1317 South 13th Avenue Kelso, Washington 98626 (360) 577-7222 (360) 636-1068 fax

Columbia Analytical Services INC.
An Employee - Owned Company

December 4, 2008 Analytical Report for Service Request No: K0810639

Pat Heins
CH2M Hill
2020 Southwest Fourth Ave.
Suite 300
Portland, OR 97201

RE: Northwest Pipe Co Sediment/358932.PH.OF

Dear Pat:

Enclosed are the results of the samples submitted to our laboratory on July 15, 2008. For your reference, these analyses have been assigned our service request number K0810639.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.caslab.com. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please call if you have any questions. My extension is 3281. You may also contact me via Email at PDivvela@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc.

12/05/07

Pradeep Divvela
Project Chemist

PD/sv

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

* The result is an outlier. See case narrative.
# The control limit criteria is not applicable. See case narrative.
B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
E The result is an estimate amount because the value exceeded the instrument calibration range.
J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i The MRL/MDL has been elevated due to a matrix interference.
X See case narrative.

Metals Data Qualifiers

The control limit criteria is not applicable. See case narrative.
B The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M The duplicate injection precision was not met.
N The Matrix Spike sample recovery is not within control limits. See case narrative.
S The reported value was determined by the Method of Standard Additions (MSA).
U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i The MRL/MDL has been elevated due to a matrix interference.
X See case narrative.
* The duplicate analysis not within control limits. See case narrative.
+ The correlation coefficient for the MSA is less than 0.995.

Organic Data Qualifiers

* The result is an outlier. See case narrative.
# The control limit criteria is not applicable. See case narrative.
A A tentatively identified compound, a suspected aldol-condensation product.
B The analyte was found in the associated method blank at a level that is significant relative to the sample result.
C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D The reported result is from a dilution.
E The result is an estimate amount because the value exceeded the instrument calibration range.
J The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.
N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results (25% for CLP Pesticides).
U The compound was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
i The MRL/MDL has been elevated due to a chromatographic interference.
X See case narrative.

Additional Petroleum Hydrocarbon Specific Qualifiers

F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z The chromatographic fingerprint does not resemble a petroleum product.

Columbia Analytical Services, Inc.
Kelso, WA
State Certifications, Accreditations, and Licenses

Program	Number
Alaska DEC UST	UST-040
Arizona DHS	AZ0339
Arkansas - DEQ	88-0637
California DHS	2286
Colorado DPHE	-
Florida DOH	E87412
Hawaii DOH	-
Idaho DHW	-
Indiana DOH	C-WA-01
Louisiana DEQ	3016
Louisiana DHH	LA050010
Maine DHS	WA0035
Michigan DEQ	9949
Minnesota DOH	053-999-368
Montana DPHHS	CERT0047
Nevada DEP	WA35
New Jersey DEP	WA005
New Mexico ED	-
North Carolina DWQ	605
Oklahoma DEQ	9801
Oregon - DHS	WA200001
South Carolina DHEC	61002
Utah DOH	COLU
Washington DOE	C1203
Wisconsin DNR	998386840
Wyoming (EPA Region 8)	-

MEMBER ACIL

nelac

Case Narrative

COLUMBIA ANALYTICAL SERVICES, INC.

Client:	CH2M Hill	**Service Request No.:**	K0810639
Project:	Northwest pipe Co Sediment/358932.PH.OF	**Date Received:**	07/15-29/08
Sample Matrix:	Sediment		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier III validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Ten sediment samples originally from SRs K0806418 and K0806941 were reissued following an email request from Mr. Pat Heins. The samples were stored frozen at –20°C upon receipt at the laboratory.

Total solids

Samples SED01-0.5-2.5A (001), SED02-2.5-5-A (005) and SED14-0.5-2-A (009) were broken during handling posing a possibility of loss of water. The broken containers were transferred into new containers and used for prep/analysis. The containers were re-measured for Total Solids. Hence the results for Metals and PAH analyses will reflect different total solids values compared to PCBs.

Total Metals

No anomalies associated with the analysis of these samples were observed.

PCB Aroclors by EPA Method 8082

Sample Confirmation Notes:
The confirmation comparison criteria of 40% difference for Aroclor 1260 was exceeded in sample SED01-5-6.5-A. The lower of the two values was reported because of an apparent interference on the alternate column that produced the higher value.

Elevated Method Reporting Limits:
The Method Reporting Limit/Method Detection Limit (MRL/MDL) is elevated for Aroclors 1016, 1221, 1232, 1242, 1248, and 1254 in Method Blank KWG0811860-4. The chromatogram indicated the presence of non-target background components, which were apparently introduced as laboratory artifacts. The contamination prevented adequate resolution of the target compounds at the MRL/MDL. The results are flagged to indicate the problem.

Several field samples required dilution due to the presence of elevated levels of target analyte. The reporting limits are adjusted to reflect the dilution.

Sample Notes and Discussion
Two Aroclors were identified in samples SED02-5-8.5-A and SED01-5-6.5-A: Aroclor 1254 and Aroclor 1260. When Aroclor mixtures are present in a sample, care is taken to minimize the possibility of double-counting PCBs. Analytical peaks are selected based on the best resolution possible for that particular sample. However, when a mixture of Aroclors 1254 and 1260 are present in a sample, the potential exists for a high bias from contribution of one Aroclor to another due to common peaks or peaks that cannot be completely resolved.

Approved by ______________________ **Date** 12/05/08

No other anomalies associated with the analysis of these samples were observed.

Polynuclear Aromatic Hydrocarbons by EPA Method 8270C

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recoveries of numerous analytes for sample SED02-5-8.5-A are not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

The replicate matrix spike recoveries of Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, and Benzo(g,h,i)perylene for sample SED02-5-8.5-A was outside the CAS control criteria as a result of the heterogeneous character of the sample. Since the unspiked samples contain high analyte concentrations relative to the amount spiked, the variability between replicates was sufficient to bias the percent recoveries outside normal CAS control criteria. The associated QA/QC results (e.g. control sample, calibration standards, etc.) indicate the analysis was in control. No further corrective action was appropriate.

Elevated Method Reporting Limits:
Numerous samples required dilution due to the presence of elevated levels of target analyte. The reporting limits are adjusted to reflect the dilution.

No other anomalies associated with the analysis of these samples were observed.

BY 12/05/08

Approved by____________________________________ **Date**____________

Chain of Custody Documentation

Columbia Analytical Services

1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

SR# ____________

PAGE 1 OF 4

Project Name: Northwest Pipe Co Sediment Project Number: 358932.PH.0F

Project Manager: Rob Healy Company: CH2M HILL

Company/Address: 2020 SW 4th Ave, 3rd floor Phone: 503-235-5000

City, State, Zip: Portland, OR 97201 FAX: 503-736-2000

Sampler's Signature:

	Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Metals 6010B (Mercury & Zinc)	PCBs Low level Aroclors 8082	PAH 8270C SIM	Particle size	Total Organic Carbon	REMARKS
	SED01-0-A	7/10/2008	11:20	K0806418-001	Sed	3	X	X	X	X	X	Hold 1 16 oz jar
Analyze -	SED01-0.5-2.5-A	7/10/2008	11:35	K0806418-002	Sed	3	X	X	X	~~X~~	~~X~~	~~Hold~~
Analyze -	SED01-2.5-5-A	7/10/2008	11:40	K0806418-003	Sed	2	X	X	X	~~X~~	~~X~~	~~Hold~~
Analyze -	SED01-5-10-A	7/10/2008	11:45	K0806418-004	Sed	2	X	X	X	X	~~X~~	~~Hold~~
	SED02-0-A	7/10/2008	12:55	K0806418-005	Sed	3	X	X	X	X	X	Hold 1 16 oz jar
Analyze -	SED02-0.5-2.5-A	7/10/2008	13:00	K0806418-006	Sed	3	X	X	X	~~X~~	~~X~~	Hold
Analyze -	SED02-2.5-5-A	7/10/2008	13:10	K0806418-007	Sed	2	X	X	X	~~X~~	~~X~~	Hold
Analyze -	SED02-5-10-A	7/10/2008	13:20	K0806418-008	Sed	2	X	X	X	~~X~~	~~X~~	~~Hold~~
	SED03-0-A	7/10/2008	14:35	K0806418-009	Sed	3	X	X	X	X	X	Hold 1 16 oz jar
	SED04-0-A	7/11/2008	9:00	K0806418-010	Sed	3	X	X	X	X	X	Hold 1 16 oz jar

Analysis Requested

TURNAROUND REQUIREMENTS

___ 24 hr ___ 48 hr ___ 5 day

X Standard (21 days)

___ Provide FAX Preliminary Results

Requested Report Date: ________

Invoice Information

P.O. # ________

Bill to: ________

REPORT REQUIREMENTS

___ I. Routine Report: Results, Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. Data Validation Report (includes raw data)

___ IV. CLP Deliverable Report

___ V. EDD

Comments/Special Instructions:

RELINQUISHED BY:
Signature: [signature]
Printed Name: Pat Heins
Firm: CH2M HILL
Date/Time: 7/14/08 13:00

RECEIVED BY:
Signature: ________
Printed Name: ________
Firm: ________
Date/Time: ________

RELINQUISHED BY:
Signature: ________
Printed Name: ________
Firm: ________
Date/Time: ________

RECEIVED BY:
Signature: ________
Printed Name: ________
Firm: ________
Date/Time: ________

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Columbia Analytical Services

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SR# ______________

PAGE __1___ OF __3___

Project Name: _Northwest Pipe Co Sediment____ Project Number: _358932.PH.0F_____

Project Manager: __Rob Healy_________ Company: ___CH2M HILL____________

Company/Address: ___2020 SW 4th Ave, 3rd floor__________ Phone: __503-235-5000______

City, State, Zip: __Portland, OR 97201________ FAX: ___503-736-2000______

Sampler's Signature:

	Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Analysis Requested: Metals 6010B (Mercury & Zinc)	PCBs Low level Aroclors 8082	PAH 8270C SIM	Particle size	Total Organic Carbon	REMARKS
	SED10-0-A	7/24/2008	10:00	K0806941-001	Sed	3	X	X	X	X	X	Hold 1 16 oz jar
Analyze -	SED10-0.5-2.5-A	7/24/2008	10:10	K0806941-002	Sed	3	Hg, Zn	X	X			Hold [illegible]
	SED10-2.5-5-A	7/24/2008	10:20	K0806941-003	Sed	2						Hold
	SED10-5-10-A	7/24/2008	10:30	K0806941-004	Sed	2						Hold
	SED10-0-B	7/24/2008	10:00	K0806941-005	Sed	3	X	X	X	X	X	Hold 1 16 oz jar
	SED10-0.5-2.5-B	7/24/2008	10:10	K0806941-006	Sed	3						Hold
	SED10-2.5-5-B	7/24/2008	10:20	K0806941-007	Sed	2						Hold
	SED10-5-10-B	7/24/2008	10:30	K0806941-008	Sed	2						Hold
	SED11-0-A	7/24/2008	13:20	K0806941-009	Sed	3	X	X	X	X	X	Hold 1 16 oz jar
Analyze -	SED11-0.5-2.5-A	7/24/2008	13:40	K0806941-010	Sed	3	Hg, Zn	X	X			Hold [illegible]

TURNAROUND REQUIREMENTS

____ 24 hr ____ 48 hr ____ 5 day

__X__ Standard (21 days)

____ Provide FAX Preliminary Results

Requested Report Date:____________

REPORT REQUIREMENTS

______ I. Routine Report: Results, Method Blank, Surrogate, as required

______ II. Report Dup., MS, MSD as required

______ III. Data Validation Report (includes raw data)

______ IV. CLP Deliverable Report

______ V. EDD

Comments/Special Instructions:

Invoice Information

P.O. # ______________________

Bill to: ______________________

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [signature]	Signature:	Signature:	Signature:
Printed Name: ___Pat Heins_____	Printed Name:	Printed Name:	Printed Name:
Firm: __CH2M HILL_____________	Firm:	Firm:	Firm:
Date/Time: 7/28/08 12:30	Date/Time:	Date/Time:	Date/Time:

Columbia Analytical Services
1317 South 13th, Kelso, WA 98626 (360) 577-7222 FAX (360) 636-1068

SR# ____
PAGE 3 OF 3

Project Name: Northwest Pipe Co Sediment Project Number: 358932.PH.0F

Project Manager: Rob Healy Company: CH2M HILL

Company/Address: 2020 SW 4th Ave, 3rd floor Phone: 503-235-5000

City, State, Zip: Portland, OR 97201 FAX: 503-736-2000

Sampler's Signature:

	Sample I.D.	Date	Time	LAB ID	Matrix	Number of Containers	Metals 6010B (Mercury & Zinc)	PCBs Low level Aroclors 8082	PAH 8270C SIM	Particle size	Total Organic Carbon	REMARKS
	SED14-0-A	7/25/2008	9:00	K0806941-021	Sed	3	X	X	X	X	X	Hold 1 16 oz jar
Analyze -	SED14-0.5-2-A	7/25/2008	9:15	K0806941-022	Sed	3	X	X	X			Hold
Analyze -	SED14-2-3.5-A	7/25/2008	9:20	K0806941-023	Sed	2	X	X	X			Hold
	SED03-0.5-2.5-A	7/25/2008	10:45	K0806941-024	Sed	3						Hold
	SED03-2.5-5-A	7/25/2008	10:50	K0806941-025	Sed	2						Hold
	SED14-0-C	7/25/2008	9:40	K0806941-026	Water	3	X	X	X			

TURNAROUND REQUIREMENTS
___ 24 hr ___ 48 hr ___ 5 day
X Standard (21 days)
___ Provide FAX Preliminary Results
Requested Report Date: ____

Invoice Information
P.O. # ____
Bill to: ____

REPORT REQUIREMENTS
___ I. Routine Report: Results, Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. Data Validation Report (includes raw data)
___ IV. CLP Deliverable Report
___ V. EDD

Comments/Special Instructions:

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: [illegible]	Signature:	Signature:	Signature:
Printed Name: Pat Heins	Printed Name:	Printed Name:	Printed Name:
Firm: CH2M HILL	Firm:	Firm:	Firm:
Date/Time: 7/28/08 12:30	Date/Time:	Date/Time:	Date/Time:

Total Solids

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: CH2M Hill
Project: Northwest Pipe Co Se/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639

Total Solids

Prep Method: NONE
Analysis Method: 160.3M
Test Notes:

Units: PERCENT
Basis: Wet

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
SED01-0.5-2.5A	K0810639-001	07/10/2008	07/15/2008	11/04/2008	47.5	
SED01-2.5-5-A	K0810639-002	07/10/2008	07/15/2008	11/04/2008	53.0	
SED02-5-8.5-A	K0810639-003	07/10/2008	07/15/2008	11/04/2008	66.2	
SED02-0.5-2.5A	K0810639-004	07/10/2008	07/15/2008	11/04/2008	52.6	
SED02-2.5-5-A	K0810639-005	07/10/2008	07/15/2008	11/04/2008	48.8	
SED01-5-6.5-A	K0810639-006	07/10/2008	07/15/2008	11/04/2008	58.0	
SED10-0.5-2.5-B	K0810639-007	07/24/2008	07/29/2008	11/04/2008	67.0	
SED11-0.5-2.5-A	K0810639-008	07/24/2008	07/29/2008	11/04/2008	53.9	
SED14-0.5-2-A	K0810639-009	07/25/2008	07/29/2008	11/04/2008	60.0	
SED14-2-3.5-A	K0810639-010	07/25/2008	07/29/2008	11/04/2008	68.2	

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Se/358932.PH.OF	**Date Collected:**	07/25/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008
		Date Analyzed:	11/04/2008

Duplicate Sample Summary
Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Sample Result	Duplicate Sample Result	Average	Relative Percent Difference	Result Notes
SED14-2-3.5-A	K0810639-010	68.2	68.1	68.2	<1	

COLUMBIA ANALYTICAL SERVICES, INC.

EPA Method 160.3 - Total Solids

Run # 132788

Group ID:	KWG0811839				
Analyst:	TNguyen			**Reviewed By:**	SAN
Date Acquired:	11/04/2008 11:35	**Oven TempStart:**	104 DEG C	**Date Reviewed:**	11/6/08
Date Completed:	11/05/2008 08:10	**Oven TempEnd:**	104 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
1	K0810477-001	3" Tire Chips	SOLID FUEL	8.61g	100.26g	96.21g	95.6		As rec'd
2	K0810477-002	1" Tire Chips	SOLID FUEL	9.17g	91.89g	89.14g	96.7		As rec'd
3	K0810477-003	C&D Wood Chips	SOLID FUEL	9.43g	35.93g	30.70g	80.3		As rec'd
4	K0810477-004	Regular Mulch	SOLID FUEL	9.17g	33.09g	28.63g	81.4		As rec'd
5	K0810477-005	Hardwoods Mulch	SOLID FUEL	8.58g	50.54g	35.24g	63.5		As rec'd
6	K0810639-001	SED01-0.5-2.5A	SEDIMENT	1.31g	14.75g	7.69g	47.5		
7	K0810639-002	SED01-2.5-5-A	SEDIMENT	1.32g	11.47g	6.70g	53.0		
8	K0810639-003	SED02-5-8.5-A	SEDIMENT	1.35g	13.92g	9.67g	66.2		
9	K0810639-004	SED02-0.5-2.5A	SEDIMENT	1.35g	17.16g	9.66g	52.6		
10	K0810639-005	SED02-2.5-5-A	SEDIMENT	1.34g	13.46g	7.25g	48.8		
11	K0810639-006	SED01-5-6.5-A	SEDIMENT	1.34g	15.74g	9.69g	58.0		
12	K0810639-007	SED10-0.5-2.5-B	SEDIMENT	1.33g	10.91g	7.75g	67.0		
13	K0810639-008	SED11-0.5-2.5-A	SEDIMENT	1.35g	13.33g	7.81g	53.9		
14	K0810639-009	SED14-0.5-2-A	SEDIMENT	1.34g	15.15g	9.63g	60.0		
15	K0810639-010	SED14-2-3.5-A	SEDIMENT	1.35g	10.96g	7.90g	68.2		
16	K0810705-001	GP11-103108-8-9'	SOIL	1.33g	9.61g	7.51g	74.6		
17	K0810705-002	GP11-103108-14-15'	SOIL	1.34g	11.61g	8.33g	68.1		
18	K0810705-003	GP11-103108-18-19'	SOIL	1.32g	16.27g	13.63g	82.3		
19	K0810708-001	0814328-01A	SOIL	35.5160g	67.1796g	35.8320g	1.00		Used balance # 26
20	K0810709-001	CRC110308001	SOIL	1.30	7.56	7.54	99.7		
21	KWG0811839-1	Duplicate Client Sample	SOIL	37.8018g	70.6319g	38.1278g	0.99	K0810708-001	
22	KWG0811839-2	Duplicate Client Sample	SOLID FUEL	9.22g	54.42g	37.73g	63.1	K0810477-005	

Group ID:	KWG0811839				
Analyst:	TNguyen			**Reviewed By:**	SQL
Date Acquired:	11/04/2008 11:35	**Oven TempStart:**	104 DEG C	**Date Reviewed:**	11/6/08
Date Completed:	11/05/2008 08:10	**Oven TempEnd:**	104 DEG C		

#	Lab Code	Client ID	Matrix	Tare	Tare+Wet	Tare+Dry	% Solids	QC Ref Sample	Comments
23	KWG0811839-3	Duplicate Client Sample	SEDIMENT	1.35g	10.69g	7.71g	68.1	K0810639-010	
24	KWG0811839-4	Duplicate Client Sample	SOIL	1.30	4.64	4.62	99.4	K0810709-001	

Metals

Columbia Analytical Services

- Cover Page -
INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project Name: Northwest Pipe Co Sediment
Project No.: 358932.PH.OF

Service Request: K0810639

Sample Name:	Lab Code:
SED01-0.5-2.5A	K0810639-001
SED01-0.5-2.5AD	K0810639-001D
SED01-0.5-2.5AS	K0810639-001S
SED01-2.5-5-A	K0810639-002
SED02-5-8.5-A	K0810639-003
SED02-0.5-2.5A	K0810639-004
SED02-2.5-5-A	K0810639-005
SED01-5-6.5-A	K0810639-006
SED10-0.5-2.5-B	K0810639-007
SED11-0.5-2.5-A	K0810639-008
SED14-0.5-2-A	K0810639-009
SED14-2-3.5-A	K0810639-010
SED14-2-3.5-AD	K0810639-010D
SED14-2-3.5-AS	K0810639-010S
Method Blank	K0810639-MB

Comments:

Approved By: [signature] **Date:** 11/15/08

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project No.: 358932.PH.OF
Project Name: Northwest Pipe Co Sediment
Matrix: SEDIMENT

Service Request: K0810639
Date Collected: 7/10/08
Date Received: 7/15/08
Units: mg/Kg
Basis: DRY

Sample Name: SED01-0.5-2.5A **Lab Code:** K0810639-001

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Mercury	7471A	0.015	0.001	1.0	11/10/08	11/12/08	0.403		
Zinc	6010B	1.57	0.2	2.0	11/10/08	11/12/08	494		

% Solids: 57.4

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project No.: 358932.PH.OF
Project Name: Northwest Pipe Co Sediment
Matrix: SEDIMENT

Service Request: K0810639
Date Collected: 07/10/08
Date Received: 07/15/08
Units: mg/Kg
Basis: DRY

Sample Name: SED01-2.5-5-A **Lab Code:** K0810639-002

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Mercury	7471A	0.016	0.002	1.0	11/10/08	11/12/08	0.398		
Zinc	6010B	2.06	0.3	2.0	11/10/08	11/12/08	408		

% Solids: 53.0

Comments:

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project No.: 358932.PH.OF
Project Name: Northwest Pipe Co Sediment
Matrix: SEDIMENT

Service Request: K0810639
Date Collected: 07/10/08
Date Received: 07/15/08
Units: mg/Kg
Basis: DRY

Sample Name: SED02-5-8.5-A **Lab Code:** K0810639-003

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Mercury	7471A	0.185	0.018	10.0	11/10/08	11/12/08	1.160		
Zinc	6010B	2.13	0.3	2.0	11/10/08	11/12/08	225		

% Solids: 66.2

Comments:

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project No.: 358932.PH.OF
Project Name: Northwest Pipe Co Sediment
Matrix: SEDIMENT

Service Request: K0810639
Date Collected: 07/10/08
Date Received: 07/15/08
Units: mg/Kg
Basis: DRY

Sample Name: SED02-0.5-2.5A **Lab Code:** K0810639-004

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Mercury	7471A	0.016	0.002	1.0	11/10/08	11/12/08	0.368		
Zinc	6010B	2.09	0.3	2.0	11/10/08	11/12/08	403		

% Solids: 52.6

Comments:

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project No.: 358932.PH.OF
Project Name: Northwest Pipe Co Sediment
Matrix: SEDIMENT

Service Request: K0810639
Date Collected: 7/10/08
Date Received: 7/15/08
Units: mg/Kg
Basis: DRY

Sample Name: SED02-2.5-5-A
Lab Code: K0810639-005

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Mercury	7471A	0.017	0.002	1.0	11/10/08	11/12/08	0.503		
Zinc	6010B	1.68	0.3	2.0	11/10/08	11/12/08	402		

% Solids: 53.4

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project No.: 358932.PH.OF
Project Name: Northwest Pipe Co Sediment
Matrix: SEDIMENT

Service Request: K0810639
Date Collected: 07/10/08
Date Received: 07/15/08
Units: mg/Kg
Basis: DRY

Sample Name: SED01-5-6.5-A **Lab Code:** K0810639-006

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Mercury	7471A	0.018	0.002	1.0	11/10/08	11/12/08	0.569		
Zinc	6010B	1.91	0.3	2.0	11/10/08	11/12/08	148		

% Solids: 58.0

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project No.: 358932.PH.OF
Project Name: Northwest Pipe Co Sediment
Matrix: SEDIMENT

Service Request: K0810639
Date Collected: 07/24/08
Date Received: 07/29/08
Units: mg/Kg
Basis: DRY

Sample Name: SED10-0.5-2.5-B
Lab Code: K0810639-007

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Mercury	7471A	0.017	0.002	1.0	11/10/08	11/12/08	0.104		

% Solids: 67.0

Comments:

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project No.: 358932.PH.OF
Project Name: Northwest Pipe Co Sediment
Matrix: SEDIMENT

Service Request: K0810639
Date Collected: 07/24/08
Date Received: 07/29/08
Units: mg/Kg
Basis: DRY

Sample Name: SED11-0.5-2.5-A **Lab Code:** K0810639-008

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Mercury	7471A	0.181	0.018	10.0	11/10/08	11/12/08	1.350		

% Solids: 53.9

Comments:

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project No.: 358932.PH.OF
Project Name: Northwest Pipe Co Sediment
Matrix: SEDIMENT

Service Request: K0810639
Date Collected: 7/25/08
Date Received: 7/29/08
Units: mg/Kg
Basis: DRY

Sample Name: SED14-0.5-2-A **Lab Code:** K0810639-009

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Mercury	7471A	0.016	0.002	1.0	11/10/08	11/12/08	0.173		
Zinc	6010B	2.03	0.3	2.0	11/10/08	11/12/08	246		

% Solids: 69.8

Comments:

Metals

- 1 -

INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project No.: 358932.PH.OF
Project Name: Northwest Pipe Co Sediment
Matrix: SEDIMENT

Service Request: K0810639
Date Collected: 07/25/08
Date Received: 07/29/08
Units: mg/Kg
Basis: DRY

Sample Name: SED14-2-3.5-A **Lab Code:** K0810639-010

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Mercury	7471A	0.019	0.002	1.0	11/10/08	11/12/08	0.780		
Zinc	6010B	2.08	0.3	2.0	11/10/08	11/12/08	241		

% Solids: 68.2

Comments:

Metals

- 1 -
INORGANIC ANALYSIS DATA PACKAGE

Client: CH2M Hill
Project No.: 358932.PH.OF
Project Name: Northwest Pipe Co Sediment
Matrix: SEDIMENT

Service Request: K0810639
Date Collected:
Date Received:
Units: mg/Kg
Basis: DRY

Sample Name: Method Blank **Lab Code:** K0810639-MB

Analyte	Analysis Method	MRL	MDL	Dil. Factor	Date Extracted	Date Analyzed	Result	C	Q
Mercury	7471A	0.020	0.002	1.0	11/10/08	11/12/08	0.002	U	
Zinc	6010B	2.00	0.3	2.0	11/10/08	11/12/08	0.3	U	

% Solids: 100.0

Comments:

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

ICV Source: Inorganic Ventures **CCV Source:** CAS Mixed

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Mercury	5.00	5.33	107	5.00	5.05	101	4.98	100	7471A
Zinc	1250	1240	99	250	258	103	250	100	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: CH2M Hill

Service Request: K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

ICV Source: Inorganic Ventures

CCV Source: CAS Mixed

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Mercury				5.00	5.11	102	5.01	100	7471A
Zinc				250	258	103	253	101	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

ICV Source: Inorganic Ventures **CCV Source:** CAS Mixed

Concentration Units: ug/L

	Initial Calibration			Continuing Calibration					
Analyte	True	Found	%R(1)	True	Found	%R(1)	Found	%R(1)	Method
Zinc				250	256	102	245	98	6010B

Metals

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

ICV Source: Inorganic Ventures **CCV Source:** CAS Mixed

Concentration Units: ug/L

Analyte	Initial Calibration True	Initial Calibration Found	Initial Calibration %R(1)	Continuing Calibration True	Continuing Calibration Found	Continuing Calibration %R(1)	Continuing Calibration Found	Continuing Calibration %R(1)	Method
Zinc				250	247	99			6010B

Metals
- 2b -
CRDL STANDARD FOR AA AND ICP

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Concentration Units: ug/L

Analyte	CRDL Standard for AA			CRDL Standard for ICP Initial			Final	
	True	Found	%R	True	Found	%R	Found	%R
Mercury	0.20	0.20	100					
Zinc				10.0	10.0	100		

Metals

-3-

BLANKS

Client: CH2M Hill

Service Request: K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Mercury	0.020	U	0.020	U	0.020	U	0.020	U	7471A
Zinc	1.50	U	1.50	U	1.50	U	1.50	U	6010B

Metals

-3-

BLANKS

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Mercury			0.020	U					7471A
Zinc			1.50	U	1.50	U	1.50	U	6010B

Metals

- 3 -

BLANKS

Client: CH2M Hill

Service Request: K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Preparation Blank Matrix (soil/water): WATER

Preparation Blank Concentration Units (ug/L or mg/kg): UG/L

Analyte	Initial Calib. Blank (ug/L)	C	Continuing Calibration Blank (ug/L) 1	C	2	C	3	C	Method
Zinc			1.50	U					6010B

Metals
- 4 -

ICP INTERFERENCE CHECK SAMPLE

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

ICP ID Number: K-ICP-AES-03 **ICS Source:** Inorganic Ventures

Concentration Units): ug/L

Analyte	True Sol.A	True Sol.AB	Initial Found Sol.A	Initial Found Sol.AB	Initial Found %R	Final Found Sol.A	Final Found Sol.AB	Final Found %R
Zinc		1000	-2	848	85			

80-120% control criteria is not applicable to interfering elements (Al,Ca,Fe,Mg).

Metals

- 5A -

SPIKE SAMPLE RECOVERY

Client: CH2M Hill　　**Service Request:** K0810639

Project No.: 358932.PH.OF　　**Units:** MG/KG

Project Name: Northwest Pipe Co Sediment　　**Basis:** DRY

Matrix: SEDIMENT　　**% Solids:** 57.4

Sample Name: SED01-0.5--2.5AS　　**Lab Code:** K0810639-001S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	64 - 127	0.773		0.403		0.37	100.0		7471A

An empty field in the Control Limit column indicates the control limit is not applicabl

Metals
- 5A -

SPIKE SAMPLE RECOVERY

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF **Units:** MG/KG

Project Name: Northwest Pipe Co Sediment **Basis:** DRY

Matrix: SEDIMENT **% Solids:** 68.2

Sample Name: SED14-2-3.5-AS **Lab Code:** K0810639-010S

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Zinc	31 - 160	319		241		103.99	75.0		6010B

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 5B -

POST SPIKE SAMPLE RECOVERY

Client: CH2M Hill

Service Request: K0810639

Project No.: 358932.PH.OF

Units: UG/L

Project Name: Northwest Pipe Co Sediment

Basis: DRY

Matrix: WATER

Sample Name: SED01-0.5-2.5AA

Lab Code: K0810639-001A

Analyte	Control Limit %R	Spike Result	C	Sample Result	C	Spike Added	%R	Q	Method
Mercury	85 - 115	8.040		5.540		2.5	100		7471A

Metals

- 6 -

DUPLICATES

Client:	CH2M Hill	**Service Request:**	K0810639
Project No.:	358932.PH.OF	**Units:**	MG/KG
Project Name:	Northwest Pipe Co Sediment	**Basis:**	DRY
Matrix:	SEDIMENT	**% Solids:**	57.4

Sample Name: SED01-0.5-2.5AD **Lab Code:** K0810639-001D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	30	0.40		0.41		2.5		7471A

An empty field in the Control Limit column indicates the control limit is not applicable

Metals

- 6 -

DUPLICATES

Client: CH2M Hill

Service Request: K0810639

Project No.: 358932.PH.OF

Units: MG/KG

Project Name: Northwest Pipe Co Sediment

Basis: DRY

Matrix: SEDIMENT

% Solids: 68.2

Sample Name: SED14-2-3.5-AD

Lab Code: K0810639-010D

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Zinc	30	241		239		0.8		6010B

An empty field in the Control Limit column indicates the control limit is not applicable.

Metals

- 7 -

LABORATORY CONTROL SAMPLE

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Aqueous LCS Source: **Solid LCS Source:** ERA D045540

Analyte	Aqueous (ug/L) True	Aqueous (ug/L) Found	Aqueous (ug/L) %R	Solid (mg/kg) True	Solid (mg/kg) Found	C	Limits		%R
Mercury				1.77	1.750		76	121	98.9
Zinc				402	399		89	125	99.3

Metals

-9-

ICP SERIAL DILUTIONS

Client: CH2M Hill

Service Request: K0810639

Project No.: 358932.PH.OF

Units: UG/L

Project Name: Northwest Pipe Co Sediment

Sample Name: SED01-0.5-2.5AL

Lab Code: K0810639-001L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Mercury	5.54		5.90		6		CV

Form IX - IN

Metals

- 9 -

ICP SERIAL DILUTIONS

Client: CH2M Hill

Service Request: K0810639

Project No.: 358932.PH.OF

Units: UG/L

Project Name: Northwest Pipe Co Sediment

Sample Name: SED14-2-3.5-AL

Lab Code: K0810639-010L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	M
Zinc	1157.00		1331.50		15.1	E	P

Form IX - IN

Metals
- 10 -
DETECTION LIMITS

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:**

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Zinc	206.2		10.00	1.50	P

Comments:

Metals
- 10 -
DETECTION LIMITS

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

ICP/ICP-MS ID #:

GFAA ID #: **AA ID #:** K-CVAA-01

Analyte	Wave-length (nm)	Back-ground	MRL ug/L	MDL ug/L	M
Mercury	253.70		0.20	0.020	CV

Comments:

Metals

- 11A -

ICP INTERELEMENT CORRECTION FACTORS

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

ICP ID Number: K-ICP-AES-03

Analyte	Wave-length (nm)	Interelement Correction Factors for: Al	Ca	Fe	Mg	Co
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0000530	0.0000000	0.0000000	0.0000000	0.0000000
Arsenic	189.042	0.0000640	0.0000000	-0.0000770	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	0.0000000	0.0000100	0.0000000	0.0000000
Boron	249.678	0.0000000	0.0000000	-0.0002060	0.0000000	0.0015610
Cadmium	226.502	0.0000000	0.0000000	0.0001500	0.0000000	-0.0001590
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000000	0.0000070	0.0000000	0.0000000
Cobalt	230.786	0.0000000	0.0000000	0.0000040	0.0000000	0.0000000
Copper	327.396	0.0000000	0.0000140	-0.0000060	0.0000000	0.0002880
Iron	259.94	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Lead	220.353	-0.0000610	0.0000000	0.0000380	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	-0.0000110	0.0000000	0.0000000
Nickel	221.647	0.0000080	0.0000000	0.0000080	0.0000000	-0.0000840
Phosphorus	214.914	-0.0011870	0.0000000	0.0014090	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0000000	0.0000000	0.0000000	0.0000000	0.0050000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000120	0.0000000	0.0000000	0.0000280
Vanadium	292.402	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Zinc	206.2	0.0000000	0.0000000	-0.0000110	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

ICP ID Number: K-ICP-AES-03

Analyte	Wave-length (nm)	Interelement Correction Factors for: Cr	Mn	Mo	Ni	Sb
Aluminum	394.401	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.833	0.0168870	0.0000000	-0.0026080	0.0000000	0.0000000
Arsenic	189.042	0.0005550	0.0000000	0.0005650	0.0000000	0.0000000
Barium	455.403	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Beryllium	234.861	0.0000000	-0.0000270	-0.0001950	-0.0000280	0.0000000
Boron	249.678	0.0002490	0.0000000	-0.0007430	0.0000000	0.0000000
Cadmium	226.502	0.0000000	0.0000000	0.0000280	0.0000000	0.0000000
Calcium	393.366	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.716	0.0000000	0.0000950	0.0000000	0.0000000	0.0000000
Cobalt	230.786	-0.0000490	0.0000970	-0.0077960	0.0021700	0.0000000
Copper	327.396	0.0000000	0.0000780	0.0000000	0.0000000	0.0000000
Iron	259.94	0.0000000	0.0000000	-0.0002280	0.0000000	0.0000000
Lead	220.353	0.0000000	0.0000000	-0.0024330	0.0000000	0.0000000
Lithium	670.784	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	285.213	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	-0.0000130	0.0000000	0.0000000	0.0000000	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	221.647	-0.0003830	0.0001130	0.0000000	0.0000000	0.0000000
Phosphorus	214.914	0.0000000	-0.0009590	0.0077580	0.0000000	0.0000000
Potassium	766.491	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.0	0.0000000	0.0010260	0.0000000	0.0000000	0.0000000
Silicon	251.611	0.0000000	0.0000000	0.0072090	0.0000000	0.0000000
Silver	328.068	0.0000000	0.0000580	0.0000000	0.0000000	0.0000000
Sodium	589.592	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Strontium	407.771	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.856	0.0003880	0.0011620	0.0000000	0.0000000	0.0000000
Tin	189.989	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	336.121	0.0000000	0.0000000	0.0000510	0.0001260	0.0000000
Vanadium	292.402	0.0000000	0.0000000	-0.0093280	0.0000000	0.0000000
Zinc	206.2	-0.0001540	0.0001220	0.0001920	0.0000000	0.0000000

Comments:

Metals

- 11B -

ICP INTERELEMENT CORRECTION FACTORS

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

ICP ID Number: K-ICP-AES-03

Analyte	Wave-length (nm)	Interelement Correction Factors for: Si	Ti	V		
Aluminum	394.401	0.0000000	0.0000000	0.0000000		
Antimony	206.833	0.0000000	0.0003650	0.0000000		
Arsenic	189.042	0.0000000	0.0000000	0.0000000		
Barium	455.403	0.0000000	0.0000000	0.0000000		
Beryllium	234.861	0.0000000	0.0000000	0.0000000		
Boron	249.678	0.0000000	0.0000000	0.0000000		
Cadmium	226.502	0.0000000	0.0000610	0.0000000		
Calcium	393.366	0.0000000	0.0000000	0.0000000		
Chromium	267.716	0.0000000	0.0000000	-0.0000640		
Cobalt	230.786	0.0000000	0.0000000	0.0000000		
Copper	327.396	0.0000000	0.0001150	0.0000000		
Iron	259.94	0.0000000	0.0000000	0.0000000		
Lead	220.353	0.0004730	-0.0005690	0.0000000		
Lithium	670.784	0.0000000	0.0000000	0.0000000		
Magnesium	285.213	0.0000000	0.0000000	0.0000000		
Manganese	257.61	0.0000000	0.0000000	0.0000000		
Molybdenum	202.03	0.0000000	0.0000000	0.0000610		
Nickel	221.647	0.0003740	-0.0016690	0.0000000		
Phosphorus	214.914	0.0000000	0.0000000	-0.0052140		
Potassium	766.491	0.0000000	0.0000000	0.0000000		
Selenium	196.0	0.0000000	0.0000000	0.0000000		
Silicon	251.611	0.0000000	0.0000000	0.0000000		
Silver	328.068	0.0000000	0.0000000	0.0000560		
Sodium	589.592	0.0000000	0.0000000	0.0000000		
Strontium	407.771	0.0000000	0.0000000	0.0000000		
Thallium	190.856	0.0000000	-0.0007390	-0.0041980		
Tin	189.989	0.0000000	-0.0006250	0.0000000		
Titanium	336.121	0.0000000	0.0000000	0.0000000		
Vanadium	292.402	0.0000000	0.0007220	0.0000400		
Zinc	206.2	0.0000000	0.0000000	0.0000000		

Comments:

Metals
-12-
ICP LINEAR RANGES (QUARTERLY)

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

ICP ID Number: K-ICP-AES-03

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Zinc	15.000	18000	6010B

Comments:

Metals
-13-
PREPARATION LOG

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Method: P

Sample ID	Preparation Date	Initial Weight (g)	Final Volume(mL)
K0810639-001	11/10/08	2.22	100.0
K0810639-002	11/10/08	1.83	100.0
K0810639-003	11/10/08	1.42	100.0
K0810639-004	11/10/08	1.82	100.0
K0810639-005	11/10/08	2.23	100.0
K0810639-006	11/10/08	1.81	100.0
K0810639-009	11/10/08	1.41	100.0
K0810639-010	11/10/08	1.41	100.0
K0810639-010D	11/10/08	1.40	100.0
K0810639-010S	11/10/08	1.41	100.0
K0810639-MB	11/10/08	1.00	100.0
LCSS	11/10/08	1.00	100.0

Metals
-13-
PREPARATION LOG

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Method: CV

Sample ID	Preparation Date	Initial Weight (g)	Final Volume (mL)
K0810639-001	11/10/08	1.20	50.0
K0810639-001D	11/10/08	1.23	50.0
K0810639-001S	11/10/08	1.17	50.0
K0810639-002	11/10/08	1.20	50.0
K0810639-003	11/10/08	0.82	50.0
K0810639-004	11/10/08	1.17	50.0
K0810639-005	11/10/08	1.11	50.0
K0810639-006	11/10/08	0.97	50.0
K0810639-007	11/10/08	0.88	50.0
K0810639-008	11/10/08	1.02	50.0
K0810639-009	11/10/08	0.87	50.0
K0810639-010	11/10/08	0.79	50.0
K0810639-MB	11/10/08	0.50	50.0
LCSS	11/10/08	0.26	50.0

Metals
- 14 -
ANALYSIS RUN LOG

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 11/12/08 **End Date:** 11/12/08

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLK	1	17:38																								X	
STD A	1	17:41																								X	
STD B	1	17:44																									
ICV1	1	17:47																								X	
ZZZZZZ	1	17:50																									
ICB1	1	17:53																								X	
CCV1	1	17:56																								X	
ZZZZZZ	1	17:59																									
CCB1	1	18:02																								X	
CRA1	1	18:04																								X	
ZZZZZZ	1	18:07																									
ICS-A1	1	18:10																								X	
ICS-AB1	1	18:14																								X	
ZZZZZZ	1	18:18																									
ZZZZZZ	1	18:21																									
ZZZZZZ	1	18:24																									
ZZZZZZ	1	18:27																									
ZZZZZZ	1	18:30																									
ZZZZZZ	1	18:33																									
CCV2	1	18:36																								X	
ZZZZZZ	1	18:39																									
CCB2	1	18:42																								X	
ZZZZZZ	1	18:45																									
ZZZZZZ	1	18:48																									
ZZZZZZ	1	18:51																									
ZZZZZZ	1	18:54																									
ZZZZZZ	1	18:57																									
ZZZZZZ	1	19:00																									
ZZZZZZ	1	19:03																									
ZZZZZZ	1	19:06																									
ZZZZZZ	1	19:09																									
ZZZZZZ	1	19:12																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 11/12/08 **End Date:** 11/12/08

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV3	1	19:15																								X	
ZZZZZZ	1	19:18																									
CCB3	1	19:21																								X	
ZZZZZZ	1	19:24																									
ZZZZZZ	1	19:27																									
ZZZZZZ	1	19:30																									
ZZZZZZ	1	19:32																									
ZZZZZZ	1	19:35																									
ZZZZZZ	1	19:38																									
ZZZZZZ	1	19:42																									
ZZZZZZ	1	19:45																									
ZZZZZZ	1	19:48																									
ZZZZZZ	1	19:52																									
CCV4	1	19:56																								X	
ZZZZZZ	1	19:59																									
CCB4	1	20:02																								X	
ZZZZZZ	1	20:05																									
ZZZZZZ	1	20:09																									
ZZZZZZ	1	20:13																									
ZZZZZZ	1	20:15																									
ZZZZZZ	1	20:18																									
ZZZZZZ	1	20:22																									
ZZZZZZ	1	20:25																									
ZZZZZZ	5	20:28																									
ZZZZZZ	1	20:32																									
ZZZZZZ	1	20:35																									
CCV5	1	20:38																								X	
ZZZZZZ	1	20:41																									
CCB5	1	20:44																								X	
ZZZZZZ	1	20:47																									
ZZZZZZ	1	20:51																									
ZZZZZZ	1	20:54																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Instrument ID Number: K-ICP-AES-03 **Method:** P

Start Date: 11/12/08 **End Date:** 11/12/08

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1	20:57																									
ZZZZZZ	1	21:01																									
ZZZZZZ	1	21:04																									
ZZZZZZ	1	21:07																									
K0810639-MB	2	21:11																								X	
LCSS	2	21:13																								X	
K0810639-001	2	21:16																								X	
CCV6	1	21:20																								X	
ZZZZZZ	1	21:23																									
CCB6	1	21:27																								X	
K0810639-002	2	21:30																								X	
K0810639-003	2	21:33																								X	
K0810639-004	2	21:36																								X	
K0810639-005	2	21:40																								X	
K0810639-006	2	21:44																								X	
K0810639-009	2	21:47																								X	
K0810639-010	2	21:51																								X	
K0810639-010D	2	21:54																								X	
K0810639-010L	10	21:57																								X	
K0810639-010S	2	22:01																								X	
CCV7	1	22:04																								X	
ZZZZZZ	1	22:07																									
CCB7	1	22:10																								X	

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Instrument ID Number: K-CVAA-01 **Method:** CV

Start Date: 11/12/08 **End Date:** 11/12/08

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
Calibration Zero	1	06:17																X									
Standard #1	1	06:19																X									
Standard #2	1	06:20																X									
Standard #3	1	06:22																X									
Standard #4	1	06:24																X									
Standard #5	1	06:26																X									
ICV1	1	06:27																X									
ICB1	1	06:29																X									
CCV1	1	06:31																X									
CCB1	1	06:33																X									
CRA1	1	06:34																X									
K0810639-MB	1	06:36																X									
LCSS	2	06:38																X									
K0810639-001	1	06:40																X									
K0810639-001L	5	06:43																X									
K0810639-001A	1	06:46																X									
K0810639-001D	1	06:48																X									
K0810639-001S	2	06:50																X									
K0810639-002	1	06:52																X									
ZK0810639-003	1	06:55																									
CCV2	1	06:58																X									
CCB2	1	07:00																X									
K0810639-004	1	07:01																X									
K0810639-005	1	07:03																X									
K0810639-006	1	07:05																X									
K0810639-007	1	07:07																X									
ZK0810639-008	1	07:08																									
K0810639-009	1	07:11																X									
K0810639-010	1	07:13																X									
ZZZZZZ	1	07:16																									
ZZZZZZ	1	07:17																									
ZZZZZZ	1	07:19																									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals
- 14 -
ANALYSIS RUN LOG

Client: CH2M Hill **Service Request:** K0810639

Project No.: 358932.PH.OF

Project Name: Northwest Pipe Co Sediment

Instrument ID Number: K-CVAA-01 **Method:** CV

Start Date: 11/12/08 **End Date:** 11/12/08

Sample No.	D/F	Time	% R	Analytes																							
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
CCV3	1	07:21																X									
CCB3	1	07:23																X									
ZZZZZZ	1	07:24																									
ZZZZZZ	1	07:26																									
ZZZZZZ	1	07:28																									
ZZZZZZ	1	07:30																									
ZZZZZZ	1	07:32																									
ZZZZZZ	1	07:33																									
K0810639-003	10	07:38																X									
K0810639-008	10	07:40																X									
ZZZZZZ	5	07:43																									
ZZZZZZ	25	07:44																									
CCV4	1	07:46																X									
CCB4	1	07:48																X									

* - Denotes additional elements (other than the standard CLP elements) are represented on another Form 14

Metals Digestion Sheet

Service Request Number(s) : K0810639, K0810572, K0810486, K0810579

Star Lims Run No.: 77387

Method : CLP 3010A 3020A 3005A 3050B CLP Hot Block Other-

Analysis for : ICP ICP-MS GFAA Flame AA Other

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
-Blank	1.77		X		100	10% HNO3/HCl
-LCSS	1.80					
K0810639-1	2.22					
-2	1.83					
-3	1.42					
-4	1.82					
-5	2.23					
-6	1.81					
-9	1.41					
-10	1.41					
-10D	1.40					
-10S	1.41					
K0810579-1	1.02					
-2	1.00					
-2D	1.02					
-2S	1.00					
-3	1.02					
-4	1.02					
K0810486-1	3.03					
-1D	3.03					
-1S	3.02					
K0810572-1	1.40					
-2	1.40					
-3	1.02					
-4	1.01					
-5	1.82					

Time Digestion Started: 2:10 PM **Balance I.D.:** 2 **Date Balance Checked** 11-10-08

Lot # Acids Used: HNO3 6200416 **HCl** 480260 **H_2O_2** 48139831 **HF**

LCSS (circle appropriate) ~~ERA~~ CLP Soil Lot # D045540 **Other:**

GFAA LCSW = GFLCSW, MET1-64-R, ______ mls. added

ICP LCSW = QCP-CICV-1, MET1-70-P, ______ mls. added

QCP CICV-2, MET1-66-E, ______ mls. added

QCP CICV-3, MET1-66-F, ______ mls. added

SS6, MET1-70-X, ______ mls. Added

TCLP Spike/LCSE

TSS1 MET1-64-P ______ mls. added

SPIKE INFO

SS1-MET1-70-V, 2.00 mls added SS4-MET1-67-P ______ mls added SS7-MET1-70-Y ______ mls added

SS5-MET1-70-W, 1.00 mls added 200.8 1000ppb Stock (MS12-51-A) ______ mls added

SS6-MET1-70-X, 1.00 mls added Ag 1000ppb Stock (MS12-48-H) ______ mls added

Additional spikes:

Comments: K0810639-1, 5, 9 Jars were Broke and may have lost some liquid.

Analyst [signature] **Date** 11-10-08

Reviewer [signature] **Date** 11/11/08

metdig.xls

Service Request Number(s) : K0810639, K0810572, K0810486, K0810579
Star Lims Run No.: 77387

Method : CLP 3010A 3020A 3005A 3050B CLP Hot Block Other-______
Analysis for : ICP ICP-MS GFAA Flame AA Other ________

Sample	Initial Weight (g)	Dry	Wet	Initial Volume(ml)	Final Volume (ml)	Matrix
K0810572-6	1.00		X		100	10% HNO3, HCl
↓ -7	1.01		↓		↓	↓

mth 11-10-08

Time Digestion Started: 2:10pm **Balance I.D.:** 2 **Date Balance Checked**________
Lot # Acids Used: HNO3 620046 **HCl** 48026 **H_2O_2** 4813983 **HF**________

LCSS (circle appropriate) ERA CLP Soil Lot # D045540 **Other:**________

GFAA LCSW = GFLCSW, MET1-64-R, ________ mls. added
ICP LCSW = QCP-CICV-1, MET1-70-P, ________ mls. added
QCP CICV-2, MET1-66-E, ________ mls. added
QCP CICV-3, MET1-66-F, ________ mls. added
SS6, MET1-70-X, ________ mls. Added

TCLP Spike/LCSE
TSS1 MET1-64-P________mls. added

SPIKE INFO
SS1-MET1-70-V, 2.00 mls added SS4-MET1-67-P________mls added SS7-MET1-70-Y ________mls added
SS5-MET1-70-W, 1.00 mls added 200.8 1000ppb Stock (MS12-51-A)________mls added
SS6-MET1-70-X, 1.00 mls added Ag 1000ppb Stock (MS12-48-H) ________ mls added
Additional spikes:________
Comments:________

Analyst [signature] **Date** 11-10-08
Reviewer [signature] **Date** 11/11/08

metdig.xls

Service Request # K0810639, K0810572, K0810486, K0810579
Q.C. Sample # 10639-10, 10579-2, 10486-11

Circle type of digest: GFAA ICP FAA ICP-MS Other:________ Initials / Date: MH 11-10-08
Circle type of sample: Soil Water Misc. Sludge Oil Other:________

Solution Name	Element	mLs of 1000ppm Solution	Final Volume	Solution Conc. mg/L	Enter mls Added	
	HNO3	50.0	1000ml	-		
	Al	100*	1000ml	200		
	Ag	100*	1000ml	5		
	Ba	100*	1000ml	200		
	Be	100*	1000ml	5		
	Cd	100*	1000ml	5		
	Co	100*	1000ml	50		Expires:4/1/09
	Cr	100*	1000ml	20		
SS1-MET1-70-V	Cu	100*	1000ml	25	2.00	
	Fe	100*	1000ml	100		
	Pb	100*	1000ml	50		
	Mn	100*	1000ml	50		
	Ni	100*	1000ml	50		
	Sb	50	1000ml	50		
	V	100*	1000ml	50		
	Zn	100*	1000ml	50		
	HNO3	25.0	500ml	-		
	As	2.0	500ml	4		
SS4-MET1-67-P	Cd	2.0	500ml	4		
	Pb	2.0	500ml	4		Expires:1/2/09
	Se	2.0	500ml	4		
	Tl	2.0	500ml	4		
	Cu	2.0	500ml	4		
	HNO3	25.0	500ml	-		
SS5-MET1-70-W	As	50.0	500ml	100	1.00	Expires:1/6/09
	Se	50.0	500ml	100		
	Tl	50.0	500ml	100		
	HNO3	25	500ml	-		
SS6-MET1-70-X	B	50	500ml	100	1.00	Expires: 2/01/09
	Mo	50	500ml	100		
	HNO3	10.0	200ml	-		
	K**	20	200ml	1000		
SS7-MET1-70-Y	Na**	20	200ml	1000		Expires:12/04/08
	Mg**	20	200ml	1000		
	Ca**	20	200ml	1000		

GFLCSW	HNO3	10.0	1000ml	-		
(MET1-64-R)	As, Pb, Se, Tl	5.0	1000ml	2.5		
	Cd	-	-	1.25		Expires: 1/1/09
	Cu	2.5	1000ml	2.5		
QCP-CICV-1	Ca, Mg, Na, K	no dilution	-	2500		
(MET1-70-P)	Al, Ba	no dilution	-	1000		
	Fe	no dilution	-	500		Expires:11/1/09
	Co, Mn, Ni, V, Zn	no dilution	-	250		
	Cu, Ag	no dilution	-	125		
	Cr	no dilution	-	100		
	Be	no dilution	-	25		
QCP-CICV-2 (MET1-66-E)	Sb	no dilution	-	500		Expires: 7/1/09
QCP-CICV-3	As, Pb, Se, Tl	no dilution	-	500		Expires: 7/1/09
(MET1-66-F)	Cd	no dilution	-	250		

* Denotes volume of mixed stock standard.
** Denotes 10,000 ppm individual stock standards.

Standard	mls of standard	ppm	Logbook #	Exp. Date

CVAA Mercury Data Review Form

Element: Hg

Analysis Lot #: 133564

Cal. STD/CCV Source: HG1-76-R

Service Request Numbers:

K0810639, K0810355, K0810432, K0810446, K0810486, K0810457

	Yes	No	NA
1) Appropriate standardization completed	X		
2) ICV within 10% of true value	X		
3) CCVs in control	X		
4) CCBs and or ICBs below MRL	X		
5) All reported samples within calibration range	X		
6) Calculations correct	X		

Comments:

K0810457 - spike not spiked, Redigest

Data reviewed against service request(s) to ensure no samples were omitted: MJS (initials)

Primary Reviewed By: MHS Date: 11/12/08

Secondary Reviewed By: JDB Date: 11/12/08

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:______________
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # : K0810639, K0810355, K0810432, K0810446, K0810486, K0810457
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Measured Adjusted (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
1	ICV1	~	~	~	5.33			107%
2	ICB1	~	~	~	-0.01			< 0.2
3	CCV1	~	~	~	5.05			101%
4	CCB1	~	~	~	-0.01			< 0.2
5	CRA1	~	~	~	0.20			100%
6	K0810639-MB	0.503	50	~	0.00		0.000	
7	LCSS K0810639 1/2	0.260	50	1/2	4.55		1.750	99%
8	K0810639-001	0.569	50	~	5.54		0.487	
9	K0810639-001L		50	~	1.18	106%		
10	K0810639-001A		50	~	8.04	100%		
11	K0810639-001D	0.582	50	~	5.81		0.499	2%
12	K0810639-001S	0.558	50	1/2	5.21		0.934	100%
13	K0810639-002	0.638	50	~	5.08		0.398	
14	~~K0810639-003~~	~~0.541~~	~~50~~	~~~~	~~11.40~~	See dil.	11/15/08	
15	CCV2	~	~	~	4.98			100%
16	CCB2	~	~	~	-0.01			< 0.2
17	K0810639-004	0.615	50	~	4.53		0.368	
18	K0810639-005	0.544	50	~	5.98		0.550	
19	K0810639-006	0.561	50	~	6.39		0.570	
20	K0810639-007	0.592	50	~	1.23		0.104	
21	~~K0810639-008~~	~~0.551~~	~~50~~	~~~~	~~12.70~~	See dil.	11/15/08	
22	K0810639-009	0.524	50	~	2.11		0.201	
23	K0810639-010	0.535	50	~	8.35		0.780	
24	K0810355-007	0.524	50	~	0.08		0.008	
25	K0810355-008	0.527	50	~	0.13		0.012	

Comments: Reporting Levels:

Soil/Tissue Spike Level:		**K0810639-001S=.488mg/kg**			
Post Spike Level:		x @ ~~1~~ µg/L 2.5 ppb SR 11-14-08			
Method	**Spike Level**	**MRL**	**LCS Limit**	**MS Limit**	**RPD**
7470A Water	**1.0 µg/L**	**0.2 µg/L**	**84-117%**	**78-122%**	**20%**
245.1 Water	**1.0 µg/L**	**0.2 µg/L**	**85-115%**	**70-131%**	**20%**
7470A TCLP	**5.0 µg/L**	**1.0 µg/L**	**85-115%**	**75-125%**	**20%**
7471A Soil LCSS	**1.77 mg/kg**	**0.02 mg/kg**	**76-121%**	**64-127%**	**30%**
7471A Tissue Tort	**0.27 mg/kg**	**0.02 mg/kg**	**63-148%**	**60-130%**	**30%**

Analyst:	Date:	Page Number:
Melissa Acuth	11/12/08	1

[HgMSASoilRunForm] HG1.XLS

COLUMBIA ANALYTICAL SERVICES, INC. PRINTOUT WITH:______________
ANALYTICAL WORKSHEET

Method: (Circle One) 7470A 7471A 245.1	Service Request # :
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Measured Adjusted (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
26	K0810355-009	0.482	50	~	0.15		0.016	
27	CCV3	~	~	~	5.11			102%
28	CCB3	~	~	~	-0.01			< 0.2
29	K0810355-010	0.498	50	~	0.12		0.012	
30	K0810355-011	0.518	50	~	0.28		0.027	
31	K0810355-012	0.475	50	~	0.39		0.041	
32	K0810432-001	0.581	50	~	2.40	3.810	0.328	
33	K0810446-004	0.514	50	~	2.53	4.865	0.473	
34	K0810486-001	0.512	50	~	10.30			
35	K0810639-003 1/10	0.541	50	1/10	1.26		1.165	
36	K0810639-008 1/10	0.551	50	1/10	1.49		1.352	
37	K0810432-001L		50	~	0.71	148%		
38	K0810446-004L		50	~	0.69	136%		
39	CCV4	~	~	~	5.01			100%
40	CCB4	~	~	~	-0.01			< 0.2
41	K0810486 1/5	0.512	50	1/5	3.17	3.943	0.385	
42	K0810486 1/5L		50	~	0.72	114%		
43	K0810432-001A		50	~	5.55	63%		
44	K0810446-004A		50	~	5.13	52%		
45	K0910486-001 1/5A		50	~	7.19	80%		
46	K0810457-MB	0.526	50	~	-0.01		-0.001	
47	LCSS K08010457 1/2	0.252	50	1/2	4.34		1.722	97%
48	K0810457-001	0.548	50	~	13.70			
49	K0810457-001 1/10	0.548	50	1/10	13.70			
50	K0810457-001 1/10+1/1	0.548	50	1/100	2.12		19.343	

MS 11/12/08

Comments: Reporting Levels:
Soil/Tissue Spike Level:
Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	84-117%	78-122%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-131%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	1.77 mg/kg	0.02 mg/kg	76-121%	64-127%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-148%	60-130%	30%

Analyst:	Date:	Page Number:
Melissa Ooth	11/12/08	2

[HgMSASoilRunForm] HG2.XLS

COLUMBIA ANALYTICAL SERVICES, INC.
ANALYTICAL WORKSHEET

PRINTOUT WITH:

Method: (Circle One) 7470A 7471A 245.1	**Service Request # :**
Analysis For: Hg	

DATA

Pos.	SAMPLE NUMBER	Initial Sample (g) or (mL)	Initial Dilution (mL)	Dilution Factor	Measured (µg/L)	Measured Adjusted (µg/L)	Sample Actual (mg/kg)	Sample Actual (µg/L)
51	CCV5	~	~	~	5.14			103%
52	CCB5	~	~	~	-0.01			< 0.2
53	K0810457-001 1/10+1/10L		50	~	0.42	99%		
54	K0810457-001 1/10+1/10A		50	~	7.08	99%		
55	K0810457-001D 1/10+1	0.548	50	100	1.80		16.423	
56	K0810457-001S 1/10+1	0.549	50	100	1.82		16.576	1%
57	CCV6	~	~	~	5.10			102%
58	CCB6	~	~	~	-0.01			< 0.2
59	K0810457-001 1/10+1/1	0.548	50	100	10.20			
60	K0810457-001 1/100	0.548	50	100	10.10			
61	K0810457-001 1/100+1/	0.548	50	1000	1.03			
62	K0810457-001 1/100+1/10L		50	~	0.11			
63	K0810457-001 1/100+1/10L		50	1000	0.21			
64	K0810457-001 1/100+1/10A		50	1000	5.85			
65	K0810457-001D 1/100+	0.548	50	1000	0.89			
66	K0810457-001S 1/100+	0.549	50	1000	0.86			
67	CCV7	~	~	~	5.08			102%
68	CCB7	~	~	~	0.00			< 0.2
69						MS 11/12/08		
70								
71								
72								
73								
74								
75								

Comments: Reporting Levels:

Soil/Tissue Spike Level: K0810457-001S=0.455mg/kg

Post Spike Level:

Method	Spike Level	MRL	LCS Limit	MS Limit	RPD
7470A Water	1.0 µg/L	0.2 µg/L	84-117%	78-122%	20%
245.1 Water	1.0 µg/L	0.2 µg/L	85-115%	70-131%	20%
7470A TCLP	5.0 µg/L	1.0 µg/L	85-115%	75-125%	20%
7471A Soil LCSS	1.77 mg/kg	0.02 mg/kg	76-121%	64-127%	30%
7471A Tissue Tort	0.27 mg/kg	0.02 mg/kg	63-148%	60-130%	30%

Analyst: [signature]	**Date:**	**Page Number:** 3

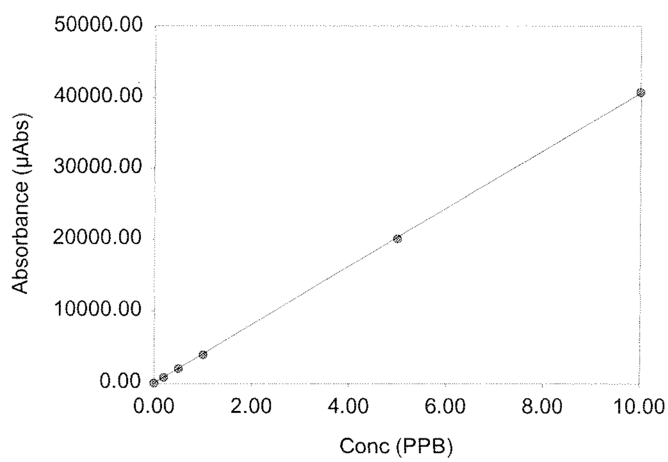
[HgMSASoilRunForm] HG3.XLS

CETAC Hg Analysis Report - 08111200.DB - Wednesday, November 12, 2008, 9:34:34 AM

Analyst M SMITH
Date Started Wednesday, November 12, 2008, 06:17:17
Worksheet Hg 111208A
Comment K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
Calibration Zero	12-Nov-2008, 06:17	0.00	21.50	30.00	21	29	35	34	
Standard #1	12-Nov-2008, 06:19	0.20	1.28	829.00	813	831	837	834	
Standard #2	12-Nov-2008, 06:20	0.50	0.55	2030.00	2018	2032	2036	2045	
Standard #3	12-Nov-2008, 06:22	1.00	0.71	3930.00	3889	3931	3952	3941	
Standard #4	12-Nov-2008, 06:24	5.00	0.16	20100.00	20026	20075	20095	20095	
Standard #5	12-Nov-2008, 06:26	10.00	0.65	40700.00	40552	41117	40725	40556	

Calibration Data



Int.	0.000
Slope	4060.898
Correlation	0.99997

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
ICV1	12-Nov-2008, 06:27	5.33	0.22	21700.00	21598	21649	21714	21674	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
ICB1	12-Nov-2008, 06:29	-0.01	7.42	-53.60	-58	-51	-50	-56	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV1	12-Nov-2008, 06:31	5.05	0.46	20500.00	20413	20464	20554	20624	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB1	12-Nov-2008, 06:33	-0.01	8.51	-45.40	-45	-41	-46	-50	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CRA1	12-Nov-2008, 06:34	0.20	1.48	795.00	779	795	800	807	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0810639-MB	12-Nov-2008, 06:36	-0.00	39.70	-11.00	-17	-8	-9	-10	
LCSS K0810639 1/2	12-Nov-2008, 06:38	4.55	0.26	18500.00	18491	18520	18464	18407	
K0810639-001	12-Nov-2008, 06:40	5.54	0.06	22500.00	22501	22505	22504	22475	
K0810639-001L	12-Nov-2008, 06:43	1.18	1.38	4810.00	4785	4850	4880	4733	
K0810639-001A	12-Nov-2008, 06:46	8.04	0.21	32600.00	32546	32646	32704	32676	
K0810639-001D	12-Nov-2008, 06:48	5.81	0.17	23600.00	23521	23581	23576	23619	
K0810639-001S	12-Nov-2008, 06:50	5.21	0.40	21100.00	21030	21125	21201	21215	
K0810639-002	12-Nov-2008, 06:52	5.08	0.55	20600.00	20720	20715	20617	20480	
K0810639-003	12-Nov-2008, 06:55	11.40	0.11	46200.00	46115	46156	46172	46232	O

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV2	12-Nov-2008, 06:58	4.98	0.17	20200.00	20185	20218	20257	20256	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB2	12-Nov-2008, 07:00	-0.01	14.40	-33.30	-40	-28	-32	-33	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0810639-004	12-Nov-2008, 07:01	4.53	0.34	18400.00	18305	18444	18415	18431	
K0810639-005	12-Nov-2008, 07:03	5.98	0.26	24300.00	24208	24275	24340	24339	
K0810639-006	12-Nov-2008, 07:05	6.39	0.39	26000.00	25827	25947	26050	26028	
K0810639-007	12-Nov-2008, 07:07	1.23	0.68	4990.00	4944	4979	5006	5021	
K0810639-008	12-Nov-2008, 07:08	12.70	0.46	51700.00	51384	51564	51808	51914	O

CETAC Hg Analysis Report - 08111200.DB - Wednesday, November 12, 2008, 9:34:35 AM

Analyst M SMITH
Date Started Wednesday, November 12, 2008, 07:11:47
Worksheet Hg 111208A
Comment K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0810639-009	12-Nov-2008, 07:11	2.11	0.61	8550.00	8478	8548	8588	8587	
K0810639-010	12-Nov-2008, 07:13	8.35	0.47	33900.00	34132	33942	33843	33764	
K0810355-007	12-Nov-2008, 07:16	0.08	6.83	317.00	285	320	328	333	
K0810355-008	12-Nov-2008, 07:17	0.13	1.24	540.00	531	539	544	546	
K0810355-009	12-Nov-2008, 07:19	0.15	1.65	611.00	598	610	617	621	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV3	12-Nov-2008, 07:21	5.11	0.05	20700.00	20729	20748	20743	20728	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB3	12-Nov-2008, 07:23	-0.01	18.50	-29.50	-37	-29	-28	-24	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0810355-010	12-Nov-2008, 07:24	0.12	2.73	482.00	463	484	491	490	
K0810355-011	12-Nov-2008, 07:26	0.28	0.80	1150.00	1138	1155	1153	1159	
K0810355-012	12-Nov-2008, 07:28	0.39	1.39	1570.00	1540	1564	1579	1591	
K0810432-001	12-Nov-2008, 07:30	2.40	1.05	9750.00	9702	9794	9862	9628	
K0810446-004	12-Nov-2008, 07:32	2.53	0.84	10300.00	10171	10342	10360	10264	
K0810486-001	12-Nov-2008, 07:33	10.30	2.97	41900.00	42560	43045	41907	40198	O
K0810639-003 1/10	12-Nov-2008, 07:38	1.26	0.62	5140.00	5090	5143	5154	5159	
K0810639-008 1/10	12-Nov-2008, 07:40	1.49	3.35	6040.00	5753	6028	6177	6186	
K0810432-001L	12-Nov-2008, 07:43	0.71	1.30	2880.00	2867	2903	2911	2829	
K0810446-004L	12-Nov-2008, 07:44	0.69	0.60	2790.00	2791	2801	2798	2764	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV4	12-Nov-2008, 07:46	5.01	0.40	20400.00	20280	20312	20405	20455	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB4	12-Nov-2008, 07:48	-0.01	41.50	-24.20	-38	-25	-21	-14	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0810486 1/5	12-Nov-2008, 07:50	3.17	0.74	12900.00	12775	12855	12945	12988	
K0810486 1/5L	12-Nov-2008, 07:52	0.72	0.82	2910.00	2880	2910	2927	2933	
K0810432-001A	12-Nov-2008, 07:55	5.55	0.36	22500.00	22442	22561	22635	22512	
K0810446-004A	12-Nov-2008, 07:56	5.13	5.33	20800.00	21847	21670	20320	19525	
K0910486-001 1/5A	12-Nov-2008, 07:58	7.19	0.41	29200.00	29017	29167	29271	29272	
K0810457-MB	12-Nov-2008, 08:03	-0.01	109.00	-20.50	-54	-15	-7	-7	
LCSS K08010457 1/2	12-Nov-2008, 08:05	4.34	1.17	17600.00	17364	17589	17756	17830	
K0810457-001	12-Nov-2008, 08:07	Sat'd.	0.00	55600.00	55610	55610	55610	55610	SO
K0810457-001 1/10	12-Nov-2008, 08:16	Sat'd.	0.00	55600.00	55638	55638	55638	55638	SO
K0810457-001 1/10+1/10	12-Nov-2008, 08:23	2.12	0.65	8600.00	8529	8583	8628	8656	

MSH 11/12/08

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV5	12-Nov-2008, 08:25	5.14	0.50	20900.00	20715	20833	20908	20957	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB5	12-Nov-2008, 08:26	-0.01	31.70	-30.80	-45	-26	-25	-26	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0810457-001 1/10+1/10L	12-Nov-2008, 08:30	0.42	1.17	1690.00	1661	1689	1697	1706	
K0810457-001 1/10+1/10A	12-Nov-2008, 08:32	7.08	0.70	28800.00	28497	28703	28860	28957	
K0810457-001D 1/10+1/10	12-Nov-2008, 08:34	1.80	0.71	7300.00	7231	7289	7327	7349	
K0810457-001S 1/10+1/10	12-Nov-2008, 08:35	1.82	0.67	7390.00	7324	7394	7417	7437	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV6	12-Nov-2008, 08:46	5.10	0.47	20700.00	20611	20694	20753	20843	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB6	12-Nov-2008, 08:48	-0.01	62.70	-35.50	-66	-36	-24	-15	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0810457-001 1/10+1/10	12-Nov-2008, 09:05	10.20	0.61	41400.00	41072	41333	41553	41639	O
K0810457-001 1/100	12-Nov-2008, 09:08	10.10	0.41	41200.00	40937	41133	41254	41324	O
K0810457-001 1/100+1/10	12-Nov-2008, 09:11	1.03	0.65	4190.00	4166	4205	4228	4179	
K0810457-001 1/100+1/10L	12-Nov-2008, 09:16	0.11	2.63	432.00	415	437	438	439	
K0810457-001 1/100+1/10L	12-Nov-2008, 09:22	0.21	2.31	835.00	808	838	854	840	

MSH 11/12/08

Analyst	M SMITH
Date Started	Wednesday, November 12, 2008, 09:24:24
Worksheet	Hg 111208A
Comment	K-CVAA-01

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
K0810457-001 1/100+1/10A	12-Nov-2008, 09:24	5.85	0.67	23800.00	23793	23832	23868	23518	
~~K0810457-001D 1/100+~~1/10	12-Nov-2008, 09:26	0.89	1.24	3630.00	3618	3656	3668	3568	
K0810457-001S 1/100+1/10	12-Nov-2008, 09:28	0.86	0.98	3480.00	3438	3487	3520	3483	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCV7	12-Nov-2008, 09:29	5.08	0.48	20600.00	20498	20726	20679	20648	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Readings				Flags
CCB7	12-Nov-2008, 09:31	-0.00	106.00	-18.80	-48	-14	-9	-4	

MS
11/12/08

Columbia Analytical Services
EPA METHOD 7471A

Service Request Number(s) :	K0810639, K0810355, K0810432, K0810446, K0810486
PREP RUN: 77430	

Sample	Wet Weight (g)	% Solids	Dry Weight (g)	Final Volume (mL)
MB	~	~	0.503	50
LCSS	~	~	0.260	
K0810639-001	1.197	47.5	0.569	
K0810639-001D	1.226	47.5	0.582	
K0810639-001S	1.174	47.5	0.558	
K0810639-002	1.203	53.0	0.638	
K0810639-003	0.817	66.2	0.541	
K0810639-004	1.170	52.6	0.615	
K0810639-005	1.114	48.8	0.544	
K0810639-006	0.968	58.0	0.561	
K0810639-007	0.884	67.0	0.592	
K0810639-008	1.023	53.9	0.551	
K0810639-009	0.874	60.0	0.524	
K0810639-010	0.785	68.2	0.535	
K0810355-007	0.589	89.0	0.524	
K0810355-008	0.595	88.6	0.527	
K0810355-009	0.555	86.9	0.482	
K0810355-010	0.565	88.2	0.498	
K0810355-011	0.661	78.3	0.518	
K0810355-012	0.586	81.1	0.475	
K0810432-001	1.694	34.3	0.581	
K0810446-004	0.628	81.9	0.514	
K0810486-001	3.411	15.0	0.512	
				JLS 11/10/08
Std. 0.2	0.1 * mL			50
Std. 0.5	0.25 * mL			50
Std. 1.0	0.5 * mL			50
Std. 5.0	2.5 * mL			50
Std. 10.0	5.0 * mL			50
ICV	0.25 ** mL			50

Start Time: 2:00 **Finish Time:** 2:30 **Hot block Temp.:** 95° C
Balance#: 1

Lot # of Reagents Used:		
HNO_3: G20046	**$K_2S_2O_8$: C45H07**	**NaCl : E29582**
H_2SO_4: 46137	**$KMnO_4$: G19476**	**NH_2OH-HCL: E31591**
HCL: 78060	**$SnCl_2$: G20637**	**ERA CLP Soil: D045540**

*** Source Standard:** HG1-76-K **100 ppb** **Spike =** 0.25 **ml** HG1-76-O **1000 ppb**
****Source Standard: ICV** HG1-76-N **1000 ppb** **LCSW=** **ml ICV **Source Standard**

Comments:

Analyst: [signature] **Date:** 11/10/08

[Copy of HGFORMnew.XLW] 7471

Columbia Analytical Services

EPA METHOD 7471A

Service Request Number(s) :	K0810457
PREP RUN: 77433	

Sample	Wet Weight (g)	% Solids	Dry Weight (g)	Final Volume (mL)
MB	~	~	0.526	50
LCSS	~	~	0.252	
K0810457-001	0.548	Non Available		
K0810457-001D	0.548			
K0810457-001S	0.549			
				MS 11/10/08
Std. 0.2	0.1 * mL			50
Std. 0.5	0.25 * mL			50
Std. 1.0	0.5 * mL			50
Std. 5.0	2.5 * mL			50
Std. 10.0	5.0 * mL			50
ICV	0.25 ** mL			50

Start Time: 2:00 **Finish Time:** 2:30 **Hot block Temp.:** 95° C

Balance#: 1

Lot # of Reagents Used:		
HNO_3: G20046	**$K_2S_2O_8$: C45H07**	**NaCl : E29582**
H_2SO_4: 46137	**$KMnO_4$: G19476**	**NH_2OH-HCL: E31591**
HCL: 78060	**$SnCl_2$: G20637**	**ERA CLP Soil: D045540**

*** Source Standard:** HG1-76-R **100 ppb** **Spike =** 0.25 **ml** HG1-76-O **1000 ppb**

****Source Standard: ICV** HG1-76-N **1000 ppb** **LCSW=** **ml ICV **Source Standard**

Comments:

Analyst: [signature]	**Date:** 11/10/08

[Copy of HGFORMnew.XLW] 7471

Service Request # K0810639
Instrument ID# K-ICP-AES-03

ICP-OES Data Review Form

	Yes	No
1. Standardization completed	✓	
2. ICV within 10 % of true value	✓	
3. ICB below MRL	✓	
4. CRI standard analyzed.	✓	
5. ICS standards within 20% of true value	✓	
6. All preceding CCVs within 10 % of true value	✓	
7. Following CCV within 10 % of true value	✓	
8. Bracketing CCBs below MRL	✓	
9. Method Blank below MRL	✓	
10. MS-MSD or Dup-MS and LCS within CAS control limits	✓	
11. All analytes within instrument linear range	✓	
12. Adequate rinse out time allowed between samples to eliminate memory effect	✓	

Comments:
StarLIMS Run # 133660 Saved under 111208BICP03
NR Al1670. NR LL Ba, Fe, Ti.
Do not report 200.7.
Serial dilution %Rec=115.

Primary Review by [signature] Date 11/13/08

Secondary Review by [signature] Date 11/13/08

Sample Name: BLK Acquired: 11/12/2008 17:38:17 Type: Cal
Method: 090708(v58) Mode: IR Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0036**	**-10.10**	**.0008**	**-.5267**	**.0186**	**-.0002**	**.0001**	**-.0014**
Stddev	.0001	1.09	.0003	.3677	.0029	.0001	.0001	.0002
%RSD	1.986	10.82	38.93	69.82	15.47	35.99	39.10	17.79
#1	.0036	-9.324	.0006	-.2667	.0206	-.0002	.0002	-.0012
#2	.0037	-10.87	.0010	-.7867	.0166	-.0001	.0001	-.0016

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0024**	**-.0001**	**-.0007**	**-.0039**	**.0001**	**-.0011**	**-.0002**	**.0000**
Stddev	.0003	.0000	.0004	.0000	.0000	.0002	.0001	.0004
%RSD	13.75	9.143	56.85	.6813	6.631	17.30	39.28	85080.
#1	.0026	-.0001	-.0010	-.0039	.0001	-.0009	-.0003	.0003
#2	.0022	-.0001	-.0004	-.0039	.0001	-.0012	-.0002	-.0003

Elem	Mn2576	Mn2605	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0001**	**.0000**	**-.0004**	**.0014**	**.0099**	**2.370**	**-6.731**	**-.2758**
Stddev	.0000	.000	.0006	.0002	.0012	1.051	.423	.0035
%RSD	22.93	67.75	136.1	17.49	12.66	44.36	6.285	1.286
#1	.0001	.0000	.0000	.0012	.0107	1.627	-7.030	-.2783
#2	.0001	.0000	-.0009	.0015	.0090	3.113	-6.432	-.2733

Elem	Sn1899	V_2924	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.0001**	**-.0003**	**.0011**	**-.0019**	**.0022**	**.0004**	**-.0031**	**.0035**
Stddev	.0002	.0001	.0000	.0001	.0000	.0001	.0002	.0010
%RSD	159.4	39.44	3.544	5.503	1.163	32.84	5.621	28.28
#1	.0000	-.0003	.0011	-.0018	.0022	.0003	-.0032	.0042
#2	.0003	-.0002	.0011	-.0020	.0022	.0005	-.0030	.0028

Sample Name: BLK   Acquired: 11/12/2008 17:38:17   Type: Cal
Method: 090708(v58)   Mode: IR   Corr. Factor: 1.000000
User: admin   StarLIMS#: 133660   File Name: 111208BICP03 Database: 1108
Comment:

Elem	Sr4077
Units	Cts/S
Avg	**-.0007**
Stddev	.0011
%RSD	161.4
#1	.0001
#2	-.0014

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2392.2	68158.	6115.0
Stddev	6.0	98.	14.4
%RSD	.25066	.14380	.23507
#1	2396.4	68088.	6104.8
#2	2387.9	68227.	6125.2

MMK 11/12/08

Sample Name: STD A Acquired: 11/12/2008 17:41:22 Type: Cal
Method: 090708(v58) Mode: IR Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: ICP5-65-A

Elem	Al1670	Sb2068	Be2348	B_2496	Cd2265	Cr2677	Co2307	Cu3273	Pb2203
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4454**	**.1542**	**.4446**	**.0373**	**2.560**	**.0852**	**.7652**	**.1219**	**.1807**
Stddev	.0018	.0005	.0009	.0001	.013	.0002	.0047	.0002	.0012
%RSD	.4130	.3118	.2121	.3950	.5070	.2624	.6152	.1767	.6805
#1	.4441	.1539	.4440	.0374	2.550	.0850	.7619	.1220	.1799
#2	.4467	.1546	.4453	.0372	2.569	.0853	.7685	.1217	.1816

Elem	Mn2576	Mn2605	Mo2020	Ni2216	Se1960	Ag3280	Sn1899	V_2924	Zn2062
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**.4805**	**.0110**	**.6799**	**.9225**	**310.1**	**9753.**	**.1131**	**.0905**	**.6606**
Stddev	.0001	.0001	.0039	.0040	.5	8.	.0003	.0001	.0000
%RSD	.0188	.8528	.5720	.4371	.1638	.0778	.2493	.0773	.0043
#1	.4804	.0109	.6772	.9197	309.7	9758.	.1129	.0905	.6606
#2	.4805	.0110	.6827	.9254	310.5	9748.	.1133	.0906	.6606

Elem	Ti3361	Tl1908
Units	Cts/S	Cts/S
Avg	**.3734**	**.1067**
Stddev	.0007	.0012
%RSD	.2000	1.117
#1	.3729	.1058
#2	.3739	.1075

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2447.0**	**69808.**	**6219.9**
Stddev	11.9	66.	37.3
%RSD	.48723	.09409	.59947
#1	2455.4	69761.	6193.5
#2	2438.6	69854.	6246.3

Sample Name: STD B Acquired: 11/12/2008 17:44:17 Type: Cal
Method: 090708(v58) Mode: IR Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: ICP5-65-D

Elem	Al3944	As1890	Ba4554	Ca3158	Fe2599	Mg2790	Mg2852	K_7664
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**94300.**	**761.4**	**207.8**	**2.092**	**.1945**	**.2983**	**6.048**	**2.272**
Stddev	184.	5.6	2.0	.005	.0004	.0019	.002	.003
%RSD	.1955	.7350	.9702	.2334	.1802	.6351	.0346	.1137
#1	94430.	765.4	209.2	2.095	.1942	.2969	6.049	2.274
#2	94170.	757.5	206.4	2.088	.1947	.2996	6.046	2.271

Elem	Na5889	P_2149	Si2516	Li6707	Sr4077
Units	Cts/S	Cts/S	Cts/S	Cts/S	Cts/S
Avg	**13.04**	**2.998**	**.5392**	**4.842**	**35.82**
Stddev	.04	.004	.0002	.001	.03
%RSD	.3192	.1363	.0423	.0113	.0810
#1	13.07	2.995	.5390	4.842	35.79
#2	13.01	3.001	.5394	4.841	35.84

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2387.5	68286.	6130.4
Stddev	3.6	57.	12.1
%RSD	.15020	.08329	.19790
#1	2390.0	68326.	6121.9
#2	2385.0	68245.	6139.0

Sample Name: ICV1 Acquired: 11/12/2008 17:47:34 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: ICP5-68-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.306**	**4.659**	**2.579**	**2.525**	**5.031**	**.1269**	**.0007**	**1.259**	**12.28**
Stddev	.004	.013	.007	.001	.010	.0004	.0003	.004	.04
%RSD	.1032	.2860	.2545	.0200	.2049	.3215	38.60	.3141	.3083
#1	4.303	4.650	2.574	2.525	5.024	.1266	.0010	1.256	12.31
#2	4.310	4.669	2.584	2.524	5.038	.1272	.0005	1.261	12.25
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4930**	**1.261**	**.6490**	**2.460**	**2.580**	**12.30**	**12.29**	**1.239**	**1.253**
Stddev	.0001	.003	.0003	.014	.006	.03	.01	.003	.007
%RSD	.0221	.1944	.0524	.5719	.2273	.2381	.0899	.2349	.5907
#1	.4929	1.260	.6492	2.450	2.575	12.32	12.30	1.237	1.247
#2	.4931	1.263	.6487	2.470	2.584	12.28	12.28	1.241	1.258
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.018**	**1.244**	**12.25**	**2.488**	**.6427**	**12.42**	**.0000**	**1.251**	**1.240**
Stddev	.006	.004	.04	.001	.0011	.02	.0011	.006	.004
%RSD	.3111	.2882	.3458	.0406	.1674	.1229	5539.	.4498	.3447
#1	2.013	1.241	12.22	2.489	.6419	12.43	-.0007	1.247	1.237
#2	2.022	1.247	12.28	2.487	.6435	12.41	.0008	1.255	1.243
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value									
Range									

Sample Name: ICV1 Acquired: 11/12/2008 17:47:34 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: ICP5-68-A

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0011**	**.0162**	**2.020**	**2.667**	**.0002**	**.0010**
Stddev	.0006	.0170	.000	.001	.0005	.0000
%RSD	57.79	105.0	.0051	.0497	241.9	1.239
#1	-.0006	.0283	2.020	2.666	.0006	.0010
#2	-.0015	.0042	2.020	2.668	-.0002	.0010
Check ?	None	None	Chk Pass	Chk Pass	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2402.9	69360.	6207.7
Stddev	3.3	49.	21.7
%RSD	.13834	.07106	.34998
#1	2405.2	69326.	6192.3
#2	2400.5	69395.	6223.1

Sample Name: ICV1B Acquired: 11/12/2008 17:50:36 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: ICP5-63-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9982**	**.9246**	**.0026**	**.0005**	**.0029**	**.0000**	**5.131**	**.0003**	**.0145**
Stddev	.0028	.0010	.0008	.0015	.0002	.0000	.038	.0000	.0027
%RSD	.2764	.1031	31.06	330.0	7.348	283.1	.7467	6.307	18.30
#1	.9962	.9253	.0032	.0016	.0030	.0000	5.158	.0003	.0164
#2	1.000	.9239	.0020	-.0006	.0027	.0000	5.104	.0004	.0126
Check ?	Chk Pass	None	None	None	None	None	Chk Pass	None	None
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0002**	**.0002**	**.0012**	**.0001**	**.0226**	**.0067**	**.0005**	**.0013**
Stddev	.0001	.0000	.0001	.0005	.0013	.0105	.0009	.0001	.0014
%RSD	21.57	9.574	50.47	37.94	1877.	46.34	14.03	12.85	107.2
#1	.0006	.0002	.0001	.0009	.0010	.0300	.0074	.0004	.0023
#2	.0008	.0002	.0002	.0015	-.0008	.0152	.0060	.0005	.0003
Check ?	None	None	None	None	None	None	None	None	None
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0040**	**.0006**	**.0365**	**.0022**	**.0005**	**8.189**	**5.136**	**.0002**	**.0023**
Stddev	.0006	.0001	.0123	.0004	.0004	.032	.028	.0007	.0000
%RSD	13.91	23.42	33.70	18.74	89.76	.3880	.5496	427.6	1.192
#1	.0044	.0007	.0452	.0025	.0007	8.211	5.116	-.0003	.0023
#2	.0036	.0005	.0278	.0019	.0002	8.166	5.156	.0006	.0023
Check ?	None	None	None	None	None	None	Chk Pass	None	None
Value									
Range									

Sample Name: ICV1B Acquired: 11/12/2008 17:50:36 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: ICP5-63-A

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.941**	**4.879**	**.0009**	**.0020**	**4.979**	**1.980**
Stddev	.001	.003	.0001	.0008	.017	.006
%RSD	.0165	.0520	15.50	40.25	.3312	.3281
#1	4.940	4.877	.0008	.0014	4.991	1.985
#2	4.941	4.881	.0010	.0026	4.967	1.975
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2422.9	69316.	6179.8
Stddev	8.0	230.	10.2
%RSD	.33054	.33142	.16581
#1	2428.6	69154.	6172.6
#2	2417.2	69478.	6187.1

Sample Name: ICB Acquired: 11/12/2008 17:53:37 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0005**	**-.0011**	**.0009**	**.0018**	**-.0005**	**-.0001**	**.0050**	**.0001**	**-.0031**
Stddev	.0001	.0012	.0001	.0043	.0001	.0001	.0003	.0000	.0004
%RSD	18.69	105.2	7.201	236.3	25.37	49.50	5.567	61.90	13.46
#1	-.0004	-.0003	.0010	.0049	-.0004	-.0001	.0048	.0000	-.0028
#2	-.0005	-.0019	.0009	-.0012	-.0006	-.0001	.0052	.0001	-.0034
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0001**	**-.0006**	**-.0073**	**-.0010**	**-.0047**	**.0011**	**.0001**	**.0007**
Stddev	.0004	.0006	.0002	.0000	.0000	.0180	.0003	.0000	.0004
%RSD	94.53	851.9	33.87	.0067	1.695	384.3	24.96	17.60	56.16
#1	.0006	-.0004	-.0004	-.0073	-.0010	-.0174	.0013	.0001	.0004
#2	.0001	.0005	-.0007	-.0073	-.0010	.0080	.0009	.0000	.0010
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**.0000**	**-.0028**	**.0011**	**-.0005**	**-.0003**	**.0008**	**.0000**	**.0001**
Stddev	.0002	.0001	.0296	.0014	.0002	.0070	.0000	.0005	.0001
%RSD	19.39	448.9	1044.	120.4	47.13	2039.	.4101	1740.	75.09
#1	.0012	-.0001	-.0237	.0002	-.0007	-.0053	.0008	-.0003	.0001
#2	.0009	.0001	.0181	.0021	-.0003	.0046	.0008	.0004	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: ICB Acquired: 11/12/2008 17:53:37 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0006**	**-.0073**	**-.0002**	**-.0001**	**-.0006**	**.0000**
Stddev	.0016	.0033	.0001	.0007	.0002	.000
%RSD	272.4	44.89	43.88	534.4	37.06	172.8
#1	.0005	-.0096	-.0002	-.0006	-.0004	.0000
#2	-.0017	-.0050	-.0003	.0004	-.0008	.0000
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2409.5	69053.	6152.4
Stddev	11.3	38.	11.3
%RSD	.46737	.05469	.18368
#1	2417.5	69026.	6144.4
#2	2401.5	69079.	6160.3

Sample Name: CCVA1 Acquired: 11/12/2008 17:56:09 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2671**	**.2140**	**.2572**	**.2531**	**.2606**	**.2589**	**.2670**	**.2588**	**.2607**
Stddev	.0004	.0031	.0014	.0026	.0008	.0001	.0008	.0001	.0031
%RSD	.1636	1.459	.5562	1.011	.2926	.0331	.2833	.0388	1.172
#1	.2674	.2162	.2582	.2513	.2600	.2589	.2675	.2587	.2586
#2	.2668	.2118	.2562	.2549	.2611	.2588	.2664	.2588	.2629
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	None
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2593**	**.2564**	**.2576**	**.2711**	**.2568**	**.2712**	**.2710**	**.2629**	**.2642**
Stddev	.0017	.0003	.0012	.0024	.0016	.0028	.0004	.0005	.0025
%RSD	.6381	.1029	.4666	.8708	.6241	1.044	.1505	.1764	.9544
#1	.2582	.2562	.2584	.2694	.2557	.2732	.2713	.2626	.2660
#2	.2605	.2566	.2567	.2728	.2579	.2692	.2707	.2632	.2624
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2569**	**.2564**	**2.543**	**.2540**	**.2524**	**.5163**	**.2565**	**.2586**	**.2581**
Stddev	.0005	.0003	.020	.0016	.0000	.0062	.0003	.0009	.0005
%RSD	.2003	.1346	.8022	.6283	.0160	1.206	.1302	.3573	.2103
#1	.2565	.2562	2.557	.2528	.2524	.5207	.2562	.2592	.2577
#2	.2573	.2567	2.528	.2551	.2524	.5119	.2567	.2579	.2585
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Sample Name: CCVA1 Acquired: 11/12/2008 17:56:09 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0043**	**.1574**	**.2597**	**.2548**	**.0003**	**.0001**
Stddev	.0031	.0187	.0001	.0003	.0001	.0000
%RSD	71.93	11.87	.0215	.1114	33.46	47.15
#1	.0065	.1706	.2598	.2550	.0003	.0001
#2	.0021	.1442	.2597	.2546	.0002	.0001
Check ?	None	None	Chk Pass	Chk Pass	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2388.4	67603.	6065.1
Stddev	3.7	115.	38.3
%RSD	.15312	.17067	.63196
#1	2391.0	67521.	6092.2
#2	2385.8	67685.	6038.0

Sample Name: CCVB1 Acquired: 11/12/2008 17:59:05 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.290**	**9.338**	**.0006**	**1.001**	**9.979**	**.0001**	**.0054**	**-.0001**	**9.947**
Stddev	.025	.017	.0002	.001	.090	.0000	.0007	.0001	.009
%RSD	.3473	.1784	27.71	.1195	.9058	1.497	13.81	153.4	.0850
#1	7.272	9.349	.0005	1.000	9.915	.0001	.0048	-.0002	9.941
#2	7.308	9.326	.0007	1.002	10.04	.0001	.0059	.0000	9.953
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None	Chk Pass
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0007**	**.0009**	**9.844**	**.0009**	**9.647**	**10.06**	**.0009**	**.0016**
Stddev	.0005	.0003	.0005	.013	.0005	.080	.00	.0000	.0011
%RSD	898.0	38.43	55.22	.1309	59.63	.8268	.0424	5.330	65.27
#1	-.0004	.0005	.0006	9.853	.0012	9.591	10.06	.0009	.0024
#2	.0003	.0009	.0013	9.834	.0005	9.704	10.06	.0009	.0009
Check ?	None	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	None
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0011**	**9.902**	**.0010**	**-.0007**	**10.14**	**-.0002**	**.0000**	**.0001**
Stddev	.0001	.0002	.056	.0017	.0003	.00	.0011	.0000	.0001
%RSD	10.86	21.21	.5613	169.0	47.51	.0309	515.4	119.3	191.2
#1	.0009	.0013	9.942	.0022	-.0005	10.14	-.0010	.0000	.0002
#2	.0011	.0009	9.863	-.0002	-.0009	10.14	.0006	.0000	.0000
Check ?	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value									
Range									

Sample Name: CCVB1 Acquired: 11/12/2008 17:59:05 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.851**	**9.783**	**.0009**	**.0003**	**1.001**	**.9965**
Stddev	.020	.044	.0001	.0002	.001	.0005
%RSD	.2062	.4538	7.921	77.56	.0698	.0546
#1	9.836	9.814	.0008	.0004	1.001	.9962
#2	9.865	9.752	.0009	.0001	1.002	.9969
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2418.8	69117.	6172.3
Stddev	1.9	158.	7.6
%RSD	.07656	.22851	.12351
#1	2420.1	69229.	6167.0
#2	2417.5	69005.	6177.7

Sample Name: CCB1 Acquired: 11/12/2008 18:02:15 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0003**	**-.0004**	**.0010**	**.0005**	**-.0003**	**.0000**	**.0025**	**.0000**	**-.0040**
Stddev	.0002	.0023	.0009	.0001	.0001	.000	.0013	.0000	.0025
%RSD	54.24	570.5	85.45	27.42	34.28	925.2	52.26	73.62	61.92
#1	-.0002	-.0020	.0016	.0006	-.0003	.0000	.0016	.0000	-.0057
#2	-.0005	.0012	.0004	.0004	-.0002	.0000	.0034	.0000	-.0022
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0002**	**.0000**	**-.0057**	**-.0008**	**.0062**	**.0009**	**.0000**	**-.0001**
Stddev	.0004	.0002	.0001	.0009	.0001	.0052	.0001	.0001	.0003
%RSD	665.9	95.79	424.0	14.95	12.14	84.44	10.16	243.7	234.2
#1	.0003	-.0004	.0001	-.0064	-.0009	.0099	.0010	.0000	.0001
#2	-.0002	-.0001	-.0001	-.0051	-.0007	.0025	.0009	.0001	-.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**-.0003**	**-.0197**	**.0010**	**.0002**	**.0025**	**-.0001**	**.0003**	**-.0001**
Stddev	.0001	.0003	.0090	.0006	.0003	.0025	.0001	.0002	.0000
%RSD	55.51	77.70	45.66	56.09	215.0	101.9	70.67	76.66	14.23
#1	.0002	-.0005	-.0261	.0014	.0004	.0043	-.0002	.0004	-.0002
#2	.0004	-.0002	-.0133	.0006	-.0001	.0007	-.0001	.0001	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: CCB1 Acquired: 11/12/2008 18:02:15 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0023**	**.0052**	**-.0001**	**-.0020**	**-.0004**	**-.0001**
Stddev	.0027	.0013	.0003	.0028	.0006	.0000
%RSD	114.4	25.12	187.7	139.4	156.0	12.53
#1	-.0042	.0061	-.0003	.0000	-.0008	.0000
#2	-.0004	.0043	.0000	-.0039	.0000	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2410.1	68517.	6128.4
Stddev	2.3	278.	6.8
%RSD	.09358	.40501	.11016
#1	2408.5	68713.	6133.2
#2	2411.7	68321.	6123.7

Sample Name: CRI Acquired: 11/12/2008 18:04:41 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: ICP5-67-A

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0534**	**.0437**	**.0506**	**.0999**	**.0050**	**.0050**	**.0515**	**.0051**	**.0462**
Stddev	.0003	.0025	.0009	.0003	.0001	.0001	.0005	.0000	.0075
%RSD	.4830	5.647	1.862	.2600	1.195	1.001	.8807	.1715	16.23
#1	.0536	.0419	.0512	.0997	.0049	.0051	.0518	.0051	.0409
#2	.0532	.0454	.0499	.1001	.0050	.0050	.0511	.0051	.0515
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0052**	**.0100**	**.0103**	**.0128**	**.0493**	**.0067**	**.0233**	**.0052**	**.0063**
Stddev	.0001	.0004	.0003	.0004	.0008	.0166	.0015	.0001	.0004
%RSD	2.048	3.798	2.534	2.922	1.540	246.3	6.373	1.205	6.669
#1	.0053	.0097	.0101	.0125	.0498	.0185	.0222	.0053	.0060
#2	.0051	.0102	.0105	.0130	.0487	-.0050	.0243	.0052	.0066
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0104**	**.0198**	**.4247**	**.0999**	**.0099**	**.1112**	**.0489**	**.0098**	**.0100**
Stddev	.0001	.0000	.0370	.0002	.0002	.0034	.0003	.0002	.0001
%RSD	1.178	.2315	8.715	.2455	2.116	3.015	.5623	1.832	.5925
#1	.0105	.0199	.3986	.0997	.0101	.1089	.0487	.0099	.0100
#2	.0104	.0198	.4509	.1000	.0098	.1136	.0491	.0097	.0099
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Sample Name: CRI Acquired: 11/12/2008 18:04:41 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: ICP5-67-A

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1938**	**.3730**	**.0099**	**.1925**	**.0104**	**.0100**
Stddev	.0013	.0098	.0000	.0002	.0000	.0000
%RSD	.6763	2.628	.4611	.1102	.3568	.3483
#1	.1947	.3661	.0099	.1923	.0104	.0100
#2	.1929	.3800	.0099	.1926	.0104	.0101
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2441.9	69304.	6214.9
Stddev	4.8	27.	9.7
%RSD	.19455	.03860	.15560
#1	2445.3	69285.	6208.1
#2	2438.6	69323.	6221.8

Sample Name: CRI Acquired: 11/12/2008 18:07:45 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: LL ICP5-61-A 1/100

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0025**	**.0021**	**.0105**	**.0108**	**.0018**	**.0003**	**.0123**	**.0006**
Stddev	.0001	.0005	.0021	.0011	.0002	.0001	.0006	.0001
%RSD	2.209	22.66	19.88	10.05	8.939	29.01	4.699	21.85
#1	.0025	.0025	.0120	.0116	.0017	.0002	.0127	.0007
#2	.0024	.0018	.0090	.0101	.0020	.0003	.0119	.0005
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0040**	**.0023**	**.0006**	**.0019**	F **.0042**	**.0104**	**.0019**	**.0030**
Stddev	.0071	.0002	.0001	.0004	.0015	.0005	.0207	.0008
%RSD	178.2	10.29	21.25	23.83	36.42	4.350	1068.	25.26
#1	.0010	.0024	.0007	.0022	.0031	.0101	.0166	.0035
#2	-.0091	.0021	.0005	.0016	.0053	.0108	-.0127	.0025
Check ?	None	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	None	None
Value					.0100			
Range					-50.00%			

Elem	Mn2576	Mn2605	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0020**	**.0022**	**.0024**	**.3143**	**.0206**	**.0017**	**.2033**
Stddev	.0000	.0005	.0000	.0000	.0049	.0010	.0004	.0094
%RSD	1.451	23.58	.6071	1.232	1.555	4.980	26.32	4.622
#1	.0007	.0017	.0022	.0024	.3109	.0199	.0014	.1967
#2	.0007	.0024	.0022	.0024	.3178	.0214	.0020	.2099
Check ?	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
Value								
Range								

Sample Name: CRI Acquired: 11/12/2008 18:07:45 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: LL ICP5-61-A 1/100

Elem	Sn1899	V_2924	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0099**	**.0021**	**.0019**	**.0313**	**.0588**	F **.0025**	**.0094**	**.0097**
Stddev	.0014	.0001	.0000	.0025	.0003	.0001	.0010	.0002
%RSD	14.45	6.723	.4290	7.984	.4961	3.065	10.72	2.357
#1	.0109	.0022	.0019	.0296	.0585	.0024	.0101	.0099
#2	.0088	.0020	.0019	.0331	.0590	.0025	.0087	.0096
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Fail	Chk Pass	Chk Pass
Value						.0010		
Range						100.0%		

Elem	Sr4077
Units	ppm
Avg	**.0021**
Stddev	.0000
%RSD	.2801
#1	.0021
#2	.0021
Check ?	Chk Pass
Value	
Range	

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2400.9**	**67388.**	**6030.4**
Stddev	2.9	133.	3.7
%RSD	.12178	.19692	.06054
#1	2402.9	67482.	6027.8
#2	2398.8	67294.	6033.0

Sample Name: ICSA Acquired: 11/12/2008 18:10:49 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: ICP5-68-B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**22.40**	**513.4**	**-.0101**	**-.0001**	**-.0003**	**-.0008**	**.0183**	**.0026**	**492.7**
Stddev	.65	1.5	.0023	.0027	.0001	.0002	.0001	.0016	1.5
%RSD	2.921	.2944	22.48	4077.	24.04	18.02	.6305	62.89	.2944
#1	22.86	512.3	-.0117	-.0019	-.0003	-.0007	.0184	.0037	493.7
#2	21.93	514.5	-.0085	.0018	-.0002	-.0010	.0182	.0014	491.6
Check ?	None	Chk Pass	None	None	None	None	None	None	Chk Pass
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**-.0001**	**.0010**	**191.0**	**-.0045**	**534.8**	**372.4**	**.0088**	**.0028**
Stddev	.0006	.0005	.0004	1.0	.0008	2.0	4.1	.0001	.0002
%RSD	101.8	340.5	35.57	.5359	17.78	.3708	1.107	1.094	7.611
#1	.0002	-.0005	.0013	190.3	-.0051	536.2	375.4	.0089	.0026
#2	.0010	.0002	.0008	191.7	-.0040	533.4	369.5	.0087	.0029
Check ?	None	None	None	Chk Pass	None	Chk Pass	None	None	None
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.0001**	**.0048**	**.0030**	**-.0010**	**.0880**	**.0019**	**-.0013**	**-.0020**
Stddev	.0003	.0003	.0090	.0018	.0005	.0201	.0018	.0004	.0004
%RSD	27.09	505.4	186.6	58.91	46.84	22.89	91.57	29.14	22.40
#1	.0008	.0003	-.0015	.0043	-.0013	.0738	.0007	-.0010	-.0023
#2	.0012	-.0002	.0112	.0018	-.0006	.1022	.0032	-.0016	-.0016
Check ?	None	None	None	None	None	None	None	None	None
Value									
Range									

Sample Name: ICSA Acquired: 11/12/2008 18:10:49 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: ICP5-68-B

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0212**	**.0212**	**-.0003**	**-.0007**	**.0084**	**.0109**
Stddev	.0030	.0038	.0002	.0012	.0003	.0000
%RSD	13.91	18.11	61.81	182.1	3.651	.0682
#1	.0233	.0184	-.0004	.0002	.0086	.0109
#2	.0192	.0239	-.0001	-.0015	.0082	.0109
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2162.1	60976.	5640.1
Stddev	62.4	41.	35.5
%RSD	2.8870	.06772	.62927
#1	2118.0	61005.	5615.0
#2	2206.3	60946.	5665.2

Sample Name: ICSAB Acquired: 11/12/2008 18:14:18 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: ICP5-69-B

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**21.85**	**505.2**	**.9947**	**-.0015**	**.4985**	**.4901**	**.0161**	**.8988**	**456.9**
Stddev	.01	1.6	.0008	.0016	.0006	.0009	.0006	.0022	.5
%RSD	.0438	.3091	.0827	110.0	.1130	.1852	3.753	.2421	.1092
#1	21.85	506.3	.9941	-.0026	.4989	.4907	.0166	.8973	456.5
#2	21.86	504.1	.9953	-.0003	.4981	.4894	.0157	.9003	457.2
Check ?	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4550**	**.4617**	**.5943**	**177.0**	**.9521**	**497.0**	**341.8**	**.4741**	**.4756**
Stddev	.0005	.0014	.0013	.3	.0058	.5	3.7	.0013	.0017
%RSD	.1178	.3031	.2246	.1457	.6070	.0959	1.096	.2806	.3522
#1	.4546	.4607	.5953	177.2	.9480	497.3	344.5	.4750	.4768
#2	.4554	.4626	.5934	176.8	.9562	496.6	339.2	.4731	.4744
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**.8875**	**-.0238**	**.0039**	**1.078**	**.1188**	**.0019**	**.4767**	**.8480**
Stddev	.0000	.0020	.0074	.0024	.000	.0011	.0014	.0007	.0006
%RSD	4.199	.2277	31.21	62.84	.0285	.9631	76.73	.1443	.0681
#1	.0010	.8861	-.0291	.0056	1.078	.1180	.0029	.4772	.8484
#2	.0010	.8889	-.0186	.0022	1.078	.1196	.0008	.4762	.8476
Check ?	None	Chk Pass	None	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Sample Name: ICSAB   Acquired: 11/12/2008 18:14:18   Type: QC
Method: 090708(v58)   Mode: CONC   Corr. Factor: 1.000000
User: admin   StarLIMS#: 133660   File Name: 111208BICP03 Database: 1108
Comment: ICP5-69-B

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0312**	**.0136**	**-.0002**	**-.0018**	**.0078**	**.0101**
Stddev	.0099	.0028	.0001	.0041	.0006	.0001
%RSD	31.86	20.48	56.71	225.3	7.723	.8781
#1	.0382	.0116	-.0003	-.0047	.0074	.0102
#2	.0242	.0156	-.0001	.0011	.0082	.0101
Check ?	None	None	None	None	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2205.3	64636.	5955.8
Stddev	2.9	140.	1.9
%RSD	.13000	.21645	.03184
#1	2207.4	64537.	5954.5
#2	2203.3	64734.	5957.2

Sample Name: RB Acquired: 11/12/2008 18:18:21 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2048**	**.1642**	**.0016**	**.0012**	F **-.0003**	**.0002**	F **.0005**	**.0004**
#1	.2062	.1634	.0022	.0002	-.0003	.0002	.0009	.0004
#2	.2034	.1649	.0010	.0022	-.0002	.0002	.0002	.0003

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2061**	F **.0001**	**-.0001**	**-.0004**	**.0807**	**.0013**	**.2121**	**.0002**
#1	.2066	.0001	-.0002	-.0002	.0846	.0011	.2126	.0001
#2	.2057	.0001	.0001	-.0007	.0769	.0014	.2116	.0002

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0003**	**-.0244**	**.0018**	**.0001**	F **-.0060**	**-.0003**	**.0001**
#1	-.0003	.0003	-.0122	.0027	-.0001	-.0006	-.0004	.0003
#2	-.0001	.0004	-.0367	.0010	.0002	-.0113	-.0001	-.0001

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0005**	**.0002**	**.0059**	**-.0002**	**-.0006**	**-.0009**	**-.0001**
#1	.0003	.0000	.0105	-.0003	-.0011	-.0009	-.0001
#2	.0006	.0004	.0013	-.0001	.0000	-.0008	-.0001

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2374.1**	**67860.**	**6058.5**
#1	2380.6	67653.	6060.9
#2	2367.6	68067.	6056.2

Sample Name: K0810872-MB Acquired: 11/12/2008 18:21:26 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0316**	**.0262**	**-.0002**	**-.0067**	**.0003**	**-.0003**	**.0099**	**-.0002**
#1	.0318	.0246	-.0004	-.0067	.0003	-.0003	.0103	-.0002
#2	.0314	.0277	.0001	-.0067	.0003	-.0003	.0095	-.0002

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0157**	**.0013**	**-.0012**	**.0020**	**.0005**	**.0016**	**.0033**	**.0001**
#1	.0162	.0011	-.0011	.0019	.0013	.0022	.0017	.0001
#2	.0153	.0015	-.0013	.0022	-.0003	.0010	.0048	.0001

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**-.0002**	**.1282**	**.0054**	**.0001**	F **.3467**	**.0000**	**.0000**
#1	-.0005	-.0002	.1291	.0061	.0001	.3500	-.0002	.0001
#2	.0001	-.0001	.1274	.0048	.0000	.3433	.0003	.0000

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0042**	**-.0202**	**.2035**	**-.0016**	**-.0172**	**.0039**	**.0004**
#1	.0042	-.0191	.1933	-.0016	-.0185	.0044	.0003
#2	.0043	-.0214	.2136	-.0017	-.0160	.0035	.0004

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2470.4**	**70590.**	**6373.3**
#1	2475.7	70497.	6366.5
#2	2465.1	70682.	6380.1

Sample Name: K0810872-002 Acquired: 11/12/2008 18:24:31 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2973**	**.2551**	**.0013**	**-.0062**	**.0032**	**-.0002**	F **.0289**	**.0002**
#1	.2953	.2529	.0016	-.0064	.0032	-.0002	.0282	.0002
#2	.2993	.2573	.0010	-.0059	.0033	-.0002	.0295	.0002

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5955**	**.0175**	**.0017**	**.1216**	**1.978**	**.0030**	**.1276**	**.3300**
#1	.5968	.0185	.0018	.1214	1.969	.0024	.1273	.3300
#2	.5942	.0165	.0016	.1218	1.987	.0036	.1279	.3300

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.1886**	**.1144**	**.0035**	**.0002**	**.7238**	**.0005**	**.0045**
#1	-.0002	.1877	.1352	.0035	.0001	.7208	.0010	.0042
#2	.0003	.1894	.0937	.0036	.0003	.7268	-.0001	.0047

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0329**	**.0745**	**2.305**	**.0393**	**-.0159**	**.0024**	**.0017**
#1	.0329	.0751	2.313	.0393	-.0162	.0023	.0018
#2	.0328	.0738	2.298	.0393	-.0155	.0025	.0017

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2548.4**	**72574.**	**6502.9**
#1	2554.1	72406.	6462.5
#2	2542.7	72741.	6543.3

Sample Name: K0810872-004 Acquired: 11/12/2008 18:27:33 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2789**	**.2407**	**.0015**	**-.0054**	**.0059**	**-.0002**	**.0748**	**.0005**	**.9768**
#1	.2786	.2399	.0027	-.0064	.0059	-.0002	.0749	.0005	.9795
#2	.2791	.2415	.0003	-.0044	.0059	-.0002	.0748	.0005	.9740

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0161**	**.0009**	**.0873**	**1.188**	**.0032**	**.3073**	**.2840**	**.0007**	**.1533**
#1	.0156	.0009	.0873	1.181	.0031	.3092	.2843	.0007	.1528
#2	.0166	.0010	.0873	1.194	.0034	.3054	.2837	.0007	.1538

Elem	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4753**	**.0058**	**-.0002**	**1.389**	**-.0003**	**.0010**	**.0664**	**.0046**	**3.506**
#1	.4709	.0053	.0005	1.377	.0000	.0007	.0662	.0038	3.528
#2	.4797	.0062	-.0008	1.401	-.0006	.0013	.0666	.0054	3.484

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	**.0388**	**-.0151**	**.0066**	**.0052**
#1	.0388	-.0147	.0071	.0051
#2	.0389	-.0154	.0060	.0052

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2551.9**	**72740.**	**6483.3**
#1	2550.9	72602.	6472.6
#2	2552.9	72877.	6493.9

Sample Name: K0810872-006 Acquired: 11/12/2008 18:30:36 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2588**	**.2273**	**-.0003**	**-.0062**	**.0037**	**-.0003**	F **.0451**	**.0000**
#1	.2583	.2255	-.0001	-.0065	.0037	-.0003	.0443	.0000
#2	.2594	.2291	-.0005	-.0059	.0036	-.0003	.0458	.0000

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8551**	**.0260**	**.0128**	**.0673**	**16.11**	**.0026**	**.2223**	**.5413**
#1	.8548	.0263	.0129	.0673	16.00	.0032	.2220	.5404
#2	.8553	.0257	.0126	.0673	16.22	.0020	.2227	.5423

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017**	**.6979**	**.1421**	**.0059**	**.0000**	**.6193**	**.0011**	**.0033**
#1	.0016	.6987	.1578	.0060	-.0002	.6222	.0016	.0031
#2	.0018	.6972	.1264	.0058	.0001	.6163	.0007	.0035

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0567**	**.0208**	**4.191**	**.0406**	**-.0138**	**.0017**	**.0022**
#1	.0569	.0210	4.181	.0405	-.0137	.0019	.0022
#2	.0566	.0207	4.200	.0406	-.0140	.0015	.0023

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2527.8**	**72322.**	**6438.0**
#1	2526.2	72407.	6435.0
#2	2529.3	72237.	6440.9

Sample Name: K0810872-008 Acquired: 11/12/2008 18:33:38 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1594**	**.1348**	**.0020**	**-.0062**	**.0075**	**-.0002**	F **.0095**	**.0006**
#1	.1592	.1327	.0025	-.0051	.0074	-.0002	.0093	.0006
#2	.1597	.1370	.0015	-.0072	.0076	-.0002	.0096	.0007

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5374**	**.0155**	**-.0002**	**.0516**	**1.698**	**-.0001**	**.1557**	**.3719**
#1	.5411	.0155	-.0003	.0513	1.702	-.0004	.1526	.3707
#2	.5337	.0156	-.0001	.0519	1.694	.0002	.1588	.3732

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0371**	**.1125**	**.0073**	**-.0003**	**.5185**	**.0001**	**.0005**
#1	.0004	.0369	.1060	.0063	-.0005	.5226	-.0001	.0006
#2	.0008	.0374	.1190	.0083	-.0001	.5143	.0002	.0004

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0364**	**-.0067**	**2.403**	**.0358**	**-.0178**	**.0000**	**.0030**
#1	.0362	-.0052	2.406	.0341	-.0190	-.0007	.0030
#2	.0366	-.0082	2.401	.0375	-.0166	.0007	.0030

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2499.3	71393.	6357.5
#1	2506.7	71591.	6351.1
#2	2491.9	71195.	6363.8

Sample Name: CCVA2 Acquired: 11/12/2008 18:36:41 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2578**	**.2114**	**.2489**	**.2502**	**.2587**	**.2536**	**.2598**	**.2506**	**.2582**
Stddev	.0011	.0026	.0024	.0011	.0001	.0002	.0026	.0004	.0044
%RSD	.4431	1.245	.9642	.4592	.0328	.0607	.9845	.1692	1.706
#1	.2570	.2133	.2472	.2510	.2586	.2535	.2616	.2503	.2614
#2	.2586	.2095	.2506	.2494	.2587	.2537	.2580	.2509	.2551
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	None
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2546**	**.2499**	**.2518**	**.2620**	**.2481**	**.2549**	**.2649**	**.2590**	**.2566**
Stddev	.0013	.0002	.0001	.0022	.0030	.0198	.0013	.0026	.0031
%RSD	.4967	.0624	.0309	.8512	1.208	7.750	.4857	.9983	1.204
#1	.2555	.2500	.2517	.2604	.2460	.2409	.2658	.2609	.2588
#2	.2538	.2498	.2518	.2636	.2502	.2689	.2639	.2572	.2544
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2498**	**.2496**	**2.521**	**.2517**	**.2509**	**.4147**	**.2508**	**.2543**	**.2495**
Stddev	.0002	.0007	.026	.0011	.0012	.0015	.0006	.0003	.0011
%RSD	.0984	.2606	1.027	.4490	.4945	.3533	.2283	.1375	.4487
#1	.2496	.2491	2.502	.2509	.2500	.4137	.2504	.2540	.2487
#2	.2499	.2501	2.539	.2525	.2518	.4158	.2512	.2545	.2503
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Sample Name: CCVA2 Acquired: 11/12/2008 18:36:41 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.1482**	**.2544**	**.2478**	**-.0006**	**.0001**
Stddev	.0025	.0144	.0002	.0004	.0002	.0000
%RSD	16610.	9.752	.0752	.1765	43.47	11.85
#1	.0018	.1379	.2546	.2481	-.0007	.0000
#2	-.0017	.1584	.2543	.2475	-.0004	.0001
Check ?	None	None	Chk Pass	Chk Pass	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2438.2	68629.	6122.2
Stddev	6.2	418.	19.3
%RSD	.25512	.60900	.31508
#1	2442.6	68333.	6108.5
#2	2433.8	68925.	6135.8

Sample Name: CCVB5 Acquired: 11/12/2008 18:39:38 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.568**	**9.758**	**.0001**	**1.039**	**10.48**	**.0001**	**.0022**	**.0000**	**10.44**
Stddev	.027	.018	.0009	.000	.12	.0000	.0001	.0001	.03
%RSD	.3558	.1847	1447.	.0103	1.117	.2329	2.497	343.1	.2620
#1	7.549	9.771	.0007	1.039	10.40	.0001	.0022	.0001	10.42
#2	7.587	9.745	-.0006	1.038	10.56	.0001	.0021	.0000	10.46
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None	Chk Pass
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0005**	**.0008**	**10.21**	**.0003**	**10.06**	**10.50**	**.0007**	**.0016**
Stddev	.0006	.0002	.0002	.05	.0004	.08	.01	.0000	.0001
%RSD	158.8	29.98	32.94	.4580	145.0	.7943	.0597	.7177	7.896
#1	.0000	.0006	.0009	10.24	.0000	10.01	10.50	.0007	.0016
#2	.0008	.0004	.0006	10.18	.0006	10.12	10.49	.0007	.0015
Check ?	None	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	None
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0012**	**10.36**	**.0019**	**.0000**	**10.57**	**.0001**	**-.0003**	**-.0004**
Stddev	.0003	.0001	.01	.0005	.000	.01	.0001	.0001	.0002
%RSD	82.66	6.364	.0587	24.77	640.9	.1420	132.6	37.23	37.41
#1	.0005	.0011	10.35	.0015	.0002	10.58	.0000	-.0004	-.0005
#2	.0001	.0012	10.36	.0022	-.0002	10.56	.0002	-.0003	-.0003
Check ?	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value									
Range									

Sample Name: CCVB5 Acquired: 11/12/2008 18:39:38 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.32**	**10.30**	**.0007**	**-.0029**	**1.051**	**1.046**
Stddev	.05	.02	.0000	.0008	.002	.001
%RSD	.5140	.2248	4.304	28.51	.1480	.0582
#1	10.28	10.28	.0007	-.0023	1.050	1.047
#2	10.36	10.32	.0008	-.0035	1.052	1.046
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2401.7	68620.	6079.5
Stddev	.4	220.	12.2
%RSD	.01862	.32054	.19988
#1	2402.0	68464.	6088.1
#2	2401.4	68775.	6070.9

Sample Name: CCB5 Acquired: 11/12/2008 18:42:48 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0016**	**-.0007**	**.0032**	**.0004**	**.0000**	**-.0002**	**.0001**	**-.0011**
Stddev	.0002	.0002	.0013	.0020	.0000	.000	.0002	.0000	.0104
%RSD	31.71	11.09	193.7	61.37	9.457	294.6	92.93	1.911	910.6
#1	.0006	.0017	.0003	.0018	.0004	-.0001	-.0004	.0001	-.0085
#2	.0009	.0014	-.0016	.0047	.0004	.0000	-.0001	.0001	.0062
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0002**	**-.0001**	**-.0061**	**.0006**	**.0244**	**.0022**	**.0000**	**.0008**
Stddev	.0002	.0003	.0006	.0026	.0015	.0026	.0009	.000	.0016
%RSD	2112.	147.7	491.8	42.33	248.6	10.84	42.28	416.9	215.2
#1	-.0001	-.0004	.0003	-.0079	-.0005	.0263	.0015	-.0001	-.0004
#2	.0001	.0000	-.0006	-.0043	.0017	.0225	.0028	.0000	.0019
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0000**	**-.0095**	**.0017**	**-.0003**	**-.0316**	**-.0002**	**.0005**	**.0002**
Stddev	.0001	.000	.0080	.0005	.0002	.0094	.0018	.0005	.0001
%RSD	34.63	222.9	84.00	28.51	56.16	29.63	1029.	115.2	74.84
#1	.0003	.0000	-.0038	.0014	-.0002	-.0382	.0011	.0008	.0002
#2	.0005	-.0001	-.0151	.0020	-.0004	-.0250	-.0015	.0001	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: CCB5 Acquired: 11/12/2008 18:42:48 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0020**	**.0027**	**-.0001**	**-.0023**	**-.0002**	**.0001**
Stddev	.0019	.0142	.0001	.0001	.0001	.0000
%RSD	97.30	523.7	46.88	4.622	46.99	4.958
#1	-.0033	.0128	-.0001	-.0024	-.0001	.0001
#2	-.0006	-.0073	-.0002	-.0023	-.0002	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2388.9	67493.	5942.7
Stddev	8.5	189.	41.2
%RSD	.35691	.27948	.69348
#1	2382.9	67360.	5913.6
#2	2394.9	67627.	5971.9

Sample Name: K0810872-010 Acquired: 11/12/2008 18:45:21 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2180**	**.1864**	**.0011**	**-.0065**	**.0061**	**-.0003**	F **.0056**	**.0008**
#1	.2170	.1863	.0014	-.0054	.0061	-.0004	.0055	.0009
#2	.2189	.1865	.0008	-.0076	.0061	-.0003	.0058	.0007

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4335**	**.0185**	**-.0006**	**.0289**	**1.013**	**-.0001**	**.1454**	**.3066**
#1	.4273	.0187	-.0007	.0293	1.015	.0005	.1445	.3070
#2	.4396	.0183	-.0006	.0285	1.011	-.0007	.1463	.3062

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0015**	**.0285**	**.0743**	**.0058**	**-.0001**	**.3558**	**.0010**	**.0023**
#1	.0014	.0285	.0731	.0058	-.0004	.3554	.0011	.0026
#2	.0017	.0286	.0756	.0057	.0002	.3563	.0009	.0021

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0489**	**-.0026**	**2.353**	**.0311**	**-.0187**	**.0001**	**.0010**
#1	.0485	-.0037	2.360	.0308	-.0189	.0003	.0010
#2	.0493	-.0016	2.347	.0313	-.0186	-.0001	.0010

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2549.8**	**72031.**	**6427.6**
#1	2550.4	72051.	6424.8
#2	2549.3	72011.	6430.5

Sample Name: K0810872-012 Acquired: 11/12/2008 18:48:25 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2278**	**.1970**	**-.0008**	**-.0077**	**.0073**	**-.0003**	F **.0142**	**.0004**
#1	.2273	.1965	-.0020	-.0095	.0075	-.0002	.0135	.0004
#2	.2283	.1975	.0005	-.0059	.0072	-.0003	.0148	.0005

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5414**	**.0323**	**.0020**	**.0306**	**9.426**	**.0009**	**.1556**	**.3583**
#1	.5447	.0321	.0016	.0305	9.415	.0003	.1574	.3578
#2	.5381	.0325	.0024	.0307	9.437	.0014	.1537	.3588

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0037**	**.0946**	**.0585**	**.0057**	**.0001**	**.7272**	**.0006**	**.0015**
#1	.0038	.0942	.0754	.0073	-.0001	.7180	.0007	.0016
#2	.0036	.0950	.0417	.0042	.0003	.7364	.0005	.0014

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0498**	**-.0089**	**3.008**	**.0326**	**-.0139**	**.0045**	**.0020**
#1	.0496	-.0072	3.016	.0339	-.0140	.0048	.0020
#2	.0500	-.0107	3.001	.0314	-.0137	.0042	.0020

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2545.4**	**71618.**	**6312.9**
#1	2548.3	71466.	6256.6
#2	2542.6	71770.	6369.1

Sample Name: K0810872-014 Acquired: 11/12/2008 18:51:27 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1563**	**.1314**	**.0003**	**-.0069**	**.0049**	**-.0002**	F **.0029**	**.0026**
#1	.1560	.1310	.0002	-.0067	.0050	-.0002	.0027	.0026
#2	.1566	.1318	.0004	-.0071	.0049	-.0002	.0031	.0025

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6506**	**.0113**	**.0001**	**.0742**	**.9669**	**-.0003**	**.2723**	**1.146**
#1	.6520	.0106	.0000	.0741	.9671	-.0003	.2726	1.147
#2	.6493	.0120	.0003	.0744	.9667	-.0002	.2719	1.145

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0202**	**.0637**	**.0044**	**-.0004**	**.7082**	**-.0005**	**-.0002**
#1	.0002	.0201	.0828	.0054	-.0005	.7059	-.0010	.0002
#2	.0006	.0203	.0447	.0035	-.0003	.7105	.0001	-.0006

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0557**	**-.0030**	**2.665**	**.0330**	**-.0174**	**.0038**	**.0024**
#1	.0553	-.0033	2.673	.0324	-.0180	.0038	.0024
#2	.0561	-.0027	2.658	.0336	-.0167	.0038	.0024

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2512.1**	**71179.**	**6303.9**
#1	2515.0	71128.	6304.0
#2	2509.2	71231.	6303.8

Sample Name: K0810872-016   Acquired: 11/12/2008 18:54:30   Type: Unk
Method: 090708(v58)   Mode: CONC   Corr. Factor: 1.000000
User: admin   StarLIMS#: 133660   File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1885**	**.1589**	**.0022**	**-.0070**	**.0033**	**-.0003**	F **.0168**	**.0020**
#1	.1878	.1591	.0020	-.0076	.0033	-.0003	.0167	.0020
#2	.1893	.1586	.0024	-.0064	.0033	-.0003	.0169	.0021

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5601**	**.0132**	**.0001**	**.0308**	**1.889**	**-.0002**	**.2256**	**.7582**
#1	.5607	.0131	.0003	.0309	1.888	-.0001	.2263	.7592
#2	.5595	.0133	-.0002	.0307	1.890	-.0003	.2248	.7571

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0242**	**.0931**	**.0052**	**.0000**	**.3543**	**.0009**	**.0012**
#1	.0002	.0243	.0997	.0049	.0004	.3559	.0004	.0009
#2	.0006	.0241	.0866	.0056	-.0003	.3527	.0014	.0016

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0574**	**-.0075**	**2.838**	**.0352**	**-.0187**	**-.0003**	**.0015**
#1	.0570	-.0108	2.830	.0352	-.0197	-.0006	.0015
#2	.0577	-.0041	2.846	.0352	-.0178	-.0001	.0014

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2512.5**	**71021.**	**6352.2**
#1	2506.4	70947.	6351.2
#2	2518.7	71094.	6353.1

Sample Name: K0810872-018 Acquired: 11/12/2008 18:57:34 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8985**	**.7957**	**.0003**	**-.0030**	**.0189**	**-.0003**	F **.0232**	**.0018**
#1	.8974	.7983	.0011	-.0046	.0190	-.0003	.0230	.0019
#2	.8996	.7931	-.0004	-.0015	.0188	-.0003	.0233	.0018

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.768**	**.1030**	**.0075**	**.1742**	**18.78**	**.0064**	**.5251**	**.8967**
#1	1.775	.1019	.0075	.1744	18.74	.0060	.5258	.8956
#2	1.762	.1041	.0075	.1739	18.81	.0068	.5244	.8978

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0064**	**.1320**	**.3442**	**.0050**	**-.0006**	**1.553**	**.0020**	**.0048**
#1	.0064	.1319	.3412	.0051	-.0004	1.549	.0019	.0045
#2	.0064	.1322	.3473	.0050	-.0008	1.557	.0020	.0050

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1700**	**.0184**	**3.602**	**.0592**	**-.0125**	**.0006**	**.0069**
#1	.1696	.0179	3.624	.0590	-.0123	.0002	.0069
#2	.1705	.0188	3.579	.0595	-.0128	.0010	.0069

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2493.6	70174.	6224.3
#1	2494.8	70220.	6214.6
#2	2492.4	70128.	6234.1

Sample Name: K0810872-020 Acquired: 11/12/2008 19:00:42 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2263**	**.1930**	**.0005**	**-.0052**	**.0022**	**-.0003**	F **.0201**	**.0007**
#1	.2256	.1926	.0005	-.0067	.0022	-.0003	.0207	.0006
#2	.2269	.1934	.0006	-.0037	.0022	-.0003	.0195	.0007

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5183**	**.1069**	**-.0007**	**.0671**	**1.362**	**.0024**	**.1340**	**.0375**
#1	.5156	.1072	-.0006	.0670	1.352	.0020	.1344	.0375
#2	.5211	.1066	-.0008	.0671	1.372	.0028	.1335	.0375

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0050**	**.0588**	**.1843**	**.0072**	**.0001**	**1.026**	**.0001**	**.0010**
#1	.0049	.0588	.1789	.0076	.0003	1.020	.0006	.0010
#2	.0051	.0589	.1896	.0067	-.0001	1.033	-.0004	.0010

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0447**	**.0101**	**2.764**	**.0402**	**-.0154**	**.0039**	**.0022**
#1	.0445	.0105	2.762	.0402	-.0158	.0042	.0021
#2	.0449	.0097	2.766	.0403	-.0149	.0036	.0022

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2554.5	71686.	6381.7
#1	2551.9	71499.	6336.7
#2	2557.1	71873.	6426.7

Sample Name: K0810872-022 Acquired: 11/12/2008 19:03:45 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2360**	**.2011**	**-.0001**	**-.0056**	**.0063**	**-.0003**	F **.0036**	**.0006**
#1	.2355	.1988	-.0009	-.0043	.0064	-.0003	.0030	.0005
#2	.2365	.2034	.0007	-.0069	.0063	-.0003	.0042	.0007

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4414**	**.0587**	**-.0005**	**.0521**	**1.130**	**.0034**	**.1153**	**.0377**
#1	.4384	.0577	-.0007	.0524	1.118	.0023	.1142	.0375
#2	.4444	.0598	-.0003	.0518	1.141	.0044	.1163	.0379

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023**	**.0584**	**.5217**	**.0044**	**.0005**	**2.424**	**.0008**	**.0015**
#1	.0024	.0586	.5276	.0039	.0011	2.412	.0018	.0016
#2	.0022	.0582	.5157	.0049	-.0001	2.436	-.0001	.0014

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0412**	**-.0047**	**2.378**	**.0329**	**-.0170**	**.0481**	**.0038**
#1	.0409	-.0044	2.401	.0328	-.0163	.0479	.0038
#2	.0415	-.0049	2.355	.0331	-.0177	.0484	.0038

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2506.9	70663.	6246.0
#1	2518.3	70709.	6247.5
#2	2495.4	70617.	6244.4

Sample Name: K0810872-024 Acquired: 11/12/2008 19:06:48 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4034**	**.3447**	**.0015**	**-.0060**	**.0036**	**-.0002**	F **.0175**	**.0006**
#1	.4022	.3439	.0030	-.0043	.0037	-.0002	.0174	.0006
#2	.4046	.3455	.0000	-.0077	.0036	-.0002	.0175	.0006

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6437**	**.0957**	**.0024**	**.0517**	**2.538**	**.0024**	**.1506**	**.0558**
#1	.6521	.0957	.0018	.0516	2.524	.0034	.1503	.0553
#2	.6353	.0956	.0029	.0517	2.551	.0014	.1508	.0562

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0057**	**.1102**	**.1578**	**.0068**	**.0008**	**1.029**	**.0004**	**.0016**
#1	.0058	.1100	.1724	.0065	.0006	1.023	.0000	.0015
#2	.0055	.1105	.1433	.0070	.0010	1.034	.0008	.0016

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0624**	**-.0050**	**3.572**	**.0505**	**-.0163**	**.0065**	**.0040**
#1	.0624	-.0041	3.564	.0501	-.0155	.0065	.0040
#2	.0624	-.0059	3.580	.0509	-.0172	.0065	.0041

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2520.6**	**71179.**	**6327.4**
#1	2520.2	71310.	6281.8
#2	2521.0	71047.	6373.1

Sample Name: K0810872-026 Acquired: 11/12/2008 19:09:50 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2524**	**.2229**	**-.0002**	**-.0080**	**.0104**	**-.0003**	F **.0104**	**.0233**
#1	.2517	.2194	.0009	-.0077	.0106	-.0003	.0110	.0231
#2	.2531	.2264	-.0013	-.0083	.0103	-.0003	.0098	.0234

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.009**	**.0812**	**.0013**	**.4066**	**4.312**	**.0261**	**.6861**	**.7203**
#1	1.010	.0817	.0010	.4060	4.294	.0259	.6867	.7215
#2	1.009	.0807	.0015	.4071	4.330	.0264	.6854	.7191

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0062**	**.1478**	**.1459**	**.0068**	**.0013**	**1.871**	**.0003**	**.0018**
#1	.0062	.1472	.1634	.0065	.0011	1.879	.0008	.0017
#2	.0063	.1484	.1283	.0070	.0014	1.862	-.0002	.0019

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0732**	**-.0099**	**3.201**	**.0755**	**-.0151**	**.0080**	**.0069**
#1	.0732	-.0093	3.200	.0766	-.0157	.0079	.0069
#2	.0733	-.0104	3.202	.0744	-.0144	.0081	.0069

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2570.2	72377.	6397.9
#1	2574.3	72281.	6409.8
#2	2566.1	72473.	6385.9

Sample Name: K0810872-028 Acquired: 11/12/2008 19:12:51 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2230**	**.1956**	**.0001**	**-.0069**	**.0095**	**-.0003**	F **.0067**	**.0178**
#1	.2218	.1965	-.0006	-.0073	.0095	-.0003	.0068	.0177
#2	.2243	.1947	.0009	-.0066	.0095	-.0003	.0065	.0178

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6928**	**.0485**	**.0009**	**.2221**	**2.209**	**.0095**	**.5973**	**.6981**
#1	.6976	.0487	.0008	.2229	2.205	.0095	.5977	.7003
#2	.6879	.0483	.0010	.2214	2.213	.0094	.5970	.6959

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023**	**.1084**	**.1564**	**.0057**	**.0000**	**1.381**	**-.0007**	**.0010**
#1	.0023	.1083	.1520	.0062	.0001	1.371	-.0011	.0012
#2	.0023	.1085	.1609	.0053	-.0002	1.391	-.0004	.0008

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0532**	**-.0093**	**2.571**	**.0350**	**-.0154**	**.0051**	**.0054**
#1	.0531	-.0094	2.576	.0348	-.0161	.0049	.0054
#2	.0533	-.0091	2.566	.0352	-.0146	.0053	.0054

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2568.4**	**72730.**	**6447.5**
#1	2570.3	72399.	6433.2
#2	2566.5	73060.	6461.8

Sample Name: CCVA3 Acquired: 11/12/2008 19:15:53 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2655**	**.2160**	**.2555**	**.2574**	**.2632**	**.2562**	**.2672**	**.2590**	**.2664**
Stddev	.0009	.0031	.0013	.0003	.0011	.0017	.0027	.0005	.0043
%RSD	.3549	1.433	.5100	.1293	.4119	.6576	1.019	.1919	1.605
#1	.2661	.2182	.2546	.2577	.2625	.2574	.2652	.2586	.2634
#2	.2648	.2139	.2564	.2572	.2640	.2550	.2691	.2593	.2695
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	None
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2586**	**.2569**	**.2581**	**.2577**	**.2567**	**.2743**	**.2718**	**.2664**	**.2626**
Stddev	.0011	.0004	.0002	.0028	.0002	.0125	.0033	.0005	.0002
%RSD	.4234	.1434	.0813	1.085	.0899	4.539	1.230	.2062	.0672
#1	.2593	.2572	.2582	.2557	.2565	.2655	.2694	.2660	.2625
#2	.2578	.2567	.2579	.2597	.2569	.2831	.2741	.2668	.2627
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2572**	**.2572**	**2.561**	**.2543**	**.2565**	**.3939**	**.2565**	**.2569**	**.2577**
Stddev	.0004	.0005	.028	.0007	.0008	.0092	.0012	.0022	.0002
%RSD	.1533	.2128	1.097	.2863	.2994	2.323	.4732	.8571	.0707
#1	.2569	.2568	2.541	.2538	.2570	.4003	.2573	.2585	.2576
#2	.2574	.2576	2.581	.2548	.2559	.3874	.2556	.2554	.2578
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Sample Name: CCVA3 Acquired: 11/12/2008 19:15:53 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.1615**	**.2586**	**.2548**	**-.0009**	**.0001**
Stddev	.0007	.0079	.0006	.0016	.0008	.0001
%RSD	80.29	4.905	.2197	.6418	85.45	81.26
#1	.0004	.1559	.2590	.2560	-.0015	.0000
#2	.0014	.1671	.2582	.2536	-.0004	.0001
Check ?	None	None	Chk Pass	Chk Pass	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2404.9	68063.	6034.5
Stddev	4.8	178.	28.2
%RSD	.20020	.26128	.46722
#1	2408.3	68189.	6054.5
#2	2401.5	67937.	6014.6

Sample Name: CCVB3 Acquired: 11/12/2008 19:18:49 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.369**	**9.408**	**.0016**	**1.009**	**10.00**	**.0001**	**.0029**	**.0000**	**10.06**
Stddev	.010	.012	.0005	.001	.08	.0001	.0000	.0001	.08
%RSD	.1331	.1278	32.22	.0638	.8121	107.9	.7645	483.0	.7542
#1	7.362	9.417	.0012	1.010	9.948	.0001	.0029	.0001	10.01
#2	7.376	9.400	.0020	1.009	10.06	.0000	.0029	.0000	10.12
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None	Chk Pass
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0002**	**.0012**	**9.756**	**-.0006**	**9.735**	**10.18**	**.0008**	**.0021**
Stddev	.0004	.0000	.0001	.032	.0016	.085	.11	.0000	.0000
%RSD	378.0	17.40	4.964	.3282	263.0	.8758	1.046	.0116	2.347
#1	.0004	.0002	.0012	9.779	-.0017	9.674	10.11	.0008	.0021
#2	-.0002	.0002	.0011	9.733	.0005	9.795	10.26	.0008	.0020
Check ?	None	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	None
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0008**	**10.02**	**.0024**	**-.0005**	**10.28**	**.0002**	**.0004**	**.0001**
Stddev	.0004	.0000	.03	.0037	.0004	.09	.0009	.0002	.0001
%RSD	65.16	4.092	.2938	150.1	85.19	.8501	589.0	47.92	110.5
#1	.0009	.0007	9.998	.0050	-.0007	10.22	.0008	.0005	.0002
#2	.0003	.0008	10.04	-.0001	-.0002	10.34	-.0005	.0002	.0000
Check ?	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value									
Range									

Sample Name: CCVB3 Acquired: 11/12/2008 19:18:49 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.965**	**9.785**	**.0006**	**.0001**	**1.018**	**1.008**
Stddev	.017	.042	.0002	.0005	.009	.007
%RSD	.1737	.4304	31.75	505.0	.9110	.7487
#1	9.977	9.755	.0004	-.0003	1.012	1.003
#2	9.953	9.815	.0007	.0005	1.025	1.013
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2424.7**	**68621.**	**6064.6**
Stddev	3.0	23.	41.0
%RSD	.12559	.03305	.67653
#1	2426.8	68637.	6093.6
#2	2422.5	68605.	6035.6

Sample Name: CCB3 Acquired: 11/12/2008 19:21:59 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0010**	**-.0003**	**.0011**	**-.0016**	**.0012**	**.0000**	**.0012**	**.0001**	**-.0020**
Stddev	.0002	.0018	.0014	.0014	.0002	.000	.0003	.0000	.0041
%RSD	15.84	682.2	123.9	90.05	12.92	46.45	23.87	46.01	205.7
#1	.0011	-.0016	.0021	-.0026	.0013	.0000	.0010	.0001	-.0049
#2	.0009	.0010	.0001	-.0006	.0011	.0000	.0014	.0001	.0009
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0003**	**-.0001**	**-.0048**	**-.0007**	**.0331**	**.0021**	**.0000**	**.0015**
Stddev	.0005	.0003	.0002	.0014	.0006	.0063	.0015	.0000	.0009
%RSD	172.7	102.0	258.5	30.06	93.21	19.07	69.52	71.52	59.33
#1	-.0001	.0006	-.0002	-.0037	-.0002	.0286	.0011	.0001	.0021
#2	.0006	.0001	.0001	-.0058	-.0011	.0376	.0031	.0000	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0001**	**-.0038**	**.0002**	**.0000**	**-.0384**	**-.0007**	**.0003**	**.0000**
Stddev	.0000	.0001	.0018	.0018	.000	.0096	.0003	.0003	.000
%RSD	1.243	53.27	47.31	794.2	860.9	24.96	37.27	116.9	534.4
#1	.0002	.0002	-.0051	-.0010	.0002	-.0452	-.0005	.0001	-.0002
#2	.0002	.0001	-.0025	.0015	-.0003	-.0317	-.0009	.0005	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: CCB3 Acquired: 11/12/2008 19:21:59 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0013**	**-.0036**	**-.0001**	**-.0005**	**-.0001**	**.0002**
Stddev	.0011	.0102	.0002	.0009	.0008	.0000
%RSD	88.80	283.9	124.7	174.0	1230.	20.57
#1	-.0021	.0036	-.0002	.0001	-.0006	.0002
#2	-.0005	-.0108	.0000	-.0011	.0005	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	2441.3	68836.	6085.0
Stddev	.3	32.	26.2
%RSD	.01150	.04637	.43051
#1	2441.5	68814.	6066.5
#2	2441.1	68859.	6103.6

Sample Name: K0810872-030 Acquired: 11/12/2008 19:24:32 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: TORAY

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.7346**	**.6491**	**.0003**	**-.0065**	**.0150**	**-.0003**	F **.0319**	**.0186**
#1	.7328	.6444	-.0002	-.0072	.0149	-.0003	.0320	.0186
#2	.7364	.6537	.0009	-.0059	.0151	-.0003	.0318	.0186

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.8871**	**.1486**	**.0017**	**.2452**	**3.385**	**.0122**	**.7283**	**.8000**
#1	.8869	.1468	.0018	.2457	3.376	.0124	.7280	.8004
#2	.8874	.1503	.0016	.2448	3.394	.0121	.7285	.7996

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0074**	**.1178**	**.5322**	**.0057**	**.0026**	**3.760**	**.0013**	**.0027**
#1	.0075	.1176	.5109	.0056	.0032	3.742	.0010	.0033
#2	.0072	.1180	.5536	.0059	.0019	3.778	.0016	.0022

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0798**	**.0030**	**3.465**	**.0465**	**-.0152**	**.0554**	**.0087**
#1	.0803	.0004	3.466	.0458	-.0154	.0551	.0086
#2	.0793	.0055	3.463	.0472	-.0150	.0557	.0088

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2516.8**	**70657.**	**6265.6**
#1	2508.0	70681.	6284.7
#2	2525.6	70633.	6246.6

Sample Name: K0810446-MB Acquired: 11/12/2008 19:27:33 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**.0015**	**.0007**	**-.0040**	**-.0006**	**-.0003**	**.0011**	**-.0002**	**.0020**
#1	.0018	.0017	.0011	-.0043	-.0005	-.0002	.0012	-.0001	.0034
#2	.0017	.0013	.0002	-.0038	-.0007	-.0003	.0009	-.0002	.0005

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**-.0010**	**.0009**	**-.0033**	**-.0013**	**.0047**	**.0000**	**-.0001**	**-.0003**
#1	.0011	-.0010	.0010	-.0041	-.0014	.0039	.0001	.0000	-.0004
#2	.0013	-.0010	.0009	-.0025	-.0011	.0055	.0000	-.0001	-.0002

Elem	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0066**	**.0050**	**.0001**	**-.0245**	**.0120**	**-.0003**	**.0013**	**-.0053**	**.0080**
#1	-.0061	.0054	.0002	-.0221	.0123	-.0004	.0013	-.0049	.0201
#2	.0193	.0046	.0000	-.0269	.0116	-.0002	.0013	-.0058	-.0040

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	**-.0019**	**-.0142**	**-.0008**	**-.0001**
#1	-.0018	-.0126	.0001	-.0001
#2	-.0021	-.0157	-.0016	-.0001

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2494.4**	**70419.**	**6226.9**
#1	2500.2	70362.	6213.3
#2	2488.5	70476.	6240.5

Sample Name: LCSW Acquired: 11/12/2008 19:30:05 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**.0008**	**-.0002**	**-.0055**	**-.0006**	**-.0002**	**.0007**	**-.0002**	**.0034**
#1	.0020	.0005	.0006	-.0044	-.0005	-.0002	.0002	-.0002	.0100
#2	.0017	.0011	-.0011	-.0065	-.0007	-.0002	.0012	-.0002	-.0032

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0008**	**-.0008**	**.0005**	**-.0046**	**-.0006**	**.0013**	**.0001**	**-.0001**	**-.0002**
#1	.0009	-.0005	.0006	-.0057	-.0006	.0015	.0001	-.0002	-.0001
#2	.0007	-.0011	.0005	-.0034	-.0007	.0012	.0001	.0001	-.0002

Elem	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0012**	**.0050**	**-.0002**	**-.0203**	**.0137**	**.0002**	**.0013**	**2.207**	**.0054**
#1	-.0017	.0055	-.0002	-.0139	.0148	.0002	.0013	2.211	.0033
#2	.0042	.0045	-.0002	-.0267	.0127	.0003	.0013	2.202	.0076

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	**-.0019**	**-.0135**	**-.0006**	**-.0001**
#1	-.0018	-.0134	-.0004	.0000
#2	-.0020	-.0136	-.0009	-.0001

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2492.8**	**69951.**	**6246.7**
#1	2490.1	70060.	6279.8
#2	2495.5	69842.	6213.6

Sample Name: LCSS Acquired: 11/12/2008 19:32:36 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**32.11**	**.4401**	**.7438**	**1.820**	**.3089**	**.4916**	**.4525**	**19.99**	**.9101**
#1	32.26	.4454	.7503	1.828	.3102	.4910	.4553	20.02	.9131
#2	31.97	.4348	.7374	1.813	.3077	.4923	.4496	19.97	.9072

Elem	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020	Ni2216	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2956**	**.3858**	**66.11**	**.3347**	**10.86**	**1.069**	**.1436**	**.4172**	**12.01**
#1	.2973	.3864	66.49	.3360	10.89	1.072	.1439	.4199	12.08
#2	.2940	.3853	65.73	.3333	10.83	1.065	.1432	.4145	11.95

Elem	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062	P_2149	Si2516	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3289**	**.5233**	**3.574**	**.4855**	**.7607**	**1.933**	**3.328**	**8.932**	**1.488**
#1	.3302	.5252	3.587	.4892	.7622	1.948	3.353	9.148	1.492
#2	.3276	.5214	3.562	.4818	.7593	1.919	3.303	8.716	1.484

Elem	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**.4098**	**.0334**	**.1757**
#1	.4118	.0324	.1765
#2	.4079	.0343	.1750

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2598.1**	**73804.**	**6602.1**
#1	2600.6	73853.	6608.9
#2	2595.6	73754.	6595.3

Sample Name: K0810446-001 Acquired: 11/12/2008 19:35:42 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**16.50**	**.0062**	**.0084**	**.5004**	**.0000**	**.1467**	**.0021**	F **42.81**
#1	16.51	.0062	.0080	.5007	.0000	.1479	.0021	42.93
#2	16.50	.0062	.0088	.5001	.0000	.1455	.0020	42.69

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0435**	**.0041**	**1.139**	**10.63**	**.0328**	**12.82**	**1.192**	**.0219**
#1	.0437	.0042	1.139	10.61	.0340	12.84	1.196	.0219
#2	.0432	.0040	1.138	10.64	.0316	12.80	1.189	.0220

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0578**	**16.74**	**.0236**	**.0049**	**2.943**	**.1176**	**.0989**	**1.260**
#1	.0579	16.77	.0226	.0051	2.949	.1173	.0990	1.260
#2	.0577	16.72	.0247	.0047	2.936	.1178	.0988	1.260

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**68.87**	**4.691**	**2.026**	**-.0221**	**.0019**	**.3140**
#1	68.91	4.726	2.022	-.0229	.0019	.3146
#2	68.84	4.656	2.030	-.0213	.0019	.3134

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2403.2**	**69066.**	**6285.4**
#1	2400.9	68972.	6275.6
#2	2405.5	69160.	6295.2

Sample Name: K0810446-001D Acquired: 11/12/2008 19:38:56 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**17.18**	**.0055**	**.0085**	**.5058**	**.0001**	**.1486**	**.0022**	F **43.52**
#1	17.20	.0063	.0092	.5061	.0001	.1492	.0022	43.60
#2	17.16	.0048	.0078	.5055	.0001	.1479	.0022	43.44

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0413**	**.0041**	**1.159**	**10.13**	**.0348**	**13.02**	**1.201**	**.0226**
#1	.0413	.0036	1.161	10.20	.0342	13.03	1.202	.0227
#2	.0412	.0046	1.157	10.07	.0355	13.02	1.200	.0226

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0587**	**17.25**	**.0254**	**.0053**	**3.018**	**.1204**	**.1003**	**1.292**
#1	.0587	17.26	.0254	.0054	3.020	.1208	.1000	1.293
#2	.0587	17.23	.0254	.0053	3.017	.1201	.1005	1.292

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**70.72**	**4.721**	**2.134**	**-.0254**	**.0024**	**.3179**
#1	70.61	4.709	2.139	-.0258	.0030	.3183
#2	70.83	4.733	2.130	-.0250	.0019	.3174

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2439.3**	**70585.**	**6387.0**
#1	2446.3	70484.	6393.1
#2	2432.3	70686.	6380.9

Sample Name: K0810446-001S Acquired: 11/12/2008 19:42:10 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**19.46**	**.4241**	**.4681**	**2.484**	**.0460**	**.6222**	**.0483**	F **44.20**
#1	19.43	.4246	.4729	2.481	.0460	.6229	.0483	44.17
#2	19.48	.4235	.4633	2.488	.0460	.6215	.0483	44.24

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2292**	**.4881**	**1.454**	**11.36**	**.5121**	**13.26**	**1.707**	**.5107**
#1	.2284	.4872	1.454	11.39	.5125	13.20	1.708	.5101
#2	.2300	.4890	1.454	11.33	.5117	13.31	1.706	.5113

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5273**	**17.56**	**.4293**	**.0540**	**3.116**	**2.500**	**.5905**	**1.745**
#1	.5266	17.56	.4279	.0540	3.105	2.498	.5905	1.746
#2	.5280	17.56	.4306	.0539	3.128	2.503	.5905	1.745

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**74.30**	**3.674**	**2.265**	**.4657**	**.0015**	**2.773**
#1	74.31	3.669	2.254	.4647	.0018	2.775
#2	74.29	3.679	2.275	.4666	.0011	2.771

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2431.4**	**70175.**	**6413.8**
#1	2436.0	70086.	6420.5
#2	2426.9	70264.	6407.1

Sample Name: K0810272-001 Acquired: 11/12/2008 19:45:19 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **166.3**	**-.0060**	**.0593**	**.0372**	**.0015**	F **.0057**	**-.0004**	**1.180**
#1	166.9	-.0074	.0601	.0371	.0015	.0063	-.0004	1.184
#2	165.8	-.0046	.0585	.0373	.0016	.0051	-.0004	1.176

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0169**	**.0101**	**.1200**	F **28.88**	**.0151**	**3.045**	**.1960**	**.0010**
#1	.0169	.0100	.1201	28.68	.0151	3.052	.1946	.0010
#2	.0169	.0101	.1200	29.09	.0151	3.039	.1974	.0009

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0374**	**.7746**	**.0051**	**-.0011**	**.1650**	**.0119**	**.0149**	**.1014**
#1	.0372	.7490	.0046	-.0011	.1575	.0117	.0148	.1016
#2	.0376	.8002	.0056	-.0011	.1726	.0122	.0150	.1011

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.6903**	**5.255**	**.0924**	**-.0079**	**.0152**	**.0092**
#1	.6866	5.229	.0920	-.0086	.0155	.0093
#2	.6940	5.281	.0928	-.0072	.0150	.0091

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	3096.3	86993.	7897.6
#1	3101.1	87079.	7852.2
#2	3091.5	86907.	7943.0

Sample Name: K0810459-001 Acquired: 11/12/2008 19:48:30 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158 *
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**8.278**	**.0023**	**.0085**	**.5578**	**.0001**	F **.0121**	**.0007**	F>**900.0**
#1	8.247	.0033	.0096	.5581	.0001	.0120	.0007	1556.
#2	8.309	.0012	.0073	.5574	.0001	.0122	.0008	1553.

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0320**	**.0020**	**.1936**	**7.282**	**-.0010**	F **34.51**	**1.243**	**.0079**
#1	.0319	.0017	.1939	7.277	-.0011	34.56	1.243	.0080
#2	.0320	.0023	.1934	7.287	-.0010	34.45	1.244	.0078

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0231**	**.9183**	**.0041**	**-.0005**	**17.89**	**.0255**	**.0193**	**.1157**
#1	.0235	.9414	.0038	-.0005	17.93	.0260	.0191	.1155
#2	.0226	.8951	.0043	-.0004	17.85	.0250	.0195	.1159

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.647**	**7.203**	**.5004**	**-.0201**	**.0252**	**2.120**
#1	3.627	7.221	.5040	-.0199	.0253	2.124
#2	3.667	7.184	.4969	-.0203	.0251	2.117

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2176.3**	**64208.**	**5789.6**
#1	2185.9	64079.	5779.9
#2	2166.8	64336.	5799.4

* dilute
MMR 11/13/08

Sample Name: K0810459-002 Acquired: 11/12/2008 19:52:31 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158 *
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.505**	**.0017**	**.0092**	**.6663**	**.0002**	F **.0146**	**.0012**	F>**900.0**
#1	9.523	.0018	.0077	.6670	.0002	.0143	.0012	1664.
#2	9.486	.0016	.0106	.6656	.0002	.0149	.0011	1671.

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0476**	**.0039**	**.2427**	**9.405**	**.0004**	F **39.47**	**2.410**	**.0047**
#1	.0471	.0040	.2425	9.425	.0006	39.47	2.403	.0048
#2	.0481	.0038	.2429	9.386	.0001	39.48	2.417	.0047

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0358**	**.8695**	**.0025**	**.0001**	**18.93**	**.0239**	**.0200**	**.2525**
#1	.0359	.8805	.0024	.0000	18.95	.0250	.0207	.2537
#2	.0357	.8585	.0025	.0002	18.92	.0228	.0194	.2513

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.706**	**8.597**	**.5444**	**-.0160**	**.0271**	**2.393**
#1	3.715	8.628	.5439	-.0160	.0275	2.394
#2	3.696	8.567	.5449	-.0159	.0267	2.391

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2162.6**	**63025.**	**5656.6**
#1	2157.1	63302.	5677.0
#2	2168.0	62748.	5636.2

* dilute
MMR
11/13/08

Sample Name: CCVA4 Acquired: 11/12/2008 19:56:28 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2628**	**.2167**	**.2521**	**.2545**	**.2619**	**.2563**	**.2639**	**.2548**	**.2783**
Stddev	.0000	.0001	.0008	.0016	.0001	.0007	.0022	.0001	.0072
%RSD	.0179	.0273	.3018	.6314	.0523	.2790	.8323	.0455	2.596
#1	.2628	.2167	.2526	.2557	.2618	.2558	.2654	.2549	.2834
#2	.2628	.2167	.2515	.2534	.2620	.2568	.2623	.2548	.2732
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	None
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2589**	**.2549**	**.2558**	**.2603**	**.2537**	**.2605**	**.2693**	**.2639**	**.2590**
Stddev	.0011	.0001	.0000	.0015	.0020	.0099	.0013	.0002	.0030
%RSD	.4331	.0577	.0065	.5861	.7831	3.812	.4968	.0820	1.166
#1	.2581	.2550	.2558	.2592	.2551	.2535	.2702	.2637	.2612
#2	.2597	.2548	.2558	.2614	.2523	.2676	.2683	.2640	.2569
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2542**	**.2532**	**2.561**	**.2549**	**.2555**	**.4147**	**.2551**	**.2583**	**.2529**
Stddev	.0002	.0008	.001	.0006	.0000	.0008	.0015	.0007	.0001
%RSD	.0887	.3190	.0189	.2160	.0164	.1845	.5880	.2666	.0379
#1	.2544	.2538	2.562	.2553	.2555	.4141	.2561	.2578	.2529
#2	.2540	.2526	2.561	.2545	.2555	.4152	.2540	.2588	.2530
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Sample Name: CCVA4 Acquired: 11/12/2008 19:56:28 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0026**	**.1577**	**.2573**	**.2545**	**-.0004**	**.0001**
Stddev	.0012	.0178	.0006	.0008	.0003	.0000
%RSD	44.21	11.31	.2378	.3197	82.62	5.792
#1	.0035	.1451	.2569	.2550	-.0002	.0001
#2	.0018	.1703	.2578	.2539	-.0006	.0001
Check ?	None	None	Chk Pass	Chk Pass	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2429.1**	**68040.**	**6052.1**
Stddev	6.3	93.	24.4
%RSD	.25932	.13680	.40320
#1	2433.5	67974.	6034.9
#2	2424.6	68106.	6069.4

Sample Name: CCVB4   Acquired: 11/12/2008 19:59:25   Type: QC
Method: 090708(v58)   Mode: CONC   Corr. Factor: 1.000000
User: admin   StarLIMS#: 133660   File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.552**	**9.508**	**.0001**	**1.019**	**10.56**	**.0000**	**.0023**	**.0001**	**10.45**
Stddev	.013	.008	.0010	.001	.01	.0000	.0010	.0001	.03
%RSD	.1699	.0822	812.5	.1407	.1137	104.7	41.12	146.8	.2964
#1	7.561	9.503	-.0006	1.020	10.57	.0000	.0016	.0002	10.47
#2	7.543	9.514	.0008	1.018	10.55	.0000	.0030	.0000	10.43
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None	Chk Pass
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0006**	**.0009**	**10.10**	**.0012**	**10.10**	**10.55**	**.0008**	**.0004**
Stddev	.0001	.0002	.0000	.06	.0010	.03	.01	.0000	.0021
%RSD	16.64	29.79	4.306	.6263	83.24	.2532	.1324	4.748	459.7
#1	.0005	.0005	.0009	10.06	.0020	10.08	10.56	.0008	.0019
#2	.0006	.0007	.0009	10.15	.0005	10.11	10.54	.0008	-.0010
Check ?	None	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	None
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0011**	**10.43**	**.0004**	**-.0004**	**10.71**	**-.0005**	**-.0004**	**.0001**
Stddev	.0001	.0002	.03	.0018	.0001	.01	.0002	.0000	.0004
%RSD	20.68	18.58	.3178	431.7	19.80	.1260	42.44	10.82	312.7
#1	.0002	.0012	10.41	-.0008	-.0005	10.72	-.0003	-.0003	-.0001
#2	.0003	.0009	10.46	.0017	-.0004	10.70	-.0006	-.0004	.0004
Check ?	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value									
Range									

Sample Name: CCVB4 Acquired: 11/12/2008 19:59:25 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.16**	**10.11**	**.0008**	**-.0011**	**1.064**	**1.052**
Stddev	.01	.01	.0001	.0020	.002	.001
%RSD	.1205	.0785	12.20	178.3	.1672	.0509
#1	10.17	10.10	.0007	.0003	1.065	1.053
#2	10.15	10.11	.0009	-.0025	1.062	1.052
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2376.6**	**66738.**	**5904.2**
Stddev	2.8	132.	5.1
%RSD	.11974	.19803	.08653
#1	2374.6	66832.	5900.6
#2	2378.6	66645.	5907.8

Sample Name: CCB4 Acquired: 11/12/2008 20:02:34 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021**	**.0018**	**.0010**	**.0011**	**.0020**	**.0000**	**.0007**	**.0001**	**.0005**
Stddev	.0002	.0022	.0004	.0004	.0001	.0000	.0006	.0000	.0043
%RSD	9.973	122.4	42.85	37.32	5.578	548.9	77.65	58.24	832.8
#1	.0022	.0034	.0007	.0008	.0019	.0000	.0003	.0000	-.0025
#2	.0019	.0002	.0013	.0014	.0021	.0000	.0011	.0001	.0036
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**-.0001**	**.0003**	**-.0009**	**-.0001**	**.0341**	**.0028**	**.0001**	**.0001**
Stddev	.0000	.0003	.0001	.0032	.0006	.0052	.0008	.0000	.0010
%RSD	5.298	381.9	36.07	347.3	1004.	15.40	29.71	31.74	1151.
#1	.0002	.0001	.0002	.0013	.0004	.0378	.0033	.0001	-.0006
#2	.0002	-.0003	.0004	-.0032	-.0005	.0304	.0022	.0002	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0006**	**.0000**	**.0000**	**.0009**	**-.0004**	**-.0439**	**-.0010**	**.0000**	**.0000**
Stddev	.0000	.0002	.0335	.0032	.0003	.0056	.0011	.0004	.000
%RSD	1.171	572.1	413700.	354.1	77.63	12.70	111.2	13690.	1886.
#1	.0006	.0002	.0237	.0032	-.0002	-.0400	-.0017	-.0003	.0001
#2	.0006	-.0001	-.0237	-.0014	-.0007	-.0479	-.0002	.0003	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: CCB4 Acquired: 11/12/2008 20:02:34 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0024**	**.0156**	**-.0003**	**-.0027**	**.0000**	**.0002**
Stddev	.0037	.0109	.0004	.0003	.0006	.0000
%RSD	155.9	69.52	141.6	10.25	1725.	21.12
#1	-.0002	.0233	.0000	-.0025	-.0004	.0002
#2	.0050	.0080	-.0005	-.0029	.0005	.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2370.9**	**66230.**	**5836.8**
Stddev	29.7	157.	2.4
%RSD	1.2534	.23766	.04138
#1	2349.9	66119.	5838.5
#2	2392.0	66342.	5835.1

Sample Name: K0810459-003 Acquired: 11/12/2008 20:05:07 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158 *
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.392**	**-.0005**	**.0085**	**.6916**	**.0003**	F **.0129**	**.0012**	F>**900.0**
#1	9.404	-.0013	.0072	.6919	.0002	.0138	.0012	1724.
#2	9.379	.0003	.0098	.6912	.0003	.0121	.0011	1705.

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0446**	**.0043**	**.1899**	**9.820**	**-.0006**	F **39.86**	**2.456**	**.0032**
#1	.0447	.0041	.1893	9.799	-.0009	39.91	2.462	.0033
#2	.0446	.0045	.1905	9.840	-.0003	39.81	2.451	.0031

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0337**	**1.305**	**.0015**	**-.0008**	F **25.68**	**.0235**	**.0174**	**.2248**
#1	.0341	1.309	.0006	.0001	25.67	.0242	.0178	.2252
#2	.0334	1.302	.0025	-.0016	25.70	.0228	.0170	.2243

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.565**	**9.798**	**.6115**	**-.0141**	**.0289**	**2.542**
#1	4.576	9.825	.6081	-.0148	.0281	2.541
#2	4.554	9.771	.6150	-.0135	.0296	2.542

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2222.0**	**64637.**	**5827.9**
#1	2220.7	64691.	5803.3
#2	2223.2	64582.	5852.5

* dilute
unmR
11/13/08

Sample Name: K0810459-004 Acquired: 11/12/2008 20:09:11 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	~~Ca3158~~
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	~~ppm~~
Avg	**13.69**	**.0027**	**.0099**	**.7740**	**.0003**	F **.0135**	**.0016**	~~F>900.0~~
#1	13.75	.0024	.0077	.7762	.0003	.0137	.0016	~~1806.~~
#2	13.64	.0029	.0121	.7719	.0003	.0133	.0016	~~1818.~~

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2067**	**.0062**	**.2089**	**11.07**	**.0026**	F **43.29**	**2.889**	**.0046**
#1	.2065	.0064	.2087	11.09	.0028	43.31	2.882	.0048
#2	.2070	.0060	.2091	11.05	.0024	43.27	2.897	.0045

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1265**	**1.223**	**.0029**	**-.0002**	F **24.91**	**.0289**	**.0221**	**.3706**
#1	.1258	1.235	.0010	-.0001	24.92	.0277	.0223	.3679
#2	.1272	1.211	.0049	-.0002	24.90	.0302	.0220	.3734

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**5.241**	**10.30**	**.8995**	**-.0173**	**.0298**	**2.702**
#1	5.193	10.29	.8907	-.0197	.0299	2.706
#2	5.289	10.31	.9082	-.0149	.0298	2.697

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2134.5**	**62450.**	**5594.8**
#1	2142.7	62617.	5602.4
#2	2126.3	62283.	5587.2

X dilute
MMR
11/13/08

Sample Name: K0809765-MB   Acquired: 11/12/2008 20:13:14   Type: Unk
Method: 090708(v58)   Mode: CONC   Corr. Factor: 1.000000
User: admin   StarLIMS#: 133660   File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**.0004**	**-.0005**	**-.0023**	**-.0005**	**-.0001**	**.0019**	**.0000**	**.0171**
#1	.0001	.0018	-.0006	-.0028	-.0005	-.0001	.0018	.0001	.0157
#2	.0000	-.0009	-.0005	-.0019	-.0005	-.0001	.0021	.0000	.0185

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0002**	**-.0001**	**-.0049**	**.0000**	**.0006**	**.0000**	**.0000**	**-.0002**
#1	-.0001	-.0001	.0000	-.0055	-.0003	.0002	.0000	.0001	-.0002
#2	.0002	-.0004	-.0003	-.0043	.0003	.0010	.0000	-.0001	-.0002

Elem	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0213**	**.0020**	**-.0003**	**-.0066**	**-.0002**	**.0003**	**.0017**	**-.0003**	**.0249**
#1	-.0189	.0005	-.0001	-.0016	.0001	.0006	.0018	-.0015	.0169
#2	-.0237	.0036	-.0004	-.0116	-.0004	.0000	.0015	.0009	.0330

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	**-.0005**	**-.0031**	**-.0001**	**.0000**
#1	-.0005	-.0027	-.0004	.0000
#2	-.0005	-.0035	.0001	.0000

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2378.9**	**67100.**	**5990.1**
#1	2377.1	67052.	5985.2
#2	2380.7	67147.	5995.0

Sample Name: LCSW Acquired: 11/12/2008 20:15:46 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158	Cr2677
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.722**	**2.560**	**2.464**	**5.296**	**.1293**	**1.081**	**1.256**	**12.81**	**.5137**
#1	4.728	2.556	2.463	5.297	.1297	1.079	1.254	12.81	.5139
#2	4.715	2.565	2.465	5.296	.1289	1.083	1.257	12.82	.5135

Elem	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020	Ni2216	K_7664
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.300**	**.6795**	**2.522**	**2.576**	**12.96**	**1.317**	**1.060**	**1.269**	**12.89**
#1	1.300	.6794	2.505	2.572	12.97	1.315	1.059	1.269	12.88
#2	1.300	.6797	2.538	2.580	12.94	1.319	1.062	1.269	12.90

Elem	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062	P_2149	Si2516	Ti3361
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.345**	**.6563**	**13.33**	**-.0013**	**1.317**	**1.235**	**-.0016**	**.0186**	**-.0006**
#1	2.348	.6568	13.34	-.0006	1.320	1.230	.0007	.0240	-.0006
#2	2.343	.6558	13.32	-.0021	1.313	1.239	-.0038	.0132	-.0007

Elem	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm
Avg	**2.727**	**.0003**	**.0005**
#1	2.720	.0001	.0005
#2	2.733	.0005	.0005

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2349.7**	**66715.**	**5970.0**
#1	2351.4	66839.	5961.2
#2	2347.9	66591.	5978.9

Sample Name: K0809765-002 Acquired: 11/12/2008 20:18:48 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.550**	**.0047**	**.0136**	**.2286**	**.0001**	**.3188**	**.0042**	F **79.38**
#1	2.551	.0036	.0146	.2280	.0001	.3230	.0042	79.22
#2	2.549	.0059	.0126	.2291	.0001	.3146	.0042	79.53

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0080**	**.0083**	**.1814**	**4.072**	**.0110**	**16.67**	**.2279**	**.0065**
#1	.0078	.0083	.1820	4.080	.0103	16.66	.2295	.0066
#2	.0082	.0084	.1807	4.065	.0116	16.67	.2263	.0063

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0367**	**200.3**	**.0070**	**.0010**	F **38.46**	**.0017**	**.0198**	**.1389**
#1	.0364	199.7	.0092	.0012	38.45	.0020	.0199	.1390
#2	.0370	200.8	.0049	.0008	38.47	.0014	.0198	.1387

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**2.995**	**14.74**	**.0844**	**-.0098**	**.0024**	**.5516**
#1	2.994	14.67	.0846	-.0090	.0028	.5501
#2	2.996	14.81	.0841	-.0106	.0019	.5530

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2309.5**	**66288.**	**5991.7**
#1	2308.5	65918.	5989.1
#2	2310.5	66657.	5994.3

Sample Name: K0809765-003 Acquired: 11/12/2008 20:22:03 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0257**	F **.0082**	**-.0041**	**.0234**	**.0223**	**-.0004**	**.5849**	**-.0003**
#1	-.0250	.0085	-.0035	.0219	.0222	-.0005	.5829	-.0002
#2	-.0263	.0078	-.0047	.0249	.0223	-.0004	.5869	-.0004

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **66.69**	F **.0002**	**.0003**	**-.0001**	F **104.5**	**.0025**	F **25.96**	**5.291**
#1	66.82	.0001	.0002	-.0002	104.2	.0027	25.99	5.269
#2	66.55	.0003	.0004	-.0001	104.8	.0023	25.92	5.313

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0020**	**.0066**	**4.017**	**.0009**	**-.0005**	F **37.05**	**.0021**	**.0033**
#1	.0018	.0066	4.012	.0021	-.0005	37.13	.0022	.0040
#2	.0021	.0065	4.021	-.0003	-.0005	36.98	.0019	.0026

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0026**	**1.030**	**30.99**	**.0003**	**-.0096**	**.0024**	**.2927**
#1	-.0028	1.032	30.98	.0003	-.0088	.0027	.2933
#2	-.0024	1.029	30.99	.0002	-.0104	.0021	.2922

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2329.1**	**67215.**	**6094.4**
#1	2329.7	67234.	6077.8
#2	2328.5	67196.	6111.0

Sample Name: K0809765-003D Acquired: 11/12/2008 20:25:26 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0266**	F **.0081**	**-.0039**	**.0242**	**.0231**	**-.0004**	**.6047**	**-.0005**
#1	-.0265	.0086	-.0038	.0249	.0230	-.0006	.6063	-.0005
#2	-.0267	.0076	-.0039	.0234	.0231	-.0003	.6030	-.0005

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **68.84**	F **-.0005**	**.0003**	**-.0008**	F **107.5**	**.0016**	F **26.86**	**5.430**
#1	68.77	-.0005	.0000	-.0008	107.6	.0007	26.75	5.443
#2	68.92	-.0005	.0006	-.0008	107.4	.0025	26.96	5.417

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0017**	**.0069**	**4.170**	**-.0007**	**-.0006**	F **38.22**	**.0019**	**.0036**
#1	.0022	.0068	4.170	-.0007	-.0010	38.02	.0005	.0036
#2	.0012	.0070	4.171	-.0006	-.0002	38.43	.0033	.0036

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0019**	**1.062**	**32.15**	**.0001**	**-.0106**	**.0025**	**.3020**
#1	-.0021	1.063	32.23	.0002	-.0094	.0025	.3012
#2	-.0017	1.060	32.06	.0000	-.0119	.0026	.3028

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2287.0**	**66324.**	**5977.6**
#1	2287.5	66316.	5986.1
#2	2286.6	66332.	5969.1

Sample Name: K0809765-003L Acquired: 11/12/2008 20:28:48 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/5 DIL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0059**	F **.0019**	**.0002**	**.0034**	**.0039**	**-.0001**	**.1170**	**-.0004**
#1	-.0059	.0026	.0009	.0029	.0040	-.0001	.1174	-.0004
#2	-.0059	.0013	-.0005	.0039	.0038	-.0001	.1167	-.0004

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**13.66**	F **.0001**	**-.0002**	**.0001**	F **21.28**	**-.0003**	**5.328**	**1.107**
#1	13.67	-.0001	-.0003	.0004	21.28	-.0005	5.329	1.112
#2	13.66	.0002	-.0002	-.0003	21.27	-.0001	5.326	1.102

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0010**	**.8135**	**.0016**	**-.0004**	**7.377**	**-.0009**	**.0005**
#1	.0005	.0008	.8085	.0016	-.0006	7.405	-.0003	.0002
#2	.0004	.0011	.8185	.0015	-.0003	7.350	-.0014	.0009

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0006**	**.1993**	**6.295**	**-.0001**	**-.0034**	**.0006**	**.0589**
#1	-.0005	.1970	6.316	.0000	-.0016	.0005	.0590
#2	-.0008	.2016	6.274	-.0003	-.0052	.0007	.0587

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2436.7**	**68617.**	**6084.2**
#1	2438.6	68478.	6081.7
#2	2434.9	68757.	6086.7

Sample Name: K0809765-003S   Acquired: 11/12/2008 20:32:05   Type: Unk
Method: 090708(v58)   Mode: CONC   Corr. Factor: 1.000000
User: admin   StarLIMS#: 133660   File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.998**	**.5078**	**.9815**	**2.097**	**.0501**	**1.652**	**.0479**	F **67.01**
#1	2.001	.5082	.9824	2.103	.0500	1.651	.0479	67.02
#2	1.996	.5074	.9805	2.091	.0502	1.653	.0479	66.99

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1945**	**.5093**	**.2711**	F **106.8**	**.5066**	F **26.06**	**5.819**	**1.032**
#1	.1937	.5083	.2712	107.4	.5081	26.03	5.811	1.032
#2	.1953	.5103	.2709	106.2	.5052	26.10	5.827	1.033

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4973**	**4.060**	**.9291**	**.0504**	F **37.20**	**.0029**	**.5145**	**.4628**
#1	.4966	4.064	.9291	.0511	37.17	.0020	.5128	.4628
#2	.4981	4.057	.9291	.0497	37.22	.0039	.5162	.4629

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**1.035**	**31.32**	**.0001**	**1.056**	**.0027**	**.2941**
#1	1.035	31.47	.0001	1.056	.0024	.2948
#2	1.035	31.16	.0002	1.056	.0029	.2933

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2278.8**	**65720.**	**5979.4**
#1	2283.7	65879.	5993.4
#2	2273.9	65561.	5965.5

Sample Name: K0809765-004 Acquired: 11/12/2008 20:35:17 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0205**	F **.0144**	**-.0049**	**.0074**	**.0503**	**-.0004**	**.0901**	**-.0002**
#1	-.0212	.0143	-.0046	.0060	.0504	-.0004	.0907	-.0003
#2	-.0199	.0145	-.0052	.0088	.0501	-.0005	.0894	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **92.63**	F **.0001**	**.0004**	**-.0004**	F **107.8**	**.0008**	F **64.67**	**5.182**
#1	92.79	.0002	.0002	-.0007	108.1	.0017	64.84	5.203
#2	92.47	.0001	.0007	-.0001	107.6	-.0002	64.49	5.161

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**.0412**	**7.947**	**.0014**	**-.0007**	F **47.25**	**.0028**	**.0466**
#1	.0014	.0411	7.972	.0002	-.0008	47.42	.0019	.0468
#2	.0008	.0412	7.921	.0025	-.0005	47.09	.0036	.0465

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **-.0027**	**1.988**	**31.25**	**.0011**	**-.0095**	**.0063**	**.4410**
#1	-.0027	1.985	31.31	.0009	-.0087	.0066	.4419
#2	-.0027	1.991	31.18	.0013	-.0103	.0060	.4400

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2330.1**	**67093.**	**6010.5**
#1	2334.7	67052.	6014.5
#2	2325.5	67134.	6006.6

Sample Name: CCVA5 Acquired: 11/12/2008 20:38:41 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2683**	**.2167**	**.2569**	**.2540**	**.2678**	**.2618**	**.2693**	**.2594**	**.4023**
Stddev	.0012	.0003	.0012	.0018	.0002	.0018	.0009	.0001	.0083
%RSD	.4484	.1207	.4551	.7198	.0573	.6935	.3419	.0324	2.064
#1	.2674	.2165	.2561	.2527	.2679	.2605	.2687	.2594	.4082
#2	.2691	.2169	.2577	.2553	.2677	.2631	.2700	.2595	.3964
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	None
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2645**	**.2606**	**.2610**	**.2697**	**.2575**	**.2784**	**.2782**	**.2712**	**.2620**
Stddev	.0017	.0006	.0003	.0014	.0036	.0127	.0009	.0012	.0011
%RSD	.6584	.2185	.1145	.5044	1.403	4.545	.3303	.4376	.4023
#1	.2633	.2602	.2608	.2706	.2600	.2694	.2788	.2703	.2613
#2	.2658	.2610	.2613	.2687	.2549	.2873	.2775	.2720	.2628
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2597**	**.2581**	**2.624**	**.2568**	**.2567**	**.4196**	**.2600**	**.2648**	**.2564**
Stddev	.0009	.0004	.034	.0008	.0005	.0048	.0007	.0035	.0003
%RSD	.3517	.1506	1.308	.2961	.1843	1.152	.2837	1.338	.1027
#1	.2590	.2578	2.649	.2573	.2570	.4162	.2605	.2623	.2566
#2	.2603	.2584	2.600	.2562	.2564	.4230	.2595	.2673	.2562
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Sample Name: CCVA5 Acquired: 11/12/2008 20:38:41 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0023**	**.1606**	**.2624**	**.2608**	**-.0013**	**.0003**
Stddev	.0011	.0099	.0016	.0020	.0016	.0001
%RSD	49.72	6.188	.6131	.7724	124.4	47.78
#1	.0015	.1676	.2613	.2594	-.0002	.0003
#2	.0031	.1536	.2636	.2623	-.0024	.0002
Check ?	None	None	Chk Pass	Chk Pass	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2390.1**	**67102.**	**5926.7**
Stddev	3.1	96.	27.2
%RSD	.12991	.14272	.45815
#1	2392.3	67035.	5907.5
#2	2387.9	67170.	5945.9

Sample Name: CCVB5 Acquired: 11/12/2008 20:41:37 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.512**	**9.494**	**-.0007**	**1.021**	**10.48**	**.0001**	**.0037**	**.0002**	**10.42**
Stddev	.006	.002	.0016	.002	.08	.0000	.0001	.0000	.02
%RSD	.0870	.0233	239.2	.1552	.7941	9.872	2.437	4.025	.1583
#1	7.517	9.493	-.0018	1.022	10.42	.0001	.0038	.0002	10.41
#2	7.508	9.496	.0005	1.020	10.53	.0001	.0037	.0002	10.43
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None	Chk Pass
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0005**	**.0005**	**10.02**	**.0003**	**9.958**	**10.52**	**.0009**	**.0003**
Stddev	.0000	.0008	.0003	.02	.0005	.045	.03	.0001	.0001
%RSD	49.28	168.5	54.79	.1605	132.9	.4564	.3017	7.117	45.07
#1	.0001	-.0001	.0007	10.00	.0007	9.926	10.50	.0009	.0004
#2	.0000	.0010	.0003	10.03	.0000	9.990	10.55	.0010	.0002
Check ?	None	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	None
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0011**	**10.45**	**.0030**	**-.0001**	**10.72**	**-.0002**	**.0002**	**-.0001**
Stddev	.0001	.0005	.00	.0015	.0002	.01	.0004	.0003	.0000
%RSD	17.71	45.15	.0408	48.44	173.5	.0907	210.1	116.1	33.48
#1	.0006	.0008	10.45	.0040	.0000	10.71	-.0004	.0000	-.0001
#2	.0008	.0015	10.44	.0020	-.0002	10.72	.0001	.0004	-.0001
Check ?	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value									
Range									

Sample Name: CCVB5 Acquired: 11/12/2008 20:41:37 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**10.08**	**10.06**	**.0008**	**-.0020**	**1.061**	**1.051**
Stddev	.02	.01	.0002	.0015	.001	.002
%RSD	.1677	.0528	21.99	71.99	.0685	.1609
#1	10.09	10.07	.0007	-.0031	1.061	1.050
#2	10.07	10.06	.0009	-.0010	1.062	1.052
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2387.2**	**67181.**	**5931.9**
Stddev	1.1	24.	13.0
%RSD	.04753	.03625	.21912
#1	2386.3	67164.	5941.1
#2	2388.0	67198.	5922.7

Sample Name: CCB5 Acquired: 11/12/2008 20:44:46 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0030**	**.0005**	**.0010**	**.0000**	**.0024**	**.0000**	**.0014**	**.0001**	**.0073**
Stddev	.0003	.0001	.0010	.001	.0002	.0001	.0010	.0000	.0048
%RSD	11.58	25.61	94.80	1463.	6.504	302.9	72.70	45.13	65.67
#1	.0027	.0005	.0003	-.0004	.0025	.0001	.0021	.0001	.0039
#2	.0032	.0004	.0017	.0003	.0023	.0000	.0007	.0001	.0107
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0001**	**-.0002**	**-.0001**	**-.0014**	**-.0002**	**.0226**	**.0032**	**.0000**	**.0002**
Stddev	.0002	.0005	.0000	.0029	.0003	.0086	.0005	.0000	.0020
%RSD	284.6	244.5	47.81	213.5	163.2	38.11	16.64	56.02	1005.
#1	.0002	.0001	-.0001	.0007	.0000	.0287	.0028	.0000	.0016
#2	-.0001	-.0005	-.0001	-.0034	-.0004	.0165	.0036	.0000	-.0012
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0001**	**.0248**	**.0013**	**-.0003**	**-.0316**	**.0003**	**.0001**	**.0000**
Stddev	.0000	.0000	.0174	.0001	.0003	.0031	.0007	.0002	.000
%RSD	3.194	7.956	70.33	9.776	123.2	9.881	287.6	175.7	975.2
#1	.0004	.0000	.0125	.0014	-.0005	-.0338	-.0003	.0002	-.0001
#2	.0004	.0001	.0371	.0012	.0000	-.0294	.0008	.0000	.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: CCB5 Acquired: 11/12/2008 20:44:46 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0014**	**.0150**	**-.0003**	**-.0008**	**-.0004**	**.0003**
Stddev	.0032	.0008	.0003	.0012	.0007	.0000
%RSD	222.0	5.223	137.0	148.1	164.0	3.121
#1	.0037	.0145	-.0005	.0000	.0001	.0003
#2	-.0008	.0156	.0000	-.0016	-.0009	.0003
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2402.2**	**66977.**	**5917.4**
Stddev	4.6	70.	5.8
%RSD	.19122	.10517	.09884
#1	2399.0	66927.	5921.6
#2	2405.5	67027.	5913.3

Sample Name: K0809765-007 Acquired: 11/12/2008 20:47:51 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0172**	F **.0104**	**-.0037**	**.0251**	**.0246**	**-.0003**	**.0537**	**-.0008**
#1	-.0174	.0105	-.0025	.0246	.0244	-.0002	.0542	-.0008
#2	-.0169	.0104	-.0049	.0256	.0247	-.0003	.0532	-.0008

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **47.89**	F **.0006**	**.0005**	**-.0003**	F **84.98**	**.0006**	**19.09**	**4.138**
#1	47.83	.0007	.0008	-.0004	85.12	.0002	19.03	4.145
#2	47.95	.0006	.0002	-.0002	84.84	.0010	19.15	4.131

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0038**	**4.550**	**-.0006**	**-.0006**	F **28.80**	**.0016**	**.0076**
#1	.0001	.0036	4.558	-.0006	-.0002	28.73	.0011	.0074
#2	.0004	.0041	4.542	-.0006	-.0010	28.86	.0020	.0077

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0012**	**1.994**	**31.60**	**.0020**	**-.0064**	**.0038**	**.2288**
#1	.0013	1.990	31.55	.0021	-.0058	.0046	.2290
#2	.0010	1.998	31.65	.0019	-.0070	.0031	.2286

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2336.1**	**66454.**	**5955.0**
#1	2338.6	66275.	5963.6
#2	2333.6	66633.	5946.3

Sample Name: K0809765-008 Acquired: 11/12/2008 20:51:09 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2712**	**.2688**	**.0013**	**.0082**	**.0332**	**-.0001**	**.2033**	**.0000**
#1	.2709	.2690	.0003	.0106	.0330	-.0002	.2030	.0000
#2	.2715	.2685	.0023	.0058	.0333	-.0001	.2036	.0000

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **38.80**	F **.0017**	**.0008**	**.0036**	F **30.58**	**.0038**	**15.90**	**1.615**
#1	38.62	.0019	.0010	.0036	30.78	.0037	15.81	1.614
#2	38.98	.0015	.0007	.0036	30.37	.0039	15.98	1.615

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0021**	**.0109**	**8.515**	**.0014**	**-.0004**	F **58.77**	**.0015**	**.0045**
#1	.0023	.0111	8.484	.0010	-.0001	58.35	.0016	.0046
#2	.0020	.0107	8.547	.0018	-.0007	59.19	.0013	.0044

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0090**	**1.208**	**25.73**	**.0071**	**-.0049**	**.0124**	**.2441**
#1	.0090	1.209	25.75	.0072	-.0046	.0129	.2433
#2	.0089	1.206	25.71	.0071	-.0051	.0120	.2449

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2333.9**	**66849.**	**6009.7**
#1	2331.8	66804.	6047.1
#2	2336.1	66894.	5972.2

Sample Name: K0809765-017 Acquired: 11/12/2008 20:54:25 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0018**	F **.0158**	**-.0005**	**.0114**	**.0192**	**-.0003**	**.1474**	**.0000**
#1	-.0017	.0168	-.0004	.0130	.0191	-.0002	.1472	.0000
#2	-.0019	.0148	-.0006	.0097	.0192	-.0003	.1476	.0000

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **53.15**	F **.0003**	**.0008**	**.0000**	F **51.08**	**.0032**	**16.77**	**1.653**
#1	53.20	.0005	.0007	-.0008	50.99	.0044	16.78	1.653
#2	53.11	.0001	.0010	.0009	51.18	.0019	16.77	1.654

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0077**	**5.080**	**.0035**	**-.0004**	F **99.62**	**.0009**	**.0018**
#1	-.0002	.0074	5.093	.0033	-.0006	99.37	.0014	.0017
#2	.0002	.0080	5.067	.0036	-.0002	99.87	.0004	.0018

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0026**	**2.576**	**34.15**	**.0010**	**-.0081**	**.0043**	**.2369**
#1	.0027	2.578	34.16	.0010	-.0087	.0038	.2371
#2	.0025	2.575	34.13	.0011	-.0075	.0047	.2367

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2347.0**	**66873.**	**5968.0**
#1	2352.7	66837.	5959.3
#2	2341.3	66910.	5976.7

Sample Name: K0809765-021 Acquired: 11/12/2008 20:57:49 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0136**	F **.0086**	**-.0029**	**.0123**	**.0123**	**-.0003**	**.0874**	**-.0012**
#1	-.0142	.0084	-.0031	.0100	.0123	-.0003	.0867	-.0012
#2	-.0131	.0089	-.0026	.0146	.0123	-.0004	.0881	-.0012

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **23.02**	F **.0002**	**.0018**	**.0000**	F **66.60**	**.0020**	**10.92**	**1.716**
#1	23.01	-.0001	.0018	-.0001	66.40	.0014	10.95	1.714
#2	23.03	.0005	.0018	.0001	66.81	.0025	10.90	1.718

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0033**	**1.258**	**.0016**	**-.0006**	**14.24**	**-.0002**	**.0018**
#1	.0001	.0030	1.256	.0019	-.0007	14.29	-.0004	.0018
#2	.0003	.0036	1.261	.0013	-.0004	14.19	.0001	.0018

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0013**	**.6789**	**31.96**	**.0000**	**-.0054**	**.0025**	**.1258**
#1	.0016	.6709	31.67	.0001	-.0064	.0024	.1261
#2	.0011	.6869	32.26	.0000	-.0045	.0025	.1255

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2413.1**	**67787.**	**6082.5**
#1	2419.3	67801.	6076.4
#2	2406.8	67773.	6088.6

Sample Name: K0810037-002 Acquired: 11/12/2008 21:01:04 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0088**	F **.0123**	**-.0030**	**.0055**	**.0314**	**-.0003**	**.7480**	**-.0001**
#1	-.0095	.0134	-.0043	.0060	.0315	-.0003	.7452	-.0001
#2	-.0080	.0112	-.0017	.0050	.0314	-.0003	.7508	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **63.71**	F **.0007**	**.0010**	**.0001**	F **63.98**	**.0013**	F **26.76**	**2.875**
#1	63.62	.0005	.0008	-.0001	64.31	.0010	26.74	2.870
#2	63.80	.0008	.0012	.0003	63.65	.0015	26.78	2.880

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0003**	**.0191**	**4.667**	**.0011**	**-.0007**	F **58.18**	**.0014**	**.0043**
#1	.0004	.0190	4.675	.0036	-.0003	58.09	.0013	.0045
#2	.0002	.0192	4.659	-.0015	-.0010	58.27	.0015	.0041

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0018**	**2.645**	**31.17**	**.0006**	**-.0066**	**.0030**	**.2960**
#1	.0016	2.627	31.11	.0008	-.0068	.0035	.2953
#2	.0020	2.663	31.24	.0005	-.0064	.0026	.2967

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2362.2**	**67808.**	**6052.6**
#1	2371.9	67566.	6059.8
#2	2352.6	68051.	6045.4

Sample Name: K0810037-003 Acquired: 11/12/2008 21:04:21 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0021**	F **.0097**	**-.0016**	**.0341**	**.0135**	**-.0001**	**.0953**	**-.0003**
#1	-.0023	.0098	-.0018	.0332	.0135	-.0001	.0962	-.0002
#2	-.0019	.0096	-.0013	.0349	.0135	-.0001	.0943	-.0004

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **40.88**	F **.0006**	**.0004**	**.0002**	F **30.39**	**.0024**	**11.68**	**4.263**
#1	40.78	.0002	.0003	.0001	30.32	.0024	11.64	4.266
#2	40.97	.0010	.0005	.0002	30.46	.0024	11.73	4.261

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0011**	**.0044**	**2.271**	**.0001**	**-.0003**	**19.17**	**.0009**	**.0041**
#1	.0009	.0046	2.254	-.0001	-.0004	19.12	.0009	.0037
#2	.0012	.0042	2.289	.0003	-.0003	19.23	.0010	.0046

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0025**	**1.508**	**31.52**	**.0012**	**-.0064**	**.0020**	**.1864**
#1	.0022	1.503	31.58	.0013	-.0059	.0019	.1857
#2	.0028	1.513	31.45	.0011	-.0069	.0020	.1871

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2403.4**	**68114.**	**6096.8**
#1	2404.5	68078.	6092.4
#2	2402.2	68150.	6101.2

Sample Name: K0810037-004 Acquired: 11/12/2008 21:07:39 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0180**	F **.0161**	**-.0038**	**.0146**	**.0475**	**-.0003**	**.5101**	**.0000**
#1	-.0179	.0159	-.0030	.0155	.0475	-.0004	.5120	.0000
#2	-.0181	.0163	-.0045	.0137	.0475	-.0003	.5082	-.0001

Elem	Ca3158	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **83.68**	F **.0012**	**.0008**	**-.0001**	F **98.73**	**.0015**	F **34.54**	**7.743**
#1	83.66	.0014	.0007	.0001	98.83	.0022	34.53	7.759
#2	83.69	.0009	.0010	-.0003	98.63	.0007	34.55	7.727

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0001**	**.0223**	**4.610**	**-.0013**	**-.0005**	F **71.06**	**.0020**	**.0106**
#1	-.0002	.0223	4.608	-.0015	-.0003	70.84	.0026	.0103
#2	.0001	.0222	4.611	-.0011	-.0007	71.28	.0014	.0109

Elem	Zn2062	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **.0027**	**2.341**	**31.60**	**.0021**	**-.0098**	**.0035**	**.4428**
#1	.0026	2.345	31.55	.0021	-.0080	.0035	.4426
#2	.0027	2.337	31.64	.0022	-.0115	.0034	.4431

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2303.6**	**66344.**	**5906.4**
#1	2301.2	66249.	5911.6
#2	2306.0	66438.	5901.2

Sample Name: K0810639-MB Acquired: 11/12/2008 21:11:09 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0019**	**.0002**	**-.0003**	**-.0070**	**-.0005**	**-.0002**	**.0013**	**-.0001**	**.0049**
#1	.0019	.0015	-.0001	-.0076	-.0007	-.0003	.0011	-.0001	.0101
#2	.0019	-.0011	-.0006	-.0064	-.0004	-.0002	.0014	.0000	-.0004

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020	Ni2216
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**-.0008**	**.0005**	**.0046**	**-.0004**	**.0013**	**.0003**	**-.0003**	**-.0002**
#1	.0005	-.0008	.0009	.0044	-.0003	.0024	.0002	.0000	-.0002
#2	.0003	-.0009	.0002	.0047	-.0006	.0001	.0003	-.0005	-.0001

Elem	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062	P_2149	Si2516
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0137**	**.0034**	**-.0003**	**-.0025**	**.0141**	**.0002**	**.0007**	**-.0053**	**.0138**
#1	.0129	.0035	-.0003	.0032	.0142	-.0001	.0008	-.0054	.0071
#2	.0144	.0032	-.0002	-.0081	.0140	.0004	.0006	-.0053	.0204

Elem	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm
Avg	**-.0019**	**-.0131**	**-.0008**	**-.0001**
#1	-.0019	-.0136	-.0008	-.0001
#2	-.0019	-.0126	-.0009	-.0001

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2498.8**	**69826.**	**6208.4**
#1	2502.4	69744.	6242.1
#2	2495.3	69908.	6174.7

Sample Name: LCSS Acquired: 11/12/2008 21:13:41 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**33.90**	**.4700**	**.8014**	**1.881**	**.3141**	**.5169**	**.4683**	**20.29**
#1	33.95	.4698	.8002	1.878	.3139	.5162	.4677	20.27
#2	33.85	.4702	.8026	1.884	.3143	.5176	.4690	20.31

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9312**	**.3087**	**.3929**	**69.50**	**.3529**	**11.16**	**1.117**	**.1496**
#1	.9293	.3087	.3930	69.36	.3535	11.13	1.115	.1493
#2	.9331	.3086	.3927	69.64	.3524	11.19	1.119	.1500

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4346**	**12.18**	**.3502**	F **.5639**	**3.591**	**.5246**	**.7845**	**1.995**
#1	.4348	12.14	.3506	.5642	3.583	.5248	.7841	1.993
#2	.4344	12.21	.3499	.5635	3.599	.5243	.7849	1.997

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.471**	**7.046**	**1.573**	**.4323**	**.0350**	**.1762**
#1	3.469	7.038	1.572	.4324	.0349	.1759
#2	3.473	7.054	1.575	.4322	.0351	.1764

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2664.5**	**75463.**	**6662.2**
#1	2665.1	75520.	6675.2
#2	2663.8	75405.	6649.2

Sample Name: K0810639-001 Acquired: 11/12/2008 21:16:52 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **112.6**	**.0057**	**.0689**	**1.203**	**.0019**	**.0653**	**.0120**	F **115.9**
#1	112.6	.0042	.0697	1.207	.0020	.0660	.0119	115.7
#2	112.6	.0072	.0682	1.199	.0019	.0645	.0122	116.1

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4799**	**.0867**	**.8243**	F **257.8**	**1.004**	F **30.28**	**7.779**	**.0186**
#1	.4806	.0861	.8228	258.5	1.002	30.30	7.831	.0186
#2	.4793	.0872	.8258	257.1	1.006	30.26	7.727	.0186

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1991**	**4.391**	**.0022**	**.0014**	**3.298**	**.0803**	**.5770**	**3.147**
#1	.1987	4.390	.0021	.0009	3.308	.0806	.5788	3.142
#2	.1996	4.391	.0023	.0019	3.288	.0799	.5753	3.152

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.695**	**7.274**	**10.59**	**-.0099**	**.0493**	**.4547**
#1	9.704	7.276	10.61	-.0093	.0490	.4555
#2	9.686	7.272	10.57	-.0104	.0496	.4540

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2632.4**	**75301.**	**6701.5**
#1	2633.4	75178.	6712.5
#2	2631.3	75425.	6690.5

Sample Name: CCVA6 Acquired: 11/12/2008 21:20:59 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2596**	**.2172**	**.2432**	**.2546**	**.2600**	**.2527**	**.2567**	**.2480**	**.3982**
Stddev	.0008	.0041	.0000	.0009	.0001	.0006	.0033	.0001	.0053
%RSD	.2930	1.890	.0107	.3696	.0264	.2225	1.286	.0234	1.329
#1	.2590	.2143	.2433	.2552	.2600	.2523	.2590	.2480	.4020
#2	.2601	.2201	.2432	.2539	.2599	.2531	.2544	.2481	.3945
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	None
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2566**	**.2508**	**.2504**	**.2778**	**.2453**	**.2467**	**.2764**	**.2641**	**.2467**
Stddev	.0005	.0009	.0007	.0149	.0007	.0110	.0002	.0016	.0036
%RSD	.2014	.3407	.2735	5.346	.2759	4.458	.0802	.6203	1.444
#1	.2570	.2502	.2499	.2883	.2457	.2544	.2765	.2653	.2493
#2	.2563	.2514	.2509	.2673	.2448	.2389	.2762	.2630	.2442
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2494**	**.2477**	**2.554**	**.2545**	**.2570**	**.3791**	**.2519**	**.2587**	**.2449**
Stddev	.0003	.0000	.035	.0006	.0014	.0112	.0000	.0001	.0001
%RSD	.1146	.0140	1.387	.2210	.5576	2.941	.0123	.0566	.0559
#1	.2496	.2477	2.579	.2541	.2560	.3712	.2519	.2588	.2449
#2	.2492	.2478	2.529	.2549	.2580	.3870	.2519	.2586	.2448
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Sample Name: CCVA6 Acquired: 11/12/2008 21:20:59 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0018**	**.1516**	**.2548**	**.2510**	**-.0005**	**.0003**
Stddev	.0003	.0100	.0003	.0007	.0007	.0000
%RSD	15.68	6.620	.1272	.2755	134.0	12.83
#1	.0020	.1587	.2551	.2505	.0000	.0003
#2	.0016	.1445	.2546	.2515	-.0010	.0004
Check ?	None	None	Chk Pass	Chk Pass	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2489.5**	**69036.**	**6037.4**
Stddev	.3	450.	6.6
%RSD	.01351	.65232	.10967
#1	2489.3	68718.	6032.8
#2	2489.8	69355.	6042.1

Sample Name: CCVB6 Acquired: 11/12/2008 21:23:55 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.265**	**9.402**	**.0002**	**1.013**	**10.20**	**.0002**	**.0043**	**.0000**	**10.14**
Stddev	.011	.005	.0004	.004	.06	.0000	.0004	.000	.03
%RSD	.1557	.0544	197.1	.4303	.6253	26.19	9.440	46.68	.2814
#1	7.257	9.406	.0004	1.016	10.24	.0001	.0046	.0000	10.12
#2	7.273	9.398	-.0001	1.010	10.15	.0002	.0040	.0000	10.16
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None	Chk Pass
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**-.0002**	**.0006**	**.0008**	**9.646**	**.0016**	**9.556**	**10.23**	**.0010**	**.0002**
Stddev	.0002	.0002	.0000	.019	.0006	.085	.04	.0000	.0010
%RSD	135.3	31.42	4.582	.1925	35.36	.8922	.3754	3.978	443.7
#1	.0000	.0008	.0008	9.659	.0012	9.495	10.21	.0010	-.0005
#2	-.0003	.0005	.0008	9.632	.0020	9.616	10.26	.0009	.0010
Check ?	None	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	None
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0007**	**.0014**	**10.12**	**.0020**	**.0000**	**10.42**	**-.0005**	**-.0002**	**.0000**
Stddev	.0001	.0003	.04	.0002	.000	.05	.0009	.0001	.0001
%RSD	12.58	21.52	.3774	8.916	35050.	.4726	196.2	52.56	323.4
#1	.0006	.0016	10.10	.0019	-.0003	10.39	-.0011	-.0003	-.0001
#2	.0008	.0012	10.15	.0022	.0003	10.46	.0002	-.0001	.0002
Check ?	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value									
Range									

Sample Name: CCVB6 Acquired: 11/12/2008 21:23:55 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.648**	**9.585**	**.0012**	**-.0019**	**1.022**	**1.020**
Stddev	.047	.028	.0002	.0001	.004	.003
%RSD	.4830	.2880	14.44	4.866	.3419	.3027
#1	9.615	9.605	.0013	-.0020	1.020	1.017
#2	9.681	9.566	.0010	-.0019	1.025	1.022
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2472.7**	**68962.**	**6018.6**
Stddev	10.4	21.	7.3
%RSD	.42010	.03069	.12067
#1	2480.0	68947.	6023.7
#2	2465.3	68977.	6013.5

Sample Name: CCB6 Acquired: 11/12/2008 21:27:05 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0033**	**.0024**	**.0001**	**-.0001**	**.0036**	**.0000**	**.0007**	**.0001**	**.0104**
Stddev	.0000	.0002	.0001	.0020	.0000	.000	.0001	.0000	.0050
%RSD	.8447	9.523	56.93	1885.	.5872	599.1	13.84	25.41	48.09
#1	.0033	.0026	.0001	.0013	.0037	.0000	.0008	.0001	.0139
#2	.0033	.0023	.0001	-.0015	.0036	.0000	.0006	.0001	.0069
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**.0001**	**.0002**	**.0009**	**-.0008**	**.0126**	**.0042**	**.0002**	**.0002**
Stddev	.000	.0002	.0001	.0003	.0004	.0092	.0010	.0000	.0008
%RSD	371.2	127.6	29.00	38.15	58.05	73.02	24.70	1.150	451.9
#1	.0000	.0003	.0001	.0007	-.0011	.0191	.0049	.0002	-.0004
#2	-.0001	.0000	.0002	.0011	-.0004	.0061	.0035	.0002	.0008
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0000**	**-.0002**	**-.0103**	**.0009**	**-.0001**	**-.0634**	**-.0003**	**-.0003**	**-.0002**
Stddev	.0001	.0000	.0047	.0023	.0001	.0025	.0009	.0007	.0001
%RSD	279.1	3.075	45.28	243.2	74.22	3.965	275.3	258.1	66.56
#1	.0000	-.0002	-.0136	.0025	-.0001	-.0652	.0003	.0002	-.0001
#2	.0001	-.0002	-.0070	-.0007	-.0002	-.0616	-.0010	-.0007	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: CCB6 Acquired: 11/12/2008 21:27:05 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0004**	**.0054**	**-.0002**	**-.0017**	**.0003**	**.0004**
Stddev	.0036	.0023	.0001	.0024	.0000	.0001
%RSD	927.1	41.67	42.77	139.7	12.62	14.71
#1	-.0021	.0070	-.0003	-.0034	.0003	.0004
#2	.0029	.0038	-.0001	.0000	.0002	.0004
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2420.3**	**67373.**	**5880.7**
Stddev	7.2	266.	22.9
%RSD	.29575	.39407	.38879
#1	2425.4	67186.	5896.8
#2	2415.3	67561.	5864.5

Sample Name: K0810639-002 Acquired: 11/12/2008 21:30:08 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **113.5**	**-.0064**	**.0370**	**.7690**	**.0019**	F **.0319**	**.0058**	F **29.87**
#1	113.4	-.0061	.0339	.7712	.0020	.0325	.0057	29.91
#2	113.6	-.0067	.0401	.7667	.0019	.0313	.0059	29.84

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2141**	**.0678**	**.3985**	F **180.8**	**.8206**	F **24.47**	**2.879**	**.0056**
#1	.2140	.0671	.3988	181.1	.8177	24.53	2.879	.0055
#2	.2142	.0685	.3981	180.5	.8236	24.41	2.878	.0057

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1315**	**3.870**	**.0043**	**.0014**	**2.420**	**.0347**	**.4833**	**1.979**
#1	.1313	3.882	.0053	.0011	2.430	.0337	.4831	1.975
#2	.1317	3.859	.0032	.0016	2.410	.0357	.4834	1.983

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.798**	**7.603**	**8.281**	**-.0122**	**.0434**	**.2920**
#1	6.797	7.631	8.277	-.0115	.0441	.2925
#2	6.798	7.574	8.284	-.0130	.0426	.2916

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2694.7**	**75568.**	**6769.0**
#1	2696.0	75482.	6746.7
#2	2693.4	75653.	6791.3

Sample Name: K0810639-003 Acquired: 11/12/2008 21:33:35 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **75.76**	**-.0017**	**.0165**	**.6735**	**.0015**	F **.0215**	**.0021**	F **72.48**
#1	75.91	.0000	.0175	.6731	.0016	.0216	.0021	72.31
#2	75.60	-.0033	.0156	.6740	.0014	.0214	.0021	72.65

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1331**	**.0626**	**.2262**	F **129.7**	**.4692**	F **20.45**	**1.709**	**.0025**
#1	.1336	.0626	.2261	129.6	.4689	20.41	1.709	.0025
#2	.1326	.0626	.2263	129.8	.4694	20.49	1.709	.0025

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1024**	**3.166**	**.0036**	**.0013**	**1.722**	**.0329**	**.3684**	**1.058**
#1	.1022	3.175	.0041	.0010	1.732	.0330	.3702	1.057
#2	.1025	3.157	.0031	.0016	1.711	.0328	.3667	1.059

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.748**	**6.313**	**6.776**	**-.0125**	**.0342**	**.3121**
#1	3.736	6.288	6.743	-.0117	.0347	.3123
#2	3.760	6.339	6.809	-.0134	.0338	.3119

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2636.8**	**74101.**	**6590.4**
#1	2640.2	74069.	6605.1
#2	2633.5	74132.	6575.7

Sample Name: K0810639-004 Acquired: 11/12/2008 21:36:50 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **91.01**	**-.0031**	**.0404**	**.8951**	**.0016**	F **.0433**	**.0047**	F **64.09**
#1	90.74	-.0013	.0411	.8945	.0016	.0426	.0047	63.88
#2	91.27	-.0050	.0397	.8956	.0016	.0440	.0048	64.29

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.3782**	**.0716**	**.5938**	F **197.8**	**.5147**	F **23.78**	**6.117**	**.0115**
#1	.3792	.0717	.5934	198.3	.5164	23.71	6.123	.0114
#2	.3772	.0714	.5942	197.3	.5129	23.84	6.111	.0116

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1415**	**3.498**	**.0015**	**.0003**	**2.603**	**.0720**	**.4552**	**1.931**
#1	.1414	3.485	.0026	.0003	2.603	.0727	.4536	1.929
#2	.1415	3.511	.0004	.0003	2.604	.0712	.4569	1.933

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**6.019**	**5.031**	**8.811**	**-.0105**	**.0387**	**.3403**
#1	6.015	5.014	8.813	-.0101	.0381	.3400
#2	6.024	5.048	8.810	-.0109	.0394	.3406

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2670.9**	**75293.**	**6704.9**
#1	2671.4	75281.	6720.9
#2	2670.4	75305.	6688.9

Sample Name: K0810639-005 Acquired: 11/12/2008 21:40:19 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **166.8**	**-.0025**	**.0538**	**1.031**	**.0029**	F **.0396**	**.0073**	F **83.07**
#1	168.0	-.0015	.0519	1.037	.0030	.0388	.0075	83.41
#2	165.7	-.0036	.0557	1.026	.0029	.0405	.0072	82.74

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2884**	**.0913**	**.5183**	F **225.8**	**.8352**	F **33.03**	**4.010**	**.0069**
#1	.2889	.0912	.5200	226.1	.8360	33.18	4.013	.0066
#2	.2880	.0914	.5166	225.5	.8344	32.87	4.006	.0072

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1648**	**5.124**	**.0048**	**.0024**	**3.021**	**.0417**	**.6121**	**2.392**
#1	.1654	5.168	.0033	.0021	3.038	.0432	.6134	2.397
#2	.1643	5.080	.0064	.0027	3.003	.0402	.6108	2.387

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.928**	**5.844**	**10.43**	**-.0098**	**.0633**	**.4040**
#1	7.941	5.897	10.50	-.0117	.0623	.4067
#2	7.914	5.792	10.36	-.0079	.0642	.4014

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2697.8**	**76279.**	**6909.4**
#1	2701.8	76139.	6876.4
#2	2693.8	76420.	6942.3

Sample Name: K0810639-006 Acquired: 11/12/2008 21:44:27 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **114.0**	**-.0080**	**.0168**	**.8141**	**.0023**	F **.0268**	**.0023**	F **143.0**
#1	113.6	-.0087	.0165	.8128	.0023	.0266	.0024	142.7
#2	114.4	-.0073	.0171	.8155	.0024	.0271	.0023	143.2

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1725**	**.0717**	**.2198**	F **144.9**	**.5173**	F **30.59**	**2.515**	**.0023**
#1	.1724	.0719	.2202	145.1	.5184	30.54	2.528	.0019
#2	.1726	.0715	.2195	144.7	.5162	30.64	2.502	.0027

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1169**	**4.601**	**.0051**	**.0012**	**3.426**	**.0282**	**.4473**	**.7757**
#1	.1165	4.595	.0061	.0009	3.423	.0270	.4482	.7756
#2	.1172	4.607	.0041	.0015	3.429	.0294	.4465	.7758

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.836**	**11.09**	**8.833**	**-.0086**	**.0465**	**.4194**
#1	3.825	11.09	8.850	-.0097	.0464	.4188
#2	3.848	11.09	8.817	-.0076	.0466	.4200

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2650.8**	**74605.**	**6620.8**
#1	2653.8	74463.	6631.1
#2	2647.7	74747.	6610.4

Sample Name: K0810639-009 Acquired: 11/12/2008 21:47:49 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **77.60**	**-.0070**	**.0266**	**2.157**	**.0013**	F **.0270**	**.0021**	F **23.02**
#1	77.80	-.0062	.0266	2.150	.0012	.0264	.0023	23.02
#2	77.41	-.0079	.0266	2.163	.0014	.0276	.0019	23.01

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2301**	**.0680**	**.3379**	F **164.8**	**.4082**	F **20.18**	**3.216**	**.0058**
#1	.2293	.0679	.3378	164.0	.4080	20.14	3.222	.0058
#2	.2309	.0681	.3380	165.5	.4084	20.22	3.209	.0058

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1158**	**3.094**	**.0007**	**.0001**	**2.182**	**.0349**	**.4072**	**1.209**
#1	.1148	3.078	.0024	.0000	2.190	.0344	.4061	1.205
#2	.1167	3.110	-.0010	.0002	2.174	.0353	.4084	1.213

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.701**	**6.028**	**7.869**	**-.0105**	**.0349**	**.3087**
#1	4.690	5.982	7.883	-.0099	.0352	.3085
#2	4.712	6.074	7.856	-.0111	.0347	.3089

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2598.5**	**73327.**	**6509.3**
#1	2604.0	73502.	6516.7
#2	2593.0	73151.	6501.9

Sample Name: K0810639-010 Acquired: 11/12/2008 21:51:08 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **77.66**	**.0054**	**.0208**	**.6850**	**.0015**	F **.0212**	**.0022**	F **74.09**
#1	77.70	.0053	.0222	.6869	.0015	.0216	.0020	74.27
#2	77.62	.0054	.0194	.6832	.0015	.0209	.0024	73.91

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2448**	**.0681**	**.1890**	F **137.2**	**.3652**	F **21.45**	**2.228**	**.0023**
#1	.2453	.0680	.1887	137.5	.3635	21.56	2.236	.0024
#2	.2443	.0683	.1893	136.8	.3669	21.33	2.220	.0022

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.1005**	**3.321**	**.0029**	**.0007**	**2.050**	**.0273**	**.3741**	**1.157**
#1	.1002	3.346	.0033	.0005	2.062	.0260	.3730	1.154
#2	.1008	3.295	.0024	.0008	2.039	.0285	.3752	1.161

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.069**	**4.626**	**7.365**	**-.0128**	**.0373**	**.3307**
#1	4.056	4.648	7.359	-.0146	.0372	.3317
#2	4.082	4.605	7.372	-.0109	.0374	.3296

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2600.3**	**73653.**	**6528.3**
#1	2602.6	73501.	6506.9
#2	2597.9	73804.	6549.6

Sample Name: K0810639-010D Acquired: 11/12/2008 21:54:30 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **77.98**	**.0058**	**.0204**	**.7138**	**.0015**	F **.0206**	**.0017**	F **74.77**
#1	78.09	.0046	.0196	.7125	.0015	.0215	.0017	74.58
#2	77.87	.0070	.0211	.7150	.0016	.0197	.0018	74.97

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2320**	**.0649**	**.1790**	F **135.4**	**.3340**	F **21.15**	**2.334**	**.0024**
#1	.2307	.0650	.1791	135.3	.3351	21.12	2.332	.0022
#2	.2334	.0648	.1789	135.5	.3329	21.19	2.336	.0025

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0989**	**3.323**	**.0044**	**.0011**	**1.986**	**.0281**	**.3643**	**1.143**
#1	.0989	3.322	.0059	.0012	1.975	.0276	.3634	1.143
#2	.0988	3.325	.0030	.0011	1.996	.0286	.3653	1.144

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**3.903**	**5.317**	**7.431**	**-.0094**	**.0372**	**.3556**
#1	3.893	5.295	7.445	-.0077	.0369	.3551
#2	3.912	5.339	7.417	-.0110	.0374	.3560

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2641.4**	**74010.**	**6554.8**
#1	2647.3	74043.	6571.8
#2	2635.6	73976.	6537.8

Sample Name: K0810639-010L Acquired: 11/12/2008 21:57:53 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/10 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**14.35**	**.0038**	**.0033**	**.1547**	**.0003**	F **.0053**	**-.0001**	**16.84**
#1	14.30	.0033	.0025	.1547	.0003	.0048	.0000	16.88
#2	14.40	.0043	.0040	.1546	.0003	.0059	-.0001	16.80

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0563**	**.0152**	**.0394**	F **31.77**	**.0813**	**4.923**	**.5104**	**.0007**
#1	.0565	.0149	.0393	31.70	.0801	4.931	.5111	.0007
#2	.0560	.0155	.0395	31.84	.0824	4.916	.5097	.0008

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0230**	**.7336**	**.0017**	**-.0003**	**.4131**	**.0061**	**.0851**	**.2663**
#1	.0231	.7459	.0008	.0001	.4127	.0061	.0856	.2657
#2	.0230	.7213	.0025	-.0007	.4135	.0062	.0845	.2669

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.9391**	**1.001**	**1.677**	**-.0057**	**.0074**	**.0751**
#1	.9384	1.009	1.676	-.0054	.0070	.0753
#2	.9399	.9927	1.678	-.0060	.0078	.0749

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2448.8**	**68582.**	**6045.5**
#1	2454.1	68481.	6026.9
#2	2443.6	68684.	6064.1

Sample Name: K0810639-010S Acquired: 11/12/2008 22:01:06 Type: Unk
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment: 1/2 DIL

Elem	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	F **83.98**	**.1797**	**.4719**	**2.607**	**.0452**	**.4399**	**.0443**	F **95.10**
#1	83.96	.1777	.4728	2.613	.0452	.4421	.0440	95.44
#2	84.01	.1817	.4710	2.602	.0452	.4378	.0446	94.76

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2852	Mn2576	Mo2020
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.4219**	**.5172**	**.4478**	F **140.8**	**.9201**	F **22.46**	**2.720**	**.4373**
#1	.4230	.5165	.4481	141.2	.9181	22.52	2.732	.4362
#2	.4208	.5179	.4474	140.3	.9222	22.40	2.709	.4383

Elem	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.5342**	**3.393**	**.3901**	**.0521**	**2.191**	**.0320**	**.8358**	**1.535**
#1	.5337	3.392	.3905	.0518	2.193	.0324	.8401	1.532
#2	.5346	3.394	.3898	.0523	2.189	.0315	.8316	1.538

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**4.148**	**7.126**	**7.642**	**.4500**	**.0397**	**.3571**
#1	4.134	7.123	7.684	.4502	.0394	.3575
#2	4.162	7.128	7.599	.4499	.0400	.3566

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2623.9**	**73978.**	**6601.0**
#1	2630.3	73815.	6587.8
#2	2617.5	74141.	6614.2

Sample Name: CCVA7 Acquired: 11/12/2008 22:04:24 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2705**	**.2250**	**.2448**	**.2546**	**.2666**	**.2568**	**.2606**	**.2515**	**.4047**
Stddev	.0003	.0011	.0005	.0032	.0011	.0014	.0011	.0007	.0088
%RSD	.1054	.4817	.2021	1.239	.3998	.5278	.4385	.2865	2.173
#1	.2707	.2257	.2452	.2568	.2673	.2558	.2614	.2510	.4109
#2	.2703	.2242	.2445	.2523	.2658	.2578	.2598	.2520	.3985
Check ?	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass	Chk Pass	None
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2617**	**.2560**	**.2551**	**.2979**	**.2495**	**.2778**	**.2850**	**.2685**	**.2490**
Stddev	.0001	.0007	.0006	.0063	.0005	.0160	.0027	.0005	.0018
%RSD	.0448	.2767	.2207	2.131	.1938	5.763	.9504	.1751	.7345
#1	.2616	.2555	.2547	.3024	.2491	.2891	.2870	.2689	.2503
#2	.2618	.2565	.2555	.2934	.2498	.2664	.2831	.2682	.2477
Check ?	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	None	None	Chk Pass	Chk Pass
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.2536**	**.2519**	**2.595**	**.2544**	**.2565**	**.3695**	**.2557**	**.2626**	**.2472**
Stddev	.0000	.0004	.027	.0005	.0003	.0003	.0001	.0012	.0011
%RSD	.0146	.1560	1.053	.1834	.1093	.0872	.0527	.4752	.4493
#1	.2536	.2516	2.576	.2547	.2567	.3698	.2556	.2617	.2464
#2	.2535	.2521	2.615	.2541	.2563	.3693	.2558	.2635	.2480
Check ?	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	Chk Pass
Value									
Range									

Sample Name: CCVA7 Acquired: 11/12/2008 22:04:24 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.1452**	**.2592**	**.2560**	**-.0005**	**.0003**
Stddev	.0013	.0069	.0003	.0007	.0001	.0000
%RSD	149.9	4.736	.1292	.2682	25.37	1.029
#1	.0018	.1501	.2590	.2565	-.0004	.0003
#2	-.0001	.1403	.2595	.2556	-.0005	.0003
Check ?	None	None	Chk Pass	Chk Pass	None	None
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2467.9**	**68035.**	**5928.1**
Stddev	.4	43.	53.1
%RSD	.01507	.06298	.89569
#1	2467.6	68066.	5890.6
#2	2468.2	68005.	5965.7

Sample Name: CCVB7 Acquired: 11/12/2008 22:07:21 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**7.271**	**9.406**	**.0000**	**1.010**	**10.15**	**.0001**	**.0032**	**.0001**	**10.14**
Stddev	.012	.004	.0012	.001	.05	.0000	.0001	.0001	.00
%RSD	.1612	.0408	3664.	.0490	.4498	9.436	2.572	168.5	.0150
#1	7.263	9.403	.0009	1.011	10.12	.0001	.0033	.0000	10.14
#2	7.280	9.408	-.0008	1.010	10.18	.0001	.0031	.0002	10.14
Check ?	None	Chk Pass	None	Chk Pass	Chk Pass	None	None	None	Chk Pass
Value									
Range									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0005**	**.0006**	**.0013**	**9.599**	**.0010**	**9.561**	**10.20**	**.0011**	**.0010**
Stddev	.0013	.0003	.0000	.025	.0010	.029	.04	.0000	.0006
%RSD	278.0	51.28	.6635	.2555	100.8	.3022	.3560	3.800	65.58
#1	-.0005	.0004	.0013	9.582	.0016	9.582	10.18	.0012	.0005
#2	.0014	.0008	.0013	9.617	.0003	9.541	10.23	.0011	.0014
Check ?	None	None	None	Chk Pass	None	Chk Pass	Chk Pass	None	None
Value									
Range									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0009**	**.0013**	**10.23**	**.0008**	**-.0001**	**10.45**	**-.0013**	**-.0001**	**.0002**
Stddev	.0001	.0003	.01	.0010	.0002	.02	.0003	.0001	.0002
%RSD	9.055	22.45	.0553	116.8	163.5	.2178	26.63	60.51	70.79
#1	.0010	.0011	10.23	.0001	-.0003	10.43	-.0010	-.0001	.0001
#2	.0009	.0016	10.23	.0015	.0000	10.46	-.0015	-.0001	.0003
Check ?	None	None	Chk Pass	None	None	Chk Pass	None	None	None
Value									
Range									

Sample Name: CCVB7 Acquired: 11/12/2008 22:07:21 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**9.566**	**9.549**	**.0016**	**.0002**	**1.028**	**1.023**
Stddev	.017	.008	.0001	.0026	.004	.001
%RSD	.1747	.0857	8.950	1158.	.4030	.1344
#1	9.555	9.555	.0017	-.0016	1.025	1.022
#2	9.578	9.544	.0015	.0020	1.031	1.024
Check ?	Chk Pass	Chk Pass	None	None	Chk Pass	Chk Pass
Value						
Range						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2489.1**	**68893.**	**5995.0**
Stddev	.6	111.	16.6
%RSD	.02229	.16069	.27757
#1	2489.5	68971.	5983.2
#2	2488.7	68814.	6006.7

Sample Name: CCB7 Acquired: 11/12/2008 22:10:31 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	Al1670	Al3944	Sb2068	As1890	Ba4554	Be2348	B_2496	Cd2265	Ca3158
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0046**	**.0044**	**.0007**	**.0009**	**.0043**	**.0000**	**.0010**	**.0002**	**.0173**
Stddev	.0002	.0006	.0004	.0003	.0001	.0000	.0003	.0000	.0041
%RSD	3.449	13.94	62.60	31.83	1.707	5.290	29.09	3.723	23.67
#1	.0045	.0040	.0004	.0010	.0044	.0000	.0012	.0002	.0202
#2	.0047	.0049	.0009	.0007	.0043	.0000	.0008	.0002	.0144
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Elem	Cr2677	Co2307	Cu3273	Fe2599	Pb2203	Mg2790	Mg2852	Mn2576	Mn2605
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0002**	**.0004**	**.0025**	**.0000**	**.0128**	**.0081**	**.0001**	**.0003**
Stddev	.0007	.0003	.0004	.0040	.0001	.0437	.0001	.0000	.0006
%RSD	356.3	119.6	102.8	159.4	387.3	341.9	1.317	9.551	218.9
#1	-.0003	.0000	.0001	.0053	.0000	-.0181	.0081	.0001	.0006
#2	.0007	.0004	.0007	-.0003	.0001	.0437	.0080	.0001	-.0001
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	None	Chk Pass	Chk Pass	None
High Limit									
Low Limit									

Elem	Mo2020	Ni2216	K_7664	Se1960	Ag3280	Na5889	Sn1899	V_2924	Zn2062
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0002**	**.0000**	**.0022**	**.0019**	**-.0006**	**-.0776**	**-.0006**	**.0001**	**-.0001**
Stddev	.0001	.000	.0029	.0014	.0005	.0060	.0003	.0004	.0001
%RSD	84.76	156.7	130.8	72.52	86.84	7.739	51.08	303.1	153.9
#1	.0003	.0000	.0002	.0029	-.0002	-.0819	-.0008	.0004	.0000
#2	.0001	.0000	.0043	.0009	-.0009	-.0734	-.0004	-.0001	-.0002
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit									
Low Limit									

Sample Name: CCB7 Acquired: 11/12/2008 22:10:31 Type: QC
Method: 090708(v58) Mode: CONC Corr. Factor: 1.000000
User: admin StarLIMS#: 133660 File Name: 111208BICP03 Database: 1108
Comment:

Elem	P_2149	Si2516	Ti3361	Tl1908	Li6707	Sr4077
Units	ppm	ppm	ppm	ppm	ppm	ppm
Avg	**.0043**	**.0130**	**-.0001**	**-.0016**	**.0005**	**.0005**
Stddev	.0005	.0133	.0001	.0002	.0001	.0000
%RSD	12.16	102.4	170.0	12.99	26.73	3.023
#1	.0047	.0224	.0000	-.0017	.0004	.0005
#2	.0039	.0036	-.0002	-.0014	.0006	.0005
Check ?	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass	Chk Pass
High Limit						
Low Limit						

Int. Std.	Y_2243	Y_3600	Y_3600-2
Units	Cts/S	Cts/S	Cts/S
Avg	**2507.2**	**69426.**	**6000.6**
Stddev	7.0	224.	6.5
%RSD	.27919	.32312	.10804
#1	2512.1	69267.	5996.0
#2	2502.2	69584.	6005.2

Polychlorinated Biphenyls
PCB's
EPA Method 8082

COLUMBIA ANALYTICAL SERVICES, INC.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Service Request: K0810639

Cover Page - Organic Analysis Data Package
Polychlorinated Biphenyls (PCBs)

Sample Name	Lab Code	Date Collected	Date Received
SED01-0.5-2.5A	K0810639-001	07/10/2008	07/15/2008
SED01-2.5-5-A	K0810639-002	07/10/2008	07/15/2008
SED02-5-8.5-A	K0810639-003	07/10/2008	07/15/2008
SED02-0.5-2.5A	K0810639-004	07/10/2008	07/15/2008
SED02-2.5-5-A	K0810639-005	07/10/2008	07/15/2008
SED01-5-6.5-A	K0810639-006	07/10/2008	07/15/2008
SED10-0.5-2.5-B	K0810639-007	07/24/2008	07/29/2008
SED11-0.5-2.5-A	K0810639-008	07/24/2008	07/29/2008
SED14-0.5-2-A	K0810639-009	07/25/2008	07/29/2008
SED14-2-3.5-A	K0810639-010	07/25/2008	07/29/2008
SED10-0.5-2.5-BMS	KWG0811860-1	07/24/2008	07/29/2008
SED10-0.5-2.5-BDMS	KWG0811860-2	07/24/2008	07/29/2008

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: ______________________ Name: Les Kennedy

Date: 11/26/08 Title: Project Chemist

Organic Analysis:

Polychlorinated Biphenyls (PCBs)

Summary Package

Sample and QC Results

Client:	CH2M Hill		**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF		**Date Collected:**	07/10/2008
Sample Matrix:	Sediment		**Date Received:**	07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED01-0.5-2.5A		**Units:**	ug/Kg
Lab Code:	K0810639-001		**Basis:**	Dry
Extraction Method:	EPA 3540C		**Level:**	Low
Analysis Method:	8082			

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	110	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	210	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	110	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	110	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	110	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**5100**	D	110	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	110	14	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	107	38-144	11/22/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED01-2.5-5-A	**Units:**	ug/Kg
Lab Code:	K0810639-002	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	190	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	380	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	190	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	190	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	190	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**14000**	D	190	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	190	26	20	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	138	38-144	11/22/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED02-5-8.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-003	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	75	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	150	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	75	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	75	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	75	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**810**	D	75	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	**380**	D	75	13	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	127	38-144	11/22/08	Acceptable

Comments:

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED02-0.5-2.5A	**Units:**	ug/Kg
Lab Code:	K0810639-004	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	96	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	200	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	96	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	96	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	96	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**3900**	D	96	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	96	13	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	103	38-144	11/22/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED02-2.5-5-A	**Units:**	ug/Kg
Lab Code:	K0810639-005	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	210	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	410	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	210	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	210	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	210	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**14000**	D	210	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	210	27	20	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	109	38-144	11/22/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED01-5-6.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-006	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	8.6	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	18	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	8.6	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	8.6	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	8.6	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**410**		8.6	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	**170**	P	8.6	1.3	1	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	72	38-144	11/22/08	Acceptable

Comments:

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/24/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED10-0.5-2.5-B	**Units:**	ug/Kg
Lab Code:	K0810639-007	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	15	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**87**		7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	65	38-144	11/22/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/24/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED11-0.5-2.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-008	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	93	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	190	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	93	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	93	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	93	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**2000**	D	93	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	93	13	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	115	38-144	11/22/08	Acceptable

Comments:

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Collected: 07/25/2008
Date Received: 07/29/2008

Polychlorinated Biphenyls (PCBs)

Sample Name: SED14-0.5-2-A
Lab Code: K0810639-009

Extraction Method: EPA 3540C
Analysis Method: 8082

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	83	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	170	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	83	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	83	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	83	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**1100**	D	83	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	83	13	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	108	38-144	11/22/08	Acceptable

Comments:

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/25/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED14-2-3.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-010	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	73	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	150	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	73	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	73	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	73	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**1100**	D	73	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	73	13	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	114	38-144	11/22/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0811860-4	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	7.1	7.1	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	Ui	41	41	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	Ui	67	67	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	Ui	62	62	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	Ui	6.1	6.1	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	ND	Ui	5.0	5.0	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	5.0	1.3	1	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	80	38-144	11/22/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3540C
Analysis Method: 8082

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1
SED01-0.5-2.5A	K0810639-001	107 D
SED01-2.5-5-A	K0810639-002	138 D
SED02-5-8.5-A	K0810639-003	127 D
SED02-0.5-2.5A	K0810639-004	103 D
SED02-2.5-5-A	K0810639-005	109 D
SED01-5-6.5-A	K0810639-006	72
SED10-0.5-2.5-B	K0810639-007	65
SED11-0.5-2.5-A	K0810639-008	115 D
SED14-0.5-2-A	K0810639-009	108 D
SED14-2-3.5-A	K0810639-010	114 D
Method Blank	KWG0811860-4	80
SED10-0.5-2.5-BMS	KWG0811860-1	67
SED10-0.5-2.5-BDMS	KWG0811860-2	70
Lab Control Sample	KWG0811860-3	82

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl	38-144

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Extracted:**	11/05/2008
Sample Matrix:	Sediment	**Date Analyzed:**	11/22/2008

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	SED10-0.5-2.5-B	**Units:**	ug/Kg
Lab Code:	K0810639-007	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0811860

		SED10-0.5-2.5-BMS KWG0811860-1 **Matrix Spike**			SED10-0.5-2.5-BDMS KWG0811860-2 **Duplicate Matrix Spike**					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	ND	115	148	78	123	148	83	24-168	6	40
Aroclor 1260	ND	150	148	101	167	148	113	24-163	11	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Extracted:**	11/05/2008
Sample Matrix:	Sediment	**Date Analyzed:**	11/22/2008

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3540C	**Units:**	ug/Kg
Analysis Method:	8082	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0811860

	Lab Control Sample KWG0811860-3 **Lab Control Spike**			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Aroclor 1016	173	200	86	44-130
Aroclor 1260	162	200	81	52-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Extracted: 11/05/2008
Date Analyzed: 11/22/2008
Time Analyzed: 03:41

Method Blank Summary
Polychlorinated Biphenyls (PCBs)

Sample Name: Method Blank
Lab Code: KWG0811860-4

Extraction Method: EPA 3540C
Analysis Method: 8082

File ID: J:\GC09\DATA\112108.B\1121F027.D
Instrument ID: GC09.i

Level: Low
Extraction Lot: KWG0811860

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0811860-3	J:\GC09\DATA\112108.B\1121F028.D	11/22/08	04:08
SED01-0.5-2.5A	K0810639-001	J:\GC09\DATA\112108.B\1121F033.D	11/22/08	06:34
SED01-2.5-5-A	K0810639-002	J:\GC09\DATA\112108.B\1121F034.D	11/22/08	07:00
SED02-5-8.5-A	K0810639-003	J:\GC09\DATA\112108.B\1121F035.D	11/22/08	07:27
SED02-0.5-2.5A	K0810639-004	J:\GC09\DATA\112108.B\1121F036.D	11/22/08	07:53
SED02-2.5-5-A	K0810639-005	J:\GC09\DATA\112108.B\1121F037.D	11/22/08	08:19
SED01-5-6.5-A	K0810639-006	J:\GC09\DATA\112108.B\1121F038.D	11/22/08	08:46
SED10-0.5-2.5-B	K0810639-007	J:\GC09\DATA\112108.B\1121F039.D	11/22/08	09:12
SED10-0.5-2.5-BMS	KWG0811860-1	J:\GC09\DATA\112108.B\1121F040.D	11/22/08	09:38
SED10-0.5-2.5-BDMS	KWG0811860-2	J:\GC09\DATA\112108.B\1121F041.D	11/22/08	10:05
SED11-0.5-2.5-A	K0810639-008	J:\GC09\DATA\112108.B\1121F045.D	11/22/08	12:05
SED14-0.5-2-A	K0810639-009	J:\GC09\DATA\112108.B\1121F046.D	11/22/08	12:31
SED14-2-3.5-A	K0810639-010	J:\GC09\DATA\112108.B\1121F047.D	11/22/08	12:57

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Extracted:**	11/05/2008
Sample Matrix:	Sediment	**Date Analyzed:**	11/22/2008
		Time Analyzed:	04:08

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**File ID:**	J:\GC09\DATA\112108.B\1121F028.D
Lab Code:	KWG0811860-3	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0811860

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0811860-4	J:\GC09\DATA\112108.B\1121F027.D	11/22/08	03:41
SED01-0.5-2.5A	K0810639-001	J:\GC09\DATA\112108.B\1121F033.D	11/22/08	06:34
SED01-2.5-5-A	K0810639-002	J:\GC09\DATA\112108.B\1121F034.D	11/22/08	07:00
SED02-5-8.5-A	K0810639-003	J:\GC09\DATA\112108.B\1121F035.D	11/22/08	07:27
SED02-0.5-2.5A	K0810639-004	J:\GC09\DATA\112108.B\1121F036.D	11/22/08	07:53
SED02-2.5-5-A	K0810639-005	J:\GC09\DATA\112108.B\1121F037.D	11/22/08	08:19
SED01-5-6.5-A	K0810639-006	J:\GC09\DATA\112108.B\1121F038.D	11/22/08	08:46
SED10-0.5-2.5-B	K0810639-007	J:\GC09\DATA\112108.B\1121F039.D	11/22/08	09:12
SED10-0.5-2.5-BMS	KWG0811860-1	J:\GC09\DATA\112108.B\1121F040.D	11/22/08	09:38
SED10-0.5-2.5-BDMS	KWG0811860-2	J:\GC09\DATA\112108.B\1121F041.D	11/22/08	10:05
SED11-0.5-2.5-A	K0810639-008	J:\GC09\DATA\112108.B\1121F045.D	11/22/08	12:05
SED14-0.5-2-A	K0810639-009	J:\GC09\DATA\112108.B\1121F046.D	11/22/08	12:31
SED14-2-3.5-A	K0810639-010	J:\GC09\DATA\112108.B\1121F047.D	11/22/08	12:57

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-35MS

Level ID	File ID
A	\\cash1\acqudata\GC09\data\092208.b\0922F009.D
B	\\cash1\acqudata\GC09\data\092208.b\0922F013.D
C	\\cash1\acqudata\GC09\data\092208.b\0922F017.D
D	\\cash1\acqudata\GC09\data\092208.b\0922F021.D
E	\\cash1\acqudata\GC09\data\092208.b\0922F025.D
F	\\cash1\acqudata\GC09\data\092208.b\0922F029.D
G	\\cash1\acqudata\GC09\data\092208.b\0922F033.D
H	\\cash1\acqudata\GC09\data\092208.b\0922F035.D
I	\\cash1\acqudata\GC09\data\092208.b\0922F036.D
J	\\cash1\acqudata\GC09\data\092208.b\0922F037.D
K	\\cash1\acqudata\GC09\data\092208.b\0922F038.D
L	\\cash1\acqudata\GC09\data\092208.b\0922F039.D
M	\\cash1\acqudata\GC09\data\092208.b\0922F040.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl															
							H	2.5	12100	I	5.0	12200	J	50	10800
	K	100	9790	L	200	8610	M	500	7540						
Aroclor 1016 {1}															
							H	25	239	I	50	261	J	500	245
	K	1000	224	L	2000	197	M	5000	165						
Aroclor 1016 {2}															
							H	25	490	I	50	513	J	500	477
	K	1000	429	L	2000	373	M	5000	313						
Aroclor 1016 {3}															
							H	25	244	I	50	273	J	500	248
	K	1000	222	L	2000	194	M	5000	165						
Aroclor 1016 {4}															
							H	25	346	I	50	370	J	500	323
	K	1000	294	L	2000	258	M	5000	221						
Aroclor 1016 {5}															
							H	25	193	I	50	231	J	500	255
	K	1000	238	L	2000	216	M	5000	190						
Aroclor 1260 {1}															
							H	25	431	I	50	451	J	500	399
	K	1000	363	L	2000	326	M	5000	287						
Aroclor 1260 {2}															
							H	25	762	I	50	786	J	500	755
	K	1000	691	L	2000	642	M	5000	571						

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-35MS

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {3}															
							H	25	585	I	50	598	J	500	516
	K	1000	485	L	2000	416	M	5000	364						
Aroclor 1260 {4}															
							H	25	513	I	50	507	J	500	477
	K	1000	444	L	2000	406	M	5000	364						
Aroclor 1260 {5}															
							H	25	1050	I	50	1050	J	500	984
	K	1000	924	L	2000	842	M	5000	762						

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Calibration Date:**	09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID:	CAL7795	**Column:**	DB-35MS
Instrument ID:	GC09.i		

Analyte Name	Compound Type	Calibration Evaluation Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	18.4		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	15.9		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	17.8		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	17.5		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	18.5		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	11.7		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	16.7		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	11.8		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	18.6		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	13.1		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	12.5		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008
Date Analyzed: 09/23/2008

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration ID: CAL7795
Units: ng/mL

File ID:
\\cash1\acqudata\GC09\data\092208.b\0922F041.D
\\cash1\acqudata\GC09\data\092208.b\0922F042.D
\\cash1\acqudata\GC09\data\092208.b\0922F043.D
\\cash1\acqudata\GC09\data\092208.b\0922F044.D
\\cash1\acqudata\GC09\data\092208.b\0922F045.D
\\cash1\acqudata\GC09\data\092208.b\0922F046.D
\\cash1\acqudata\GC09\data\092208.b\0922F047.D
\\cash1\acqudata\GC09\data\092208.b\0922F048.D
\\cash1\acqudata\GC09\data\092208.b\0922F049.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	1000	980	222	218	-2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	960	433	416	-4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	960	224	214	-4	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	960	302	289	-4	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1200	220	264	20	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	-1	± 15 %	NA
Aroclor 1260 {1}	1000	910	376	344	-9	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	830	701	579	-17	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	494	532	8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	452	467	3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	936	995	6	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	2	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-XLB

Level ID	File ID
A	\\cash1\acqudata\GC09\data\092208_r.b\0922R009.D
B	\\cash1\acqudata\GC09\data\092208_r.b\0922R013.D
C	\\cash1\acqudata\GC09\data\092208_r.b\0922R017.D
D	\\cash1\acqudata\GC09\data\092208_r.b\0922R021.D
E	\\cash1\acqudata\GC09\data\092208_r.b\0922R025.D
F	\\cash1\acqudata\GC09\data\092208_r.b\0922R029.D
G	\\cash1\acqudata\GC09\data\092208_r.b\0922R033.D
H	\\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
I	\\cash1\acqudata\GC09\data\092208_r.b\0922R036.D
J	\\cash1\acqudata\GC09\data\092208_r.b\0922R037.D
K	\\cash1\acqudata\GC09\data\092208_r.b\0922R038.D
L	\\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
M	\\cash1\acqudata\GC09\data\092208_r.b\0922R040.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl															
							H	2.5	15200	I	5.0	15300	J	50	13300
	K	100	12000	L	200	10500									
Aroclor 1016 {1}															
							H	25	392	I	50	429	J	500	358
	K	1000	339	L	2000	300	M	5000	239						
Aroclor 1016 {2}															
							H	25	763	I	50	828	J	500	699
	K	1000	624	L	2000	546	M	5000	625						
Aroclor 1016 {3}															
							H	25	396	I	50	434	J	500	403
	K	1000	356	L	2000	310	M	5000	263						
Aroclor 1016 {4}															
							H	25	461	I	50	479	J	500	455
	K	1000	412	L	2000	363	M	5000	309						
Aroclor 1016 {5}															
							H	25	416	I	50	408	J	500	412
	K	1000	369	L	2000	324	M	5000	279						
Aroclor 1260 {1}															
							H	25	827	I	50	854	J	500	746
	K	1000	680	L	2000	594	M	5000	516						
Aroclor 1260 {2}															
							H	25	872	I	50	919	J	500	772
	K	1000	707	L	2000	626	M	5000	542						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-XLB

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {3}															
							H	25	969	I	50	1060	J	500	994
	K	1000	924	L	2000	830	M	5000	735						
Aroclor 1260 {4}															
							H	25	509	I	50	583	J	500	536
	K	1000	493	L	2000	440	M	5000	390						
Aroclor 1260 {5}															
							H	25	1190	I	50	1200	J	500	1120
	K	1000	1050	L	2000	946	M	5000	845						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-XLB

		Calibration Evaluation				
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**
Decachlorobiphenyl	SURR	AverageRF	% RSD	15.6		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	19.7		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	15.2		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	17.8		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	16.0		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	15.2		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	18.8		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	19.5		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	12.9		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	14.0		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	13.5		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008
Date Analyzed: 09/23/2008

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration ID: CAL7795
Units: ng/mL

File ID:
\\cash1\acqudata\GC09\data\092208_r.b\0922R041.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R042.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R043.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R044.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R046.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R047.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R048.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R049.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	1000	970	343	334	-3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	900	681	614	-10	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	930	360	334	-7	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	980	413	406	-2	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	980	368	361	-2	NA	± 100 %	AverageRF
Aroclor 1016	1000	950	NA	NA	NA	5	± 15 %	NA
Aroclor 1260 {1}	1000	920	703	647	-8	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	930	740	685	-7	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	880	919	809	-12	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	550	12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1140	8	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	2	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F019.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	93	10200	9420	-7	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	970	222	214	-3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	950	433	409	-5	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	930	224	208	-7	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	940	302	283	-6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	220	232	5	NA	± 100 %	AverageRF
Aroclor 1016	1000	970	NA	NA	NA	-3	± 15 %	NA
Aroclor 1260 {1}	1000	940	376	352	-6	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	940	701	662	-6	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	920	494	454	-8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	940	452	425	-6	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	940	936	883	-6	NA	± 100 %	AverageRF
Aroclor 1260	1000	940	NA	NA	NA	-6	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R019.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	97	13300	12900	-3	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	1000	343	357	4	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	681	693	2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1100	360	381	6	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	413	439	6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	368	385	5	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	5	± 15 %	NA
Aroclor 1260 {1}	1000	1000	703	737	5	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1000	740	765	3	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	919	996	8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	532	8	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1130	7	NA	± 100 %	AverageRF
Aroclor 1260	1000	1100	NA	NA	NA	6	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F031.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	92	10200	9390	-8	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	960	222	214	-4	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	950	433	410	-5	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	890	224	199	-11	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	920	302	278	-8	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	220	227	3	NA	± 100 %	AverageRF
Aroclor 1016	1000	950	NA	NA	NA	-5	± 15 %	NA
Aroclor 1260 {1}	1000	890	376	335	-11	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	910	701	635	-9	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	890	494	442	-11	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	930	452	420	-7	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	940	936	878	-6	NA	± 100 %	AverageRF
Aroclor 1260	1000	910	NA	NA	NA	-9	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type:	External Standard	**Calibration Date:**	09/22/2008
Analysis Method:	8082	**Calibration ID:**	CAL7795
		Analysis Lot:	KWG0812580
		Units:	ng/mL
File ID:	\\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R031.D	**Column ID:**	DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	98	13300	13100	-2	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	1100	343	369	8	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	681	711	4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1100	360	392	9	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	413	442	7	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	368	394	7	NA	± 100 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	7	± 15 %	NA
Aroclor 1260 {1}	1000	1000	703	738	5	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1000	740	762	3	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	919	990	8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	530	8	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1130	7	NA	± 100 %	AverageRF
Aroclor 1260	1000	1100	NA	NA	NA	6	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F044.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	88	10200	8920	-12	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	920	222	205	-8	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	910	433	394	-9	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	900	224	201	-10	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	880	302	265	-12	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	970	220	214	-3	NA	± 100 %	AverageRF
Aroclor 1016	1000	920	NA	NA	NA	-8	± 15 %	NA
Aroclor 1260 {1}	1000	840	376	317	-16	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	870	701	613	-13	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	830	494	410	-17	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	840	452	380	-16	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	870	936	815	-13	NA	± 100 %	AverageRF
Aroclor 1260	1000	850	NA	NA	NA	-15	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R044.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	95	13300	12600	-5	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	990	343	340	-1	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	980	681	665	-2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	360	366	2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1000	413	419	1	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	368	377	2	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	0	± 15 %	NA
Aroclor 1260 {1}	1000	990	703	694	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	970	740	715	-3	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	919	935	2	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	492	500	2	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1000	1060	1080	2	NA	± 100 %	AverageRF
Aroclor 1260	1000	1000	NA	NA	NA	0	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F050.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	90	10200	9190	-10	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	940	222	208	-6	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	940	433	405	-6	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	880	224	197	-12	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	910	302	274	-9	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	220	222	1	NA	± 100 %	AverageRF
Aroclor 1016	1000	930	NA	NA	NA	-7	± 15 %	NA
Aroclor 1260 {1}	1000	880	376	330	-12	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	880	701	616	-12	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	860	494	424	-14	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	900	452	407	-10	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	910	936	851	-9	NA	± 100 %	AverageRF
Aroclor 1260	1000	880	NA	NA	NA	-12	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R050.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	96	13300	12800	-4	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	1100	343	363	6	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	681	696	2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1100	360	383	6	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	413	437	6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	368	392	6	NA	± 100 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	5	± 15 %	NA
Aroclor 1260 {1}	1000	1000	703	729	4	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1000	740	753	2	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	919	978	6	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	523	6	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1120	5	NA	± 100 %	AverageRF
Aroclor 1260	1000	1000	NA	NA	NA	5	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639

Analysis Run Log
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082

Analysis Lot: KWG0812580
Instrument ID: GC09.i
Column: DB-35MS

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1121F004.D	Instrument Blank	KWG0812580-1	11/21/2008	17:20		11/21/2008	17:20
1121F005.D	Continuing Calibration Verification	KWG0812580-2	11/21/2008	17:47		11/21/2008	17:47
1121F008.D	ZZZZZZ	ZZZZZZ	11/21/2008	19:06		11/21/2008	19:06
1121F009.D	ZZZZZZ	ZZZZZZ	11/21/2008	19:32		11/21/2008	19:32
1121F010.D	ZZZZZZ	ZZZZZZ	11/21/2008	19:58		11/21/2008	19:58
1121F011.D	ZZZZZZ	ZZZZZZ	11/21/2008	20:25		11/21/2008	20:25
1121F012.D	ZZZZZZ	ZZZZZZ	11/21/2008	20:51		11/21/2008	20:51
1121F013.D	ZZZZZZ	ZZZZZZ	11/21/2008	21:18		11/21/2008	21:18
1121F014.D	ZZZZZZ	ZZZZZZ	11/21/2008	21:44		11/21/2008	21:44
1121F015.D	ZZZZZZ	ZZZZZZ	11/21/2008	22:11		11/21/2008	22:11
1121F016.D	ZZZZZZ	ZZZZZZ	11/21/2008	22:37		11/21/2008	22:37
1121F018.D	Instrument Blank	KWG0812580-3	11/21/2008	23:44		11/21/2008	23:44
1121F019.D	Continuing Calibration Verification	KWG0812580-4	11/22/2008	00:10		11/22/2008	00:10
1121F020.D	ZZZZZZ	ZZZZZZ	11/22/2008	00:37		11/22/2008	00:37
1121F021.D	ZZZZZZ	ZZZZZZ	11/22/2008	01:03		11/22/2008	01:03
1121F022.D	ZZZZZZ	ZZZZZZ	11/22/2008	01:29		11/22/2008	01:29
1121F023.D	ZZZZZZ	ZZZZZZ	11/22/2008	01:56		11/22/2008	01:56
1121F024.D	ZZZZZZ	ZZZZZZ	11/22/2008	02:22		11/22/2008	02:22
1121F025.D	ZZZZZZ	ZZZZZZ	11/22/2008	02:48		11/22/2008	02:48
1121F026.D	ZZZZZZ	ZZZZZZ	11/22/2008	03:15		11/22/2008	03:15
1121F027.D	Method Blank	KWG0811860-4	11/22/2008	03:41		11/22/2008	03:41
1121F028.D	Lab Control Sample	KWG0811860-3	11/22/2008	04:08		11/22/2008	04:08
1121F030.D	Instrument Blank	KWG0812580-5	11/22/2008	05:15		11/22/2008	05:15
1121F031.D	Continuing Calibration Verification	KWG0812580-6	11/22/2008	05:41		11/22/2008	05:41
1121F032.D	ZZZZZZ	ZZZZZZ	11/22/2008	06:08		11/22/2008	06:08
1121F033.D	SED01-0.5-2.5A	K0810639-001	11/22/2008	06:34		11/22/2008	06:34
1121F034.D	SED01-2.5-5-A	K0810639-002	11/22/2008	07:00		11/22/2008	07:00
1121F035.D	SED02-5-8.5-A	K0810639-003	11/22/2008	07:27		11/22/2008	07:27
1121F036.D	SED02-0.5-2.5A	K0810639-004	11/22/2008	07:53		11/22/2008	07:53
1121F037.D	SED02-2.5-5-A	K0810639-005	11/22/2008	08:19		11/22/2008	08:19
1121F038.D	SED01-5-6.5-A	K0810639-006	11/22/2008	08:46		11/22/2008	08:46
1121F039.D	SED10-0.5-2.5-B	K0810639-007	11/22/2008	09:12		11/22/2008	09:12
1121F040.D	SED10-0.5-2.5-BMS	KWG0811860-1	11/22/2008	09:38		11/22/2008	09:38
1121F041.D	SED10-0.5-2.5-BDMS	KWG0811860-2	11/22/2008	10:05		11/22/2008	10:05

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639

Analysis Run Log
Polychlorinated Biphenyls (PCBs)

Analysis Method: 8082

Analysis Lot: KWG0812580
Instrument ID: GC09.i
Column: DB-35MS

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1121F043.D	Instrument Blank	KWG0812580-7	11/22/2008	11:12		11/22/2008	11:12
1121F044.D	Continuing Calibration Verification	KWG0812580-8	11/22/2008	11:38		11/22/2008	11:38
1121F045.D	SED11-0.5-2.5-A	K0810639-008	11/22/2008	12:05		11/22/2008	12:05
1121F046.D	SED14-0.5-2-A	K0810639-009	11/22/2008	12:31		11/22/2008	12:31
1121F047.D	SED14-2-3.5-A	K0810639-010	11/22/2008	12:57		11/22/2008	12:57
1121F049.D	Instrument Blank	KWG0812580-9	11/22/2008	14:04		11/22/2008	14:04
1121F050.D	Continuing Calibration Verification	KWG0812580-10	11/22/2008	14:31		11/22/2008	14:31

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Extracted: 11/05/2008

Extraction Prep Log
Polychlorinated Biphenyls (PCBs)

Extraction Method: EPA 3540C
Analysis Method: 8082

Extraction Lot: KWG0811860
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SED01-0.5-2.5A	K0810639-001	07/10/08	07/15/08	40.15g	4ml	47.5	
SED01-2.5-5-A	K0810639-002	07/10/08	07/15/08	40.28g	4ml	53.0	
SED02-5-8.5-A	K0810639-003	07/10/08	07/15/08	40.67g	4ml	66.2	
SED02-0.5-2.5A	K0810639-004	07/10/08	07/15/08	40.02g	4ml	52.6	
SED02-2.5-5-A	K0810639-005	07/10/08	07/15/08	40.25g	4ml	48.8	
SED01-5-6.5-A	K0810639-006	07/10/08	07/15/08	40.21g	4ml	58.0	
SED10-0.5-2.5-B	K0810639-007	07/24/08	07/29/08	40.34g	4ml	67.0	
SED11-0.5-2.5-A	K0810639-008	07/24/08	07/29/08	40.30g	4ml	53.9	
SED14-0.5-2-A	K0810639-009	07/25/08	07/29/08	40.60g	4ml	60.0	
SED14-2-3.5-A	K0810639-010	07/25/08	07/29/08	40.34g	4ml	68.2	
Method Blank	KWG0811860-4	NA	NA	40.67g	4ml	NA	
SED10-0.5-2.5-BMS	KWG0811860-1	07/24/08	07/29/08	40.34g	4ml	67.0	
SED10-0.5-2.5-BDMS	KWG0811860-2	07/24/08	07/29/08	40.33g	4ml	67.0	
Lab Control Sample	KWG0811860-3	NA	NA	20.00g	4ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008
		Date Extracted:	11/05/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED01-0.5-2.5A	**Units:**	ug/Kg
Lab Code:	K0810639-001	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	%RSD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	110	14	5100	4600	10.3	D	10	11/22/08

Confirmation Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008
		Date Extracted:	11/05/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED01-2.5-5-A	**Units:**	ug/Kg
Lab Code:	K0810639-002	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	%RSD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	190	26	14000	13000	7.4	D	20	11/22/08

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008
		Date Extracted:	11/05/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED02-5-8.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-003	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	%RSD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	75	13	810	640	23.4	D	10	11/22/08
Aroclor 1260	75	13	380	540	34.8	D	10	11/22/08

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008
		Date Extracted:	11/05/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED02-0.5-2.5A	**Units:**	ug/Kg
Lab Code:	K0810639-004	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	%RSD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	96	13	3900	3500	10.8	D	10	11/22/08

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Collected: 07/10/2008
Date Received: 07/15/2008
Date Extracted: 11/05/2008

Polychlorinated Biphenyls (PCBs)

Sample Name: SED02-2.5-5-A
Lab Code: K0810639-005

Extraction Method: EPA 3540C
Analysis Method: 8082

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	%RSD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	210	27	14000	13000	7.4	D	20	11/22/08

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008
		Date Extracted:	11/05/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED01-5-6.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-006	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	%RSD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	8.6	1.3	410	370	10.3		1	11/22/08
Aroclor 1260	8.6	1.3	170	260	41.9	P	1	11/22/08

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Collected: 07/24/2008
Date Received: 07/29/2008
Date Extracted: 11/05/2008

Polychlorinated Biphenyls (PCBs)

Sample Name: SED10-0.5-2.5-B
Lab Code: K0810639-007

Extraction Method: EPA 3540C
Analysis Method: 8082

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	%RSD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	7.4	1.3	87	80	8.4		1	11/22/08

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/24/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008
		Date Extracted:	11/05/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED11-0.5-2.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-008	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	%RSD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	93	13	2000	1700	16.2	D	10	11/22/08

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/25/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008
		Date Extracted:	11/05/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED14-0.5-2-A	**Units:**	ug/Kg
Lab Code:	K0810639-009	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	%RSD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	83	13	1100	950	14.6	D	10	11/22/08

COLUMBIA ANALYTICAL SERVICES, INC.

Confirmation Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/25/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008
		Date Extracted:	11/05/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED14-2-3.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-010	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	MRL	MDL	Primary Result	Confirmation Result	%RSD	Q	Dilution Factor	Date Analyzed
Aroclor 1254	73	13	1100	1100	0.0	D	10	11/22/08

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

QC Reports

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF		
Sample Matrix:	Sediment		

Surrogate Recovery Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3540C	**Units:**	PERCENT
Analysis Method:	8082	**Level:**	Low

Sample Name	Lab Code	Sur1
SED01-0.5-2.5A	K0810639-001	107 D
SED01-2.5-5-A	K0810639-002	138 D
SED02-5-8.5-A	K0810639-003	127 D
SED02-0.5-2.5A	K0810639-004	103 D
SED02-2.5-5-A	K0810639-005	109 D
SED01-5-6.5-A	K0810639-006	72
SED10-0.5-2.5-B	K0810639-007	65
SED11-0.5-2.5-A	K0810639-008	115 D
SED14-0.5-2-A	K0810639-009	108 D
SED14-2-3.5-A	K0810639-010	114 D
Method Blank	KWG0811860-4	80
SED10-0.5-2.5-BMS	KWG0811860-1	67
SED10-0.5-2.5-BDMS	KWG0811860-2	70
Lab Control Sample	KWG0811860-3	82

Surrogate Recovery Control Limits (%)

Sur1 = Decachlorobiphenyl	38-144

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Extracted: 11/05/2008
Date Analyzed: 11/22/2008

Matrix Spike/Duplicate Matrix Spike Summary
Polychlorinated Biphenyls (PCBs)

Sample Name: SED10-0.5-2.5-B
Lab Code: K0810639-007

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3540C
Analysis Method: 8082

Level: Low
Extraction Lot: KWG0811860

		SED10-0.5-2.5-BMS KWG0811860-1 Matrix Spike			SED10-0.5-2.5-BDMS KWG0811860-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Aroclor 1016	ND	115	148	78	123	148	83	24-168	6	40
Aroclor 1260	ND	150	148	101	167	148	113	24-163	11	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Extracted:**	11/05/2008
Sample Matrix:	Sediment	**Date Analyzed:**	11/22/2008

Lab Control Spike Summary
Polychlorinated Biphenyls (PCBs)

Extraction Method:	EPA 3540C	**Units:**	ug/Kg
Analysis Method:	8082	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0811860

	Lab Control Sample KWG0811860-3 **Lab Control Spike**			
Analyte Name	**Result**	**Expected**	**%Rec**	**%Rec Limits**
Aroclor 1016	173	200	86	44-130
Aroclor 1260	162	200	81	52-127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Extracted:**	11/05/2008
Sample Matrix:	Sediment	**Date Analyzed:**	11/22/2008
		Time Analyzed:	03:41

Method Blank Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**File ID:**	J:\GC09\DATA\112108.B\1121F027.D
Lab Code:	KWG0811860-4	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0811860

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0811860-3	J:\GC09\DATA\112108.B\1121F028.D	11/22/08	04:08
SED01-0.5-2.5A	K0810639-001	J:\GC09\DATA\112108.B\1121F033.D	11/22/08	06:34
SED01-2.5-5-A	K0810639-002	J:\GC09\DATA\112108.B\1121F034.D	11/22/08	07:00
SED02-5-8.5-A	K0810639-003	J:\GC09\DATA\112108.B\1121F035.D	11/22/08	07:27
SED02-0.5-2.5A	K0810639-004	J:\GC09\DATA\112108.B\1121F036.D	11/22/08	07:53
SED02-2.5-5-A	K0810639-005	J:\GC09\DATA\112108.B\1121F037.D	11/22/08	08:19
SED01-5-6.5-A	K0810639-006	J:\GC09\DATA\112108.B\1121F038.D	11/22/08	08:46
SED10-0.5-2.5-B	K0810639-007	J:\GC09\DATA\112108.B\1121F039.D	11/22/08	09:12
SED10-0.5-2.5-BMS	KWG0811860-1	J:\GC09\DATA\112108.B\1121F040.D	11/22/08	09:38
SED10-0.5-2.5-BDMS	KWG0811860-2	J:\GC09\DATA\112108.B\1121F041.D	11/22/08	10:05
SED11-0.5-2.5-A	K0810639-008	J:\GC09\DATA\112108.B\1121F045.D	11/22/08	12:05
SED14-0.5-2-A	K0810639-009	J:\GC09\DATA\112108.B\1121F046.D	11/22/08	12:31
SED14-2-3.5-A	K0810639-010	J:\GC09\DATA\112108.B\1121F047.D	11/22/08	12:57

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Extracted:**	11/05/2008
Sample Matrix:	Sediment	**Date Analyzed:**	11/22/2008
		Time Analyzed:	04:08

Lab Control Sample Summary
Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**File ID:**	J:\GC09\DATA\112108.B\1121F028.D
Lab Code:	KWG0811860-3	**Instrument ID:**	GC09.i
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082	**Extraction Lot:**	KWG0811860

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0811860-4	J:\GC09\DATA\112108.B\1121F027.D	11/22/08	03:41
SED01-0.5-2.5A	K0810639-001	J:\GC09\DATA\112108.B\1121F033.D	11/22/08	06:34
SED01-2.5-5-A	K0810639-002	J:\GC09\DATA\112108.B\1121F034.D	11/22/08	07:00
SED02-5-8.5-A	K0810639-003	J:\GC09\DATA\112108.B\1121F035.D	11/22/08	07:27
SED02-0.5-2.5A	K0810639-004	J:\GC09\DATA\112108.B\1121F036.D	11/22/08	07:53
SED02-2.5-5-A	K0810639-005	J:\GC09\DATA\112108.B\1121F037.D	11/22/08	08:19
SED01-5-6.5-A	K0810639-006	J:\GC09\DATA\112108.B\1121F038.D	11/22/08	08:46
SED10-0.5-2.5-B	K0810639-007	J:\GC09\DATA\112108.B\1121F039.D	11/22/08	09:12
SED10-0.5-2.5-BMS	KWG0811860-1	J:\GC09\DATA\112108.B\1121F040.D	11/22/08	09:38
SED10-0.5-2.5-BDMS	KWG0811860-2	J:\GC09\DATA\112108.B\1121F041.D	11/22/08	10:05
SED11-0.5-2.5-A	K0810639-008	J:\GC09\DATA\112108.B\1121F045.D	11/22/08	12:05
SED14-0.5-2-A	K0810639-009	J:\GC09\DATA\112108.B\1121F046.D	11/22/08	12:31
SED14-2-3.5-A	K0810639-010	J:\GC09\DATA\112108.B\1121F047.D	11/22/08	12:57

Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

Raw Data

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED01-0.5-2.5A	**Units:**	ug/Kg
Lab Code:	K0810639-001	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	110	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	210	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	110	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	110	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	110	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**5100**	D	110	14	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	110	14	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	107	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F033.D
Lab ID: K0810639-001
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 06:34
Date Quantitated: 11/25/2008 15:19
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: 11/25/08

Secondary Review: 11/25/08

Printed: 11/25/2008 17:00:18
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R033.D
Lab ID: K0810639-001
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 06:34
Date Quantitated: 11/25/2008 15:21
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: JN 11/25/08

Secondary Review: [illegible] 11/25/08

Printed: 11/25/2008 17:00:21
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	K0810639
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774963	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ3300
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ445
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\112108.B\1121F033.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R033.D			**Vial:**	24
Acqu Date:	11/22/2008 06:34	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-001				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.05 +0.00	17.13	92962	141513	9.15	10.67			107OK
			%Recovery =		92OK	107OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	14U	14U	14U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1221			0	0	0.0000	0.0000	14U	14U	14U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1232			0	0	0.0000	0.0000	14U	14U	14U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1242			0	0	0.0000	0.0000	14U	14U	14U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	14U	14U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F033.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R033.D			**Vial:**	24
Acqu Date:	11/22/2008 06:34	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-001				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1248			0	0	0.0000	0.0000	14U	14U	14U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1254			0	0	2,203	2,449	4600D	5100D	**5100**D
Aroclor 1254 {1}	7.98	8.53	1079684m	1901023	2,108	2,365	4400D	5000D	
Aroclor 1254 {2}	8.09	8.64	632239m	846365	2,233	2,385	4700D	5000D	
Aroclor 1254 {3}	8.68	9.09	746415m	1049349	2,061	2,346	4300D	4900D	
Aroclor 1254 {4}	8.88	9.28	1730544m	2117709	2,339	2,553	4900D	5400D	
Aroclor 1254 {5}	9.28	9.87	1461836m	1596508	2,274	2,595	4800D	5400D	
Aroclor 1260			0	0	0.0000	0.0000	14U	14U	14U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	14U	14U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	14U	14U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.15 g	**Dilution:**	10.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	47.5 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F033.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F033.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R033.D
Inj Date : 22-NOV-2008 06:34
Sample Info: K0810639-001 | SED01-0.5-2.5A
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10639001.H | F=4
Cal Date : 22-NOV-2008 10:36
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

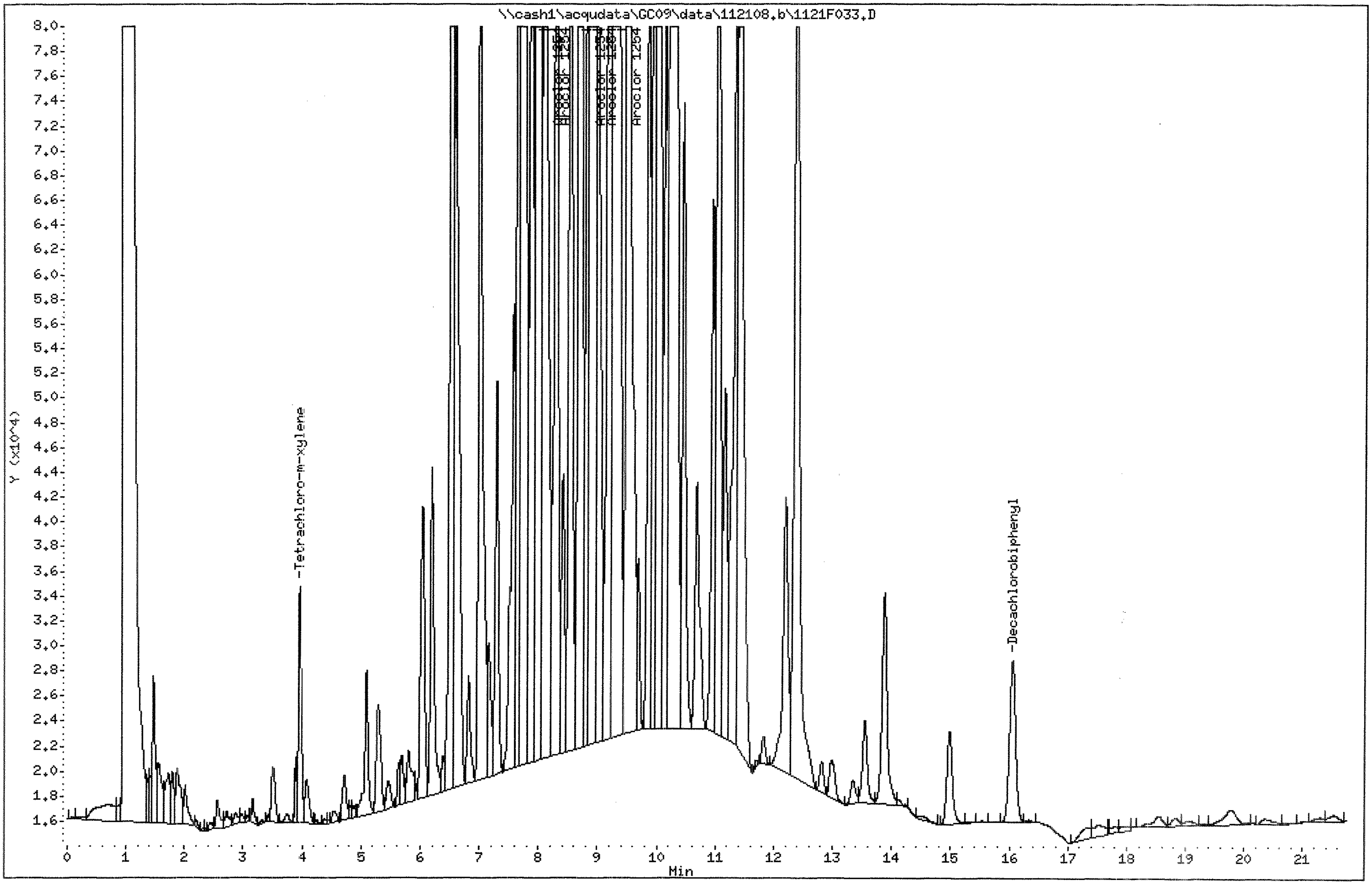
Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.503	60435	102020	5.94	5.93		100.00(RM)
Aroclor 1254	7.977	8.527	1079684	1901023	2110	2360	80.00- 120.00	100.00(M)
	8.093	8.640	632239	846365	2230	2380	44.24- 66.36	58.56(M)
	8.683	9.090	746415	1049349	2060	2340	56.57- 84.86	69.13(M)
	8.883	9.277	1730544	2117709	2340	2550	115.58- 173.38	160.28(M)
	9.280	9.873	1461836	1596508	2270	2600	100.44- 150.66	135.39(M)
		Average of Peak Amounts =			2200	2450		
Decachlorobiphenyl	16.050	17.130	92962	141513	9.15	10.7		100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F033.D
Date : 22-NOV-2008 06:34
Client ID: Instrument: GC09.i
Sample Info: K0810639-001 | SED01-0.5-2.5A
Operator: LHarris
Column phase: DB-35MS Column diameter: 0.53

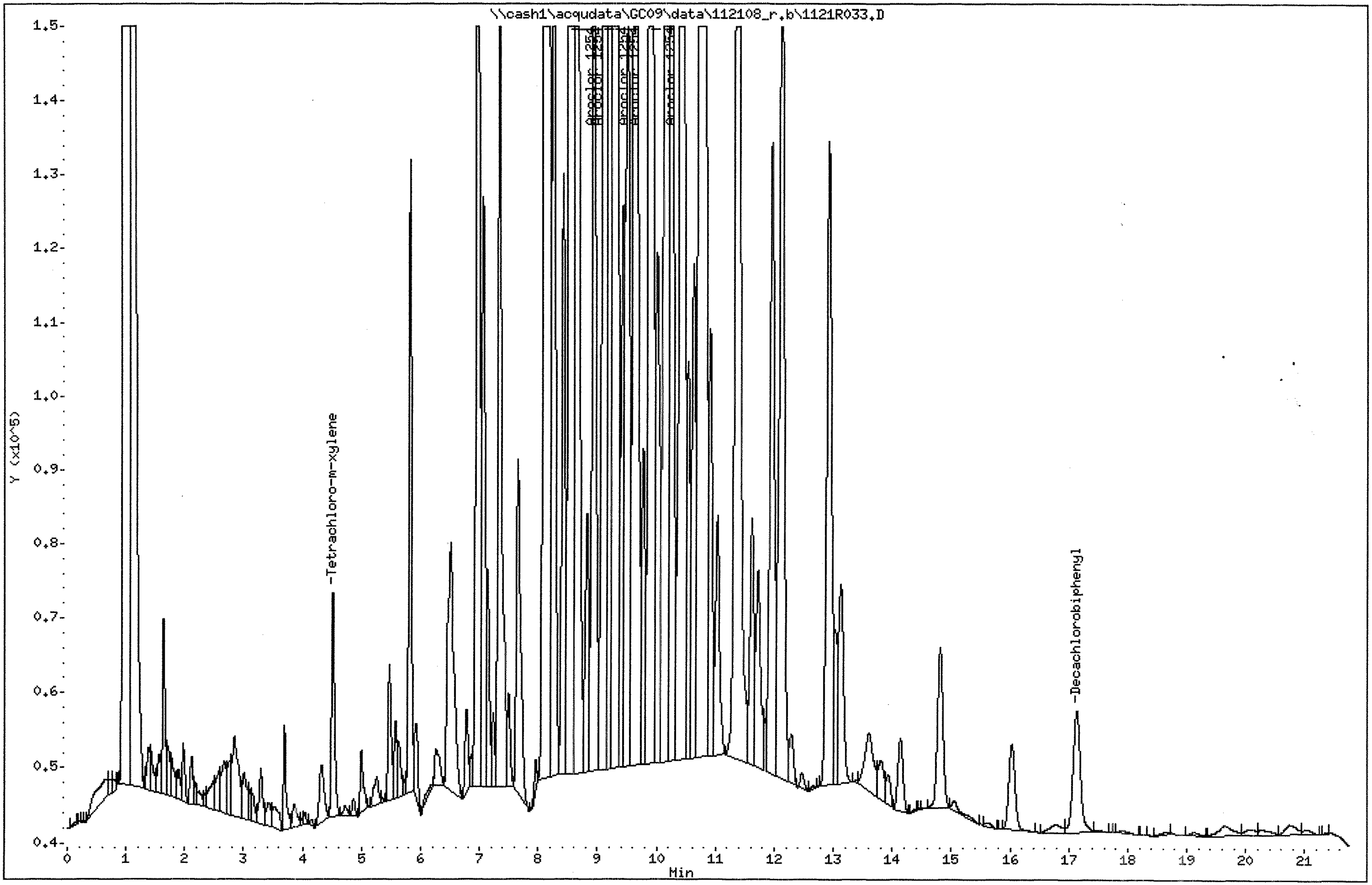


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R033.D
Date : 22-NOV-2008 06:34
Client ID:
Sample Info: K0810639-001 | SED01-0.5-2.5A

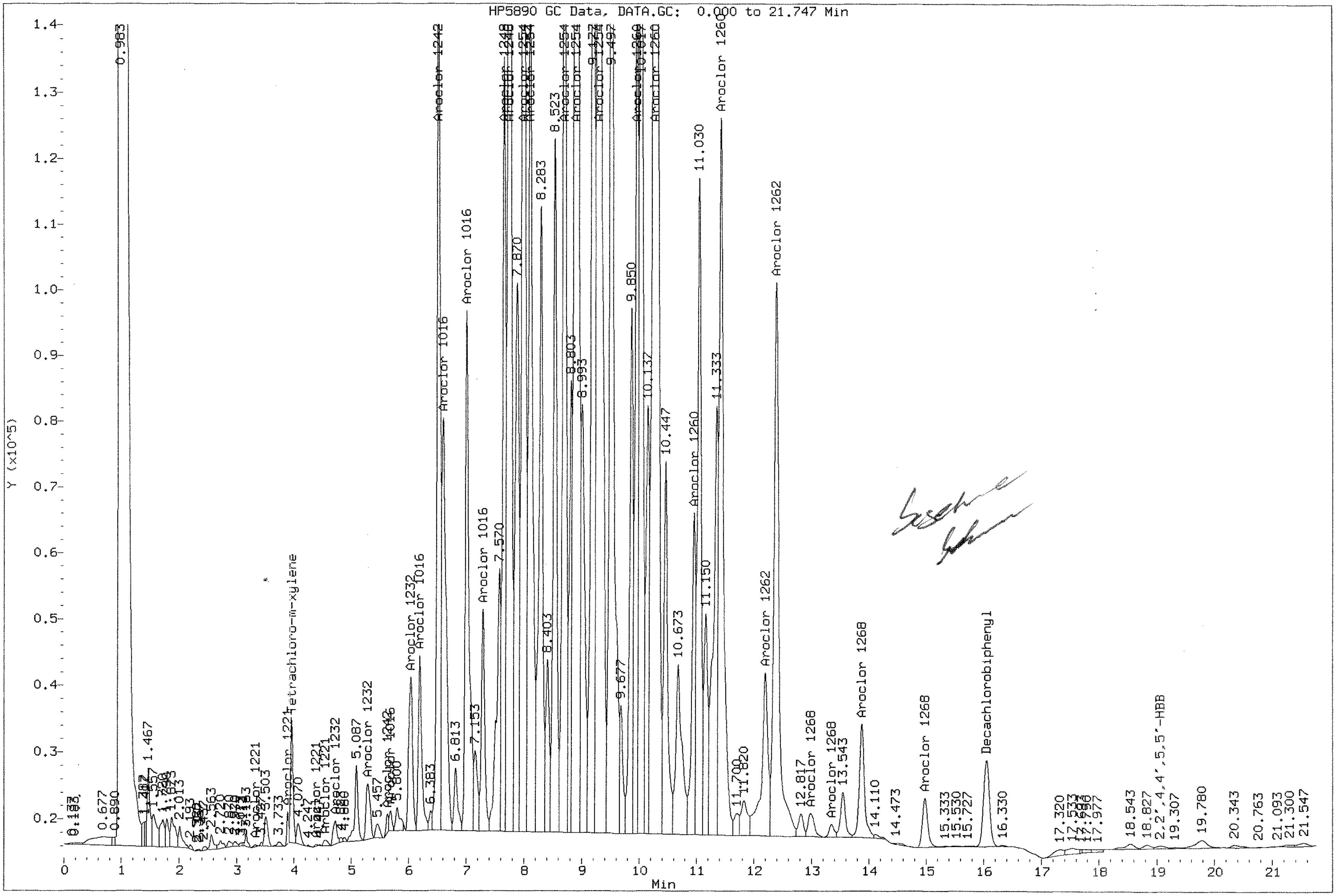
Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\112108.b\1121F033.D
Injection Date: 22-NOV-2008 06:34
Instrument: GC09.i
Client Sample ID:



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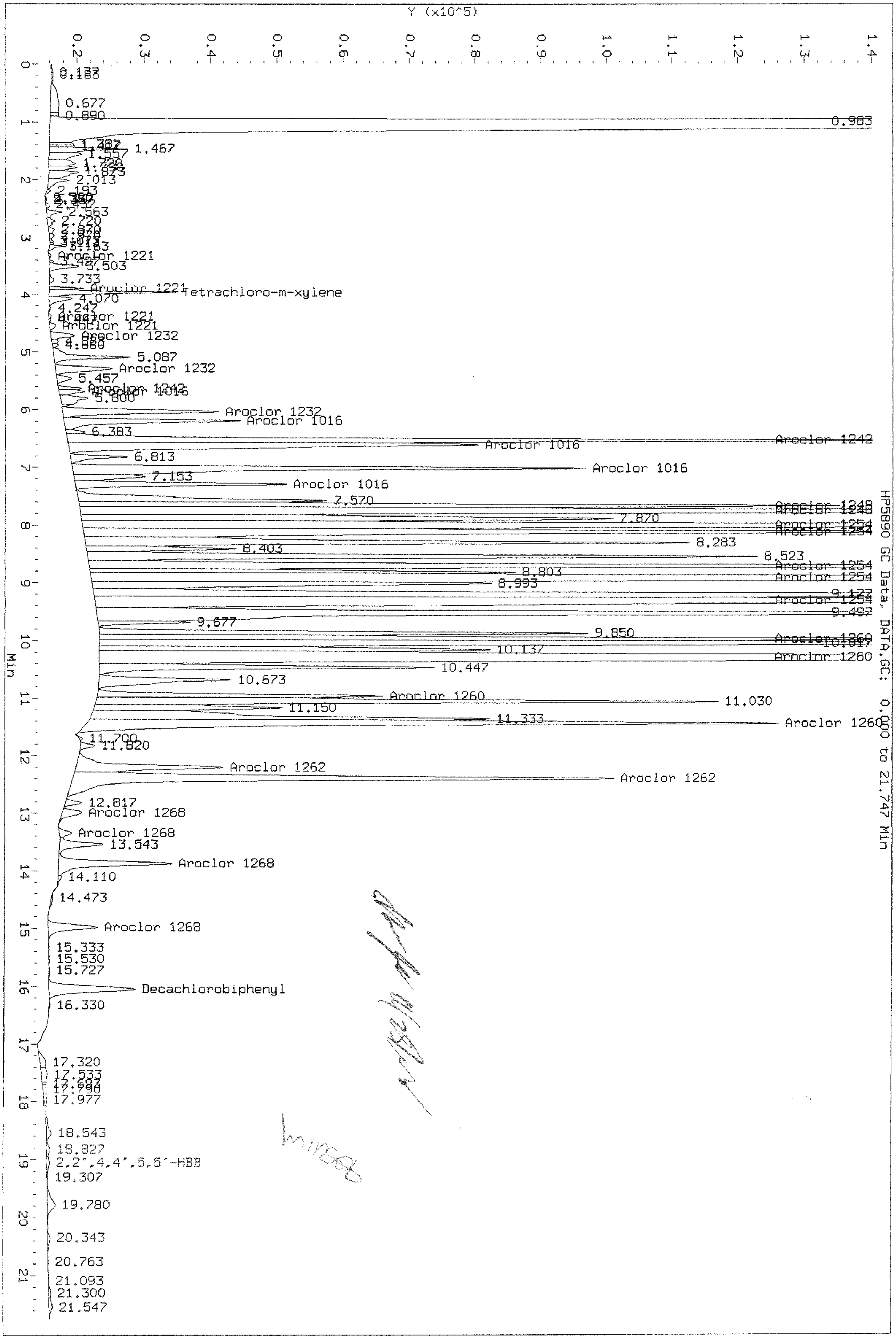
Instrument: GC09.i
Client Sample ID:



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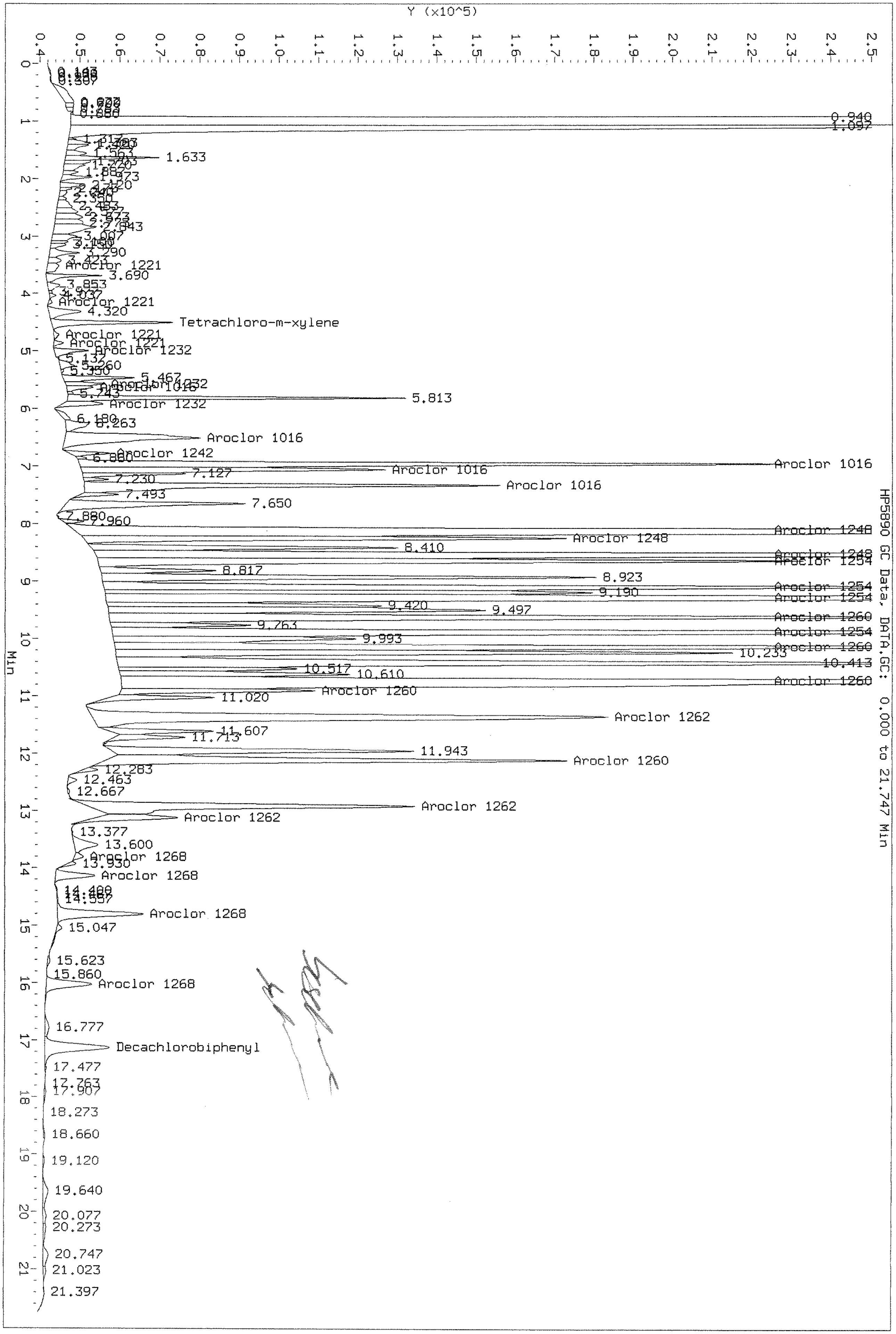
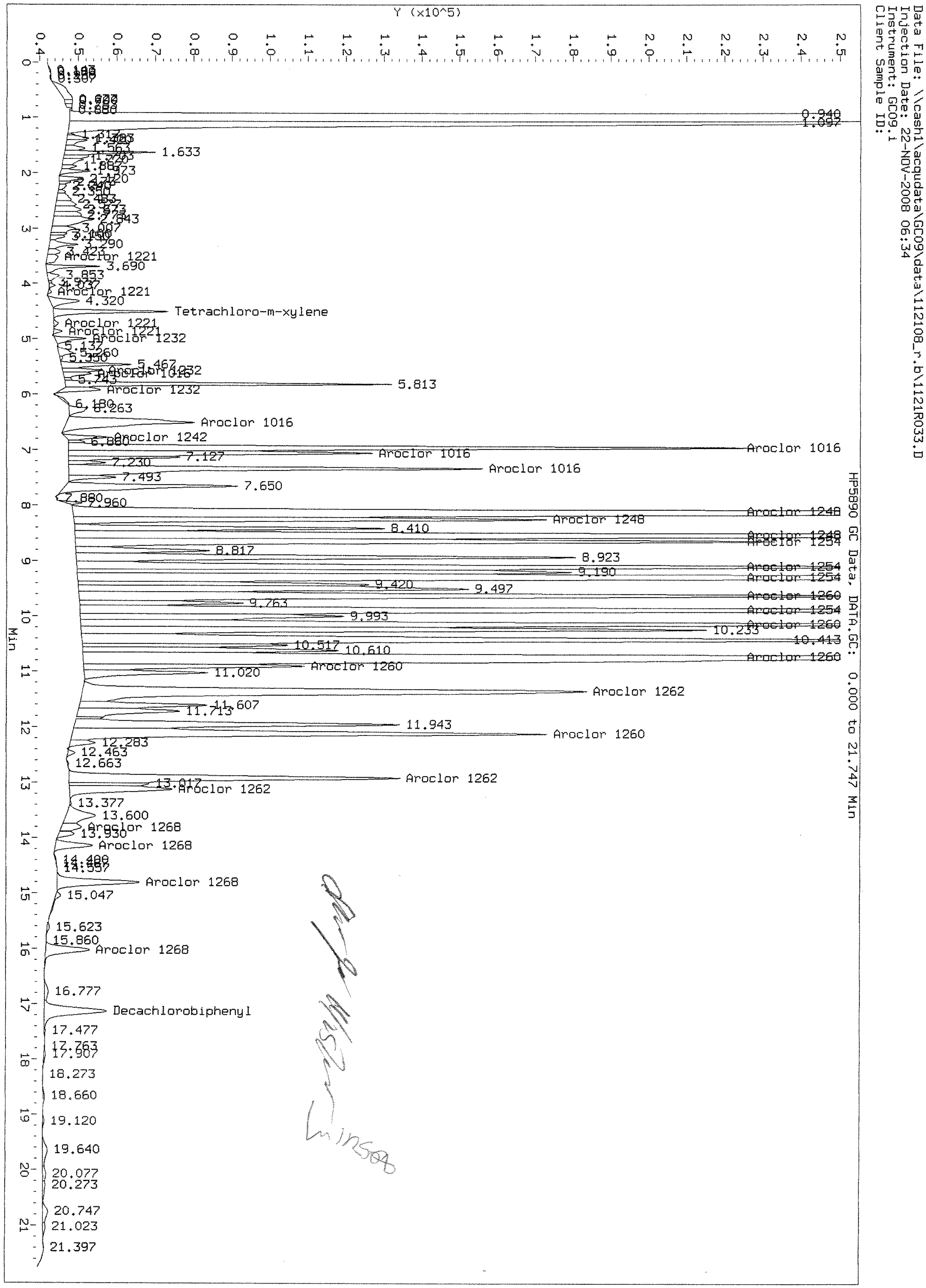
Injection Date: 22-NOV-2008 06:34
Instrument: GC09.i
Client Sample ID:




Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R033.D
Injection Date: 22-NOV-2008 06:34
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.747 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1221
Aroclor 1232
Aroclor 1016
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Aroclor 1262
Aroclor 1268
Decachlorobiphenyl

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED01-2.5-5-A	**Units:**	ug/Kg
Lab Code:	K0810639-002	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	190	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	380	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	190	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	190	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	190	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**14000**	D	190	26	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	190	26	20	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	138	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F034.D
Lab ID: K0810639-002
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 07:00
Date Quantitated: 11/25/2008 15:19
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: Jo 11/25/08

Secondary Review: M 11/25/08

Printed: 11/25/2008 17:00:24
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R034.D	**Date Acquired:**	11/22/2008 07:00
Lab ID:	K0810639-002	**Date Quantitated:**	11/25/2008 15:22
RunType:	SMPL	**Batch ID:**	KWG0812580
Matrix:	SEDIMENT	**Analysis Method:**	8082
		MethodJoinID:	MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Decachlorobiphenyl	153	38	144	Sur ok

Primary Review: JW 11/25/08

Secondary Review: m 11/25/08

Printed: 11/25/2008 17:00:27

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	K0810639
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774964	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ3300
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ445
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\112108.B\1121F034.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R034.D			**Vial:**	25
Acqu Date:	11/22/2008 07:00	**Quant Date:**	11/25/2008 15:19	**Dilution:**	20.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-002				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.05	17.13	70308	101769	6.92	7.67			153*
			%Recovery =		138OK	153*	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	26U	26U	26U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1221			0	0	0.0000	0.0000	26U	26U	26U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1232			0	0	0.0000	0.0000	26U	26U	26U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1242			0	0	0.0000	0.0000	26U	26U	26U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	26U	26U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F034.D	**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R034.D	**Vial:**	25
Acqu Date:	11/22/2008 07:00 **Quant Date:** 11/25/2008 15:19	**Dilution:**	20.0
Run Type:	SMPL	**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-002		
Signal #1:	DB-35MS **Signal #2:** DB-XLB		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1248			0	0	0.0000	0.0000	26U	26U	26U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1254			0	0	3,413	3,730	13000D	14000D	**14000**D
Aroclor 1254 {1}	7.98	8.53	1674947m	2853510	3,271	3,551	12000D	13000D	
Aroclor 1254 {2}	8.09	8.64	928404m	1225723	3,279	3,454	12000D	13000D	
Aroclor 1254 {3}	8.68	9.09	1154500m	1682392	3,188	3,761	12000D	14000D	
Aroclor 1254 {4}	8.88	9.28	2801610m	3305294	3,787	3,985	14000D	15000D	
Aroclor 1254 {5}	9.28	9.87	2277348m	2400032	3,542	3,901	13000D	15000D	
Aroclor 1260			0	0	0.0000	0.0000	26U	26U	26U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	26U	26U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	26U	26U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.28 g	**Dilution:**	20.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	53.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F034.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F034.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R034.D
Inj Date : 22-NOV-2008 07:00
Sample Info: K0810639-002 | SED01-2.5-5-A
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10639002.H | F=4
Cal Date : 22-NOV-2008 10:36
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.953	4.503	31625	59672	3.10	3.47		100.00(RM)
Aroclor 1254	7.977	8.527	1674947	2853510	3270	3550	80.00- 120.00	100.00(M)
	8.093	8.637	928404	1225723	3280	3450	44.24- 66.36	55.43(M)
	8.683	9.090	1154500	1682392	3190	3760	56.57- 84.86	68.93(M)
	8.883	9.277	2801610	3305294	3790	3980	115.58- 173.38	167.27(M)
	9.280	9.873	2277348	2400032	3540	3900	100.44- 150.66	135.97(M)
		Average of Peak Amounts =			3410	3730		
Decachlorobiphenyl	16.047	17.130	70308	101769	6.92	7.67		100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

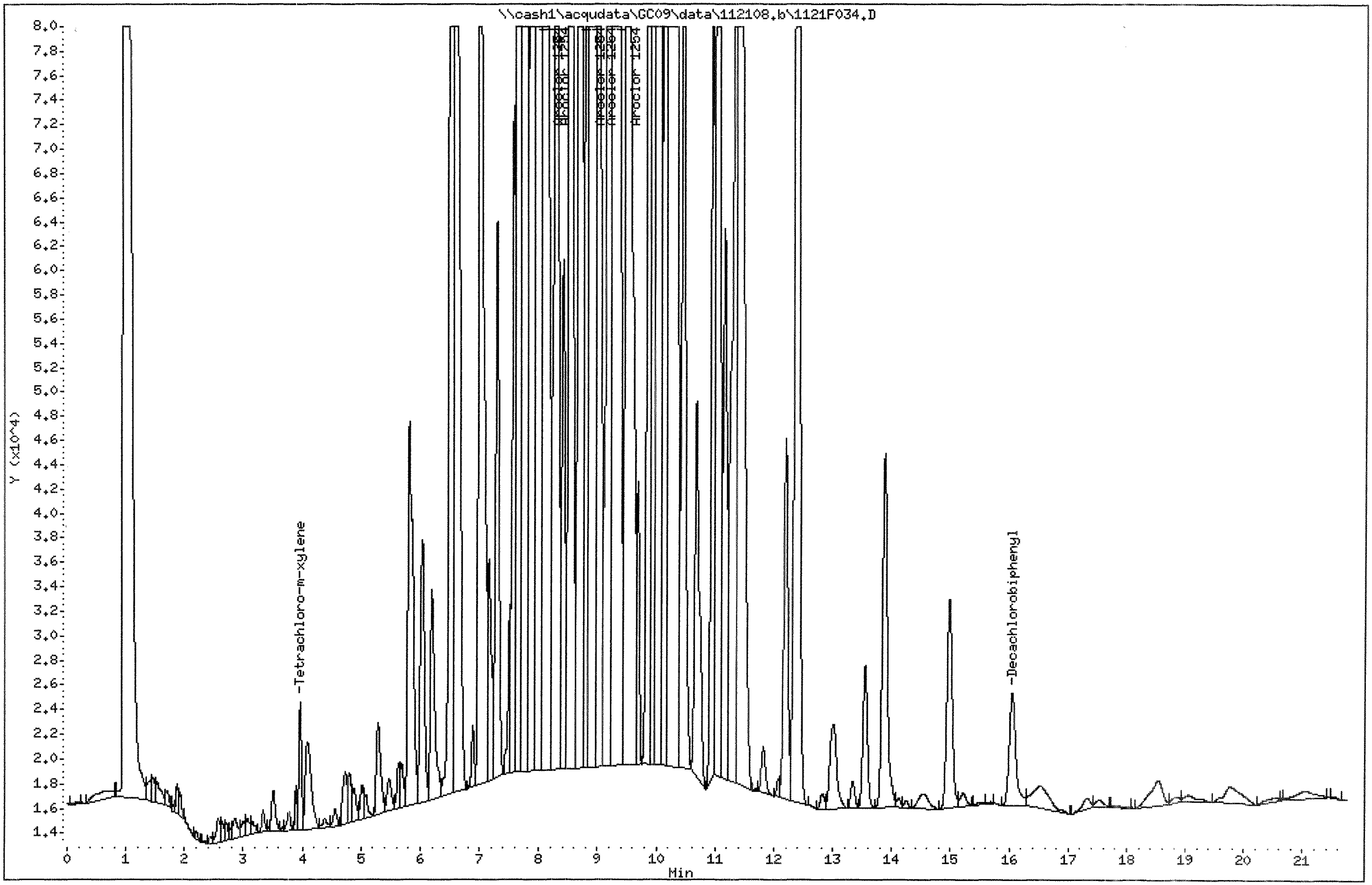
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F034.D
Date : 22-NOV-2008 07:00
Client ID:
Sample Info: K0810639-002 | SED01-2.5-5-A

Instrument: GC09.i

Operator: LHarris

Column phase: DB-35MS

Column diameter: 0.53

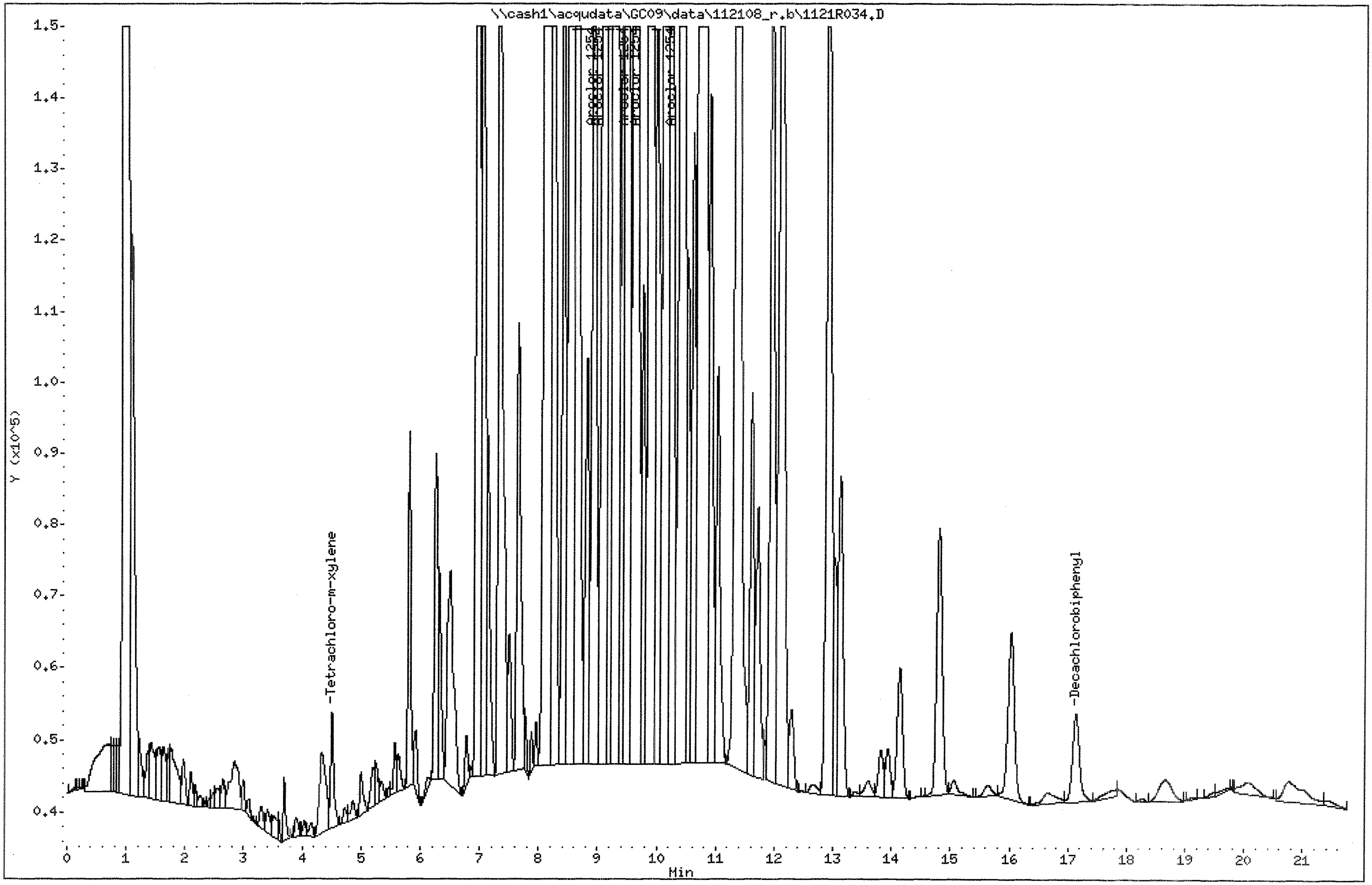


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R034.D
Date : 22-NOV-2008 07:00
Client ID:
Sample Info: K0810639-002 | SED01-2.5-5-A

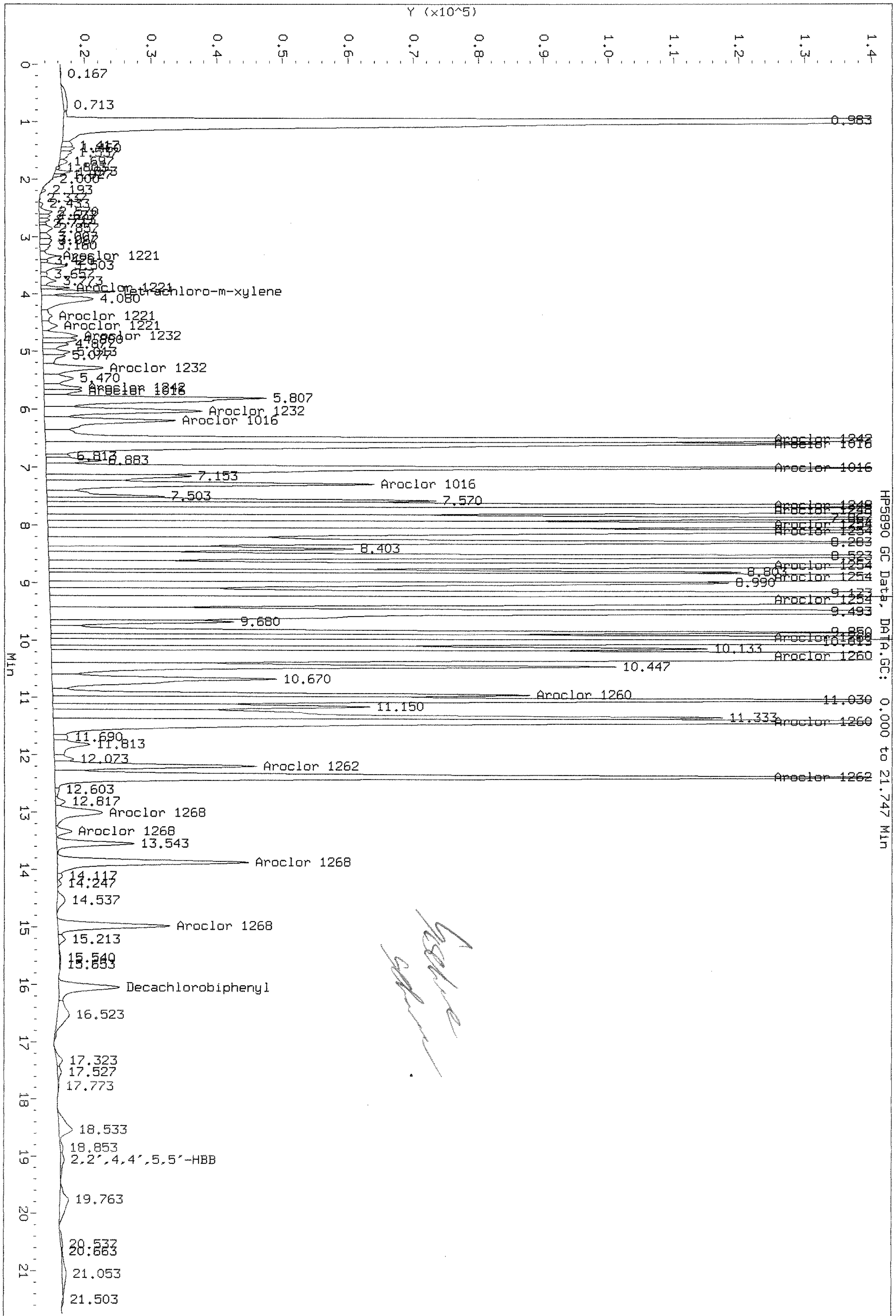
Column phase: DB-XLB

Instrument: GC09.i

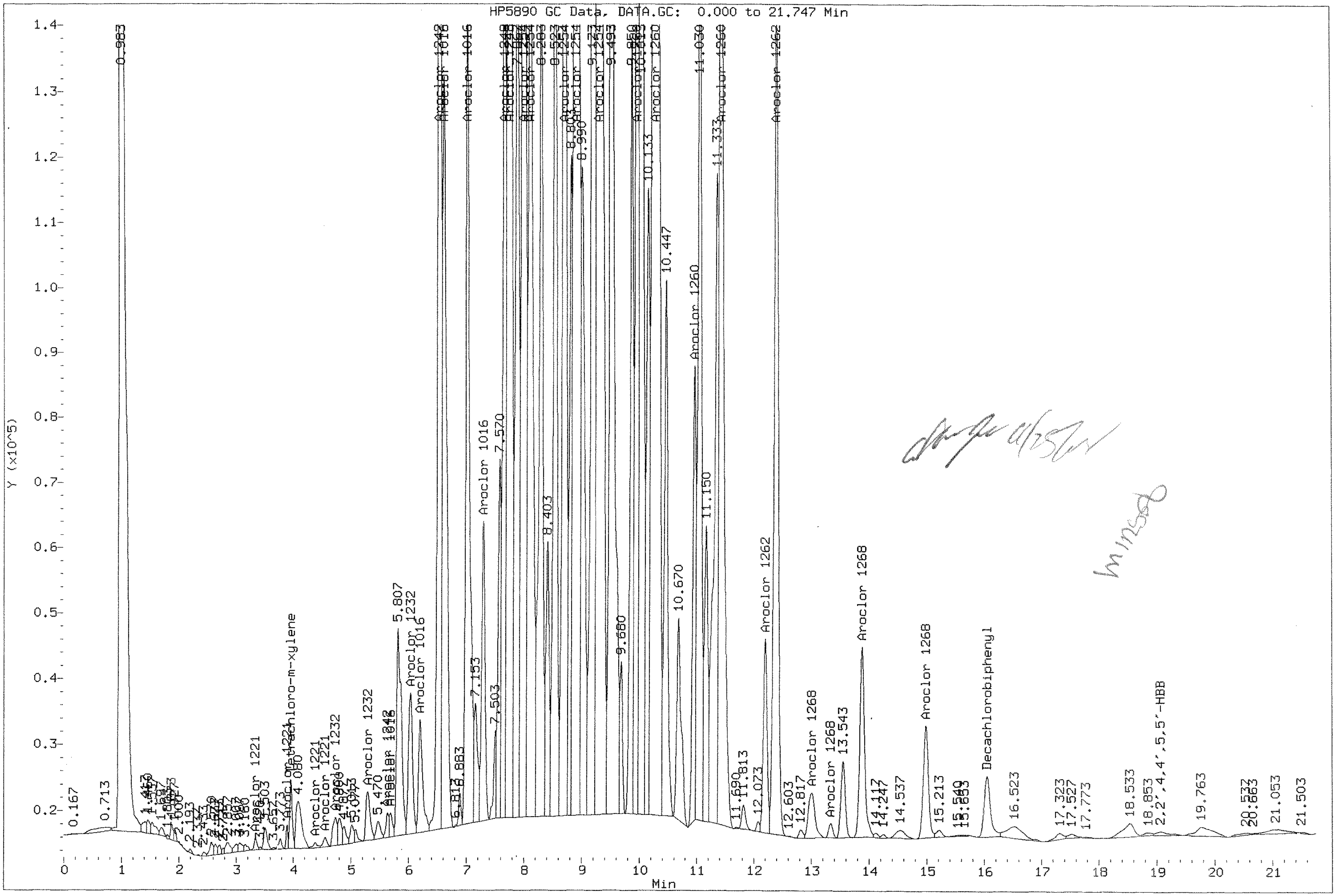
Operator: LHarris
Column diameter: 0.53



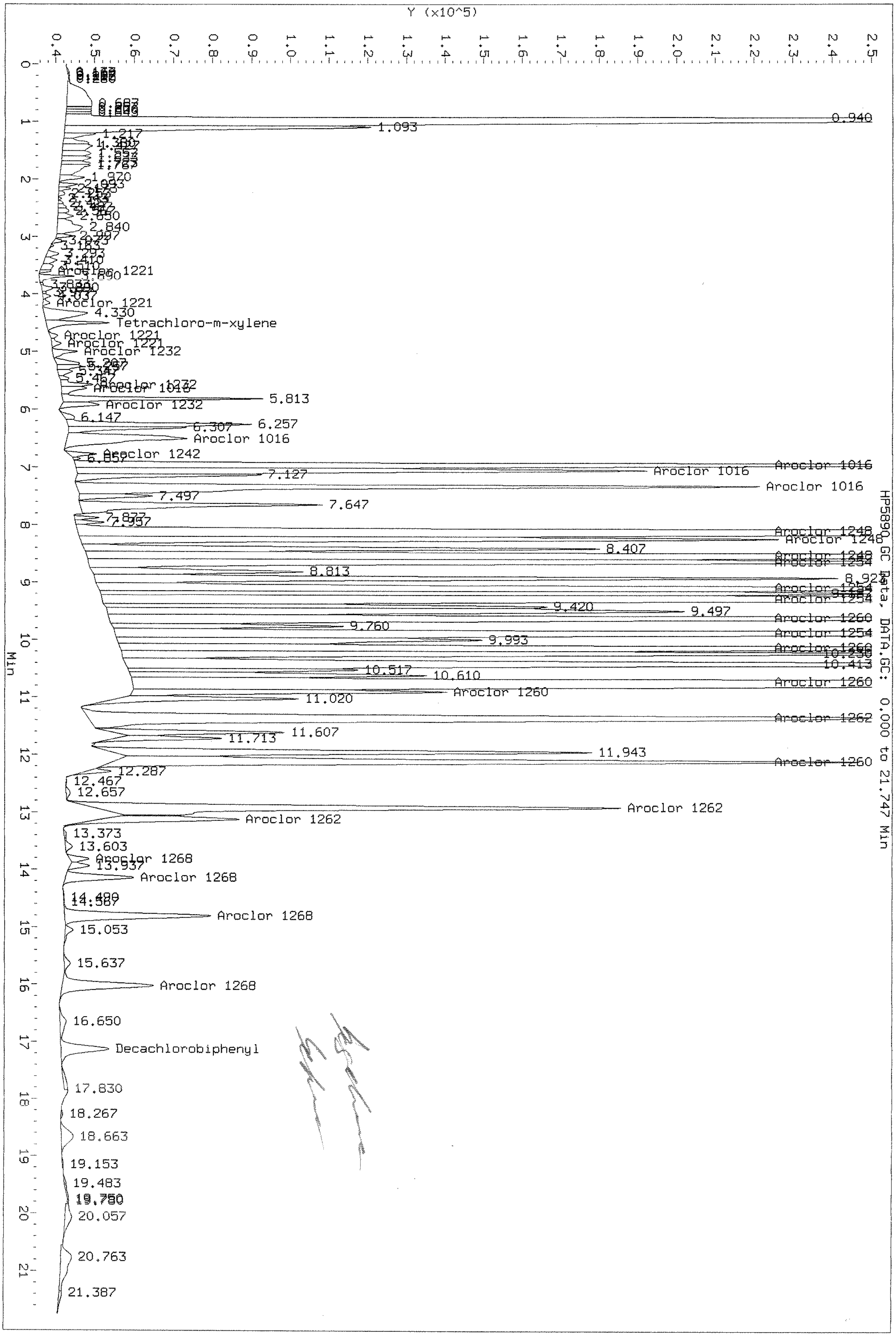
Data File: \\cash1\acqudata\GC09\data\112108.b\121F034.D
Injection Date: 22-NOV-2008 07:00
Instrument: GC09.1
Client Sample ID:

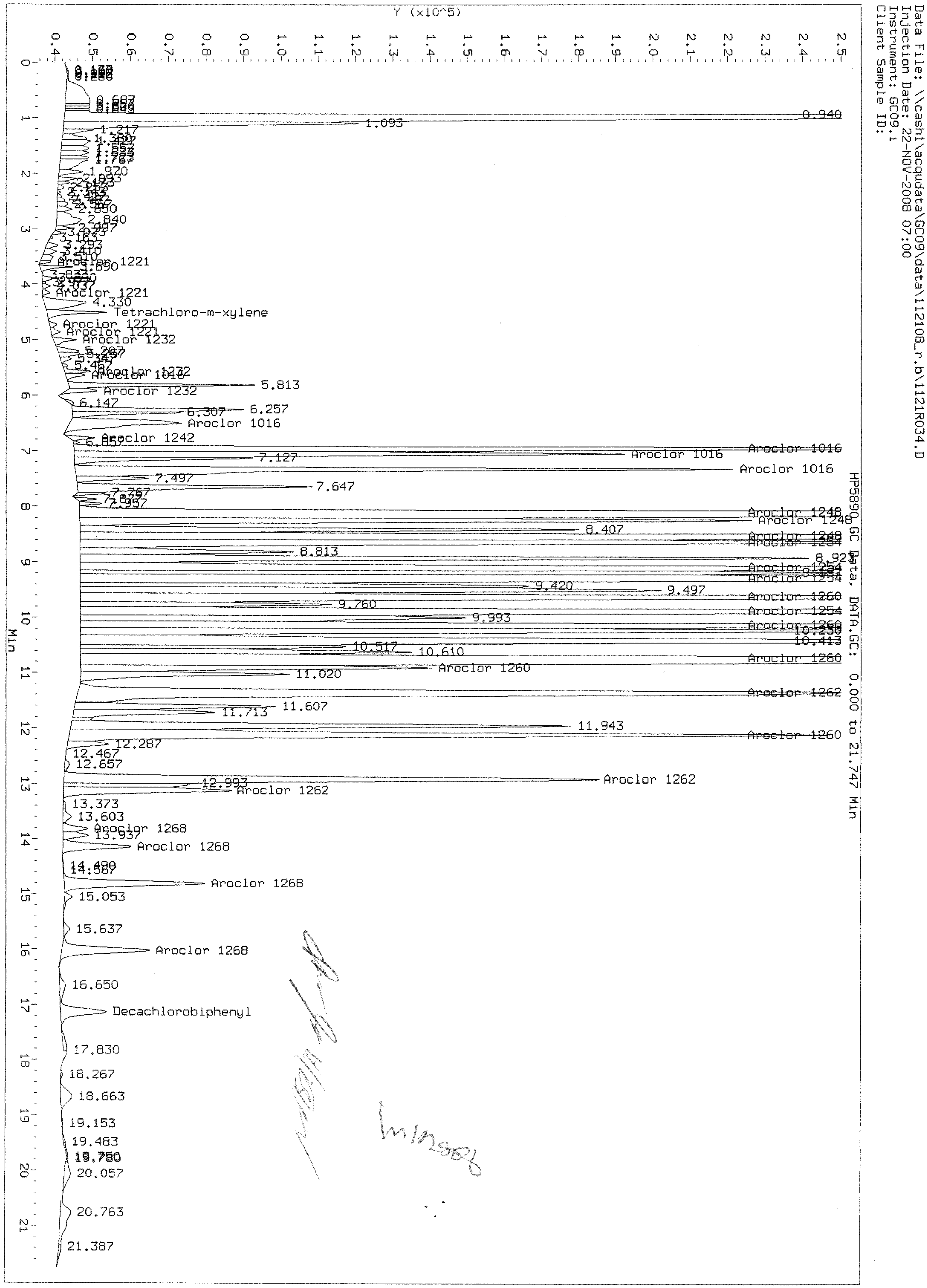


Data File: \\cash1\acqudata\GC09\data\112108.b\1121F034.D
Injection Date: 22-NOV-2008 07:00
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R034.D
Injection Date: 22-NOV-2008 07:00
Instrument: GC09.i
Client Sample ID:




Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R034.D
Injection Date: 22-NOV-2008 07:00
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.747 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Decachlorobiphenyl

Client:	CH2M Hill		**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF		**Date Collected:**	07/10/2008
Sample Matrix:	Sediment		**Date Received:**	07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED02-5-8.5-A		**Units:**	ug/Kg
Lab Code:	K0810639-003		**Basis:**	Dry
Extraction Method:	EPA 3540C		**Level:**	Low
Analysis Method:	8082			

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	75	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	150	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	75	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	75	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	75	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**810**	D	75	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	**380**	D	75	13	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	127	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F035.D
Lab ID: K0810639-003
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 07:27
Date Quantitated: 11/25/2008 15:19
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: JM 11/25/08

Secondary Review: KW 11/25/08

Printed: 11/25/2008 17:00:30
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R035.D	**Date Acquired:**	11/22/2008 07:27
Lab ID:	K0810639-003	**Date Quantitated:**	11/25/2008 15:22
RunType:	SMPL	**Batch ID:**	KWG0812580
Matrix:	SEDIMENT	**Analysis Method:**	8082
		MethodJoinID:	MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: JW 11/25/08

Secondary Review: MM 11/25/08

Printed: 11/25/2008 17:00:33

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Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	K0810639
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774965	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ3300
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ445
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\112108.B\1121F035.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R035.D			**Vial:**	26
Acqu Date:	11/22/2008 07:27	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-003				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.05	17.13	109318m	168815	10.76	12.73			127OK
				%Recovery =	108OK	127OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	13U	13U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F035.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R035.D			**Vial:**	26
Acqu Date:	11/22/2008 07:27	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-003				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1254			0	0	428.43	542.88	640D	810D	**810**D
Aroclor 1254 {1}	7.98	8.53	253293m	387088	494.65	481.65	730D	720D	
Aroclor 1254 {2}	8.09	8.64	112815m	180670	398.41	509.06	590D	760D	
Aroclor 1254 {3}	8.68	9.07	148980m	341113	411.41	762.49	610D	1100D	
Aroclor 1254 {4}	8.89	9.28	361459m	426485	488.56	514.21	730D	760D	
Aroclor 1254 {5}	9.28	9.87	224451m	274979	349.13	447.00	520D	660D	
Aroclor 1260			0	0	258.36	366.04	380D	540D mt	**540**D
Aroclor 1260 {1}	9.94	9.61	117106m	241221m	311.25	343.22	460D	510D	
Aroclor 1260 {2}	10.26	10.13 0.00	0m	354192m	0.0000	478.72	13U	710D	
Aroclor 1260 {3}		10.72 0.00	0m	405649m	0.0000	441.42	13U	660D	
Aroclor 1260 {4}	10.94	10.90	77967m	130475m	172.61	265.28	260D	390D	
Aroclor 1260 {5}	11.41	12.11 0.00	272649m	319890m	291.21	301.55	430D	450D	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.67 g	**Dilution:**	10.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	66.2 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F035.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F035.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R035.D
Inj Date : 22-NOV-2008 07:27
Sample Info: K0810639-003 | SED02-5-8.5-A
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10639003.H | F=4
Cal Date : 22-NOV-2008 10:36
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

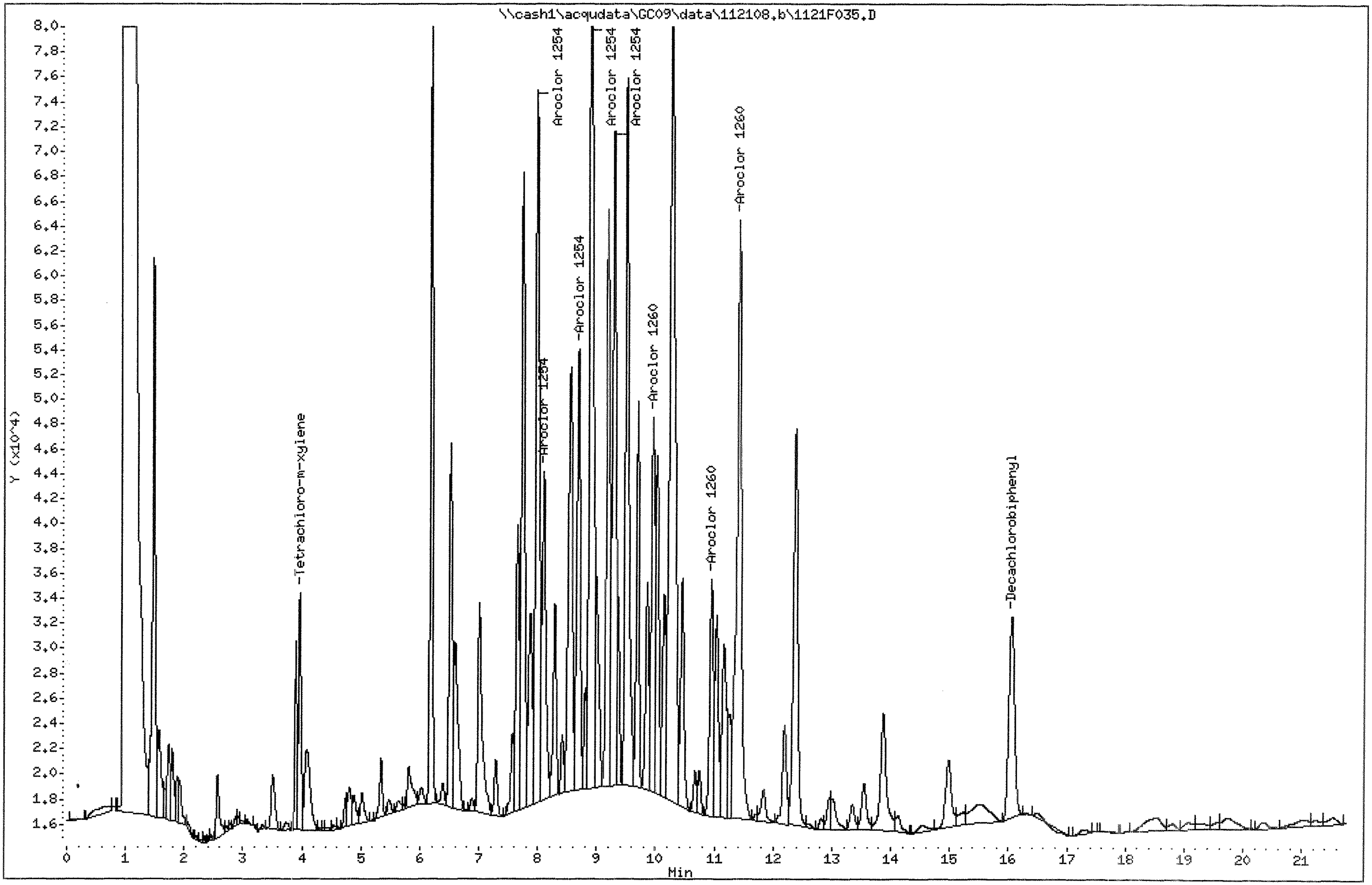
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	59105	96763	5.80	5.63		100.00(RM)
Aroclor 1254	7.977	8.527	253293	387088	495	482	80.00- 120.00	100.00(M)
	8.093	8.637	112815	180670	398	509	44.24- 66.36	44.54(M)
	8.680	9.073	148980	341113	411	762	56.57- 84.86	58.82(M)
	8.887	9.277	361459	426485	488	514	115.58- 173.38	168.61(M)
	9.283	9.873	224451	274979	349	447	100.44- 150.66	104.63(M)
		Average of Peak Amounts =			428	543		
Aroclor 1260	9.943	9.613	117106	241221	311	343	80.00- 120.00	100.00(TM)
	10.257	10.130		354192		479	82.66- 123.99	146.83(TM)
	0.000	10.720		405649		441	107.32- 160.98	212.83(TM)
	10.943	10.900	77967	130475	173	265	98.63- 147.94	66.58(TM)
	11.407	12.107	272649	319890	291	302	206.52- 309.78	232.82(TM)
		Average of Peak Amounts =			258	366		
Decachlorobiphenyl	16.047	17.130	109318	168815	10.8	12.7		100.00(RM)

QC Flag Legend

T - Target compound detected outside RT window.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

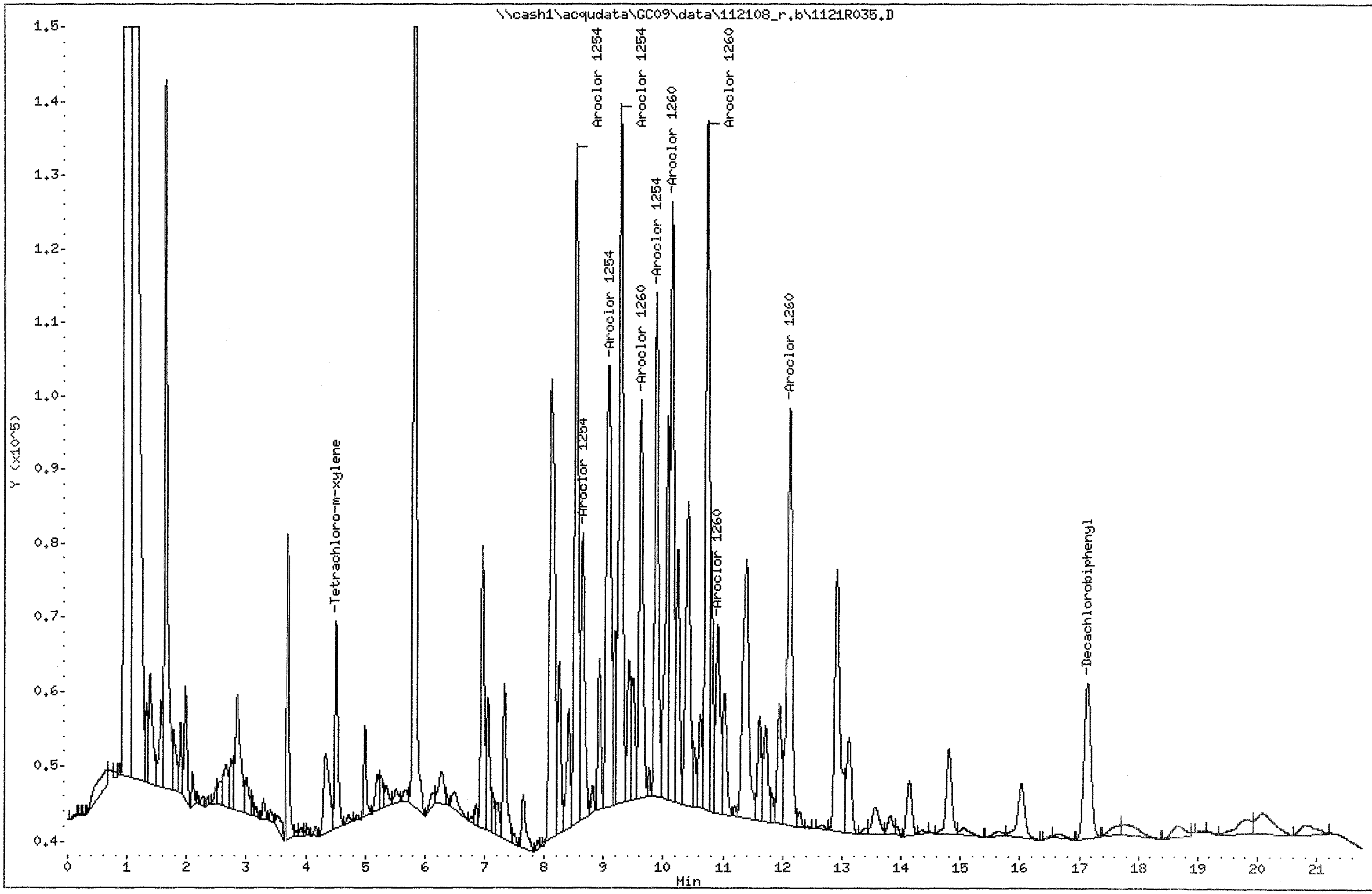
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F035.D
Date : 22-NOV-2008 07:27
Client ID:
Sample Info: K0810639-003 | SED02-5-8.5-A
Column phase: DB-35MS

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53



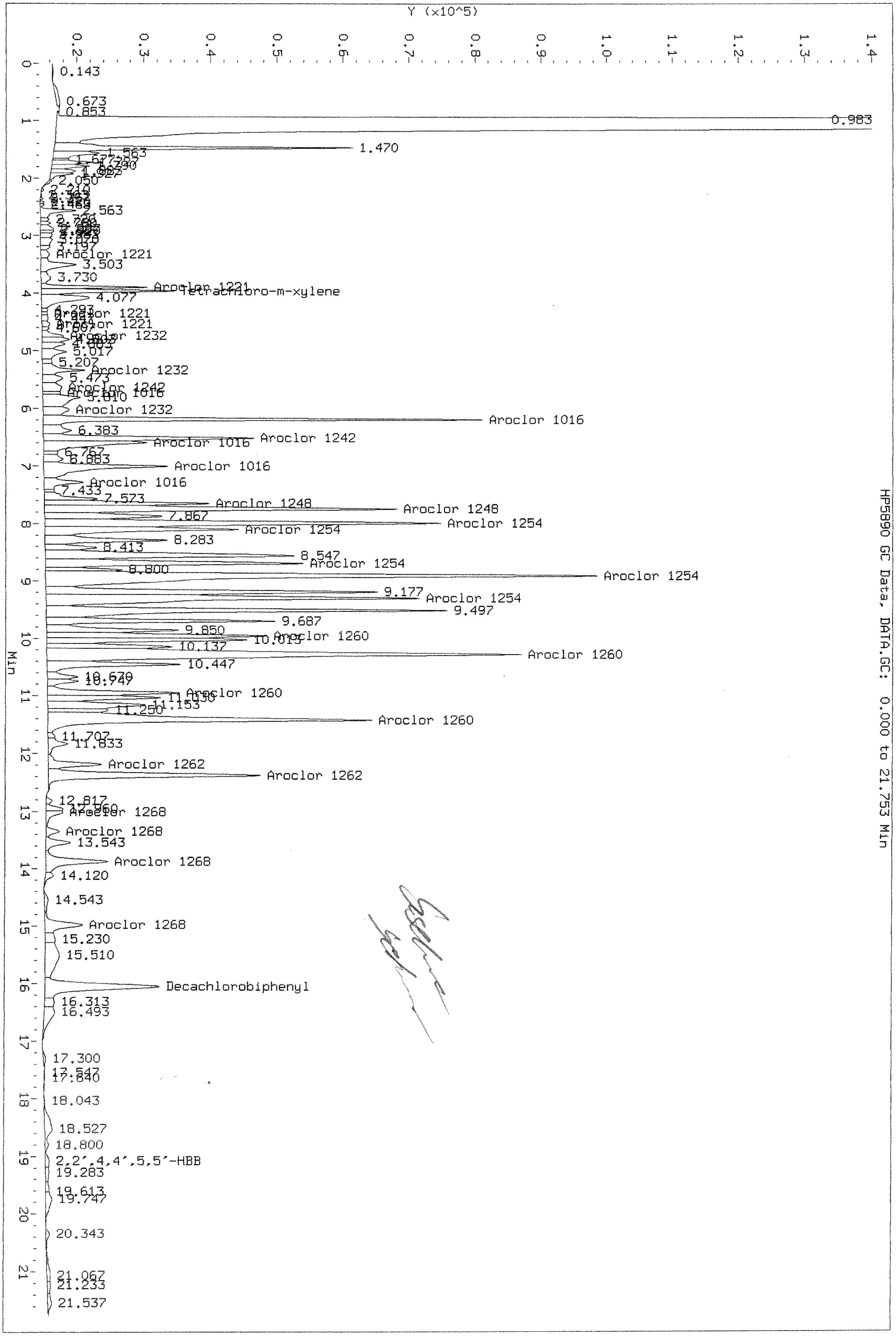
Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R035.D
Date : 22-NOV-2008 07:27
Client ID:
Sample Info: K0810639-003 | SED02-5-8.5-A
Column phase: DB-XLB

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

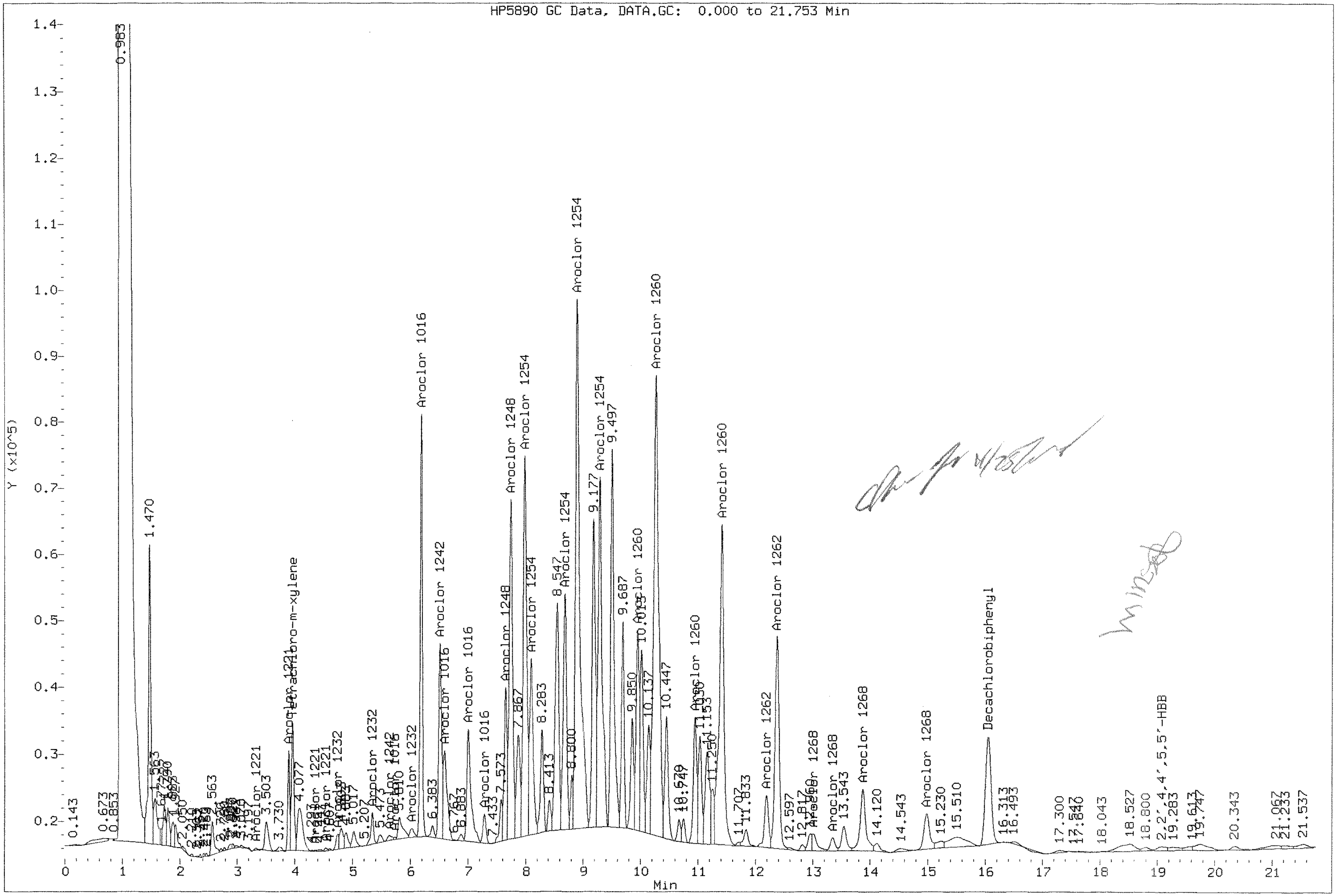


Data File: \\cash1\acqudata\GC09\data\112108.b\1121F035.D
Injection Date: 22-NOV-2008 07:27
Instrument: GC09.i
Client Sample ID:

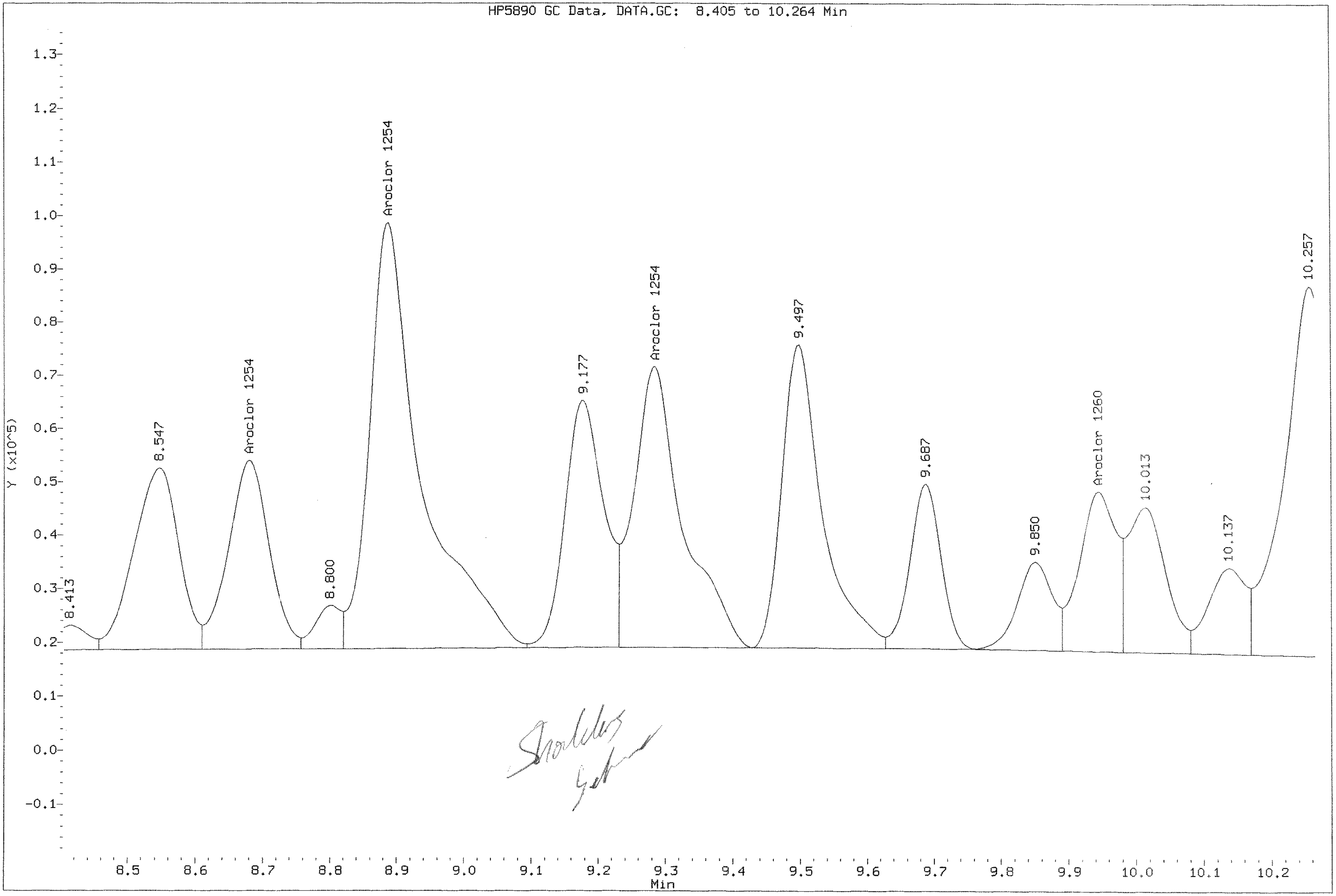
HP5890 GC Data, DATA.GC: 0.000 to 21.753 Min



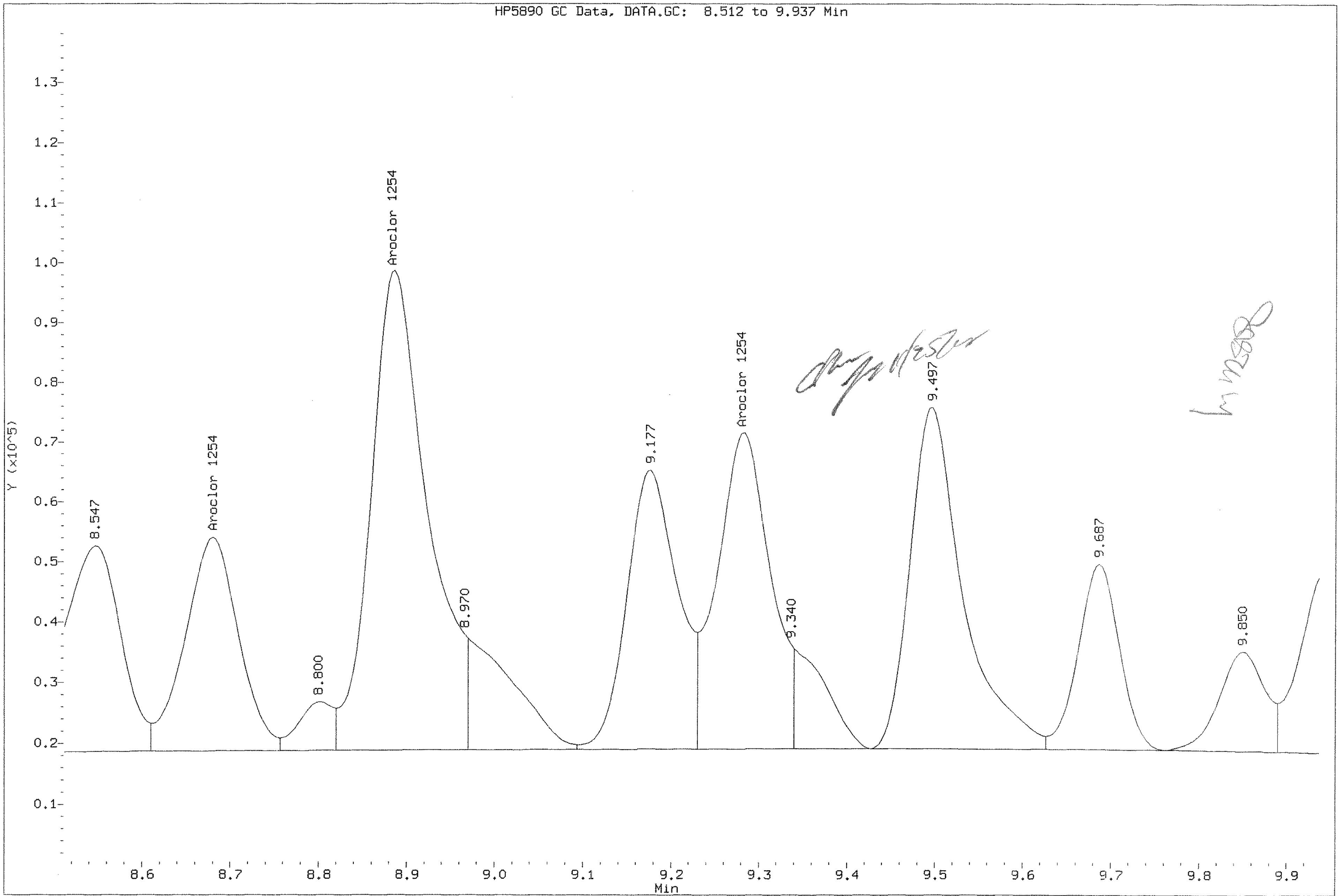
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F035.D
Injection Date: 22-NOV-2008 07:27
Instrument: GC09.i
Client Sample ID:



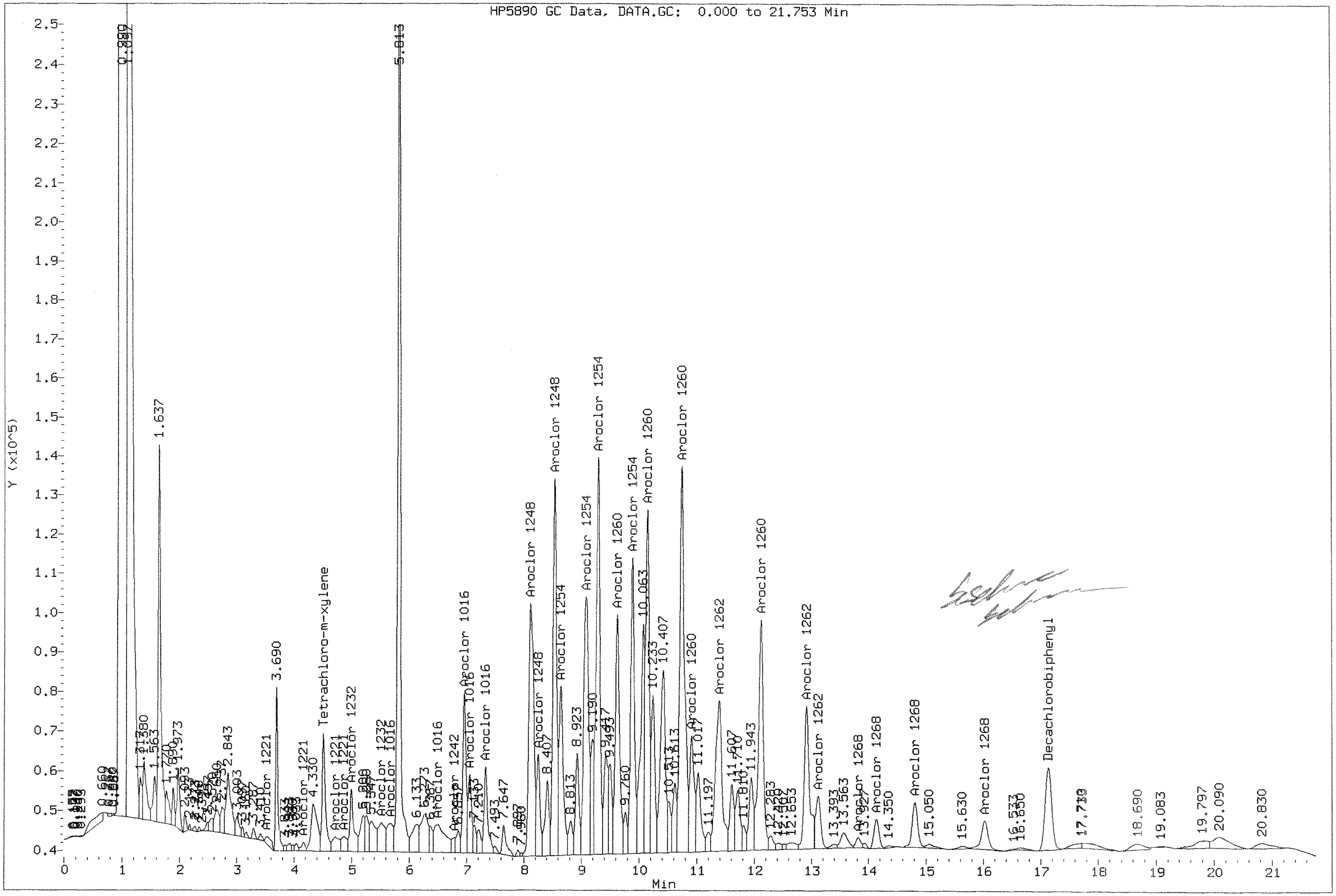
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F035.D
Injection Date: 22-NOV-2008 07:27
Instrument: GC09.i
Client Sample ID:



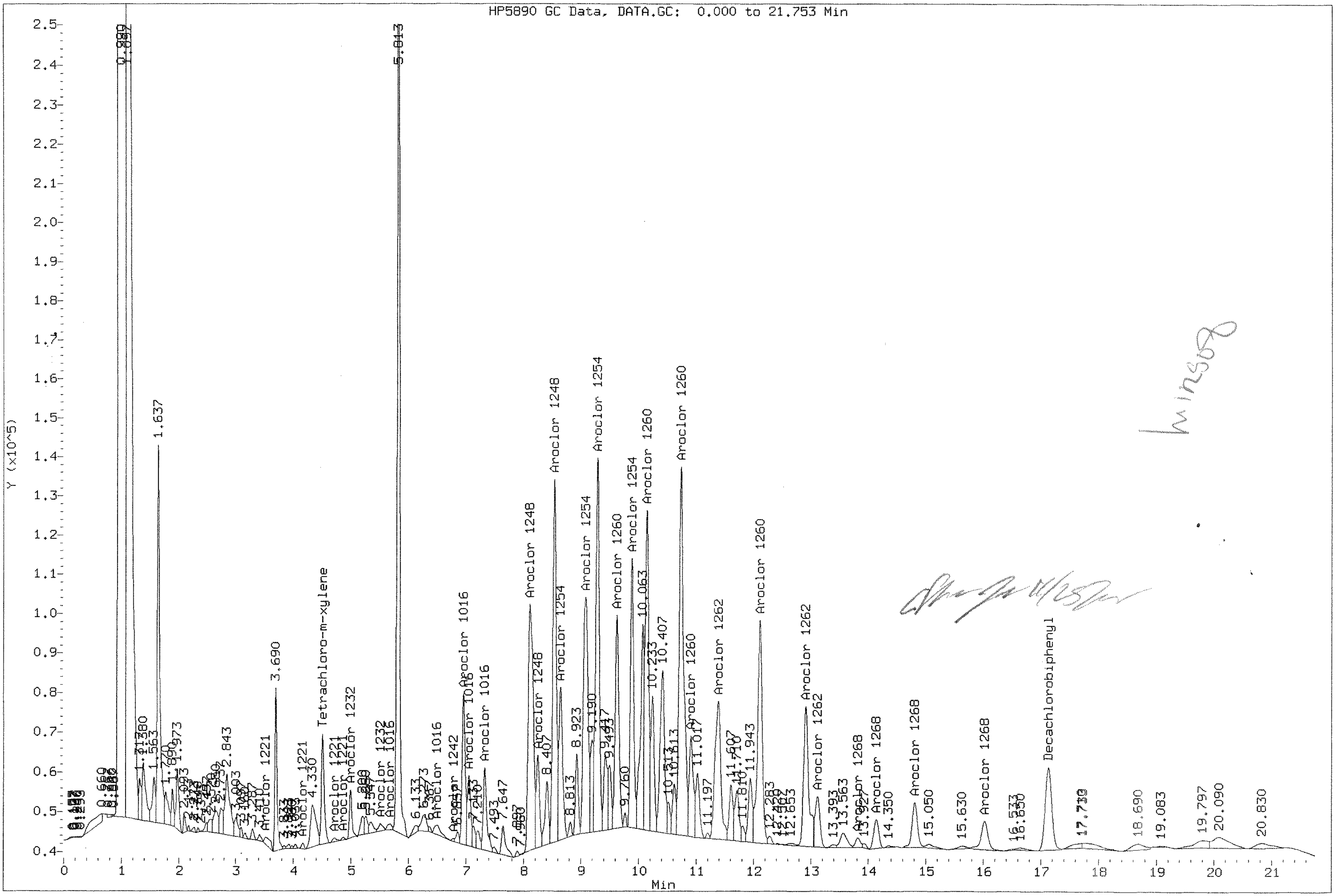
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F035.D
Injection Date: 22-NOV-2008 07:27
Instrument: GC09.i
Client Sample ID:



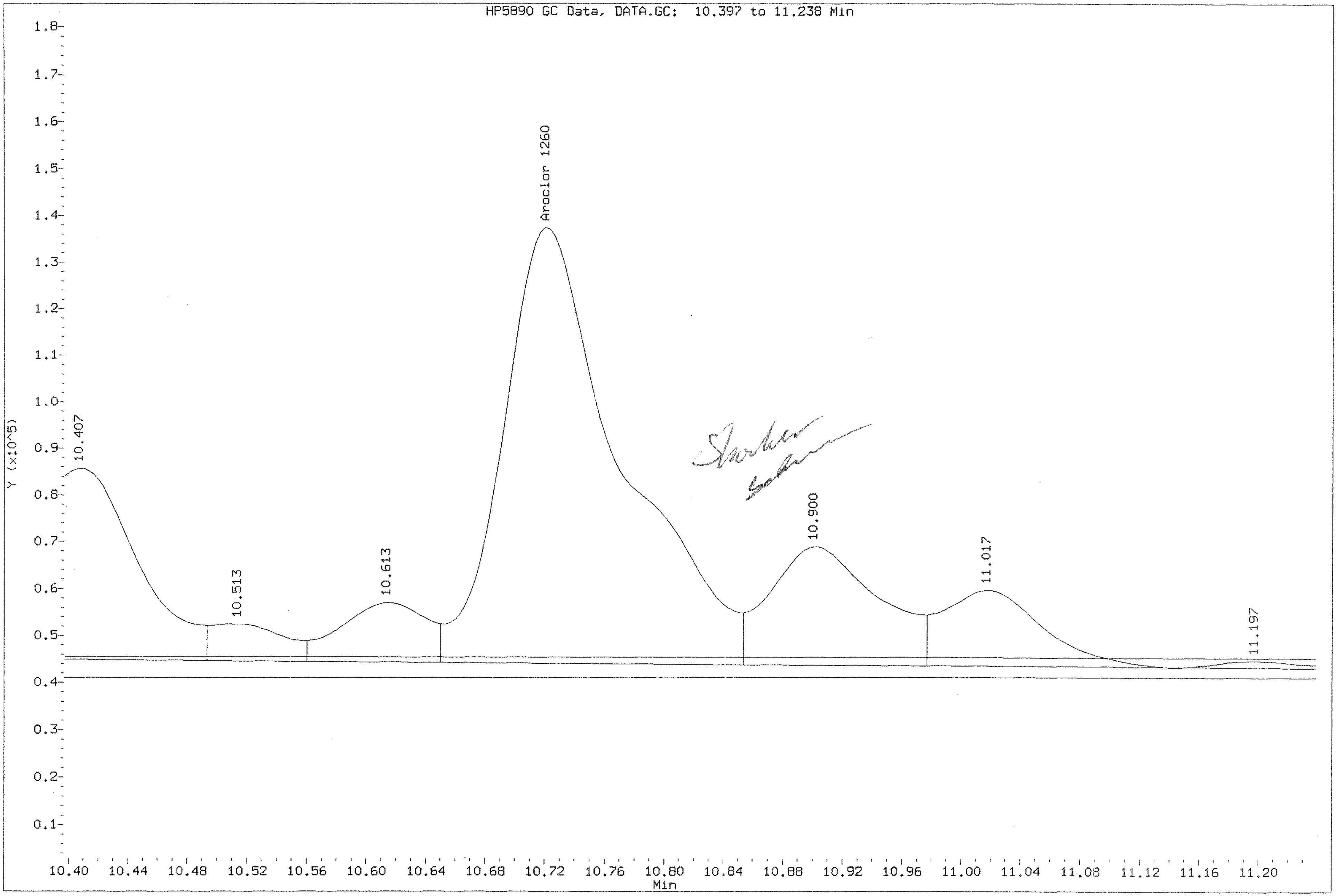
Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R035.D
Injection Date: 22-NOV-2008 07:27
Instrument: GC09.i
Client Sample ID:



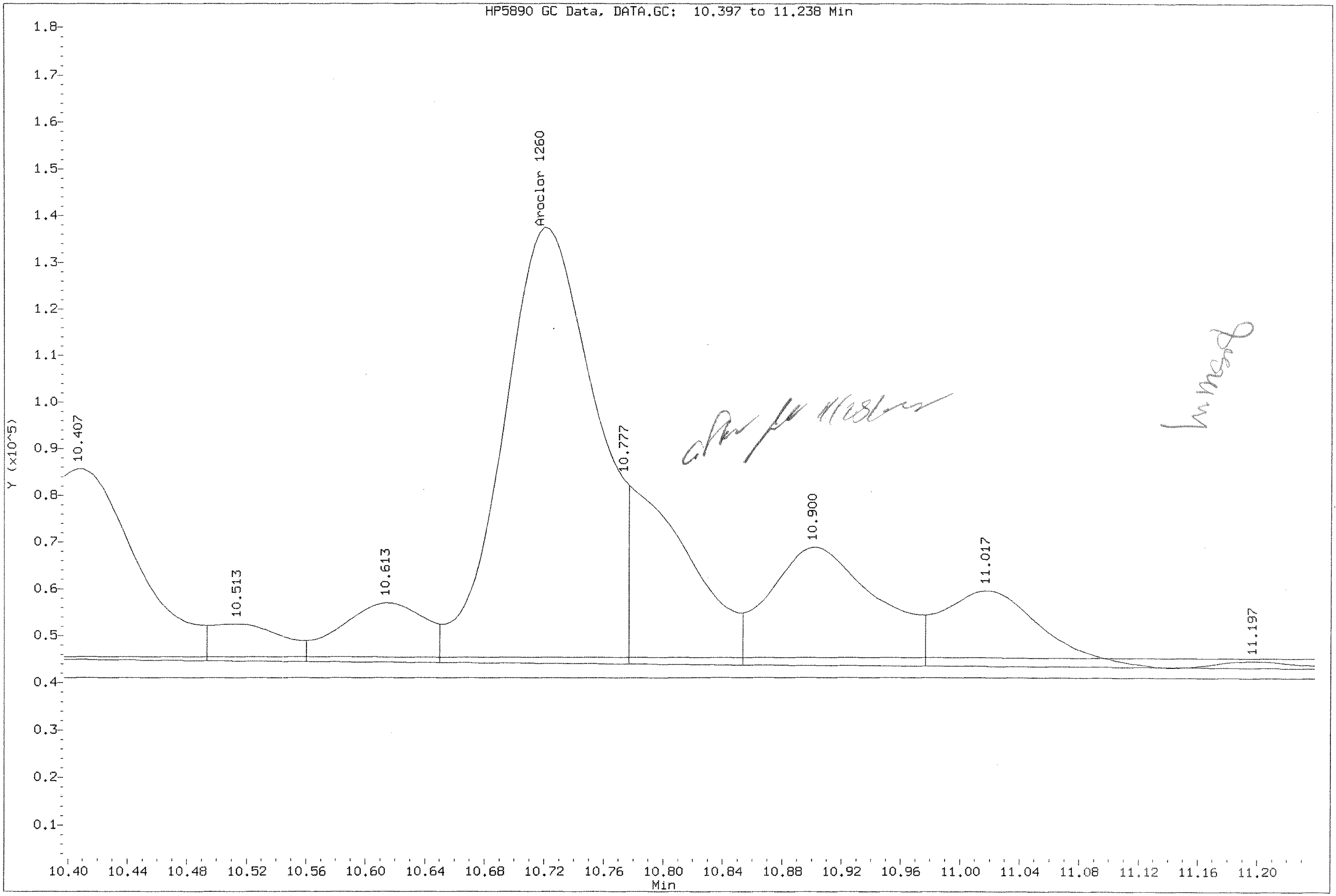
Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R035.D
Injection Date: 22-NOV-2008 07:27
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R035.D
Injection Date: 22-NOV-2008 07:27
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R035.D
Injection Date: 22-NOV-2008 07:27
Instrument: GC09.i
Client Sample ID:



Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED02-0.5-2.5A	**Units:**	ug/Kg
Lab Code:	K0810639-004	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	96	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	200	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	96	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	96	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	96	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**3900**	D	96	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	96	13	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	103	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F036.D
Lab ID: K0810639-004
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 07:53
Date Quantitated: 11/25/2008 15:19
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: [signature]

Secondary Review: M 11/25/08

Printed: 11/25/2008 17:00:36
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Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R036.D
Lab ID: K0810639-004
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 07:53
Date Quantitated: 11/25/2008 15:22
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: [signature] 11/25/08

Secondary Review: [signature] 11/25/08

Printed: 11/25/2008 17:00:39
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	K0810639
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774966	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ3300
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ445
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\112108.B\1121F036.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R036.D			**Vial:**	27
Acqu Date:	11/22/2008 07:53	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-004				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.05 +0.00	17.13 0.00	104611m	125518m	10.30	9.46			103OK
			%Recovery =		103OK	95OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	13U	13U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F036.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R036.D			**Vial:**	27
Acqu Date:	11/22/2008 07:53	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-004				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1254			0	0	1,850	2,057	3500D	3900D	**3900**D
Aroclor 1254 {1}	7.98	8.53	908676m	1592695m	1,775	1,982	3400D	3800D	
Aroclor 1254 {2}	8.09	8.64	515978m	718858m	1,822	2,025	3500D	3800D	
Aroclor 1254 {3}	8.68	9.09	649811m	894909m	1,794	2,000	3400D	3800D	
Aroclor 1254 {4}	8.88	9.28	1474169m	1803942m	1,993	2,175	3800D	4100D	
Aroclor 1254 {5}	9.28	9.87	1198348m	1293286m	1,864	2,102	3500D	4000D	
Aroclor 1260			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	13U	13U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.02 g	**Dilution:**	10.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	52.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F036.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F036.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R036.D
Inj Date : 22-NOV-2008 07:53
Sample Info: K0810639-004 | SED02-0.5-2.5A
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10639004.H | F=4
Cal Date : 22-NOV-2008 10:36
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

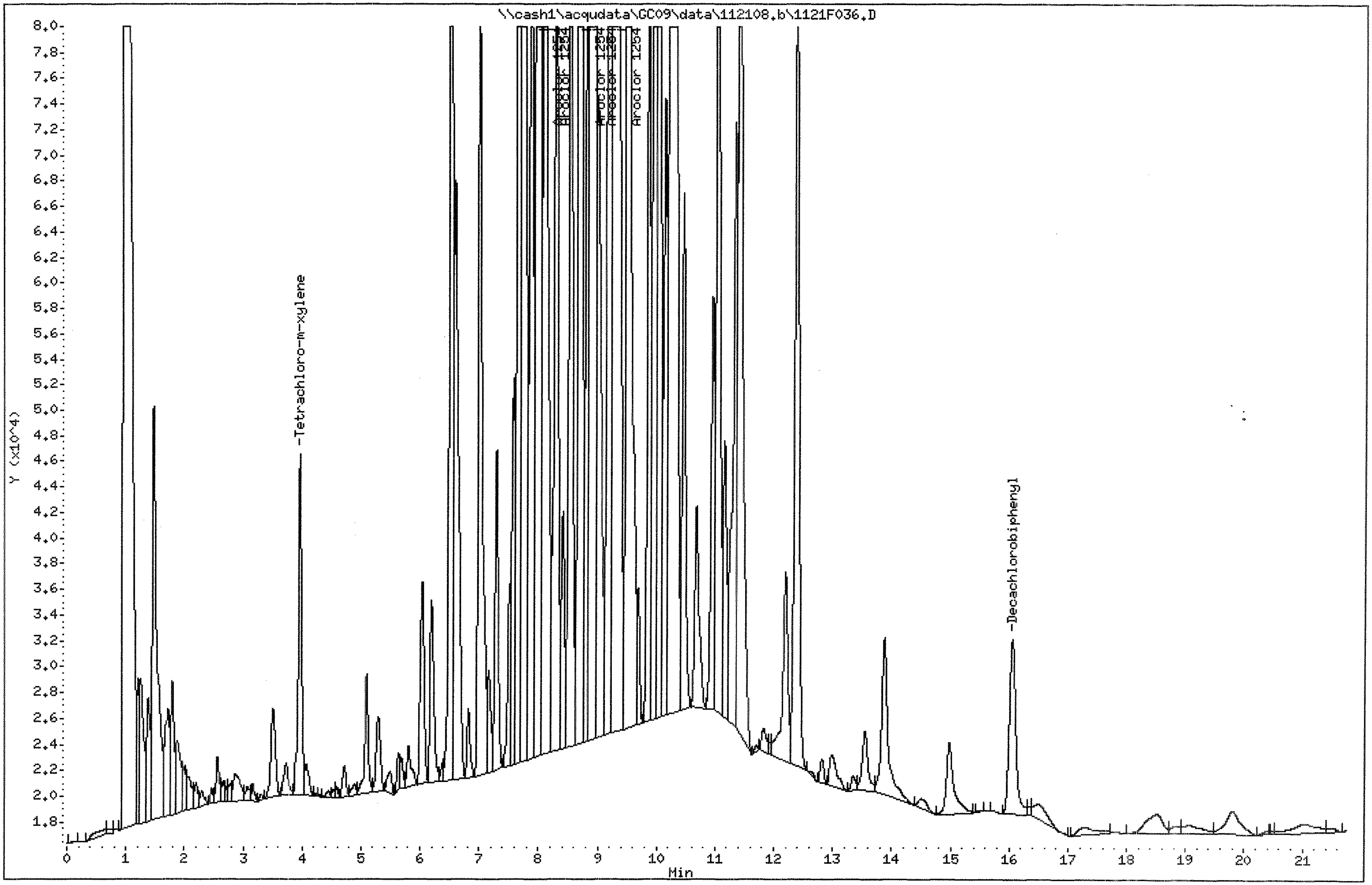
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.953	4.503	99641	116625	9.78	6.78		100.00(RM)
Aroclor 1254	7.977	8.527	908676	1592695	1770	1980	80.00- 120.00	100.00(M)
	8.093	8.640	515978	718858	1820	2020	44.24- 66.36	56.78(M)
	8.683	9.090	649811	894909	1790	2000	56.57- 84.86	71.51(M)
	8.883	9.277	1474169	1803942	1990	2170	115.58- 173.38	162.23(M)
	9.280	9.870	1198348	1293286	1860	2100	100.44- 150.66	131.88(M)
			Average of Peak Amounts =		1850	2050		
Decachlorobiphenyl	16.050	17.127	104611	125518	10.3	9.46		100.00(RM)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

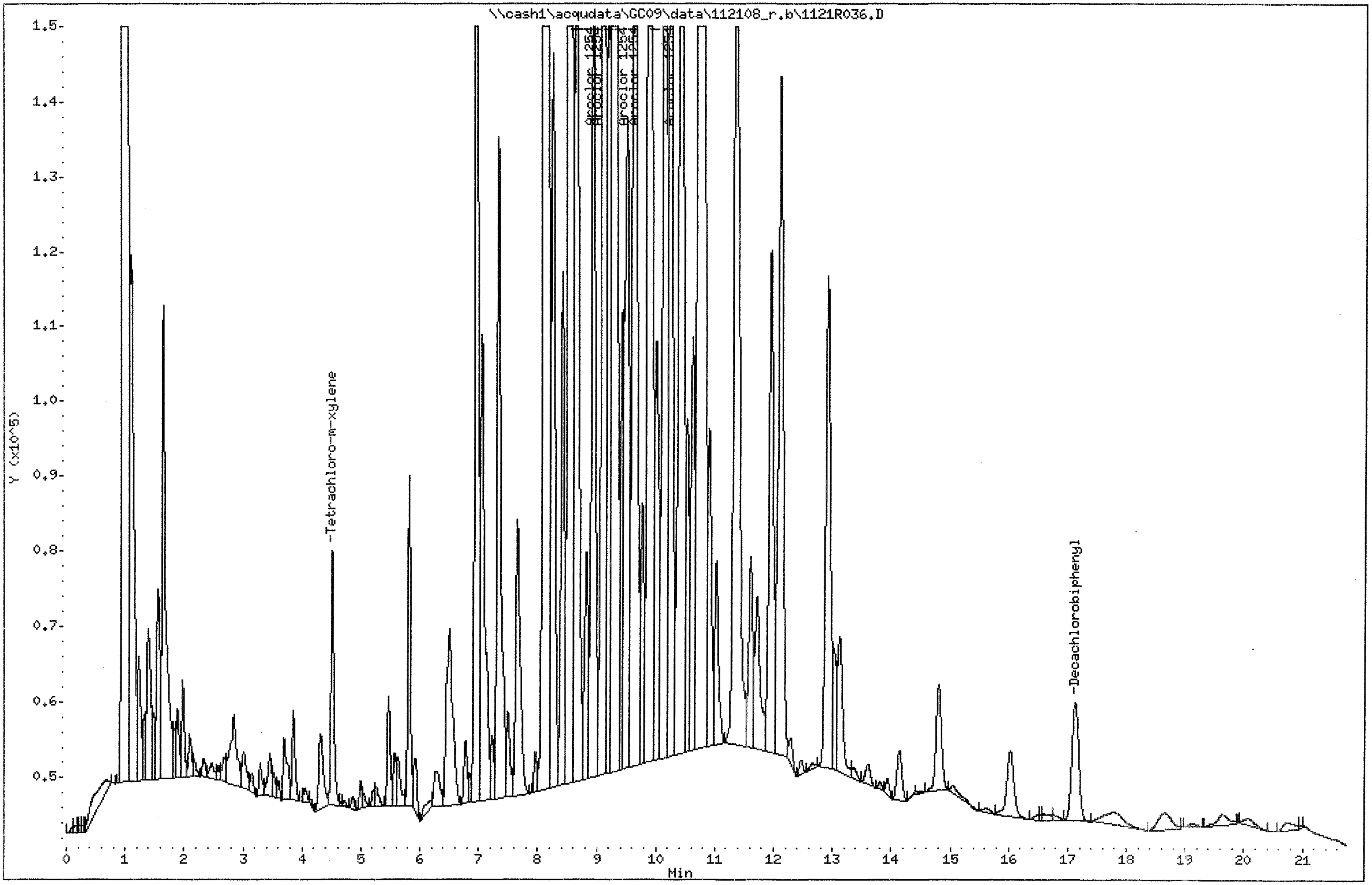
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F036.D
Date : 22-NOV-2008 07:53
Client ID:
Sample Info: K0810639-004 | SED02-0.5-2.5A
Column phase: DB-35MS

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

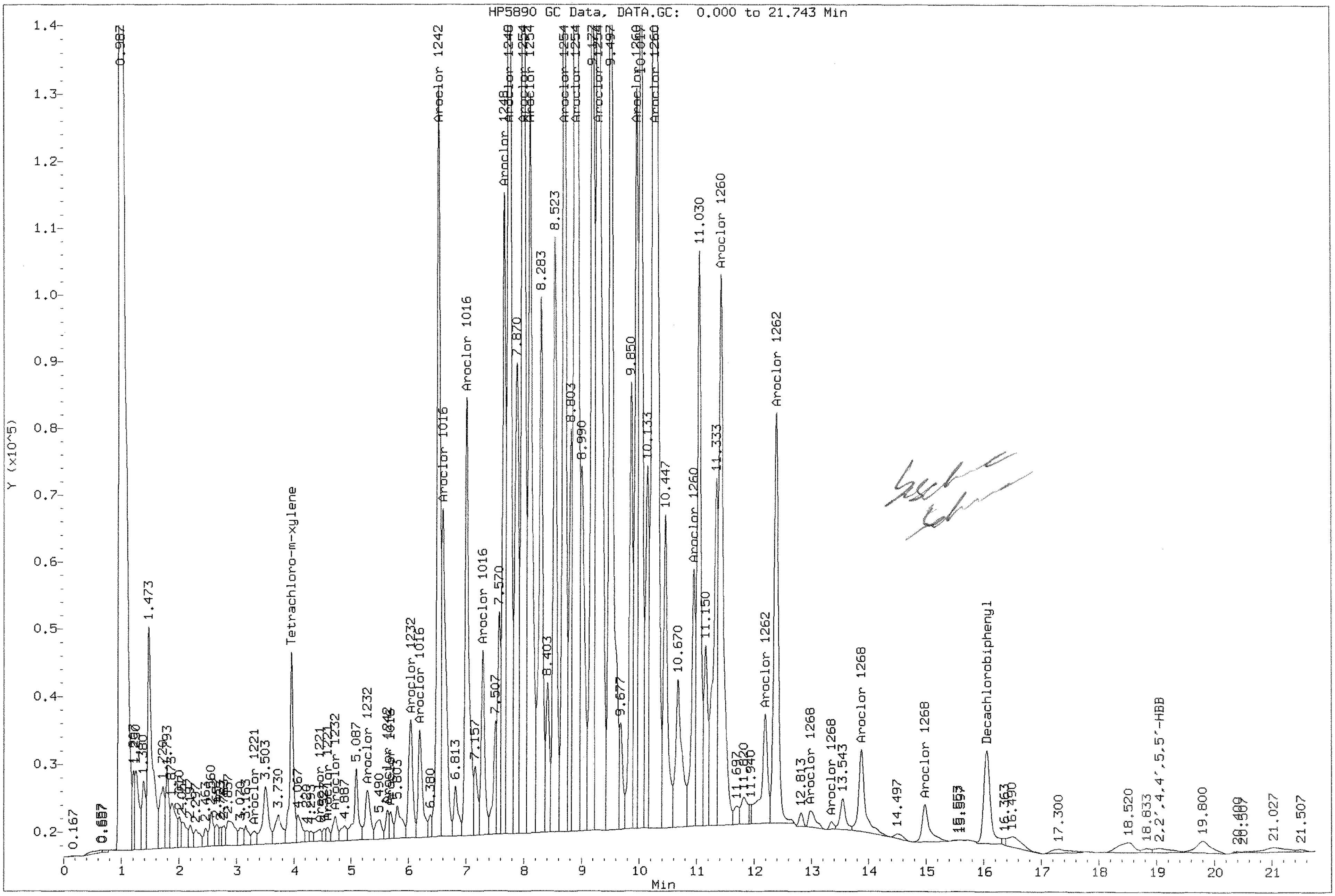


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R036.D
Date : 22-NOV-2008 07:53
Client ID:
Sample Info: K0810639-004 | SED02-0.5-2.5A
Column phase: DB-XLB

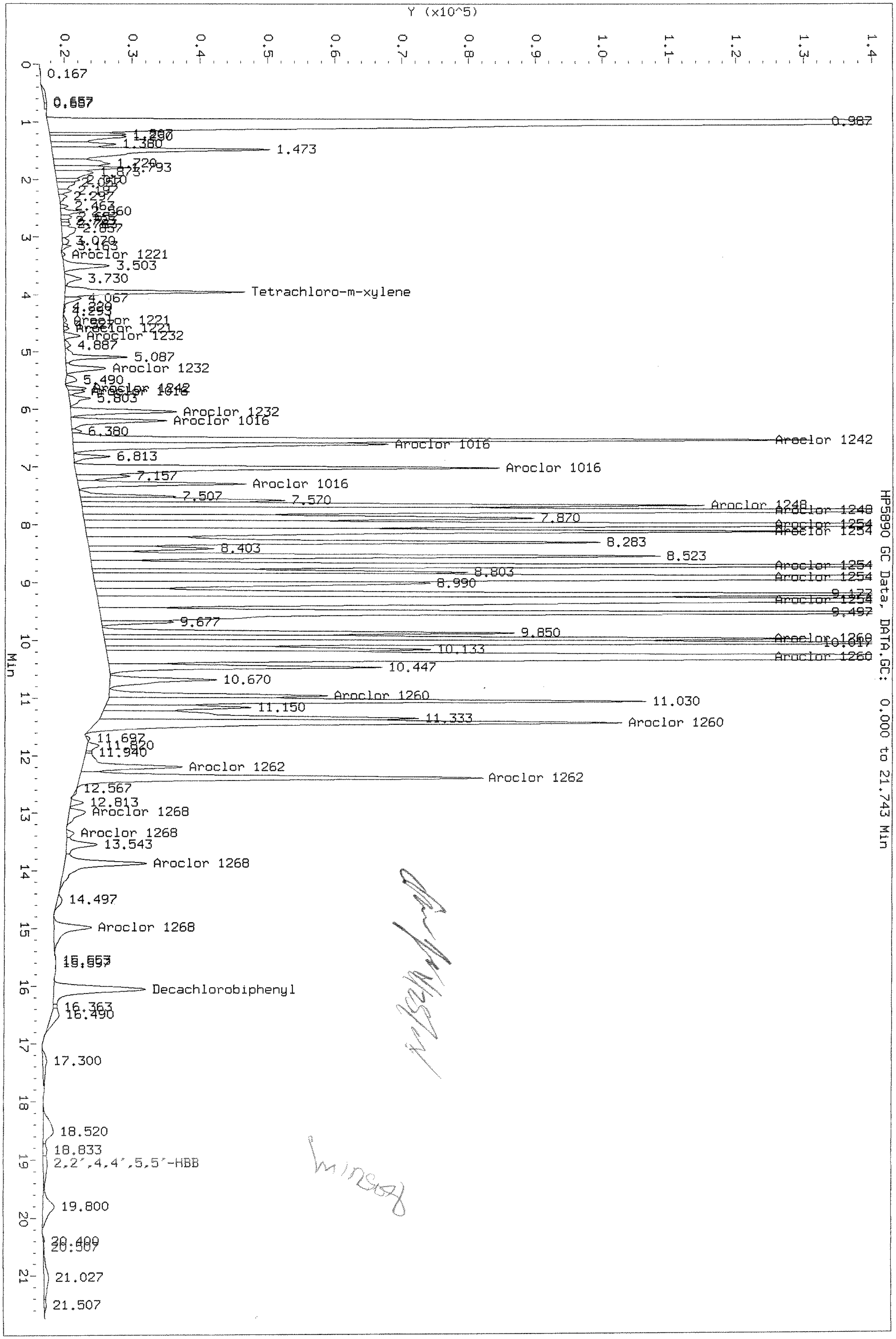
Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53



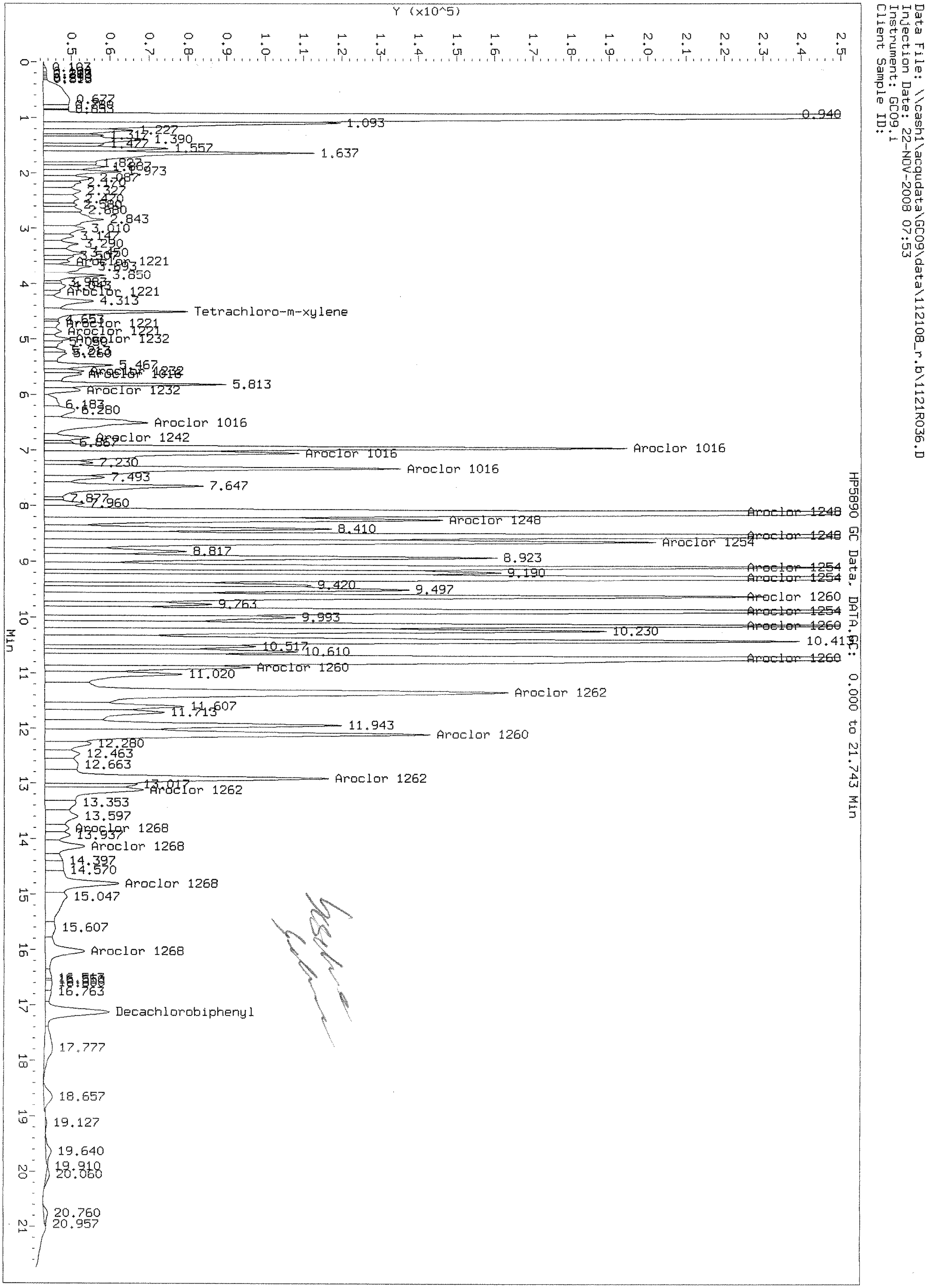
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F036.D
Injection Date: 22-NOV-2008 07:53
Instrument: GC09.i
Client Sample ID:



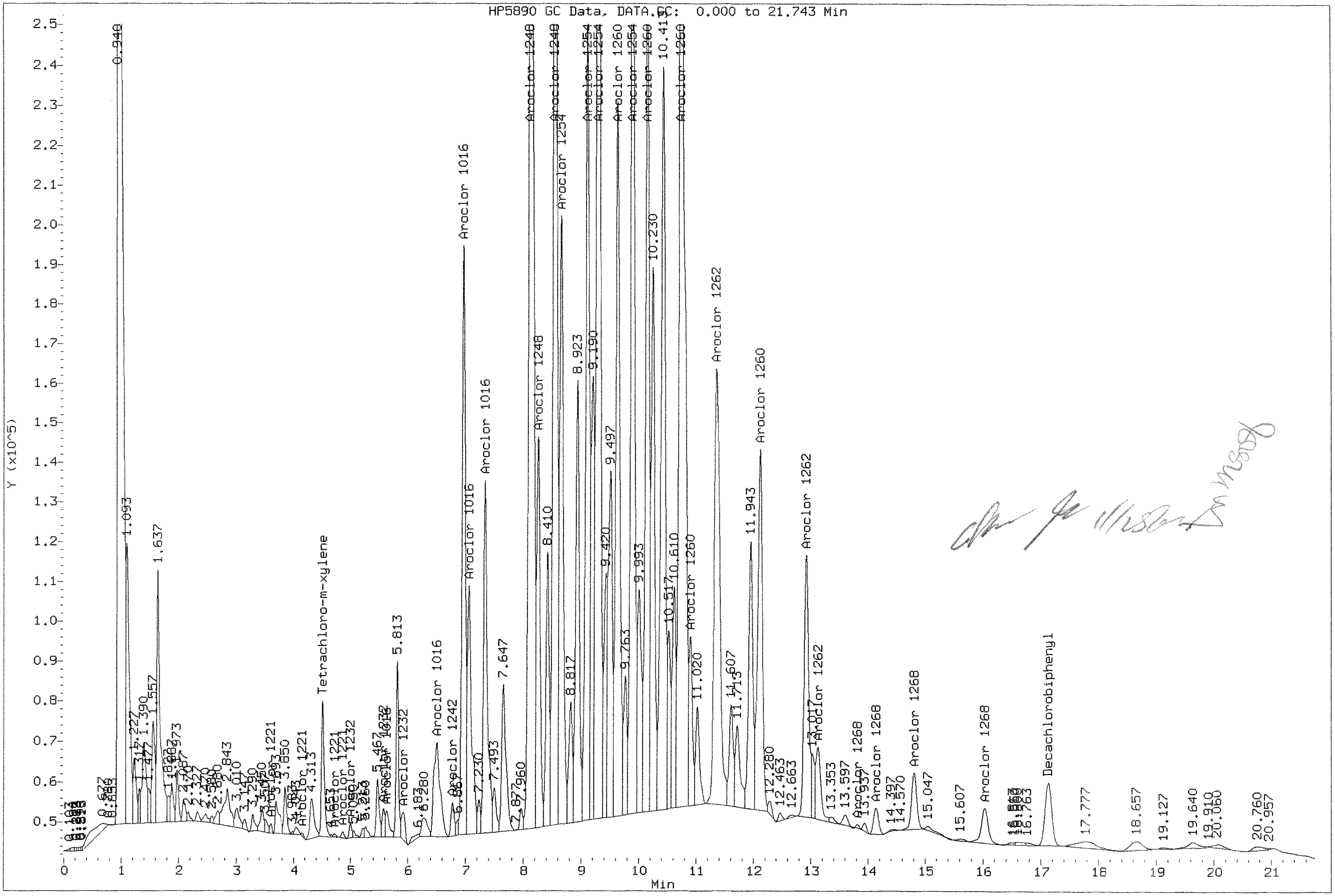
Data File: \\cash1\acqudata\GC09\data\112108.b\121F036.D
Injection Date: 22-NOV-2008 07:53
Instrument: GC09.1
Client Sample ID:



HP5890 GC Data, DATA.GC: 0.000 to 21.743 Min


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R036.D
Injection Date: 22-NOV-2008 07:53
Instrument: GC09.i
Client Sample ID:
Y (x10^5)
Min
HP5890 GC Data, DATA.GC: 0.000 to 21.743 Min
Tetrachloro-m-xylene
Aroclor 1221
Aroclor 1232
Aroclor 1016
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Aroclor 1262
Aroclor 1268
Decachlorobiphenyl

Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R036.D
Injection Date: 22-NOV-2008 07:53
Instrument: GC09.i
Client Sample ID:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Collected: 07/10/2008
Date Received: 07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name: SED02-2.5-5-A
Lab Code: K0810639-005

Extraction Method: EPA 3540C
Analysis Method: 8082

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	210	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	410	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	210	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	210	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	210	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**14000**	D	210	27	20	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	210	27	20	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	109	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F037.D
Lab ID: K0810639-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 08:19
Date Quantitated: 11/25/2008 15:19
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: JL 11/25/08

Secondary Review: MW 11/25/08

Printed: 11/25/2008 17:00:42
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R037.D
Lab ID: K0810639-005
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 08:19
Date Quantitated: 11/25/2008 15:22
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: 11/25/08

Secondary Review: 112508

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	K0810639
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774967	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ3300
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ445
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\112108.B\1121F037.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R037.D			**Vial:**	28
Acqu Date:	11/22/2008 08:19	**Quant Date:**	11/25/2008 15:19	**Dilution:**	20.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-005				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.05	17.13	51695	72568	5.09	5.47			109OK
				%Recovery =	102OK	109OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	27U	27U	27U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1221			0	0	0.0000	0.0000	27U	27U	27U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1232			0	0	0.0000	0.0000	27U	27U	27U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1242			0	0	0.0000	0.0000	27U	27U	27U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	27U	27U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F037.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R037.D			**Vial:**	28
Acqu Date:	11/22/2008 08:19	**Quant Date:**	11/25/2008 15:19	**Dilution:**	20.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-005				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1248			0	0	0.0000	0.0000	27U	27U	27U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1254			0	0	3,087	3,389	13000D	14000D	**14000**D
Aroclor 1254 {1}	7.98	8.53	1520708m	2619406m	2,970	3,259	12000D	13000D	
Aroclor 1254 {2}	8.09	8.64	878926m	1122870m	3,104	3,164	13000D	13000D	
Aroclor 1254 {3}	8.68	9.09	1041340m	1534422m	2,876	3,430	12000D	14000D	
Aroclor 1254 {4}	8.88	9.28	2442137m	2937937m	3,301	3,542	13000D	14000D	
Aroclor 1254 {5}	9.28	9.87	2047456m	2184005m	3,185	3,550	13000D	14000D	
Aroclor 1260			0	0	0.0000	0.0000	27U	27U	27U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	27U	27U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	27U	27U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.25 g	**Dilution:**	20.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	48.8 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F037.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F037.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R037.D
Inj Date : 22-NOV-2008 08:19
Sample Info: K0810639-005 | SED02-2.5-5-A
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10639005.H | F=4
Cal Date : 22-NOV-2008 10:36
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.953	4.503	32406	53888	3.18	3.13		100.00(R)
Aroclor 1254	7.977	8.527	1520708	2619406	2970	3260	80.00- 120.00	100.00(M)
	8.093	8.640	878926	1122870	3100	3160	44.24- 66.36	57.80(M)
	8.683	9.090	1041340	1534422	2880	3430	56.57- 84.86	68.48(M)
	8.883	9.277	2442137	2937937	3300	3540	115.58- 173.38	160.59(M)
	9.280	9.870	2047456	2184005	3180	3550	100.44- 150.66	134.64(M)
		Average of Peak Amounts =			3090	3390		
Decachlorobiphenyl	16.047	17.130	51695	72568	5.09	5.47		100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

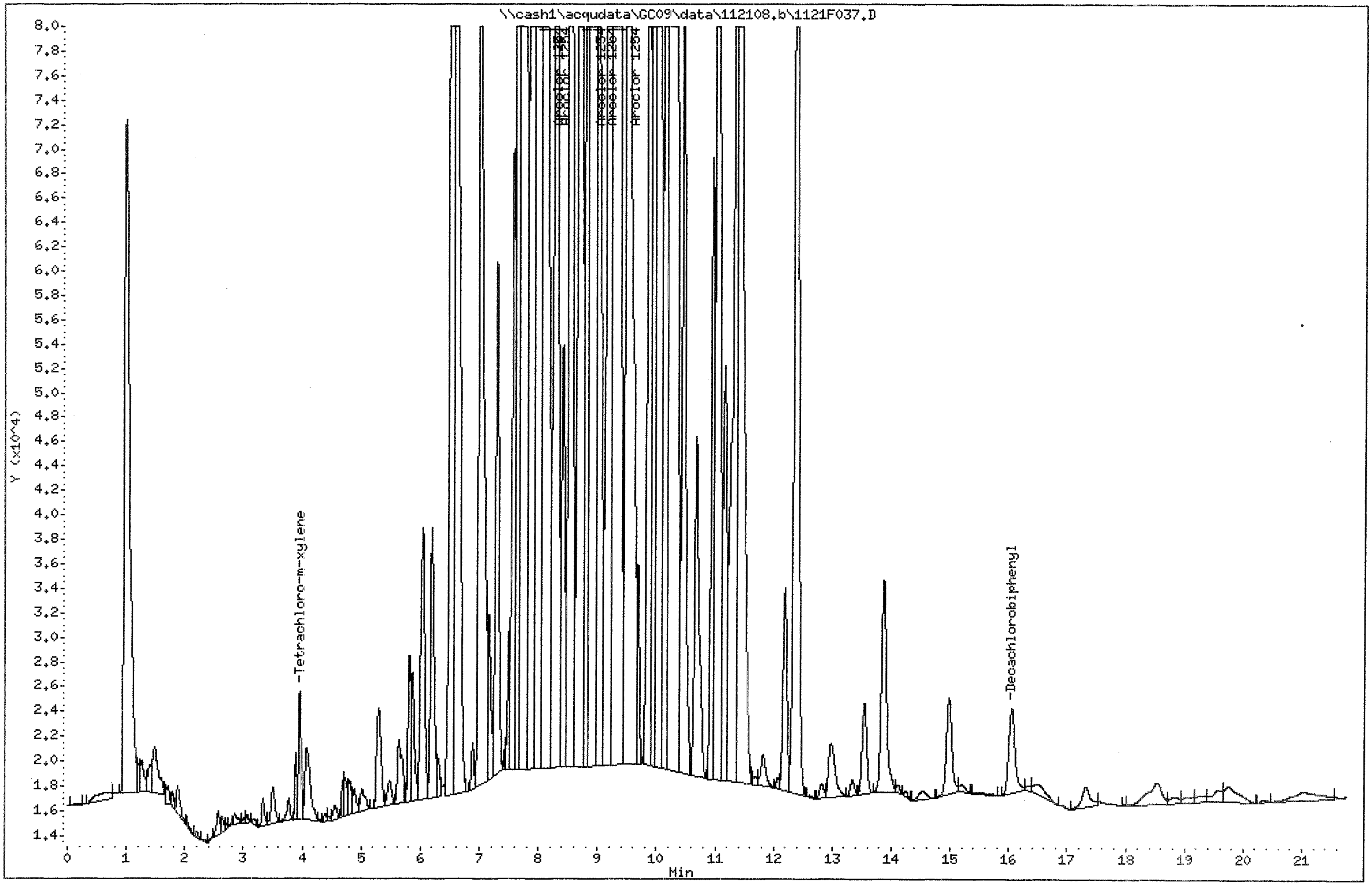
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F037.D
Date : 22-NOV-2008 08:19
Client ID:
Sample Info: K0810639-005 | SED02-2.5-5-A

Instrument: GC09.i

Operator: LHarris

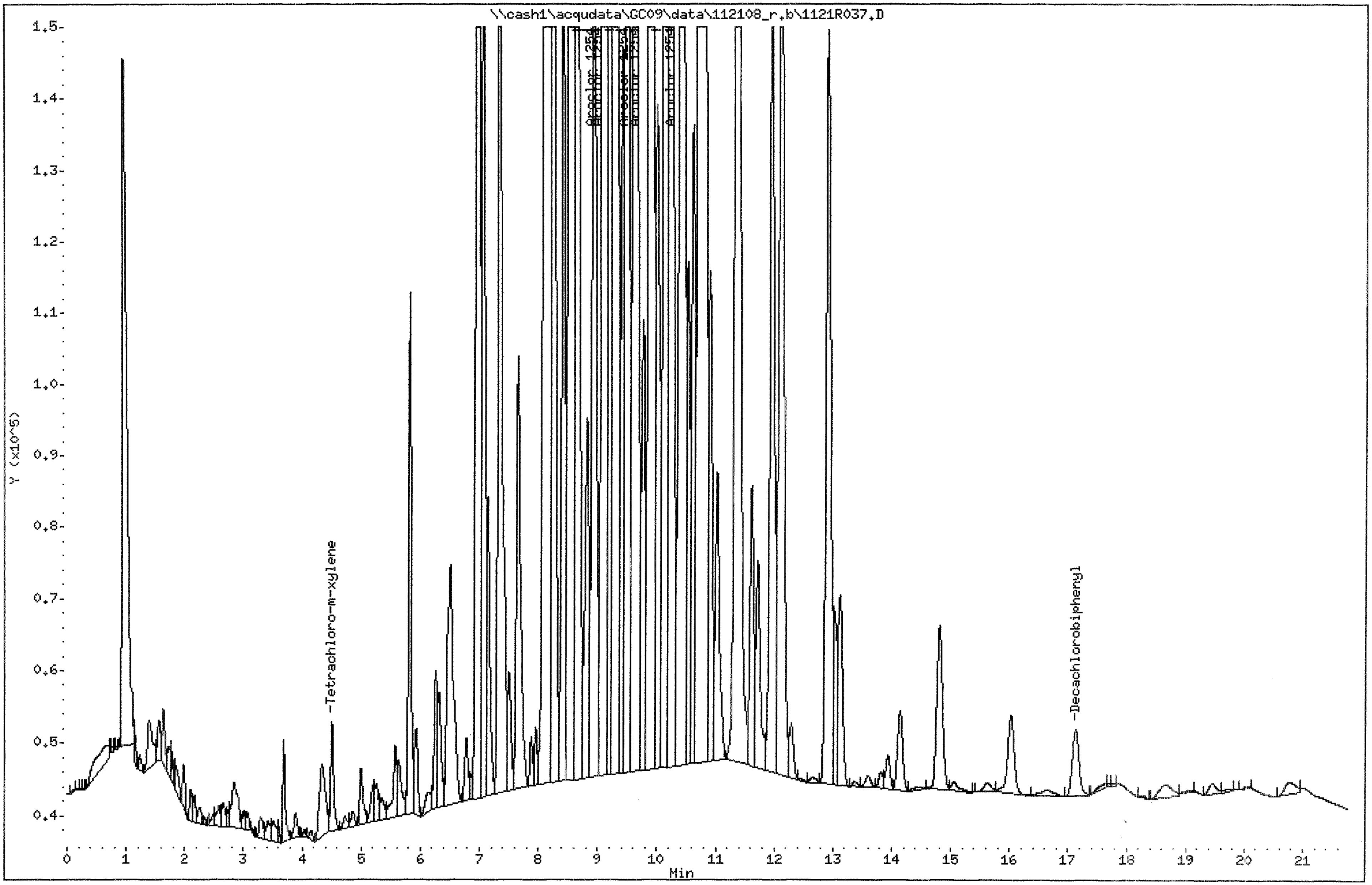
Column phase: DB-35MS

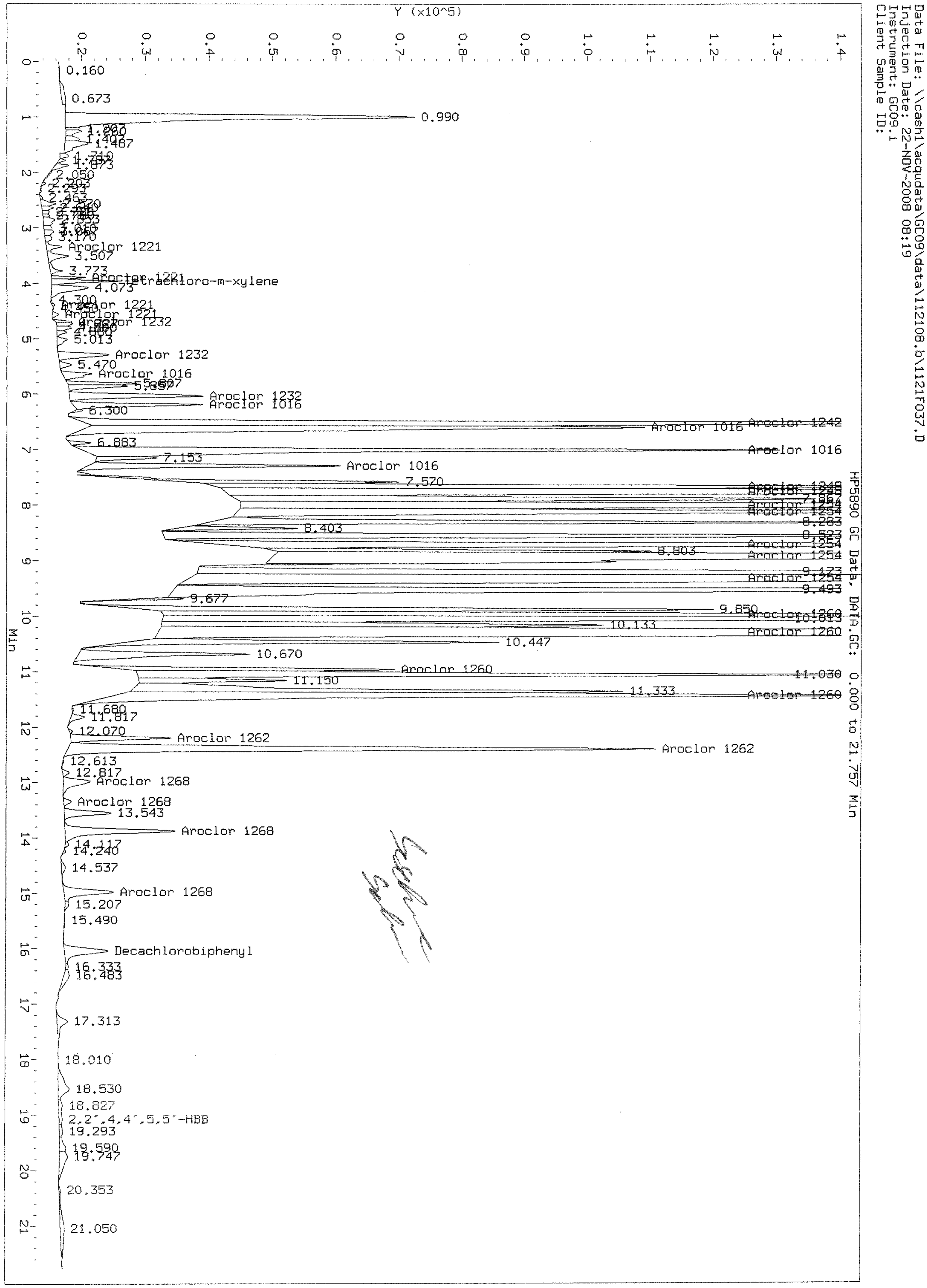
Column diameter: 0.53

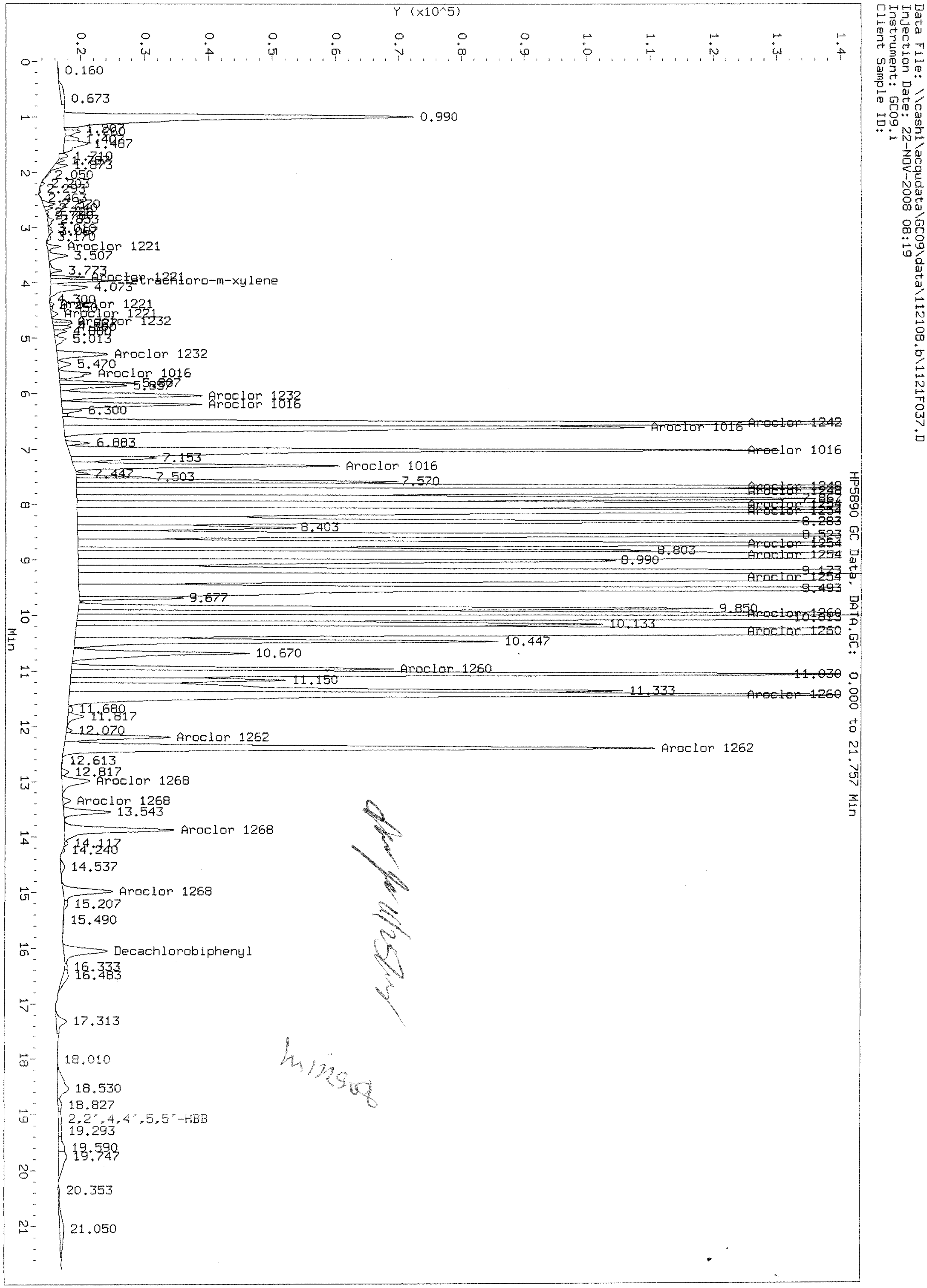


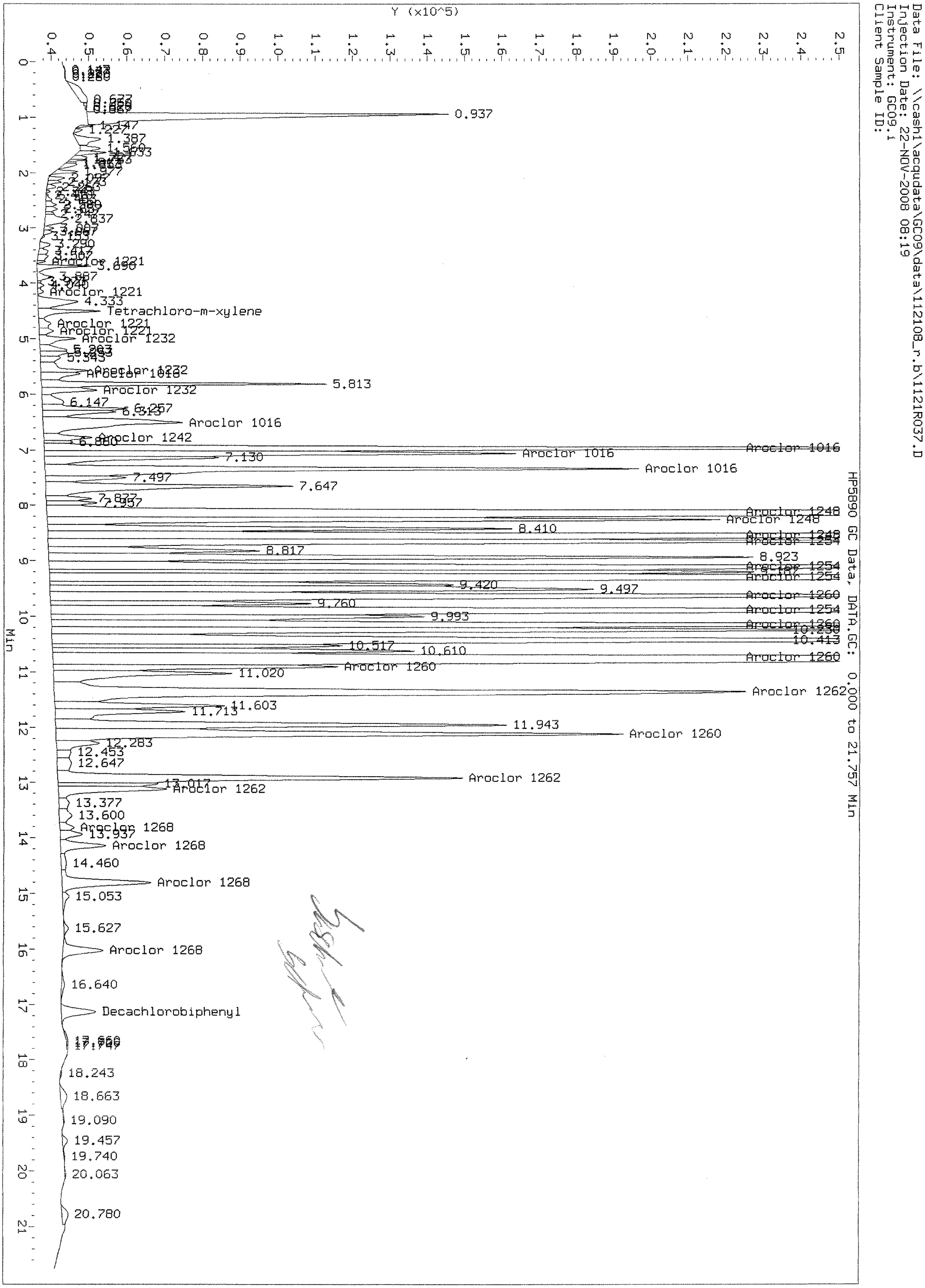
Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R037.D
Date : 22-NOV-2008 08:19
Client ID:
Sample Info: K0810639-005 | SED02-2.5-5-A
Column phase: DB-XLB

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

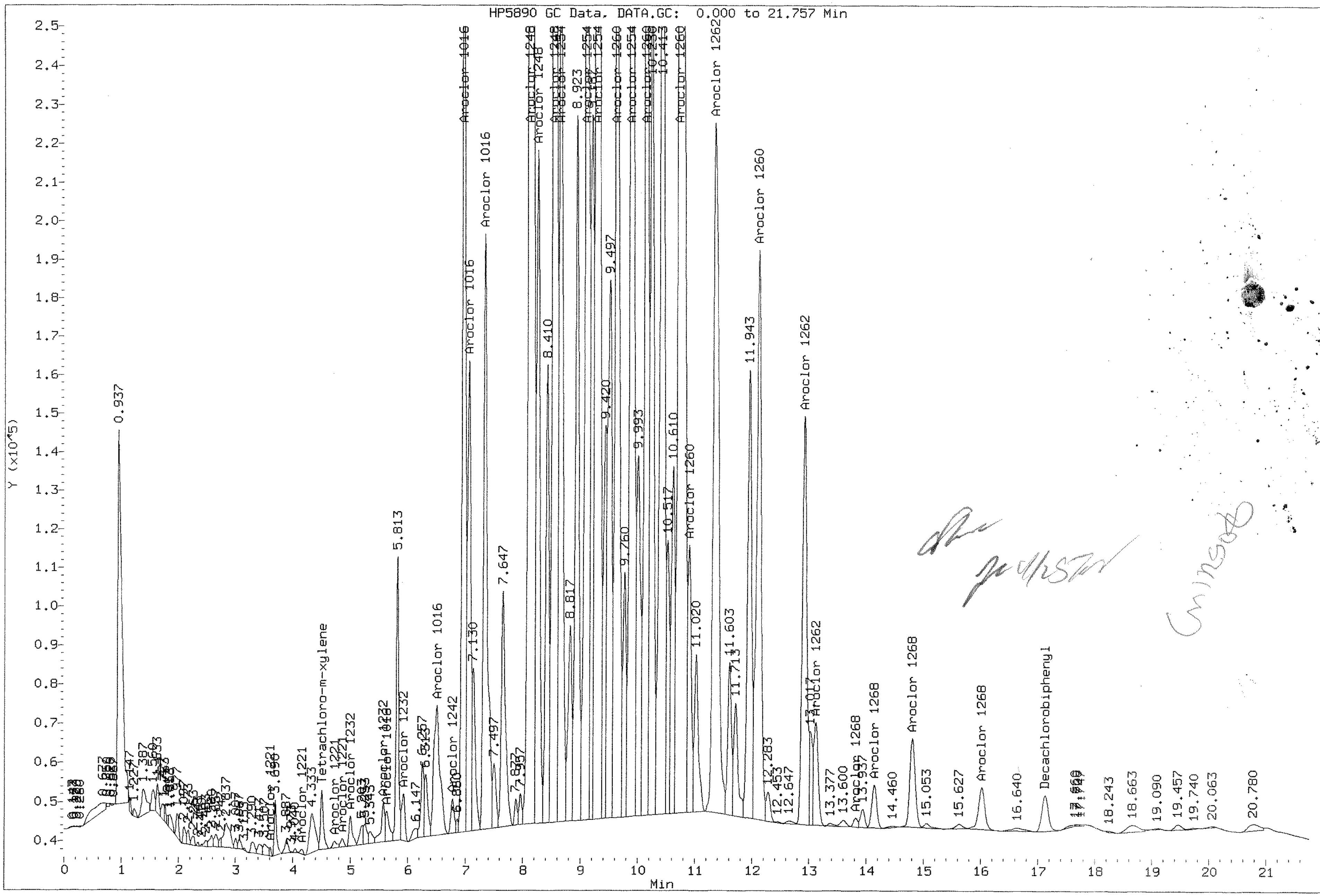



Data File: \\cash1\acqudata\GC09\data\112108.b\1121F037.D
Injection Date: 22-NOV-2008 08:19
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
0.160
0.673
0.990
Aroclor 1221
3.507
Tetrachloro-m-xylene
4.073
Aroclor 1232
5.470
Aroclor 1016
6.300
Aroclor 1242
6.883
7.153
7.570
8.403
8.803
9.677
9.850
10.133
10.447
10.670
Aroclor 1260
11.150
11.030
11.333
12.070
Aroclor 1262
12.613
Aroclor 1268
13.543
14.537
15.207
15.490
Decachlorobiphenyl
16.483
17.313
18.010
18.530
18.827
2,2',4,4',5,5'-HBB
19.293
19.747
20.353
21.050


Data File: \\cash1\acqudata\GC09\data\112108.b\1121F037.D
Injection Date: 22-NOV-2008 08:19
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
Aroclor 1221
Tetrachloro-m-xylene
Aroclor 1232
Aroclor 1016
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Aroclor 1262
Aroclor 1268
Decachlorobiphenyl
2,2',4,4',5,5'-HBB


Data File: \\cashl\acqudata\GC09\data\112108_r.b\1121R037.D
Injection Date: 22-NOV-2008 08:19
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Decachlorobiphenyl

Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R037.D
Injection Date: 22-NOV-2008 08:19
Instrument: GC09.i
Client Sample ID:



Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED01-5-6.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-006	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	8.6	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	18	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	8.6	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	8.6	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	8.6	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**410**		8.6	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	**170**	P	8.6	1.3	1	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	72	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F038.D
Lab ID: K0810639-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 08:46
Date Quantitated: 11/25/2008 15:19
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JH 11/25/08

Secondary Review: lm 11/25/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R038.D
Lab ID: K0810639-006
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 08:46
Date Quantitated: 11/25/2008 15:22
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature] MS138

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	K0810639
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774968	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ3300
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ445
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\112108.B\1121F038.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R038.D			**Vial:**	29
Acqu Date:	11/22/2008 08:46	**Quant Date:**	11/25/2008 15:19	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-006				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.05 +0.01	17.13 +0.00	704246	957892	69.32	72.21			72OK
			%Recovery =		69OK	72OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F038.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R038.D			**Vial:**	29
Acqu Date:	11/22/2008 08:46	**Quant Date:**	11/25/2008 15:19	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-006				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254			0	0	2,162	2,412	370	410	**410**
Aroclor 1254 {1}	7.98	8.53	1103499m	1788104	2,155	2,225	370	380	
Aroclor 1254 {2}	8.10	8.64	568961m	782919	2,009	2,206	340	380	
Aroclor 1254 {3}	8.68	9.09	772588m	1338533	2,134	2,992	370	510	
Aroclor 1254 {4}	8.89	9.28	1722448m	1919383	2,328	2,314	400	400	
Aroclor 1254 {5}	9.28	9.87	1405328m	1428302	2,186	2,322	370	400	
Aroclor 1260			0	0	1,005	1,522	170	260	**260**P
Aroclor 1260 {1}	9.94	9.61	513603m	1238343m	1,365	1,762	230	300	
Aroclor 1260 {2}	10.26 +0.00	10.13	0m	1458095m	0.0000	1,971	1.3U	340	
Aroclor 1260 {3}		10.72	0m	1788819m	0.0000	1,947	1.3U	330	
Aroclor 1260 {4}	10.95 +0.00	10.90 +0.00	283397m	377870m	627.40	768.29	110	130	
Aroclor 1260 {5}	11.41	12.11	956125m	1231933m	1,021	1,161	180	200	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.21 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	58.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F038.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F038.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R038.D
Inj Date : 22-NOV-2008 08:46
Sample Info: K0810639-006 | SED01-5-6.5-A
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10639006.H | F=4
Cal Date : 22-NOV-2008 15:04
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	542900	784915	53.3	45.6		100.00(R)
Aroclor 1254	7.980	8.527	1103499	1788104	2150	2220	80.00- 120.00	100.00(M)
	8.097	8.640	568961	782919	2010	2200	44.24- 66.36	51.56(M)
	8.683	9.090	772588	1338533	2130	2990	56.57- 84.86	70.01(M)
	8.887	9.277	1722448	1919383	2330	2310	115.58- 173.38	156.09(M)
	9.283	9.873	1405328	1428302	2180	2320	100.44- 150.66	127.35(M)
		Average of Peak Amounts =			2160	2410		
Aroclor 1260	9.943	9.613	513603	1238343	1360	1760	80.00- 120.00	100.00(TM)
	10.260	10.133		1458095		1970	82.66- 123.99	117.75(TM)
	0.000	10.723		1788819		1950	107.32- 160.98	144.45(TM)
	10.947	10.903	283397	377870	627	768	98.63- 147.94	55.18(TM)
	11.407	12.110	956125	1231933	1020	1160	206.52- 309.78	186.16(TM)
		Average of Peak Amounts =			1000	1520		
Decachlorobiphenyl	16.053	17.133	704246	957892	69.3	72.2		100.00(R)

QC Flag Legend

T - Target compound detected outside RT window.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F038.D

Date : 22-NOV-2008 08:46

Client ID:

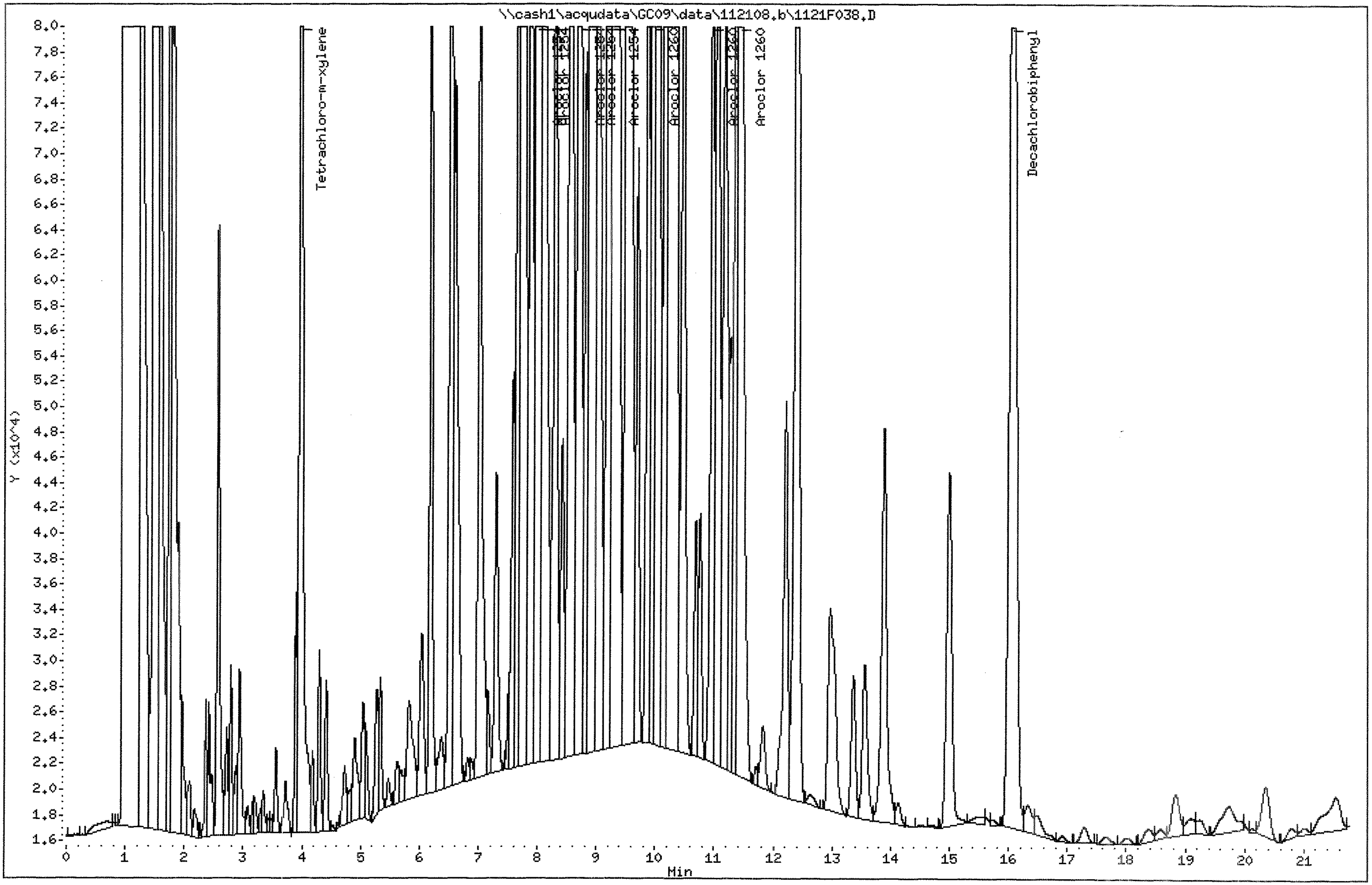
Sample Info: K0810639-006 | SED01-5-6.5-A

Column phase: DB-35MS

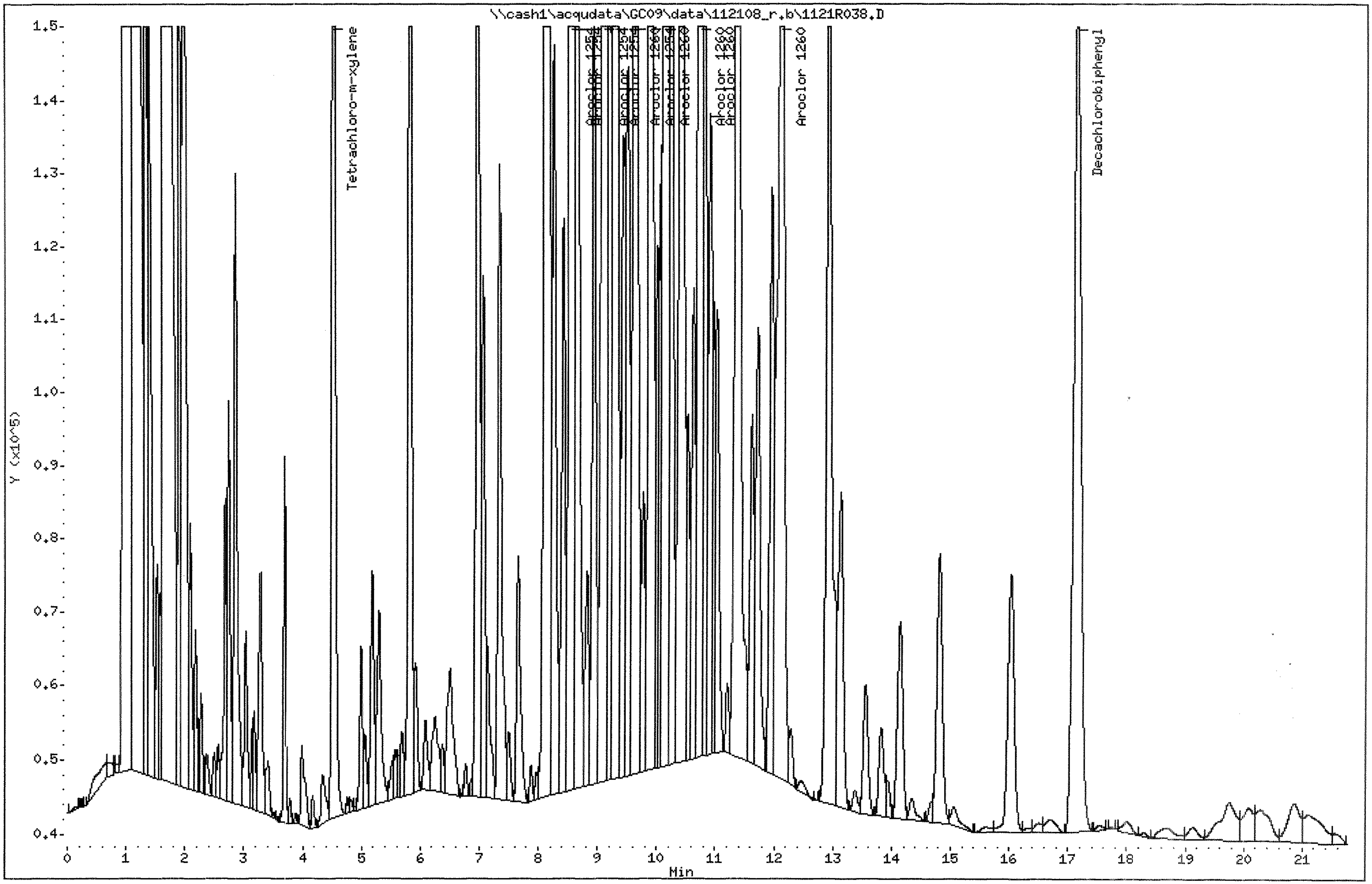
Instrument: GC09.i

Operator: LHarris

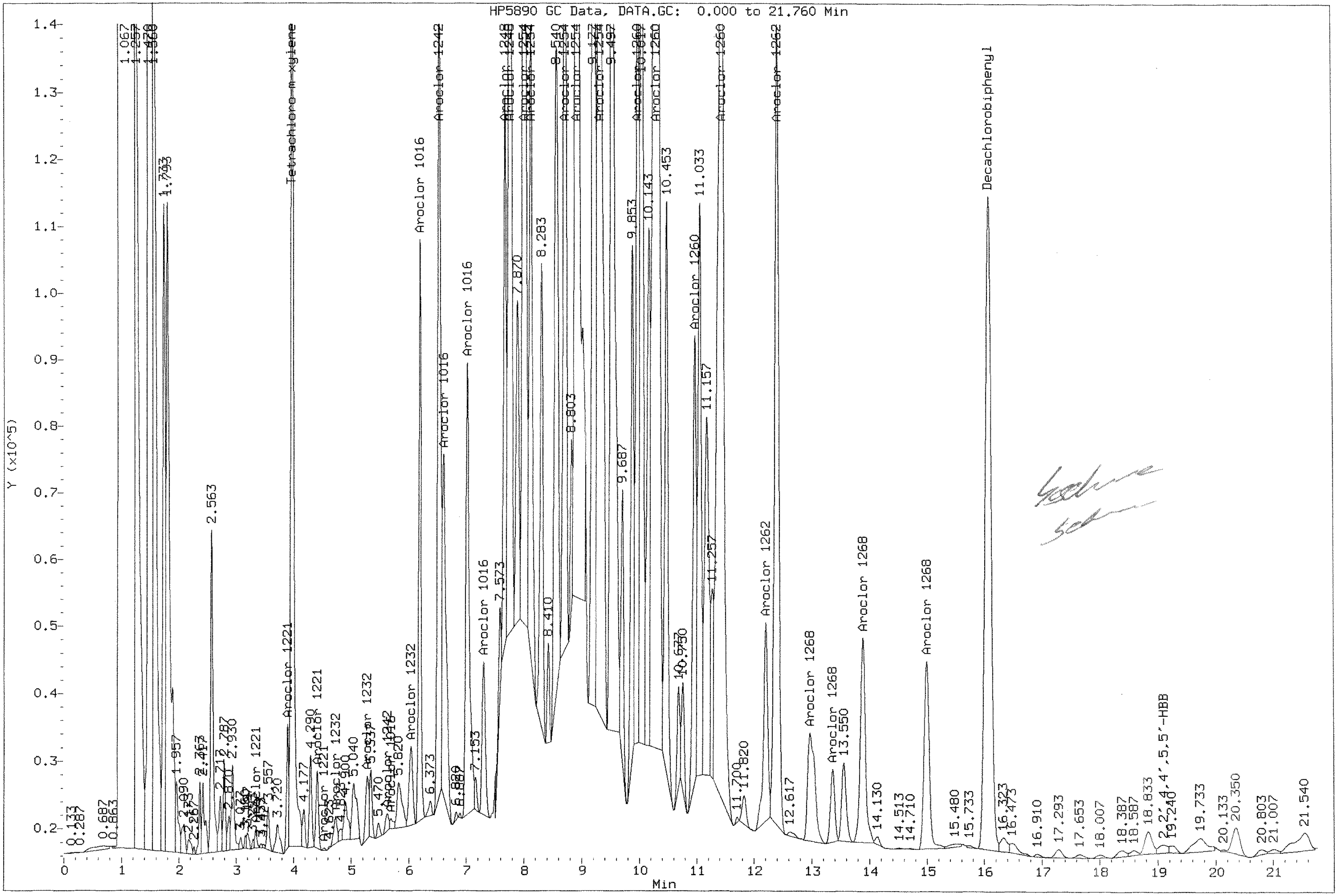
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R038.D
Date : 22-NOV-2008 08:46
Client ID:
Instrument: GC09.i
Sample Info: K0810639-006 | SED01-5-6.5-A
Operator: LHarris
Column phase: DB-XLB
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\112108.b\1121F038.D
Injection Date: 22-NOV-2008 08:46
Instrument: GC09.i
Client Sample ID:



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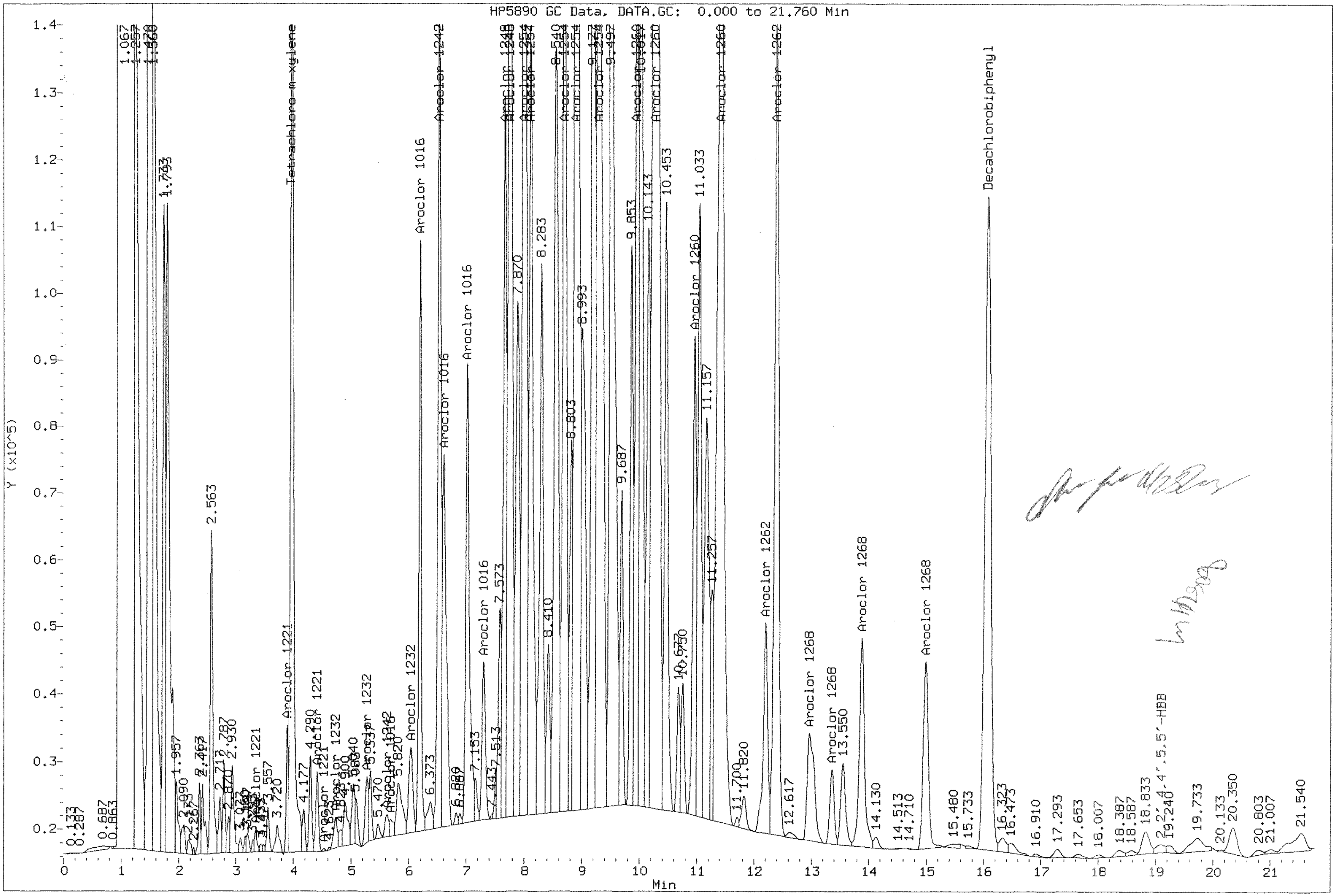
Injection Date: 22-NOV-2008 08:46
Instrument: GC09.i
Client Sample ID:



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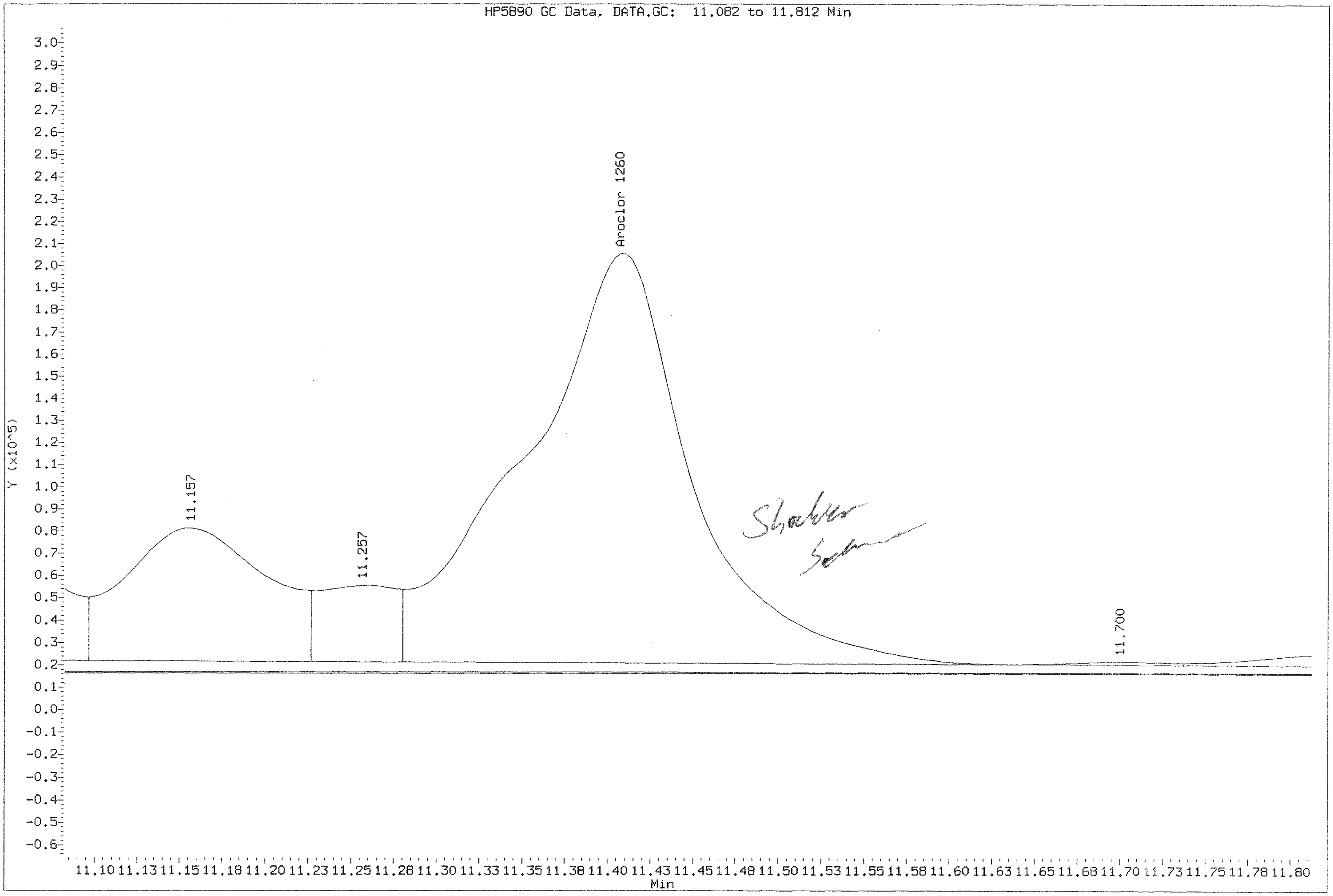
Injection Date: 22-NOV-2008 08:46
Instrument: GC09.i
Client Sample ID:



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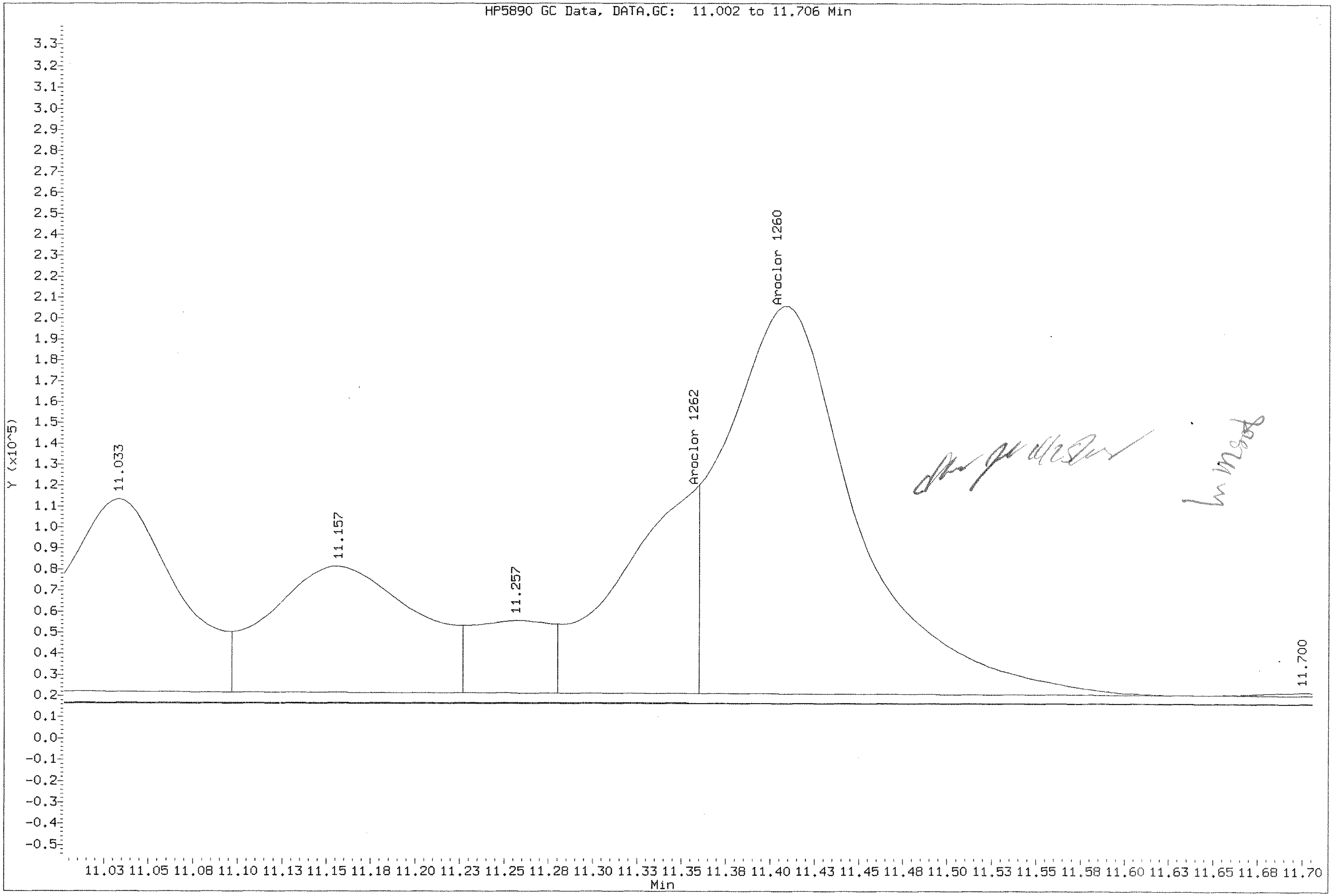
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F038.D
Injection Date: 22-NOV-2008 08:46
Instrument: GC09.i
Client Sample ID:



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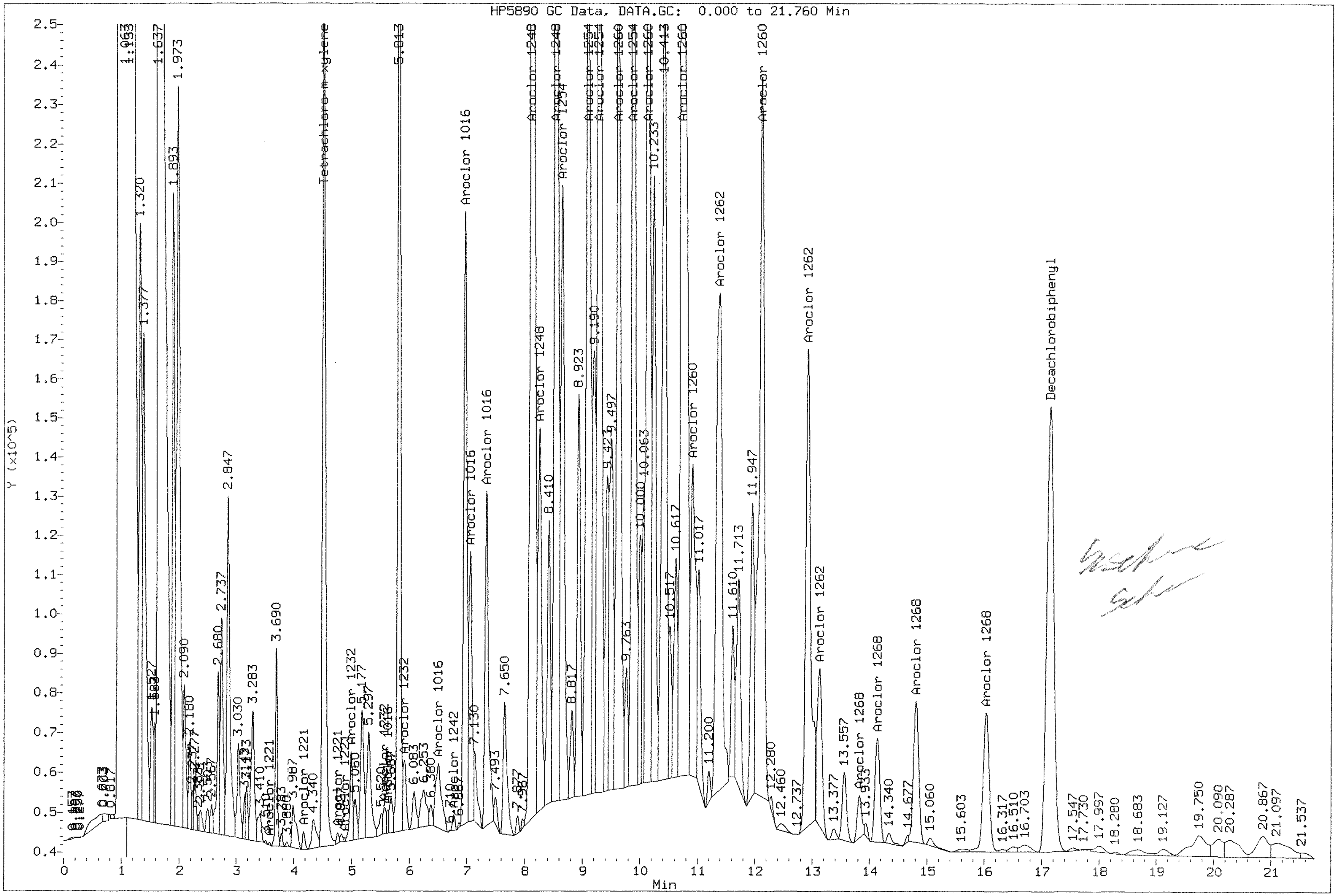
Instrument: GC09.i
Client Sample ID:



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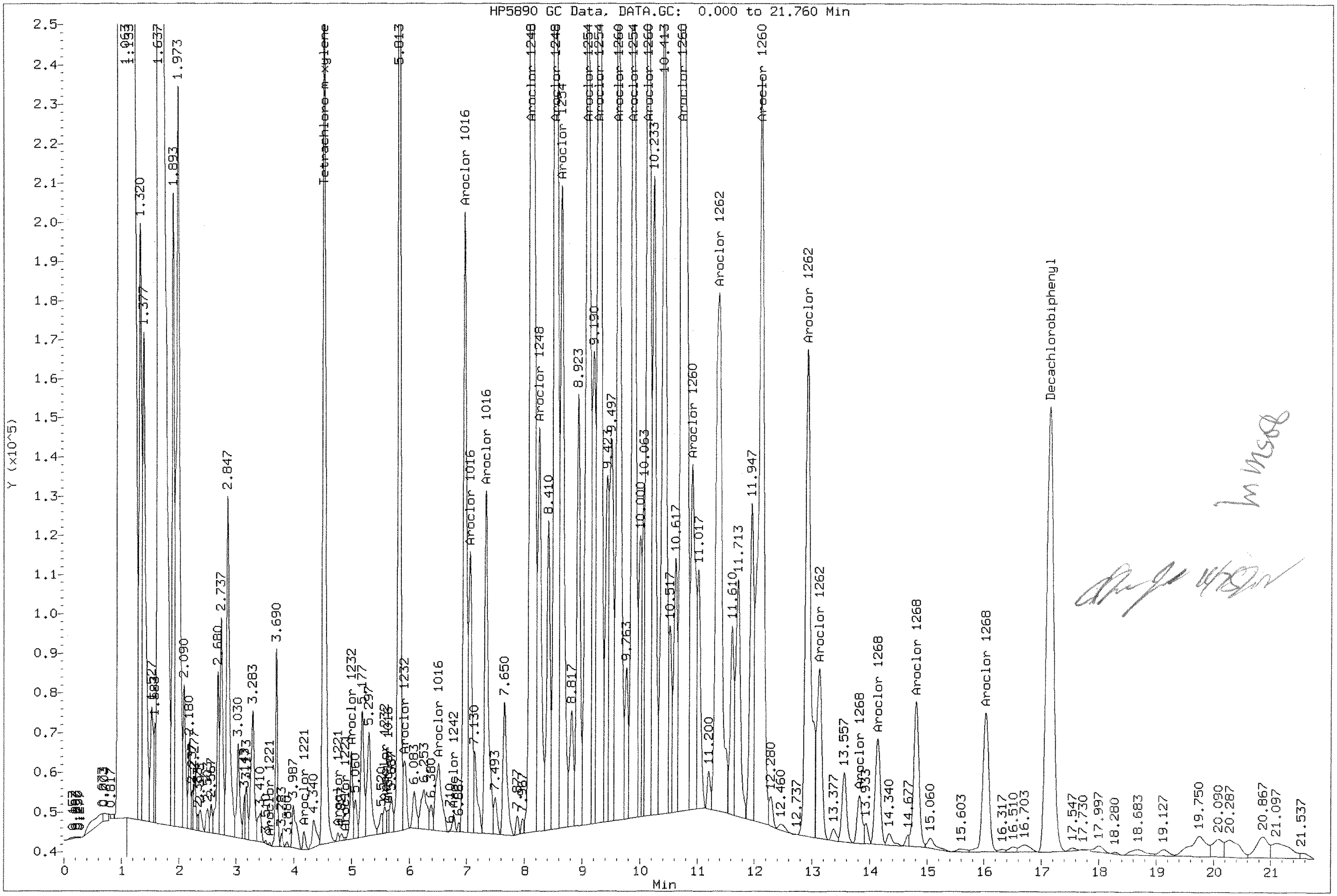
Instrument: GC09.i
Client Sample ID:



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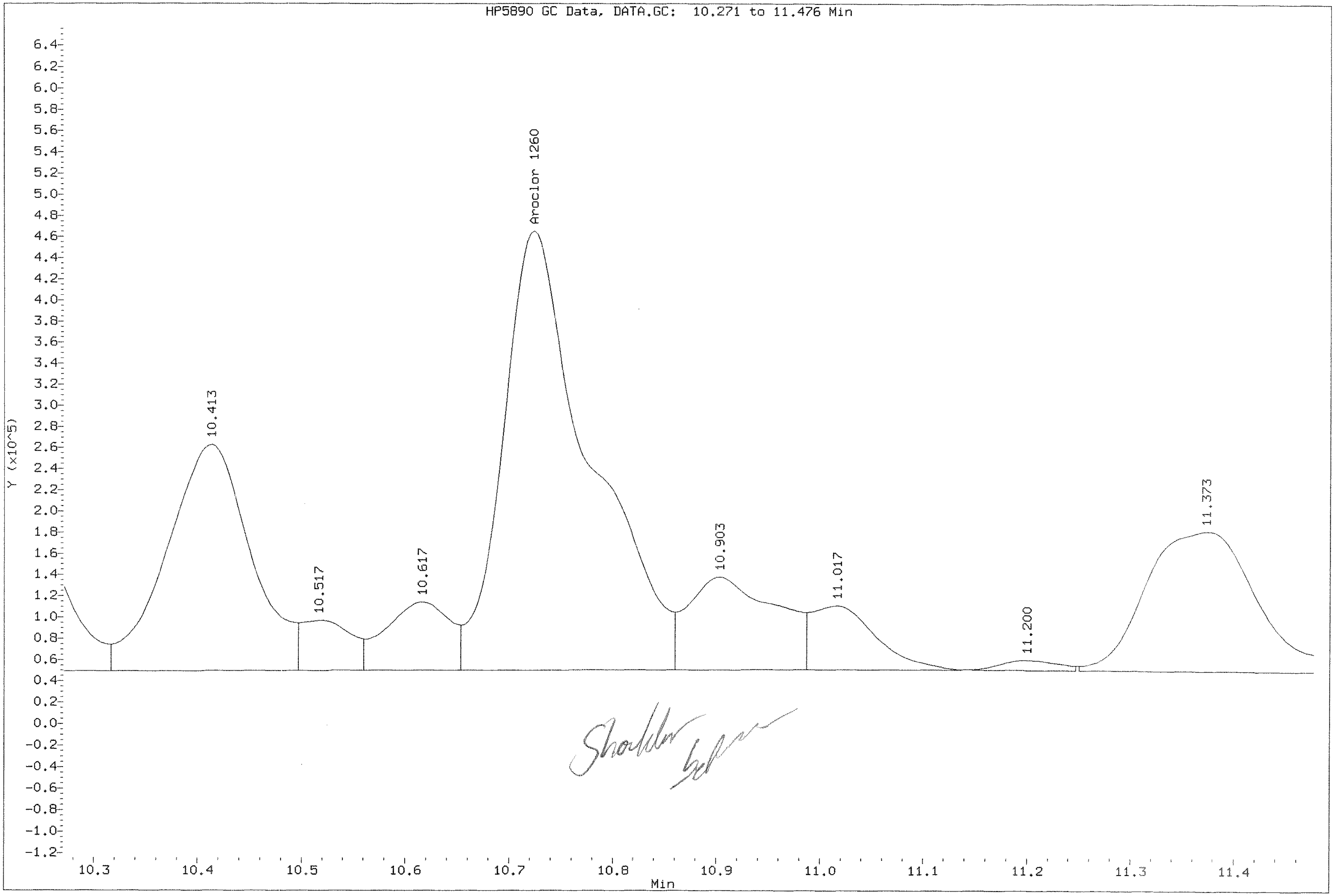
Injection Date: 22-NOV-2008 08:46
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R038.D
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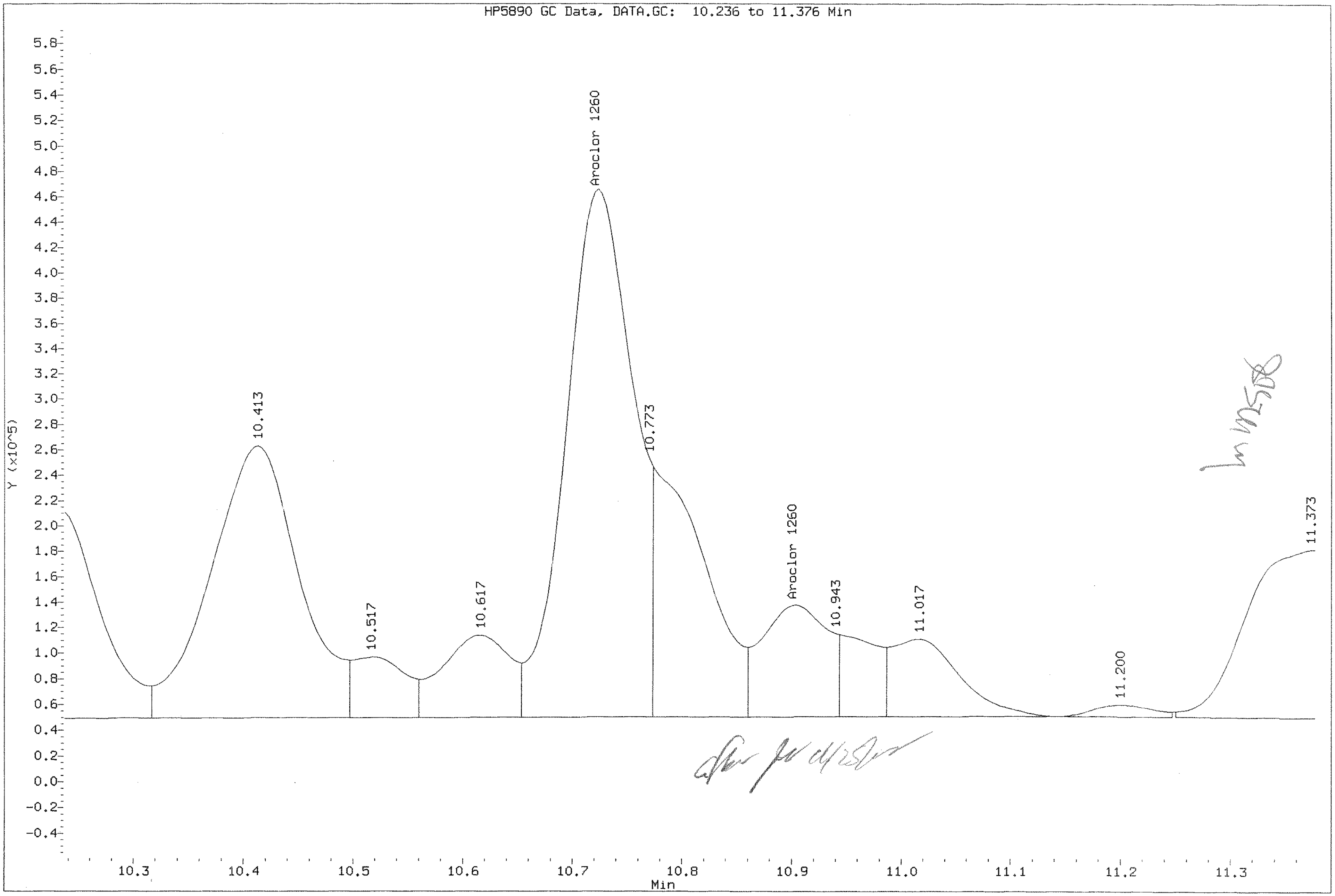
Instrument: GC09.i
Client Sample ID:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/24/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED10-0.5-2.5-B	**Units:**	ug/Kg
Lab Code:	K0810639-007	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	15	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**87**		7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	65	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F039.D		**Date Acquired:**	11/22/2008 09:12
Lab ID:	K0810639-007		**Date Quantitated:**	11/25/2008 15:19
RunType:	SMPL		**Batch ID:**	KWG0812580
Matrix:	SEDIMENT		**Analysis Method:**	8082
			MethodJoinID:	MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JW 11/25/08

Secondary Review: km 11/25/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R039.D
Lab ID: K0810639-007
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 09:12
Date Quantitated: 11/25/2008 15:22
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JM 11/25/08

Secondary Review: 11/25/08 TM

Printed: 11/25/2008 17:00:57
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**	07/24/2008	**Receive Date:**	07/29/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	K0810639
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774969	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ3300
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ445
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\112108.B\1121F039.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R039.D			**Vial:**	30
Acqu Date:	11/22/2008 09:12	**Quant Date:**	11/25/2008 15:19	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-007				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.05	17.13	661487	838160	65.11	63.18			65OK
			%Recovery =		65OK	63OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F039.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R039.D			**Vial:**	30
Acqu Date:	11/22/2008 09:12	**Quant Date:**	11/25/2008 15:19	**Dilution:**	1.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-007				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254			0	0	539.87	589.98	80	87	**87**
Aroclor 1254 {1}	7.98	8.53	273270	457750m	533.66	569.57	79	84	
Aroclor 1254 {2}	8.09	8.64	150441	199785m	531.29	562.92	79	83	
Aroclor 1254 {3}	8.68	9.09	170280	281946m	470.24	630.24	70	93	
Aroclor 1254 {4}	8.88	9.28	421600	500085m	569.85	602.95	84	89	
Aroclor 1254 {5}	9.28	9.87	382091	359385m	594.33	584.21	88	86	
Aroclor 1260			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.34 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	67.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F039.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F039.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R039.D
Inj Date : 22-NOV-2008 09:12
Sample Info: K0810639-007 | SED10-0.5-2.5-B
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10639007.H | F=4
Cal Date : 22-NOV-2008 15:04
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	517051	775854	50.8	45.1		100.00(R)
Aroclor 1254	7.977	8.527	273270	457750	534	570	80.00- 120.00	100.00
	8.093	8.640	150441	199785	531	563	44.24- 66.36	55.05
	8.683	9.090	170280	281946	470	630	56.57- 84.86	62.31
	8.883	9.277	421600	500085	570	603	115.58- 173.38	154.28
	9.280	9.870	382091	359385	594	584	100.44- 150.66	139.82
		Average of Peak Amounts =			540	590		
Decachlorobiphenyl	16.047	17.130	661487	838160	65.1	63.2		100.00(R)

QC Flag Legend

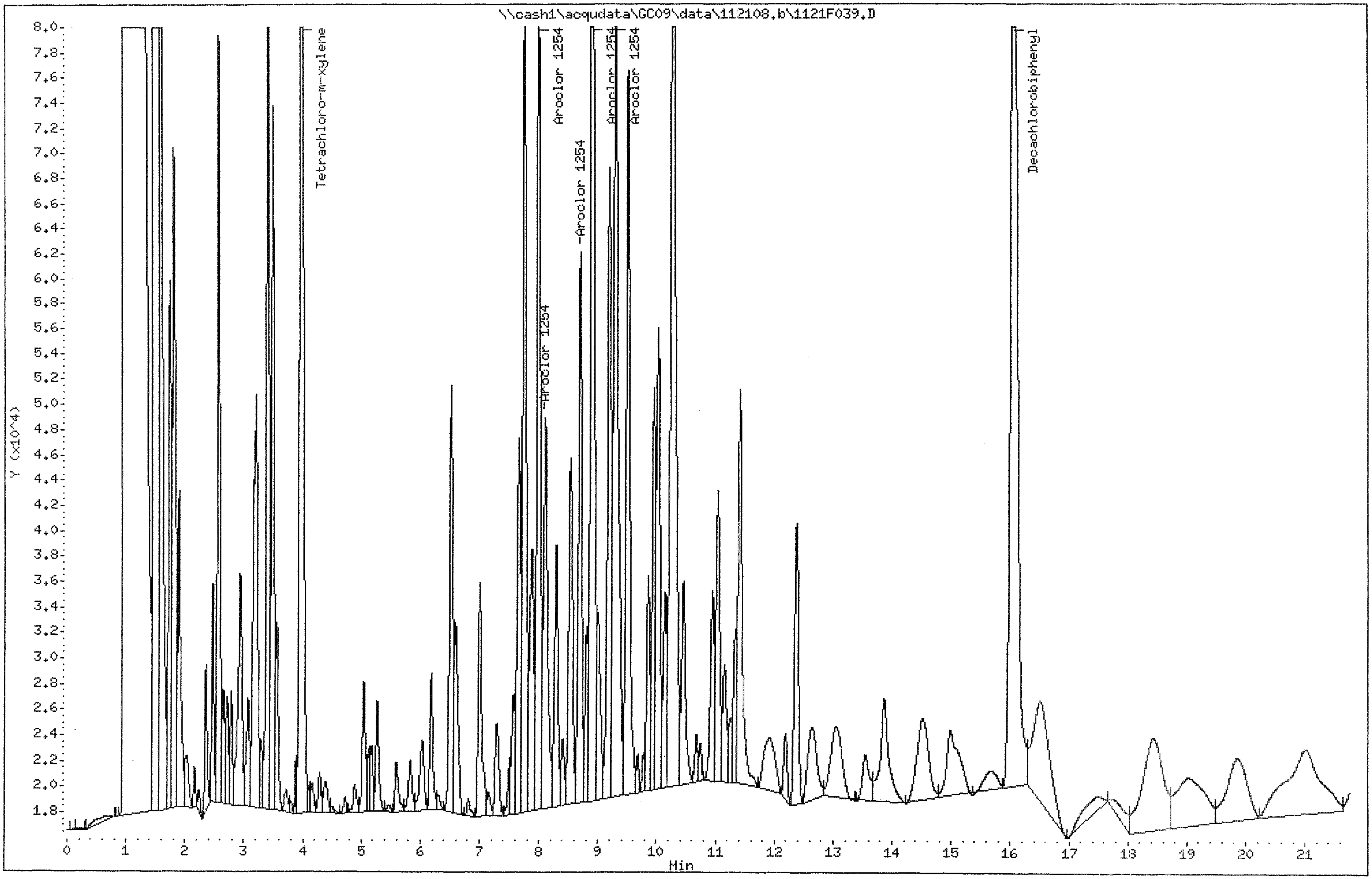
R - Spike/Surrogate failed recovery limits.

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F039.D
Date : 22-NOV-2008 09:12
Client ID:
Sample Info: K0810639-007 | SED10-0.5-2.5-B

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

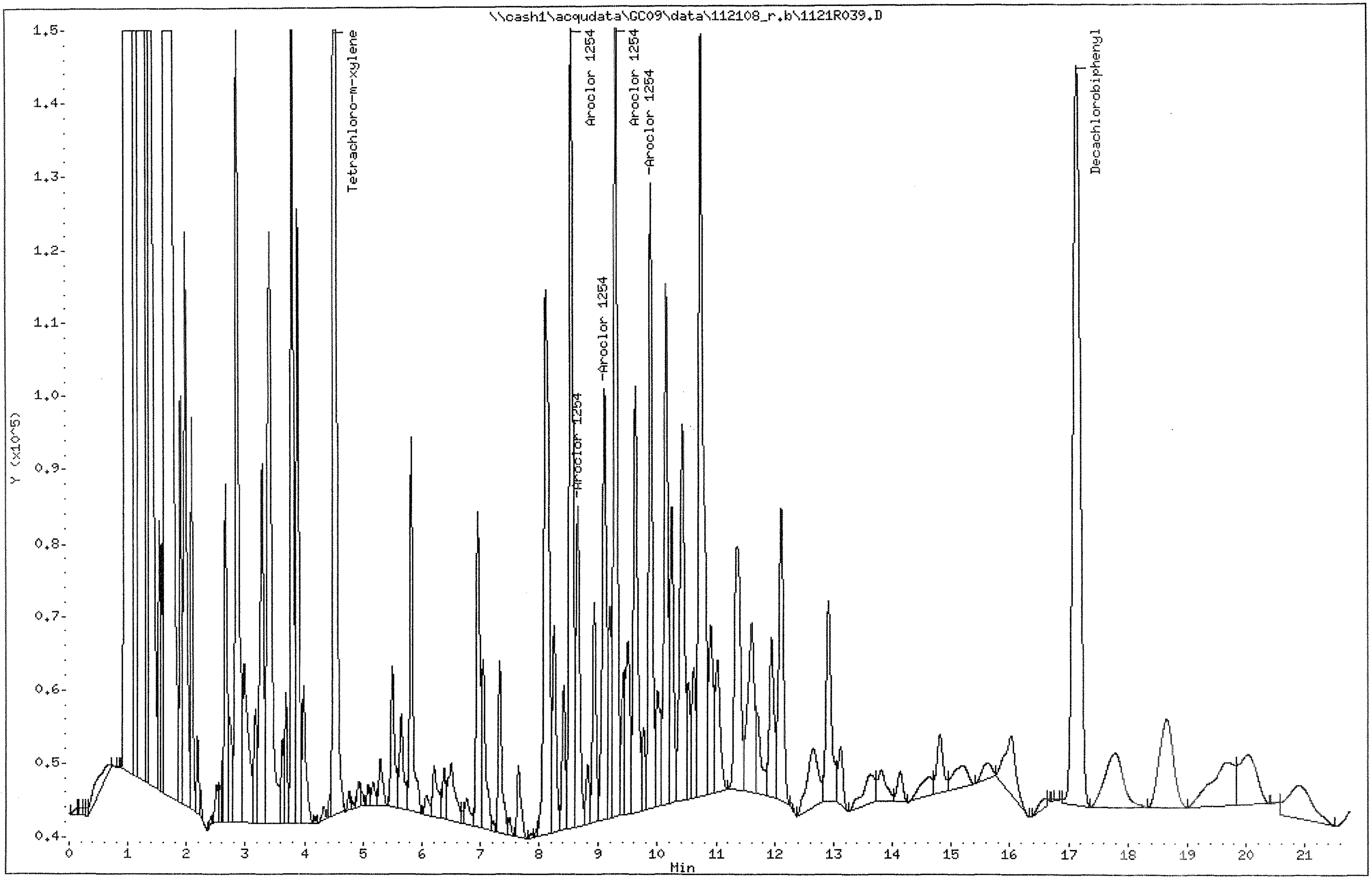


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R039.D
Date : 22-NOV-2008 09:12
Client ID:
Sample Info: K0810639-007 | SED10-0.5-2.5-B

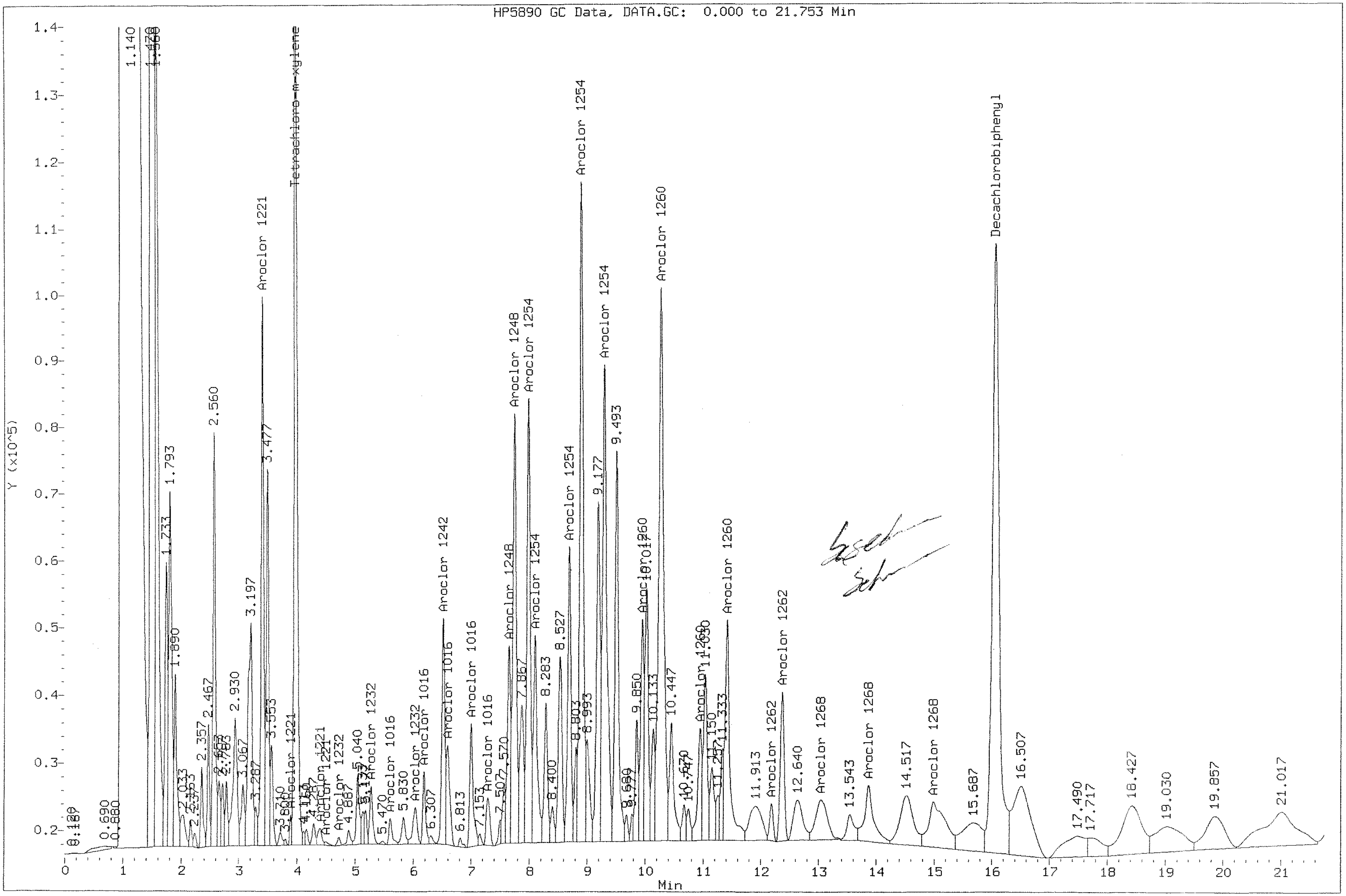
Column phase: DB-XLB

Instrument: GC09.i

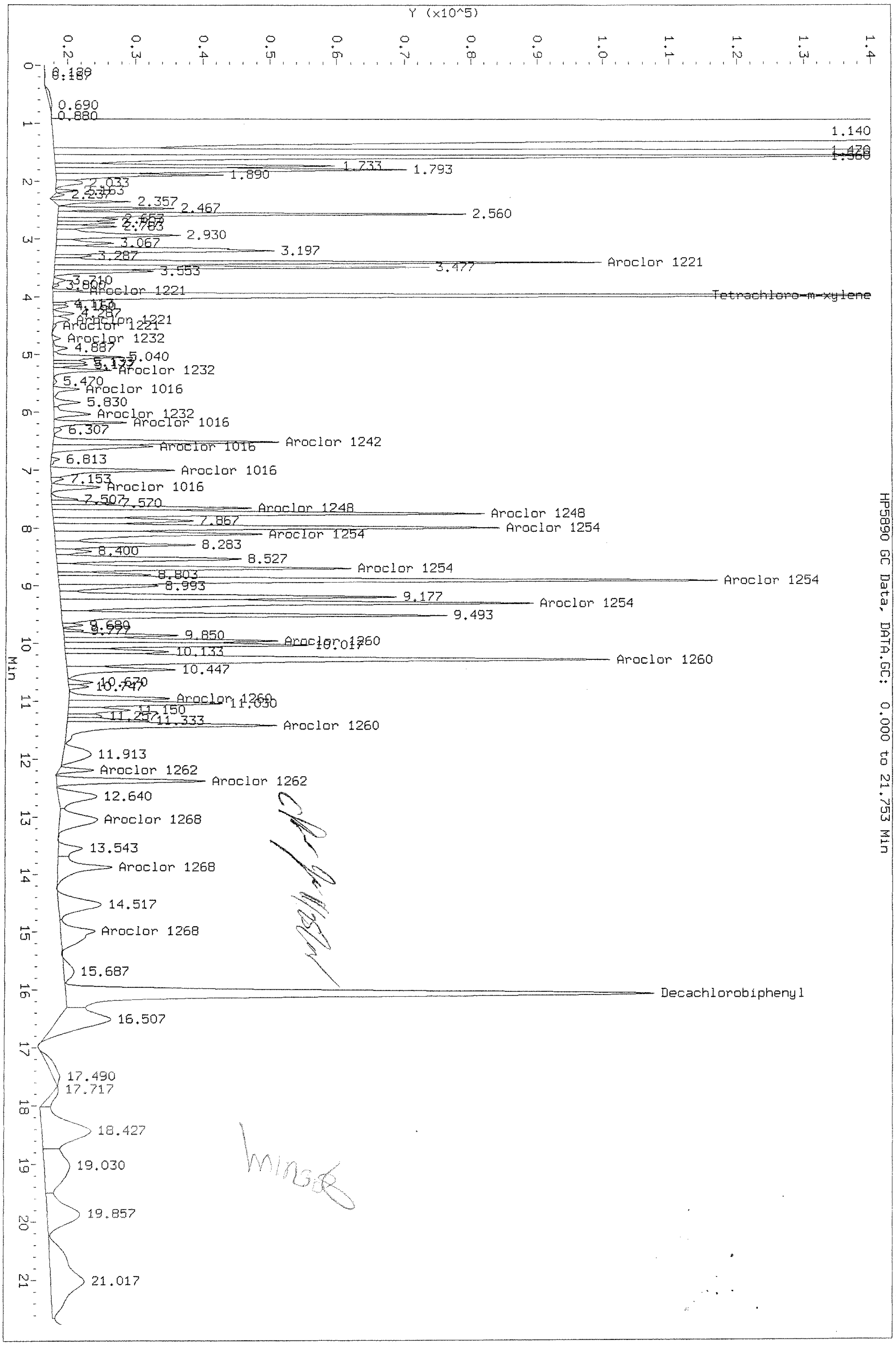
Operator: LHarris
Column diameter: 0.53



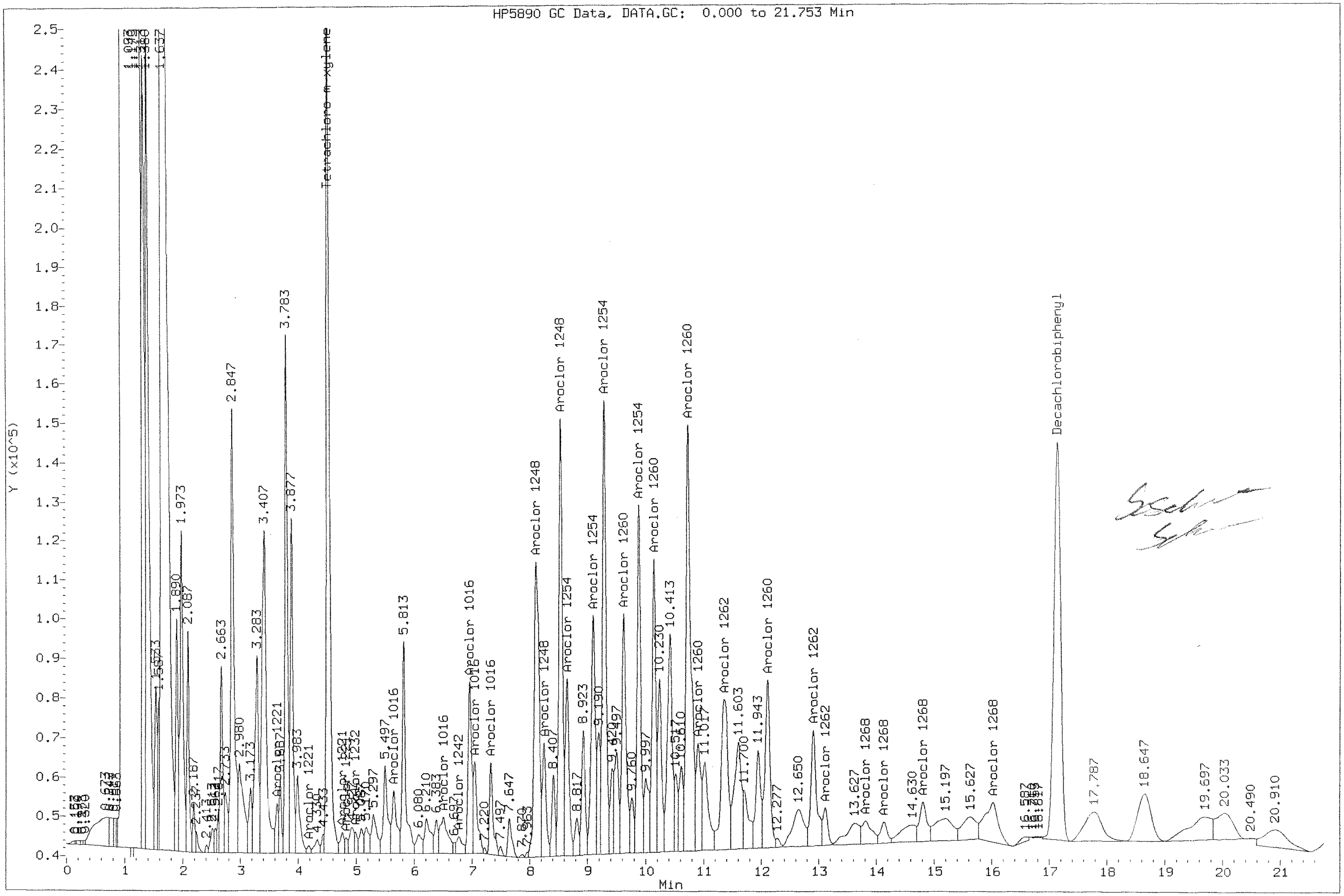
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F039.D
Injection Date: 22-NOV-2008 09:12
Instrument: GC09.i
Client Sample ID:



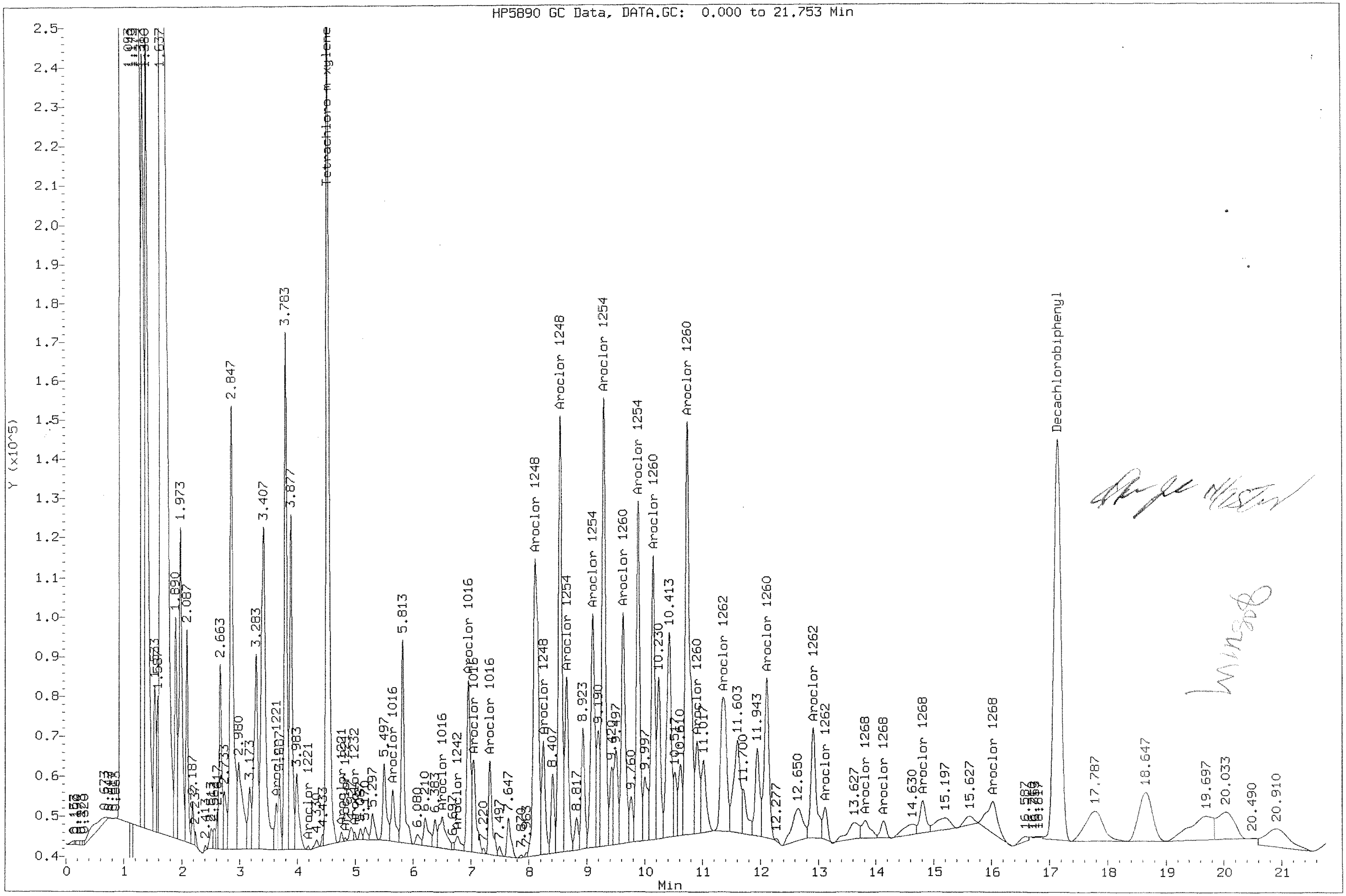
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F039.D
Injection Date: 22-NOV-2008 09:12
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R039.D
Injection Date: 22-NOV-2008 09:12
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R039.D
Injection Date: 22-NOV-2008 09:12
Instrument: GC09.i
Client Sample ID:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/24/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED11-0.5-2.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-008	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	93	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	190	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	93	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	93	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	93	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**2000**	D	93	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	93	13	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	115	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F045.D		**Date Acquired:**	11/22/2008 12:05
Lab ID:	K0810639-008		**Date Quantitated:**	11/25/2008 15:19
RunType:	SMPL		**Batch ID:**	KWG0812580
Matrix:	SEDIMENT		**Analysis Method:**	8082
			MethodJoinID:	MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: JH 11/25/08

Secondary Review: lm 11/25/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R045.D
Lab ID: K0810639-008
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 12:05
Date Quantitated: 11/25/2008 15:22
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: JW 11/25/08

Secondary Review: [illegible]

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**	07/24/2008	**Receive Date:**	07/29/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	K0810639
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774970	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ3300
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ445
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\112108.B\1121F045.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R045.D			**Vial:**	33
Acqu Date:	11/22/2008 12:05	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-008				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.05 +0.00	17.13	96853m	152429	9.53	11.49			115OK
				%Recovery =	95OK	115OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	13U	13U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F045.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R045.D			**Vial:**	33
Acqu Date:	11/22/2008 12:05	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-008				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1254			0	0	928.27	1,098	1700D	2000D	**2000**D
Aroclor 1254 {1}	7.98	8.53	475099	836589	927.80	1,041	1700D	1900D	
Aroclor 1254 {2}	8.09	8.64	257377	369089	908.94	1,040	1700D	1900D	
Aroclor 1254 {3}	8.68	9.09	316381	556059	873.70	1,243	1600D	2300D	
Aroclor 1254 {4}	8.89	9.28	730645	896160	987.57	1,080	1800D	2000D	
Aroclor 1254 {5}	9.28	9.87	606468	669235	943.34	1,088	1700D	2000D	
Aroclor 1260			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	13U	13U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.30 g	**Dilution:**	10.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	53.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F045.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F045.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R045.D
Inj Date : 22-NOV-2008 12:05
Sample Info: K0810639-008 | SED11-0.5-2.5-A
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10639008.H | F=4
Cal Date : 22-NOV-2008 15:04
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

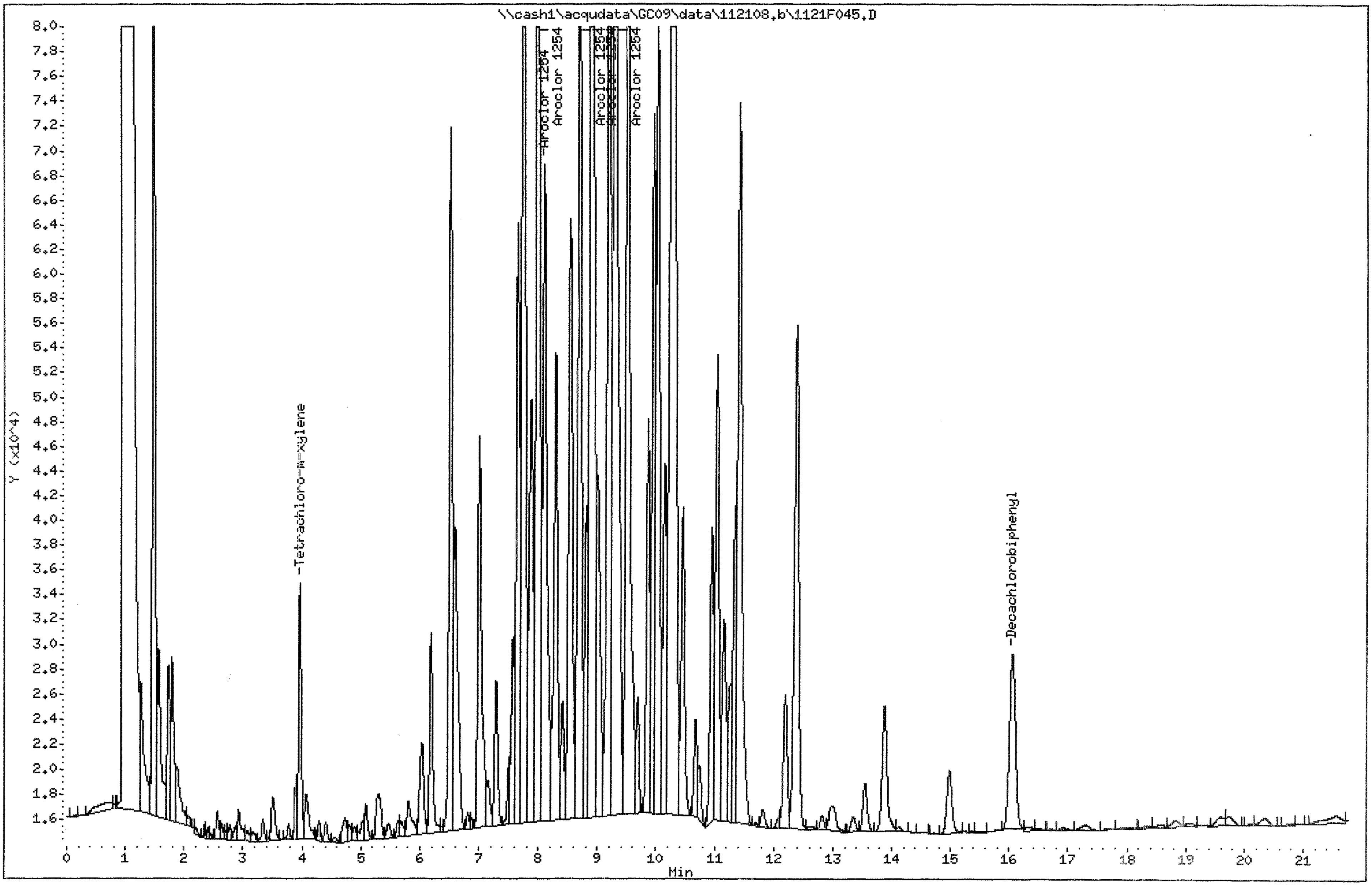
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	62237	113799	6.11	6.62		100.00(R)
Aroclor 1254	7.977	8.527	475099	836589	928	1040	80.00- 120.00	100.00
	8.093	8.640	257377	369089	909	1040	44.24- 66.36	54.17
	8.683	9.090	316381	556059	874	1240	56.57- 84.86	66.59
	8.887	9.277	730645	896160	988	1080	115.58- 173.38	153.79
	9.283	9.873	606468	669235	943	1090	100.44- 150.66	127.65
		Average of Peak Amounts =			928	1100		
Decachlorobiphenyl	16.050	17.130	96853	152429	9.53	11.5		100.00(RM)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

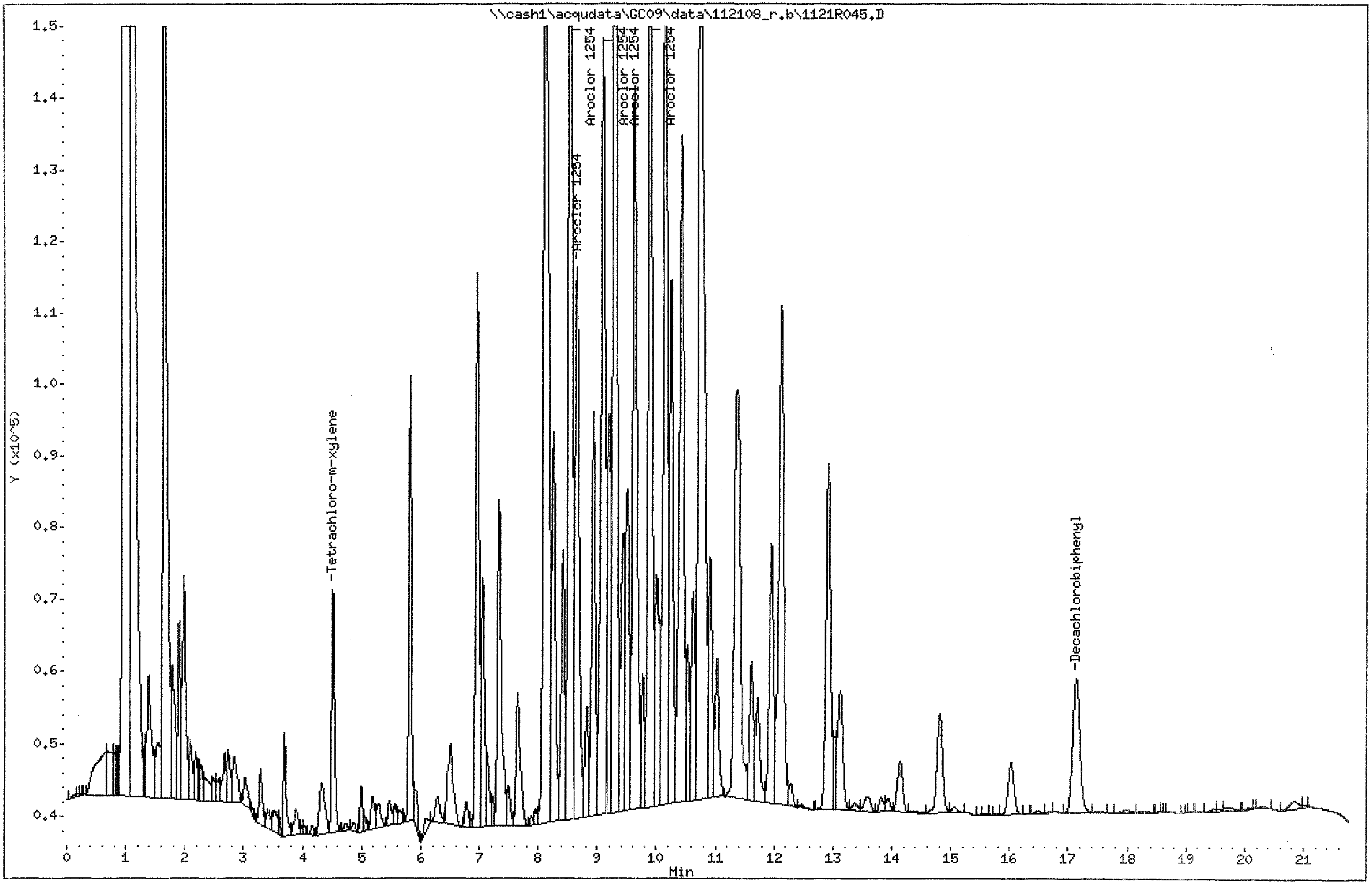
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F045.D
Date : 22-NOV-2008 12:05
Client ID:
Sample Info: K0810639-008 | SED11-0.5-2.5-A
Column phase: DB-35MS

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

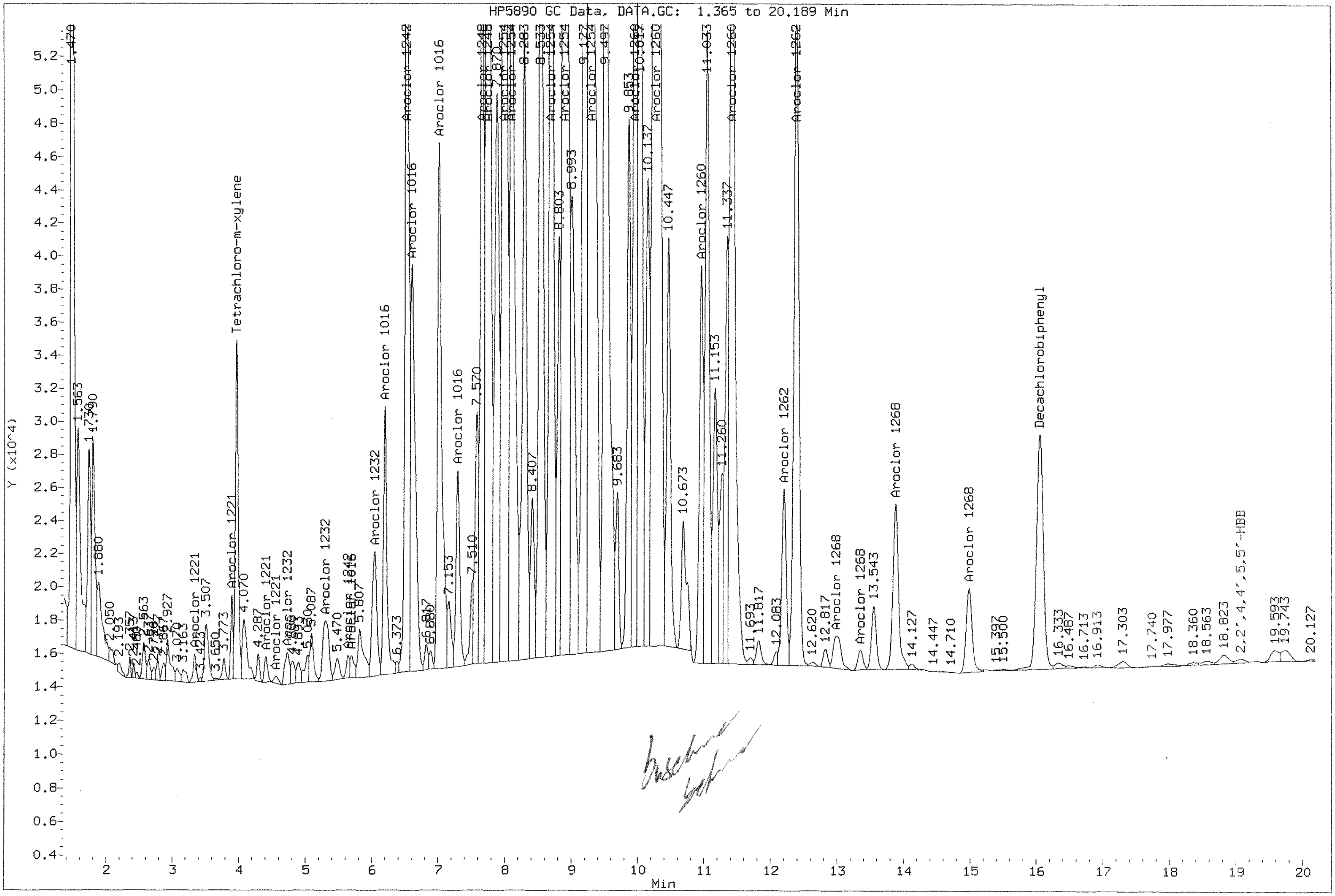


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R045.D
Date : 22-NOV-2008 12:05
Client ID:
Sample Info: K0810639-008 | SED11-0.5-2.5-A
Column phase: DB-XLB

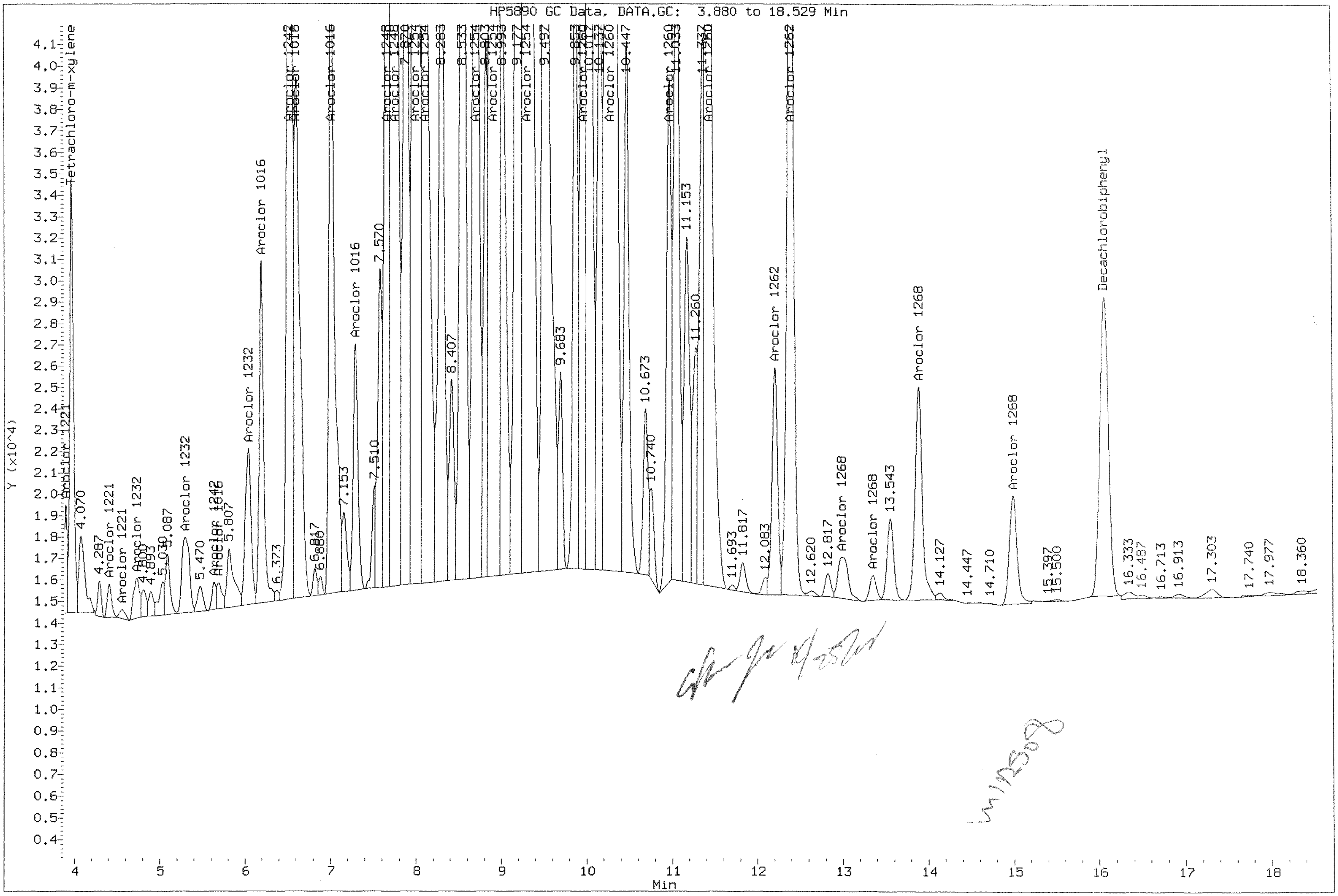
Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

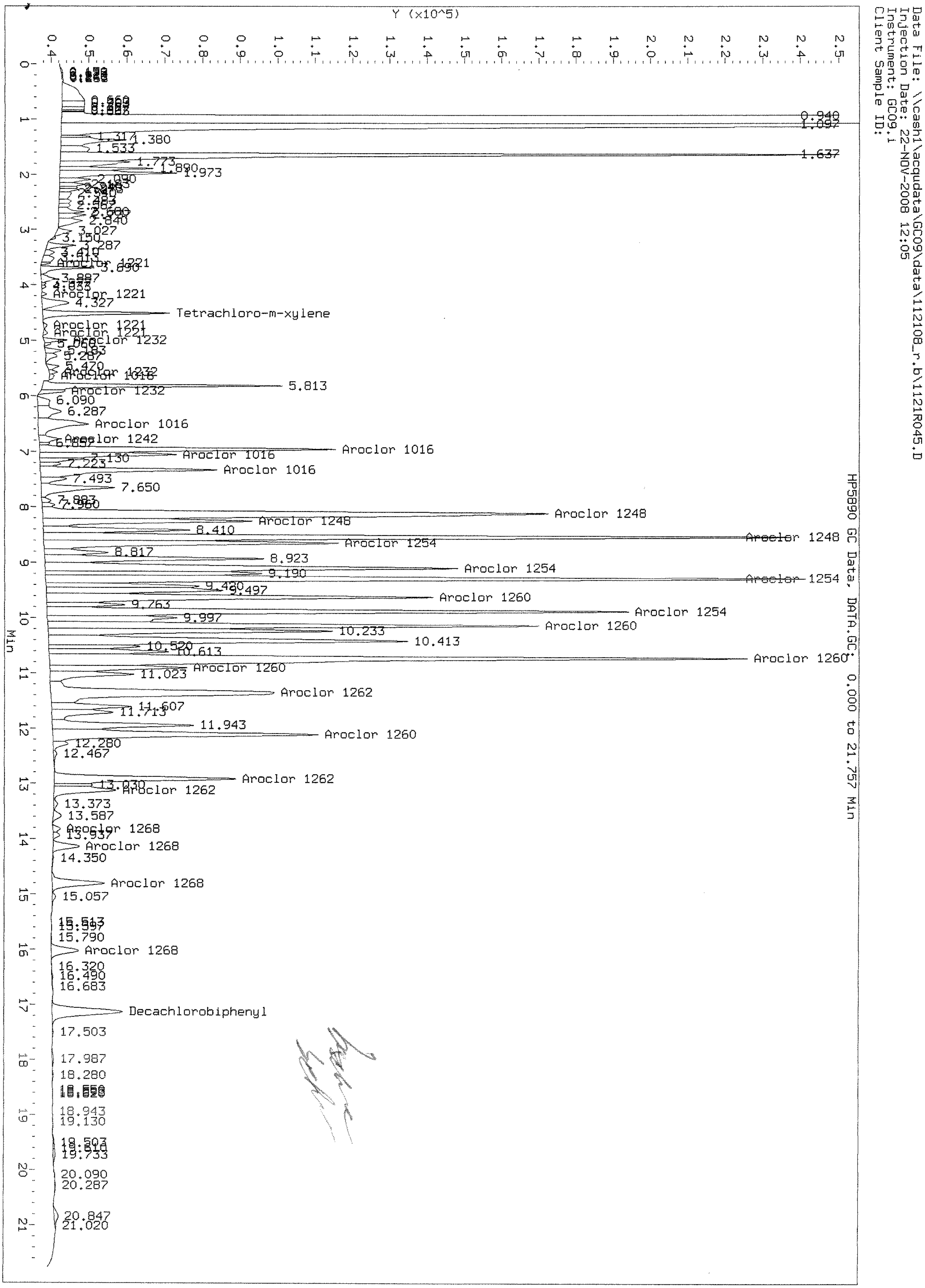


Data File: \\cash1\acqudata\GC09\data\112108.b\1121F045.D
Injection Date: 22-NOV-2008 12:05
Instrument: GC09.i
Client Sample ID:

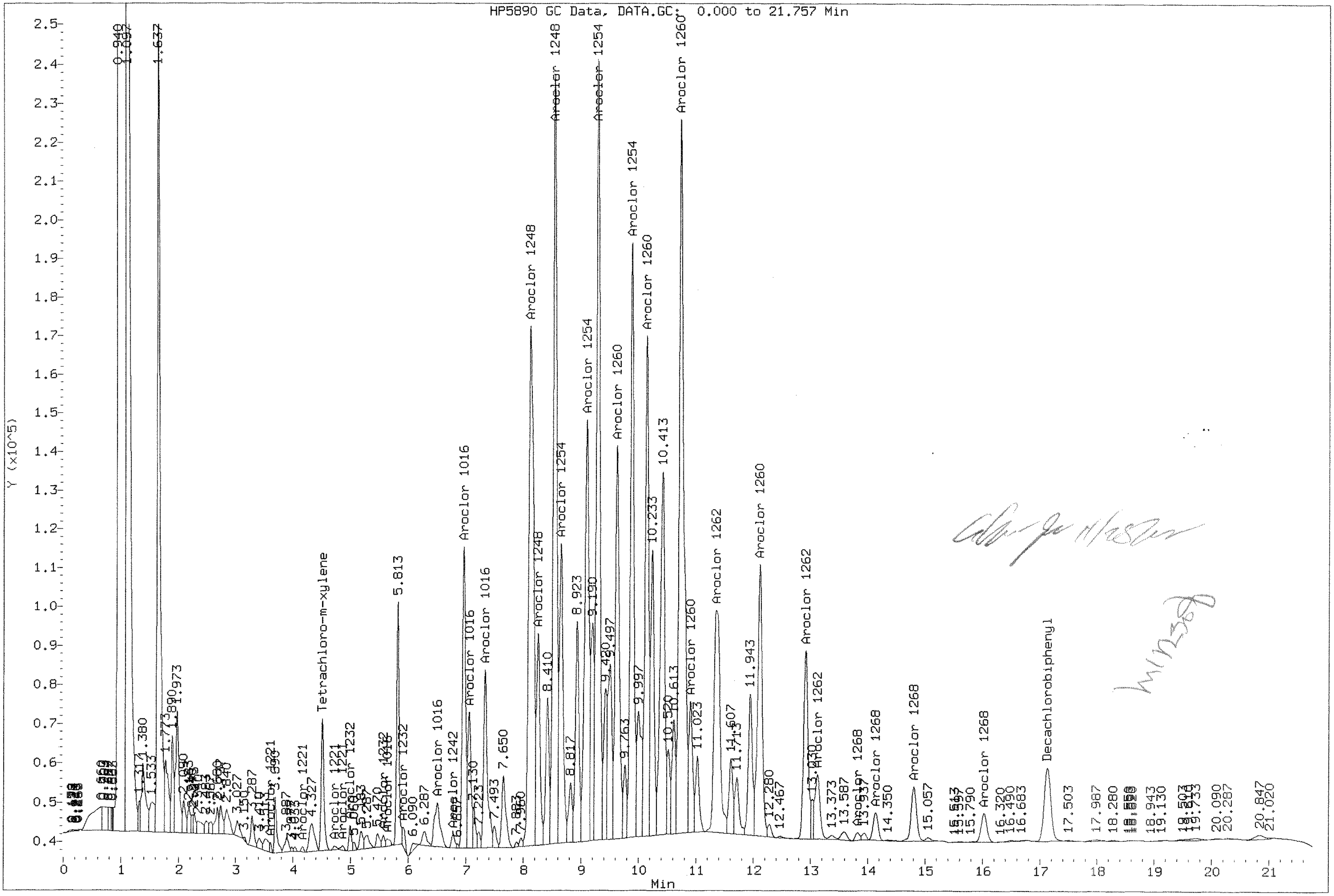


Data File: \\cash1\acqudata\GC09\data\112108.b\1121F045.D
Injection Date: 22-NOV-2008 12:05
Instrument: GC09.i
Client Sample ID:




Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R045.D
Injection Date: 22-NOV-2008 12:05
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor 1016
Aroclor 1221
Aroclor 1232
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Aroclor 1262
Aroclor 1268

Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R045.D
Injection Date: 22-NOV-2008 12:05
Instrument: GC09.i
Client Sample ID:



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Collected: 07/25/2008
Date Received: 07/29/2008

Polychlorinated Biphenyls (PCBs)

Sample Name: SED14-0.5-2-A
Lab Code: K0810639-009

Extraction Method: EPA 3540C
Analysis Method: 8082

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	83	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	170	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	83	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	83	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	83	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**1100**	D	83	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	83	13	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	108	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F046.D	**Date Acquired:**	11/22/2008 12:31
Lab ID:	K0810639-009	**Date Quantitated:**	11/25/2008 15:19
RunType:	SMPL	**Batch ID:**	KWG0812580
Matrix:	SEDIMENT	**Analysis Method:**	8082
		MethodJoinID:	MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: Ju 11/25/08

Secondary Review: KM 11/25/08

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R046.D	**Date Acquired:**	11/22/2008 12:31
Lab ID:	K0810639-009	**Date Quantitated:**	11/25/2008 15:22
RunType:	SMPL	**Batch ID:**	KWG0812580
Matrix:	SEDIMENT	**Analysis Method:**	8082
		MethodJoinID:	MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: JA 11/25/08

Secondary Review: MW 11/25/08

Printed: 11/25/2008 17:01:33

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**	07/25/2008	**Receive Date:**	07/29/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	K0810639
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774971	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ3300
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ445
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\112108.B\1121F046.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R046.D			**Vial:**	34
Acqu Date:	11/22/2008 12:31	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-009				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.05 +0.00	17.13 +0.00	94132m	143117	9.27	10.79			108OK
			%Recovery =		93OK	108OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	13U	13U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F046.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R046.D			**Vial:**	34
Acqu Date:	11/22/2008 12:31	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-009				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1254			0	0	579.43	651.06	950D	1100D	**1100**D
Aroclor 1254 {1}	7.98	8.53	290011m	514727	566.35	640.46	930D	1100D	
Aroclor 1254 {2}	8.09	8.64	165627m	229120	584.92	645.57	960D	1100D	
Aroclor 1254 {3}	8.69	9.09	190983m	285330	527.41	637.80	870D	1000D	
Aroclor 1254 {4}	8.89	9.28	456474m	553297	616.99	667.10	1000D	1100D	
Aroclor 1254 {5}	9.28	9.87	386700m	408684	601.50	664.35	990D	1100D	
Aroclor 1260			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	13U	13U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.60 g	**Dilution:**	10.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	60.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F046.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F046.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R046.D
Inj Date : 22-NOV-2008 12:31
Sample Info: K0810639-009 | SED14-0.5-2-A
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10639009.H | F=4
Cal Date : 22-NOV-2008 12:27
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

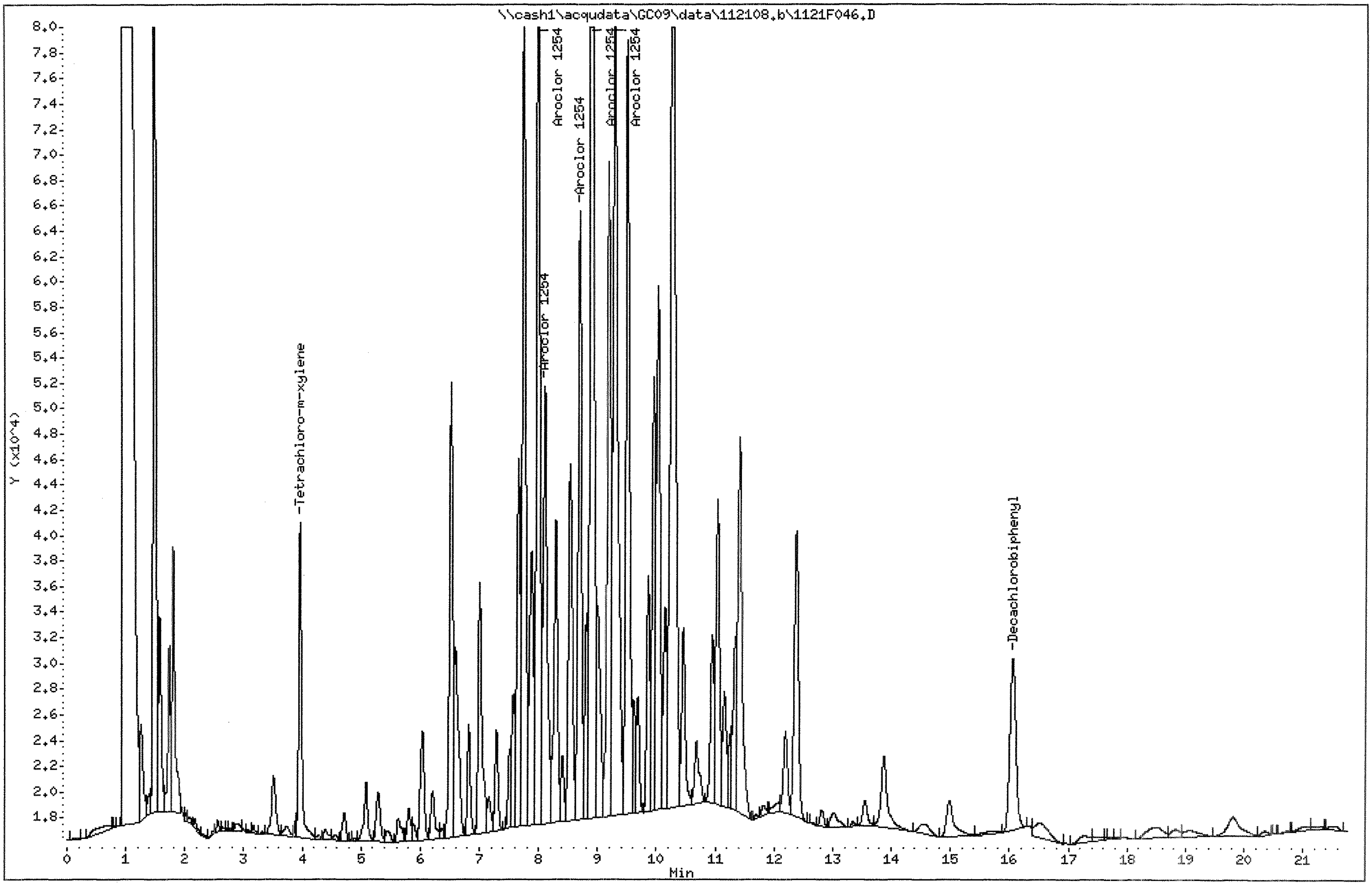
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	83867	147601	8.24	8.58		100.00(R)
Aroclor 1254	7.977	8.527	290011	514727	566	640	80.00- 120.00	100.00(M)
	8.093	8.640	165627	229120	585	646	44.24- 66.36	57.11(M)
	8.687	9.090	190983	285330	527	638	56.57- 84.86	65.85(M)
	8.887	9.277	456474	553297	617	667	115.58- 173.38	157.40(M)
	9.283	9.873	386700	408684	602	664	100.44- 150.66	133.34(M)
		Average of Peak Amounts =			579	651		
Decachlorobiphenyl	16.050	17.133	94132	143117	9.26	10.8		100.00(RM)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

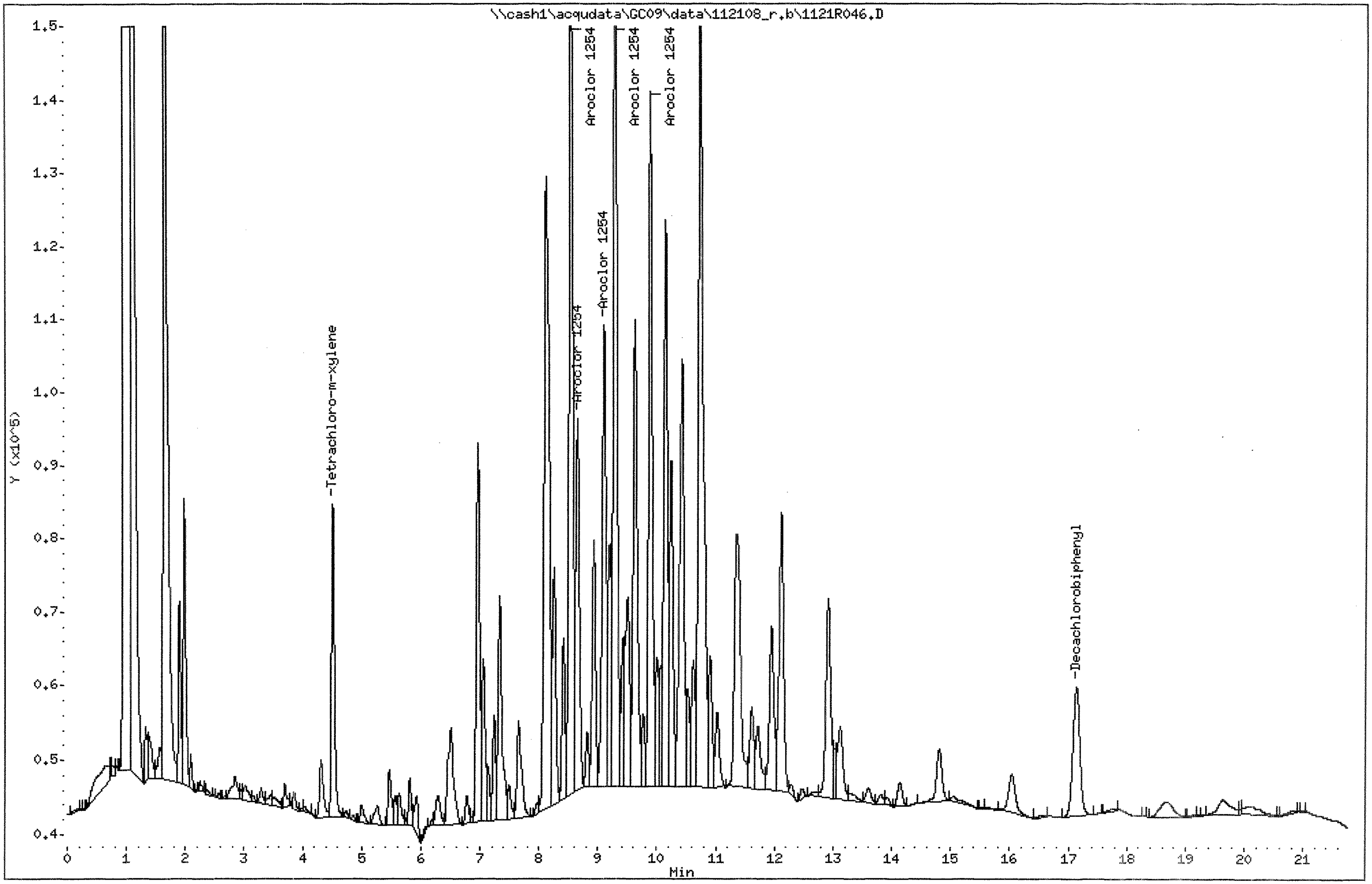
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F046.D
Date : 22-NOV-2008 12:31
Client ID:
Sample Info: K0810639-009 | SED14-0.5-2-A
Column phase: DB-35MS

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

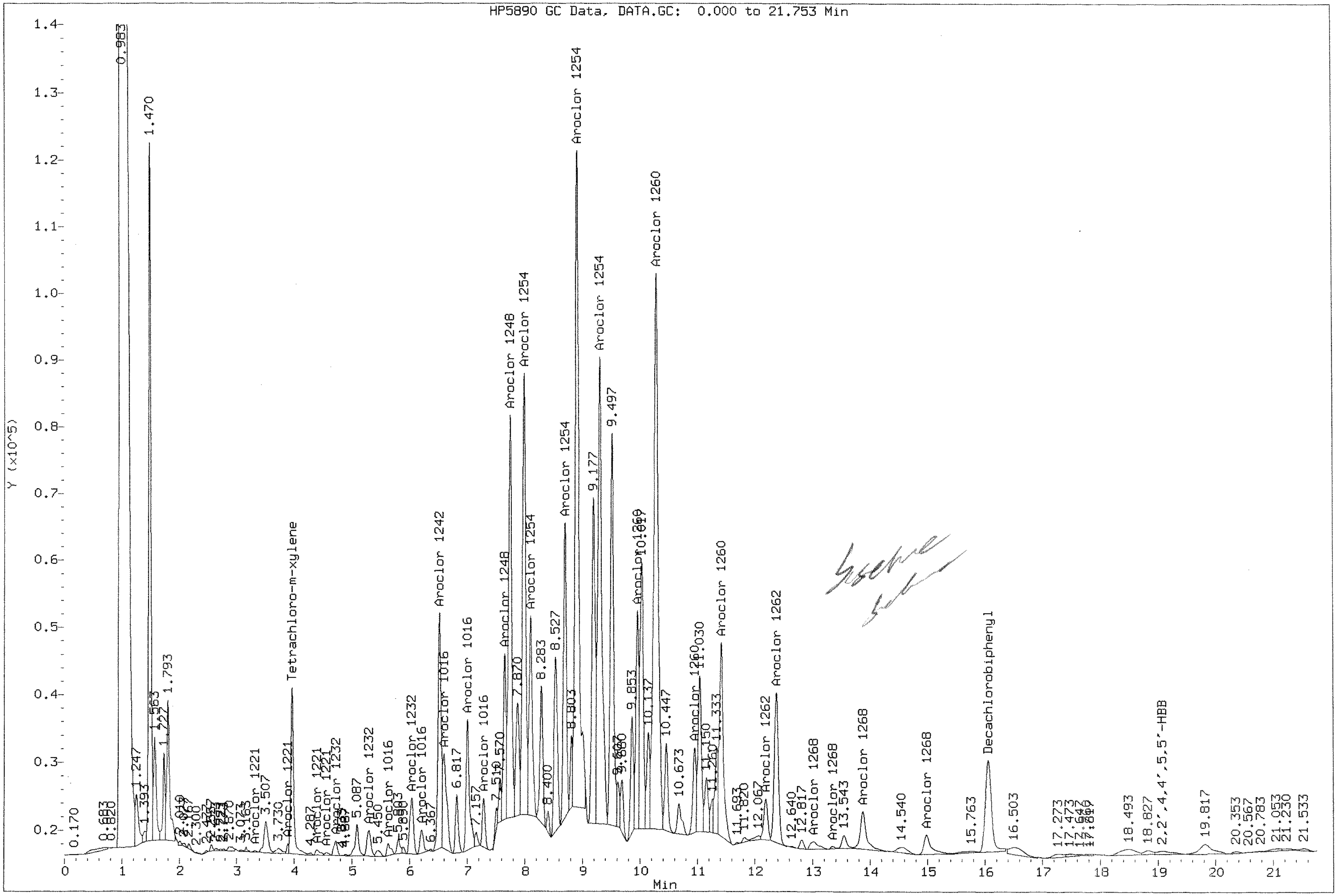


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R046.D
Date : 22-NOV-2008 12:31
Client ID:
Sample Info: K0810639-009 | SED14-0.5-2-A
Column phase: DB-XLB

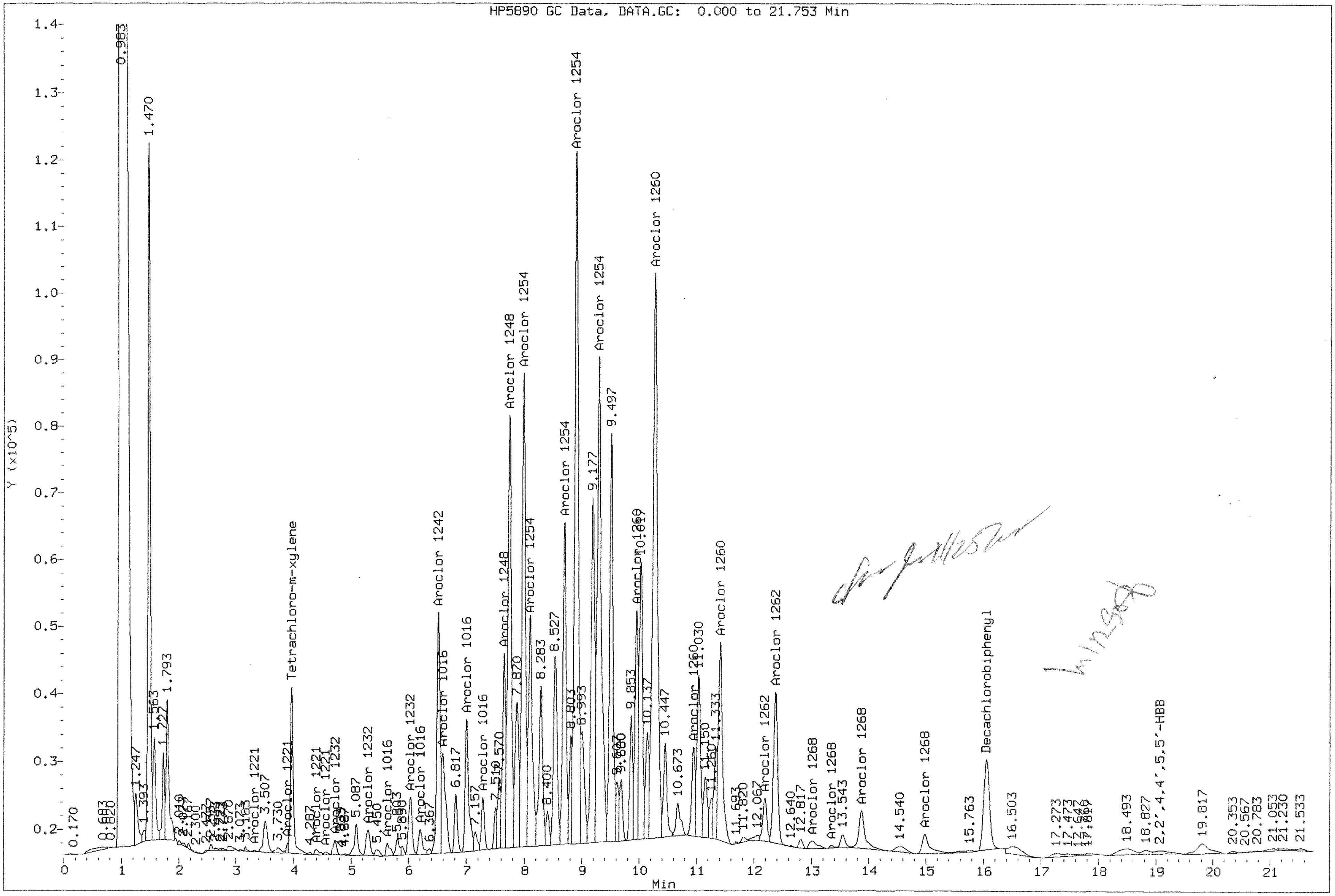
Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53



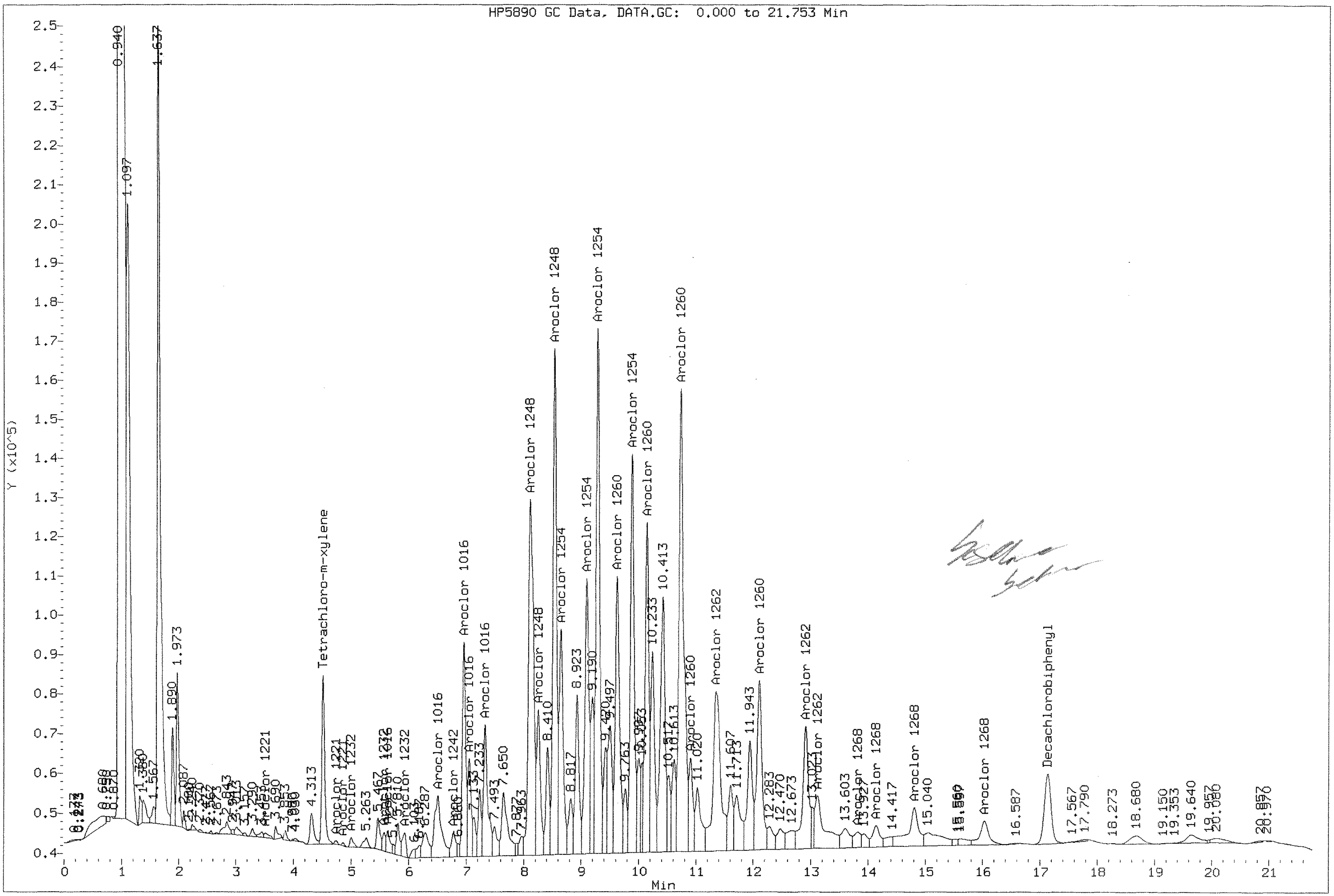
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F046.D
Injection Date: 22-NOV-2008 12:31
Instrument: GC09.i
Client Sample ID:



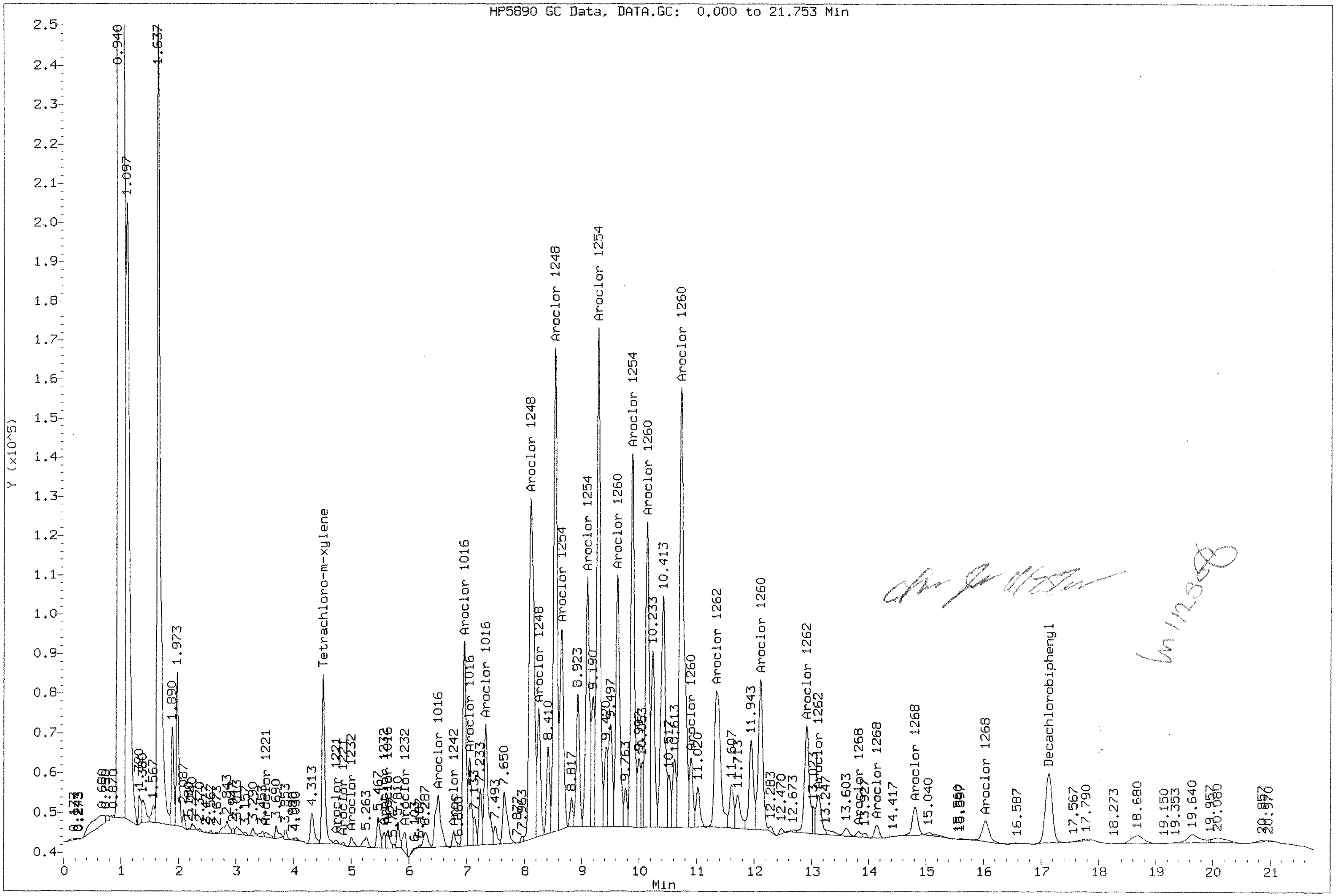
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F046.D
Injection Date: 22-NOV-2008 12:31
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R046.D
Injection Date: 22-NOV-2008 12:31
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R046.D
Injection Date: 22-NOV-2008 12:31
Instrument: GC09.i
Client Sample ID:



Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/25/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED14-2-3.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-010	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	U	73	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	150	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	73	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	73	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	73	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	**1100**	D	73	13	10	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	73	13	10	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	114	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F047.D
Lab ID: K0810639-010
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 12:57
Date Quantitated: 11/25/2008 15:19
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: JW 11/28/08

Secondary Review: Km 11/28/08

Printed: 11/25/2008 17:01:36
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R047.D
Lab ID: K0810639-010
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 12:57
Date Quantitated: 11/25/2008 15:22
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

Primary Review: JR 11/25/08

Secondary Review: m 11/28/08

Printed: 11/25/2008 17:01:39
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**	07/25/2008	**Receive Date:**	07/29/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	K0810639
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774972	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:	Polychlorinated Biphenyls (PCBs)	**Report List ID:**	LJ3300
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ445
		Quant based on Report List	

Data File #1:	J:\GC09\DATA\112108.B\1121F047.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R047.D			**Vial:**	35
Acqu Date:	11/22/2008 12:57	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-010				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Decachlorobiphenyl	16.05 +0.00	17.13 +0.00	105795m	151146	10.41	11.39			114OK
				%Recovery =	104OK	114OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1016 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1016 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	13U	13U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F047.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R047.D			**Vial:**	35
Acqu Date:	11/22/2008 12:57	**Quant Date:**	11/25/2008 15:19	**Dilution:**	10.0
Run Type:	SMPL			**Soln Conc. Units:**	ng/mL
Lab ID:	K0810639-010				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1254			0	0	727.44	779.60	1100D	1100D	**1100**D
Aroclor 1254 {1}	7.98	8.53	371995m	611313	726.46	760.64	1100D	1100D	
Aroclor 1254 {2}	8.10	8.64	201627m	244933	712.06	690.13	1000D	1000D	
Aroclor 1254 {3}	8.69	9.09	244188m	374132	674.34	836.30	980D	1200D	
Aroclor 1254 {4}	8.89	9.28	571258m	658122	772.14	793.49	1100D	1200D	
Aroclor 1254 {5}	9.28	9.87	483594m	502865	752.22	817.45	1100D	1200D	
Aroclor 1260			0	0	0.0000	0.0000	13U	13U	13U
Aroclor 1260 {1}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {2}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {3}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {4}			0d	0d	0.0000	0.0000	13U	13U	
Aroclor 1260 {5}			0d	0d	0.0000	0.0000	13U	13U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.34 g	**Dilution:**	10.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	68.2 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F047.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F047.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R047.D
Inj Date : 22-NOV-2008 12:57
Sample Info: K0810639-010 | SED14-2-3.5-A
Misc Info : KELSO\SEMIVOA GC\8082-PCB_LL\10639010.H | F=4
Cal Date : 22-NOV-2008 15:03
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

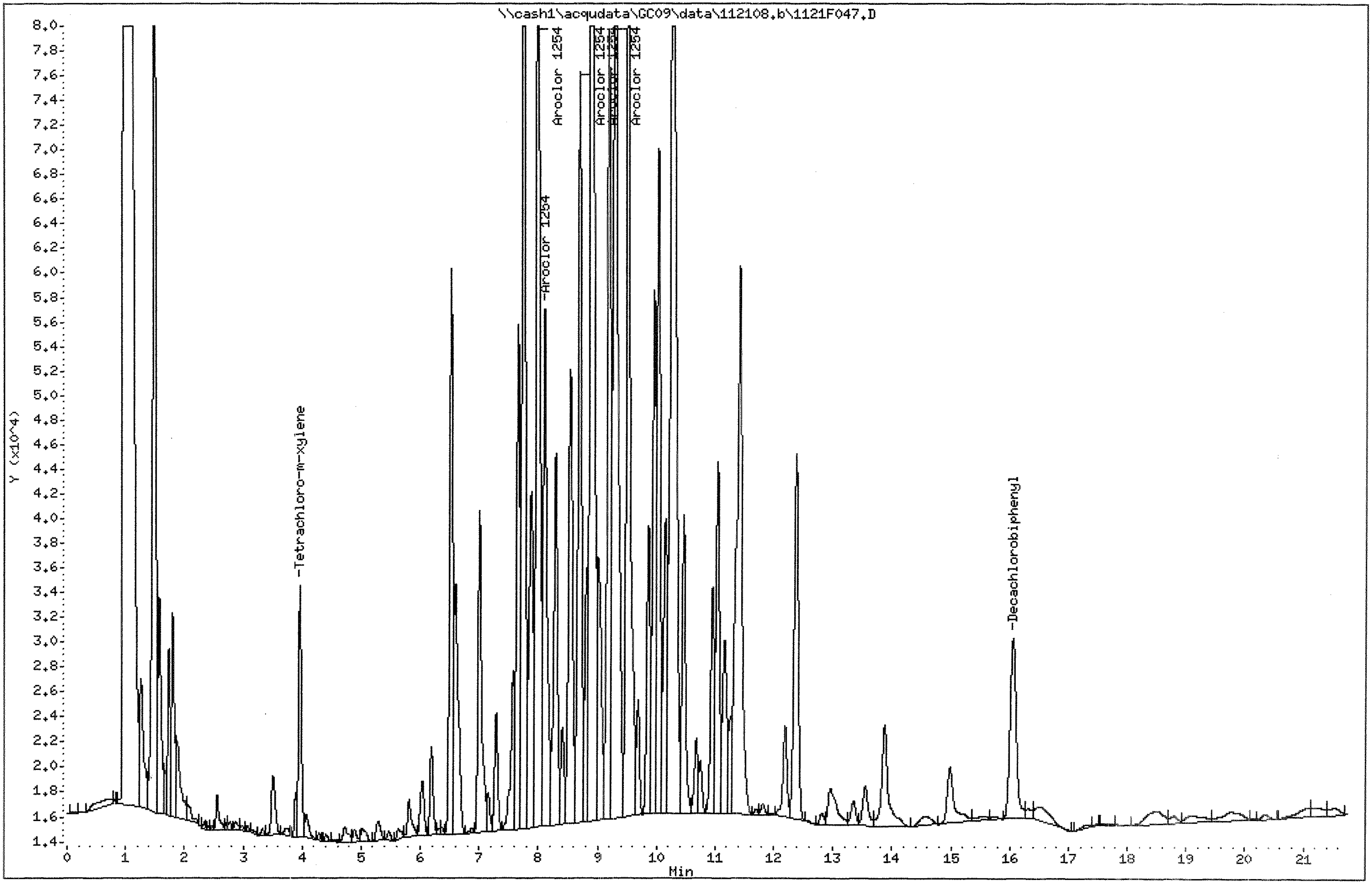
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	64281	110750	6.31	6.44		100.00(R)
Aroclor 1254	7.977	8.527	371995	611313	726	761	80.00- 120.00	100.00(M)
	8.097	8.643	201627	244933	712	690	44.24- 66.36	54.20(M)
	8.687	9.093	244188	374132	674	836	56.57- 84.86	65.64(M)
	8.887	9.277	571258	658122	772	793	115.58- 173.38	153.57(M)
	9.283	9.873	483594	502865	752	817	100.44- 150.66	130.00(M)
		Average of Peak Amounts =			727	779		
Decachlorobiphenyl	16.050	17.133	105795	151146	10.4	11.4		100.00(RM)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F047.D
Date : 22-NOV-2008 12:57
Client ID:
Sample Info: K0810639-010 | SED14-2-3.5-A
Column phase: DB-35MS

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

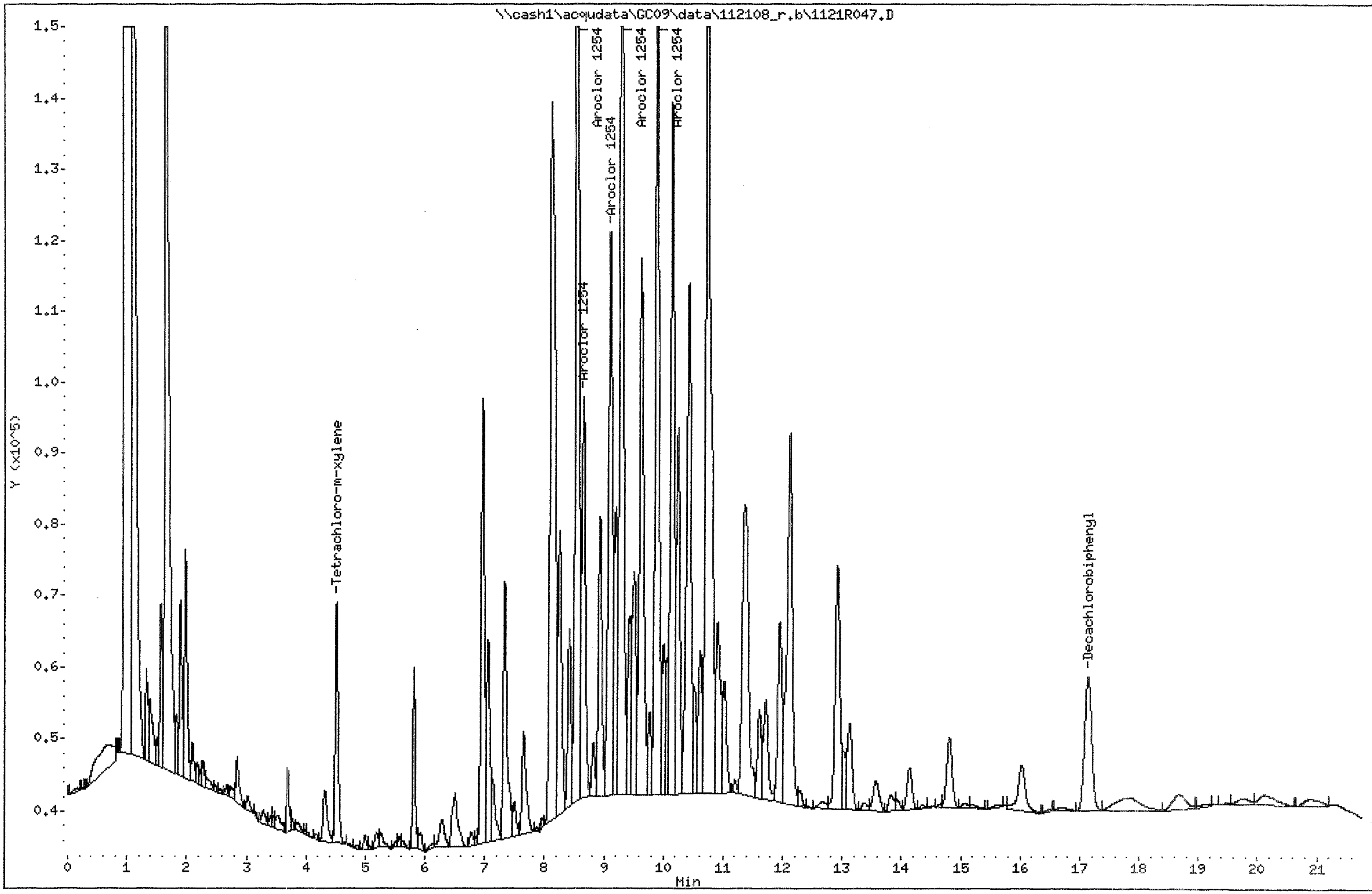


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R047.D
Date : 22-NOV-2008 12:57
Client ID:
Sample Info: K0810639-010 | SED14-2-3.5-A

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



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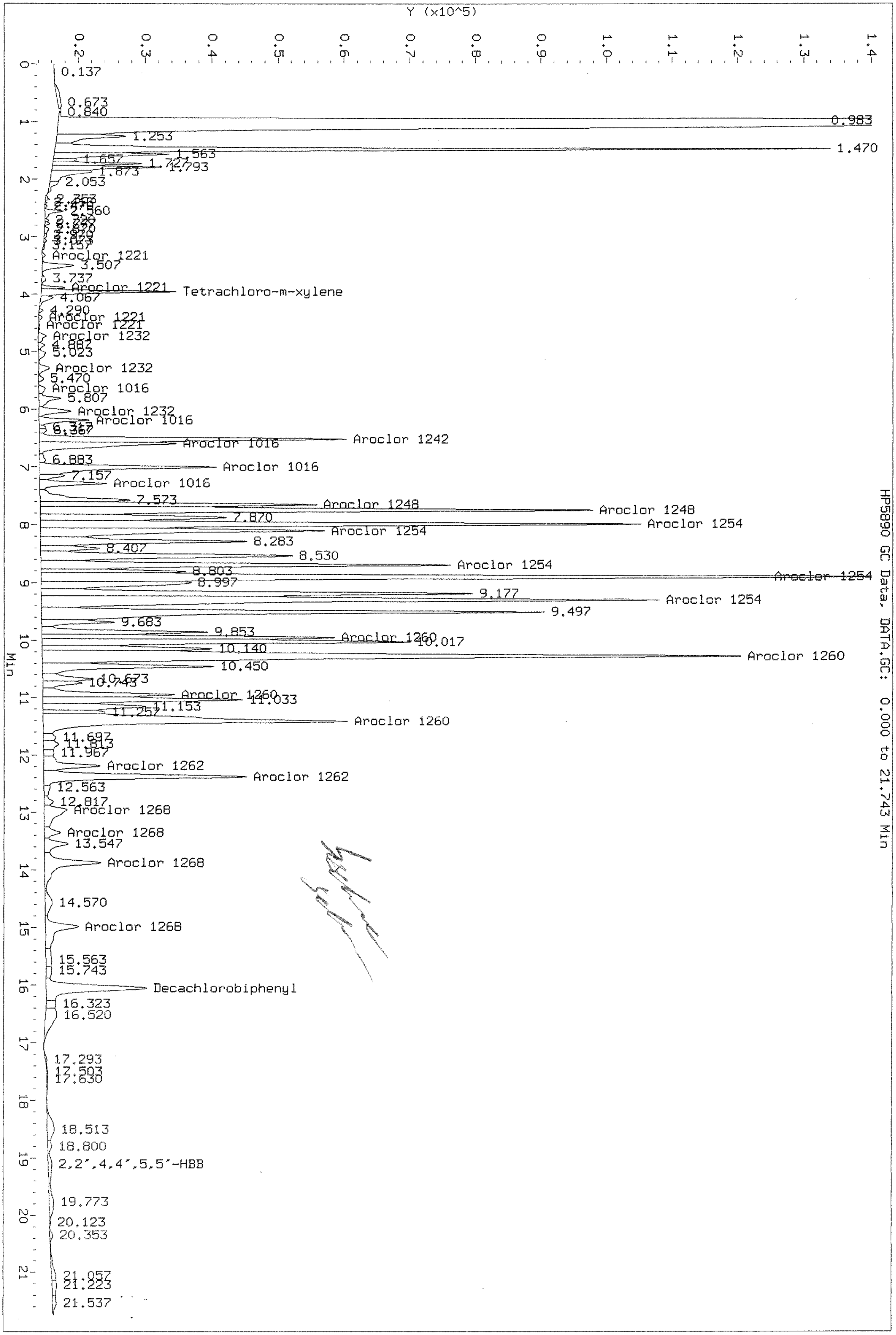
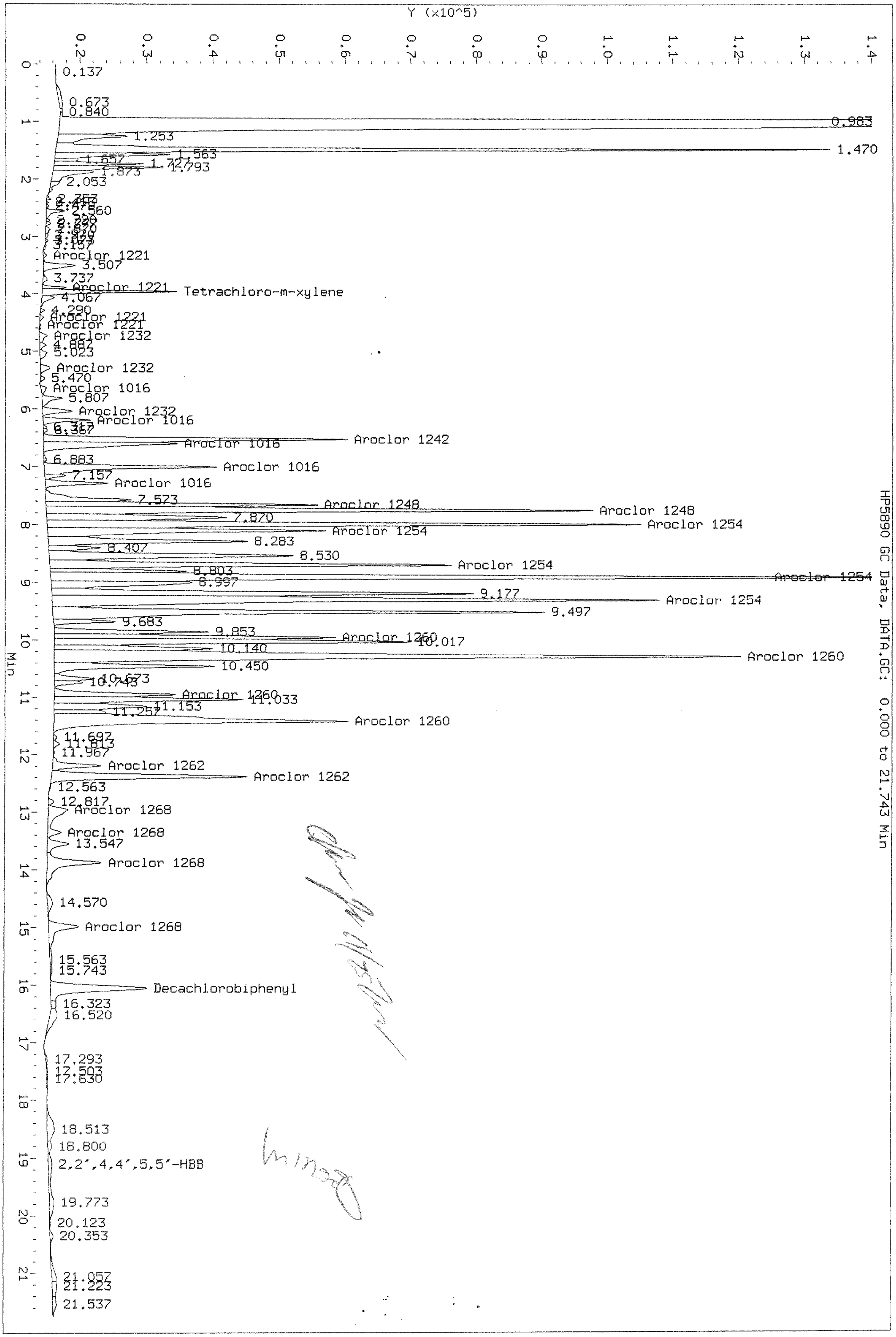
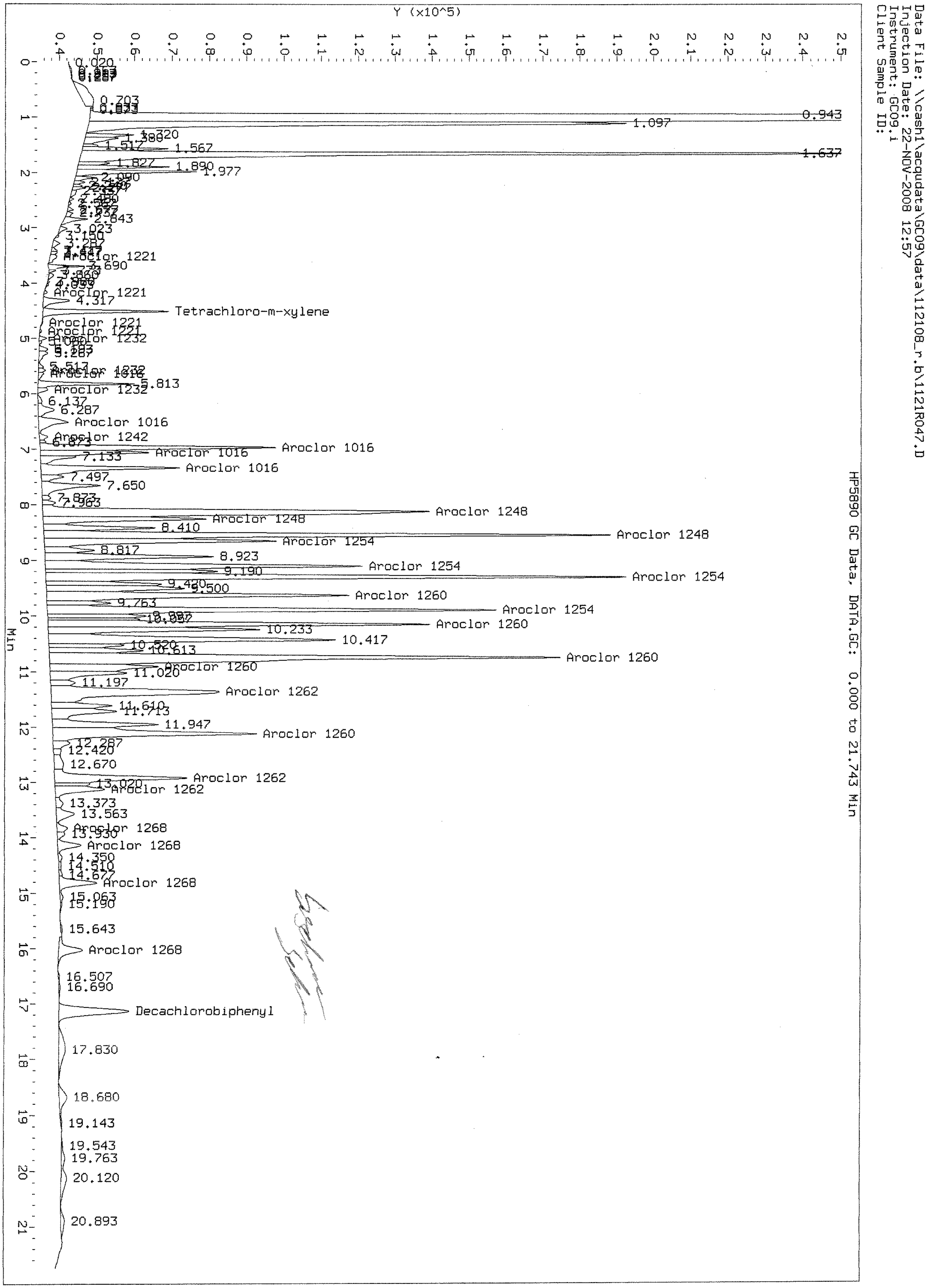
Injection Date: 22-NOV-2008 12:57
Instrument: GC09.i
Client Sample ID:



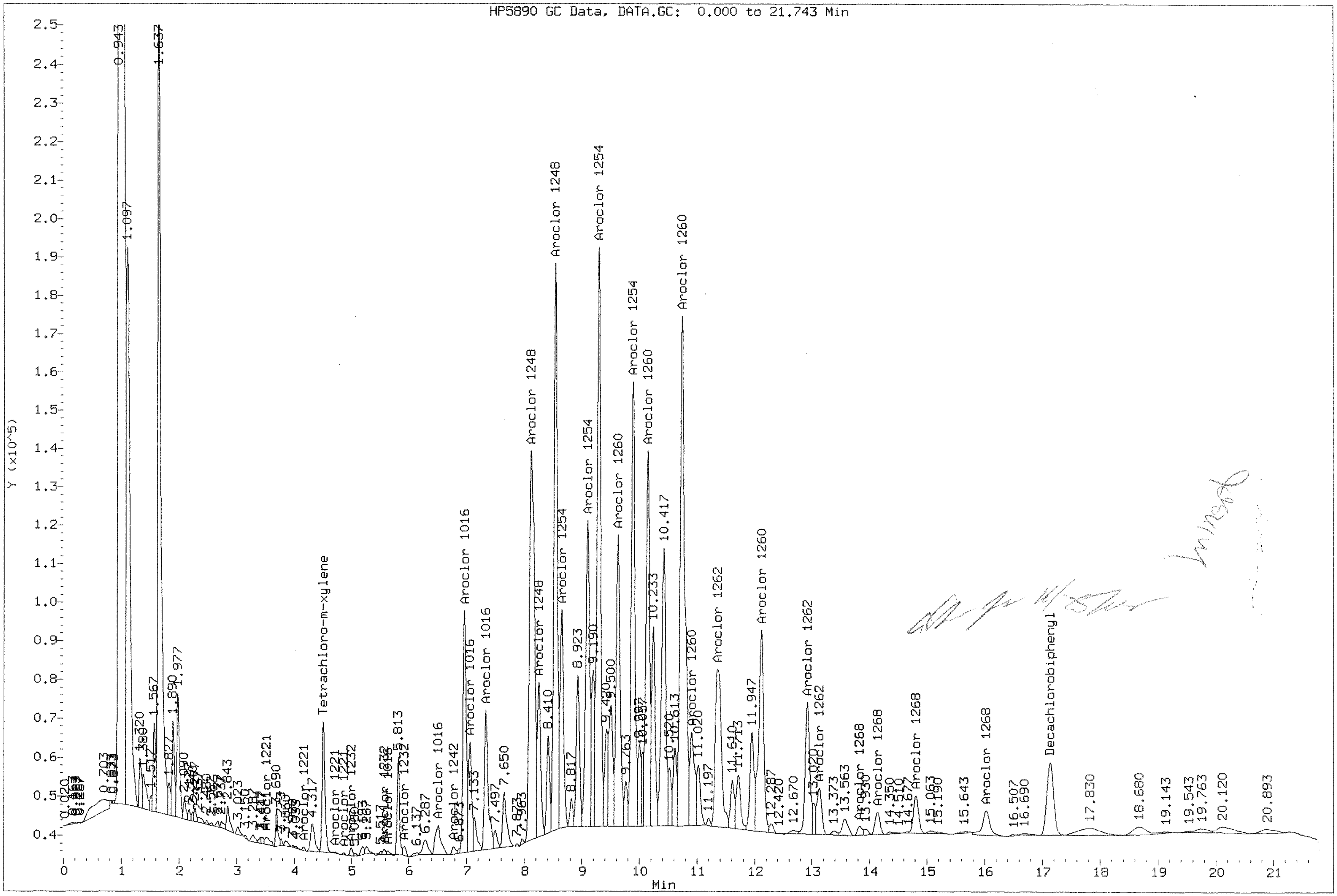
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F047.D
Injection Date: 22-NOV-2008 12:57
Instrument: GC09.i
Client Sample ID:




Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R047.D
Injection Date: 22-NOV-2008 12:57
Instrument: GC09.i
Client Sample ID:
Y (x10^5)
HP5890 GC Data, DATA.GC: 0.000 to 21.743 Min
Min
Tetrachloro-m-xylene
Decachlorobiphenyl

Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R047.D
Injection Date: 22-NOV-2008 12:57
Instrument: GC09.i
Client Sample ID:

HP5890 GC Data, DATA.GC: 0.000 to 21.743 Min



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0811860-4	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	ND	Ui	7.1	7.1	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	Ui	41	41	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	Ui	67	67	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	Ui	62	62	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	Ui	6.1	6.1	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	ND	Ui	5.0	5.0	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	ND	U	5.0	1.3	1	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	80	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F027.D	**Date Acquired:**	11/22/2008 03:41
Lab ID:	KWG0811860-4	**Date Quantitated:**	11/25/2008 16:18
RunType:	MB	**Batch ID:**	KWG0812580
Matrix:	SEDIMENT	**Analysis Method:**	8082
		MethodJoinID:	MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Aroclor 1016 {2}	6.21	NA	NA	CBAK
	Aroclor 1016 {4}	7.01	NA	NA	
	Aroclor 1016 {5}	7.32	NA	NA	
	Aroclor 1232 {2}	5.263	NA	NA	
	Aroclor 1232 {3}	5.963	NA	NA	
	Aroclor 1232 {4}	6.21	NA	NA	
	Aroclor 1242 {1}	5.263	NA	NA	
	Aroclor 1242 {3}	5.963	NA	NA	
	Aroclor 1242 {4}	6.21	NA	NA	
	Aroclor 1248 {2}	7.01	NA	NA	
	Aroclor 1248 {3}	7.32	NA	NA	
Above Highest ICAL Level	Aroclor 1242	7053.62	NA	5000	not E
	Aroclor 1242 {1}	6608.78	NA	5000	
	Aroclor 1242 {2}	12511.75	NA	5000	

Primary Review: JN 11/25/08

Secondary Review: [illegible]

Printed: 11/25/2008 16:59:45
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R027.D
Lab ID: KWG0811860-4
RunType: MB
Matrix: SEDIMENT

Date Acquired: 11/22/2008 03:41
Date Quantitated: 11/25/2008 16:18
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA		x
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Analyte Co-elution	Aroclor 1016 {2}	6.543	NA	NA	OKAY
	Aroclor 1016 {3}	6.95	NA	NA	
	Aroclor 1016 {4}	7.12	NA	NA	
	Aroclor 1016 {5}	7.423	NA	NA	
	Aroclor 1232 {2}	5.53	NA	NA	
	Aroclor 1232 {4}	6.543	NA	NA	
	Aroclor 1242 {1}	5.53	NA	NA	
	Aroclor 1242 {3}	6.543	NA	NA	
	Aroclor 1242 {5}	6.95	NA	NA	
	Aroclor 1248 {1}	7.12	NA	NA	
	Aroclor 1248 {2}	7.423	NA	NA	
	Aroclor 1248 {5}	8.57	NA	NA	
	Aroclor 1254 {1}	8.57	NA	NA	

Primary Review: JN 11/25/08

Secondary Review: [illegible] 11/25/08

Printed: 11/25/2008 16:59:49
u:\Stealth\Crystal.rpt\except2.rpt

Page 1 of 1

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**		**Receive Date:**	11/19/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774976	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ445
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F027.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R027.D			**Vial:**	21
Acqu Date:	11/22/2008 03:41	**Quant Date:**	11/25/2008 16:18	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811860-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.96	4.50 0.00	961299	1325270	94.41	77.07			94OK
				%Recovery =	94OK	77OK	Limits =	22-130	
Decachlorobiphenyl	16.05 +0.00	17.13	813414	1063867	80.06	80.19			80OK
				%Recovery =	80OK	80OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	71.53	1,187	7.1Ui	120Ui	7.1Ui
Aroclor 1016 {1}	5.74 +0.05	5.67 +0.04	0	0	0.0000	0.0000	1.3Ui	1.3Ui	
Aroclor 1016 {2}	6.21 c	6.54 -0.02 c	24303	808043	56.18	1,187	1.3Ui	1.3Ui	
Aroclor 1016 {3}		6.95 0.00 c	0	0	0.0000	0.0000	1.3Ui	1.3Ui	
Aroclor 1016 {4}	7.01 +0.01c	7.12 +0.07c	26222	0	86.88	0.0000	1.3Ui	1.3Ui	
Aroclor 1016 {5}	7.32 +0.04c	7.42 +0.10c	0	0	0.0000	0.0000	1.3Ui	1.3Ui	
Aroclor 1221			0	0	1,615	414.11	160Ui	41Ui	41Ui
Aroclor 1221 {1}	3.41	3.59	0	49287	0.0000	350.49	1.3Ui	1.3Ui	
Aroclor 1221 {2}	3.80	4.17	59795	30431	1,580	621.68	1.3Ui	1.3Ui	
Aroclor 1221 {3}	4.41	4.72	256050	60365	1,897	270.17	1.3Ui	1.3Ui	
Aroclor 1221 {4}	4.52	4.89	119457	0	1,368	0.0000	1.3Ui	1.3Ui	
Aroclor 1232			0	0	676.22	1,664	67	160	160P
Aroclor 1232 {1}	4.67	4.96	196312	798267	743.44	1,924	73.1	189	
Aroclor 1232 {2}	5.26 c	5.53 c	0	263743	0.0000	1,404	1.3U	138	
Aroclor 1232 {3}	5.96 c		258741	0	608.99	0.0000	59.9	1.3U	
Aroclor 1232 {4}	6.21 c	6.54 c	0	0	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242			0	0	7,054	621.49	700Ui	62Ui	62Ui
Aroclor 1242 {1}	5.26 c	5.53 c	2573406	263743	6,609	772.08	1.3UiE	1.3Ui	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F027.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R027.D			**Vial:**	21
Acqu Date:	11/22/2008 03:41	**Quant Date:**	11/25/2008 16:18	**Dilution:**	1.0
Run Type:	MB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811860-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}	5.61		1095654	0	12,512	0.0000	1.3UiE	1.3Ui	
Aroclor 1242 {3}	5.96 c	6.54 c	0	808043	0.0000	1,134	1.3Ui	1.3Ui	
Aroclor 1242 {4}	6.21 c	6.75	0	78416	0.0000	199.26	1.3Ui	1.3Ui	
Aroclor 1242 {5}	6.48	6.95 c	572605	106515	2,040	380.55	1.3Ui	1.3Ui	
Aroclor 1248			0	0	61.12	99.68	6.0	9.8	9.8P
Aroclor 1248 {1}		7.12 c	0	0	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {2}	7.01 c	7.42 c	26222	0	70.23	0.0000	6.91	1.3U	
Aroclor 1248 {3}	7.32 c	8.13	0	154390	0.0000	161.22	1.3U	15.9	
Aroclor 1248 {4}	7.67	8.35	0	57581	0.0000	82.59	1.3U	8.12	
Aroclor 1248 {5}	7.81	8.57 c	30017	28080	52.02	55.23	5.12	5.43	
Aroclor 1254			0	0	16.89	51.91	1.7J	5.1	5.1P
Aroclor 1254 {1}	7.93	8.57 c	4925	28080	9.62	34.94	1.3U	3.44J	
Aroclor 1254 {2}	8.09		0	0	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {3}	8.69	9.13	0	30818	0.0000	68.89	1.3U	6.78	
Aroclor 1254 {4}	8.93	9.30	12783	0	17.28	0.0000	1.70J	1.3U	
Aroclor 1254 {5}	9.31		15278	0	23.76	0.0000	2.34J	1.3U	
Aroclor 1260			0	0	5.34	50.54	1.3U	4.97J	1.3U
Aroclor 1260 {1}	9.91 -0.04	9.67 +0.06	0m	0m	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {2}	10.22 -0.04	10.13	0m	36549m	0.0000	49.40	1.3U	4.86J	
Aroclor 1260 {3}		10.73 +0.01	0m	64259m	0.0000	69.93	1.3U	6.88	
Aroclor 1260 {4}	10.99 +0.04	10.98 +0.08	0m	0m	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260 {5}	11.42 +0.01	12.10 -0.01	5001m	34275m	5.34	32.31	1.3U	3.18J	
Aroclor 1262			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.67 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F027.D
Report Date: 25-Nov-2008 16:18

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F027.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R027.D
Inj Date : 22-NOV-2008 03:41
Sample Info: KWG0811860-4 | MB | 8082 PCB_LL | SEDIMENT
Misc Info : SEMIVOA GC\W0811860\4-MB.H | F=4 D=1 A=40.67
Cal Date : 22-NOV-2008 15:04
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.503	961299	1325270	94.4	77.1		100.00(R)
Aroclor 1016	5.737	5.670					80.00- 120.00	0.00(TH)
	6.210	6.543	24303	808043	56.2	1190	155.62- 233.43	5.75(TH)
	0.000	6.950					84.40- 126.59	0.00(TH)
	7.010	7.120	26222		86.9		105.37- 158.05	6.21(TH)
	7.320	7.423					86.47- 129.70	0.00(TH)
		Average of Peak Amounts =			71.6	1190		
Aroclor 1221	3.410	3.590		49287		350	80.00- 120.00	100.00(H)
	3.803	4.170	59795	30431	1580	622	33.06- 49.60	107.21(H)
	4.407	4.723	256050	60365	1900	270	117.90- 176.86	459.09(H)
	4.520	4.893	119457		1370		76.27- 114.41	214.18(H)
		Average of Peak Amounts =			1620	414		
Aroclor 1232	4.673	4.957	196312	798267	743	1920	80.00- 120.00	100.00(H)
	5.263	5.530		263743		1400	36.21- 54.31	33.04(H)
	5.963	0.000	258741		609		128.72- 193.08	131.80(H)
	6.210	6.543					38.07- 57.10	0.00(H)
		Average of Peak Amounts =			676	1660		
Aroclor 1242	5.263	5.530	2573406	263743	6610	772	80.00- 120.00	100.00(AH)
	5.607	0.000	1095654		12500		17.99- 26.99	42.58(AH)
	5.963	6.543		808043		1130	166.87- 250.30	306.38(AH)
	6.210	6.750		78416		199	92.17- 138.25	29.73(AH)
	6.477	6.950	572605	106515	2040	380	57.66- 86.49	22.25(AH)
		Average of Peak Amounts =			7050	620		
Aroclor 1248	0.000	7.120					80.00- 120.00	0.00(TH)
	7.010	7.423	26222		70.2		110.51- 165.76	0.00(TH)
	7.320	8.133		154390		161	155.62- 233.43	17.56(TH)
	7.667	8.353		57581		82.6	113.29- 169.94	6.55(TH)
	7.810	8.570	30017	28080	52.0	55.2	170.78- 256.17	0.00(TH)

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F027.D
Report Date: 25-Nov-2008 16:18

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
		Average of Peak Amounts =			61.1	99.6		
Aroclor 1254	7.930	8.570	4925	28080	9.62	34.9	80.00- 120.00	100.00(H)
	8.087	0.000					35.33- 52.99	0.00(H)
	8.690	9.127		30818		68.9	44.53- 66.80	109.75(H)
	8.930	9.303	12783		17.3		115.58- 173.38	259.55(H)
	9.313	0.000	15278		23.8		100.44- 150.66	310.21(H)
		Average of Peak Amounts =			16.9	51.9		
Aroclor 1260	9.907	9.673					80.00- 120.00	0.00(TMH)
	10.220	10.133		36549		49.4	82.66- 123.99	71.78(TMH)
	0.000	10.730		64259		69.9	107.32- 160.98	126.20(TMH)
	10.987	10.977					57.39- 86.08	0.00(TMH)
	11.417	12.097	5001	34275	5.34	32.3	206.52- 309.78	0.00(TMH)
		Average of Peak Amounts =			5.34	50.5		
Decachlorobiphenyl	16.050	17.130	813414	1063867	80.0	80.2		100.00(R)

QC Flag Legend

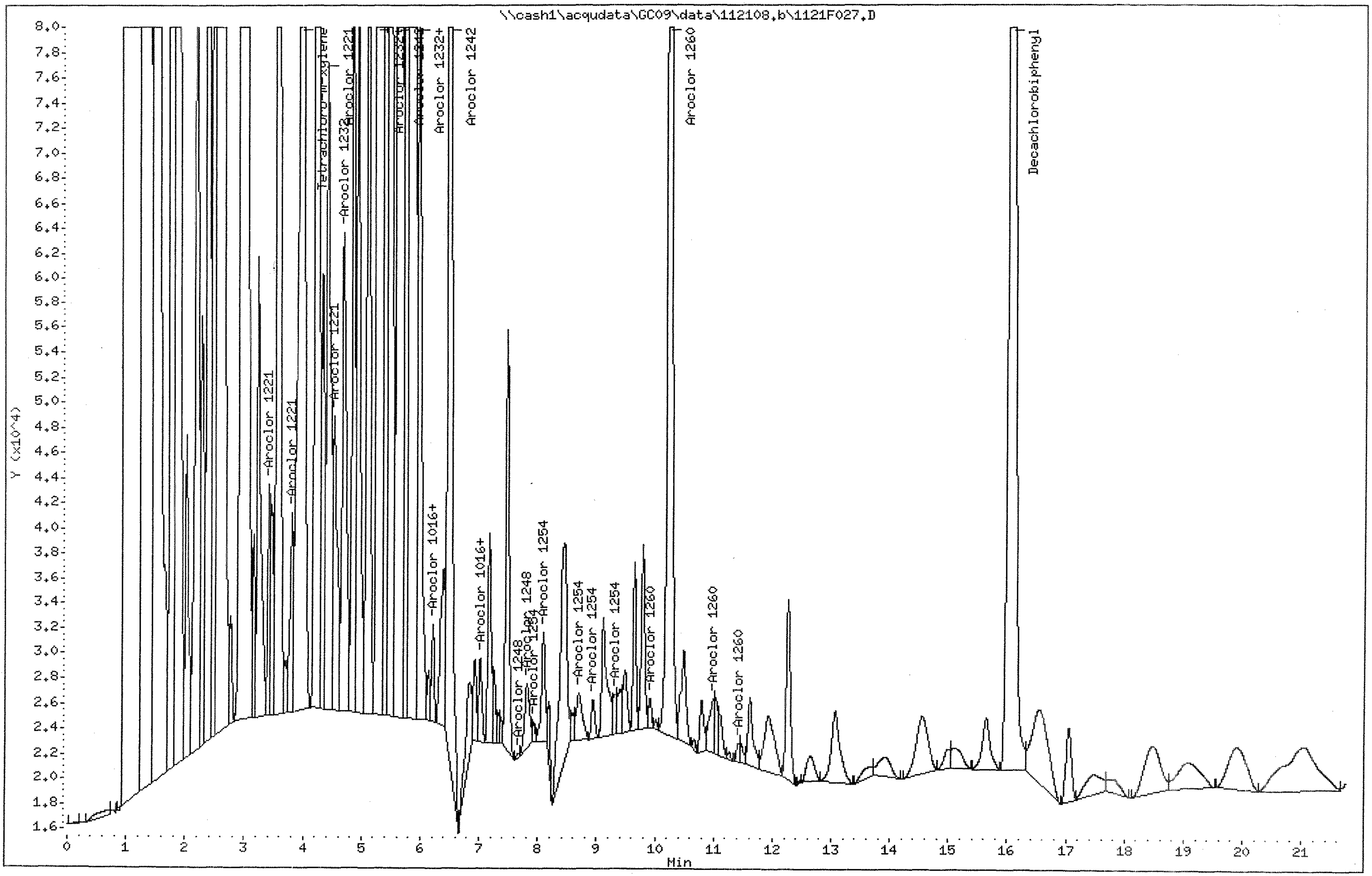
T - Target compound detected outside RT window.
A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F027.D
Date : 22-NOV-2008 03:41
Client ID:
Sample Info: KWG0811860-4 | MB | 8082 PCB_LL | SEDIMENT

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

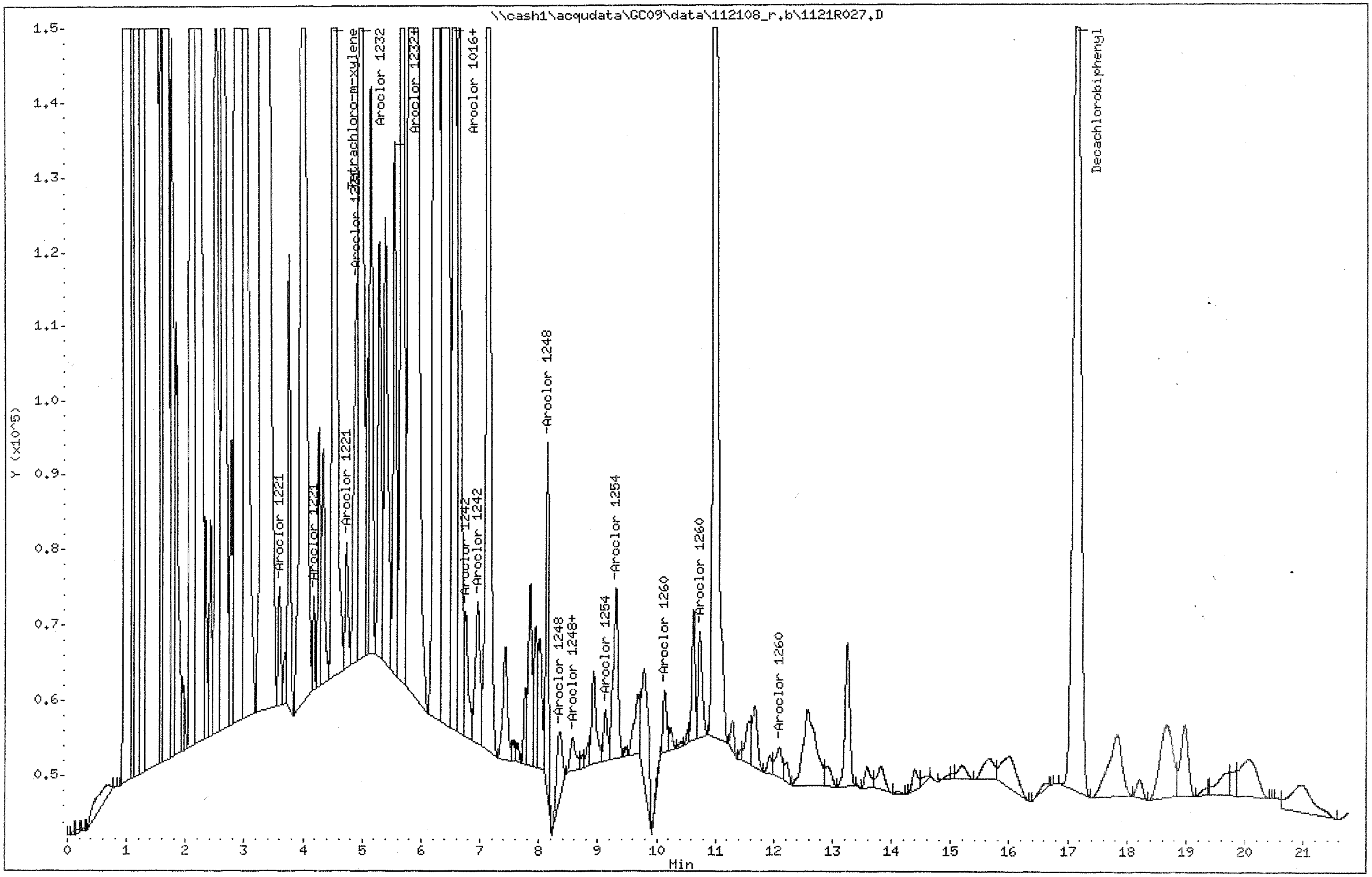


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R027.D
Date : 22-NOV-2008 03:41
Client ID:
Sample Info: KWG0811860-4 | MB | 8082 PCB_LL | SEDIMENT

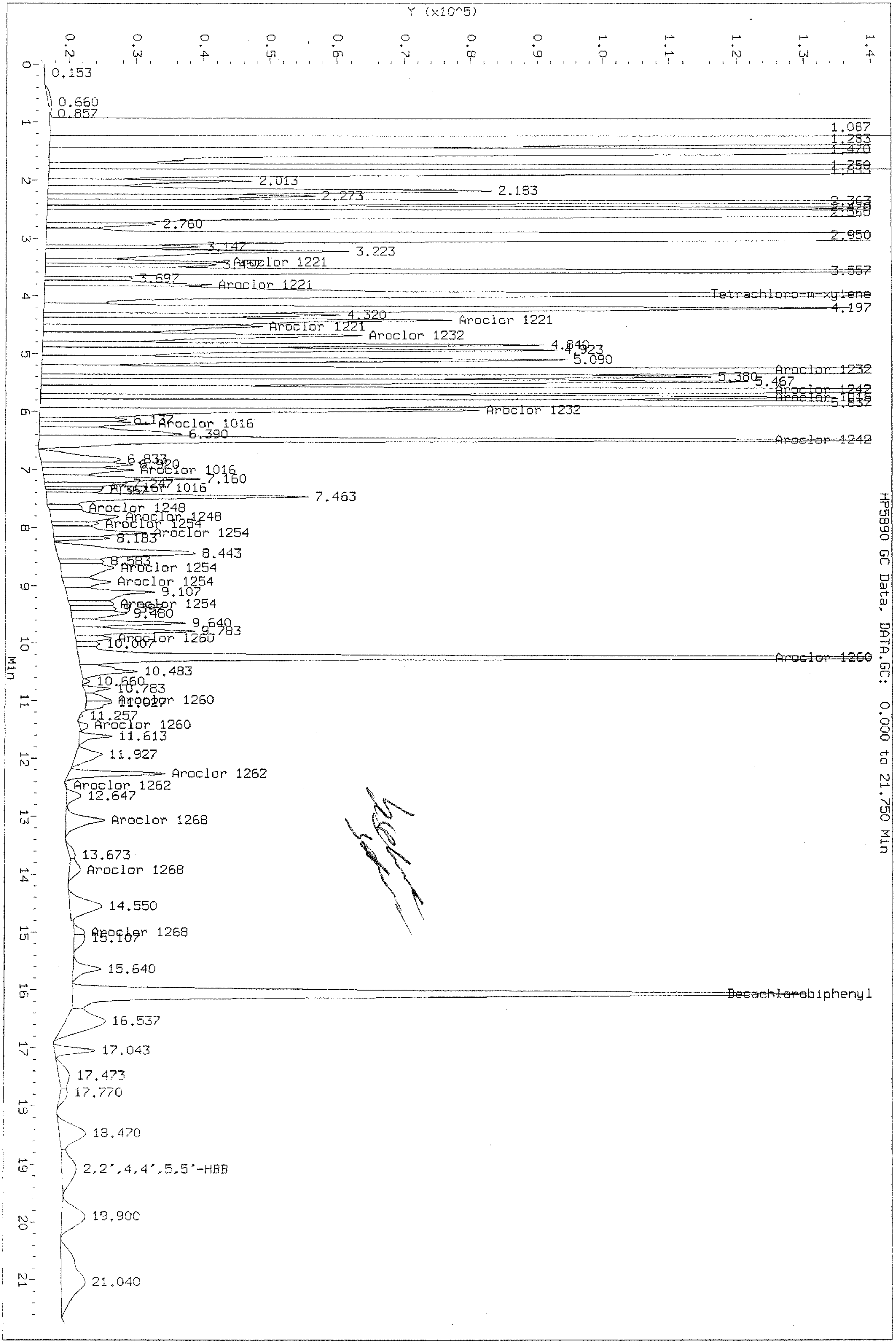
Column phase: DB-XLB

Instrument: GC09.i

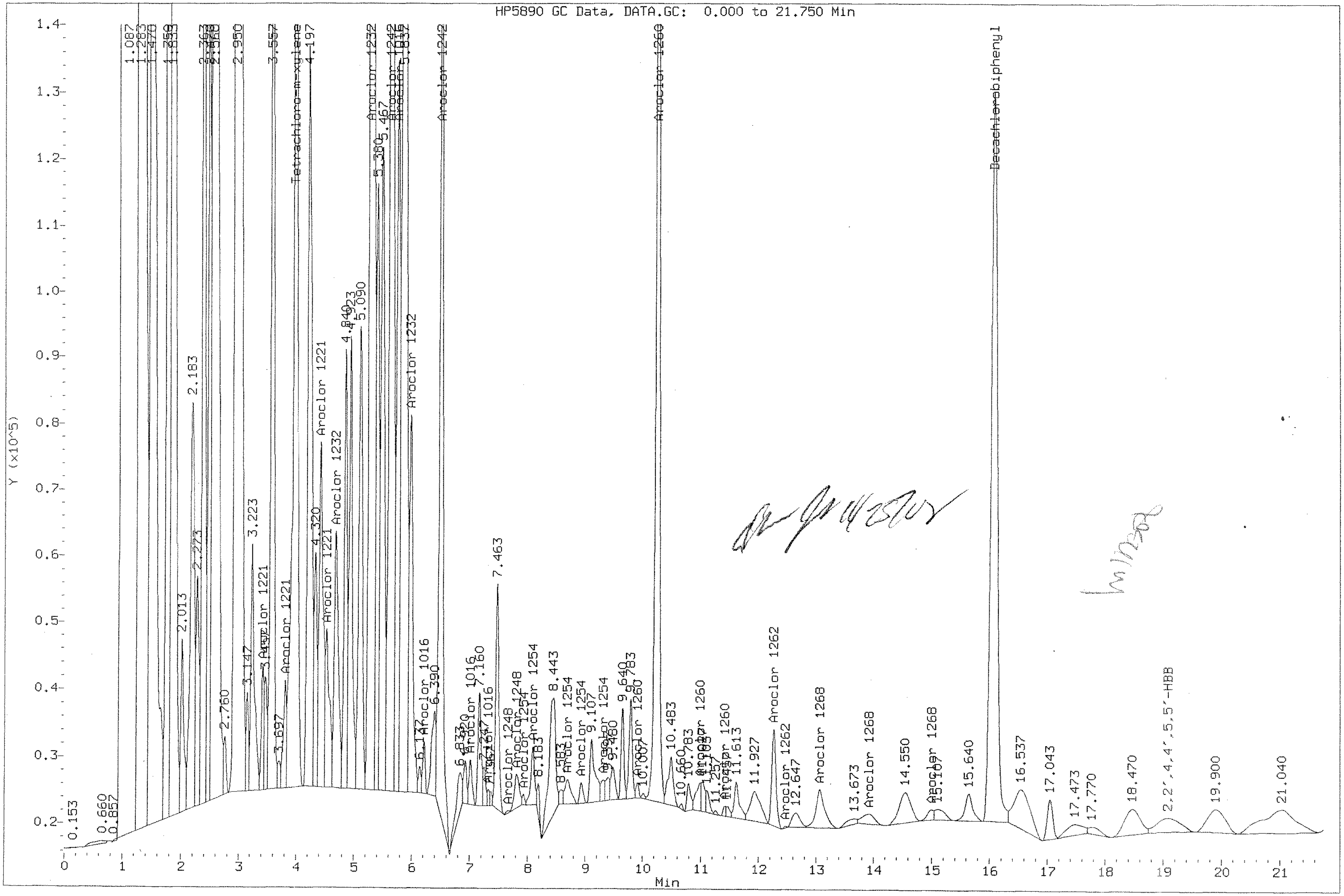
Operator: LHarris
Column diameter: 0.53



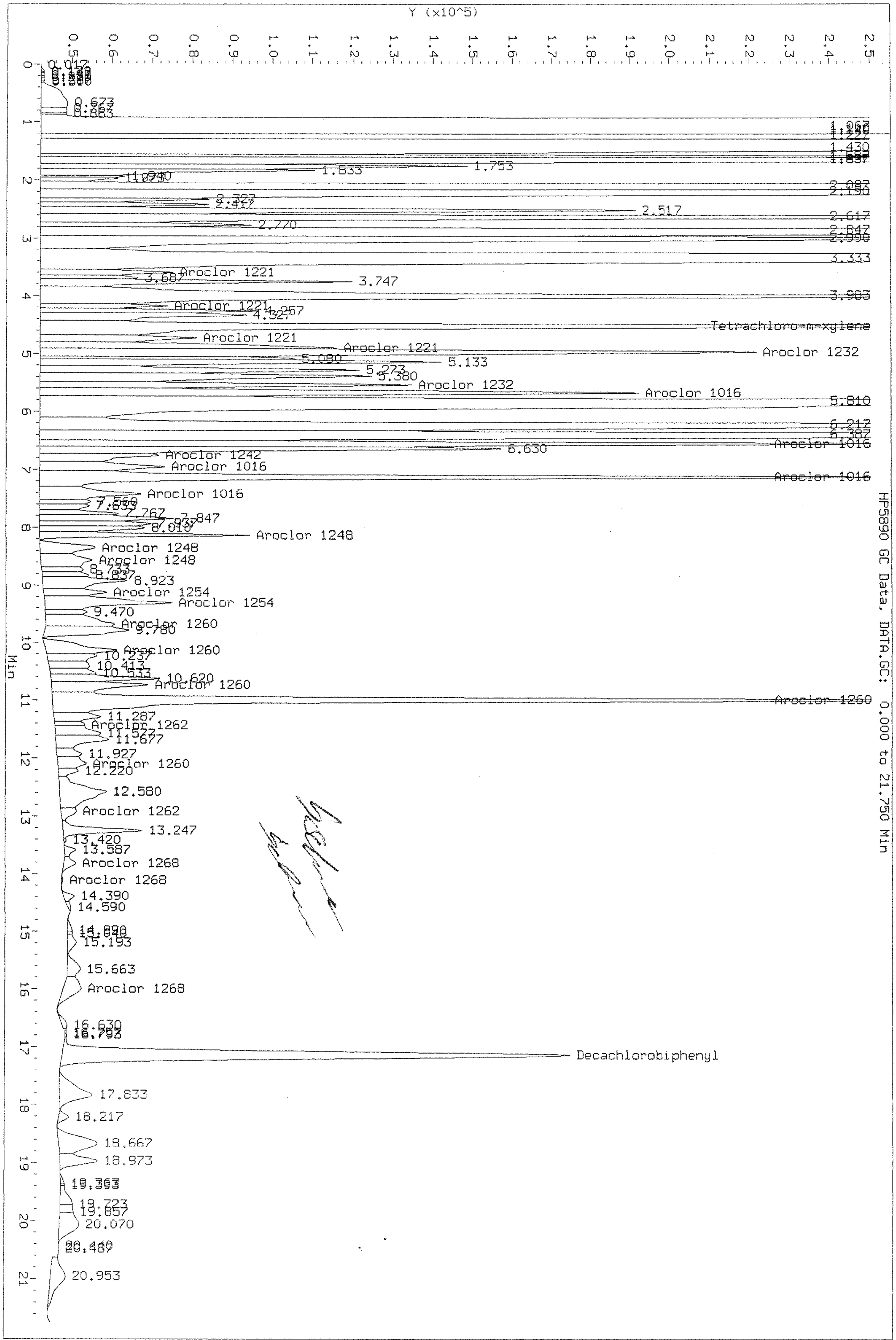
Data File: \\cashl\acqudata\GC09\data\112108.b\1121F027.D
Injection Date: 22-NOV-2008 03:41
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108.b\1121F027.D
Injection Date: 22-NOV-2008 03:41
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R027.D
Injection Date: 22-NOV-2008 03:41
Instrument: GC09.i
Client Sample ID:



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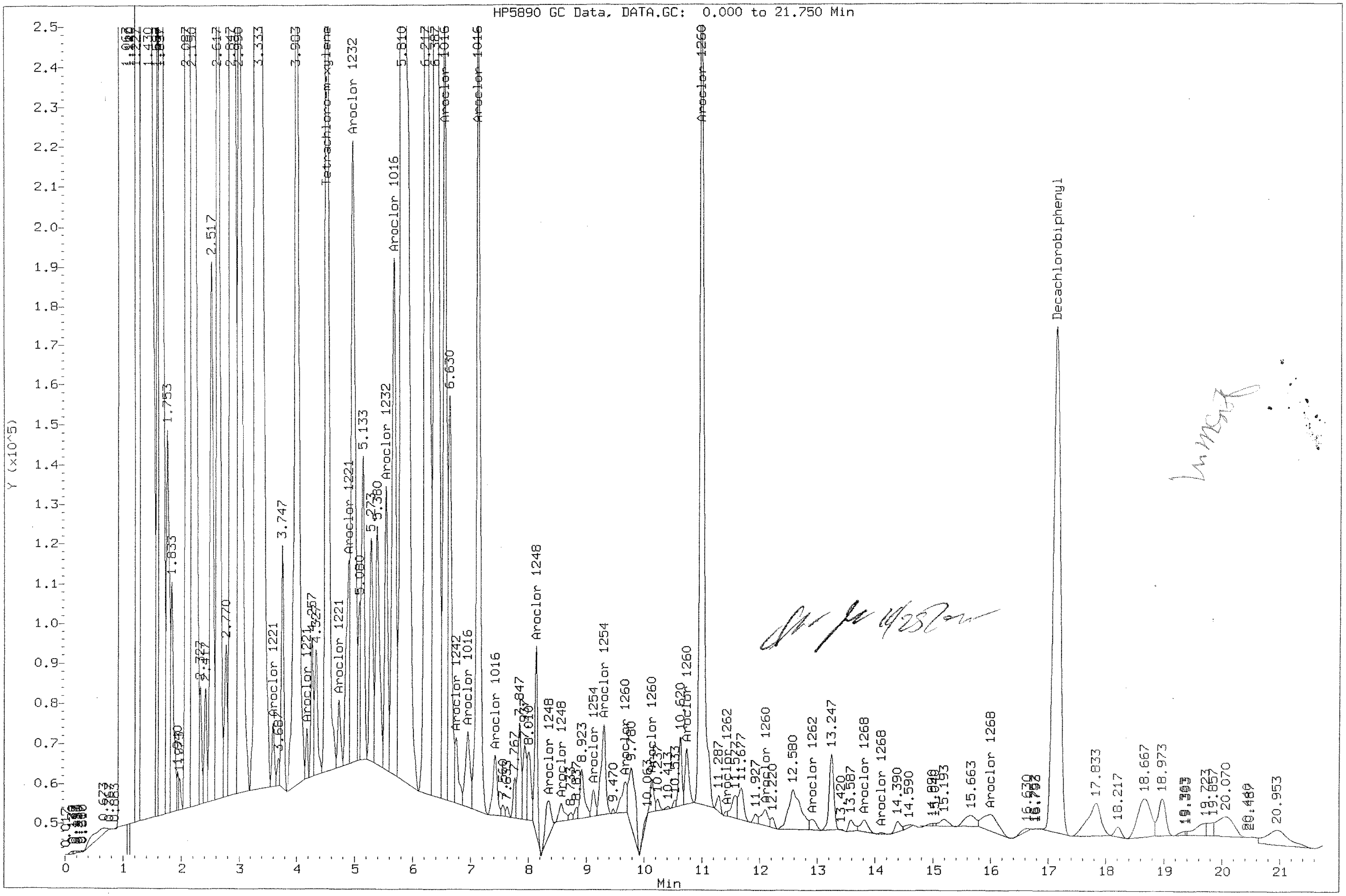
Injection Date: 22-NOV-2008 03:41
Instrument: GC09.i
Client Sample ID:



Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/24/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED10-0.5-2.5-BMS	**Units:**	ug/Kg
Lab Code:	KWG0811860-1	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	**115**		7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	15	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	ND	U	7.4	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	**150**		7.4	1.3	1	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	67	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F040.D
Lab ID: KWG0811860-1 -- K0810639-007MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 11/22/2008 09:38
Date Quantitated: 11/25/2008 15:19
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JW 11/25/08

Secondary Review: M 112508

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R040.D
Lab ID: KWG0811860-1 -- K0810639-007MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 11/22/2008 09:38
Date Quantitated: 11/25/2008 15:22
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature]

Printed: 11/25/2008 17:01:03
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**		**Receive Date:**	11/19/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774973	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F040.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R040.D			**Vial:**	31
Acqu Date:	11/22/2008 09:38	**Quant Date:**	11/25/2008 15:19	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811860-1 -- K0810639-007MS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.96	4.51	542249	894595m	53.25	52.02			53OK
				%Recovery =	53OK	52OK	Limits =	22-130	
Decachlorobiphenyl	16.05 +0.00	17.13	653002m	883267	64.27	66.58			67OK
				%Recovery =	64OK	67OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	709.09	780.20	105	115	115
Aroclor 1016 {1}	5.69	5.63 +0.00	128168m	246527m	577.68	718.89	85.5	106	
Aroclor 1016 {2}	6.21	6.56	255873m	372932m	591.53	547.87	87.5	81.1	
Aroclor 1016 {3}	6.59	6.95	172734m	352938m	770.09	979.93	114	145	
Aroclor 1016 {4}	7.00	7.05	229640m	342728m	760.84	829.47	113	123	
Aroclor 1016 {5}	7.29	7.33	186103m	303610m	845.31	824.84	125	122	
Aroclor 1221			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F040.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R040.D			**Vial:**	31
Acqu Date:	11/22/2008 09:38	**Quant Date:**	11/25/2008 15:19	**Dilution:**	1.0
Run Type:	MS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811860-1 -- K0810639-007MS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260			0	0	876.32	1,012	130	150	**150**
Aroclor 1260 {1}	9.94	9.61	313252m	661819m	832.57	941.67	123	139	
Aroclor 1260 {2}	10.26	10.13	788215m	729962m	1,124	986.60	166	146	
Aroclor 1260 {3}	10.32 0.00	10.72	380136m	1063949m	769.42	1,158	114	171	
Aroclor 1260 {4}	10.94	10.90	321337m	480651m	711.40	977.26	105	145	
Aroclor 1260 {5}	11.41 +0.00	12.11 0.00	883751m	1057724m	943.92	997.07	140	148	
Aroclor 1262			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.34 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	67.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F040.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F040.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R040.D
Inj Date : 22-NOV-2008 09:38
Sample Info: KWG0811860-1 | K0810639-007MS | 8082 PCB_LL
Misc Info : SEMIVOA GC\W0811860\1-MS.H | F=4 D=1 A=40.34
Cal Date : 22-NOV-2008 15:04
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	542249	894595	53.2	52.0		100.00(R)
Aroclor 1016	5.687	5.630	128168	246527	578	719	80.00- 120.00	100.00(M)
	6.210	6.563	255873	372932	592	548	155.62- 233.43	199.64(M)
	6.593	6.953	172734	352938	770	980	75.65- 113.48	134.77(M)
	7.000	7.050	229640	342728	761	829	105.37- 158.05	179.17(M)
	7.287	7.327	186103	303610	845	825	85.28- 127.92	145.20(M)
		Average of Peak Amounts =			709	780		
Aroclor 1260	9.943	9.613	313252	661819	832	942	80.00- 120.00	100.00(M)
	10.257	10.133	788215	729962	1120	987	149.50- 224.25	251.62(M)
	10.317	10.723	380136	1063949	769	1160	102.96- 154.44	121.35(M)
	10.943	10.900	321337	480651	711	977	98.63- 147.94	102.58(M)
	11.410	12.107	883751	1057724	944	997	206.52- 309.78	282.12(M)
		Average of Peak Amounts =			875	1010		
Decachlorobiphenyl	16.050	17.130	653002	883267	64.3	66.6		100.00(RM)

QC Flag Legend

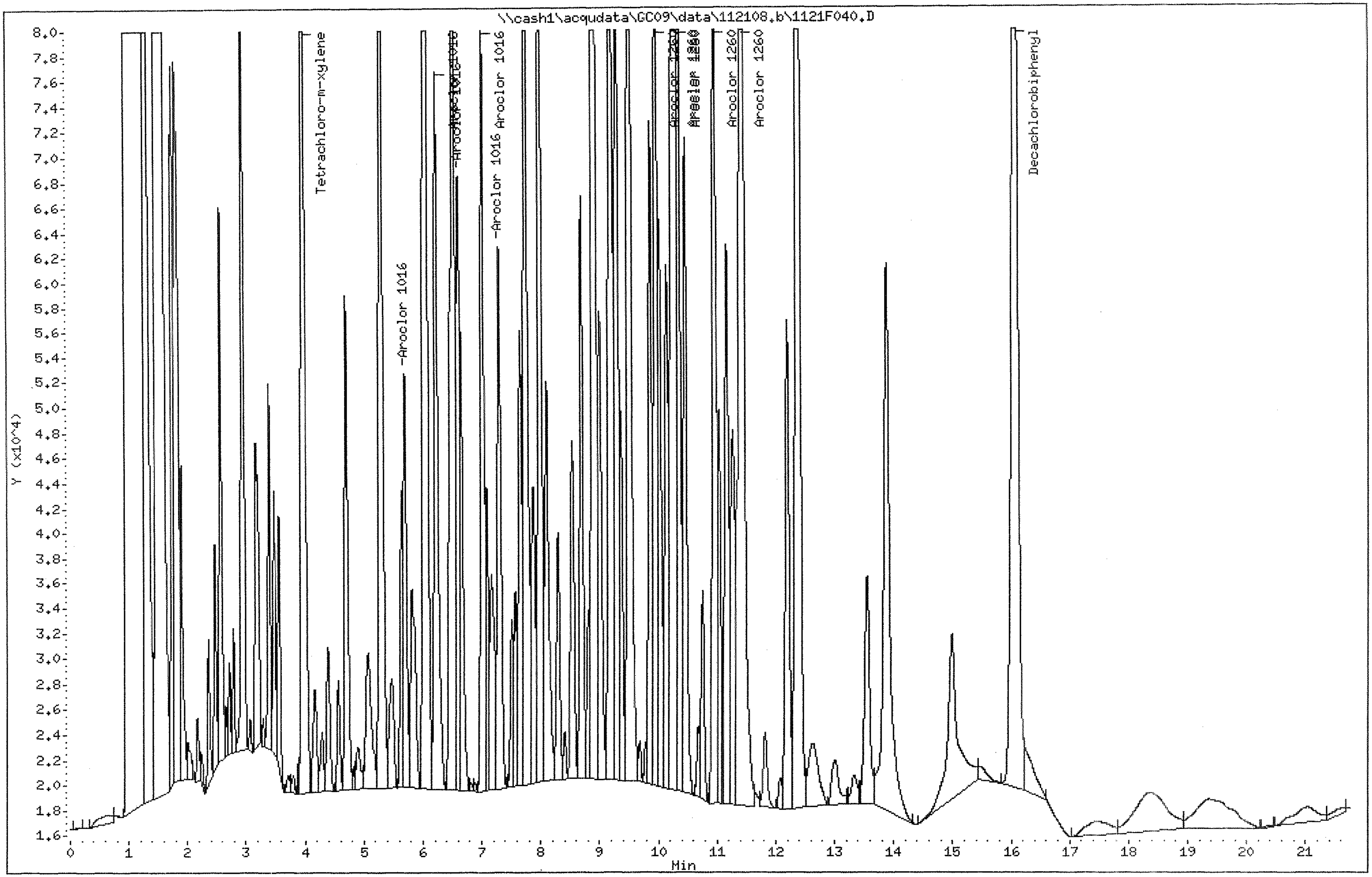
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F040.D
Date : 22-NOV-2008 09:38
Client ID:
Sample Info: KWG0811860-1 | K0810639-007MS | 8082 PCB_LL

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

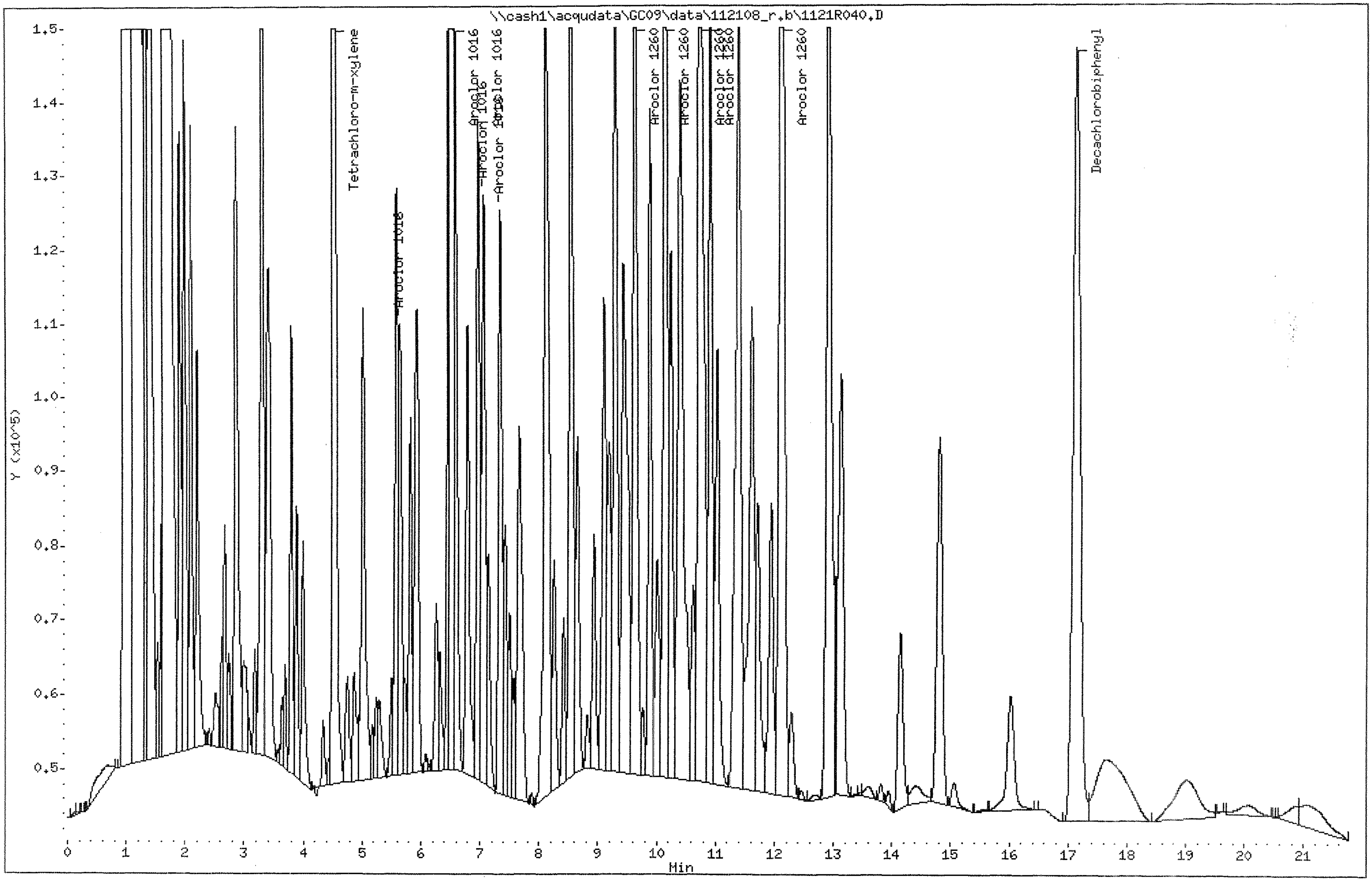


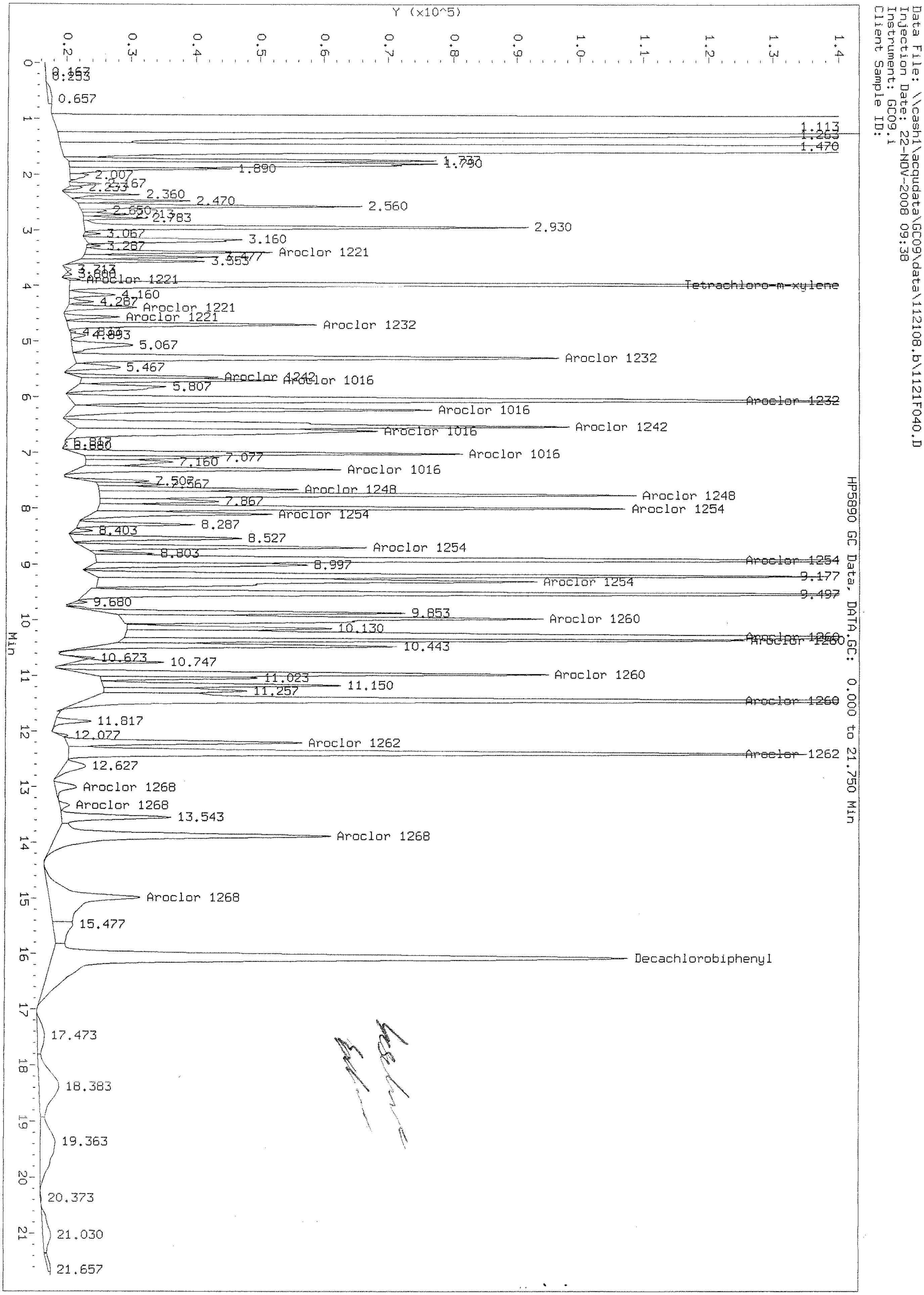
Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R040.D
Date : 22-NOV-2008 09:38
Client ID:
Sample Info: KWG0811860-1 | K0810639-007MS | 8082 PCB_LL

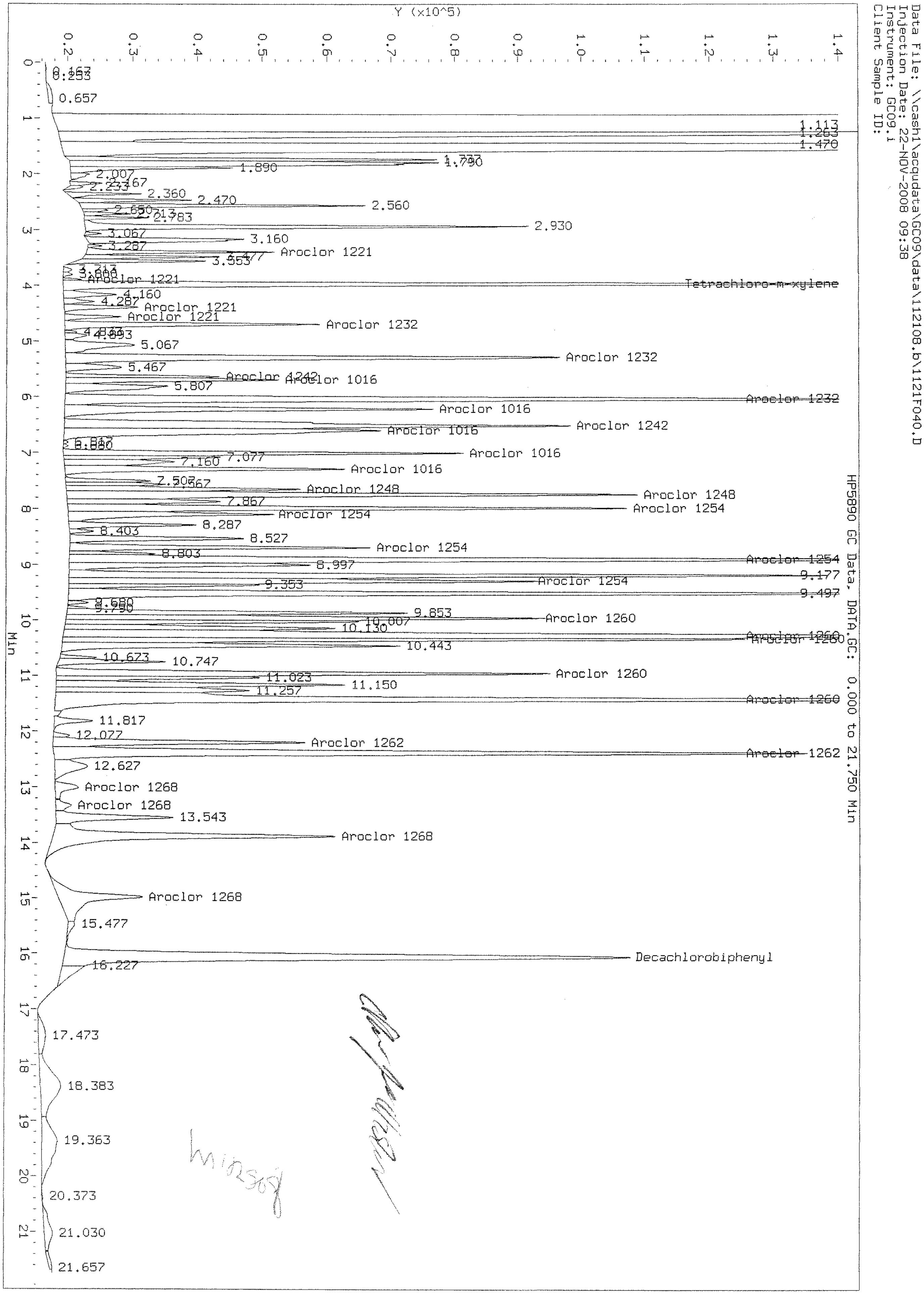
Column phase: DB-XLB

Instrument: GC09.i

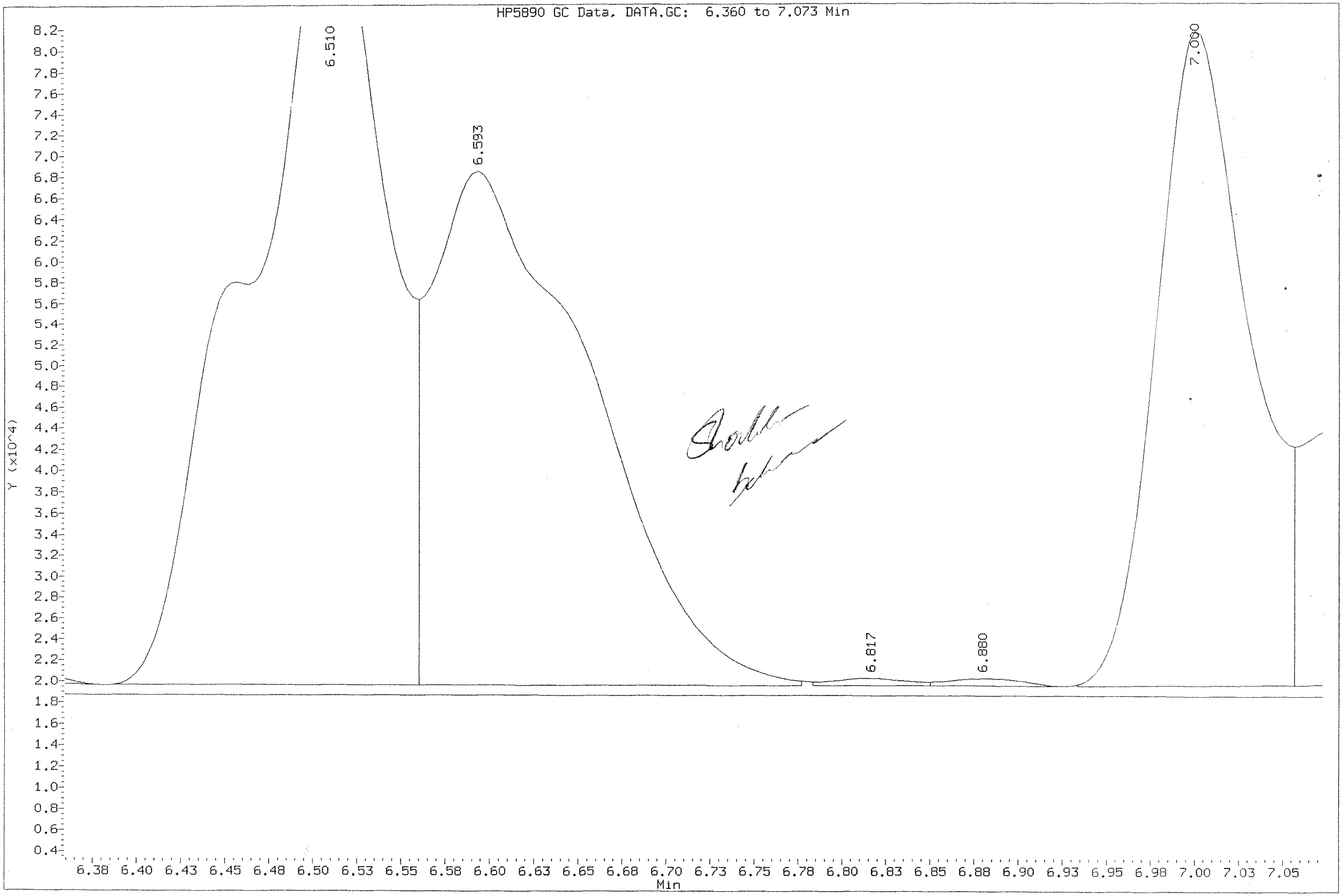
Operator: LHarris
Column diameter: 0.53



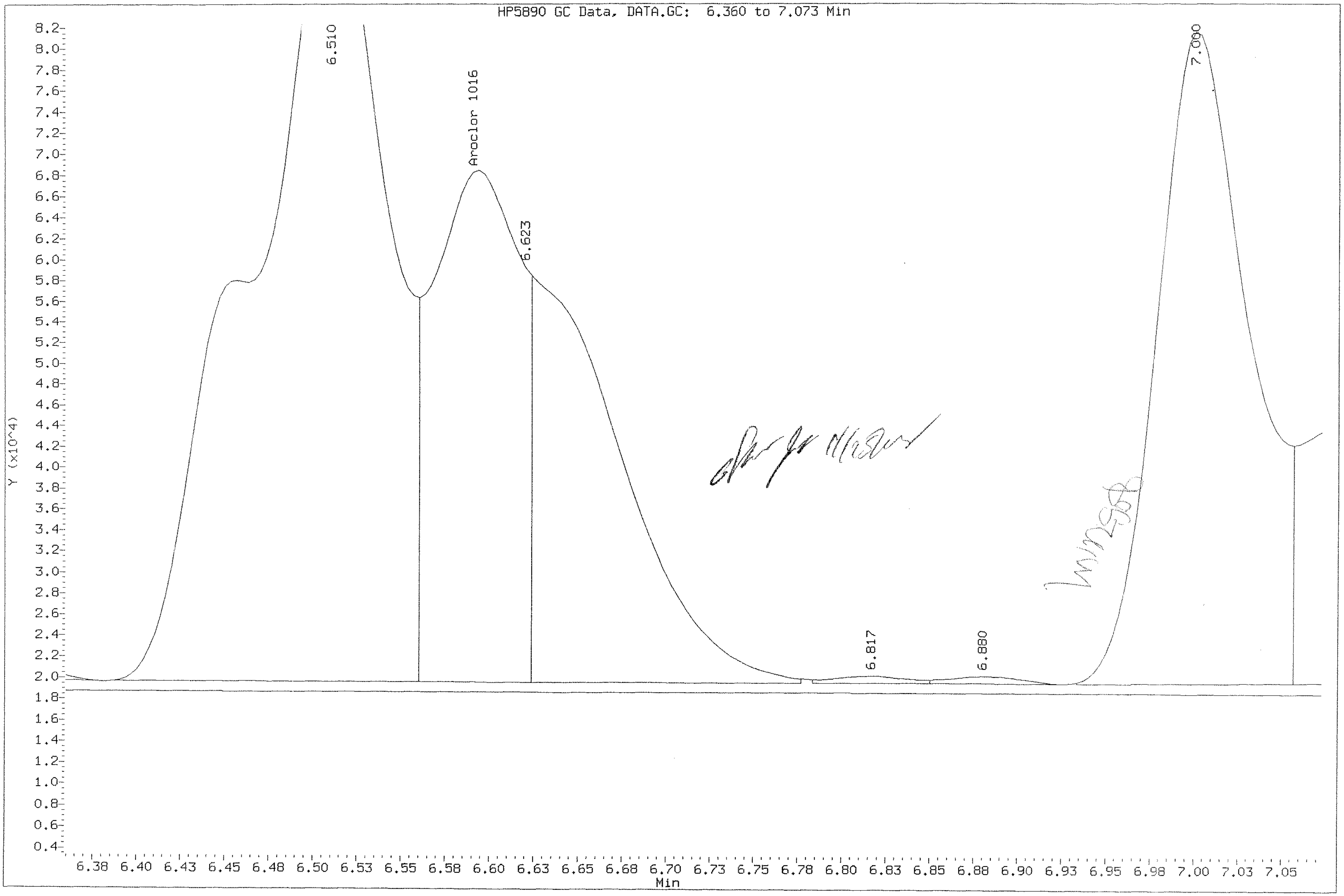

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F040.D
Injection Date: 22-NOV-2008 09:38
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.750 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1221
Aroclor 1232
Aroclor 1016
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Aroclor 1262
Aroclor 1268
Decachlorobiphenyl

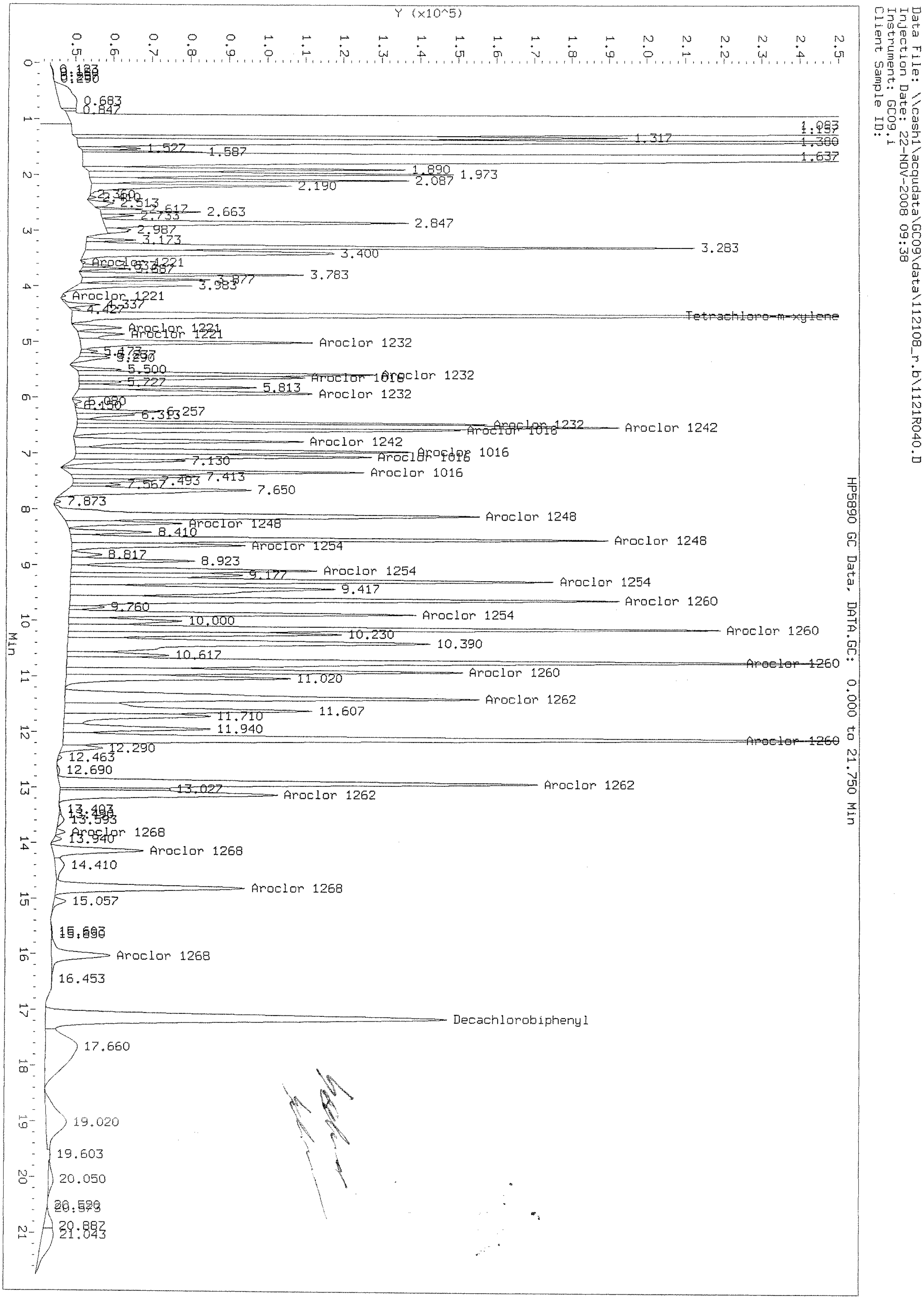

Data File: \\cashl\acqudata\GC09\data\112108.b\1121F040.D
Injection Date: 22-NOV-2008 09:38
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.750 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Decachlorobiphenyl

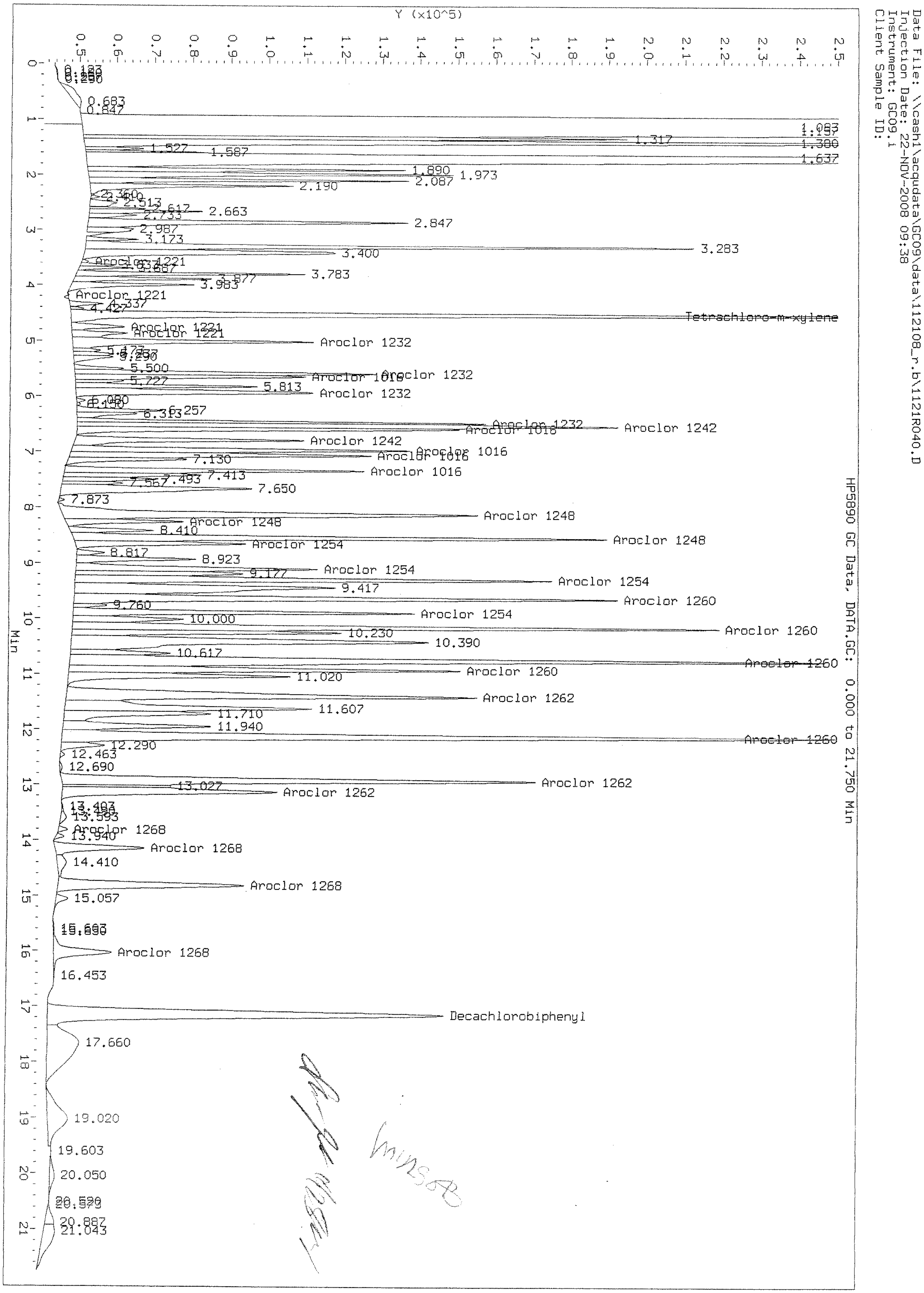
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F040.D
Injection Date: 22-NOV-2008 09:38
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108.b\1121F040.D
Injection Date: 22-NOV-2008 09:38
Instrument: GC09.i
Client Sample ID:




Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R040.D
Injection Date: 22-NOV-2008 09:38
Instrument: GC09.i
Client Sample ID:
Y (x10^5)
Min
HP5890 GC Data, DATA.GC: 0.000 to 21.750 Min
Tetrachloro-m-xylene
Decachlorobiphenyl


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R040.D
Injection Date: 22-NOV-2008 09:38
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.750 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1221
Aroclor 1232
Aroclor 1016
Aroclor 1242
Aroclor 1248
Aroclor 1254
Aroclor 1260
Aroclor 1262
Aroclor 1268
Decachlorobiphenyl

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/24/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polychlorinated Biphenyls (PCBs)

Sample Name:	SED10-0.5-2.5-BDMS	**Units:**	ug/Kg
Lab Code:	KWG0811860-2	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	**123**		7.5	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	15	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	7.5	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	7.5	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	7.5	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	ND	U	7.5	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	**167**		7.5	1.3	1	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	70	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F041.D
Lab ID: KWG0811860-2 -- K0810639-007DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 11/22/2008 10:05
Date Quantitated: 11/25/2008 15:19
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JH 11/25/08

Secondary Review: LM 11/25/08

Printed: 11/25/2008 17:01:06
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R041.D
Lab ID: KWG0811860-2 -- K0810639-007DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 11/22/2008 10:05
Date Quantitated: 11/25/2008 15:22
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/25/08

Secondary Review: 11/25/08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**		**Receive Date:**	11/19/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774974	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F041.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R041.D			**Vial:**	32
Acqu Date:	11/22/2008 10:05	**Quant Date:**	11/25/2008 15:19	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811860-2 -- K0810639-007DMS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.96	4.51	572635	929960m	56.24	54.08			56OK
			%Recovery =		56OK	54OK	Limits =	22-130	
Decachlorobiphenyl	16.05 +0.00	17.13 +0.00	672491	928577m	66.19	70.00			70OK
			%Recovery =		66OK	70OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	745.10	829.78	110	123	**123**
Aroclor 1016 {1}	5.69 +0.00	5.63 +0.00	128431m	207087m	578.87	603.88	85.7	89.4	
Aroclor 1016 {2}	6.21 +0.00	6.57 +0.00	250901m	398547m	580.03	585.50	85.9	86.7	
Aroclor 1016 {3}	6.59	6.96 +0.00	192540m	415882m	858.38	1,155	127	171	
Aroclor 1016 {4}	7.00	7.05 +0.00	247437m	357240m	819.80	864.59	121	128	
Aroclor 1016 {5}	7.29 +0.00	7.33 +0.00	195593m	346084m	888.41	940.23	132	139	
Aroclor 1221			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F041.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R041.D			**Vial:**	32
Acqu Date:	11/22/2008 10:05	**Quant Date:**	11/25/2008 15:19	**Dilution:**	1.0
Run Type:	DMS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811860-2 -- K0810639-007DMS				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260			0	0	965.88	1,127	143	167	**167**
Aroclor 1260 {1}	9.95 +0.00	9.61	353546m	755435m	939.66	1,075	139	159	
Aroclor 1260 {2}	10.26	10.13	868222m	840893m	1,238	1,137	183	168	
Aroclor 1260 {3}	10.31 -0.01	10.72	401868m	1222328m	813.40	1,330	120	197	
Aroclor 1260 {4}	10.95 +0.00	10.90 +0.00	366049m	507585m	810.38	1,032	120	153	
Aroclor 1260 {5}	11.41 +0.00	12.11	962036m	1124780m	1,028	1,060	152	157	
Aroclor 1262			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	40.33 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	67.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F041.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F041.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R041.D
Inj Date : 22-NOV-2008 10:05
Sample Info: KWG0811860-2 | K0810639-007DMS | 8082 PCB_LL
Misc Info : SEMIVOA GC\W0811860\2-DMS.H | F=4 D=1 A=40.33
Cal Date : 22-NOV-2008 15:04
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

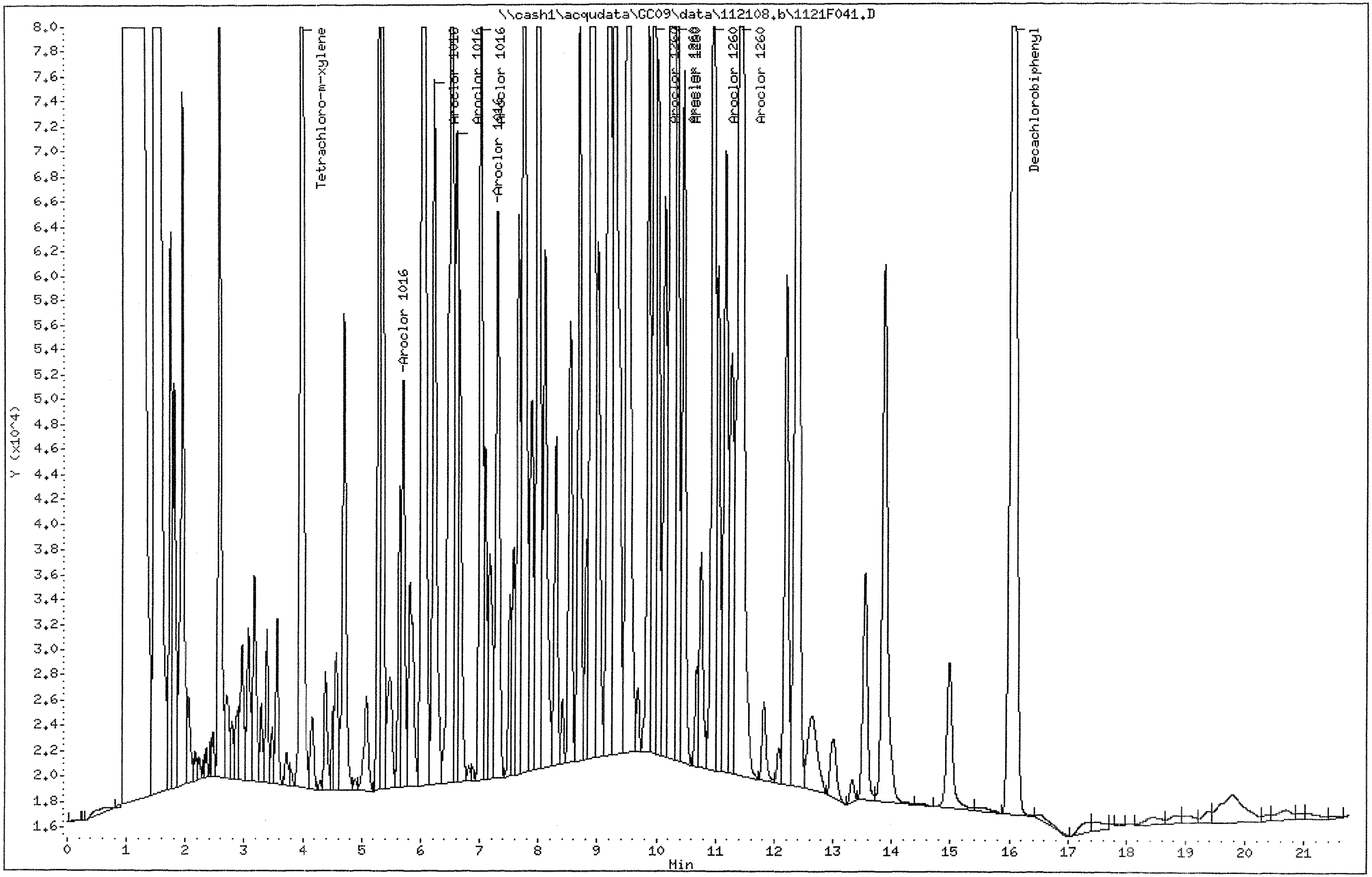
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	572635	929960	56.2	54.1		100.00(R)
Aroclor 1016	5.690	5.630	128431	207087	579	604	80.00- 120.00	100.00(M)
	6.213	6.567	250901	398547	580	586	155.62- 233.43	195.36(M)
	6.593	6.957	192540	415882	858	1150	75.65- 113.48	149.92(M)
	7.000	7.053	247437	357240	820	864	105.37- 158.05	192.66(M)
	7.290	7.330	195593	346084	888	940	85.28- 127.92	152.29(M)
		Average of Peak Amounts =			745	829		
Aroclor 1260	9.947	9.613	353546	755435	940	1070	80.00- 120.00	100.00(M)
	10.257	10.133	868222	840893	1240	1140	149.50- 224.25	245.58(M)
	10.313	10.723	401868	1222328	813	1330	102.96- 154.44	113.67(M)
	10.947	10.903	366049	507585	810	1030	98.63- 147.94	103.54(M)
	11.410	12.110	962036	1124780	1030	1060	206.52- 309.78	272.11(M)
		Average of Peak Amounts =			967	1130		
Decachlorobiphenyl	16.050	17.133	672491	928577	66.2	70.0		100.00(R)

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F041.D
Date : 22-NOV-2008 10:05
Client ID:
Sample Info: KWG0811860-2 | K0810639-007DMS | 8082 PCB_LL
Column phase: DB-35MS

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53

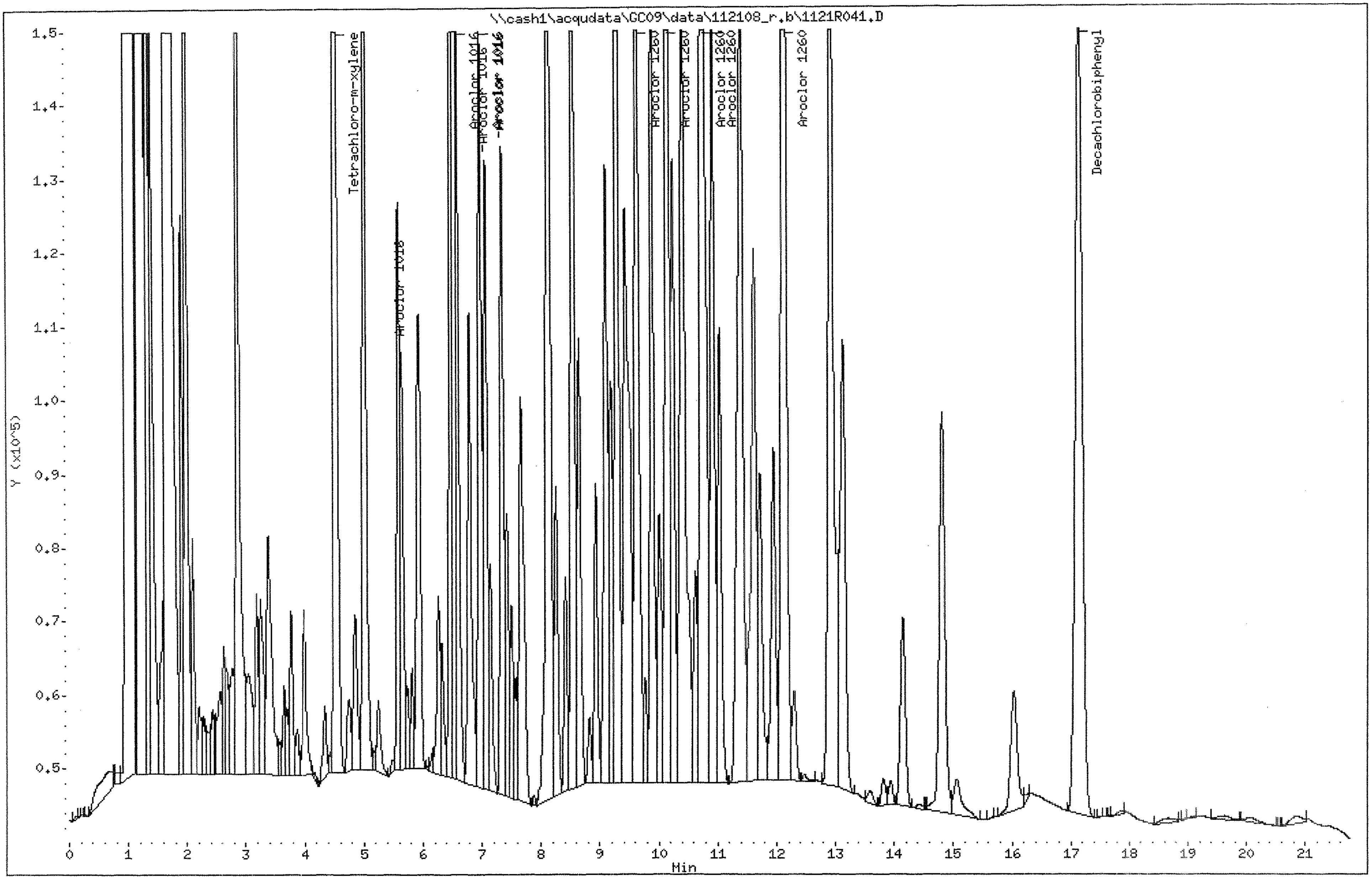


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R041.D
Date : 22-NOV-2008 10:05
Client ID:
Sample Info: KWG0811860-2 | K0810639-007DMS | 8082 PCB_LL

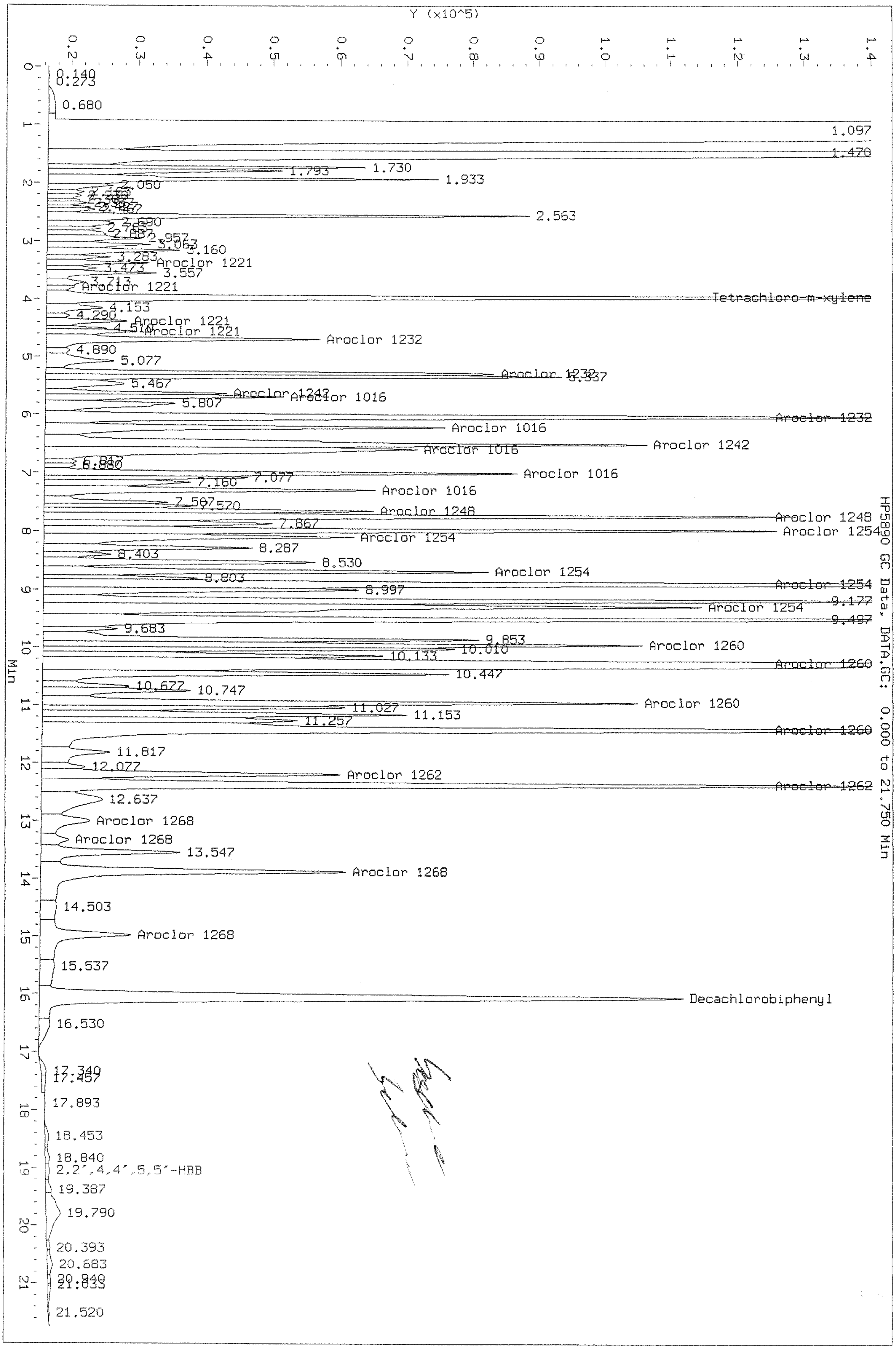
Column phase: DB-XLB

Instrument: GC09.i

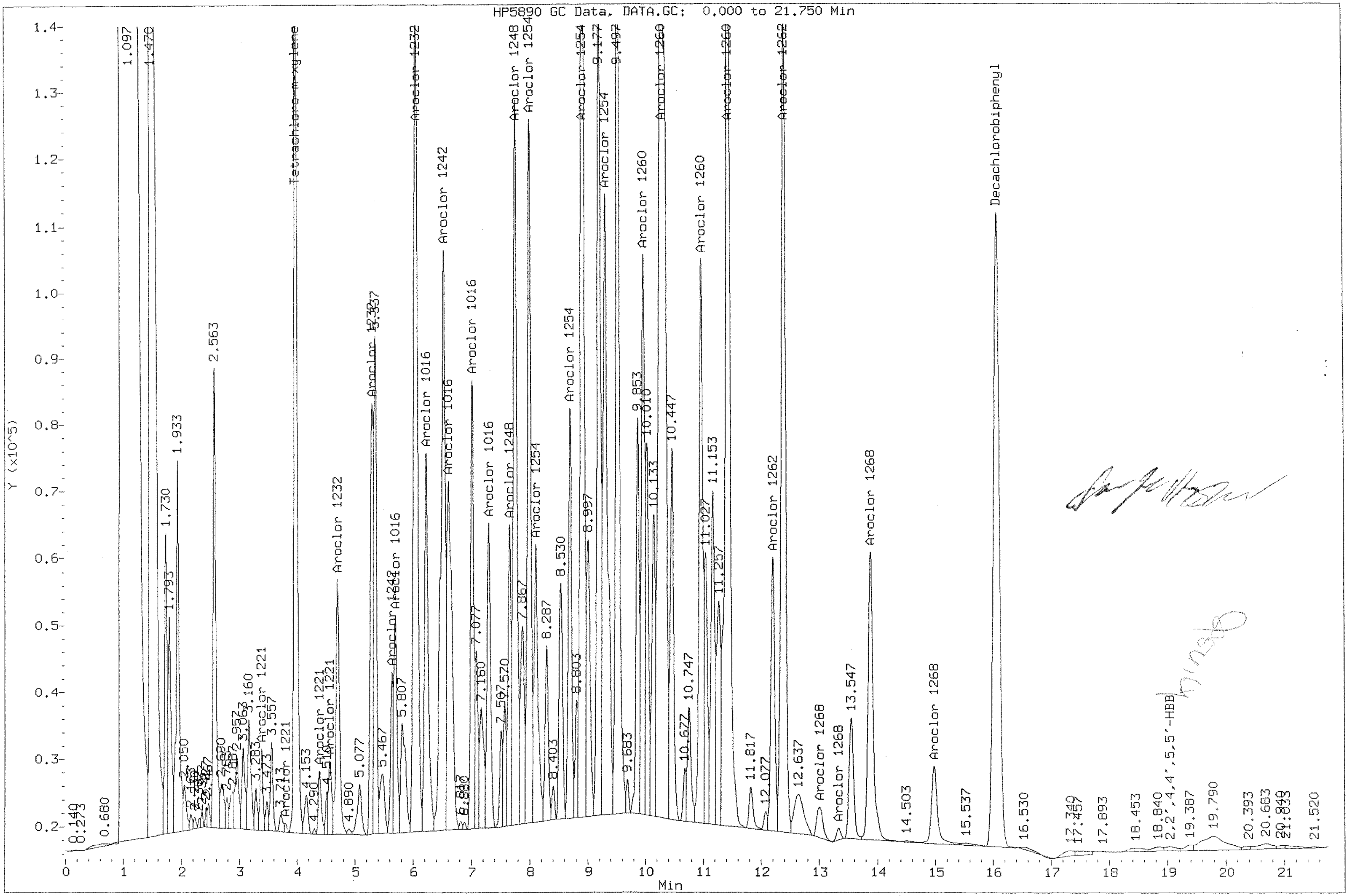
Operator: LHarris
Column diameter: 0.53



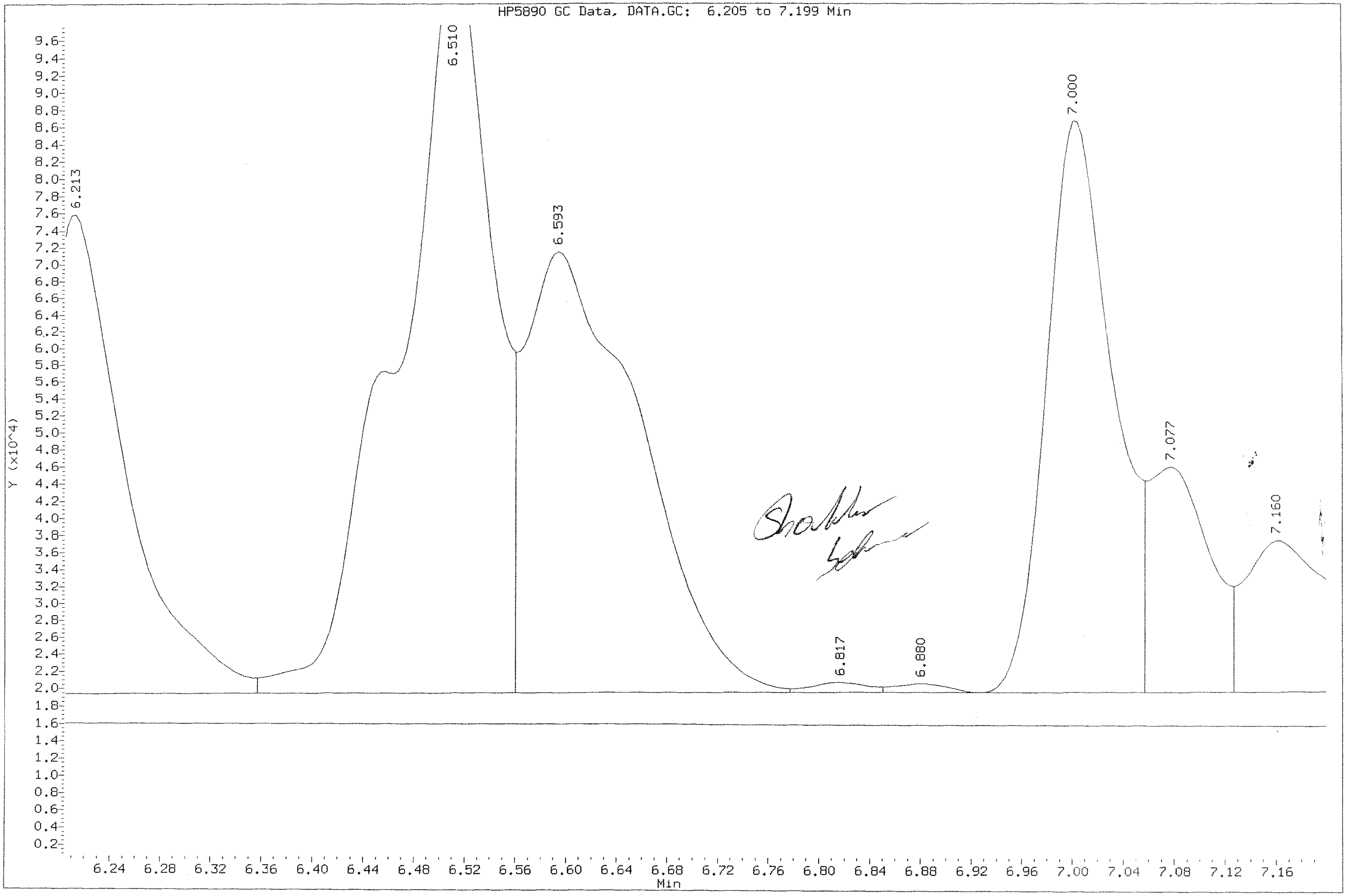
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F041.D
Injection Date: 22-NOV-2008 10:05
Instrument: GC09.i
Client Sample ID:



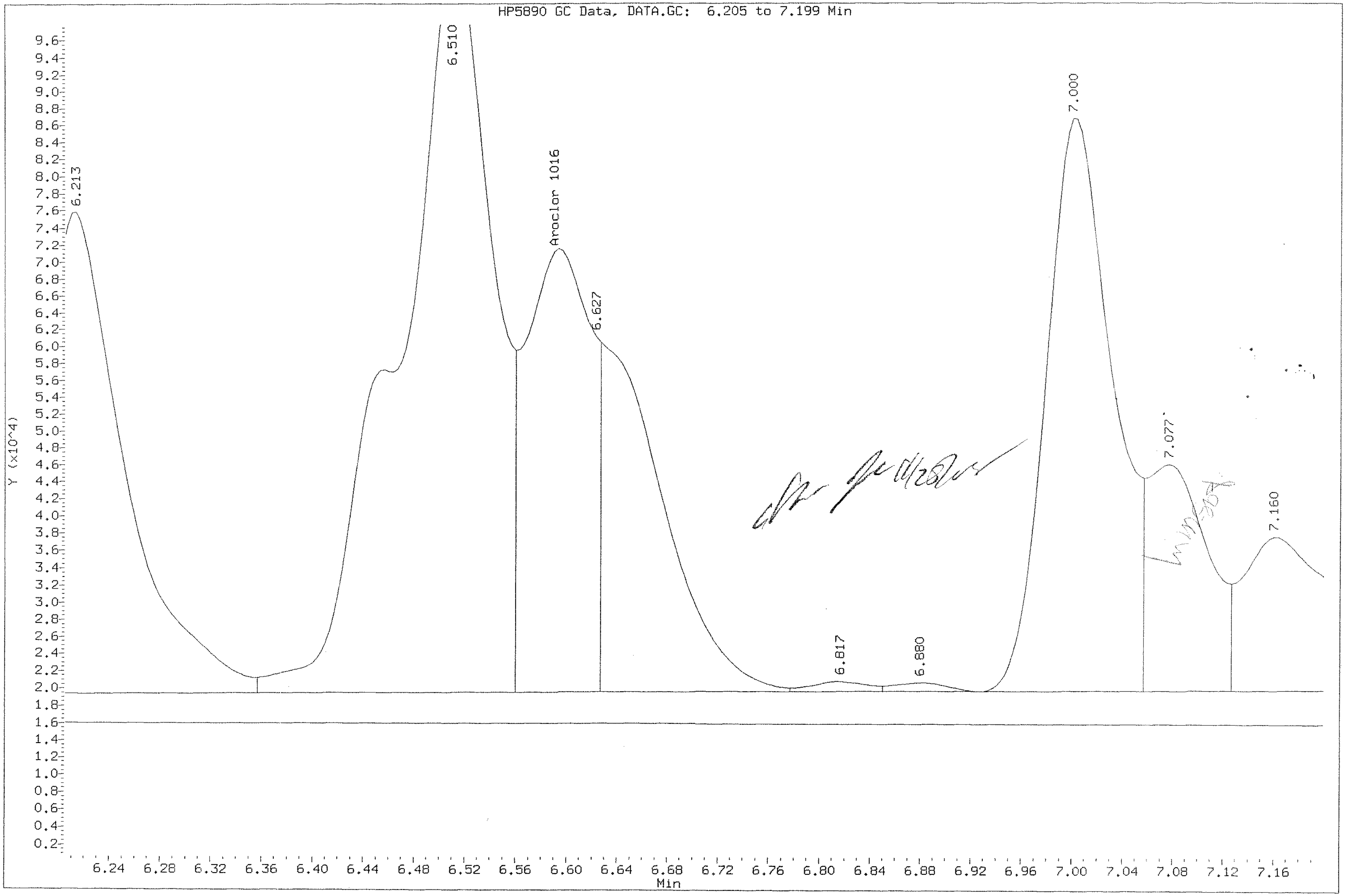
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F041.D
Injection Date: 22-NOV-2008 10:05
Instrument: GC09.i
Client Sample ID:



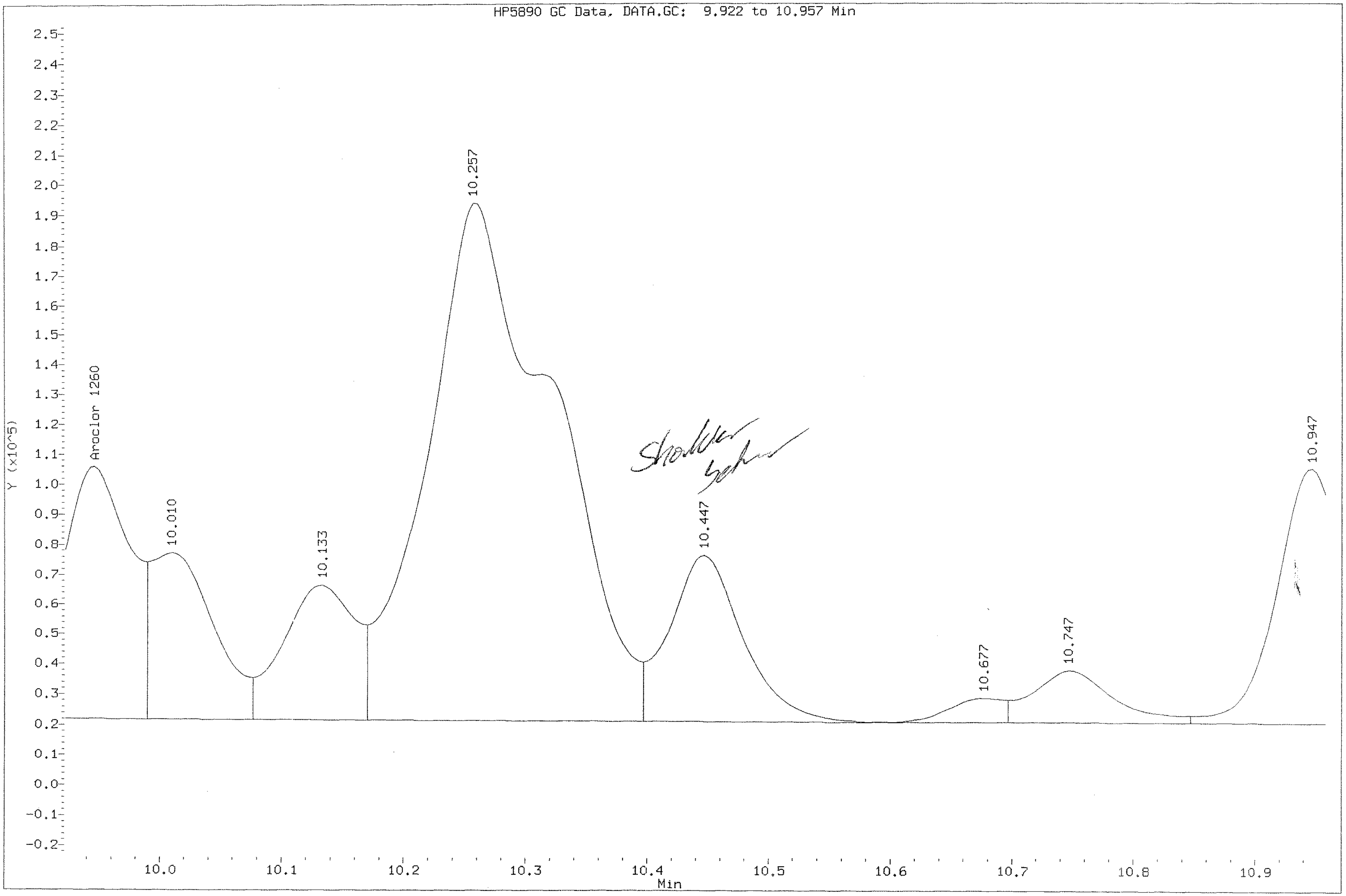
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F041.D
Injection Date: 22-NOV-2008 10:05
Instrument: GC09.i
Client Sample ID:



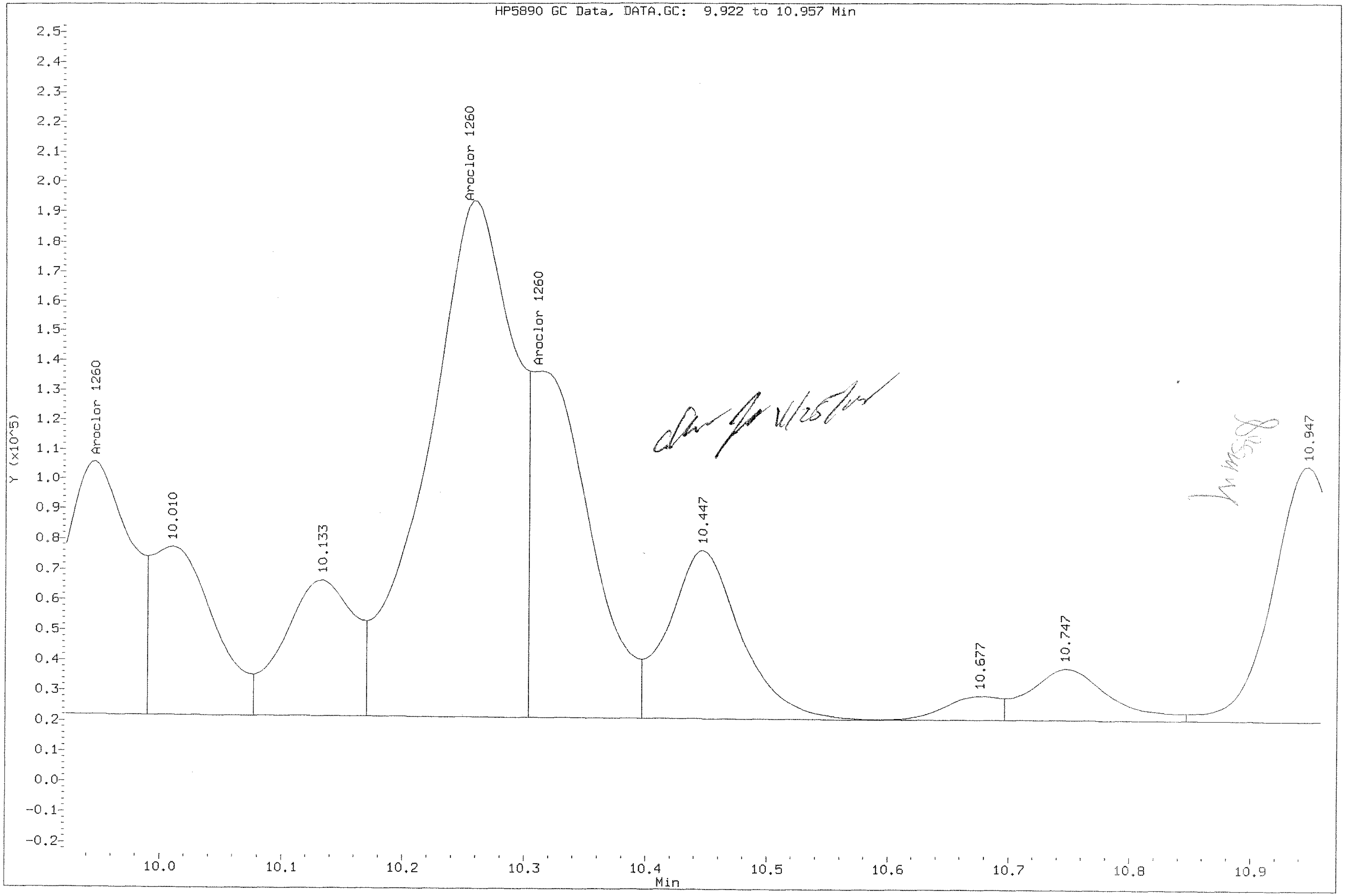
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F041.D
Injection Date: 22-NOV-2008 10:05
Instrument: GC09.i
Client Sample ID:



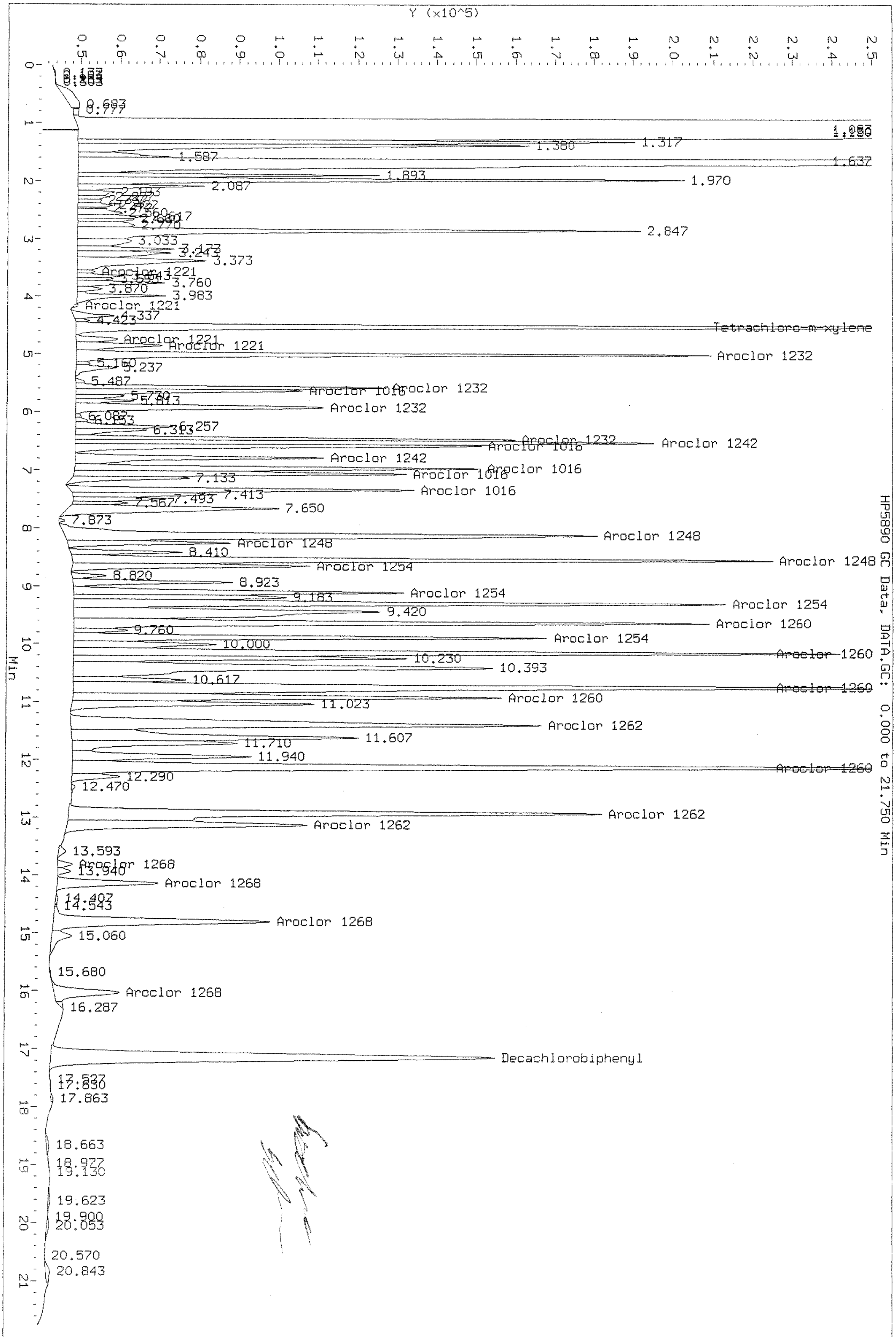
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F041.D
Injection Date: 22-NOV-2008 10:05
Instrument: GC09.i
Client Sample ID:



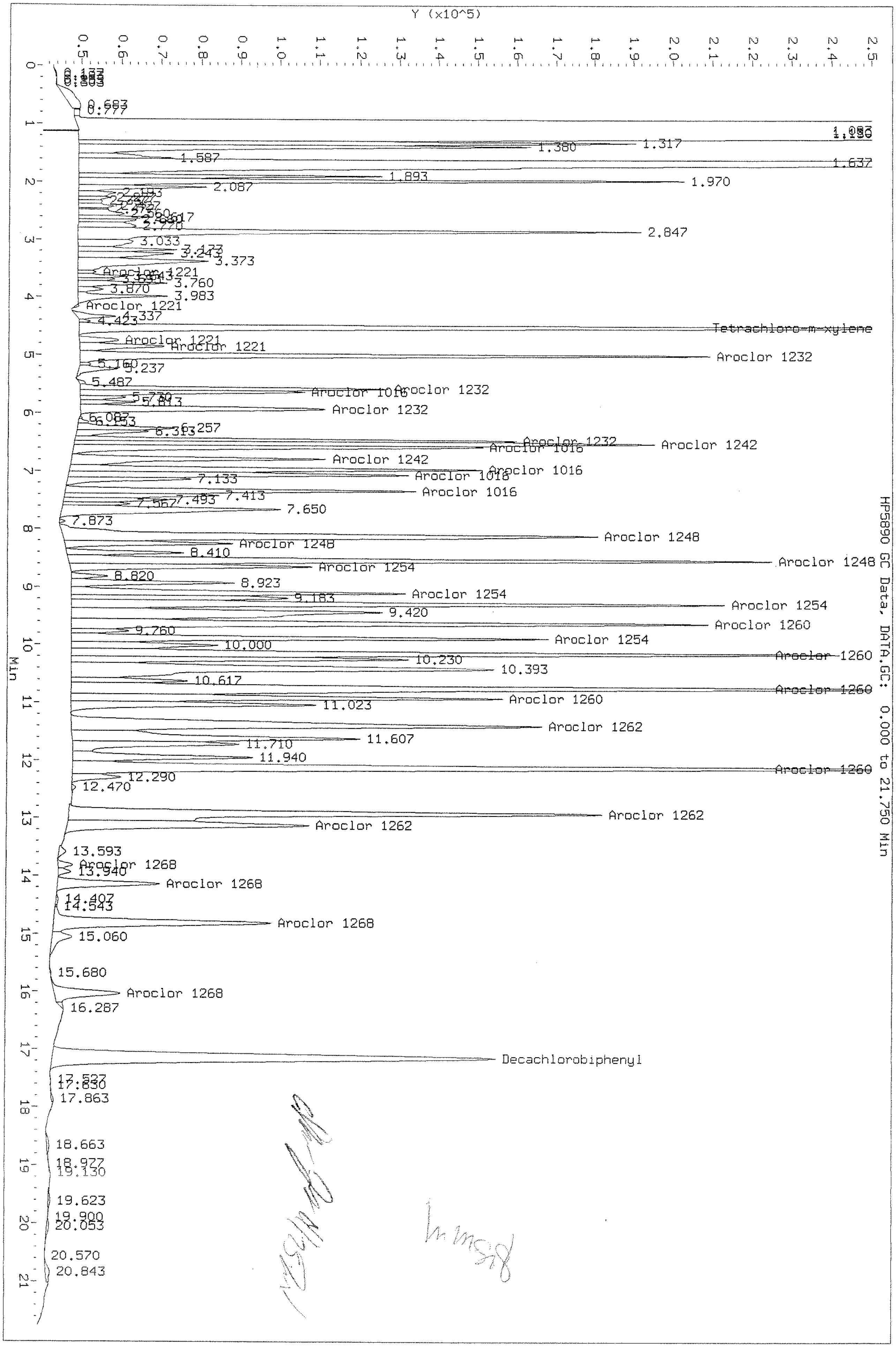
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F041.D
Injection Date: 22-NOV-2008 10:05
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R041.D
Injection Date: 22-NOV-2008 10:05
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R041.D
Injection Date: 22-NOV-2008 10:05
Instrument: GC09.i
Client Sample ID:



Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polychlorinated Biphenyls (PCBs)

Sample Name:	Lab Control Sample	**Units:**	ug/Kg
Lab Code:	KWG0811860-3	**Basis:**	Dry
Extraction Method:	EPA 3540C	**Level:**	Low
Analysis Method:	8082		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Aroclor 1016	**173**		10	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1221	ND	U	20	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1232	ND	U	10	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1242	ND	U	10	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1248	ND	U	10	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1254	ND	U	10	1.3	1	11/05/08	11/22/08	KWG0811860	
Aroclor 1260	**162**		10	1.3	1	11/05/08	11/22/08	KWG0811860	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Decachlorobiphenyl	82	38-144	11/22/08	Acceptable

Comments:

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F028.D
Lab ID: KWG0811860-3
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 11/22/2008 04:08
Date Quantitated: 11/25/2008 15:18
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JW 11/25/08

Secondary Review: GN 11/26/08

Printed: 11/25/2008 16:59:52
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R028.D
Lab ID: KWG0811860-3
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 11/22/2008 04:08
Date Quantitated: 11/25/2008 15:21
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Analytical Holding Time	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Calibration Verification Ave %D	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Calibration Verification Ave %D (Closing)	NA	NA	NA	x	
Continuing Calibration Recovery (Closing)	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: JM 11/25/08

Secondary Review: [illegible]

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8082 PCB_LL	**Collect Date:**		**Receive Date:**	11/19/2008

Analysis Lot:	KWG0812580	**Prep Lot:**	KWG0811860	**Report Group:**	
Analysis Method:	8082	**Prep Method:**	EPA 3540C		
Prep Ref:	774975	**Prep Date:**	11/05/2008		

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:	J:\GC09\DATA\112108.B\1121F027.D	**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F028.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R028.D			**Vial:**	22
Acqu Date:	11/22/2008 04:08	**Quant Date:**	11/25/2008 15:18	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811860-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.96	4.51	674416m	1173927	66.23	68.27			68OK
			%Recovery =		66OK	68OK	Limits =	22-130	
Decachlorobiphenyl	16.05	17.13	802087m	1081268	78.95	81.51			82OK
			%Recovery =		79OK	82OK	Limits =	38-144	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	797.32	863.15	159	173	**173**
Aroclor 1016 {1}	5.68 0.00	5.63 +0.01	252002m	341644m	1,136	996.25	227	199	
Aroclor 1016 {2}	6.21	6.56 -0.01	332392m	585553m	768.42	860.23	154	172	
Aroclor 1016 {3}	6.59	6.95	136089m	333436m	606.71	925.78	121	185	
Aroclor 1016 {4}	7.00	7.05	208995m	325717m	692.44	788.30	138	158	
Aroclor 1016 {5}	7.29 +0.00	7.33	172430m	274291m	783.20	745.18	157	149	
Aroclor 1221			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1221 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1221 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1232 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1232 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1242 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F028.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R028.D			**Vial:**	22
Acqu Date:	11/22/2008 04:08	**Quant Date:**	11/25/2008 15:18	**Dilution:**	1.0
Run Type:	LCS			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0811860-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1242 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1248 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1248 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1254 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1254 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1260			0	0	792.02	808.91	158	162	162
Aroclor 1260 {1}	9.94	9.61	253534m	542472	673.85	771.85	135	154	
Aroclor 1260 {2}	10.25 -0.01	10.13	598144m	562503	853.20	760.27	171	152	
Aroclor 1260 {3}	10.32 +0.00	10.72	419634m	625716	849.36	680.89	170	136	
Aroclor 1260 {4}	10.94	10.90 +0.00	344428m	436252	762.52	886.99	153	177	
Aroclor 1260 {5}	11.41 +0.00	12.11 0.00	768826m	1002022	821.17	944.56	164	189	
Aroclor 1262			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1262 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1262 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268			0	0	0.0000	0.0000	1.3U	1.3U	1.3U
Aroclor 1268 {1}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {2}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {3}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {4}			0d	0d	0.0000	0.0000	1.3U	1.3U	
Aroclor 1268 {5}			0d	0d	0.0000	0.0000	1.3U	1.3U	

The -/+ after Retention Time symbolize the direction of the RT shift

Prep Amount:	20.00 g	**Dilution:**	1.0
Prep Final Vol:	4 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F028.D
Report Date: 25-Nov-2008 15:18

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F028.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R028.D
Inj Date : 22-NOV-2008 04:08
Sample Info: KWG0811860-3 | LCS | 8082 PCB_LL | SEDIMENT
Misc Info : SEMIVOA GC\W0811860\3-LCS.H | F=4 D=1 A=20.00
Cal Date : 22-NOV-2008 10:35
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	674416	1173927	66.2	68.3		100.00(RM)
Aroclor 1016	5.683	5.633	252002	341644	1140	996	80.00- 120.00	100.00(M)
	6.210	6.557	332392	585553	768	860	155.62- 233.43	131.90(M)
	6.593	6.953	136089	333436	607	926	75.65- 113.48	93.88(M)
	7.000	7.053	208995	325717	692	788	105.37- 158.05	82.93(M)
	7.287	7.327	172430	274291	783	745	85.28- 127.92	68.42(M)
		Average of Peak Amounts =			798	863		
Aroclor 1260	9.943	9.613	253534	542472	674	772	80.00- 120.00	100.00(M)
	10.247	10.133	598144	562503	853	760	149.50- 224.25	235.92(M)
	10.323	10.723	419634	625716	849	681	102.96- 154.44	165.51(M)
	10.943	10.903	344428	436252	762	887	98.63- 147.94	135.85(M)
	11.410	12.107	768826	1002022	821	944	206.52- 309.78	303.24(M)
		Average of Peak Amounts =			792	809		
Decachlorobiphenyl	16.047	17.130	802087	1081268	78.9	81.5		100.00(RM)

QC Flag Legend

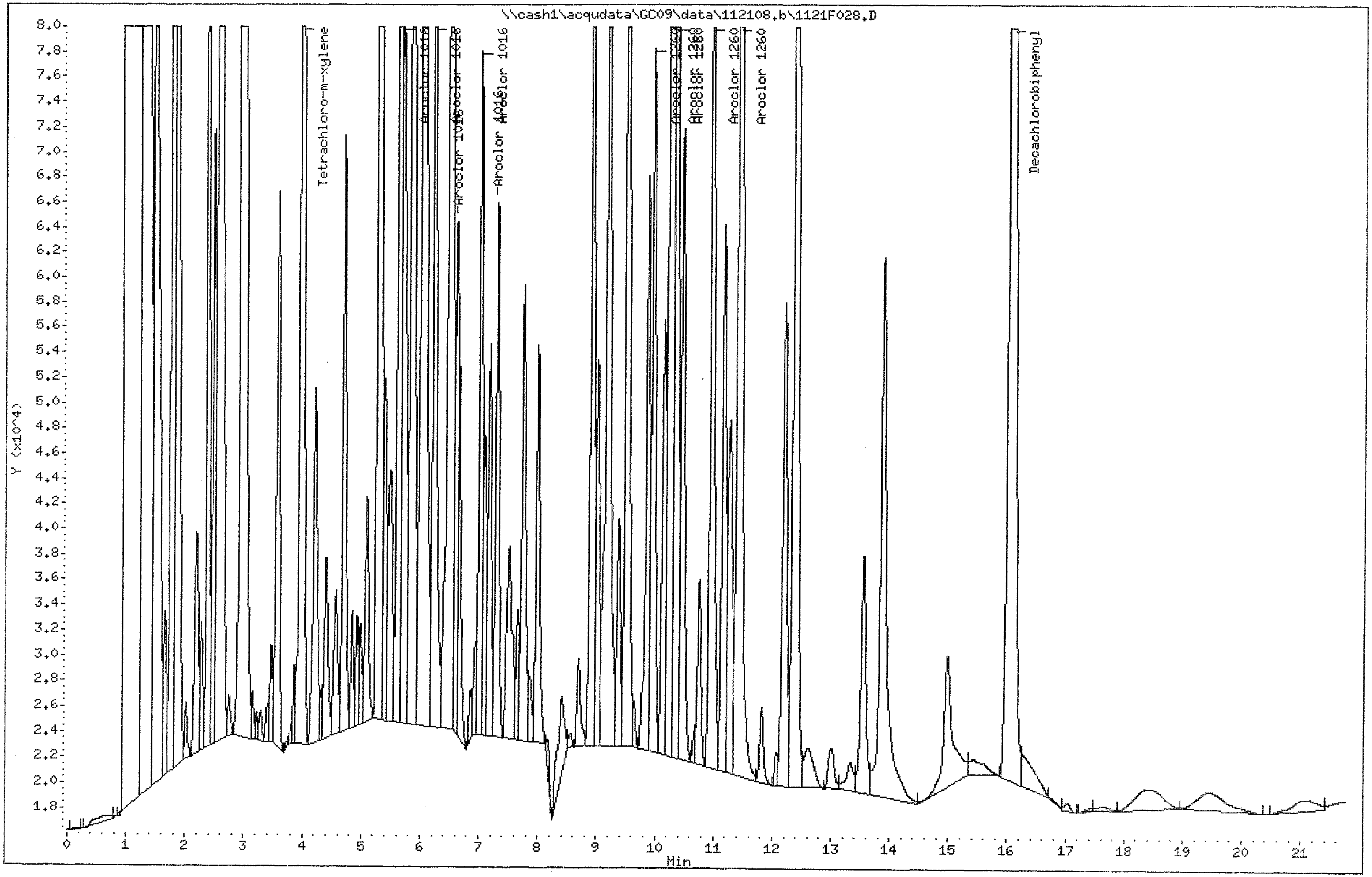
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F028.D
Date : 22-NOV-2008 04:08
Client ID:
Sample Info: KWG0811860-3 | LCS | 8082 PCB_LL | SEDIMENT

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

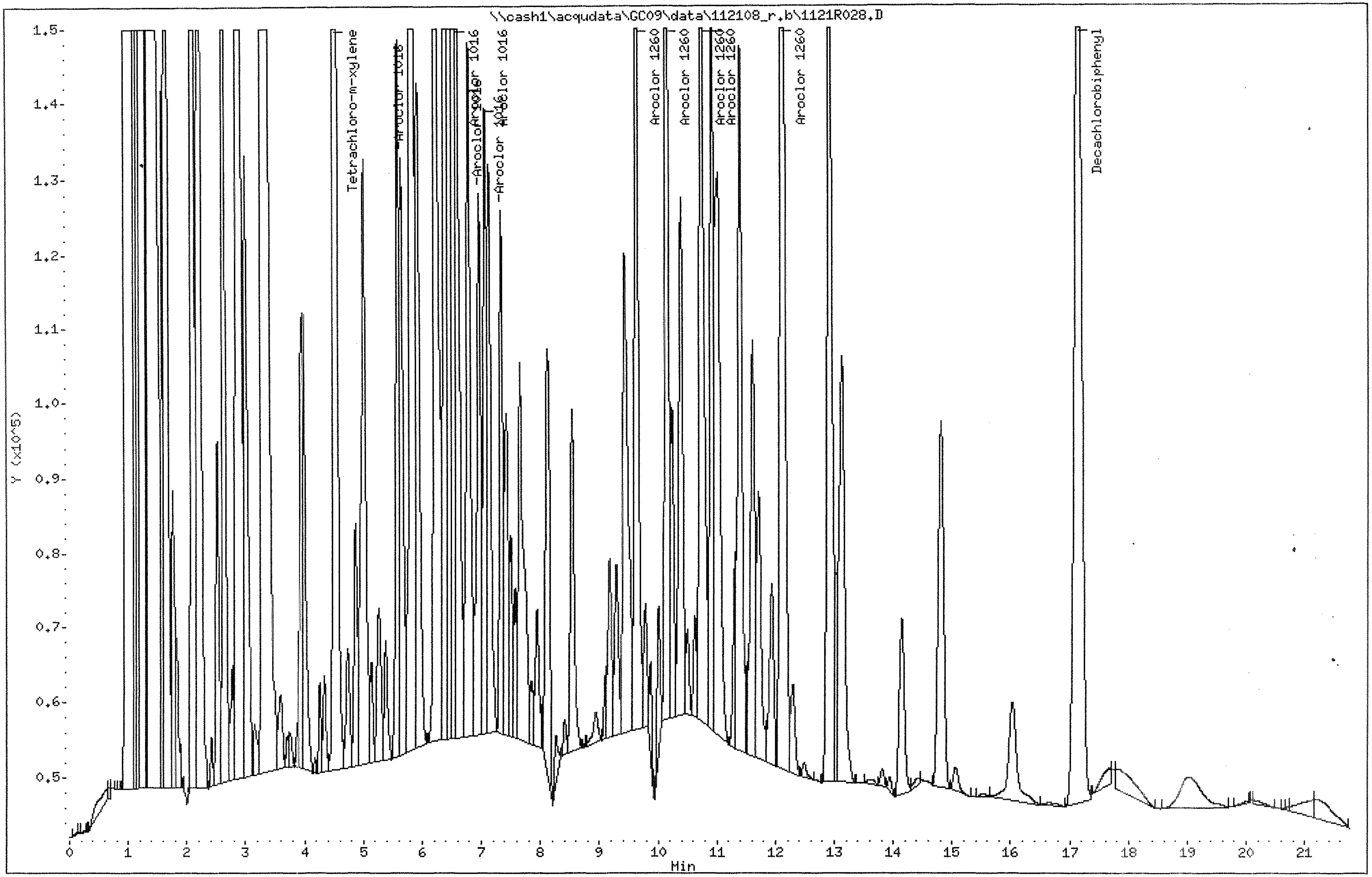


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R028.D
Date : 22-NOV-2008 04:08
Client ID:
Sample Info: KWG0811860-3 | LCS | 8082 PCB_LL | SEDIMENT

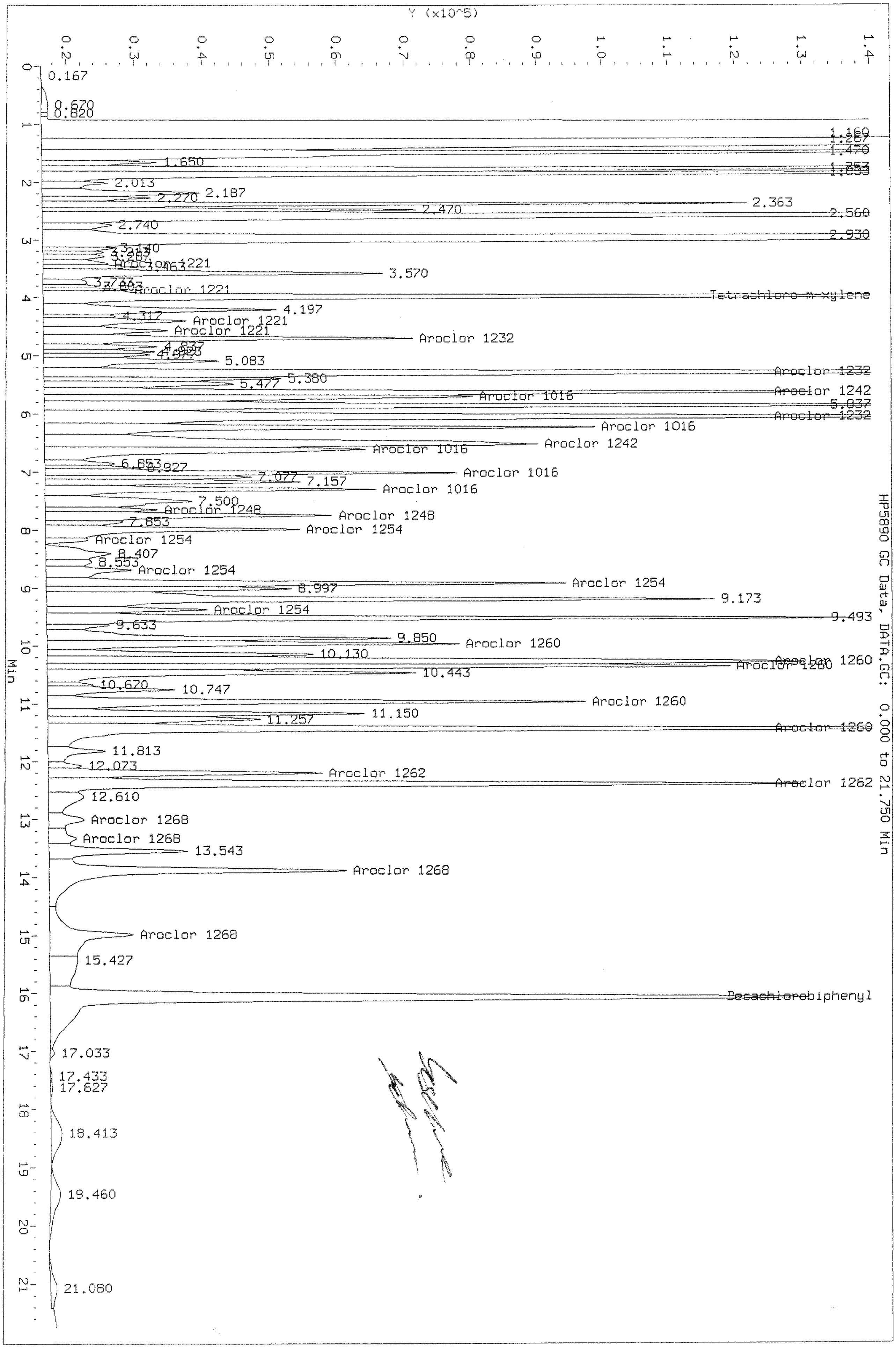
Column phase: DB-XLB

Instrument: GC09.i

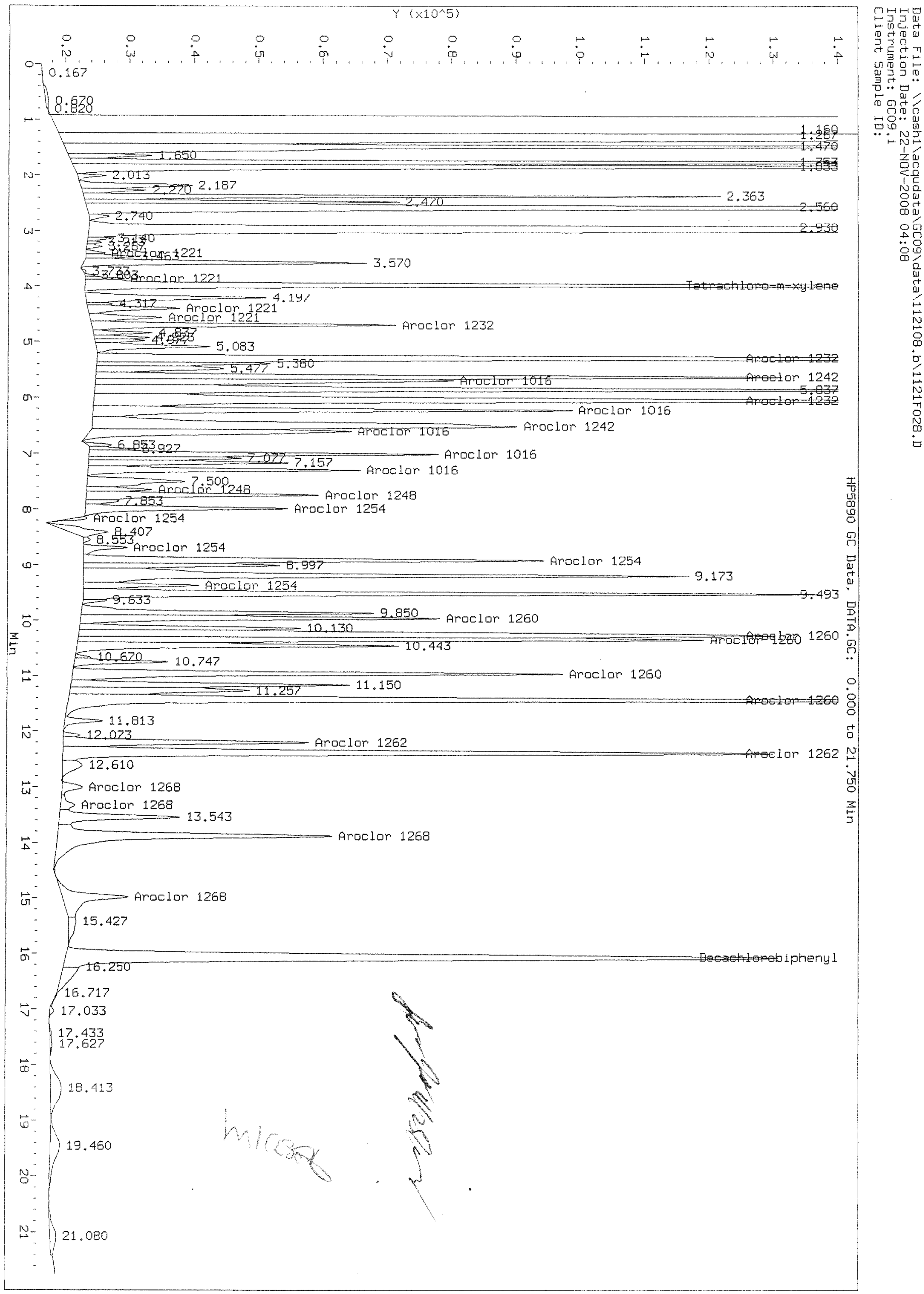
Operator: LHarris
Column diameter: 0.53



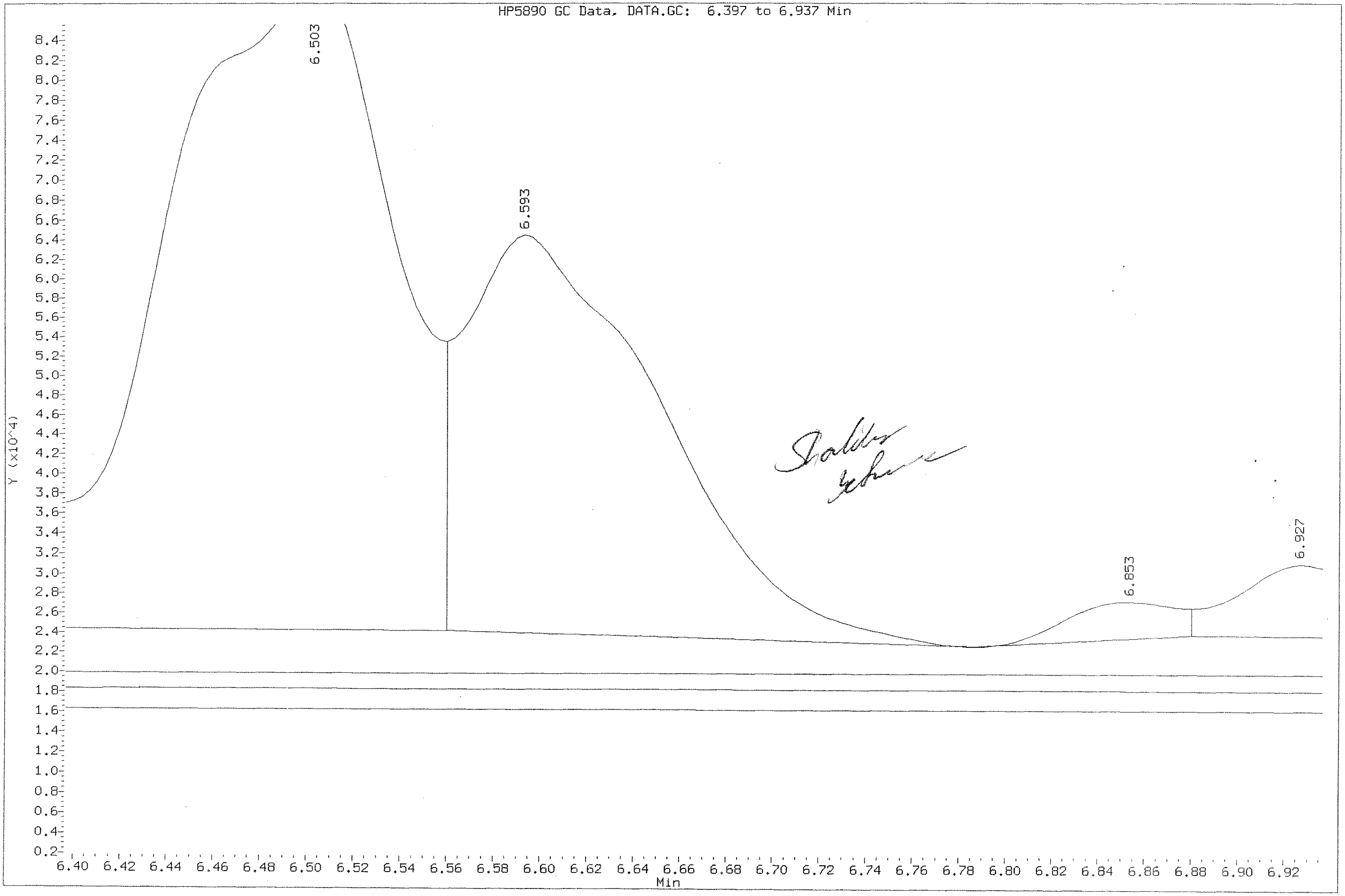
Data File: \\cash1\acqudata\GC09\data\112108.b\121F028.D
Injection Date: 22-NOV-2008 04:08
Instrument: GC09.i
Client Sample ID:



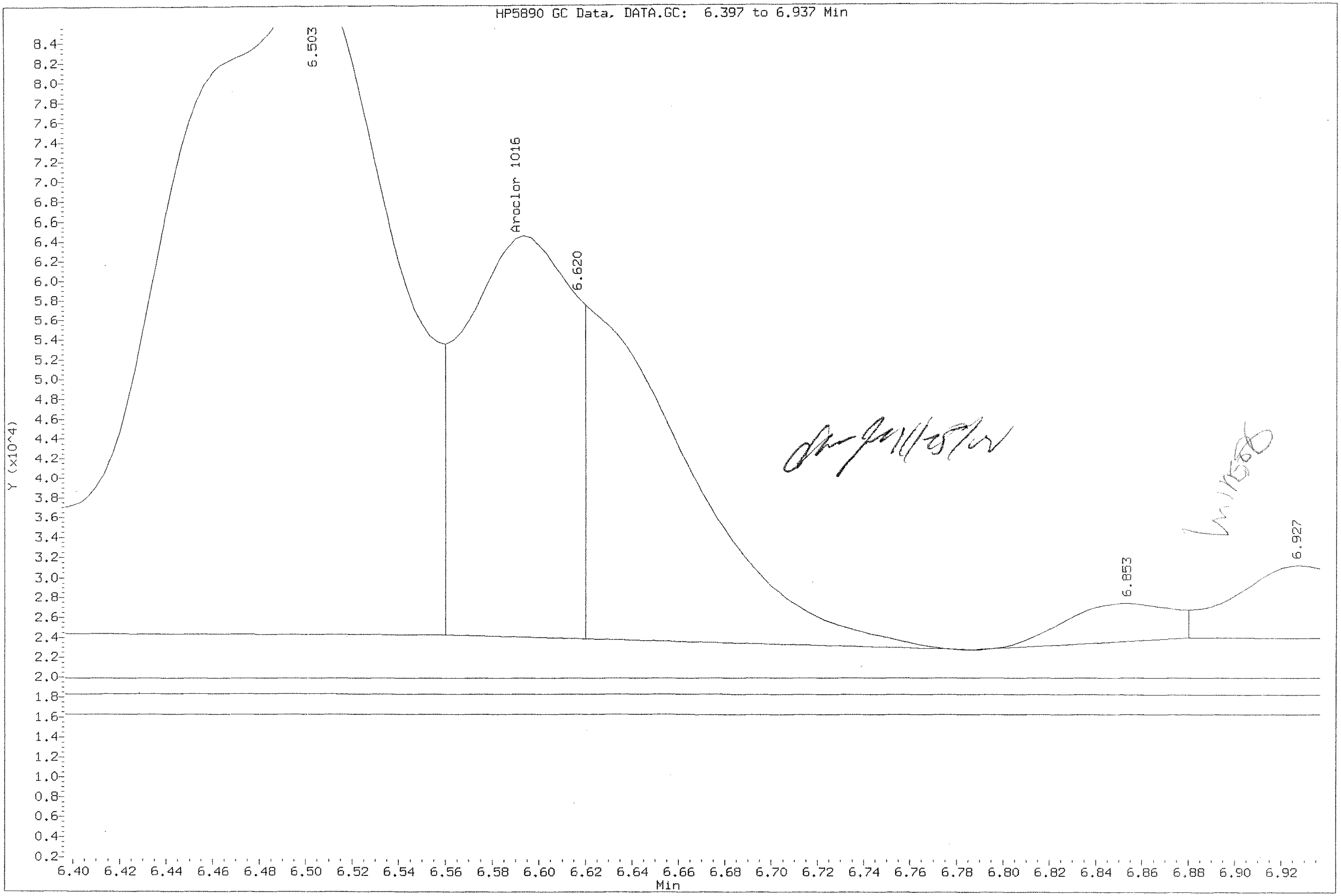
HP5890 GC Data, DATA.GC: 0.000 to 21.750 Min


Data File: \\cash1\acqudata\GC09\data\112108.b\1121F028.D
Injection Date: 22-NOV-2008 04:08
Instrument: GC09.i
Client Sample ID:
Y (x10^5)
Min
HP5890 GC Data, DATA.GC: 0.000 to 21.750 Min

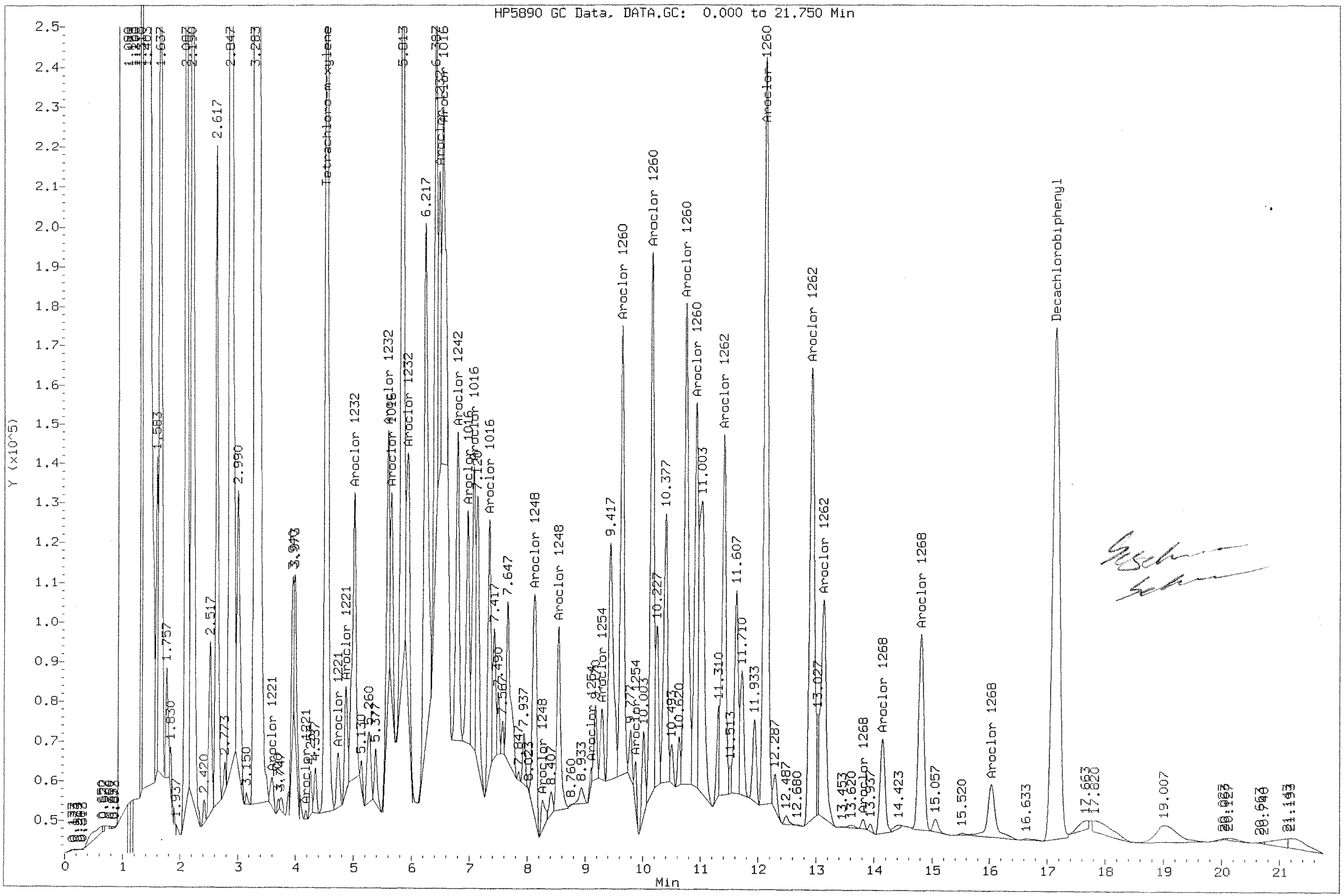
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F028.D
Injection Date: 22-NOV-2008 04:08
Instrument: GC09.i
Client Sample ID:



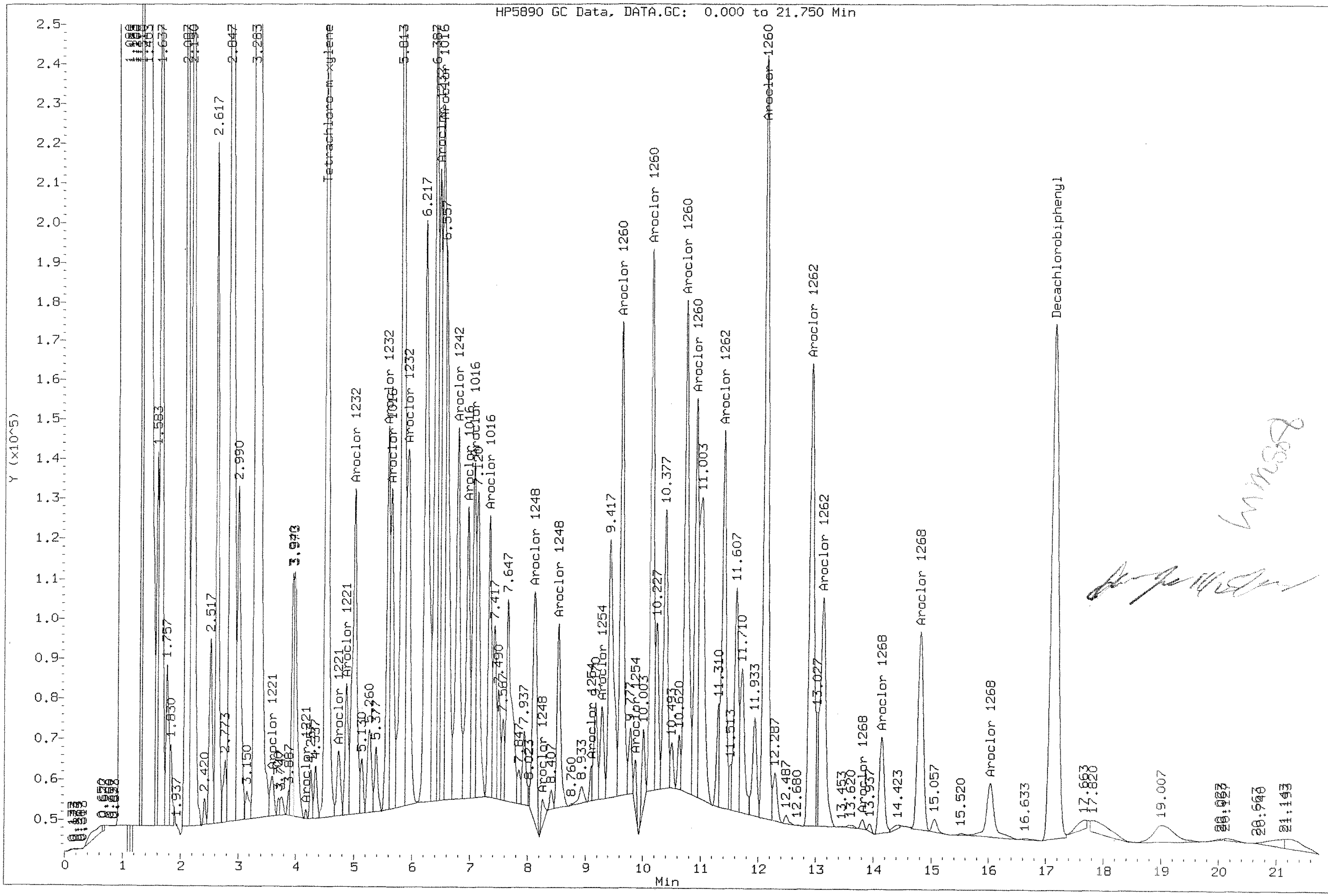
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F028.D
Injection Date: 22-NOV-2008 04:08
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R028.D
Injection Date: 22-NOV-2008 04:08
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R028.D
Injection Date: 22-NOV-2008 04:08
Instrument: GC09.i
Client Sample ID:



Organic Analysis:
Polychlorinated Biphenyls (PCBs)

Validation Package

Standards Data

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Calibration Date:**	09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID:	CAL7795	**Column:**	DB-35MS
Instrument ID:	GC09.i		

Level ID	File ID	Level ID	File ID
A	\\cash1\acqudata\GC09\data\092208.b\0922F009.D	H	\\cash1\acqudata\GC09\data\092208.b\0922F035.D
B	\\cash1\acqudata\GC09\data\092208.b\0922F013.D	I	\\cash1\acqudata\GC09\data\092208.b\0922F036.D
C	\\cash1\acqudata\GC09\data\092208.b\0922F017.D	J	\\cash1\acqudata\GC09\data\092208.b\0922F037.D
D	\\cash1\acqudata\GC09\data\092208.b\0922F021.D	K	\\cash1\acqudata\GC09\data\092208.b\0922F038.D
E	\\cash1\acqudata\GC09\data\092208.b\0922F025.D	L	\\cash1\acqudata\GC09\data\092208.b\0922F039.D
F	\\cash1\acqudata\GC09\data\092208.b\0922F029.D	M	\\cash1\acqudata\GC09\data\092208.b\0922F040.D
G	\\cash1\acqudata\GC09\data\092208.b\0922F033.D		

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl															
							H	2.5	12100	I	5.0	12200	J	50	10800
	K	100	9790	L	200	8610	M	500	7540						
Aroclor 1016 {1}															
							H	25	239	I	50	261	J	500	245
	K	1000	224	L	2000	197	M	5000	165						
Aroclor 1016 {2}															
							H	25	490	I	50	513	J	500	477
	K	1000	429	L	2000	373	M	5000	313						
Aroclor 1016 {3}															
							H	25	244	I	50	273	J	500	248
	K	1000	222	L	2000	194	M	5000	165						
Aroclor 1016 {4}															
							H	25	346	I	50	370	J	500	323
	K	1000	294	L	2000	258	M	5000	221						
Aroclor 1016 {5}															
							H	25	193	I	50	231	J	500	255
	K	1000	238	L	2000	216	M	5000	190						
Aroclor 1260 {1}															
							H	25	431	I	50	451	J	500	399
	K	1000	363	L	2000	326	M	5000	287						
Aroclor 1260 {2}															
							H	25	762	I	50	786	J	500	755
	K	1000	691	L	2000	642	M	5000	571						

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-35MS

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {3}															
							H	25	585	I	50	598	J	500	516
	K	1000	485	L	2000	416	M	5000	364						
Aroclor 1260 {4}															
							H	25	513	I	50	507	J	500	477
	K	1000	444	L	2000	406	M	5000	364						
Aroclor 1260 {5}															
							H	25	1050	I	50	1050	J	500	984
	K	1000	924	L	2000	842	M	5000	762						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-35MS

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	18.4		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	15.9		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	17.8		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	17.5		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	18.5		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	11.7		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	16.7		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	11.8		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	18.6		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	13.1		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	12.5		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008
Date Analyzed: 09/23/2008

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration ID: CAL7795
Units: ng/mL

File ID:
\\cash1\acqudata\GC09\data\092208.b\0922F041.D
\\cash1\acqudata\GC09\data\092208.b\0922F042.D
\\cash1\acqudata\GC09\data\092208.b\0922F043.D
\\cash1\acqudata\GC09\data\092208.b\0922F044.D
\\cash1\acqudata\GC09\data\092208.b\0922F045.D
\\cash1\acqudata\GC09\data\092208.b\0922F046.D
\\cash1\acqudata\GC09\data\092208.b\0922F047.D
\\cash1\acqudata\GC09\data\092208.b\0922F048.D
\\cash1\acqudata\GC09\data\092208.b\0922F049.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	1000	980	222	218	-2	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	960	433	416	-4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	960	224	214	-4	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	960	302	289	-4	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1200	220	264	20	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	-1	± 15 %	NA
Aroclor 1260 {1}	1000	910	376	344	-9	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	830	701	579	-17	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	494	532	8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	452	467	3	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	936	995	6	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	2	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Calibration Date:**	09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID:	CAL7795	**Column:**	DB-XLB
Instrument ID:	GC09.i		

Level ID	File ID	Level ID	File ID
A	\\cash1\acqudata\GC09\data\092208_r.b\0922R009.D	H	\\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
B	\\cash1\acqudata\GC09\data\092208_r.b\0922R013.D	I	\\cash1\acqudata\GC09\data\092208_r.b\0922R036.D
C	\\cash1\acqudata\GC09\data\092208_r.b\0922R017.D	J	\\cash1\acqudata\GC09\data\092208_r.b\0922R037.D
D	\\cash1\acqudata\GC09\data\092208_r.b\0922R021.D	K	\\cash1\acqudata\GC09\data\092208_r.b\0922R038.D
E	\\cash1\acqudata\GC09\data\092208_r.b\0922R025.D	L	\\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
F	\\cash1\acqudata\GC09\data\092208_r.b\0922R029.D	M	\\cash1\acqudata\GC09\data\092208_r.b\0922R040.D
G	\\cash1\acqudata\GC09\data\092208_r.b\0922R033.D		

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Decachlorobiphenyl															
							H	2.5	15200	I	5.0	15300	J	50	13300
	K	100	12000	L	200	10500									
Aroclor 1016 {1}															
							H	25	392	I	50	429	J	500	358
	K	1000	339	L	2000	300	M	5000	239						
Aroclor 1016 {2}															
							H	25	763	I	50	828	J	500	699
	K	1000	624	L	2000	546	M	5000	625						
Aroclor 1016 {3}															
							H	25	396	I	50	434	J	500	403
	K	1000	356	L	2000	310	M	5000	263						
Aroclor 1016 {4}															
							H	25	461	I	50	479	J	500	455
	K	1000	412	L	2000	363	M	5000	309						
Aroclor 1016 {5}															
							H	25	416	I	50	408	J	500	412
	K	1000	369	L	2000	324	M	5000	279						
Aroclor 1260 {1}															
							H	25	827	I	50	854	J	500	746
	K	1000	680	L	2000	594	M	5000	516						
Aroclor 1260 {2}															
							H	25	872	I	50	919	J	500	772
	K	1000	707	L	2000	626	M	5000	542						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Calibration Date:**	09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID:	CAL7795	**Column:**	DB-XLB
Instrument ID:	GC09.i		

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Aroclor 1260 {3}															
							H	25	969	I	50	1060	J	500	994
	K	1000	924	L	2000	830	M	5000	735						
Aroclor 1260 {4}															
							H	25	509	I	50	583	J	500	536
	K	1000	493	L	2000	440	M	5000	390						
Aroclor 1260 {5}															
							H	25	1190	I	50	1200	J	500	1120
	K	1000	1050	L	2000	946	M	5000	845						

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008

Initial Calibration Summary
Polychlorinated Biphenyls (PCBs)

Calibration ID: CAL7795
Instrument ID: GC09.i

Column: DB-XLB

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Decachlorobiphenyl	SURR	AverageRF	% RSD	15.6		≤ 20
Aroclor 1016 {1}	MULTI	AverageRF	% RSD	19.7		≤ 20
Aroclor 1016 {2}	MULTI	AverageRF	% RSD	15.2		≤ 20
Aroclor 1016 {3}	MULTI	AverageRF	% RSD	17.8		≤ 20
Aroclor 1016 {4}	MULTI	AverageRF	% RSD	16.0		≤ 20
Aroclor 1016 {5}	MULTI	AverageRF	% RSD	15.2		≤ 20
Aroclor 1260 {1}	MULTI	AverageRF	% RSD	18.8		≤ 20
Aroclor 1260 {2}	MULTI	AverageRF	% RSD	19.5		≤ 20
Aroclor 1260 {3}	MULTI	AverageRF	% RSD	12.9		≤ 20
Aroclor 1260 {4}	MULTI	AverageRF	% RSD	14.0		≤ 20
Aroclor 1260 {5}	MULTI	AverageRF	% RSD	13.5		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 09/22/2008
Date Analyzed: 09/23/2008

Second Source Calibration Verification
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration ID: CAL7795
Units: ng/mL

File ID:
\\cash1\acqudata\GC09\data\092208_r.b\0922R041.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R042.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R043.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R044.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R046.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R047.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R048.D
\\cash1\acqudata\GC09\data\092208_r.b\0922R049.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Aroclor 1016 {1}	1000	970	343	334	-3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	900	681	614	-10	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	930	360	334	-7	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	980	413	406	-2	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	980	368	361	-2	NA	± 100 %	AverageRF
Aroclor 1016	1000	950	NA	NA	NA	5	± 15 %	NA
Aroclor 1260 {1}	1000	920	703	647	-8	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	930	740	685	-7	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	880	919	809	-12	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	550	12	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1140	8	NA	± 100 %	AverageRF
Aroclor 1260	1000	980	NA	NA	NA	2	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Sequence Name: D:\GC09\SEQUENCE\092208.S
Comment:
Operator: LHarris
Data Path: D:\GC09\DATA\092208.B\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

8082
ICAL 7795

Line	Type	Vial	DataFile	Method	Sample Name
1	DeleteGC				
2	MaskName - ----r---				
3	IB	1	0922F001	PCB1	IB
4	IB	1	0922F002	PCB1	IB
5	IB	1	0922F003	PCB1	IB
6	IB	1	0922F004	PCB1	IB
7	IB	1	0922F005	PCB1	IB
8	IB	2	0922F006	PCB1	KWG0804201-2 | IB | 8082 PCB
9	ICAL	3	0922F007	PCB1	1221 @ 50ppb | PCB5-10I | KWG0804201-
10	ICAL	4	0922F008	PCB1	1221 @ 500ppb | PCB5-10J | KWG0804201
11	ICAL	5	0922F009	PCB1	1221 @ 1000ppb | PCB5-18J | KWG080420
12	ICAL	6	0922F010	PCB1	1221 @ 2000ppb | PCB5-10K | KWG080420
13	ICAL	7	0922F011	PCB1	1232 @ 50ppb | PCB5-10L | KWG0804201-
14	ICAL	8	0922F012	PCB1	1232 @ 500ppb | PCB5-10M | KWG0804201
15	ICAL	9	0922F013	PCB1	1232 @ 1000ppb | PCB5-18K | KWG080420
16	ICAL	10	0922F014	PCB1	1232 @ 2000ppb | PCB5-10N | KWG080420
17	ICAL	11	0922F015	PCB1	1242 @ 50ppb | PCB5-10O | KWG0804201-
18	ICAL	12	0922F016	PCB1	1242 @ 500ppb | PCB5-10P | KWG0804201
19	ICAL	13	0922F017	PCB1	1242 @ 1000ppb | PCB5-18L | KWG080420
20	ICAL	14	0922F018	PCB1	1242 @ 2000ppb | PCB5-10Q | KWG080420
21	ICAL	15	0922F019	PCB1	1248 @ 50ppb | PCB5-11A | KWG0804201-
22	ICAL	16	0922F020	PCB1	1248 @ 500ppb | PCB5-11B | KWG0804201
23	ICAL	17	0922F021	PCB1	1248 @ 1000ppb | PCB5-18M | KWG080420
24	ICAL	18	0922F022	PCB1	1248 @ 2000ppb | PCB5-11C | KWG080420
25	ICAL	19	0922F023	PCB1	1254 @ 50ppb | PCB5-11D | KWG0804201-
26	ICAL	20	0922F024	PCB1	1254 @ 500ppb | PCB5-11E | KWG0804201
27	ICAL	21	0922F025	PCB1	1254 @ 1000ppb | PCB5-18N | KWG080420
28	ICAL	22	0922F026	PCB1	1254 @ 2000ppb | PCB5-11F | KWG080420
29	ICAL	23	0922F027	PCB1	1262 @ 50ppb | PCB5-11G | KWG0804201-
30	ICAL	24	0922F028	PCB1	1262 @ 500ppb | PCB5-11H | KWG0804201
31	ICAL	25	0922F029	PCB1	1262 @ 1000ppb | PCB5-18O | KWG080420
32	ICAL	26	0922F030	PCB1	1262 @ 2000ppb | PCB5-11I | KWG080420
33	ICAL	27	0922F031	PCB1	1268 @ 50ppb | PCB5-11J | KWG0804201-
34	ICAL	28	0922F032	PCB1	1268 @ 500ppb | PCB5-11K | KWG0804201
35	ICAL	29	0922F033	PCB1	1268 @ 1000ppb | PCB5-18P | KWG080420
36	ICAL	30	0922F034	PCB1	1268 @ 2000ppb | PCB5-11L | KWG080420
37	ICAL	31	0922F035	PCB1	1660 @ 25ppb | PCB5-23A | KWG0804201-
38	ICAL	32	0922F036	PCB1	1660 @ 50ppb | PCB5-23B | KWG0804201-
39	ICAL	33	0922F037	PCB1	1660 @ 500ppb | PCB5-23C | KWG0804201
40	ICAL	34	0922F038	PCB1	1660 @ 1000ppb | PCB5-22H | KWG080420
41	ICAL	35	0922F039	PCB1	1660 @ 2000ppb | PCB5-23D | KWG080420
42	ICAL	36	0922F040	PCB1	1660 @ 5000ppb | PCB5-23E | KWG080420
43	ICV	37	0922F041	PCB1	1016 @ 1000ppb | PCB5-19A | KWG080420

✱ 500ppb standard disabled for PCB in rear column. LH 9/23/08

Last Modified: Mon Sep 22 14:30:18 2008 Page: 1

Line	Type	Vial	DataFile	Method	Sample Name
44	ICV	38	0922F042	PCB1	1221 @ 1000ppb | PCB5-19B | KWG080420
45	ICV	39	0922F043	PCB1	1232 @ 1000ppb | PCB5-19C | KWG080420
46	ICV	40	0922F044	PCB1	1242 @ 1000ppb | PCB5-19D | KWG080420
47	ICV	41	0922F045	PCB1	1248 @ 1000ppb | PCB5-19E | KWG080420
48	ICV	42	0922F046	PCB1	1254 @ 1000ppb | PCB5-19F | KWG080420
49	ICV	43	0922F047	PCB1	1260 @ 1000ppb | PCB5-19G | KWG080420
50	ICV	44	0922F048	PCB1	1262 @ 1000ppb | PCB5-19H | KWG080420
51	ICV	45	0922F049	PCB1	1268 @ 1000ppb | PCB5-19I | KWG080420
52	IB	2	0922F050	PCB1	KWG0804201-24 | IB | 8082 PCB

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F006.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F006.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R006.D
Inj Date : 22-SEP-2008 18:25
Sample Info: KWG0804201-2 | IB | 8082 PCB
Misc Info : SEMIVOA GC\W0804201\2-IB.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

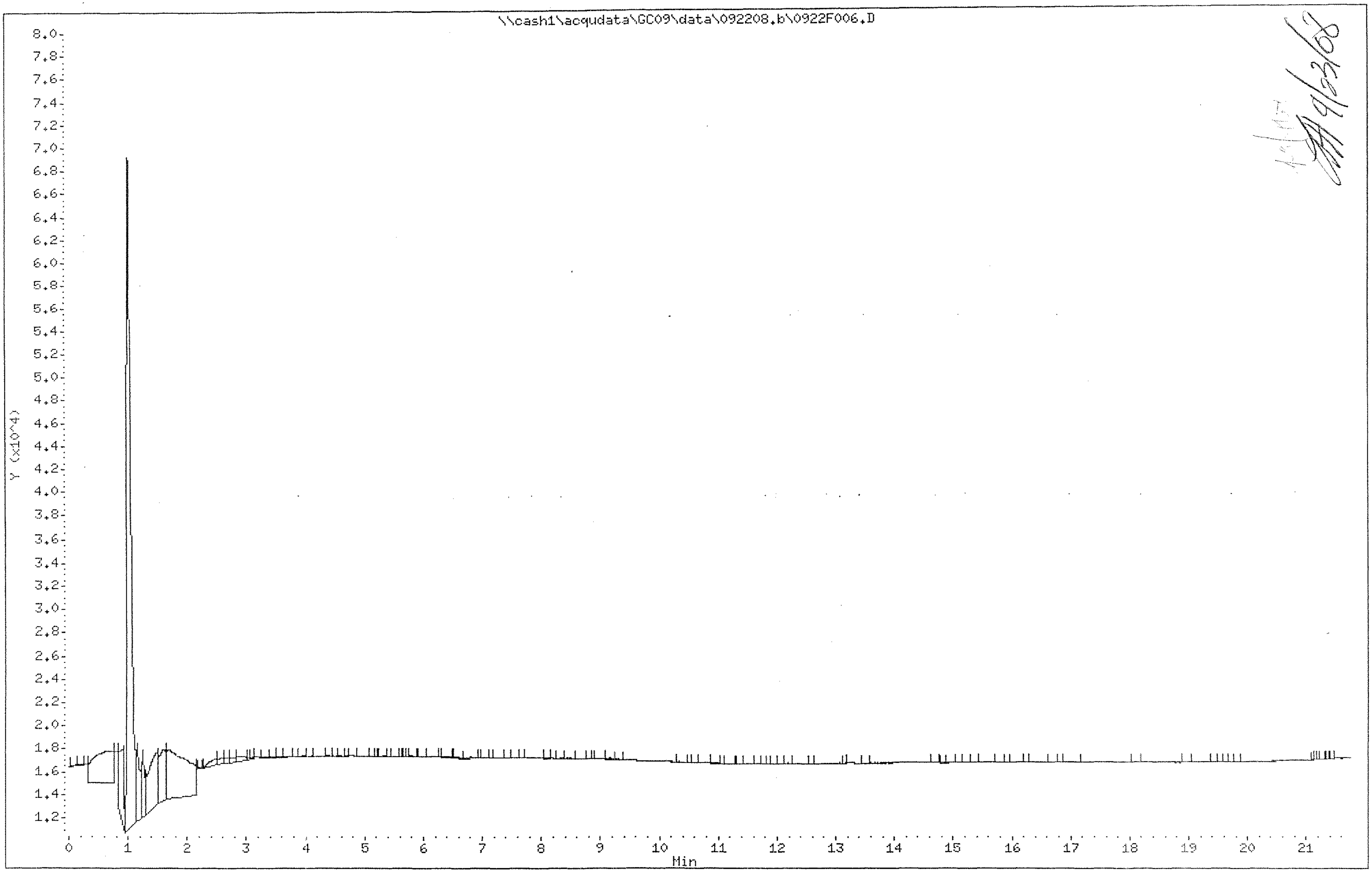
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F006.D
Date : 22-SEP-2008 18:25
Client ID:
Sample Info: KWG0804201-2 | IB | 8082 PCB

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

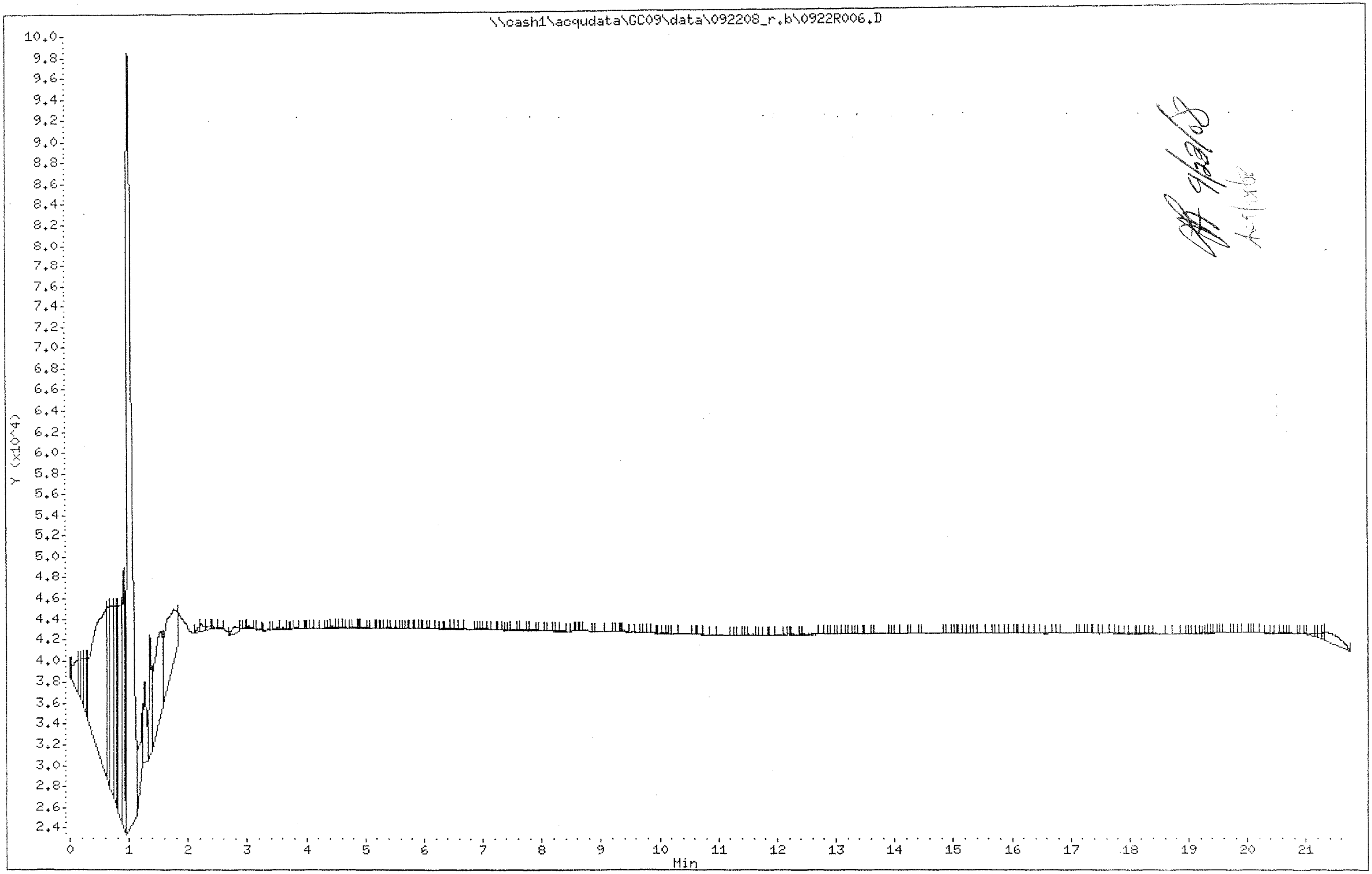


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R006.D
Date : 22-SEP-2008 18:25
Client ID:
Sample Info: KWG0804201-2 | IB | 8082 PCB

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F009.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F009.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R009.D
Inj Date : 22-SEP-2008 19:44
Sample Info: 1221 @ 1000ppb | PCB5-18J | KWG0804201-3
Misc Info : SEMIVOA GC\W0804201\3-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1221.SUB
Sub List #2 : AR1221.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	3.360	3.573	91590	140624	1000	1000	80.00- 120.00	100.00(M)
	3.870	4.197	37855	48950	1000	1000	33.06- 49.60	41.33(M)
	4.387	4.747	134986	223434	1000	1000	117.90- 176.86	147.38(M)
	4.563	4.867	87320	146185	1000	1000	76.27- 114.41	95.34(M)
			Average of Peak Amounts =		1000	1000		

QC Flag Legend

M - Compound response manually integrated.

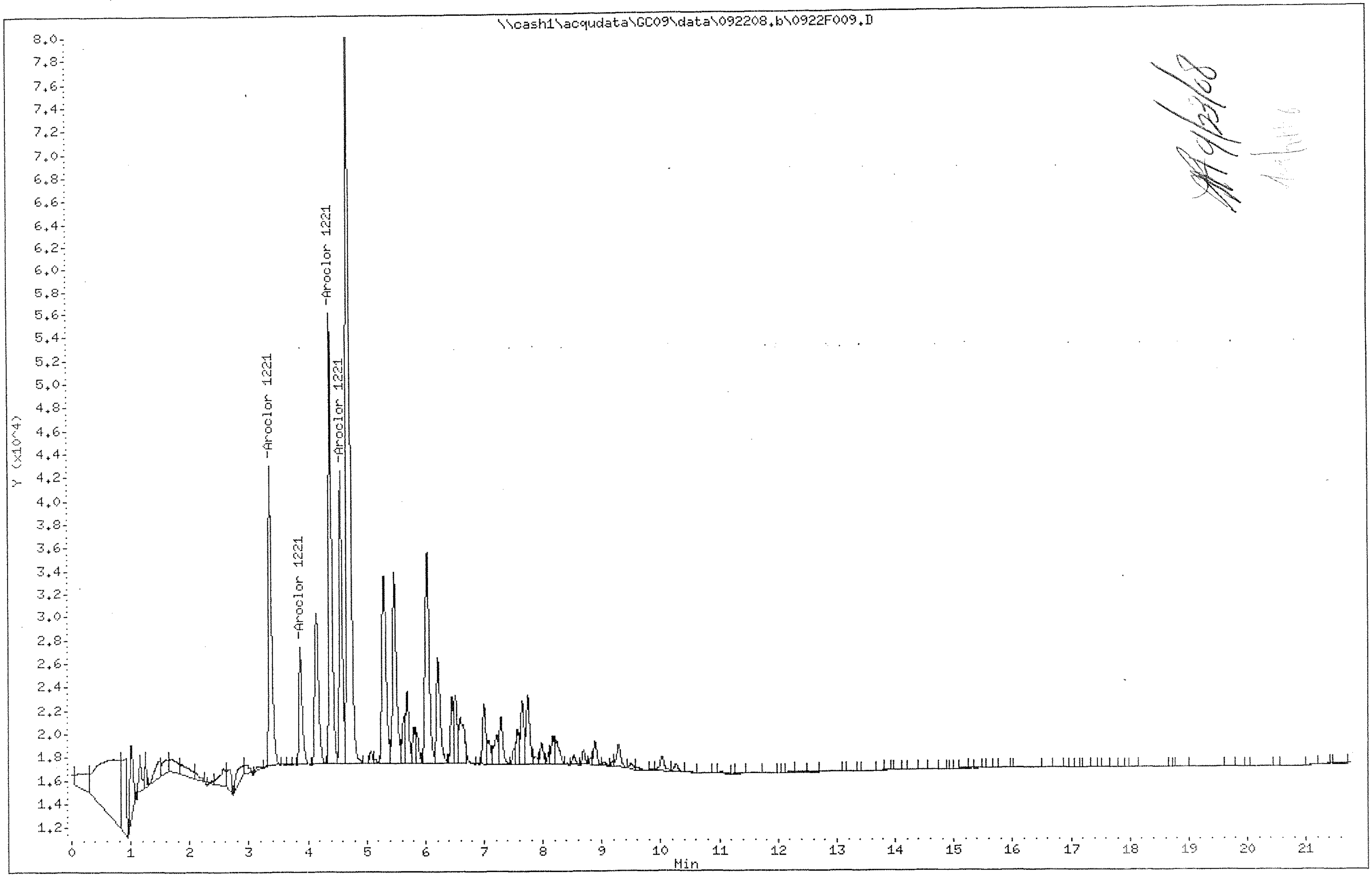
SA 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F009.D
Date : 22-SEP-2008 19:44
Client ID:
Sample Info: 1221 @ 1000ppb | PC35-18J | KWG0804201-3

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

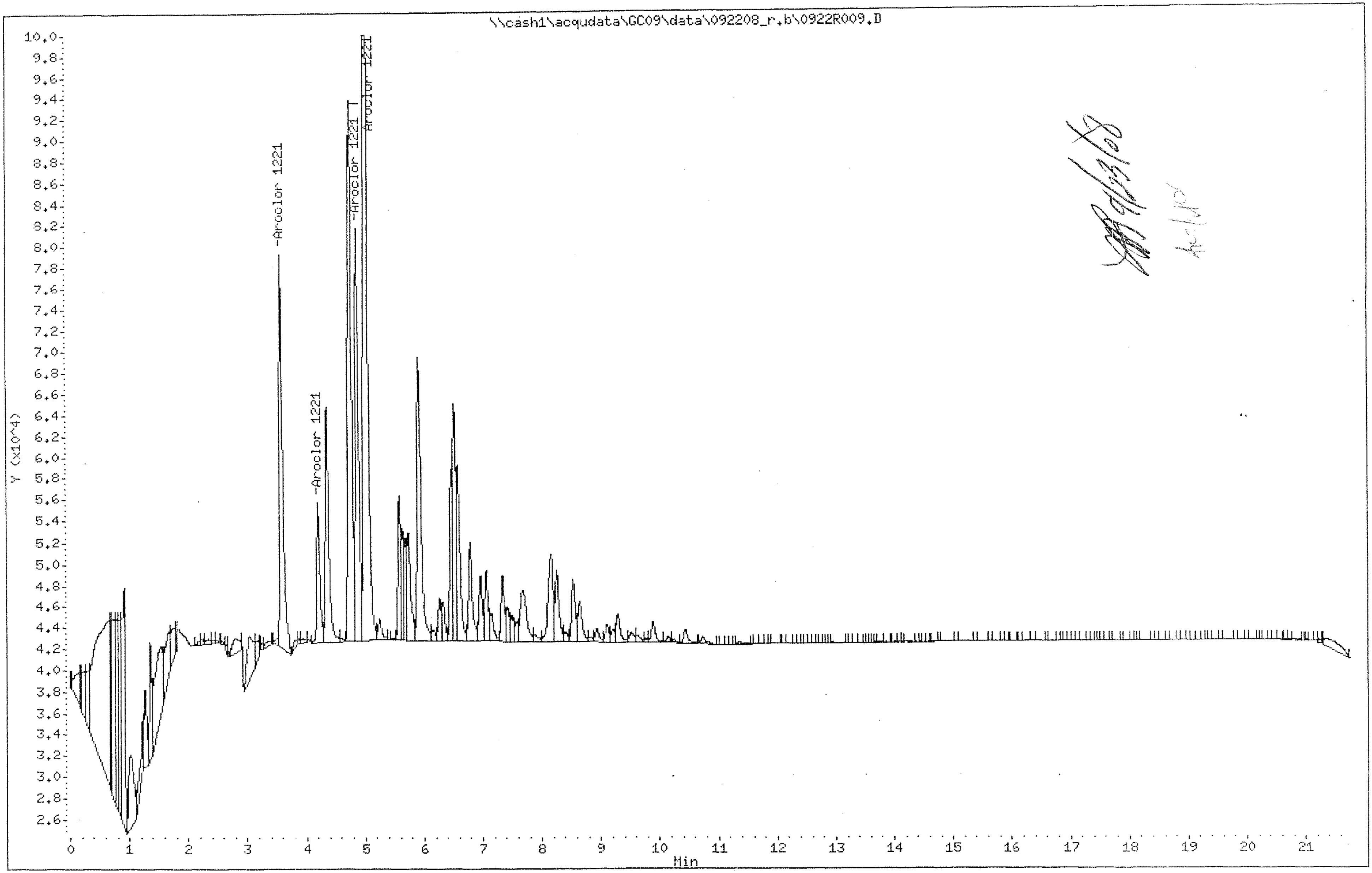


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R009.D
Date : 22-SEP-2008 19:44
Client ID:
Sample Info: 1221 @ 1000ppb | PCB5-18J | KWG0804201-3

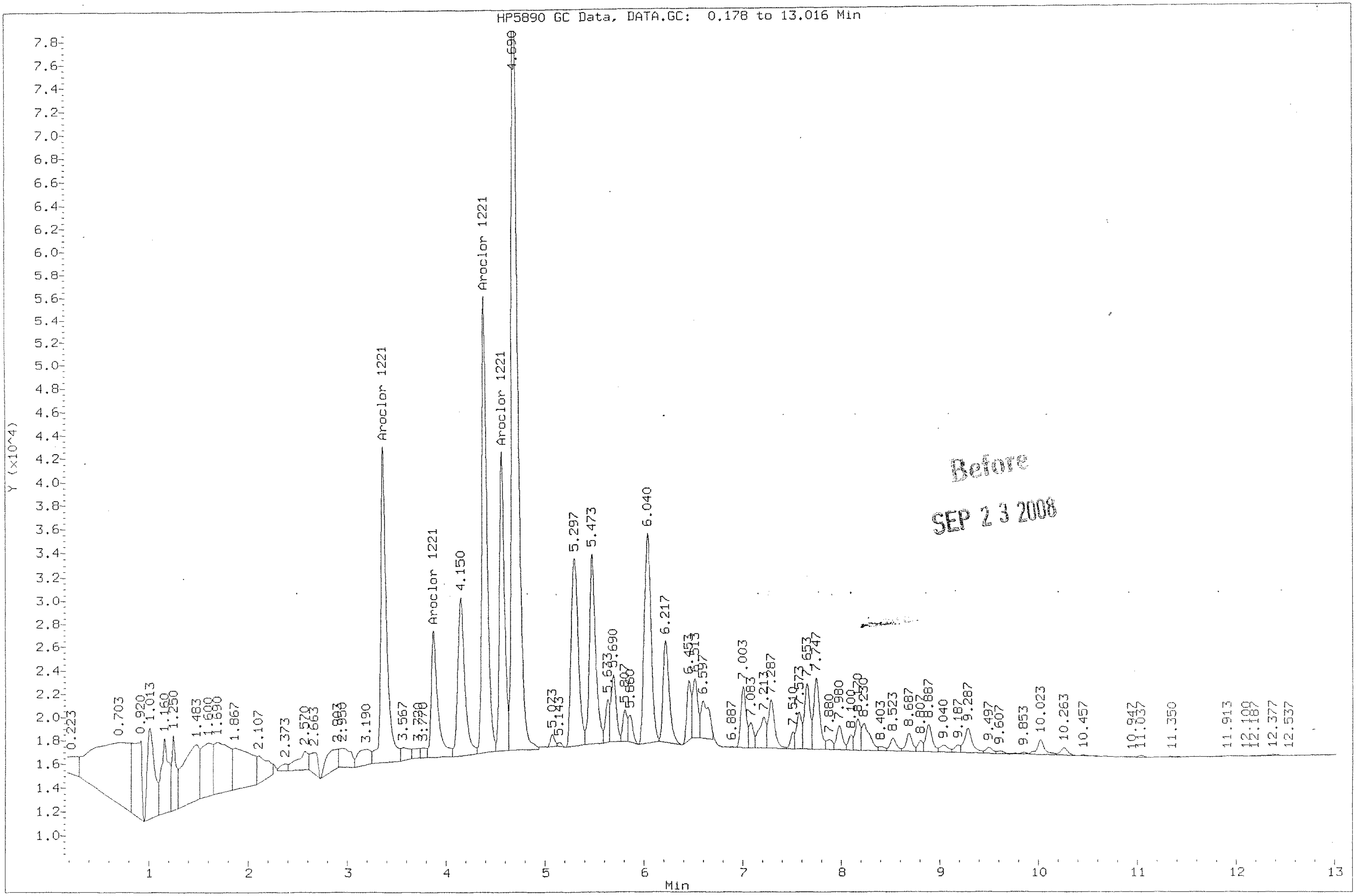
Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

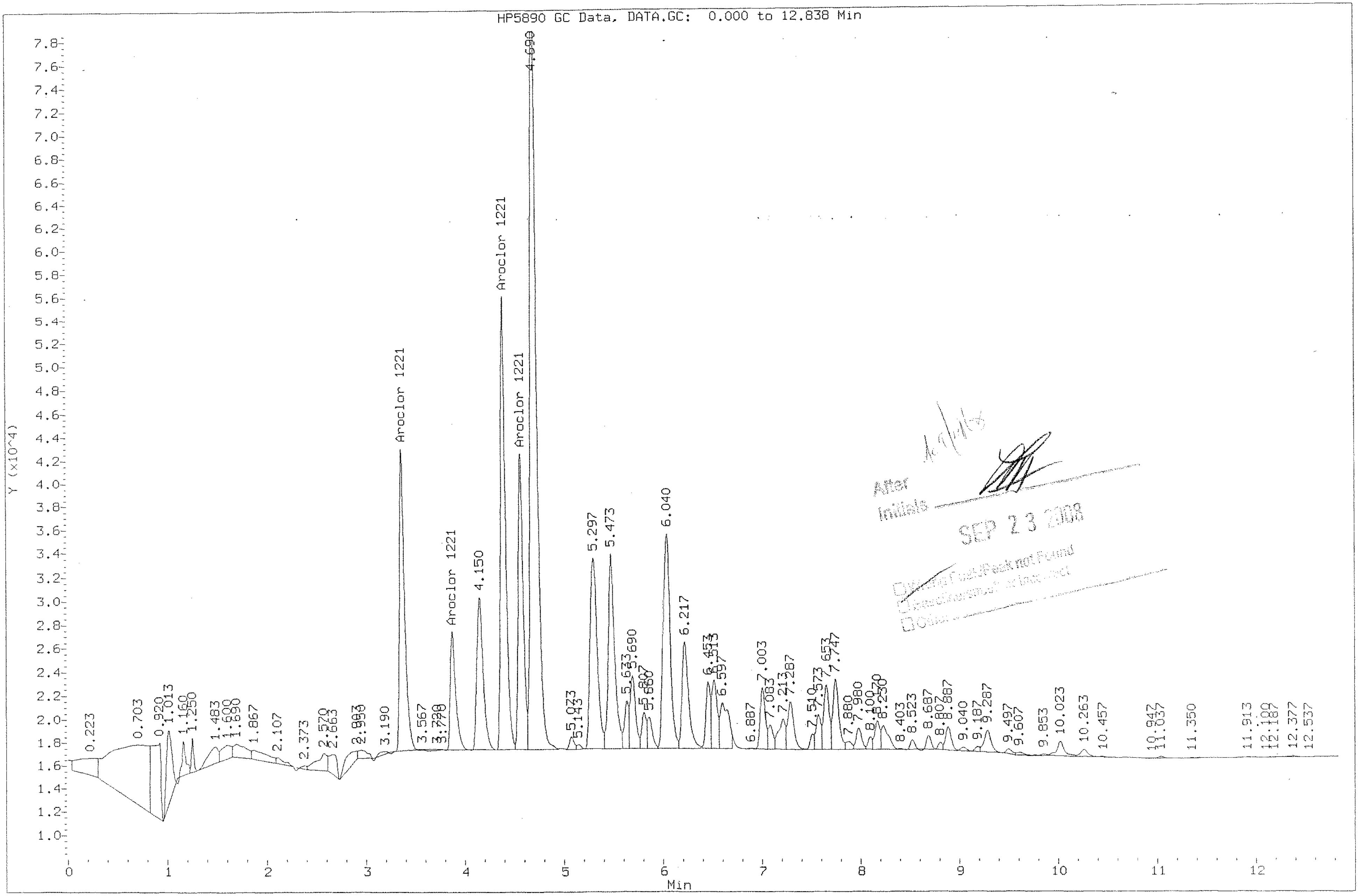


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F009.D
Injection Date: 22-SEP-2008 19:44
Instrument: GC09.i
Client Sample ID:



Before
SEP 23 2008

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F009.D
Injection Date: 22-SEP-2008 19:44
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F013.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F013.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R013.D
Inj Date : 22-SEP-2008 21:30
Sample Info: 1232 @ 1000ppb | PCB5-18K | KWG0804201-4
Misc Info : SEMIVOA GC\W0804201\4-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1232.SUB
Sub List #2 : AR1232.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.690	5.007	264058	414955	1000	1000	80.00- 120.00	100.00(M)
	5.287	5.583	226730	187819	1000	1000	68.69- 103.04	85.86(M)
	6.040	5.920	424870	267841	1000	1000	128.72- 193.08	160.90(M)
	6.217	6.470	195528	197459	1000	1000	59.24- 88.86	74.05(M)
		Average of Peak Amounts =			1000	1000		

QC Flag Legend

M - Compound response manually integrated.

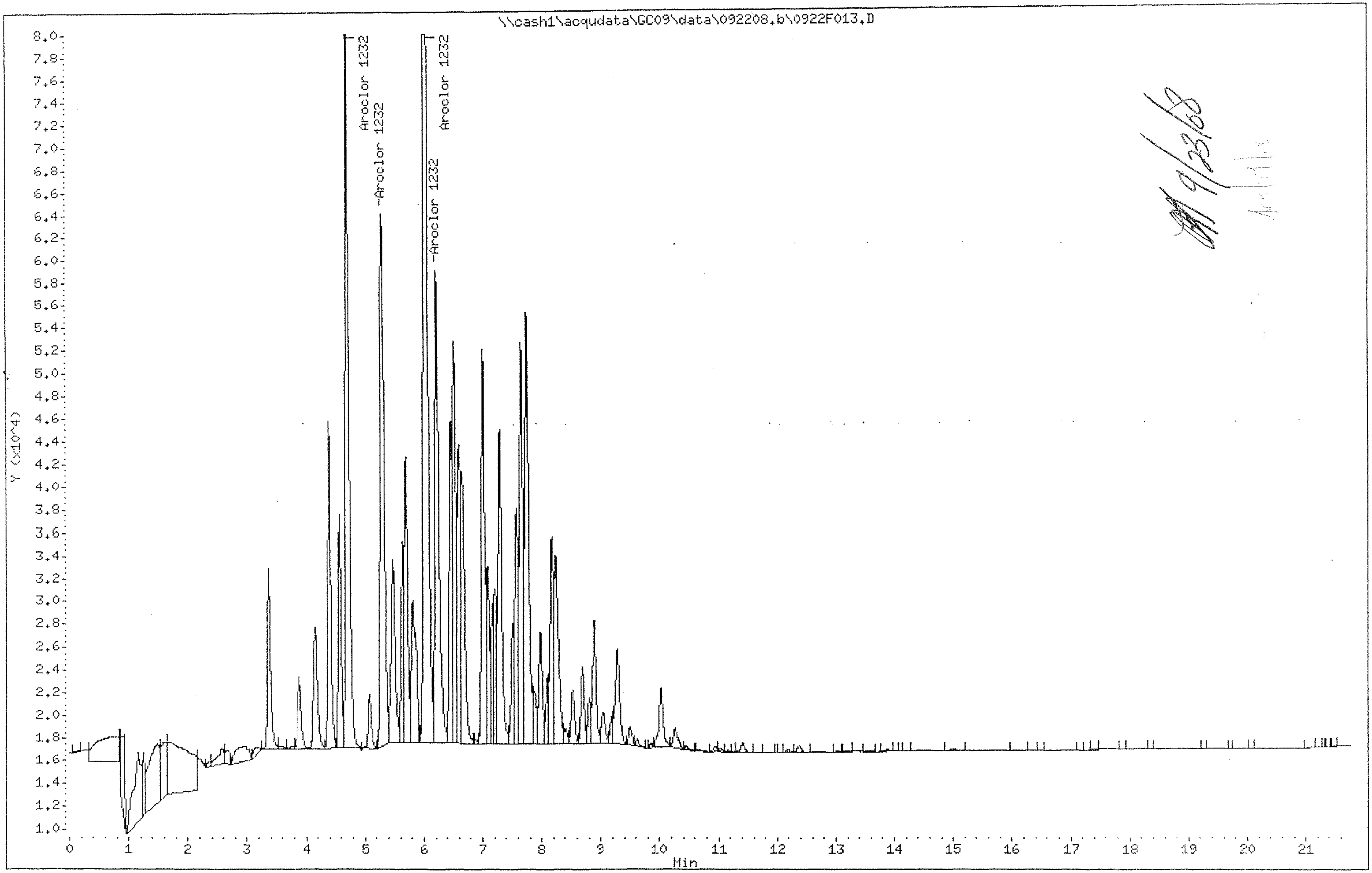
AH 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F013.D
Date : 22-SEP-2008 21:30
Client ID:
Sample Info: 1232 @ 1000ppb | PCB5-18K | KWG0804201-4

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



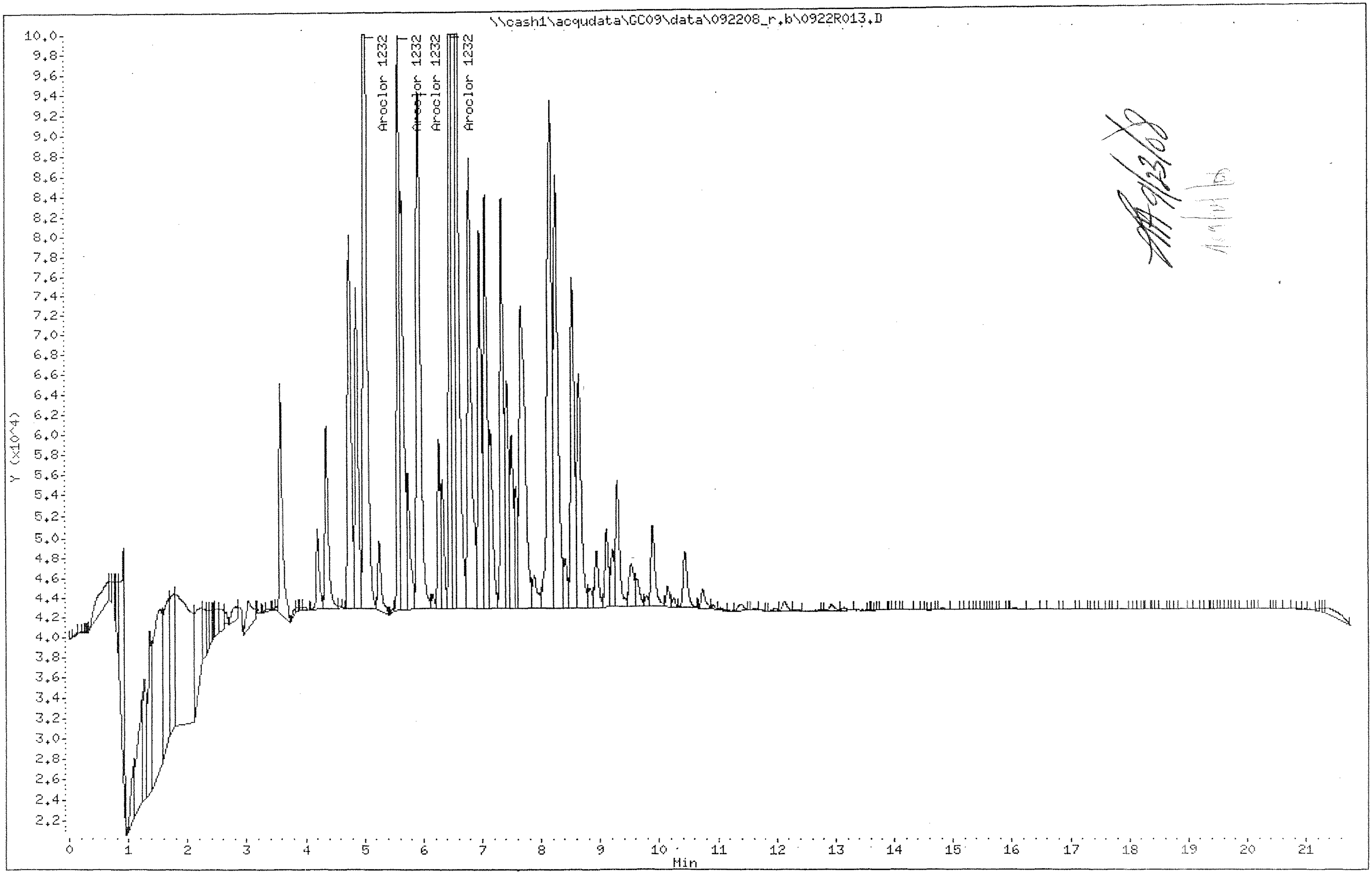
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R013.D
Date : 22-SEP-2008 21:30
Client ID:
Sample Info: 1232 @ 1000ppb | PCB5-18K | KWG0804201-4

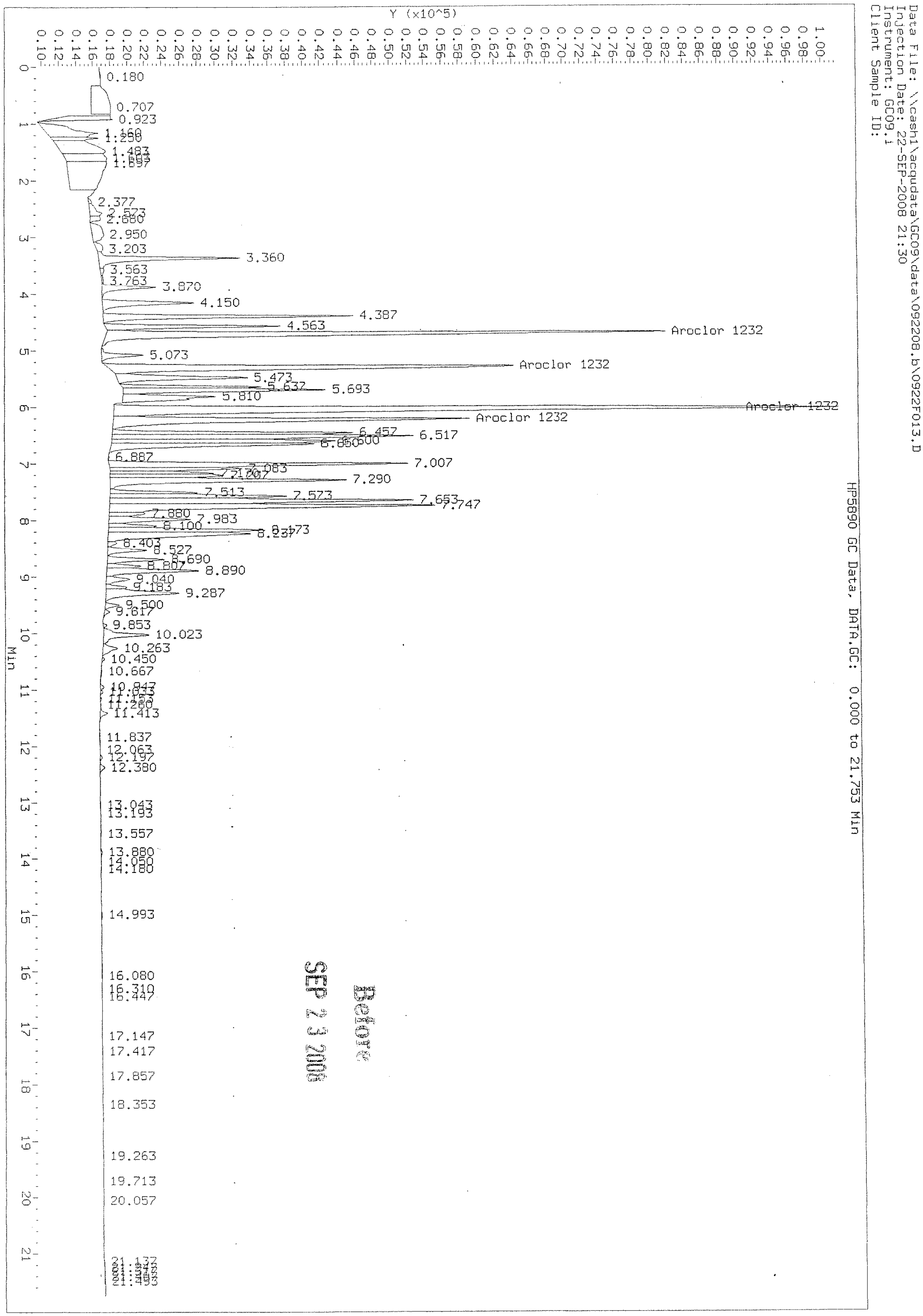
Column phase: DB-XLB

Instrument: GC09.i

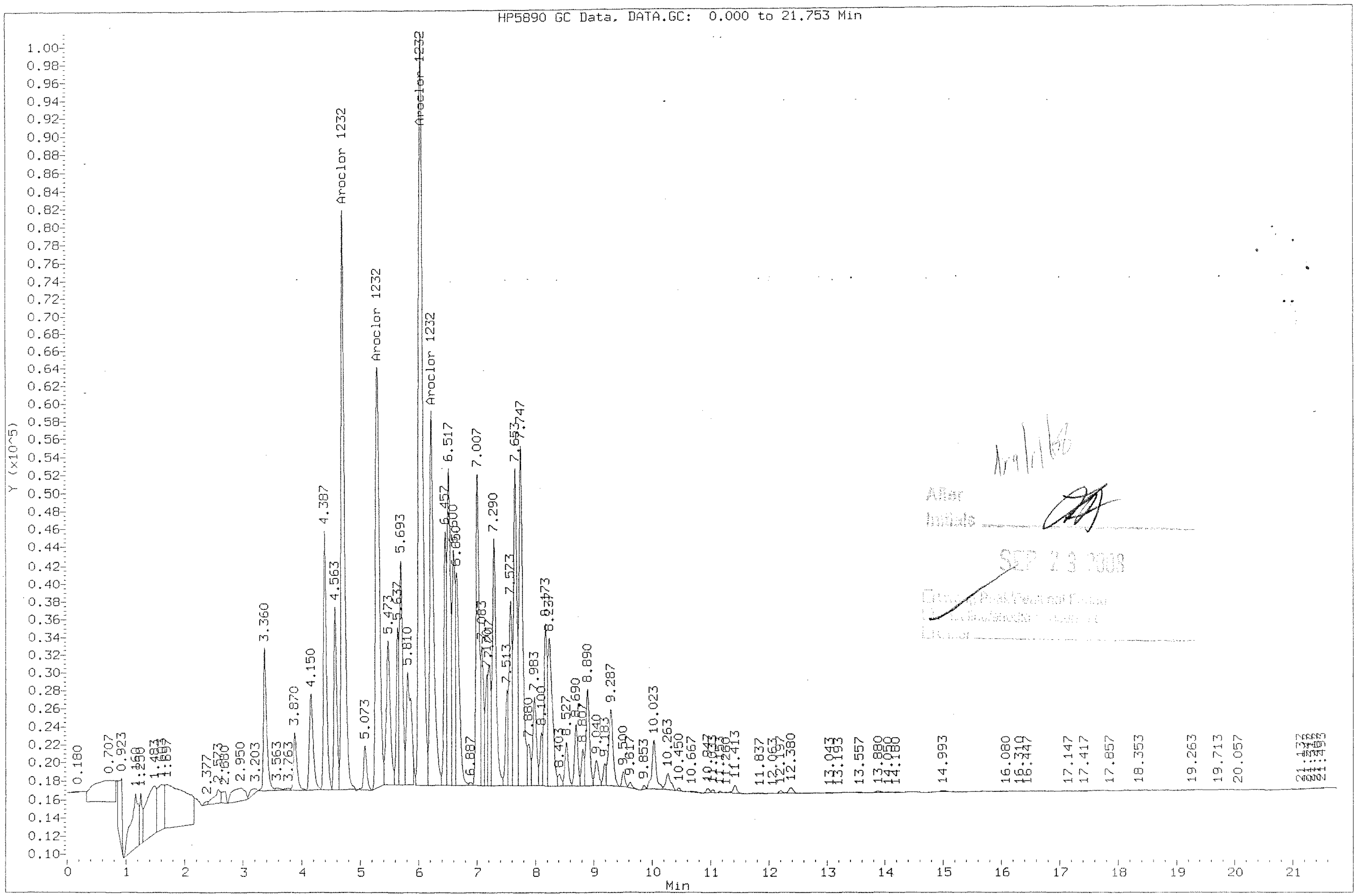
Operator: LHarris
Column diameter: 0.53



9/23/08


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F013.D
Injection Date: 22-SEP-2008 21:30
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.753 Min
Y (x10^5)
Min
Aroclor 1232
Aroclor 1232
Aroclor 1232
Aroclor 1232
Before
SEP 23 2008

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F013.D
Injection Date: 22-SEP-2008 21:30
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F017.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F017.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R017.D
Inj Date : 22-SEP-2008 23:15
Sample Info: 1242 @ 1000ppb | PCB5-18L | KWG0804201-5
Misc Info : SEMIVOA GC\W0804201\5-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1242.SUB
Sub List #2 : AR1242.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	5.287	5.583	389392	341599	1000	1000	80.00- 120.00	100.00(M)
	5.640	5.927	87570	410490	1000	1000	17.99- 26.99	22.49(M)
	6.040	6.520	738657	712521	1000	1000	151.76- 227.63	189.70(M)
	6.217	6.787	340854	393545	1000	1000	70.03- 105.04	87.54(M)
	6.517	6.963	280645	279899	1000	1000	57.66- 86.49	72.07(M)
			Average of Peak Amounts =		1000	1000		

QC Flag Legend

M - Compound response manually integrated.

