963	0
Sb	123	0.687	ug/L	0.017	2	575	8140	0
Ba	135	1.952	ug/L	0.034	1	23	8491	0
Ba	137	1.946	ug/L	0.041	2	42	14677	0
Tb	159		ug/L			1098939	1145763	1
Tl	205	-0.010	ug/L	0.001	9	811	436	7
Pb	208	0.097	ug/L	0.001	1	507	5397	1
Bi	209		ug/L			2742152	2731647	1
Th	232	-0.048	ug/L	0.006	12	5672	3555	7
U	238	0.006	ug/L	0.000	6	50	372	5

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 ESPK REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:43:10

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
> Li	6		ug/L			1766731	1934829		2
[ Be	9	23.621	ug/L	0.975	4	22	119676		1
C	13		ug/L			143235	163399		1
Cl	37		ug/L			4954439	5549236		0
> Sc	45		ug/L			1218098	1339465		2
V	51	24.048	ug/L	0.804	3	9170	643186		0
V-1	51	24.275	ug/L	0.608	2	105	632466		0
Cr	52	24.718	ug/L	1.049	4	27160	580559		1
Cr	53	25.522	ug/L	0.573	2	170	62174		2
Mn	55	170.746	ug/L	6.733	3	674	5168644		1
Co	59	24.029	ug/L	0.517	2	88	525860		0
> Ge	72		ug/L			652831	667084		1
Ni	60	26.915	ug/L	0.155	0	35	115017		1
Ni	62	26.565	ug/L	0.594	2	471	16372		0
Cu	63	28.601	ug/L	0.634	2	514	272162		1
Cu	65	29.190	ug/L	0.381	1	55	125390		1
Zn	66	94.168	ug/L	1.332	1	255	248300		0
Zn	67	87.160	ug/L	0.293	0	38	38233		1
Zn	68	91.220	ug/L	2.955	3	241	173727		1
As	75	24.401	ug/L	0.148	0	310	56057		0
As-1	75	24.007	ug/L	0.525	2	9967	65597		0
Se	82	74.809	ug/L	0.712	0	4	18696		1
Se	78	71.520	ug/L	1.277	1	10138	57515		0
Mo	98	1.057	ug/L	0.041	3	31	5485		2
Y	89		ug/L			399449	422191		2
Kr	83		ug/L			635	661		3
> In	115		ug/L			965468	1013806		0
Ag	107	25.912	ug/L	0.596	2	54	312219		2
Cd	111	24.286	ug/L	0.257	1	102	119580		0
Cd	114	23.682	ug/L	0.216	0	36	294853		0
Sb	121	0.691	ug/L	0.008	1	768	10883		0
Sb	123	0.716	ug/L	0.016	2	575	8506		1
Ba	135	27.255	ug/L	0.239	0	23	118843		0
Ba	137	26.899	ug/L	0.185	0	42	203307		0
> Tb	159		ug/L			1098939	1168794		0
Tl	205	23.959	ug/L	0.086	0	811	968662		0
Pb	208	24.487	ug/L	0.190	0	507	1254458		0
Bi	209		ug/L			2742152	2743464		0
Th	232	23.004	ug/L	0.155	0	5672	1159940		0
U	238	22.967	ug/L	0.109	0	50	1244126		0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:47:19

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1823544	3
[ Be	9	51.356	ug/L	0.965	1	22	245270	1
C	13		ug/L			143235	146739	2
Cl	37		ug/L			4954439	5428232	1
> Sc	45		ug/L			1218098	1262192	2
V	51	47.485	ug/L	1.360	2	9170	1187717	0
V-1	51	48.194	ug/L	1.399	2	105	1183176	1
Cr	52	47.513	ug/L	1.116	2	27160	1026027	1
Cr	53	49.949	ug/L	1.044	2	170	114488	0
Mn	55	48.459	ug/L	1.201	2	674	1383239	0
Co	59	47.511	ug/L	1.149	2	88	979718	0
> Ge	72		ug/L			652831	644959	1
Ni	60	50.256	ug/L	1.134	2	35	207562	1
Ni	62	49.854	ug/L	0.627	1	471	29301	0
Cu	63	50.157	ug/L	1.168	2	514	461101	1
Cu	65	50.126	ug/L	0.378	0	55	208148	0
Zn	66	50.829	ug/L	0.775	1	255	129708	1
Zn	67	51.364	ug/L	1.779	3	38	21794	2
Zn	68	50.358	ug/L	0.823	1	241	92846	0
As	75	50.022	ug/L	0.759	1	310	110777	0
As-1	75	49.849	ug/L	0.793	1	9967	121099	0
Se	82	51.020	ug/L	1.018	1	4	12328	0
Se	78	50.384	ug/L	1.025	2	10138	42134	0
Mo	98	49.214	ug/L	0.503	1	31	245654	2
Y	89		ug/L			399449	401967	0
Kr	83		ug/L			635	680	3
> In	115		ug/L			965468	978928	0
Ag	107	51.728	ug/L	1.021	1	54	601755	1
Cd	111	50.631	ug/L	0.877	1	102	240604	1
Cd	114	49.898	ug/L	0.187	0	36	599854	0
Sb	121	49.661	ug/L	0.086	0	768	699618	0
Sb	123	50.085	ug/L	0.491	0	575	534103	0
Ba	135	49.201	ug/L	0.672	1	23	207126	0
Ba	137	48.996	ug/L	0.479	0	42	357535	0
> Tb	159		ug/L			1098939	1134044	1
Tl	205	46.843	ug/L	0.436	0	811	1836714	1
Pb	208	48.086	ug/L	0.337	0	507	2389656	0
Bi	209		ug/L			2742152	2719010	0
Th	232	50.356	ug/L	0.626	1	5672	2456547	0
U	238	50.987	ug/L	0.368	0	50	2679712	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 14:54:12

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			1766731	1824789	0
Be	9	0.000	ug/L	0.002	773	22	25	48
C	13		ug/L			143235	147268	2
Cl	37		ug/L			4954439	5036578	1
Sc	45		ug/L			1218098	1245210	2
V	51	-0.005	ug/L	0.024	473	9170	9244	4
V-1	51	0.006	ug/L	0.002	35	105	248	18
Cr	52	-0.034	ug/L	0.075	219	27160	27037	3
Cr	53	0.002	ug/L	0.006	326	170	178	7
Mn	55	0.003	ug/L	0.007	199	674	782	22
Co	59	0.001	ug/L	0.001	121	88	109	20
Ge	72		ug/L			652831	643288	2
Ni	60	-0.001	ug/L	0.000	65	35	32	7
Ni	62	-0.144	ug/L	0.016	11	471	381	5
Cu	63	-0.004	ug/L	0.003	69	514	471	5
Cu	65	0.005	ug/L	0.001	22	55	77	6
Zn	66	-0.002	ug/L	0.005	233	255	246	2
Zn	67	0.004	ug/L	0.008	222	38	39	10
Zn	68	0.011	ug/L	0.010	95	241	258	9
As	75	0.011	ug/L	0.028	244	310	331	20
As-1	75	0.048	ug/L	0.085	176	9967	9925	0
Se	82	-0.024	ug/L	0.082	341	4	-1	1806
Se	78	0.154	ug/L	0.350	227	10138	10083	0
Mo	98	0.022	ug/L	0.010	47	31	140	36
Y	89		ug/L			399449	388665	2
Kr	83		ug/L			635	664	3
In	115		ug/L			965468	961937	0
Ag	107	0.008	ug/L	0.009	120	54	144	76
Cd	111	0.002	ug/L	0.007	450	102	110	32
Cd	114	0.004	ug/L	0.006	147	36	87	86
Sb	121	0.091	ug/L	0.035	38	768	2031	24
Sb	123	0.097	ug/L	0.036	36	575	1593	23
Ba	135	0.003	ug/L	0.004	102	23	37	40
Ba	137	0.003	ug/L	0.003	132	42	60	41
Tb	159		ug/L			1098939	1094851	0
Tl	205	-0.010	ug/L	0.006	59	811	424	53
Pb	208	0.003	ug/L	0.003	96	507	643	20
Bi	209		ug/L			2742152	2741572	0
Th	232	0.339	ug/L	0.150	44	5672	21551	32
U	238	0.007	ug/L	0.003	51	50	384	43

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 MB2 REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:06:16

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
> Li	6		ug/L			1766731	1872020	2
[ Be	9	0.009	ug/L	0.001	10	22	66	4
C	13		ug/L			143235	158425	1
Cl	37		ug/L			4954439	5157984	1
> Sc	45		ug/L			1218098	1294238	3
V	51	0.013	ug/L	0.015	117	9170	10064	1
V-1	51	0.016	ug/L	0.001	6	105	525	1
Cr	52	0.029	ug/L	0.061	208	27160	29468	2
Cr	53	0.042	ug/L	0.015	35	170	279	9
Mn	55	0.573	ug/L	0.032	5	674	17462	2
Co	59	0.011	ug/L	0.000	2	88	335	1
> Ge	72		ug/L			652831	653309	1
Ni	60	0.042	ug/L	0.002	3	35	212	1
Ni	62	-0.108	ug/L	0.070	64	471	408	9
Cu	63	0.108	ug/L	0.008	6	514	1518	3
Cu	65	0.127	ug/L	0.006	5	55	588	4
Zn	66	0.878	ug/L	0.033	3	255	2519	2
Zn	67	0.796	ug/L	0.027	3	38	380	4
Zn	68	0.906	ug/L	0.017	1	241	1928	1
As	75	0.008	ug/L	0.012	147	310	328	6
As-1	75	0.086	ug/L	0.074	85	9967	10169	0
Se	82	-0.026	ug/L	0.060	227	4	-2	712
Se	78	0.300	ug/L	0.268	89	10138	10338	0
Mo	98	0.006	ug/L	0.001	18	31	61	9
Y	89		ug/L			399449	409916	1
Kr	83		ug/L			635	678	1
> In	115		ug/L			965468	982896	0
Ag	107	0.013	ug/L	0.001	8	54	205	6
Cd	111	0.007	ug/L	0.003	40	102	139	9
Cd	114	0.009	ug/L	0.001	9	36	146	7
Sb	121	-0.017	ug/L	0.005	28	768	543	13
Sb	123	-0.017	ug/L	0.007	41	575	408	18
Ba	135	0.047	ug/L	0.002	4	23	222	4
Ba	137	0.053	ug/L	0.002	4	42	428	3
> Tb	159		ug/L			1098939	1125223	1
Tl	205	0.003	ug/L	0.003	89	811	696	18
Pb	208	0.017	ug/L	0.001	2	507	1357	2
Bi	209		ug/L			2742152	2763871	0
Th	232	0.087	ug/L	0.027	31	5672	10027	14
U	238	0.010	ug/L	0.000	3	50	565	2

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 B REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:10:24

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1877146	2
Be	9	0.055	ug/L	0.002	4	22	293	4
C	13		ug/L			143235	170704	1
Cl	37		ug/L			4954439	5438814	1
Sc	45		ug/L			1218098	1370876	1
V	51	16.836	ug/L	0.284	1	9170	464143	0
V-1	51	17.087	ug/L	0.262	1	105	455794	0
Cr	52	4.049	ug/L	0.074	1	27160	122964	2
Cr	53	4.438	ug/L	0.087	1	170	11225	2
Mn	55	486.956	ug/L	6.154	1	674	15093849	1
Co	59	0.640	ug/L	0.007	1	88	14442	2
Ge	72		ug/L			652831	662887	0
Ni	60	2.029	ug/L	0.037	1	35	8646	1
Ni	62	1.730	ug/L	0.083	4	471	1506	3
Cu	63	10.751	ug/L	0.164	1	514	102001	1
Cu	65	10.671	ug/L	0.109	1	55	45590	1
Zn	66	86.646	ug/L	1.489	1	255	227067	1
Zn	67	80.962	ug/L	0.823	1	38	35292	0
Zn	68	84.357	ug/L	1.434	1	241	159698	1
As	75	3.745	ug/L	0.075	1	310	8815	1
As-1	75	3.553	ug/L	0.102	2	9967	18271	0
Se	82	0.143	ug/L	0.069	48	4	40	42
Se	78	-0.358	ug/L	0.218	60	10138	10059	1
Mo	98	2.597	ug/L	0.009	0	31	13353	1
Y	89		ug/L			399449	465618	1
Kr	83		ug/L			635	675	2
In	115		ug/L			965468	991430	0
Ag	107	0.021	ug/L	0.000	1	54	306	1
Cd	111	0.572	ug/L	0.011	1	102	2858	1
Cd	114	0.541	ug/L	0.011	2	36	6630	2
Sb	121	1.735	ug/L	0.010	0	768	25510	0
Sb	123	1.733	ug/L	0.013	0	575	19288	0
Ba	135	37.814	ug/L	0.453	1	23	161229	1
Ba	137	37.850	ug/L	0.355	0	42	279737	0
Tb	159		ug/L			1098939	1171277	0
Tl	205	0.002	ug/L	0.002	74	811	960	6
Pb	208	5.316	ug/L	0.052	0	507	273342	0
Bi	209		ug/L			2742152	2691364	0
Th	232	0.112	ug/L	0.021	18	5672	11671	8
U	238	0.051	ug/L	0.001	1	50	2802	1



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 C REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:14:31

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens.	Meas Intens.	Intens. RSD
Li	6		ug/L			1766731	1892415	1
Be	9	0.015	ug/L	0.003	17	22	98	14
C	13		ug/L			143235	159063	0
Cl	37		ug/L			4954439	5074194	3
Sc	45		ug/L			1218098	1337388	0
V	51	0.540	ug/L	0.008	1	9170	24268	0
V-1	51	0.583	ug/L	0.003	0	105	15276	0
Cr	52	0.521	ug/L	0.044	8	27160	41405	2
Cr	53	0.666	ug/L	0.018	2	170	1803	2
Mn	55	62.099	ug/L	0.831	1	674	1878554	1
Co	59	0.137	ug/L	0.004	2	88	3093	2
Ge	72		ug/L			652831	675793	1
Ni	60	0.614	ug/L	0.001	0	35	2691	1
Ni	62	0.133	ug/L	0.028	21	471	568	4
Cu	63	3.874	ug/L	0.069	1	514	37806	0
Cu	65	3.790	ug/L	0.082	2	55	16541	0
Zn	66	174.706	ug/L	0.252	0	255	466498	1
Zn	67	154.103	ug/L	4.632	3	38	68438	2
Zn	68	164.790	ug/L	3.513	2	241	317882	3
As	75	0.626	ug/L	0.012	1	310	1769	1
As-1	75	0.584	ug/L	0.041	7	9967	11682	0
Se	82	0.005	ug/L	0.065	1353	4	5	278
Se	78	-0.117	ug/L	0.135	115	10138	10416	0
Mo	98	0.492	ug/L	0.015	2	31	2603	2
Y	89		ug/L			399449	426330	0
Kr	83		ug/L			635	660	4
In	115		ug/L			965468	1026981	0
Ag	107	0.001	ug/L	0.001	65	54	70	12
Cd	111	0.514	ug/L	0.011	2	102	2671	1
Cd	114	0.512	ug/L	0.005	1	36	6491	0
Sb	121	0.968	ug/L	0.011	1	768	15108	0
Sb	123	0.975	ug/L	0.013	1	575	11505	1
Ba	135	7.824	ug/L	0.043	0	23	34577	0
Ba	137	7.790	ug/L	0.097	1	42	59675	1
Tb	159		ug/L			1098939	1166375	0
Tl	205	-0.012	ug/L	0.001	4	811	395	4
Pb	208	0.390	ug/L	0.001	0	507	20479	0
Bi	209		ug/L			2742152	2783546	0
Th	232	-0.076	ug/L	0.005	7	5672	2197	12
U	238	0.011	ug/L	0.000	0	50	630	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 D REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:18:39

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1894134	1
Be	9	0.021	ug/L	0.003	15	22	126	12
C	13		ug/L			143235	160086	2
Cl	37		ug/L			4954439	6092318	4
Sc	45		ug/L			1218098	1313972	3
V	51	1.031	ug/L	0.044	4	9170	36504	2
V-1	51	1.299	ug/L	0.040	3	105	33312	2
Cr	52	0.416	ug/L	0.031	7	27160	38393	2
Cr	53	1.315	ug/L	0.025	1	170	3317	3
Mn	55	421.300	ug/L	11.615	2	674	12510720	0
Co	59	0.174	ug/L	0.010	5	88	3818	3
Ge	72		ug/L			652831	642444	1
Ni	60	0.665	ug/L	0.028	4	35	2768	2
Ni	62	0.203	ug/L	0.015	7	471	580	2
Cu	63	3.028	ug/L	0.136	4	514	28192	3
Cu	65	2.204	ug/L	0.053	2	55	9170	2
Zn	66	35.641	ug/L	0.645	1	255	90664	1
Zn	67	32.548	ug/L	1.085	3	38	13770	2
Zn	68	34.766	ug/L	0.458	1	241	63923	0
As	75	0.505	ug/L	0.015	2	310	1415	1
As-1	75	0.584	ug/L	0.072	12	9967	11105	0
Se	82	0.033	ug/L	0.045	139	4	12	90
Se	78	0.418	ug/L	0.198	47	10138	10241	0
Mo	98	0.455	ug/L	0.004	0	31	2293	1
Y	89		ug/L			399449	409540	2
Kr	83		ug/L			635	698	3
In	115		ug/L			965468	967432	1
Ag	107	-0.001	ug/L	0.001	76	54	45	16
Cd	111	0.144	ug/L	0.005	3	102	777	2
Cd	114	0.144	ug/L	0.002	1	36	1744	2
Sb	121	0.889	ug/L	0.010	1	768	13138	0
Sb	123	0.901	ug/L	0.017	1	575	10062	1
Ba	135	6.699	ug/L	0.141	2	23	27890	2
Ba	137	6.654	ug/L	0.050	0	42	48024	1
Tb	159		ug/L			1098939	1126114	0
Tl	205	-0.007	ug/L	0.001	16	811	549	7
Pb	208	0.146	ug/L	0.002	1	507	7739	1
Bi	209		ug/L			2742152	2557490	0
Th	232	-0.081	ug/L	0.005	6	5672	1879	12
U	238	0.012	ug/L	0.001	6	50	656	6

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 F REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:22:46

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: C:\NexIONData\System\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1891273	0
Be	9	0.001	ug/L	0.001	73	22	29	12
C	13		ug/L			143235	173063	1
Cl	37		ug/L			4954439	5326295	0
Sc	45		ug/L			1218098	1313969	1
V	51	0.545	ug/L	0.014	2	9170	23969	1
V-1	51	0.646	ug/L	0.009	1	105	16626	0
Cr	52	0.304	ug/L	0.049	16	27160	35948	2
Cr	53	0.643	ug/L	0.037	5	170	1713	3
Mn	55	113.744	ug/L	3.235	2	674	3378947	1
Co	59	0.065	ug/L	0.001	2	88	1485	2
Ge	72		ug/L			652831	653615	1
Ni	60	0.459	ug/L	0.011	2	35	1955	1
Ni	62	0.017	ug/L	0.008	50	471	481	0
Cu	63	1.781	ug/L	0.033	1	514	17089	0
Cu	65	1.616	ug/L	0.016	0	55	6852	0
Zn	66	4.720	ug/L	0.091	1	255	12434	0
Zn	67	4.495	ug/L	0.045	1	38	1968	2
Zn	68	4.976	ug/L	0.137	2	241	9514	1
As	75	0.324	ug/L	0.018	5	310	1036	2
As-1	75	0.305	ug/L	0.051	16	9967	10669	0
Se	82	0.056	ug/L	0.064	115	4	18	85
Se	78	0.072	ug/L	0.153	212	10138	10196	0
Mo	98	2.583	ug/L	0.009	0	31	13093	1
Y	89		ug/L			399449	412695	0
Kr	83		ug/L			635	696	3
In	115		ug/L			965468	1002612	0
Ag	107	-0.002	ug/L	0.000	14	54	34	8
Cd	111	0.016	ug/L	0.002	12	102	185	5
Cd	114	0.018	ug/L	0.000	1	36	260	1
Sb	121	0.741	ug/L	0.010	1	768	11477	1
Sb	123	0.738	ug/L	0.016	2	575	8653	1
Ba	135	1.541	ug/L	0.028	1	23	6668	1
Ba	137	1.523	ug/L	0.015	0	42	11425	0
Tb	159		ug/L			1098939	1146634	0
Tl	205	-0.011	ug/L	0.001	10	811	408	10
Pb	208	0.111	ug/L	0.000	0	507	6096	0
Bi	209		ug/L			2742152	2699232	0
Th	232	-0.094	ug/L	0.004	3	5672	1279	13
U	238	0.005	ug/L	0.000	4	50	292	3

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 G REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:26:53

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1957359	1
Be	9	0.000	ug/L	0.001	222	22	26	10
C	13		ug/L			143235	164552	2
Cl	37		ug/L			4954439	5222649	0
> Sc	45		ug/L			1218098	1308102	1
V	51	0.336	ug/L	0.011	3	9170	18491	0
V-1	51	0.383	ug/L	0.007	1	105	9865	0
Cr	52	0.310	ug/L	0.015	4	27160	35915	0
Cr	53	0.471	ug/L	0.009	1	170	1300	2
Mn	55	56.727	ug/L	0.706	1	674	1678372	0
Co	59	0.109	ug/L	0.002	1	88	2429	2
> Ge	72		ug/L			652831	657067	0
Ni	60	0.563	ug/L	0.014	2	35	2403	2
Ni	62	0.180	ug/L	0.016	8	471	580	1
Cu	63	2.225	ug/L	0.010	0	514	21332	0
Cu	65	2.268	ug/L	0.055	2	55	9648	2
Zn	66	167.089	ug/L	1.680	1	255	433805	1
Zn	67	151.388	ug/L	3.655	2	38	65377	1
Zn	68	161.469	ug/L	1.588	0	241	302786	0
As	75	0.497	ug/L	0.017	3	310	1430	2
As-1	75	0.470	ug/L	0.072	15	9967	11099	0
Se	82	-0.022	ug/L	0.035	160	4	0	1025
Se	78	-0.032	ug/L	0.259	813	10138	10183	1
Mo	98	0.449	ug/L	0.024	5	31	2314	4
Y	89		ug/L			399449	415090	1
Kr	83		ug/L			635	694	2
> In	115		ug/L			965468	1006953	0
Ag	107	-0.000	ug/L	0.000	468	54	55	8
Cd	111	0.469	ug/L	0.009	1	102	2398	1
Cd	114	0.469	ug/L	0.008	1	36	5835	1
Sb	121	0.939	ug/L	0.008	0	768	14388	0
Sb	123	0.945	ug/L	0.019	1	575	10959	1
Ba	135	7.480	ug/L	0.007	0	23	32410	0
Ba	137	7.403	ug/L	0.046	0	42	55609	0
> Tb	159		ug/L			1098939	1161020	0
Tl	205	-0.013	ug/L	0.001	7	811	355	11
Pb	208	0.161	ug/L	0.003	1	507	8704	0
Bi	209		ug/L			2742152	2777829	0
Th	232	-0.099	ug/L	0.003	2	5672	1062	13
U	238	0.007	ug/L	0.000	5	50	455	4

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS17 H REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:32:05

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens	Intens. RSD
Li	6		ug/L			1766731	1916289	1
Be	9	0.018	ug/L	0.002	11	22	115	9
C	13		ug/L			143235	167840	2
Cl	37		ug/L			4954439	6347190	5
Sc	45		ug/L			1218098	1344631	0
V	51	0.353	ug/L	0.026	7	9170	19450	2
V-1	51	0.703	ug/L	0.015	2	105	18516	2
Cr	52	0.232	ug/L	0.035	15	27160	35180	1
Cr	53	1.430	ug/L	0.070	4	170	3676	5
Mn	55	401.847	ug/L	5.011	1	674	12219094	2
Co	59	0.156	ug/L	0.002	1	88	3519	2
Ge	72		ug/L			652831	649703	0
Ni	60	0.689	ug/L	0.011	1	35	2901	0
Ni	62	0.196	ug/L	0.058	29	471	582	5
Cu	63	2.392	ug/L	0.045	1	514	22644	1
Cu	65	1.637	ug/L	0.041	2	55	6902	3
Zn	66	31.601	ug/L	0.197	0	255	81327	0
Zn	67	28.990	ug/L	0.331	1	38	12410	1
Zn	68	30.839	ug/L	0.397	1	241	57374	1
As	75	0.377	ug/L	0.016	4	310	1146	2
As-1	75	0.287	ug/L	0.039	13	9967	10565	0
Se	82	0.085	ug/L	0.032	37	4	25	31
Se	78	-0.135	ug/L	0.130	96	10138	10003	0
Mo	98	0.433	ug/L	0.008	1	31	2208	1
Y	89		ug/L			399449	404860	4
Kr	83		ug/L			635	698	1
In	115		ug/L			965468	980566	1
Ag	107	-0.002	ug/L	0.000	7	54	26	7
Cd	111	0.114	ug/L	0.005	4	102	648	4
Cd	114	0.111	ug/L	0.003	2	36	1373	1
Sb	121	0.850	ug/L	0.028	3	768	12762	1
Sb	123	0.863	ug/L	0.019	2	575	9795	2
Ba	135	5.407	ug/L	0.023	0	23	22822	1
Ba	137	5.356	ug/L	0.049	0	42	39190	1
Tb	159		ug/L			1098939	1151222	0
Tl	205	-0.008	ug/L	0.001	15	811	545	9
Pb	208	0.103	ug/L	0.002	1	507	5711	1
Bi	209		ug/L			2742152	2606430	0
Th	232	-0.096	ug/L	0.002	1	5672	1178	7
U	238	0.011	ug/L	0.001	5	50	642	4

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VT58 D SWN

Sample Dil Factor: 100

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:36:12

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1889185	1
[ Be	9	0.010	ug/L	0.002	23	22	71	15
C	13		ug/L			143235	152287	2
Cl	37		ug/L			4954439	5361830	1
> Sc	45		ug/L			1218098	1293315	1
V	51	9.118	ug/L	0.131	1	9170	241610	0
V-1	51	9.246	ug/L	0.109	1	105	232721	0
Cr	52	0.873	ug/L	0.106	12	27160	47604	3
Cr	53	1.005	ug/L	0.032	3	170	2536	1
Mn	55	21.913	ug/L	0.289	1	674	641455	1
Co	59	0.434	ug/L	0.022	4	88	9259	3
> Ge	72		ug/L			652831	666915	1
Ni	60	0.162	ug/L	0.008	4	35	730	5
Ni	62	0.118	ug/L	0.041	34	471	552	5
Cu	63	149.585	ug/L	5.546	3	514	1420420	1
Cu	65	154.255	ug/L	4.289	2	55	662079	1
Zn	66	56.780	ug/L	0.799	1	255	149768	0
Zn	67	53.965	ug/L	0.114	0	38	23680	1
Zn	68	55.324	ug/L	2.209	3	241	105410	2
As	75	0.885	ug/L	0.015	1	310	2338	0
As-1	75	0.769	ug/L	0.152	19	9967	11954	1
Se	82	2.131	ug/L	0.032	1	4	536	0
Se	78	1.707	ug/L	0.519	30	10138	11478	1
Mo	98	4.707	ug/L	0.116	2	31	24314	0
Y	89		ug/L			399449	422725	1
Kr	83		ug/L			635	673	3
> In	115		ug/L			965468	1075958	0
Ag	107	0.586	ug/L	0.021	3	54	7550	3
Cd	111	0.119	ug/L	0.006	4	102	735	4
Cd	114	0.117	ug/L	0.001	0	36	1584	0
Sb	121	-0.045	ug/L	0.002	4	768	161	18
Sb	123	-0.044	ug/L	0.001	2	575	127	11
Ba	135	26.398	ug/L	0.151	0	23	122163	0
Ba	137	26.299	ug/L	0.406	1	42	210961	1
> Tb	159		ug/L			1098939	1151681	0
Tl	205	0.208	ug/L	0.004	1	811	9109	1
Pb	208	18.737	ug/L	0.139	0	507	945984	0
Bi	209		ug/L			2742152	2879146	0
Th	232	-0.067	ug/L	0.003	5	5672	2645	5
U	238	0.042	ug/L	0.001	3	50	2317	2

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VT58 E SWN

Sample Dil Factor: 100

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:40:29

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1885103	2
[ Be	9	0.008	ug/L	0.002	28	22	65	15
C	13		ug/L			143235	155772	2
Cl	37		ug/L			4954439	5306870	1
> Sc	45		ug/L			1218098	1294195	2
V	51	9.187	ug/L	0.283	3	9170	243436	0
V-1	51	9.317	ug/L	0.288	3	105	234568	0
Cr	52	1.013	ug/L	0.079	7	27160	50669	3
Cr	53	1.154	ug/L	0.030	2	170	2889	0
Mn	55	22.141	ug/L	1.041	4	674	648124	2
Co	59	0.126	ug/L	0.002	1	88	2759	3
> Ge	72		ug/L			652831	655241	2
Ni	60	0.144	ug/L	0.010	6	35	638	7
Ni	62	0.133	ug/L	0.038	28	471	550	1
Cu	63	109.153	ug/L	1.777	1	514	1018748	0
Cu	65	111.688	ug/L	4.072	3	55	470891	1
Zn	66	24.900	ug/L	0.828	3	255	64655	1
Zn	67	26.274	ug/L	0.631	2	38	11344	1
Zn	68	26.126	ug/L	0.792	3	241	49038	0
As	75	0.817	ug/L	0.023	2	310	2144	2
As-1	75	0.786	ug/L	0.115	14	9967	11783	0
Se	82	2.017	ug/L	0.045	2	4	499	4
Se	78	1.937	ug/L	0.353	18	10138	11427	0
Mo	98	5.528	ug/L	0.243	4	31	28043	2
Y	89		ug/L			399449	419359	1
Kr	83		ug/L			635	696	0
> In	115		ug/L			965468	1058980	0
Ag	107	0.641	ug/L	0.022	3	54	8130	3
Cd	111	0.028	ug/L	0.000	1	102	259	1
Cd	114	0.028	ug/L	0.002	7	36	398	6
Sb	121	-0.047	ug/L	0.001	2	768	121	15
Sb	123	-0.046	ug/L	0.002	4	575	106	21
Ba	135	31.528	ug/L	0.046	0	23	143598	0
Ba	137	31.095	ug/L	0.086	0	42	245486	0
> Tb	159		ug/L			1098939	1158193	0
Tl	205	0.199	ug/L	0.002	1	811	8821	0
Pb	208	19.645	ug/L	0.091	0	507	997406	0
Bi	209		ug/L			2742152	2856003	1
Th	232	-0.053	ug/L	0.003	5	5672	3330	4
U	238	0.026	ug/L	0.000	1	50	1436	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VT58 F SWN

Sample Dil Factor: 100

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:44:36

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
Li	6		ug/L			1766731	1884285		2
Be	9	0.014	ug/L	0.001	7	22	94		6
C	13		ug/L			143235	154741		3
Cl	37		ug/L			4954439	5204530		1
Sc	45		ug/L			1218098	1316256		1
V	51	10.956	ug/L	0.175	1	9170	293484		1
V-1	51	11.127	ug/L	0.176	1	105	285044		2
Cr	52	1.436	ug/L	0.062	4	27160	60783		0
Cr	53	1.670	ug/L	0.023	1	170	4169		0
Mn	55	24.958	ug/L	0.241	0	674	743586		2
Co	59	0.440	ug/L	0.010	2	88	9551		0
Ge	72		ug/L			652831	654732		1
Ni	60	0.180	ug/L	0.011	6	35	791		6
Ni	62	0.054	ug/L	0.057	105	471	503		6
Cu	63	83.755	ug/L	1.345	1	514	781276		0
Cu	65	82.761	ug/L	1.135	1	55	348811		0
Zn	66	41.873	ug/L	1.220	2	255	108497		2
Zn	67	40.340	ug/L	1.251	3	38	17384		2
Zn	68	42.799	ug/L	0.724	1	241	80138		0
As	75	0.745	ug/L	0.041	5	310	1980		3
As-1	75	0.690	ug/L	0.106	15	9967	11557		0
Se	82	1.924	ug/L	0.046	2	4	476		2
Se	78	1.737	ug/L	0.238	13	10138	11290		0
Mo	98	3.699	ug/L	0.058	1	31	18768		0
Y	89		ug/L			399449	420389		0
Kr	83		ug/L			635	679		3
In	115		ug/L			965468	1057087		1
Ag	107	0.567	ug/L	0.004	0	54	7181		1
Cd	111	0.035	ug/L	0.003	7	102	292		3
Cd	114	0.034	ug/L	0.002	5	36	483		3
Sb	121	-0.048	ug/L	0.002	4	768	104		30
Sb	123	-0.048	ug/L	0.001	1	575	78		11
Ba	135	35.011	ug/L	0.707	2	23	159142		0
Ba	137	34.579	ug/L	0.194	0	42	272485		0
Tb	159		ug/L			1098939	1145362		1
Tl	205	0.288	ug/L	0.007	2	811	12240		1
Pb	208	12.283	ug/L	0.085	0	507	616897		0
Bi	209		ug/L			2742152	2851001		1
Th	232	-0.024	ug/L	0.003	13	5672	4724		2
U	238	0.045	ug/L	0.001	2	50	2428		2



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:48:46

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: C:\NexIONData\System\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1766731	1862298	0
[ Be	9	50.829	ug/L	0.611	1	22	247991	0
C	13		ug/L			143235	146393	1
Cl	37		ug/L			4954439	5375900	0
> Sc	45		ug/L			1218098	1276748	0
V	51	46.479	ug/L	1.071	2	9170	1176566	1
V-1	51	47.224	ug/L	1.082	2	105	1173117	2
Cr	52	46.755	ug/L	0.405	0	27160	1022013	0
Cr	53	49.320	ug/L	0.781	1	170	114384	1
Mn	55	47.049	ug/L	1.298	2	674	1358815	2
Co	59	47.021	ug/L	0.588	1	88	981088	1
> Ge	72		ug/L			652831	638465	1
Ni	60	50.490	ug/L	1.052	2	35	206491	3
Ni	62	48.951	ug/L	0.735	1	471	28489	1
Cu	63	50.608	ug/L	0.768	1	514	460592	1
Cu	65	49.847	ug/L	0.286	0	55	204920	1
Zn	66	50.656	ug/L	0.365	0	255	127966	1
Zn	67	51.163	ug/L	1.298	2	38	21500	3
Zn	68	49.884	ug/L	0.432	0	241	91063	1
As	75	50.393	ug/L	0.119	0	310	110486	1
As-1	75	49.926	ug/L	0.315	0	9967	120055	0
Se	82	52.386	ug/L	0.863	1	4	12534	2
Se	78	50.673	ug/L	0.700	1	10138	41894	0
Mo	98	51.321	ug/L	0.887	1	31	253545	0
Y	89		ug/L			399449	410658	2
Kr	83		ug/L			635	663	2
> In	115		ug/L			965468	986036	0
Ag	107	52.357	ug/L	1.186	2	54	613553	2
Cd	111	50.710	ug/L	0.335	0	102	242736	0
Cd	114	49.645	ug/L	0.114	0	36	601140	0
Sb	121	49.518	ug/L	0.492	0	768	702644	0
Sb	123	49.770	ug/L	0.348	0	575	534602	0
Ba	135	48.512	ug/L	0.723	1	23	205708	1
Ba	137	48.640	ug/L	0.256	0	42	357520	0
> Tb	159		ug/L			1098939	1137752	0
Tl	205	46.361	ug/L	0.314	0	811	1823752	0
Pb	208	47.514	ug/L	0.288	0	507	2369037	0
Bi	209		ug/L			2742152	2705305	0
Th	232	49.734	ug/L	0.520	1	5672	2434338	0
U	238	50.308	ug/L	0.173	0	50	2652782	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 15:55:39

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			1766731	1829834	0
Be	9	-0.001	ug/L	0.001	87	22	19	18
C	13		ug/L			143235	147824	0
Cl	37		ug/L			4954439	5104057	6
Sc	45		ug/L			1218098	1239387	1
V	51	-0.009	ug/L	0.020	231	9170	9117	5
V-1	51	0.003	ug/L	0.001	19	105	171	6
Cr	52	-0.044	ug/L	0.066	150	27160	26736	5
Cr	53	-0.006	ug/L	0.004	70	170	160	5
Mn	55	0.001	ug/L	0.000	51	674	711	1
Co	59	0.000	ug/L	0.000	52	88	93	1
Ge	72		ug/L			652831	634942	0
Ni	60	0.000	ug/L	0.001	1640	35	34	14
Ni	62	-0.238	ug/L	0.027	11	471	322	5
Cu	63	-0.006	ug/L	0.001	19	514	443	2
Cu	65	0.007	ug/L	0.003	43	55	82	14
Zn	66	0.006	ug/L	0.007	124	255	262	7
Zn	67	0.008	ug/L	0.014	166	38	41	13
Zn	68	0.016	ug/L	0.010	62	241	263	7
As	75	0.014	ug/L	0.006	43	310	333	4
As-1	75	0.105	ug/L	0.035	33	9967	9924	0
Se	82	-0.033	ug/L	0.032	97	4	-3	224
Se	78	0.339	ug/L	0.092	27	10138	10073	0
Mo	98	0.017	ug/L	0.003	16	31	114	11
Y	89		ug/L			399449	394972	2
Kr	83		ug/L			635	662	2
In	115		ug/L			965468	976356	0
Ag	107	0.002	ug/L	0.001	53	54	76	14
Cd	111	0.000	ug/L	0.000	2717	102	104	2
Cd	114	0.001	ug/L	0.001	149	36	47	32
Sb	121	0.090	ug/L	0.038	42	768	2039	26
Sb	123	0.088	ug/L	0.033	38	575	1514	23
Ba	135	0.002	ug/L	0.001	69	23	30	15
Ba	137	0.001	ug/L	0.002	120	42	53	24
Tb	159		ug/L			1098939	1091429	1
Tl	205	-0.010	ug/L	0.004	38	811	435	33
Pb	208	0.002	ug/L	0.000	6	507	604	2
Bi	209		ug/L			2742152	2776776	1
Th	232	0.282	ug/L	0.150	53	5672	18874	37
U	238	0.005	ug/L	0.002	31	50	297	26

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS20 MB1 SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:02:53

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\112712a.cal

Dd

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1823605	2
[ Be	9	-0.001	ug/L	0.001	68	22	17	19
C	13		ug/L			143235	154438	2
Cl	37		ug/L			4954439	5023182	2
> Sc	45		ug/L			1218098	1231692	1
V	51	-0.001	ug/L	0.007	1290	9170	9258	2
V-1	51	0.000	ug/L	0.001	207	105	114	14
Cr	52	-0.001	ug/L	0.025	2759	27160	27443	2
Cr	53	0.002	ug/L	0.002	110	170	176	4
Mn	55	0.041	ug/L	0.001	3	674	1816	3
Co	59	0.000	ug/L	0.001	1155	88	90	13
> Ge	72		ug/L			652831	621149	1
Ni	60	-0.001	ug/L	0.001	79	35	29	13
Ni	62	-0.360	ug/L	0.029	7	471	247	5
Cu	63	0.007	ug/L	0.004	59	514	554	7
Cu	65	0.028	ug/L	0.002	8	55	164	4
Zn	66	0.130	ug/L	0.018	13	255	562	6
Zn	67	0.133	ug/L	0.019	14	38	91	7
Zn	68	0.160	ug/L	0.007	4	241	513	2
As	75	0.010	ug/L	0.017	174	310	315	10
As-1	75	0.202	ug/L	0.065	32	9967	9918	1
Se	82	-0.071	ug/L	0.082	114	4	-12	154
Se	78	0.698	ug/L	0.205	29	10138	10074	0
Mo	98	0.000	ug/L	0.001	224	31	31	9
Y	89		ug/L			399449	395114	1
Kr	83		ug/L			635	678	7
> In	115		ug/L			965468	963691	0
Ag	107	-0.002	ug/L	0.000	12	54	30	8
Cd	111	-0.003	ug/L	0.001	51	102	89	7
Cd	114	0.001	ug/L	0.000	72	36	43	12
Sb	121	-0.023	ug/L	0.004	15	768	444	11
Sb	123	-0.021	ug/L	0.006	26	575	351	17
Ba	135	0.015	ug/L	0.001	8	23	85	5
Ba	137	0.015	ug/L	0.004	23	42	152	17
> Tb	159		ug/L			1098939	1084430	0
Tl	205	-0.013	ug/L	0.004	35	811	328	50
Pb	208	0.006	ug/L	0.000	6	507	795	1
Bi	209		ug/L			2742152	2683528	1
Th	232	0.003	ug/L	0.026	961	5672	5721	20
U	238	-0.000	ug/L	0.000	888	50	47	40

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS20 MB1SPK SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:07:01