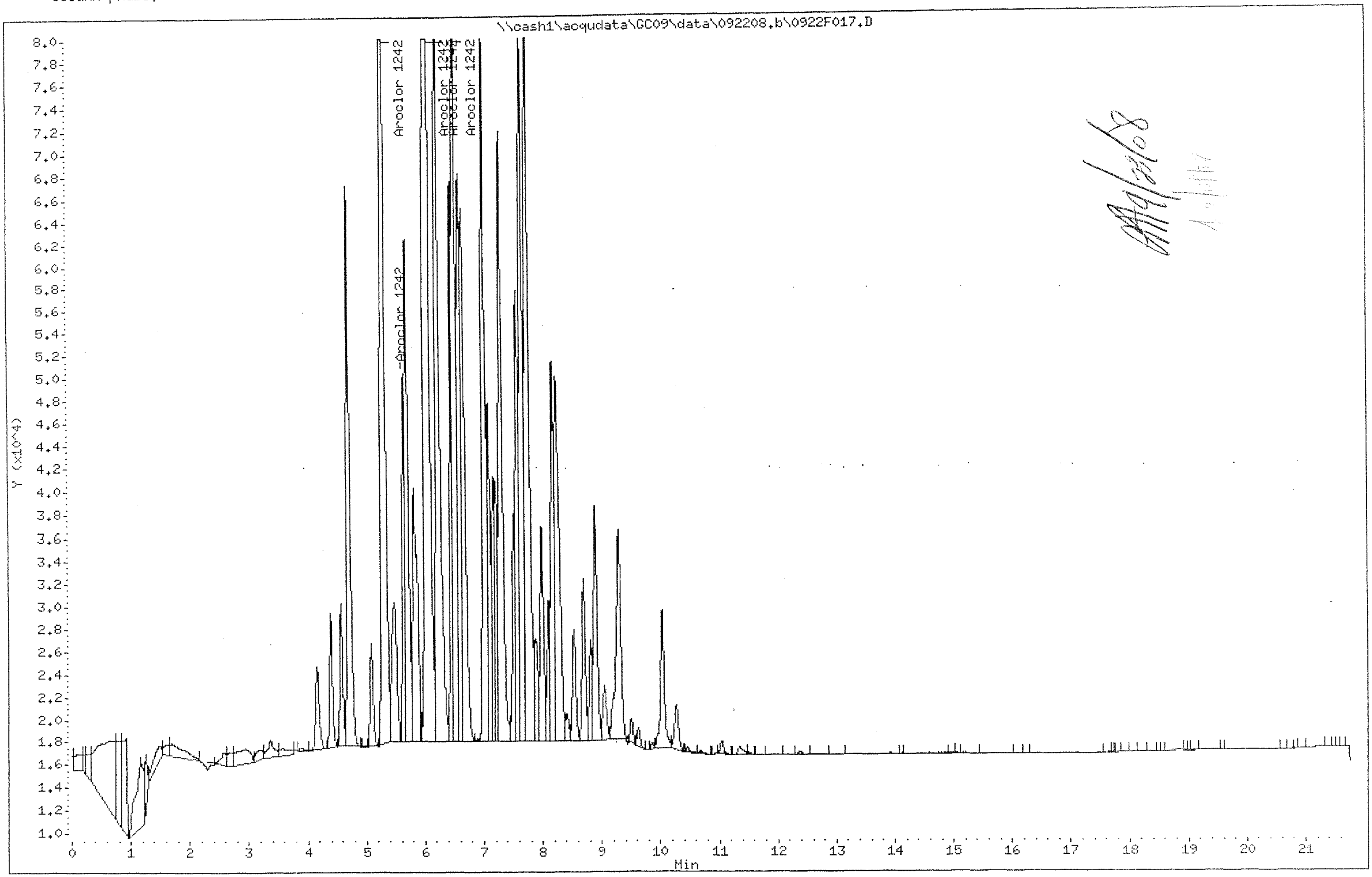
LH 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F017.D
Date : 22-SEP-2008 23:15
Client ID:
Sample Info: 1242 @ 1000ppb | PCB5-18L | KWG0804201-5

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

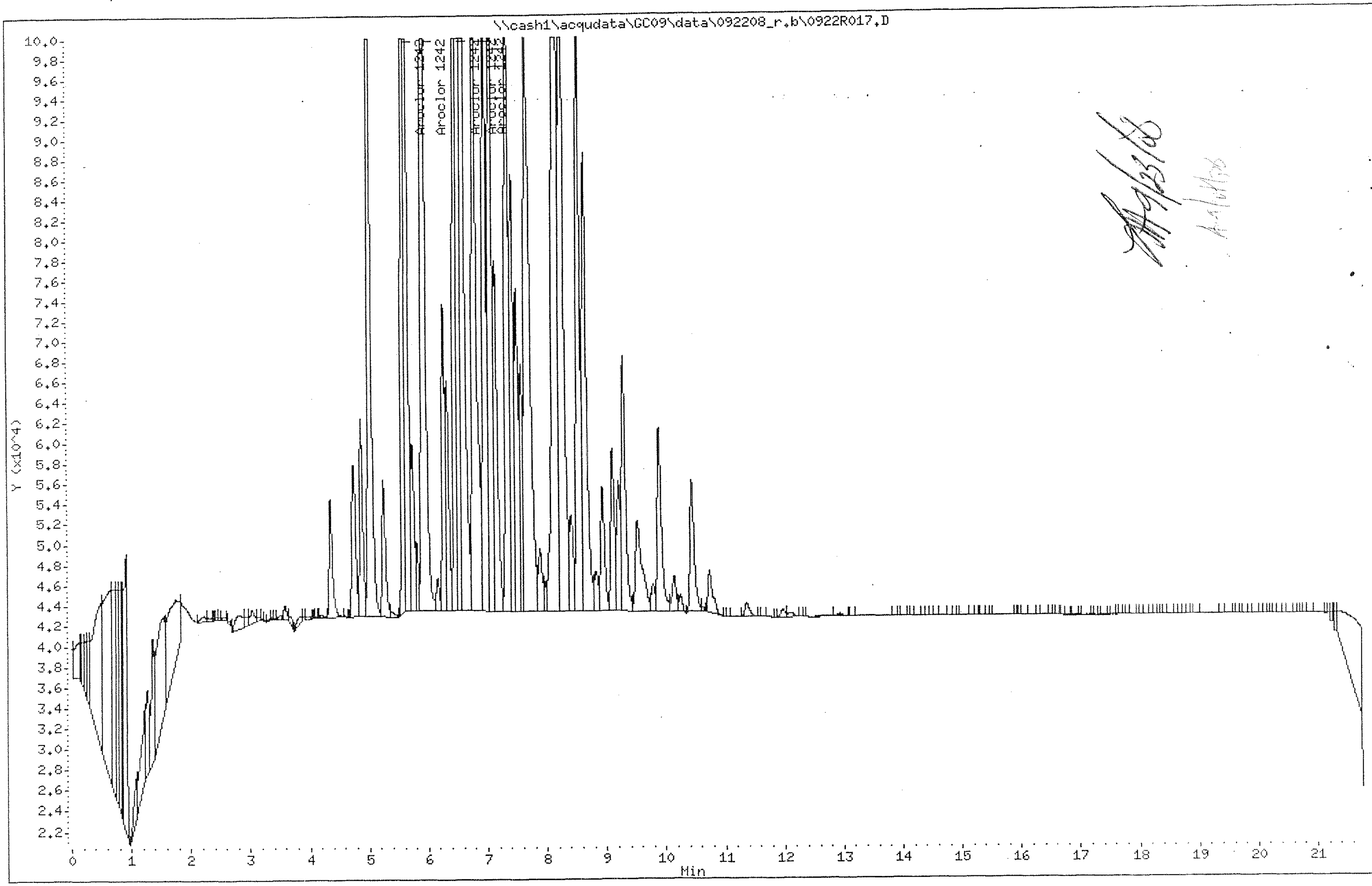


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R017.D
Date : 22-SEP-2008 23:15
Client ID:
Sample Info: 1242 @ 1000ppb | PCB5-18L | KWG0804201-5

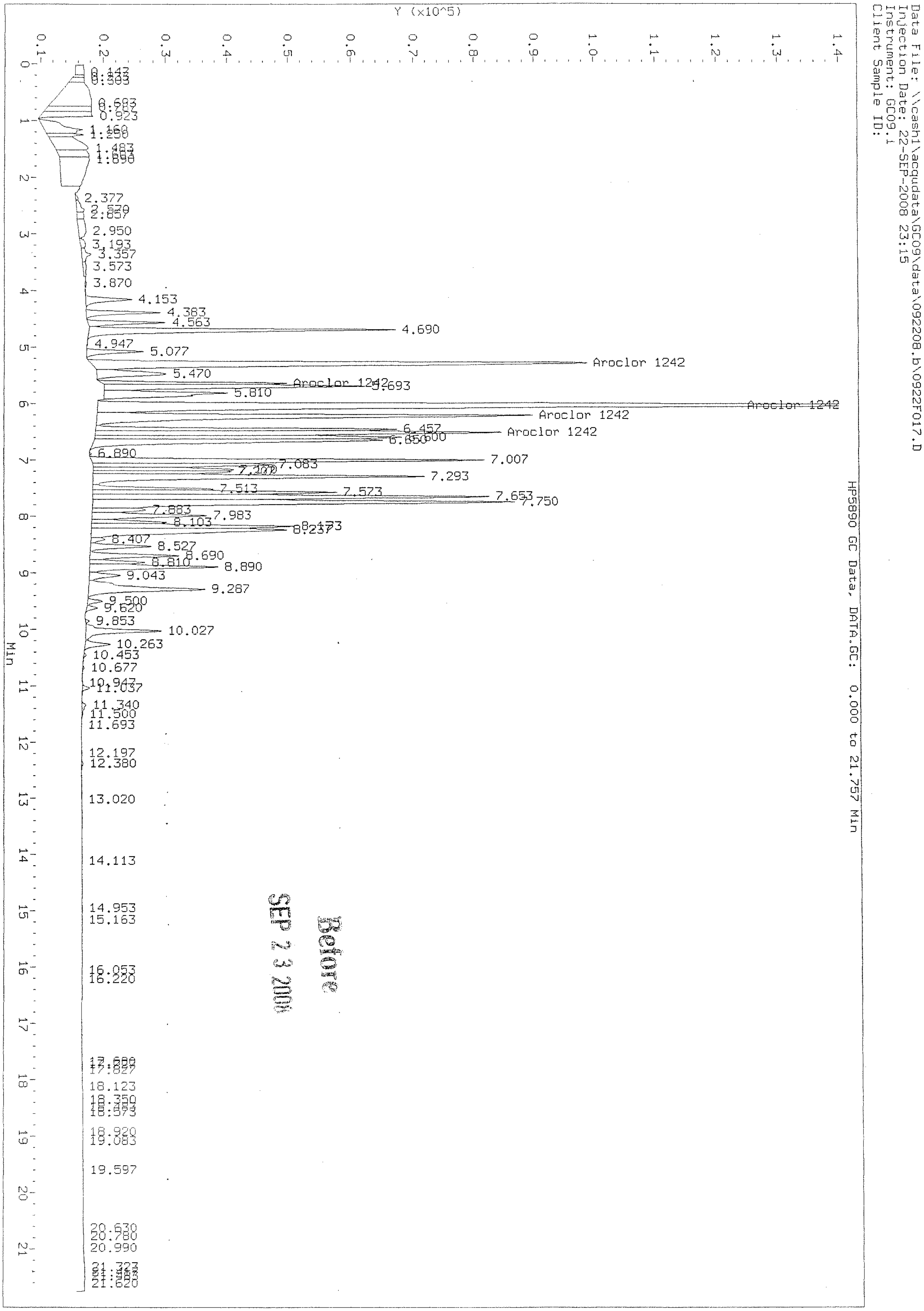
Column phase: DB-XLB

Instrument: GC09.i

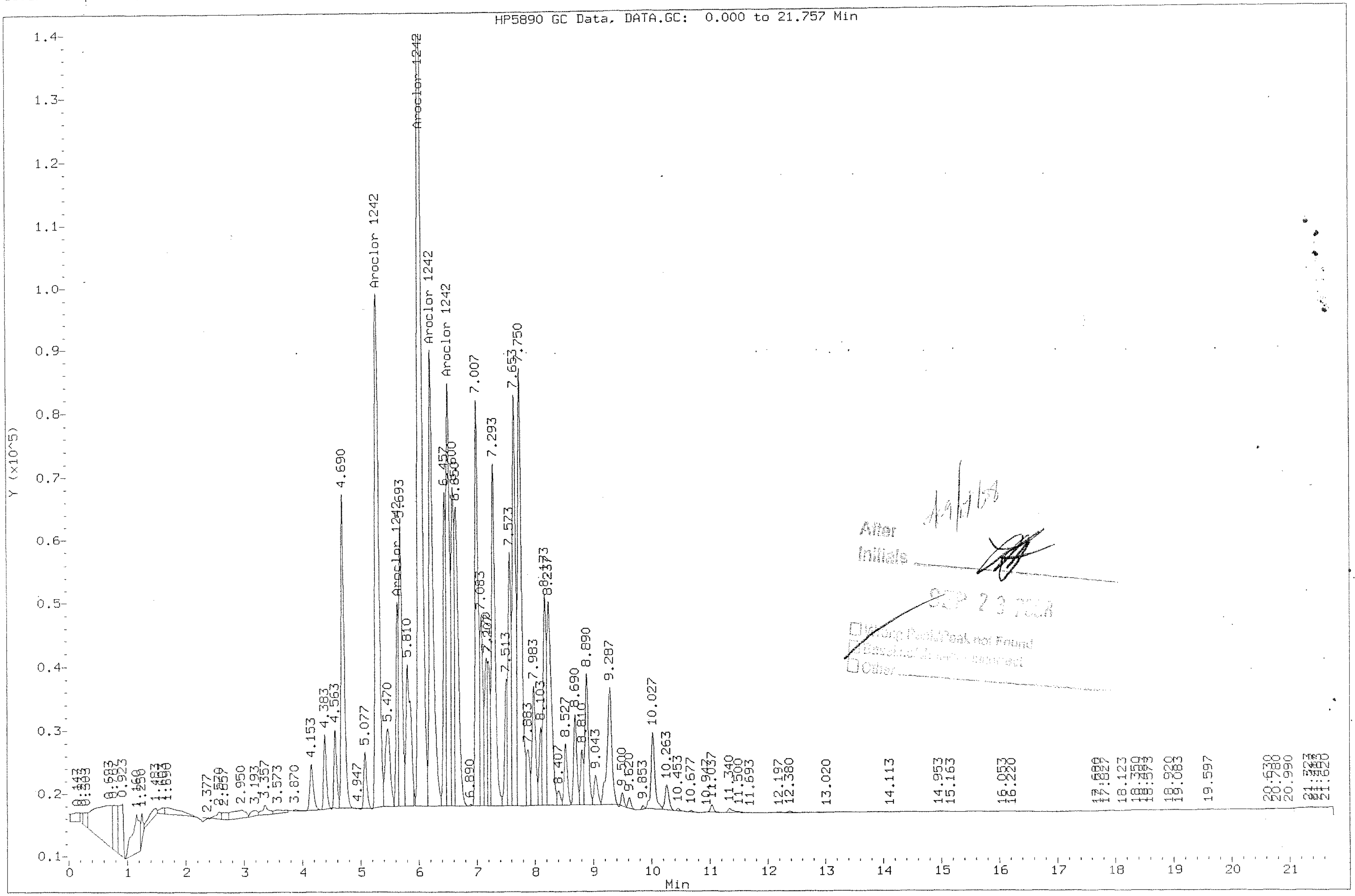
Operator: LHarris
Column diameter: 0.53



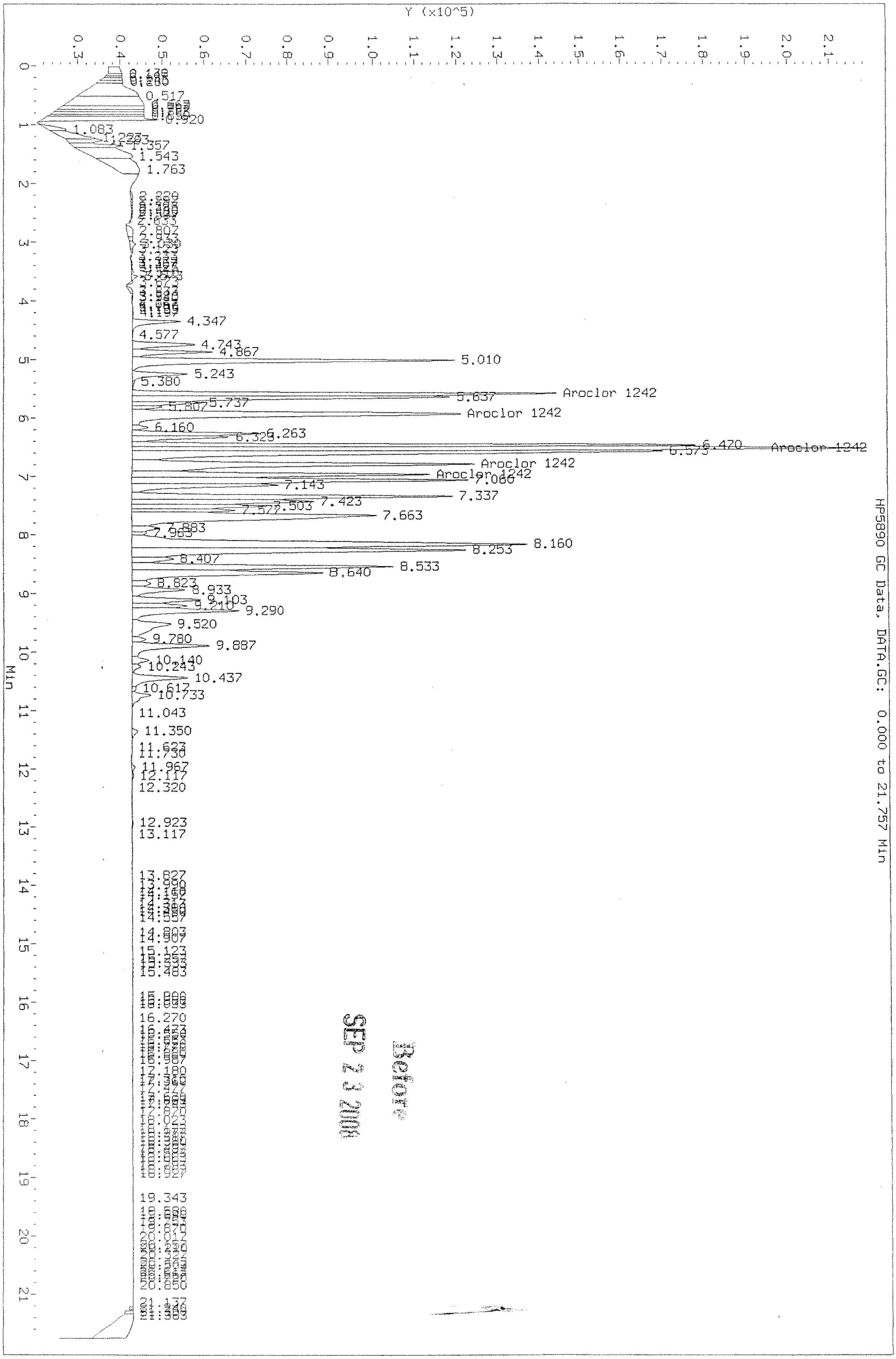
LH 9/23/08


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F017.D
Injection Date: 22-SEP-2008 23:15
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
Aroclor 1242
Before
SEP 2 3 2008

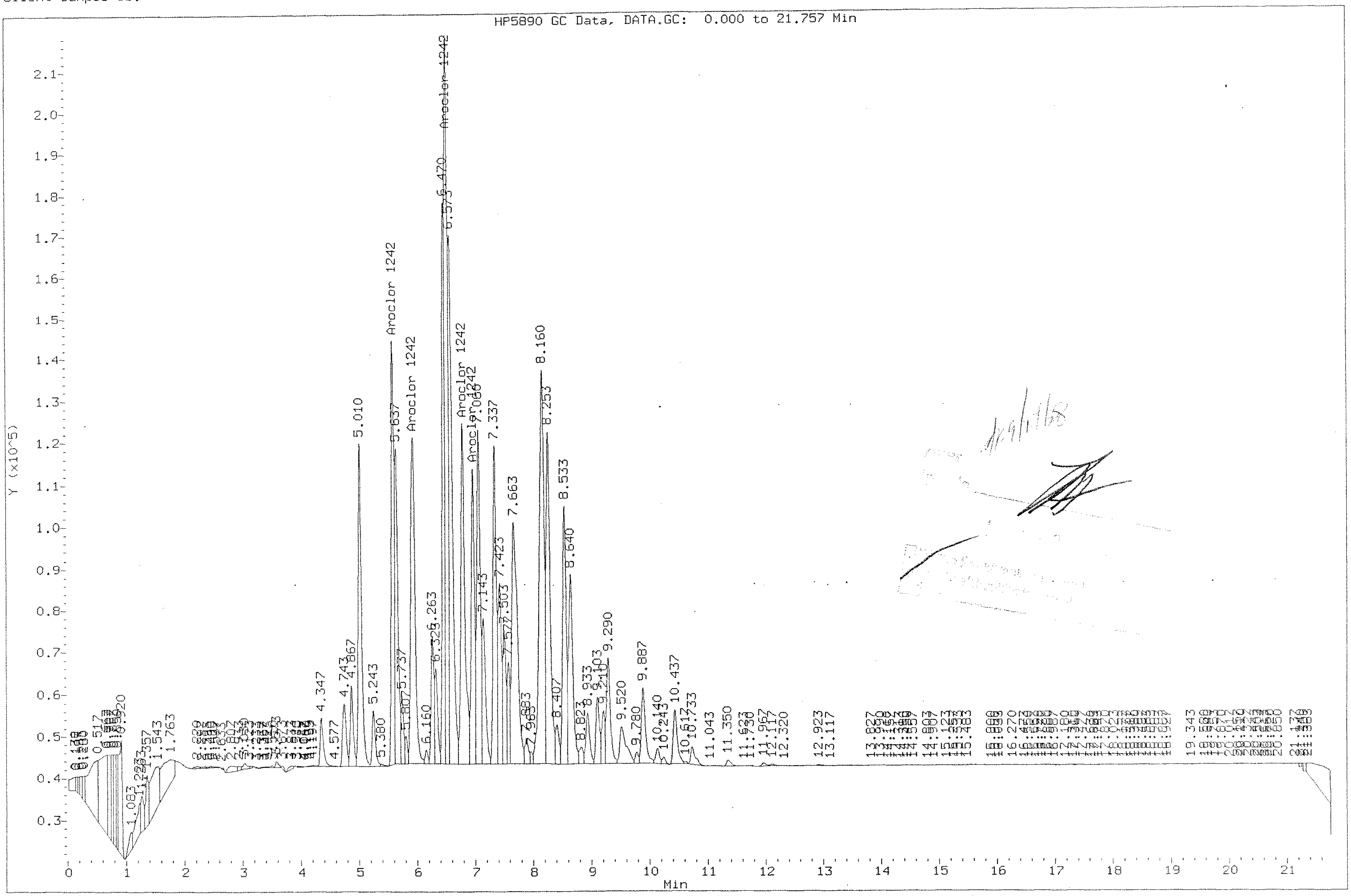
Data File: \\cash1\acqudata\GC09\data\092208.b\0922F017.D
Injection Date: 22-SEP-2008 23:15
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R017.D
Injection Date: 22-SEP-2008 23:15
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R017.D
Injection Date: 22-SEP-2008 23:15
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F021.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F021.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R021.D
Inj Date : 23-SEP-2008 01:01
Sample Info: 1248 @ 1000ppb | PCB5-18M | KWG0804201-6
Misc Info : SEMIVOA GC\W0804201\6-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1248.SUB
Sub List #2 : AR1248.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	6.600	7.060	270306	492303	1000	1000	80.00- 120.00	100.00
	7.007	7.337	373384	490799	1000	1000	110.51- 165.76	138.13
	7.293	8.160	338764	957641	1000	1000	100.26- 150.39	125.33
	7.653	8.253	454266	697169	1000	1000	134.44- 201.67	168.06
	7.750	8.537	577039	508393	1000	1000	170.78- 256.17	213.48
			Average of Peak Amounts =		1000	1000		

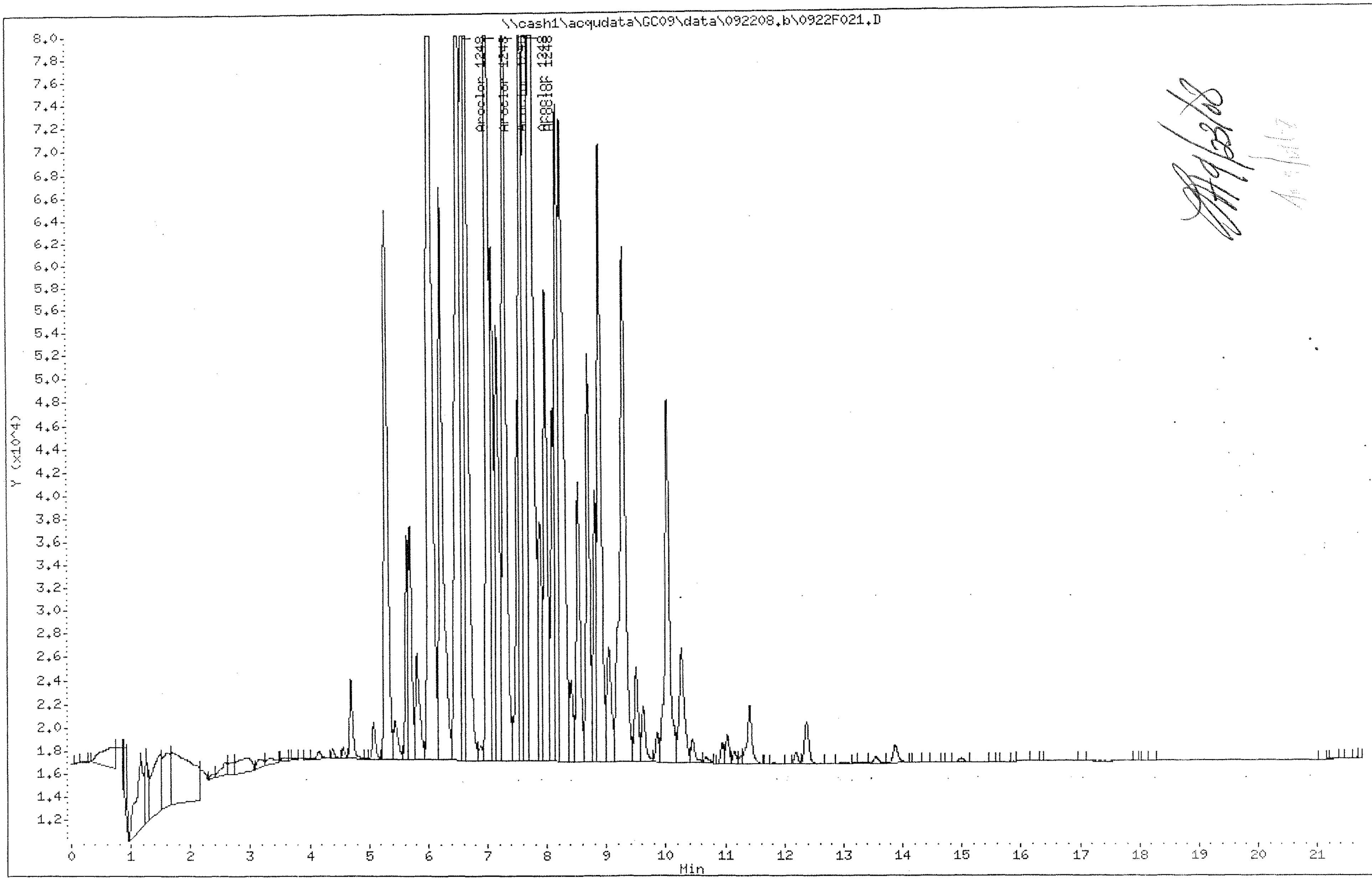
LH 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F021.D
Date : 23-SEP-2008 01:01
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-18M | KWG0804201-6

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



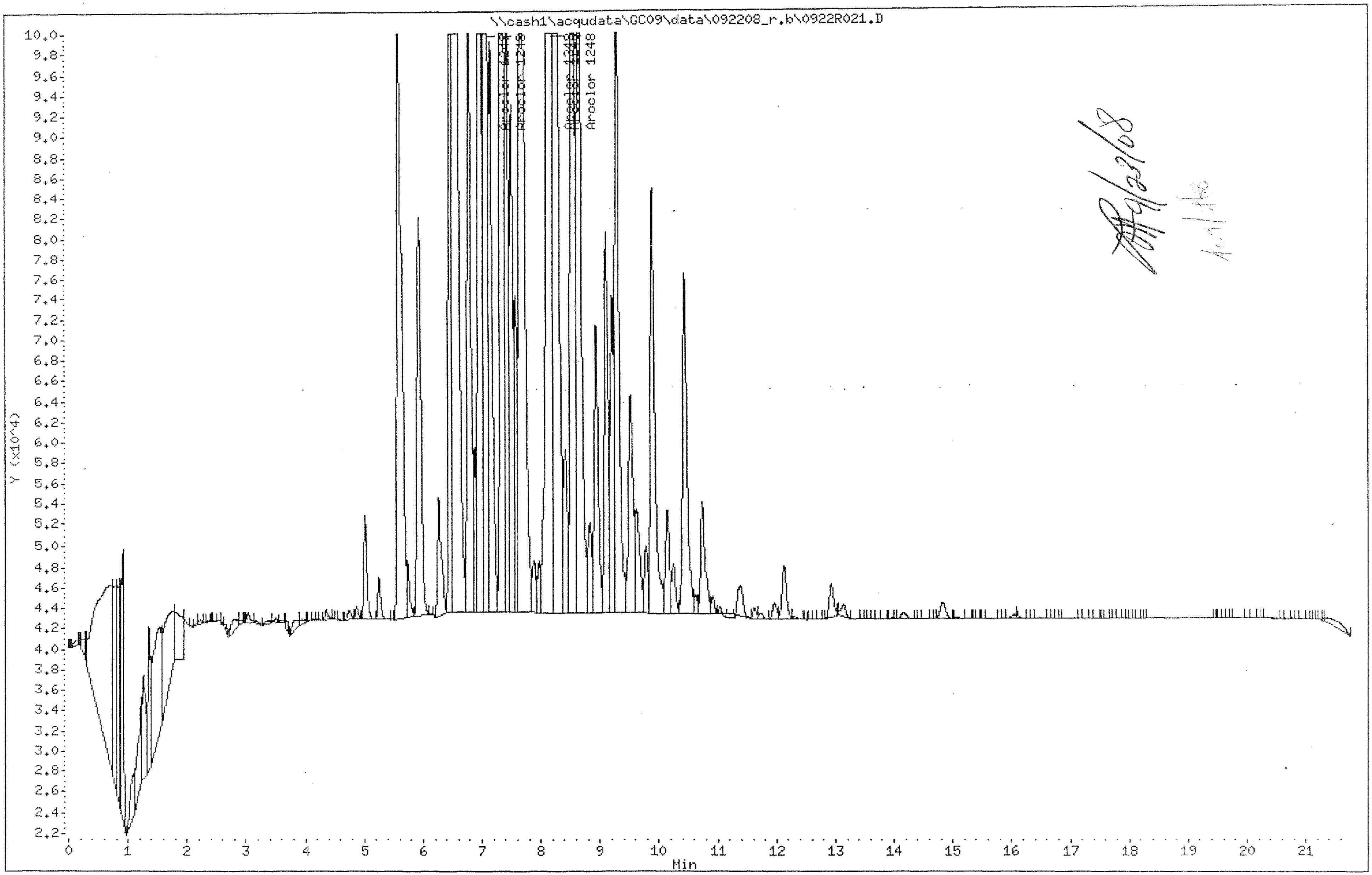
LH 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R021.D
Date : 23-SEP-2008 01:01
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-18M | KWG0804201-6

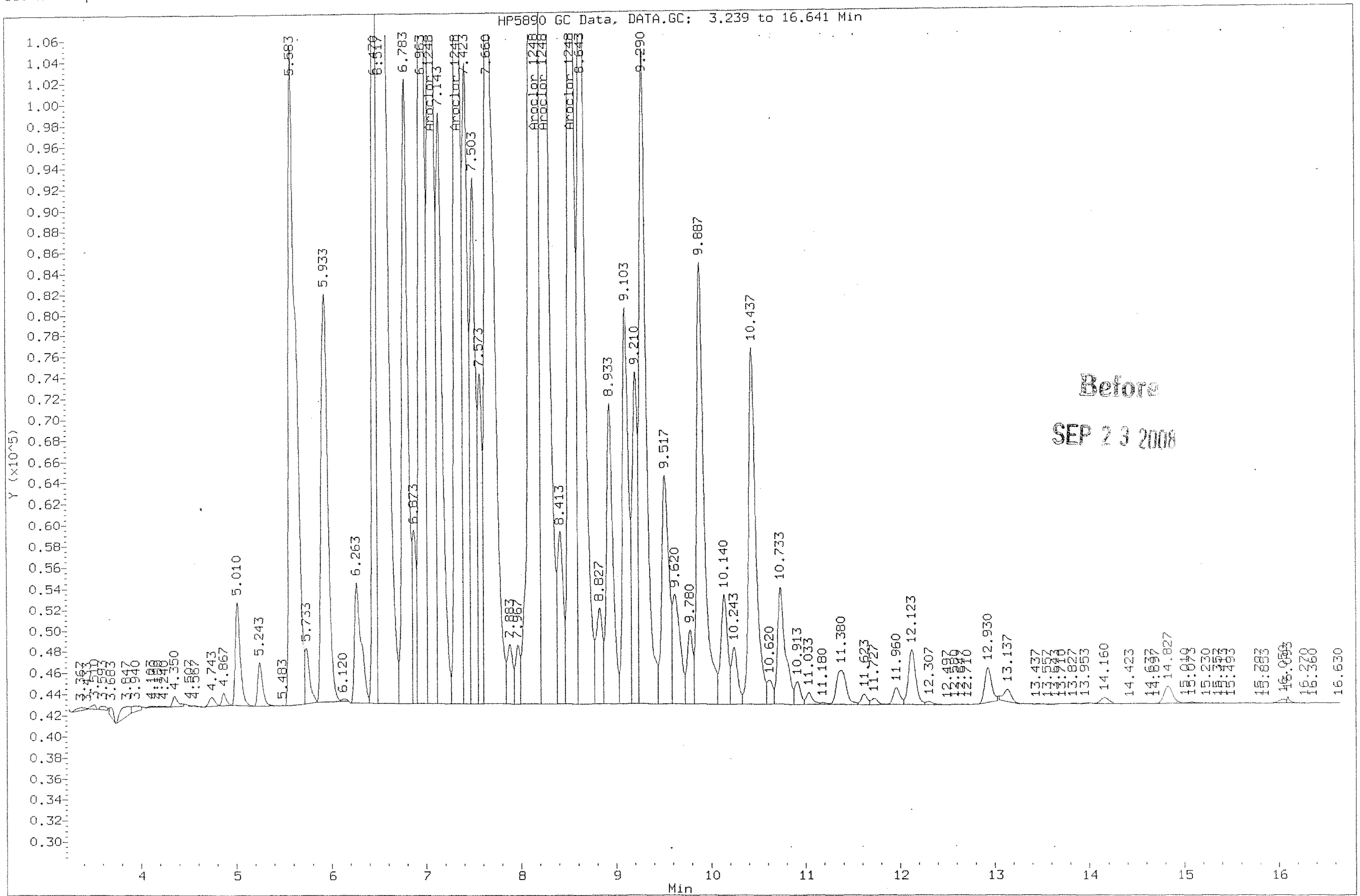
Column phase: DB-XLB

Instrument: GC09.i

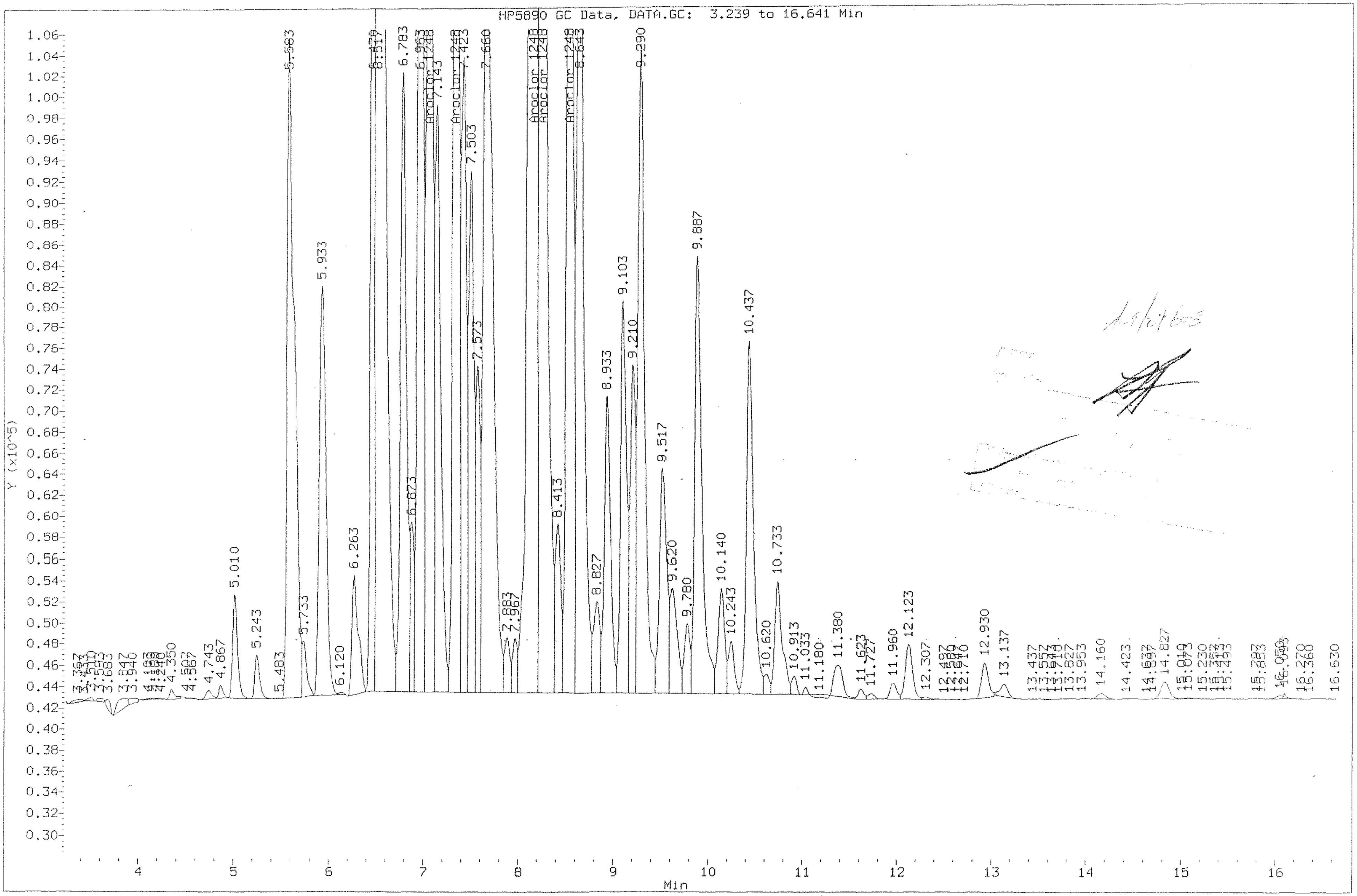
Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R021.D
Injection Date: 23-SEP-2008 01:01
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R021.D
Injection Date: 23-SEP-2008 01:01
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F025.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F025.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R025.D
Inj Date : 23-SEP-2008 02:46
Sample Info: 1254 @ 1000ppb | PCB5-18N | KWG0804201-7
Misc Info : SEMIVOA GC\W0804201\7-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1254.SUB
Sub List #2 : AR1254.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1254	7.980	8.537	512069	803680	1000	1000	80.00- 120.00	100.00(M)
	8.100	8.650	283161	354911	1000	1000	44.24- 66.36	55.30(M)
	8.690	9.100	362117	447367	1000	1000	56.57- 84.86	70.72(M)
	8.890	9.287	739842	829405	1000	1000	115.58- 173.38	167.93(M)
	9.290	9.883	642893	615163	1000	1000	100.44- 150.66	125.55(M)
			Average of Peak Amounts =		1000	1000		

QC Flag Legend

M - Compound response manually integrated.

9/23/08

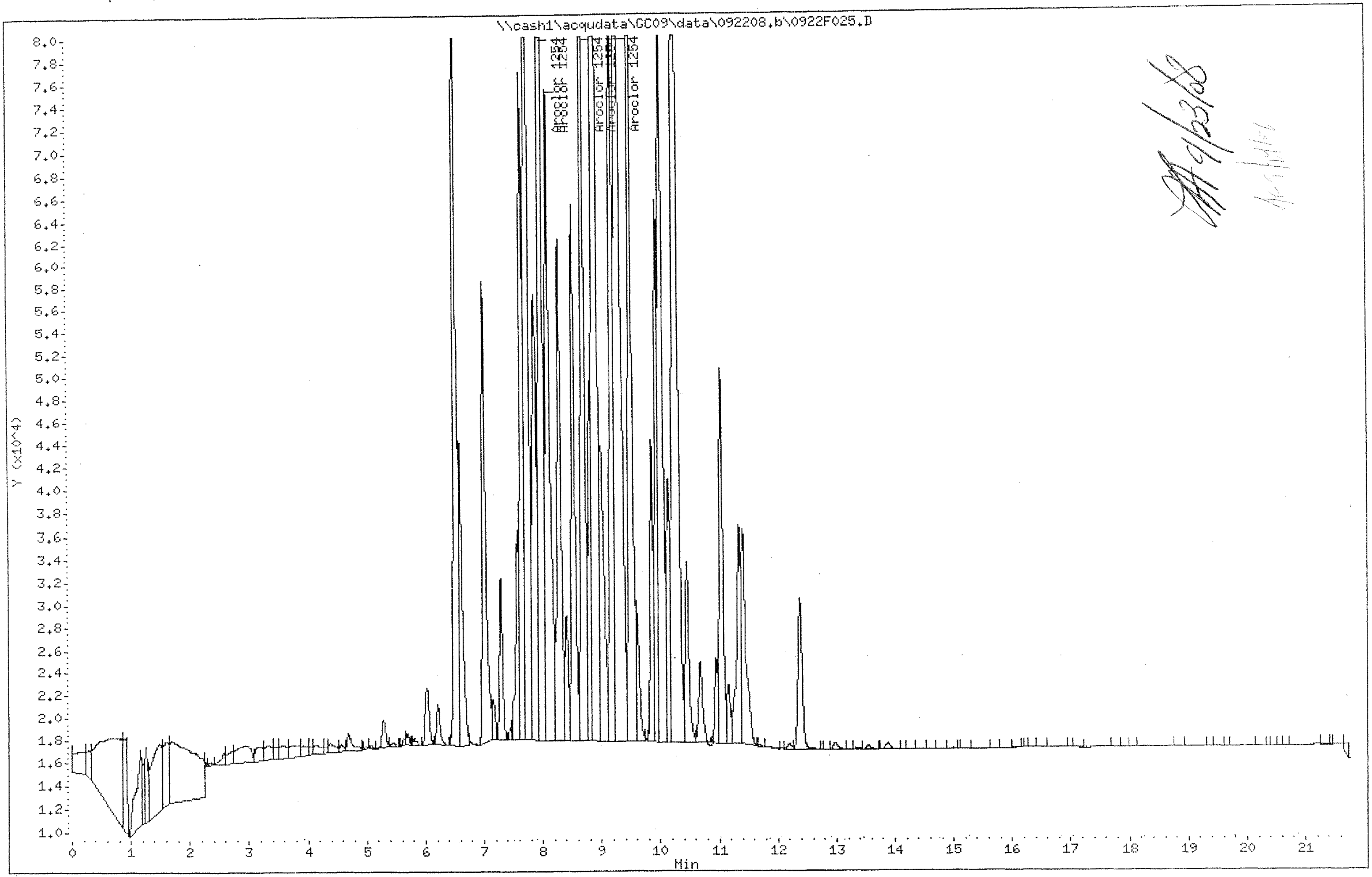
9/24/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F025.D
Date : 23-SEP-2008 02:46
Client ID:
Sample Info: 1254 @ 1000ppb | PCB5-18N | KWG0804201-7

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



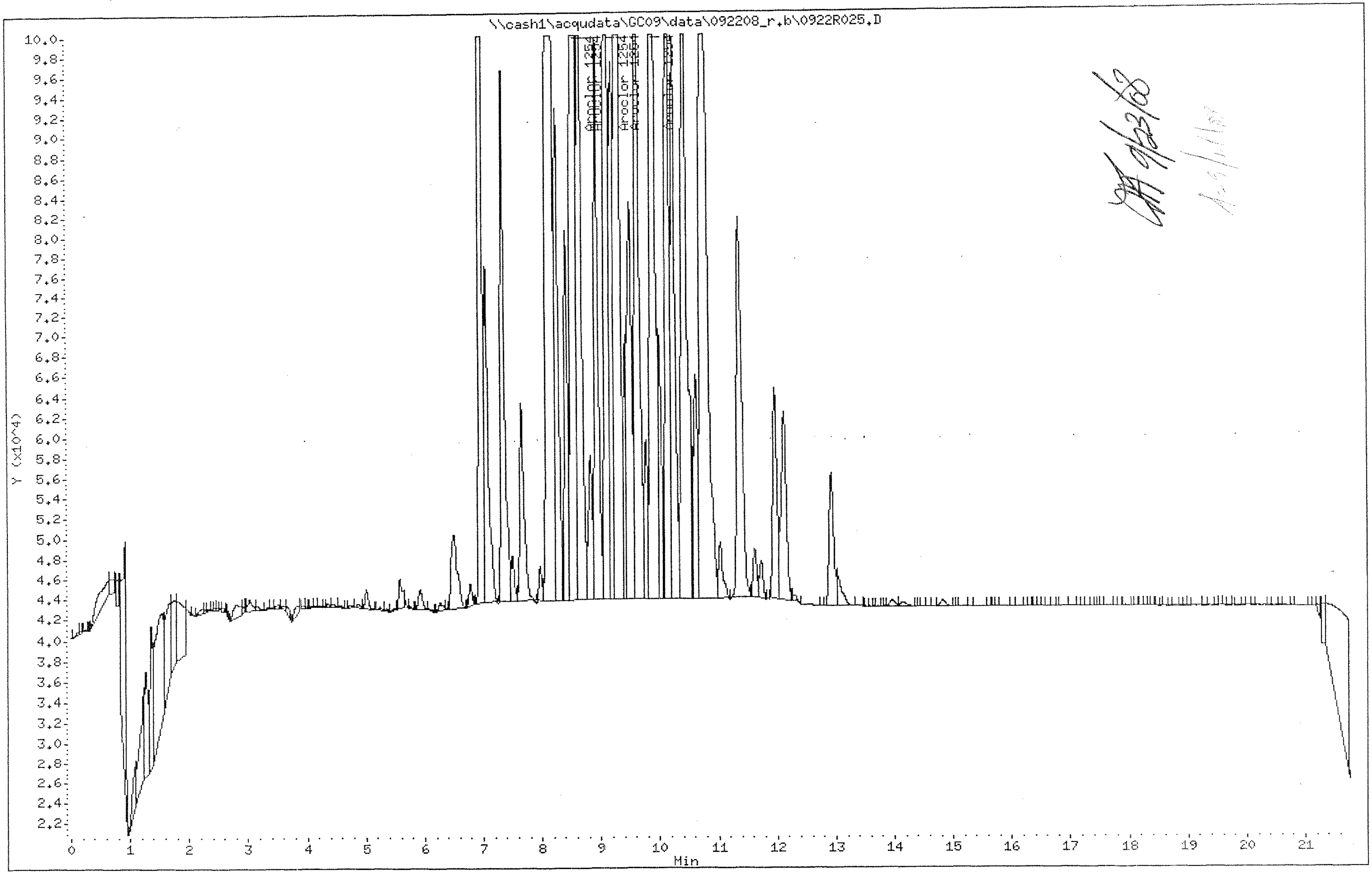
LH 9/23/08

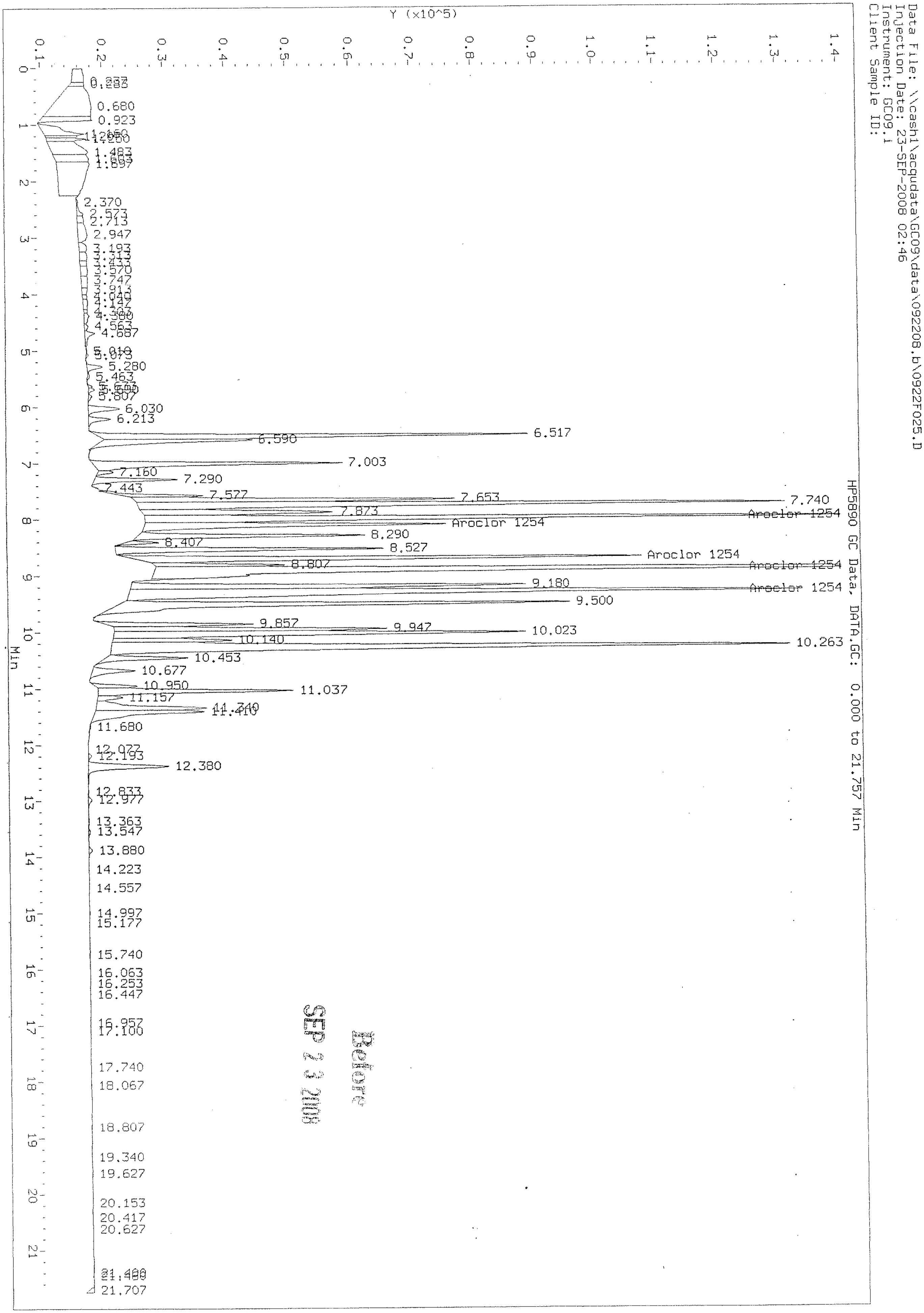
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R025.D
Date : 23-SEP-2008 02:46
Client ID:
Sample Info: 1254 @ 1000ppb | PCB5-18N | KWG0804201-7

Column phase: DB-XLB

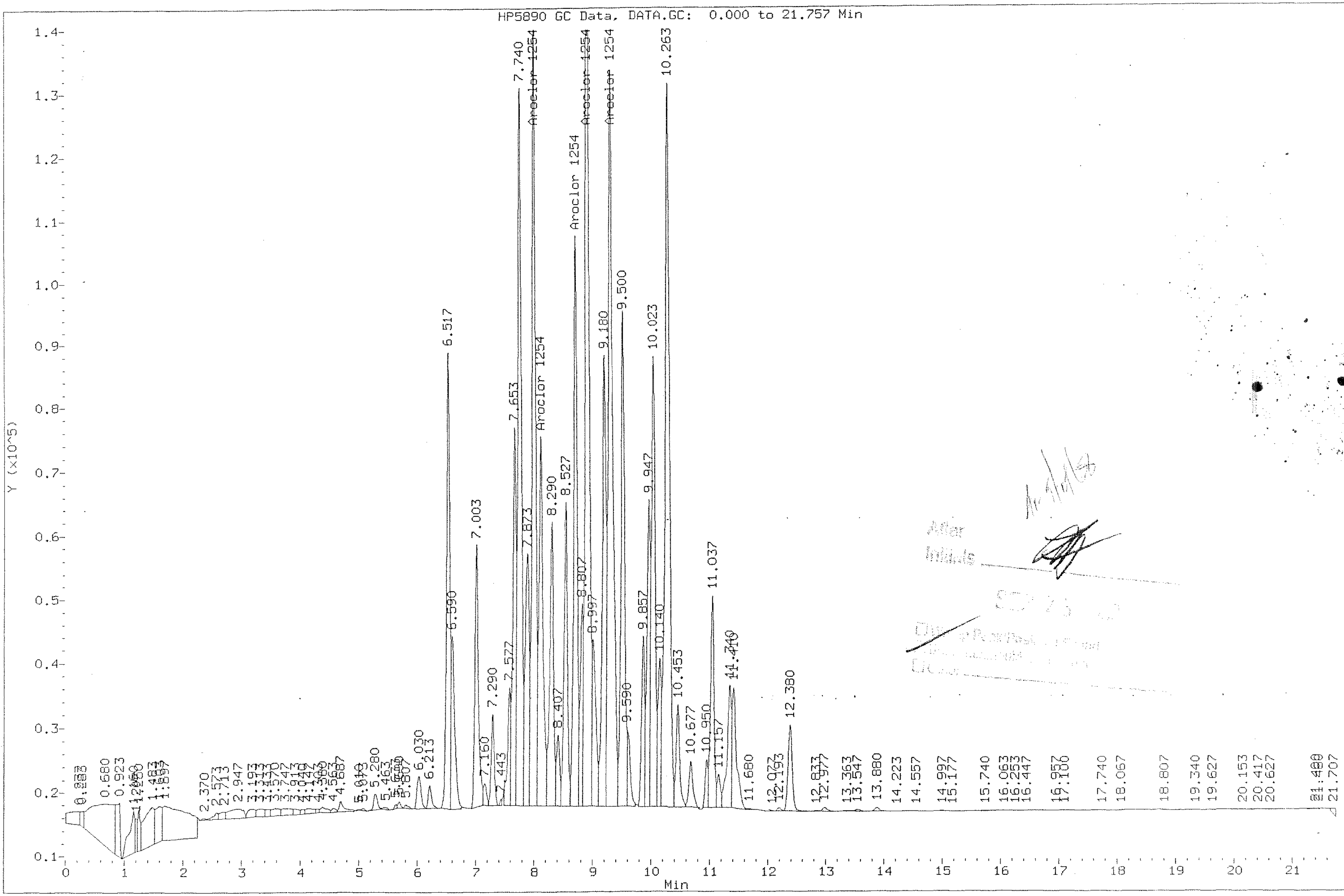
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

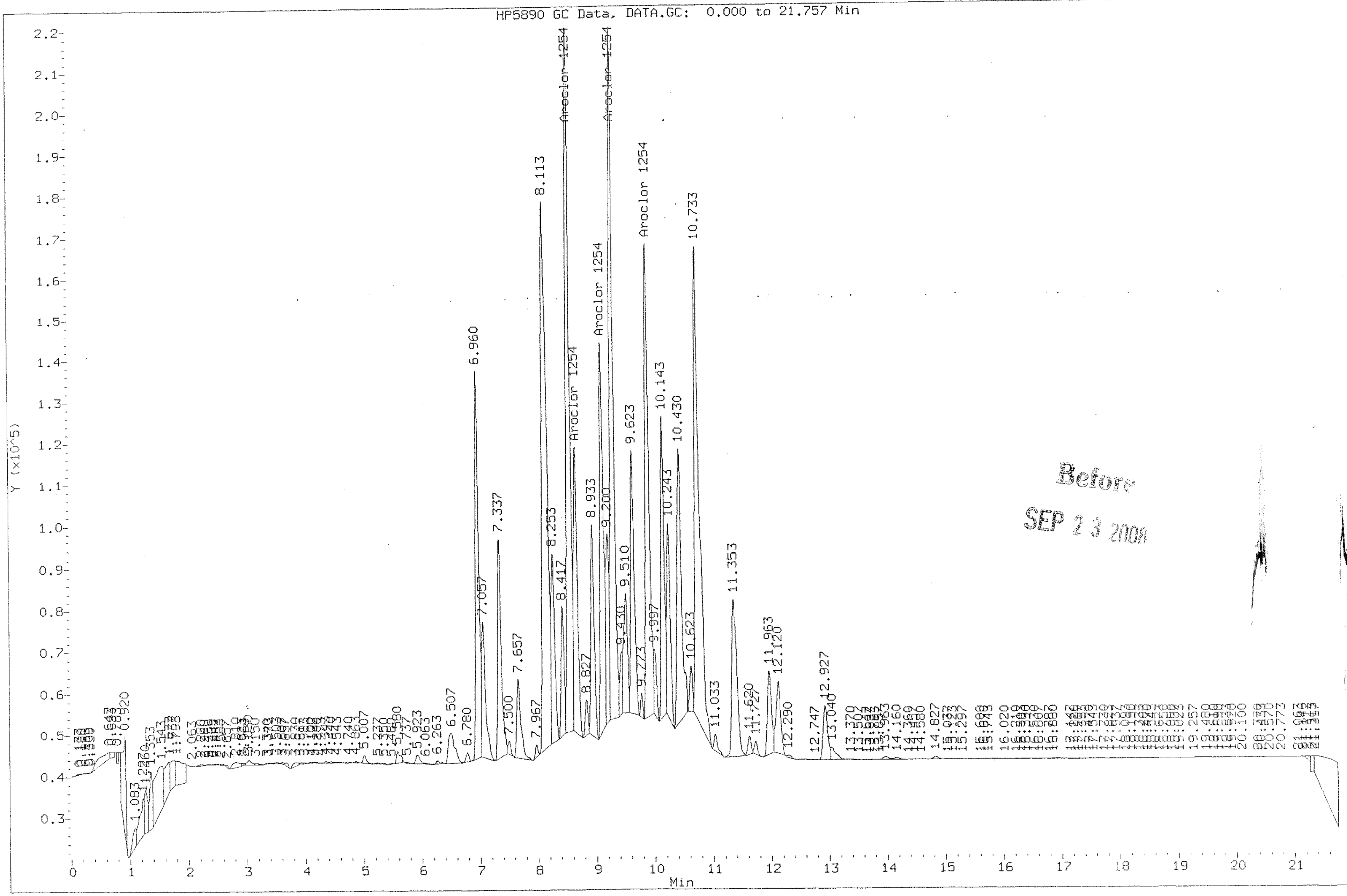



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F025.D
Injection Date: 23-SEP-2008 02:46
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
6.517
6.590
7.003
7.160
7.290
7.443
7.577
7.653
7.740
7.873
Aroclor 1254
8.290
8.407
8.527
8.807
9.180
9.500
9.857
9.947
10.023
10.140
10.263
10.453
10.677
10.950
11.037
11.157
11.680
12.380
13.880
14.223
14.557
15.740
17.740
18.067
18.807
19.340
19.627
20.153
21.707
Before
SEP 23 2008

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F025.D
Injection Date: 23-SEP-2008 02:46
Instrument: GC09.i
Client Sample ID:

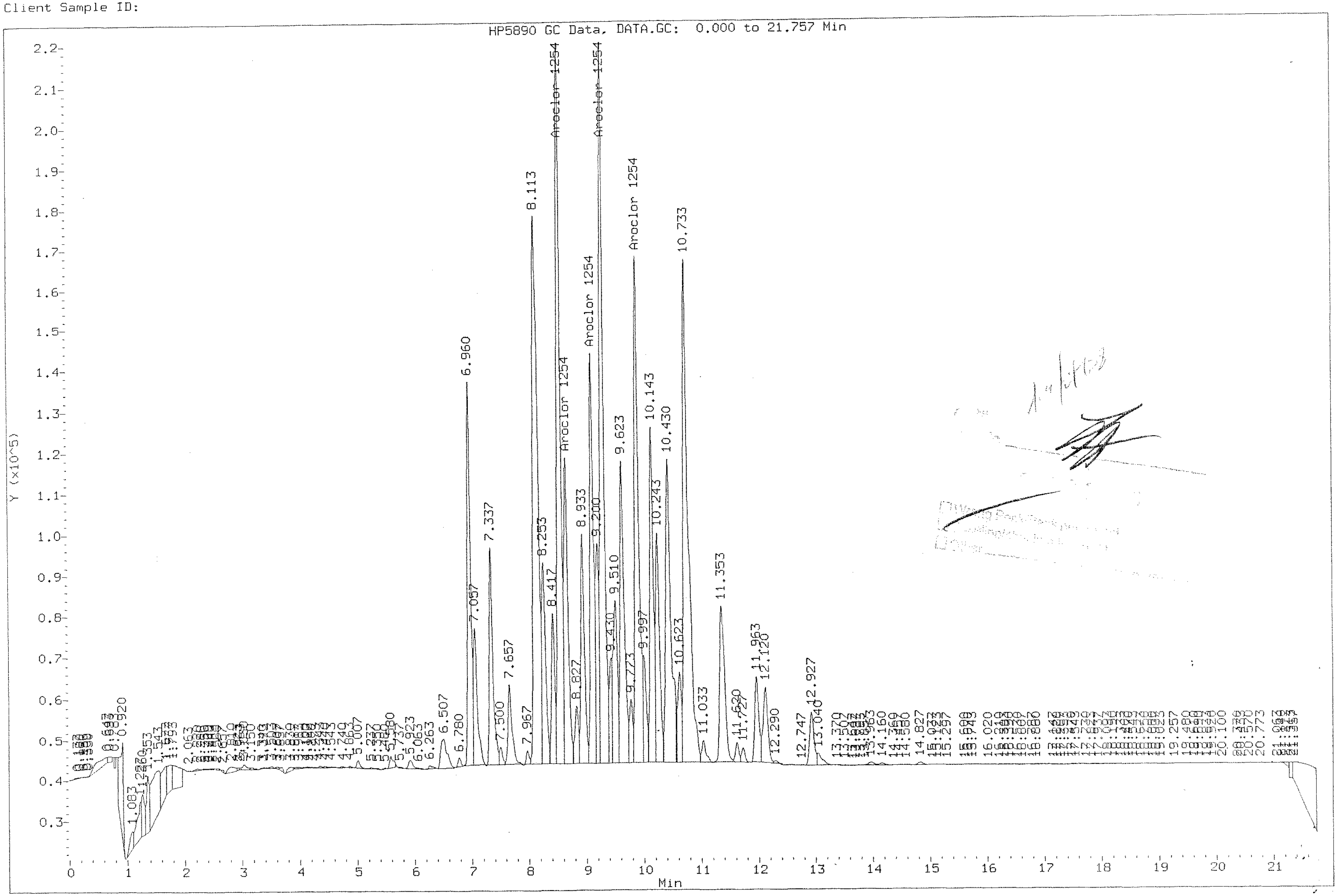


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R025.D
Injection Date: 23-SEP-2008 02:46
Instrument: GC09.i
Client Sample ID:



Before
SEP 23 2008

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R025.D
Injection Date: 23-SEP-2008 02:46
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F029.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F029.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R029.D
Inj Date : 23-SEP-2008 04:31
Sample Info: 1262 @ 1000ppb | PCB5-180 | KWG0804201-8
Misc Info : SEMIVOA GC\W0804201\8-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1262.SUB
Sub List #2 : AR1262.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1262	10.333	10.913	709838	742329	1000	1000	80.00- 120.00	100.00
	10.950	11.400	543548	601978	1000	1000	61.26- 91.89	76.57
	11.413	12.123	1043755	1232912	1000	1000	117.63- 176.45	147.04
	12.197	12.930	468548	929259	1000	1000	52.81- 79.21	66.01
	12.373	13.137	824371	716701	1000	1000	92.91- 139.36	116.14
			Average of Peak Amounts =		1000	1000		

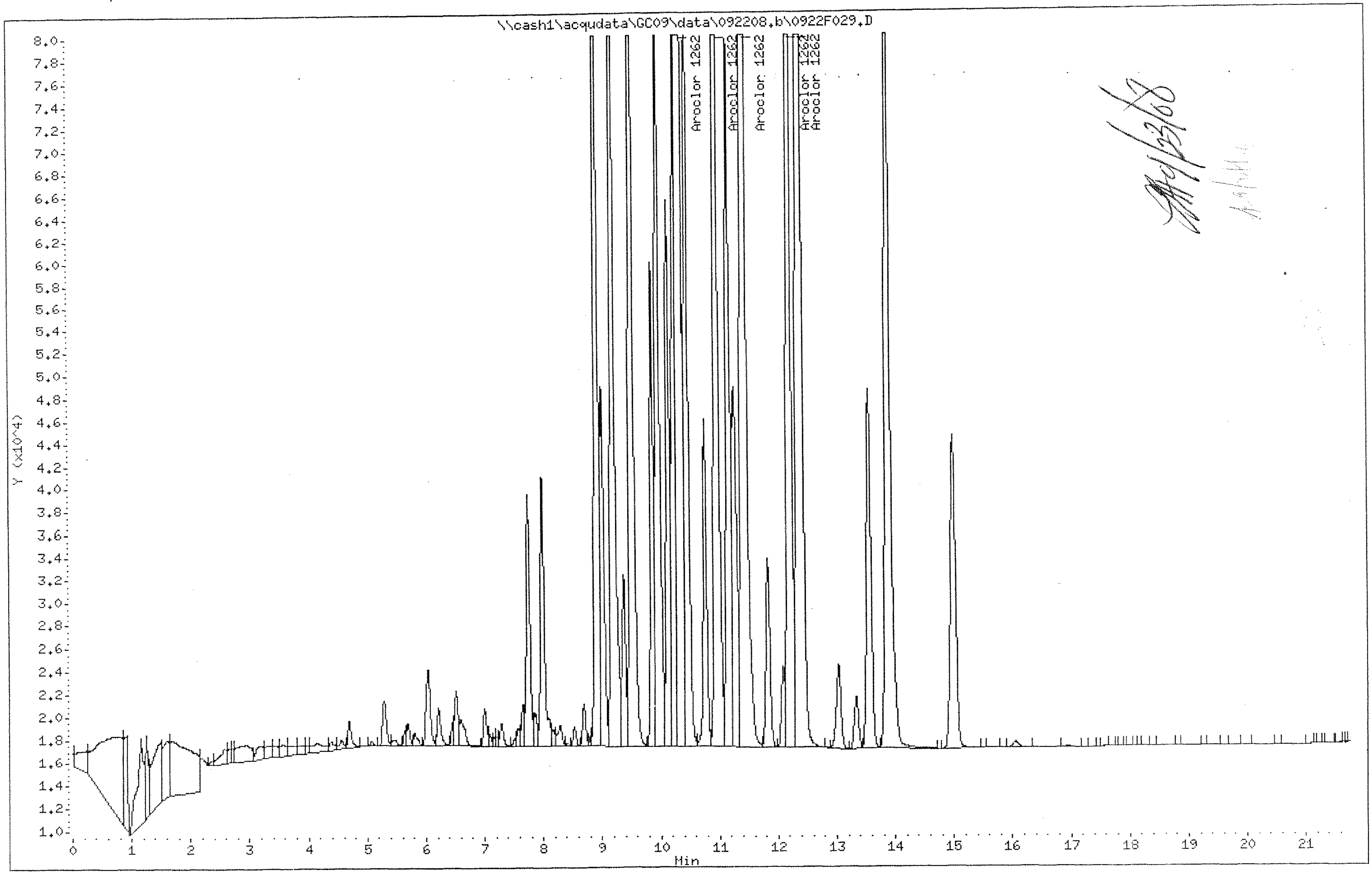
LH 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F029.D
Date : 23-SEP-2008 04:31
Client ID:
Sample Info: 1262 @ 1000ppb | PCB5-180 | KWG0804201-8

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



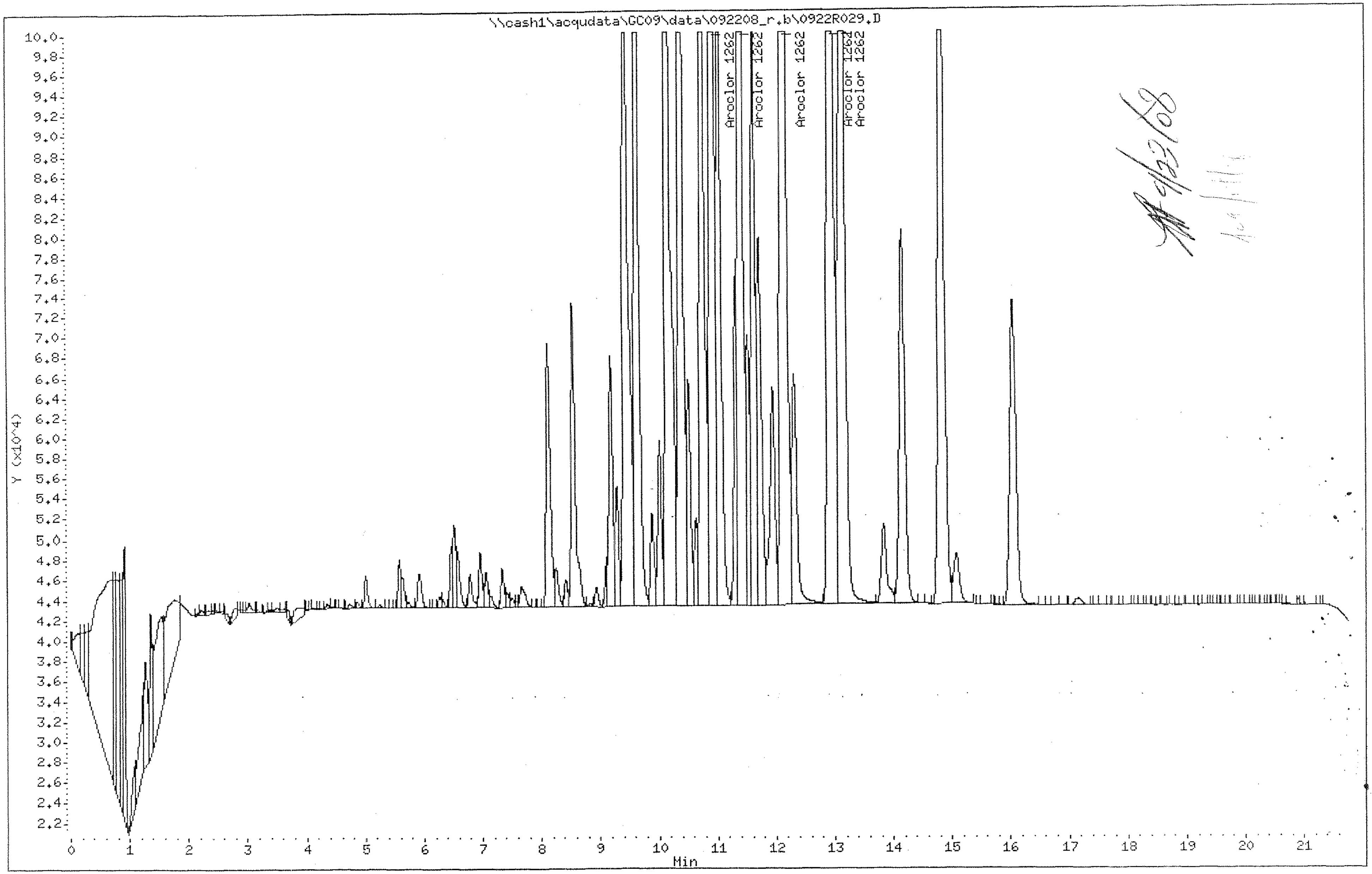
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R029.D
Date : 23-SEP-2008 04:31
Client ID:
Sample Info: 1262 @ 1000ppb | PCB5-180 | KWG0804201-8

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F033.D
Report Date: 23-Sep-2008 16:36

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F033.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R033.D
Inj Date : 23-SEP-2008 06:16
Sample Info: 1268 @ 1000ppb | PCB5-18P | KWG0804201-9
Misc Info : SEMIVOA GC\W0804201\9-ICAL.H
Cal Date : 23-SEP-2008 15:26
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1268.SUB
Sub List #2 : AR1268.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1268	12.353	13.140	1319004	1617646	1000	1000	80.00- 120.00	100.00
	13.033	13.833	1056441	1308682	1000	1000	64.08- 96.11	80.09
	13.333	14.113	294822	401613	1000	1000	17.88- 26.82	22.35
	13.880	14.823	493071	609460	1000	1000	29.91- 44.86	37.38
	14.987	16.043	2949143	3573579	1000	1000	178.87- 268.31	223.59
		Average of Peak Amounts =			1000	1000		

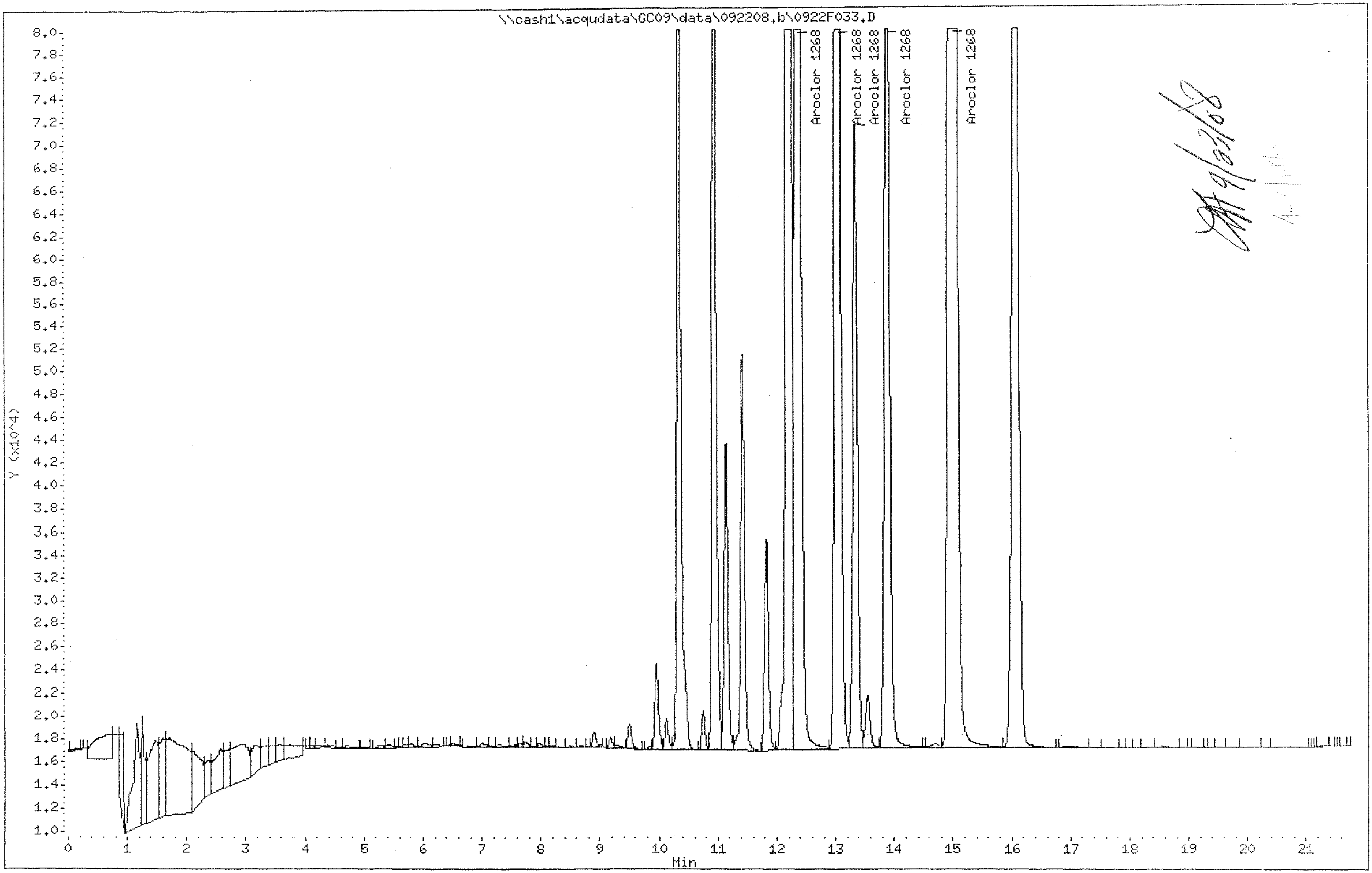
AA 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F033.D
Date : 23-SEP-2008 06:16
Client ID:
Sample Info: 1268 @ 1000ppb | PCB5-18P | KWG0804201-9

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

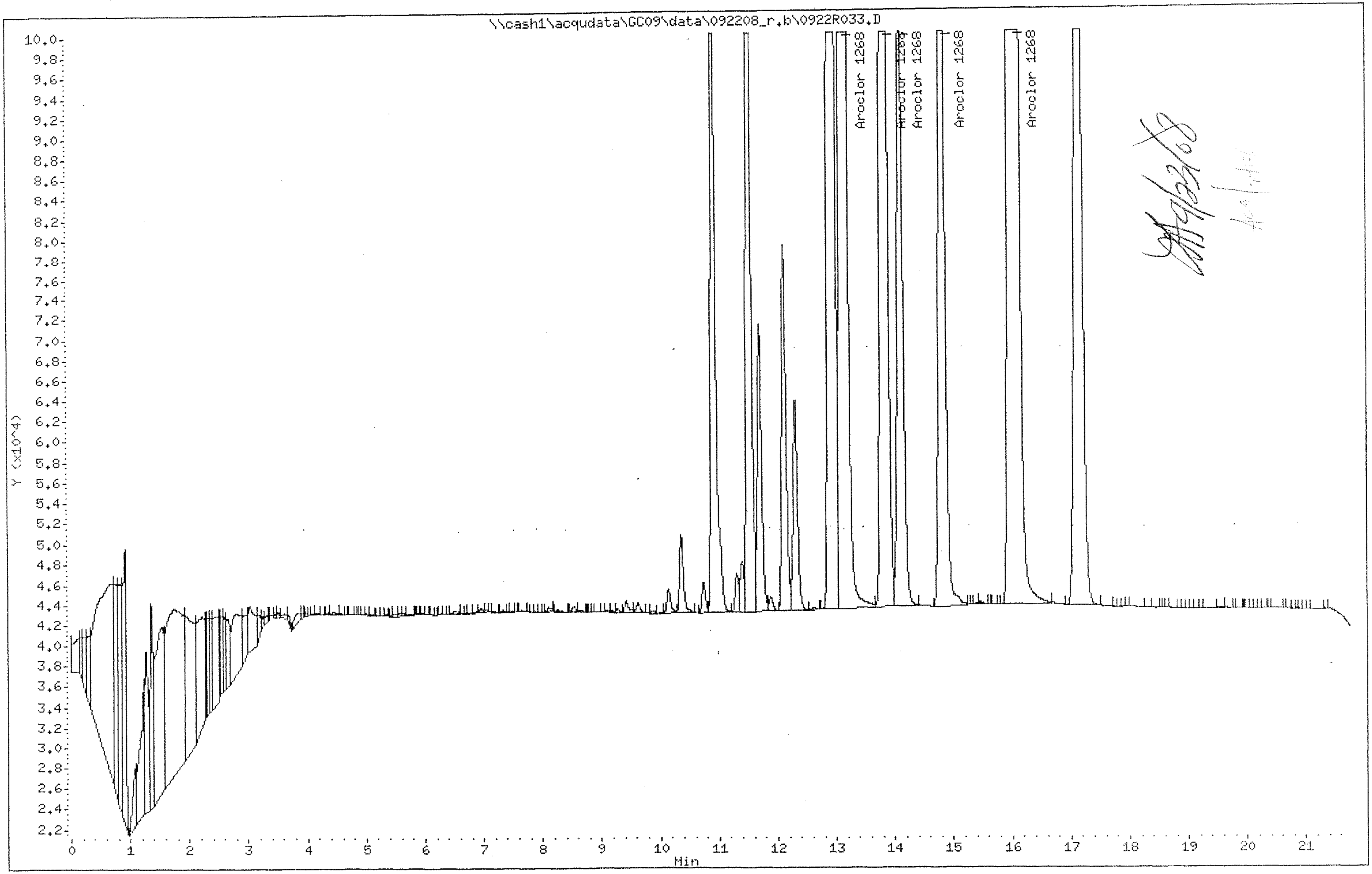


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R033.D
Date : 23-SEP-2008 06:16
Client ID:
Sample Info: 1268 @ 1000ppb | PCB5-18P | KWG0804201-9

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F035.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F035.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
Inj Date : 23-SEP-2008 07:09
Sample Info: 1660 @ 25ppb | PCB5-23A | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	29470	51548	2.89	3.00		100.00
Aroclor 1016	5.690	5.633	5985	9805	27.0	28.6	80.00- 120.00	100.00
	6.213	6.573	12253	19065	28.3	28.0	151.51- 227.27	204.72
	6.597	6.963	6098	9898	27.2	27.5	79.74- 119.61	101.89
	7.003	7.057	8645	11531	28.6	27.9	106.84- 160.26	144.44
	7.287	7.333	4816	10411	21.9	28.3	91.86- 137.79	80.47
		Average of Peak Amounts =			26.6	28.1		
Aroclor 1260	9.950	9.623	10768	20686	25.0	29.1	80.00- 120.00	100.00
	10.260	10.147	19058	21796	27.6	29.3	159.28- 238.92	176.99
	10.327	10.737	14615	24232	23.1	26.3	101.69- 152.53	135.73
	10.947	10.910	12825	12718	28.4	25.8	101.44- 152.16	119.11
	11.413	12.123	26302	29874	28.1	28.2	212.51- 318.76	244.27
		Average of Peak Amounts =			26.4	27.7		
Decachlorobiphenyl	16.060	17.153	30189	38013	2.97	3.03		100.00(M)

QC Flag Legend

M - Compound response manually integrated.

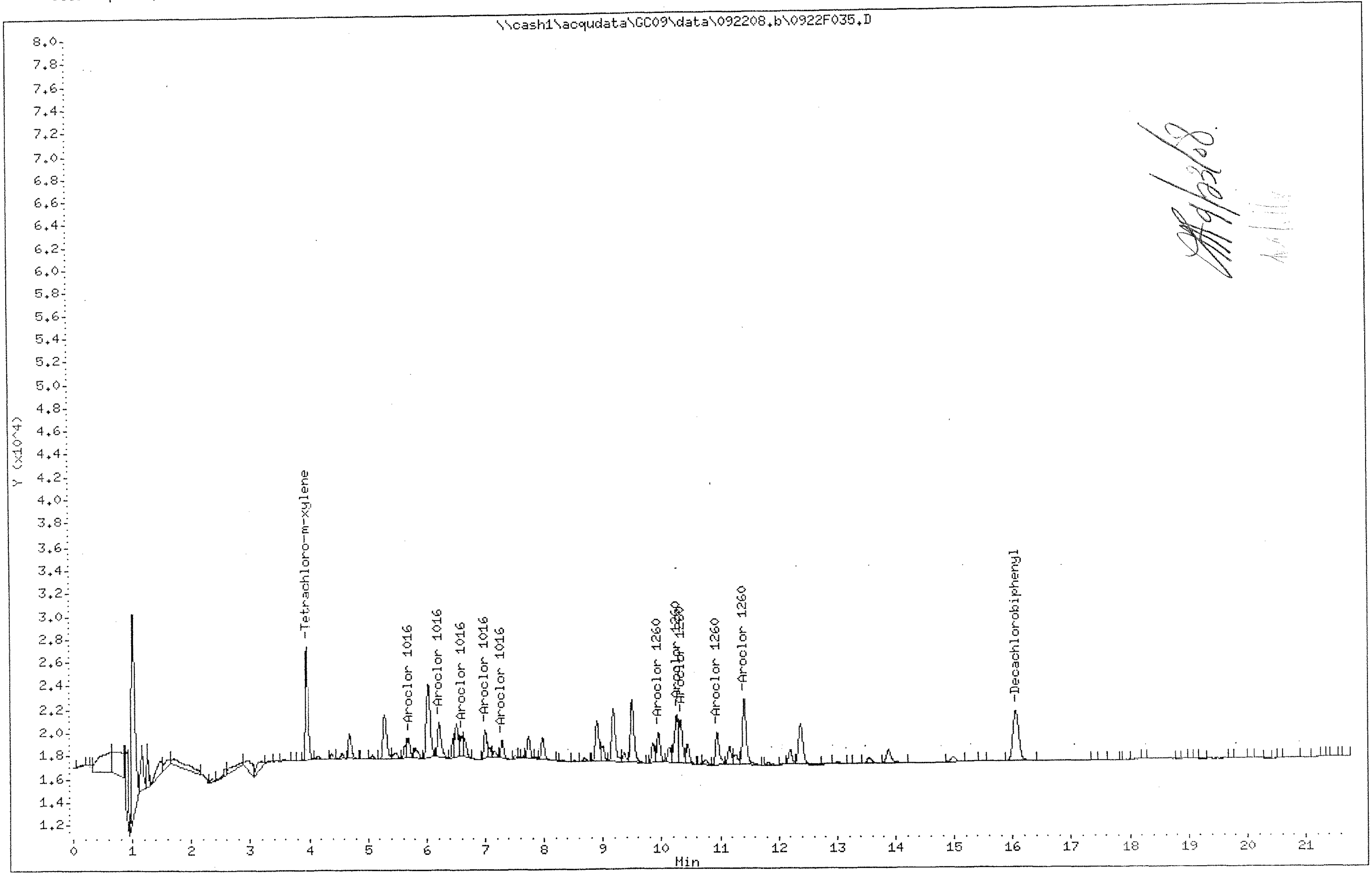
AH 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F035.D
Date : 23-SEP-2008 07:09
Client ID:
Sample Info: 1660 @ 25ppb | PCB5-23A | KWG0804201-10

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

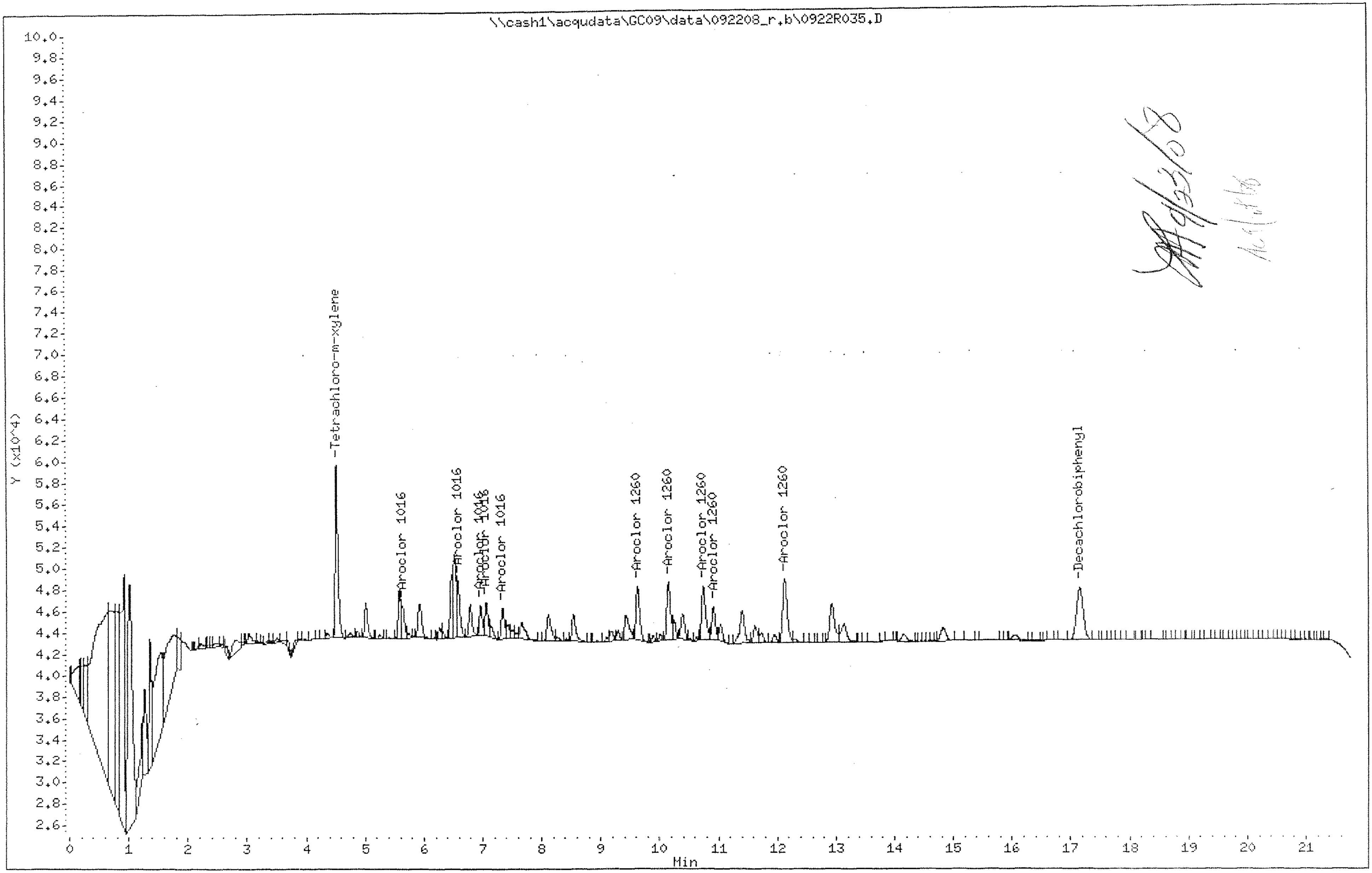


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
Date : 23-SEP-2008 07:09
Client ID:
Sample Info: 1660 @ 25ppb | PCB5-23A | KWG0804201-10

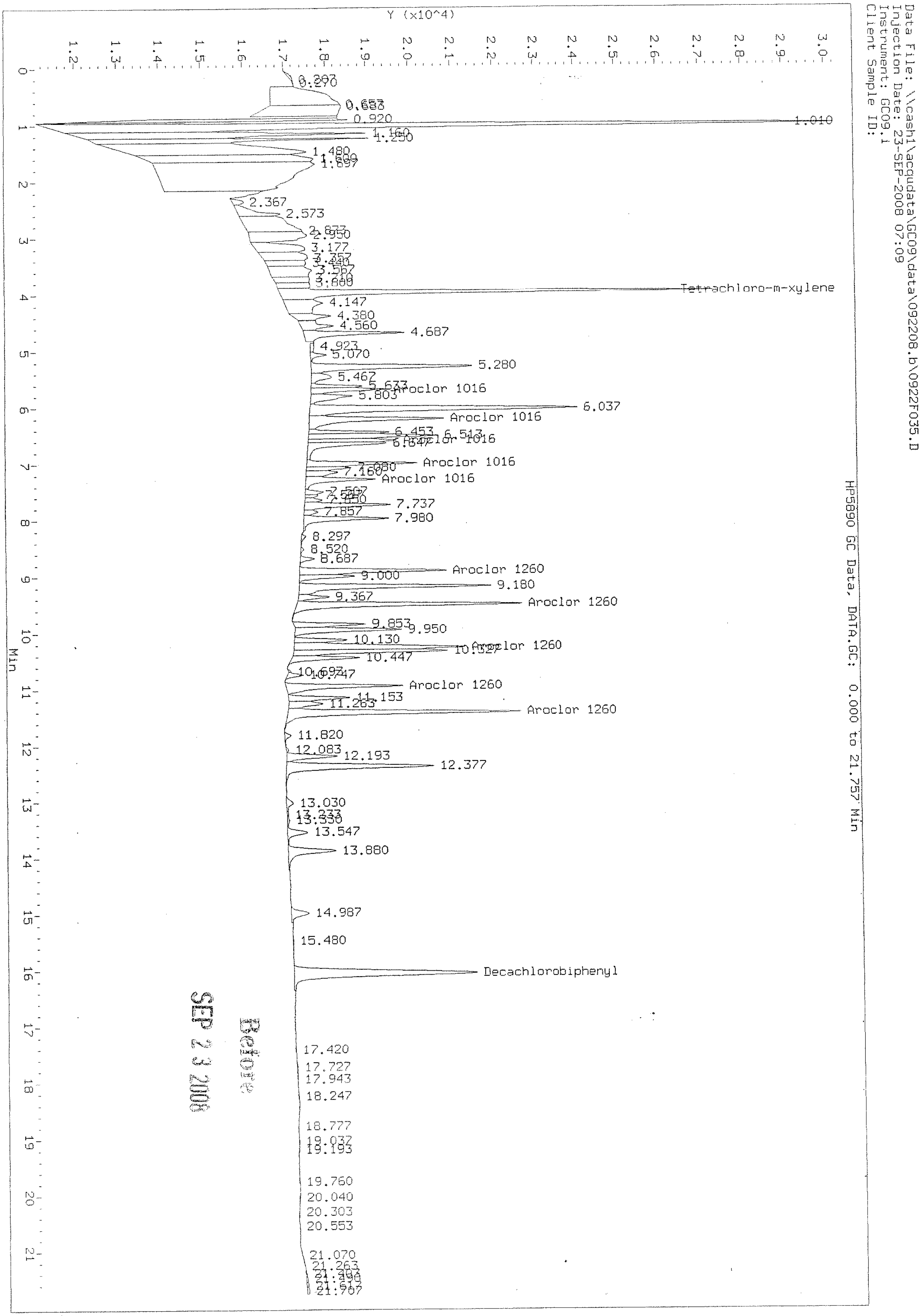
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-XLB

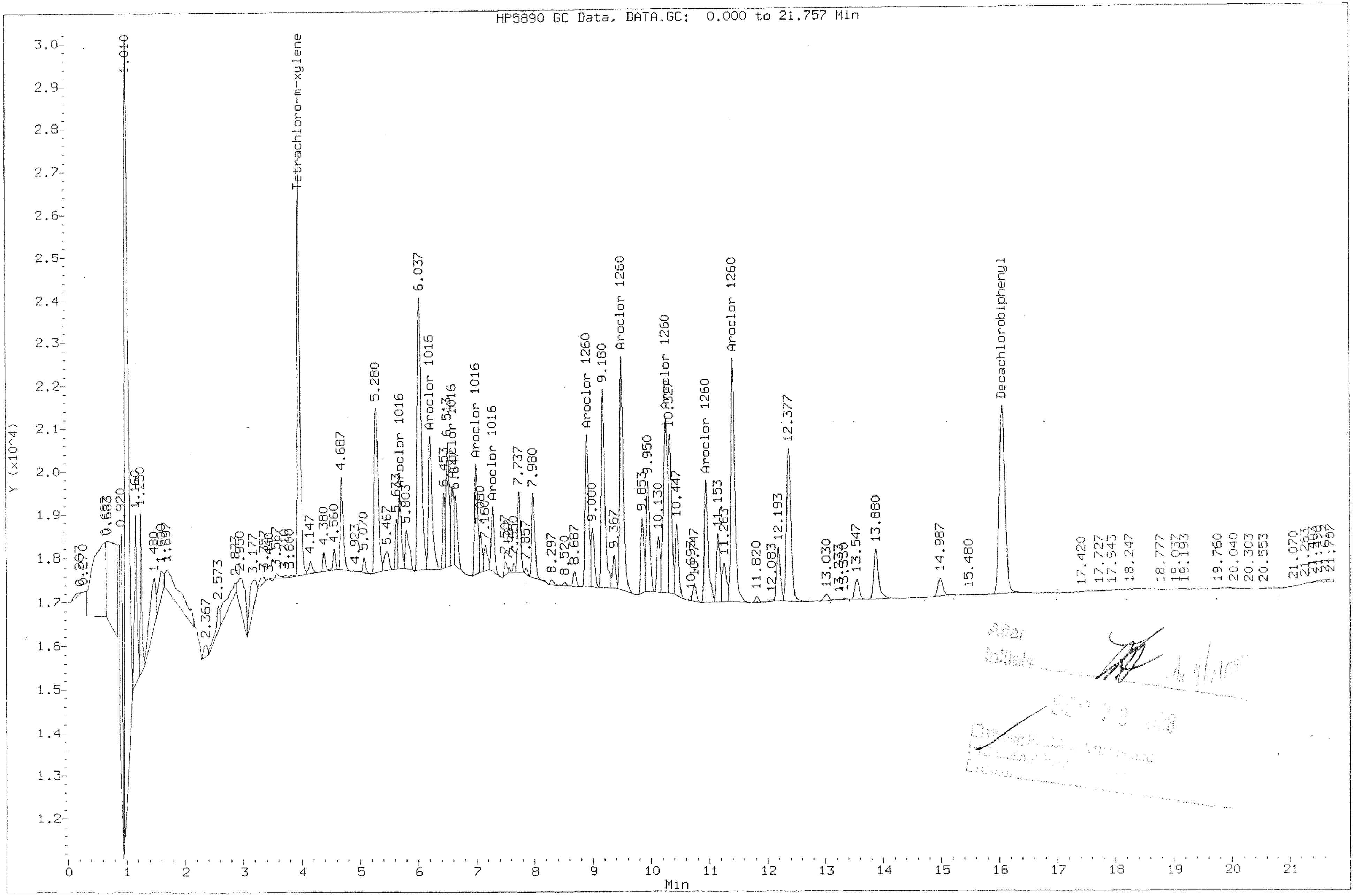


9/23/08

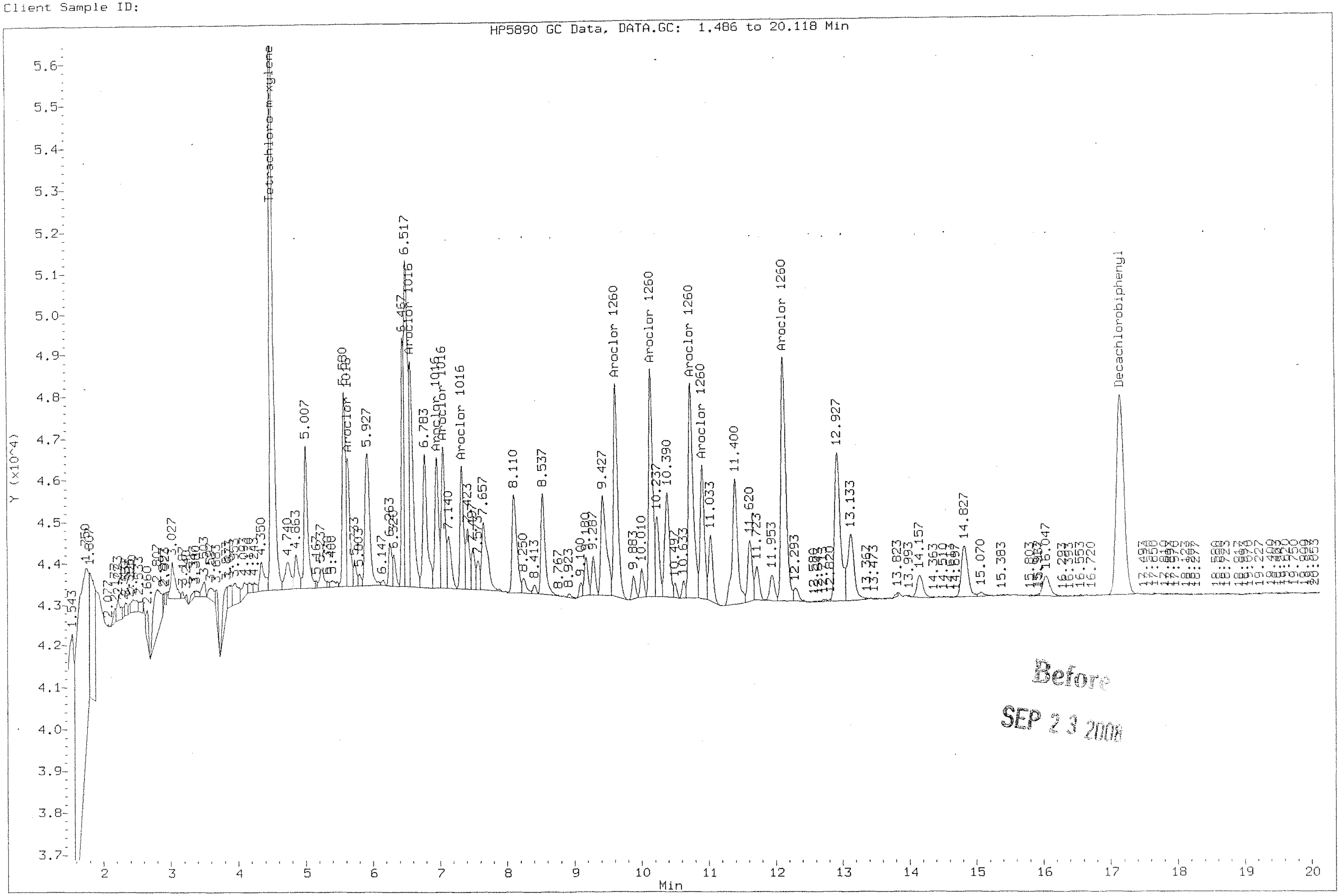


Data File: \\cash1\acqudata\GC09\data\092208.b\0922F035.D
Injection Date: 23-SEP-2008 07:09
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^4)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl
Before
SEP 23 2008

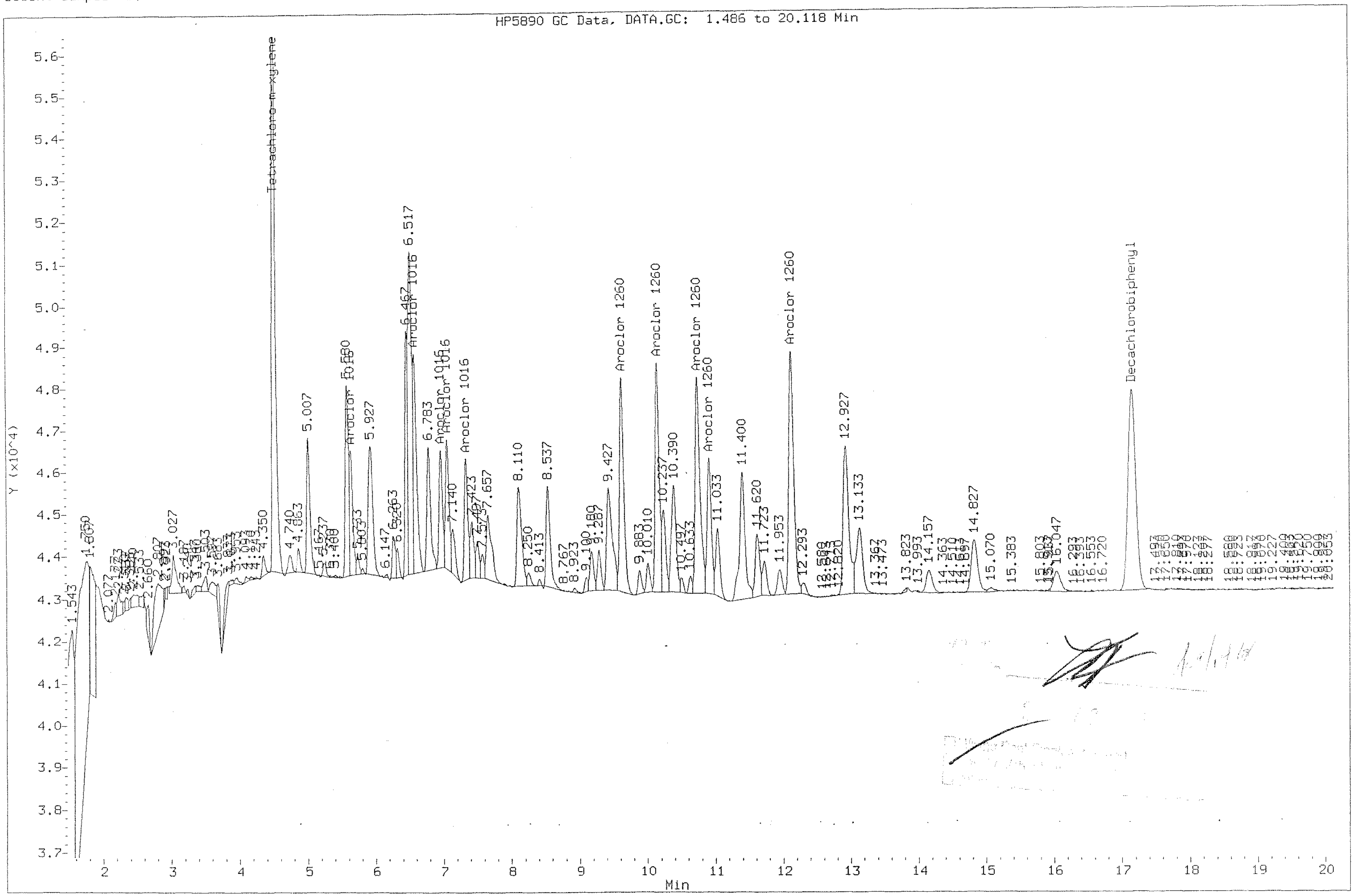
Data File: \\cash1\acqudata\GC09\data\092208.b\0922F035.D
Injection Date: 23-SEP-2008 07:09
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
Injection Date: 23-SEP-2008 07:09
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R035.D
Injection Date: 23-SEP-2008 07:09
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F036.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F036.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R036.D
Inj Date : 23-SEP-2008 07:35
Sample Info: 1660 @ 50ppb | PCB5-23B | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	58714	104101	5.77	6.05		100.00
Aroclor 1016	5.690	5.633	13055	21463	58.8	62.6	80.00- 120.00	100.00
	6.213	6.570	25658	41390	59.3	60.8	151.51- 227.27	196.54
	6.597	6.960	13646	21700	60.8	60.2	79.74- 119.61	104.52
	7.003	7.057	18490	23963	61.3	58.0	106.84- 160.26	141.63
	7.287	7.333	11530	20421	52.4	55.5	91.86- 137.79	88.32
		Average of Peak Amounts =			58.5	59.4		
Aroclor 1260	9.950	9.623	22567	42695	55.4	60.7	80.00- 120.00	100.00
	10.260	10.143	39280	45969	58.4	62.1	159.28- 238.92	174.06
	10.327	10.737	29900	53070	49.8	57.8	101.69- 152.53	132.49
	10.947	10.910	25370	29170	56.2	59.3	101.44- 152.16	112.42
	11.413	12.123	52689	60136	56.3	56.7	212.51- 318.76	233.48
		Average of Peak Amounts =			55.2	59.3		
Decachlorobiphenyl	16.057	17.153	60965	76631	6.00	6.10		100.00(M)

QC Flag Legend

M - Compound response manually integrated.

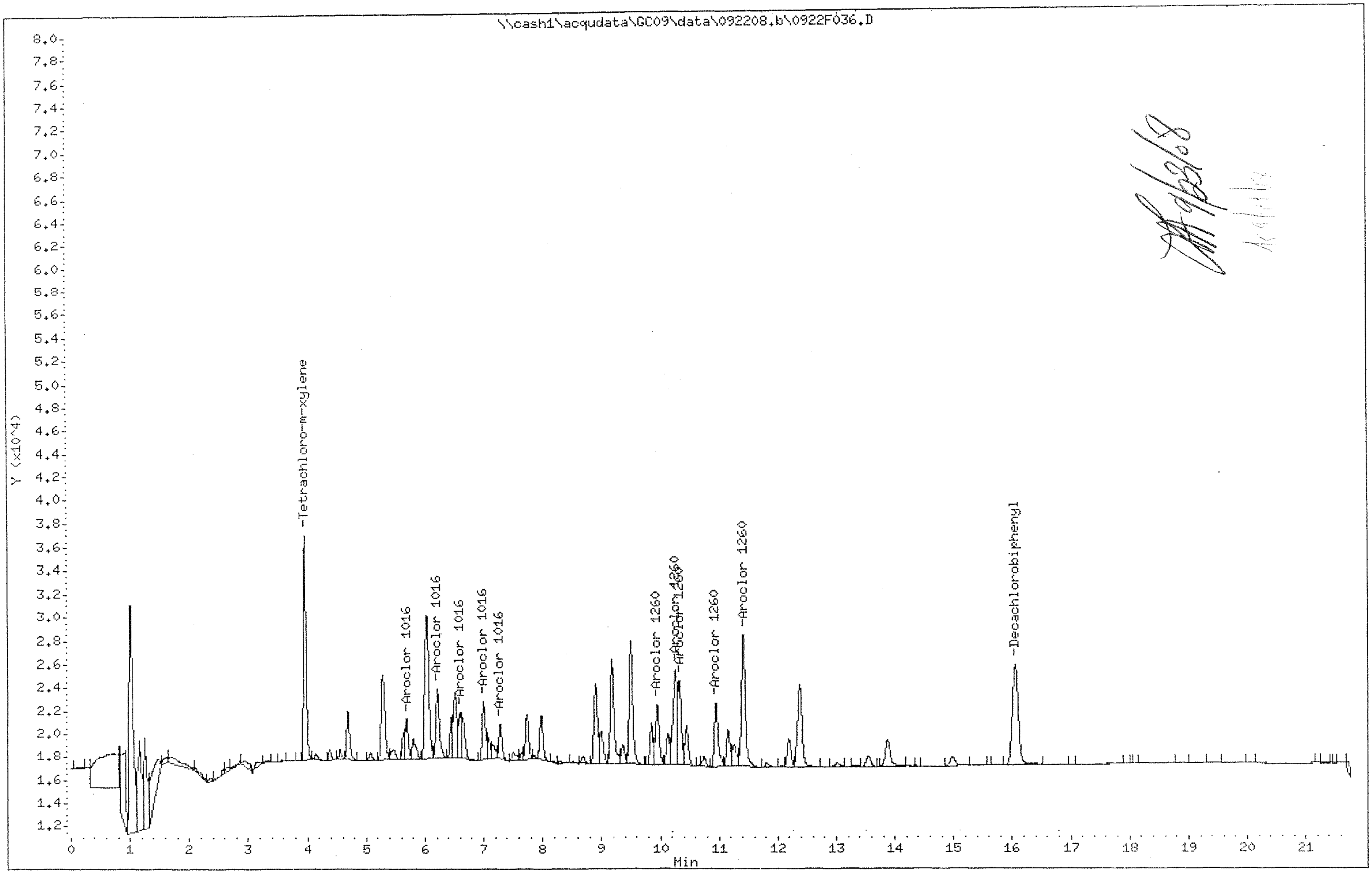
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F036.D
Date : 23-SEP-2008 07:35
Client ID:
Sample Info: 1660 @ 50ppb | PCB5-23B | KWG0804201-10

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

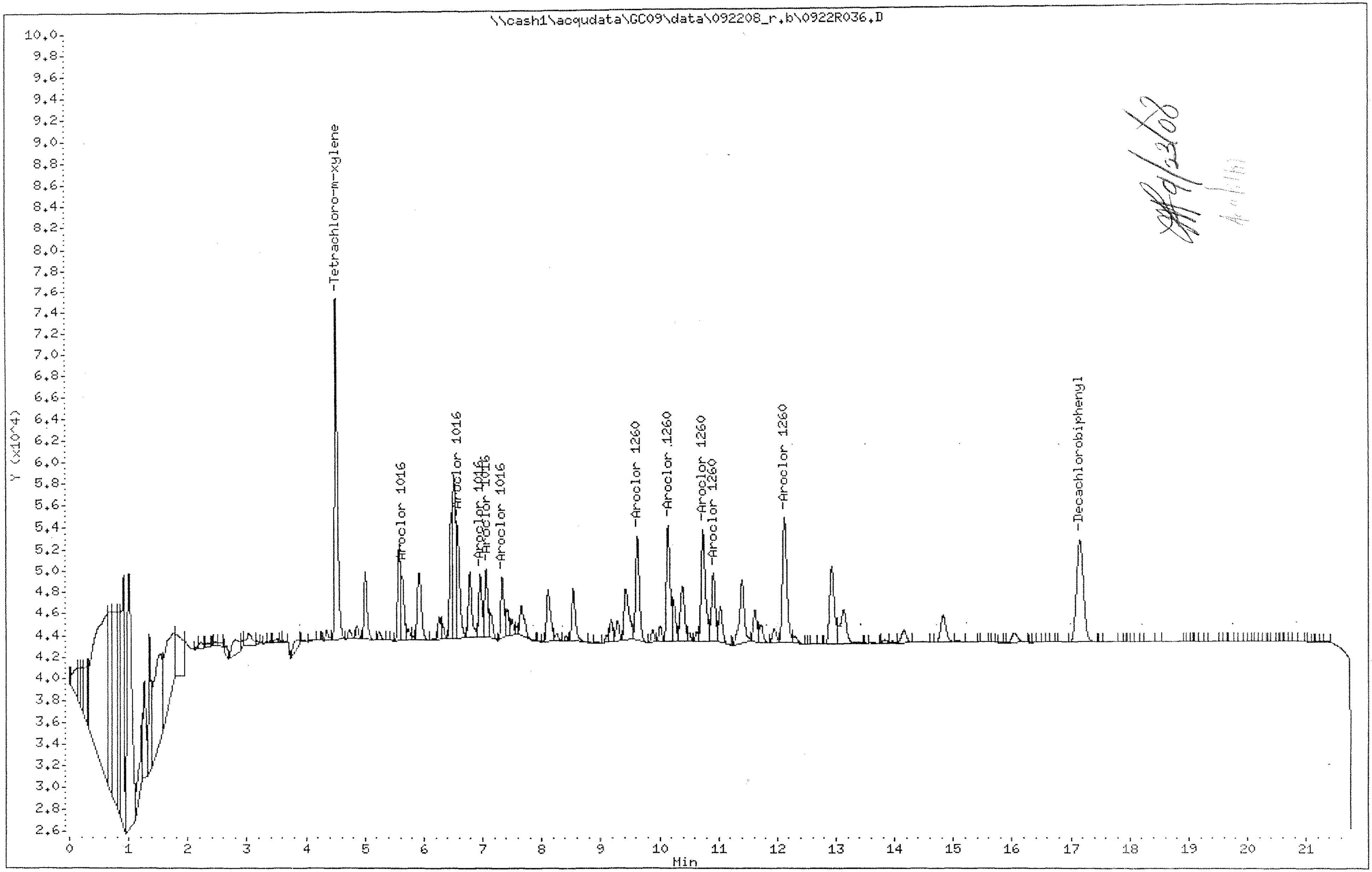


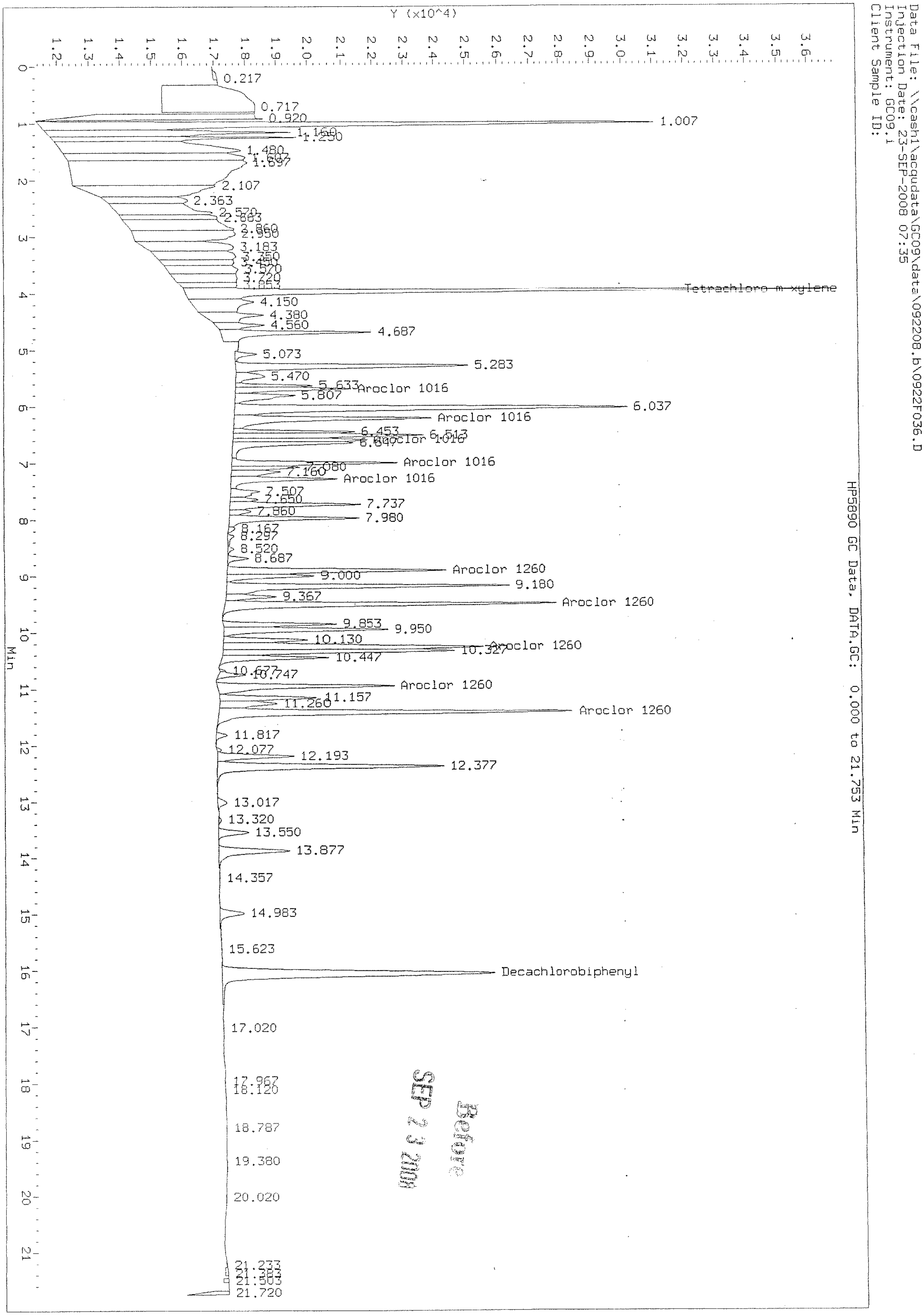
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R036.D
Date : 23-SEP-2008 07:35
Client ID:
Sample Info: 1660 @ 50ppb | PCB5-23B | KWG0804201-10

Column phase: DB-XLB

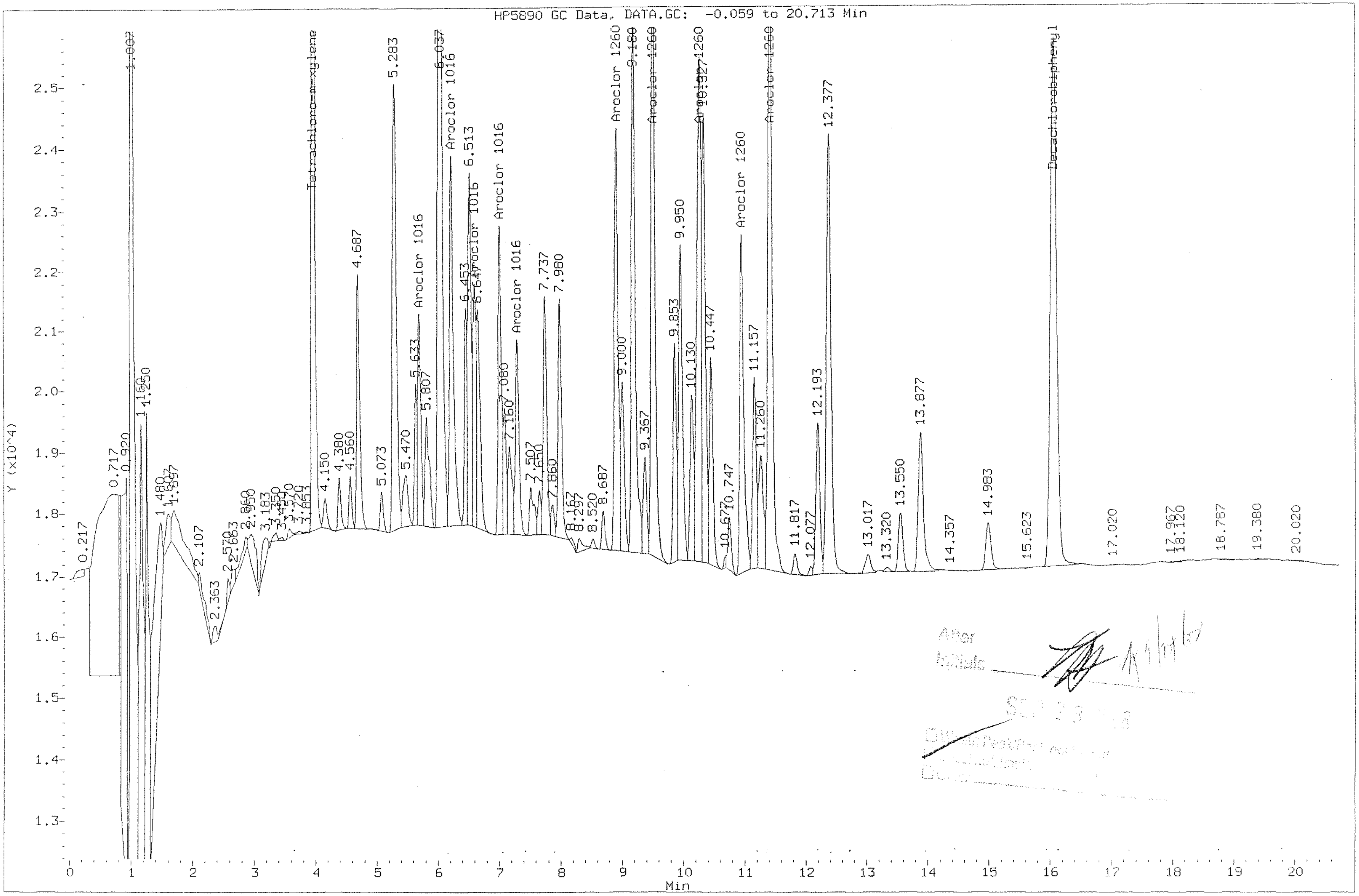
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

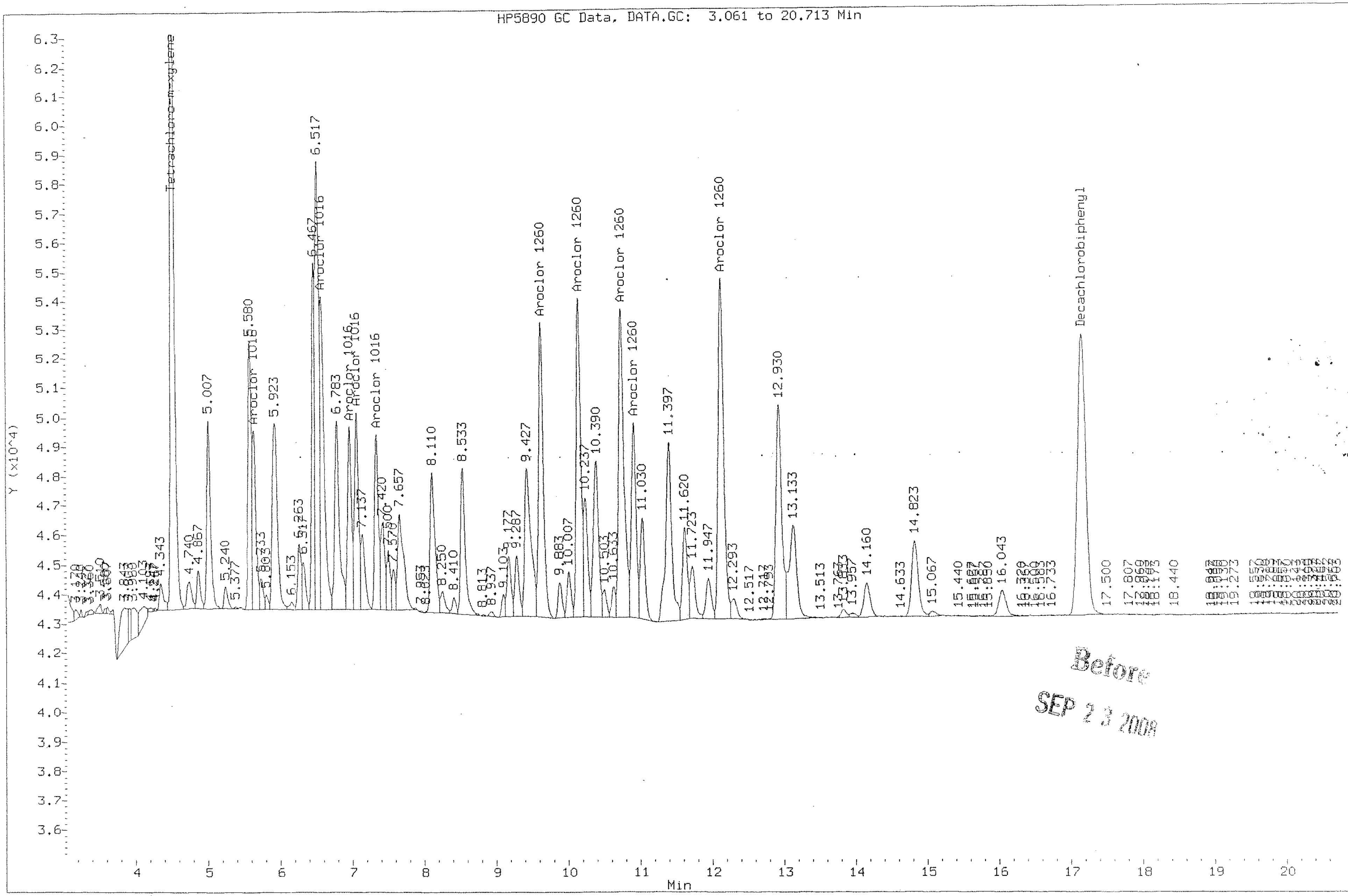



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F036.D
Injection Date: 23-SEP-2008 07:35
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.753 Min
Y (x10^4)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl
Before
SEP 23 2008

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F036.D
Injection Date: 23-SEP-2008 07:35
Instrument: GC09.i
Client Sample ID:

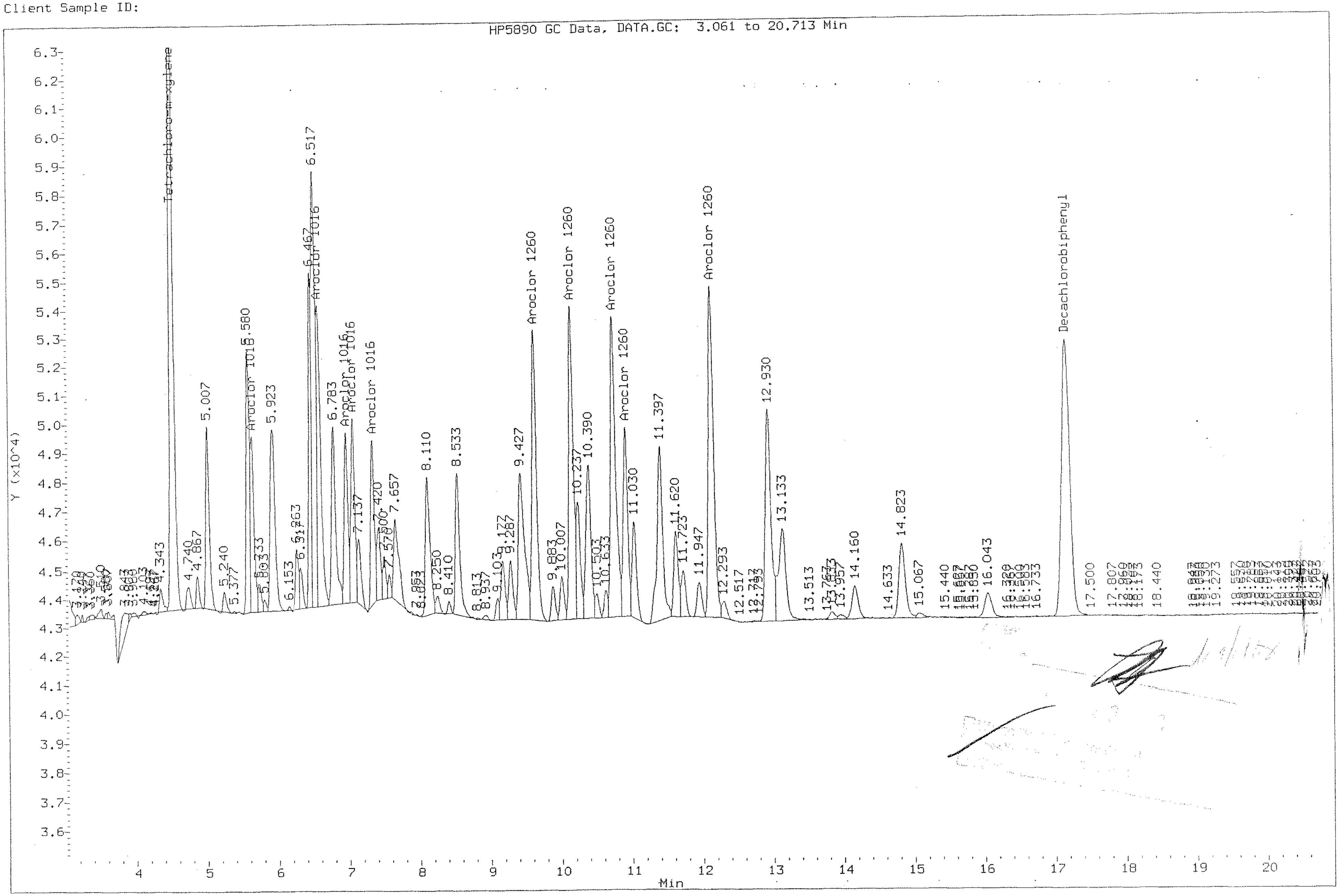


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R036.D
Injection Date: 23-SEP-2008 07:35
Instrument: GC09.i
Client Sample ID:



Before
SEP 2 3 2008

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R036.D
Injection Date: 23-SEP-2008 07:35
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F037.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F037.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R037.D
Inj Date : 23-SEP-2008 08:01
Sample Info: 1660 @ 500ppb | PCB5-23C | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	539759	912633	53.0	44.5		100.00
Aroclor 1016	5.690	5.633	122632	178915	553	451	80.00- 120.00	100.00
	6.213	6.570	238571	349712	552	442	151.51- 227.27	194.54
	6.597	6.960	123821	201479	552	441	79.74- 119.61	100.97
	7.003	7.060	161729	227692	536	453	106.84- 160.26	131.88
	7.290	7.333	127258	205868	578	476	91.86- 137.79	103.77
		Average	of Peak	Amounts =	554	453		
Aroclor 1260	9.950	9.623	199458	373186	489	442	80.00- 120.00	100.00
	10.260	10.143	377334	386086	562	441	159.28- 238.92	189.18
	10.323	10.733	257923	496779	430	477	101.69- 152.53	129.31
	10.950	10.910	238362	268076	528	474	101.44- 152.16	119.50
	11.413	12.120	492085	561922	526	470	212.51- 318.76	246.71
		Average	of Peak	Amounts =	507	461		
Decachlorobiphenyl	16.057	17.157	537520	664094	52.9	45.5		100.00

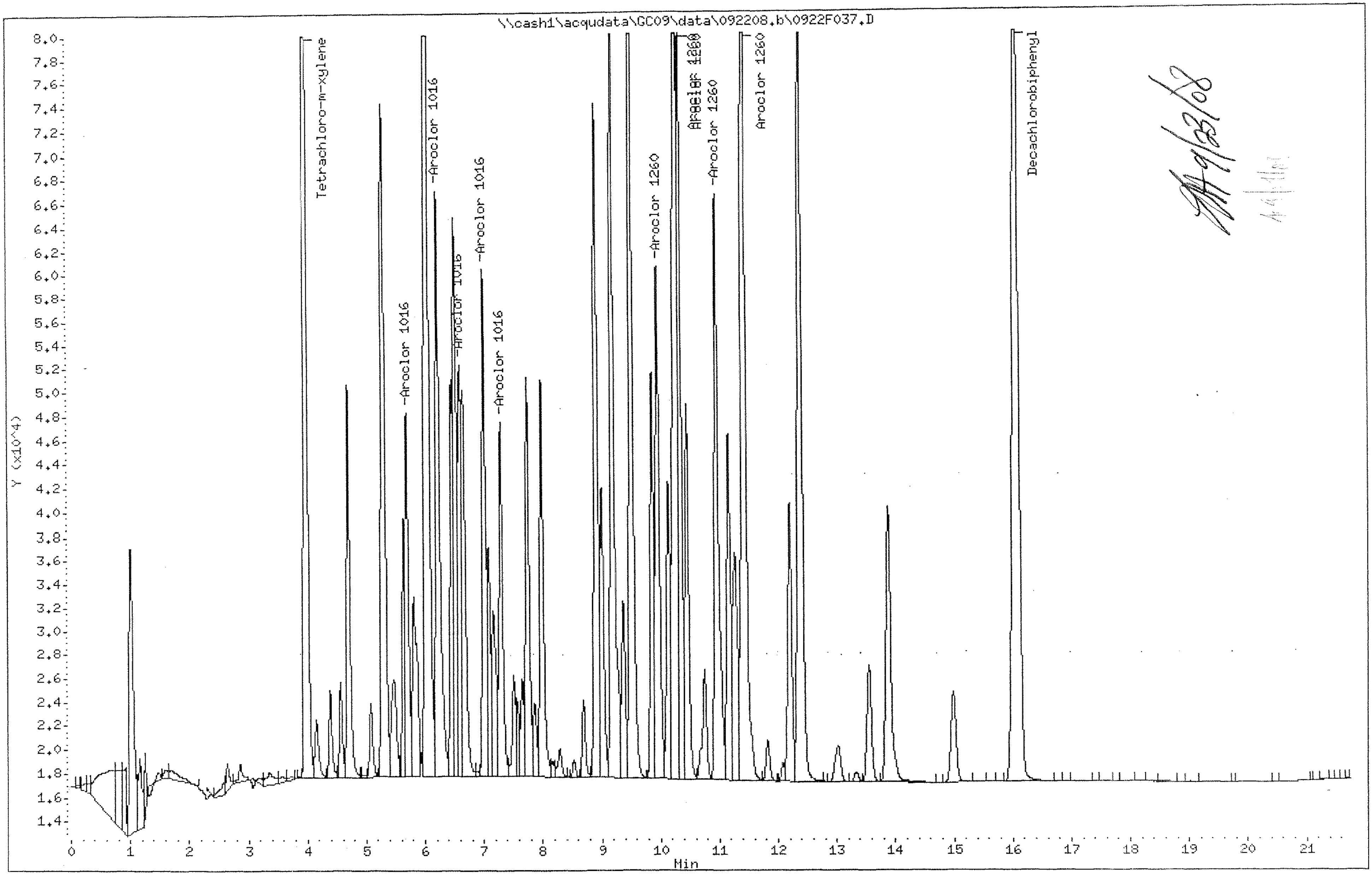
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F037.D
Date : 23-SEP-2008 08:01
Client ID:
Sample Info: 1660 @ 500ppb | PCB5-23C | KWG0804201-10

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



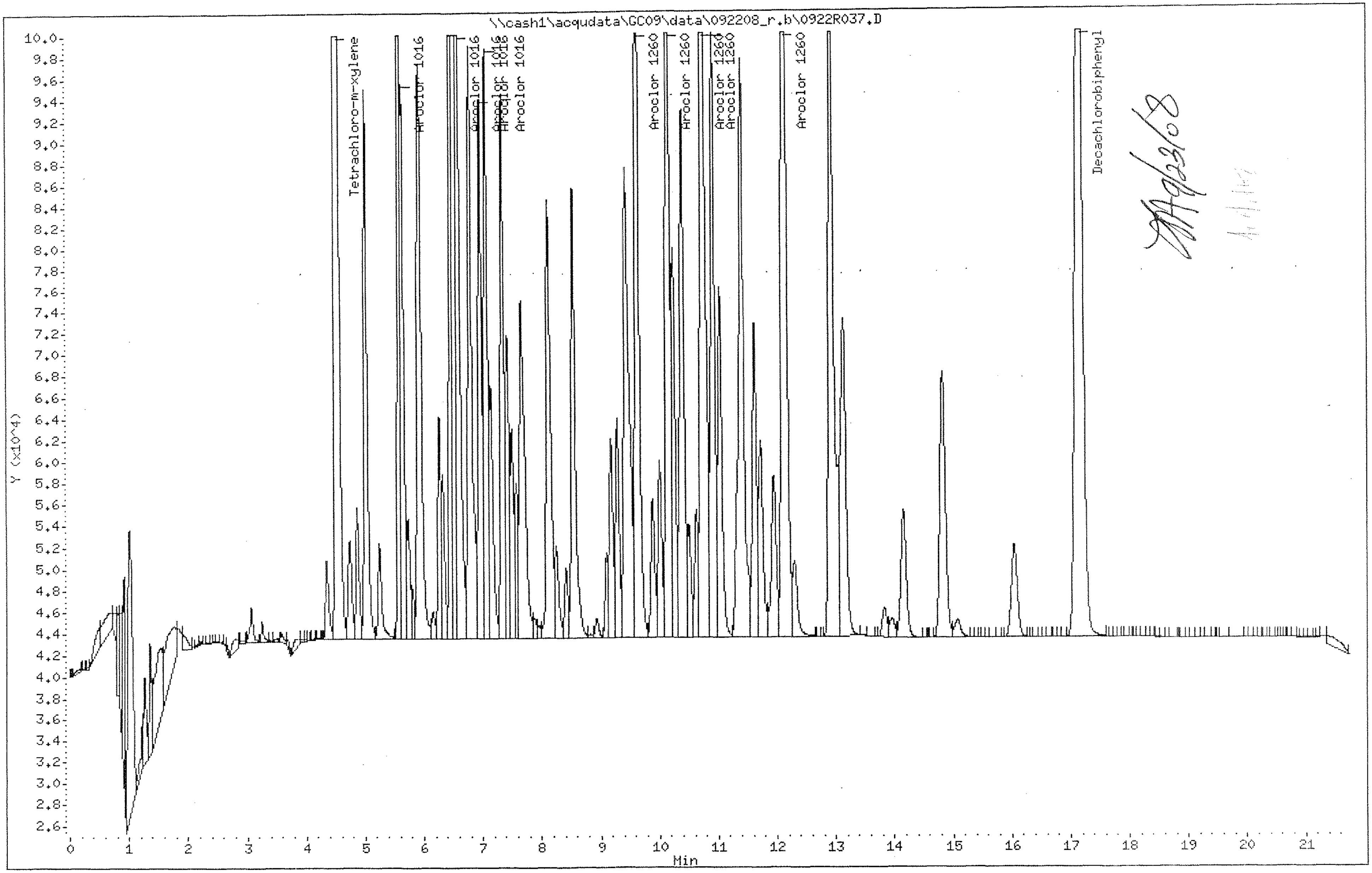
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R037.D
Date : 23-SEP-2008 08:01
Client ID:
Sample Info: 1660 @ 500ppb | PCB5-23C | KWG0804201-10

Instrument: GC09.i

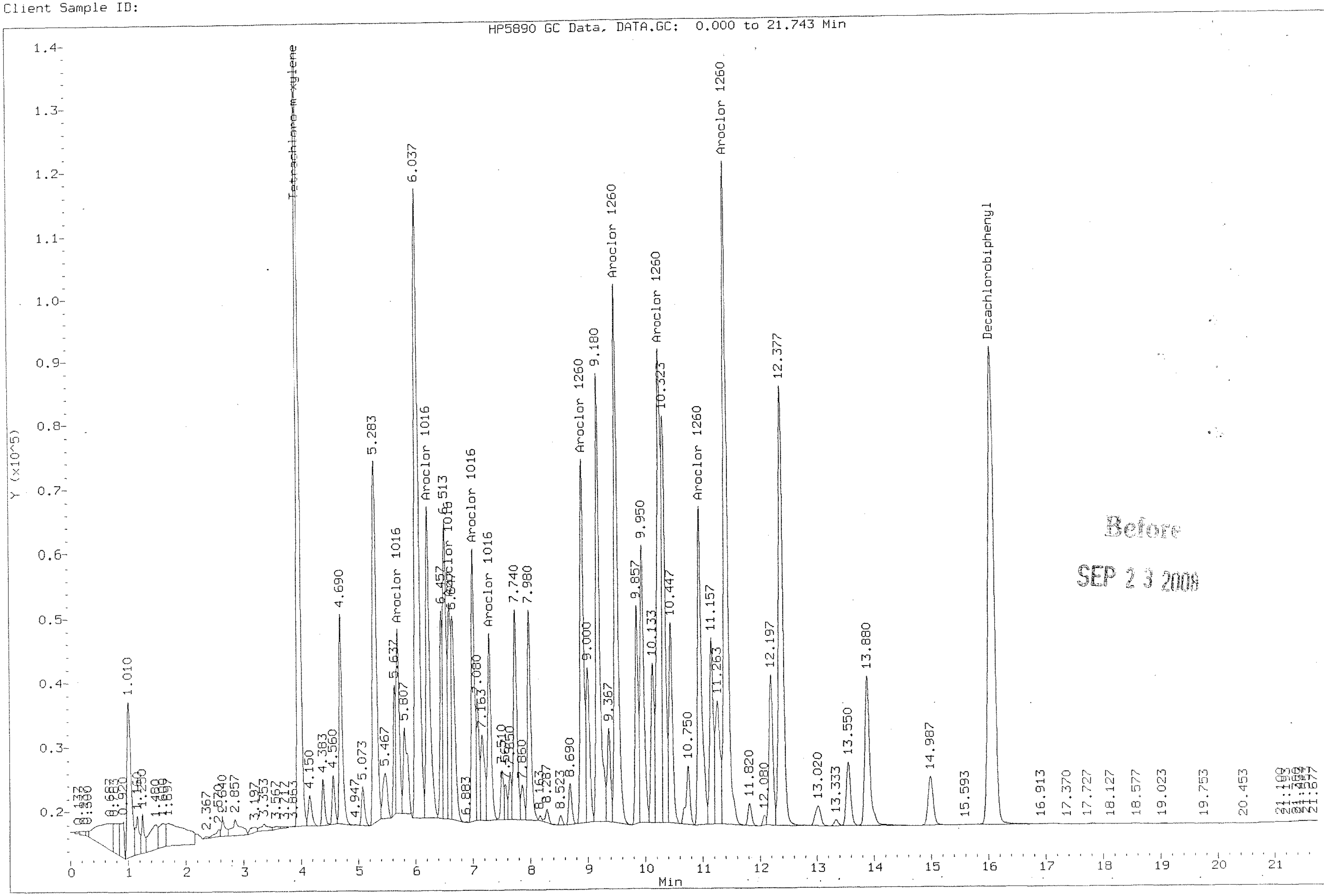
Operator: LHarris

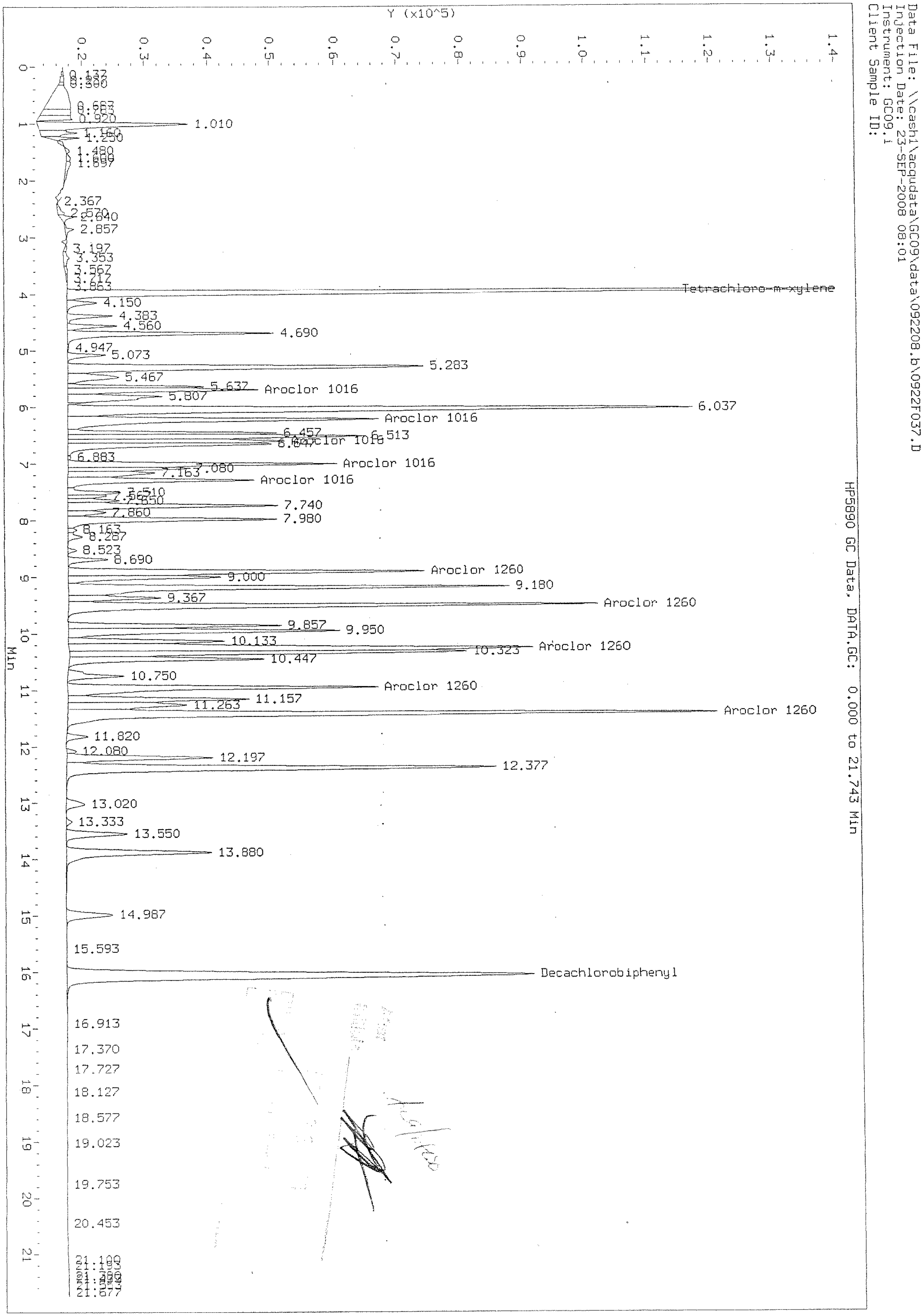
Column phase: DB-XLB

Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F037.D
Injection Date: 23-SEP-2008 08:01
Instrument: GC09.i
Client Sample ID:

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Injection Date: 23-SEP-2008 08:01
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.743 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl
1.010
4.690
5.283
6.037
7.740
7.980
9.180
9.950
12.197
12.377
13.880
14.987

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F038.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F038.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R038.D
Inj Date : 23-SEP-2008 08:28
Sample Info: 1660 @ 1000ppb | PCB5-22H | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	998349	1657632	98.0	85.0		100.00
Aroclor 1016	5.690	5.633	223512	339424	1010	888	80.00- 120.00	100.00
	6.213	6.570	428623	623525	991	832	151.51- 227.27	191.77
	6.597	6.960	222326	355610	991	824	79.74- 119.61	99.47
	7.003	7.057	293573	411719	973	859	106.84- 160.26	131.35
	7.290	7.333	237769	368918	1080	885	91.86- 137.79	106.38
		Average of Peak Amounts =			1010	858		
Aroclor 1260	9.950	9.623	363363	679963	920	846	80.00- 120.00	100.00
	10.260	10.143	690953	707317	1020	849	159.28- 238.92	190.15
	10.323	10.733	485291	924097	857	913	101.69- 152.53	133.56
	10.947	10.910	443789	492871	982	900	101.44- 152.16	122.13
	11.413	12.120	923644	1052243	986	907	212.51- 318.76	254.19
		Average of Peak Amounts =			953	883		
Decachlorobiphenyl	16.057	17.153	979213	1202113	96.4	86.1		100.00

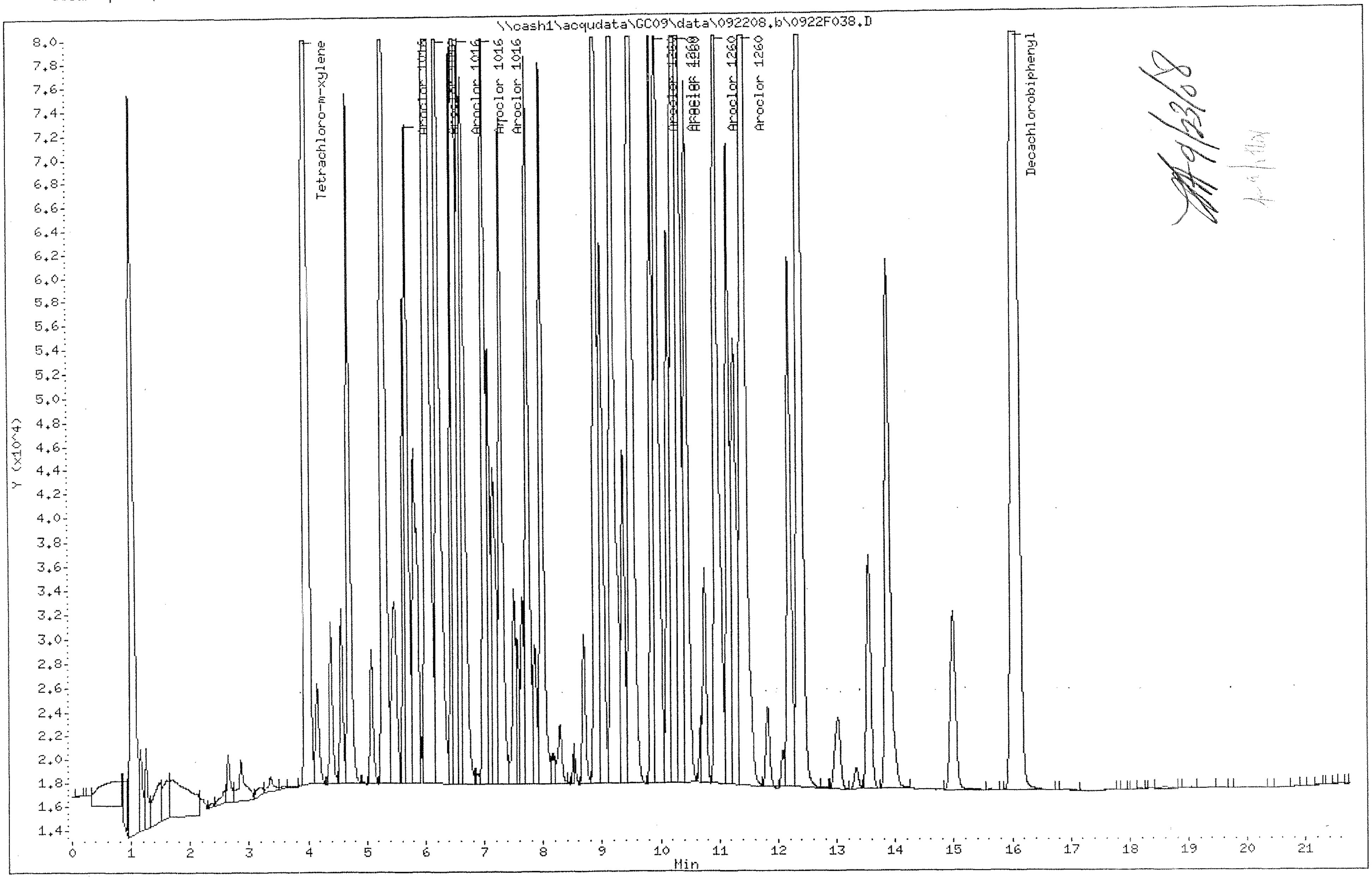
AH 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F038.D
Date : 23-SEP-2008 08:28
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-22H | KWG0804201-10

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



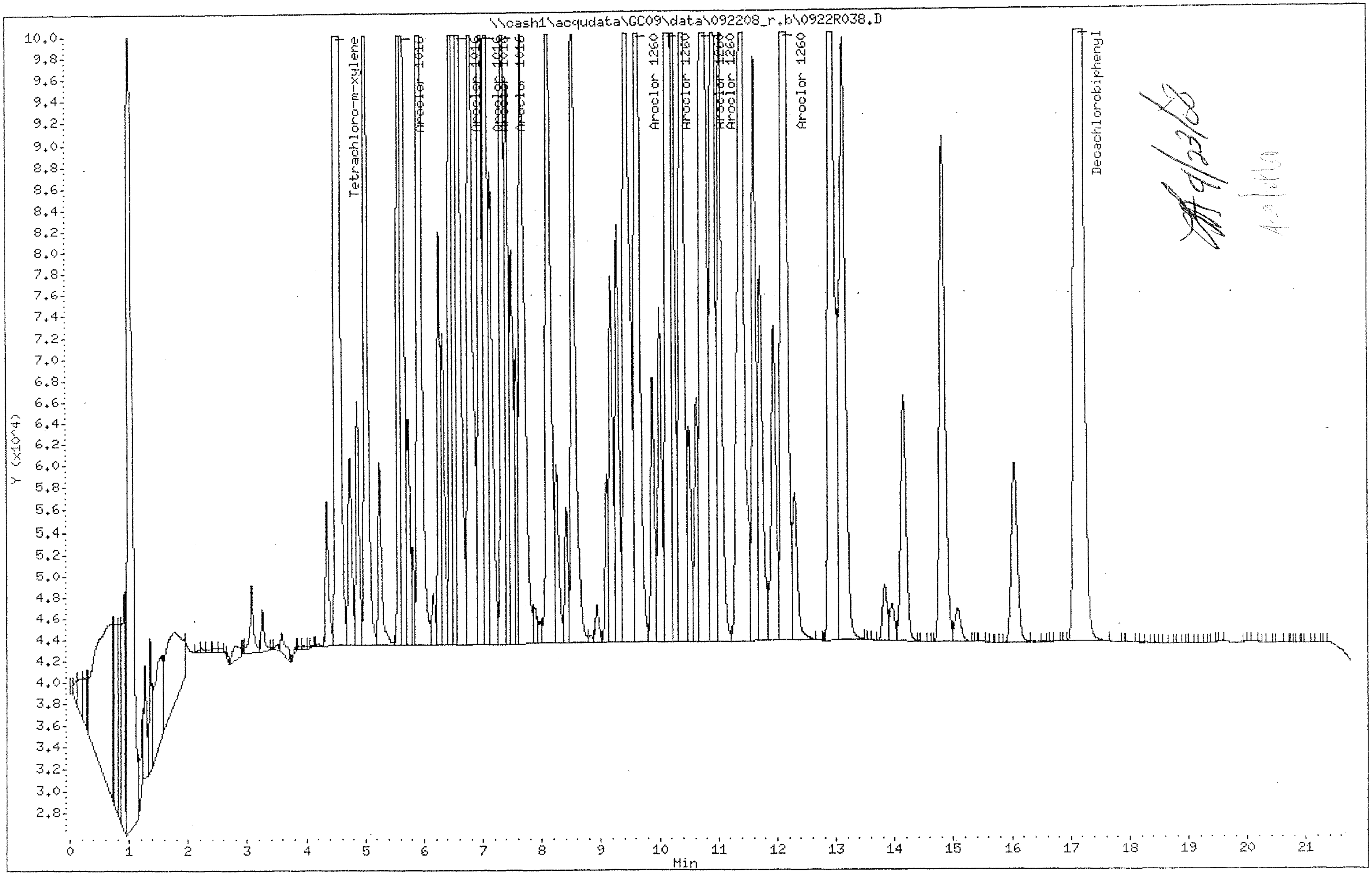
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R038.D
Date : 23-SEP-2008 08:28
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-22H | KWG0804201-10

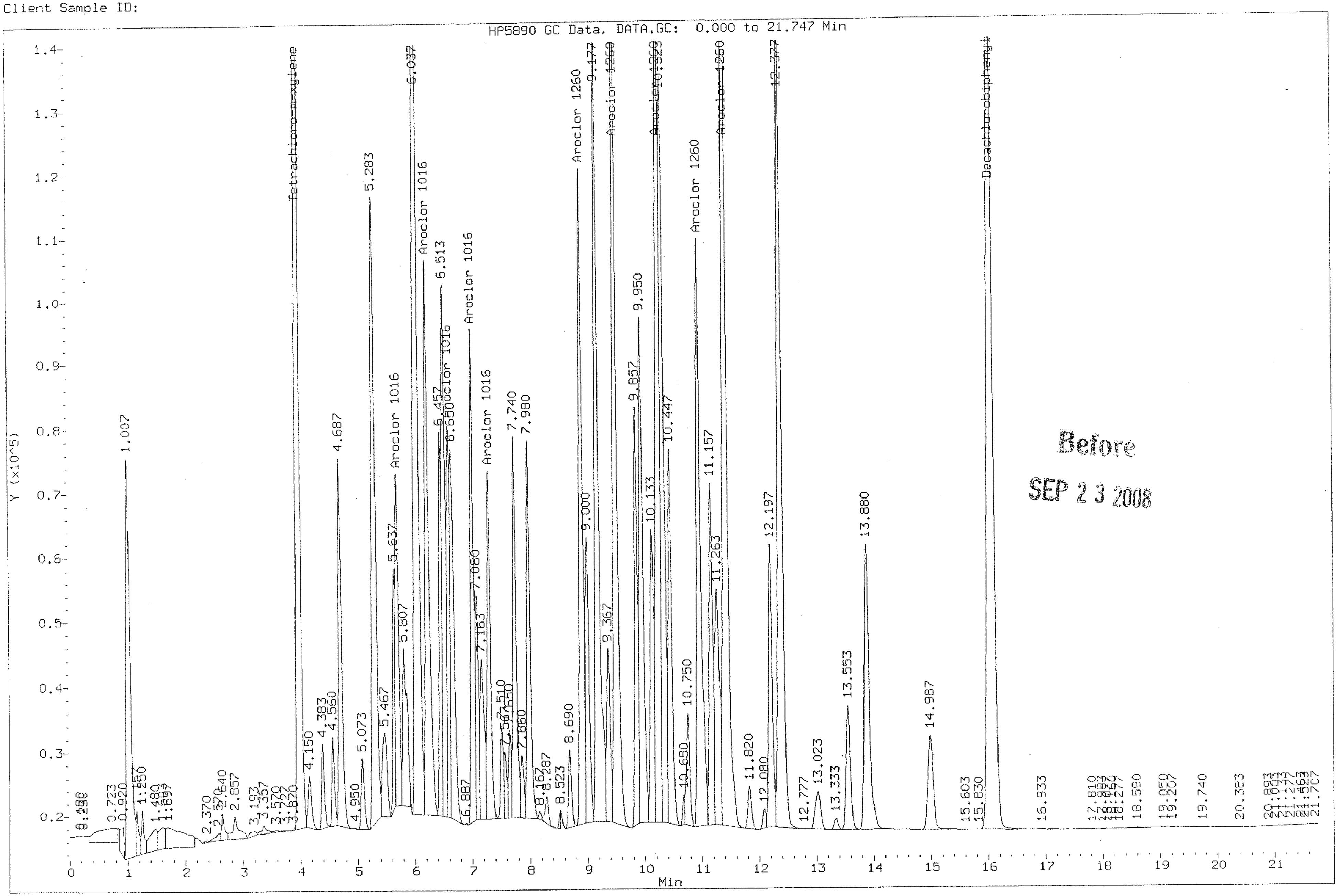
Column phase: DB-XLB

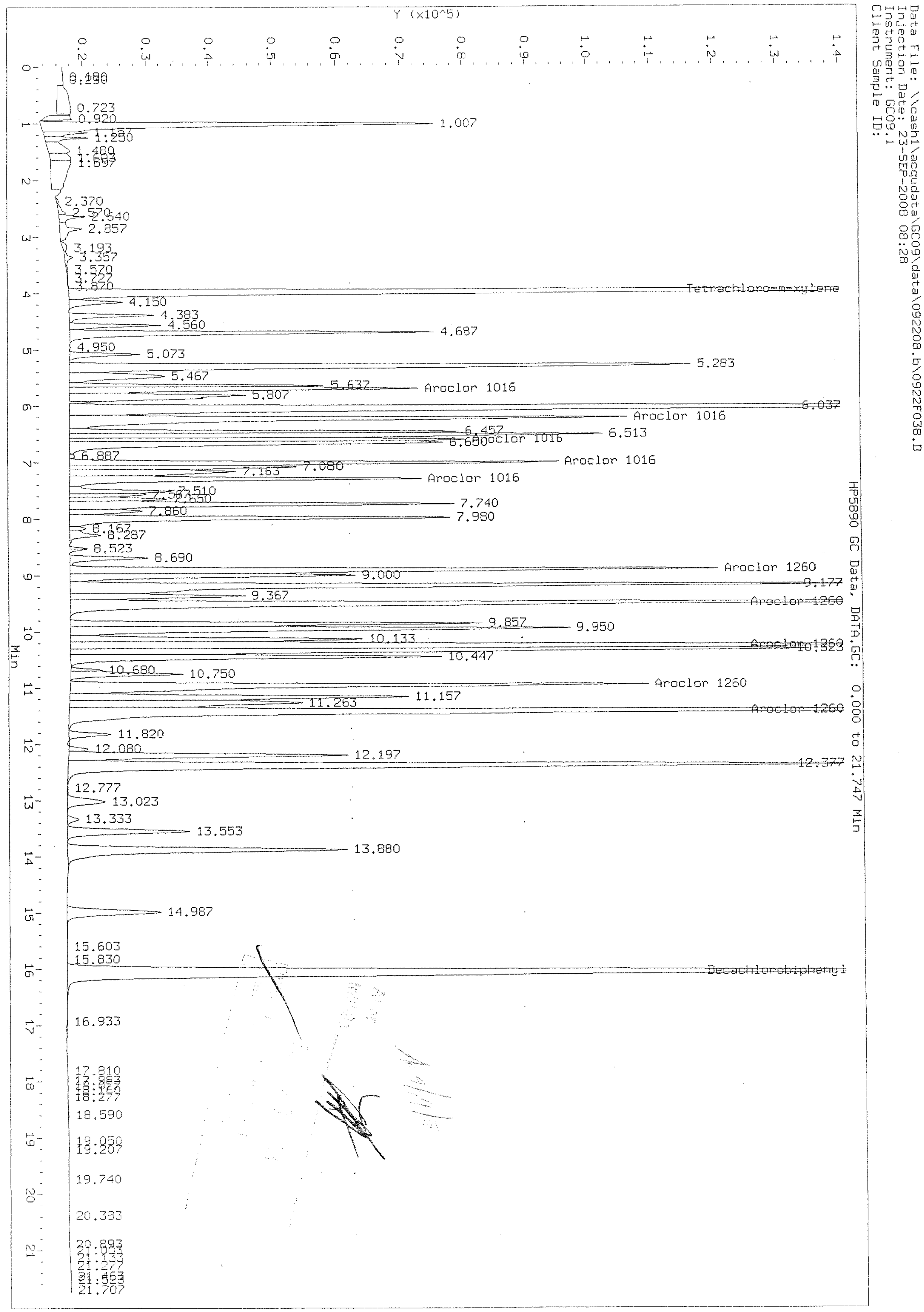
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F038.D
Injection Date: 23-SEP-2008 08:28
Instrument: GC09.i
Client Sample ID:




Data File: \\cash1\acqudata\GC09\data\092208.b\0922F038.D
Injection Date: 23-SEP-2008 08:28
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.747 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F039.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F039.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
Inj Date : 23-SEP-2008 08:54
Sample Info: 1660 @ 2000ppb | PCB5-23D | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	1788213	2884274	176	168		100.00
Aroclor 1016	5.690	5.633	393185	599143	1770	1850	80.00- 120.00	100.00
	6.213	6.570	746406	1091318	1720	1660	151.51- 227.27	189.84
	6.597	6.960	388449	619406	1730	1750	79.74- 119.61	98.80
	7.003	7.060	515015	725169	1710	1780	106.84- 160.26	130.99
	7.290	7.333	431160	647198	1960	1780	91.86- 137.79	109.66
		Average of Peak Amounts =			1780	1760		
Aroclor 1260	9.950	9.623	652888	1187239	1700	1660	80.00- 120.00	100.00
	10.260	10.143	1284017	1252846	1860	1680	159.28- 238.92	196.67
	10.323	10.733	832348	1660287	1580	1790	101.69- 152.53	127.49
	10.950	10.910	811487	880438	1800	1770	101.44- 152.16	124.29
	11.413	12.120	1684546	1892037	1800	1790	212.51- 318.76	258.01
		Average of Peak Amounts =			1750	1740		
Decachlorobiphenyl	16.057	17.153	1722606	2099406	170	167		100.00

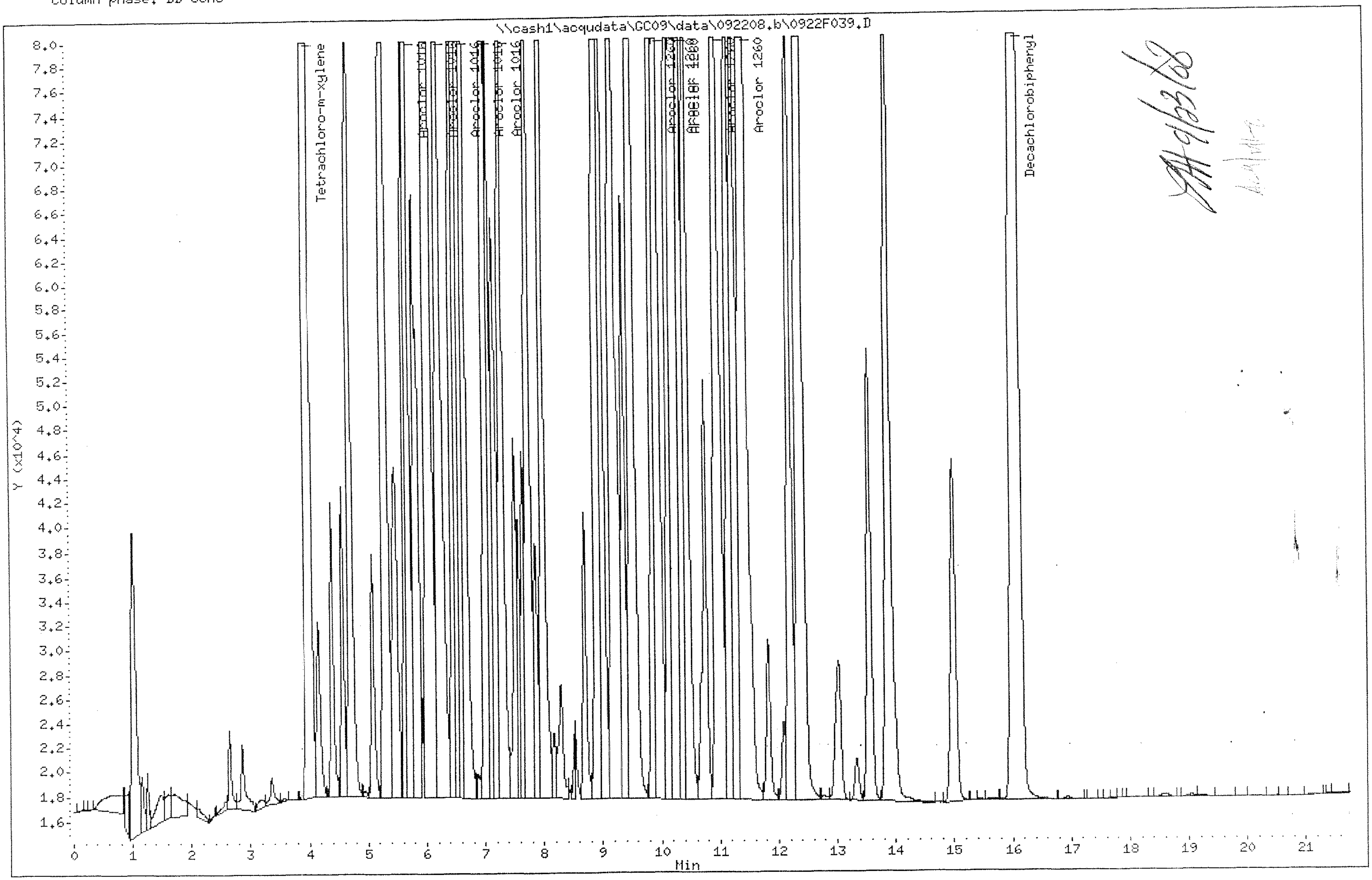
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F039.D
Date : 23-SEP-2008 08:54
Client ID:
Sample Info: 1660 @ 2000ppb | PCB5-23D | KWG0804201-10

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

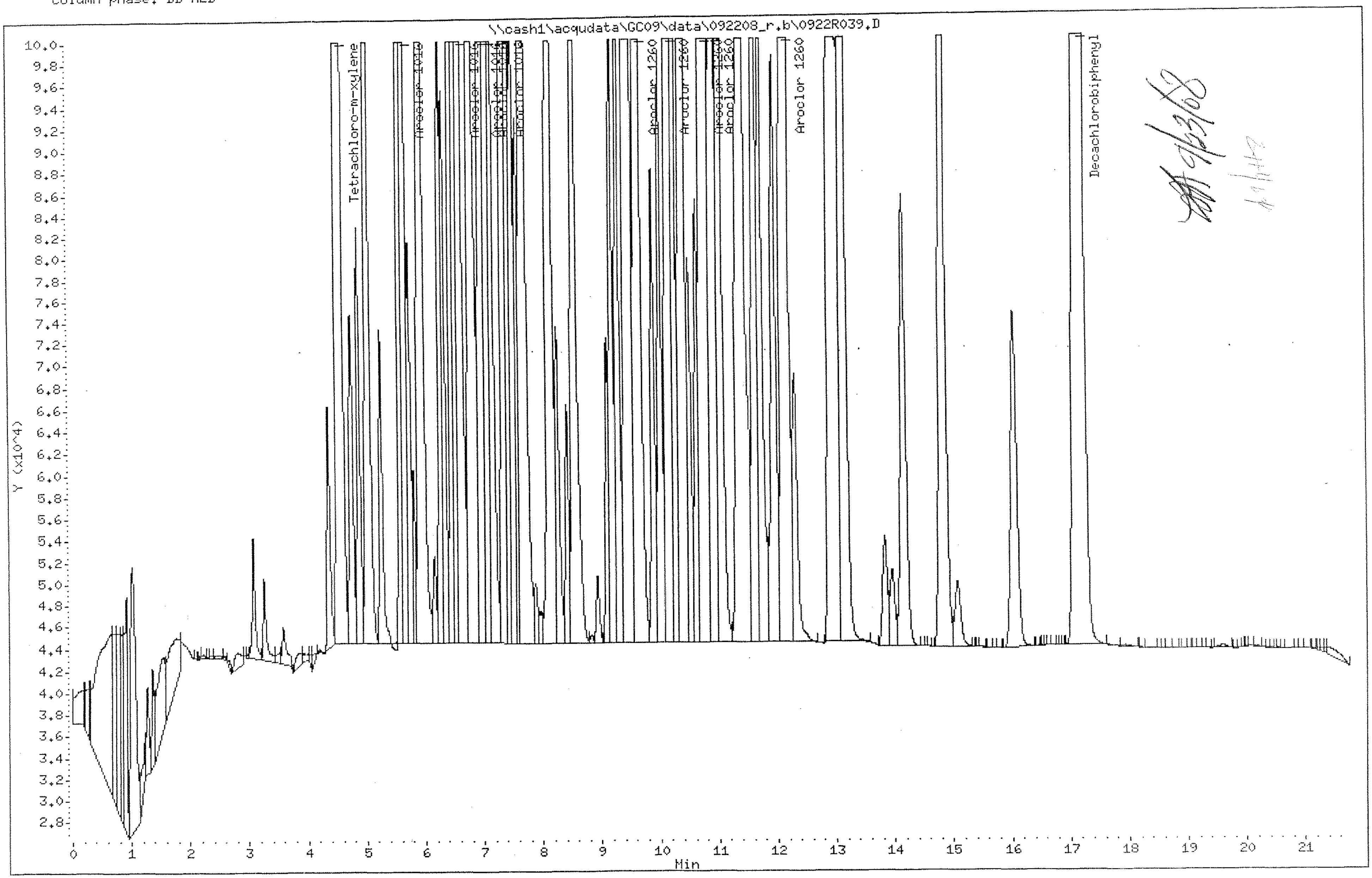


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
Date : 23-SEP-2008 08:54
Client ID:
Sample Info: 1660 @ 2000ppb | PCB5-23D | KWG0804201-10

Column phase: DB-XLB

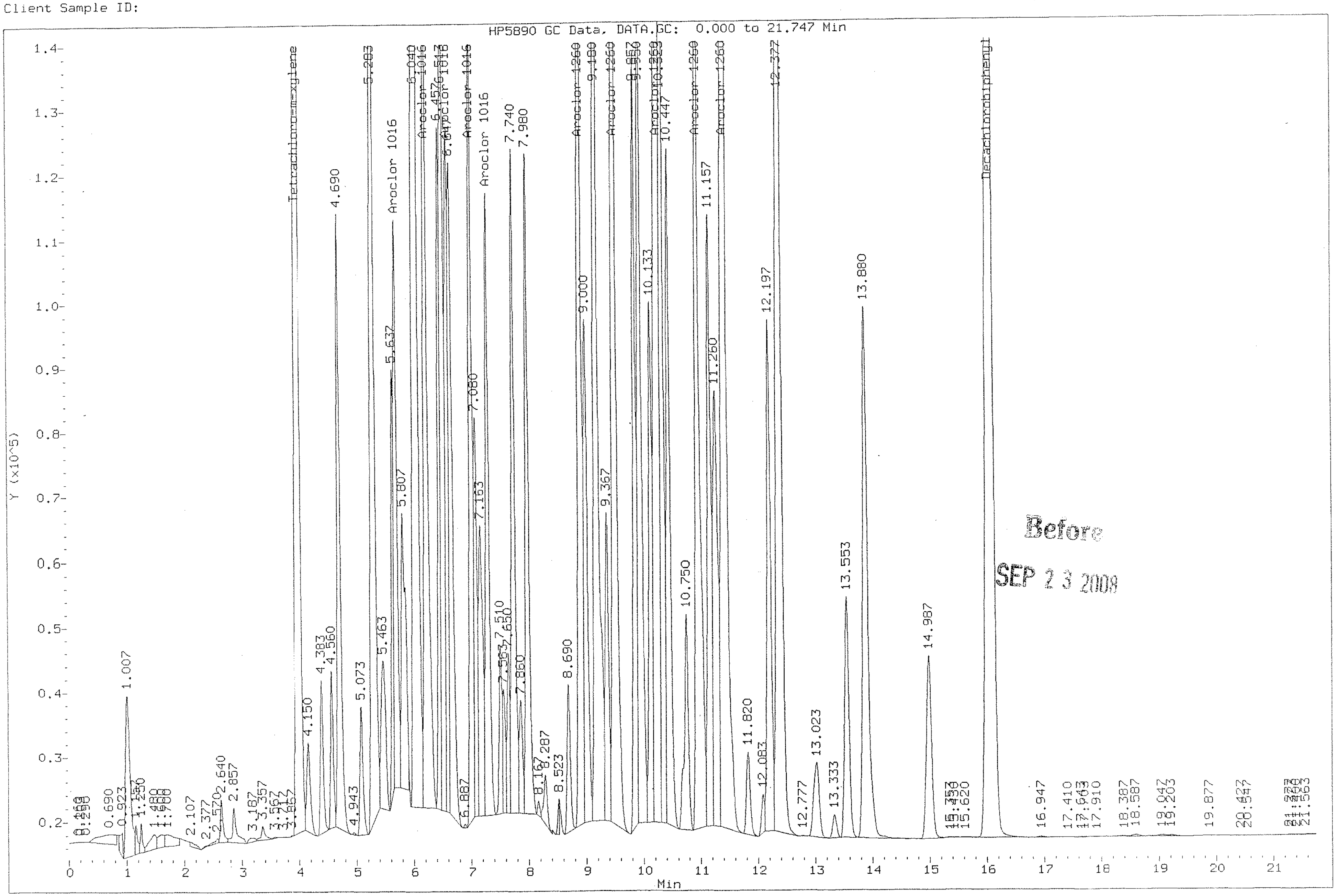
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

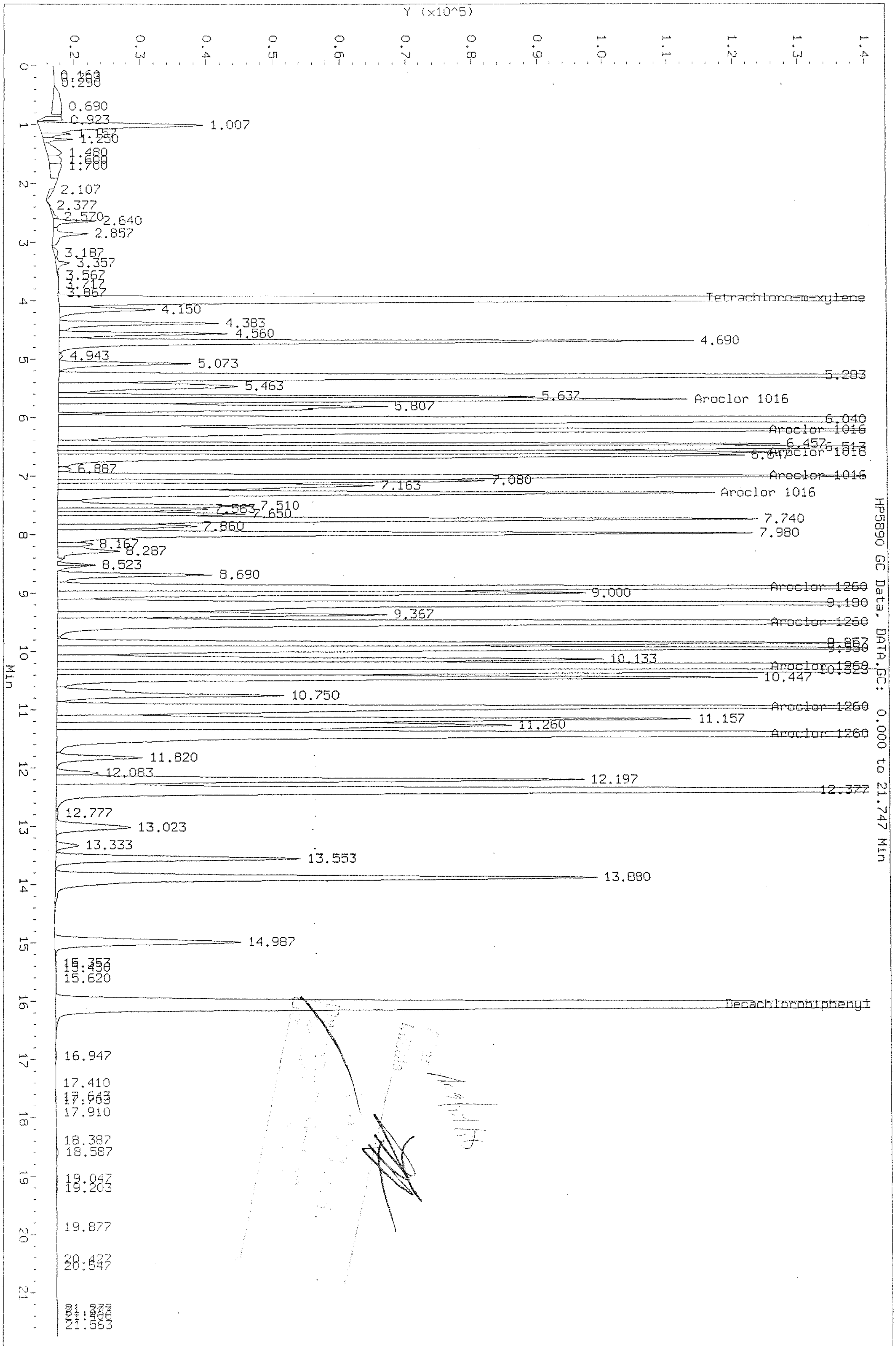


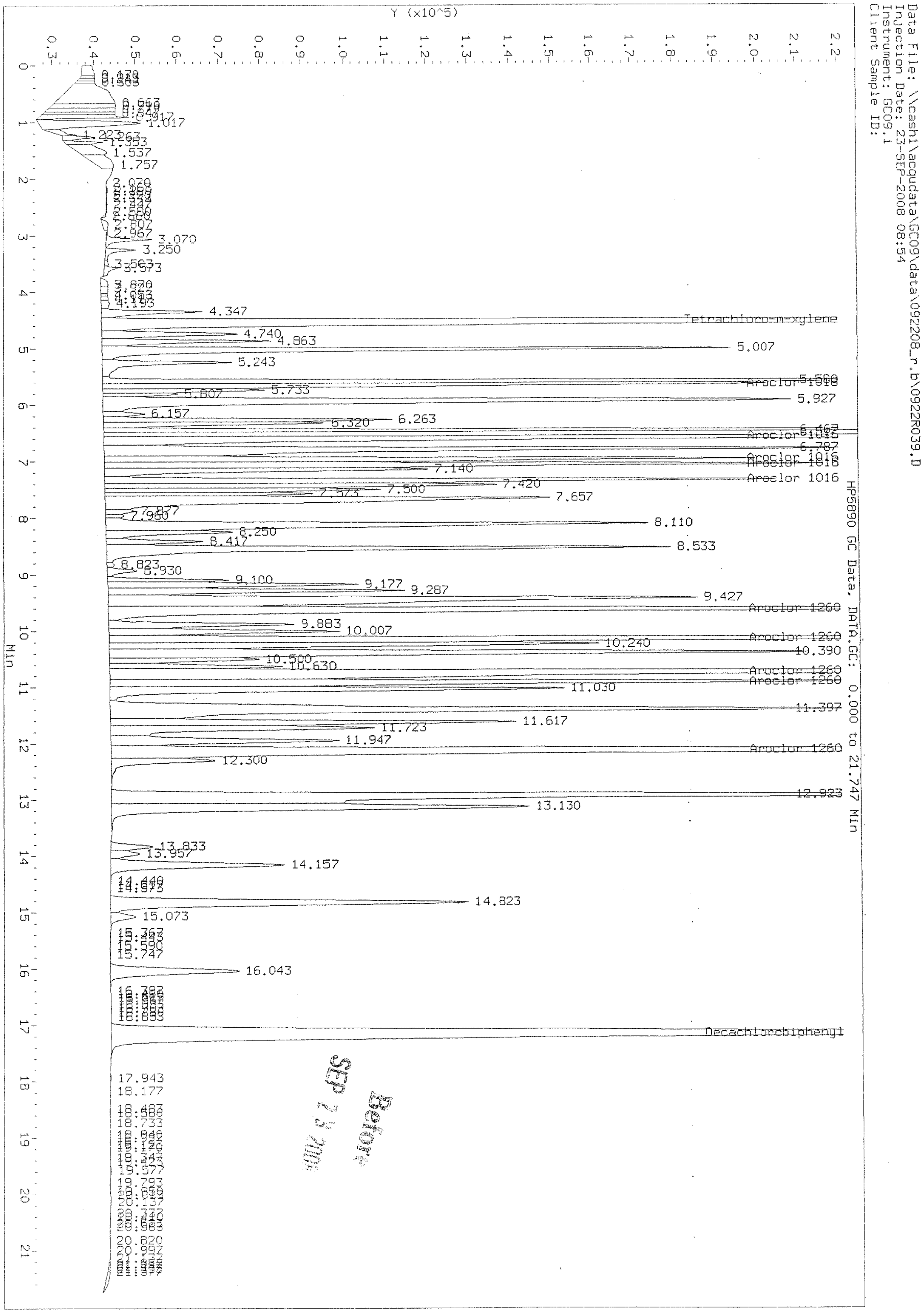
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F039.D
Injection Date: 23-SEP-2008 08:54
Instrument: GC09.i
Client Sample ID:



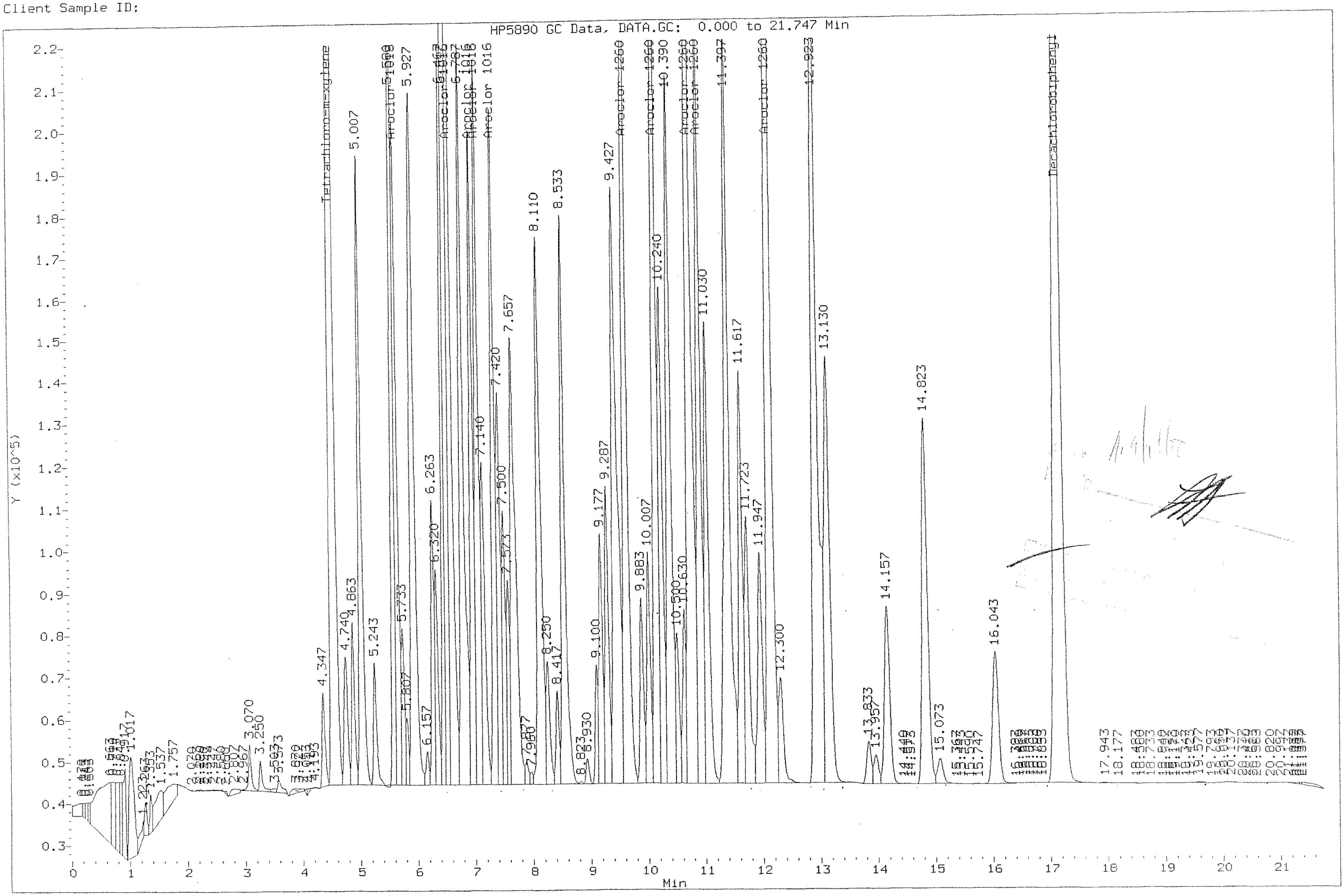
Data File: \\cash1\acqudata\GC09\data\092208.b\0922F039.D
Injection Date: 23-SEP-2008 08:54
Instrument: GC09.i
Client Sample ID:





Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
Injection Date: 23-SEP-2008 08:54
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.747 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl
Before
SEP 23 2008

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R039.D
Injection Date: 23-SEP-2008 08:54
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F040.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F040.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R040.D
Inj Date : 23-SEP-2008 09:20
Sample Info: 1660 @ 5000ppb | PCB5-23E | KWG0804201-10
Misc Info : SEMIVOA GC\W0804201\10-ICAL.H
Cal Date : 23-SEP-2008 16:06
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.510	3921719	6244215	385	363		100.00
Aroclor 1016	5.690	5.633	826701	1196481	3730	3490	80.00- 120.00	100.00
	6.213	6.517	1565705	3125725	3620	4590	151.51- 227.27	189.39
	6.597	6.960	824010	1314089	3670	3650	79.74- 119.61	99.67
	7.003	7.057	1104080	1544755	3660	3740	106.84- 160.26	133.55
	7.290	7.333	949272	1396996	4310	3800	91.86- 137.79	114.83
			Average of Peak Amounts =		3800	3850		
Aroclor 1260	9.950	9.620	1433550	2577980	3810	3580	80.00- 120.00	100.00
	10.260	10.140	2854147	2710560	4070	3610	159.28- 238.92	199.10
	10.323	10.733	1822170	3676526	3690	3940	101.69- 152.53	127.11
	10.947	10.910	1817682	1948243	4020	3890	101.44- 152.16	126.80
	11.413	12.120	3807966	4226096	4070	3980	212.51- 318.76	265.63
			Average of Peak Amounts =		3930	3800		
Decachlorobiphenyl	16.057	17.153	3768271	4515017	371	359		100.00

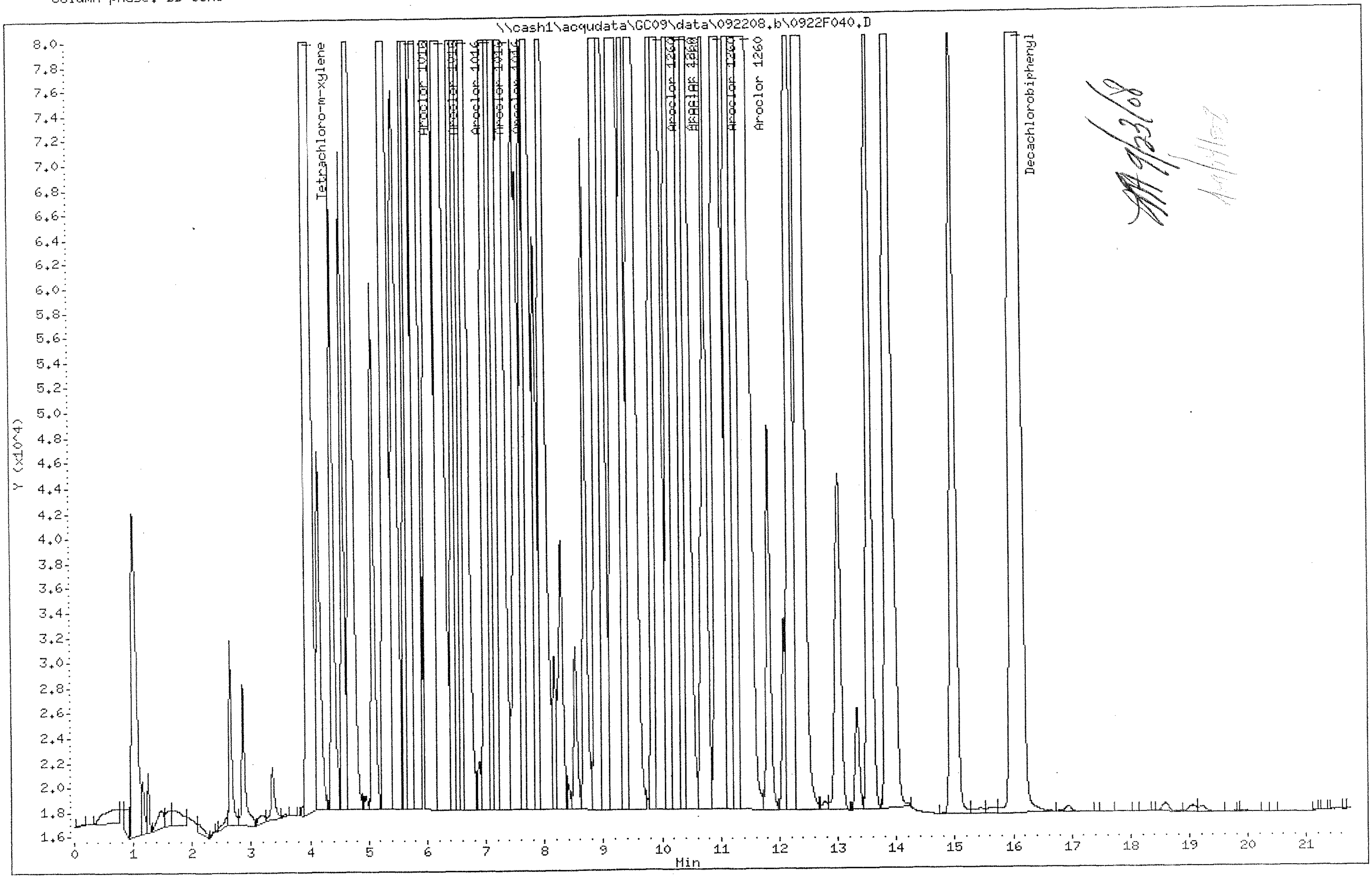
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F040.D
Date : 23-SEP-2008 09:20
Client ID:
Sample Info: 1660 @ 5000ppb | PCB5-23E | KWG0804201-10

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

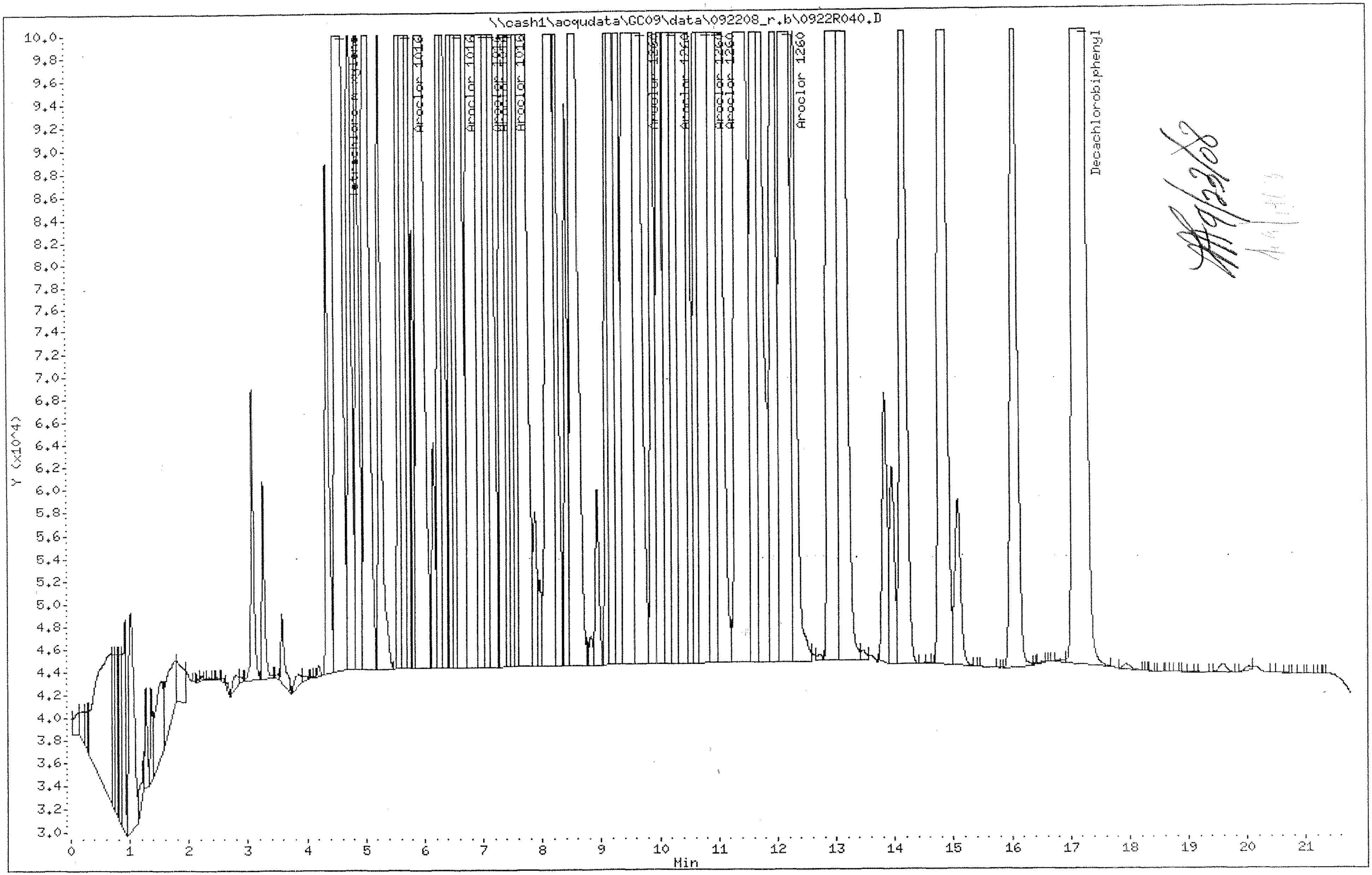


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R040.D
Date : 23-SEP-2008 09:20
Client ID:
Sample Info: 1660 @ 5000ppb | PCB5-23E | KWG0804201-10

Column phase: DB-XLB

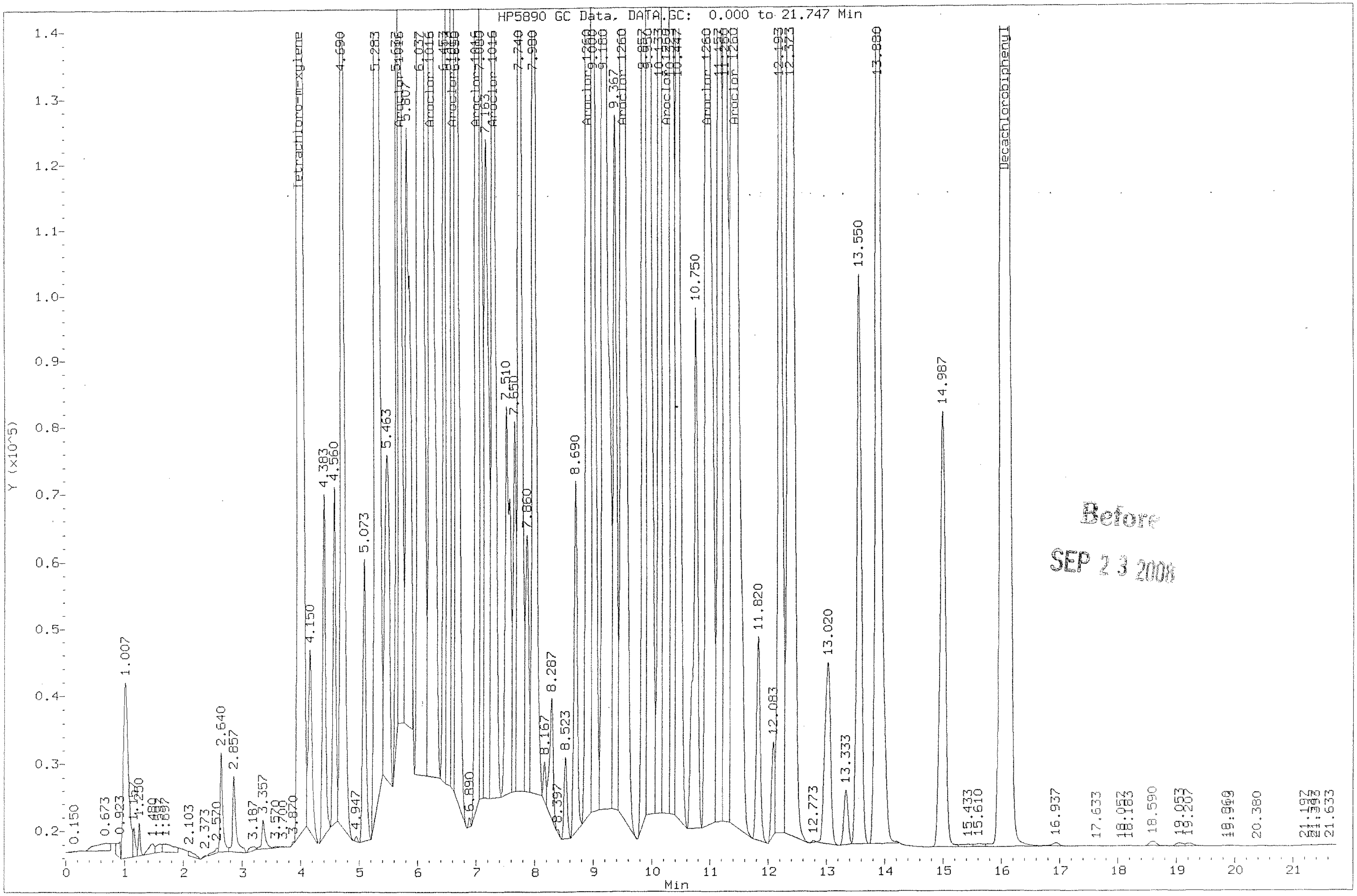
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

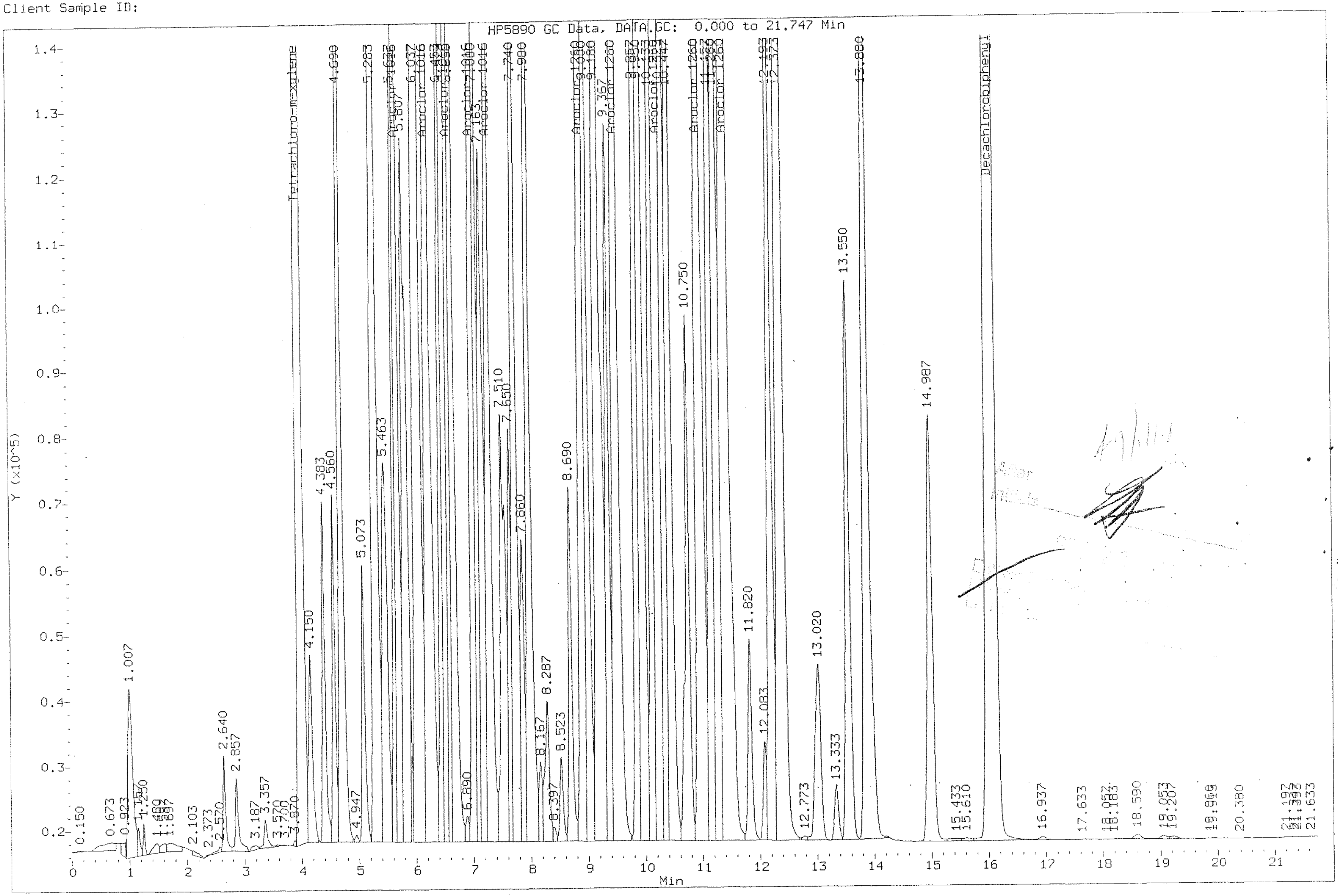


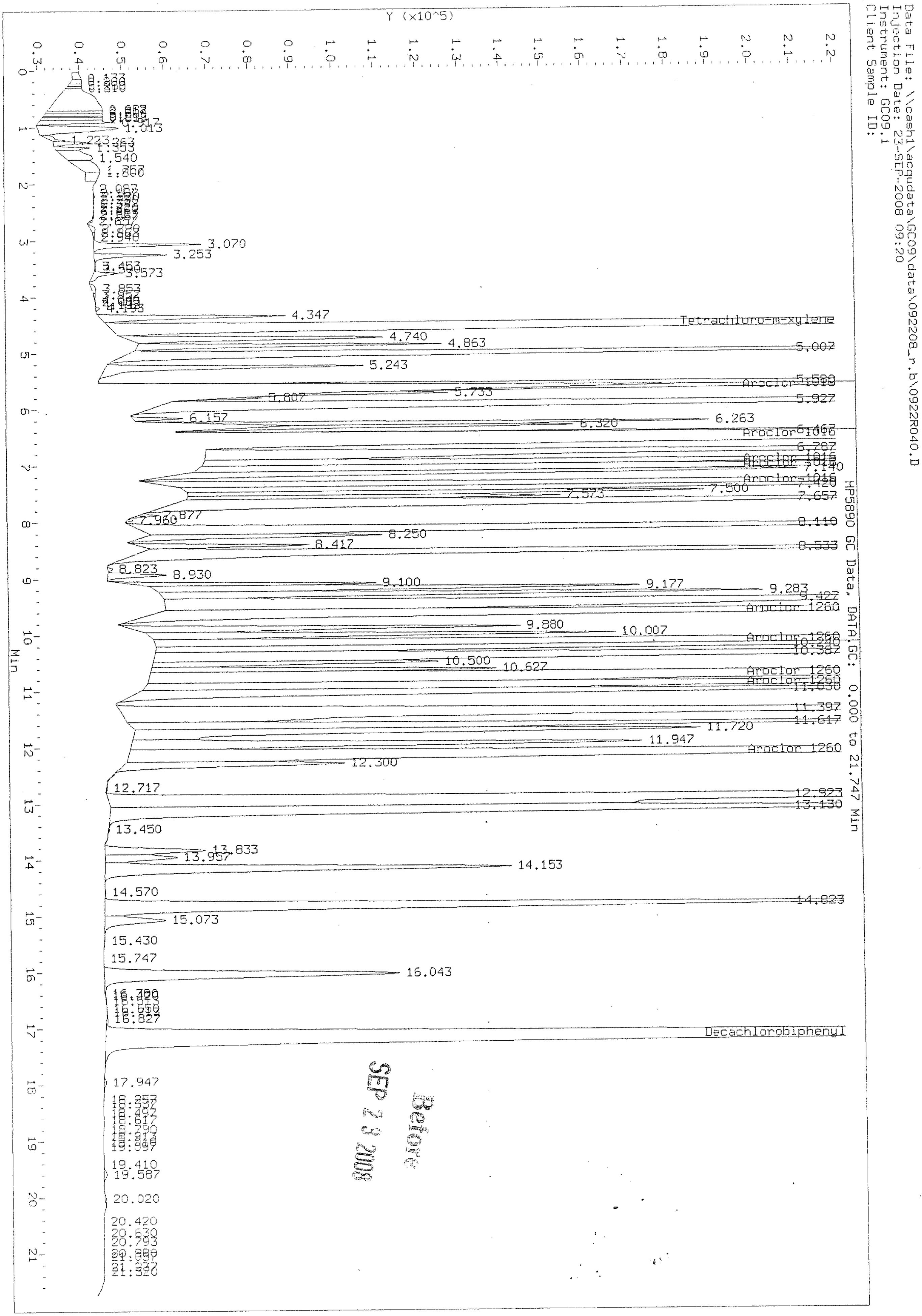
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F040.D
Injection Date: 23-SEP-2008 09:20
Instrument: GC09.i
Client Sample ID:



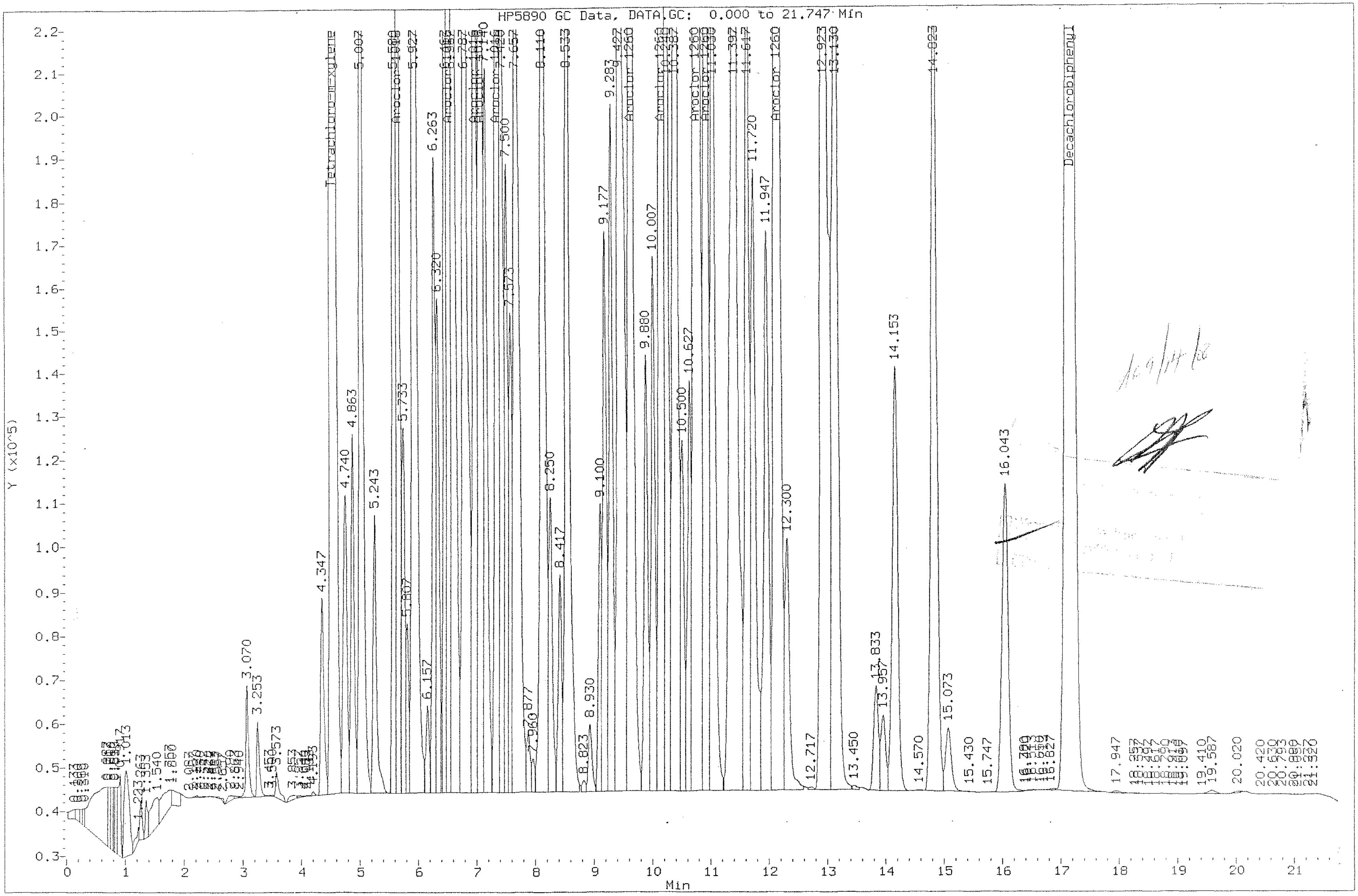
Data File: \\cash1\acqudata\GC09\data\092208.b\0922F040.D
Injection Date: 23-SEP-2008 09:20
Instrument: GC09.i
Client Sample ID:





Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R040.D
Injection Date: 23-SEP-2008 09:20
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.747 Min
Y (x10^5)
Min
Tetrachloro-m-xylene
Aroclor 1016
Aroclor 1260
Decachlorobiphenyl
Before
SEP 23 2008

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R040.D
Injection Date: 23-SEP-2008 09:20
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F041.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F041.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R041.D
Inj Date : 23-SEP-2008 09:47
Sample Info: 1016 @ 1000ppb | PCB5-19A | KWG0804201-15
Misc Info : SEMIVOA GC\W0804201\15-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1016.sub
Sub List #2 : AR1016.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1016	5.690	5.633	218244	333609	984	973	80.00- 120.00	100.00(M)
	6.213	6.570	416323	614205	962	902	151.51- 227.27	190.76(M)
	6.597	6.960	214312	333965	955	927	79.74- 119.61	98.20(M)
	7.003	7.060	288662	405934	956	982	106.84- 160.26	132.27(M)
	7.290	7.333	263673	361154	1200	981	91.86- 137.79	120.82(M)
			Average of Peak Amounts =		1010	953		

QC Flag Legend

M - Compound response manually integrated.

AH 9/23/08

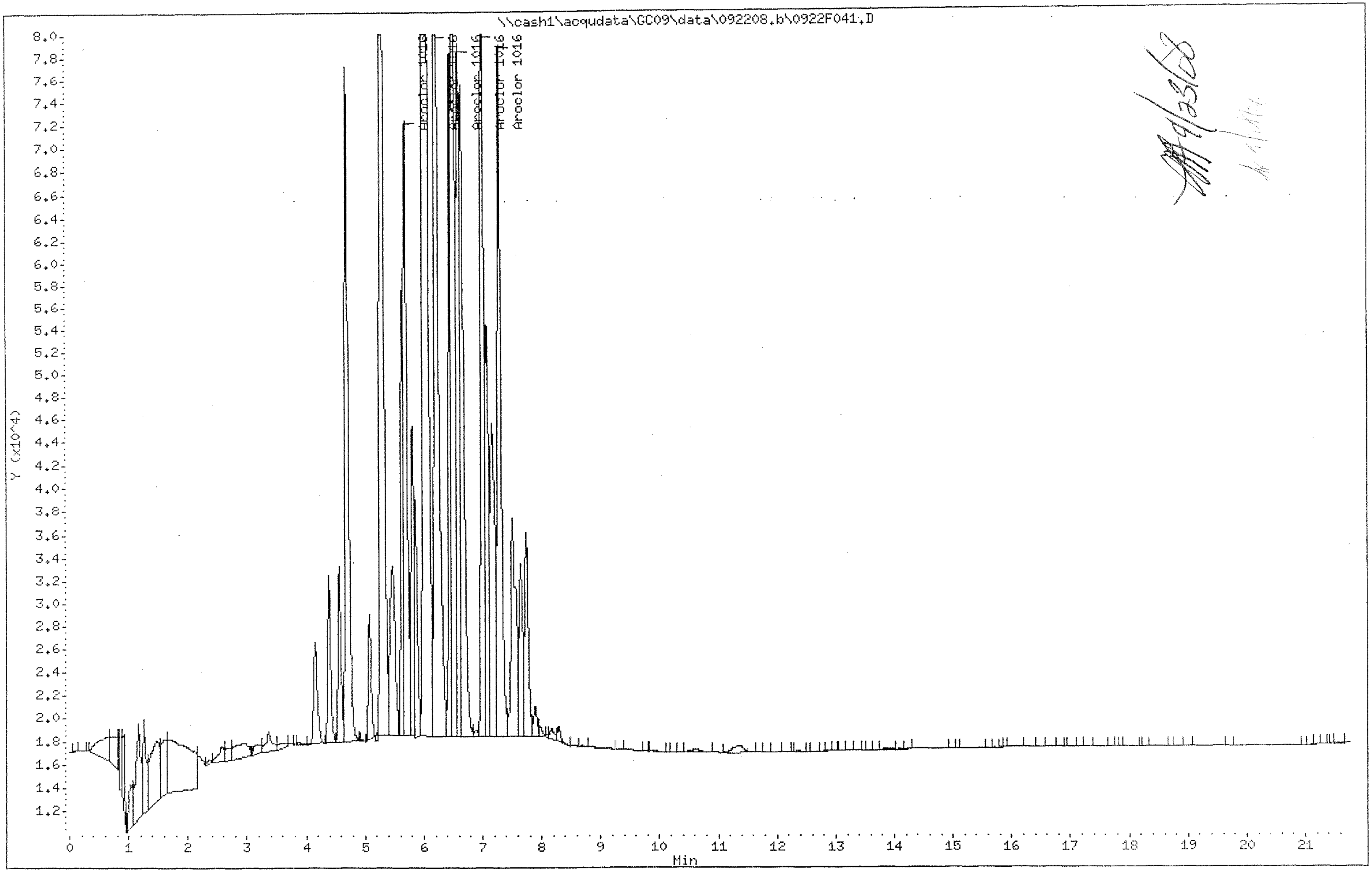
AR 9/11/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F041.D
Date : 23-SEP-2008 09:47
Client ID:
Sample Info: 1016 @ 1000ppb | PCB5-19A | KWG0804201-15

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

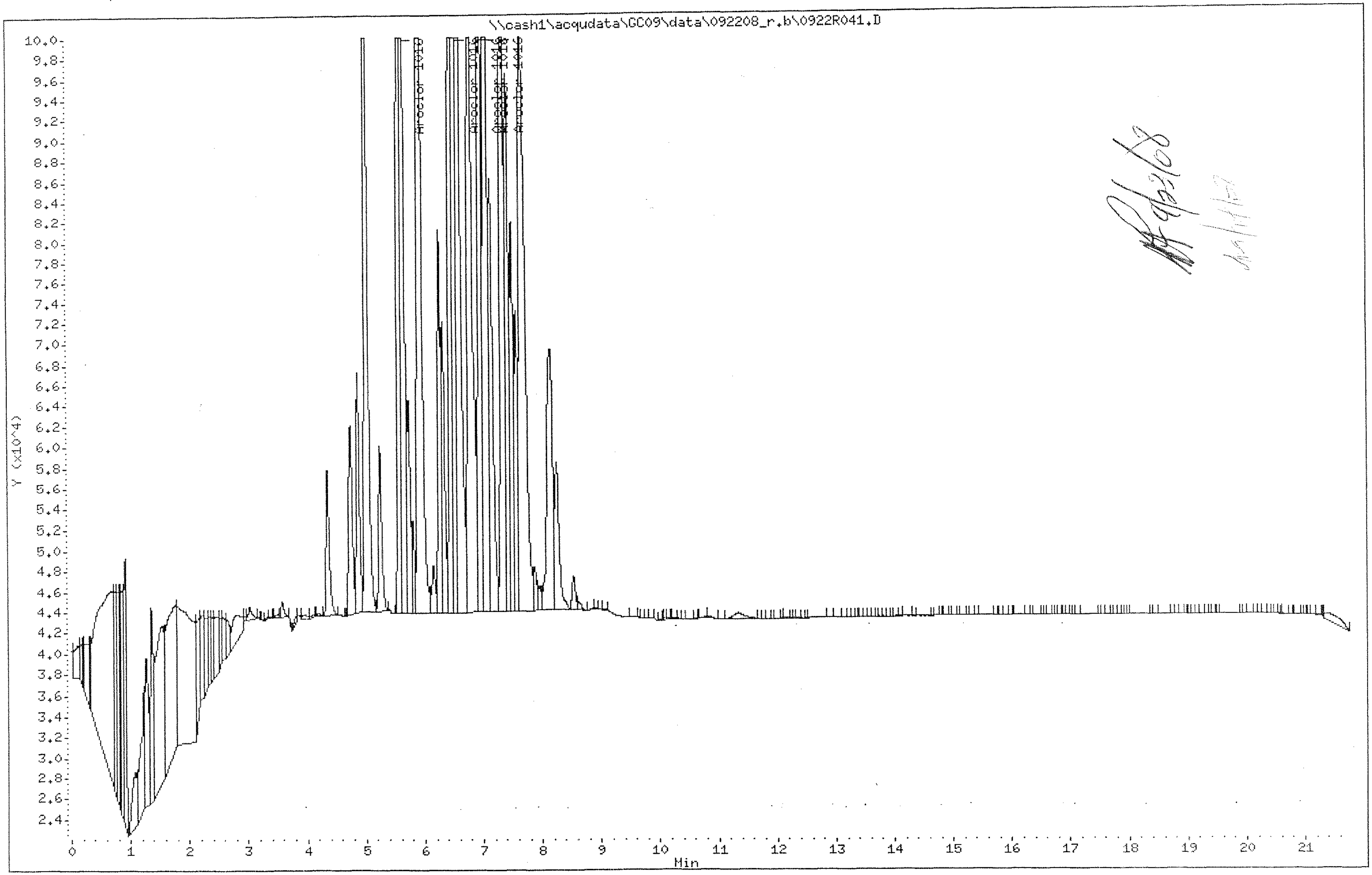


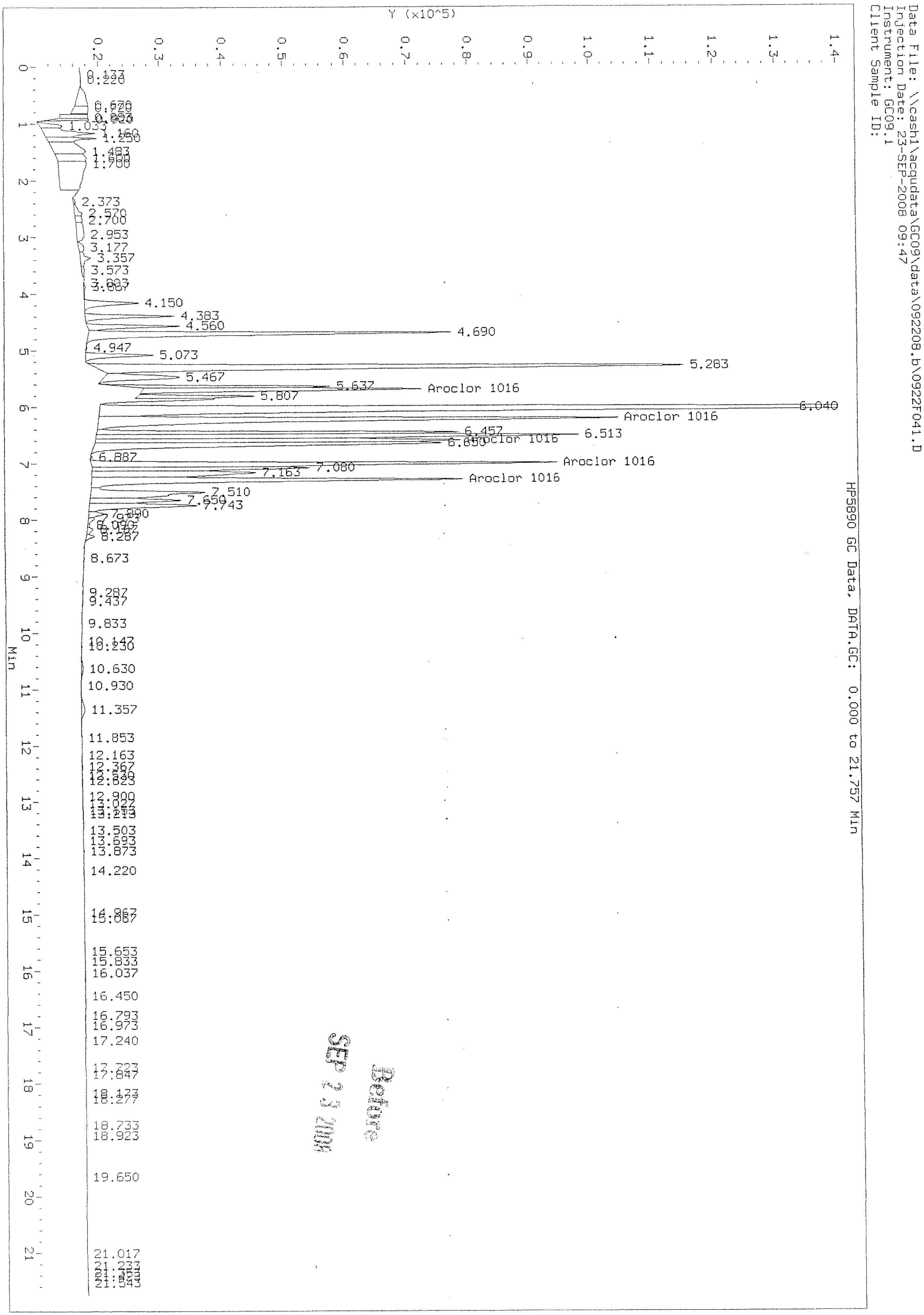
Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R041.D
Date : 23-SEP-2008 09:47
Client ID:
Sample Info: 1016 @ 1000ppb | PCB5-19A | KWG0804201-15

Column phase: DB-XLB

Instrument: GC09.i

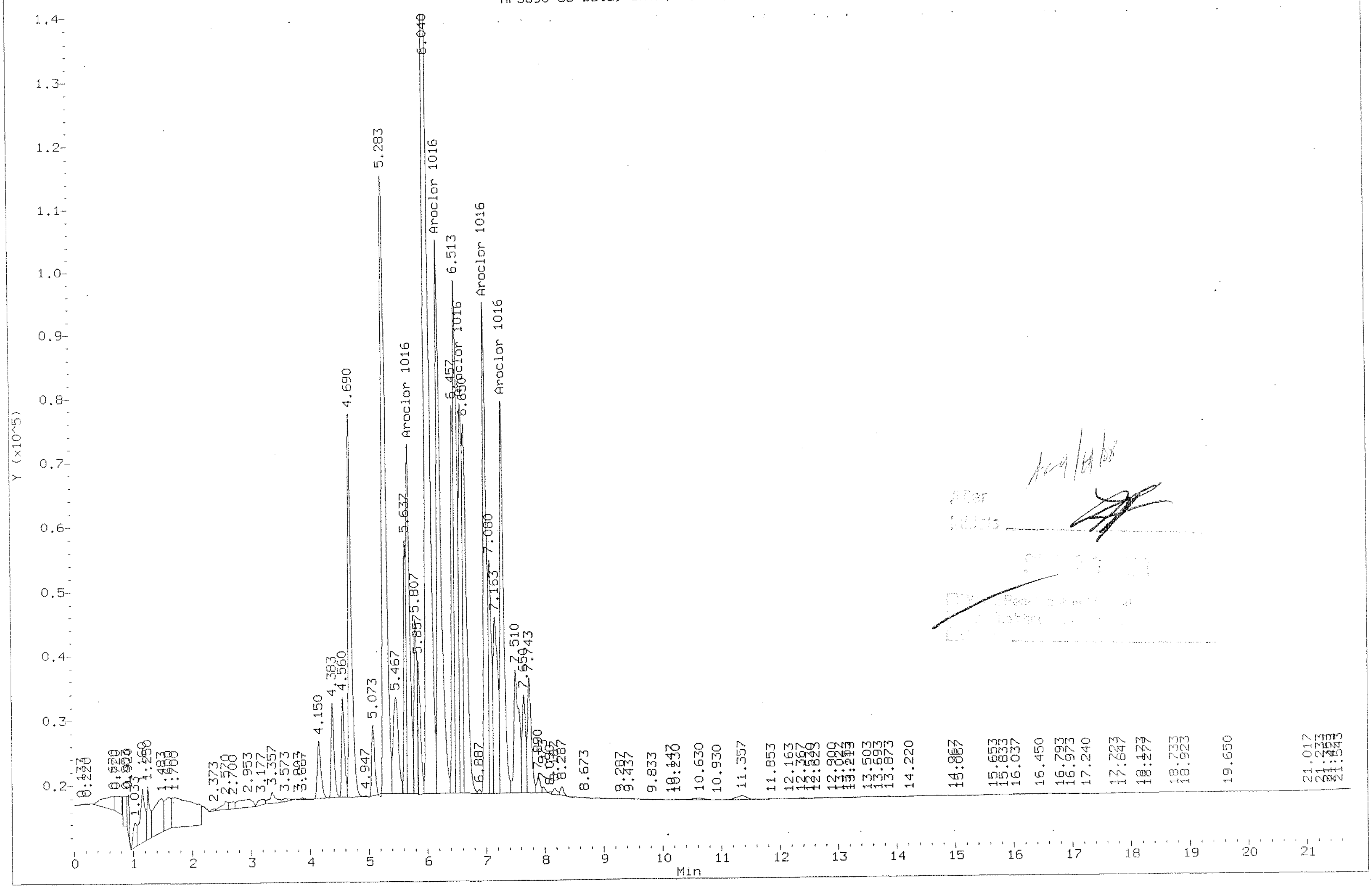
Operator: LHarris
Column diameter: 0.53




Data File: \\cash1\acqudata\GC09\data\092208.b\0922F041.D
Injection Date: 23-SEP-2008 09:47
Instrument: GC09.i
Client Sample ID:
HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min
Y (x10^5)
Min
Aroclor 1016
Aroclor 1016
Aroclor 1016
Aroclor 1016
Aroclor 1016
Before
SEP 23 2008

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F041.D
Injection Date: 23-SEP-2008 09:47
Instrument: GC09.i
Client Sample ID:

HP5890 GC Data, DATA.GC: 0.000 to 21.757 Min



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F042.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F042.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R042.D
Inj Date : 23-SEP-2008 10:13
Sample Info: 1221 @ 1000ppb | PCB5-19B | KWG0804201-16
Misc Info : SEMIVOA GC\W0804201\16-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1221.SUB
Sub List #2 : AR1221.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1221	3.357	3.573	90447	142004	988	1010	80.00- 120.00	100.00(M)
	3.870	4.193	35969	46418	950	948	33.06- 49.60	39.77(M)
	4.383	4.747	137481	229593	1020	1030	117.90- 176.86	152.00(M)
	4.560	4.863	91023	152941	1040	1050	76.27- 114.41	100.64(M)
			Average of Peak Amounts =		1000	1010		

QC Flag Legend

M - Compound response manually integrated.

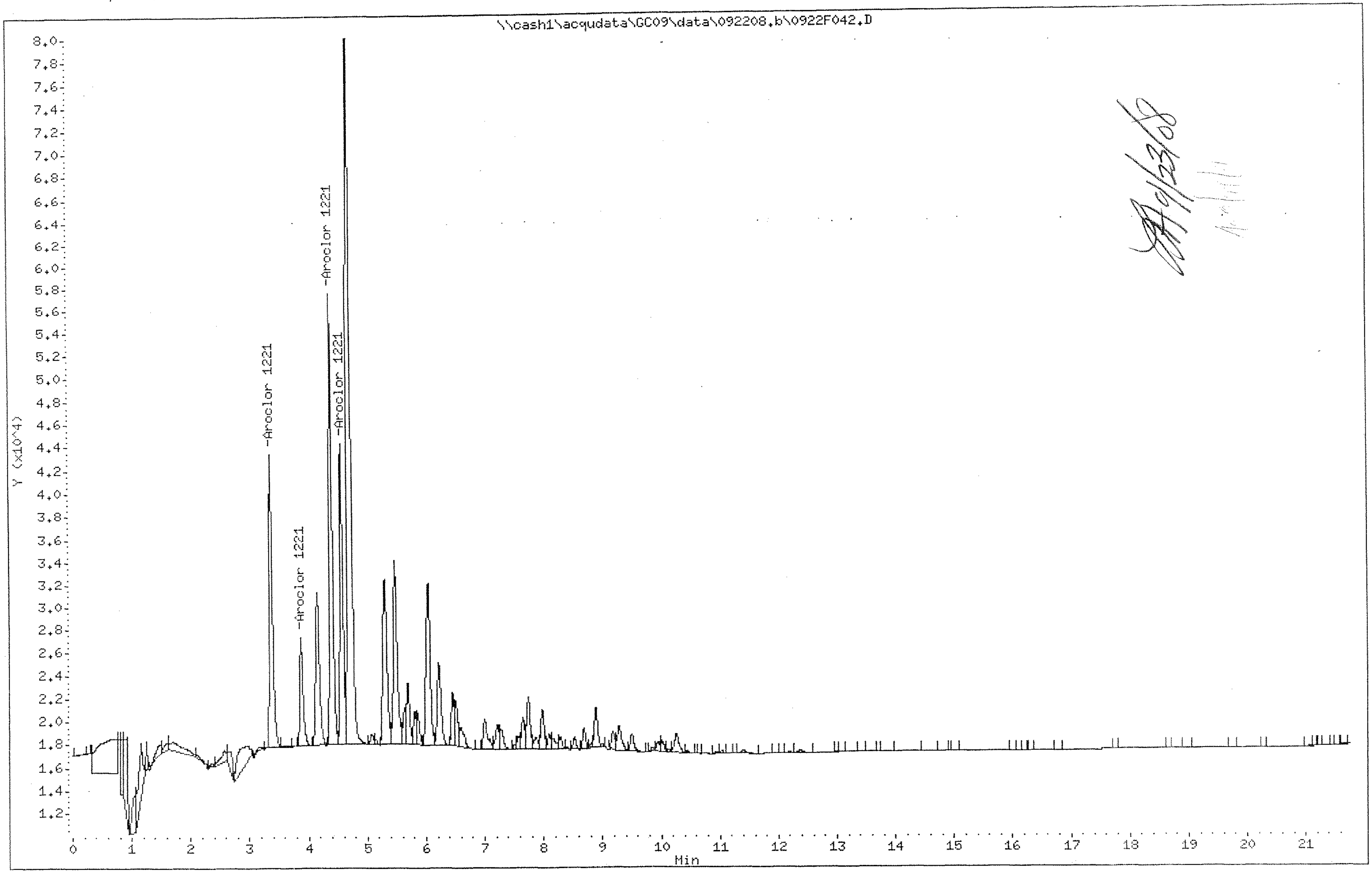
AH 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F042.D
Date : 23-SEP-2008 10:13
Client ID:
Sample Info: 1221 @ 1000ppb | FCB5-19B | KWG0804201-16

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



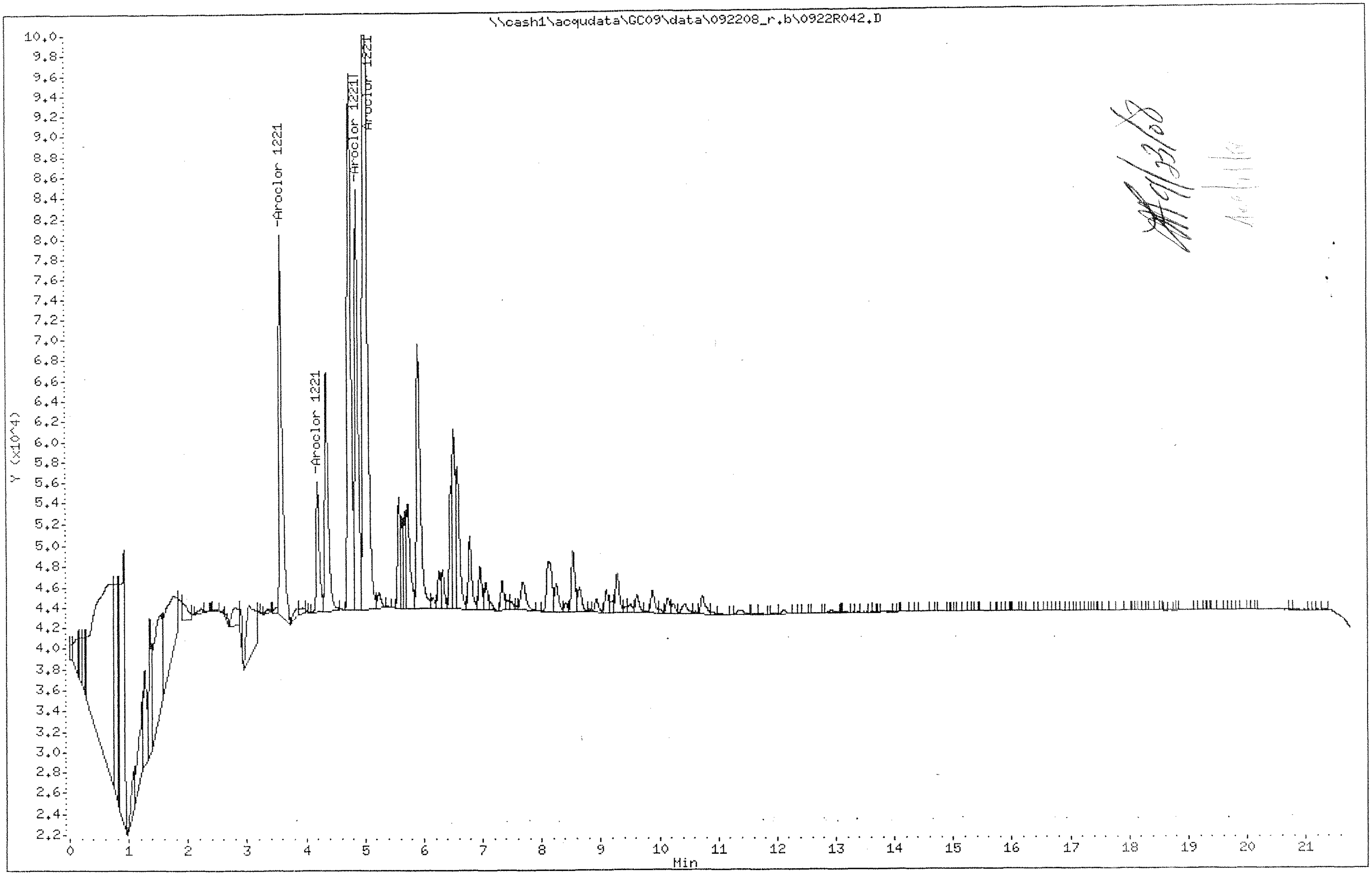
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R042.D
Date : 23-SEP-2008 10:13
Client ID:
Sample Info: 1221 @ 1000ppb | PCB5-19B | KWG0804201-16

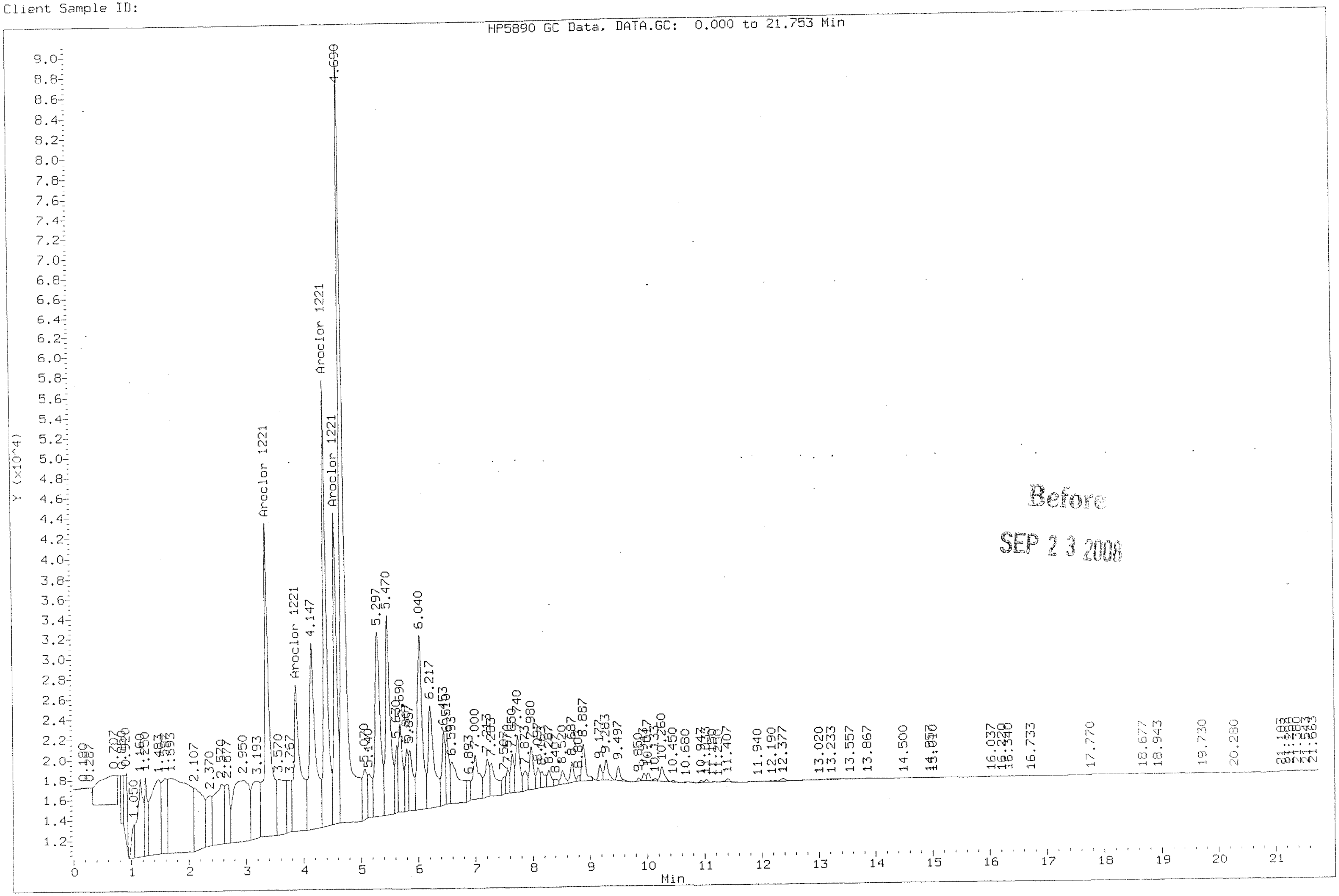
Column phase: DB-XLB

Instrument: GC09.i

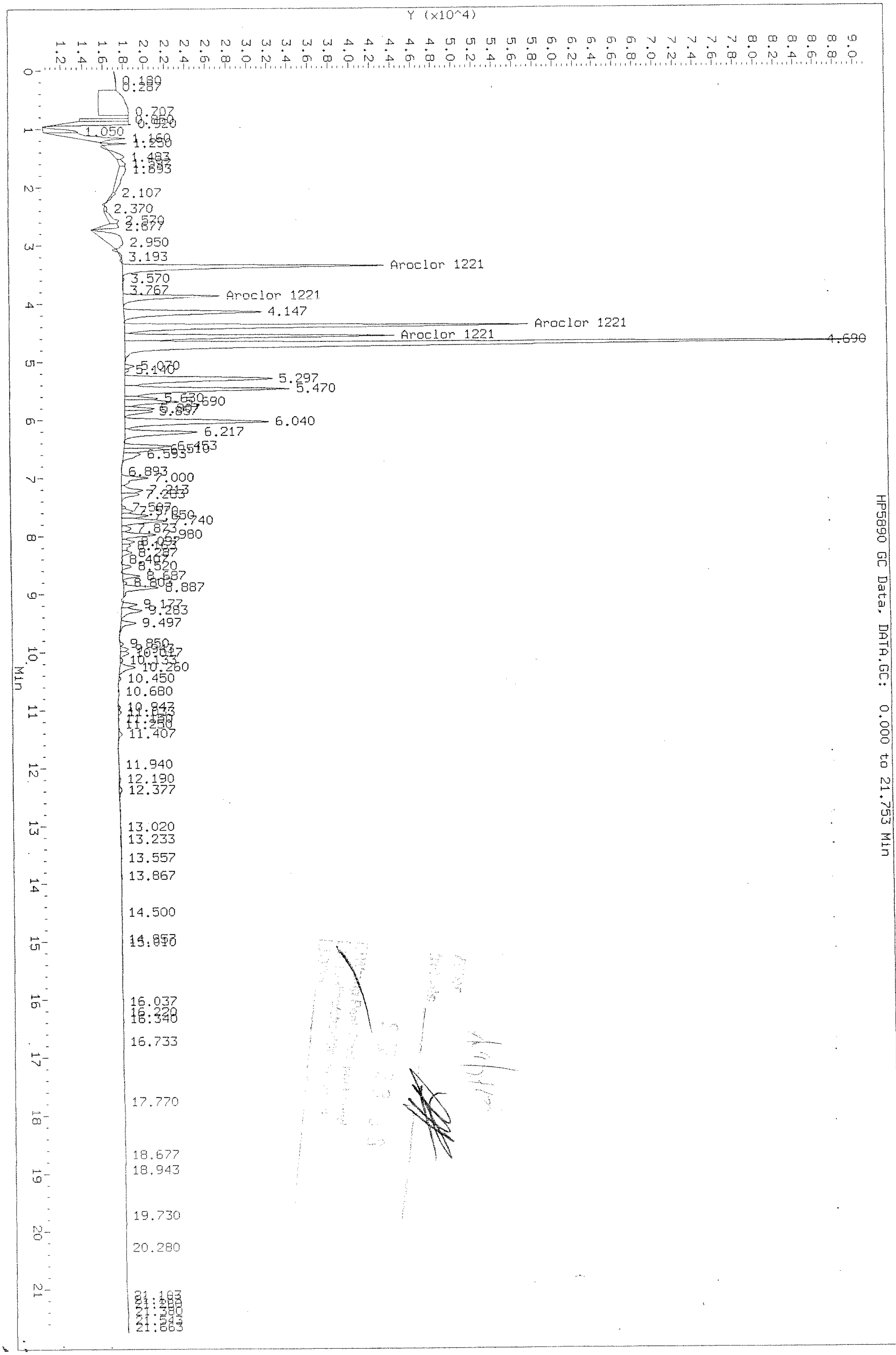
Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F042.D
Injection Date: 23-SEP-2008 10:13
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F042.D
Injection Date: 23-SEP-2008 10:13
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F043.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F043.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R043.D
Inj Date : 23-SEP-2008 10:39
Sample Info: 1232 @ 1000ppb | PCB5-19C | KWG0804201-17
Misc Info : SEMIVOA GC\W0804201\17-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1232.SUB
Sub List #2 : AR1232.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1232	4.690	5.007	248942	392102	943	945	80.00- 120.00	100.00(M)
	5.283	5.580	242636	212724	1070	1130	68.69- 103.04	97.47(M)
	6.037	5.920	447568	282590	1050	1060	128.72- 193.08	179.79(M)
	6.213	6.467	206800	208568	1060	1060	59.24- 88.86	83.07(M)
		Average of Peak Amounts =			1030	1050		

QC Flag Legend

M - Compound response manually integrated.

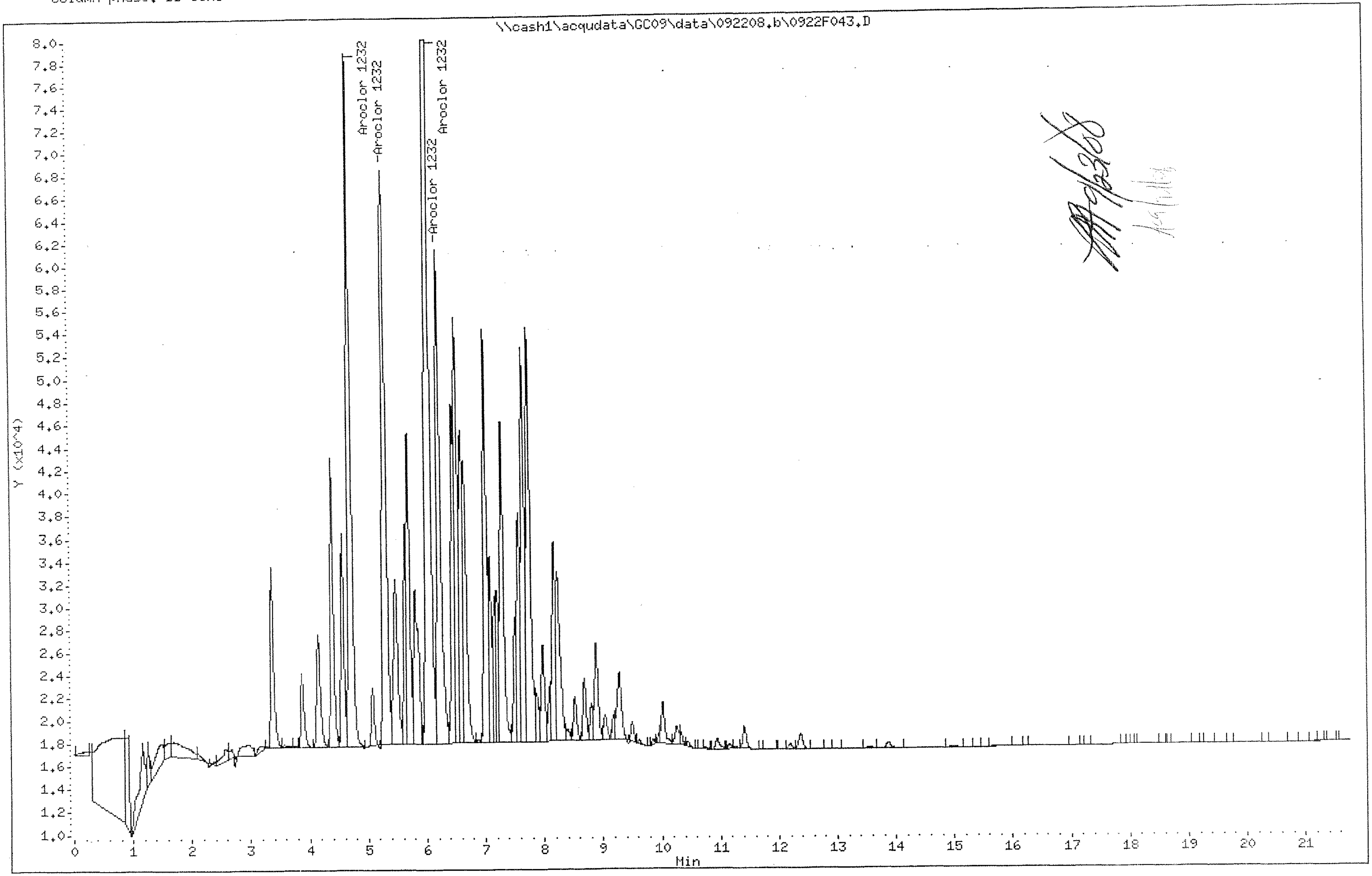
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F043.D
Date : 23-SEP-2008 10:39
Client ID:
Sample Info: 1232 @ 1000ppb | PCB5-19C | KWG0804201-17

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

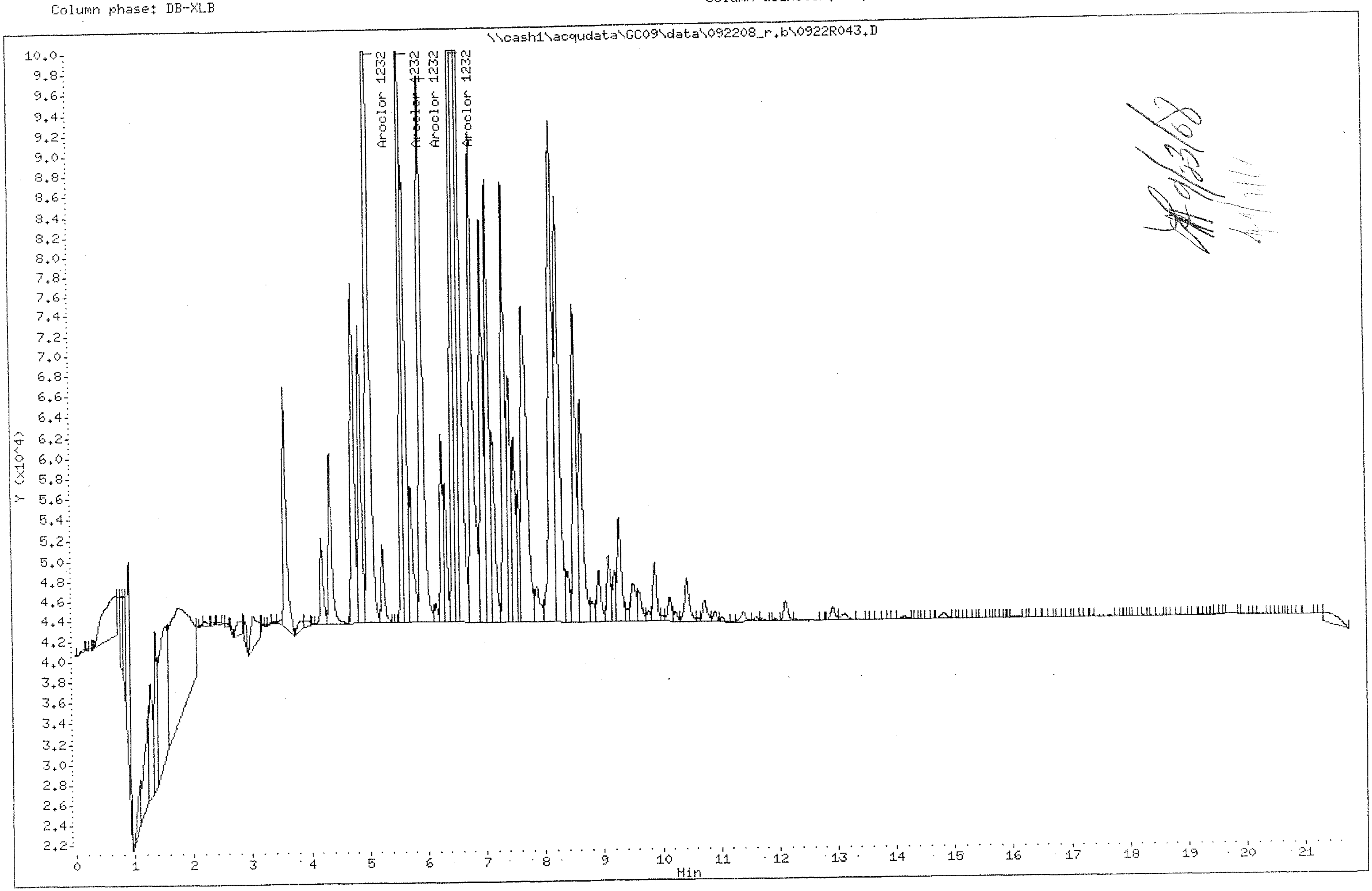


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R043.D
Date : 23-SEP-2008 10:39
Client ID:
Sample Info: 1232 @ 1000ppb | PCB5-19C | KWG0804201-17

Column phase: DB-XLB

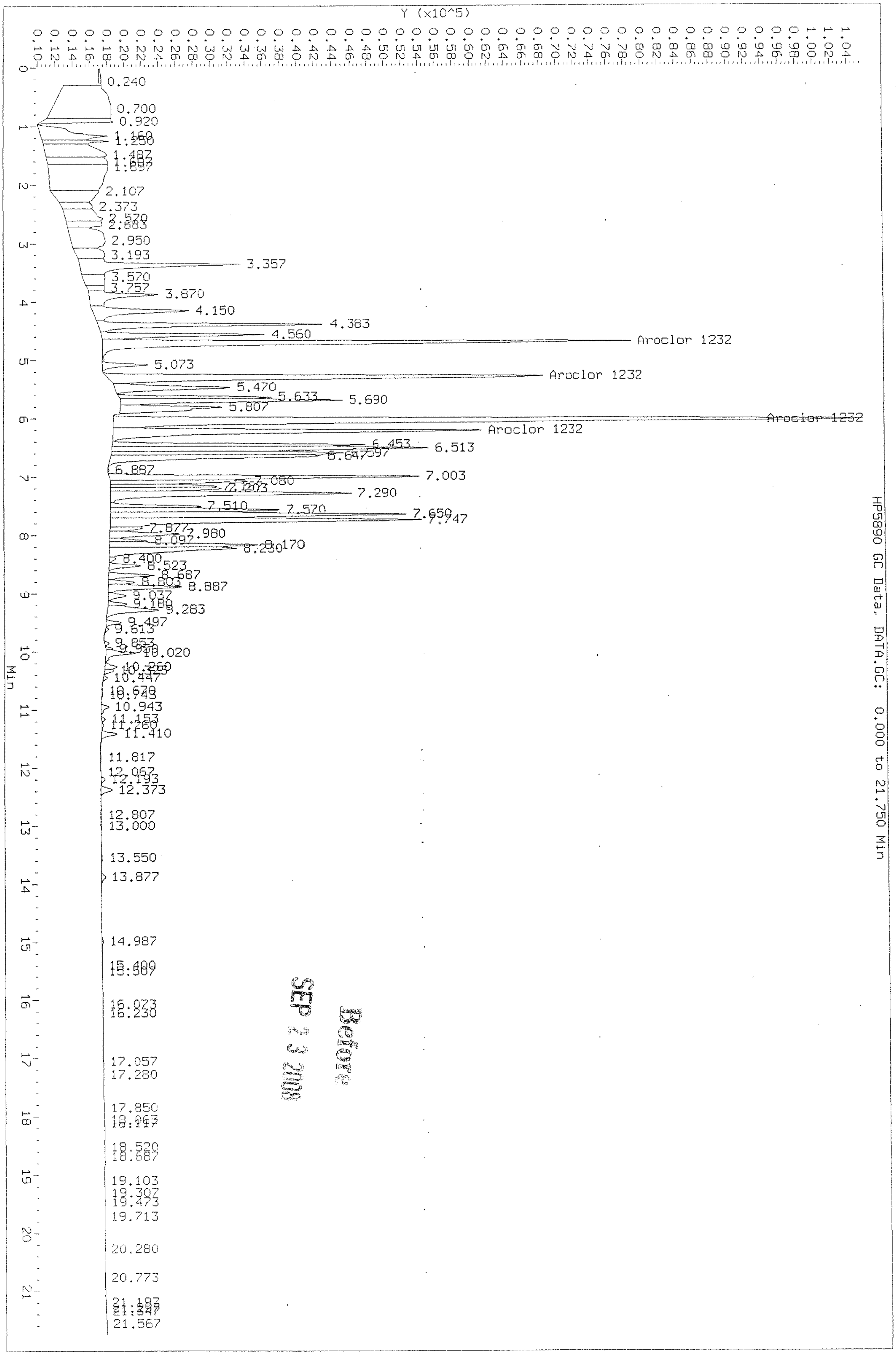
Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

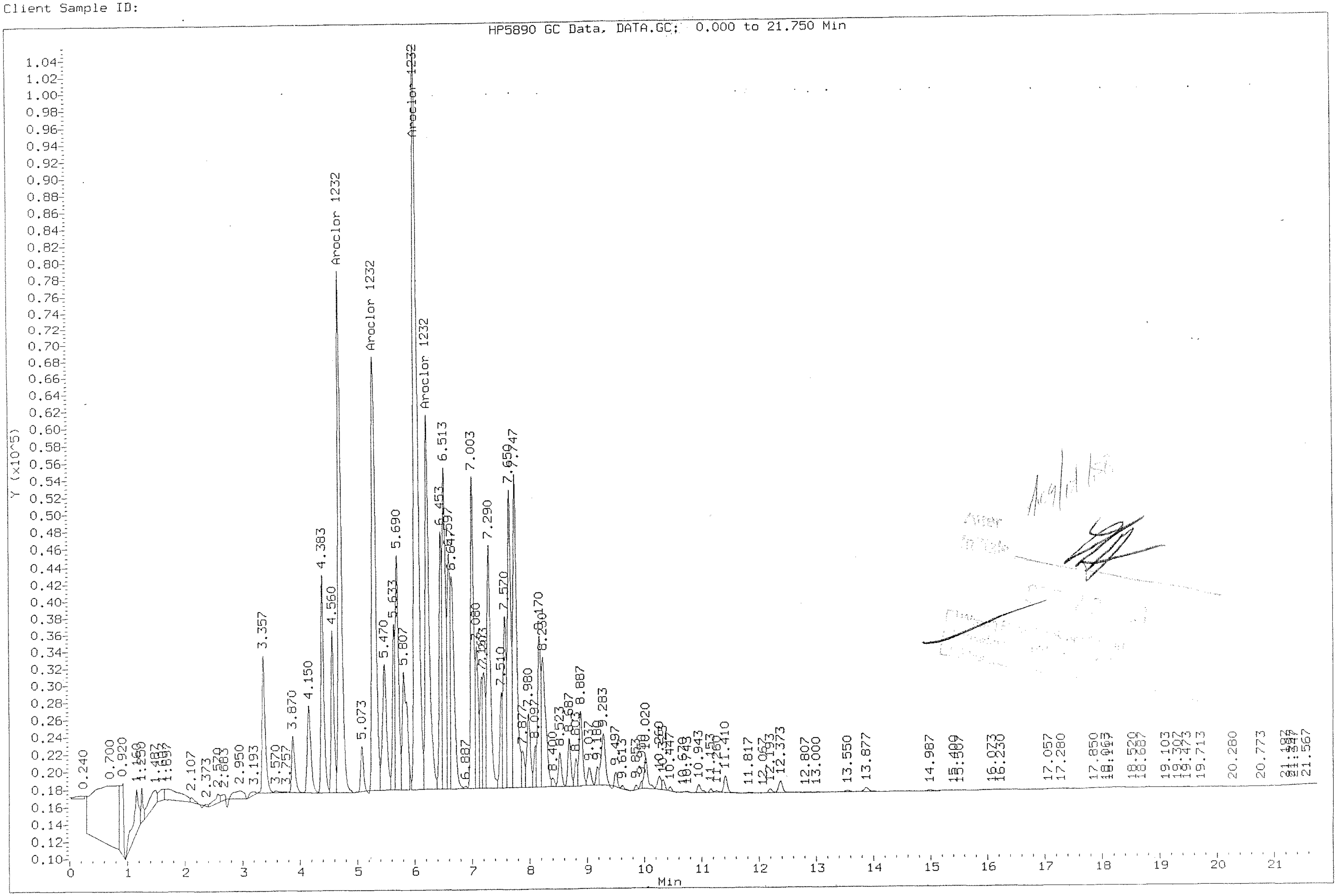


9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F043.D
Injection Date: 23-SEP-2008 10:39
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F043.D
Injection Date: 23-SEP-2008 10:39
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F044.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F044.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R044.D
Inj Date : 23-SEP-2008 11:05
Sample Info: 1242 @ 1000ppb | PCB5-19D | KWG0804201-18
Misc Info : SEMIVOA GC\W0804201\18-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1242.SUB
Sub List #2 : AR1242.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1242	5.283	5.580	397697	354108	1020	1040	80.00- 120.00	100.00(M)
	5.637	5.923	91996	415018	1050	1010	17.99- 26.99	23.13(M)
	6.037	6.517	767153	698105	1040	980	151.76- 227.63	192.90(M)
	6.213	6.783	359557	398983	1050	1010	70.03- 105.04	90.41(M)
	6.513	6.960	300598	307181	1070	1100	57.66- 86.49	75.58(M)
		Average of Peak Amounts =			1050	1030		

QC Flag Legend

M - Compound response manually integrated.

AA 9/23/08

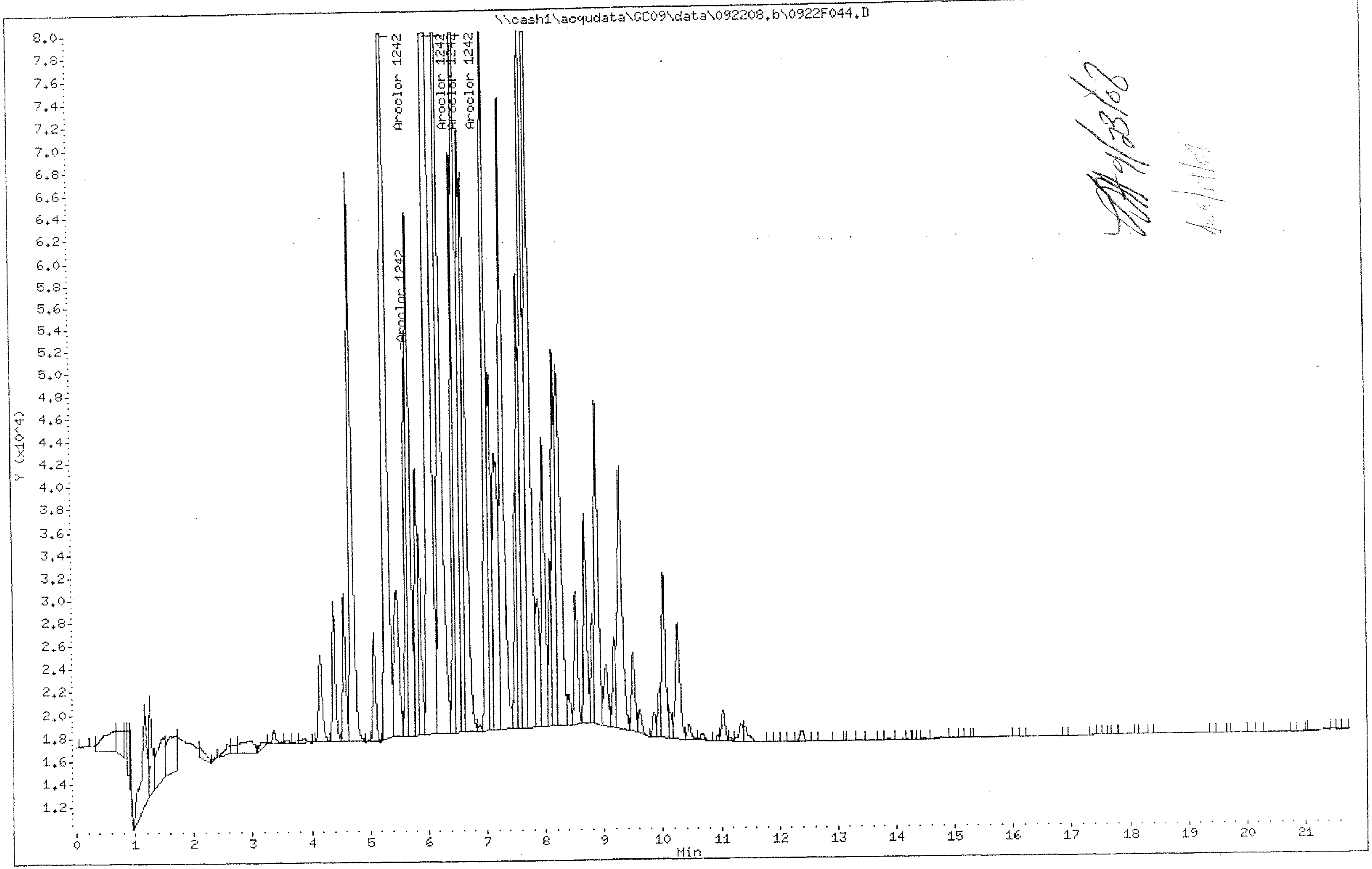
A 9/24/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F044.D
Date : 23-SEP-2008 11:05
Client ID:
Sample Info: 1242 @ 1000ppb | PCB5-19D | KWG0804201-18

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

Column phase: DB-35MS



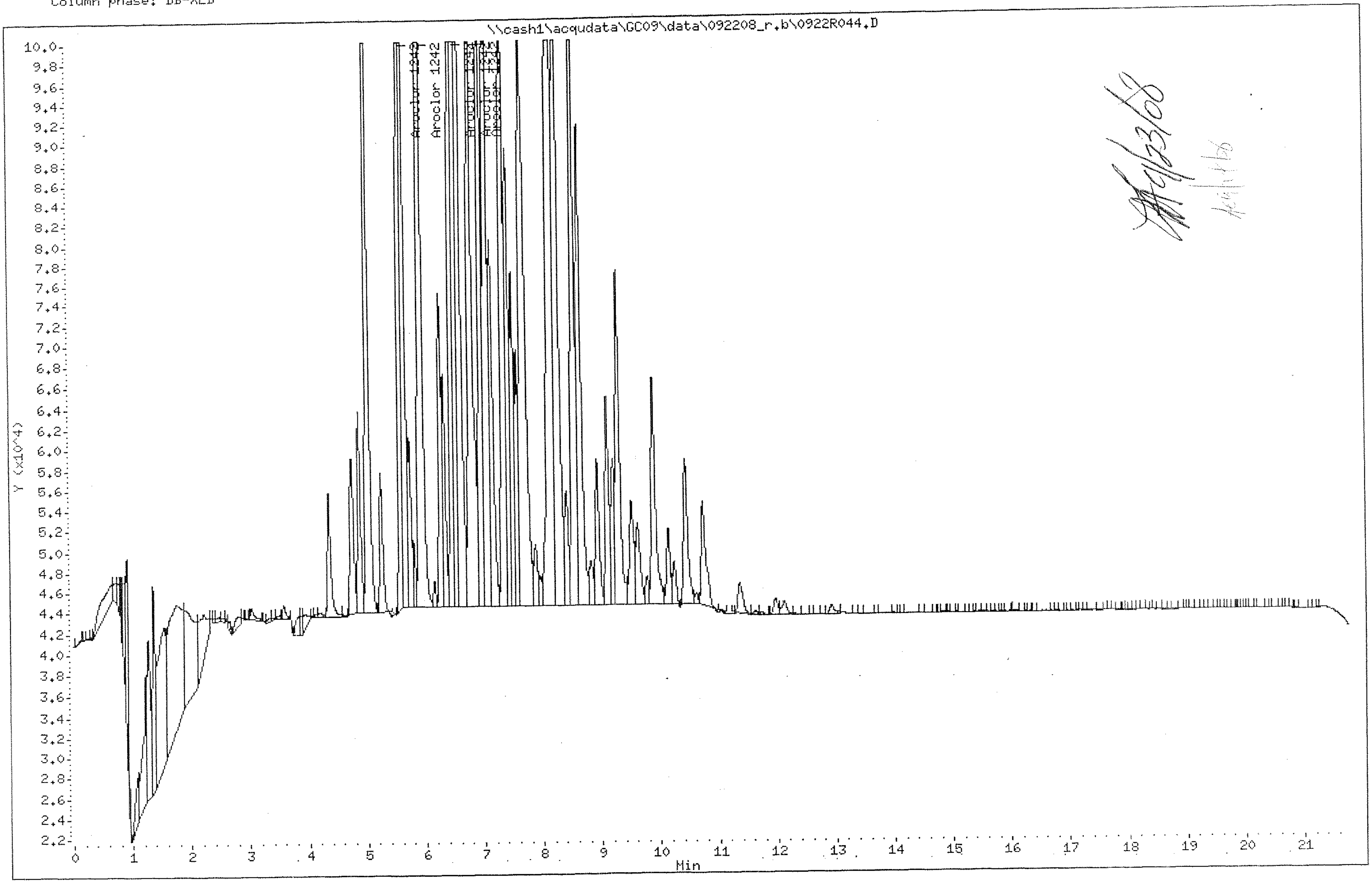
LH 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R044.D
Date : 23-SEP-2008 11:05
Client ID:
Sample Info: 1242 @ 1000ppb | PCB5-19D | KWG0804201-18

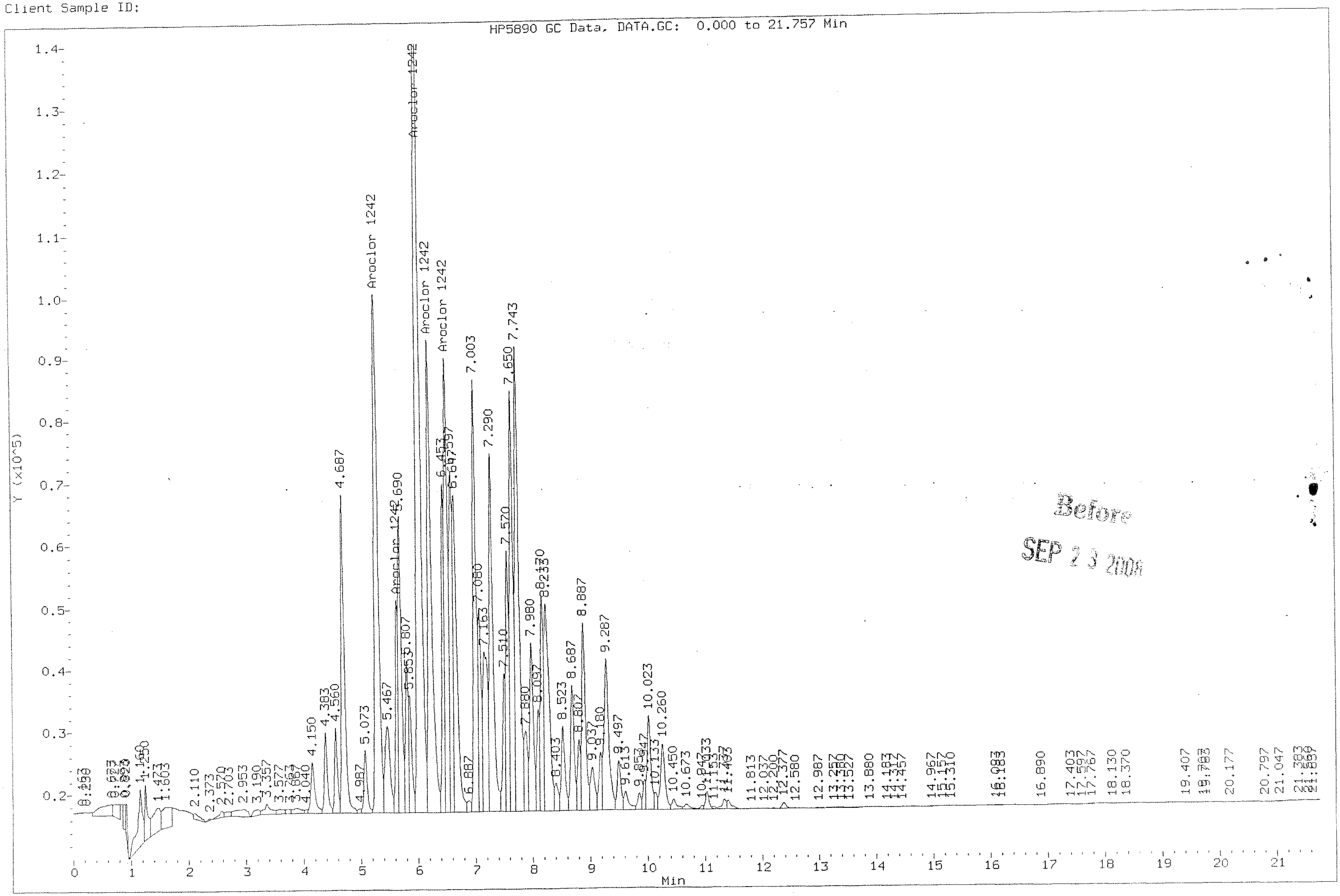
Column phase: DB-XLB

Instrument: GC09.i

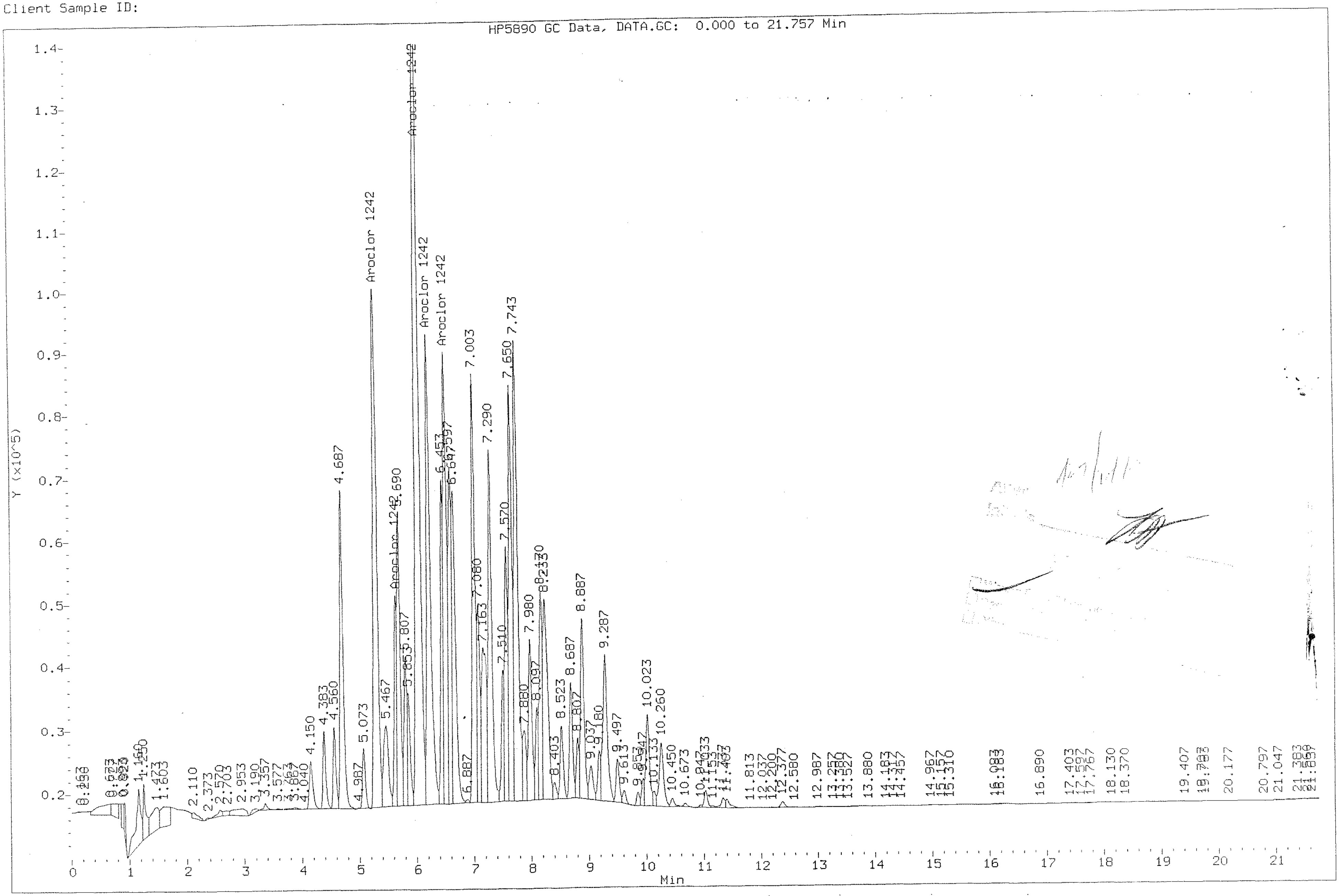
Operator: LHarris
Column diameter: 0.53



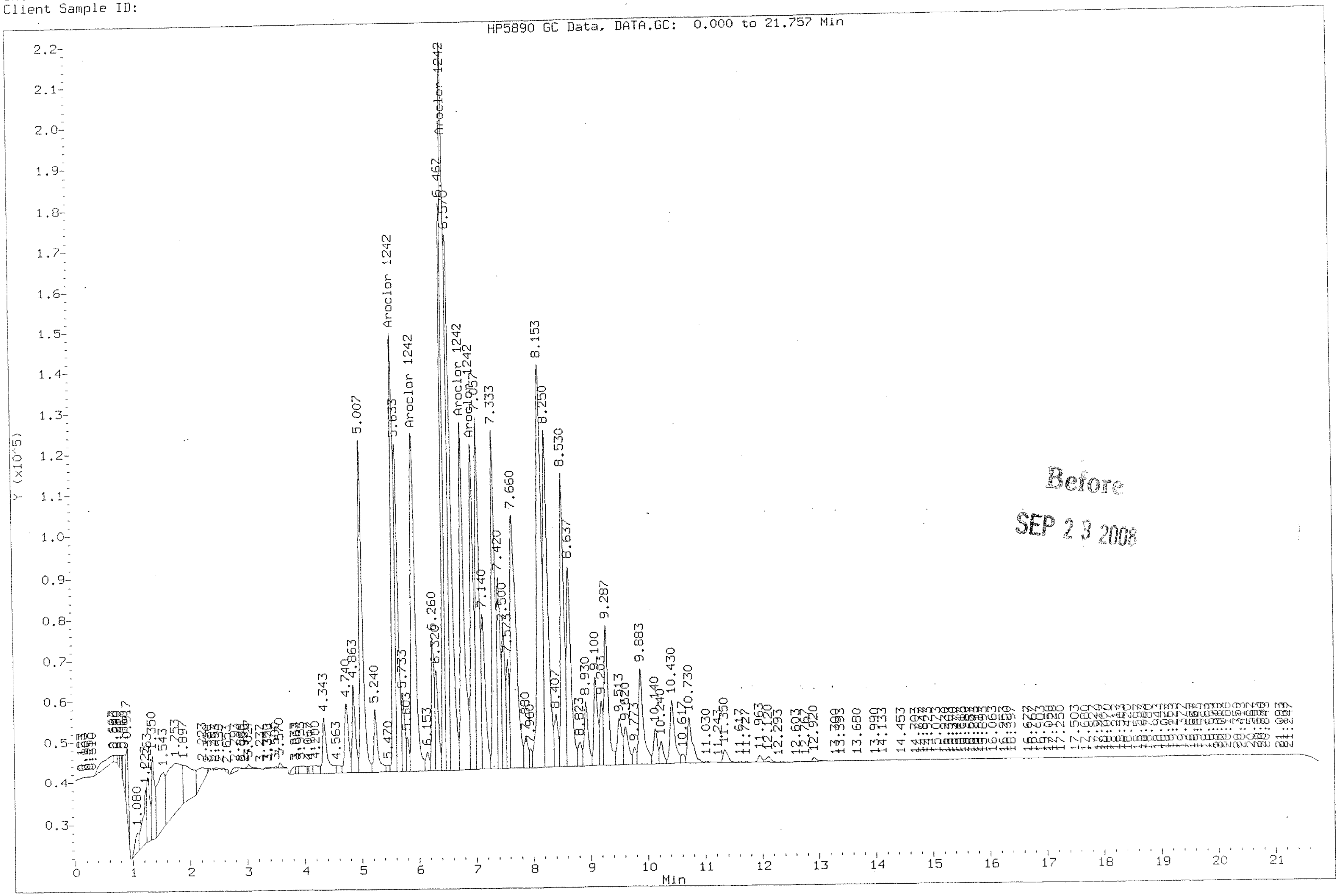
Data File: \\cash1\acqudata\GC09\data\092208.b\0922F044.D
Injection Date: 23-SEP-2008 11:05
Instrument: GC09.i
Client Sample ID:



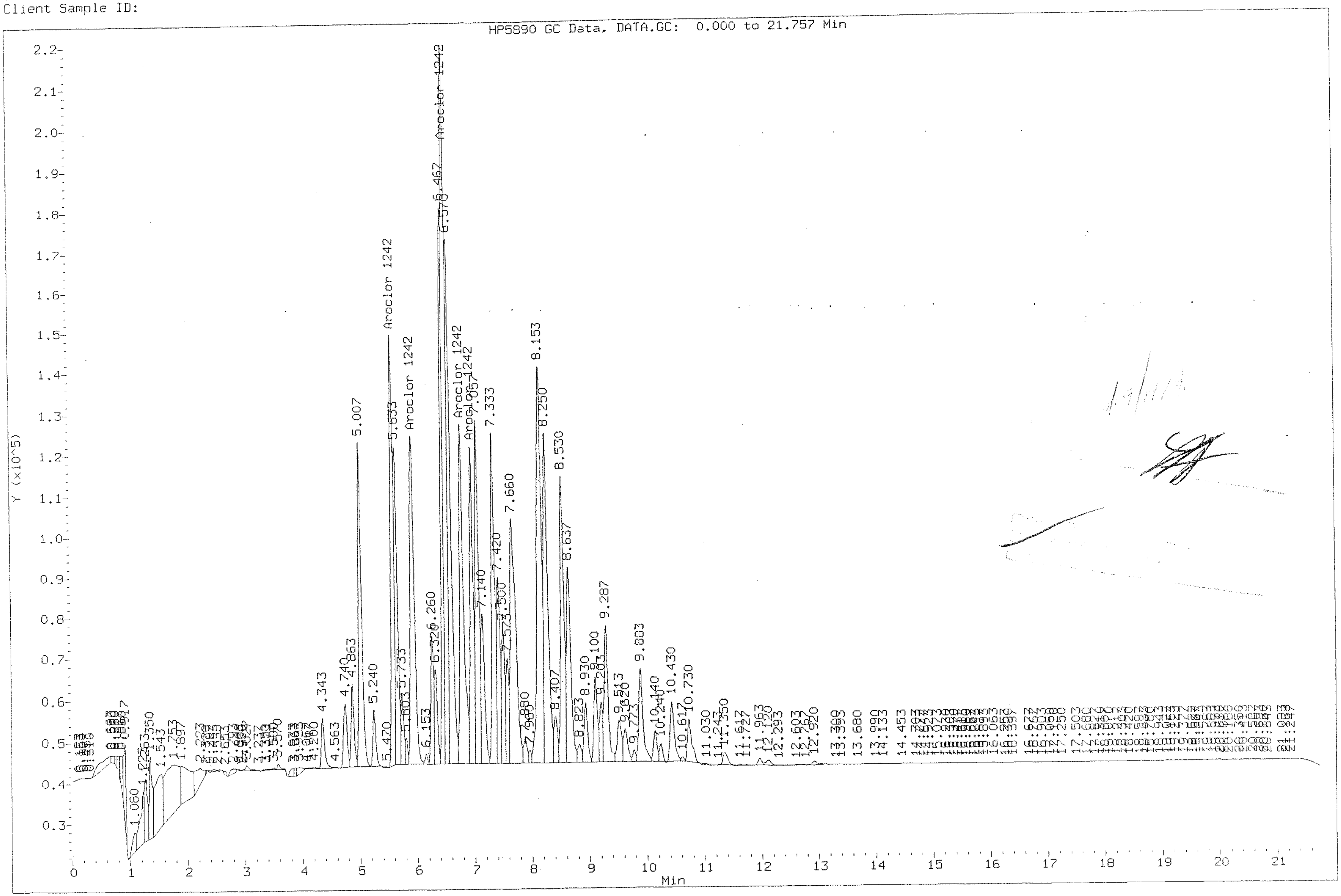
Data File: \\cash1\acqudata\GC09\data\092208.b\0922F044.D
Injection Date: 23-SEP-2008 11:05
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R044.D
Injection Date: 23-SEP-2008 11:05
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R044.D
Injection Date: 23-SEP-2008 11:05
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F045.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F045.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
Inj Date : 23-SEP-2008 11:32
Sample Info: 1248 @ 1000ppb | PCB5-19E | KWG0804201-19
Misc Info : SEMIVOA GC\W0804201\19-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1248.SUB
Sub List #2 : AR1248.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1248	6.597	7.057	268510	468592	993	952	80.00- 120.00	100.00(M)
	7.003	7.333	368584	484574	987	987	110.51- 165.76	137.27(M)
	7.290	8.153	307837	895748	909	935	100.26- 150.39	114.65(M)
	7.650	8.250	438612	612811	966	879	134.44- 201.67	163.35(M)
	7.743	8.533	522311	497777	905	979	170.78- 256.17	194.52(M)
			Average of Peak Amounts =		952	946		

QC Flag Legend

M - Compound response manually integrated.

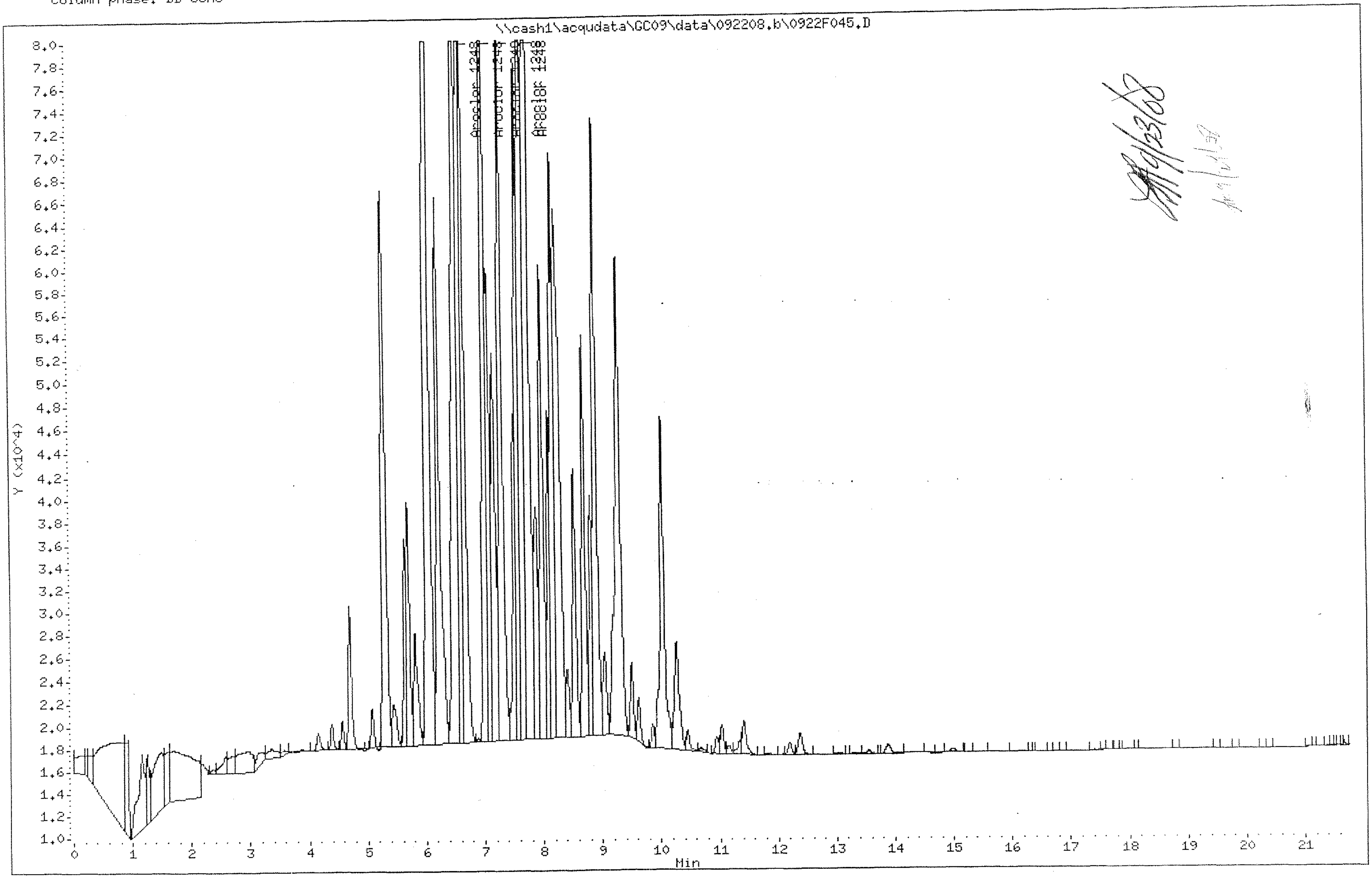
AA 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F045.D
Date : 23-SEP-2008 11:32
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-19E | KWG0804201-19

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



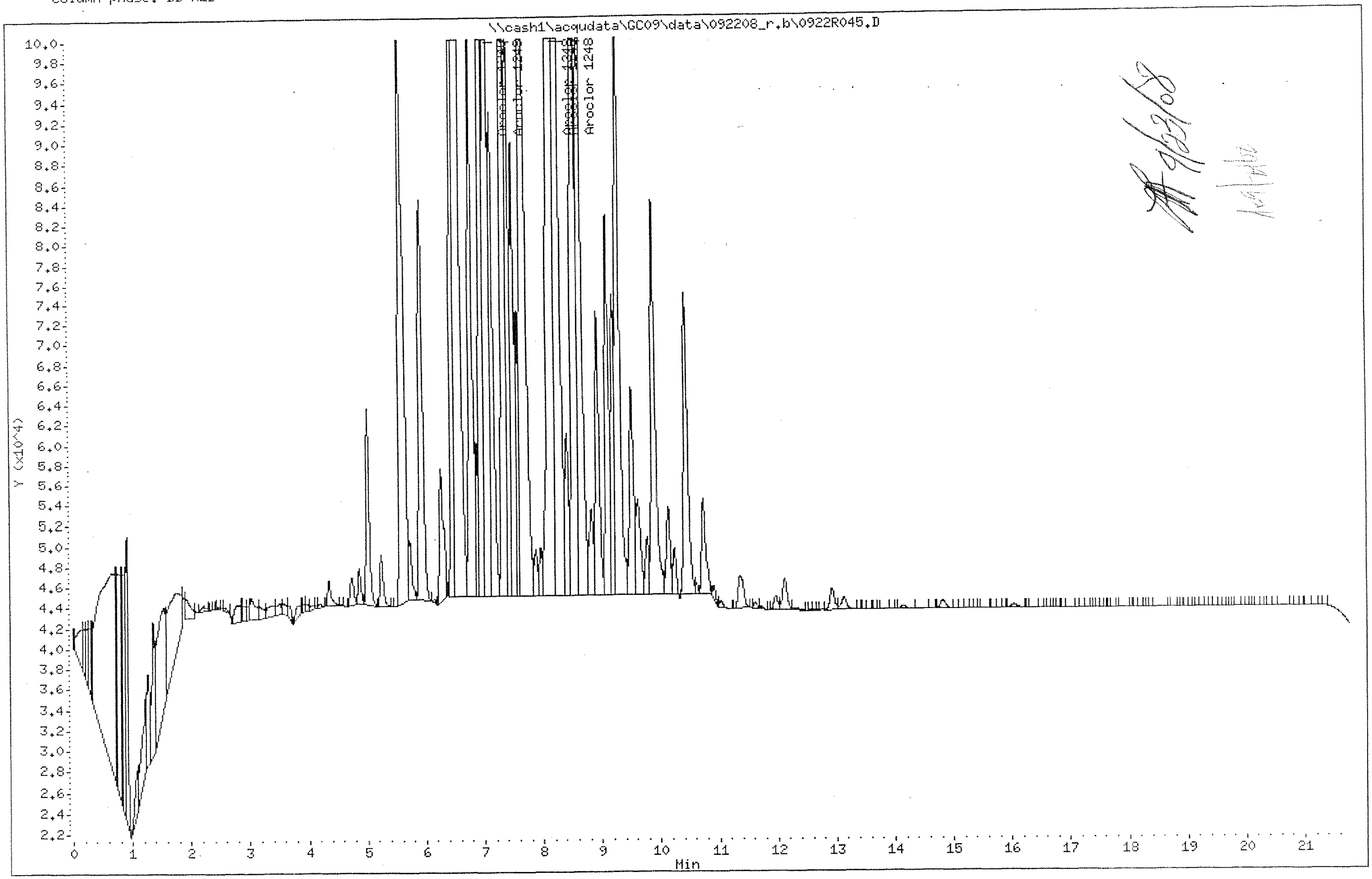
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
Date : 23-SEP-2008 11:32
Client ID:
Sample Info: 1248 @ 1000ppb | PCB5-19E | KWG0804201-19

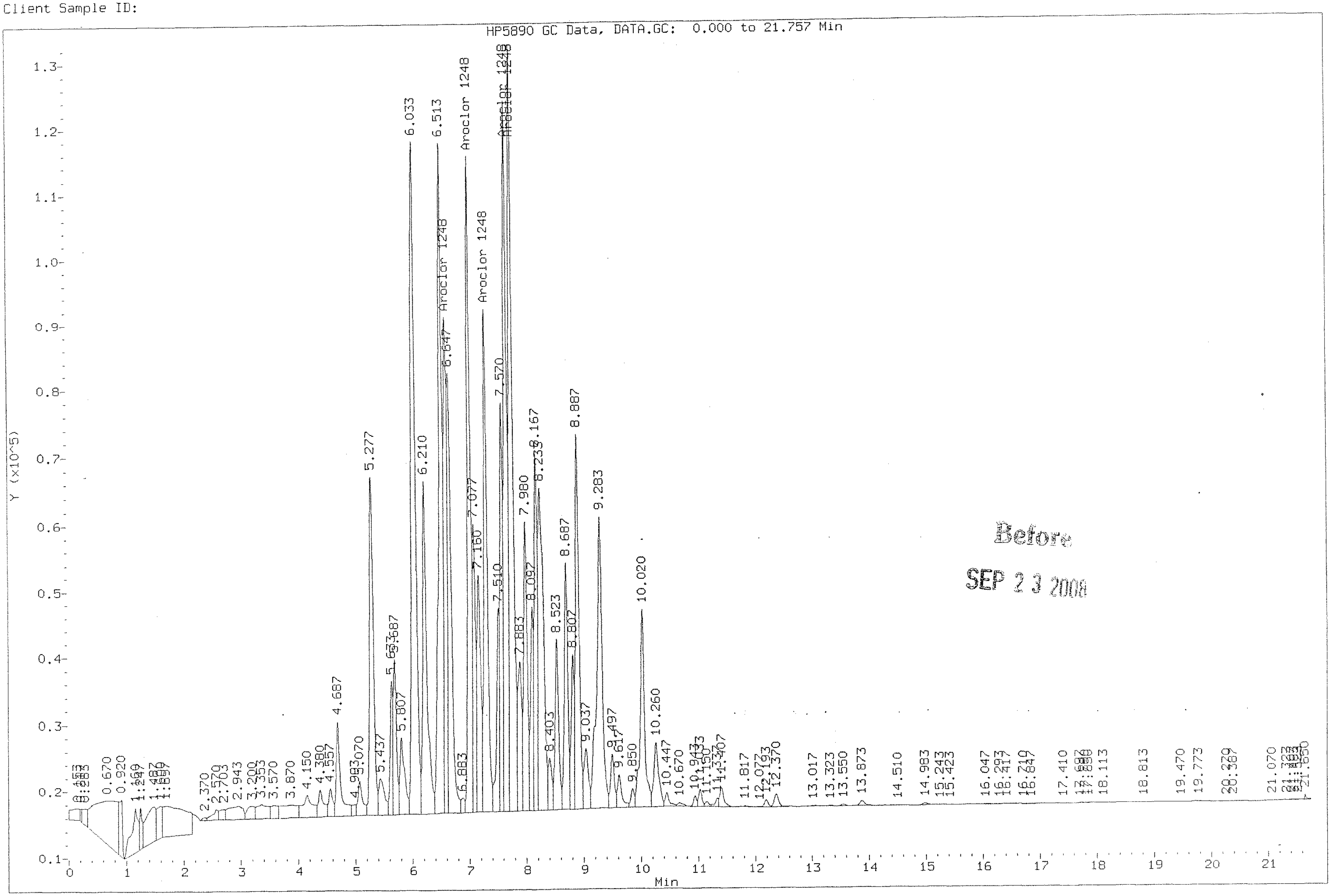
Column phase: DB-XLB

Instrument: GC09.i

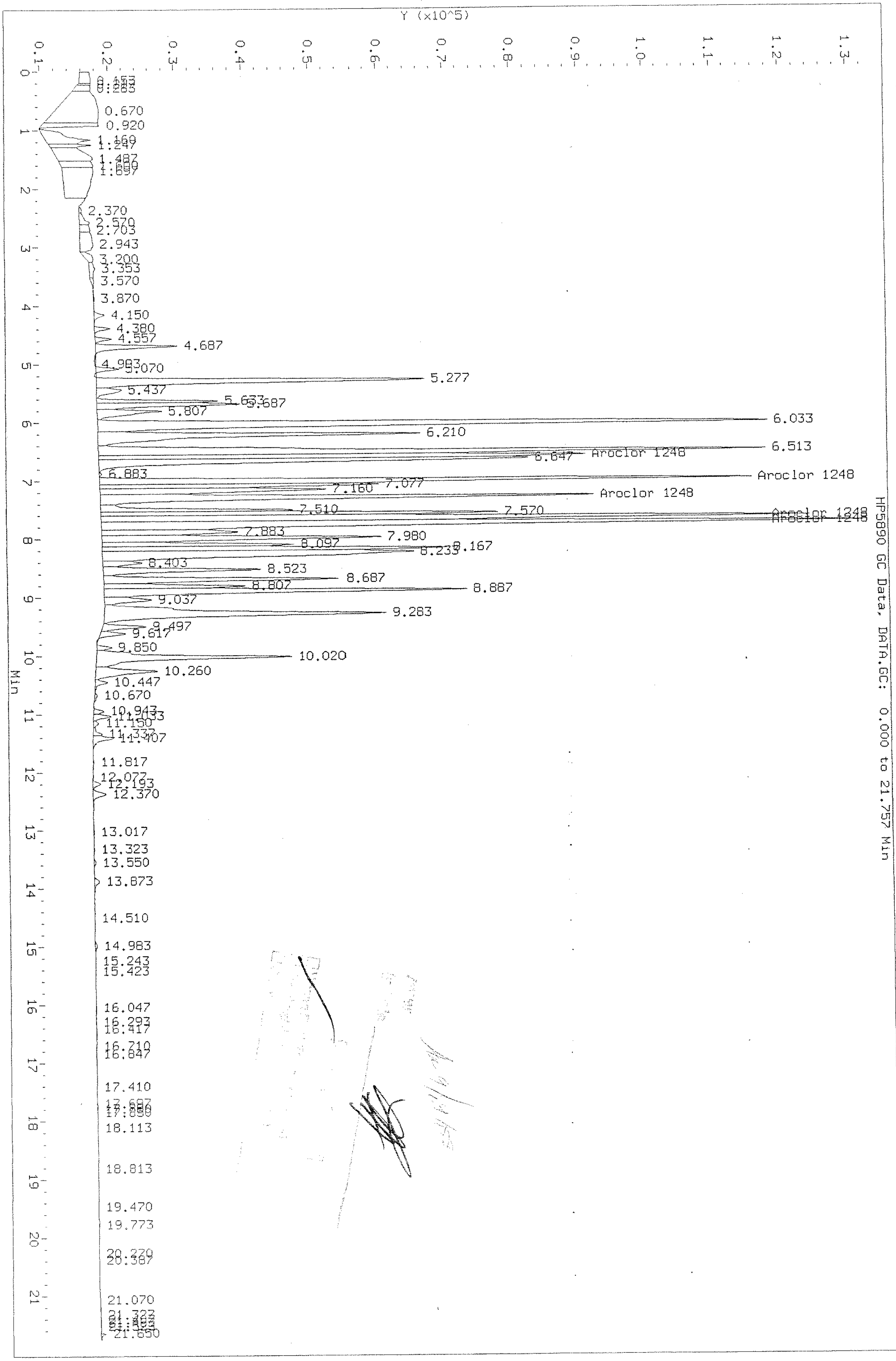
Operator: LHarris
Column diameter: 0.53



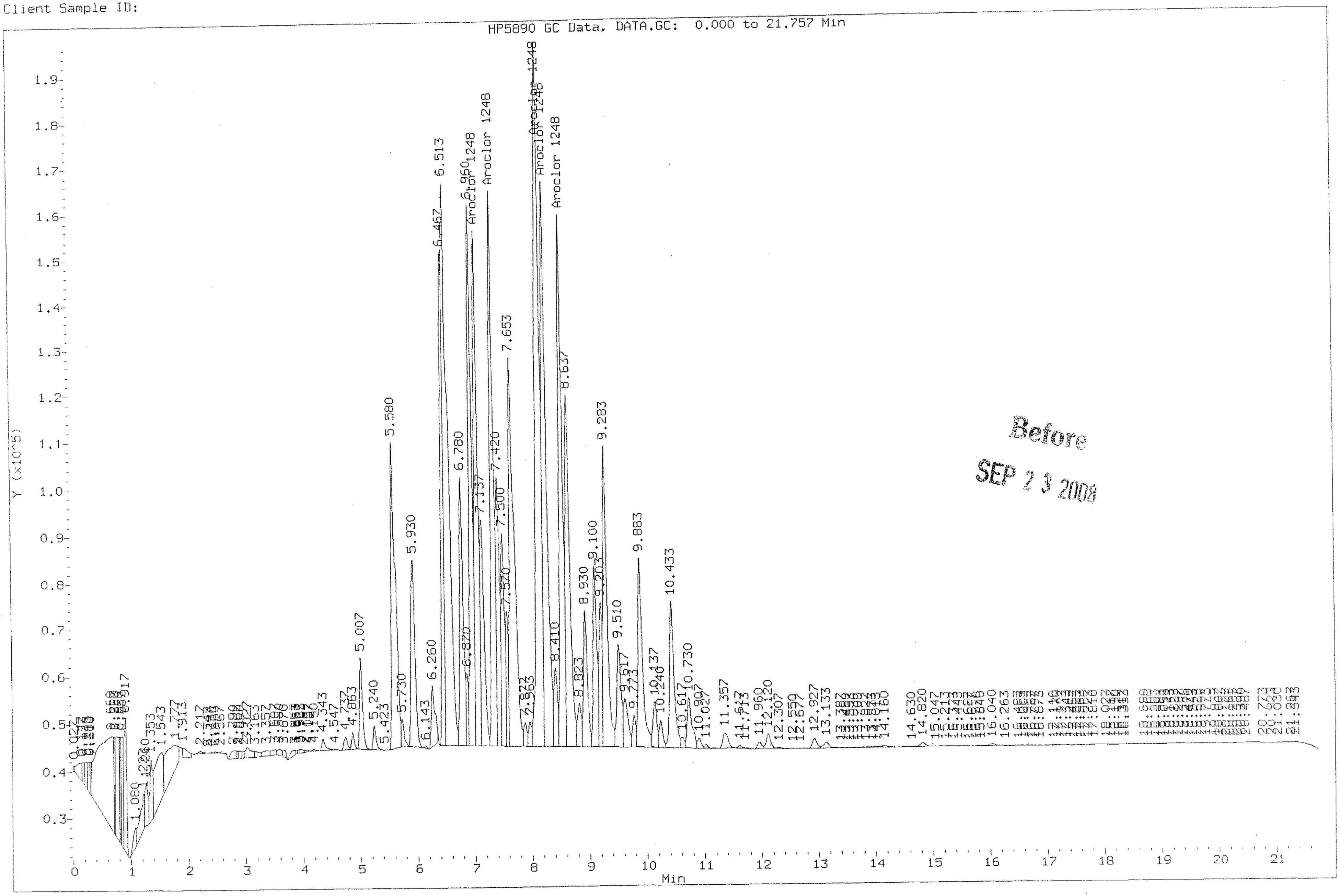
Data File: \\cash1\acqudata\GC09\data\092208.b\0922F045.D
Injection Date: 23-SEP-2008 11:32
Instrument: GC09.i
Client Sample ID:



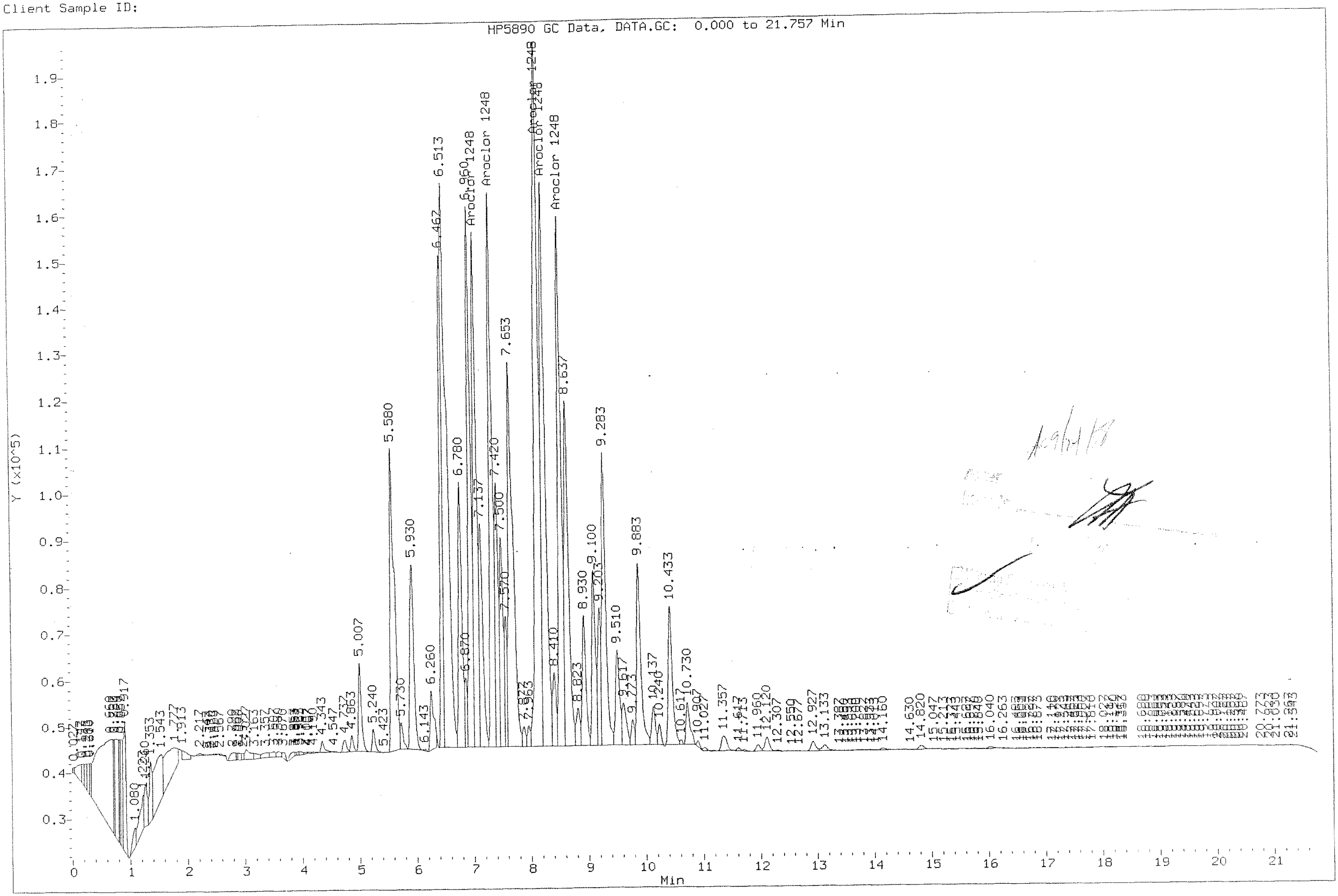
Data File: \\cash1\acqudata\GC09\data\092208.b\0922F045.D
Injection Date: 23-SEP-2008 11:32
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
Injection Date: 23-SEP-2008 11:32
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R045.D
Injection Date: 23-SEP-2008 11:32
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F046.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F046.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R046.D
Inj Date : 23-SEP-2008 11:58
Sample Info: 1254 @ 1000ppb | PCB5-19F | KWG0804201-20
Misc Info : SEMIVOA GC\W0804201\20-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1254.SUB
Sub List #2 : AR1254.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1254	7.980	8.533	489802	763024	956	949	80.00- 120.00	100.00
	8.097	8.647	262837	318931	928	899	44.24- 66.36	53.66
	8.690	9.100	343576	411538	949	920	56.57- 84.86	70.15
	8.887	9.287	690678	765445	934	923	115.58- 173.38	141.01
	9.287	9.883	609960	570988	949	928	100.44- 150.66	124.53
			Average of Peak Amounts =		943	924		

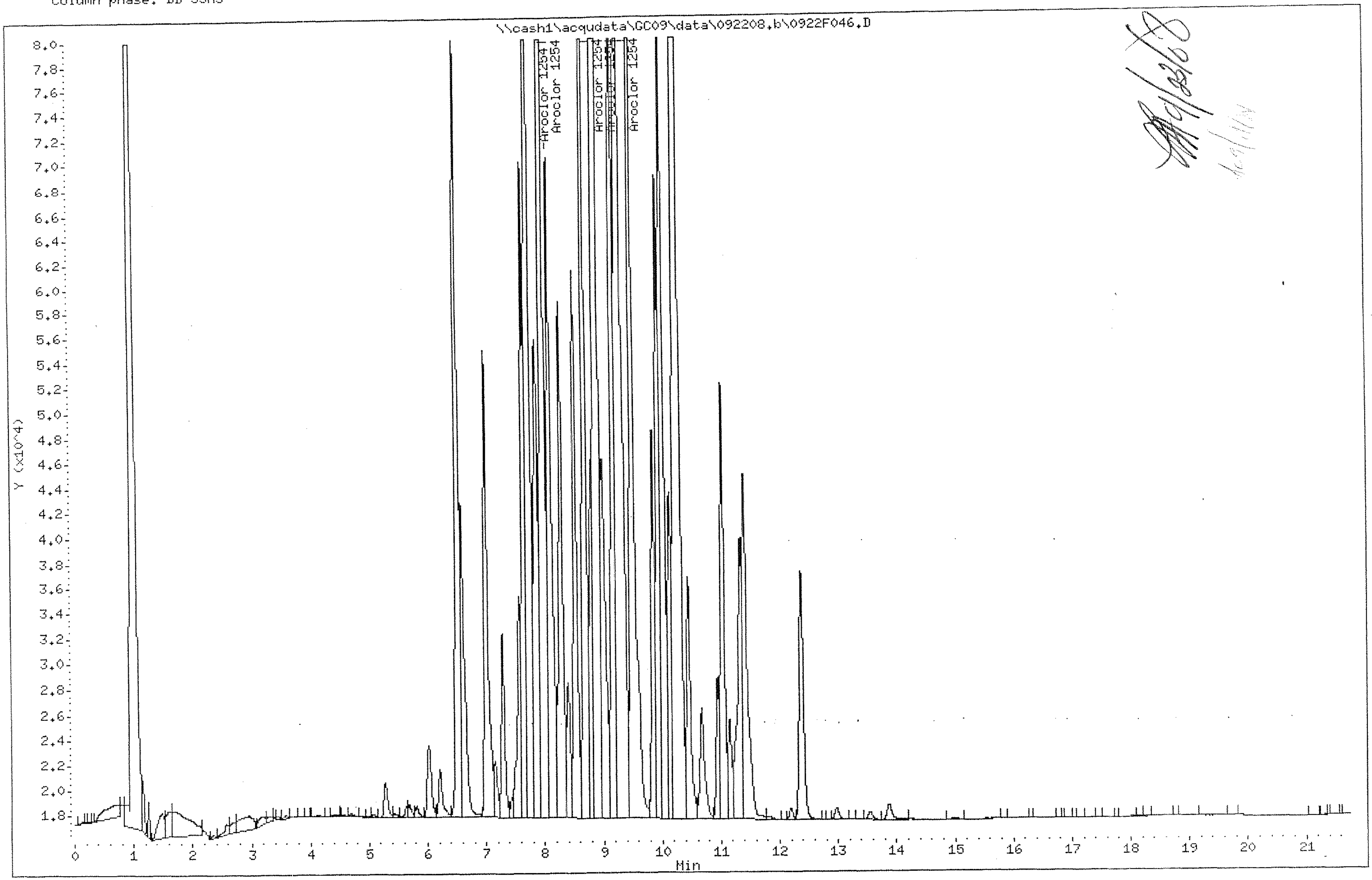
Ar 9/24/08
LH 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F046.D
Date : 23-SEP-2008 11:58
Client ID:
Sample Info: 1254 @ 1000ppb | PCB5-19F | KWG0804201-20

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

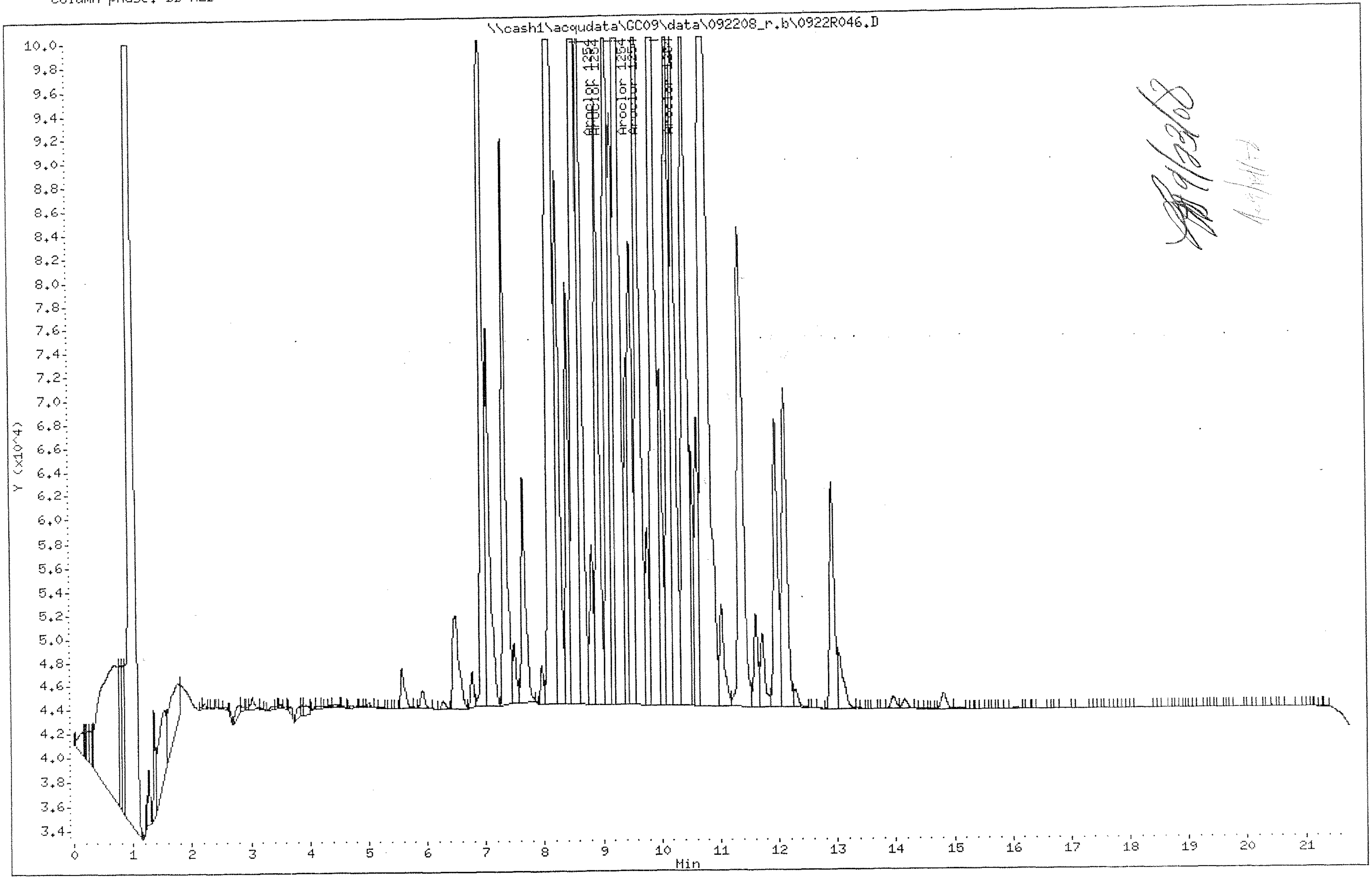


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R046.D
Date : 23-SEP-2008 11:58
Client ID:
Sample Info: 1254 @ 1000ppb | PCB5-19F | KWG0804201-20

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



9/22/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F047.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F047.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R047.D
Inj Date : 23-SEP-2008 12:25
Sample Info: 1260 @ 1000ppb | PCB5-19G | KWG0804201-21
Misc Info : SEMIVOA GC\W0804201\21-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1260.sub
Sub List #2 : AR1260.sub
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1260	9.950	9.620	343659	647015	913	921	80.00- 120.00	100.00
	10.260	10.140	578662	685260	825	926	159.28- 238.92	168.38
	10.327	10.733	532434	808751	1080	880	101.69- 152.53	154.93
	10.947	10.910	467425	550138	1030	1120	101.44- 152.16	136.01
	11.413	12.120	995198	1143454	1060	1080	212.51- 318.76	289.59
			Average of Peak Amounts =		982	985		

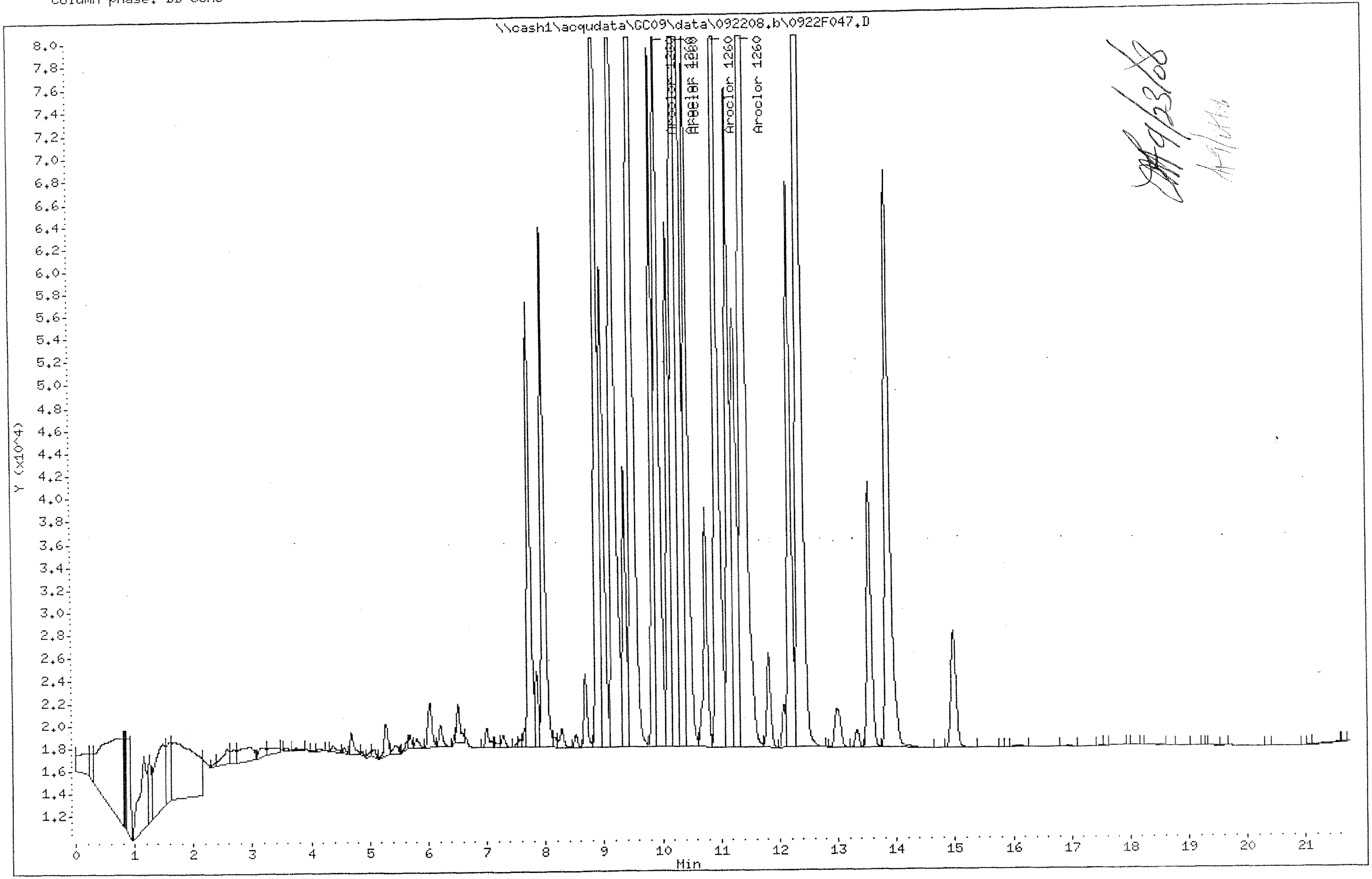
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F047.D
Date : 23-SEP-2008 12:25
Client ID:
Sample Info: 1260 @ 1000ppb | PCB5-19G | KWG0804201-21

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

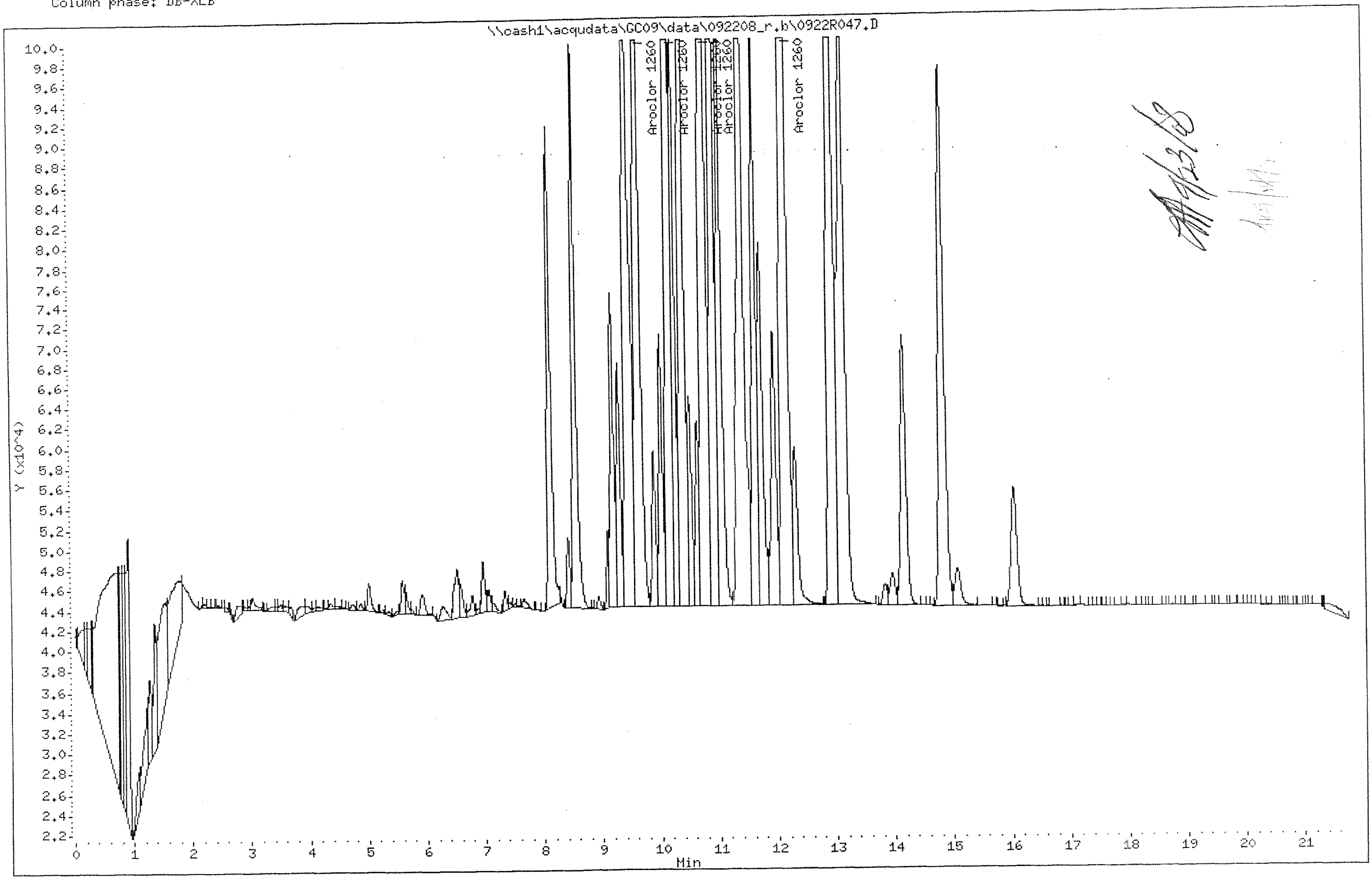


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R047.D
Date : 23-SEP-2008 12:25
Client ID:
Sample Info: 1260 @ 1000ppb | PCB5-19G | KWG0804201-21

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F048.D
Report Date: 23-Sep-2008 16:37

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F048.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R048.D
Inj Date : 23-SEP-2008 12:51
Sample Info: 1262 @ 1000ppb | PCB5-19H | KWG0804201-22
Misc Info : SEMIVOA GC\W0804201\22-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1262.SUB
Sub List #2 : AR1262.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1262	10.330	10.910	722383	773686	1020	1040	80.00- 120.00	100.00
	10.947	11.397	562286	632156	1030	1050	61.26- 91.89	77.84
	11.413	12.120	1078755	1276891	1030	1040	117.63- 176.45	149.33
	12.193	12.927	482832	964436	1030	1040	52.81- 79.21	66.84
	12.370	13.133	854091	733774	1040	1020	92.91- 139.36	118.23
			Average of Peak Amounts =		1030	1040		

LH 9/23/08

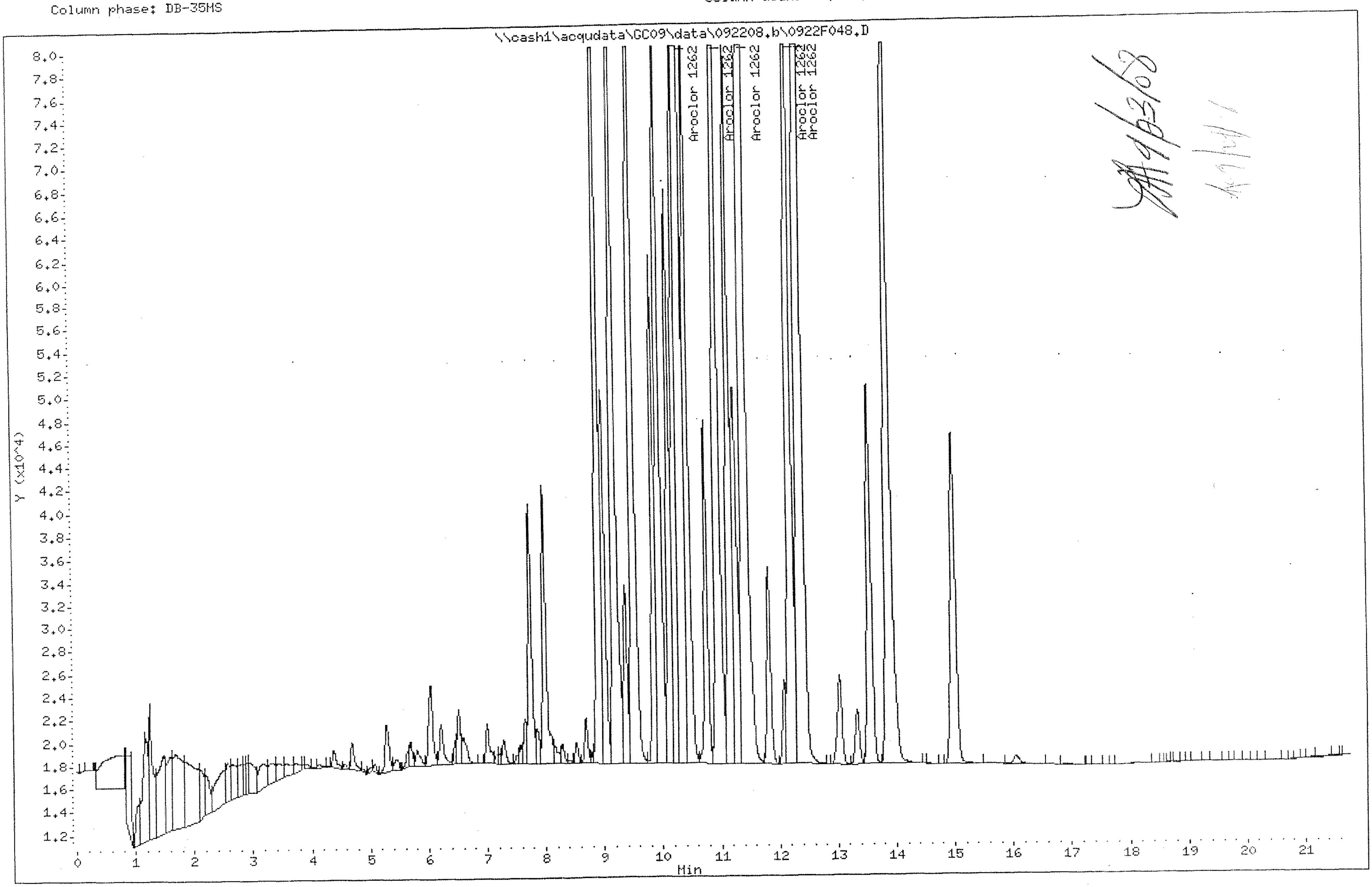
[illegible]

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F048.D
Date : 23-SEP-2008 12:51
Client ID:
Sample Info: 1262 @ 1000ppb | PCB5-19H | KWG0804201-22

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R048.D

Date : 23-SEP-2008 12:51

Client ID:

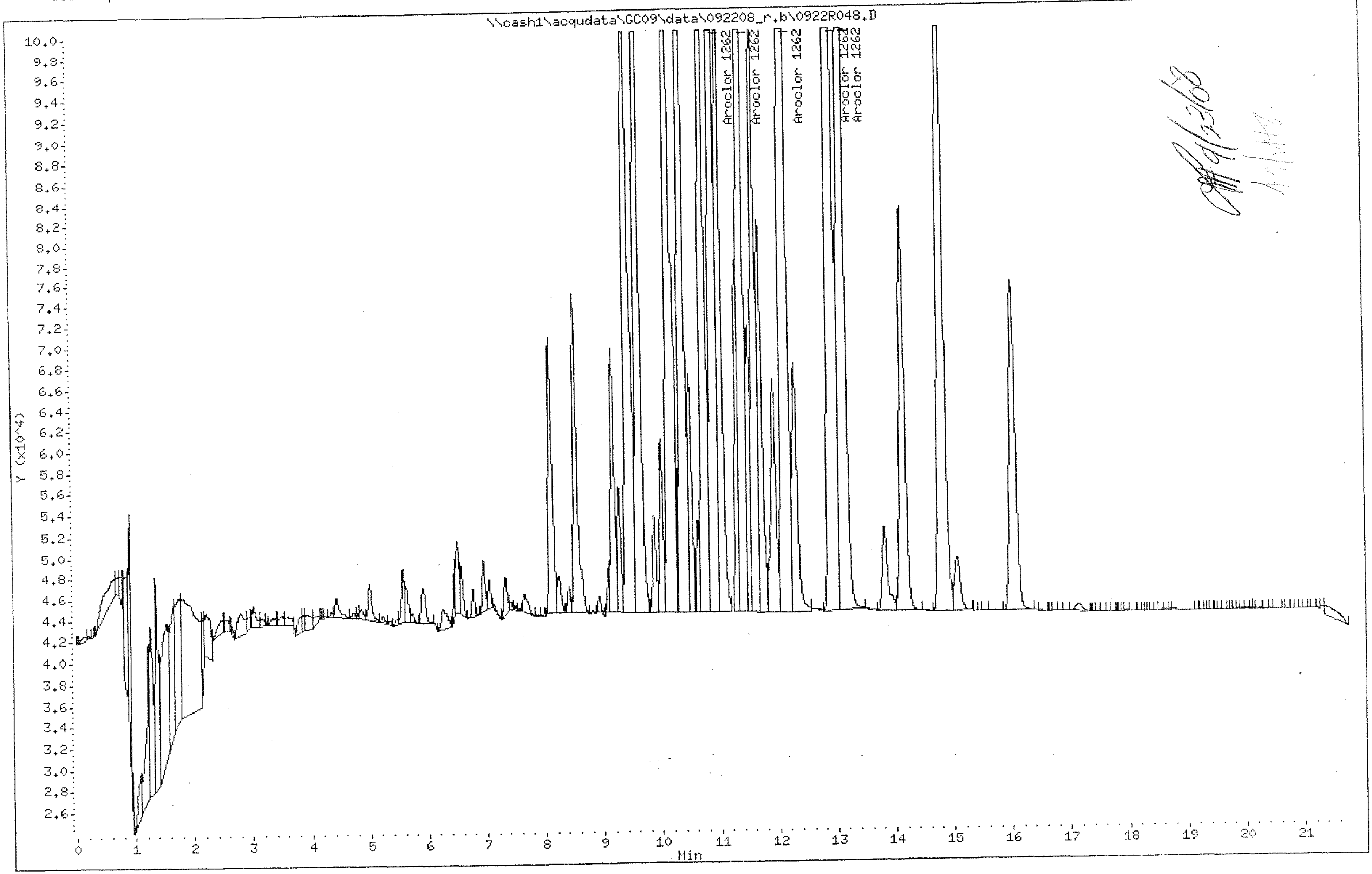
Sample Info: 1262 @ 1000ppb | PCB5-19H | KWG0804201-22

Column phase: DB-XLB

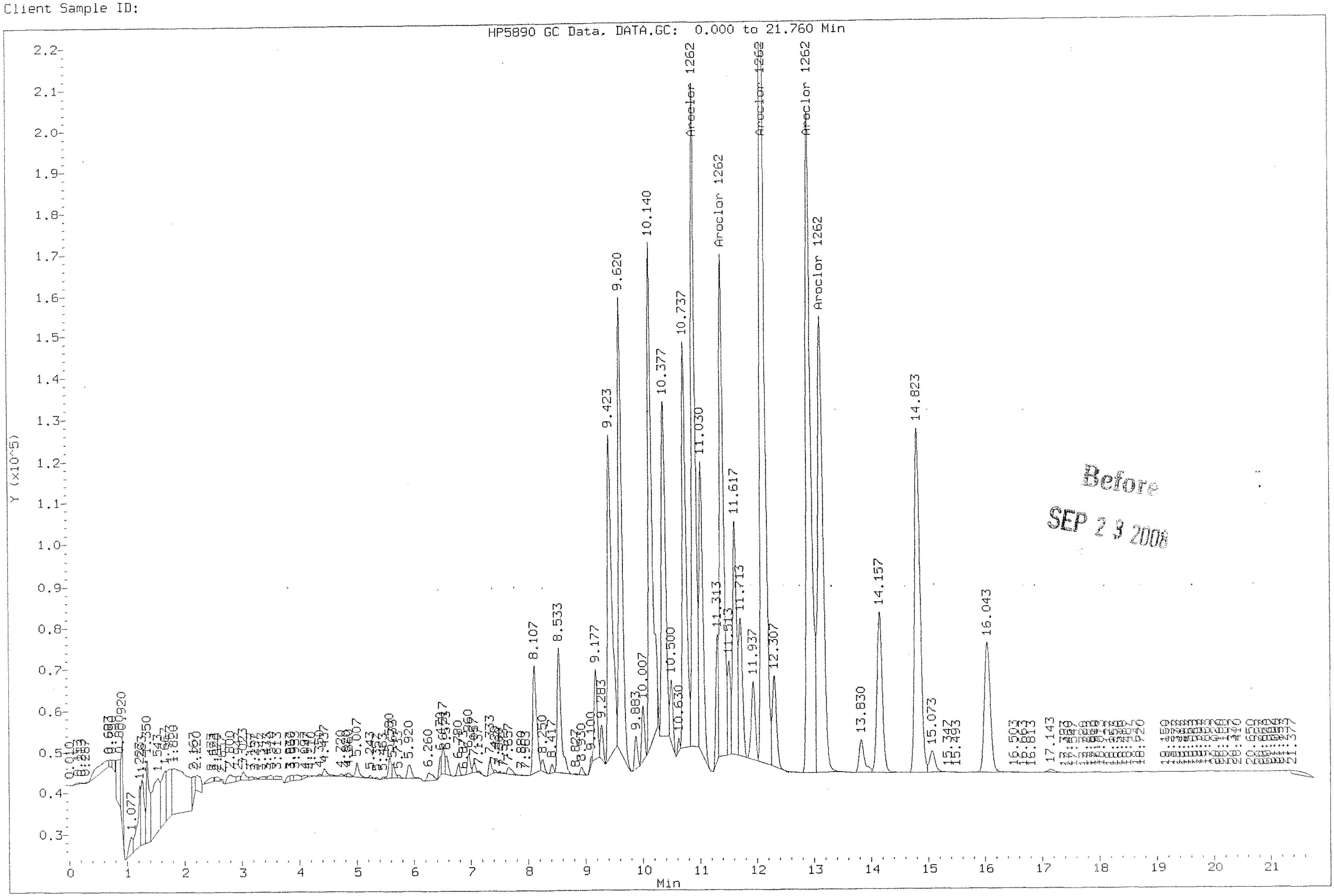
Instrument: GC09.i

Operator: LHarris

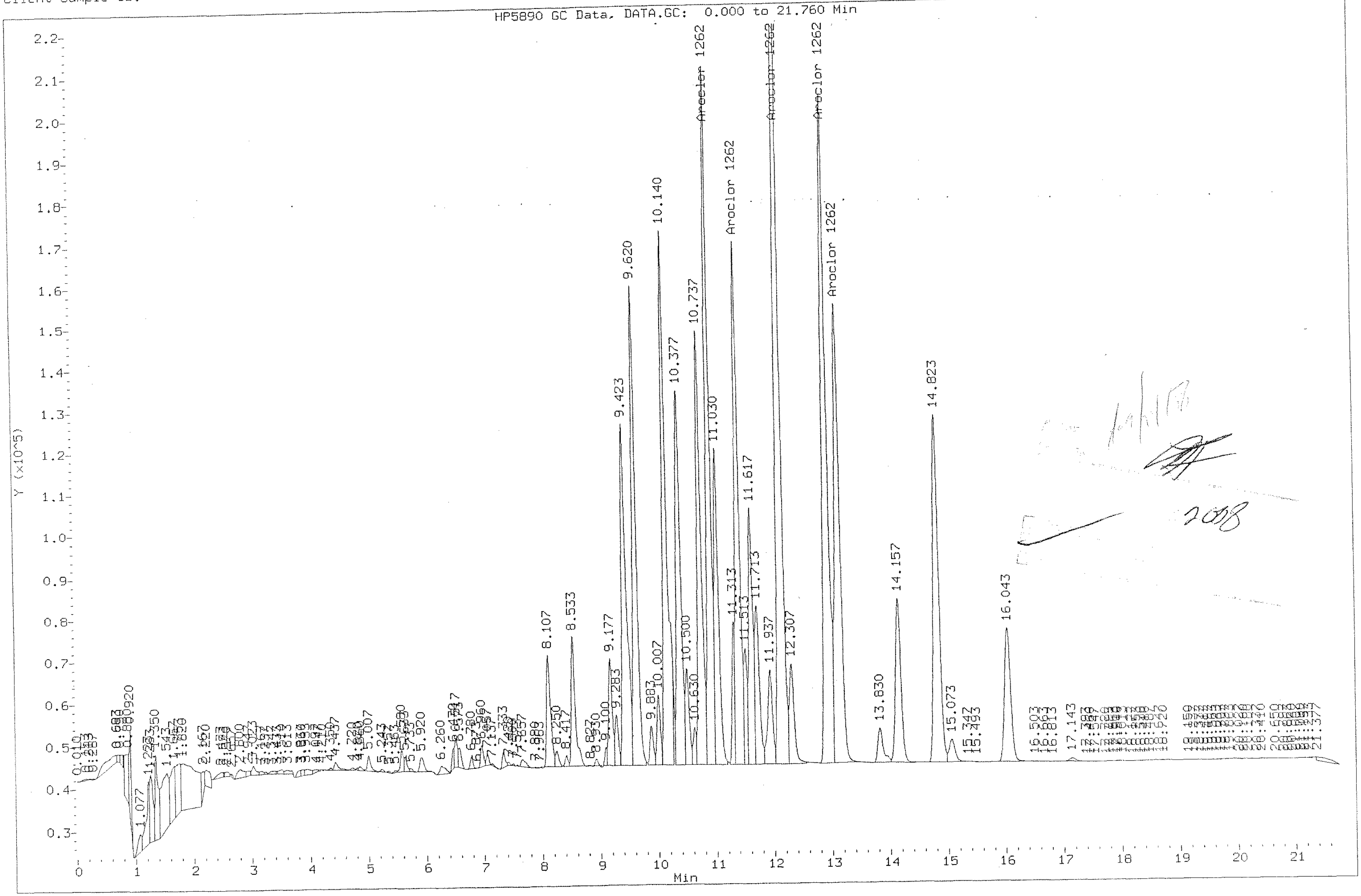
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R048.D
Injection Date: 23-SEP-2008 12:51
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R048.D
Injection Date: 23-SEP-2008 12:51
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F049.D
Report Date: 23-Sep-2008 16:38

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F049.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R049.D
Inj Date : 23-SEP-2008 13:17
Sample Info: 1268 @ 1000ppb | PCB5-19I | KWG0804201-23
Misc Info : SEMIVOA GC\W0804201\23-ICV.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : AR1268.SUB
Sub List #2 : AR1268.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Aroclor 1268	12.353	13.140	1205405	1483044	914	917	80.00- 120.00	100.00
	13.030	13.830	1061806	1317491	1000	1010	64.08- 96.11	88.09
	13.333	14.110	286441	387772	972	966	17.88- 26.82	23.76
	13.877	14.820	430389	538582	873	884	29.91- 44.86	35.70
	14.987	16.040	2854287	3469164	968	971	178.87- 268.31	236.79
			Average of Peak Amounts =		945	950		

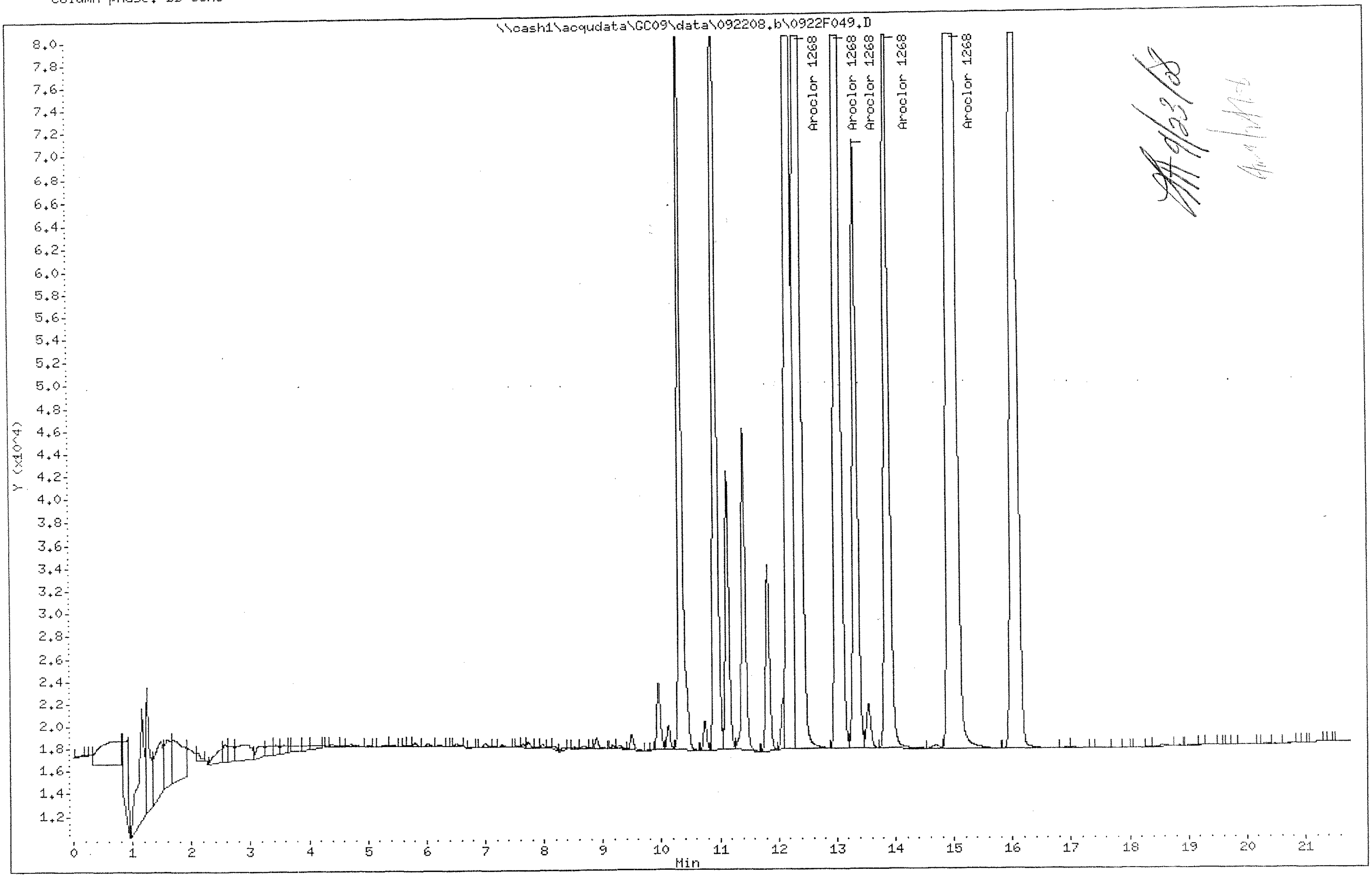
9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F049.D
Date : 23-SEP-2008 13:17
Client ID:
Sample Info: 1268 @ 1000ppb | PCB5-19I | KWG0804201-23

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

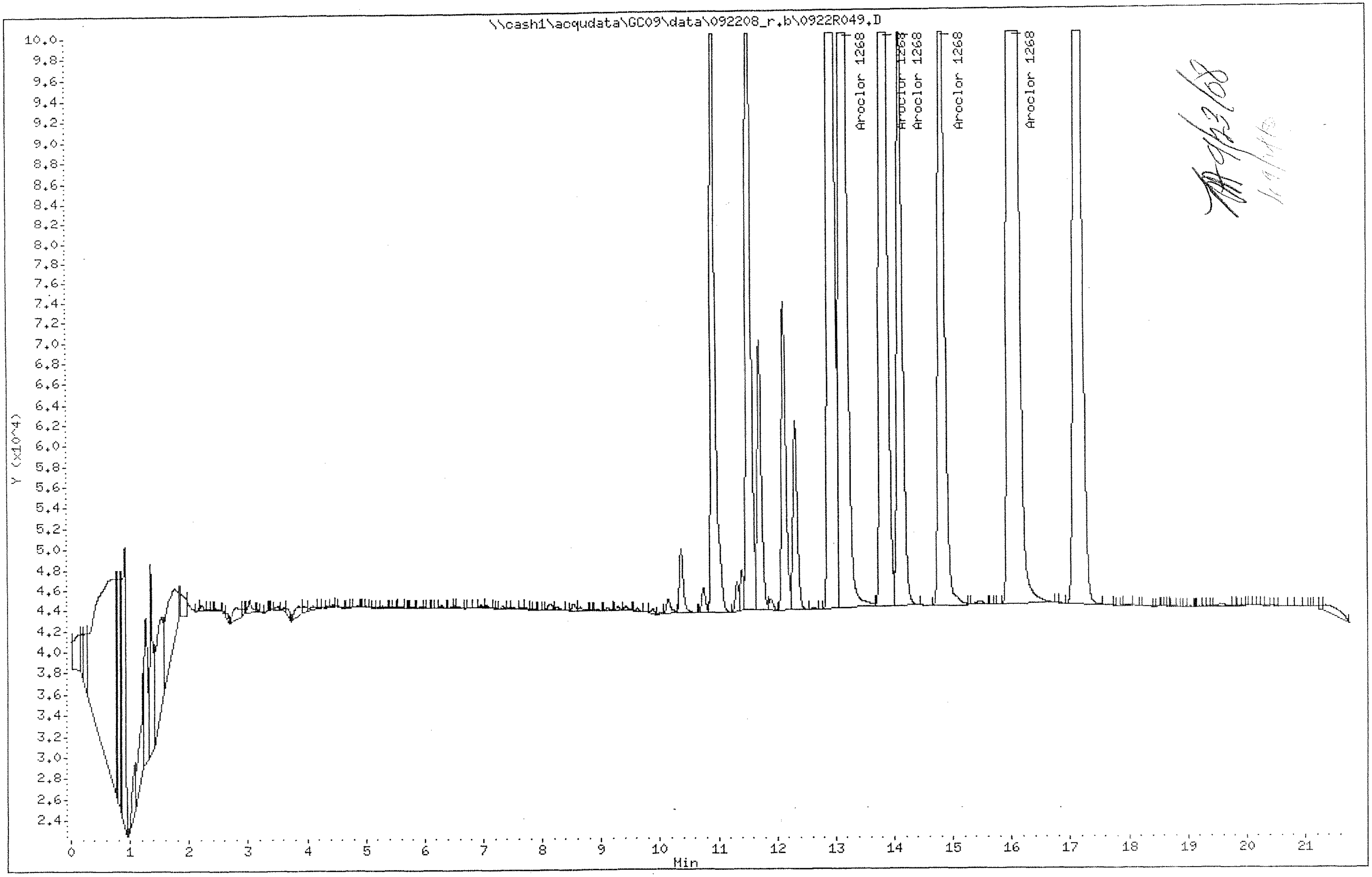


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R049.D
Date : 23-SEP-2008 13:17
Client ID:
Sample Info: 1268 @ 1000ppb | PCB5-19I | KWG0804201-23

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\092208.b\0922F050.D
Report Date: 23-Sep-2008 16:38

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\092208.b\0922F050.D
Sample #2 : \\cash1\acqudata\GC09\data\092208_r.b\0922R050.D
Inj Date : 23-SEP-2008 13:44
Sample Info: KWG0804201-24 | IB | 8082 PCB
Misc Info : SEMIVOA GC\W0804201\24-IB.H
Cal Date : 23-SEP-2008 16:08
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\092208.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\092208_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

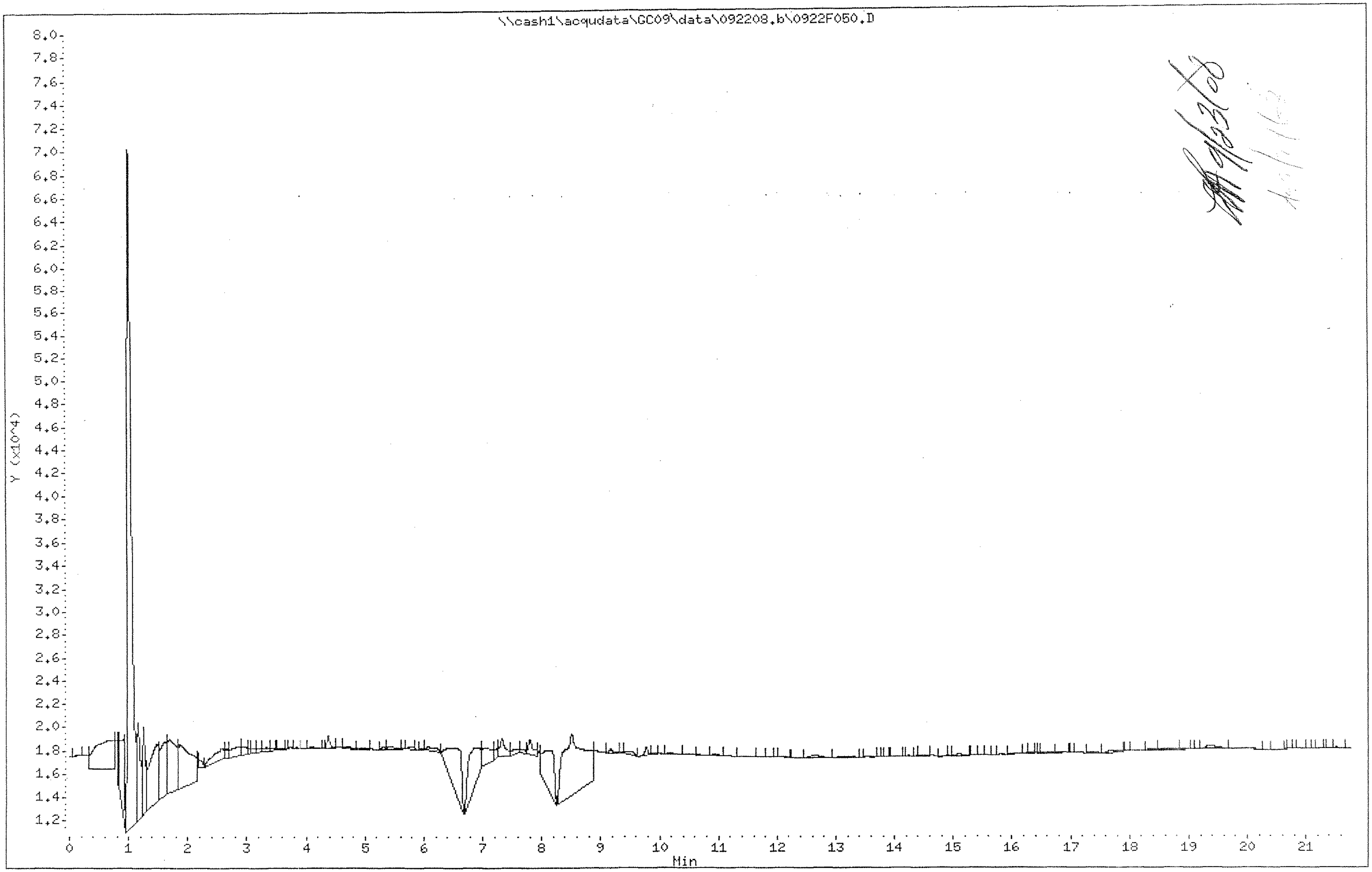
AA 9/23/08

Data File: \\cash1\acqudata\GC09\data\092208.b\0922F050.D
Date : 23-SEP-2008 13:44
Client ID:
Sample Info: KWG0804201-24 | IB | 8082 PCB

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

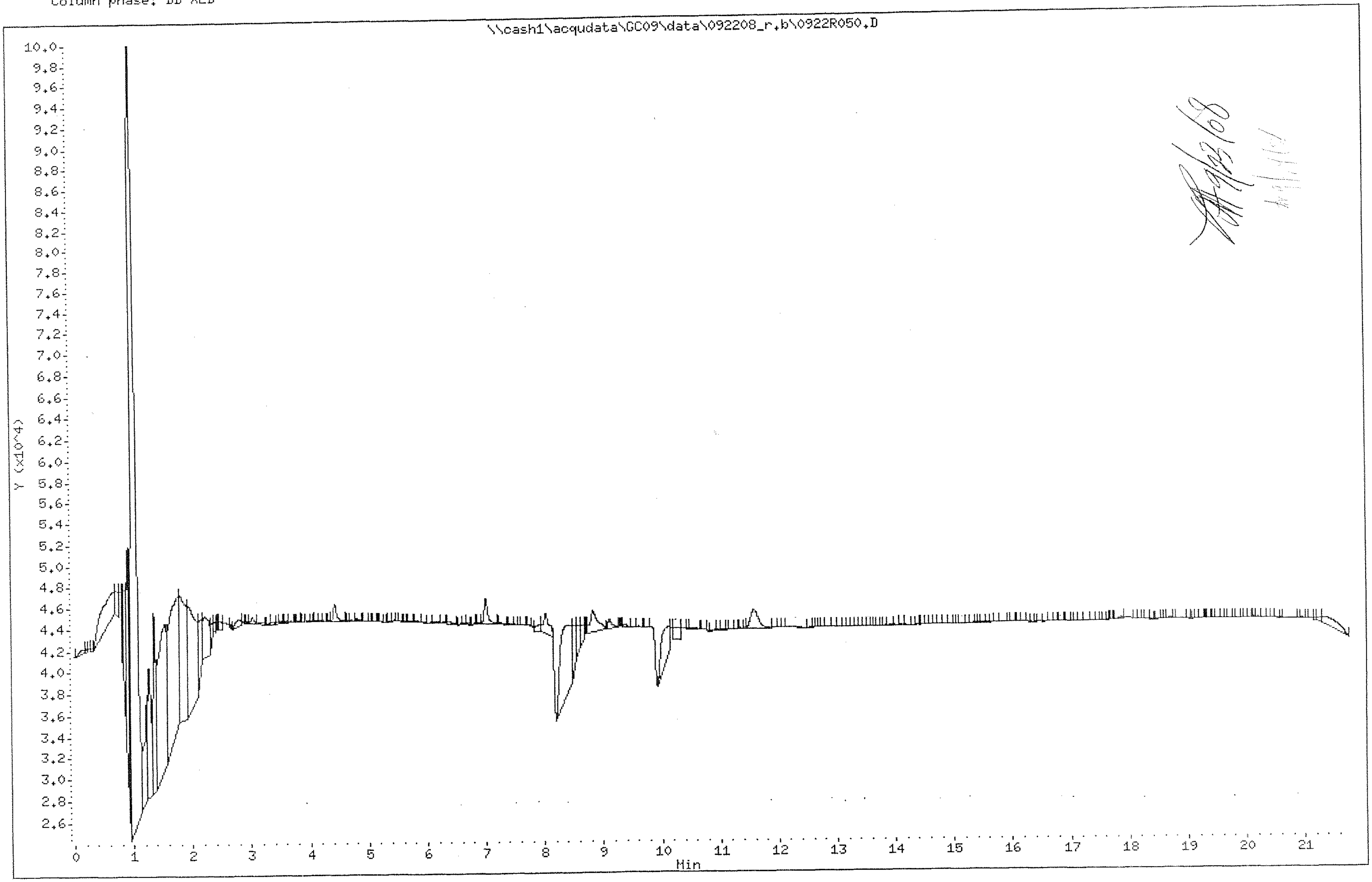


Data File: \\cash1\acqudata\GC09\data\092208_r.b\0922R050.D
Date : 23-SEP-2008 13:44
Client ID:
Sample Info: KWG0804201-24 | IB | 8082 PCB

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F019.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	93	10200	9420	-7	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	970	222	214	-3	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	950	433	409	-5	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	930	224	208	-7	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	940	302	283	-6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	220	232	5	NA	± 100 %	AverageRF
Aroclor 1016	1000	970	NA	NA	NA	-3	± 15 %	NA
Aroclor 1260 {1}	1000	940	376	352	-6	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	940	701	662	-6	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	920	494	454	-8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	940	452	425	-6	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	940	936	883	-6	NA	± 100 %	AverageRF
Aroclor 1260	1000	940	NA	NA	NA	-6	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type:	External Standard	**Calibration Date:**	09/22/2008
Analysis Method:	8082	**Calibration ID:**	CAL7795
		Analysis Lot:	KWG0812580
		Units:	ng/mL
File ID:	\\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R019.D	**Column ID:**	DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	97	13300	12900	-3	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	1000	343	357	4	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	681	693	2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1100	360	381	6	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	413	439	6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	368	385	5	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	5	± 15 %	NA
Aroclor 1260 {1}	1000	1000	703	737	5	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1000	740	765	3	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	919	996	8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	532	8	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1130	7	NA	± 100 %	AverageRF
Aroclor 1260	1000	1100	NA	NA	NA	6	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F019.D
Lab ID: KWG0812580-4
RunType: CCV
Matrix: LIQUID

Date Acquired: 11/22/2008 00:10
Date Quantitated: 11/25/2008 15:18
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/25/08

Secondary Review: 11/25/08

Printed: 11/25/2008 16:58:56

u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R019.D
Lab ID: KWG0812580-4
RunType: CCV
Matrix: LIQUID

Date Acquired: 11/22/2008 00:10
Date Quantitated: 11/25/2008 15:21
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [illegible] 11/25/08

Secondary Review: [illegible]

Printed: 11/25/2008 16:58:59
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	11/21/2008

Analysis Lot:	KWG0812580	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F019.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R019.D			**Vial:**	96
Acqu Date:	11/22/2008 00:10	**Quant Date:**	11/25/2008 15:18	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-4				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.96	4.51	947567m	1757766m	93.06	102.22			NA
				%Recovery =	NA	NA	Limits =	22-130	
Decachlorobiphenyl	16.05	17.13	942067	1290376	92.72	97.27			NA
				%Recovery =	NA	NA	Limits =	38-144	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	965.83	1,045			
Aroclor 1016 {1}	5.69	5.63	214354m	357377m	966.13	1,042			
Aroclor 1016 {2}	6.21	6.57	408895m	693012m	945.28	1,018			
Aroclor 1016 {3}	6.59	6.95	208089m	381327m	927.70	1,059			
Aroclor 1016 {4}	7.00	7.05	283018m	438976m	937.69	1,062			
Aroclor 1016 {5}	7.28	7.33	231681m	385011m	1,052	1,046			
Aroclor 1260			0	0	936.85	1,063			
Aroclor 1260 {1}	9.94	9.61	352363m	736706m	936.52	1,048			
Aroclor 1260 {2}	10.26	10.13	662409m	764735m	944.87	1,034			
Aroclor 1260 {3}	10.32	10.72	454215m	995734m	919.36	1,084			
Aroclor 1260 {4}	10.94	10.90	424762m	531762m	940.37	1,081			
Aroclor 1260 {5}	11.41	12.11	883032m	1134804m	943.15	1,070			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ150
DataFile: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F019.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					965.8	1,000	-3.4
Aroclor 1260		MS	NA	15					936.9	1,000	-6.3
Tetrachloro-m-xylene		SURR	AverageRF	15		1.0E+4	9.5E+3	-6.9			
Aroclor 1016 {1}		MULTI	AverageRF	100		2.2E+2	2.1E+2	-3.4			
Aroclor 1016 {2}		MULTI	AverageRF	100		4.3E+2	4.1E+2	-5.5			
Aroclor 1016 {3}		MULTI	AverageRF	100		2.2E+2	2.1E+2	-7.2			
Aroclor 1016 {4}		MULTI	AverageRF	100		3.0E+2	2.8E+2	-6.2			
Aroclor 1016 {5}		MULTI	AverageRF	100		2.2E+2	2.3E+2	5.2			
Aroclor 1260 {1}		MULTI	AverageRF	100		3.8E+2	3.5E+2	-6.3			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.0E+2	6.6E+2	-5.5			
Aroclor 1260 {3}		MULTI	AverageRF	100		4.9E+2	4.5E+2	-8.1			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.5E+2	4.2E+2	-6.0			
Aroclor 1260 {5}		MULTI	AverageRF	100		9.4E+2	8.8E+2	-5.7			
Decachlorobiphenyl		SURR	AverageRF	15		1.0E+4	9.4E+3	-7.3			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	6.1

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ150
DataFile: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R019.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					1,045	1,000	4.5
Aroclor 1260		MS	NA	15					1,063	1,000	6.3
Tetrachloro-m-xylene		SURR	AverageRF	15		1.7E+4	1.8E+4	2.2			
Aroclor 1016 {1}		MULTI	AverageRF	100		3.4E+2	3.6E+2	4.2			
Aroclor 1016 {2}		MULTI	AverageRF	100		6.8E+2	6.9E+2	1.8			
Aroclor 1016 {3}		MULTI	AverageRF	100		3.6E+2	3.8E+2	5.9			
Aroclor 1016 {4}		MULTI	AverageRF	100		4.1E+2	4.4E+2	6.2			
Aroclor 1016 {5}		MULTI	AverageRF	100		3.7E+2	3.9E+2	4.6			
Aroclor 1260 {1}		MULTI	AverageRF	100		7.0E+2	7.4E+2	4.8			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.4E+2	7.6E+2	3.4			
Aroclor 1260 {3}		MULTI	AverageRF	100		9.2E+2	1.0E+3	8.4			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.9E+2	5.3E+2	8.1			
Aroclor 1260 {5}		MULTI	AverageRF	100		1.1E+3	1.1E+3	7.0			
Decachlorobiphenyl		SURR	AverageRF	15		1.3E+4	1.3E+4	-2.7			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	4.9

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F019.D
Report Date: 25-Nov-2008 15:18

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F019.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R019.D
Inj Date : 22-NOV-2008 00:10
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-4
Misc Info : SEMIVOA GC\W0812580\4-CCV.H
Cal Date : 22-NOV-2008 10:35
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	947567	1757766	93.1	102		100.00(M)
Aroclor 1016	5.687	5.627	214354	357377	966	1040	80.00- 120.00	100.00(M)
	6.210	6.567	408895	693012	945	1020	155.62- 233.43	190.76(M)
	6.593	6.953	208089	381327	928	1060	75.65- 113.48	97.08(M)
	7.000	7.053	283018	438976	938	1060	105.37- 158.05	132.03(M)
	7.283	7.327	231681	385011	1050	1040	85.28- 127.92	108.08(M)
		Average of Peak Amounts =			965	1040		
Aroclor 1260	9.943	9.613	352363	736706	936	1050	80.00- 120.00	100.00(M)
	10.257	10.133	662409	764735	945	1030	149.50- 224.25	187.99(M)
	10.320	10.723	454215	995734	919	1080	102.96- 154.44	128.91(M)
	10.943	10.900	424762	531762	940	1080	98.63- 147.94	120.55(M)
	11.407	12.110	883032	1134804	943	1070	206.52- 309.78	250.60(M)
		Average of Peak Amounts =			937	1060		
Decachlorobiphenyl	16.047	17.130	942067	1290376	92.7	97.3		100.00

QC Flag Legend

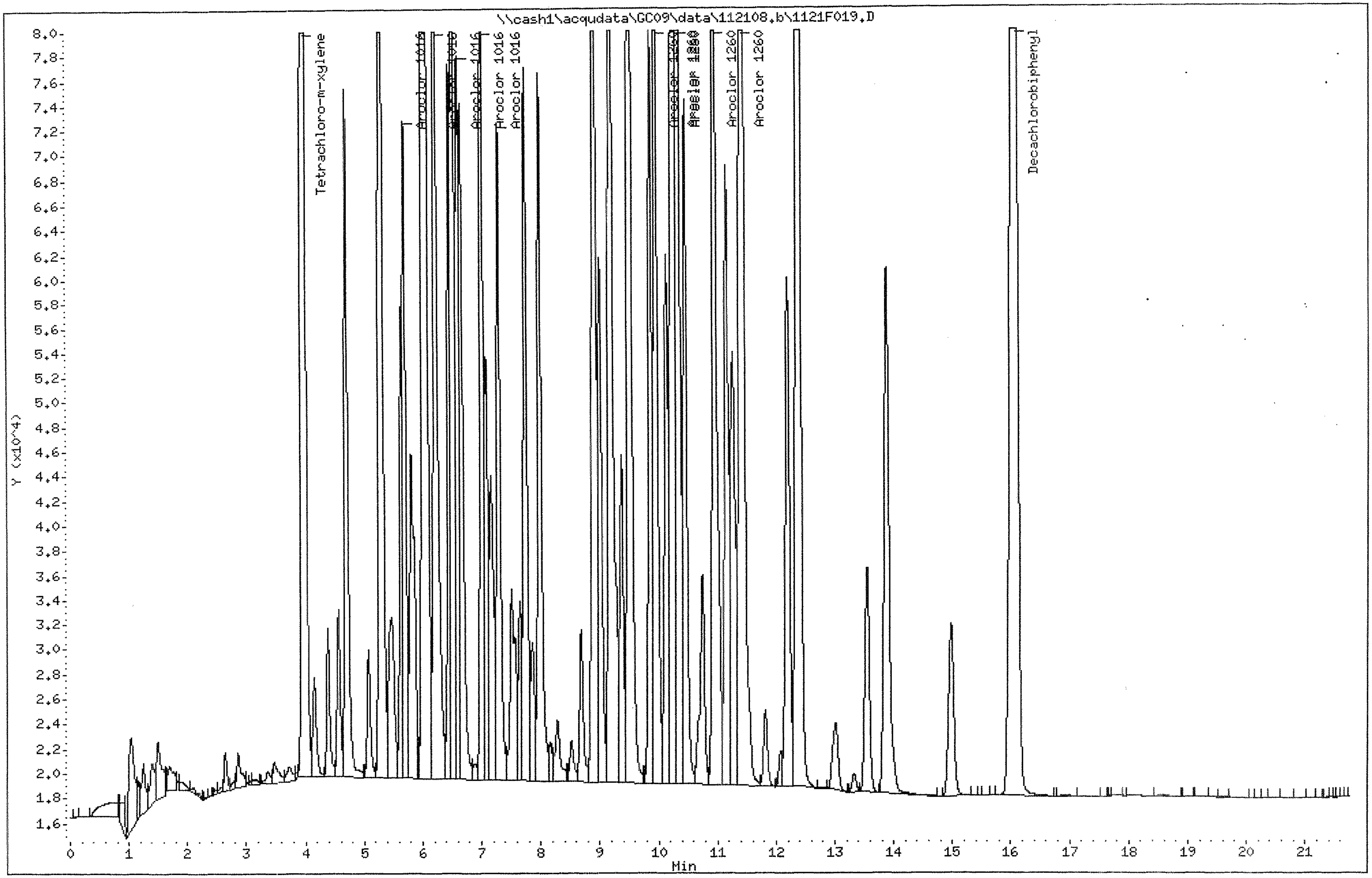
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F019.D
Date : 22-NOV-2008 00:10
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-4

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

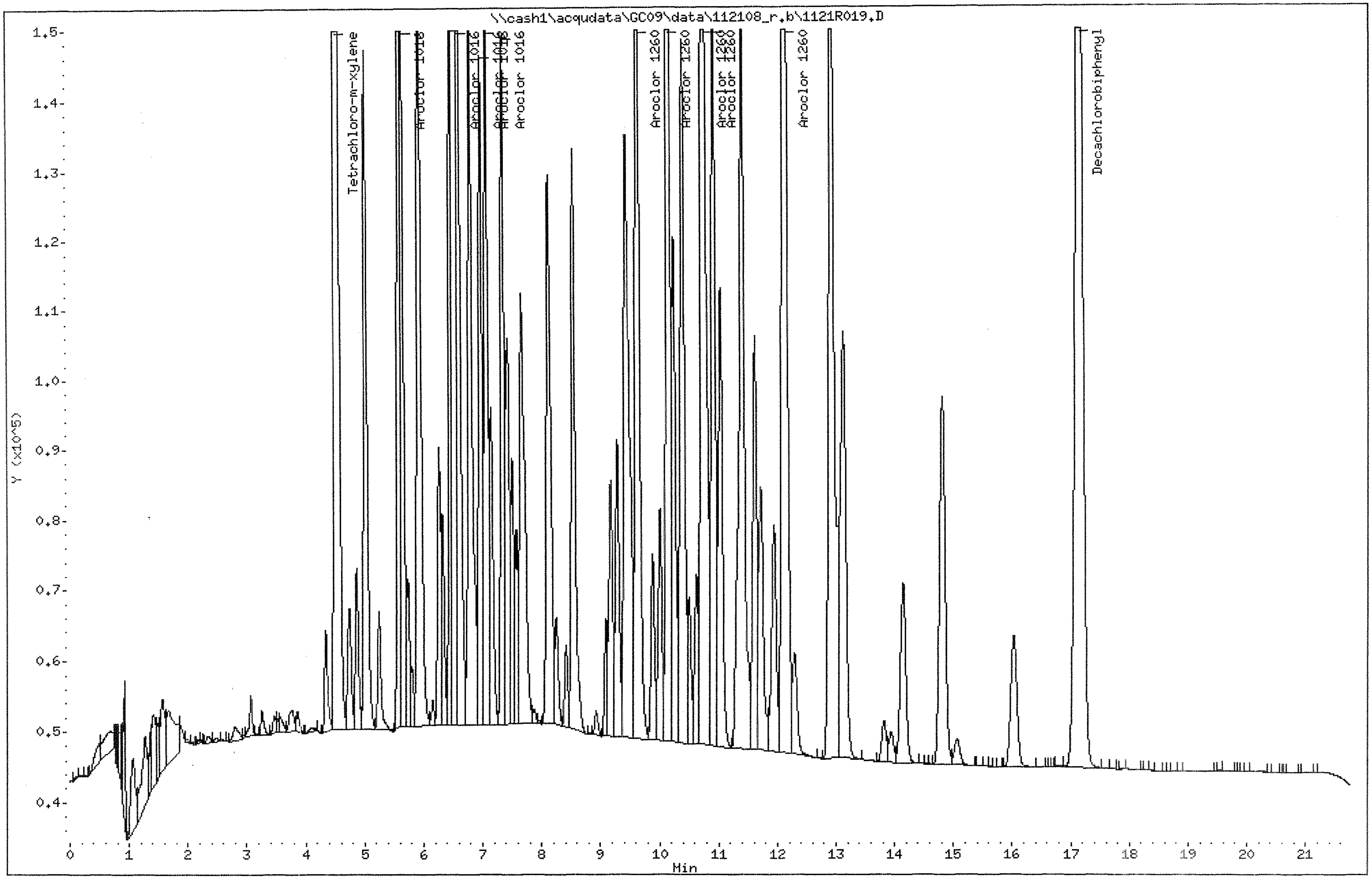


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R019.D
Date : 22-NOV-2008 00:10
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-4

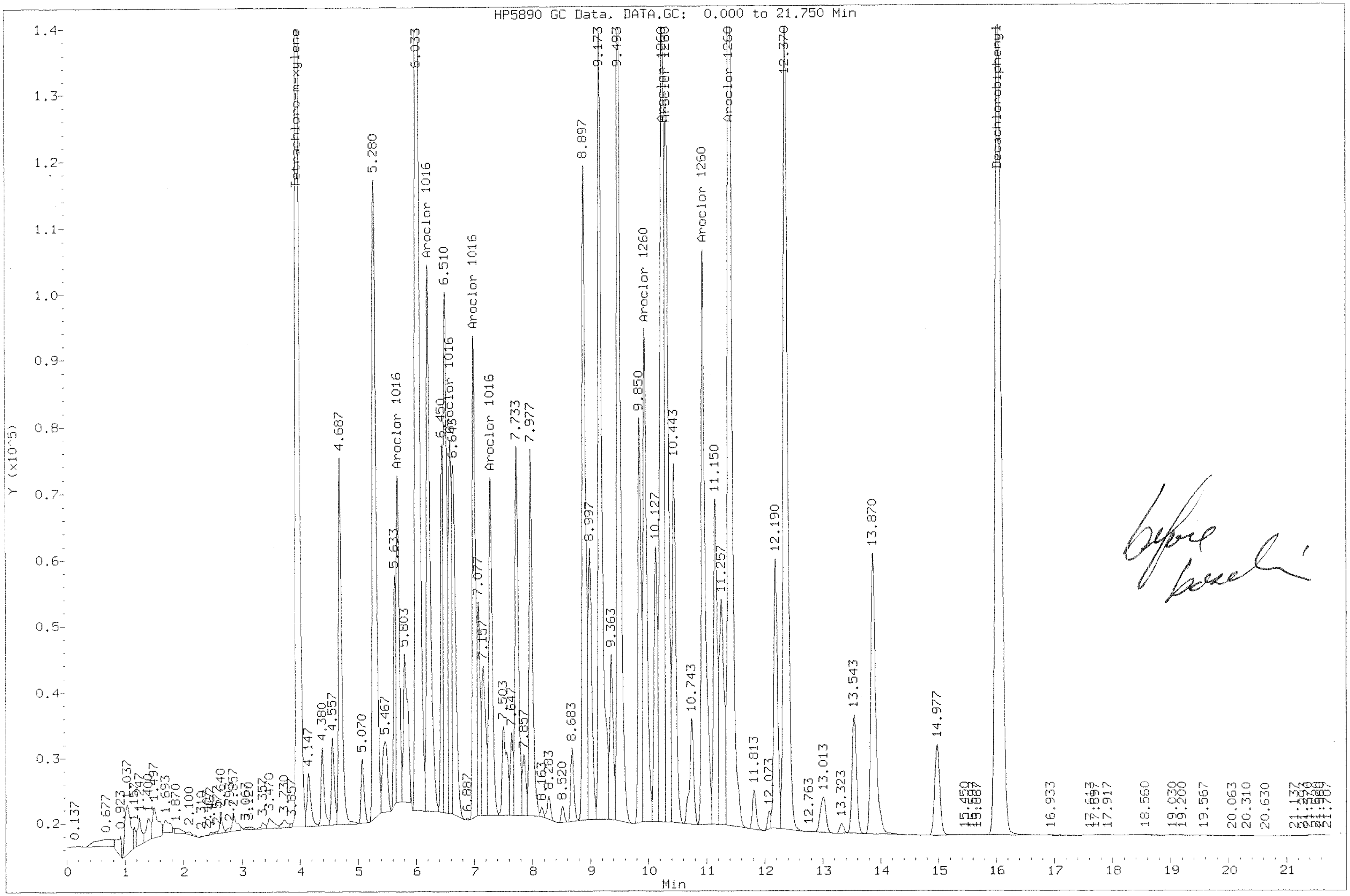
Column phase: DB-XLB

Instrument: GC09.i

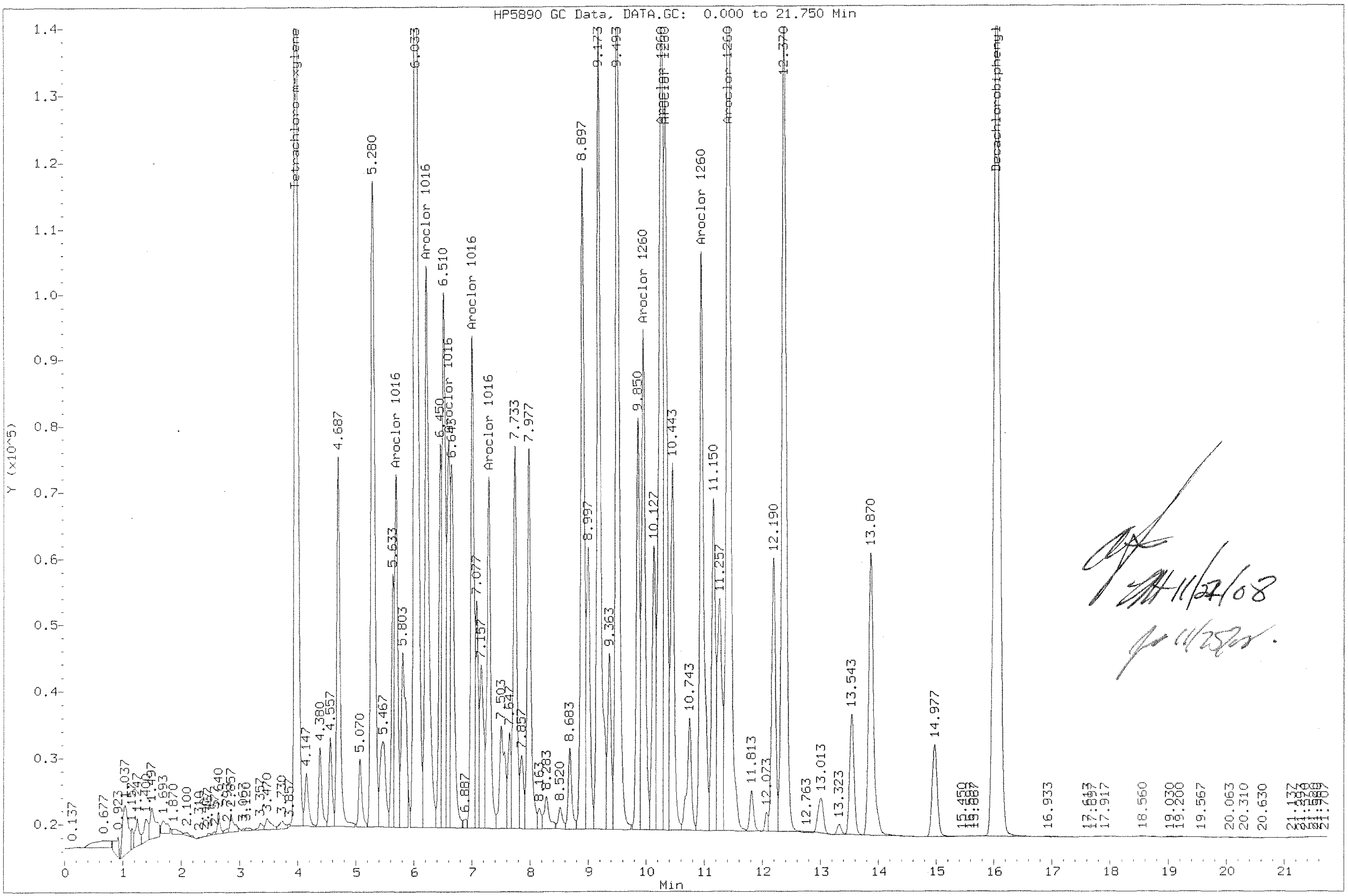
Operator: LHarris
Column diameter: 0.53



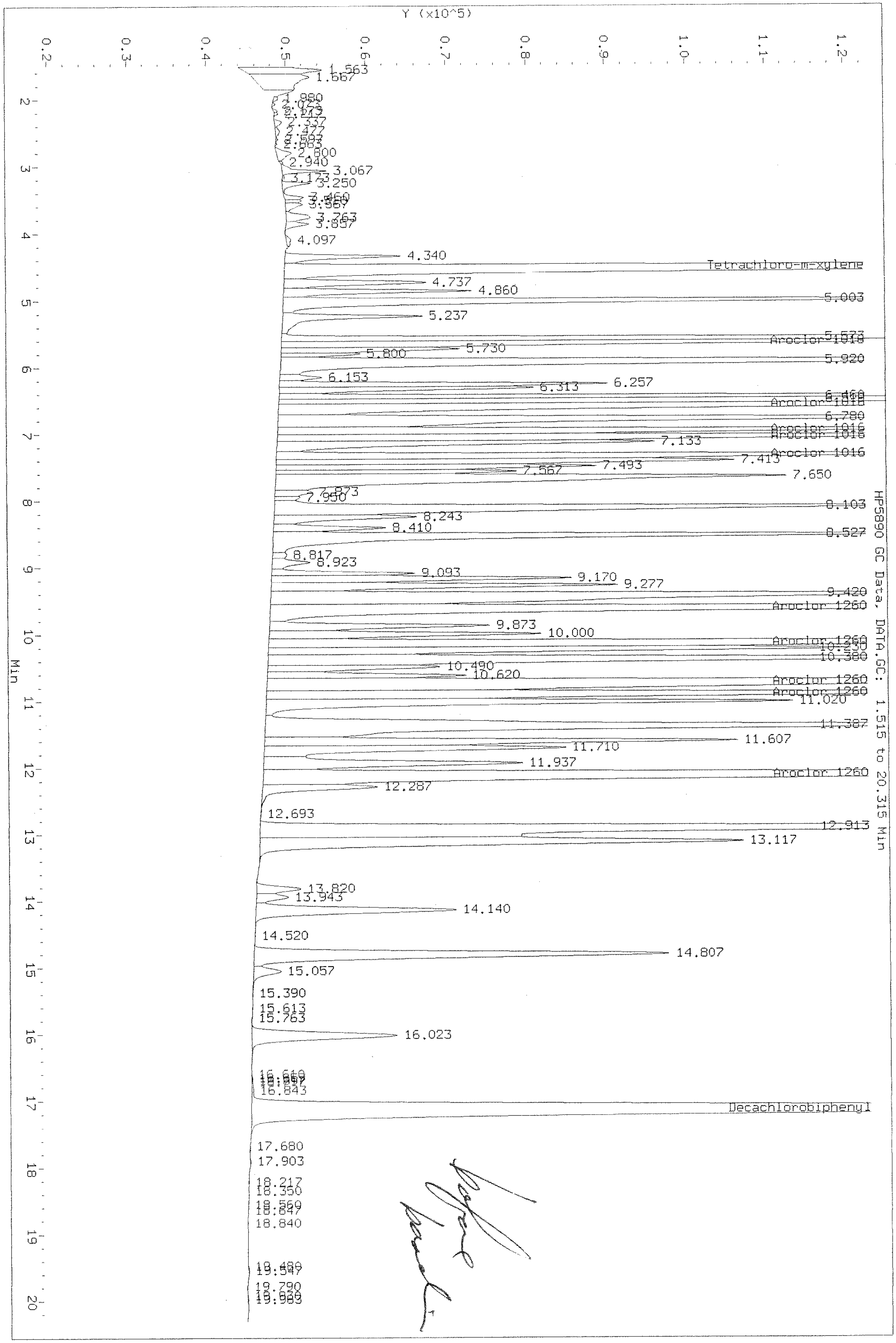
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F019.D
Injection Date: 22-NOV-2008 00:10
Instrument: GC09.i
Client Sample ID:



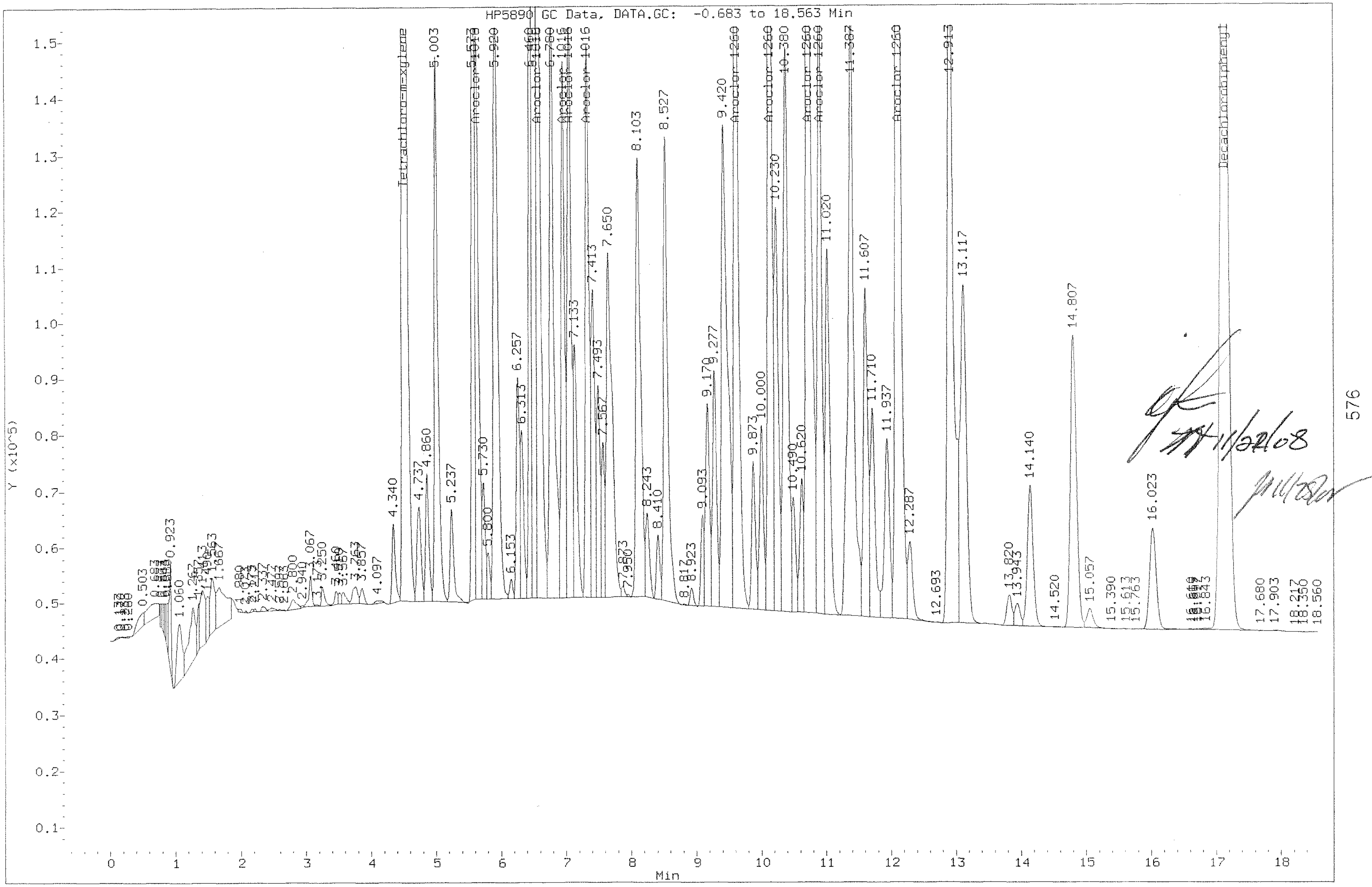
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F019.D
Injection Date: 22-NOV-2008 00:10
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R019.D
Injection Date: 22-NOV-2008 00:10
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R019.D
Injection Date: 22-NOV-2008 00:10
Instrument: GC09.i
Client Sample ID:



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F031.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	92	10200	9390	-8	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	960	222	214	-4	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	950	433	410	-5	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	890	224	199	-11	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	920	302	278	-8	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	220	227	3	NA	± 100 %	AverageRF
Aroclor 1016	1000	950	NA	NA	NA	-5	± 15 %	NA
Aroclor 1260 {1}	1000	890	376	335	-11	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	910	701	635	-9	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	890	494	442	-11	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	930	452	420	-7	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	940	936	878	-6	NA	± 100 %	AverageRF
Aroclor 1260	1000	910	NA	NA	NA	-9	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill		**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF		**Date Analyzed:**	11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type:	External Standard		**Calibration Date:**	09/22/2008
Analysis Method:	8082		**Calibration ID:**	CAL7795
			Analysis Lot:	KWG0812580
			Units:	ng/mL
File ID:	\\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R031.D		**Column ID:**	DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	98	13300	13100	-2	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	1100	343	369	8	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	681	711	4	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1100	360	392	9	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	413	442	7	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	368	394	7	NA	± 100 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	7	± 15 %	NA
Aroclor 1260 {1}	1000	1000	703	738	5	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1000	740	762	3	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	919	990	8	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	530	8	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1130	7	NA	± 100 %	AverageRF
Aroclor 1260	1000	1100	NA	NA	NA	6	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F031.D
Lab ID: KWG0812580-6
RunType: CCV
Matrix: LIQUID

Date Acquired: 11/22/2008 05:41
Date Quantitated: 11/25/2008 15:18
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/25 [signature]

Secondary Review: [signature] 11/25/08

Printed: 11/25/2008 17:00:05
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R031.D
Lab ID: KWG0812580-6
RunType: CCV
Matrix: LIQUID

Date Acquired: 11/22/2008 05:41
Date Quantitated: 11/25/2008 15:21
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: JW 11/28 JW

Secondary Review: M 11/28/08

Printed: 11/25/2008 17:00:09
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	11/21/2008

Analysis Lot:	KWG0812580	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F031.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R031.D			**Vial:**	97
Acqu Date:	11/22/2008 05:41	**Quant Date:**	11/25/2008 15:18	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-6				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.96	4.51	949415	1780059m	93.24	103.51			NA
				%Recovery =	NA	NA	Limits =	22-130	
Decachlorobiphenyl	16.05	17.13	939215	1306529	92.44	98.49			NA
				%Recovery =	NA	NA	Limits =	38-144	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	950.25	1,069			
Aroclor 1016 {1}	5.69	5.63	213508	368881m	962.32	1,076			
Aroclor 1016 {2}	6.21	6.56	410287	710676m	948.50	1,044			
Aroclor 1016 {3}	6.59	6.95	198908	391808m	886.77	1,088			
Aroclor 1016 {4}	7.00	7.05	278193	441552m	921.70	1,069			
Aroclor 1016 {5}	7.29	7.33	227194	394137m	1,032	1,071			
Aroclor 1260			0	0	911.66	1,061			
Aroclor 1260 {1}	9.94	9.61	335284	737540m	891.12	1,049			
Aroclor 1260 {2}	10.26	10.13	634559	762070m	905.14	1,030			
Aroclor 1260 {3}	10.32	10.72	441778	989671m	894.18	1,077			
Aroclor 1260 {4}	10.94	10.90	420207	530472m	930.28	1,079			
Aroclor 1260 {5}	11.41	12.11	877808	1134624m	937.57	1,070			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ150
DataFile: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F031.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					950.2	1,000	-5.0
Aroclor 1260		MS	NA	15					911.7	1,000	-8.8
Tetrachloro-m-xylene		SURR	AverageRF	15		1.0E+4	9.5E+3	-6.8			
Aroclor 1016 {1}		MULTI	AverageRF	100		2.2E+2	2.1E+2	-3.8			
Aroclor 1016 {2}		MULTI	AverageRF	100		4.3E+2	4.1E+2	-5.2			
Aroclor 1016 {3}		MULTI	AverageRF	100		2.2E+2	2.0E+2	-11.3			
Aroclor 1016 {4}		MULTI	AverageRF	100		3.0E+2	2.8E+2	-7.8			
Aroclor 1016 {5}		MULTI	AverageRF	100		2.2E+2	2.3E+2	3.2			
Aroclor 1260 {1}		MULTI	AverageRF	100		3.8E+2	3.4E+2	-10.9			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.0E+2	6.3E+2	-9.5			
Aroclor 1260 {3}		MULTI	AverageRF	100		4.9E+2	4.4E+2	-10.6			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.5E+2	4.2E+2	-7.0			
Aroclor 1260 {5}		MULTI	AverageRF	100		9.4E+2	8.8E+2	-6.2			
Decachlorobiphenyl		SURR	AverageRF	15		1.0E+4	9.4E+3	-7.6			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	7.5

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ150
DataFile: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R031.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					1,069	1,000	6.9
Aroclor 1260		MS	NA	15					1,061	1,000	6.1
Tetrachloro-m-xylene		SURR	AverageRF	15		1.7E+4	1.8E+4	3.5			
Aroclor 1016 {1}		MULTI	AverageRF	100		3.4E+2	3.7E+2	7.6			
Aroclor 1016 {2}		MULTI	AverageRF	100		6.8E+2	7.1E+2	4.4			
Aroclor 1016 {3}		MULTI	AverageRF	100		3.6E+2	3.9E+2	8.8			
Aroclor 1016 {4}		MULTI	AverageRF	100		4.1E+2	4.4E+2	6.9			
Aroclor 1016 {5}		MULTI	AverageRF	100		3.7E+2	3.9E+2	7.1			
Aroclor 1260 {1}		MULTI	AverageRF	100		7.0E+2	7.4E+2	4.9			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.4E+2	7.6E+2	3.0			
Aroclor 1260 {3}		MULTI	AverageRF	100		9.2E+2	9.9E+2	7.7			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.9E+2	5.3E+2	7.9			
Aroclor 1260 {5}		MULTI	AverageRF	100		1.1E+3	1.1E+3	7.0			
Decachlorobiphenyl		SURR	AverageRF	15		1.3E+4	1.3E+4	-1.5			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	5.8

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F031.D
Report Date: 25-Nov-2008 15:18

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F031.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R031.D
Inj Date : 22-NOV-2008 05:41
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-6
Misc Info : SEMIVOA GC\W0812580\6-CCV.H
Cal Date : 22-NOV-2008 10:36
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

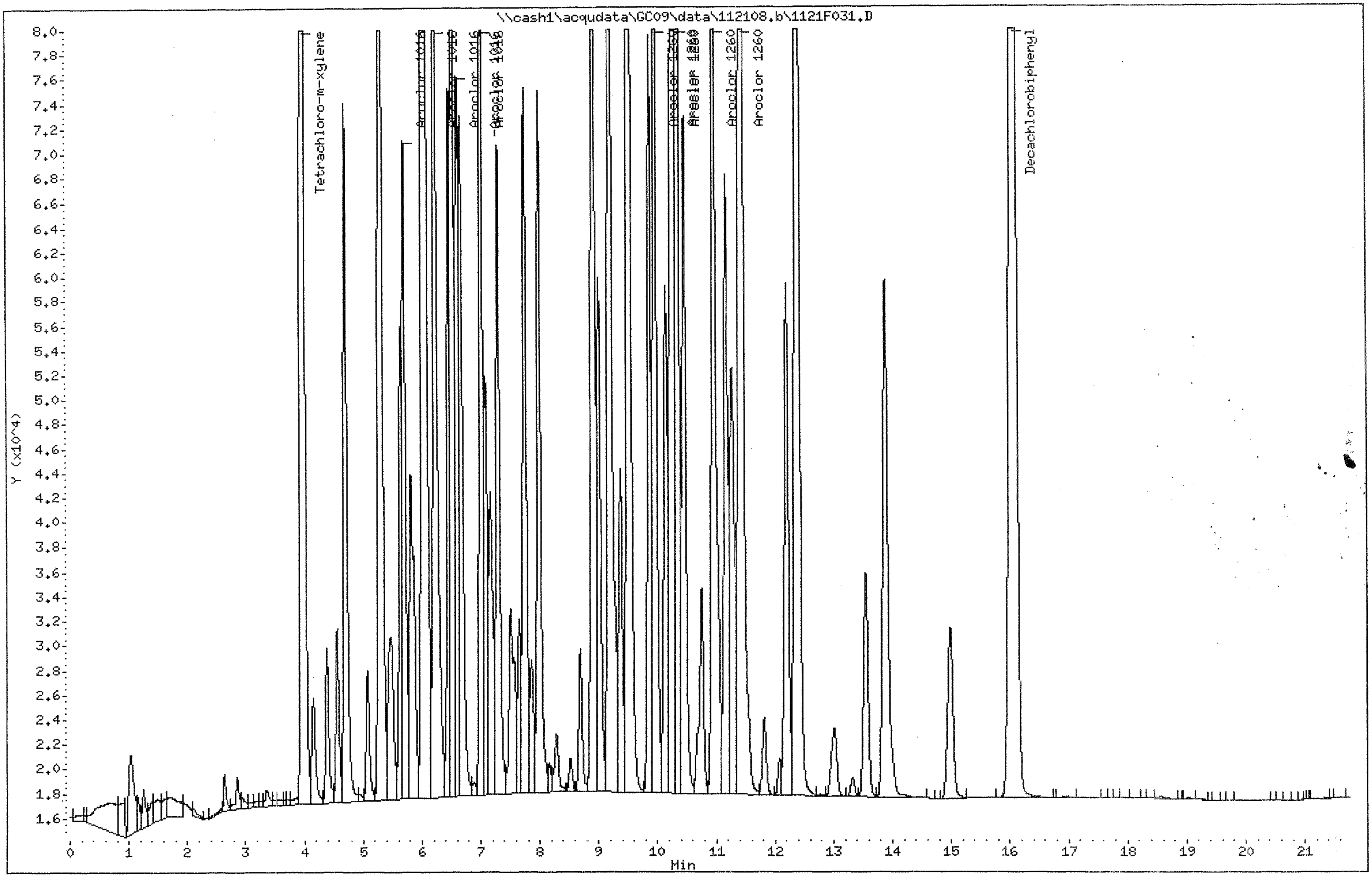
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	949415	1780059	93.2	104		100.00
Aroclor 1016	5.687	5.627	213508	368881	962	1080	80.00- 120.00	100.00
	6.210	6.563	410287	710676	948	1040	155.62- 233.43	192.16
	6.593	6.953	198908	391808	887	1090	75.65- 113.48	93.16
	7.000	7.050	278193	441552	922	1070	105.37- 158.05	130.30
	7.287	7.327	227194	394137	1030	1070	85.28- 127.92	106.41
		Average of Peak Amounts =			950	1070		
Aroclor 1260	9.943	9.613	335284	737540	891	1050	80.00- 120.00	100.00
	10.257	10.133	634559	762070	905	1030	149.50- 224.25	189.26
	10.320	10.723	441778	989671	894	1080	102.96- 154.44	131.76
	10.943	10.900	420207	530472	930	1080	98.63- 147.94	125.33
	11.407	12.110	877808	1134624	938	1070	206.52- 309.78	261.81
		Average of Peak Amounts =			912	1060		
Decachlorobiphenyl	16.047	17.130	939215	1306529	92.4	98.5		100.00

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F031.D
Date : 22-NOV-2008 05:41
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-6

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

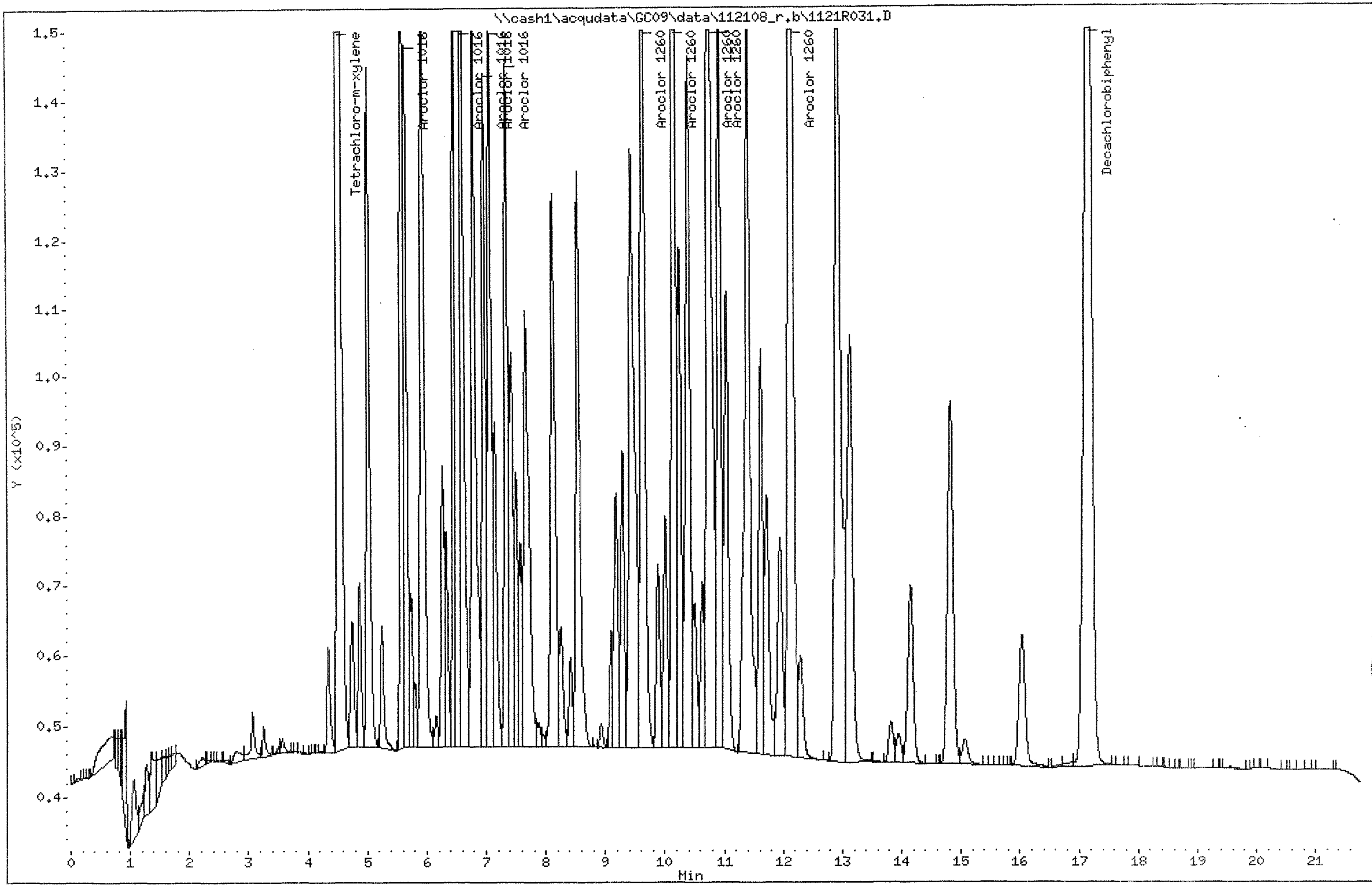


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R031.D
Date : 22-NOV-2008 05:41
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-6

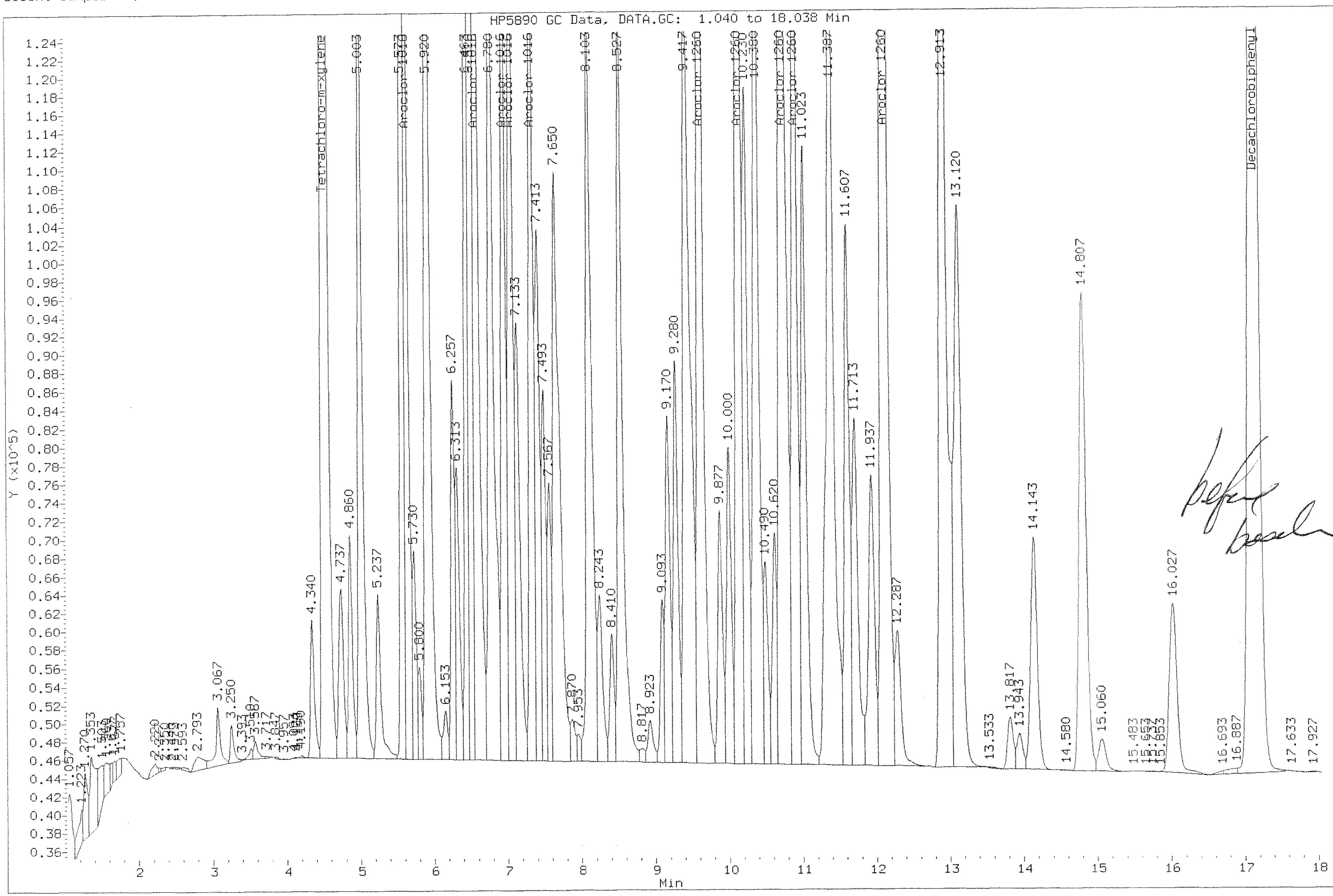
Column phase: DB-XLB

Instrument: GC09.i

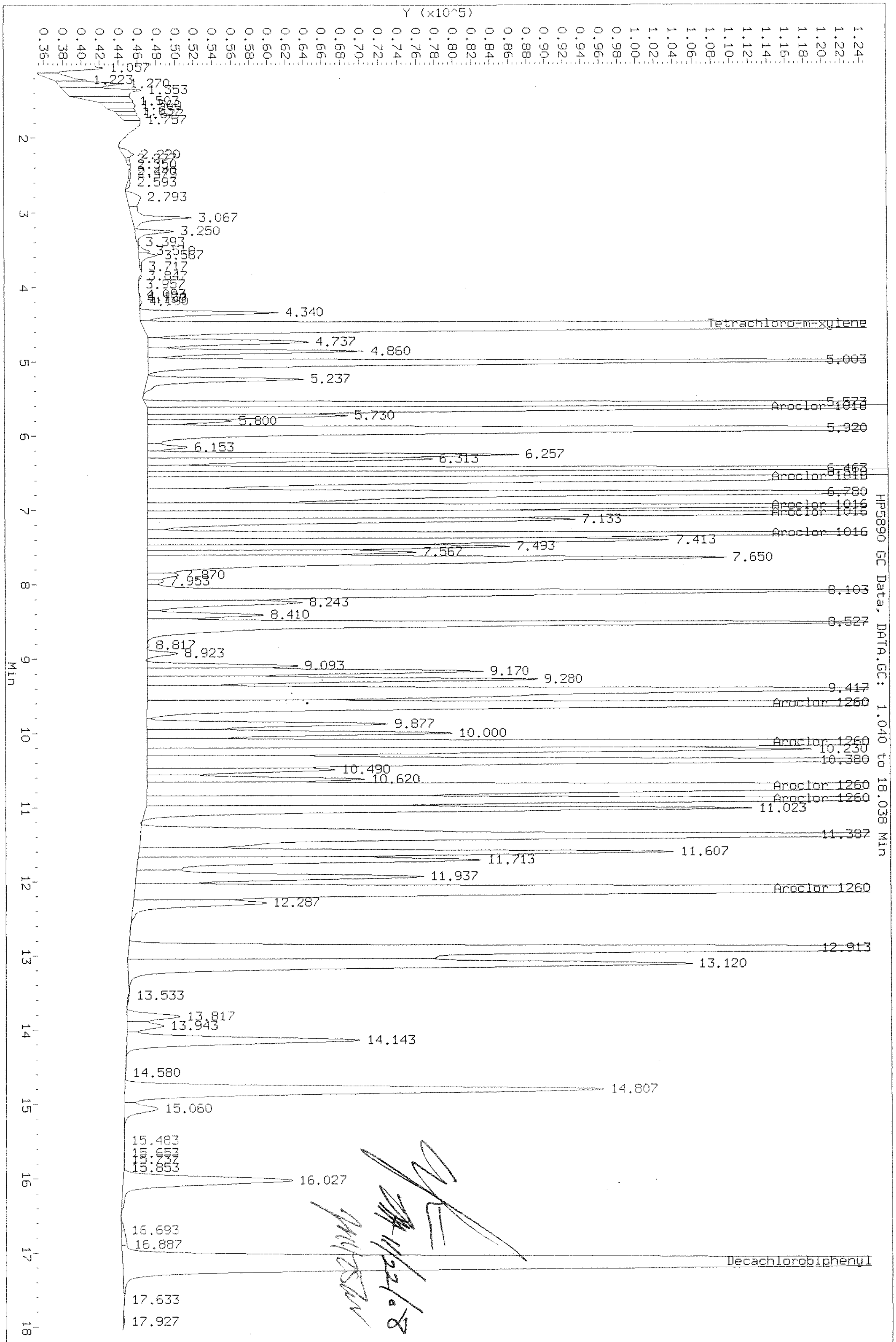
Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R031.D
Injection Date: 22-NOV-2008 05:41
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R031.D
Injection Date: 22-NOV-2008 05:41
Instrument: GC09.i
Client Sample ID:



COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F044.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	88	10200	8920	-12	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	920	222	205	-8	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	910	433	394	-9	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	900	224	201	-10	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	880	302	265	-12	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	970	220	214	-3	NA	± 100 %	AverageRF
Aroclor 1016	1000	920	NA	NA	NA	-8	± 15 %	NA
Aroclor 1260 {1}	1000	840	376	317	-16	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	870	701	613	-13	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	830	494	410	-17	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	840	452	380	-16	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	870	936	815	-13	NA	± 100 %	AverageRF
Aroclor 1260	1000	850	NA	NA	NA	-15	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R044.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	95	13300	12600	-5	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	990	343	340	-1	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	980	681	665	-2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1000	360	366	2	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1000	413	419	1	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	368	377	2	NA	± 100 %	AverageRF
Aroclor 1016	1000	1000	NA	NA	NA	0	± 15 %	NA
Aroclor 1260 {1}	1000	990	703	694	-1	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	970	740	715	-3	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1000	919	935	2	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1000	492	500	2	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1000	1060	1080	2	NA	± 100 %	AverageRF
Aroclor 1260	1000	1000	NA	NA	NA	0	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F044.D
Lab ID: KWG0812580-8
RunType: CCV
Matrix: LIQUID

Date Acquired: 11/22/2008 11:38
Date Quantitated: 11/25/2008 15:19
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature] 11/25/08

Secondary Review: [signature] 11/25/08

Printed: 11/25/2008 17:01:18
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R044.D
Lab ID: KWG0812580-8
RunType: CCV
Matrix: LIQUID

Date Acquired: 11/22/2008 11:38
Date Quantitated: 11/25/2008 15:22
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: JP 11/25/08

Secondary Review: MMS 08

Printed: 11/25/2008 17:01:21

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	11/21/2008

Analysis Lot:	KWG0812580	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F044.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R044.D			**Vial:**	97
Acqu Date:	11/22/2008 11:38	**Quant Date:**	11/25/2008 15:19	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-8				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.96	4.51	939996m	1751301	92.32	101.84			NA
				%Recovery =	NA	NA	Limits =	22-130	
Decachlorobiphenyl	16.05	17.13	891820	1256516	87.78	94.72			NA
				%Recovery =	NA	NA	Limits =	38-144	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	916.06	1,005			
Aroclor 1016 {1}	5.69	5.63	205025m	340428	924.09	992.70			
Aroclor 1016 {2}	6.21	6.56	394094m	665356	911.07	977.47			
Aroclor 1016 {3}	6.59	6.96	200754m	366376	895.00	1,017			
Aroclor 1016 {4}	7.00	7.05	265078m	419230	878.25	1,015			
Aroclor 1016 {5}	7.29	7.33	213970m	376532	971.89	1,023			
Aroclor 1260			0	0	851.42	1,001			
Aroclor 1260 {1}	9.95	9.61	316830m	694438	842.08	988.08			
Aroclor 1260 {2}	10.26	10.13	612979m	714521	874.36	965.73			
Aroclor 1260 {3}	10.32	10.72	409733m	934869	829.32	1,017			
Aroclor 1260 {4}	10.94	10.90	379919m	499605	841.09	1,016			
Aroclor 1260 {5}	11.41	12.11	814764m	1082245	870.24	1,020			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ150
DataFile: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F044.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					916.1	1,000	-8.4
Aroclor 1260		MS	NA	15					851.4	1,000	-14.9
Tetrachloro-m-xylene		SURR	AverageRF	15		1.0E+4	9.4E+3	-7.7			
Aroclor 1016 {1}		MULTI	AverageRF	100		2.2E+2	2.1E+2	-7.6			
Aroclor 1016 {2}		MULTI	AverageRF	100		4.3E+2	3.9E+2	-8.9			
Aroclor 1016 {3}		MULTI	AverageRF	100		2.2E+2	2.0E+2	-10.5			
Aroclor 1016 {4}		MULTI	AverageRF	100		3.0E+2	2.7E+2	-12.2			
Aroclor 1016 {5}		MULTI	AverageRF	100		2.2E+2	2.1E+2	-2.8			
Aroclor 1260 {1}		MULTI	AverageRF	100		3.8E+2	3.2E+2	-15.8			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.0E+2	6.1E+2	-12.6			
Aroclor 1260 {3}		MULTI	AverageRF	100		4.9E+2	4.1E+2	-17.1			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.5E+2	3.8E+2	-15.9			
Aroclor 1260 {5}		MULTI	AverageRF	100		9.4E+2	8.1E+2	-13.0			
Decachlorobiphenyl		SURR	AverageRF	15		1.0E+4	8.9E+3	-12.2			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	11.3

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ150
DataFile: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R044.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					1,005	1,000	0.5
Aroclor 1260		MS	NA	15					1,001	1,000	0.1
Tetrachloro-m-xylene		SURR	AverageRF	15		1.7E+4	1.8E+4	1.8			
Aroclor 1016 {1}		MULTI	AverageRF	100		3.4E+2	3.4E+2	-0.7			
Aroclor 1016 {2}		MULTI	AverageRF	100		6.8E+2	6.7E+2	-2.3			
Aroclor 1016 {3}		MULTI	AverageRF	100		3.6E+2	3.7E+2	1.7			
Aroclor 1016 {4}		MULTI	AverageRF	100		4.1E+2	4.2E+2	1.5			
Aroclor 1016 {5}		MULTI	AverageRF	100		3.7E+2	3.8E+2	2.3			
Aroclor 1260 {1}		MULTI	AverageRF	100		7.0E+2	6.9E+2	-1.2			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.4E+2	7.1E+2	-3.4			
Aroclor 1260 {3}		MULTI	AverageRF	100		9.2E+2	9.3E+2	1.7			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.9E+2	5.0E+2	1.6			
Aroclor 1260 {5}		MULTI	AverageRF	100		1.1E+3	1.1E+3	2.0			
Decachlorobiphenyl		SURR	AverageRF	15		1.3E+4	1.3E+4	-5.3			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	2.1

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F044.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F044.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R044.D
Inj Date : 22-NOV-2008 11:38
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-8
Misc Info : SEMIVOA GC\W0812580\8-CCV.H
Cal Date : 22-NOV-2008 12:27
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	939996	1751301	92.3	102		100.00(M)
Aroclor 1016	5.687	5.627	205025	340428	924	993	80.00- 120.00	100.00(M)
	6.213	6.563	394094	665356	911	977	155.62- 233.43	192.22(M)
	6.593	6.957	200754	366376	895	1020	75.65- 113.48	97.92(M)
	7.000	7.053	265078	419230	878	1010	105.37- 158.05	129.29(M)
	7.287	7.327	213970	376532	972	1020	85.28- 127.92	104.36(M)
		Average of Peak Amounts =			916	1000		
Aroclor 1260	9.947	9.613	316830	694438	842	988	80.00- 120.00	100.00(M)
	10.257	10.133	612979	714521	874	966	149.50- 224.25	193.47(M)
	10.320	10.723	409733	934869	829	1020	102.96- 154.44	129.32(M)
	10.943	10.903	379919	499605	841	1020	98.63- 147.94	119.91(M)
	11.410	12.110	814764	1082245	870	1020	206.52- 309.78	257.16(M)
		Average of Peak Amounts =			851	1000		
Decachlorobiphenyl	16.047	17.130	891820	1256516	87.8	94.7		100.00

QC Flag Legend

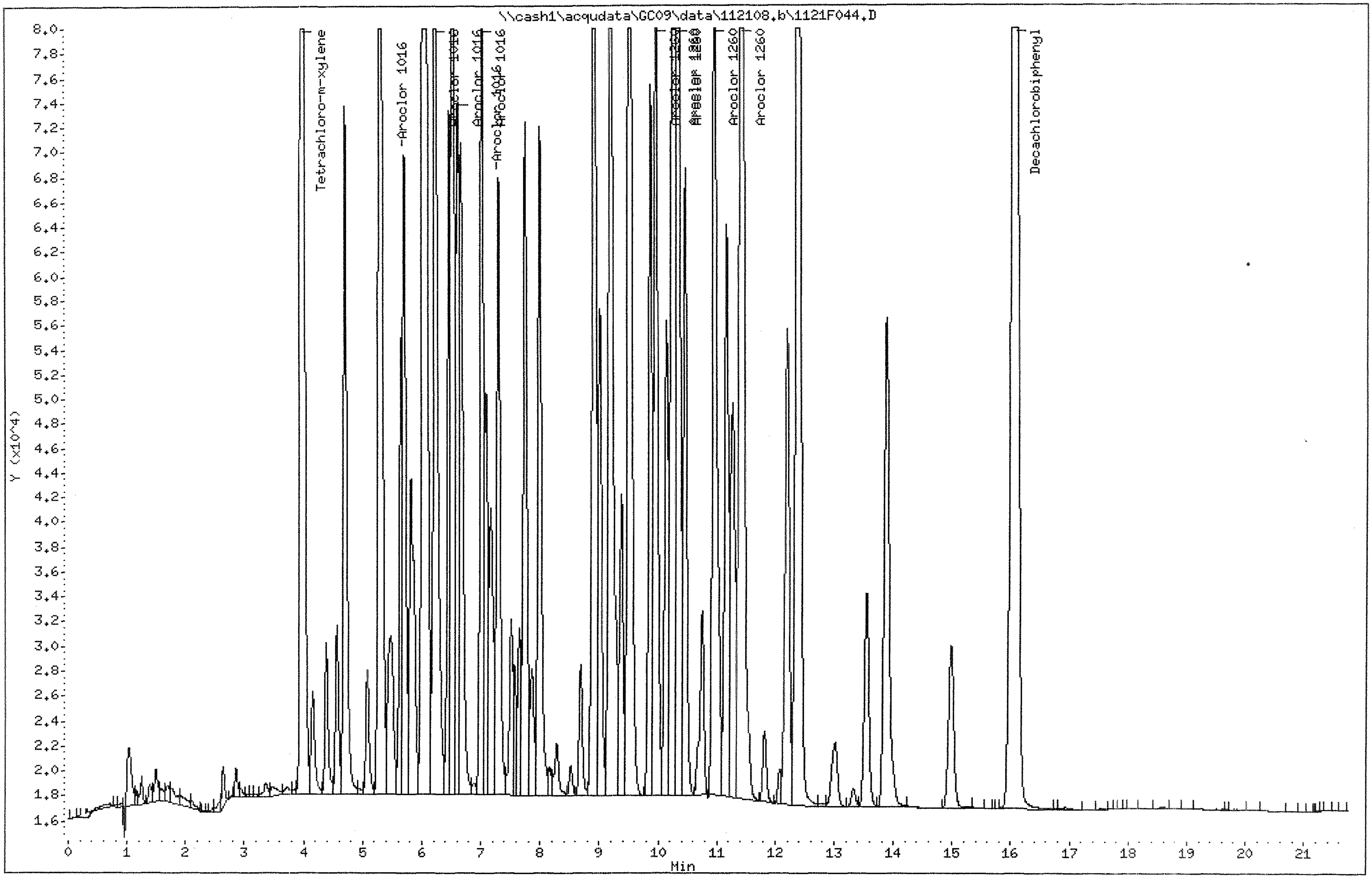
M - Compound response manually integrated.

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F044.D
Date : 22-NOV-2008 11:38
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-8

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

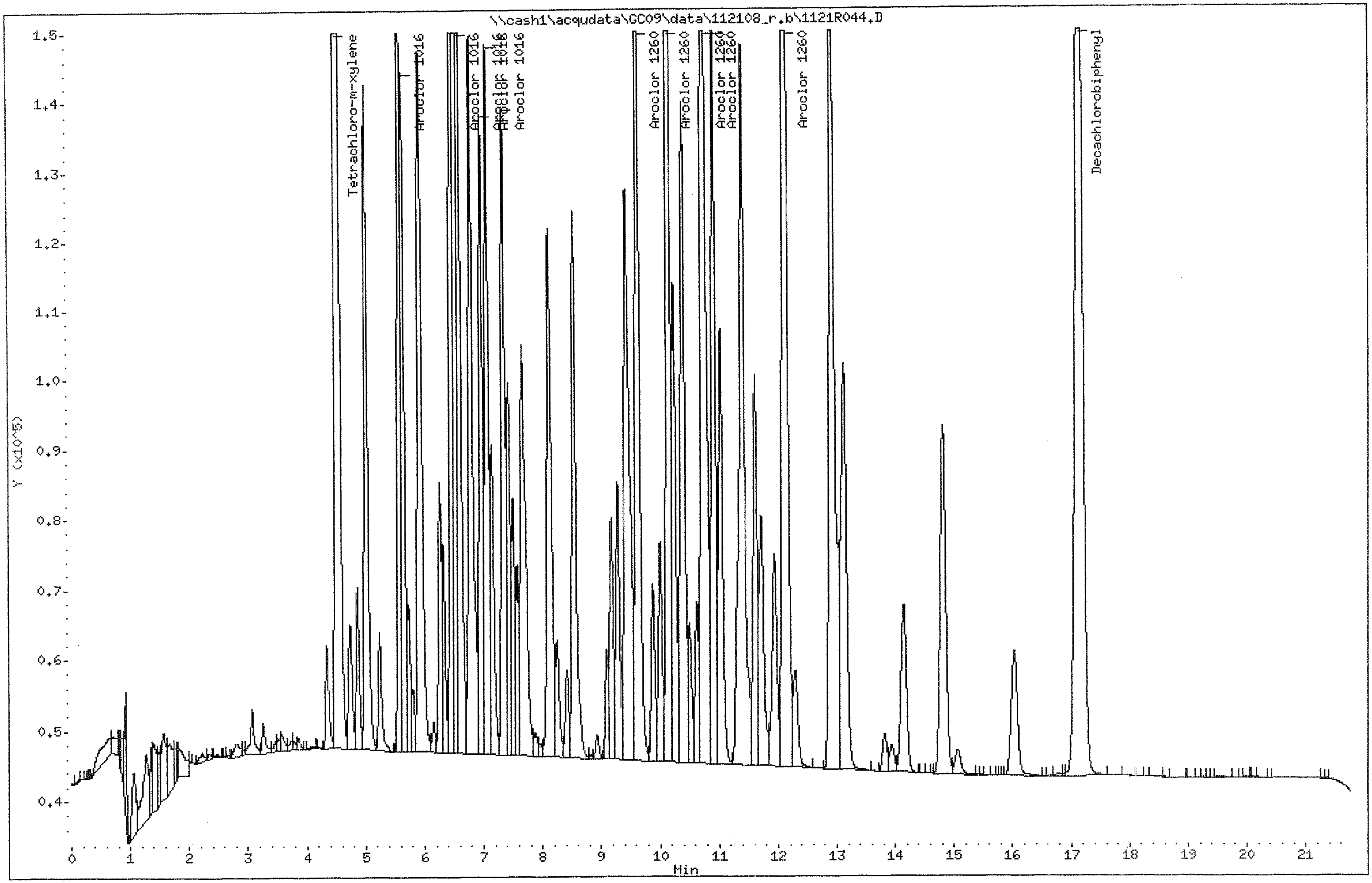


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R044.D
Date : 22-NOV-2008 11:38
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-8

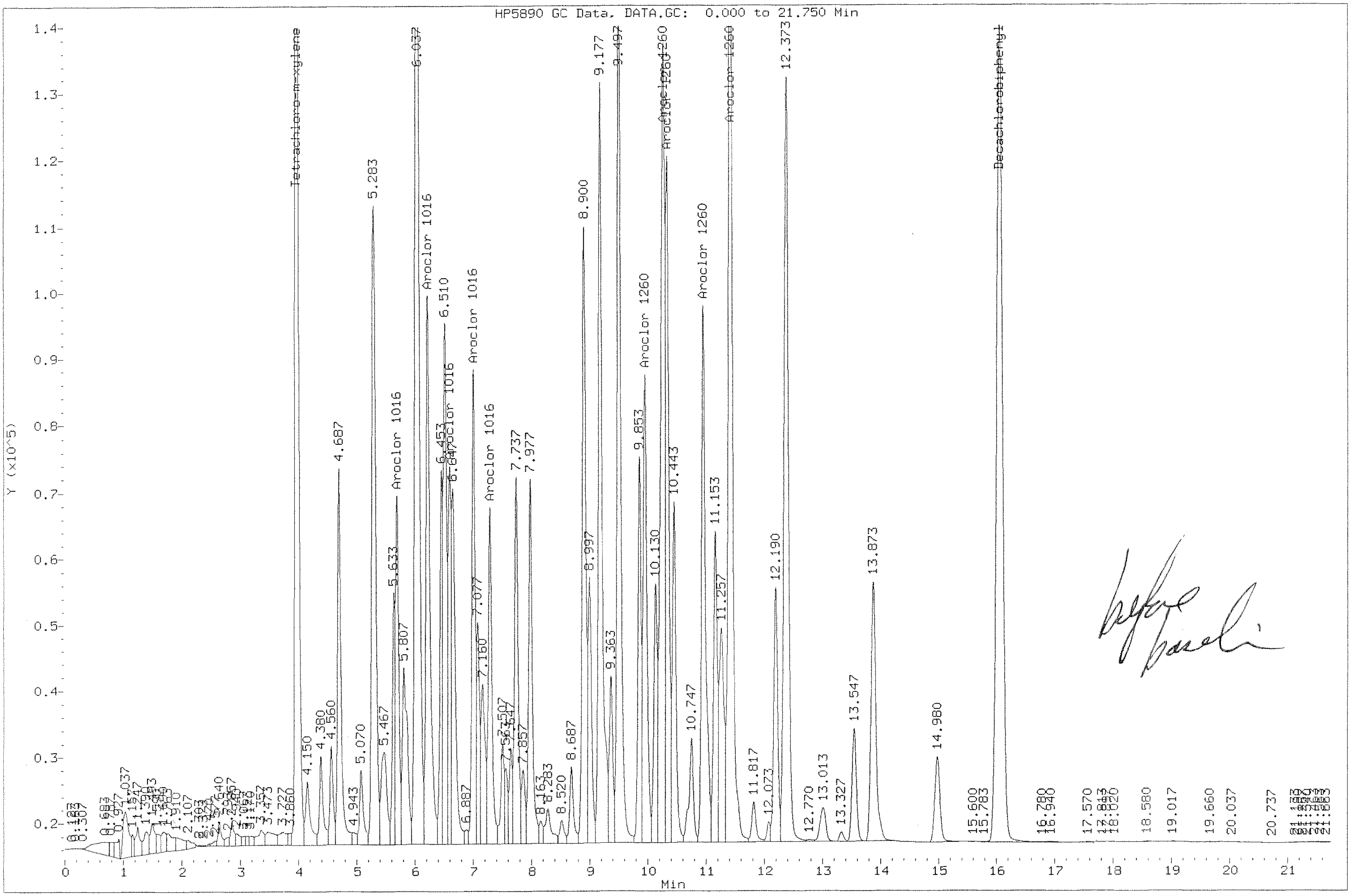
Column phase: DB-XLB

Instrument: GC09.i

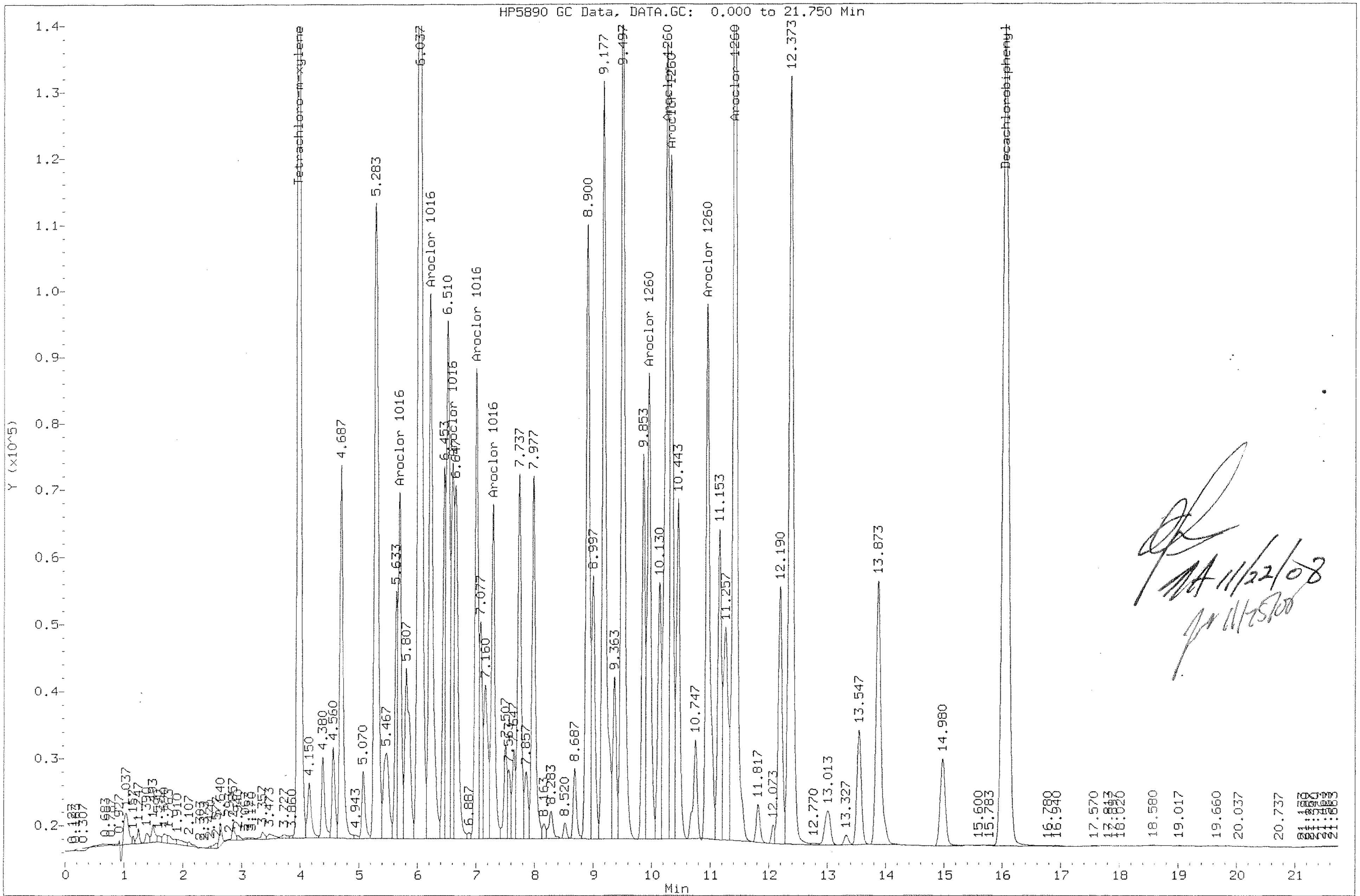
Operator: LHarris
Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\112108.b\1121F044.D
Injection Date: 22-NOV-2008 11:38
Instrument: GC09.i
Client Sample ID:



Data File: \\cash1\acqudata\GC09\data\112108.b\1121F044.D
Injection Date: 22-NOV-2008 11:38
Instrument: GC09.i
Client Sample ID:



Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\I121F049.D
Lab ID: KWG0812580-9
RunType: IB
Matrix: LIQUID

Date Acquired: 11/22/2008 14:04
Date Quantitated: 11/25/2008 15:20
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: JA 11/25/08

Secondary Review: mm 11/25/08

Printed: 11/25/2008 17:01:42
u:\Stealth\Crystal.rpt\except2.rpt

Page 1 of 1

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F050.D

Column ID: DB-35MS

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	90	10200	9190	-10	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	940	222	208	-6	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	940	433	405	-6	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	880	224	197	-12	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	910	302	274	-9	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1000	220	222	1	NA	± 100 %	AverageRF
Aroclor 1016	1000	930	NA	NA	NA	-7	± 15 %	NA
Aroclor 1260 {1}	1000	880	376	330	-12	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	880	701	616	-12	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	860	494	424	-14	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	900	452	407	-10	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	910	936	851	-9	NA	± 100 %	AverageRF
Aroclor 1260	1000	880	NA	NA	NA	-12	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polychlorinated Biphenyls (PCBs)

Calibration Type: External Standard
Analysis Method: 8082

Calibration Date: 09/22/2008
Calibration ID: CAL7795
Analysis Lot: KWG0812580
Units: ng/mL

File ID: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R050.D

Column ID: DB-XLB

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Decachlorobiphenyl	100	96	13300	12800	-4	NA	± 15 %	AverageRF
Aroclor 1016 {1}	1000	1100	343	363	6	NA	± 100 %	AverageRF
Aroclor 1016 {2}	1000	1000	681	696	2	NA	± 100 %	AverageRF
Aroclor 1016 {3}	1000	1100	360	383	6	NA	± 100 %	AverageRF
Aroclor 1016 {4}	1000	1100	413	437	6	NA	± 100 %	AverageRF
Aroclor 1016 {5}	1000	1100	368	392	6	NA	± 100 %	AverageRF
Aroclor 1016	1000	1100	NA	NA	NA	5	± 15 %	NA
Aroclor 1260 {1}	1000	1000	703	729	4	NA	± 100 %	AverageRF
Aroclor 1260 {2}	1000	1000	740	753	2	NA	± 100 %	AverageRF
Aroclor 1260 {3}	1000	1100	919	978	6	NA	± 100 %	AverageRF
Aroclor 1260 {4}	1000	1100	492	523	6	NA	± 100 %	AverageRF
Aroclor 1260 {5}	1000	1100	1060	1120	5	NA	± 100 %	AverageRF
Aroclor 1260	1000	1000	NA	NA	NA	5	± 15 %	NA

Results flagged with an asterisk (*) indicate values outside control criteria.

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F050.D		**Date Acquired:**	11/22/2008 14:31
Lab ID:	KWG0812580-10		**Date Quantitated:**	11/25/2008 15:20
RunType:	CCV		**Batch ID:**	KWG0812580
Matrix:	LIQUID		**Analysis Method:**	8082
			MethodJoinID:	MJ150

Sample Exceptions

Exception Categories	**Result**	**Low Limit**	**High Limit**	**Pass**	**Fail**
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: JM 11/25/08

Secondary Review: km 11/25/08

Printed: 11/25/2008 17:01:48

u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R050.D
Lab ID: KWG0812580-10
RunType: CCV
Matrix: LIQUID

Date Acquired: 11/22/2008 14:31
Date Quantitated: 11/25/2008 15:22
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature] 11/25/08

Secondary Review: [signature] 11/25/08

Printed: 11/25/2008 17:01:51
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	11/21/2008

Analysis Lot:	KWG0812580	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F050.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R050.D			**Vial:**	97
Acqu Date:	11/22/2008 14:31	**Quant Date:**	11/25/2008 15:20	**Dilution:**	1.0
Run Type:	CCV			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-10				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	3.96	4.51	944352	1772847	92.74	103.09			NA
				%Recovery =	NA	NA	Limits =	22-130	
Decachlorobiphenyl	16.05	17.14	918860	1279626	90.44	96.46			NA
				%Recovery =	NA	NA	Limits =	38-144	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	933.57	1,053			
Aroclor 1016 {1}	5.69	5.63	208149	362577	938.17	1,057			
Aroclor 1016 {2}	6.21	6.57	404898	696359	936.04	1,023			
Aroclor 1016 {3}	6.60	6.96	196833	382503	877.52	1,062			
Aroclor 1016 {4}	7.00	7.05	274151	437395	908.31	1,059			
Aroclor 1016 {5}	7.29	7.33	221879	391900	1,008	1,065			
Aroclor 1260			0	0	884.88	1,046			
Aroclor 1260 {1}	9.95	9.62	329812	728747	876.58	1,037			
Aroclor 1260 {2}	10.26	10.14	616327	752970	879.13	1,018			
Aroclor 1260 {3}	10.32	10.73	424474	977605	859.16	1,064			
Aroclor 1260 {4}	10.95	10.90	406599	522757	900.16	1,063			
Aroclor 1260 {5}	11.41	12.11	851410	1115017	909.38	1,051			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ150
DataFile: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F050.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					933.6	1,000	-6.6
Aroclor 1260		MS	NA	15					884.9	1,000	-11.5
Tetrachloro-m-xylene		SURR	AverageRF	15		1.0E+4	9.4E+3	-7.3			
Aroclor 1016 {1}		MULTI	AverageRF	100		2.2E+2	2.1E+2	-6.2			
Aroclor 1016 {2}		MULTI	AverageRF	100		4.3E+2	4.0E+2	-6.4			
Aroclor 1016 {3}		MULTI	AverageRF	100		2.2E+2	2.0E+2	-12.2			
Aroclor 1016 {4}		MULTI	AverageRF	100		3.0E+2	2.7E+2	-9.2			
Aroclor 1016 {5}		MULTI	AverageRF	100		2.2E+2	2.2E+2	0.8			
Aroclor 1260 {1}		MULTI	AverageRF	100		3.8E+2	3.3E+2	-12.3			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.0E+2	6.2E+2	-12.1			
Aroclor 1260 {3}		MULTI	AverageRF	100		4.9E+2	4.2E+2	-14.1			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.5E+2	4.1E+2	-10.0			
Aroclor 1260 {5}		MULTI	AverageRF	100		9.4E+2	8.5E+2	-9.1			
Decachlorobiphenyl		SURR	AverageRF	15		1.0E+4	9.2E+3	-9.6			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	9.1

Calibration Verification Report

Calibration ID: CAL7795
Method ID: MJ150
DataFile: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R050.D

Parameter Name	Type	PARM Type	Curve Fit	Method Criteria	Min RF	ICAL RF	CCV RF	%Diff	Sol'n Conc.	True Value	% Drift
Aroclor 1016		MS	NA	15					1,053	1,000	5.3
Aroclor 1260		MS	NA	15					1,046	1,000	4.6
Tetrachloro-m-xylene		SURR	AverageRF	15		1.7E+4	1.8E+4	3.1			
Aroclor 1016 {1}		MULTI	AverageRF	100		3.4E+2	3.6E+2	5.7			
Aroclor 1016 {2}		MULTI	AverageRF	100		6.8E+2	7.0E+2	2.3			
Aroclor 1016 {3}		MULTI	AverageRF	100		3.6E+2	3.8E+2	6.2			
Aroclor 1016 {4}		MULTI	AverageRF	100		4.1E+2	4.4E+2	5.9			
Aroclor 1016 {5}		MULTI	AverageRF	100		3.7E+2	3.9E+2	6.5			
Aroclor 1260 {1}		MULTI	AverageRF	100		7.0E+2	7.3E+2	3.7			
Aroclor 1260 {2}		MULTI	AverageRF	100		7.4E+2	7.5E+2	1.8			
Aroclor 1260 {3}		MULTI	AverageRF	100		9.2E+2	9.8E+2	6.4			
Aroclor 1260 {4}		MULTI	AverageRF	100		4.9E+2	5.2E+2	6.3			
Aroclor 1260 {5}		MULTI	AverageRF	100		1.1E+3	1.1E+3	5.1			
Decachlorobiphenyl		SURR	AverageRF	15		1.3E+4	1.3E+4	-3.5			

Alternate Calibration Evaluation Summary

Maximum Allowable Average %D =	15.0
Calculated Average %D =	4.7

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F050.D
Report Date: 25-Nov-2008 15:20

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F050.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R050.D
Inj Date : 22-NOV-2008 14:31
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-10
Misc Info : SEMIVOA GC\W0812580\10-CCV.H
Cal Date : 22-NOV-2008 15:04
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : AR1660.SUB
Sub List #2 : AR1660.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

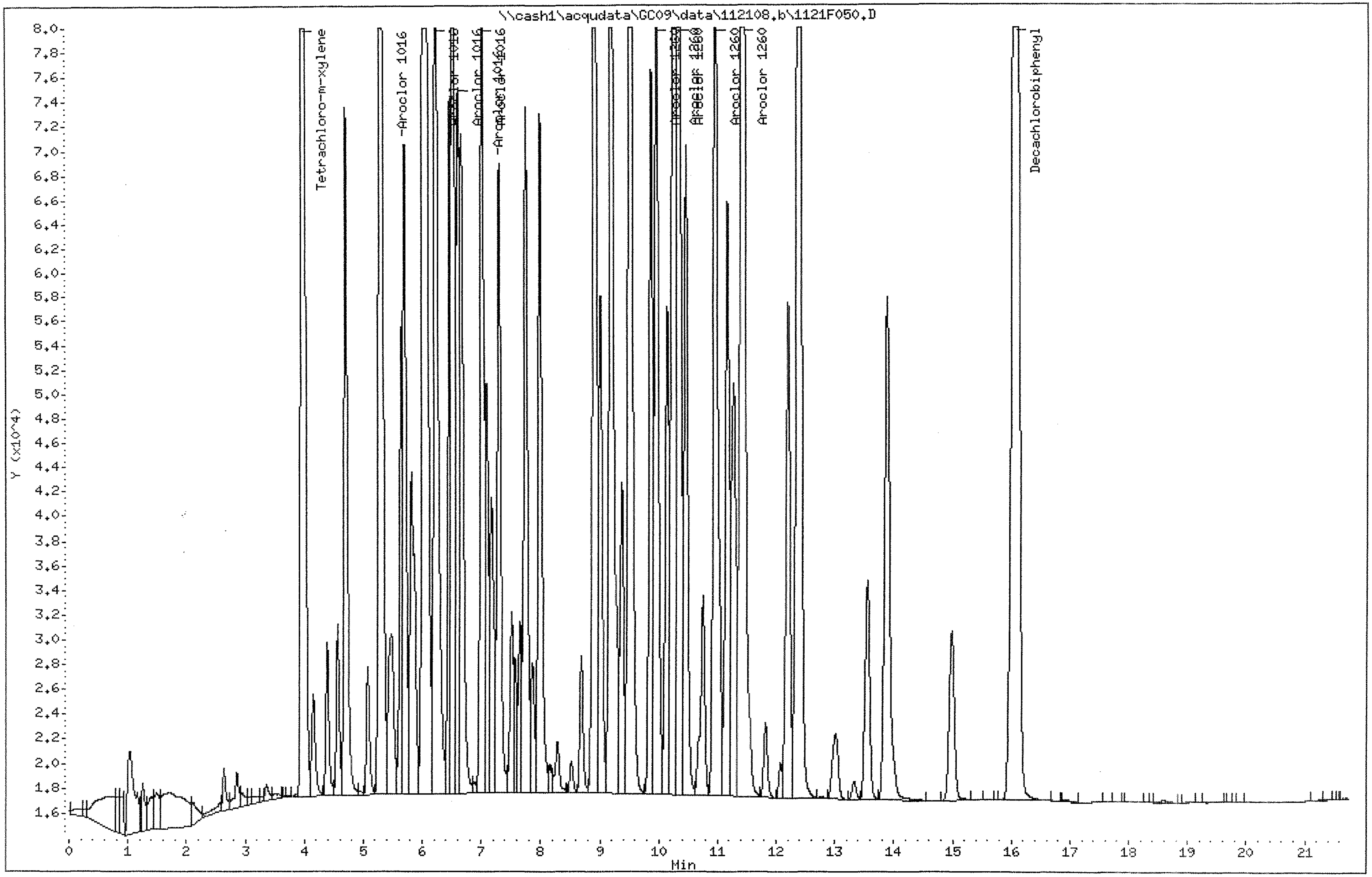
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio
Tetrachloro-m-xylene	3.957	4.507	944352	1772847	92.7	103		100.00
Aroclor 1016	5.687	5.630	208149	362577	938	1060	80.00- 120.00	100.00
	6.213	6.567	404898	696359	936	1020	155.62- 233.43	194.52
	6.597	6.957	196833	382503	878	1060	75.65- 113.48	94.56
	7.003	7.053	274151	437395	908	1060	105.37- 158.05	131.71
	7.287	7.330	221879	391900	1010	1060	85.28- 127.92	106.60
		Average	of Peak	Amounts =	934	1050		
Aroclor 1260	9.947	9.617	329812	728747	876	1040	80.00- 120.00	100.00
	10.257	10.137	616327	752970	879	1020	149.50- 224.25	186.87
	10.323	10.727	424474	977605	859	1060	102.96- 154.44	128.70
	10.947	10.903	406599	522757	900	1060	98.63- 147.94	123.28
	11.410	12.110	851410	1115017	909	1050	206.52- 309.78	258.15
		Average	of Peak	Amounts =	885	1050		
Decachlorobiphenyl	16.050	17.137	918860	1279626	90.4	96.4		100.00

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F050.D
Date : 22-NOV-2008 14:31
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-10

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



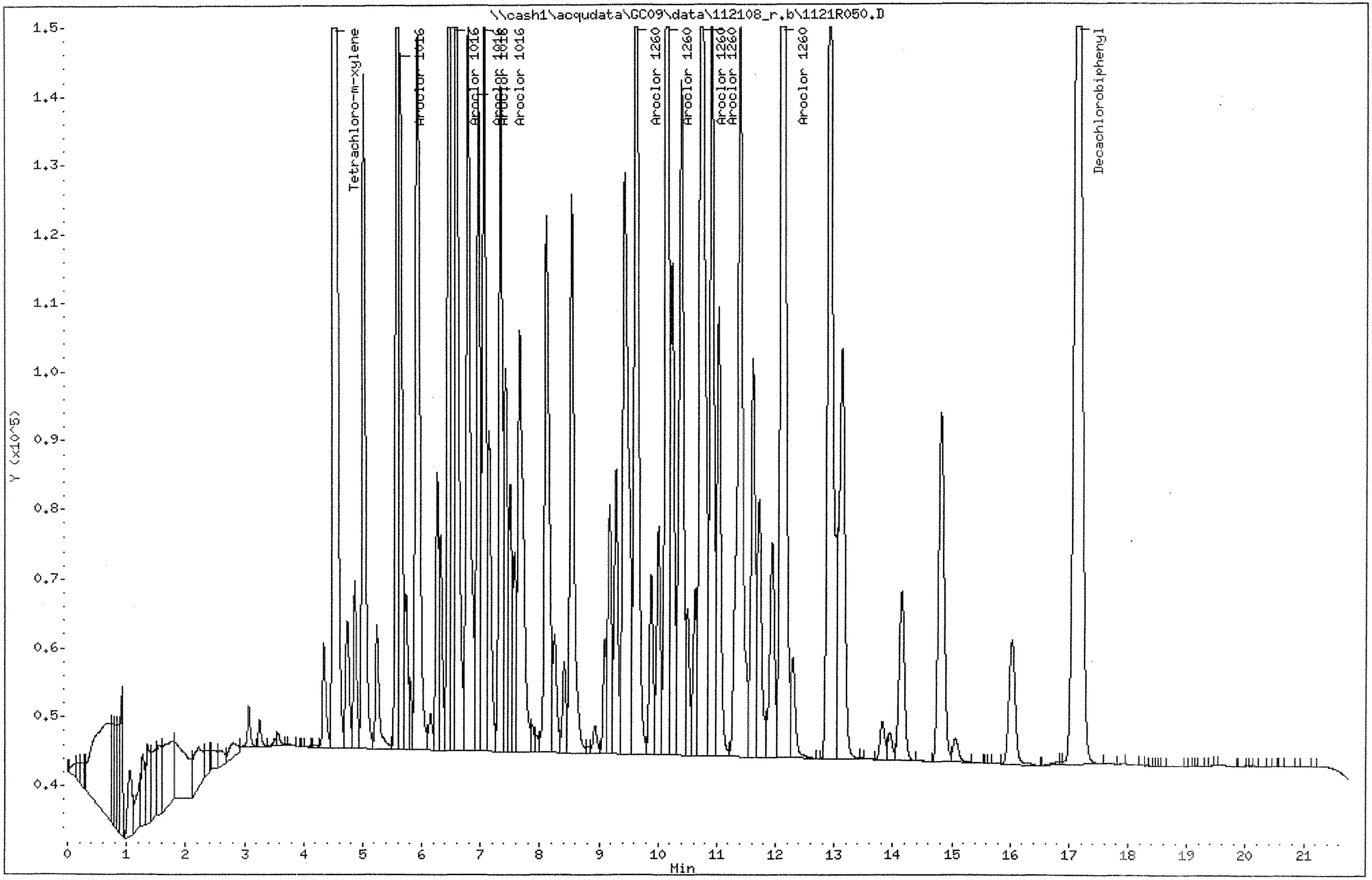
Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R050.D
Date : 22-NOV-2008 14:31
Client ID:
Sample Info: 1660 @ 1000ppb | PCB5-25A | KWG0812580-10

Instrument: GC09.i

Operator: LHarris

Column phase: DB-XLB

Column diameter: 0.53



Organic Analysis:

Polychlorinated Biphenyls (PCBs)

Validation Package

Sample Prep and Screen Data

SVG Dilution Log

LAB ID.	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	DATE	ANALYST	EXTRACTION DATE	COMMENTS
K10639-1	100ul	1000ul	10X	11/20/08	[illegible]	11/5/08	
-2	50ul		20X				
-3	100ul		10X				
-4	100ul		10X				
-5	50ul		20X				
-8	100ul		10X				
-9	100ul		10X				
-10	100ul		10X				

Preparation Information

Group ID:	KWG0811860	**Prep Method:**	EPA 3540C	**Prep Date:**	11/05/08 00:00
Department:	Semivoa GC				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K0810625-007	West-Vault-102908	8082 PCB_LL	SOIL	26.84g	4ml	
K0810639-001	SED01-0.5-2.5A	8082 PCB_LL	SEDIMENT	40.15g	4ml	
K0810639-002	SED01-2.5-5-A	8082 PCB_LL	SEDIMENT	40.28g	4ml	
K0810639-003	SED02-5-8.5-A	8082 PCB_LL	SEDIMENT	40.67g	4ml	
K0810639-004	SED02-0.5-2.5A	8082 PCB_LL	SEDIMENT	40.02g	4ml	
K0810639-005	SED02-2.5-5-A	8082 PCB_LL	SEDIMENT	40.25g	4ml	
K0810639-006	SED01-5-6.5-A	8082 PCB_LL	SEDIMENT	40.21g	4ml	
K0810639-007	SED10-0.5-2.5-B	8082 PCB_LL	SEDIMENT	40.34g	4ml	
K0810639-008	SED11-0.5-2.5-A	8082 PCB_LL	SEDIMENT	40.30g	4ml	
K0810639-009	SED14-0.5-2-A	8082 PCB_LL	SEDIMENT	40.60g	4ml	
K0810639-010	SED14-2-3.5-A	8082 PCB_LL	SEDIMENT	40.34g	4ml	
KWG0811860-1	Matrix Spike	8082 PCB_LL	SEDIMENT	40.34g	4ml	
KWG0811860-2	Duplicate Matrix Spike	8082 PCB_LL	SEDIMENT	40.33g	4ml	
KWG0811860-3	Lab Control Sample	8082 PCB_LL	SEDIMENT	20.00g	4ml	
KWG0811860-4	Method Blank	8082 PCB_LL	SEDIMENT	40.67g	4ml	

Lab Code	Parent Lab Code	Comments
KWG0811860-1	K0810639-007	
KWG0811860-2	K0810639-007	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K0810625-007	779281	PCB5-24F	200uL			LBerg
K0810639-001	774963	PCB5-24F	200uL			LBerg
K0810639-002	774964	PCB5-24F	200uL			LBerg
K0810639-003	774965	PCB5-24F	200uL			LBerg
K0810639-004	774966	PCB5-24F	200uL			LBerg
K0810639-005	774967	PCB5-24F	200uL			LBerg
K0810639-006	774968	PCB5-24F	200uL			LBerg
K0810639-007	774969	PCB5-24F	200uL			LBerg
K0810639-008	774970	PCB5-24F	200uL			LBerg
K0810639-009	774971	PCB5-24F	200uL			LBerg
K0810639-010	774972	PCB5-24F	200uL			LBerg
KWG0811860-1	774973	PCB5-24F	200uL	PCB5-23H	100uL	LBerg
KWG0811860-2	774974	PCB5-24F	200uL	PCB5-23H	100uL	LBerg
KWG0811860-3	774975	PCB5-24F	200uL	PCB5-23H	100uL	LBerg

Comments:

Started By: KYip   Assisted By: Training Yes No

Completed By: KMiller   Assisted By: Yes No

Reviewed By: AB   Date: 11-19-08   Storage:

Chain of Custody

Relinquished By: Date: 11-19-8

Received By: Date: 11/19/08

Extracts Examined Yes No

Group ID:	KWG0811860	Prep Method:	EPA 3540C	Prep Date:	11/05/08 00:00
Department:	Semivoa GC				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
KWG0811860-4	774976	PCB5-24F	200uL			LBerg

Comments:

Started By: KYip Assisted By:

Completed By: KMiller Assisted By:

Training: Yes No

Yes No

Reviewed By: AB Date: 11-19-08 Storage:

Chain of Custody

Relinquished By:		Date: 11-19-8	Extracts Examined
Received By:		Date: 11/19/08	Yes No

Preparation Information

Due 9/17/08

Group ID: KWG0811860	**Prep Method:** EPA 3540C	**Prep Date:** 11/05/08 00:00	
Department: Semivoa GC			

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. (g)	pH	Int. Vol.	Final Vol.	Surr. Added	Spike Added
1	K0810639-001	SED01-0.5-2.5A		√	8082 PCB_LL	SEDIMENT	40.15	N/A	10 mL	4 ml	200uL	NA
2	K0810639-002	SED01-2.5-5-A		√	8082 PCB_LL	SEDIMENT	40.28					
3	K0810639-003	SED02-5-~~8.5~~-A 6.5 Ky		√	8082 PCB_LL	SEDIMENT	40.67					
4	K0810639-004	SED02-0.5-2.5A		√	8082 PCB_LL	SEDIMENT	40.02					
5	K0810639-005	SED02-2.5-5-A		√	8082 PCB_LL	SEDIMENT	40.25					
6	K0810639-006	SED01-5-~~6.5~~-A 8.5		√	8082 PCB_LL	SEDIMENT	40.21					
7	K0810639-007	SED10-0.5-2.5-B		√	8082 PCB_LL	SEDIMENT	40.34					
8	K0810639-008	SED11-0.5-2.5-A		√	8082 PCB_LL	SEDIMENT	40.30					
9	K0810639-009	SED14-0.5-2-A		√	8082 PCB_LL	SEDIMENT	40.60					
10	K0810639-010	SED14-2-3.5-A		√	8082 PCB_LL	SEDIMENT	40.34					
11	KWG0811860-1	Matrix Spike 10639-7		√	8082 PCB_LL	SEDIMENT	40.34					100 uL
12	KWG0811860-2	Duplicate Matrix Spike 10639-7		√	8082 PCB_LL	SEDIMENT	40.33					
13	KWG0811860-3	Lab Control Sample			8082 PCB_LL	SEDIMENT	20.00					
14	KWG0811860-4	Method Blank			8082 PCB_LL	SEDIMENT	40.67					NA

K0810625-7 26.81

Comments: Prep run #77780

Surrogate ID: PCBS-24F, 2ppm, XP: 4/7/09, 200uL, PP10

Spike ID: PCBS-23H 40ppm, XP: 4/21/09, 100uL, PPA

Witness: [signature] 11/5/08

Started By: KYip Assisted By:

Completed By: ~~KYip~~ [initials] Assisted By:

ABC GPC BENCHSHEET

Analyst: FE

Matrix: Tissue / Reg. Soil / Low Level Soil / Water / Oil

Date: 11-12-08

Work Order: K0810625 / 639

A. GPC Calibrated on this date: 11-7-08

B. (1) Intermediate Volume before GPC: 10 (ml)

(2) Aliquot taken from intermediate volume: 10 (ml)

(3) Aliquot diluted up to....... 10 (ml)

(4) Volume injected onto column: 5 (ml)

(5) GPC'd Extract brought to the Final Volume of 2 (ml)

(6) Calculate the True Final Volume 4 (ml) $\frac{(1) \times (3)}{(2) \times (4)} \times (5) = (6)$

C. Does a split for PCB's or PAH's need to be done? YES NO

Checklist for the GPC Run:

- ✓ 1. Is the column reservoir full?
- ✓ 2. Is the rinse reservoir full?
- ✓ 3. Is the waste bottle empty?
- ✓ 4. Did you check the flow rate?
- ✓ 5. Is there a collection vessel for each extract tube?
- ✓ 6. Do the extract tube labels correspond to the collection vessel labels?
- ✓ 7. Are the extracts diluted properly, if needed?
- ✓ 8. Are all extracts filtered? (They MUST be)
- ✓ 9. Did you record where you put the remaining extract?
- 10. Is the correct method/collection window programmed?
- ✓ 11. Is the By-pass valve set to In-line?
- ✓ 12. Is the run log filled out?
- ✓ 13. Is sample load time set correctly for extract with lowest volume? (VERY IMPORTANT)
- ✓ 14. Is the nitrogen tank valve open?
- ✓ 15. Is there enough nitrogen (at least 500lb/23 extracts)?
- ✓ 16. Did you double check your GPC setup?

Operator date and initial FE 11-12-08

Sample	Dry weight (g)	% TS	Weigh this amount (g)
10625-7	20	74.6	26.81
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!
	20		#DIV/0!

Analytical Results

Client:	URS Corporation	**Service Request:**	K0810625
Project:	Portland Harbor Samp/46194204		
Sample Matrix:	Soil		

Total Solids

Prep Method:	NONE	**Units:**	PERCENT
Analysis Method:	160.3M	**Basis:**	Wet
Test Notes:			

Sample Name	Lab Code	Date Collected	Date Received	Date Analyzed	Result	Result Notes
SPBT-CB-1234910-102908	K0810625-001	10/29/2008	10/30/2008	11/03/2008	58.4	
SPBT-CB5-8, 11-13-102908	K0810625-002	10/29/2008	10/30/2008	11/03/2008	47.3	
SPBT-CB15-19-102908	K0810625-003	10/29/2008	10/30/2008	11/03/2008	61.5	
SPBT-CB202122-102908	K0810625-004	10/29/2008	10/30/2008	11/03/2008	61.7	
SPBT-CB23242728-102908	K0810625-005	10/29/2008	10/30/2008	11/03/2008	67.7	
SPBT-CB2526-102908	K0810625-006	10/29/2008	10/30/2008	11/03/2008	53.8	
West-Vault-102908	K0810625-007	10/28/2008	10/30/2008	11/03/2008	74.6	

Additional Prep Information For Pest/PCB Low Level Soils

Service Request # K0810639 / K0810625 Work Group # Pest: KWG0811859

PCB: KWG0811860

Solvents/Reagents used:

DCM Lot # LX673 Hexane Lot # 48142 Sulfate Lot # 48184837

48004808

Acetone Lot # ~~48105~~ 48107

key 11-5-08

Soxhlet Start (Time/Date/Initial): 7:30pm/11-5-08/key

Soxhlet Stop (Time/Date/Initial): 8:20am/11-6-08/key

Solvent Exchanged To Hexane (Date/Initial) ☑ yes: 11-17-08 EE S-Evap Temp: 85°C SH/1

Cleanups:

GPC Clean-up (3640): 11-12-08 EE ☑ all samples

Sulfuric Acid Clean-up (3665): 11-18-8 K (PCB aliquots only)

Clean-up #3: 3620m 11-18-8 K ☑ all samples ☐ some samples:

Clean-up #4: — ☐ all samples ☐ some samples:

Pest Vial: yellow Vial Storage: Korn A1-8

PCB Vial: Green Vial Storage: Mel B1-C5

Archived Extract Storage:

Comments/Observations:

Bench Sheet Review Check List

- ☑ Hold Times Met (if no, Reason: 10639 was frozen)
- ☑ Prep date, dept, method, product code correct in stealth
- ☑ Spike Information correct
- ☑ Weights/Volumes and units correct on raw and final bench sheets
- ☑ Sample IDs have been checked—Bottle numbers appended if required
- ☑ Names present for: Started by, Completed by, relinquished by, and witnessed by.
- ☑ Training has been circled
- ☑ Extract Storage recorded
- ☑ Additional Prep Sheet completely filled out (NA or line out Blanks)
- ☑ All clean-ups have been noted on additional prep sheet
- ☑ Signed service request with Form V, if applicable, has been attached

Sequence Name: D:\GC09\SEQUENCE\112108.S
Comment:
Operator: LHarris
Data Path: D:\GC09\DATA\112108.B\
Pre-Seq Cmd:
Post-Seq Cmd:

8082
ICAL 7795
608
ICAL 7796

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Run #134930

Line	Type	Vial	DataFile	Method	Sample Name
1	DeleteGC				
2	MaskName - ----r---				
3	IB	1	1121F001	PCB1	IB
4	IB	1	1121F002	PCB1	IB
5	IB	1	1121F003	PCB1	IB
6	IB	2	1121F004	PCB1	KWG0812580-1 | IB | 8082 PCB
OK, OK 7	CCV	96	1121F005	PCB1	1660 @ 1000ppb | PCB5-25A | KWG081258
8	MB	3	1121F006	PCB1	KWG0812125-1 | MB | 608 Modified PCB
9	SMPL	4	1121F007	PCB1	K0810947-001 | Voith WM Sump - NR, need florisil
10	MB	5	1121F008	PCB1	KWG0812376-4 | MB | 8082 PCB_LL | SED
11	LCS	6	1121F009	PCB1	KWG0812376-3 | LCS | 8082 PCB_LL | SE
12	SMPL	7	1121F010	PCB1	KWG0812376-5 | IRM-910
13	SMPL	8	1121F011	PCB1	K0811222-001 | S15-SD-05-15-121807-01
14	SMPL	9	1121F012	PCB1	K0811222-002 | S15-SD-15-25-121807-01
15	SMPL	10	1121F013	PCB1	K0811222-003 | S15-SD-25-35-121807-01
16	SMPL	11	1121F014	PCB1	K0811222-004 | S16-SD-05-15-121707-01
17	SMPL	12	1121F015	PCB1	K0811222-005 | S16-SD-15-25-121707-01
18	MS	13	1121F016	PCB1	KWG0812376-1 | MS | 8082 PCB_LL
19	IB	1	1121F017	BAKE	BAKE
20	IB	2	1121F018	PCB1	KWG0812580-3 | IB | 8082 PCB
?, OK 21	CCV	96	1121F019	PCB1	1660 @ 1000ppb | PCB5-25A | KWG081258
22	DMS	14	1121F020	PCB1	KWG0812376-2 | DMS | 8082 PCB_LL
23	SMPL	15	1121F021	PCB1	K0811222-006 | S16-SD-25-35-121707-01
24	SMPL	16	1121F022	PCB1	K0811222-007 | S6-SD-05-15-121707-01
25	SMPL	17	1121F023	PCB1	K0811222-008 | S6-SD-15-25-121707-01
26	SMPL	18	1121F024	PCB1	K0811222-009 | S7-SD-05-15-121707-01
27	SMPL	19	1121F025	PCB1	K0811222-010 | S7-SD-15-25-121707-01
28	SMPL	20	1121F026	PCB1	K0811222-011 | S8-SD-05-15-121707-01
29	MB	21	1121F027	PCB1	KWG0811860-4 | MB | 8082 PCB_LL | SED
30	LCS	22	1121F028	PCB1	KWG0811860-3 | LCS | 8082 PCB_LL | SE
31	IB	1	1121F029	BAKE	BAKE
32	IB	2	1121F030	PCB1	KWG0812580-5 | IB | 8082 PCB
?, OK 33	CCV	97	1121F031	PCB1	1660 @ 1000ppb | PCB5-25A | KWG081258
34	SMPL	23	1121F032	PCB1	K0810625-007 | West-Vault-102908
35	SMPL	24	1121F033	PCB1	K0810639-001 | SED01-0.5-2.5A
36	SMPL	25	1121F034	PCB1	K0810639-002 | SED01-2.5-5-A
37	SMPL	26	1121F035	PCB1	K0810639-003 | SED02-5-8.5-A
38	SMPL	27	1121F036	PCB1	K0810639-004 | SED02-0.5-2.5A
39	SMPL	28	1121F037	PCB1	K0810639-005 | SED02-2.5-5-A
40	SMPL	29	1121F038	PCB1	K0810639-006 | SED01-5-6.5-A
41	SMPL	30	1121F039	PCB1	K0810639-007 | SED10-0.5-2.5-B
42	MS	31	1121F040	PCB1	KWG0811860-1 | K0810639-007MS | 8082
43	DMS	32	1121F041	PCB1	KWG0811860-2 | K0810639-007DMS | 8082

Last Modified: Fri Nov 21 15:55:56 2008

Page: 1

Sequence Name: D:\GC09\SEQUENCE\112108.S

Line	Type	Vial	DataFile	Method	Sample Name
44	IB	1	1121F042	BAKE	BAKE
45	IB	2	1121F043	PCB1	KWG0812580-7 | IB | 8082 PCB
ok, ok 46	CCV	97	1121F044	PCB1	1660 @ 1000ppb | PCB5-25A | KWG081258
47	SMPL	33	1121F045	PCB1	K0810639-008 | SED11-0.5-2.5-A
48	SMPL	34	1121F046	PCB1	K0810639-009 | SED14-0.5-2-A
49	SMPL	35	1121F047	PCB1	K0810639-010 | SED14-2-3.5-A
50	IB	1	1121F048	BAKE	BAKE
51	IB	2	1121F049	PCB1	KWG0812580-9 | IB | 8082 PCB
ok, ok 52	CCV	97	1121F050	PCB1	1660 @ 1000ppb | PCB5-25A | KWG081258

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F018.D	**Date Acquired:**	11/21/2008 23:44
Lab ID:	KWG0812580-3	**Date Quantitated:**	11/25/2008 15:17
RunType:	IB	**Batch ID:**	KWG0812580
Matrix:	LIQUID	**Analysis Method:**	8082
		MethodJoinID:	MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: JW 11/25/08

Secondary Review: [illegible] 112508

Printed: 11/25/2008 16:58:50

u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R018.D	**Date Acquired:**	11/21/2008 23:44
Lab ID:	KWG0812580-3	**Date Quantitated:**	11/25/2008 15:21
RunType:	IB	**Batch ID:**	KWG0812580
Matrix:	LIQUID	**Analysis Method:**	8082
		MethodJoinID:	MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [illegible] 11/25/08

Secondary Review: [illegible]

Printed: 11/25/2008 16:58:53

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	11/21/2008

Analysis Lot:	KWG0812580	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F018.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R018.D			**Vial:**	2
Acqu Date:	11/21/2008 23:44	**Quant Date:**	11/25/2008 15:17	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	22-130	
Decachlorobiphenyl	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	38-144	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0	0d	0.0000	0.0000			
Aroclor 1016 {2}			0	0d	0.0000	0.0000			
Aroclor 1016 {3}			0	0d	0.0000	0.0000			
Aroclor 1016 {4}			0	0d	0.0000	0.0000			
Aroclor 1016 {5}			0	0d	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0d	0d	0.0000	0.0000			
Aroclor 1221 {2}			0d	0d	0.0000	0.0000			
Aroclor 1221 {3}			0d	0d	0.0000	0.0000			
Aroclor 1221 {4}			0d	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0d	0d	0.0000	0.0000			
Aroclor 1232 {2}			0d	0d	0.0000	0.0000			
Aroclor 1232 {3}			0d	0d	0.0000	0.0000			
Aroclor 1232 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F018.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R018.D			**Vial:**	2
Acqu Date:	11/21/2008 23:44	**Quant Date:**	11/25/2008 15:17	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-3				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0	0d	0.0000	0.0000			
Aroclor 1248 {2}			0	0d	0.0000	0.0000			
Aroclor 1248 {3}			0	0d	0.0000	0.0000			
Aroclor 1248 {4}			0	0d	0.0000	0.0000			
Aroclor 1248 {5}			0	0d	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0d	0.0000	0.0000			
Aroclor 1254 {2}			0	0d	0.0000	0.0000			
Aroclor 1254 {3}			0	0d	0.0000	0.0000			
Aroclor 1254 {4}			0	0d	0.0000	0.0000			
Aroclor 1254 {5}			0	0d	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0d	0.0000	0.0000			
Aroclor 1260 {2}			0	0d	0.0000	0.0000			
Aroclor 1260 {3}			0	0d	0.0000	0.0000			
Aroclor 1260 {4}			0	0d	0.0000	0.0000			
Aroclor 1260 {5}			0	0d	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0d	0.0000	0.0000			
Aroclor 1262 {2}			0	0d	0.0000	0.0000			
Aroclor 1262 {3}			0	0d	0.0000	0.0000			
Aroclor 1262 {4}			0	0d	0.0000	0.0000			
Aroclor 1262 {5}			0	0d	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0d	0d	0.0000	0.0000			
Aroclor 1268 {2}			0d	0d	0.0000	0.0000			
Aroclor 1268 {3}			0d	0d	0.0000	0.0000			
Aroclor 1268 {4}			0d	0d	0.0000	0.0000			
Aroclor 1268 {5}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F018.D
Report Date: 25-Nov-2008 15:17

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F018.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R018.D
Inj Date : 21-NOV-2008 23:44
Sample Info: KWG0812580-3 | IB | 8082 PCB
Misc Info : SEMIVOA GC\W0812580\3-IB.H
Cal Date : 22-NOV-2008 10:33
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

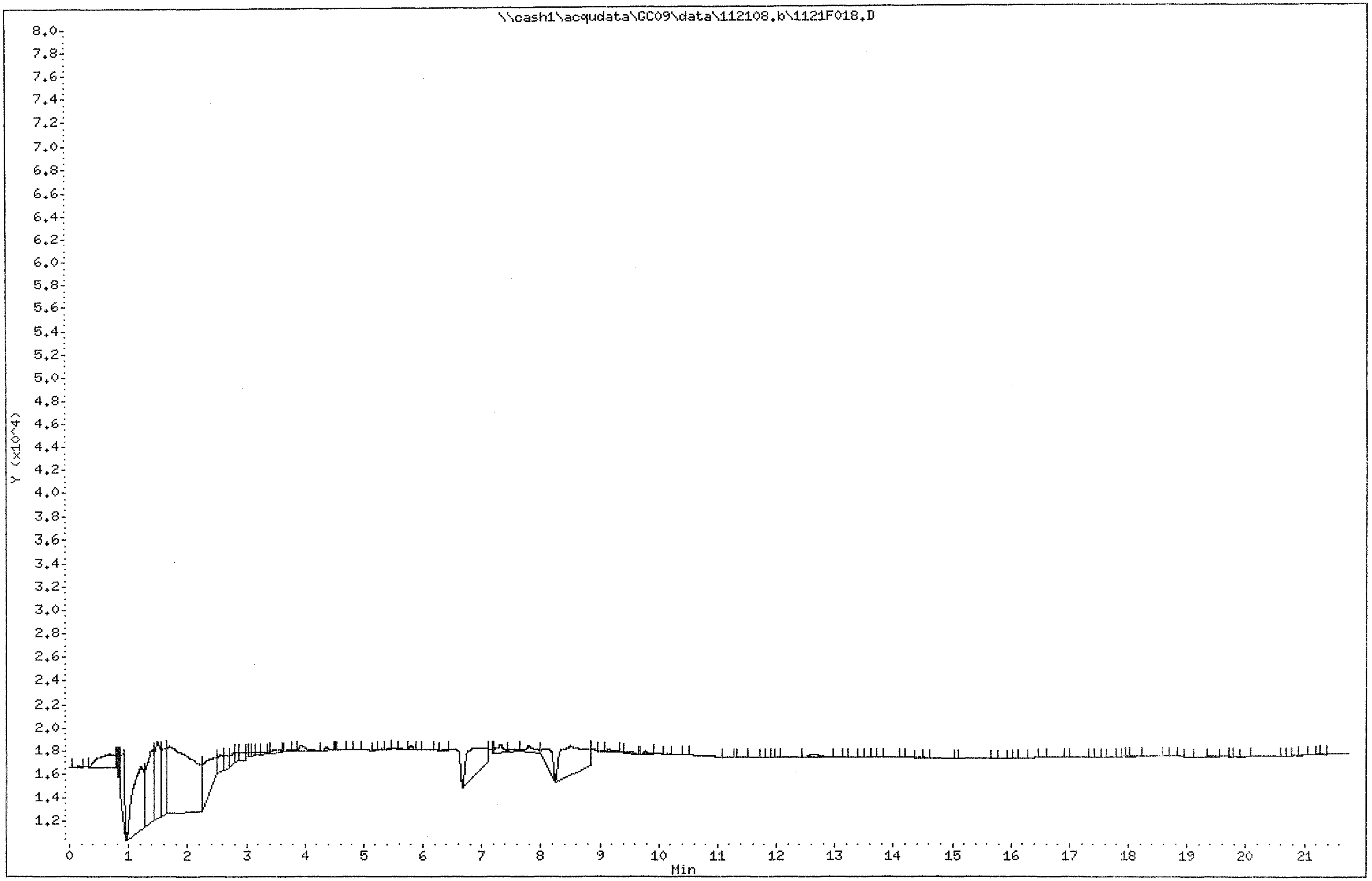
Data File: \\cash1\acqudata\GC09\data\112108.b\1121F018.D
Date : 21-NOV-2008 23:44
Client ID:
Sample Info: KWG0812580-3 | IB | 8082 PCB

Instrument: GC09.i

Operator: LHarris

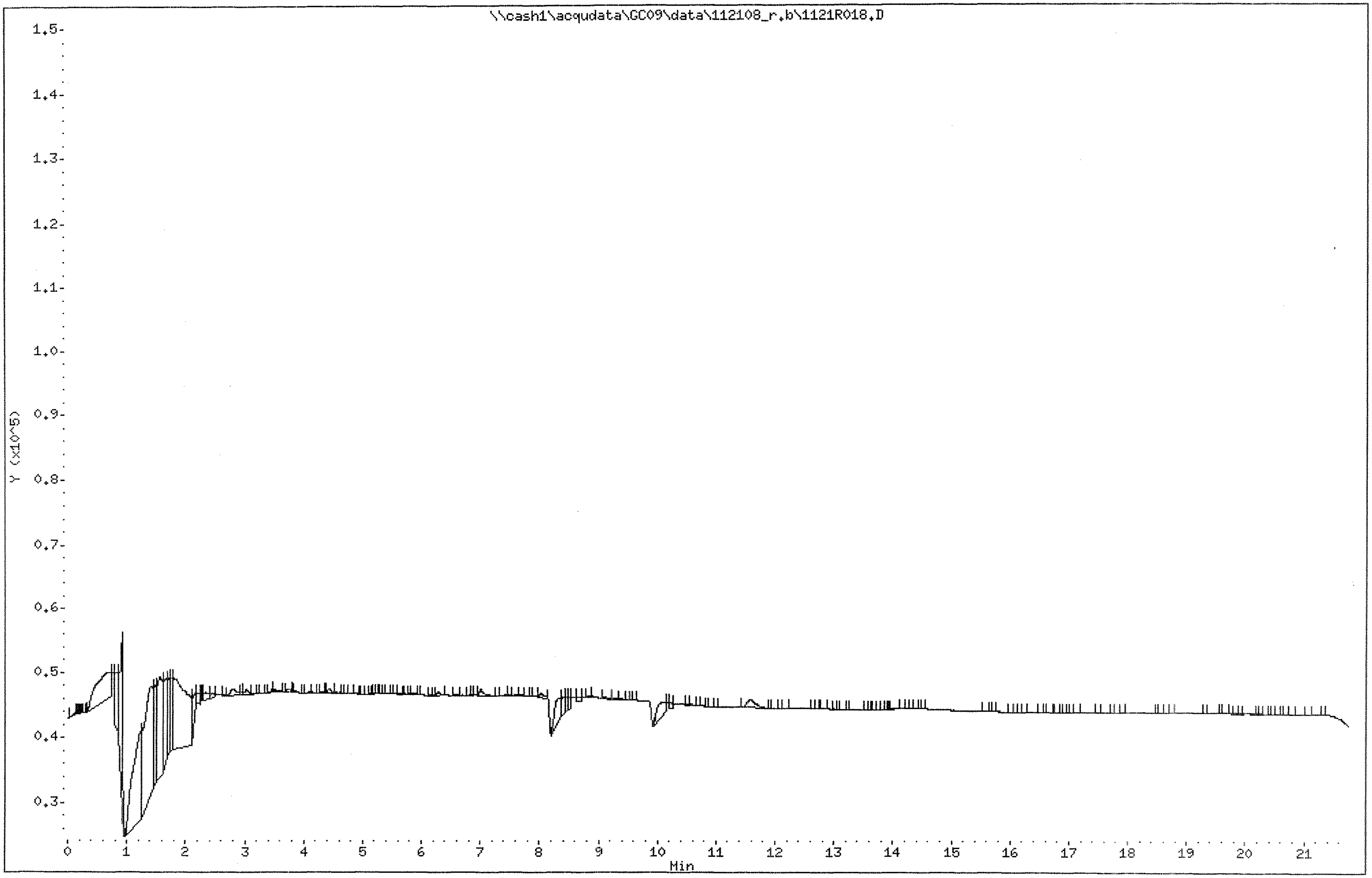
Column phase: DB-35MS

Column diameter: 0.53



Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R018.D
Date : 21-NOV-2008 23:44
Client ID:
Sample Info: KWG0812580-3 | IB | 8082 PCB
Column phase: DB-XLB

Instrument: GC09.i
Operator: LHarris
Column diameter: 0.53



Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F030.D
Lab ID: KWG0812580-5
RunType: IB
Matrix: LIQUID

Date Acquired: 11/22/2008 05:15
Date Quantitated: 11/25/2008 15:18
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/28/08

Secondary Review: 11/28/08

Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R030.D
Lab ID: KWG0812580-5
RunType: IB
Matrix: LIQUID

Date Acquired: 11/22/2008 05:15
Date Quantitated: 11/25/2008 15:21
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [signature]

Secondary Review: [signature]

Printed: 11/25/2008 17:00:02
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	11/21/2008

Analysis Lot:	KWG0812580	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F030.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R030.D			**Vial:**	2
Acqu Date:	11/22/2008 05:15	**Quant Date:**	11/25/2008 15:18	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-5				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	22-130	
Decachlorobiphenyl	0.00		0	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	38-144	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0d	0d	0.0000	0.0000			
Aroclor 1016 {2}			0d	0d	0.0000	0.0000			
Aroclor 1016 {3}			0d	0d	0.0000	0.0000			
Aroclor 1016 {4}			0d	0d	0.0000	0.0000			
Aroclor 1016 {5}			0d	0d	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0d	0d	0.0000	0.0000			
Aroclor 1221 {2}			0d	0d	0.0000	0.0000			
Aroclor 1221 {3}			0d	0d	0.0000	0.0000			
Aroclor 1221 {4}			0d	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0d	0d	0.0000	0.0000			
Aroclor 1232 {2}			0d	0d	0.0000	0.0000			
Aroclor 1232 {3}			0d	0d	0.0000	0.0000			
Aroclor 1232 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F030.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R030.D			**Vial:**	2
Acqu Date:	11/22/2008 05:15	**Quant Date:**	11/25/2008 15:18	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-5				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds **Final Conc. Units:**

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0d	0d	0.0000	0.0000			
Aroclor 1248 {2}			0d	0d	0.0000	0.0000			
Aroclor 1248 {3}			0d	0d	0.0000	0.0000			
Aroclor 1248 {4}			0d	0d	0.0000	0.0000			
Aroclor 1248 {5}			0d	0d	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0d	0d	0.0000	0.0000			
Aroclor 1254 {2}			0d	0d	0.0000	0.0000			
Aroclor 1254 {3}			0d	0d	0.0000	0.0000			
Aroclor 1254 {4}			0d	0d	0.0000	0.0000			
Aroclor 1254 {5}			0d	0d	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0d	0.0000	0.0000			
Aroclor 1260 {2}			0	0d	0.0000	0.0000			
Aroclor 1260 {3}			0	0d	0.0000	0.0000			
Aroclor 1260 {4}			0	0d	0.0000	0.0000			
Aroclor 1260 {5}			0	0d	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0	0d	0.0000	0.0000			
Aroclor 1262 {2}			0	0d	0.0000	0.0000			
Aroclor 1262 {3}			0	0d	0.0000	0.0000			
Aroclor 1262 {4}			0	0d	0.0000	0.0000			
Aroclor 1262 {5}			0	0d	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0	0d	0.0000	0.0000			
Aroclor 1268 {2}			0	0d	0.0000	0.0000			
Aroclor 1268 {3}			0	0d	0.0000	0.0000			
Aroclor 1268 {4}			0	0d	0.0000	0.0000			
Aroclor 1268 {5}			0	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F030.D
Report Date: 25-Nov-2008 15:18

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F030.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R030.D
Inj Date : 22-NOV-2008 05:15
Sample Info: KWG0812580-5 | IB | 8082 PCB
Misc Info : SEMIVOA GC\W0812580\5-IB.H
Cal Date : 22-NOV-2008 10:35
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

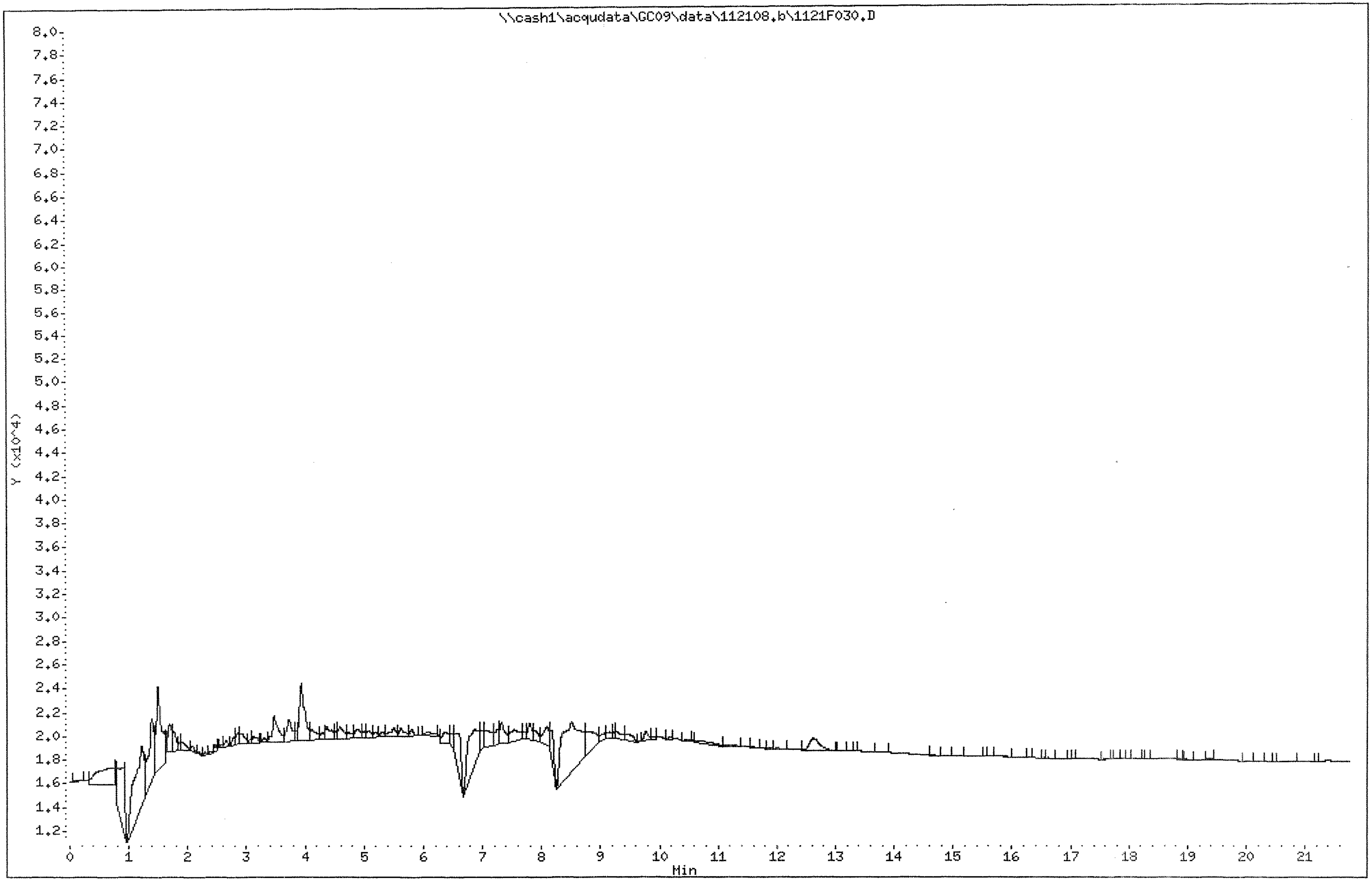
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F030.D
Date : 22-NOV-2008 05:15
Client ID:
Sample Info: KWG0812580-5 | IB | 8082 PCB

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

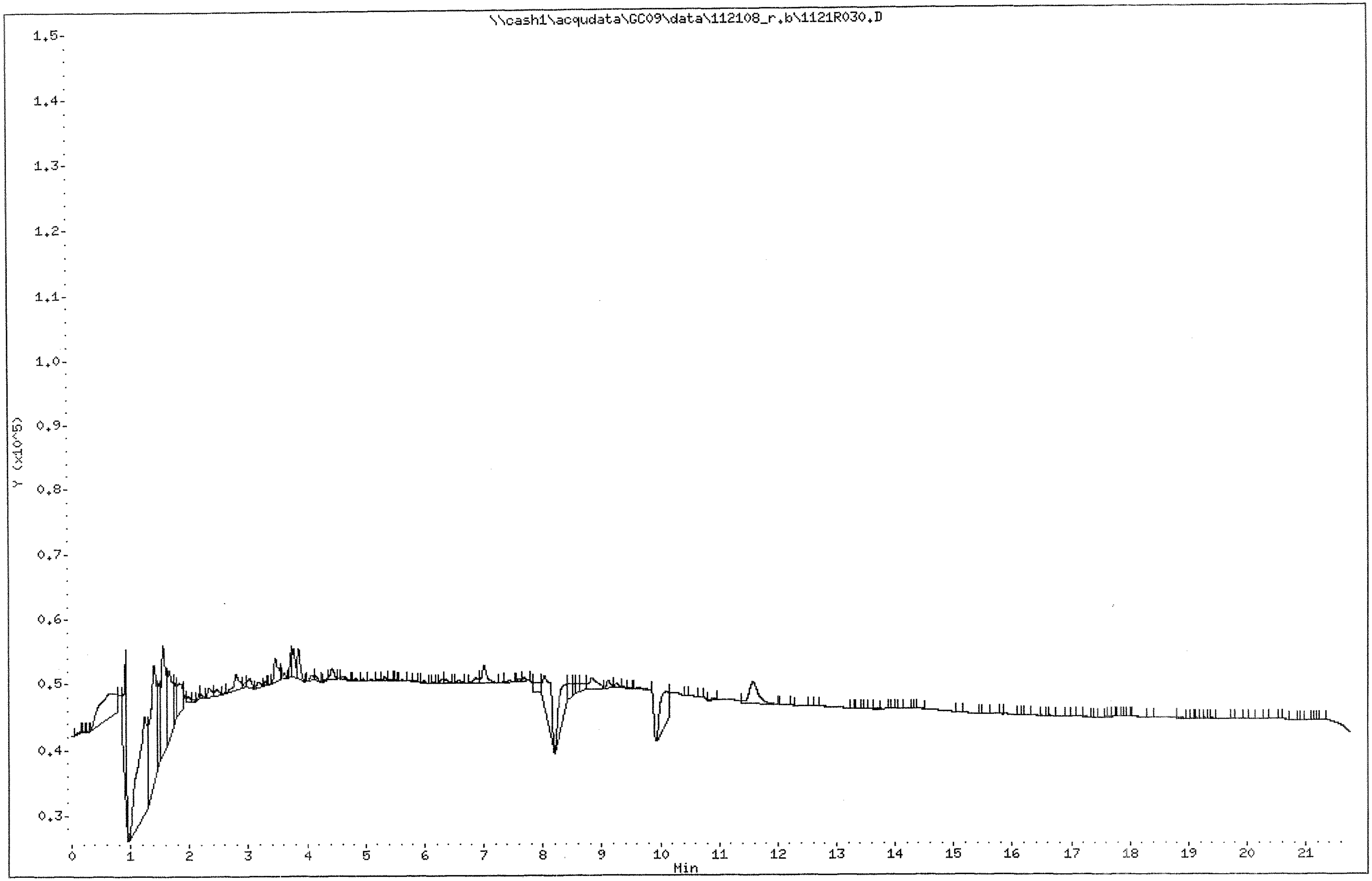


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R030.D
Date : 22-NOV-2008 05:15
Client ID:
Sample Info: KWG0812580-5 | IB | 8082 PCB

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108.B\1121F043.D
Lab ID: KWG0812580-7
RunType: IB
Matrix: LIQUID

Date Acquired: 11/22/2008 11:12
Date Quantitated: 11/25/2008 15:19
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/25/08

Secondary Review: 11/25/08

Exception Report

Data File:	\\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R043.D	**Date Acquired:**	11/22/2008 11:12
Lab ID:	KWG0812580-7	**Date Quantitated:**	11/25/2008 15:22
RunType:	IB	**Batch ID:**	KWG0812580
Matrix:	LIQUID	**Analysis Method:**	8082
		MethodJoinID:	MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: JM 11/25/08

Secondary Review: MS8

Printed: 11/25/2008 17:01:15

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	11/21/2008

Analysis Lot:	KWG0812580	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F043.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R043.D			**Vial:**	2
Acqu Date:	11/22/2008 11:12	**Quant Date:**	11/25/2008 15:19	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-7				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	22-130	
Decachlorobiphenyl	0.00		0	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	38-144	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0d	0d	0.0000	0.0000			
Aroclor 1016 {2}			0d	0d	0.0000	0.0000			
Aroclor 1016 {3}			0d	0d	0.0000	0.0000			
Aroclor 1016 {4}			0d	0d	0.0000	0.0000			
Aroclor 1016 {5}			0d	0d	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0d	0	0.0000	0.0000			
Aroclor 1221 {2}			0d	0	0.0000	0.0000			
Aroclor 1221 {3}			0d	0	0.0000	0.0000			
Aroclor 1221 {4}			0d	0	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0d	0d	0.0000	0.0000			
Aroclor 1232 {2}			0d	0d	0.0000	0.0000			
Aroclor 1232 {3}			0d	0d	0.0000	0.0000			
Aroclor 1232 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F043.D				**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R043.D				**Vial:**	2
Acqu Date:	11/22/2008 11:12	**Quant Date:**	11/25/2008 15:19		**Dilution:**	1.0
Run Type:	IB				**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-7					
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB			

Target Compounds **Final Conc. Units:**

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0d	0	0.0000	0.0000			
Aroclor 1248 {2}			0d	0	0.0000	0.0000			
Aroclor 1248 {3}			0d	0	0.0000	0.0000			
Aroclor 1248 {4}			0d	0	0.0000	0.0000			
Aroclor 1248 {5}			0d	0	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0d	0d	0.0000	0.0000			
Aroclor 1254 {2}			0d	0d	0.0000	0.0000			
Aroclor 1254 {3}			0d	0d	0.0000	0.0000			
Aroclor 1254 {4}			0d	0d	0.0000	0.0000			
Aroclor 1254 {5}			0d	0d	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0d	0d	0.0000	0.0000			
Aroclor 1260 {2}			0d	0d	0.0000	0.0000			
Aroclor 1260 {3}			0d	0d	0.0000	0.0000			
Aroclor 1260 {4}			0d	0d	0.0000	0.0000			
Aroclor 1260 {5}			0d	0d	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0d	0d	0.0000	0.0000			
Aroclor 1262 {2}			0d	0d	0.0000	0.0000			
Aroclor 1262 {3}			0d	0d	0.0000	0.0000			
Aroclor 1262 {4}			0d	0d	0.0000	0.0000			
Aroclor 1262 {5}			0d	0d	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0d	0d	0.0000	0.0000			
Aroclor 1268 {2}			0d	0d	0.0000	0.0000			
Aroclor 1268 {3}			0d	0d	0.0000	0.0000			
Aroclor 1268 {4}			0d	0d	0.0000	0.0000			
Aroclor 1268 {5}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F043.D
Report Date: 25-Nov-2008 15:19

Laboratory Name

Sample #1 : \\cash1\acqudata\GC09\data\112108.b\1121F043.D
Sample #2 : \\cash1\acqudata\GC09\data\112108_r.b\1121R043.D
Inj Date : 22-NOV-2008 11:12
Sample Info: KWG0812580-7 | IB | 8082 PCB
Misc Info : SEMIVOA GC\W0812580\7-IB.H
Cal Date : 22-NOV-2008 10:36
Operator : LHarris
Inst ID : GC09.i
Dil Factor : 1.000000

Method #1 : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2 : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1 : ALL.SUB
Sub List #2 : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

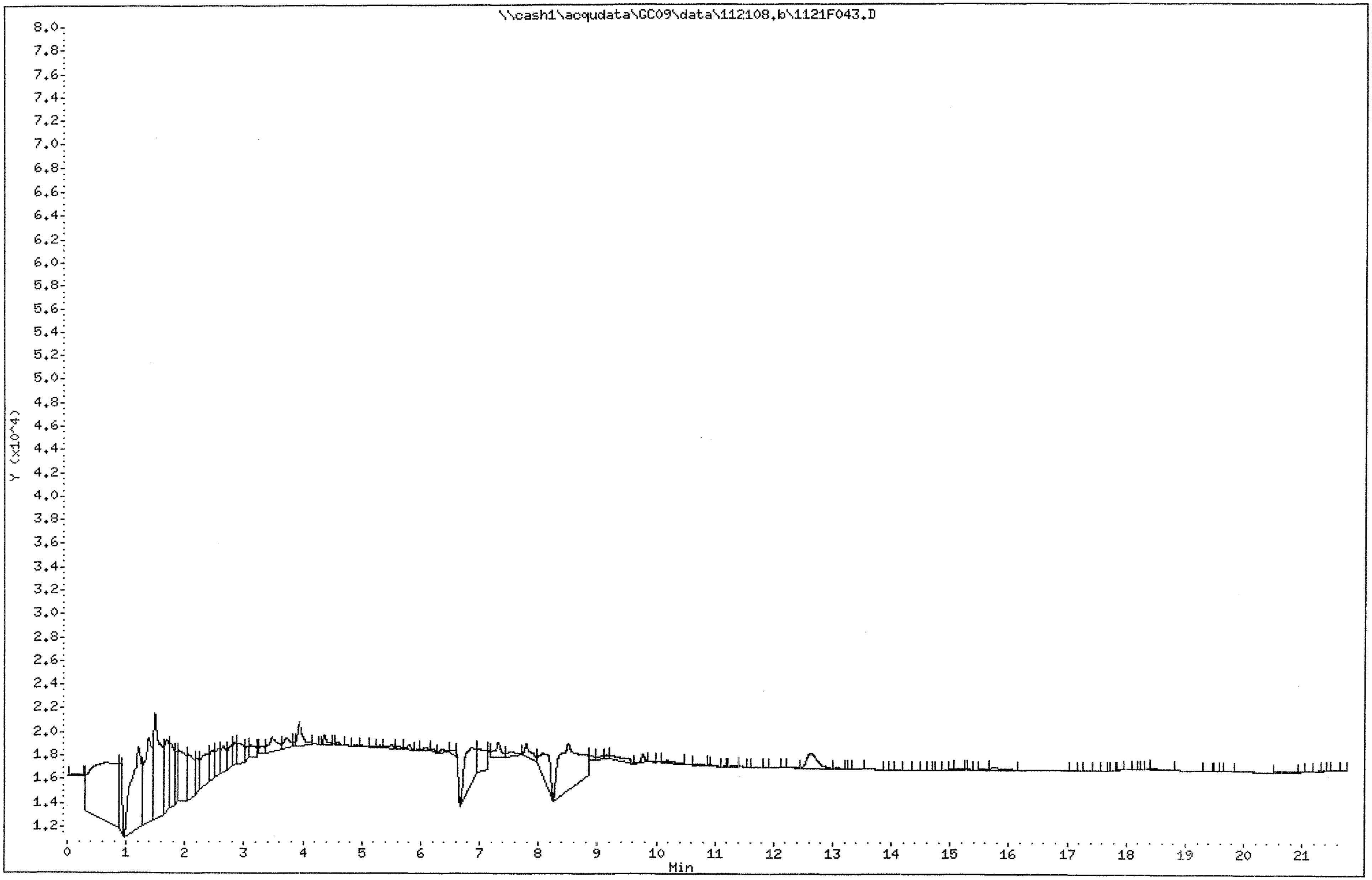
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F043.D
Date : 22-NOV-2008 11:12
Client ID:
Sample Info: KWG0812580-7 | IB | 8082 PCB

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53

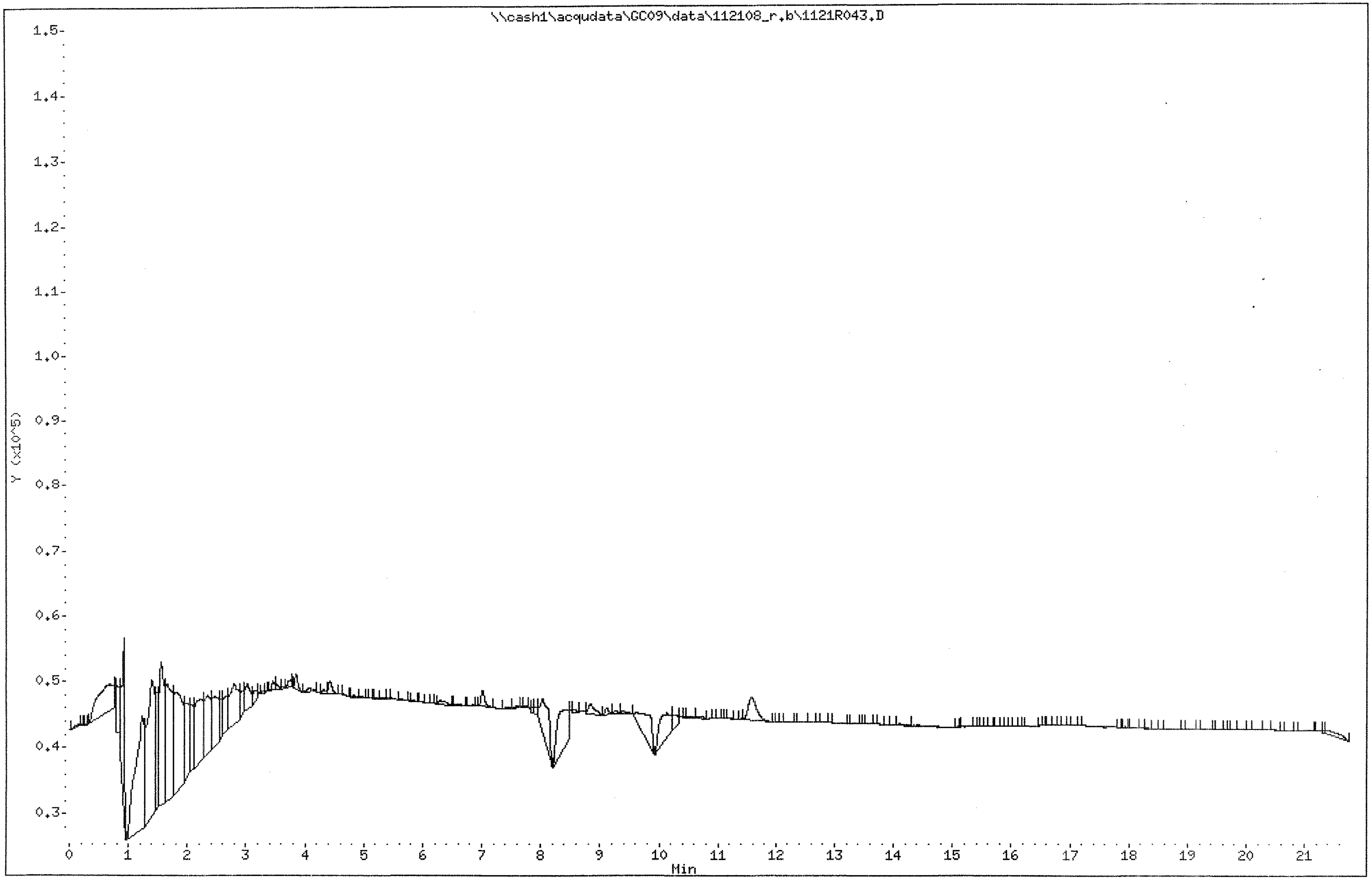


Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R043.D
Date : 22-NOV-2008 11:12
Client ID:
Sample Info: KWG0812580-7 | IB | 8082 PCB

Column phase: DB-XLB

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



Exception Report

Data File: \\CASH1\ACQUDATA\GC09\DATA\112108_R.B\1121R049.D
Lab ID: KWG0812580-9
RunType: IB
Matrix: LIQUID

Date Acquired: 11/22/2008 14:04
Date Quantitated: 11/25/2008 15:22
Batch ID: KWG0812580
Analysis Method: 8082
MethodJoinID: MJ150

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Analyte Recovery	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: [illegible signature]

Secondary Review: [illegible signature]

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	LIQUID
Prod Code:	8082 PCB	**Collect Date:**		**Receive Date:**	11/21/2008

Analysis Lot:	KWG0812580	**Prep Lot:**		**Report Group:**	
Analysis Method:	8082	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	\\CASH1\ACQUDATA\GC09\DATA\112108.B\092208_F.M	**Calibration ID:**	CAL7795
Title:			
MB Ref:		**Method ID:**	MJ150
		Quant based on Method	

Data File #1:	J:\GC09\DATA\112108.B\1121F049.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R049.D			**Vial:**	2
Acqu Date:	11/22/2008 14:04	**Quant Date:**	11/25/2008 15:20	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-9				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Surrogate Compounds

Parameter Name	RT #1	RT #2	Resp #1	Respe #2	ng/mL #1	ng/mL #2			Rpt
Tetrachloro-m-xylene	0.00		0d	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	22-130	
Decachlorobiphenyl	0.00		0	0d		0.0000			NA
			%Recovery =		NA	NA	Limits =	38-144	

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1016			0	0	0.0000	0.0000			
Aroclor 1016 {1}			0d	0d	0.0000	0.0000			
Aroclor 1016 {2}			0d	0d	0.0000	0.0000			
Aroclor 1016 {3}			0d	0d	0.0000	0.0000			
Aroclor 1016 {4}			0d	0d	0.0000	0.0000			
Aroclor 1016 {5}			0d	0d	0.0000	0.0000			
Aroclor 1221			0	0	0.0000	0.0000			
Aroclor 1221 {1}			0d	0d	0.0000	0.0000			
Aroclor 1221 {2}			0d	0d	0.0000	0.0000			
Aroclor 1221 {3}			0d	0d	0.0000	0.0000			
Aroclor 1221 {4}			0d	0d	0.0000	0.0000			
Aroclor 1232			0	0	0.0000	0.0000			
Aroclor 1232 {1}			0d	0d	0.0000	0.0000			
Aroclor 1232 {2}			0d	0d	0.0000	0.0000			
Aroclor 1232 {3}			0d	0d	0.0000	0.0000			
Aroclor 1232 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242			0	0	0.0000	0.0000			
Aroclor 1242 {1}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File #1:	J:\GC09\DATA\112108.B\1121F049.D			**Instrument:**	GC09.i
Data File #2:	\\cash1\acqudata\GC09\data\112108_r.b\1121R049.D			**Vial:**	2
Acqu Date:	11/22/2008 14:04	**Quant Date:**	11/25/2008 15:20	**Dilution:**	1.0
Run Type:	IB			**Soln Conc. Units:**	ng/mL
Lab ID:	KWG0812580-9				
Signal #1:	DB-35MS	**Signal #2:**	DB-XLB		

Target Compounds

Final Conc. Units:

Parameter Name	RT #1	RT #2	Resp #1	Resp #2	ng/mL #1	ng/mL #2	ug/Kg #1	ug/Kg #2	Rpt
Aroclor 1242 {2}			0d	0d	0.0000	0.0000			
Aroclor 1242 {3}			0d	0d	0.0000	0.0000			
Aroclor 1242 {4}			0d	0d	0.0000	0.0000			
Aroclor 1242 {5}			0d	0d	0.0000	0.0000			
Aroclor 1248			0	0	0.0000	0.0000			
Aroclor 1248 {1}			0d	0d	0.0000	0.0000			
Aroclor 1248 {2}			0d	0d	0.0000	0.0000			
Aroclor 1248 {3}			0d	0d	0.0000	0.0000			
Aroclor 1248 {4}			0d	0d	0.0000	0.0000			
Aroclor 1248 {5}			0d	0d	0.0000	0.0000			
Aroclor 1254			0	0	0.0000	0.0000			
Aroclor 1254 {1}			0	0d	0.0000	0.0000			
Aroclor 1254 {2}			0	0d	0.0000	0.0000			
Aroclor 1254 {3}			0	0d	0.0000	0.0000			
Aroclor 1254 {4}			0	0d	0.0000	0.0000			
Aroclor 1254 {5}			0	0d	0.0000	0.0000			
Aroclor 1260			0	0	0.0000	0.0000			
Aroclor 1260 {1}			0	0d	0.0000	0.0000			
Aroclor 1260 {2}			0	0d	0.0000	0.0000			
Aroclor 1260 {3}			0	0d	0.0000	0.0000			
Aroclor 1260 {4}			0	0d	0.0000	0.0000			
Aroclor 1260 {5}			0	0d	0.0000	0.0000			
Aroclor 1262			0	0	0.0000	0.0000			
Aroclor 1262 {1}			0d	0d	0.0000	0.0000			
Aroclor 1262 {2}			0d	0d	0.0000	0.0000			
Aroclor 1262 {3}			0d	0d	0.0000	0.0000			
Aroclor 1262 {4}			0d	0d	0.0000	0.0000			
Aroclor 1262 {5}			0d	0d	0.0000	0.0000			
Aroclor 1268			0	0	0.0000	0.0000			
Aroclor 1268 {1}			0d	0d	0.0000	0.0000			
Aroclor 1268 {2}			0d	0d	0.0000	0.0000			
Aroclor 1268 {3}			0d	0d	0.0000	0.0000			
Aroclor 1268 {4}			0d	0d	0.0000	0.0000			
Aroclor 1268 {5}			0d	0d	0.0000	0.0000			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F049.D
Report Date: 25-Nov-2008 15:20

Laboratory Name

Sample #1   : \\cash1\acqudata\GC09\data\112108.b\1121F049.D
Sample #2   : \\cash1\acqudata\GC09\data\112108_r.b\1121R049.D
Inj Date   : 22-NOV-2008 14:04
Sample Info: KWG0812580-9 | IB | 8082 PCB
Misc Info   : SEMIVOA GC\W0812580\9-IB.H
Cal Date   : 22-NOV-2008 15:03
Operator   : LHarris
Inst ID   : GC09.i
Dil Factor : 1.000000

Method #1   : \\cash1\acqudata\GC09\data\112108.b\092208_f.m
Method #2   : \\cash1\acqudata\GC09\data\112108_r.b\092208_r.m
Sub List #1   : ALL.SUB
Sub List #2   : ALL.SUB
Col #1 Phase : DB-35MS
Col #2 Phase : DB-XLB

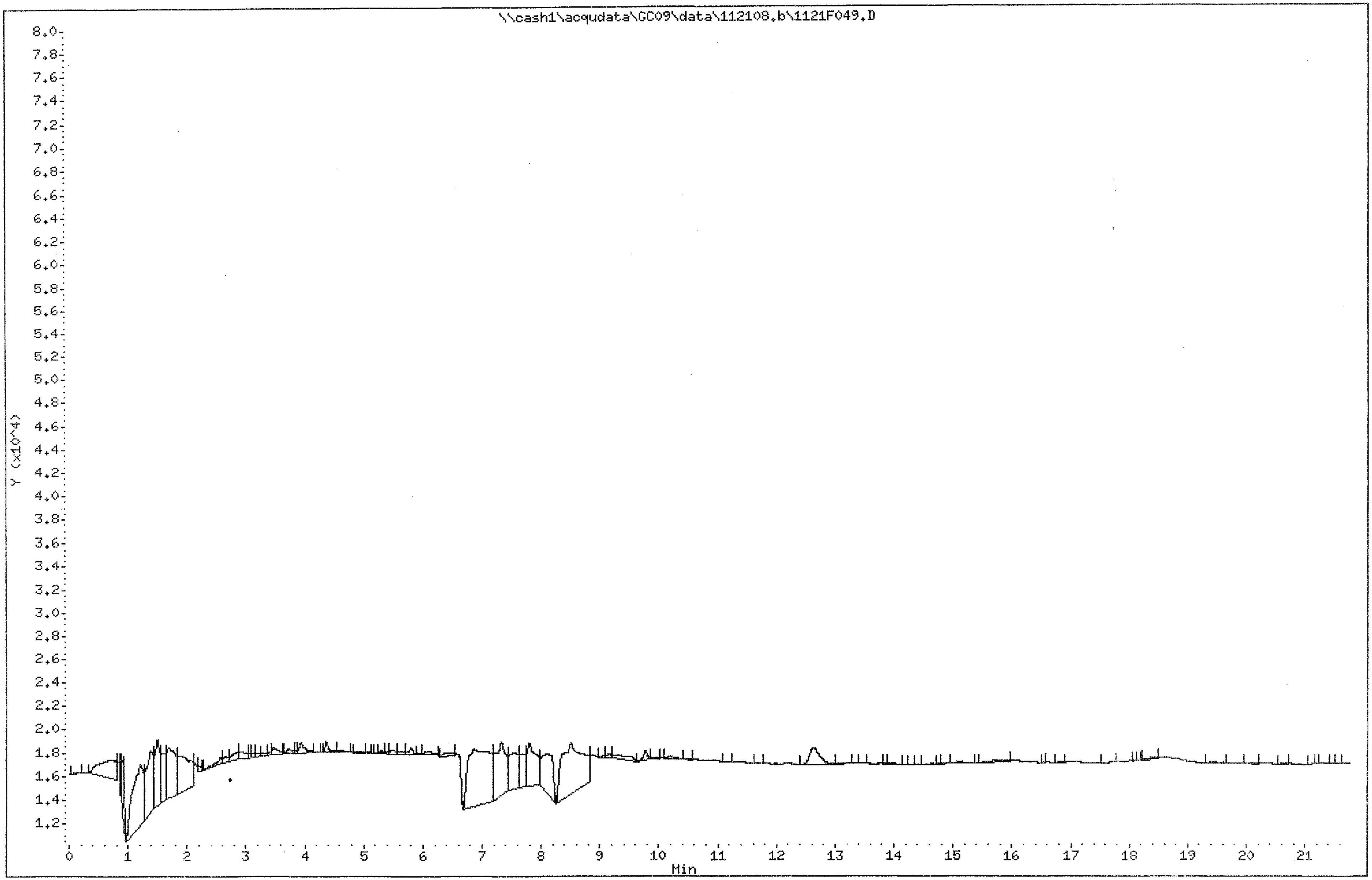
Compound	RT#1	RT#2	Resp#1	Resp#2	Conc#1	Conc#2	Target Range	Ratio

Data File: \\cash1\acqudata\GC09\data\112108.b\1121F049.D
Date : 22-NOV-2008 14:04
Client ID:
Sample Info: KWG0812580-9 | IB | 8082 PCB

Column phase: DB-35MS

Instrument: GC09.i

Operator: LHarris
Column diameter: 0.53



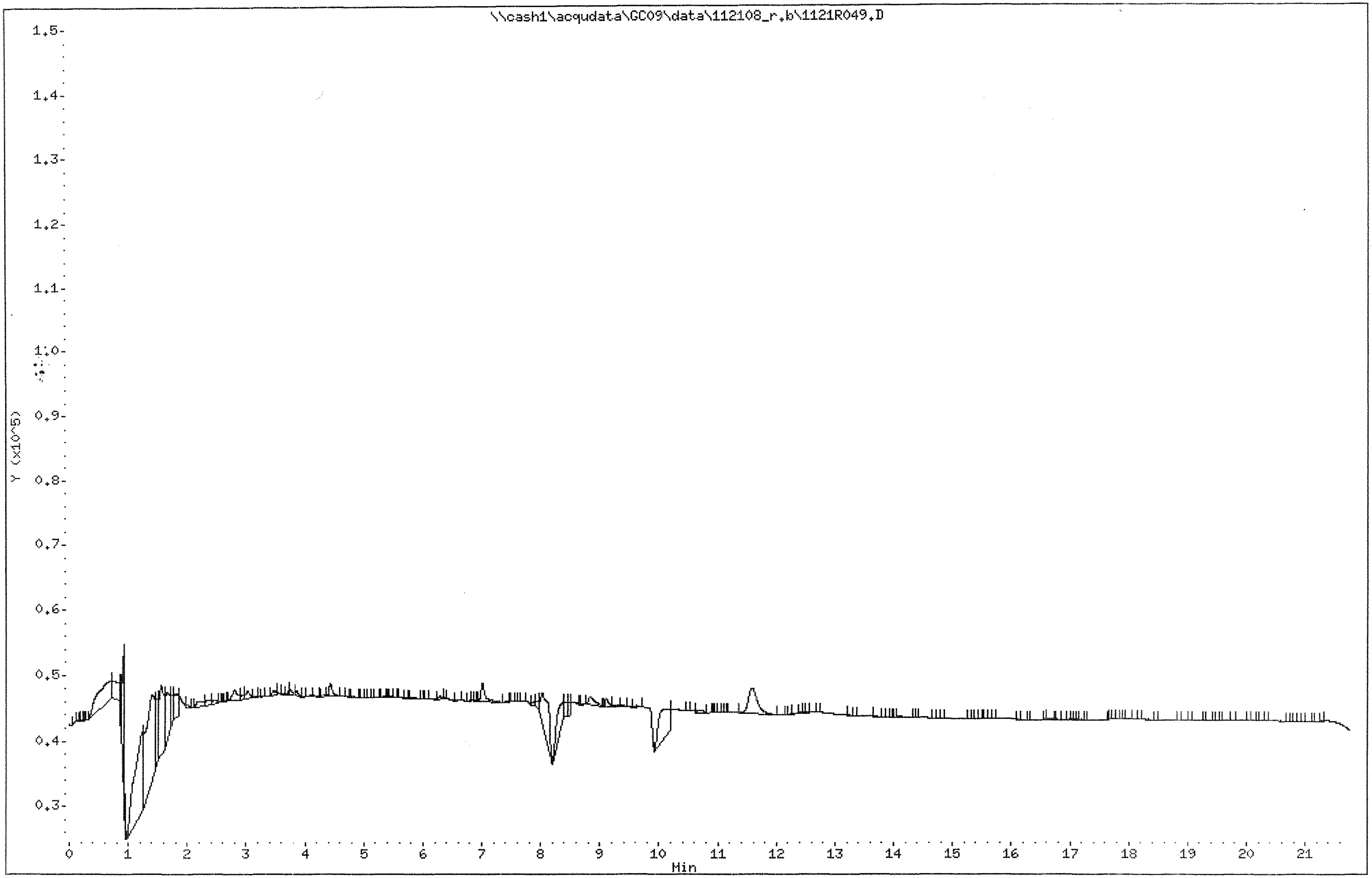
Data File: \\cash1\acqudata\GC09\data\112108_r.b\1121R049.D
Date : 22-NOV-2008 14:04
Client ID:
Sample Info: KWG0812580-9 | IB | 8082 PCB

Instrument: GC09.i

Operator: LHarris

Column phase: DB-XLB

Column diameter: 0.53



Polynuclear Aromatic Hydrocarbons
EPA Method 8270C SIM

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Summary Package

Sample and QC Results

COLUMBIA ANALYTICAL SERVICES, INC.

Client: CH2M Hill **Service Request:** K0810639
Project: Northwest Pipe Co Sediment/358932.PH.OF

Cover Page - Organic Analysis Data Package
Polynuclear Aromatic Hydrocarbons

Sample Name	Lab Code	Date Collected	Date Received
SED01-0.5-2.5A	K0810639-001	07/10/2008	07/15/2008
SED01-2.5-5-A	K0810639-002	07/10/2008	07/15/2008
SED02-5-8.5-A	K0810639-003	07/10/2008	07/15/2008
SED02-0.5-2.5A	K0810639-004	07/10/2008	07/15/2008
SED02-2.5-5-A	K0810639-005	07/10/2008	07/15/2008
SED01-5-6.5-A	K0810639-006	07/10/2008	07/15/2008
SED10-0.5-2.5-B	K0810639-007	07/24/2008	07/29/2008
SED11-0.5-2.5-A	K0810639-008	07/24/2008	07/29/2008
SED14-0.5-2-A	K0810639-009	07/25/2008	07/29/2008
SED14-2-3.5-A	K0810639-010	07/25/2008	07/29/2008
SED02-5-8.5-AMS	KWG0812042-1	07/10/2008	07/15/2008
SED02-5-8.5-ADMS	KWG0812042-2	07/10/2008	07/15/2008

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: [signature] Name: Carl Degner

Date: 12/3/08 Title: SVM Supervisor

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED01-0.5-2.5A	**Units:**	ug/Kg
Lab Code:	K0810639-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**110**		4.4	0.37	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	**81**		4.4	0.39	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	**63**		4.4	0.24	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	**3100**	D	87	4.6	20	11/11/08	11/21/08	KWG0812042	
Fluorene	**3100**	D	87	10	20	11/11/08	11/21/08	KWG0812042	
Dibenzofuran	**150**		4.4	0.59	1	11/11/08	11/22/08	KWG0812042	
Phenanthrene	**15000**	D	87	15	20	11/11/08	11/21/08	KWG0812042	
Anthracene	**4600**	D	87	9.4	20	11/11/08	11/21/08	KWG0812042	
Fluoranthene	**12000**	D	87	13	20	11/11/08	11/21/08	KWG0812042	
Pyrene	**10000**	D	87	7.4	20	11/11/08	11/21/08	KWG0812042	
Benz(a)anthracene	**3300**	D	87	9.6	20	11/11/08	11/21/08	KWG0812042	
Chrysene	**4500**	D	87	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(b)fluoranthene	**3700**	D	87	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(k)fluoranthene	**1300**		4.4	0.15	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	**2700**	D	87	2.8	20	11/11/08	11/21/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**2100**	D	87	3.2	20	11/11/08	11/21/08	KWG0812042	
Dibenz(a,h)anthracene	**570**		4.4	0.28	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	**2000**	D	87	13	20	11/11/08	11/21/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	61	10-128	11/22/08	Acceptable
Fluoranthene-d10	88	29-121	11/22/08	Acceptable
Terphenyl-d14	69	24-141	11/22/08	Acceptable

Comments:

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Collected: 07/10/2008
Date Received: 07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name: SED01-2.5-5-A
Lab Code: K0810639-002
Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry
Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	310	D	99	7.4	20	11/11/08	11/21/08	KWG0812042	
2-Methylnaphthalene	1600	D	99	7.8	20	11/11/08	11/21/08	KWG0812042	
Acenaphthylene	340	D	99	4.8	20	11/11/08	11/21/08	KWG0812042	
Acenaphthene	56000	D	990	46	200	11/11/08	11/23/08	KWG0812042	
Fluorene	43000	D	990	100	200	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	21000	D	99	12	20	11/11/08	11/21/08	KWG0812042	
Phenanthrene	200000	D	990	150	200	11/11/08	11/23/08	KWG0812042	
Anthracene	32000	D	99	9.4	20	11/11/08	11/21/08	KWG0812042	
Fluoranthene	120000	D	990	130	200	11/11/08	11/23/08	KWG0812042	
Pyrene	110000	D	990	74	200	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	16000	D	99	9.6	20	11/11/08	11/21/08	KWG0812042	
Chrysene	16000	D	99	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(b)fluoranthene	7000	D	99	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(k)fluoranthene	2800	D	99	3.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(a)pyrene	5400	D	99	2.8	20	11/11/08	11/21/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	2800	D	99	3.2	20	11/11/08	11/21/08	KWG0812042	
Dibenz(a,h)anthracene	500	D	99	5.6	20	11/11/08	11/21/08	KWG0812042	
Benzo(g,h,i)perylene	2700	D	99	13	20	11/11/08	11/21/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	90	10-128	11/21/08	Acceptable
Fluoranthene-d10	46	29-121	11/21/08	Acceptable
Terphenyl-d14	114	24-141	11/21/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED02-5-8.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**230**		5.0	0.37	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	**300**		5.0	0.39	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	**98**		5.0	0.24	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	**10000**	D	99	4.6	20	11/11/08	11/23/08	KWG0812042	
Fluorene	**7400**	D	99	10	20	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	**3800**	D	99	12	20	11/11/08	11/23/08	KWG0812042	
Phenanthrene	**31000**	D	99	15	20	11/11/08	11/23/08	KWG0812042	
Anthracene	**5900**	D	99	9.4	20	11/11/08	11/23/08	KWG0812042	
Fluoranthene	**16000**	D	99	13	20	11/11/08	11/23/08	KWG0812042	
Pyrene	**14000**	D	99	7.4	20	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	**2400**	D	99	9.6	20	11/11/08	11/23/08	KWG0812042	
Chrysene	**2600**	D	99	5.0	20	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	**1800**		5.0	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(k)fluoranthene	**580**		5.0	0.15	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	**1600**		5.0	0.14	1	11/11/08	11/22/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**1200**		5.0	0.16	1	11/11/08	11/22/08	KWG0812042	
Dibenz(a,h)anthracene	**230**		5.0	0.28	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	**1200**		5.0	0.64	1	11/11/08	11/22/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	10-128	11/22/08	Acceptable
Fluoranthene-d10	75	29-121	11/22/08	Acceptable
Terphenyl-d14	78	24-141	11/22/08	Acceptable

Comments:

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED02-0.5-2.5A	**Units:**	ug/Kg
Lab Code:	K0810639-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	63		4.8	0.37	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	43		4.8	0.39	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	45		4.8	0.24	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	1600		4.8	0.23	1	11/11/08	11/22/08	KWG0812042	
Fluorene	1400		4.8	0.50	1	11/11/08	11/22/08	KWG0812042	
Dibenzofuran	84		4.8	0.59	1	11/11/08	11/22/08	KWG0812042	
Phenanthrene	7200	D	95	15	20	11/11/08	11/21/08	KWG0812042	
Anthracene	820		4.8	0.47	1	11/11/08	11/22/08	KWG0812042	
Fluoranthene	8100	D	95	13	20	11/11/08	11/21/08	KWG0812042	
Pyrene	7300	D	95	7.4	20	11/11/08	11/21/08	KWG0812042	
Benz(a)anthracene	2300	D	95	9.6	20	11/11/08	11/21/08	KWG0812042	
Chrysene	3100	D	95	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(b)fluoranthene	2900	D	95	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(k)fluoranthene	990		4.8	0.15	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	2100	D	95	2.8	20	11/11/08	11/21/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	1800		4.8	0.16	1	11/11/08	11/22/08	KWG0812042	
Dibenz(a,h)anthracene	460		4.8	0.28	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	1700		4.8	0.64	1	11/11/08	11/22/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	56	10-128	11/22/08	Acceptable
Fluoranthene-d10	82	29-121	11/22/08	Acceptable
Terphenyl-d14	65	24-141	11/22/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED02-2.5-5-A	**Units:**	ug/Kg
Lab Code:	K0810639-005	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**380**	D	94	7.4	20	11/11/08	11/21/08	KWG0812042	
2-Methylnaphthalene	**370**	D	94	7.8	20	11/11/08	11/21/08	KWG0812042	
Acenaphthylene	**300**	D	94	4.8	20	11/11/08	11/21/08	KWG0812042	
Acenaphthene	**30000**	D	94	4.6	20	11/11/08	11/21/08	KWG0812042	
Fluorene	**22000**	D	94	10	20	11/11/08	11/21/08	KWG0812042	
Dibenzofuran	**10000**	D	94	12	20	11/11/08	11/21/08	KWG0812042	
Phenanthrene	**110000**	D	940	150	200	11/11/08	11/23/08	KWG0812042	
Anthracene	**22000**	D	94	9.4	20	11/11/08	11/21/08	KWG0812042	
Fluoranthene	**64000**	D	940	130	200	11/11/08	11/23/08	KWG0812042	
Pyrene	**59000**	D	940	74	200	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	**8700**	D	94	9.6	20	11/11/08	11/21/08	KWG0812042	
Chrysene	**9600**	D	94	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(b)fluoranthene	**4700**	D	94	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(k)fluoranthene	**1900**	D	94	3.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(a)pyrene	**3900**	D	94	2.8	20	11/11/08	11/21/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**2500**	D	94	3.2	20	11/11/08	11/21/08	KWG0812042	
Dibenz(a,h)anthracene	**410**	D	94	5.6	20	11/11/08	11/21/08	KWG0812042	
Benzo(g,h,i)perylene	**2600**	D	94	13	20	11/11/08	11/21/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	84	10-128	11/21/08	Acceptable
Fluoranthene-d10	63	29-121	11/21/08	Acceptable
Terphenyl-d14	96	24-141	11/21/08	Acceptable

Comments:

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED01-5-6.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-006	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**52**		4.3	0.37	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	**58**		4.3	0.39	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	**24**		4.3	0.24	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	**550**		4.3	0.23	1	11/11/08	11/22/08	KWG0812042	
Fluorene	**410**		4.3	0.50	1	11/11/08	11/22/08	KWG0812042	
Dibenzofuran	**150**		4.3	0.59	1	11/11/08	11/22/08	KWG0812042	
Phenanthrene	**2000**	D	22	3.8	5	11/11/08	11/23/08	KWG0812042	
Anthracene	**320**		4.3	0.47	1	11/11/08	11/22/08	KWG0812042	
Fluoranthene	**1600**		4.3	0.61	1	11/11/08	11/22/08	KWG0812042	
Pyrene	**1400**		4.3	0.37	1	11/11/08	11/22/08	KWG0812042	
Benz(a)anthracene	**330**		4.3	0.48	1	11/11/08	11/22/08	KWG0812042	
Chrysene	**450**		4.3	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(b)fluoranthene	**330**		4.3	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(k)fluoranthene	**110**		4.3	0.15	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	**310**		4.3	0.14	1	11/11/08	11/22/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**270**		4.3	0.16	1	11/11/08	11/22/08	KWG0812042	
Dibenz(a,h)anthracene	**44**		4.3	0.28	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	**310**		4.3	0.64	1	11/11/08	11/22/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	54	10-128	11/22/08	Acceptable
Fluoranthene-d10	60	29-121	11/22/08	Acceptable
Terphenyl-d14	61	24-141	11/22/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/24/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED10-0.5-2.5-B	**Units:**	ug/Kg
Lab Code:	K0810639-007	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**8.9**		5.0	0.37	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	**5.0**	J	5.0	0.39	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	**5.2**		5.0	0.24	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	**27**		5.0	0.23	1	11/11/08	11/22/08	KWG0812042	
Fluorene	**24**		5.0	0.50	1	11/11/08	11/22/08	KWG0812042	
Dibenzofuran	**3.3**	J	5.0	0.59	1	11/11/08	11/22/08	KWG0812042	
Phenanthrene	**210**		5.0	0.75	1	11/11/08	11/22/08	KWG0812042	
Anthracene	**41**		5.0	0.47	1	11/11/08	11/22/08	KWG0812042	
Fluoranthene	**200**		5.0	0.61	1	11/11/08	11/22/08	KWG0812042	
Pyrene	**230**		5.0	0.37	1	11/11/08	11/22/08	KWG0812042	
Benz(a)anthracene	**67**		5.0	0.48	1	11/11/08	11/22/08	KWG0812042	
Chrysene	**94**		5.0	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(b)fluoranthene	**90**		5.0	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(k)fluoranthene	**34**		5.0	0.15	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	**75**		5.0	0.14	1	11/11/08	11/22/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**73**		5.0	0.16	1	11/11/08	11/22/08	KWG0812042	
Dibenz(a,h)anthracene	**11**		5.0	0.28	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	**78**		5.0	0.64	1	11/11/08	11/22/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	62	10-128	11/22/08	Acceptable
Fluoranthene-d10	55	29-121	11/22/08	Acceptable
Terphenyl-d14	67	24-141	11/22/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/24/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED11-0.5-2.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-008	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**140**	D	24	1.9	5	11/11/08	11/23/08	KWG0812042	
2-Methylnaphthalene	**100**	D	24	2.0	5	11/11/08	11/23/08	KWG0812042	
Acenaphthylene	**110**	D	24	1.2	5	11/11/08	11/23/08	KWG0812042	
Acenaphthene	**3700**	D	24	1.2	5	11/11/08	11/23/08	KWG0812042	
Fluorene	**2600**	D	24	2.5	5	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	**190**	D	24	3.0	5	11/11/08	11/23/08	KWG0812042	
Phenanthrene	**15000**	D	93	15	20	11/11/08	11/22/08	KWG0812042	
Anthracene	**1800**	D	24	2.4	5	11/11/08	11/23/08	KWG0812042	
Fluoranthene	**11000**	D	93	13	20	11/11/08	11/22/08	KWG0812042	
Pyrene	**8400**	D	24	1.9	5	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	**2100**	D	24	2.4	5	11/11/08	11/23/08	KWG0812042	
Chrysene	**2400**	D	24	1.3	5	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	**1800**	D	24	1.3	5	11/11/08	11/23/08	KWG0812042	
Benzo(k)fluoranthene	**680**	D	24	0.75	5	11/11/08	11/23/08	KWG0812042	
Benzo(a)pyrene	**1600**	D	24	0.70	5	11/11/08	11/23/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**1300**	D	24	0.80	5	11/11/08	11/23/08	KWG0812042	
Dibenz(a,h)anthracene	**230**	D	24	1.4	5	11/11/08	11/23/08	KWG0812042	
Benzo(g,h,i)perylene	**1400**	D	24	3.2	5	11/11/08	11/23/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	58	10-128	11/23/08	Acceptable
Fluoranthene-d10	61	29-121	11/23/08	Acceptable
Terphenyl-d14	87	24-141	11/23/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/25/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED14-0.5-2-A	**Units:**	ug/Kg
Lab Code:	K0810639-009	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**41**		4.2	0.37	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	**21**		4.2	0.39	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	**23**		4.2	0.24	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	**230**		4.2	0.23	1	11/11/08	11/22/08	KWG0812042	
Fluorene	**230**		4.2	0.50	1	11/11/08	11/22/08	KWG0812042	
Dibenzofuran	**40**		4.2	0.59	1	11/11/08	11/22/08	KWG0812042	
Phenanthrene	**1400**		4.2	0.75	1	11/11/08	11/22/08	KWG0812042	
Anthracene	**230**		4.2	0.47	1	11/11/08	11/22/08	KWG0812042	
Fluoranthene	**2000**	D	21	3.1	5	11/11/08	11/23/08	KWG0812042	
Pyrene	**1900**	D	21	1.9	5	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	**930**		4.2	0.48	1	11/11/08	11/22/08	KWG0812042	
Chrysene	**1200**		4.2	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(b)fluoranthene	**1300**		4.2	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(k)fluoranthene	**490**		4.2	0.15	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	**1000**		4.2	0.14	1	11/11/08	11/22/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**920**		4.2	0.16	1	11/11/08	11/22/08	KWG0812042	
Dibenz(a,h)anthracene	**190**		4.2	0.28	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	**880**		4.2	0.64	1	11/11/08	11/22/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	65	10-128	11/22/08	Acceptable
Fluoranthene-d10	80	29-121	11/22/08	Acceptable
Terphenyl-d14	71	24-141	11/22/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/25/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED14-2-3.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-010	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**120**		4.6	0.37	1	11/11/08	11/23/08	KWG0812042	
2-Methylnaphthalene	**57**		4.6	0.39	1	11/11/08	11/23/08	KWG0812042	
Acenaphthylene	**86**		4.6	0.24	1	11/11/08	11/23/08	KWG0812042	
Acenaphthene	**630**		4.6	0.23	1	11/11/08	11/23/08	KWG0812042	
Fluorene	**560**		4.6	0.50	1	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	**140**		4.6	0.59	1	11/11/08	11/23/08	KWG0812042	
Phenanthrene	**4200**	D	46	7.5	10	11/11/08	11/24/08	KWG0812042	
Anthracene	**600**		4.6	0.47	1	11/11/08	11/23/08	KWG0812042	
Fluoranthene	**4000**	D	46	6.1	10	11/11/08	11/24/08	KWG0812042	
Pyrene	**4000**	D	46	3.7	10	11/11/08	11/24/08	KWG0812042	
Benz(a)anthracene	**1100**		4.6	0.48	1	11/11/08	11/23/08	KWG0812042	
Chrysene	**1500**		4.6	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	**1600**		4.6	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(k)fluoranthene	**470**		4.6	0.15	1	11/11/08	11/23/08	KWG0812042	
Benzo(a)pyrene	**1400**		4.6	0.14	1	11/11/08	11/23/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**1400**		4.6	0.16	1	11/11/08	11/23/08	KWG0812042	
Dibenz(a,h)anthracene	**250**		4.6	0.28	1	11/11/08	11/23/08	KWG0812042	
Benzo(g,h,i)perylene	**1400**		4.6	0.64	1	11/11/08	11/23/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	64	10-128	11/23/08	Acceptable
Fluoranthene-d10	91	29-121	11/23/08	Acceptable
Terphenyl-d14	81	24-141	11/23/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0812042-5	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	1.7	0.37	1	11/11/08	11/23/08	KWG0812042	
2-Methylnaphthalene	ND	U	1.7	0.39	1	11/11/08	11/23/08	KWG0812042	
Acenaphthylene	ND	U	1.7	0.24	1	11/11/08	11/23/08	KWG0812042	
Acenaphthene	ND	U	1.7	0.23	1	11/11/08	11/23/08	KWG0812042	
Fluorene	ND	U	1.7	0.50	1	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	ND	U	1.7	0.59	1	11/11/08	11/23/08	KWG0812042	
Phenanthrene	**0.86**	J	1.7	0.75	1	11/11/08	11/23/08	KWG0812042	
Anthracene	ND	U	1.7	0.47	1	11/11/08	11/23/08	KWG0812042	
Fluoranthene	**0.67**	J	1.7	0.61	1	11/11/08	11/23/08	KWG0812042	
Pyrene	**0.61**	J	1.7	0.37	1	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	ND	U	1.7	0.48	1	11/11/08	11/23/08	KWG0812042	
Chrysene	**0.26**	J	1.7	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	ND	U	1.7	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(k)fluoranthene	ND	U	1.7	0.15	1	11/11/08	11/23/08	KWG0812042	
Benzo(a)pyrene	ND	U	1.7	0.14	1	11/11/08	11/23/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	ND	U	1.7	0.16	1	11/11/08	11/23/08	KWG0812042	
Dibenz(a,h)anthracene	ND	U	1.7	0.28	1	11/11/08	11/23/08	KWG0812042	
Benzo(g,h,i)perylene	ND	U	1.7	0.64	1	11/11/08	11/23/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	68	10-128	11/23/08	Acceptable
Fluoranthene-d10	68	29-121	11/23/08	Acceptable
Terphenyl-d14	67	24-141	11/23/08	Acceptable

Comments:

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
SED01-0.5-2.5A	K0810639-001	61	88	69
SED01-2.5-5-A	K0810639-002	90 D	46 D	114 D
SED02-5-8.5-A	K0810639-003	72	75	78
SED02-0.5-2.5A	K0810639-004	56	82	65
SED02-2.5-5-A	K0810639-005	84 D	63 D	96 D
SED01-5-6.5-A	K0810639-006	54	60	61
SED10-0.5-2.5-B	K0810639-007	62	55	67
SED11-0.5-2.5-A	K0810639-008	58 D	61 D	87 D
SED14-0.5-2-A	K0810639-009	65	80	71
SED14-2-3.5-A	K0810639-010	64	91	81
Method Blank	KWG0812042-5	68	68	67
SED02-5-8.5-AMS	KWG0812042-1	83	102	87
SED02-5-8.5-ADMS	KWG0812042-2	71	104	84
Lab Control Sample	KWG0812042-3	76	76	73
Duplicate Lab Control Sample	KWG0812042-4	78	84	84

Surrogate Recovery Control Limits (%)

Sur1 = Fluorene-d10	10-128
Sur2 = Fluoranthene-d10	29-121
Sur3 = Terphenyl-d14	24-141

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/21/2008
Time Analyzed: 06:37

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112108\1121F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0812597-2
Analysis Lot: KWG0812597

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	198,044	5.04	121,056	6.46	211,707	7.70
	Upper Limit ==>	396,088	5.54	242,112	6.96	423,414	8.20
	Lower Limit ==>	99,022	4.54	60,528	5.96	105,854	7.20
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
SED01-0.5-2.5ADL	K0810639-001	180,892	5.05	97,918	6.47	179,576	7.71
SED01-2.5-5-A	K0810639-002	191,900	5.05	110,813	6.47	217,351	7.71
SED02-0.5-2.5ADL	K0810639-004	190,376	5.06	98,996	6.47	186,496	7.70
SED02-2.5-5-A	K0810639-005	184,766	5.05	105,836	6.47	190,914	7.70

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/21/2008
Time Analyzed: 06:37

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112108\1121F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0812597-2
Analysis Lot: KWG0812597

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	237,498	10.59	260,933	14.59
	Upper Limit ==>	474,996	11.09	521,866	15.09
	Lower Limit ==>	118,749	10.09	130,467	14.09
	ICAL Result ==>	268,348	10.61	256,596	14.61
Associated Analyses					
SED01-0.5-2.5ADL	K0810639-001	210,121	10.59	223,321	14.61
SED01-2.5-5-A	K0810639-002	256,218	10.60	255,003	14.61
SED02-0.5-2.5ADL	K0810639-004	213,600	10.59	231,371	14.61
SED02-2.5-5-A	K0810639-005	230,284	10.60	235,300	14.61

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/21/2008
Time Analyzed: 19:21

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112108\1121F031.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0812613-2
Analysis Lot: KWG0812613

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	209,677	5.05	114,663	6.47	194,060	7.71
	Upper Limit ==>	419,354	5.55	229,326	6.97	388,120	8.21
	Lower Limit ==>	104,839	4.55	57,332	5.97	97,030	7.21
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
SED11-0.5-2.5-ADL	K0810639-008	228,086	5.06	113,668	6.47	215,237	7.71
SED10-0.5-2.5-B	K0810639-007	176,484	5.04	108,198	6.47	188,421	7.71
SED02-5-8.5-A	K0810639-003	261,241	5.04	157,180	6.47	309,278	7.73
SED01-5-6.5-A	K0810639-006	228,791	5.04	123,749	6.47	210,262	7.71
SED14-0.5-2-A	K0810639-009	269,595	5.05	138,146	6.47	230,010	7.71

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/21/2008
		Time Analyzed:	19:21

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112108\1121F031.D	**Lab Code:**	KWG0812613-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812613
Analysis Method:	8270C SIM		

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	214,914	10.60	222,377	14.61
	Upper Limit ==>	429,828	11.10	444,754	15.11
	Lower Limit ==>	107,457	10.10	111,189	14.11
	ICAL Result ==>	268,348	10.61	256,596	14.61
Associated Analyses					
SED11-0.5-2.5-ADL	K0810639-008	242,153	10.61	251,850	14.64
SED10-0.5-2.5-B	K0810639-007	179,877	10.60	190,694	14.63
SED02-5-8.5-A	K0810639-003	331,513	10.65	311,851	14.74
SED01-5-6.5-A	K0810639-006	262,376	10.62	266,909	14.67
SED14-0.5-2-A	K0810639-009	288,363	10.62	299,055	14.66

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/22/2008
		Time Analyzed:	10:15

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112208\1122F006.D	**Lab Code:**	KWG0812624-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812624
Analysis Method:	8270C SIM		

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	331,128	5.04	178,067	6.46	298,606	7.70
	Upper Limit ==>	662,256	5.54	356,134	6.96	597,212	8.20
	Lower Limit ==>	165,564	4.54	89,034	5.96	149,303	7.20
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
SED01-0.5-2.5A	K0810639-001	276,938	5.03	155,248	6.45	278,460	7.70
SED02-0.5-2.5A	K0810639-004	273,979	5.03	155,860	6.45	275,518	7.70

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008
Time Analyzed: 10:15

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112208\1122F006.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0812624-2
Analysis Lot: KWG0812624

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	334,575	10.57	384,082	14.56
	Upper Limit ==>	669,150	11.07	768,164	15.06
	Lower Limit ==>	167,288	10.07	192,041	14.06
	ICAL Result ==>	268,348	10.61	256,596	14.61
Associated Analyses					
SED01-0.5-2.5A	K0810639-001	363,535	10.62	368,075	14.69
SED02-0.5-2.5A	K0810639-004	360,171	10.60	388,407	14.65

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/22/2008
		Time Analyzed:	23:08

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112208\1122F035.D	**Lab Code:**	KWG0812625-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812625
Analysis Method:	8270C SIM		

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	313,405	5.04	166,936	6.45	281,904	7.69
	Upper Limit ==>	626,810	5.54	333,872	6.95	563,808	8.19
	Lower Limit ==>	156,703	4.54	83,468	5.95	140,952	7.19
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
SED01-2.5-5-ADL	K0810639-002	305,871	5.04	152,267	6.45	266,592	7.69
SED02-2.5-5-ADL	K0810639-005	220,587	5.04	111,896	6.46	207,934	7.70
SED02-5-8.5-ADL	K0810639-003	227,669	5.04	126,980	6.45	209,850	7.69
SED01-5-6.5-ADL	K0810639-006	242,576	5.04	122,969	6.45	210,352	7.69
SED14-0.5-2-ADL	K0810639-009	240,074	5.04	123,982	6.46	228,079	7.69
SED11-0.5-2.5-A	K0810639-008	225,019	5.04	127,552	6.45	222,993	7.69

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/22/2008
		Time Analyzed:	23:08

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112208\1122F035.D	**Lab Code:**	KWG0812625-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812625
Analysis Method:	8270C SIM		

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	312,237	10.57	354,334	14.55
	Upper Limit ==>	624,474	11.07	708,668	15.05
	Lower Limit ==>	156,119	10.07	177,167	14.05
	ICAL Result ==>	268,348	10.61	256,596	14.61
Associated Analyses					
SED01-2.5-5-ADL	K0810639-002	265,504	10.58	271,253	14.57
SED02-2.5-5-ADL	K0810639-005	209,367	10.58	202,665	14.57
SED02-5-8.5-ADL	K0810639-003	239,440	10.57	267,713	14.56
SED01-5-6.5-ADL	K0810639-006	244,970	10.57	275,912	14.56
SED14-0.5-2-ADL	K0810639-009	263,793	10.57	315,159	14.55
SED11-0.5-2.5-A	K0810639-008	275,731	10.58	302,931	14.58

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/23/2008
Time Analyzed: 11:43

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112308\1123F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0812642-2
Analysis Lot: KWG0812642

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	288,327	5.04	154,376	6.45	260,362	7.69
	Upper Limit ==>	576,654	5.54	308,752	6.95	520,724	8.19
	Lower Limit ==>	144,164	4.54	77,188	5.95	130,181	7.19
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
Method Blank	KWG0812042-5	193,013	5.02	115,774	6.45	209,742	7.69
Lab Control Sample	KWG0812042-3	176,907	5.02	104,948	6.45	185,446	7.69
Duplicate Lab Control Sample	KWG0812042-4	183,383	5.02	105,139	6.45	187,364	7.69
SED14-2-3.5-A	K0810639-010	167,508	5.02	98,097	6.45	199,834	7.69
SED02-5-8.5-AMS	KWG0812042-1	175,386	5.02	121,999	6.45	339,720	7.72
SED02-5-8.5-ADMS	KWG0812042-2	174,171	5.02	122,372	6.45	310,917	7.72

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/23/2008
Time Analyzed: 11:43

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112308\1123F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0812642-2
Analysis Lot: KWG0812642

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	318,561	10.56	360,959	14.53
	Upper Limit ==>	637,122	11.06	721,918	15.03
	Lower Limit ==>	159,281	10.06	180,480	14.03
Associated Analyses	**ICAL Result ==>**	268,348	10.61	256,596	14.61
Method Blank	KWG0812042-5	235,530	10.56	262,098	14.53
Lab Control Sample	KWG0812042-3	215,124	10.56	238,690	14.52
Duplicate Lab Control Sample	KWG0812042-4	215,847	10.56	239,351	14.52
SED14-2-3.5-A	K0810639-010	299,462	10.62	267,913	14.68
SED02-5-8.5-AMS	KWG0812042-1	341,829	10.63	299,460	14.69
SED02-5-8.5-ADMS	KWG0812042-2	336,071	10.63	295,085	14.70

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/24/2008
		Time Analyzed:	07:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112408\1124F002.D	**Lab Code:**	KWG0812654-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812654
Analysis Method:	8270C SIM		

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	299,506	5.04	166,804	6.45	276,041	7.70
	Upper Limit ==>	599,012	5.54	333,608	6.95	552,082	8.20
	Lower Limit ==>	149,753	4.54	83,402	5.95	138,021	7.20
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
SED14-2-3.5-ADL	K0810639-010	283,636	5.03	150,435	6.45	246,483	7.69

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/24/2008
		Time Analyzed:	07:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112408\1124F002.D	**Lab Code:**	KWG0812654-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812654
Analysis Method:	8270C SIM		

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	330,482	10.58	369,666	14.59
	Upper Limit ==>	660,964	11.08	739,332	15.09
	Lower Limit ==>	165,241	10.08	184,833	14.09
	ICAL Result ==>	268,348	10.61	256,596	14.61
Associated Analyses					
SED14-2-3.5-ADL	K0810639-010	301,391	10.59	329,279	14.61

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Extracted: 11/11/2008
Date Analyzed: 11/23/2008

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name: SED02-5-8.5-A
Lab Code: K0810639-003

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low
Extraction Lot: KWG0812042

		SED02-5-8.5-AMS KWG0812042-1 Matrix Spike			SED02-5-8.5-ADMS KWG0812042-2 Duplicate Matrix Spike					
Analyte Name	Sample Result	Result	Expected	%Rec	Result	Expected	%Rec	%Rec Limits	RPD	RPD Limit
Naphthalene	230	593	497	73	562	493	67	10-129	6	40
2-Methylnaphthalene	300	717	497	83	720	493	85	10-133	0	40
Acenaphthylene	98	408	497	62	407	493	63	37-100	0	40
Acenaphthene	10000	11500E	497	276 #	11600E	493	295 #	28-111	1	40
Fluorene	7400	8620E	497	242 #	8930E	493	308 #	24-122	4	40
Dibenzofuran	3800	4500E	497	141 #	4720E	493	188 #	37-103	5	40
Phenanthrene	31000	9220E	497	-4372 #	11800E	493	-3886 #	23-124	25	40
Anthracene	5900	3120E	497	-555 #	3800E	493	-422 #	30-144	20	40
Fluoranthene	16000	7830E	497	-1728 #	8400E	493	-1627 #	21-145	7	40
Pyrene	14000	8880E	497	-971 #	9160E	493	-924 #	10-155	3	40
Benz(a)anthracene	2400	3040E	497	125 #	3210E	493	160 #	25-127	5	40
Chrysene	2600	3010E	497	77 #	3230E	493	121 #	28-126	7	40
Benzo(b)fluoranthene	1800	2380E	497	119	2370E	493	119	18-130	0	40
Benzo(k)fluoranthene	580	1120	497	108	1110	493	107	30-122	0	40
Benzo(a)pyrene	1600	2300E	497	138 *	2230E	493	126	20-132	3	40
Indeno(1,2,3-cd)pyrene	1200	2120E	497	181 *	1970E	493	152 *	20-132	7	40
Dibenz(a,h)anthracene	230	808	497	116	767	493	109	28-124	5	40
Benzo(g,h,i)perylene	1200	2040E	497	160 *	1950	493	143 *	24-124	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Extracted: 11/11/2008
Date Analyzed: 11/23/2008

Lab Control Spike/Duplicate Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0812042

	Lab Control Sample KWG0812042-3 **Lab Control Spike**			Duplicate Lab Control Sample KWG0812042-4 **Duplicate Lab Control Spike**					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	372	500	74	378	500	76	35-104	1	40
2-Methylnaphthalene	429	500	86	427	500	85	34-110	1	40
Acenaphthylene	412	500	82	417	500	83	46-105	1	40
Acenaphthene	398	500	80	403	500	81	47-104	1	40
Fluorene	417	500	83	425	500	85	52-106	2	40
Dibenzofuran	416	500	83	426	500	85	50-106	2	40
Phenanthrene	400	500	80	401	500	80	48-108	0	40
Anthracene	429	500	86	444	500	89	51-110	3	40
Fluoranthene	417	500	83	447	500	89	54-121	7	40
Pyrene	396	500	79	424	500	85	53-110	7	40
Benz(a)anthracene	428	500	86	464	500	93	51-113	8	40
Chrysene	428	500	86	465	500	93	56-112	8	40
Benzo(b)fluoranthene	411	500	82	444	500	89	51-116	8	40
Benzo(k)fluoranthene	439	500	88	470	500	94	57-114	7	40
Benzo(a)pyrene	456	500	91	494	500	99	53-112	8	40
Indeno(1,2,3-cd)pyrene	451	500	90	492	500	98	42-124	9	40
Dibenz(a,h)anthracene	471	500	94	512	500	102	44-125	8	40
Benzo(g,h,i)perylene	435	500	87	469	500	94	50-115	7	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Extracted:**	11/11/2008
Sample Matrix:	Sediment	**Date Analyzed:**	11/23/2008
		Time Analyzed:	12:10

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**File ID:**	J:\MS11\DATA\112308\1123F003.D
Lab Code:	KWG0812042-5	**Instrument ID:**	MS11
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0812042

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112108\1121F025.D	11/21/08	16:43
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112108\1121F026.D	11/21/08	17:10
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112108\1121F027.D	11/21/08	17:36
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112108\1121F028.D	11/21/08	18:02
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112108\1121F047.D	11/22/08	02:22
SED10-0.5-2.5-B	K0810639-007	J:\MS11\DATA\112108\1121F048.D	11/22/08	02:48
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112108\1121F049.D	11/22/08	03:14
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112108\1121F050.D	11/22/08	03:40
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112108\1121F051.D	11/22/08	04:07
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112208\1122F028.D	11/22/08	20:04
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112208\1122F029.D	11/22/08	20:30
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112208\1122F042.D	11/23/08	02:13
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112208\1122F043.D	11/23/08	02:39
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112208\1122F044.D	11/23/08	03:05
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112208\1122F045.D	11/23/08	03:32
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112208\1122F046.D	11/23/08	03:58
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112208\1122F058.D	11/23/08	09:15
Lab Control Sample	KWG0812042-3	J:\MS11\DATA\112308\1123F005.D	11/23/08	13:03
Duplicate Lab Control Sample	KWG0812042-4	J:\MS11\DATA\112308\1123F006.D	11/23/08	13:29
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112308\1123F011.D	11/23/08	15:42
SED02-5-8.5-AMS	KWG0812042-1	J:\MS11\DATA\112308\1123F012.D	11/23/08	16:09
SED02-5-8.5-ADMS	KWG0812042-2	J:\MS11\DATA\112308\1123F013.D	11/23/08	16:35
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112408\1124F004.D	11/24/08	07:55

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639

Lab Control Sample/Duplicate Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0812042-3	**Lab Code:**	KWG0812042-4
File ID:	J:\MS11\DATA\112308\1123F005.D	**File ID:**	J:\MS11\DATA\112308\1123F006.D
Instrument ID:	MS11	**Instrument ID:**	MS11
Date Extracted:	11/11/2008	**Date Extracted:**	11/11/2008
Date Analyzed:	11/23/2008	**Date Analyzed:**	11/23/2008
Time Analyzed:	13:03	**Time Analyzed:**	13:29

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0812042

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112108\1121F025.D	11/21/08	16:43
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112108\1121F026.D	11/21/08	17:10
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112108\1121F027.D	11/21/08	17:36
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112108\1121F028.D	11/21/08	18:02
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112108\1121F047.D	11/22/08	02:22
SED10-0.5-2.5-B	K0810639-007	J:\MS11\DATA\112108\1121F048.D	11/22/08	02:48
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112108\1121F049.D	11/22/08	03:14
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112108\1121F050.D	11/22/08	03:40
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112108\1121F051.D	11/22/08	04:07
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112208\1122F028.D	11/22/08	20:04
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112208\1122F029.D	11/22/08	20:30
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112208\1122F042.D	11/23/08	02:13
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112208\1122F043.D	11/23/08	02:39
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112208\1122F044.D	11/23/08	03:05
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112208\1122F045.D	11/23/08	03:32
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112208\1122F046.D	11/23/08	03:58
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112208\1122F058.D	11/23/08	09:15
Method Blank	KWG0812042-5	J:\MS11\DATA\112308\1123F003.D	11/23/08	12:10
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112308\1123F011.D	11/23/08	15:42
SED02-5-8.5-AMS	KWG0812042-1	J:\MS11\DATA\112308\1123F012.D	11/23/08	16:09
SED02-5-8.5-ADMS	KWG0812042-2	J:\MS11\DATA\112308\1123F013.D	11/23/08	16:35
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112408\1124F004.D	11/24/08	07:55

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/21/2008
Time Analyzed: 06:10

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112108\1121F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0812597

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	61.8	492217	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	54.3	433061	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	52.6	418944	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	60.4	796928	PASS
199	198	5	9	6.8	54368	PASS
275	198	10	60	35.4	282176	PASS
365	442	1	50	3.5	46568	PASS
441	443	0	100	74.8	201920	PASS
442	442	100	100	100.0	1320448	PASS
443	442	15	24	20.5	270080	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812597-2	J:\MS11\DATA\112108\1121F002.D	11/21/2008	06:37	
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112108\1121F025.D	11/21/2008	16:43	
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112108\1121F026.D	11/21/2008	17:10	
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112108\1121F027.D	11/21/2008	17:36	
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112108\1121F028.D	11/21/2008	18:02	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/21/2008
Time Analyzed: 18:55

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112108\1121F030.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0812613

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	70.7	354240	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	59.4	297536	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	53.2	266368	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	70.7	500736	PASS
199	198	5	9	7.0	35072	PASS
275	198	10	60	33.1	165952	PASS
365	442	1	50	3.8	26600	PASS
441	443	0	100	74.2	105608	PASS
442	442	100	100	100.0	707840	PASS
443	442	15	24	20.1	142336	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812613-2	J:\MS11\DATA\112108\1121F031.D	11/21/2008	19:21	
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112108\1121F047.D	11/22/2008	02:22	
SED10-0.5-2.5-B	K0810639-007	J:\MS11\DATA\112108\1121F048.D	11/22/2008	02:48	
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112108\1121F049.D	11/22/2008	03:14	
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112108\1121F050.D	11/22/2008	03:40	
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112108\1121F051.D	11/22/2008	04:07	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/22/2008
		Time Analyzed:	09:49

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112208\1122F005.D	**Analysis Method:**	8270C SIM
Instrument ID:	MS11	**Analysis Lot:**	KWG0812624
Column:			

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	38.7	230400	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	40.3	239744	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	46.3	275392	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	43.4	595328	PASS
199	198	5	9	6.6	39352	PASS
275	198	10	60	36.1	214656	PASS
365	442	1	50	2.2	30040	PASS
441	443	0	100	72.1	205056	PASS
442	442	100	100	100.0	1373184	PASS
443	442	15	24	20.7	284480	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812624-2	J:\MS11\DATA\112208\1122F006.D	11/22/2008	10:15	
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112208\1122F028.D	11/22/2008	20:04	
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112208\1122F029.D	11/22/2008	20:30	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008
Time Analyzed: 22:42

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112208\1122F034.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0812625

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	44.1	269992	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	43.2	264438	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	46.2	282944	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	48.2	612288	PASS
199	198	5	9	7.2	43944	PASS
275	198	10	60	36.6	224064	PASS
365	442	1	50	2.5	31888	PASS
441	443	0	100	74.4	195712	PASS
442	442	100	100	100.0	1269248	PASS
443	442	15	24	20.7	263104	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812625-2	J:\MS11\DATA\112208\1122F035.D	11/22/2008	23:08	
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112208\1122F042.D	11/23/2008	02:13	
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112208\1122F043.D	11/23/2008	02:39	
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112208\1122F044.D	11/23/2008	03:05	
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112208\1122F045.D	11/23/2008	03:32	
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112208\1122F046.D	11/23/2008	03:58	
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112208\1122F058.D	11/23/2008	09:15	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/23/2008
Time Analyzed: 11:17

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112308\1123F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0812642

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	69.4	399808	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	61.6	354804	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	55.8	321408	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	75.3	576448	PASS
199	198	5	9	7.2	41376	PASS
275	198	10	60	33.2	191232	PASS
365	442	1	50	3.4	26160	PASS
441	443	0	100	72.0	113536	PASS
442	442	100	100	100.0	765568	PASS
443	442	15	24	20.6	157760	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812642-2	J:\MS11\DATA\112308\1123F002.D	11/23/2008	11:43	
Method Blank	KWG0812042-5	J:\MS11\DATA\112308\1123F003.D	11/23/2008	12:10	
Lab Control Sample	KWG0812042-3	J:\MS11\DATA\112308\1123F005.D	11/23/2008	13:03	
Duplicate Lab Control Sample	KWG0812042-4	J:\MS11\DATA\112308\1123F006.D	11/23/2008	13:29	
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112308\1123F011.D	11/23/2008	15:42	
SED02-5-8.5-AMS	KWG0812042-1	J:\MS11\DATA\112308\1123F012.D	11/23/2008	16:09	
SED02-5-8.5-ADMS	KWG0812042-2	J:\MS11\DATA\112308\1123F013.D	11/23/2008	16:35	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/24/2008
Time Analyzed: 06:34

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112408\1124F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0812654

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	38.7	202379	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	41.2	215300	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	48.9	255872	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	52.3	523072	PASS
199	198	5	9	7.0	36648	PASS
275	198	10	60	33.8	176640	PASS
365	442	1	50	2.0	19688	PASS
441	443	0	100	72.6	151936	PASS
442	442	100	100	100.0	1001024	PASS
443	442	15	24	20.9	209152	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812654-2	J:\MS11\DATA\112408\1124F002.D	11/24/2008	07:00	
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112408\1124F004.D	11/24/2008	07:55	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 11/10/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL7938
Instrument ID: MS11

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS11\DATA\111008\1110F005.D	F	J:\MS11\DATA\111008\1110F010.D
B	J:\MS11\DATA\111008\1110F006.D	G	J:\MS11\DATA\111008\1110F011.D
C	J:\MS11\DATA\111008\1110F007.D	H	J:\MS11\DATA\111008\1110F012.D
D	J:\MS11\DATA\111008\1110F008.D	I	J:\MS11\DATA\111008\1110F013.D
E	J:\MS11\DATA\111008\1110F009.D	J	J:\MS11\DATA\111008\1110F014.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	2.0	1.37	B	4.0	1.30	C	8.0	1.28	D	20	1.21	E	100	1.20
	F	200	1.23	G	400	1.21	H	1000	1.14	I	1600	1.11	J	2000	1.13
2-Methylnaphthalene	A	2.0	0.941	B	4.0	0.854	C	8.0	0.870	D	20	0.836	E	100	0.831
	F	200	0.852	G	400	0.853	H	1000	0.816	I	1600	0.811	J	2000	0.833
Acenaphthylene	A	2.0	2.44	B	4.0	2.18	C	8.0	2.25	D	20	2.14	E	100	2.22
	F	200	2.33	G	400	2.35	H	1000	2.26	I	1600	2.18	J	2000	2.22
Acenaphthene	A	2.0	1.48	B	4.0	1.39	C	8.0	1.38	D	20	1.31	E	100	1.34
	F	200	1.39	G	400	1.38	H	1000	1.35	I	1600	1.33	J	2000	1.37
Fluorene	A	2.0	1.74	B	4.0	1.57	C	8.0	1.61	D	20	1.54	E	100	1.64
	F	200	1.72	G	400	1.70	H	1000	1.66	I	1600	1.61	J	2000	1.66
Dibenzofuran	A	2.0	2.29	B	4.0	2.06	C	8.0	2.10	D	20	2.00	E	100	2.06
	F	200	2.13	G	400	2.10	H	1000	1.99	I	1600	1.93	J	2000	1.96
Phenanthrene	A	2.0	1.58	B	4.0	1.43	C	8.0	1.42	D	20	1.31	E	100	1.40
	F	200	1.43	G	400	1.44	H	1000	1.37	I	1600	1.32	J	2000	1.36
Anthracene	A	2.0	1.40	B	4.0	1.23	C	8.0	1.26	D	20	1.28	E	100	1.36
	F	200	1.45	G	400	1.50	H	1000	1.41	I	1600	1.36	J	2000	1.44
Fluoranthene	A	2.0	1.87	B	4.0	1.63	C	8.0	1.57	D	20	1.54	E	100	1.62
	F	200	1.64	G	400	1.64	H	1000	1.50	I	1600	1.47	J	2000	1.51
Pyrene	A	2.0	1.66	B	4.0	1.61	C	8.0	1.60	D	20	1.56	E	100	1.49
	F	200	1.54	G	400	1.50	H	1000	1.40	I	1600	1.34	J	2000	1.35
Benz(a)anthracene	A	2.0	1.83	B	4.0	1.43	C	8.0	1.33	D	20	1.26	E	100	1.26
	F	200	1.32	G	400	1.33	H	1000	1.31	I	1600	1.28	J	2000	1.30
Chrysene	A	2.0	1.54	B	4.0	1.42	C	8.0	1.37	D	20	1.31	E	100	1.30
	F	200	1.34	G	400	1.34	H	1000	1.28	I	1600	1.25	J	2000	1.26
Benzo(b)fluoranthene	A	2.0	1.43	B	4.0	1.31	C	8.0	1.29	D	20	1.26	E	100	1.37
	F	200	1.45	G	400	1.51	H	1000	1.39	I	1600	1.37	J	2000	1.40
Benzo(k)fluoranthene	A	2.0	1.42	B	4.0	1.18	C	8.0	1.22	D	20	1.23	E	100	1.32
	F	200	1.39	G	400	1.45	H	1000	1.35	I	1600	1.34	J	2000	1.35

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 11/10/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL7938
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzo(a)pyrene	A	2.0	1.16	B	4.0	1.08	C	8.0	1.01	D	20	1.01	E	100	1.07
	F	200	1.17	G	400	1.24	H	1000	1.23	I	1600	1.22	J	2000	1.24
Indeno(1,2,3-cd)pyrene	A	2.0	1.26	B	4.0	1.03	C	8.0	0.999	D	20	0.954	E	100	0.982
	F	200	1.06	G	400	1.11	H	1000	1.07	I	1600	1.06	J	2000	1.07
Dibenz(a,h)anthracene	A	2.0	1.13	B	4.0	1.18	C	8.0	1.07	D	20	1.02	E	100	1.08
	F	200	1.14	G	400	1.16	H	1000	1.13	I	1600	1.10	J	2000	1.13
Benzo(g,h,i)perylene	A	2.0	1.33	B	4.0	1.25	C	8.0	1.22	D	20	1.18	E	100	1.18
	F	200	1.22	G	400	1.23	H	1000	1.18	I	1600	1.14	J	2000	1.15
Fluorene-d10	A	2.0	1.49	B	4.0	1.29	C	8.0	1.30	D	20	1.30	E	100	1.32
	F	200	1.38	G	400	1.40	H	1000	1.38	I	1600	1.35	J	2000	1.39
Fluoranthene-d10	A	2.0	1.50	B	4.0	1.34	C	8.0	1.32	D	20	1.30	E	100	1.37
	F	200	1.37	G	400	1.43	H	1000	1.34	I	1600	1.32	J	2000	1.34
Terphenyl-d14	A	2.0	1.24	B	4.0	1.06	C	8.0	1.07	D	20	1.03	E	100	0.986
	F	200	1.02	G	400	1.02	H	1000	0.985	I	1600	0.965	J	2000	0.974

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Calibration Date:**	11/10/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID:	CAL7938	**Column:**	MS
Instrument ID:	MS11		

		Calibration Evaluation					RRF Evaluation		
Analyte Name	**Compound Type**	**Fit Type**	**Eval.**	**Eval. Result**	**Q**	**Control Criteria**	**Average RRF**	**Q**	**Minimum RRF**
Naphthalene	MS	AverageRF	% RSD	6.5		≤ 15	1.22		0.01
2-Methylnaphthalene	MS	AverageRF	% RSD	4.3		≤ 15	0.850		0.01
Acenaphthylene	MS	AverageRF	% RSD	4.0		≤ 15	2.26		0.01
Acenaphthene	MS	AverageRF	% RSD	3.3		≤ 15	1.37		0.01
Fluorene	MS	AverageRF	% RSD	3.9		≤ 15	1.65		0.01
Dibenzofuran	MS	AverageRF	% RSD	5.0		≤ 15	2.06		0.01
Phenanthrene	MS	AverageRF	% RSD	5.4		≤ 15	1.41		0.01
Anthracene	MS	AverageRF	% RSD	6.5		≤ 15	1.37		0.01
Fluoranthene	MS	AverageRF	% RSD	7.1		≤ 15	1.60		0.01
Pyrene	MS	AverageRF	% RSD	7.2		≤ 15	1.50		0.01
Benz(a)anthracene	MS	AverageRF	% RSD	12.5		≤ 15	1.36		0.01
Chrysene	MS	AverageRF	% RSD	6.6		≤ 15	1.34		0.01
Benzo(b)fluoranthene	MS	AverageRF	% RSD	5.5		≤ 15	1.38		0.01
Benzo(k)fluoranthene	MS	AverageRF	% RSD	6.7		≤ 15	1.33		0.01
Benzo(a)pyrene	MS	AverageRF	% RSD	8.2		≤ 15	1.14		0.01
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	8.0		≤ 15	1.06		0.01
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	4.3		≤ 15	1.11		0.01
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	4.7		≤ 15	1.21		0.01
Fluorene-d10	SURR	AverageRF	% RSD	4.6		≤ 15	1.36		0.01
Fluoranthene-d10	SURR	AverageRF	% RSD	4.4		≤ 15	1.36		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	7.7		≤ 15	1.04		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† *SPCC Compound* ‡ *CCC Compound*

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Calibration Date:**	11/10/2008
		Date Analyzed:	11/11/2008

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type:	Internal Standard	**Calibration ID:**	CAL7938
Analysis Method:	8270C SIM	**Units:**	ng/ml

File ID: J:\MS11\DATA\111108\1111F003.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	400	1.22	1.21	0	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	400	0.850	0.850	0	NA	± 20 %	AverageRF
Acenaphthylene	400	420	2.26	2.38	6	NA	± 20 %	AverageRF
Acenaphthene	400	410	1.37	1.39	2	NA	± 20 %	AverageRF
Fluorene	400	420	1.65	1.74	6	NA	± 20 %	AverageRF
Dibenzofuran	400	410	2.06	2.12	3	NA	± 20 %	AverageRF
Phenanthrene	400	400	1.41	1.42	1	NA	± 20 %	AverageRF
Anthracene	400	420	1.37	1.45	6	NA	± 20 %	AverageRF
Fluoranthene	400	410	1.60	1.64	3	NA	± 20 %	AverageRF
Pyrene	400	400	1.50	1.52	1	NA	± 20 %	AverageRF
Benz(a)anthracene	400	390	1.36	1.34	-2	NA	± 20 %	AverageRF
Chrysene	400	410	1.34	1.36	1	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	450	1.38	1.54	11	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	450	1.33	1.49	12	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	440	1.14	1.26	10	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	400	1.06	1.05	-1	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	420	1.11	1.16	4	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	420	1.21	1.26	4	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/21/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/10/2008
Calibration ID: CAL7938
Analysis Lot: KWG0812597
Units: ng/ml

File ID: J:\MS11\DATA\112108\1121F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	390	0.01	1.22	1.17	-4	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	410	0.01	0.850	0.877	3	NA	± 20 %	AverageRF
Acenaphthylene	400	410	0.01	2.26	2.32	3	NA	± 20 %	AverageRF
Acenaphthene	400	390	0.01	1.37	1.35	-2	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.65	1.69	3	NA	± 20 %	AverageRF
Dibenzofuran	400	400	0.01	2.06	2.04	-1	NA	± 20 %	AverageRF
Phenanthrene	400	400	0.01	1.41	1.39	-1	NA	± 20 %	AverageRF
Anthracene	400	410	0.01	1.37	1.42	4	NA	± 20 %	AverageRF
Fluoranthene	400	400	0.01	1.60	1.58	-1	NA	± 20 %	AverageRF
Pyrene	400	380	0.01	1.50	1.44	-4	NA	± 20 %	AverageRF
Benz(a)anthracene	400	390	0.01	1.36	1.34	-2	NA	± 20 %	AverageRF
Chrysene	400	400	0.01	1.34	1.33	-1	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	380	0.01	1.38	1.32	-4	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	390	0.01	1.33	1.30	-2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	410	0.01	1.14	1.17	2	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	390	0.01	1.06	1.03	-3	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	440	0.01	1.11	1.22	9	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	410	0.01	1.21	1.24	3	NA	± 20 %	AverageRF
Fluorene-d10	400	400	0.01	1.36	1.36	0	NA	± 20 %	AverageRF
Fluoranthene-d10	400	400	0.01	1.36	1.36	-1	NA	± 20 %	AverageRF
Terphenyl-d14	400	400	0.01	1.04	1.03	0	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/21/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type:	Internal Standard	**Calibration Date:**	11/10/2008
Analysis Method:	8270C SIM	**Calibration ID:**	CAL7938
		Analysis Lot:	KWG0812613
		Units:	ng/ml

File ID: J:\MS11\DATA\112108\1121F031.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	380	0.01	1.22	1.17	-4	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	390	0.01	0.850	0.834	-2	NA	± 20 %	AverageRF
Acenaphthylene	400	410	0.01	2.26	2.33	3	NA	± 20 %	AverageRF
Acenaphthene	400	400	0.01	1.37	1.35	-1	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.65	1.69	3	NA	± 20 %	AverageRF
Dibenzofuran	400	390	0.01	2.06	2.02	-2	NA	± 20 %	AverageRF
Phenanthrene	400	400	0.01	1.41	1.42	1	NA	± 20 %	AverageRF
Anthracene	400	420	0.01	1.37	1.44	5	NA	± 20 %	AverageRF
Fluoranthene	400	410	0.01	1.60	1.64	2	NA	± 20 %	AverageRF
Pyrene	400	400	0.01	1.50	1.50	0	NA	± 20 %	AverageRF
Benz(a)anthracene	400	400	0.01	1.36	1.35	-1	NA	± 20 %	AverageRF
Chrysene	400	400	0.01	1.34	1.35	0	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	390	0.01	1.38	1.34	-3	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	410	0.01	1.33	1.36	2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	410	0.01	1.14	1.16	2	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	380	0.01	1.06	1.01	-5	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	410	0.01	1.11	1.15	3	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	380	0.01	1.21	1.15	-5	NA	± 20 %	AverageRF
Fluorene-d10	400	400	0.01	1.36	1.35	-1	NA	± 20 %	AverageRF
Fluoranthene-d10	400	400	0.01	1.36	1.37	1	NA	± 20 %	AverageRF
Terphenyl-d14	400	410	0.01	1.04	1.05	2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/10/2008
Calibration ID: CAL7938
Analysis Lot: KWG0812624
Units: ng/ml

File ID: J:\MS11\DATA\112208\1122F006.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	390	0.01	1.22	1.17	-4	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	380	0.01	0.850	0.814	-4	NA	± 20 %	AverageRF
Acenaphthylene	400	410	0.01	2.26	2.31	3	NA	± 20 %	AverageRF
Acenaphthene	400	400	0.01	1.37	1.36	-1	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.65	1.69	2	NA	± 20 %	AverageRF
Dibenzofuran	400	390	0.01	2.06	2.03	-1	NA	± 20 %	AverageRF
Phenanthrene	400	390	0.01	1.41	1.37	-3	NA	± 20 %	AverageRF
Anthracene	400	430	0.01	1.37	1.47	8	NA	± 20 %	AverageRF
Fluoranthene	400	390	0.01	1.60	1.56	-2	NA	± 20 %	AverageRF
Pyrene	400	390	0.01	1.50	1.48	-2	NA	± 20 %	AverageRF
Benz(a)anthracene	400	400	0.01	1.36	1.37	1	NA	± 20 %	AverageRF
Chrysene	400	410	0.01	1.34	1.37	2	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	370	0.01	1.38	1.29	-7	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	400	0.01	1.33	1.32	0	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	420	0.01	1.14	1.19	4	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	440	0.01	1.06	1.17	11	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	470	0.01	1.11	1.30	17	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	450	0.01	1.21	1.37	14	NA	± 20 %	AverageRF
Fluorene-d10	400	390	0.01	1.36	1.33	-2	NA	± 20 %	AverageRF
Fluoranthene-d10	400	390	0.01	1.36	1.33	-2	NA	± 20 %	AverageRF
Terphenyl-d14	400	390	0.01	1.04	1.01	-2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/10/2008
Calibration ID: CAL7938
Analysis Lot: KWG0812625
Units: ng/ml

File ID: J:\MS11\DATA\112208\1122F035.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	380	0.01	1.22	1.15	-5	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	400	0.01	0.850	0.841	-1	NA	± 20 %	AverageRF
Acenaphthylene	400	420	0.01	2.26	2.36	5	NA	± 20 %	AverageRF
Acenaphthene	400	400	0.01	1.37	1.38	1	NA	± 20 %	AverageRF
Fluorene	400	420	0.01	1.65	1.73	5	NA	± 20 %	AverageRF
Dibenzofuran	400	400	0.01	2.06	2.06	0	NA	± 20 %	AverageRF
Phenanthrene	400	390	0.01	1.41	1.39	-1	NA	± 20 %	AverageRF
Anthracene	400	410	0.01	1.37	1.40	2	NA	± 20 %	AverageRF
Fluoranthene	400	400	0.01	1.60	1.60	0	NA	± 20 %	AverageRF
Pyrene	400	410	0.01	1.50	1.53	2	NA	± 20 %	AverageRF
Benz(a)anthracene	400	410	0.01	1.36	1.40	2	NA	± 20 %	AverageRF
Chrysene	400	420	0.01	1.34	1.39	4	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	380	0.01	1.38	1.31	-5	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	410	0.01	1.33	1.35	2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	410	0.01	1.14	1.18	3	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	410	0.01	1.06	1.10	3	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	440	0.01	1.11	1.23	10	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	430	0.01	1.21	1.29	7	NA	± 20 %	AverageRF
Fluorene-d10	400	400	0.01	1.36	1.34	-1	NA	± 20 %	AverageRF
Fluoranthene-d10	400	390	0.01	1.36	1.34	-2	NA	± 20 %	AverageRF
Terphenyl-d14	400	380	0.01	1.04	0.989	-4	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/23/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/10/2008
Calibration ID: CAL7938
Analysis Lot: KWG0812642
Units: ng/ml

File ID: J:\MS11\DATA\112308\1123F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	390	0.01	1.22	1.18	-3	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	390	0.01	0.850	0.829	-2	NA	± 20 %	AverageRF
Acenaphthylene	400	420	0.01	2.26	2.36	4	NA	± 20 %	AverageRF
Acenaphthene	400	400	0.01	1.37	1.37	0	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.65	1.70	3	NA	± 20 %	AverageRF
Dibenzofuran	400	400	0.01	2.06	2.05	-1	NA	± 20 %	AverageRF
Phenanthrene	400	400	0.01	1.41	1.41	0	NA	± 20 %	AverageRF
Anthracene	400	430	0.01	1.37	1.49	9	NA	± 20 %	AverageRF
Fluoranthene	400	410	0.01	1.60	1.63	2	NA	± 20 %	AverageRF
Pyrene	400	380	0.01	1.50	1.42	-6	NA	± 20 %	AverageRF
Benz(a)anthracene	400	400	0.01	1.36	1.37	0	NA	± 20 %	AverageRF
Chrysene	400	400	0.01	1.34	1.34	0	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	380	0.01	1.38	1.31	-5	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	390	0.01	1.33	1.30	-2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	420	0.01	1.14	1.19	4	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	470	0.01	1.06	1.24	17	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	480	0.01	1.11	1.33	20	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	470	0.01	1.21	1.42	17	NA	± 20 %	AverageRF
Fluorene-d10	400	400	0.01	1.36	1.36	0	NA	± 20 %	AverageRF
Fluoranthene-d10	400	410	0.01	1.36	1.38	1	NA	± 20 %	AverageRF
Terphenyl-d14	400	390	0.01	1.04	1.01	-3	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/24/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/10/2008
Calibration ID: CAL7938
Analysis Lot: KWG0812654
Units: ng/ml

File ID: J:\MS11\DATA\112408\1124F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	390	0.01	1.22	1.19	-3	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	390	0.01	0.850	0.831	-2	NA	± 20 %	AverageRF
Acenaphthylene	400	410	0.01	2.26	2.32	3	NA	± 20 %	AverageRF
Acenaphthene	400	390	0.01	1.37	1.35	-1	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.65	1.69	3	NA	± 20 %	AverageRF
Dibenzofuran	400	400	0.01	2.06	2.05	-1	NA	± 20 %	AverageRF
Phenanthrene	400	410	0.01	1.41	1.46	4	NA	± 20 %	AverageRF
Anthracene	400	420	0.01	1.37	1.45	6	NA	± 20 %	AverageRF
Fluoranthene	400	410	0.01	1.60	1.66	4	NA	± 20 %	AverageRF
Pyrene	400	390	0.01	1.50	1.45	-3	NA	± 20 %	AverageRF
Benz(a)anthracene	400	400	0.01	1.36	1.37	0	NA	± 20 %	AverageRF
Chrysene	400	410	0.01	1.34	1.36	1	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	390	0.01	1.38	1.34	-3	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	390	0.01	1.33	1.31	-1	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	420	0.01	1.14	1.21	6	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	450	0.01	1.06	1.19	12	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	450	0.01	1.11	1.26	13	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	450	0.01	1.21	1.35	12	NA	± 20 %	AverageRF
Fluorene-d10	400	390	0.01	1.36	1.33	-2	NA	± 20 %	AverageRF
Fluoranthene-d10	400	410	0.01	1.36	1.40	3	NA	± 20 %	AverageRF
Terphenyl-d14	400	390	0.01	1.04	1.01	-3	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Service Request: K0810639

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270C SIM
Analysis Lot: KWG0812597
Instrument ID: MS11

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1121F001.D	GC/MS Tuning - Decafluorotripheny	KWG0812597-1	11/21/2008	06:10		11/21/2008	06:30
1121F002.D	Continuing Calibration Verification	KWG0812597-2	11/21/2008	06:37		11/21/2008	06:56
1121F003.D	ZZZZZZ	ZZZZZZ	11/21/2008	07:03		11/21/2008	07:22
1121F004.D	ZZZZZZ	ZZZZZZ	11/21/2008	07:30		11/21/2008	07:49
1121F005.D	ZZZZZZ	ZZZZZZ	11/21/2008	07:56		11/21/2008	08:15
1121F006.D	ZZZZZZ	ZZZZZZ	11/21/2008	08:23		11/21/2008	08:42
1121F007.D	ZZZZZZ	ZZZZZZ	11/21/2008	08:49		11/21/2008	09:08
1121F008.D	ZZZZZZ	ZZZZZZ	11/21/2008	09:15		11/21/2008	09:34
1121F009.D	ZZZZZZ	ZZZZZZ	11/21/2008	09:42		11/21/2008	10:01
1121F010.D	ZZZZZZ	ZZZZZZ	11/21/2008	10:08		11/21/2008	10:27
1121F011.D	ZZZZZZ	ZZZZZZ	11/21/2008	10:34		11/21/2008	10:53
1121F012.D	ZZZZZZ	ZZZZZZ	11/21/2008	11:01		11/21/2008	11:20
1121F013.D	ZZZZZZ	ZZZZZZ	11/21/2008	11:27		11/21/2008	11:46
1121F014.D	ZZZZZZ	ZZZZZZ	11/21/2008	11:54		11/21/2008	12:13
1121F015.D	ZZZZZZ	ZZZZZZ	11/21/2008	12:20		11/21/2008	12:39
1121F016.D	ZZZZZZ	ZZZZZZ	11/21/2008	12:46		11/21/2008	13:05
1121F017.D	ZZZZZZ	ZZZZZZ	11/21/2008	13:13		11/21/2008	13:32
1121F018.D	ZZZZZZ	ZZZZZZ	11/21/2008	13:39		11/21/2008	13:58
1121F019.D	ZZZZZZ	ZZZZZZ	11/21/2008	14:05		11/21/2008	14:24
1121F020.D	ZZZZZZ	ZZZZZZ	11/21/2008	14:32		11/21/2008	14:51
1121F021.D	ZZZZZZ	ZZZZZZ	11/21/2008	14:58		11/21/2008	15:17
1121F022.D	ZZZZZZ	ZZZZZZ	11/21/2008	15:24		11/21/2008	15:43
1121F023.D	ZZZZZZ	ZZZZZZ	11/21/2008	15:51		11/21/2008	16:10
1121F024.D	ZZZZZZ	ZZZZZZ	11/21/2008	16:17		11/21/2008	16:36
1121F025.D	SED01-0.5-2.5A	K0810639-001	11/21/2008	16:43		11/21/2008	17:02
1121F026.D	SED01-2.5-5-A	K0810639-002	11/21/2008	17:10		11/21/2008	17:29
1121F027.D	SED02-0.5-2.5A	K0810639-004	11/21/2008	17:36		11/21/2008	17:55
1121F028.D	SED02-2.5-5-A	K0810639-005	11/21/2008	18:02		11/21/2008	18:21

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Service Request: K0810639

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270C SIM
Analysis Lot: KWG0812613
Instrument ID: MS11

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1121F030.D	GC/MS Tuning - Decafluorotripheny	KWG0812613-1	11/21/2008	18:55		11/21/2008	19:14
1121F031.D	Continuing Calibration Verification	KWG0812613-2	11/21/2008	19:21		11/21/2008	19:40
1121F032.D	ZZZZZZ	ZZZZZZ	11/21/2008	19:47		11/21/2008	20:06
1121F033.D	ZZZZZZ	ZZZZZZ	11/21/2008	20:14		11/21/2008	20:33
1121F034.D	ZZZZZZ	ZZZZZZ	11/21/2008	20:40		11/21/2008	20:59
1121F035.D	ZZZZZZ	ZZZZZZ	11/21/2008	21:06		11/21/2008	21:25
1121F036.D	ZZZZZZ	ZZZZZZ	11/21/2008	21:33		11/21/2008	21:52
1121F037.D	ZZZZZZ	ZZZZZZ	11/21/2008	21:59		11/21/2008	22:18
1121F038.D	ZZZZZZ	ZZZZZZ	11/21/2008	22:25		11/21/2008	22:44
1121F039.D	ZZZZZZ	ZZZZZZ	11/21/2008	22:51		11/21/2008	23:10
1121F040.D	ZZZZZZ	ZZZZZZ	11/21/2008	23:18		11/21/2008	23:37
1121F041.D	ZZZZZZ	ZZZZZZ	11/21/2008	23:44		11/22/2008	00:03
1121F042.D	ZZZZZZ	ZZZZZZ	11/22/2008	00:10		11/22/2008	00:29
1121F043.D	ZZZZZZ	ZZZZZZ	11/22/2008	00:36		11/22/2008	00:55
1121F044.D	ZZZZZZ	ZZZZZZ	11/22/2008	01:03		11/22/2008	01:22
1121F045.D	ZZZZZZ	ZZZZZZ	11/22/2008	01:29		11/22/2008	01:48
1121F046.D	ZZZZZZ	ZZZZZZ	11/22/2008	01:55		11/22/2008	02:14
1121F047.D	SED11-0.5-2.5-A	K0810639-008	11/22/2008	02:22		11/22/2008	02:41
1121F048.D	SED10-0.5-2.5-B	K0810639-007	11/22/2008	02:48		11/22/2008	03:07
1121F049.D	SED02-5-8.5-A	K0810639-003	11/22/2008	03:14		11/22/2008	03:33
1121F050.D	SED01-5-6.5-A	K0810639-006	11/22/2008	03:40		11/22/2008	03:59
1121F051.D	SED14-0.5-2-A	K0810639-009	11/22/2008	04:07		11/22/2008	04:26
1121F052.D	ZZZZZZ	ZZZZZZ	11/22/2008	04:33		11/22/2008	04:52
1121F053.D	ZZZZZZ	ZZZZZZ	11/22/2008	05:45		11/22/2008	06:04
1121F054.D	ZZZZZZ	ZZZZZZ	11/22/2008	06:11		11/22/2008	06:30
1121F055.D	ZZZZZZ	ZZZZZZ	11/22/2008	06:37		11/22/2008	06:56

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Service Request: K0810639

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270C SIM
Analysis Lot: KWG0812624
Instrument ID: MS11

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1122F005.D	GC/MS Tuning - Decafluorotripheny	KWG0812624-1	11/22/2008	09:49		11/22/2008	10:08
1122F006.D	Continuing Calibration Verification	KWG0812624-2	11/22/2008	10:15		11/22/2008	10:34
1122F007.D	ZZZZZZ	ZZZZZZ	11/22/2008	10:41		11/22/2008	11:00
1122F008.D	ZZZZZZ	ZZZZZZ	11/22/2008	11:08		11/22/2008	11:27
1122F009.D	ZZZZZZ	ZZZZZZ	11/22/2008	11:34		11/22/2008	11:53
1122F010.D	ZZZZZZ	ZZZZZZ	11/22/2008	12:00		11/22/2008	12:19
1122F011.D	ZZZZZZ	ZZZZZZ	11/22/2008	12:27		11/22/2008	12:46
1122F012.D	ZZZZZZ	ZZZZZZ	11/22/2008	12:53		11/22/2008	13:12
1122F013.D	ZZZZZZ	ZZZZZZ	11/22/2008	13:20		11/22/2008	13:39
1122F014.D	ZZZZZZ	ZZZZZZ	11/22/2008	13:46		11/22/2008	14:05
1122F015.D	ZZZZZZ	ZZZZZZ	11/22/2008	14:13		11/22/2008	14:32
1122F016.D	ZZZZZZ	ZZZZZZ	11/22/2008	14:39		11/22/2008	14:58
1122F017.D	ZZZZZZ	ZZZZZZ	11/22/2008	15:06		11/22/2008	15:25
1122F018.D	ZZZZZZ	ZZZZZZ	11/22/2008	15:32		11/22/2008	15:51
1122F019.D	ZZZZZZ	ZZZZZZ	11/22/2008	15:58		11/22/2008	16:17
1122F020.D	ZZZZZZ	ZZZZZZ	11/22/2008	16:25		11/22/2008	16:44
1122F021.D	ZZZZZZ	ZZZZZZ	11/22/2008	16:51		11/22/2008	17:10
1122F022.D	ZZZZZZ	ZZZZZZ	11/22/2008	17:17		11/22/2008	17:36
1122F023.D	ZZZZZZ	ZZZZZZ	11/22/2008	17:44		11/22/2008	18:03
1122F024.D	ZZZZZZ	ZZZZZZ	11/22/2008	18:10		11/22/2008	18:29
1122F025.D	ZZZZZZ	ZZZZZZ	11/22/2008	18:36		11/22/2008	18:55
1122F026.D	ZZZZZZ	ZZZZZZ	11/22/2008	19:12		11/22/2008	19:31
1122F027.D	ZZZZZZ	ZZZZZZ	11/22/2008	19:38		11/22/2008	19:57
1122F028.D	SED01-0.5-2.5A	K0810639-001	11/22/2008	20:04		11/22/2008	20:23
1122F029.D	SED02-0.5-2.5A	K0810639-004	11/22/2008	20:30		11/22/2008	20:49
1122F030.D	ZZZZZZ	ZZZZZZ	11/22/2008	20:57		11/22/2008	21:16
1122F031.D	ZZZZZZ	ZZZZZZ	11/22/2008	21:23		11/22/2008	21:42

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill **Service Request:** K0810639
Project: Northwest Pipe Co Sediment/358932.PH.OF

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270C SIM **Analysis Lot:** KWG0812625
Instrument ID: MS11

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1122F034.D	GC/MS Tuning - Decafluorotripheny	KWG0812625-1	11/22/2008	22:42		11/22/2008	23:02
1122F035.D	Continuing Calibration Verification	KWG0812625-2	11/22/2008	23:08		11/22/2008	23:27
1122F036.D	ZZZZZZ	ZZZZZZ	11/22/2008	23:35		11/22/2008	23:54
1122F037.D	ZZZZZZ	ZZZZZZ	11/23/2008	00:01		11/23/2008	00:20
1122F038.D	ZZZZZZ	ZZZZZZ	11/23/2008	00:27		11/23/2008	00:46
1122F039.D	ZZZZZZ	ZZZZZZ	11/23/2008	00:54		11/23/2008	01:13
1122F040.D	ZZZZZZ	ZZZZZZ	11/23/2008	01:20		11/23/2008	01:39
1122F041.D	ZZZZZZ	ZZZZZZ	11/23/2008	01:46		11/23/2008	02:05
1122F042.D	SED01-2.5-5-A	K0810639-002	11/23/2008	02:13		11/23/2008	02:32
1122F043.D	SED02-2.5-5-A	K0810639-005	11/23/2008	02:39		11/23/2008	02:58
1122F044.D	SED02-5-8.5-A	K0810639-003	11/23/2008	03:05		11/23/2008	03:24
1122F045.D	SED01-5-6.5-A	K0810639-006	11/23/2008	03:32		11/23/2008	03:51
1122F046.D	SED14-0.5-2-A	K0810639-009	11/23/2008	03:58		11/23/2008	04:17
1122F047.D	ZZZZZZ	ZZZZZZ	11/23/2008	04:25		11/23/2008	04:44
1122F048.D	ZZZZZZ	ZZZZZZ	11/23/2008	04:51		11/23/2008	05:10
1122F049.D	ZZZZZZ	ZZZZZZ	11/23/2008	05:17		11/23/2008	05:36
1122F050.D	ZZZZZZ	ZZZZZZ	11/23/2008	05:44		11/23/2008	06:03
1122F051.D	ZZZZZZ	ZZZZZZ	11/23/2008	06:10		11/23/2008	06:29
1122F052.D	ZZZZZZ	ZZZZZZ	11/23/2008	06:36		11/23/2008	06:55
1122F053.D	ZZZZZZ	ZZZZZZ	11/23/2008	07:03		11/23/2008	07:22
1122F054.D	ZZZZZZ	ZZZZZZ	11/23/2008	07:29		11/23/2008	07:48
1122F055.D	ZZZZZZ	ZZZZZZ	11/23/2008	07:55		11/23/2008	08:14
1122F056.D	ZZZZZZ	ZZZZZZ	11/23/2008	08:22		11/23/2008	08:41
1122F057.D	ZZZZZZ	ZZZZZZ	11/23/2008	08:48		11/23/2008	09:07
1122F058.D	SED11-0.5-2.5-A	K0810639-008	11/23/2008	09:15		11/23/2008	09:34
1122F059.D	ZZZZZZ	ZZZZZZ	11/23/2008	09:41		11/23/2008	10:00

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Service Request: K0810639

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270C SIM
Analysis Lot: KWG0812642
Instrument ID: MS11

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1123F001.D	GC/MS Tuning - Decafluorotripheny	KWG0812642-1	11/23/2008	11:17		11/23/2008	11:37
1123F002.D	Continuing Calibration Verification	KWG0812642-2	11/23/2008	11:43		11/23/2008	12:02
1123F003.D	Method Blank	KWG0812042-5	11/23/2008	12:10		11/23/2008	12:29
1123F004.D	ZZZZZZ	ZZZZZZ	11/23/2008	12:37		11/23/2008	12:56
1123F005.D	Lab Control Sample	KWG0812042-3	11/23/2008	13:03		11/23/2008	13:22
1123F006.D	Duplicate Lab Control Sample	KWG0812042-4	11/23/2008	13:29		11/23/2008	13:48
1123F007.D	ZZZZZZ	ZZZZZZ	11/23/2008	13:56		11/23/2008	14:15
1123F008.D	ZZZZZZ	ZZZZZZ	11/23/2008	14:23		11/23/2008	14:42
1123F009.D	ZZZZZZ	ZZZZZZ	11/23/2008	14:49		11/23/2008	15:08
1123F010.D	ZZZZZZ	ZZZZZZ	11/23/2008	15:16		11/23/2008	15:35
1123F011.D	SED14-2-3.5-A	K0810639-010	11/23/2008	15:42		11/23/2008	16:01
1123F012.D	SED02-5-8.5-AMS	KWG0812042-1	11/23/2008	16:09		11/23/2008	16:28
1123F013.D	SED02-5-8.5-ADMS	KWG0812042-2	11/23/2008	16:35		11/23/2008	16:54
1123F014.D	ZZZZZZ	ZZZZZZ	11/23/2008	17:02		11/23/2008	17:21
1123F015.D	ZZZZZZ	ZZZZZZ	11/23/2008	17:28		11/23/2008	17:47
1123F016.D	ZZZZZZ	ZZZZZZ	11/23/2008	17:55		11/23/2008	18:14
1123F017.D	ZZZZZZ	ZZZZZZ	11/23/2008	18:21		11/23/2008	18:40
1123F018.D	ZZZZZZ	ZZZZZZ	11/23/2008	18:48		11/23/2008	19:07
1123F019.D	ZZZZZZ	ZZZZZZ	11/23/2008	19:14		11/23/2008	19:33
1123F020.D	ZZZZZZ	ZZZZZZ	11/23/2008	19:41		11/23/2008	20:00
1123F021.D	ZZZZZZ	ZZZZZZ	11/23/2008	20:07		11/23/2008	20:26
1123F022.D	ZZZZZZ	ZZZZZZ	11/23/2008	20:34		11/23/2008	20:53
1123F023.D	ZZZZZZ	ZZZZZZ	11/23/2008	21:00		11/23/2008	21:19
1123F024.D	ZZZZZZ	ZZZZZZ	11/23/2008	21:27		11/23/2008	21:46
1123F025.D	ZZZZZZ	ZZZZZZ	11/23/2008	21:53		11/23/2008	22:12
1123F026.D	ZZZZZZ	ZZZZZZ	11/23/2008	22:20		11/23/2008	22:39
1123F027.D	ZZZZZZ	ZZZZZZ	11/23/2008	22:46		11/23/2008	23:05
1123F028.D	ZZZZZZ	ZZZZZZ	11/23/2008	23:13		11/23/2008	23:32

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Service Request: K0810639

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270C SIM
Analysis Lot: KWG0812654
Instrument ID: MS11

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1124F001.D	GC/MS Tuning - Decafluorotripheny	KWG0812654-1	11/24/2008	06:34		11/24/2008	06:53
1124F002.D	Continuing Calibration Verification	KWG0812654-2	11/24/2008	07:00		11/24/2008	07:19
1124F004.D	SED14-2-3.5-A	K0810639-010	11/24/2008	07:55		11/24/2008	08:14
1124F005.D	ZZZZZZ	ZZZZZZ	11/24/2008	08:22		11/24/2008	08:41
1124F006.D	ZZZZZZ	ZZZZZZ	11/24/2008	08:48		11/24/2008	09:07
1124F008.D	ZZZZZZ	ZZZZZZ	11/24/2008	09:41		11/24/2008	10:00
1124F009.D	ZZZZZZ	ZZZZZZ	11/24/2008	10:08		11/24/2008	10:27
1124F010.D	ZZZZZZ	ZZZZZZ	11/24/2008	10:34		11/24/2008	10:53
1124F011.D	ZZZZZZ	ZZZZZZ	11/24/2008	11:01		11/24/2008	11:20
1124F012.D	ZZZZZZ	ZZZZZZ	11/24/2008	11:27		11/24/2008	11:46
1124F013.D	ZZZZZZ	ZZZZZZ	11/24/2008	11:54		11/24/2008	12:13

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Extracted: 11/11/2008

Extraction Prep Log
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Extraction Lot: KWG0812042
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
SED01-0.5-2.5ADL	K0810639-001	07/10/08	07/15/08	20.05g	10ml	47.5	
SED01-0.5-2.5A	K0810639-001	07/10/08	07/15/08	20.05g	10ml	47.5	
SED01-2.5-5-ADL	K0810639-002	07/10/08	07/15/08	19.16g	10ml	53.0	
SED01-2.5-5-A	K0810639-002	07/10/08	07/15/08	19.16g	10ml	53.0	
SED02-5-8.5-ADL	K0810639-003	07/10/08	07/15/08	15.38g	10ml	66.2	
SED02-5-8.5-A	K0810639-003	07/10/08	07/15/08	15.38g	10ml	66.2	
SED02-0.5-2.5ADL	K0810639-004	07/10/08	07/15/08	20.02g	10ml	52.6	
SED02-0.5-2.5A	K0810639-004	07/10/08	07/15/08	20.02g	10ml	52.6	
SED02-2.5-5-ADL	K0810639-005	07/10/08	07/15/08	20.01g	10ml	48.8	
SED02-2.5-5-A	K0810639-005	07/10/08	07/15/08	20.01g	10ml	48.8	
SED01-5-6.5-ADL	K0810639-006	07/10/08	07/15/08	20.08g	10ml	58.0	
SED01-5-6.5-A	K0810639-006	07/10/08	07/15/08	20.08g	10ml	58.0	
SED10-0.5-2.5-B	K0810639-007	07/24/08	07/29/08	15.04g	10ml	67.0	
SED11-0.5-2.5-ADL	K0810639-008	07/24/08	07/29/08	20.09g	10ml	53.9	
SED11-0.5-2.5-A	K0810639-008	07/24/08	07/29/08	20.09g	10ml	53.9	
SED14-0.5-2-ADL	K0810639-009	07/25/08	07/29/08	17.42g	10ml	60.0	
SED14-0.5-2-A	K0810639-009	07/25/08	07/29/08	17.42g	10ml	60.0	
SED14-2-3.5-ADL	K0810639-010	07/25/08	07/29/08	16.02g	10ml	68.2	
SED14-2-3.5-A	K0810639-010	07/25/08	07/29/08	16.02g	10ml	68.2	
Method Blank	KWG0812042-5	NA	NA	30.00g	10ml	NA	
SED02-5-8.5-AMS	KWG0812042-1	07/10/08	07/15/08	15.19g	10ml	66.2	
SED02-5-8.5-ADMS	KWG0812042-2	07/10/08	07/15/08	15.32g	10ml	66.2	
Lab Control Sample	KWG0812042-3	NA	NA	10.00g	10ml	NA	
Duplicate Lab Control Sample	KWG0812042-4	NA	NA	10.00g	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

u:\Stealth\Crystal.rpt\DividerB.rpt

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

QC Reports

u:\Stealth\Crystal.rpt\DividerC.rpt

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
SED01-0.5-2.5A	K0810639-001	61	88	69
SED01-2.5-5-A	K0810639-002	90 D	46 D	114 D
SED02-5-8.5-A	K0810639-003	72	75	78
SED02-0.5-2.5A	K0810639-004	56	82	65
SED02-2.5-5-A	K0810639-005	84 D	63 D	96 D
SED01-5-6.5-A	K0810639-006	54	60	61
SED10-0.5-2.5-B	K0810639-007	62	55	67
SED11-0.5-2.5-A	K0810639-008	58 D	61 D	87 D
SED14-0.5-2-A	K0810639-009	65	80	71
SED14-2-3.5-A	K0810639-010	64	91	81
Method Blank	KWG0812042-5	68	68	67
SED02-5-8.5-AMS	KWG0812042-1	83	102	87
SED02-5-8.5-ADMS	KWG0812042-2	71	104	84
Lab Control Sample	KWG0812042-3	76	76	73
Duplicate Lab Control Sample	KWG0812042-4	78	84	84

Surrogate Recovery Control Limits (%)

Sur1 = Fluorene-d10	10-128
Sur2 = Fluoranthene-d10	29-121
Sur3 = Terphenyl-d14	24-141

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/21/2008
		Time Analyzed:	06:37

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112108\1121F002.D	**Lab Code:**	KWG0812597-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812597
Analysis Method:	8270C SIM		

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	198,044	5.04	121,056	6.46	211,707	7.70
	Upper Limit ==>	396,088	5.54	242,112	6.96	423,414	8.20
	Lower Limit ==>	99,022	4.54	60,528	5.96	105,854	7.20
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
SED01-0.5-2.5ADL	K0810639-001	180,892	5.05	97,918	6.47	179,576	7.71
SED01-2.5-5-A	K0810639-002	191,900	5.05	110,813	6.47	217,351	7.71
SED02-0.5-2.5ADL	K0810639-004	190,376	5.06	98,996	6.47	186,496	7.70
SED02-2.5-5-A	K0810639-005	184,766	5.05	105,836	6.47	190,914	7.70

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/21/2008
Time Analyzed: 06:37

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112108\1121F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0812597-2
Analysis Lot: KWG0812597

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	237,498	10.59	260,933	14.59
	Upper Limit ==>	474,996	11.09	521,866	15.09
	Lower Limit ==>	118,749	10.09	130,467	14.09
	ICAL Result ==>	268,348	10.61	256,596	14.61
Associated Analyses					
SED01-0.5-2.5ADL	K0810639-001	210,121	10.59	223,321	14.61
SED01-2.5-5-A	K0810639-002	256,218	10.60	255,003	14.61
SED02-0.5-2.5ADL	K0810639-004	213,600	10.59	231,371	14.61
SED02-2.5-5-A	K0810639-005	230,284	10.60	235,300	14.61

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/21/2008
		Time Analyzed:	19:21

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112108\1121F031.D	**Lab Code:**	KWG0812613-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812613
Analysis Method:	8270C SIM		

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	209,677	5.05	114,663	6.47	194,060	7.71
	Upper Limit ==>	419,354	5.55	229,326	6.97	388,120	8.21
	Lower Limit ==>	104,839	4.55	57,332	5.97	97,030	7.21
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
SED11-0.5-2.5-ADL	K0810639-008	228,086	5.06	113,668	6.47	215,237	7.71
SED10-0.5-2.5-B	K0810639-007	176,484	5.04	108,198	6.47	188,421	7.71
SED02-5-8.5-A	K0810639-003	261,241	5.04	157,180	6.47	309,278	7.73
SED01-5-6.5-A	K0810639-006	228,791	5.04	123,749	6.47	210,262	7.71
SED14-0.5-2-A	K0810639-009	269,595	5.05	138,146	6.47	230,010	7.71

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/21/2008
		Time Analyzed:	19:21

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112108\1121F031.D	**Lab Code:**	KWG0812613-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812613
Analysis Method:	8270C SIM		

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	214,914	10.60	222,377	14.61
	Upper Limit ==>	429,828	11.10	444,754	15.11
	Lower Limit ==>	107,457	10.10	111,189	14.11
	ICAL Result ==>	268,348	10.61	256,596	14.61
Associated Analyses					
SED11-0.5-2.5-ADL	K0810639-008	242,153	10.61	251,850	14.64
SED10-0.5-2.5-B	K0810639-007	179,877	10.60	190,694	14.63
SED02-5-8.5-A	K0810639-003	331,513	10.65	311,851	14.74
SED01-5-6.5-A	K0810639-006	262,376	10.62	266,909	14.67
SED14-0.5-2-A	K0810639-009	288,363	10.62	299,055	14.66

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/22/2008
		Time Analyzed:	10:15

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112208\1122F006.D	**Lab Code:**	KWG0812624-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812624
Analysis Method:	8270C SIM		

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	331,128	5.04	178,067	6.46	298,606	7.70
	Upper Limit ==>	662,256	5.54	356,134	6.96	597,212	8.20
	Lower Limit ==>	165,564	4.54	89,034	5.96	149,303	7.20
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
SED01-0.5-2.5A	K0810639-001	276,938	5.03	155,248	6.45	278,460	7.70
SED02-0.5-2.5A	K0810639-004	273,979	5.03	155,860	6.45	275,518	7.70

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/22/2008
		Time Analyzed:	10:15

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112208\1122F006.D	**Lab Code:**	KWG0812624-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812624
Analysis Method:	8270C SIM		

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	334,575	10.57	384,082	14.56
	Upper Limit ==>	669,150	11.07	768,164	15.06
	Lower Limit ==>	167,288	10.07	192,041	14.06
	ICAL Result ==>	268,348	10.61	256,596	14.61
Associated Analyses					
SED01-0.5-2.5A	K0810639-001	363,535	10.62	368,075	14.69
SED02-0.5-2.5A	K0810639-004	360,171	10.60	388,407	14.65

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/22/2008
		Time Analyzed:	23:08

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112208\1122F035.D	**Lab Code:**	KWG0812625-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812625
Analysis Method:	8270C SIM		

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	313,405	5.04	166,936	6.45	281,904	7.69
	Upper Limit ==>	626,810	5.54	333,872	6.95	563,808	8.19
	Lower Limit ==>	156,703	4.54	83,468	5.95	140,952	7.19
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
SED01-2.5-5-ADL	K0810639-002	305,871	5.04	152,267	6.45	266,592	7.69
SED02-2.5-5-ADL	K0810639-005	220,587	5.04	111,896	6.46	207,934	7.70
SED02-5-8.5-ADL	K0810639-003	227,669	5.04	126,980	6.45	209,850	7.69
SED01-5-6.5-ADL	K0810639-006	242,576	5.04	122,969	6.45	210,352	7.69
SED14-0.5-2-ADL	K0810639-009	240,074	5.04	123,982	6.46	228,079	7.69
SED11-0.5-2.5-A	K0810639-008	225,019	5.04	127,552	6.45	222,993	7.69

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008
Time Analyzed: 23:08

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112208\1122F035.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0812625-2
Analysis Lot: KWG0812625

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	312,237	10.57	354,334	14.55
	Upper Limit ==>	624,474	11.07	708,668	15.05
	Lower Limit ==>	156,119	10.07	177,167	14.05
	ICAL Result ==>	268,348	10.61	256,596	14.61
Associated Analyses					
SED01-2.5-5-ADL	K0810639-002	265,504	10.58	271,253	14.57
SED02-2.5-5-ADL	K0810639-005	209,367	10.58	202,665	14.57
SED02-5-8.5-ADL	K0810639-003	239,440	10.57	267,713	14.56
SED01-5-6.5-ADL	K0810639-006	244,970	10.57	275,912	14.56
SED14-0.5-2-ADL	K0810639-009	263,793	10.57	315,159	14.55
SED11-0.5-2.5-A	K0810639-008	275,731	10.58	302,931	14.58

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/23/2008
		Time Analyzed:	11:43

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112308\1123F002.D	**Lab Code:**	KWG0812642-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812642
Analysis Method:	8270C SIM		

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	288,327	5.04	154,376	6.45	260,362	7.69
	Upper Limit ==>	576,654	5.54	308,752	6.95	520,724	8.19
	Lower Limit ==>	144,164	4.54	77,188	5.95	130,181	7.19
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
Method Blank	KWG0812042-5	193,013	5.02	115,774	6.45	209,742	7.69
Lab Control Sample	KWG0812042-3	176,907	5.02	104,948	6.45	185,446	7.69
Duplicate Lab Control Sample	KWG0812042-4	183,383	5.02	105,139	6.45	187,364	7.69
SED14-2-3.5-A	K0810639-010	167,508	5.02	98,097	6.45	199,834	7.69
SED02-5-8.5-AMS	KWG0812042-1	175,386	5.02	121,999	6.45	339,720	7.72
SED02-5-8.5-ADMS	KWG0812042-2	174,171	5.02	122,372	6.45	310,917	7.72

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/23/2008
Time Analyzed: 11:43

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112308\1123F002.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0812642-2
Analysis Lot: KWG0812642

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	318,561	10.56	360,959	14.53
	Upper Limit ==>	637,122	11.06	721,918	15.03
	Lower Limit ==>	159,281	10.06	180,480	14.03
	ICAL Result ==>	268,348	10.61	256,596	14.61
Associated Analyses					
Method Blank	KWG0812042-5	235,530	10.56	262,098	14.53
Lab Control Sample	KWG0812042-3	215,124	10.56	238,690	14.52
Duplicate Lab Control Sample	KWG0812042-4	215,847	10.56	239,351	14.52
SED14-2-3.5-A	K0810639-010	299,462	10.62	267,913	14.68
SED02-5-8.5-AMS	KWG0812042-1	341,829	10.63	299,460	14.69
SED02-5-8.5-ADMS	KWG0812042-2	336,071	10.63	295,085	14.70

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/24/2008
		Time Analyzed:	07:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112408\1124F002.D	**Lab Code:**	KWG0812654-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812654
Analysis Method:	8270C SIM		

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	299,506	5.04	166,804	6.45	276,041	7.70
	Upper Limit ==>	599,012	5.54	333,608	6.95	552,082	8.20
	Lower Limit ==>	149,753	4.54	83,402	5.95	138,021	7.20
	ICAL Result ==>	244,249	5.06	138,359	6.48	234,142	7.72
Associated Analyses							
SED14-2-3.5-ADL	K0810639-010	283,636	5.03	150,435	6.45	246,483	7.69

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/24/2008
		Time Analyzed:	07:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112408\1124F002.D	**Lab Code:**	KWG0812654-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0812654
Analysis Method:	8270C SIM		

		Chrysene-d12			
		Area	**RT**	**Area**	**RT**
	Results ==>	330,482	10.58		
	Upper Limit ==>	660,964	11.08		
	Lower Limit ==>	165,241	10.08		
	ICAL Result ==>	268,348	10.61		
Associated Analyses					
SED14-2-3.5-ADL	K0810639-010	301,391	10.59		

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639
Date Extracted: 11/11/2008
Date Analyzed: 11/23/2008

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name: SED02-5-8.5-A
Lab Code: K0810639-003

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low
Extraction Lot: KWG0812042

		SED02-5-8.5-AMS KWG0812042-1 Matrix Spike			SED02-5-8.5-ADMS KWG0812042-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	230	593	497	73	562	493	67	10-129	6	40
2-Methylnaphthalene	300	717	497	83	720	493	85	10-133	0	40
Acenaphthylene	98	408	497	62	407	493	63	37-100	0	40
Acenaphthene	10000	11500E	497	276 #	11600E	493	295 #	28-111	1	40
Fluorene	7400	8620E	497	242 #	8930E	493	308 #	24-122	4	40
Dibenzofuran	3800	4500E	497	141 #	4720E	493	188 #	37-103	5	40
Phenanthrene	31000	9220E	497	-4372 #	11800E	493	-3886 #	23-124	25	40
Anthracene	5900	3120E	497	-555 #	3800E	493	-422 #	30-144	20	40
Fluoranthene	16000	7830E	497	-1728 #	8400E	493	-1627 #	21-145	7	40
Pyrene	14000	8880E	497	-971 #	9160E	493	-924 #	10-155	3	40
Benz(a)anthracene	2400	3040E	497	125 #	3210E	493	160 #	25-127	5	40
Chrysene	2600	3010E	497	77 #	3230E	493	121 #	28-126	7	40
Benzo(b)fluoranthene	1800	2380E	497	119	2370E	493	119	18-130	0	40
Benzo(k)fluoranthene	580	1120	497	108	1110	493	107	30-122	0	40
Benzo(a)pyrene	1600	2300E	497	138 *	2230E	493	126	20-132	3	40
Indeno(1,2,3-cd)pyrene	1200	2120E	497	181 *	1970E	493	152 *	20-132	7	40
Dibenz(a,h)anthracene	230	808	497	116	767	493	109	28-124	5	40
Benzo(g,h,i)perylene	1200	2040E	497	160 *	1950	493	143 *	24-124	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Extracted:**	11/11/2008
Sample Matrix:	Sediment	**Date Analyzed:**	11/23/2008

Lab Control Spike/Duplicate Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8270C SIM	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0812042

	Lab Control Sample KWG0812042-3 **Lab Control Spike**			Duplicate Lab Control Sample KWG0812042-4 **Duplicate Lab Control Spike**					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	372	500	74	378	500	76	35-104	1	40
2-Methylnaphthalene	429	500	86	427	500	85	34-110	1	40
Acenaphthylene	412	500	82	417	500	83	46-105	1	40
Acenaphthene	398	500	80	403	500	81	47-104	1	40
Fluorene	417	500	83	425	500	85	52-106	2	40
Dibenzofuran	416	500	83	426	500	85	50-106	2	40
Phenanthrene	400	500	80	401	500	80	48-108	0	40
Anthracene	429	500	86	444	500	89	51-110	3	40
Fluoranthene	417	500	83	447	500	89	54-121	7	40
Pyrene	396	500	79	424	500	85	53-110	7	40
Benz(a)anthracene	428	500	86	464	500	93	51-113	8	40
Chrysene	428	500	86	465	500	93	56-112	8	40
Benzo(b)fluoranthene	411	500	82	444	500	89	51-116	8	40
Benzo(k)fluoranthene	439	500	88	470	500	94	57-114	7	40
Benzo(a)pyrene	456	500	91	494	500	99	53-112	8	40
Indeno(1,2,3-cd)pyrene	451	500	90	492	500	98	42-124	9	40
Dibenz(a,h)anthracene	471	500	94	512	500	102	44-125	8	40
Benzo(g,h,i)perylene	435	500	87	469	500	94	50-115	7	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Extracted:**	11/11/2008
Sample Matrix:	Sediment	**Date Analyzed:**	11/23/2008
		Time Analyzed:	12:10

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**File ID:**	J:\MS11\DATA\112308\1123F003.D
Lab Code:	KWG0812042-5	**Instrument ID:**	MS11
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0812042

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112108\1121F025.D	11/21/08	16:43
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112108\1121F026.D	11/21/08	17:10
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112108\1121F027.D	11/21/08	17:36
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112108\1121F028.D	11/21/08	18:02
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112108\1121F047.D	11/22/08	02:22
SED10-0.5-2.5-B	K0810639-007	J:\MS11\DATA\112108\1121F048.D	11/22/08	02:48
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112108\1121F049.D	11/22/08	03:14
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112108\1121F050.D	11/22/08	03:40
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112108\1121F051.D	11/22/08	04:07
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112208\1122F028.D	11/22/08	20:04
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112208\1122F029.D	11/22/08	20:30
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112208\1122F042.D	11/23/08	02:13
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112208\1122F043.D	11/23/08	02:39
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112208\1122F044.D	11/23/08	03:05
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112208\1122F045.D	11/23/08	03:32
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112208\1122F046.D	11/23/08	03:58
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112208\1122F058.D	11/23/08	09:15
Lab Control Sample	KWG0812042-3	J:\MS11\DATA\112308\1123F005.D	11/23/08	13:03
Duplicate Lab Control Sample	KWG0812042-4	J:\MS11\DATA\112308\1123F006.D	11/23/08	13:29
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112308\1123F011.D	11/23/08	15:42
SED02-5-8.5-AMS	KWG0812042-1	J:\MS11\DATA\112308\1123F012.D	11/23/08	16:09
SED02-5-8.5-ADMS	KWG0812042-2	J:\MS11\DATA\112308\1123F013.D	11/23/08	16:35
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112408\1124F004.D	11/24/08	07:55

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF
Sample Matrix: Sediment

Service Request: K0810639

Lab Control Sample/Duplicate Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0812042-3	**Lab Code:**	KWG0812042-4
File ID:	J:\MS11\DATA\112308\1123F005.D	**File ID:**	J:\MS11\DATA\112308\1123F006.D
Instrument ID:	MS11	**Instrument ID:**	MS11
Date Extracted:	11/11/2008	**Date Extracted:**	11/11/2008
Date Analyzed:	11/23/2008	**Date Analyzed:**	11/23/2008
Time Analyzed:	13:03	**Time Analyzed:**	13:29

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0812042

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112108\1121F025.D	11/21/08	16:43
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112108\1121F026.D	11/21/08	17:10
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112108\1121F027.D	11/21/08	17:36
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112108\1121F028.D	11/21/08	18:02
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112108\1121F049.D	11/22/08	03:14
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112108\1121F050.D	11/22/08	03:40
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112108\1121F051.D	11/22/08	04:07
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112208\1122F028.D	11/22/08	20:04
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112208\1122F029.D	11/22/08	20:30
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112108\1121F047.D	11/22/08	02:22
SED10-0.5-2.5-B	K0810639-007	J:\MS11\DATA\112108\1121F048.D	11/22/08	02:48
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112208\1122F042.D	11/23/08	02:13
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112208\1122F043.D	11/23/08	02:39
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112208\1122F044.D	11/23/08	03:05
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112208\1122F045.D	11/23/08	03:32
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112208\1122F046.D	11/23/08	03:58
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112208\1122F058.D	11/23/08	09:15
Method Blank	KWG0812042-5	J:\MS11\DATA\112308\1123F003.D	11/23/08	12:10
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112308\1123F011.D	11/23/08	15:42
SED02-5-8.5-AMS	KWG0812042-1	J:\MS11\DATA\112308\1123F012.D	11/23/08	16:09
SED02-5-8.5-ADMS	KWG0812042-2	J:\MS11\DATA\112308\1123F013.D	11/23/08	16:35
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112408\1124F004.D	11/24/08	07:55

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Raw Data

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COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED01-0.5-2.5A	**Units:**	ug/Kg
Lab Code:	K0810639-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**130**		5.3	0.39	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	**98**		5.3	0.41	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	**76**		5.3	0.26	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	**3700**	D	110	4.9	20	11/11/08	11/21/08	KWG0812042	
Fluorene	**3800**	D	110	11	20	11/11/08	11/21/08	KWG0812042	
Dibenzofuran	**180**		5.3	0.62	1	11/11/08	11/22/08	KWG0812042	
Phenanthrene	**19000**	D	110	16	20	11/11/08	11/21/08	KWG0812042	
Anthracene	**5500**	D	110	9.9	20	11/11/08	11/21/08	KWG0812042	
Fluoranthene	**15000**	D	110	13	20	11/11/08	11/21/08	KWG0812042	
Pyrene	**12000**	D	110	7.8	20	11/11/08	11/21/08	KWG0812042	
Benz(a)anthracene	**4000**	D	110	11	20	11/11/08	11/21/08	KWG0812042	
Chrysene	**5400**	D	110	5.3	20	11/11/08	11/21/08	KWG0812042	
Benzo(b)fluoranthene	**4400**	D	110	5.3	20	11/11/08	11/21/08	KWG0812042	
Benzo(k)fluoranthene	**1500**		5.3	0.16	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	**3300**	D	110	3.0	20	11/11/08	11/21/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**2500**	D	110	3.4	20	11/11/08	11/21/08	KWG0812042	
Dibenz(a,h)anthracene	**690**		5.3	0.30	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	**2400**	D	110	14	20	11/11/08	11/21/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	61	10-128	11/22/08	Acceptable
Fluoranthene-d10	88	29-121	11/22/08	Acceptable
Terphenyl-d14	69	24-141	11/22/08	Acceptable

Comments:

Exception Report

Data File:	J:\MS11\DATA\112208\1122F028.D	**Date Acquired:**	11/22/2008 20:04
Lab ID:	K0810639-001	**Date Quantitated:**	11/23/2008 11:03
RunType:	SMPL	**Batch ID:**	KWG0812624
Matrix:	SEDIMENT	**Analysis Method:**	8270C SIM
		ListJoinID:	LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Anthracene	3545.37	NA	2000	See Dil
	Pyrene	7103.56	NA	2000	
	Benzo(g,h,i)perylene	2362.92	NA	2000	
	Indeno(1,2,3-cd)pyrene	2546.59	NA	2000	
	Benzo(b)fluoranthene	4377.26	NA	2000	
	Fluoranthene	7744.15	NA	2000	
	Chrysene	4501.22	NA	2000	

Primary Review: RW 11/24/08

Secondary Review: KB 11/24/08

Printed: 11/23/2008 12:53:03

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Exception Report

Data File: J:\MS11\DATA\112208\1122F028.D
Lab ID: K0810639-001
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 20:04
Date Quantitated: 11/23/2008 11:03
Batch ID: KWG0812624
Analysis Method: 8270C SIM
ListJoinID: LJ5646

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Benzo(a)pyrene	3229.66	NA	2000	Dil
	Benz(a)anthracene	3880.40	NA	2000	
	Acenaphthene	3209.63	NA	2000	
	Phenanthrene	8553.95	NA	2000	
	Fluorene	3355.59	NA	2000	

Primary Review: 11/24/08

Secondary Review: KB 11/24/08

Printed: 11/23/2008 12:53:03
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Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812624	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776065	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112208\1122F005.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112208\1122F028.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 20:04	**Quant Date:**	11/23/2008 11:03	**Vial:**	22
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-001			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.03	-0.01	136	276938	200.00	OK
2	Acenaphthene-d10	6.45	-0.01	164	155248	200.00	OK
3	Phenanthrene-d10	7.70	0.00	188	278460	200.00	OK
4	Chrysene-d12	10.62	0.05	240	363535	200.00	OK
5	Perylene-d12	14.69	0.13	264	368075	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	128437**m**	121.73	61	10-128	OK	
3	Fluoranthene-d10	8.71	0.01	0.00	212	333376	175.60	88	29-121	OK	
4	Terphenyl-d14	9.10	0.01	0.00	244	261241	138.80	69	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantM ass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.05	-0.01	0.00	128	205002**m**	121.52	130		
1	2-Methylnaphthalene	5.60	-0.01	0.00	142	109794	93.33	98		
2	Acenaphthylene	6.34		0.00	152	126189**m**	72.08	76		
2	Acenaphthene	6.48	-0.01	0.00	154	3414352	3,210	3400	E	NR
2	Dibenzofuran	6.62	-0.01	0.00	168	278346	173.94	180		
2	Fluorene	6.91		0.00	166	4285365	3,356	3500	E	NR
3	Phenanthrene	7.72		0.00	178	16742738	8,554	9000	E	NR
3	Anthracene	7.76	0.01	0.00	178	6761259**m**	3,545	3700	E	NR
3	Fluoranthene	8.73	0.02	0.00	202	17217810	7,744	8100	E	NR
4	Pyrene	8.96	0.02	0.00	202	19426898	7,104	7500	E	NR
4	Benz(a)anthracene	10.60	0.04	0.00	228	9627403	3,880	4100	E	NR
4	Chrysene	10.68	0.05	0.00	228	10968287	4,501	4700	E	NR
5	Benzo(b)fluoranthene	13.34	0.13	0.00	252	11119009	4,377	4600	E	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112208\1122F028.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 20:04	**Quant Date:**	11/23/2008 11:03	**Vial:**	22
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-001			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.41	0.12	0.00	252	3571469**m**	1,464	1500		
5	Benzo(a)pyrene	14.49	0.15	0.00	252	6792488	3,230	3400	E	NR
5	Indeno(1,2,3-cd)pyrene	17.50	0.08	-0.01	276	4969380	2,547	2700	E	NR
5	Dibenz(a,h)anthracene	17.54	0.07	-0.01	278	1348833**m**	658.56	690		
5	Benzo(g,h,i)perylene	17.96	0.09	0.00	276	5253201	2,363	2500	E	NR

Prep Amount:	20.05 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	47.5 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112208\1122F028.D Vial: 22
Acq On : 22 Nov 2008 8:04 pm Operator: LWeiskopf
Sample : K0810639-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:14:00 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.03	136	276938	200.00 ng/ml	-0.01
10) Acenaphthene-d10	6.45	164	155248	200.00 ng/ml	-0.01
22) Phenanthrene-d10	7.70	188	278460	200.00 ng/ml	0.00
37) Chrysene-d12	10.62	240	363535	200.00 ng/ml	0.04
49) Perylene-d12	14.69	264	368075	200.00 ng/ml	0.10

System Monitoring Compounds					
15) Fluorene-d10	6.88	176	128437m	121.73 ng/ml	-0.01
Spiked Amount 200.000			Recovery =	60.87%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00 ng/ml	
Spiked Amount 375.000			Recovery =	0.00%	
36) Fluoranthene-d10	8.71	212	333376	175.60 ng/ml	0.00
Spiked Amount 200.000			Recovery =	87.80%	
42) Terphenyl-d14	9.10	244	261241	138.80 ng/ml	0.00
Spiked Amount 200.000			Recovery =	69.40%	

Target Compounds					Qvalue
2) Naphthalene	5.05	128	205002m	121.52 ng/ml	
3) 2-Methylnaphthalene	5.60	142	109794	93.33 ng/ml	98
4) 1-Methylnaphthalene	5.68	142	63690	60.48 ng/ml	94
5) Biphenyl	5.97	154	45473m	31.63 ng/ml	
6) 2,6-Dimethylnaphthalene	6.11	156	372545	362.76 ng/ml	99
11) Acenaphthylene	6.34	152	126189m	72.08 ng/ml	
12) Acenaphthene	6.48	154	3414352	3209.63 ng/ml	95
13) Dibenzofuran	6.62	168	278346	173.94 ng/ml	82
14) 2,3,5-Trimethylnaphthalene	6.79	170	487354	520.90 ng/ml	89
16) Fluorene	6.91	166	4285365	3355.59 ng/ml	92
23) Dibenzothiophene	7.61	184	2135651	1115.94 ng/ml	88
27) Phenanthrene	7.72	178	16742738	8553.95 ng/ml	71
28) Anthracene	7.76	178	6761259m	3545.37 ng/ml	
29) Carbazole	7.91	167	397310m	227.09 ng/ml	
30) 1-Methylphenanthrene	8.22	192	1472461m	1013.64 ng/ml	
35) Fluoranthene	8.73	202	17217810	7744.15 ng/ml	35
38) Pyrene	8.96	202	19426898	7103.56 ng/ml	36
43) Benz(a)anthracene	10.60	228	9627403	3880.40 ng/ml	89
44) Chrysene	10.68	228	10968287	4501.22 ng/ml	89
50) Benzo(b)fluoranthene	13.34	252	11119009	4377.26 ng/ml	94
51) Benzo(k)fluoranthene	13.41	252	3571469m	1463.60 ng/ml	
52) Benzo(e)pyrene	14.27	252	5608510	2430.63 ng/ml	96
53) Benzo(a)pyrene	14.49	252	6792488	3229.66 ng/ml	95
54) Perylene	14.80	252	1939514	938.75 ng/ml	96
55) Indeno(1,2,3-cd)pyrene	17.50	276	4969380	2546.59 ng/ml	95

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112208\1122F028.D Vial: 22
Acq On : 22 Nov 2008 8:04 pm Operator: LWeiskopf
Sample : K0810639-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:14:00 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
56) Dibenz(a,h)anthracene	17.54	278	1348833m	658.56 ng/ml	
57) Benzo(g,h,i)perylene	17.96	276	5253201	2362.92 ng/ml	94

(#) = qualifier out of range (m) = manual integration

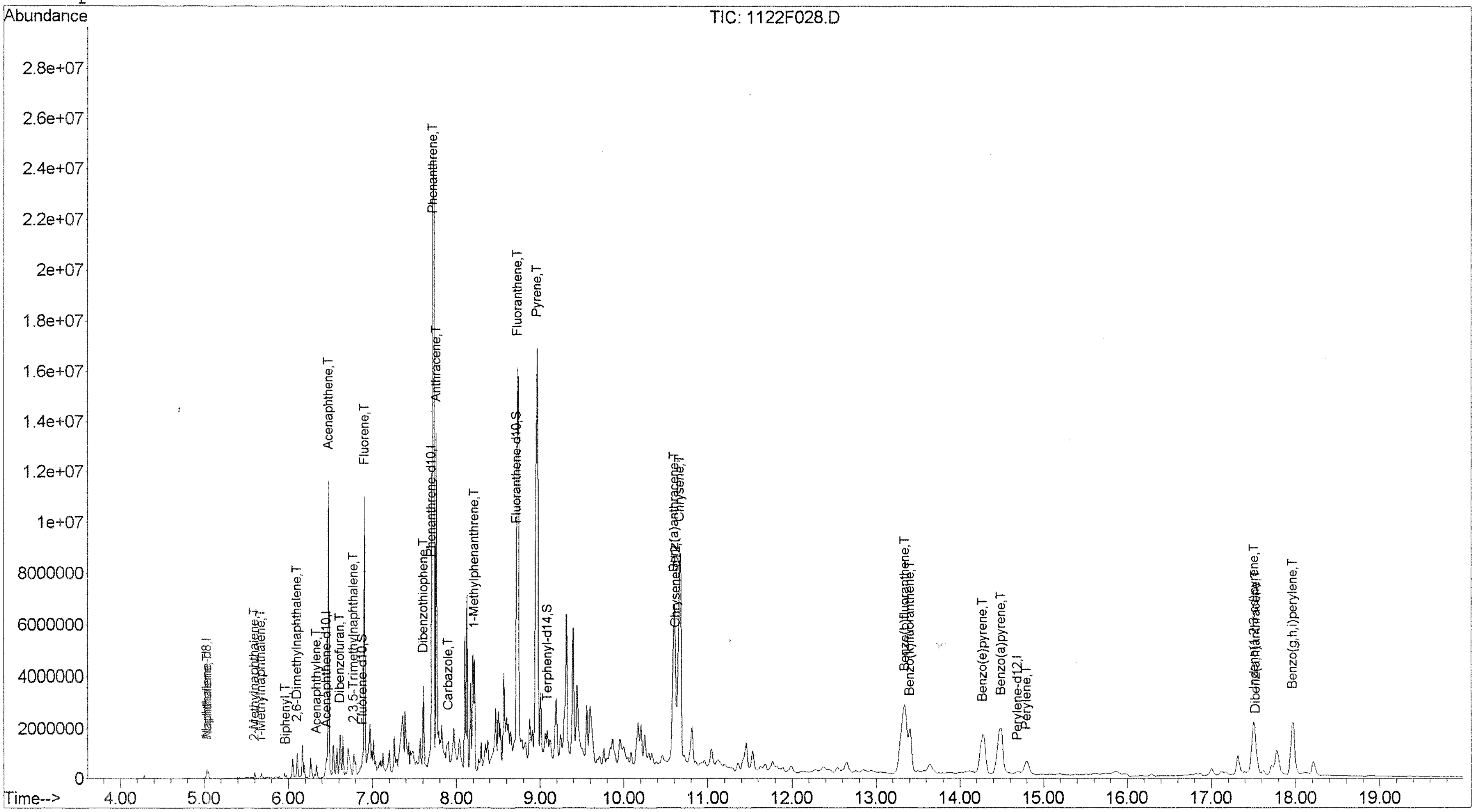
Quantitation Report (QT Reviewed)

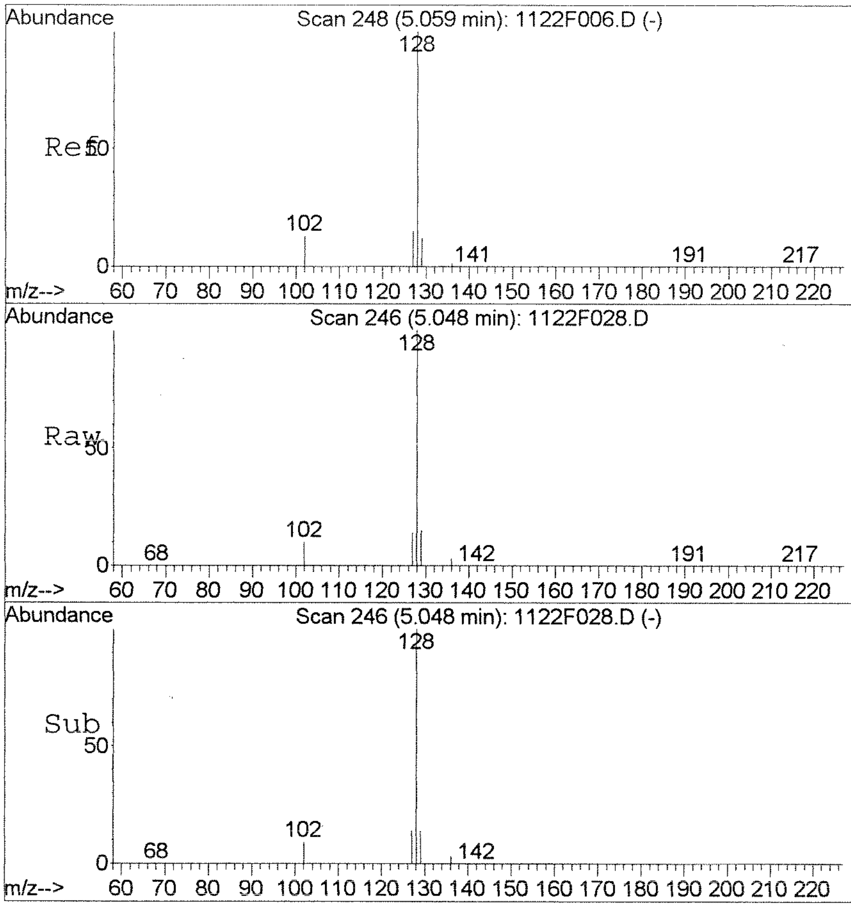
Data File : J:\MS11\DATA\112208\1122F028.D
Acq On : 22 Nov 2008 8:04 pm
Sample : K0810639-001
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:03 2008

Vial: 22
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Initial Calibration

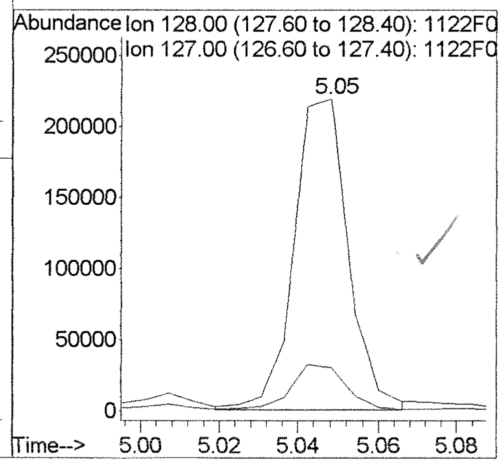


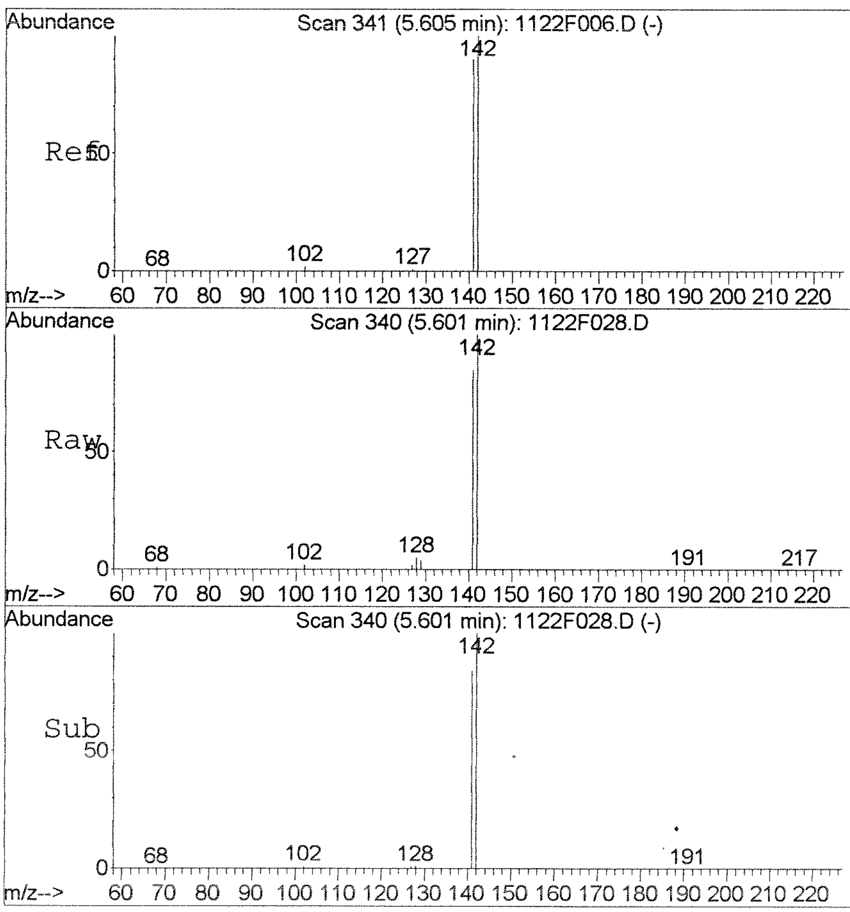


#2
Naphthalene
Concen: 121.52 ng/ml m
RT: 5.05 min Scan# 246
Delta R.T. -0.01 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:128 Resp: 205002

Ion	Ratio	Lower	Upper
128	100		
127	13.9	0.0	43.8

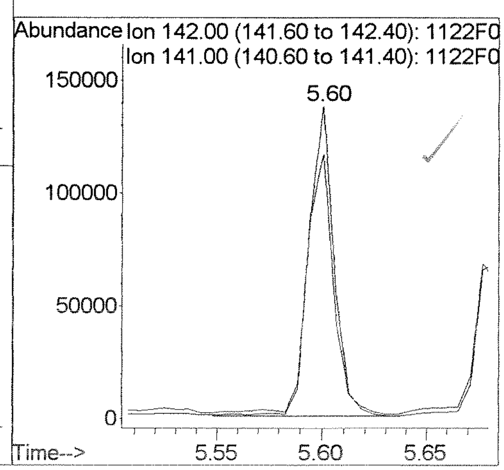


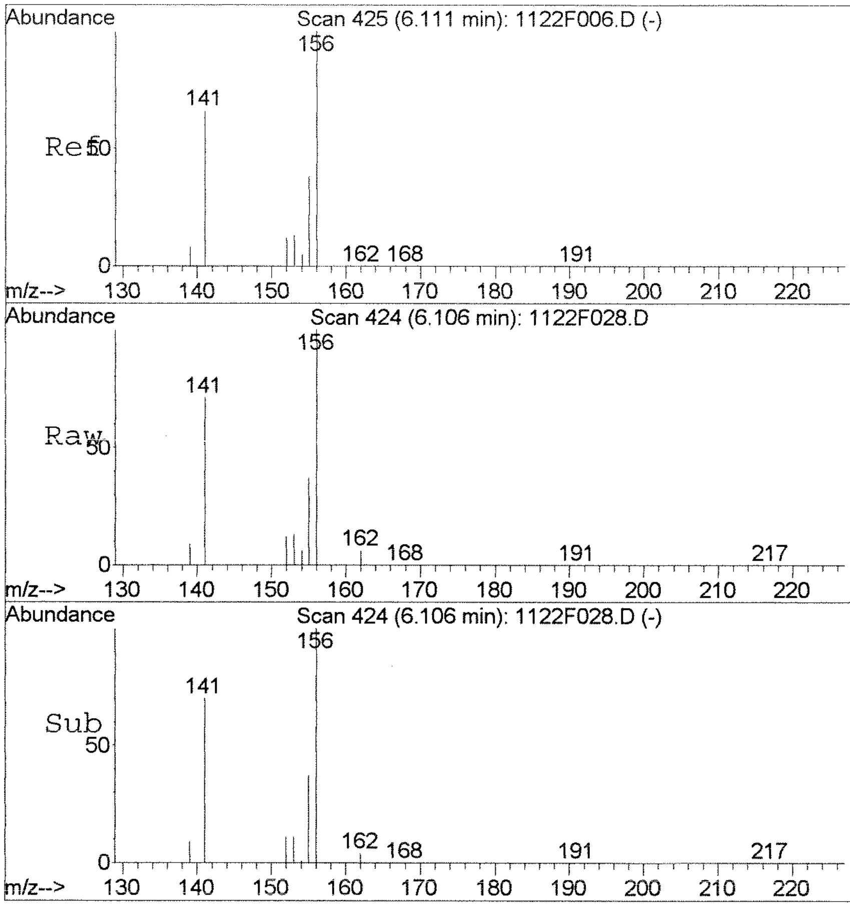


#3
2-Methylnaphthalene
Concen: 93.33 ng/ml
RT: 5.60 min Scan# 340
Delta R.T. -0.01 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:142 Resp: 109794

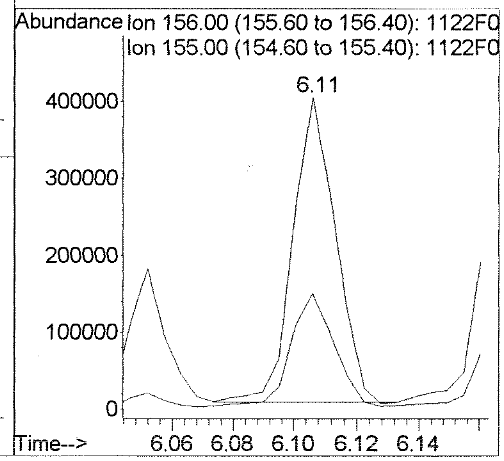
Ion	Ratio	Lower	Upper
142	100		
141	83.9	52.4	112.4

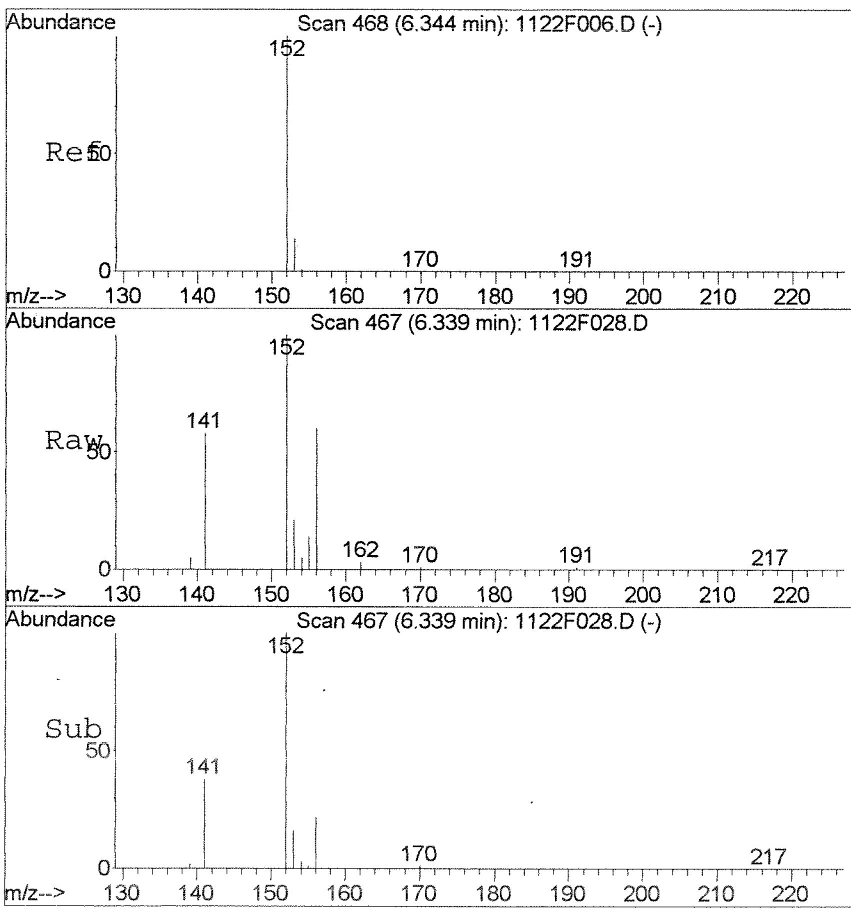




#6
2,6-Dimethylnaphthalene
Concen: 362.76 ng/ml
RT: 6.11 min Scan# 424
Delta R.T. -0.01 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

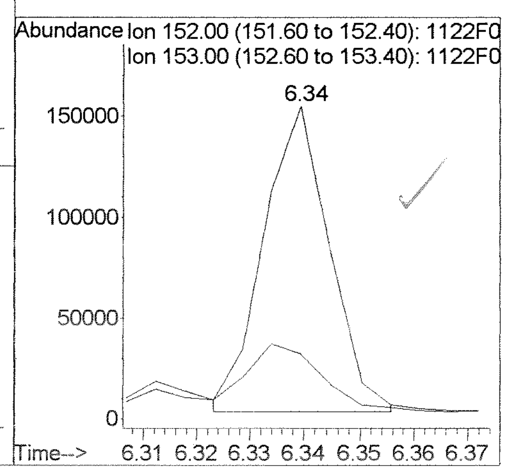
Tgt Ion:156	Resp:		372545
Ion	Ratio	Lower	Upper
156	100		
155	36.9	7.3	67.3

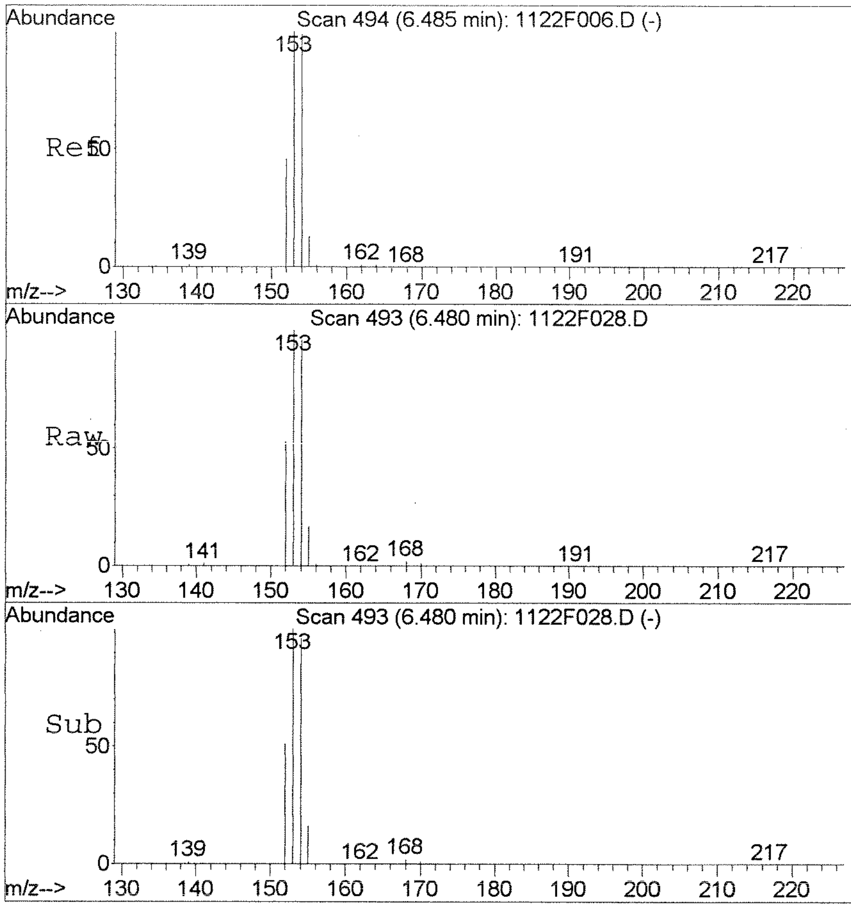




#11
Acenaphthylene
Concen: 72.08 ng/ml m
RT: 6.34 min Scan# 467
Delta R.T. -0.01 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:152	Resp:		126189
Ion	Ratio	Lower	Upper
152	100		
153	21.0	0.0	43.0

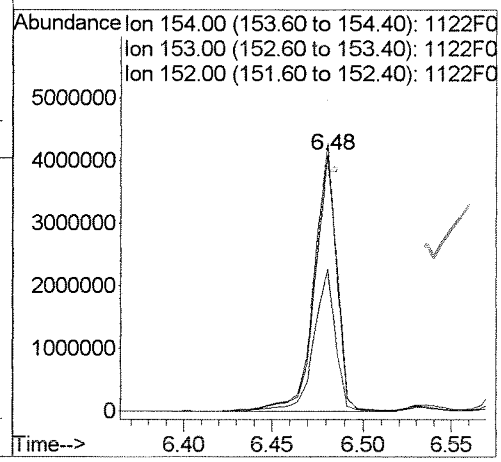


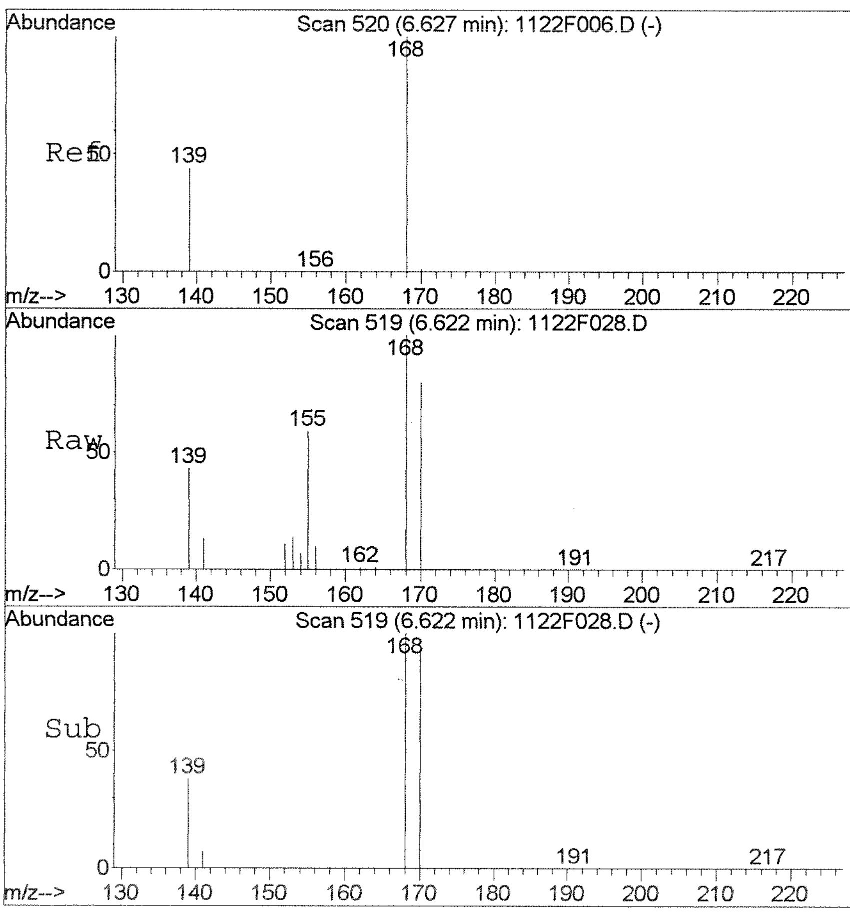


#12
Acenaphthene
Concen: 3209.63 ng/ml
RT: 6.48 min Scan# 493
Delta R.T. -0.01 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:154 Resp: 3414352

Ion	Ratio	Lower	Upper
154	100		
153	104.4	81.9	141.9
152	55.3	26.8	86.8

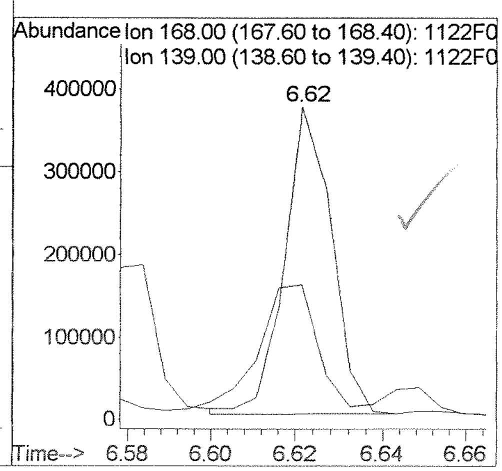


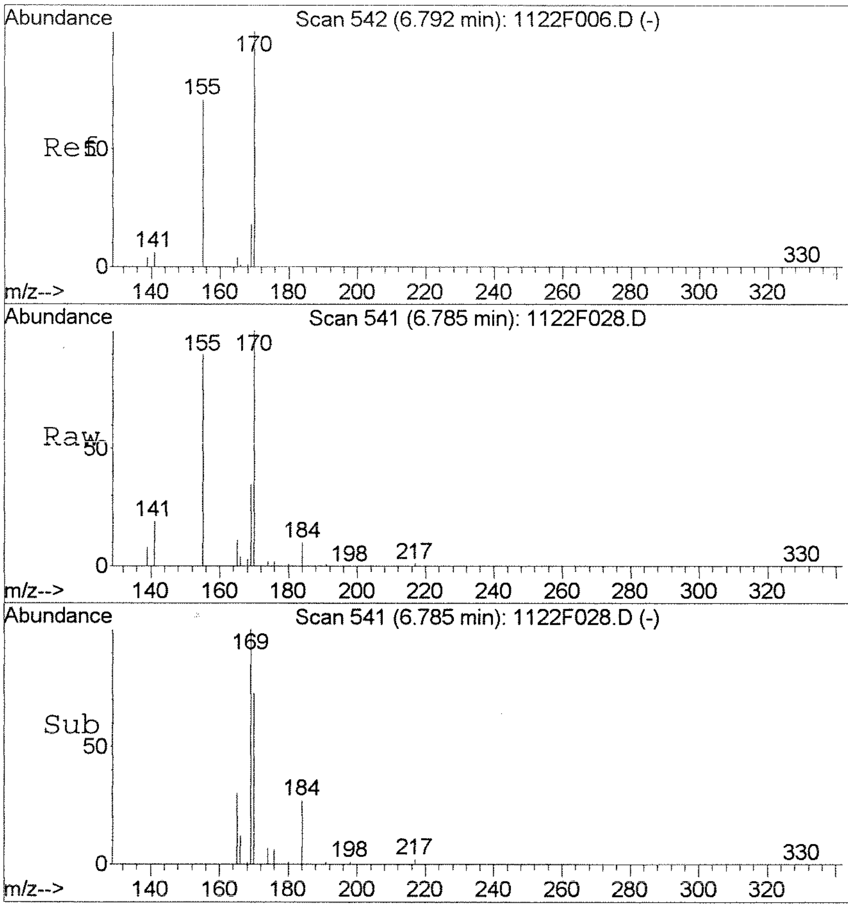


#13
Dibenzofuran
Concen: 173.94 ng/ml
RT: 6.62 min Scan# 519
Delta R.T. -0.01 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:168 Resp: 278346

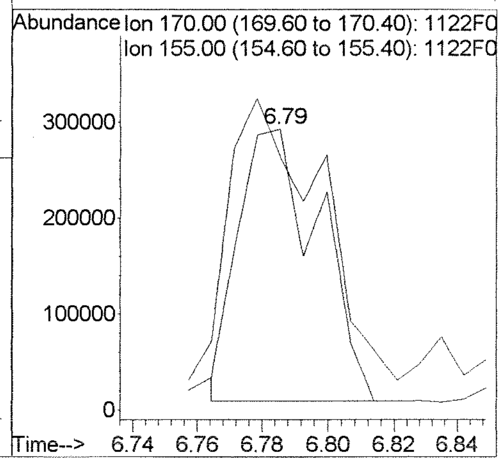
Ion	Ratio	Lower	Upper
168	100		
139	38.2	21.0	81.0

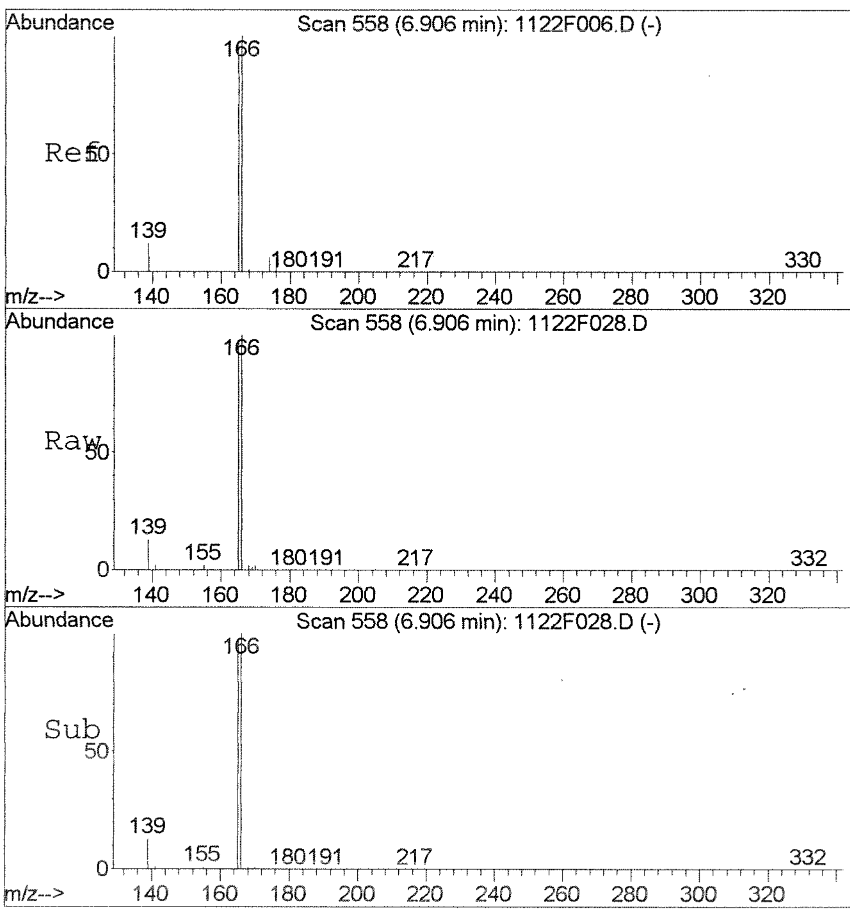




#14
2,3,5-Trimethylnaphthalene
Concen: 520.90 ng/ml
RT: 6.79 min Scan# 541
Delta R.T. -0.01 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

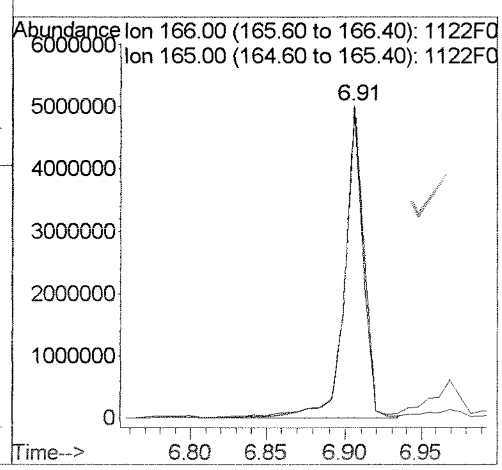
Tgt	Ion:170	Resp:	487354
Ion	Ratio	Lower	Upper
170	100		
155	82.4	42.9	102.9

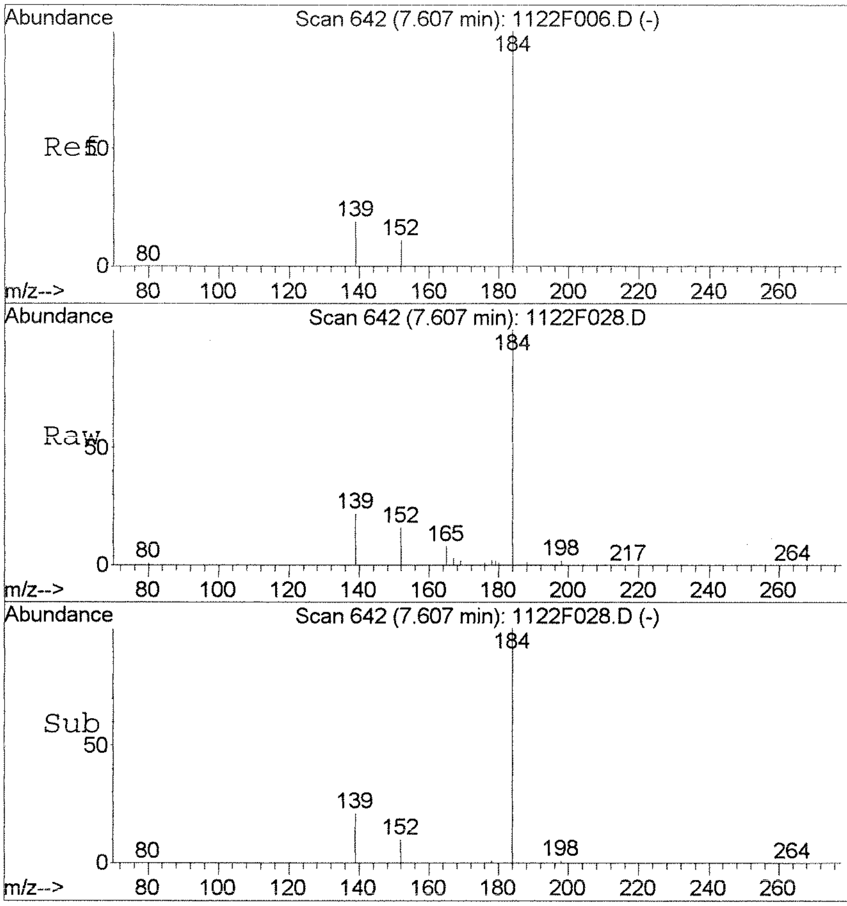




#16
Fluorene
Concen: 3355.59 ng/ml
RT: 6.91 min Scan# 558
Delta R.T. -0.01 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt	Ion:166	Resp:	4285365
Ion	Ratio	Lower	Upper
166	100		
165	97.5	59.8	119.8

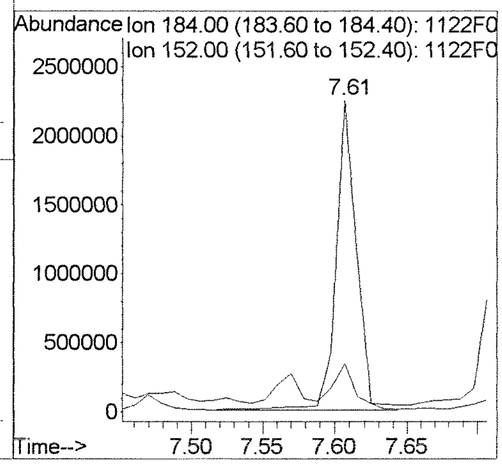


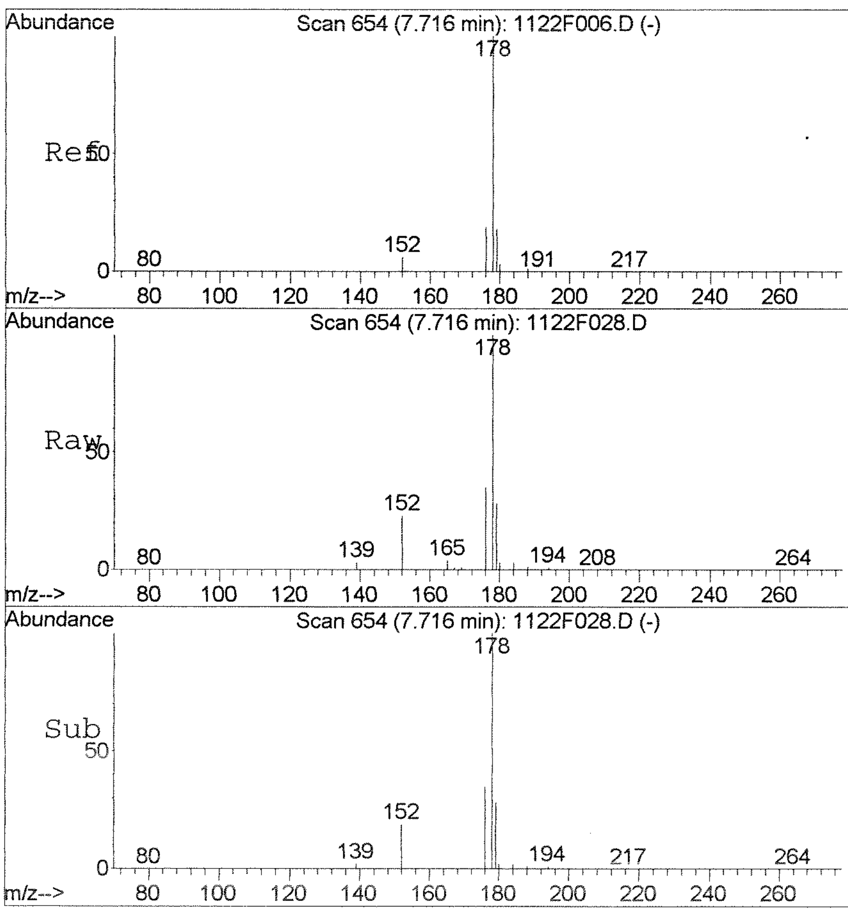


#23
Dibenzothiophene
Concen: 1115.94 ng/ml
RT: 7.61 min Scan# 642
Delta R.T. -0.01 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:184 Resp: 2135651

Ion	Ratio	Lower	Upper
184	100		
152	13.3	0.0	39.1

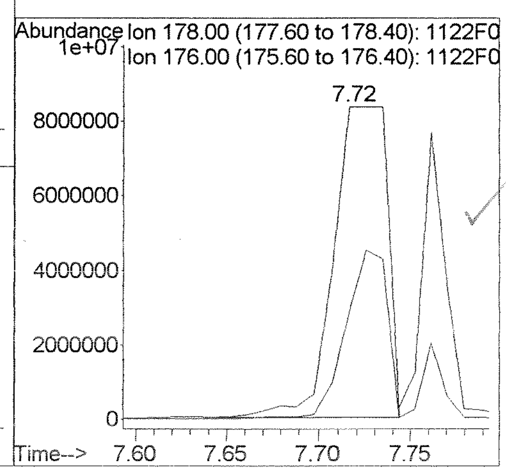


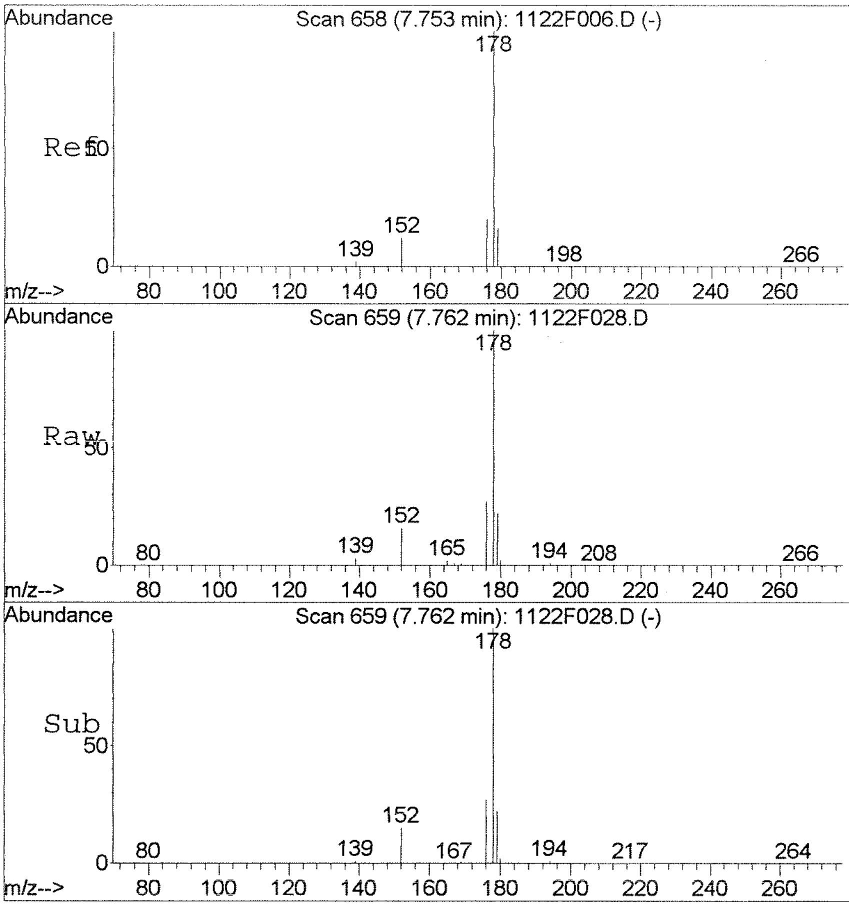


#27
Phenanthrene
Concen: 8553.95 ng/ml
RT: 7.72 min Scan# 654
Delta R.T. -0.00 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:178 Resp:16742738

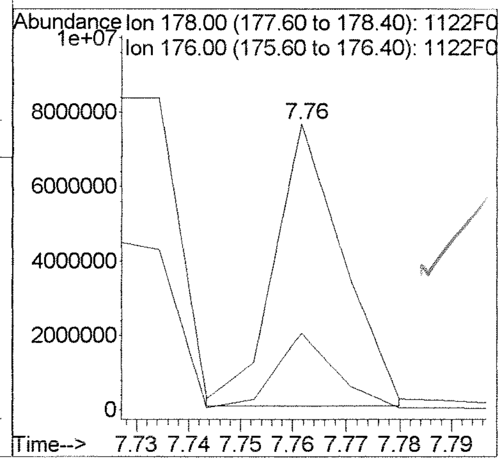
Ion	Ratio	Lower	Upper
178	100		
176	34.8	0.0	51.0

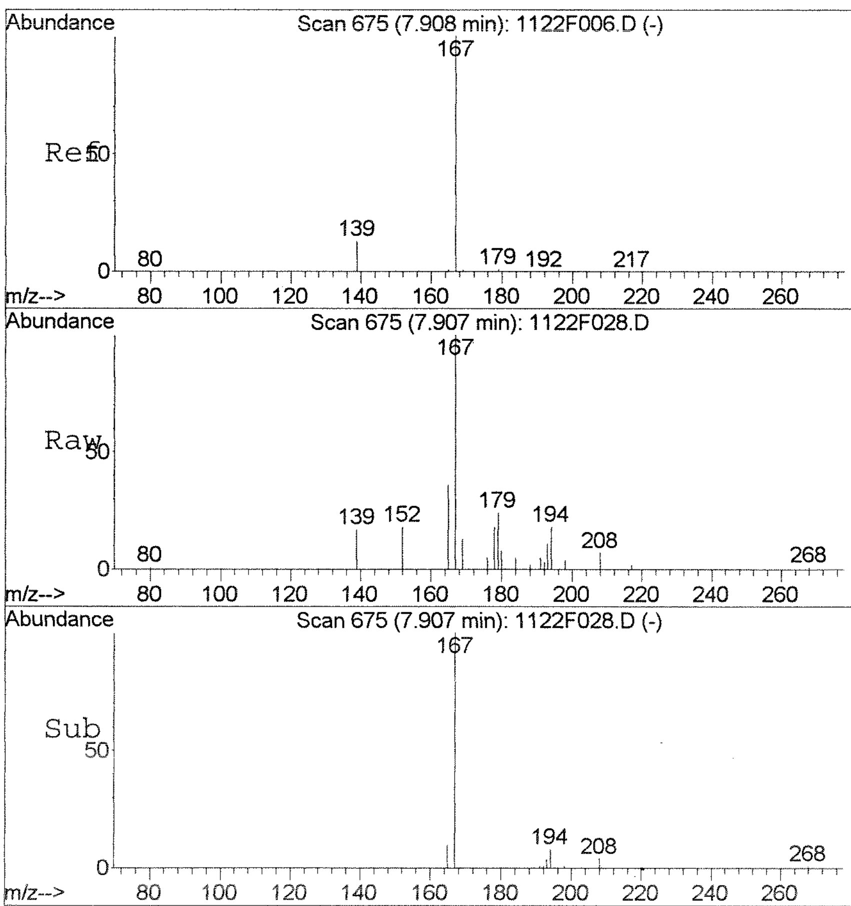




#28
Anthracene
Concen: 3545.37 ng/ml m
RT: 7.76 min Scan# 659
Delta R.T. -0.00 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

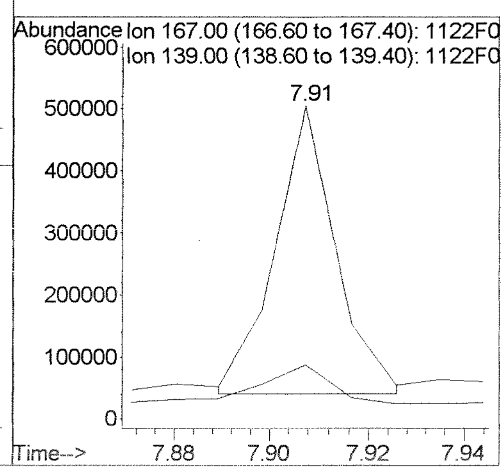
Tgt	Ion:178	Resp:	6761259
Ion	Ratio	Lower	Upper
178	100		
176	26.9	0.0	49.7

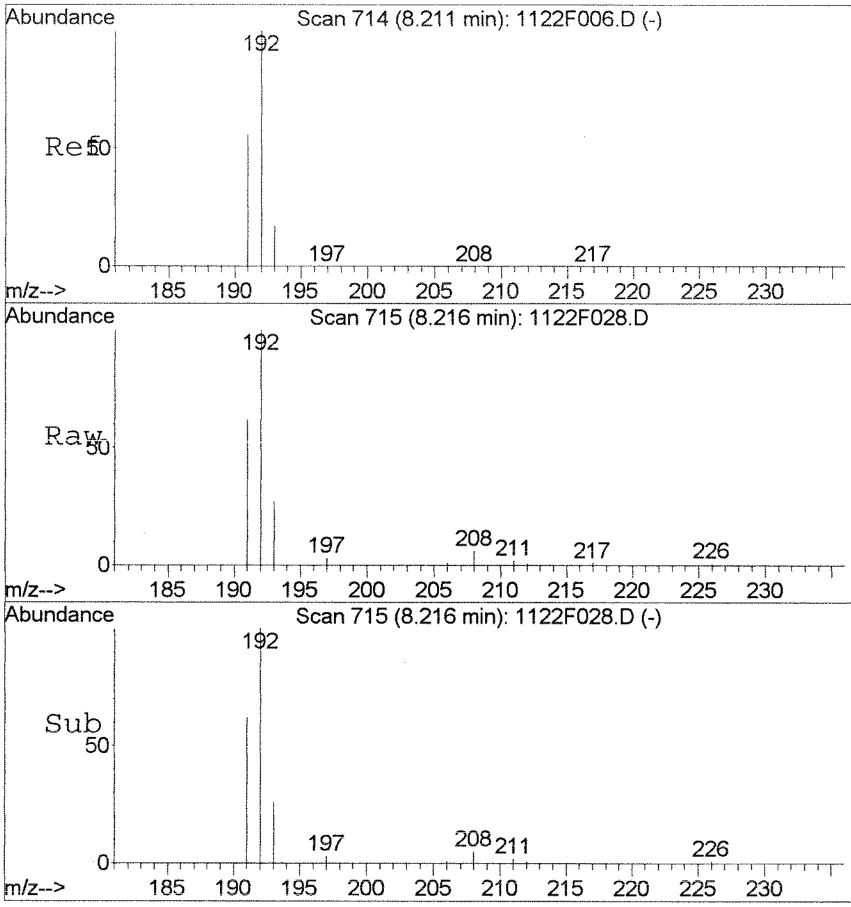




#29
Carbazole
Concen: 227.09 ng/ml m
RT: 7.91 min Scan# 675
Delta R.T. -0.00 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt	Ion:167	Resp:	397310
Ion	Ratio	Lower	Upper
167	100		
139	17.4	0.0	46.8

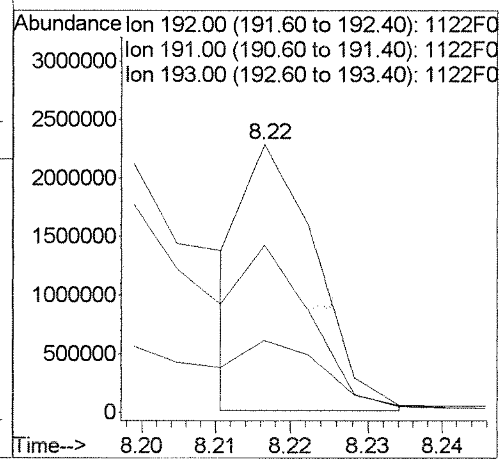


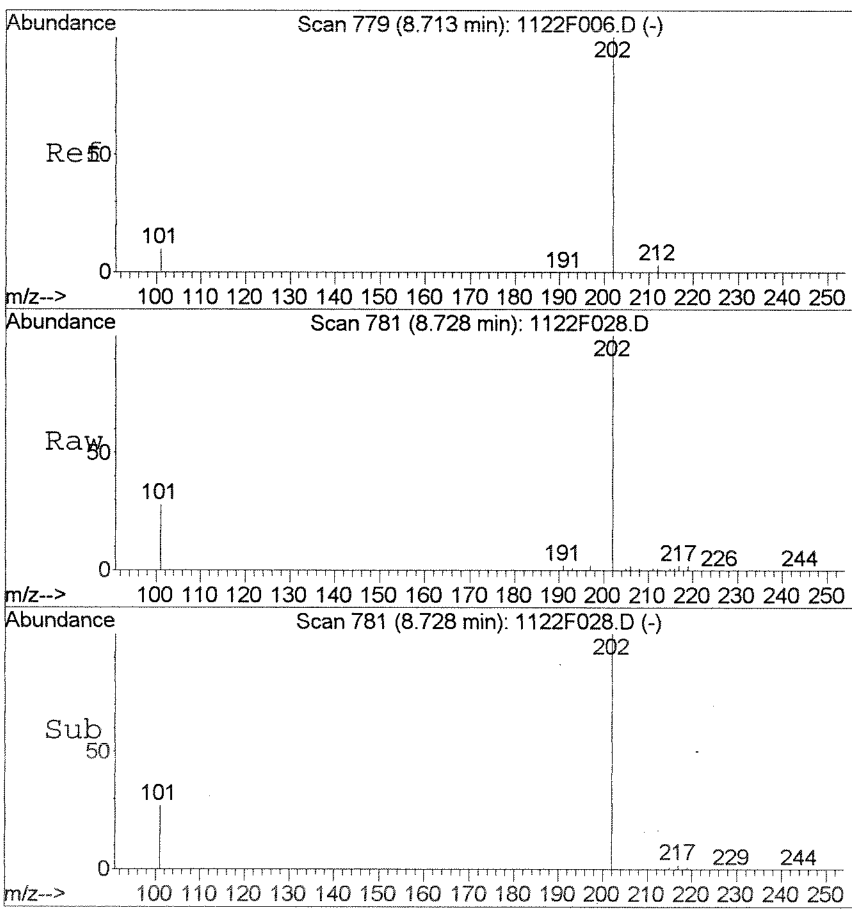


#30
1-Methylphenanthrene
Concen: 1013.64 ng/ml m
RT: 8.22 min Scan# 715
Delta R.T. 0.00 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:192 Resp: 1472461

Ion	Ratio	Lower	Upper
192	100		
191	62.4	29.0	89.0
193	26.9	0.0	45.4

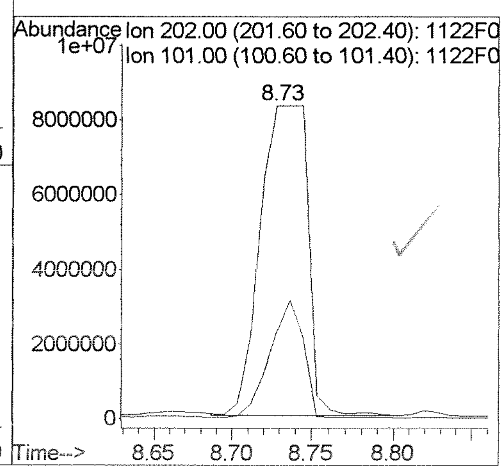


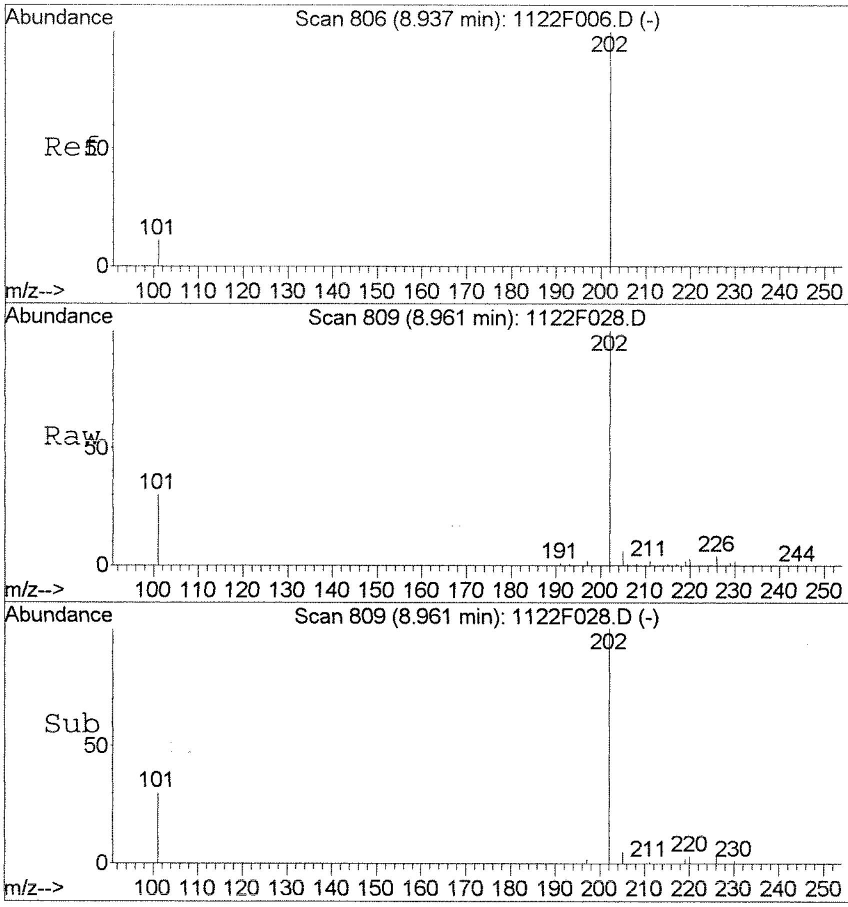


#35
Fluoranthene
Concen: 7744.15 ng/ml
RT: 8.73 min Scan# 781
Delta R.T. 0.01 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:202 Resp:17217810

Ion	Ratio	Lower	Upper
202	100		
101	27.8	0.0	35.8

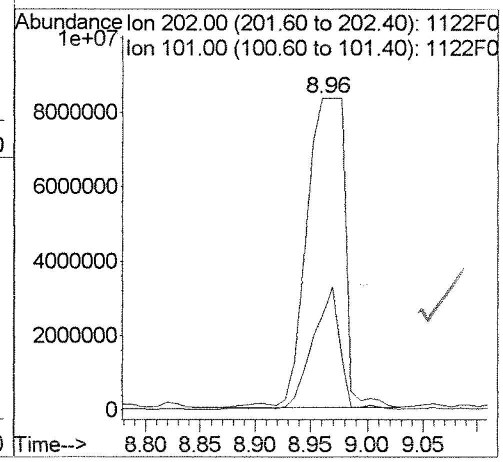


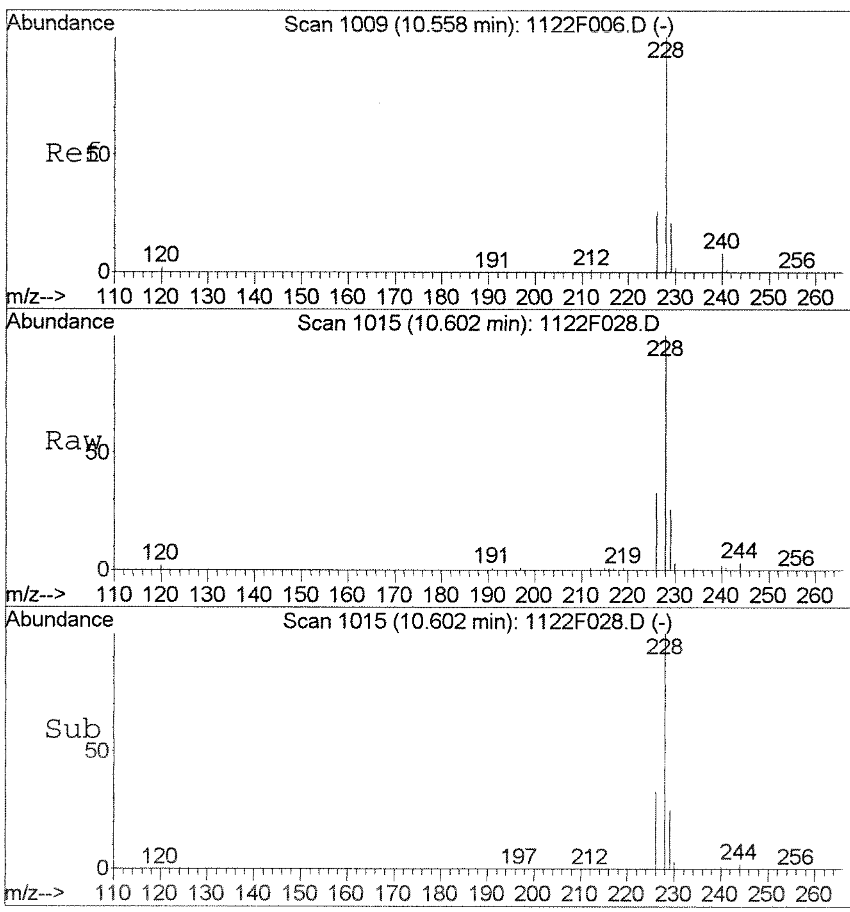


#38
Pyrene
Concen: 7103.56 ng/ml
RT: 8.96 min Scan# 809
Delta R.T. 0.02 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:202 Resp:19426898

Ion	Ratio	Lower	Upper
202	100		
101	30.1	0.0	37.6

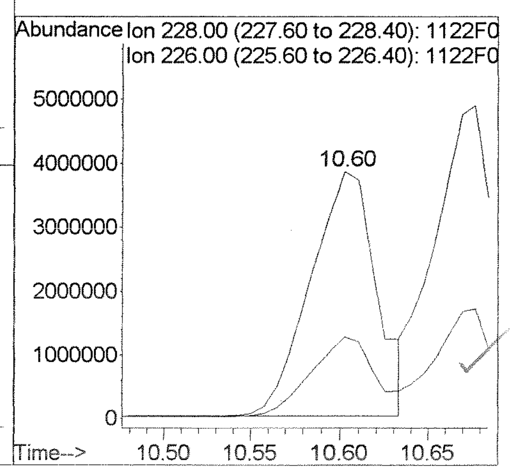


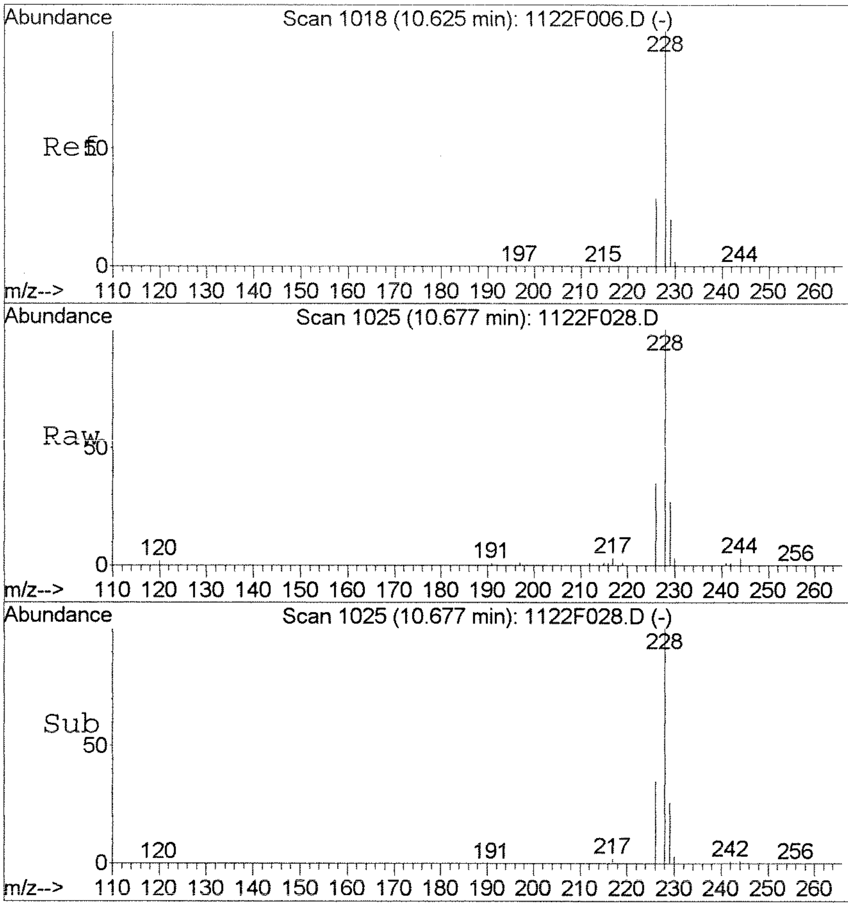


#43
Benz(a)anthracene
Concen: 3880.40 ng/ml
RT: 10.60 min Scan# 1015
Delta R.T. 0.04 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:228 Resp: 9627403

Ion	Ratio	Lower	Upper
228	100		
226	32.7	0.0	57.0

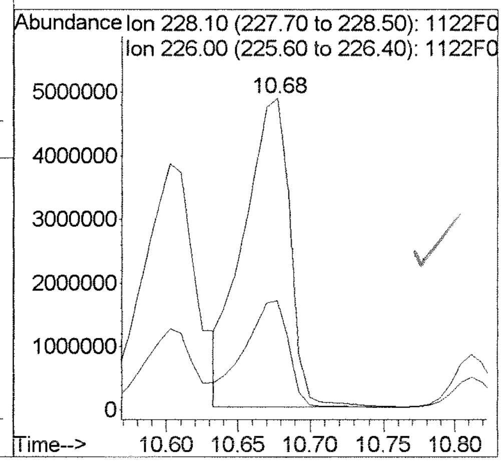


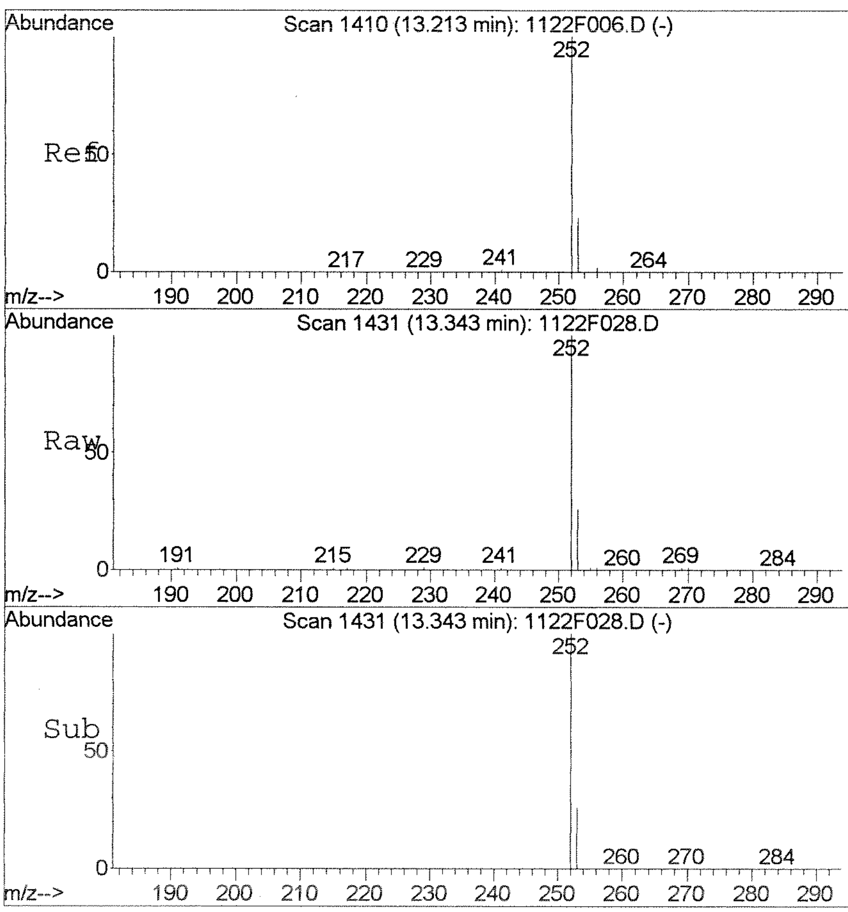


#44
Chrysene
Concen: 4501.22 ng/ml
RT: 10.68 min Scan# 1025
Delta R.T. 0.04 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:228 Resp:10968287

Ion	Ratio	Lower	Upper
228	100		
226	34.6	0.0	58.9

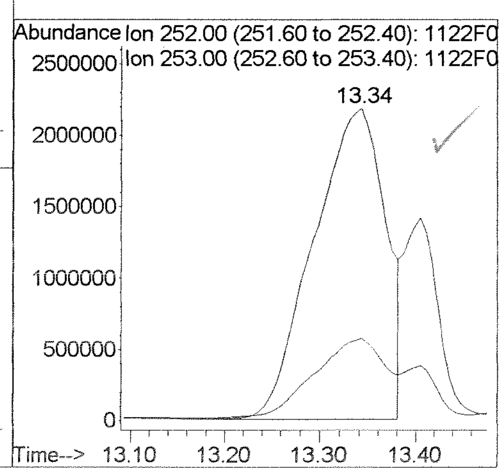


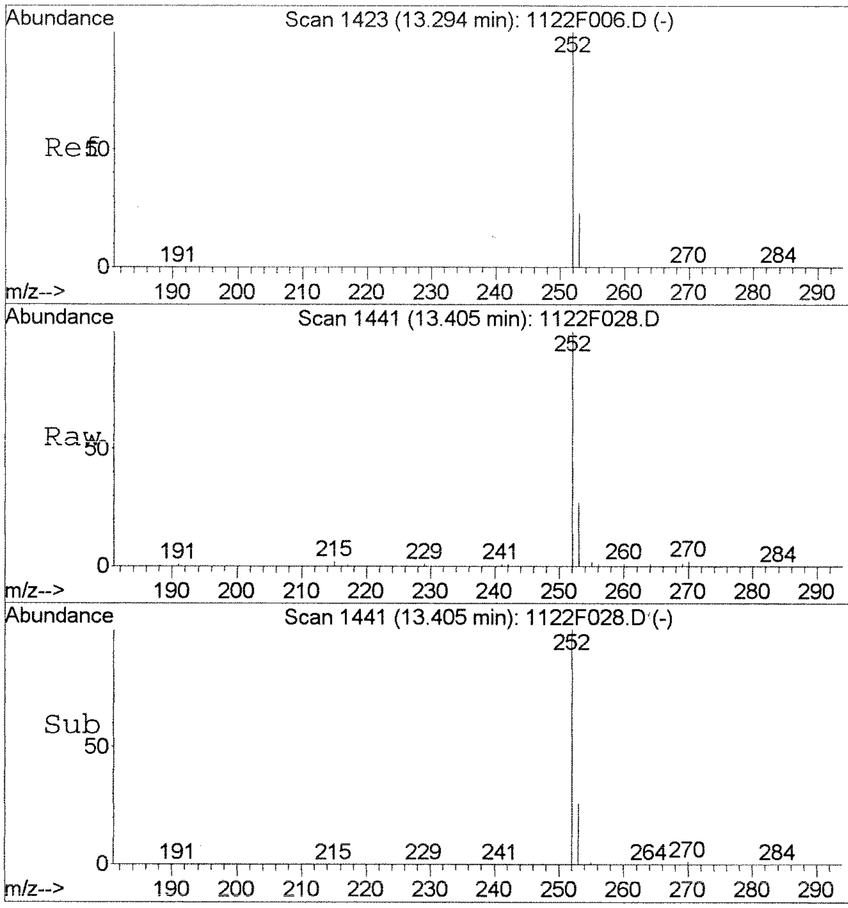


#50
Benzo(b)fluoranthene
Concen: 4377.26 ng/ml
RT: 13.34 min Scan# 1431
Delta R.T. 0.12 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:252 Resp:11119009

Ion	Ratio	Lower	Upper
252	100		
253	25.7	0.0	52.6

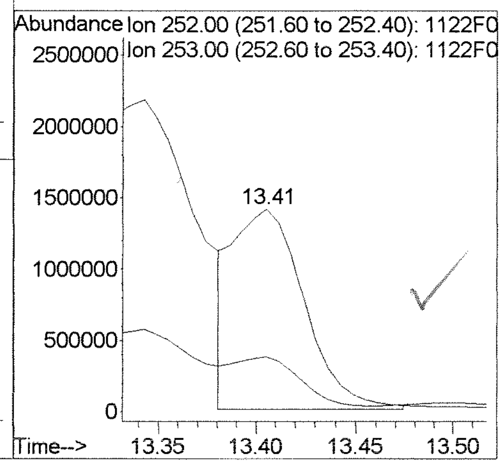


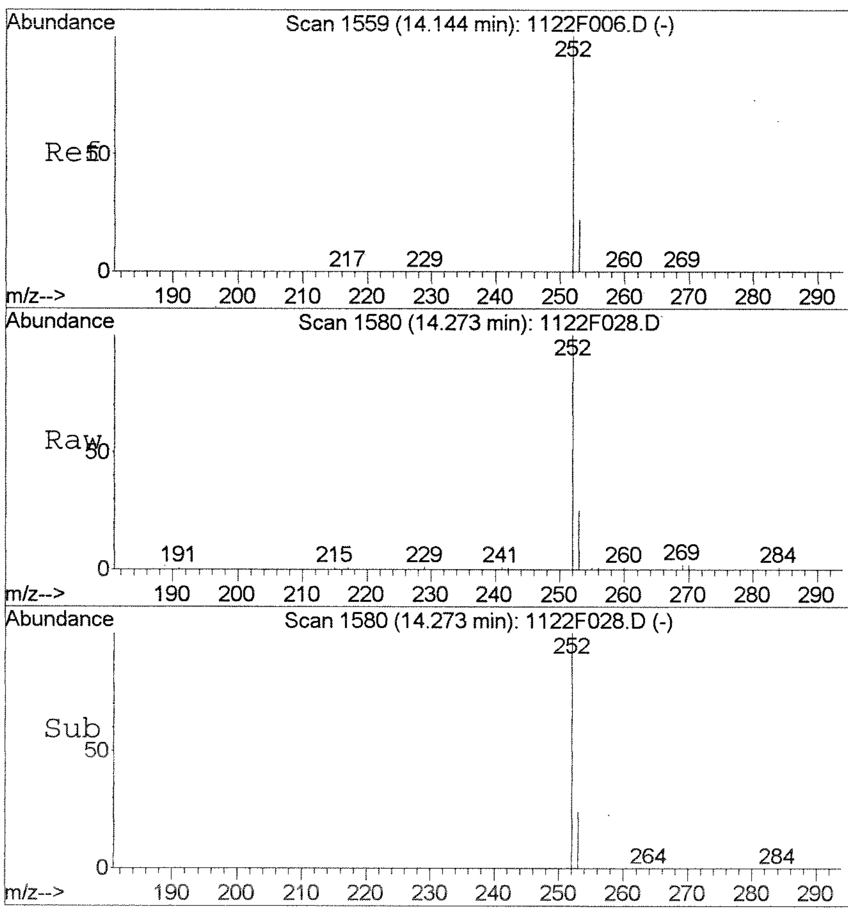


#51
Benzo(k)fluoranthene
Concen: 1463.60 ng/ml m
RT: 13.41 min Scan# 1441
Delta R.T. 0.09 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:252 Resp: 3571469

Ion	Ratio	Lower	Upper
252	100		
253	27.2	0.0	52.0

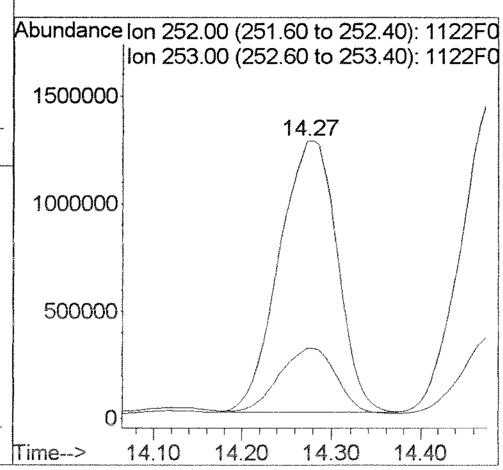


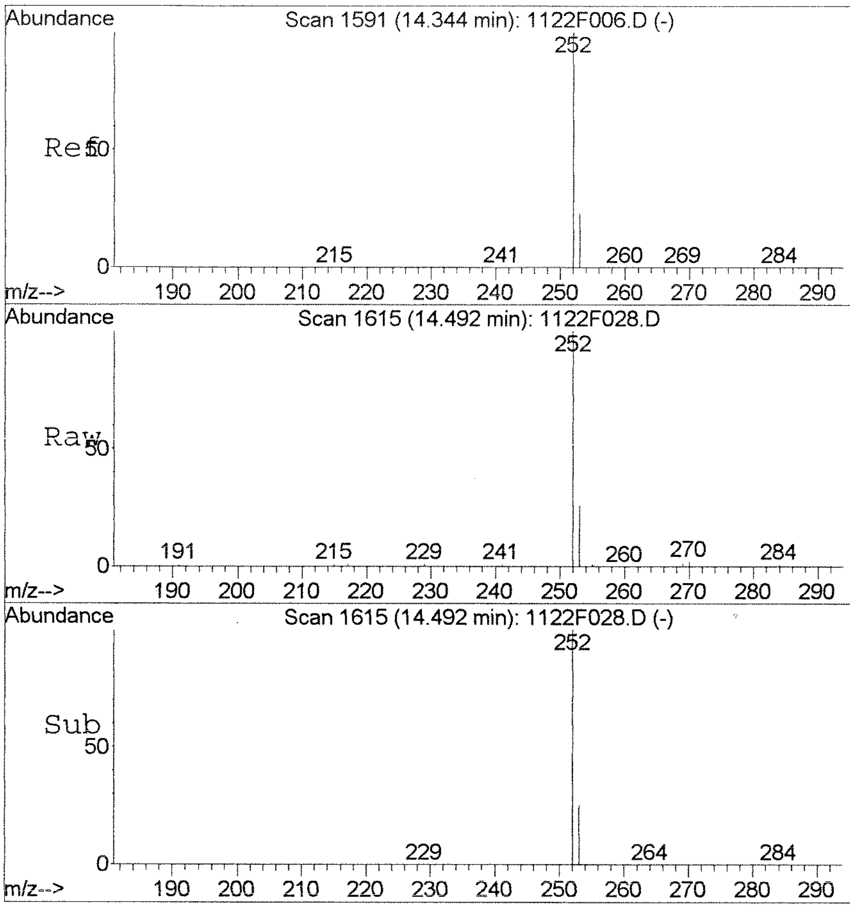


#52
Benzo(e)pyrene
Concen: 2430.63 ng/ml
RT: 14.27 min Scan# 1580
Delta R.T. 0.10 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:252 Resp: 5608510

Ion	Ratio	Lower	Upper
252	100		
253	24.0	0.0	52.2

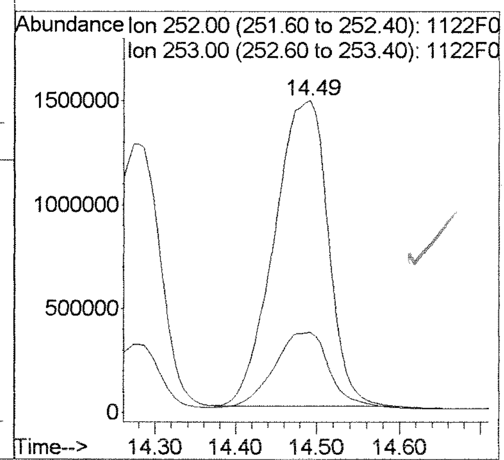


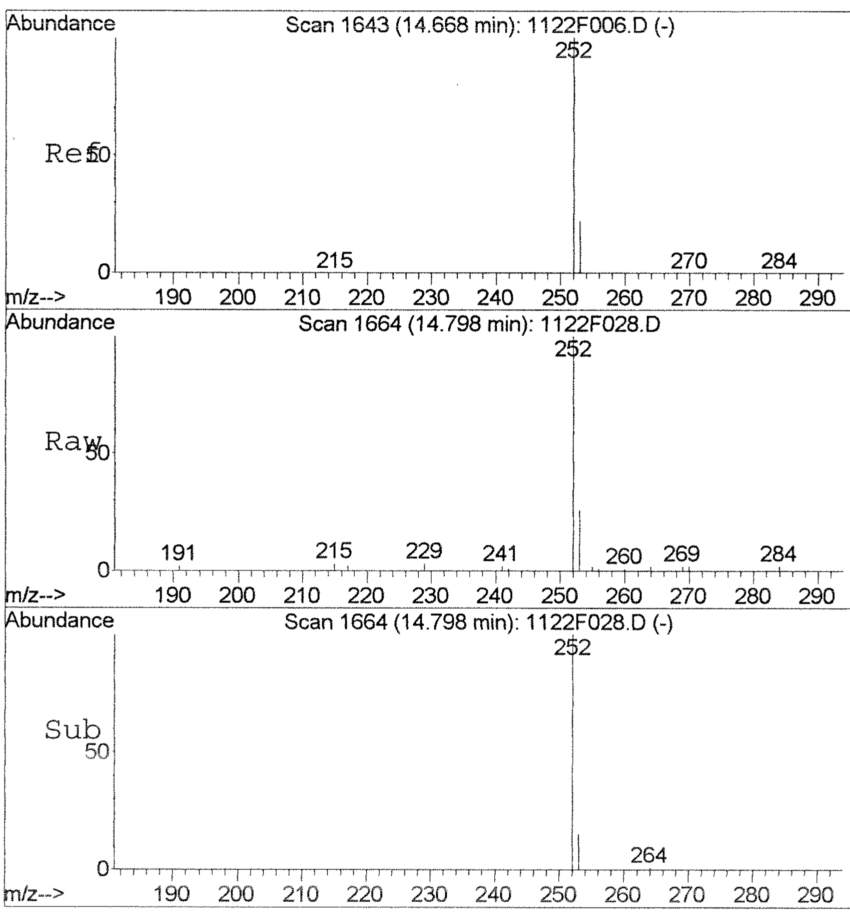


#53
Benzo(a)pyrene
Concen: 3229.66 ng/ml
RT: 14.49 min Scan# 1615
Delta R.T. 0.12 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:252 Resp: 6792488

Ion	Ratio	Lower	Upper
252	100		
253	24.7	0.0	52.2

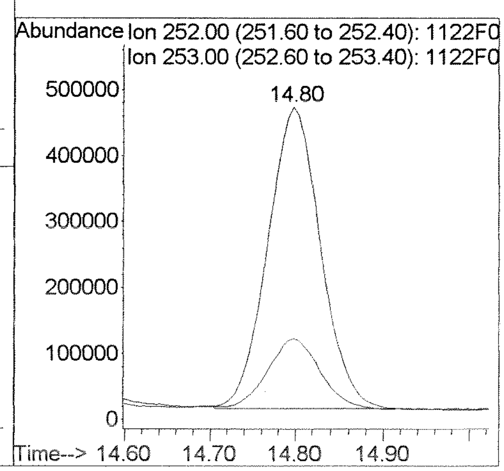


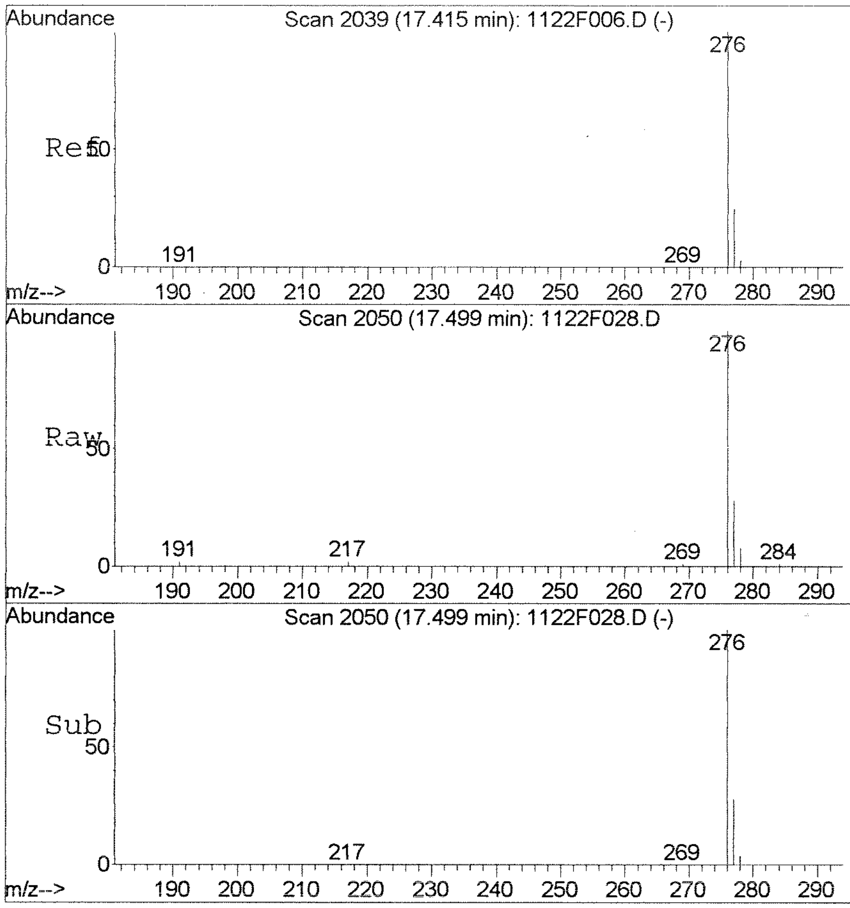


#54
Perylene
Concen: 938.75 ng/ml
RT: 14.80 min Scan# 1664
Delta R.T. 0.11 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:252 Resp: 1939514

Ion	Ratio	Lower	Upper
252	100		
253	23.3	0.0	51.5

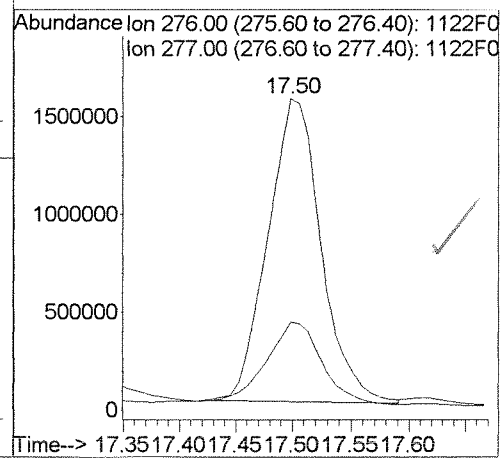


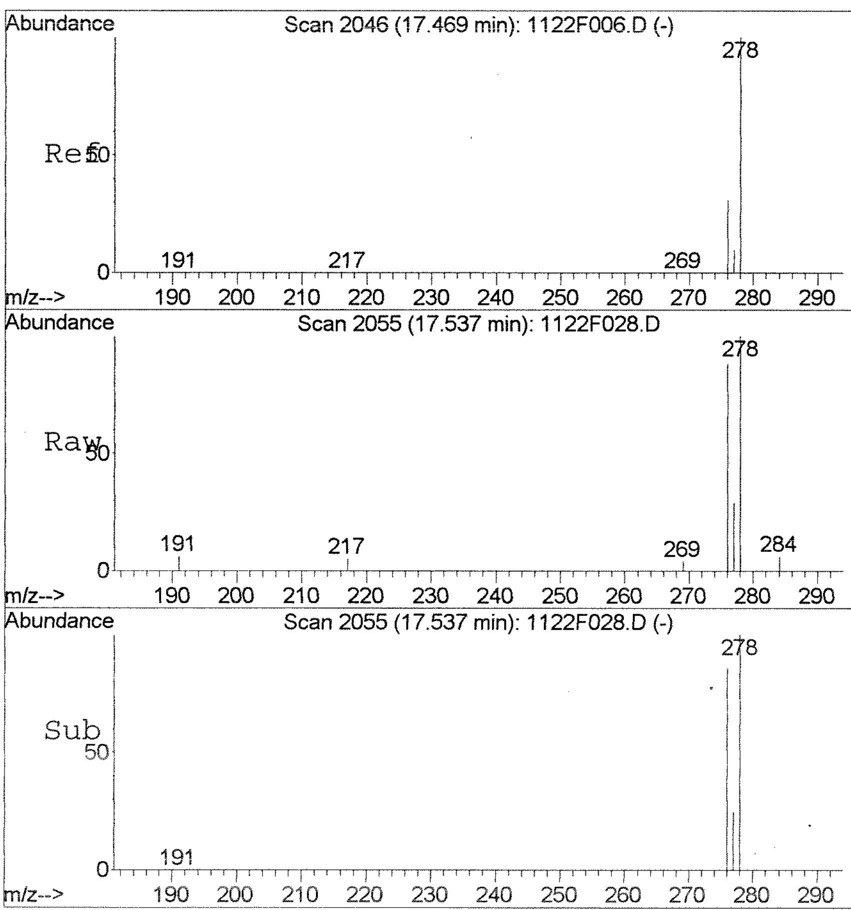


#55
Indeno(1,2,3-cd)pyrene
Concen: 2546.59 ng/ml
RT: 17.50 min Scan# 2050
Delta R.T. 0.06 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:276 Resp: 4969380

Ion	Ratio	Lower	Upper
276	100		
277	27.3	0.0	54.7

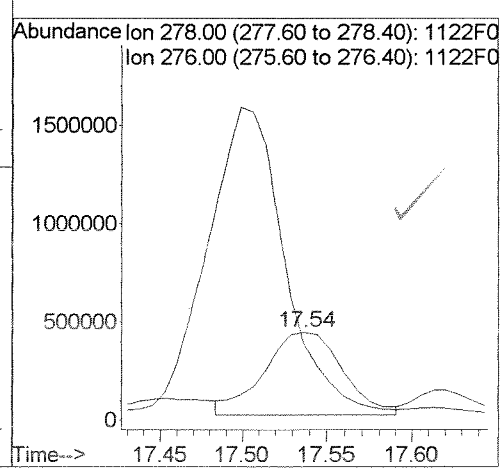


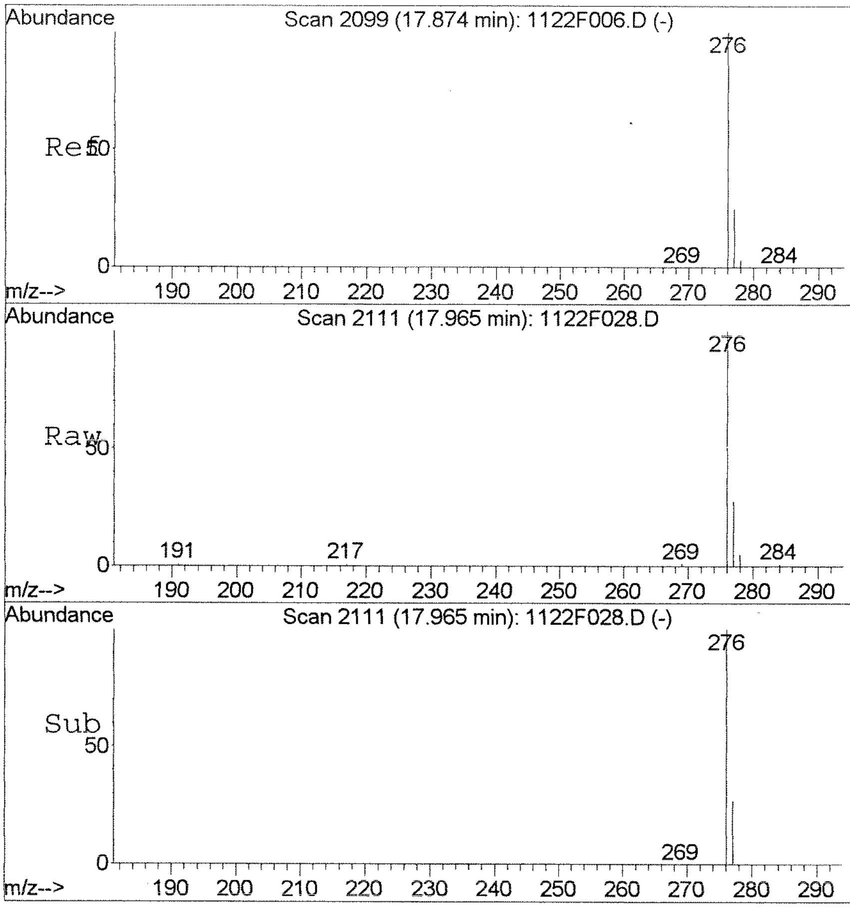


#56
Dibenz(a,h)anthracene
Concen: 658.56 ng/ml m
RT: 17.54 min Scan# 2055
Delta R.T. 0.05 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

Tgt Ion:278 Resp: 1348833

Ion	Ratio	Lower	Upper
278	100		
276	87.7	0.0	59.7#

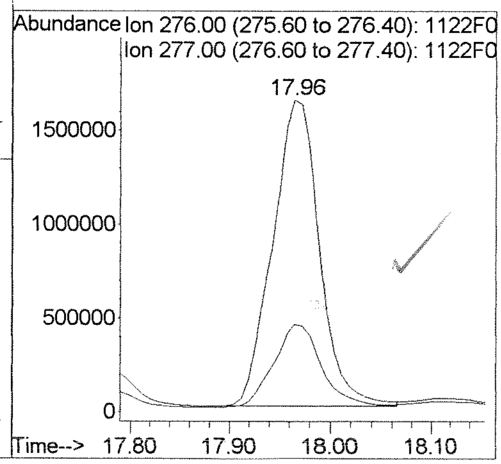




#57
Benzo(g,h,i)perylene
Concen: 2362.92 ng/ml
RT: 17.96 min Scan# 2111
Delta R.T. 0.07 min
Lab File: 1122F028.D
Acq: 22 Nov 2008 8:04 pm

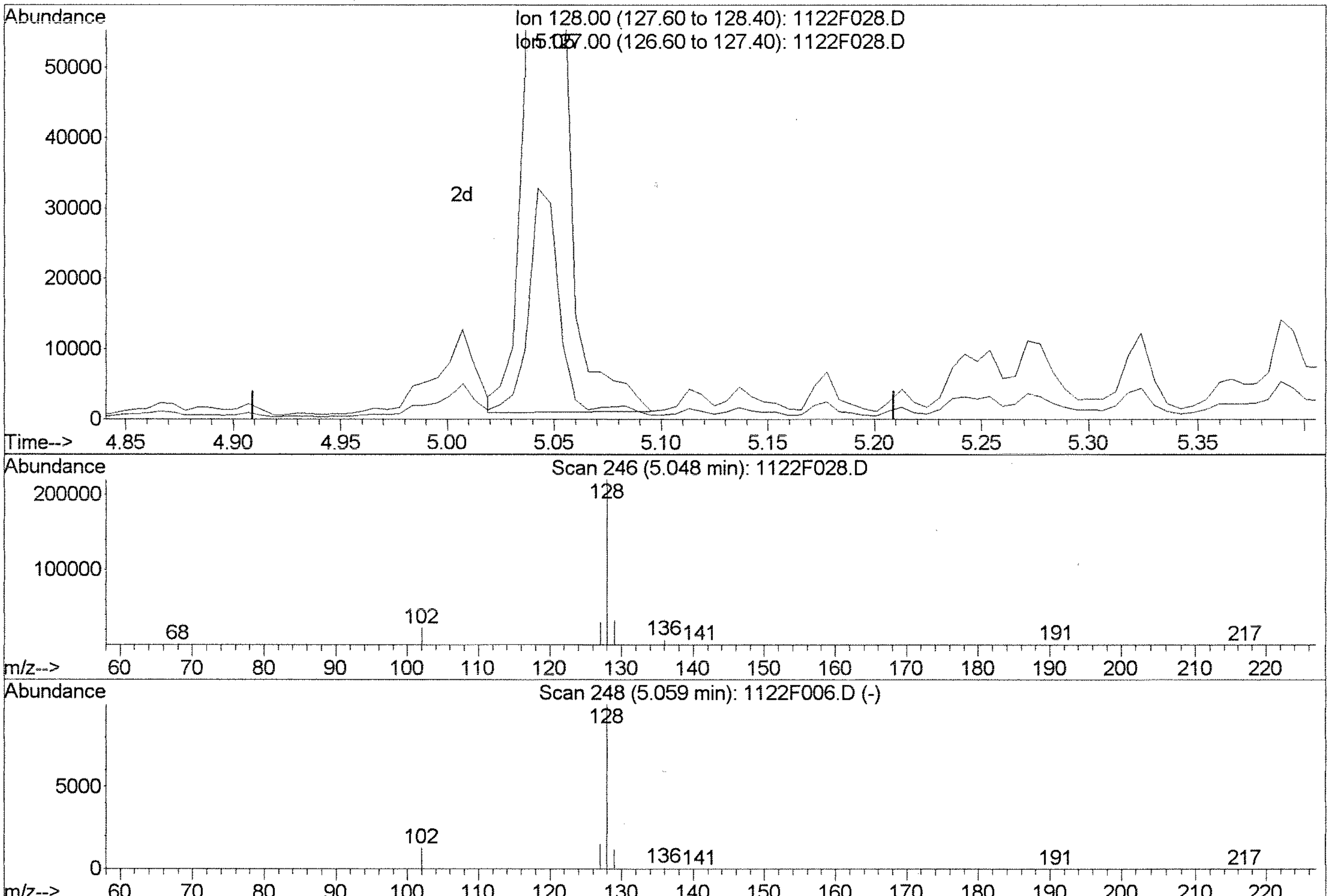
Tgt Ion:276 Resp: 5253201

Ion	Ratio	Lower	Upper
276	100		
277	27.0	0.0	54.2



Data File : J:\MS11\DATA\112208\1122F028.D Vial: 22
Acq On : 22 Nov 2008 8:04 pm Operator: LWeiskopf
Sample : K0810639-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:14 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



TIC: 1122F028.D

(2) Naphthalene (T)

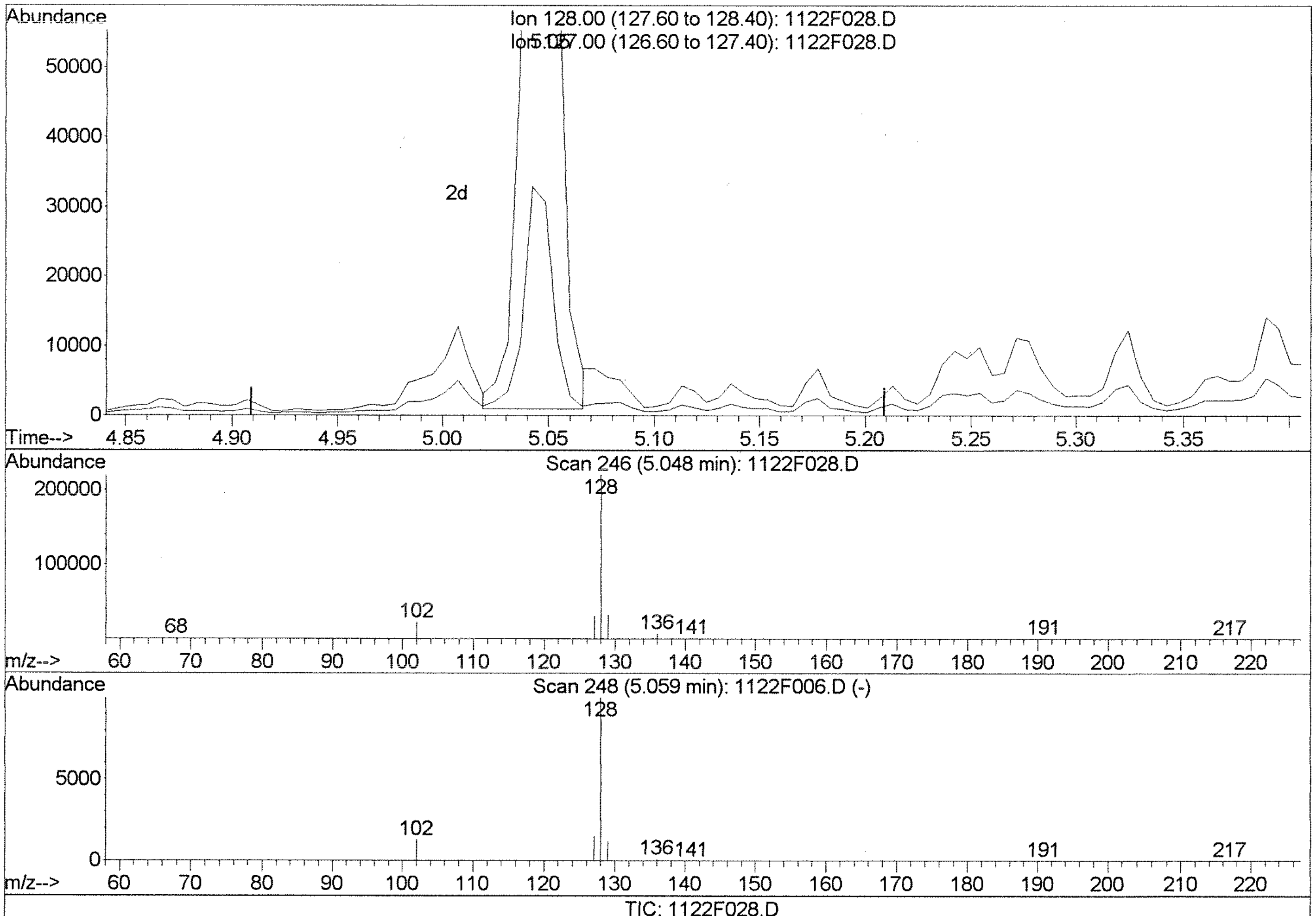
5.05min 124.70ng/ml

response 210371

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	13.75
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112208\1122F028.D Vial: 22
Acq On : 22 Nov 2008 8:04 pm Operator: LWeiskopf
Sample : K0810639-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:02 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



(2) Naphthalene (T)

5.05min 121.52ng/ml m

response 205002

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	13.95
0.00	0.00	0.00
0.00	0.00	0.00

OI [illegible]

LB
11/24/08

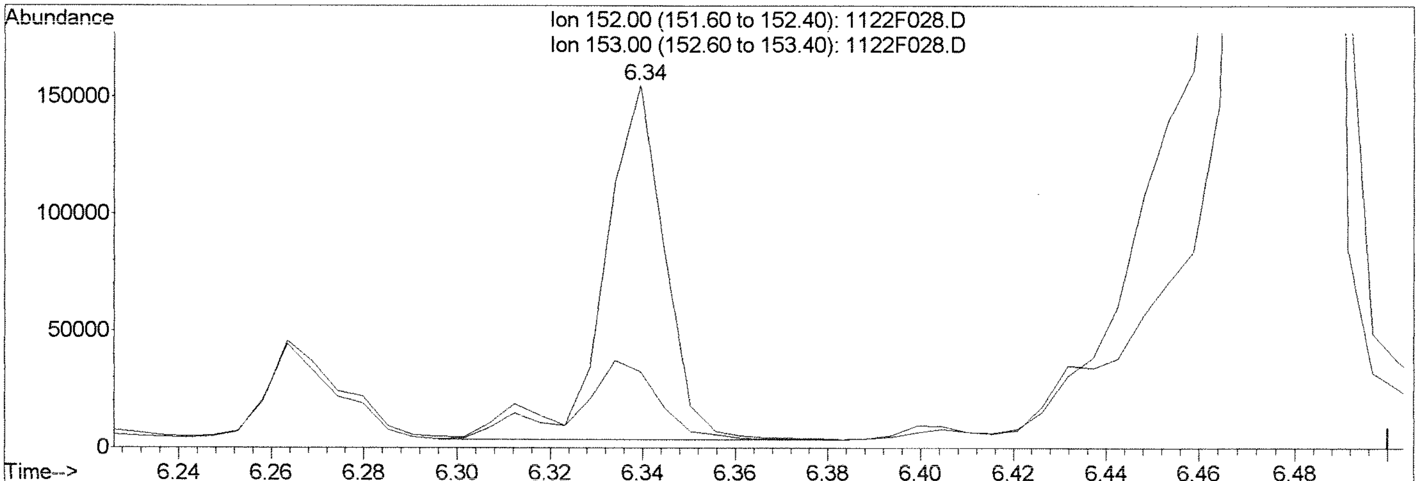
Quantitation Report (Qedit)

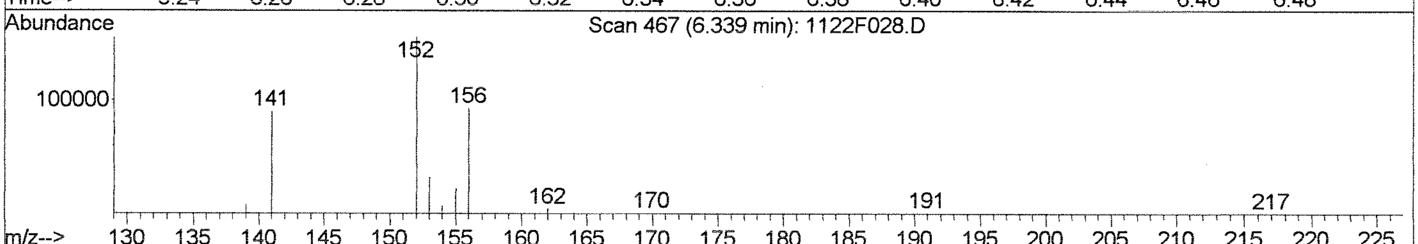
Data File : J:\MS11\DATA\112208\1122F028.D
Acq On : 22 Nov 2008 8:04 pm
Sample : K0810639-001
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:02 2008

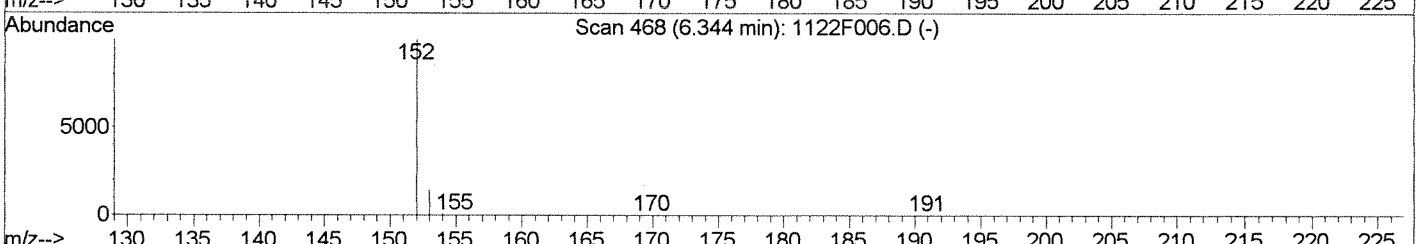
Vial: 22
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration







TIC: 1122F028.D

(11) Acenaphthylene (T)

6.34min 78.21ng/ml

response 136917

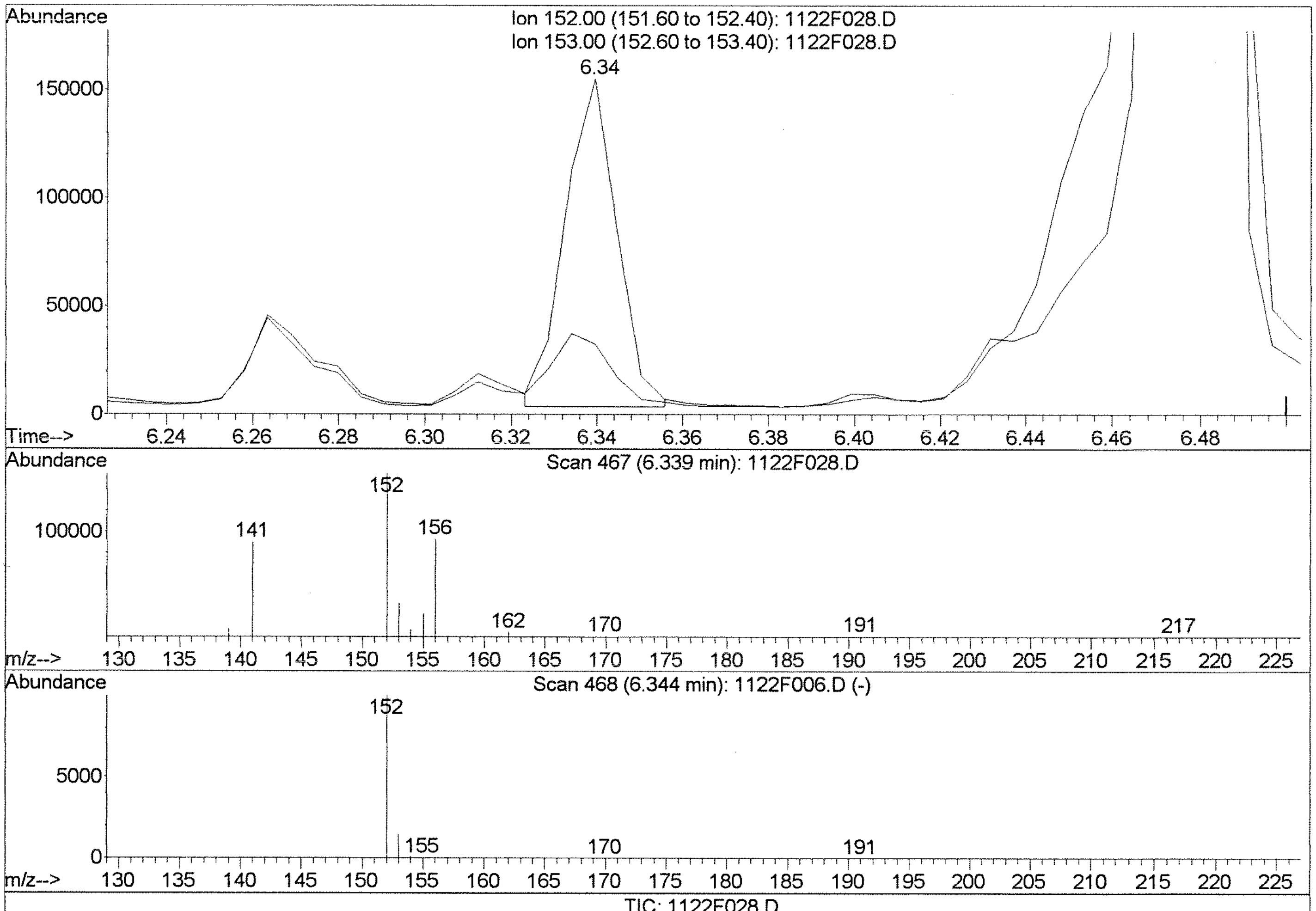
Ion	Exp%	Act%
152.00	100	100
153.00	13.00	19.11
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112208\1122F028.D
Acq On : 22 Nov 2008 8:04 pm
Sample : K0810639-001
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:02 2008

Vial: 22
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



(11) Acenaphthylene (T)

6.34min 72.08ng/ml m

response 126189

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	20.96
0.00	0.00	0.00
0.00	0.00	0.00

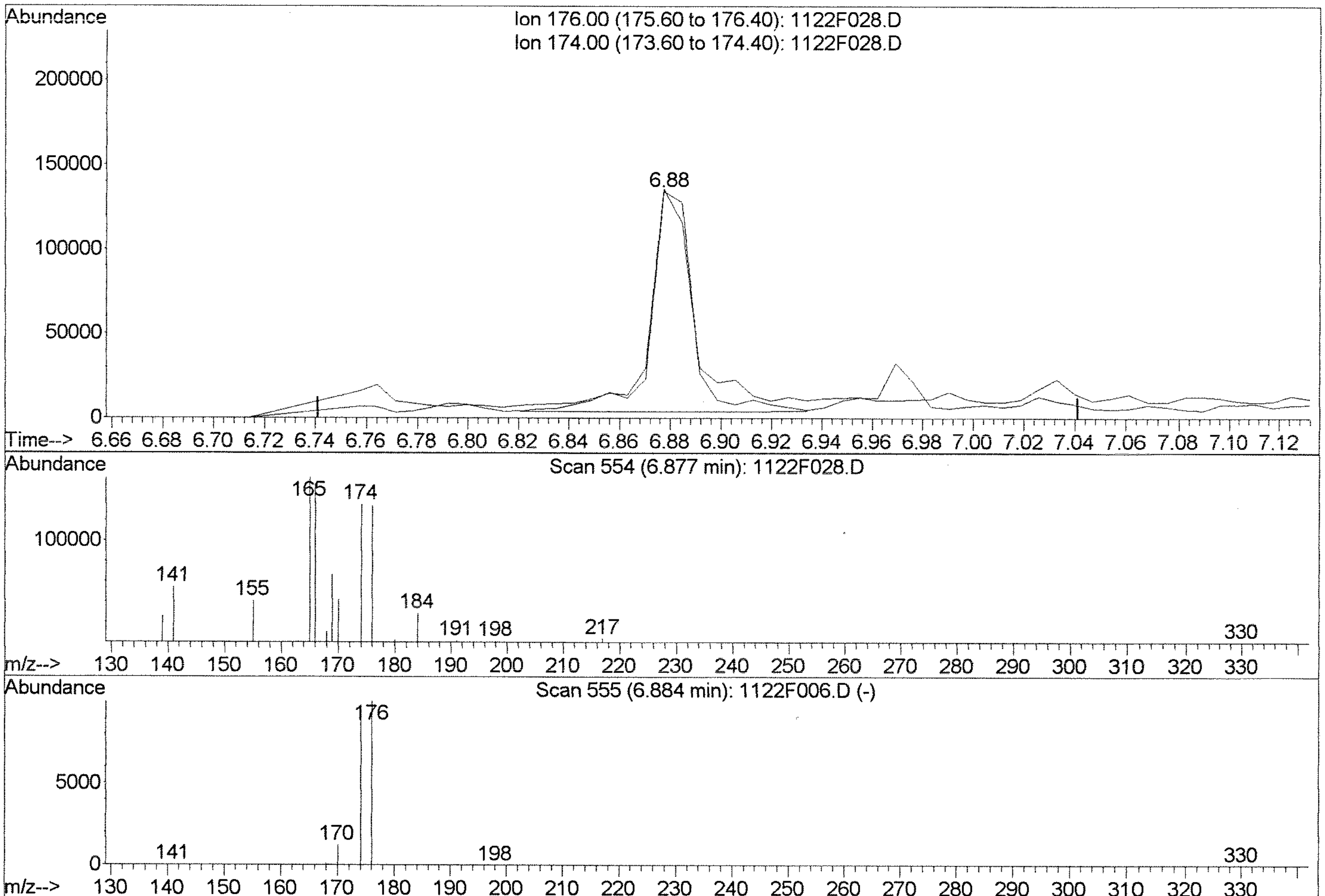
OI 11/24/08

LB
11/24/08

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112208\1122F028.D   Vial: 22
Acq On : 22 Nov 2008 8:04 pm   Operator: LWeiskopf
Sample : K0810639-001   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:02 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



TIC: 1122F028.D

(15) Fluorene-d10 (S)

6.88min 142.64ng/ml

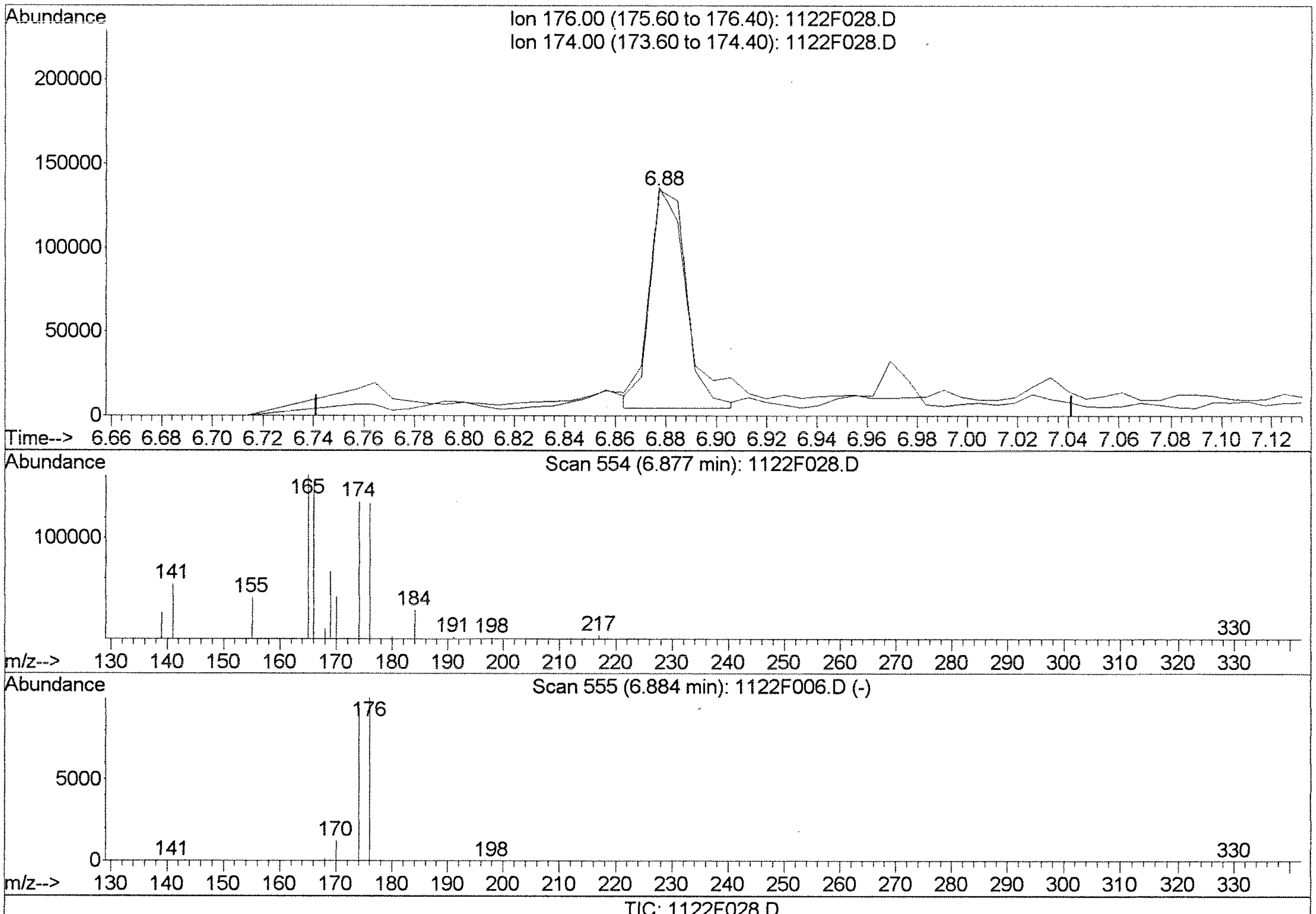
response 150500

Ion	Exp%	Act%
176.00	100	100
174.00	96.70	98.61
0.00	0.00	0.00
0.00	0.00	0.00

1122F028.D 1110ALK.M Sun Nov 23 11:02:49 2008

```
Data File : J:\MS11\DATA\112208\1122F028.D                    Vial: 22
Acq On    : 22 Nov 2008   8:04 pm                         Operator: LWeiskopf
Sample    : K0810639-001                                  Inst    : MS11
Misc      :                                               Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:02 2008                    Quant Results File: temp.res

Method          : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title           : PAHS and ALKYLATED HOMOLOGS
Last Update     : Sun Nov 23 10:13:22 2008
Response via    : Multiple Level Calibration
```



(15) Fluorene-d10 (S)