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1766731	1820626	1
[ Be	9	25.777	ug/L	0.678	2	22	122927	0
C	13		ug/L			143235	153421	2
Cl	37		ug/L			4954439	5043900	2
> Sc	45		ug/L			1218098	1235394	1
V	51	24.751	ug/L	0.116	0	9170	610648	1
V-1	51	24.945	ug/L	0.166	0	105	599659	1
Cr	52	24.868	ug/L	0.071	0	27160	538868	1
Cr	53	25.537	ug/L	0.608	2	170	57377	1
Mn	55	25.660	ug/L	0.157	0	674	717415	0
Co	59	25.040	ug/L	0.622	2	88	505507	1
> Ge	72		ug/L			652831	636042	1
Ni	60	26.516	ug/L	0.858	3	35	108020	2
Ni	62	25.865	ug/L	0.163	0	471	15213	1
Cu	63	26.680	ug/L	0.696	2	514	242109	1
Cu	65	26.493	ug/L	0.329	1	55	108532	2
Zn	66	87.014	ug/L	3.615	4	255	218742	3
Zn	67	79.625	ug/L	1.655	2	38	33303	1
Zn	68	79.921	ug/L	0.356	0	241	145189	0
As	75	25.476	ug/L	0.164	0	310	55792	0
As-1	75	25.364	ug/L	0.284	1	9967	65538	0
Se	82	84.063	ug/L	1.074	1	4	20030	0
Se	78	81.499	ug/L	1.647	2	10138	61113	0
Mo	98	25.080	ug/L	0.039	0	31	123465	0
Y	89		ug/L			399449	406536	1
Kr	83		ug/L			635	669	4
> In	115		ug/L			965468	984485	0
Ag	107	27.040	ug/L	0.638	2	54	316376	2
Cd	111	25.496	ug/L	0.233	0	102	121908	1
Cd	114	25.010	ug/L	0.162	0	36	302378	0
Sb	121	24.638	ug/L	0.149	0	768	349463	0
Sb	123	24.484	ug/L	0.207	0	575	262876	0
Ba	135	24.950	ug/L	0.253	1	23	105643	0
Ba	137	25.001	ug/L	0.097	0	42	183502	0
> Tb	159		ug/L			1098939	1113703	0
Tl	205	24.555	ug/L	0.248	1	811	945972	1
Pb	208	25.294	ug/L	0.023	0	507	1234776	0
Bi	209		ug/L			2742152	2745593	1
Th	232	22.931	ug/L	0.060	0	5672	1101798	0
U	238	23.397	ug/L	0.315	1	50	1207716	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS20 C SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:15:16

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1919305	2
[ Be	9	1.082	ug/L	0.019	1	22	5466	2
C	13		ug/L			143235	259002	1
Cl	37		ug/L			4954439	5229024	1
> Sc	45		ug/L			1218098	1404989	0
V	51	22.465	ug/L	0.258	1	9170	631265	0
V-1	51	22.745	ug/L	0.336	1	105	621819	1
Cr	52	18.780	ug/L	0.377	2	27160	470518	2
Cr	53	19.603	ug/L	0.133	0	170	50147	1
Mn	55	5417.542	ug/L	11.276	0	674	172106195	0
Co	59	19.827	ug/L	0.233	1	88	455276	0
> Ge	72		ug/L			652831	650401	2
Ni	60	47.653	ug/L	1.474	3	35	198426	1
Ni	62	49.108	ug/L	1.093	2	471	29107	0
Cu	63	54.706	ug/L	2.130	3	514	506910	1
Cu	65	55.233	ug/L	1.083	1	55	231238	0
Zn	66	1425.883	ug/L	38.008	2	255	3661423	1
Zn	67	1196.298	ug/L	8.951	0	38	511127	1
Zn	68	1378.399	ug/L	14.131	1	241	2556595	1
As	75	49.551	ug/L	1.177	2	310	110640	0
As-1	75	48.928	ug/L	1.208	2	9967	120022	0
Se	82	1.127	ug/L	0.135	11	4	278	10
Se	78	1.269	ug/L	0.321	25	10138	10914	1
Mo	98	1.120	ug/L	0.029	2	31	5670	2
Y	89		ug/L			399449	691324	2
Kr	83		ug/L			635	1083	3
> In	115		ug/L			965468	1114414	1
Ag	107	0.628	ug/L	0.015	2	54	8381	0
Cd	111	34.233	ug/L	0.663	1	102	185203	0
Cd	114	33.588	ug/L	0.524	1	36	459603	0
Sb	121	2.295	ug/L	0.019	0	768	37642	0
Sb	123	2.285	ug/L	0.038	1	575	28365	0
Ba	135	493.285	ug/L	7.900	1	23	2363582	0
Ba	137	488.943	ug/L	10.643	2	42	4060642	1
> Tb	159		ug/L			1098939	1158275	0
Tl	205	0.975	ug/L	0.011	1	811	39887	0
Pb	208	1078.510	ug/L	8.095	0	507	54732599	0
Bi	209		ug/L			2742152	2738827	0
Th	232	3.563	ug/L	0.013	0	5672	183103	0
U	238	0.662	ug/L	0.007	1	50	35569	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS20 B SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:11:08

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1766731	1862994	2
[ Be	9	0.536	ug/L	0.031	5	22	2635	3
C	13		ug/L			143235	212730	2
Cl	37		ug/L			4954439	5249210	3
> Sc	45		ug/L			1218098	1421266	3
V	51	38.121	ug/L	1.305	3	9170	1075509	1
V-1	51	38.678	ug/L	1.562	4	105	1068805	1
Cr	52	30.119	ug/L	0.480	1	27160	743981	1
Cr	53	31.734	ug/L	1.389	4	170	81925	1
Mn	55	993.655	ug/L	35.342	3	674	31912120	1
Co	59	8.330	ug/L	0.149	1	88	193496	1
> Ge	72		ug/L			652831	647944	0
Ni	60	21.964	ug/L	0.341	1	35	91167	1
Ni	62	23.747	ug/L	0.240	1	471	14267	1
Cu	63	34.225	ug/L	0.210	0	514	316284	0
Cu	65	34.686	ug/L	0.306	0	55	144726	1
Zn	66	355.422	ug/L	4.940	1	255	909676	1
Zn	67	348.669	ug/L	4.089	1	38	148447	1
Zn	68	357.155	ug/L	4.775	1	241	660159	1
As	75	10.627	ug/L	0.084	0	310	23888	0
As-1	75	10.428	ug/L	0.092	0	9967	33275	0
Se	82	-0.031	ug/L	0.043	140	4	-2	353
Se	78	0.137	ug/L	0.160	116	10138	10150	0
Mo	98	0.426	ug/L	0.011	2	31	2169	2
Y	89		ug/L			399449	565854	0
Kr	83		ug/L			635	1014	3
> In	115		ug/L			965468	1027630	0
Ag	107	0.194	ug/L	0.007	3	54	2425	3
Cd	111	6.897	ug/L	0.041	0	102	34503	1
Cd	114	6.751	ug/L	0.034	0	36	85223	0
Sb	121	0.347	ug/L	0.007	2	768	5951	2
Sb	123	0.343	ug/L	0.007	2	575	4444	2
Ba	135	536.902	ug/L	2.326	0	23	2372543	0
Ba	137	526.200	ug/L	5.376	1	42	4030472	0
> Tb	159		ug/L			1098939	1152022	0
Tl	205	0.346	ug/L	0.002	0	811	14634	0
Pb	208	330.862	ug/L	0.714	0	507	16700737	0
Bi	209		ug/L			2742152	2681266	0
Th	232	4.423	ug/L	0.056	1	5672	224634	0
U	238	0.778	ug/L	0.009	1	50	41613	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS20 D SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:19:23

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
Li	6		ug/L			1766731	1973144	3
Be	9	0.787	ug/L	0.022	2	22	4090	1
C	13		ug/L			143235	298840	0
Cl	37		ug/L			4954439	5533960	1
Sc	45		ug/L			1218098	1405970	1
V	51	17.549	ug/L	0.444	2	9170	495685	1
V-1	51	17.649	ug/L	0.384	2	105	482781	0
Cr	52	13.057	ug/L	0.392	3	27160	336784	1
Cr	53	13.234	ug/L	0.427	3	170	33930	1
Mn	55	5217.377	ug/L	90.325	1	674	165834914	0
Co	59	17.425	ug/L	0.305	1	88	400348	0
Ge	72		ug/L			652831	653410	1
Ni	60	37.359	ug/L	0.341	0	35	156345	0
Ni	62	38.033	ug/L	0.819	2	471	22757	1
Cu	63	59.323	ug/L	0.634	1	514	552458	1
Cu	65	59.176	ug/L	0.947	1	55	248979	2
Zn	66	1184.350	ug/L	9.879	0	255	3056086	0
Zn	67	1016.862	ug/L	32.388	3	38	436404	2
Zn	68	1091.360	ug/L	57.381	5	241	2034155	5
As	75	19.841	ug/L	0.137	0	310	44705	0
As-1	75	19.476	ug/L	0.212	1	9967	54013	0
Se	82	1.229	ug/L	0.041	3	4	305	3
Se	78	1.067	ug/L	0.262	24	10138	10835	0
Mo	98	1.034	ug/L	0.039	3	31	5259	2
Y	89		ug/L			399449	674738	1
Kr	83		ug/L			635	991	2
In	115		ug/L			965468	1133031	0
Ag	107	0.928	ug/L	0.028	2	54	12556	2
Cd	111	23.967	ug/L	0.304	1	102	131884	0
Cd	114	23.565	ug/L	0.075	0	36	327895	0
Sb	121	2.761	ug/L	0.030	1	768	45864	0
Sb	123	2.757	ug/L	0.022	0	575	34668	0
Ba	135	355.919	ug/L	3.718	1	23	1734018	0
Ba	137	386.829	ug/L	8.152	2	42	3266505	1
Tb	159		ug/L			1098939	1156327	0
Tl	205	0.802	ug/L	0.007	0	811	32885	0
Pb	208	1478.029	ug/L	10.350	0	507	74881860	0
Bi	209		ug/L			2742152	2733856	0
Th	232	2.524	ug/L	0.010	0	5672	131209	0
U	238	0.519	ug/L	0.002	0	50	27844	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS20 D SWN

Sample Dil Factor: 500

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:23:31

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1861901	0
Be	9	0.037	ug/L	0.003	7	22	206	5
C	13		ug/L			143235	161717	0
Cl	37		ug/L			4954439	5537750	5
> Sc	45		ug/L			1218098	1292808	0
V	51	0.747	ug/L	0.020	2	9170	28715	0
V-1	51	0.783	ug/L	0.007	0	105	19804	0
Cr	52	0.497	ug/L	0.050	10	27160	39517	1
Cr	53	0.612	ug/L	0.006	1	170	1615	1
Mn	55	238.431	ug/L	3.789	1	674	6970700	2
Co	59	0.806	ug/L	0.012	1	88	17117	1
> Ge	72		ug/L			652831	652865	2
Ni	60	1.594	ug/L	0.012	0	35	6700	2
Ni	62	1.156	ug/L	0.121	10	471	1146	4
Cu	63	2.624	ug/L	0.086	3	514	24898	1
Cu	65	2.603	ug/L	0.036	1	55	10990	1
Zn	66	49.991	ug/L	1.228	2	255	129083	0
Zn	67	44.976	ug/L	1.365	3	38	19317	0
Zn	68	48.120	ug/L	1.062	2	241	89793	0
As	75	0.882	ug/L	0.024	2	310	2280	0
As-1	75	0.926	ug/L	0.150	16	9967	12054	0
Se	82	0.054	ug/L	0.063	116	4	17	86
Se	78	0.305	ug/L	0.436	142	10138	10330	0
Mo	98	0.042	ug/L	0.002	5	31	242	2
Y	89		ug/L			399449	420117	1
Kr	83		ug/L			635	689	4
> In	115		ug/L			965468	984973	1
Ag	107	0.046	ug/L	0.003	7	54	594	6
Cd	111	1.207	ug/L	0.038	3	102	5871	1
Cd	114	1.191	ug/L	0.034	2	36	14440	1
Sb	121	0.097	ug/L	0.007	7	768	2159	3
Sb	123	0.102	ug/L	0.007	6	575	1675	4
Ba	135	16.766	ug/L	0.419	2	23	71017	1
Ba	137	16.637	ug/L	0.394	2	42	122167	1
> Tb	159		ug/L			1098939	1097664	0
Tl	205	0.017	ug/L	0.001	3	811	1458	2
Pb	208	60.663	ug/L	0.154	0	507	2917963	0
Bi	209		ug/L			2742152	2709554	1
Th	232	0.004	ug/L	0.003	76	5672	5860	2
U	238	0.021	ug/L	0.001	2	50	1133	2



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS20 E SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:27:38

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			1766731	1953252	1
Be	9	2.272	ug/L	0.092	4	22	11646	3
C	13		ug/L			143235	261210	2
Cl	37		ug/L			4954439	5345060	1
Sc	45		ug/L			1218098	1410003	0
V	51	26.173	ug/L	0.422	1	9170	736440	2
V-1	51	26.453	ug/L	0.287	1	105	725857	1
Cr	52	21.886	ug/L	0.274	1	27160	545093	1
Cr	53	22.688	ug/L	0.360	1	170	58211	1
Mn	55	4433.189	ug/L	57.190	1	674	141343596	1
Co	59	31.859	ug/L	0.464	1	88	734112	1
Ge	72		ug/L			652831	643438	0
Ni	60	70.320	ug/L	0.114	0	35	289775	0
Ni	62	72.384	ug/L	1.255	1	471	42236	1
Cu	63	62.212	ug/L	0.931	1	514	570509	1
Cu	65	63.352	ug/L	0.899	1	55	262445	1
Zn	66	709.547	ug/L	11.670	1	255	1803109	1
Zn	67	654.116	ug/L	11.251	1	38	276511	1
Zn	68	684.535	ug/L	12.437	1	241	1256240	1
As	75	25.547	ug/L	0.221	0	310	56598	0
As-1	75	25.092	ug/L	0.164	0	9967	65697	0
Se	82	1.267	ug/L	0.136	10	4	309	10
Se	78	1.537	ug/L	0.167	10	10138	10970	1
Mo	98	1.515	ug/L	0.030	1	31	7574	2
Y	89		ug/L			399449	882723	1
Kr	83		ug/L			635	1410	4
In	115		ug/L			965468	1002926	0
Ag	107	0.930	ug/L	0.016	1	54	11143	1
Cd	111	11.360	ug/L	0.198	1	102	55397	2
Cd	114	11.115	ug/L	0.094	0	36	136923	0
Sb	121	0.844	ug/L	0.003	0	768	12965	0
Sb	123	0.847	ug/L	0.011	1	575	9842	1
Ba	135	337.536	ug/L	1.558	0	23	1455693	0
Ba	137	368.965	ug/L	4.035	1	42	2758080	0
Tb	159		ug/L			1098939	1145784	0
Tl	205	0.375	ug/L	0.005	1	811	15693	0
Pb	208	519.209	ug/L	4.230	0	507	26064423	0
Bi	209		ug/L			2742152	2564742	0
Th	232	4.555	ug/L	0.067	1	5672	229867	0
U	238	0.764	ug/L	0.008	1	50	40597	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS20 G SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:31:46

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: C:\NexIONData\System\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
Li	6		ug/L			1766731	1896226	1
Be	9	0.621	ug/L	0.009	1	22	3110	2
C	13		ug/L			143235	209058	0
Cl	37		ug/L			4954439	5116821	0
Sc	45		ug/L			1218098	1401944	1
V	51	23.505	ug/L	0.370	1	9170	658515	0
V-1	51	23.849	ug/L	0.456	1	105	650543	0
Cr	52	19.393	ug/L	0.032	0	27160	483775	1
Cr	53	20.423	ug/L	0.361	1	170	52117	1
Mn	55	2682.687	ug/L	30.289	1	674	85045189	2
Co	59	9.002	ug/L	0.074	0	88	206319	0
Ge	72		ug/L			652831	636549	1
Ni	60	27.864	ug/L	0.700	2	35	113593	1
Ni	62	28.844	ug/L	1.114	3	471	16922	2
Cu	63	25.945	ug/L	0.465	1	514	235644	1
Cu	65	25.984	ug/L	0.281	1	55	106515	0
Zn	66	416.561	ug/L	3.827	0	255	1047280	0
Zn	67	403.881	ug/L	7.930	1	38	168939	2
Zn	68	412.314	ug/L	9.762	2	241	748545	1
As	75	20.105	ug/L	0.253	1	310	44124	0
As-1	75	19.920	ug/L	0.325	1	9967	53595	0
Se	82	0.140	ug/L	0.034	24	4	37	22
Se	78	0.766	ug/L	0.243	31	10138	10366	0
Mo	98	0.785	ug/L	0.013	1	31	3899	2
Y	89		ug/L			399449	563706	1
Kr	83		ug/L			635	1052	2
In	115		ug/L			965468	1014799	1
Ag	107	0.297	ug/L	0.008	2	54	3642	3
Cd	111	7.314	ug/L	0.193	2	102	36116	1
Cd	114	7.103	ug/L	0.165	2	36	88540	1
Sb	121	0.381	ug/L	0.010	2	768	6362	1
Sb	123	0.389	ug/L	0.008	2	575	4902	1
Ba	135	383.546	ug/L	6.507	1	23	1673511	0
Ba	137	416.242	ug/L	5.484	1	42	3148203	0
Tb	159		ug/L			1098939	1135752	1
Tl	205	0.378	ug/L	0.006	1	811	15692	0
Pb	208	329.337	ug/L	4.267	1	507	16387213	0
Bi	209		ug/L			2742152	2637565	0
Th	232	4.163	ug/L	0.092	2	5672	208756	0
U	238	0.596	ug/L	0.009	1	50	31406	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS20 H SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:36:57

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1764931	1
[ Be	9	-0.001	ug/L	0.001	50	22	16	21
C	13		ug/L			143235	149714	0
Cl	37		ug/L			4954439	4893392	4
> Sc	45		ug/L			1218098	1210323	0
V	51	-0.009	ug/L	0.016	184	9170	8906	4
V-1	51	0.001	ug/L	0.001	86	105	129	15
Cr	52	-0.034	ug/L	0.053	156	27160	26305	3
Cr	53	-0.002	ug/L	0.007	431	170	165	8
Mn	55	0.232	ug/L	0.028	12	674	7035	11
Co	59	0.001	ug/L	0.000	74	88	98	7
> Ge	72		ug/L			652831	616059	2
Ni	60	0.001	ug/L	0.002	140	35	38	19
Ni	62	-0.573	ug/L	0.001	0	471	127	2
Cu	63	0.006	ug/L	0.005	85	514	533	5
Cu	65	0.039	ug/L	0.006	14	55	208	9
Zn	66	0.158	ug/L	0.034	21	255	623	11
Zn	67	0.147	ug/L	0.038	25	38	96	14
Zn	68	0.146	ug/L	0.025	16	241	483	7
As	75	0.007	ug/L	0.021	319	310	306	13
As-1	75	0.283	ug/L	0.136	47	9967	10005	1
Se	82	-0.091	ug/L	0.111	120	4	-17	149
Se	78	1.023	ug/L	0.518	50	10138	10185	1
Mo	98	-0.003	ug/L	0.001	33	31	15	31
Y	89		ug/L			399449	399676	2
Kr	83		ug/L			635	711	1
> In	115		ug/L			965468	947321	0
Ag	107	-0.003	ug/L	0.001	20	54	23	25
Cd	111	-0.002	ug/L	0.003	140	102	92	13
Cd	114	0.001	ug/L	0.001	92	36	50	26
Sb	121	-0.049	ug/L	0.002	3	768	89	28
Sb	123	-0.048	ug/L	0.001	1	575	67	13
Ba	135	0.024	ug/L	0.004	16	23	119	12
Ba	137	0.026	ug/L	0.002	9	42	225	7
> Tb	159		ug/L			1098939	1055990	0
Tl	205	-0.020	ug/L	0.000	1	811	67	16
Pb	208	0.022	ug/L	0.002	11	507	1508	7
Bi	209		ug/L			2742152	2678762	0
Th	232	-0.082	ug/L	0.006	7	5672	1753	15
U	238	-0.000	ug/L	0.000	23	50	25	21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS20 I SWS  
 Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:41:04

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1891802	1
Be	9	1.045	ug/L	0.029	2	22	5204	1
C	13		ug/L			143235	206481	2
Cl	37		ug/L			4954439	5150949	2
> Sc	45		ug/L			1218098	1526542	0
V	51	60.712	ug/L	0.116	0	9170	1834104	0
V-1	51	61.508	ug/L	0.257	0	105	1826925	0
Cr	52	41.989	ug/L	0.668	1	27160	1100856	1
Cr	53	44.026	ug/L	0.340	0	170	122101	0
Mn	55	1730.052	ug/L	26.500	1	674	59713478	1
Co	59	15.949	ug/L	0.188	1	88	397949	0
> Ge	72		ug/L			652831	620684	1
Ni	60	46.048	ug/L	0.734	1	35	183031	0
Ni	62	48.211	ug/L	0.523	1	471	27286	2
Cu	63	45.625	ug/L	1.110	2	514	403653	1
Cu	65	45.986	ug/L	0.624	1	55	183783	1
Zn	66	320.034	ug/L	5.985	1	255	784600	1
Zn	67	335.312	ug/L	4.198	1	38	136738	0
Zn	68	338.771	ug/L	7.557	2	241	599809	2
As	75	20.270	ug/L	0.345	1	310	43374	0
As-1	75	20.074	ug/L	0.397	1	9967	52588	0
Se	82	-0.401	ug/L	0.048	11	4	-88	11
Se	78	0.974	ug/L	0.188	19	10138	10235	0
Mo	98	1.067	ug/L	0.012	1	31	5153	0
Y	89		ug/L			399449	747659	2
Kr	83		ug/L			635	1616	1
> In	115		ug/L			965468	952319	0
Ag	107	0.406	ug/L	0.012	2	54	4651	3
Cd	111	4.580	ug/L	0.005	0	102	21268	0
Cd	114	4.312	ug/L	0.080	1	36	50453	1
Sb	121	0.134	ug/L	0.003	1	768	2594	1
Sb	123	0.137	ug/L	0.005	3	575	1984	1
Ba	135	736.878	ug/L	11.102	1	23	3017409	0
Ba	137	736.843	ug/L	7.216	0	42	5230147	0
> Tb	159		ug/L			1098939	1126741	0
Tl	205	0.353	ug/L	0.004	1	811	14588	0
Pb	208	153.422	ug/L	0.961	0	507	7574445	0
Bi	209		ug/L			2742152	2488826	0
Th	232	7.612	ug/L	0.035	0	5672	373920	0
U	238	1.157	ug/L	0.014	1	50	60449	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:45:14

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens	RSD
Li	6		ug/L			1766731	1808162		1
Be	9	52.885	ug/L	0.890	1	22	250495		1
C	13		ug/L			143235	145139		0
Cl	37		ug/L			4954439	5202951		2
Sc	45		ug/L			1218098	1254317		3
V	51	46.799	ug/L	1.475	3	9170	1163112		0
V-1	51	47.251	ug/L	1.211	2	105	1152649		1
Cr	52	47.531	ug/L	1.613	3	27160	1019595		0
Cr	53	49.109	ug/L	0.585	1	170	111868		2
Mn	55	47.798	ug/L	1.561	3	674	1355547		1
Co	59	47.456	ug/L	0.936	1	88	972405		1
Ge	72		ug/L			652831	625443		1
Ni	60	51.327	ug/L	0.696	1	35	205613		2
Ni	62	50.327	ug/L	1.727	3	471	28674		2
Cu	63	51.457	ug/L	0.761	1	514	458724		0
Cu	65	49.793	ug/L	1.561	3	55	200468		1
Zn	66	51.667	ug/L	1.378	2	255	127836		2
Zn	67	51.156	ug/L	0.877	1	38	21053		1
Zn	68	50.920	ug/L	1.355	2	241	91028		1
As	75	51.914	ug/L	1.087	2	310	111470		0
As-1	75	50.819	ug/L	1.055	2	9967	119525		0
Se	82	54.885	ug/L	0.951	1	4	12860		0
Se	78	51.004	ug/L	0.784	1	10138	41243		0
Mo	98	53.992	ug/L	1.652	3	31	261265		1
Y	89		ug/L			399449	400704		1
Kr	83		ug/L			635	700		4
In	115		ug/L			965468	949885		0
Ag	107	57.148	ug/L	1.259	2	54	645054		1
Cd	111	51.861	ug/L	0.655	1	102	239161		1
Cd	114	50.917	ug/L	0.621	1	36	593918		0
Sb	121	51.006	ug/L	0.393	0	768	697204		0
Sb	123	51.617	ug/L	0.281	0	575	534096		0
Ba	135	49.429	ug/L	0.610	1	23	201915		1
Ba	137	49.460	ug/L	0.542	1	42	350204		0
Tb	159		ug/L			1098939	1083269		1
Tl	205	47.154	ug/L	0.624	1	811	1765994		0
Pb	208	48.701	ug/L	0.482	0	507	2311851		0
Bi	209		ug/L			2742152	2608621		0
Th	232	50.830	ug/L	0.410	0	5672	2368710		0
U	238	51.967	ug/L	0.384	0	50	2608909		0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 16:52:06

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
> Li	6		ug/L			1766731	1813611	2
[ Be	9	-0.000	ug/L	0.000	122	22	22	9
C	13		ug/L			143235	155909	3
Cl	37		ug/L			4954439	5013965	1
> Sc	45		ug/L			1218098	1246312	1
V	51	-0.019	ug/L	0.018	92	9170	8903	3
V-1	51	-0.001	ug/L	0.000	34	105	73	17
Cr	52	-0.070	ug/L	0.060	85	27160	26327	3
Cr	53	-0.010	ug/L	0.003	26	170	151	4
Mn	55	0.022	ug/L	0.013	59	674	1319	29
Co	59	0.001	ug/L	0.001	113	88	109	20
> Ge	72		ug/L			652831	618137	2
Ni	60	0.001	ug/L	0.002	149	35	37	19
Ni	62	-0.549	ug/L	0.024	4	471	142	11
Cu	63	-0.032	ug/L	0.002	7	514	204	7
Cu	65	0.000	ug/L	0.002	1275	55	53	15
Zn	66	-0.031	ug/L	0.007	22	255	165	7
Zn	67	-0.008	ug/L	0.021	263	38	33	24
Zn	68	-0.010	ug/L	0.008	79	241	211	7
As	75	0.019	ug/L	0.006	31	310	333	2
As-1	75	0.296	ug/L	0.144	48	9967	10064	0
Se	82	-0.058	ug/L	0.047	80	4	-9	117
Se	78	1.023	ug/L	0.504	49	10138	10218	0
Mo	98	0.003	ug/L	0.000	15	31	44	3
Y	89		ug/L			399449	388345	1
Kr	83		ug/L			635	689	5
> In	115		ug/L			965468	940789	1
Ag	107	-0.002	ug/L	0.001	37	54	31	23
Cd	111	-0.001	ug/L	0.002	119	102	93	9
Cd	114	0.001	ug/L	0.001	122	36	47	32
Sb	121	0.009	ug/L	0.008	87	768	864	10
Sb	123	0.010	ug/L	0.006	60	575	667	8
Ba	135	0.002	ug/L	0.002	124	23	30	28
Ba	137	0.001	ug/L	0.003	298	42	47	37
> Tb	159		ug/L			1098939	1061653	0
Tl	205	-0.016	ug/L	0.002	11	811	186	36
Pb	208	0.002	ug/L	0.003	148	507	576	21
Bi	209		ug/L			2742152	2659618	1
Th	232	0.051	ug/L	0.017	33	5672	7791	9
U	238	0.002	ug/L	0.001	42	50	145	27

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 A-L SWN

Sample Dil Factor: 500

Comments:

Sample Date/Time: Tuesday, November 27, 2012 17:09:02

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1854047	2
Be	9	0.027	ug/L	0.000	0	22	155	2
C	13		ug/L			143235	151562	1
Cl	37		ug/L			4954439	4757428	2
> Sc	45		ug/L			1218098	1264293	1
V	51	2.231	ug/L	0.056	2	9170	64985	1
V-1	51	2.292	ug/L	0.037	1	105	56491	0
Cr	52	1.411	ug/L	0.102	7	27160	57862	2
Cr	53	1.590	ug/L	0.039	2	170	3822	2
Mn	55	29.517	ug/L	0.679	2	674	844337	1
Co	59	0.413	ug/L	0.017	3	88	8631	2
> Ge	72		ug/L			652831	643843	0
Ni	60	0.994	ug/L	0.008	0	35	4132	0
Ni	62	0.519	ug/L	0.043	8	471	764	2
Cu	63	1.422	ug/L	0.024	1	514	13543	1
Cu	65	1.458	ug/L	0.033	2	55	6095	2
Zn	66	12.709	ug/L	0.169	1	255	32563	1
Zn	67	12.415	ug/L	0.358	2	38	5288	2
Zn	68	12.661	ug/L	0.304	2	241	23485	2
As	75	0.973	ug/L	0.019	1	310	2450	1
As-1	75	1.029	ug/L	0.049	4	9967	12122	0
Se	82	-0.052	ug/L	0.064	123	4	-8	191
Se	78	0.259	ug/L	0.124	47	10138	10163	0
Mo	98	0.021	ug/L	0.002	11	31	134	8
Y	89		ug/L			399449	413315	0
Kr	83		ug/L			635	689	4
> In	115		ug/L			965468	978296	0
Ag	107	0.010	ug/L	0.002	16	54	175	11
Cd	111	0.300	ug/L	0.014	4	102	1529	4
Cd	114	0.294	ug/L	0.006	2	36	3564	1
Sb	121	-0.020	ug/L	0.002	10	768	492	6
Sb	123	-0.019	ug/L	0.004	22	575	383	11
Ba	135	8.411	ug/L	0.033	0	23	35406	0
Ba	137	8.376	ug/L	0.052	0	42	61119	0
> Tb	159		ug/L			1098939	1099156	0
Tl	205	0.003	ug/L	0.001	24	811	930	3
Pb	208	21.987	ug/L	0.083	0	507	1059366	0
Bi	209		ug/L			2742152	2730491	0
Th	232	0.098	ug/L	0.012	12	5672	10284	5
U	238	0.032	ug/L	0.001	1	50	1692	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 A SWN

Sample Dil Factor: 100

Comments:

Sample Date/Time: Tuesday, November 27, 2012 17:13:09

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1857513	2
Be	9	0.144	ug/L	0.002	1	22	722	0
C	13		ug/L			143235	158282	1
Cl	37		ug/L			4954439	4893708	2
Sc	45		ug/L			1218098	1305190	0
V	51	11.243	ug/L	0.128	1	9170	298430	1
V-1	51	11.376	ug/L	0.143	1	105	288999	1
Cr	52	7.285	ug/L	0.025	0	27160	187353	0
Cr	53	7.592	ug/L	0.108	1	170	18154	1
Mn	55	154.348	ug/L	2.095	1	674	4555664	1
Co	59	2.037	ug/L	0.021	1	88	43539	1
Ge	72		ug/L			652831	647153	1
Ni	60	4.936	ug/L	0.152	3	35	20486	1
Ni	62	4.873	ug/L	0.059	1	471	3295	0
Cu	63	7.159	ug/L	0.130	1	514	66472	0
Cu	65	7.296	ug/L	0.241	3	55	30440	2
Zn	66	63.850	ug/L	1.368	2	255	163398	1
Zn	67	62.050	ug/L	0.578	0	38	26415	1
Zn	68	63.243	ug/L	1.534	2	241	116947	2
As	75	4.928	ug/L	0.114	2	310	11226	0
As-1	75	4.870	ug/L	0.172	3	9967	20783	0
Se	82	0.015	ug/L	0.033	223	4	8	100
Se	78	0.174	ug/L	0.244	140	10138	10160	0
Mo	98	0.106	ug/L	0.007	6	31	562	5
Y	89		ug/L			399449	454785	0
Kr	83		ug/L			635	779	3
In	115		ug/L			965468	988396	1
Ag	107	0.065	ug/L	0.002	3	54	820	2
Cd	111	1.504	ug/L	0.035	2	102	7321	3
Cd	114	1.481	ug/L	0.006	0	36	18011	1
Sb	121	0.028	ug/L	0.003	10	768	1190	3
Sb	123	0.028	ug/L	0.003	12	575	885	3
Ba	135	43.165	ug/L	0.185	0	23	183480	0
Ba	137	42.697	ug/L	0.306	0	42	314586	0
Tb	159		ug/L			1098939	1099408	0
Tl	205	0.092	ug/L	0.002	2	811	4324	1
Pb	208	118.522	ug/L	0.701	0	507	5709512	0
Bi	209		ug/L			2742152	2727903	0
Th	232	0.854	ug/L	0.006	0	5672	45960	0
U	238	0.173	ug/L	0.002	1	50	8884	1



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 ADUP SWN

Sample Dil Factor: 100

Comments:

Sample Date/Time: Tuesday, November 27, 2012 17:17:16

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1844888	1
[ Be	9	0.133	ug/L	0.007	5	22	666	5
C	13		ug/L			143235	162864	0
Cl	37		ug/L			4954439	5024130	1
> Sc	45		ug/L			1218098	1302319	1
V	51	11.015	ug/L	0.207	1	9170	291899	1
V-1	51	11.160	ug/L	0.219	1	105	282848	1
Cr	52	6.730	ug/L	0.074	1	27160	174900	0
Cr	53	7.066	ug/L	0.145	2	170	16869	0
Mn	55	145.236	ug/L	2.378	1	674	4276901	0
Co	59	1.989	ug/L	0.030	1	88	42408	1
> Ge	72		ug/L			652831	655229	1
Ni	60	4.755	ug/L	0.107	2	35	19990	3
Ni	62	4.587	ug/L	0.075	1	471	3168	1
Cu	63	6.684	ug/L	0.072	1	514	62877	1
Cu	65	6.772	ug/L	0.067	0	55	28614	0
Zn	66	58.939	ug/L	0.677	1	255	152751	1
Zn	67	56.989	ug/L	0.994	1	38	24567	2
Zn	68	57.915	ug/L	0.668	1	241	108444	0
As	75	4.591	ug/L	0.132	2	310	10611	1
As-1	75	4.534	ug/L	0.182	4	9967	20280	0
Se	82	0.026	ug/L	0.045	171	4	11	101
Se	78	0.117	ug/L	0.198	168	10138	10250	0
Mo	98	0.103	ug/L	0.004	4	31	552	3
Y	89		ug/L			399449	455765	1
Kr	83		ug/L			635	741	3
> In	115		ug/L			965468	980486	1
Ag	107	0.063	ug/L	0.002	3	54	792	2
Cd	111	1.367	ug/L	0.033	2	102	6609	1
Cd	114	1.340	ug/L	0.023	1	36	16163	0
Sb	121	0.025	ug/L	0.002	8	768	1127	1
Sb	123	0.022	ug/L	0.003	13	575	820	3
Ba	135	38.853	ug/L	0.730	1	23	163809	0
Ba	137	38.729	ug/L	0.597	1	42	283040	0
> Tb	159		ug/L			1098939	1100623	0
Tl	205	0.086	ug/L	0.002	2	811	4072	1
Pb	208	108.694	ug/L	1.072	0	507	5241785	0
Bi	209		ug/L			2742152	2706818	0
Th	232	1.287	ug/L	0.014	1	5672	66475	0
U	238	0.290	ug/L	0.004	1	50	14831	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 ASPK SWN

Sample Dil Factor: 100

Comments:

Sample Date/Time: Tuesday, November 27, 2012 17:21:24

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1893200	2
Be	9	5.298	ug/L	0.171	3	22	26300	3
C	13		ug/L			143235	160142	1
Cl	37		ug/L			4954439	4969816	3
Sc	45		ug/L			1218098	1317940	2
V	51	14.683	ug/L	0.182	1	9170	390398	1
V-1	51	14.933	ug/L	0.193	1	105	382931	1
Cr	52	10.776	ug/L	0.291	2	27160	265655	0
Cr	53	11.489	ug/L	0.341	2	170	27631	0
Mn	55	148.781	ug/L	0.315	0	674	4434297	2
Co	59	6.527	ug/L	0.321	4	88	140531	1
Ge	72		ug/L			652831	642256	1
Ni	60	10.126	ug/L	0.127	1	35	41677	0
Ni	62	9.857	ug/L	0.291	2	471	6141	3
Cu	63	12.290	ug/L	0.054	0	514	112906	1
Cu	65	12.402	ug/L	0.328	2	55	51317	1
Zn	66	79.039	ug/L	1.185	1	255	200687	0
Zn	67	75.289	ug/L	0.875	1	38	31799	0
Zn	68	77.481	ug/L	1.907	2	241	142143	2
As	75	10.001	ug/L	0.145	1	310	22300	0
As-1	75	9.812	ug/L	0.211	2	9967	31611	0
Se	82	17.022	ug/L	0.136	0	4	4099	1
Se	78	16.256	ug/L	0.362	2	10138	20294	1
Mo	98	4.613	ug/L	0.073	1	31	22953	0
Y	89		ug/L			399449	449892	1
Kr	83		ug/L			635	763	5
In	115		ug/L			965468	984834	0
Ag	107	4.864	ug/L	0.021	0	54	56980	0
Cd	111	6.590	ug/L	0.042	0	102	31598	1
Cd	114	6.404	ug/L	0.043	0	36	77490	1
Sb	121	0.366	ug/L	0.012	3	768	5960	1
Sb	123	0.357	ug/L	0.013	3	575	4416	2
Ba	135	44.826	ug/L	0.484	1	23	189847	0
Ba	137	44.779	ug/L	0.616	1	42	328739	1
Tb	159		ug/L			1098939	1109924	1
Tl	205	4.702	ug/L	0.051	1	811	181178	0
Pb	208	119.271	ug/L	1.196	1	507	5800195	0
Bi	209		ug/L			2742152	2724222	0
Th	232	4.251	ug/L	0.049	1	5672	208232	0
U	238	4.707	ug/L	0.046	0	50	242163	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~VS21-APOST-SWN~~ *ZZZZZ*  
 Sample Dil Factor: 100  
 Comments: *11-28-12*

Sample Date/Time: Tuesday, November 27, 2012 17:25:31

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1899448	0
Be	9	27.247	ug/L	0.198	0	22	135611	1
C	13		ug/L			143235	163728	2
Cl	37		ug/L			4954439	5065508	3
Sc	45		ug/L			1218098	1305615	1
V	51	34.902	ug/L	0.555	1	9170	905842	0
V-1	51	35.331	ug/L	0.445	1	105	897467	0
Cr	52	32.024	ug/L	1.121	3	27160	724907	2
Cr	53	33.387	ug/L	0.348	1	170	79236	1
Mn	55	174.924	ug/L	4.164	2	674	5163543	0
Co	59	27.061	ug/L	0.310	1	88	577378	0
Ge	72		ug/L			652831	647609	1
Ni	60	31.978	ug/L	0.647	2	35	132633	1
Ni	62	31.503	ug/L	0.668	2	471	18763	1
Cu	63	32.896	ug/L	0.674	2	514	303857	2
Cu	65	34.006	ug/L	0.397	1	55	141808	0
Zn	66	148.023	ug/L	2.331	1	255	378814	2
Zn	67	139.445	ug/L	2.742	1	38	59356	1
Zn	68	144.631	ug/L	2.465	1	241	267341	2
As	75	32.056	ug/L	0.351	1	310	71400	1
As-1	75	31.345	ug/L	0.227	0	9967	80137	1
Se	82	91.970	ug/L	0.907	0	4	22313	0
Se	78	87.369	ug/L	1.170	1	10138	65984	0
Mo	98	0.110	ug/L	0.006	5	31	584	4
Y	89		ug/L			399449	464579	4
Kr	83		ug/L			635	769	1
In	115		ug/L			965468	986284	0
Ag	107	28.178	ug/L	0.344	1	54	330304	1
Cd	111	28.696	ug/L	0.280	0	102	137436	0
Cd	114	27.974	ug/L	0.453	1	36	338827	1
Sb	121	0.022	ug/L	0.000	1	768	1093	1
Sb	123	0.021	ug/L	0.002	10	575	808	2
Ba	135	66.176	ug/L	0.613	0	23	280669	0
Ba	137	65.335	ug/L	0.614	0	42	480328	0
Tb	159		ug/L			1098939	1110762	0
Tl	205	24.868	ug/L	0.324	1	811	955412	0
Pb	208	136.576	ug/L	1.312	0	507	6646995	0
Bi	209		ug/L			2742152	2732861	0
Th	232	24.631	ug/L	0.269	1	5672	1179911	0
U	238	24.433	ug/L	0.199	0	50	1257812	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 B SWN

Sample Dil Factor: 200

Comments:

Sample Date/Time: Tuesday, November 27, 2012 17:29:39

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1845859	2
> Be	9	0.053	ug/L	0.007	12	22	280	12
> C	13		ug/L			143235	173385	2
> Cl	37		ug/L			4954439	5139549	0
> Sc	45		ug/L			1218098	1304983	1
> V	51	0.970	ug/L	0.007	0	9170	34711	0
> V-1	51	1.003	ug/L	0.023	2	105	25587	2
> Cr	52	0.669	ug/L	0.057	8	27160	43621	2
> Cr	53	0.773	ug/L	0.042	5	170	2011	3
> Mn	55	165.544	ug/L	2.361	1	674	4884855	0
> Co	59	0.381	ug/L	0.010	2	88	8217	1
> Ge	72		ug/L			652831	650443	1
> Ni	60	0.680	ug/L	0.028	4	35	2867	2
> Ni	62	0.206	ug/L	0.054	26	471	589	3
> Cu	63	4.449	ug/L	0.112	2	514	41705	0
> Cu	65	4.603	ug/L	0.065	1	55	19325	1
> Zn	66	106.087	ug/L	2.638	2	255	272676	1
> Zn	67	101.867	ug/L	3.454	3	38	43552	2
> Zn	68	106.460	ug/L	2.919	2	241	197685	2
> As	75	2.422	ug/L	0.049	2	310	5702	1
> As-1	75	2.461	ug/L	0.128	5	9967	15469	0
> Se	82	0.078	ug/L	0.045	58	4	23	47
> Se	78	0.367	ug/L	0.307	83	10138	10335	0
> Mo	98	0.067	ug/L	0.005	7	31	366	5
> Y	89		ug/L			399449	424398	1
> Kr	83		ug/L			635	686	2
> In	115		ug/L			965468	1008133	1
> Ag	107	0.160	ug/L	0.009	5	54	1967	4
> Cd	111	1.917	ug/L	0.013	0	102	9482	0
> Cd	114	1.875	ug/L	0.031	1	36	23243	1
> Sb	121	1.965	ug/L	0.037	1	768	29274	1
> Sb	123	1.999	ug/L	0.030	1	575	22527	1
> Ba	135	93.014	ug/L	0.995	1	23	403214	0
> Ba	137	91.456	ug/L	1.721	1	42	687167	0
> Tb	159		ug/L			1098939	1096110	1
> Tl	205	0.070	ug/L	0.001	1	811	3470	0
> Pb	208	170.112	ug/L	0.697	0	507	8170121	1
> Bi	209		ug/L			2742152	2762130	0
> Th	232	0.313	ug/L	0.016	5	5672	20390	4
> U	238	0.052	ug/L	0.001	2	50	2706	2

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 D SWN

Sample Dil Factor: 100

Comments:

Sample Date/Time: Tuesday, November 27, 2012 17:33:46

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: C:\NexIONData\System\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1766731	1880751	2
Be	9	0.104	ug/L	0.004	3	22	536	1
C	13		ug/L			143235	162832	1
Cl	37		ug/L			4954439	5104359	1
> Sc	45		ug/L			1218098	1297426	0
V	51	5.859	ug/L	0.062	1	9170	159247	0
V-1	51	5.954	ug/L	0.046	0	105	150392	0
Cr	52	4.009	ug/L	0.006	0	27160	115500	0
Cr	53	4.266	ug/L	0.069	1	170	10219	2
Mn	55	377.440	ug/L	3.339	0	674	11073467	1
Co	59	1.674	ug/L	0.078	4	88	35584	5
> Ge	72		ug/L			652831	656944	1
Ni	60	4.000	ug/L	0.079	1	35	16860	1
Ni	62	3.597	ug/L	0.058	1	471	2593	1
Cu	63	8.062	ug/L	0.204	2	514	75924	1
Cu	65	8.131	ug/L	0.129	1	55	34443	2
Zn	66	140.977	ug/L	2.380	1	255	365935	0
Zn	67	136.006	ug/L	4.359	3	38	58723	2
Zn	68	139.869	ug/L	2.037	1	241	262271	1
As	75	6.888	ug/L	0.106	1	310	15805	0
As-1	75	6.814	ug/L	0.158	2	9967	25518	0
Se	82	-0.015	ug/L	0.046	300	4	0	1258
Se	78	0.105	ug/L	0.160	151	10138	10270	0
Mo	98	0.100	ug/L	0.006	6	31	540	6
Y	89		ug/L			399449	439200	1
Kr	83		ug/L			635	744	4
> In	115		ug/L			965468	1002913	1
Ag	107	0.139	ug/L	0.004	3	54	1710	4
Cd	111	3.097	ug/L	0.001	0	102	15179	1
Cd	114	3.035	ug/L	0.032	1	36	37409	0
Sb	121	0.144	ug/L	0.003	1	768	2876	2
Sb	123	0.145	ug/L	0.001	0	575	2183	2
Ba	135	108.977	ug/L	0.982	0	23	469963	0
Ba	137	108.404	ug/L	1.181	1	42	810324	0
> Tb	159		ug/L			1098939	1099878	0
Tl	205	0.086	ug/L	0.003	3	811	4084	2
Pb	208	166.237	ug/L	2.883	1	507	8010830	1
Bi	209		ug/L			2742152	2734561	0
Th	232	0.560	ug/L	0.007	1	5672	32103	0
U	238	0.079	ug/L	0.001	0	50	4088	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 E SWN

Sample Dil Factor: 100

Comments:

Sample Date/Time: Tuesday, November 27, 2012 17:37:53

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1883833	0
[ Be	9	0.107	ug/L	0.003	2	22	554	2
C	13		ug/L			143235	162463	0
Cl	37		ug/L			4954439	5051452	2
> Sc	45		ug/L			1218098	1318862	1
V	51	6.254	ug/L	0.089	1	9170	172103	0
V-1	51	6.339	ug/L	0.063	0	105	162754	0
Cr	52	3.813	ug/L	0.168	4	27160	113069	2
Cr	53	4.015	ug/L	0.101	2	170	9787	2
Mn	55	296.562	ug/L	9.417	3	674	8841405	1
Co	59	1.700	ug/L	0.036	2	88	36726	0
> Ge	72		ug/L			652831	652311	1
Ni	60	3.762	ug/L	0.018	0	35	15748	2
Ni	62	3.455	ug/L	0.018	0	471	2492	2
Cu	63	4.254	ug/L	0.025	0	514	40028	1
Cu	65	4.375	ug/L	0.154	3	55	18420	2
Zn	66	91.252	ug/L	2.155	2	255	235243	0
Zn	67	89.010	ug/L	1.837	2	38	38169	0
Zn	68	91.450	ug/L	2.757	3	241	170286	1
As	75	4.965	ug/L	0.141	2	310	11396	1
As-1	75	4.910	ug/L	0.217	4	9967	21036	0
Se	82	-0.011	ug/L	0.054	497	4	1	735
Se	78	0.084	ug/L	0.295	351	10138	10182	0
Mo	98	0.091	ug/L	0.004	4	31	488	3
Y	89		ug/L			399449	438387	0
Kr	83		ug/L			635	721	4
> In	115		ug/L			965468	987462	0
Ag	107	0.078	ug/L	0.001	0	54	965	0
Cd	111	1.386	ug/L	0.010	0	102	6746	1
Cd	114	1.357	ug/L	0.026	1	36	16494	1
Sb	121	0.025	ug/L	0.001	3	768	1146	1
Sb	123	0.024	ug/L	0.004	15	575	847	4
Ba	135	82.971	ug/L	0.542	0	23	352332	0
Ba	137	82.528	ug/L	0.796	0	42	607440	0
> Tb	159		ug/L			1098939	1106712	1
Tl	205	0.047	ug/L	0.001	3	811	2601	1
Pb	208	41.842	ug/L	0.579	1	507	2029214	0
Bi	209		ug/L			2742152	2741866	0
Th	232	0.559	ug/L	0.014	2	5672	32250	1
U	238	0.075	ug/L	0.000	0	50	3917	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 G SWN

Sample Dil Factor: 50

Comments:

Sample Date/Time: Tuesday, November 27, 2012 17:43:05

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1883495	0
Be	9	0.233	ug/L	0.004	1	22	1176	2
C	13		ug/L			143235	161137	2
Cl	37		ug/L			4954439	5067446	1
Sc	45		ug/L			1218098	1344041	1
V	51	16.832	ug/L	0.288	1	9170	454944	0
V-1	51	17.037	ug/L	0.240	1	105	445563	0
Cr	52	8.625	ug/L	0.281	3	27160	222833	1
Cr	53	9.024	ug/L	0.226	2	170	22180	1
Mn	55	167.880	ug/L	2.884	1	674	5102154	1
Co	59	3.530	ug/L	0.094	2	88	77601	1
Ge	72		ug/L			652831	657279	1
Ni	60	8.021	ug/L	0.112	1	35	33792	0
Ni	62	8.223	ug/L	0.268	3	471	5321	2
Cu	63	11.609	ug/L	0.178	1	514	109156	1
Cu	65	11.844	ug/L	0.183	1	55	50164	2
Zn	66	25.253	ug/L	0.336	1	255	65797	1
Zn	67	29.186	ug/L	0.478	1	38	12638	0
Zn	68	27.205	ug/L	0.243	0	241	51229	0
As	75	2.335	ug/L	0.071	3	310	5566	2
As-1	75	2.253	ug/L	0.119	5	9967	15157	1
Se	82	-0.084	ug/L	0.028	32	4	-16	40
Se	78	-0.027	ug/L	0.178	655	10138	10188	0
Mo	98	0.121	ug/L	0.002	1	31	647	0
Y	89		ug/L			399449	510276	0
Kr	83		ug/L			635	848	1
In	115		ug/L			965468	982504	2
Ag	107	0.092	ug/L	0.002	2	54	1129	1
Cd	111	0.152	ug/L	0.012	7	102	827	5
Cd	114	0.085	ug/L	0.003	3	36	1059	5
Sb	121	-0.035	ug/L	0.001	2	768	288	3
Sb	123	-0.035	ug/L	0.002	4	575	215	9
Ba	135	60.727	ug/L	1.625	2	23	256492	0
Ba	137	60.383	ug/L	1.992	3	42	442046	1
Tb	159		ug/L			1098939	1116924	1
Tl	205	0.047	ug/L	0.000	0	811	2645	0
Pb	208	3.084	ug/L	0.030	0	507	151405	0
Bi	209		ug/L			2742152	2710477	0
Th	232	1.598	ug/L	0.027	1	5672	82351	0
U	238	0.281	ug/L	0.005	1	50	14599	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 H SWN

Sample Dil Factor: 50

Comments:

Sample Date/Time: Tuesday, November 27, 2012 17:47:12

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1766731	1879321	1
Be	9	0.203	ug/L	0.012	5	22	1022	5
C	13		ug/L			143235	161850	4
Cl	37		ug/L			4954439	5165679	2
> Sc	45		ug/L			1218098	1333185	2
V	51	18.534	ug/L	0.591	3	9170	495762	1
V-1	51	18.751	ug/L	0.573	3	105	486306	1
Cr	52	9.658	ug/L	0.275	2	27160	243961	0
Cr	53	10.076	ug/L	0.148	1	170	24543	0
Mn	55	144.682	ug/L	2.294	1	674	4361302	0
Co	59	3.754	ug/L	0.111	2	88	81850	1
> Ge	72		ug/L			652831	640413	1
Ni	60	8.605	ug/L	0.176	2	35	35318	0
Ni	62	8.773	ug/L	0.116	1	471	5500	0
Cu	63	13.028	ug/L	0.279	2	514	119293	1
Cu	65	12.944	ug/L	0.197	1	55	53405	0
Zn	66	23.661	ug/L	1.111	4	255	60057	3
Zn	67	26.534	ug/L	1.006	3	38	11197	2
Zn	68	25.320	ug/L	1.020	4	241	46457	2
As	75	2.626	ug/L	0.093	3	310	6061	1
As-1	75	2.585	ug/L	0.161	6	9967	15503	0
Se	82	-0.010	ug/L	0.091	889	4	1	1115
Se	78	0.171	ug/L	0.286	167	10138	10052	0
Mo	98	0.148	ug/L	0.008	5	31	765	4
Y	89		ug/L			399449	500143	1
Kr	83		ug/L			635	805	6
> In	115		ug/L			965468	967077	0
Ag	107	0.096	ug/L	0.001	1	54	1162	0
Cd	111	0.112	ug/L	0.014	12	102	630	10
Cd	114	0.058	ug/L	0.001	2	36	721	1
Sb	121	-0.044	ug/L	0.001	2	768	164	10
Sb	123	-0.043	ug/L	0.001	2	575	122	10
Ba	135	52.344	ug/L	0.931	1	23	217681	1
Ba	137	52.484	ug/L	0.367	0	42	378367	1
> Tb	159		ug/L			1098939	1116768	0
Tl	205	0.051	ug/L	0.002	4	811	2773	3
Pb	208	2.944	ug/L	0.012	0	507	144569	0
Bi	209		ug/L			2742152	2702543	1
Th	232	1.917	ug/L	0.017	0	5672	97634	1
U	238	0.319	ug/L	0.002	0	50	16582	0



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV7

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 17:51:21

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1857808	1
Be	9	50.736	ug/L	1.585	3	22	246864	1
C	13		ug/L			143235	149636	1
Cl	37		ug/L			4954439	5256289	1
Sc	45		ug/L			1218098	1229489	1
V	51	48.180	ug/L	1.695	3	9170	1173743	1
V-1	51	48.461	ug/L	1.691	3	105	1158872	1
Cr	52	48.357	ug/L	1.785	3	27160	1016681	2
Cr	53	49.327	ug/L	1.623	3	170	110129	2
Mn	55	48.123	ug/L	2.374	4	674	1337949	3
Co	59	47.912	ug/L	1.002	2	88	962441	0
Ge	72		ug/L			652831	620177	1
Ni	60	50.040	ug/L	1.413	2	35	198782	3
Ni	62	49.794	ug/L	0.288	0	471	28143	1
Cu	63	49.675	ug/L	0.308	0	514	439189	1
Cu	65	50.408	ug/L	0.753	1	55	201262	0
Zn	66	50.839	ug/L	1.509	2	255	124715	1
Zn	67	51.134	ug/L	0.677	1	38	20866	0
Zn	68	50.399	ug/L	1.459	2	241	89339	1
As	75	51.292	ug/L	0.639	1	310	109218	0
As-1	75	50.292	ug/L	0.857	1	9967	117391	0
Se	82	54.349	ug/L	0.567	1	4	12629	1
Se	78	50.835	ug/L	1.211	2	10138	40791	1
Mo	98	52.624	ug/L	1.811	3	31	252497	2
Y	89		ug/L			399449	405074	0
Kr	83		ug/L			635	720	3
In	115		ug/L			965468	949019	1
Ag	107	55.377	ug/L	1.533	2	54	624479	2
Cd	111	50.998	ug/L	0.621	1	102	234940	0
Cd	114	49.810	ug/L	0.123	0	36	580489	1
Sb	121	50.106	ug/L	0.634	1	768	684269	0
Sb	123	50.675	ug/L	0.761	1	575	523852	1
Ba	135	49.249	ug/L	0.400	0	23	200991	0
Ba	137	48.391	ug/L	0.881	1	42	342302	0
Tb	159		ug/L			1098939	1085965	0
Tl	205	46.346	ug/L	0.427	0	811	1740230	0
Pb	208	47.885	ug/L	0.112	0	507	2278891	0
Bi	209		ug/L			2742152	2617162	0
Th	232	50.985	ug/L	0.471	0	5672	2381985	1
U	238	51.861	ug/L	0.204	0	50	2610214	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB7

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 17:58:14

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
Li	6		ug/L			1766731	1814603	1
Be	9	0.000	ug/L	0.002	985	22	24	31
C	13		ug/L			143235	153222	1
Cl	37		ug/L			4954439	5023383	1
Sc	45		ug/L			1218098	1250041	0
V	51	-0.018	ug/L	0.006	29	9170	8956	0
V-1	51	-0.001	ug/L	0.002	275	105	94	38
Cr	52	-0.066	ug/L	0.018	27	27160	26500	0
Cr	53	-0.006	ug/L	0.006	101	170	160	8
Mn	55	0.003	ug/L	0.006	192	674	779	21
Co	59	0.001	ug/L	0.002	334	88	101	33
Ge	72		ug/L			652831	621549	0
Ni	60	0.002	ug/L	0.002	82	35	43	19
Ni	62	-0.582	ug/L	0.010	1	471	124	4
Cu	63	-0.036	ug/L	0.001	1	514	170	3
Cu	65	-0.001	ug/L	0.001	126	55	49	10
Zn	66	-0.005	ug/L	0.034	655	255	229	35
Zn	67	-0.001	ug/L	0.039	4003	38	36	42
Zn	68	0.014	ug/L	0.030	212	241	254	20
As	75	0.022	ug/L	0.012	57	310	341	6
As-1	75	0.213	ug/L	0.061	28	9967	9948	0
Se	82	-0.060	ug/L	0.058	96	4	-9	138
Se	78	0.724	ug/L	0.200	27	10138	10097	0
Mo	98	0.004	ug/L	0.001	20	31	50	8
Y	89		ug/L			399449	386751	1
Kr	83		ug/L			635	692	5
In	115		ug/L			965468	939524	1
Ag	107	-0.002	ug/L	0.001	44	54	35	22
Cd	111	-0.000	ug/L	0.003	1074	102	98	15
Cd	114	0.001	ug/L	0.002	163	36	49	45
Sb	121	0.008	ug/L	0.001	8	768	857	1
Sb	123	0.008	ug/L	0.003	39	575	646	5
Ba	135	0.002	ug/L	0.004	245	23	29	58
Ba	137	0.002	ug/L	0.003	169	42	55	42
Tb	159		ug/L			1098939	1049530	1
Tl	205	-0.015	ug/L	0.002	11	811	226	26
Pb	208	0.001	ug/L	0.003	534	507	509	26
Bi	209		ug/L			2742152	2653822	0
Th	232	0.024	ug/L	0.013	56	5672	6489	9
U	238	0.002	ug/L	0.002	80	50	138	52

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 I SWN

Sample Dil Factor: 100

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:02:23

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1883229	0
Be	9	0.189	ug/L	0.003	1	22	958	1
C	13		ug/L			143235	168676	3
Cl	37		ug/L			4954439	5034180	0
> Sc	45		ug/L			1218098	1308741	1
V	51	5.752	ug/L	0.177	3	9170	157846	1
V-1	51	5.859	ug/L	0.230	3	105	149235	2
Cr	52	5.892	ug/L	0.121	2	27160	157509	0
Cr	53	6.264	ug/L	0.275	4	170	15044	2
Mn	55	580.859	ug/L	5.141	0	674	17188007	0
Co	59	2.447	ug/L	0.034	1	88	52429	1
> Ge	72		ug/L			652831	656659	2
Ni	60	7.029	ug/L	0.192	2	35	29580	0
Ni	62	6.686	ug/L	0.275	4	471	4408	1
Cu	63	7.747	ug/L	0.320	4	514	72910	1
Cu	65	8.089	ug/L	0.141	1	55	34239	0
Zn	66	155.481	ug/L	1.380	0	255	403377	1
Zn	67	144.820	ug/L	5.993	4	38	62470	2
Zn	68	148.714	ug/L	3.459	2	241	278623	1
As	75	6.164	ug/L	0.259	4	310	14166	2
As-1	75	6.023	ug/L	0.356	5	9967	23700	1
Se	82	0.128	ug/L	0.034	26	4	36	23
Se	78	-0.012	ug/L	0.511	4360	10138	10184	0
Mo	98	0.215	ug/L	0.012	5	31	1122	4
Y	89		ug/L			399449	450788	0
Kr	83		ug/L			635	748	3
> In	115		ug/L			965468	993639	2
Ag	107	0.100	ug/L	0.003	3	54	1237	4
Cd	111	3.440	ug/L	0.033	0	102	16690	1
Cd	114	3.412	ug/L	0.074	2	36	41661	0
Sb	121	0.157	ug/L	0.008	4	768	3025	1
Sb	123	0.162	ug/L	0.017	10	575	2340	5
Ba	135	83.560	ug/L	2.896	3	23	356886	1
Ba	137	83.200	ug/L	2.555	3	42	615961	0
> Tb	159		ug/L			1098939	1106911	0
Tl	205	0.107	ug/L	0.005	4	811	4922	4
Pb	208	138.506	ug/L	1.755	1	507	6717386	0
Bi	209		ug/L			2742152	2760631	0
Th	232	0.814	ug/L	0.005	0	5672	44386	1
U	238	0.116	ug/L	0.002	2	50	5978	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 J SWN

Sample Dil Factor: 50

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:06:30

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1871310	0
Be	9	0.570	ug/L	0.023	3	22	2819	3
C	13		ug/L			143235	167122	0
Cl	37		ug/L			4954439	5117510	1
Sc	45		ug/L			1218098	1340609	1
V	51	18.696	ug/L	0.277	1	9170	502943	1
V-1	51	18.963	ug/L	0.349	1	105	494635	1
Cr	52	14.621	ug/L	0.230	1	27160	356081	0
Cr	53	15.385	ug/L	0.503	3	170	37580	1
Mn	55	661.679	ug/L	14.467	2	674	20053034	0
Co	59	7.854	ug/L	0.195	2	88	172110	1
Ge	72		ug/L			652831	635479	0
Ni	60	31.300	ug/L	0.300	0	35	127402	1
Ni	62	31.822	ug/L	0.246	0	471	18596	1
Cu	63	22.129	ug/L	0.358	1	514	200768	2
Cu	65	22.374	ug/L	0.244	1	55	91570	0
Zn	66	188.033	ug/L	5.697	3	255	472110	3
Zn	67	180.888	ug/L	3.881	2	38	75541	1
Zn	68	183.111	ug/L	1.971	1	241	332059	1
As	75	10.292	ug/L	0.039	0	310	22700	1
As-1	75	10.256	ug/L	0.042	0	9967	32257	1
Se	82	0.191	ug/L	0.092	48	4	49	43
Se	78	0.843	ug/L	0.139	16	10138	10398	0
Mo	98	0.556	ug/L	0.030	5	31	2762	4
Y	89		ug/L			399449	579367	0
Kr	83		ug/L			635	944	5
In	115		ug/L			965468	972160	1
Ag	107	0.517	ug/L	0.008	1	54	6022	0
Cd	111	2.848	ug/L	0.035	1	102	13537	1
Cd	114	2.649	ug/L	0.068	2	36	31652	0
Sb	121	0.052	ug/L	0.005	9	768	1502	3
Sb	123	0.055	ug/L	0.006	11	575	1161	3
Ba	135	111.594	ug/L	2.979	2	23	466380	0
Ba	137	111.663	ug/L	2.110	1	42	808995	0
Tb	159		ug/L			1098939	1102494	1
Tl	205	0.136	ug/L	0.003	2	811	5997	0
Pb	208	77.454	ug/L	0.534	0	507	3741699	0
Bi	209		ug/L			2742152	2651474	0
Th	232	2.277	ug/L	0.043	1	5672	113430	0
U	238	0.556	ug/L	0.004	0	50	28453	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 J SWN

Sample Dil Factor: 100

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:10:37

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\112712a.cal

DBL  
(use 50x)

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1911897	0
Be	9	0.278	ug/L	0.013	4	22	1417	4
C	13		ug/L			143235	161373	2
Cl	37		ug/L			4954439	5111954	3
Sc	45		ug/L			1218098	1308574	0
V	51	9.398	ug/L	0.305	3	9170	251651	2
V-1	51	9.611	ug/L	0.320	3	105	244762	2
Cr	52	7.376	ug/L	0.036	0	27160	189820	1
Cr	53	8.033	ug/L	0.097	1	170	19246	1
Mn	55	340.705	ug/L	5.533	1	674	10081425	1
Co	59	4.150	ug/L	0.070	1	88	88832	2
Ge	72		ug/L			652831	649085	2
Ni	60	15.737	ug/L	0.620	3	35	65409	2
Ni	62	15.609	ug/L	1.050	6	471	9546	4
Cu	63	10.984	ug/L	0.274	2	514	102021	2
Cu	65	10.959	ug/L	0.470	4	55	45818	2
Zn	66	93.358	ug/L	3.984	4	255	239428	2
Zn	67	90.377	ug/L	2.409	2	38	38560	0
Zn	68	93.012	ug/L	3.012	3	241	172324	1
As	75	5.080	ug/L	0.129	2	310	11597	0
As-1	75	5.019	ug/L	0.234	4	9967	21177	0
Se	82	0.139	ug/L	0.054	38	4	38	34
Se	78	0.285	ug/L	0.368	129	10138	10260	0
Mo	98	0.273	ug/L	0.021	7	31	1402	6
Y	89		ug/L			399449	499437	0
Kr	83		ug/L			635	778	1
In	115		ug/L			965468	978181	0
Ag	107	0.271	ug/L	0.011	4	54	3209	3
Cd	111	1.438	ug/L	0.022	1	102	6928	0
Cd	114	1.327	ug/L	0.008	0	36	15973	0
Sb	121	-0.000	ug/L	0.005	3744	768	777	9
Sb	123	0.002	ug/L	0.003	113	575	606	3
Ba	135	55.238	ug/L	1.044	1	23	232353	1
Ba	137	55.030	ug/L	0.763	1	42	401243	0
Tb	159		ug/L			1098939	1106139	0
Tl	205	0.057	ug/L	0.001	1	811	2987	2
Pb	208	38.887	ug/L	0.214	0	507	1885092	0
Bi	209		ug/L			2742152	2688290	0
Th	232	1.071	ug/L	0.008	0	5672	56547	0
U	238	0.276	ug/L	0.001	0	50	14197	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR82 C SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:14:45

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1902743	1
[ Be	9	0.149	ug/L	0.005	3	22	767	4
C	13		ug/L			143235	176942	2
Cl	37		ug/L			4954439	5269971	1
> Sc	45		ug/L			1218098	1385447	1
V	51	27.805	ug/L	0.555	1	9170	767888	1
V-1	51	28.034	ug/L	0.570	2	105	755660	1
Cr	52	21.744	ug/L	0.373	1	27160	532275	1
Cr	53	22.304	ug/L	0.586	2	170	56236	2
Mn	55	206.152	ug/L	2.310	1	674	6459131	2
Co	59	5.079	ug/L	0.043	0	88	115085	0
> Ge	72		ug/L			652831	648596	0
Ni	60	28.062	ug/L	0.531	1	35	116586	1
Ni	62	28.607	ug/L	0.739	2	471	17108	2
Cu	63	14.960	ug/L	0.260	1	514	138678	1
Cu	65	15.253	ug/L	0.426	2	55	63732	2
Zn	66	41.710	ug/L	0.066	0	255	107082	0
Zn	67	42.659	ug/L	1.039	2	38	18213	2
Zn	68	41.902	ug/L	0.581	1	241	77739	1
As	75	3.945	ug/L	0.069	1	310	9071	1
As-1	75	3.927	ug/L	0.050	1	9967	18716	0
Se	82	-0.012	ug/L	0.022	176	4	1	357
Se	78	0.316	ug/L	0.061	19	10138	10275	0
Mo	98	0.101	ug/L	0.003	3	31	537	3
Y	89		ug/L			399449	520724	0
Kr	83		ug/L			635	833	1
> In	115		ug/L			965468	973932	0
Ag	107	0.041	ug/L	0.002	4	54	525	5
Cd	111	0.156	ug/L	0.007	4	102	840	3
Cd	114	0.110	ug/L	0.004	3	36	1347	3
Sb	121	-0.037	ug/L	0.002	6	768	264	11
Sb	123	-0.035	ug/L	0.001	1	575	204	3
Ba	135	38.774	ug/L	0.376	0	23	162406	0
Ba	137	38.447	ug/L	0.409	1	42	279136	0
> Tb	159		ug/L			1098939	1111530	0
Tl	205	0.009	ug/L	0.000	4	811	1169	1
Pb	208	4.039	ug/L	0.018	0	507	197226	0
Bi	209		ug/L			2742152	2631875	0
Th	232	0.708	ug/L	0.007	1	5672	39511	0
U	238	0.185	ug/L	0.001	0	50	9590	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR82 D SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:18:52

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
[> Li	6		ug/L			1766731	1890078	1
[ Be	9	0.089	ug/L	0.003	2	22	465	4
[ C	13		ug/L			143235	183086	1
[ Cl	37		ug/L			4954439	5082048	1
[> Sc	45		ug/L			1218098	1328647	1
[ V	51	13.555	ug/L	0.159	1	9170	364137	1
[ V-1	51	13.729	ug/L	0.067	0	105	355007	1
[ Cr	52	13.255	ug/L	0.512	3	27160	322594	1
[ Cr	53	13.842	ug/L	0.246	1	170	33533	1
[ Mn	55	178.050	ug/L	5.069	2	674	5348328	1
[ Co	59	2.928	ug/L	0.044	1	88	63664	2
[> Ge	72		ug/L			652831	644088	0
[ Ni	60	13.253	ug/L	0.021	0	35	54695	0
[ Ni	62	13.156	ug/L	0.259	1	471	8064	1
[ Cu	63	12.630	ug/L	0.080	0	514	116349	0
[ Cu	65	12.729	ug/L	0.322	2	55	52829	2
[ Zn	66	64.345	ug/L	0.150	0	255	163911	0
[ Zn	67	62.810	ug/L	1.065	1	38	26615	2
[ Zn	68	64.348	ug/L	1.279	1	241	118421	1
[ As	75	2.934	ug/L	0.078	2	310	6777	2
[ As-1	75	2.957	ug/L	0.076	2	9967	16425	0
[ Se	82	u 0.149	ug/L	0.022	14	4	40	13
[ Se	78	0.444	ug/L	0.024	5	10138	10285	0
[ Mo	98	0.146	ug/L	0.004	3	31	759	2
[ Y	89		ug/L			399449	487968	2
[ Kr	83		ug/L			635	717	0
[> In	115		ug/L			965468	969550	0
[ Ag	107	0.031	ug/L	0.001	4	54	416	3
[ Cd	111	0.215	ug/L	0.004	1	102	1116	1
[ Cd	114	0.188	ug/L	0.003	1	36	2269	2
[ Sb	121	-0.024	ug/L	0.003	12	768	443	8
[ Sb	123	-0.022	ug/L	0.002	8	575	343	5
[ Ba	135	49.183	ug/L	0.329	0	23	205072	0
[ Ba	137	48.459	ug/L	0.684	1	42	350235	1
[> Tb	159		ug/L			1098939	1099741	0
[ Tl	205	0.006	ug/L	0.001	18	811	1049	4
[ Pb	208	9.966	ug/L	0.037	0	507	480726	0
[ Bi	209		ug/L			2742152	2683274	1
[ Th	232	0.275	ug/L	0.002	0	5672	18635	0
[ U	238	0.165	ug/L	0.004	2	50	8435	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR82 E SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:22:59

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			1766731	1896820	2
Be	9	0.088	ug/L	0.005	5	22	462	2
C	13		ug/L			143235	179974	0
Cl	37		ug/L			4954439	5072141	2
Sc	45		ug/L			1218098	1333821	2
V	51	13.574	ug/L	0.234	1	9170	366019	1
V-1	51	13.746	ug/L	0.204	1	105	356746	1
Cr	52	13.038	ug/L	0.373	2	27160	319071	1
Cr	53	13.608	ug/L	0.349	2	170	33089	0
Mn	55	189.689	ug/L	3.267	1	674	5720037	1
Co	59	2.770	ug/L	0.138	4	88	60417	2
Ge	72		ug/L			652831	650870	0
Ni	60	13.233	ug/L	0.140	1	35	55190	1
Ni	62	12.730	ug/L	0.488	3	471	7900	3
Cu	63	12.447	ug/L	0.156	1	514	115867	0
Cu	65	12.656	ug/L	0.291	2	55	53076	1
Zn	66	48.276	ug/L	0.801	1	255	124329	1
Zn	67	46.648	ug/L	0.313	0	38	19982	0
Zn	68	47.631	ug/L	0.679	1	241	88641	0
As	75	2.801	ug/L	0.002	0	310	6551	0
As-1	75	2.775	ug/L	0.054	1	9967	16187	0
Se	82	0.144	ug/L	0.021	14	4	39	12
Se	78	0.307	ug/L	0.182	59	10138	10305	0
Mo	98	0.156	ug/L	0.008	5	31	815	4
Y	89		ug/L			399449	484312	1
Kr	83		ug/L			635	760	2
In	115		ug/L			965468	974537	1
Ag	107	0.036	ug/L	0.002	4	54	475	3
Cd	111	0.225	ug/L	0.004	1	102	1169	1
Cd	114	0.192	ug/L	0.003	1	36	2334	1
Sb	121	-0.033	ug/L	0.001	2	768	315	3
Sb	123	-0.031	ug/L	0.002	5	575	250	8
Ba	135	35.420	ug/L	0.315	0	23	148444	0
Ba	137	35.165	ug/L	0.588	1	42	255442	0
Tb	159		ug/L			1098939	1106526	0
Tl	205	0.009	ug/L	0.000	4	811	1152	1
Pb	208	8.411	ug/L	0.108	1	507	408274	0
Bi	209		ug/L			2742152	2701941	0
Th	232	0.298	ug/L	0.003	1	5672	19876	0
U	238	0.188	ug/L	0.002	1	50	9697	1



8  
11-29

# ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR82F SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:27:07

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
Li	6		ug/L			1766731	1862917		1
Be	9	0.101	ug/L	0.003	3	22	517		4
C	13		ug/L			143235	179772		2
Cl	37		ug/L			4954439	4996435		1
Sc	45		ug/L			1218098	1327383		1
V	51	15.107	ug/L	0.536	3	9170	404178		1
V-1	51	15.276	ug/L	0.467	3	105	394478		1
Cr	52	14.607	ug/L	0.374	2	27160	352198		0
Cr	53	15.168	ug/L	0.130	0	170	36696		1
Mn	55	193.469	ug/L	3.426	1	674	5806189		0
Co	59	3.239	ug/L	0.128	3	88	70322		2
Ge	72		ug/L			652831	642347		2
Ni	60	15.283	ug/L	0.260	1	35	62885		0
Ni	62	14.891	ug/L	0.452	3	471	9038		1
Cu	63	9.756	ug/L	0.340	3	514	89699		1
Cu	65	10.072	ug/L	0.249	2	55	41686		0
Zn	66	45.167	ug/L	1.854	4	255	114751		1
Zn	67	44.398	ug/L	1.313	2	38	18766		2
Zn	68	43.878	ug/L	0.951	2	241	80584		0
As	75	3.314	ug/L	0.072	2	310	7593		0
As-1	75	3.359	ug/L	0.161	4	9967	17269		0
Se	82	0.118	ug/L	0.018	15	4	32		15
Se	78	0.550	ug/L	0.326	59	10138	10321		0
Mo	98	0.159	ug/L	0.015	9	31	821		7
Y	89		ug/L			399449	481611		0
Kr	83		ug/L			635	753		1
In	115		ug/L			965468	970999		0
Ag	107	0.034	ug/L	0.001	1	54	449		2
Cd	111	0.175	ug/L	0.007	4	102	929		3
Cd	114	0.158	ug/L	0.002	1	36	1921		1
Sb	121	-0.021	ug/L	0.002	8	768	474		5
Sb	123	-0.023	ug/L	0.000	1	575	335		1
Ba	135	33.070	ug/L	0.548	1	23	138100		1
Ba	137	32.818	ug/L	0.301	0	42	237555		0
Tb	159		ug/L			1098939	1103469		0
Tl	205	0.010	ug/L	0.001	6	811	1194		2
Pb	208	7.527	ug/L	0.039	0	507	364406		0
Bi	209		ug/L			2742152	2704105		0
Th	232	0.264	ug/L	0.005	2	5672	18209		1
U	238	0.190	ug/L	0.001	0	50	9763		0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR82 G SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:31:14

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1867259	0
Be	9	0.095	ug/L	0.005	4	22	490	4
C	13		ug/L			143235	174918	1
Cl	37		ug/L			4954439	5032012	1
Sc	45		ug/L			1218098	1327043	0
V	51	15.090	ug/L	0.188	1	9170	403801	1
V-1	51	15.347	ug/L	0.265	1	105	396377	2
Cr	52	14.945	ug/L	0.203	1	27160	359669	0
Cr	53	15.824	ug/L	0.332	2	170	38268	1
Mn	55	187.955	ug/L	2.663	1	674	5640268	1
Co	59	3.369	ug/L	0.066	1	88	73144	1
Ge	72		ug/L			652831	639845	3
Ni	60	15.553	ug/L	0.606	3	35	63707	0
Ni	62	15.374	ug/L	0.690	4	471	9275	1
Cu	63	10.277	ug/L	0.464	4	514	94052	1
Cu	65	10.586	ug/L	0.490	4	55	43611	1
Zn	66	47.179	ug/L	1.478	3	255	119378	0
Zn	67	44.973	ug/L	0.683	1	38	18935	2
Zn	68	46.397	ug/L	2.013	4	241	84820	1
As	75	3.272	ug/L	0.073	2	310	7470	1
As-1	75	3.318	ug/L	0.248	7	9967	17104	0
Se	82	0.096	ug/L	0.008	8	4	27	10
Se	78	0.579	ug/L	0.646	111	10138	10294	0
Mo	98	0.157	ug/L	0.011	7	31	808	5
Y	89		ug/L			399449	484181	3
Kr	83		ug/L			635	789	0
In	115		ug/L			965468	971195	2
Ag	107	0.034	ug/L	0.001	2	54	449	0
Cd	111	0.189	ug/L	0.006	3	102	992	1
Cd	114	0.163	ug/L	0.001	0	36	1976	2
Sb	121	-0.024	ug/L	0.001	5	768	441	2
Sb	123	-0.023	ug/L	0.003	12	575	336	8
Ba	135	35.418	ug/L	0.818	2	23	147891	1
Ba	137	34.768	ug/L	0.797	2	42	251646	0
Tb	159		ug/L			1098939	1109809	1
Tl	205	0.009	ug/L	0.002	18	811	1168	4
Pb	208	7.871	ug/L	0.060	0	507	383254	0
Bi	209		ug/L			2742152	2712740	0
Th	232	0.297	ug/L	0.009	3	5672	19869	1
U	238	0.187	ug/L	0.004	2	50	9656	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR82 H SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:36:26

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1890019	2
Be	9	0.101	ug/L	0.005	4	22	524	3
C	13		ug/L			143235	179492	1
Cl	37		ug/L			4954439	5088207	3
> Sc	45		ug/L			1218098	1343240	1
V	51	16.671	ug/L	0.267	1	9170	450424	0
V-1	51	16.973	ug/L	0.229	1	105	443635	0
Cr	52	15.705	ug/L	0.495	3	27160	380988	2
Cr	53	16.706	ug/L	0.296	1	170	40880	0
Mn	55	195.016	ug/L	2.723	1	674	5923318	1
Co	59	3.694	ug/L	0.073	1	88	81157	1
> Ge	72		ug/L			652831	641817	0
Ni	60	17.520	ug/L	0.299	1	35	72036	1
Ni	62	17.449	ug/L	0.395	2	471	10506	1
Cu	63	11.152	ug/L	0.260	2	514	102420	1
Cu	65	11.544	ug/L	0.152	1	55	47744	0
Zn	66	49.613	ug/L	1.723	3	255	125979	2
Zn	67	50.533	ug/L	0.890	1	38	21341	0
Zn	68	49.253	ug/L	1.903	3	241	90377	3
As	75	3.365	ug/L	0.032	0	310	7699	0
As-1	75	3.387	ug/L	0.050	1	9967	17321	0
Se	82	0.118	ug/L	0.082	69	4	32	60
Se	78	0.507	ug/L	0.104	20	10138	10288	0
Mo	98	0.159	ug/L	0.011	6	31	822	5
Y	89		ug/L			399449	489381	1
Kr	83		ug/L			635	780	7
> In	115		ug/L			965468	960858	0
Ag	107	0.037	ug/L	0.001	3	54	480	2
Cd	111	0.219	ug/L	0.008	3	102	1123	3
Cd	114	0.188	ug/L	0.002	1	36	2249	0
Sb	121	-0.030	ug/L	0.002	6	768	355	6
Sb	123	-0.030	ug/L	0.002	6	575	255	8
Ba	135	36.722	ug/L	0.248	0	23	151745	0
Ba	137	36.571	ug/L	0.174	0	42	261961	0
> Tl	159		ug/L			1098939	1112991	1
Tl	205	0.013	ug/L	0.001	7	811	1308	1
Pb	208	8.247	ug/L	0.124	1	507	402626	0
Bi	209		ug/L			2742152	2690285	0
Th	232	0.360	ug/L	0.009	2	5672	22955	0
U	238	0.201	ug/L	0.002	1	50	10444	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR82 I SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:40:33