6.88min 121.73ng/ml m

response 128437

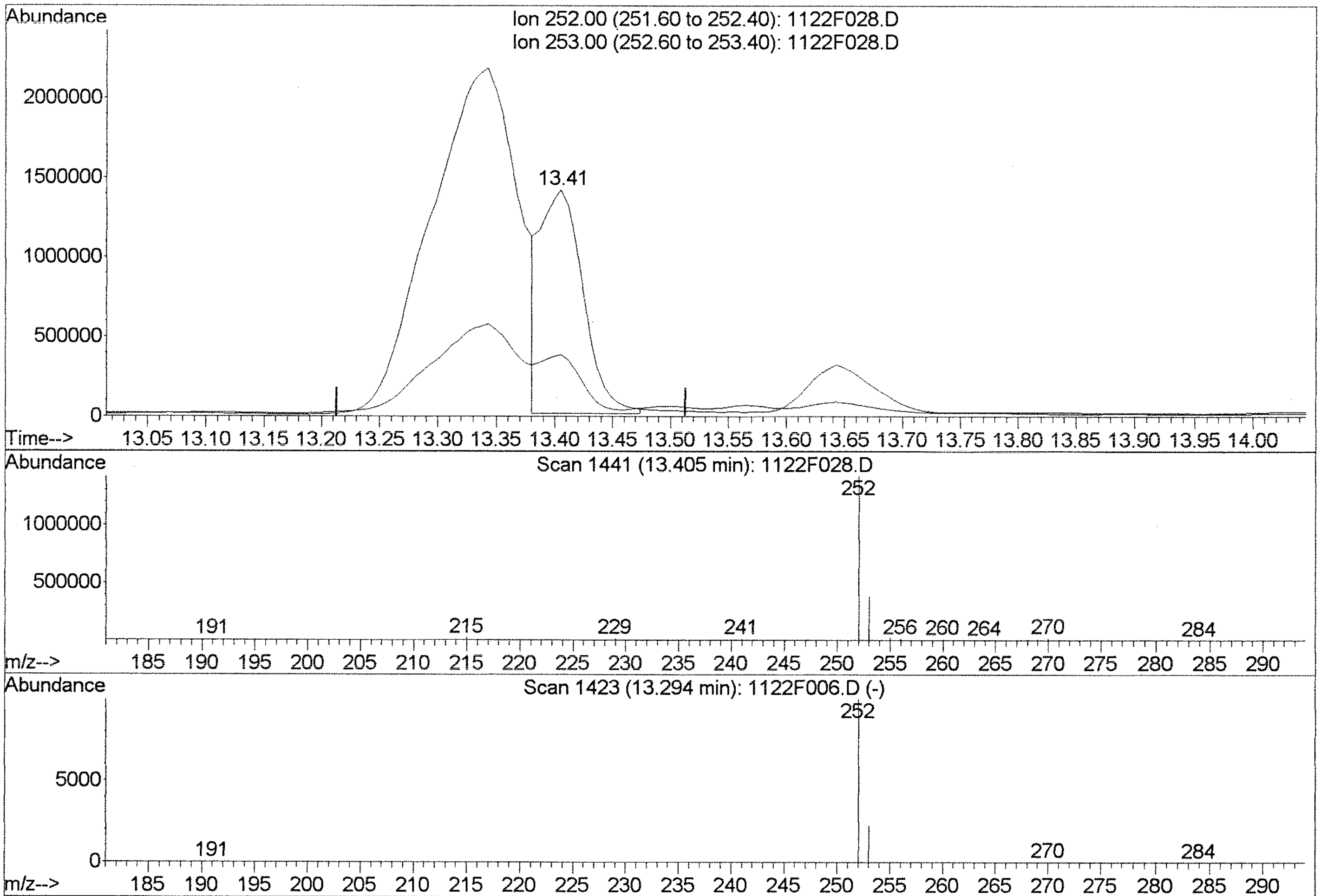
Ion	Exp%	Act%
176.00	100	100
174.00	96.70	101.14
0.00	0.00	0.00
0.00	0.00	0.00

OI Lmpair

LB 11/24/08

Data File : J:\MS11\DATA\112208\1122F028.D Vial: 22
Acq On : 22 Nov 2008 8:04 pm Operator: LWeiskopf
Sample : K0810639-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:03 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



(51) Benzo(k)fluoranthene (T)

13.41min 1463.60ng/ml m

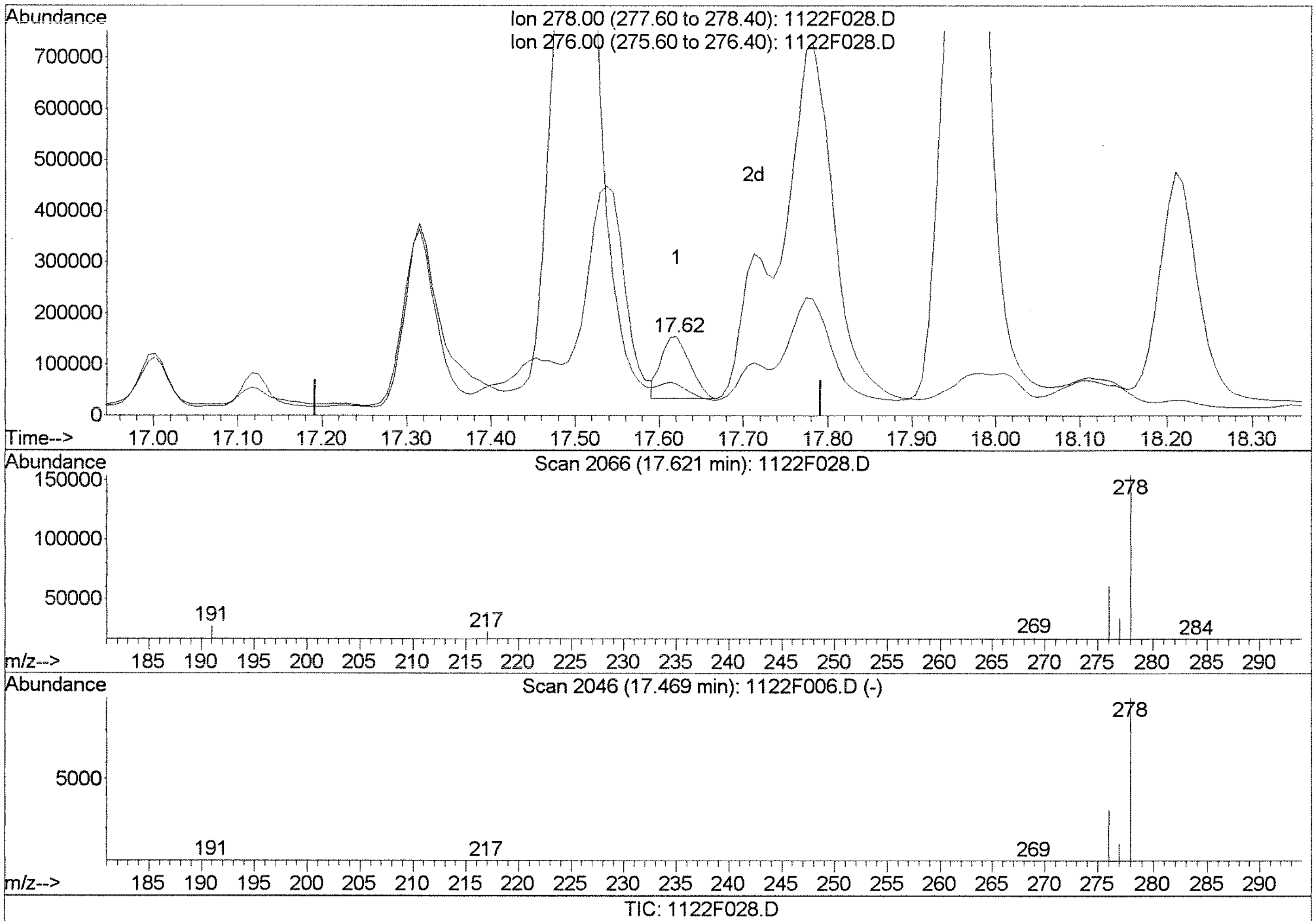
response 3571469

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	27.20
0.00	0.00	0.00
0.00	0.00	0.00

LB
11/24/08

Data File : J:\MS11\DATA\112208\1122F028.D   Vial: 22
Acq On : 22 Nov 2008 8:04 pm   Operator: LWeiskopf
Sample : K0810639-001   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:03 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



(56) Dibenz(a,h)anthracene (T)

17.62min 141.07ng/ml

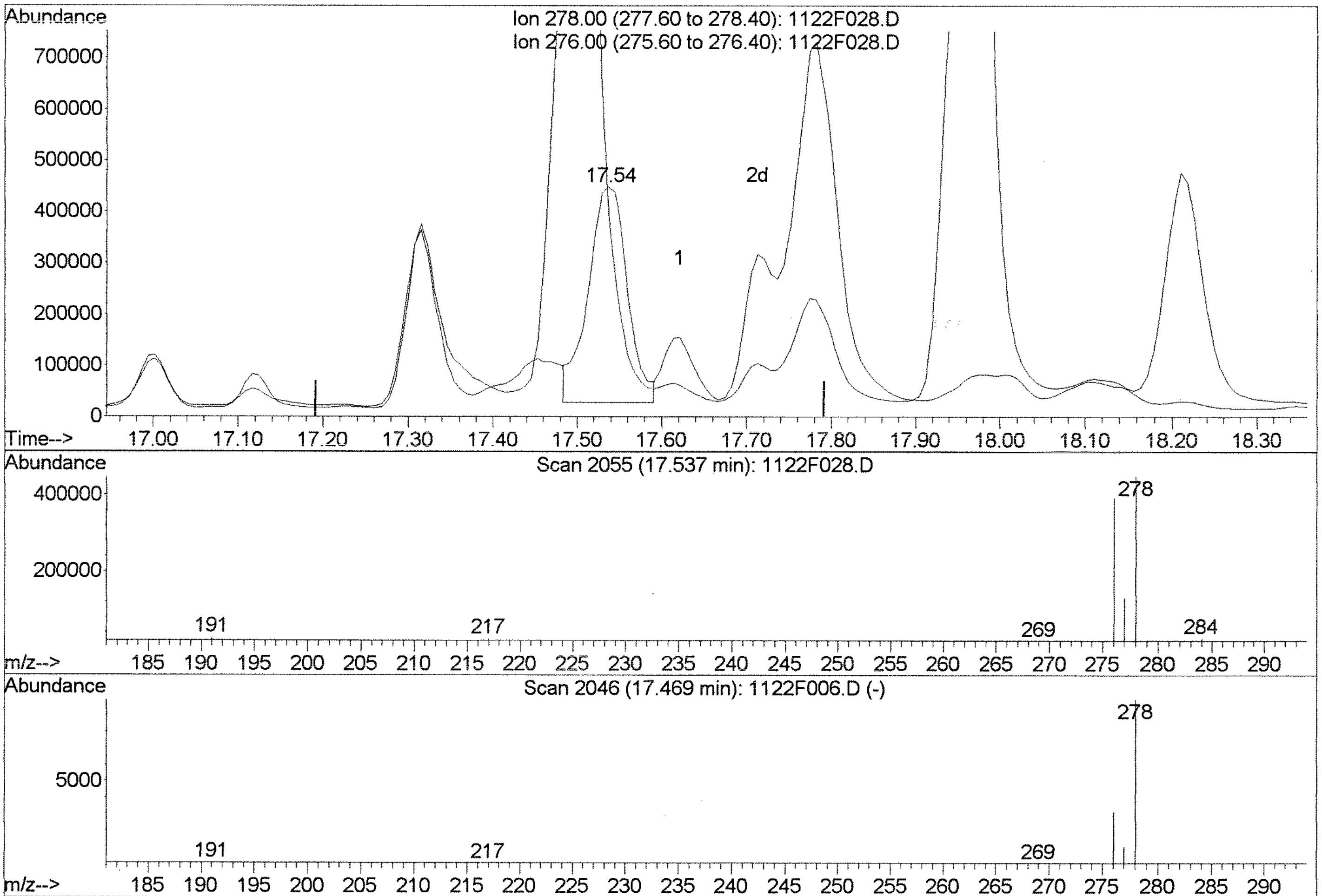
response 288933

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	25.89
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112208\1122F028.D   Vial: 22
Acq On : 22 Nov 2008 8:04 pm   Operator: LWeiskopf
Sample : K0810639-001   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:03 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



TIC: 1122F028.D

(56) Dibenz(a,h)anthracene (T)

17.54min 658.56ng/ml m

response 1348833

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	87.73#
0.00	0.00	0.00
0.00	0.00	0.00

wP 11/24/08

KB 11/24/08

Exception Report

Data File: J:\MS11\DATA\112108\1121F025.D
Lab ID: K0810639-001
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/21/2008 16:43
Date Quantitated: 11/22/2008 10:24
Batch ID: KWG0812597
Analysis Method: 8270C SIM
ListJoinID: LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

see 1X

Primary Review: KW 11/22/8

Secondary Review: KB 11/24/08

Printed: 11/22/2008 12:44:17
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812597	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776065	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112108\1121F001.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112108\1121F025.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 16:43	**Quant Date:**	11/22/2008 10:24	**Vial:**	23
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-001			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.05	0.01	136	180892	200.00	OK
2	Acenaphthene-d10	6.47	0.01	164	97918	200.00	OK
3	Phenanthrene-d10	7.71	0.01	188	179576	200.00	OK
4	Chrysene-d12	10.59	0.00	240	210121	200.00	OK
5	Perylene-d12	14.61	0.02	264	223321	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.90	0.01	0.00	176	3794m	5.70	57	10-128	OK	
3	Fluoranthene-d10	8.70	0.00	0.00	212	7201m	5.88	59	29-121	OK	
4	Terphenyl-d14	9.10	0.01	0.00	244	7538m	6.93	69	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantM ass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.07	0.01	0.00	128	6761	6.14	130	D	
1	2-Methylnaphthalene	5.62	0.01	0.00	142	3306	4.30	90	JD	
2	Acenaphthylene	6.36	0.01	0.00	152	3410m	3.09	65	JD	
2	Acenaphthene	6.49		0.00	154	119211	177.67	3700	D	
2	Dibenzofuran	6.64	0.01	0.00	168	8913m	8.83	190	D	
2	Fluorene	6.92	0.01	0.00	166	144552	179.46	3800	D	
3	Phenanthrene	7.72		0.00	178	1124170	890.61	19000	D	
3	Anthracene	7.77	0.01	0.00	178	324558	263.90	5500	D	
3	Fluoranthene	8.73	0.01	0.00	202	1020190	711.53	15000	D	
4	Pyrene	8.95		0.00	202	935797	592.01	12000	D	
4	Benz(a)anthracene	10.58	0.01	0.00	228	271567	189.37	4000	D	
4	Chrysene	10.65	0.02	0.00	228	365174	259.28	5400	D	
5	Benzo(b)fluoranthene	13.25	0.02	0.00	252	324401	210.49	4400	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112108\1121F025.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 16:43	**Quant Date:**	11/22/2008 10:24	**Vial:**	23
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-001			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.33	0.02	0.00	252	120934	81.68	1700	D	
5	Benzo(a)pyrene	14.39	0.02	0.00	252	201012	157.53	3300	D	
5	Indeno(1,2,3-cd)pyrene	17.44		0.00	276	143613	121.30	2500	D	
5	Dibenz(a,h)anthracene	17.49		0.00	278	29060	23.39	490	D	
5	Benzo(g,h,i)perylene	17.90		0.00	276	155981	115.64	2400	D	

Prep Amount:	20.05 g	**Dilution:**	20.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	47.5 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112108\1121F025.D Vial: 23
Acq On : 21 Nov 2008 4:43 pm Operator: LWeiskopf
Sample : K0810639-001DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 08:13:25 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.05	136	180892	200.00	ng/ml	0.01
10) Acenaphthene-d10	6.47	164	97918	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.71	188	179576	200.00	ng/ml	0.00
37) Chrysene-d12	10.59	240	210121	200.00	ng/ml	0.00
49) Perylene-d12	14.61	264	223321	200.00	ng/ml	0.02
System Monitoring Compounds						
15) Fluorene-d10	6.90	176	3794m	5.70	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	2.85%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery	=	0.00%	
36) Fluoranthene-d10	8.70	212	7201m	5.88	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	2.94%	
42) Terphenyl-d14	9.10	244	7538m	6.93	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	3.46%	
Target Compounds						Qvalue
2) Naphthalene	5.07	128	6761	6.14	ng/ml	100
3) 2-Methylnaphthalene	5.62	142	3306	4.30	ng/ml	98
4) 1-Methylnaphthalene	5.70	142	1892	2.75	ng/ml	94
5) Biphenyl	5.99	154	1548	1.65	ng/ml	82
6) 2,6-Dimethylnaphthalene	6.12	156	12454	18.57	ng/ml	100
11) Acenaphthylene	6.36	152	3410m	3.09	ng/ml	
12) Acenaphthene	6.49	154	119211	177.67	ng/ml	99
13) Dibenzofuran	6.64	168	8913m	8.83	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.80	170	15071	25.54	ng/ml	69
16) Fluorene	6.92	166	144552	179.46	ng/ml	95
23) Dibenzothiophene	7.62	184	68360	55.39	ng/ml	85
27) Phenanthrene	7.72	178	1124170	890.61	ng/ml	97
28) Anthracene	7.77	178	324558	263.90	ng/ml	95
29) Carbazole	7.92	167	9842	8.72	ng/ml	94
30) 1-Methylphenanthrene	8.22	192	57715	61.61	ng/ml	95
35) Fluoranthene	8.73	202	1020190	711.53	ng/ml	97
38) Pyrene	8.95	202	935797	592.01	ng/ml	96
43) Benz(a)anthracene	10.58	228	271567	189.37	ng/ml	97
44) Chrysene	10.65	228	365174	259.28	ng/ml	100
50) Benzo(b)fluoranthene	13.25	252	324401	210.49	ng/ml	100
51) Benzo(k)fluoranthene	13.33	252	120934	81.68	ng/ml	96
52) Benzo(e)pyrene	14.19	252	171013	122.15	ng/ml	98
53) Benzo(a)pyrene	14.39	252	201012	157.53	ng/ml	98
54) Perylene	14.71	252	53720	42.85	ng/ml	98
55) Indeno(1,2,3-cd)pyrene	17.44	276	143613	121.30	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112108\1121F025.D Vial: 23
Acq On : 21 Nov 2008 4:43 pm Operator: LWeiskopf
Sample : K0810639-001DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 08:13:25 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
56)	Dibenz(a,h)anthracene	17.49	278	29060	23.39	ng/ml	59
57)	Benzo(g,h,i)perylene	17.90	276	155981	115.64	ng/ml	99

(#) = qualifier out of range (m) = manual integration

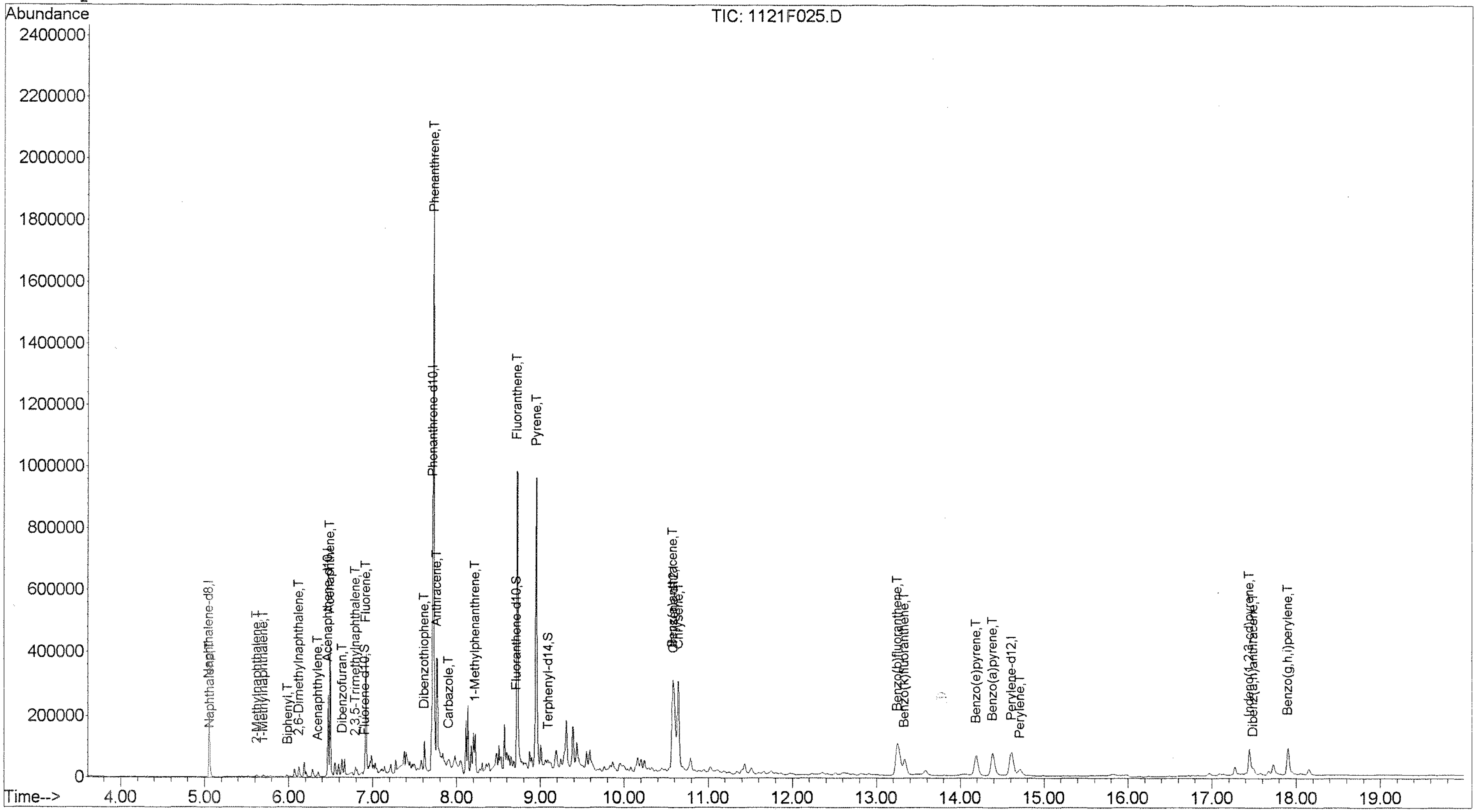
Quantitation Report (QT Reviewed)

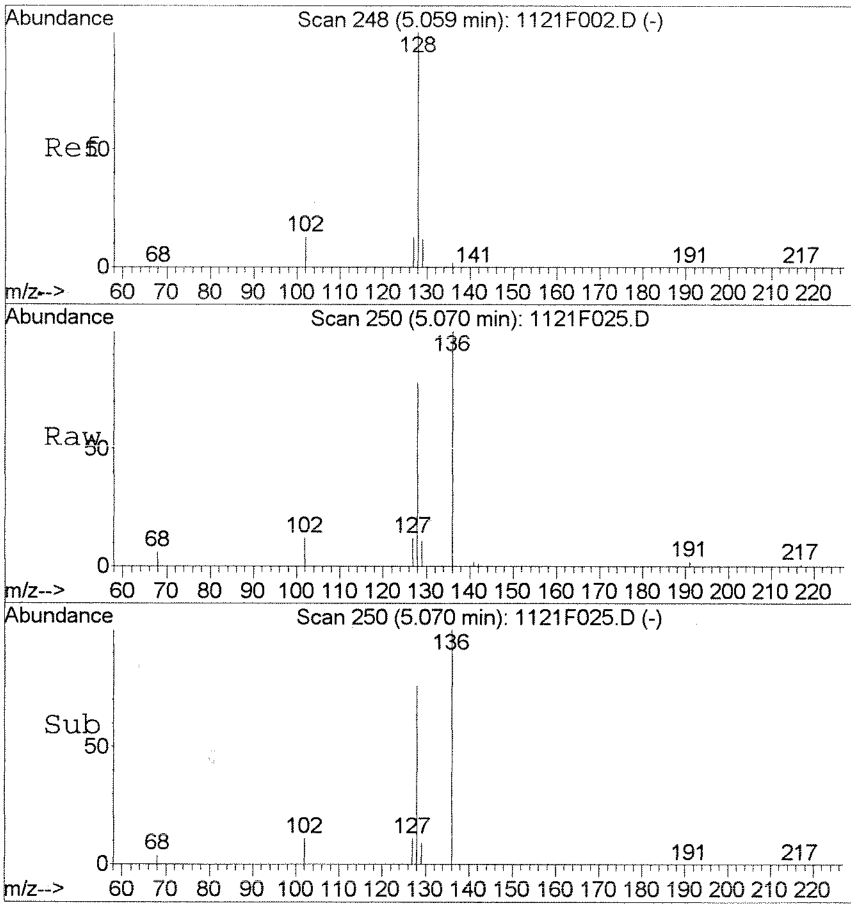
Data File : J:\MS11\DATA\112108\1121F025.D
Acq On : 21 Nov 2008 4:43 pm
Sample : K0810639-001DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:24 2008

Vial: 23
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

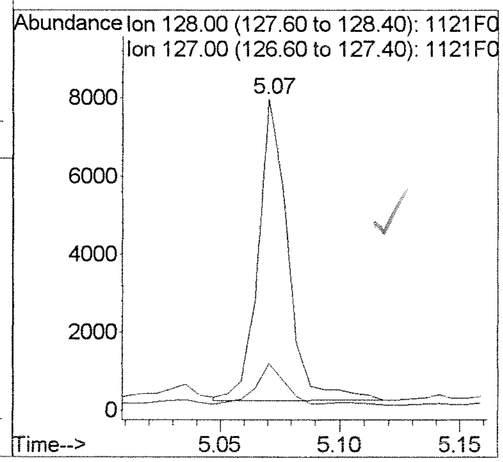
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration

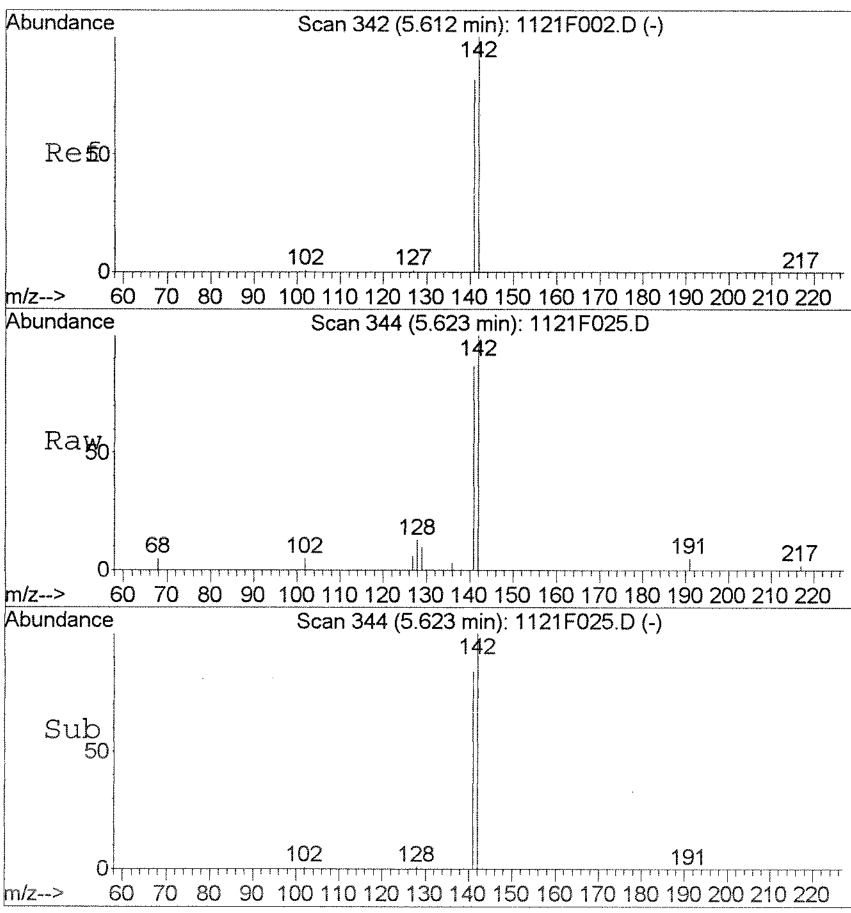




#2
Naphthalene
Concen: 6.14 ng/ml
RT: 5.07 min Scan# 250
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

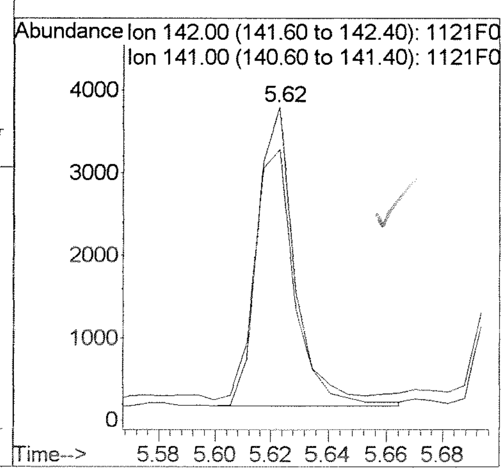
Tgt	Ion:128	Resp:	6761
Ion	Ratio	Lower	Upper
128	100		
127	13.8	0.0	43.8

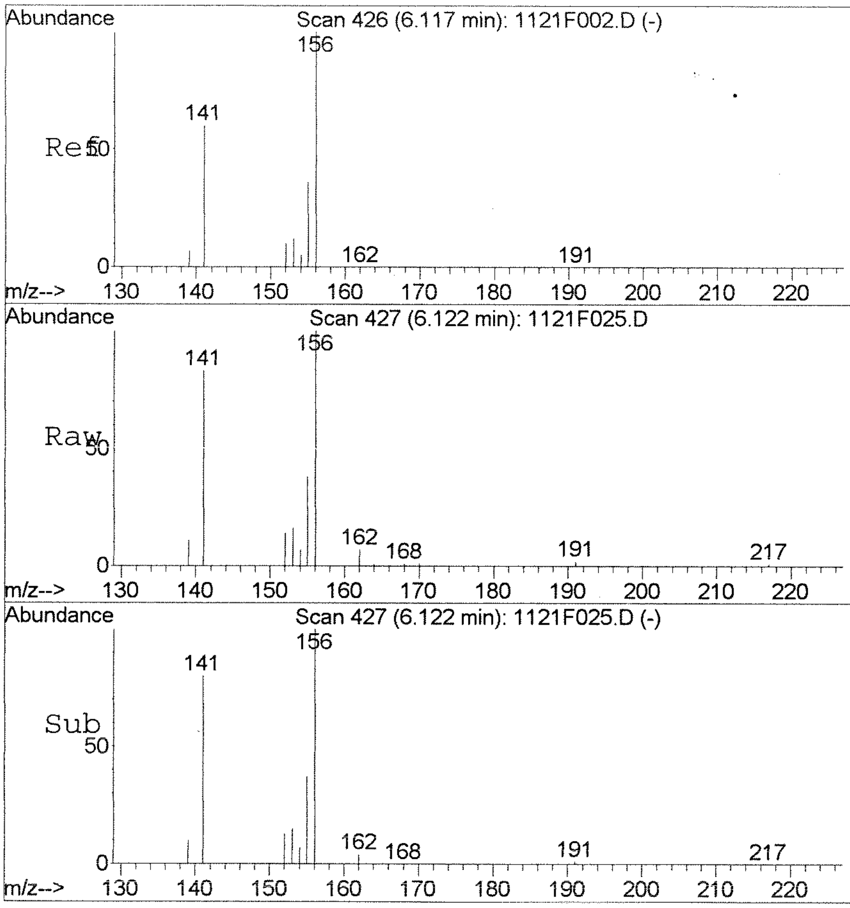




#3
2-Methylnaphthalene
Concen: 4.30 ng/ml
RT: 5.62 min Scan# 344
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt	Ion:142	Resp:	3306
Ion	Ratio	Lower	Upper
142	100		
141	83.9	52.4	112.4

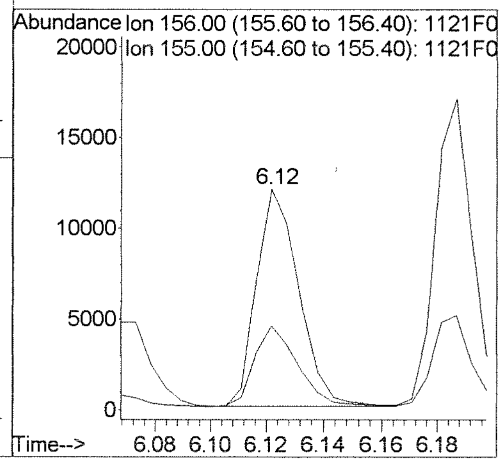


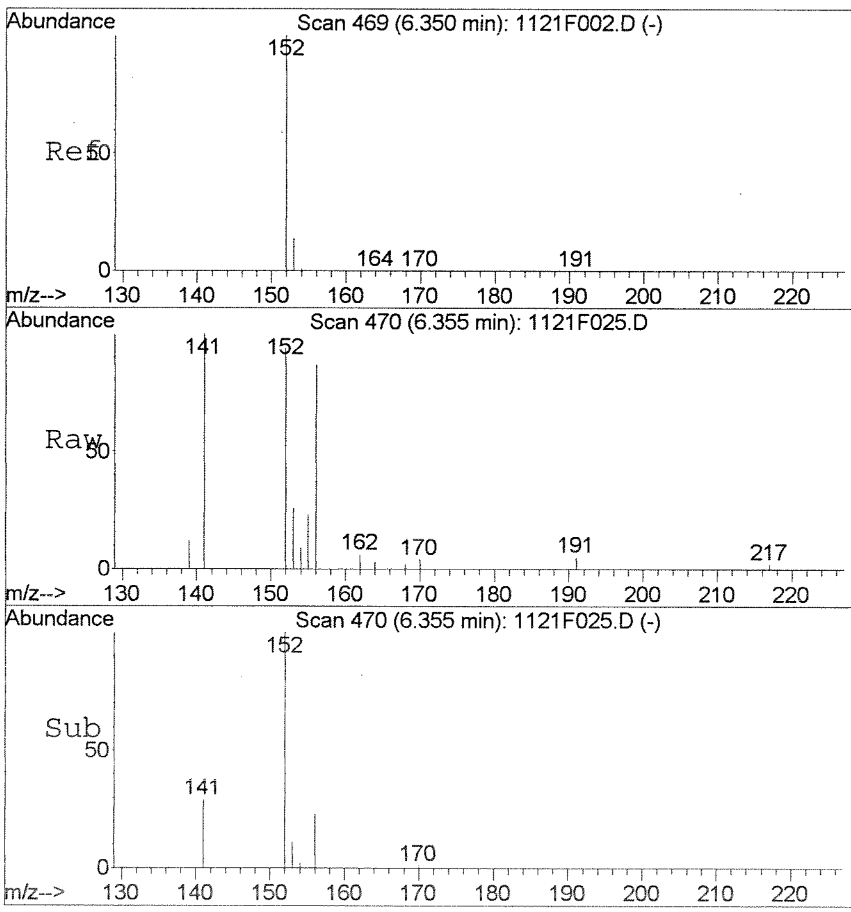


#6
2,6-Dimethylnaphthalene
Concen: 18.57 ng/ml
RT: 6.12 min Scan# 427
Delta R.T. 0.00 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:156 Resp: 12454

Ion	Ratio	Lower	Upper
156	100		
155	37.3	7.3	67.3

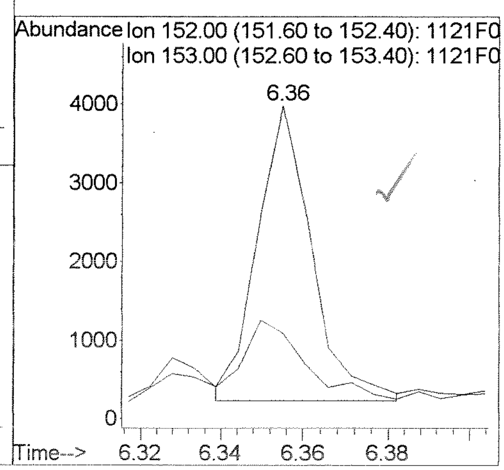


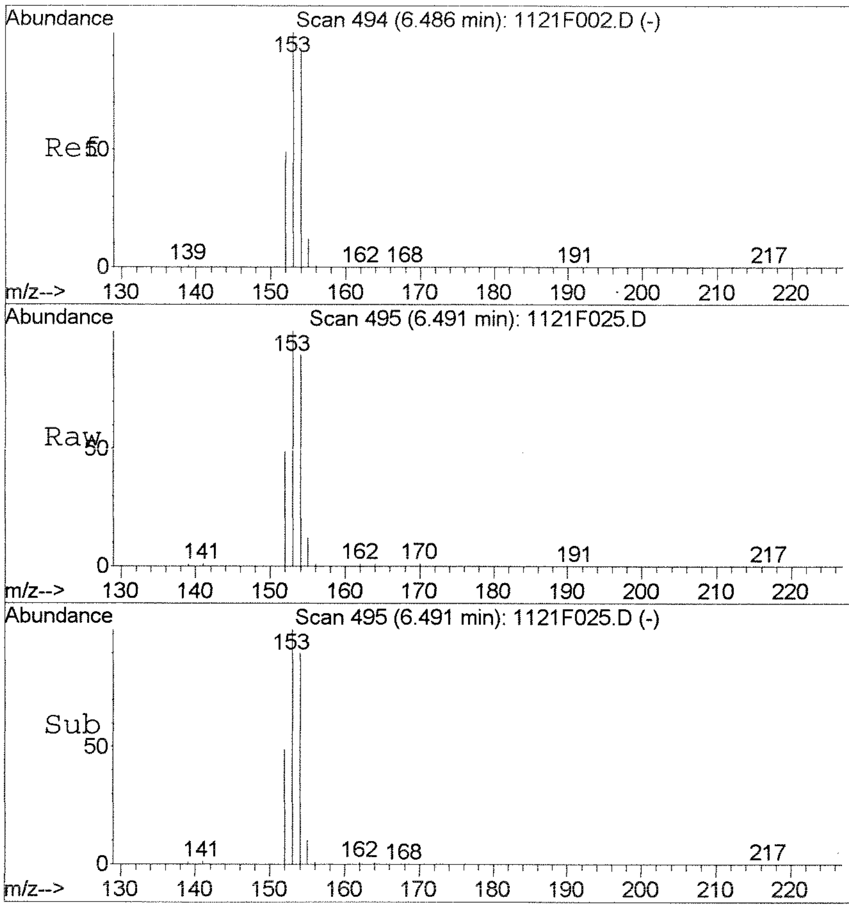


#11
Acenaphthylene
Concen: 3.09 ng/ml m
RT: 6.36 min Scan# 470
Delta R.T. 0.00 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:152 Resp: 3410

Ion	Ratio	Lower	Upper
152	100		
153	27.5	0.0	43.0

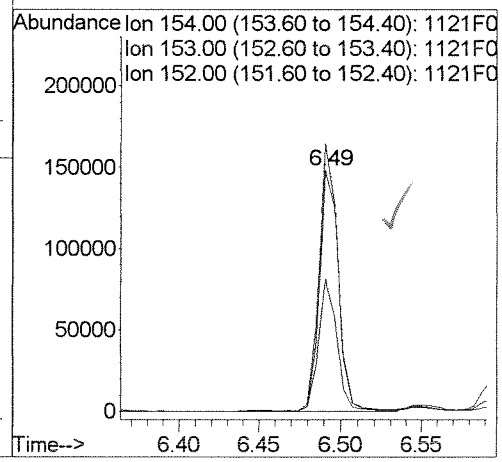


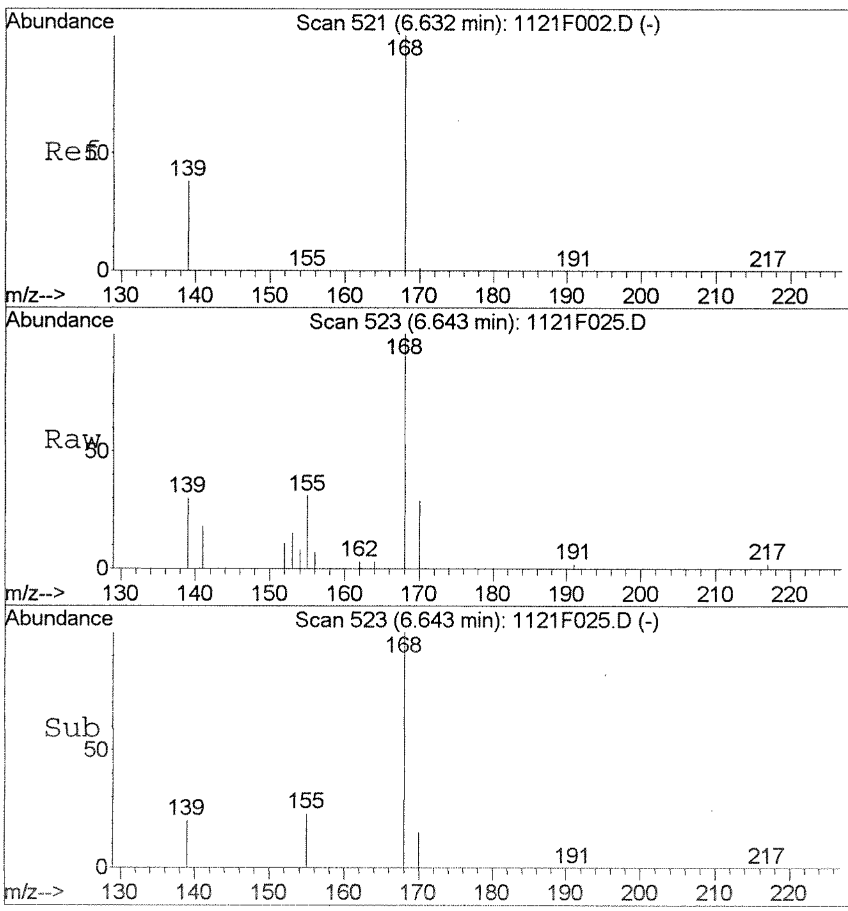


#12
Acenaphthene
Concen: 177.67 ng/ml
RT: 6.49 min Scan# 495
Delta R.T. 0.00 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:154 Resp: 119211

Ion	Ratio	Lower	Upper
154	100		
153	111.1	81.9	141.9
152	54.7	26.8	86.8

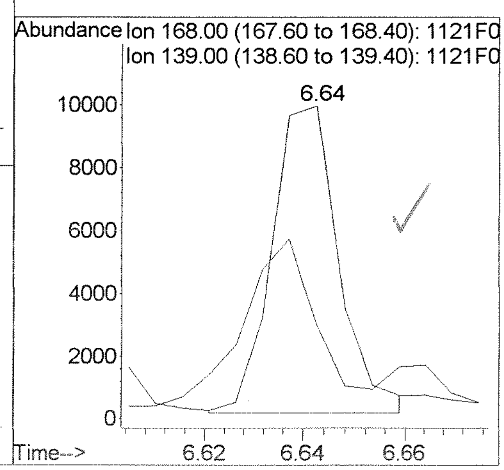


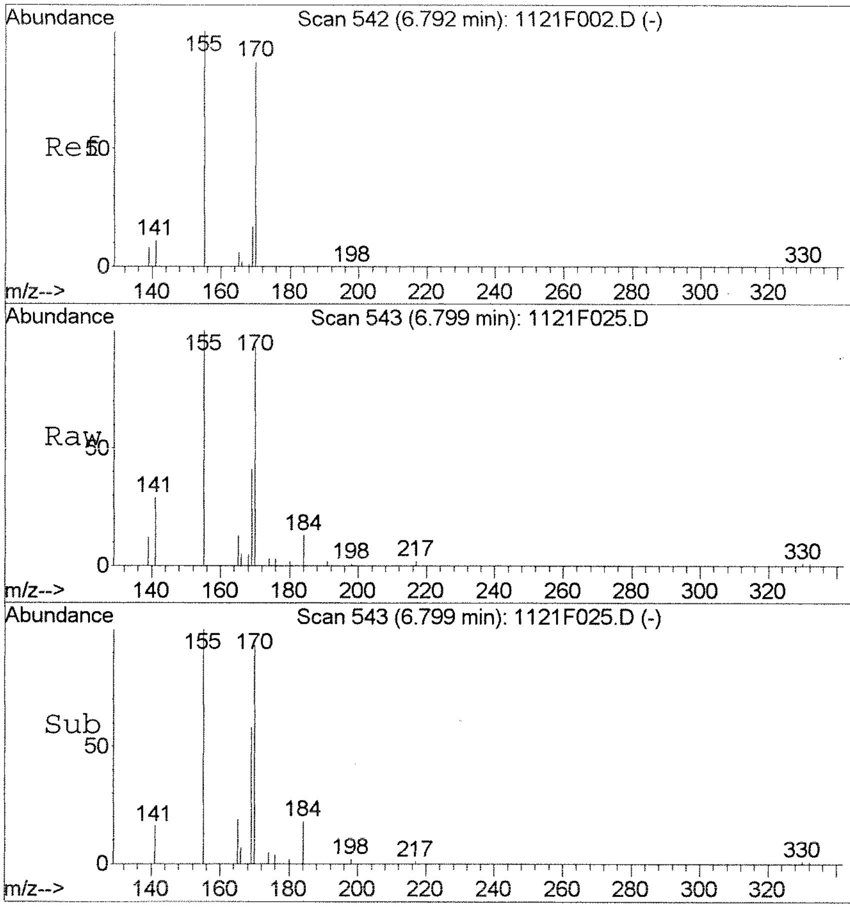


#13
Dibenzofuran
Concen: 8.83 ng/ml m
RT: 6.64 min Scan# 523
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:168 Resp: 8913

Ion	Ratio	Lower	Upper
168	100		
139	30.0	21.0	81.0

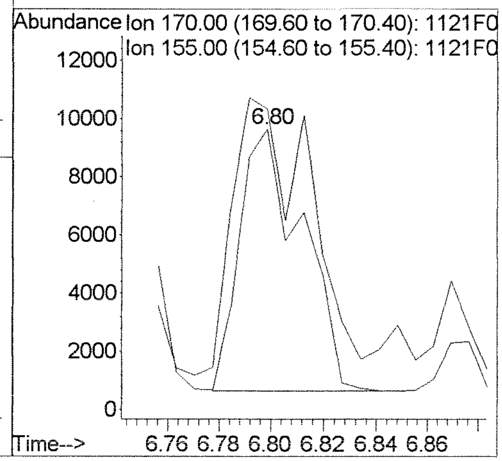


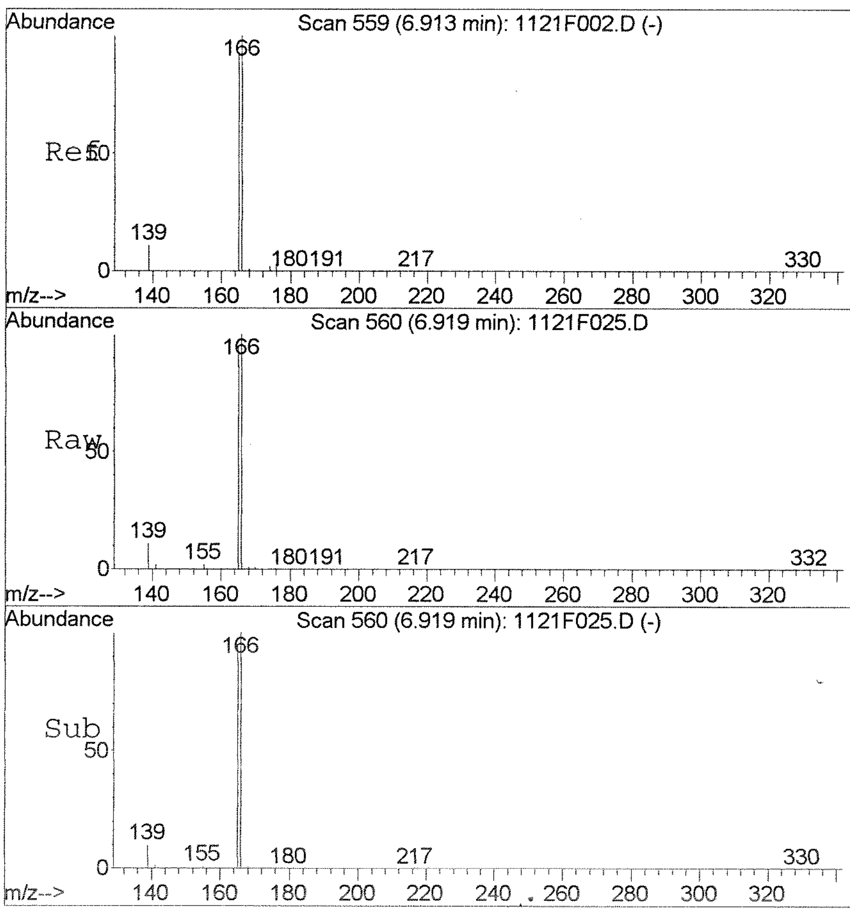


#14
2,3,5-Trimethylnaphthalene
Concen: 25.54 ng/ml
RT: 6.80 min Scan# 543
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:170 Resp: 15071

Ion	Ratio	Lower	Upper
170	100		
155	98.8	42.9	102.9

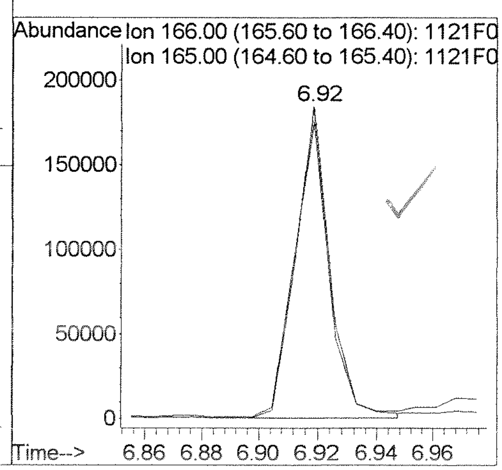


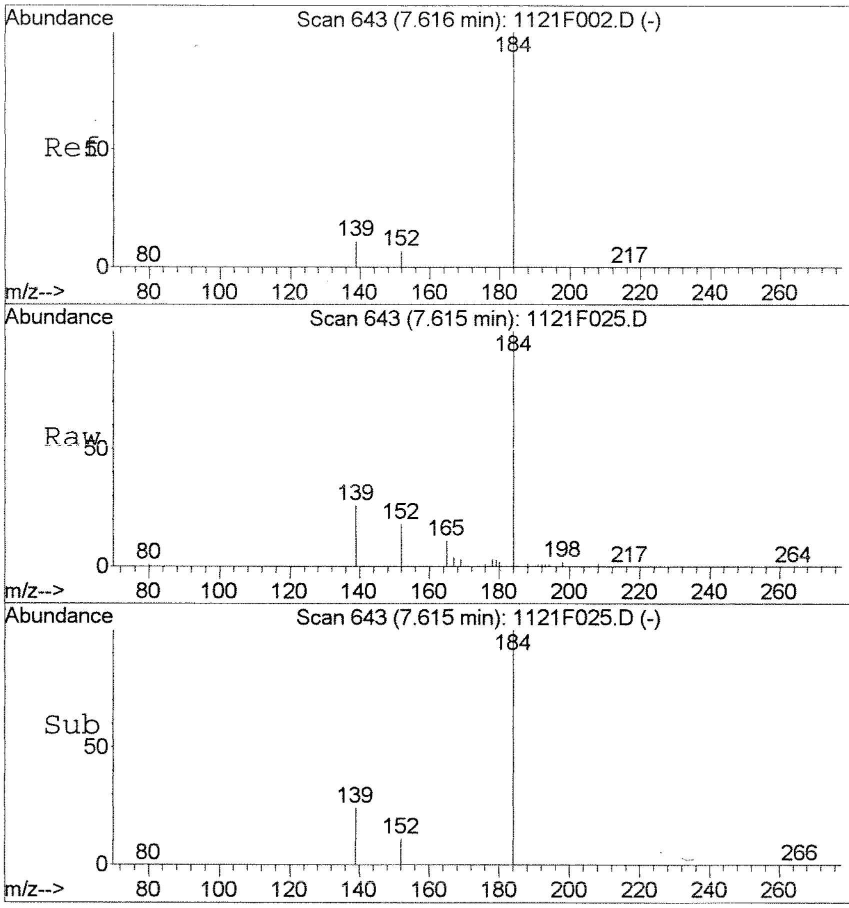


#16
Fluorene
Concen: 179.46 ng/ml
RT: 6.92 min Scan# 560
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:166 Resp: 144552

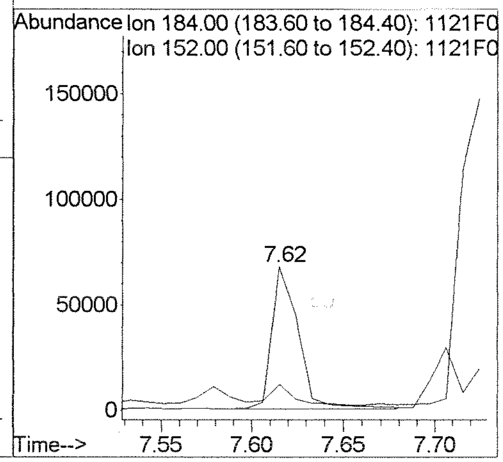
Ion	Ratio	Lower	Upper
166	100		
165	94.7	59.8	119.8

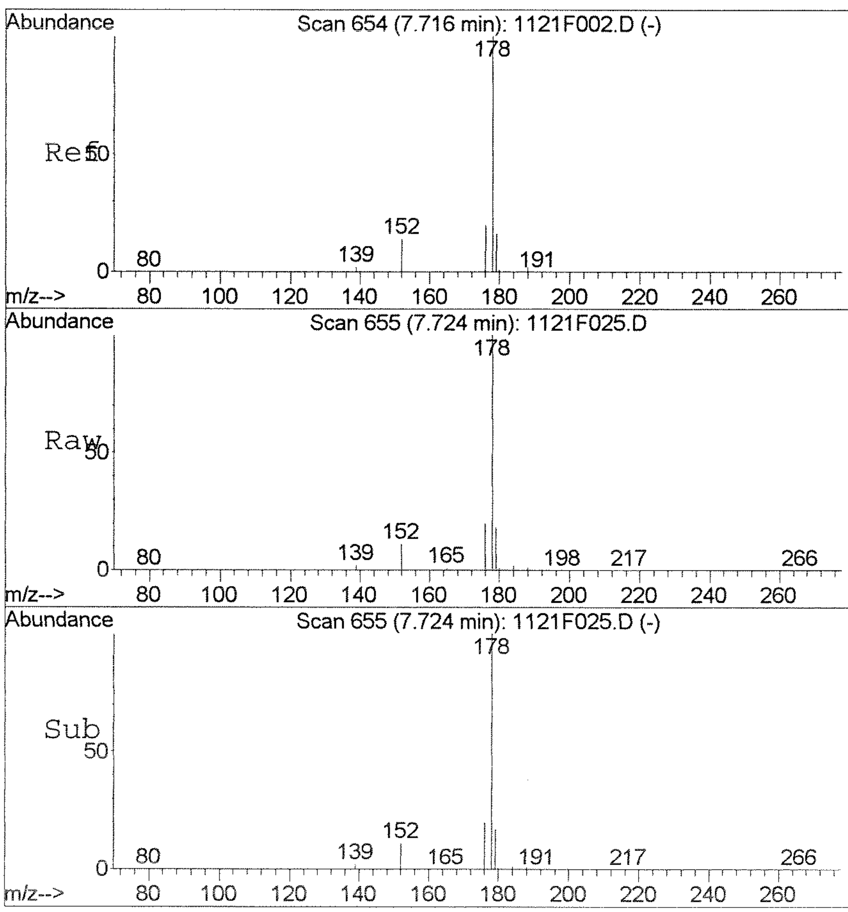




#23
Dibenzothiophene
Concen: 55.39 ng/ml
RT: 7.62 min Scan# 643
Delta R.T. -0.00 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

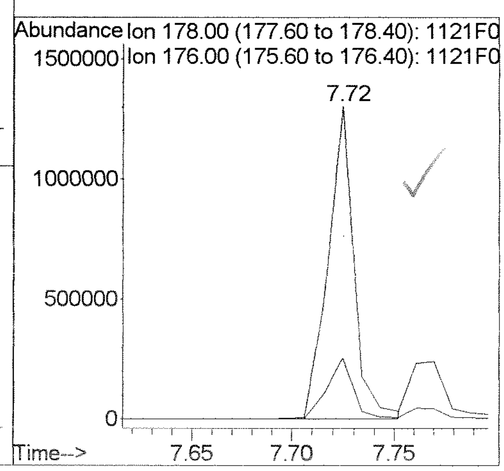
Tgt Ion:184	Resp:		68360
Ion	Ratio	Lower	Upper
184	100		
152	14.4	0.0	39.1

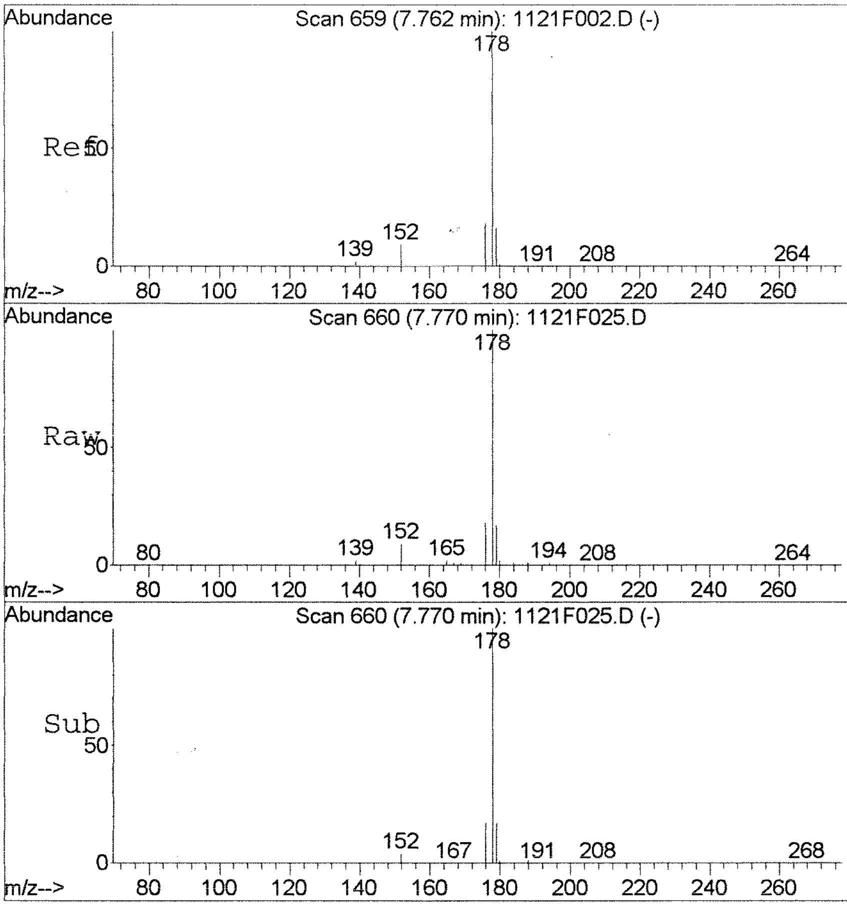




#27
Phenanthrene
Concen: 890.61 ng/ml
RT: 7.72 min Scan# 655
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:178	Resp:		1124170
Ion	Ratio	Lower	Upper
178	100		
176	19.6	0.0	51.0

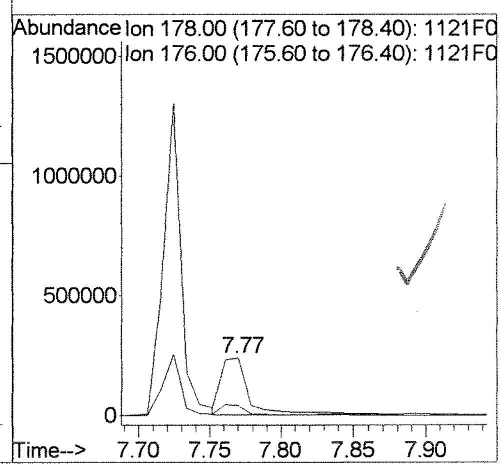


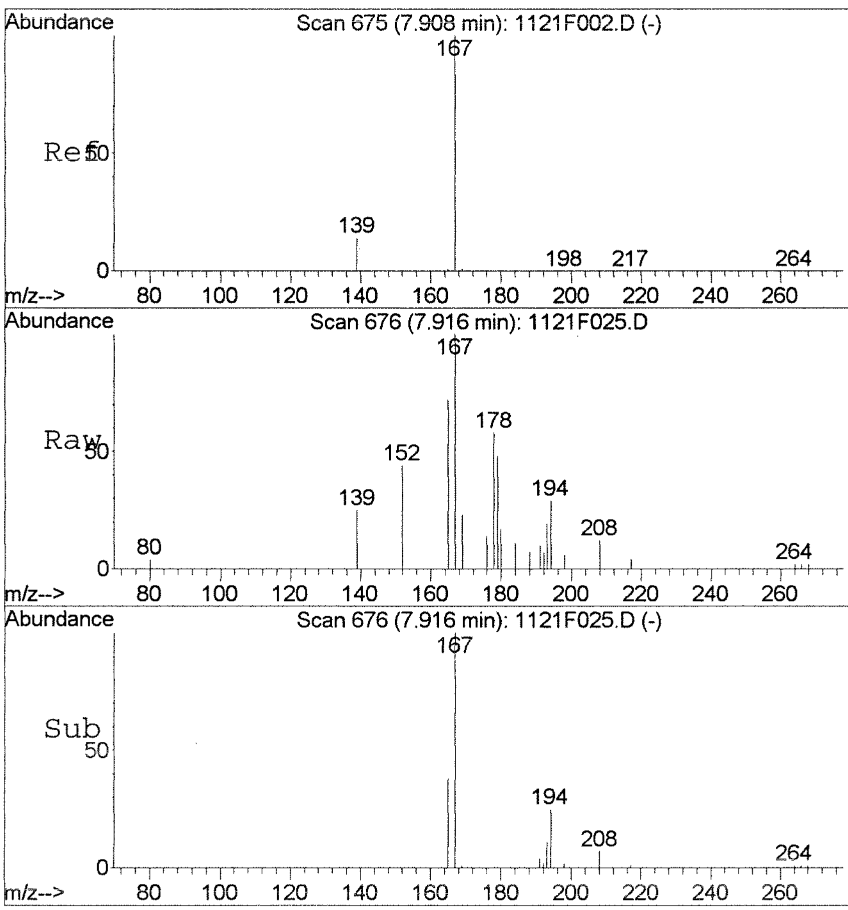


#28
Anthracene
Concen: 263.90 ng/ml
RT: 7.77 min Scan# 660
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:178 Resp: 324558

Ion	Ratio	Lower	Upper
178	100		
176	17.3	0.0	49.7

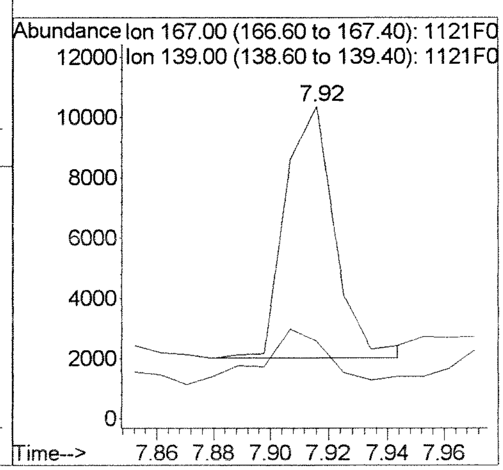


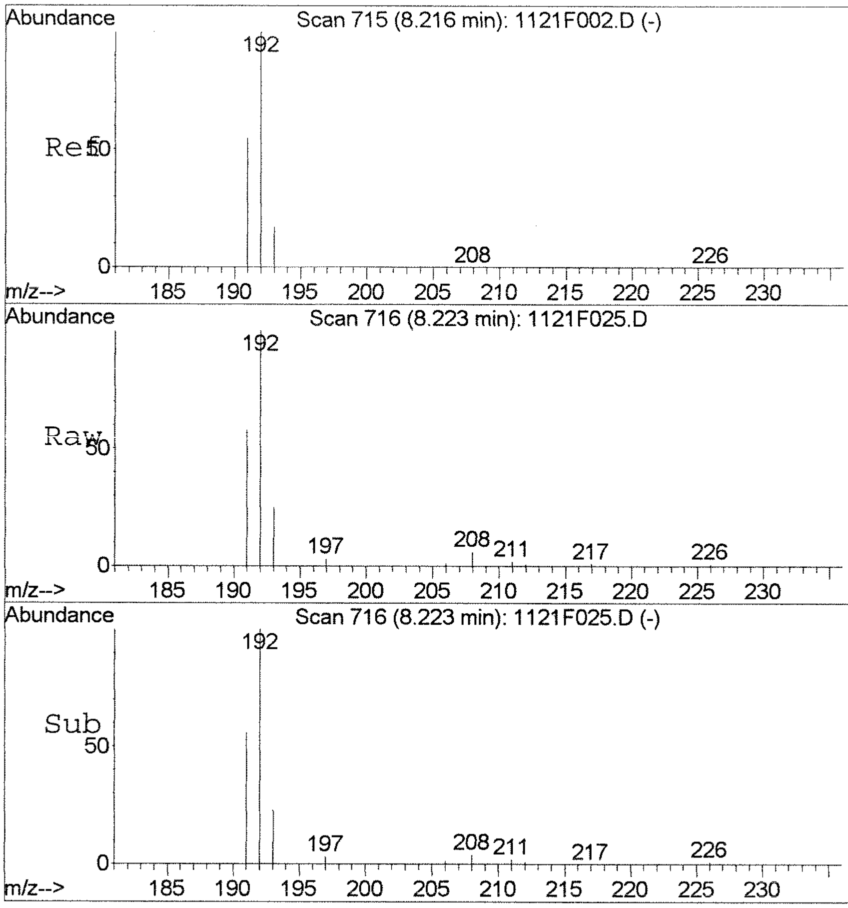


#29
Carbazole
Concen: 8.72 ng/ml
RT: 7.92 min Scan# 676
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:167 Resp: 9842

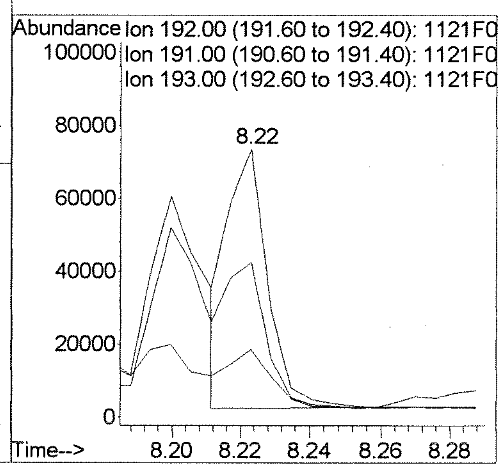
Ion	Ratio	Lower	Upper
167	100		
139	14.1	0.0	46.8

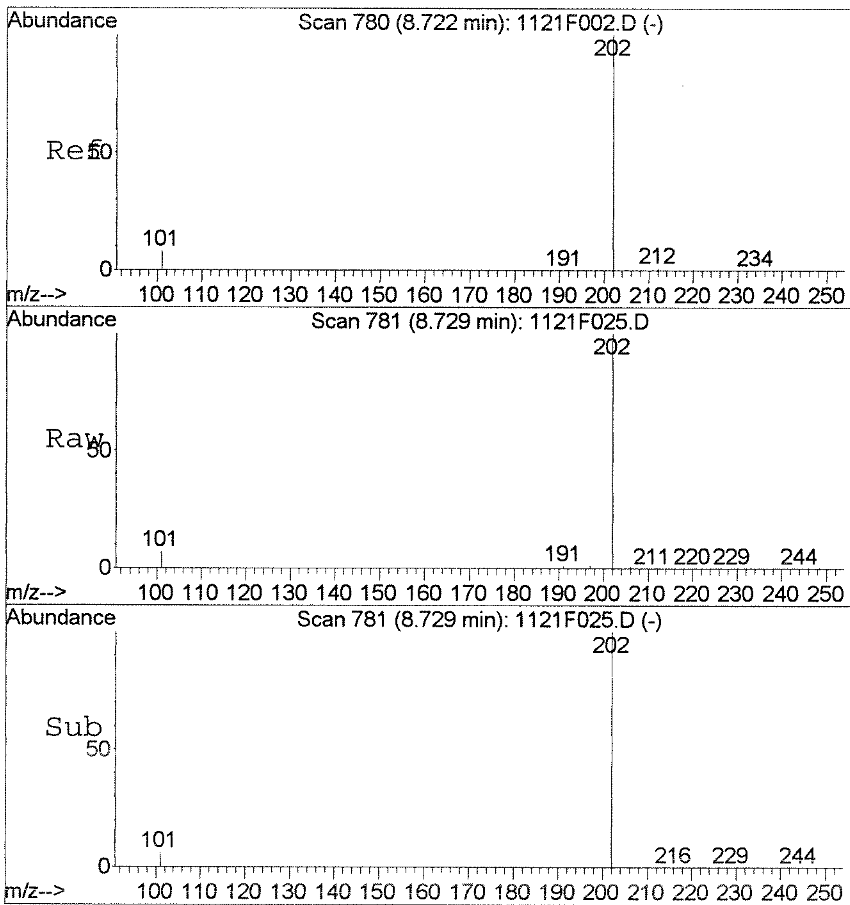




#30
1-Methylphenanthrene
Concen: 61.61 ng/ml
RT: 8.22 min Scan# 716
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

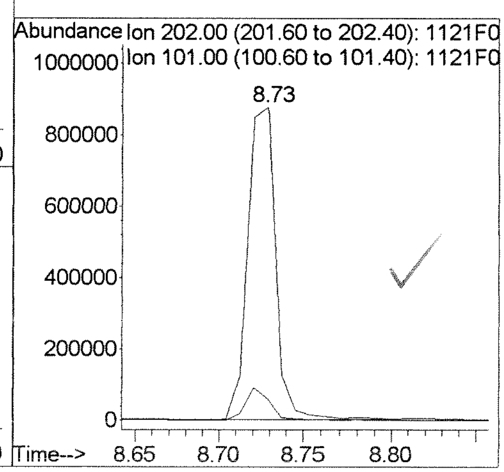
Tgt Ion:192	Resp:		57715
Ion	Ratio	Lower	Upper
192	100		
191	56.3	29.0	89.0
193	20.5	0.0	45.4

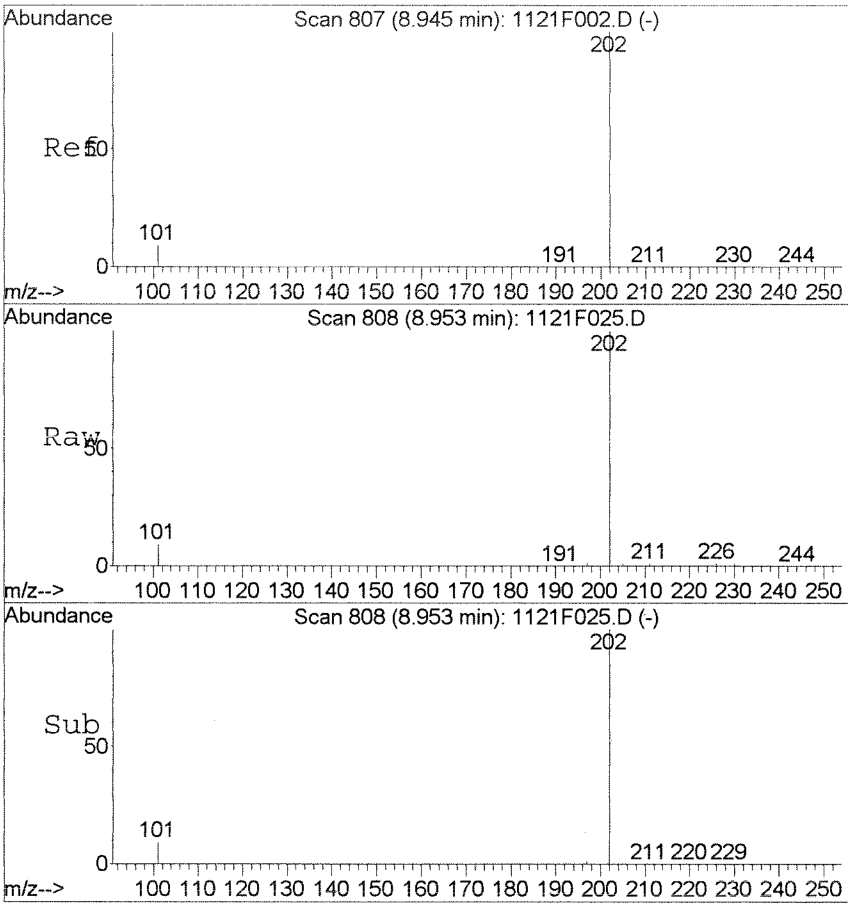




#35
Fluoranthene
Concen: 711.53 ng/ml
RT: 8.73 min Scan# 781
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

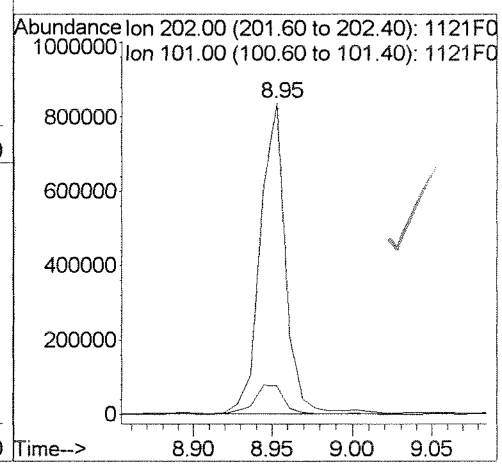
Tgt Ion:202	Resp:		1020190
Ion	Ratio	Lower	Upper
202	100		
101	6.9	0.0	35.8

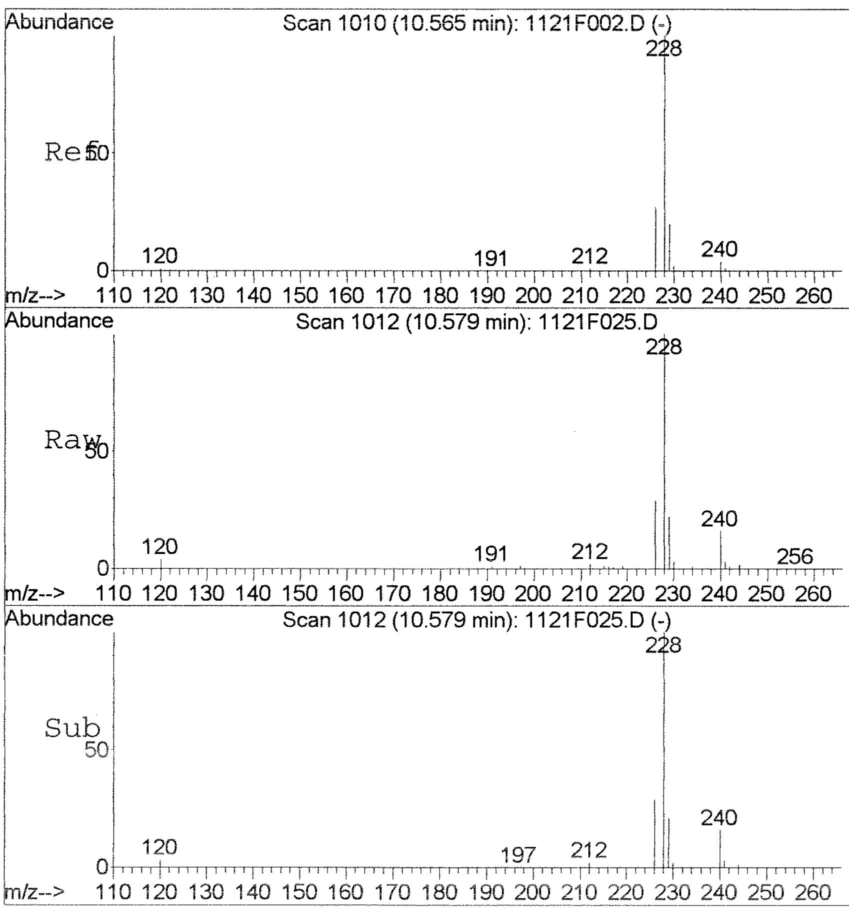




#38
Pyrene
Concen: 592.01 ng/ml
RT: 8.95 min Scan# 808
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

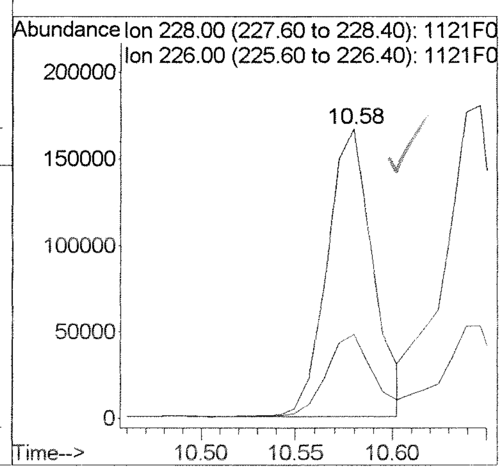
Tgt	Ion:202	Resp:	935797
Ion	Ratio	Lower	Upper
202	100		
101	9.1	0.0	37.6

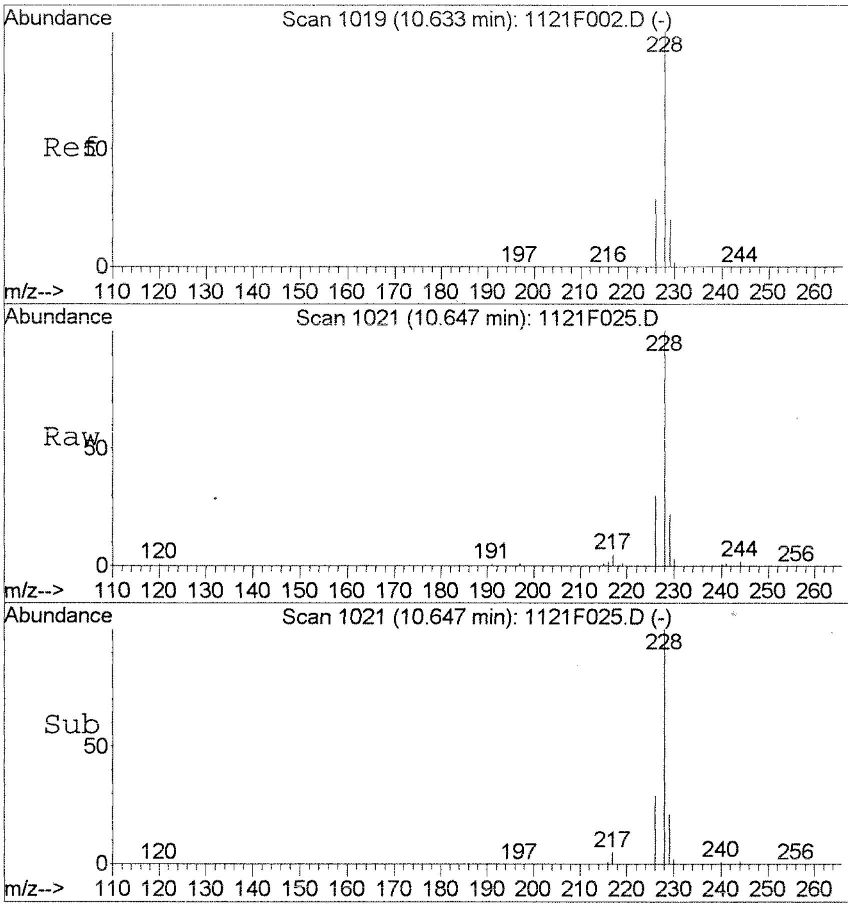




#43
Benz(a)anthracene
Concen: 189.37 ng/ml
RT: 10.58 min Scan# 1012
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

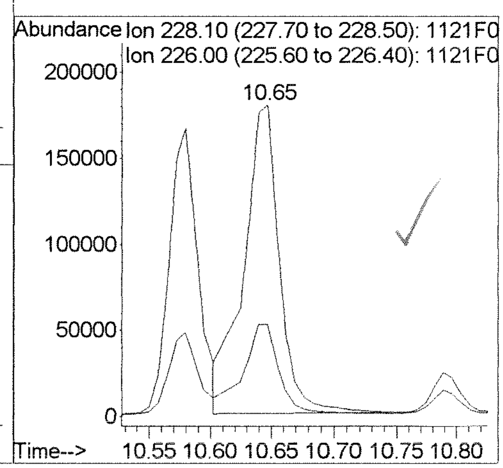
Tgt	Ion:228	Resp:	271567
Ion	Ratio	Lower	Upper
228	100		
226	28.8	0.0	57.0

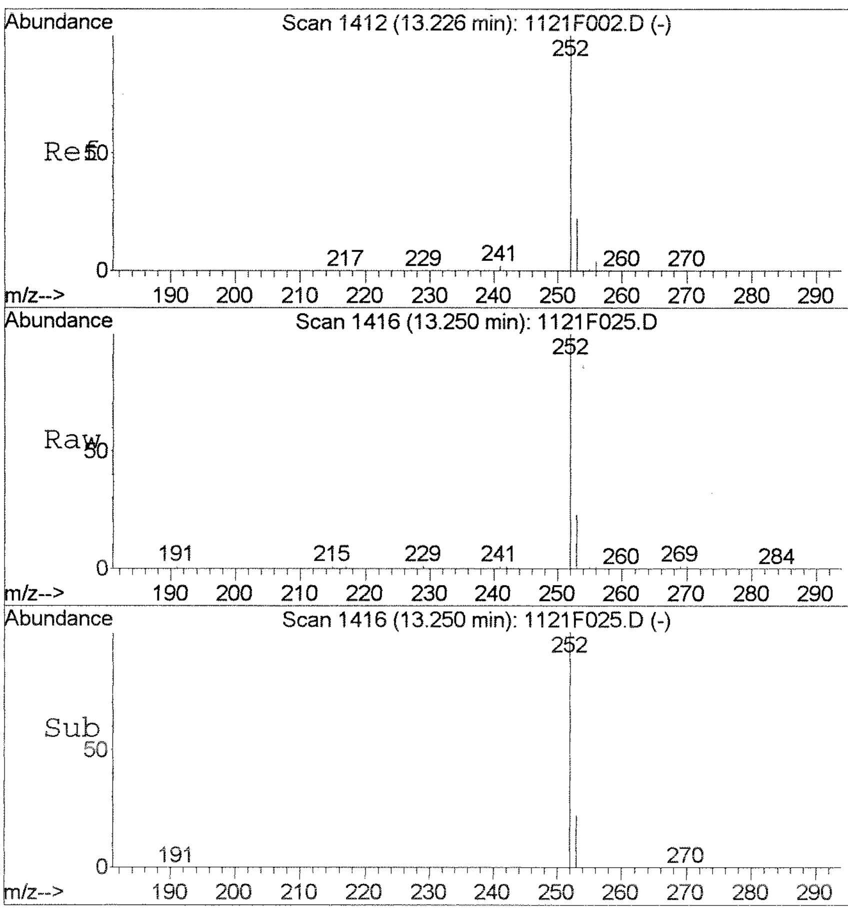




#44
Chrysene
Concen: 259.28 ng/ml
RT: 10.65 min Scan# 1021
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

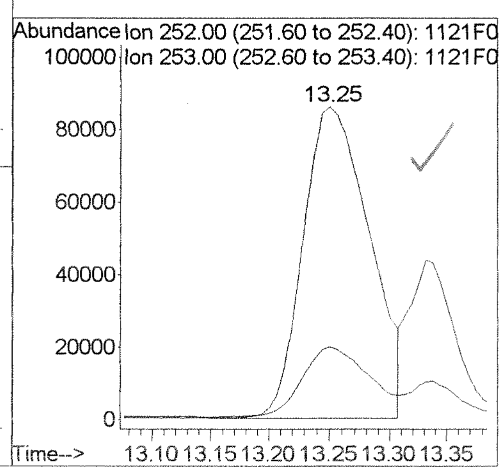
Tgt Ion:228	Resp:	365174	
Ion	Ratio	Lower	Upper
228	100		
226	28.9	0.0	58.9

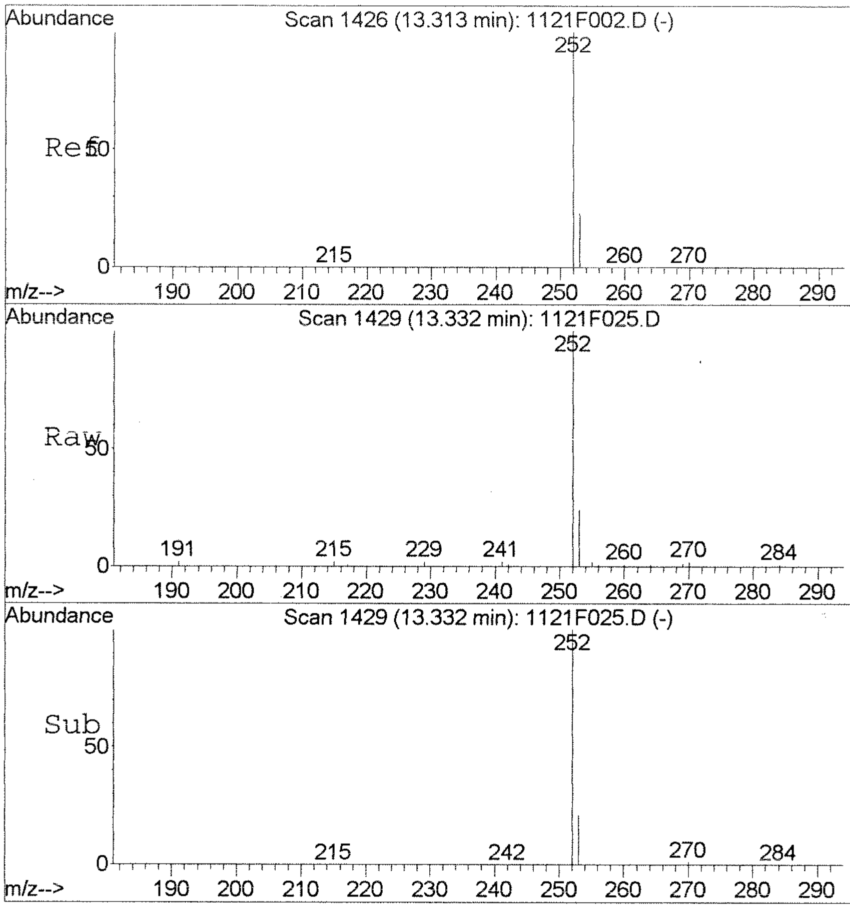




#50
Benzo(b)fluoranthene
Concen: 210.49 ng/ml
RT: 13.25 min Scan# 1416
Delta R.T. 0.02 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:252	Resp:	324401	
Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	52.6

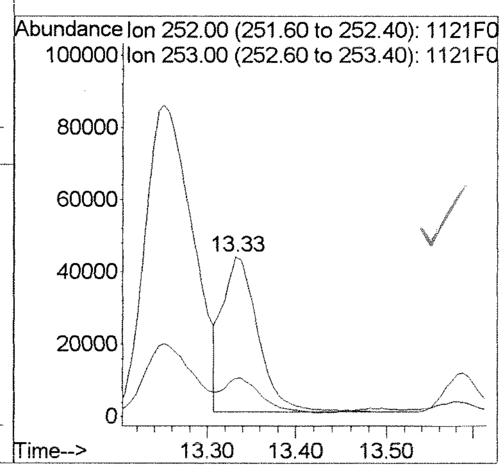


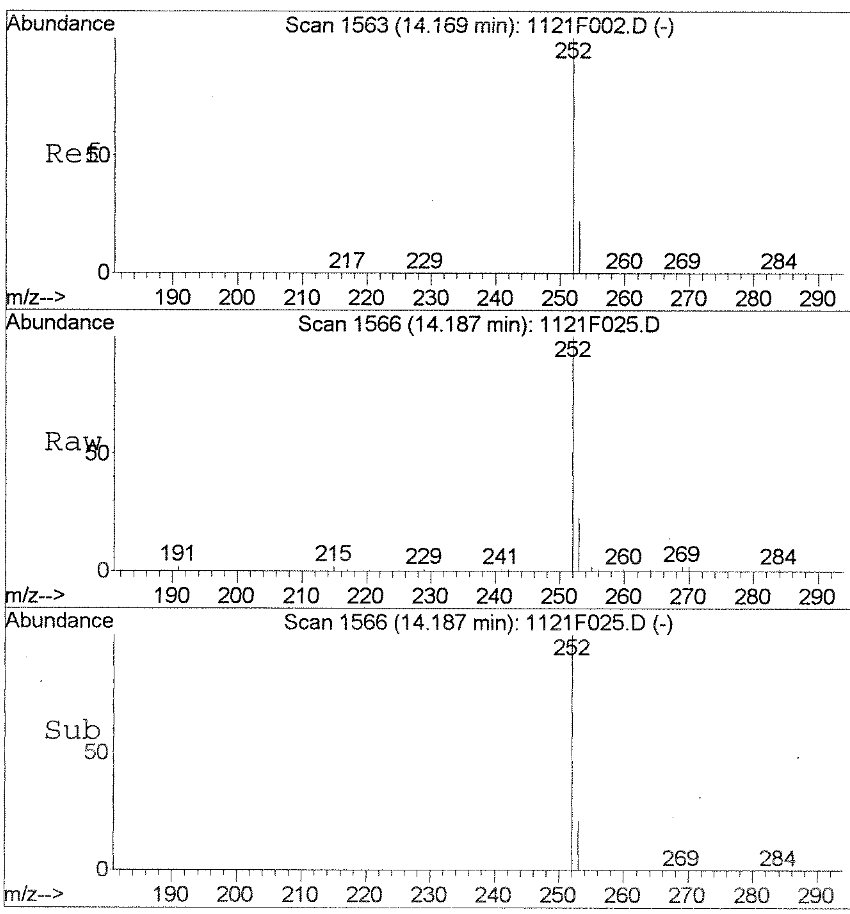


#51
Benzo(k)fluoranthene
Concen: 81.68 ng/ml
RT: 13.33 min Scan# 1429
Delta R.T. 0.02 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:252 Resp: 120934

Ion	Ratio	Lower	Upper
252	100		
253	20.0	0.0	52.0

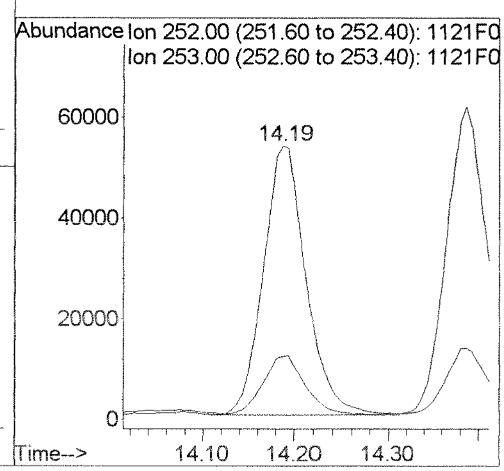


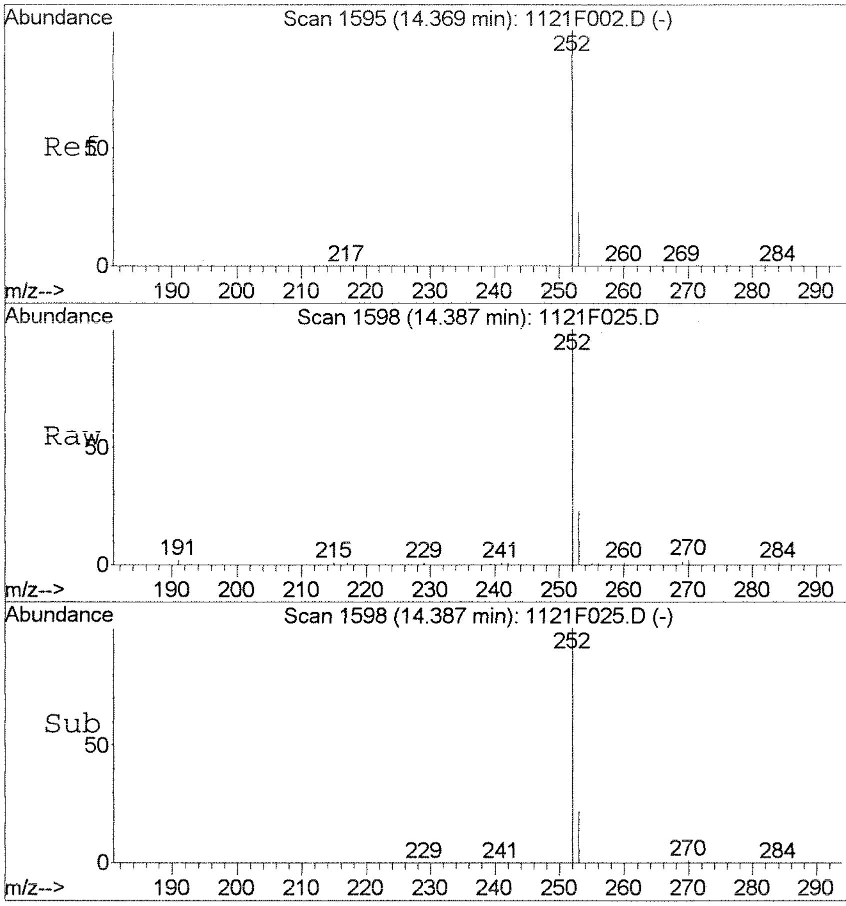


#52
Benzo(e)pyrene
Concen: 122.15 ng/ml
RT: 14.19 min Scan# 1566
Delta R.T. 0.02 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:252 Resp: 171013

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	52.2

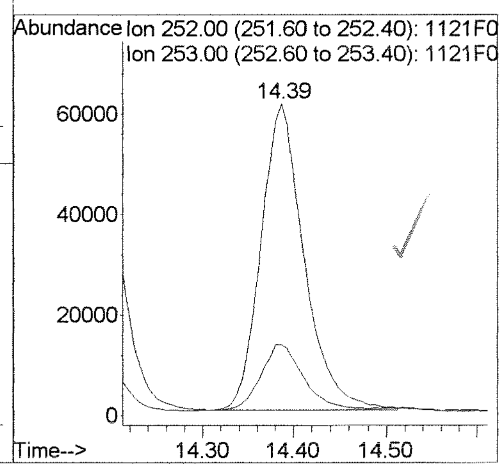


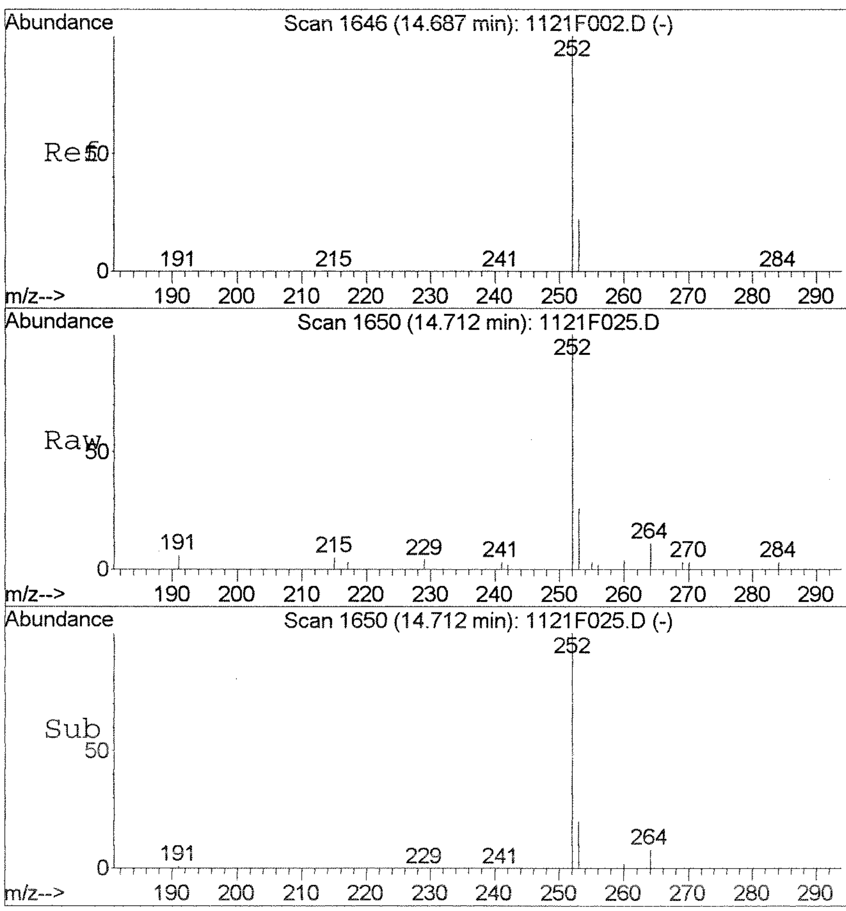


#53
Benzo(a)pyrene
Concen: 157.53 ng/ml
RT: 14.39 min Scan# 1598
Delta R.T. 0.02 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:252 Resp: 201012

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	52.2

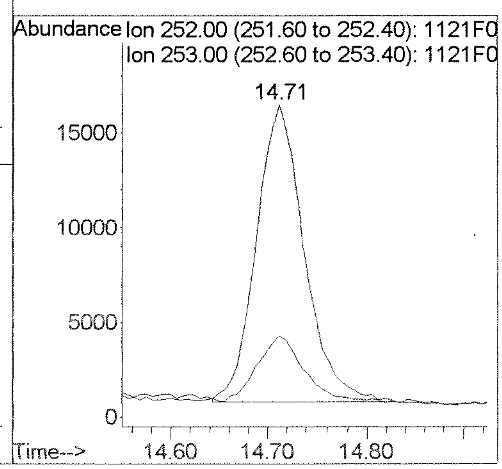


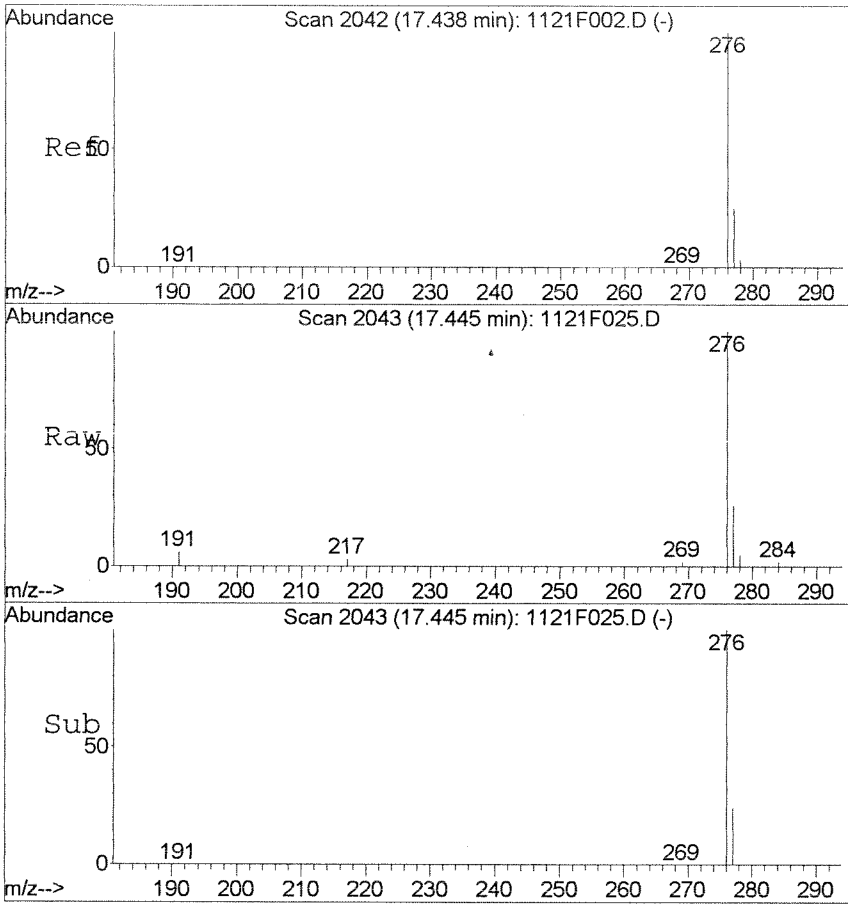


#54
Perylene
Concen: 42.85 ng/ml
RT: 14.71 min Scan# 1650
Delta R.T. 0.02 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:252 Resp: 53720

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	51.5

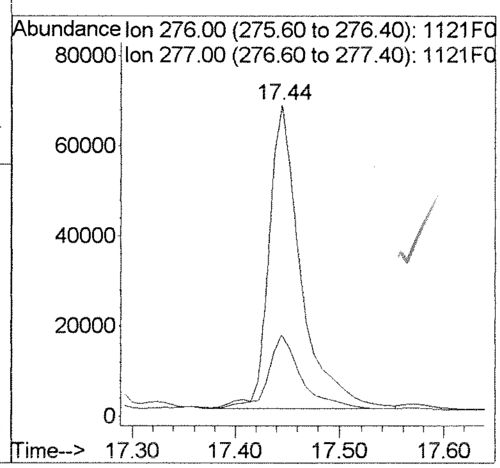


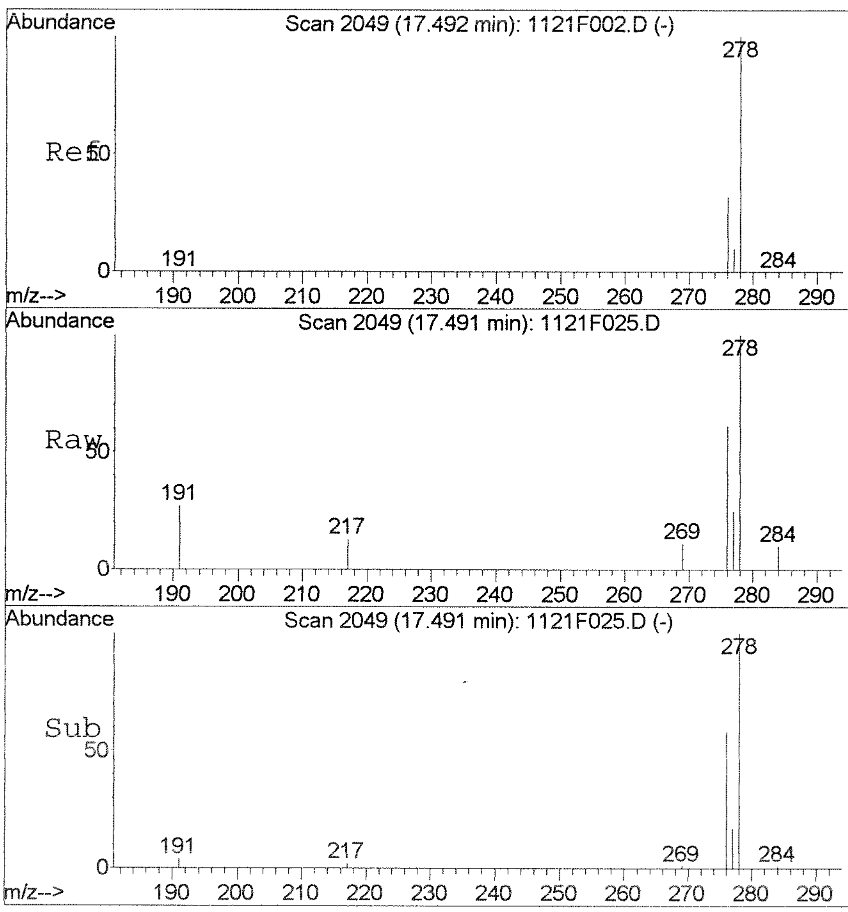


#55
Indeno(1,2,3-cd)pyrene
Concen: 121.30 ng/ml
RT: 17.44 min Scan# 2043
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:276 Resp: 143613

Ion	Ratio	Lower	Upper
276	100		
277	24.2	0.0	54.7

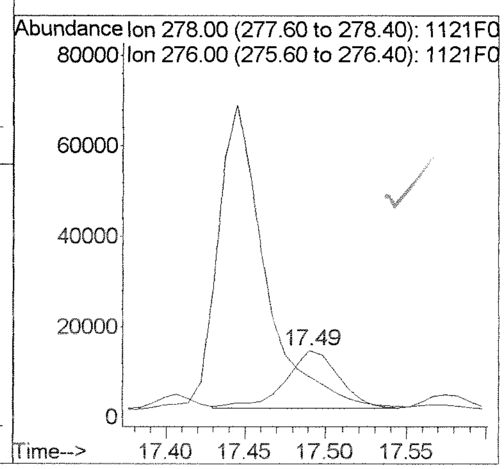


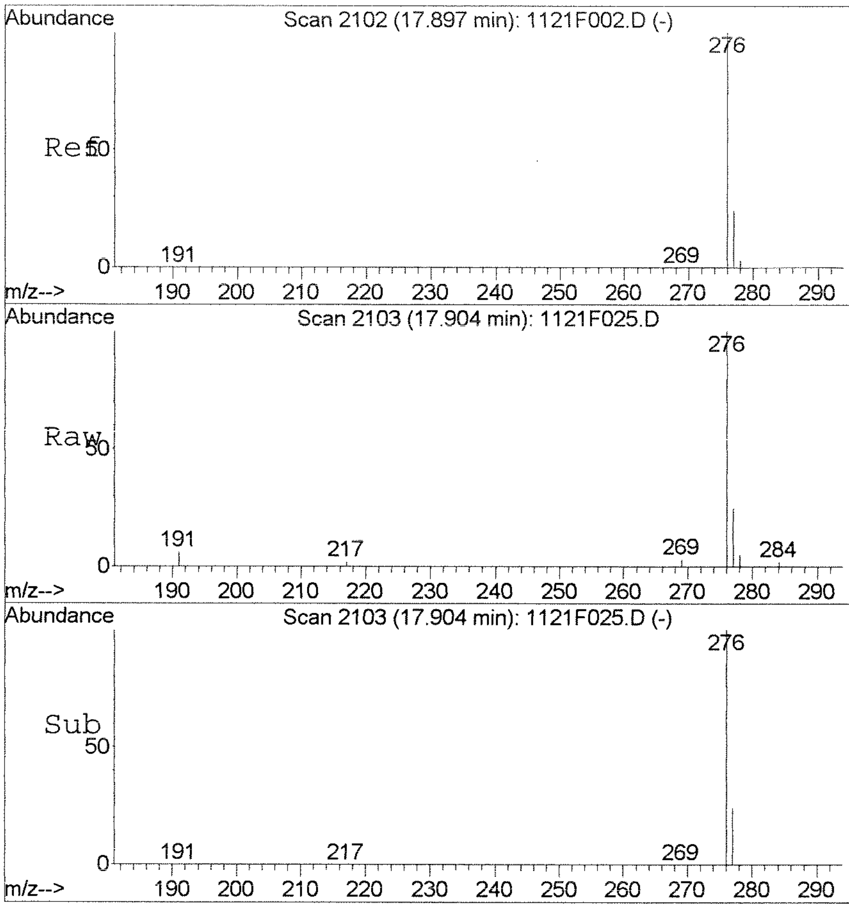


#56
Dibenz(a,h)anthracene
Concen: 23.39 ng/ml
RT: 17.49 min Scan# 2049
Delta R.T. -0.00 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:278 Resp: 29060

Ion	Ratio	Lower	Upper
278	100		
276	51.7	0.0	59.7

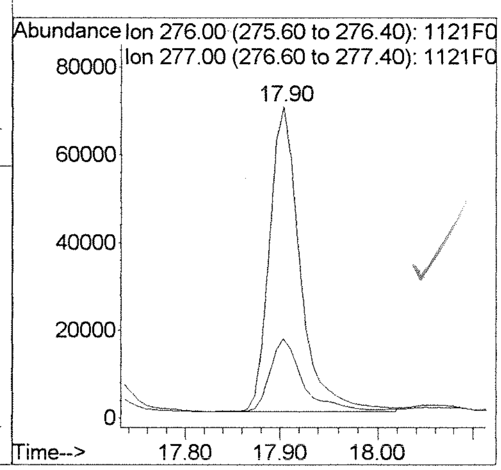




#57
Benzo(g,h,i)perylene
Concen: 115.64 ng/ml
RT: 17.90 min Scan# 2103
Delta R.T. 0.01 min
Lab File: 1121F025.D
Acq: 21 Nov 2008 4:43 pm

Tgt Ion:276 Resp: 155981

Ion	Ratio	Lower	Upper
276	100		
277	23.8	0.0	54.2

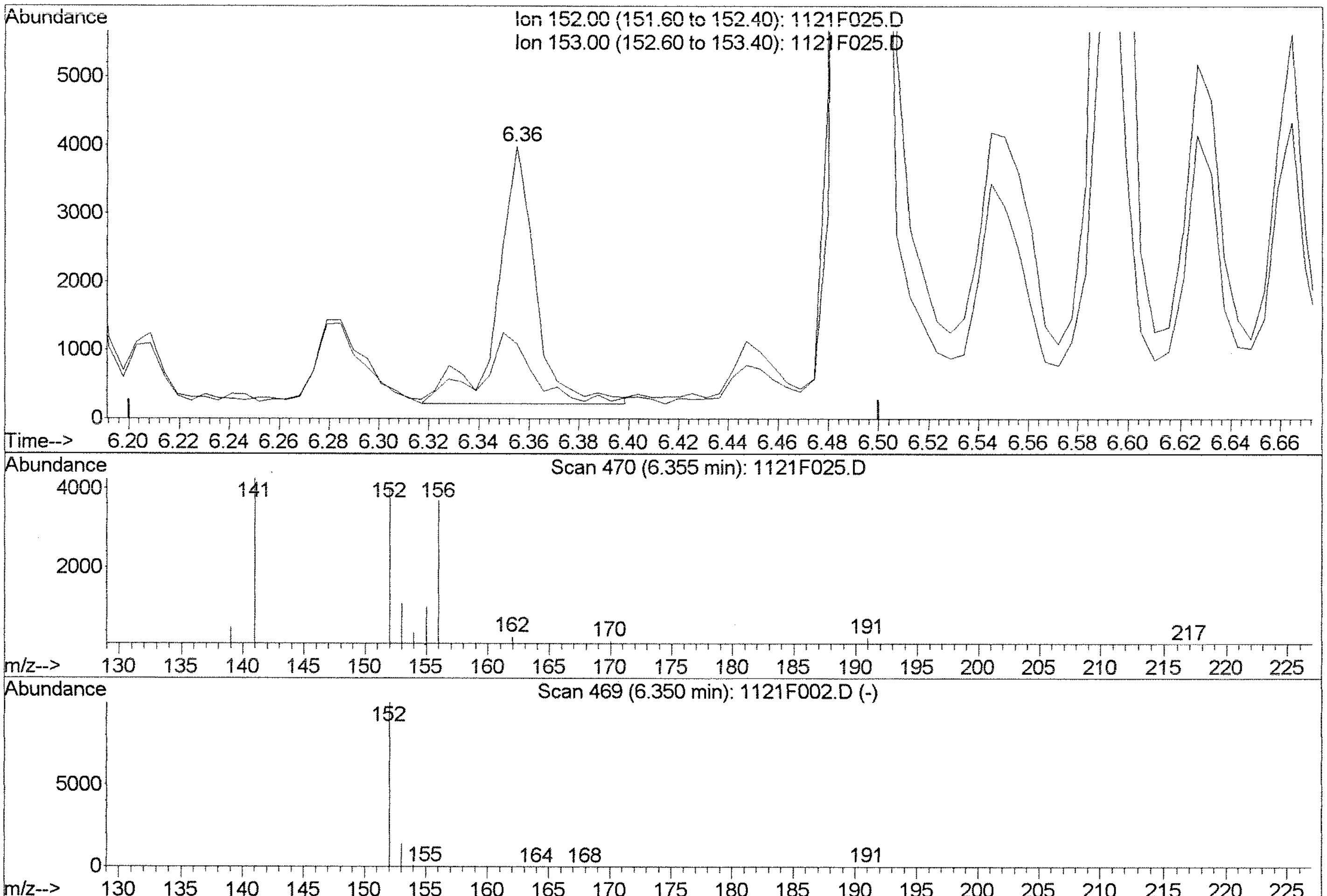


1121F025.D 1110ALK.M Sat Nov 22 10:26:18 2008 Page 17

Quantitation Report (Qedit)

```
Data File : J:\MS11\DATA\112108\1121F025.D                Vial: 23
Acq On    : 21 Nov 2008   4:43 pm                      Operator: LWeiskopf
Sample    : K0810639-001DIL  20X                       Inst    : MS11
Misc      :                                            Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22  8:13 2008                Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sat Nov 22 08:12:47 2008
Response via   : Multiple Level Calibration
```



TIC: 1121F025.D

(11) Acenaphthylene (T)

6.36min 3.53ng/ml

response 3896

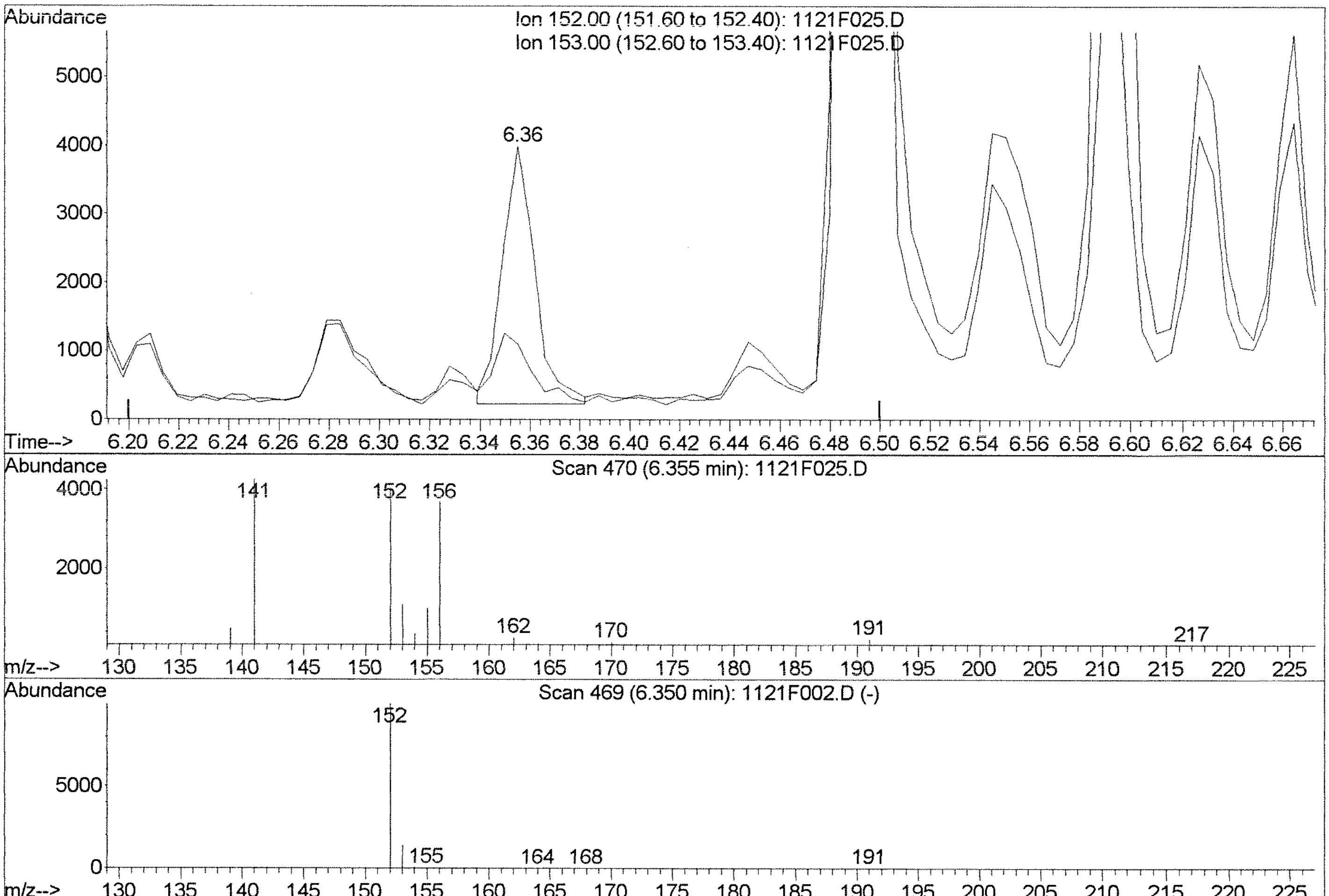
Ion	Exp%	Act%
152.00	100	100
153.00	13.00	21.68
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File	: J:\MS11\DATA\112108\1121F025.D	Vial:	23
Acq On	: 21 Nov 2008 4:43 pm	Operator:	LWeiskopf
Sample	: K0810639-001DIL 20X	Inst :	MS11
Misc	:	Multiplr:	1.00

MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:23 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F025.D

(11) Acenaphthylene (T)

6.36min 3.09ng/ml m

response 3410

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	27.50
0.00	0.00	0.00
0.00	0.00	0.00

OI
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11/24/08

1121F025.D 1110ALK.M Sat Nov 22 10:23:24 2008

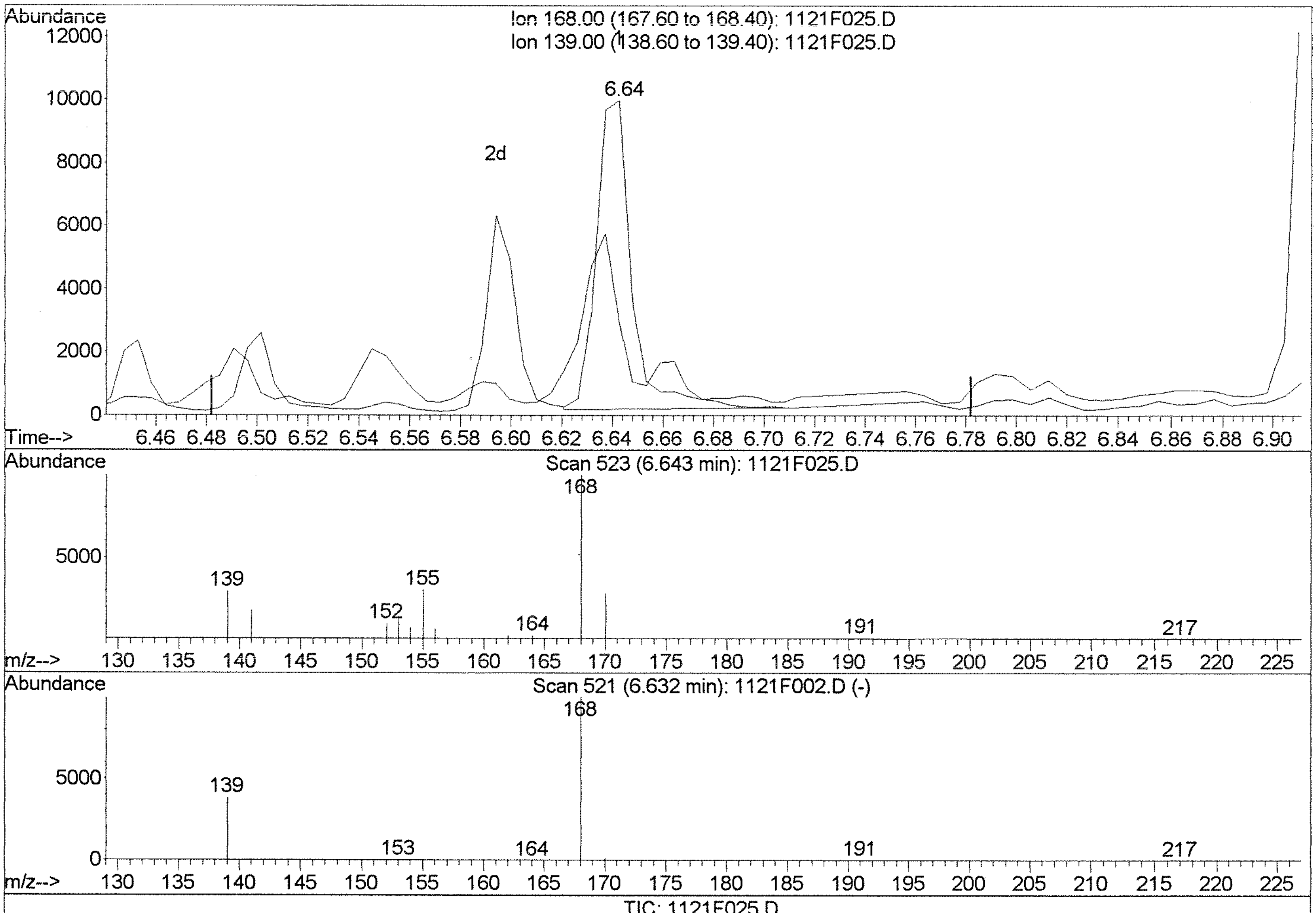
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F025.D
Acq On : 21 Nov 2008 4:43 pm
Sample : K0810639-001DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:23 2008

Vial: 23
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.64min 9.37ng/ml

response 9460

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	26.43
0.00	0.00	0.00
0.00	0.00	0.00

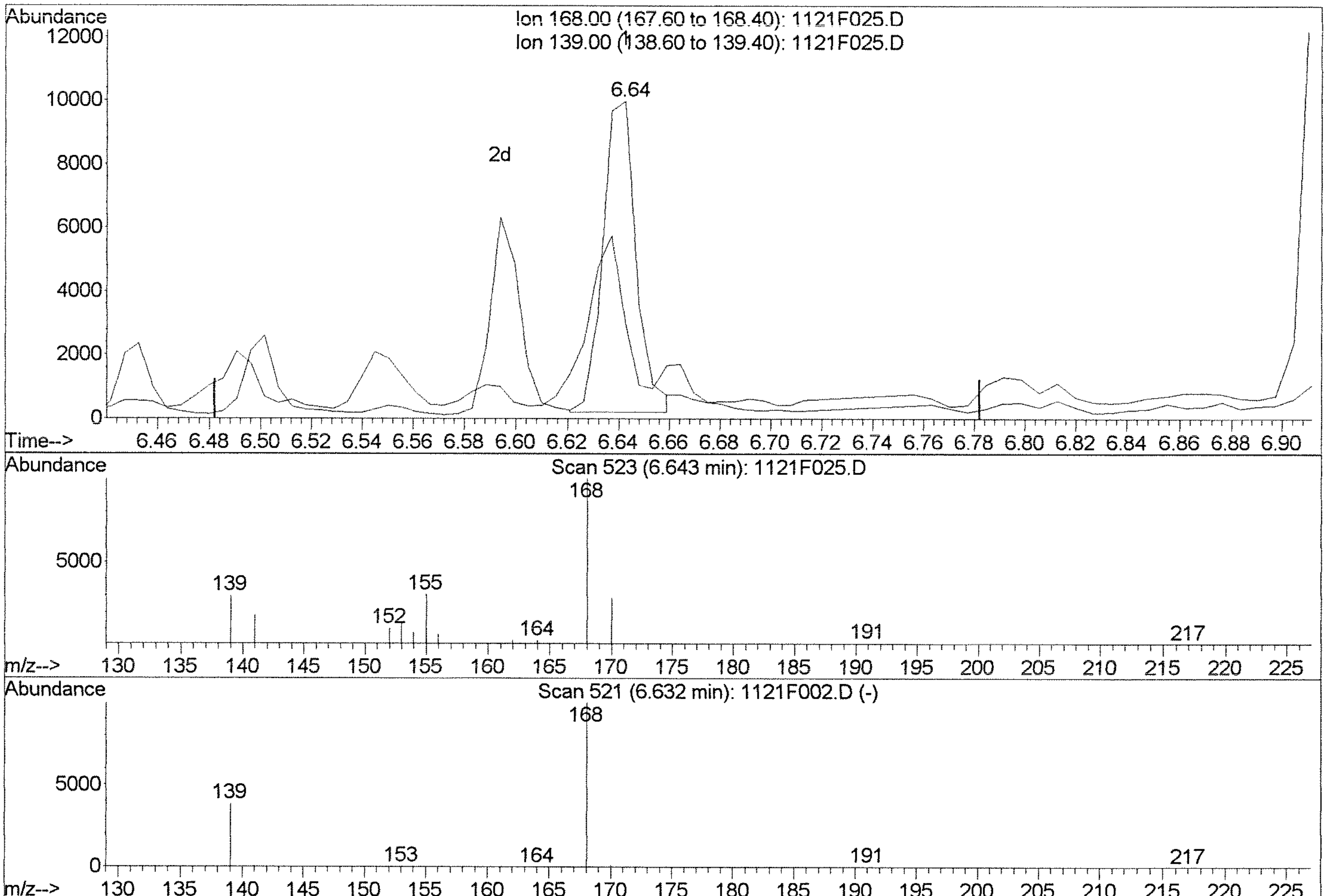
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F025.D
Acq On : 21 Nov 2008 4:43 pm
Sample : K0810639-001DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:23 2008

Vial: 23
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F025.D

(13) Dibenzofuran (T)

6.64min 8.83ng/ml m

response 8913

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	30.05
0.00	0.00	0.00
0.00	0.00	0.00

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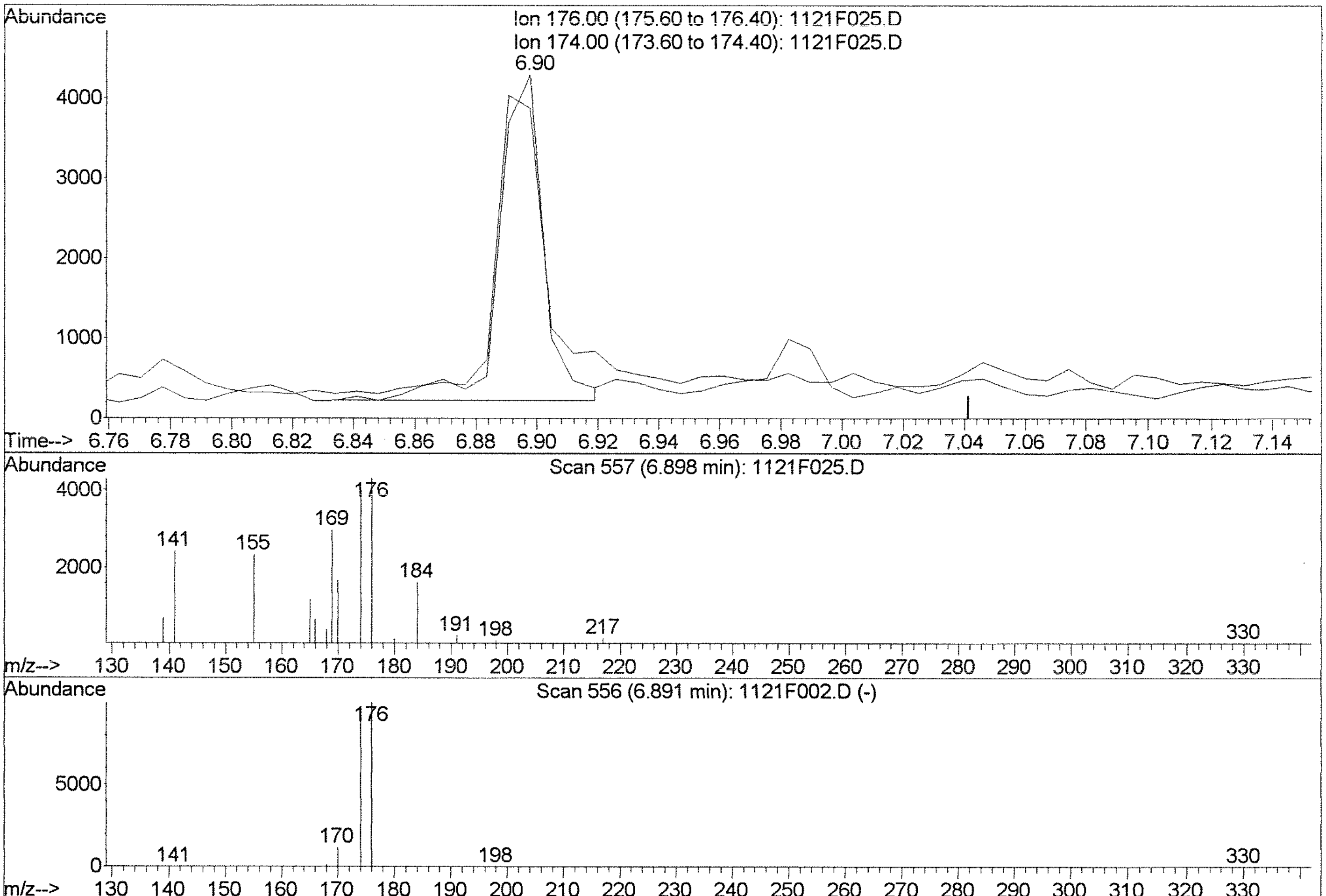
1121F025.D 1110ALK.M Sat Nov 22 10:23:37 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F025.D Vial: 23
Acq On : 21 Nov 2008 4:43 pm Operator: LWeiskopf
Sample : K0810639-001DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:23 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F025.D

(15) Fluorene-d10 (S)

6.90min 6.21ng/ml

response 4132

Ion	Exp%	Act%
176.00	100	100
174.00	96.70	87.70
0.00	0.00	0.00
0.00	0.00	0.00

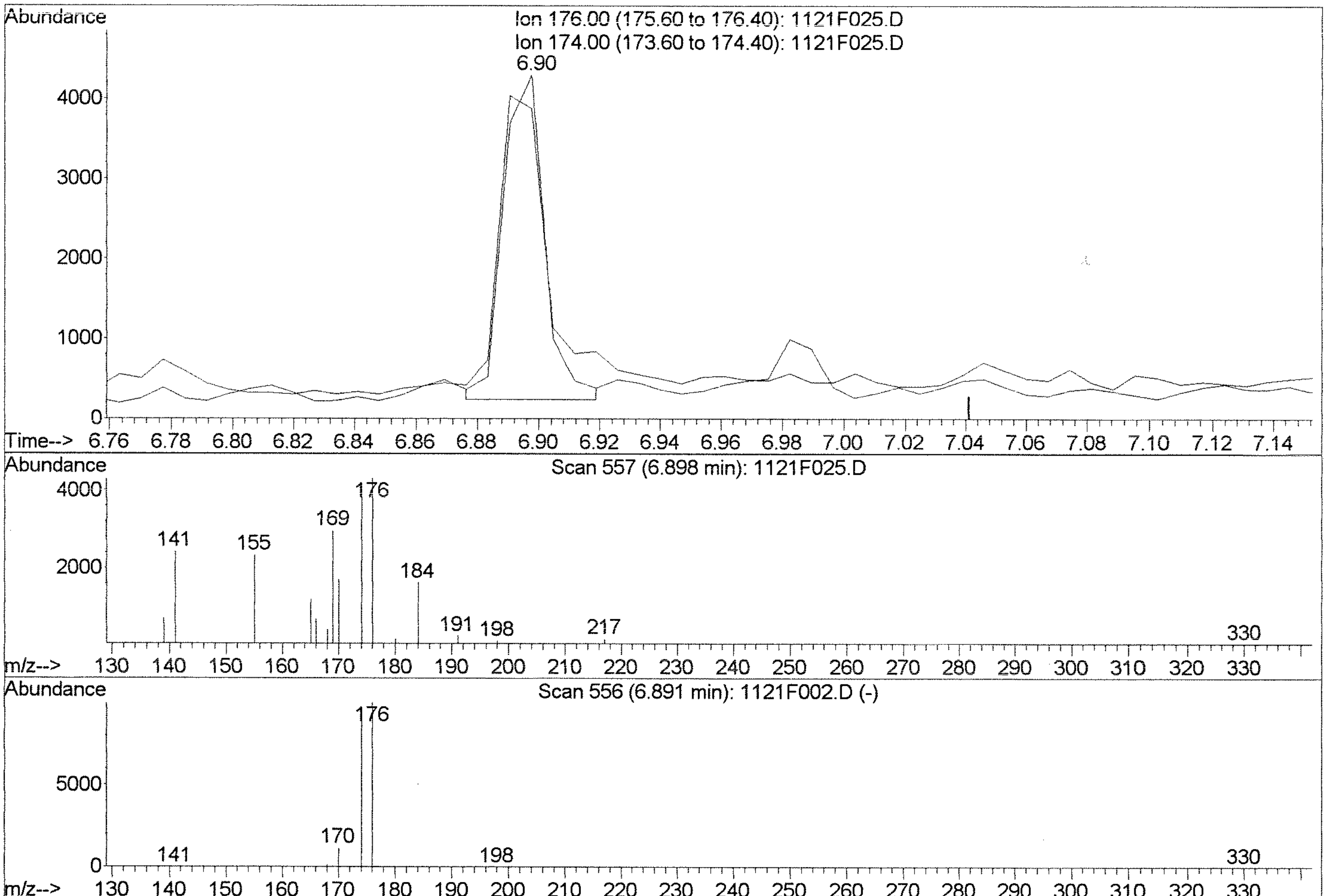
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F025.D
Acq On : 21 Nov 2008 4:43 pm
Sample : K0810639-001DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:23 2008

Vial: 23
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F025.D

(15) Fluorene-d10 (S)

6.90min 5.70ng/ml m

response 3794

Ion	Exp%	Act%
176.00	100	100
174.00	96.70	90.27
0.00	0.00	0.00
0.00	0.00	0.00

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11/22/08

LB
11/24/08

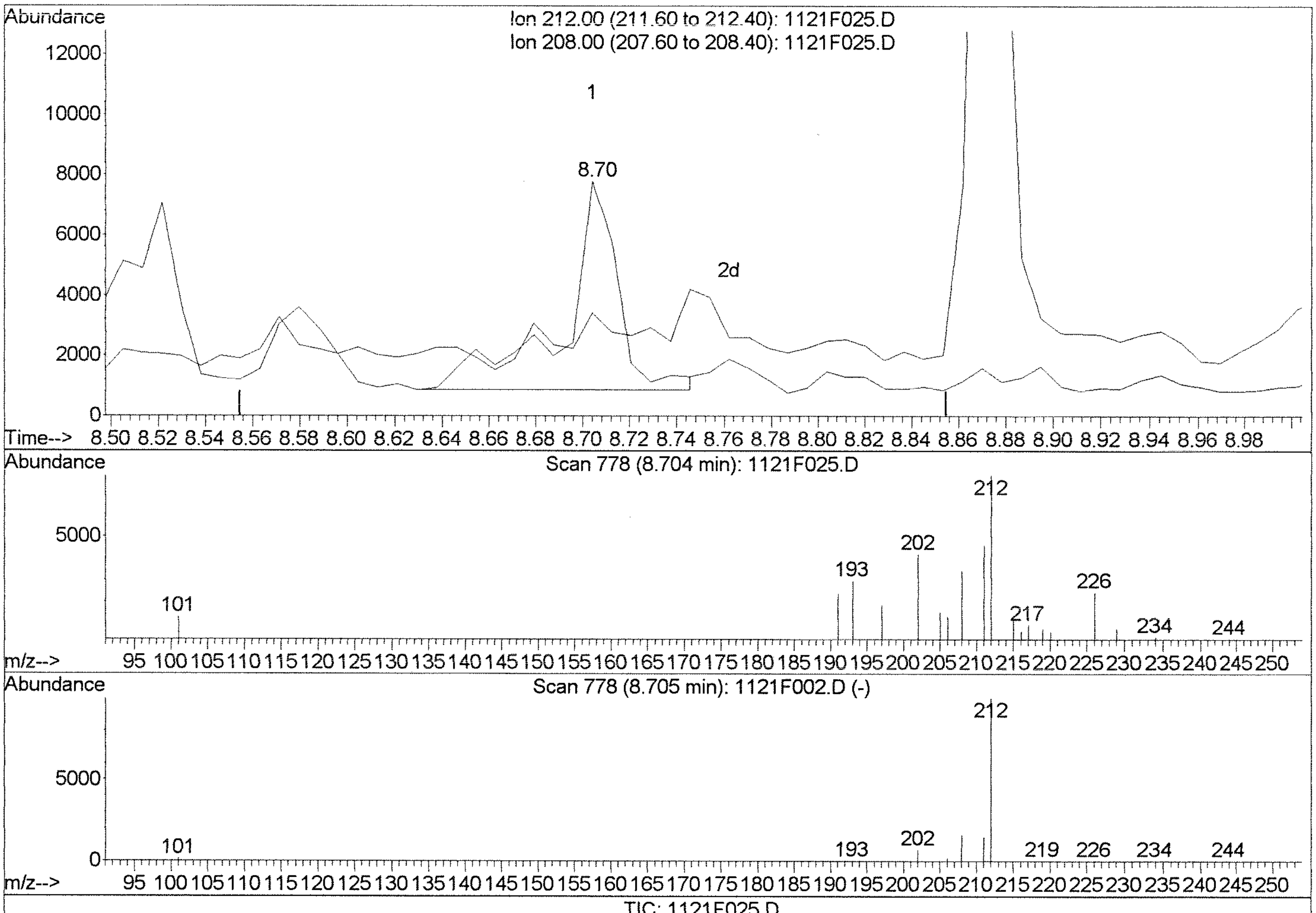
1121F025.D 1110ALK.M Sat Nov 22 10:23:48 2008

Data File : J:\MS11\DATA\112108\1121F025.D
Acq On : 21 Nov 2008 4:43 pm
Sample : K0810639-001DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:23 2008

Vial: 23
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(36) Fluoranthene-d10 (S)

8.70min 9.22ng/ml

response 11291

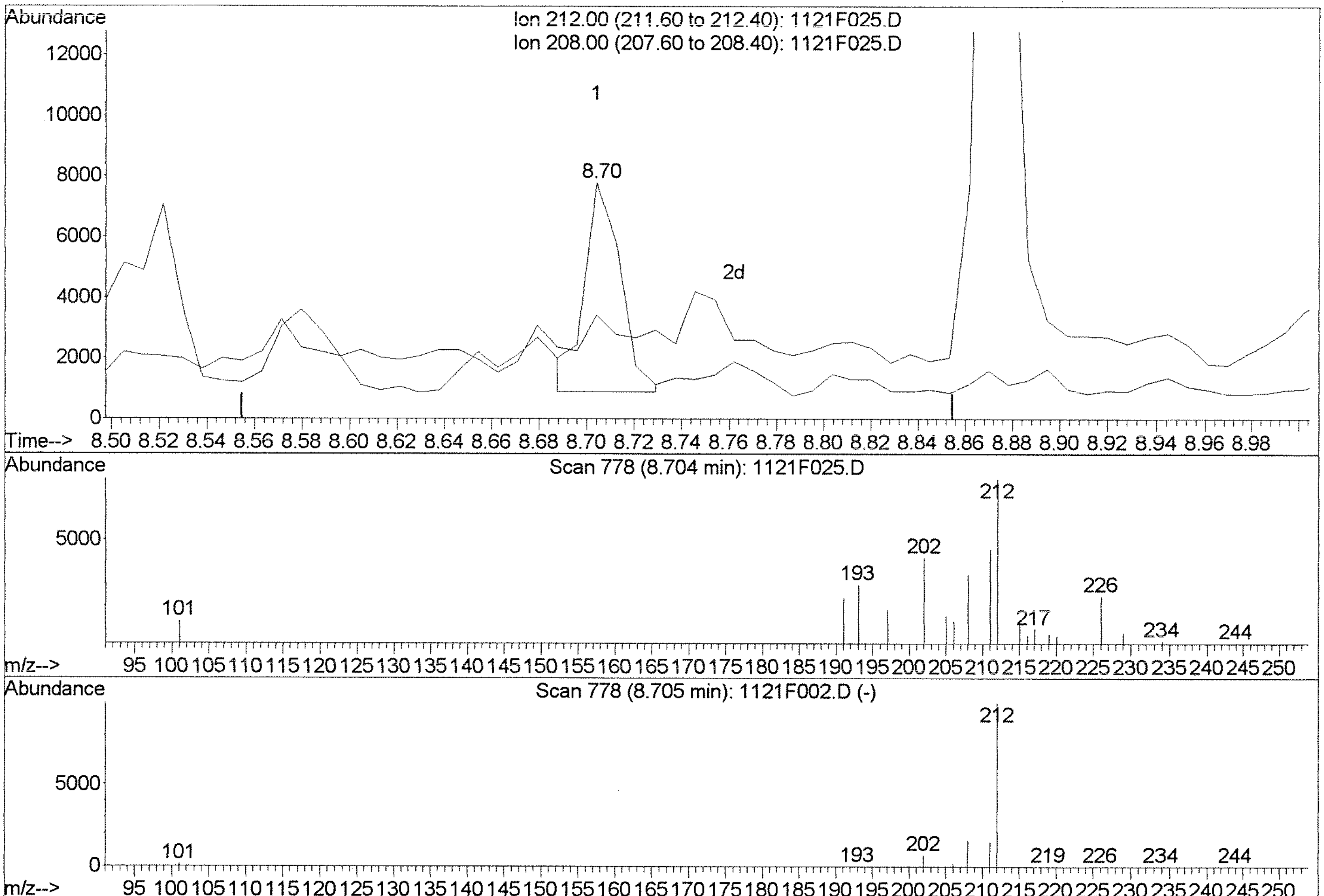
Ion	Exp%	Act%
212.00	100	100
208.00	16.70	19.67
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F025.D
Acq On : 21 Nov 2008 4:43 pm
Sample : K0810639-001DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:24 2008

Vial: 23
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F025.D

(36) Fluoranthene-d10 (S)

8.70min 5.88ng/ml m

response 7201

Ion	Exp%	Act%
212.00	100	100
208.00	16.70	43.93
0.00	0.00	0.00
0.00	0.00	0.00

OT
11/22/08

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11/24/08

1121F025.D 1110ALK.M Sat Nov 22 10:24:04 2008

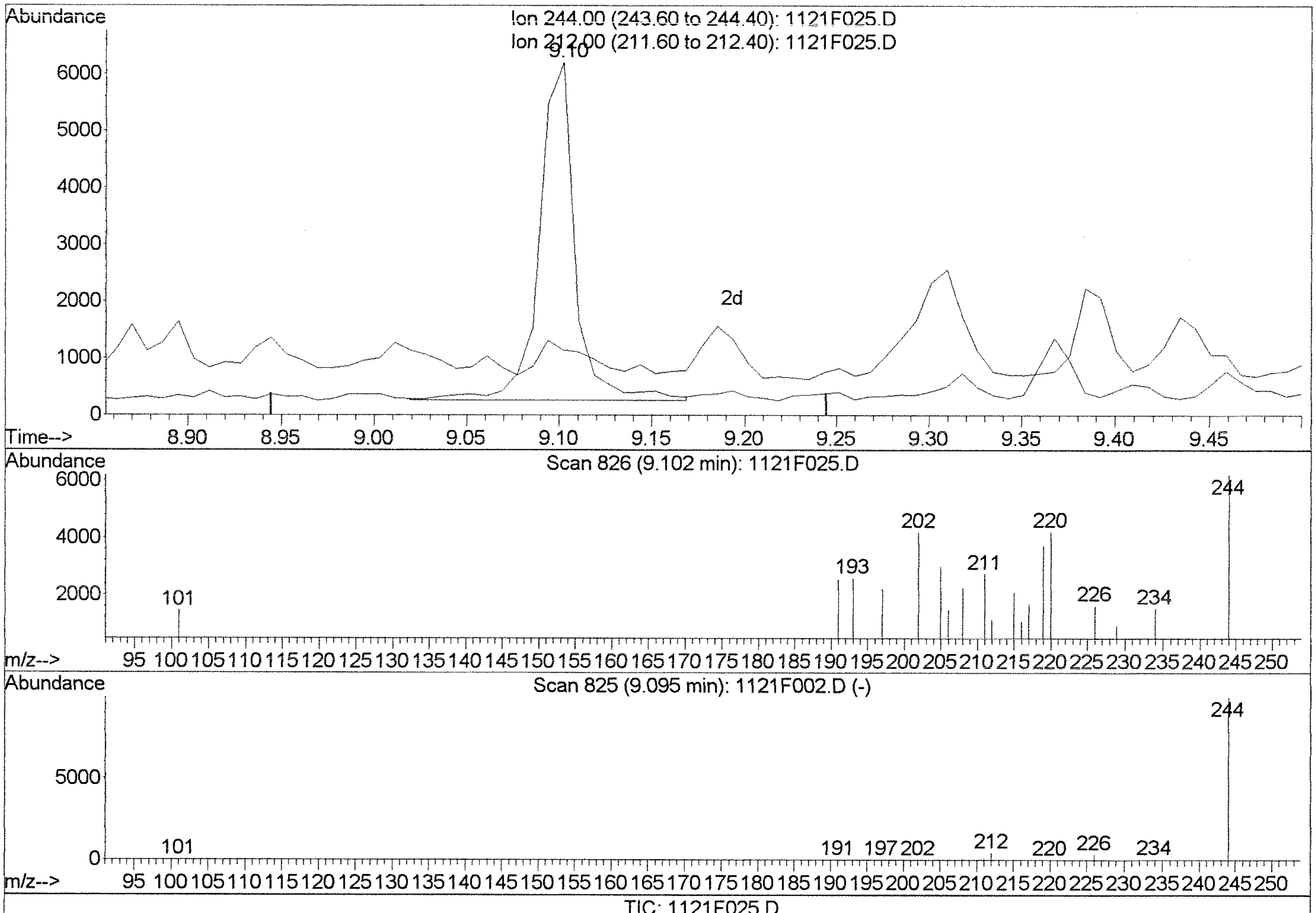
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F025.D
Acq On : 21 Nov 2008 4:43 pm
Sample : K0810639-001DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:24 2008

Vial: 23
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(42) Terphenyl-d14 (S)

9.10min 7.40ng/ml

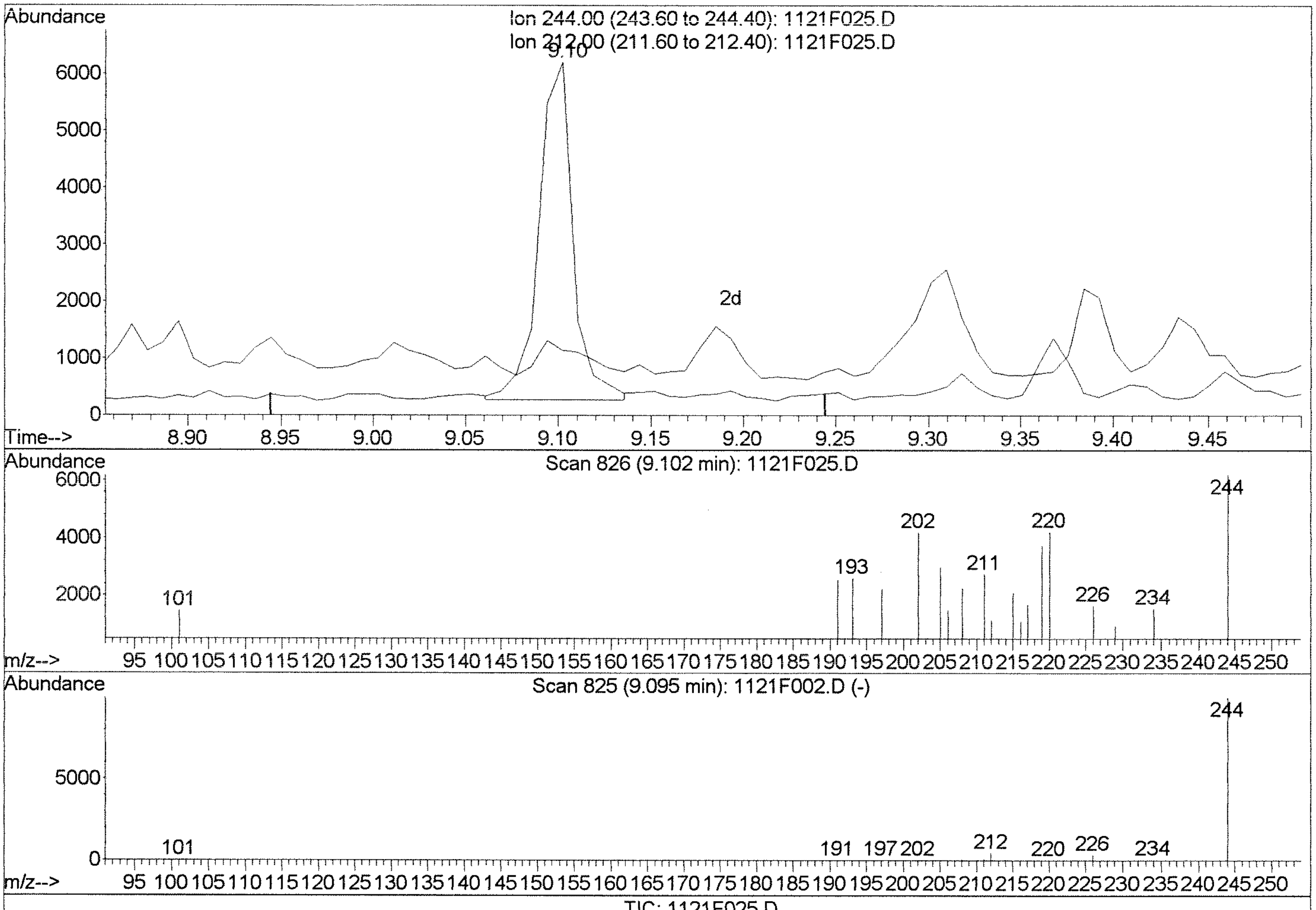
response 8047

Ion	Exp%	Act%
244.00	100	100
212.00	4.90	6.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F025.D   Vial: 23
Acq On : 21 Nov 2008 4:43 pm   Operator: LWeiskopf
Sample : K0810639-001DIL 20X   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:24 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(42) Terphenyl-d14 (S)

9.10min 6.93ng/ml m

response 7538

Ion	Exp%	Act%
244.00	100	100
212.00	4.90	18.41
0.00	0.00	0.00
0.00	0.00	0.00

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11/24/08

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED01-2.5-5-A	**Units:**	ug/Kg
Lab Code:	K0810639-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**310**	D	99	7.4	20	11/11/08	11/21/08	KWG0812042	
2-Methylnaphthalene	**1600**	D	99	7.8	20	11/11/08	11/21/08	KWG0812042	
Acenaphthylene	**340**	D	99	4.8	20	11/11/08	11/21/08	KWG0812042	
Acenaphthene	**56000**	D	990	46	200	11/11/08	11/23/08	KWG0812042	
Fluorene	**43000**	D	990	100	200	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	**21000**	D	99	12	20	11/11/08	11/21/08	KWG0812042	
Phenanthrene	**200000**	D	990	150	200	11/11/08	11/23/08	KWG0812042	
Anthracene	**32000**	D	99	9.4	20	11/11/08	11/21/08	KWG0812042	
Fluoranthene	**120000**	D	990	130	200	11/11/08	11/23/08	KWG0812042	
Pyrene	**110000**	D	990	74	200	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	**16000**	D	99	9.6	20	11/11/08	11/21/08	KWG0812042	
Chrysene	**16000**	D	99	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(b)fluoranthene	**7000**	D	99	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(k)fluoranthene	**2800**	D	99	3.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(a)pyrene	**5400**	D	99	2.8	20	11/11/08	11/21/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**2800**	D	99	3.2	20	11/11/08	11/21/08	KWG0812042	
Dibenz(a,h)anthracene	**500**	D	99	5.6	20	11/11/08	11/21/08	KWG0812042	
Benzo(g,h,i)perylene	**2700**	D	99	13	20	11/11/08	11/21/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	90	10-128	11/21/08	Acceptable
Fluoranthene-d10	46	29-121	11/21/08	Acceptable
Terphenyl-d14	114	24-141	11/21/08	Acceptable

Comments:

Exception Report

Data File:	J:\MS11\DATA\112108\1121F026.D	**Date Acquired:**	11/21/2008 17:10
Lab ID:	K0810639-002	**Date Quantitated:**	11/22/2008 10:25
RunType:	DL	**Batch ID:**	KWG0812597
Matrix:	SEDIMENT	**Analysis Method:**	8270C SIM
		ListJoinID:	LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	4465.12	NA	2000	
	Fluoranthene	5262.57	NA	2000	
	Acenaphthene	2996.30	NA	2000	see Dil
	Phenanthrene	7160.90	NA	2000	
	Fluorene	2260.03	NA	2000	

Primary Review: 11/22/08

Secondary Review: KB 11/24/08

Printed: 11/22/2008 12:44:20

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812597	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776066	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112108\1121F001.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112108\1121F026.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 17:10	**Quant Date:**	11/22/2008 10:25	**Vial:**	24
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-002			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.05	0.01	136	191900	200.00	OK
2	Acenaphthene-d10	6.47	0.01	164	110813	200.00	OK
3	Phenanthrene-d10	7.71	0.01	188	217351	200.00	OK
4	Chrysene-d12	10.60	0.01	240	256218	200.00	OK
5	Perylene-d12	14.61	0.02	264	255003	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.90	0.01	0.00	176	6810	9.04	90	10-128	OK	
3	Fluoranthene-d10	8.71	0.01	0.00	212	6794**m**	4.58	46	29-121	OK	
4	Terphenyl-d14	9.10	0.01	0.00	244	15056**m**	11.35	114	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.07	0.01	0.00	128	18310**m**	15.66	310	D	
1	2-Methylnaphthalene	5.62	0.01	0.00	142	66861	82.02	1600	D	
2	Acenaphthylene	6.35		0.00	152	21462**m**	17.18	340	D	
2	Acenaphthene	6.50	0.01	0.00	154	2275117	2,996	59000	ED	
2	Dibenzofuran	6.64	0.01	0.00	168	1219088	1,067	21000	D	
2	Fluorene	6.92	0.01	0.00	166	2060141	2,260	45000	ED	
3	Phenanthrene	7.73	0.01	0.00	178	10940232**m**	7,161	140000	ED	
3	Anthracene	7.77	0.01	0.00	178	2403969**m**	1,615	32000	D	
3	Fluoranthene	8.74	0.02	0.00	202	9132743	5,263	100000	ED	
4	Pyrene	8.96	0.01	0.00	202	8606446	4,465	88000	ED	
4	Benz(a)anthracene	10.58	0.01	0.00	228	1401278	801.36	16000	D	
4	Chrysene	10.65	0.02	0.00	228	1407684	819.66	16000	D	
5	Benzo(b)fluoranthene	13.25	0.02	0.00	252	625984	355.71	7000	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112108\1121F026.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 17:10	**Quant Date:**	11/22/2008 10:25	**Vial:**	24
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-002			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.34	0.03	0.00	252	244590	144.68	2800	D	
5	Benzo(a)pyrene	14.39	0.02	0.00	252	396470	272.10	5400	D	
5	Indeno(1,2,3-cd)pyrene	17.45	0.01	0.00	276	194459	143.84	2800	D	
5	Dibenz(a,h)anthracene	17.49		0.00	278	35939**m**	25.33	500	D	
5	Benzo(g,h,i)perylene	17.90		0.00	276	212111	137.71	2700	D	

Prep Amount:	19.16 g	**Dilution:**	20.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	53.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

```
Data File : J:\MS11\DATA\112108\1121F026.D                Vial: 24
Acq On    : 21 Nov 2008   5:10 pm                      Operator: LWeiskopf
Sample    : K0810639-002DIL  20X                       Inst    : MS11
Misc      :                                            Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 08:13:25 2008             Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title        : PAHS and ALKYLATED HOMOLOGS
Last Update  : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT
```

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.05	136	191900	200.00	ng/ml	0.01
10) Acenaphthene-d10	6.47	164	110813	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.71	188	217351	200.00	ng/ml	0.00
37) Chrysene-d12	10.60	240	256218	200.00	ng/ml	0.01
49) Perylene-d12	14.61	264	255003	200.00	ng/ml	0.02
System Monitoring Compounds						
15) Fluorene-d10	6.90	176	6810	9.04	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	4.52%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery	=	0.00%	
36) Fluoranthene-d10	8.71	212	6794m	4.58	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	2.29%	
42) Terphenyl-d14	9.10	244	15056m	11.35	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	5.67%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Naphthalene	5.07	128	18310m	15.66	ng/ml	
3) 2-Methylnaphthalene	5.62	142	66861	82.02	ng/ml	92
4) 1-Methylnaphthalene	5.70	142	184219	252.45	ng/ml	93
5) Biphenyl	5.99	154	6891	6.92	ng/ml	99
6) 2,6-Dimethylnaphthalene	6.13	156	305401	429.16	ng/ml	97
11) Acenaphthylene	6.35	152	21462m	17.18	ng/ml	
12) Acenaphthene	6.50	154	2275117	2996.30	ng/ml	95
13) Dibenzofuran	6.64	168	1219088	1067.30	ng/ml	92
14) 2,3,5-Trimethylnaphthalene	6.79	170	232576m	348.26	ng/ml	
16) Fluorene	6.92	166	2060141	2260.03	ng/ml	95
23) Dibenzothiophene	7.62	184	1017713	681.30	ng/ml	92
27) Phenanthrene	7.73	178	10940232m	7160.90	ng/ml	
28) Anthracene	7.77	178	2403969m	1614.97	ng/ml	
29) Carbazole	7.91	167	111345	81.54	ng/ml	95
30) 1-Methylphenanthrene	8.22	192	549649m	484.76	ng/ml	
35) Fluoranthene	8.74	202	9132743	5262.57	ng/ml	65
38) Pyrene	8.96	202	8606446	4465.12	ng/ml	69
43) Benz(a)anthracene	10.58	228	1401278	801.36	ng/ml	98
44) Chrysene	10.65	228	1407684	819.66	ng/ml	98
50) Benzo(b)fluoranthene	13.25	252	625984	355.71	ng/ml	100
51) Benzo(k)fluoranthene	13.34	252	244590	144.68	ng/ml	95
52) Benzo(e)pyrene	14.19	252	278263	174.07	ng/ml	99
53) Benzo(a)pyrene	14.39	252	396470	272.10	ng/ml	99
54) Perylene	14.71	252	86151	60.19	ng/ml	99
55) Indeno(1,2,3-cd)pyrene	17.45	276	194459	143.84	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112108\1121F026.D Vial: 24
Acq On : 21 Nov 2008 5:10 pm Operator: LWeiskopf
Sample : K0810639-002DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 08:13:25 2008 Quant Results File: 1110ALK.RES

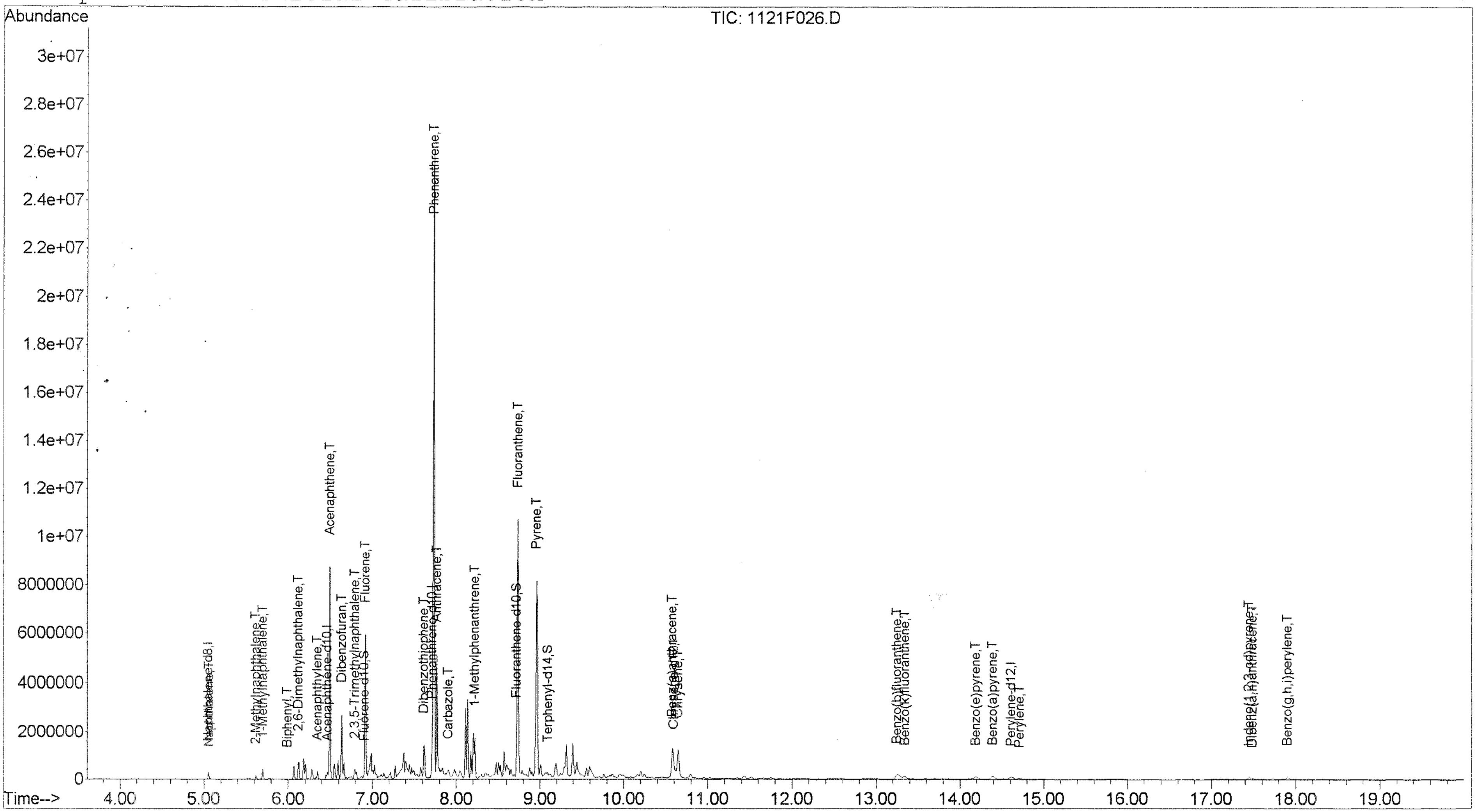
Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
56) Dibenz(a,h)anthracene	17.49	278	35939m	25.33 ng/ml	
57) Benzo(g,h,i)perylene	17.90	276	212111	137.71 ng/ml	99

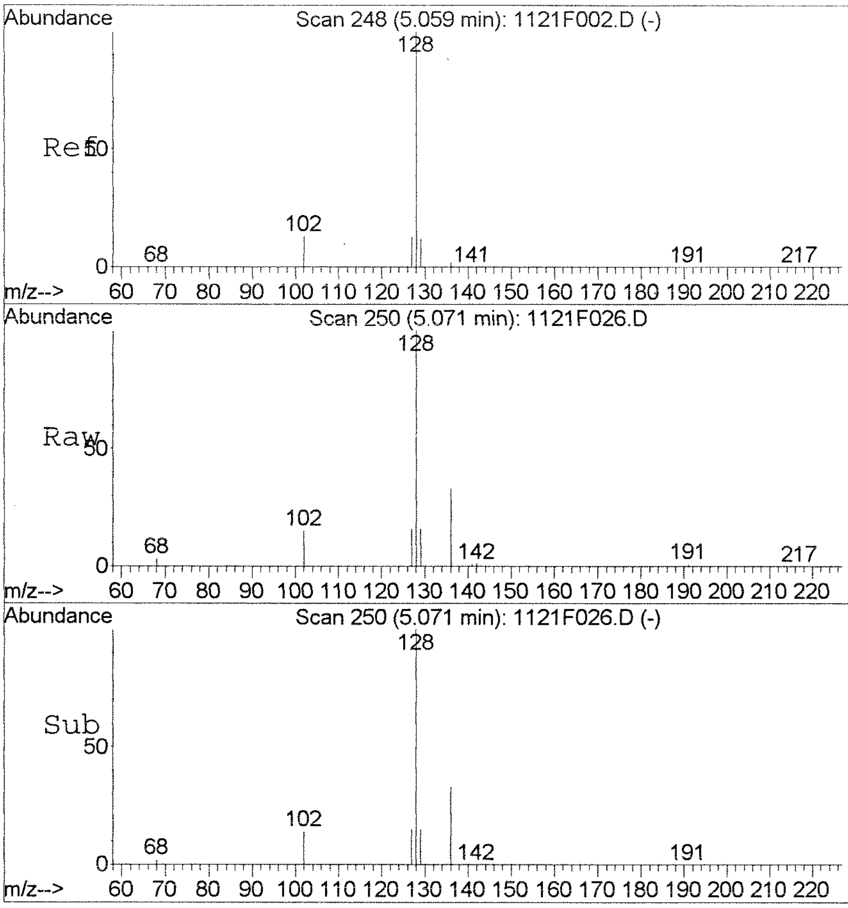
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F026.D Vial: 24
Acq On : 21 Nov 2008 5:10 pm Operator: LWeiskopf
Sample : K0810639-002DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:25 2008 Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration

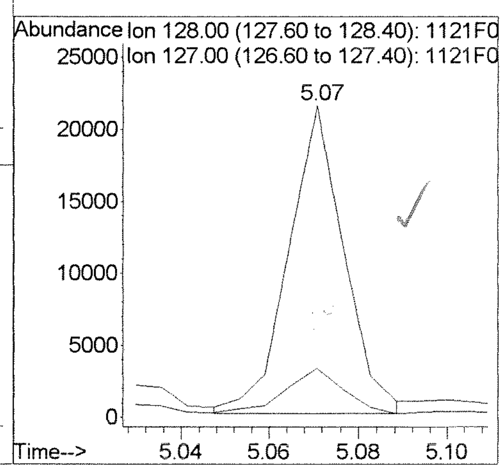


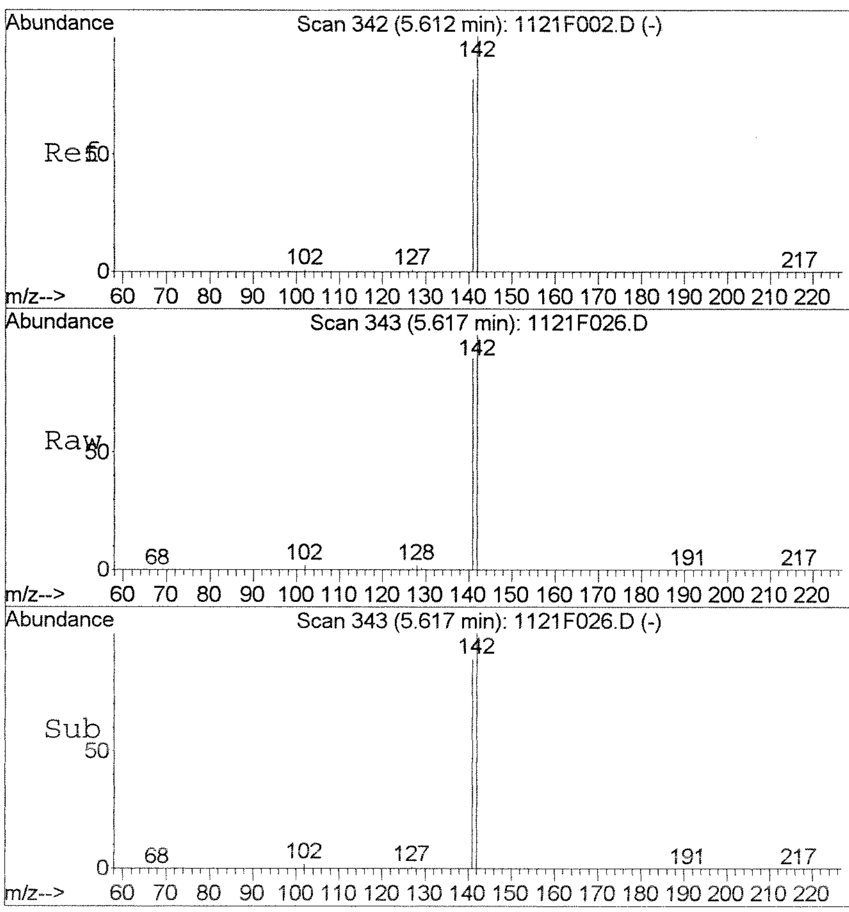
1121F026.D 1110ALK.M Sat Nov 22 10:26:21 2008 Page 3



#2
Naphthalene
Concen: 15.66 ng/ml m
RT: 5.07 min Scan# 250
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

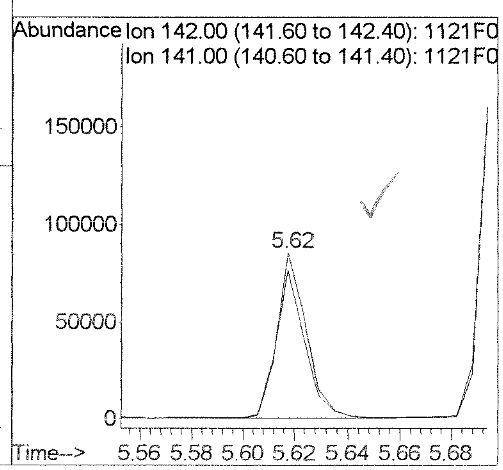
Tgt Ion:128	Resp:		18310
Ion	Ratio	Lower	Upper
128	100		
127	15.8	0.0	43.8

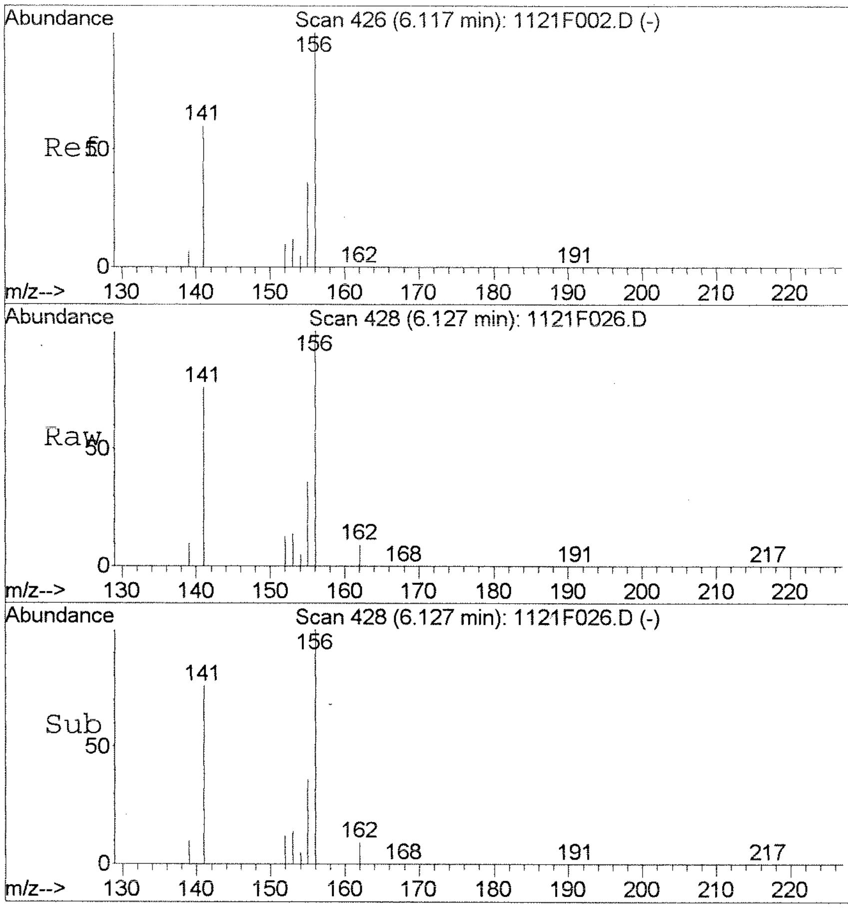




#3
2-Methylnaphthalene
Concen: 82.02 ng/ml
RT: 5.62 min Scan# 343
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:142	Resp:		66861
Ion	Ratio	Lower	Upper
142	100		
141	89.2	52.4	112.4

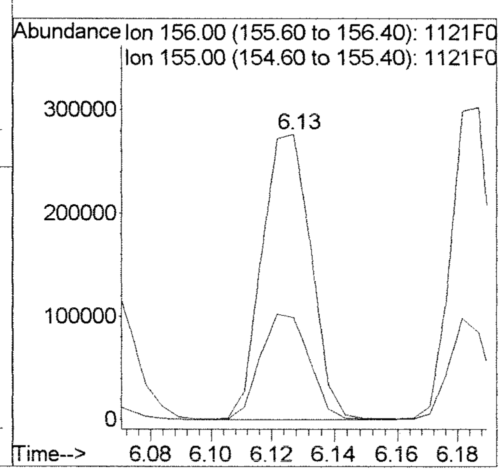


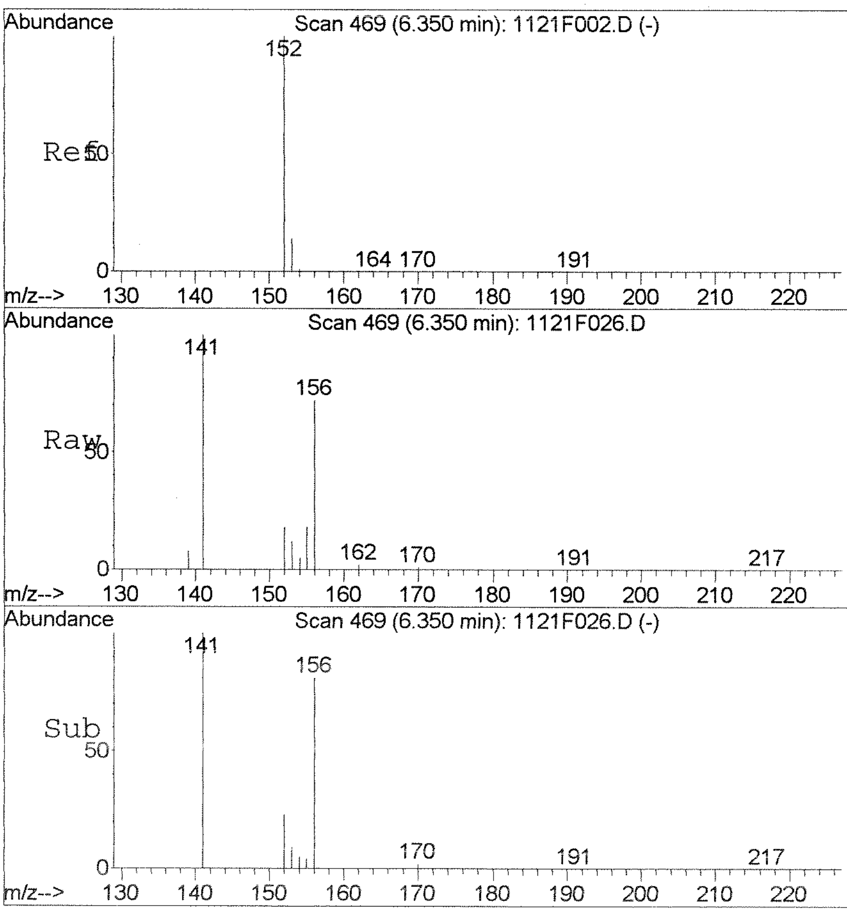


#6
2,6-Dimethylnaphthalene
Concen: 429.16 ng/ml
RT: 6.13 min Scan# 428
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:156 Resp: 305401

Ion	Ratio	Lower	Upper
156	100		
155	35.8	7.3	67.3

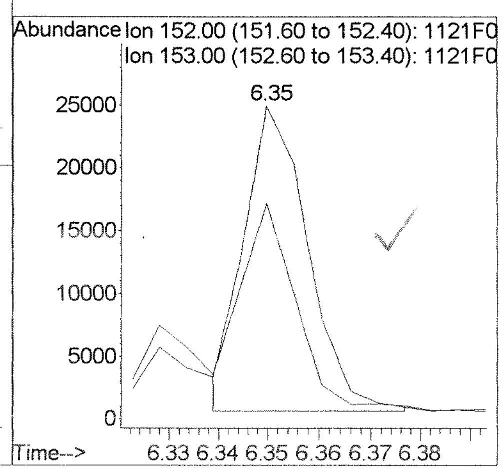


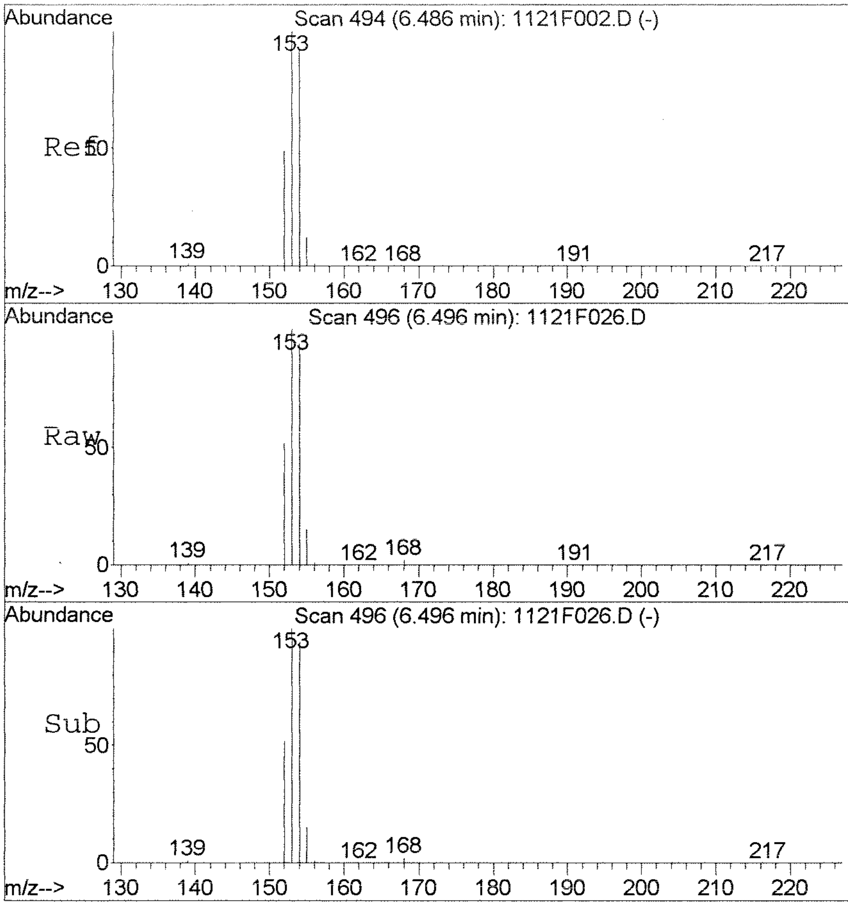


#11
Acenaphthylene
Concen: 17.18 ng/ml m
RT: 6.35 min Scan# 469
Delta R.T. -0.00 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:152 Resp: 21462

Ion	Ratio	Lower	Upper
152	100		
153	68.9	0.0	43.0#

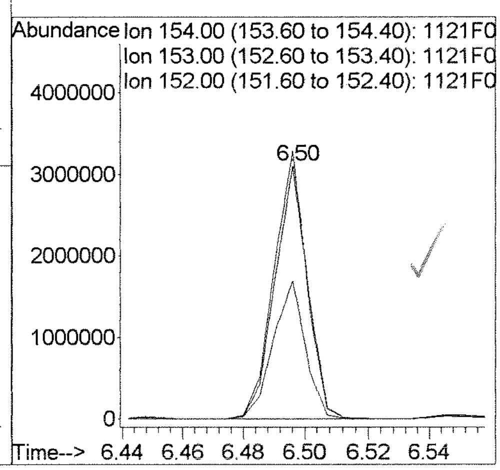


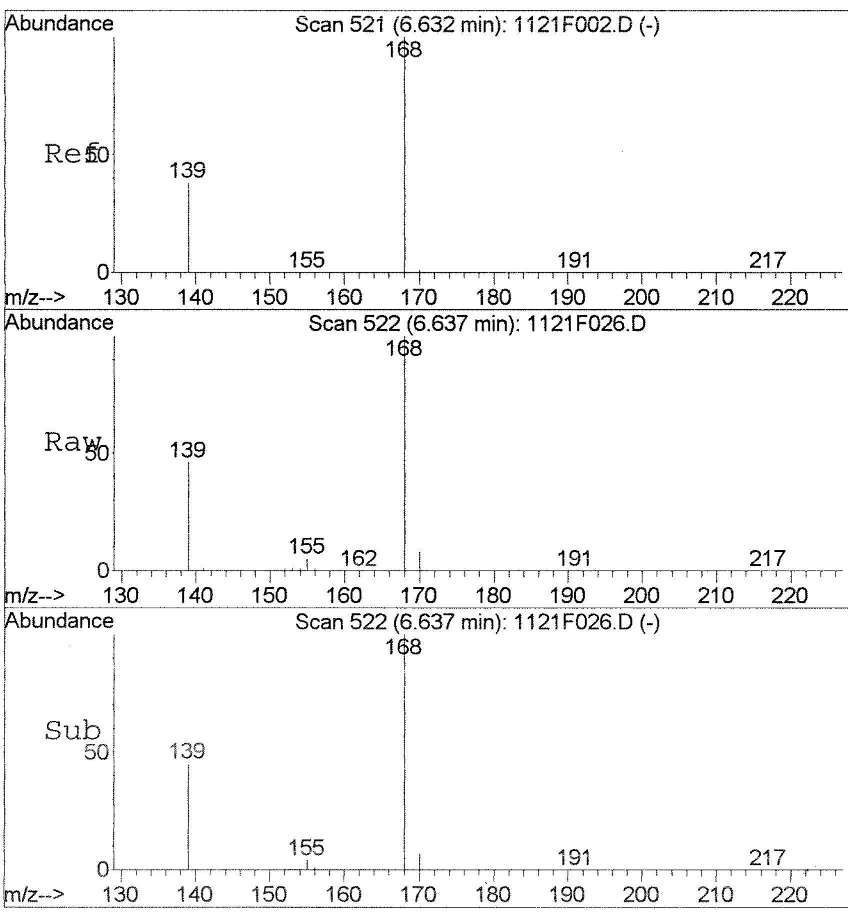


#12
Acenaphthene
Concen: 2996.30 ng/ml
RT: 6.50 min Scan# 496
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:154 Resp: 2275117

Ion	Ratio	Lower	Upper
154	100		
153	106.1	81.9	141.9
152	54.7	26.8	86.8

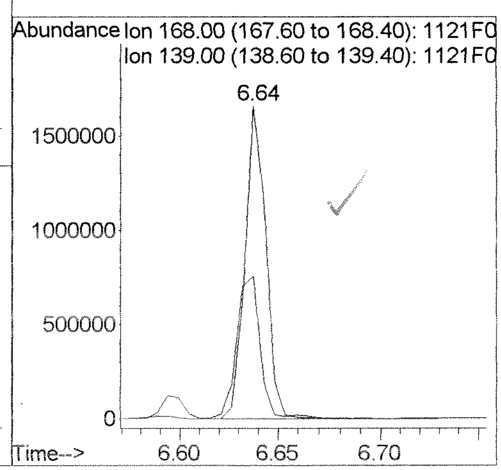


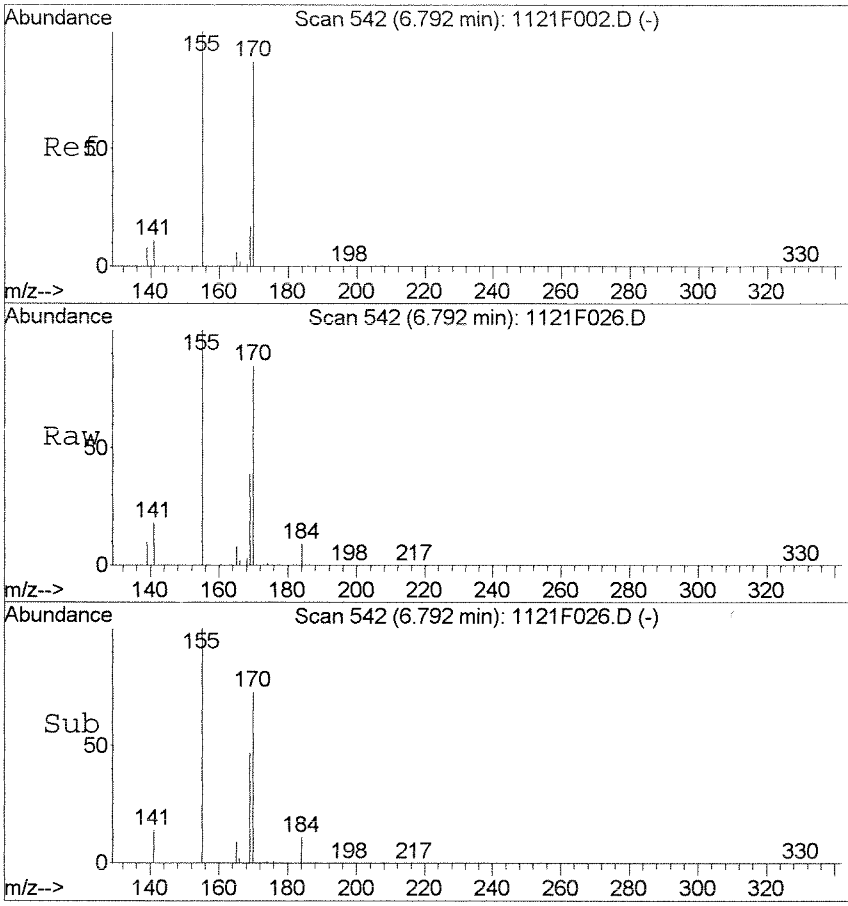


#13
Dibenzofuran
Concen: 1067.30 ng/ml
RT: 6.64 min Scan# 522
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:168 Resp: 1219088

Ion	Ratio	Lower	Upper
168	100		
139	45.5	21.0	81.0

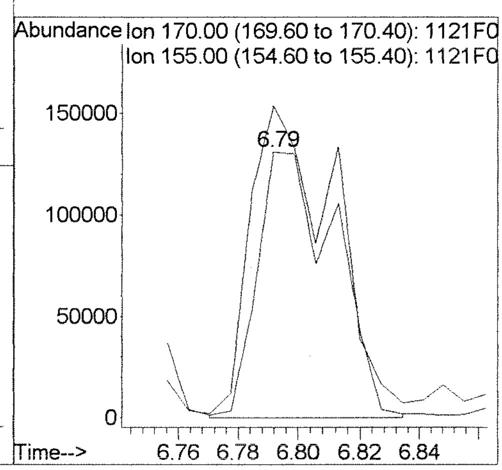


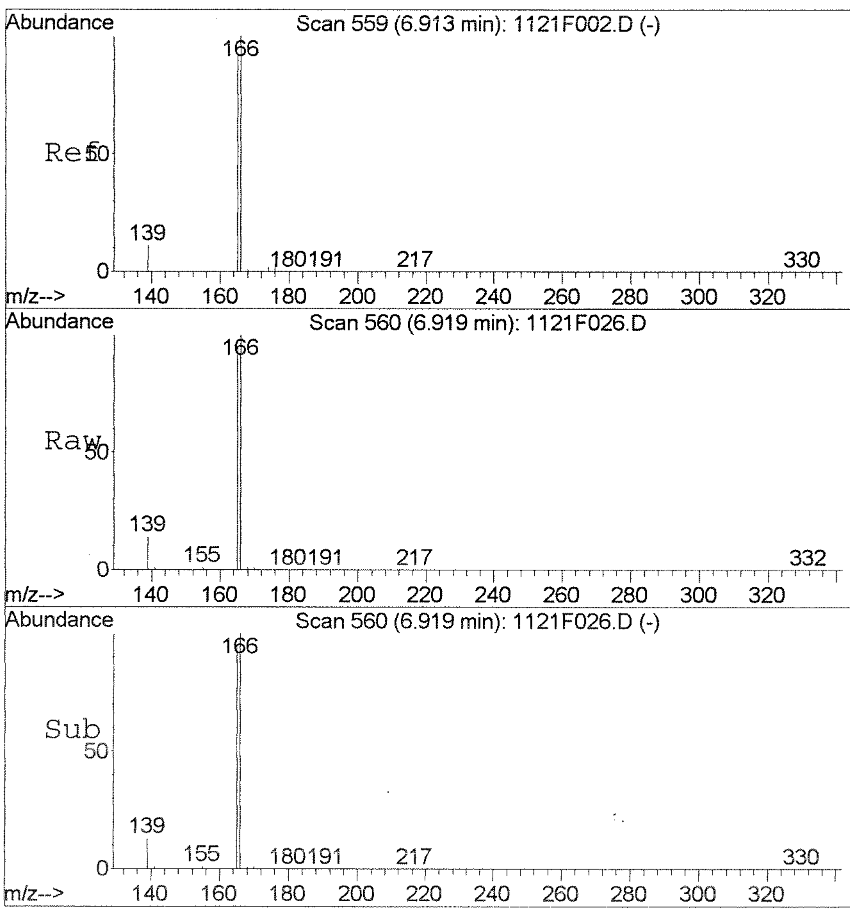


#14
2,3,5-Trimethylnaphthalene
Concen: 348.26 ng/ml m
RT: 6.79 min Scan# 542
Delta R.T. -0.00 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:170 Resp: 232576

Ion	Ratio	Lower	Upper
170	100		
155	117.4	42.9	102.9#

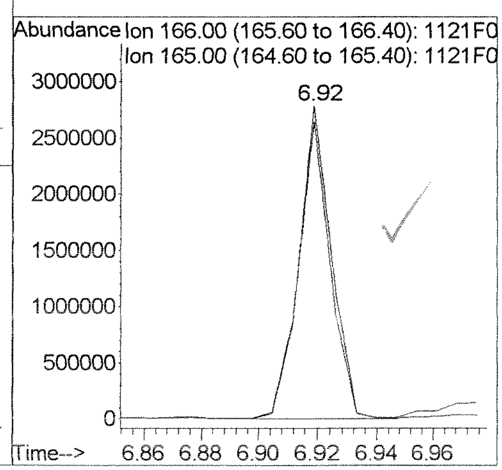


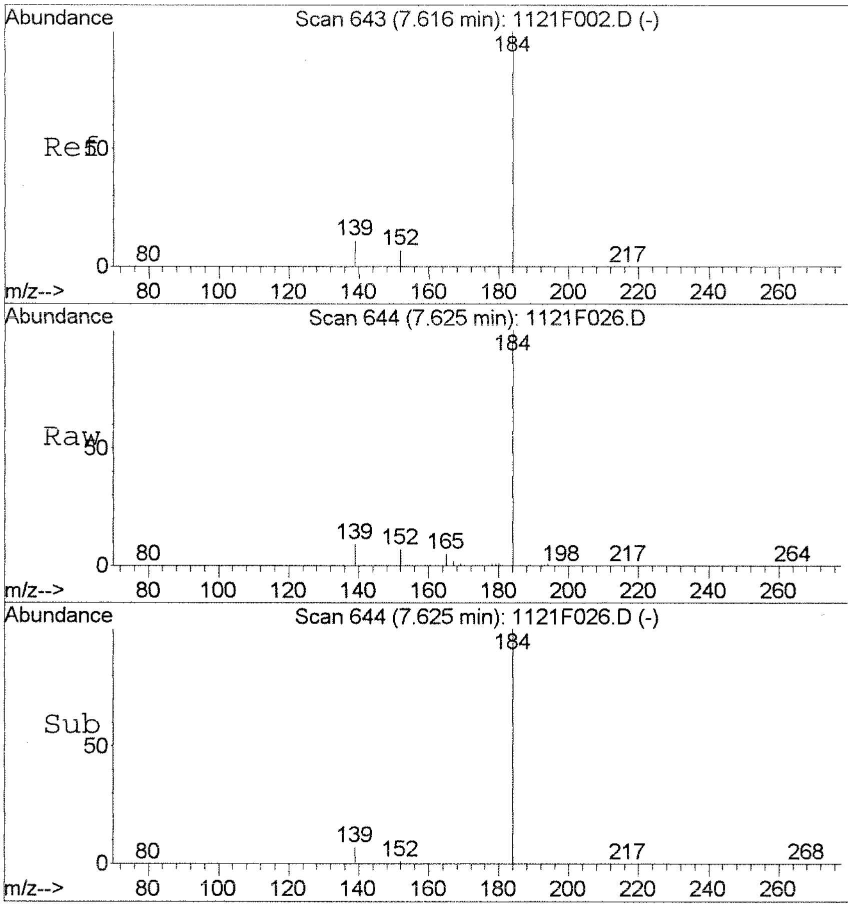


#16
Fluorene
Concen: 2260.03 ng/ml
RT: 6.92 min Scan# 560
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:166 Resp: 2060141

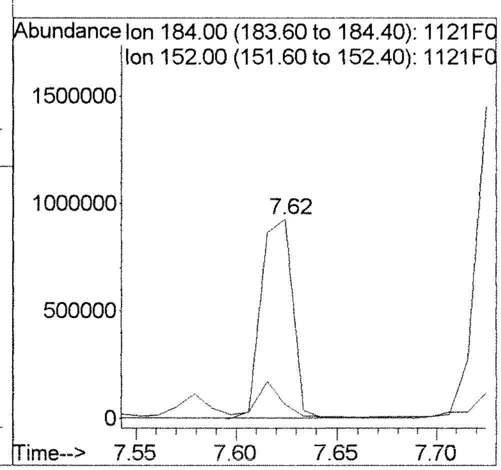
Ion	Ratio	Lower	Upper
166	100		
165	94.9	59.8	119.8

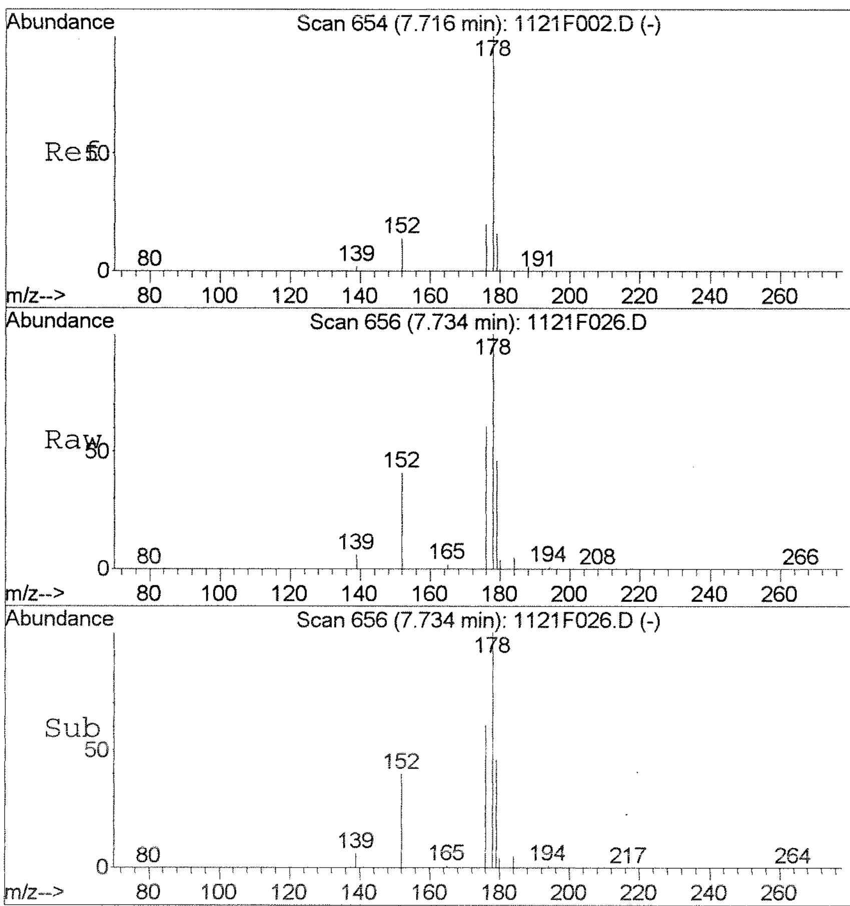




#23
Dibenzothiophene
Concen: 681.30 ng/ml
RT: 7.62 min Scan# 644
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

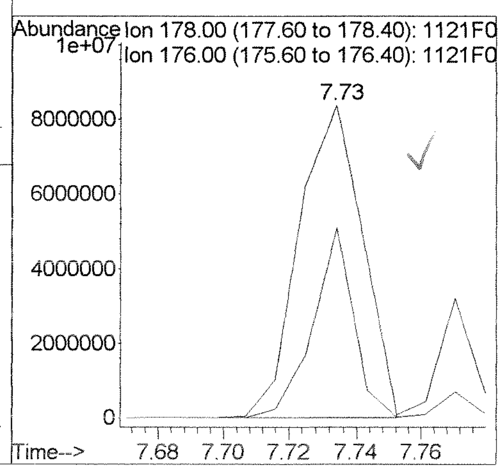
Tgt Ion:184	Resp: 1017713		
Ion	Ratio	Lower	Upper
184	100		
152	6.0	0.0	39.1

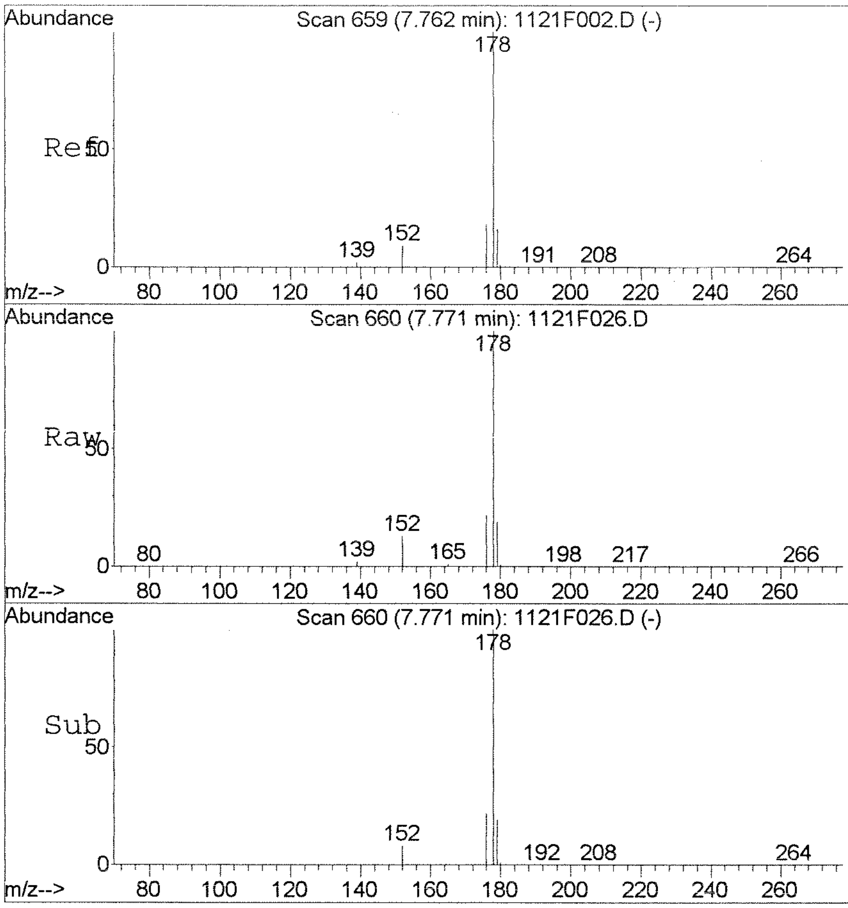




#27
Phenanthrene
Concen: 7160.90 ng/ml m
RT: 7.73 min Scan# 656
Delta R.T. 0.02 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:178	Resp:10940232		
Ion	Ratio	Lower	Upper
178	100		
176	60.9	0.0	51.0#

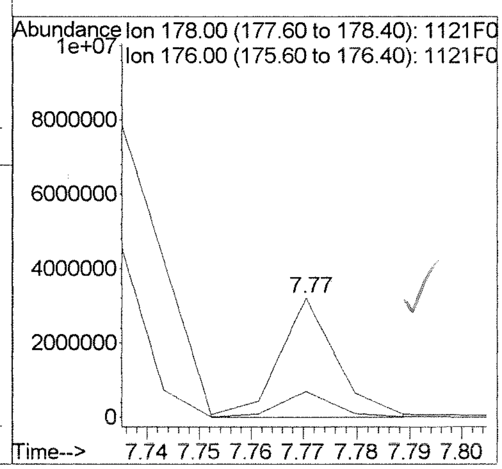


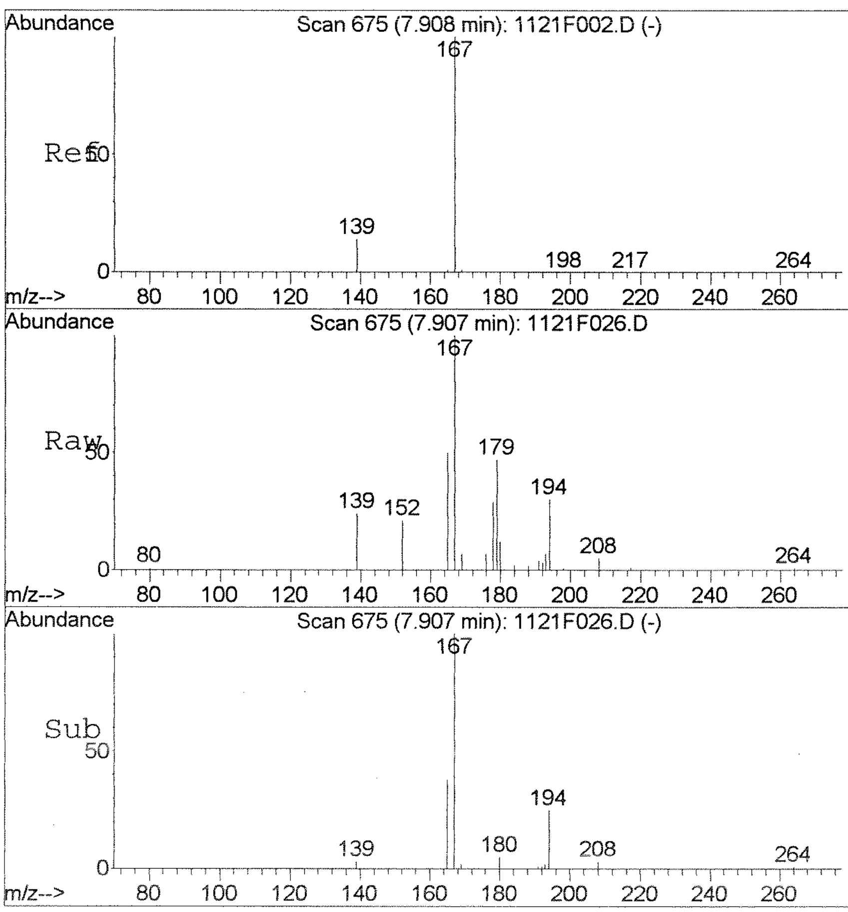


#28
Anthracene
Concen: 1614.97 ng/ml m
RT: 7.77 min Scan# 660
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:178 Resp: 2403969

Ion	Ratio	Lower	Upper
178	100		
176	21.8	0.0	49.7

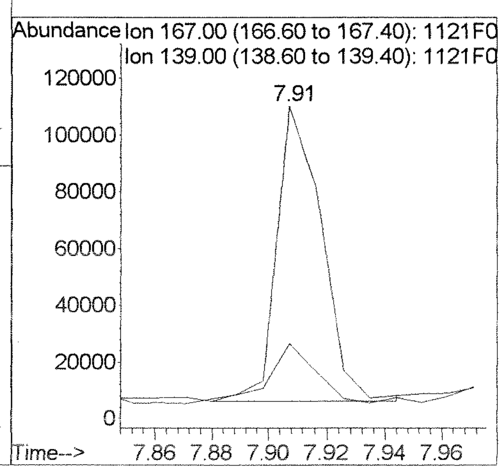


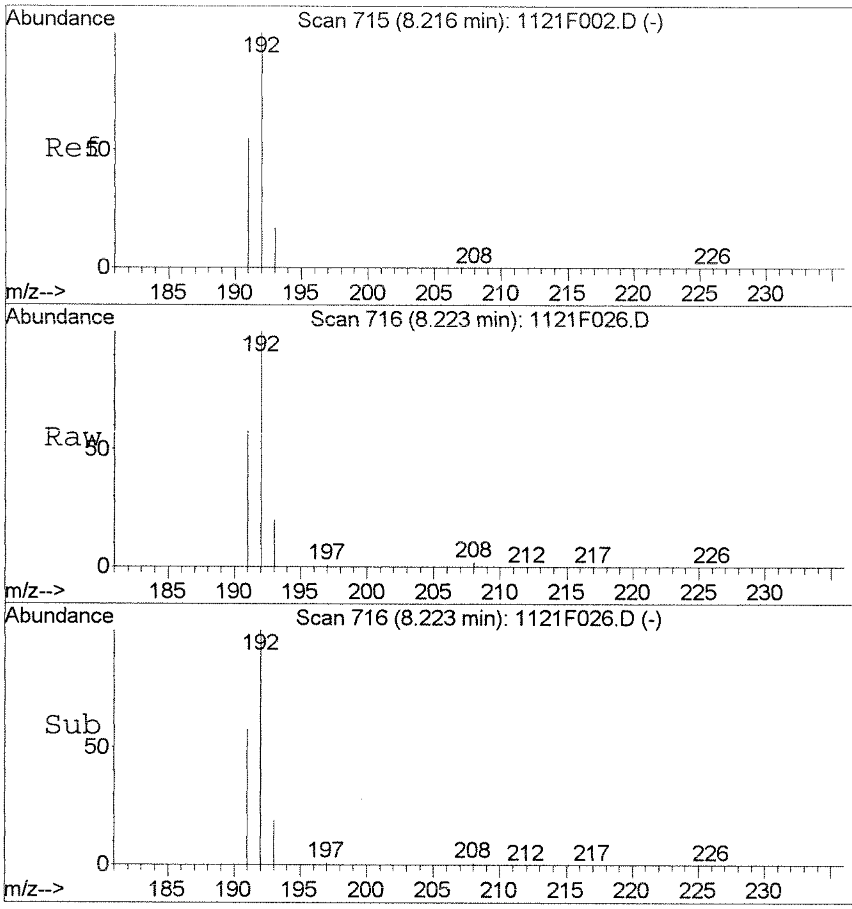


#29
Carbazole
Concen: 81.54 ng/ml
RT: 7.91 min Scan# 675
Delta R.T. -0.00 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:167 Resp: 111345

Ion	Ratio	Lower	Upper
167	100		
139	18.8	0.0	46.8

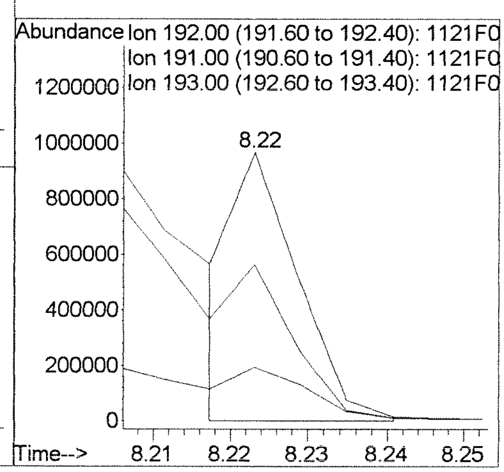


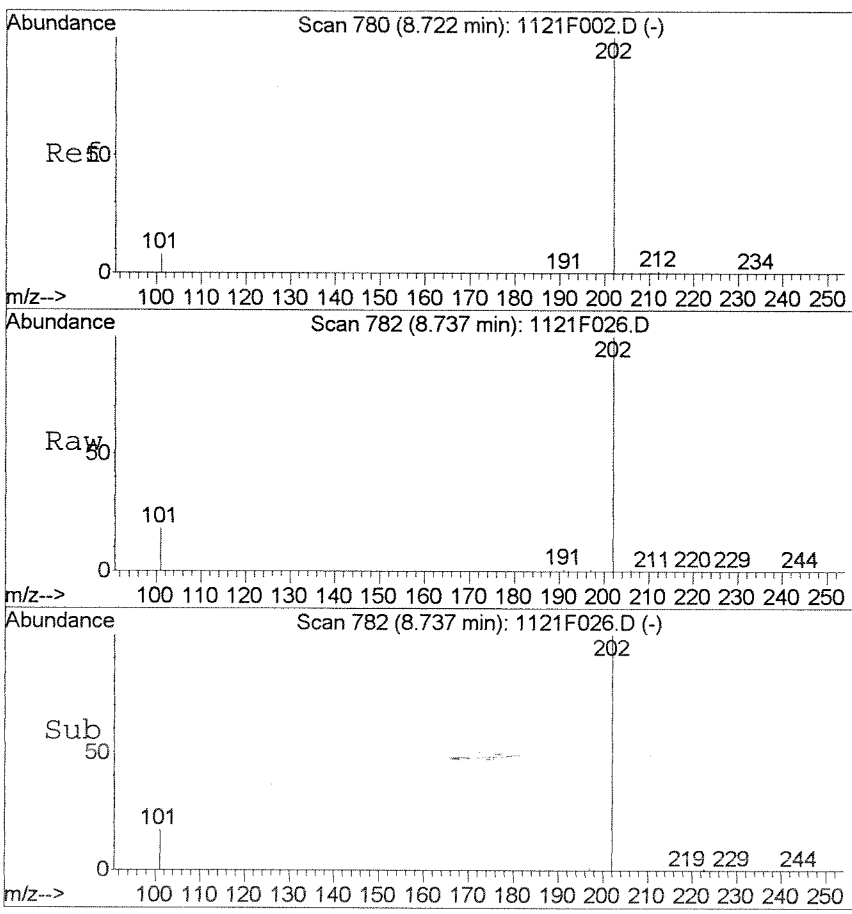


#30
1-Methylphenanthrene
Concen: 484.76 ng/ml m
RT: 8.22 min Scan# 716
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:192 Resp: 549649

Ion	Ratio	Lower	Upper
192	100		
191	58.2	29.0	89.0
193	20.0	0.0	45.4

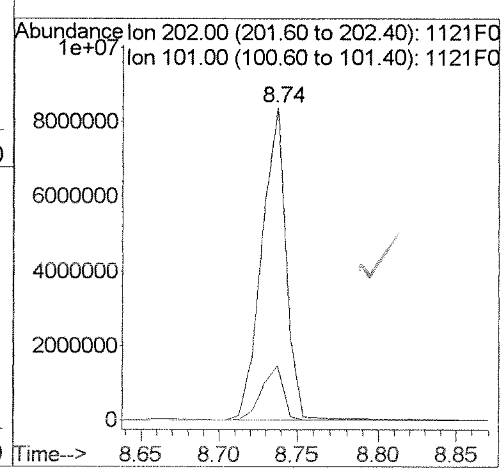


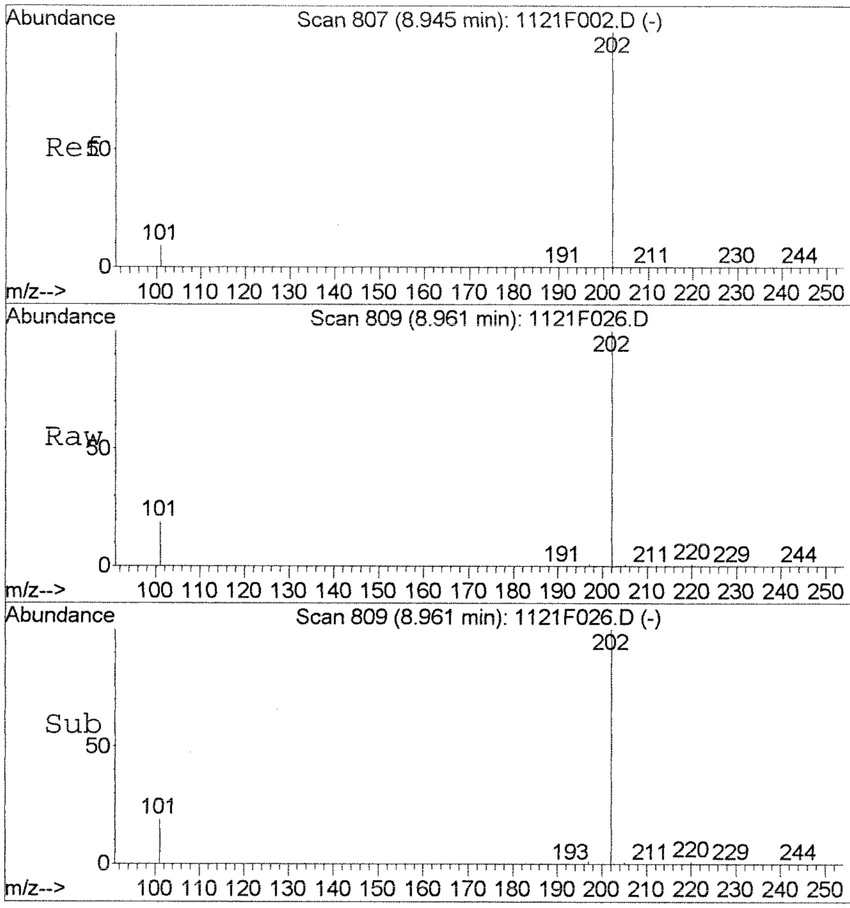


#35
Fluoranthene
Concen: 5262.57 ng/ml
RT: 8.74 min Scan# 782
Delta R.T. 0.02 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:202 Resp: 9132743

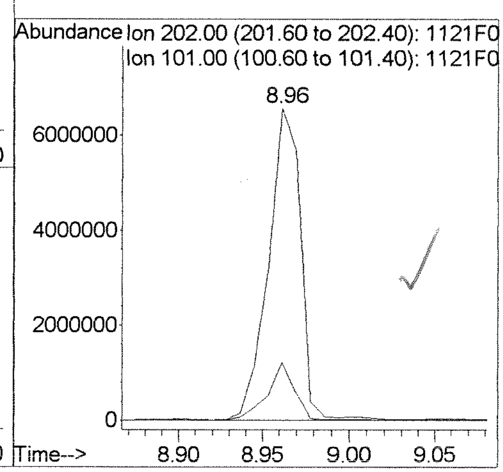
Ion	Ratio	Lower	Upper
202	100		
101	17.5	0.0	35.8

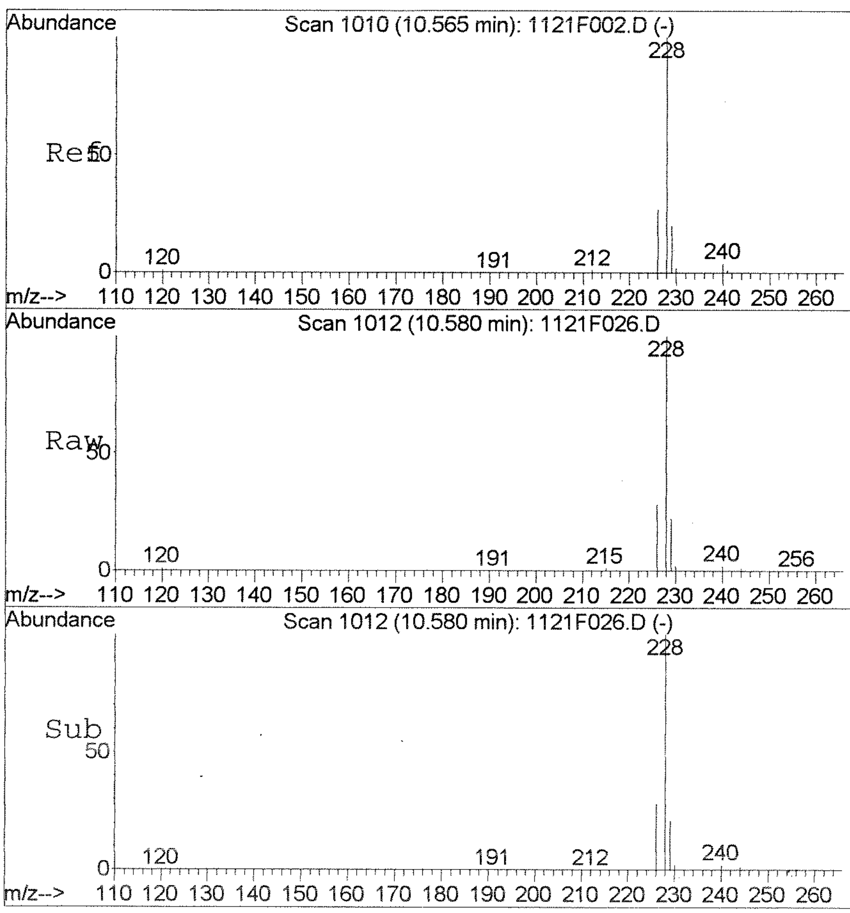




#38
Pyrene
Concen: 4465.12 ng/ml
RT: 8.96 min   Scan# 809
Delta R.T.   0.02 min
Lab File: 1121F026.D
Acq: 21 Nov 2008   5:10 pm

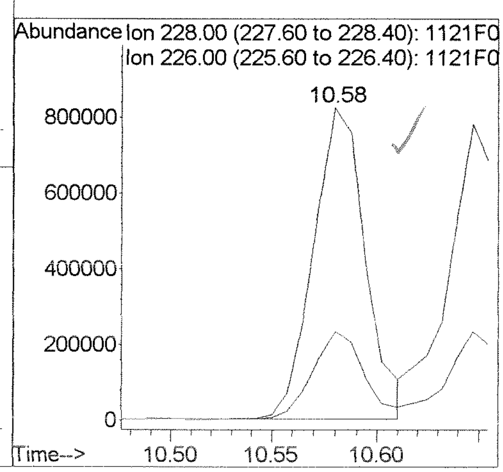
Tgt	Ion:202	Resp:	8606446
Ion	Ratio	Lower	Upper
202	100		
101	18.6	0.0	37.6

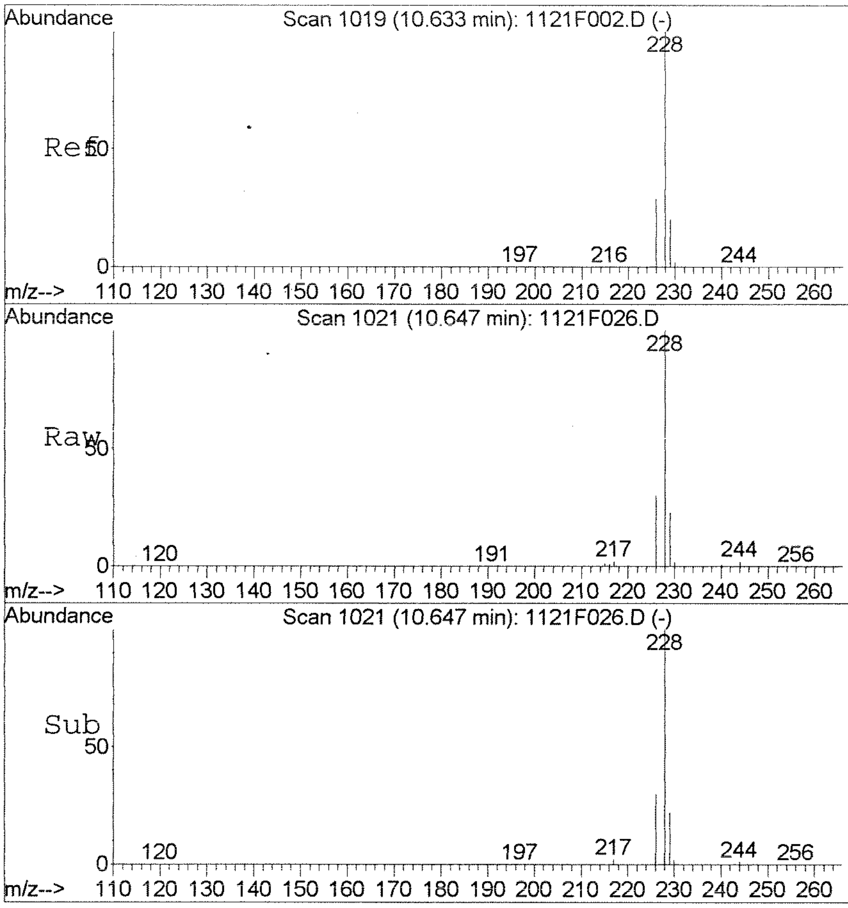




#43
Benz(a)anthracene
Concen: 801.36 ng/ml
RT: 10.58 min   Scan# 1012
Delta R.T.   0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008   5:10 pm

Tgt	Ion:228	Resp:	1401278
Ion	Ratio	Lower	Upper
228	100		
226	28.3	0.0	57.0

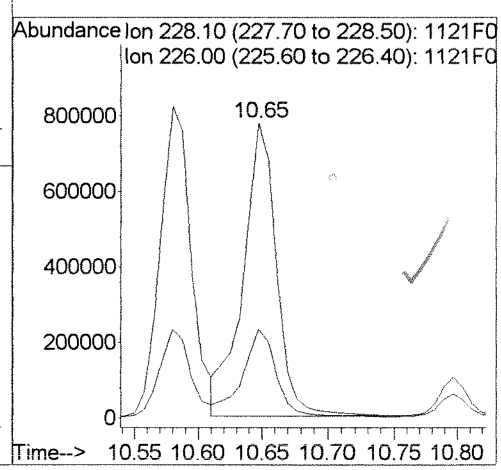


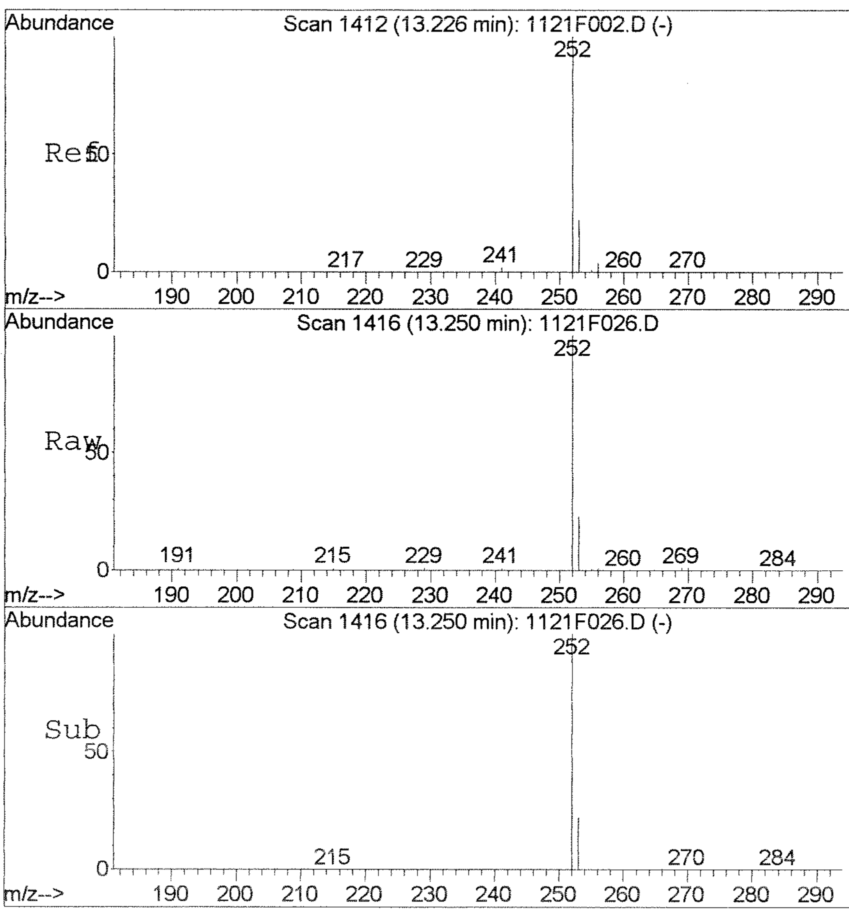


#44
Chrysene
Concen: 819.66 ng/ml
RT: 10.65 min Scan# 1021
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:228 Resp: 1407684

Ion	Ratio	Lower	Upper
228	100		
226	29.8	0.0	58.9

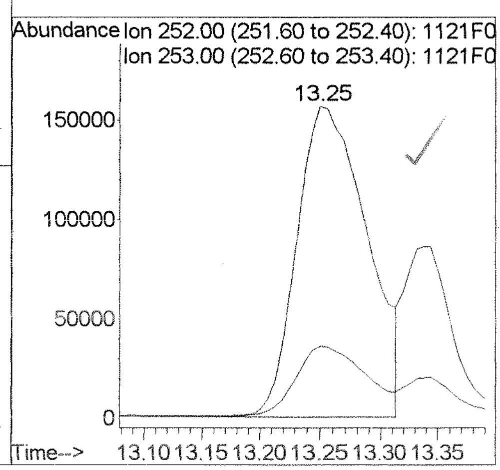


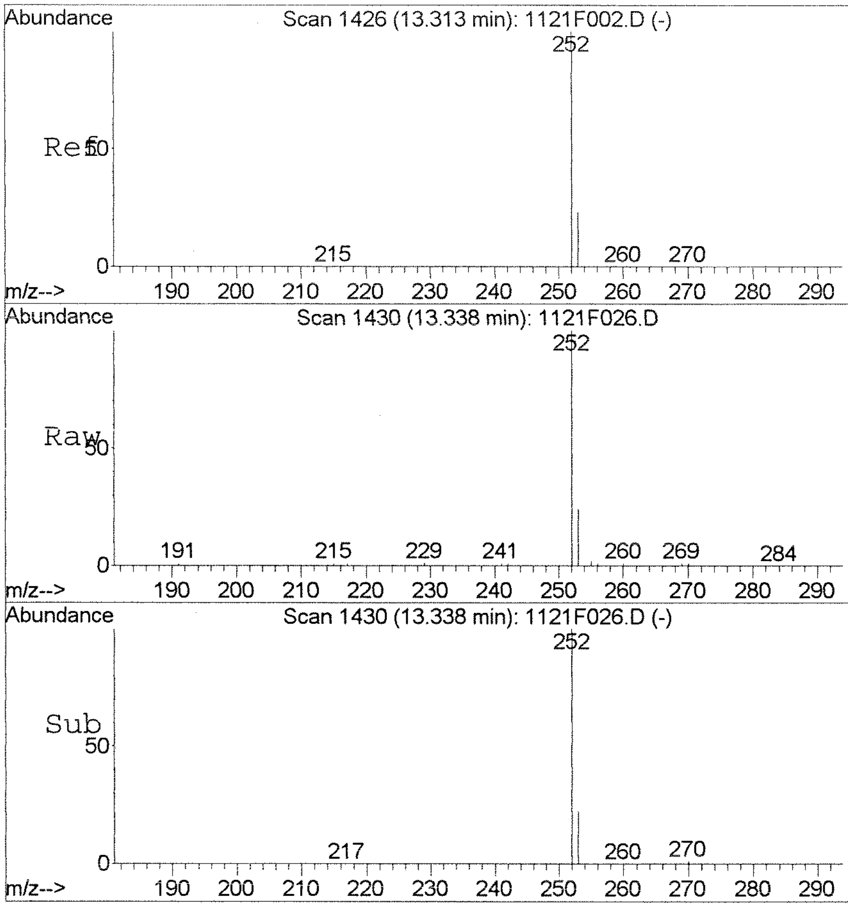


#50
Benzo(b)fluoranthene
Concen: 355.71 ng/ml
RT: 13.25 min Scan# 1416
Delta R.T. 0.02 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:252 Resp: 625984

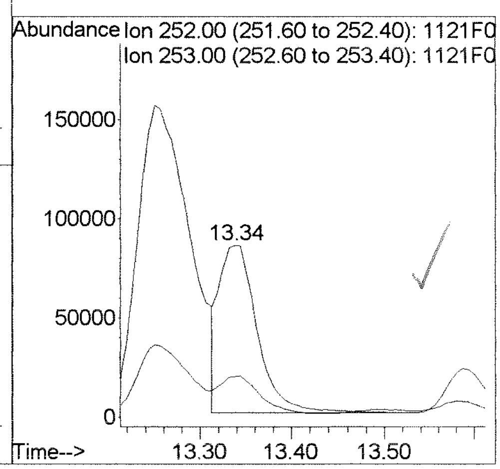
Ion	Ratio	Lower	Upper
252	100		
253	22.5	0.0	52.6

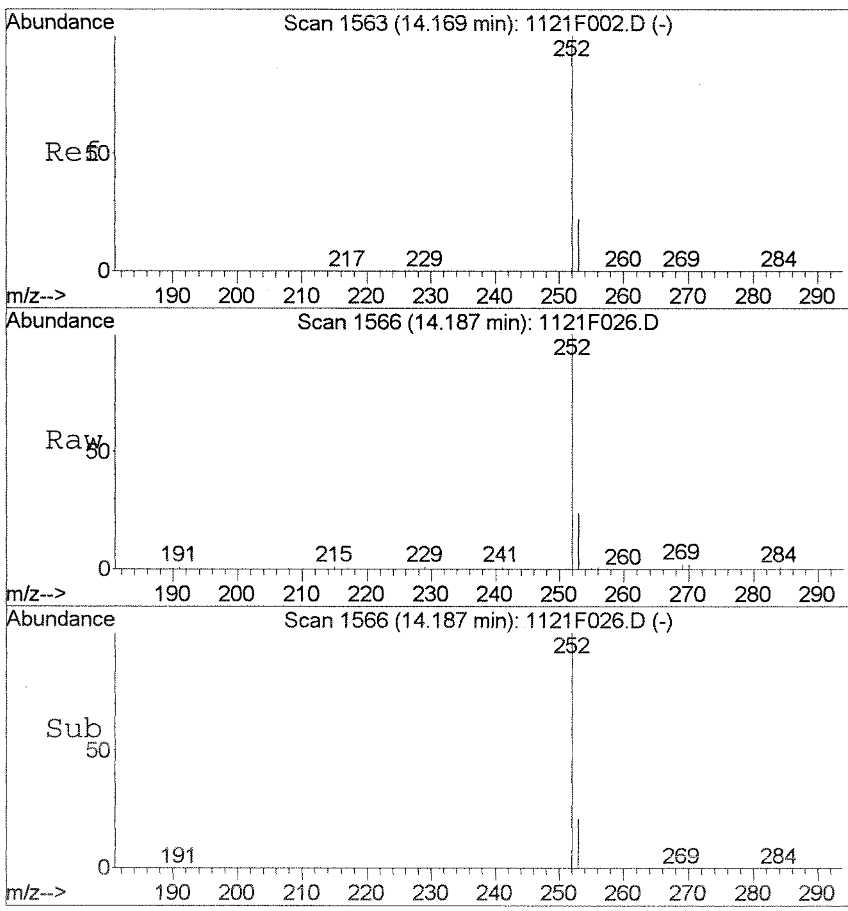




#51
Benzo(k)fluoranthene
Concen: 144.68 ng/ml
RT: 13.34 min Scan# 1430
Delta R.T. 0.02 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

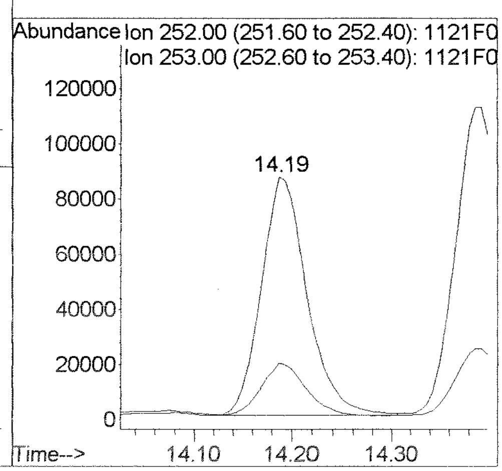
Tgt	Ion:252	Resp:	244590
Ion	Ratio	Lower	Upper
252	100		
253	19.8	0.0	52.0

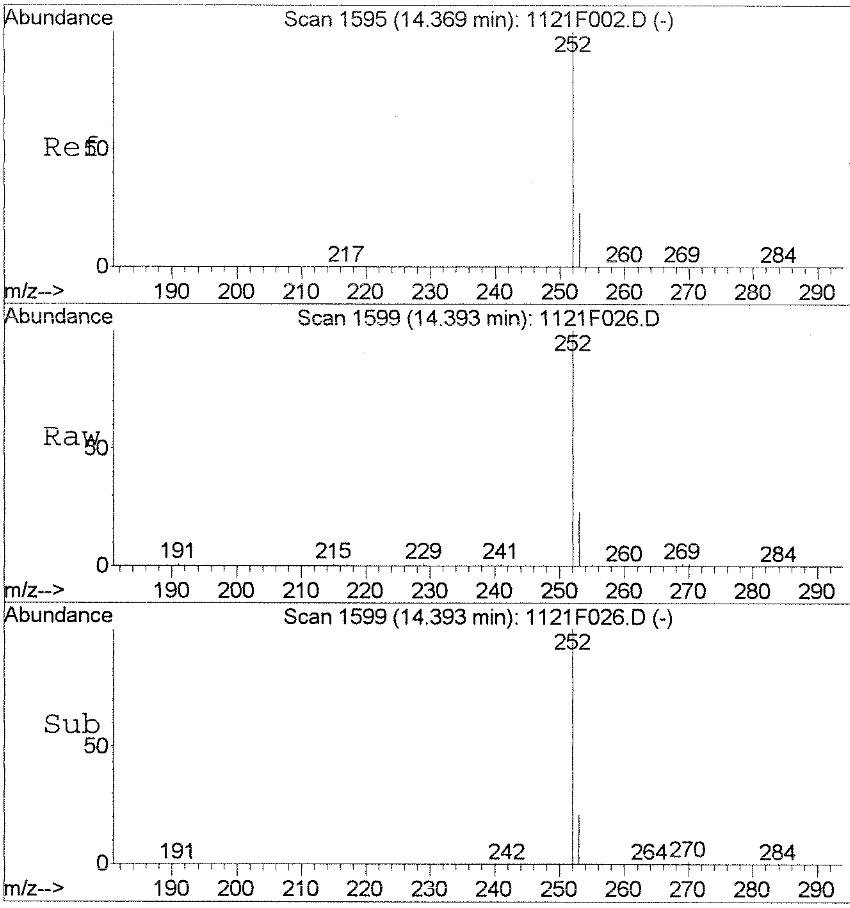




#52
Benzo(e)pyrene
Concen: 174.07 ng/ml
RT: 14.19 min Scan# 1566
Delta R.T. 0.02 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

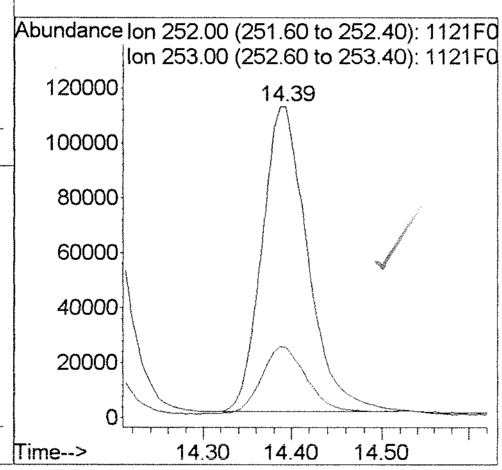
Tgt	Ion:252	Resp:	278263
Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	52.2

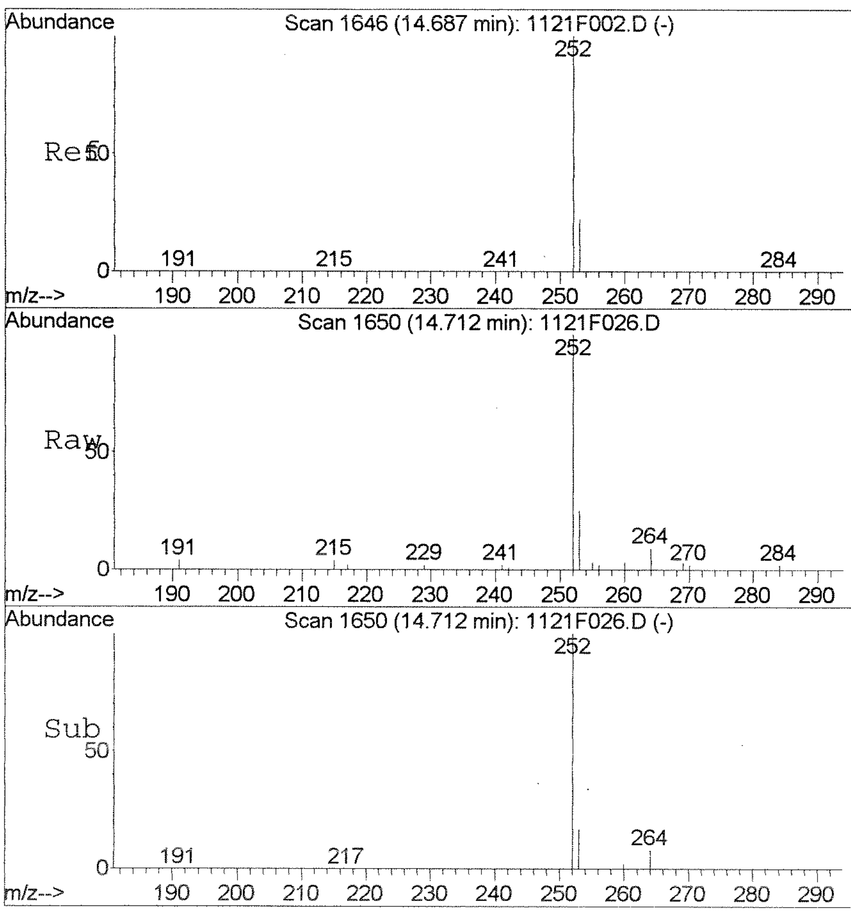




#53
Benzo(a)pyrene
Concen: 272.10 ng/ml
RT: 14.39 min Scan# 1599
Delta R.T. 0.02 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

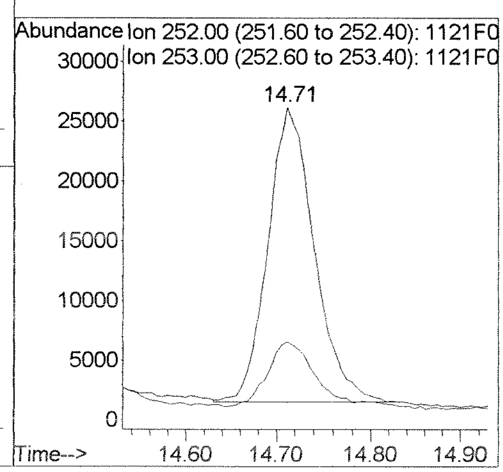
Tgt Ion:252		Resp:	396470
Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	52.2

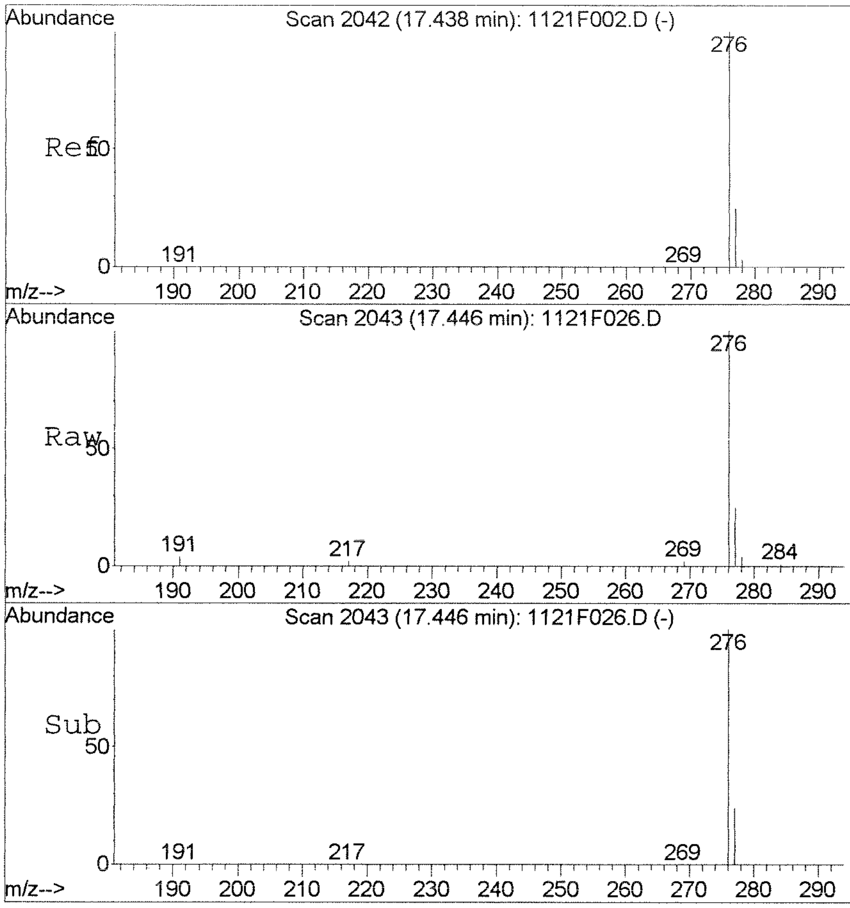




#54
Perylene
Concen: 60.19 ng/ml
RT: 14.71 min Scan# 1650
Delta R.T. 0.02 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:252		Resp:	86151
Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	51.5

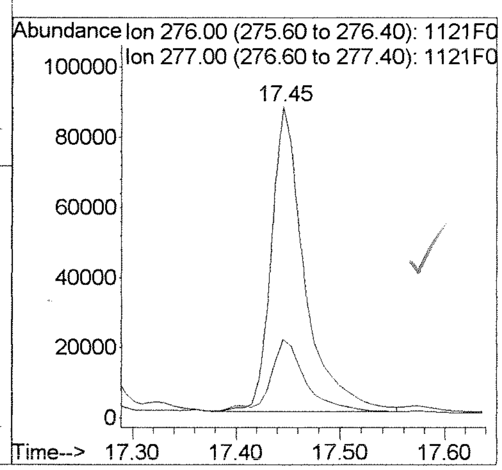


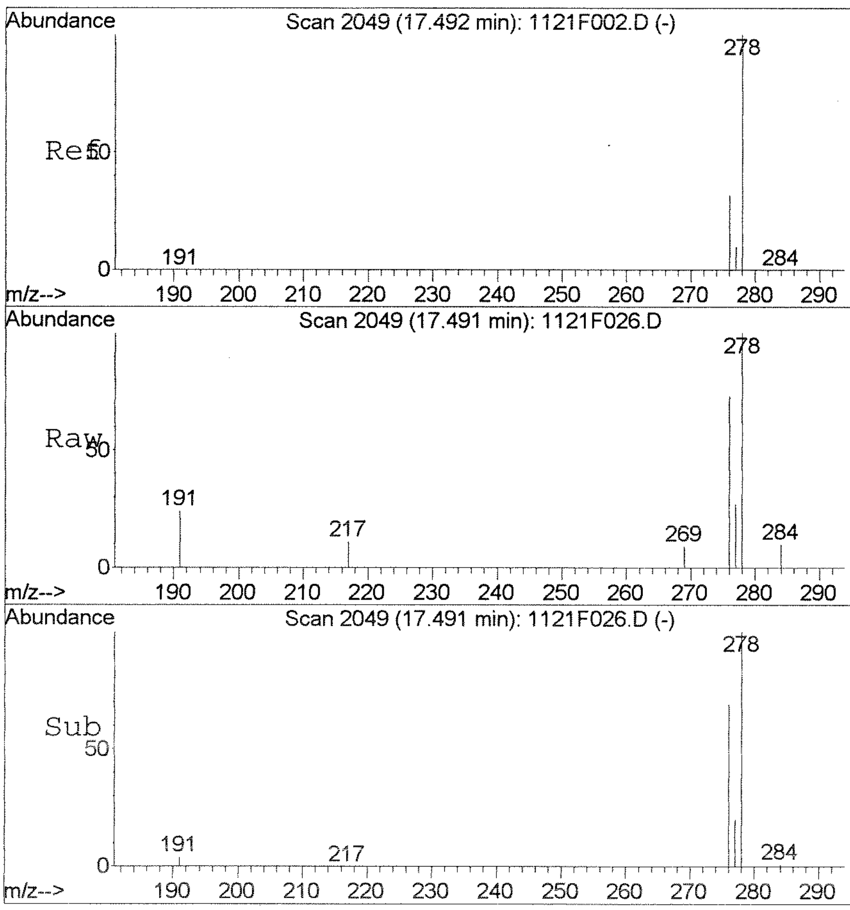


#55
Indeno(1,2,3-cd)pyrene
Concen: 143.84 ng/ml
RT: 17.45 min Scan# 2043
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:276 Resp: 194459

Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	54.7

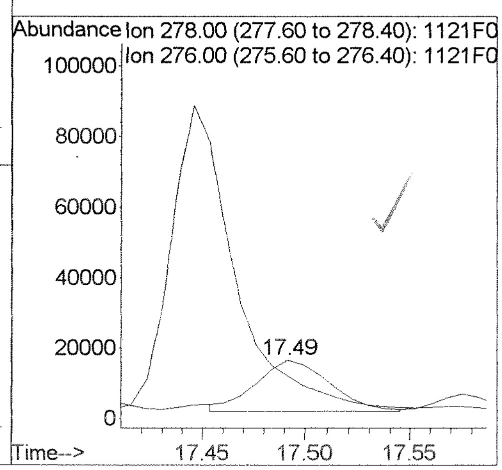


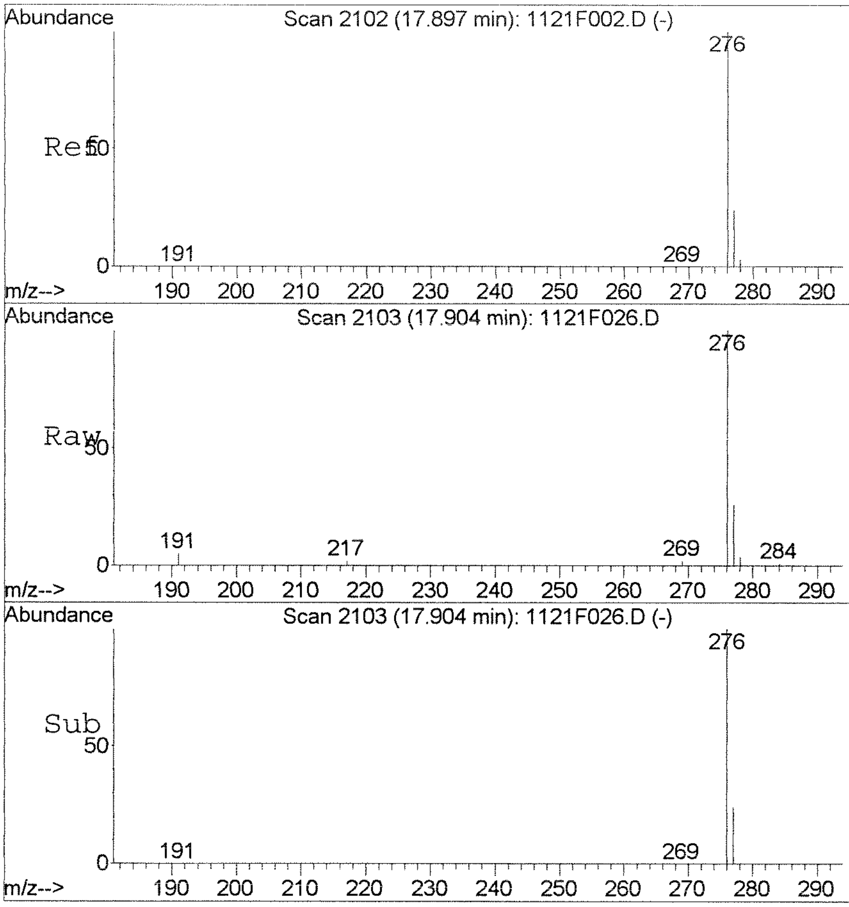


#56
Dibenz(a,h)anthracene
Concen: 25.33 ng/ml m
RT: 17.49 min Scan# 2049
Delta R.T. -0.00 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:278 Resp: 35939

Ion	Ratio	Lower	Upper
278	100		
276	73.0	0.0	59.7#

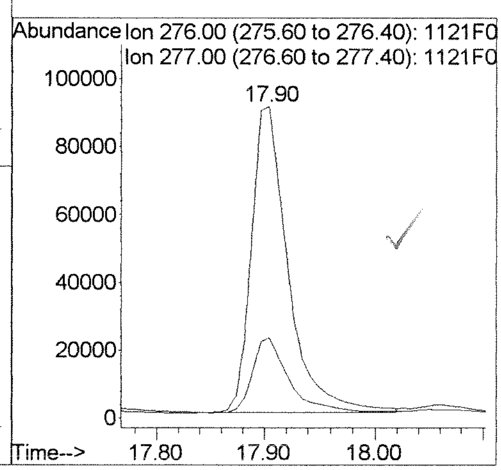




#57
Benzo(g,h,i)perylene
Concen: 137.71 ng/ml
RT: 17.90 min Scan# 2103
Delta R.T. 0.01 min
Lab File: 1121F026.D
Acq: 21 Nov 2008 5:10 pm

Tgt Ion:276 Resp: 212111

Ion	Ratio	Lower	Upper
276	100		
277	24.5	0.0	54.2



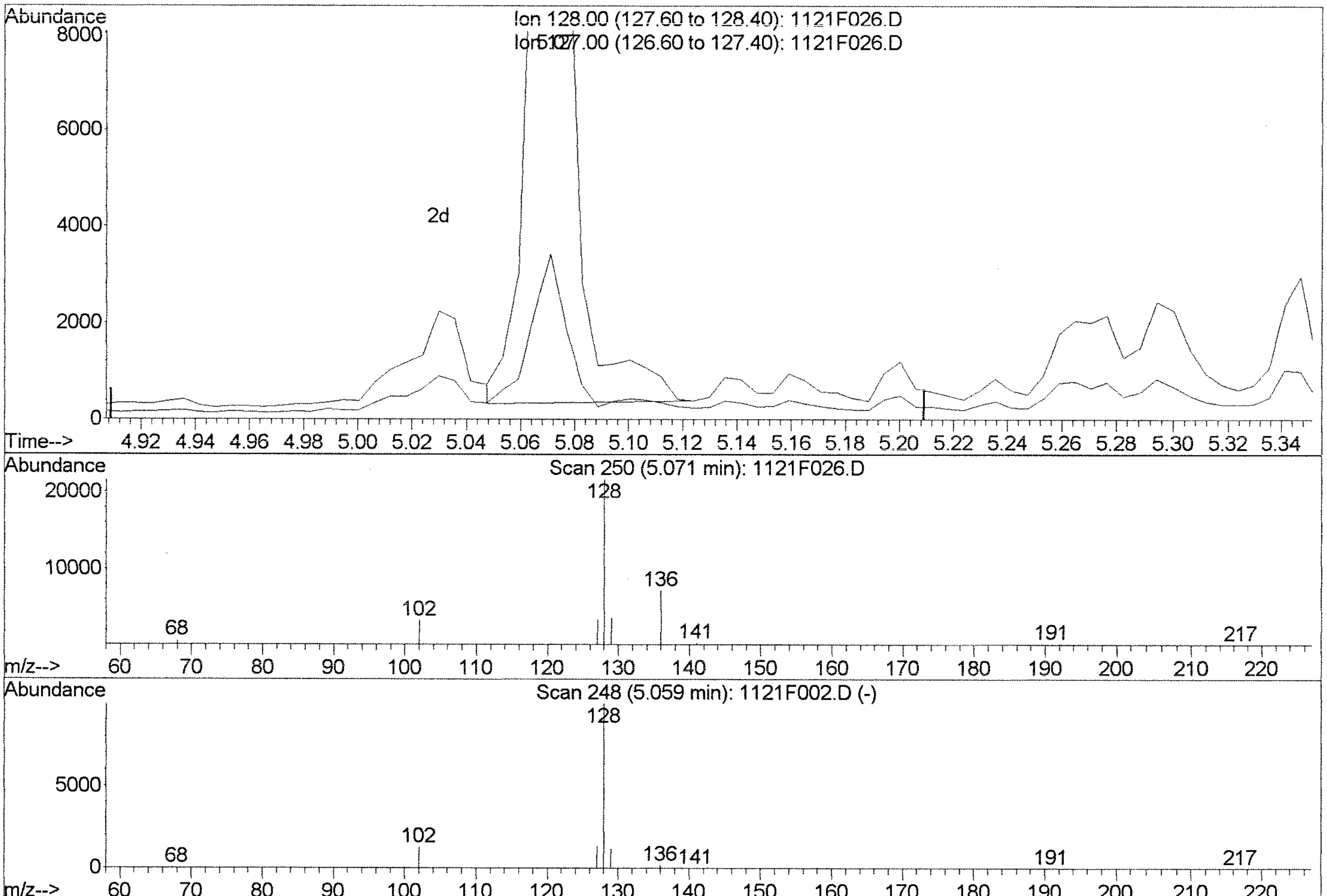
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F026.D
Acq On : 21 Nov 2008 5:10 pm
Sample : K0810639-002DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 8:13 2008

Vial: 24
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F026.D

(2) Naphthalene (T)

5.07min 16.45ng/ml

response 19234

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	14.95
0.00	0.00	0.00
0.00	0.00	0.00

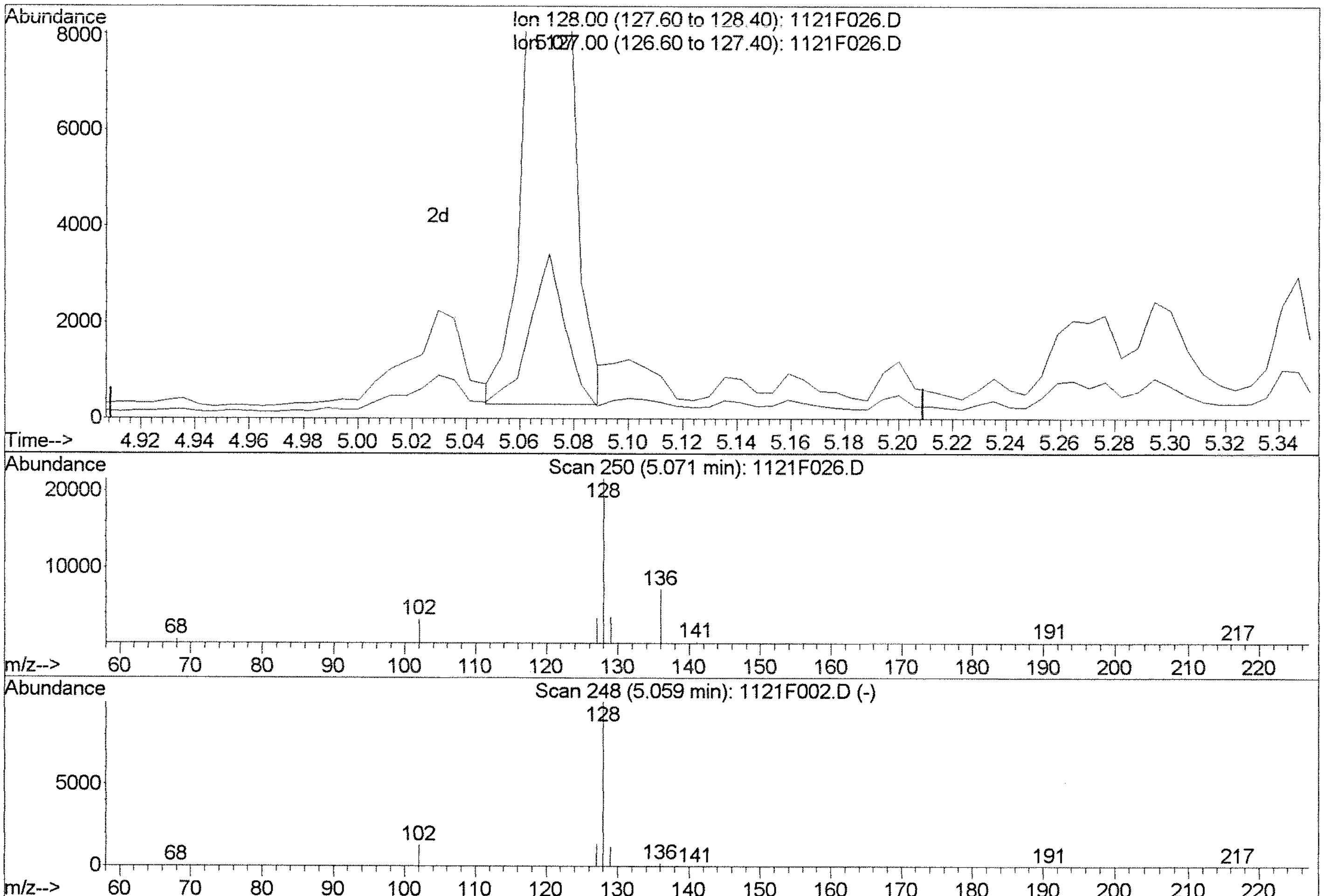
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F026.D
Acq On : 21 Nov 2008 5:10 pm
Sample : K0810639-002DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:24 2008

Vial: 24
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(2) Naphthalene (T)

5.07min 15.66ng/ml m

response 18310

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	15.78
0.00	0.00	0.00
0.00	0.00	0.00

OI
11/22/08

LB
11/24/08

1121F026.D 1110ALK.M Sat Nov 22 10:24:30 2008

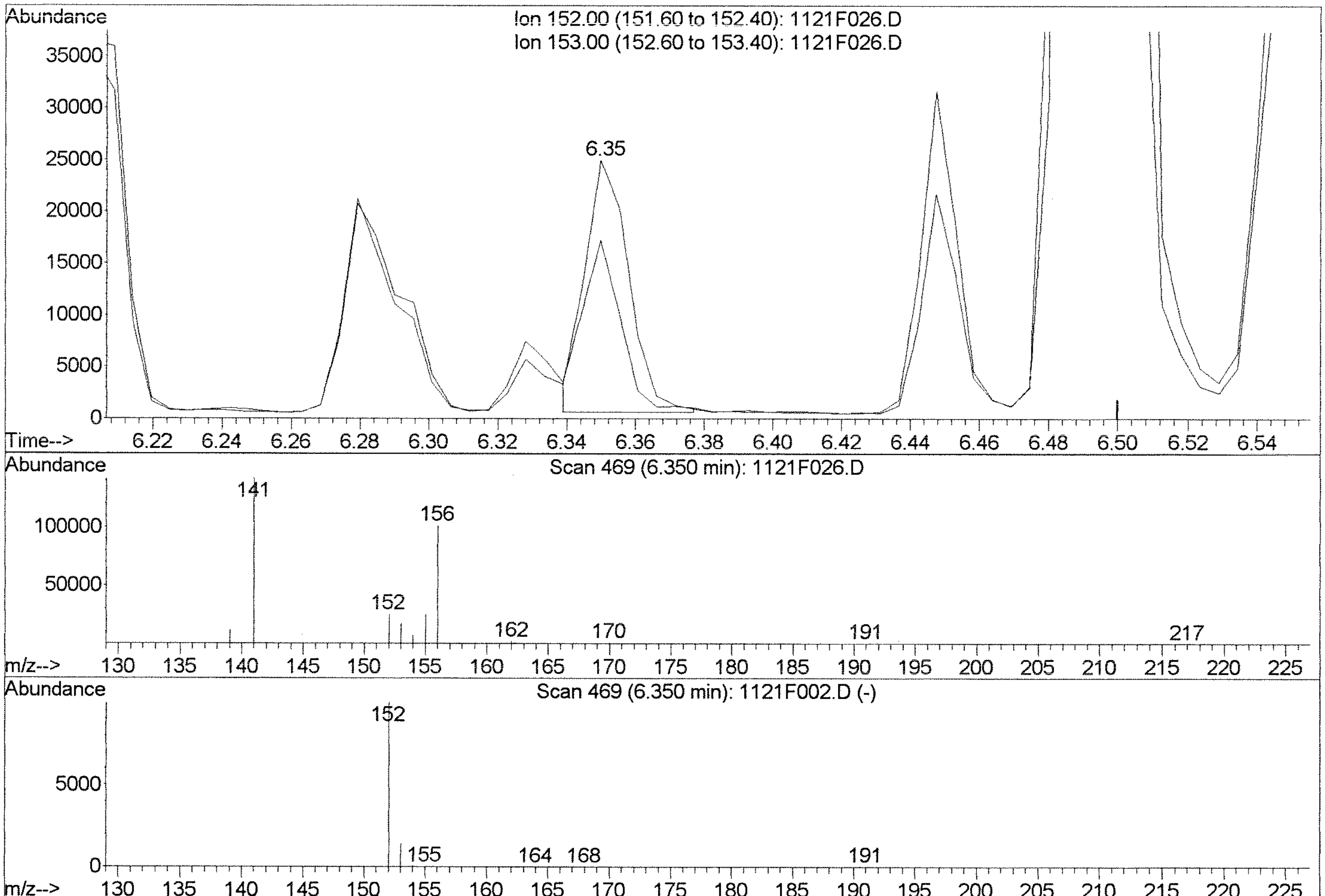
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F026.D
Acq On : 21 Nov 2008 5:10 pm
Sample : K0810639-002DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:24 2008

Vial: 24
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F026.D

(11) Acenaphthylene (T)

6.35min 17.18ng/ml m

response 21462

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	68.93#
0.00	0.00	0.00
0.00	0.00	0.00

MP 11/12/08

LB 11/24/08

1121F026.D 1110ALK.M Sat Nov 22 10:24:44 2008

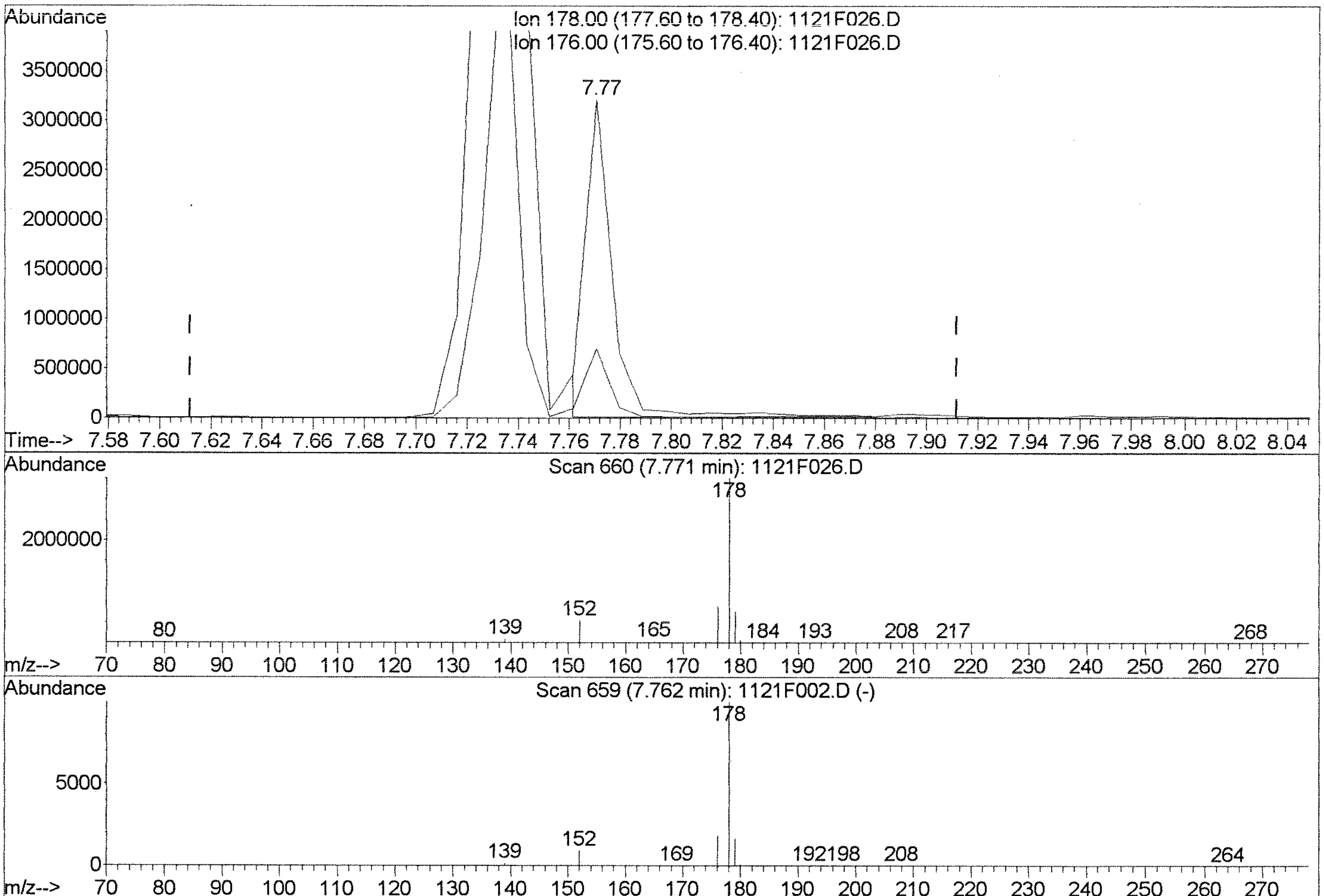
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F026.D
Acq On : 21 Nov 2008 5:10 pm
Sample : K0810639-002DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:25 2008

Vial: 24
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F026.D

(28) Anthracene (T)

7.77min 1538.80ng/ml

response 2290593

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	21.82
0.00	0.00	0.00
0.00	0.00	0.00

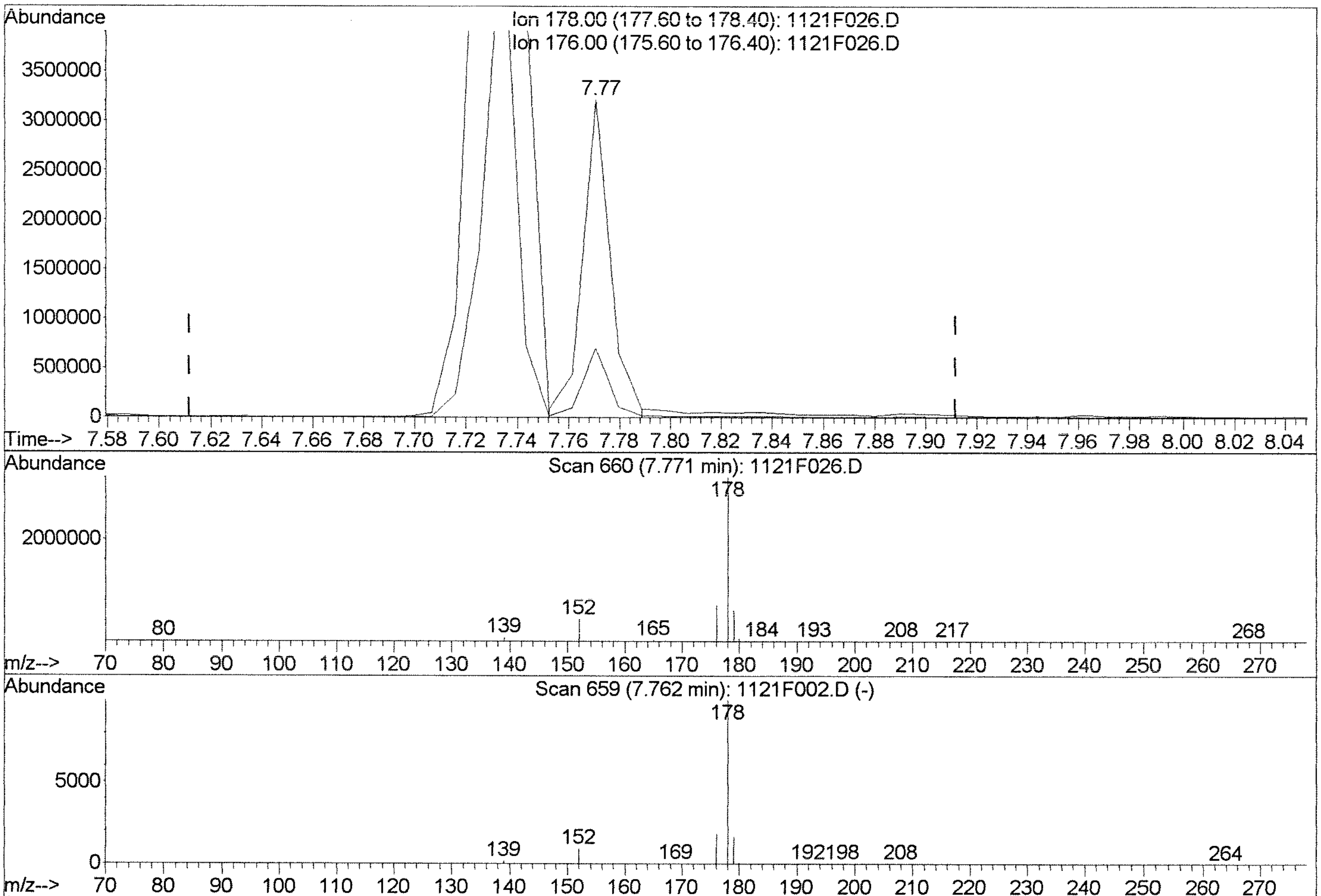
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F026.D
Acq On : 21 Nov 2008 5:10 pm
Sample : K0810639-002DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:25 2008

Vial: 24
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.77min 1614.97ng/ml m

response 2403969

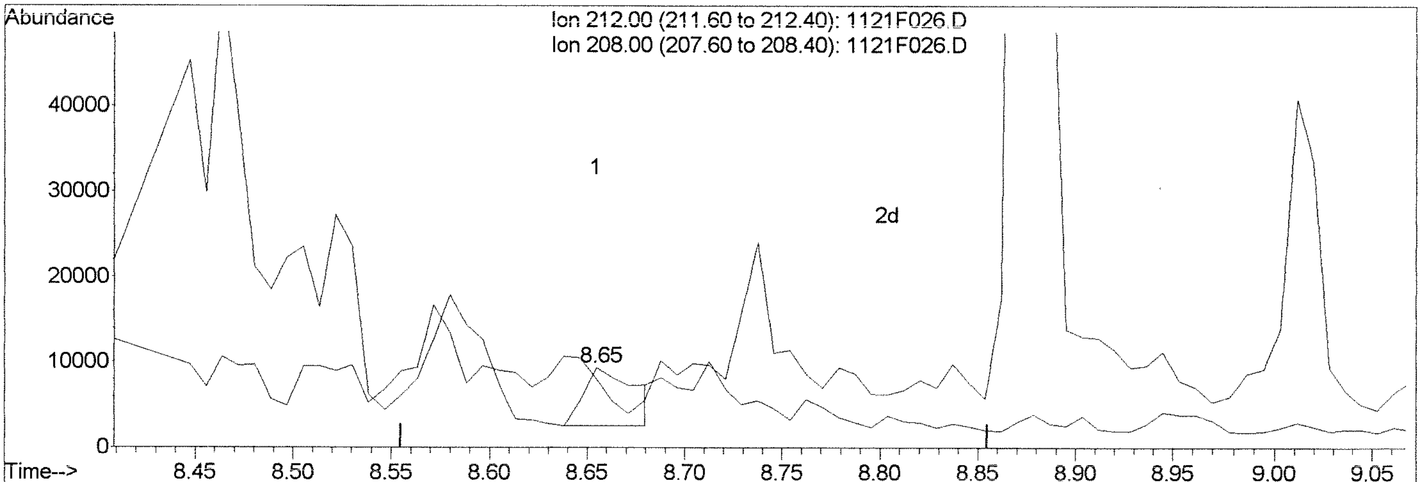
Ion	Exp%	Act%
178.00	100	100
176.00	19.70	21.84
0.00	0.00	0.00
0.00	0.00	0.00

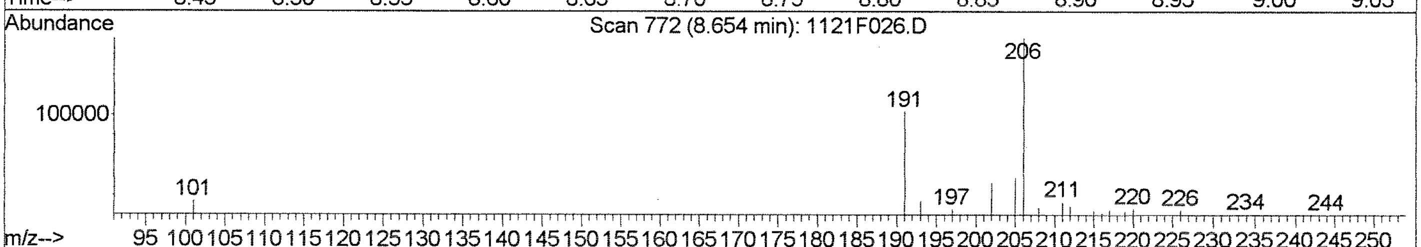
IC 11/24/08

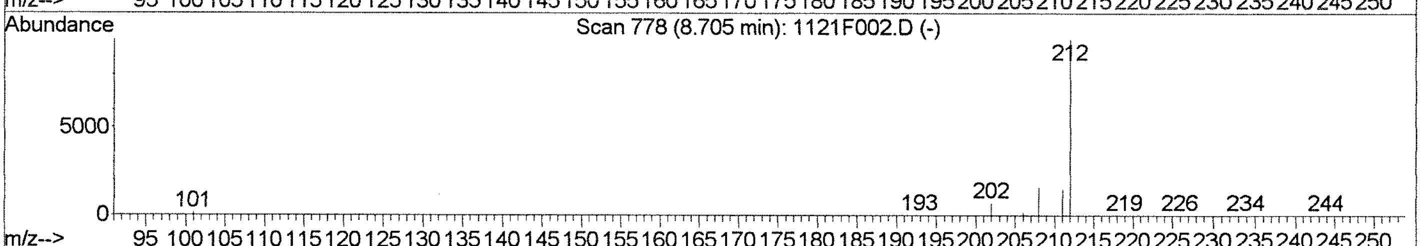
LB 11/24/08

Quantitation Report (Qedit)

```
Data File : J:\MS11\DATA\112108\1121F026.D              Vial: 24
Acq On    : 21 Nov 2008   5:10 pm                   Operator: LWeiskopf
Sample    : K0810639-002DIL  20X                    Inst    : MS11
Misc      :                                         Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:25 2008               Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sat Nov 22 08:12:47 2008
Response via   : Multiple Level Calibration
```







TIC: 1121F026.D

(36) Fluoranthene-d10 (S)

8.65min 8.35ng/ml

response 12367

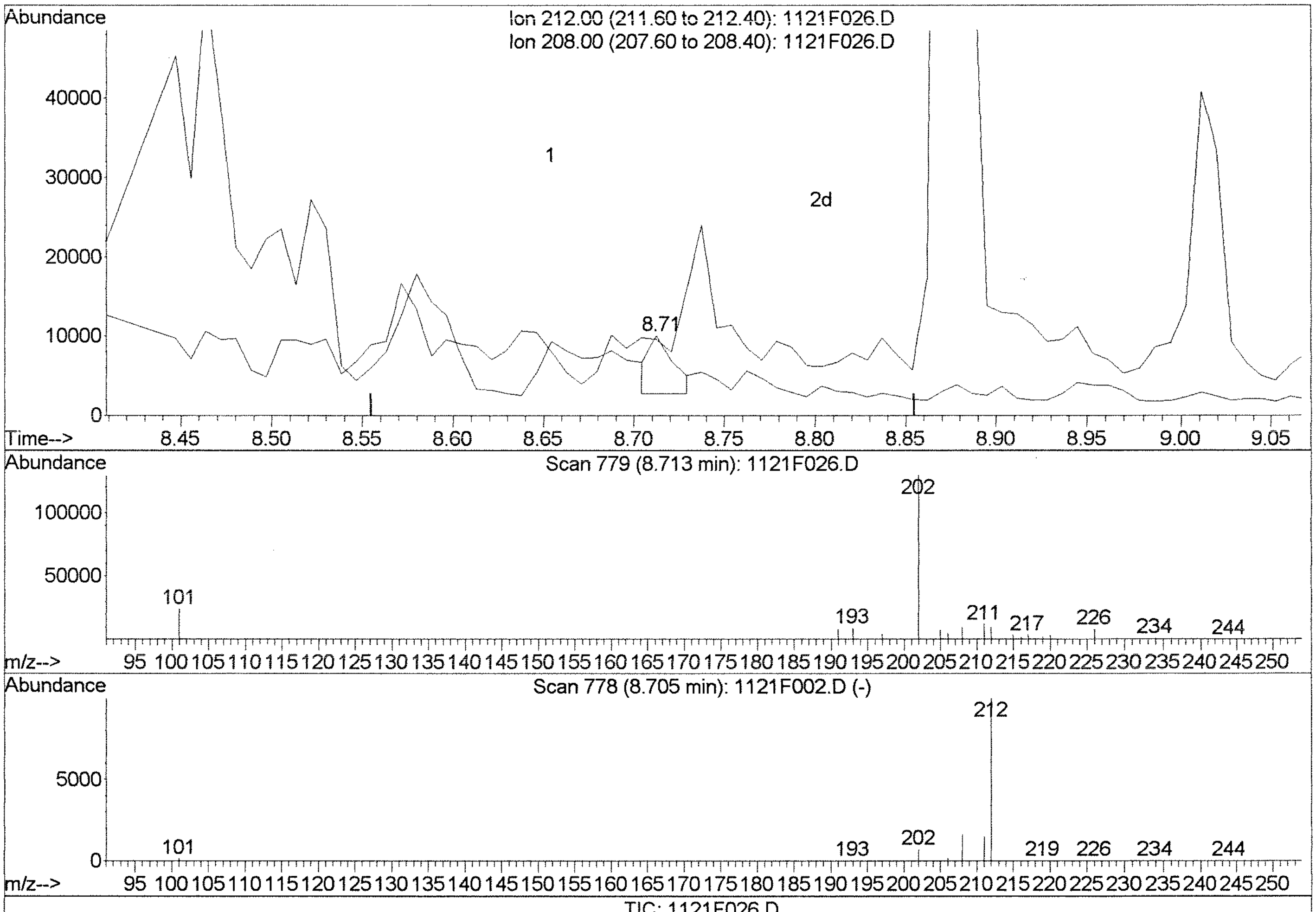
Ion	Exp%	Act%
212.00	100	100
208.00	16.70	36.40
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F026.D
Acq On : 21 Nov 2008 5:10 pm
Sample : K0810639-002DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:25 2008

Vial: 24
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(36) Fluoranthene-d10 (S)

8.71min 4.58ng/ml m

response 6794

Ion	Exp%	Act%
212.00	100	100
208.00	16.70	95.44#
0.00	0.00	0.00
0.00	0.00	0.00

WP 11/22/08

LB 11/26/08

1121F026.D 1110ALK.M Sat Nov 22 10:25:31 2008

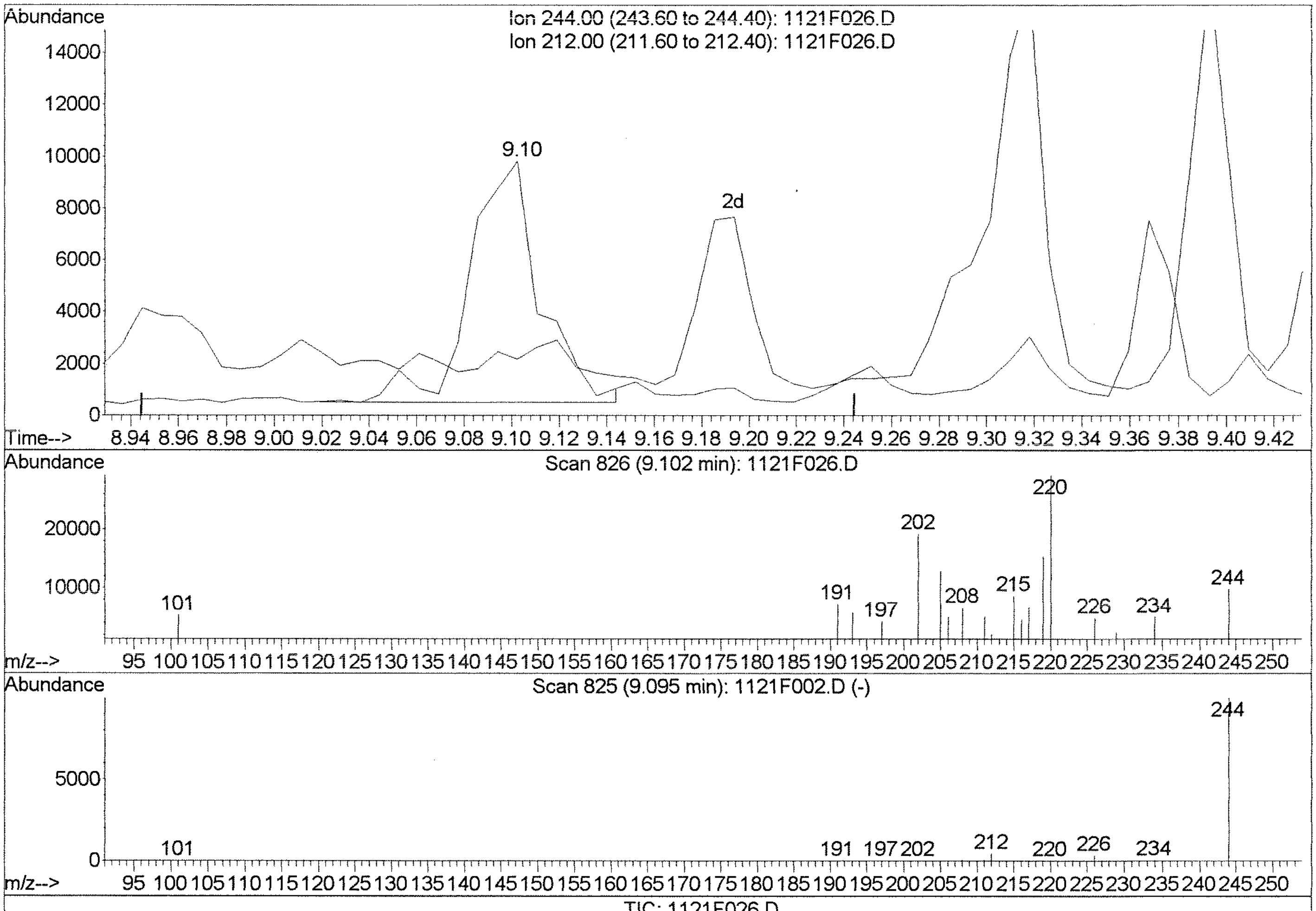
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F026.D
Acq On : 21 Nov 2008 5:10 pm
Sample : K0810639-002DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:25 2008

Vial: 24
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(42) Terphenyl-d14 (S)

9.10min 14.38ng/ml

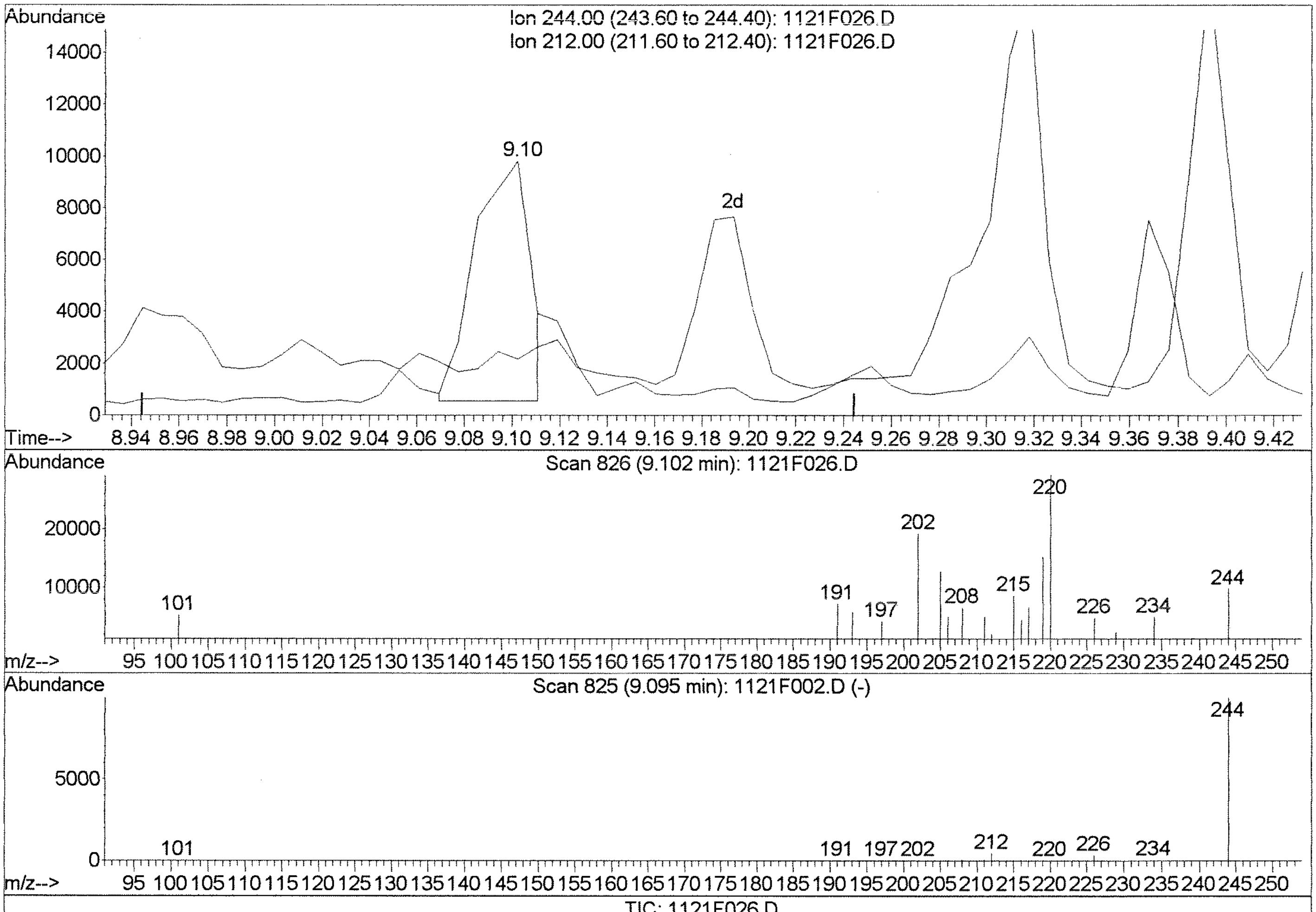
response 19078

Ion	Exp%	Act%
244.00	100	100
212.00	4.90	7.03
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F026.D Vial: 24
Acq On : 21 Nov 2008 5:10 pm Operator: LWeiskopf
Sample : K0810639-002DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:25 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(42) Terphenyl-d14 (S)

9.10min 11.35ng/ml m

response 15056

Ion	Exp%	Act%
244.00	100	100
212.00	4.90	22.08
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/22/08

LG 11/24/08

1121F026.D 1110ALK.M Sat Nov 22 10:25:44 2008

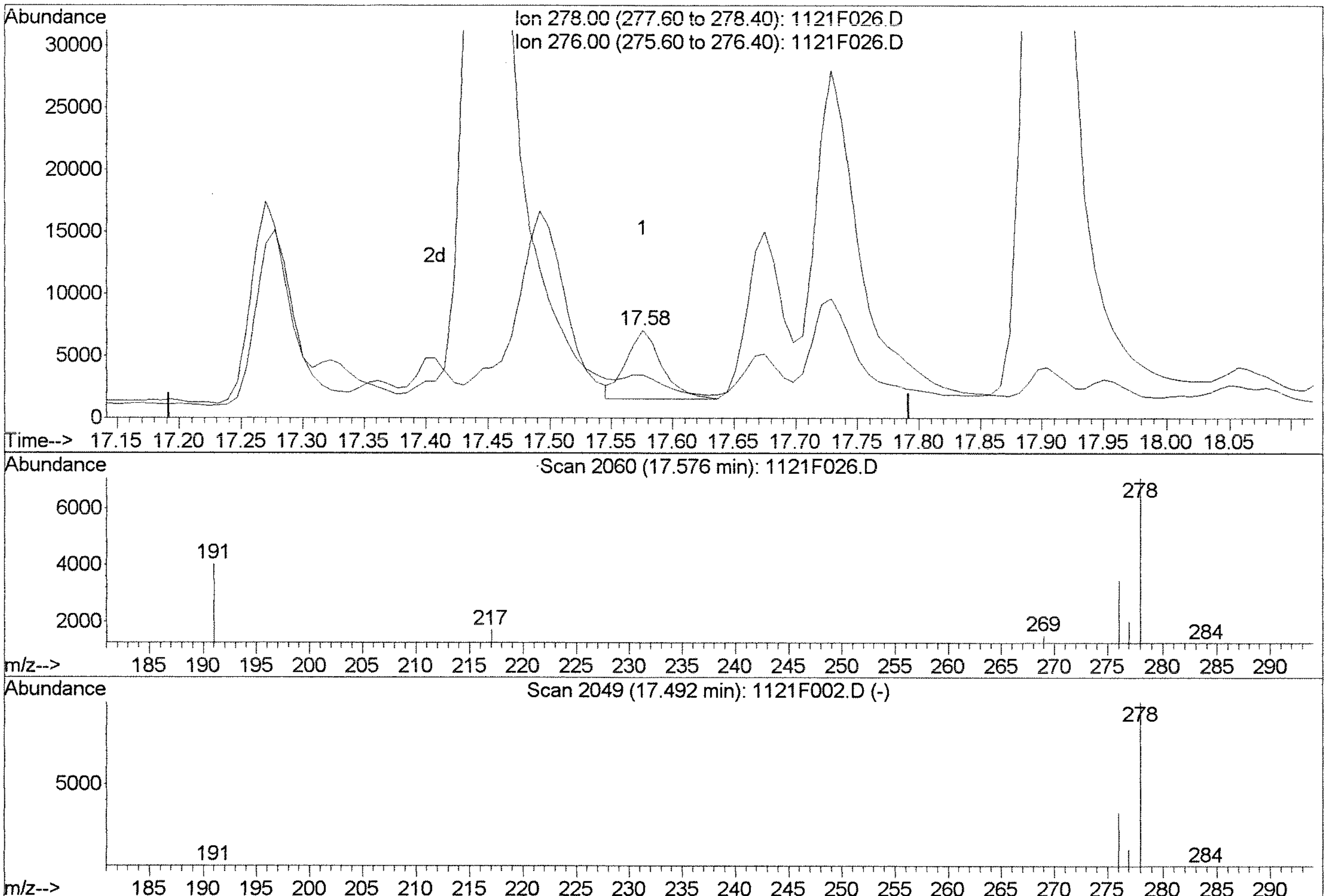
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F026.D
Acq On : 21 Nov 2008 5:10 pm
Sample : K0810639-002DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:25 2008

Vial: 24
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F026.D

(56) Dibenz(a,h)anthracene (T)

17.58min 7.78ng/ml

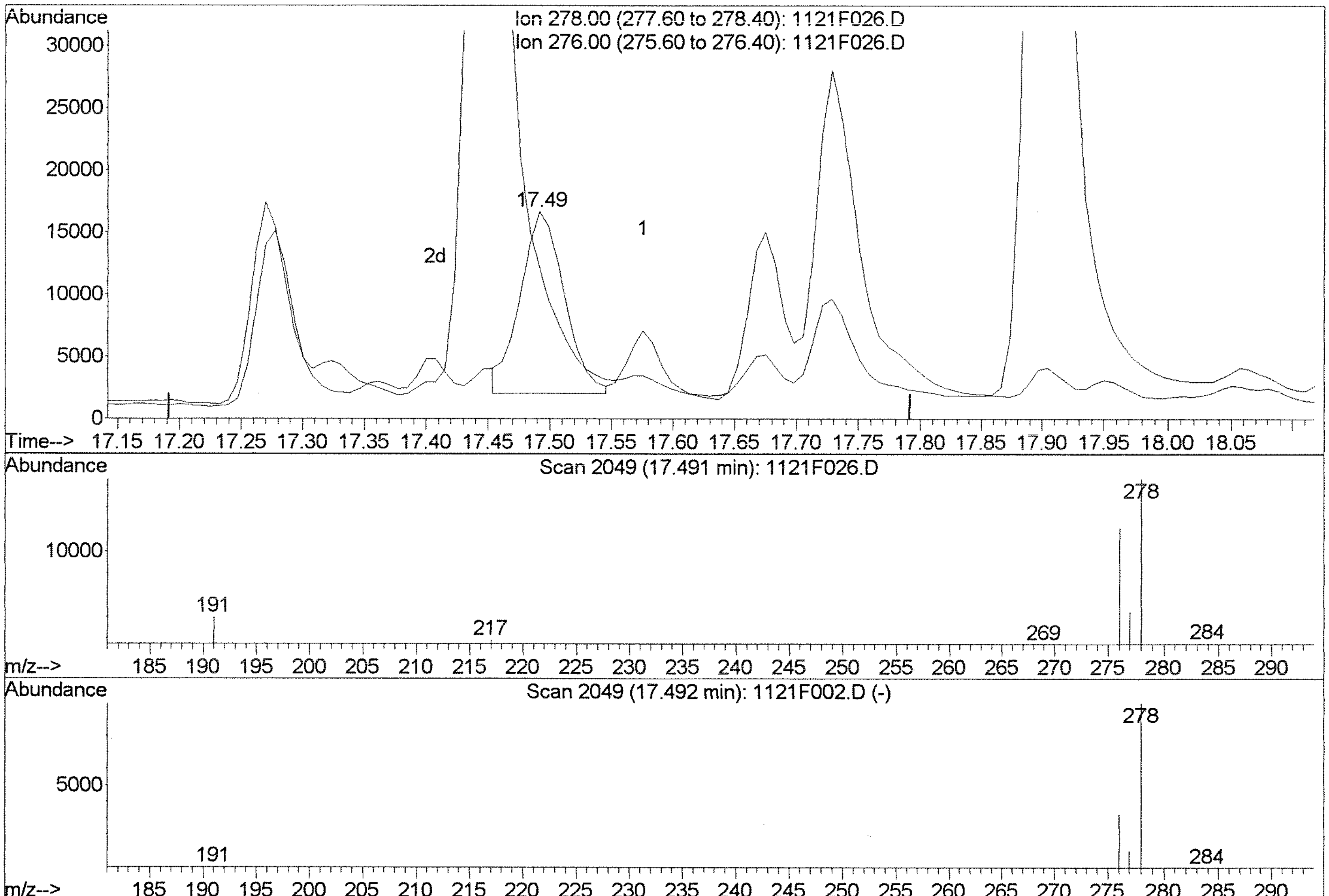
response 11035

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	29.01
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F026.D Vial: 24
Acq On : 21 Nov 2008 5:10 pm Operator: LWeiskopf
Sample : K0810639-002DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:25 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F026.D

(56) Dibenz(a,h)anthracene (T)

17.49min 25.33ng/ml m

response 35939

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	73.02#
0.00	0.00	0.00
0.00	0.00	0.00

wt RW 11/24/08

LB 11/24/08

Exception Report

Data File:	J:\MS11\DATA\112208\1122F042.D		**Date Acquired:**	11/23/2008 02:13
Lab ID:	K0810639-002		**Date Quantitated:**	11/23/2008 11:21
RunType:	DL		**Batch ID:**	KWG0812625
Matrix:	SEDIMENT		**Analysis Method:**	8270C SIM
			ListJoinID:	LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: RW 11/24/08

Secondary Review: JJ 11-30-8

Printed: 11/23/2008 13:28:21

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812625	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776066	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112208\1122F034.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112208\1122F042.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 02:13	**Quant Date:**	11/23/2008 11:21	**Vial:**	35
Run Type:	DL			**Dilution:**	200.0
Lab ID:	K0810639-002			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	0.00	136	305871	200.00	OK
2	Acenaphthene-d10	6.45	0.00	164	152267	200.00	OK
3	Phenanthrene-d10	7.69	0.00	188	266592	200.00	OK
4	Chrysene-d12	10.58	0.01	240	265504	200.00	OK
5	Perylene-d12	14.57	0.02	264	271253	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10			0.00	176	0d		0	10-128	#	NR
3	Fluoranthene-d10			0.00	212	0d		0	29-121	#	NR
4	Terphenyl-d14			0.00	244	0d		0	24-141	#	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantM ass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.06		0.00	128	3784	2.03	400	JD	NR
1	2-Methylnaphthalene	5.61		0.00	142	10071	7.75	1500	D	NR
2	Acenaphthylene	6.34		0.00	152	6800	3.96	780	JD	NR
2	Acenaphthene	6.48		0.00	154	298537	286.13	56000	D	
2	Dibenzofuran	6.63		0.00	168	173977	110.85	22000	D	NR
2	Fluorene	6.91		0.00	166	271965	217.13	43000	D	
3	Phenanthrene	7.71		0.00	178	1933923	1,032	200000	D	
3	Anthracene	7.75		0.00	178	464369	254.34	50000	D	NR
3	Fluoranthene	8.71	0.01	0.00	202	1309255	615.09	120000	D	
4	Pyrene	8.94		0.00	202	1141304	571.41	110000	D	
4	Benz(a)anthracene	10.56	0.01	0.00	228	172821	95.38	19000	D	NR
4	Chrysene	10.62		0.00	228	166185	93.38	18000	D	NR
5	Benzo(b)fluoranthene	13.24	0.04	0.00	252	66891	35.73	7000	D	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112208\1122F042.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 02:13	**Quant Date:**	11/23/2008 11:21	**Vial:**	35
Run Type:	DL			**Dilution:**	200.0
Lab ID:	K0810639-002			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.30	0.01	0.00	252	43069**m**	23.95	4700	D	NR
5	Benzo(a)pyrene	14.36	0.03	0.00	252	42835	27.64	5400	D	NR
5	Indeno(1,2,3-cd)pyrene	17.44	0.02	0.00	276	22020	15.31	3000	D	NR
5	Dibenz(a,h)anthracene	17.49	0.02	0.00	278	7598**m**	5.03	990	D	NR
5	Benzo(g,h,i)perylene	17.90	0.03	0.00	276	27436	16.75	3300	D	NR

Prep Amount:	19.16 g	**Dilution:**	200.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	53.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F042.D Vial: 35
Acq On : 23 Nov 2008 2:13 am Operator: LWeiskopf
Sample : K0810639-002DIL 200X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:10:46 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.04	136	305871	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.45	164	152267	200.00	ng/ml	-0.01
22) Phenanthrene-d10	7.69	188	266592	200.00	ng/ml	0.00
37) Chrysene-d12	10.58	240	265504	200.00	ng/ml	0.00
49) Perylene-d12	14.57	264	271253	200.00	ng/ml	-0.01

System Monitoring Compounds						
15) Fluorene-d10	0.00	176	0d	0.00	ng/ml	
Spiked Amount 200.000			Recovery	=	0.00%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery	=	0.00%	
36) Fluoranthene-d10	0.00	212	0d	0.00	ng/ml	
Spiked Amount 200.000			Recovery	=	0.00%	
42) Terphenyl-d14	0.00	244	0d	0.00	ng/ml	
Spiked Amount 200.000			Recovery	=	0.00%	

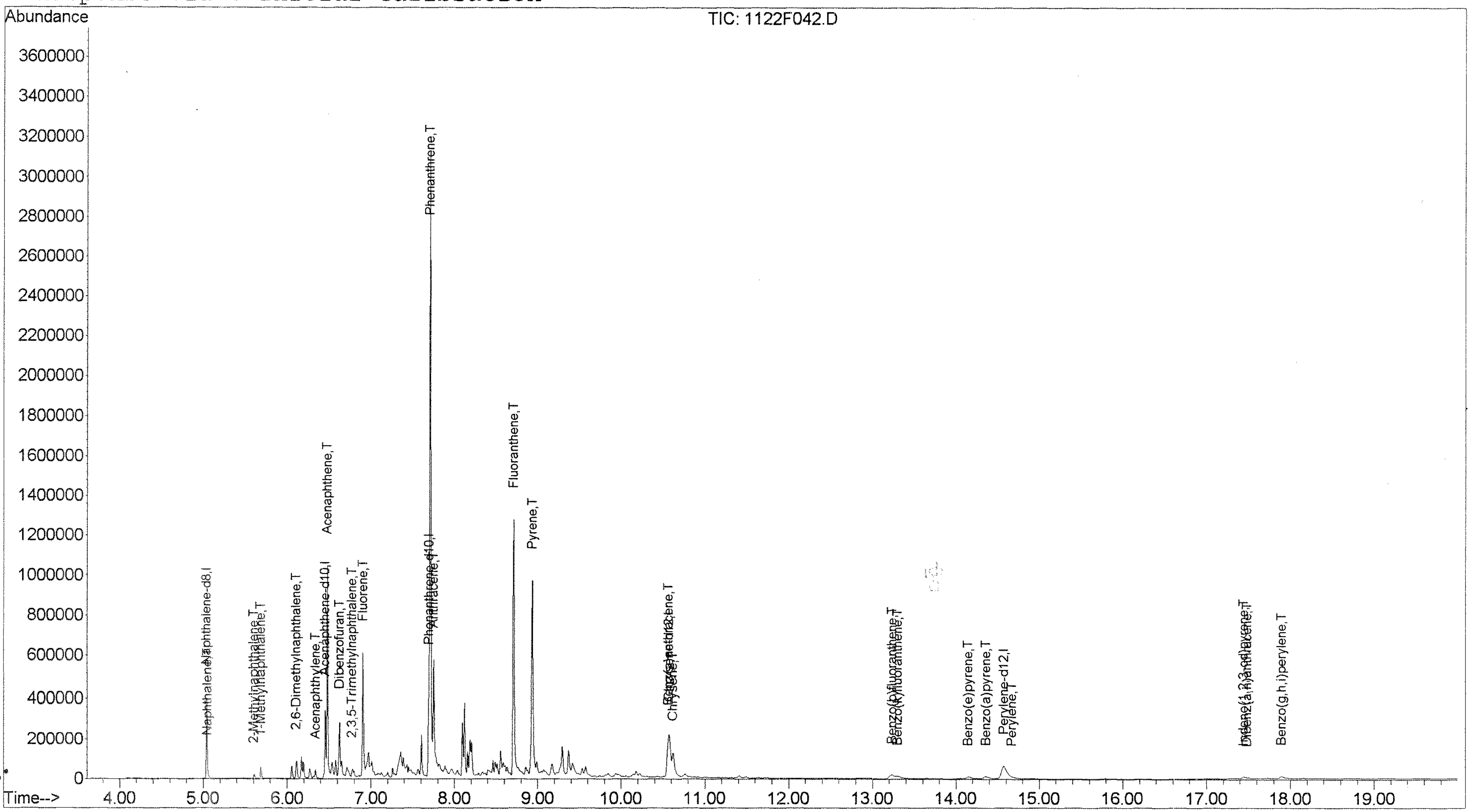
Target Compounds						Qvalue
2) Naphthalene	5.06	128	3784	2.03	ng/ml	99
3) 2-Methylnaphthalene	5.61	142	10071	7.75	ng/ml	91
4) 1-Methylnaphthalene	5.69	142	25818	22.20	ng/ml	95
6) 2,6-Dimethylnaphthalene	6.12	156	41500	36.59	ng/ml	97
11) Acenaphthylene	6.34	152	6800	3.96	ng/ml	80
12) Acenaphthene	6.48	154	298537	286.13	ng/ml	94
13) Dibenzofuran	6.63	168	173977	110.85	ng/ml	74
14) 2,3,5-Trimethylnaphthalene	6.79	170	28216	30.75	ng/ml	76
16) Fluorene	6.91	166	271965	217.13	ng/ml	97
27) Phenanthrene	7.71	178	1933923	1032.04	ng/ml	100
28) Anthracene	7.75	178	464369	254.34	ng/ml	96
35) Fluoranthene	8.71	202	1309255	615.09	ng/ml	90
38) Pyrene	8.94	202	1141304	571.41	ng/ml	90
43) Benz(a)anthracene	10.56	228	172821	95.38	ng/ml	98
44) Chrysene	10.62	228	166185	93.38	ng/ml	98
50) Benzo(b)fluoranthene	13.24	252	66891	35.73	ng/ml	97
51) Benzo(k)fluoranthene	13.30	252	43069m	23.95	ng/ml	
52) Benzo(e)pyrene	14.15	252	34402	20.23	ng/ml	94
53) Benzo(a)pyrene	14.36	252	42835	27.64	ng/ml	100
54) Perylene	14.68	252	9814	6.45	ng/ml	99
55) Indeno(1,2,3-cd)pyrene	17.44	276	22020	15.31	ng/ml	99
56) Dibenz(a,h)anthracene	17.49	278	7598m	5.03	ng/ml	
57) Benzo(g,h,i)perylene	17.90	276	27436	16.75	ng/ml	99

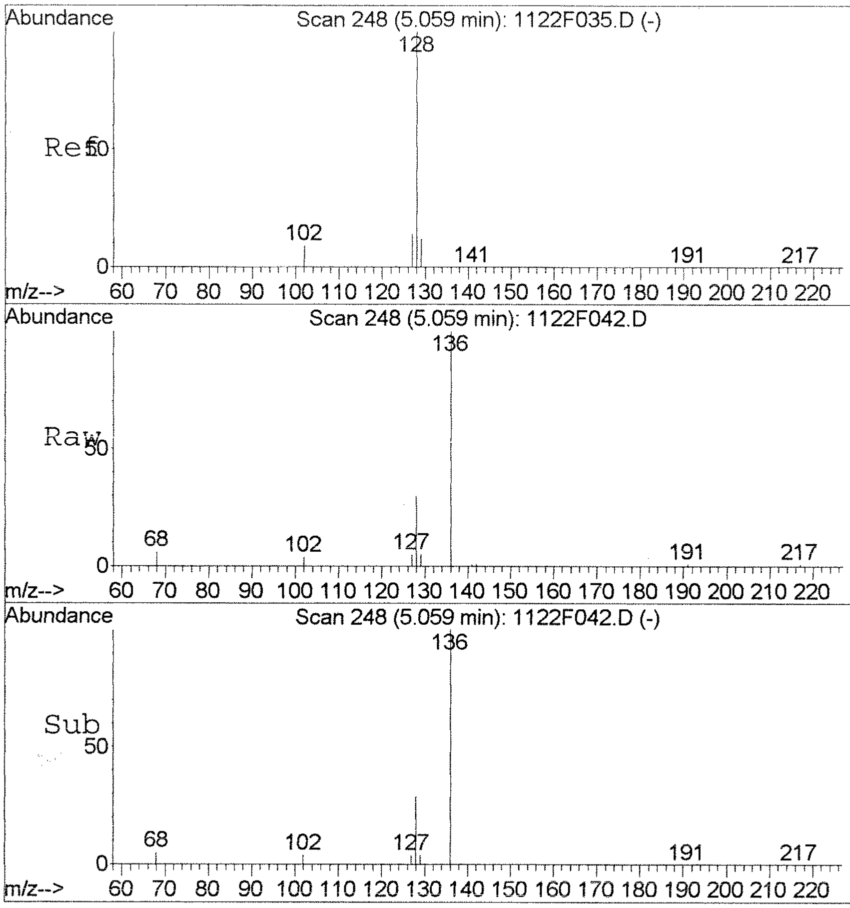
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F042.D Vial: 35
Acq On : 23 Nov 2008 2:13 am Operator: LWeiskopf
Sample : K0810639-002DIL 200X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:21 2008 Quant Results File: 1110ALK.RES

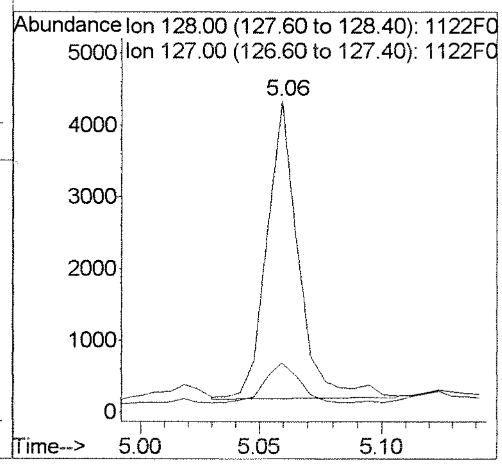
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration

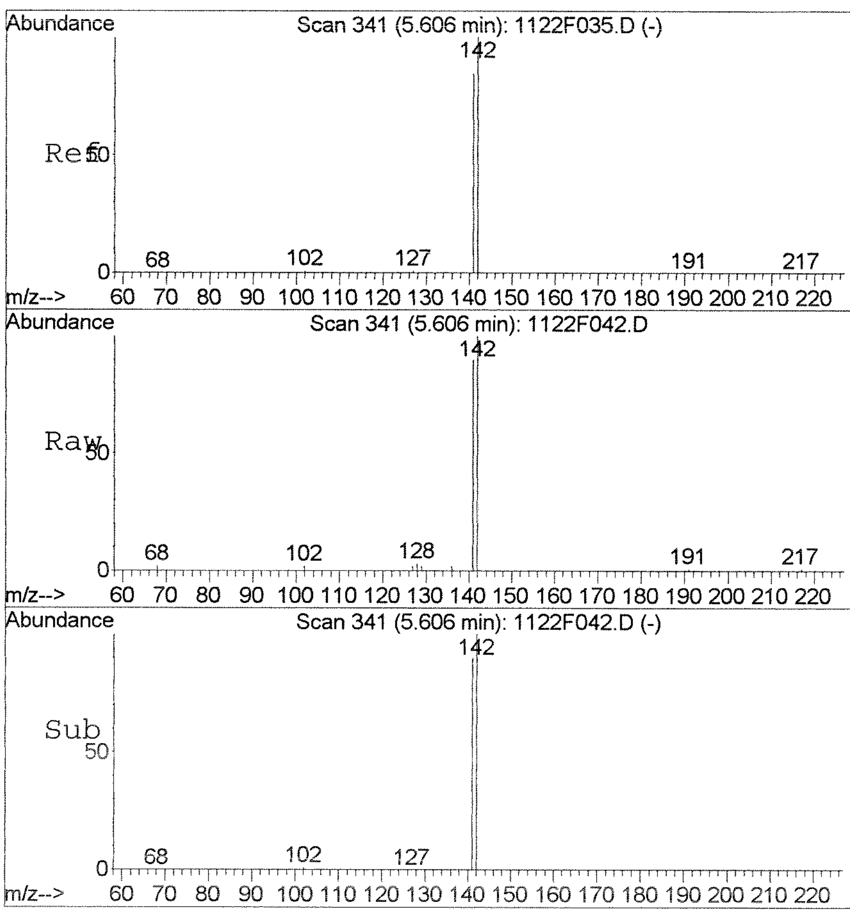




#2
Naphthalene
Concen: 2.03 ng/ml
RT: 5.06 min Scan# 248
Delta R.T. 0.00 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

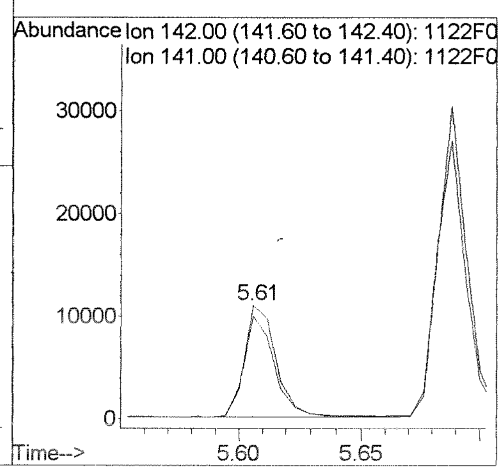
Tgt Ion:128	Resp:		3784
Ion	Ratio	Lower	Upper
128	100		
127	13.5	0.0	43.8

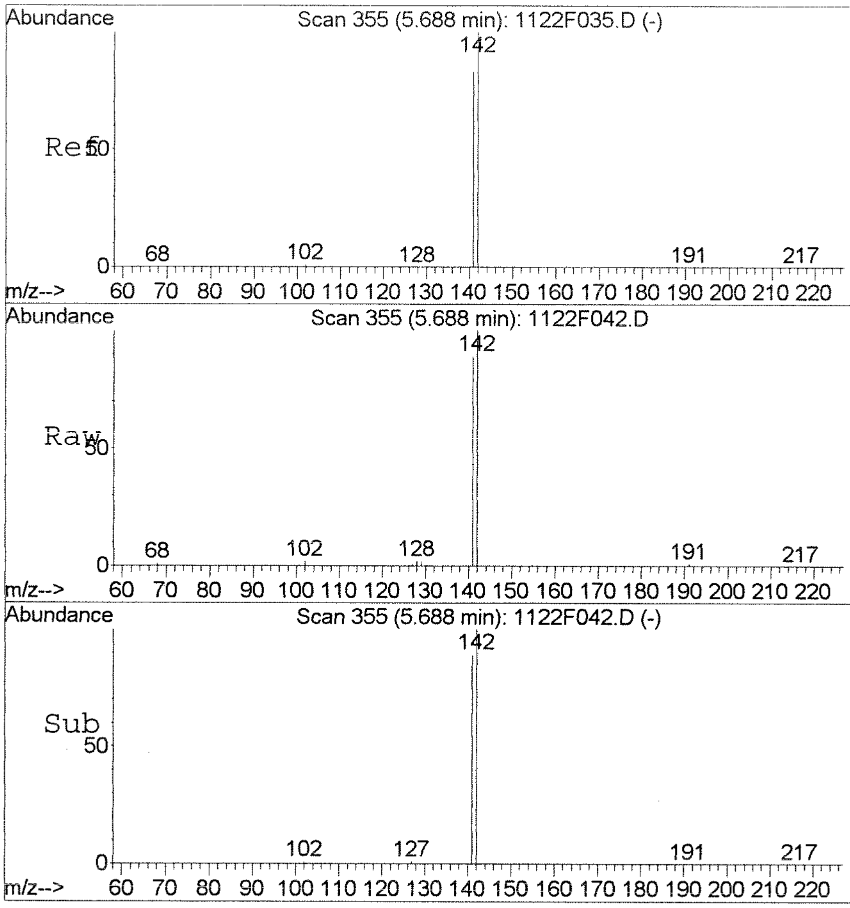




#3
2-Methylnaphthalene
Concen: 7.75 ng/ml
RT: 5.61 min Scan# 341
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:142	Resp:		10071
Ion	Ratio	Lower	Upper
142	100		
141	90.2	52.4	112.4

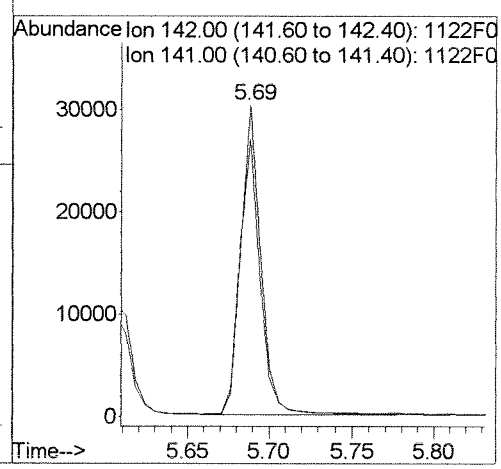


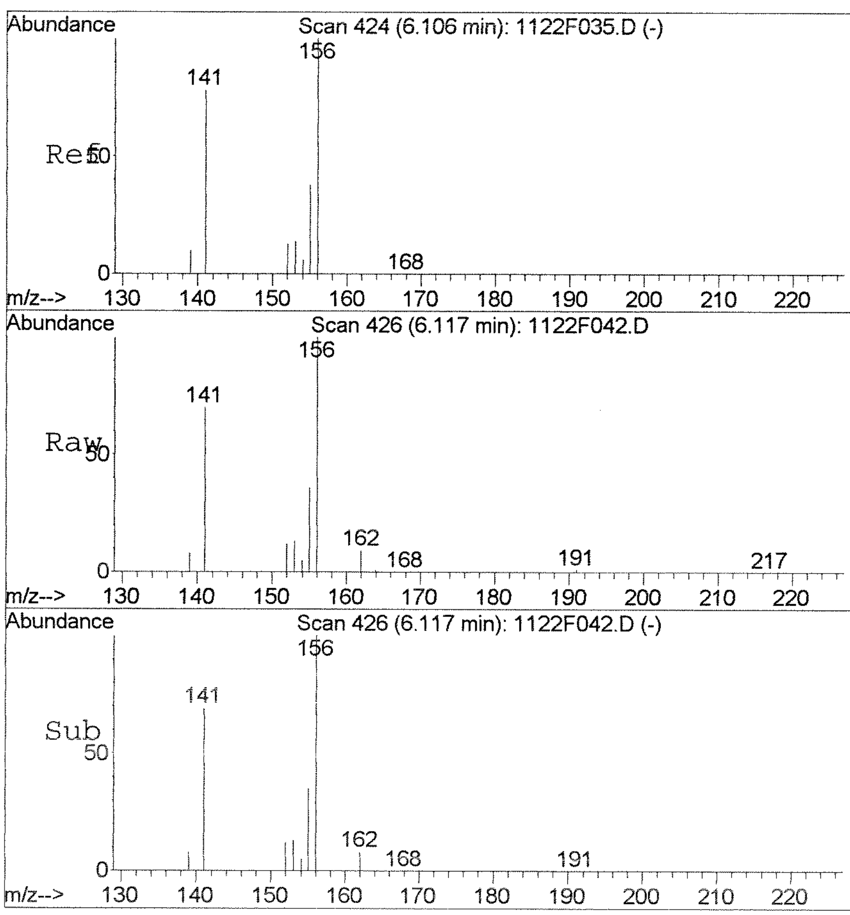


#4
1-Methylnaphthalene
Concen: 22.20 ng/ml
RT: 5.69 min Scan# 355
Delta R.T. 0.00 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:142 Resp: 25818

Ion	Ratio	Lower	Upper
142	100		
141	88.7	63.0	123.0

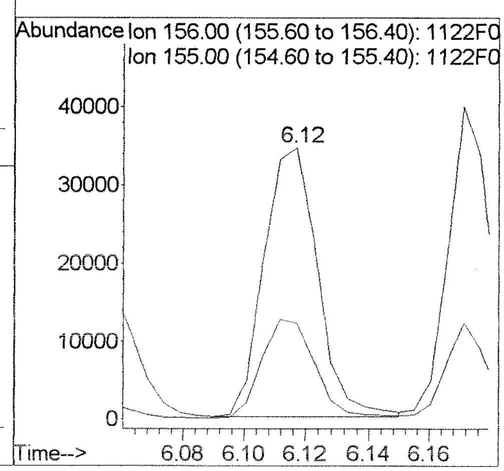


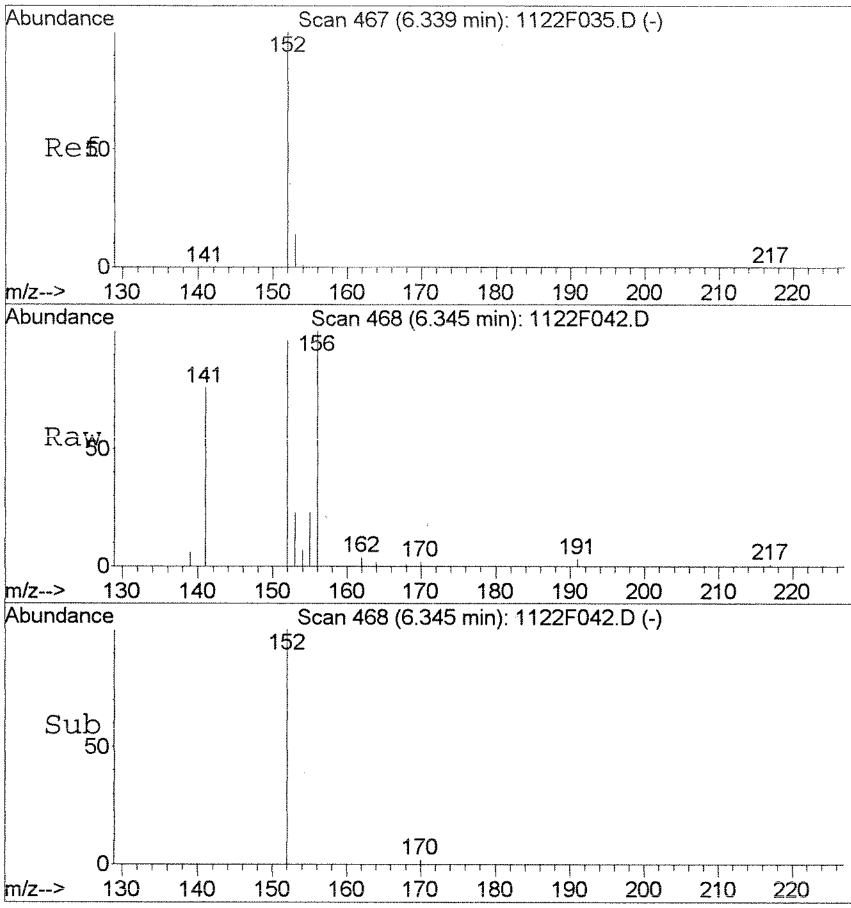


#6
2,6-Dimethylnaphthalene
Concen: 36.59 ng/ml
RT: 6.12 min Scan# 426
Delta R.T. 0.00 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:156 Resp: 41500

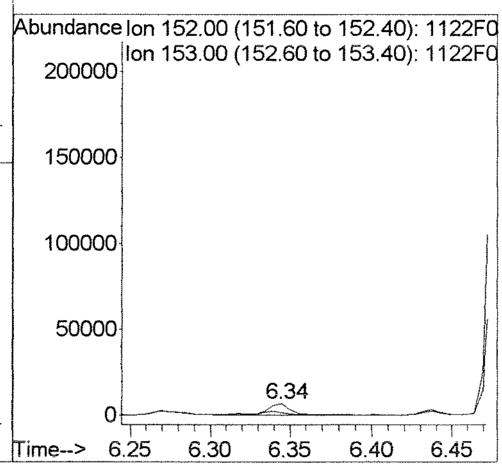
Ion	Ratio	Lower	Upper
156	100		
155	35.4	7.3	67.3

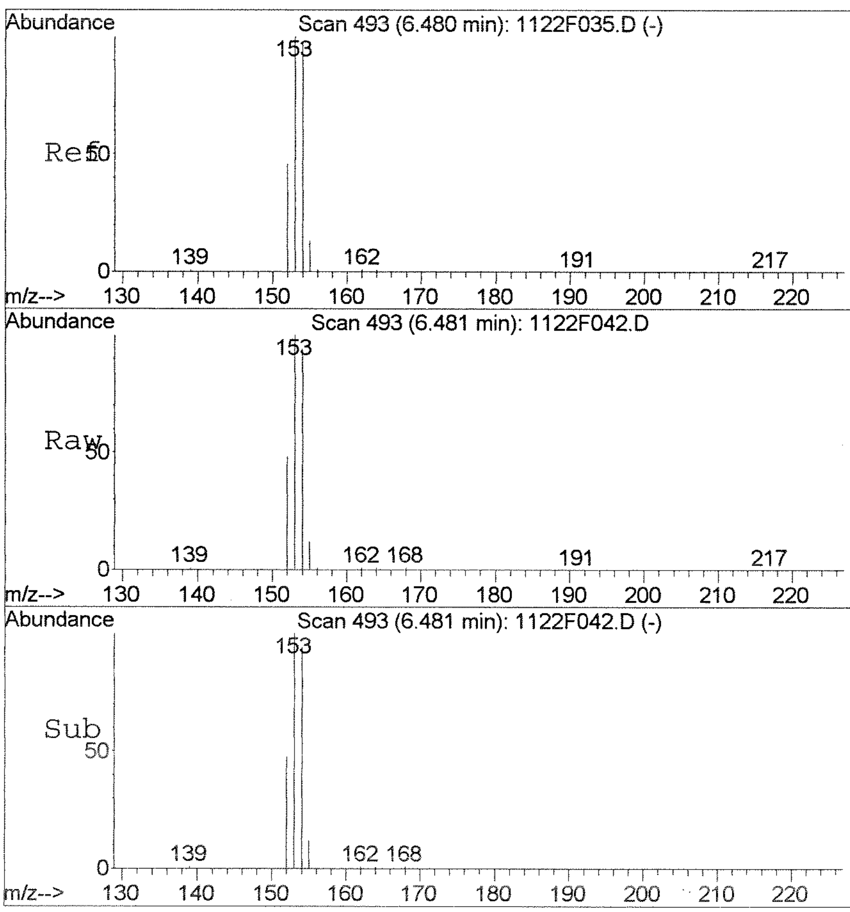




#11
Acenaphthylene
Concen: 3.96 ng/ml
RT: 6.34 min Scan# 468
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

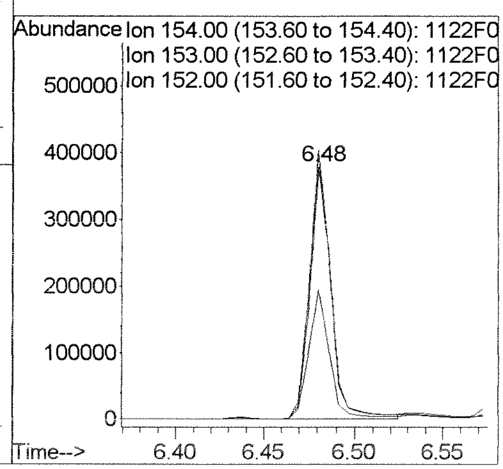
Tgt	Ion:152	Resp:	6800
Ion	Ratio	Lower	Upper
152	100		
153	20.9	0.0	43.0

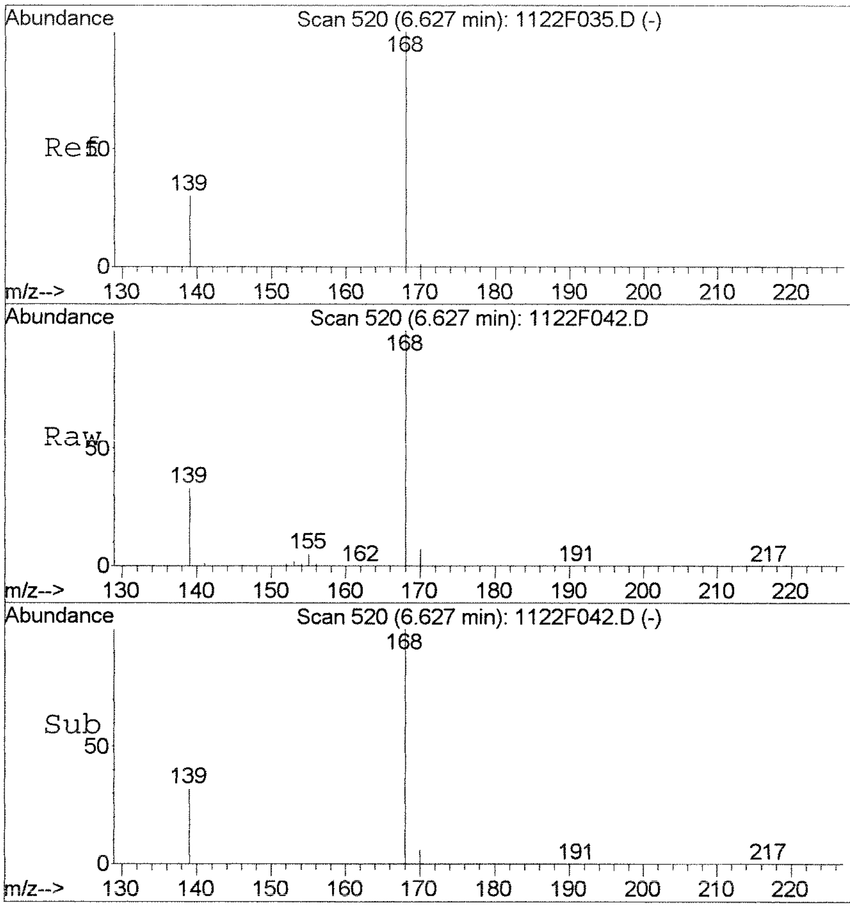




#12
Acenaphthene
Concen: 286.13 ng/ml
RT: 6.48 min Scan# 493
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt	Ion:154	Resp:	298537
Ion	Ratio	Lower	Upper
154	100		
153	106.5	81.9	141.9
152	51.4	26.8	86.8

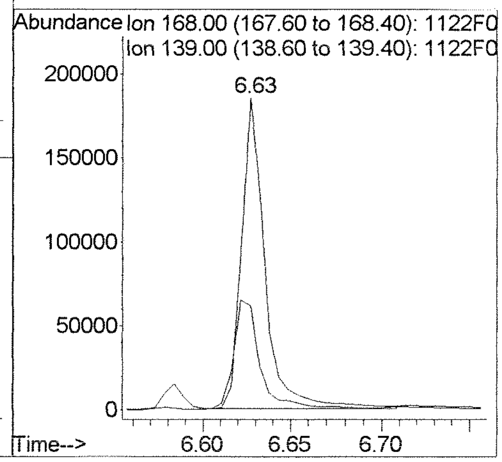


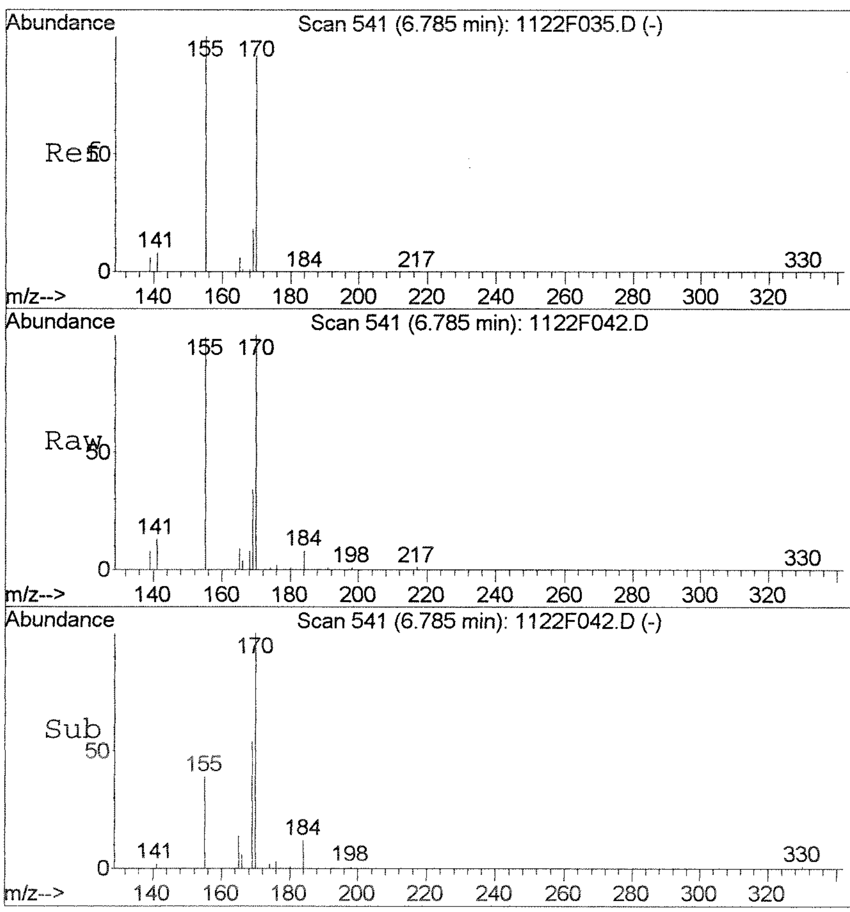


#13
Dibenzofuran
Concen: 110.85 ng/ml
RT: 6.63 min Scan# 520
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:168 Resp: 173977

Ion	Ratio	Lower	Upper
168	100		
139	33.1	21.0	81.0

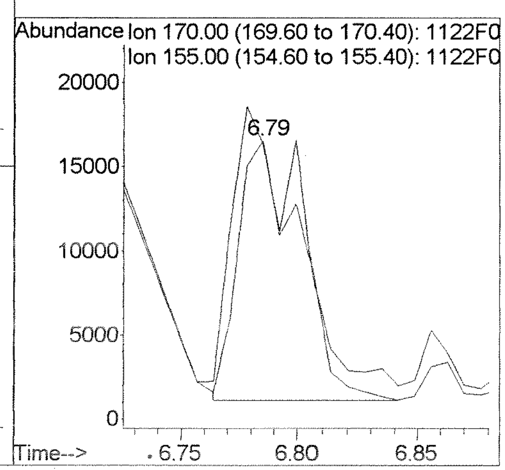


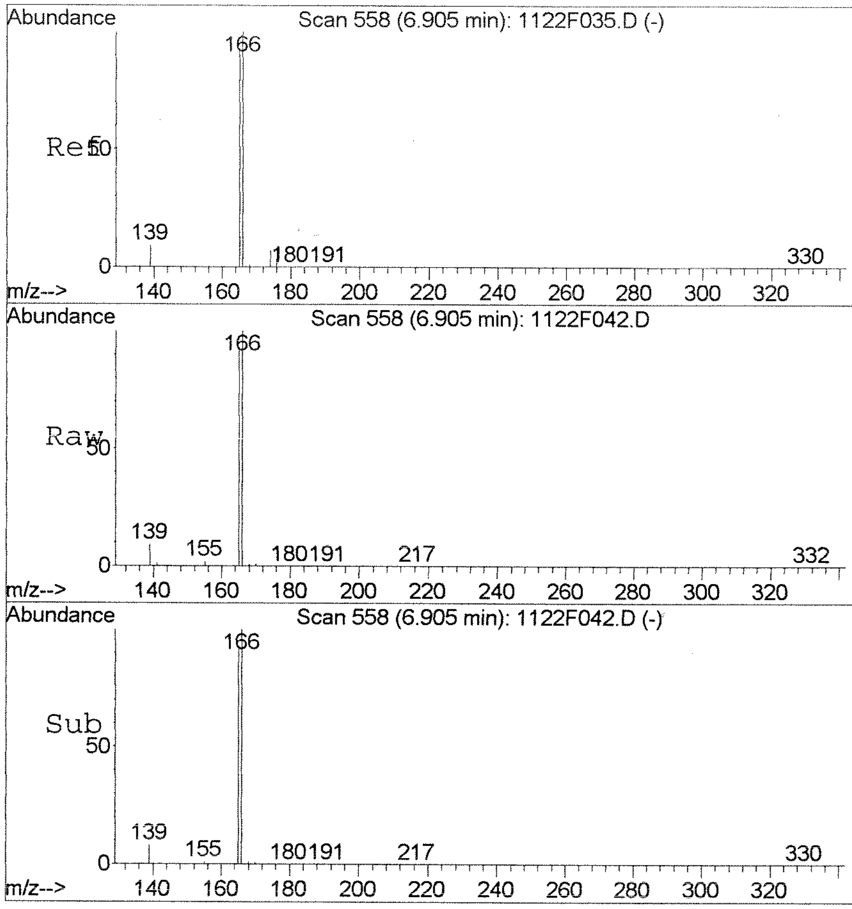


#14
2,3,5-Trimethylnaphthalene
Concen: 30.75 ng/ml
RT: 6.79 min Scan# 541
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:170 Resp: 28216

Ion	Ratio	Lower	Upper
170	100		
155	93.1	42.9	102.9

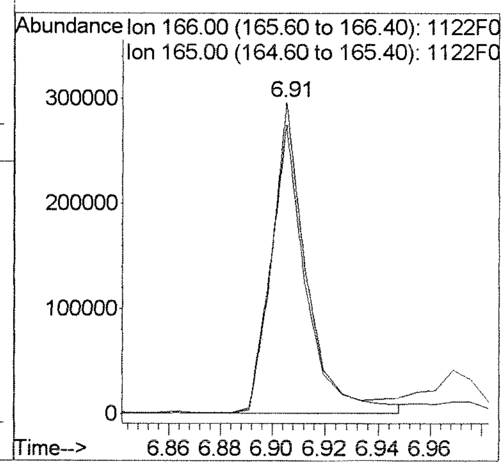


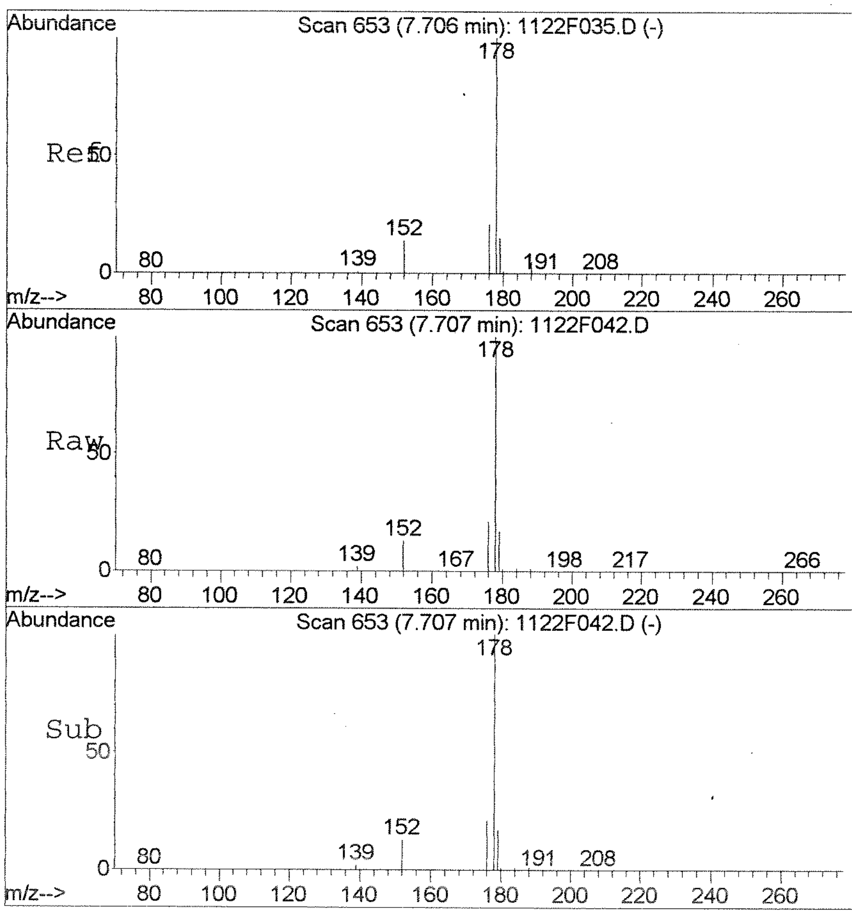


#16
Fluorene
Concen: 217.13 ng/ml
RT: 6.91 min Scan# 558
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:166 Resp: 271965

Ion	Ratio	Lower	Upper
166	100		
165	92.5	59.8	119.8

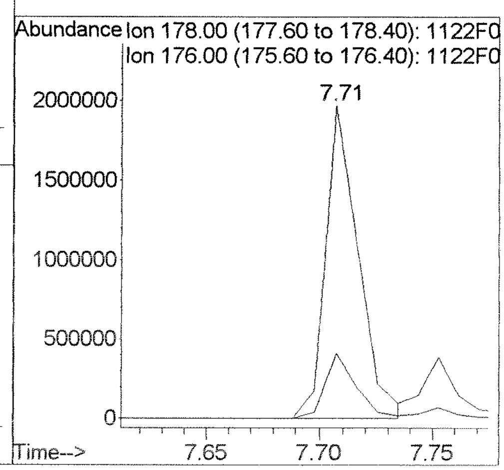


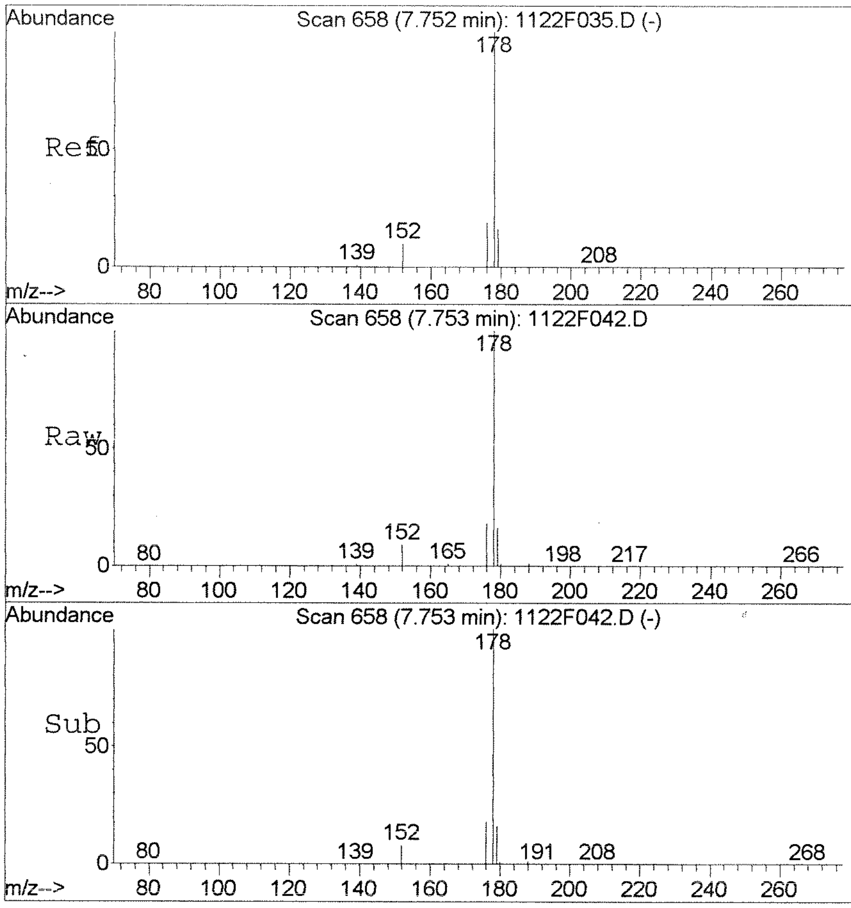


#27
Phenanthrene
Concen: 1032.04 ng/ml
RT: 7.71 min Scan# 653
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:178 Resp: 1933923

Ion	Ratio	Lower	Upper
178	100		
176	20.9	0.0	51.0

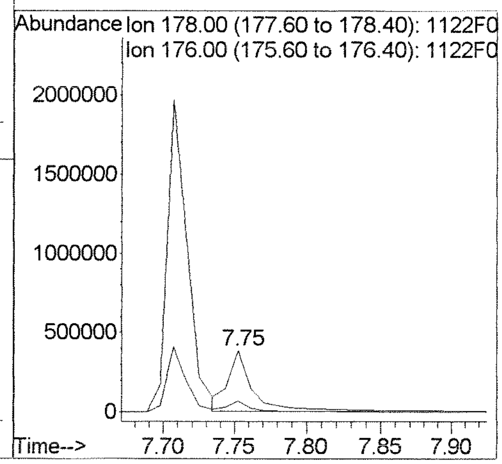


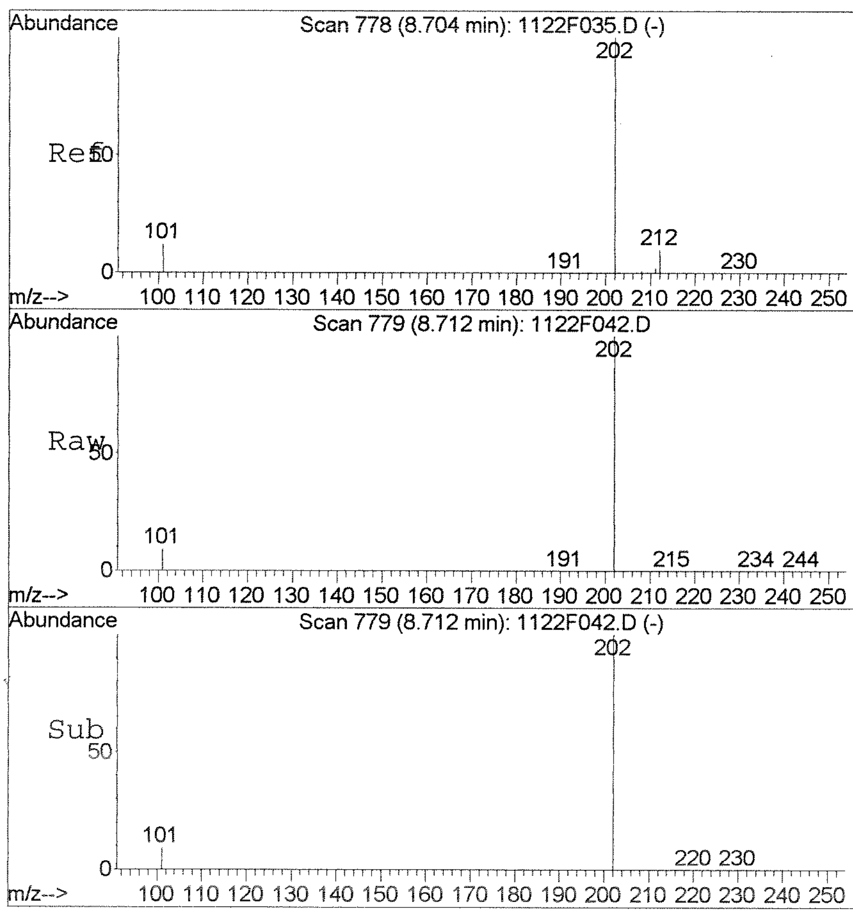


#28
Anthracene
Concen: 254.34 ng/ml
RT: 7.75 min Scan# 658
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:178 Resp: 464369

Ion	Ratio	Lower	Upper
178	100		
176	18.0	0.0	49.7

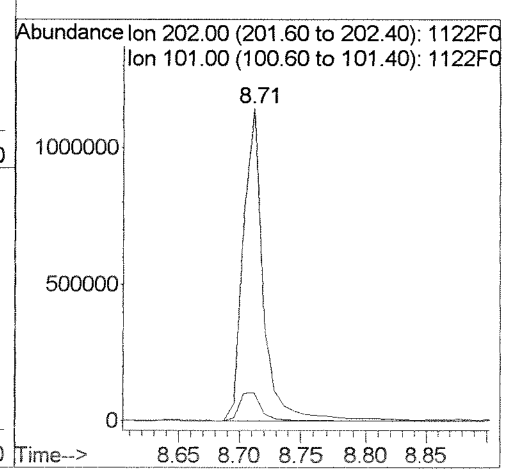


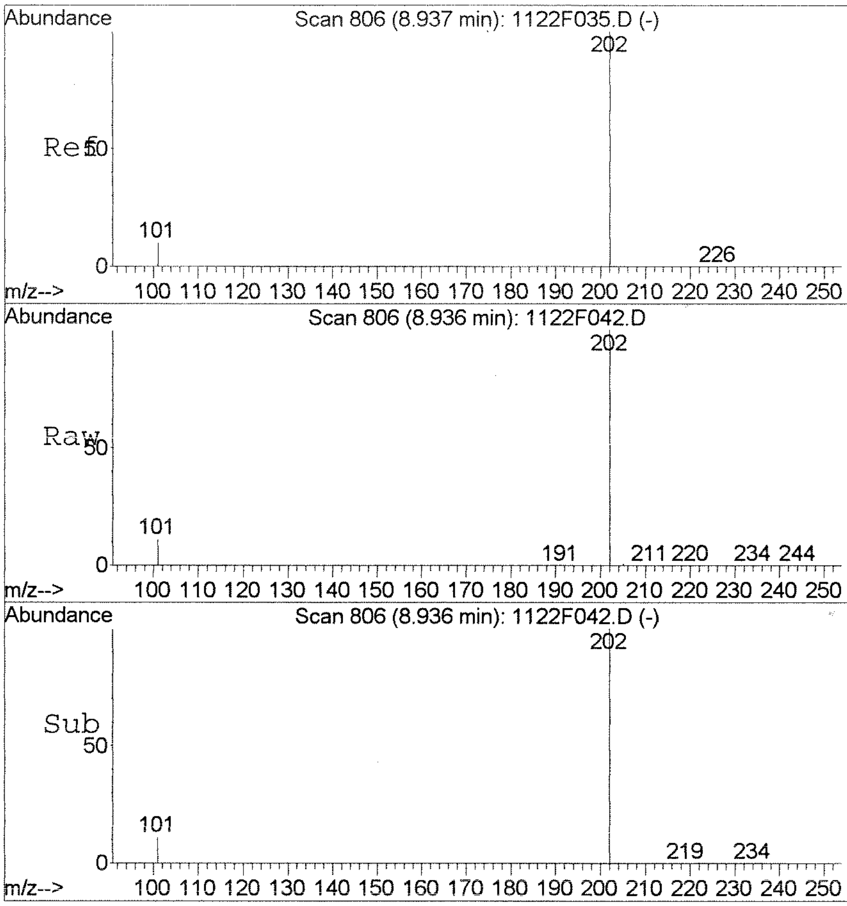


#35
Fluoranthene
Concen: 615.09 ng/ml
RT: 8.71 min Scan# 779
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:202 Resp: 1309255

Ion	Ratio	Lower	Upper
202	100		
101	9.1	0.0	35.8

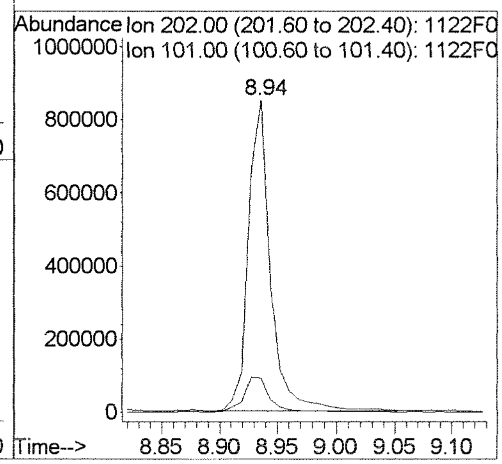


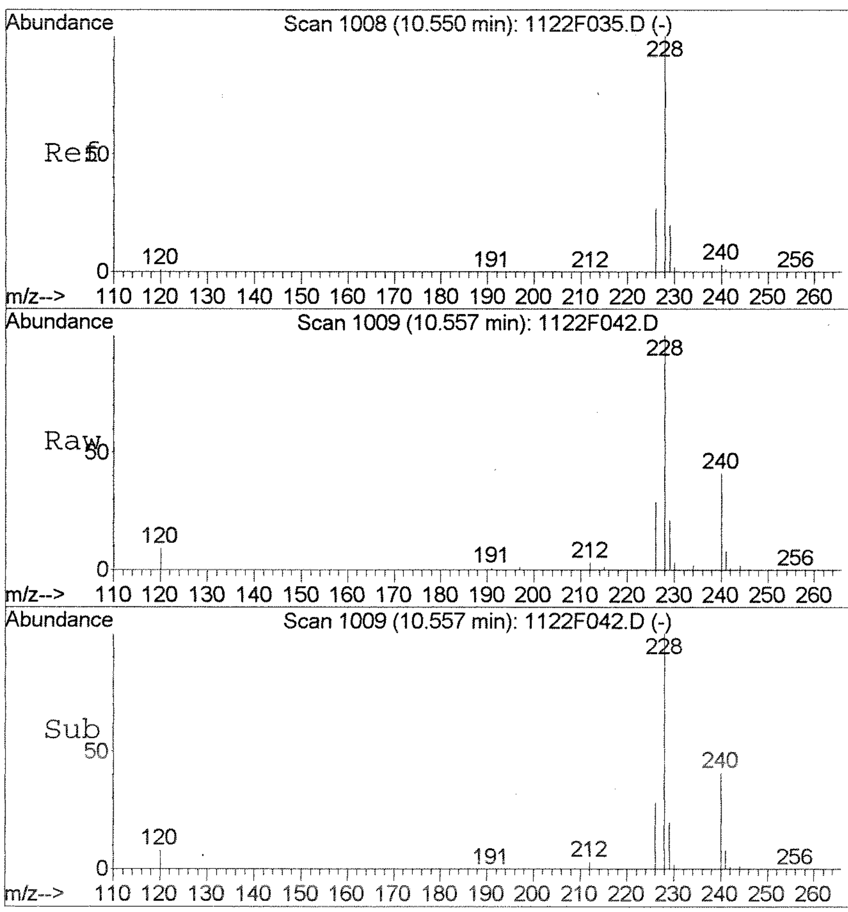


#38
Pyrene
Concen: 571.41 ng/ml
RT: 8.94 min Scan# 806
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:202 Resp: 1141304

Ion	Ratio	Lower	Upper
202	100		
101	10.9	0.0	37.6

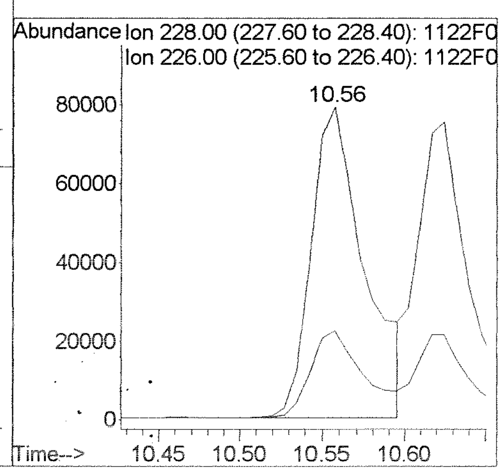


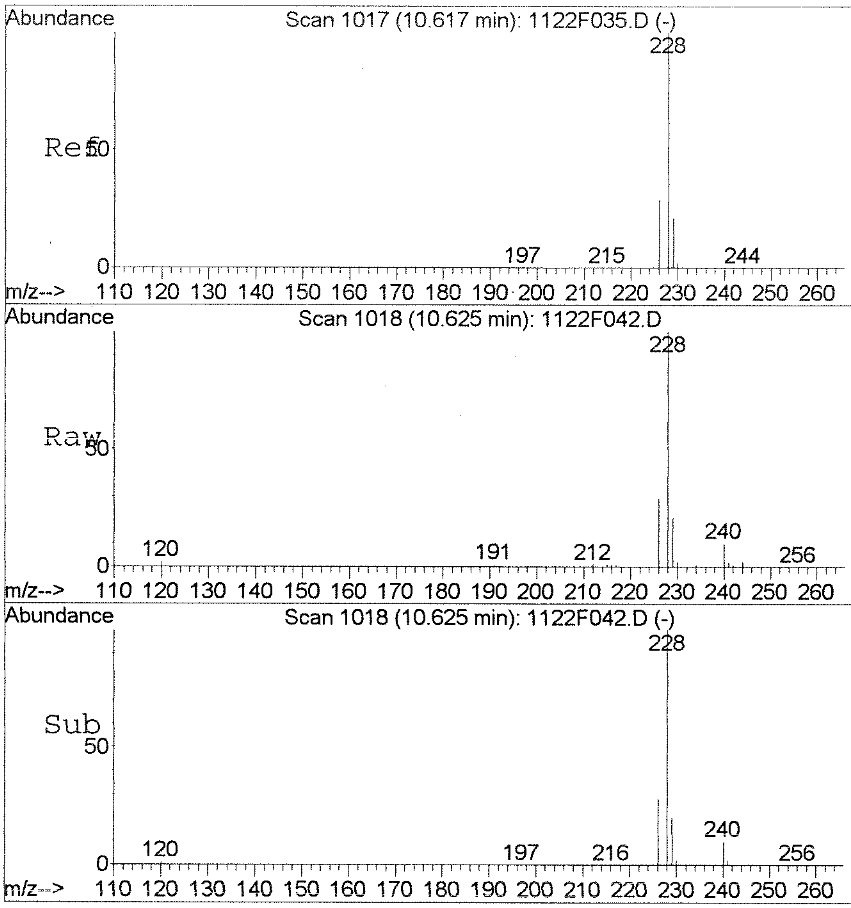


#43
Benz(a)anthracene
Concen: 95.38 ng/ml
RT: 10.56 min Scan# 1009
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:228 Resp: 172821

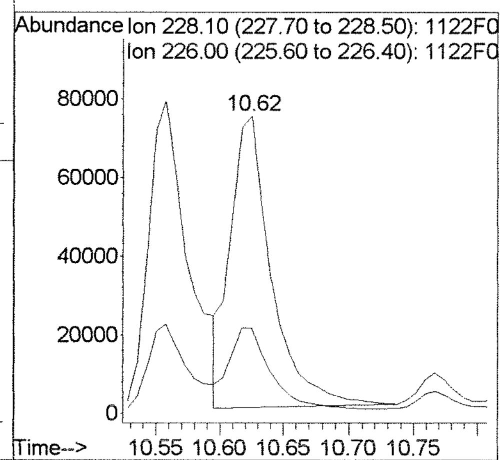
Ion	Ratio	Lower	Upper
228	100		
226	28.1	0.0	57.0

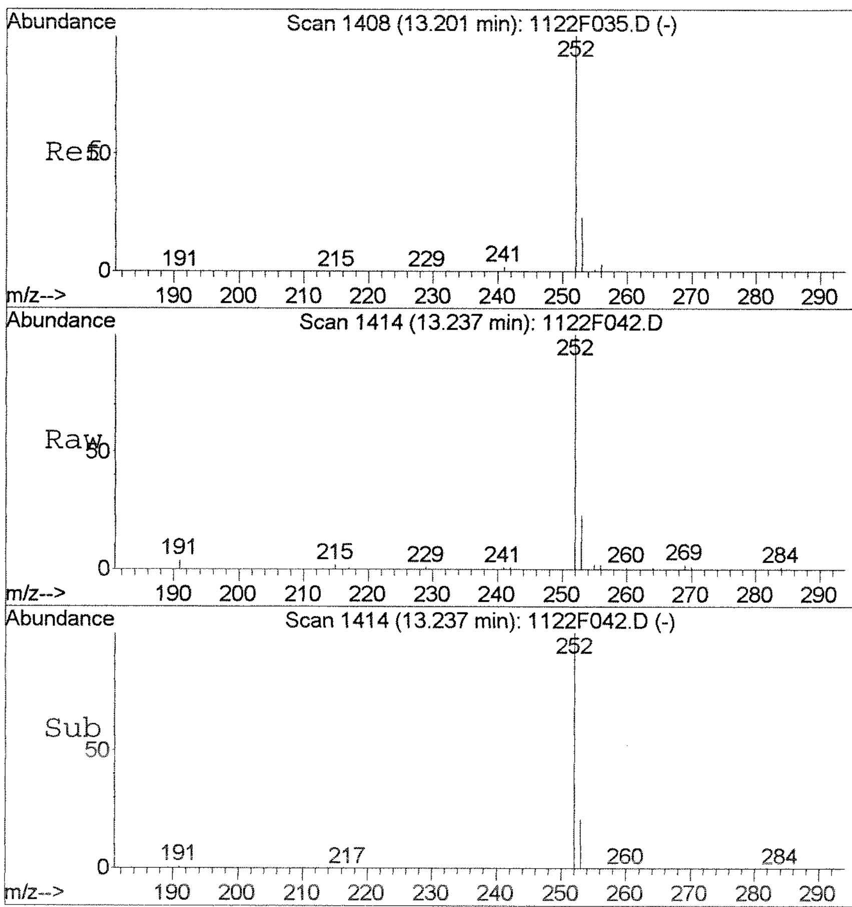




#44
Chrysene
Concen: 93.38 ng/ml
RT: 10.62 min Scan# 1018
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

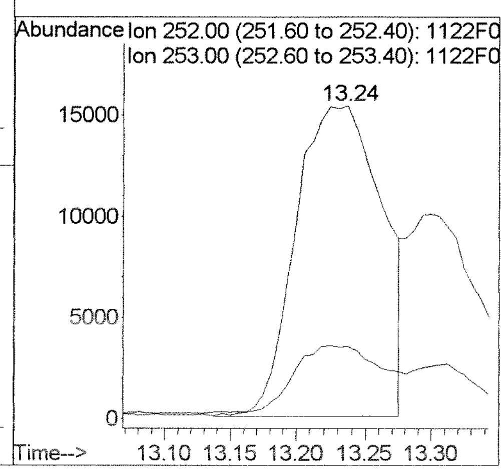
Tgt	Ion:228	Resp:	166185
Ion	Ratio	Lower	Upper
228	100		
226	27.9	0.0	58.9

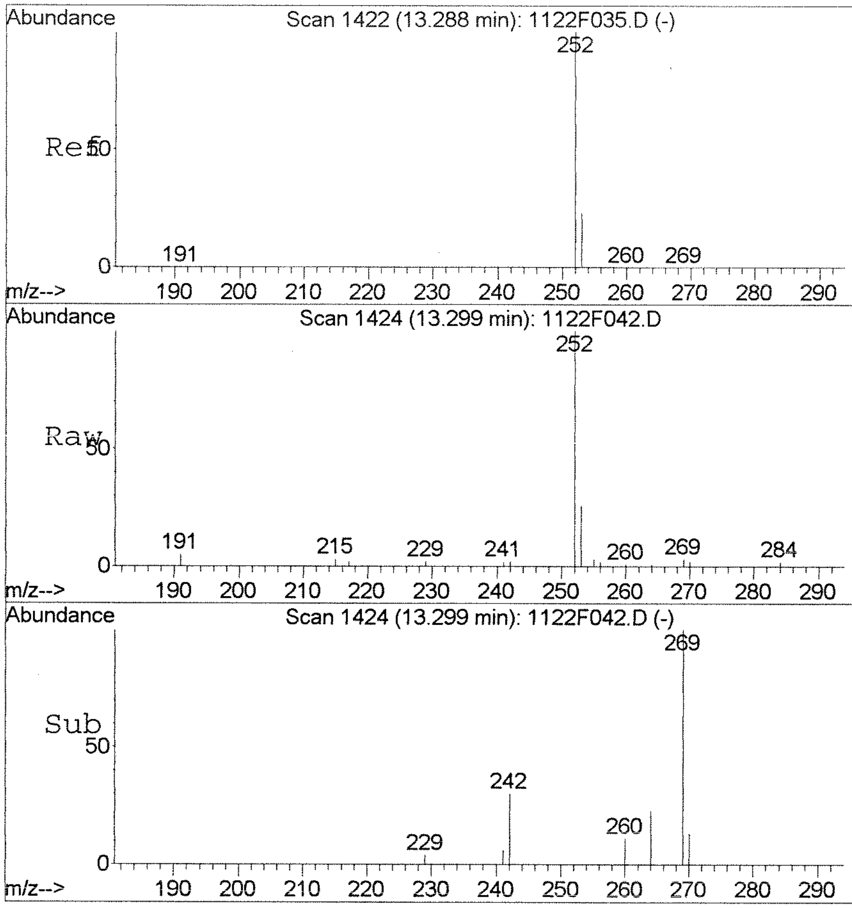




#50
Benzo(b)fluoranthene
Concen: 35.73 ng/ml
RT: 13.24 min Scan# 1414
Delta R.T. 0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt	Ion:252	Resp:	66891
Ion	Ratio	Lower	Upper
252	100		
253	21.1	0.0	52.6

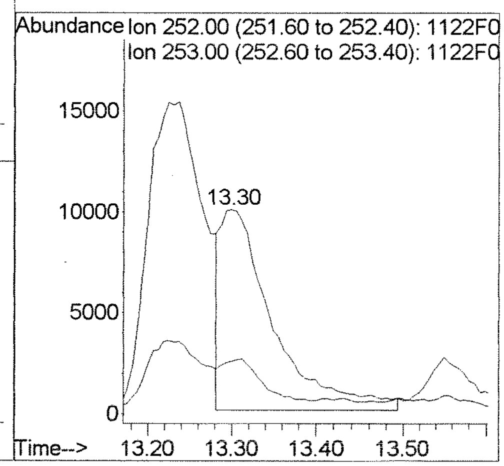


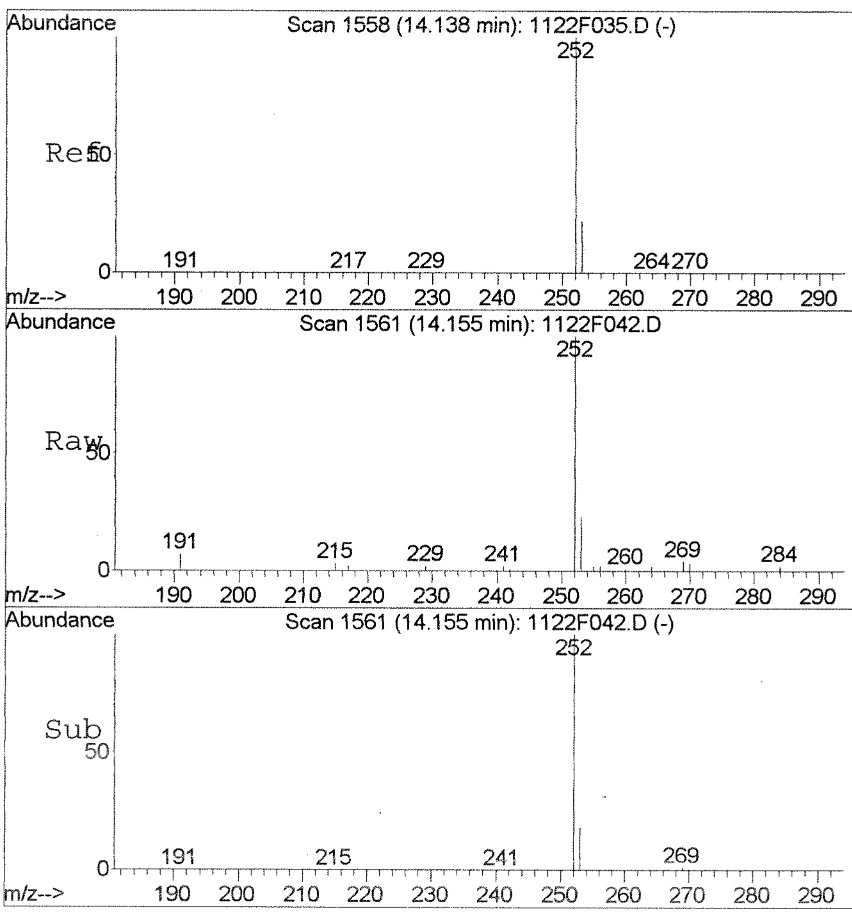


#51
Benzo(k)fluoranthene
Concen: 23.95 ng/ml m
RT: 13.30 min Scan# 1424
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:252 Resp: 43069

Ion	Ratio	Lower	Upper
252	100		
253	25.9	0.0	52.0

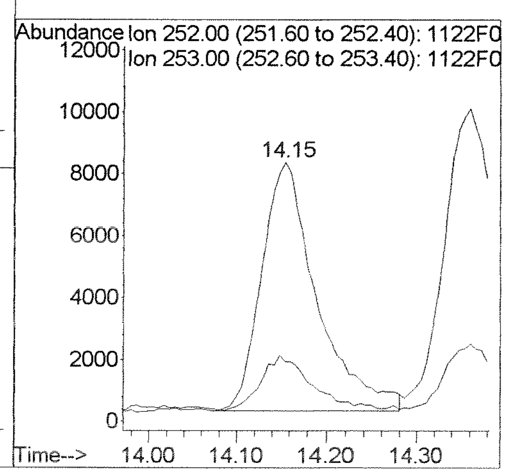


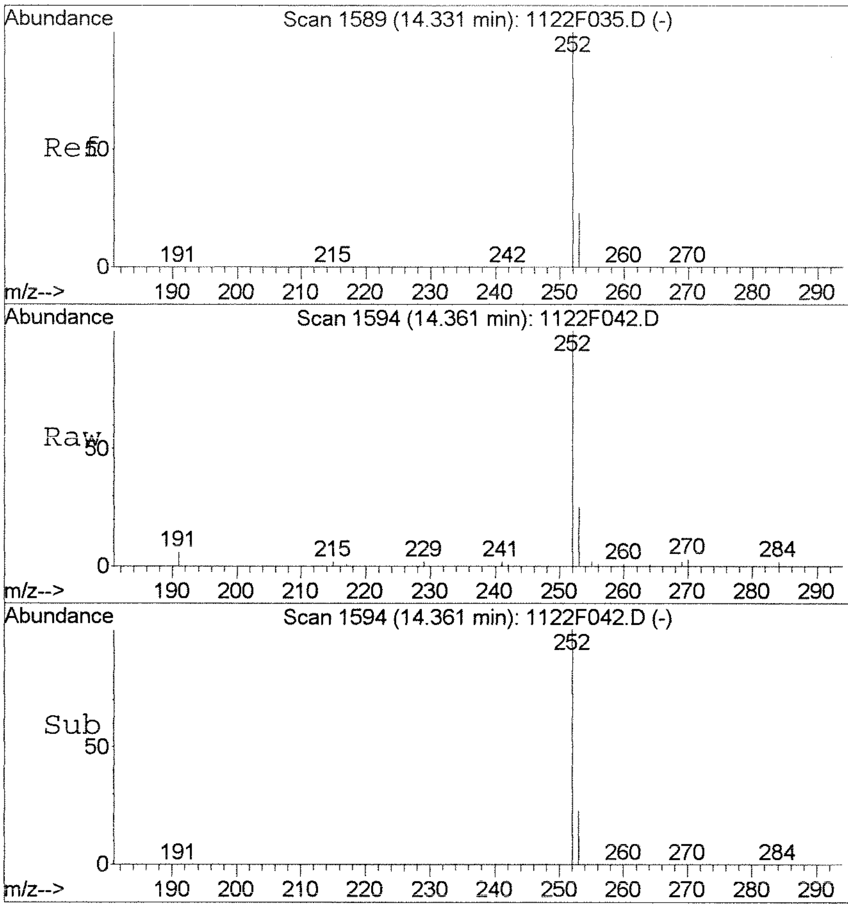


#52
Benzo(e)pyrene
Concen: 20.23 ng/ml
RT: 14.15 min Scan# 1561
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:252 Resp: 34402

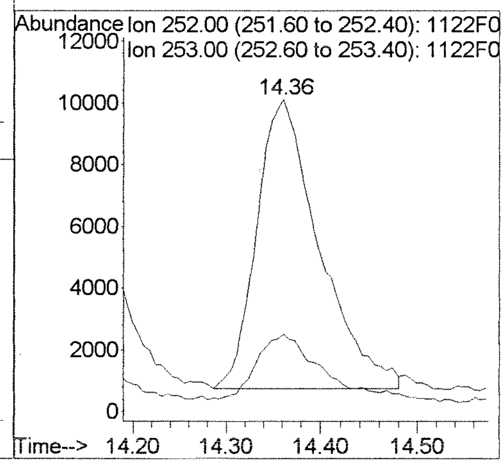
Ion	Ratio	Lower	Upper
252	100		
253	19.2	0.0	52.2

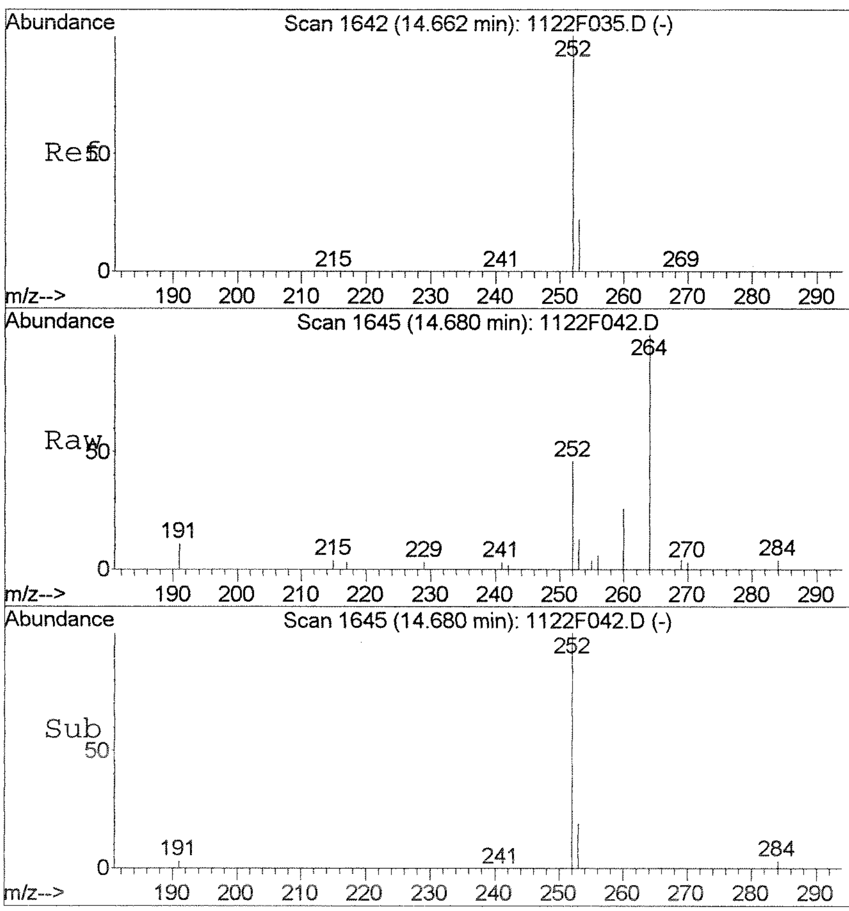




#53
Benzo(a)pyrene
Concen: 27.64 ng/ml
RT: 14.36 min Scan# 1594
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

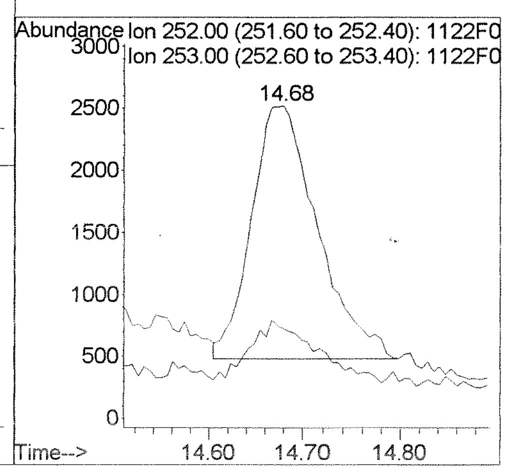
Tgt Ion:252	Resp:		42835
Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	52.2

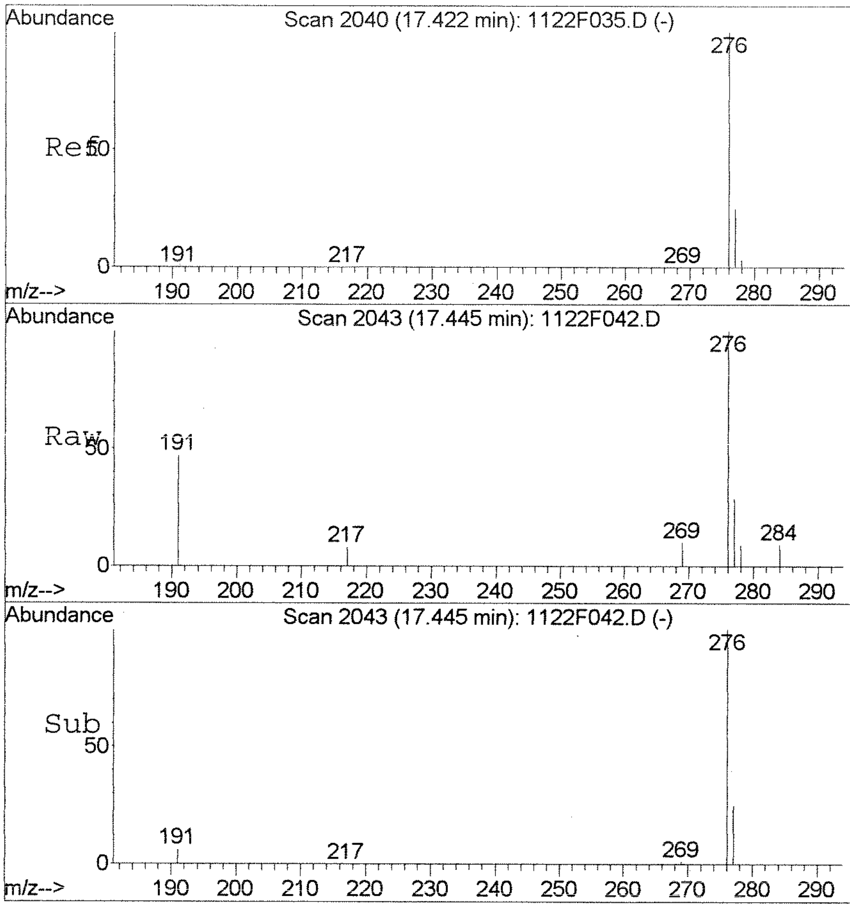




#54
Perylene
Concen: 6.45 ng/ml
RT: 14.68 min Scan# 1645
Delta R.T. -0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

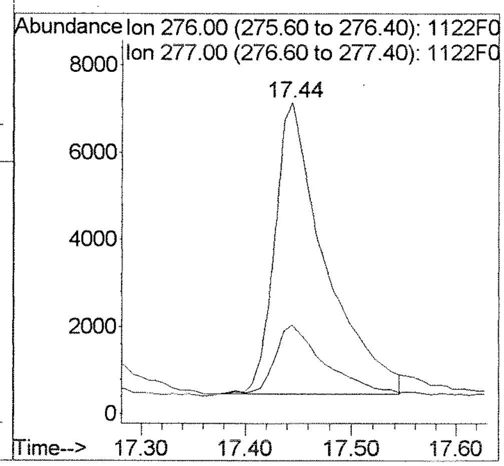
Tgt Ion:252	Resp:		9814
Ion	Ratio	Lower	Upper
252	100		
253	20.9	0.0	51.5

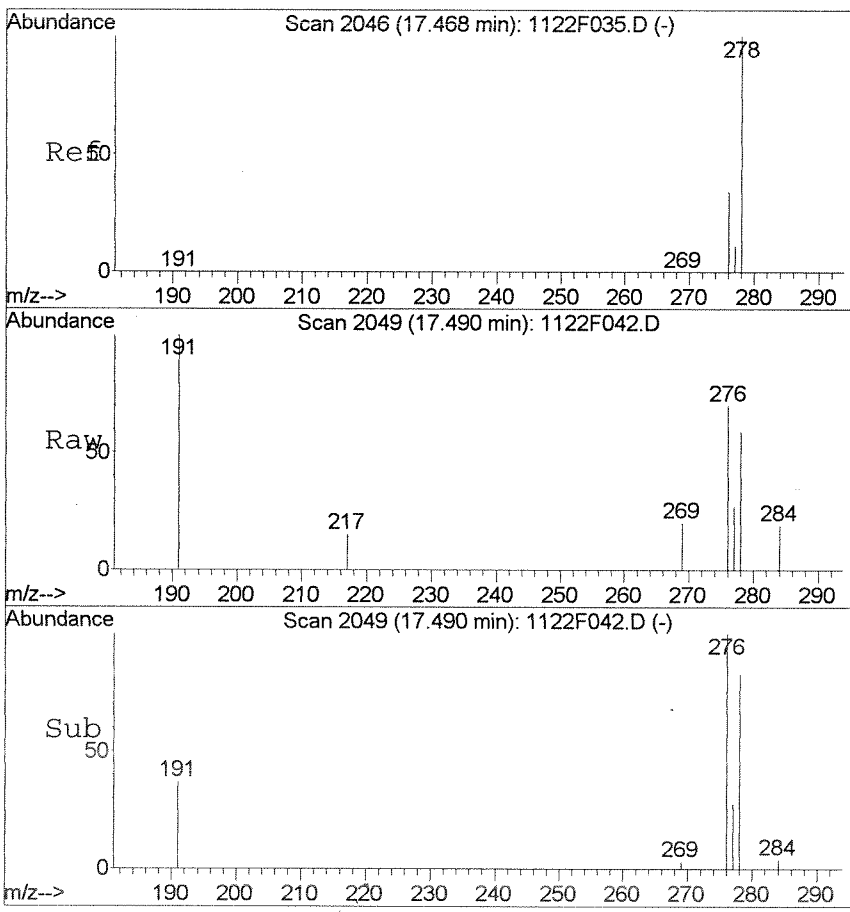




#55
Indeno(1,2,3-cd)pyrene
Concen: 15.31 ng/ml
RT: 17.44 min Scan# 2043
Delta R.T. 0.01 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

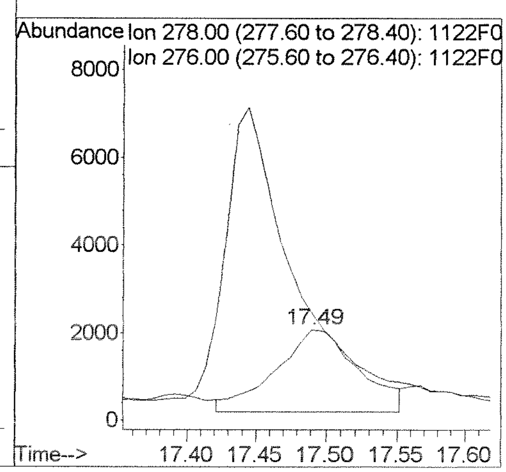
Tgt Ion:276	Resp:		22020
Ion	Ratio	Lower	Upper
276	100		
277	24.1	0.0	54.7

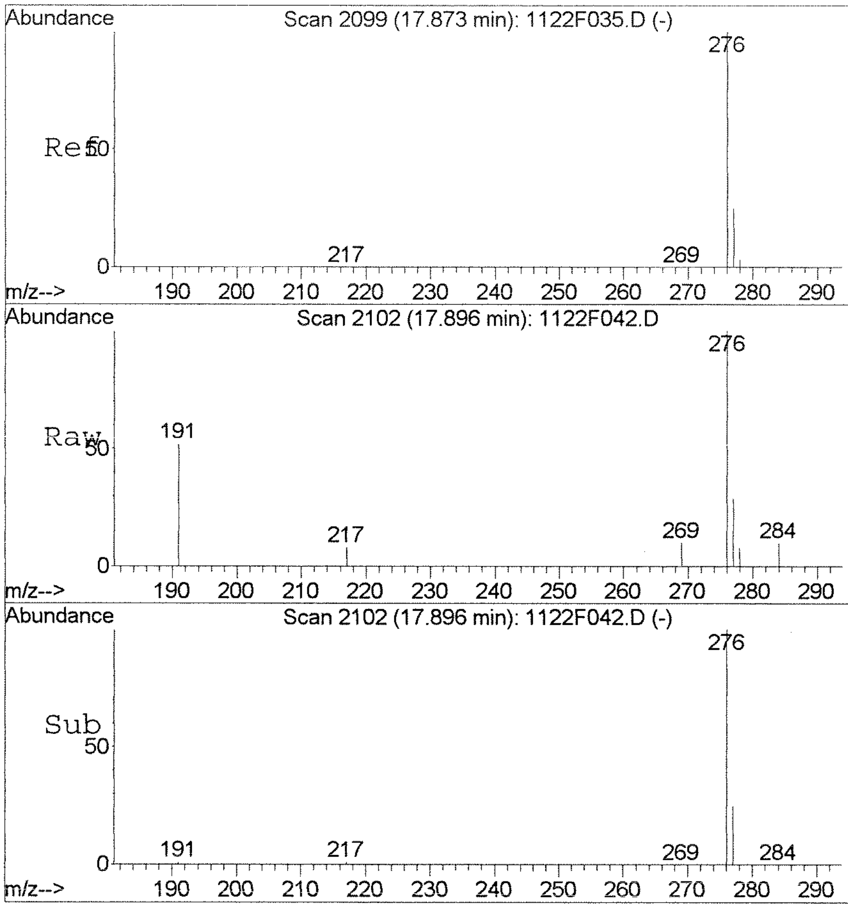




#56
Dibenz(a,h)anthracene
Concen: 5.03 ng/ml m
RT: 17.49 min Scan# 2049
Delta R.T. -0.00 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

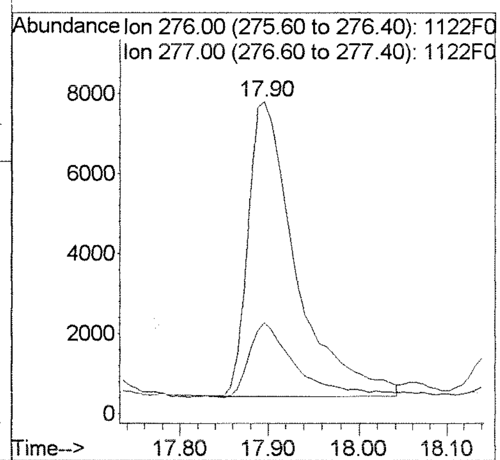
Tgt Ion:278	Resp:		7598
Ion	Ratio	Lower	Upper
278	100		
276	119.4	0.0	59.7#





#57
Benzo(g,h,i)perylene
Concen: 16.75 ng/ml
RT: 17.90 min Scan# 2102
Delta R.T. -0.00 min
Lab File: 1122F042.D
Acq: 23 Nov 2008 2:13 am

Tgt Ion:276	Resp:		27436
Ion	Ratio	Lower	Upper
276	100		
277	24.9	0.0	54.2



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED02-5-8.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	230		5.0	0.37	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	300		5.0	0.39	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	98		5.0	0.24	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	10000	D	99	4.6	20	11/11/08	11/23/08	KWG0812042	
Fluorene	7400	D	99	10	20	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	3800	D	99	12	20	11/11/08	11/23/08	KWG0812042	
Phenanthrene	31000	D	99	15	20	11/11/08	11/23/08	KWG0812042	
Anthracene	5900	D	99	9.4	20	11/11/08	11/23/08	KWG0812042	
Fluoranthene	16000	D	99	13	20	11/11/08	11/23/08	KWG0812042	
Pyrene	14000	D	99	7.4	20	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	2400	D	99	9.6	20	11/11/08	11/23/08	KWG0812042	
Chrysene	2600	D	99	5.0	20	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	1800		5.0	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(k)fluoranthene	580		5.0	0.15	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	1600		5.0	0.14	1	11/11/08	11/22/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	1200		5.0	0.16	1	11/11/08	11/22/08	KWG0812042	
Dibenz(a,h)anthracene	230		5.0	0.28	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	1200		5.0	0.64	1	11/11/08	11/22/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	10-128	11/22/08	Acceptable
Fluoranthene-d10	75	29-121	11/22/08	Acceptable
Terphenyl-d14	78	24-141	11/22/08	Acceptable

Comments:

Exception Report

Data File:	J:\MS11\DATA\112108\1121F049.D	**Date Acquired:**	11/22/2008 03:14
Lab ID:	K0810639-003	**Date Quantitated:**	11/22/2008 14:00
RunType:	SMPL	**Batch ID:**	KWG0812613
Matrix:	SEDIMENT	**Analysis Method:**	8270C SIM
		ListJoinID:	LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Anthracene	3408.15	NA	2000	see Dil
	Pyrene	7757.26	NA	2000	
	Dibenzofuran	3410.48	NA	2000	
	Fluoranthene	8140.28	NA	2000	
	Chrysene	2739.46	NA	2000	
	Benz(a)anthracene	2469.22	NA	2000	
	Acenaphthene	8355.52	NA	2000	

Primary Review: 11/22/08

Secondary Review: 11·22·8

Printed: 11/22/2008 14:50:35

u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\MS11\DATA\112108\1121F049.D
Lab ID: K0810639-003
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 03:14
Date Quantitated: 11/22/2008 14:00
Batch ID: KWG0812613
Analysis Method: 8270C SIM
ListJoinID: LJ5646

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Phenanthrene	9311.17	NA	2000	see Dil
	Fluorene	6158.22	NA	2000	

Primary Review: RW 11/22/08

Secondary Review: 11-22-8

Printed: 11/22/2008 14:50:35
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812613	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776067	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112108\1121F030.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112108\1121F049.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 03:14	**Quant Date:**	11/22/2008 14:00	**Vial:**	46
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-003			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	-0.01	136	261241	200.00	OK
2	Acenaphthene-d10	6.47	0.00	164	157180	200.00	OK
3	Phenanthrene-d10	7.73	0.02	188	309278m	200.00	OK
4	Chrysene-d12	10.65	0.05	240	331513	200.00	OK
5	Perylene-d12	14.74	0.13	264	311851	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.90	0.00	0.00	176	153571m	143.76	72	10-128	OK	
3	Fluoranthene-d10	8.74	0.04	0.00	212	317839	150.73	75	29-121	OK	
4	Terphenyl-d14	9.13	0.03	0.00	244	268319	156.34	78	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.06	-0.01	0.00	128	371246	233.29	230		
1	2-Methylnaphthalene	5.62		0.00	142	341104	307.38	300		
2	Acenaphthylene	6.35		0.00	152	177530m	100.16	98		
2	Acenaphthene	6.51	0.02	0.00	154	8999092	8,356	8200	E	
2	Dibenzofuran	6.64		0.00	168	5525470	3,410	3300	E	
2	Fluorene	6.93	0.01	0.00	166	7962424	6,158	6000	E	
3	Phenanthrene	7.73	0.01	0.00	178	20241867	9,311	9100	E	
3	Anthracene	7.79	0.02	0.00	178	7218908m	3,408	3300	E	
3	Fluoranthene	8.75	0.03	0.00	202	20101556	8,140	8000	E	
4	Pyrene	8.99	0.04	0.00	202	19345948	7,757	7600	E	
4	Benz(a)anthracene	10.64	0.06	0.00	228	5586594	2,469	2400	E	
4	Chrysene	10.71	0.06	0.00	228	6087332m	2,739	2700	E	
5	Benzo(b)fluoranthene	13.36	0.11	0.00	252	3916584	1,820	1800		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112108\1121F049.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 03:14	**Quant Date:**	11/22/2008 14:00	**Vial:**	46
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-003			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.44	0.10	0.00	252	1229162	594.53	580		
5	Benzo(a)pyrene	14.52	0.13	0.00	252	2927470	1,643	1600		
5	Indeno(1,2,3-cd)pyrene	17.51	0.06	-0.01	276	2059452**m**	1,246	1200		
5	Dibenz(a,h)anthracene	17.56	0.05	-0.01	278	409546**m**	236.01	230		
5	Benzo(g,h,i)perylene	17.97	0.06	-0.01	276	2390426	1,269	1200		

Prep Amount:	15.38 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	66.2 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F049.D Vial: 46
Acq On : 22 Nov 2008 3:14 am Operator: LWeiskopf
Sample : K0810639-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14:34 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.04	136	261241	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.47	164	157180	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.73	188	309278m	200.00	ng/ml	0.03
37) Chrysene-d12	10.65	240	331513	200.00	ng/ml	0.07
49) Perylene-d12	14.74	264	311851	200.00	ng/ml	0.15
System Monitoring Compounds						
15) Fluorene-d10	6.90	176	153571m	143.76	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	71.88%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery	=	0.00%	
36) Fluoranthene-d10	8.74	212	317839	150.73	ng/ml	0.03
Spiked Amount 200.000			Recovery	=	75.36%	
42) Terphenyl-d14	9.13	244	268319	156.34	ng/ml	0.03
Spiked Amount 200.000			Recovery	=	78.17%	
Target Compounds						Qvalue
2) Naphthalene	5.06	128	371246	233.29	ng/ml	99
3) 2-Methylnaphthalene	5.62	142	341104	307.38	ng/ml	97
4) 1-Methylnaphthalene	5.69	142	942935	949.19	ng/ml	99
5) Biphenyl	5.99	154	64637	47.67	ng/ml	93
6) 2,6-Dimethylnaphthalene	6.12	156	1483468	1531.29	ng/ml	98
11) Acenaphthylene	6.35	152	177530m	100.16	ng/ml	
12) Acenaphthene	6.51	154	8999092	8355.52	ng/ml	89
13) Dibenzofuran	6.64	168	5525470	3410.48	ng/ml	97
14) 2,3,5-Trimethylnaphthalene	6.80	170	1344744	1419.64	ng/ml	66
16) Fluorene	6.93	166	7962424	6158.22	ng/ml	90
23) Dibenzothiophene	7.63	184	4264254	2006.16	ng/ml	99
27) Phenanthrene	7.73	178	20241867	9311.17	ng/ml	76
28) Anthracene	7.79	178	7218908m	3408.15	ng/ml	
30) 1-Methylphenanthrene	8.24	192	2156024m	1336.32	ng/ml	
35) Fluoranthene	8.75	202	20101556	8140.28	ng/ml	41
38) Pyrene	8.99	202	19345948	7757.26	ng/ml	44
43) Benz(a)anthracene	10.64	228	5586594	2469.22	ng/ml	86
44) Chrysene	10.71	228	6087332m	2739.46	ng/ml	
50) Benzo(b)fluoranthene	13.36	252	3916584	1819.84	ng/ml	100
51) Benzo(k)fluoranthene	13.44	252	1229162	594.53	ng/ml	84
52) Benzo(e)pyrene	14.31	252	2116917	1082.84	ng/ml	99
53) Benzo(a)pyrene	14.52	252	2927470	1642.89	ng/ml	98
54) Perylene	14.84	252	824675	471.12	ng/ml	97
55) Indeno(1,2,3-cd)pyrene	17.51	276	2059452m	1245.66	ng/ml	
56) Dibenz(a,h)anthracene	17.56	278	409546m	236.01	ng/ml	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F049.D Vial: 46
Acq On : 22 Nov 2008 3:14 am Operator: LWeiskopf
Sample : K0810639-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14:34 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

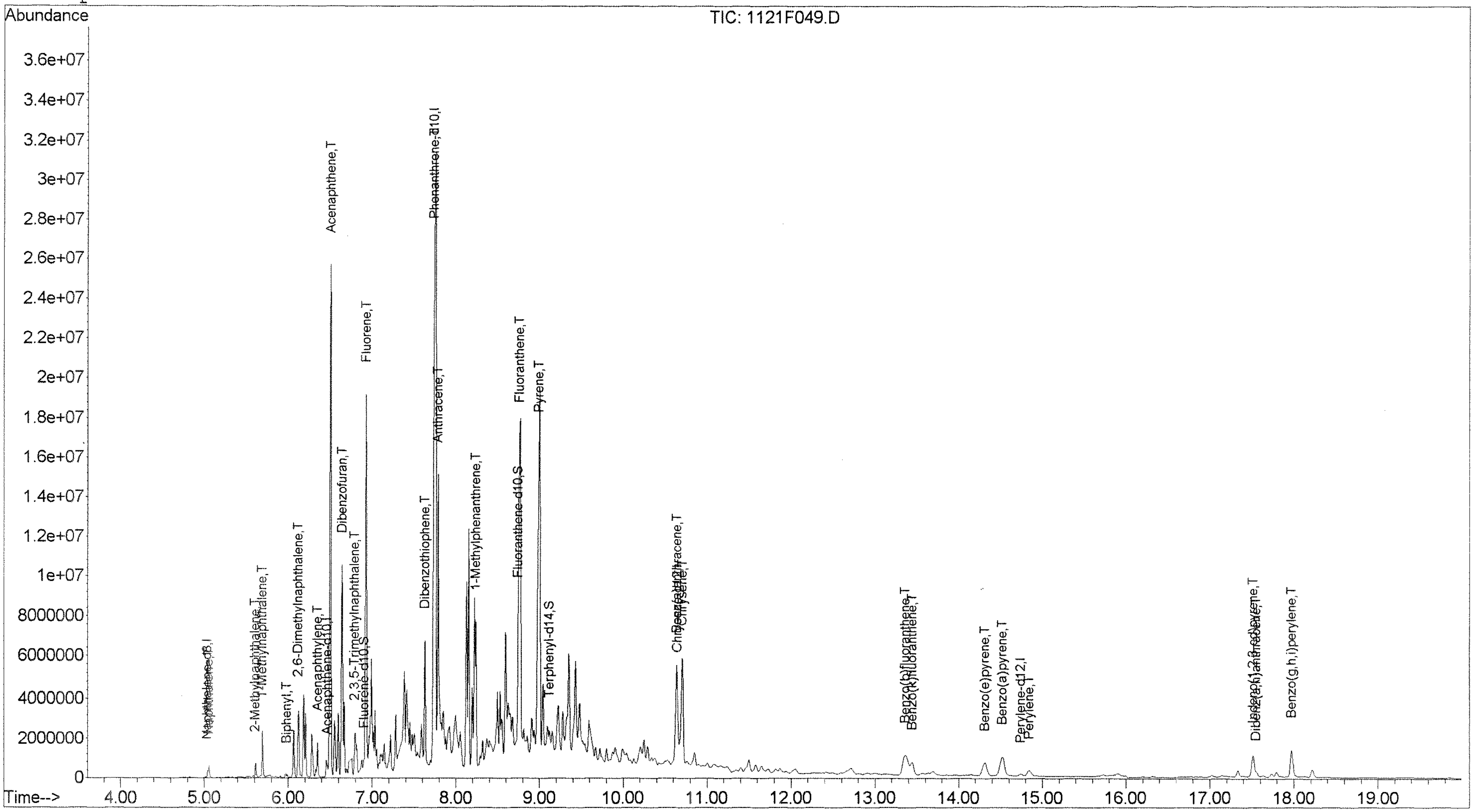
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
57)	Benzo(g,h,i)perylene	17.97	276	2390426	1269.08	ng/ml	96

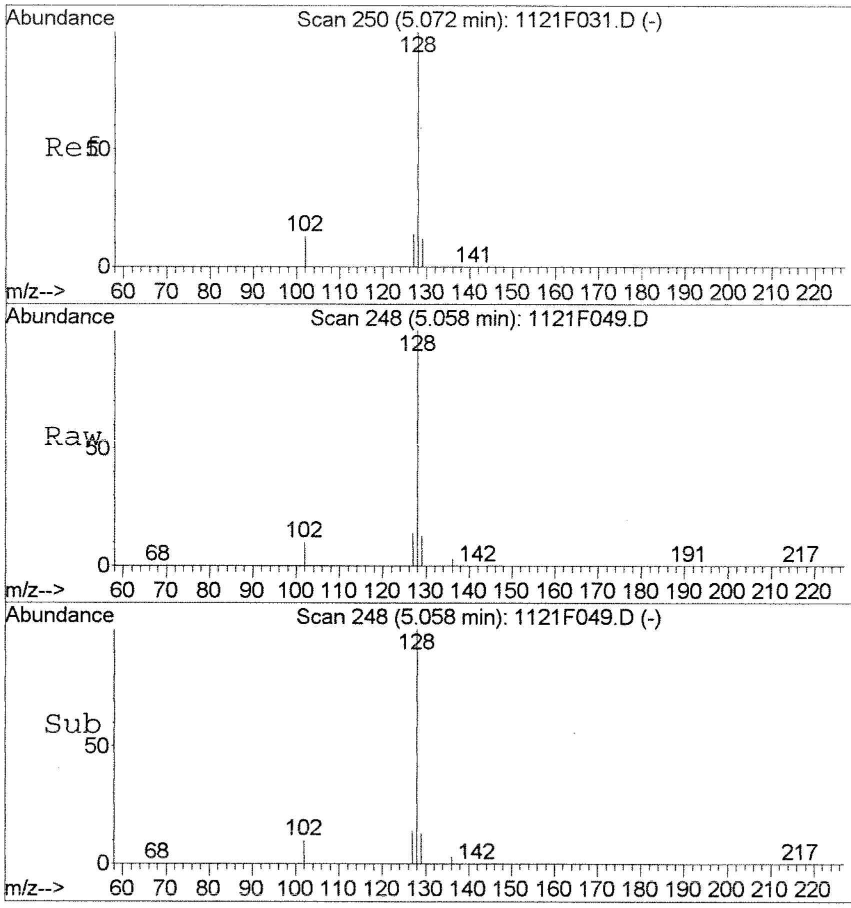
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F049.D
Acq On : 22 Nov 2008 3:14 am
Sample : K0810639-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:00 2008

Vial: 46
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration

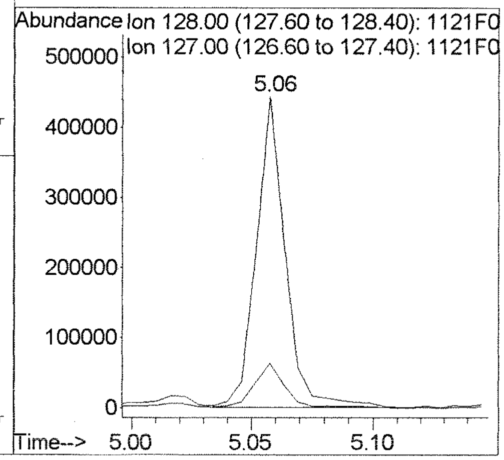


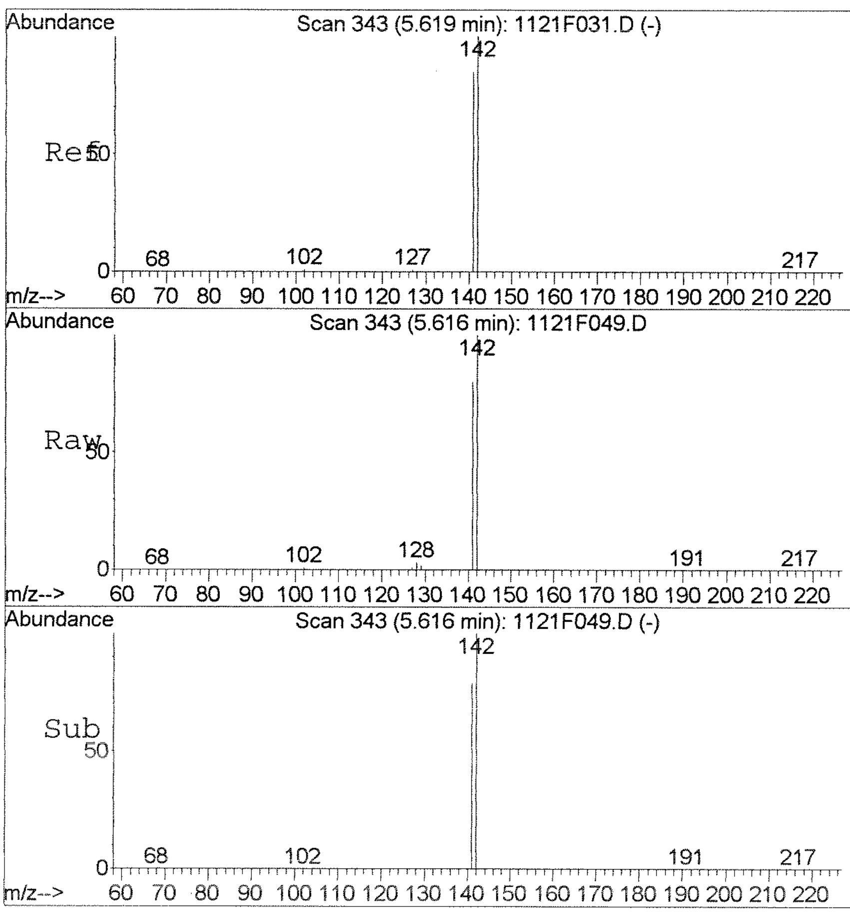


#2
Naphthalene
Concen: 233.29 ng/ml
RT: 5.06 min Scan# 248
Delta R.T. -0.00 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:128 Resp: 371246

Ion	Ratio	Lower	Upper
128	100		
127	14.3	0.0	43.8

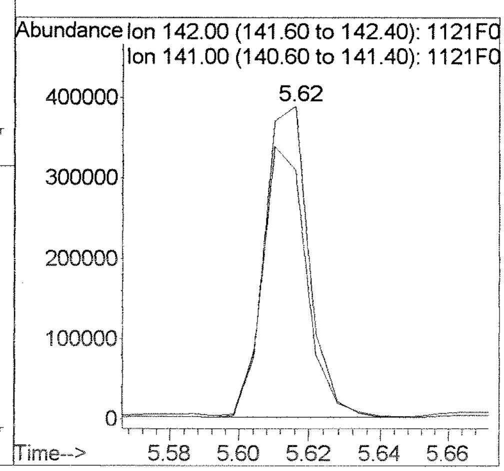


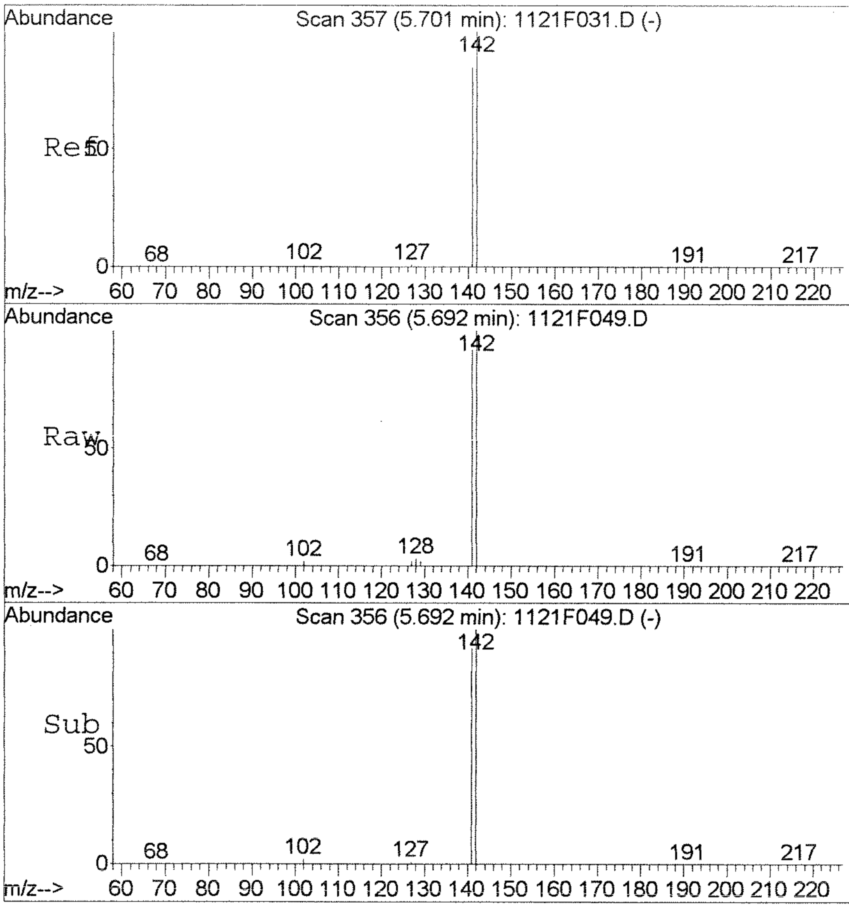


#3
2-Methylnaphthalene
Concen: 307.38 ng/ml
RT: 5.62 min Scan# 343
Delta R.T. 0.00 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:142 Resp: 341104

Ion	Ratio	Lower	Upper
142	100		
141	79.3	52.4	112.4

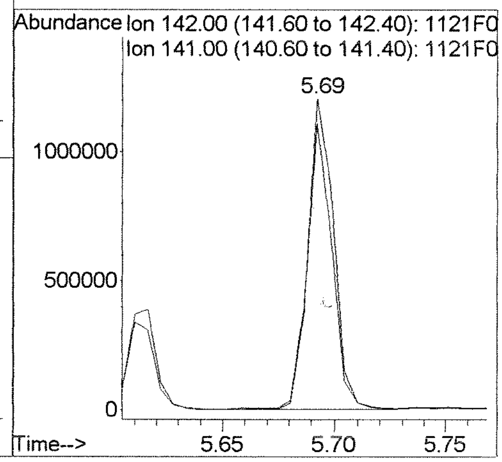


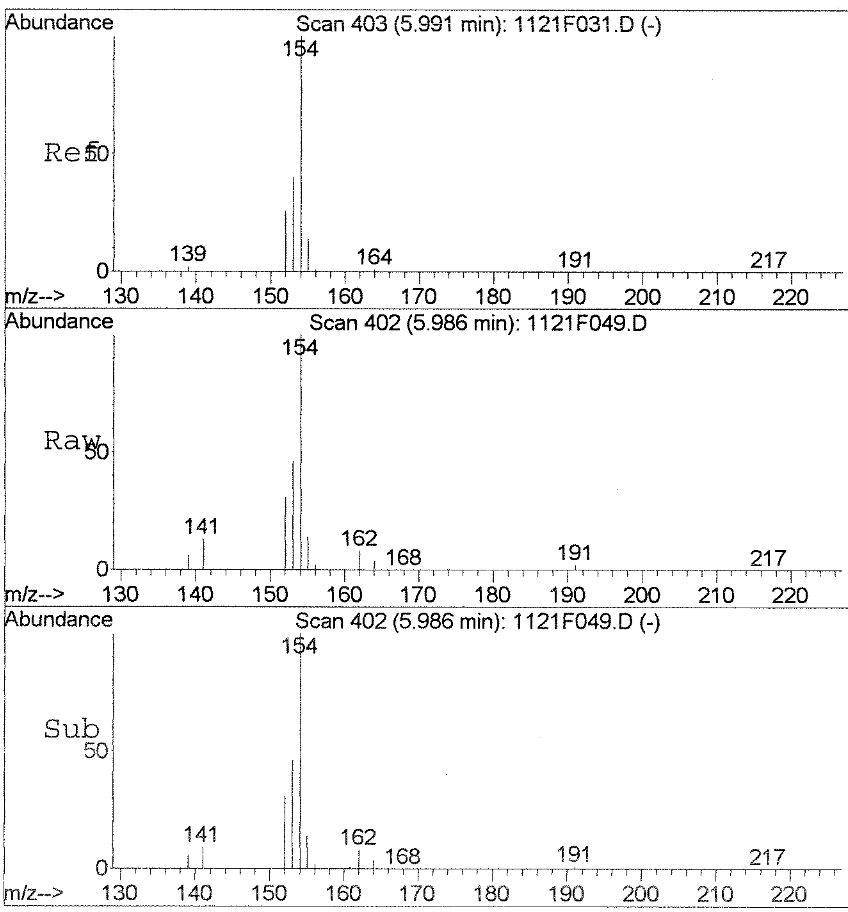


#4
1-Methylnaphthalene
Concen: 949.19 ng/ml
RT: 5.69 min Scan# 356
Delta R.T. 0.00 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:142 Resp: 942935

Ion	Ratio	Lower	Upper
142	100		
141	91.9	63.0	123.0

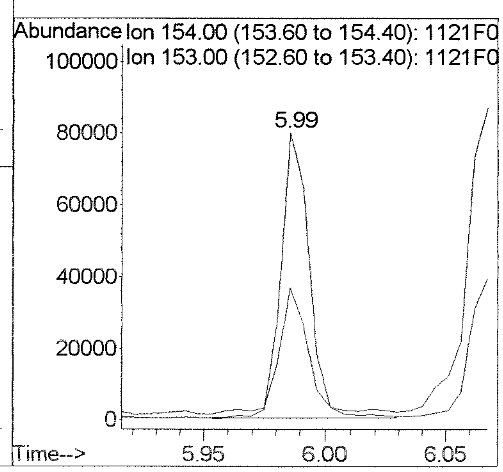


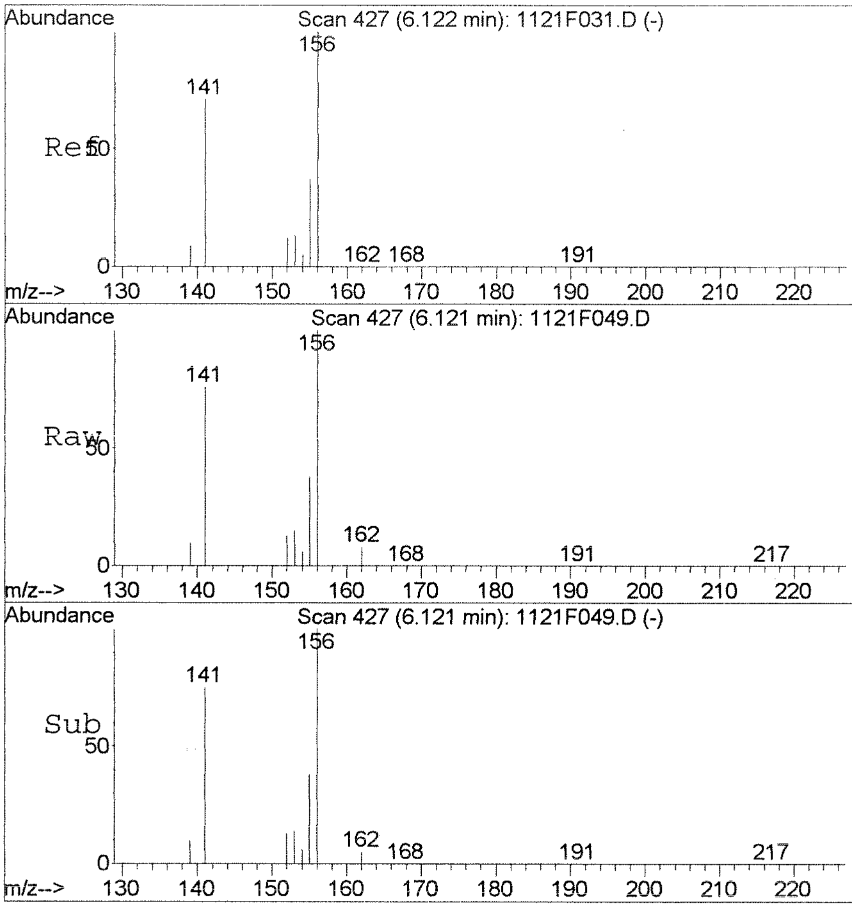


#5
Biphenyl
Concen: 47.67 ng/ml
RT: 5.99 min Scan# 402
Delta R.T. 0.00 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:154 Resp: 64637

Ion	Ratio	Lower	Upper
154	100		
153	44.5	10.4	70.4

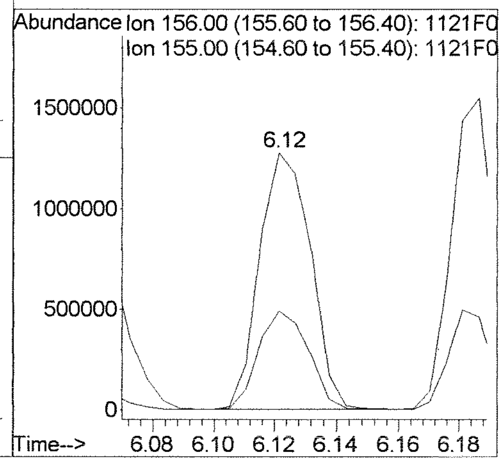


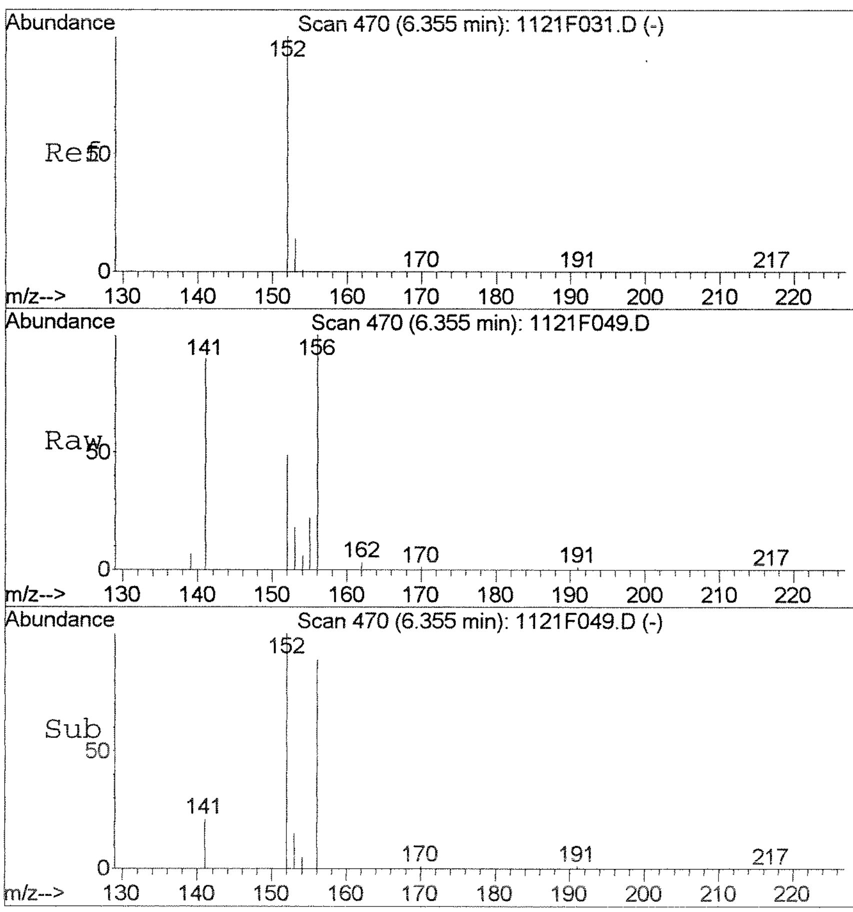


#6
2,6-Dimethylnaphthalene
Concen: 1531.29 ng/ml
RT: 6.12 min Scan# 427
Delta R.T. 0.00 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:156 Resp: 1483468

Ion	Ratio	Lower	Upper
156	100		
155	38.4	7.3	67.3

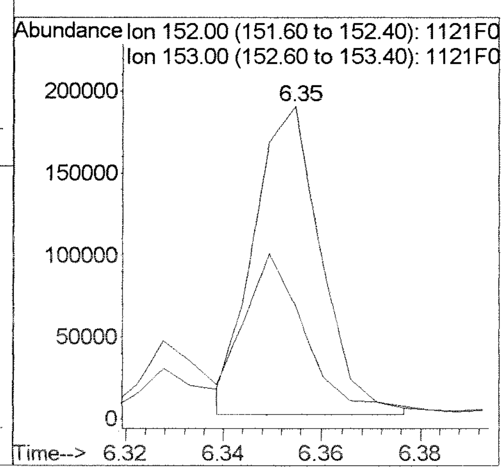


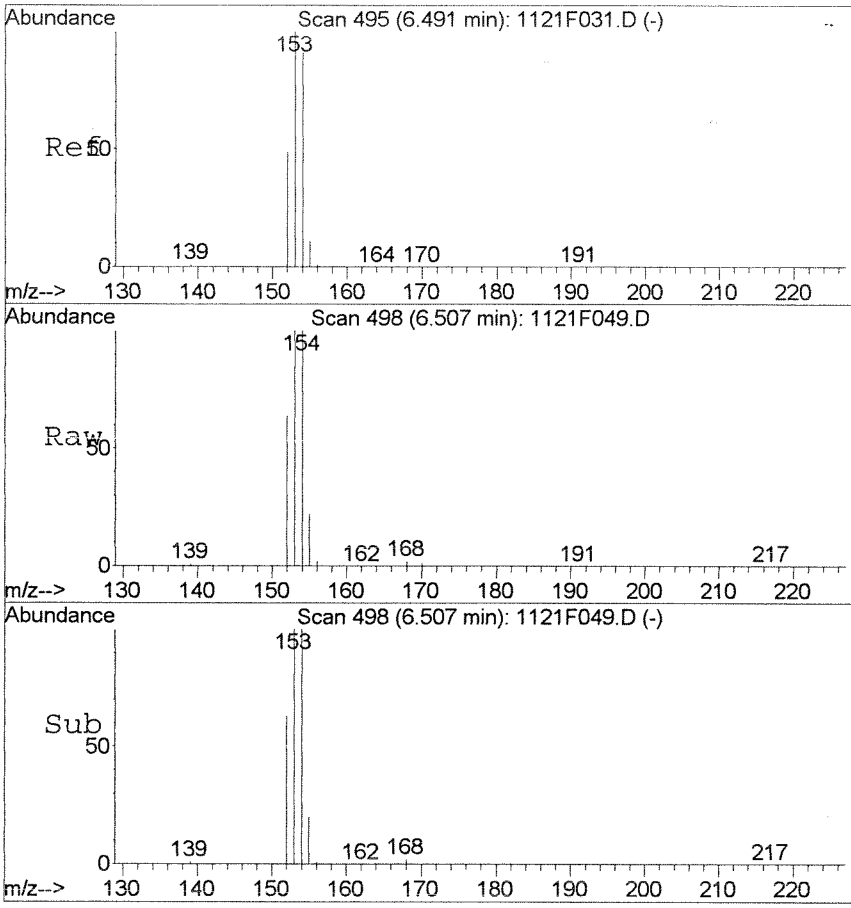


#11
Acenaphthylene
Concen: 100.16 ng/ml m
RT: 6.35 min Scan# 470
Delta R.T. 0.00 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:152 Resp: 177530

Ion	Ratio	Lower	Upper
152	100		
153	36.5	0.0	43.0

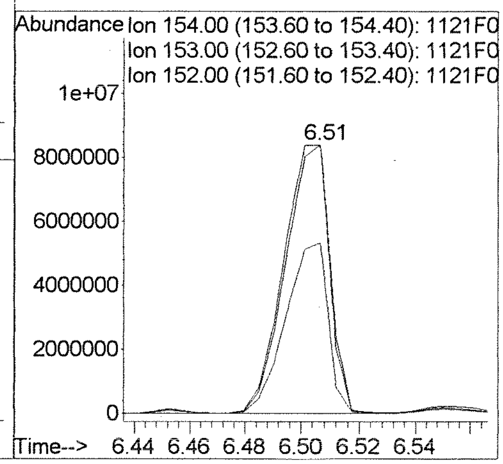


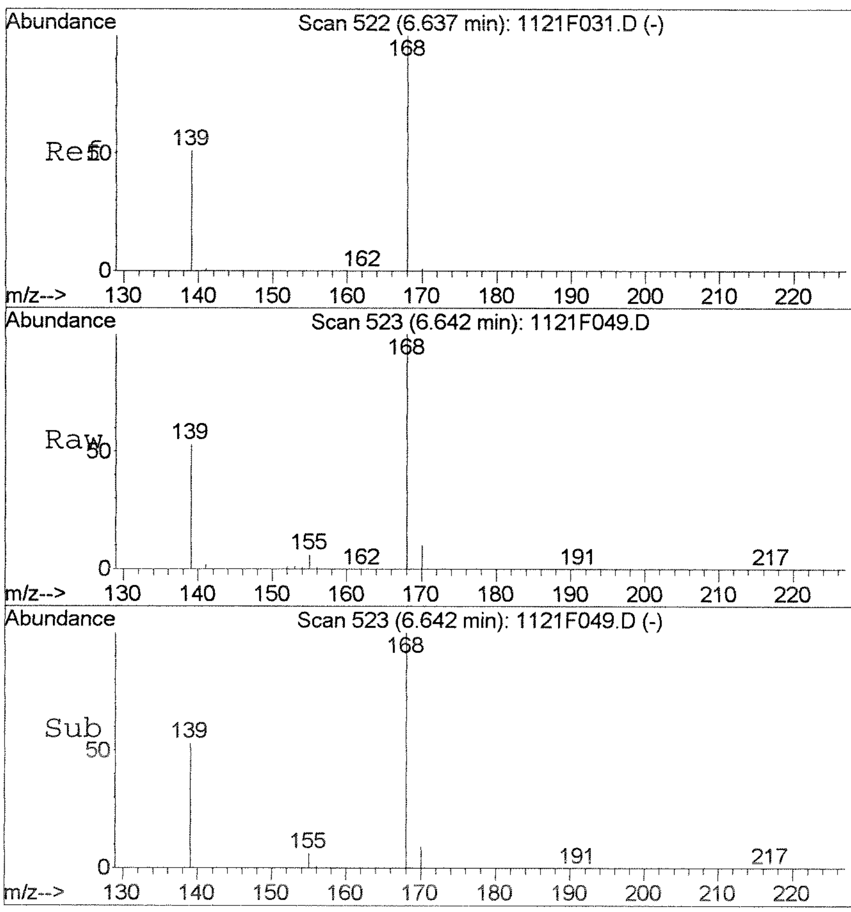


#12
Acenaphthene
Concen: 8355.52 ng/ml
RT: 6.51 min Scan# 498
Delta R.T. 0.02 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:154 Resp: 8999092

Ion	Ratio	Lower	Upper
154	100		
153	99.9	81.9	141.9
152	63.5	26.8	86.8

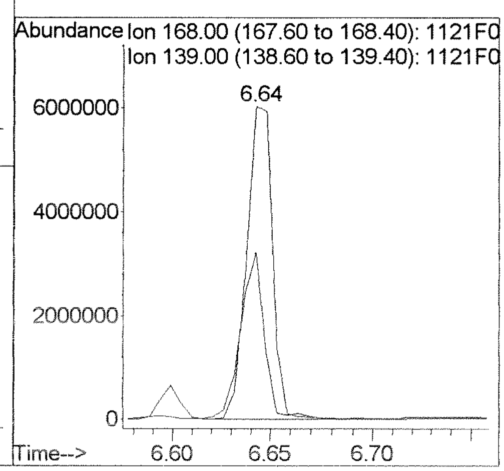


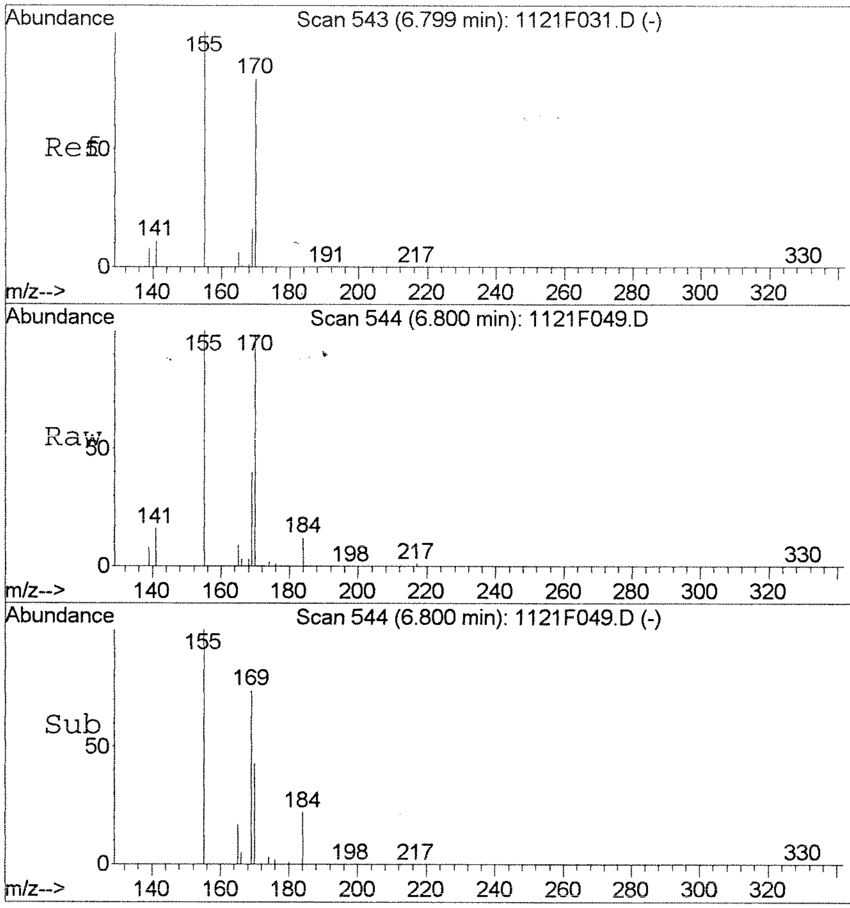


#13
Dibenzofuran
Concen: 3410.48 ng/ml
RT: 6.64 min Scan# 523
Delta R.T. 0.01 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:168 Resp: 5525470

Ion	Ratio	Lower	Upper
168	100		
139	53.3	21.0	81.0

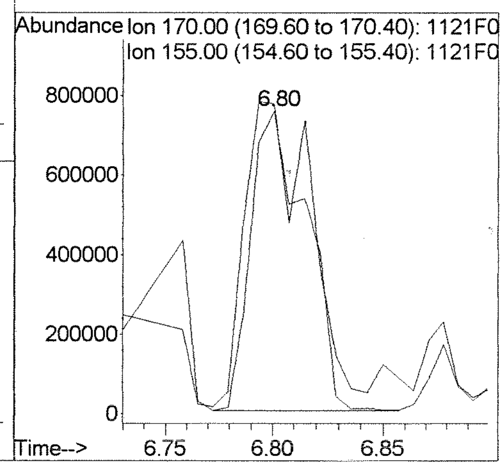


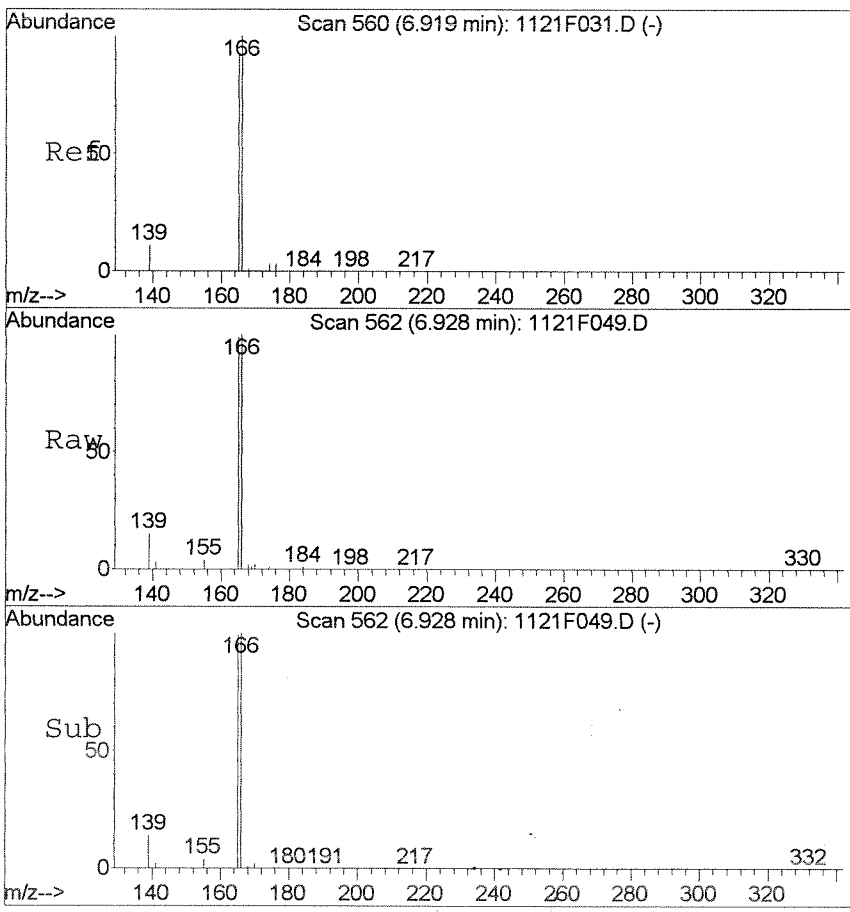


#14
2,3,5-Trimethylnaphthalene
Concen: 1419.64 ng/ml
RT: 6.80 min   Scan# 544
Delta R.T.   0.01 min
Lab File: 1121F049.D
Acq: 22 Nov 2008   3:14 am

Tgt Ion:170 Resp: 1344744

Ion	Ratio	Lower	Upper
170	100		
155	101.2	42.9	102.9

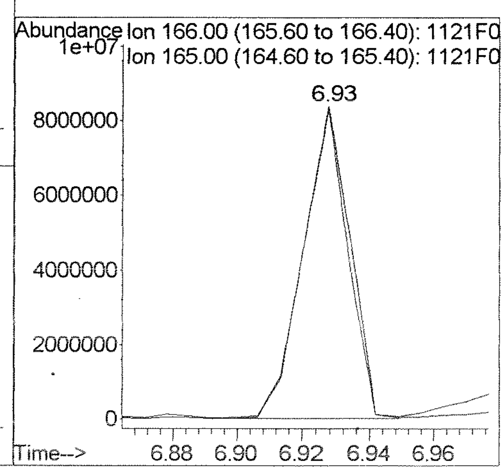


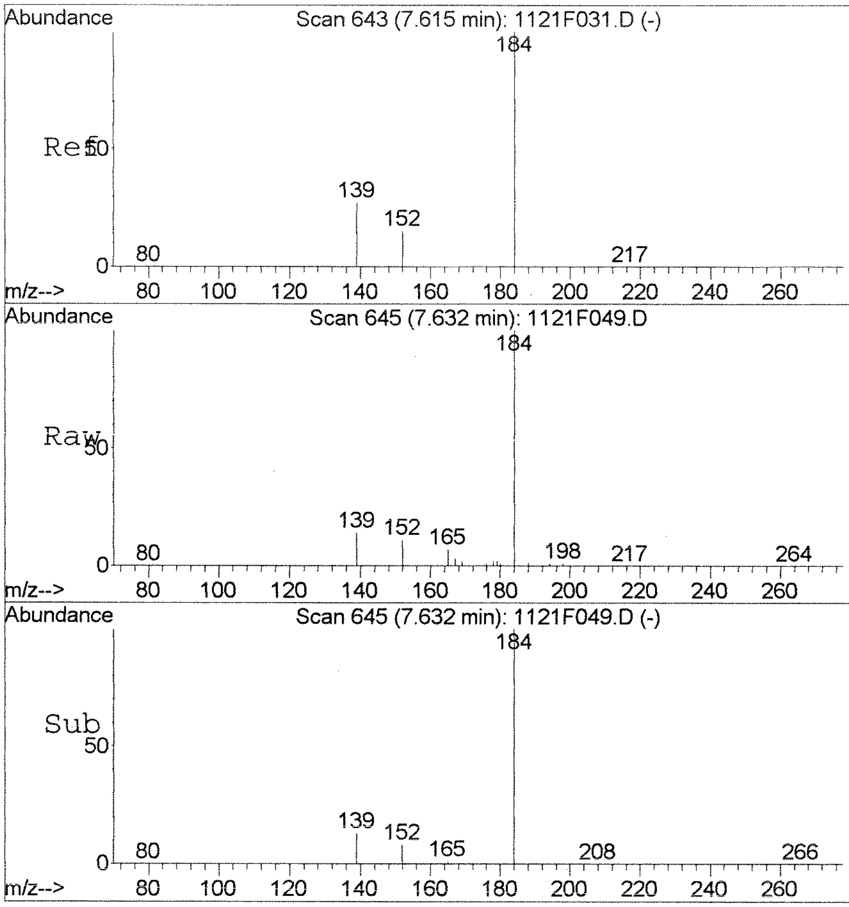


#16
Fluorene
Concen: 6158.22 ng/ml
RT: 6.93 min   Scan# 562
Delta R.T.   0.02 min
Lab File: 1121F049.D
Acq: 22 Nov 2008   3:14 am

Tgt Ion:166 Resp: 7962424

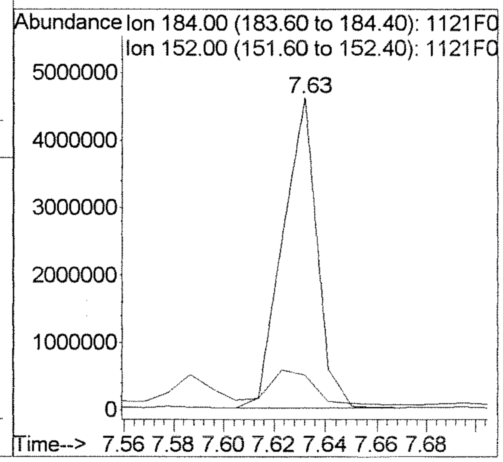
Ion	Ratio	Lower	Upper
166	100		
165	98.9	59.8	119.8

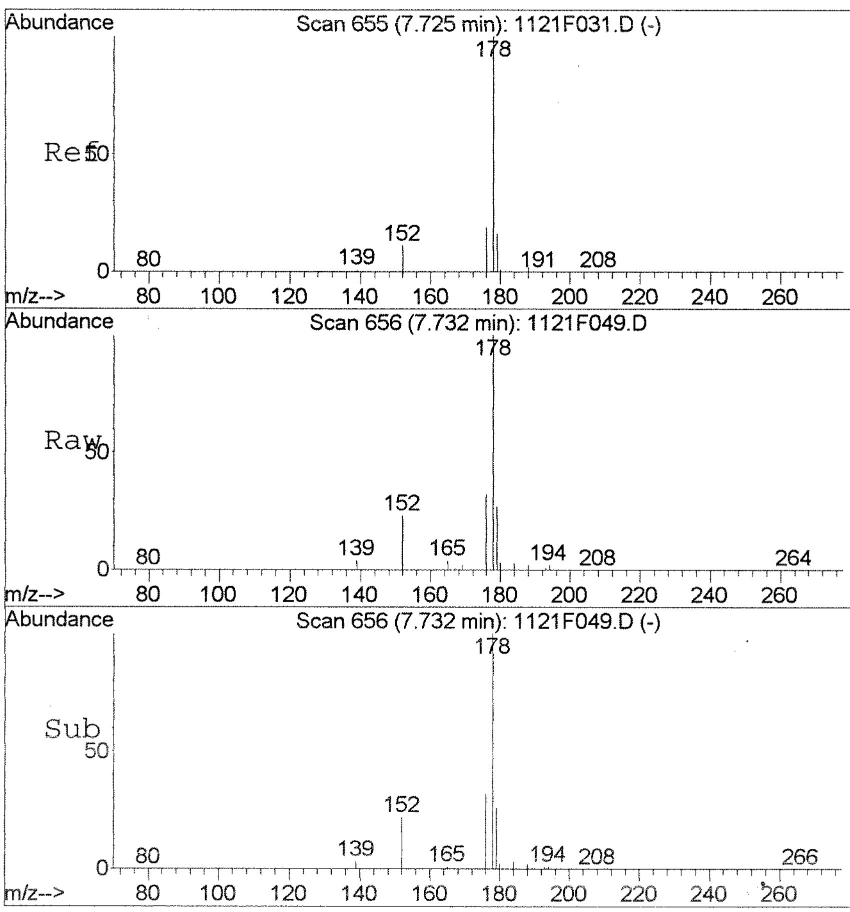




#23
Dibenzothiophene
Concen: 2006.16 ng/ml
RT: 7.63 min   Scan# 645
Delta R.T.   0.02 min
Lab File: 1121F049.D
Acq: 22 Nov 2008   3:14 am

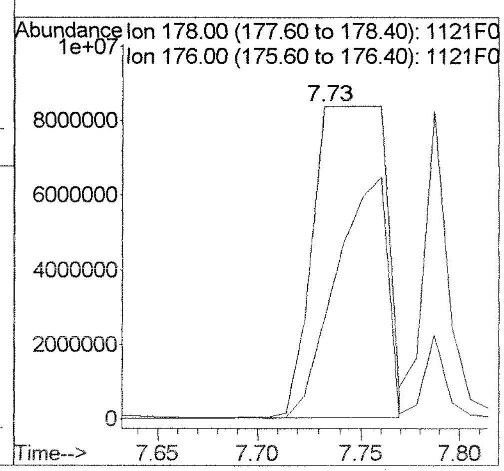
Tgt Ion:184	Resp: 4264254		
Ion	Ratio	Lower	Upper
184	100		
152	9.6	0.0	39.1

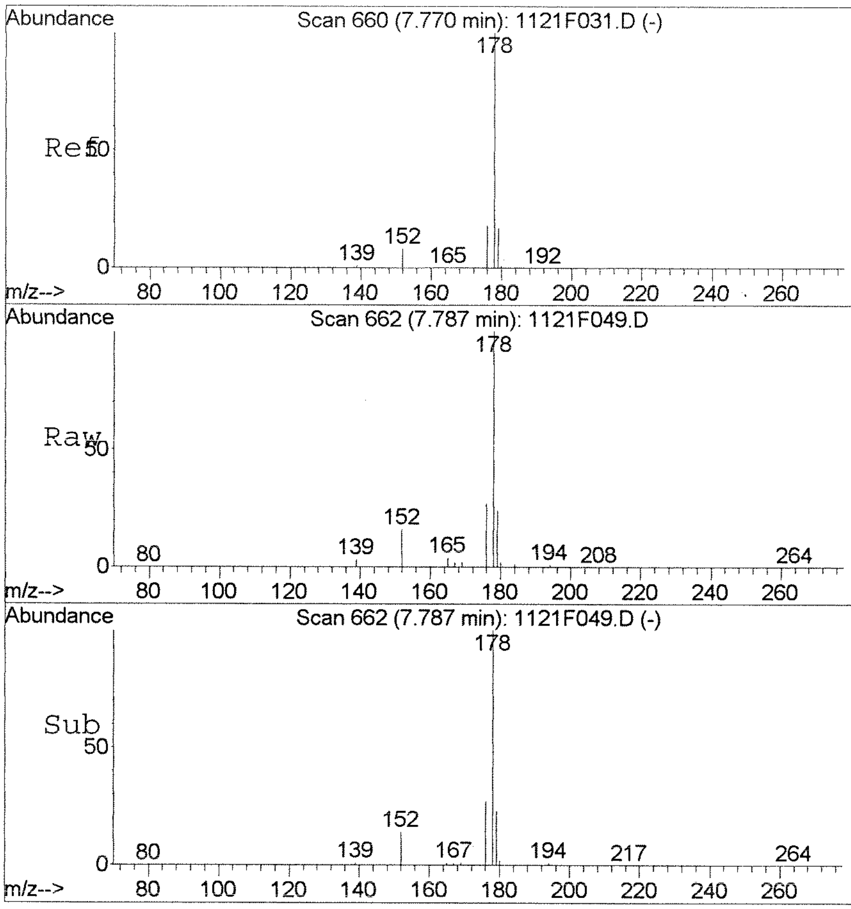




#27
Phenanthrene
Concen: 9311.17 ng/ml
RT: 7.73 min   Scan# 656
Delta R.T.   0.02 min
Lab File: 1121F049.D
Acq: 22 Nov 2008   3:14 am

Tgt Ion:178	Resp:20241867		
Ion	Ratio	Lower	Upper
178	100		
176	32.3	0.0	51.0

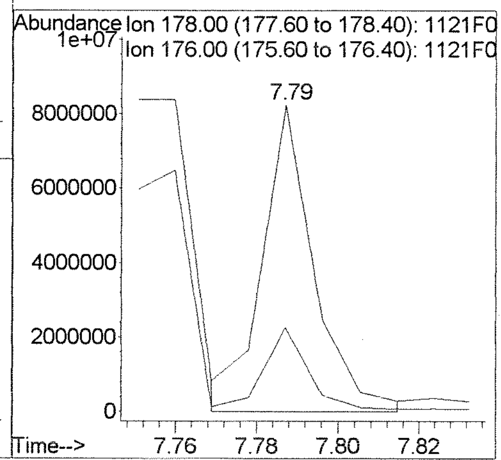


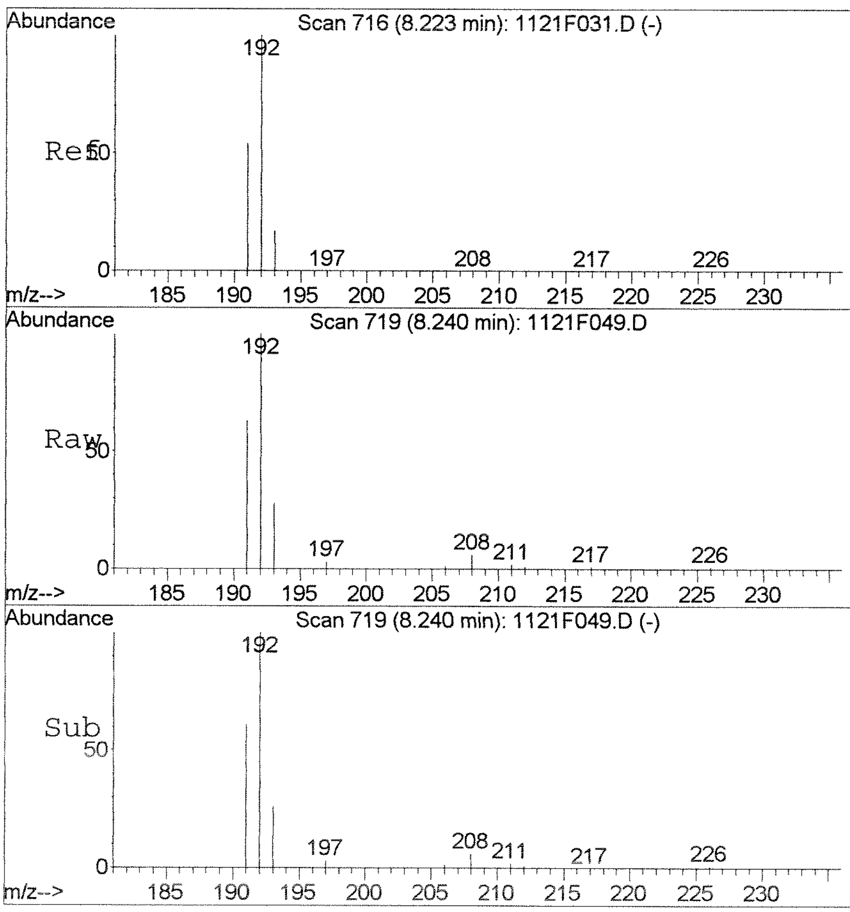


#28
Anthracene
Concen: 3408.15 ng/ml m
RT: 7.79 min Scan# 662
Delta R.T. 0.03 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:178 Resp: 7218908

Ion	Ratio	Lower	Upper
178	100		
176	27.4	0.0	49.7

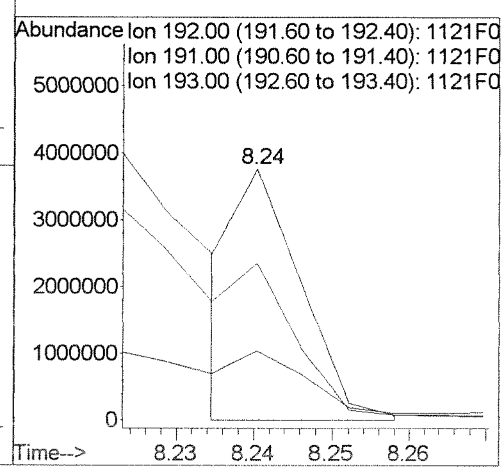


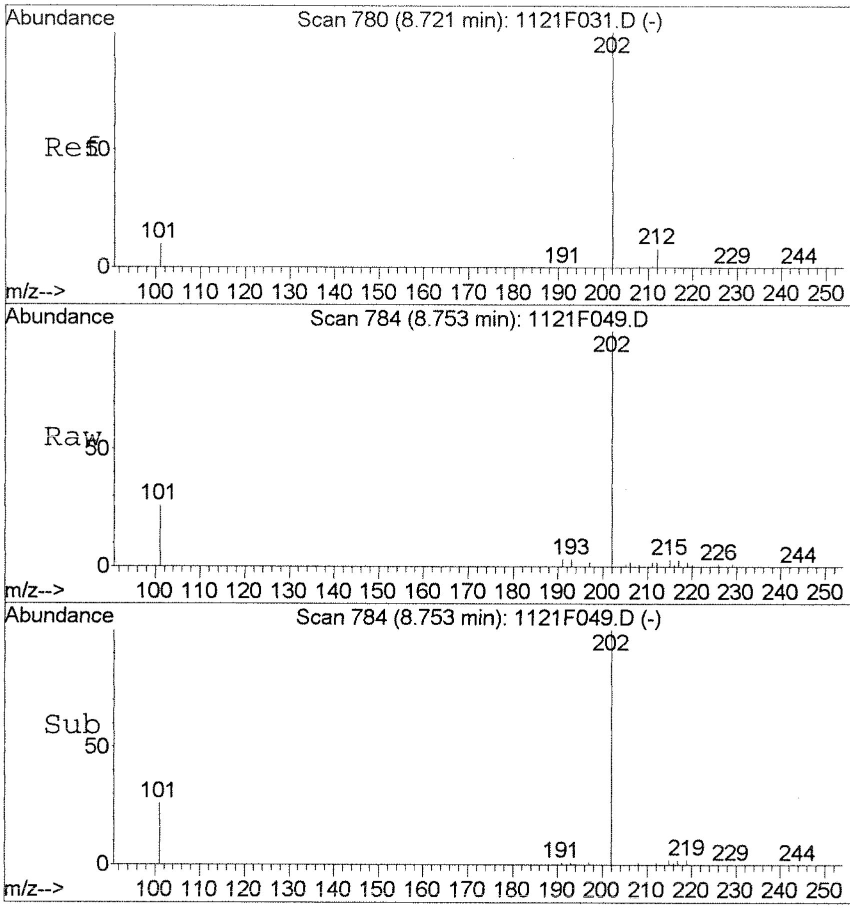


#30
1-Methylphenanthrene
Concen: 1336.32 ng/ml m
RT: 8.24 min Scan# 719
Delta R.T. 0.02 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:192 Resp: 2156024

Ion	Ratio	Lower	Upper
192	100		
191	62.6	29.0	89.0
193	27.8	0.0	45.4

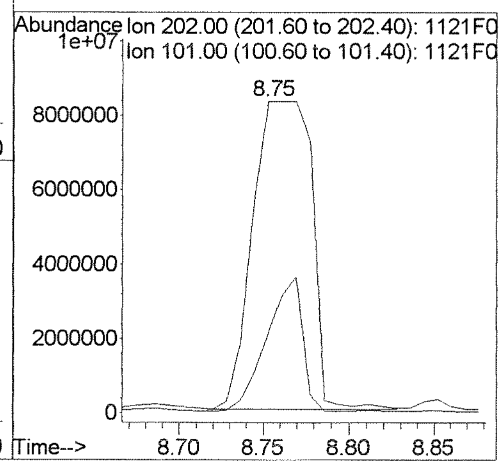


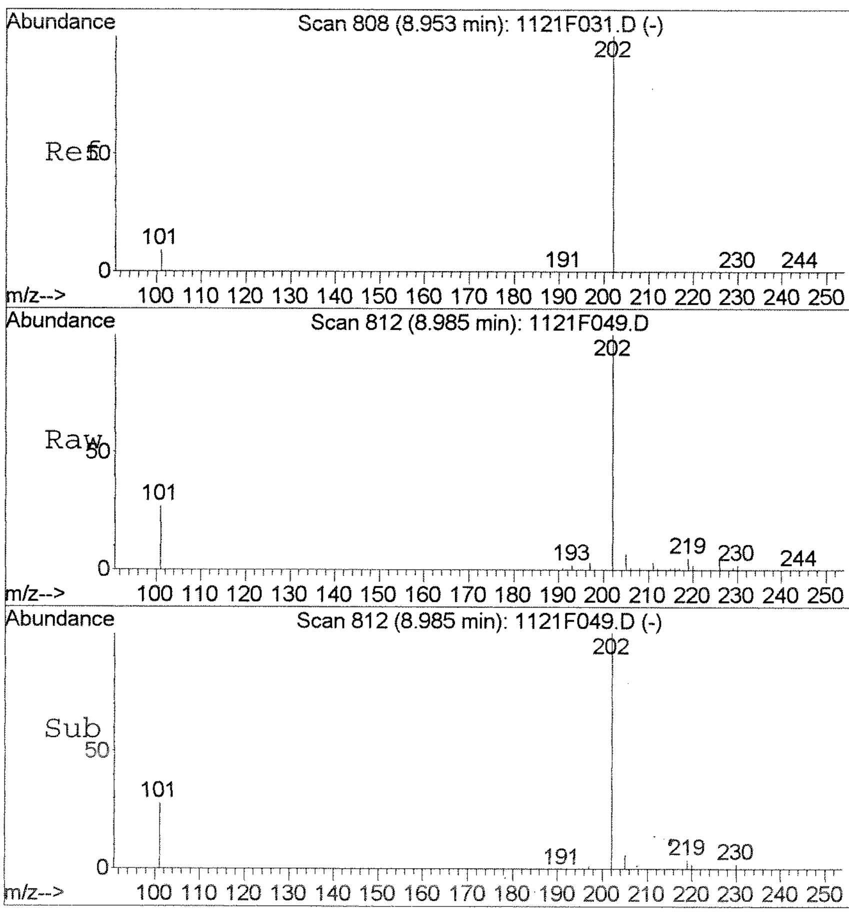


#35
Fluoranthene
Concen: 8140.28 ng/ml
RT: 8.75 min   Scan# 784
Delta R.T.   0.03 min
Lab File: 1121F049.D
Acq: 22 Nov 2008   3:14 am

Tgt Ion:202 Resp:20101556

Ion	Ratio	Lower	Upper
202	100		
101	25.5	0.0	35.8

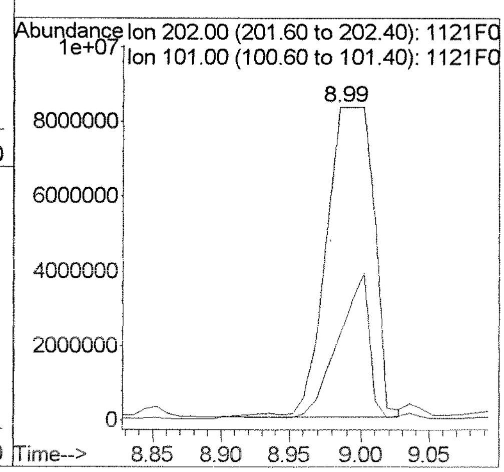


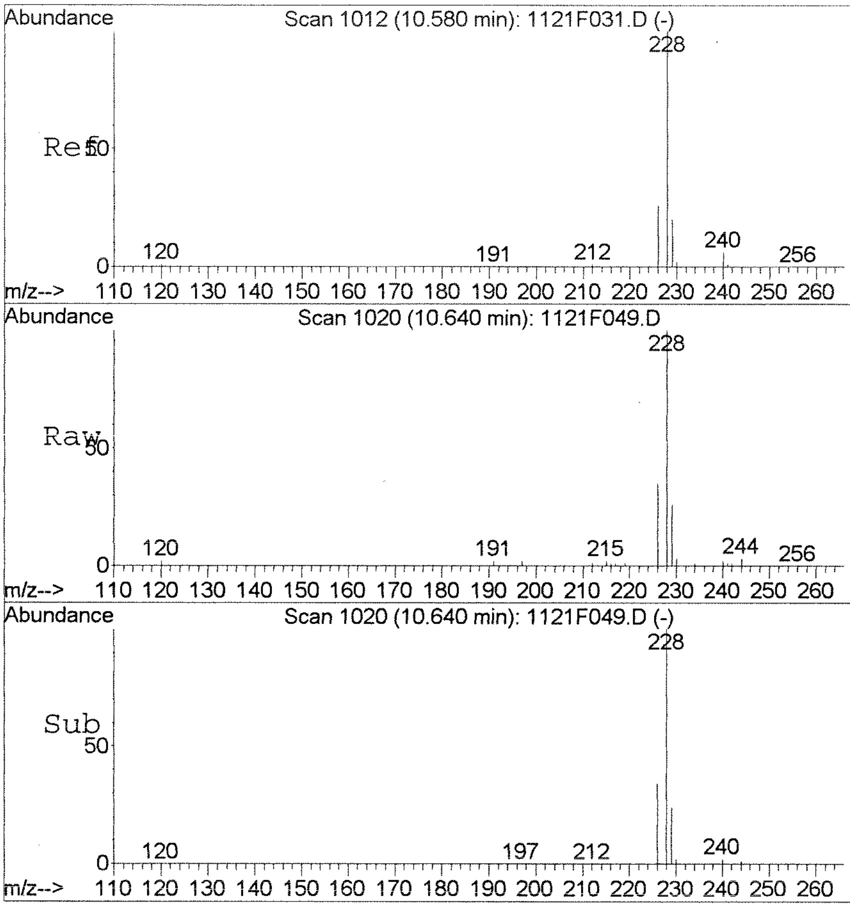


#38
Pyrene
Concen: 7757.26 ng/ml
RT: 8.99 min   Scan# 812
Delta R.T.   0.04 min
Lab File: 1121F049.D
Acq: 22 Nov 2008   3:14 am

Tgt Ion:202 Resp:19345948

Ion	Ratio	Lower	Upper
202	100		
101	27.2	0.0	37.6

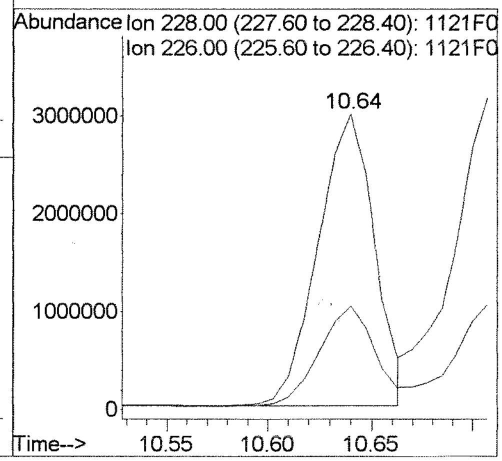


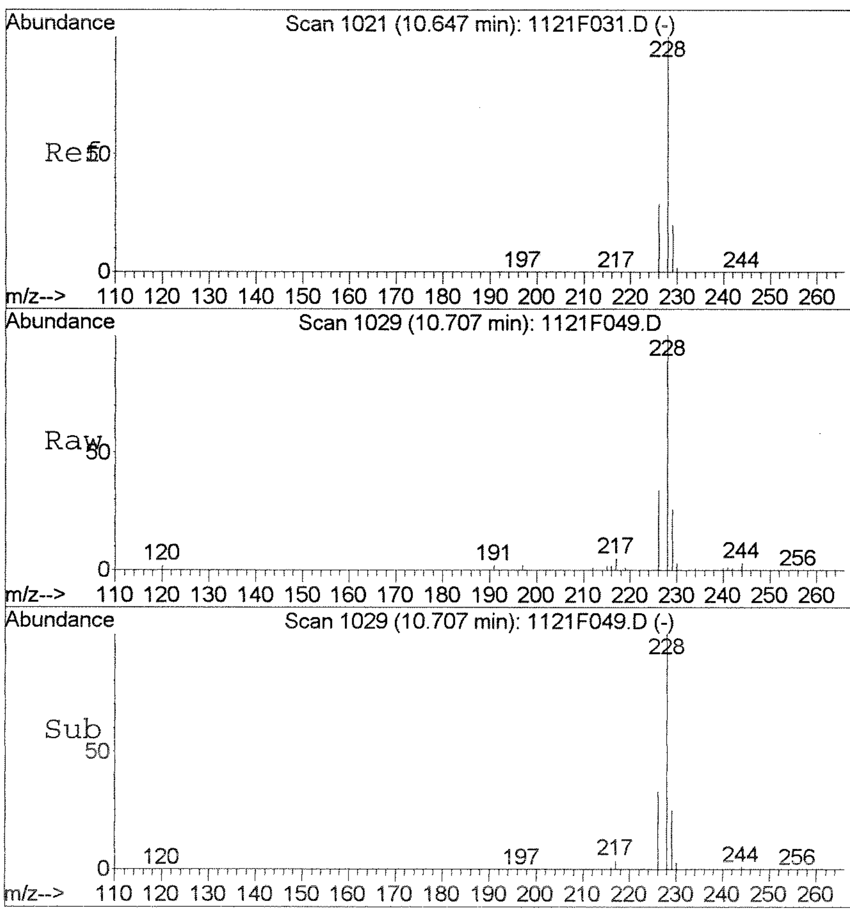


#43
Benz(a)anthracene
Concen: 2469.22 ng/ml
RT: 10.64 min Scan# 1020
Delta R.T. 0.07 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:228 Resp: 5586594

Ion	Ratio	Lower	Upper
228	100		
226	34.4	0.0	57.0

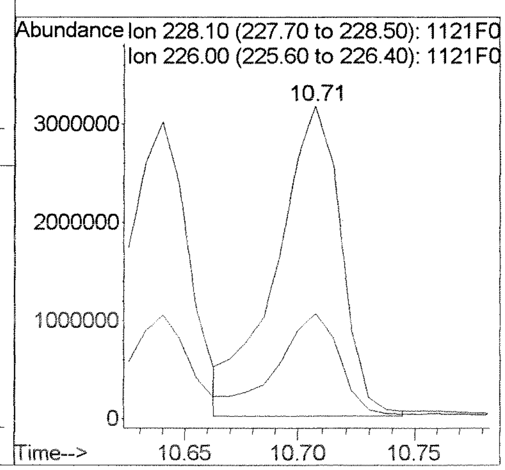


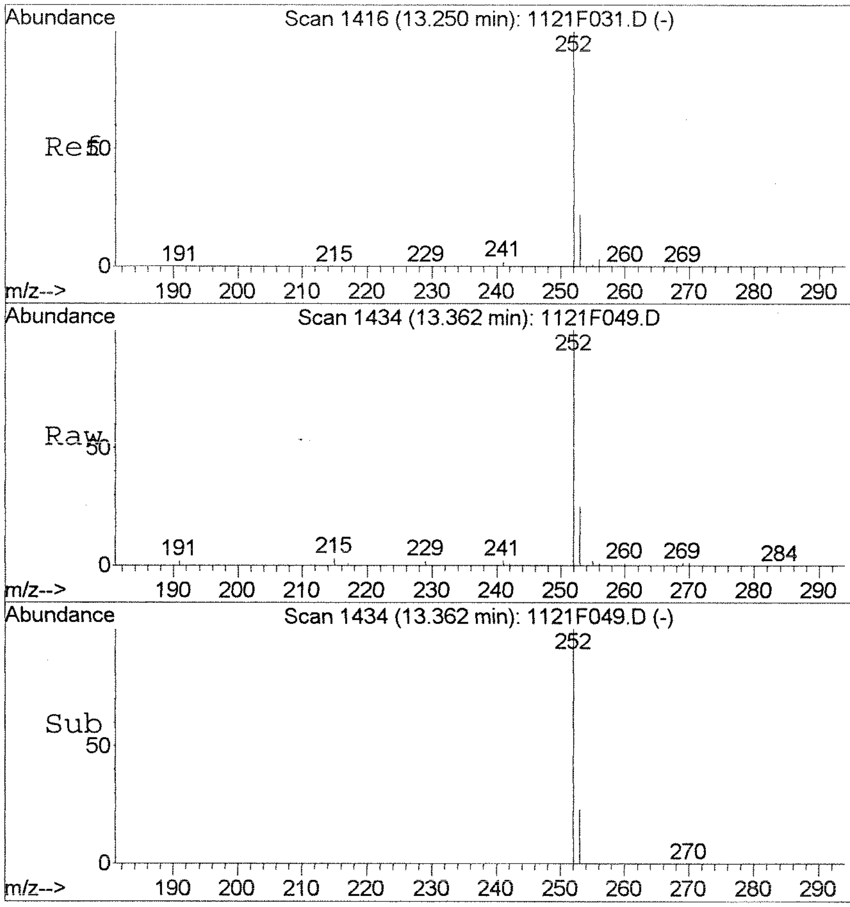


#44
Chrysene
Concen: 2739.46 ng/ml m
RT: 10.71 min Scan# 1029
Delta R.T. 0.07 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:228 Resp: 6087332

Ion	Ratio	Lower	Upper
228	100		
226	33.7	0.0	58.9

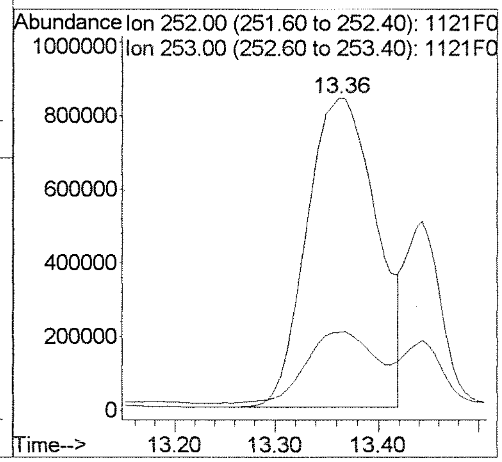


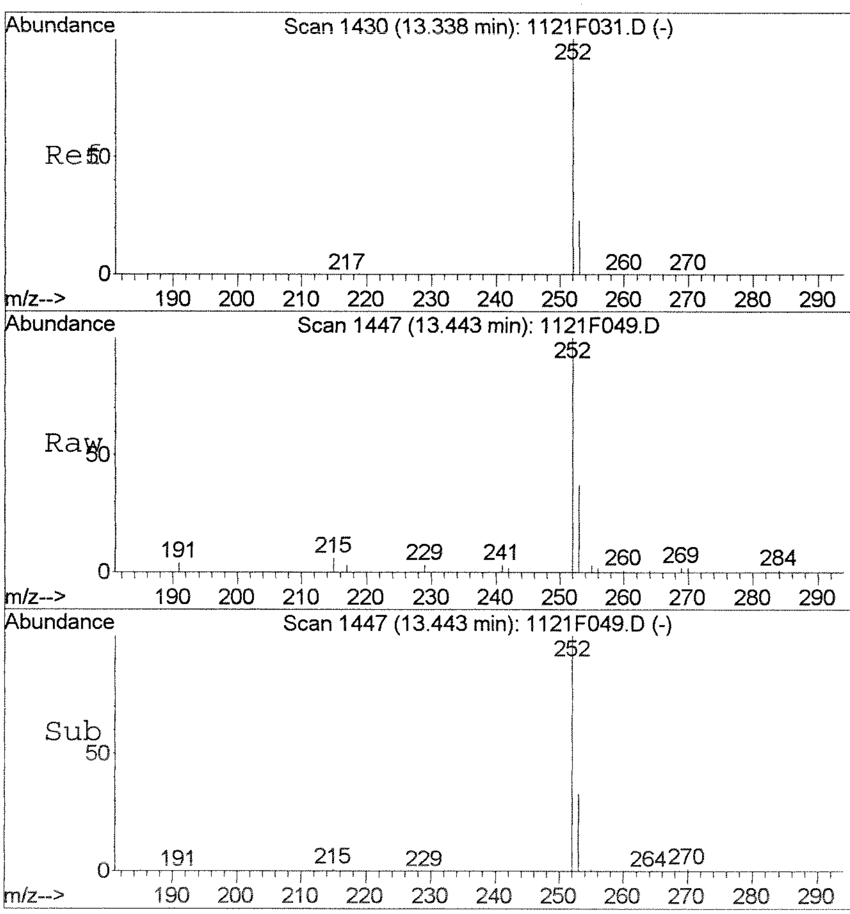


#50
Benzo(b)fluoranthene
Concen: 1819.84 ng/ml
RT: 13.36 min Scan# 1434
Delta R.T. 0.14 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:252 Resp: 3916584

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	52.6

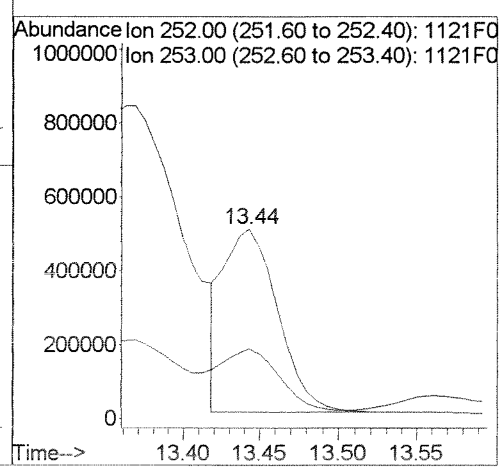


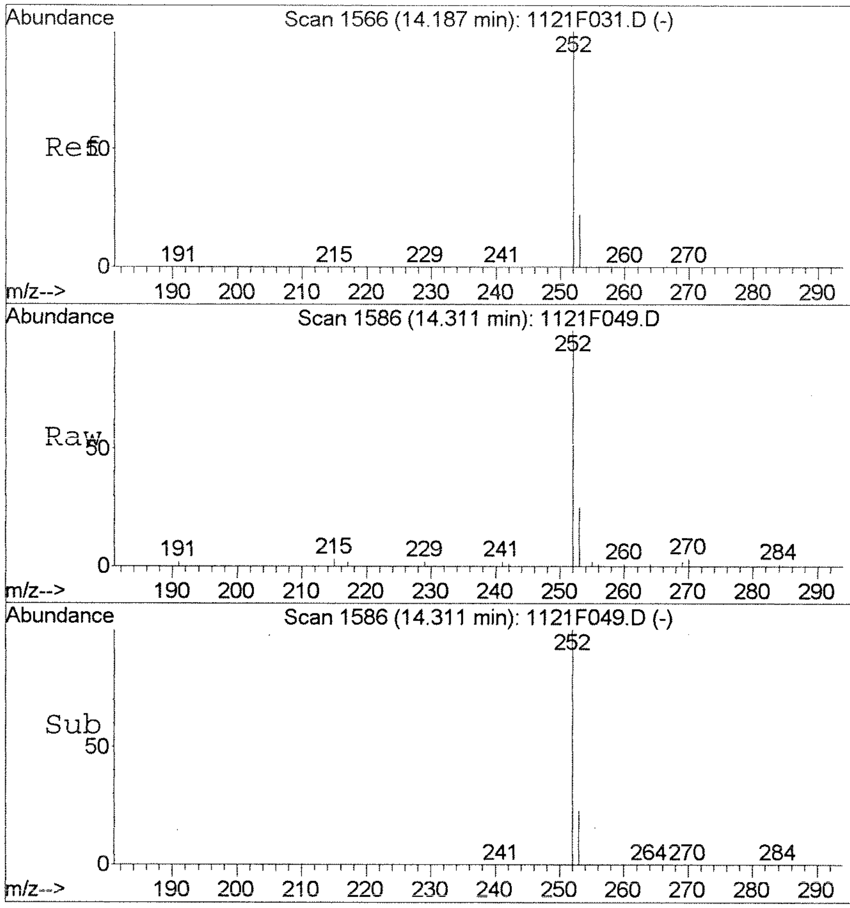


#51
Benzo(k)fluoranthene
Concen: 594.53 ng/ml
RT: 13.44 min Scan# 1447
Delta R.T. 0.13 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:252 Resp: 1229162

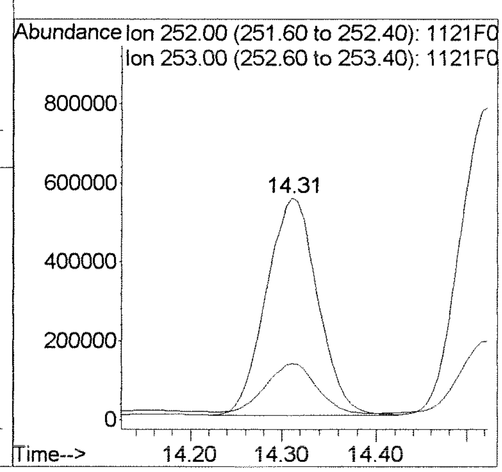
Ion	Ratio	Lower	Upper
252	100		
253	29.7	0.0	52.0

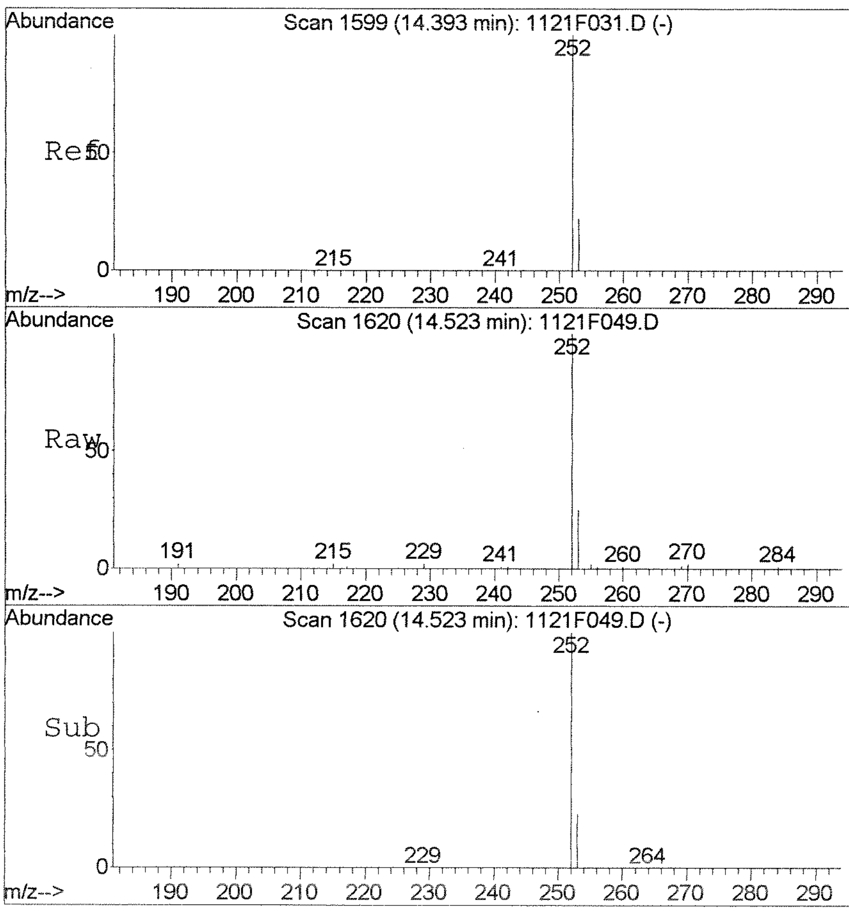




#52
Benzo(e)pyrene
Concen: 1082.84 ng/ml
RT: 14.31 min Scan# 1586
Delta R.T. 0.14 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

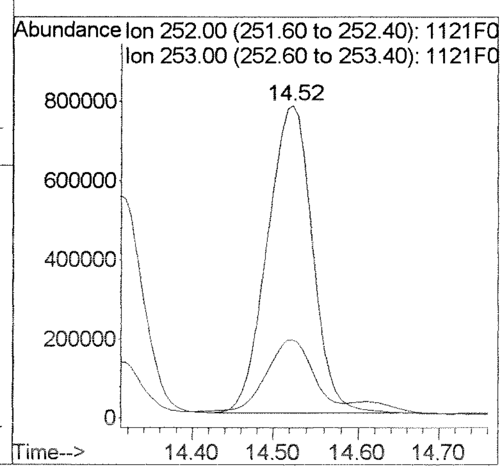
Tgt Ion:252	Resp: 2116917		
Ion	Ratio	Lower	Upper
252	100		
253	22.5	0.0	52.2

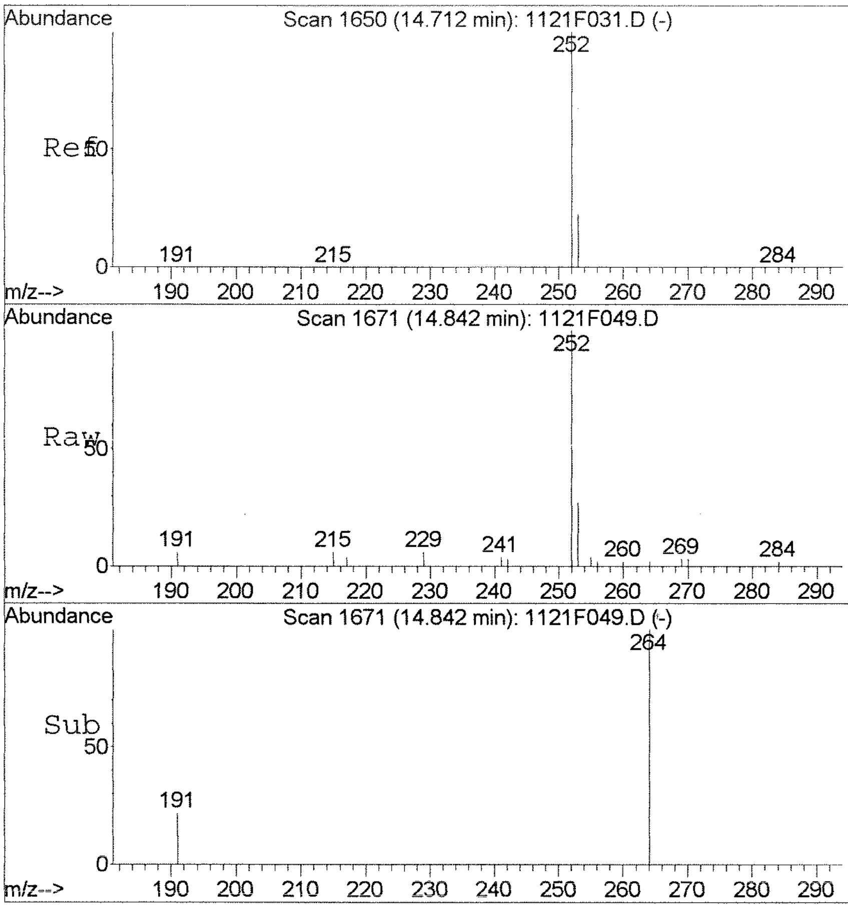




#53
Benzo(a)pyrene
Concen: 1642.89 ng/ml
RT: 14.52 min Scan# 1620
Delta R.T. 0.15 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:252	Resp: 2927470		
Ion	Ratio	Lower	Upper
252	100		
253	23.2	0.0	52.2

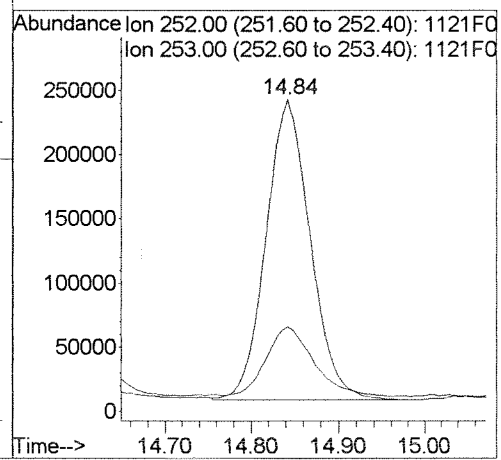


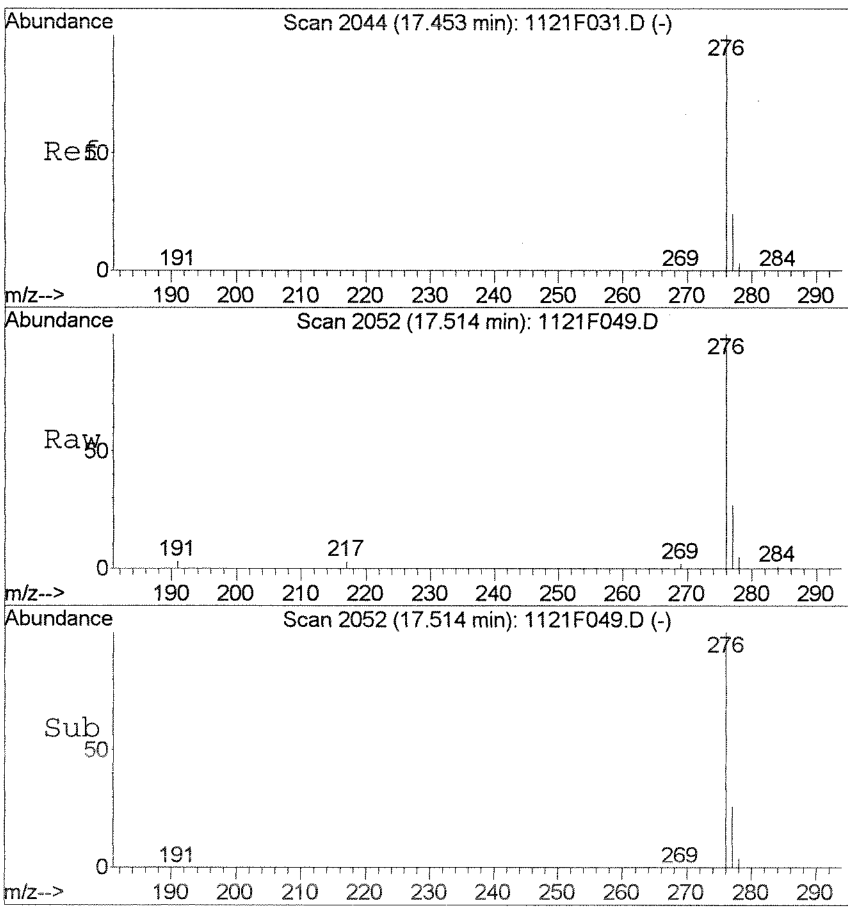


#54
Perylene
Concen: 471.12 ng/ml
RT: 14.84 min Scan# 1671
Delta R.T. 0.15 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:252 Resp: 824675

Ion	Ratio	Lower	Upper
252	100		
253	23.0	0.0	51.5

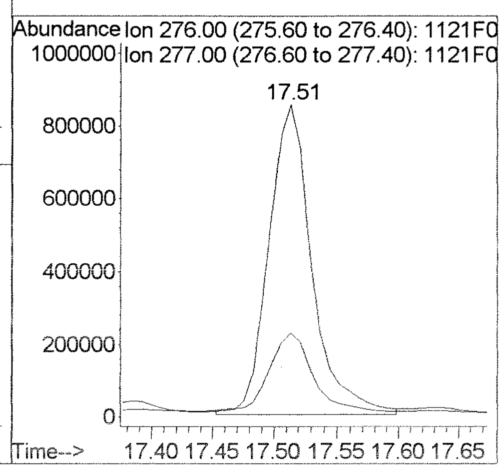


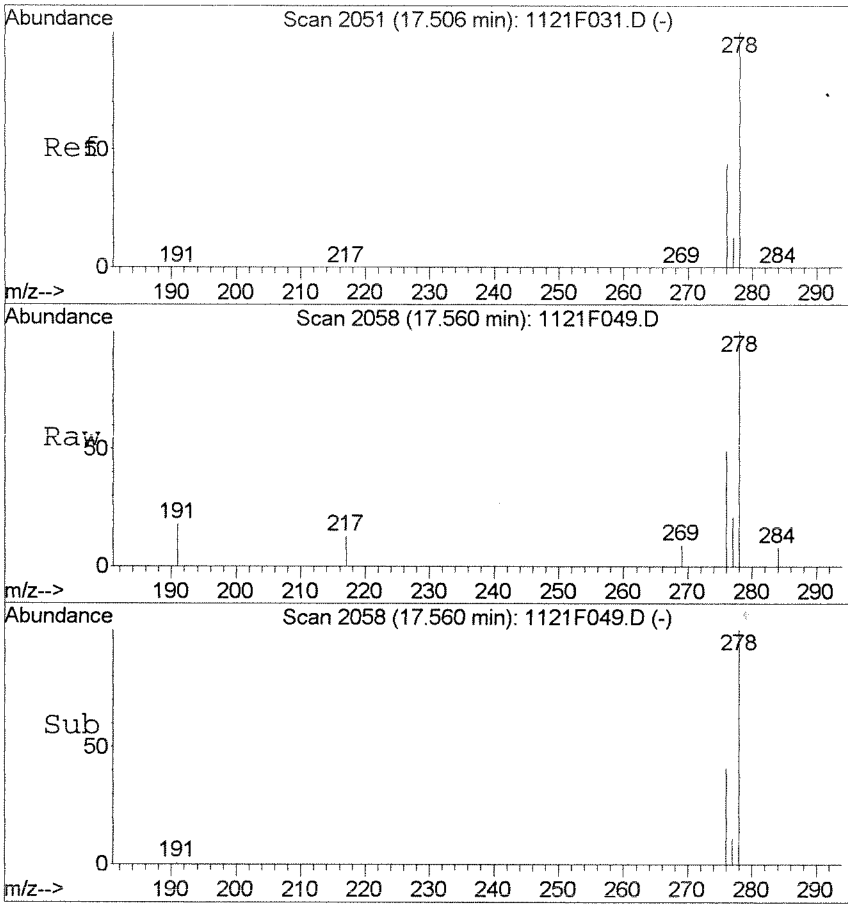


#55
Indeno(1,2,3-cd)pyrene
Concen: 1245.66 ng/ml m
RT: 17.51 min Scan# 2052
Delta R.T. 0.08 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:276 Resp: 2059452

Ion	Ratio	Lower	Upper
276	100		
277	26.9	0.0	54.7

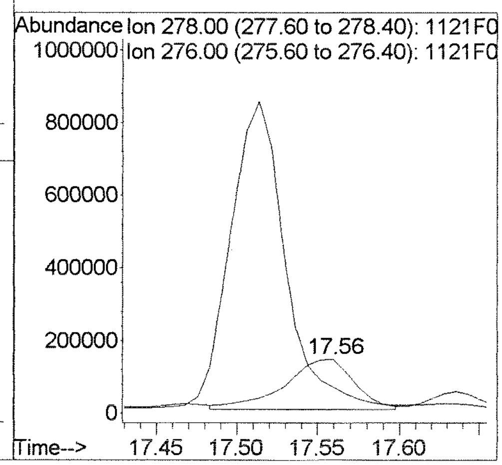


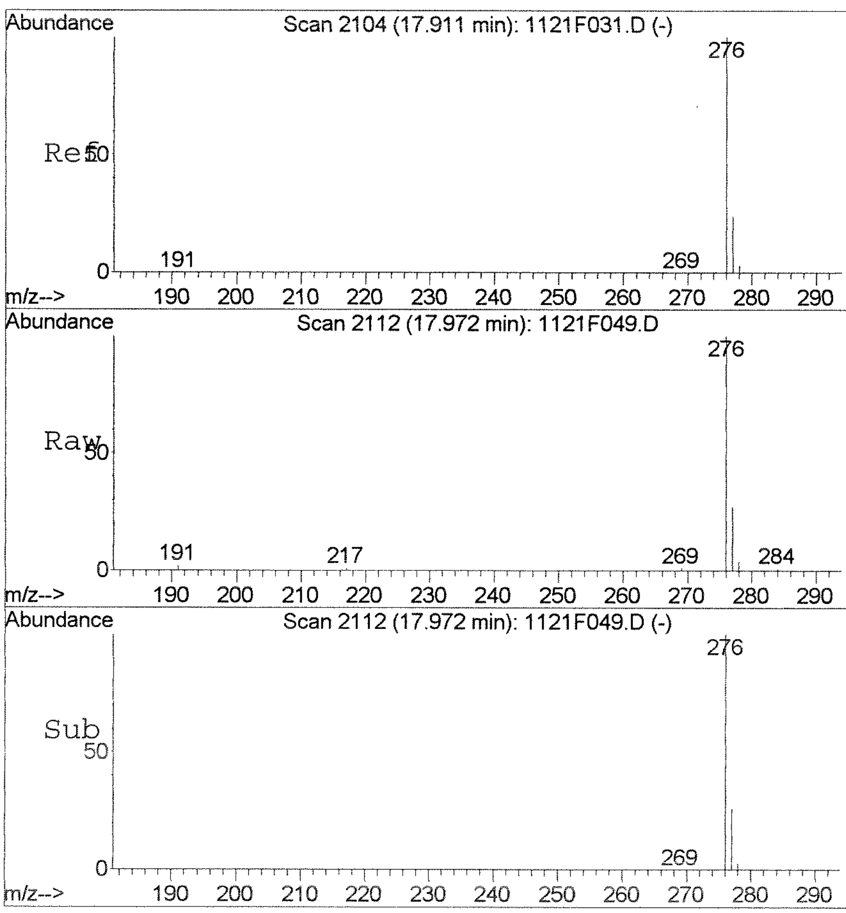


#56
Dibenz(a,h)anthracene
Concen: 236.01 ng/ml m
RT: 17.56 min Scan# 2058
Delta R.T. 0.07 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:278 Resp: 409546

Ion	Ratio	Lower	Upper
278	100		
276	48.6	0.0	59.7

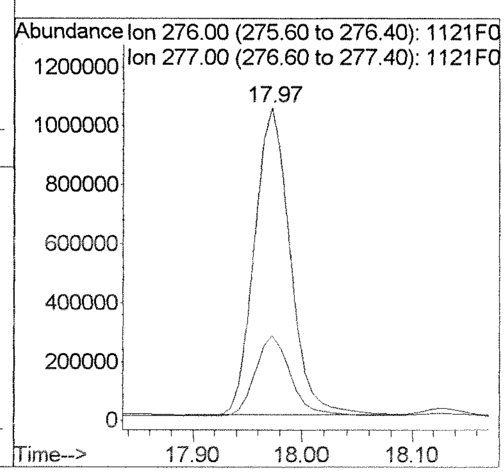




#57
Benzo(g,h,i)perylene
Concen: 1269.08 ng/ml
RT: 17.97 min Scan# 2112
Delta R.T. 0.08 min
Lab File: 1121F049.D
Acq: 22 Nov 2008 3:14 am

Tgt Ion:276 Resp: 2390426

Ion	Ratio	Lower	Upper
276	100		
277	26.1	0.0	54.2



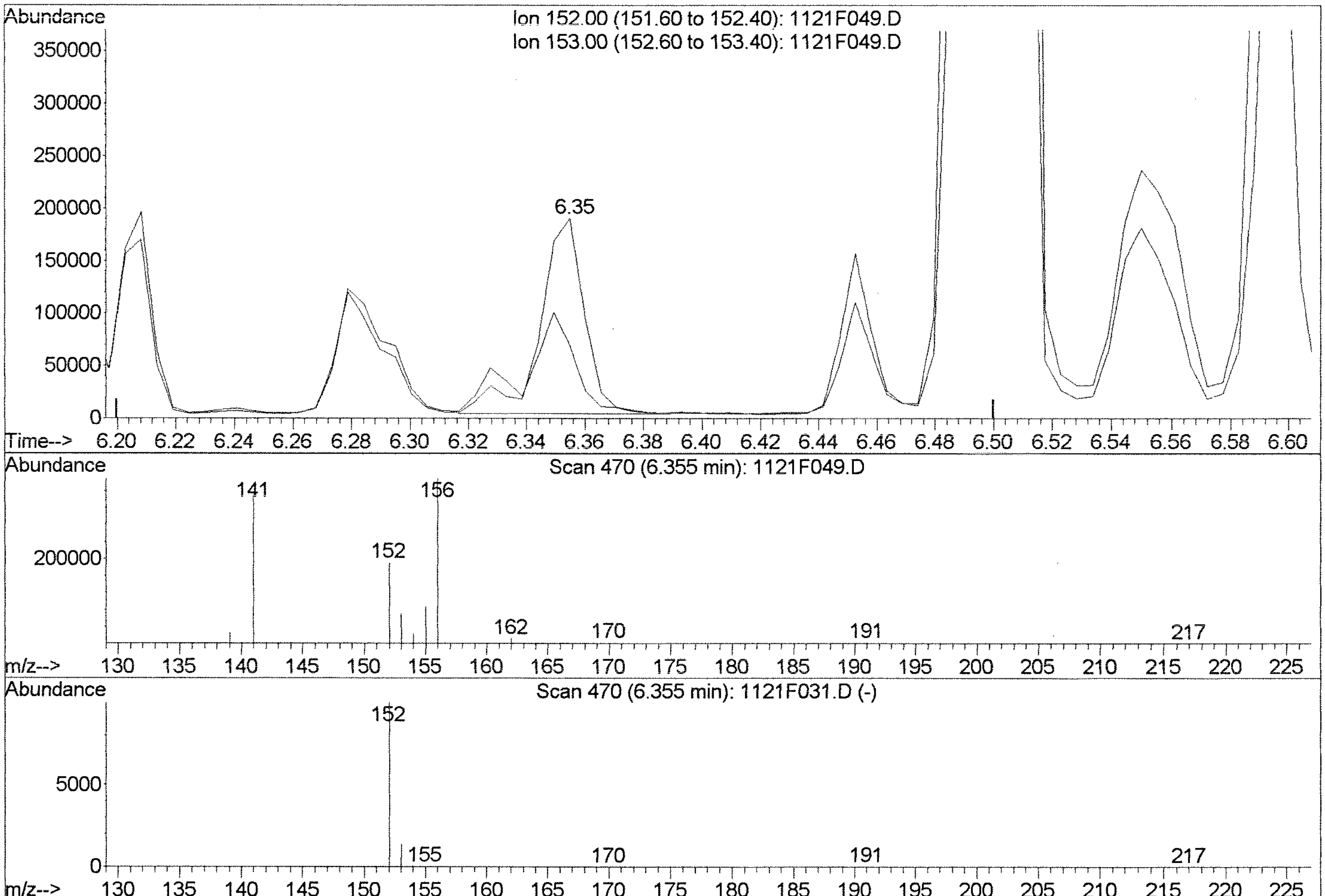
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F049.D
Acq On : 22 Nov 2008 3:14 am
Sample : K0810639-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14 2008

Vial: 46
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F049.D

(11) Acenaphthylene (T)

6.35min 110.84ng/ml

response 196456

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	34.62
0.00	0.00	0.00
0.00	0.00	0.00

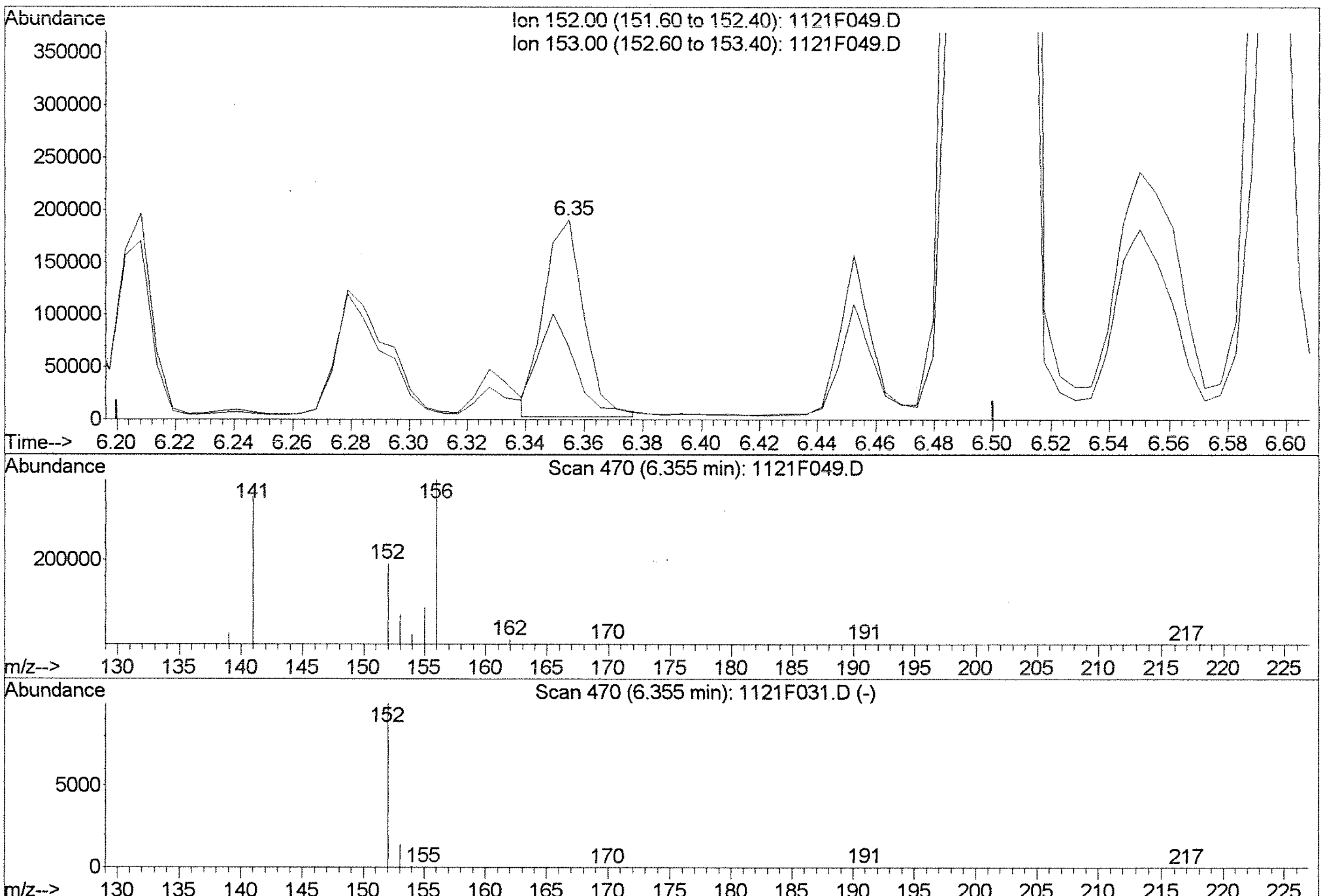
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F049.D
Acq On : 22 Nov 2008 3:14 am
Sample : K0810639-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:59 2008

Vial: 46
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F049.D

(11) Acenaphthylene (T)

6.35min 100.16ng/ml m

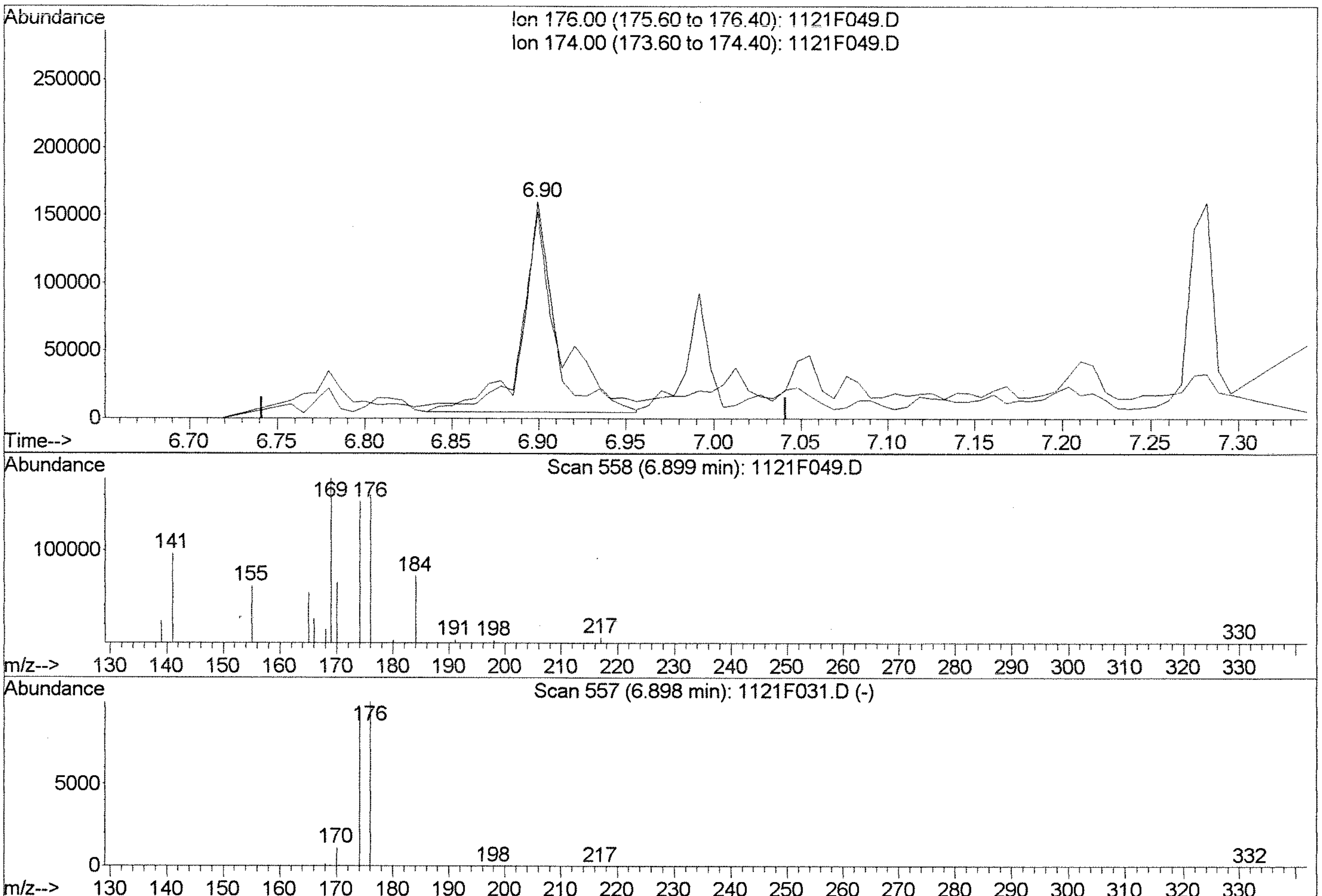
response 177530

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	36.49
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F049.D   Vial: 46
Acq On : 22 Nov 2008 3:14 am   Operator: LWeiskopf
Sample : K0810639-003   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:59 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F049.D

(15) Fluorene-d10 (S)

6.90min 188.85ng/ml

response 201736

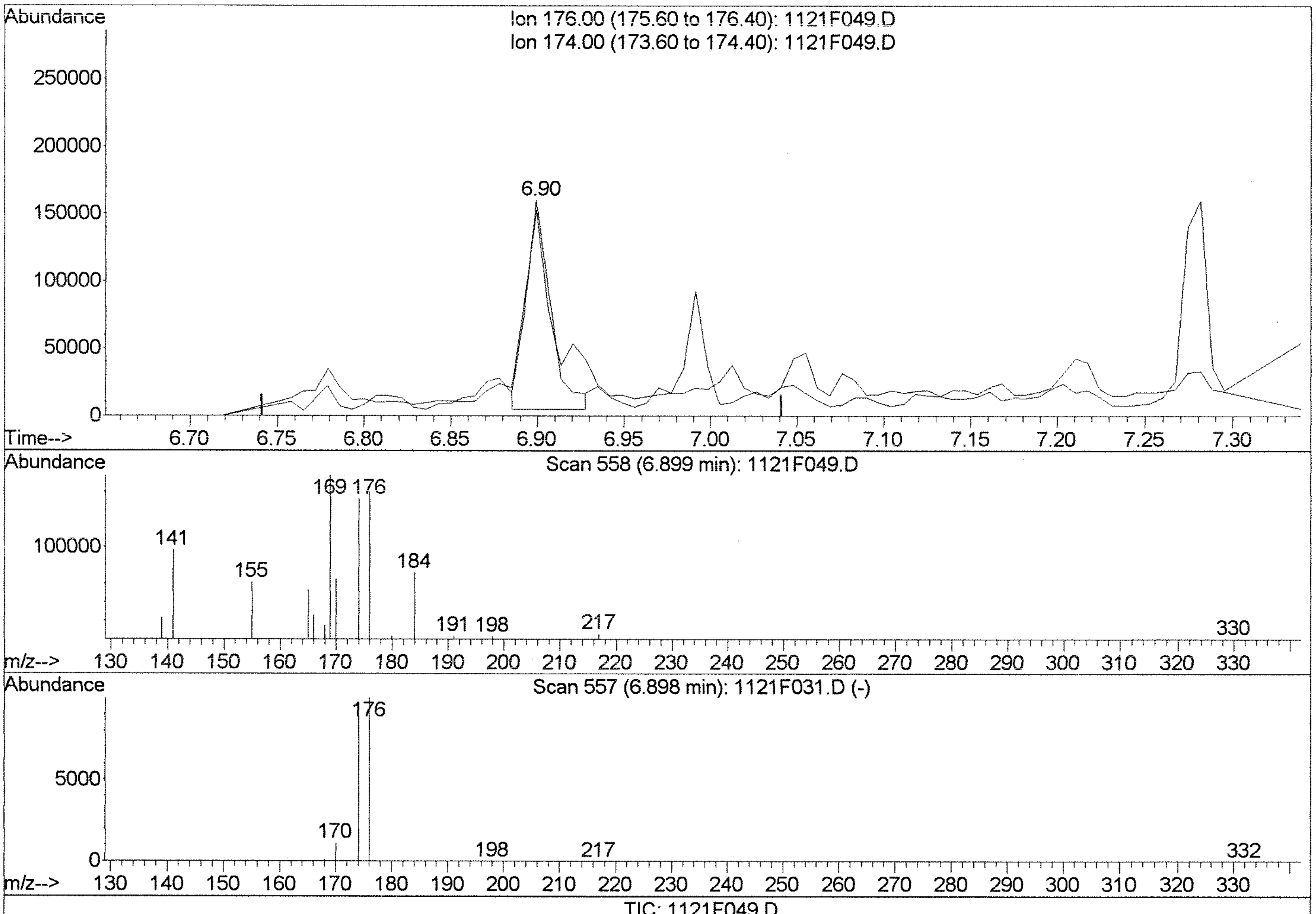
Ion	Exp%	Act%
176.00	100	100
174.00	96.70	92.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F049.D
Acq On : 22 Nov 2008 3:14 am
Sample : K0810639-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:59 2008

Vial: 46
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(15) Fluorene-d10 (S)

6.90min 143.76ng/ml m

response 153571

Ion	Exp%	Act%
176.00	100	100
174.00	96.70	95.45
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/22/08

1121F049.D 1110ALK.M Sat Nov 22 13:59:44 2008

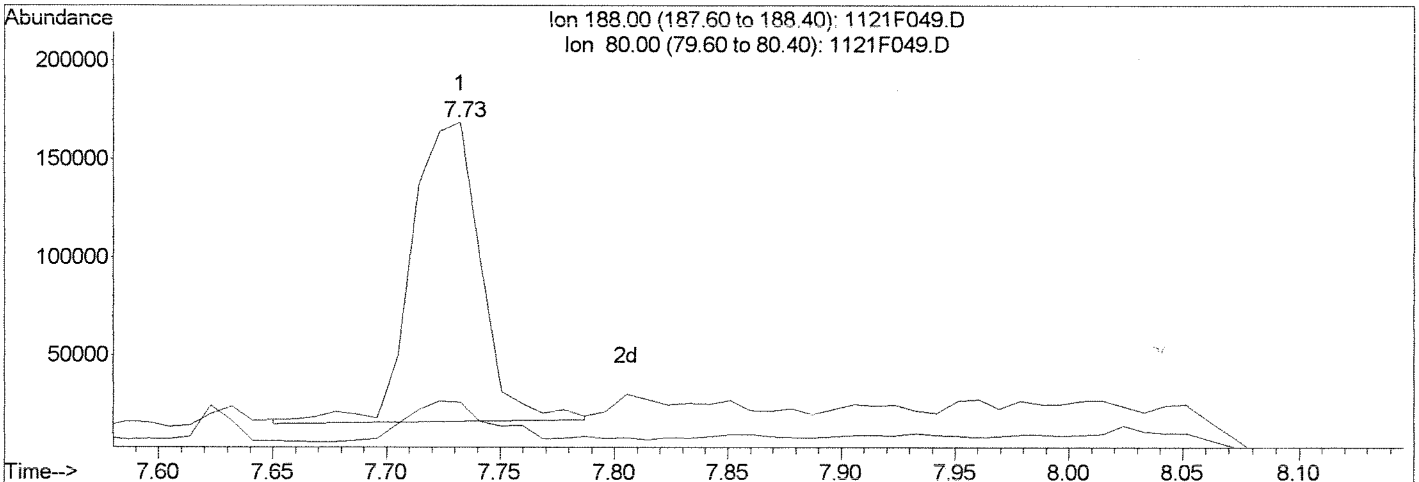
Quantitation Report (Qedit)

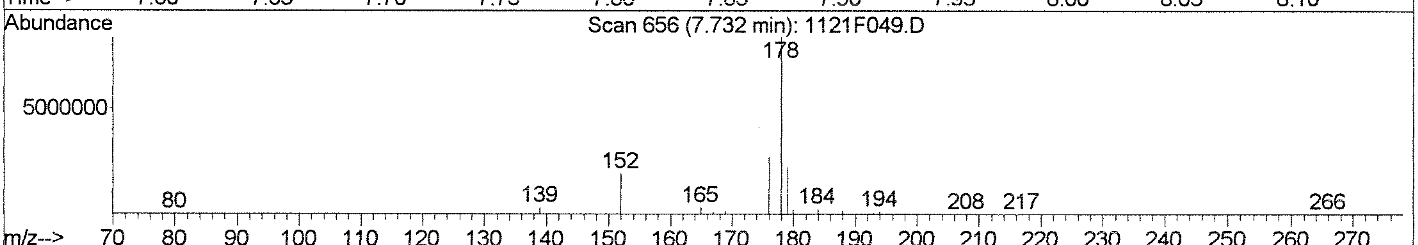
Data File : J:\MS11\DATA\112108\1121F049.D
Acq On : 22 Nov 2008 3:14 am
Sample : K0810639-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:59 2008

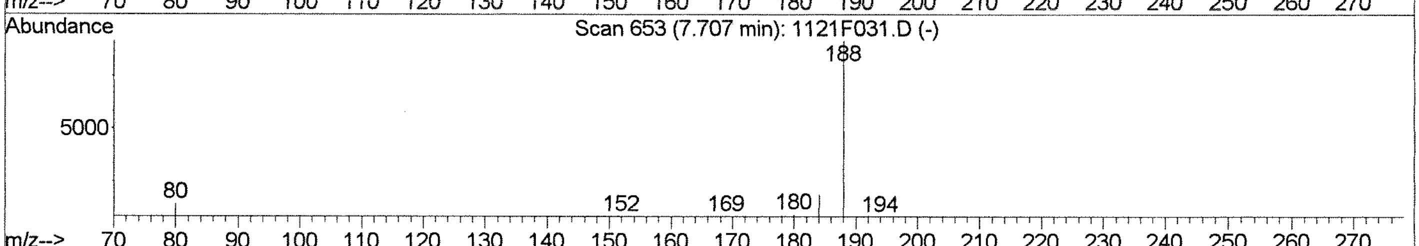
Vial: 46
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration







TIC: 1121F049.D

(22) Phenanthrene-d10 (I)

7.73min 200.00ng/ml

response 322181

Ion	Exp%	Act%
188.00	100	100
80.00	10.80	12.96
0.00	0.00	0.00
0.00	0.00	0.00

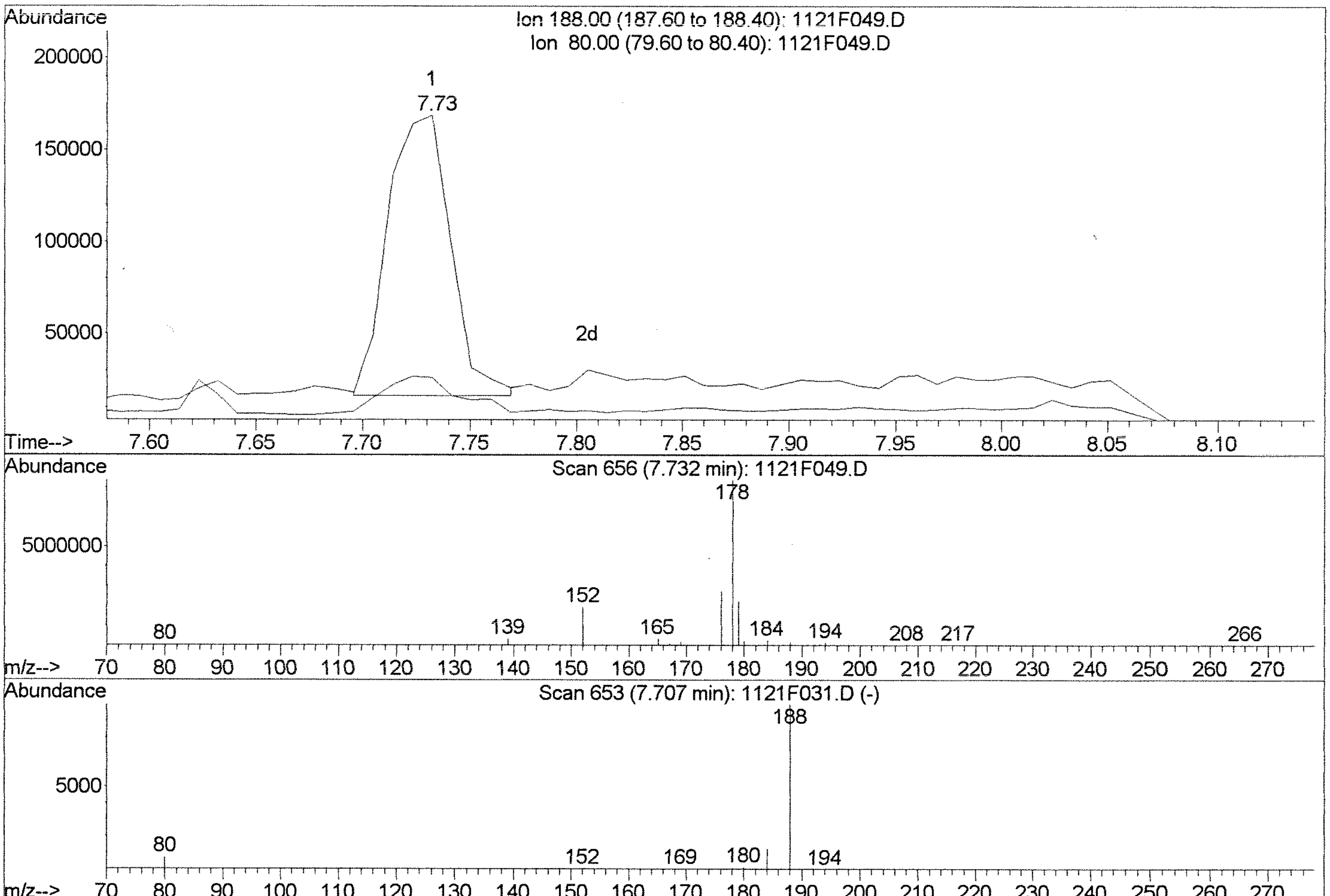
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F049.D
Acq On : 22 Nov 2008 3:14 am
Sample : K0810639-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:59 2008

Vial: 46
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F049.D

(22) Phenanthrene-d10 (I)

7.73min 200.00ng/ml m

response 309278

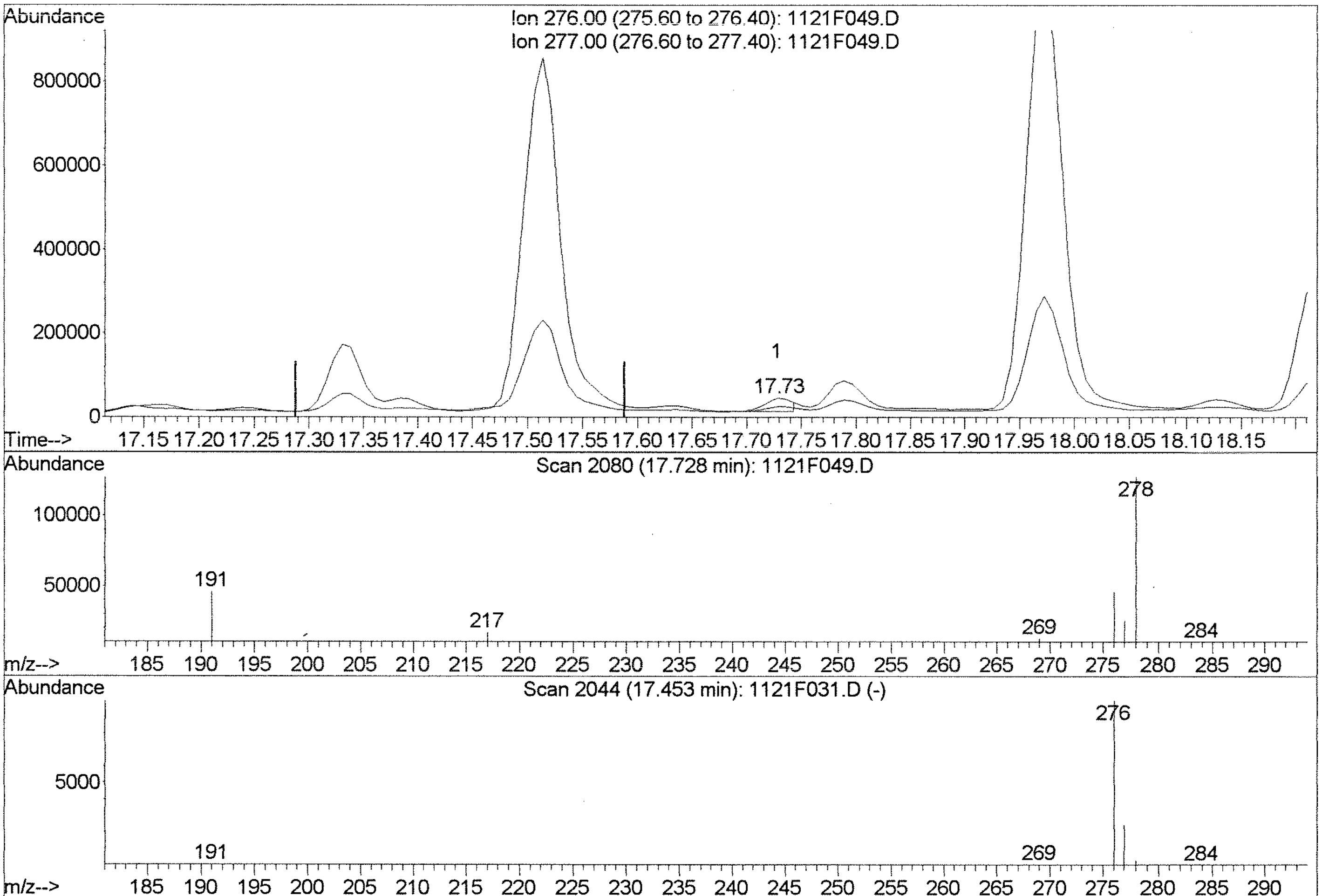
Ion	Exp%	Act%
188.00	100	100
80.00	10.80	15.45
0.00	0.00	0.00
0.00	0.00	0.00

OT 11/22/08

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F049.D Vial: 46
Acq On : 22 Nov 2008 3:14 am Operator: LWeiskopf
Sample : K0810639-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:00 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F049.D

(55) Indeno(1,2,3-cd)pyrene (T)

17.73min 33.91ng/ml

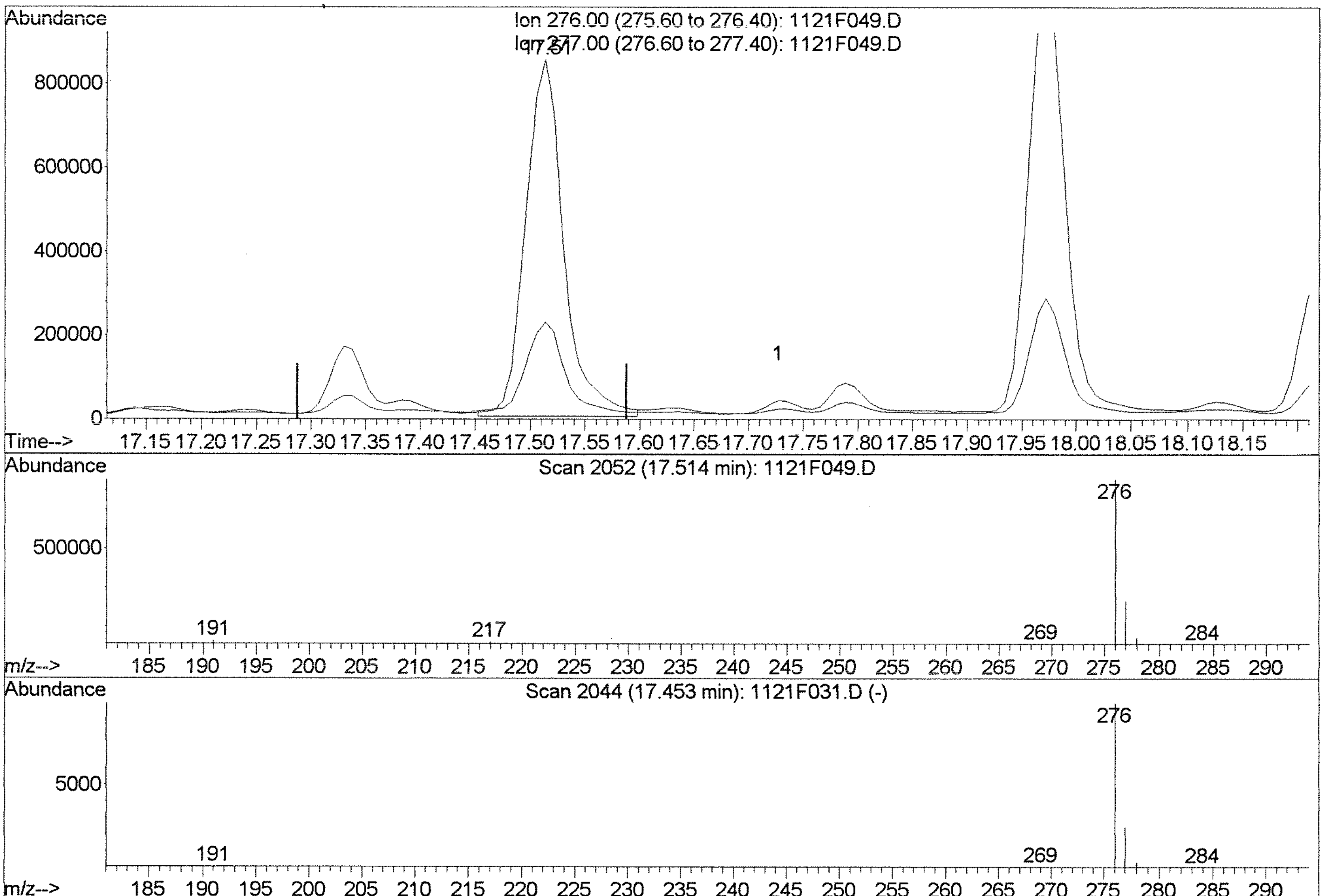
response 56071

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	37.58
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F049.D Vial: 46
Acq On : 22 Nov 2008 3:14 am Operator: LWeiskopf
Sample : K0810639-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:00 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F049.D

(55) Indeno(1,2,3-cd)pyrene (T)

17.51min 1245.66ng/ml m

response 2059452

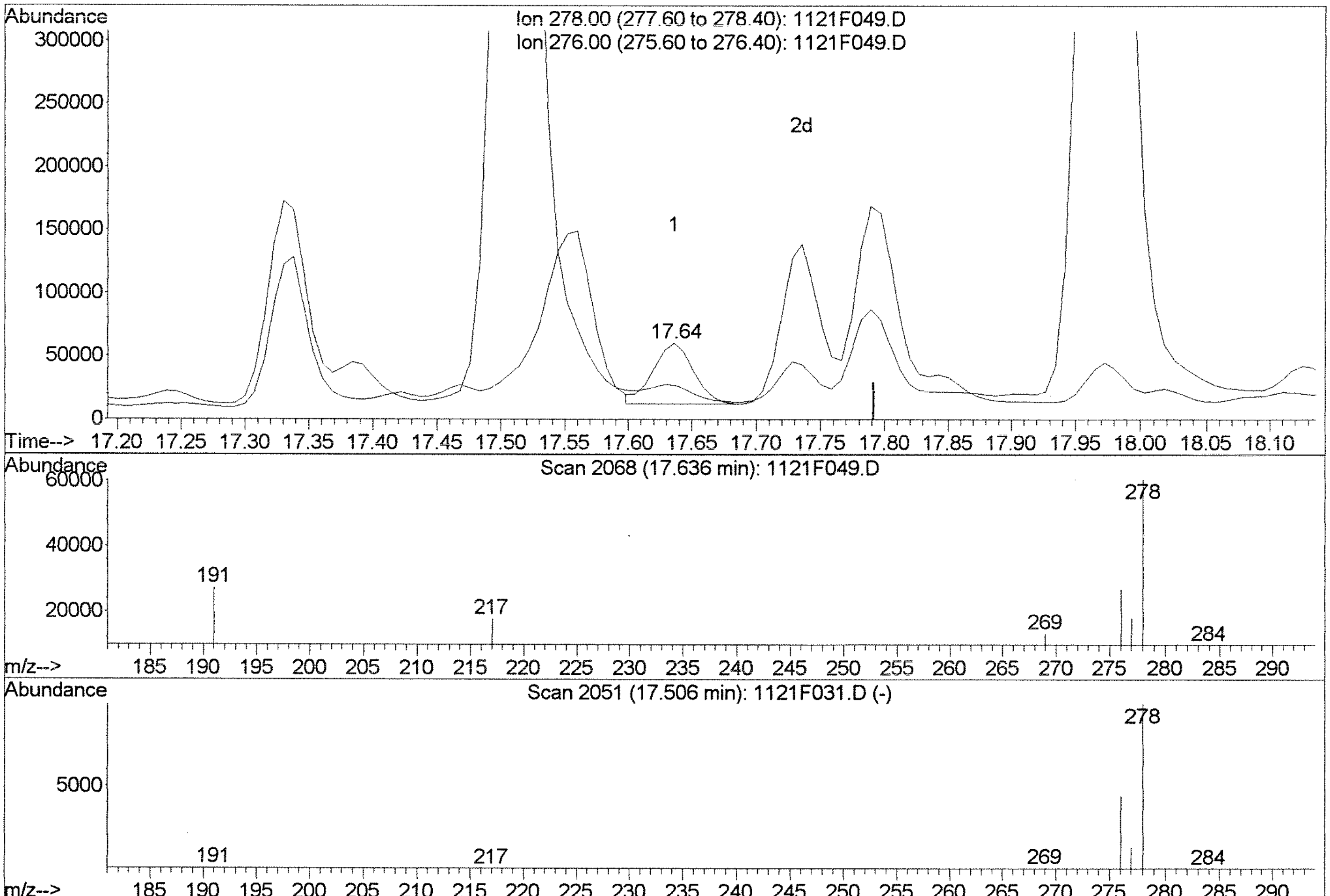
Ion	Exp%	Act%
276.00	100	100
277.00	24.70	26.95
0.00	0.00	0.00
0.00	0.00	0.00

WP 11/24/08

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F049.D Vial: 46
Acq On : 22 Nov 2008 3:14 am Operator: LWeiskopf
Sample : K0810639-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:00 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F049.D

(56) Dibenz(a,h)anthracene (T)

17.64min 59.98ng/ml

response 104091

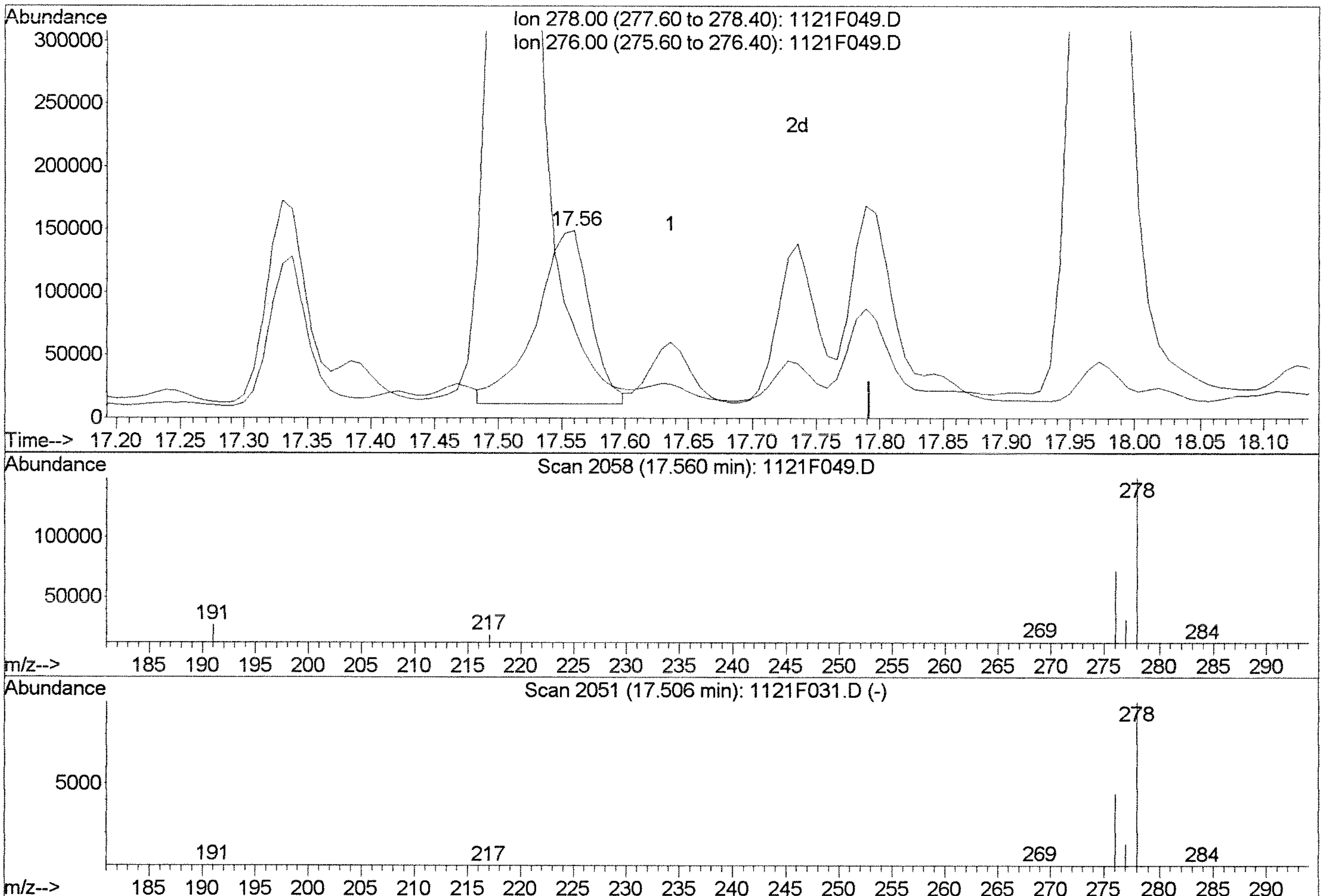
Ion	Exp%	Act%
278.00	100	100
276.00	29.70	27.52
0.00	0.00	0.00
0.00	0.00	0.00

1121F049.D 1110ALK.M Sat Nov 22 14:00:41 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F049.D Vial: 46
Acq On : 22 Nov 2008 3:14 am Operator: LWeiskopf
Sample : K0810639-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:00 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(56) Dibenz(a,h)anthracene (T)

17.56min 236.01ng/ml m

response 409546

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	48.62
0.00	0.00	0.00
0.00	0.00	0.00

WP RW 11/22/08

1121F049.D 1110ALK.M Sat Nov 22 14:00:45 2008

Exception Report

Data File:	J:\MS11\DATA\112208\1122F044.D		**Date Acquired:**	11/23/2008 03:05
Lab ID:	K0810639-003		**Date Quantitated:**	11/23/2008 11:23
RunType:	DL		**Batch ID:**	KWG0812625
Matrix:	SEDIMENT		**Analysis Method:**	8270C SIM
			ListJoinID:	LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	Terphenyl-d14	165	24	141	NR

Primary Review: [signature] 11/24/08

Secondary Review: [signature] 11/30/08

Printed: 11/23/2008 13:28:27

u:\Stealth\Crystal.rpt\except2.rpt

Page 1 of 1

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812625	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776067	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112208\1122F034.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112208\1122F044.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 03:05	**Quant Date:**	11/23/2008 11:23	**Vial:**	37
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-003			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	0.00	136	227669	200.00	OK
2	Acenaphthene-d10	6.45	0.00	164	126980	200.00	OK
3	Phenanthrene-d10	7.69	0.00	188	209850	200.00	OK
4	Chrysene-d12	10.57	0.00	240	239440	200.00	OK
5	Perylene-d12	14.56	0.01	264	267713	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	5547m	6.43	64	10-128	OK	NR
3	Fluoranthene-d10	8.70	0.00	0.00	212	8548m	5.97	60	29-121	OK	NR
4	Terphenyl-d14	9.08	0.00	0.00	244	20494	16.53	165	24-141	*	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.06		0.00	128	14518	10.47	210	D	NR
1	2-Methylnaphthalene	5.61		0.00	142	13100	13.55	270	D	NR
2	Acenaphthylene	6.34		0.00	152	11060	7.72	150	D	NR
2	Acenaphthene	6.48		0.00	154	449429	516.53	10000	D	
2	Dibenzofuran	6.63		0.00	168	252938	193.25	3800	D	
2	Fluorene	6.91		0.00	166	394256	377.44	7400	D	
3	Phenanthrene	7.71		0.00	178	2324428	1,576	31000	D	
3	Anthracene	7.75		0.00	178	430265	299.38	5900	D	
3	Fluoranthene	8.71	0.01	0.00	202	1400917	836.11	16000	D	
4	Pyrene	8.94		0.00	202	1257498	698.12	14000	D	
4	Benz(a)anthracene	10.55		0.00	228	201070	123.04	2400	D	
4	Chrysene	10.62		0.00	228	214591	133.71	2600	D	
5	Benzo(b)fluoranthene	13.21	0.01	0.00	252	143093	77.45	1500	D	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112208\1122F044.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 03:05	**Quant Date:**	11/23/2008 11:23	**Vial:**	37
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-003			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.29		0.00	252	52578	29.62	580	D	NR
5	Benzo(a)pyrene	14.34	0.01	0.00	252	105913	69.24	1400	D	NR
5	Indeno(1,2,3-cd)pyrene	17.42		0.00	276	70647	49.78	980	D	NR
5	Dibenz(a,h)anthracene	17.47		0.00	278	12833**m**	8.61	170	D	NR
5	Benzo(g,h,i)perylene	17.87		0.00	276	98520	60.93	1200	D	NR

Prep Amount:	15.38 g	**Dilution:**	20.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	66.2 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F044.D Vial: 37
Acq On : 23 Nov 2008 3:05 am Operator: LWeiskopf
Sample : K0810639-003DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:10:47 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

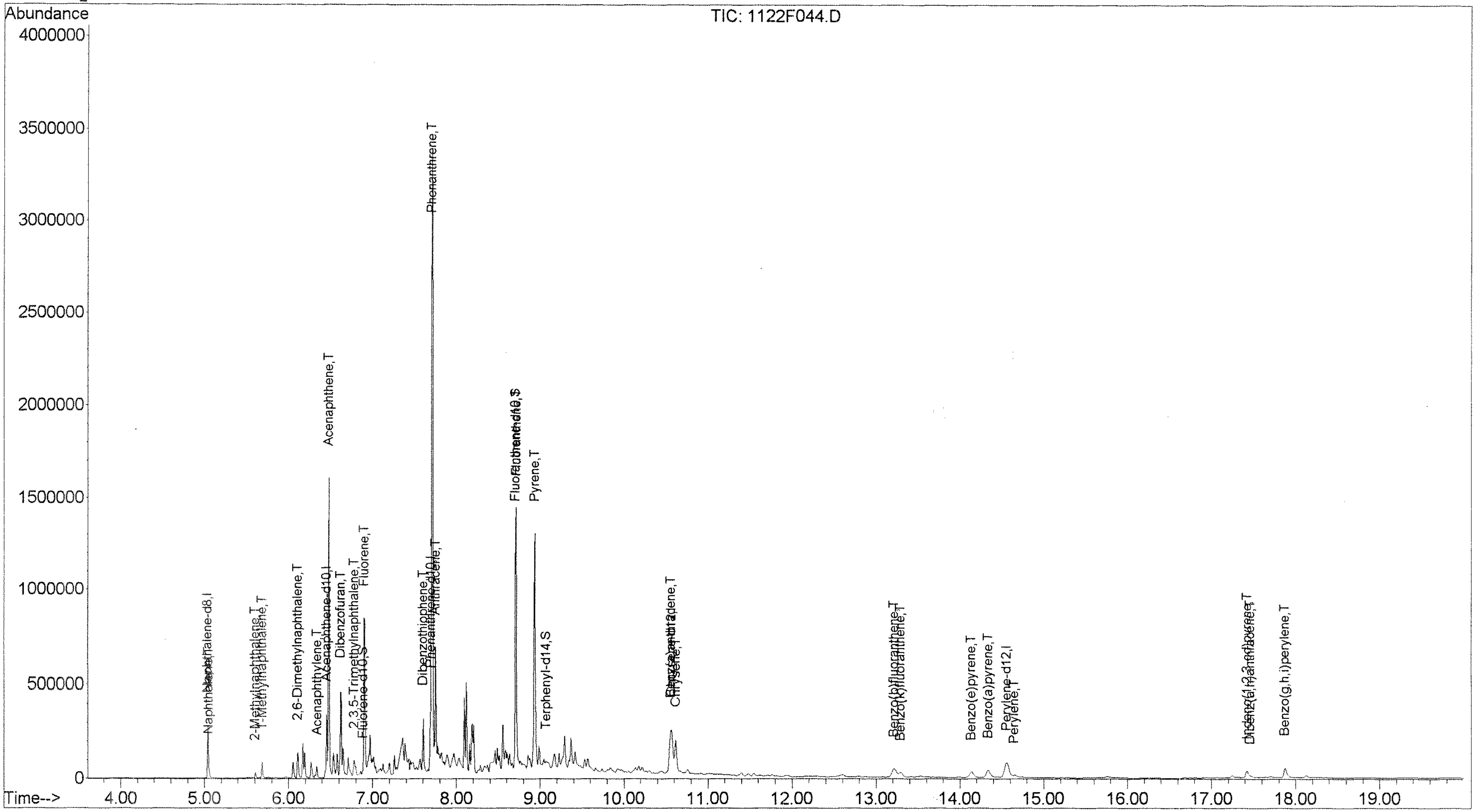
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.04	136	227669	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.45	164	126980	200.00	ng/ml	-0.01
22) Phenanthrene-d10	7.69	188	209850	200.00	ng/ml	-0.01
37) Chrysene-d12	10.57	240	239440	200.00	ng/ml	-0.01
49) Perylene-d12	14.56	264	267713	200.00	ng/ml	-0.03
System Monitoring Compounds						
15) Fluorene-d10	6.88	176	5547m	6.43	ng/ml	-0.01
Spiked Amount 200.000			Recovery =	3.21%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.70	212	8548m	5.97	ng/ml	0.00
Spiked Amount 200.000			Recovery =	2.98%		
42) Terphenyl-d14	9.08	244	20494	16.53	ng/ml	-0.02
Spiked Amount 200.000			Recovery =	8.27%		
Target Compounds						Qvalue
2) Naphthalene	5.06	128	14518	10.47	ng/ml	98
3) 2-Methylnaphthalene	5.61	142	13100	13.55	ng/ml	88
4) 1-Methylnaphthalene	5.69	142	36633	42.31	ng/ml	95
6) 2,6-Dimethylnaphthalene	6.11	156	58692	69.52	ng/ml	99
11) Acenaphthylene	6.34	152	11060	7.72	ng/ml	46
12) Acenaphthene	6.48	154	449429	516.53	ng/ml	93
13) Dibenzofuran	6.63	168	252938	193.25	ng/ml	69
14) 2,3,5-Trimethylnaphthalene	6.79	170	50397	65.86	ng/ml	85
16) Fluorene	6.91	166	394256	377.44	ng/ml	98
23) Dibenzothiophene	7.61	184	182526	126.56	ng/ml	98
27) Phenanthrene	7.71	178	2324428	1575.83	ng/ml	97
28) Anthracene	7.75	178	430265	299.38	ng/ml	98
35) Fluoranthene	8.71	202	1400917	836.11	ng/ml	95
38) Pyrene	8.94	202	1257498	698.12	ng/ml	94
43) Benz(a)anthracene	10.55	228	201070	123.04	ng/ml	93
44) Chrysene	10.62	228	214591	133.71	ng/ml	98
50) Benzo(b)fluoranthene	13.21	252	143093	77.45	ng/ml	98
51) Benzo(k)fluoranthene	13.29	252	52578	29.62	ng/ml	97
52) Benzo(e)pyrene	14.14	252	83678	49.86	ng/ml	99
53) Benzo(a)pyrene	14.34	252	105913	69.24	ng/ml	98
54) Perylene	14.65	252	28246	18.80	ng/ml	97
55) Indeno(1,2,3-cd)pyrene	17.42	276	70647	49.78	ng/ml	100
56) Dibenz(a,h)anthracene	17.47	278	12833m	8.61	ng/ml	
57) Benzo(g,h,i)perylene	17.87	276	98520	60.93	ng/ml	98

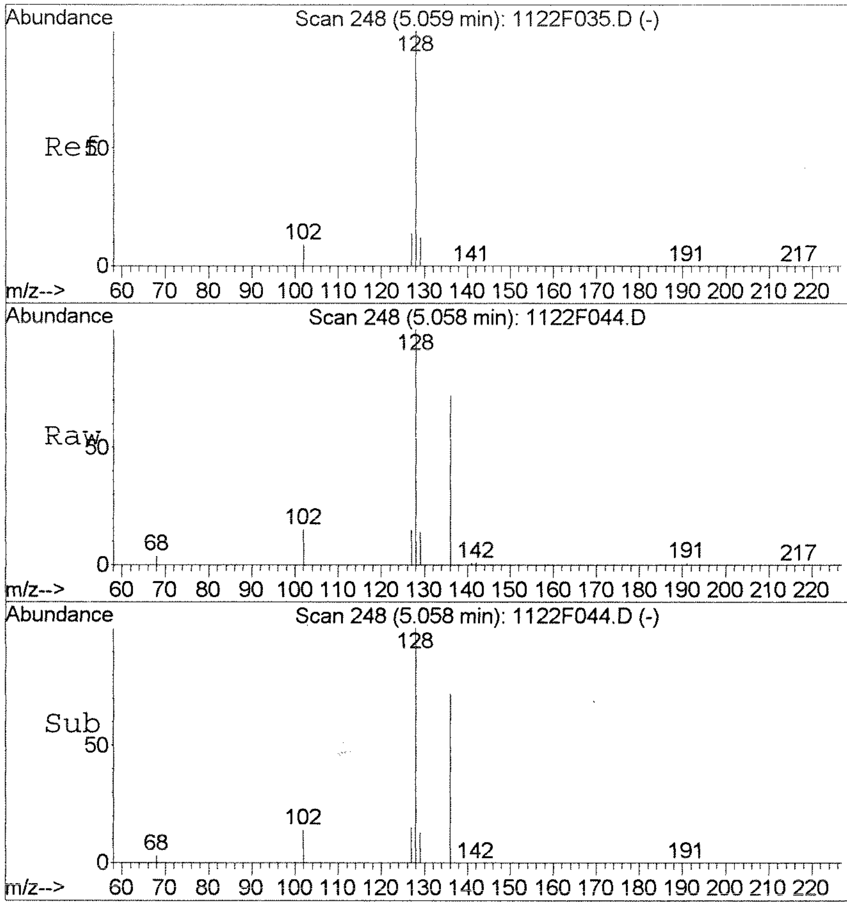
(#) = qualifier out of range (m) = manual integration

Quantitation Report   (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F044.D   Vial: 37
Acq On : 23 Nov 2008   3:05 am   Operator: LWeiskopf
Sample : K0810639-003DIL 20X   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:23 2008   Quant Results File: 1110ALK.RES

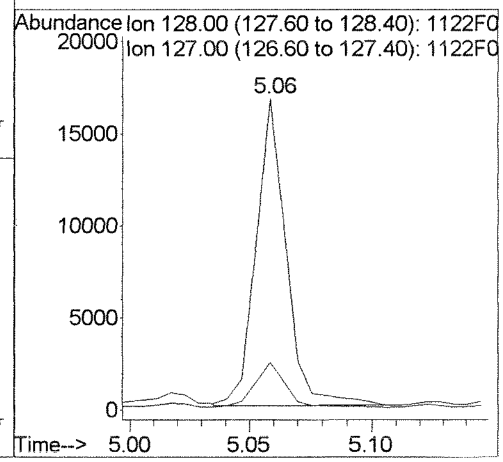
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration

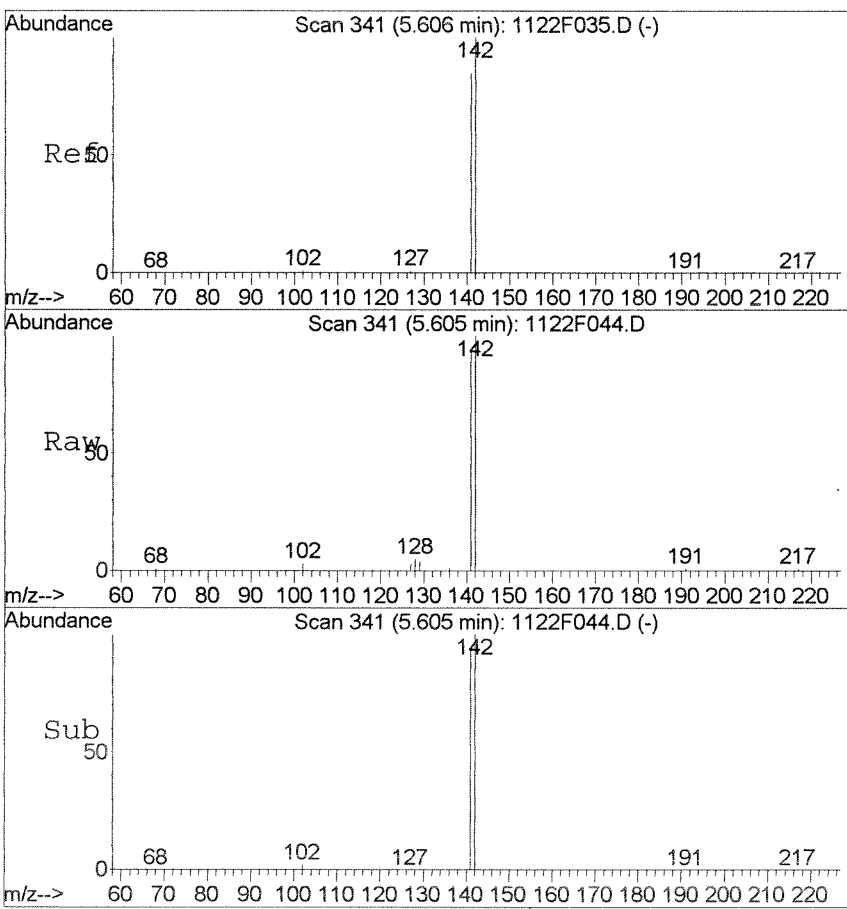




#2
Naphthalene
Concen: 10.47 ng/ml
RT: 5.06 min Scan# 248
Delta R.T. -0.00 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

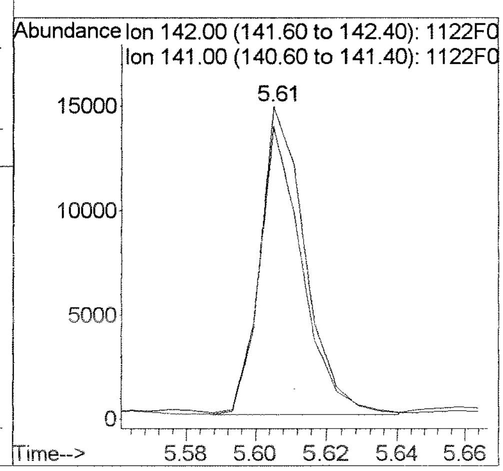
Tgt	Ion:128	Resp:	14518
Ion	Ratio	Lower	Upper
128	100		
127	14.6	0.0	43.8

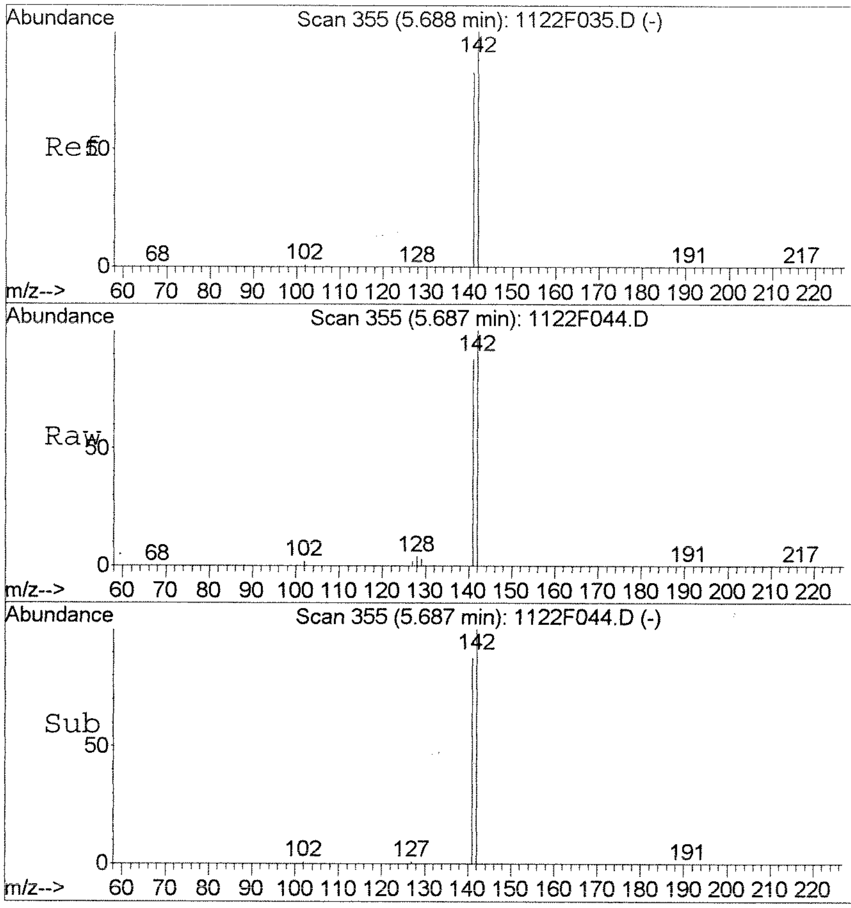




#3
2-Methylnaphthalene
Concen: 13.55 ng/ml
RT: 5.61 min Scan# 341
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

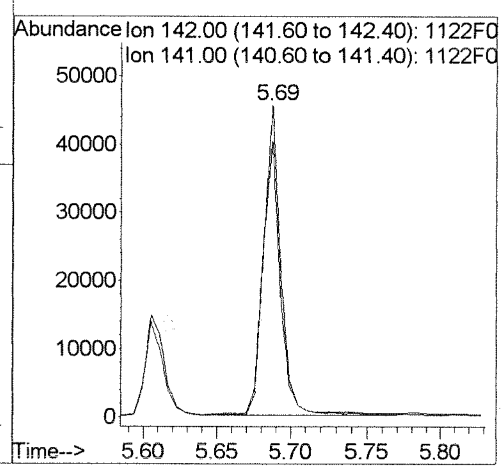
Tgt	Ion:142	Resp:	13100
Ion	Ratio	Lower	Upper
142	100		
141	93.0	52.4	112.4

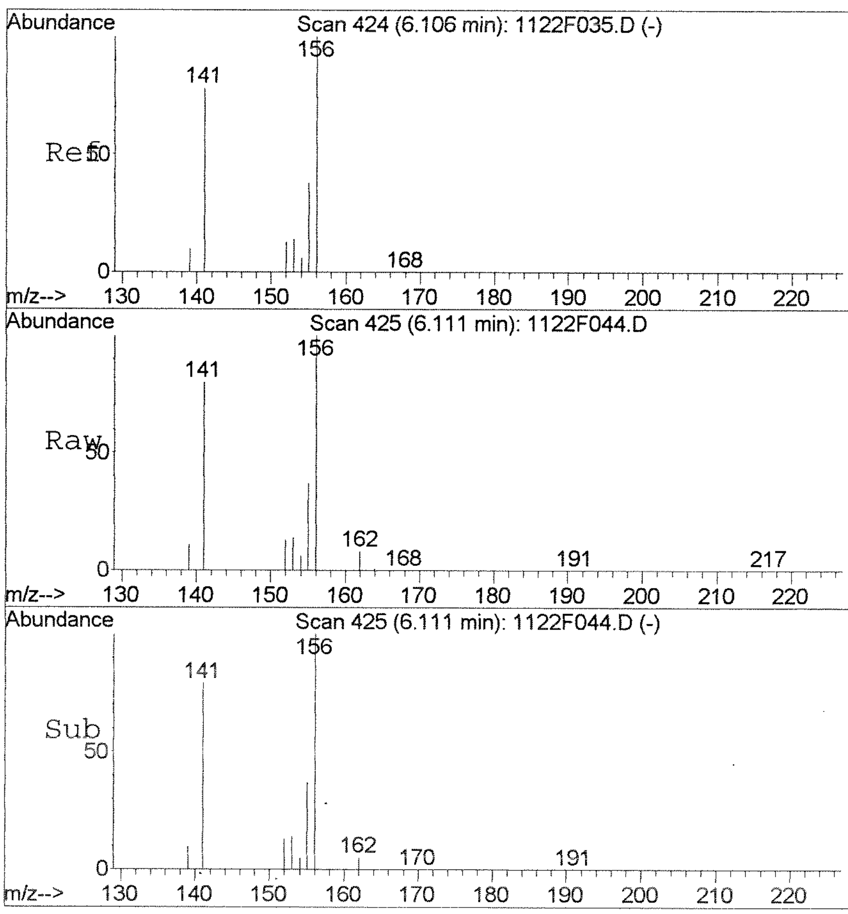




#4
1-Methylnaphthalene
Concen: 42.31 ng/ml
RT: 5.69 min Scan# 355
Delta R.T. -0.00 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

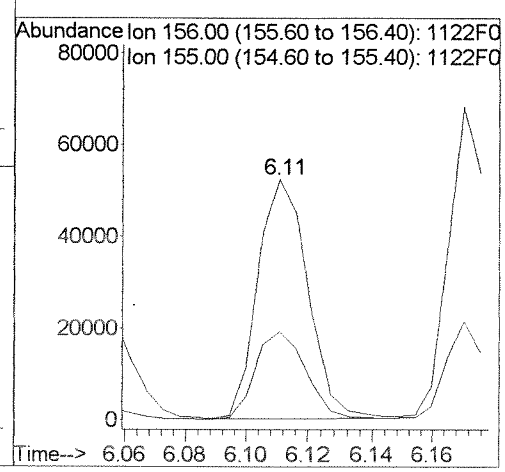
Tgt Ion:142	Resp:	36633	
Ion	Ratio	Lower	Upper
142	100		
141	88.1	63.0	123.0

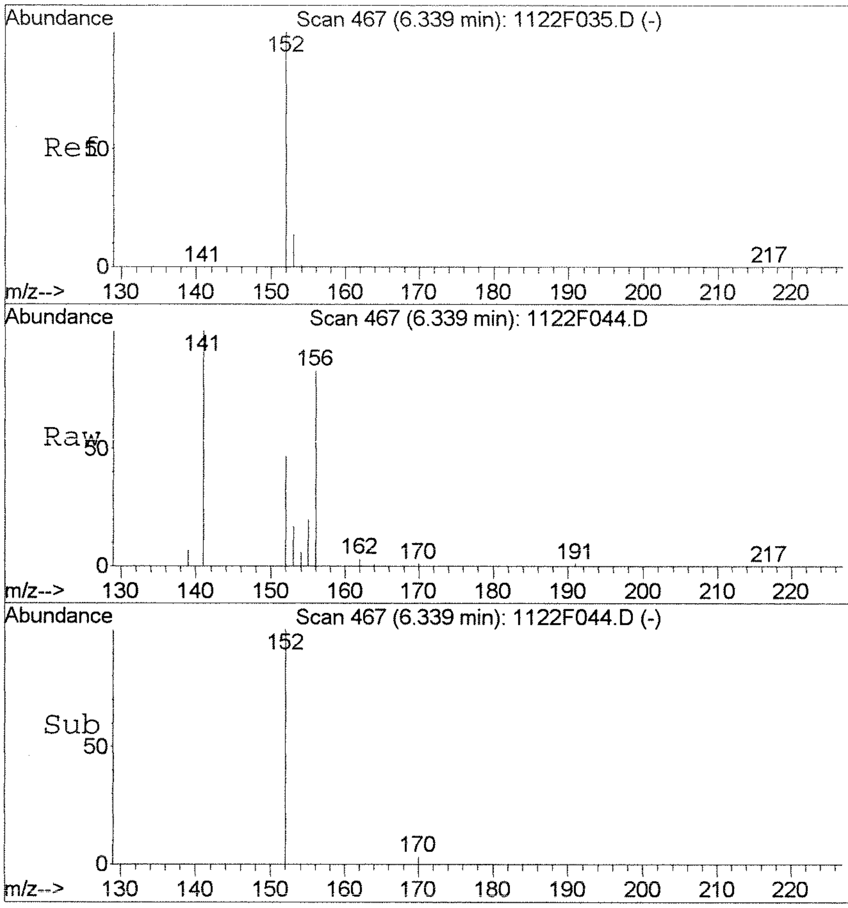




#6
2,6-Dimethylnaphthalene
Concen: 69.52 ng/ml
RT: 6.11 min Scan# 425
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:156	Resp:	58692	
Ion	Ratio	Lower	Upper
156	100		
155	36.7	7.3	67.3

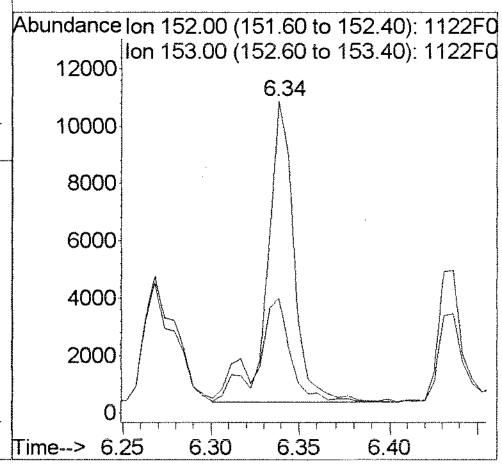


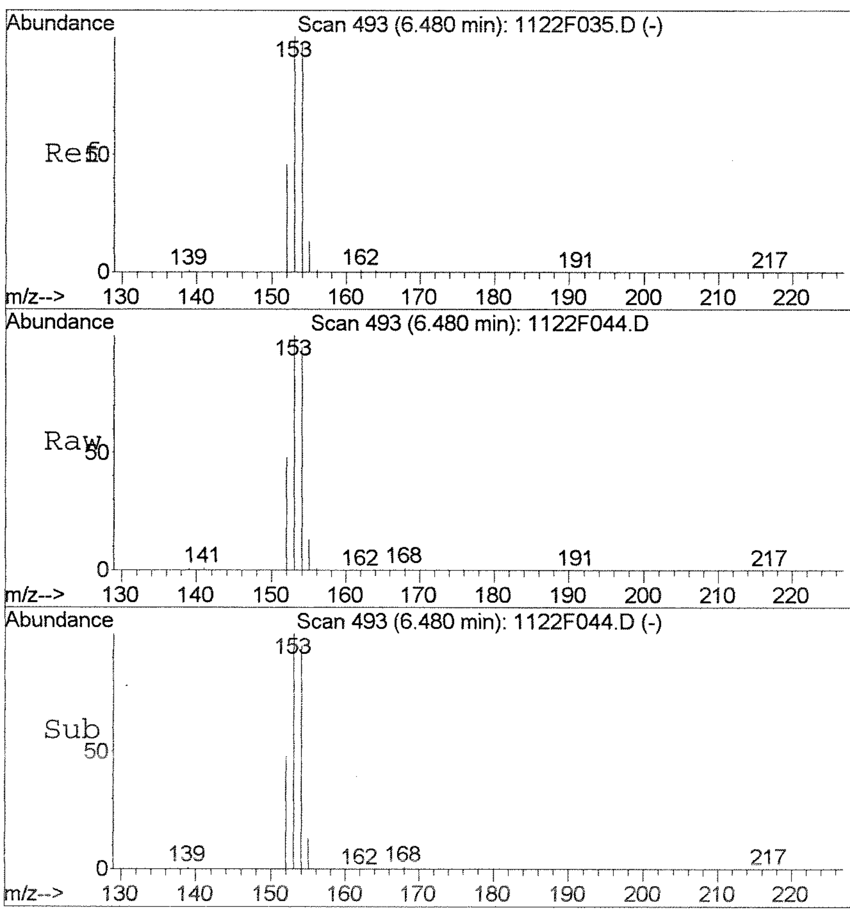


#11
Acenaphthylene
Concen: 7.72 ng/ml
RT: 6.34 min Scan# 467
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:152 Resp: 11060

Ion	Ratio	Lower	Upper
152	100		
153	34.3	0.0	43.0

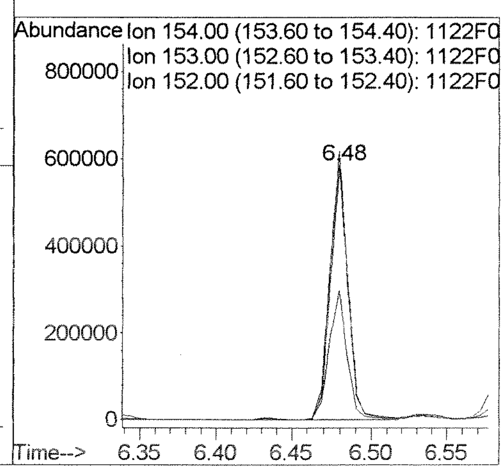


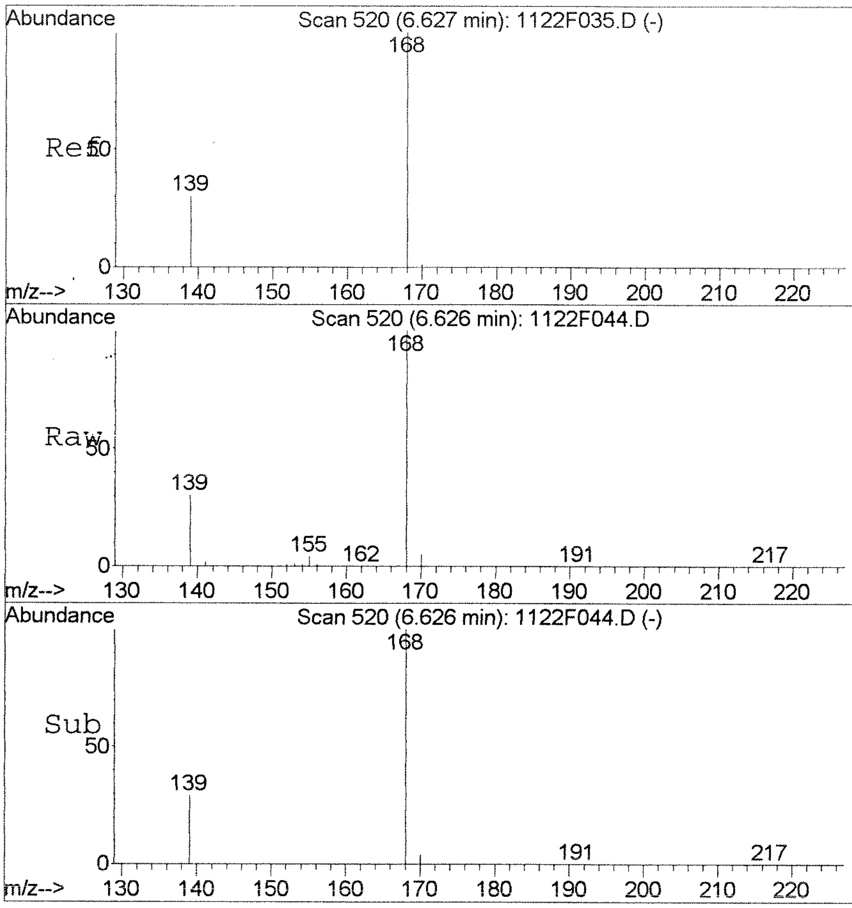


#12
Acenaphthene
Concen: 516.53 ng/ml
RT: 6.48 min Scan# 493
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:154 Resp: 449429

Ion	Ratio	Lower	Upper
154	100		
153	105.6	81.9	141.9
152	51.0	26.8	86.8

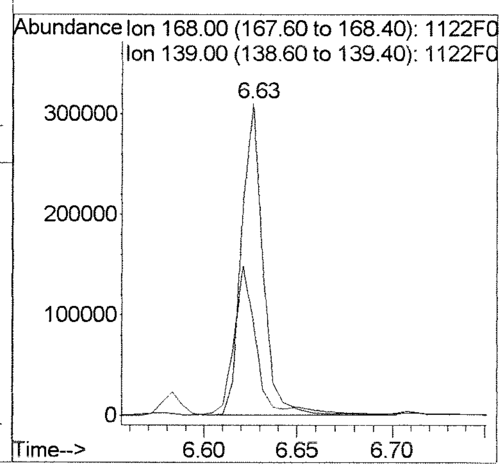


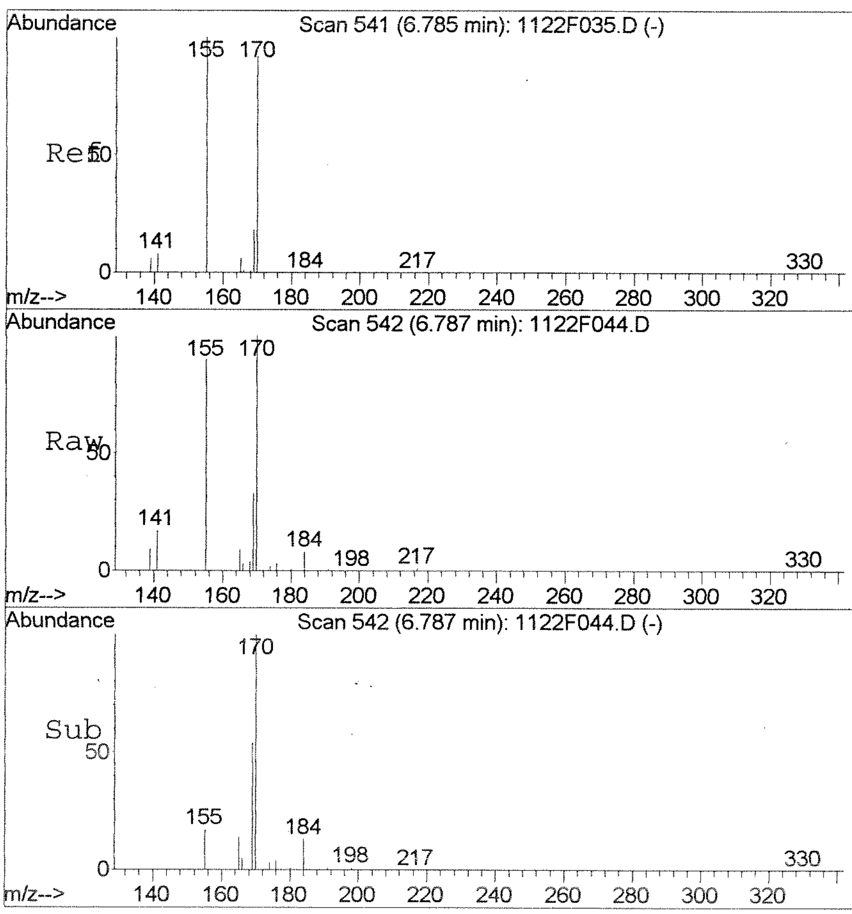


#13
Dibenzofuran
Concen: 193.25 ng/ml
RT: 6.63 min Scan# 520
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:168 Resp: 252938

Ion	Ratio	Lower	Upper
168	100		
139	29.6	21.0	81.0

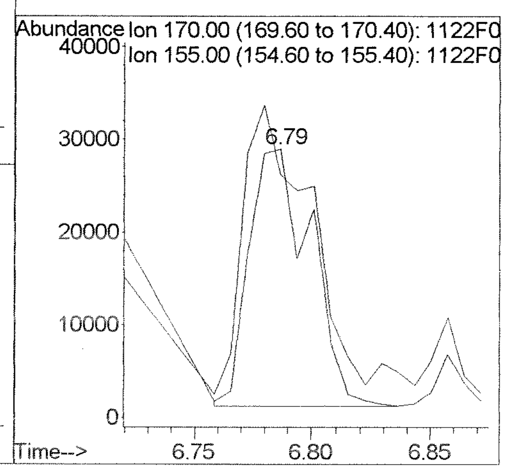


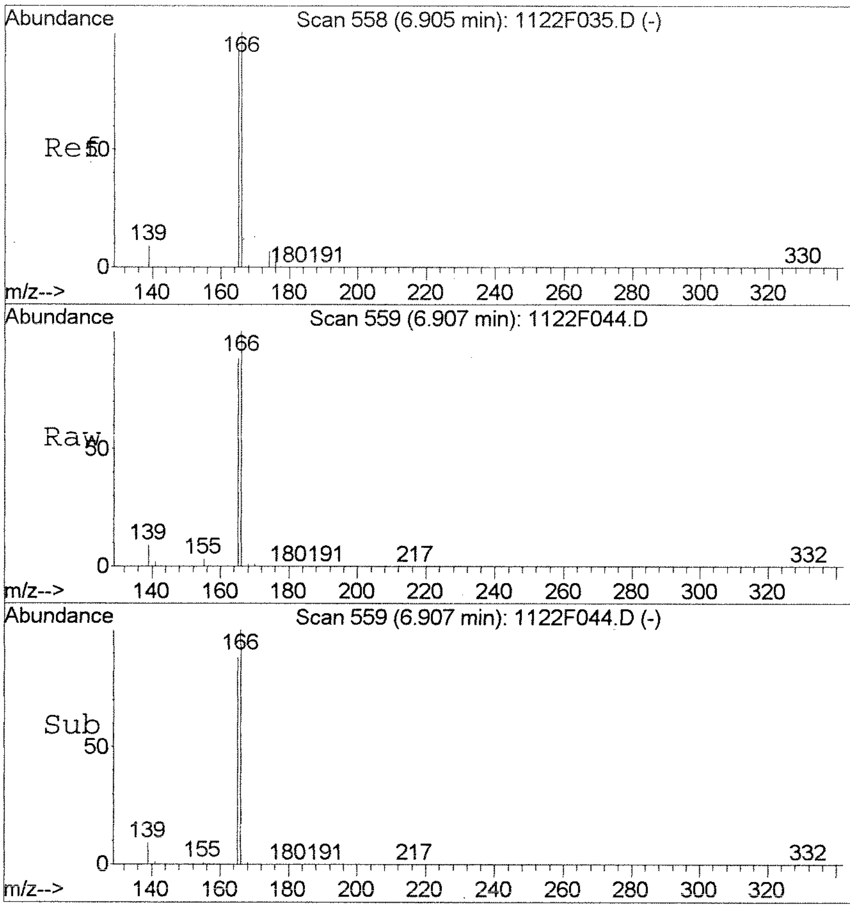


#14
2,3,5-Trimethylnaphthalene
Concen: 65.86 ng/ml
RT: 6.79 min Scan# 542
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:170 Resp: 50397

Ion	Ratio	Lower	Upper
170	100		
155	85.2	42.9	102.9

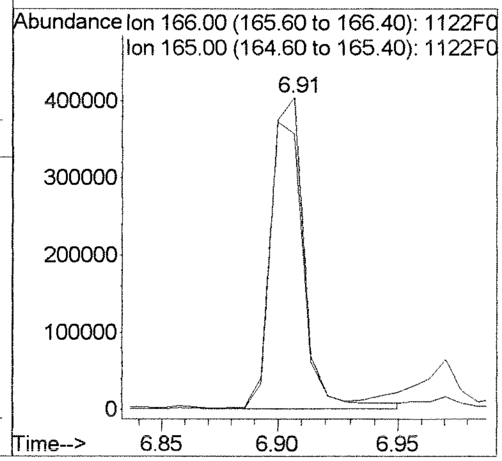


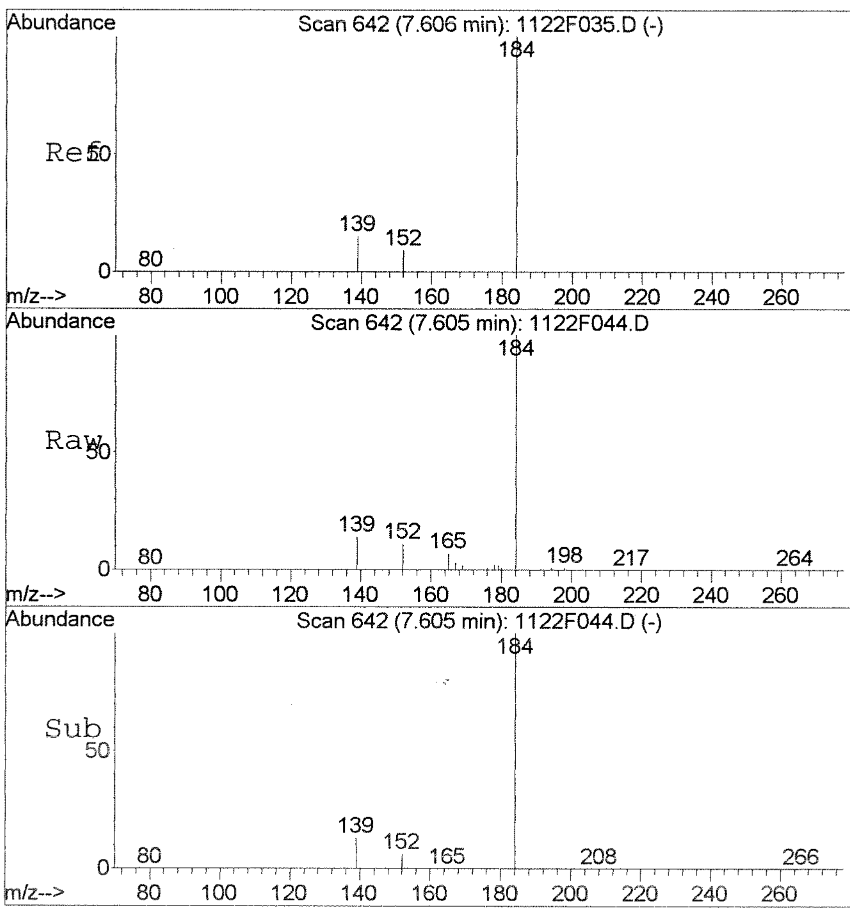


#16
Fluorene
Concen: 377.44 ng/ml
RT: 6.91 min Scan# 559
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:166 Resp: 394256

Ion	Ratio	Lower	Upper
166	100		
165	88.2	59.8	119.8

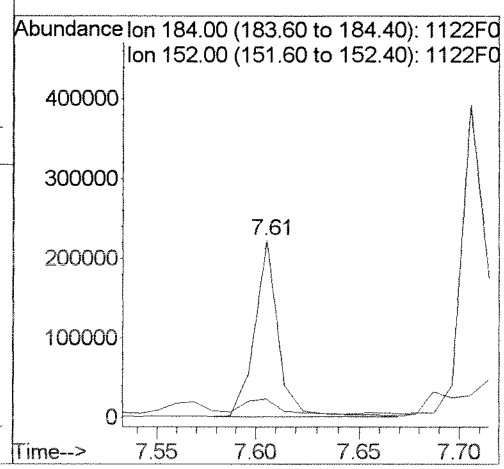


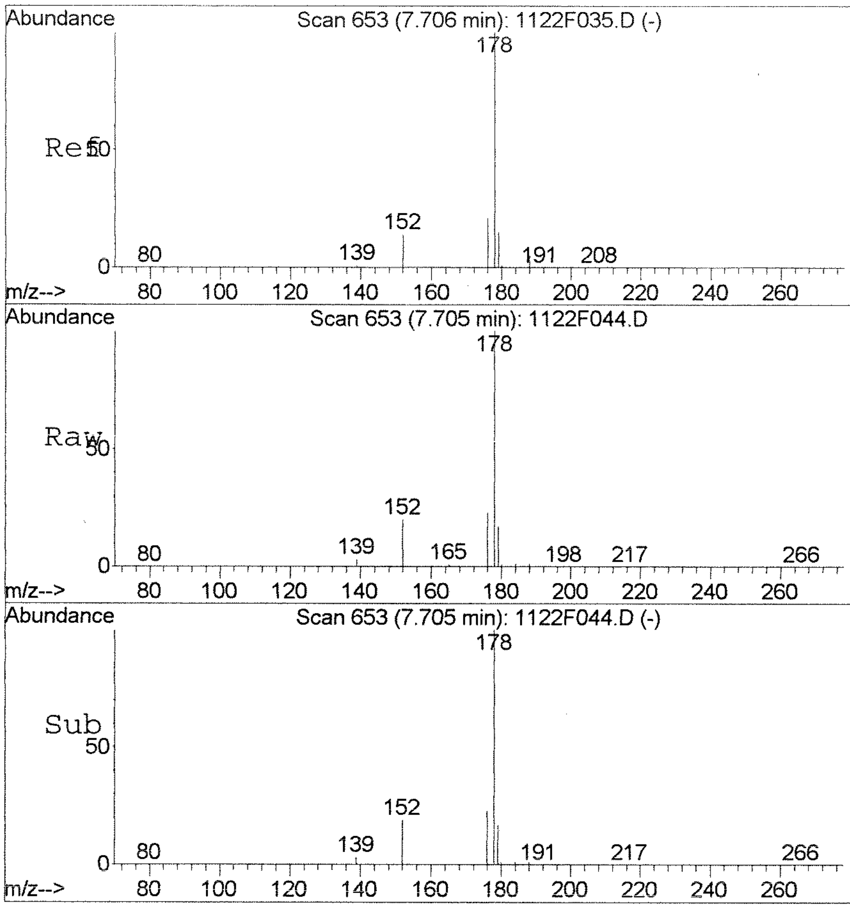


#23
Dibenzothiophene
Concen: 126.56 ng/ml
RT: 7.61 min Scan# 642
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:184 Resp: 182526

Ion	Ratio	Lower	Upper
184	100		
152	8.3	0.0	39.1

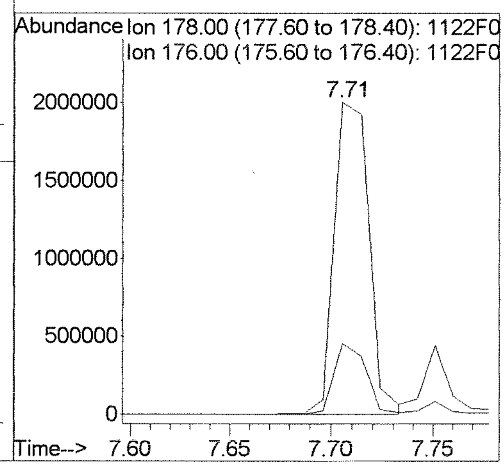


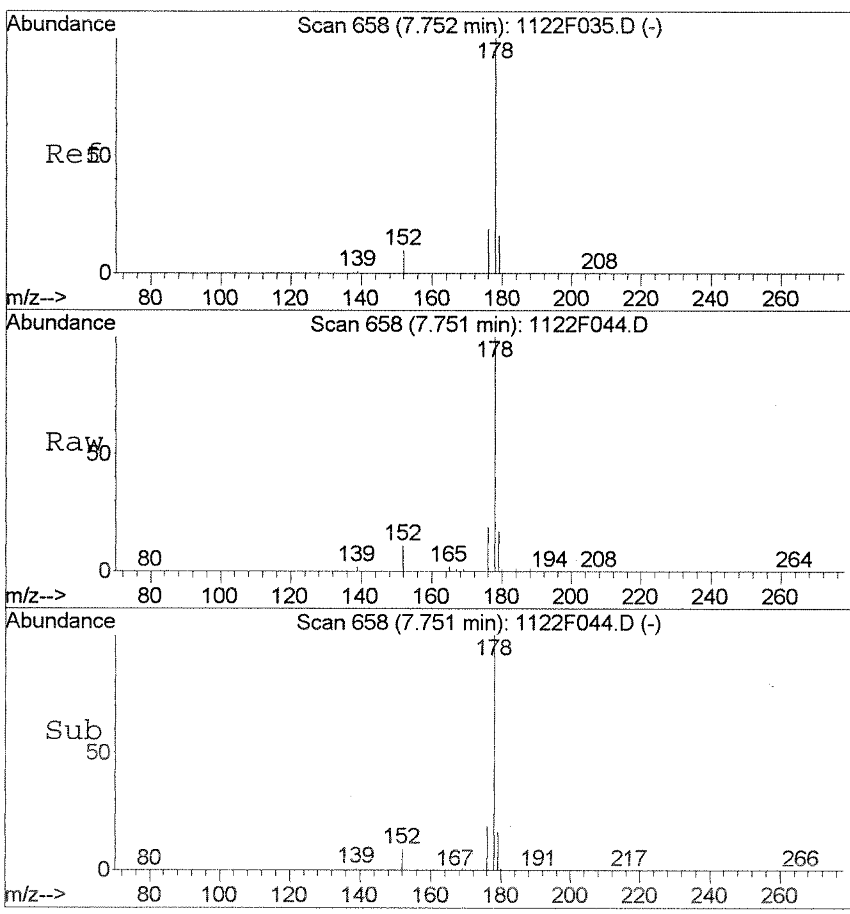


#27
Phenanthrene
Concen: 1575.83 ng/ml
RT: 7.71 min Scan# 653
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:178 Resp: 2324428

Ion	Ratio	Lower	Upper
178	100		
176	22.6	0.0	51.0

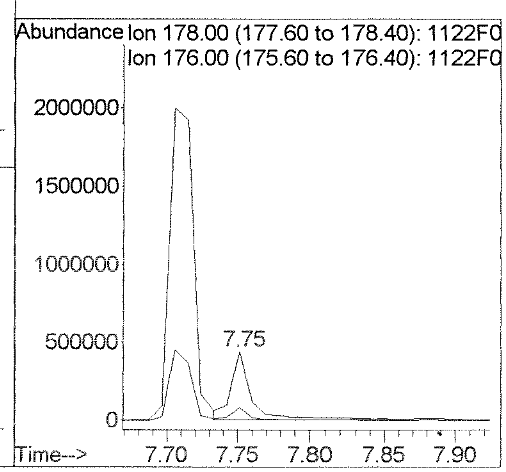


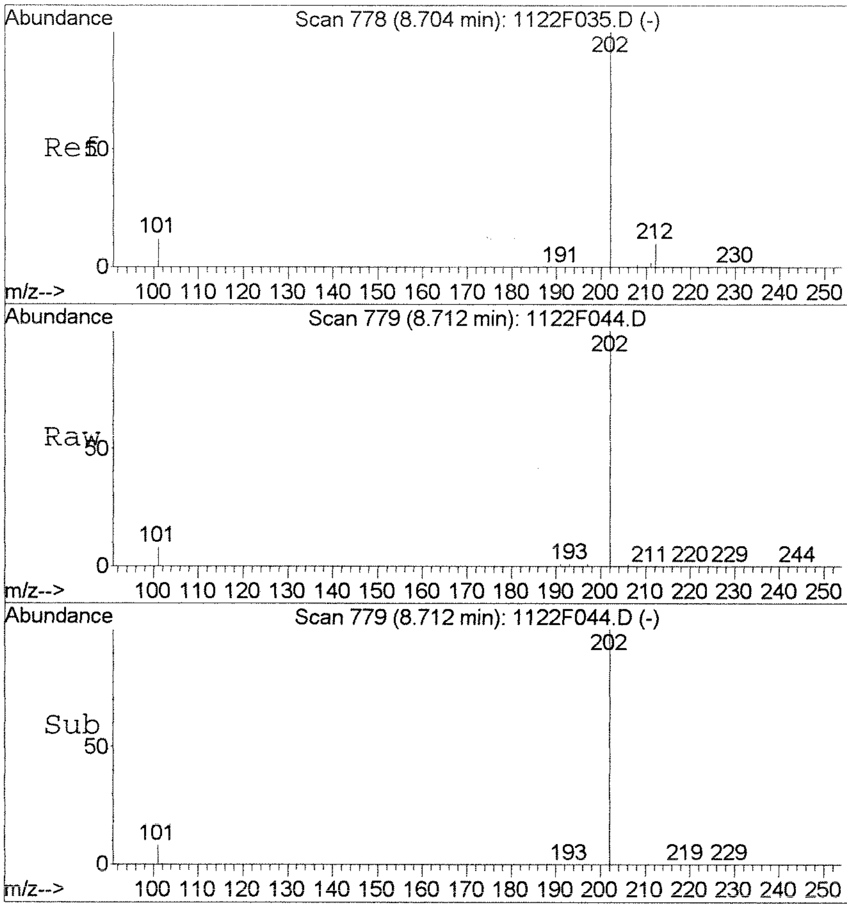


#28
Anthracene
Concen: 299.38 ng/ml
RT: 7.75 min Scan# 658
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:178 Resp: 430265

Ion	Ratio	Lower	Upper
178	100		
176	18.6	0.0	49.7

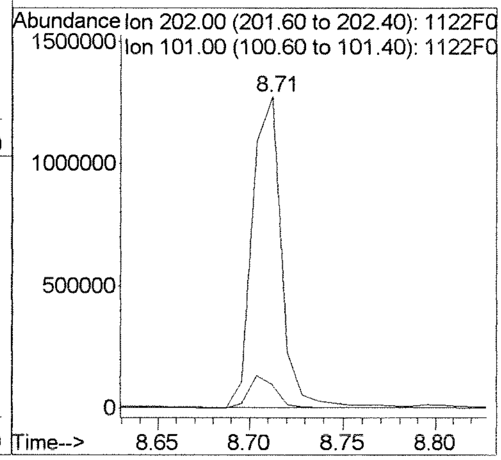


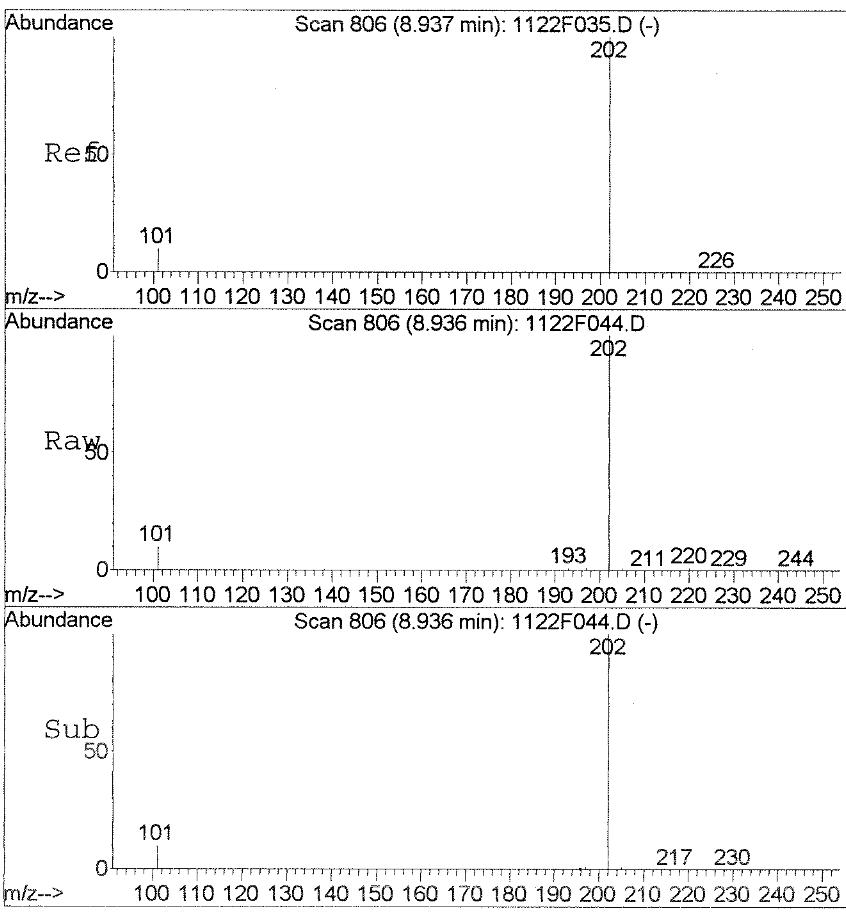


#35
Fluoranthene
Concen: 836.11 ng/ml
RT: 8.71 min Scan# 779
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:202 Resp: 1400917

Ion	Ratio	Lower	Upper
202	100		
101	7.6	0.0	35.8

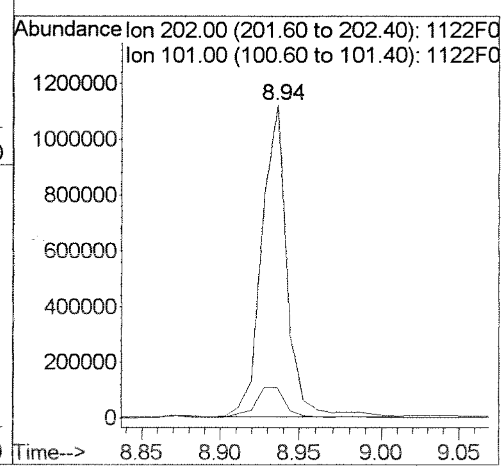


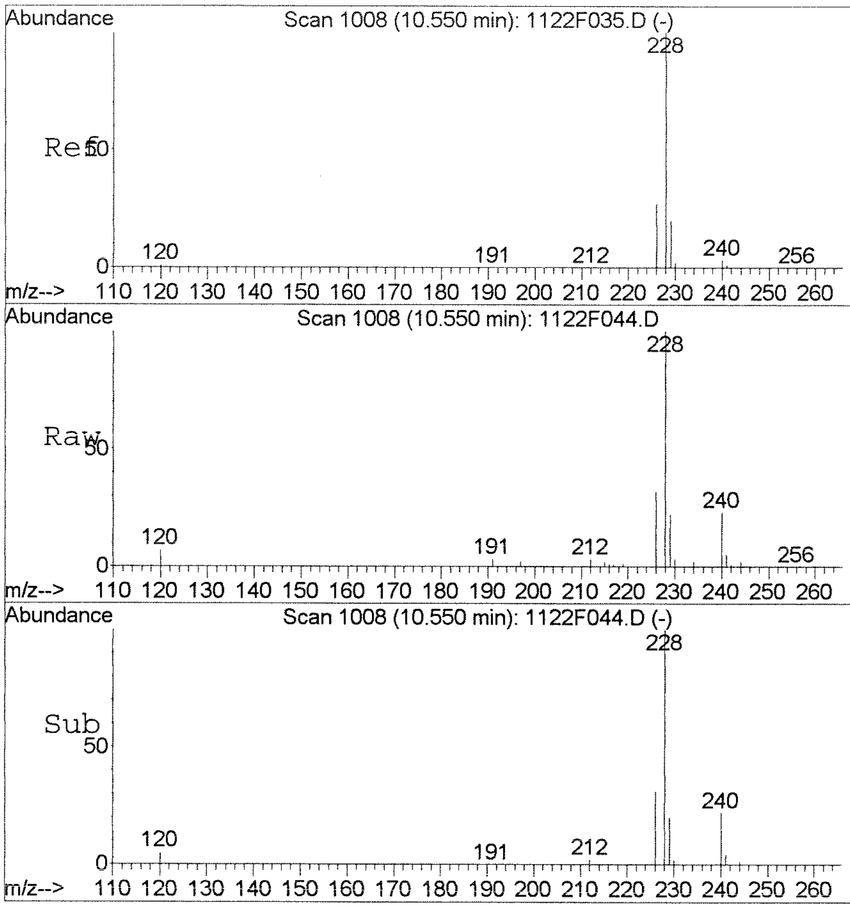


#38
Pyrene
Concen: 698.12 ng/ml
RT: 8.94 min Scan# 806
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:202 Resp: 1257498

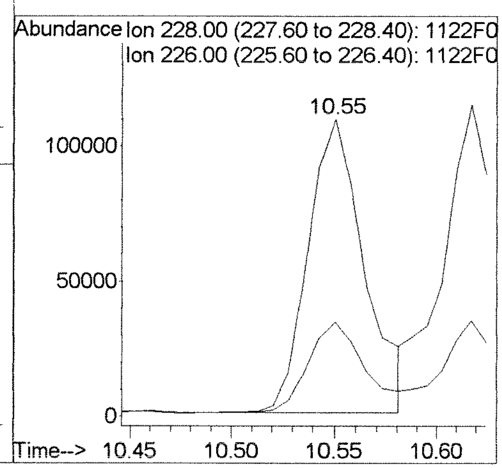
Ion	Ratio	Lower	Upper
202	100		
101	9.7	0.0	37.6

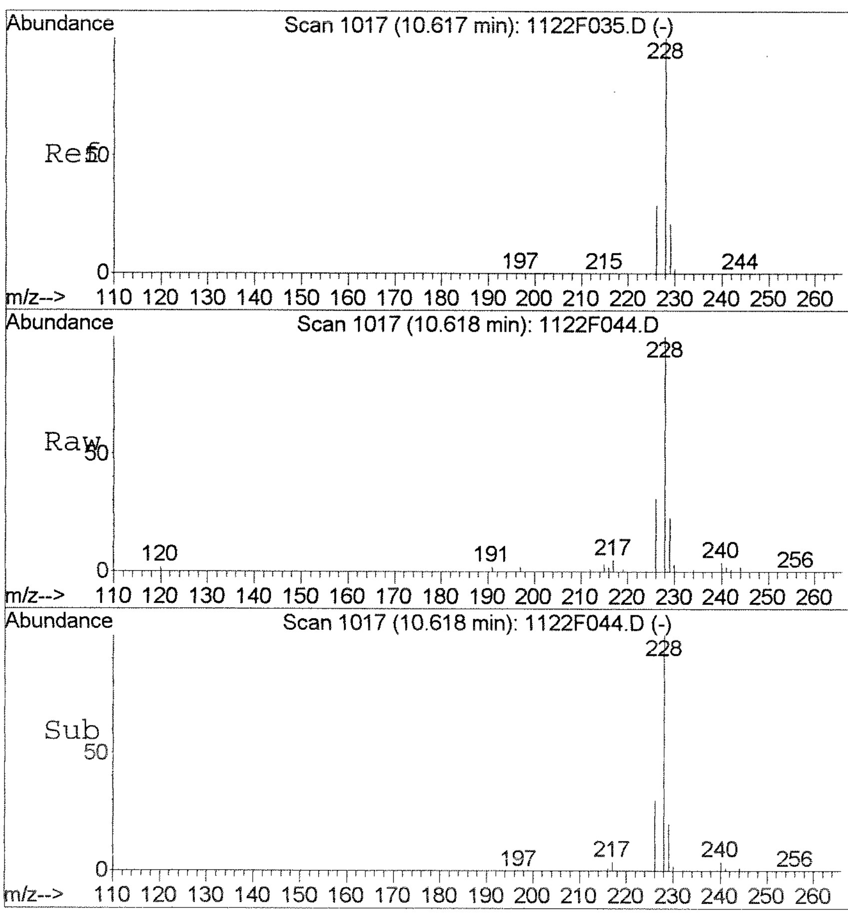




#43
Benz(a)anthracene
Concen: 123.04 ng/ml
RT: 10.55 min Scan# 1008
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

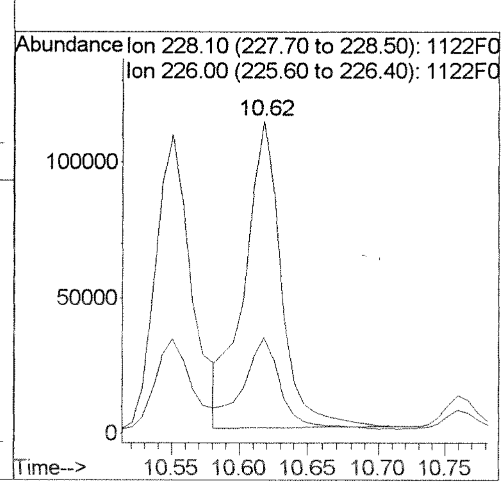
Tgt	Ion:228	Resp:	201070
Ion	Ratio	Lower	Upper
228	100		
226	30.8	0.0	57.0

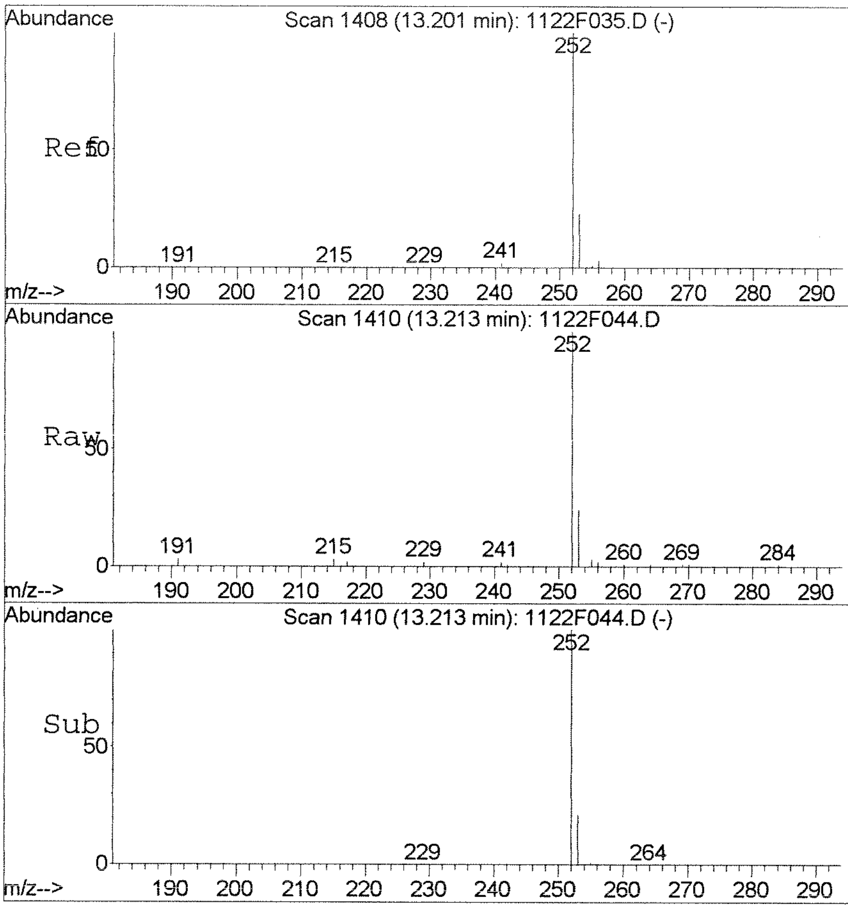




#44
Chrysene
Concen: 133.71 ng/ml
RT: 10.62 min Scan# 1017
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt	Ion:228	Resp:	214591
Ion	Ratio	Lower	Upper
228	100		
226	29.9	0.0	58.9

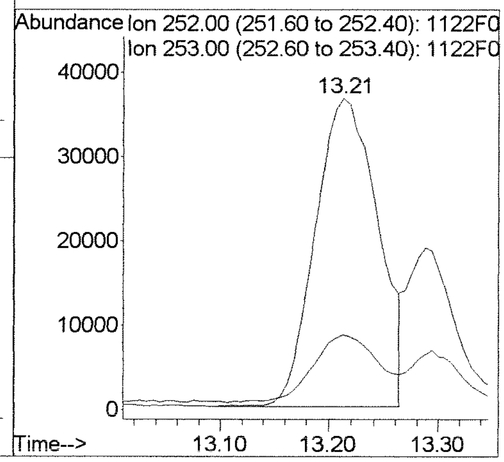


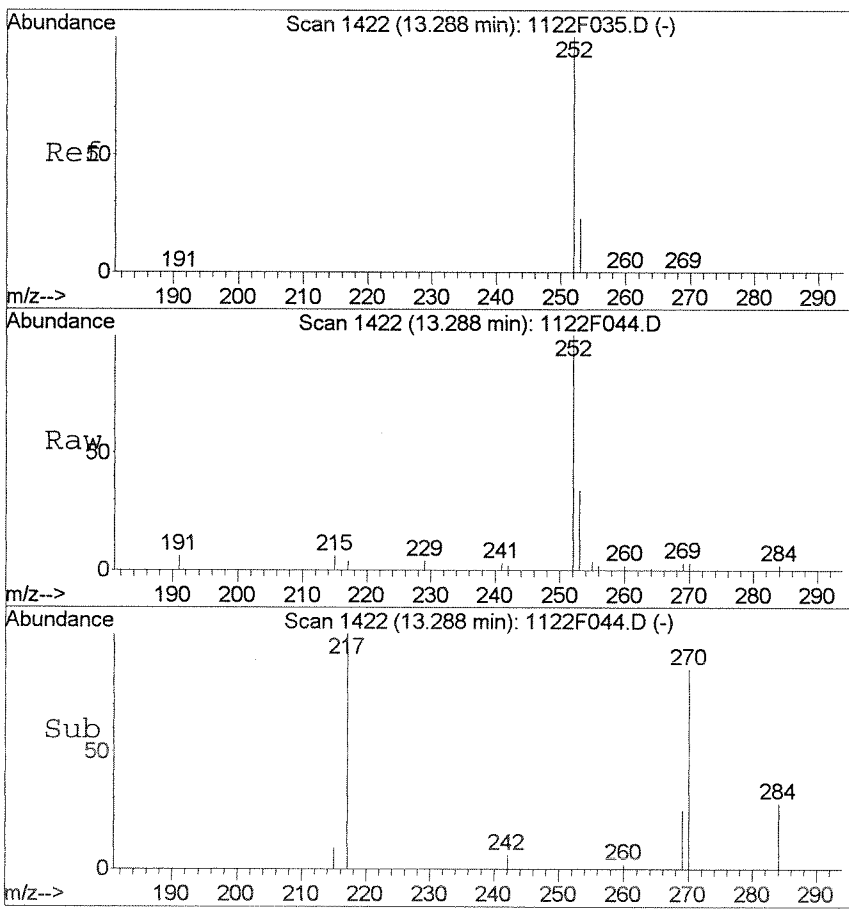


#50
Benzo(b)fluoranthene
Concen: 77.45 ng/ml
RT: 13.21 min Scan# 1410
Delta R.T. -0.01 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:252 Resp: 143093

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	52.6

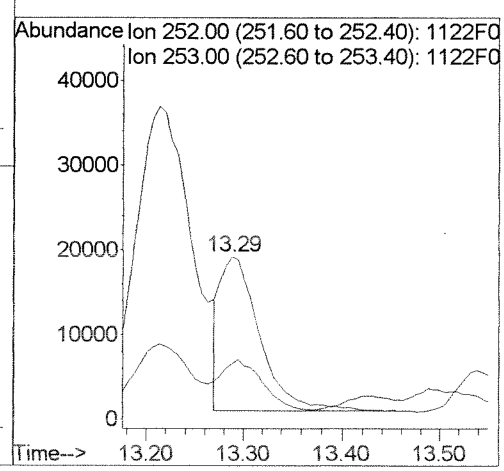


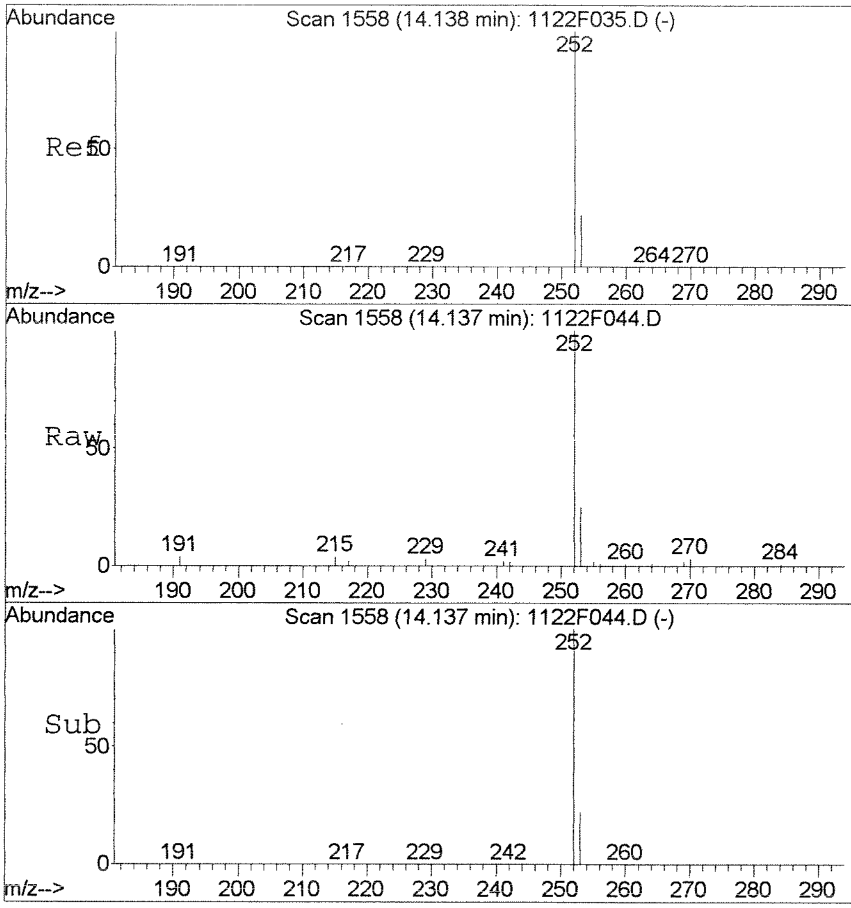


#51
Benzo(k)fluoranthene
Concen: 29.62 ng/ml
RT: 13.29 min Scan# 1422
Delta R.T. -0.03 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:252 Resp: 52578

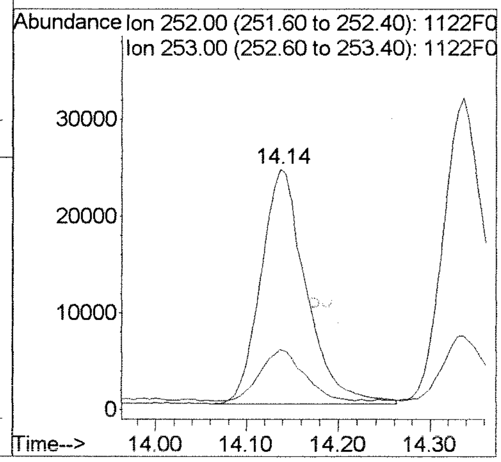
Ion	Ratio	Lower	Upper
252	100		
253	23.4	0.0	52.0

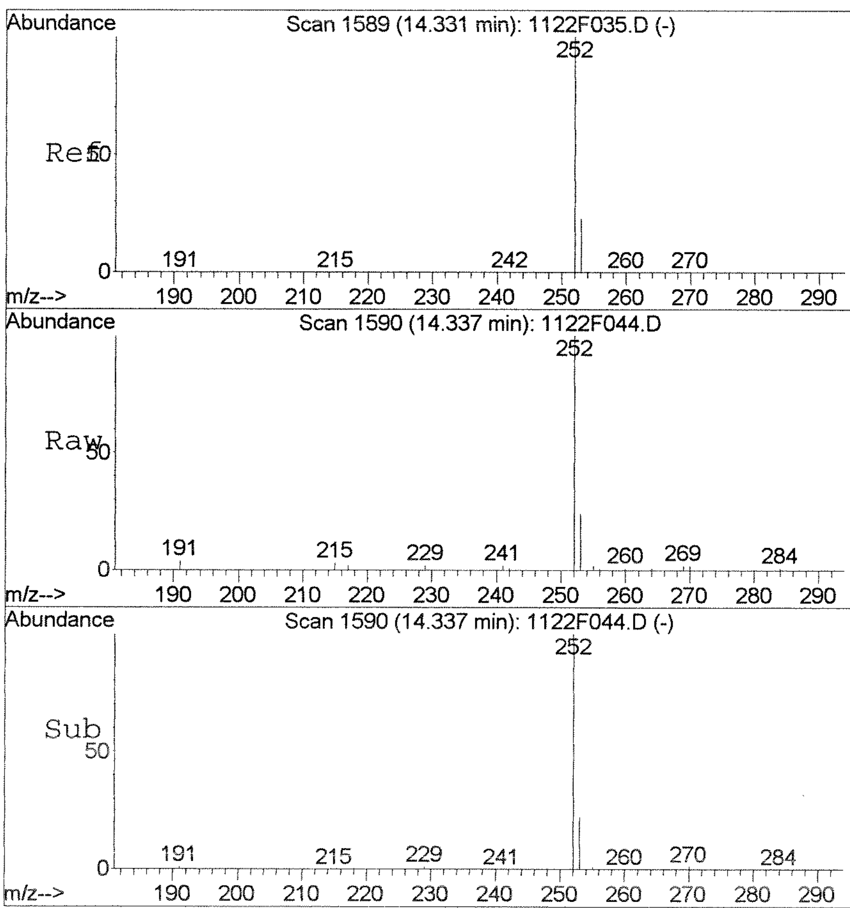




#52
Benzo(e)pyrene
Concen: 49.86 ng/ml
RT: 14.14 min Scan# 1558
Delta R.T. -0.03 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

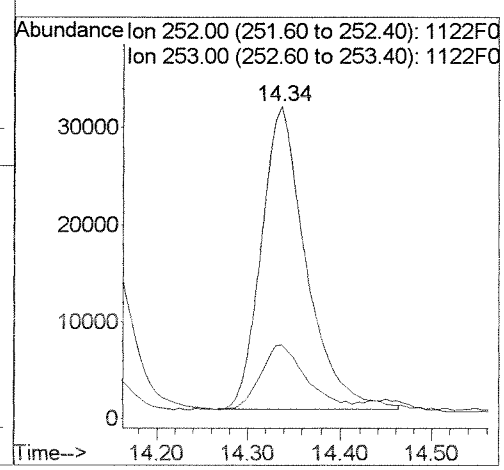
Tgt Ion:252	Resp:		83678
Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	52.2

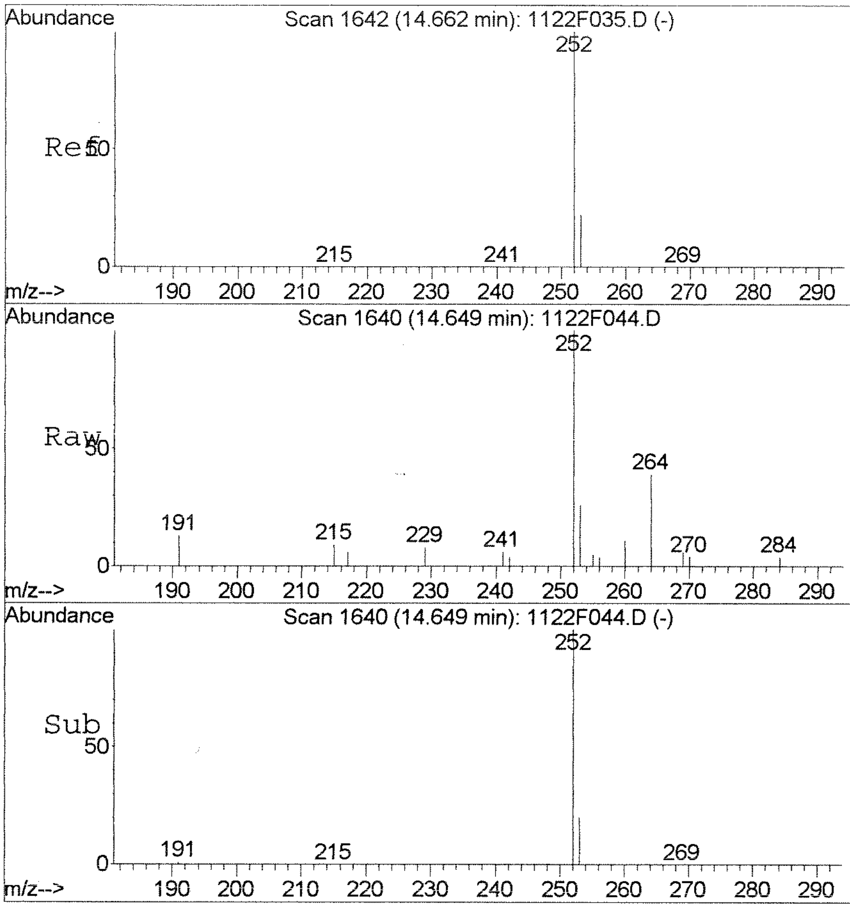




#53
Benzo(a)pyrene
Concen: 69.24 ng/ml
RT: 14.34 min Scan# 1590
Delta R.T. -0.03 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:252	Resp:		105913
Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	52.2

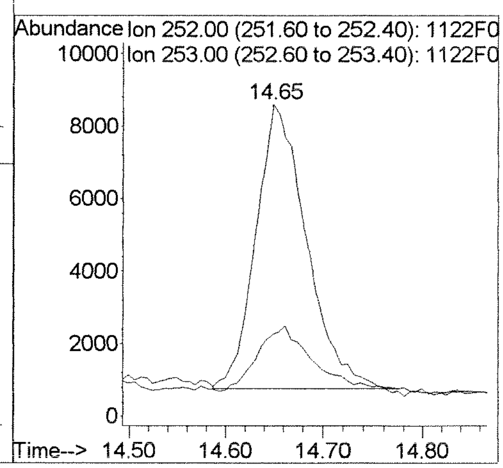


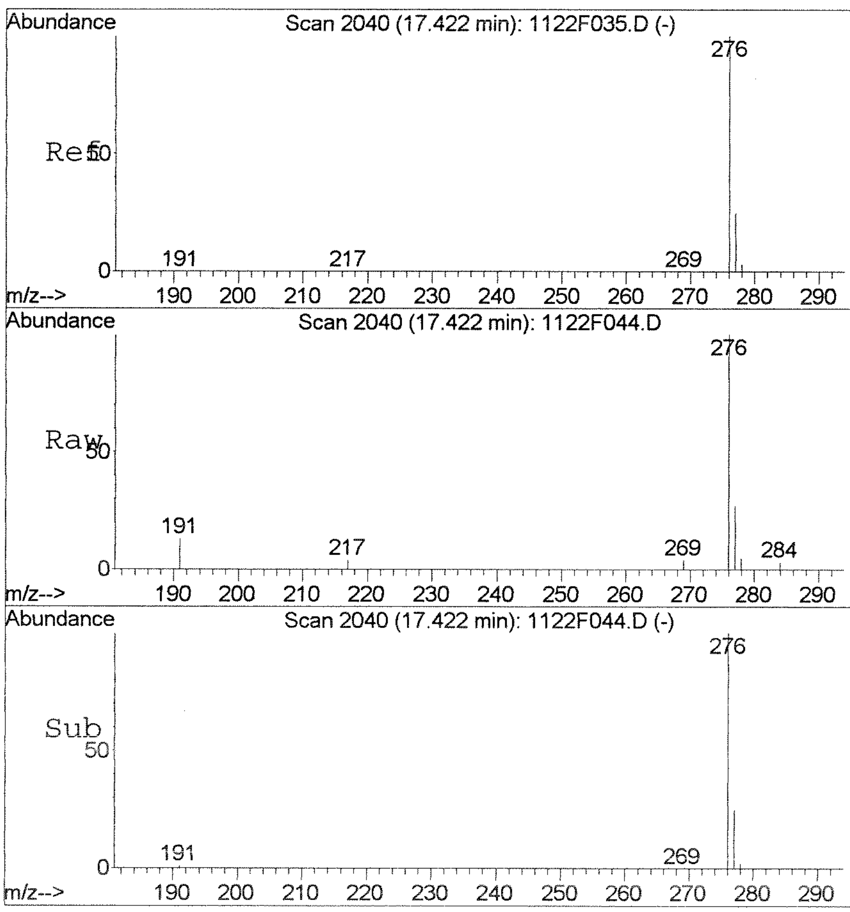


#54
Perylene
Concen: 18.80 ng/ml
RT: 14.65 min Scan# 1640
Delta R.T. -0.04 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:252 Resp: 28246

Ion	Ratio	Lower	Upper
252	100		
253	20.0	0.0	51.5

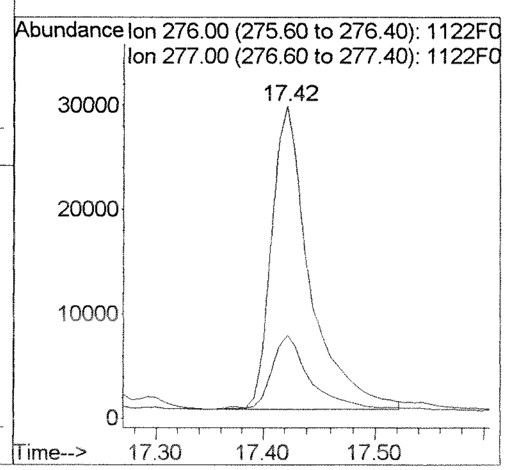


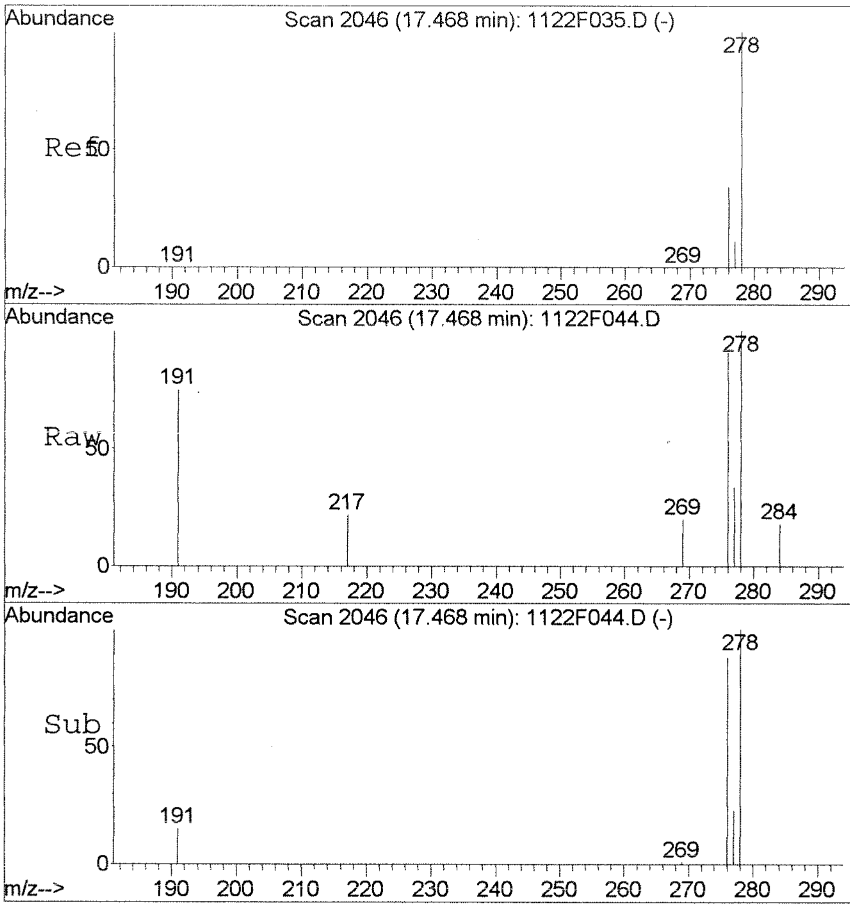


#55
Indeno(1,2,3-cd)pyrene
Concen: 49.78 ng/ml
RT: 17.42 min Scan# 2040
Delta R.T. -0.02 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:276 Resp: 70647

Ion	Ratio	Lower	Upper
276	100		
277	24.5	0.0	54.7

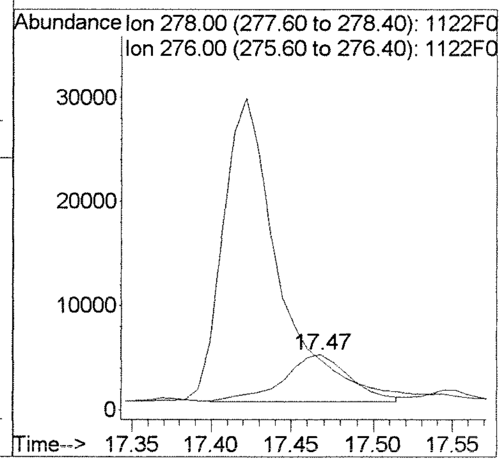


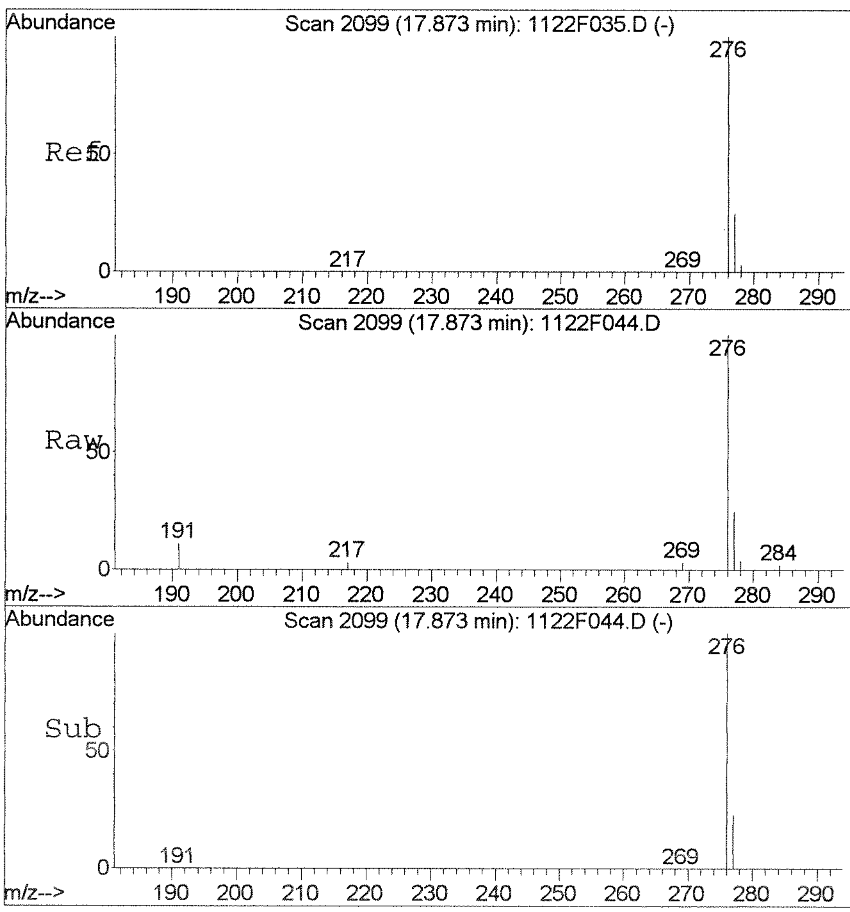


#56
Dibenz(a,h)anthracene
Concen: 8.61 ng/ml m
RT: 17.47 min Scan# 2046
Delta R.T. -0.02 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:278 Resp: 12833

Ion	Ratio	Lower	Upper
278	100		
276	91.0	0.0	59.7#

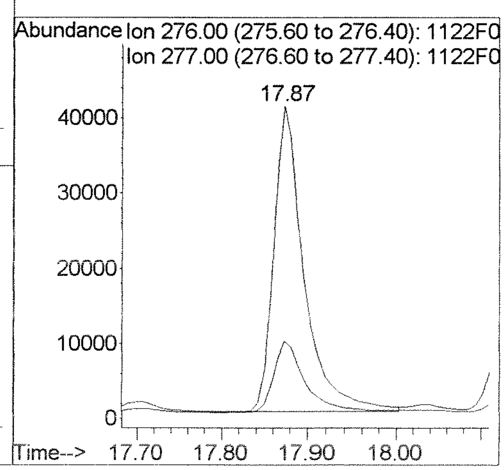




#57
Benzo(g,h,i)perylene
Concen: 60.93 ng/ml
RT: 17.87 min Scan# 2099
Delta R.T. -0.02 min
Lab File: 1122F044.D
Acq: 23 Nov 2008 3:05 am

Tgt Ion:276 Resp: 98520

Ion	Ratio	Lower	Upper
276	100		
277	23.4	0.0	54.2



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED02-0.5-2.5A	**Units:**	ug/Kg
Lab Code:	K0810639-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**63**		4.8	0.37	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	**43**		4.8	0.39	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	**45**		4.8	0.24	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	**1600**		4.8	0.23	1	11/11/08	11/22/08	KWG0812042	
Fluorene	**1400**		4.8	0.50	1	11/11/08	11/22/08	KWG0812042	
Dibenzofuran	**84**		4.8	0.59	1	11/11/08	11/22/08	KWG0812042	
Phenanthrene	**7200**	D	95	15	20	11/11/08	11/21/08	KWG0812042	
Anthracene	**820**		4.8	0.47	1	11/11/08	11/22/08	KWG0812042	
Fluoranthene	**8100**	D	95	13	20	11/11/08	11/21/08	KWG0812042	
Pyrene	**7300**	D	95	7.4	20	11/11/08	11/21/08	KWG0812042	
Benz(a)anthracene	**2300**	D	95	9.6	20	11/11/08	11/21/08	KWG0812042	
Chrysene	**3100**	D	95	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(b)fluoranthene	**2900**	D	95	5.0	20	11/11/08	11/21/08	KWG0812042	
Benzo(k)fluoranthene	**990**		4.8	0.15	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	**2100**	D	95	2.8	20	11/11/08	11/21/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**1800**		4.8	0.16	1	11/11/08	11/22/08	KWG0812042	
Dibenz(a,h)anthracene	**460**		4.8	0.28	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	**1700**		4.8	0.64	1	11/11/08	11/22/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	56	10-128	11/22/08	Acceptable
Fluoranthene-d10	82	29-121	11/22/08	Acceptable
Terphenyl-d14	65	24-141	11/22/08	Acceptable

Comments:

Exception Report

Data File:	J:\MS11\DATA\112208\1122F029.D	**Date Acquired:**	11/22/2008 20:30
Lab ID:	K0810639-004	**Date Quantitated:**	11/23/2008 11:05
RunType:	SMPL	**Batch ID:**	KWG0812624
Matrix:	SEDIMENT	**Analysis Method:**	8270C SIM
		ListJoinID:	LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	5164.97	NA	2000	See Dil
	Benzo(b)fluoranthene	3042.49	NA	2000	
	Fluoranthene	6102.11	NA	2000	
	Chrysene	3174.64	NA	2000	
	Benzo(a)pyrene	2277.95	NA	2000	
	Benz(a)anthracene	2451.79	NA	2000	
	Phenanthrene	5811.75	NA	2000	

Primary Review: RW 11/24/08

Secondary Review: LB 11/24/08

Printed: 11/23/2008 12:53:06

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812624	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776068	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112208\1122F005.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112208\1122F029.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 20:30	**Quant Date:**	11/23/2008 11:05	**Vial:**	23
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-004			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.03	-0.01	136	273979	200.00	OK
2	Acenaphthene-d10	6.45	-0.01	164	155860	200.00	OK
3	Phenanthrene-d10	7.70	0.00	188	275518	200.00	OK
4	Chrysene-d12	10.60	0.03	240	360171	200.00	OK
5	Perylene-d12	14.65	0.09	264	388407	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	118924m	112.27	56	10-128	OK	
3	Fluoranthene-d10	8.70	0.00	0.00	212	307423	163.66	82	29-121	OK	
4	Terphenyl-d14	9.09	0.00	0.00	244	241040	129.27	65	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.05	-0.01	0.00	128	111558m	66.84	63		
1	2-Methylnaphthalene	5.60	-0.01	0.00	142	53240	45.75	43		
2	Acenaphthylene	6.34		0.00	152	82804m	47.11	45		
2	Acenaphthene	6.48	-0.01	0.00	154	1800980	1,686	1600		
2	Dibenzofuran	6.62	-0.01	0.00	168	142558m	88.74	84		
2	Fluorene	6.91		0.00	166	1867595	1,457	1400		
3	Phenanthrene	7.72		0.00	178	11255220	5,812	5500	E	NR
3	Anthracene	7.76	0.01	0.00	178	1634664m	866.31	820		
3	Fluoranthene	8.73	0.02	0.00	202	13423685	6,102	5800	E	NR
4	Pyrene	8.95	0.01	0.00	202	13994518	5,165	4900	E	NR
4	Benz(a)anthracene	10.59	0.03	0.00	228	6026692	2,452	2300	E	NR
4	Chrysene	10.66	0.03	0.00	228	7664168	3,175	3000	E	NR
5	Benzo(b)fluoranthene	13.30	0.09	0.00	252	8155375	3,042	2900	E	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112208\1122F029.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 20:30	**Quant Date:**	11/23/2008 11:05	**Vial:**	23
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-004			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.38	0.09	0.00	252	2680316	1,041	990		
5	Benzo(a)pyrene	14.45	0.11	0.00	252	5055534	2,278	2200	E	NR
5	Indeno(1,2,3-cd)pyrene	17.48	0.06	0.00	276	3992202	1,939	1800		
5	Dibenz(a,h)anthracene	17.51	0.04	0.00	278	1043162**m**	482.66	460		
5	Benzo(g,h,i)perylene	17.94	0.07	0.00	276	4147955	1,768	1700		

Prep Amount:	20.02 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	52.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F029.D Vial: 23
Acq On : 22 Nov 2008 8:30 pm Operator: LWeiskopf
Sample : K0810639-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:14:01 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.03	136	273979	200.00	ng/ml	-0.01
10) Acenaphthene-d10	6.45	164	155860	200.00	ng/ml	-0.01
22) Phenanthrene-d10	7.70	188	275518	200.00	ng/ml	0.00
37) Chrysene-d12	10.60	240	360171	200.00	ng/ml	0.01
49) Perylene-d12	14.65	264	388407	200.00	ng/ml	0.07
System Monitoring Compounds						
15) Fluorene-d10	6.88	176	118924m	112.27	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	56.14%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery	=	0.00%	
36) Fluoranthene-d10	8.70	212	307423	163.66	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	81.83%	
42) Terphenyl-d14	9.09	244	241040	129.27	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	64.64%	
Target Compounds						Qvalue
2) Naphthalene	5.05	128	111558m	66.84	ng/ml	
3) 2-Methylnaphthalene	5.60	142	53240	45.75	ng/ml	95
4) 1-Methylnaphthalene	5.68	142	26871	25.79	ng/ml	99
5) Biphenyl	5.98	154	28887m	20.31	ng/ml	
6) 2,6-Dimethylnaphthalene	6.11	156	138045	135.87	ng/ml	98
11) Acenaphthylene	6.34	152	82804m	47.11	ng/ml	
12) Acenaphthene	6.48	154	1800980	1686.34	ng/ml	92
13) Dibenzofuran	6.62	168	142558m	88.74	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.79	170	221912	236.26	ng/ml	99
16) Fluorene	6.91	166	1867595	1456.65	ng/ml	98
23) Dibenzothiophene	7.61	184	987172	521.33	ng/ml	97
27) Phenanthrene	7.72	178	11255220	5811.75	ng/ml	74
28) Anthracene	7.76	178	1634664m	866.31	ng/ml	
29) Carbazole	7.91	167	231814m	133.91	ng/ml	
30) 1-Methylphenanthrene	8.21	192	903354m	628.51	ng/ml	
35) Fluoranthene	8.73	202	13423685	6102.11	ng/ml	29
38) Pyrene	8.95	202	13994518	5164.97	ng/ml	49
43) Benz(a)anthracene	10.59	228	6026692	2451.79	ng/ml	90
44) Chrysene	10.66	228	7664168	3174.64	ng/ml	92
50) Benzo(b)fluoranthene	13.30	252	8155375	3042.49	ng/ml	95
51) Benzo(k)fluoranthene	13.38	252	2680316	1040.91	ng/ml	96
52) Benzo(e)pyrene	14.25	252	4224618	1735.03	ng/ml	97
53) Benzo(a)pyrene	14.45	252	5055534	2277.95	ng/ml	96
54) Perylene	14.77	252	1497679	686.95	ng/ml	96
55) Indeno(1,2,3-cd)pyrene	17.48	276	3992202	1938.74	ng/ml	95

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F029.D Vial: 23
Acq On : 22 Nov 2008 8:30 pm Operator: LWeiskopf
Sample : K0810639-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:14:01 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
56) Dibenz(a,h)anthracene	17.51	278	1043162m	482.66 ng/ml	
57) Benzo(g,h,i)perylene	17.94	276	4147955	1768.11 ng/ml	96

(#) = qualifier out of range (m) = manual integration

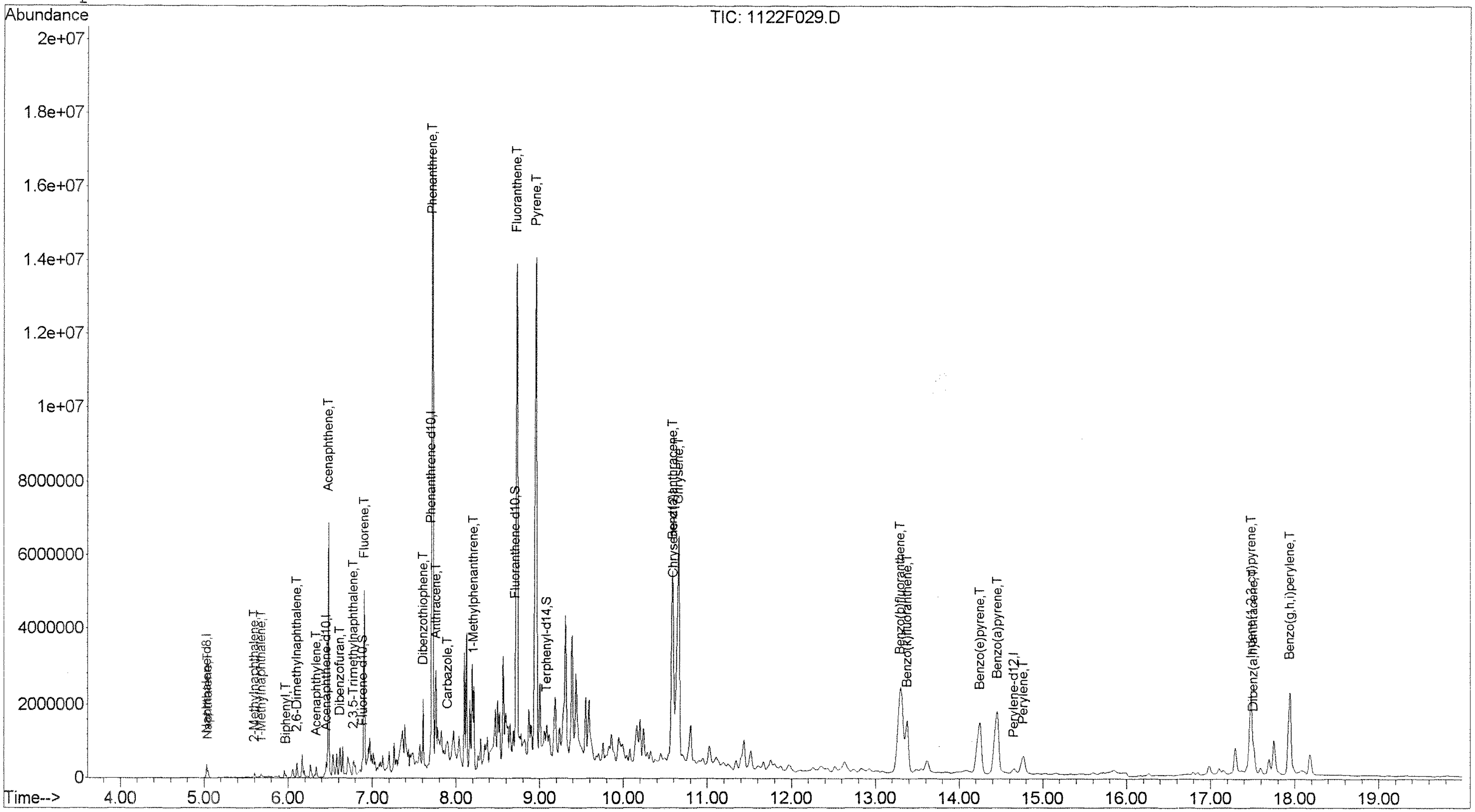
Quantitation Report (QT Reviewed)

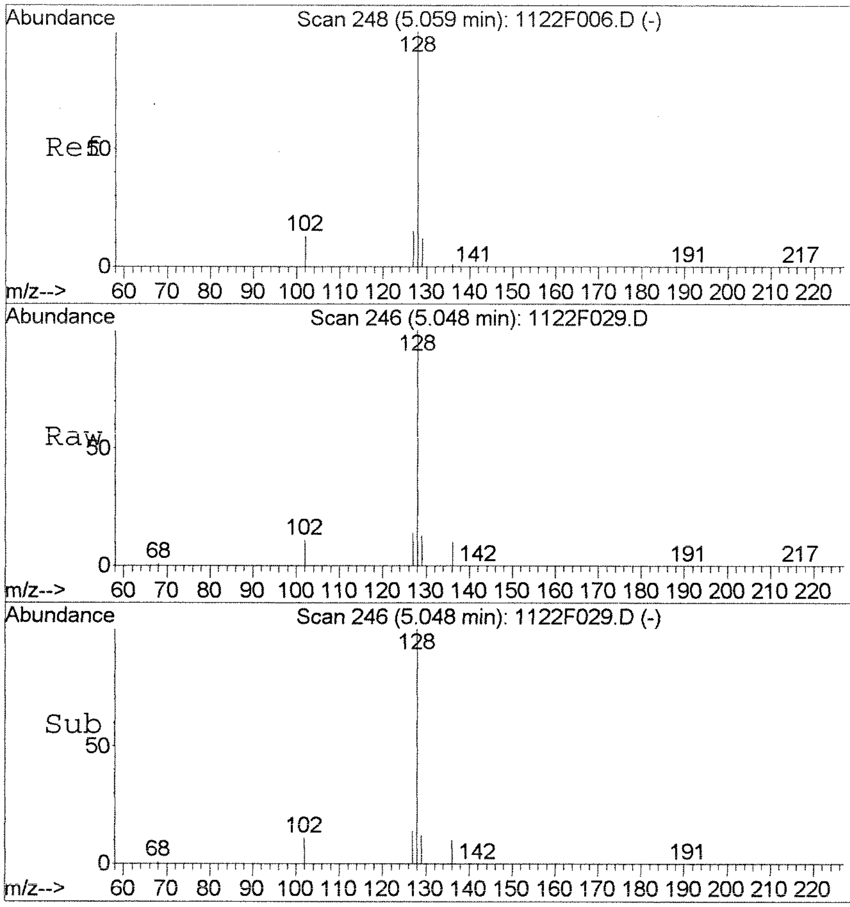
Data File : J:\MS11\DATA\112208\1122F029.D
Acq On : 22 Nov 2008 8:30 pm
Sample : K0810639-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:05 2008

Vial: 23
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Initial Calibration

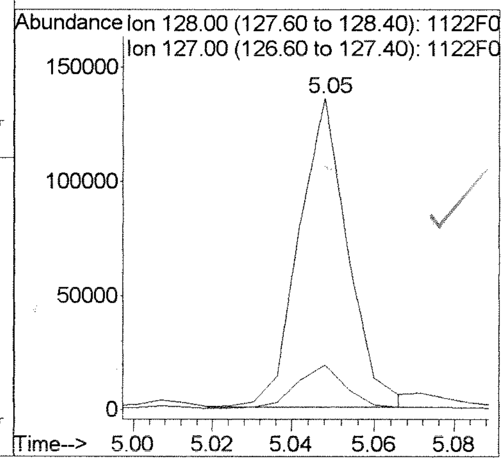


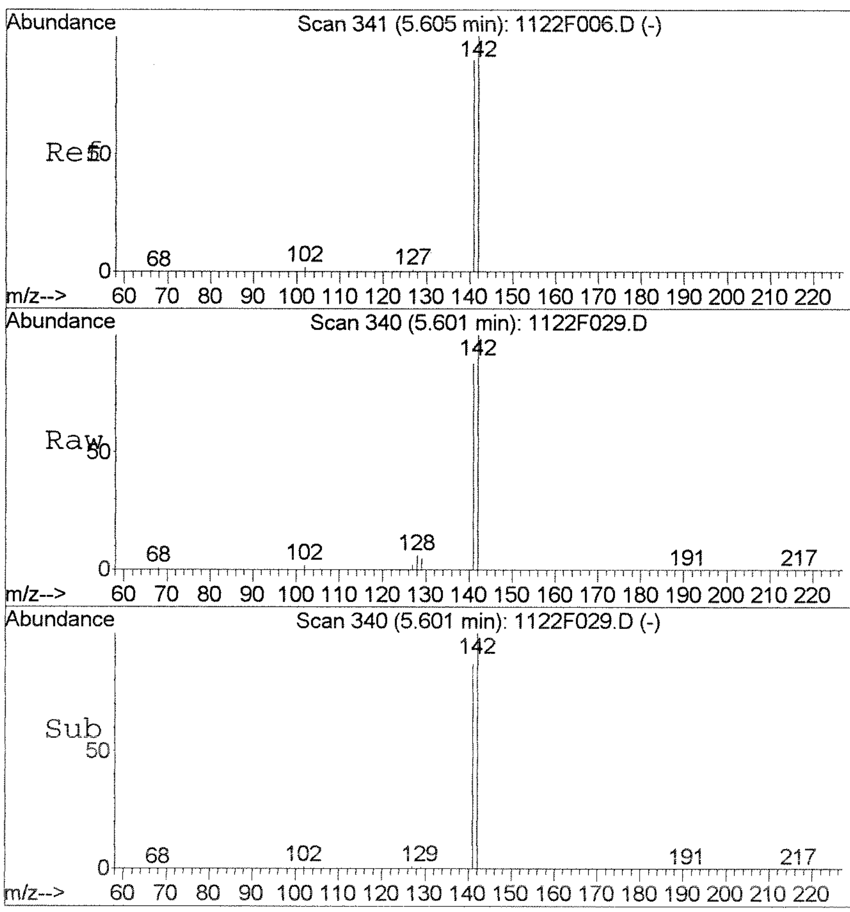


#2
Naphthalene
Concen: 66.84 ng/ml m
RT: 5.05 min Scan# 246
Delta R.T. -0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:128 Resp: 111558

Ion	Ratio	Lower	Upper
128	100		
127	14.3	0.0	43.8

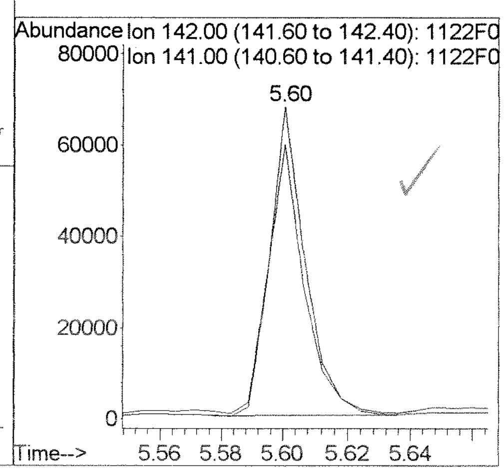


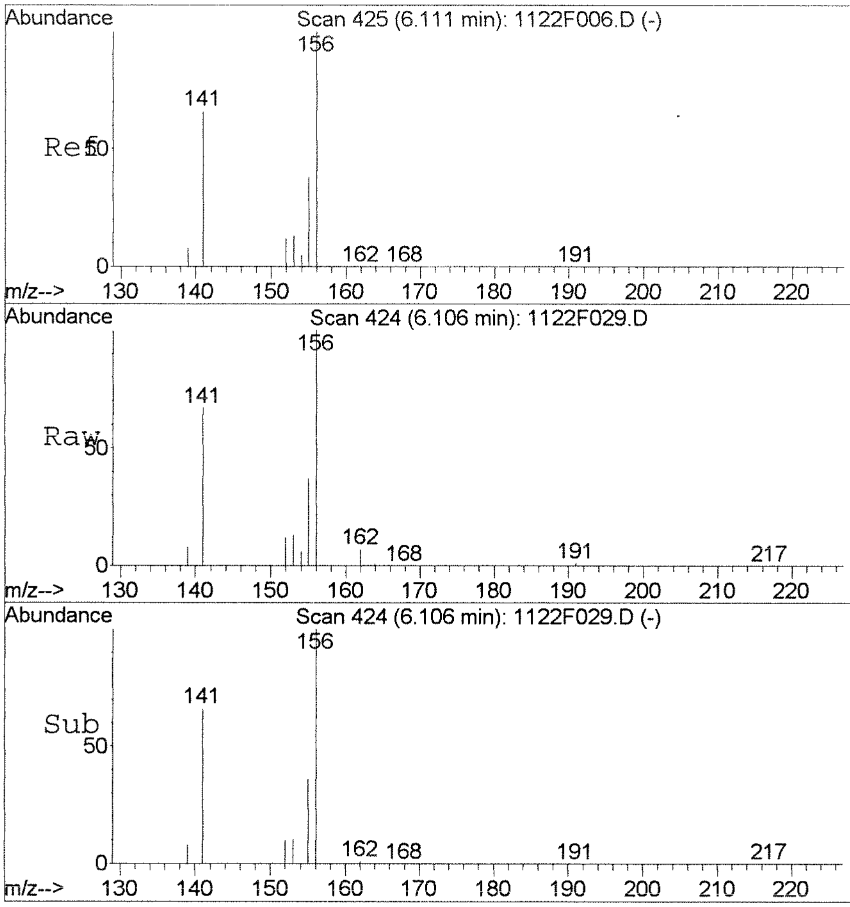


#3
2-Methylnaphthalene
Concen: 45.75 ng/ml
RT: 5.60 min Scan# 340
Delta R.T. -0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:142 Resp: 53240

Ion	Ratio	Lower	Upper
142	100		
141	87.0	52.4	112.4

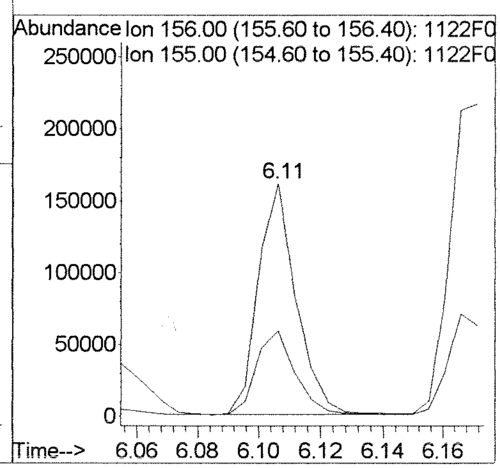


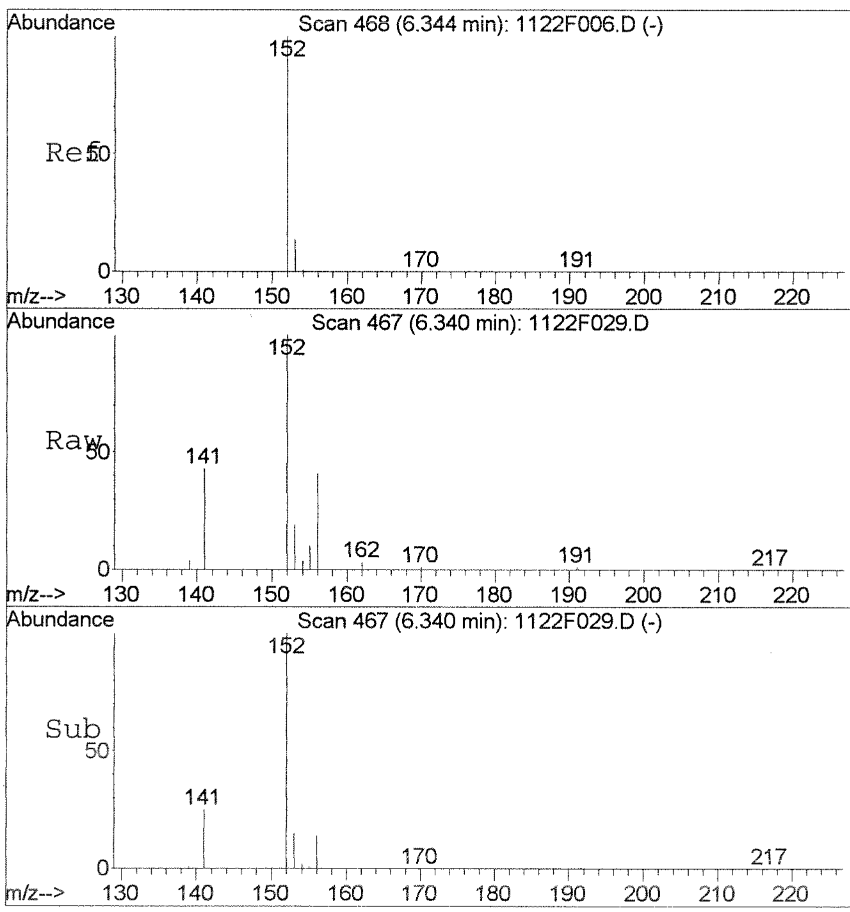


#6
2,6-Dimethylnaphthalene
Concen: 135.87 ng/ml
RT: 6.11 min Scan# 424
Delta R.T. -0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:156 Resp: 138045

Ion	Ratio	Lower	Upper
156	100		
155	36.4	7.3	67.3

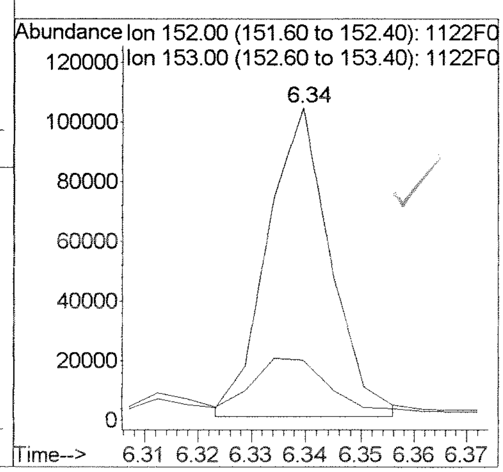


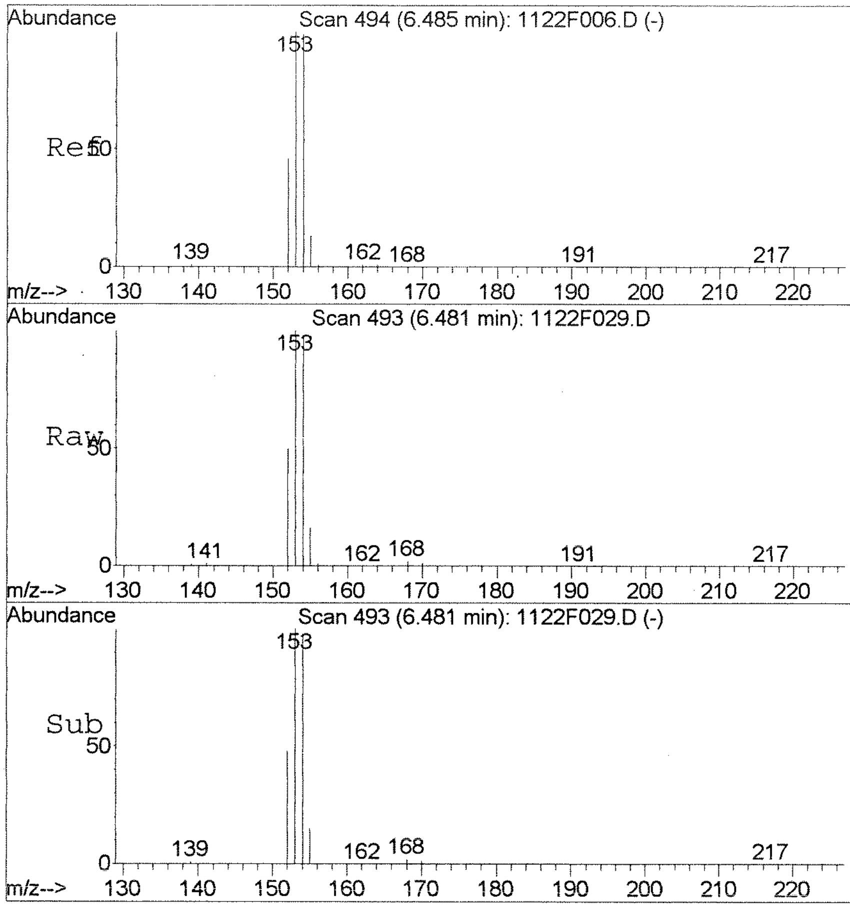


#11
Acenaphthylene
Concen: 47.11 ng/ml m
RT: 6.34 min Scan# 467
Delta R.T. -0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:152 Resp: 82804

Ion	Ratio	Lower	Upper
152	100		
153	19.4	0.0	43.0

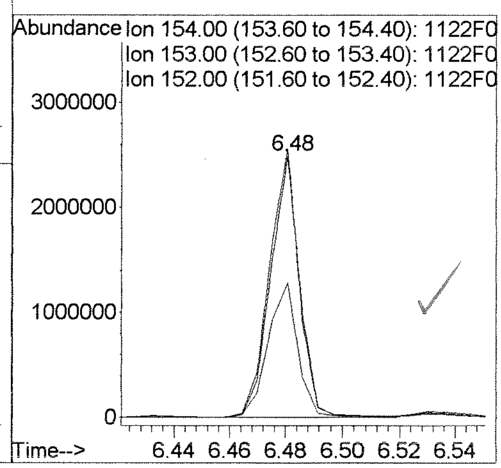


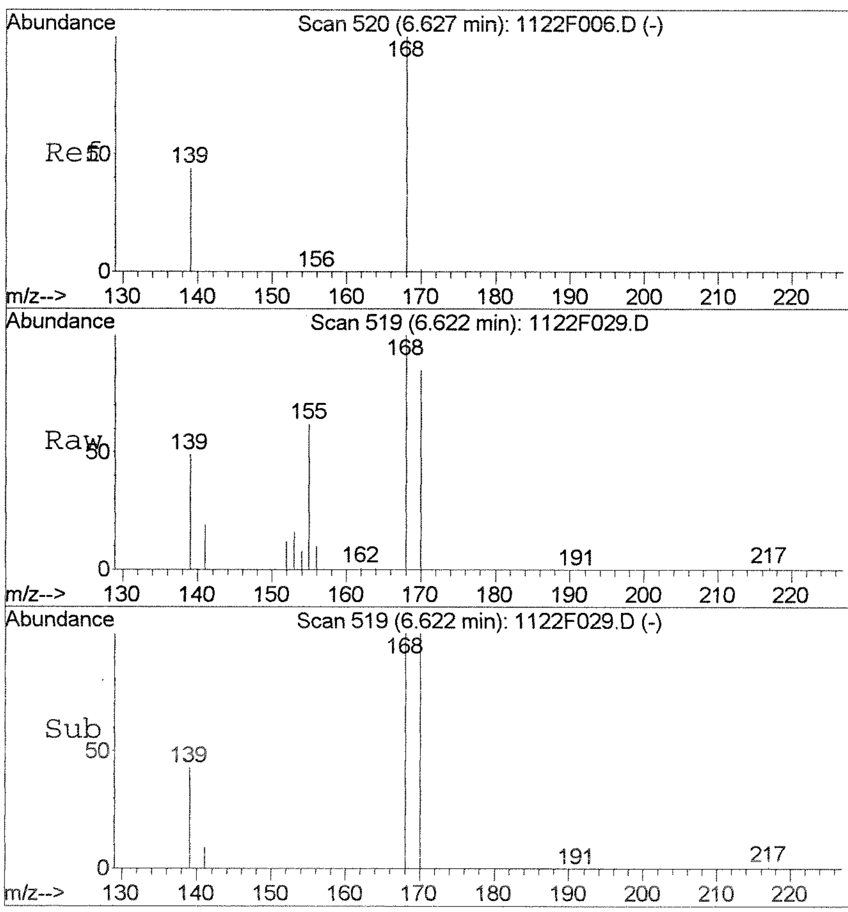


#12
Acenaphthene
Concen: 1686.34 ng/ml
RT: 6.48 min Scan# 493
Delta R.T. -0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:154 Resp: 1800980

Ion	Ratio	Lower	Upper
154	100		
153	102.6	81.9	141.9
152	51.3	26.8	86.8

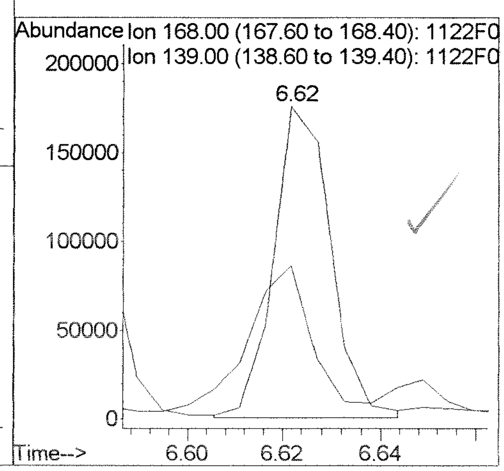


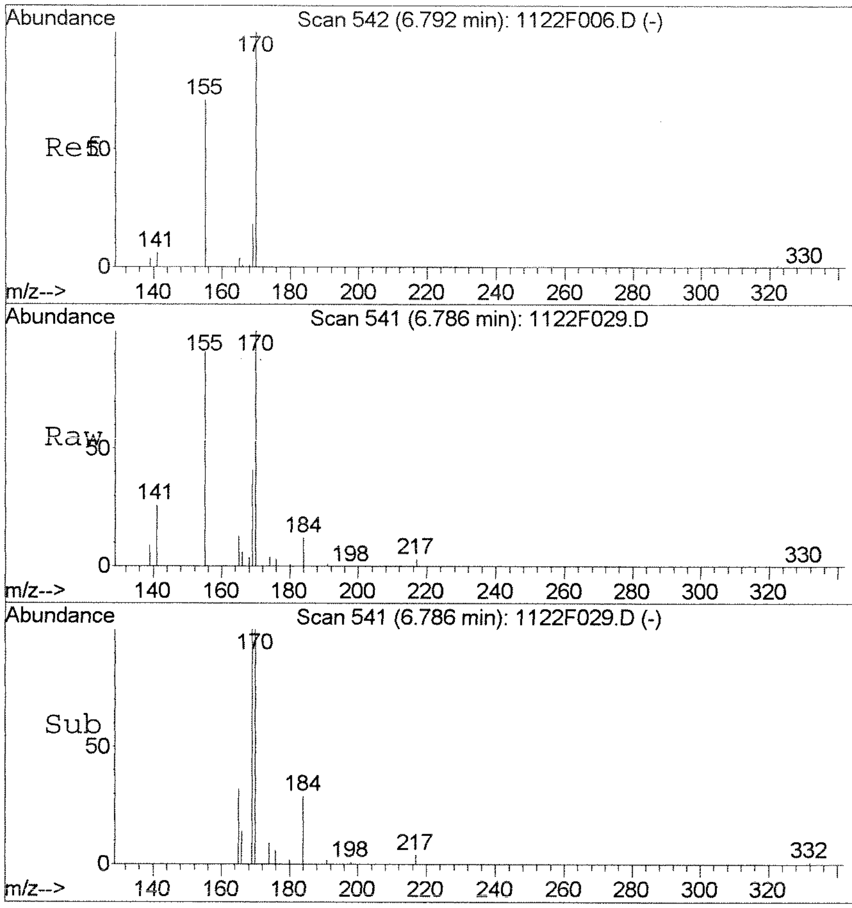


#13
Dibenzofuran
Concen: 88.74 ng/ml m
RT: 6.62 min Scan# 519
Delta R.T. -0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:168 Resp: 142558

Ion	Ratio	Lower	Upper
168	100		
139	49.2	21.0	81.0

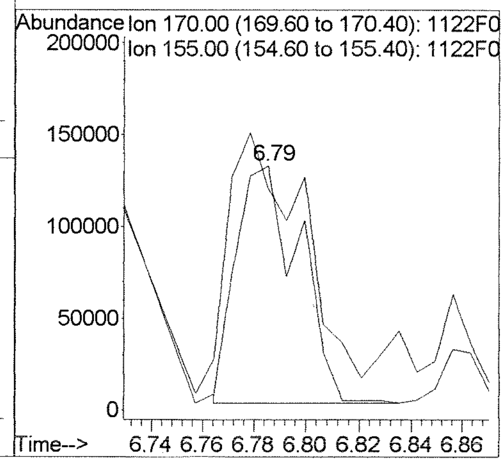


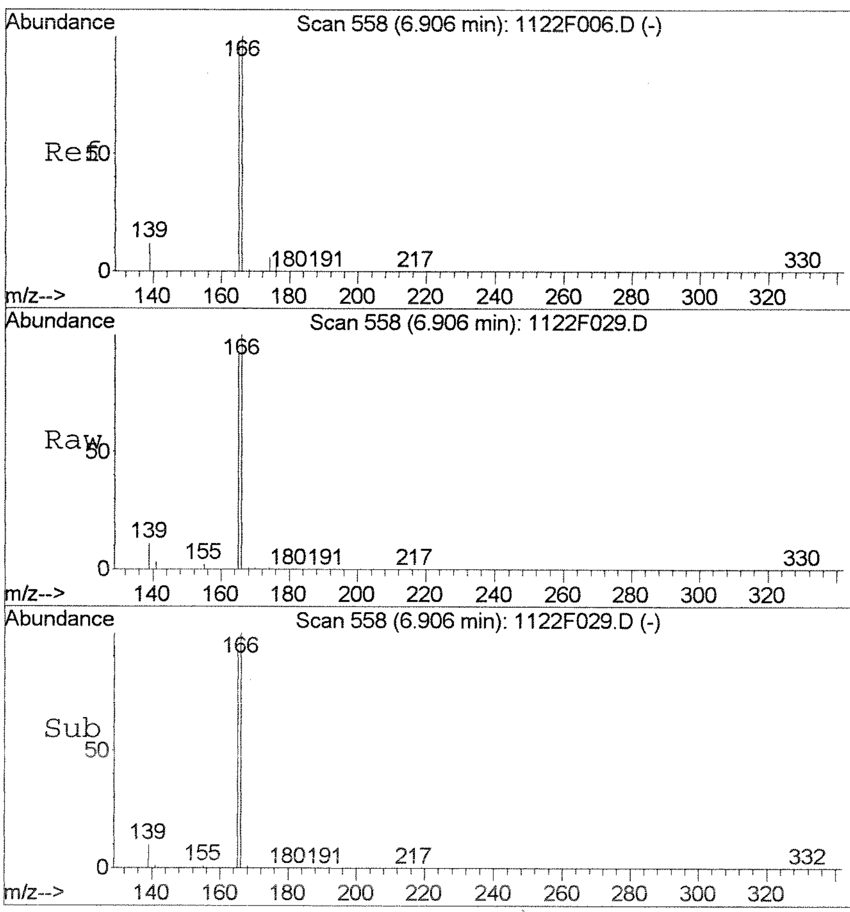


#14
2,3,5-Trimethylnaphthalene
Concen: 236.26 ng/ml
RT: 6.79 min Scan# 541
Delta R.T. -0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:170 Resp: 221912

Ion	Ratio	Lower	Upper
170	100		
155	72.3	42.9	102.9

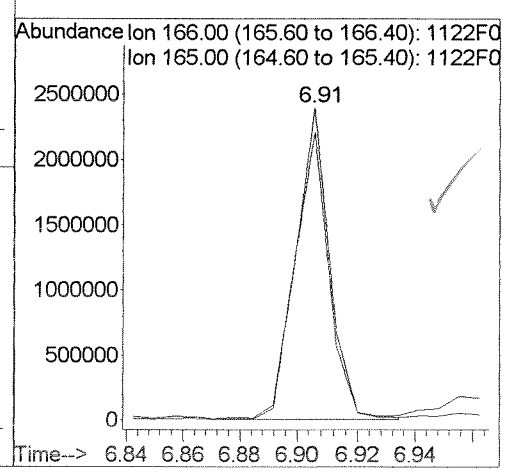


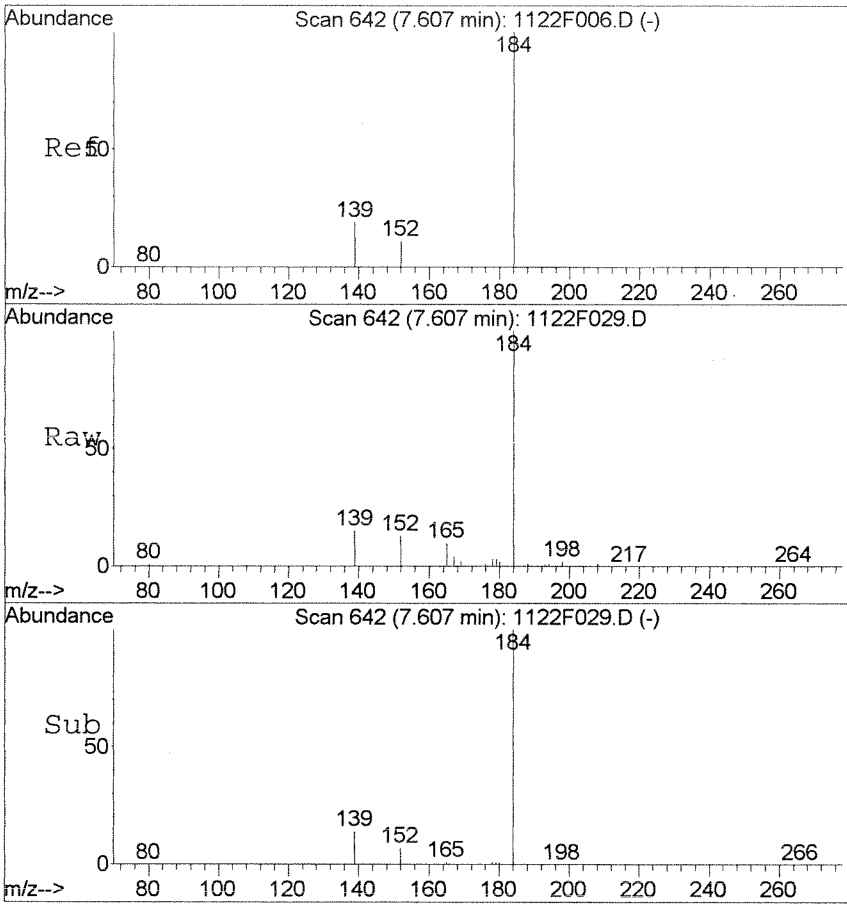


#16
Fluorene
Concen: 1456.65 ng/ml
RT: 6.91 min Scan# 558
Delta R.T. -0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:166 Resp: 1867595

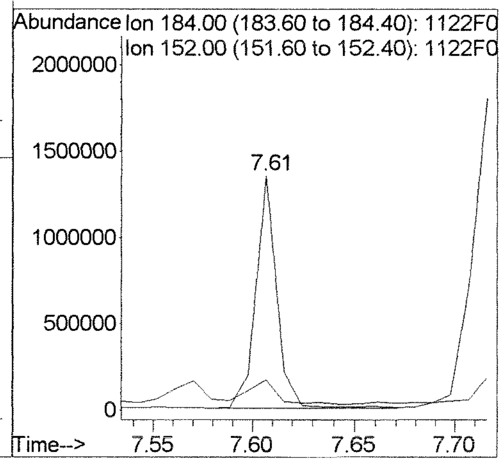
Ion	Ratio	Lower	Upper
166	100		
165	91.9	59.8	119.8

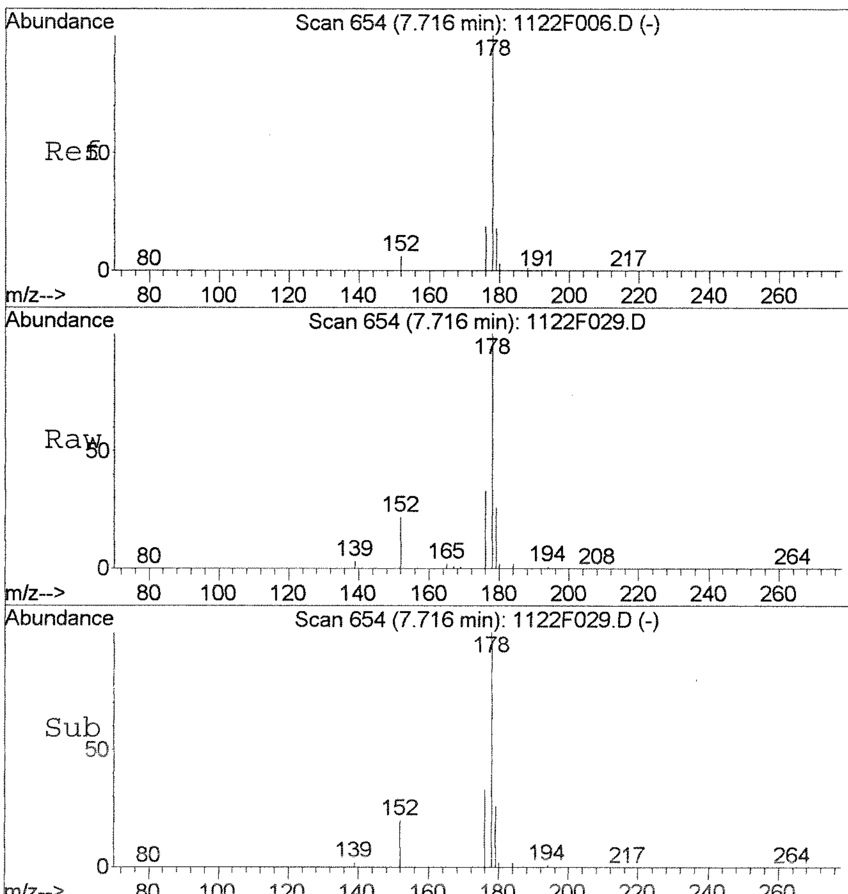




#23
Dibenzothiophene
Concen: 521.33 ng/ml
RT: 7.61 min Scan# 642
Delta R.T.   -0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008   8:30 pm

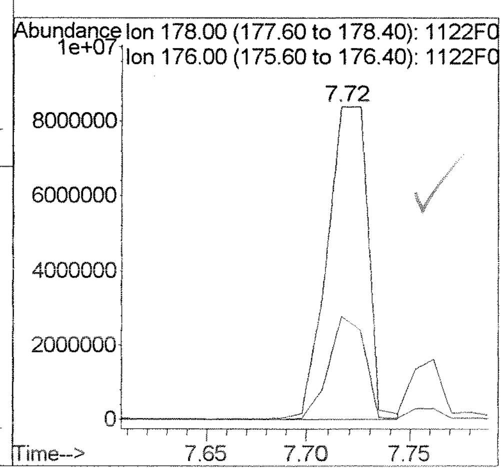
Tgt	Ion:184	Resp:	987172
Ion	Ratio	Lower	Upper
184	100		
152	10.1	0.0	39.1

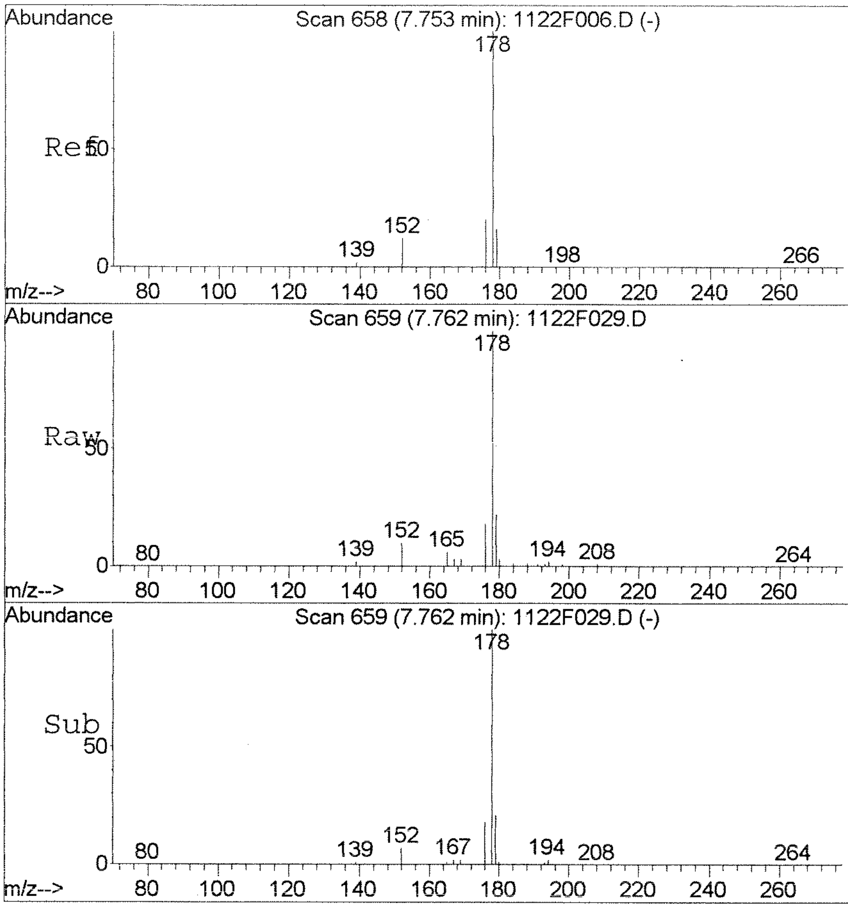




#27
Phenanthrene
Concen: 5811.75 ng/ml
RT: 7.72 min Scan# 654
Delta R.T.   0.00 min
Lab File: 1122F029.D
Acq: 22 Nov 2008   8:30 pm

Tgt	Ion:178	Resp:11255220	
Ion	Ratio	Lower	Upper
178	100		
176	33.0	0.0	51.0

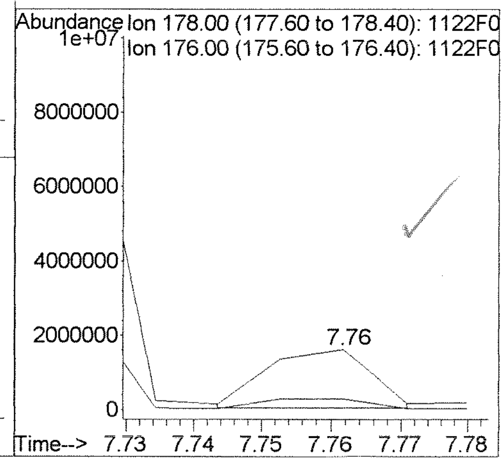


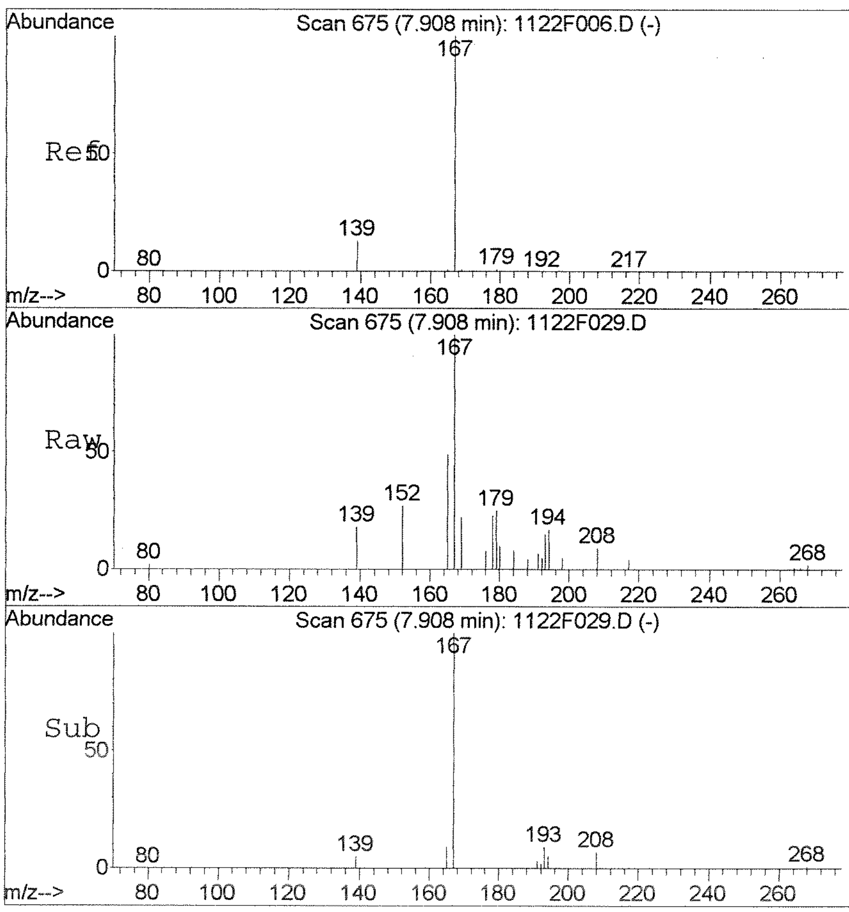


#28
Anthracene
Concen: 866.31 ng/ml m
RT: 7.76 min Scan# 659
Delta R.T. -0.00 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:178 Resp: 1634664

Ion	Ratio	Lower	Upper
178	100		
176	18.4	0.0	49.7

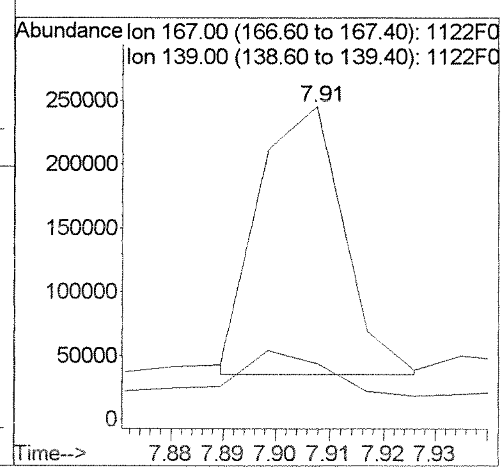


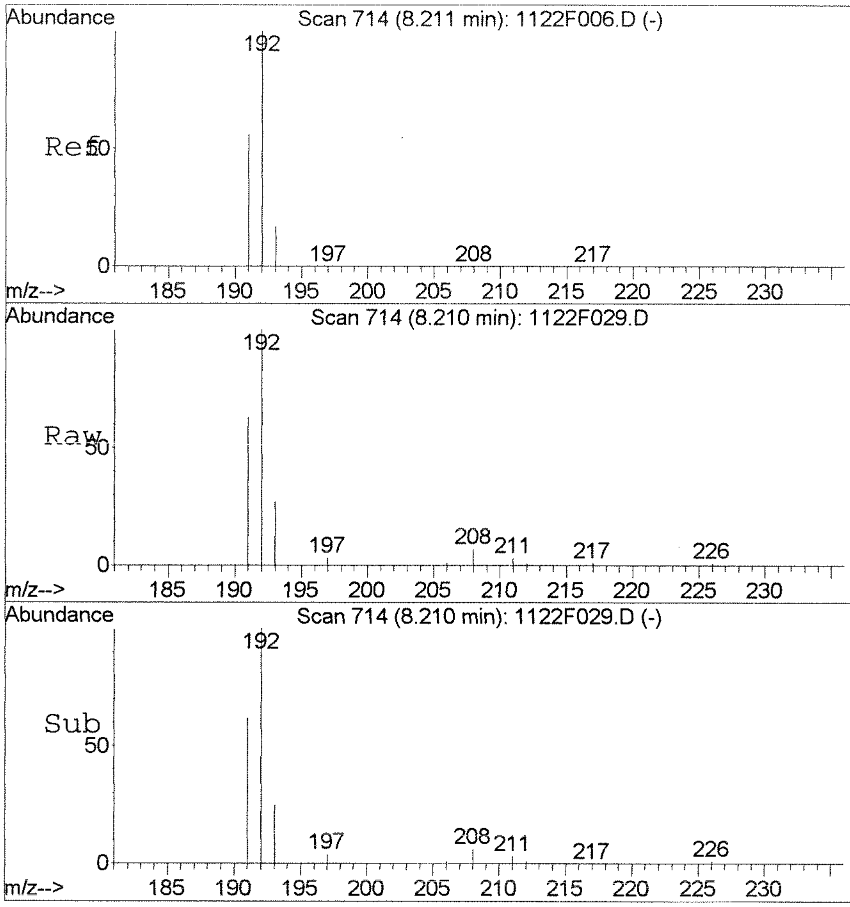


#29
Carbazole
Concen: 133.91 ng/ml m
RT: 7.91 min Scan# 675
Delta R.T. 0.00 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:167 Resp: 231814

Ion	Ratio	Lower	Upper
167	100		
139	18.0	0.0	46.8

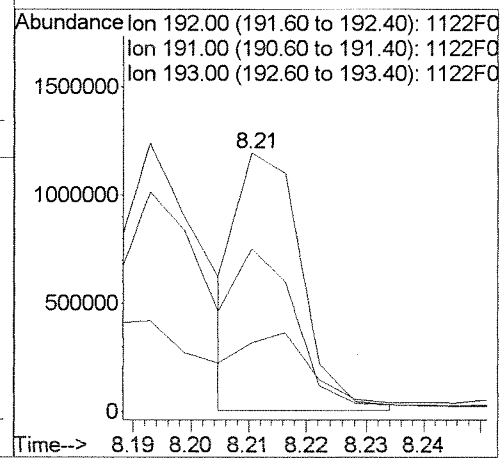


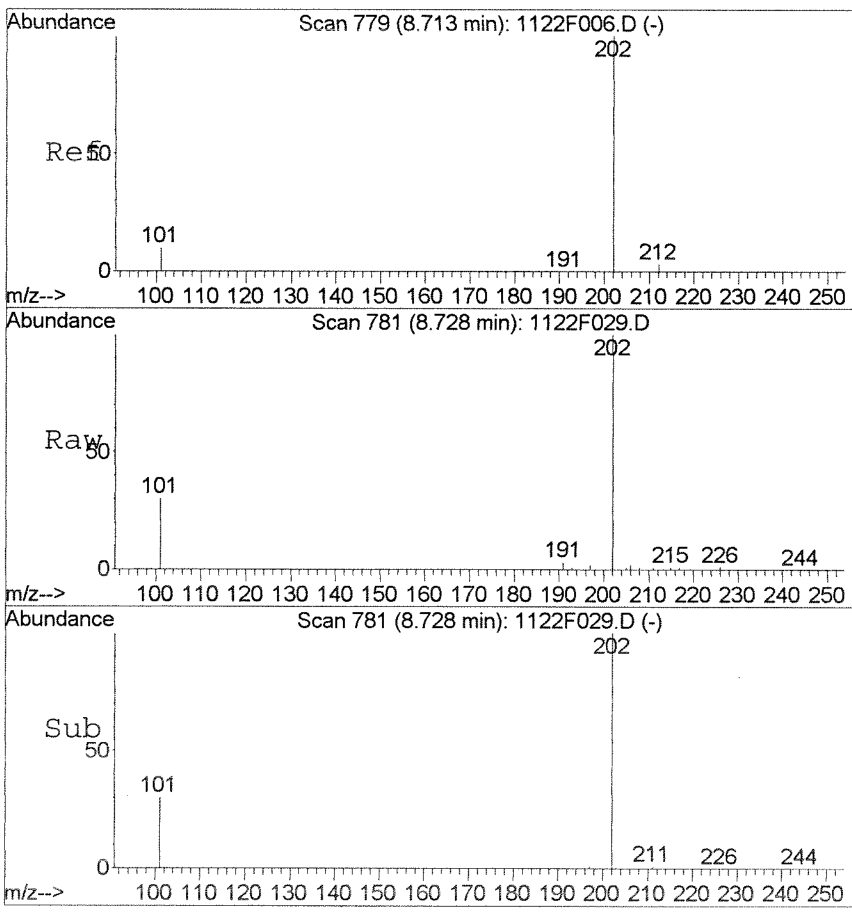


#30
1-Methylphenanthrene
Concen: 628.51 ng/ml m
RT: 8.21 min Scan# 714
Delta R.T. -0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:192 Resp: 903354

Ion	Ratio	Lower	Upper
192	100		
191	63.0	29.0	89.0
193	26.6	0.0	45.4

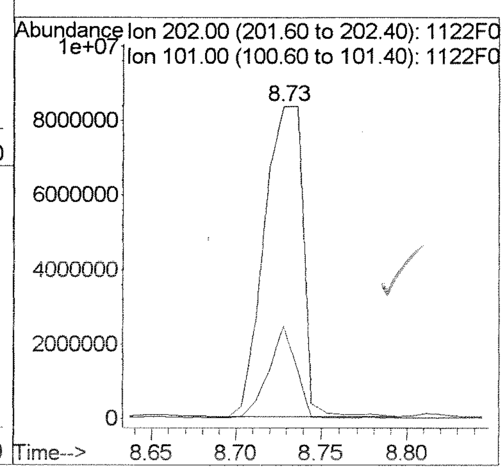


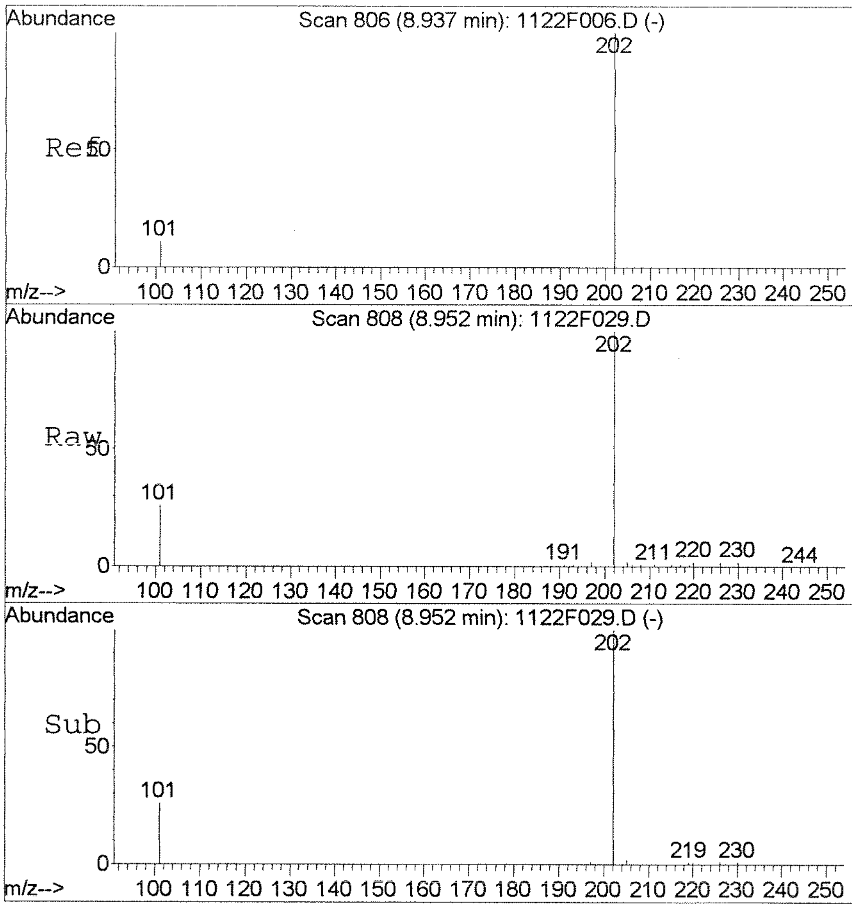


#35
Fluoranthene
Concen: 6102.11 ng/ml
RT: 8.73 min Scan# 781
Delta R.T. 0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:202 Resp:13423685

Ion	Ratio	Lower	Upper
202	100		
101	29.8	0.0	35.8

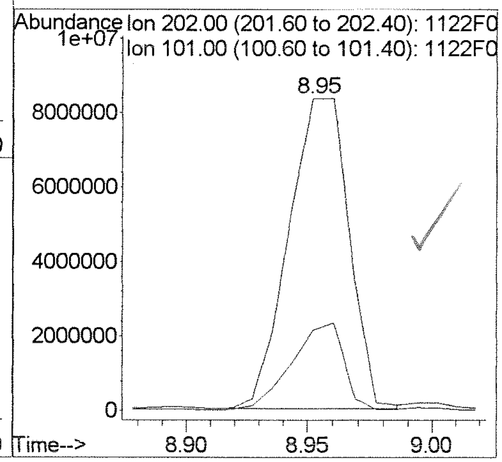


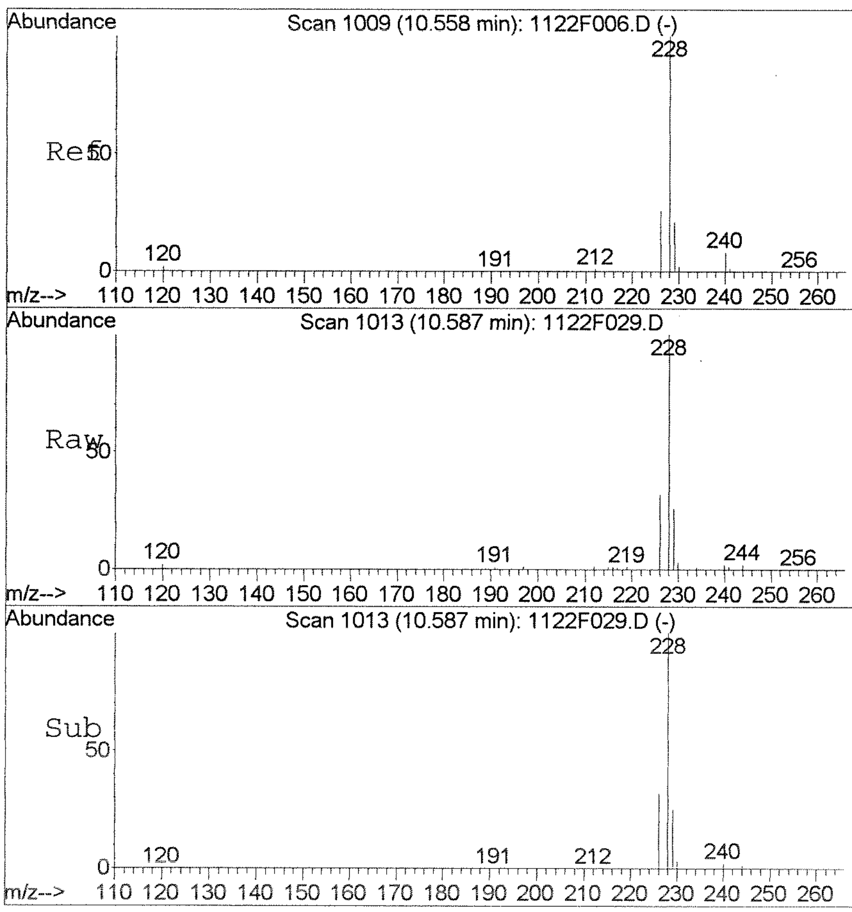


#38
Pyrene
Concen: 5164.97 ng/ml
RT: 8.95 min Scan# 808
Delta R.T. 0.01 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:202 Resp:13994518

Ion	Ratio	Lower	Upper
202	100		
101	25.6	0.0	37.6

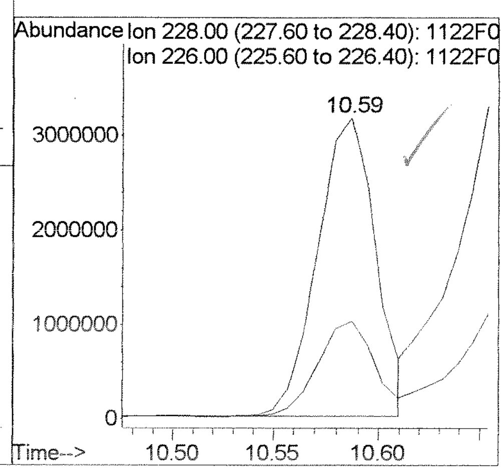


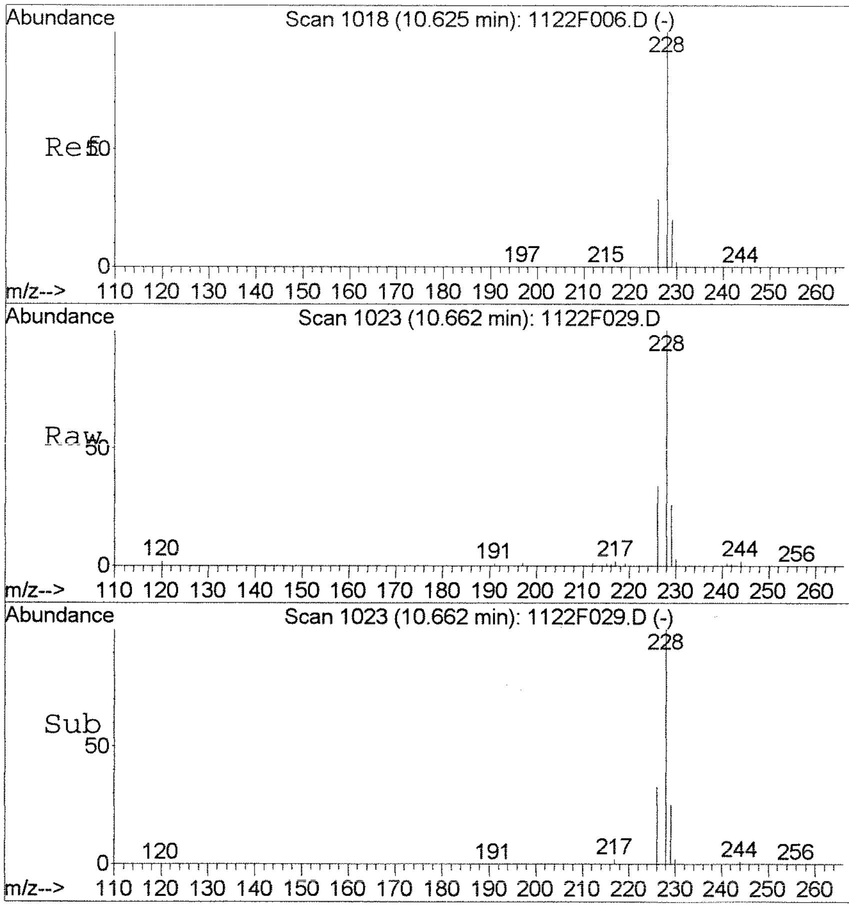


#43
Benz(a)anthracene
Concen: 2451.79 ng/ml
RT: 10.59 min Scan# 1013
Delta R.T. 0.02 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:228 Resp: 6026692

Ion	Ratio	Lower	Upper
228	100		
226	32.0	0.0	57.0

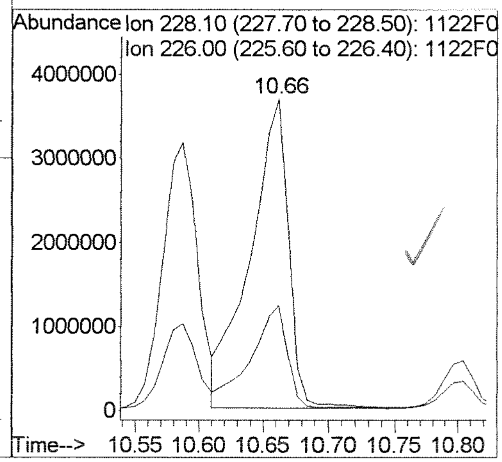


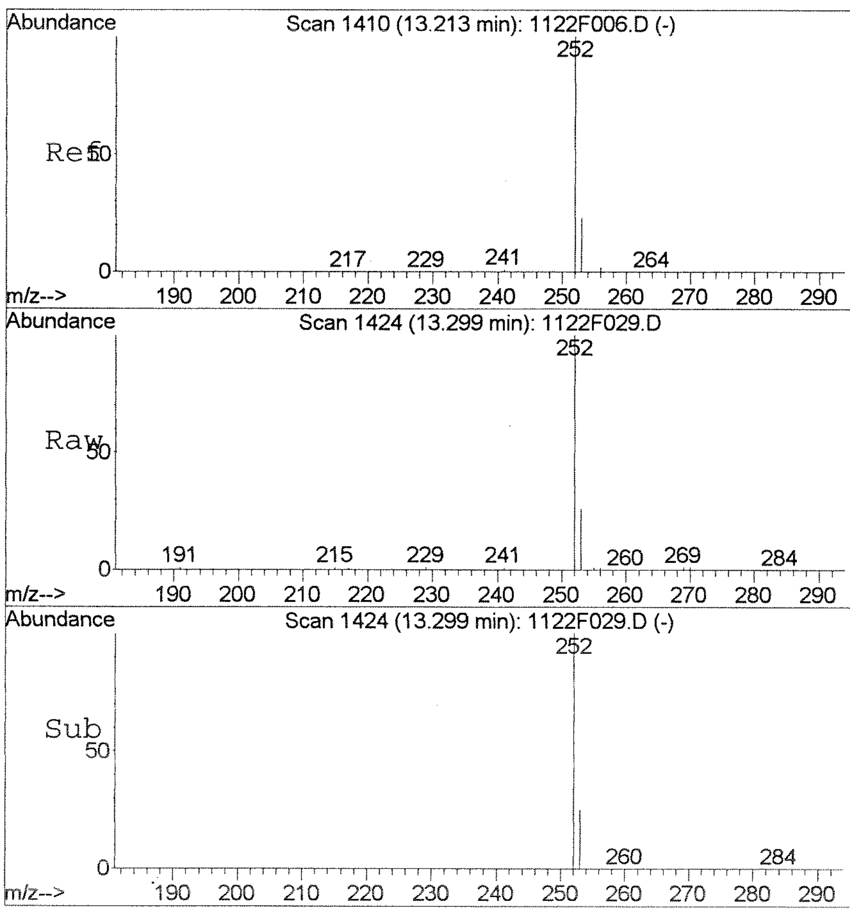


#44
Chrysene
Concen: 3174.64 ng/ml
RT: 10.66 min Scan# 1023
Delta R.T. 0.03 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:228 Resp: 7664168

Ion	Ratio	Lower	Upper
228	100		
226	33.2	0.0	58.9

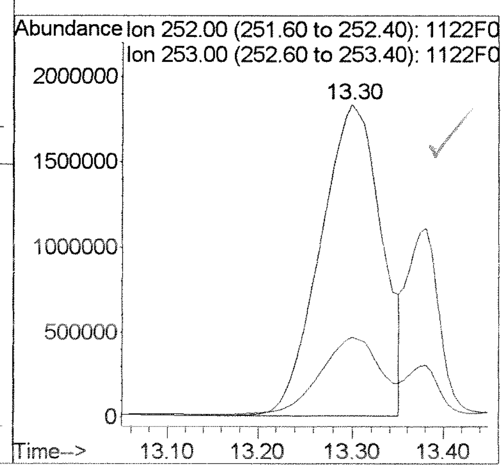


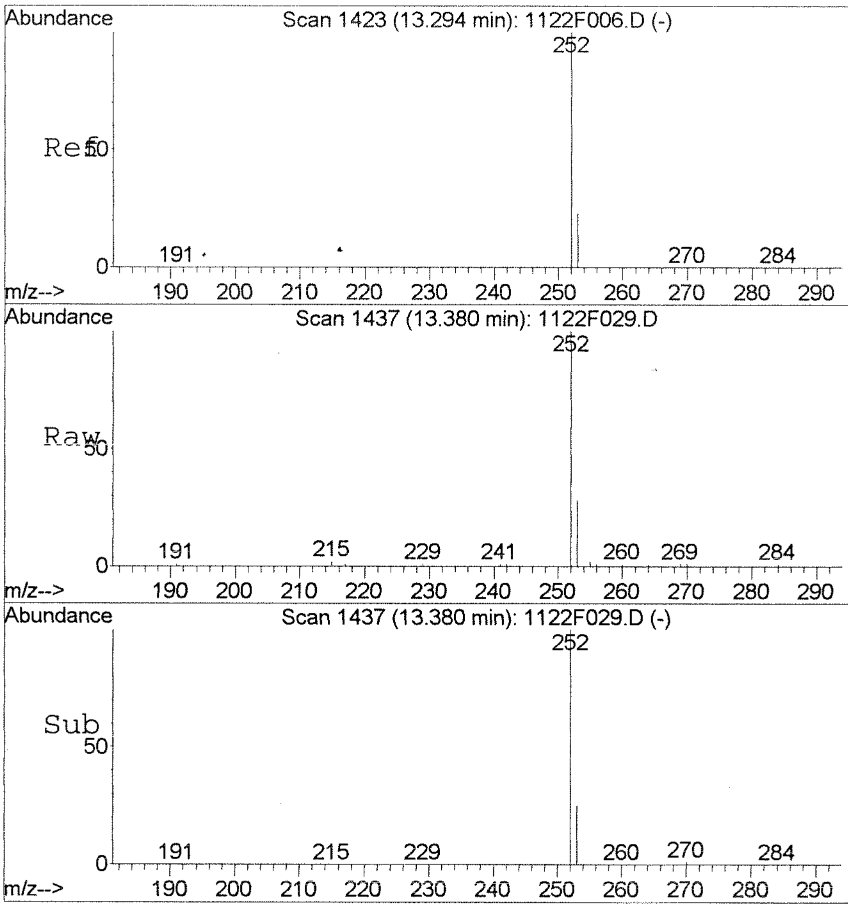


#50
Benzo(b)fluoranthene
Concen: 3042.49 ng/ml
RT: 13.30 min Scan# 1424
Delta R.T. 0.07 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:252 Resp: 8155375

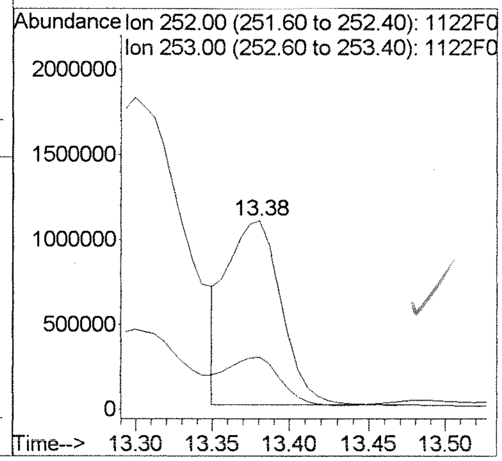
Ion	Ratio	Lower	Upper
252	100		
253	24.9	0.0	52.6

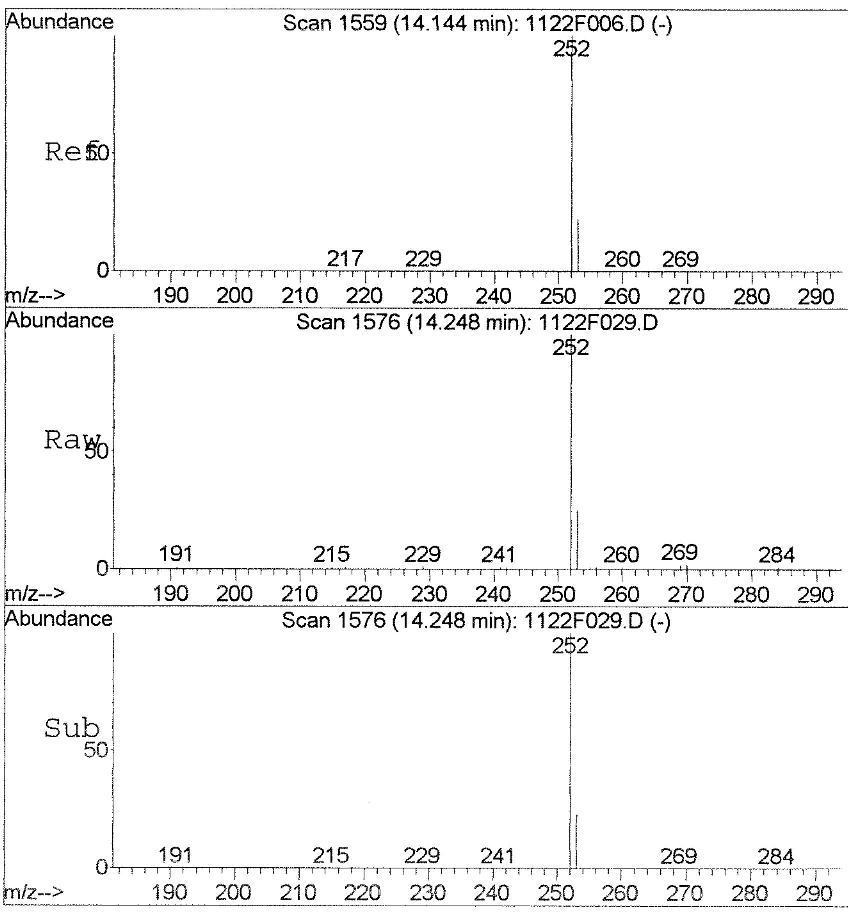




#51
Benzo(k)fluoranthene
Concen: 1040.91 ng/ml
RT: 13.38 min Scan# 1437
Delta R.T. 0.07 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

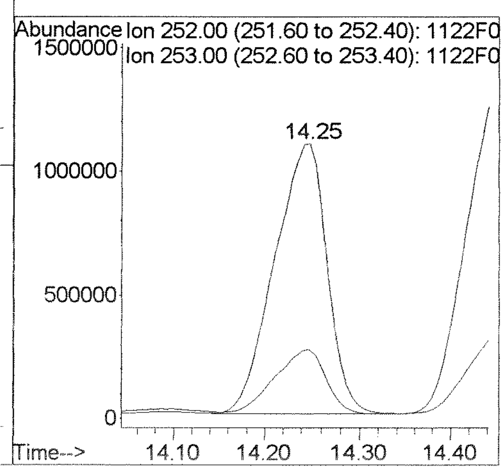
Tgt	Ion:252	Resp:	2680316
Ion	Ratio	Lower	Upper
252	100		
253	24.0	0.0	52.0

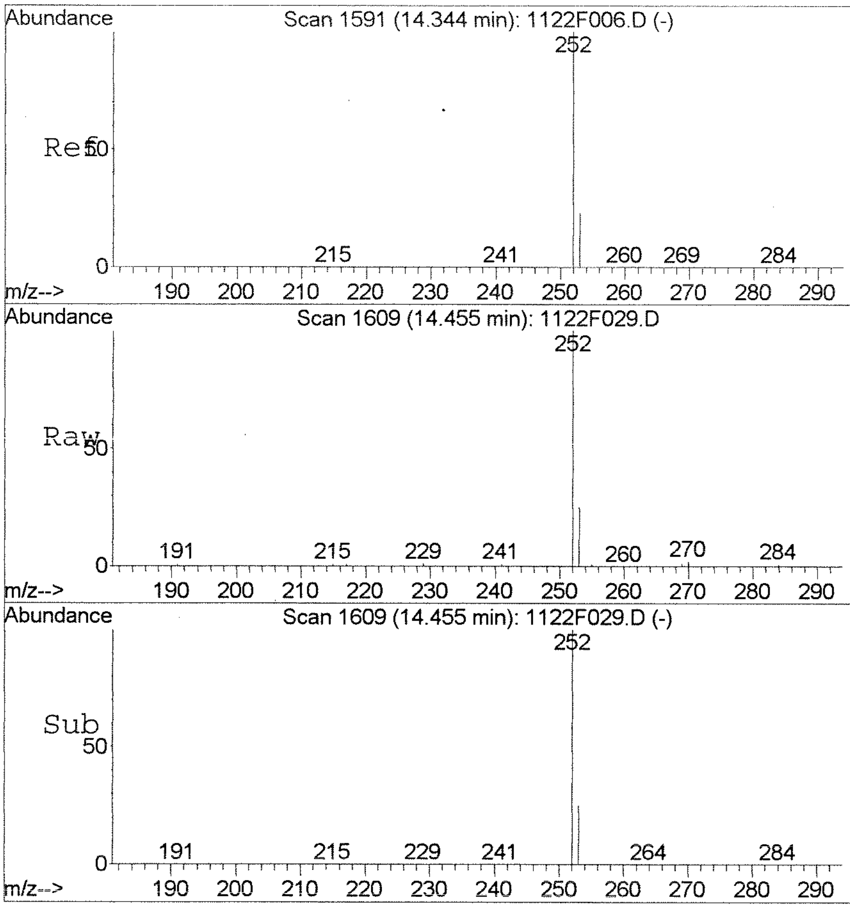




#52
Benzo(e)pyrene
Concen: 1735.03 ng/ml
RT: 14.25 min Scan# 1576
Delta R.T. 0.08 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt	Ion:252	Resp:	4224618
Ion	Ratio	Lower	Upper
252	100		
253	23.7	0.0	52.2

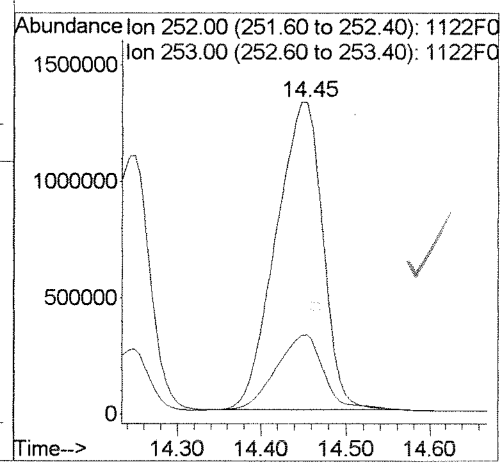


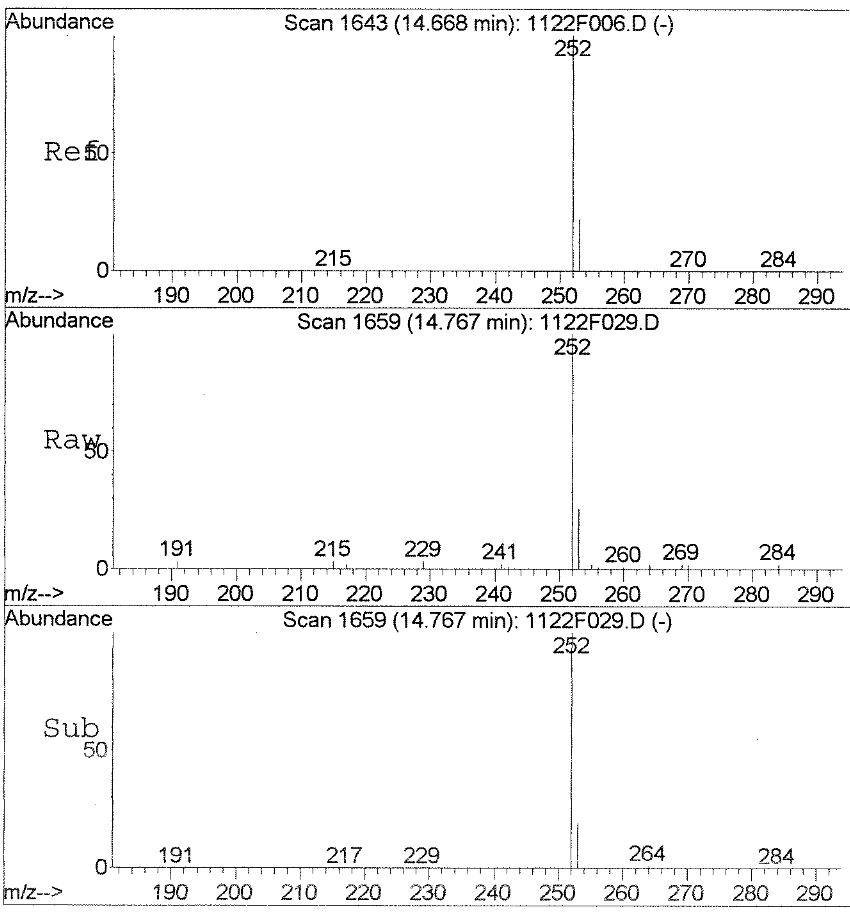


#53
Benzo(a)pyrene
Concen: 2277.95 ng/ml
RT: 14.45 min Scan# 1609
Delta R.T. 0.09 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:252 Resp: 5055534

Ion	Ratio	Lower	Upper
252	100		
253	24.3	0.0	52.2

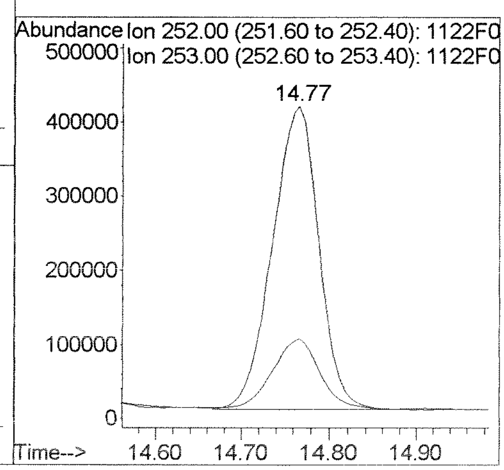


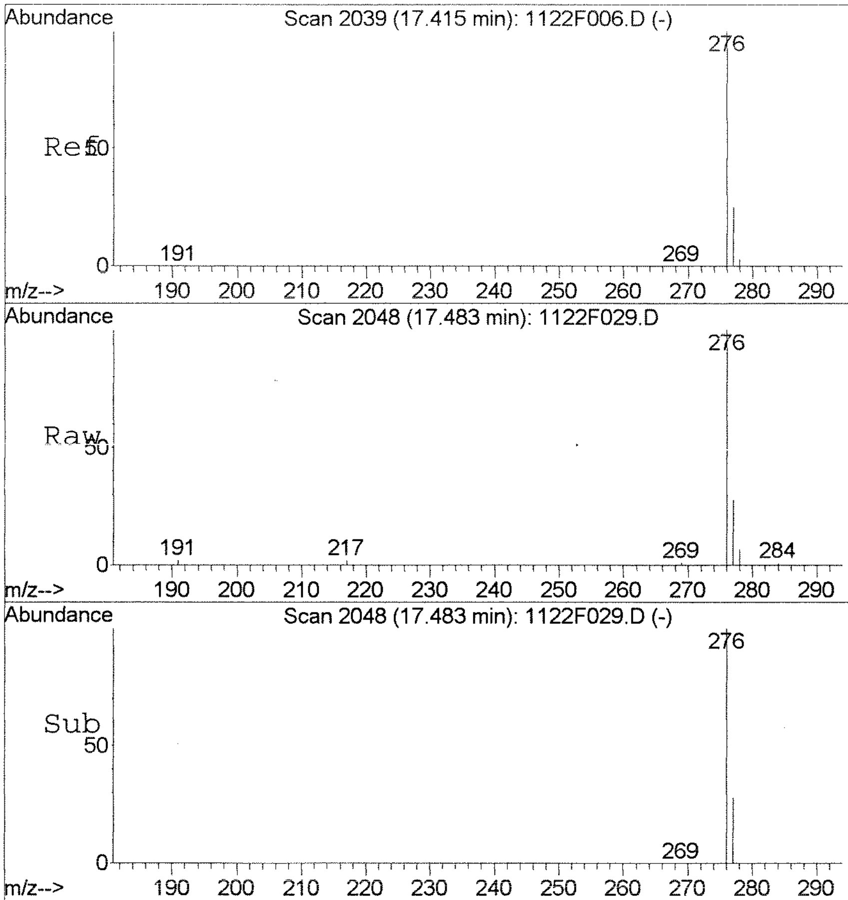


#54
Perylene
Concen: 686.95 ng/ml
RT: 14.77 min Scan# 1659
Delta R.T. 0.08 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:252 Resp: 1497679

Ion	Ratio	Lower	Upper
252	100		
253	23.3	0.0	51.5

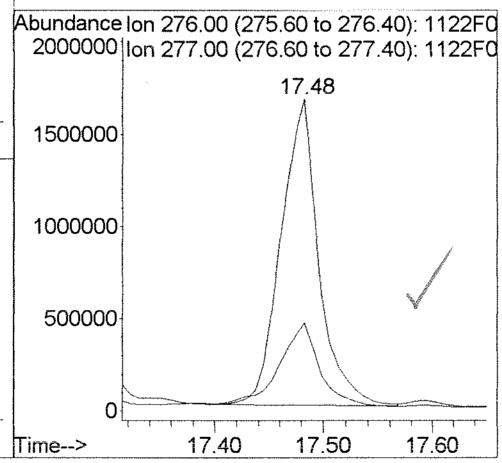


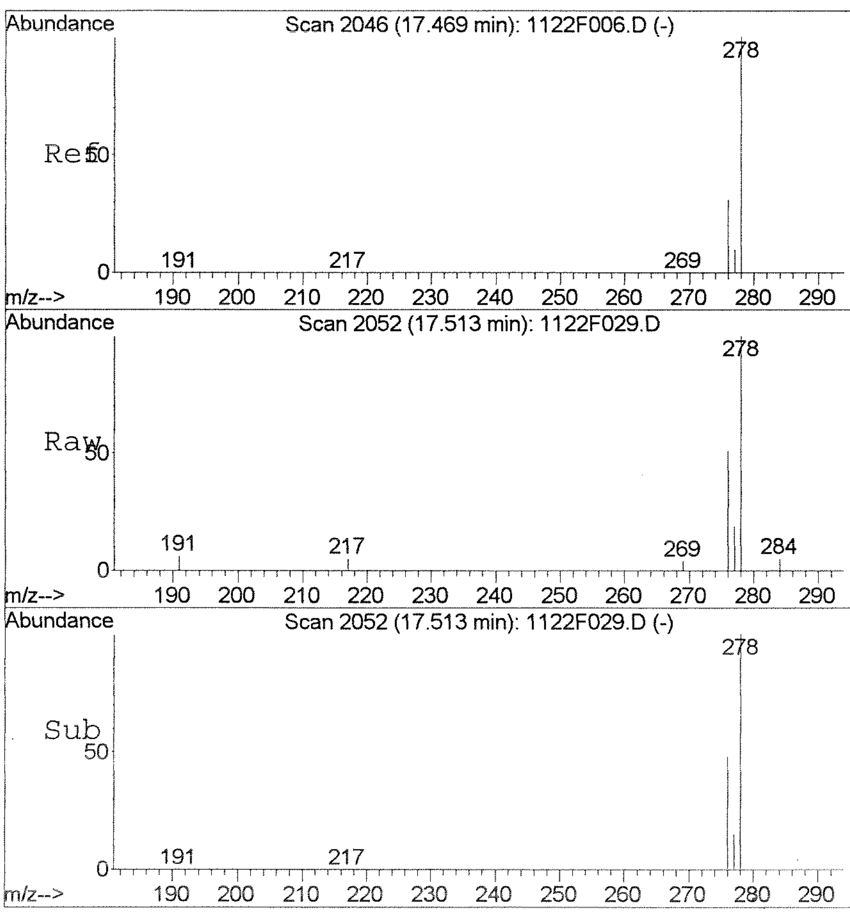


#55
Indeno(1,2,3-cd)pyrene
Concen: 1938.74 ng/ml
RT: 17.48 min Scan# 2048
Delta R.T. 0.04 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:276 Resp: 3992202

Ion	Ratio	Lower	Upper
276	100		
277	27.3	0.0	54.7

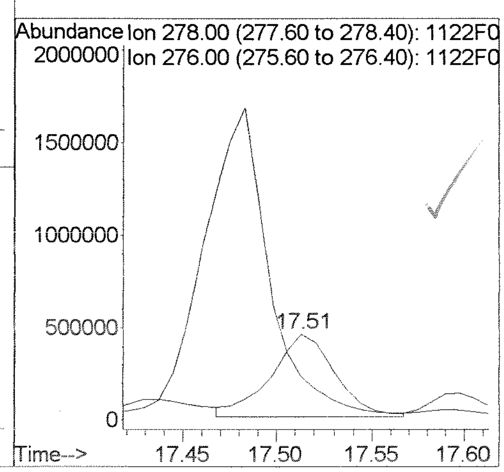


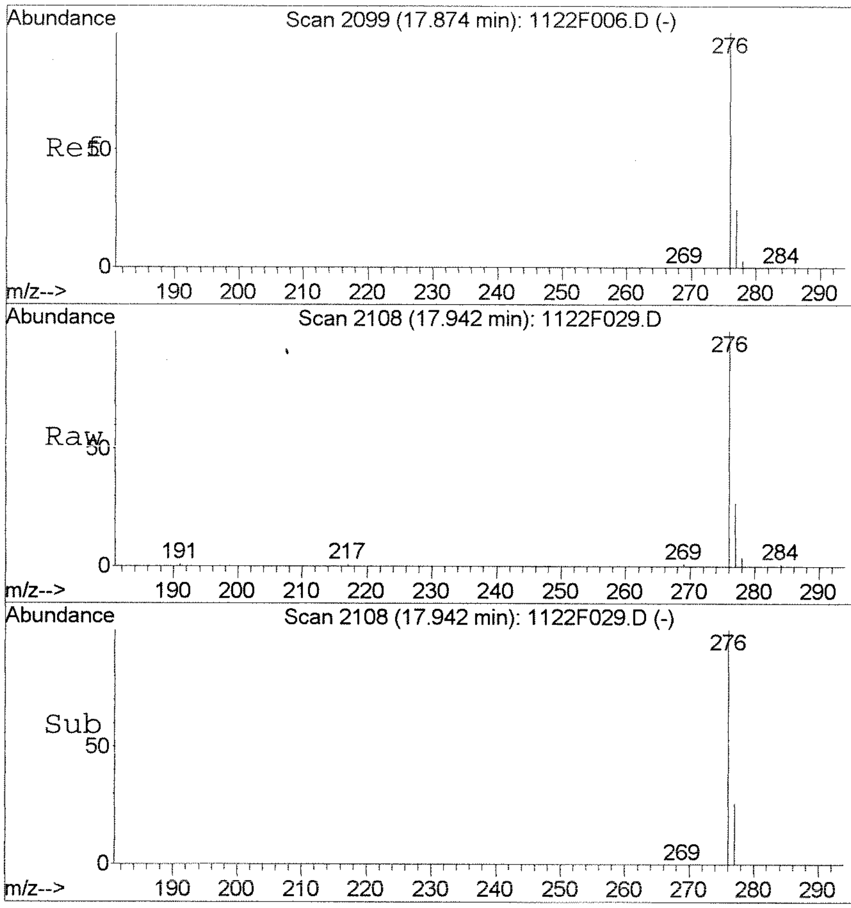


#56
Dibenz(a,h)anthracene
Concen: 482.66 ng/ml m
RT: 17.51 min Scan# 2052
Delta R.T. 0.02 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:278 Resp: 1043162

Ion	Ratio	Lower	Upper
278	100		
276	50.7	0.0	59.7

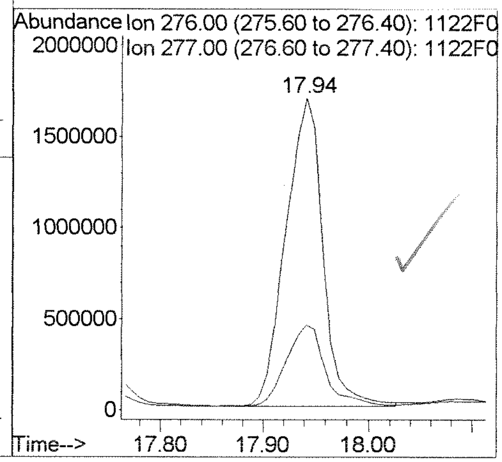




#57
Benzo(g,h,i)perylene
Concen: 1768.11 ng/ml
RT: 17.94 min Scan# 2108
Delta R.T. 0.04 min
Lab File: 1122F029.D
Acq: 22 Nov 2008 8:30 pm

Tgt Ion:276 Resp: 4147955

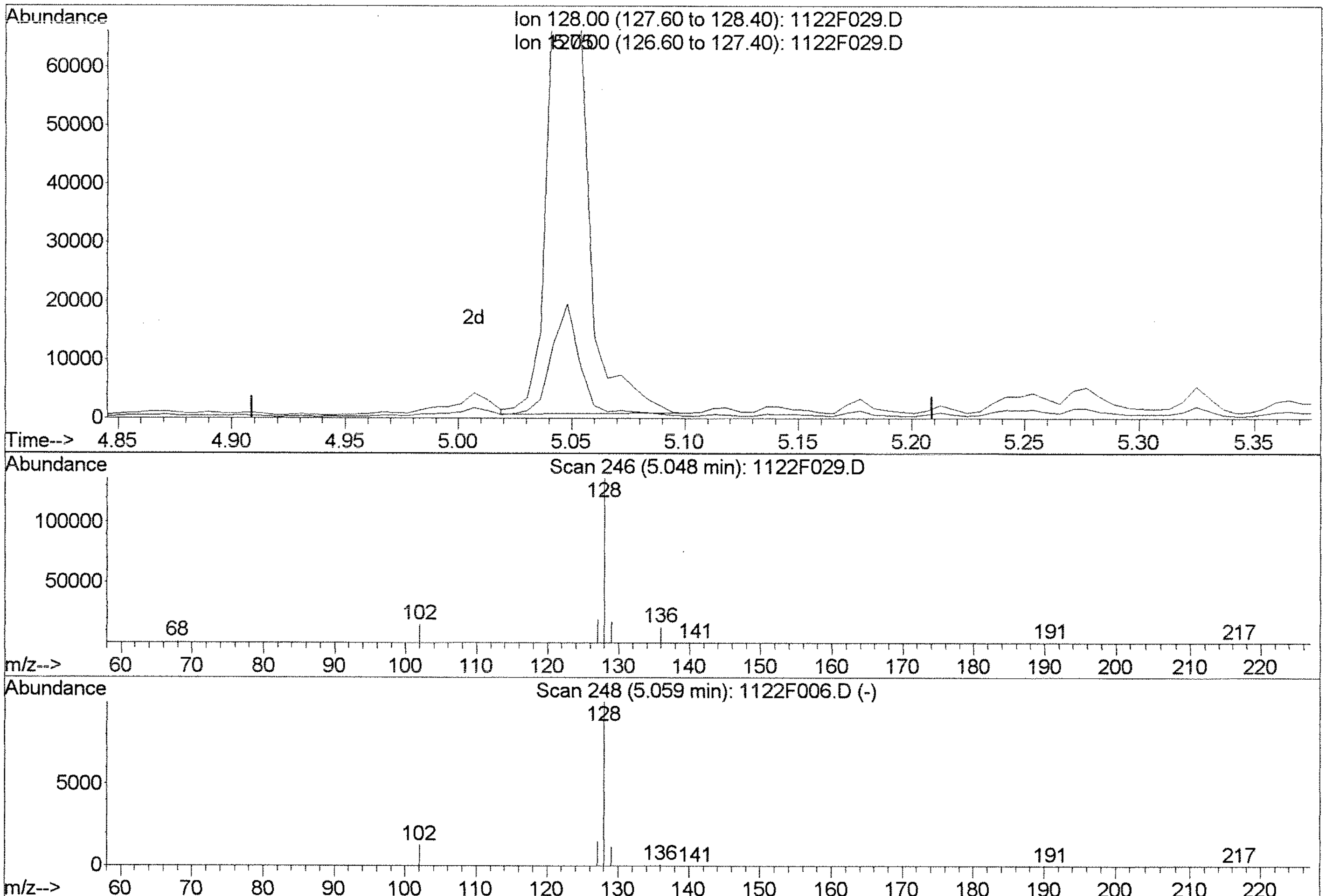
Ion	Ratio	Lower	Upper
276	100		
277	26.4	0.0	54.2



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112208\1122F029.D Vial: 23
Acq On : 22 Nov 2008 8:30 pm Operator: LWeiskopf
Sample : K0810639-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 10:14 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



TIC: 1122F029.D

(2) Naphthalene (T)

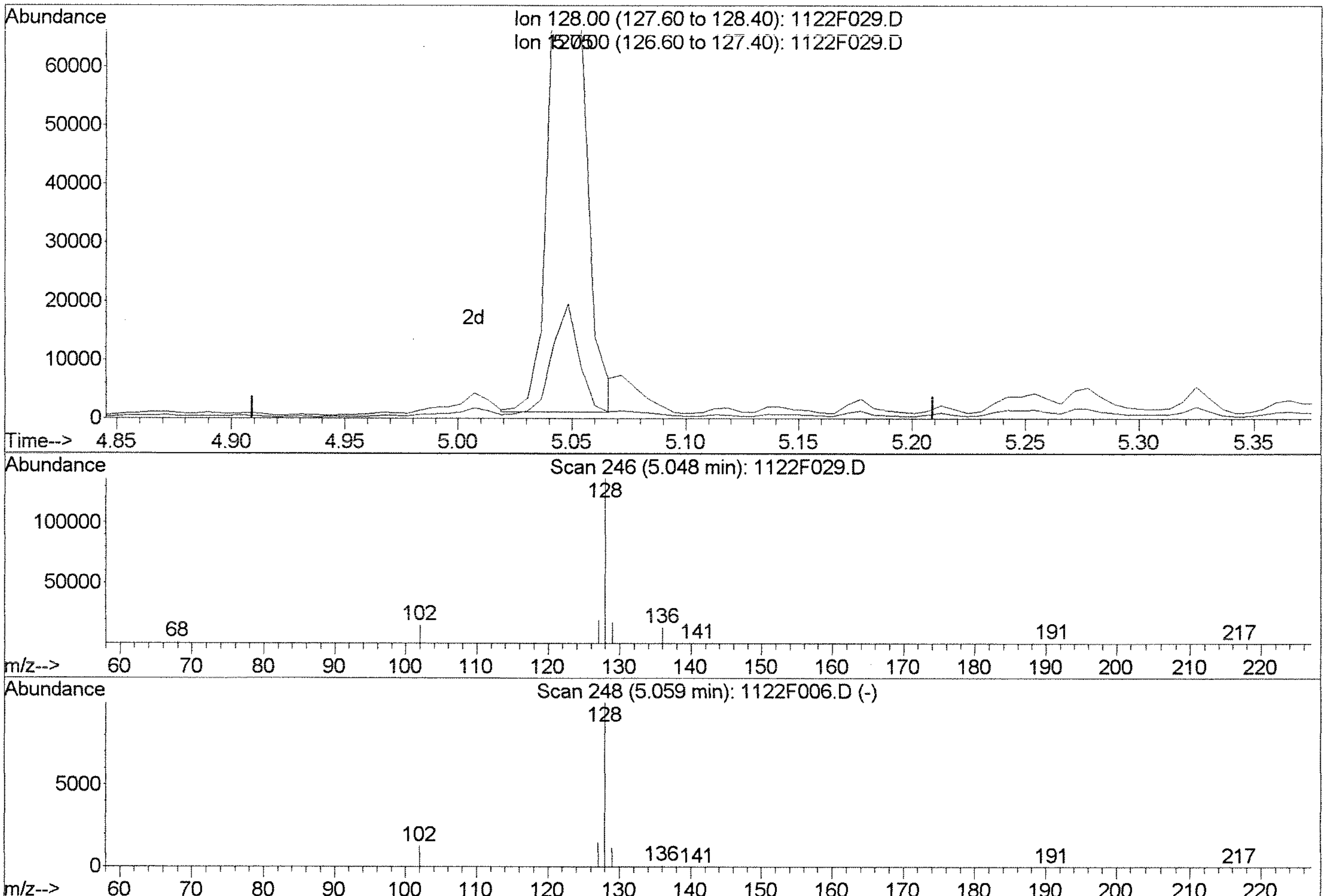
5.05min 70.44ng/ml

response 117567

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	14.10
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112208\1122F029.D Vial: 23
Acq On : 22 Nov 2008 8:30 pm Operator: LWeiskopf
Sample : K0810639-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:04 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



TIC: 1122F029.D

(2) Naphthalene (T)

5.05min 66.84ng/ml m

response 111558

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	14.32
0.00	0.00	0.00
0.00	0.00	0.00

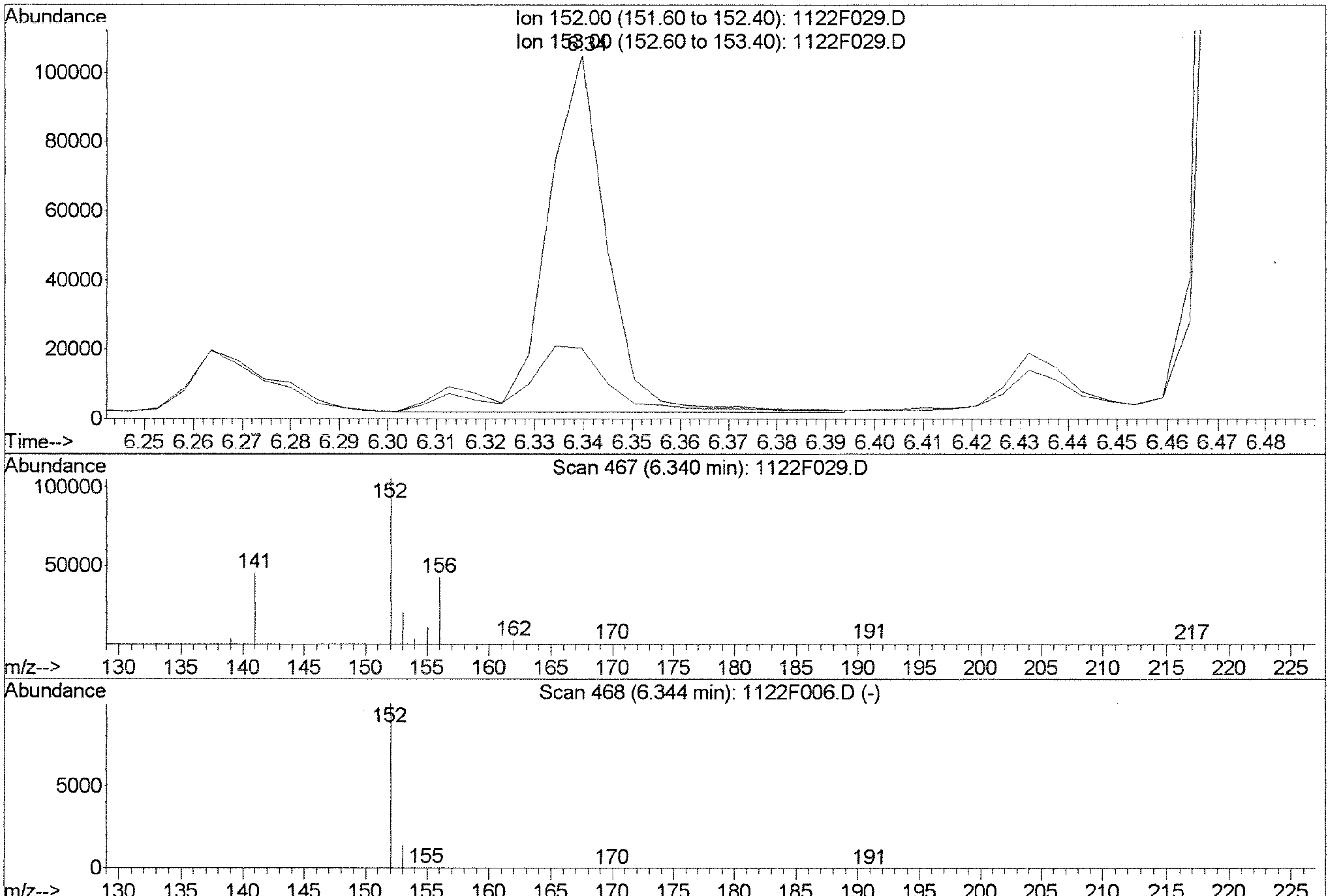
OT 11/24/08

LB 11/24/08

1122F029.D 1110ALK.M Sun Nov 23 11:04:03 2008

Data File : J:\MS11\DATA\112208\1122F029.D   Vial: 23
Acq On : 22 Nov 2008 8:30 pm   Operator: LWeiskopf
Sample : K0810639-004   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:04 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



(11) Acenaphthylene (T)

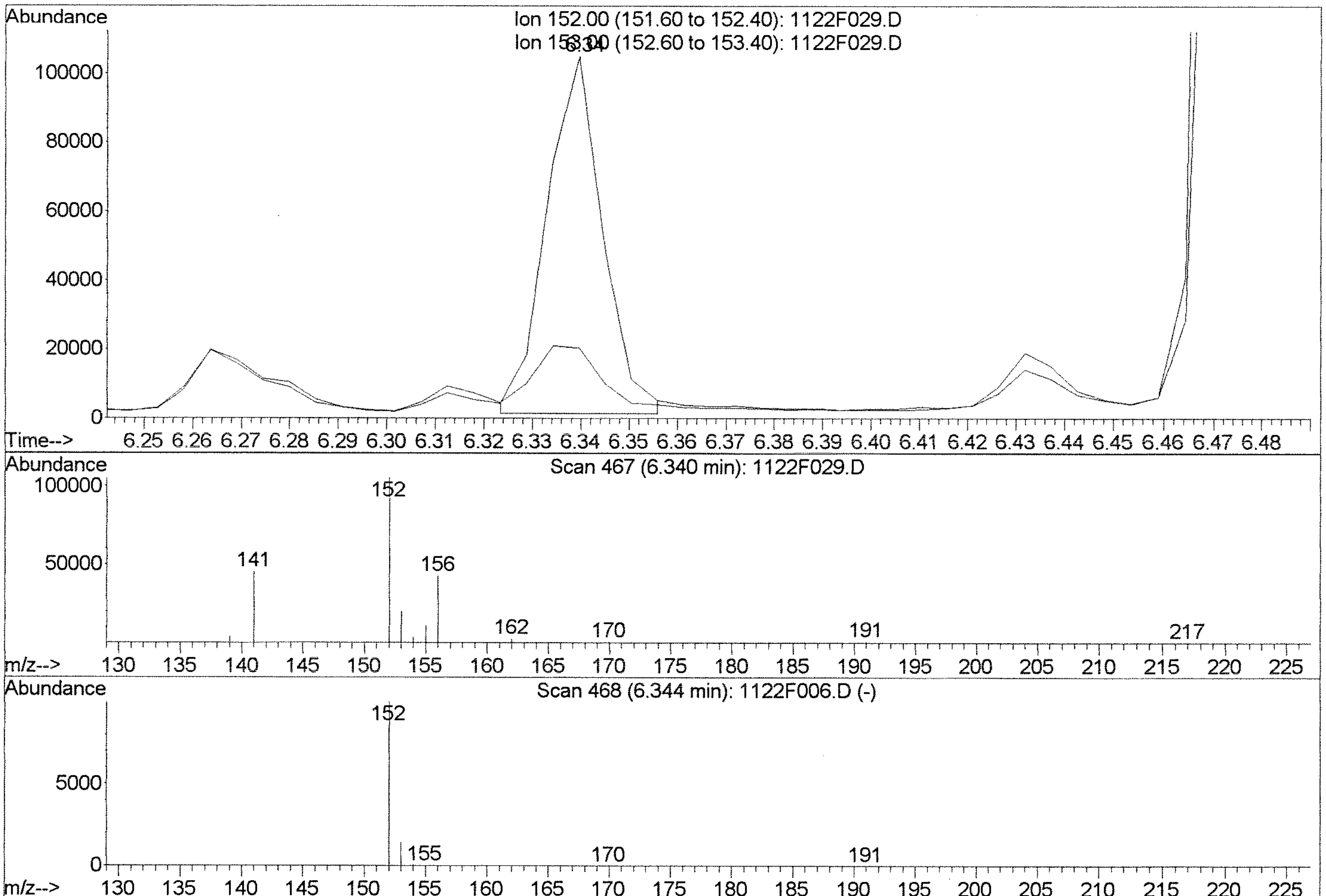
6.34min 50.44ng/ml

response 88648

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	17.72
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112208\1122F029.D Vial: 23
Acq On : 22 Nov 2008 8:30 pm Operator: LWeiskopf
Sample : K0810639-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:04 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



TIC: 1122F029.D

(11) Acenaphthylene (T)

6.34min 47.11ng/ml m

response 82804

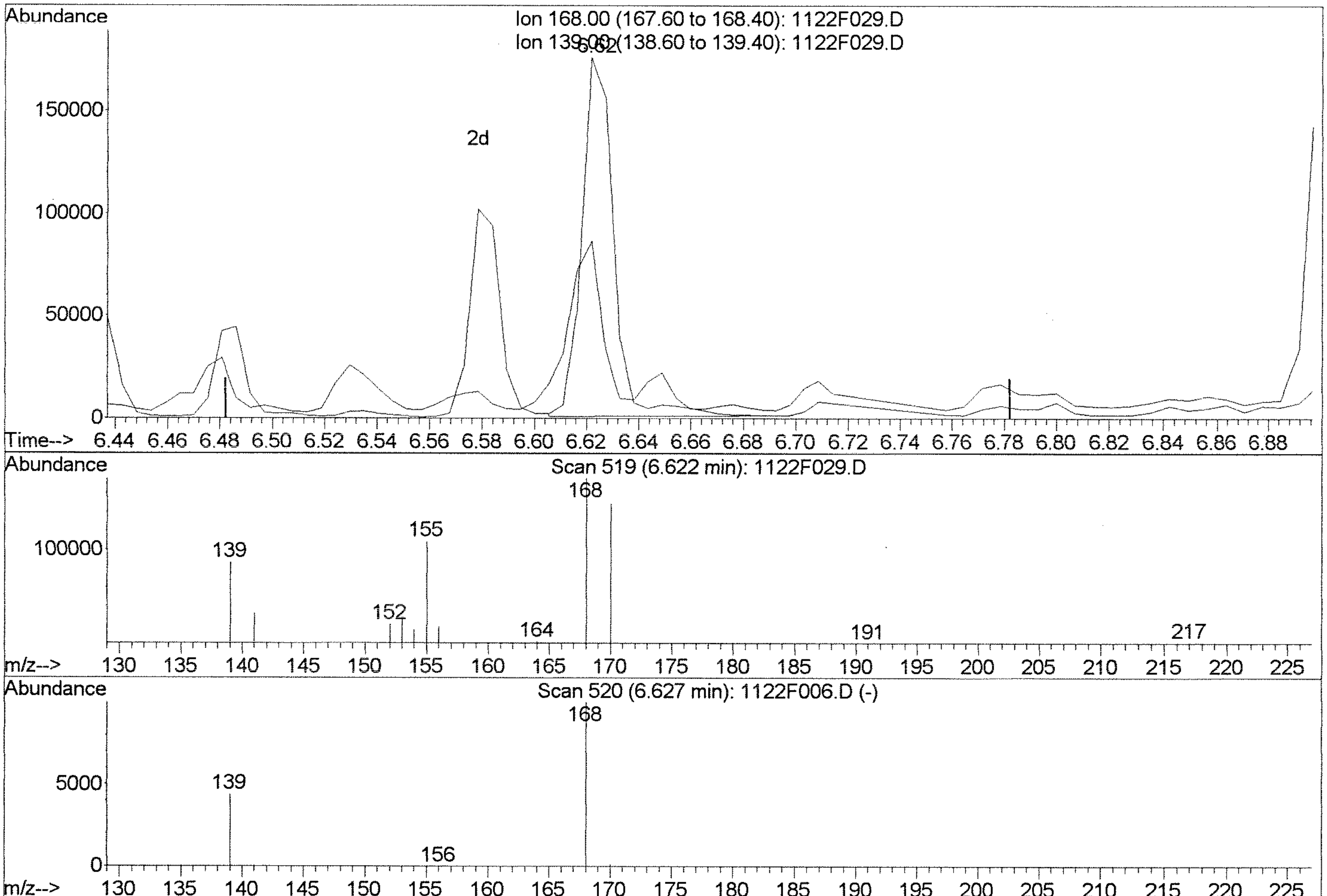
Ion	Exp%	Act%
152.00	100	100
153.00	13.00	19.38
0.00	0.00	0.00
0.00	0.00	0.00

OI
C 11/24/08

KB
11/24/08

1122F029.D 1110ALK.M Sun Nov 23 11:04:21 2008

```
Data File : J:\MS11\DATA\112208\1122F029.D                Vial: 23
Acq On    : 22 Nov 2008   8:30 pm                    Operator: LWeiskopf
Sample    : K0810639-004                             Inst    : MS11
Misc      :                                          Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:04 2008                  Quant Results File: temp.res

Method          : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title           : PAHS and ALKYLATED HOMOLOGS
Last Update     : Sun Nov 23 10:13:22 2008
Response via    : Multiple Level Calibration
```



TIC: 1122F029.D

(13) Dibenzofuran (T)

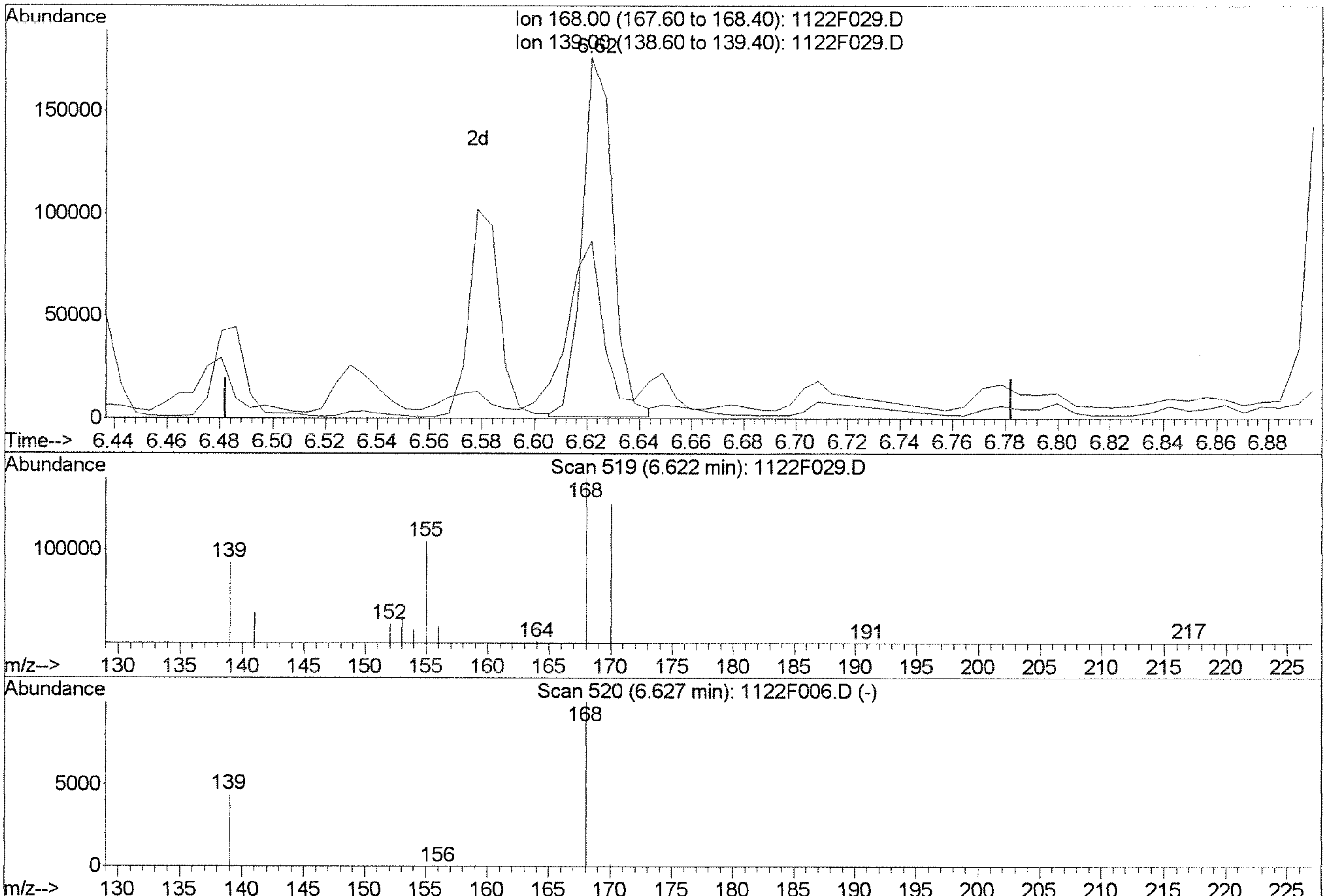
6.62min 92.12ng/ml

response 147992

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	47.33
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112208\1122F029.D Vial: 23
Acq On : 22 Nov 2008 8:30 pm Operator: LWeiskopf
Sample : K0810639-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:04 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



TIC: 1122F029.D

(13) Dibenzofuran (T)

6.62min 88.74ng/ml m

response 142558

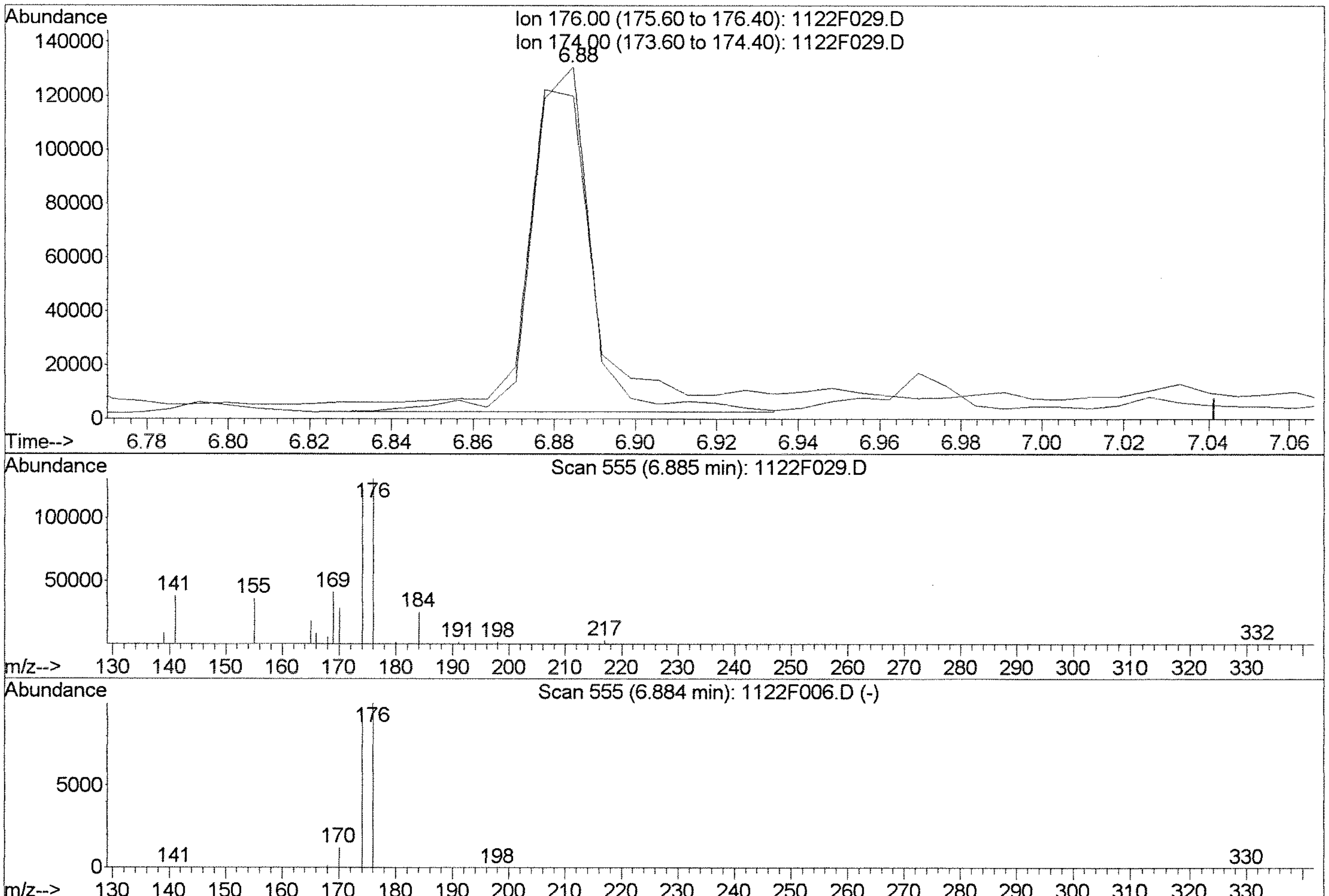
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	49.16
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/24/08

LB 11/24/08

Quantitation Report (Qedit)

```
Data File : J:\MS11\DATA\112208\1122F029.D                    Vial: 23
Acq On    : 22 Nov 2008   8:30 pm                         Operator: LWeiskopf
Sample    : K0810639-004                                  Inst     : MS11
Misc      :                                               Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:04 2008                  Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sun Nov 23 10:13:22 2008
Response via   : Multiple Level Calibration
```



TIC: 1122F029.D

(15) Fluorene-d10 (S)

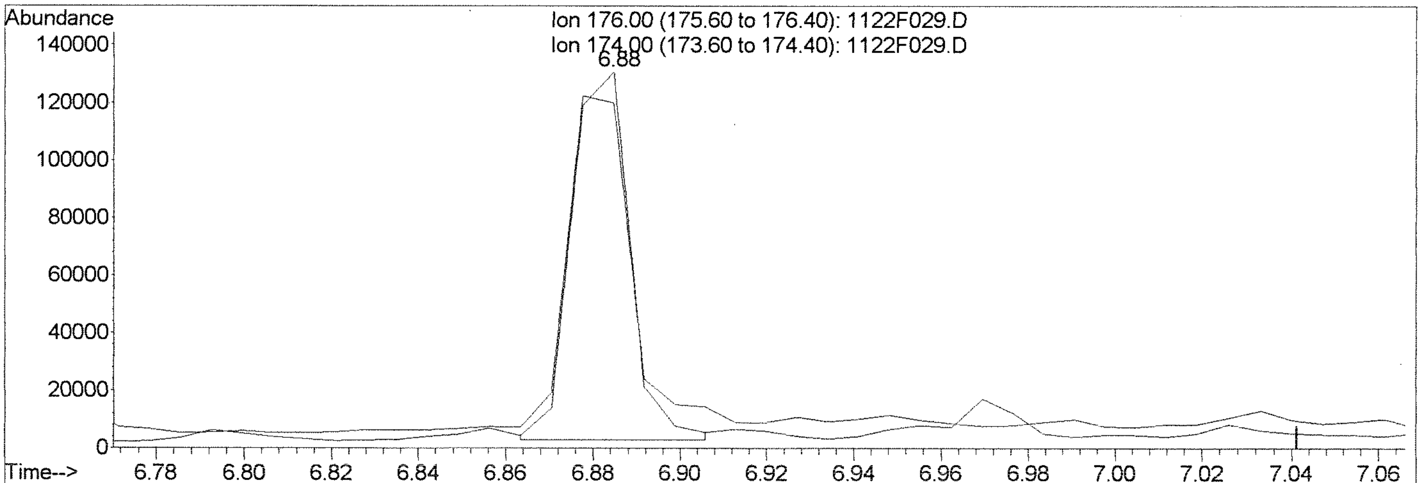
6.88min 120.36ng/ml

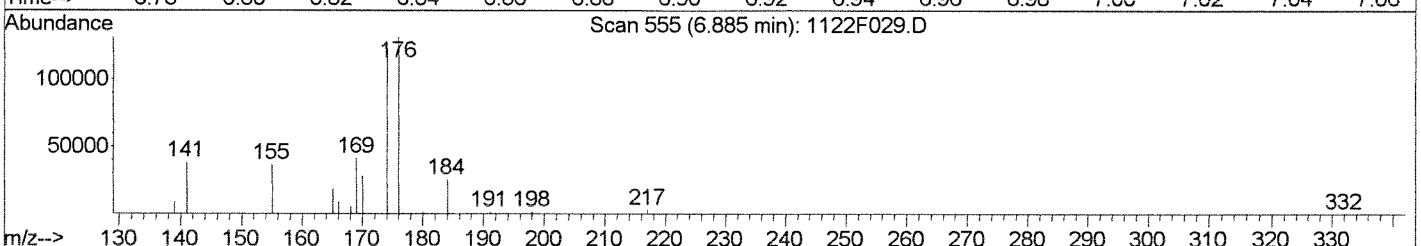
response 127493

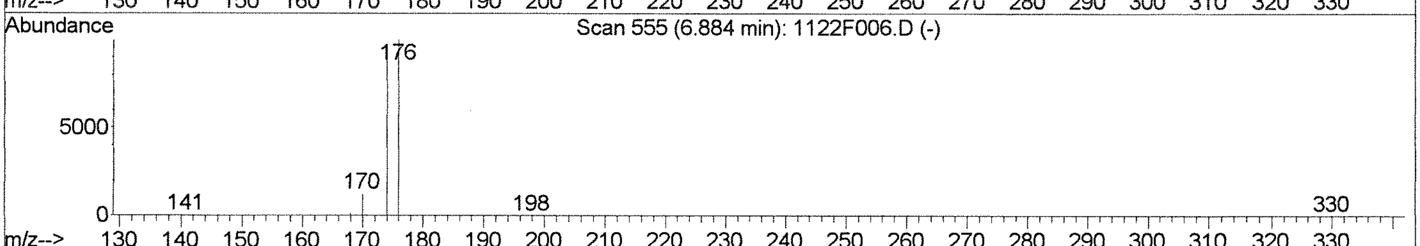
Ion	Exp%	Act%
176.00	100	100
174.00	96.70	88.78
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112208\1122F029.D Vial: 23
Acq On : 22 Nov 2008 8:30 pm Operator: LWeiskopf
Sample : K0810639-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:04 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration







TIC: 1122F029.D

(15) Fluorene-d10 (S)

6.88min 112.27ng/ml m

response 118924

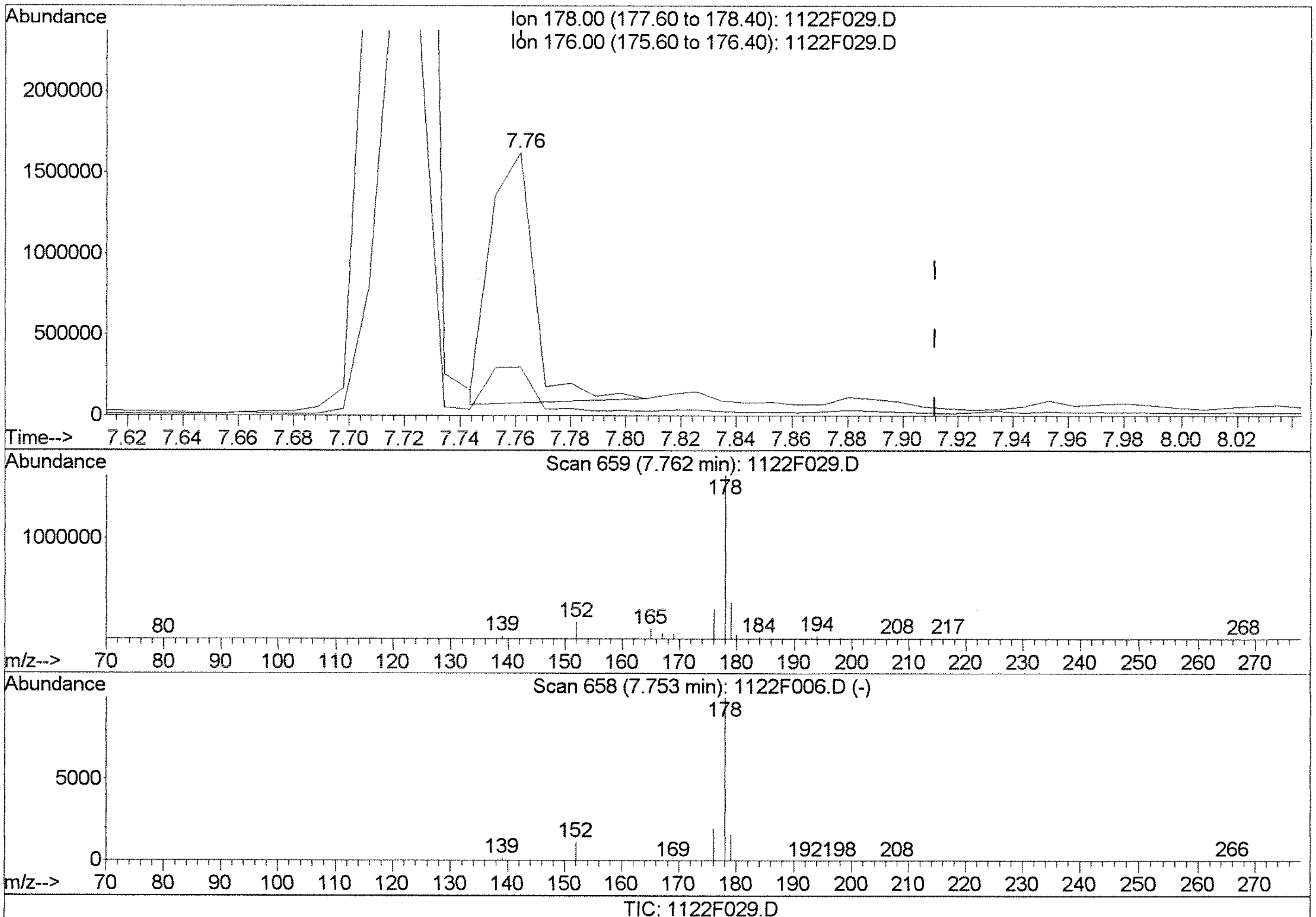
Ion	Exp%	Act%
176.00	100	100
174.00	96.70	91.71
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/24/08

LB 11/24/08

Data File : J:\MS11\DATA\112208\1122F029.D Vial: 23
Acq On : 22 Nov 2008 8:30 pm Operator: LWeiskopf
Sample : K0810639-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:04 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.76min 904.12ng/ml

response 1705996

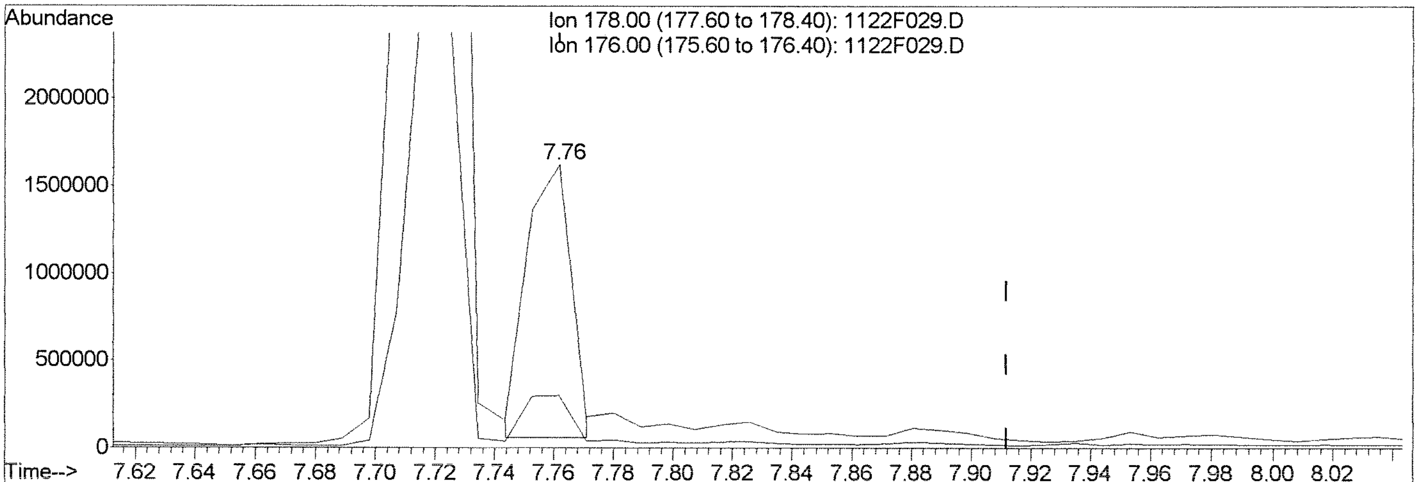
Ion	Exp%	Act%
178.00	100	100
176.00	19.70	17.89
0.00	0.00	0.00
0.00	0.00	0.00