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens	RSD
Li	6		ug/L			1766731	1938536		0
Be	9	0.097	ug/L	0.004	4	22	518		4
C	13		ug/L			143235	180240		2
Cl	37		ug/L			4954439	5082636		4
Sc	45		ug/L			1218098	1366892		1
V	51	15.317	ug/L	0.391	2	9170	421931		1
V-1	51	15.485	ug/L	0.246	1	105	411876		0
Cr	52	14.576	ug/L	0.659	4	27160	361946		2
Cr	53	15.126	ug/L	0.308	2	170	37684		1
Mn	55	175.810	ug/L	4.852	2	674	5433252		1
Co	59	3.176	ug/L	0.074	2	88	71024		1
Ge	72		ug/L			652831	644620		1
Ni	60	15.755	ug/L	0.260	1	35	65064		0
Ni	62	15.543	ug/L	0.516	3	471	9451		3
Cu	63	26.855	ug/L	0.985	3	514	246961		2
Cu	65	27.012	ug/L	0.231	0	55	112132		0
Zn	66	49.052	ug/L	1.181	2	255	125098		1
Zn	67	47.653	ug/L	0.103	0	38	20217		0
Zn	68	48.288	ug/L	0.991	2	241	88992		1
As	75	3.394	ug/L	0.015	0	310	7797		0
As-1	75	3.437	ug/L	0.121	3	9967	17507		0
Se	82	0.125	ug/L	0.050	39	4	34		33
Se	78	0.594	ug/L	0.380	64	10138	10388		1
Mo	98	0.156	ug/L	0.009	5	31	809		6
Y	89		ug/L			399449	480715		3
Kr	83		ug/L			635	788		5
In	115		ug/L			965468	971928		1
Ag	107	0.042	ug/L	0.001	2	54	543		3
Cd	111	0.204	ug/L	0.016	8	102	1065		6
Cd	114	0.175	ug/L	0.004	2	36	2122		1
Sb	121	-0.036	ug/L	0.001	4	768	276		6
Sb	123	-0.036	ug/L	0.001	2	575	197		3
Ba	135	36.103	ug/L	0.986	2	23	150880		1
Ba	137	35.953	ug/L	0.351	0	42	260486		0
Tb	159		ug/L			1098939	1105896		1
Tl	205	0.011	ug/L	0.001	6	811	1221		1
Pb	208	7.997	ug/L	0.063	0	507	387958		0
Bi	209		ug/L			2742152	2692413		0
Th	232	0.352	ug/L	0.005	1	5672	22410		1
U	238	0.202	ug/L	0.002	1	50	10422		1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV8

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:44:42

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
> Li	6		ug/L			1766731	1839859		0
Be	9	51.950	ug/L	0.152	0	22	250414		0
C	13		ug/L			143235	149502		0
Cl	37		ug/L			4954439	5278112		2
> Sc	45		ug/L			1218098	1269225		1
V	51	46.447	ug/L	1.804	3	9170	1168469		2
V-1	51	46.838	ug/L	2.026	4	105	1156316		3
Cr	52	46.973	ug/L	0.819	1	27160	1020557		1
Cr	53	48.334	ug/L	1.330	2	170	111436		3
Mn	55	48.297	ug/L	1.237	2	674	1386519		1
Co	59	46.255	ug/L	1.400	3	88	959549		3
> Ge	72		ug/L			652831	618210		2
Ni	60	52.310	ug/L	1.817	3	35	207008		1
Ni	62	50.831	ug/L	1.354	2	471	28618		0
Cu	63	51.023	ug/L	1.129	2	514	449535		1
Cu	65	50.265	ug/L	1.837	3	55	199970		1
Zn	66	52.234	ug/L	1.424	2	255	127718		1
Zn	67	51.485	ug/L	1.988	3	38	20932		1
Zn	68	51.664	ug/L	1.537	2	241	91266		0
As	75	51.920	ug/L	0.931	1	310	110186		1
As-1	75	51.175	ug/L	1.038	2	9967	118891		0
Se	82	54.857	ug/L	1.330	2	4	12702		0
Se	78	52.190	ug/L	1.806	3	10138	41477		0
Mo	98	53.552	ug/L	0.877	1	31	256136		0
Y	89		ug/L			399449	403586		1
Kr	83		ug/L			635	684		2
> In	115		ug/L			965468	943285		0
Ag	107	55.232	ug/L	2.940	5	54	619047		4
Cd	111	52.006	ug/L	0.382	0	102	238151		0
Cd	114	51.017	ug/L	0.720	1	36	590949		0
Sb	121	50.465	ug/L	0.389	0	768	685054		1
Sb	123	51.269	ug/L	0.681	1	575	526804		0
Ba	135	49.494	ug/L	0.473	0	23	200790		1
Ba	137	49.022	ug/L	0.834	1	42	344701		1
> Tb	159		ug/L			1098939	1076997		1
Tl	205	47.031	ug/L	0.438	0	811	1751214		0
Pb	208	48.229	ug/L	0.310	0	507	2276164		0
Bi	209		ug/L			2742152	2610553		1
Th	232	51.895	ug/L	0.822	1	5672	2403995		0
U	238	52.383	ug/L	0.491	0	50	2614518		0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB8

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:51:35

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1828563	1
Be	9	-0.002	ug/L	0.001	56	22	14	31
C	13		ug/L			143235	153282	1
Cl	37		ug/L			4954439	5045838	3
Sc	45		ug/L			1218098	1263057	2
V	51	-0.016	ug/L	0.015	98	9170	9111	2
V-1	51	-0.002	ug/L	0.000	7	105	55	10
Cr	52	-0.058	ug/L	0.055	94	27160	26928	2
Cr	53	-0.013	ug/L	0.003	22	170	147	1
Mn	55	-0.003	ug/L	0.000	5	674	601	2
Co	59	-0.000	ug/L	0.000	137	88	85	8
Ge	72		ug/L			652831	628275	2
Ni	60	0.003	ug/L	0.001	36	35	47	8
Ni	62	-0.634	ug/L	0.015	2	471	96	9
Cu	63	-0.041	ug/L	0.002	4	514	132	13
Cu	65	-0.003	ug/L	0.002	84	55	41	22
Zn	66	-0.037	ug/L	0.003	9	255	152	3
Zn	67	-0.026	ug/L	0.014	52	38	26	19
Zn	68	-0.024	ug/L	0.010	39	241	188	10
As	75	0.018	ug/L	0.023	130	310	337	15
As-1	75	0.230	ug/L	0.076	33	9967	10089	0
Se	82	-0.031	ug/L	0.027	88	4	-2	219
Se	78	0.795	ug/L	0.294	36	10138	10248	0
Mo	98	0.004	ug/L	0.001	39	31	48	12
Y	89		ug/L			399449	395908	0
Kr	83		ug/L			635	679	5
In	115		ug/L			965468	934852	0
Ag	107	-0.002	ug/L	0.000	16	54	26	15
Cd	111	-0.003	ug/L	0.001	24	102	84	3
Cd	114	-0.000	ug/L	0.000	748	36	34	14
Sb	121	0.010	ug/L	0.006	57	768	876	7
Sb	123	0.008	ug/L	0.007	88	575	639	10
Ba	135	-0.001	ug/L	0.001	51	23	17	14
Ba	137	-0.002	ug/L	0.000	12	42	27	5
Tb	159		ug/L			1098939	1042590	0
Tl	205	-0.018	ug/L	0.001	3	811	121	16
Pb	208	-0.003	ug/L	0.000	12	507	348	5
Bi	209		ug/L			2742152	2662470	0
Th	232	0.013	ug/L	0.014	104	5672	5978	10
U	238	0.001	ug/L	0.000	11	50	98	5

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 MB1 SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:55:43

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\112712a.cal

*D.D.*

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
Li	6		ug/L			1766731	1887239	1
Be	9	-0.001	ug/L	0.002	277	22	21	39
C	13		ug/L			143235	156402	0
Cl	37		ug/L			4954439	4993190	1
Sc	45		ug/L			1218098	1261440	1
V	51	-0.011	ug/L	0.006	51	9170	9226	2
V-1	51	0.000	ug/L	0.002	1417	105	113	42
Cr	52	-0.035	ug/L	0.023	66	27160	27387	2
Cr	53	0.002	ug/L	0.005	278	170	180	6
Mn	55	0.057	ug/L	0.012	21	674	2329	15
Co	59	0.000	ug/L	0.001	721	88	94	21
Ge	72		ug/L			652831	626062	0
Ni	60	0.002	ug/L	0.003	138	35	42	28
Ni	62	-0.625	ug/L	0.018	2	471	101	10
Cu	63	0.016	ug/L	0.005	28	514	636	6
Cu	65	0.056	ug/L	0.005	9	55	280	7
Zn	66	0.238	ug/L	0.016	6	255	832	4
Zn	67	0.241	ug/L	0.059	24	38	136	17
Zn	68	0.233	ug/L	0.009	3	241	646	2
As	75	0.004	ug/L	0.007	158	310	306	5
As-1	75	0.249	ug/L	0.011	4	9967	10098	0
Se	82	-0.094	ug/L	0.019	19	4	-17	24
Se	78	0.837	ug/L	0.041	4	10138	10240	0
Mo	98	-0.000	ug/L	0.001	330	31	28	19
Y	89		ug/L			399449	396241	1
Kr	83		ug/L			635	667	3
In	115		ug/L			965468	948995	0
Ag	107	-0.002	ug/L	0.001	32	54	27	31
Cd	111	-0.004	ug/L	0.002	48	102	81	11
Cd	114	0.001	ug/L	0.001	63	36	45	13
Sb	121	-0.033	ug/L	0.002	5	768	307	8
Sb	123	-0.031	ug/L	0.003	10	575	249	12
Ba	135	0.017	ug/L	0.004	22	23	91	16
Ba	137	0.016	ug/L	0.003	19	42	158	14
Tb	159		ug/L			1098939	1049987	0
Tl	205	-0.015	ug/L	0.001	3	811	230	8
Pb	208	0.009	ug/L	0.002	18	507	887	8
Bi	209		ug/L			2742152	2655906	1
Th	232	-0.047	ug/L	0.003	7	5672	3294	4
U	238	0.000	ug/L	0.001	221	50	62	50

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 MB1SPK SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 18:59:51

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1841689	1
Be	9	26.022	ug/L	0.616	2	22	125563	2
C	13		ug/L			143235	159388	2
Cl	37		ug/L			4954439	5047805	3
> Sc	45		ug/L			1218098	1232390	1
V	51	24.573	ug/L	0.251	1	9170	604845	1
V-1	51	24.811	ug/L	0.322	1	105	595002	1
Cr	52	25.193	ug/L	0.073	0	27160	544248	1
Cr	53	26.031	ug/L	0.193	0	170	58352	1
Mn	55	25.233	ug/L	0.045	0	674	703809	0
Co	59	25.261	ug/L	0.524	2	88	508781	2
> Ge	72		ug/L			652831	629083	1
Ni	60	26.611	ug/L	0.534	2	35	107208	0
Ni	62	25.864	ug/L	0.084	0	471	15046	1
Cu	63	27.021	ug/L	0.028	0	514	242554	1
Cu	65	27.482	ug/L	0.964	3	55	111301	2
Zn	66	85.440	ug/L	2.167	2	255	212435	1
Zn	67	78.423	ug/L	2.157	2	38	32437	1
Zn	68	83.147	ug/L	0.805	0	241	149384	1
As	75	26.728	ug/L	0.148	0	310	57880	1
As-1	75	25.917	ug/L	0.531	2	9967	66013	0
Se	82	87.958	ug/L	0.107	0	4	20730	1
Se	78	82.900	ug/L	1.819	2	10138	61309	0
Mo	98	26.027	ug/L	0.372	1	31	126728	2
Y	89		ug/L			399449	403619	0
Kr	83		ug/L			635	699	3
> In	115		ug/L			965468	953002	1
Ag	107	28.366	ug/L	0.331	1	54	321294	2
Cd	111	26.018	ug/L	0.319	1	102	120412	1
Cd	114	25.532	ug/L	0.150	0	36	298815	0
Sb	121	25.329	ug/L	0.446	1	768	347730	1
Sb	123	25.302	ug/L	0.425	1	575	262934	0
Ba	135	25.078	ug/L	0.602	2	23	102786	2
Ba	137	25.246	ug/L	0.094	0	42	179371	0
> Tb	159		ug/L			1098939	1051581	1
Tl	205	25.257	ug/L	0.192	0	811	918628	0
Pb	208	25.999	ug/L	0.219	0	507	1198314	1
Bi	209		ug/L			2742152	2675661	0
Th	232	23.510	ug/L	0.151	0	5672	1066481	1
U	238	23.939	ug/L	0.143	0	50	1166719	1



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 A-L SWN

Sample Dil Factor: 100

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:03:58

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\112712a.cal

*ppb, Pb Zn*

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1926239	0
Be	9	0.129	ug/L	0.005	3	22	675	2
C	13		ug/L			143235	164329	1
Cl	37		ug/L			4954439	5096261	1
Sc	45		ug/L			1218098	1313009	1
V	51	10.015	ug/L	0.204	2	9170	268508	2
V-1	51	10.143	ug/L	0.206	2	105	259241	2
Cr	52	6.764	ug/L	0.148	2	27160	177093	1
Cr	53	7.083	ug/L	0.214	3	170	17048	2
Mn	55	145.206	ug/L	2.811	1	674	4311189	1
Co	59	1.847	ug/L	0.017	0	88	39732	0
Ge	72		ug/L			652831	650246	1
Ni	60	4.570	ug/L	0.073	1	35	19063	1
Ni	62	4.293	ug/L	0.110	2	471	2972	1
Cu	63	6.467	ug/L	0.191	2	514	60382	1
Cu	65	6.490	ug/L	0.104	1	55	27219	1
Zn	66	58.988	ug/L	0.951	1	255	151712	1
Zn	67	56.155	ug/L	0.823	1	38	24023	1
Zn	68	57.641	ug/L	1.177	2	241	107106	1
As	75	4.487	ug/L	0.168	3	310	10298	2
As-1	75	4.419	ug/L	0.197	4	9967	19869	1
Se	82	0.007	ug/L	0.046	683	4	6	184
Se	78	0.038	ug/L	0.155	407	10138	10122	0
Mo	98	0.102	ug/L	0.005	4	31	546	3
Y	89		ug/L			399449	457635	2
Kr	83		ug/L			635	718	3
In	115		ug/L			965468	978243	0
Ag	107	0.062	ug/L	0.002	3	54	777	3
Cd	111	1.388	ug/L	0.011	0	102	6692	0
Cd	114	1.349	ug/L	0.035	2	36	16234	1
Sb	121	0.042	ug/L	0.002	4	768	1363	2
Sb	123	0.044	ug/L	0.004	7	575	1055	4
Ba	135	39.542	ug/L	0.409	1	23	166348	0
Ba	137	39.290	ug/L	0.643	1	42	286501	0
Tb	159		ug/L			1098939	1094731	0
Tl	205	0.087	ug/L	0.001	0	811	4111	0
Pb	208	108.841	ug/L	0.178	0	507	5221036	0
Bi	209		ug/L			2742152	2724289	0
Th	232	1.026	ug/L	0.019	1	5672	53876	1
U	238	0.161	ug/L	0.003	1	50	8242	2

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 A SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:08:06

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\112712a.cal

Pb Zn

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1926486	2
Be	9	0.678	ug/L	0.017	2	22	3445	0
C	13		ug/L			143235	203136	0
Cl	37		ug/L			4954439	5248033	2
> Sc	45		ug/L			1218098	1431840	0
V	51	49.013	ug/L	0.579	1	9170	1390906	1
V-1	51	49.715	ug/L	0.677	1	105	1385048	1
Cr	52	32.558	ug/L	0.238	0	27160	807837	0
Cr	53	34.354	ug/L	0.233	0	170	89412	0
Mn	55	691.879	ug/L	9.338	1	674	22400355	1
Co	59	9.018	ug/L	0.064	0	88	211108	0
> Ge	72		ug/L			652831	643189	0
Ni	60	23.689	ug/L	0.576	2	35	97590	1
Ni	62	25.953	ug/L	0.269	1	471	15434	0
Cu	63	33.683	ug/L	0.279	0	514	309017	1
Cu	65	34.239	ug/L	0.788	2	55	141795	1
Zn	66	296.768	ug/L	2.118	0	255	753996	0
Zn	67	278.003	ug/L	5.175	1	38	117504	2
Zn	68	291.008	ug/L	5.975	2	241	533959	1
As	75	23.257	ug/L	0.174	0	310	51533	1
As-1	75	22.992	ug/L	0.196	0	9967	60997	1
Se	82	-0.052	ug/L	0.077	148	4	-7	233
Se	78	0.588	ug/L	0.170	28	10138	10362	0
Mo	98	0.556	ug/L	0.009	1	31	2797	1
Y	89		ug/L			399449	607323	0
Kr	83		ug/L			635	1202	4
> In	115		ug/L			965468	1026433	0
Ag	107	0.303	ug/L	0.005	1	54	3750	1
Cd	111	6.707	ug/L	0.056	0	102	33515	0
Cd	114	6.554	ug/L	0.031	0	36	82643	0
Sb	121	0.299	ug/L	0.002	0	768	5233	1
Sb	123	0.300	ug/L	0.005	1	575	3961	0
Ba	135	200.920	ug/L	1.576	0	23	886822	0
Ba	137	199.608	ug/L	0.543	0	42	1527183	0
> Tb	159		ug/L			1098939	1109878	0
Tl	205	0.502	ug/L	0.008	1	811	20078	1
Pb	208	578.089	ug/L	4.116	0	507	28112167	0
Bi	209		ug/L			2742152	2603936	0
Th	232	4.571	ug/L	0.032	0	5672	223483	0
U	238	0.830	ug/L	0.007	0	50	42751	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 ADUP SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:12:13

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\112712a.cal

*PK Ag Pb Zn*

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
> Li	6		ug/L			1766731	1910482	2
Be	9	0.648	ug/L	0.005	0	22	3266	2
C	13		ug/L			143235	200744	1
Cl	37		ug/L			4954439	5188981	0
> Sc	45		ug/L			1218098	1409485	0
V	51	52.035	ug/L	0.787	1	9170	1452895	1
V-1	51	52.816	ug/L	0.840	1	105	1448392	1
Cr	52	31.418	ug/L	0.268	0	27160	768449	0
Cr	53	33.331	ug/L	0.441	1	170	85394	0
Mn	55	676.770	ug/L	21.520	3	674	21565246	2
Co	59	9.321	ug/L	0.156	1	88	214804	2
> Ge	72		ug/L			652831	638997	1
Ni	60	24.455	ug/L	0.218	0	35	100096	0
Ni	62	25.891	ug/L	0.438	1	471	15298	1
Cu	63	33.197	ug/L	0.606	1	514	302524	0
Cu	65	34.345	ug/L	0.736	2	55	141294	0
Zn	66	294.520	ug/L	5.786	1	255	743288	0
Zn	67	281.448	ug/L	3.167	1	38	118180	1
Zn	68	289.579	ug/L	4.955	1	241	527840	1
As	75	23.299	ug/L	0.505	2	310	51278	1
As-1	75	23.059	ug/L	0.557	2	9967	60737	0
Se	82	-0.094	ug/L	0.038	39	4	-18	51
Se	78	0.619	ug/L	0.341	54	10138	10312	0
Mo	98	0.581	ug/L	0.013	2	31	2901	1
Y	89		ug/L			399449	599800	1
Kr	83		ug/L			635	1179	3
> In	115		ug/L			965468	1019248	0
Ag	107	0.315	ug/L	0.021	6	54	3869	5
Cd	111	6.389	ug/L	0.031	0	102	31707	0
Cd	114	6.256	ug/L	0.110	1	36	78338	1
Sb	121	0.309	ug/L	0.004	1	768	5344	0
Sb	123	0.313	ug/L	0.005	1	575	4079	1
Ba	135	192.034	ug/L	0.522	0	23	841681	0
Ba	137	190.872	ug/L	2.569	1	42	1450111	1
> Tb	159		ug/L			1098939	1097861	0
Tl	205	0.508	ug/L	0.001	0	811	20067	0
Pb	208	563.244	ug/L	1.395	0	507	27093544	0
Bi	209		ug/L			2742152	2598295	0
Th	232	7.140	ug/L	0.045	0	5672	342077	0
U	238	1.468	ug/L	0.023	1	50	74758	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 ASPK SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:16:21

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\112712a.cal

*RR Ag Pb Zn*

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1906934	1
Be	9	27.352	ug/L	0.775	2	22	136628	1
C	13		ug/L			143235	192634	1
Cl	37		ug/L			4954439	5230201	3
> Sc	45		ug/L			1218098	1424954	1
V	51	74.392	ug/L	3.775	5	9170	2095061	4
V-1	51	75.198	ug/L	3.576	4	105	2084531	4
Cr	52	51.987	ug/L	1.087	2	27160	1264594	1
Cr	53	53.922	ug/L	1.193	2	170	139531	1
Mn	55	720.219	ug/L	7.644	1	674	23205095	0
Co	59	31.360	ug/L	0.623	1	88	730220	1
> Ge	72		ug/L			652831	633359	1
Ni	60	51.445	ug/L	1.303	2	35	208643	1
Ni	62	54.083	ug/L	1.590	2	471	31172	2
Cu	63	61.010	ug/L	0.527	0	514	550737	1
Cu	65	60.993	ug/L	1.951	3	55	248659	2
Zn	66	394.792	ug/L	8.761	2	255	987549	1
Zn	67	374.651	ug/L	3.197	0	38	155912	1
Zn	68	392.168	ug/L	4.597	1	241	708605	2
As	75	51.238	ug/L	1.298	2	310	111412	1
As-1	75	50.030	ug/L	0.857	1	9967	119313	0
Se	82	85.504	ug/L	1.973	2	4	20285	1
Se	78	80.656	ug/L	0.633	0	10138	60332	0
Mo	98	24.399	ug/L	0.514	2	31	119587	1
Y	89		ug/L			399449	593908	0
Kr	83		ug/L			635	1186	2
> In	115		ug/L			965468	1027107	0
Ag	107	23.043	ug/L	0.272	1	54	281300	1
Cd	111	30.951	ug/L	0.276	0	102	154372	1
Cd	114	31.097	ug/L	0.124	0	36	392239	0
Sb	121	1.911	ug/L	0.010	0	768	29027	0
Sb	123	1.929	ug/L	0.011	0	575	22174	0
Ba	135	224.481	ug/L	1.200	0	23	991477	0
Ba	137	223.659	ug/L	2.113	0	42	1712294	0
> Tb	159		ug/L			1098939	1099367	0
Tl	205	23.969	ug/L	0.333	1	811	911469	0
Pb	208	633.145	ug/L	4.477	0	507	30496814	0
Bi	209		ug/L			2742152	2610277	0
Th	232	22.964	ug/L	0.319	1	5672	1089141	0
U	238	24.476	ug/L	0.353	1	50	1247059	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 APOST SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:20:28

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1976047	1
Be	9	26.450	ug/L	0.402	1	22	136941	1
C	13		ug/L			143235	201087	1
Cl	37		ug/L			4954439	5278858	4
Sc	45		ug/L			1218098	1434206	1
V	51	76.540	ug/L	1.445	1	9170	2169251	0
V-1	51	77.223	ug/L	1.248	1	105	2154648	0
Cr	52	54.916	ug/L	0.485	0	27160	1342832	1
Cr	53	56.457	ug/L	0.717	1	170	147070	2
Mn	55	724.403	ug/L	0.851	0	674	23492221	1
Co	59	30.279	ug/L	0.169	0	88	709719	1
Ge	72		ug/L			652831	650298	1
Ni	60	49.326	ug/L	0.807	1	35	205454	2
Ni	62	51.425	ug/L	0.918	1	471	30459	1
Cu	63	58.586	ug/L	0.788	1	514	542984	1
Cu	65	59.500	ug/L	0.946	1	55	249087	0
Zn	66	365.885	ug/L	3.300	0	255	939839	1
Zn	67	352.607	ug/L	4.232	1	38	150651	0
Zn	68	361.707	ug/L	11.151	3	241	670866	2
As	75	49.057	ug/L	0.369	0	310	109553	1
As-1	75	47.803	ug/L	0.285	0	9967	117506	1
Se	82	85.005	ug/L	1.578	1	4	20708	1
Se	78	79.959	ug/L	0.831	1	10138	61496	0
Mo	98	26.199	ug/L	0.788	3	31	131826	1
Y	89		ug/L			399449	606649	0
Kr	83		ug/L			635	1234	3
In	115		ug/L			965468	1017724	0
Ag	107	26.394	ug/L	0.605	2	54	319240	1
Cd	111	30.956	ug/L	0.055	0	102	152987	0
Cd	114	30.521	ug/L	0.408	1	36	381445	0
Sb	121	23.070	ug/L	0.169	0	768	338332	0
Sb	123	22.933	ug/L	0.472	2	575	254573	1
Ba	135	222.207	ug/L	1.067	0	23	972471	0
Ba	137	223.103	ug/L	3.736	1	42	1692377	1
Tb	159		ug/L			1098939	1105565	1
Tl	205	24.180	ug/L	0.456	1	811	924571	0
Pb	208	600.495	ug/L	9.807	1	507	29084017	0
Bi	209		ug/L			2742152	2608751	0
Th	232	27.920	ug/L	0.700	2	5672	1330200	1
U	238	24.607	ug/L	0.547	2	50	1260612	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 B SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:24:36

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1969371	1
[ Be	9	0.484	ug/L	0.010	1	22	2523	1
C	13		ug/L			143235	322196	3
Cl	37		ug/L			4954439	5655237	1
> Sc	45		ug/L			1218098	1380785	0
V	51	9.213	ug/L	0.052	0	9170	260565	0
V-1	51	9.292	ug/L	0.043	0	105	249734	0
Cr	52	6.921	ug/L	0.136	1	27160	189846	1
Cr	53	7.106	ug/L	0.209	2	170	17988	2
Mn	55	1516.752	ug/L	11.883	0	674	47355586	0
[ Co	59	3.485	ug/L	0.022	0	88	78741	0
> Ge	72		ug/L			652831	647693	2
Ni	60	6.486	ug/L	0.161	2	35	26927	0
Ni	62	7.006	ug/L	0.415	5	471	4535	4
Cu	63	42.798	ug/L	0.545	1	514	395195	1
Cu	65	43.927	ug/L	1.859	4	55	183108	2
Zn	66	1107.092	ug/L	56.777	5	255	2829826	3
Zn	67	947.611	ug/L	22.671	2	38	403087	0
Zn	68	994.561	ug/L	15.435	1	241	1836789	0
As	75	23.554	ug/L	0.293	1	310	52542	1
As-1	75	23.302	ug/L	0.433	1	9967	62106	0
Se	82	1.189	ug/L	0.019	1	4	292	0
Se	78	1.325	ug/L	0.500	37	10138	10902	1
[ Mo	98	0.692	ug/L	0.036	5	31	3497	3
Y	89		ug/L			399449	501981	0
Kr	83		ug/L			635	794	4
> In	115		ug/L			965468	1292849	1
Ag	107	1.200	ug/L	0.025	2	54	18499	1
Cd	111	13.840	ug/L	0.283	2	102	86954	1
Cd	114	13.535	ug/L	0.167	1	36	214912	0
Sb	121	15.160	ug/L	0.124	0	768	282765	0
Sb	123	15.296	ug/L	0.181	1	575	215947	0
Ba	135	778.258	ug/L	3.139	0	23	4326571	0
[ Ba	137	766.676	ug/L	4.656	0	42	7387830	0
> Tb	159		ug/L			1098939	1101524	0
Tl	205	0.794	ug/L	0.009	1	811	31042	1
Pb	208	1672.609	ug/L	17.973	1	507	80721127	0
Bi	209		ug/L			2742152	2727256	1
Th	232	1.319	ug/L	0.050	3	5672	68042	3
[ U	238	0.467	ug/L	0.003	0	50	23869	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 C SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:29:47

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\112712a.cal

DL

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
Li	6		ug/L			1766731	1947865	0
Be	9	0.508	ug/L	0.005	1	22	2615	0
C	13		ug/L			143235	189437	3
Cl	37		ug/L			4954439	5008480	1
Sc	45		ug/L			1218098	1389142	1
V	51	33.104	ug/L	0.634	1	9170	914638	0
V-1	51	33.533	ug/L	0.622	1	105	906257	1
Cr	52	25.371	ug/L	0.781	3	27160	617357	1
Cr	53	26.556	ug/L	0.642	2	170	67081	1
Mn	55	733.409	ug/L	2.724	0	674	23037916	2
Co	59	8.208	ug/L	0.099	1	88	186413	2
Ge	72		ug/L			652831	627728	0
Ni	60	20.522	ug/L	0.350	1	35	82520	0
Ni	62	21.648	ug/L	0.512	2	471	12639	2
Cu	63	25.906	ug/L	0.356	1	514	232060	1
Cu	65	26.489	ug/L	0.255	0	55	107094	1
Zn	66	283.664	ug/L	7.950	2	255	703327	2
Zn	67	282.611	ug/L	3.421	1	38	116572	1
Zn	68	285.001	ug/L	7.686	2	241	510314	1
As	75	19.938	ug/L	0.492	2	310	43153	1
As-1	75	19.786	ug/L	0.509	2	9967	52560	1
Se	82	-0.055	ug/L	0.076	137	4	-8	208
Se	78	0.703	ug/L	0.112	15	10138	10184	0
Mo	98	0.458	ug/L	0.013	2	31	2256	1
Y	89		ug/L			399449	538678	1
Kr	83		ug/L			635	1051	6
In	115		ug/L			965468	971816	0
Ag	107	0.293	ug/L	0.007	2	54	3442	1
Cd	111	5.088	ug/L	0.114	2	102	24094	1
Cd	114	4.911	ug/L	0.085	1	36	58639	0
Sb	121	0.171	ug/L	0.006	3	768	3165	3
Sb	123	0.178	ug/L	0.003	1	575	2465	0
Ba	135	284.048	ug/L	1.869	0	23	1186995	0
Ba	137	313.389	ug/L	4.487	1	42	2269926	0
Tb	159		ug/L			1098939	1086735	0
Tl	205	0.258	ug/L	0.008	3	811	10493	2
Pb	208	205.778	ug/L	4.100	1	507	9798533	2
Bi	209		ug/L			2742152	2591338	0
Th	232	3.566	ug/L	0.026	0	5672	171947	0
U	238	0.488	ug/L	0.006	1	50	24622	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 D SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:33:55

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
> Li	6		ug/L			1766731	1941039	1
[ Be	9	0.513	ug/L	0.011	2	22	2630	0
C	13		ug/L			143235	208334	2
Cl	37		ug/L			4954439	5213087	1
> Sc	45		ug/L			1218098	1406333	2
V	51	27.202	ug/L	0.360	1	9170	762849	1
V-1	51	27.434	ug/L	0.245	0	105	750705	1
Cr	52	18.989	ug/L	0.498	2	27160	475692	1
Cr	53	19.480	ug/L	0.369	1	170	49869	0
Mn	55	1725.342	ug/L	46.939	2	674	54845510	1
[ Co	59	7.626	ug/L	0.249	3	88	175265	1
> Ge	72		ug/L			652831	628220	1
Ni	60	20.710	ug/L	0.274	1	35	83340	0
Ni	62	21.218	ug/L	0.444	2	471	12406	0
Cu	63	40.364	ug/L	0.572	1	514	361557	1
Cu	65	39.889	ug/L	1.358	3	55	161326	2
Zn	66	695.243	ug/L	12.688	1	255	1724760	0
Zn	67	664.069	ug/L	19.586	2	38	274034	2
Zn	68	699.239	ug/L	3.681	0	241	1252840	0
As	75	35.007	ug/L	0.394	1	310	75604	0
As-1	75	34.685	ug/L	0.463	1	9967	84991	0
Se	82	0.233	ug/L	0.045	19	4	59	17
Se	78	0.870	ug/L	0.286	32	10138	10295	0
[ Mo	98	0.570	ug/L	0.025	4	31	2803	4
Y	89		ug/L			399449	535722	1
Kr	83		ug/L			635	998	2
> In	115		ug/L			965468	1037021	0
Ag	107	0.675	ug/L	0.009	1	54	8381	1
Cd	111	14.385	ug/L	0.038	0	102	72497	0
Cd	114	13.932	ug/L	0.145	1	36	177447	0
Sb	121	0.864	ug/L	0.013	1	768	13707	1
Sb	123	0.873	ug/L	0.006	0	575	10471	0
Ba	135	578.187	ug/L	5.288	0	23	2578395	1
[ Ba	137	568.260	ug/L	5.831	1	42	4392365	0
> Tb	159		ug/L			1098939	1096588	0
Tl	205	0.494	ug/L	0.009	1	811	19539	1
Pb	208	846.470	ug/L	1.678	0	507	40669910	0
Bi	209		ug/L			2742152	2628537	1
Th	232	3.077	ug/L	0.011	0	5672	150477	0
[ U	238	0.389	ug/L	0.002	0	50	19815	0



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV9

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:38:03

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
> Li	6		ug/L			1766731	1854149	\	3
Be	9	52.250	ug/L	2.390	4	22	253568		1
C	13		ug/L			143235	152569		0
Cl	37		ug/L			4954439	5343739		2
> Sc	45		ug/L			1218098	1273616		3
V	51	46.259	ug/L	2.536	5	9170	1166901		2
V-1	51	46.865	ug/L	2.175	4	105	1160243		1
Cr	52	46.793	ug/L	1.622	3	27160	1019643		0
Cr	53	48.891	ug/L	0.758	1	170	113090		2
Mn	55	46.652	ug/L	0.281	0	674	1344019		2
Co	59	46.834	ug/L	0.780	1	88	974458		1
> Ge	72		ug/L			652831	622404		2
Ni	60	50.286	ug/L	0.611	1	35	200424		1
Ni	62	50.463	ug/L	1.031	2	471	28613		1
Cu	63	50.579	ug/L	1.740	3	514	448541		1
Cu	65	50.065	ug/L	0.813	1	55	200588		0
Zn	66	51.253	ug/L	0.568	1	255	126211		2
Zn	67	50.764	ug/L	0.642	1	38	20788		1
Zn	68	51.301	ug/L	0.810	1	241	91263		0
As	75	50.998	ug/L	1.246	2	310	108959		0
As-1	75	50.279	ug/L	1.125	2	9967	117764		0
Se	82	53.946	ug/L	1.635	3	4	12576		1
Se	78	51.426	ug/L	1.162	2	10138	41296		0
Mo	98	53.261	ug/L	2.022	3	31	256411		2
Y	89		ug/L			399449	404604		1
Kr	83		ug/L			635	733		2
> In	115		ug/L			965468	934331		2
Ag	107	56.271	ug/L	0.472	0	54	624739		1
Cd	111	51.968	ug/L	1.568	3	102	235612		0
Cd	114	50.973	ug/L	1.505	2	36	584621		1
Sb	121	51.114	ug/L	1.152	2	768	687046		0
Sb	123	51.206	ug/L	1.174	2	575	521011		0
Ba	135	48.967	ug/L	0.694	1	23	196719		0
Ba	137	49.286	ug/L	1.054	2	42	343186		1
> Tb	159		ug/L			1098939	1065198		1
Tl	205	46.792	ug/L	0.695	1	811	1723117		0
Pb	208	48.046	ug/L	0.553	1	507	2242602		0
Bi	209		ug/L			2742152	2589401		0
Th	232	52.020	ug/L	0.792	1	5672	2383292		0
U	238	52.765	ug/L	1.058	2	50	2604385		0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB9

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:44:56

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1849095	0
Be	9	-0.001	ug/L	0.000	37	22	18	11
C	13		ug/L			143235	154509	4
Cl	37		ug/L			4954439	5084244	1
Sc	45		ug/L			1218098	1242155	1
V	51	-0.019	ug/L	0.005	23	9170	8887	0
V-1	51	-0.002	ug/L	0.000	10	105	56	9
Cr	52	-0.067	ug/L	0.015	22	27160	26307	0
Cr	53	-0.011	ug/L	0.004	33	170	148	5
Mn	55	0.002	ug/L	0.001	51	674	731	1
Co	59	-0.000	ug/L	0.000	191	88	86	8
Ge	72		ug/L			652831	618477	1
Ni	60	0.003	ug/L	0.001	21	35	45	5
Ni	62	0.629	ug/L	0.015	2	471	97	10
Cu	63	-0.041	ug/L	0.001	2	514	128	7
Cu	65	-0.001	ug/L	0.001	87	55	49	7
Zn	66	-0.028	ug/L	0.002	7	255	173	3
Zn	67	-0.026	ug/L	0.012	45	38	26	20
Zn	68	-0.022	ug/L	0.006	28	241	190	4
As	75	0.032	ug/L	0.011	35	310	362	7
As-1	75	0.261	ug/L	0.078	29	9967	10000	0
Se	82	-0.031	ug/L	0.013	42	4	-2	104
Se	78	0.903	ug/L	0.293	32	10138	10155	0
Mo	98	0.004	ug/L	0.000	3	31	51	2
Y	89		ug/L			399449	393555	0
Kr	83		ug/L			635	706	2
In	115		ug/L			965468	927806	0
Ag	107	-0.001	ug/L	0.000	16	54	35	7
Cd	111	-0.003	ug/L	0.001	22	102	85	2
Cd	114	0.001	ug/L	0.001	111	36	48	30
Sb	121	0.011	ug/L	0.006	54	768	884	9
Sb	123	0.012	ug/L	0.007	60	575	672	11
Ba	135	0.001	ug/L	0.001	113	23	26	17
Ba	137	0.001	ug/L	0.001	60	42	50	11
Tb	159		ug/L			1098939	1031049	0
Tl	205	-0.018	ug/L	0.000	2	811	128	9
Pb	208	0.002	ug/L	0.001	64	507	566	10
Bi	209		ug/L			2742152	2621348	0
Th	232	0.019	ug/L	0.016	81	5672	6164	10
U	238	0.001	ug/L	0.000	16	50	103	8

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR88 MB2SPK REN

Sample Dil Factor: 2

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:49:04

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\112712a.cal

*Del*

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
Li	6		ug/L			1766731	1940812	0
Be	9	24.345	ug/L	0.411	1	22	123804	1
C	13		ug/L			143235	172025	0
Cl	37		ug/L			4954439	5102306	2
Sc	45		ug/L			1218098	1298101	2
V	51	23.325	ug/L	0.568	2	9170	605020	0
V-1	51	23.599	ug/L	0.534	2	105	595936	0
Cr	52	23.604	ug/L	0.621	2	27160	538757	0
Cr	53	24.556	ug/L	0.546	2	170	57974	0
Mn	55	23.859	ug/L	0.219	0	674	700930	1
Co	59	23.608	ug/L	0.226	0	88	500903	2
Ge	72		ug/L			652831	634301	0
Ni	60	26.057	ug/L	0.472	1	35	105884	2
Ni	62	25.562	ug/L	0.436	1	471	14998	0
Cu	63	26.127	ug/L	0.126	0	514	236493	1
Cu	65	26.109	ug/L	0.461	1	55	106668	2
Zn	66	80.626	ug/L	1.194	1	255	202193	1
Zn	67	74.641	ug/L	1.400	1	38	31141	2
Zn	68	77.805	ug/L	1.502	1	241	140954	1
As	75	25.257	ug/L	0.676	2	310	55174	3
As-1	75	24.699	ug/L	0.387	1	9967	63906	2
Se	82	80.945	ug/L	0.887	1	4	19237	2
Se	78	77.012	ug/L	0.288	0	10138	58138	0
Mo	98	25.568	ug/L	0.318	1	31	125528	2
Y	89		ug/L			399449	408901	0
Kr	83		ug/L			635	730	2
In	115		ug/L			965468	952372	1
Ag	107	25.870	ug/L	0.440	1	54	292795	1
Cd	111	24.795	ug/L	0.120	0	102	114690	1
Cd	114	24.393	ug/L	0.166	0	36	285287	0
Sb	121	24.107	ug/L	0.206	0	768	330771	0
Sb	123	24.328	ug/L	0.319	1	575	252677	0
Ba	135	24.511	ug/L	0.066	0	23	100401	1
Ba	137	24.225	ug/L	0.374	1	42	171980	0
Tb	159		ug/L			1098939	1072215	0
Tl	205	24.017	ug/L	0.185	0	811	890757	0
Pb	208	24.704	ug/L	0.226	0	507	1161015	0
Bi	209		ug/L			2742152	2697960	0
Th	232	22.674	ug/L	0.275	1	5672	1048900	0
U	238	22.837	ug/L	0.388	1	50	1134811	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR88 J REN

Sample Dil Factor: 5

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:53:12

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
Li	6		ug/L			1766731	1878477	1
Be	9	0.041	ug/L	0.005	11	22	227	9
C	13		ug/L			143235	159321	3
Cl	37		ug/L			4954439	6342466	0
Sc	45		ug/L			1218098	1316001	1
V	51	22.807	ug/L	0.263	1	9170	600121	0
V-1	51	23.170	ug/L	0.316	1	105	593318	0
Cr	52	4.478	ug/L	0.135	3	27160	127438	3
Cr	53	5.045	ug/L	0.073	1	170	12224	0
Mn	55	108.479	ug/L	1.384	1	674	3228400	0
Co	59	0.162	ug/L	0.007	4	88	3585	4
Ge	72		ug/L			652831	611174	1
Ni	60	0.289	ug/L	0.009	3	35	1163	2
Ni	62	68.238	ug/L	32.687	47	471	37978	48
Cu	63	8.327	ug/L	2.592	31	514	73117	31
Cu	65	0.917	ug/L	0.187	20	55	3663	21
Zn	66	1.148	ug/L	0.048	4	255	3007	3
Zn	67	1.919	ug/L	0.082	4	38	806	4
Zn	68	1.839	ug/L	0.115	6	241	3429	5
As	75	0.176	ug/L	0.012	6	310	660	4
As-1	75	0.537	ug/L	0.018	3	9967	10467	1
Se	82	0.027	ug/L	0.013	48	4	10	28
Se	78	1.493	ug/L	0.065	4	10138	10393	1
Mo	98	0.084	ug/L	0.005	6	31	427	6
Y	89		ug/L			399449	435546	0
Kr	83		ug/L			635	750	2
In	115		ug/L			965468	908019	0
Ag	107	0.008	ug/L	0.003	30	54	140	19
Cd	111	0.026	ug/L	0.005	19	102	210	10
Cd	114	0.004	ug/L	0.001	32	36	75	17
Sb	121	-0.008	ug/L	0.005	63	768	615	11
Sb	123	-0.007	ug/L	0.007	97	575	469	15
Ba	135	2.299	ug/L	0.024	1	23	8997	1
Ba	137	2.266	ug/L	0.022	0	42	15379	1
Tb	159		ug/L			1098939	1064605	0
Tl	205	-0.005	ug/L	0.002	36	811	584	12
Pb	208	0.070	ug/L	0.001	0	507	3766	0
Bi	209		ug/L			2742152	2418439	0
Th	232	0.259	ug/L	0.035	13	5672	17328	9
U	238	0.043	ug/L	0.001	2	50	2175	2

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 E SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 19:57:19

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\112712a.cal

*Del*

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1872130	2
Be	9	0.509	ug/L	0.014	2	22	2521	1
C	13		ug/L			143235	191550	2
Cl	37		ug/L			4954439	5138917	1
Sc	45		ug/L			1218098	1363490	2
V	51	30.079	ug/L	0.240	0	9170	816875	2
V-1	51	30.471	ug/L	0.227	0	105	808465	2
Cr	52	18.079	ug/L	0.198	1	27160	440633	1
Cr	53	18.979	ug/L	0.543	2	170	47102	0
Mn	55	1381.655	ug/L	36.260	2	674	42586579	2
Co	59	7.804	ug/L	0.269	3	88	173898	1
Ge	72		ug/L			652831	631355	1
Ni	60	18.048	ug/L	0.263	1	35	72995	0
Ni	62	21.723	ug/L	1.145	5	471	12759	5
Cu	63	20.916	ug/L	0.465	2	514	188504	1
Cu	65	21.241	ug/L	0.525	2	55	86363	1
Zn	66	432.495	ug/L	7.831	1	255	1078384	0
Zn	67	421.072	ug/L	7.247	1	38	174651	0
Zn	68	432.280	ug/L	14.170	3	241	778310	2
As	75	23.834	ug/L	0.294	1	310	51828	0
As-1	75	23.656	ug/L	0.343	1	9967	61321	0
Se	82	0.040	ug/L	0.057	140	4	14	96
Se	78	0.726	ug/L	0.176	24	10138	10257	0
Mo	98	0.459	ug/L	0.017	3	31	2275	4
Y	89		ug/L			399449	525344	3
Kr	83		ug/L			635	962	2
In	115		ug/L			965468	979550	1
Ag	107	0.381	ug/L	0.012	3	54	4493	1
Cd	111	6.635	ug/L	0.101	1	102	31638	1
Cd	114	6.404	ug/L	0.068	1	36	77057	0
Sb	121	0.320	ug/L	0.005	1	768	5292	0
Sb	123	0.322	ug/L	0.006	1	575	4021	0
Ba	135	411.184	ug/L	5.778	1	23	1731866	0
Ba	137	450.611	ug/L	9.509	2	42	3289545	0
Tb	159		ug/L			1098939	1104547	0
Tl	205	0.293	ug/L	0.003	1	811	12018	0
Pb	208	222.983	ug/L	0.680	0	507	10791787	0
Bi	209		ug/L			2742152	2635766	0
Th	232	3.188	ug/L	0.008	0	5672	156830	0
U	238	0.370	ug/L	0.006	1	50	18970	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 F SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:01:26

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\112712a.cal

*Del*

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1907649	1
Be	9	0.582	ug/L	0.016	2	22	2933	1
C	13		ug/L			143235	185630	2
Cl	37		ug/L			4954439	5175658	1
Sc	45		ug/L			1218098	1395864	1
V	51	33.457	ug/L	0.918	2	9170	928638	0
V-1	51	33.842	ug/L	0.867	2	105	918923	0
Cr	52	19.638	ug/L	0.716	3	27160	487177	1
Cr	53	20.447	ug/L	0.528	2	170	51944	0
Mn	55	703.572	ug/L	10.018	1	674	22203430	0
Co	59	8.206	ug/L	0.126	1	88	187238	0
Ge	72		ug/L			652831	621679	0
Ni	60	22.693	ug/L	0.028	0	35	90374	0
Ni	62	25.290	ug/L	0.762	3	471	14549	2
Cu	63	23.010	ug/L	0.366	1	514	204175	1
Cu	65	23.353	ug/L	0.368	1	55	93501	1
Zn	66	120.707	ug/L	2.856	2	255	296537	1
Zn	67	132.213	ug/L	0.808	0	38	54030	0
Zn	68	126.762	ug/L	2.169	1	241	224938	1
As	75	16.174	ug/L	0.162	1	310	34730	1
As-1	75	16.061	ug/L	0.139	0	9967	44046	1
Se	82	-0.246	ug/L	0.050	20	4	-53	22
Se	78	0.665	ug/L	0.065	9	10138	10062	0
Mo	98	0.353	ug/L	0.004	0	31	1728	0
Y	89		ug/L			399449	558663	2
Kr	83		ug/L			635	1155	4
In	115		ug/L			965468	942073	2
Ag	107	0.223	ug/L	0.036	16	54	2543	13
Cd	111	0.785	ug/L	0.011	1	102	3688	3
Cd	114	0.583	ug/L	0.013	2	36	6775	0
Sb	121	0.053	ug/L	0.003	6	768	1463	2
Sb	123	0.053	ug/L	0.005	10	575	1105	2
Ba	135	275.908	ug/L	6.517	2	23	1117393	1
Ba	137	274.929	ug/L	9.754	3	42	1929545	1
Tb	159		ug/L			1098939	1097800	1
Tl	205	0.178	ug/L	0.005	2	811	7578	1
Pb	208	18.377	ug/L	0.272	1	507	884343	0
Bi	209		ug/L			2742152	2596787	1
Th	232	3.902	ug/L	0.050	1	5672	189486	0
U	238	0.513	ug/L	0.013	2	50	26167	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 G SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:05:34

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\112712a.cal

*Del*

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1944304	1
Be	9	0.538	ug/L	0.008	1	22	2763	2
C	13		ug/L			143235	174724	1
Cl	37		ug/L			4954439	5226526	1
Sc	45		ug/L			1218098	1429824	1
V	51	38.893	ug/L	0.835	2	9170	1104086	0
V-1	51	39.365	ug/L	0.914	2	105	1094851	0
Cr	52	20.021	ug/L	0.298	1	27160	508257	0
Cr	53	20.939	ug/L	0.634	3	170	54479	1
Mn	55	391.802	ug/L	3.162	0	674	12666464	1
Co	59	8.174	ug/L	0.219	2	88	191019	1
Ge	72		ug/L			652831	623579	1
Ni	60	20.209	ug/L	0.511	2	35	80722	2
Ni	62	22.691	ug/L	0.712	3	471	13138	2
Cu	63	29.428	ug/L	0.880	2	514	261745	1
Cu	65	29.611	ug/L	0.559	1	55	118896	1
Zn	66	63.255	ug/L	1.371	2	255	156004	2
Zn	67	72.070	ug/L	0.901	1	38	29558	1
Zn	68	68.250	ug/L	0.828	1	241	121605	2
As	75	5.895	ug/L	0.053	0	310	12883	0
As-1	75	5.871	ug/L	0.163	2	9967	22187	0
Se	82	-0.129	ug/L	0.145	112	4	-25	131
Se	78	0.630	ug/L	0.369	58	10138	10071	1
Mo	98	0.312	ug/L	0.002	0	31	1533	1
Y	89		ug/L			399449	641015	2
Kr	83		ug/L			635	1092	3
In	115		ug/L			965468	950648	0
Ag	107	0.239	ug/L	0.008	3	54	2750	3
Cd	111	0.408	ug/L	0.011	2	102	1982	2
Cd	114	0.214	ug/L	0.000	0	36	2536	0
Sb	121	-0.009	ug/L	0.002	22	768	635	4
Sb	123	-0.005	ug/L	0.001	14	575	512	2
Ba	135	154.894	ug/L	2.900	1	23	633171	1
Ba	137	153.997	ug/L	1.727	1	42	1091219	1
Tb	159		ug/L			1098939	1110184	0
Tl	205	0.140	ug/L	0.002	1	811	6181	0
Pb	208	7.437	ug/L	0.082	1	507	362217	0
Bi	209		ug/L			2742152	2606377	0
Th	232	4.101	ug/L	0.057	1	5672	201113	0
U	238	0.696	ug/L	0.011	1	50	35845	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 H SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:09:41

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\112712a.cal

*Del*

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1905311	0
Be	9	0.490	ug/L	0.011	2	22	2470	2
C	13		ug/L			143235	171505	1
Cl	37		ug/L			4954439	5230158	4
Sc	45		ug/L			1218098	1412359	1
V	51	41.932	ug/L	0.253	0	9170	1175276	1
V-1	51	42.500	ug/L	0.211	0	105	1167941	1
Cr	52	21.652	ug/L	0.531	2	27160	540331	0
Cr	53	22.848	ug/L	0.404	1	170	58711	0
Mn	55	324.080	ug/L	13.230	4	674	10345470	2
Co	59	8.285	ug/L	0.203	2	88	191273	1
Ge	72		ug/L			652831	629321	0
Ni	60	19.984	ug/L	0.276	1	35	80567	1
Ni	62	22.346	ug/L	0.575	2	471	13066	2
Cu	63	30.287	ug/L	0.319	1	514	271908	1
Cu	65	30.753	ug/L	0.633	2	55	124634	1
Zn	66	54.617	ug/L	0.687	1	255	135979	1
Zn	67	60.785	ug/L	0.663	1	38	25165	0
Zn	68	57.842	ug/L	1.347	2	241	104034	2
As	75	6.060	ug/L	0.092	1	310	13359	1
As-1	75	6.007	ug/L	0.118	1	9967	22691	1
Se	82	-0.084	ug/L	0.014	16	4	-15	21
Se	78	0.457	ug/L	0.148	32	10138	10057	0
Mo	98	0.367	ug/L	0.005	1	31	1819	1
Y	89		ug/L			399449	610510	2
Kr	83		ug/L			635	1007	4
In	115		ug/L			965468	945749	0
Ag	107	0.237	ug/L	0.002	0	54	2718	0
Cd	111	0.325	ug/L	0.031	9	102	1592	9
Cd	114	0.142	ug/L	0.004	2	36	1689	2
Sb	121	-0.026	ug/L	0.001	4	768	396	4
Sb	123	-0.027	ug/L	0.001	5	575	290	5
Ba	135	126.184	ug/L	0.726	0	23	513181	0
Ba	137	125.946	ug/L	0.709	0	42	887880	0
Tb	159		ug/L			1098939	1104317	0
Tl	205	0.142	ug/L	0.001	0	811	6218	0
Pb	208	6.880	ug/L	0.041	0	507	333389	0
Bi	209		ug/L			2742152	2590022	0
Th	232	4.715	ug/L	0.047	0	5672	229159	0
U	238	0.750	ug/L	0.004	0	50	38439	0



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 I SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:13:49

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens	Intens. RSD
> Li	6		ug/L			1766731	1920278	3
[ Be	9	0.955	ug/L	0.022	2	22	4825	1
C	13		ug/L			143235	227754	1
Cl	37		ug/L			4954439	5310531	0
> Sc	45		ug/L			1218098	1394905	1
V	51	28.887	ug/L	0.519	1	9170	802789	0
V-1	51	29.300	ug/L	0.799	2	105	795058	1
Cr	52	28.472	ug/L	0.387	1	27160	692216	2
Cr	53	29.871	ug/L	0.592	1	170	75748	0
Mn	55	2721.538	ug/L	44.062	1	674	85826779	0
[ Co	59	11.916	ug/L	0.320	2	88	271642	1
> Ge	72		ug/L			652831	629541	1
Ni	60	36.463	ug/L	0.602	1	35	147000	0
Ni	62	38.072	ug/L	1.193	3	471	21943	1
Cu	63	39.860	ug/L	1.629	4	514	357667	2
Cu	65	40.666	ug/L	1.283	3	55	164785	1
Zn	66	750.979	ug/L	9.682	1	255	1867115	1
Zn	67	706.432	ug/L	8.814	1	38	292205	2
Zn	68	738.245	ug/L	19.629	2	241	1325188	1
As	75	31.274	ug/L	0.778	2	310	67703	1
As-1	75	30.934	ug/L	0.822	2	9967	76987	0
Se	82	0.555	ug/L	0.041	7	4	135	6
Se	78	1.134	ug/L	0.354	31	10138	10480	0
Mo	98	1.177	ug/L	0.062	5	31	5760	4
Y	89		ug/L			399449	635664	1
Kr	83		ug/L			635	1119	4
> In	115		ug/L			965468	1016423	0
Ag	107	0.488	ug/L	0.015	3	54	5946	2
Cd	111	16.025	ug/L	0.120	0	102	79148	0
Cd	114	15.688	ug/L	0.057	0	36	195845	0
Sb	121	0.891	ug/L	0.016	1	768	13822	1
Sb	123	0.885	ug/L	0.009	1	575	10391	1
Ba	135	409.788	ug/L	1.633	0	23	1791105	0
[ Ba	137	449.317	ug/L	1.922	0	42	3404083	0
> Tb	159		ug/L			1098939	1096967	1
Tl	205	0.562	ug/L	0.009	1	811	22111	0
Pb	208	709.779	ug/L	12.951	1	507	34109183	0
Bi	209		ug/L			2742152	2606769	0
Th	232	4.190	ug/L	0.073	1	5672	202906	0
U	238	0.606	ug/L	0.012	1	50	30831	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 J SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:17:57

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1941367	1
Be	9	1.258	ug/L	0.031	2	22	6420	2
C	13		ug/L			143235	197868	0
Cl	37		ug/L			4954439	5263898	1
Sc	45		ug/L			1218098	1435933	0
V	51	41.354	ug/L	0.788	1	9170	1178598	2
V-1	51	41.894	ug/L	1.113	2	105	1170578	2
Cr	52	32.196	ug/L	0.923	2	27160	801412	2
Cr	53	33.711	ug/L	0.428	1	170	87994	1
Mn	55	1464.941	ug/L	50.265	3	674	47556888	2
Co	59	17.393	ug/L	0.197	1	88	408238	1
Ge	72		ug/L			652831	620116	0
Ni	60	73.295	ug/L	1.556	2	35	291052	1
Ni	62	77.451	ug/L	0.871	1	471	43526	2
Cu	63	51.088	ug/L	0.513	1	514	451617	1
Cu	65	52.009	ug/L	0.786	1	55	207639	0
Zn	66	425.116	ug/L	10.292	2	255	1041128	1
Zn	67	411.378	ug/L	11.898	2	38	167586	2
Zn	68	418.739	ug/L	10.556	2	241	740587	1
As	75	23.790	ug/L	0.373	1	310	50809	0
As-1	75	23.505	ug/L	0.401	1	9967	59906	0
Se	82	0.315	ug/L	0.044	13	4	77	12
Se	78	1.375	ug/L	0.152	11	10138	10472	0
Mo	98	1.345	ug/L	0.042	3	31	6482	3
Y	89		ug/L			399449	810851	2
Kr	83		ug/L			635	1530	1
In	115		ug/L			965468	955719	1
Ag	107	1.229	ug/L	0.022	1	54	14015	1
Cd	111	6.422	ug/L	0.120	1	102	29879	1
Cd	114	5.993	ug/L	0.086	1	36	70360	0
Sb	121	0.177	ug/L	0.010	5	768	3196	3
Sb	123	0.177	ug/L	0.001	0	575	2415	1
Ba	135	264.447	ug/L	1.825	0	23	1086783	1
Ba	137	264.834	ug/L	3.939	1	42	1886359	0
Tb	159		ug/L			1098939	1100070	0
Tl	205	0.336	ug/L	0.003	1	811	13585	0
Pb	208	194.628	ug/L	1.669	0	507	9381086	0
Bi	209		ug/L			2742152	2499116	0
Th	232	5.313	ug/L	0.041	0	5672	256524	0
U	238	1.299	ug/L	0.018	1	50	66267	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 K SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:23:08

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens RSD
Li	6		ug/L			1766731	1962488	1
Be	9	0.508	ug/L	0.015	2	22	2635	1
C	13		ug/L			143235	190670	2
Cl	37		ug/L			4954439	5068365	3
Sc	45		ug/L			1218098	1387244	0
V	51	31.920	ug/L	0.543	1	9170	881292	1
V-1	51	32.263	ug/L	0.457	1	105	870915	1
Cr	52	20.383	ug/L	0.388	1	27160	501559	1
Cr	53	21.131	ug/L	0.266	1	170	53357	0
Mn	55	1383.797	ug/L	25.102	1	674	43405479	1
Co	59	8.558	ug/L	0.060	0	88	194111	1
Ge	72		ug/L			652831	623770	0
Ni	60	20.132	ug/L	0.185	0	35	80449	1
Ni	62	21.299	ug/L	0.402	1	471	12364	0
Cu	63	17.881	ug/L	0.578	3	514	159301	2
Cu	65	18.157	ug/L	0.397	2	55	72949	1
Zn	66	216.633	ug/L	3.799	1	255	533894	2
Zn	67	213.317	ug/L	6.392	2	38	87428	2
Zn	68	216.744	ug/L	2.060	0	241	385746	0
As	75	15.482	ug/L	0.238	1	310	33364	1
As-1	75	15.394	ug/L	0.286	1	9967	42751	0
Se	82	-0.256	ug/L	0.037	14	4	-55	14
Se	78	0.604	ug/L	0.176	29	10138	10058	0
Mo	98	0.431	ug/L	0.006	1	31	2109	2
Y	89		ug/L			399449	471386	1
Kr	83		ug/L			635	1068	2
In	115		ug/L			965468	964349	0
Ag	107	0.189	ug/L	0.002	1	54	2216	0
Cd	111	2.844	ug/L	0.008	0	102	13413	0
Cd	114	2.695	ug/L	0.009	0	36	31951	0
Sb	121	0.141	ug/L	0.007	4	768	2720	2
Sb	123	0.143	ug/L	0.001	0	575	2070	0
Ba	135	241.634	ug/L	1.491	0	23	1002038	1
Ba	137	239.157	ug/L	2.656	1	42	1719013	0
Tb	159		ug/L			1098939	1074959	0
Tl	205	0.227	ug/L	0.002	0	811	9244	0
Pb	208	220.121	ug/L	1.472	0	507	10367691	0
Bi	209		ug/L			2742152	2589379	0
Th	232	2.857	ug/L	0.006	0	5672	137360	0
U	238	0.322	ug/L	0.006	1	50	16067	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VS21 L SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:27:16

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\112712a.cal

*Del*

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
Li	6		ug/L			1766731	1981657	3
Be	9	0.358	ug/L	0.020	5	22	1882	2
C	13		ug/L			143235	234600	1
Cl	37		ug/L			4954439	5263295	1
Sc	45		ug/L			1218098	1377388	1
V	51	24.075	ug/L	0.529	2	9170	662339	0
V-1	51	24.415	ug/L	0.697	2	105	654190	1
Cr	52	15.299	ug/L	0.245	1	27160	381392	0
Cr	53	16.139	ug/L	0.779	4	170	40491	3
Mn	55	602.760	ug/L	15.655	2	674	18771056	2
Co	59	6.275	ug/L	0.167	2	88	141290	1
Ge	72		ug/L			652831	636571	0
Ni	60	14.012	ug/L	0.248	1	35	57153	2
Ni	62	15.287	ug/L	0.229	1	471	9187	1
Cu	63	20.339	ug/L	0.193	0	514	184861	0
Cu	65	20.414	ug/L	0.183	0	55	83701	0
Zn	66	199.476	ug/L	1.602	0	255	501681	0
Zn	67	193.603	ug/L	3.319	1	38	80993	1
Zn	68	198.394	ug/L	3.065	1	241	360360	1
As	75	10.396	ug/L	0.049	0	310	22964	0
As-1	75	10.321	ug/L	0.092	0	9967	32454	0
Se	82	0.526	ug/L	0.051	9	4	129	9
Se	78	0.931	ug/L	0.177	18	10138	10471	0
Mo	98	0.463	ug/L	0.029	6	31	2311	5
Y	89		ug/L			399449	500825	1
Kr	83		ug/L			635	865	2
In	115		ug/L			965468	987841	0
Ag	107	0.269	ug/L	0.009	3	54	3216	2
Cd	111	3.978	ug/L	0.101	2	102	19173	1
Cd	114	3.850	ug/L	0.016	0	36	46743	0
Sb	121	0.356	ug/L	0.002	0	768	5835	0
Sb	123	0.357	ug/L	0.006	1	575	4425	1
Ba	135	137.858	ug/L	1.782	1	23	585602	1
Ba	137	137.327	ug/L	2.405	1	42	1011114	1
Tb	159		ug/L			1098939	1081256	0
Tl	205	0.190	ug/L	0.005	2	811	7910	2
Pb	208	204.535	ug/L	2.189	1	507	9689921	0
Bi	209		ug/L			2742152	2607247	0
Th	232	1.880	ug/L	0.017	0	5672	92822	0
U	238	0.509	ug/L	0.005	1	50	25539	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV10

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:31:24

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1887691	2
Be	9	52.680	ug/L	0.933	1	22	260466	1
C	13		ug/L			143235	157221	1
Cl	37		ug/L			4954439	5357006	3
> Sc	45		ug/L			1218098	1257774	0
V	51	46.961	ug/L	1.228	2	9170	1171132	2
V-1	51	47.480	ug/L	0.818	1	105	1162033	2
Cr	52	47.801	ug/L	1.136	2	27160	1028729	2
Cr	53	49.611	ug/L	0.919	1	170	113336	1
Mn	55	47.628	ug/L	0.662	1	674	1355226	1
Co	59	46.737	ug/L	0.746	1	88	960620	1
> Ge	72		ug/L			652831	623224	1
Ni	60	50.161	ug/L	0.365	0	35	200220	1
Ni	62	49.588	ug/L	0.362	0	471	28168	1
Cu	63	49.042	ug/L	0.661	1	514	435677	0
Cu	65	49.905	ug/L	1.623	3	55	200210	2
Zn	66	50.891	ug/L	1.131	2	255	125469	1
Zn	67	51.454	ug/L	0.385	0	38	21103	1
Zn	68	50.418	ug/L	1.201	2	241	89818	1
As	75	50.409	ug/L	1.037	2	310	107866	1
As-1	75	49.713	ug/L	1.031	2	9967	116717	0
Se	82	53.723	ug/L	0.946	1	4	12544	1
Se	78	51.218	ug/L	0.967	1	10138	41228	0
Mo	98	52.875	ug/L	0.503	0	31	254993	0
Y	89		ug/L			399449	398639	1
Kr	83		ug/L			635	693	0
> In	115		ug/L			965468	933758	1
Ag	107	55.167	ug/L	0.600	1	54	612158	1
Cd	111	51.682	ug/L	0.406	0	102	234265	0
Cd	114	50.864	ug/L	0.526	1	36	583251	1
Sb	121	50.834	ug/L	0.978	1	768	682986	0
Sb	123	50.618	ug/L	0.825	1	575	514836	0
Ba	135	49.654	ug/L	0.733	1	23	199393	1
Ba	137	49.276	ug/L	0.437	0	42	342980	0
> Tb	159		ug/L			1098939	1066460	1
Tl	205	46.105	ug/L	0.260	0	811	1700022	0
Pb	208	47.497	ug/L	0.279	0	507	2219738	0
Bi	209		ug/L			2742152	2591548	1
Th	232	51.981	ug/L	0.423	0	5672	2384551	0
U	238	52.787	ug/L	0.749	1	50	2608865	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB10

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:38:16

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens RSD
Li	6		ug/L			1766731	1834925	2
Be	9	-0.002	ug/L	0.000	14	22	14	7
C	13		ug/L			143235	163248	0
Cl	37		ug/L			4954439	5082478	2
Sc	45		ug/L			1218098	1235415	1
V	51	-0.020	ug/L	0.007	37	9170	8817	2
V-1	51	-0.002	ug/L	0.001	44	105	70	24
Cr	52	-0.063	ug/L	0.025	39	27160	26240	2
Cr	53	-0.002	ug/L	0.005	220	170	168	4
Mn	55	0.001	ug/L	0.002	251	674	701	5
Co	59	0.000	ug/L	0.000	526	88	91	9
Ge	72		ug/L			652831	607691	0
Ni	60	0.002	ug/L	0.002	127	35	39	21
Ni	62	-0.585	ug/L	0.039	6	471	119	17
Cu	63	-0.035	ug/L	0.001	3	514	171	4
Cu	65	-0.001	ug/L	0.000	16	55	49	1
Zn	66	-0.034	ug/L	0.005	15	255	155	7
Zn	67	-0.026	ug/L	0.006	22	38	25	9
Zn	68	-0.019	ug/L	0.002	11	241	192	2
As	75	0.022	ug/L	0.012	54	310	335	7
As-1	75	0.300	ug/L	0.046	15	9967	9909	0
Se	82	-0.009	ug/L	0.073	800	4	2	791
Se	78	1.028	ug/L	0.149	14	10138	10054	0
Mo	98	0.003	ug/L	0.003	81	31	45	28
Y	89		ug/L			399449	384758	0
Kr	83		ug/L			635	641	2
In	115		ug/L			965468	929828	1
Ag	107	-0.001	ug/L	0.001	100	54	42	25
Cd	111	-0.002	ug/L	0.002	90	102	88	10
Cd	114	0.001	ug/L	0.000	28	36	49	7
Sb	121	0.007	ug/L	0.006	76	768	838	7
Sb	123	0.006	ug/L	0.004	76	575	613	6
Ba	135	0.000	ug/L	0.001	466	23	23	23
Ba	137	-0.002	ug/L	0.002	84	42	28	38
Tb	159		ug/L			1098939	1026810	1
Tl	205	-0.018	ug/L	0.001	2	811	125	14
Pb	208	-0.001	ug/L	0.000	17	507	407	1
Bi	209		ug/L			2742152	2649056	0
Th	232	0.017	ug/L	0.013	72	5672	6066	8
U	238	0.001	ug/L	0.000	24	50	97	12

# ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 MB2 SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:42:25

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\112712a.cal

11-28-12

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
[> Li	6		ug/L			1766731	1893457		2
[ Be	9	-0.001	ug/L	0.000	87	22	21		11
C	13		ug/L			143235	175723		0
Cl	37		ug/L			4954439	5073318		4
[> Sc	45		ug/L			1218098	1251680		1
V	51	-0.012	ug/L	0.003	23	9170	9137		0
V-1	51	-0.001	ug/L	0.001	171	105	95		22
Cr	52	-0.039	ug/L	0.009	22	27160	27099		0
Cr	53	-0.002	ug/L	0.008	386	170	170		9
Mn	55	0.034	ug/L	0.004	10	674	1668		5
Co	59	0.000	ug/L	0.001	556	88	94		16
[> Ge	72		ug/L			652831	619628		2
Ni	60	-0.001	ug/L	0.000	42	35	30		1
Ni	62	-0.602	ug/L	0.014	2	471	112		5
Cu	63	-0.013	ug/L	0.003	22	514	372		4
Cu	65	0.026	ug/L	0.003	10	55	156		5
Zn	66	1.894	ug/L	0.069	3	255	4873		1
Zn	67	1.709	ug/L	0.130	7	38	732		7
Zn	68	1.814	ug/L	0.013	0	241	3434		1
As	75	0.005	ug/L	0.011	224	310	305		7
As-1	75	0.205	ug/L	0.063	30	9967	9899		1
Se	82	-0.013	ug/L	0.043	321	4	1		859
Se	78	0.740	ug/L	0.205	27	10138	10074		1
Mo	98	-0.000	ug/L	0.001	233	31	28		10
Y	89		ug/L			399449	397902		2
Kr	83		ug/L			635	645		3
[> In	115		ug/L			965468	936846		1
Ag	107	-0.003	ug/L	0.000	13	54	23		17
Cd	111	-0.003	ug/L	0.002	59	102	86		10
Cd	114	0.000	ug/L	0.001	149	36	41		20
Sb	121	-0.033	ug/L	0.001	4	768	298		4
Sb	123	-0.033	ug/L	0.003	9	575	222		13
Ba	135	0.011	ug/L	0.003	31	23	66		19
Ba	137	0.011	ug/L	0.002	15	42	114		9
[> Tb	159		ug/L			1098939	1047901		1
Tl	205	-0.018	ug/L	0.000	2	811	122		11
Pb	208	0.013	ug/L	0.001	6	507	1074		3
Bi	209		ug/L			2742152	2667678		0
Th	232	-0.033	ug/L	0.004	12	5672	3903		5
U	238	0.000	ug/L	0.001	1153	50	51		59

# ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 MB1SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:42:25

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
> Li	6		ug/L			1766731	1893457		2
[ Be	9	-0.001	ug/L	0.000	87	22	21		11
C	13		ug/L			143235	175723		0
Cl	37		ug/L			4954439	5073318		4
> Sc	45		ug/L			1218098	1251680		1
V	51	-0.012	ug/L	0.003	23	9170	9137		0
V-1	51	-0.001	ug/L	0.001	171	105	95		22
Cr	52	-0.039	ug/L	0.009	22	27160	27099		0
Cr	53	-0.002	ug/L	0.008	386	170	170		9
Mn	55	0.034	ug/L	0.004	10	674	1668		5
[ Co	59	0.000	ug/L	0.001	556	88	94		16
> Ge	72		ug/L			652831	619628		2
Ni	60	-0.001	ug/L	0.000	42	35	30		1
Ni	62	-0.602	ug/L	0.014	2	471	112		5
Cu	63	-0.013	ug/L	0.003	22	514	372		4
Cu	65	0.026	ug/L	0.003	10	55	156		5
Zn	66	1.894	ug/L	0.069	3	255	4873		1
Zn	67	1.709	ug/L	0.130	7	38	732		7
Zn	68	1.814	ug/L	0.013	0	241	3434		1
As	75	0.005	ug/L	0.011	224	310	305		7
As-1	75	0.205	ug/L	0.063	30	9967	9899		1
Se	82	-0.013	ug/L	0.043	321	4	1		859
Se	78	0.740	ug/L	0.205	27	10138	10074		1
[ Mo	98	-0.000	ug/L	0.001	233	31	28		10
Y	89		ug/L			399449	397902		2
Kr	83		ug/L			635	645		3
> In	115		ug/L			965468	936846		1
Ag	107	-0.003	ug/L	0.000	13	54	23		17
Cd	111	-0.003	ug/L	0.002	59	102	86		10
Cd	114	0.000	ug/L	0.001	149	36	41		20
Sb	121	-0.033	ug/L	0.001	4	768	298		4
Sb	123	-0.033	ug/L	0.003	9	575	222		13
Ba	135	0.011	ug/L	0.003	31	23	66		19
[ Ba	137	0.011	ug/L	0.002	15	42	114		9
> Tb	159		ug/L			1098939	1047901		1
Tl	205	-0.018	ug/L	0.000	2	811	122		11
Pb	208	0.013	ug/L	0.001	6	507	1074		3
Bi	209		ug/L			2742152	2667678		0
Th	232	-0.033	ug/L	0.004	12	5672	3903		5
[ U	238	0.000	ug/L	0.001	1153	50	51		59



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 MB1SPK SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:46:32

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1842748	1
[ Be	9	26.166	ug/L	0.558	2	22	126318	0
C	13		ug/L			143235	164592	3
Cl	37		ug/L			4954439	5082435	2
> Sc	45		ug/L			1218098	1239480	0
V	51	23.952	ug/L	0.142	0	9170	593164	0
V-1	51	24.345	ug/L	0.119	0	105	587180	0
Cr	52	23.766	ug/L	0.278	1	27160	517913	0
Cr	53	25.105	ug/L	0.314	1	170	56610	1
Mn	55	24.156	ug/L	0.272	1	674	677647	0
[ Co	59	24.077	ug/L	0.704	2	88	487797	3
> Ge	72		ug/L			652831	603668	3
Ni	60	27.266	ug/L	1.399	5	35	105333	3
Ni	62	25.670	ug/L	0.300	1	471	14332	3
Cu	63	26.801	ug/L	0.926	3	514	230754	3
Cu	65	26.527	ug/L	0.762	2	55	103085	2
Zn	66	87.005	ug/L	2.107	2	255	207530	1
Zn	67	76.994	ug/L	1.626	2	38	30554	1
Zn	68	84.018	ug/L	1.364	1	241	144804	2
As	75	27.168	ug/L	1.116	4	310	56398	0
As-1	75	26.266	ug/L	1.082	4	9967	64039	0
Se	82	89.727	ug/L	3.948	4	4	20273	1
Se	78	84.302	ug/L	3.407	4	10138	59634	0
[ Mo	98	0.003	ug/L	0.003	97	31	44	31
Y	89		ug/L			399449	392296	1
Kr	83		ug/L			635	670	4
> In	115		ug/L			965468	923670	0
Ag	107	28.110	ug/L	0.175	0	54	308598	1
Cd	111	25.717	ug/L	0.189	0	102	115363	0
Cd	114	25.432	ug/L	0.327	1	36	288485	1
Sb	121	-0.041	ug/L	0.003	6	768	196	16
Sb	123	-0.039	ug/L	0.002	4	575	153	11
Ba	135	25.058	ug/L	0.096	0	23	99550	0
[ Ba	137	24.742	ug/L	0.291	1	42	170378	0
> Tb	159		ug/L			1098939	1037141	1
Tl	205	24.377	ug/L	0.310	1	811	874447	0
Pb	208	24.809	ug/L	0.309	1	507	1127728	0
Bi	209		ug/L			2742152	2624762	0
Th	232	22.505	ug/L	0.309	1	5672	1007016	0
[ U	238	22.927	ug/L	0.254	1	50	1102018	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR88 B REN

Sample Dil Factor: 10

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:50:40

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1823613	1
[ Be	9	0.080	ug/L	0.005	6	22	404	5
C	13		ug/L			143235	167606	2
Cl	37		ug/L			4954439	7020148	2
> Sc	45		ug/L			1218098	1318447	0
V	51	67.073	ug/L	1.659	2	9170	1748946	2
V-1	51	68.068	ug/L	1.674	2	105	1746095	2
Cr	52	13.763	ug/L	0.197	1	27160	331420	1
Cr	53	15.204	ug/L	0.169	1	170	36538	1
Mn	55	85.276	ug/L	2.146	2	674	2542851	2
[ Co	59	0.249	ug/L	0.006	2	88	5453	2
> Ge	72		ug/L			652831	600980	1
Ni	60	0.423	ug/L	0.013	3	35	1661	3
Ni	62	58.322	ug/L	53.838	92	471	32063	92
Cu	63	10.909	ug/L	4.385	40	514	94082	41
Cu	65	3.832	ug/L	0.228	5	55	14882	6
Zn	66	1.573	ug/L	0.098	6	255	3966	5
Zn	67	3.891	ug/L	0.028	0	38	1571	2
Zn	68	1.779	ug/L	0.049	2	241	3270	1
As	75	0.847	ug/L	0.006	0	310	2028	1
As-1	75	1.194	ug/L	0.208	17	9967	11661	4
Se	82	0.364	ug/L	0.109	29	4	86	27
Se	78	1.796	ug/L	0.723	40	10138	10402	5
[ Mo	98	0.633	ug/L	0.021	3	31	2971	3
Y	89		ug/L			399449	449137	1
Kr	83		ug/L			635	738	13
> In	115		ug/L			965468	898211	0
Ag	107	0.028	ug/L	0.006	22	54	345	19
Cd	111	0.063	ug/L	0.014	22	102	369	16
Cd	114	0.008	ug/L	0.003	38	36	120	28
Sb	121	-0.008	ug/L	0.001	16	768	607	2
Sb	123	-0.005	ug/L	0.002	40	575	488	4
Ba	135	2.995	ug/L	0.045	1	23	11591	1
[ Ba	137	3.001	ug/L	0.023	0	42	20127	0
> Tb	159		ug/L			1098939	1053557	0
Tl	205	-0.005	ug/L	0.001	22	811	592	6
Pb	208	0.251	ug/L	0.007	2	507	12091	2
Bi	209		ug/L			2742152	2385413	1
Th	232	0.514	ug/L	0.036	7	5672	28660	5
[ U	238	0.123	ug/L	0.001	1	50	6055	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR88 C REN

Sample Dil Factor: 10

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:54:47

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
> Li	6		ug/L			1766731	1871137		1
[ Be	9	0.048	ug/L	0.005	10	22	260		9
C	13		ug/L			143235	162861		1
Cl	37		ug/L			4954439	7145144		0
> Sc	45		ug/L			1218098	1299596		2
V	51	39.055	ug/L	1.136	2	9170	1007534		0
V-1	51	39.640	ug/L	1.182	2	105	1001981		1
Cr	52	6.977	ug/L	0.221	3	27160	179848		2
Cr	53	7.795	ug/L	0.206	2	170	18546		0
Mn	55	119.020	ug/L	2.791	2	674	3496997		0
[ Co	59	0.149	ug/L	0.008	5	88	3262		3
> Ge	72		ug/L			652831	596836		1
Ni	60	0.267	ug/L	0.010	3	35	1053		3
Ni	62	123.843	ug/L	23.245	18	471	66607		17
Cu	63	12.838	ug/L	2.144	16	514	109409		15
Cu	65	1.647	ug/L	0.055	3	55	6378		2
Zn	66	0.791	ug/L	0.013	1	255	2097		1
Zn	67	2.064	ug/L	0.079	3	38	845		5
Zn	68	1.030	ug/L	0.051	4	241	1973		4
As	75	0.589	ug/L	0.022	3	310	1486		1
As-1	75	1.187	ug/L	0.113	9	9967	11560		0
Se	82	0.080	ug/L	0.054	66	4	22		55
Se	78	2.418	ug/L	0.345	14	10138	10693		0
[ Mo	98	0.277	ug/L	0.006	2	31	1306		3
Y	89		ug/L			399449	414547		1
Kr	83		ug/L			635	755		4
> In	115		ug/L			965468	910132		1
Ag	107	0.009	ug/L	0.002	18	54	151		12
Cd	111	0.028	ug/L	0.004	15	102	220		10
Cd	114	0.003	ug/L	0.002	65	36	69		33
Sb	121	-0.027	ug/L	0.001	4	768	377		4
Sb	123	-0.026	ug/L	0.002	6	575	282		5
Ba	135	2.581	ug/L	0.010	0	23	10123		1
[ Ba	137	2.535	ug/L	0.029	1	42	17235		0
> Tb	159		ug/L			1098939	1068778		0
Tl	205	-0.014	ug/L	0.000	2	811	289		4
Pb	208	0.095	ug/L	0.001	0	507	4951		0
Bi	209		ug/L			2742152	2468147		0
Th	232	0.048	ug/L	0.002	4	5672	7738		1
[ U	238	0.045	ug/L	0.001	2	50	2271		2

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR88 D REN

Sample Dil Factor: 10

Comments:

Sample Date/Time: Tuesday, November 27, 2012 20:58:55

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
> Li	6		ug/L			1766731	1858836		0
[ Be	9	0.074	ug/L	0.006	7	22	384		7
C	13		ug/L			143235	164601		0
Cl	37		ug/L			4954439	6364060		2
> Sc	45		ug/L			1218098	1311622		0
V	51	53.718	ug/L	1.614	3	9170	1395518		3
V-1	51	54.426	ug/L	1.600	2	105	1389033		3
Cr	52	11.747	ug/L	0.082	0	27160	285690		0
Cr	53	12.622	ug/L	0.097	0	170	30208		0
Mn	55	93.105	ug/L	0.391	0	674	2761968		0
[ Co	59	0.242	ug/L	0.004	1	88	5277		1
> Ge	72		ug/L			652831	594198		1
Ni	60	0.342	ug/L	0.004	1	35	1332		2
Ni	62	173.066	ug/L	23.323	13	471	92711		13
Cu	63	17.875	ug/L	1.902	10	514	151757		11
Cu	65	3.302	ug/L	0.056	1	55	12677		0
Zn	66	1.143	ug/L	0.020	1	255	2914		2
Zn	67	3.054	ug/L	0.091	2	38	1227		4
Zn	68	1.501	ug/L	0.037	2	241	2762		1
As	75	0.703	ug/L	0.029	4	310	1713		3
As-1	75	1.195	ug/L	0.067	5	9967	11529		0
Se	82	0.308	ug/L	0.129	41	4	72		40
Se	78	2.203	ug/L	0.185	8	10138	10520		0
[ Mo	98	0.379	ug/L	0.014	3	31	1768		2
Y	89		ug/L			399449	452982		1
Kr	83		ug/L			635	700		8
> In	115		ug/L			965468	902795		1
Ag	107	0.018	ug/L	0.002	8	54	241		6
Cd	111	0.052	ug/L	0.007	13	102	322		8
Cd	114	0.003	ug/L	0.001	29	36	71		14
Sb	121	-0.011	ug/L	0.000	4	768	576		2
Sb	123	-0.012	ug/L	0.003	24	575	415		6
Ba	135	3.200	ug/L	0.025	0	23	12443		0
[ Ba	137	3.154	ug/L	0.057	1	42	21262		0
> Tb	159		ug/L			1098939	1065108		0
Tl	205	-0.008	ug/L	0.001	9	811	495		5
Pb	208	0.202	ug/L	0.001	0	507	9911		0
Bi	209		ug/L			2742152	2456674		0
Th	232	0.151	ug/L	0.004	2	5672	12388		1
[ U	238	0.107	ug/L	0.002	1	50	5311		2

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 ADUP SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:03:02

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1917912	1
[ Be	9	0.096	ug/L	0.005	4	22	507	5
C	13		ug/L			143235	194698	0
Cl	37		ug/L			4954439	5263123	0
> Sc	45		ug/L			1218098	1322801	2
V	51	16.597	ug/L	0.375	2	9170	441583	0
V-1	51	16.787	ug/L	0.389	2	105	432001	0
Cr	52	14.891	ug/L	0.125	0	27160	357318	1
Cr	53	15.479	ug/L	0.315	2	170	37312	1
Mn	55	169.912	ug/L	4.211	2	674	5082237	2
Co	59	3.323	ug/L	0.061	1	88	71899	1
> Ge	72		ug/L			652831	618589	1
Ni	60	19.482	ug/L	0.439	2	35	77189	0
Ni	62	59.121	ug/L	11.672	19	471	33280	20
Cu	63	13.406	ug/L	0.618	4	514	118602	5
Cu	65	11.118	ug/L	0.158	1	55	44318	0
Zn	66	65.463	ug/L	0.353	0	255	160147	1
Zn	67	64.436	ug/L	0.698	1	38	26218	0
Zn	68	63.025	ug/L	2.042	3	241	111384	2
As	75	2.025	ug/L	0.036	1	310	4583	0
As-1	75	2.162	ug/L	0.042	1	9967	14071	1
Se	82	0.003	ug/L	0.102	3273	4	4	479
Se	78	0.703	ug/L	0.034	4	10138	10036	1
Mo	98	0.119	ug/L	0.008	6	31	601	4
Y	89		ug/L			399449	462208	1
Kr	83		ug/L			635	718	4
> In	115		ug/L			965468	964946	1
Ag	107	0.029	ug/L	0.004	12	54	391	11
Cd	111	0.143	ug/L	0.006	3	102	771	2
Cd	114	0.117	ug/L	0.004	3	36	1425	2
Sb	121	-0.037	ug/L	0.001	3	768	251	6
Sb	123	-0.037	ug/L	0.002	4	575	186	9
Ba	135	33.899	ug/L	0.580	1	23	140658	0
Ba	137	33.741	ug/L	0.973	2	42	242640	1
> Tb	159		ug/L			1098939	1100979	1
Tl	205	0.012	ug/L	0.001	12	811	1259	5
Pb	208	7.574	ug/L	0.047	0	507	365872	0
Bi	209		ug/L			2742152	2740425	0
Th	232	0.314	ug/L	0.004	1	5672	20522	0
U	238	0.134	ug/L	0.003	2	50	6863	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 A SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:07:10

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1997974	3
[ Be	9	0.091	ug/L	0.008	8	22	501	5
C	13		ug/L			143235	184056	2
Cl	37		ug/L			4954439	5252699	2
> Sc	45		ug/L			1218098	1340578	1
V	51	15.527	ug/L	0.518	3	9170	419412	3
V-1	51	15.733	ug/L	0.498	3	105	410424	3
Cr	52	14.324	ug/L	0.183	1	27160	349469	1
Cr	53	14.986	ug/L	0.392	2	170	36615	1
Mn	55	171.185	ug/L	2.007	1	674	5189167	0
[ Co	59	3.352	ug/L	0.123	3	88	73497	2
> Ge	72		ug/L			652831	637207	1
Ni	60	19.059	ug/L	0.324	1	35	77795	0
Ni	62	35.506	ug/L	2.788	7	471	20752	7
Cu	63	11.296	ug/L	0.266	2	514	102983	1
Cu	65	10.518	ug/L	0.073	0	55	43196	1
Zn	66	60.048	ug/L	1.115	1	255	151337	1
Zn	67	59.352	ug/L	2.091	3	38	24875	2
Zn	68	59.181	ug/L	2.426	4	241	107743	3
As	75	1.980	ug/L	0.037	1	310	4622	0
As-1	75	1.968	ug/L	0.056	2	9967	14067	0
Se	82	✓ 0.013	ug/L	0.054	426	4	7	172
Se	78	0.178	ug/L	0.079	44	10138	10008	0
[ Mo	98	0.112	ug/L	0.002	1	31	581	2
Y	89		ug/L			399449	467301	2
Kr	83		ug/L			635	729	3
> In	115		ug/L			965468	983886	1
Ag	107	0.031	ug/L	0.001	4	54	421	4
Cd	111	0.147	ug/L	0.000	0	102	807	1
Cd	114	0.111	ug/L	0.004	3	36	1382	4
Sb	121	-0.028	ug/L	0.001	2	768	388	1
Sb	123	-0.026	ug/L	0.001	2	575	311	2
Ba	135	31.845	ug/L	0.460	1	23	134739	0
[ Ba	137	31.738	ug/L	0.642	2	42	232762	1
> Tb	159		ug/L			1098939	1119033	0
Tl	205	0.008	ug/L	0.001	9	811	1133	2
Pb	208	10.002	ug/L	0.052	0	507	490922	0
Bi	209		ug/L			2742152	2781243	0
Th	232	0.322	ug/L	0.004	1	5672	21248	1
[ U	238	0.127	ug/L	0.002	1	50	6619	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 ASPK SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:11:17

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1942462	1
[ Be	9	24.350	ug/L	0.398	1	22	123929	1
C	13		ug/L			143235	183229	1
Cl	37		ug/L			4954439	5297150	1
> Sc	45		ug/L			1218098	1351371	2
V	51	37.974	ug/L	1.136	2	9170	1018902	0
V-1	51	38.365	ug/L	1.138	2	105	1008372	1
Cr	52	36.606	ug/L	1.674	4	27160	853026	2
Cr	53	37.894	ug/L	1.023	2	170	93024	0
Mn	55	193.478	ug/L	3.705	1	674	5911092	1
[ Co	59	24.975	ug/L	0.585	2	88	551520	2
> Ge	72		ug/L			652831	636764	1
Ni	60	45.343	ug/L	1.060	2	35	184891	1
Ni	62	53.068	ug/L	1.493	2	471	30762	2
Cu	63	35.472	ug/L	0.620	1	514	322104	1
Cu	65	34.753	ug/L	0.441	1	55	142515	2
Zn	66	139.681	ug/L	2.929	2	255	351416	0
Zn	67	133.604	ug/L	2.512	1	38	55932	3
Zn	68	139.157	ug/L	1.372	0	241	252901	0
As	75	26.141	ug/L	1.107	4	310	57299	3
As-1	75	25.512	ug/L	0.956	3	9967	65934	2
Se	82	80.226	ug/L	1.231	1	4	19137	1
Se	78	76.123	ug/L	0.868	1	10138	57800	0
[ Mo	98	0.134	ug/L	0.008	5	31	688	5
Y	89		ug/L			399449	469559	1
Kr	83		ug/L			635	747	3
> In	115		ug/L			965468	975866	1
Ag	107	23.633	ug/L	0.184	0	54	274102	0
Cd	111	23.918	ug/L	0.393	1	102	113352	0
Cd	114	23.600	ug/L	0.160	0	36	282826	0
Sb	121	-0.016	ug/L	0.001	4	768	556	2
Sb	123	-0.013	ug/L	0.002	14	575	446	3
Ba	135	55.497	ug/L	0.508	0	23	232891	0
[ Ba	137	55.294	ug/L	1.046	1	42	402187	1
> Tb	159		ug/L			1098939	1098800	0
Tl	205	22.037	ug/L	0.390	1	811	837642	1
Pb	208	31.823	ug/L	0.156	0	507	1532550	0
Bi	209		ug/L			2742152	2720460	2
Th	232	21.432	ug/L	0.121	0	5672	1016347	0
[ U	238	21.817	ug/L	0.131	0	50	1111083	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 B SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:16:29

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[> Li	6		ug/L			1766731	1942778	0
[ Be	9	0.054	ug/L	0.003	4	22	301	4
[ C	13		ug/L			143235	197292	2
[ Cl	37		ug/L			4954439	5253747	1
[> Sc	45		ug/L			1218098	1307353	1
[ V	51	8.907	ug/L	0.131	1	9170	238856	2
[ V-1	51	9.006	ug/L	0.145	1	105	229198	2
[ Cr	52	7.893	ug/L	0.111	1	27160	200904	1
[ Cr	53	8.195	ug/L	0.122	1	170	19613	1
[ Mn	55	215.818	ug/L	0.940	0	674	6380382	0
[ Co	59	1.822	ug/L	0.032	1	88	39019	0
[> Ge	72		ug/L			652831	630944	2
[ Ni	60	8.485	ug/L	0.045	0	35	34315	1
[ Ni	62	11.019	ug/L	0.618	5	471	6693	6
[ Cu	63	18.551	ug/L	0.588	3	514	167134	3
[ Cu	65	18.876	ug/L	0.030	0	55	76716	2
[ Zn	66	68.067	ug/L	1.270	1	255	169816	2
[ Zn	67	63.300	ug/L	1.605	2	38	26271	3
[ Zn	68	66.431	ug/L	0.869	1	241	119735	0
[ As	75	3.237	ug/L	0.072	2	310	7291	0
[ As-1	75	3.226	ug/L	0.138	4	9967	16672	0
[ Se	82	0.057	ug/L	0.008	14	4	17	12
[ Se	78	0.215	ug/L	0.321	149	10138	9929	1
[ Mo	98	0.127	ug/L	0.011	8	31	647	6
[ Y	89		ug/L			399449	438126	2
[ Kr	83		ug/L			635	677	2
[> In	115		ug/L			965468	956225	0
[ Ag	107	0.027	ug/L	0.002	6	54	365	5
[ Cd	111	0.154	ug/L	0.011	7	102	817	6
[ Cd	114	0.141	ug/L	0.003	1	36	1697	1
[ Sb	121	-0.006	ug/L	0.001	10	768	675	1
[ Sb	123	-0.004	ug/L	0.004	91	575	529	6
[ Ba	135	27.646	ug/L	0.298	1	23	113699	1
[ Ba	137	27.143	ug/L	0.264	0	42	193499	0
[> Tb	159		ug/L			1098939	1098901	1
[ Tl	205	0.001	ug/L	0.001	93	811	845	2
[ Pb	208	8.099	ug/L	0.138	1	507	390390	0
[ Bi	209		ug/L			2742152	2728684	1
[ Th	232	0.217	ug/L	0.016	7	5672	15912	4
[ U	238	0.101	ug/L	0.002	2	50	5184	0



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 C SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:20:36

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[> Li	6		ug/L			1766731	1928911	1
[ Be	9	0.077	ug/L	0.007	9	22	413	9
C	13		ug/L			143235	190189	0
Cl	37		ug/L			4954439	5170518	0
[> Sc	45		ug/L			1218098	1320619	1
V	51	12.801	ug/L	0.406	3	9170	342267	1
V-1	51	12.975	ug/L	0.449	3	105	333338	1
Cr	52	11.015	ug/L	0.105	0	27160	271539	1
Cr	53	11.545	ug/L	0.228	1	170	27828	0
Mn	55	172.029	ug/L	6.349	3	674	5135479	2
[ Co	59	2.627	ug/L	0.103	3	88	56779	3
[> Ge	72		ug/L			652831	627953	0
Ni	60	12.278	ug/L	0.090	0	35	49405	0
Ni	62	13.463	ug/L	0.317	2	471	8035	1
Cu	63	13.943	ug/L	0.203	1	514	125164	1
Cu	65	14.278	ug/L	0.399	2	55	57769	2
Zn	66	56.464	ug/L	0.871	1	255	140252	1
Zn	67	53.660	ug/L	1.029	1	38	22170	1
Zn	68	55.359	ug/L	0.049	0	241	99363	0
As	75	2.727	ug/L	0.054	1	310	6163	1
As-1	75	2.767	ug/L	0.111	4	9967	15600	0
Se	82	u 0.081	ug/L	0.023	28	4	23	23
Se	78	0.439	ug/L	0.202	46	10138	10023	0
[ Mo	98	0.145	ug/L	0.003	2	31	735	1
Y	89		ug/L			399449	467183	2
Kr	83		ug/L			635	706	2
[> In	115		ug/L			965468	970970	1
Ag	107	0.032	ug/L	0.001	2	54	426	2
Cd	111	0.180	ug/L	0.008	4	102	951	3
Cd	114	0.152	ug/L	0.004	2	36	1845	1
Sb	121	-0.016	ug/L	0.001	9	768	551	4
Sb	123	-0.015	ug/L	0.003	17	575	424	5
Ba	135	34.060	ug/L	0.678	1	23	142209	1
[ Ba	137	34.072	ug/L	1.084	3	42	246562	2
[> Tb	159		ug/L			1098939	1095217	1
Tl	205	0.006	ug/L	0.001	14	811	1036	2
Pb	208	7.502	ug/L	0.064	0	507	360479	0
Bi	209		ug/L			2742152	2716453	0
Th	232	0.256	ug/L	0.005	2	5672	17662	0
[ U	238	0.156	ug/L	0.001	0	50	7984	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV11

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:24:45

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens	RSD
> Li	6		ug/L			1766731	1871458		2
[ Be	9	50.904	ug/L	1.061	2	22	249547		1
C	13		ug/L			143235	153576		3
Cl	37		ug/L			4954439	5191738		2
> Sc	45		ug/L			1218098	1227189		2
V	51	47.624	ug/L	0.498	1	9170	1158435		1
V-1	51	48.188	ug/L	0.659	1	105	1150401		0
Cr	52	47.386	ug/L	0.751	1	27160	995040		1
Cr	53	49.310	ug/L	1.564	3	170	109870		1
Mn	55	47.983	ug/L	1.033	2	674	1331700		0
Co	59	46.356	ug/L	0.874	1	88	929435		1
> Ge	72		ug/L			652831	604308		2
Ni	60	50.087	ug/L	0.368	0	35	193838		1
Ni	62	51.395	ug/L	1.855	3	471	28282		2
Cu	63	50.167	ug/L	1.431	2	514	432001		1
Cu	65	50.653	ug/L	1.594	3	55	197032		2
Zn	66	51.878	ug/L	1.579	3	255	123974		0
Zn	67	51.839	ug/L	1.969	3	38	20603		2
Zn	68	51.425	ug/L	1.746	3	241	88798		1
As	75	51.533	ug/L	1.196	2	310	106895		0
As-1	75	50.786	ug/L	1.292	2	9967	115394		0
Se	82	54.488	ug/L	1.282	2	4	12333		0
Se	78	51.777	ug/L	1.590	3	10138	40300		0
Mo	98	52.664	ug/L	1.977	3	31	246136		1
Y	89		ug/L			399449	385789		3
Kr	83		ug/L			635	641		0
> In	115		ug/L			965468	924164		1
Ag	107	53.853	ug/L	0.939	1	54	591509		2
Cd	111	51.632	ug/L	0.875	1	102	231627		1
Cd	114	51.303	ug/L	0.550	1	36	582179		0
Sb	121	51.730	ug/L	0.721	1	768	687880		0
Sb	123	51.318	ug/L	0.717	1	575	516576		0
Ba	135	50.247	ug/L	0.532	1	23	199689		0
Ba	137	49.557	ug/L	0.895	1	42	341375		1
> Tb	159		ug/L			1098939	1053094		0
Tl	205	46.679	ug/L	0.685	1	811	1699641		1
Pb	208	48.253	ug/L	0.393	0	507	2226829		0
Bi	209		ug/L			2742152	2610665		0
Th	232	53.413	ug/L	0.622	1	5672	2419456		0
U	238	53.459	ug/L	0.765	1	50	2609006		0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB11

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:31:38

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1822930	1
[ Be	9	-0.002	ug/L	0.001	43	22	14	27
C	13		ug/L			143235	155804	0
Cl	37		ug/L			4954439	5165852	1
> Sc	45		ug/L			1218098	1181777	2
V	51	0.001	ug/L	0.010	1080	9170	8913	0
V-1	51	-0.000	ug/L	0.001	326	105	92	33
Cr	52	0.001	ug/L	0.036	4793	27160	26352	0
Cr	53	-0.004	ug/L	0.007	176	170	157	6
Mn	55	0.003	ug/L	0.009	259	674	744	31
[ Co	59	-0.000	ug/L	0.001	487	88	83	10
> Ge	72		ug/L			652831	597682	1
Ni	60	0.002	ug/L	0.001	33	35	41	8
Ni	62	-0.151	ug/L	0.130	86	471	350	20
Cu	63	-0.008	ug/L	0.006	82	514	403	12
Cu	65	-0.001	ug/L	0.002	151	55	46	16
Zn	66	-0.031	ug/L	0.007	22	255	160	9
Zn	67	-0.027	ug/L	0.006	21	38	25	10
Zn	68	-0.017	ug/L	0.011	67	241	192	9
As	75	0.010	ug/L	0.023	240	310	303	14
As-1	75	0.279	ug/L	0.063	22	9967	9702	0
Se	82	-0.016	ug/L	0.103	627	4	0	7416
Se	78	0.969	ug/L	0.204	21	10138	9853	0
[ Mo	98	0.006	ug/L	0.001	20	31	56	9
Y	89		ug/L			399449	374537	1
Kr	83		ug/L			635	614	5
> In	115		ug/L			965468	902714	0
Ag	107	-0.000	ug/L	0.001	1244	54	49	28
Cd	111	0.001	ug/L	0.003	208	102	102	12
Cd	114	0.002	ug/L	0.003	144	36	58	59
Sb	121	0.011	ug/L	0.011	98	768	858	15
Sb	123	0.011	ug/L	0.009	75	575	648	12
Ba	135	0.002	ug/L	0.005	258	23	29	68
[ Ba	137	0.003	ug/L	0.004	156	42	58	49
> Tb	159		ug/L			1098939	1021942	1
Tl	205	-0.017	ug/L	0.002	10	811	151	41
Pb	208	-0.001	ug/L	0.002	266	507	442	18
Bi	209		ug/L			2742152	2601950	0
Th	232	0.010	ug/L	0.010	99	5672	5718	6
[ U	238	0.001	ug/L	0.001	68	50	106	38

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 D SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:35:47

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1979253	3
[ Be	9	0.073	ug/L	0.000	0	22	405	4
C	13		ug/L			143235	188602	1
Cl	37		ug/L			4954439	5182951	1
> Sc	45		ug/L			1218098	1347285	1
V	51	10.960	ug/L	0.071	0	9170	300511	0
V-1	51	11.075	ug/L	0.117	1	105	290414	1
Cr	52	10.284	ug/L	0.138	1	27160	260628	0
Cr	53	10.656	ug/L	0.205	1	170	26222	1
Mn	55	183.975	ug/L	4.641	2	674	5603947	1
[ Co	59	2.107	ug/L	0.069	3	88	46465	2
> Ge	72		ug/L			652831	636378	0
Ni	60	10.484	ug/L	0.288	2	35	42752	2
Ni	62	10.365	ug/L	0.163	1	471	6375	1
Cu	63	14.961	ug/L	0.183	1	514	136071	0
Cu	65	15.225	ug/L	0.140	0	55	62420	1
Zn	66	49.092	ug/L	0.774	1	255	123610	1
Zn	67	46.505	ug/L	0.379	0	38	19478	1
Zn	68	47.599	ug/L	0.280	0	241	86612	0
As	75	2.333	ug/L	0.039	1	310	5387	1
As-1	75	2.309	ug/L	0.036	1	9967	14801	0
Se	82	0.150	ug/L	0.027	17	4	40	15
Se	78	0.239	ug/L	0.066	27	10138	10033	0
[ Mo	98	0.117	ug/L	0.002	1	31	607	2
Y	89		ug/L			399449	456411	2
Kr	83		ug/L			635	695	7
> In	115		ug/L			965468	965145	0
Ag	107	0.031	ug/L	0.002	5	54	404	3
Cd	111	0.162	ug/L	0.013	7	102	859	6
Cd	114	0.142	ug/L	0.003	2	36	1725	2
Sb	121	-0.023	ug/L	0.002	7	768	451	4
Sb	123	-0.023	ug/L	0.005	21	575	335	14
Ba	135	30.457	ug/L	0.376	1	23	126425	1
[ Ba	137	29.874	ug/L	0.409	1	42	214937	0
> Tb	159		ug/L			1098939	1094857	1
Tl	205	0.006	ug/L	0.001	19	811	1025	3
Pb	208	6.881	ug/L	0.076	1	507	330572	0
Bi	209		ug/L			2742152	2731781	0
Th	232	0.312	ug/L	0.011	3	5672	20302	3
[ U	238	0.151	ug/L	0.002	1	50	7699	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 E SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:39:55

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
> Li	6		ug/L			1766731	1927404	1
[ Be	9	0.077	ug/L	0.007	9	22	412	7
[ C	13		ug/L			143235	195985	2
[ Cl	37		ug/L			4954439	5146914	0
> Sc	45		ug/L			1218098	1307331	1
[ V	51	12.409	ug/L	0.366	2	9170	328800	1
[ V-1	51	12.632	ug/L	0.420	3	105	321331	2
[ Cr	52	11.570	ug/L	0.159	1	27160	280922	2
[ Cr	53	12.305	ug/L	0.106	0	170	29355	0
[ Mn	55	202.098	ug/L	6.395	3	674	5973438	2
[ Co	59	2.427	ug/L	0.060	2	88	51940	1
> Ge	72		ug/L			652831	630128	1
[ Ni	60	10.933	ug/L	0.155	1	35	44153	2
[ Ni	62	11.365	ug/L	0.369	3	471	6879	4
[ Cu	63	15.041	ug/L	0.242	1	514	135447	1
[ Cu	65	15.306	ug/L	0.240	1	55	62136	1
[ Zn	66	51.360	ug/L	0.564	1	255	128039	0
[ Zn	67	49.506	ug/L	0.658	1	38	20530	2
[ Zn	68	50.687	ug/L	1.016	2	241	91298	0
[ As	75	2.511	ug/L	0.042	1	310	5717	0
[ As-1	75	2.520	ug/L	0.083	3	9967	15116	0
[ Se	82	0.131	ug/L	0.017	13	4	35	10
[ Se	78	0.385	ug/L	0.190	49	10138	10025	1
[ Mo	98	0.126	ug/L	0.001	0	31	642	1
[ Y	89		ug/L			399449	455867	1
[ Kr	83		ug/L			635	720	1
> In	115		ug/L			965468	979485	0
[ Ag	107	0.034	ug/L	0.000	1	54	445	1
[ Cd	111	0.184	ug/L	0.005	2	102	979	1
[ Cd	114	0.157	ug/L	0.006	3	36	1925	3
[ Sb	121	-0.026	ug/L	0.003	12	768	411	12
[ Sb	123	-0.026	ug/L	0.001	4	575	303	5
[ Ba	135	32.568	ug/L	0.882	2	23	137176	1
[ Ba	137	32.283	ug/L	0.554	1	42	235711	1
> Tb	159		ug/L			1098939	1091553	1
[ Tl	205	0.007	ug/L	0.000	6	811	1056	2
[ Pb	208	7.107	ug/L	0.040	0	507	340390	0
[ Bi	209		ug/L			2742152	2729786	0
[ Th	232	0.291	ug/L	0.002	0	5672	19272	1
[ U	238	0.160	ug/L	0.002	1	50	8142	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 F SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:44:02

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[> Li	6		ug/L			1766731	1956726	0
[ Be	9	0.102	ug/L	0.011	10	22	546	9
C	13		ug/L			143235	205357	0
Cl	37		ug/L			4954439	5389051	3
[> Sc	45		ug/L			1218098	1343753	0
V	51	16.330	ug/L	0.348	2	9170	441614	1
V-1	51	16.522	ug/L	0.426	2	105	432021	1
Cr	52	15.587	ug/L	0.227	1	27160	378600	1
Cr	53	16.219	ug/L	0.064	0	170	39714	0
Mn	55	182.499	ug/L	1.092	0	674	5545842	1
[ Co	59	3.661	ug/L	0.119	3	88	80495	3
[> Ge	72		ug/L			652831	629511	1
Ni	60	16.708	ug/L	0.464	2	35	67370	1
Ni	62	17.232	ug/L	0.722	4	471	10179	2
Cu	63	29.201	ug/L	0.577	1	514	262223	1
Cu	65	29.560	ug/L	0.174	0	55	119835	1
Zn	66	70.940	ug/L	1.740	2	255	176584	2
Zn	67	67.317	ug/L	1.033	1	38	27873	1
Zn	68	69.388	ug/L	1.816	2	241	124794	2
As	75	3.424	ug/L	0.039	1	310	7679	0
As-1	75	3.453	ug/L	0.065	1	9967	17133	0
Se	82	a 0.065	ug/L	0.022	34	4	19	28
Se	78	0.456	ug/L	0.150	32	10138	10059	0
Mo	98	0.193	ug/L	0.017	8	31	970	7
Y	89		ug/L			399449	469645	3
Kr	83		ug/L			635	743	3
[> In	115		ug/L			965468	961861	1
Ag	107	0.052	ug/L	0.002	4	54	646	4
Cd	111	0.256	ug/L	0.014	5	102	1295	5
Cd	114	0.208	ug/L	0.002	1	36	2489	1
Sb	121	-0.016	ug/L	0.004	22	768	538	8
Sb	123	-0.017	ug/L	0.003	15	575	399	6
Ba	135	34.596	ug/L	0.167	0	23	143112	0
Ba	137	34.819	ug/L	0.411	1	42	249656	0
[> Tb	159		ug/L			1098939	1085007	1
Tl	205	0.010	ug/L	0.001	10	811	1188	4
Pb	208	9.980	ug/L	0.087	0	507	474893	0
Bi	209		ug/L			2742152	2689820	0
Th	232	0.343	ug/L	0.009	2	5672	21592	0
[ U	238	0.171	ug/L	0.002	1	50	8653	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 G SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:48:10

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1960421	1
[ Be	9	0.085	ug/L	0.003	4	22	462	4
C	13		ug/L			143235	183479	1
Cl	37		ug/L			4954439	5193332	0
> Sc	45		ug/L			1218098	1355023	1
V	51	16.580	ug/L	0.356	2	9170	452002	2
V-1	51	16.832	ug/L	0.518	3	105	443871	3
Cr	52	16.614	ug/L	0.355	2	27160	404841	0
Cr	53	17.480	ug/L	0.380	2	170	43146	2
Mn	55	131.158	ug/L	4.719	3	674	4017703	2
[ Co	59	3.887	ug/L	0.015	0	88	86169	1
> Ge	72		ug/L			652831	627282	2
Ni	60	16.500	ug/L	0.522	3	35	66288	1
Ni	62	17.811	ug/L	0.078	0	471	10472	1
Cu	63	4.498	ug/L	0.092	2	514	40657	0
Cu	65	4.752	ug/L	0.119	2	55	19234	1
Zn	66	42.197	ug/L	1.565	3	255	104714	1
Zn	67	41.771	ug/L	1.096	2	38	17245	2
Zn	68	41.911	ug/L	1.451	3	241	75166	1
As	75	2.262	ug/L	0.054	2	310	5155	0
As-1	75	2.332	ug/L	0.131	5	9967	14636	0
Se	82	-0.094	ug/L	0.045	48	4	-17	62
Se	78	0.404	ug/L	0.358	88	10138	9989	0
[ Mo	98	0.050	ug/L	0.001	2	31	270	0
Y	89		ug/L			399449	468044	2
Kr	83		ug/L			635	741	1
> In	115		ug/L			965468	955759	0
Ag	107	0.014	ug/L	0.000	2	54	211	2
Cd	111	0.097	ug/L	0.001	0	102	549	0
Cd	114	0.075	ug/L	0.005	6	36	915	6
Sb	121	-0.042	ug/L	0.001	3	768	185	10
Sb	123	-0.038	ug/L	0.003	6	575	174	14
Ba	135	36.352	ug/L	0.249	0	23	149422	0
Ba	137	35.955	ug/L	0.239	0	42	256188	1
> Tb	159		ug/L			1098939	1085545	0
Tl	205	0.014	ug/L	0.001	4	811	1344	1
Pb	208	5.724	ug/L	0.018	0	507	272748	0
Bi	209		ug/L			2742152	2700044	0
Th	232	0.306	ug/L	0.004	1	5672	19857	0
[ U	238	0.106	ug/L	0.004	3	50	5368	3

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 H SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:52:17

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1951297	1
[ Be	9	0.113	ug/L	0.004	3	22	605	4
C	13		ug/L			143235	183082	1
Cl	37		ug/L			4954439	5318930	1
> Sc	45		ug/L			1218098	1374380	2
V	51	19.898	ug/L	0.617	3	9170	547861	0
V-1	51	20.185	ug/L	0.595	2	105	539557	0
Cr	52	17.729	ug/L	0.814	4	27160	435904	2
Cr	53	18.632	ug/L	0.813	4	170	46601	2
Mn	55	161.005	ug/L	4.328	2	674	5001932	1
Co	59	4.316	ug/L	0.116	2	88	97014	3
> Ge	72		ug/L			652831	631580	0
Ni	60	21.468	ug/L	0.280	1	35	86854	0
Ni	62	21.954	ug/L	0.140	0	471	12891	0
Cu	63	4.946	ug/L	0.153	3	514	44971	2
Cu	65	5.072	ug/L	0.060	1	55	20673	1
Zn	66	36.918	ug/L	0.798	2	255	92312	1
Zn	67	36.541	ug/L	0.395	1	38	15197	0
Zn	68	36.333	ug/L	1.194	3	241	65657	2
As	75	2.242	ug/L	0.059	2	310	5148	1
As-1	75	2.236	ug/L	0.071	3	9967	14529	0
Se	82	-0.069	ug/L	0.025	36	4	-12	51
Se	78	0.222	ug/L	0.093	42	10138	9946	0
Mo	98	0.058	ug/L	0.003	4	31	313	3
Y	89		ug/L			399449	475994	2
Kr	83		ug/L			635	793	1
> In	115		ug/L			965468	959291	1
Ag	107	0.017	ug/L	0.002	12	54	242	9
Cd	111	0.069	ug/L	0.003	4	102	423	3
Cd	114	0.045	ug/L	0.002	3	36	561	2
Sb	121	-0.046	ug/L	0.000	0	768	133	2
Sb	123	-0.045	ug/L	0.001	3	575	105	13
Ba	135	30.434	ug/L	0.120	0	23	125562	0
Ba	137	30.299	ug/L	0.155	0	42	216679	0
> Tb	159		ug/L			1098939	1084386	1
Tl	205	0.010	ug/L	0.001	10	811	1181	2
Pb	208	3.347	ug/L	0.034	1	507	159516	0
Bi	209		ug/L			2742152	2673515	0
Th	232	0.509	ug/L	0.004	0	5672	29301	0
U	238	0.124	ug/L	0.004	3	50	6265	2



## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 I SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 21:56:25

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1923853	1
[ Be	9	0.147	ug/L	0.005	3	22	765	2
C	13		ug/L			143235	194894	0
Cl	37		ug/L			4954439	5221170	1
> Sc	45		ug/L			1218098	1365133	0
V	51	21.132	ug/L	0.304	1	9170	577549	0
V-1	51	21.348	ug/L	0.336	1	105	567079	0
Cr	52	21.514	ug/L	0.327	1	27160	519246	1
Cr	53	22.271	ug/L	0.482	2	170	55326	1
Mn	55	230.606	ug/L	2.280	0	674	7118837	1
[ Co	59	2.901	ug/L	0.045	1	88	64808	1
> Ge	72		ug/L			652831	629978	0
Ni	60	17.096	ug/L	0.224	1	35	68996	0
Ni	62	17.172	ug/L	0.465	2	471	10156	2
Cu	63	6.415	ug/L	0.184	2	514	58031	2
Cu	65	6.549	ug/L	0.029	0	55	26612	0
Zn	66	32.453	ug/L	0.655	2	255	80974	1
Zn	67	35.286	ug/L	0.162	0	38	14639	0
Zn	68	33.665	ug/L	0.390	1	241	60709	0
As	75	1.993	ug/L	0.048	2	310	4598	2
As-1	75	2.017	ug/L	0.069	3	9967	14015	1
Se	82	u 0.143	ug/L	0.031	21	4	38	19
Se	78	0.498	ug/L	0.090	18	10138	10093	0
[ Mo	98	0.163	ug/L	0.003	1	31	823	1
Y	89		ug/L			399449	504133	2
Kr	83		ug/L			635	773	1
> In	115		ug/L			965468	951082	0
Ag	107	0.028	ug/L	0.002	5	54	374	5
Cd	111	0.092	ug/L	0.009	9	102	526	6
Cd	114	0.045	ug/L	0.002	3	36	565	2
Sb	121	-0.043	ug/L	0.002	3	768	174	12
Sb	123	-0.042	ug/L	0.001	3	575	133	11
Ba	135	61.184	ug/L	0.820	1	23	250230	0
[ Ba	137	59.971	ug/L	0.437	0	42	425164	0
> Tb	159		ug/L			1098939	1084661	0
Tl	205	0.023	ug/L	0.001	6	811	1677	2
Pb	208	3.093	ug/L	0.022	0	507	147489	0
Bi	209		ug/L			2742152	2680150	0
Th	232	0.613	ug/L	0.007	1	5672	34138	0
[ U	238	0.312	ug/L	0.007	2	50	15715	2

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR58 J SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 22:00:32

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1914359	1
[ Be	9	0.103	ug/L	0.002	1	22	540	0
C	13		ug/L			143235	171605	1
Cl	37		ug/L			4954439	5216088	1
> Sc	45		ug/L			1218098	1343573	1
V	51	18.259	ug/L	0.321	1	9170	492571	2
V-1	51	18.588	ug/L	0.251	1	105	486003	1
Cr	52	17.285	ug/L	0.429	2	27160	416497	2
Cr	53	18.377	ug/L	0.313	1	170	44963	1
Mn	55	188.657	ug/L	1.957	1	674	5731799	1
[ Co	59	4.195	ug/L	0.088	2	88	92176	0
> Ge	72		ug/L			652831	628211	2
Ni	60	20.447	ug/L	0.428	2	35	82277	2
Ni	62	20.112	ug/L	0.763	3	471	11778	1
Cu	63	7.341	ug/L	0.154	2	514	66144	0
Cu	65	7.372	ug/L	0.045	0	55	29865	1
Zn	66	37.182	ug/L	0.474	1	255	92468	1
Zn	67	36.827	ug/L	1.079	2	38	15228	0
Zn	68	36.598	ug/L	1.003	2	241	65777	2
As	75	2.720	ug/L	0.031	1	310	6149	1
As-1	75	2.754	ug/L	0.115	4	9967	15575	0
Se	82	-0.001	ug/L	0.044	5045	4	4	252
Se	78	0.366	ug/L	0.339	92	10138	9980	0
[ Mo	98	0.047	ug/L	0.003	6	31	260	3
Y	89		ug/L			399449	460259	1
Kr	83		ug/L			635	729	4
> In	115		ug/L			965468	943594	0
Ag	107	0.016	ug/L	0.000	0	54	236	0
Cd	111	0.074	ug/L	0.006	7	102	439	5
Cd	114	0.050	ug/L	0.002	4	36	609	3
Sb	121	-0.045	ug/L	0.001	1	768	143	6
Sb	123	-0.042	ug/L	0.002	4	575	128	12
Ba	135	30.059	ug/L	0.334	1	23	121980	0
[ Ba	137	29.731	ug/L	0.366	1	42	209131	0
> Tb	159		ug/L			1098939	1074692	1
Tl	205	0.003	ug/L	0.000	5	811	919	1
Pb	208	3.396	ug/L	0.024	0	507	160392	1
Bi	209		ug/L			2742152	2650627	0
Th	232	0.360	ug/L	0.011	2	5672	22150	1
[ U	238	0.122	ug/L	0.001	0	50	6105	0

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR82 A SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 22:04:40

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6		ug/L			1766731	1939288	1
[ Be	9	0.084	ug/L	0.006	7	22	451	5
C	13		ug/L			143235	191454	3
Cl	37		ug/L			4954439	5134524	1
> Sc	45		ug/L			1218098	1364143	1
V	51	12.857	ug/L	0.316	2	9170	355135	1
V-1	51	13.042	ug/L	0.320	2	105	346180	1
Cr	52	12.796	ug/L	0.309	2	27160	320936	2
Cr	53	13.427	ug/L	0.310	2	170	33401	0
Mn	55	183.688	ug/L	7.027	3	674	5664468	2
Co	59	2.725	ug/L	0.043	1	88	60823	0
> Ge	72		ug/L			652831	636471	0
Ni	60	12.914	ug/L	0.335	2	35	52663	2
Ni	62	12.672	ug/L	0.306	2	471	7692	1
Cu	63	23.943	ug/L	0.729	3	514	217474	2
Cu	65	23.580	ug/L	0.187	0	55	96663	1
Zn	66	60.907	ug/L	1.268	2	255	153320	1
Zn	67	58.069	ug/L	0.459	0	38	24315	0
Zn	68	60.637	ug/L	1.930	3	241	110287	3
As	75	3.400	ug/L	0.035	1	310	7712	1
As-1	75	3.425	ug/L	0.030	0	9967	17262	1
Se	82	0.063	ug/L	0.040	64	4	19	49
Se	78	0.448	ug/L	0.147	32	10138	10165	0
Mo	98	0.179	ug/L	0.005	2	31	912	3
Y	89		ug/L			399449	458597	1
Kr	83		ug/L			635	759	5
> In	115		ug/L			965468	955767	1
Ag	107	0.039	ug/L	0.003	6	54	495	5
Cd	111	0.342	ug/L	0.018	5	102	1689	3
Cd	114	0.305	ug/L	0.009	2	36	3610	2
Sb	121	-0.019	ug/L	0.003	15	768	505	9
Sb	123	-0.017	ug/L	0.003	19	575	398	9
Ba	135	33.410	ug/L	0.256	0	23	137325	0
Ba	137	33.132	ug/L	0.827	2	42	236018	1
> Tb	159		ug/L			1098939	1084680	1
Tl	205	0.007	ug/L	0.002	23	811	1048	4
Pb	208	14.739	ug/L	0.182	1	507	700886	0
Bi	209		ug/L			2742152	2679731	0
Th	232	0.300	ug/L	0.008	2	5672	19579	0
U	238	0.161	ug/L	0.005	3	50	8117	1

## ICP-MS Quantitative Analysis - Summary Report

Sample ID: VR82 B SWN

Sample Dil Factor: 20

Comments:

Sample Date/Time: Tuesday, November 27, 2012 22:09:51

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
[> Li	6		ug/L			1766731	1941189	2
[ Be	9	0.076	ug/L	0.004	5	22	413	6
C	13		ug/L			143235	198552	1
Cl	37		ug/L			4954439	5202721	2
[> Sc	45		ug/L			1218098	1335410	1
V	51	12.382	ug/L	0.215	1	9170	335170	0
V-1	51	12.604	ug/L	0.149	1	105	327538	0
Cr	52	11.696	ug/L	0.391	3	27160	289637	1
Cr	53	12.431	ug/L	0.229	1	170	30288	1
Mn	55	235.903	ug/L	2.333	0	674	7123598	1
[ Co	59	2.423	ug/L	0.069	2	88	52943	1
[> Ge	72		ug/L			652831	626793	1
Ni	60	11.615	ug/L	0.294	2	35	46642	1
Ni	62	11.658	ug/L	0.215	1	471	7004	1
Cu	63	24.048	ug/L	0.677	2	514	215070	1
Cu	65	24.092	ug/L	0.320	1	55	97246	0
Zn	66	69.545	ug/L	1.821	2	255	172334	1
Zn	67	67.197	ug/L	0.976	1	38	27700	0
Zn	68	69.194	ug/L	1.680	2	241	123875	0
As	75	3.025	ug/L	0.069	2	310	6790	0
As-1	75	3.086	ug/L	0.112	3	9967	16260	0
Se	82	0.159	ug/L	0.089	55	4	41	49
Se	78	0.588	ug/L	0.164	27	10138	10097	0
[ Mo	98	0.140	ug/L	0.005	3	31	707	2
Y	89		ug/L			399449	465504	1
Kr	83		ug/L			635	700	4
[> In	115		ug/L			965468	968821	0
Ag	107	0.037	ug/L	0.001	2	54	477	1
Cd	111	0.268	ug/L	0.010	3	102	1365	3
Cd	114	0.246	ug/L	0.004	1	36	2963	2
Sb	121	-0.025	ug/L	0.001	4	768	417	4
Sb	123	-0.026	ug/L	0.001	4	575	305	4
Ba	135	35.583	ug/L	0.374	1	23	148261	0
[ Ba	137	35.676	ug/L	0.516	1	42	257660	1
[> Tb	159		ug/L			1098939	1095941	0
Tl	205	0.005	ug/L	0.000	7	811	1010	1
Pb	208	10.025	ug/L	0.019	0	507	481862	0
Bi	209		ug/L			2742152	2696835	0
Th	232	0.254	ug/L	0.003	1	5672	17623	0
[ U	238	0.161	ug/L	0.003	1	50	8216	0