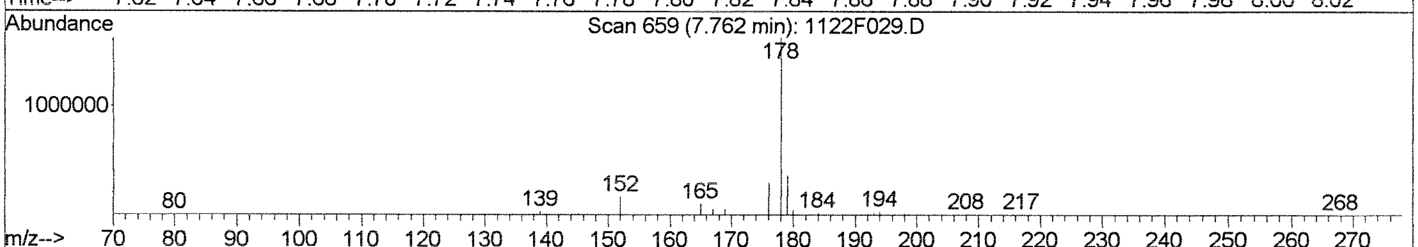
Data File : J:\MS11\DATA\112208\1122F029.D
Acq On : 22 Nov 2008 8:30 pm
Sample : K0810639-004
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:04 2008

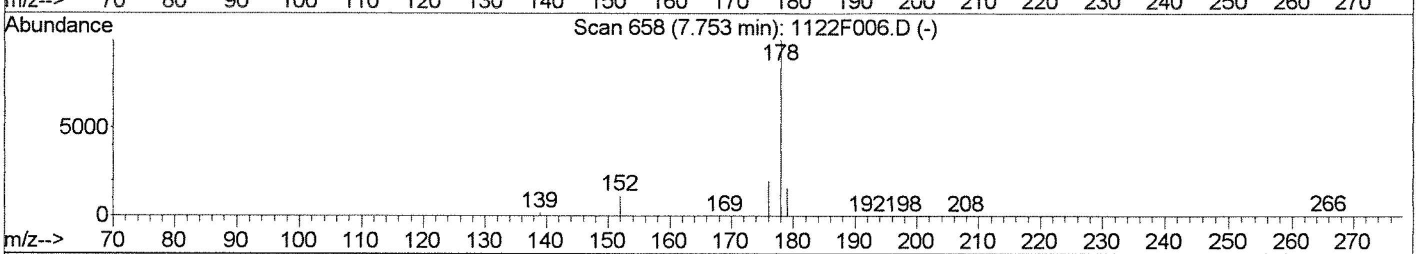
Vial: 23
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration







TIC: 1122F029.D

(28) Anthracene (T)

7.76min 866.31ng/ml m

response 1634664

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	18.42
0.00	0.00	0.00
0.00	0.00	0.00

OI

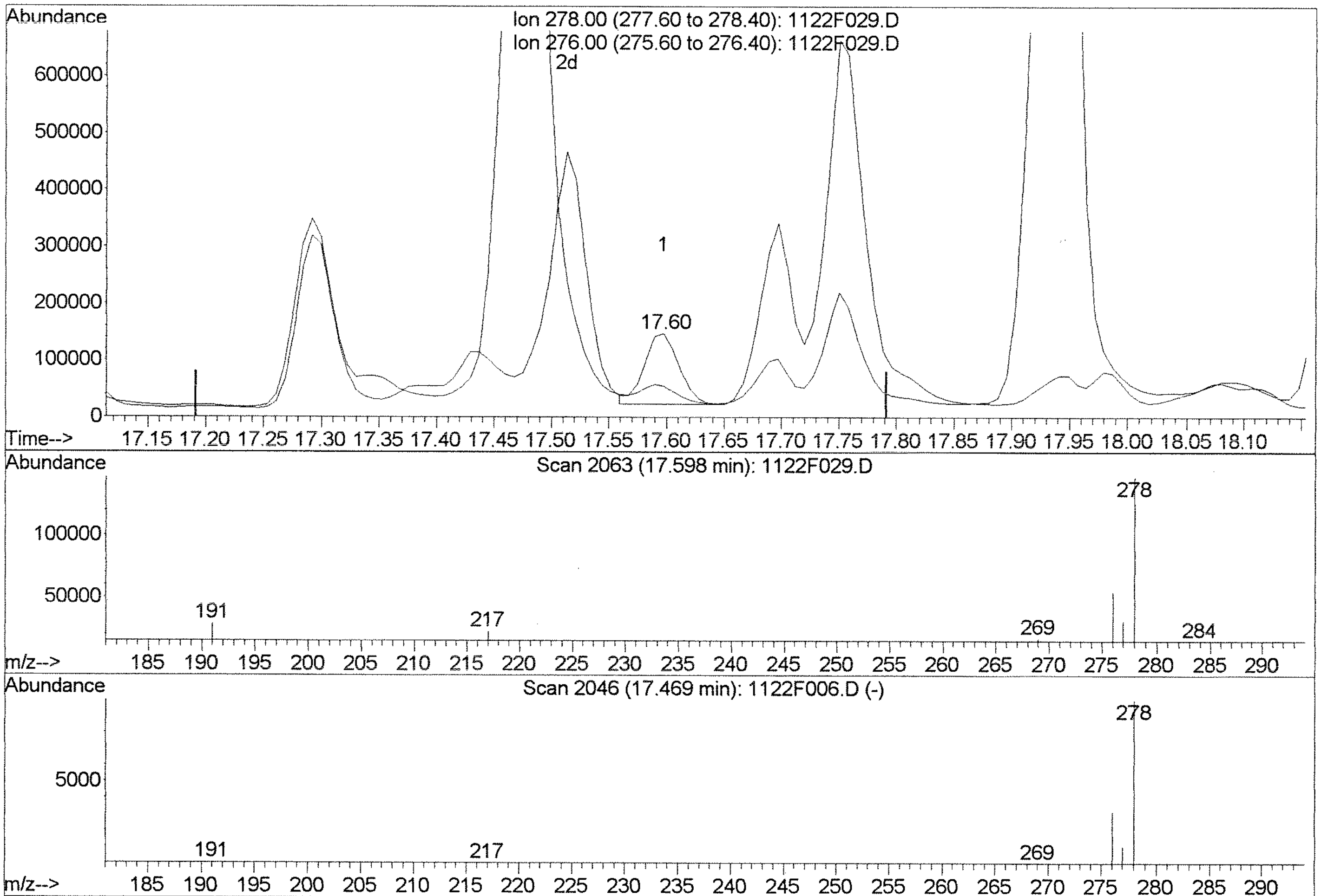
Compound

LB
11/24/08

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112208\1122F029.D Vial: 23
Acq On : 22 Nov 2008 8:30 pm Operator: LWeiskopf
Sample : K0810639-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:05 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



(56) Dibenz(a,h)anthracene (T)

17.60min 119.33ng/ml

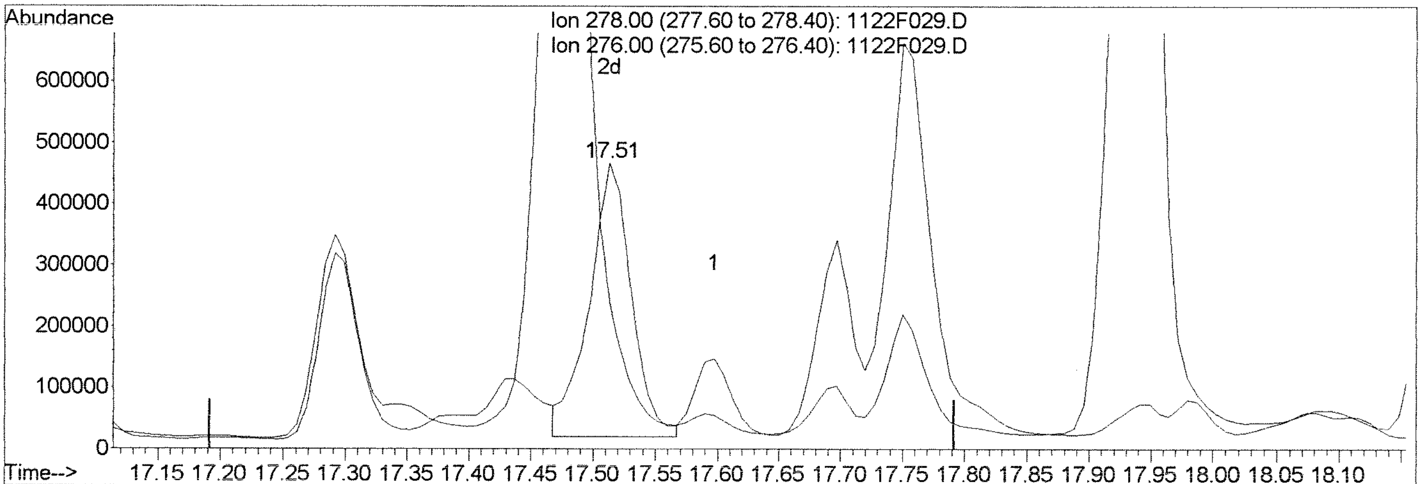
response 257918

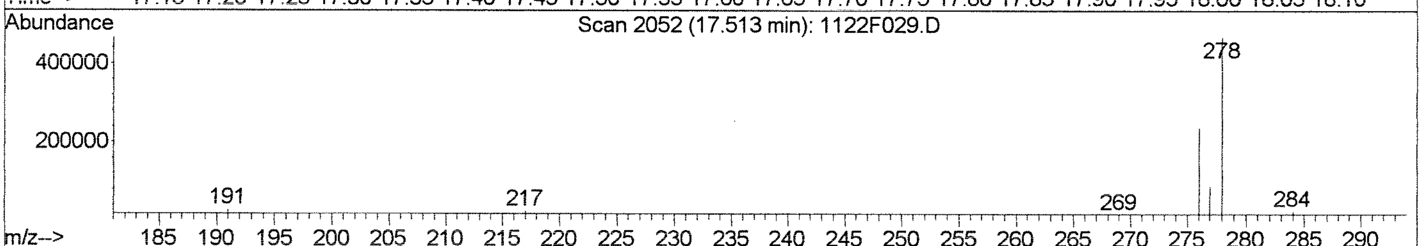
Ion	Exp%	Act%
278.00	100	100
276.00	29.70	24.44
0.00	0.00	0.00
0.00	0.00	0.00

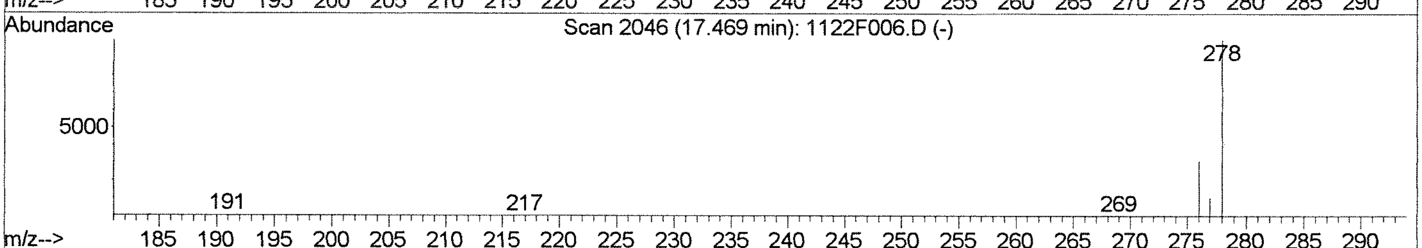
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112208\1122F029.D Vial: 23
Acq On : 22 Nov 2008 8:30 pm Operator: LWeiskopf
Sample : K0810639-004 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:05 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration







TIC: 1122F029.D

(56) Dibenz(a,h)anthracene (T)

17.51min 482.66ng/ml m

response 1043162

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	50.71
0.00	0.00	0.00
0.00	0.00	0.00

WP

RW 11/24/08

LB
11/24/08

1122F029.D 1110ALK.M Sun Nov 23 11:05:29 2008

Exception Report

Data File:	J:\MS11\DATA\112108\1121F027.D	**Date Acquired:**	11/21/2008 17:36
Lab ID:	K0810639-004	**Date Quantitated:**	11/22/2008 10:27
RunType:	DL	**Batch ID:**	KWG0812597
Matrix:	SEDIMENT	**Analysis Method:**	8270C SIM
		ListJoinID:	LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

see 1X

Primary Review: [signature] 11/22/08

Secondary Review: KB 11/24/08

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812597	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776068	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112108\1121F001.D	**Method ID:**	MJ253
MB Ref:	J:\MS11\DATA\112308\1123F003.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112108\1121F027.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 17:36	**Quant Date:**	11/22/2008 10:27	**Vial:**	25
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-004			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.06	0.02	136	190376	200.00	OK
2	Acenaphthene-d10	6.47	0.01	164	98996	200.00	OK
3	Phenanthrene-d10	7.70	0.00	188	186496	200.00	OK
4	Chrysene-d12	10.59	0.00	240	213600	200.00	OK
5	Perylene-d12	14.61	0.02	264	231371	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.89	0.00	0.00	176	3614**m**	5.37	54	10-128	OK	NR
3	Fluoranthene-d10	8.70	0.00	0.00	212	6335**m**	4.98	50	29-121	OK	NR
4	Terphenyl-d14	9.10	0.01	0.00	244	7985	7.22	72	24-141	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.07	0.01	0.00	128	4128	3.56	68	JD	NR
1	2-Methylnaphthalene	5.62	0.01	0.00	142	1852	2.29	43	JD	NR
2	Acenaphthylene	6.35		0.00	152	2287**m**	2.05	39	JD	NR
2	Acenaphthene	6.49		0.00	154	64182**m**	94.62	1800	D	NR
2	Dibenzofuran	6.64	0.01	0.00	168	4581	4.49	85	JD	NR
2	Fluorene	6.91		0.00	166	63077	77.46	1500	D	NR
3	Phenanthrene	7.72		0.00	178	496092	378.44	7200	D	
3	Anthracene	7.77	0.01	0.00	178	87896	68.82	1300	D	NR
3	Fluoranthene	8.72		0.00	202	636370	427.36	8100	D	
4	Pyrene	8.95		0.00	202	615393	382.97	7300	D	
4	Benz(a)anthracene	10.57		0.00	228	178711	122.59	2300	D	
4	Chrysene	10.65	0.02	0.00	228	234569	163.84	3100	D	
5	Benzo(b)fluoranthene	13.25	0.02	0.00	252	239678	150.10	2900	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112108\1121F027.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 17:36	**Quant Date:**	11/22/2008 10:27	**Vial:**	25
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-004			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.33	0.02	0.00	252	85972	56.05	1100	D	NR
5	Benzo(a)pyrene	14.39	0.02	0.00	252	145681	110.19	2100	D	
5	Indeno(1,2,3-cd)pyrene	17.44		0.00	276	112690	91.87	1700	D	NR
5	Dibenz(a,h)anthracene	17.50	0.01	0.00	278	21625	16.80	320	D	NR
5	Benzo(g,h,i)perylene	17.90		0.00	276	124963	89.42	1700	D	NR

Prep Amount:	20.02 g	**Dilution:**	20.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	52.6 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F027.D Vial: 25
Acq On : 21 Nov 2008 5:36 pm Operator: LWeiskopf
Sample : K0810639-004DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 08:13:26 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.06	136	190376	200.00	ng/ml	0.02
10) Acenaphthene-d10	6.47	164	98996	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.70	188	186496	200.00	ng/ml	0.00
37) Chrysene-d12	10.59	240	213600	200.00	ng/ml	0.00
49) Perylene-d12	14.61	264	231371	200.00	ng/ml	0.02
System Monitoring Compounds						
15) Fluorene-d10	6.89	176	3614m	5.37	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	2.69%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery	=	0.00%	
36) Fluoranthene-d10	8.70	212	6335m	4.98	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	2.49%	
42) Terphenyl-d14	9.10	244	7985	7.22	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	3.61%	
Target Compounds						Qvalue
2) Naphthalene	5.07	128	4128	3.56	ng/ml	97
3) 2-Methylnaphthalene	5.62	142	1852	2.29	ng/ml	96
4) 1-Methylnaphthalene	5.70	142	912	1.26	ng/ml	87
5) Biphenyl	5.99	154	1076	1.09	ng/ml	96
6) 2,6-Dimethylnaphthalene	6.12	156	4676	6.62	ng/ml	98
11) Acenaphthylene	6.35	152	2287m	2.05	ng/ml	
12) Acenaphthene	6.49	154	64182m	94.62	ng/ml	
13) Dibenzofuran	6.64	168	4581	4.49	ng/ml	74
14) 2,3,5-Trimethylnaphthalene	6.80	170	6897	11.56	ng/ml	92
16) Fluorene	6.91	166	63077	77.46	ng/ml	89
23) Dibenzothiophene	7.62	184	30367	23.69	ng/ml	93
27) Phenanthrene	7.72	178	496092	378.44	ng/ml	96
28) Anthracene	7.77	178	87896	68.82	ng/ml	95
29) Carbazole	7.91	167	6856	5.85	ng/ml	95
30) 1-Methylphenanthrene	8.22	192	30568	31.42	ng/ml	94
35) Fluoranthene	8.72	202	636370	427.36	ng/ml	85
38) Pyrene	8.95	202	615393	382.97	ng/ml	96
43) Benz(a)anthracene	10.57	228	178711	122.59	ng/ml	97
44) Chrysene	10.65	228	234569	163.84	ng/ml	100
50) Benzo(b)fluoranthene	13.25	252	239678	150.10	ng/ml	99
51) Benzo(k)fluoranthene	13.33	252	85972	56.05	ng/ml	96
52) Benzo(e)pyrene	14.19	252	128520	88.61	ng/ml	99
53) Benzo(a)pyrene	14.39	252	145681	110.19	ng/ml	99
54) Perylene	14.71	252	41238	31.75	ng/ml	100
55) Indeno(1,2,3-cd)pyrene	17.44	276	112690	91.87	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F027.D Vial: 25
Acq On : 21 Nov 2008 5:36 pm Operator: LWeiskopf
Sample : K0810639-004DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 08:13:26 2008 Quant Results File: 1110ALK.RES

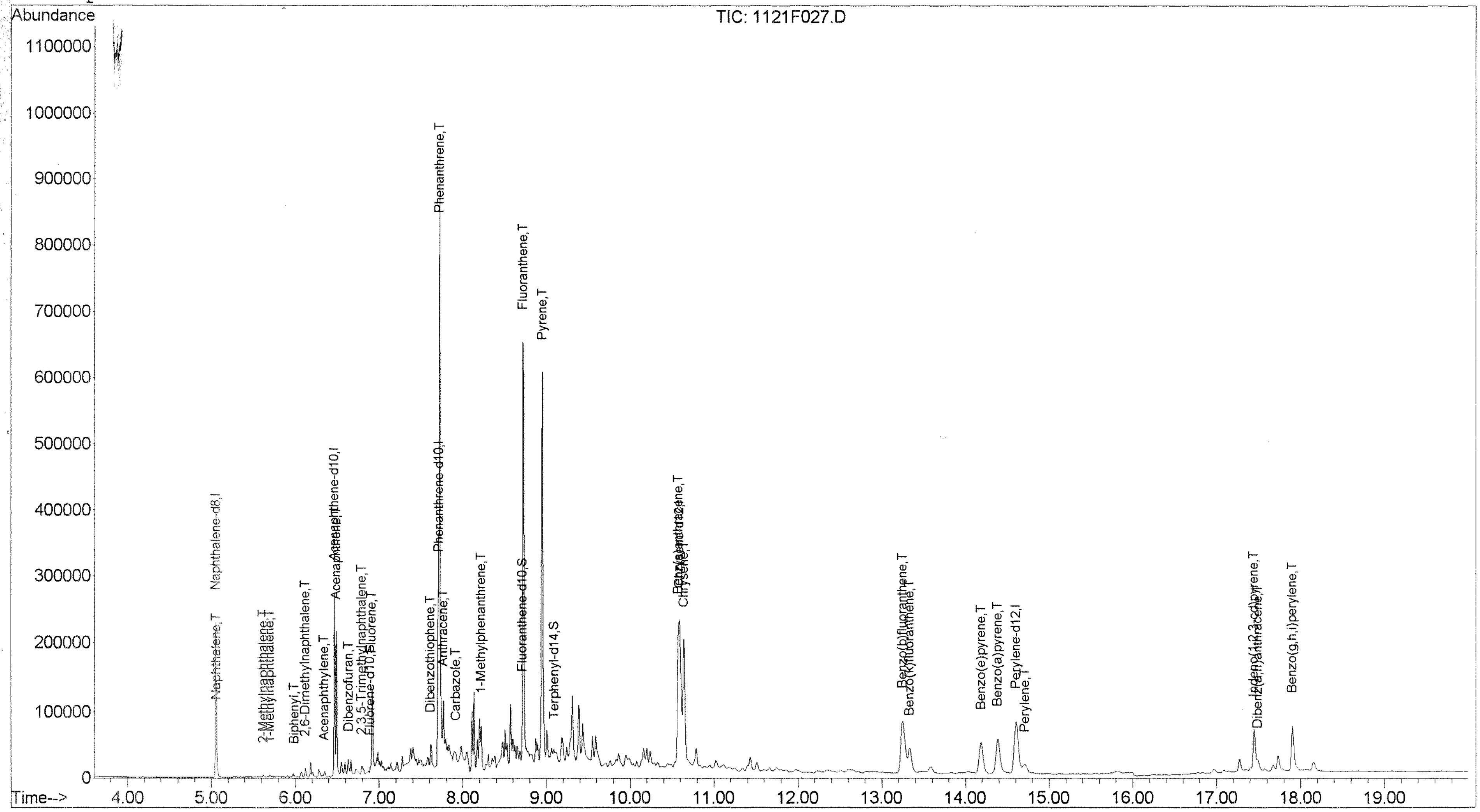
Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

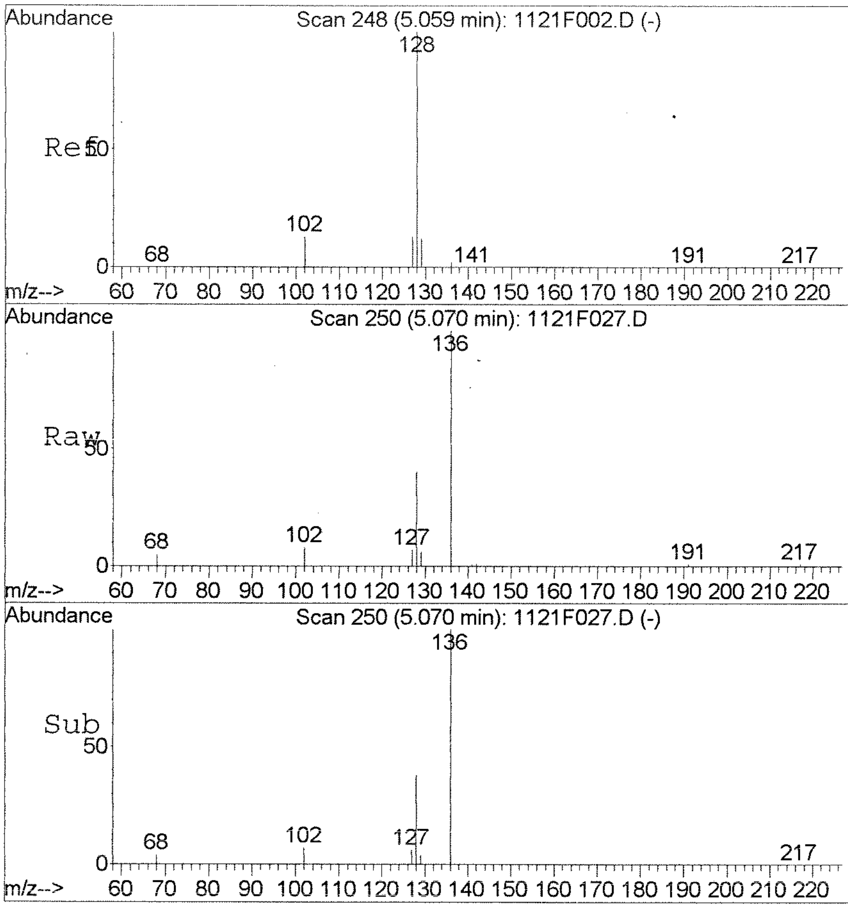
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
56) Dibenz(a,h)anthracene	17.50	278	21625	16.80 ng/ml	71
57) Benzo(g,h,i)perylene	17.90	276	124963	89.42 ng/ml	99

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F027.D	Vial: 25
Acq On : 21 Nov 2008 5:36 pm	Operator: LWeiskopf
Sample : K0810639-004DIL 20X	Inst : MS11
Misc :	Multiplr: 1.00
MS Integration Params: RTEINT.P	
Quant Time: Nov 22 10:27 2008	Quant Results File: 1110ALK.RES

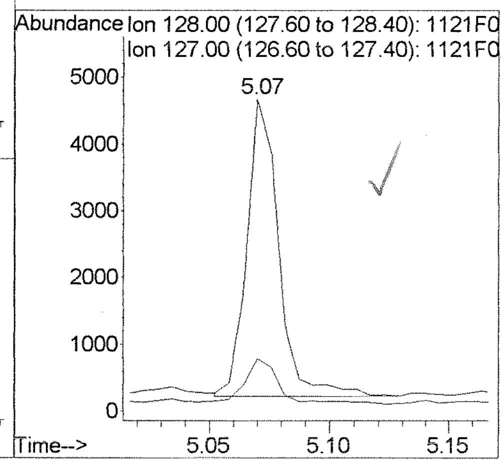
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration

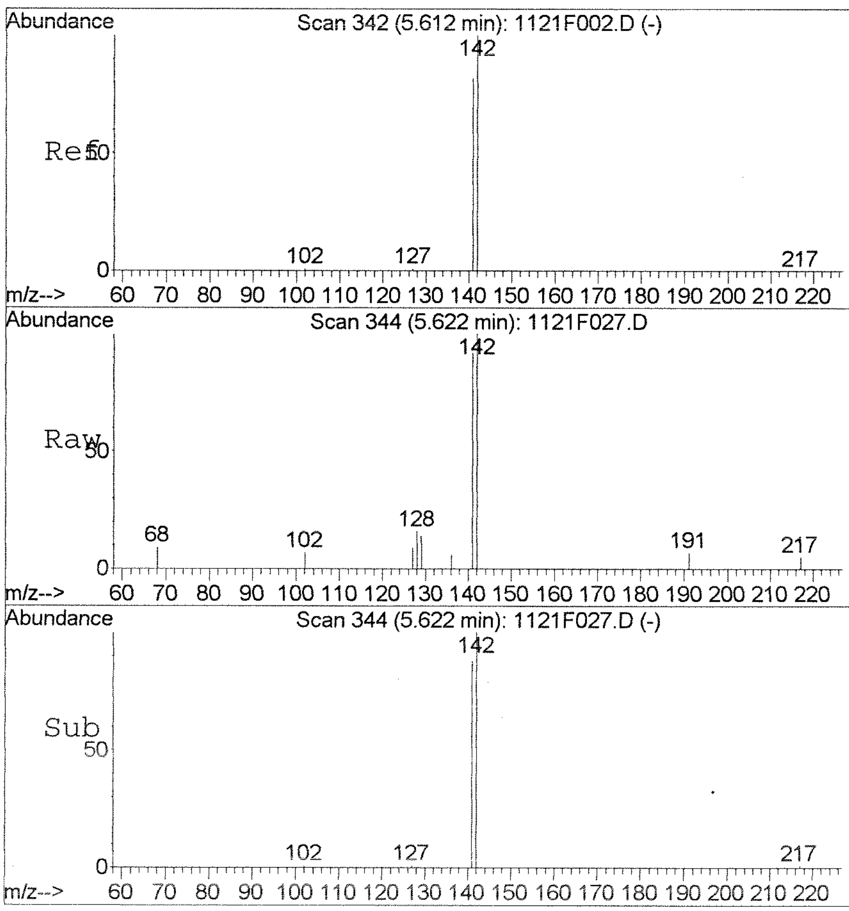




#2
Naphthalene
Concen: 3.56 ng/ml
RT: 5.07 min Scan# 250
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

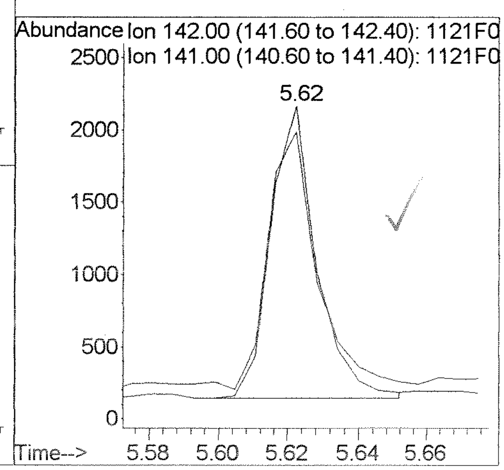
Tgt Ion:128	Resp:		4128
Ion	Ratio	Lower	Upper
128	100		
127	15.1	0.0	43.8

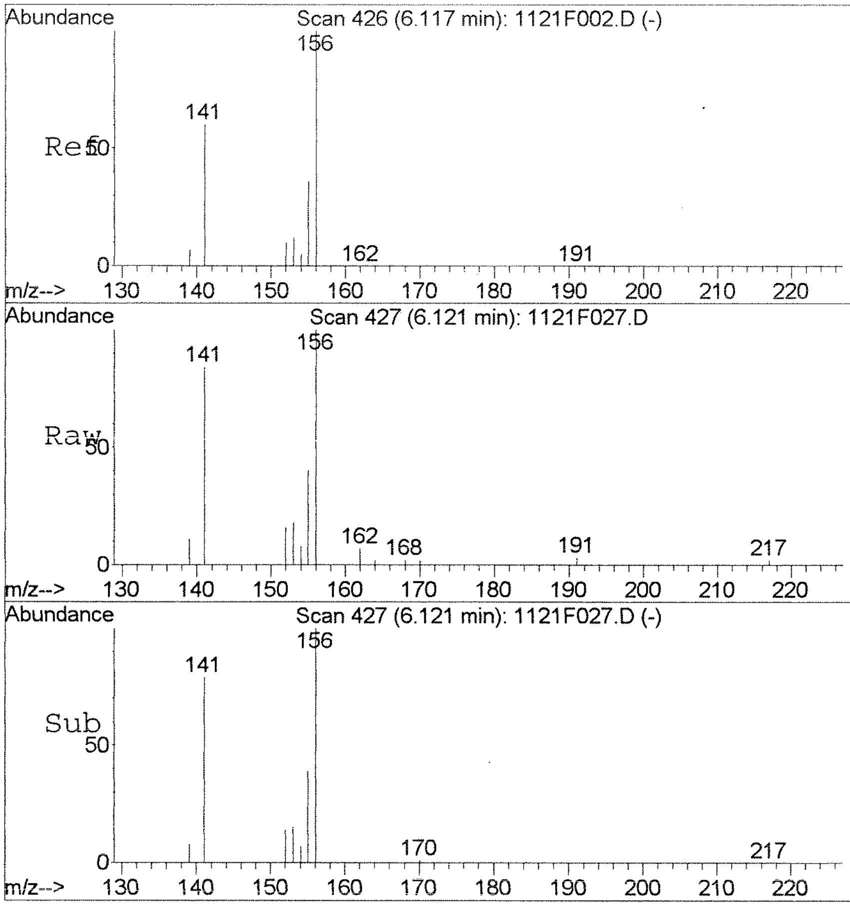




#3
2-Methylnaphthalene
Concen: 2.29 ng/ml
RT: 5.62 min Scan# 344
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

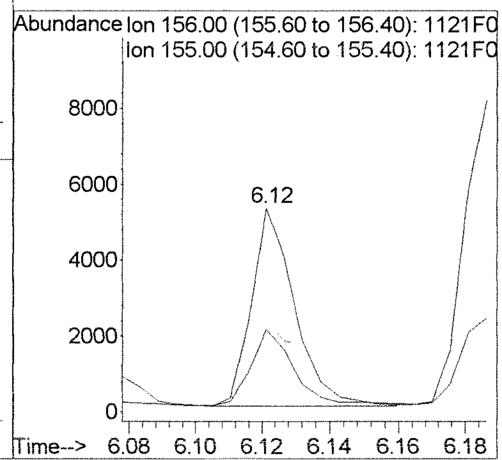
Tgt Ion:142	Resp:		1852
Ion	Ratio	Lower	Upper
142	100		
141	85.5	52.4	112.4

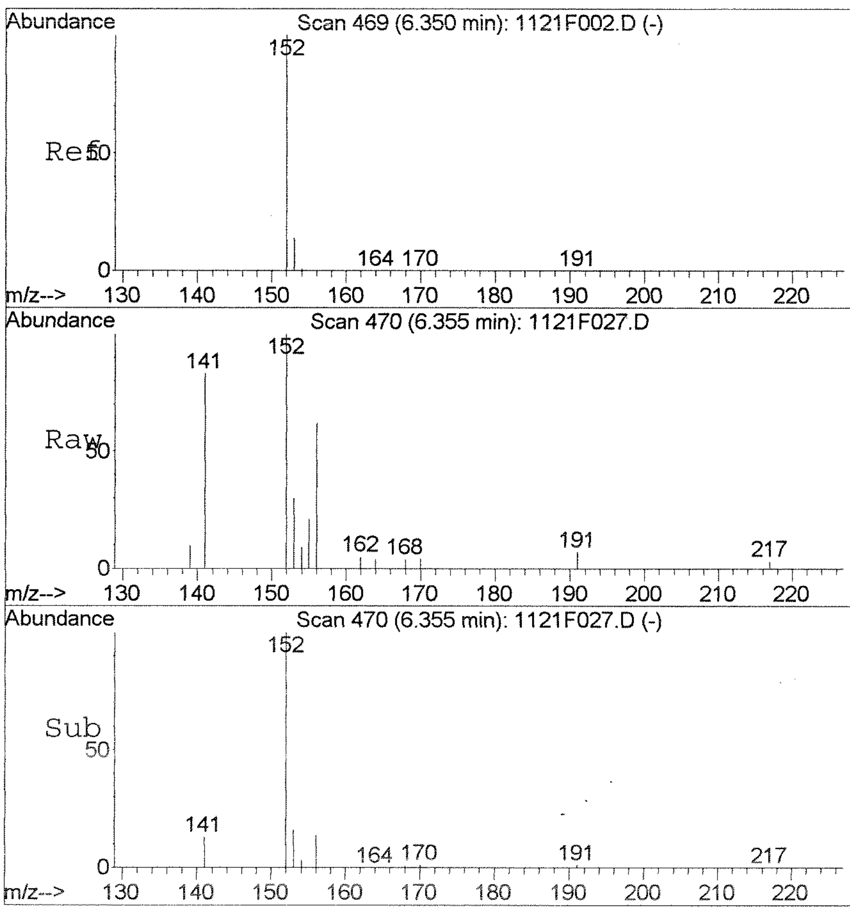




#6
2,6-Dimethylnaphthalene
Concen: 6.62 ng/ml
RT: 6.12 min Scan# 427
Delta R.T. 0.00 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

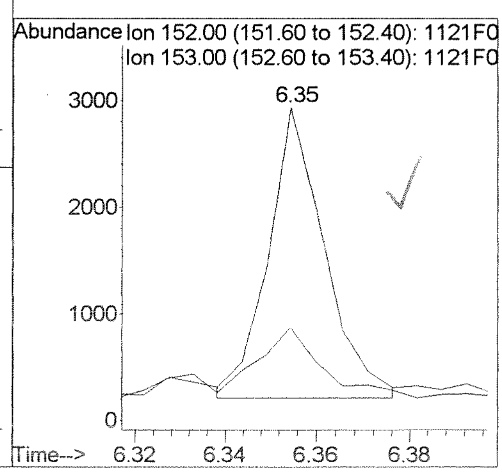
Tgt	Ion:156	Resp:	4676
Ion	Ratio	Lower	Upper
156	100		
155	38.2	7.3	67.3

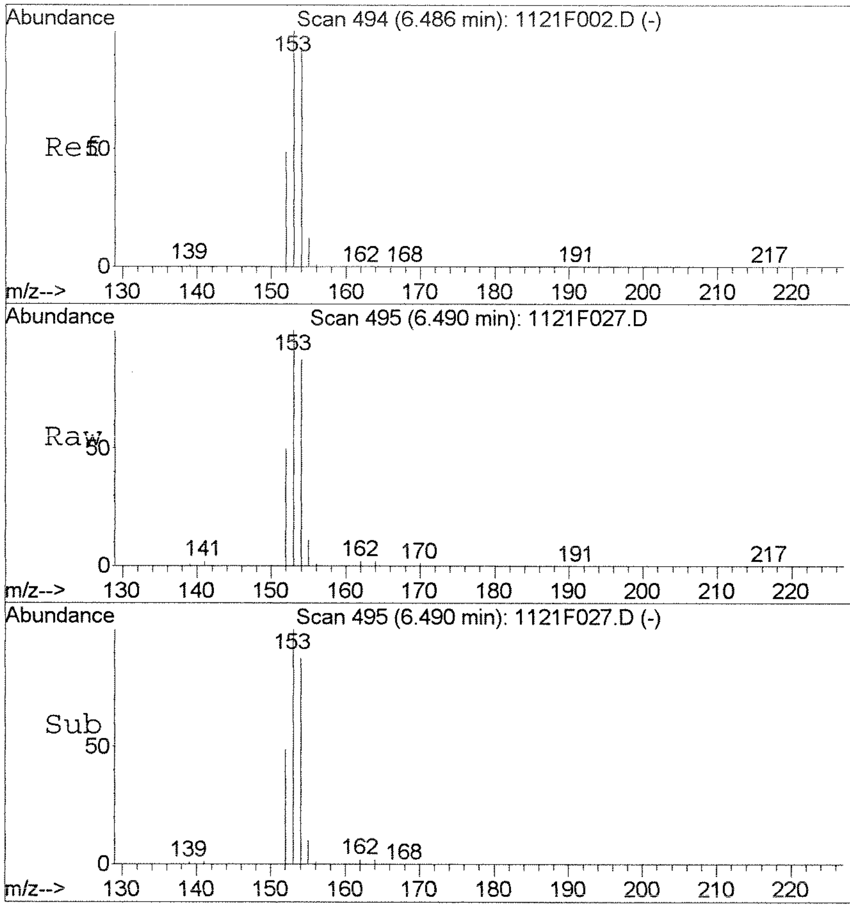




#11
Acenaphthylene
Concen: 2.05 ng/ml m
RT: 6.35 min Scan# 470
Delta R.T. 0.00 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt	Ion:152	Resp:	2287
Ion	Ratio	Lower	Upper
152	100		
153	29.9	0.0	43.0

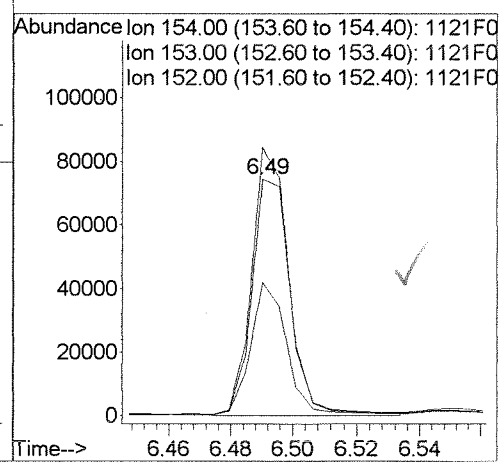


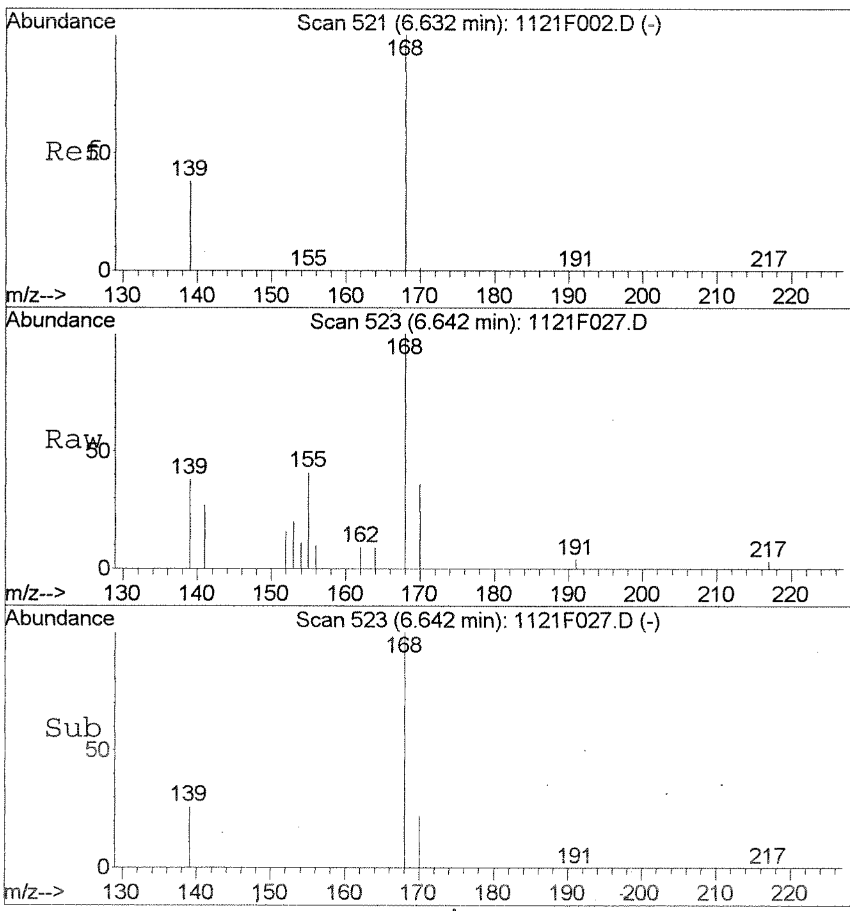


#12
Acenaphthene
Concen: 94.62 ng/ml m
RT: 6.49 min Scan# 495
Delta R.T. 0.00 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:154 Resp: 64182

Ion	Ratio	Lower	Upper
154	100		
153	113.4	81.9	141.9
152	56.3	26.8	86.8

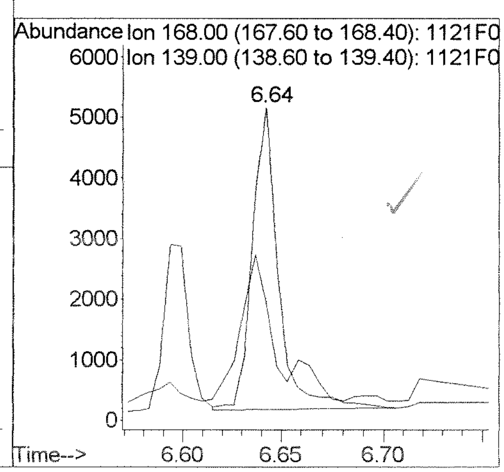


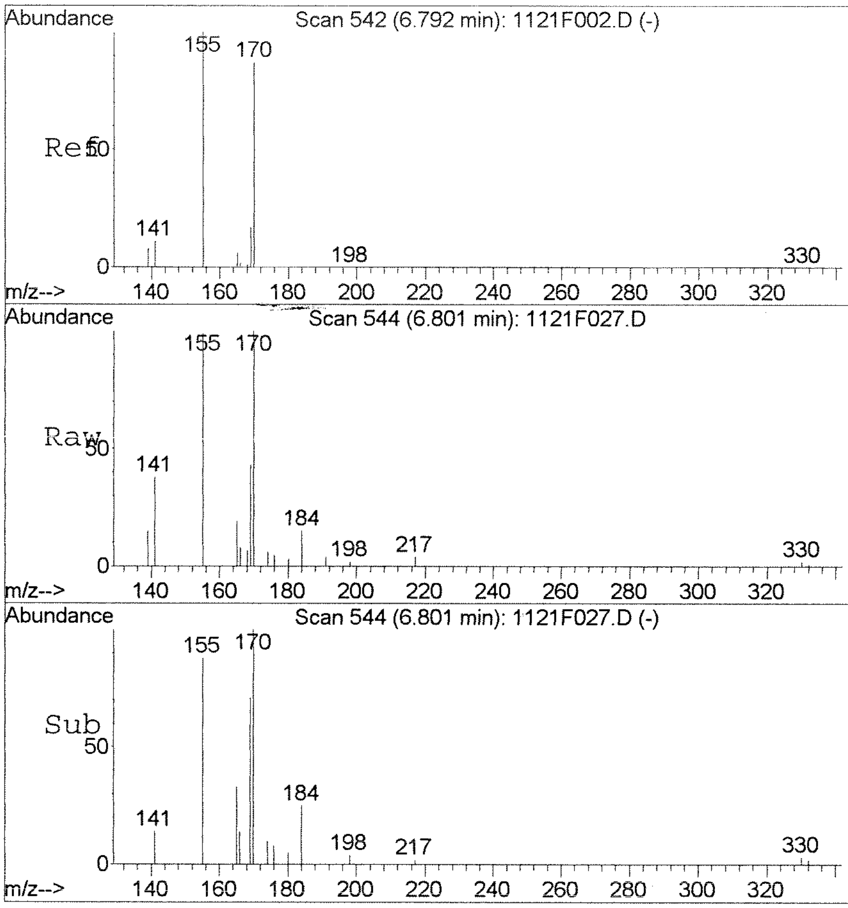


#13
Dibenzofuran
Concen: 4.49 ng/ml
RT: 6.64 min Scan# 523
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:168 Resp: 4581

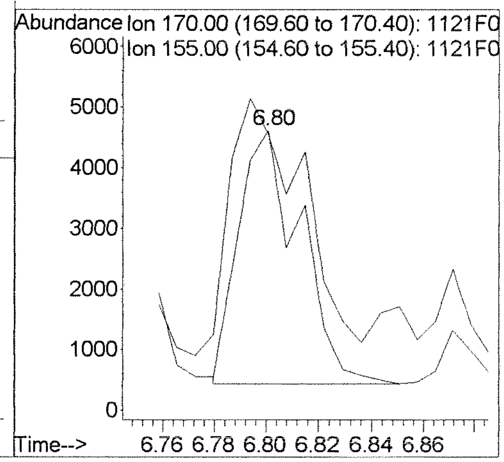
Ion	Ratio	Lower	Upper
168	100		
139	32.6	21.0	81.0

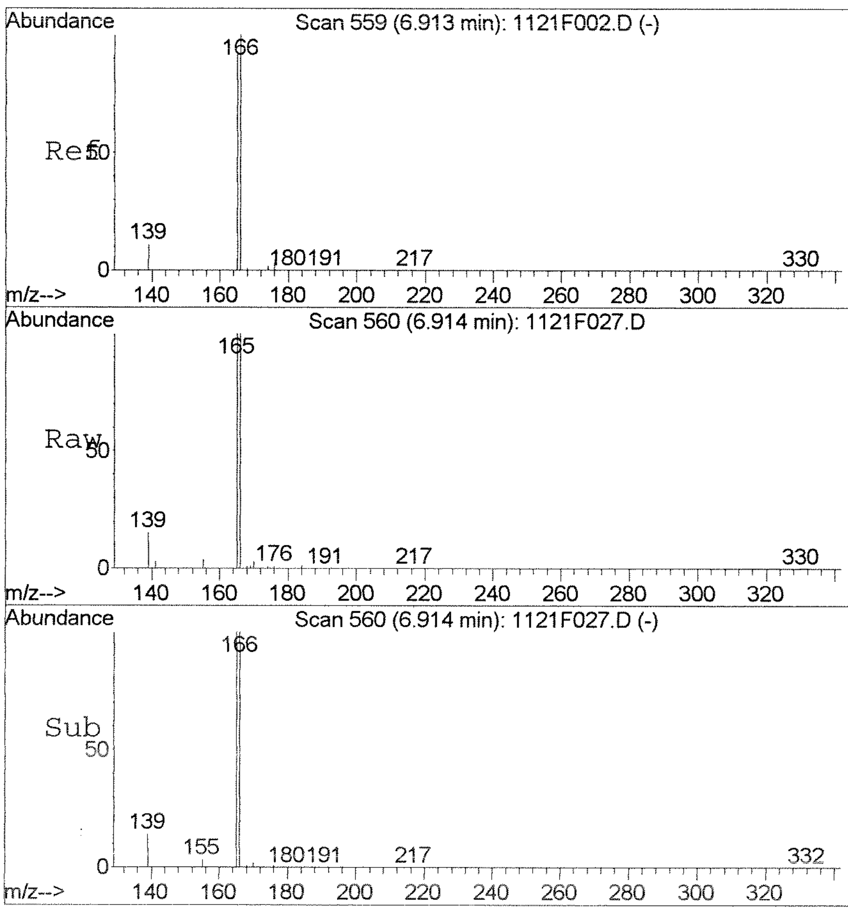




#14
2,3,5-Trimethylnaphthalene
Concen: 11.56 ng/ml
RT: 6.80 min Scan# 544
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

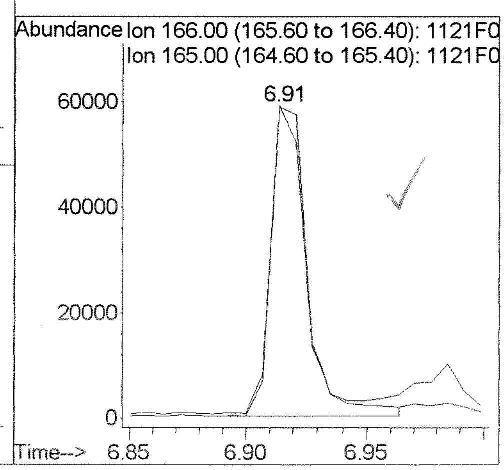
Tgt Ion:170	Resp:		6897
Ion	Ratio	Lower	Upper
170	100		
155	79.4	42.9	102.9

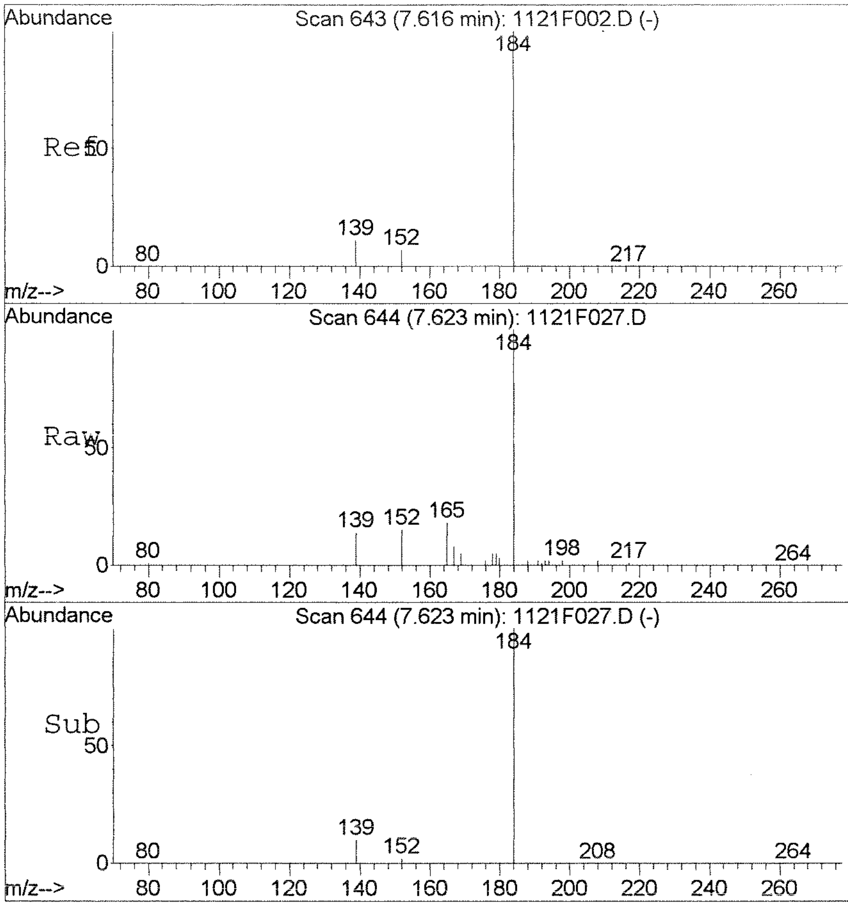




#16
Fluorene
Concen: 77.46 ng/ml
RT: 6.91 min Scan# 560
Delta R.T. 0.00 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:166	Resp:		63077
Ion	Ratio	Lower	Upper
166	100		
165	99.8	59.8	119.8

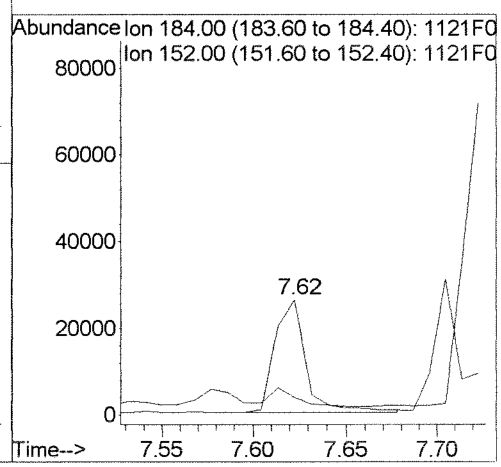


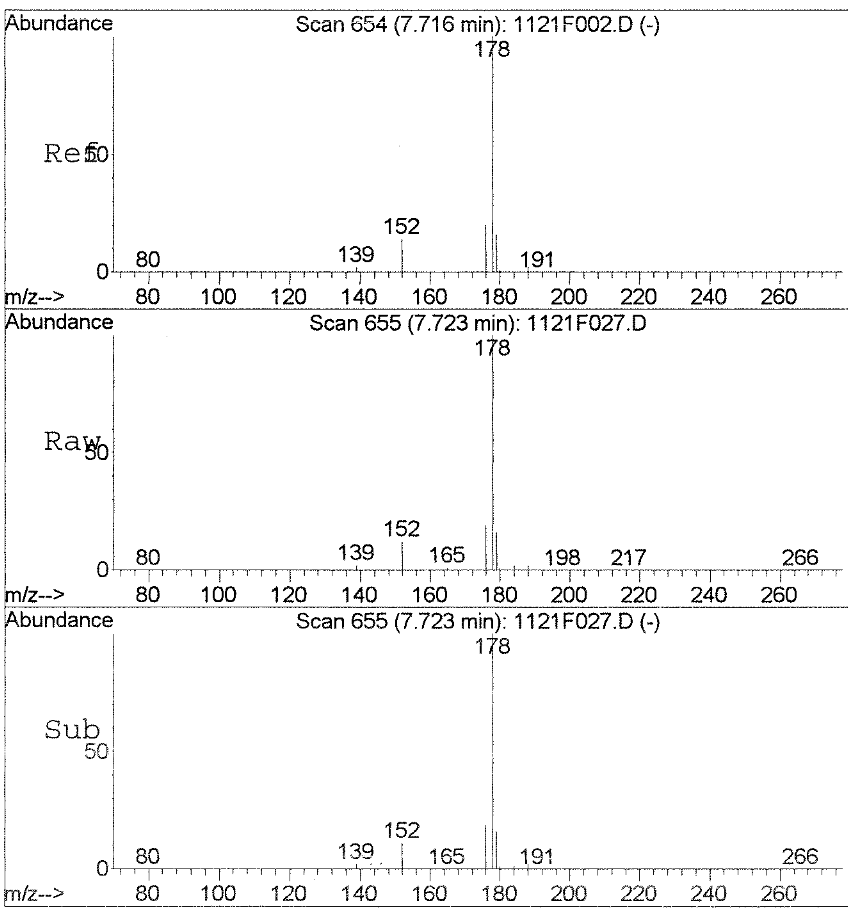


#23
Dibenzothiophene
Concen: 23.69 ng/ml
RT: 7.62 min Scan# 644
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:184 Resp: 30367

Ion	Ratio	Lower	Upper
184	100		
152	6.7	0.0	39.1

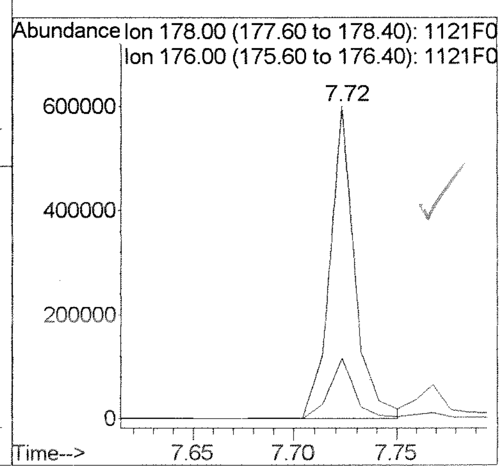


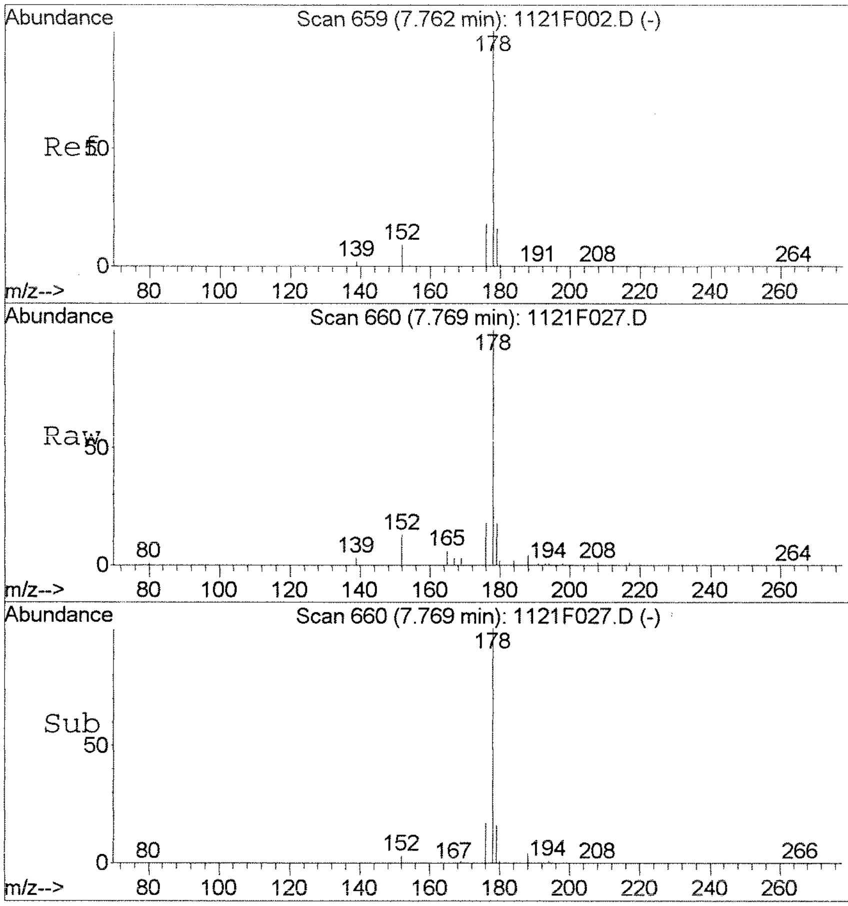


#27
Phenanthrene
Concen: 378.44 ng/ml
RT: 7.72 min Scan# 655
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:178 Resp: 496092

Ion	Ratio	Lower	Upper
178	100		
176	19.3	0.0	51.0

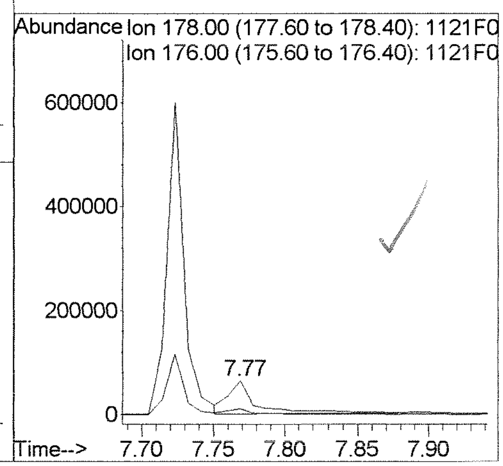


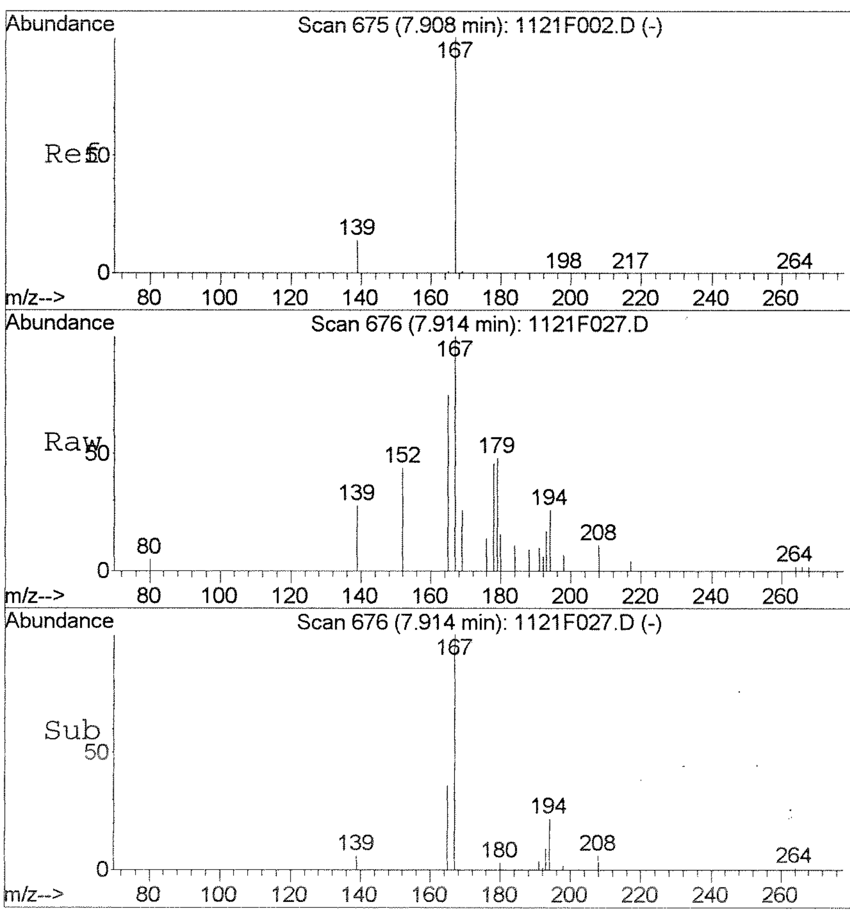


#28
Anthracene
Concen: 68.82 ng/ml
RT: 7.77 min Scan# 660
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:178 Resp: 87896

Ion	Ratio	Lower	Upper
178	100		
176	17.4	0.0	49.7

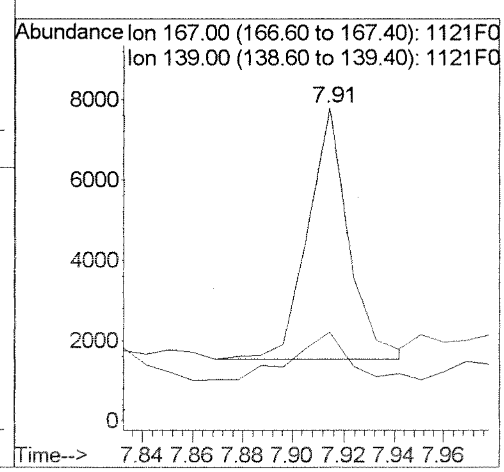


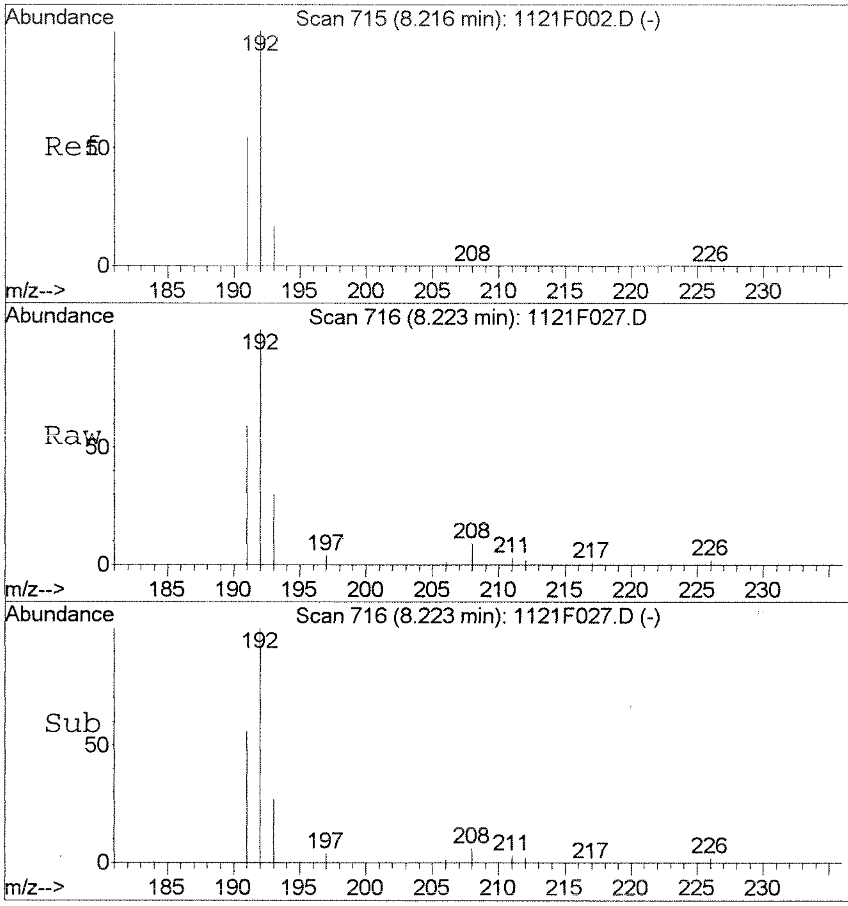


#29
Carbazole
Concen: 5.85 ng/ml
RT: 7.91 min Scan# 676
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:167 Resp: 6856

Ion	Ratio	Lower	Upper
167	100		
139	19.0	0.0	46.8

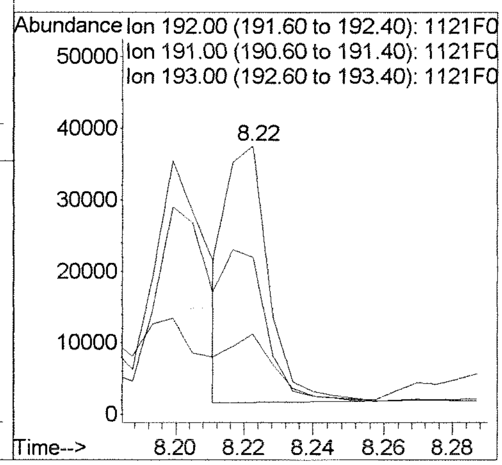


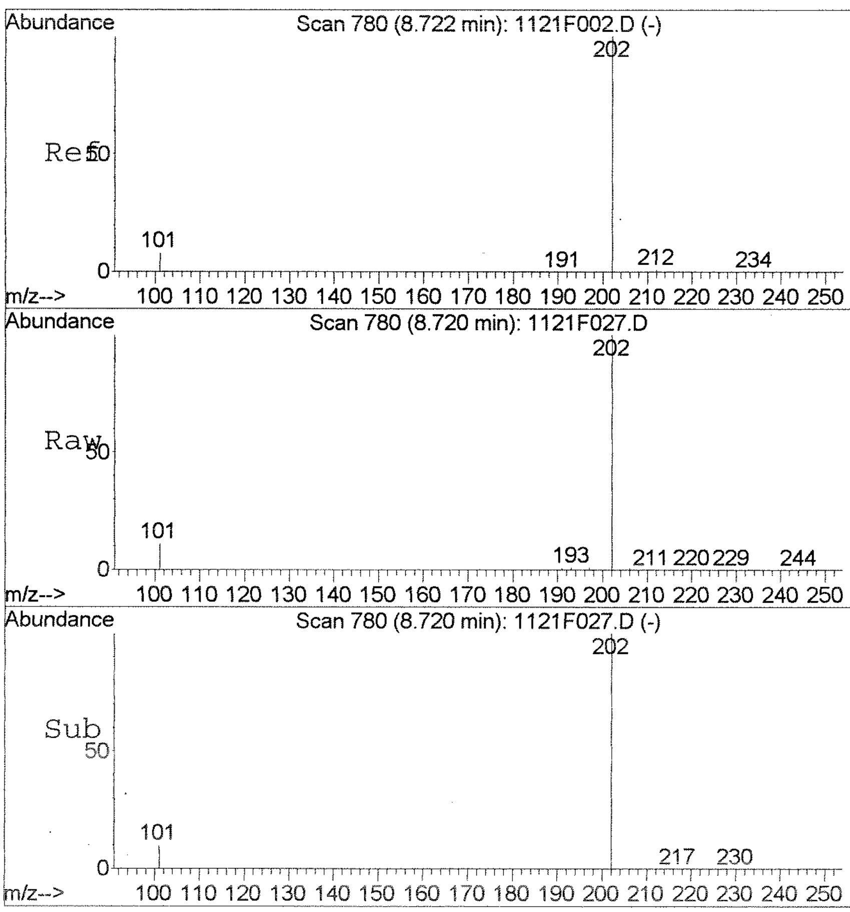


#30
1-Methylphenanthrene
Concen: 31.42 ng/ml
RT: 8.22 min Scan# 716
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:192 Resp: 30568

Ion	Ratio	Lower	Upper
192	100		
191	56.0	29.0	89.0
193	22.2	0.0	45.4

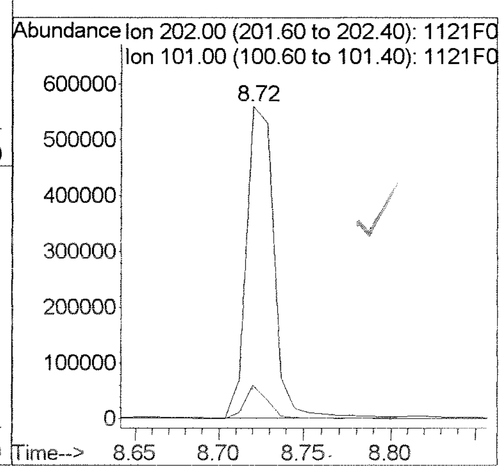


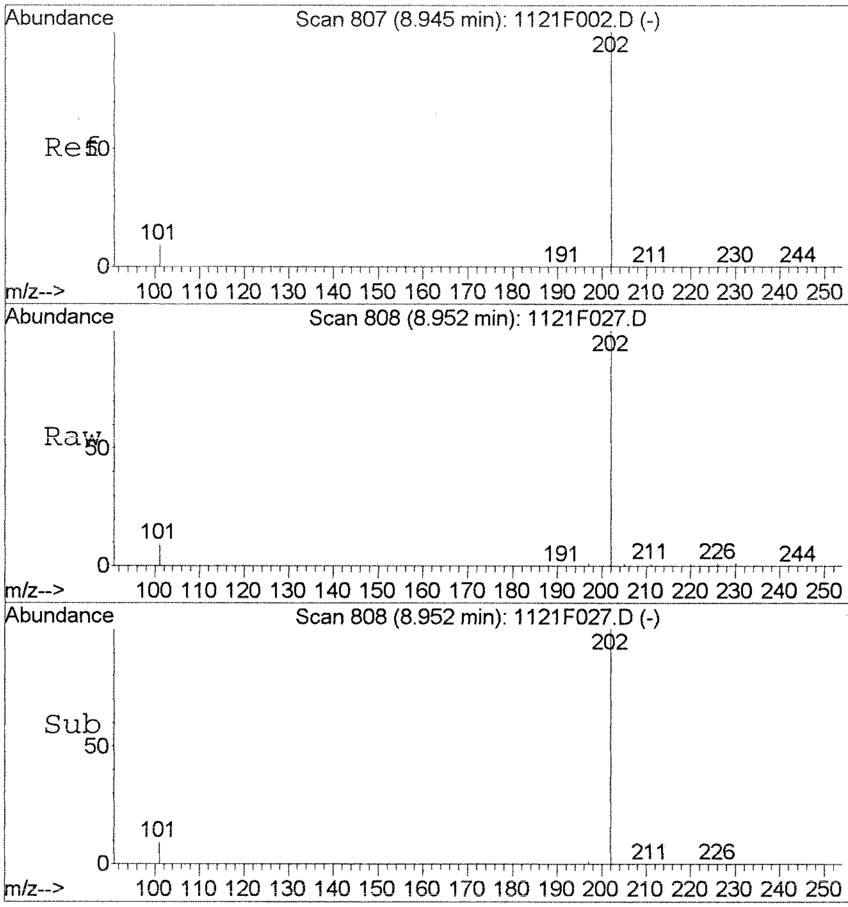


#35
Fluoranthene
Concen: 427.36 ng/ml
RT: 8.72 min Scan# 780
Delta R.T. -0.00 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:202 Resp: 636370

Ion	Ratio	Lower	Upper
202	100		
101	10.7	0.0	35.8

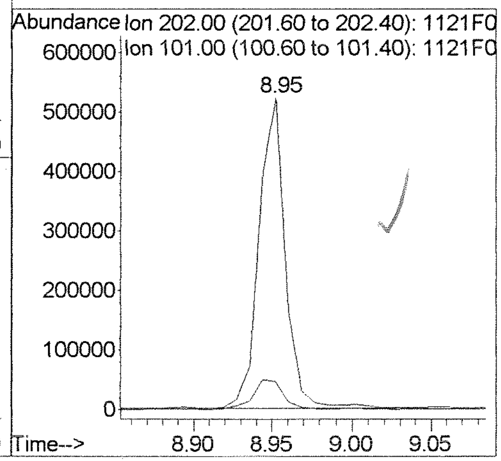


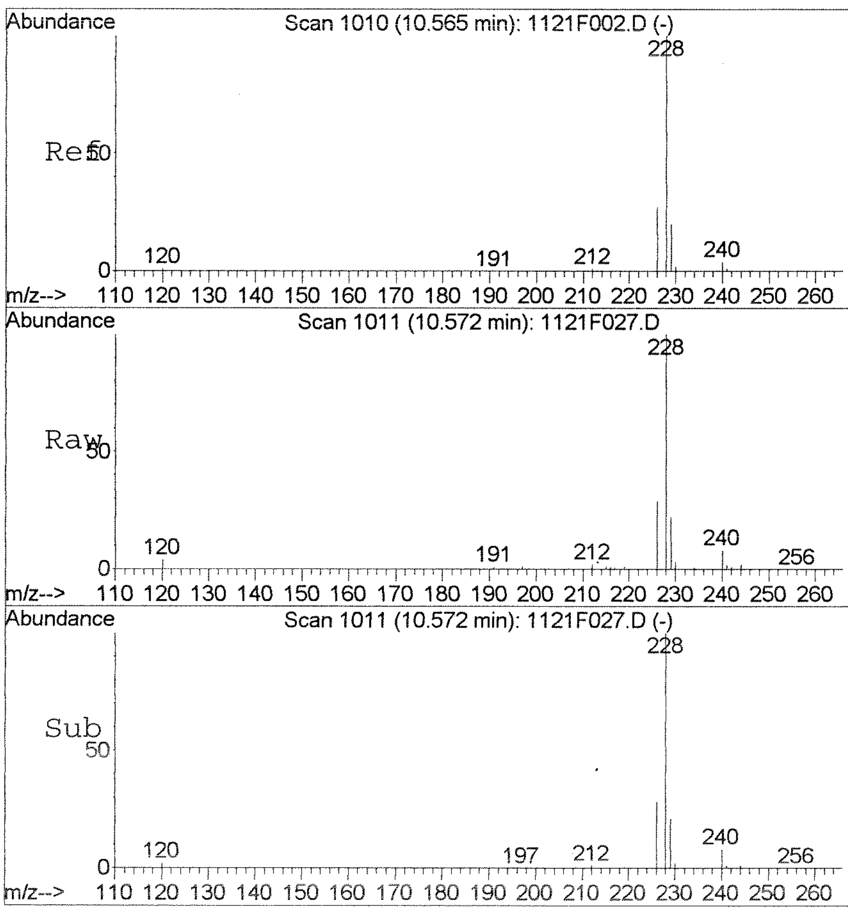


#38
Pyrene
Concen: 382.97 ng/ml
RT: 8.95 min Scan# 808
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:202 Resp: 615393

Ion	Ratio	Lower	Upper
202	100		
101	8.9	0.0	37.6

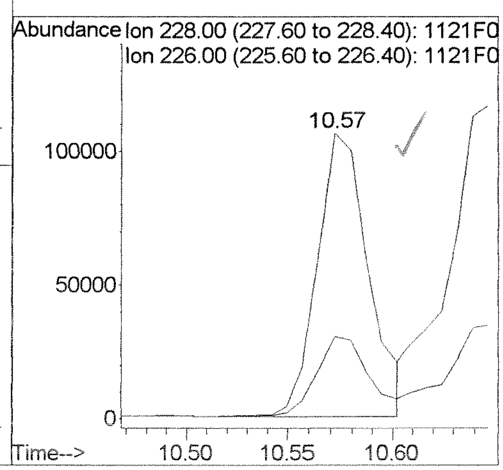


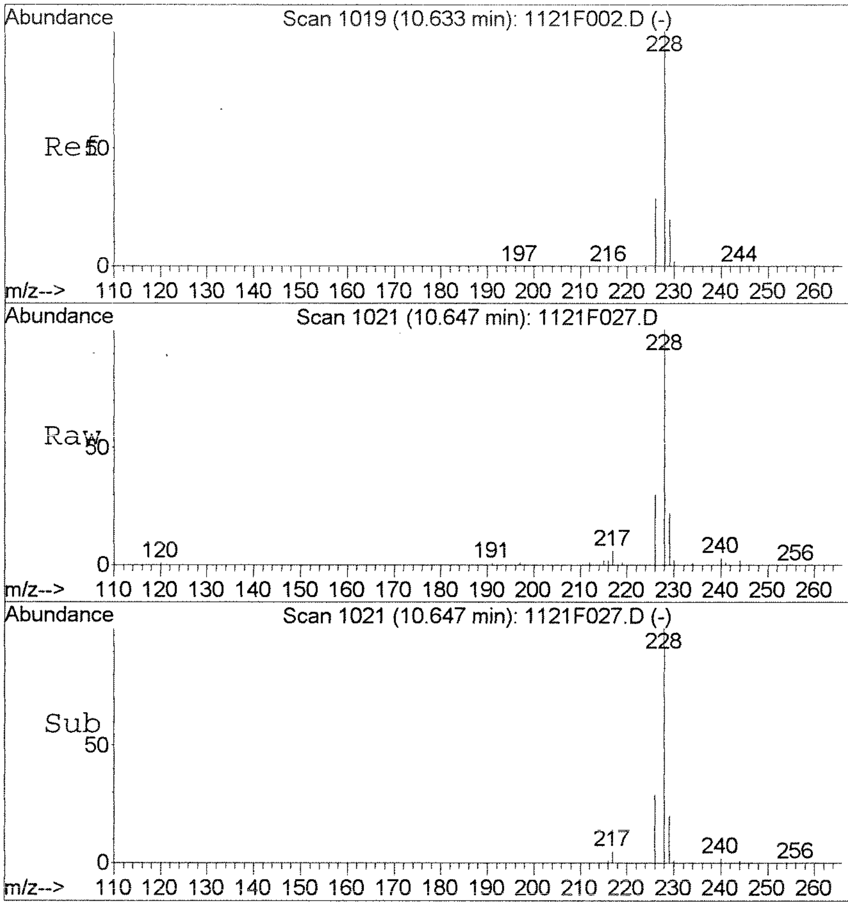


#43
Benz(a)anthracene
Concen: 122.59 ng/ml
RT: 10.57 min Scan# 1011
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:228 Resp: 178711

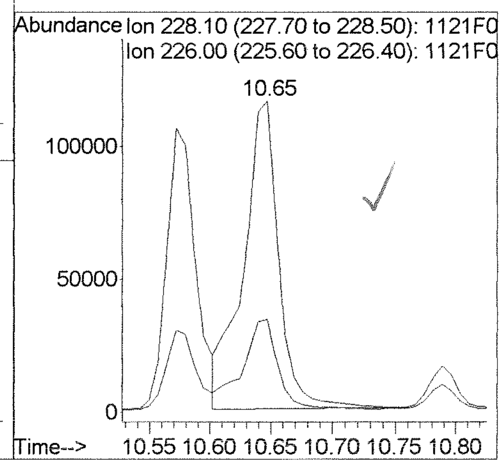
Ion	Ratio	Lower	Upper
228	100		
226	28.3	0.0	57.0

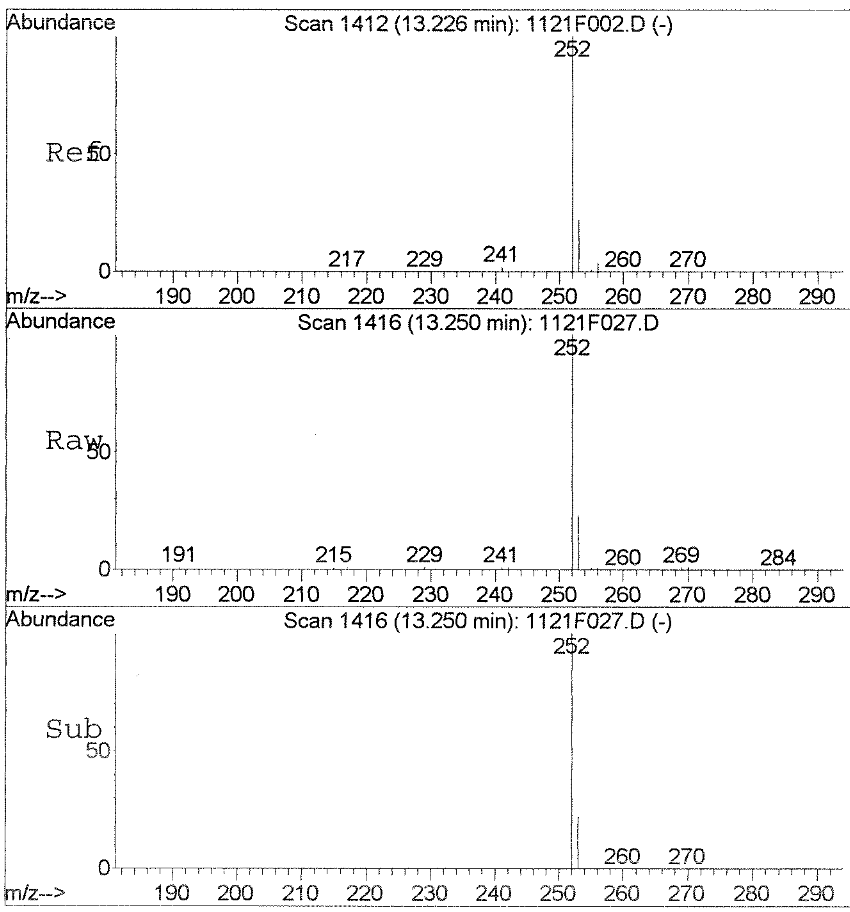




#44
Chrysene
Concen: 163.84 ng/ml
RT: 10.65 min Scan# 1021
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

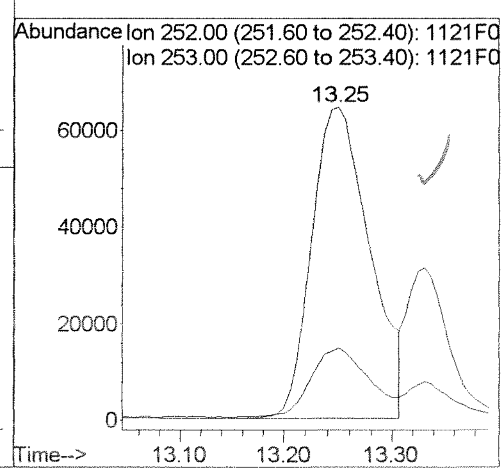
Tgt	Ion:228	Resp:	234569
Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	58.9

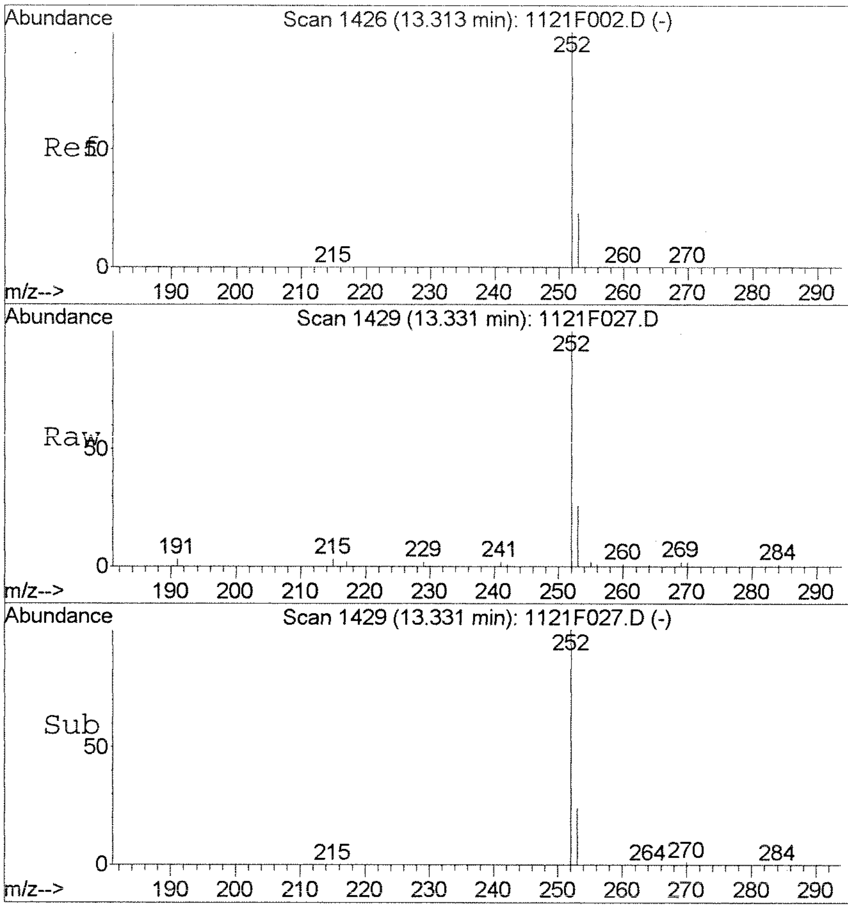




#50
Benzo(b)fluoranthene
Concen: 150.10 ng/ml
RT: 13.25 min Scan# 1416
Delta R.T. 0.02 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt	Ion:252	Resp:	239678
Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	52.6

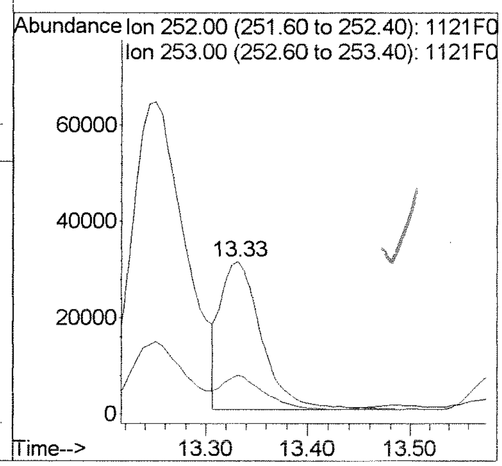


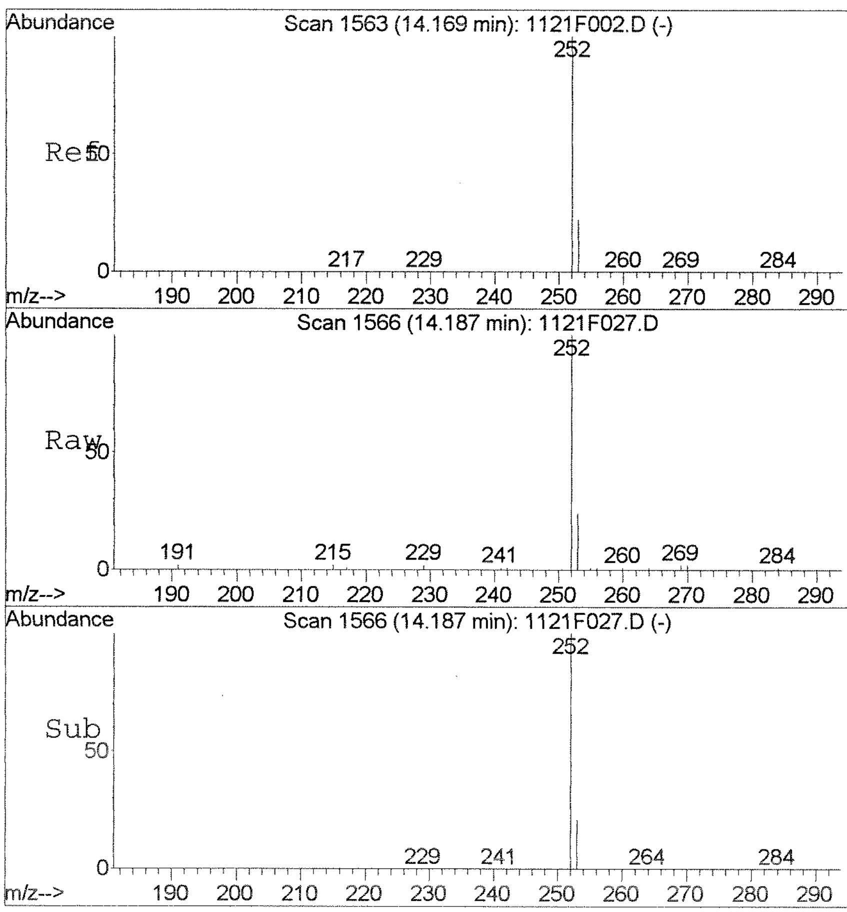


#51
Benzo(k)fluoranthene
Concen: 56.05 ng/ml
RT: 13.33 min Scan# 1429
Delta R.T. 0.02 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:252 Resp: 85972

Ion	Ratio	Lower	Upper
252	100		
253	20.1	0.0	52.0

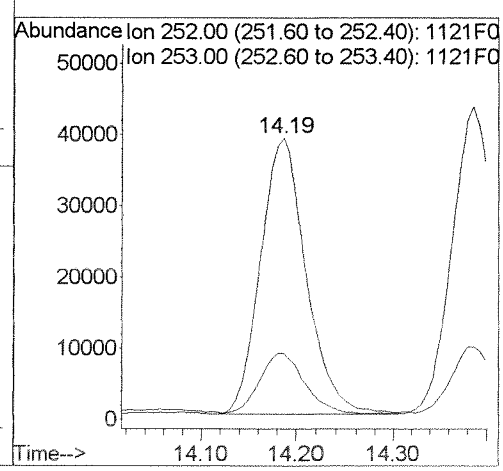




#52
Benzo(e)pyrene
Concen: 88.61 ng/ml
RT: 14.19 min Scan# 1566
Delta R.T. 0.02 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

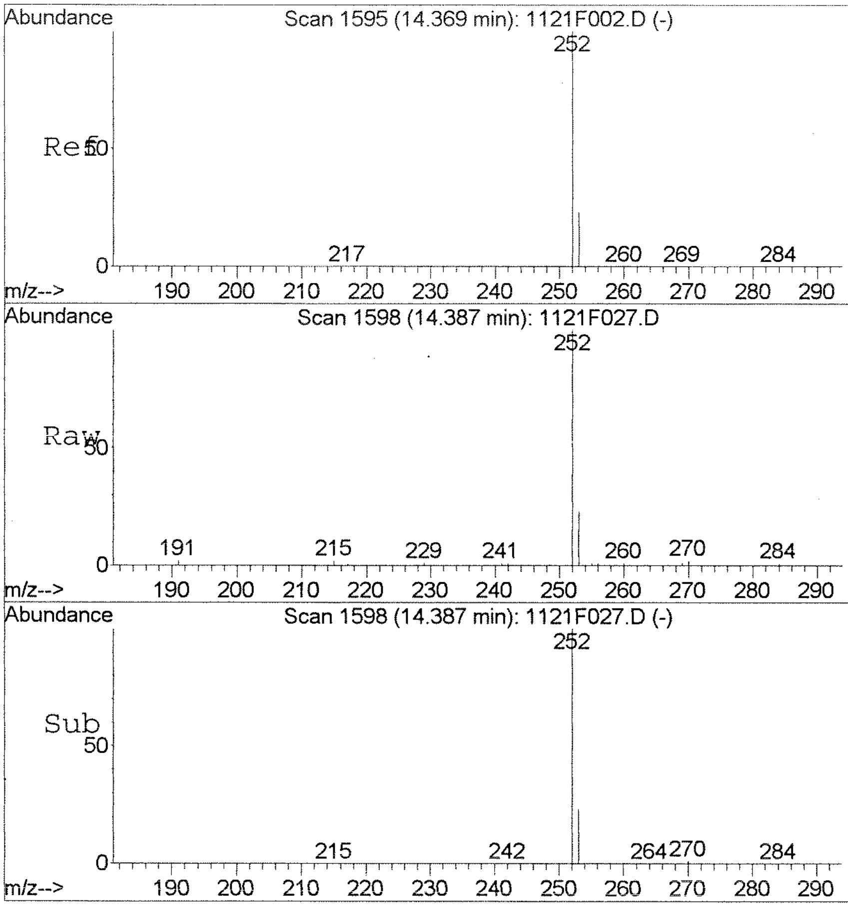
Tgt Ion:252 Resp: 128520

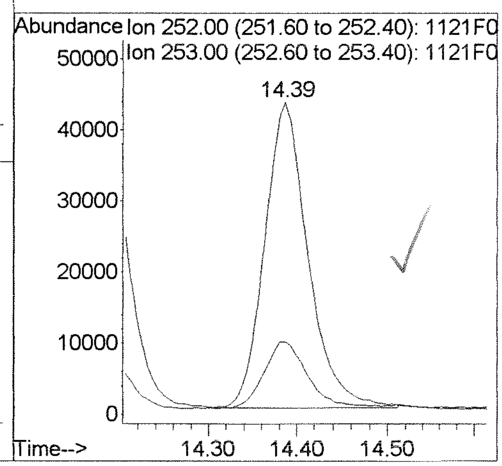
Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	52.2



#53
Benzo(a)pyrene
Concen: 110.19 ng/ml
RT: 14.39 min Scan# 1598
Delta R.T. 0.02 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

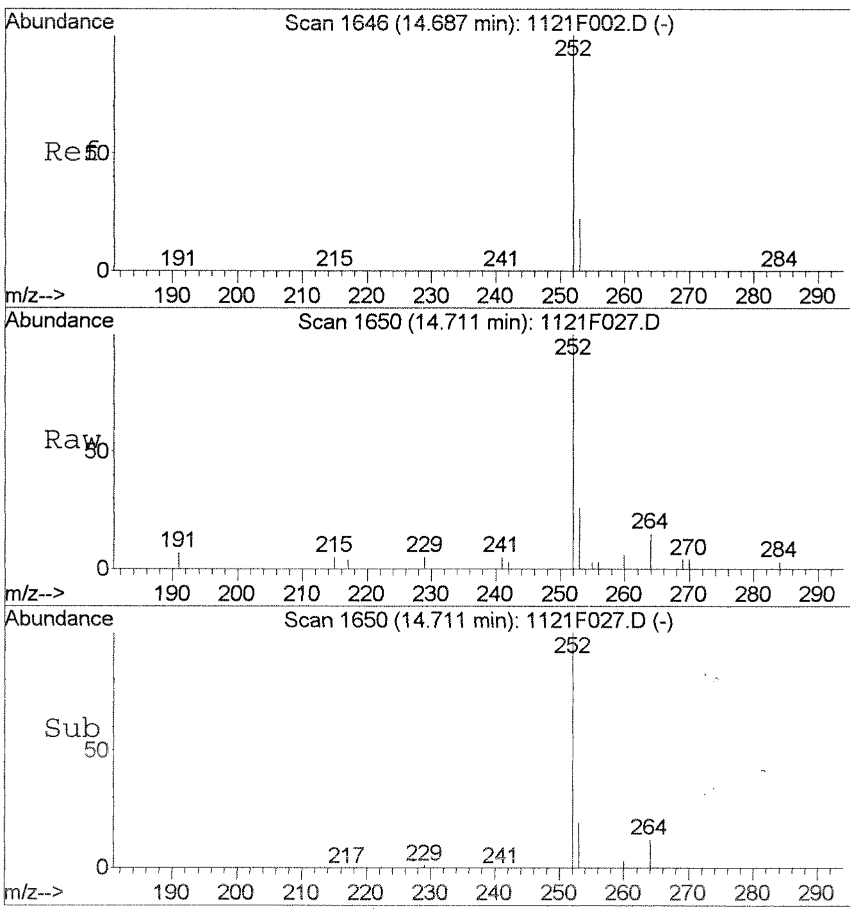
Tgt Ion:252	Resp:	145681	
Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	52.2

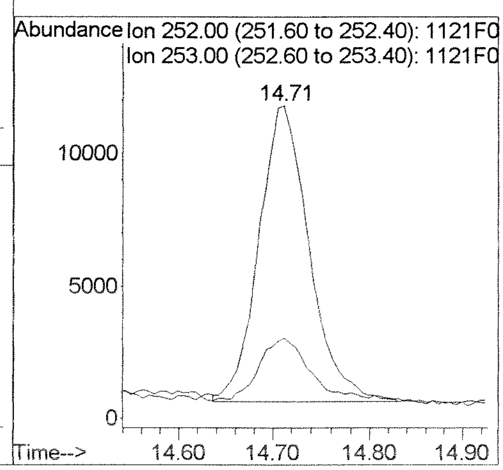


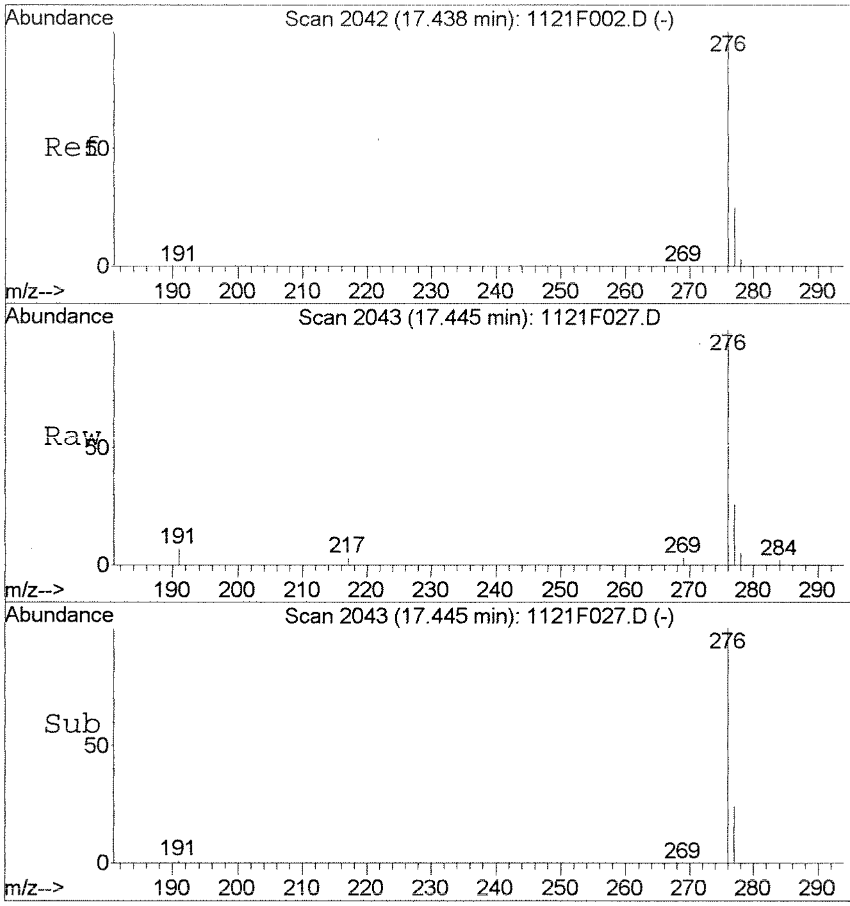


#54
Perylene
Concen: 31.75 ng/ml
RT: 14.71 min Scan# 1650
Delta R.T. 0.02 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:252	Resp:	41238	
Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.5



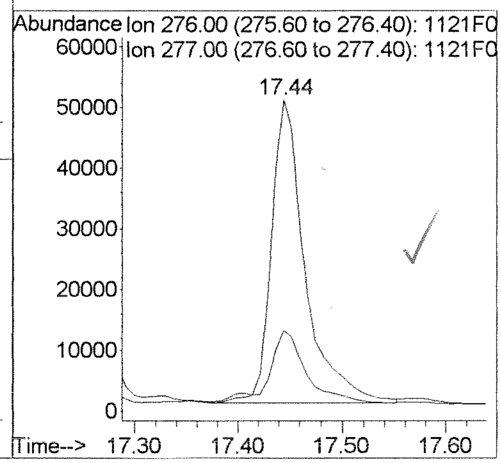


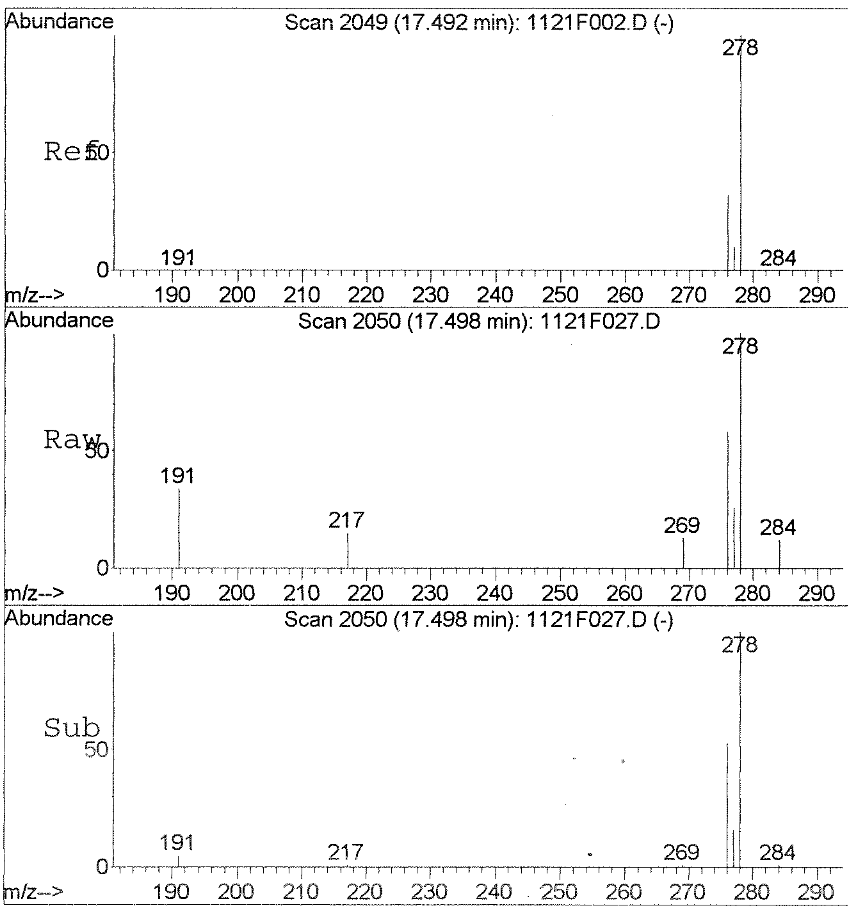


#55
Indeno(1,2,3-cd)pyrene
Concen: 91.87 ng/ml
RT: 17.44 min Scan# 2043
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:276 Resp: 112690

Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	54.7

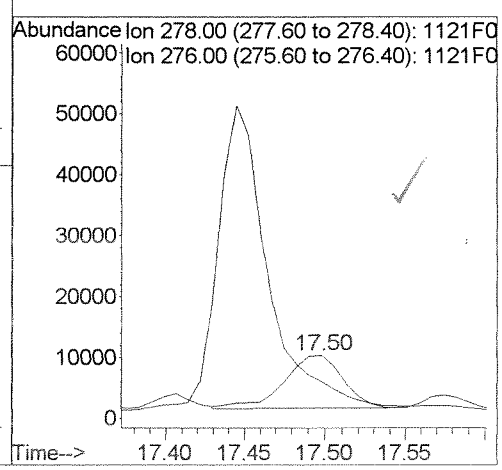


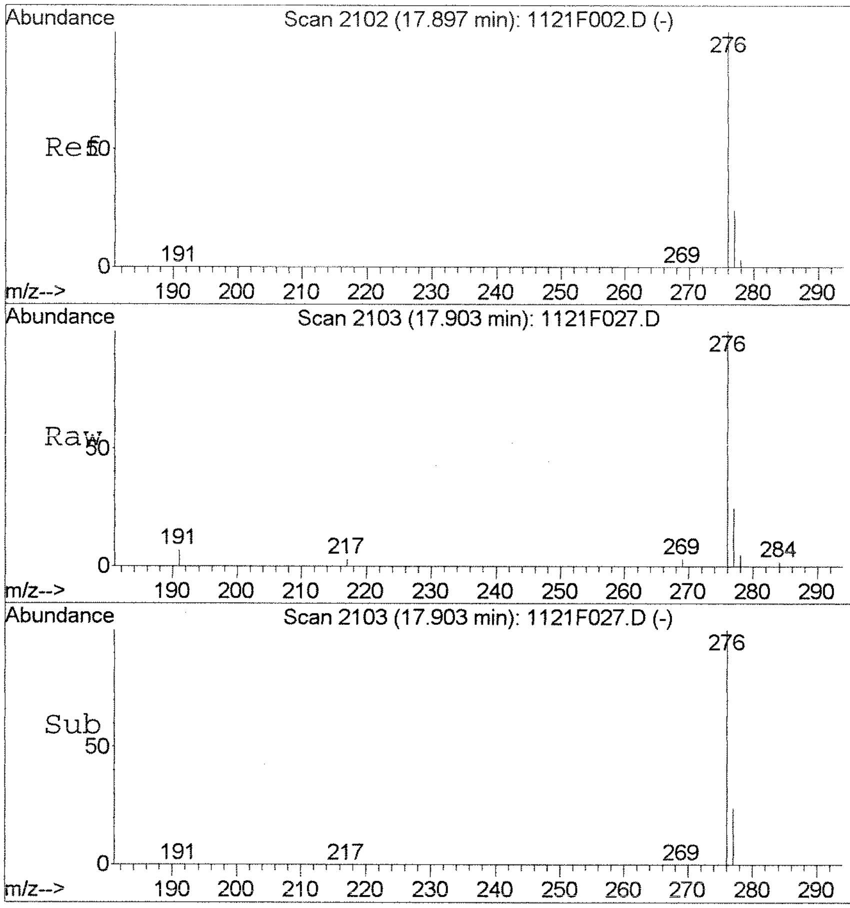


#56
Dibenz(a,h)anthracene
Concen: 16.80 ng/ml
RT: 17.50 min Scan# 2050
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:278 Resp: 21625

Ion	Ratio	Lower	Upper
278	100		
276	45.4	0.0	59.7

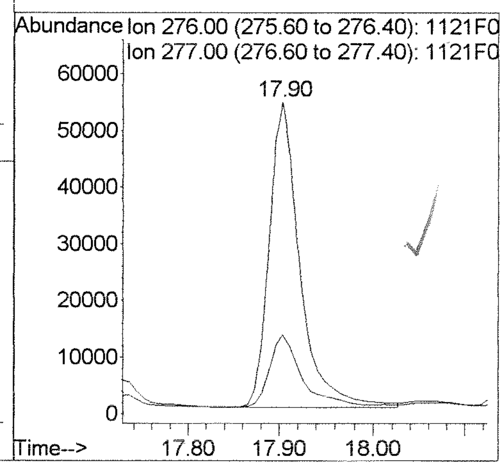




#57
Benzo(g,h,i)perylene
Concen: 89.42 ng/ml
RT: 17.90 min Scan# 2103
Delta R.T. 0.01 min
Lab File: 1121F027.D
Acq: 21 Nov 2008 5:36 pm

Tgt Ion:276 Resp: 124963

Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	54.2



Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED02-2.5-5-A	**Units:**	ug/Kg
Lab Code:	K0810639-005	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**420**	D	110	7.6	20	11/11/08	11/21/08	KWG0812042	
2-Methylnaphthalene	**400**	D	110	8.0	20	11/11/08	11/21/08	KWG0812042	
Acenaphthylene	**320**	D	110	5.0	20	11/11/08	11/21/08	KWG0812042	
Acenaphthene	**33000**	D	110	4.8	20	11/11/08	11/21/08	KWG0812042	
Fluorene	**24000**	D	110	11	20	11/11/08	11/21/08	KWG0812042	
Dibenzofuran	**11000**	D	110	13	20	11/11/08	11/21/08	KWG0812042	
Phenanthrene	**120000**	D	1100	160	200	11/11/08	11/23/08	KWG0812042	
Anthracene	**24000**	D	110	9.7	20	11/11/08	11/21/08	KWG0812042	
Fluoranthene	**70000**	D	1100	130	200	11/11/08	11/23/08	KWG0812042	
Pyrene	**65000**	D	1100	76	200	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	**9500**	D	110	9.9	20	11/11/08	11/21/08	KWG0812042	
Chrysene	**11000**	D	110	5.2	20	11/11/08	11/21/08	KWG0812042	
Benzo(b)fluoranthene	**5100**	D	110	5.2	20	11/11/08	11/21/08	KWG0812042	
Benzo(k)fluoranthene	**2100**	D	110	3.1	20	11/11/08	11/21/08	KWG0812042	
Benzo(a)pyrene	**4300**	D	110	2.9	20	11/11/08	11/21/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**2800**	D	110	3.3	20	11/11/08	11/21/08	KWG0812042	
Dibenz(a,h)anthracene	**450**	D	110	5.8	20	11/11/08	11/21/08	KWG0812042	
Benzo(g,h,i)perylene	**2800**	D	110	14	20	11/11/08	11/21/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	84	10-128	11/21/08	Acceptable
Fluoranthene-d10	63	29-121	11/21/08	Acceptable
Terphenyl-d14	96	24-141	11/21/08	Acceptable

Comments:

Exception Report

Data File:	J:\MS11\DATA\112108\1121F028.D	**Date Acquired:**	11/21/2008 18:02
Lab ID:	K0810639-005	**Date Quantitated:**	11/22/2008 10:29
RunType:	DL	**Batch ID:**	KWG0812597
Matrix:	SEDIMENT	**Analysis Method:**	8270C SIM
		ListJoinID:	LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	2382.63	NA	2000	
	Fluoranthene	3021.04	NA	2000	see Dil
	Phenanthrene	5801.78	NA	2000	

Primary Review: [signature] 11/24/08

Secondary Review: LB 11/24/08

Printed: 11/22/2008 12:44:27

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812597	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776069	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112108\1121F001.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112108\1121F028.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 18:02	**Quant Date:**	11/22/2008 10:29	**Vial:**	26
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-005			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.05	0.01	136	184766	200.00	OK
2	Acenaphthene-d10	6.47	0.01	164	105836	200.00	OK
3	Phenanthrene-d10	7.70	0.00	188	190914	200.00	OK
4	Chrysene-d12	10.60	0.01	240	230284	200.00	OK
5	Perylene-d12	14.61	0.02	264	235300	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.90	0.01	0.00	176	6035	8.39	84	10-128	OK	
3	Fluoranthene-d10	8.71	0.01	0.00	212	8203m	6.30	63	29-121	OK	
4	Terphenyl-d14	9.10	0.01	0.00	244	11434m	9.59	96	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.07	0.01	0.00	128	23036m	20.47	420	D	
1	2-Methylnaphthalene	5.62	0.01	0.00	142	15484	19.73	400	D	
2	Acenaphthylene	6.35		0.00	152	18921m	15.85	320	D	
2	Acenaphthene	6.49		0.00	154	1152103	1,589	33000	D	
2	Dibenzofuran	6.64	0.01	0.00	168	580978	532.56	11000	D	
2	Fluorene	6.92	0.01	0.00	166	1028753	1,182	24000	D	
3	Phenanthrene	7.73	0.01	0.00	178	7785677	5,802	120000	ED	
3	Anthracene	7.77	0.01	0.00	178	1523610	1,165	24000	D	
3	Fluoranthene	8.73	0.01	0.00	202	4605067	3,021	62000	ED	
4	Pyrene	8.96	0.01	0.00	202	4127637	2,383	49000	ED	
4	Benz(a)anthracene	10.58	0.01	0.00	228	731876	465.68	9500	D	
4	Chrysene	10.65	0.02	0.00	228	791672	512.88	11000	D	
5	Benzo(b)fluoranthene	13.26	0.03	0.00	252	407919	251.20	5100	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112108\1121F028.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 18:02	**Quant Date:**	11/22/2008 10:29	**Vial:**	26
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-005			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.33	0.02	0.00	252	156647	100.42	2100	D	
5	Benzo(a)pyrene	14.39	0.02	0.00	252	283592	210.93	4300	D	
5	Indeno(1,2,3-cd)pyrene	17.44		0.00	276	169540	135.91	2800	D	
5	Dibenz(a,h)anthracene	17.49		0.00	278	28578**m**	21.83	450	D	
5	Benzo(g,h,i)perylene	17.90		0.00	276	196923	138.56	2800	D	

Prep Amount:	20.01 g	**Dilution:**	20.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	48.8 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F028.D Vial: 26
Acq On : 21 Nov 2008 6:02 pm Operator: LWeiskopf
Sample : K0810639-005DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 08:13:27 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.05	136	184766	200.00	ng/ml	0.01
10) Acenaphthene-d10	6.47	164	105836	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.70	188	190914	200.00	ng/ml	0.00
37) Chrysene-d12	10.60	240	230284	200.00	ng/ml	0.00
49) Perylene-d12	14.61	264	235300	200.00	ng/ml	0.02
System Monitoring Compounds						
15) Fluorene-d10	6.90	176	6035	8.39	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	4.20%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery	=	0.00%	
36) Fluoranthene-d10	8.71	212	8203m	6.30	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	3.15%	
42) Terphenyl-d14	9.10	244	11434m	9.59	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	4.79%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Naphthalene	5.07	128	23036m	20.47	ng/ml	
3) 2-Methylnaphthalene	5.62	142	15484	19.73	ng/ml	94
4) 1-Methylnaphthalene	5.70	142	134399	191.29	ng/ml	93
5) Biphenyl	5.99	154	2783	2.90	ng/ml	100
6) 2,6-Dimethylnaphthalene	6.12	156	234663	342.49	ng/ml	99
11) Acenaphthylene	6.35	152	18921m	15.85	ng/ml	
12) Acenaphthene	6.49	154	1152103	1588.66	ng/ml	97
13) Dibenzofuran	6.64	168	580978	532.56	ng/ml	78
14) 2,3,5-Trimethylnaphthalene	6.80	170	191076	299.58	ng/ml	76
16) Fluorene	6.92	166	1028753	1181.64	ng/ml	99
23) Dibenzothiophene	7.62	184	517815	394.65	ng/ml	94
27) Phenanthrene	7.73	178	7785677	5801.78	ng/ml	89
28) Anthracene	7.77	178	1523610	1165.29	ng/ml	99
29) Carbazole	7.91	167	43520	36.28	ng/ml	98
30) 1-Methylphenanthrene	8.22	192	366751m	368.25	ng/ml	
35) Fluoranthene	8.73	202	4605067	3021.04	ng/ml	78
38) Pyrene	8.96	202	4127637	2382.63	ng/ml	93
43) Benz(a)anthracene	10.58	228	731876	465.68	ng/ml	98
44) Chrysene	10.65	228	791672	512.88	ng/ml	100
50) Benzo(b)fluoranthene	13.26	252	407919	251.20	ng/ml	100
51) Benzo(k)fluoranthene	13.33	252	156647	100.42	ng/ml	99
52) Benzo(e)pyrene	14.19	252	212578	144.11	ng/ml	99
53) Benzo(a)pyrene	14.39	252	283592	210.93	ng/ml	99
54) Perylene	14.72	252	65039	49.24	ng/ml	100
55) Indeno(1,2,3-cd)pyrene	17.44	276	169540	135.91	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F028.D Vial: 26
Acq On : 21 Nov 2008 6:02 pm Operator: LWeiskopf
Sample : K0810639-005DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 08:13:27 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

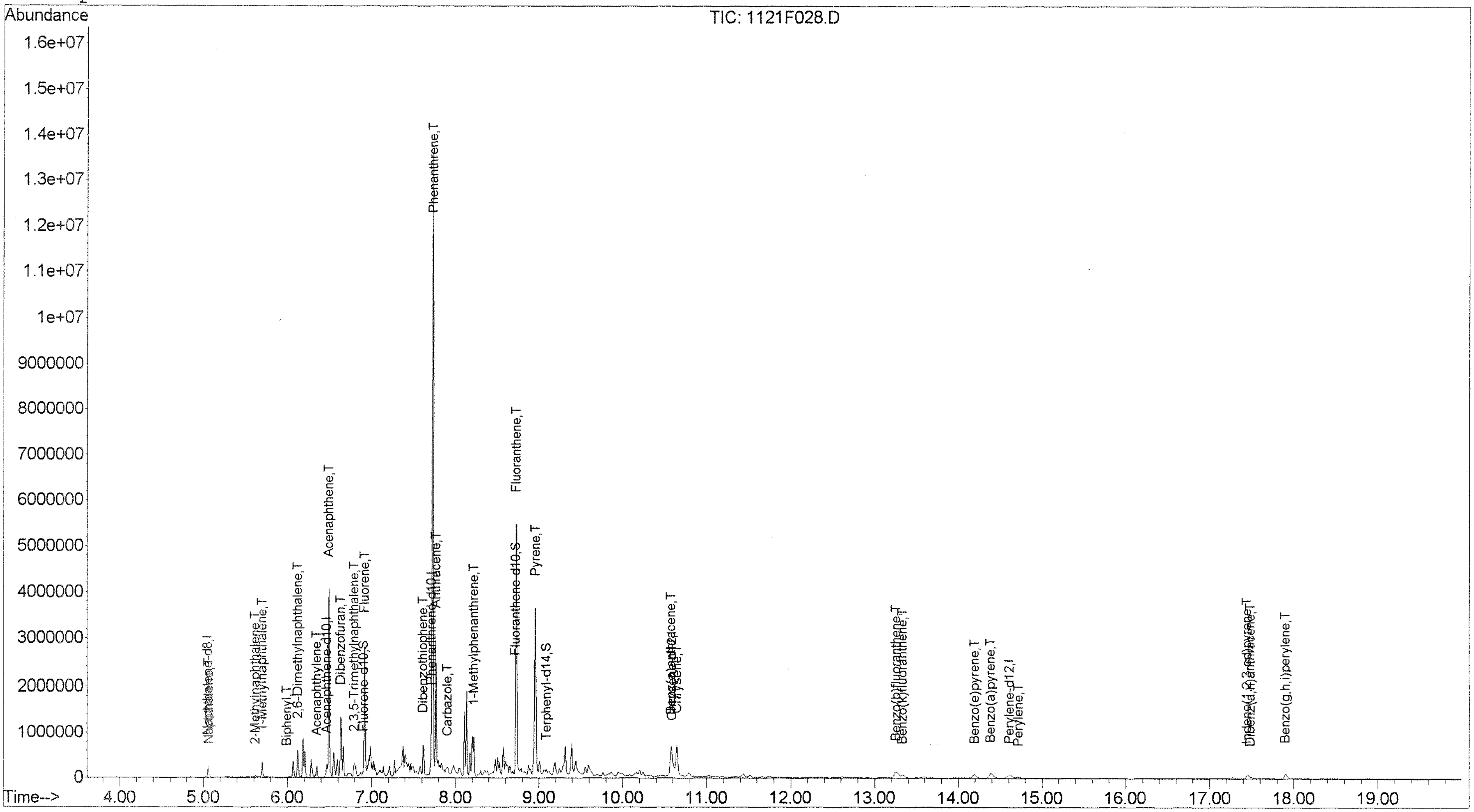
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
56)	Dibenz(a,h)anthracene	17.49	278	28578m	21.83	ng/ml	
57)	Benzo(g,h,i)perylene	17.90	276	196923	138.56	ng/ml	100

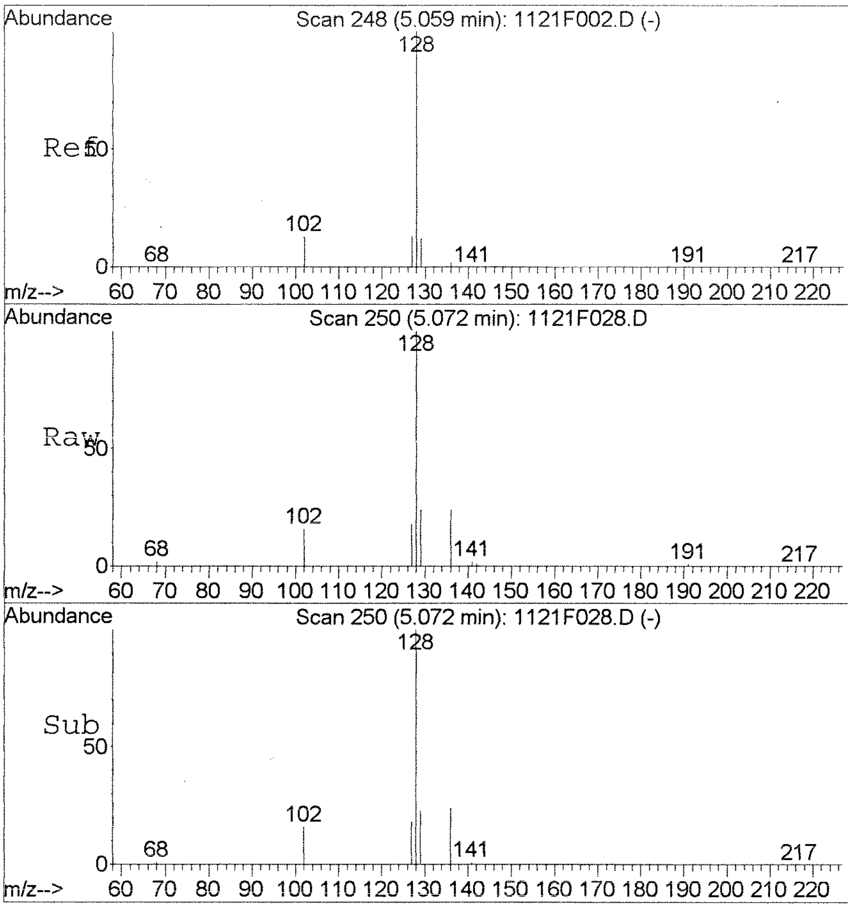
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F028.D Vial: 26
Acq On : 21 Nov 2008 6:02 pm Operator: LWeiskopf
Sample : K0810639-005DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:29 2008 Quant Results File: 1110ALK.RES

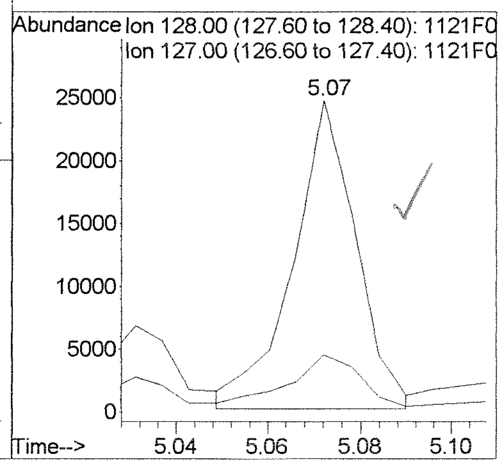
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration

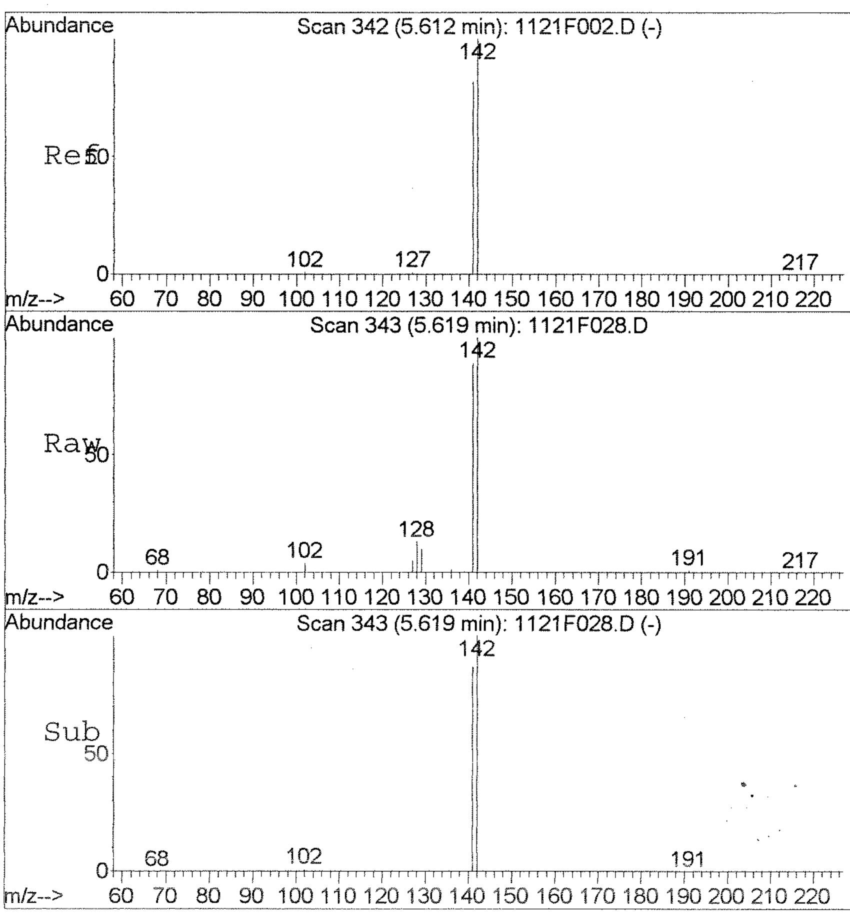




#2
Naphthalene
Concen: 20.47 ng/ml m
RT: 5.07 min Scan# 250
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

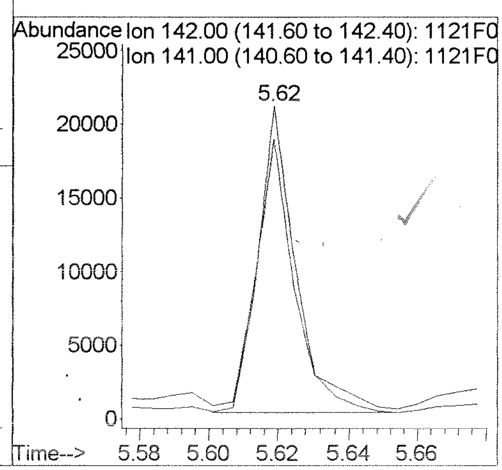
Tgt Ion:128	Resp:		23036
Ion	Ratio	Lower	Upper
128	100		
127	18.4	0.0	43.8

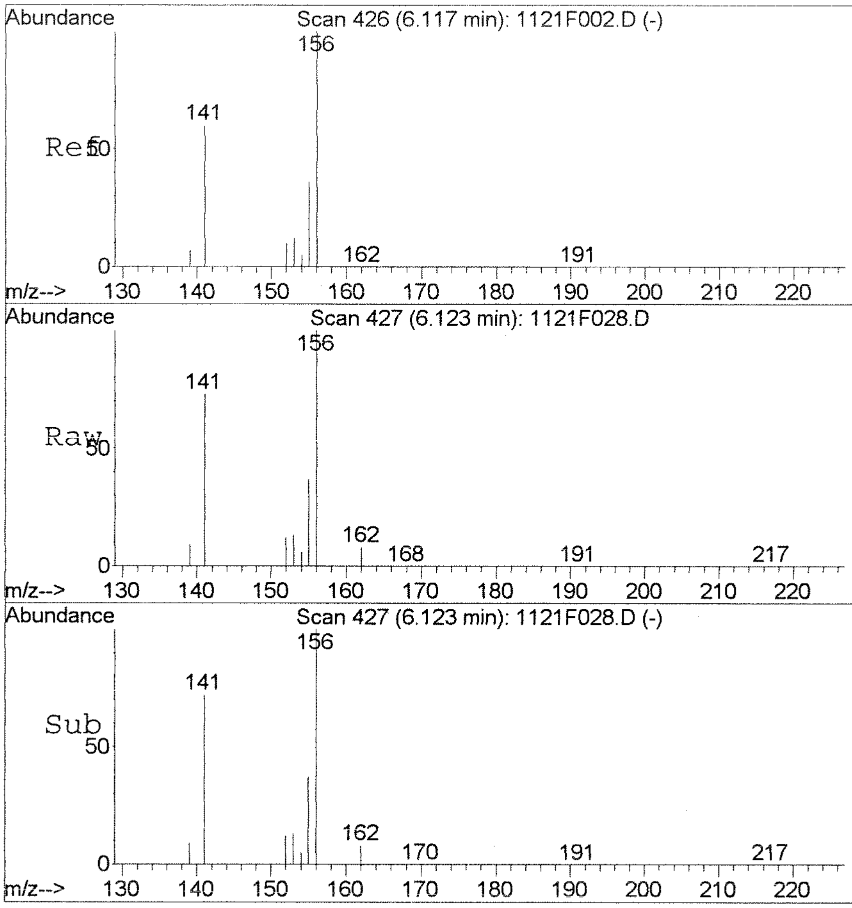




#3
2-Methylnaphthalene
Concen: 19.73 ng/ml
RT: 5.62 min Scan# 343
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

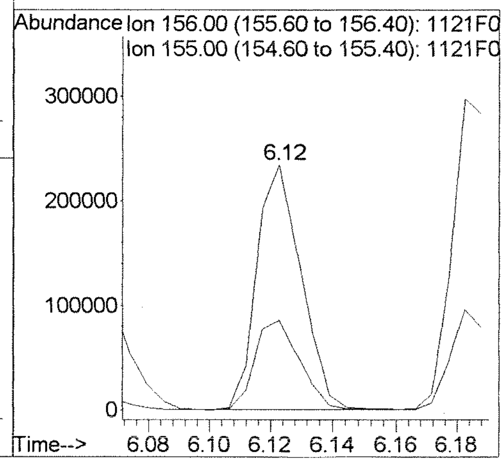
Tgt Ion:142	Resp:		15484
Ion	Ratio	Lower	Upper
142	100		
141	88.1	52.4	112.4

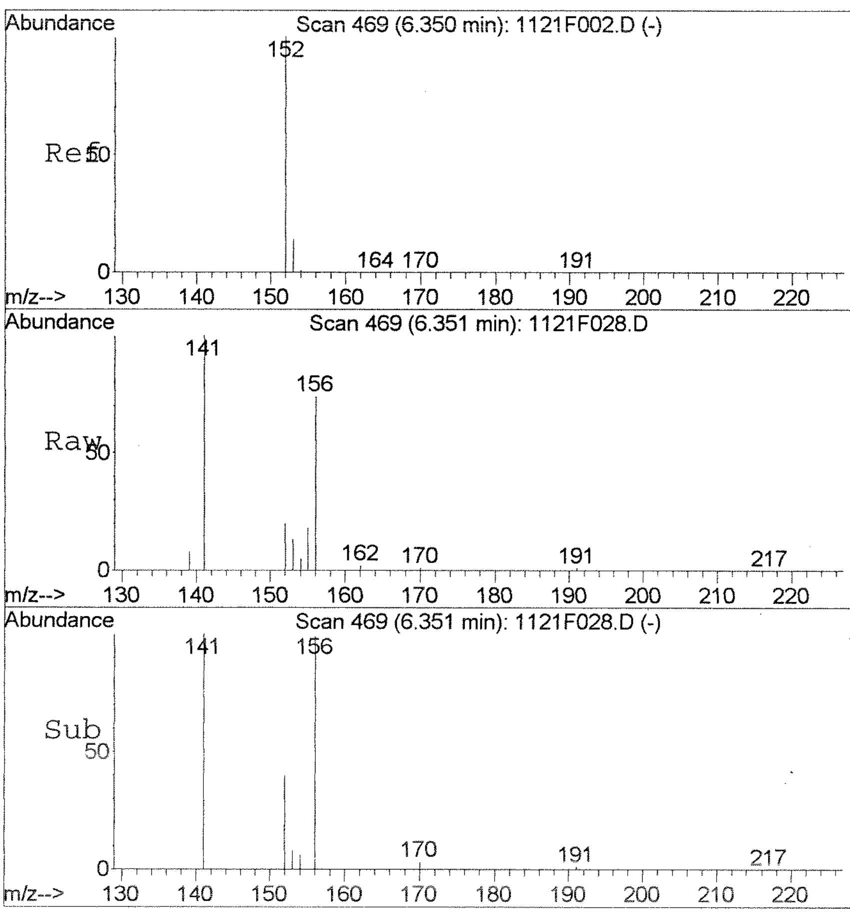




#6
2,6-Dimethylnaphthalene
Concen: 342.49 ng/ml
RT: 6.12 min Scan# 427
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

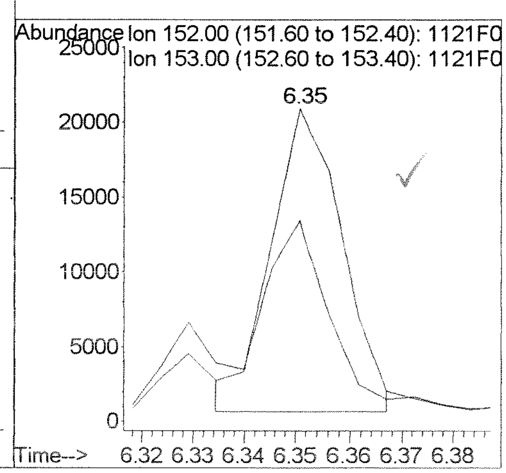
Tgt Ion:156	Resp:		234663
Ion	Ratio	Lower	Upper
156	100		
155	36.6	7.3	67.3

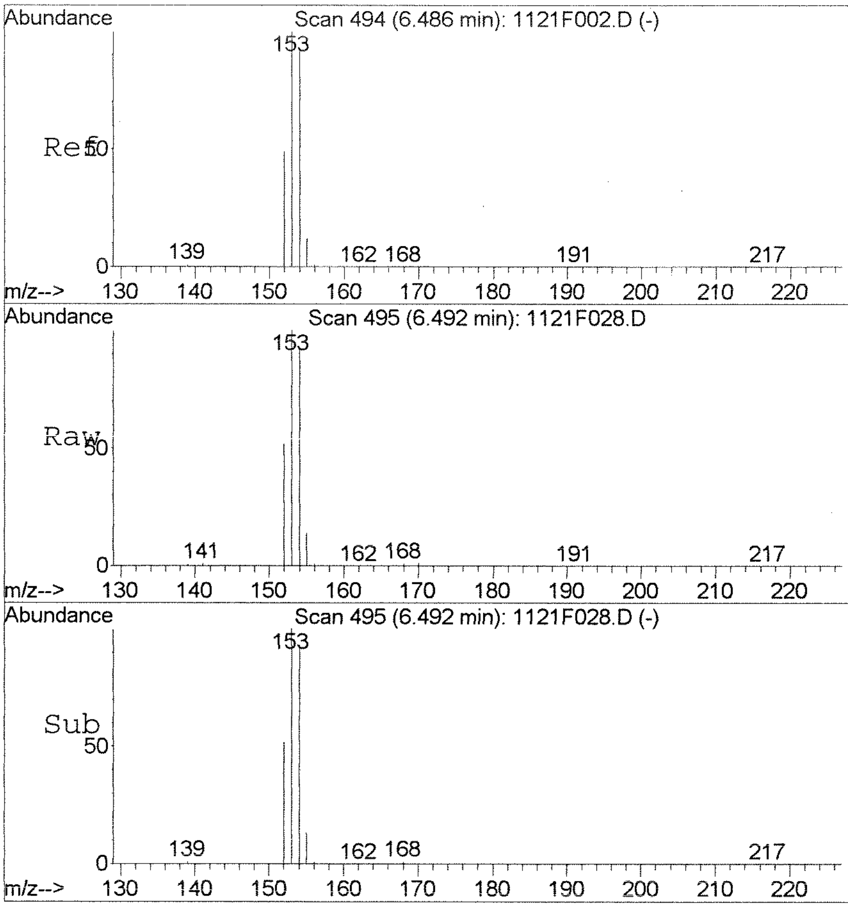




#11
Acenaphthylene
Concen: 15.85 ng/ml m
RT: 6.35 min Scan# 469
Delta R.T. 0.00 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

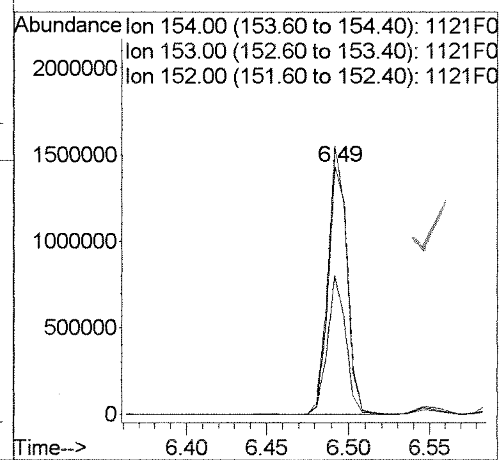
Tgt Ion:152	Resp:		18921
Ion	Ratio	Lower	Upper
152	100		
153	64.2	0.0	43.0#

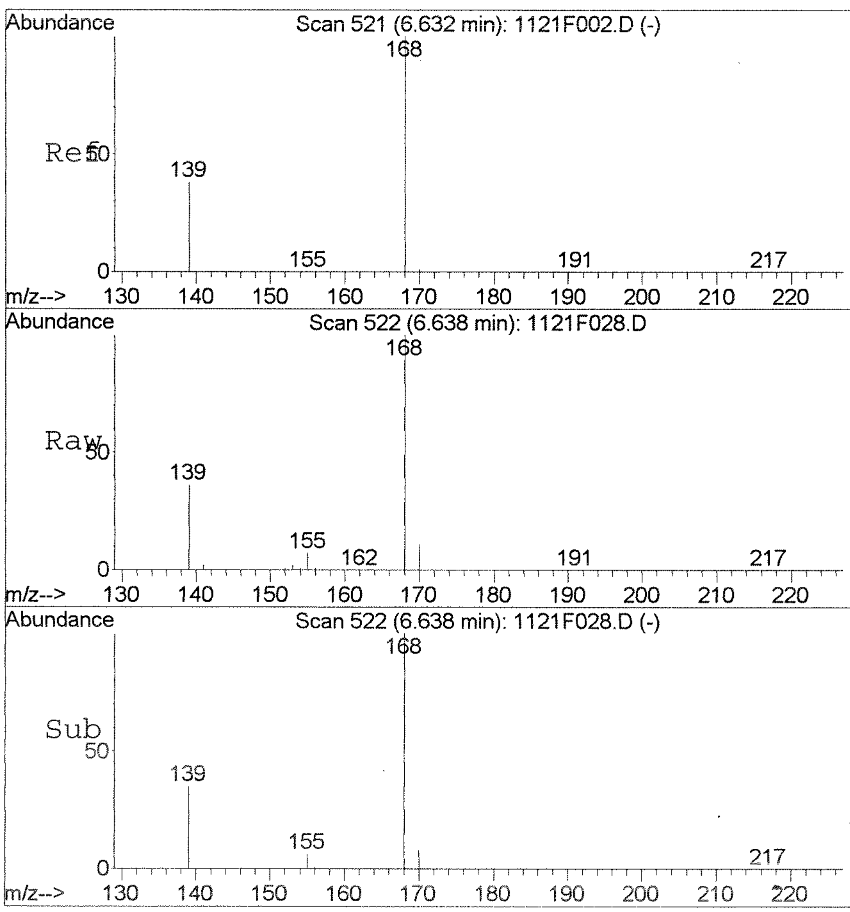




#12
Acenaphthene
Concen: 1588.66 ng/ml
RT: 6.49 min Scan# 495
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

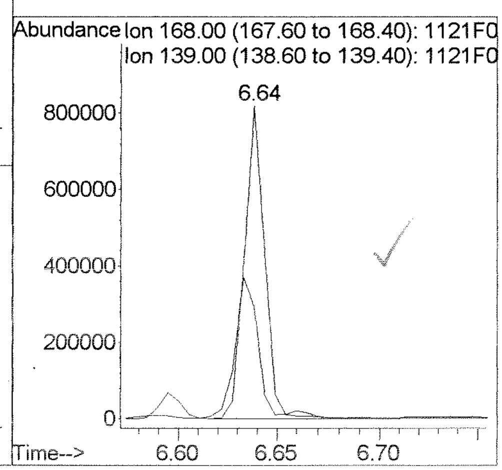
Tgt Ion:154	Resp: 1152103		
Ion	Ratio	Lower	Upper
154	100		
153	108.3	81.9	141.9
152	56.1	26.8	86.8

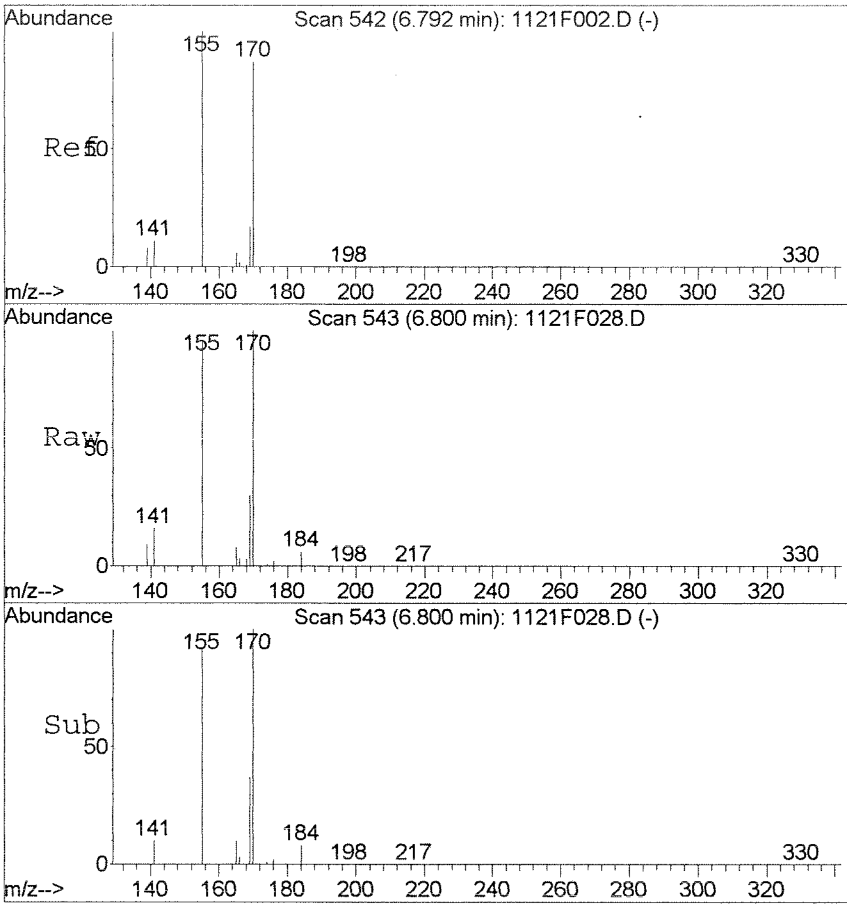




#13
Dibenzofuran
Concen: 532.56 ng/ml
RT: 6.64 min Scan# 522
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

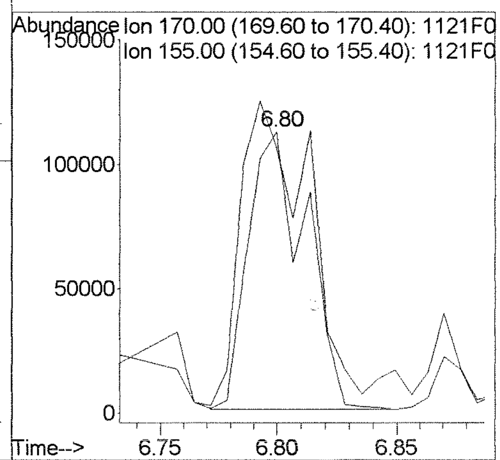
Tgt Ion:168	Resp: 580978		
Ion	Ratio	Lower	Upper
168	100		
139	35.8	21.0	81.0

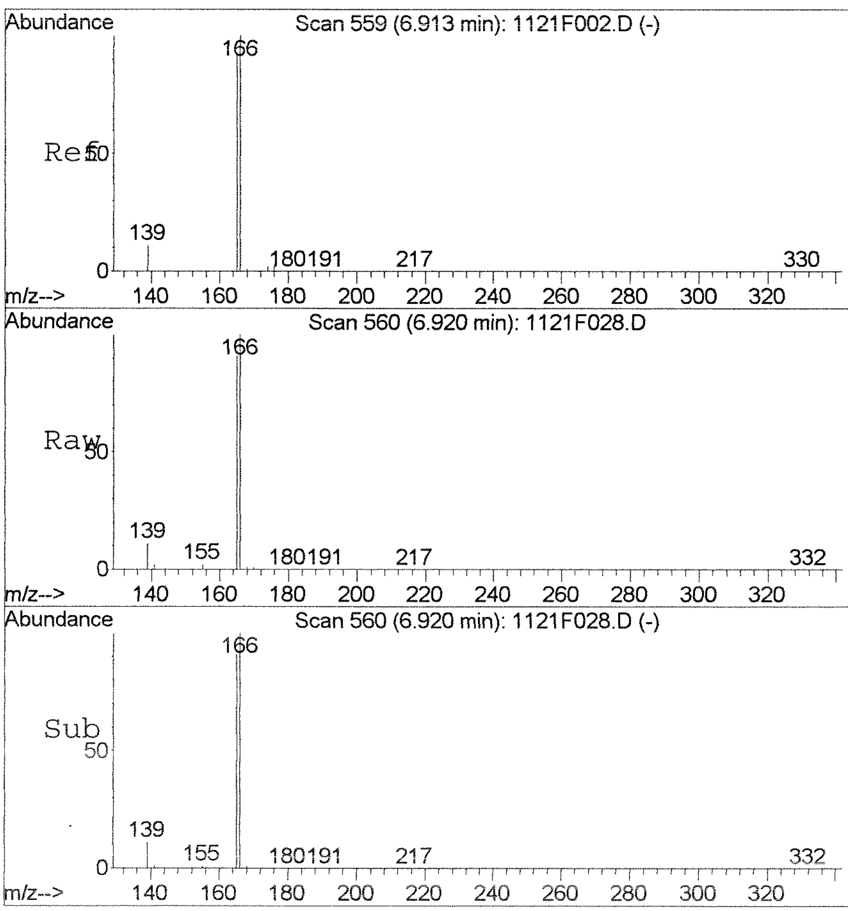




#14
2,3,5-Trimethylnaphthalene
Concen: 299.58 ng/ml
RT: 6.80 min Scan# 543
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

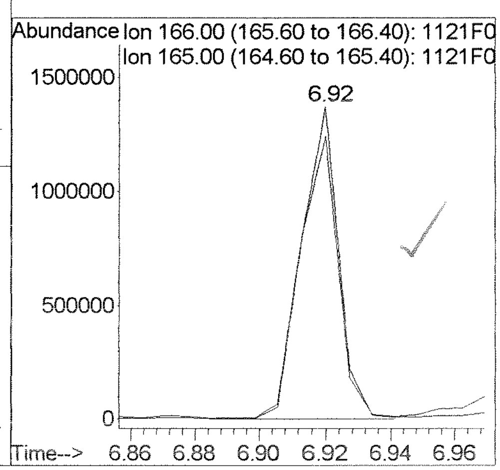
Tgt	Ion:170	Resp:	191076
Ion	Ratio	Lower	Upper
170	100		
155	93.0	42.9	102.9





#16
Fluorene
Concen: 1181.64 ng/ml
RT: 6.92 min Scan# 560
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

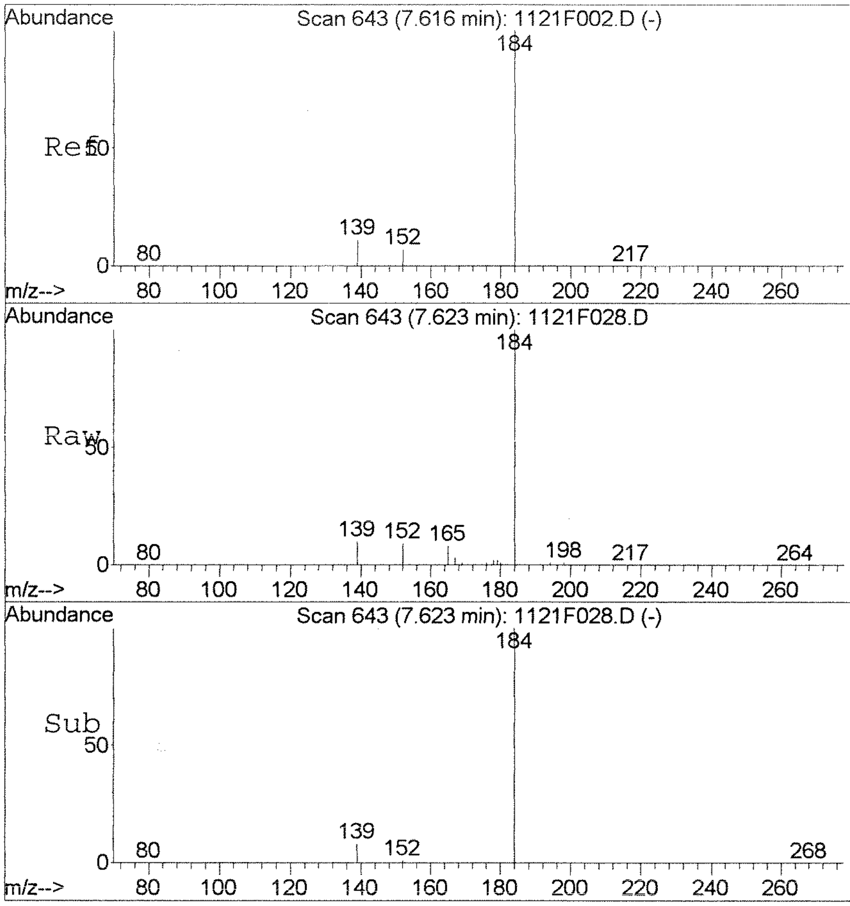
Tgt	Ion:166	Resp:	1028753
Ion	Ratio	Lower	Upper
166	100		
165	90.4	59.8	119.8

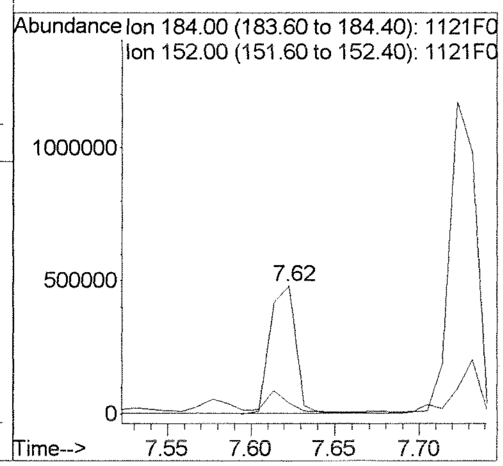


#23
Dibenzothiophene
Concen: 394.65 ng/ml
RT: 7.62 min Scan# 643
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:184 Resp: 517815

Ion	Ratio	Lower	Upper
184	100		
152	7.1	0.0	39.1

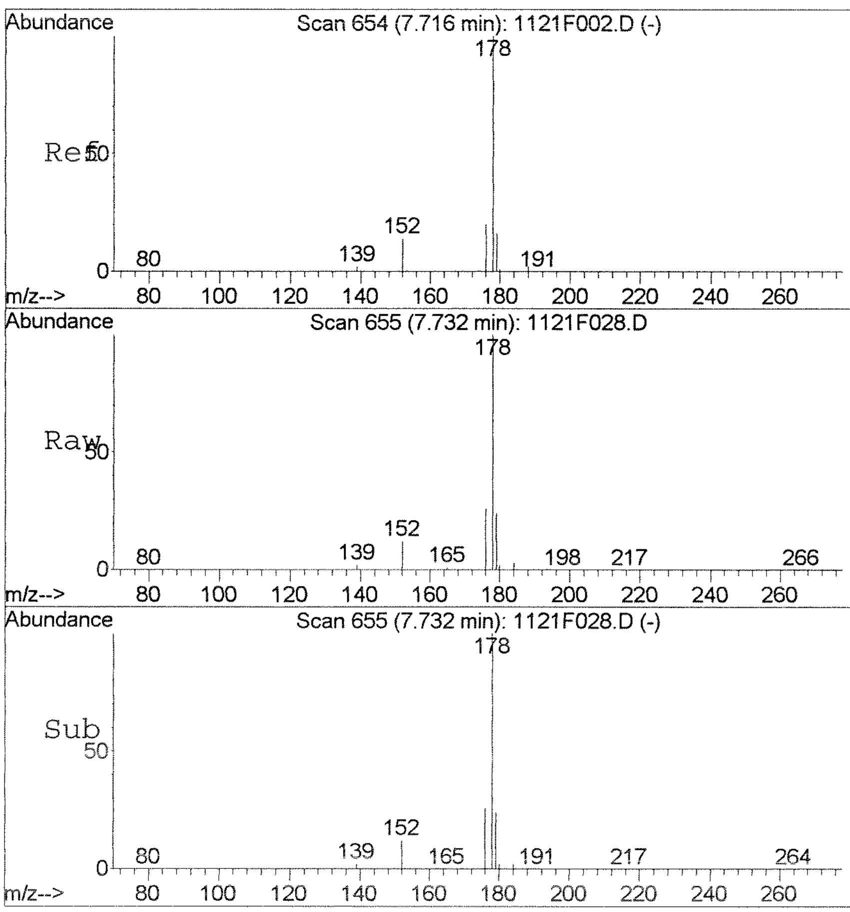


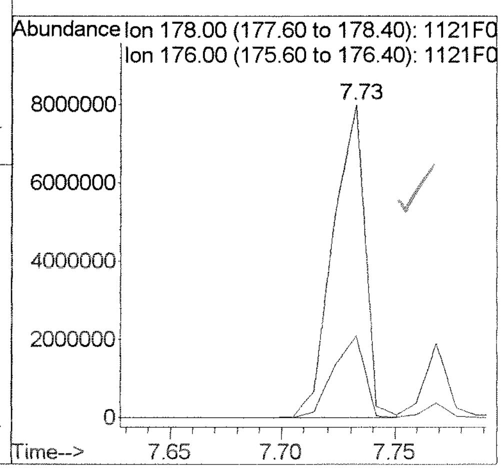


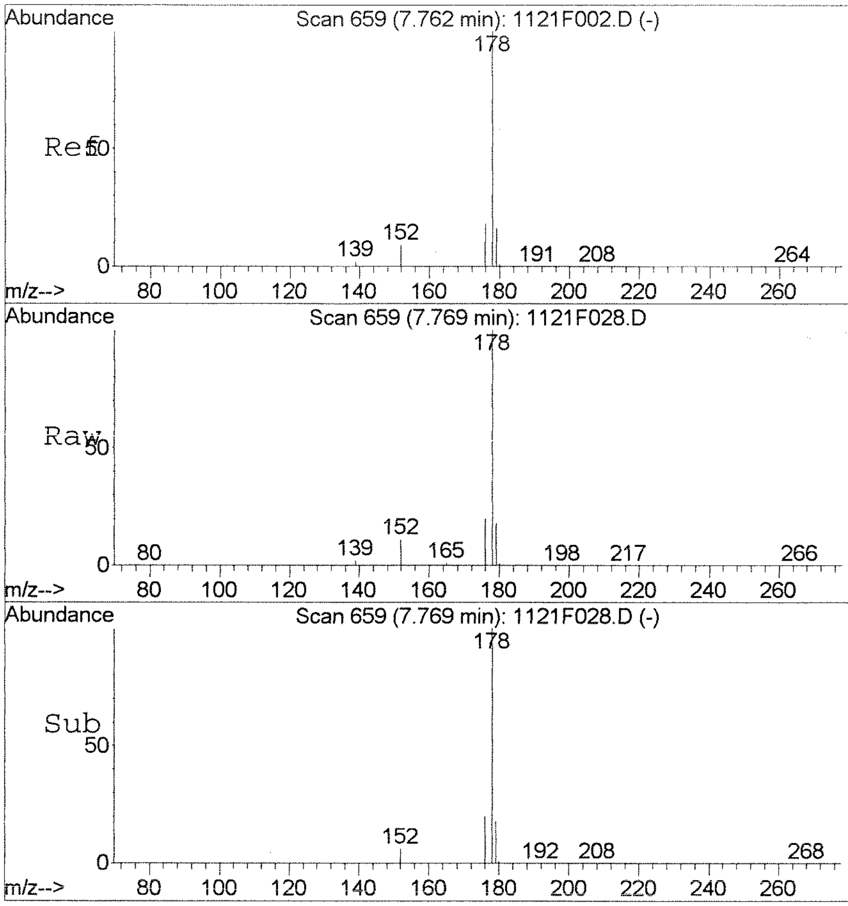
#27
Phenanthrene
Concen: 5801.78 ng/ml
RT: 7.73 min Scan# 655
Delta R.T. 0.02 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:178 Resp: 7785677

Ion	Ratio	Lower	Upper
178	100		
176	26.2	0.0	51.0

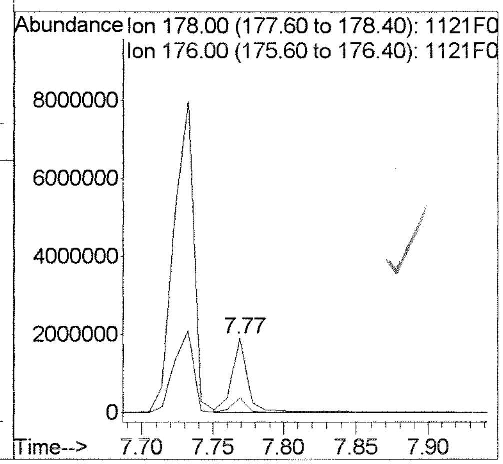


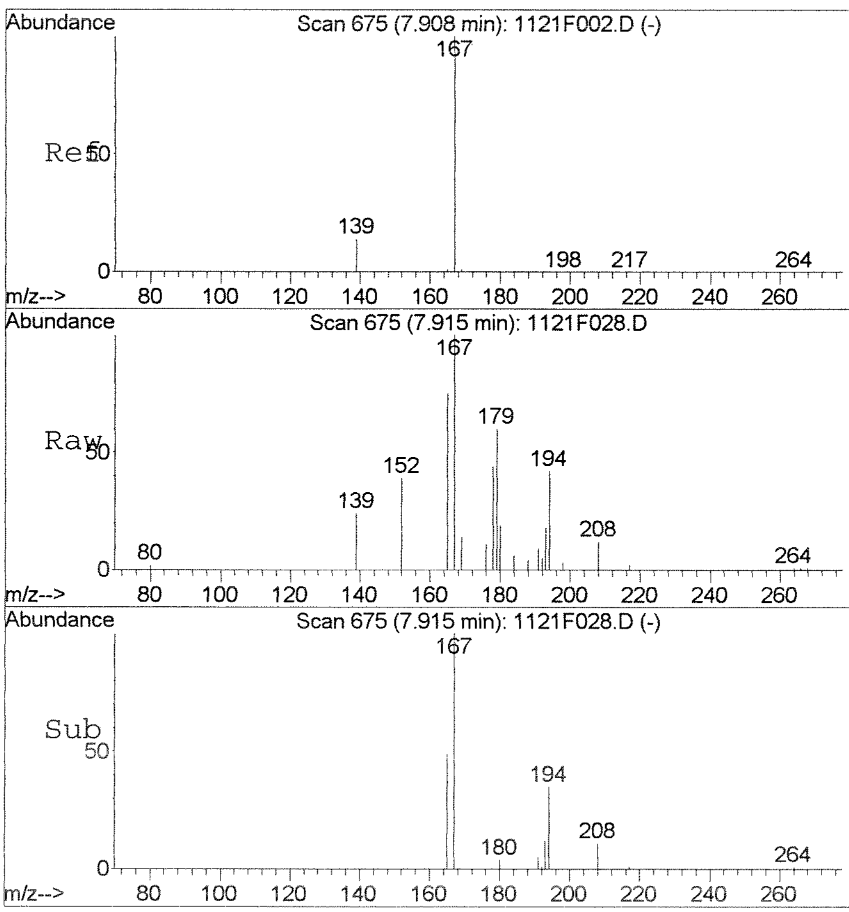




#28
Anthracene
Concen: 1165.29 ng/ml
RT: 7.77 min Scan# 659
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

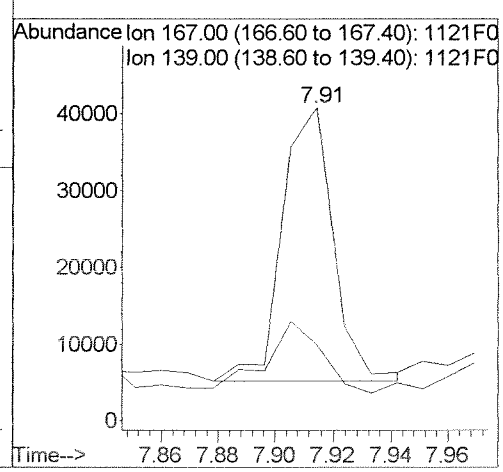
Tgt	Ion:178	Resp:	1523610
Ion	Ratio	Lower	Upper
178	100		
176	20.0	0.0	49.7

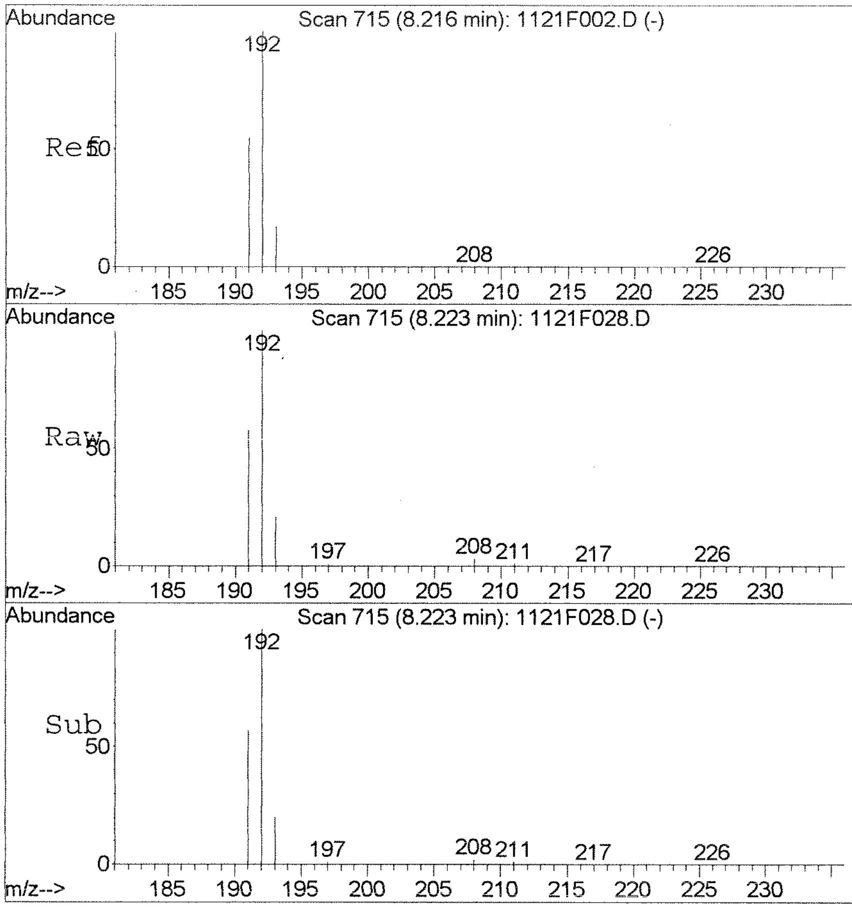




#29
Carbazole
Concen: 36.28 ng/ml
RT: 7.91 min Scan# 675
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt	Ion:167	Resp:	43520
Ion	Ratio	Lower	Upper
167	100		
139	15.8	0.0	46.8

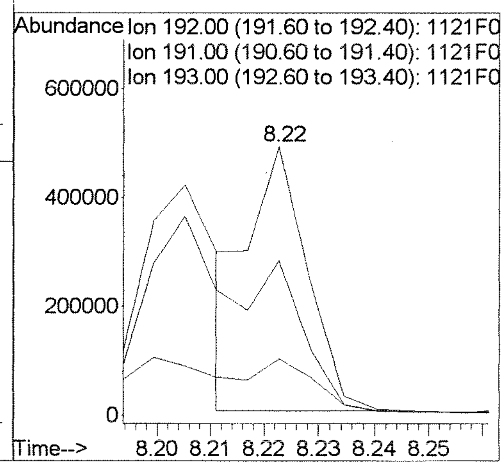


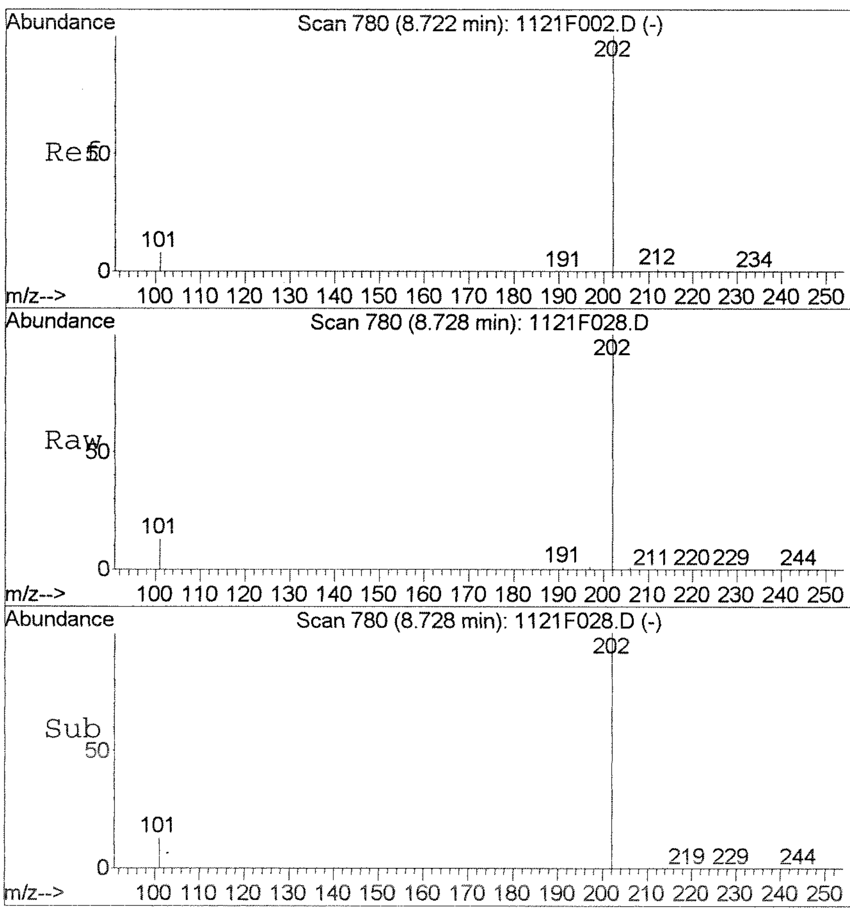


#30
1-Methylphenanthrene
Concen: 368.25 ng/ml m
RT: 8.22 min Scan# 715
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:192 Resp: 366751

Ion	Ratio	Lower	Upper
192	100		
191	57.6	29.0	89.0
193	21.1	0.0	45.4

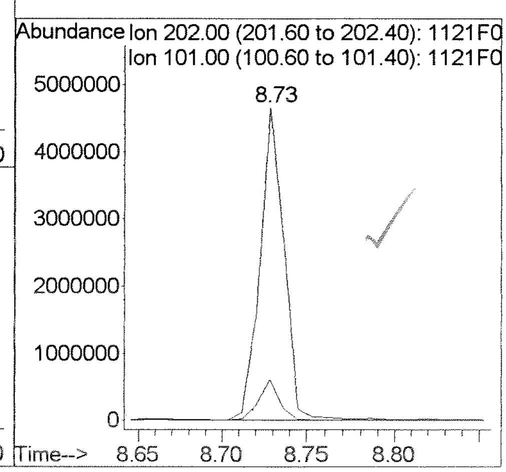


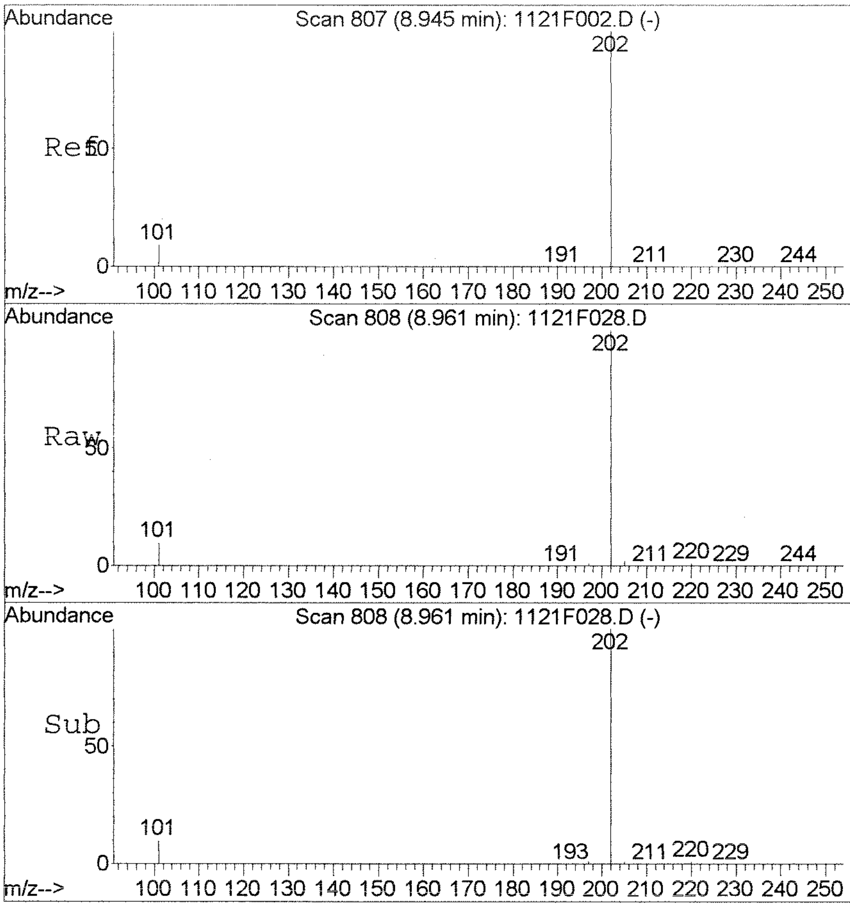


#35
Fluoranthene
Concen: 3021.04 ng/ml
RT: 8.73 min Scan# 780
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:202 Resp: 4605067

Ion	Ratio	Lower	Upper
202	100		
101	13.1	0.0	35.8

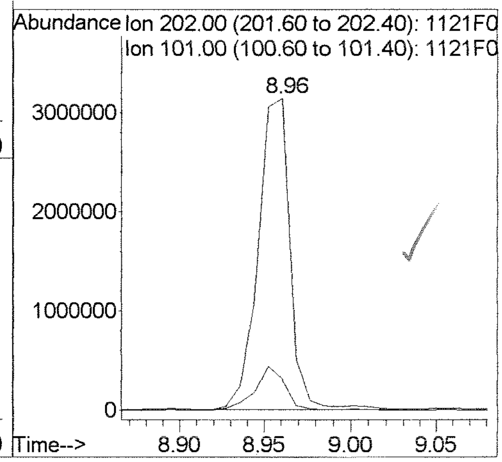


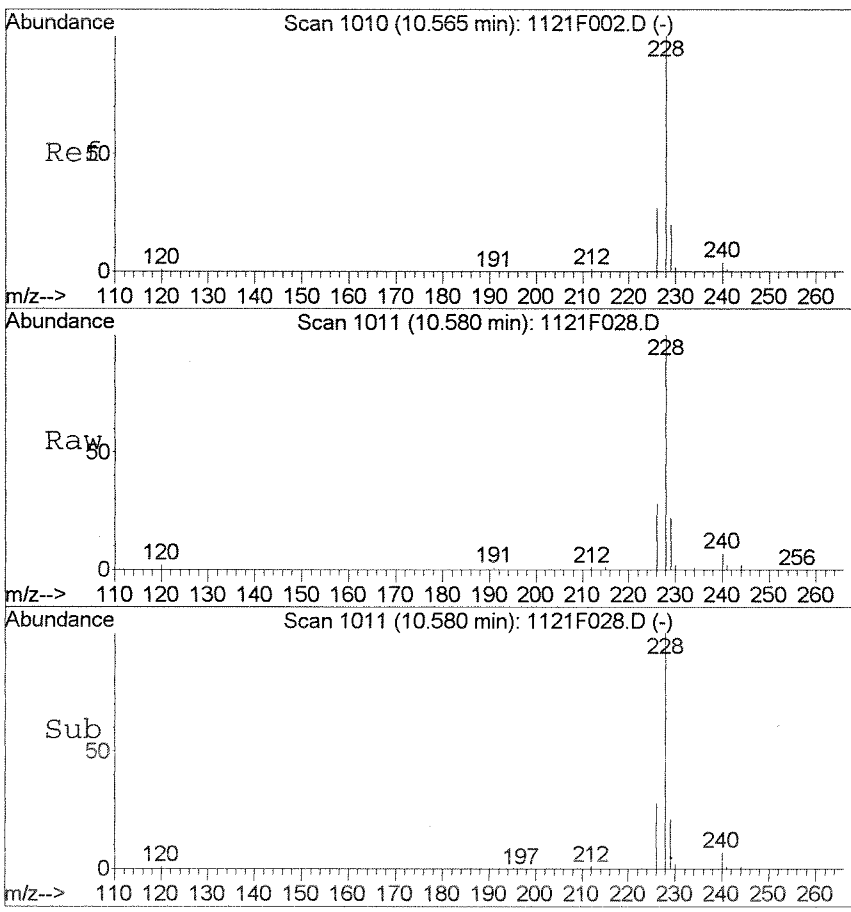


#38
Pyrene
Concen: 2382.63 ng/ml
RT: 8.96 min Scan# 808
Delta R.T. 0.02 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:202 Resp: 4127637

Ion	Ratio	Lower	Upper
202	100		
101	10.0	0.0	37.6

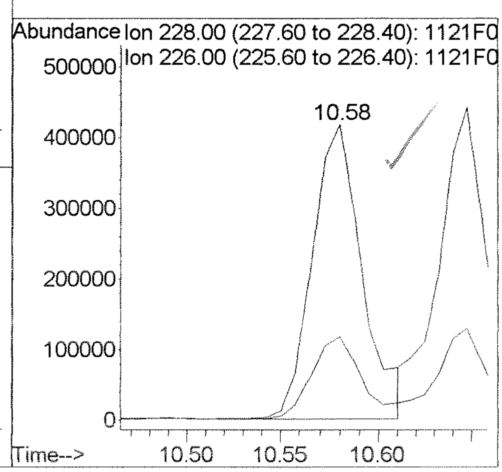


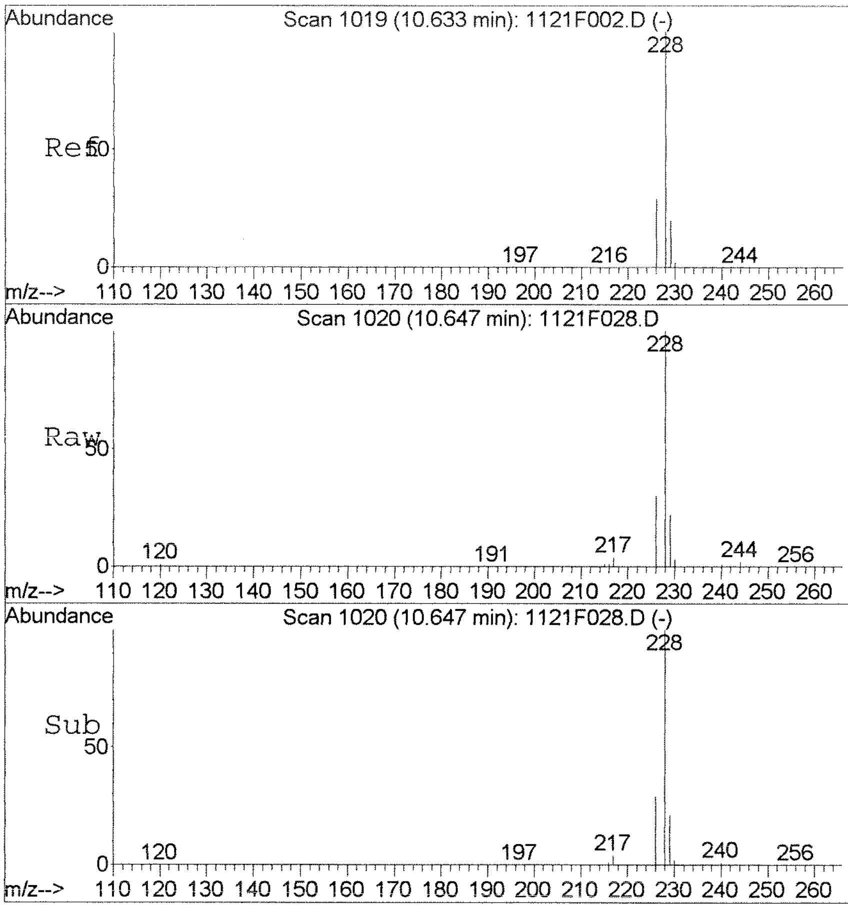


#43
Benz(a)anthracene
Concen: 465.68 ng/ml
RT: 10.58 min Scan# 1011
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:228 Resp: 731876

Ion	Ratio	Lower	Upper
228	100		
226	28.0	0.0	57.0

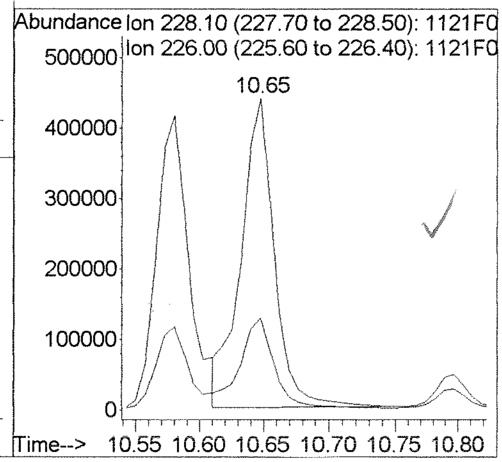


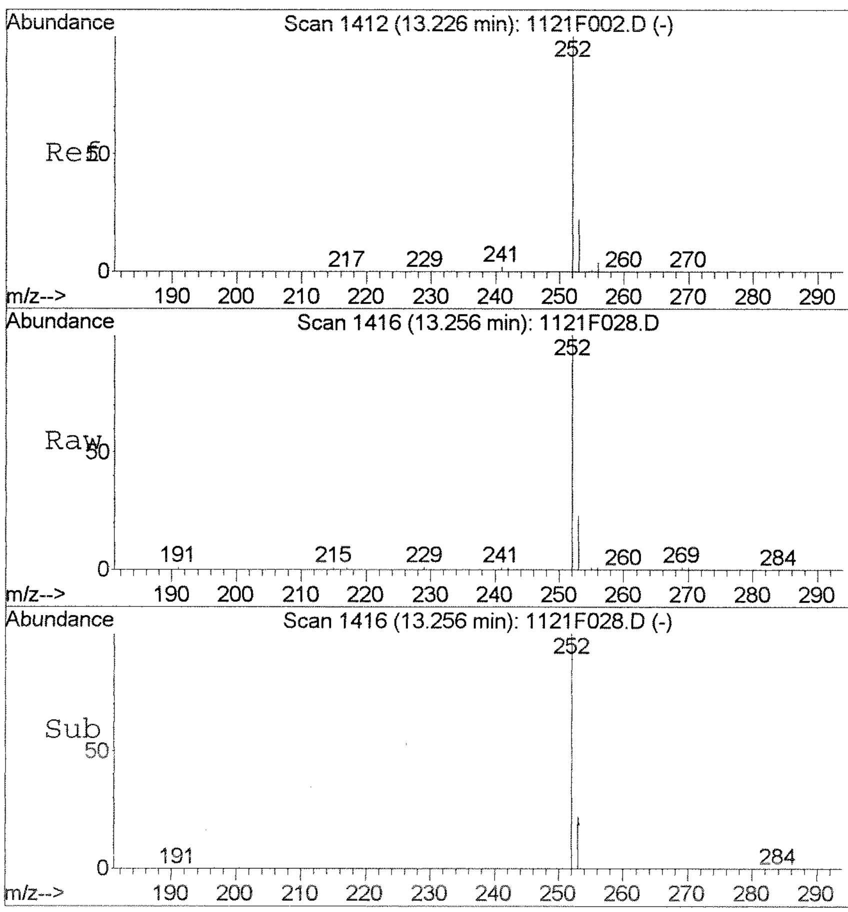


#44
Chrysene
Concen: 512.88 ng/ml
RT: 10.65 min Scan# 1020
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:228 Resp: 791672

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	58.9

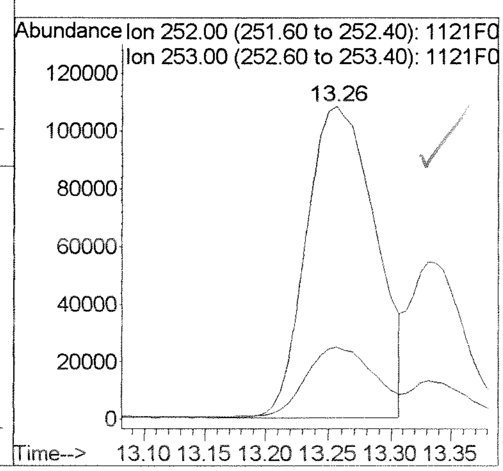


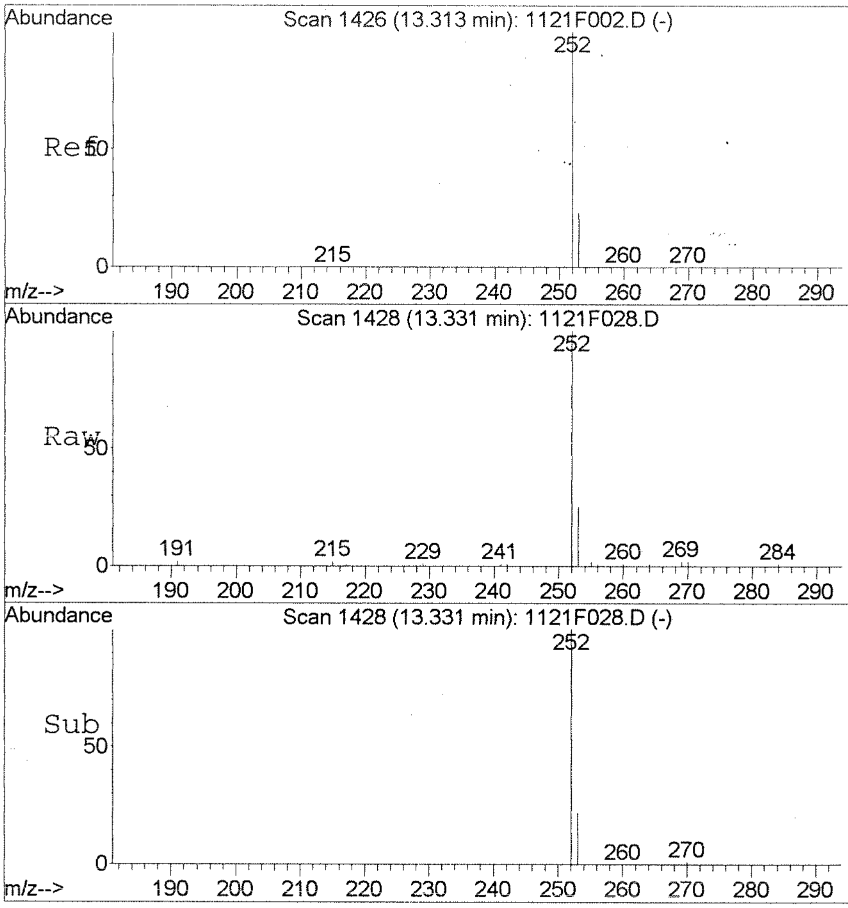


#50
Benzo(b)fluoranthene
Concen: 251.20 ng/ml
RT: 13.26 min Scan# 1416
Delta R.T. 0.03 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:252 Resp: 407919

Ion	Ratio	Lower	Upper
252	100		
253	22.5	0.0	52.6

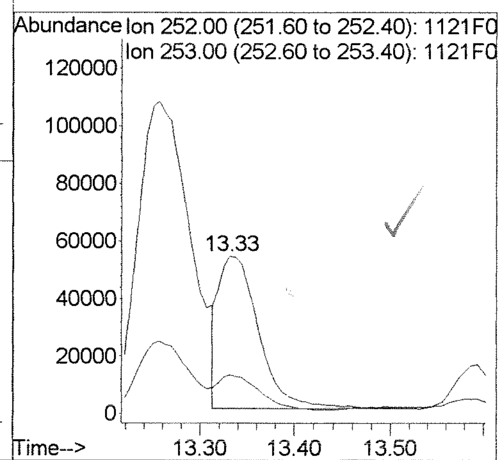


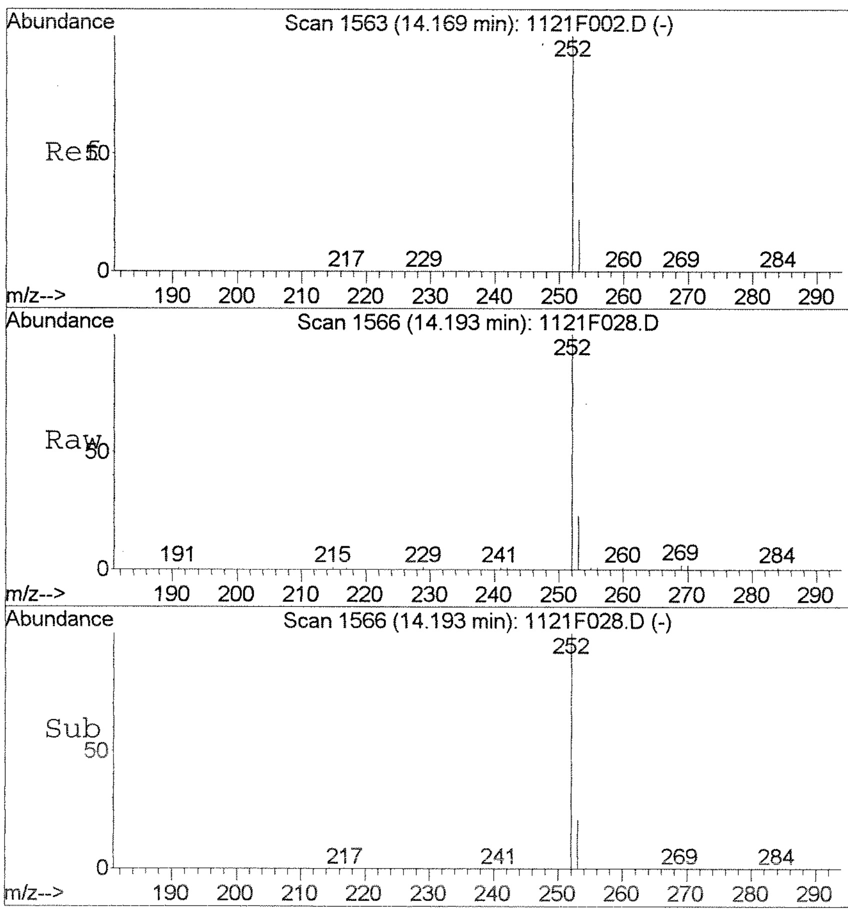


#51
Benzo(k)fluoranthene
Concen: 100.42 ng/ml
RT: 13.33 min Scan# 1428
Delta R.T. 0.02 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:252 Resp: 156647

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	52.0

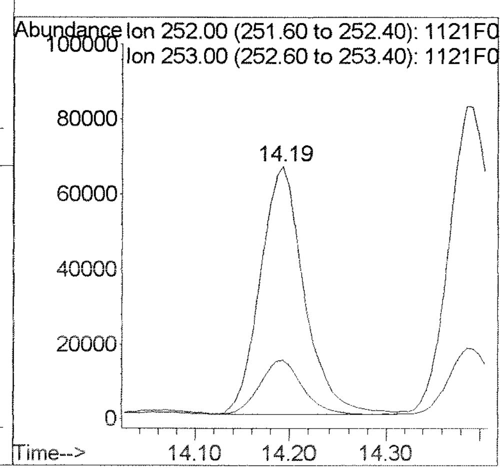


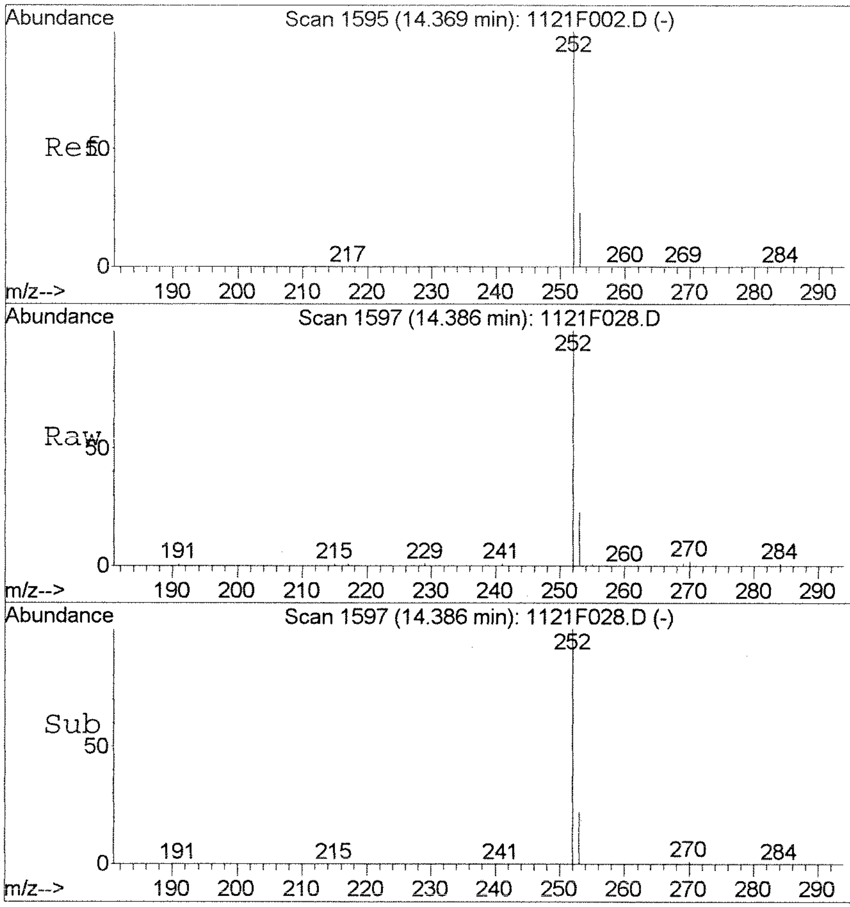


#52
Benzo(e)pyrene
Concen: 144.11 ng/ml
RT: 14.19 min Scan# 1566
Delta R.T. 0.02 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:252 Resp: 212578

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	52.2

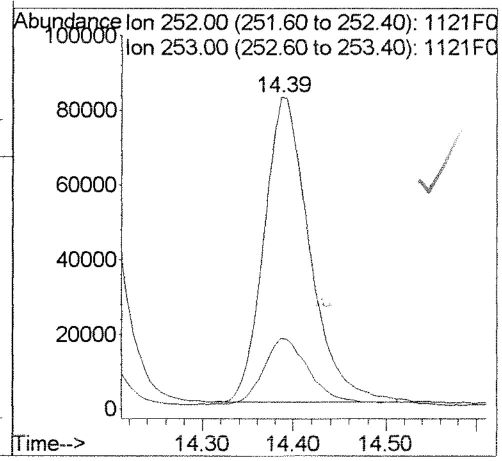


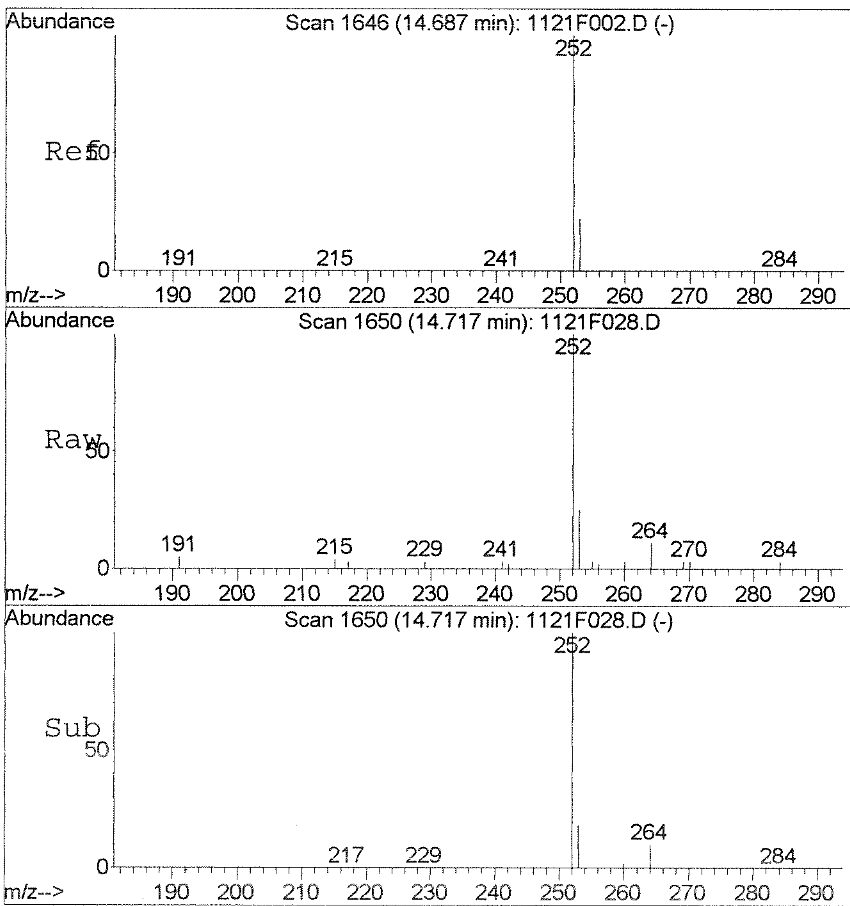


#53
Benzo(a)pyrene
Concen: 210.93 ng/ml
RT: 14.39 min Scan# 1597
Delta R.T. 0.02 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:252 Resp: 283592

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	52.2

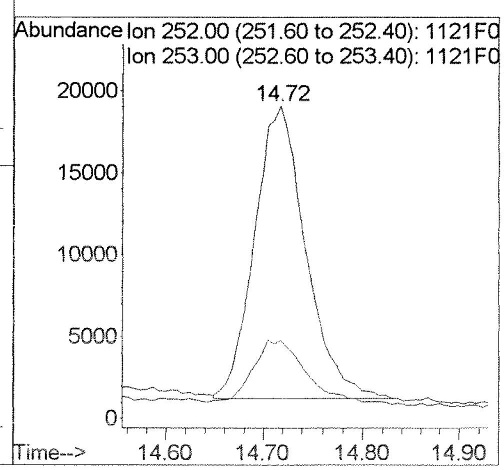


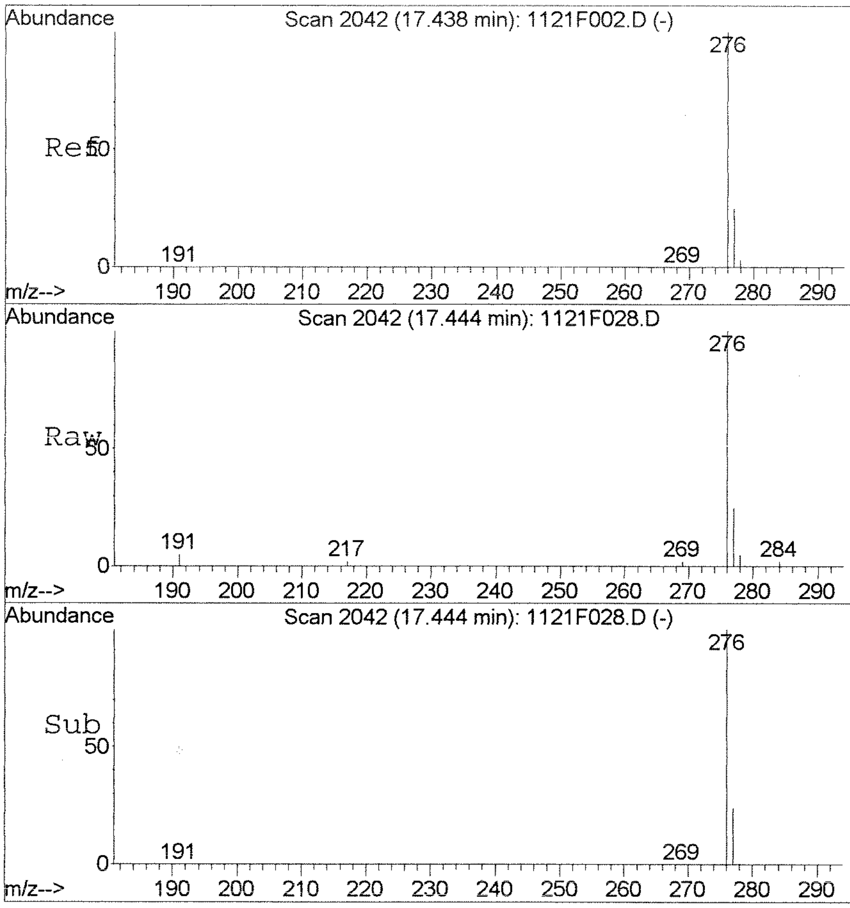


#54
Perylene
Concen: 49.24 ng/ml
RT: 14.72 min Scan# 1650
Delta R.T. 0.03 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:252 Resp: 65039

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.5

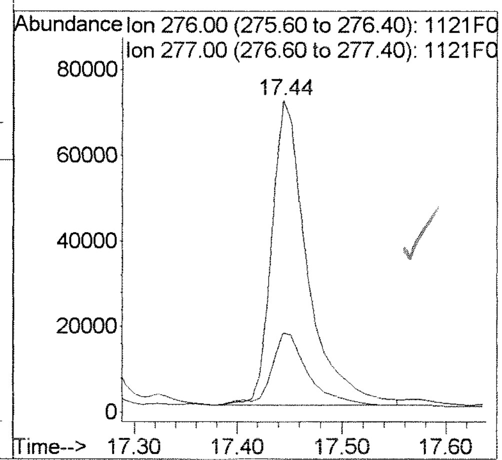


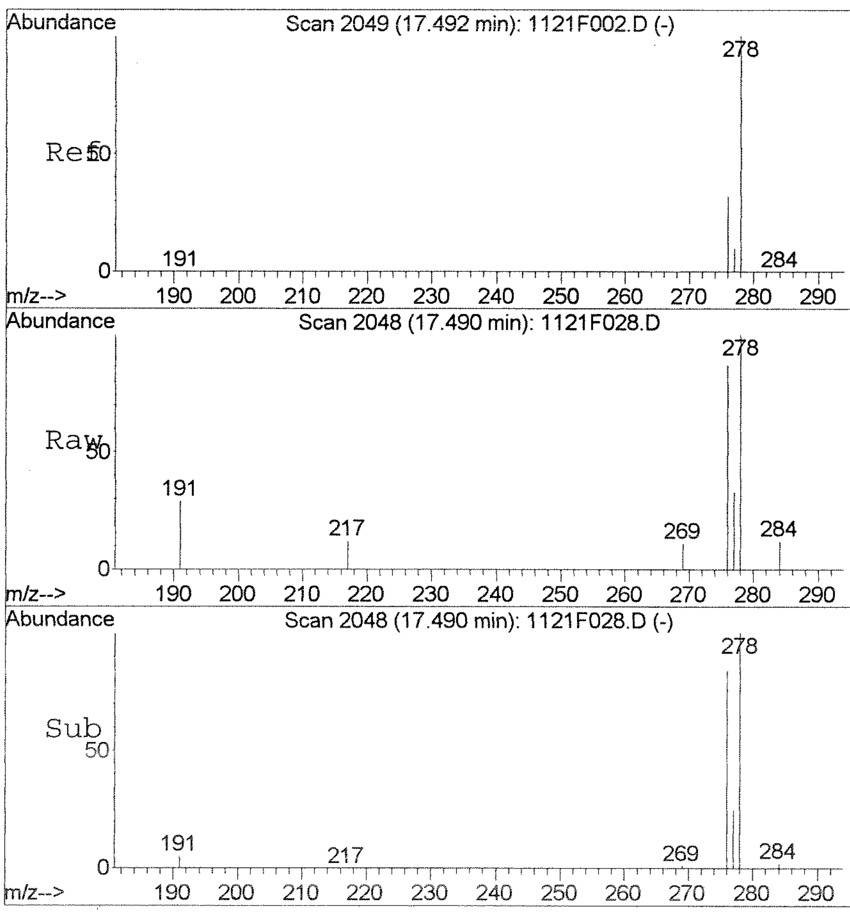


#55
Indeno(1,2,3-cd)pyrene
Concen: 135.91 ng/ml
RT: 17.44 min Scan# 2042
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:276 Resp: 169540

Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	54.7

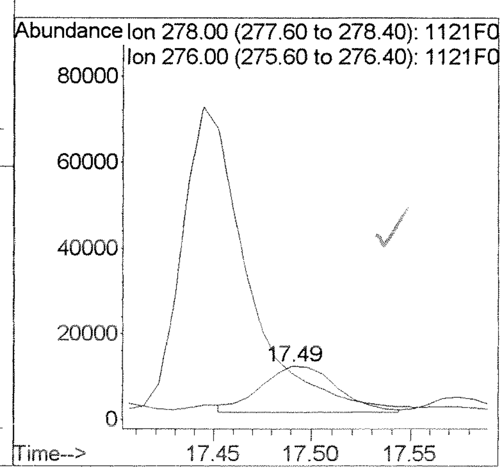


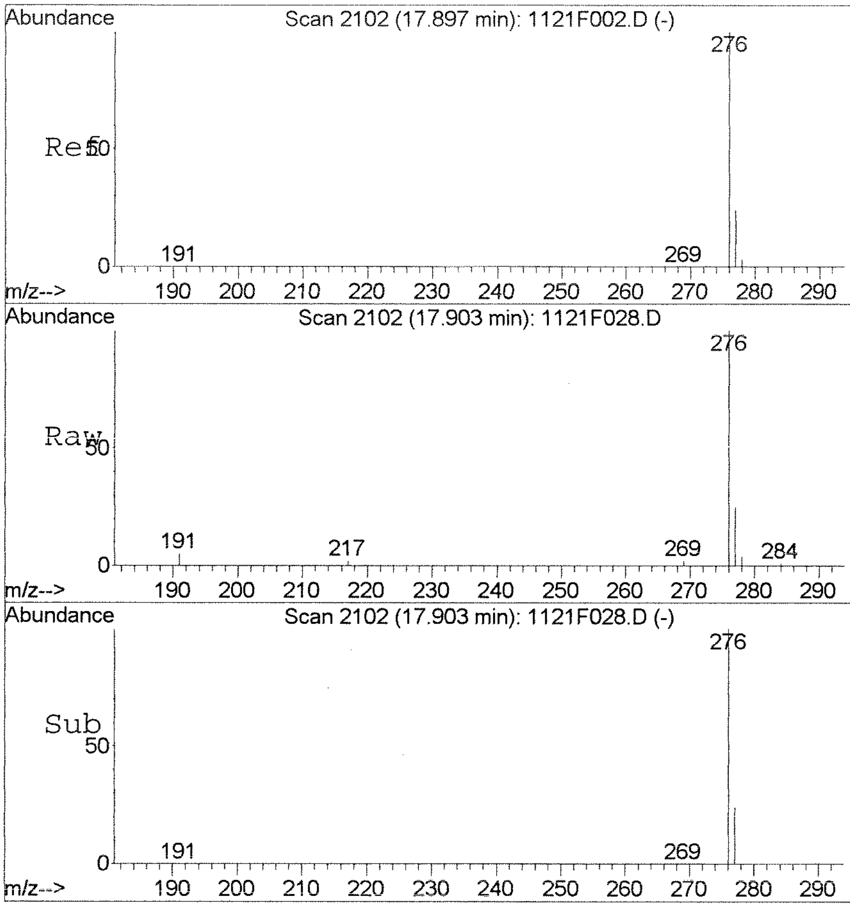


#56
Dibenz(a,h)anthracene
Concen: 21.83 ng/ml m
RT: 17.49 min Scan# 2048
Delta R.T. -0.00 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

Tgt Ion:278 Resp: 28578

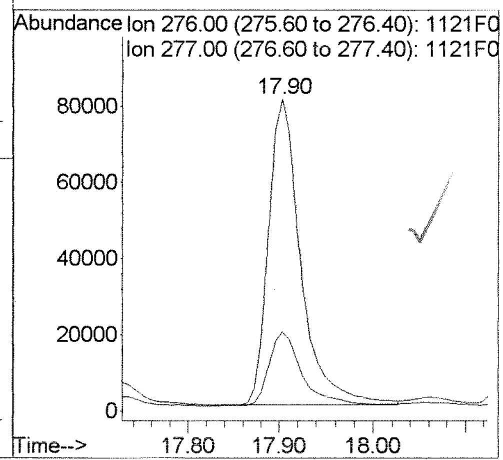
Ion	Ratio	Lower	Upper
278	100		
276	87.0	0.0	59.7#





#57
Benzo(g,h,i)perylene
Concen: 138.56 ng/ml
RT: 17.90 min Scan# 2102
Delta R.T. 0.01 min
Lab File: 1121F028.D
Acq: 21 Nov 2008 6:02 pm

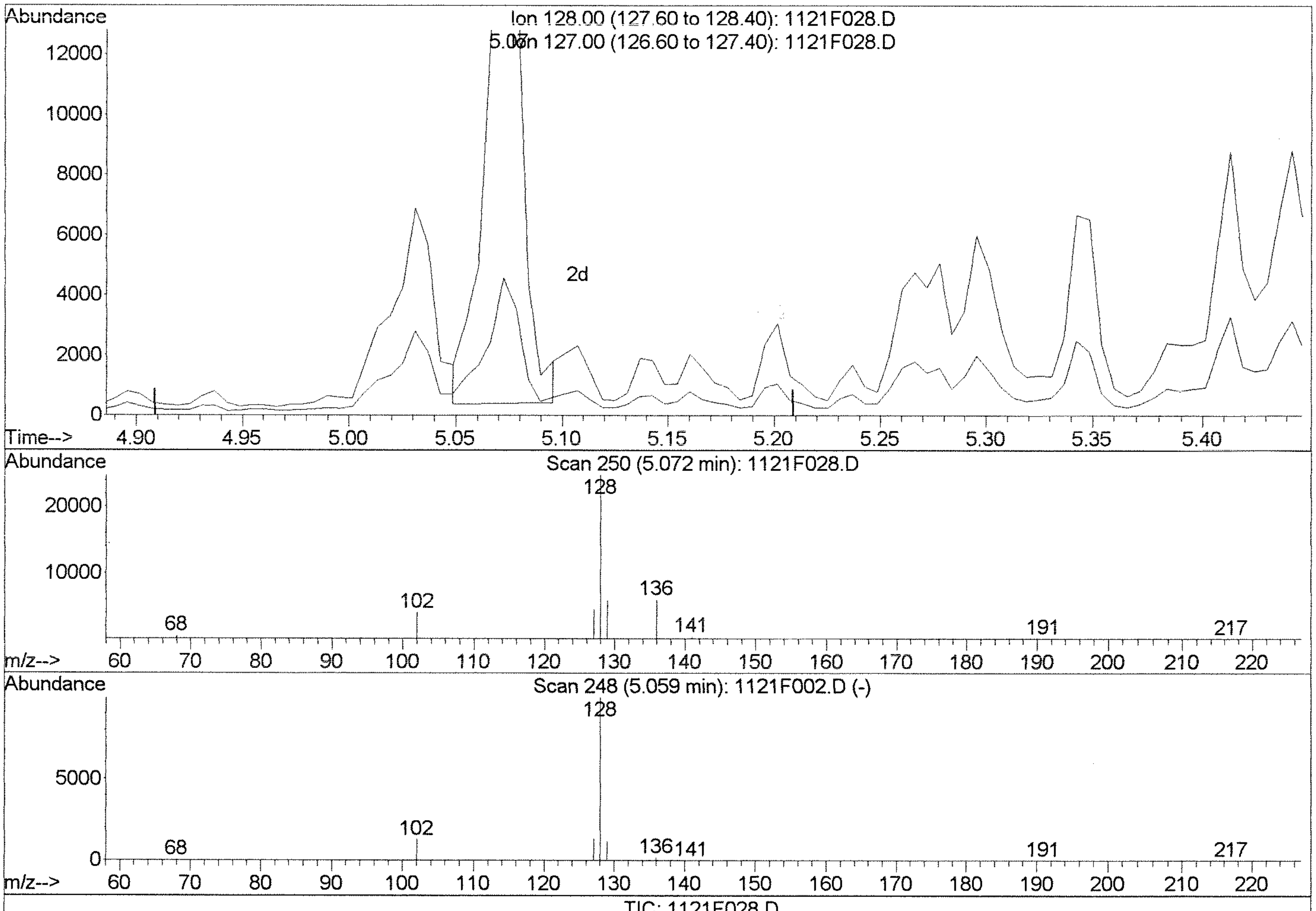
Tgt Ion:276	Resp:	196923	
Ion	Ratio	Lower	Upper
276	100		
277	24.3	0.0	54.2



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F028.D   Vial: 26
Acq On : 21 Nov 2008 6:02 pm   Operator: LWeiskopf
Sample : K0810639-005DIL 20X   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 8:13 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(2) Naphthalene (T)

5.07min 20.60ng/ml

response 23190

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	17.11
0.00	0.00	0.00
0.00	0.00	0.00

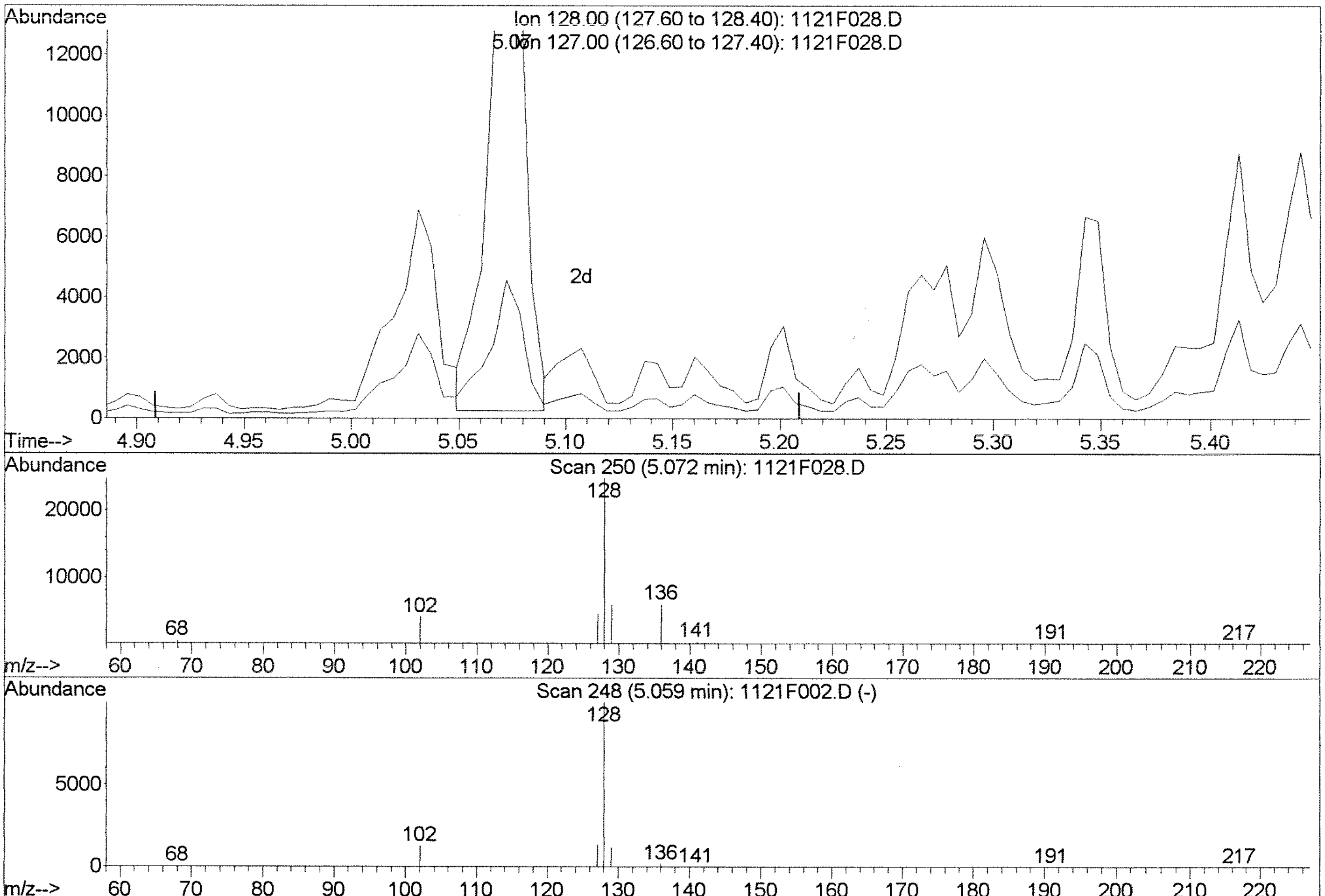
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F028.D
Acq On : 21 Nov 2008 6:02 pm
Sample : K0810639-005DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:28 2008

Vial: 26
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(2) Naphthalene (T)

5.07min 20.47ng/ml m

response 23036

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	18.38
0.00	0.00	0.00
0.00	0.00	0.00

OI
LW 11/22/08

LB
11/24/08

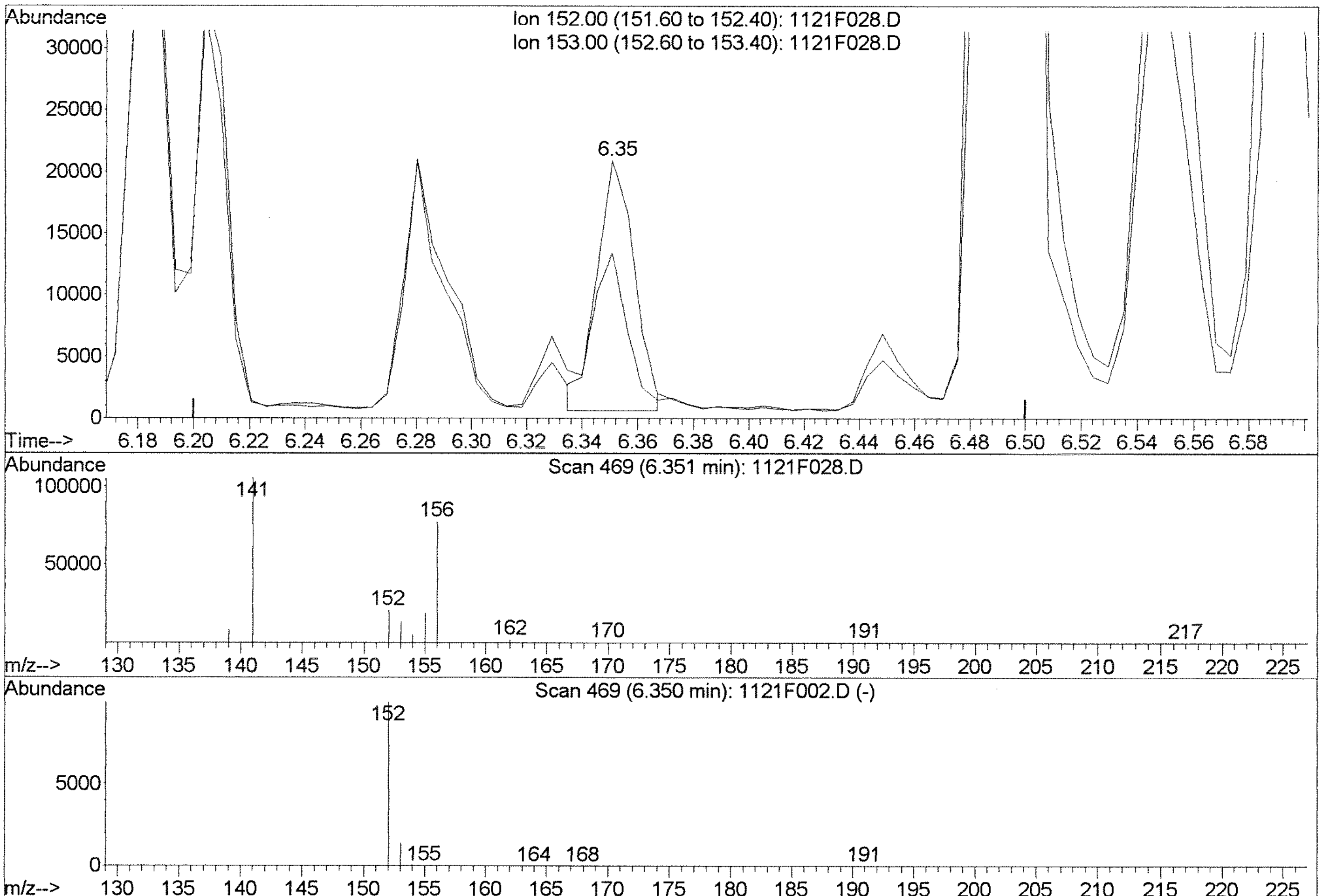
1121F028.D 1110ALK.M Sat Nov 22 10:28:12 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F028.D
Acq On : 21 Nov 2008 6:02 pm
Sample : K0810639-005DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:28 2008

Vial: 26
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F028.D

(11) Acenaphthylene (T)

6.35min 15.85ng/ml m

response 18921

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	64.20#
0.00	0.00	0.00
0.00	0.00	0.00

MP 11/22/08

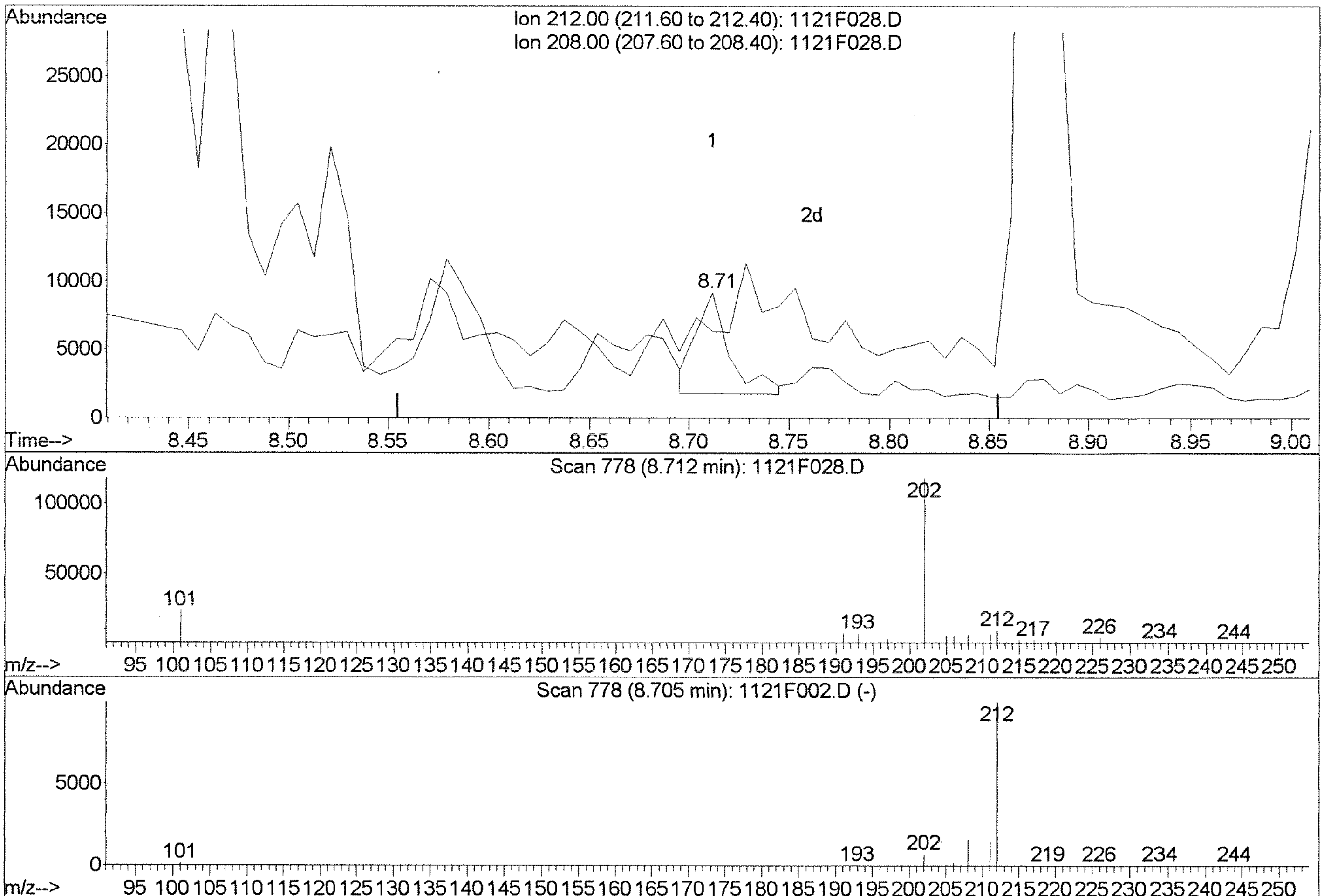
LB 11/24/08

1121F028.D 1110ALK.M Sat Nov 22 10:28:25 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F028.D
Vial: 26
Acq On : 21 Nov 2008 6:02 pm
Operator: LWeiskopf
Sample : K0810639-005DIL 20X
Inst : MS11
Misc :
Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:28 2008
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F028.D

(36) Fluoranthene-d10 (S)

8.71min 6.59ng/ml

response 8573

Ion	Exp%	Act%
212.00	100	100
208.00	16.70	21.63
0.00	0.00	0.00
0.00	0.00	0.00

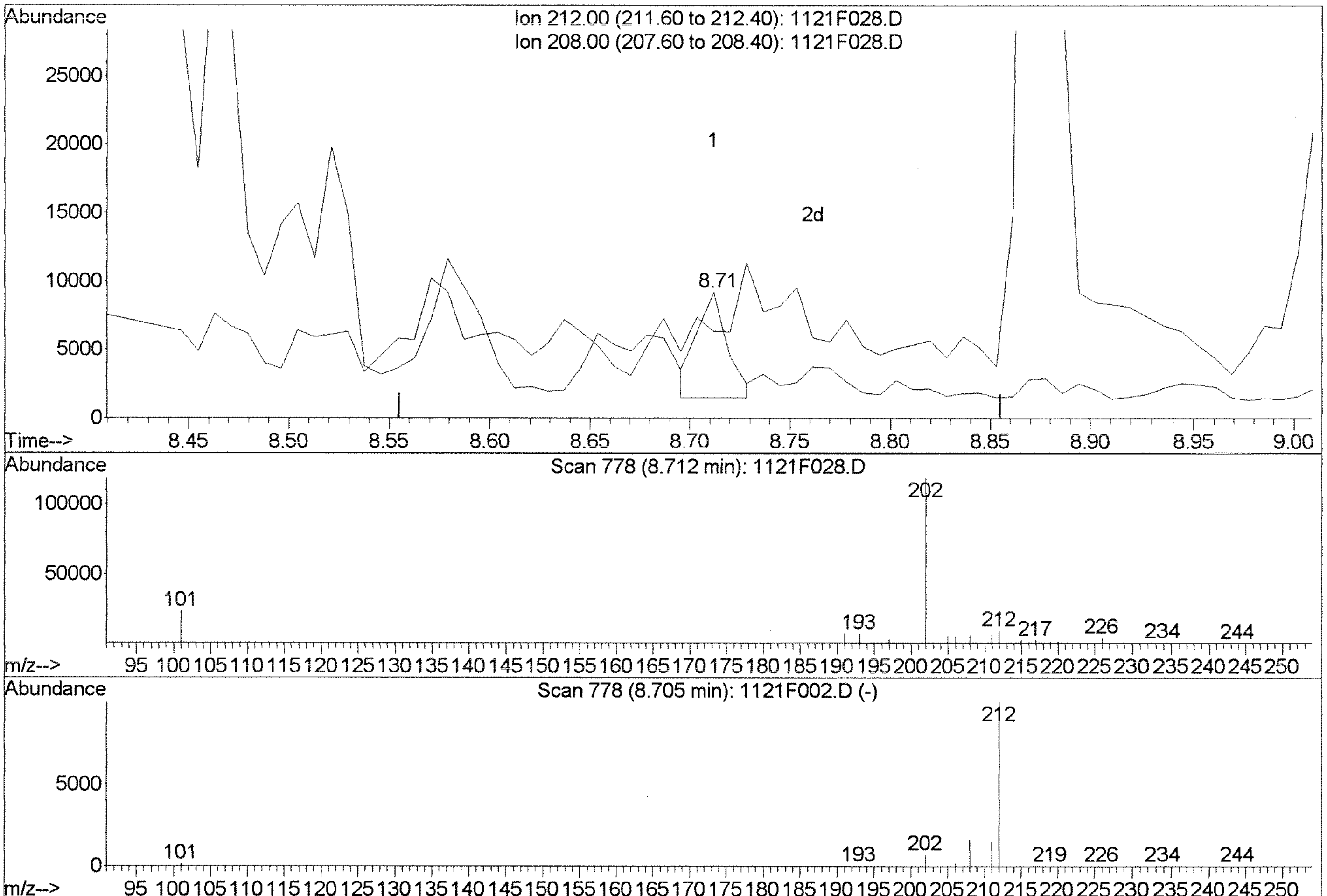
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F028.D
Acq On : 21 Nov 2008 6:02 pm
Sample : K0810639-005DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:28 2008

Vial: 26
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F028.D

(36) Fluoranthene-d10 (S)

8.71min 6.30ng/ml m

response 8203

Ion	Exp%	Act%
212.00	100	100
208.00	16.70	68.98#
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/22/08

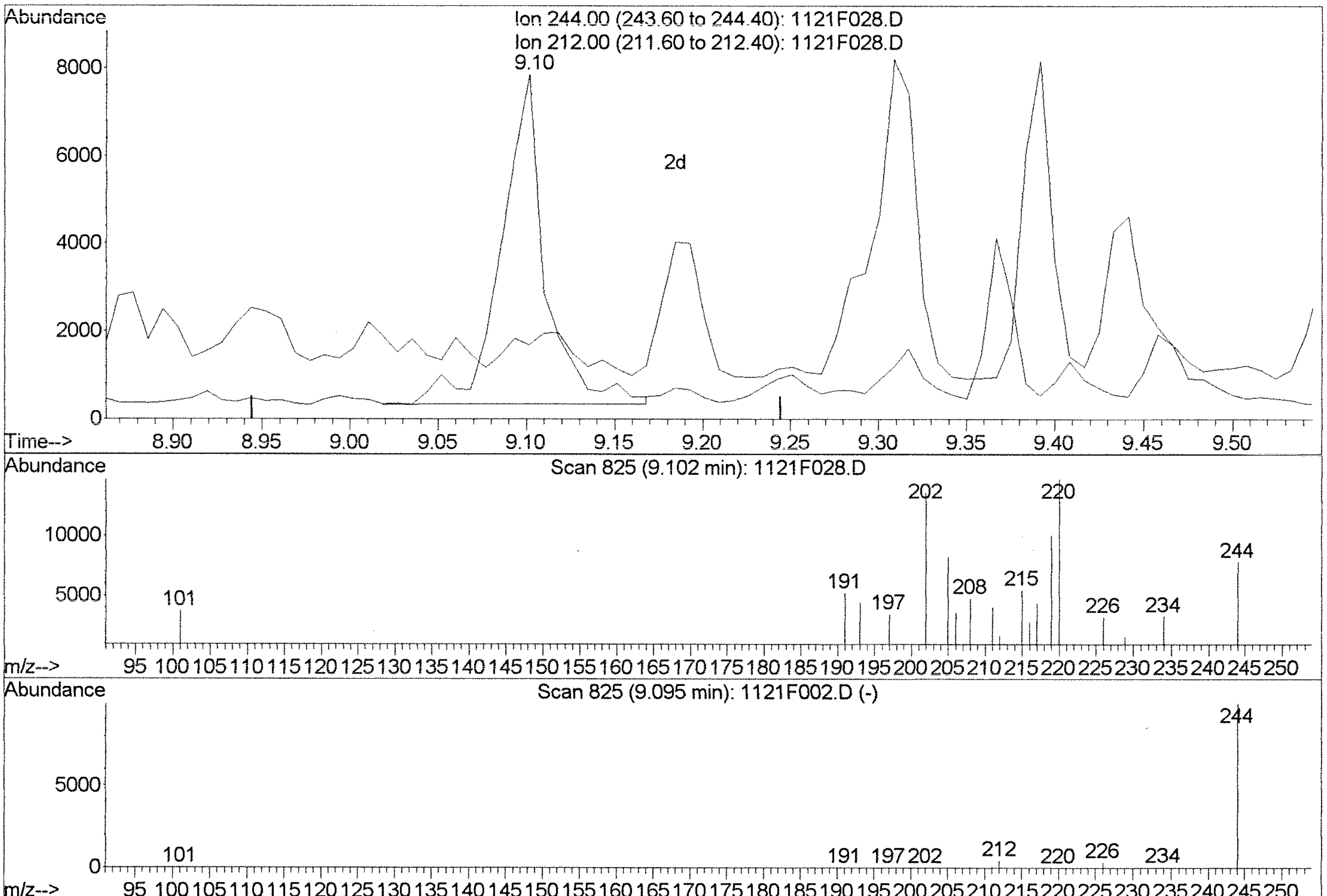
LB 11/24/08

1121F028.D 1110ALK.M Sat Nov 22 10:28:50 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F028.D Vial: 26
Acq On : 21 Nov 2008 6:02 pm Operator: LWeiskopf
Sample : K0810639-005DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:28 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F028.D

(42) Terphenyl-d14 (S)

9.10min 10.95ng/ml

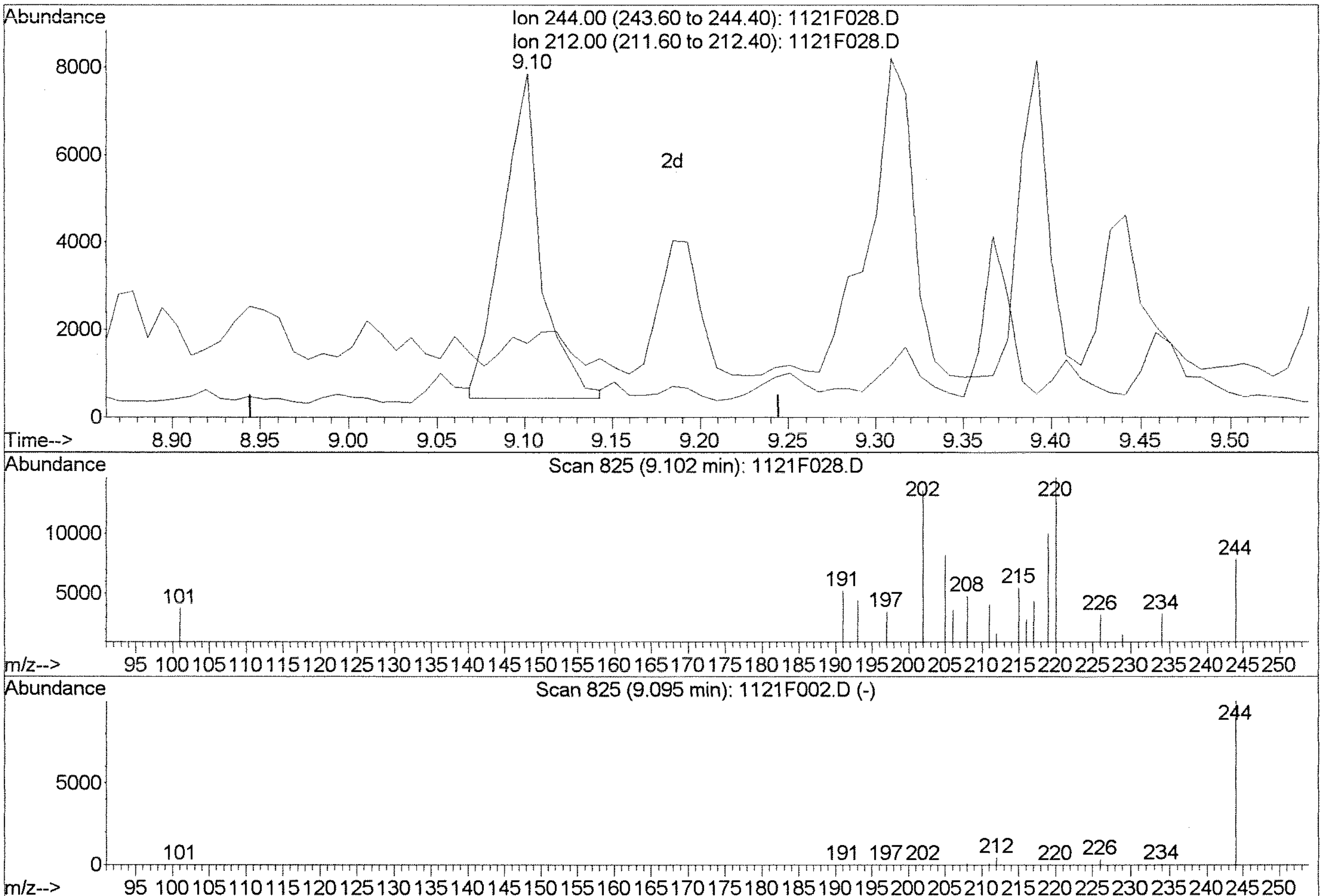
response 13055

Ion	Exp%	Act%
244.00	100	100
212.00	4.90	6.19
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F028.D   Vial: 26
Acq On : 21 Nov 2008 6:02 pm   Operator: LWeiskopf
Sample : K0810639-005DIL 20X   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:28 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(42) Terphenyl-d14 (S)

9.10min 9.59ng/ml m

response 11434

Ion	Exp%	Act%
244.00	100	100
212.00	4.90	21.46
0.00	0.00	0.00
0.00	0.00	0.00

OI
[handwritten initials] 11/22/08

LB
11/24/08

1121F028.D 1110ALK.M Sat Nov 22 10:29:01 2008

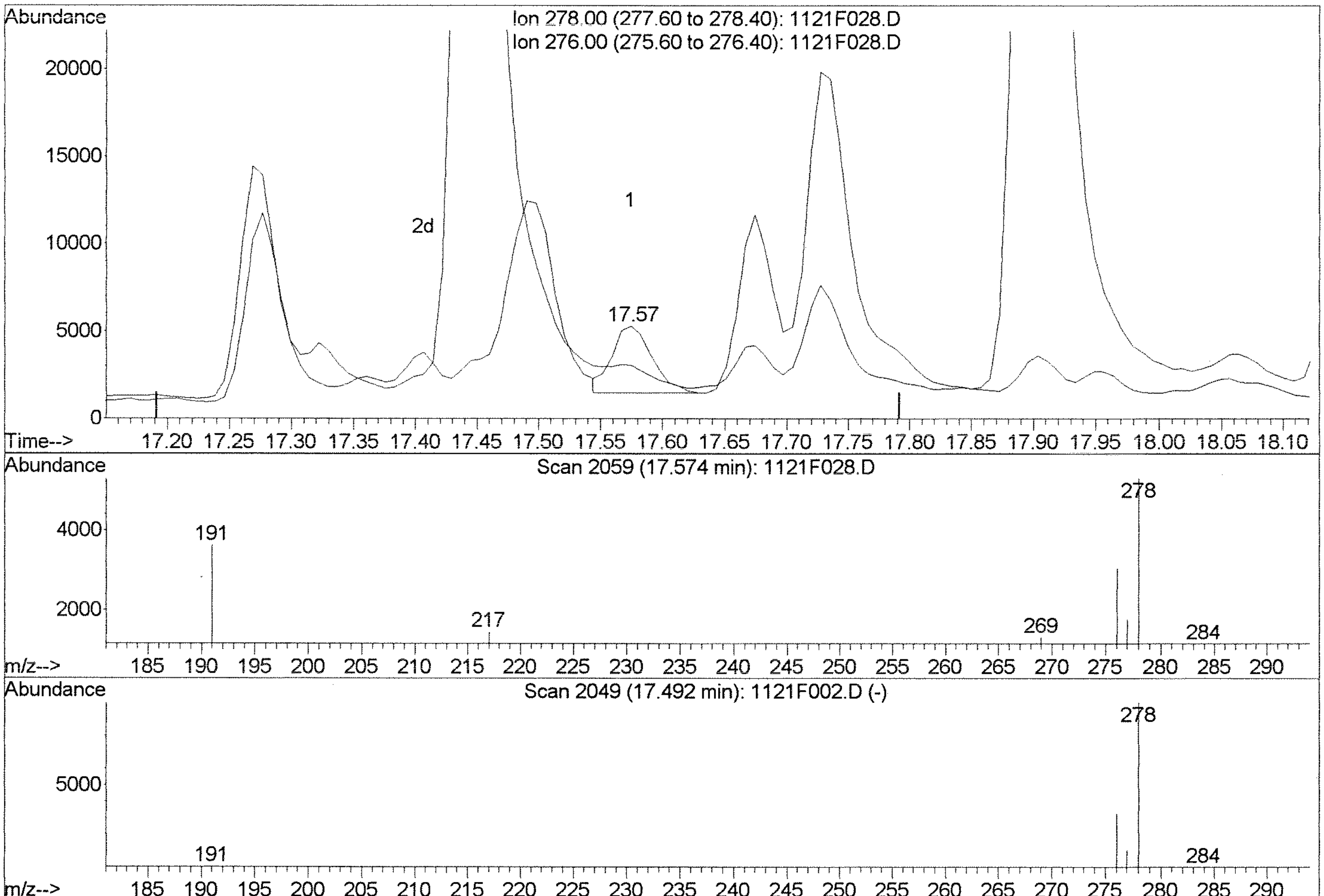
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F028.D
Acq On : 21 Nov 2008 6:02 pm
Sample : K0810639-005DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:28 2008

Vial: 26
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



TIC: 1121F028.D

(56) Dibenz(a,h)anthracene (T)

17.57min 6.46ng/ml

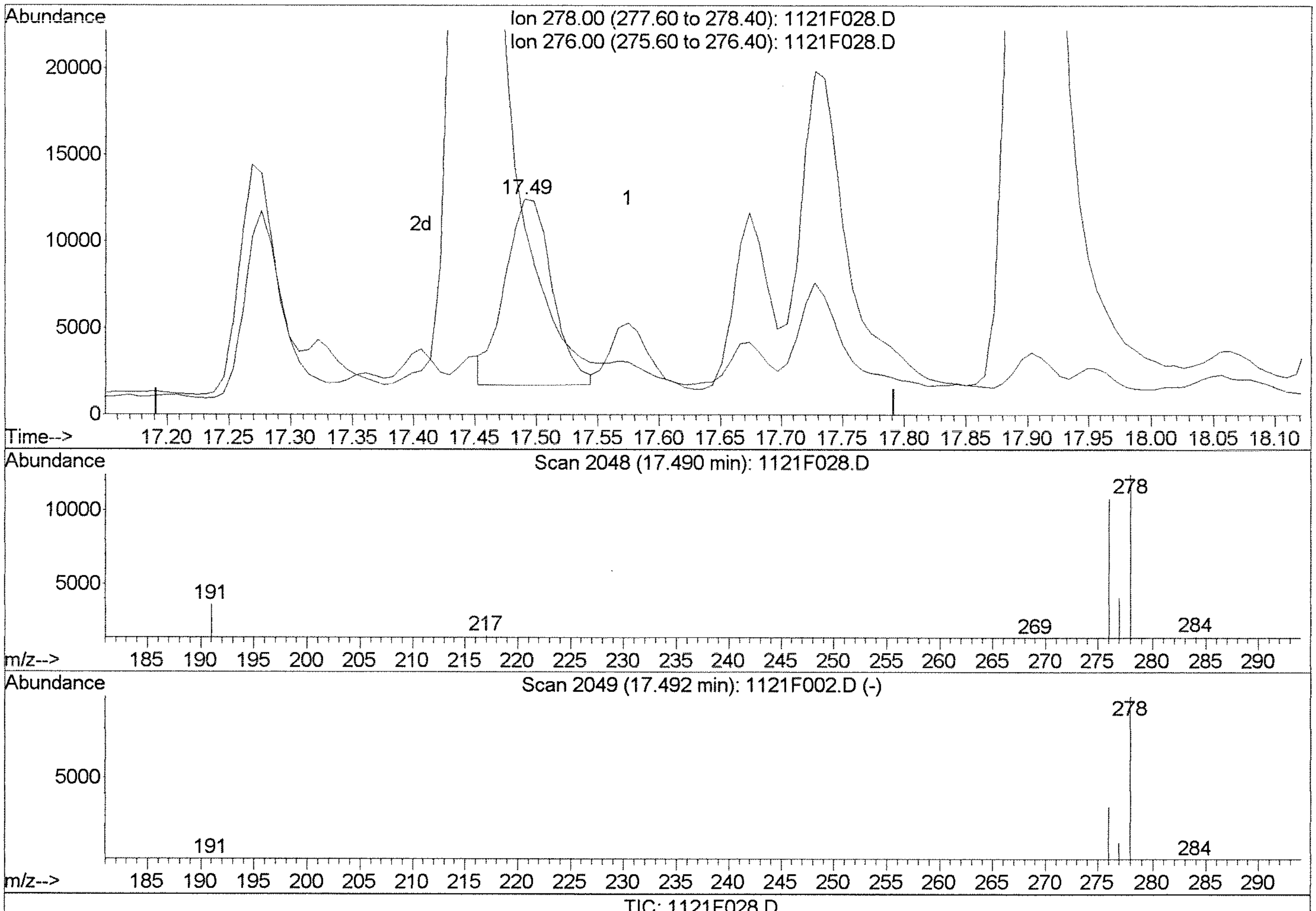
response 8454

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	31.09
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F028.D   Vial: 26
Acq On : 21 Nov 2008 6:02 pm   Operator: LWeiskopf
Sample : K0810639-005DIL 20X   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 10:29 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration



(56) Dibenz(a,h)anthracene (T)

17.49min 21.83ng/ml m

response 28578

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	86.95#
0.00	0.00	0.00
0.00	0.00	0.00

wl LW 11/22/08

LB 11/24/08

1121F028.D 1110ALK.M Sat Nov 22 10:29:13 2008

Exception Report

Data File: J:\MS11\DATA\112208\1122F043.D
Lab ID: K0810639-005
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/23/2008 02:39
Date Quantitated: 11/23/2008 11:22
Batch ID: KWG0812625
Analysis Method: 8270C SIM
ListJoinID: LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: RW 11/24/08

Secondary Review: [illegible] 11-30-8

Printed: 11/23/2008 13:28:24
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812625	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776069	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112208\1122F034.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112208\1122F043.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 02:39	**Quant Date:**	11/23/2008 11:22	**Vial:**	36
Run Type:	DL			**Dilution:**	200.0
Lab ID:	K0810639-005			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	0.00	136	220587	200.00	OK
2	Acenaphthene-d10	6.46	0.01	164	111896	200.00	OK
3	Phenanthrene-d10	7.70	0.01	188	207934	200.00	OK
4	Chrysene-d12	10.58	0.01	240	209367	200.00	OK
5	Perylene-d12	14.57	0.02	264	202665	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
2	Fluorene-d10			0.00	176	0d		0	10-128 #	NR
3	Fluoranthene-d10			0.00	212	0d		0	29-121 #	NR
4	Terphenyl-d14			0.00	244	0d		0	24-141 #	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.06		0.00	128	3137m	2.33	480	JD	NR
1	2-Methylnaphthalene	5.61		0.00	142	2322	2.48	510	JD	NR
2	Acenaphthylene	6.34		0.00	152	4279m	3.39	690	JD	NR
2	Acenaphthene	6.48		0.00	154	122449	159.70	33000	D	NR
2	Dibenzofuran	6.63		0.00	168	67022	58.11	12000	D	NR
2	Fluorene	6.91		0.00	166	122525	133.11	27000	D	NR
3	Phenanthrene	7.71		0.00	178	833332	570.16	120000	D	
3	Anthracene	7.75		0.00	178	220243	154.66	32000	D	NR
3	Fluoranthene	8.71	0.01	0.00	202	565258	340.47	70000	D	
4	Pyrene	8.94		0.00	202	497804	316.06	65000	D	
4	Benz(a)anthracene	10.56	0.01	0.00	228	73769	51.63	11000	D	NR
4	Chrysene	10.63	0.01	0.00	228	85067	60.62	12000	D	NR
5	Benzo(b)fluoranthene	13.23	0.03	0.00	252	37941	27.13	5600	D	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112208\1122F043.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 02:39	**Quant Date:**	11/23/2008 11:22	**Vial:**	36
Run Type:	DL			**Dilution:**	200.0
Lab ID:	K0810639-005			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantM ass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.31	0.02	0.00	252	21389**m**	15.92	3300	D	NR
5	Benzo(a)pyrene	14.37	0.04	0.00	252	23904	20.64	4200	D	NR
5	Indeno(1,2,3-cd)pyrene	17.45	0.03	0.00	276	14327	13.33	2700	D	NR
5	Dibenz(a,h)anthracene	17.51	0.04	0.00	278	4127**m**	3.66	750	JD	NR
5	Benzo(g,h,i)perylene	17.90	0.03	0.00	276	19527	15.95	3300	D	NR

Prep Amount:	20.01 g	**Dilution:**	200.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	48.8 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F043.D Vial: 36
Acq On : 23 Nov 2008 2:39 am Operator: LWeiskopf
Sample : K0810639-005DIL 200X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:10:46 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

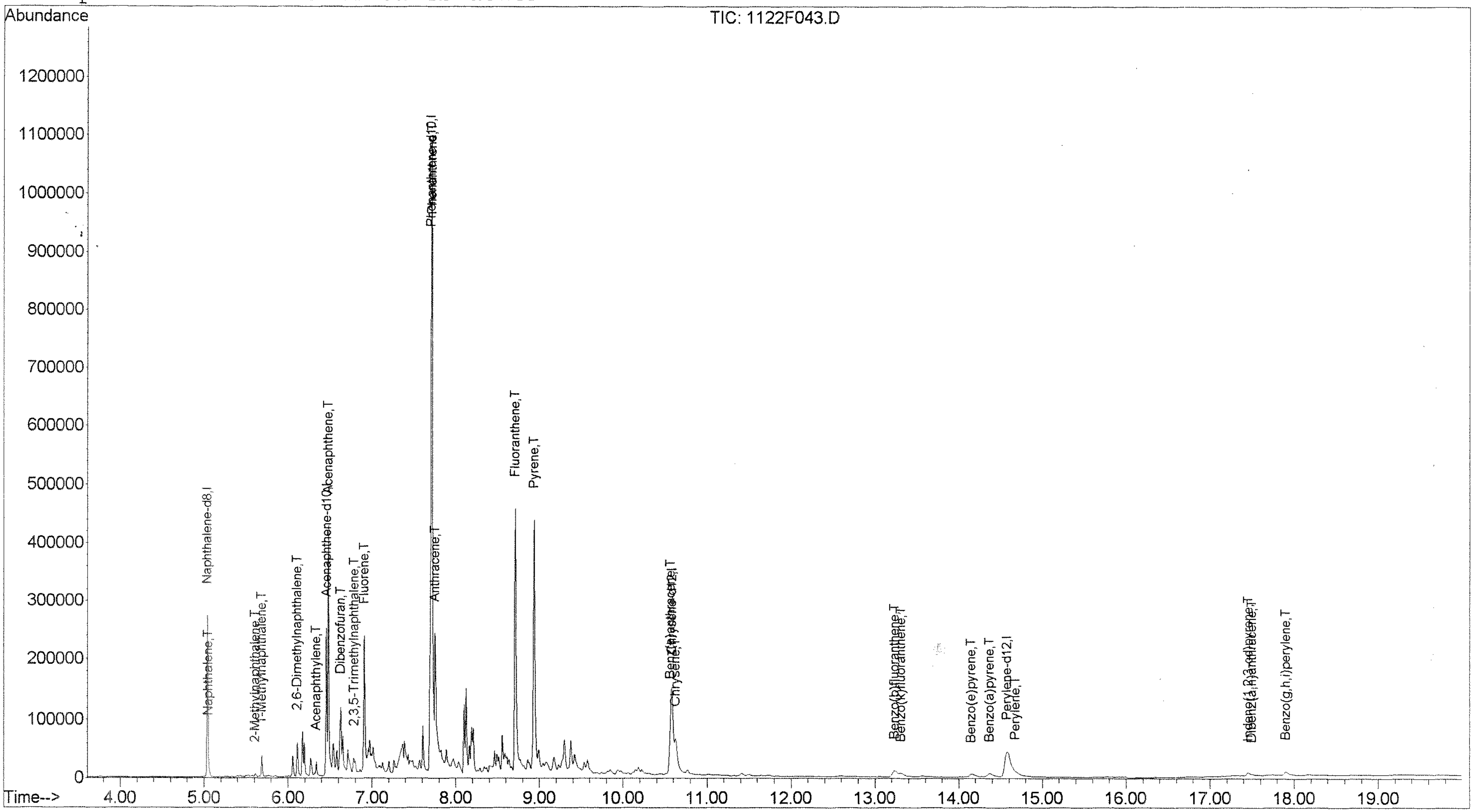
Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.04	136	220587	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.46	164	111896	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.70	188	207934	200.00 ng/ml	0.00
37) Chrysene-d12	10.58	240	209367	200.00 ng/ml	0.00
49) Perylene-d12	14.57	264	202665	200.00 ng/ml	-0.01
System Monitoring Compounds					
15) Fluorene-d10	0.00	176	0d	0.00 ng/ml	
Spiked Amount 200.000			Recovery	= 0.00%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00 ng/ml	
Spiked Amount 375.000			Recovery	= 0.00%	
36) Fluoranthene-d10	0.00	212	0d	0.00 ng/ml	
Spiked Amount 200.000			Recovery	= 0.00%	
42) Terphenyl-d14	0.00	244	0d	0.00 ng/ml	
Spiked Amount 200.000			Recovery	= 0.00%	
Target Compounds					Qvalue
2) Naphthalene	5.06	128	3137m	2.33 ng/ml	
3) 2-Methylnaphthalene	5.61	142	2322	2.48 ng/ml	98
4) 1-Methylnaphthalene	5.69	142	15061	17.96 ng/ml	100
6) 2,6-Dimethylnaphthalene	6.11	156	24691	30.18 ng/ml	100
11) Acenaphthylene	6.34	152	4279m	3.39 ng/ml	
12) Acenaphthene	6.48	154	122449	159.70 ng/ml	96
13) Dibenzofuran	6.63	168	67022	58.11 ng/ml	66
14) 2,3,5-Trimethylnaphthalene	6.79	170	18375	27.25 ng/ml	74
16) Fluorene	6.91	166	122525	133.11 ng/ml	94
27) Phenanthrene	7.71	178	833332	570.16 ng/ml	95
28) Anthracene	7.75	178	220243	154.66 ng/ml	100
35) Fluoranthene	8.71	202	565258	340.47 ng/ml	92
38) Pyrene	8.94	202	497804	316.06 ng/ml	93
43) Benz(a)anthracene	10.56	228	73769	51.63 ng/ml	97
44) Chrysene	10.63	228	85067	60.62 ng/ml	98
50) Benzo(b)fluoranthene	13.23	252	37941	27.13 ng/ml	99
51) Benzo(k)fluoranthene	13.31	252	21389m	15.92 ng/ml	
52) Benzo(e)pyrene	14.16	252	21525	16.94 ng/ml	98
53) Benzo(a)pyrene	14.37	252	23904	20.64 ng/ml	96
54) Perylene	14.68	252	6263	5.51 ng/ml	90
55) Indeno(1,2,3-cd)pyrene	17.45	276	14327	13.33 ng/ml	94
56) Dibenz(a,h)anthracene	17.51	278	4127m	3.66 ng/ml	
57) Benzo(g,h,i)perylene	17.90	276	19527	15.95 ng/ml	99

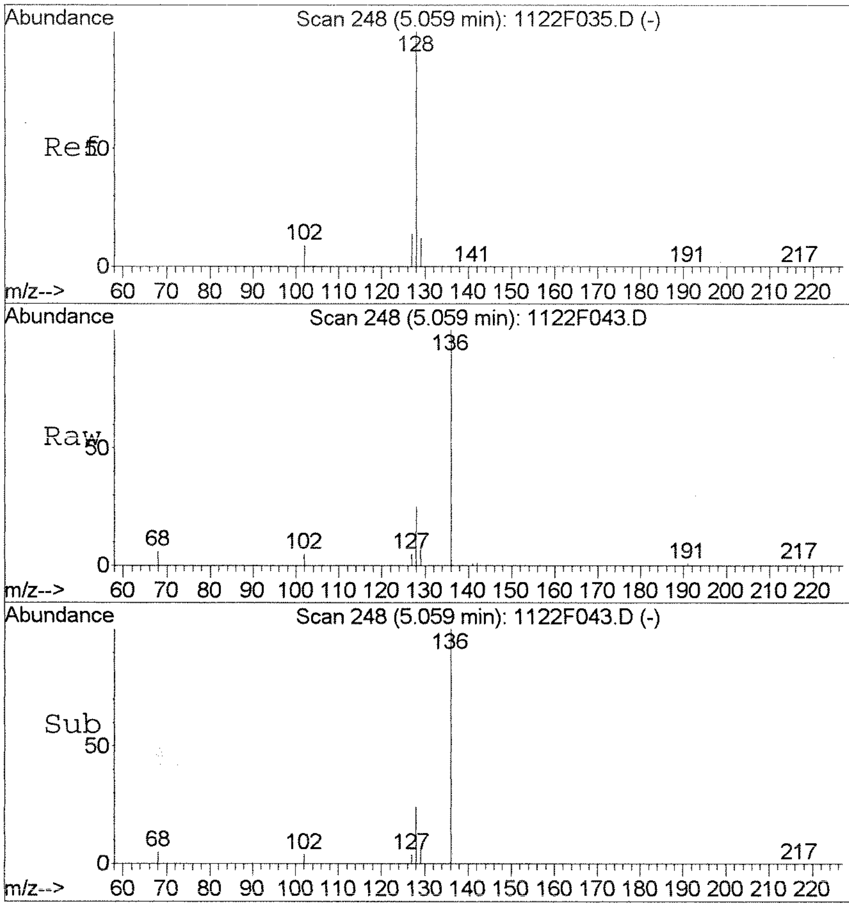
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F043.D Vial: 36
Acq On : 23 Nov 2008 2:39 am Operator: LWeiskopf
Sample : K0810639-005DIL 200X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:22 2008 Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration

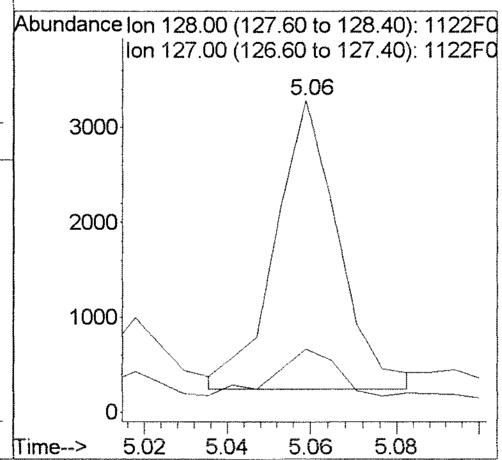


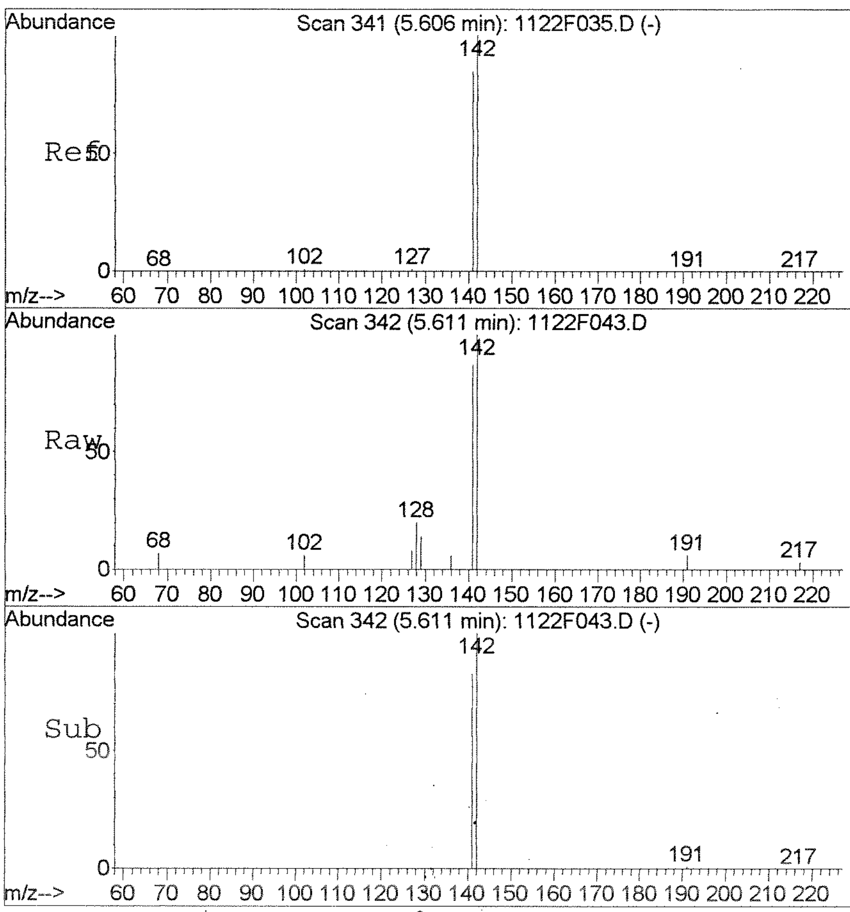


#2
Naphthalene
Concen: 2.33 ng/ml m
RT: 5.06 min Scan# 248
Delta R.T. -0.00 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:128 Resp: 3137

Ion	Ratio	Lower	Upper
128	100		
127	20.3	0.0	43.8

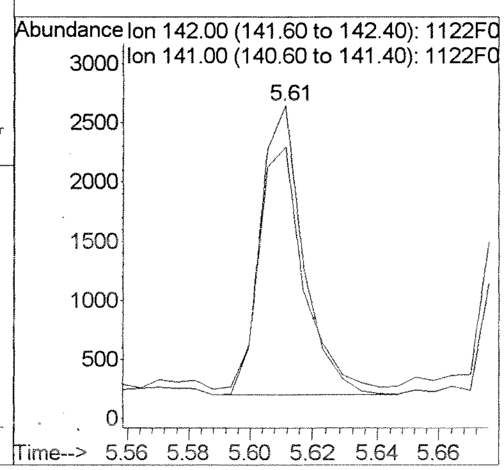


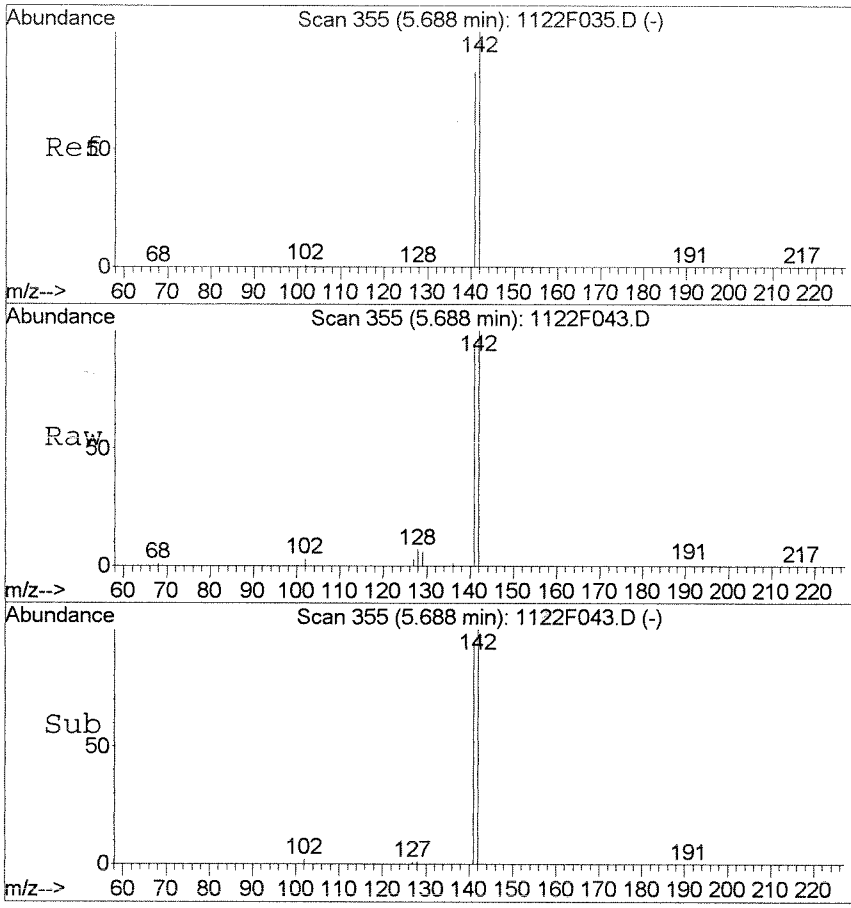


#3
2-Methylnaphthalene
Concen: 2.48 ng/ml
RT: 5.61 min Scan# 342
Delta R.T. -0.00 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:142 Resp: 2322

Ion	Ratio	Lower	Upper
142	100		
141	83.9	52.4	112.4

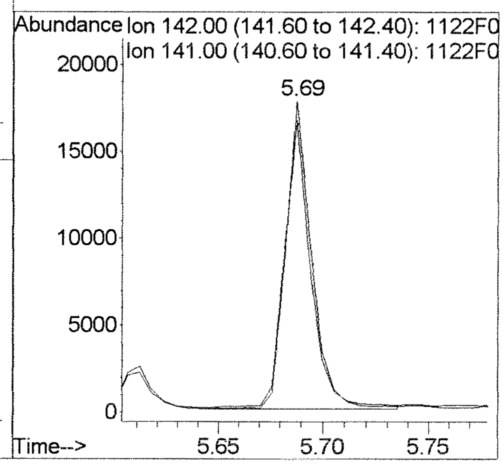


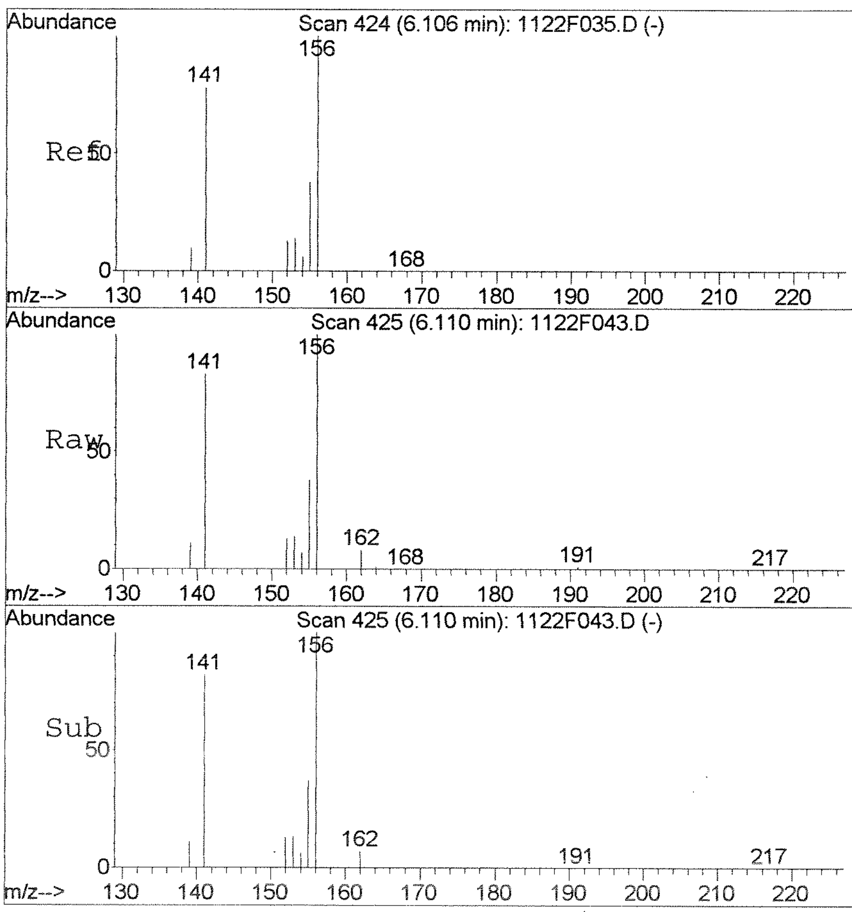


#4
1-Methylnaphthalene
Concen: 17.96 ng/ml
RT: 5.69 min Scan# 355
Delta R.T. -0.00 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:142 Resp: 15061

Ion	Ratio	Lower	Upper
142	100		
141	93.3	63.0	123.0

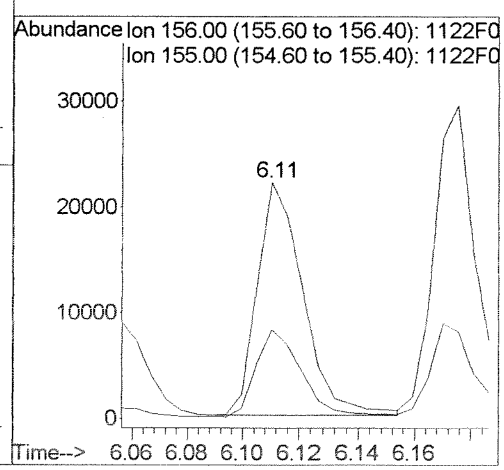


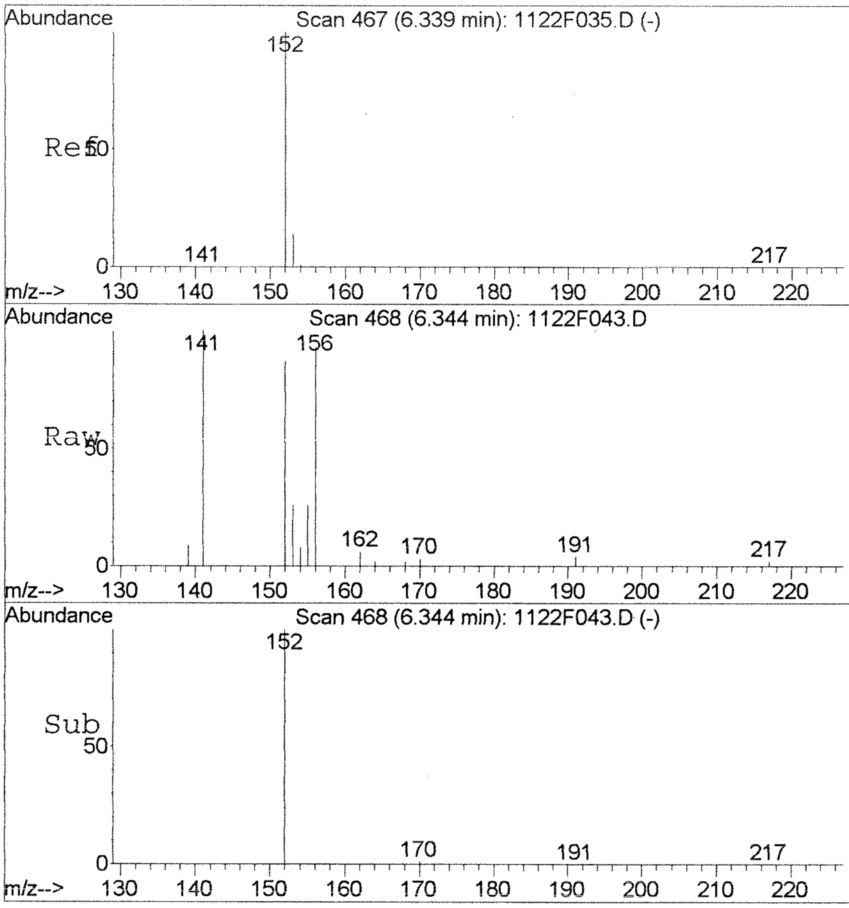


#6
2,6-Dimethylnaphthalene
Concen: 30.18 ng/ml
RT: 6.11 min Scan# 425
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:156 Resp: 24691

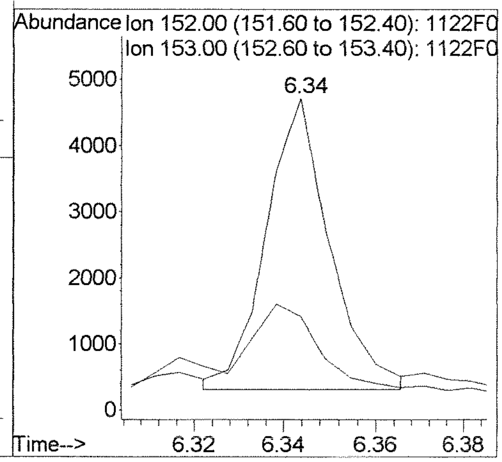
Ion	Ratio	Lower	Upper
156	100		
155	37.4	7.3	67.3

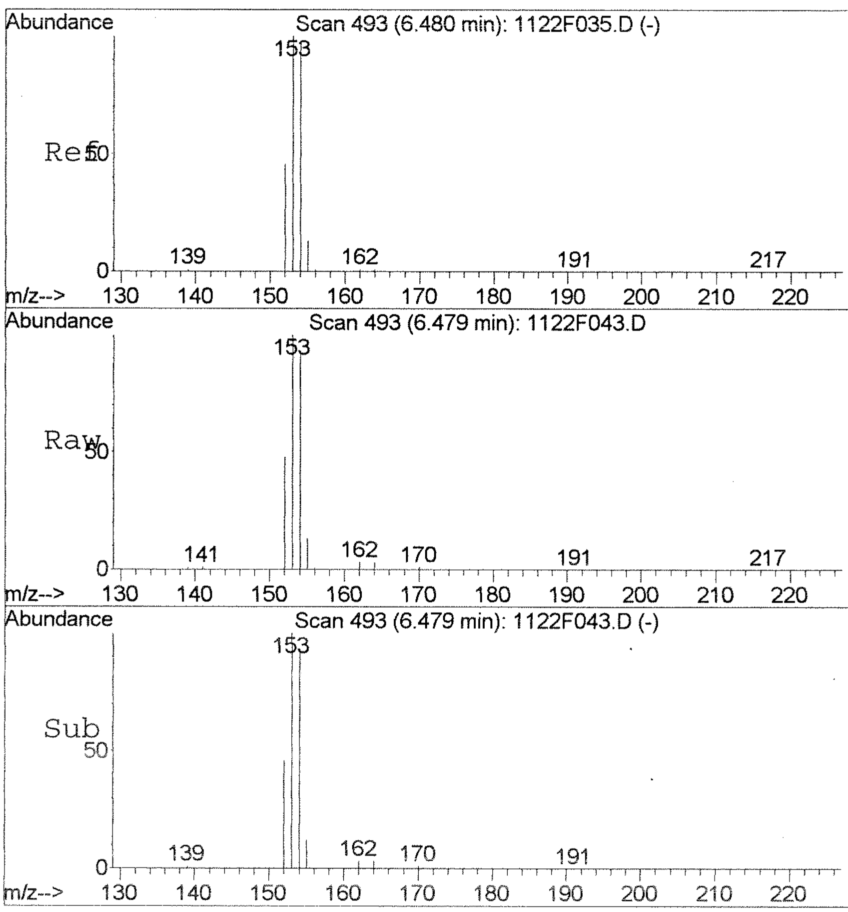




#11
Acenaphthylene
Concen: 3.39 ng/ml m
RT: 6.34 min Scan# 468
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

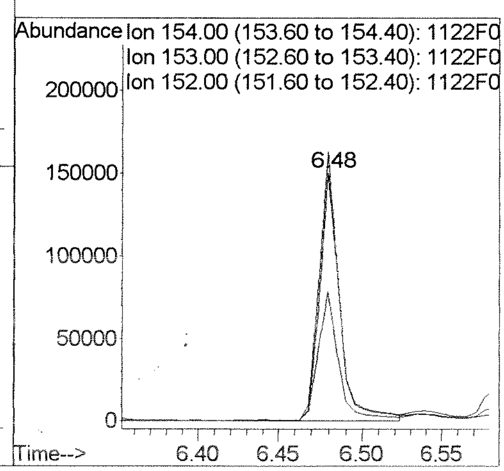
Tgt	Ion:152	Resp:	4279
Ion	Ratio	Lower	Upper
152	100		
153	30.1	0.0	43.0

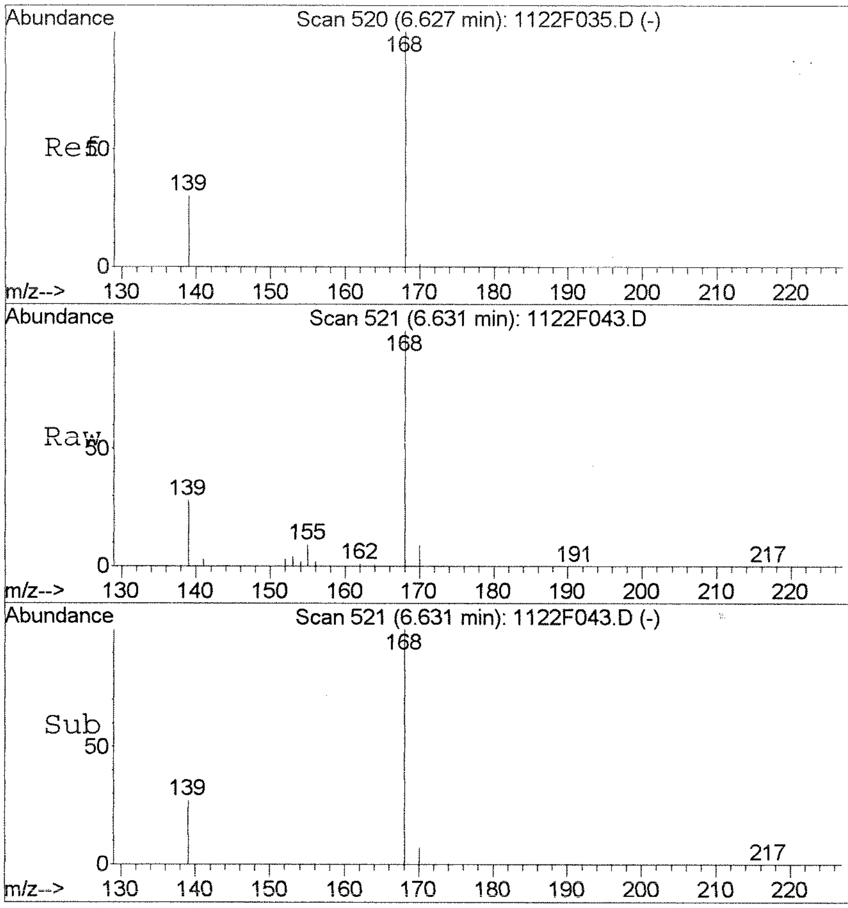




#12
Acenaphthene
Concen: 159.70 ng/ml
RT: 6.48 min Scan# 493
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

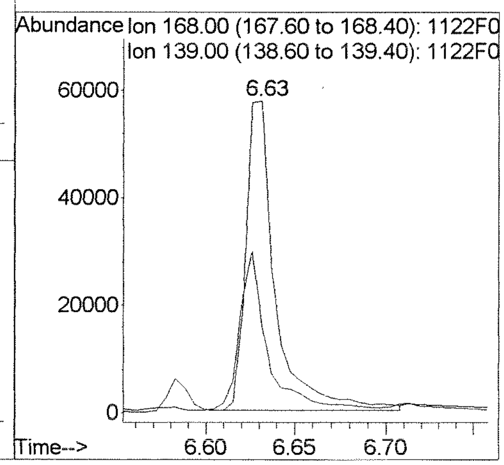
Tgt	Ion:154	Resp:	122449
Ion	Ratio	Lower	Upper
154	100		
153	108.4	81.9	141.9
152	52.2	26.8	86.8

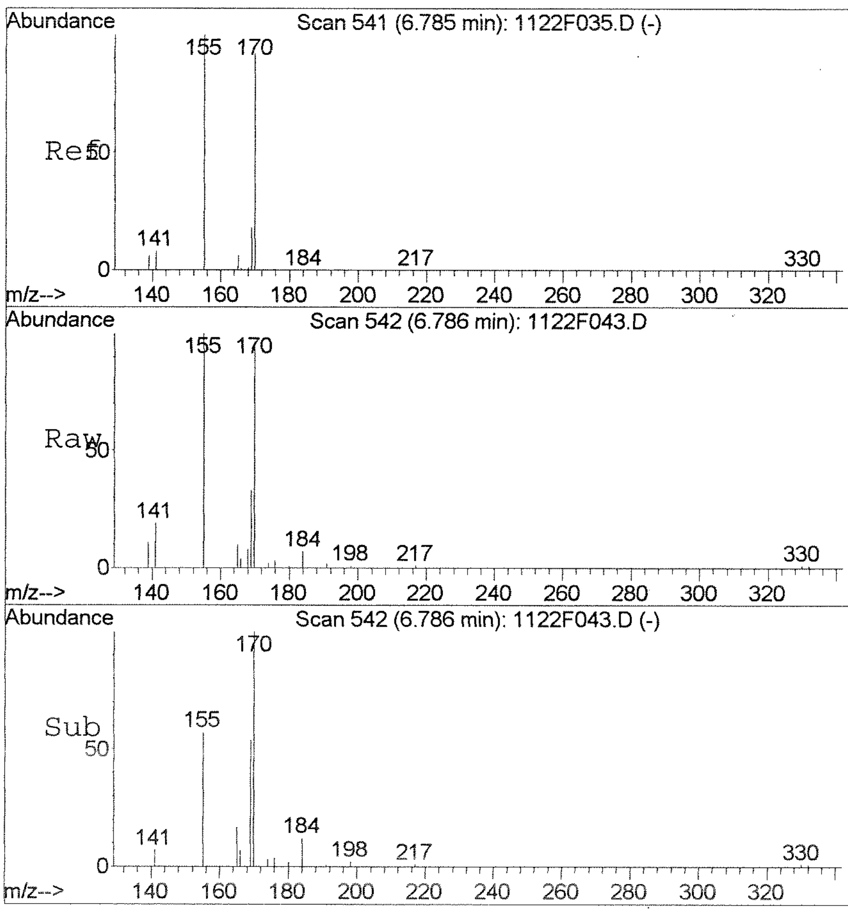




#13
Dibenzofuran
Concen: 58.11 ng/ml
RT: 6.63 min Scan# 521
Delta R.T. -0.00 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

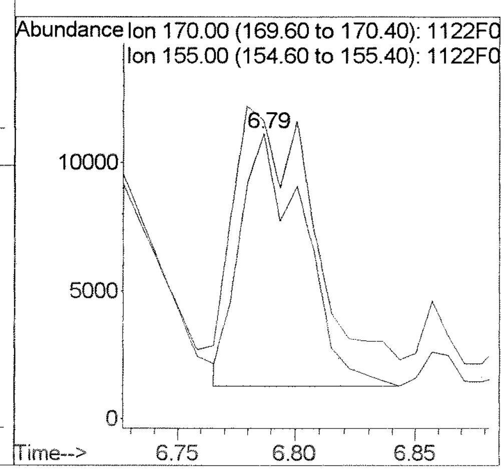
Tgt	Ion:168	Resp:	67022
Ion	Ratio	Lower	Upper
168	100		
139	27.3	21.0	81.0

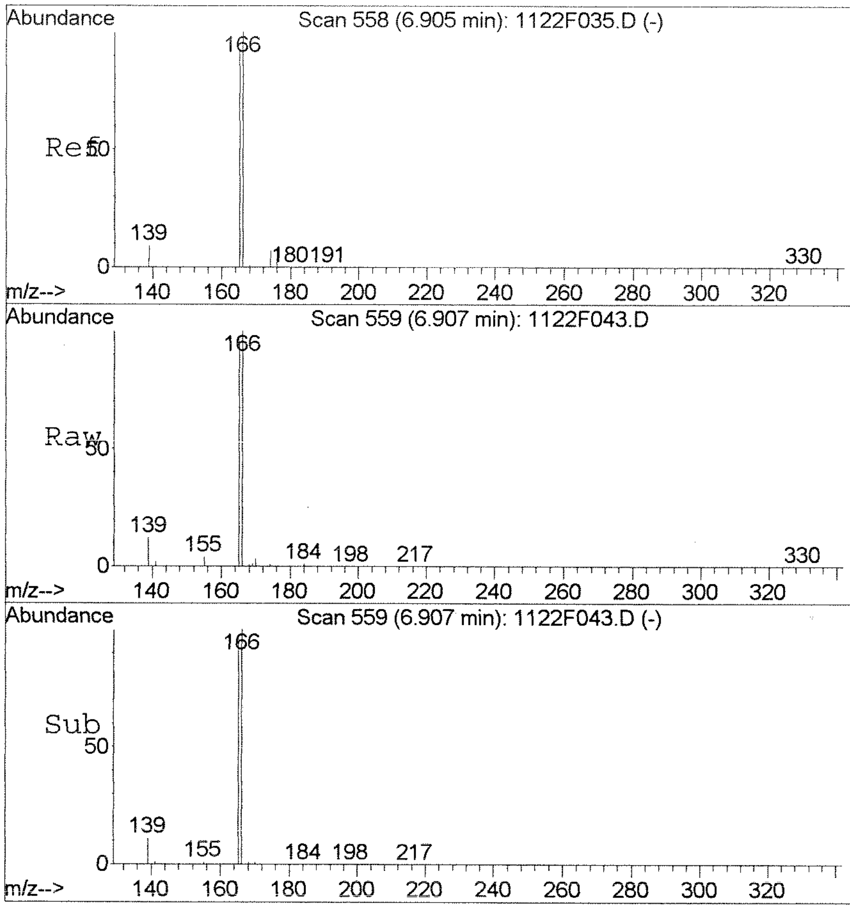




#14
2,3,5-Trimethylnaphthalene
Concen: 27.25 ng/ml
RT: 6.79 min Scan# 542
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt	Ion:170	Resp:	18375
Ion	Ratio	Lower	Upper
170	100		
155	94.8	42.9	102.9

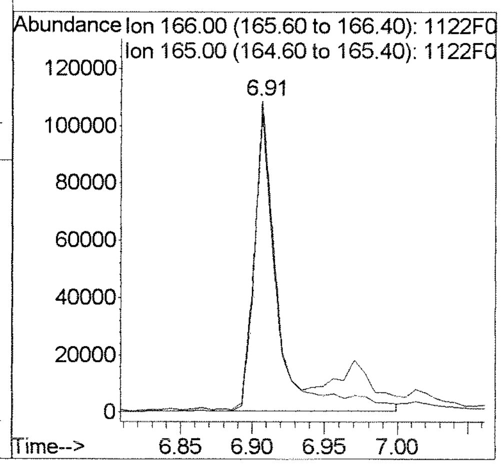


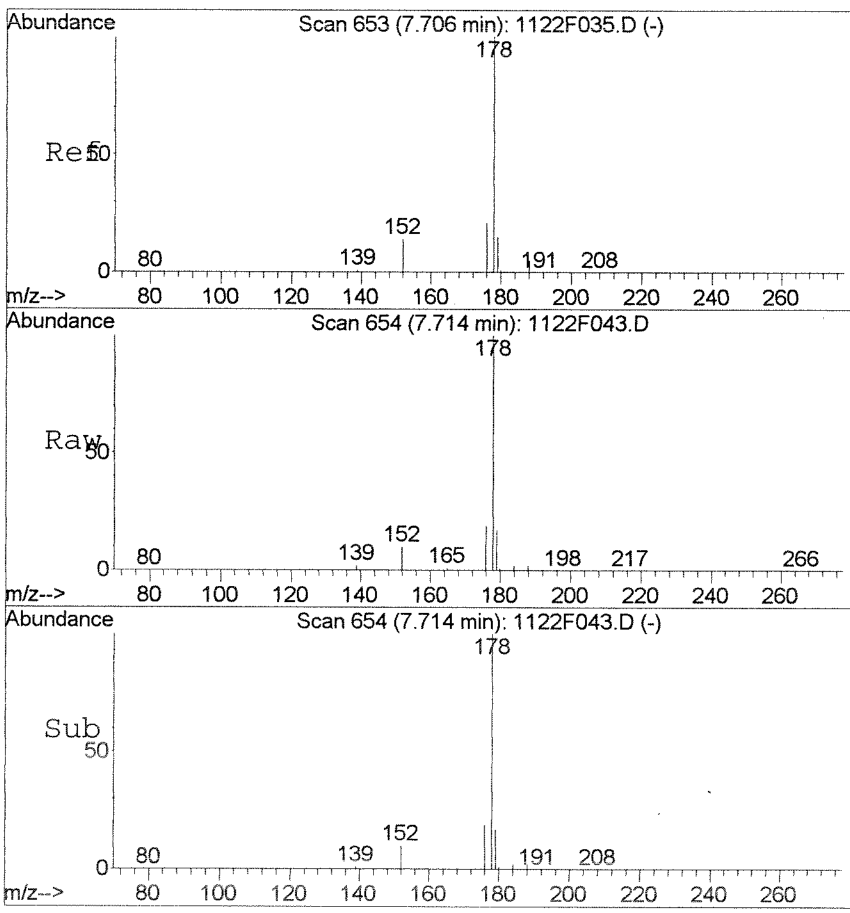


#16
Fluorene
Concen: 133.11 ng/ml
RT: 6.91 min Scan# 559
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:166 Resp: 122525

Ion	Ratio	Lower	Upper
166	100		
165	95.7	59.8	119.8

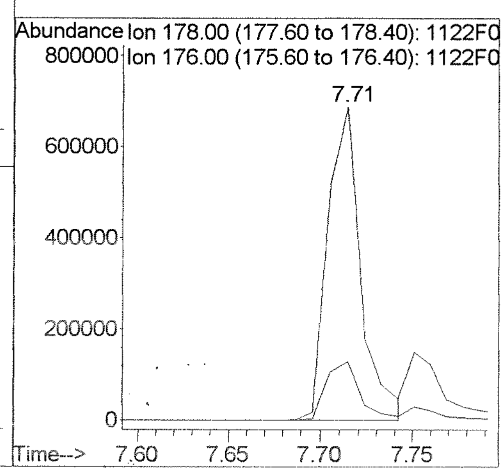


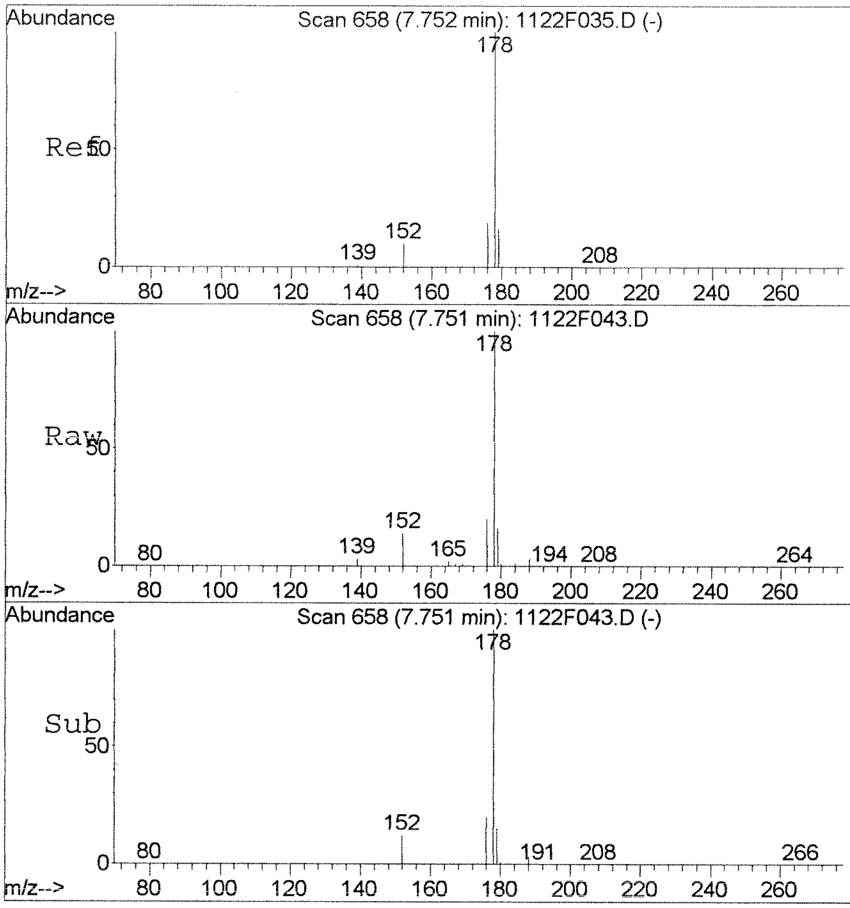


#27
Phenanthrene
Concen: 570.16 ng/ml
RT: 7.71 min Scan# 654
Delta R.T. -0.00 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:178 Resp: 833332

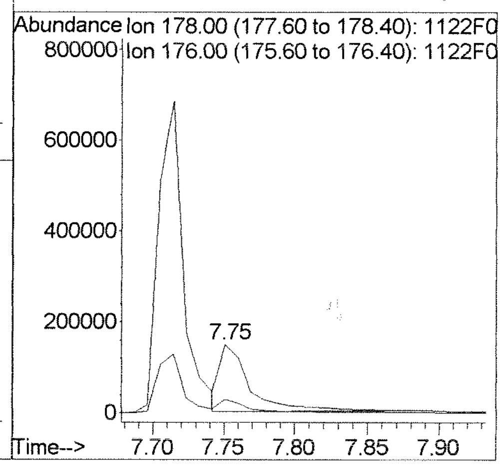
Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	51.0

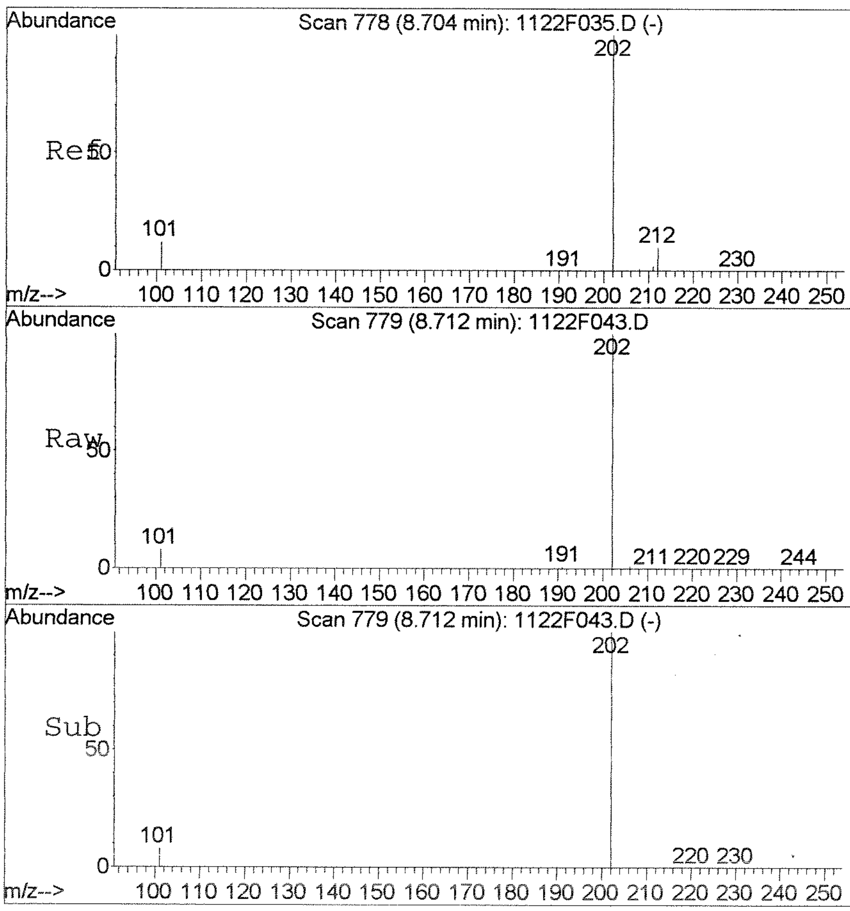




#28
Anthracene
Concen: 154.66 ng/ml
RT: 7.75 min Scan# 658
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

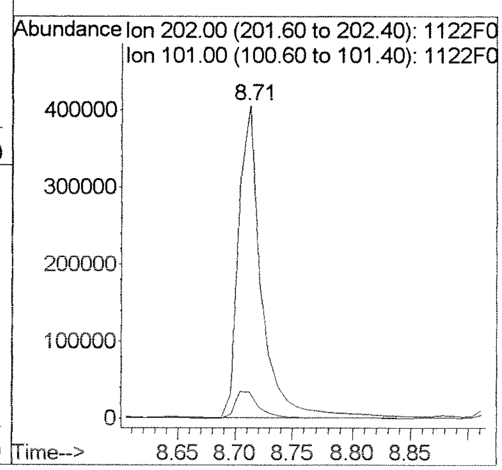
Tgt	Ion:178	Resp:	220243
Ion	Ratio	Lower	Upper
178	100		
176	19.5	0.0	49.7

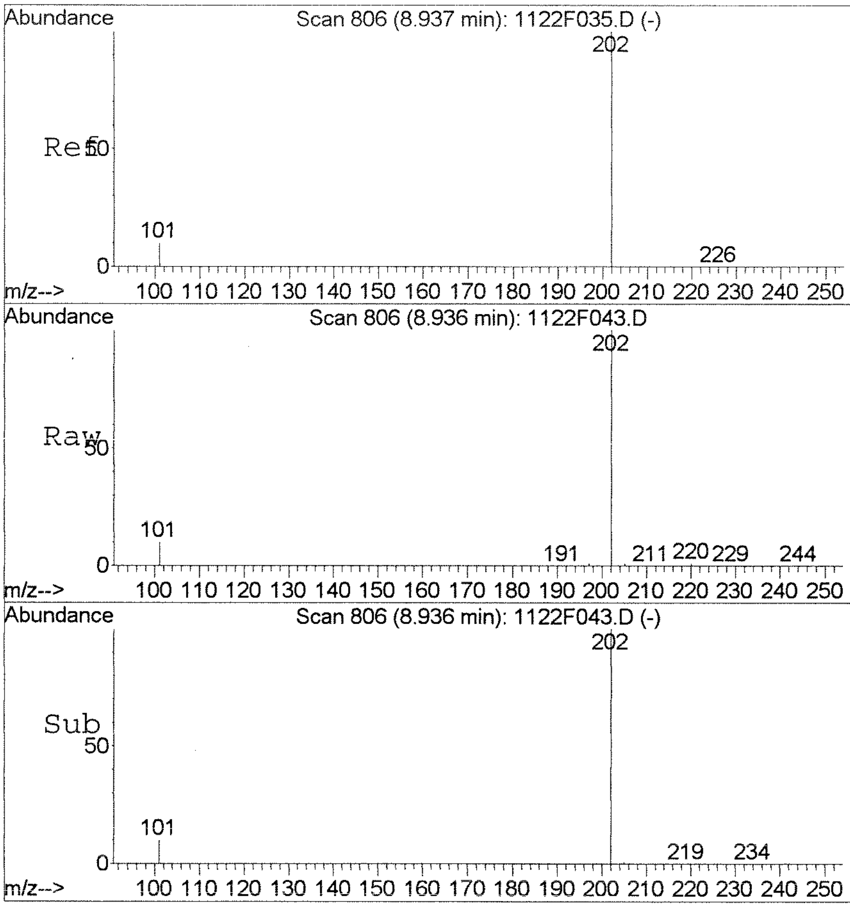




#35
Fluoranthene
Concen: 340.47 ng/ml
RT: 8.71 min Scan# 779
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt	Ion:202	Resp:	565258
Ion	Ratio	Lower	Upper
202	100		
101	8.4	0.0	35.8

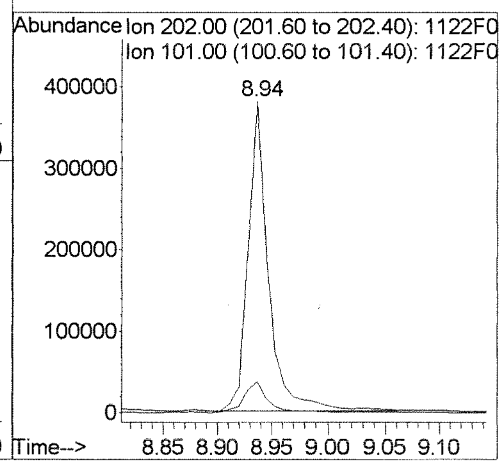


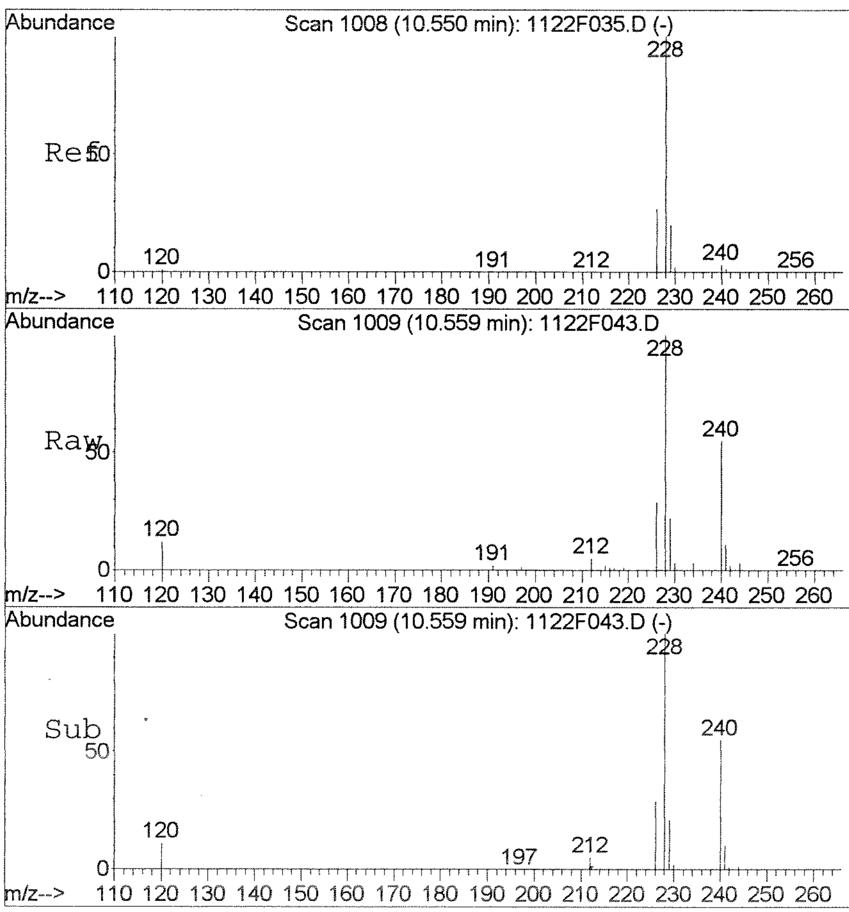


#38
Pyrene
Concen: 316.06 ng/ml
RT: 8.94 min Scan# 806
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:202 Resp: 497804

Ion	Ratio	Lower	Upper
202	100		
101	9.9	0.0	37.6

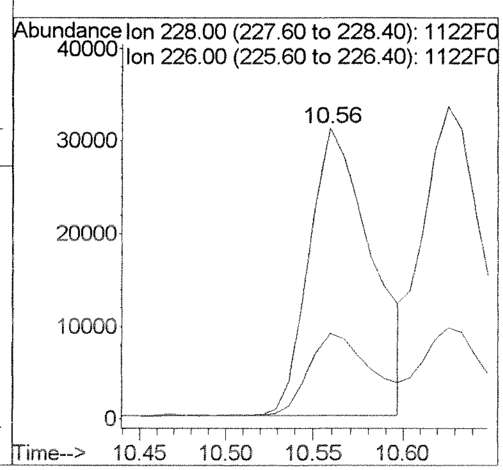


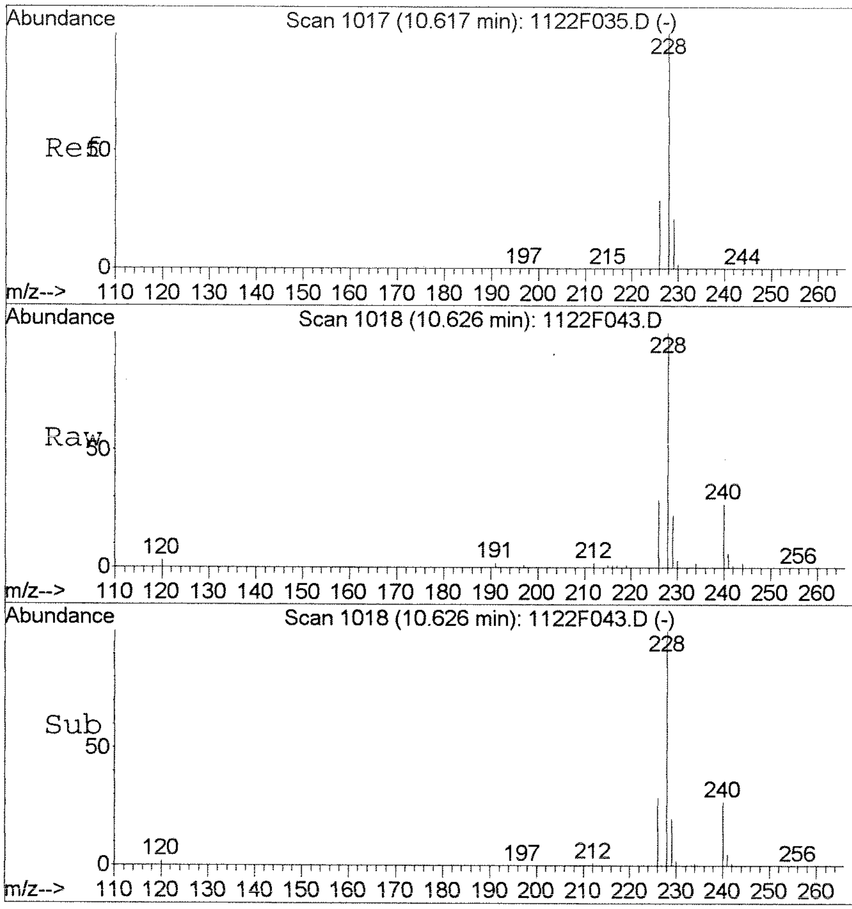


#43
Benz(a)anthracene
Concen: 51.63 ng/ml
RT: 10.56 min Scan# 1009
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:228 Resp: 73769

Ion	Ratio	Lower	Upper
228	100		
226	28.7	0.0	57.0

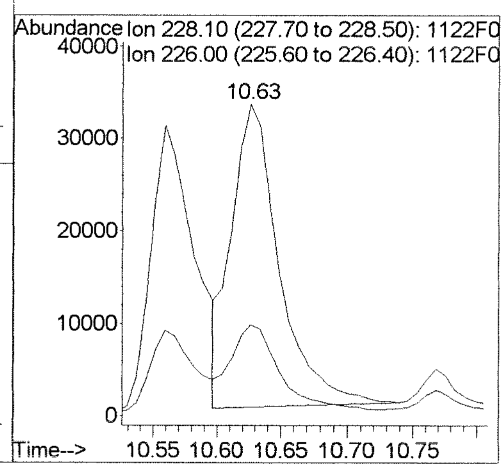


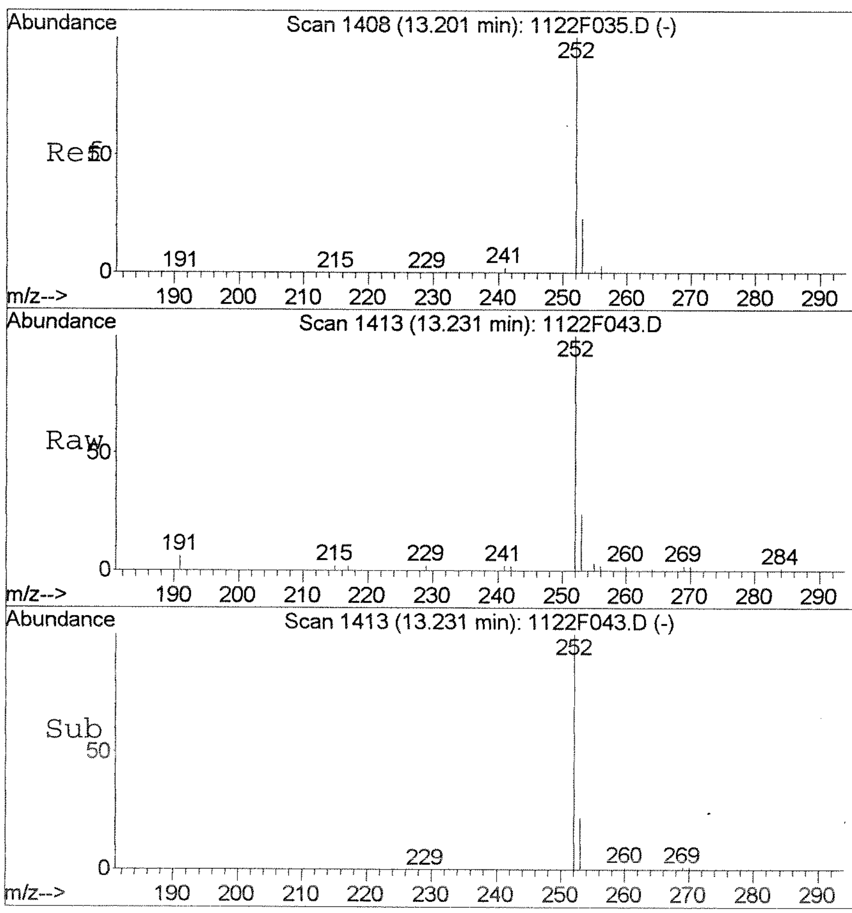


#44
Chrysene
Concen: 60.62 ng/ml
RT: 10.63 min Scan# 1018
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:228 Resp: 85067

Ion	Ratio	Lower	Upper
228	100		
226	28.0	0.0	58.9

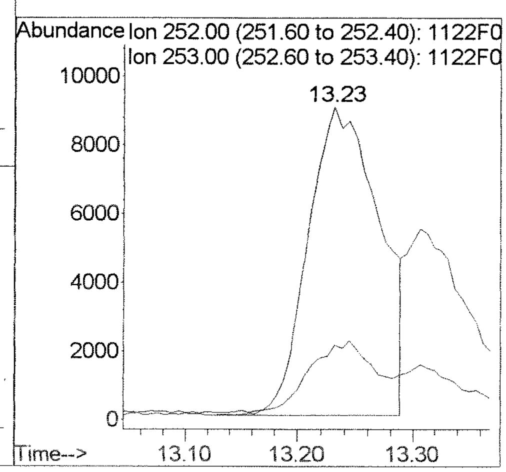


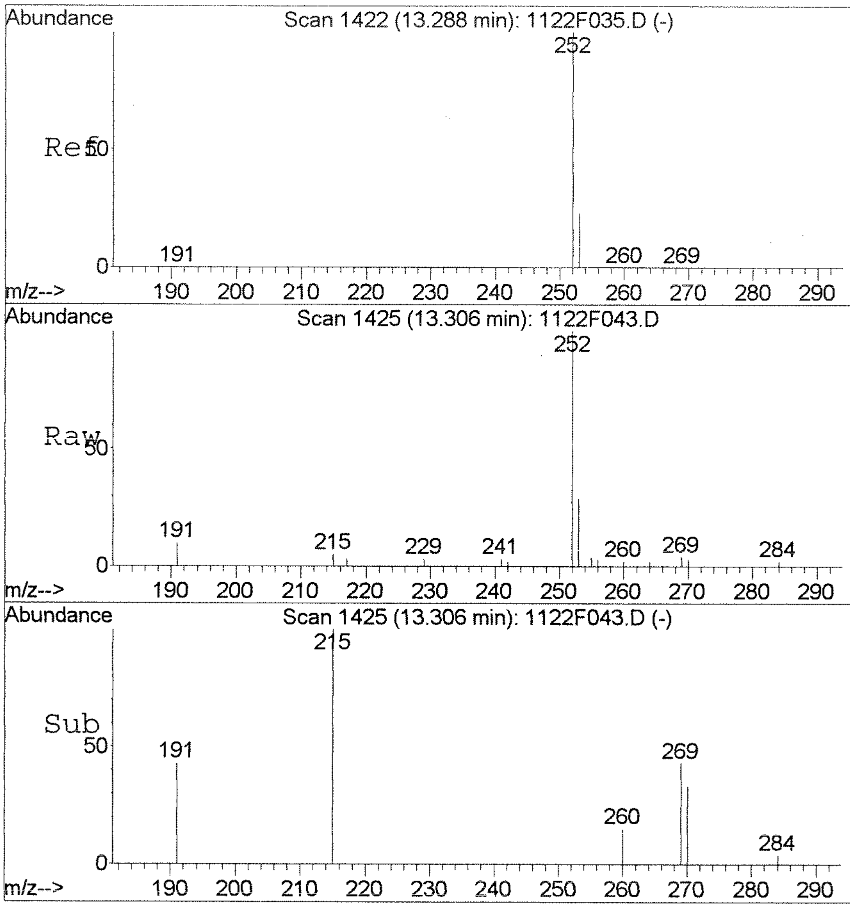


#50
Benzo(b)fluoranthene
Concen: 27.13 ng/ml
RT: 13.23 min Scan# 1413
Delta R.T. 0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:252 Resp: 37941

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	52.6

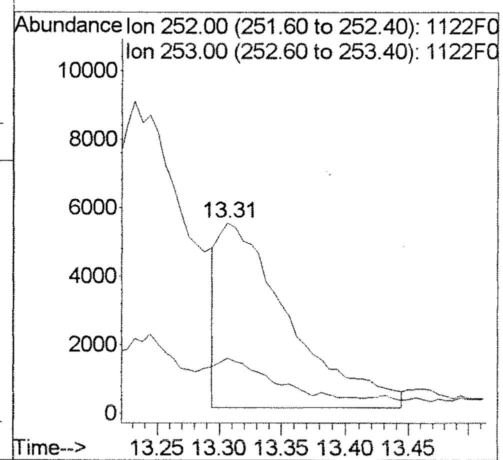


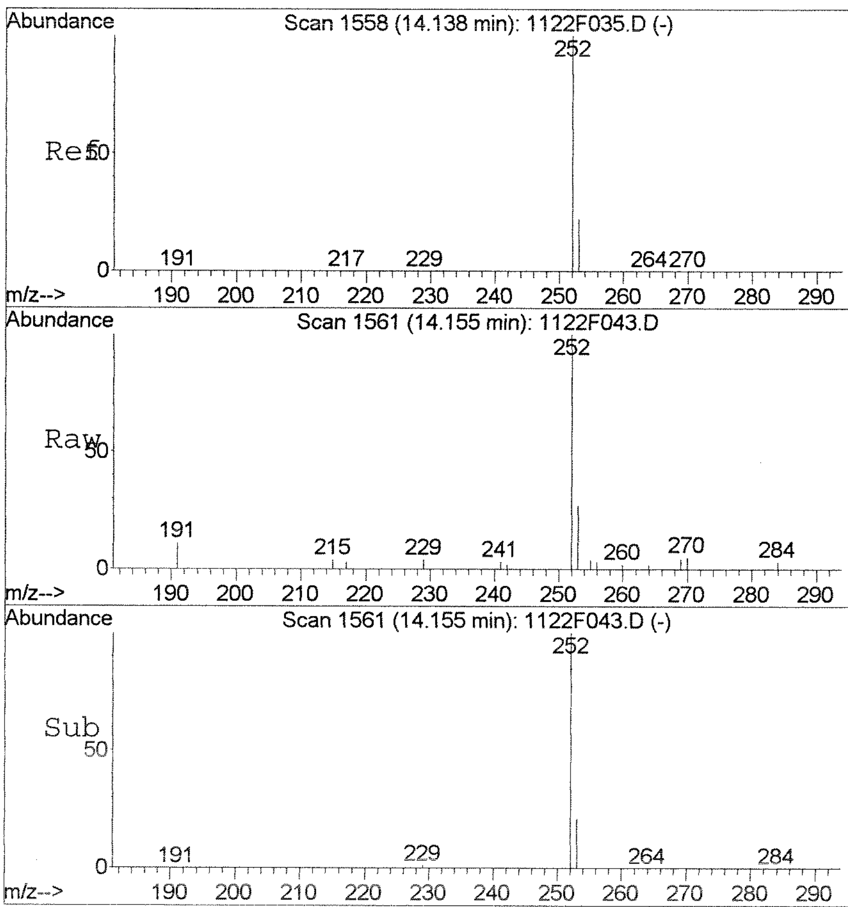


#51
Benzo(k)fluoranthene
Concen: 15.92 ng/ml m
RT: 13.31 min Scan# 1425
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:252 Resp: 21389

Ion	Ratio	Lower	Upper
252	100		
253	29.1	0.0	52.0

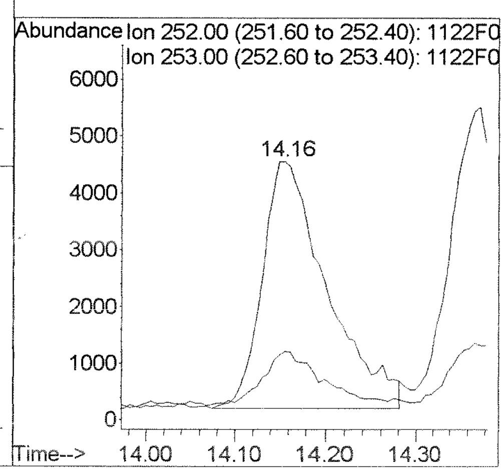


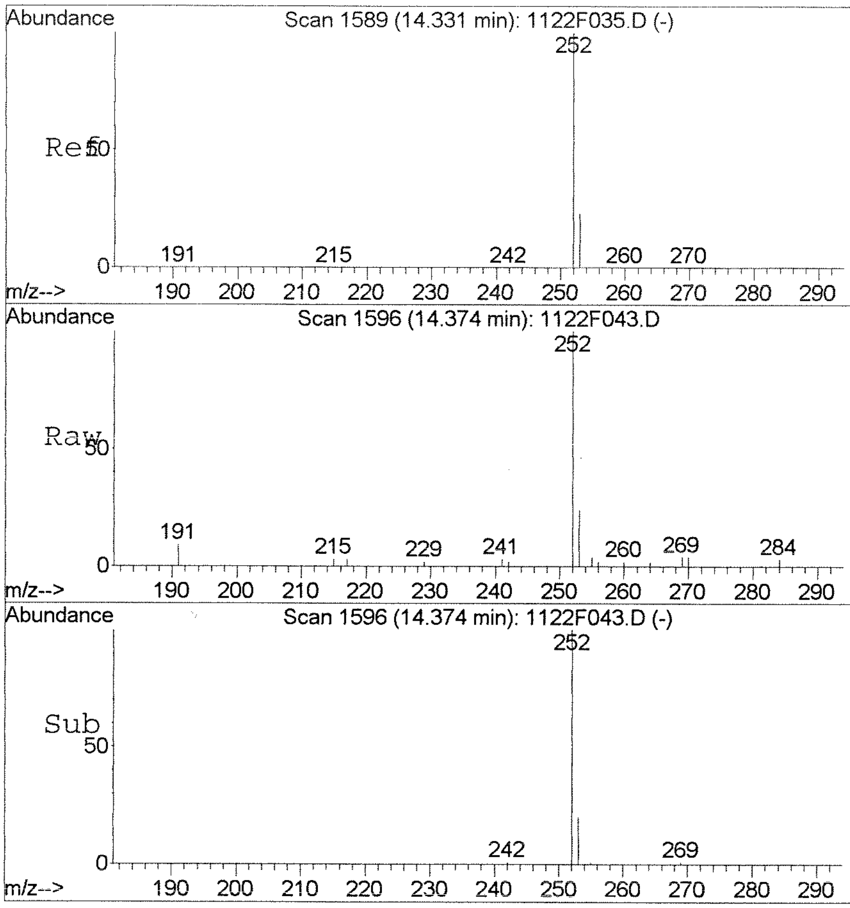


#52
Benzo(e)pyrene
Concen: 16.94 ng/ml
RT: 14.16 min Scan# 1561
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:252 Resp: 21525

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	52.2

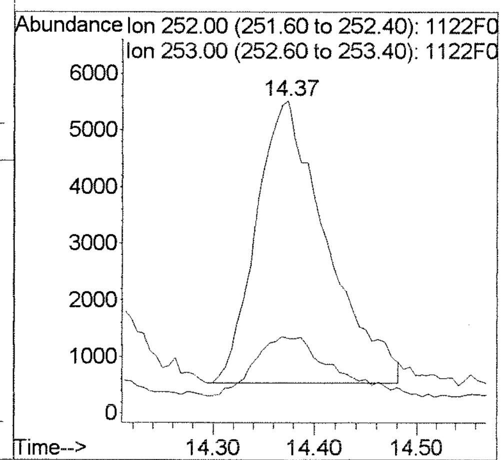


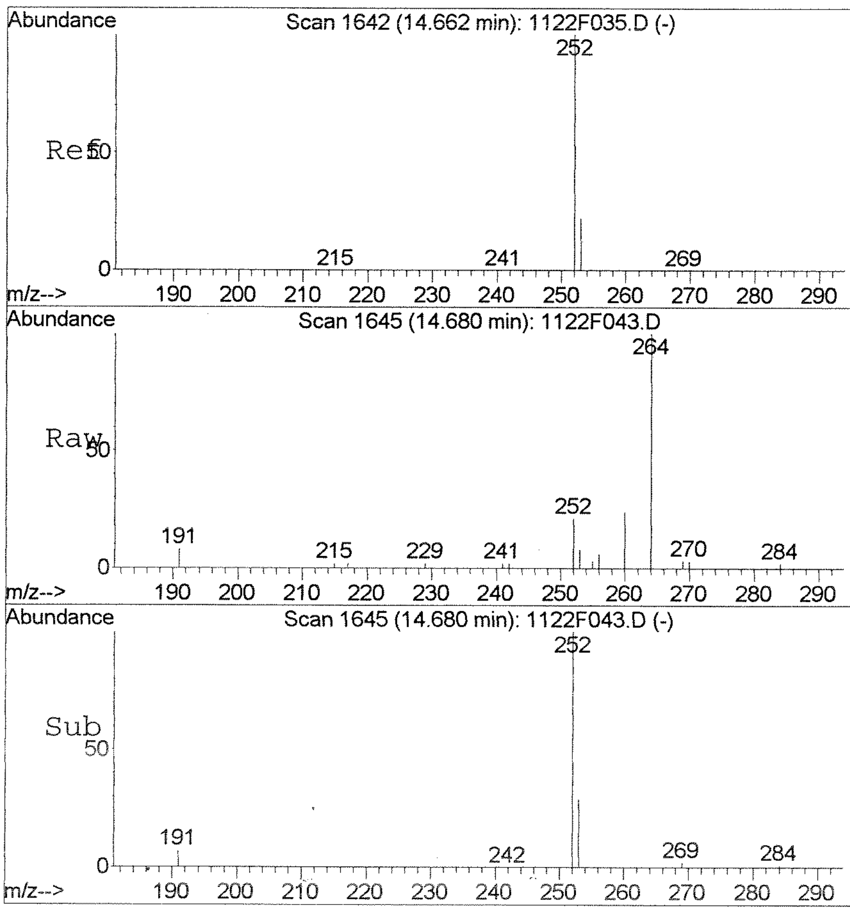


#53
Benzo(a)pyrene
Concen: 20.64 ng/ml
RT: 14.37 min Scan# 1596
Delta R.T. 0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:252 Resp: 23904

Ion	Ratio	Lower	Upper
252	100		
253	20.2	0.0	52.2

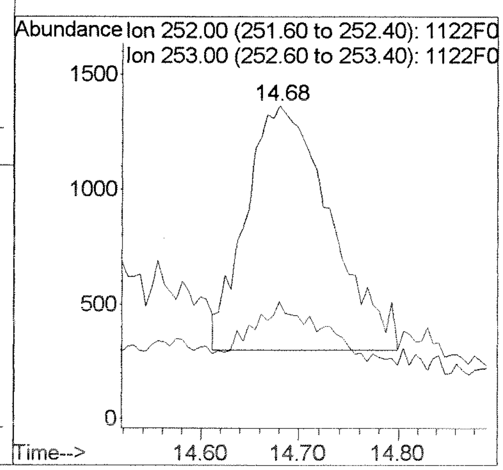


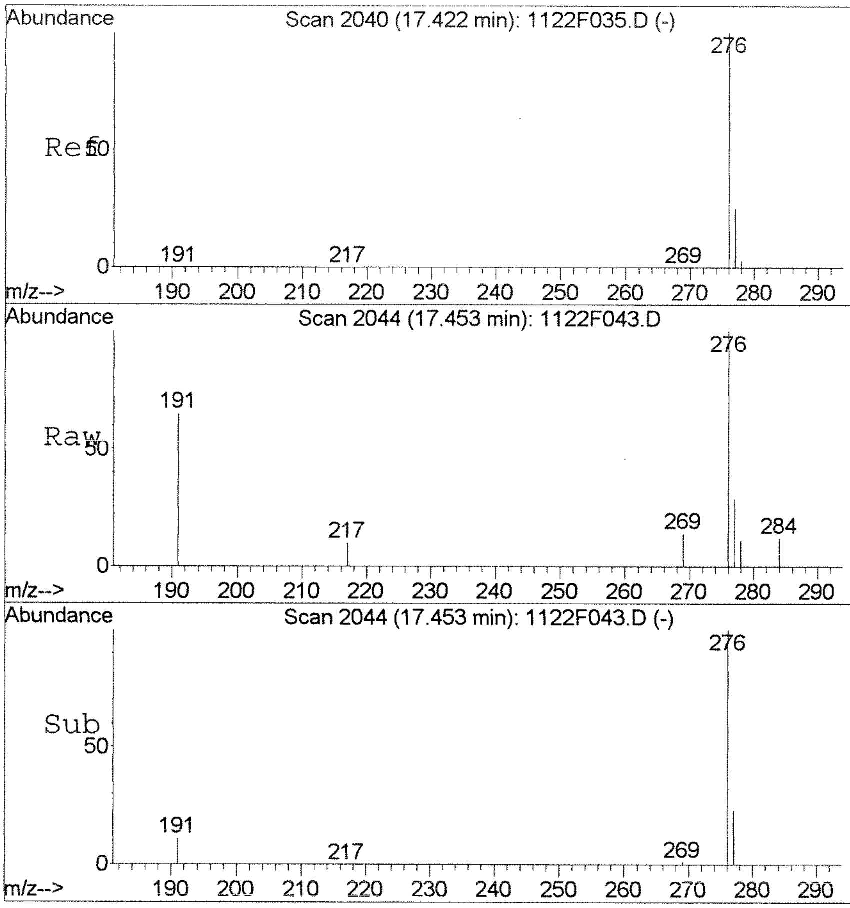


#54
Perylene
Concen: 5.51 ng/ml
RT: 14.68 min Scan# 1645
Delta R.T. -0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:252 Resp: 6263

Ion	Ratio	Lower	Upper
252	100		
253	26.2	0.0	51.5

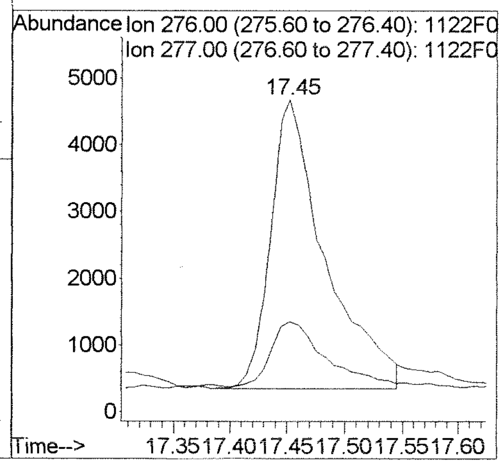


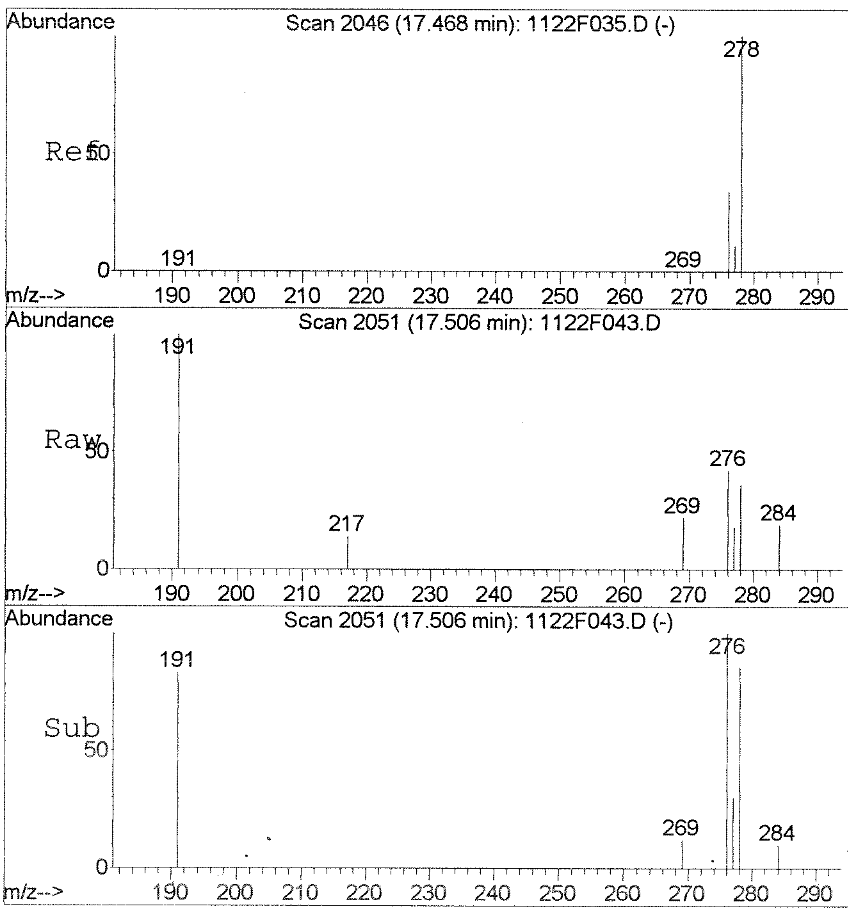


#55
Indeno(1,2,3-cd)pyrene
Concen: 13.33 ng/ml
RT: 17.45 min Scan# 2044
Delta R.T. 0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:276 Resp: 14327

Ion	Ratio	Lower	Upper
276	100		
277	21.7	0.0	54.7

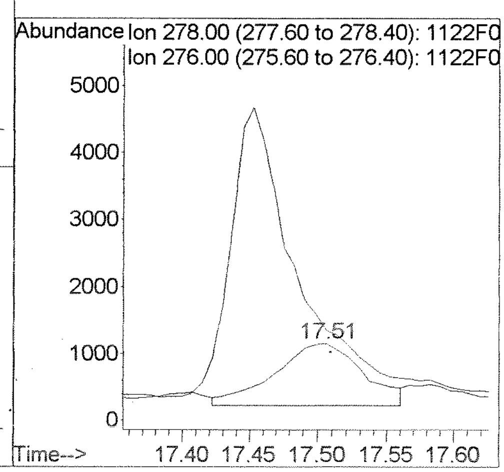


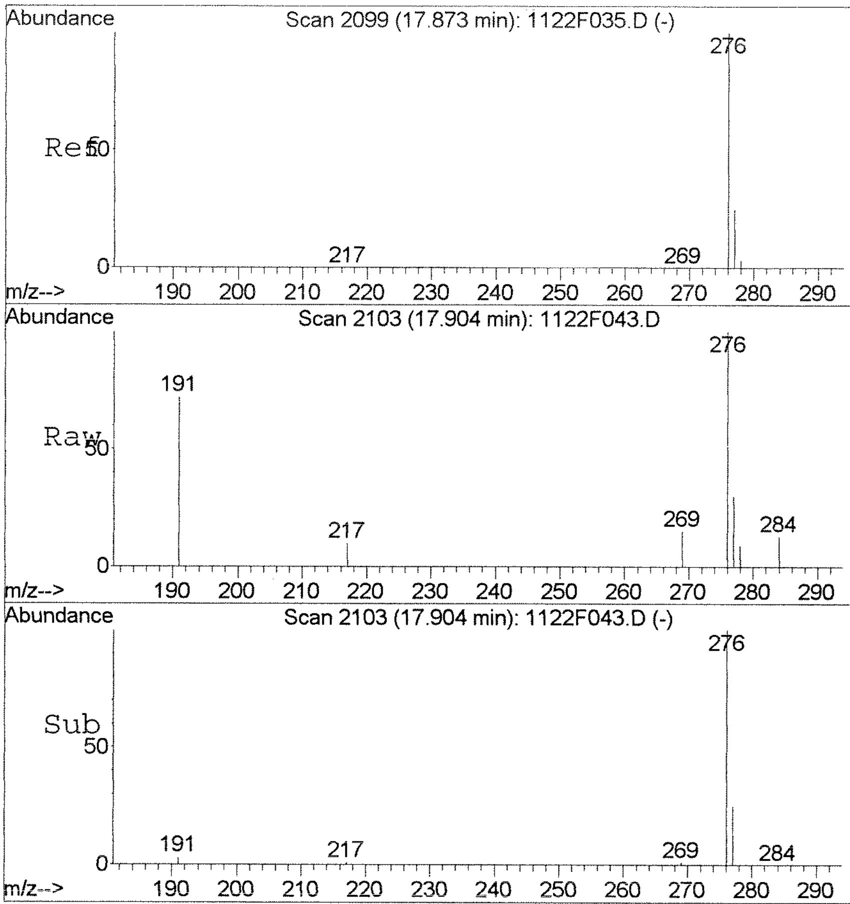


#56
Dibenz(a,h)anthracene
Concen: 3.66 ng/ml m
RT: 17.51 min Scan# 2051
Delta R.T. 0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:278 Resp: 4127

Ion	Ratio	Lower	Upper
278	100		
276	117.2	0.0	59.7#

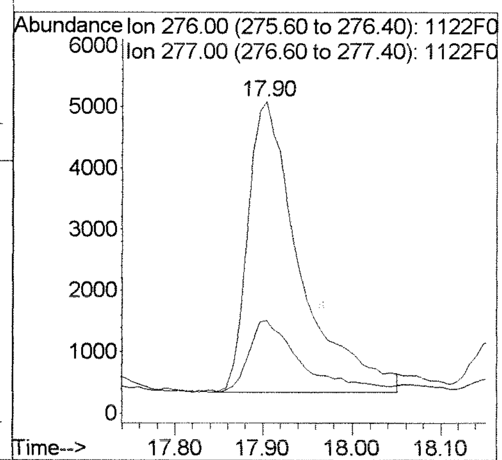




#57
Benzo(g,h,i)perylene
Concen: 15.95 ng/ml
RT: 17.90 min Scan# 2103
Delta R.T. 0.01 min
Lab File: 1122F043.D
Acq: 23 Nov 2008 2:39 am

Tgt Ion:276 Resp: 19527

Ion	Ratio	Lower	Upper
276	100		
277	23.9	0.0	54.2



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED01-5-6.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-006	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	52		4.3	0.37	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	58		4.3	0.39	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	24		4.3	0.24	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	550		4.3	0.23	1	11/11/08	11/22/08	KWG0812042	
Fluorene	410		4.3	0.50	1	11/11/08	11/22/08	KWG0812042	
Dibenzofuran	150		4.3	0.59	1	11/11/08	11/22/08	KWG0812042	
Phenanthrene	2000	D	22	3.8	5	11/11/08	11/23/08	KWG0812042	
Anthracene	320		4.3	0.47	1	11/11/08	11/22/08	KWG0812042	
Fluoranthene	1600		4.3	0.61	1	11/11/08	11/22/08	KWG0812042	
Pyrene	1400		4.3	0.37	1	11/11/08	11/22/08	KWG0812042	
Benz(a)anthracene	330		4.3	0.48	1	11/11/08	11/22/08	KWG0812042	
Chrysene	450		4.3	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(b)fluoranthene	330		4.3	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(k)fluoranthene	110		4.3	0.15	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	310		4.3	0.14	1	11/11/08	11/22/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	270		4.3	0.16	1	11/11/08	11/22/08	KWG0812042	
Dibenz(a,h)anthracene	44		4.3	0.28	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	310		4.3	0.64	1	11/11/08	11/22/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	54	10-128	11/22/08	Acceptable
Fluoranthene-d10	60	29-121	11/22/08	Acceptable
Terphenyl-d14	61	24-141	11/22/08	Acceptable

Comments:

Exception Report

Data File:	J:\MS11\DATA\112108\1121F050.D	**Date Acquired:**	11/22/2008 03:40
Lab ID:	K0810639-006	**Date Quantitated:**	11/22/2008 14:03
RunType:	SMPL	**Batch ID:**	KWG0812613
Matrix:	SEDIMENT	**Analysis Method:**	8270C SIM
		ListJoinID:	LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Phenanthrene	2475.60	NA	2000	Dil

Primary Review: RW 11/22/08

Secondary Review: 11·22·8

Printed: 11/22/2008 14:50:39

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812613	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776070	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112108\1121F030.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112108\1121F050.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 03:40	**Quant Date:**	11/22/2008 14:03	**Vial:**	47
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-006			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	-0.01	136	228791	200.00	OK
2	Acenaphthene-d10	6.47	0.00	164	123749	200.00	OK
3	Phenanthrene-d10	7.71	0.00	188	210262	200.00	OK
4	Chrysene-d12	10.62	0.02	240	262376	200.00	OK
5	Perylene-d12	14.67	0.06	264	266909	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.89	-0.01	0.00	176	90820**m**	107.99	54	10-128	OK	
3	Fluoranthene-d10	8.72	0.02	0.00	212	172743**m**	120.50	60	29-121	OK	
4	Terphenyl-d14	9.11	0.01	0.00	244	164741	121.28	61	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.06	-0.01	0.00	128	84487**m**	60.62	52		
1	2-Methylnaphthalene	5.61	-0.01	0.00	142	66190	68.11	58		
2	Acenaphthylene	6.35		0.00	152	38280**m**	27.43	24		
2	Acenaphthene	6.50	0.01	0.00	154	544305	641.91	550		
2	Dibenzofuran	6.64		0.00	168	219961**m**	172.44	150		
2	Fluorene	6.92		0.00	166	485631	477.06	410		
3	Phenanthrene	7.73	0.01	0.00	178	3658800	2,476	2100	E	
3	Anthracene	7.77		0.00	178	542690**m**	376.87	320		
3	Fluoranthene	8.74	0.02	0.00	202	3222036	1,919	1600		
4	Pyrene	8.96	0.01	0.00	202	3202340	1,622	1400		
4	Benz(a)anthracene	10.59	0.01	0.00	228	692727	386.86	330		
4	Chrysene	10.67	0.02	0.00	228	912573	518.90	450		
5	Benzo(b)fluoranthene	13.30	0.05	0.00	252	697478	378.65	330		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112108\1121F050.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 03:40	**Quant Date:**	11/22/2008 14:03	**Vial:**	47
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-006			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.37	0.03	0.00	252	235435	133.05	110		
5	Benzo(a)pyrene	14.44	0.05	0.00	252	549357	360.21	310		
5	Indeno(1,2,3-cd)pyrene	17.47	0.02	0.00	276	452679	319.90	270		
5	Dibenz(a,h)anthracene	17.52	0.01	0.00	278	75671**m**	50.95	44		
5	Benzo(g,h,i)perylene	17.93	0.02	0.00	276	573122	355.50	310		

Prep Amount:	20.08 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	58.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F050.D Vial: 47
Acq On : 22 Nov 2008 3:40 am Operator: LWeiskopf
Sample : K0810639-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14:35 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.04	136	228791	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.47	164	123749	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.71	188	210262	200.00 ng/ml	0.00
37) Chrysene-d12	10.62	240	262376	200.00 ng/ml	0.03
49) Perylene-d12	14.67	264	266909	200.00 ng/ml	0.08
System Monitoring Compounds					
15) Fluorene-d10	6.89	176	90820m	107.99 ng/ml	0.00
Spiked Amount 200.000			Recovery =	53.99%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00 ng/ml	
Spiked Amount 375.000			Recovery =	0.00%	
36) Fluoranthene-d10	8.72	212	172743m	120.50 ng/ml	0.02
Spiked Amount 200.000			Recovery =	60.25%	
42) Terphenyl-d14	9.11	244	164741	121.28 ng/ml	0.02
Spiked Amount 200.000			Recovery =	60.64%	
Target Compounds					Qvalue
2) Naphthalene	5.06	128	84487m	60.62 ng/ml	
3) 2-Methylnaphthalene	5.61	142	66190	68.11 ng/ml	92
4) 1-Methylnaphthalene	5.70	142	99343	114.19 ng/ml	95
5) Biphenyl	5.99	154	13585m	11.44 ng/ml	
6) 2,6-Dimethylnaphthalene	6.12	156	205017	241.64 ng/ml	99
11) Acenaphthylene	6.35	152	38280m	27.43 ng/ml	
12) Acenaphthene	6.50	154	544305	641.91 ng/ml	90
13) Dibenzofuran	6.64	168	219961m	172.44 ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.80	170	238825	320.24 ng/ml	70
16) Fluorene	6.92	166	485631	477.06 ng/ml	99
23) Dibenzothiophene	7.62	184	309779	214.37 ng/ml	97
27) Phenanthrene	7.73	178	3658800	2475.60 ng/ml	99
28) Anthracene	7.77	178	542690m	376.87 ng/ml	
30) 1-Methylphenanthrene	8.23	192	382372	348.60 ng/ml	90
35) Fluoranthene	8.74	202	3222036	1919.23 ng/ml	81
38) Pyrene	8.96	202	3202340	1622.42 ng/ml	79
43) Benz(a)anthracene	10.59	228	692727	386.86 ng/ml	90
44) Chrysene	10.67	228	912573	518.90 ng/ml	99
50) Benzo(b)fluoranthene	13.30	252	697478	378.65 ng/ml	99
51) Benzo(k)fluoranthene	13.37	252	235435	133.05 ng/ml	88
52) Benzo(e)pyrene	14.24	252	424765	253.86 ng/ml	100
53) Benzo(a)pyrene	14.44	252	549357	360.21 ng/ml	99
54) Perylene	14.77	252	327011	218.27 ng/ml	99
55) Indeno(1,2,3-cd)pyrene	17.47	276	452679	319.90 ng/ml	99
56) Dibenz(a,h)anthracene	17.52	278	75671m	50.95 ng/ml	

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112108\1121F050.D   Vial: 47
Acq On   : 22 Nov 2008   3:40 am   Operator: LWeiskopf
Sample   : K0810639-006   Inst   : MS11
Misc   :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14:35 2008   Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title   : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

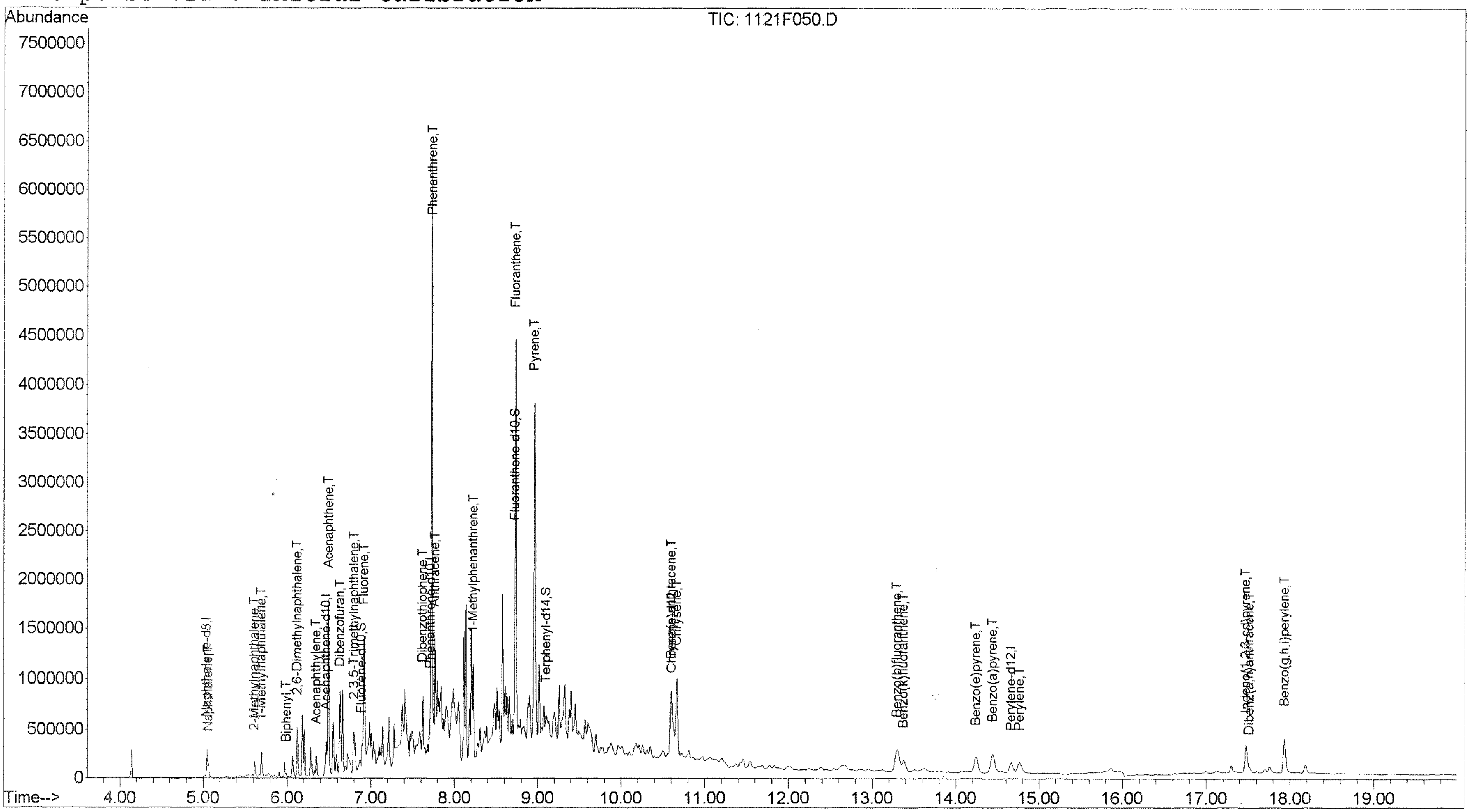
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
57)	Benzo(g,h,i)perylene	17.93	276	573122	355.50	ng/ml	98

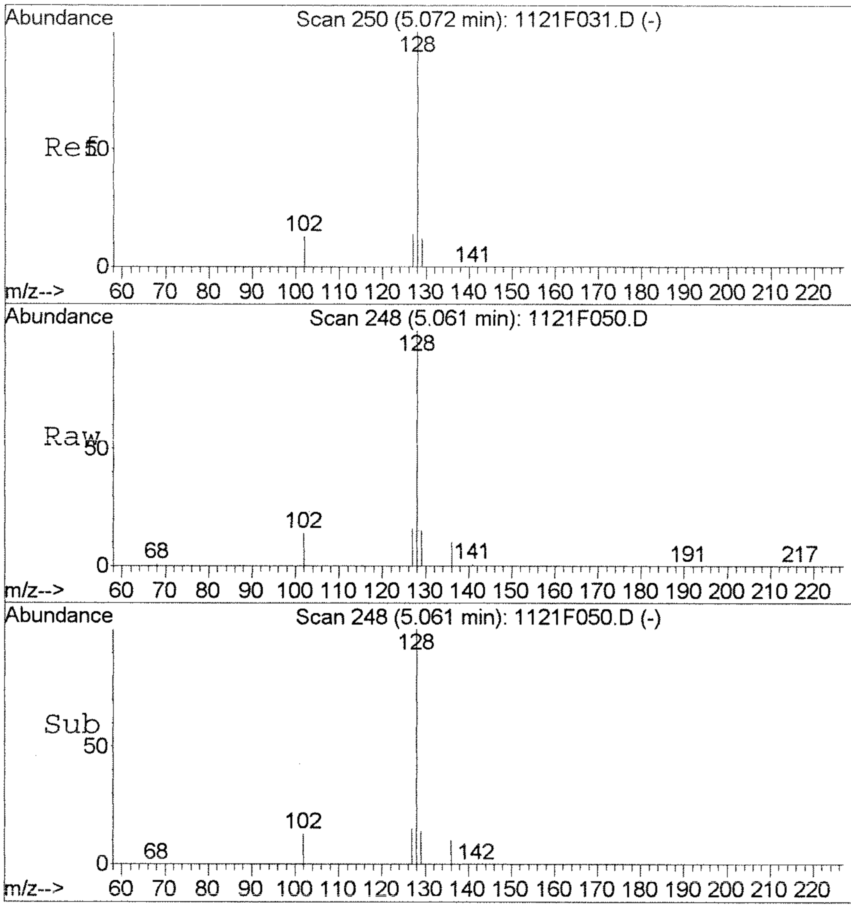
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F050.D Vial: 47
Acq On : 22 Nov 2008 3:40 am Operator: LWeiskopf
Sample : K0810639-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:03 2008 Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration

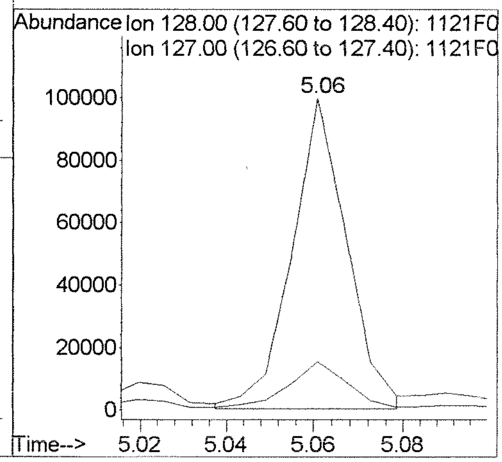


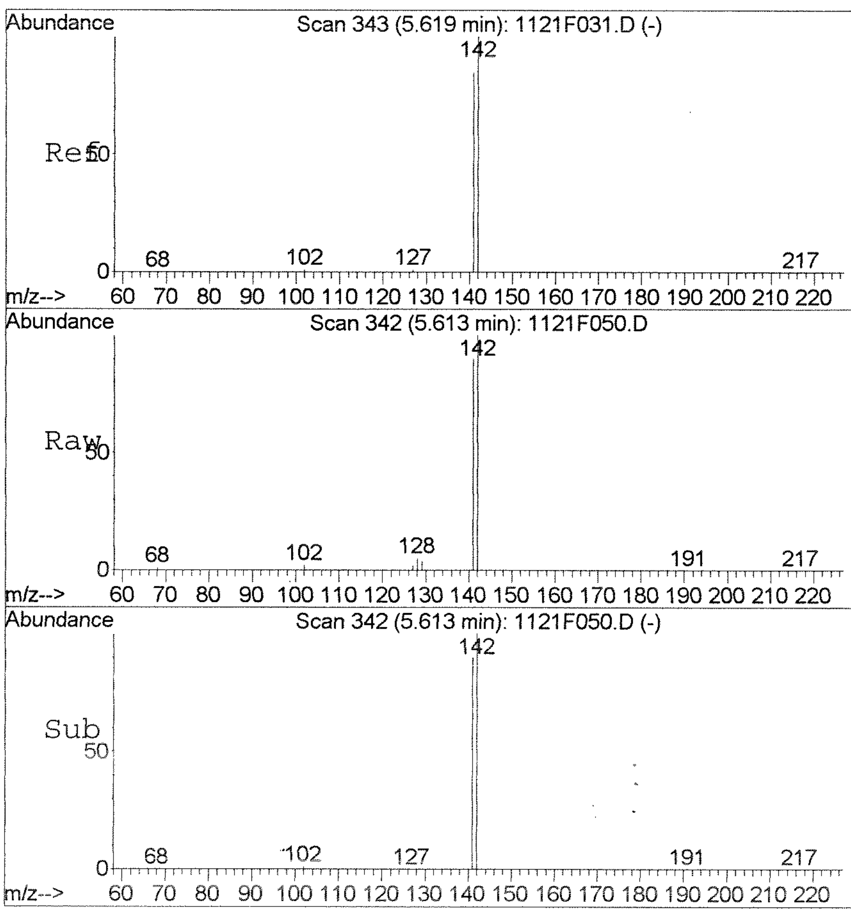


#2
Naphthalene
Concen: 60.62 ng/ml m
RT: 5.06 min Scan# 248
Delta R.T. 0.00 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:128 Resp: 84487

Ion	Ratio	Lower	Upper
128	100		
127	15.6	0.0	43.8

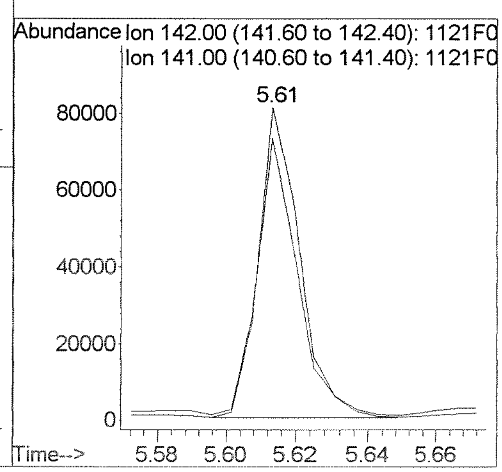


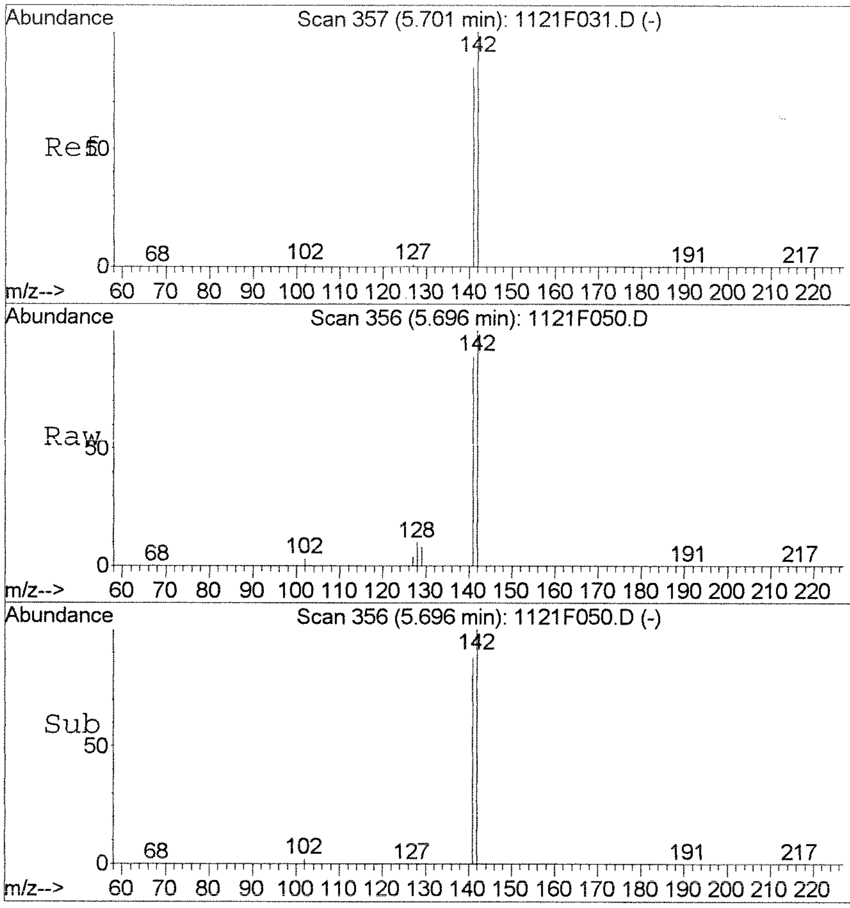


#3
2-Methylnaphthalene
Concen: 68.11 ng/ml
RT: 5.61 min Scan# 342
Delta R.T. 0.00 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:142 Resp: 66190

Ion	Ratio	Lower	Upper
142	100		
141	89.5	52.4	112.4

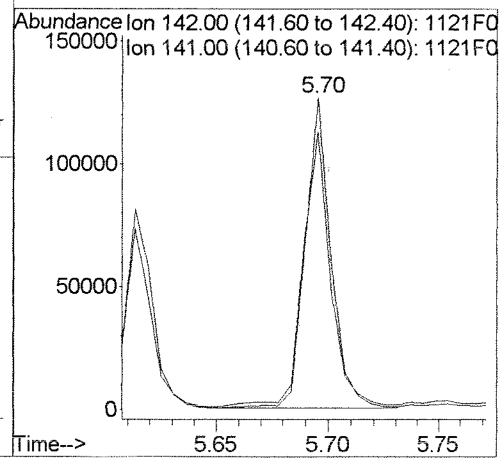


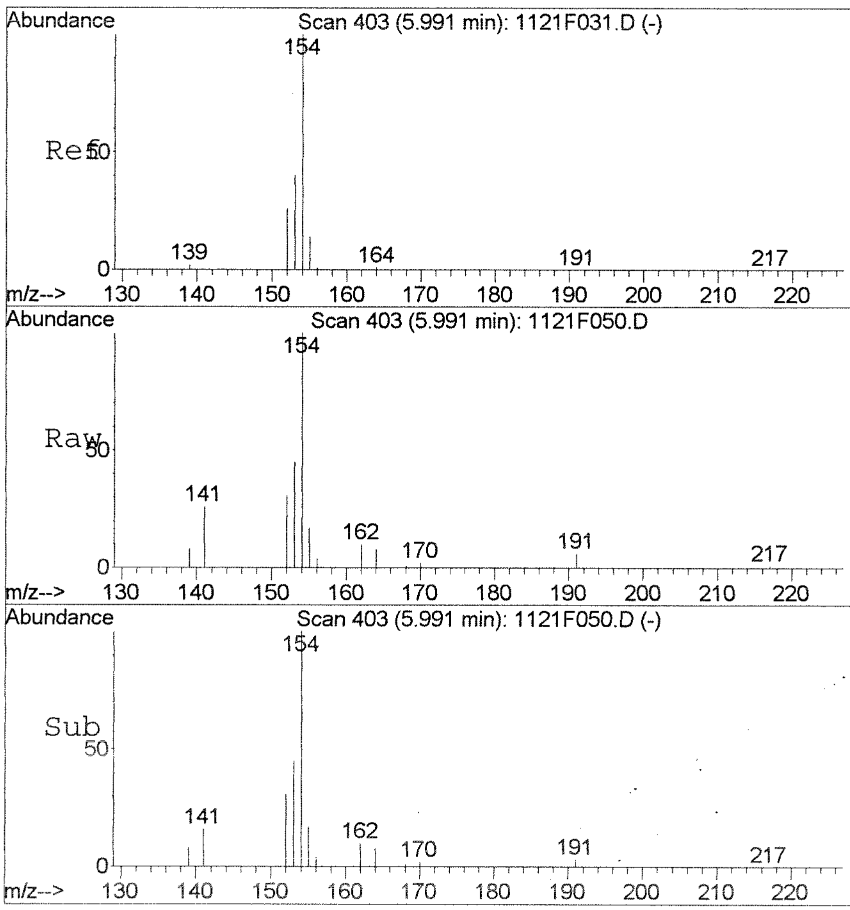


#4
1-Methylnaphthalene
Concen: 114.19 ng/ml
RT: 5.70 min Scan# 356
Delta R.T. 0.01 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:142 Resp: 99343

Ion	Ratio	Lower	Upper
142	100		
141	88.7	63.0	123.0

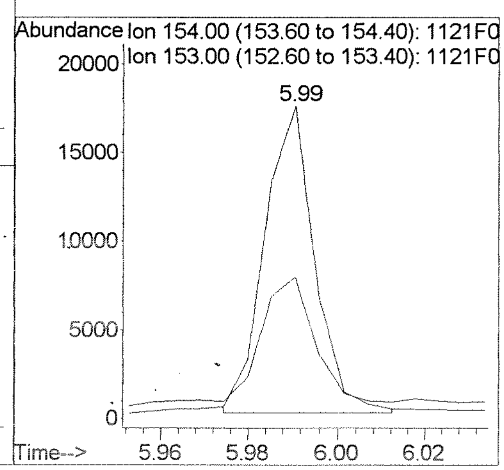


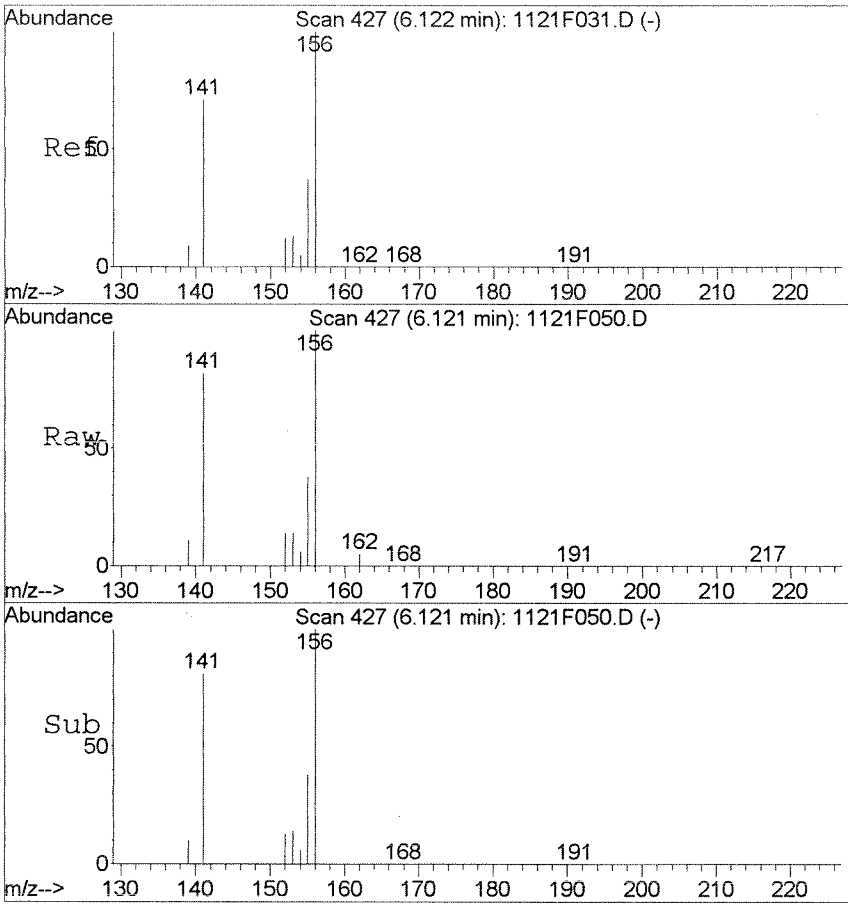


#5
Biphenyl
Concen: 11.44 ng/ml m
RT: 5.99 min Scan# 403
Delta R.T. 0.01 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:154 Resp: 13585

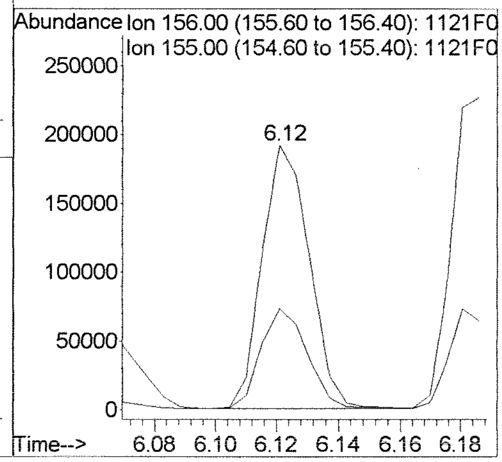
Ion	Ratio	Lower	Upper
154	100		
153	45.5	10.4	70.4

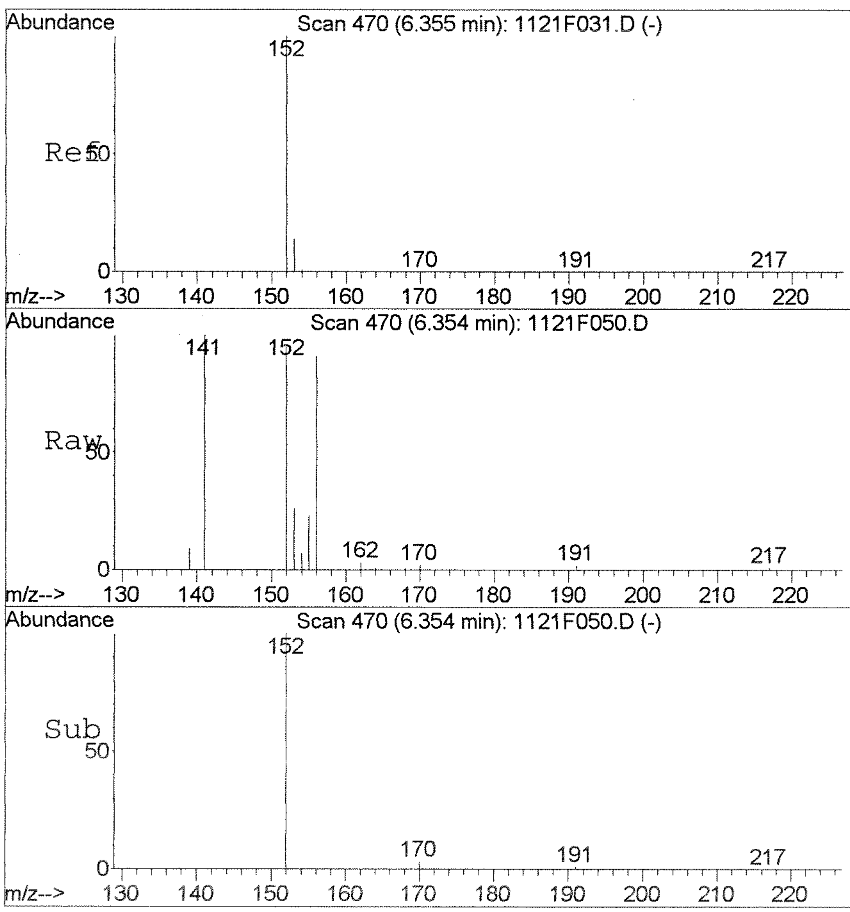




#6
2,6-Dimethylnaphthalene
Concen: 241.64 ng/ml
RT: 6.12 min Scan# 427
Delta R.T. 0.00 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

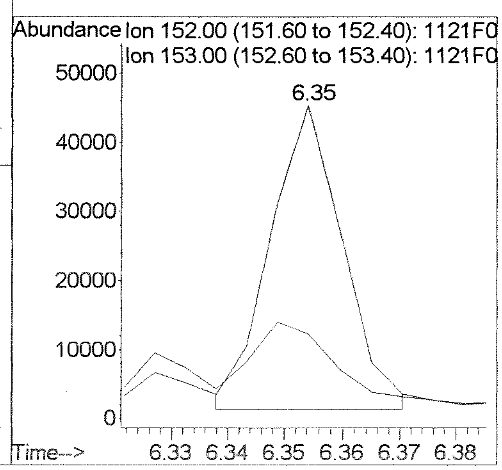
Tgt	Ion:156	Resp:	205017
Ion	Ratio	Lower	Upper
156	100		
155	37.9	7.3	67.3

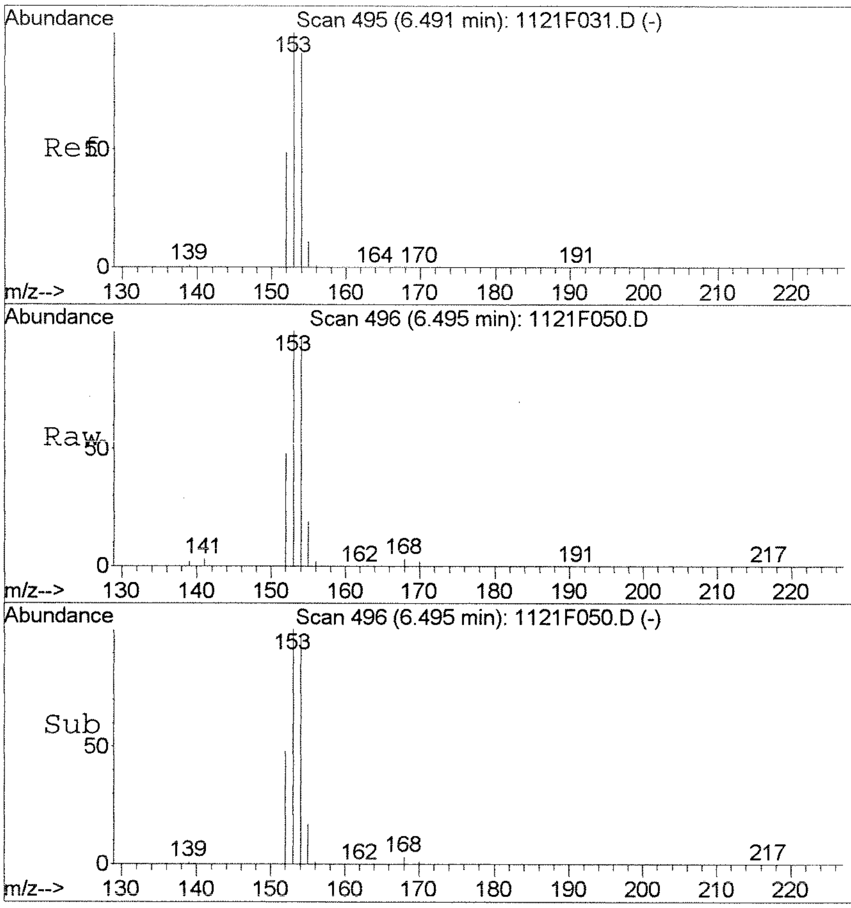




#11
Acenaphthylene
Concen: 27.43 ng/ml m
RT: 6.35 min Scan# 470
Delta R.T. 0.00 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt	Ion:152	Resp:	38280
Ion	Ratio	Lower	Upper
152	100		
153	27.2	0.0	43.0

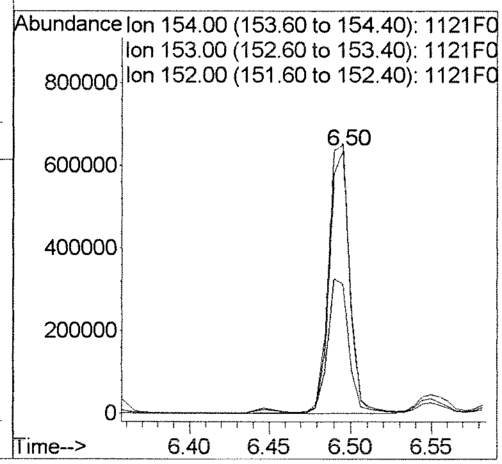


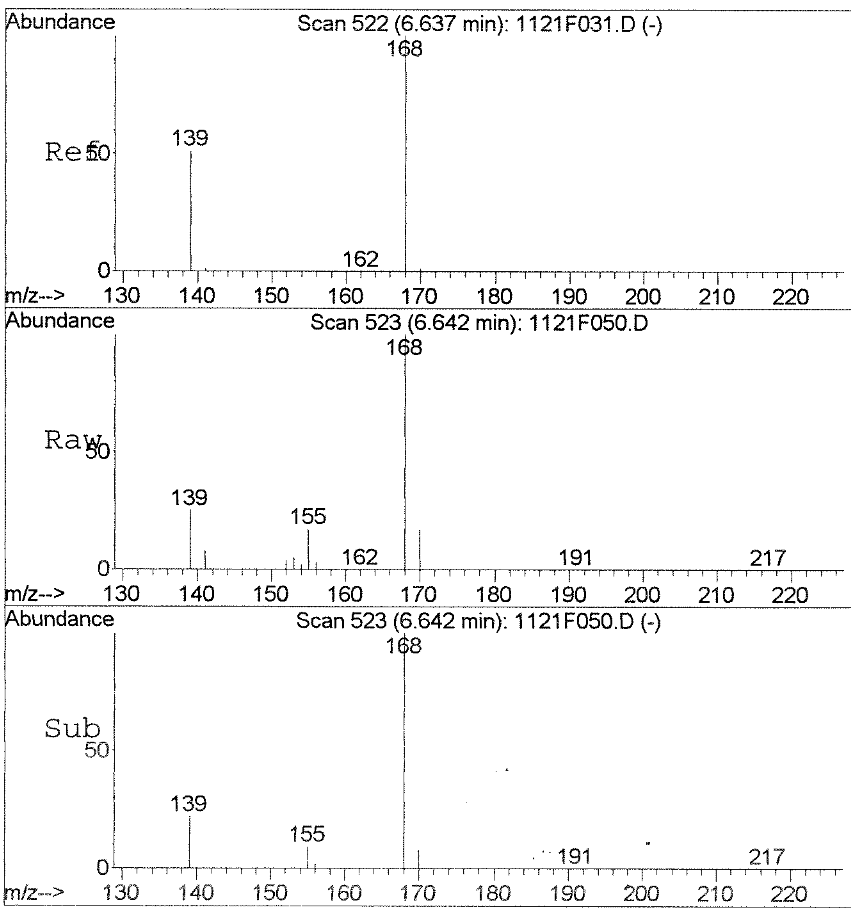


#12
Acenaphthene
Concen: 641.91 ng/ml
RT: 6.50 min Scan# 496
Delta R.T. 0.01 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:154 Resp: 544305

Ion	Ratio	Lower	Upper
154	100		
153	101.9	81.9	141.9
152	48.9	26.8	86.8

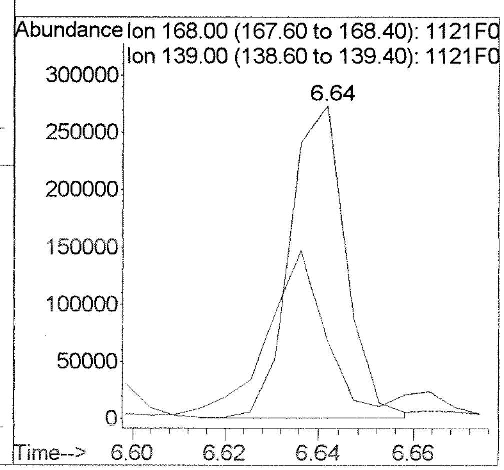


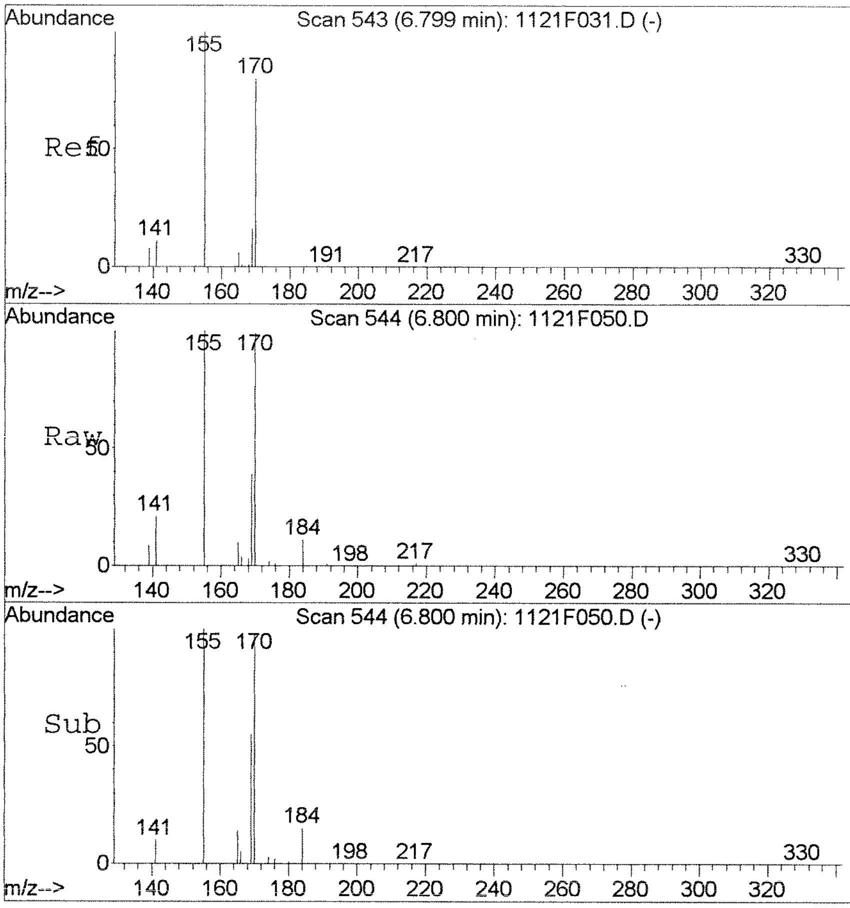


#13
Dibenzofuran
Concen: 172.44 ng/ml m
RT: 6.64 min Scan# 523
Delta R.T. 0.01 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:168 Resp: 219961

Ion	Ratio	Lower	Upper
168	100		
139	25.3	21.0	81.0

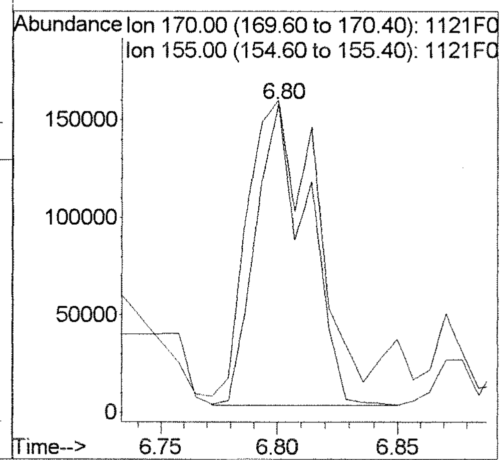


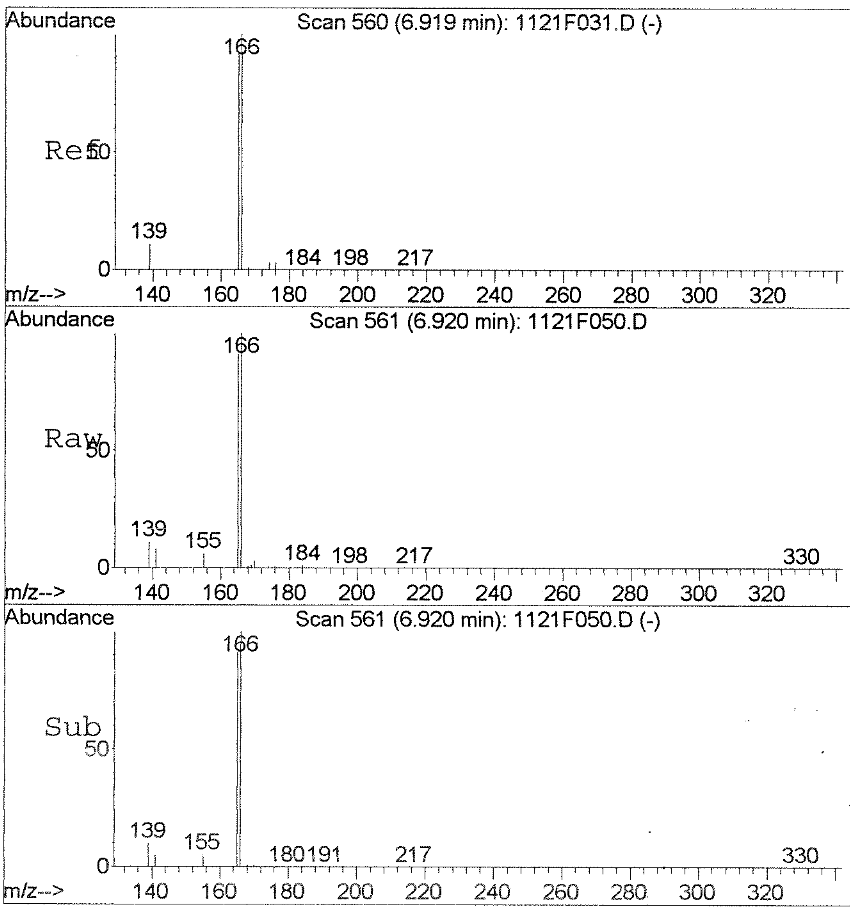


#14
2,3,5-Trimethylnaphthalene
Concen: 320.24 ng/ml
RT: 6.80 min Scan# 544
Delta R.T. 0.01 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:170 Resp: 238825