12 11-28

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 22:14:00

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
> Li	6	-	ug/L			1766731	1856991	2
[ Be	9	51.954	ug/L	0.830	1	22	252715	0
C	13		ug/L			143235	157097	1
Cl	37		ug/L			4954439	5365519	1
> Sc	45		ug/L			1218098	1244393	1
V	51	47.618	ug/L	1.116	2	9170	1174478	1
V-1	51	47.981	ug/L	1.291	2	105	1161530	1
Cr	52	48.087	ug/L	0.574	1	27160	1023683	1
Cr	53	49.350	ug/L	0.964	1	170	111535	0
Mn	55	47.382	ug/L	0.332	0	674	1333832	0
[ Co	59	46.566	ug/L	1.018	2	88	947047	2
> Ge	72		ug/L			652831	607402	1
Ni	60	51.424	ug/L	0.326	0	35	200058	1
Ni	62	50.356	ug/L	0.660	1	471	27874	2
Cu	63	50.594	ug/L	0.605	1	514	438028	0
Cu	65	51.475	ug/L	0.367	0	55	201298	0
Zn	66	52.203	ug/L	1.600	3	255	125413	1
Zn	67	52.727	ug/L	0.629	1	38	21076	2
Zn	68	51.251	ug/L	1.259	2	241	88985	2
As	75	51.064	ug/L	0.503	0	310	106496	0
As-1	75	50.452	ug/L	0.793	1	9967	115308	0
Se	82	54.523	ug/L	0.569	1	4	12410	2
Se	78	52.270	ug/L	0.779	1	10138	40813	0
[ Mo	98	53.985	ug/L	1.812	3	31	253676	1
Y	89		ug/L			399449	397161	2
Kr	83		ug/L			635	647	2
> In	115		ug/L			965468	918593	1
Ag	107	54.767	ug/L	0.634	1	54	597824	0
Cd	111	52.163	ug/L	0.503	0	102	232598	0
Cd	114	51.825	ug/L	0.920	1	36	584593	1
Sb	121	51.573	ug/L	0.715	1	768	681670	0
Sb	123	51.856	ug/L	0.501	0	575	518872	0
Ba	135	50.159	ug/L	0.822	1	23	198140	1
Ba	137	49.818	ug/L	0.800	1	42	341102	0
> Tb	159		ug/L			1098939	1051944	1
Tl	205	46.740	ug/L	0.105	0	811	1700039	1
Pb	208	48.289	ug/L	0.428	0	507	2225980	0
Bi	209		ug/L			2742152	2599500	0
Th	232	53.289	ug/L	1.045	1	5672	2410871	0
[ U	238	53.986	ug/L	0.578	1	50	2631765	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1120

Sample Dil Factor:

Comments:

Sample Date/Time: Tuesday, November 27, 2012 22:20:53

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\112712a.cal

Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[> Li	6		ug/L			1766731	1789526	1
[ Be	9	-0.002	ug/L	0.002	90	22	14	52
C	13		ug/L			143235	159989	0
Cl	37		ug/L			4954439	5037841	3
[> Sc	45		ug/L			1218098	1208368	0
V	51	-0.023	ug/L	0.004	15	9170	8552	0
V-1	51	-0.002	ug/L	0.000	28	105	65	17
Cr	52	-0.077	ug/L	0.020	25	27160	25392	0
Cr	53	-0.006	ug/L	0.007	120	170	155	9
Mn	55	-0.004	ug/L	0.001	35	674	571	6
Co	59	-0.000	ug/L	0.000	93	88	80	8
[> Ge	72		ug/L			652831	600506	0
Ni	60	0.004	ug/L	0.002	55	35	48	18
Ni	62	0.554	ug/L	0.025	4	471	134	10
Cu	63	-0.037	ug/L	0.001	3	514	153	7
Cu	65	-0.002	ug/L	0.001	83	55	44	12
Zn	66	-0.035	ug/L	0.008	21	255	150	11
Zn	67	-0.038	ug/L	0.015	38	38	20	28
Zn	68	-0.023	ug/L	0.012	50	241	182	10
As	75	0.017	ug/L	0.011	64	310	321	7
As-1	75	0.342	ug/L	0.103	30	9967	9877	1
Se	82	-0.020	ug/L	0.025	125	4	0	2186
Se	78	1.174	ug/L	0.353	30	10138	10021	1
Mo	98	0.005	ug/L	0.003	58	31	51	25
Y	89		ug/L			399449	384360	2
Kr	83		ug/L			635	630	3
[> In	115		ug/L			965468	911643	1
Ag	107	-0.002	ug/L	0.000	6	54	31	5
Cd	111	0.000	ug/L	0.002	1392	102	97	8
Cd	114	0.001	ug/L	0.001	99	36	44	21
Sb	121	0.013	ug/L	0.009	64	768	901	11
Sb	123	0.012	ug/L	0.003	26	575	662	3
Ba	135	-0.001	ug/L	0.001	133	23	17	33
Ba	137	-0.001	ug/L	0.000	30	42	33	6
[> Tb	159		ug/L			1098939	1009716	0
Tl	205	-0.016	ug/L	0.001	7	811	193	20
Pb	208	-0.002	ug/L	0.000	3	507	363	1
Bi	209		ug/L			2742152	2611058	0
Th	232	0.012	ug/L	0.012	98	5672	5728	8
U	238	0.001	ug/L	0.000	6	50	90	2

### Mercury Analysis Log

Analyst: DM

Date: 11-17-12

Instrument: CETA

Page: 1 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
STD 0.0	3mm	1X		
" 0.1				
" 0.5				
" 1.0				
" 2.0				
" 5.0				
" 10.0				
ICV			7.26	begin CLP %R=91 ✓
ICB			-0.01	✓
CCV1			3.49	%R=92 ✓
CCB1			-0.00	✓
CRA			0.10	✓
VS18 MB1			0.01	✓
" MB1BPK			1.90	%R=95 ✓
" A			1.08	
" ADLP			1.05	RPD=2.81 ✓
" ABPK			2.04	%R=96 ✓
" B				
" C				
" D				
" E				
CCV2			3.65	%R=91 ✓
CCB2			0.00	✓
VS18 F				DEL CLOUT
" G				
" H				
" I				
" J				
" K				
" L	↓	↓		↓

Chemical/Reagent ID:  
10% SnCl<sub>2</sub>: MP2391

14% NH<sub>2</sub>OH/NaCl: MP2360

Standard ID:  
Standard: 2092-7

ICV/CCV: 56-18

### Mercury Analysis Log

Analyst: DM  
Instrument: CETAC

Date: 11-17-12  
Page: 2 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR37 MBI	SMM	1X	0.00	DEL CV out ✓
" MBISPK			2.04	%R=102 ✓
" A			0.19	ft ✓
CCV3			1.76	%R=44 LOW X
CCV4			3.63	%R=91 ✓
CCB3			0.00	✓
VS18 F				
" G				
" H				
" J				
" U				
" K				
" L				
VR37 MBI			0.01	✓
" MBISPK			1.74	%R=87 ✓
" A			0.16	
CCV5			3.59	%R=90 ✓
CCB4			0.00	✓
VR37 ADUP			0.15	✓
" ASPK			1.12	%R=96 ✓
" B				
" C				
" D				
" E				
" F				
" G				
" H				
" I				
CCV6			3.60	%R=90 ✓
CCB5	↓	↓	0.00	✓

Chemical/Reagent ID:  
10% SnCl<sub>2</sub>: MP2391

14% NH<sub>2</sub>OH/NaCl: MP2360

Standard ID:  
Standard: 2992-7

ICV/CCV: SL-18



### Mercury Analysis Log

Analyst: DM  
 Instrument: CETAK

Date: 11-17-12  
 Page: 3 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR57 J	gmm	1X		
" K				
" L				
" M				
" N				
" O				
VR58 MBI			-0.00	✓
" MBISPK			1.81	%R=91 ✓
" A			0.11	
" ADUP			0.10	✓
CCV7			3.64	%R=91 ✓
CCB6			0.00	✓
VR58 ASPK			1.07	%R=96 ✓
" B				
" C				
" D				
" E				
" F				
" G				
" H				
" I				
" J				
CCV8			3.61	%R=90 ✓
CCB7			-0.00	✓
VR82 A				
" B				
" C				
" D				
" E				
" F	↓	↓		

Chemical/Reagent ID:  
 10% SnCl<sub>2</sub>: MP2391  
 Standard ID:  
 Standard: 2092-7

14% NH<sub>2</sub>OH/NaCl: MP2310  
 ICV/CCV: SL-18

### Mercury Analysis Log

Analyst: DM  
Instrument: CETAC

Date: 11-17-12  
Page: 4 of 10

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
VR82 G	SMM	1x		
" H				
" I				
CCV9			3.56	%R=89 ✓
CCB8			0.00	✓
VR30 MBI			-0.00	✓
" MBI/SPK			1.82	%R=91 ✓
" A			0.92	
" ADUP			0.93	RPD=1.08 ✓
" ASPK			1.78	%R=86 ✓
" B				
" C				
" D				
" E				
" F				
CCV10			3.71	%R=93 ✓
CCB9			-0.00	✓
VR30 G				
" H				
" I				
" J				
" K				
" L				
VR36 MBI			0.00	
" MBI/SPK			1.89	%R=95 ✓
" A			0.77	
" ADUP			0.74	RPD=3.97 ✓
CCV11			3.72	%R=93 ✓
CCB10			0.00	✓
VR36 ASPK			1.72	%R=95 ✓

Chemical/Reagent ID:  
10% SnCl<sub>2</sub>: MP2391

14% NH<sub>2</sub>OH/NaCl: MP2360

Standard ID:  
Standard: 2992-7

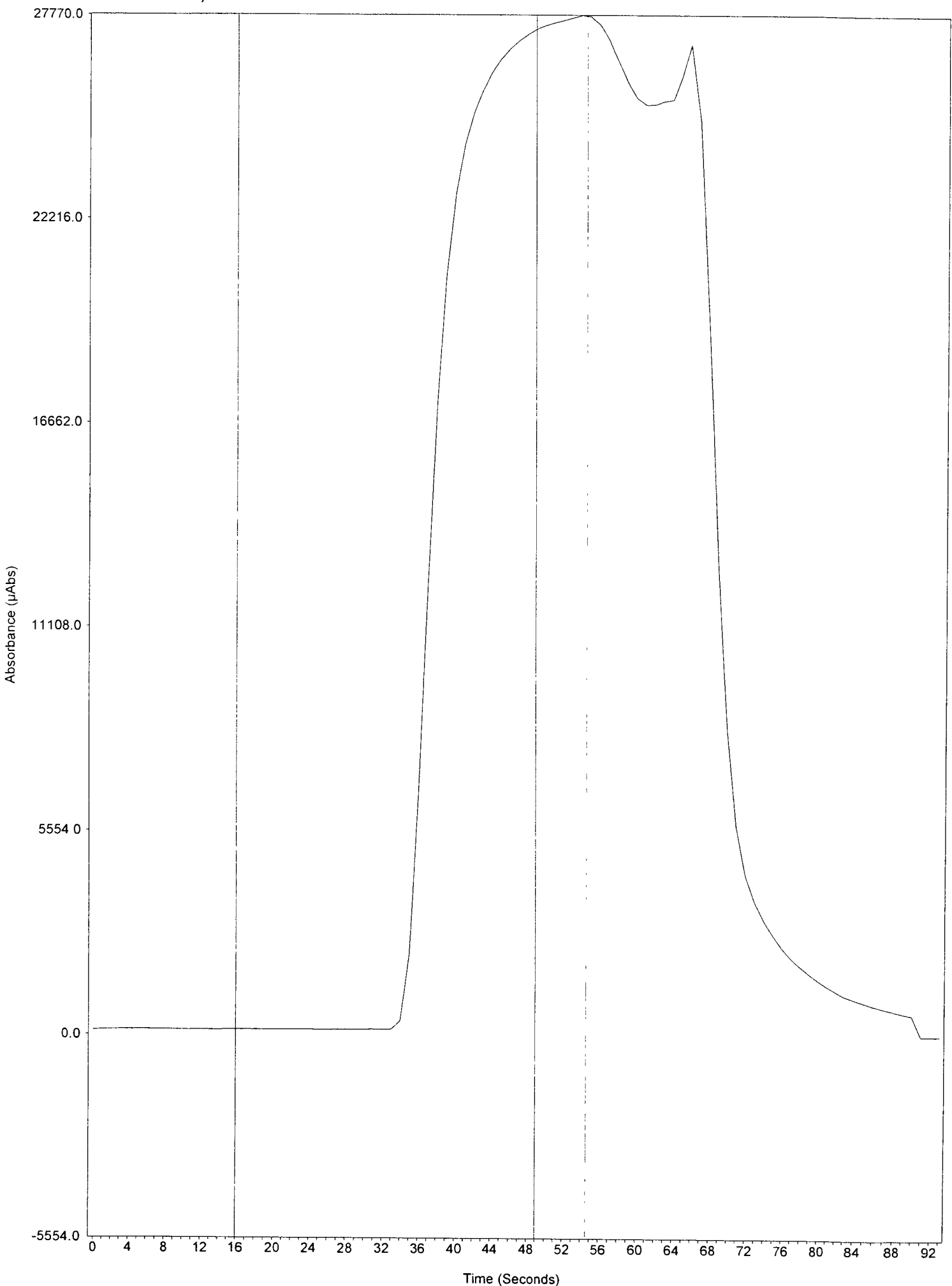
ICV/CCV: 56-18

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 11-17-12

	Analyst 11-17 om	Peer H11-19	Comment
<b>Logbook</b>			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
<b>Calibration</b>			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
<b>Calibration</b>			
ICV/CCV	✓	✓	See RUN LOG
ICB/CCB	✓	✓	
<b>Samples</b>			
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	✓	
<b>Method</b>			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
<b>Matrix/QC</b>			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	See VR33 ASDC
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
<b>QC</b>			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
	✓	✓	See CAF



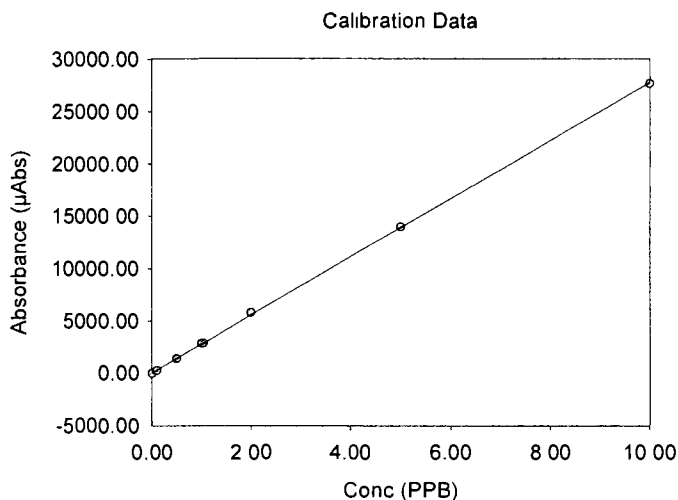
✓  
11-19-12  
JS

Analyst  
Date Started Saturday, November 17, 2012, 06:44:12  
Worksheet ARI 10ppb CALIB  
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
Std Tube 6	17-Nov-2012, 06:44	10.00	0.46	27500.00	1.00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
Calibration Zero	17-Nov-2012, 06:46	0.00	4.58	-33.10	1.00	
Standard #1	17-Nov-2012, 06:47	0.10	0.53	261.00	1.00	
Standard #2	17-Nov-2012, 06:49	0.50	0.24	1400.00	1.00	
Standard #3	17-Nov-2012, 06:51	1.00	0.45	2840.00	1.00	
Standard #4	17-Nov-2012, 06:52	2.00	0.54	5790.00	1.00	
Standard #5	17-Nov-2012, 06:54	5.00	0.29	14000.00	1.00	
Standard #6	17-Nov-2012, 06:56	10.00	0.39	27700.00	1.00	



Int 0.000  
Slope 2778.015  
Correlation 0.99994

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
ICV	17-Nov-2012, 07:05	7.26	0.75	20200.00	1.00	
ICB	17-Nov-2012, 07:06	-0.01	13.00	-18.40	1.00	

BCG:7 CLP

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
QC Standard	17-Nov-2012, 07:08	3.69	0.28	10200.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
QC Blank	17-Nov-2012, 07:09	-0.00	56.00	-2.91	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
CRA	17-Nov-2012, 07:11	0.10	0.42	267.00	1.00	
VS18 MB1 SMM	17-Nov-2012, 07:13	0.01	13.00	20.30	1.00	
VS18 MB1SPK SMM	17-Nov-2012, 07:14	1.90	0.60	5270.00	1.00	
VS18 A SMM	17-Nov-2012, 07:16	1.08	0.64	3000.00	1.00	
VS18 ADUP SMM	17-Nov-2012, 07:17	1.05	0.46	2910.00	1.00	
VS18 ASPK SMM	17-Nov-2012, 07:19	2.04	0.80	5660.00	1.00	
VS18 B SMM	17-Nov-2012, 07:21	0.70	0.68	1940.00	1.00	
VS18 C SMM	17-Nov-2012, 07:22	0.59	0.86	1640.00	1.00	
VS18 D SMM	17-Nov-2012, 07:24	0.77	0.48	2150.00	1.00	
VS18 E SMM	17-Nov-2012, 07:26	0.71	0.45	1970.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
QC Standard	17-Nov-2012, 07:27	3.65	0.49	10100.00	1.00	

Analyst  
 Date Started Saturday, November 17, 2012, 07:29:22  
 Worksheet ARI 10ppb CALIB  
 Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 07:29	0.00	11.10	10.40	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VS18 F SMM	17-Nov-2012, 07:31	0.31	1.08	873.00	1.00	
VS18 G SMM	17-Nov-2012, 07:32	0.25	0.62	691.00	1.00	
VS18 H SMM	17-Nov-2012, 07:34	1.02	1.42	2840.00	1.00	
VS18 I SMM	17-Nov-2012, 07:35	3.94	0.68	10900.00	1.00	
VS18 J SMM	17-Nov-2012, 07:37	2.53	0.19	7030.00	1.00	
VS18 K SMM	17-Nov-2012, 07:38	1.94	0.22	5380.00	1.00	
VS18 L SMM	17-Nov-2012, 07:40	0.88	0.27	2440.00	1.00	
VR37 MB1 SMM	17-Nov-2012, 07:42	0.00	17.70	12.90	1.00	
VR37 MB1SPK SMM	17-Nov-2012, 07:43	2.04	0.47	5660.00	1.00	
VR37 A SMM	17-Nov-2012, 07:45	0.19	0.58	514.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 07:47	1.76	0.86	4880.00	1.00	Q - Low 9R
QC Standard	17-Nov-2012, 07:58	3.63	0.54	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:00	0.00	11.60	11.60	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VS18 F SMM	17-Nov-2012, 08:02	0.30	0.58	846.00	1.00	
VS18 G SMM	17-Nov-2012, 08:03	0.25	0.72	683.00	1.00	
VS18 H SMM	17-Nov-2012, 08:05	1.00	0.78	2780.00	1.00	
VS18 I SMM	17-Nov-2012, 08:06	3.88	0.67	10800.00	1.00	
VS18 J SMM	17-Nov-2012, 08:08	2.42	0.57	6730.00	1.00	
VS18 K SMM	17-Nov-2012, 08:09	1.81	0.67	5030.00	1.00	
VS18 L SMM	17-Nov-2012, 08:11	0.79	0.94	2190.00	1.00	
VR37 MB1 SMM	17-Nov-2012, 08:13	0.01	4.00	19.20	1.00	
VR37 MB1SPK SMM	17-Nov-2012, 08:14	1.74	0.56	4840.00	1.00	
VR37 A SMM	17-Nov-2012, 08:16	0.16	1.44	442.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:18	3.59	0.50	9980.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:19	0.00	13.00	9.15	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VR37 ADUP SMM	17-Nov-2012, 08:21	0.15	0.54	416.00	1.00	
VR37 ASPK SMM	17-Nov-2012, 08:23	1.12	0.62	3120.00	1.00	
VR37 B SMM	17-Nov-2012, 08:24	0.09	0.36	242.00	1.00	
VR37 C SMM	17-Nov-2012, 08:26	0.28	1.03	768.00	1.00	
VR37 D SMM	17-Nov-2012, 08:27	1.41	0.61	3910.00	1.00	
VR37 E SMM	17-Nov-2012, 08:29	2.23	0.82	6190.00	1.00	
VR37 F SMM	17-Nov-2012, 08:31	0.79	0.67	2210.00	1.00	
VR37 G SMM	17-Nov-2012, 08:32	2.39	0.51	6630.00	1.00	
VR37 H SMM	17-Nov-2012, 08:34	3.87	0.37	10800.00	1.00	
VR37 I SMM	17-Nov-2012, 08:35	0.48	0.20	1340.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	17-Nov-2012, 08:37	3.60	0.66	9990.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	17-Nov-2012, 08:39	0.00	124.00	1.77	1.00	

Analyst  
 Date Started Saturday, November 17, 2012, 08:40:49  
 Worksheet ARI 10ppb CALIB  
 Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
VR37 J SMM	17-Nov-2012, 08:40	1.27	0.51	3520.00	1.00	
VR37 K SMM	17-Nov-2012, 08:42	1.51	2.55	4190.00	1.00	
VR37 L SMM	17-Nov-2012, 08:44	1.16	0.58	3220.00	1.00	
VR37 M SMM	17-Nov-2012, 08:45	1.05	0.38	2900.00	1.00	
VR37 N SMM	17-Nov-2012, 08:47	1.19	0.74	3310.00	1.00	
VR37 O SMM	17-Nov-2012, 08:48	0.83	0.81	2300.00	1.00	
VR58 MB1 SMM	17-Nov-2012, 08:50	-0.00	33.50	-6.40	1.00	
VR58 MB1SPK SMM	17-Nov-2012, 08:52	1.81	0.54	5040.00	1.00	
VR58 A SMM	17-Nov-2012, 08:53	0.11	0.89	295.00	1.00	
VR58 ADUP SMM	17-Nov-2012, 08:55	0.10	0.57	281.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
QC Standard	17-Nov-2012, 08:56	3.64	0.48	10100.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
QC Blank	17-Nov-2012, 08:58	0.00	9.27	8.18	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
VR58 ASPK SMM	17-Nov-2012, 09:00	1.07	0.63	2970.00	1.00	
VR58 B SMM	17-Nov-2012, 09:01	0.10	0.59	283.00	1.00	
VR58 C SMM	17-Nov-2012, 09:03	0.11	0.53	309.00	1.00	
VR58 D SMM	17-Nov-2012, 09:05	0.10	0.66	274.00	1.00	
VR58 E SMM	17-Nov-2012, 09:06	0.11	0.48	304.00	1.00	
VR58 F SMM	17-Nov-2012, 09:08	0.41	0.62	1150.00	1.00	
VR58 G SMM	17-Nov-2012, 09:10	0.06	0.39	175.00	1.00	
VR58 H SMM	17-Nov-2012, 09:11	0.06	0.63	161.00	1.00	
VR58 I SMM	17-Nov-2012, 09:13	0.10	1.03	271.00	1.00	
VR58 J SMM	17-Nov-2012, 09:14	0.05	1.41	126.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
QC Standard	17-Nov-2012, 09:16	3.61	0.66	10000.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
QC Blank	17-Nov-2012, 09:18	-0.00	300.00	-1.14	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
VR82 A SMM	17-Nov-2012, 09:19	0.22	0.73	605.00	1.00	
VR82 B SMM	17-Nov-2012, 09:21	0.10	2.50	265.00	1.00	
VR82 C SMM	17-Nov-2012, 09:23	0.08	1.51	214.00	1.00	
VR82 D SMM	17-Nov-2012, 09:24	0.11	1.66	312.00	1.00	
VR82 E SMM	17-Nov-2012, 09:26	0.15	0.65	428.00	1.00	
VR82 F SMM	17-Nov-2012, 09:28	0.16	0.78	453.00	1.00	
VR82 G SMM	17-Nov-2012, 09:29	0.13	0.84	355.00	1.00	
VR82 H SMM	17-Nov-2012, 09:31	0.12	0.60	343.00	1.00	
VR82 I SMM	17-Nov-2012, 09:32	0.12	0.86	328.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
QC Standard	17-Nov-2012, 09:34	3.56	0.61	9900.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
QC Blank	17-Nov-2012, 09:36	0.00	42.80	6.11	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. $\mu$ Abs	Dilution	Flags
VR30 MB1 SMM	17-Nov-2012, 09:38	-0.00	64.10	-2.94	1.00	
VR30 MB1SPK SMM	17-Nov-2012, 09:39	1.82	0.61	5060.00	1.00	
VR30 A SMM	17-Nov-2012, 09:41	0.92	0.74	2550.00	1.00	
VR30 ADUP SMM	17-Nov-2012, 09:43	0.93	0.80	2590.00	1.00	
VR30 ASPK SMM	17-Nov-2012, 09:44	1.78	0.74	4940.00	1.00	
VR30 B SMM	17-Nov-2012, 09:46	0.58	0.75	1620.00	1.00	
VR30 C SMM	17-Nov-2012, 09:47	0.68	0.60	1890.00	1.00	
VR30 D SMM	17-Nov-2012, 09:49	0.80	0.75	2230.00	1.00	

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  $\mu$ Abs > 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





# Mercury Standard Prep Log

Prep Code: SMM  
Analyst: DM  
Bath Temp: 95°C

Instrument: CETAC  
Date: 11-15-12  
End Time: 1243

Start Time: 1213

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	2992-7	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	56.18	0.08	↓	8.0	2
CCV	↓	0.04	50.0	4.0	3

Chemical/Reagent ID:

HNO<sub>3</sub>: JT833      H<sub>2</sub>SO<sub>4</sub>: JT67      HCl: —  
5% K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>: MP2375      5% KMnO<sub>4</sub>: MP2376

Prep Code: TLM  
Analyst: DM  
Bath Temp: 95°C

Digested 20.0ml

Instrument: CETAC  
Date: 11-15-12  
End Time: 1447

Start Time: 1247

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	2992-8	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	2992-9	1.0	↓	0.5	1
CCV	↓	1.0	100.0	0.5	1

Chemical/Reagent ID:

HNO<sub>3</sub>: JT833      H<sub>2</sub>SO<sub>4</sub>: JT67      HCl: —  
5% K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>: MP2375      5% KMnO<sub>4</sub>: MP2376



Analytical Resources, Incorporated  
Analytical Chemists and Consultants

# Mercury Digestion Log

Prep Code: SMM

Matrix: SOIL

Analyst: NB

Date: 11-16-12

Bath Temp: 91°C

Start Time: 1755

End Time: 1825

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# KMnO <sub>4</sub> Aliquots	CLP	Comments
VR58 A	2	-	0.284	50.0	11-24	YES	} 11/19/12 -Batch
" ADIP	2	-	0.282		1		
" ASK	2	-	0.288		1		
" B	2	-	0.271		1		
" C	2	-	0.217		1		
" D	2	-	0.221		1		
" E	2	-	0.231		1		
" F	2	-	0.206		1		
" G	2	-	0.260		1		
" H	2	-	0.238		1		
" I	2	-	0.247		1		
" J	2	-	0.219		1		
" MBI	-	-	-		1		
" MBISPK	-	-	-		1		
VR82 A	2	-	0.262		11-27		
" B	2	-	0.215		1		
" C	2	-	0.271		1		
" D	2	-	0.225		1		
" E	2	-	0.268		1		
" F	2	-	0.218		1		
" G	2	-	0.236		1		
" H	2	-	0.219		1		
" I	2	-	0.217	50.0	1		
			NB	11-16-12			

Chemical/Reagent ID:

HNO<sub>3</sub>: I7833

H<sub>2</sub>SO<sub>4</sub>: I7677

HCl: -

5% K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>: MP2375

5% KMnO<sub>4</sub>: MP2376

Digest Tube Lot: 1205258



Analytical Resources, Incorporated  
Analytical Chemists and Consultants

# Mercury Digestion Log

Prep Code: SMM

Matrix: SOIL

Analyst: NB

Date: 11-16-12

Bath Temp: 91°C

Start Time: 1755

End Time: 1825

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) Volume (mL)	Final Volume (mL)	# KMnO <sub>4</sub> Aliquots	CLP	Comments
VR58 A	2	-	0.284	50.0	11-24	YES	}
" ADIP	2	-	0.282				
" ASPK	2	-	0.288				
" B	2	-	0.271				
" C	2	-	0.217				
" D	2	-	0.221				
" E	2	-	0.231				
" F	2	-	0.206				
" G	2	-	0.260				
" H	2	-	0.238				
" I	2	-	0.247				
" J	2	-	0.219				
" MBI	-	-	-				
" MBISPK	-	-	-				
VR82 A	2	-	0.262		11-27		
" B	2	-	0.215				
" C	2	-	0.271				
" D	2	-	0.229				
" E	2	-	0.268				
" F	2	-	0.218				
" G	2	-	0.236				
" H	2	-	0.219				
" I	2	-	0.217	50.0			
			NB	11-16-12			

Chemical/Reagent ID:

HNO<sub>3</sub>: I7833

H<sub>2</sub>SO<sub>4</sub>: I7677

HCl: -

5% K<sub>2</sub>S<sub>2</sub>O<sub>8</sub>: MP2375

5% KMnO<sub>4</sub>: MP2376

Digest Tube Lot: 1205258

**General Chemistry Raw Data  
Analyst Notes and Raw Data**

**ARI Job ID: VR58**

W  
11-27-11

**TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET**

**SOLIDS** (dry at 104 (12-24 hr) then combust at 550 (30 min)) DATE: 11/19/12 (A) UW / CDE 12:30

**Instrumentation** Drying Ovens: 12 Muffle Furnace: 2790918520 Analytical Balance: 1123230597

**Batch drying time**  
 record times as mm/dd/yy hh:mm  
 11/19/2012 12:30 date/time in oven UW  
 11/20/2012 10:06 date/time out CDE  
 elapsed hrs = 21.6

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams)		dry wt (g)	TS (%)	ASH WT 550C (grams)		Ash Wt (g)	TVS (mg/kg) (%)
				CV-02	CV-02			CV-02	CV-02		
Blank			1.0818	1.0815	0.00	0.00		1.0813	1.0814	0.00	OK
VR58 A1		9.1388	1.0794	5.6004	4.52	50.1%		5.3096	5.3060	4.23	OK
VR58 A1 dup		9.0465	1.0942	5.5582	4.46	50.1%		5.2786	5.2760	4.16	OK
RPD = 0.07%											

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"

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams)		dry wt (g)	TS (%)	ASH WT 550C (grams)		Ash Wt (g)	TVS (mg/kg) (%)
				CV-02	CV-02			CV-02	CV-02		
VR58 A1 trip		9.3132	1.0864	5.7873	4.70	57.1%		5.4884	5.4849	4.40	OK
RPD = 1.49%											
VR58 B1		11.7343	1.1131	2.9095	1.80	16.9%		2.4786	2.4766	1.36	OK
VR58 C1		10.9179	1.0719	3.7671	2.70	27.4%		3.4017	3.3988	2.33	OK
VR58 D1		9.6124	1.0969	3.0724	1.98	23.2%		2.7821	2.7757	1.88	OK
VR58 E1		9.4732	1.0903	2.9946	1.90	22.7%		2.7225	2.7174	1.63	OK
VR58 F1		10.4100	1.0863	5.8391	4.75	51.0%		5.4841	5.4776	4.39	OK
VR58 G1		8.7397	1.0976	7.3984	6.30	82.8%		7.3222	7.3184	6.22	OK
VR58 H1		9.1007	1.0895	7.3137	6.22	77.7%		7.2575	7.2529	6.16	OK
VR58 I 1		10.6463	1.1081	5.5768	4.47	43.0%		5.2868	5.2775	4.17	OK
VR58 J 1		10.6470	1.1141	8.0659	6.95	72.9%		7.9891	7.9832	6.87	OK
VR82 A1		10.6234	1.1037	3.5469	2.44	25.7%		3.2237	3.2168	2.11	OK
VR82 B1		9.9101	1.1135	3.3647	2.25	25.8%		3.0308	3.0236	1.91	OK
VR82 C1		10.8727	1.1180	8.9973	7.88	80.8%		8.8685	8.8617	7.74	OK
VR82 D1		10.7028	1.0820	4.4447	3.36	35.0%		4.0766	4.0704	2.99	OK
VR82 E1		10.3916	1.1113	3.8945	2.77	28.9%		3.5053	3.4992	2.39	OK
VR82 F1		10.8701	1.0817	4.3789	3.30	33.7%		3.9409	3.9371	2.85	OK
VR82 G1		9.9598	1.0840	4.1275	3.04	34.3%		3.7050	3.6980	2.61	OK
RPD = 1.49%											

**TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET**  
**SOLIDS** (dry at 104 (12-24 hr) then combust at 550 (30 min))

DATE: 11/19/12 (A)  
 ANALYST: UW / CDE 12:30  
 Analytical Balance: 1123230597

Drying Ovens: 12  
 Muffle Furnace: 2790918520

Batch drying time		TS (%) calculated as:		TVS (mg/kg dry wt) calculated as:	
record times as mm/dd/yy hh:mm	date/time in oven	Final dry wt (g) = (Dry Wt - Tare Wt)	CV-02	Final ash wt (g) = (min ash wt - tare wt)	CV-02
11/19/2012 12:30	11/20/2012 10:06	TS = (Final Dry Wt)/(grams Sample-Tare)	11/20/12 12:29 CDE	TVS (mg/kg) = [(Dry wt-Ash wt)/(dry weight)] *1,000,000	11/20/12 14:52 CDE
elapsed hrs = 21.6			10.0000	if ash wt > dry wt, "Chk for Err"	10.0000
			Cal OK!	if dry wt-ash wt < 0.001 g, "< (1/dry wt) *1,000,000"	Cal OK!
Cal Wt (g)	Date & Time	CV-02	CV-02	CV-02	CV-02
record weights to 4 places	record weights to 4 places	11/19/12 12:00	11/20/12 10:24 CDE	11/20/12 12:29 CDE	11/20/12 14:52 CDE
SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	ASH WT 104C (grams)	ASH WT 550C (grams)
VR82 H1		10.2958	1.0851	4.9572	4.6049
VR82 I 1		9.8020	1.0769	4.1934	3.8637
				dry Wt (g)	Ash Wt (g)
				3.87	3.52
				TS (%)	TVS (mg/kg) (%)
				42.0%	90.984
				35.7%	105.792
				OK	OK
				OK	OK

0058 : 02725



Analytical Resources, Incorporated  
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET (A)

M-Furnus # 62781520

Analyst: <u>UW/CW</u>		Date: <u>11-19-12</u>	Oven ID: <u>12</u>	Balance ID: <u>1123230597</u>
Time in Oven: <u>12:30</u>		Time Out of Oven: <u>11-20-12</u>		Elapsed Time (> 12 Hrs):
Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places		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		
Sample ID	Dish #	CV-02	CV-02	CV-02
Cal Weight ID		CV-02	CV-02	CV-02
Date & Time:		<u>11-19-12 12:00</u>	<u>11-20-12 10:24</u>	<u>11-20-12 14:52</u>
Cal Weight (10.0000):		<u>9.9999</u>	<u>9.9999</u>	<u>10.0000</u>
TS (%) calculated as: Final Dry Weight (g) = (Dry Weight - Tare Weight) TS = (Final Dry Weight) / (Grams Sample - Tare Weight)				
Sample	Tare	CV-02	CV-02	CV-02
				Ash Weight 550 °C
		1	2	3
				Dry Weight
				grams
BLANK				
VR58A1	1	<u>1.0815</u>	<u>1.0818</u>	<u>1.0813</u>
	2	<u>5.6004</u>	<u>1.0794</u>	<u>5.3096</u>
	3	<u>5.5582</u>	<u>1.0942</u>	<u>5.2786</u>
	4	<u>5.7873</u>	<u>1.0864</u>	<u>5.4884</u>
	5	<u>2.9095</u>	<u>1.1131</u>	<u>2.4786</u>
	6	<u>3.7671</u>	<u>1.0719</u>	<u>3.4017</u>
	7	<u>3.0724</u>	<u>1.0969</u>	<u>2.7821</u>
	8	<u>2.9946</u>	<u>1.0903</u>	<u>2.7225</u>
	9	<u>5.8391</u>	<u>1.0863</u>	<u>5.4841</u>
	10	<u>7.3264</u>	<u>1.0926</u>	<u>7.3222</u>
	11	<u>7.3137</u>	<u>1.0815</u>	<u>7.2575</u>
	12	<u>5.5768</u>	<u>1.081</u>	<u>5.2868</u>
	13	<u>8.0659</u>	<u>1.1141</u>	<u>7.9891</u>
	14	<u>3.5469</u>	<u>1.037</u>	<u>3.2237</u>
	15	<u>3.3647</u>	<u>1.1135</u>	<u>3.0308</u>
	16	<u>6.9973</u>	<u>1.180</u>	<u>8.8617</u>
	17	<u>4.4447</u>	<u>1.0820</u>	<u>4.0766</u>
	18	<u>3.8845</u>	<u>1.1113</u>	<u>3.5053</u>
	19	<u>4.3789</u>	<u>1.0817</u>	<u>3.9409</u>
	20	<u>4.1275</u>	<u>1.0840</u>	<u>3.7050</u>
	21	<u>4.9572</u>	<u>1.0851</u>	<u>4.6111</u>
	22	<u>4.1934</u>	<u>1.0769</u>	<u>3.8690</u>

00672



Analytical Resources, Incorporated  
Analytical Chemists and Consultants

# TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

ZnO AC

(B)

Analyst: <u>Uw/cab</u>		Date: <u>11-19-12</u>		Oven ID: <u>11-20-12</u>	Balance ID: <u>1123230597</u>
Time In Oven: <u>16:40</u>		Time Out of Oven: <u>0:06</u>		Elapsed Time (> 12 Hrs):	
Sample ID	Dish #	Sample	TVS (mg/kg dry weight) calculated as: Final Ash Weight (g) = (Minimum Ash Weight - Tare Weight) / (Dry Weight - Ash Weight) / (Dry Weight) * 1,000,000 If Dry Weight > Dry Weight then "Check for Error"		
			CV-02	CV-02	CV-02
Cal Weight ID	Date & Time:	CV-02	CV-02	CV-02	CV-02
Cal Weight (10.0000):		CV-02	CV-02	CV-02	CV-02
		Tare	Dry Weight 104°C		
			1	2	3
			Dry Weight 550°C		
			1	2	3
BLANK	1	-	1.0965	1.0966	
VTC6 AL	2	9.2259	1.0680	7.3748	
T ALDUP	3	10.2069	1.1422	8.2590	
ALDHP	4	10.2287	1.1135	8.2723	
BZ	5	13.1902	1.1146	11.7270	
CDL	6	11.8990	1.0823	9.6703	
ZKZ	7	11.2863	1.1071	9.3969	
VKZ2	8	9.1736	1.1046	7.6748	
V LZ	X	10.6864	1.1127	8.8371	

11-19-12

5058 : 02728



W  
11-23-12

TOC Solids Prep Log							DATE:	11/12/12 ( A )
acid purging to remove IC and drying at 70°C for TOC analysis							ANALYST:	CDE / KE 13:54
General notes regarding prep method and samples (identify the acid used)							HCL 10% ID: _____	
Balance ID: Mettler Toledo (XS205 DU) SN 123230597							HCL ID: _____	
<i>make no entry to shaded cells, they are calculated</i>								
Sample ID		IC Test + / -	Gravimetric Data (grams)			% Solids	Sample description & notes (homogeneity and exclusions)	
ARI #	Client		Tare Wt.	Wet wt.	70°C dry wt			
Blank			13.1053		13.1056	0.3 mg		
VR58 A1		-	13.1055	17.7745	15.7762	57.20%		
VR58 A1 dup		-	13.0921	17.7225	15.6917	56.14%	RPD = 1.87%	
VR58 A1 trip		-	13.1692	17.4779	15.6637	57.89%	RSD = 1.55%	
VR58 B1		-	13.0985	17.9585	13.9847	18.23%		
VR58 C1		-	13.1294	19.9993	15.1908	30.01%		
VR58 D1		-	13.1172	20.0096	14.7753	24.06%		
VR58 E1		-	13.1580	19.6087	14.7050	23.98%		
VR58 F1		-	13.0836	18.8660	15.7204	45.60%		
VR58 G1		-	13.1493	19.8471	18.2017	75.43%		
VR58 H1		-	13.1045	18.3920	17.4433	82.06%		
VR58 I 1		-	13.1122	19.4155	16.1709	48.53%		
VR58 J 1		-	13.1158	19.7989	18.2565	76.92%		
VR82 A1		-	13.1369	17.8646	14.4115	26.96%		
VR82 B1		-	13.2036	19.1787	14.7417	25.74%		
VR82 C1		-	13.1947	18.7963	17.9219	84.39%		
VR82 D1		-	13.1390	20.0811	15.5952	35.38%		
VR82 E1		-	13.0957	19.0146	14.9428	31.21%		
VR82 F1		-	13.1713	18.7909	15.2289	36.61%		
VR82 G1		-	13.1194	19.3203	15.3322	35.69%		
VR82 H1		-	13.1070	20.7767	16.4269	43.29%		
VR82 I 1		-	13.1535	20.3792	15.8073	36.73%		



### 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 *CKR*

*(W)* *(A)*

Date *11-12-12*

*13:54*

Sample Identification		IC Test	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID		Tare	Wet	70 °C		
<b>Blank</b>			13.1053	Ø	13.1056		
<del>VR99A</del>							
<del>A'de</del>							
<del>A'IP</del>							
<del>B'</del>							
VR58A		-	13.1055	17.7745	15.7762		Silt + Sed
A'de		-	13.0921	17.7225	15.6917		
A'IP		-	13.1692	17.4779	15.6637		
B'		-	13.0985	17.9585	13.9847		wet sed.
C'		-	13.1294	19.9993	15.1908		
D'		-	13.1172	20.0096	14.7753		
E'		-	13.1580	19.6087	14.7050		
F'		-	13.0836	18.8660	15.7204		+ Rocks
G'		-	13.1493	19.8721	18.2017		wet sand
H'		-	13.1045	18.3920	17.4433		
I'		-	13.1122	19.4155	16.1709		clay like sed. + sticks
J'		-	13.1158	19.7989	18.2565		Sed.
<del>VR82A</del>		-	13.1369	17.8646	14.4115		<del>wet sed.</del> wet sed
B'		-	13.2036	19.1787	14.7417		
C'		-	13.1947	18.7963	17.9219		sand slats
D'		-	13.1390	20.0811	15.5952		wet sed.
E'		-	13.0957	19.0146	14.9428		
F'		-	13.1713	18.7909	15.2289		
G'		-	13.1194	19.3203	15.3322		
H'		-	13.1070	20.7767	16.4269		
I'		-	13.1535	20.3792	15.8073		
<i>11-12-12 CKR</i>							

W  
11-19-12

**TOC, Solids Data Analysis** DATE: 11/16/2012  
 Instrument: Apollo 1 ANALYST: KE 12:42  
 Mode: NPOC Inlet: Boat Balance ID:  
 Spike Std = 2,500 ppm C

**Calibration Data**  
 Cal Curve ID: 11/13/2012 Conc: 5,000 ppm  
 Calibration Curve Standard: 00130-01 Curve Date: 11/13/12  
 CalFact: 1.339E+05 intercept: 163305 r2: 0.99851  
 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 (µL Std)	Combustion Data			comments
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor		Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	
ICV				1.00		40.0	967	967	96.70%
Blank				1.00		40.0	-19.15	-19	Blank OK
NIST 1941B				1.00		2.2	30284	30,284	101.28%
VR58 A1				1.00		1.5	30789	30,789	Range OK!
VR58 A1 dup				1.00		1.4	34458	34,458	RPD=11.2%
VR58 A1 trp				1.00		1.5	29478	29,478	RSD=8.2%
VR58 A1 ms				1.00	20	1.4	74513	74,513	Offscale, dilute
Spike = 0.05 mg C to 1.4 mg sample = 35,714 ppm								122%	
VR58 B1				1.00		1.0	99961	99,961	Range OK!
VR58 C1				1.00		1.5	42499	42,499	Range OK!
VR58 D1				1.00		1.3	52523	52,523	Range OK!
VR58 E1				1.00		1.3	36131	36,131	Range OK!
VR58 F1				1.00		0.8	48478	48,478	Range OK!
CCV				1.00		40.0	976	976	97.60%
Blank				1.00		40.0	-24.56	-25	Blank OK
VR58 G1				1.00		1.2	20452	20,452	Range OK!
VR58 H1				1.00		1.9	6851	6,851	Range OK!
VR58 I 1				1.00		1.0	28806	28,806	Range OK!
VR58 J 1				1.00		1.4	12642	12,642	Range OK!
NIST 1941B				1.00		1.8	24492	24,492	81.91%
CCV				1.00		40.0	990	990	99.00%
Blank				1.00		40.0	-7.74	-8	Blank OK



① 11-16-12 ②

TOC Solids Sample Run Log  
Apollo 9000

Page 1 of 1

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler			
Standards:	Source	Conc (ppm)	Analyst: (12)			
Calibration:	ARI-00128-03	5000	Date: 11-16-12			
Verification:	ERA-0409-12-01	5000 to 1000 for CVS	Time: 12:42			
SRM:	NBS-1941b or 8704	Method: PSEP 1986-MOD	Balance ID B.146454145			
Sample Sequence:						
Sample ID	Dilution Data (mg)		Burn Wt mg	Matrix Spike Data		Comments
	Sample	+ Silica Gel		mg/L	µL added	
10W			40			
10B			40			
NBS 1941 B			2.2			
VR58 A			1.5			
2PA			1.4			
4PA			1.5			
ms A			1.4	2500	20	
B			1.0			
C			1.5			
D			1.3			
E			1.3			
F			0.8			
10W			40			
10B			40			
VR58 G			1.2			
H			1.9			
I			1.0			
J			1.4			
NBS 1941 B			1.9			
10W			40			
10B			40			
11-16-12 ①						

11-16-12 (4)

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 11161225
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 12:31
Operator ID: TRINA Sample Type: Cal. Verification

Table with 7 columns: Rep #, ppm C, ug C, Raw Data, Beginning Baseline, Ending Baseline, Integration Time. Row 1: 1, 966.7423, 38.6697, 5341067, 7.060, 8.057, 172

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 11161242
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 12:44
Operator ID: TRINA Sample Type: Cal. Verification

Table with 7 columns: Rep #, ppm C, ug C, Raw Data, Beginning Baseline, Ending Baseline, Integration Time. Row 1: 1, -19.1529, -0.7661, 60725, 7.602, 8.600, 46

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 11161246
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 12:50
Operator ID: TRINA Sample Type: Cal. Verification

Table with 7 columns: Rep #, ppm C, ug C, Raw Data, Beginning Baseline, Ending Baseline, Integration Time. Row 1: 1, 30283.5312, 66.6238, 9084038, 7.181, 8.175, 216

Sample ID: VR58 A1 Mode: TOC
Method: Boat Sampler Filename: 11161307
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 13:12
Operator ID: TRINA Sample Type: Sample

Table with 7 columns: Rep #, ppm C, ug C, Raw Data, Beginning Baseline, Ending Baseline, Integration Time. Row 1: 1, 30788.7715, 46.1832, 6183793, 6.867, 7.866, 161

Sample ID: VR58 A1 DP Mode: TOC
Method: Boat Sampler Filename: 11161317
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 13:21
Operator ID: TRINA Sample Type: Sample

Table with 7 columns: Rep #, ppm C, ug C, Raw Data, Beginning Baseline, Ending Baseline, Integration Time. Row 1: 1, 34457.6562, 48.2407, 6459295, 6.915, 7.913, 155

Sample ID: VR58 A1 TRIP Mode: TOC
Method: Boat Sampler Filename: 11161349
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 13:53
Operator ID: TRINA Sample Type: Sample

Table with 7 columns: Rep #, ppm C, ug C, Raw Data, Beginning Baseline, Ending Baseline, Integration Time. Row 1: 1, 29477.8945, 44.2168, 5920509, 6.773, 7.770, 159

Sample ID: VR58 A1 MS Mode: TOC
Method: Boat Sampler Filename: 11161358
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 14:03
Operator ID: TRINA Sample Type: Sample

Table with 7 columns: Rep #, ppm C, ug C, Raw Data, Beginning Baseline, Ending Baseline, Integration Time. Row 1: 1, 74512.8594, 104.3180, 13967885, 6.990, 7.988, 185

Sample ID: VR58 B1 Mode: TOC  
 Method: Boat Sampler Filename: 11161456  
 Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 15:01  
 Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	99960.9844	99.9610	13384492	6.942	7.940	185

Sample ID: VR58 B1 Mode: TOC  
 Method: Boat Sampler Filename: 11161505  
 Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 15:10  
 Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	42498.5469	63.7478	8535652	6.990	7.988	168

Sample ID: VR58 D1 Mode: TOC  
 Method: Boat Sampler Filename: 11161516  
 Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 15:22  
 Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	52522.5820	68.2794	9142412	7.030	8.030	164

Sample ID: VR58 E1 Mode: TOC  
 Method: Boat Sampler Filename: 11161529  
 Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 15:32  
 Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	36130.7500	46.9700	6289146	6.979	7.978	149

Sample ID: VR58 F1 Mode: TOC  
 Method: Boat Sampler Filename: 11161538  
 Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 15:44  
 Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	48478.3398	38.7827	5192889	6.893	7.890	141

Sample ID: ICV/CCV BOAT Mode: TOC  
 Method: Boat Sampler Filename: 11161549  
 Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 15:53  
 Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	976.4362	39.0574	5392987	6.911	7.907	150

Sample ID: ICB/CCB BOAT Mode: TOC  
 Method: Boat Sampler Filename: 11161557  
 Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 16:03  
 Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-24.5560	-0.9822	31786	7.015	6.912	120

Last Message: Low Sample Detected

=====  
Sample ID: VR58 G1 Mode: TOC  
Method: Boat Sampler Filename: 11161626  
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 16:30  
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	20451.7969	24.5422	3286125	6.763	7.756	135

=====

Sample ID: VR58 H1 Mode: TOC  
Method: Boat Sampler Filename: 11161634  
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 16:38  
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	6850.8301	13.0166	1742883	6.767	7.765	107

=====

Sample ID: VR58 I1 Mode: TOC  
Method: Boat Sampler Filename: 11161645  
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 16:49  
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	28805.9531	28.8060	3857035	6.792	7.790	132

=====

Sample ID: VR58 J1 Mode: TOC  
Method: Boat Sampler Filename: 11161659  
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 17:04  
Operator ID: TRINA Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	12641.6191	17.6983	2369748	6.934	7.933	113

=====

Sample ID: NBS 1941B Mode: TOC  
Method: Boat Sampler Filename: 11161713  
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 17:18  
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	24492.4961	44.0865	6066361	7.026	8.024	200

=====

Sample ID: ICB/CCV BOAT Mode: TOC  
Method: Boat Sampler Filename: 11161725  
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 17:29  
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	990.2028	39.6081	5466719	6.941	7.937	156

=====

Sample ID: ICB/CCB BOAT Mode: TOC  
Method: Boat Sampler Filename: 11161731  
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/16 17:35  
Operator ID: TRINA Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	-7.7391	-0.3096	121856	7.009	8.008	61

=====



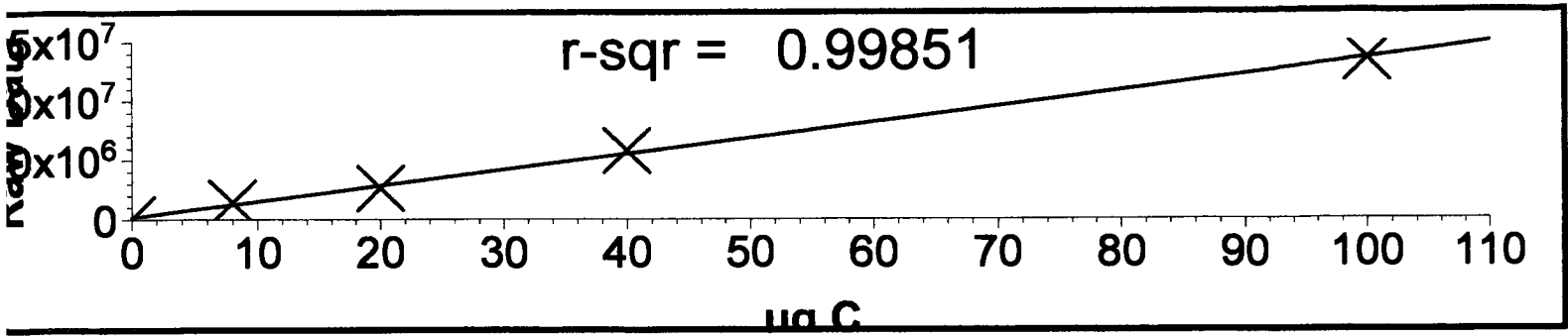


11-13-12  
①

Calibration Report    Print Date/Time: 2012/11/13 17:59:45

Cal. Curve ID:            11132012 BOAT CAL  
Created:                 2012/11/13 17:59  
Calibration Factor (m): 1.339e+05  
Y Intercept (b):        163305  
r-squared:               0.99851

Standard ID	Y	X Expected	Measured	Message	Date & Time
DI Water	34152	0.000	-0.965	Low Sample De	2012/11/13 12:29
200 ppm	1402526	8.000	9.255		2012/11/13 15:57
500 ppm	2612048	20.000	18.288		2012/11/13 16:30
1000 ppm	5782382	40.000	41.966		2012/11/13 17:08
2500 ppm	13480140	100.000	99.456		2012/11/13 17:46



```

=====
Sample ID:  DI Water           Mode:      TOC
Method:     Boat Sampler       Filename:  11131156
Cal. Curve: 11132012 BOAT CAL  Timestamp: 2012/11/13 12:29
Operator ID: TRINA             Sample Type: TOC Standard
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			18402	16.796	16.349	120
2			42520	15.376	15.117	120
3			41534	14.988	14.928	120

```

-----
Last Message: Low Sample Detected
<<<Statistics>>>  Mean:   34152  Std Dev:  13649  RSD: 39.96
=====
    
```

```

Sample ID:  200 ppm           Mode:      TOC
Method:     Boat Sampler       Filename:  11131238
Cal. Curve: 11132012 BOAT CAL  Timestamp: 2012/11/13 13:05
Operator ID: TRINA             Sample Type: TOC Standard
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1222030	14.878	15.874	82
2			2828545	14.808	15.808	104
3			1056788	14.689	15.685	76

```

-----
<<<Statistics>>>  Mean:  1702454  Std Dev:  978717  RSD: 57.49
=====
    
```

```

Sample ID:  500 ppm           Mode:      TOC
Method:     Boat Sampler       Filename:  11131440
Cal. Curve: 11132012 BOAT CAL  Timestamp: 2012/11/13 15:23
Operator ID: TRINA             Sample Type: TOC Standard
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2592282	15.291	16.289	93
2			2967532	14.712	15.709	110
3			2466931	14.170	15.169	110

```

-----
<<<Statistics>>>  Mean:  2675582  Std Dev:  260489  RSD: 9.74
=====
    
```

```

Sample ID:  1000 ppm          Mode:      TOC
Method:     Boat Sampler       Filename:  11131526
Cal. Curve: 11132012 BOAT CAL  Timestamp: 2012/11/13 15:37
Operator ID: TRINA             Sample Type: TOC Standard
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5290649	14.574	15.571	132
2			5344637	14.534	15.533	131

```

-----
<<<Statistics>>>  Mean:  5317643  Std Dev:   38175  RSD: 0.72
=====
    
```

```

Sample ID:  200 ppm           Mode:      TOC
Method:     Boat Sampler       Filename:  11131539
Cal. Curve: 11132012 BOAT CAL  Timestamp: 2012/11/13 15:57
Operator ID: TRINA             Sample Type: TOC Standard
    
```

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			1133964	14.834	15.826	75
2			1682541	14.702	15.699	105
3			1391072	14.832	15.828	89

```

-----
<<<Statistics>>>  Mean:  1402526  Std Dev:  274468  RSD: 19.57
=====
    
```

Sample ID: 500 ppm Mode: TOC  
Method: Boat Sampler Filename: 11131603  
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/13 16:30  
Operator ID: TRINA Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2617921	14.909	15.904	100
2			2699842	15.434	16.427	110
3			2518382	15.642	16.642	96

<<<Statistics>>> Mean: 2612048 Std Dev: 90872 RSD: 3.48  
=====

Sample ID: 1000 ppm Mode: TOC  
Method: Boat Sampler Filename: 11131635  
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/13 16:48  
Operator ID: TRINA Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			6098208	15.069	16.068	161
2			4400089	15.386	16.386	294

<<<Statistics>>> Mean: 5249148 Std Dev: 1200752 RSD: 22.88  
=====

Sample ID: 1000 ppm Mode: TOC  
Method: Boat Sampler Filename: 11131653  
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/13 17:08  
Operator ID: TRINA Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5668054	15.386	16.386	134
2			5866553	15.432	16.430	156
3			5812538	15.792	16.787	158

<<<Statistics>>> Mean: 5782382 Std Dev: 102628 RSD: 1.77  
=====

Sample ID: 2500 ppm Mode: TOC  
Method: Boat Sampler Filename: 11131715  
Cal. Curve: 11132012 BOAT CAL Timestamp: 2012/11/13 17:46  
Operator ID: TRINA Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			12880510	15.475	16.474	209
2			14040075	15.646	16.644	232
3			13519835	15.412	16.411	232

<<<Statistics>>> Mean: 13480140 Std Dev: 580801 RSD: 4.31  
=====

**Geotechnical Raw Data  
Analyst Notes and Raw Data**

**ARI Job ID: VR58**

Analytical Resources, Inc.

Pore Water Extraction

ARI Job No.: VR58 Date: 11/13/12 Tested By: gc Analytes: TBT

Volume Required: 150ml Filtered ( )  
 Filter Material: \_\_\_\_\_  
 Filter Size: \_\_\_\_\_

Aerobic ( )  
 Anaerobic

Centrifugation 1:	Equip ID	Speed:	Temp:	Duration:	O2 Level:
	3	3000xg	4°C	30min	<1%
Centrifugation 2:	Equip ID	Speed:	Temp:	Duration:	O2 Level:
	4	7000xg	4°C	2min	<1%

Centrifugation 1			
ARI ID	Start Time	Estimated Recovery	Decant Time
F	15:38	275	16:27

Centrifugation 2			
ARI ID	Start Time	Estimated Recovery	Decant Time
F	17:20	250	18:02

Notes:

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: VR58 ARI Sample Letter: C1 Client Sample No.: SG-12-S-E-121107

Set-up Date: 11-21-2012 Sample Description: sandy silt, organic fines & debris

SOLIDS CONTENT

Moisture Content	Initials: <u>eg</u>
Container No.	<u>109<sup>A</sup></u>
Tare Weight	<u>1.5055</u>
Wet Weight + Tare	<u>33.5314</u>
Dry Weight + Tare	<u>10.2561</u>

Test Sample	Initials: <u>eg</u>
Container No.	<u>109<sup>A</sup></u>
Tare Weight	<u>51.1467</u>
Wet Weight + Tare	<u>96.5669</u>
Dry Weight + Tare	<u>55.5308</u>

Calgon Batch #: 2716

11/27/2012

PIPETTE ANALYSIS

Temp: 23

Initials: eg

TIME

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:15:00			
8:15:20	<u>C1.1</u>	<u>1.5433</u>	<u>1.7808</u>
8:16:46	<u>C1.2</u>	<u>1.5263</u>	<u>1.6561</u>
8:22:05	<u>C1.3</u>	<u>1.5147</u>	<u>1.5874</u>
8:43:18	<u>C1.4</u>	<u>1.5155</u>	<u>1.5570</u>
10:08:00	<u>C1.5</u>	<u>1.5158</u>	<u>1.5418</u>
13:41:00	<u>C1.6</u>	<u>1.5260</u>	<u>1.5434</u>
6:51:00	<u>C1.7</u>	<u>1.5149</u>	<u>1.5272</u>

SIEVE ANALYSIS

Sieve Date: 11-26-2012

Sieve Set #: 1 Initials: eg

Sieve Size	Weight Retained
Tare	<u>51.1633</u>
4 <u>eg</u>	<u>57.2390</u>
10 <u>eg</u>	<u>51.7598</u>
18 <u>eg</u>	<u>52.2324</u>
35 <u>eg</u>	<u>52.2324</u>
60	<u>52.6678</u>
120	<u>53.3077</u>
230	<u>54.75016 <u>eg</u></u>
PAN	<u>1.2397</u>

51.1633  
51.2390  
51.7598

SALT CORRECTION

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: VR58 ARI Sample Letter: C.2 Client Sample No.: SG.12.S.E.121107

Set-up Date: 11.21.2012 Sample Description: sandy silt, organic fines & debris

SOLIDS CONTENT

Moisture Content		Initials: <u>ly</u>
Container No.	<u>119</u>	
Tare Weight	<u>1.5134</u>	
Wet Weight + Tare	<u>32.3884</u>	
Dry Weight + Tare	<u>9.9486</u>	

Test Sample		Initials: <u>ly</u>
Container No.	<u>119</u>	
Tare Weight	<u>49.9066</u>	
Wet Weight + Tare	<u>94.6069</u>	
Dry Weight + Tare	<u>54.6180</u>	

Calgon Batch #: 276

11/27/2012 PIPETTE ANALYSIS

Temp: 23

Initials: ly

TIME

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:18:00			
8:18:20	<u>C2.1</u>	<u>1.5286</u>	<u>1.7127</u>
8:19:46	<u>C2.2</u>	<u>1.5197</u>	<u>1.6480</u>
8:25:05	<u>C2.3</u>	<u>1.5190</u>	<u>1.5927</u>
8:46:18	<u>C2.4</u>	<u>1.5307</u>	<u>1.5718</u>
10:11:00	<u>C2.5</u>	<u>1.5343</u>	<u>1.5599</u>
13:44:00	<u>C2.6</u>	<u>1.5213</u>	<u>1.5377</u>
6:54:00	<u>C2.7</u>	<u>1.5309</u>	<u>1.5426</u>

SIEVE ANALYSIS

Sieve Date: 11.26.2012

Sieve Set #: 2 Initials: ly

Sieve Size	Weight Retained
Tare	<u>49.9142</u>
4	<u>49.9142</u>
10	<u>49.9142</u>
18	<u>50.2328</u>
35	<u>50.6464</u>
60	<u>51.1359</u>
120	<u>51.8888</u>
230	<u>53.3375</u>
PAN	<u>1.3879</u>

SALT CORRECTION

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	



PSEP GRAIN SIZE ANALYSIS

ARI Job No.: VR58 ARI Sample Letter: C3 Client Sample No.: SA.12.S.E.121107

Set-up Date: 11-21-2012 Sample Description: sandy silt, organic fines, debris

SOLIDS CONTENT

Moisture Content	Initials: <u>eg</u>
Container No.	<u>123</u>
Tare Weight	<u>1.5561</u>
Wet Weight + Tare	<u>25.1725</u>
Dry Weight + Tare	<u>8.0097</u>

Test Sample	Initials: <u>eg</u>
Container No.	<u>123</u>
Tare Weight	<u>50.4905</u>
Wet Weight + Tare	<u>95.2657</u>
Dry Weight + Tare	<u>55.1749</u>

Calgon Batch #: 276

11/27/2012

PIPETTE ANALYSIS

Temp: 23

Initials: eg

TIME

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:21:00			
8:21:20	<u>C31</u>	<u>1.5232</u>	<u>1.7069</u>
8:22:46	<u>C32</u>	<u>1.5333</u>	<u>1.6608</u>
8:28:05	<u>C33</u>	<u>1.5315</u>	<u>1.6027</u>
8:49:18	<u>C34</u>	<u>1.5197</u>	<u>1.5600</u>
10:14:00	<u>C35</u>	<u>1.5290</u>	<u>1.5515</u>
13:47:00	<u>C36</u>	<u>1.5216</u>	<u>1.5381</u>
6:57:00	<u>C37</u>	<u>1.5285</u>	<u>1.5407</u>

SIEVE ANALYSIS

Sieve Date: 11-26-2012

Sieve Set #: 1 Initials: eg

Sieve Size	Weight Retained
Tare	<u>50.5048</u>
4	<u>50.5048</u>
10	<u>50.5048</u>
18	<u>50.8990</u>
35	<u>51.3442</u>
60	<u>51.8255</u>
120	<u>52.4902</u>
230	<u>53.9096</u>
PAN	<u>1.3357</u>

SALT CORRECTION

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: VR58 ARI Sample Letter: A Client Sample No.: SG-10.S.E.121107

Set-up Date: 11.21.2012 Sample Description: silty sand, organic fines, debris

SOLIDS CONTENT

Moisture Content	Initials: <u>lg</u>
Container No.	<u>127</u>
Tare Weight	<u>1.5101</u>
Wet Weight + Tare	<u>49.4059</u>
Dry Weight + Tare	<u>28.4609</u>

Test Sample	Initials: <u>lg</u>
Container No.	<u>127</u>
Tare Weight	<u>49.9544</u>
Wet Weight + Tare	<u>145.8438</u>
Dry Weight + Tare	<u>93.2228</u>

Calgon Batch #: 276

11/27/2012

PIPETTE ANALYSIS

Temp: 23

Initials: lg

TIME

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:24:00			
8:24:20	<u>A1</u>	<u>1.5273</u>	<u>1.7789</u>
8:25:46	<u>A2</u>	<u>1.5203</u>	<u>1.6254</u>
8:31:05	<u>A3</u>	<u>1.5351</u>	<u>1.5995</u>
8:52:18	<u>A4</u>	<u>1.5302</u>	<u>1.5752</u>
10:17:00	<u>A5</u>	<u>1.5249</u>	<u>1.5557</u>
13:50:00	<u>A6</u>	<u>1.5261</u>	<u>1.5467</u>
7:00:00	<u>A7</u>	<u>1.5264</u>	<u>1.5417</u>

SIEVE ANALYSIS

Sieve Date: 11.26.2012

Sieve Set #: 2 Initials: lg

Sieve Size	Weight Retained
Tare	<u>49.9651</u>
4	<u>50.7750</u>
10	<u>52.8269</u>
18	<u>54.4273</u>
35	<u>56.5134</u>
60	<u>63.6414</u>
120	<u>77.9699</u>
230	<u>89.8480</u>
PAN	<u>3.4760</u>

SALT CORRECTION

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: VR58 ARI Sample Letter: B Client Sample No.: SE-11-S-E-121107<sup>leg</sup>

Set-up Date: 11-21-2012 Sample Description: silt, organic fines debris

SOLIDS CONTENT

Moisture Content		Initials: <u>eg</u>
Container No.	<u>129</u>	
Tare Weight	<u>1.5449</u>	
Wet Weight + Tare	<u>38.0188</u>	
Dry Weight + Tare	<u>7.5131</u>	

Test Sample		Initials: <u>eg</u>
Container No.	<u>129</u>	
Tare Weight	<u>50.4060</u>	
Wet Weight + Tare	<u>100.6770</u>	
Dry Weight + Tare	<u>53.0804</u>	

Calgon Batch #: 276

11/27/2012

PIPETTE ANALYSIS

Temp: 23

Initials: eg

TIME

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:27:00			
8:27:20	B1	<u>1.5465</u>	<u>1.6735</u>
8:28:46	B2	<u>1.5269</u>	<u>1.6464</u>
8:34:05	B3	<u>1.5269</u>	<u>1.5917</u>
8:55:18	B4	<u>1.5396</u>	<u>1.5812</u>
10:20:00	B5	<u>1.5517</u>	<u>1.5757</u>
13:53:00	B6	<u>1.5496</u>	<u>1.5653</u>
7:03:00	B7	<u>1.5561</u>	<u>1.5676</u>

1.5488

SIEVE ANALYSIS

Sieve Date: 11-26-2012

Sieve Set #: 1 Initials: eg

Sieve Size	Weight Retained
Tare <u>eg</u>	<u>53.0800</u> 50.4100
4	<u>50.4100</u>
10	<u>50.4100</u>
18	<u>50.8488</u>
35	<u>51.2270</u>
60	<u>51.5883</u>
120	<u>52.0469</u>
230	<u>52.6516</u>
PAN	<u>0.41660</u>

SALT CORRECTION

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: VR58 ARI Sample Letter: D Client Sample No.: S6.13.S.E.121107

Set-up Date: 11-26-2012 Sample Description: silt, organic debris

SOLIDS CONTENT

Moisture Content	Initials: <u>eg</u>
Container No.	<u>137</u>
Tare Weight	<u>1.5223</u>
Wet Weight + Tare	<u>38.3482</u>
Dry Weight + Tare	<u>9.5719</u>

Test Sample	Initials: <u>eg</u>
Container No.	<u>137</u>
Tare Weight	<u>50.9972</u>
Wet Weight + Tare	<u>94.9462</u>
Dry Weight + Tare	<u>54.0346</u>

Calgon Batch #: 276

11/27/2012

PIPETTE ANALYSIS

Temp: 23

Initials: eg

TIME

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:30:00			
8:30:20	<u>D1</u>	<u>1.5340</u>	<u>1.6863</u>
8:31:46	<u>D2</u>	<u>1.5527</u>	<u>1.6831</u>
8:37:05	<u>D3</u>	<u>1.5515</u>	<u>1.6413</u>
8:58:18	<u>D4</u>	<u>1.5458</u>	<u>1.6033</u>
10:23:00	<u>D5</u>	<u>1.5447</u>	<u>1.5767</u>
13:56:00	<u>D6</u>	<u>1.5431</u>	<u>1.5629</u>
7:06:00	<u>D7</u>	<u>1.5358</u>	<u>1.5492</u>

SIEVE ANALYSIS

Sieve Date: 11-26-2012

Sieve Set #: 2 Initials: eg

Sieve Size	Weight Retained
Tare	<u>51.0014</u>
4	<u>51.0014</u>
10	<u>51.0014</u>
18	<u>51.4115</u>
35	<u>51.7190</u>
60	<u>51.9913</u>
120	<u>52.4791</u>
230	<u>53.4448</u>
PAN	<u>0.6000</u>

SALT CORRECTION

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: V258 ARI Sample Letter: E Client Sample No.: SG.13.S.E.dup.121107

Set-up Date: 11-21-2012 Sample Description: silt organic fines

SOLIDS CONTENT

Moisture Content	Initials: <u>ly</u>
Container No.	<u>139</u>
Tare Weight	<u>1.5231</u>
Wet Weight + Tare	<u>32.2533</u>
Dry Weight + Tare	<u>8.2670</u>

Test Sample	Initials: <u>ly</u>
Container No.	<u>139</u>
Tare Weight	<u>49.9939</u>
Wet Weight + Tare	<u>92.7394</u>
Dry Weight + Tare	<u>52.16722</u>

Calgon Batch #: 276

11/27/2012

PIPETTE ANALYSIS

Temp: 23

Initials: ly

TIME

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:33:00			
8:33:20	<u>E1</u>	<u>1.5359</u>	<u>1.6880</u>
8:34:46	<u>E2</u>	<u>1.5381</u>	<u>1.6689</u>
8:40:05	<u>E3</u>	<u>1.5127</u>	<u>1.6018</u>
9:01:18	<u>E4</u>	<u>1.5188</u>	<u>1.5756</u>
10:26:00	<u>E5</u>	<u>1.5204</u>	<u>1.5517</u>
13:59:00	<u>E6</u>	<u>1.5149</u>	<u>1.5349</u>
7:09:00	<u>E7</u>	<u>1.5107</u>	<u>1.5251</u>

SIEVE ANALYSIS

Sieve Date: 11-26-2012

Sieve Set #: 1 Initials: ly

Sieve Size	Weight Retained
Tare	<u>49.9977</u>
4	<u>49.9977</u>
10	<u>49.9977</u>
18	<u>50.3210</u>
35	<u>50.6037</u>
60	<u>50.8760</u>
120	<u>51.3107</u>
230	<u>52.1870</u>
PAN	<u>0.4939</u>

SALT CORRECTION

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: VR58 ARI Sample Letter: F Client Sample No.: S6.14.S.E.121107

Set-up Date: 11.21.2012 Sample Description: sandy silt w/ some gravel

SOLIDS CONTENT

Moisture Content		Initials: <u>eg</u>
Container No.	<u>140</u>	
Tare Weight	<u>1.57403</u> <u>eg</u>	
Wet Weight + Tare	<u>51.7228</u>	
Dry Weight + Tare	<u>25.2920</u>	

Test Sample		Initials: <u>eg</u>
Container No.	<u>140</u>	
Tare Weight	<u>51.2004</u>	
Wet Weight + Tare	<u>124.5107</u>	
Dry Weight + Tare	<u>76.0638</u>	

Calgon Batch #: 276

11/27/2012

PIPETTE ANALYSIS

Temp: 23

Initials: eg

TIME

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:36:00			
8:36:20	<u>F1</u>	<u>1.5111</u>	<u>1.7203</u>
8:37:46	<u>F2</u>	<u>1.5221</u>	<u>1.6893</u>
8:43:05	<u>F3</u>	<u>1.5288</u>	<u>1.6420</u>
9:04:18	<u>F4</u>	<u>1.5154</u>	<u>1.5925</u>
10:29:00	<u>F5</u>	<u>1.5179</u>	<u>1.5613</u>
14:02:00	<u>F6</u>	<u>1.5208</u>	<u>1.5505</u>
7:12:00	<u>F7</u>	<u>1.5197</u>	<u>1.5410</u>

SIEVE ANALYSIS

Sieve Date: 11.26.2012

Sieve Set #: 2 Initials: eg

Sieve Size	Weight Retained
Tare	<u>51.2068</u>
4	<u>55.6189</u>
10 <u>eg</u>	<u>589.0386</u>
18	<u>61.1214</u>
35	<u>63.7454</u>
60	<u>68.8134</u>
120	<u>72.7687</u>
230	<u>75.2900</u>
PAN	<u>0.7780</u>

SALT CORRECTION

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: VR58 ARI Sample Letter: G Client Sample No.: SG.15.S.E.121107  
 Set-up Date: 11.21.2012 Sample Description: silty sand

SOLIDS CONTENT

Moisture Content	Initials: <u>ly</u>
Container No.	<u>150</u>
Tare Weight	<u>1.5648</u>
Wet Weight + Tare	<u>88.0601</u>
Dry Weight + Tare	<u>65.8279</u>

Test Sample	Initials: <u>ly</u>
Container No.	<u>150</u>
Tare Weight	<u>49.8939</u>
Wet Weight + Tare	<u>203.0207</u>
Dry Weight + Tare	<u>161.3029</u>

Calgon Batch #: 276

11/27/2012 PIPETTE ANALYSIS

Temp: 23 Initials: ly

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:57:00			
8:57:20	<u>G1</u>	<u>1.5282</u>	<u>1.5744</u>

SIEVE ANALYSIS

Sieve Date: 11.26.2012

Sieve Set #: 1 Initials: ly

Sieve Size	Weight Retained
Tare	<u>49.8976</u>
4	<u>49.9045</u>
10	<u>50.3143</u>
18	<u>51.9732</u>
35	<u>56.4599</u>
60	<u>81.8591</u>
120	<u>153.2428</u>
230	<u>160.9379</u>
PAN	<u>0.3729</u>

SALT CORRECTION <sup>2.7g</sup>

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: VR58 ARI Sample Letter: H Client Sample No.: SG.16.S.E.121107  
 Set-up Date: 11-21-2012 Sample Description: sand

SOLIDS CONTENT

Moisture Content		Initials: <u>ef</u>
Container No.	<u>158</u>	
Tare Weight	<u>1.5520</u>	
Wet Weight + Tare	<u>82.4240</u>	
Dry Weight + Tare	<u>64.7197</u>	

Test Sample		Initials: <u>ef</u>
Container No.	<u>158</u>	
Tare Weight	<u>49.9294</u>	
Wet Weight + Tare	<u>201.8144</u>	
Dry Weight + Tare	<u>167.9642</u>	

Calgon Batch #: 276

11/27/2012 PIPETTE ANALYSIS

Temp: 23

Initials: ef

TIME	Tare ID	Tare Wt	Dry Wt & Tare
9:00:00			
9:00:20	<u>H1</u>	<u>1.5165</u>	<u>1.9490</u>

SIEVE ANALYSIS

Sieve Date: 11-26-2012

Sieve Set #: 2 Initials: ef

Sieve Size	Weight Retained
Tare	<u>49.9317</u>
4	<u>49.9317</u>
10	<u>50.0184</u>
18	<u>50.4856</u>
35	<u>50.70087</u>
60	<u>148.90119</u>
120	<u>166.2887</u>
230	<u>167.6587</u>
PAN	<u>0.2662</u>

SALT CORRECTION <sup>0.9g</sup>

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	



PSEP GRAIN SIZE ANALYSIS

ARI Job No.: VR58 ARI Sample Letter: I Client Sample No.: S6.17.S.E.121107

Set-up Date: 11.21.2012 Sample Description: clay organic debris

SOLIDS CONTENT

Moisture Content	Initials: <u>ly</u>
Container No.	<u>178</u>
Tare Weight	<u>1.4922</u>
Wet Weight + Tare	<u>47.4257</u>
Dry Weight + Tare	<u>22.5110</u>

Test Sample	Initials: <u>ly</u>
Container No.	<u>178</u>
Tare Weight	<u>49.5033</u>
Wet Weight + Tare	<u>92.86766 g</u>
Dry Weight + Tare	<u>58.0480</u>

Calgon Batch #: 276

11/27/2012

PIPETTE ANALYSIS

Temp: 23

Initials: ly

TIME

TIME	Tare ID	Tare Wt	Dry Wt & Tare
8:39:00			
8:39:20	<u>I1</u>	<u>1.5329</u>	<u>1.8182</u>
8:40:46	<u>I2</u>	<u>1.5260</u>	<u>1.7629</u>
8:46:05	<u>I3</u>	<u>1.5245</u>	<u>1.6925</u>
9:07:18	<u>I4</u>	<u>1.5355</u>	<u>1.6517</u>
10:32:00	<u>I5</u>	<u>1.5180</u>	<u>1.5975</u>
14:05:00	<u>I6</u>	<u>1.5343</u>	<u>1.5897</u>
7:15:00	<u>I7</u>	<u>1.5258</u>	<u>1.5642</u>

SIEVE ANALYSIS

Sieve Date: 11.26.2012

Sieve Set #: 1 Initials: ly

Sieve Size	Weight Retained
Tare <u>ly</u>	<del>58.0480</del> <u>49.5357</u>
4	<u>49.5357</u>
10	<u>49.5953</u>
18	<u>50.2511</u>
35	<u>51.0289</u>
60	<u>52.1223</u>
120	<u>53.3123</u>
230	<u>55.6312</u>
PAN	<u>2.3270</u>

SALT CORRECTION

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	

PSEP GRAIN SIZE ANALYSIS

ARI Job No.: VR58 ARI Sample Letter: J Client Sample No.: SG.01.S.C.121107  
 Set-up Date: 11.21.2012 Sample Description: sand

SOLIDS CONTENT

Moisture Content	Initials: <u>ly</u>
Container No.	<u>180</u>
Tare Weight	<u>1.4933</u>
Wet Weight + Tare	<u>80.9666</u>
Dry Weight + Tare	<u>62.1624</u>

Test Sample	Initials: <u>ly</u>
Container No.	<u>180</u>
Tare Weight	<u>50.9144</u>
Wet Weight + Tare	<u>202.8707</u>
Dry Weight + Tare	<u>165.1071</u>

Calgon Batch #: 276

11/27/2012 PIPETTE ANALYSIS

Temp: 23  
 Initials: ly  
 TIME

TIME	Tare ID	Tare Wt	Dry Wt & Tare
9:03:00			
9:03:20	<u>J1</u>	<u>1.5450</u>	<u>1.6099</u>

SIEVE ANALYSIS

Sieve Date: 11.26.2012

Sieve Set #: 2 Initials: ly

Sieve Size	Weight Retained
Tare	<u>50.9329</u>
4	<u>50.9329</u>
10	<u>50.9329</u>
18	<u>51.1080</u>
35	<u>53.5541</u>
60	<u>108.5024</u>
120	<u>159.7615</u>
230	<u>164.3546</u>
PAN	<u>0.7651</u>

SALT CORRECTION <sup>2.6g</sup>

Date: \_\_\_\_\_ Initials: \_\_\_\_\_

Tare Weight	
Dry Weight + Tare	