Ion	Ratio	Lower	Upper
170	100		
155	98.4	42.9	102.9

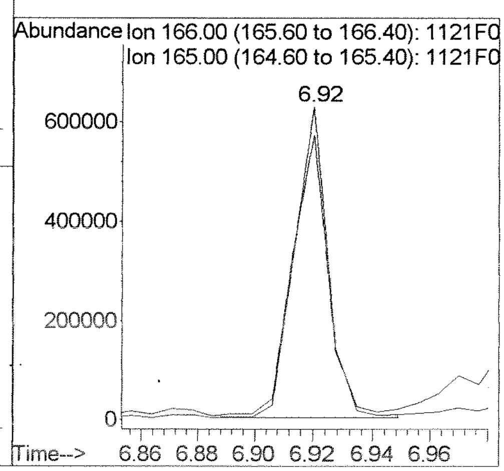


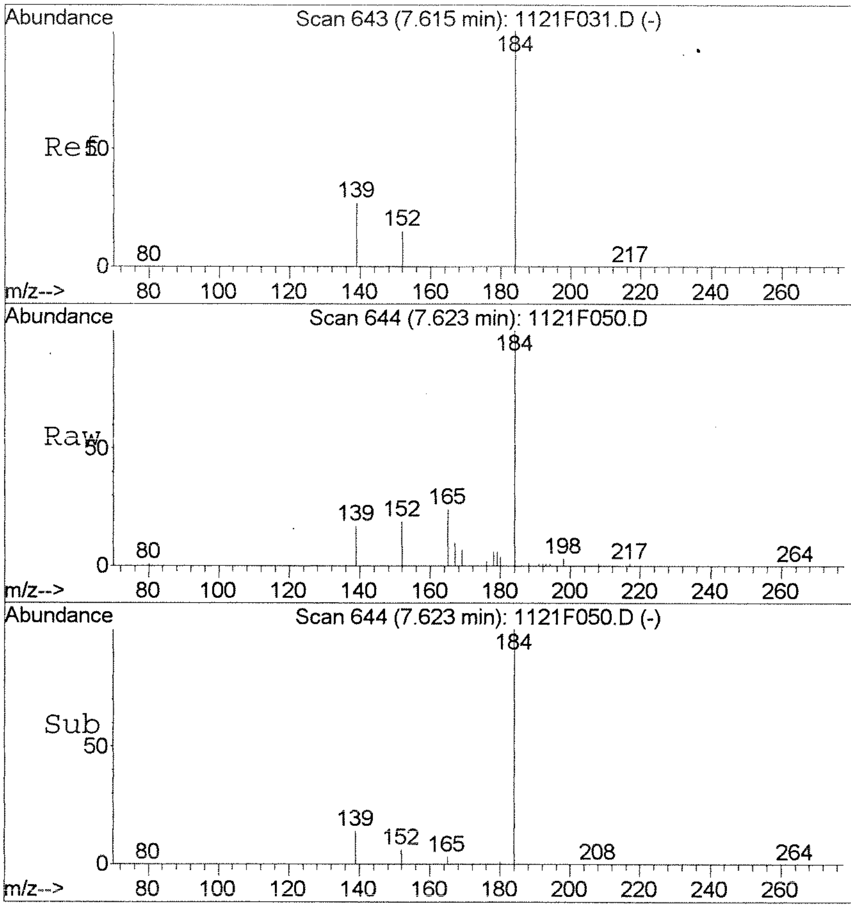


#16
Fluorene
Concen: 477.06 ng/ml
RT: 6.92 min Scan# 561
Delta R.T. 0.01 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:166 Resp: 485631

Ion	Ratio	Lower	Upper
166	100		
165	90.3	59.8	119.8

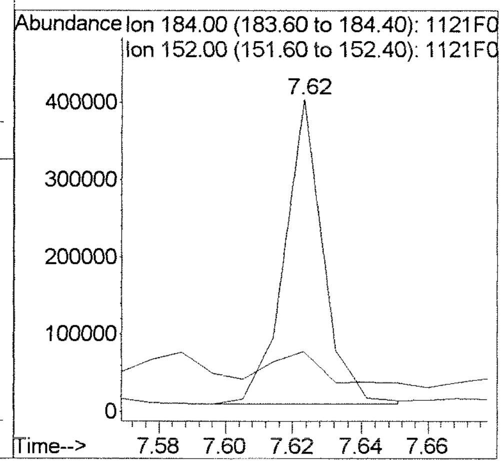


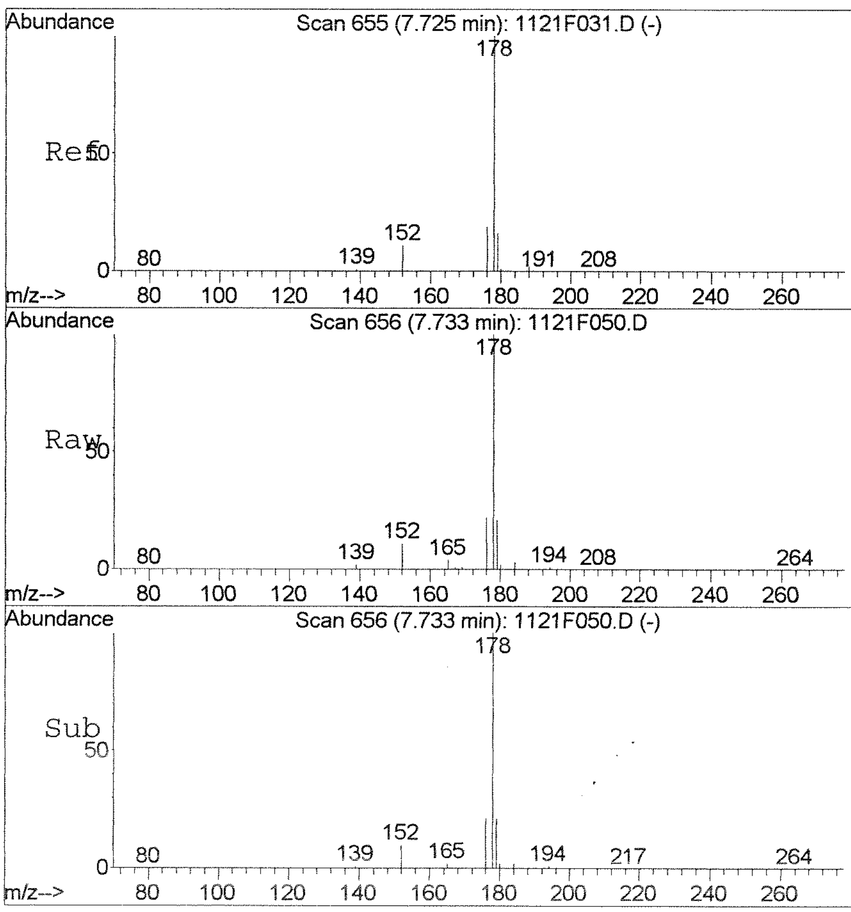


#23
Dibenzothiophene
Concen: 214.37 ng/ml
RT: 7.62 min Scan# 644
Delta R.T. 0.01 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:184 Resp: 309779

Ion	Ratio	Lower	Upper
184	100		
152	10.3	0.0	39.1

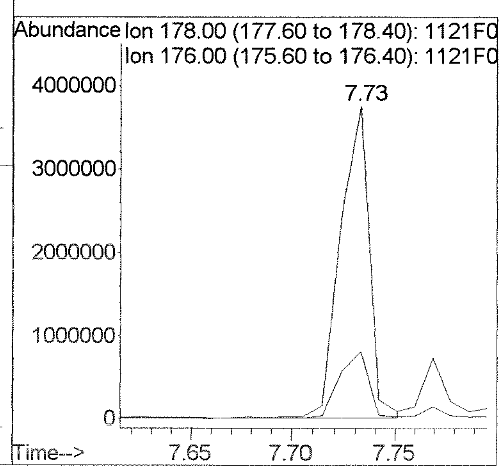


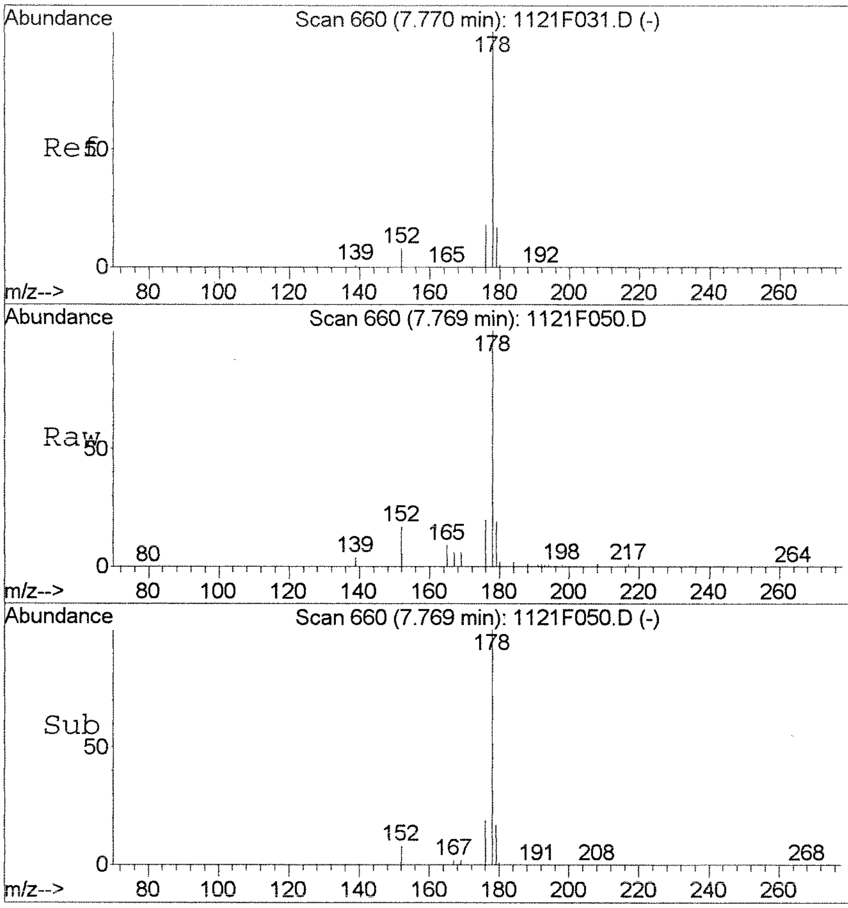


#27
Phenanthrene
Concen: 2475.60 ng/ml
RT: 7.73 min Scan# 656
Delta R.T. 0.02 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:178 Resp: 3658800

Ion	Ratio	Lower	Upper
178	100		
176	21.5	0.0	51.0

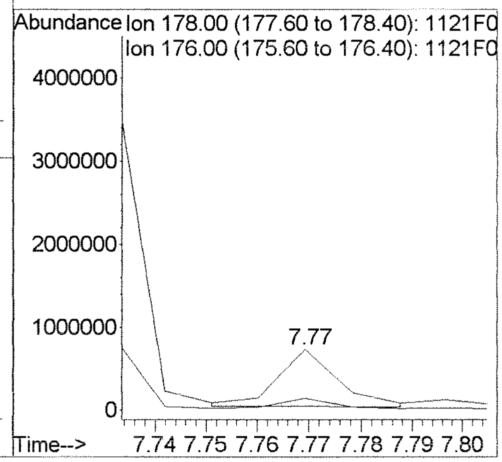


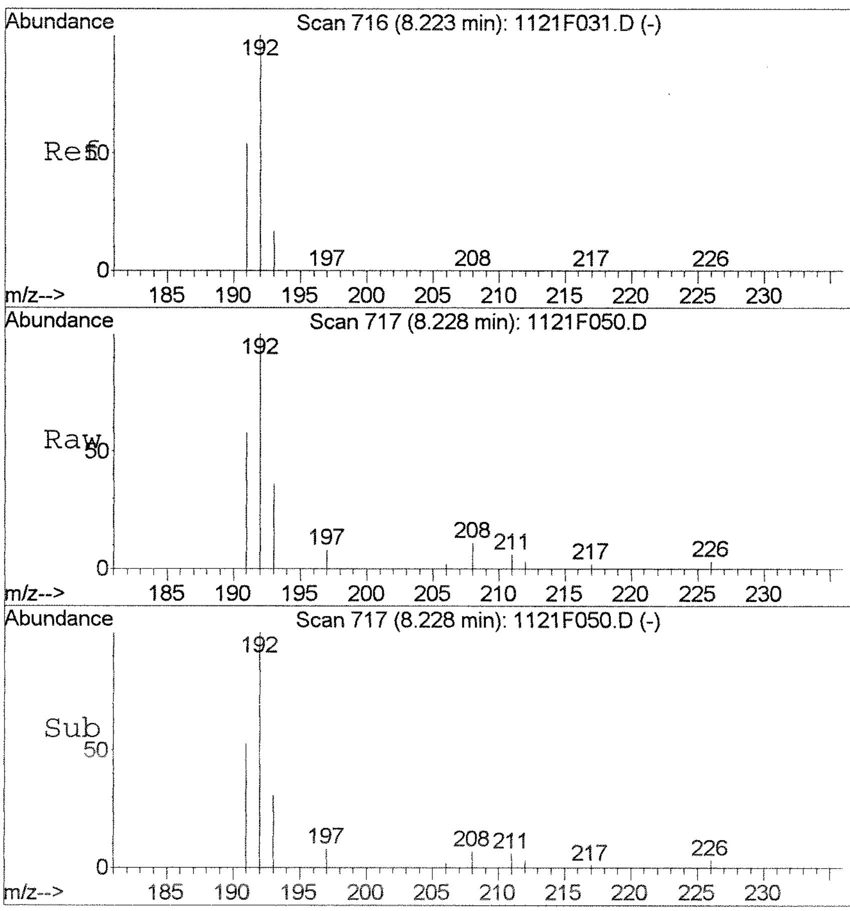


#28
Anthracene
Concen: 376.87 ng/ml m
RT: 7.77 min Scan# 660
Delta R.T. 0.01 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:178 Resp: 542690

Ion	Ratio	Lower	Upper
178	100		
176	19.8	0.0	49.7

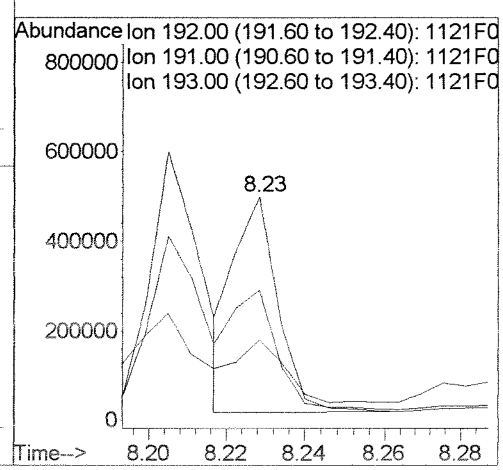


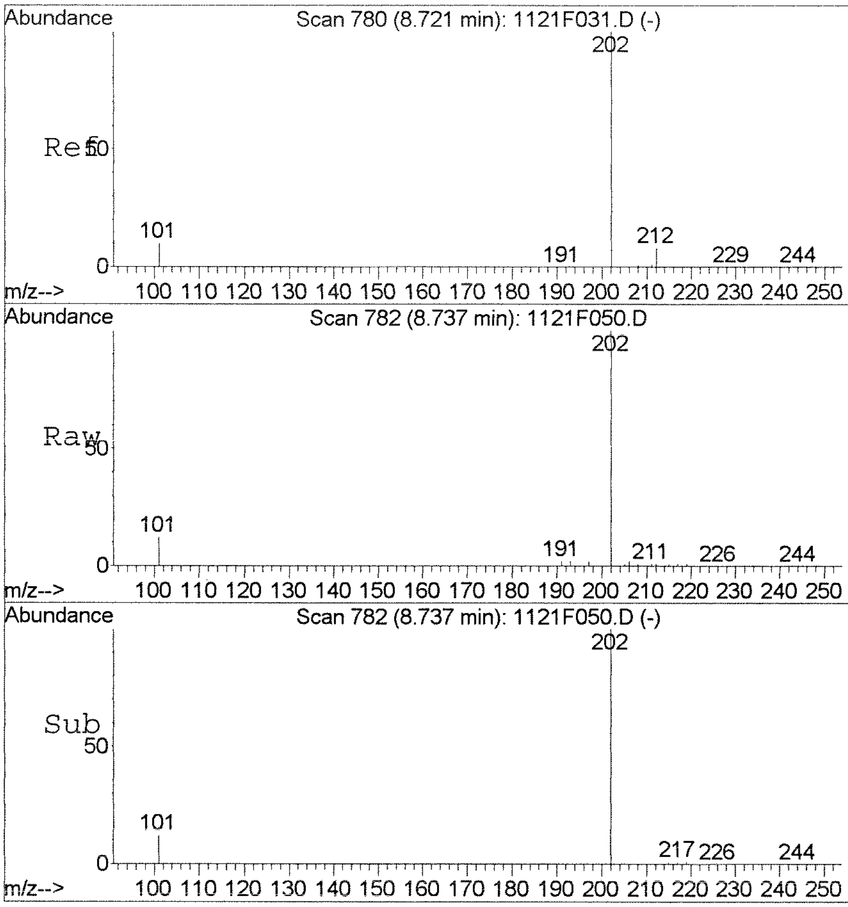


#30
1-Methylphenanthrene
Concen: 348.60 ng/ml
RT: 8.23 min Scan# 717
Delta R.T. 0.01 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:192 Resp: 382372

Ion	Ratio	Lower	Upper
192	100		
191	55.7	29.0	89.0
193	29.1	0.0	45.4

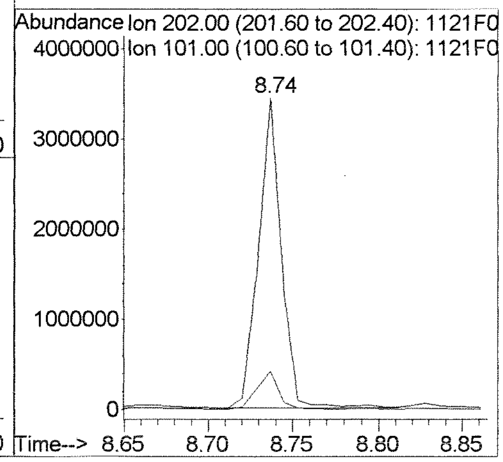


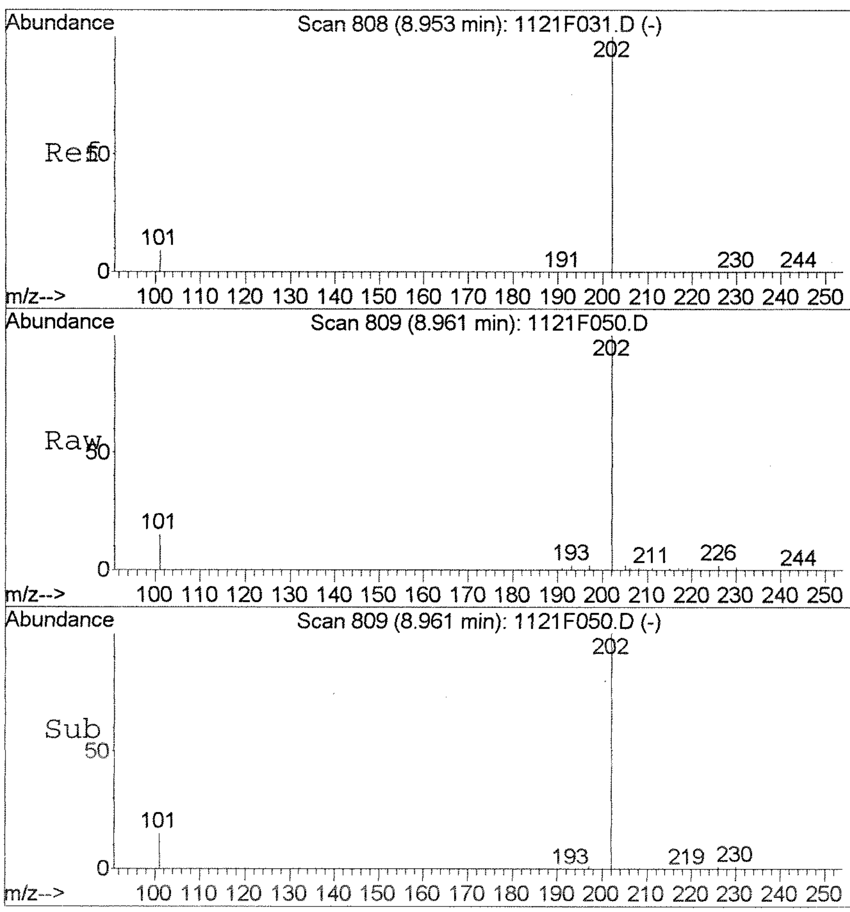


#35
Fluoranthene
Concen: 1919.23 ng/ml
RT: 8.74 min Scan# 782
Delta R.T. 0.02 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:202 Resp: 3222036

Ion	Ratio	Lower	Upper
202	100		
101	12.2	0.0	35.8

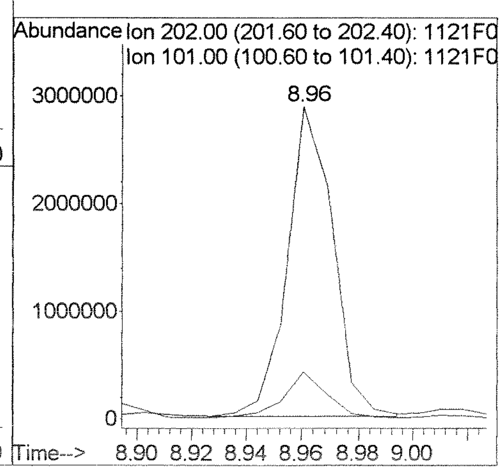


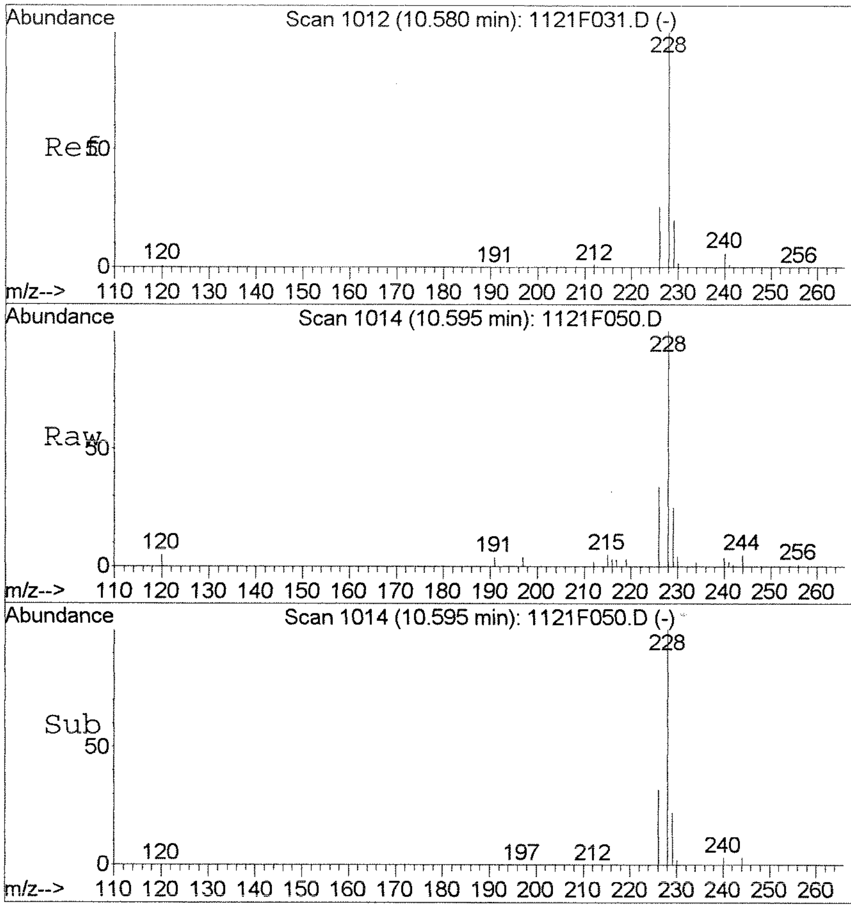


#38
Pyrene
Concen: 1622.42 ng/ml
RT: 8.96 min Scan# 809
Delta R.T. 0.02 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:202 Resp: 3202340

Ion	Ratio	Lower	Upper
202	100		
101	14.8	0.0	37.6

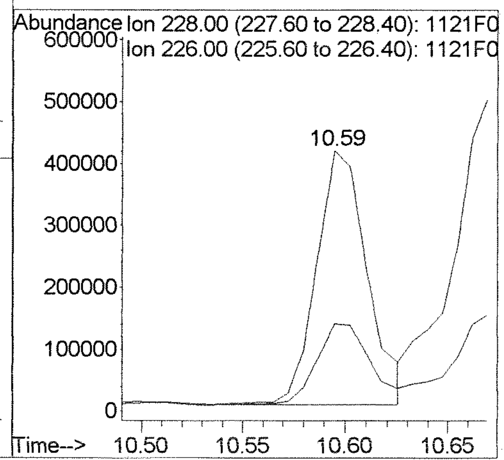


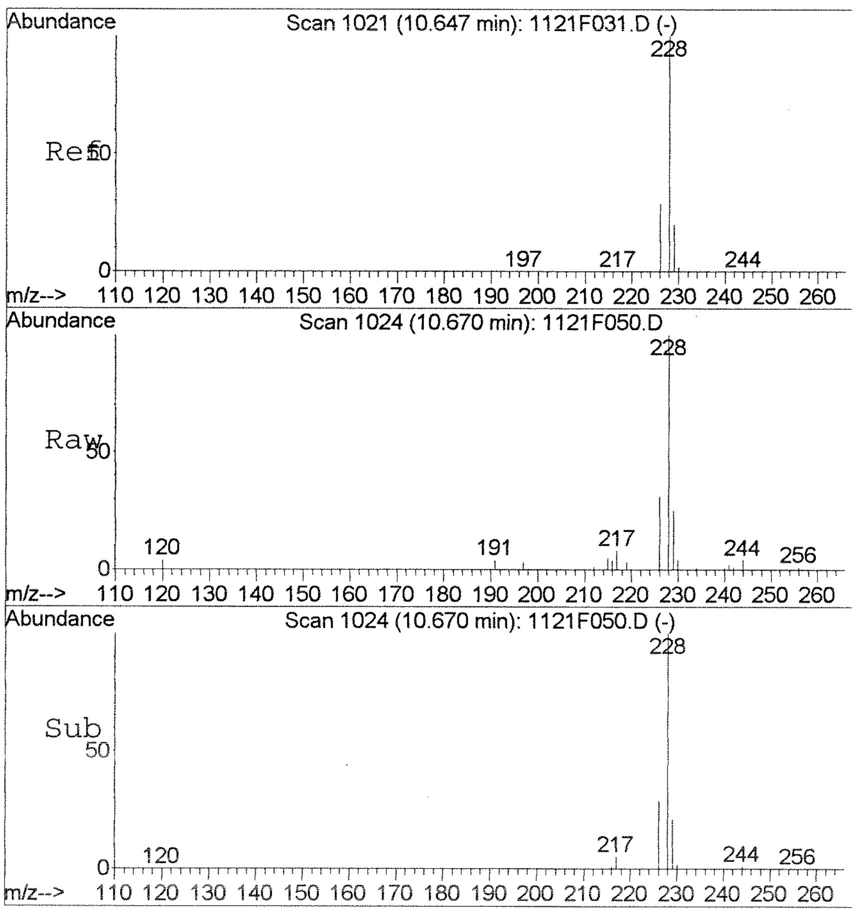


#43
Benz(a)anthracene
Concen: 386.86 ng/ml
RT: 10.59 min Scan# 1014
Delta R.T. 0.03 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:228 Resp: 692727

Ion	Ratio	Lower	Upper
228	100		
226	32.0	0.0	57.0

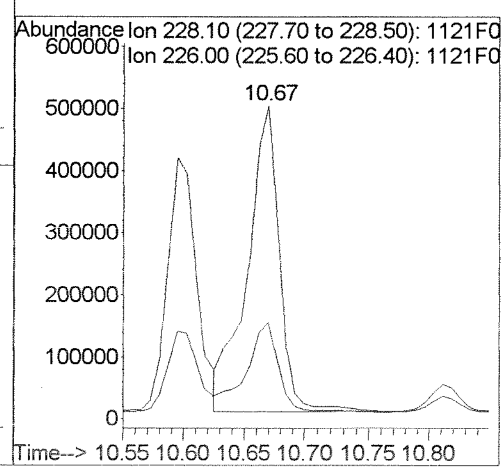


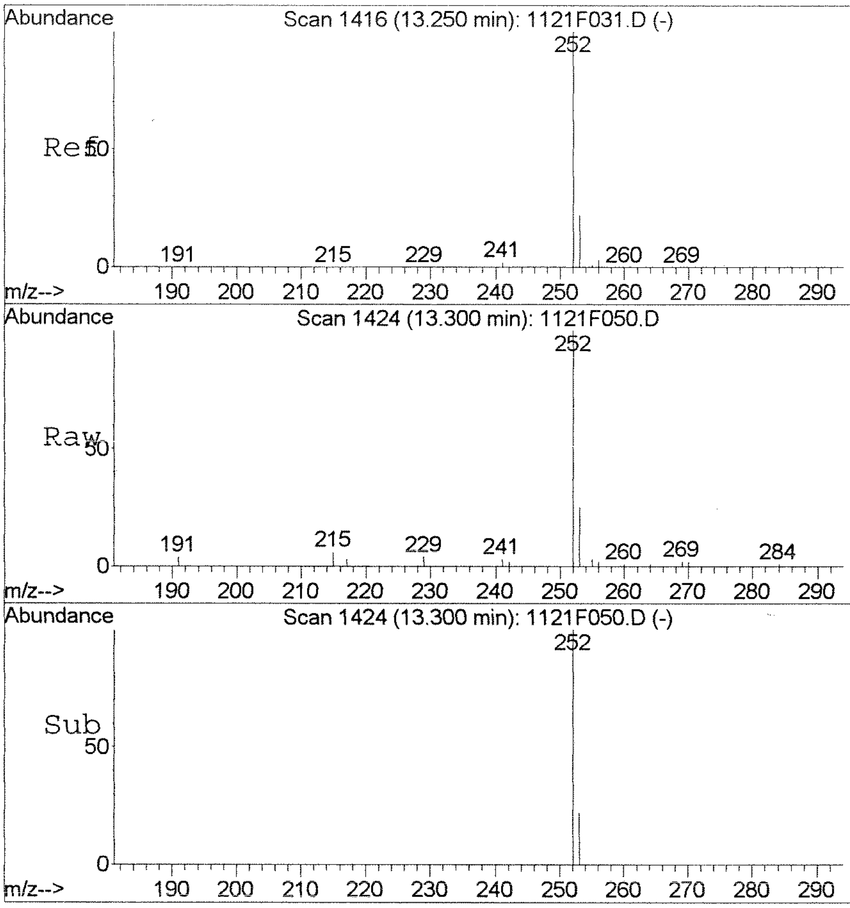


#44
Chrysene
Concen: 518.90 ng/ml
RT: 10.67 min Scan# 1024
Delta R.T. 0.04 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:228 Resp: 912573

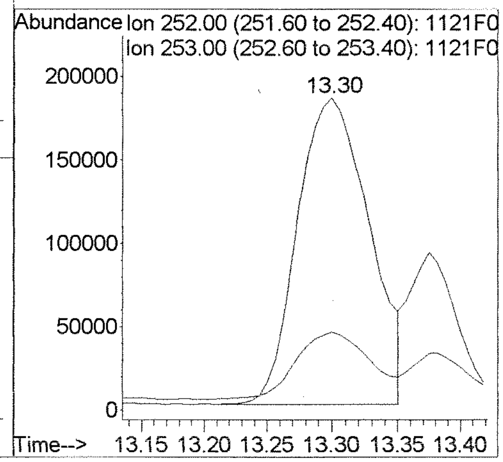
Ion	Ratio	Lower	Upper
228	100		
226	29.3	0.0	58.9

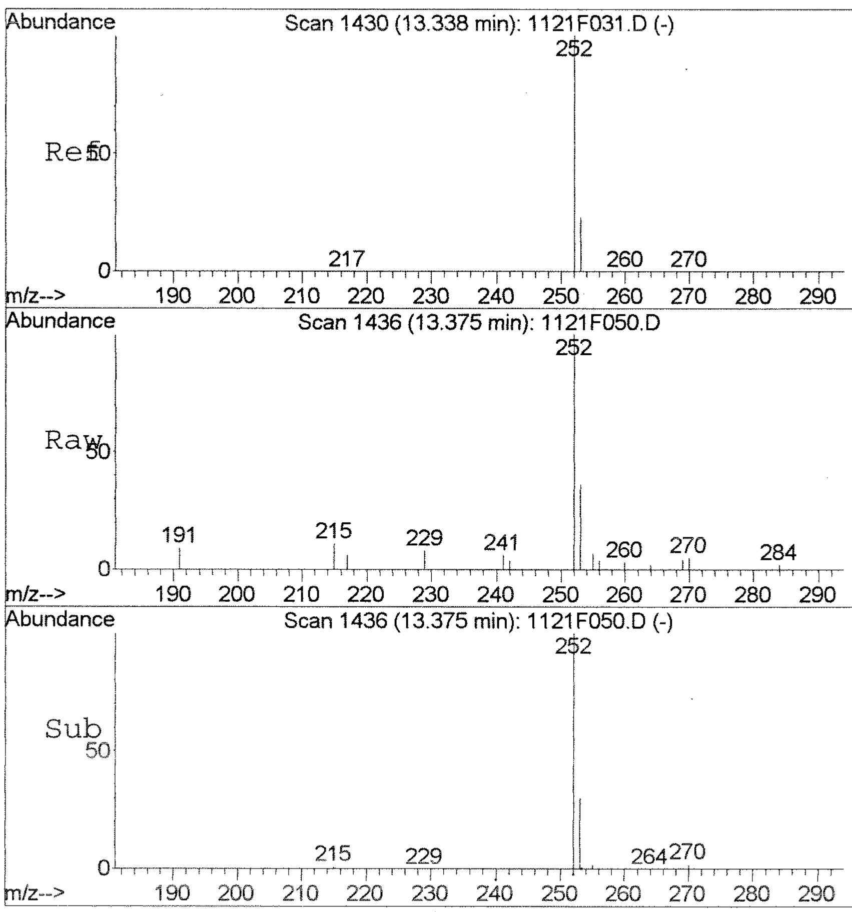




#50
Benzo(b)fluoranthene
Concen: 378.65 ng/ml
RT: 13.30 min Scan# 1424
Delta R.T. 0.07 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

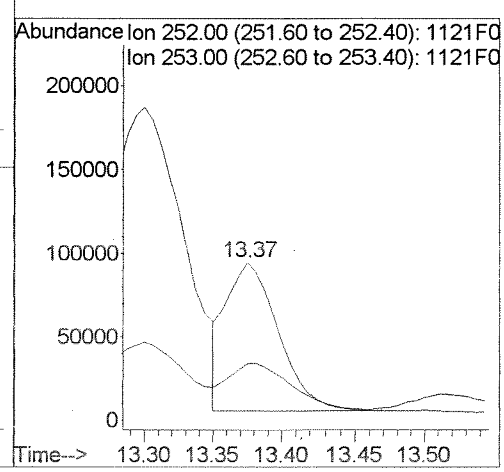
Tgt	Ion:252	Resp:	697478
Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	52.6

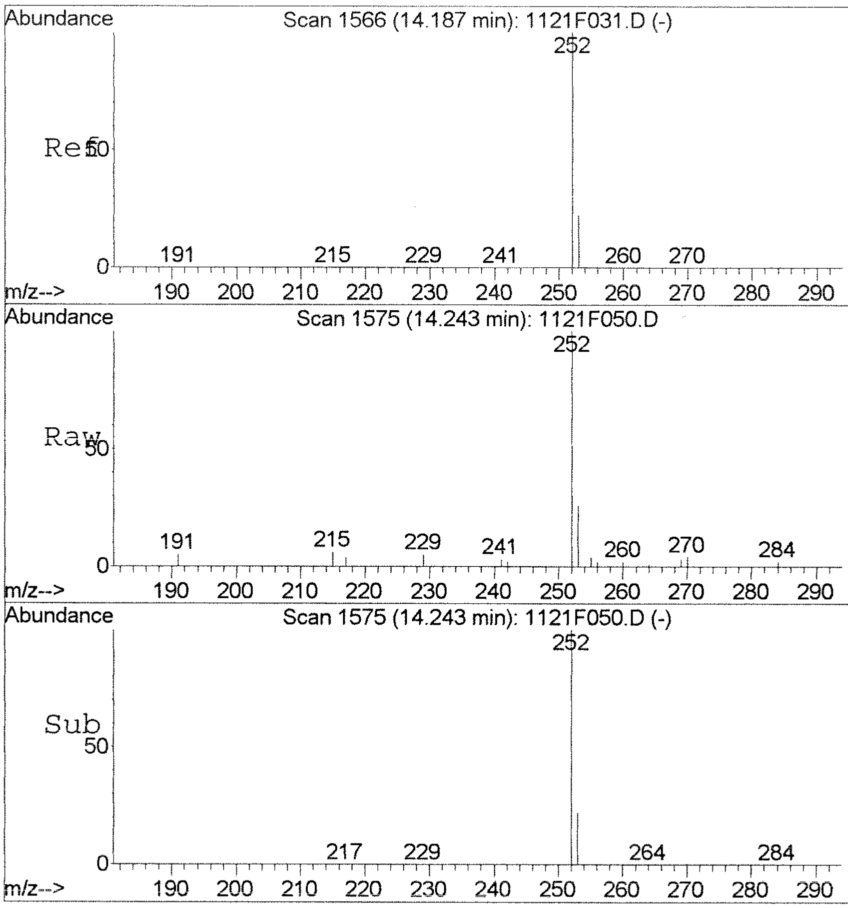




#51
Benzo(k)fluoranthene
Concen: 133.05 ng/ml
RT: 13.37 min Scan# 1436
Delta R.T. 0.06 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

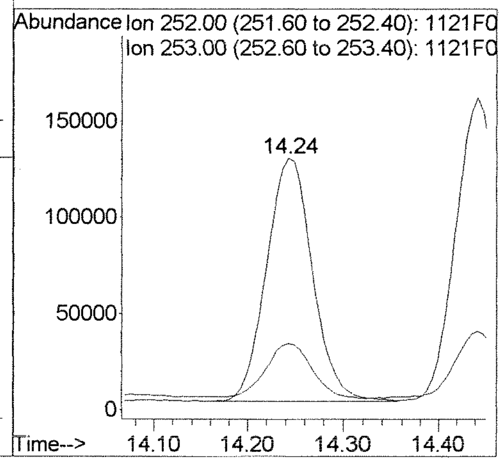
Tgt	Ion:252	Resp:	235435
Ion	Ratio	Lower	Upper
252	100		
253	27.9	0.0	52.0

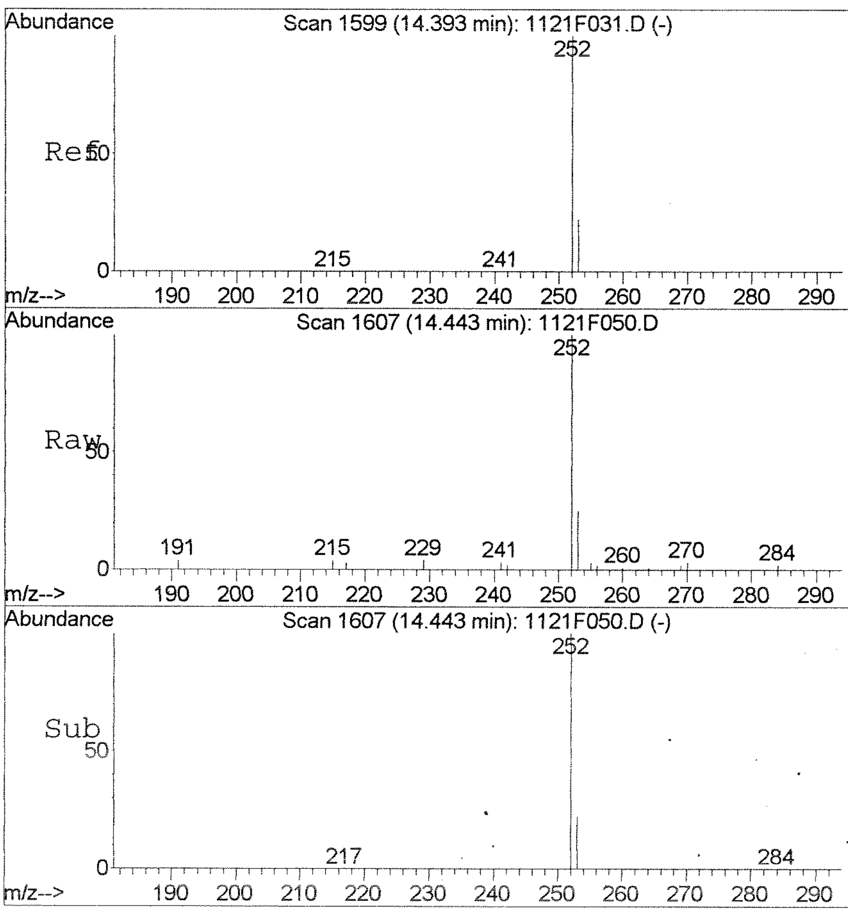




#52
Benzo(e)pyrene
Concen: 253.86 ng/ml
RT: 14.24 min Scan# 1575
Delta R.T. 0.07 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

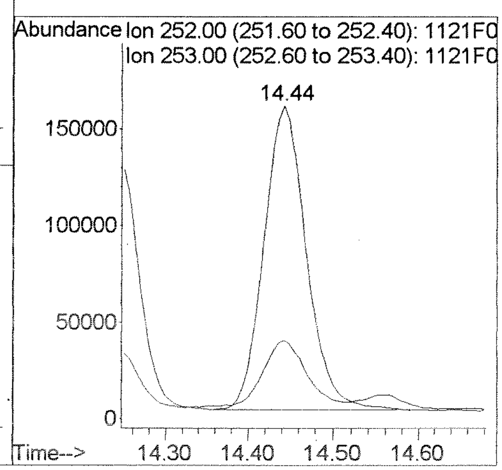
Tgt	Ion:252	Resp:	424765
Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	52.2

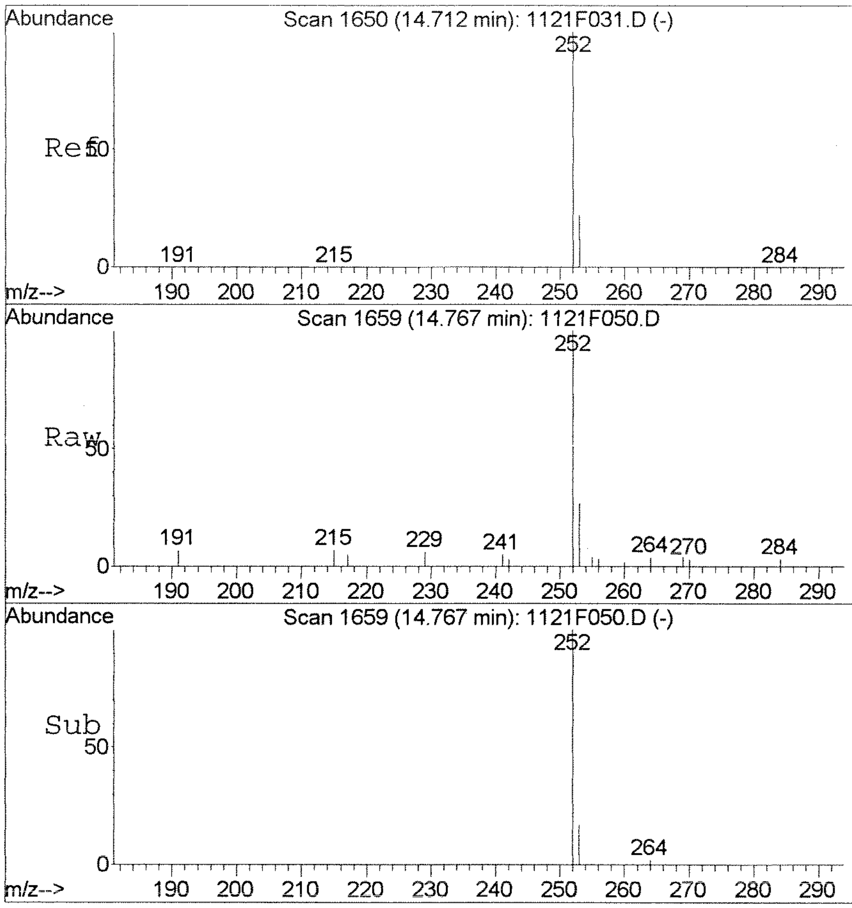




#53
Benzo(a)pyrene
Concen: 360.21 ng/ml
RT: 14.44 min Scan# 1607
Delta R.T. 0.07 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt	Ion:252	Resp:	549357
Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	52.2

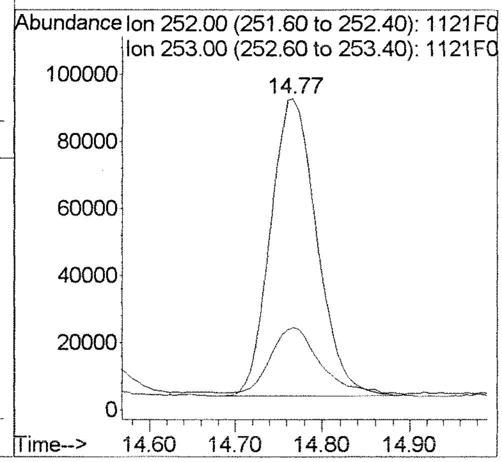


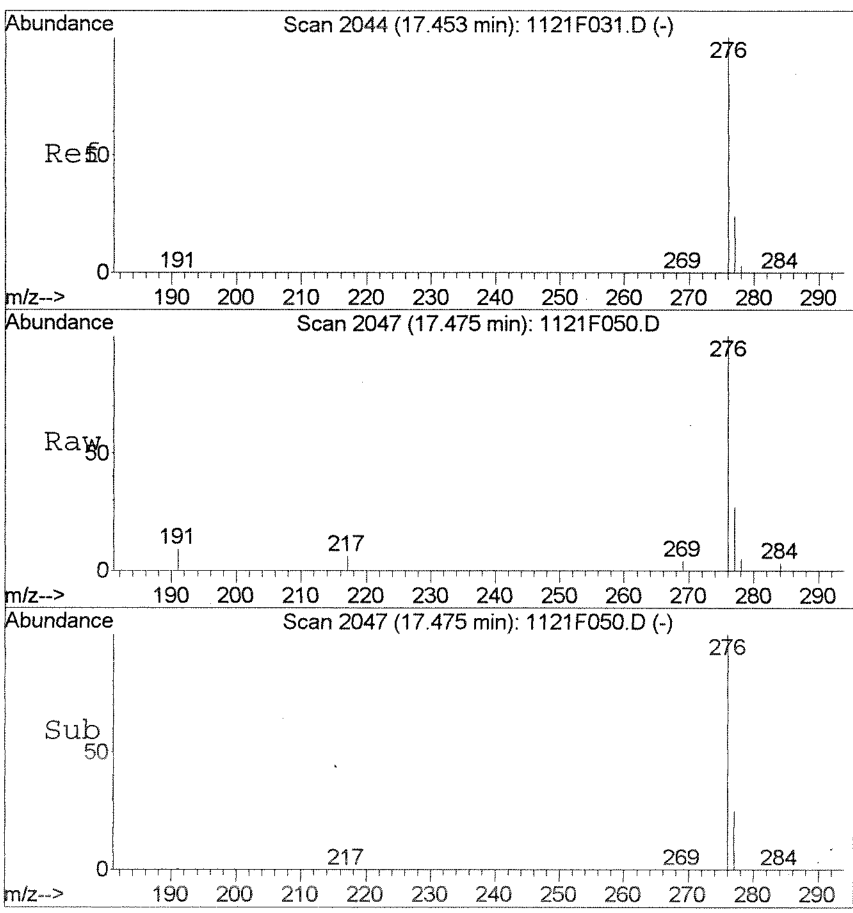


#54
Perylene
Concen: 218.27 ng/ml
RT: 14.77 min Scan# 1659
Delta R.T. 0.08 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:252 Resp: 327011

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.5

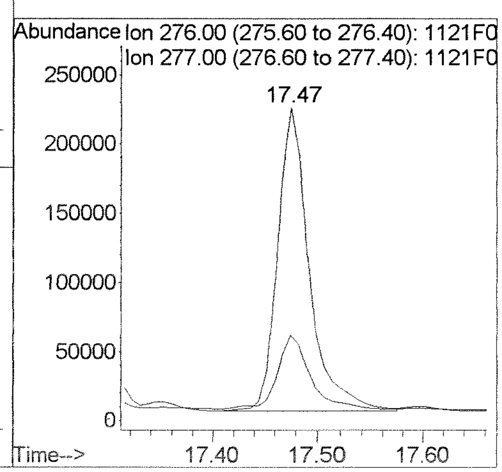


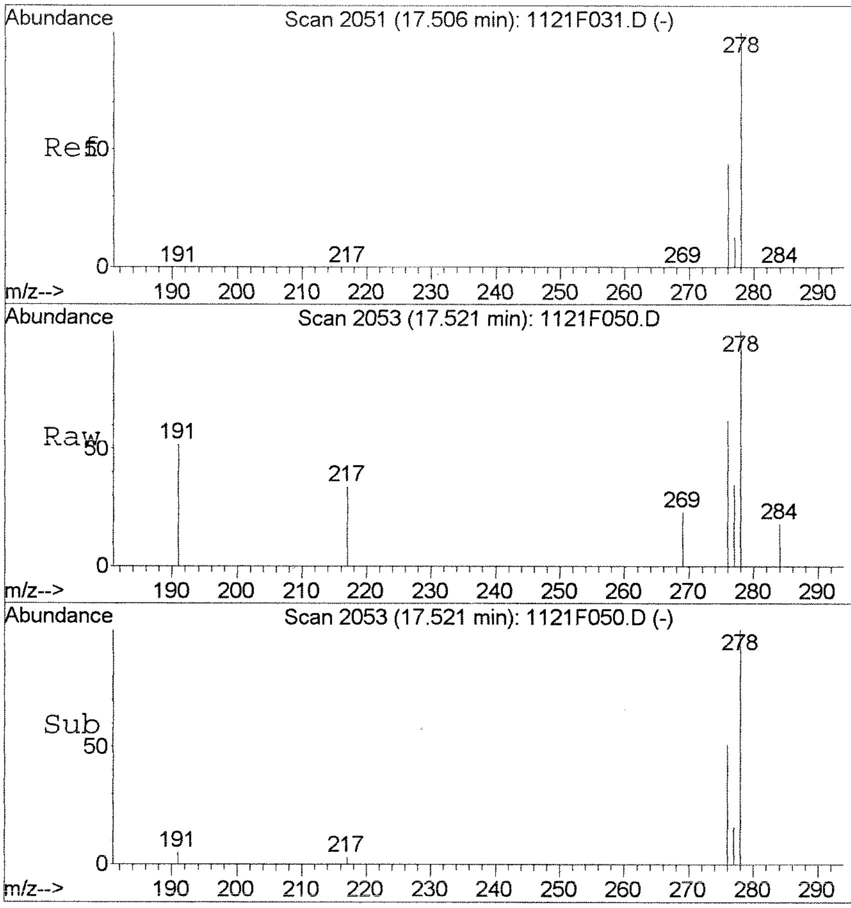


#55
Indeno(1,2,3-cd)pyrene
Concen: 319.90 ng/ml
RT: 17.47 min Scan# 2047
Delta R.T. 0.04 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:276 Resp: 452679

Ion	Ratio	Lower	Upper
276	100		
277	24.4	0.0	54.7

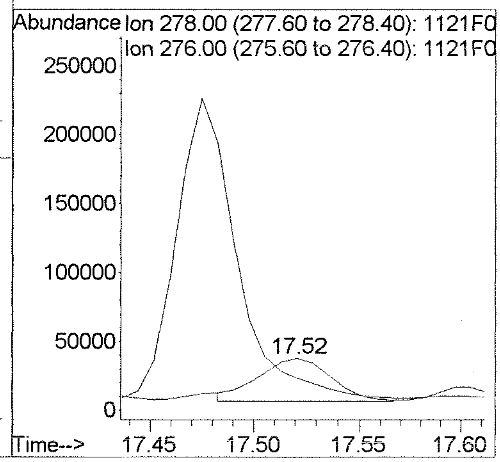


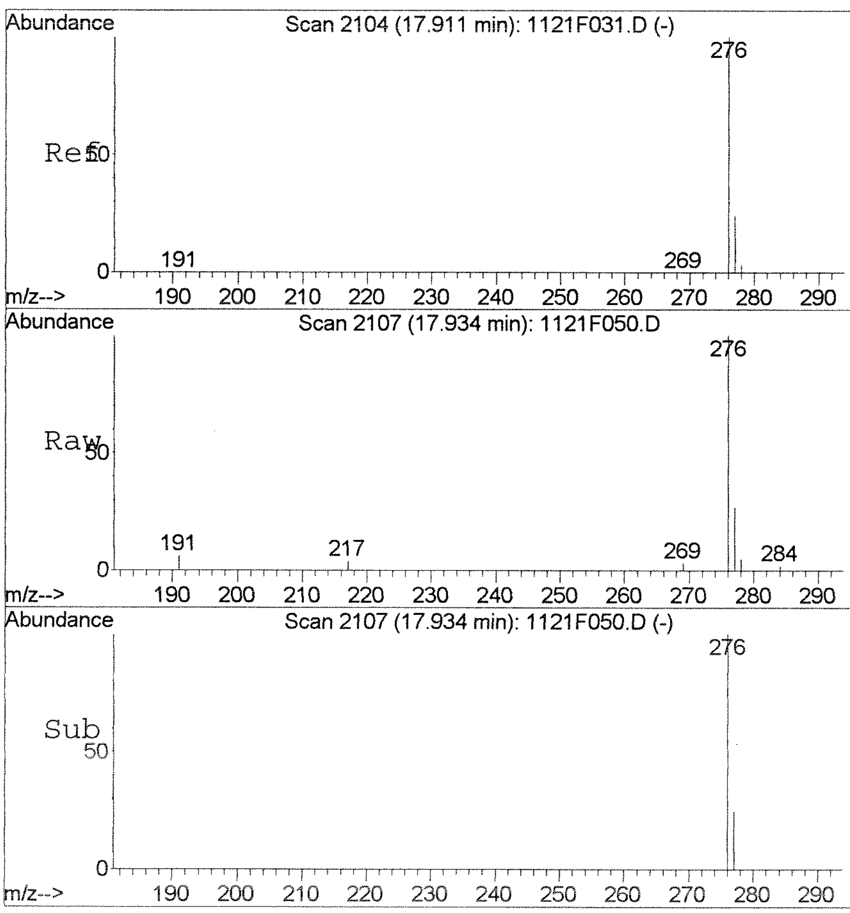


#56
Dibenz(a,h)anthracene
Concen: 50.95 ng/ml m
RT: 17.52 min Scan# 2053
Delta R.T. 0.03 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:278 Resp: 75671

Ion	Ratio	Lower	Upper
278	100		
276	62.4	0.0	59.7#

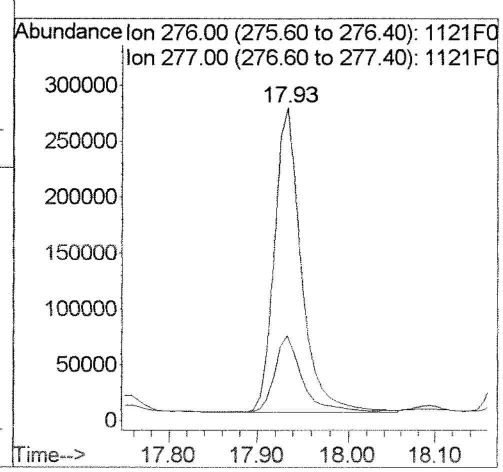




#57
Benzo(g,h,i)perylene
Concen: 355.50 ng/ml
RT: 17.93 min Scan# 2107
Delta R.T. 0.04 min
Lab File: 1121F050.D
Acq: 22 Nov 2008 3:40 am

Tgt Ion:276 Resp: 573122

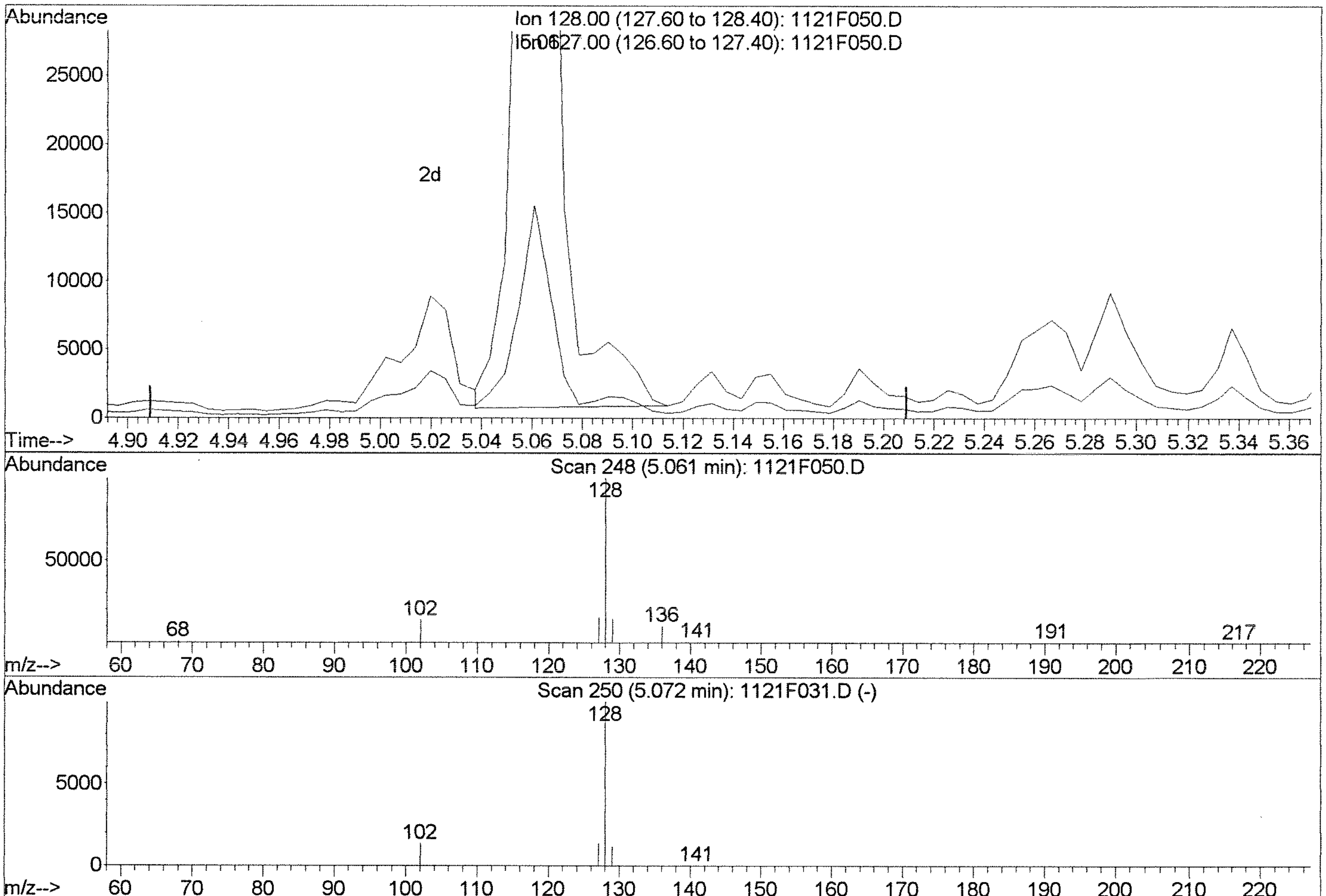
Ion	Ratio	Lower	Upper
276	100		
277	25.0	0.0	54.2



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F050.D
Vial: 47
Acq On : 22 Nov 2008 3:40 am
Operator: LWeiskopf
Sample : K0810639-006
Inst : MS11
Misc :
Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14 2008
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F050.D

(2) Naphthalene (T)

5.06min 64.11ng/ml

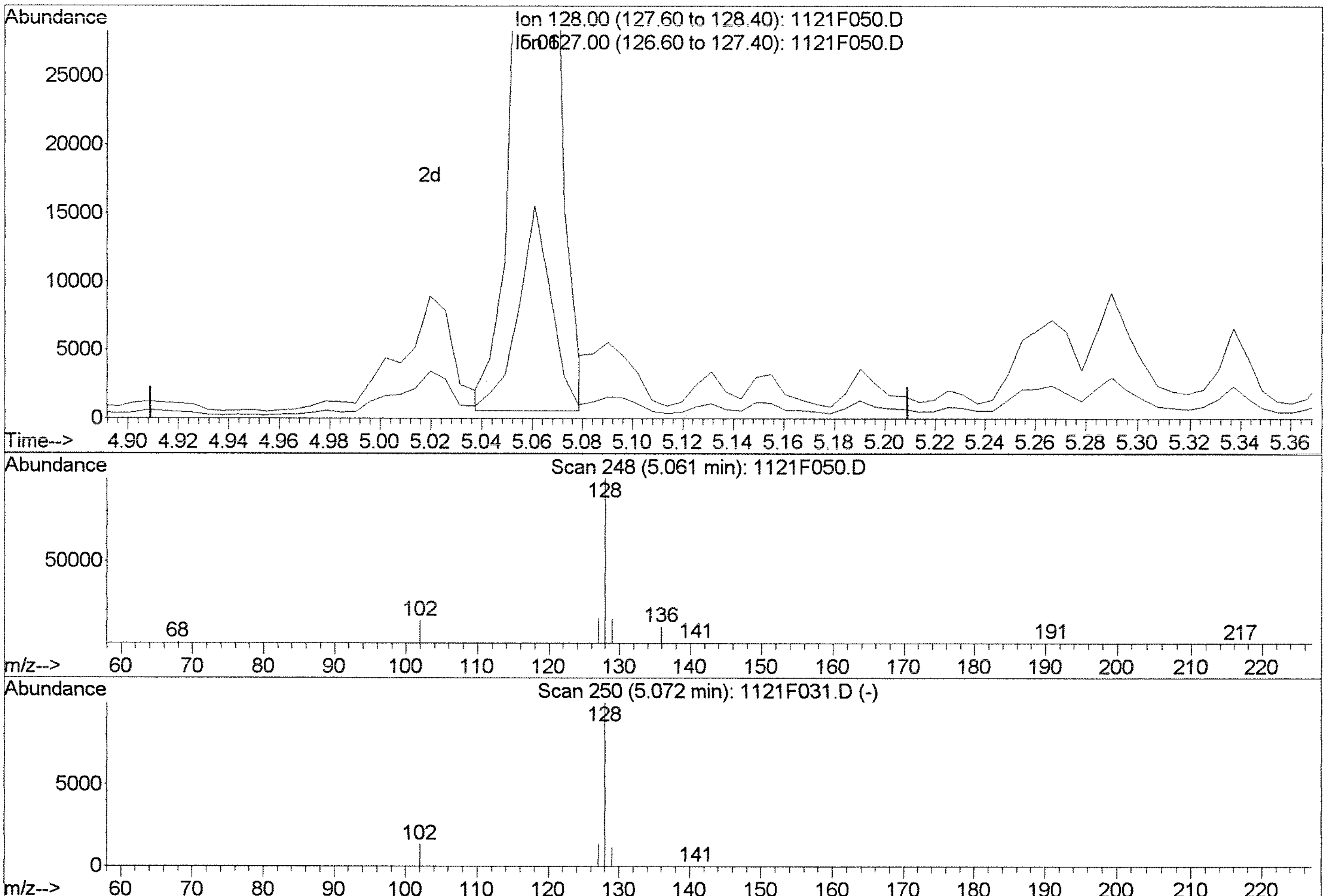
response 89350

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	15.32
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F050.D Vial: 47
Acq On : 22 Nov 2008 3:40 am Operator: LWeiskopf
Sample : K0810639-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:00 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(2) Naphthalene (T)

5.06min 60.62ng/ml m

response 84487

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	15.56
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/24/08

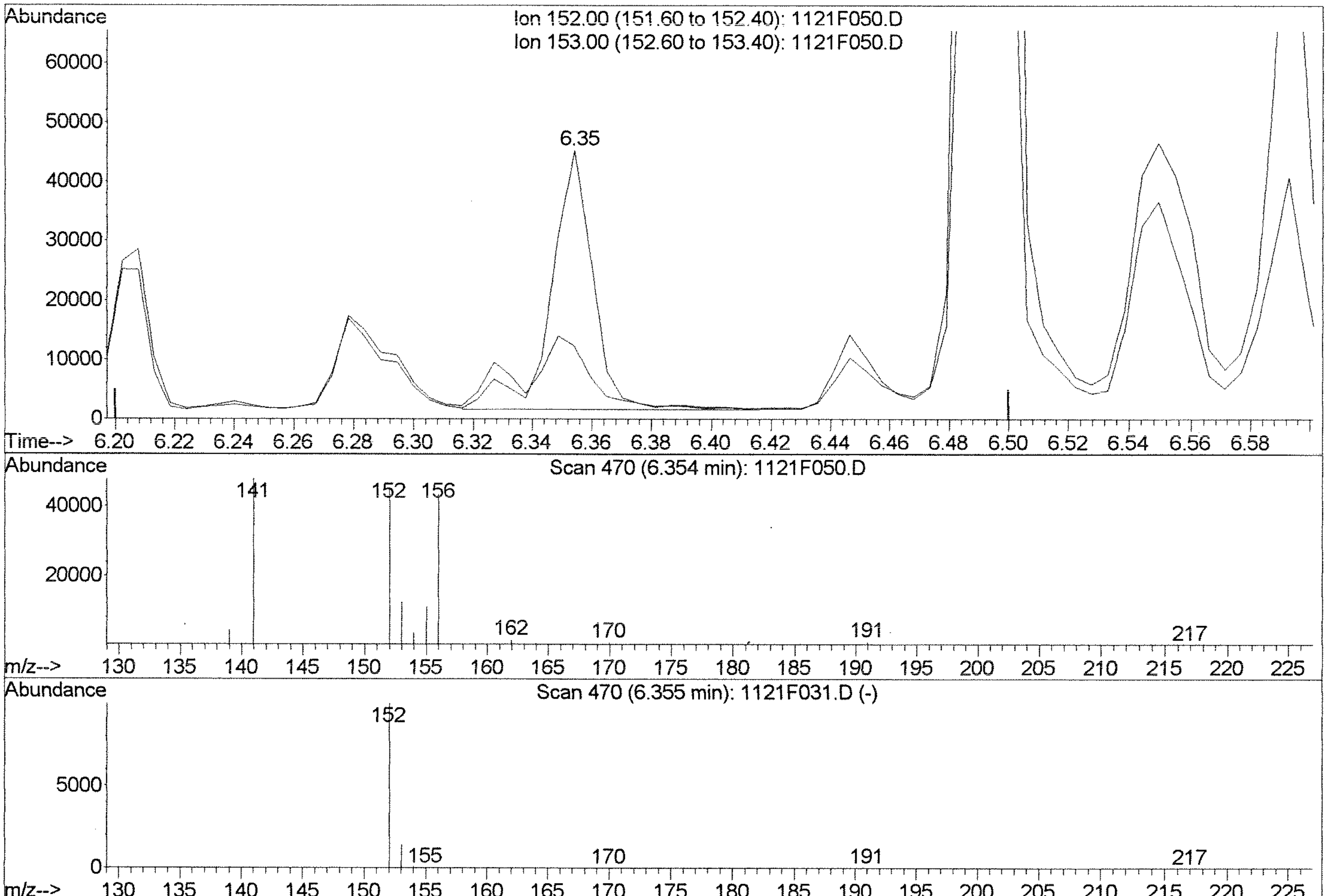
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F050.D
Acq On : 22 Nov 2008 3:40 am
Sample : K0810639-006
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:01 2008

Vial: 47
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F050.D

(11) Acenaphthylene (T)

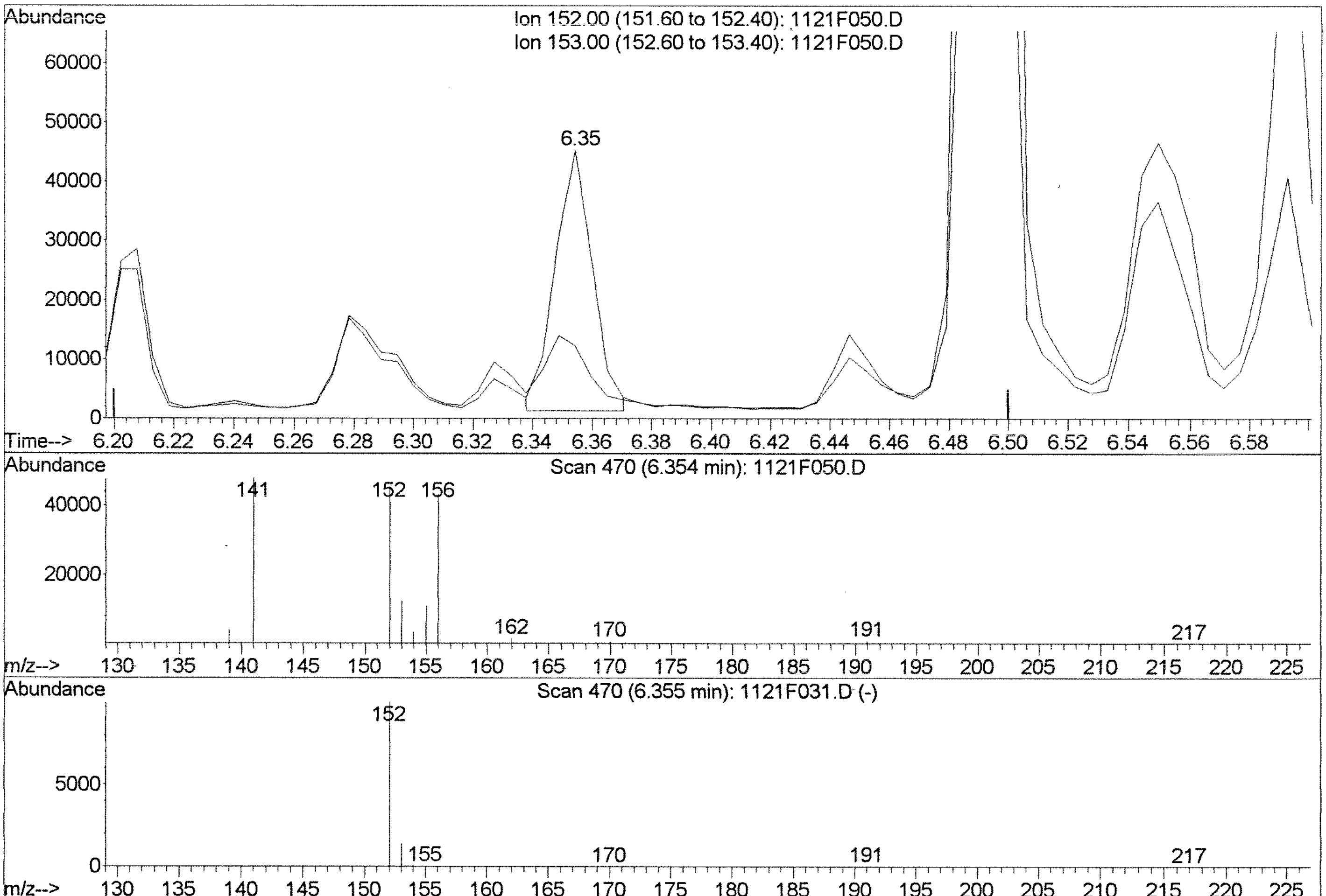
6.35min 30.75ng/ml

response 42913

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	24.12
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data File : J:\MS11\DATA\112108\1121F050.D                Vial: 47
Acq On    : 22 Nov 2008   3:40 am                     Operator: LWeiskopf
Sample    : K0810639-006                              Inst    : MS11
Misc      :                                           Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:01 2008               Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sat Nov 22 13:13:56 2008
Response via   : Multiple Level Calibration
```



TIC: 1121F050.D

(11) Acenaphthylene (T)

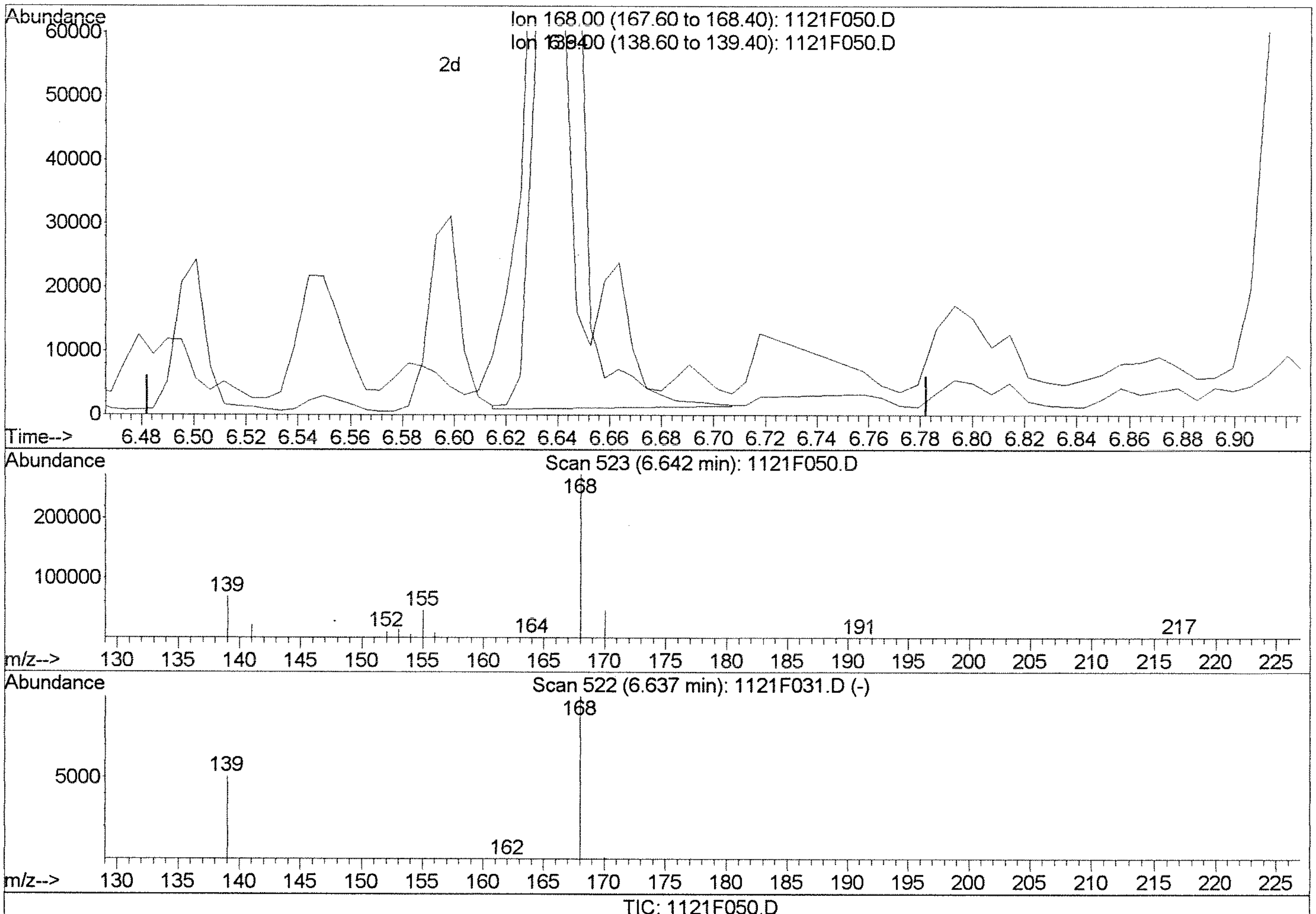
6.35min 27.43ng/ml m

response 38280

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	27.18
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data File : J:\MS11\DATA\112108\1121F050.D                 Vial: 47
Acq On    : 22 Nov 2008   3:40 am                       Operator: LWeiskopf
Sample    : K0810639-006                                Inst     : MS11
Misc      :                                             Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:01 2008                  Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sat Nov 22 13:13:56 2008
Response via   : Multiple Level Calibration
```



(13) Dibenzofuran (T)

6.64min 177.23ng/ml

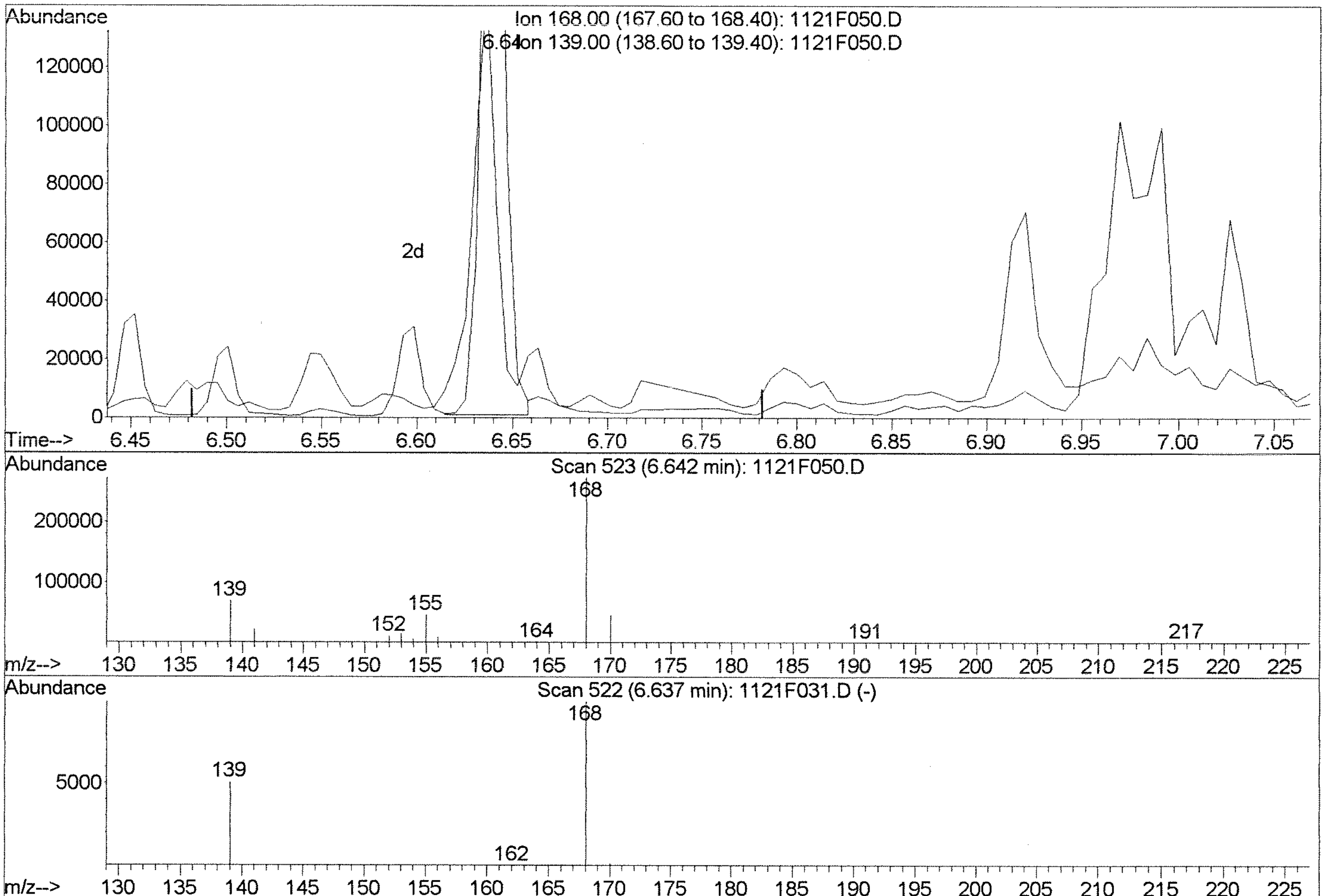
response 226067

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	24.16
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F050.D   Vial: 47
Acq On : 22 Nov 2008 3:40 am   Operator: LWeiskopf
Sample : K0810639-006   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:01 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.64min 172.44ng/ml m

response 219961

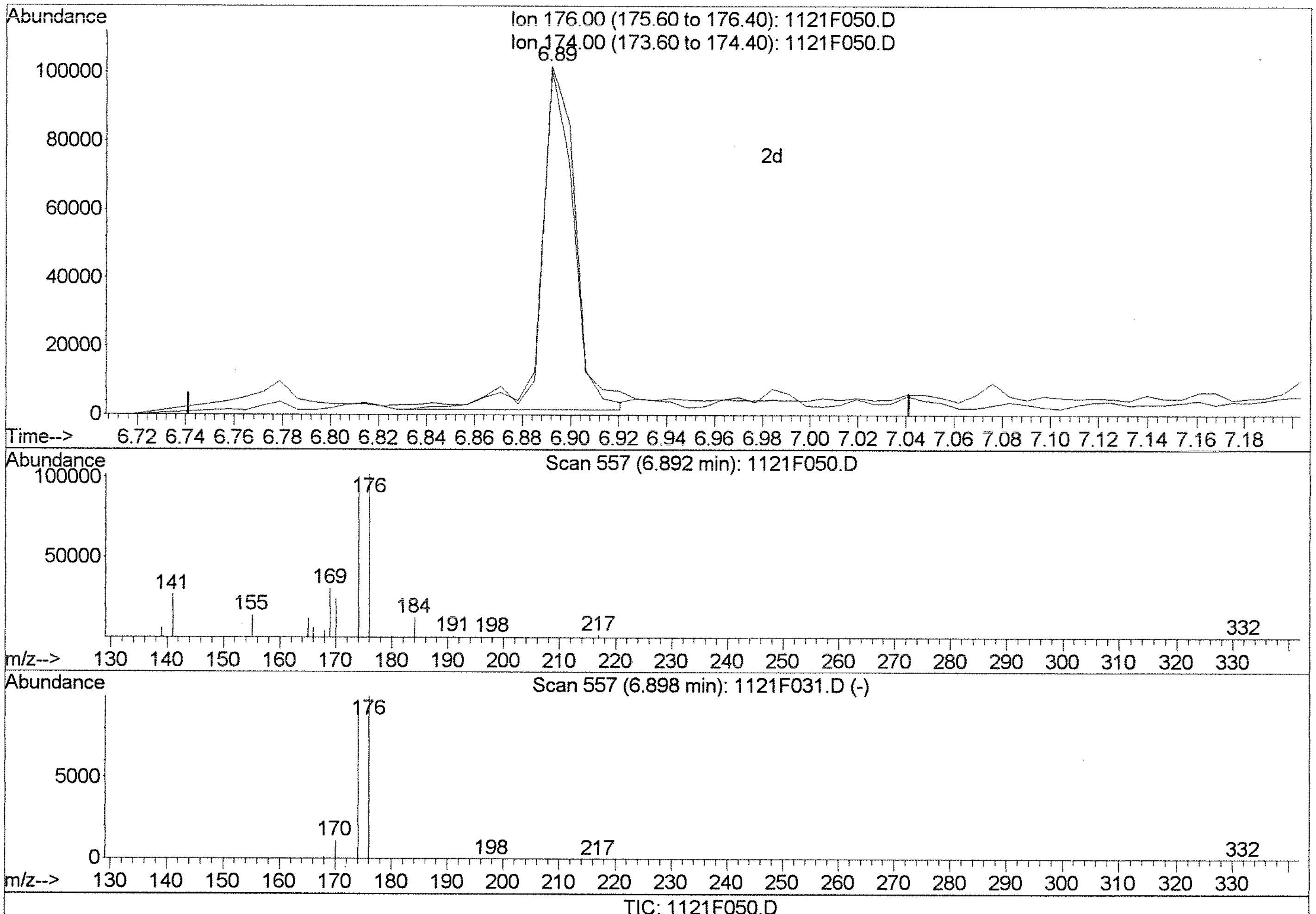
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	25.27
0.00	0.00	0.00
0.00	0.00	0.00

OT [handwritten initials and date]

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F050.D Vial: 47
Acq On : 22 Nov 2008 3:40 am Operator: LWeiskopf
Sample : K0810639-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:01 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(15) Fluorene-d10 (S)

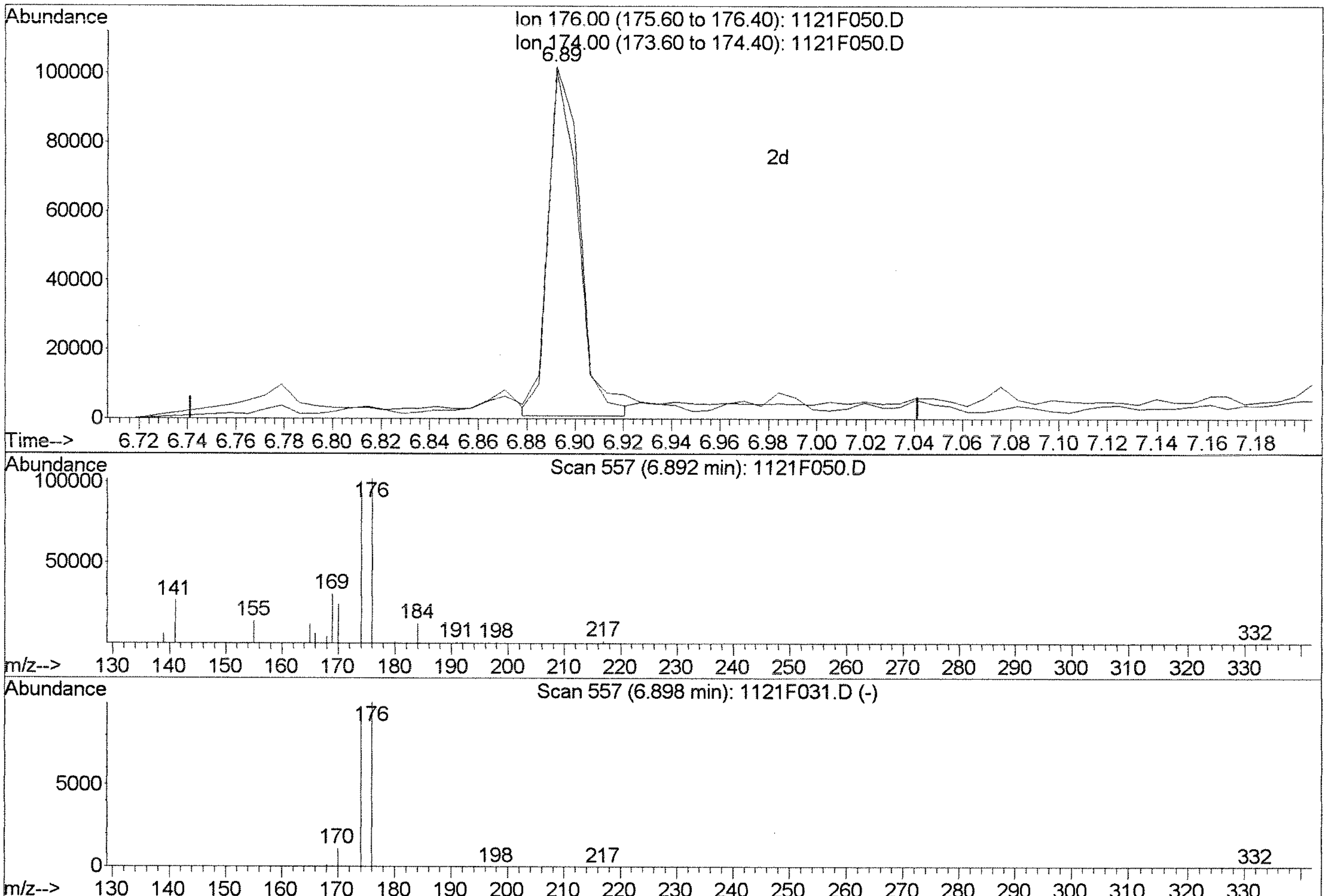
6.89min 114.61ng/ml

response 96389

Ion	Exp%	Act%
176.00	100	100
174.00	96.70	97.39
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112108\1121F050.D Vial: 47
Acq On : 22 Nov 2008 3:40 am Operator: LWeiskopf
Sample : K0810639-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:01 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F050.D

(15) Fluorene-d10 (S)

6.89min 107.99ng/ml m

response 90820

Ion	Exp%	Act%
176.00	100	100
174.00	96.70	98.78
0.00	0.00	0.00
0.00	0.00	0.00

OT lw 11/22/08

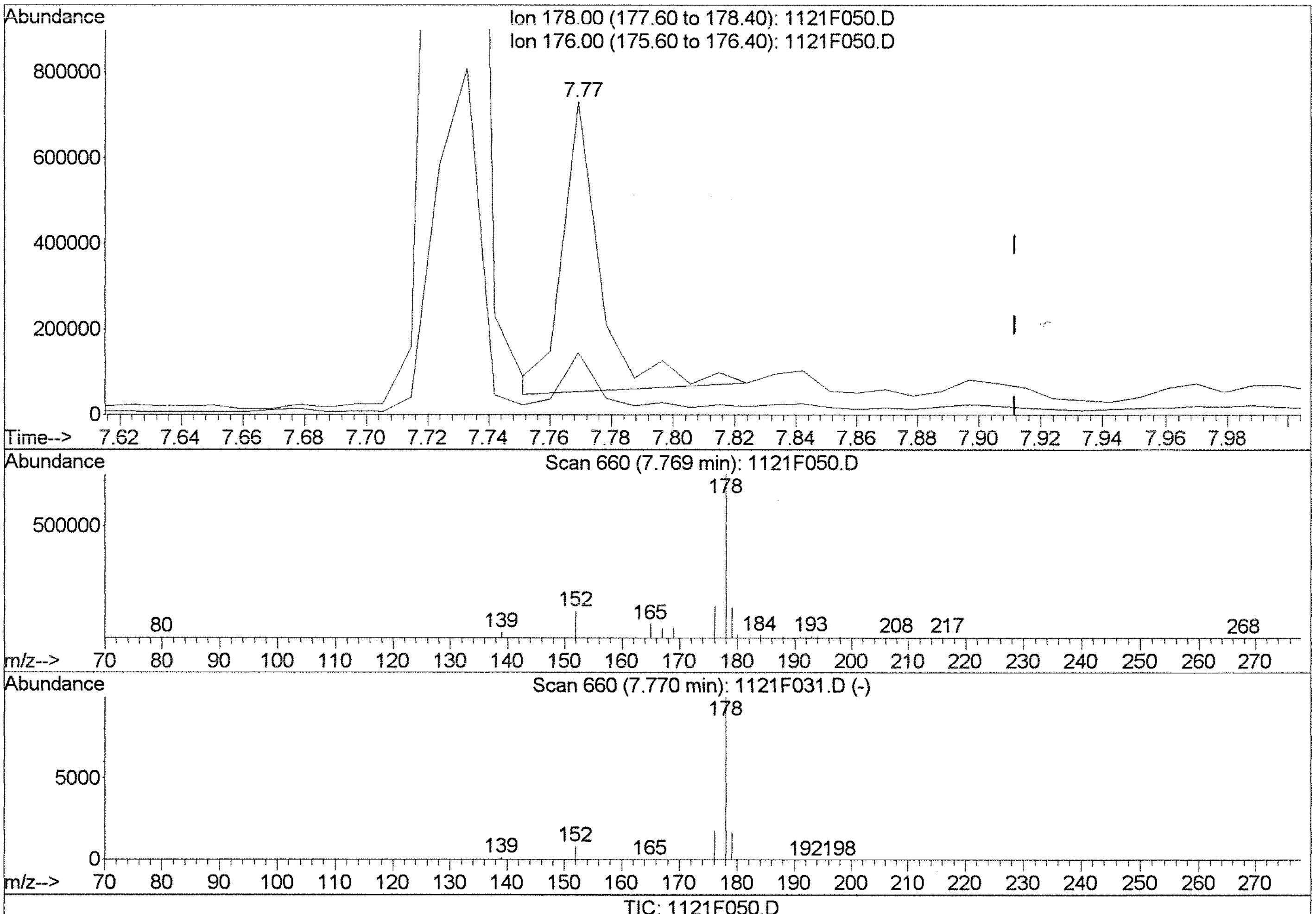
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F050.D
Acq On : 22 Nov 2008 3:40 am
Sample : K0810639-006
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:01 2008

Vial: 47
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.77min 402.89ng/ml

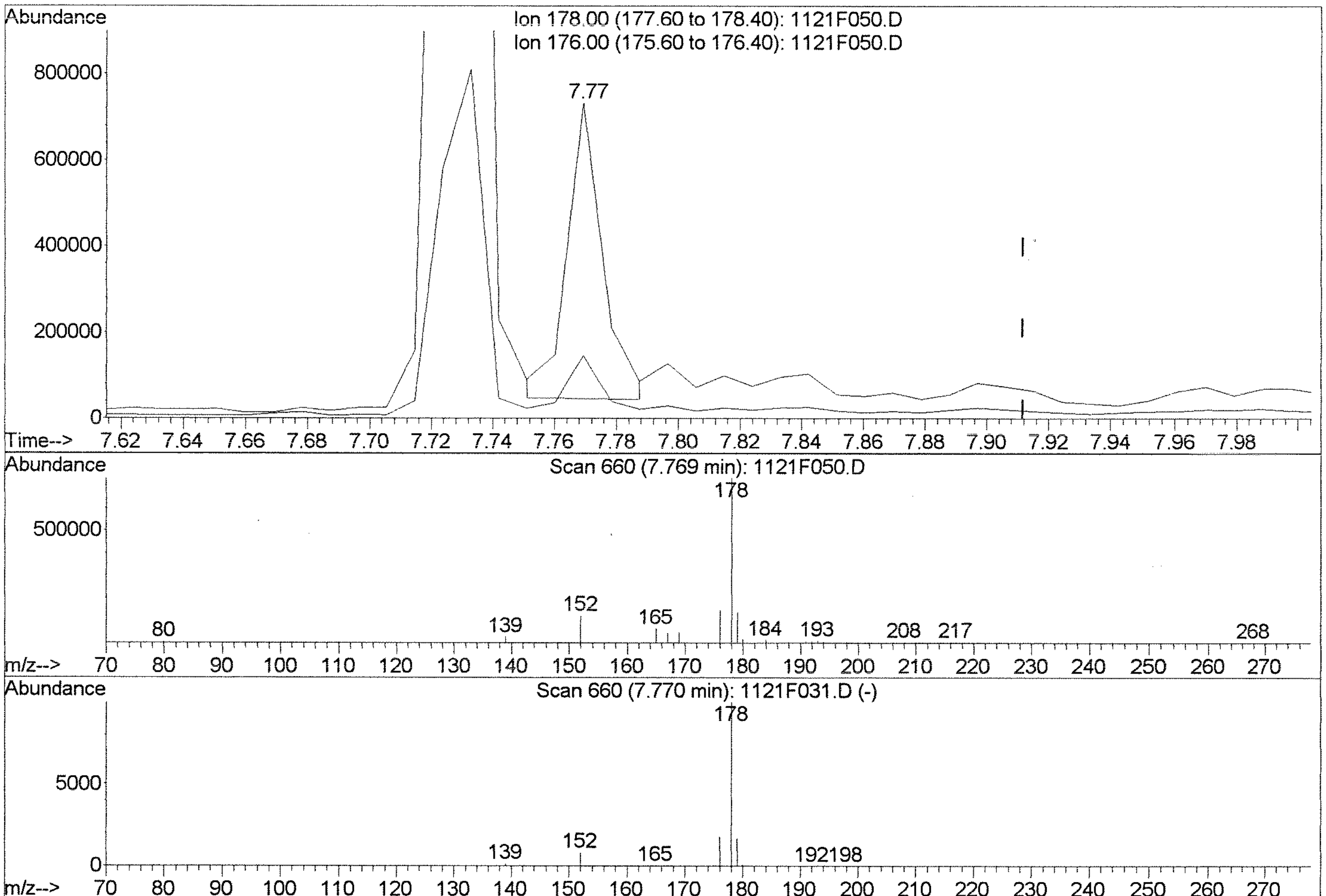
response 580164

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.13
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F050.D   Vial: 47
Acq On : 22 Nov 2008 3:40 am   Operator: LWeiskopf
Sample : K0810639-006   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:01 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F050.D

(28) Anthracene (T)

7.77min 376.87ng/ml m

response 542690

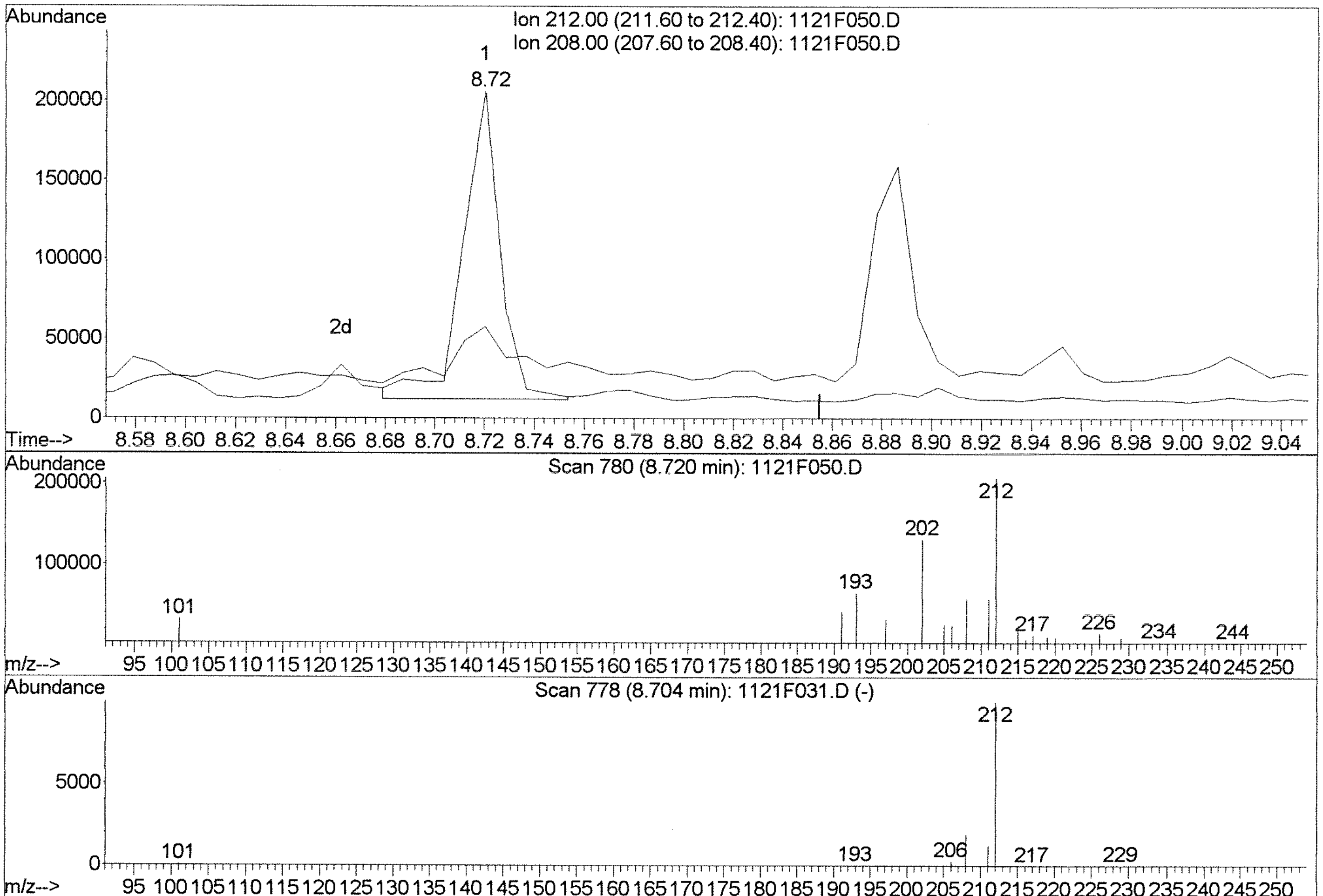
Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.80
0.00	0.00	0.00
0.00	0.00	0.00

OT 11/24/08

Data File : J:\MS11\DATA\112108\1121F050.D
Acq On : 22 Nov 2008 3:40 am
Sample : K0810639-006
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:02 2008

Vial: 47
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F050.D

(36) Fluoranthene-d10 (S)

8.72min 139.80ng/ml

response 200415

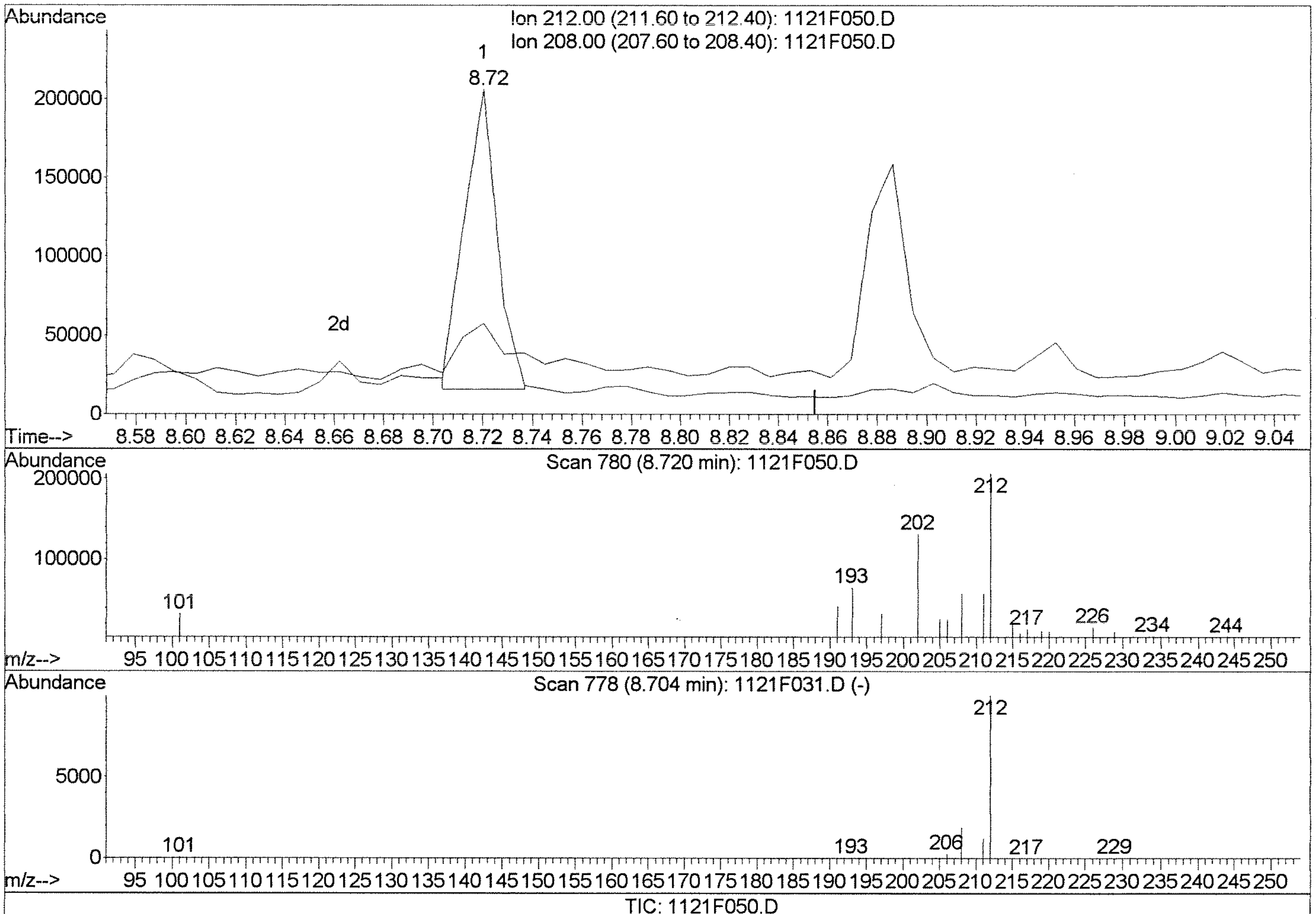
Ion	Exp%	Act%
212.00	100	100
208.00	16.70	18.51
0.00	0.00	0.00
0.00	0.00	0.00

1121F050.D 1110ALK.M Sat Nov 22 14:03:00 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F050.D Vial: 47
Acq On : 22 Nov 2008 3:40 am Operator: LWeiskopf
Sample : K0810639-006 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:03 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(36) Fluoranthene-d10 (S)

8.72min 120.50ng/ml m

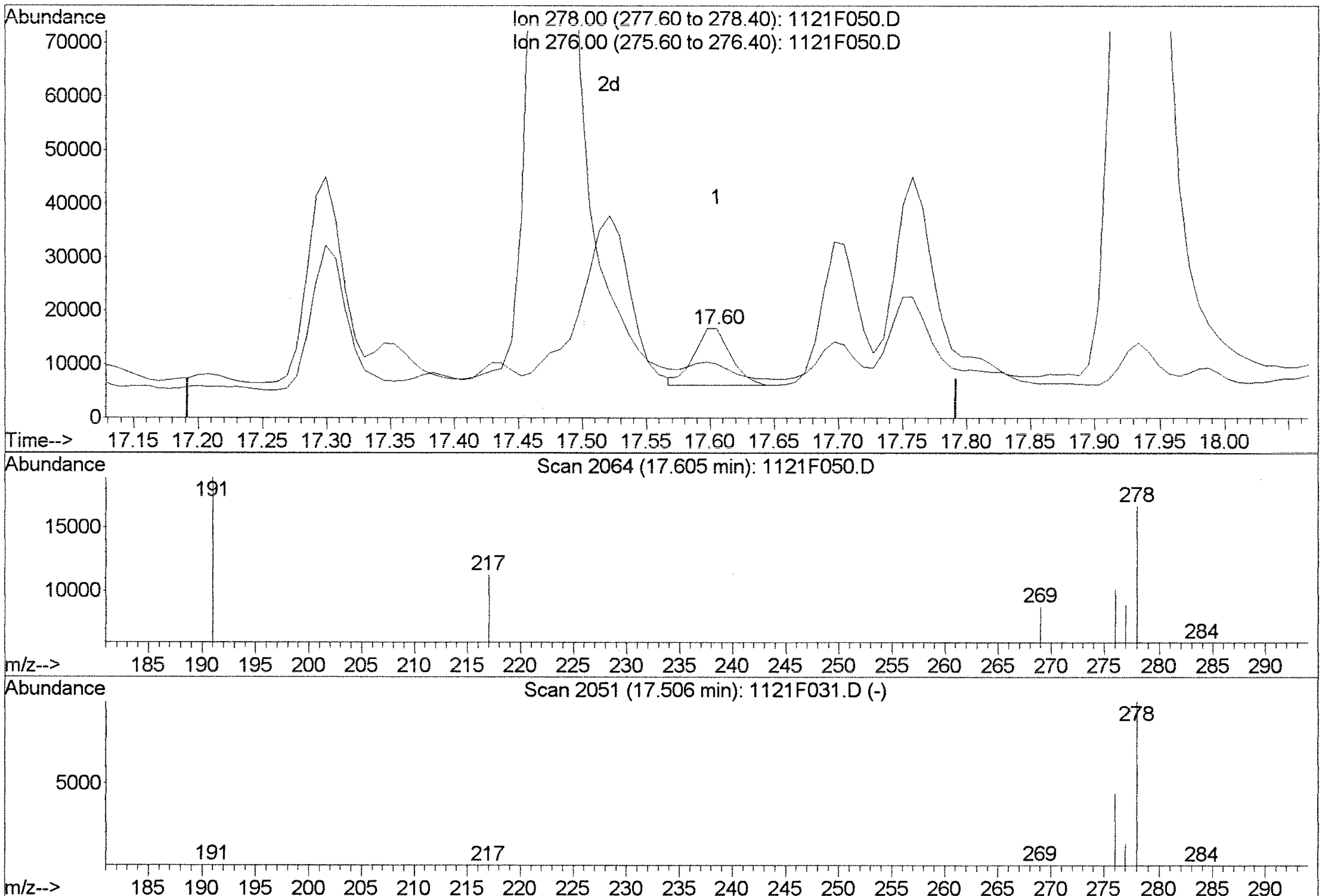
response 172743

Ion	Exp%	Act%
212.00	100	100
208.00	16.70	27.90
0.00	0.00	0.00
0.00	0.00	0.00

OT 11/22/08

Data File : J:\MS11\DATA\112108\1121F050.D   Vial: 47
Acq On : 22 Nov 2008 3:40 am   Operator: LWeiskopf
Sample : K0810639-006   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:03 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F050.D

(56) Dibenz(a,h)anthracene (T)

17.60min 14.21ng/ml

response 21099

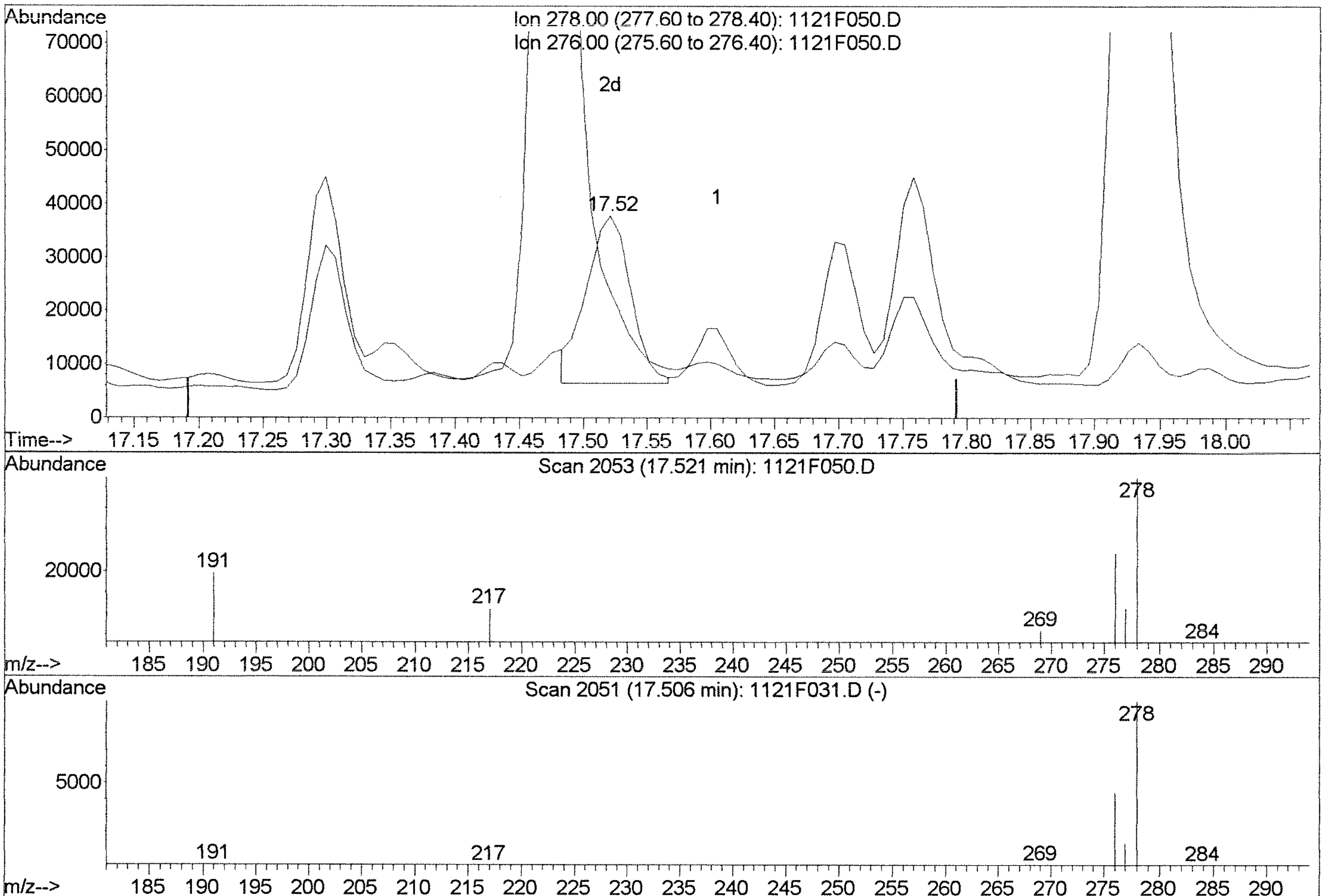
Ion	Exp%	Act%
278.00	100	100
276.00	29.70	27.54
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F050.D
Acq On : 22 Nov 2008 3:40 am
Sample : K0810639-006
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:03 2008

Vial: 47
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F050.D

(56) Dibenz(a,h)anthracene (T)

17.52min 50.95ng/ml m

response 75671

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	62.39#
0.00	0.00	0.00
0.00	0.00	0.00

WP
QW 11/22/08

1121F050.D 1110ALK.M Sat Nov 22 14:03:19 2008

Exception Report

Data File: J:\MS11\DATA\112208\1122F045.D
Lab ID: K0810639-006
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/23/2008 03:32
Date Quantitated: 11/23/2008 11:24
Batch ID: KWG0812625
Analysis Method: 8270C SIM
ListJoinID: LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KW 11/24/08

Secondary Review: 11-30-8

Printed: 11/23/2008 13:28:30
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/10/2008	**Receive Date:**	07/15/2008

Analysis Lot:	KWG0812625	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776070	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112208\1122F034.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112208\1122F045.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 03:32	**Quant Date:**	11/23/2008 11:24	**Vial:**	38
Run Type:	DL			**Dilution:**	5.0
Lab ID:	K0810639-006			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	0.00	136	242576	200.00	OK
2	Acenaphthene-d10	6.45	0.00	164	122969	200.00	OK
3	Phenanthrene-d10	7.69	0.00	188	210352	200.00	OK
4	Chrysene-d12	10.57	0.00	240	244970	200.00	OK
5	Perylene-d12	14.56	0.01	264	275912	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	16641**m**	19.91	50	10-128	OK	NR
3	Fluoranthene-d10	8.70	0.00	0.00	212	29525**m**	20.59	51	29-121	OK	NR
4	Terphenyl-d14	9.08	0.00	0.00	244	37305	29.41	74	24-141	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.06		0.00	128	17491	11.84	51	D	NR
1	2-Methylnaphthalene	5.61		0.00	142	12708	12.33	53	D	NR
2	Acenaphthylene	6.34		0.00	152	9006**m**	6.49	28	D	NR
2	Acenaphthene	6.48		0.00	154	100753	119.57	510	D	NR
2	Dibenzofuran	6.63		0.00	168	42918	33.86	150	D	NR
2	Fluorene	6.90	-0.01	0.00	166	90752	89.72	390	D	NR
3	Phenanthrene	7.71		0.00	178	705545	477.18	2000	D	
3	Anthracene	7.75		0.00	178	118130**m**	82.00	350	D	NR
3	Fluoranthene	8.70		0.00	202	602674	358.83	1500	D	NR
4	Pyrene	8.93	-0.01	0.00	202	609785	330.89	1400	D	NR
4	Benz(a)anthracene	10.55		0.00	228	119218	71.31	310	D	NR
4	Chrysene	10.62		0.00	228	154167	93.89	400	D	NR
5	Benzo(b)fluoranthene	13.21	0.01	0.00	252	128186	67.32	290	D	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112208\1122F045.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 03:32	**Quant Date:**	11/23/2008 11:24	**Vial:**	38
Run Type:	DL			**Dilution:**	5.0
Lab ID:	K0810639-006			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.29		0.00	252	44233	24.18	100	D	NR
5	Benzo(a)pyrene	14.34	0.01	0.00	252	100025	63.45	270	D	NR
5	Indeno(1,2,3-cd)pyrene	17.42		0.00	276	81809	55.93	240	D	NR
5	Dibenz(a,h)anthracene	17.46	-0.01	0.00	278	17277**m**	11.25	48	D	NR
5	Benzo(g,h,i)perylene	17.87		0.00	276	109230	65.54	280	D	NR

Prep Amount:	20.08 g	**Dilution:**	5.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	58.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112208\1122F045.D Vial: 38
Acq On : 23 Nov 2008 3:32 am Operator: LWeiskopf
Sample : K0810639-006DIL 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:10:48 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

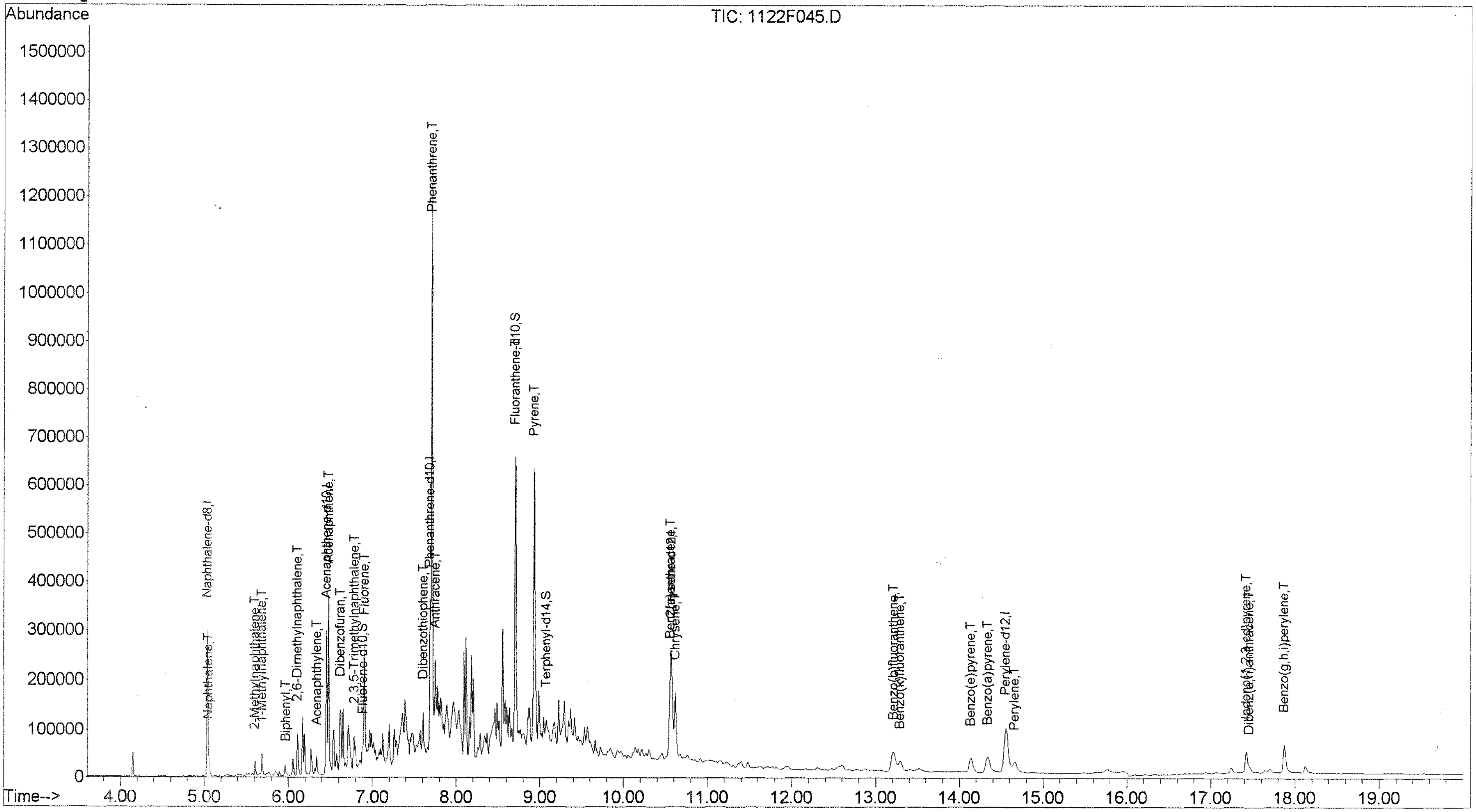
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.04	136	242576	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.45	164	122969	200.00	ng/ml	-0.01
22) Phenanthrene-d10	7.69	188	210352	200.00	ng/ml	0.00
37) Chrysene-d12	10.57	240	244970	200.00	ng/ml	-0.01
49) Perylene-d12	14.56	264	275912	200.00	ng/ml	-0.03
System Monitoring Compounds						
15) Fluorene-d10	6.88	176	16641m	19.91	ng/ml	0.00
Spiked Amount 200.000			Recovery =	9.96%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.70	212	29525m	20.59	ng/ml	0.00
Spiked Amount 200.000			Recovery =	10.30%		
42) Terphenyl-d14	9.08	244	37305	29.41	ng/ml	-0.02
Spiked Amount 200.000			Recovery =	14.71%		
Target Compounds						Qvalue
2) Naphthalene	5.06	128	17491	11.84	ng/ml	98
3) 2-Methylnaphthalene	5.61	142	12708	12.33	ng/ml	91
4) 1-Methylnaphthalene	5.69	142	18233	19.77	ng/ml	96
5) Biphenyl	5.98	154	2800	2.22	ng/ml	92
6) 2,6-Dimethylnaphthalene	6.11	156	37409	41.59	ng/ml	100
11) Acenaphthylene	6.34	152	9006m	6.49	ng/ml	
12) Acenaphthene	6.48	154	100753	119.57	ng/ml	94
13) Dibenzofuran	6.63	168	42918	33.86	ng/ml	78
14) 2,3,5-Trimethylnaphthalene	6.78	170	41164	55.55	ng/ml	70
16) Fluorene	6.90	166	90752	89.72	ng/ml	93
23) Dibenzothiophene	7.61	184	56770	39.27	ng/ml	99
27) Phenanthrene	7.71	178	705545	477.18	ng/ml	99
28) Anthracene	7.75	178	118130m	82.00	ng/ml	
35) Fluoranthene	8.70	202	602674	358.83	ng/ml	85
38) Pyrene	8.93	202	609785	330.89	ng/ml	86
43) Benz(a)anthracene	10.55	228	119218	71.31	ng/ml	89
44) Chrysene	10.62	228	154167	93.89	ng/ml	99
50) Benzo(b)fluoranthene	13.21	252	128186	67.32	ng/ml	97
51) Benzo(k)fluoranthene	13.29	252	44233	24.18	ng/ml	85
52) Benzo(e)pyrene	14.14	252	81976	47.39	ng/ml	98
53) Benzo(a)pyrene	14.34	252	100025	63.45	ng/ml	98
54) Perylene	14.66	252	57292	36.99	ng/ml	98
55) Indeno(1,2,3-cd)pyrene	17.42	276	81809	55.93	ng/ml	99
56) Dibenz(a,h)anthracene	17.46	278	17277m	11.25	ng/ml	
57) Benzo(g,h,i)perylene	17.87	276	109230	65.54	ng/ml	99

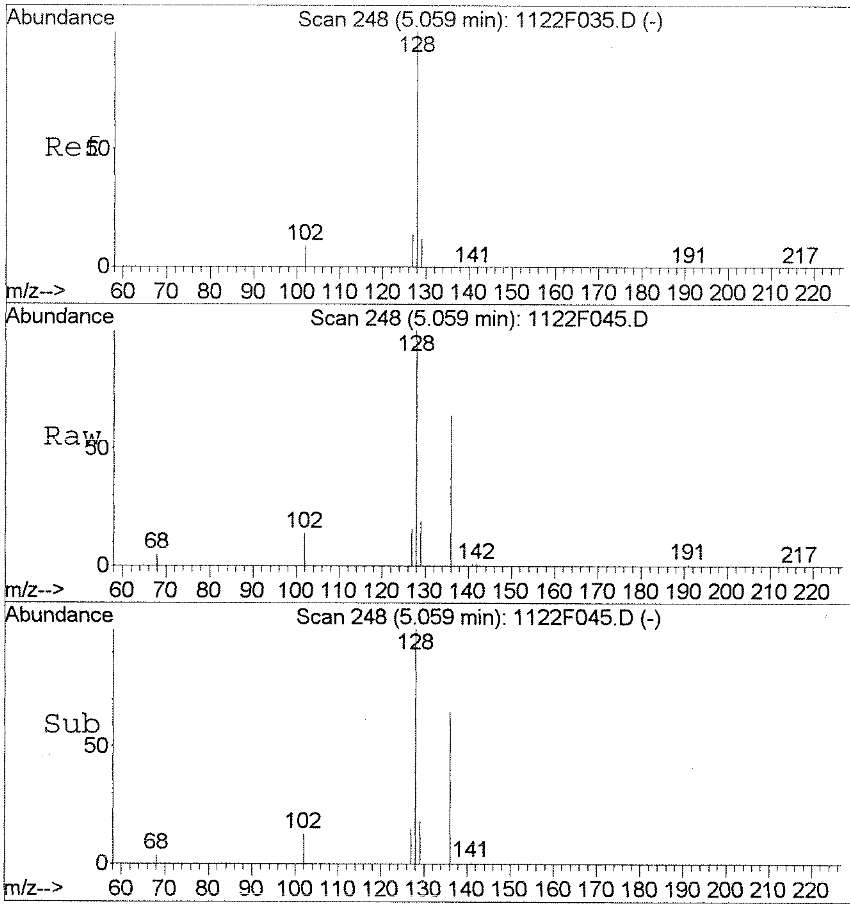
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F045.D Vial: 38
Acq On : 23 Nov 2008 3:32 am Operator: LWeiskopf
Sample : K0810639-006DIL 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:24 2008 Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration

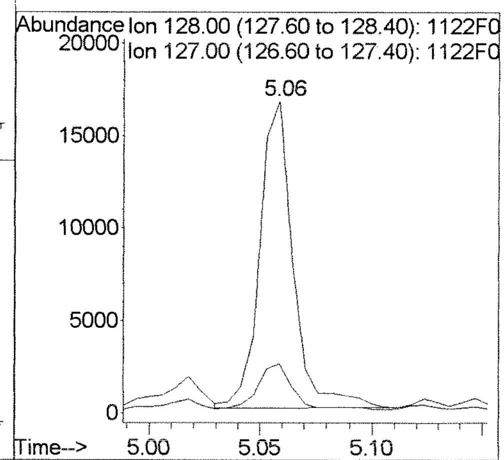


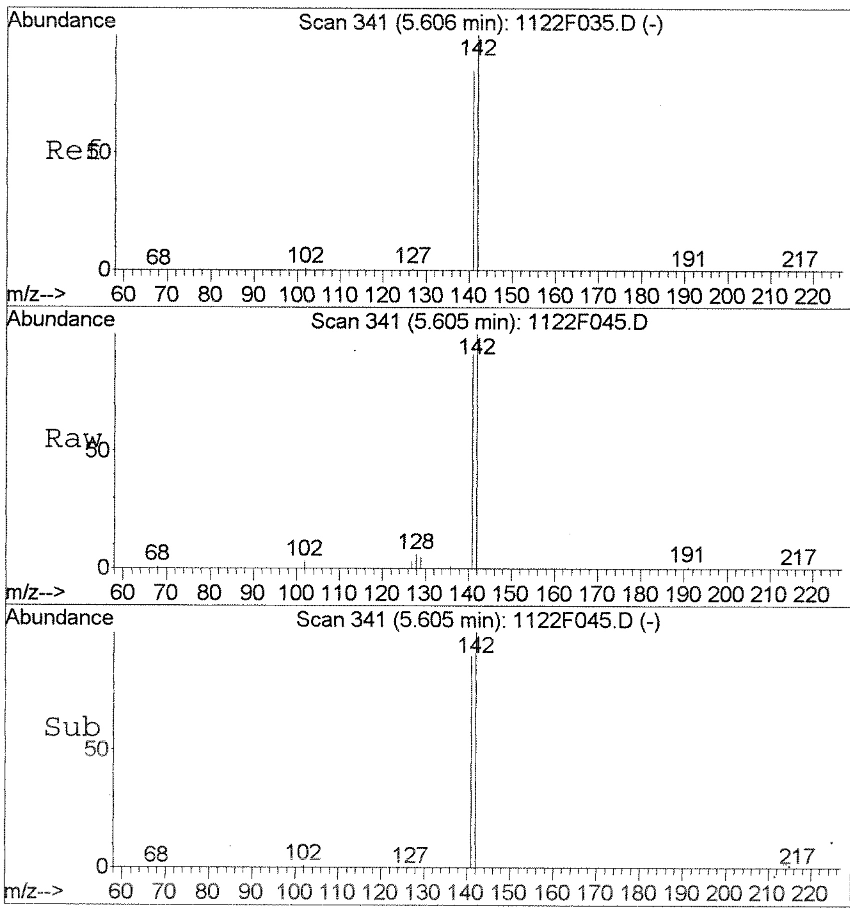


#2
Naphthalene
Concen: 11.84 ng/ml
RT: 5.06 min Scan# 248
Delta R.T. -0.00 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:128 Resp: 17491

Ion	Ratio	Lower	Upper
128	100		
127	14.7	0.0	43.8

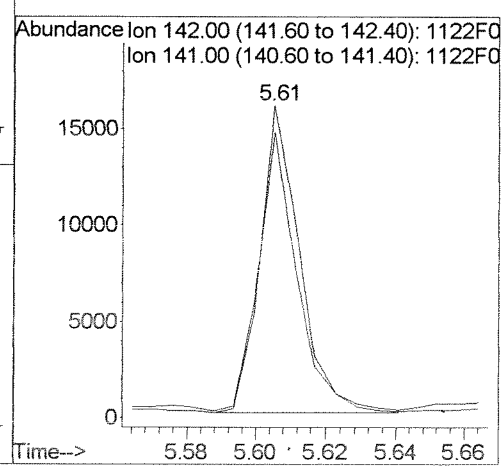


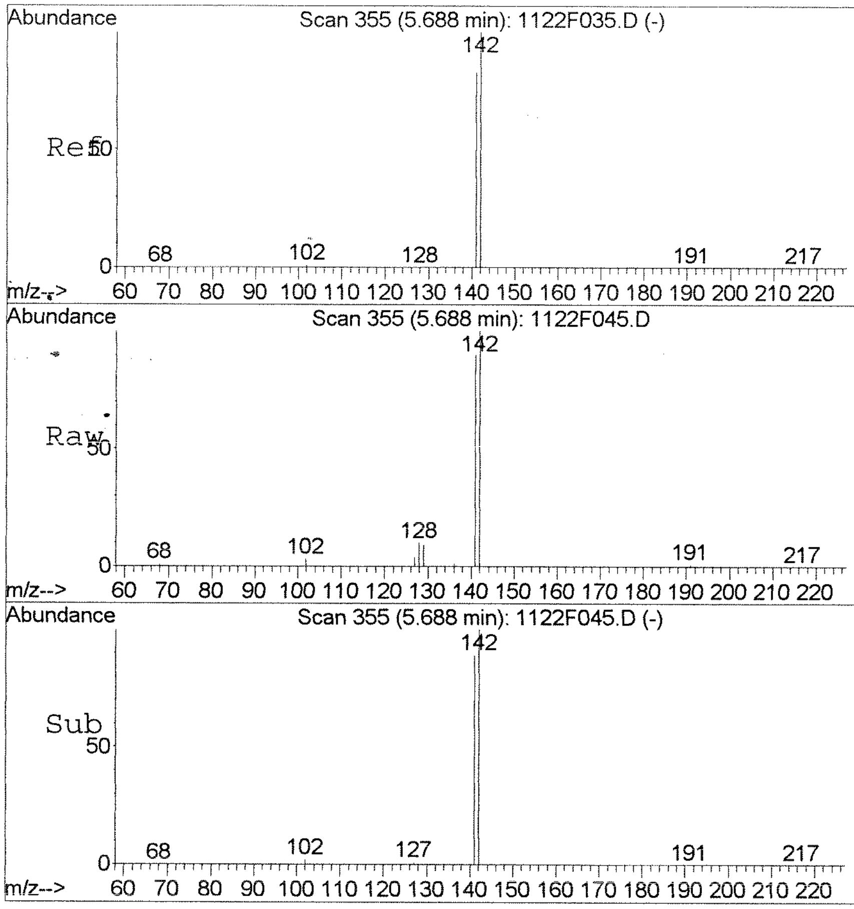


#3
2-Methylnaphthalene
Concen: 12.33 ng/ml
RT: 5.61 min Scan# 341
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:142 Resp: 12708

Ion	Ratio	Lower	Upper
142	100		
141	90.6	52.4	112.4

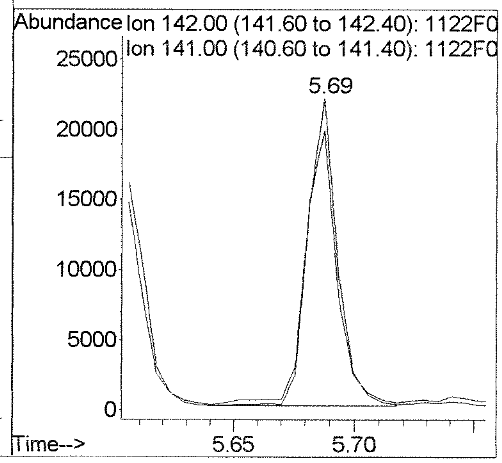


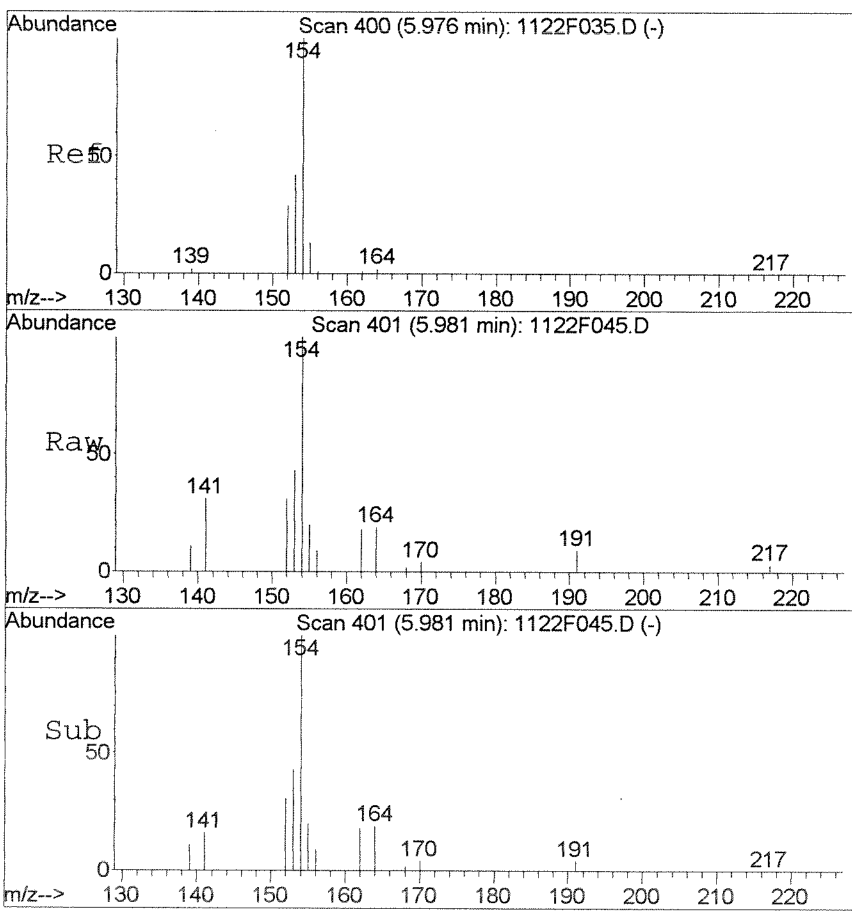


#4
1-Methylnaphthalene
Concen: 19.77 ng/ml
RT: 5.69 min Scan# 355
Delta R.T. -0.00 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:142 Resp: 18233

Ion	Ratio	Lower	Upper
142	100		
141	89.2	63.0	123.0

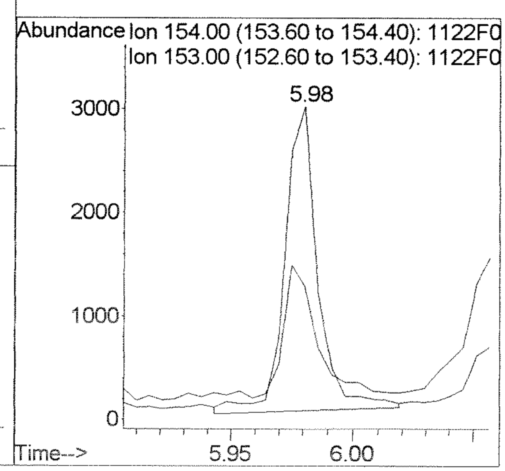


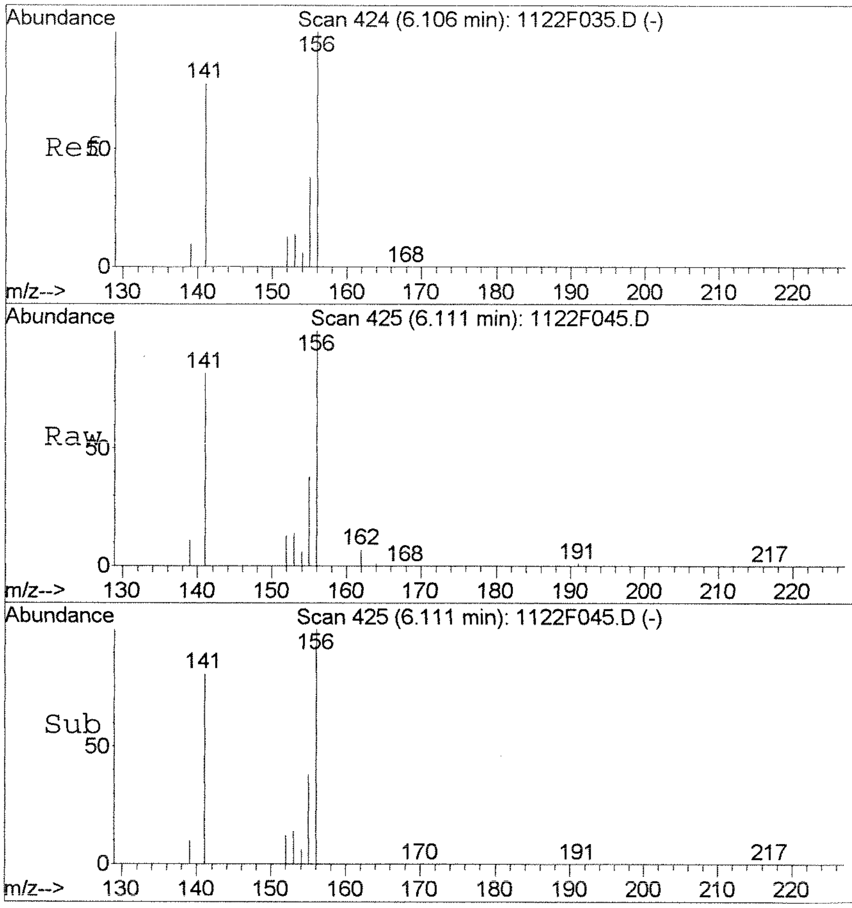


#5
Biphenyl
Concen: 2.22 ng/ml
RT: 5.98 min Scan# 401
Delta R.T. -0.00 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:154 Resp: 2800

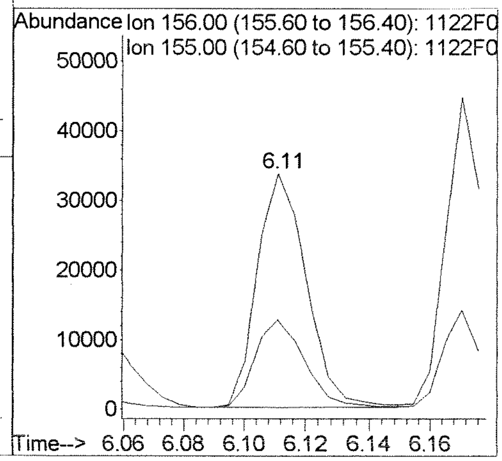
Ion	Ratio	Lower	Upper
154	100		
153	35.5	10.4	70.4

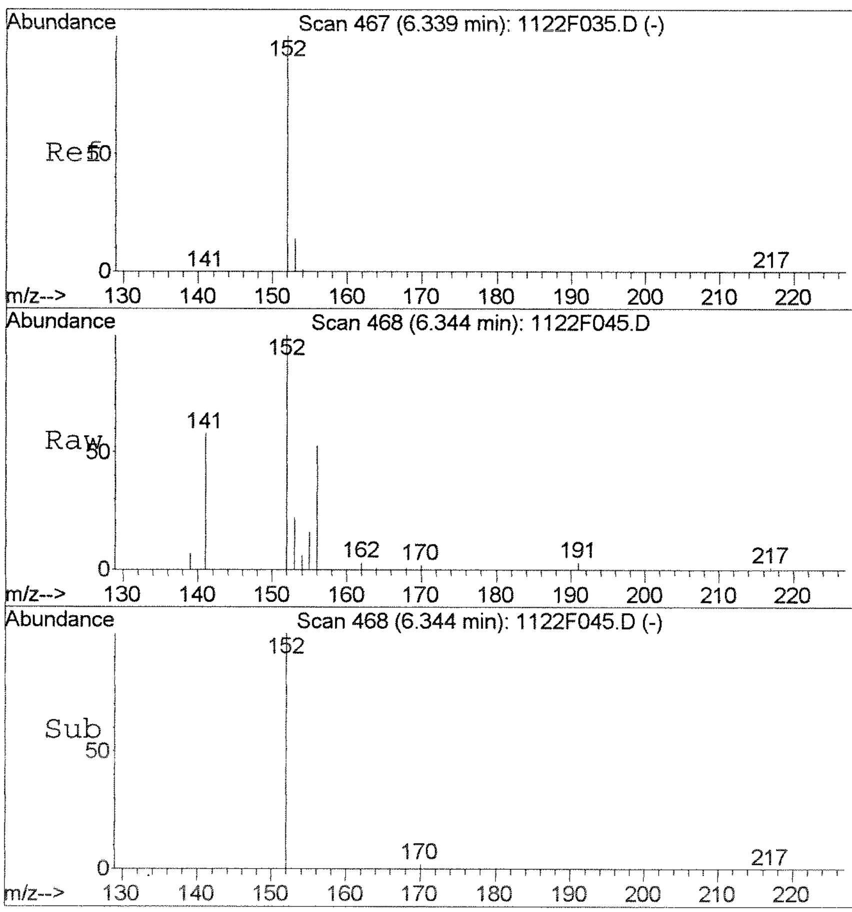




#6
2,6-Dimethylnaphthalene
Concen: 41.59 ng/ml
RT: 6.11 min Scan# 425
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

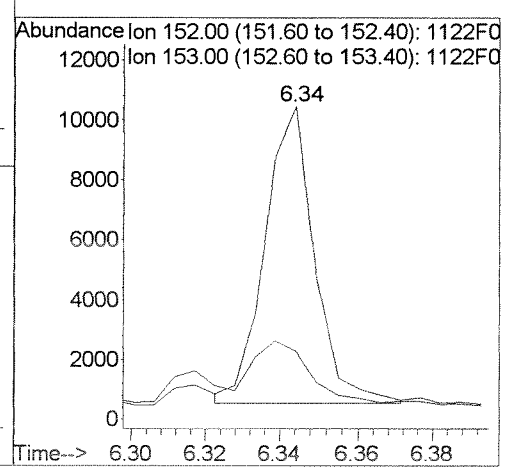
Tgt	Ion:156	Resp:	37409
Ion	Ratio	Lower	Upper
156	100		
155	37.5	7.3	67.3

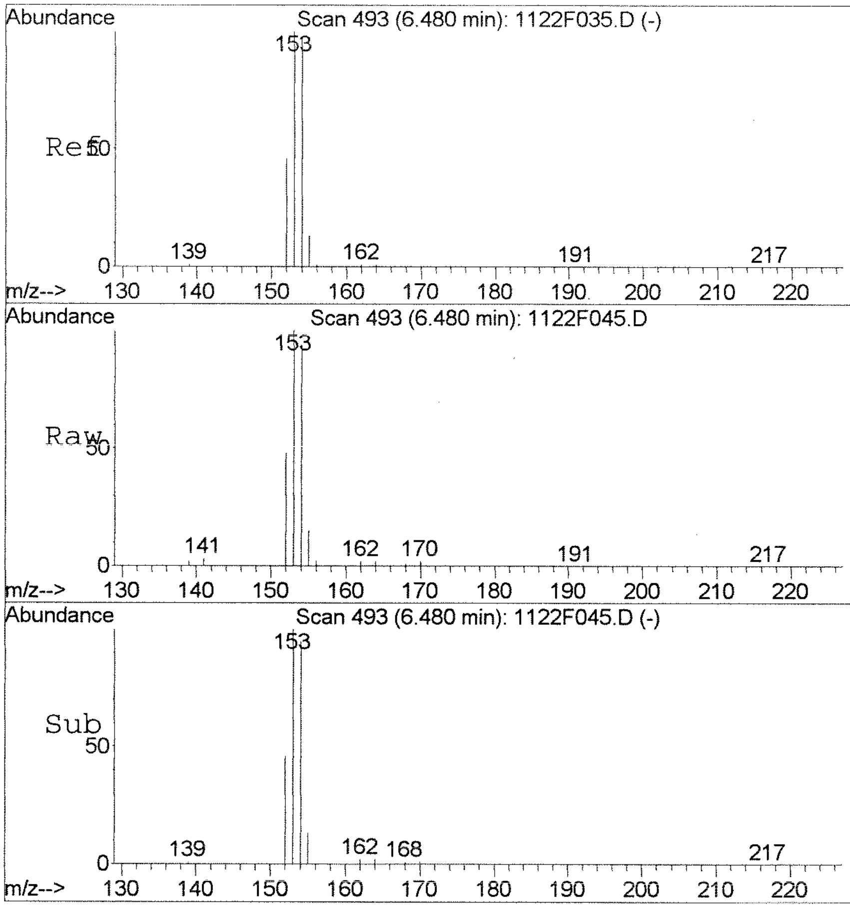




#11
Acenaphthylene
Concen: 6.49 ng/ml m
RT: 6.34 min Scan# 468
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt	Ion:152	Resp:	9006
Ion	Ratio	Lower	Upper
152	100		
153	22.0	0.0	43.0

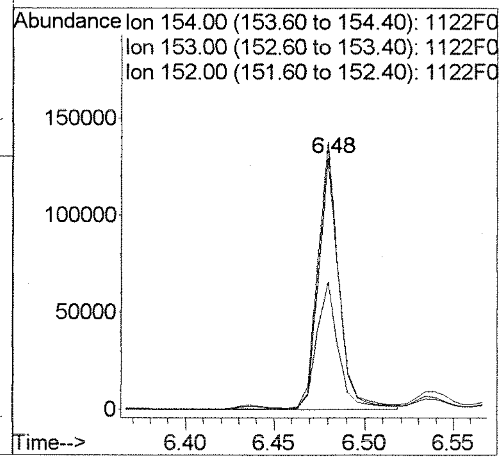


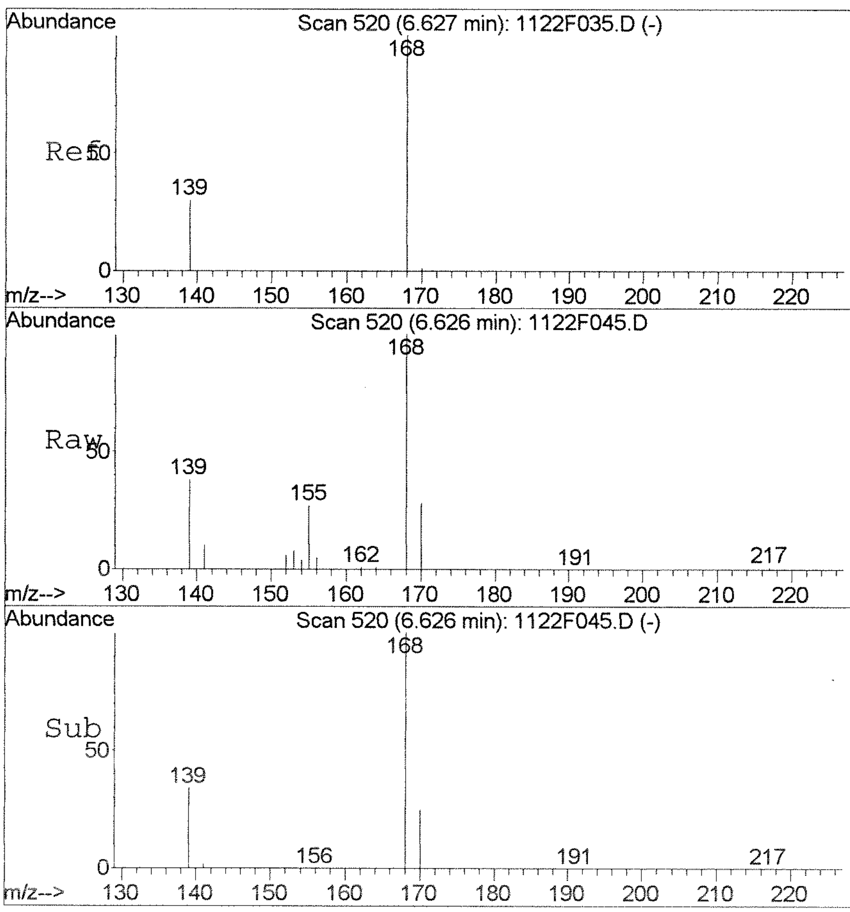


#12
Acenaphthene
Concen: 119.57 ng/ml
RT: 6.48 min Scan# 493
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:154 Resp: 100753

Ion	Ratio	Lower	Upper
154	100		
153	106.2	81.9	141.9
152	50.5	26.8	86.8

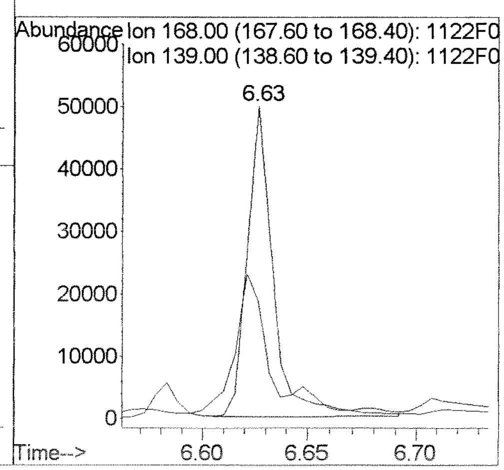


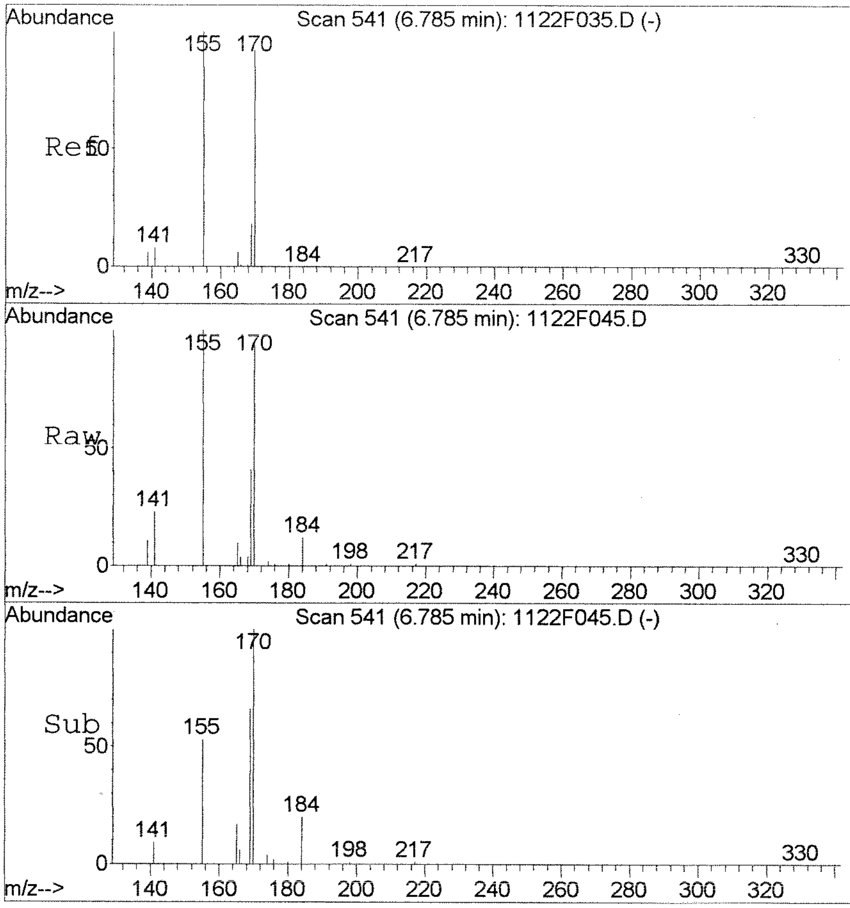


#13
Dibenzofuran
Concen: 33.86 ng/ml
RT: 6.63 min Scan# 520
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:168 Resp: 42918

Ion	Ratio	Lower	Upper
168	100		
139	35.8	21.0	81.0

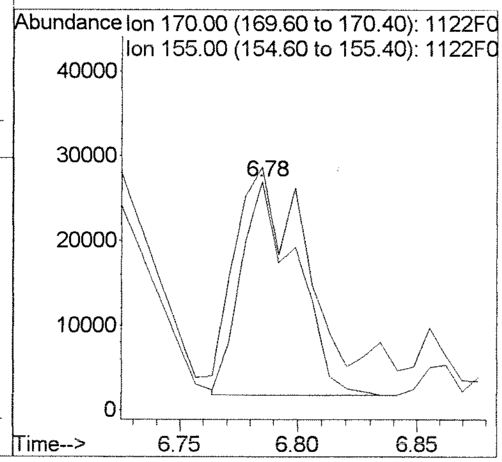


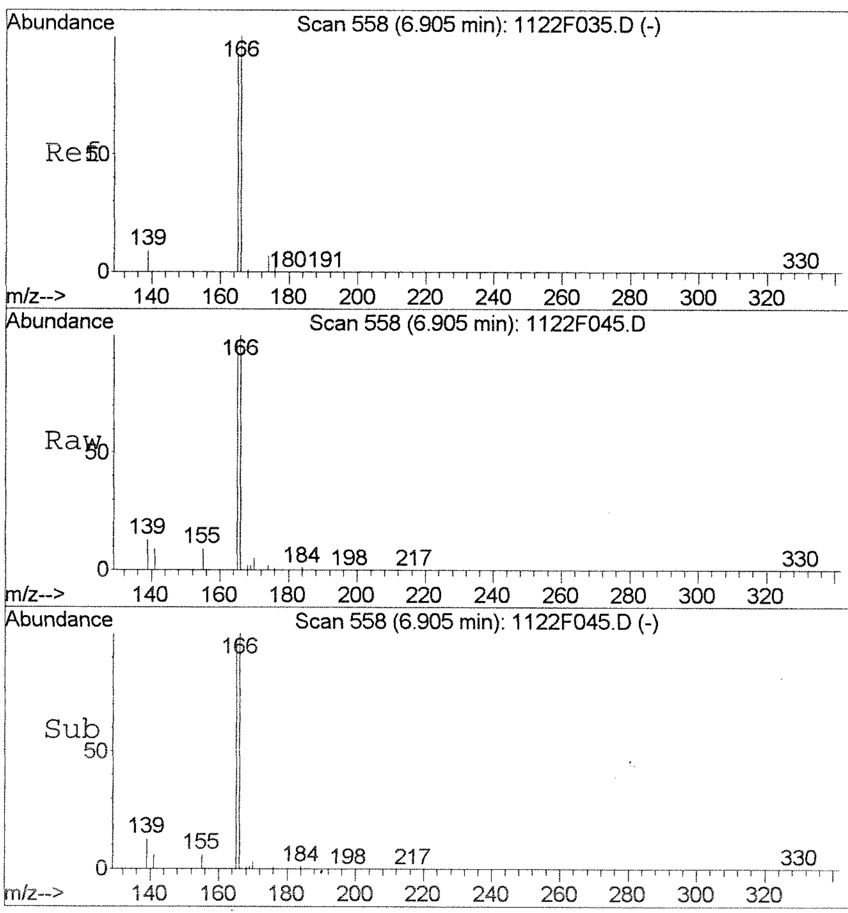


#14
2,3,5-Trimethylnaphthalene
Concen: 55.55 ng/ml
RT: 6.78 min Scan# 541
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:170 Resp: 41164

Ion	Ratio	Lower	Upper
170	100		
155	97.8	42.9	102.9

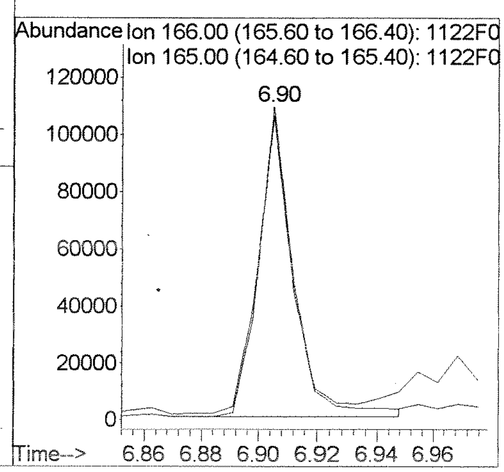


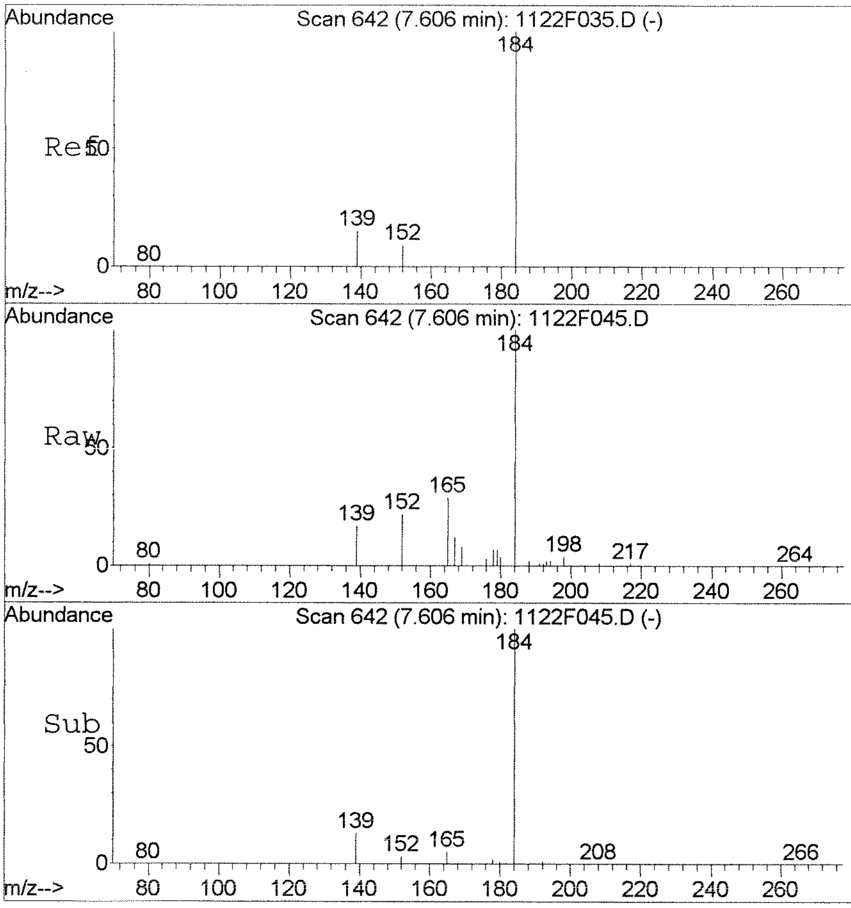


#16
Fluorene
Concen: 89.72 ng/ml
RT: 6.90 min Scan# 558
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:166 Resp: 90752

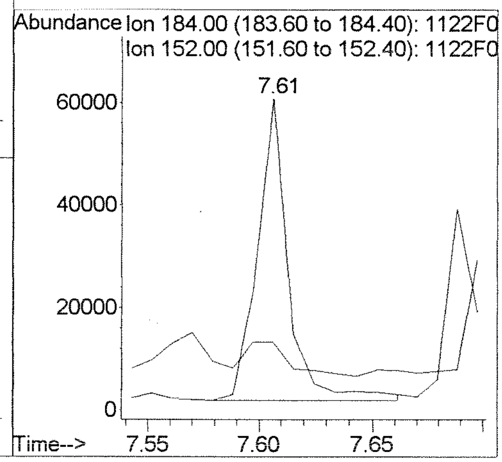
Ion	Ratio	Lower	Upper
166	100		
165	96.1	59.8	119.8

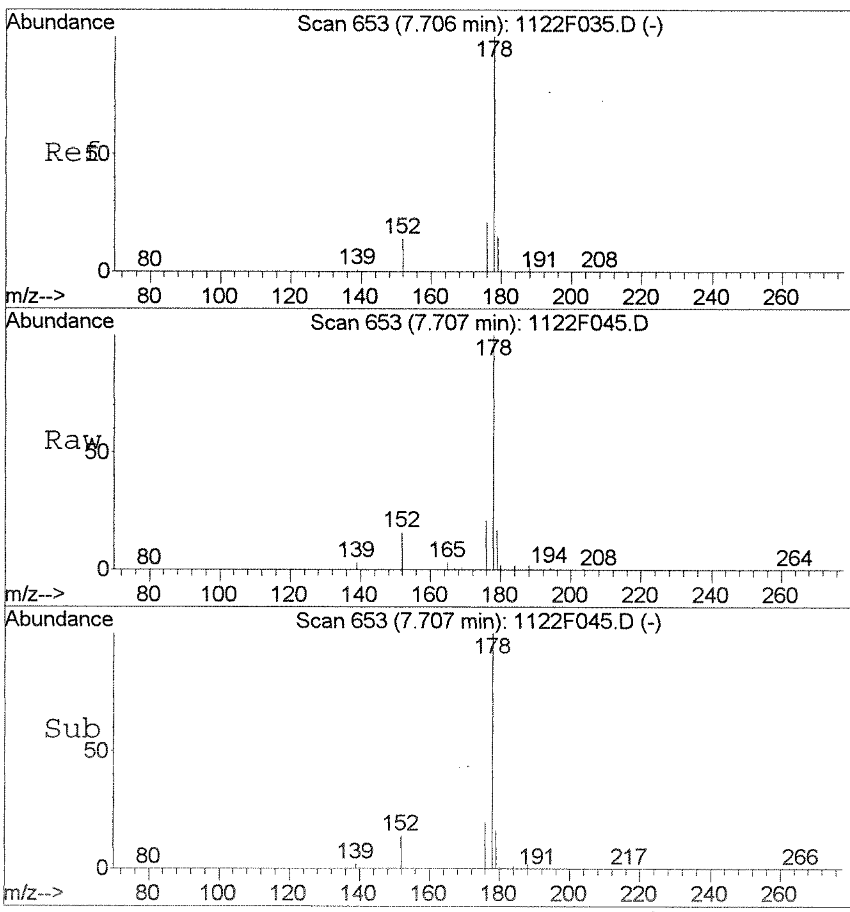




#23
Dibenzothiophene
Concen: 39.27 ng/ml
RT: 7.61 min Scan# 642
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

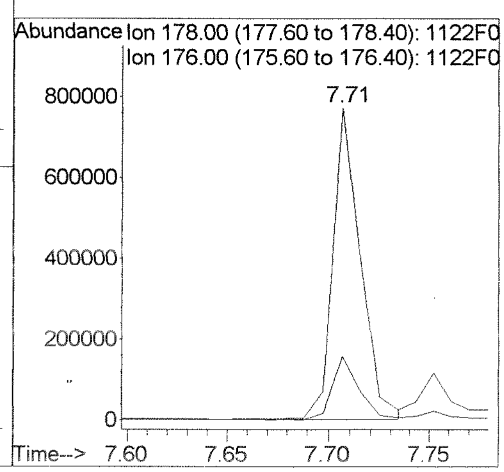
Tgt Ion:184	Resp:		56770
Ion	Ratio	Lower	Upper
184	100		
152	9.4	0.0	39.1

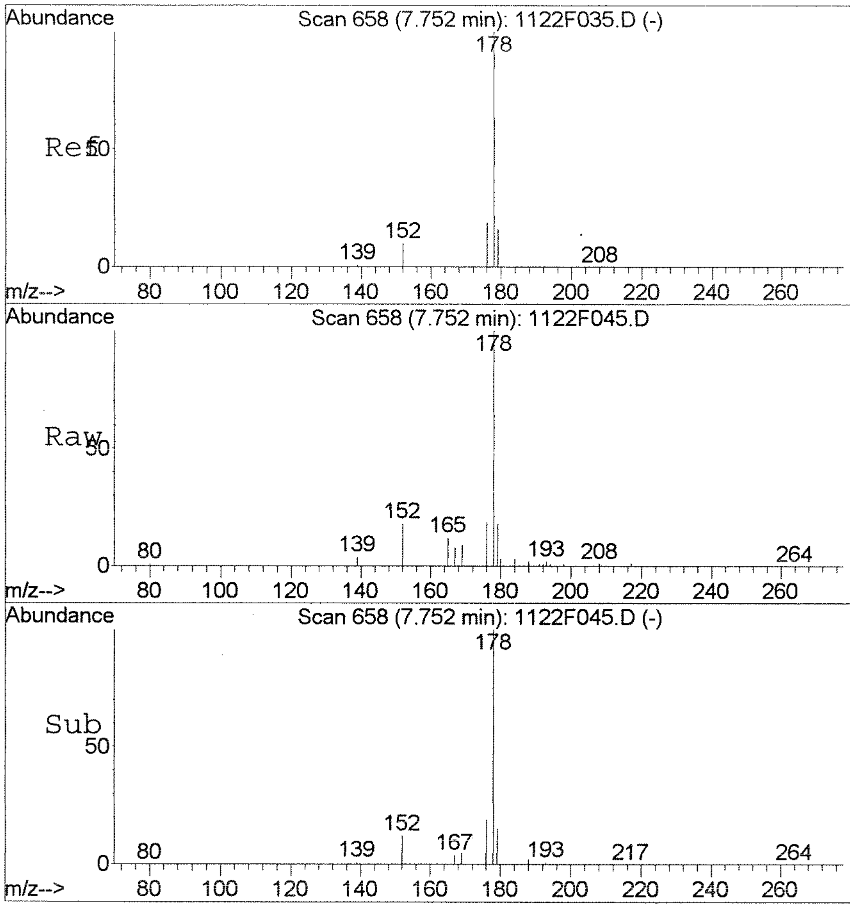




#27
Phenanthrene
Concen: 477.18 ng/ml
RT: 7.71 min Scan# 653
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

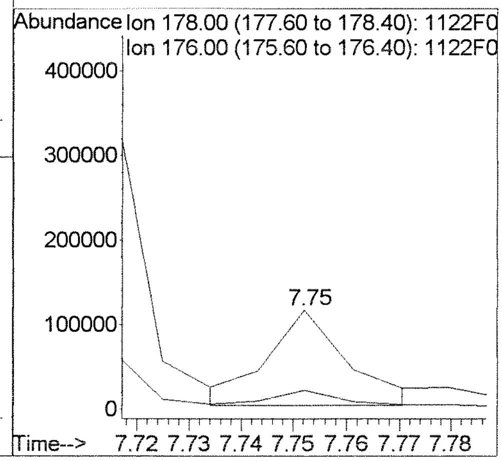
Tgt Ion:178	Resp:		705545
Ion	Ratio	Lower	Upper
178	100		
176	20.4	0.0	51.0

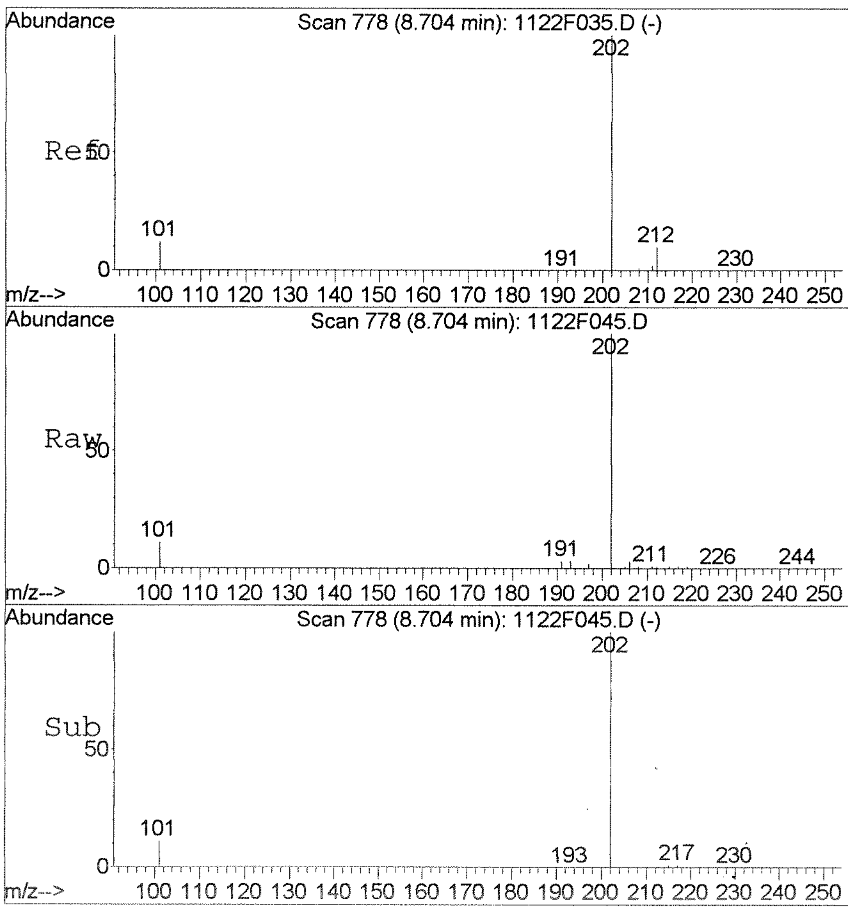




#28
Anthracene
Concen: 82.00 ng/ml m
RT: 7.75 min Scan# 658
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

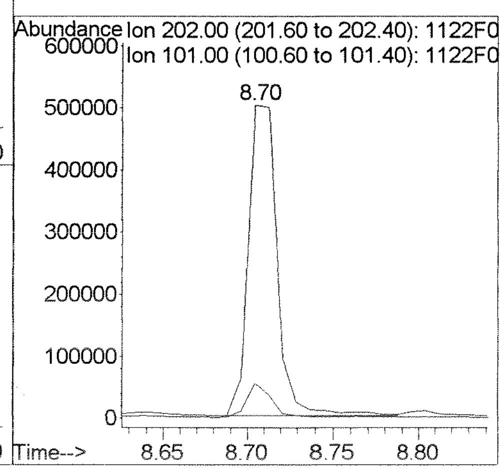
Tgt Ion:178		Resp:	118130
Ion	Ratio	Lower	Upper
178	100		
176	19.3	0.0	49.7

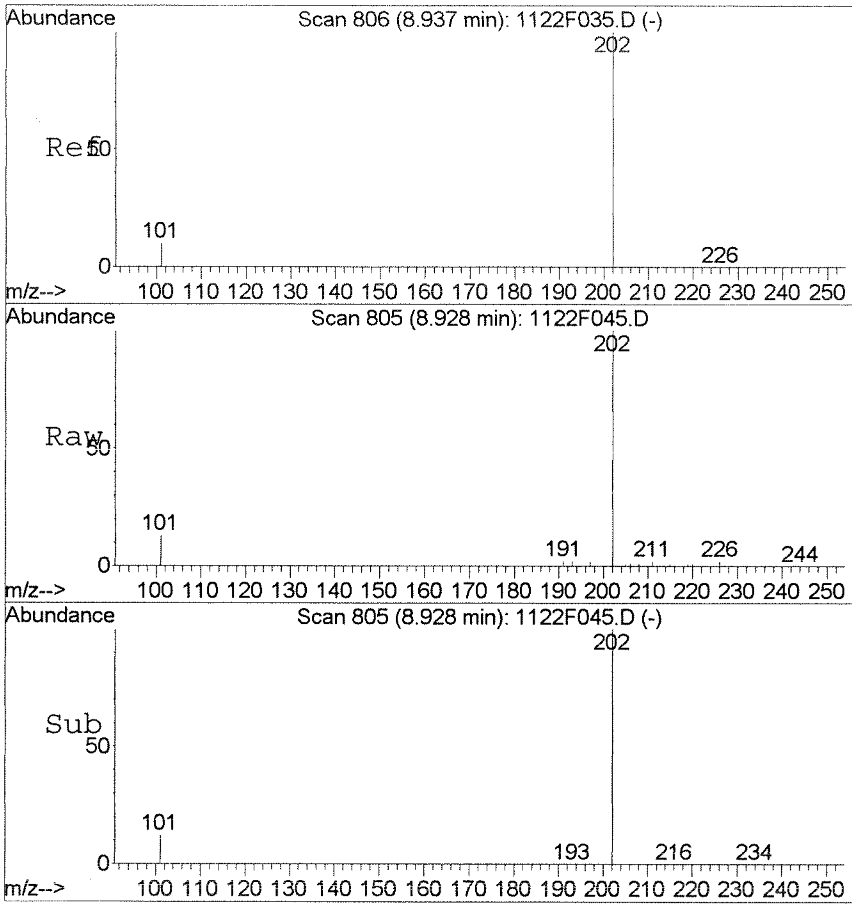




#35
Fluoranthene
Concen: 358.83 ng/ml
RT: 8.70 min Scan# 778
Delta R.T. -0.02 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:202		Resp:	602674
Ion	Ratio	Lower	Upper
202	100		
101	11.0	0.0	35.8

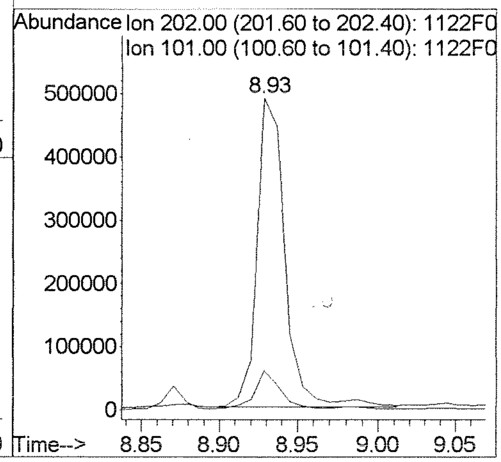


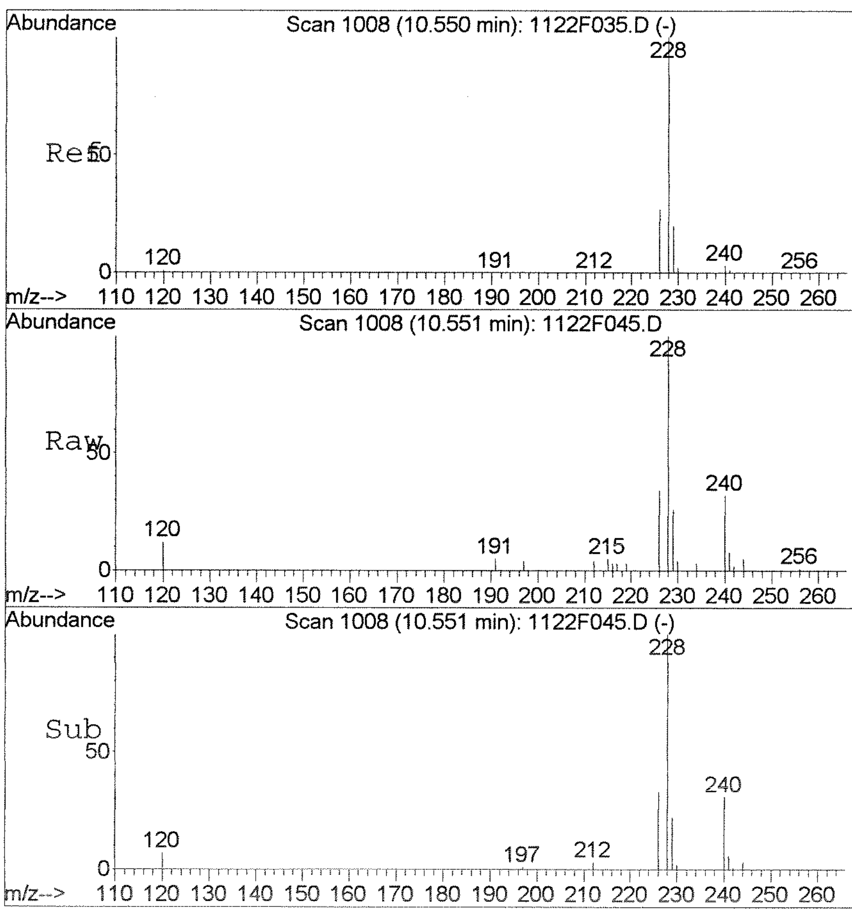


#38
Pyrene
Concen: 330.89 ng/ml
RT: 8.93 min Scan# 805
Delta R.T. -0.02 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:202 Resp: 609785

Ion	Ratio	Lower	Upper
202	100		
101	12.3	0.0	37.6

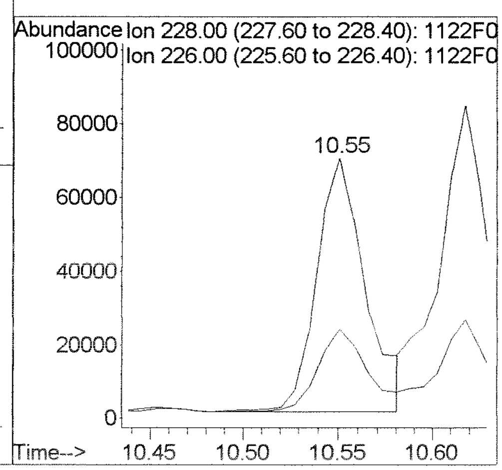


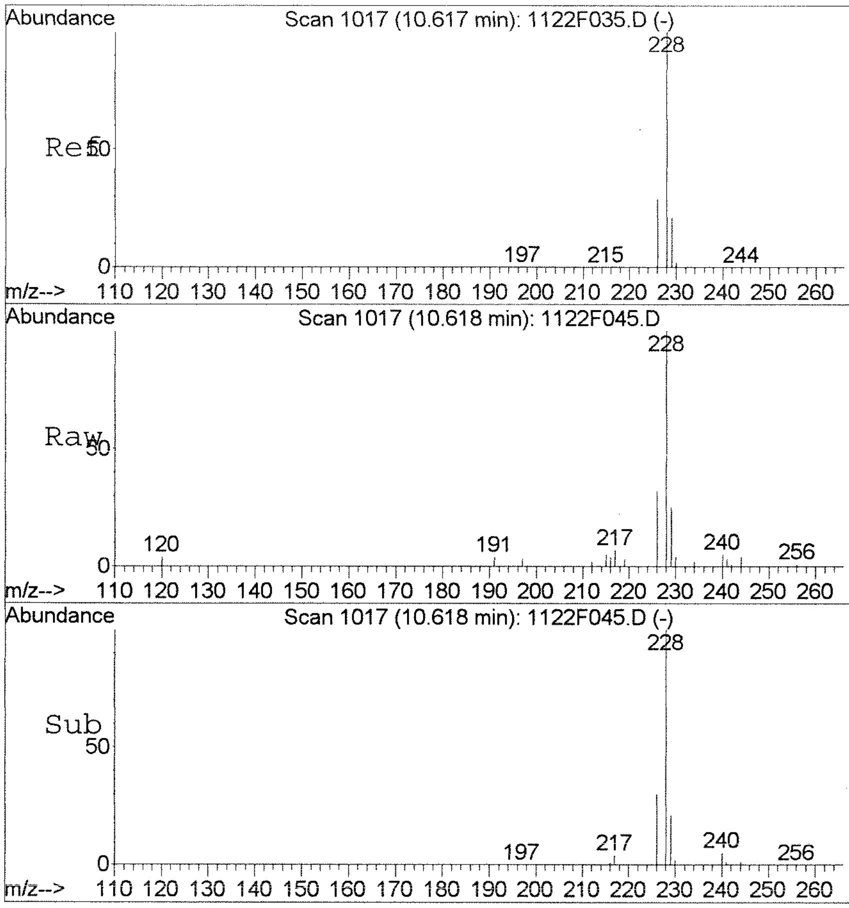


#43
Benz(a)anthracene
Concen: 71.31 ng/ml
RT: 10.55 min Scan# 1008
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:228 Resp: 119218

Ion	Ratio	Lower	Upper
228	100		
226	32.7	0.0	57.0

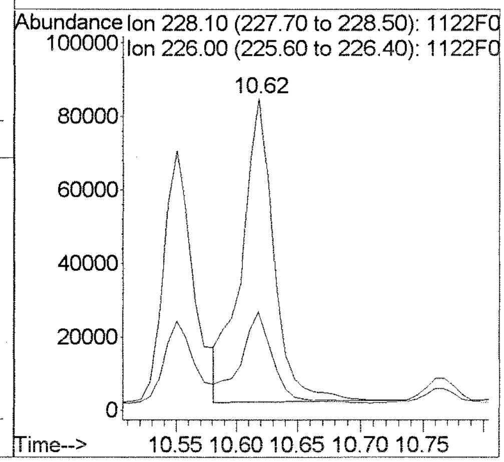


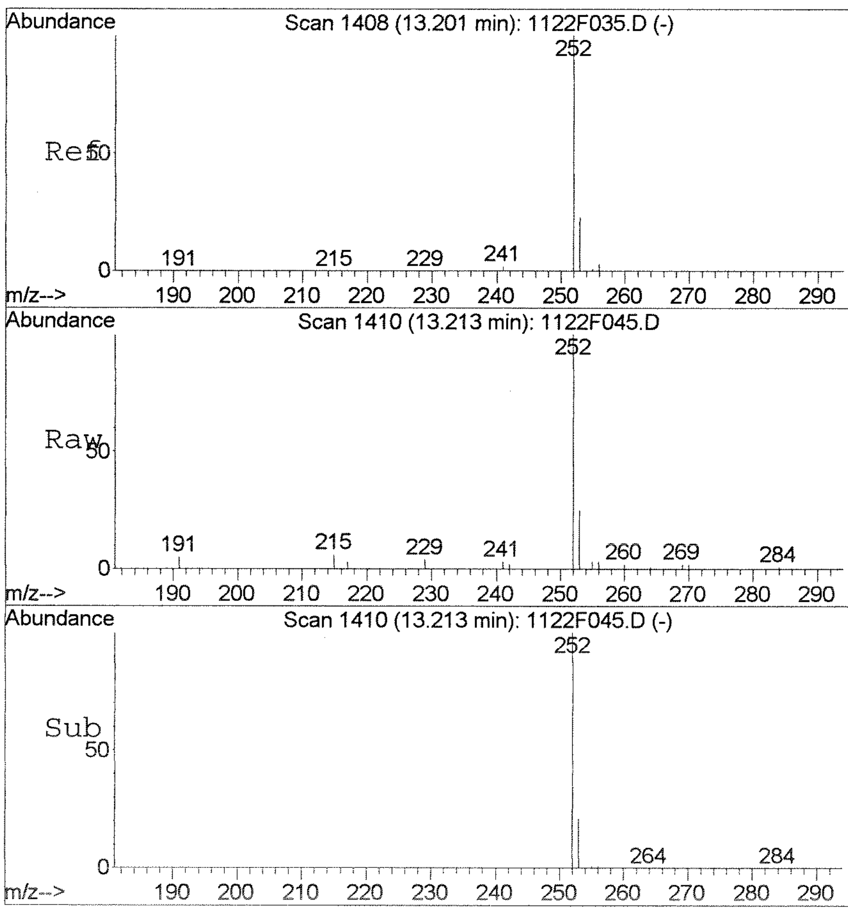


#44
Chrysene
Concen: 93.89 ng/ml
RT: 10.62 min Scan# 1017
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:228 Resp: 154167

Ion	Ratio	Lower	Upper
228	100		
226	29.7	0.0	58.9

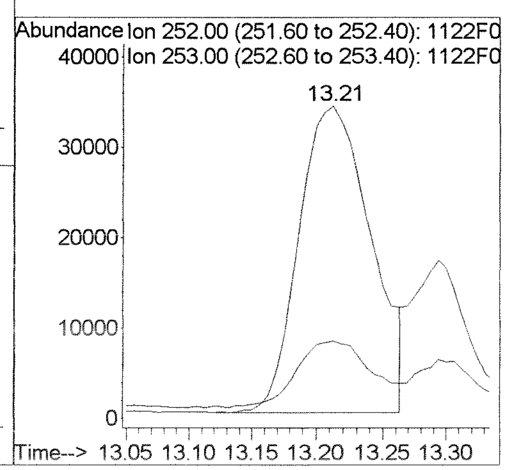


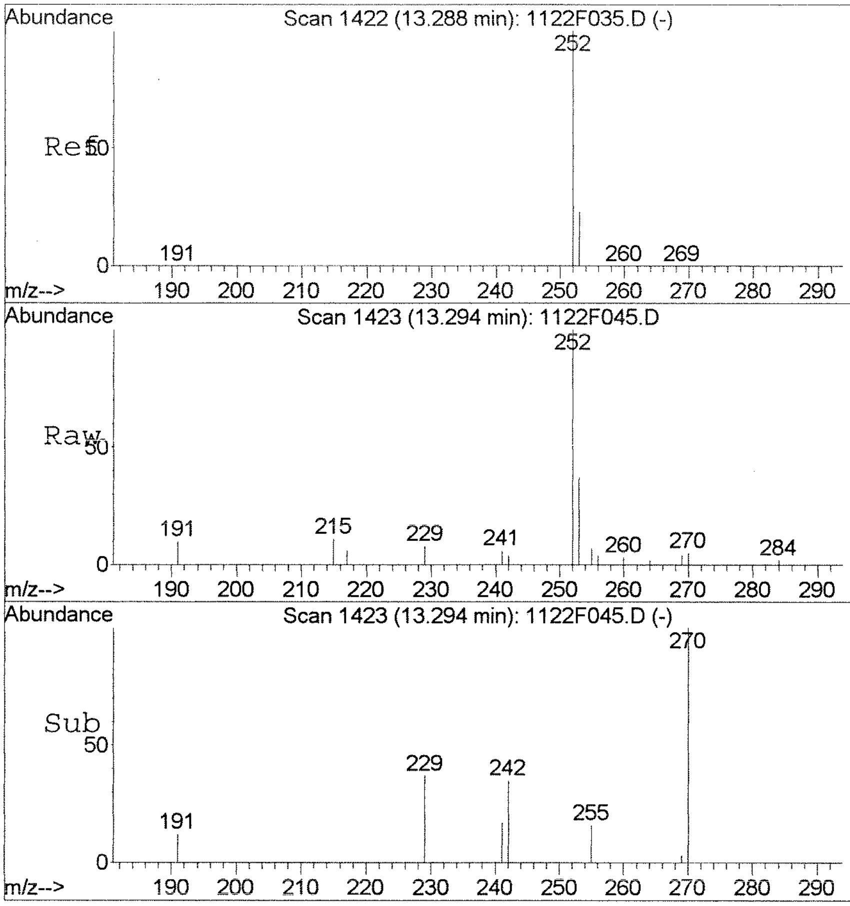


#50
Benzo(b)fluoranthene
Concen: 67.32 ng/ml
RT: 13.21 min Scan# 1410
Delta R.T. -0.01 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:252 Resp: 128186

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	52.6

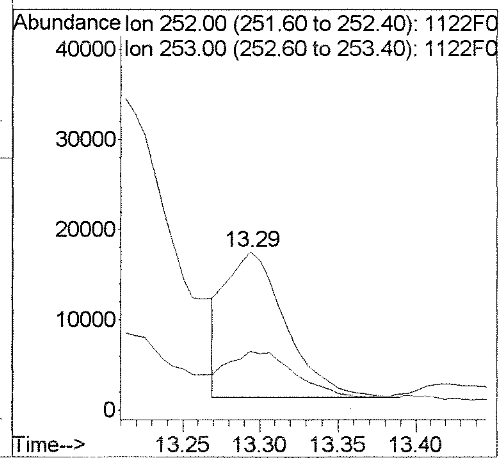


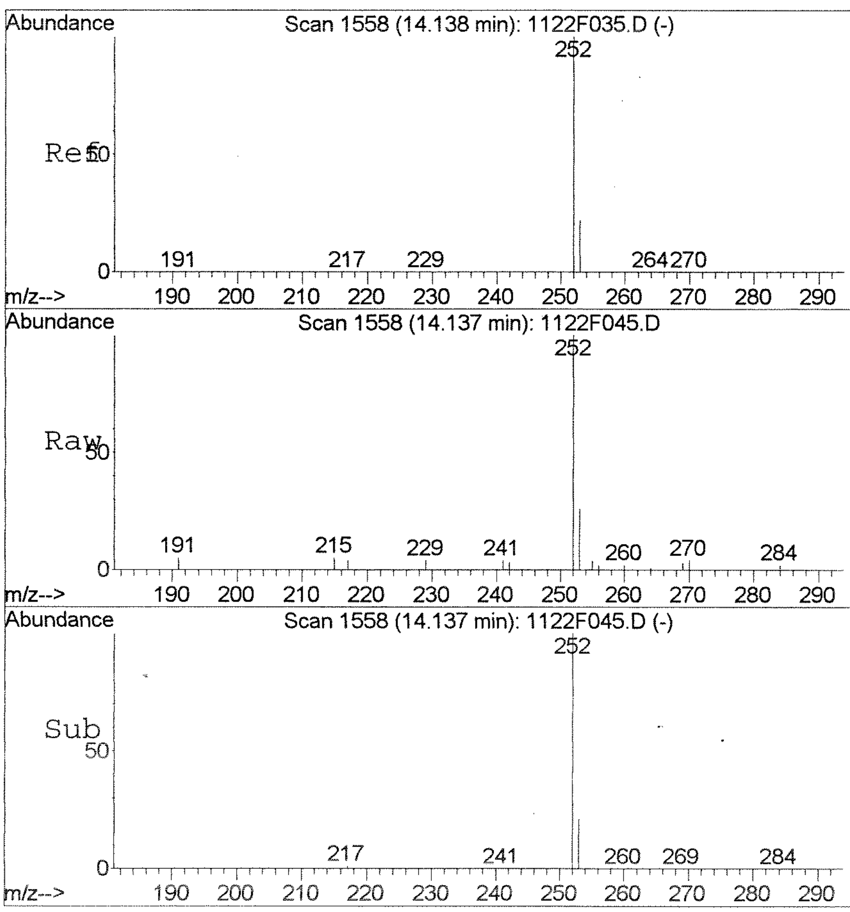


#51
Benzo(k)fluoranthene
Concen: 24.18 ng/ml
RT: 13.29 min Scan# 1423
Delta R.T. -0.02 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:252 Resp: 44233

Ion	Ratio	Lower	Upper
252	100		
253	29.3	0.0	52.0

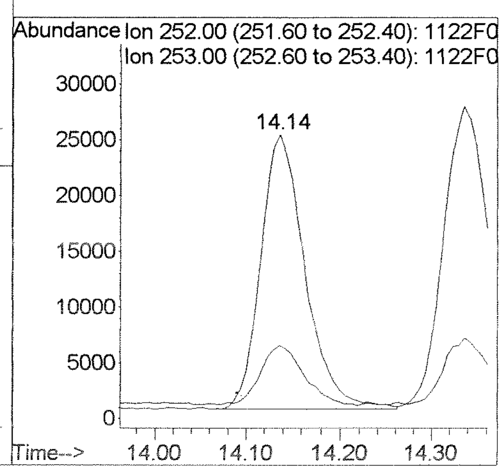


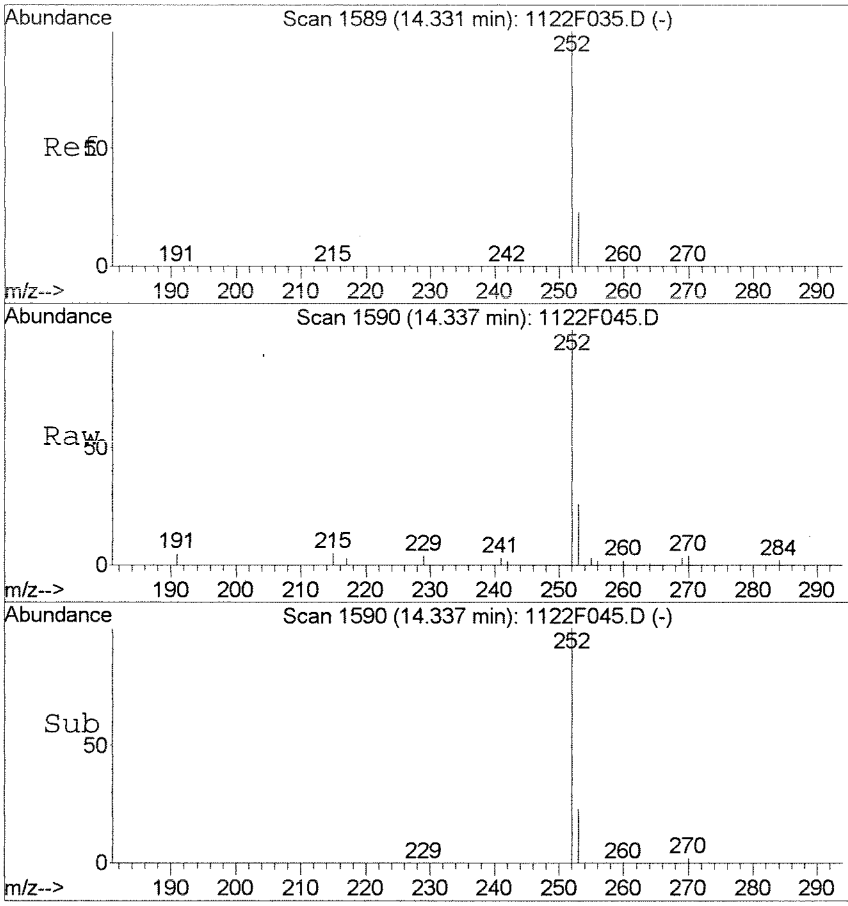


#52
Benzo(e)pyrene
Concen: 47.39 ng/ml
RT: 14.14 min Scan# 1558
Delta R.T. -0.03 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:252 Resp: 81976

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	52.2

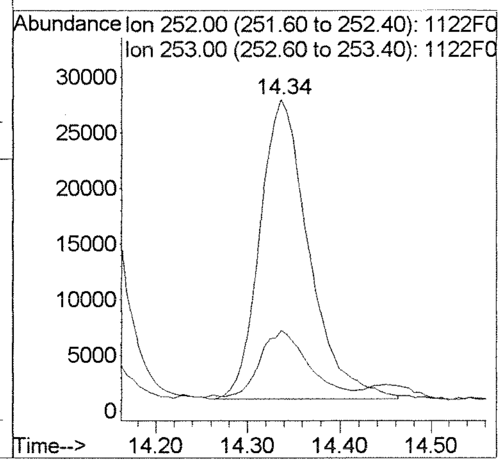


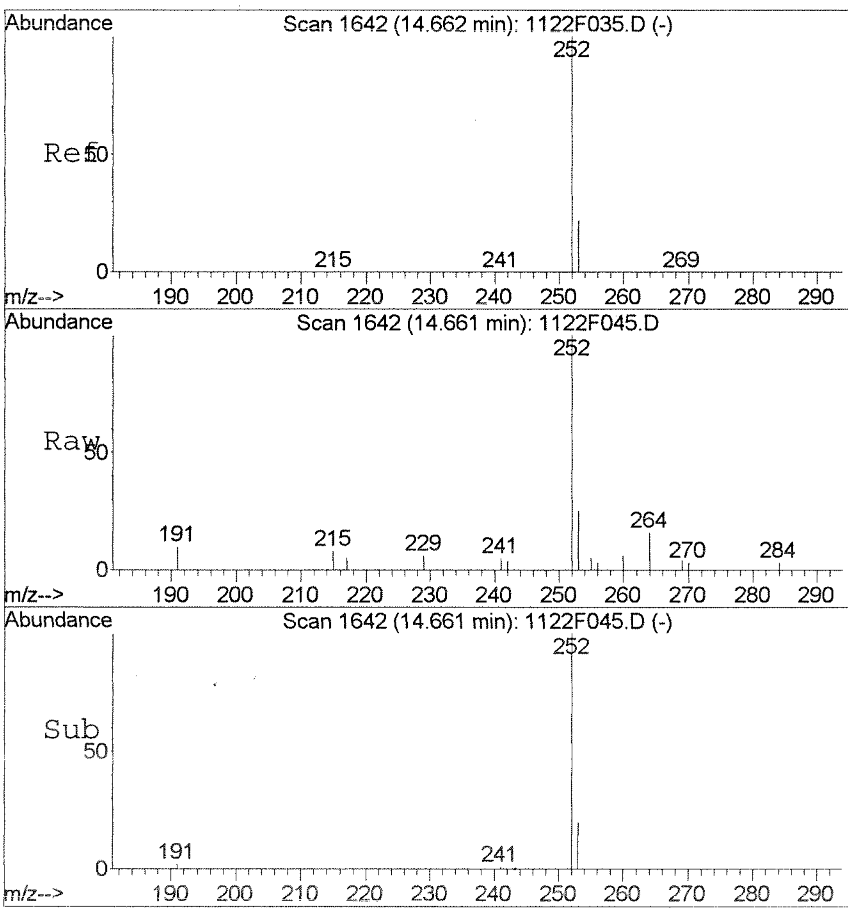


#53
Benzo(a)pyrene
Concen: 63.45 ng/ml
RT: 14.34 min Scan# 1590
Delta R.T. -0.03 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:252 Resp: 100025

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	52.2

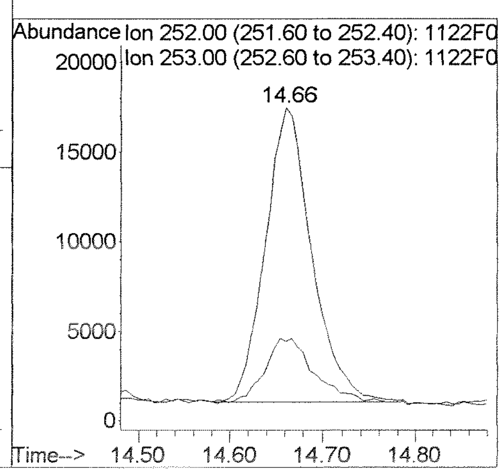


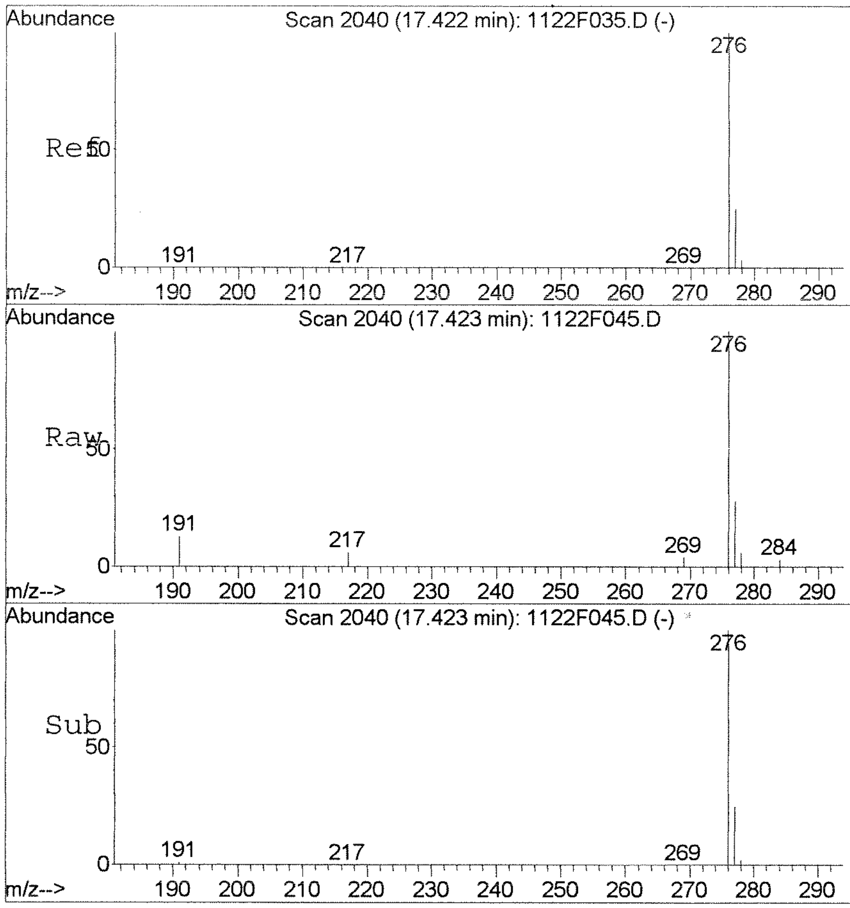


#54
Perylene
Concen: 36.99 ng/ml
RT: 14.66 min Scan# 1642
Delta R.T. -0.03 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:252 Resp: 57292

Ion	Ratio	Lower	Upper
252	100		
253	20.6	0.0	51.5

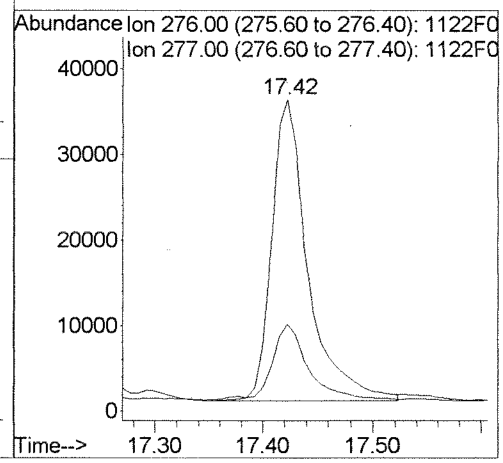


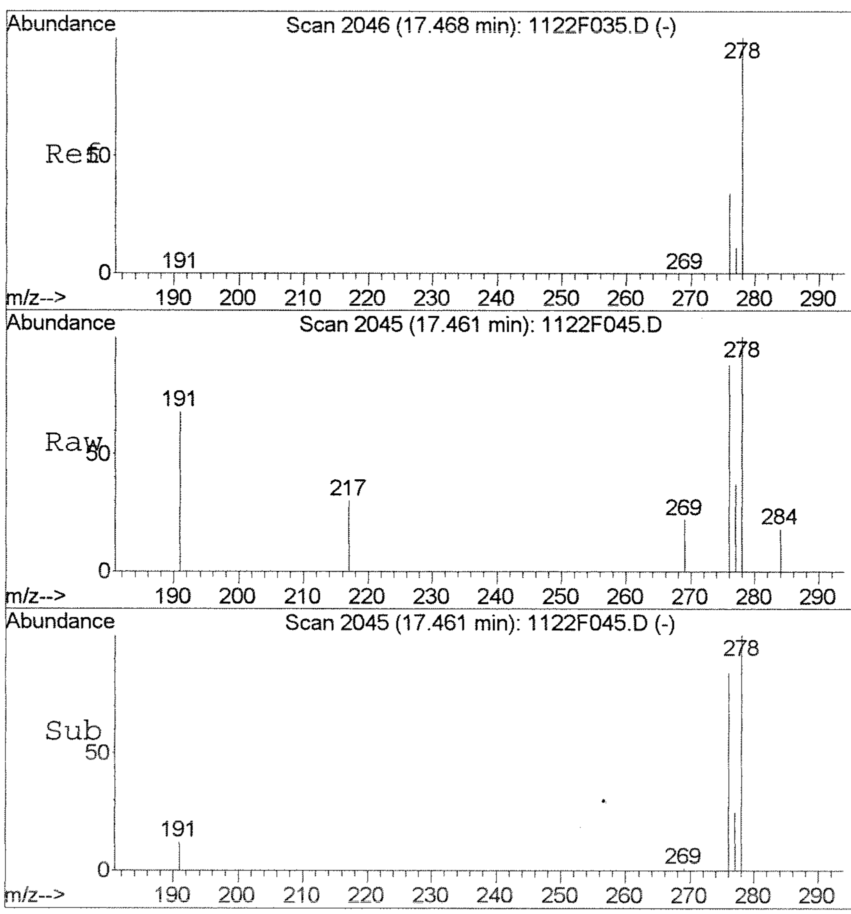


#55
Indeno(1,2,3-cd)pyrene
Concen: 55.93 ng/ml
RT: 17.42 min Scan# 2040
Delta R.T. -0.02 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:276 Resp: 81809

Ion	Ratio	Lower	Upper
276	100		
277	25.0	0.0	54.7

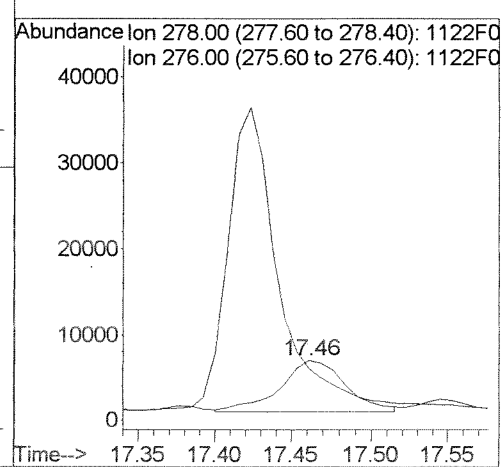


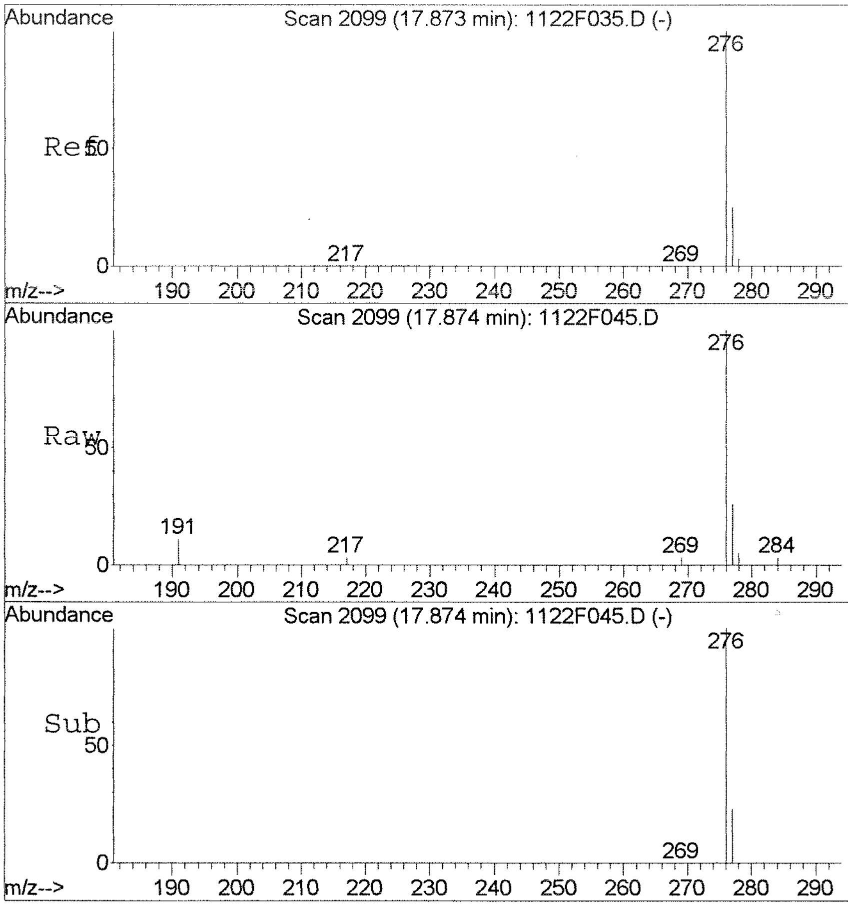


#56
Dibenz(a,h)anthracene
Concen: 11.25 ng/ml m
RT: 17.46 min Scan# 2045
Delta R.T. -0.03 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:278 Resp: 17277

Ion	Ratio	Lower	Upper
278	100		
276	87.6	0.0	59.7#

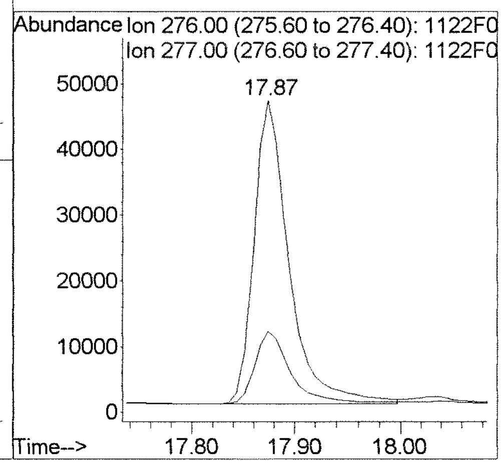




#57
Benzo(g,h,i)perylene
Concen: 65.54 ng/ml
RT: 17.87 min Scan# 2099
Delta R.T. -0.02 min
Lab File: 1122F045.D
Acq: 23 Nov 2008 3:32 am

Tgt Ion:276 Resp: 109230

Ion	Ratio	Lower	Upper
276	100		
277	23.9	0.0	54.2



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/24/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED10-0.5-2.5-B	**Units:**	ug/Kg
Lab Code:	K0810639-007	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	8.9		5.0	0.37	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	5.0	J	5.0	0.39	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	5.2		5.0	0.24	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	27		5.0	0.23	1	11/11/08	11/22/08	KWG0812042	
Fluorene	24		5.0	0.50	1	11/11/08	11/22/08	KWG0812042	
Dibenzofuran	3.3	J	5.0	0.59	1	11/11/08	11/22/08	KWG0812042	
Phenanthrene	210		5.0	0.75	1	11/11/08	11/22/08	KWG0812042	
Anthracene	41		5.0	0.47	1	11/11/08	11/22/08	KWG0812042	
Fluoranthene	200		5.0	0.61	1	11/11/08	11/22/08	KWG0812042	
Pyrene	230		5.0	0.37	1	11/11/08	11/22/08	KWG0812042	
Benz(a)anthracene	67		5.0	0.48	1	11/11/08	11/22/08	KWG0812042	
Chrysene	94		5.0	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(b)fluoranthene	90		5.0	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(k)fluoranthene	34		5.0	0.15	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	75		5.0	0.14	1	11/11/08	11/22/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	73		5.0	0.16	1	11/11/08	11/22/08	KWG0812042	
Dibenz(a,h)anthracene	11		5.0	0.28	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	78		5.0	0.64	1	11/11/08	11/22/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	62	10-128	11/22/08	Acceptable
Fluoranthene-d10	55	29-121	11/22/08	Acceptable
Terphenyl-d14	67	24-141	11/22/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\112108\1121F048.D
Lab ID: K0810639-007
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 02:48
Date Quantitated: 11/22/2008 13:58
Batch ID: KWG0812613
Analysis Method: 8270C SIM
ListJoinID: LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: RW 11/22/08

Secondary Review: [illegible] 11-22-8

Printed: 11/22/2008 14:50:32
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/24/2008	**Receive Date:**	07/29/2008

Analysis Lot:	KWG0812613	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776071	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112108\1121F030.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112108\1121F048.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 02:48	**Quant Date:**	11/22/2008 13:58	**Vial:**	45
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-007			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	-0.01	136	176484	200.00	OK
2	Acenaphthene-d10	6.47	0.00	164	108198	200.00	OK
3	Phenanthrene-d10	7.71	0.00	188	188421	200.00	OK
4	Chrysene-d12	10.60	0.00	240	179877	200.00	OK
5	Perylene-d12	14.63	0.02	264	190694	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.90	0.00	0.00	176	91683	124.68	62	10-128	OK	
3	Fluoranthene-d10	8.71	0.01	0.00	212	142293	110.76	55	29-121	OK	
4	Terphenyl-d14	9.10	0.00	0.00	244	125362	134.62	67	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.06	-0.01	0.00	128	9595	8.93	8.9		
1	2-Methylnaphthalene	5.61	-0.01	0.00	142	3740	4.99	5.0	J	
2	Acenaphthylene	6.36	0.01	0.00	152	6396	5.24	5.2		
2	Acenaphthene	6.49		0.00	154	20146**m**	27.17	27		
2	Dibenzofuran	6.64		0.00	168	3666**m**	3.29	3.3	J	
2	Fluorene	6.92		0.00	166	21806**m**	24.50	24		
3	Phenanthrene	7.73	0.01	0.00	178	277041	209.18	210		
3	Anthracene	7.77		0.00	178	53385	41.37	41		
3	Fluoranthene	8.73	0.01	0.00	202	296153	196.85	200		
4	Pyrene	8.95		0.00	202	308375	227.89	230		
4	Benz(a)anthracene	10.58		0.00	228	82679	67.35	67		
4	Chrysene	10.65		0.00	228	114677	95.11	94		
5	Benzo(b)fluoranthene	13.26	0.01	0.00	252	119402	90.73	90		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112108\1121F048.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 02:48	**Quant Date:**	11/22/2008 13:58	**Vial:**	45
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-007			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.34		0.00	252	42841	33.89	34		
5	Benzo(a)pyrene	14.40	0.01	0.00	252	82487	75.70	75		
5	Indeno(1,2,3-cd)pyrene	17.45		0.00	276	73874	73.07	73		
5	Dibenz(a,h)anthracene	17.51		0.00	278	12171	11.47	11		
5	Benzo(g,h,i)perylene	17.91		0.00	276	90506	78.58	78		

Prep Amount:	15.04 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	67.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F048.D Vial: 45
Acq On : 22 Nov 2008 2:48 am Operator: LWeiskopf
Sample : K0810639-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14:34 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.04	136	176484	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.47	164	108198	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.71	188	188421	200.00 ng/ml	0.00
37) Chrysene-d12	10.60	240	179877	200.00 ng/ml	0.01
49) Perylene-d12	14.63	264	190694	200.00 ng/ml	0.04
System Monitoring Compounds					
15) Fluorene-d10	6.90	176	91683	124.68 ng/ml	0.00
Spiked Amount 200.000			Recovery =	62.34%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00 ng/ml	
Spiked Amount 375.000			Recovery =	0.00%	
36) Fluoranthene-d10	8.71	212	142293	110.76 ng/ml	0.00
Spiked Amount 200.000			Recovery =	55.38%	
42) Terphenyl-d14	9.10	244	125362	134.62 ng/ml	0.00
Spiked Amount 200.000			Recovery =	67.31%	
Target Compounds					Qvalue
2) Naphthalene	5.06	128	9595	8.93 ng/ml	100
3) 2-Methylnaphthalene	5.61	142	3740	4.99 ng/ml	90
4) 1-Methylnaphthalene	5.70	142	1441	2.15 ng/ml	98
5) Biphenyl	5.99	154	1910m	2.08 ng/ml	
6) 2,6-Dimethylnaphthalene	6.12	156	3911	5.98 ng/ml	98
11) Acenaphthylene	6.36	152	6396	5.24 ng/ml	99
12) Acenaphthene	6.49	154	20146m	27.17 ng/ml	
13) Dibenzofuran	6.64	168	3666m	3.29 ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.80	170	7283	11.17 ng/ml	75
16) Fluorene	6.92	166	21806m	24.50 ng/ml	
23) Dibenzothiophene	7.62	184	14685	11.34 ng/ml	100
27) Phenanthrene	7.73	178	277041	209.18 ng/ml	96
28) Anthracene	7.77	178	53385	41.37 ng/ml	97
30) 1-Methylphenanthrene	8.22	192	17812m	18.12 ng/ml	
35) Fluoranthene	8.73	202	296153	196.85 ng/ml	93
38) Pyrene	8.95	202	308375	227.89 ng/ml	93
43) Benz(a)anthracene	10.58	228	82679	67.35 ng/ml	95
44) Chrysene	10.65	228	114677	95.11 ng/ml	100
50) Benzo(b)fluoranthene	13.26	252	119402	90.73 ng/ml	99
51) Benzo(k)fluoranthene	13.34	252	42841	33.89 ng/ml	99
52) Benzo(e)pyrene	14.20	252	74630	62.43 ng/ml	96
53) Benzo(a)pyrene	14.40	252	82487	75.70 ng/ml	100
54) Perylene	14.73	252	215530	201.36 ng/ml	98
55) Indeno(1,2,3-cd)pyrene	17.45	276	73874	73.07 ng/ml	98
56) Dibenz(a,h)anthracene	17.51	278	12171	11.47 ng/ml	51

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112108\1121F048.D Vial: 45
Acq On : 22 Nov 2008 2:48 am Operator: LWeiskopf
Sample : K0810639-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14:34 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
57)	Benzo(g,h,i)perylene	17.91	276	90506	78.58	ng/ml	98

(#) = qualifier out of range (m) = manual integration

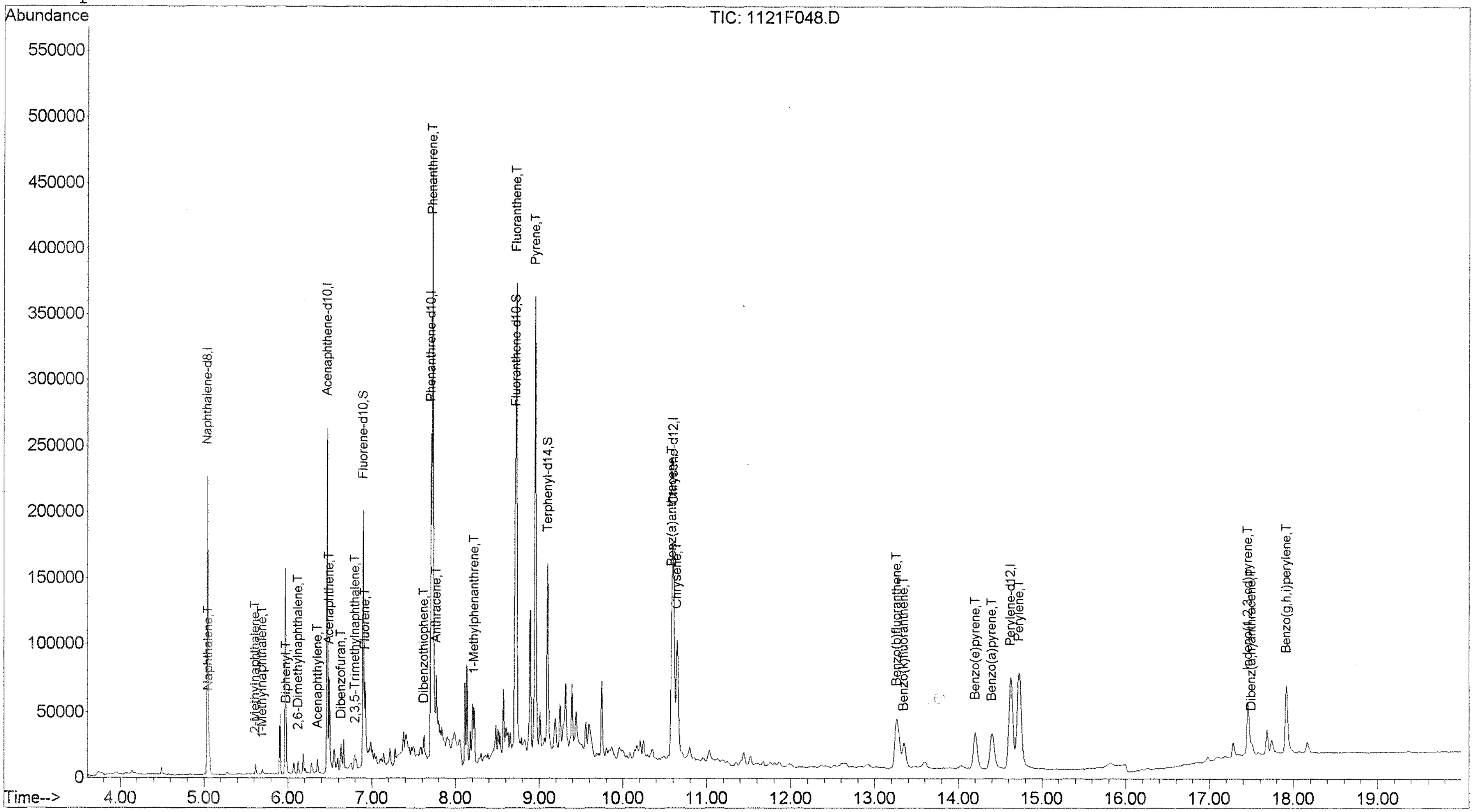
Quantitation Report (QT Reviewed)

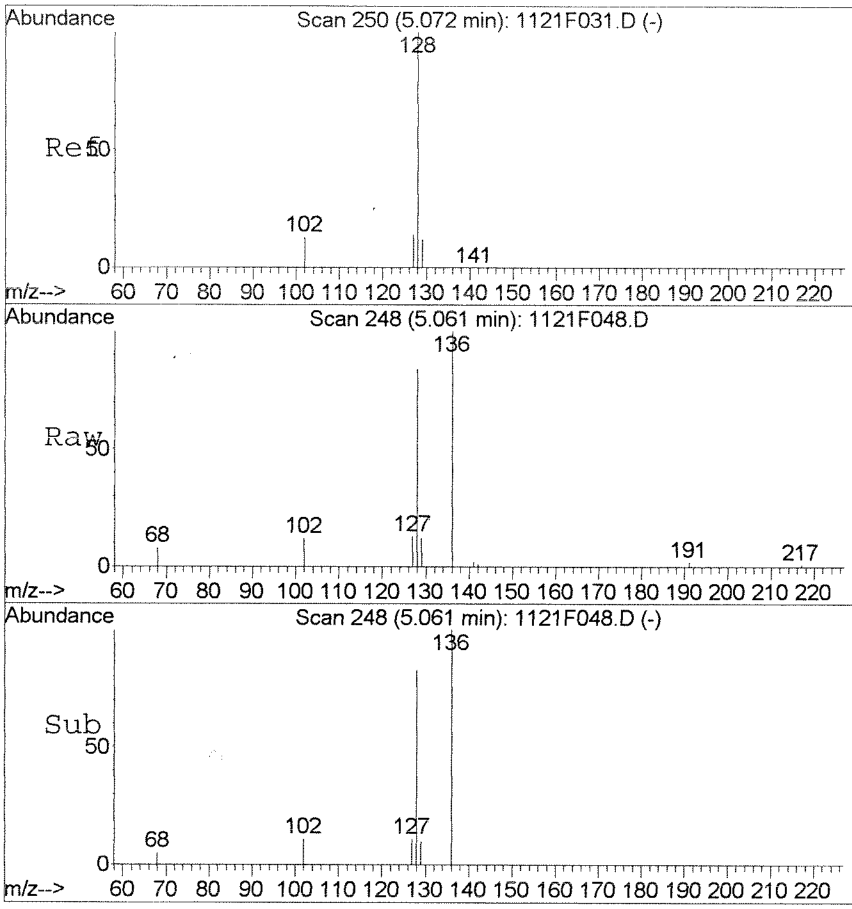
Data File : J:\MS11\DATA\112108\1121F048.D
Acq On : 22 Nov 2008 2:48 am
Sample : K0810639-007
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:58 2008

Vial: 45
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

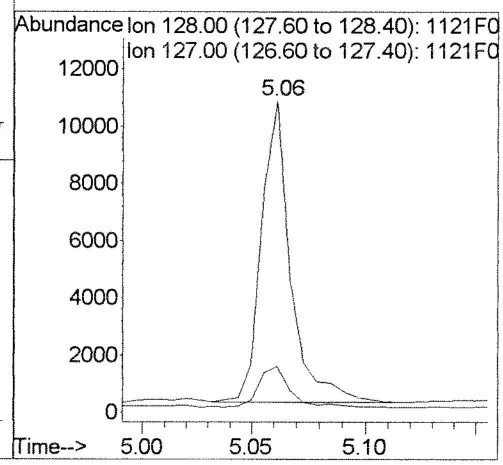
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration

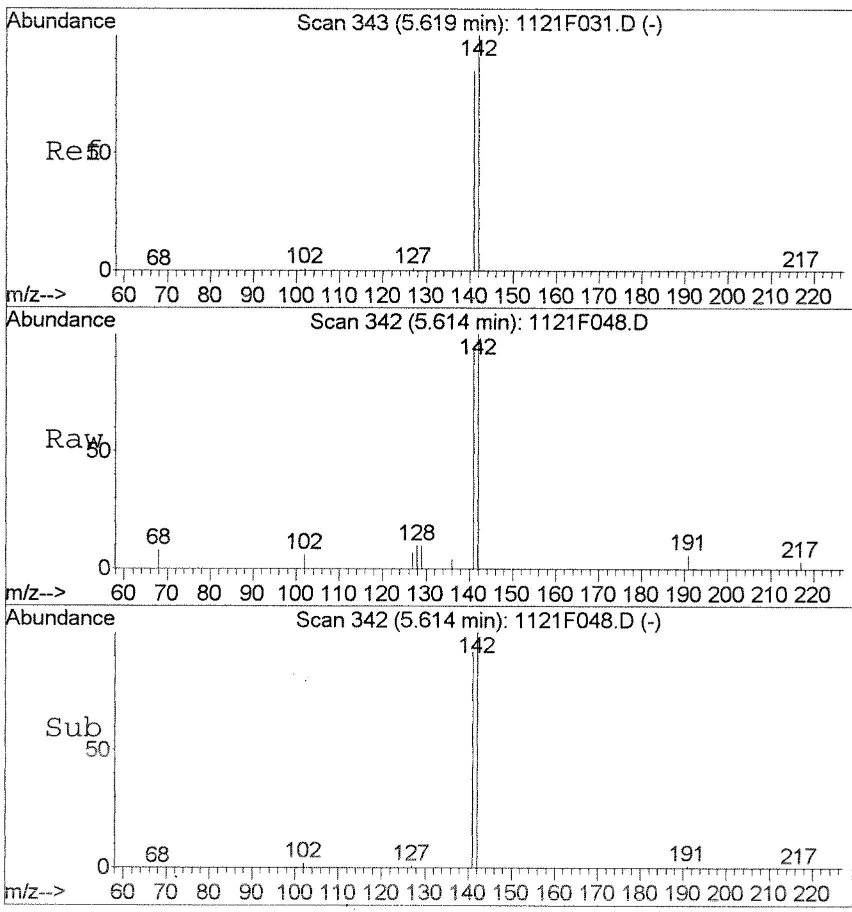




#2
Naphthalene
Concen: 8.93 ng/ml
RT: 5.06 min Scan# 248
Delta R.T. 0.00 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

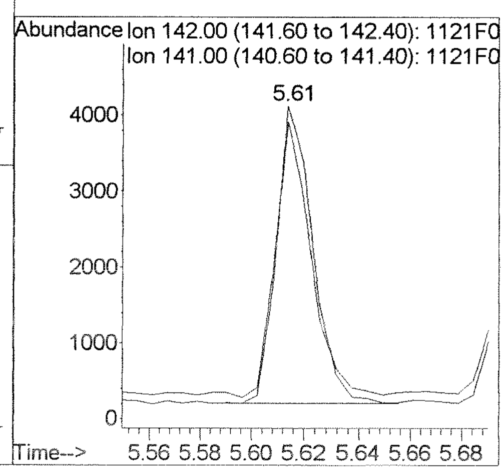
Tgt	Ion:128	Resp:	9595
Ion	Ratio	Lower	Upper
128	100		
127	13.7	0.0	43.8

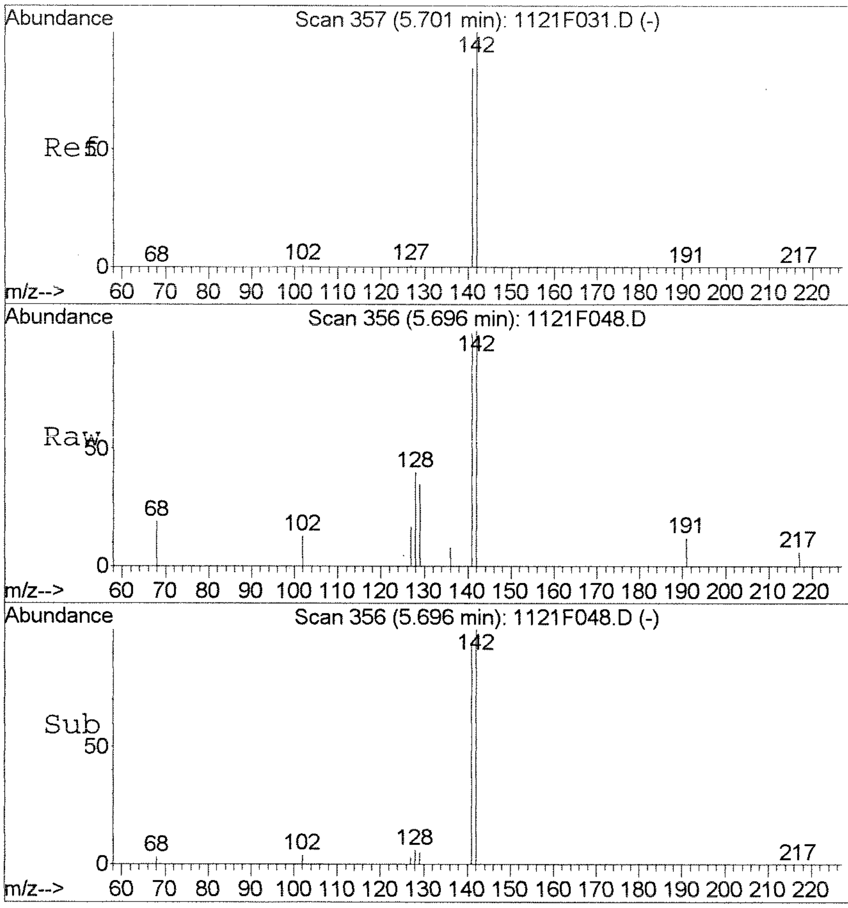




#3
2-Methylnaphthalene
Concen: 4.99 ng/ml
RT: 5.61 min Scan# 342
Delta R.T. 0.00 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

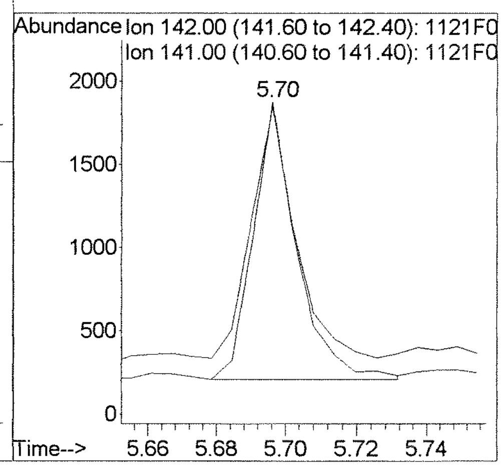
Tgt	Ion:142	Resp:	3740
Ion	Ratio	Lower	Upper
142	100		
141	91.2	52.4	112.4

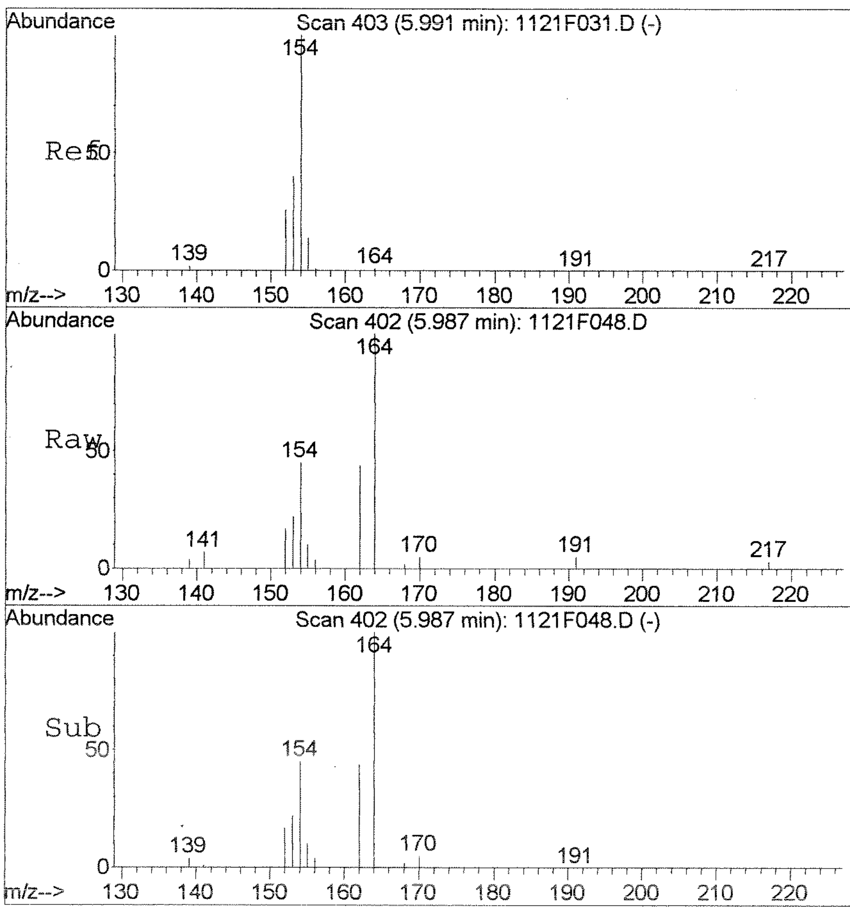




#4
1-Methylnaphthalene
Concen: 2.15 ng/ml
RT: 5.70 min Scan# 356
Delta R.T.   0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008   2:48 am

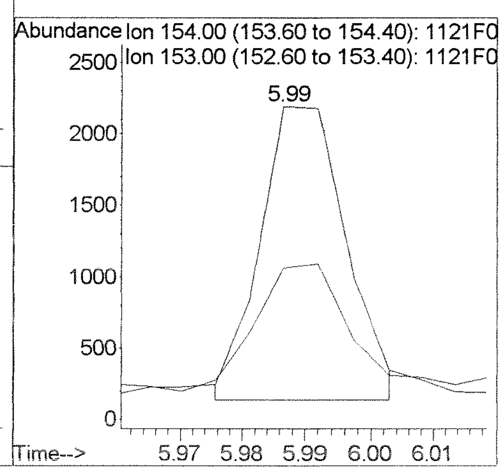
Tgt Ion:142	Resp:		1441
Ion	Ratio	Lower	Upper
142	100		
141	90.8	63.0	123.0

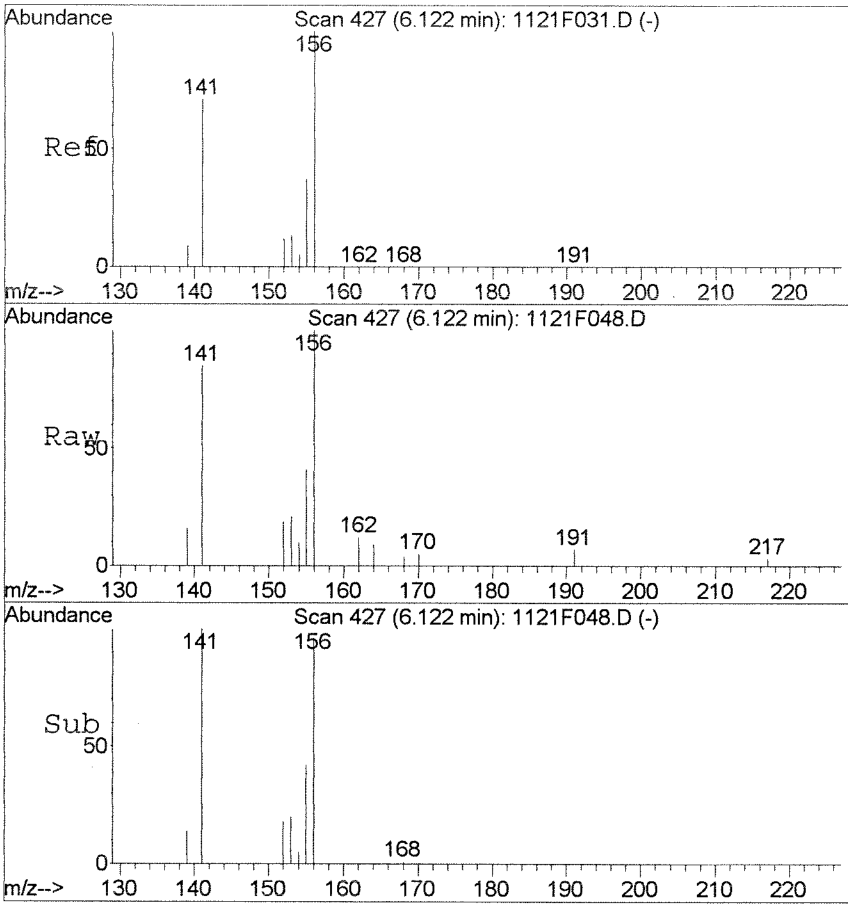




#5
Biphenyl
Concen: 2.08 ng/ml m
RT: 5.99 min Scan# 402
Delta R.T.   0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008   2:48 am

Tgt Ion:154	Resp:		1910
Ion	Ratio	Lower	Upper
154	100		
153	48.4	10.4	70.4

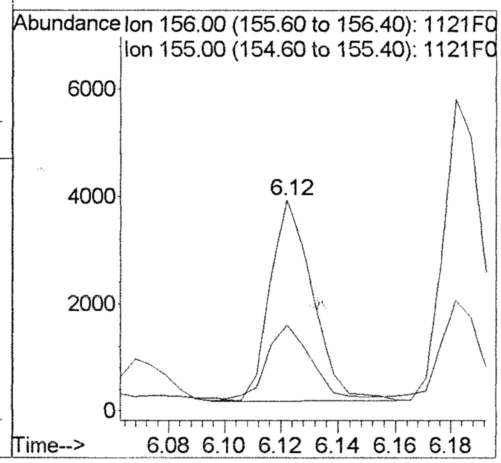


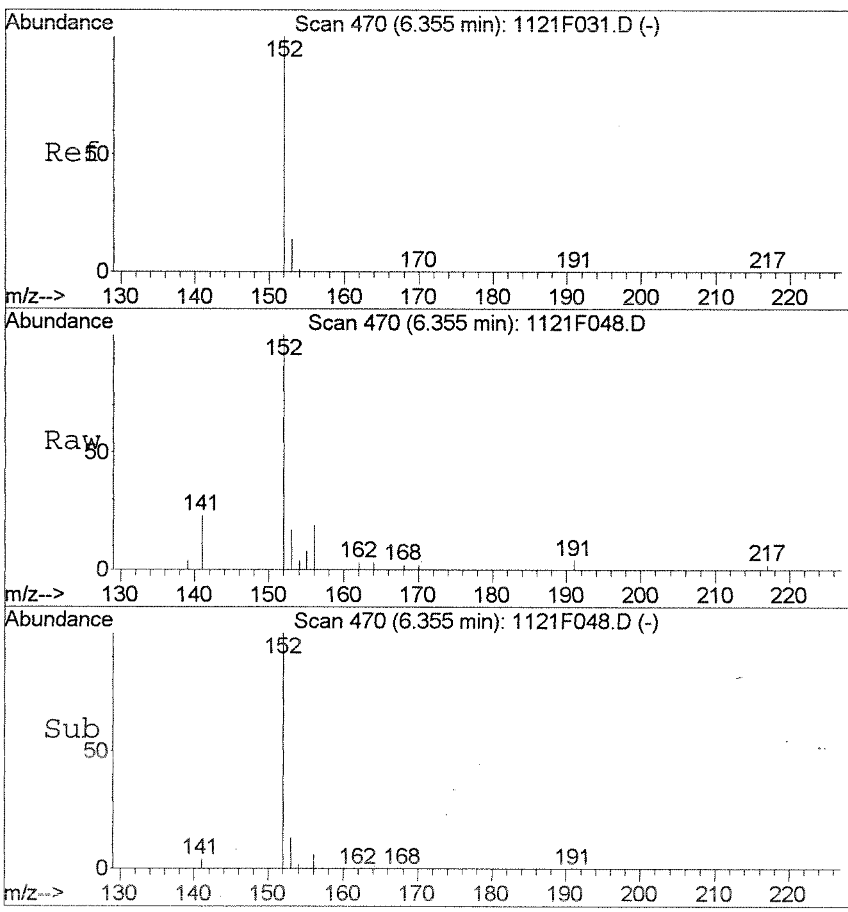


#6
2,6-Dimethylnaphthalene
Concen: 5.98 ng/ml
RT: 6.12 min Scan# 427
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:156 Resp: 3911

Ion	Ratio	Lower	Upper
156	100		
155	36.2	7.3	67.3

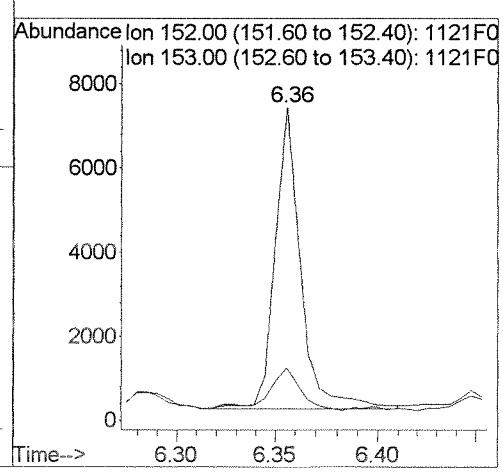


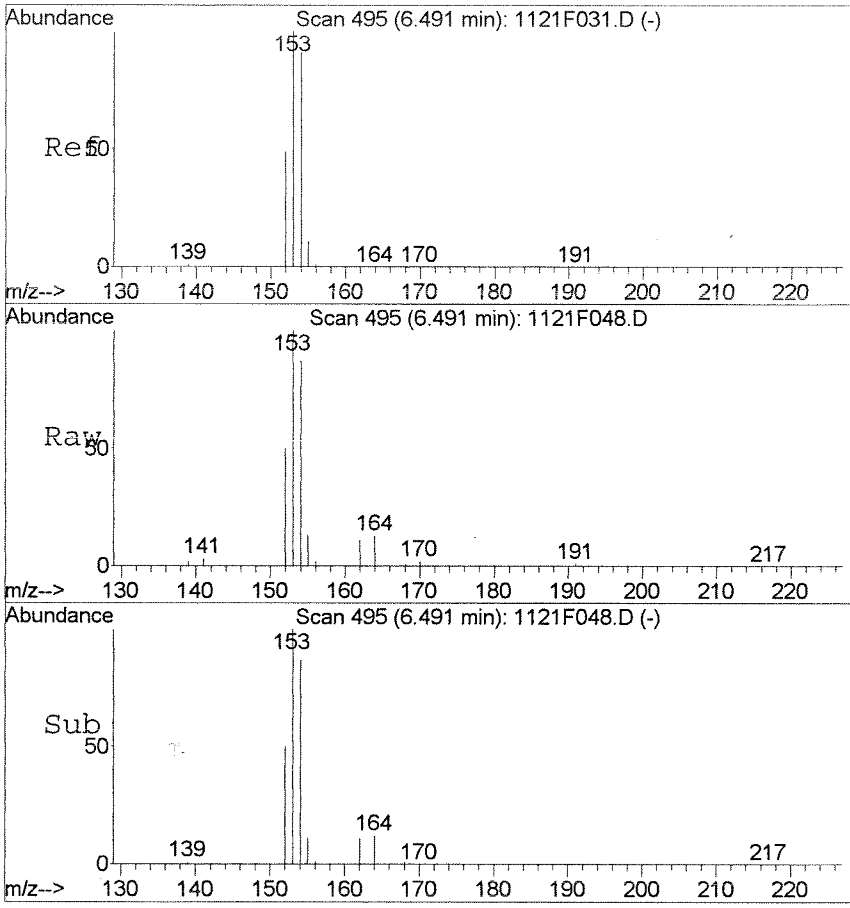


#11
Acenaphthylene
Concen: 5.24 ng/ml
RT: 6.36 min Scan# 470
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:152 Resp: 6396

Ion	Ratio	Lower	Upper
152	100		
153	13.4	0.0	43.0

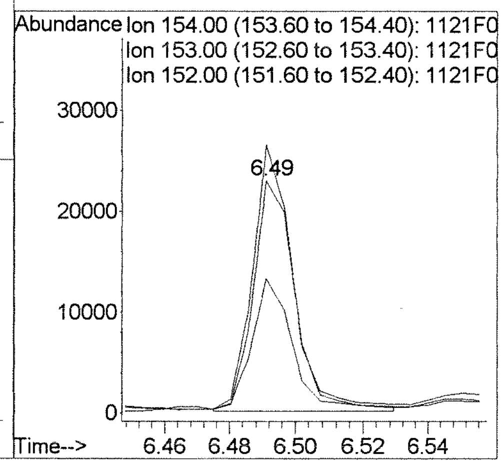


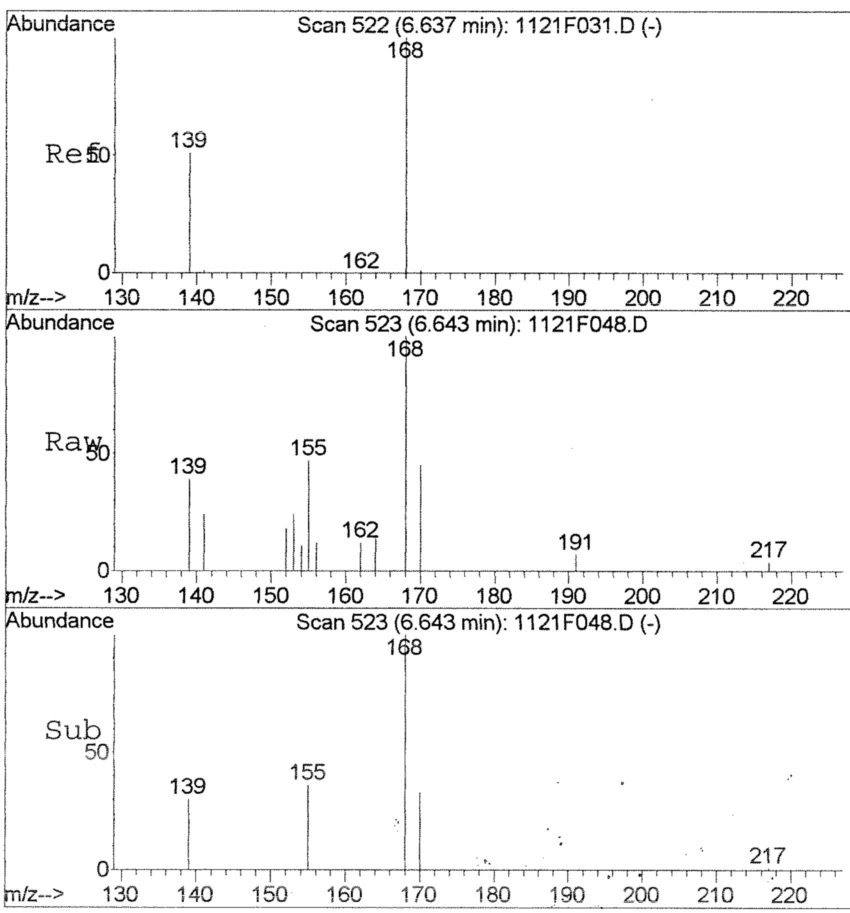


#12
Acenaphthene
Concen: 27.17 ng/ml m
RT: 6.49 min Scan# 495
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:154 Resp: 20146

Ion	Ratio	Lower	Upper
154	100		
153	115.3	81.9	141.9
152	57.9	26.8	86.8

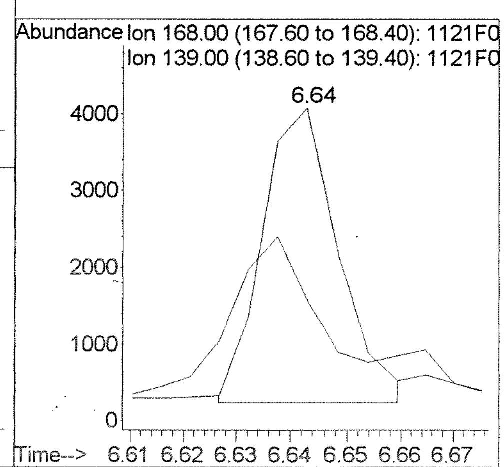


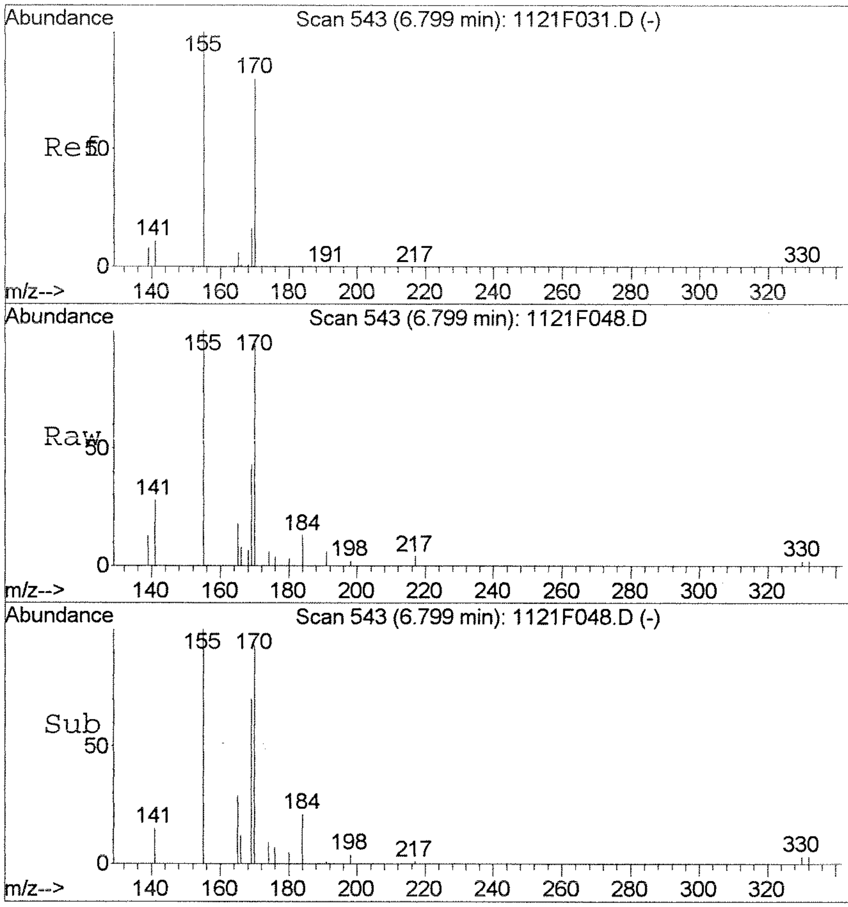


#13
Dibenzofuran
Concen: 3.29 ng/ml m
RT: 6.64 min Scan# 523
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:168 Resp: 3666

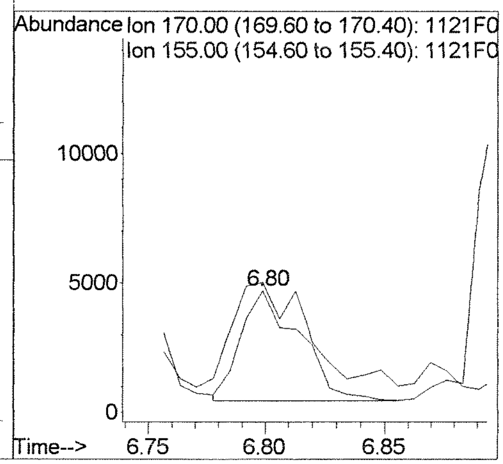
Ion	Ratio	Lower	Upper
168	100		
139	38.8	21.0	81.0

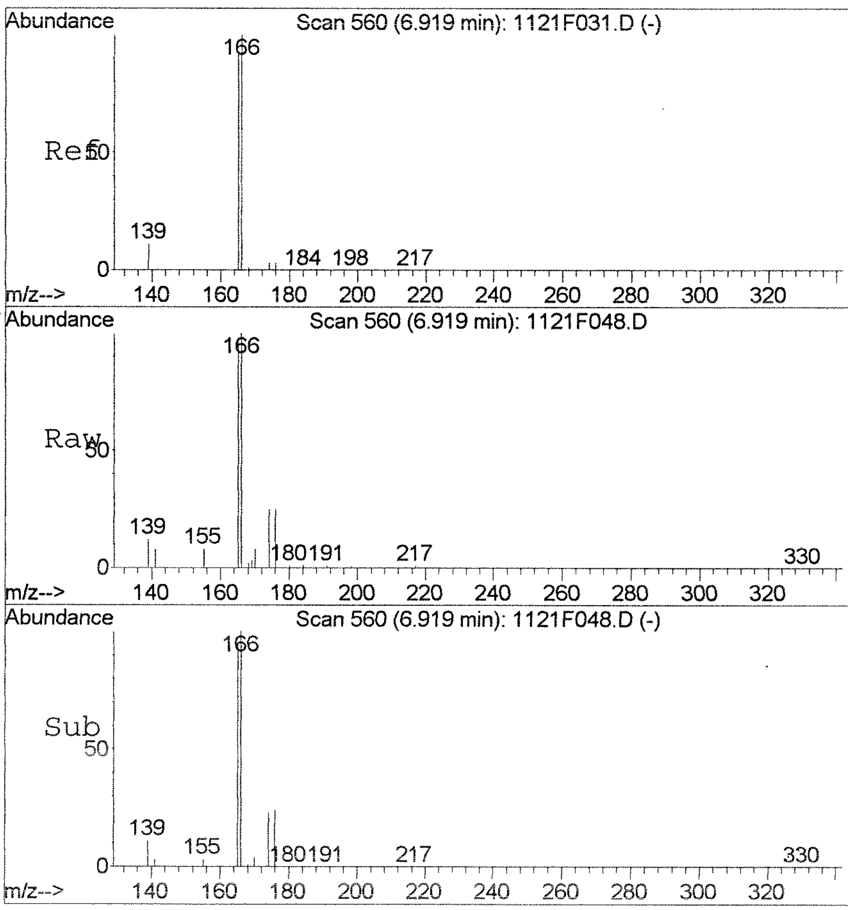




#14
2,3,5-Trimethylnaphthalene
Concen: 11.17 ng/ml
RT: 6.80 min Scan# 543
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

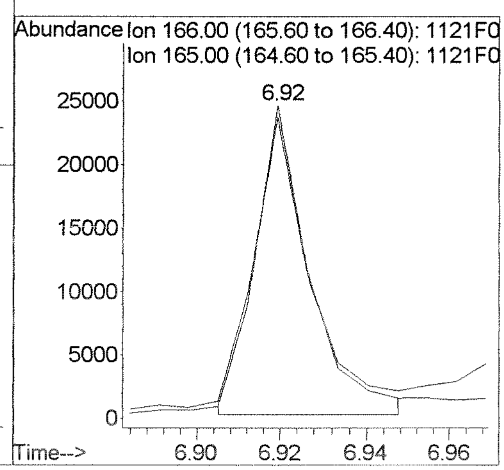
Tgt Ion:170	Resp:		7283
Ion	Ratio	Lower	Upper
170	100		
155	94.3	42.9	102.9

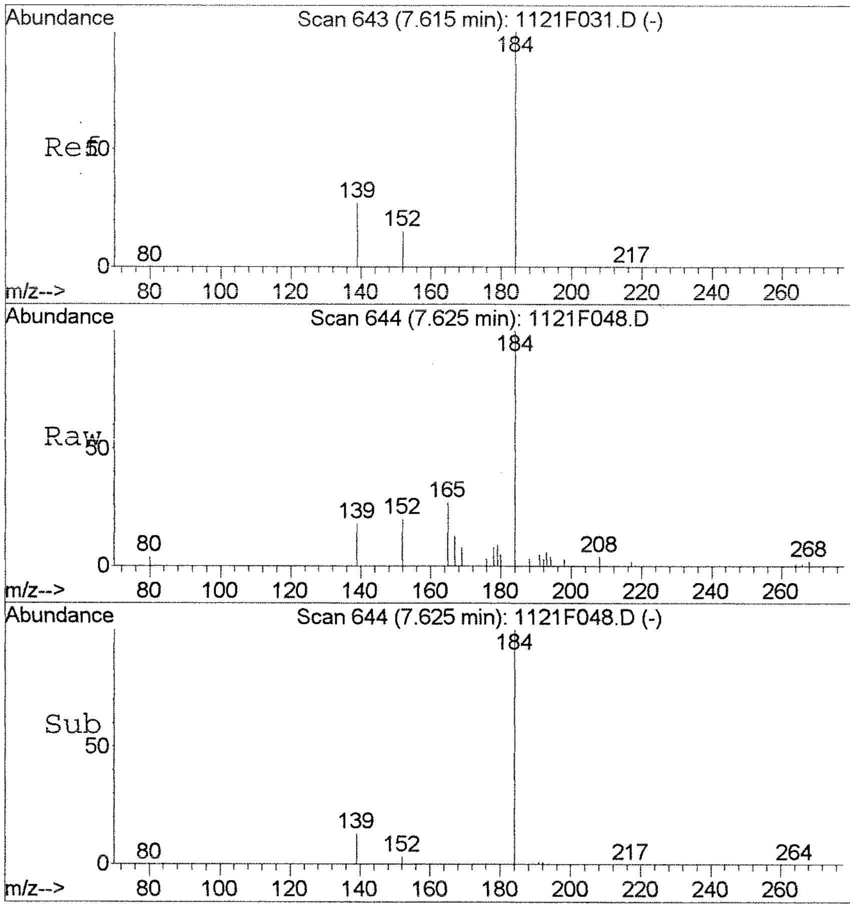




#16
Fluorene
Concen: 24.50 ng/ml m
RT: 6.92 min Scan# 560
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:166	Resp:		21806
Ion	Ratio	Lower	Upper
166	100		
165	96.3	59.8	119.8

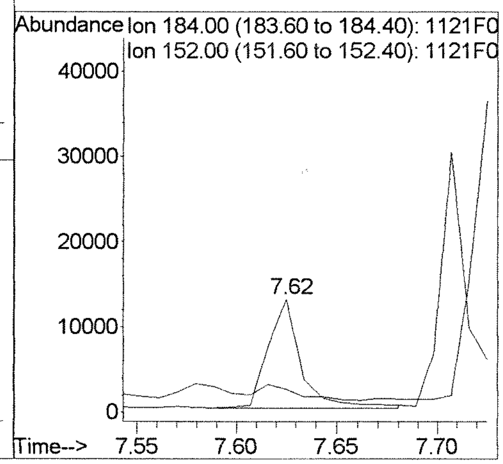


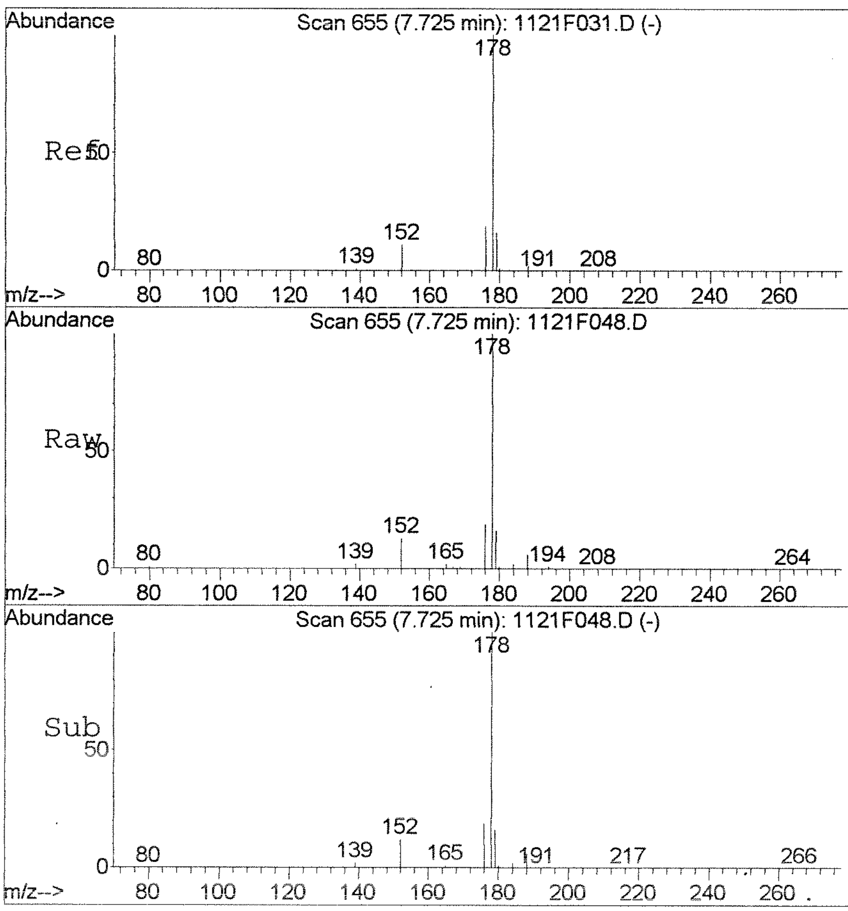


#23
Dibenzothiophene
Concen: 11.34 ng/ml
RT: 7.62 min Scan# 644
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:184 Resp: 14685

Ion	Ratio	Lower	Upper
184	100		
152	9.1	0.0	39.1

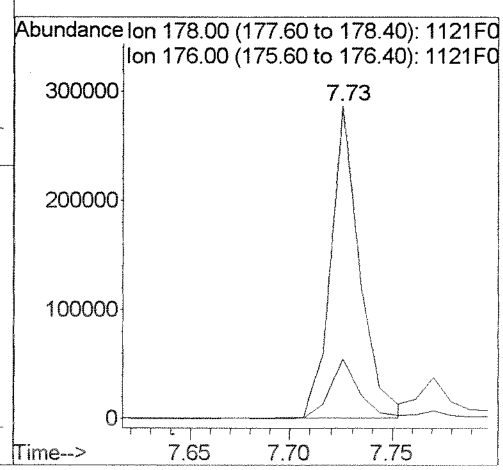


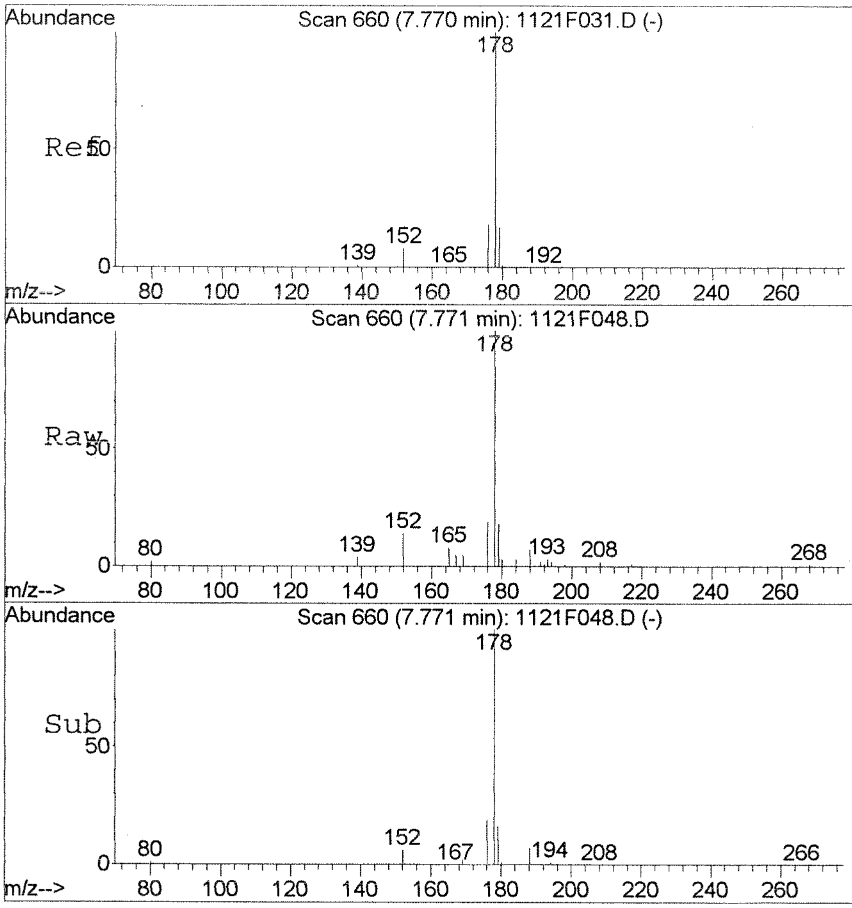


#27
Phenanthrene
Concen: 209.18 ng/ml
RT: 7.73 min Scan# 655
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:178 Resp: 277041

Ion	Ratio	Lower	Upper
178	100		
176	19.1	0.0	51.0

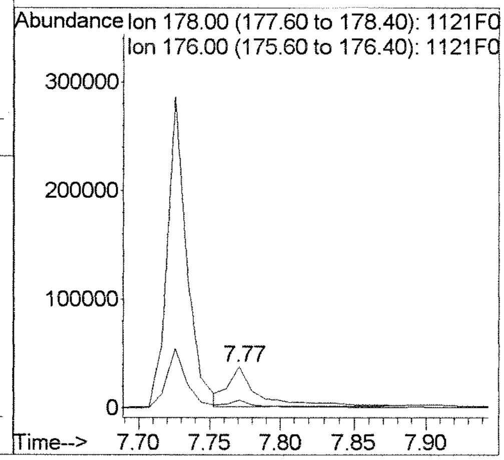


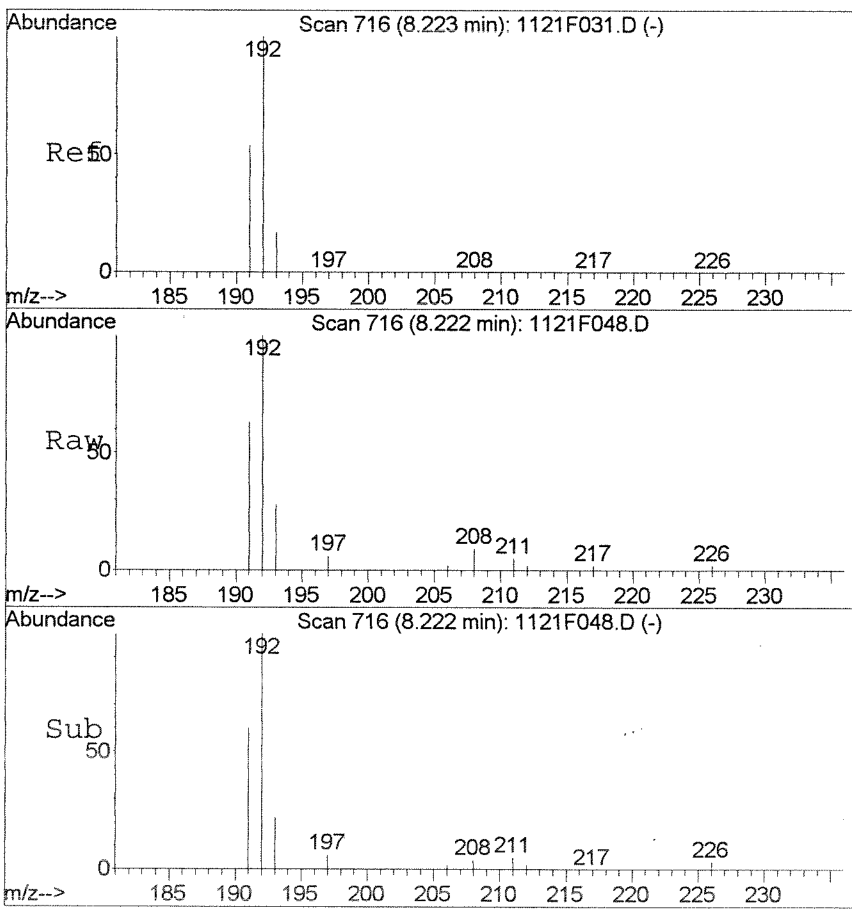


#28
Anthracene
Concen: 41.37 ng/ml
RT: 7.77 min Scan# 660
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:178 Resp: 53385

Ion	Ratio	Lower	Upper
178	100		
176	18.5	0.0	49.7

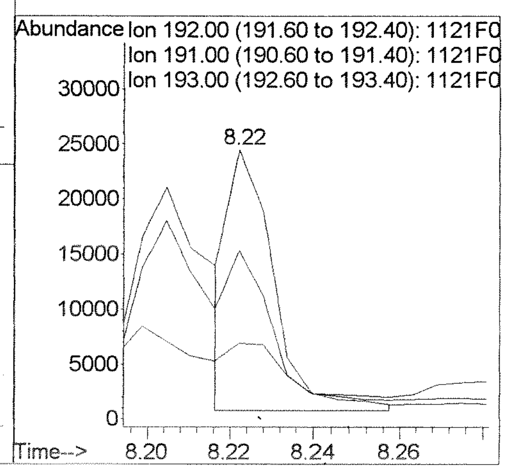


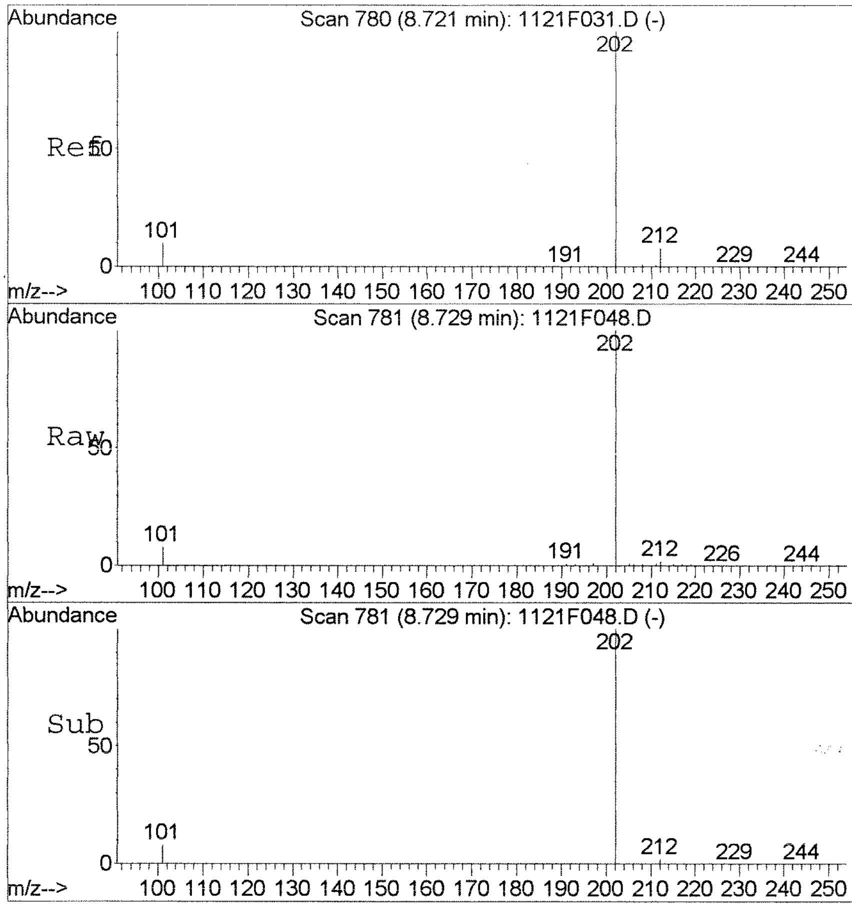


#30
1-Methylphenanthrene
Concen: 18.12 ng/ml m
RT: 8.22 min Scan# 716
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:192 Resp: 17812

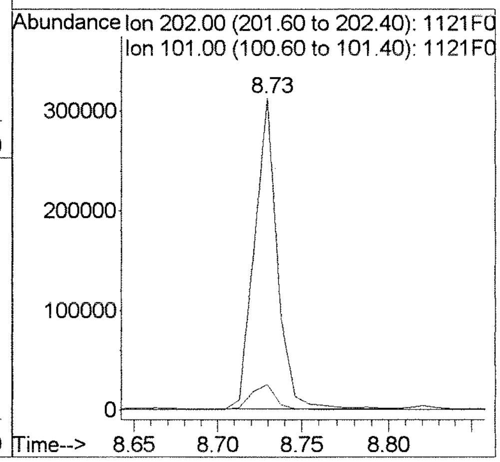
Ion	Ratio	Lower	Upper
192	100		
191	62.7	29.0	89.0
193	28.3	0.0	45.4

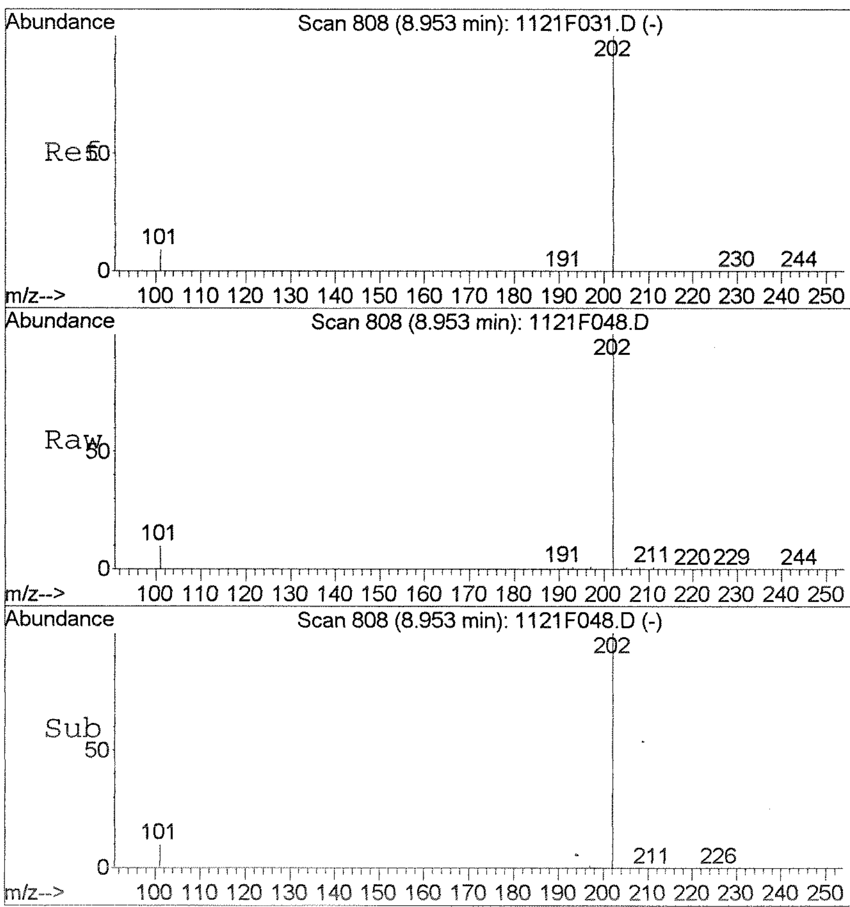




#35
Fluoranthene
Concen: 196.85 ng/ml
RT: 8.73 min Scan# 781
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

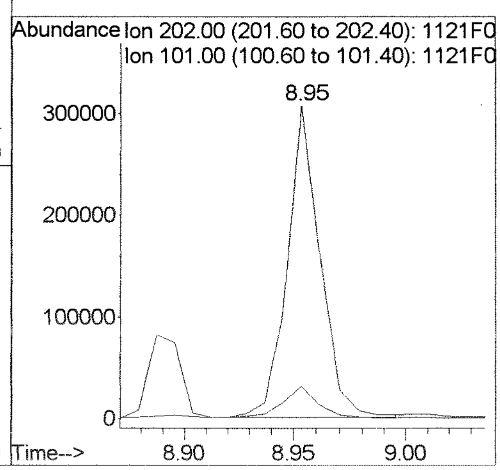
Tgt Ion:202		Resp:	296153
Ion	Ratio	Lower	Upper
202	100		
101	8.1	0.0	35.8

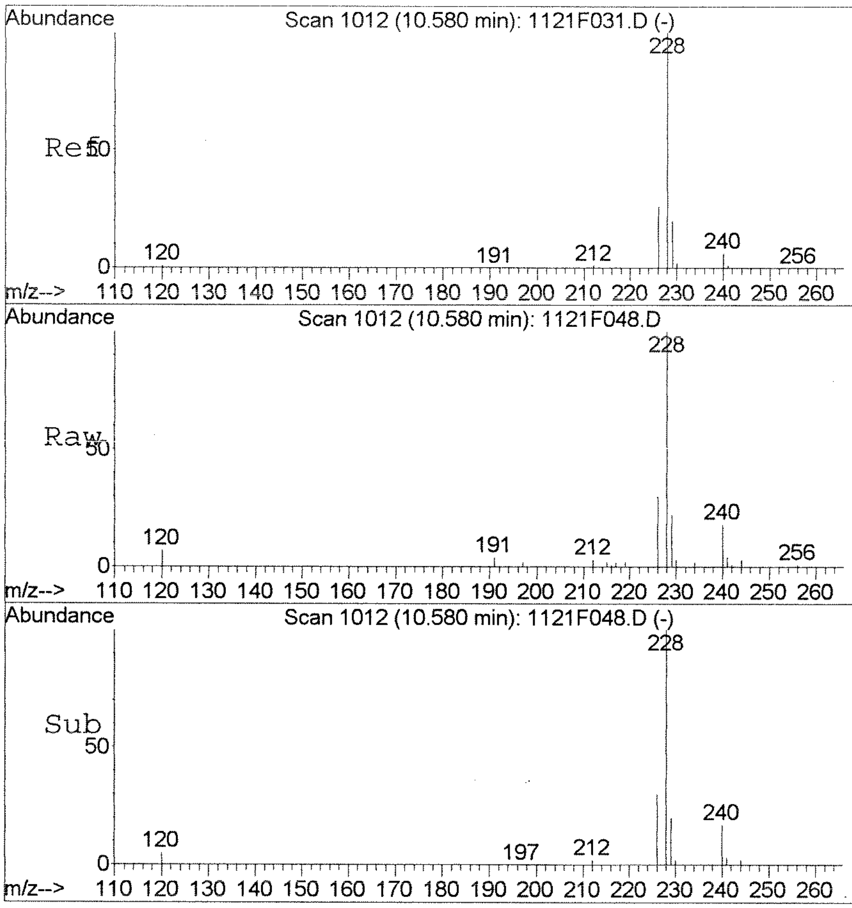




#38
Pyrene
Concen: 227.89 ng/ml
RT: 8.95 min Scan# 808
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:202		Resp:	308375
Ion	Ratio	Lower	Upper
202	100		
101	10.1	0.0	37.6

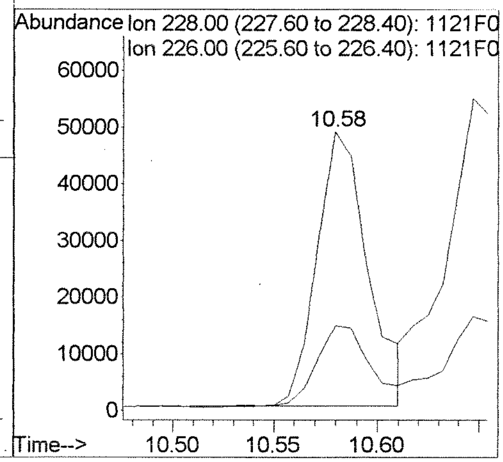


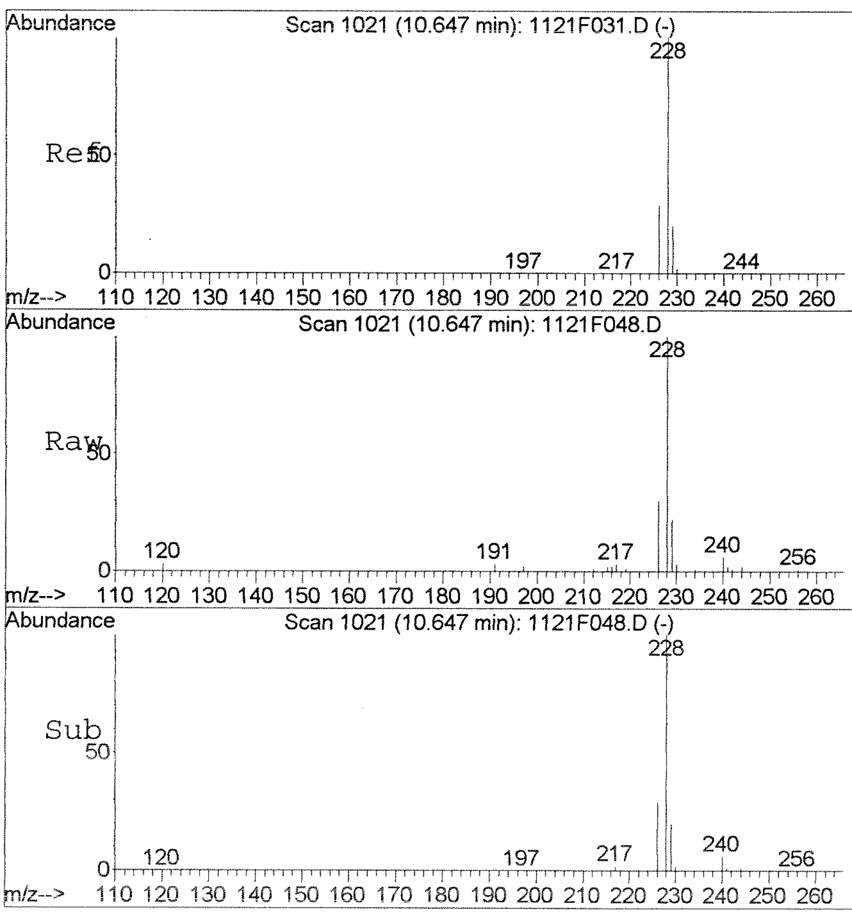


#43
Benz(a)anthracene
Concen: 67.35 ng/ml
RT: 10.58 min Scan# 1012
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:228 Resp: 82679

Ion	Ratio	Lower	Upper
228	100		
226	29.5	0.0	57.0

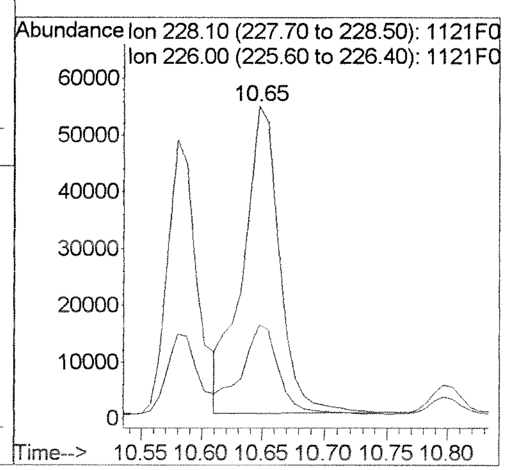


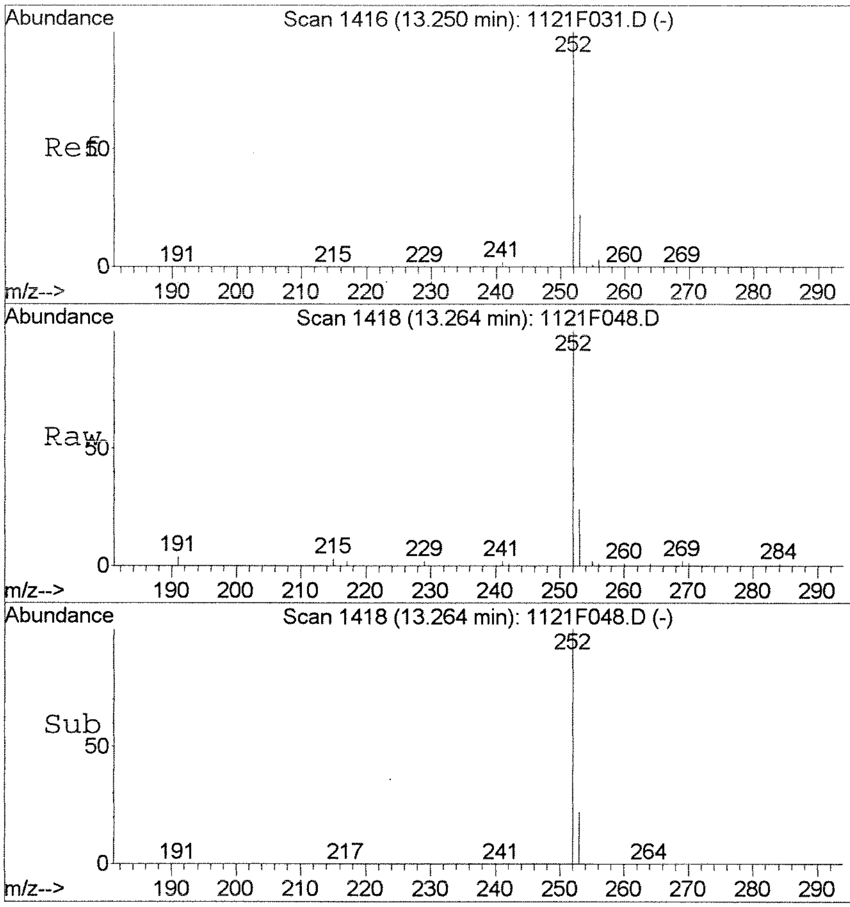


#44
Chrysene
Concen: 95.11 ng/ml
RT: 10.65 min Scan# 1021
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:228 Resp: 114677

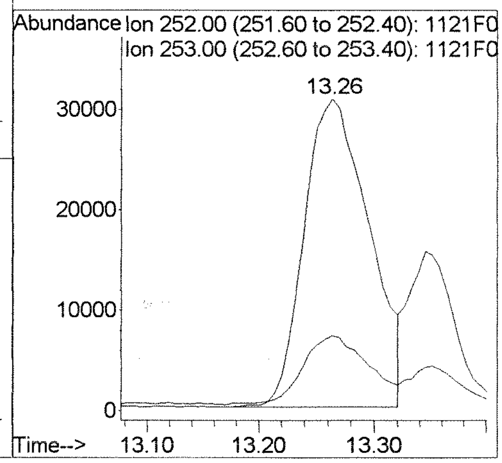
Ion	Ratio	Lower	Upper
228	100		
226	29.0	0.0	58.9

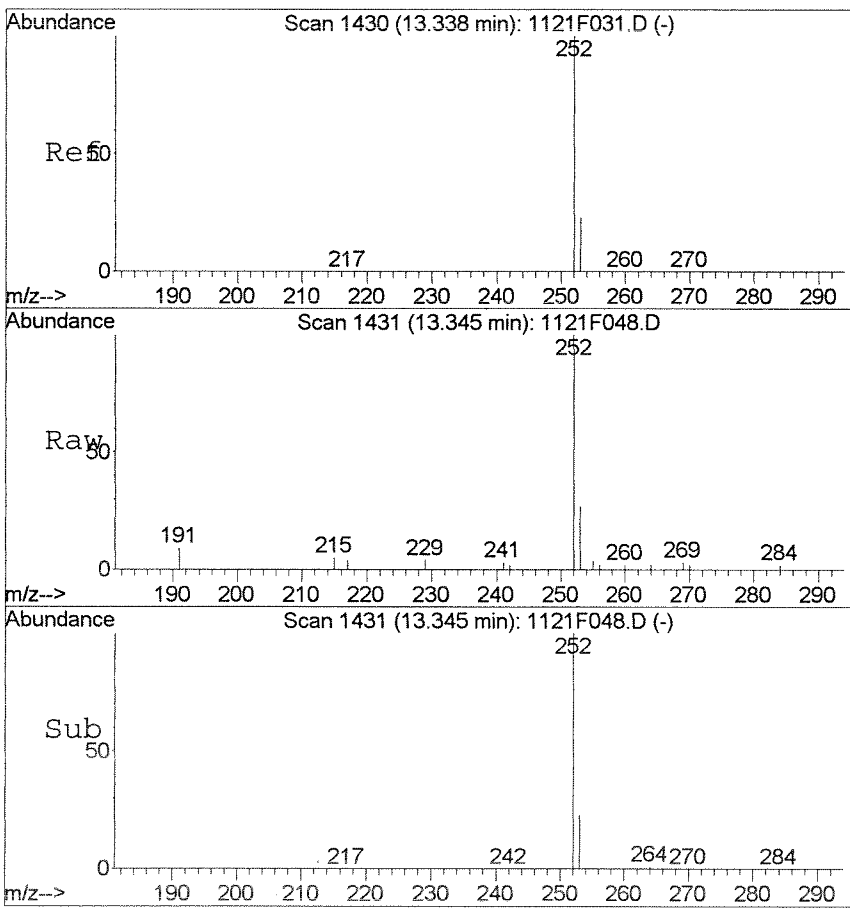




#50
Benzo(b)fluoranthene
Concen: 90.73 ng/ml
RT: 13.26 min Scan# 1418
Delta R.T. 0.04 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

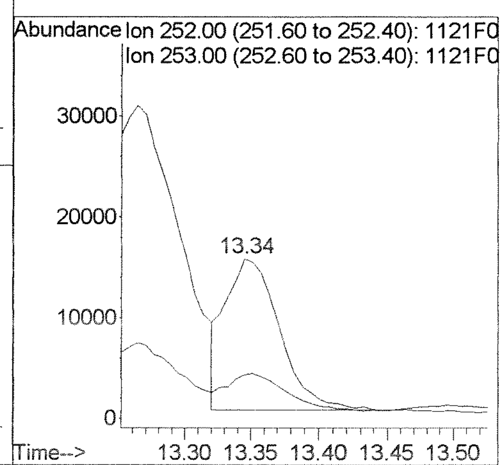
Tgt	Ion:252	Resp:	119402
Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	52.6

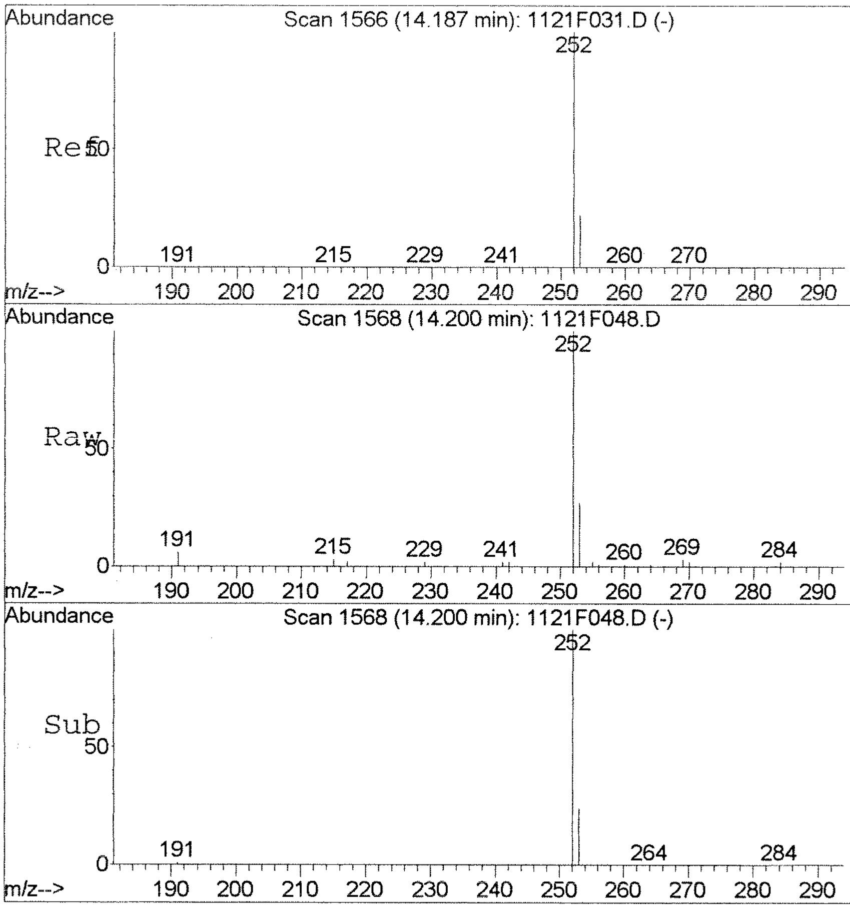




#51
Benzo(k)fluoranthene
Concen: 33.89 ng/ml
RT: 13.34 min Scan# 1431
Delta R.T. 0.03 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt	Ion:252	Resp:	42841
Ion	Ratio	Lower	Upper
252	100		
253	22.7	0.0	52.0

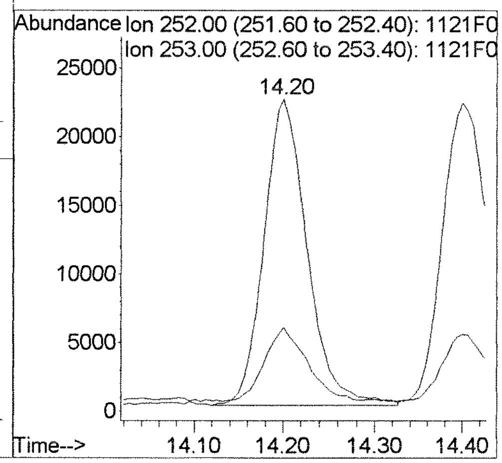


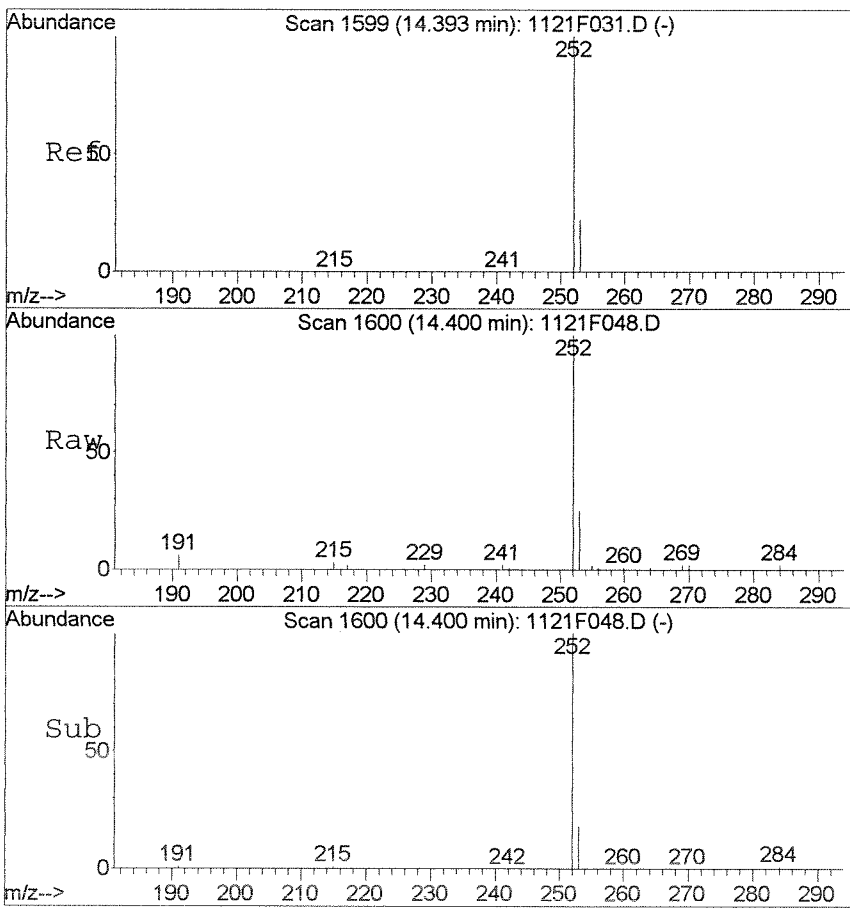


#52
Benzo(e)pyrene
Concen: 62.43 ng/ml
RT: 14.20 min Scan# 1568
Delta R.T. 0.03 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:252 Resp: 74630

Ion	Ratio	Lower	Upper
252	100		
253	24.0	0.0	52.2

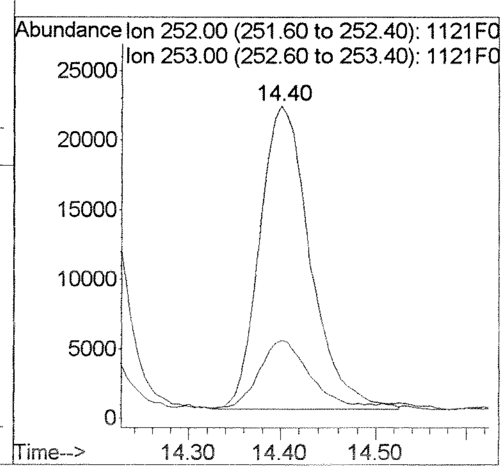


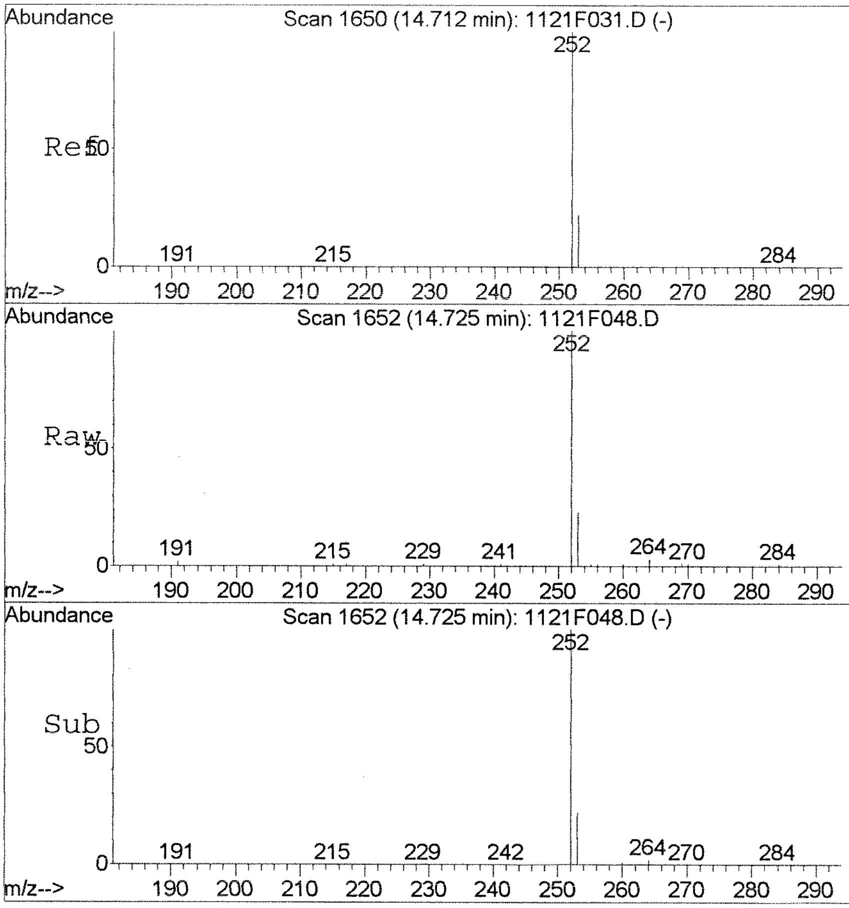


#53
Benzo(a)pyrene
Concen: 75.70 ng/ml
RT: 14.40 min Scan# 1600
Delta R.T. 0.03 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:252 Resp: 82487

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	52.2

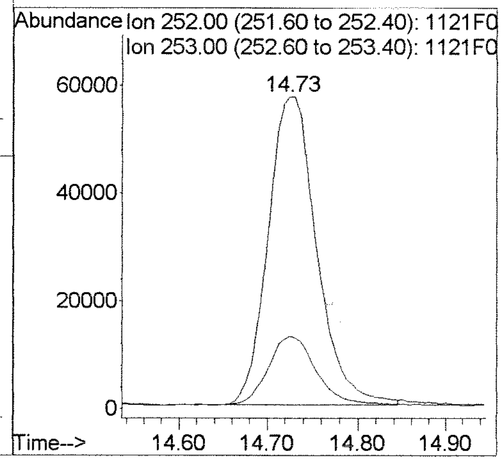


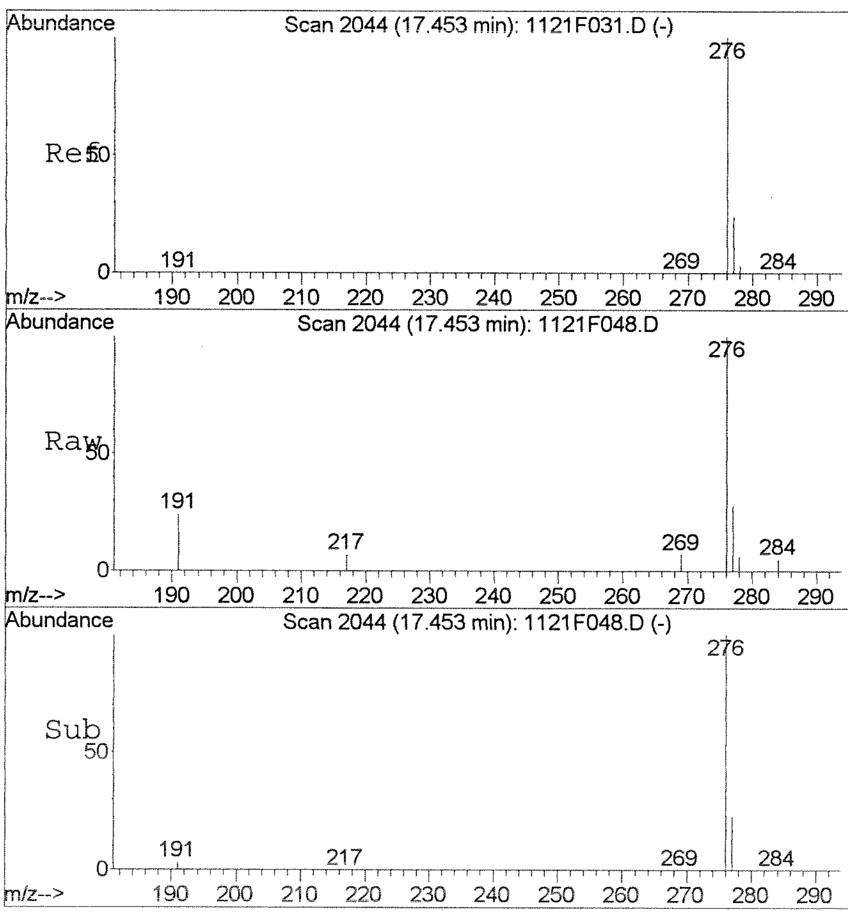


#54
Perylene
Concen: 201.36 ng/ml
RT: 14.73 min Scan# 1652
Delta R.T. 0.04 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:252 Resp: 215530

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	51.5

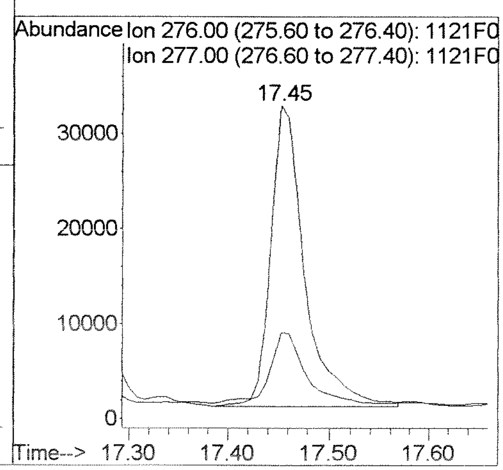


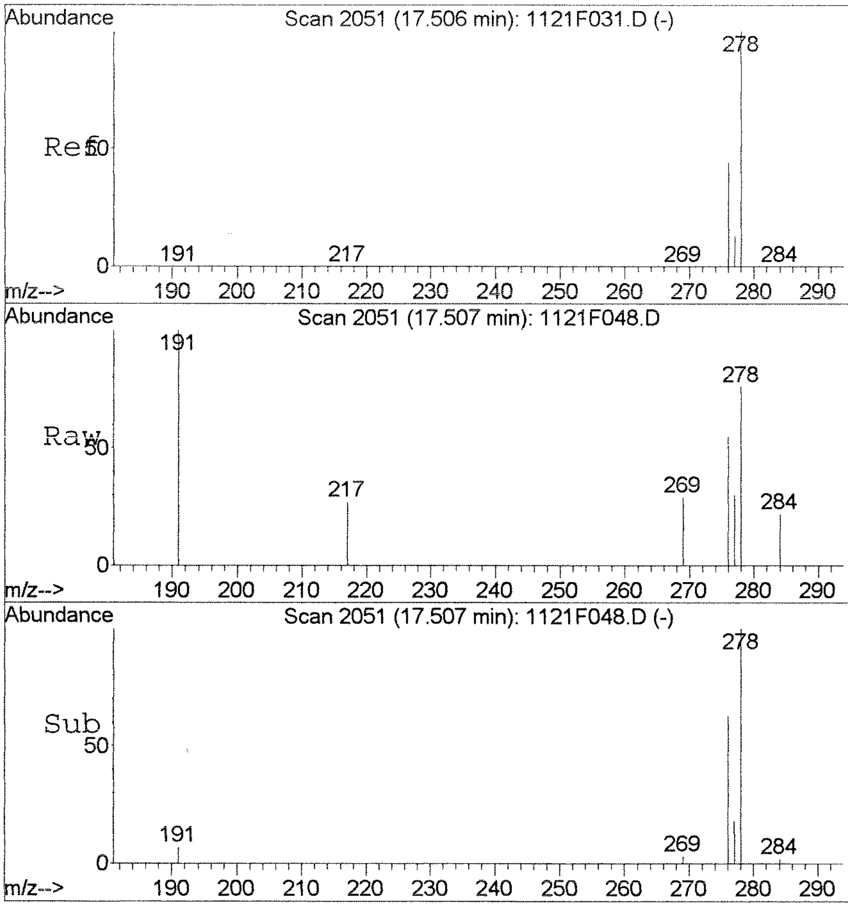


#55
Indeno(1,2,3-cd)pyrene
Concen: 73.07 ng/ml
RT: 17.45 min Scan# 2044
Delta R.T. 0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008 2:48 am

Tgt Ion:276 Resp: 73874

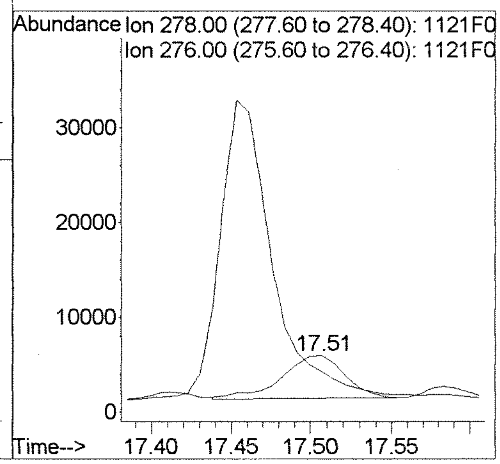
Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	54.7

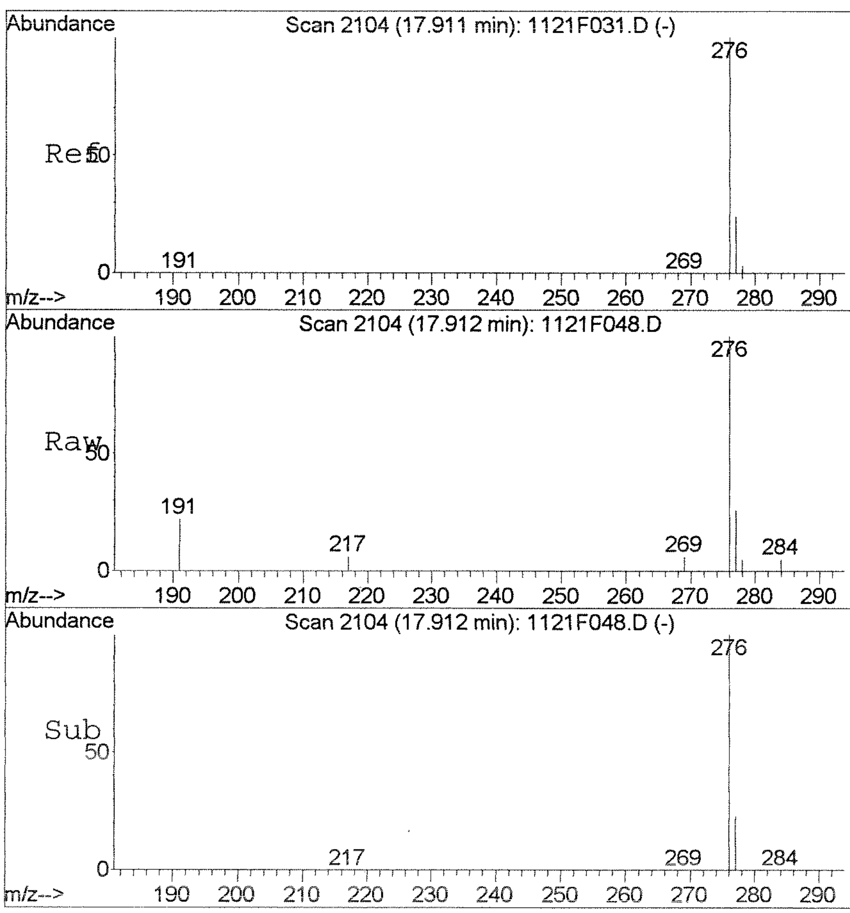




#56
Dibenz(a,h)anthracene
Concen: 11.47 ng/ml
RT: 17.51 min   Scan# 2051
Delta R.T.   0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008   2:48 am

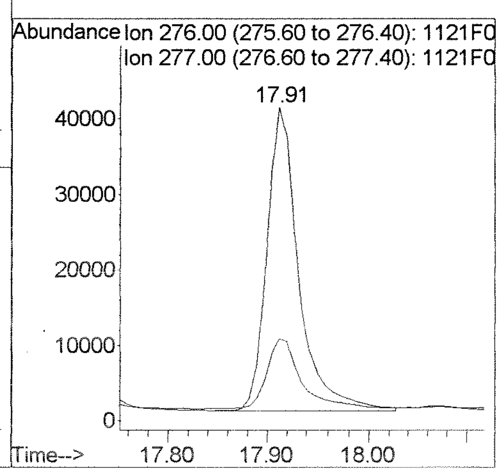
Tgt	Ion:278	Resp:	12171
Ion	Ratio	Lower	Upper
278	100		
276	56.3	0.0	59.7





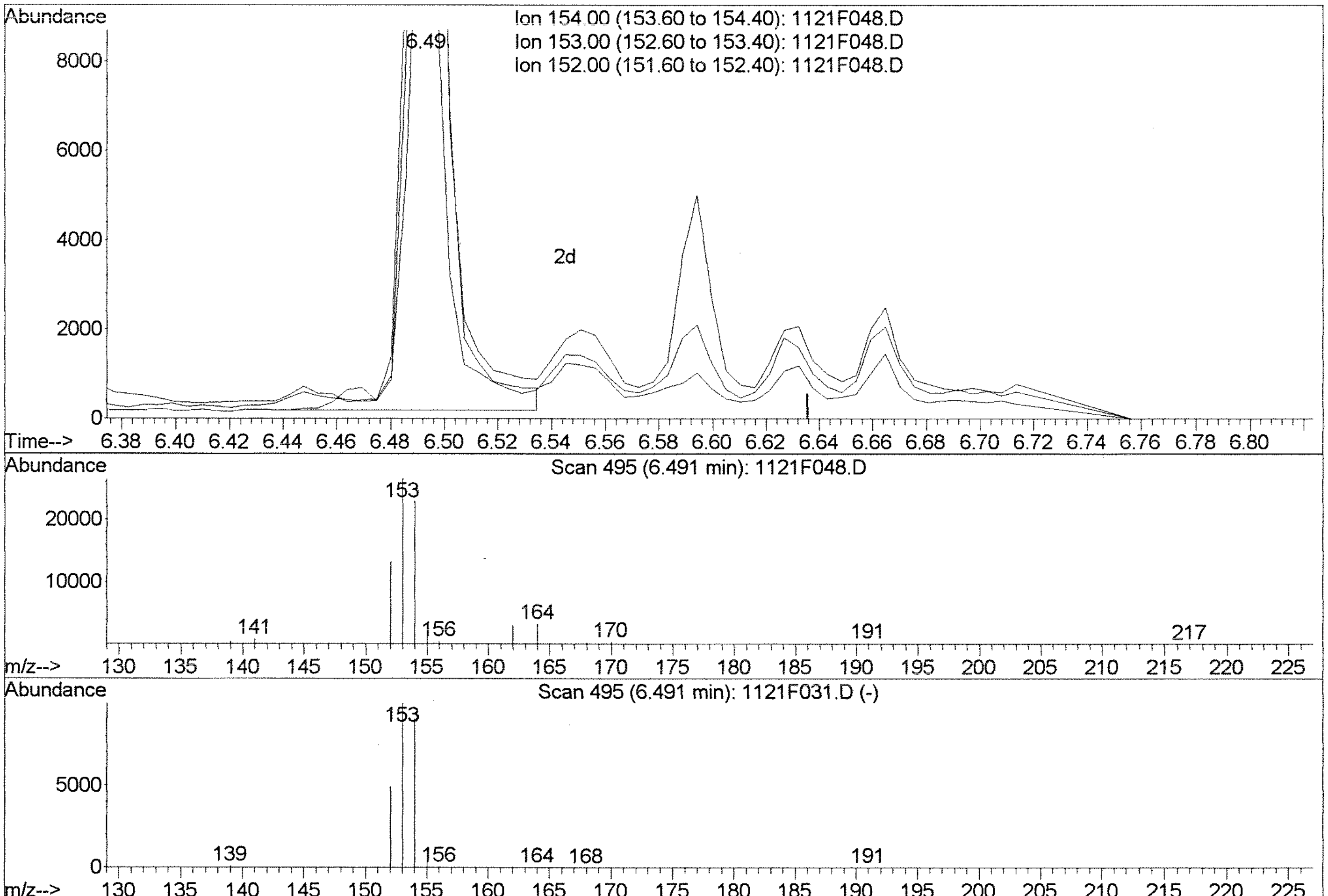
#57
Benzo(g,h,i)perylene
Concen: 78.58 ng/ml
RT: 17.91 min   Scan# 2104
Delta R.T.   0.01 min
Lab File: 1121F048.D
Acq: 22 Nov 2008   2:48 am

Tgt	Ion:276	Resp:	90506
Ion	Ratio	Lower	Upper
276	100		
277	23.1	0.0	54.2



Data File : J:\MS11\DATA\112108\1121F048.D
Vial: 45
Acq On : 22 Nov 2008 2:48 am
Operator: LWeiskopf
Sample : K0810639-007
Inst : MS11
Misc :
Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:58 2008
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F048.D

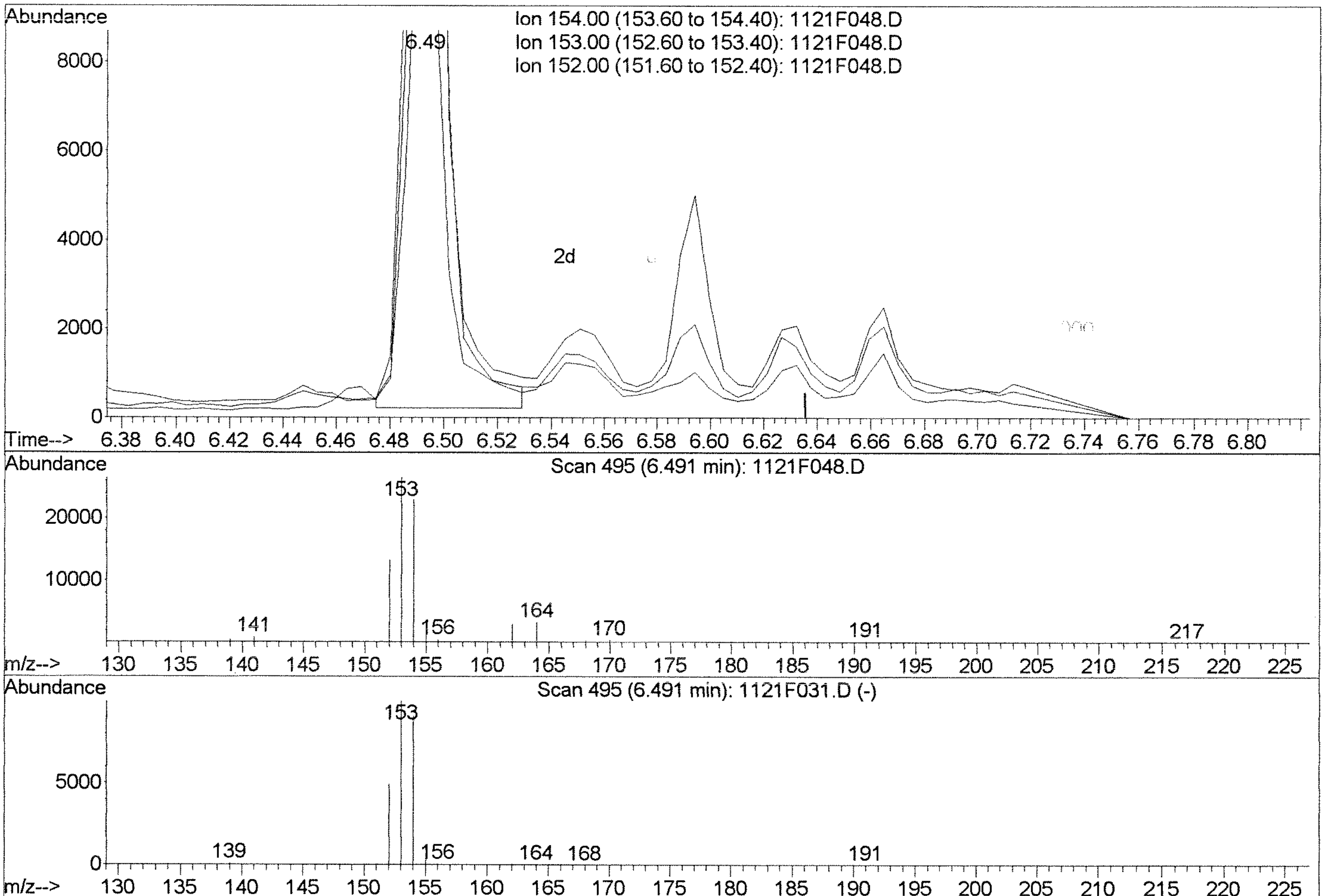
(12) Acenaphthene (T)

6.49min 28.12ng/ml

response 20850

Ion	Exp%	Act%
154.00	100	100
153.00	111.90	114.74
152.00	56.80	56.68
0.00	0.00	0.00

```
Data File : J:\MS11\DATA\112108\1121F048.D                 Vial: 45
Acq On    : 22 Nov 2008    2:48 am                     Operator: LWeiskopf
Sample    : K0810639-007                               Inst     : MS11
Misc      :                                            Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:58 2008                Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sat Nov 22 13:13:56 2008
Response via   : Multiple Level Calibration
```



TIC: 1121F048.D

(12) Acenaphthene (T)

6.49min 27.17ng/ml m

response 20146

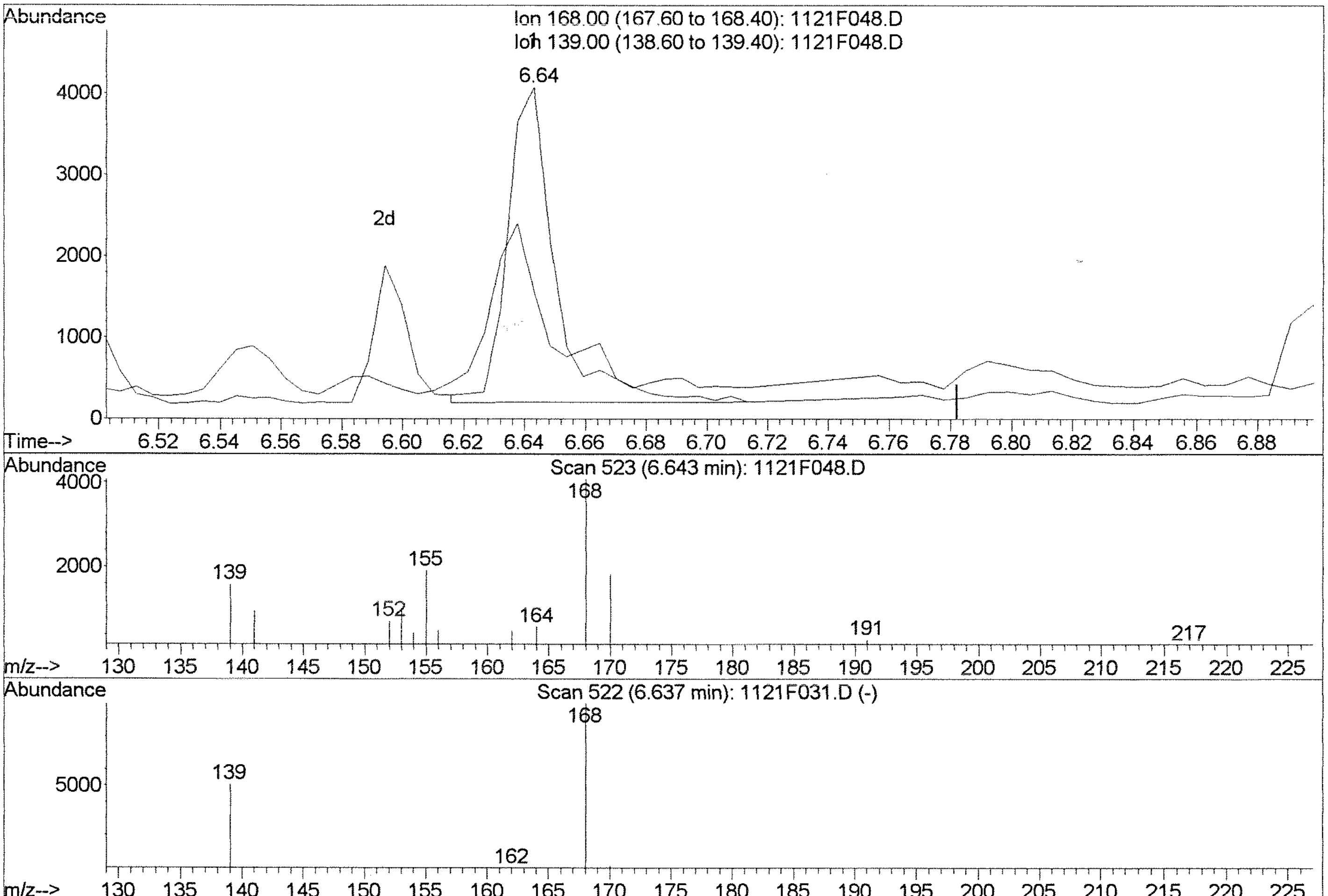
Ion	Exp%	Act%
154.00	100	100
153.00	111.90	115.26
152.00	56.80	57.88
0.00	0.00	0.00

OI 11/22/08

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F048.D Vial: 45
Acq On : 22 Nov 2008 2:48 am Operator: LWeiskopf
Sample : K0810639-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:58 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F048.D

(13) Dibenzofuran (T)

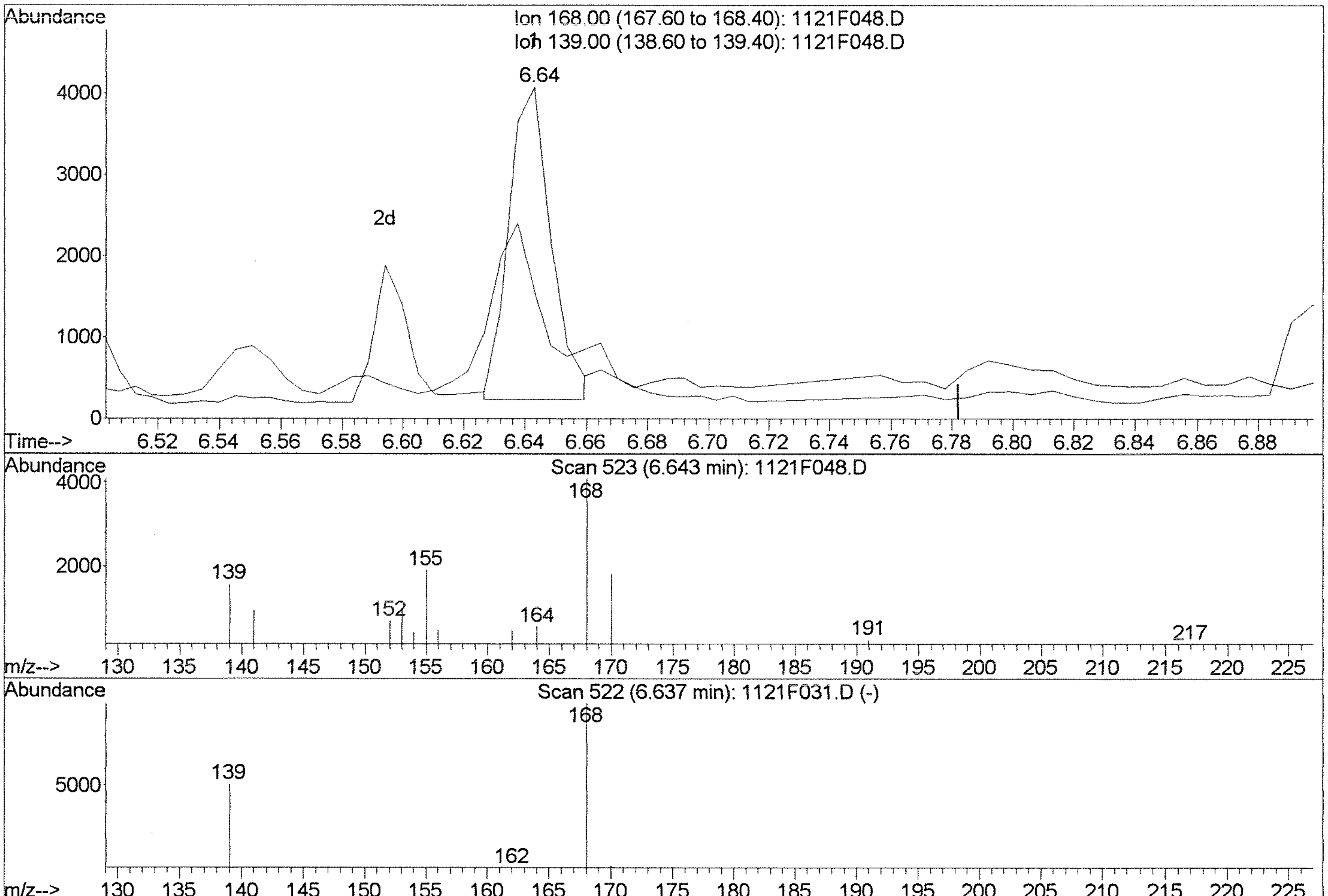
6.64min 3.78ng/ml

response 4219

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	30.94
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112108\1121F048.D   Vial: 45
Acq On : 22 Nov 2008 2:48 am   Operator: LWeiskopf
Sample : K0810639-007   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:58 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F048.D

(13) Dibenzofuran (T)

6.64min 3.29ng/ml m

response 3666

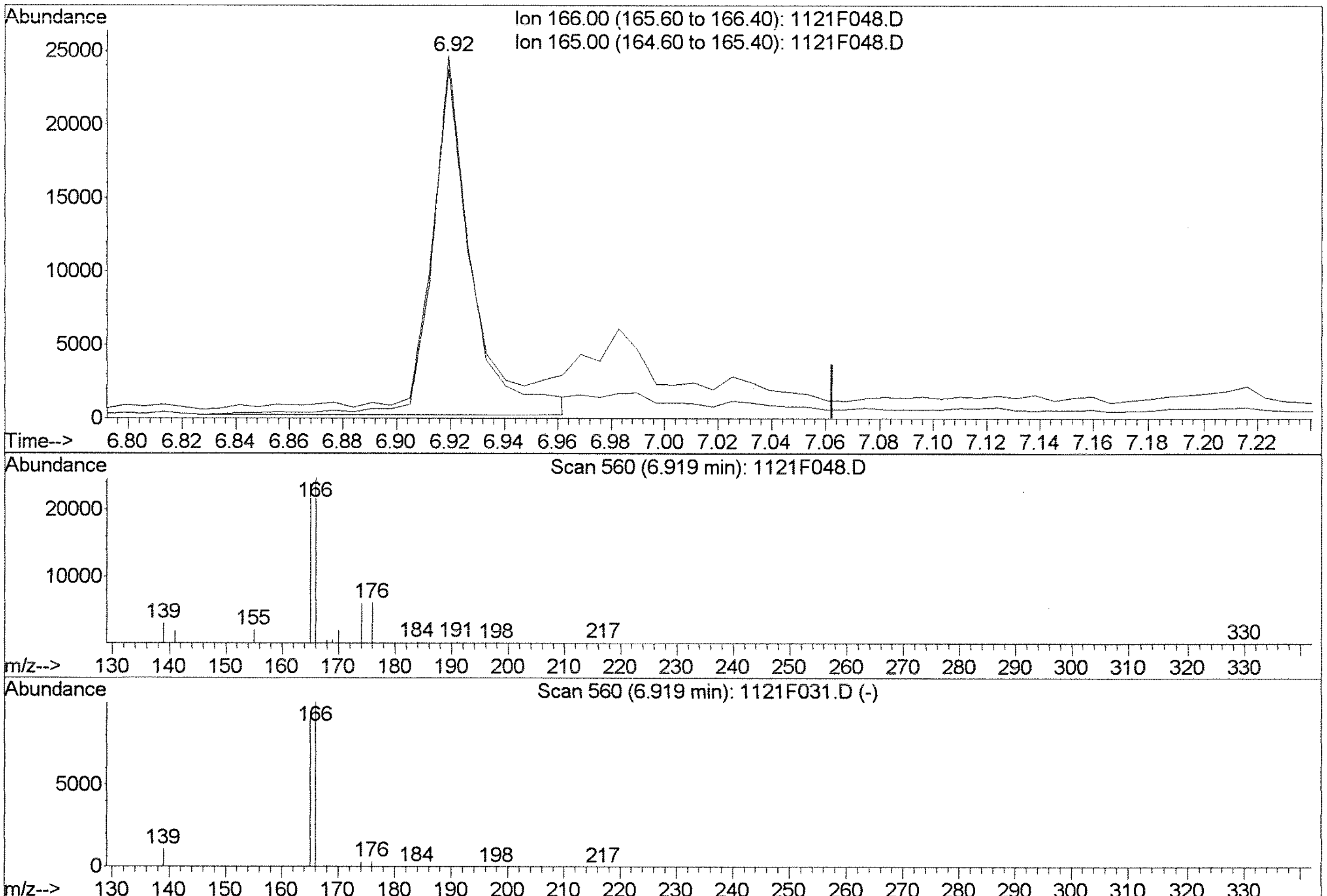
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	38.85
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/22/08

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F048.D Vial: 45
Acq On : 22 Nov 2008 2:48 am Operator: LWeiskopf
Sample : K0810639-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:58 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F048.D

(16) Fluorene (T)

6.92min 27.36ng/ml

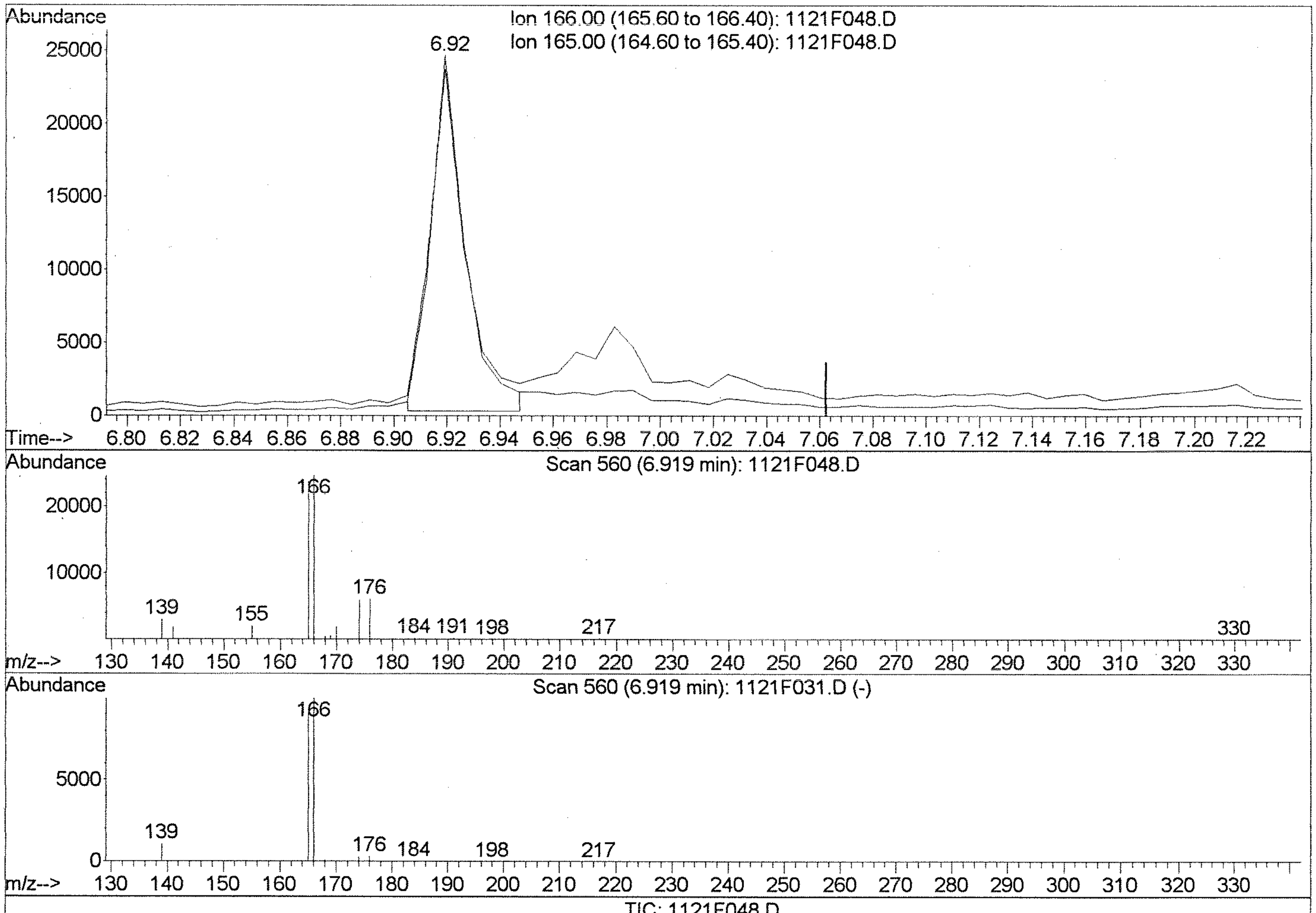
response 24352

Ion	Exp%	Act%
166.00	100	100
165.00	89.80	94.82
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F048.D Vial: 45
Acq On : 22 Nov 2008 2:48 am Operator: LWeiskopf
Sample : K0810639-007 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:58 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(16) Fluorene (T)

6.92min 24.50ng/ml m

response 21806

Ion	Exp%	Act%
166.00	100	100
165.00	89.80	96.33
0.00	0.00	0.00
0.00	0.00	0.00

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/24/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED11-0.5-2.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-008	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**140**	D	24	1.9	5	11/11/08	11/23/08	KWG0812042	
2-Methylnaphthalene	**100**	D	24	2.0	5	11/11/08	11/23/08	KWG0812042	
Acenaphthylene	**110**	D	24	1.2	5	11/11/08	11/23/08	KWG0812042	
Acenaphthene	**3700**	D	24	1.2	5	11/11/08	11/23/08	KWG0812042	
Fluorene	**2600**	D	24	2.5	5	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	**190**	D	24	3.0	5	11/11/08	11/23/08	KWG0812042	
Phenanthrene	**15000**	D	93	15	20	11/11/08	11/22/08	KWG0812042	
Anthracene	**1800**	D	24	2.4	5	11/11/08	11/23/08	KWG0812042	
Fluoranthene	**11000**	D	93	13	20	11/11/08	11/22/08	KWG0812042	
Pyrene	**8400**	D	24	1.9	5	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	**2100**	D	24	2.4	5	11/11/08	11/23/08	KWG0812042	
Chrysene	**2400**	D	24	1.3	5	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	**1800**	D	24	1.3	5	11/11/08	11/23/08	KWG0812042	
Benzo(k)fluoranthene	**680**	D	24	0.75	5	11/11/08	11/23/08	KWG0812042	
Benzo(a)pyrene	**1600**	D	24	0.70	5	11/11/08	11/23/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**1300**	D	24	0.80	5	11/11/08	11/23/08	KWG0812042	
Dibenz(a,h)anthracene	**230**	D	24	1.4	5	11/11/08	11/23/08	KWG0812042	
Benzo(g,h,i)perylene	**1400**	D	24	3.2	5	11/11/08	11/23/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	58	10-128	11/23/08	Acceptable
Fluoranthene-d10	61	29-121	11/23/08	Acceptable
Terphenyl-d14	87	24-141	11/23/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\112208\1122F058.D
Lab ID: K0810639-008
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/23/2008 09:15
Date Quantitated: 11/23/2008 11:47
Batch ID: KWG0812625
Analysis Method: 8270C SIM
ListJoinID: LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Fluoranthene	2163.68	NA	2000	see Dil
	Phenanthrene	3205.35	NA	2000	

Primary Review: [signature] 11/24/08

Secondary Review: [signature] 11-30-08

Printed: 11/23/2008 13:29:09
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/24/2008	**Receive Date:**	07/29/2008

Analysis Lot:	KWG0812625	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776072	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112208\1122F034.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112208\1122F058.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 09:15	**Quant Date:**	11/23/2008 11:47	**Vial:**	1
Run Type:	DL			**Dilution:**	5.0
Lab ID:	K0810639-008			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	0.00	136	225019	200.00	OK
2	Acenaphthene-d10	6.45	0.00	164	127552	200.00	OK
3	Phenanthrene-d10	7.69	0.00	188	222993	200.00	OK
4	Chrysene-d12	10.58	0.01	240	275731	200.00	OK
5	Perylene-d12	14.58	0.03	264	302931	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	20159m	23.25	58	10-128	OK	
3	Fluoranthene-d10	8.70	0.00	0.00	212	37336m	24.56	61	29-121	OK	
4	Terphenyl-d14	9.09	0.01	0.00	244	49670	34.80	87	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.05	-0.01	0.00	128	40112	29.26	140	D	
1	2-Methylnaphthalene	5.61		0.00	142	21160	22.14	100	D	
2	Acenaphthylene	6.34		0.00	152	32962m	22.92	110	D	
2	Acenaphthene	6.48		0.00	154	702513	803.78	3700	D	
2	Dibenzofuran	6.63		0.00	168	55443	42.17	190	D	
2	Fluorene	6.91		0.00	166	584713	557.27	2600	D	
3	Phenanthrene	7.72	0.01	0.00	178	5024157	3,205	15000	ED	NR
3	Anthracene	7.75		0.00	178	590869	386.90	1800	D	
3	Fluoranthene	8.71	0.01	0.00	202	3852345	2,164	10000	ED	NR
4	Pyrene	8.94		0.00	202	3787849	1,826	8400	D	
4	Benz(a)anthracene	10.56	0.01	0.00	228	854351	454.01	2100	D	
4	Chrysene	10.63	0.01	0.00	228	959977	519.41	2400	D	
5	Benzo(b)fluoranthene	13.22	0.02	0.00	252	830896	397.44	1800	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112208\1122F058.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 09:15	**Quant Date:**	11/23/2008 11:47	**Vial:**	1
Run Type:	DL			**Dilution:**	5.0
Lab ID:	K0810639-008			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.31	0.02	0.00	252	294496	146.64	680	D	
5	Benzo(a)pyrene	14.35	0.02	0.00	252	592319	342.20	1600	D	
5	Indeno(1,2,3-cd)pyrene	17.43	0.01	0.00	276	461923	287.62	1300	D	
5	Dibenz(a,h)anthracene	17.48	0.01	0.00	278	83255	49.39	230	D	
5	Benzo(g,h,i)perylene	17.89	0.02	0.00	276	570205	311.64	1400	D	

Prep Amount:	20.09 g	**Dilution:**	5.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	53.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112208\1122F058.D Vial: 1
Acq On : 23 Nov 2008 9:15 am Operator: LWeiskopf
Sample : K0810639-008DIL 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:10:59 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.04	136	225019	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.45	164	127552	200.00 ng/ml	-0.01
22) Phenanthrene-d10	7.69	188	222993	200.00 ng/ml	0.00
37) Chrysene-d12	10.58	240	275731	200.00 ng/ml	0.00
49) Perylene-d12	14.58	264	302931	200.00 ng/ml	0.00
System Monitoring Compounds					
15) Fluorene-d10	6.88	176	20159m	23.25 ng/ml	0.00
Spiked Amount 200.000			Recovery =	11.63%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00 ng/ml	
Spiked Amount 375.000			Recovery =	0.00%	
36) Fluoranthene-d10	8.70	212	37336m	24.56 ng/ml	0.00
Spiked Amount 200.000			Recovery =	12.28%	
42) Terphenyl-d14	9.09	244	49670	34.80 ng/ml	0.00
Spiked Amount 200.000			Recovery =	17.40%	
Target Compounds					Qvalue
2) Naphthalene	5.05	128	40112	29.26 ng/ml	97
3) 2-Methylnaphthalene	5.61	142	21160	22.14 ng/ml	97
4) 1-Methylnaphthalene	5.68	142	13144	15.36 ng/ml	93
5) Biphenyl	5.98	154	6612	5.66 ng/ml	97
6) 2,6-Dimethylnaphthalene	6.11	156	72280	86.62 ng/ml	97
11) Acenaphthylene	6.34	152	32962m	22.92 ng/ml	
12) Acenaphthene	6.48	154	702513	803.78 ng/ml	92
13) Dibenzofuran	6.63	168	55443	42.17 ng/ml	66
14) 2,3,5-Trimethylnaphthalene	6.79	170	118908	154.69 ng/ml	76
16) Fluorene	6.91	166	584713	557.27 ng/ml	99
23) Dibenzothiophene	7.61	184	377598	246.38 ng/ml	96
27) Phenanthrene	7.72	178	5024157	3205.35 ng/ml	96
28) Anthracene	7.75	178	590869	386.90 ng/ml	98
30) 1-Methylphenanthrene	8.21	192	286464m	246.25 ng/ml	
35) Fluoranthene	8.71	202	3852345	2163.68 ng/ml	76
38) Pyrene	8.94	202	3787849	1826.11 ng/ml	89
43) Benz(a)anthracene	10.56	228	854351	454.01 ng/ml	94
44) Chrysene	10.63	228	959977	519.41 ng/ml	98
50) Benzo(b)fluoranthene	13.22	252	830896	397.44 ng/ml	99
51) Benzo(k)fluoranthene	13.31	252	294496	146.64 ng/ml	96
52) Benzo(e)pyrene	14.15	252	474819	250.03 ng/ml	100
53) Benzo(a)pyrene	14.35	252	592319	342.20 ng/ml	100
54) Perylene	14.68	252	190574	112.08 ng/ml	97
55) Indeno(1,2,3-cd)pyrene	17.43	276	461923	287.62 ng/ml	99
56) Dibenz(a,h)anthracene	17.48	278	83255	49.39 ng/ml	59

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

```
Data File : J:\MS11\DATA\112208\1122F058.D              Vial: 1
Acq On    : 23 Nov 2008   9:15 am                   Operator: LWeiskopf
Sample    : K0810639-008DIL  5X                     Inst    : MS11
Misc      :                                         Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:10:59 2008          Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title        : PAHS and ALKYLATED HOMOLOGS
Last Update  : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT
```

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
57)	Benzo(g,h,i)perylene	17.89	276	570205	311.64	ng/ml	99

(#) = qualifier out of range (m) = manual integration

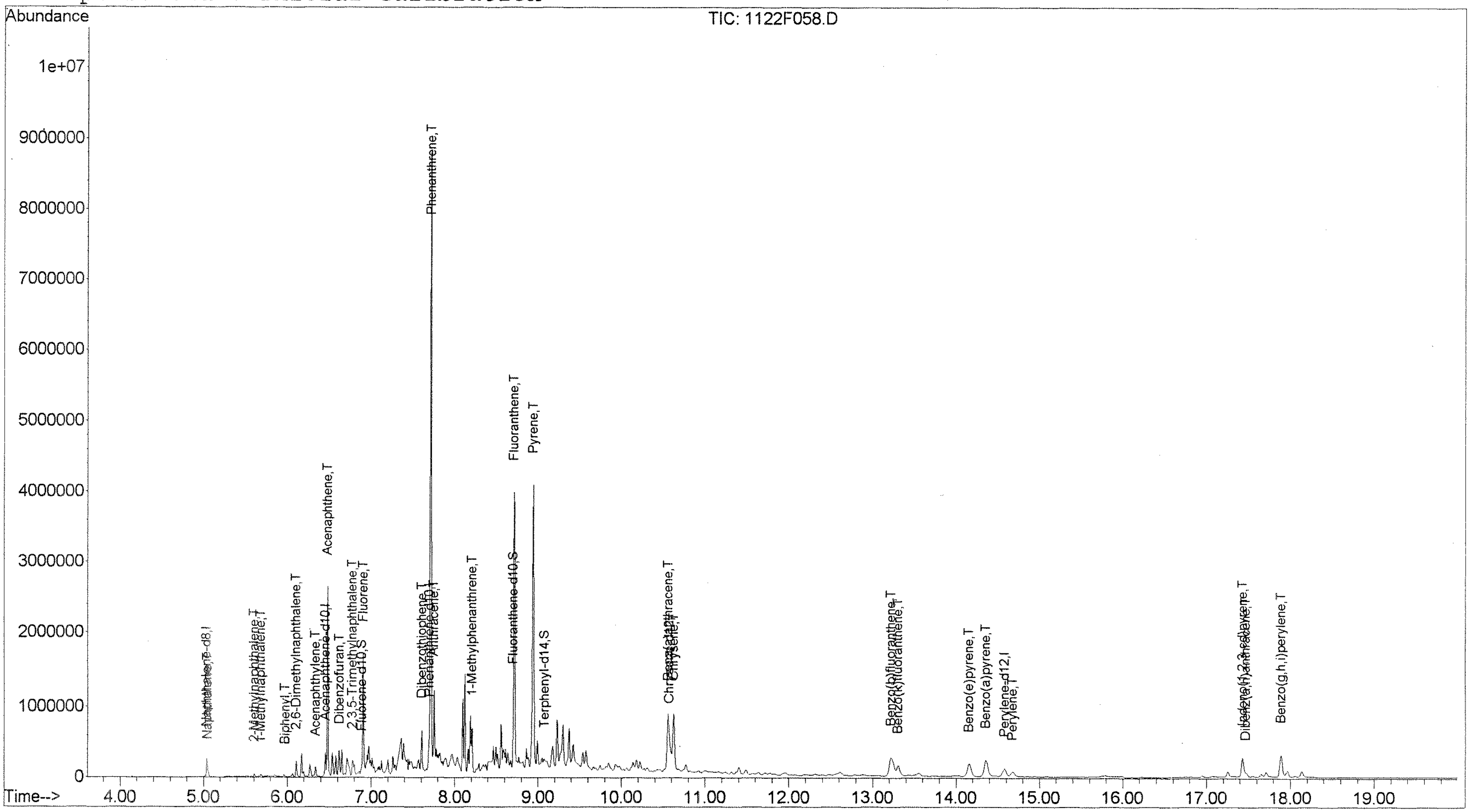
Quantitation Report (QT Reviewed)

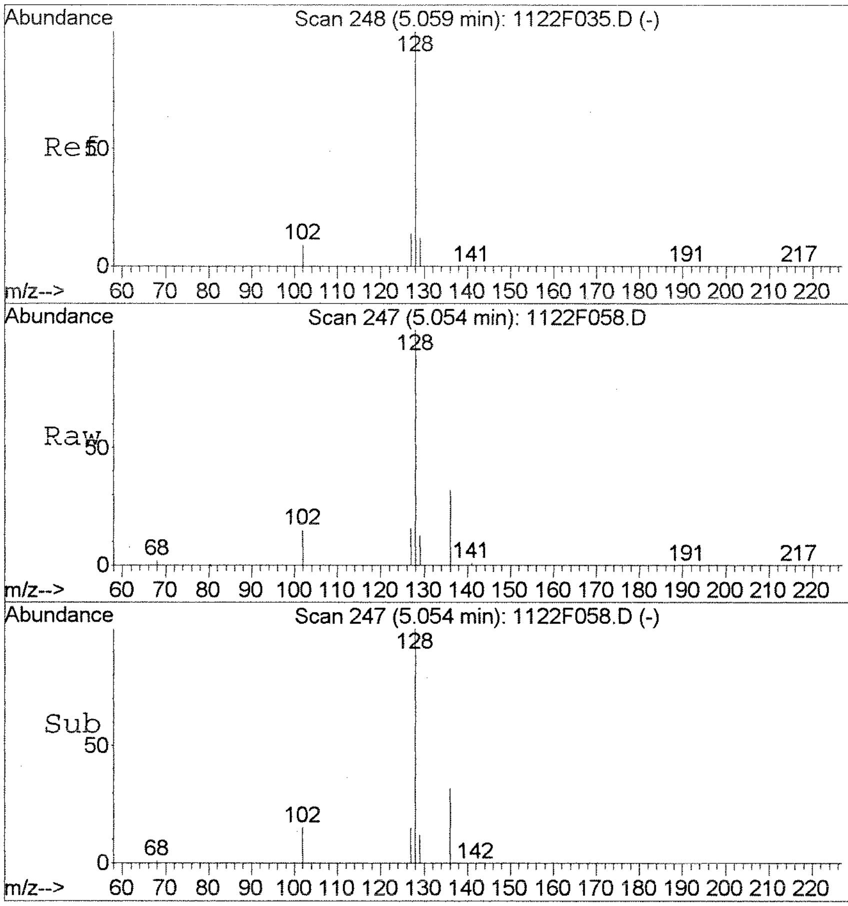
Data File : J:\MS11\DATA\112208\1122F058.D
Acq On : 23 Nov 2008 9:15 am
Sample : K0810639-008DIL 5X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:47 2008

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

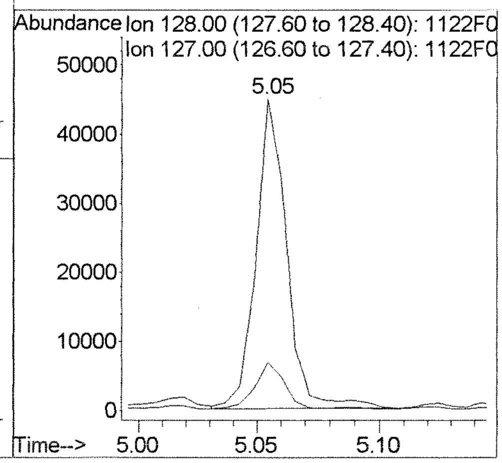
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Initial Calibration

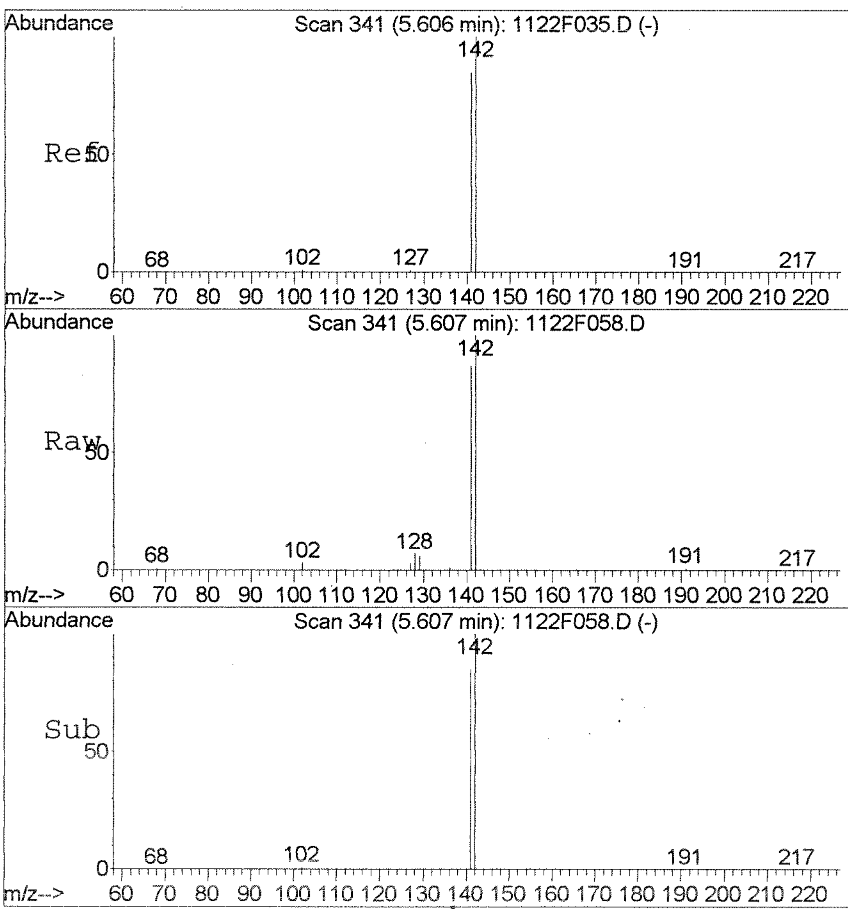




#2
Naphthalene
Concen: 29.26 ng/ml
RT: 5.05 min Scan# 247
Delta R.T. -0.00 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

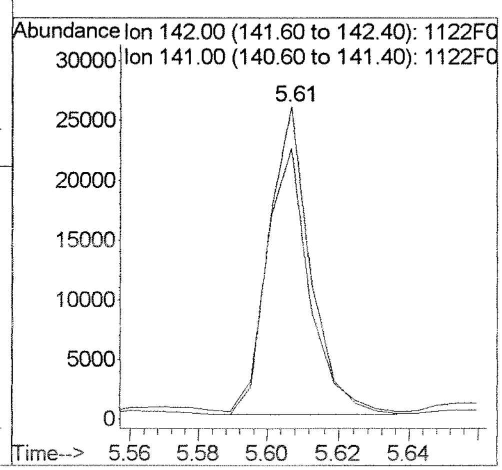
Tgt	Ion:128	Resp:	40112
Ion	Ratio	Lower	Upper
128	100		
127	15.0	0.0	43.8

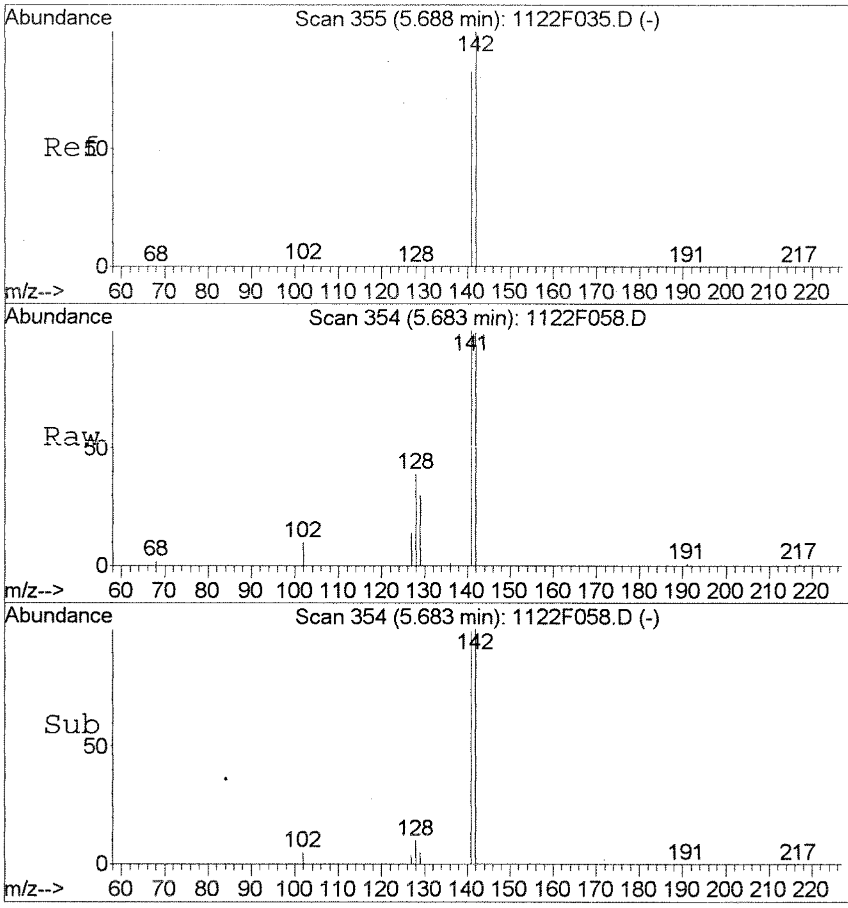




#3
2-Methylnaphthalene
Concen: 22.14 ng/ml
RT: 5.61 min Scan# 341
Delta R.T. -0.00 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt	Ion:142	Resp:	21160
Ion	Ratio	Lower	Upper
142	100		
141	85.4	52.4	112.4

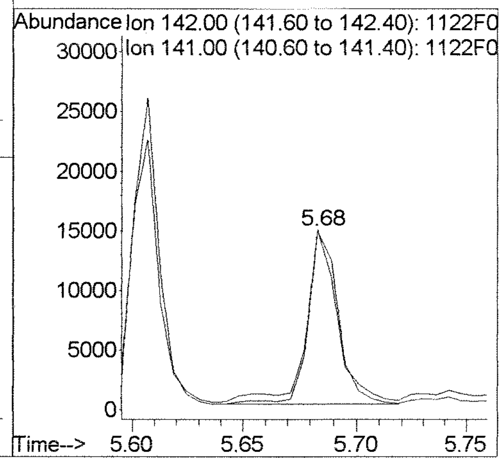


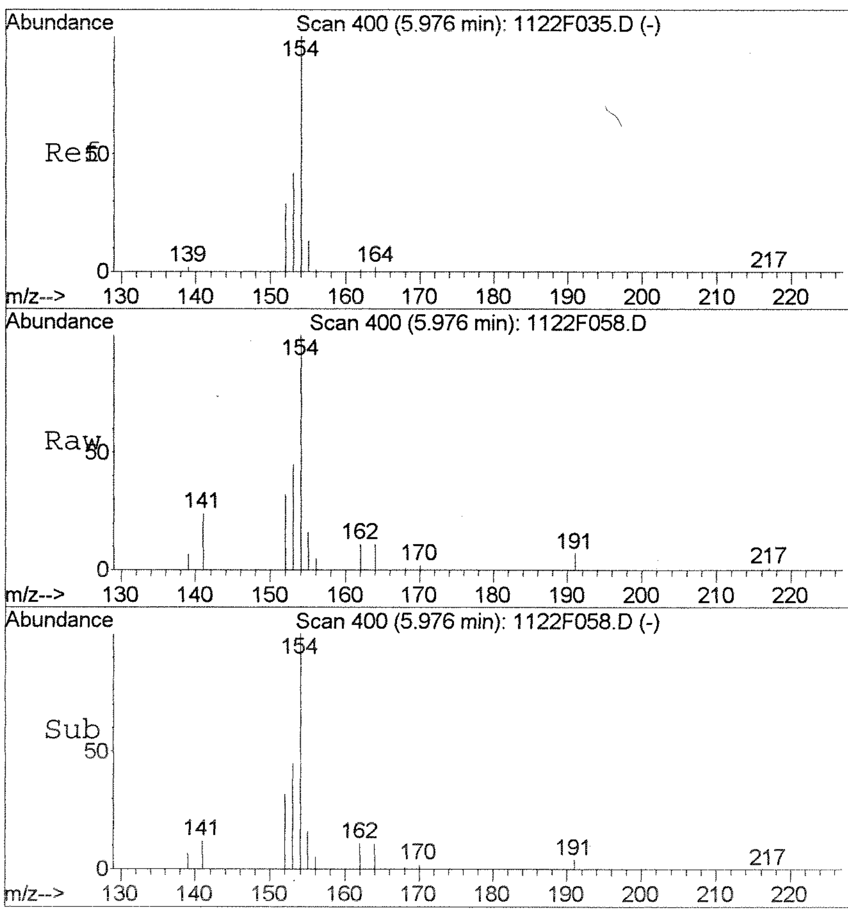


#4
1-Methylnaphthalene
Concen: 15.36 ng/ml
RT: 5.68 min Scan# 354
Delta R.T. -0.00 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:142 Resp: 13144

Ion	Ratio	Lower	Upper
142	100		
141	99.6	63.0	123.0

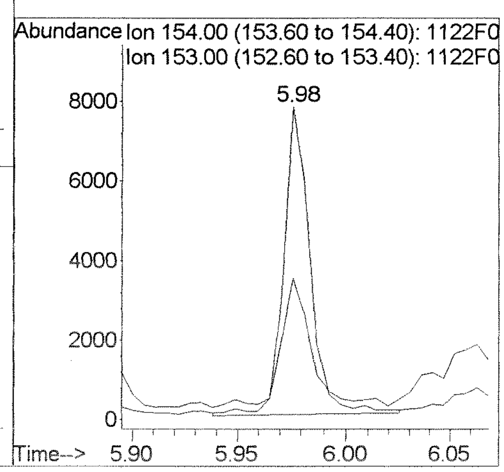


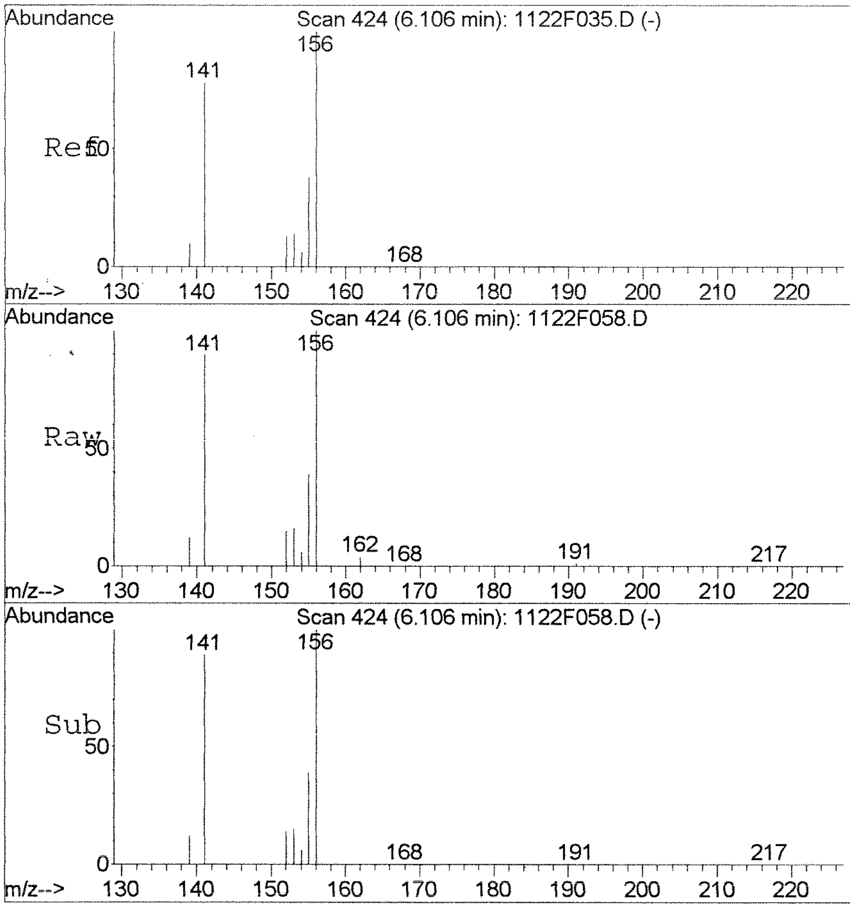


#5
Biphenyl
Concen: 5.66 ng/ml
RT: 5.98 min Scan# 400
Delta R.T. -0.00 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:154 Resp: 6612

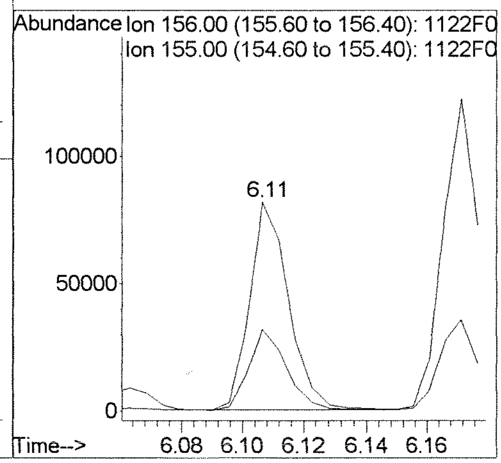
Ion	Ratio	Lower	Upper
154	100		
153	42.3	10.4	70.4

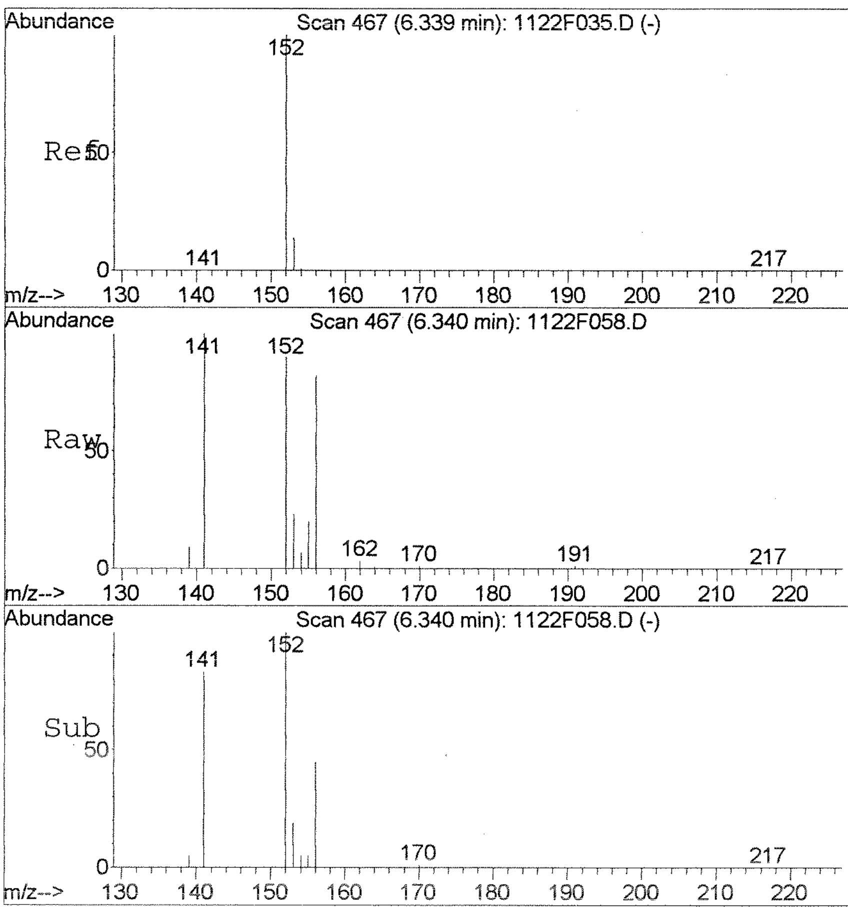




#6
2,6-Dimethylnaphthalene
Concen: 86.62 ng/ml
RT: 6.11 min Scan# 424
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

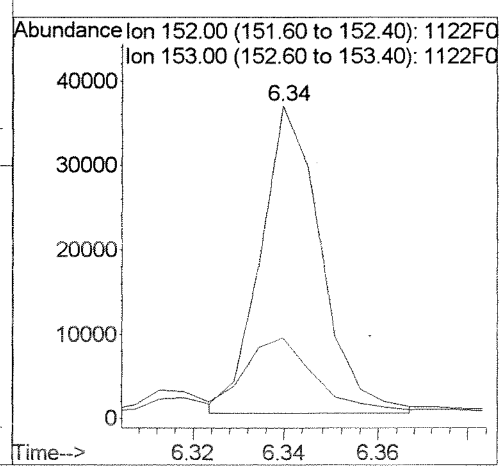
Tgt	Ion:156	Resp:	72280
Ion	Ratio	Lower	Upper
156	100		
155	38.9	7.3	67.3

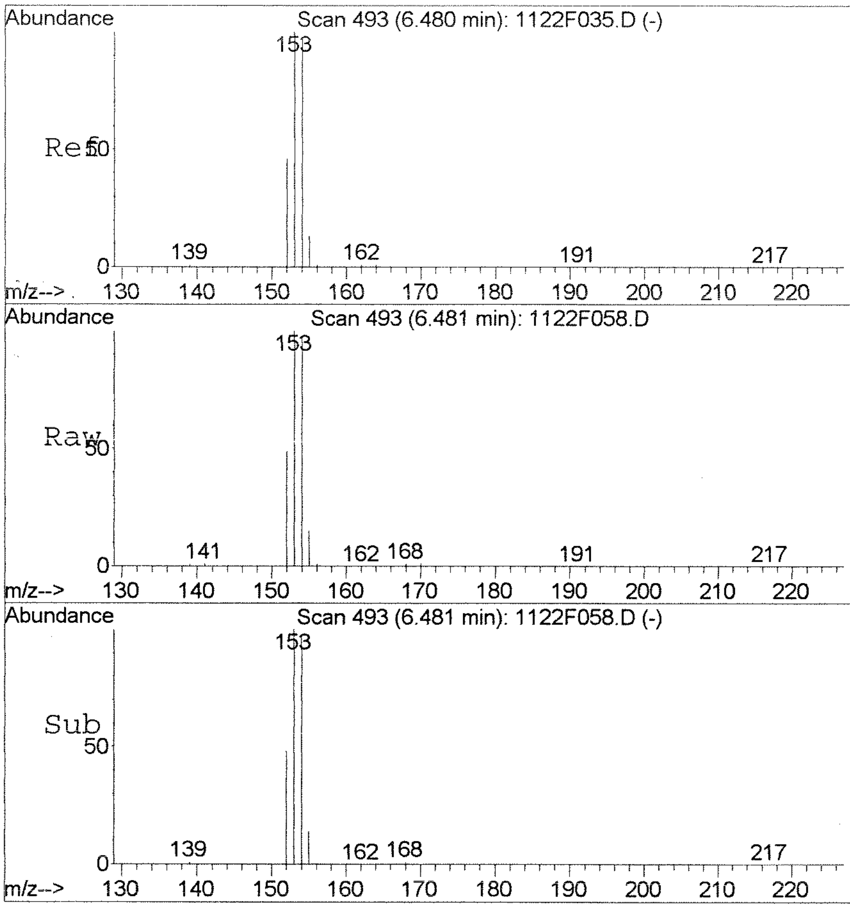




#11
Acenaphthylene
Concen: 22.92 ng/ml m
RT: 6.34 min Scan# 467
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

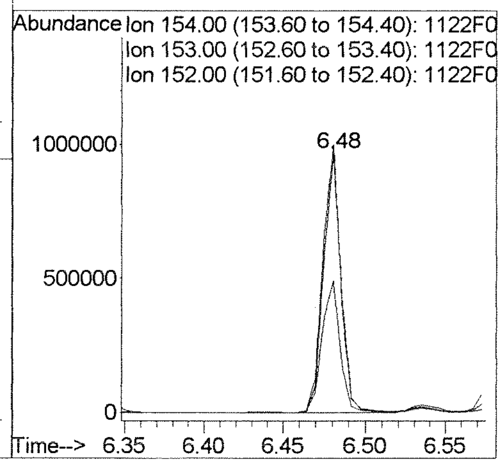
Tgt	Ion:152	Resp:	32962
Ion	Ratio	Lower	Upper
152	100		
153	25.9	0.0	43.0

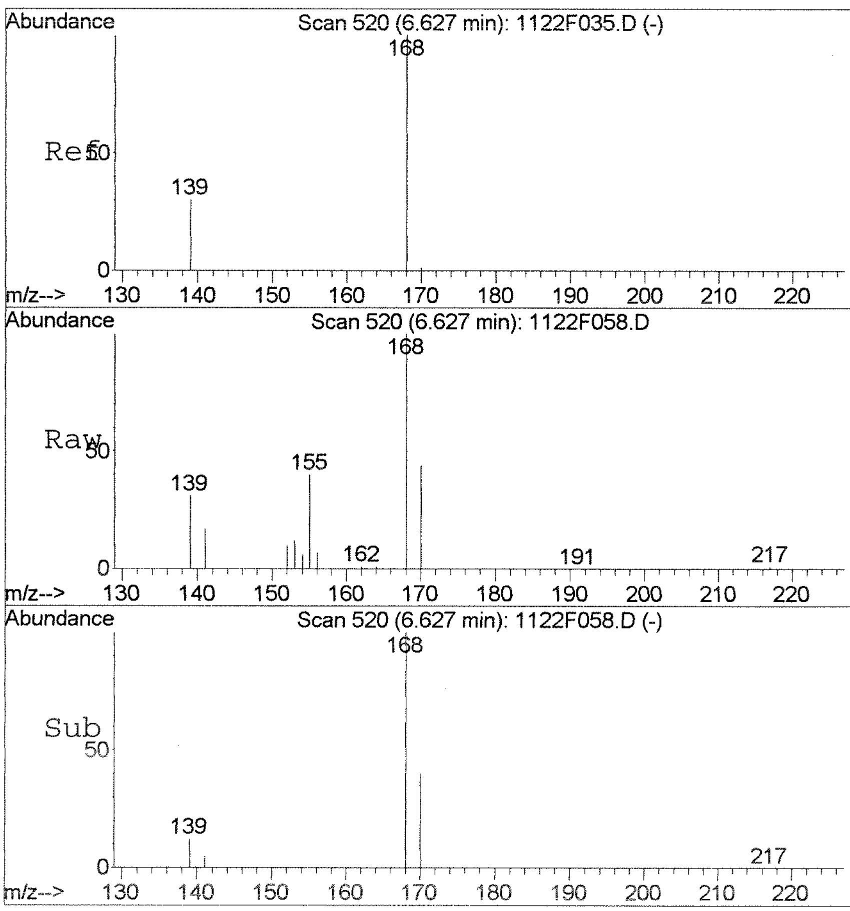




#12
Acenaphthene
Concen: 803.78 ng/ml
RT: 6.48 min Scan# 493
Delta R.T. -0.00 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

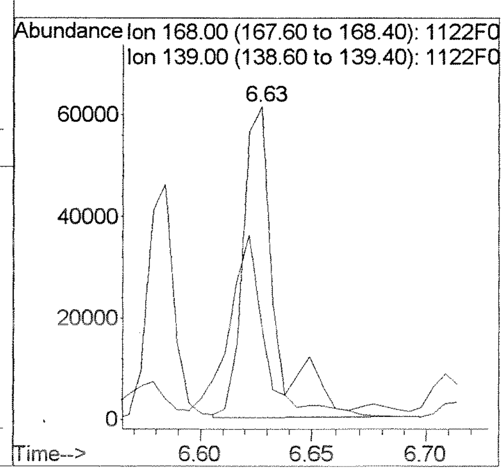
Tgt	Ion:154	Resp:	702513
Ion	Ratio	Lower	Upper
154	100		
153	103.2	81.9	141.9
152	50.7	26.8	86.8

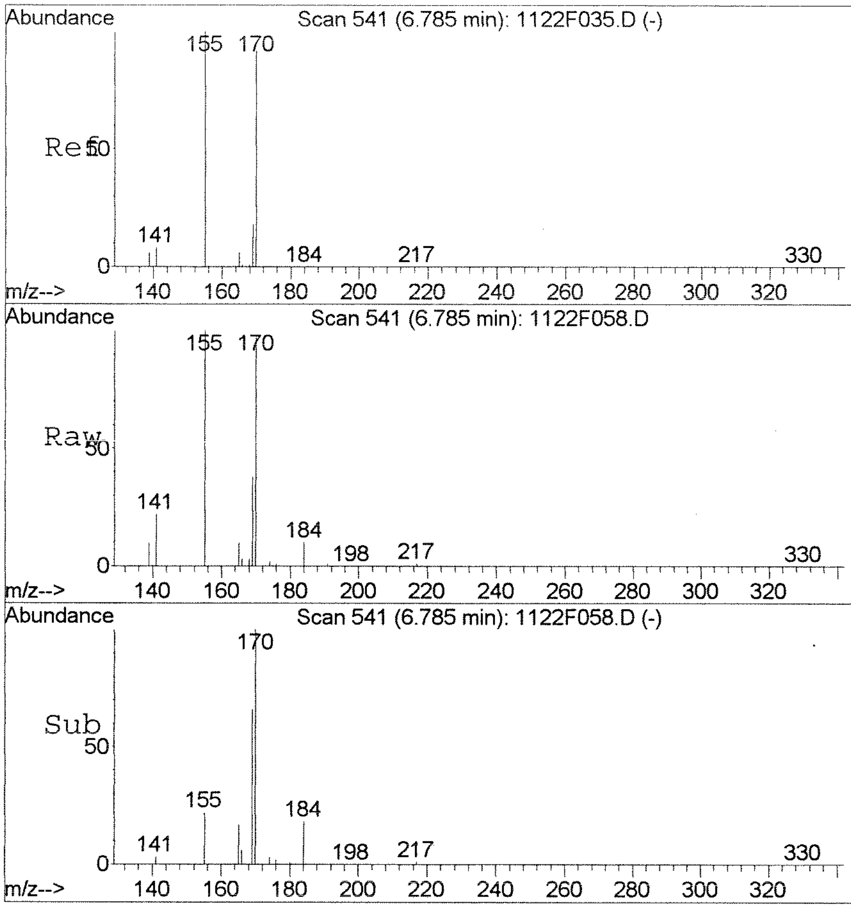




#13
Dibenzofuran
Concen: 42.17 ng/ml
RT: 6.63 min Scan# 520
Delta R.T. -0.00 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

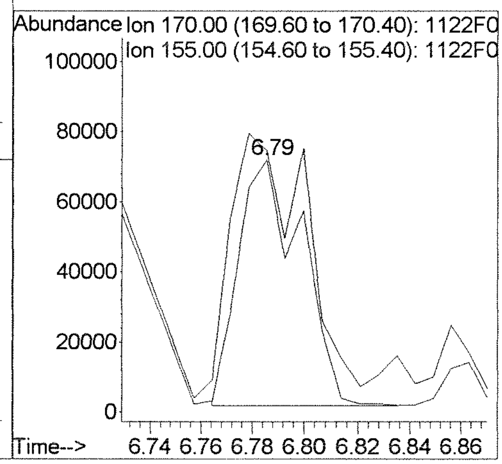
Tgt	Ion:168	Resp:	55443
Ion	Ratio	Lower	Upper
168	100		
139	27.6	21.0	81.0

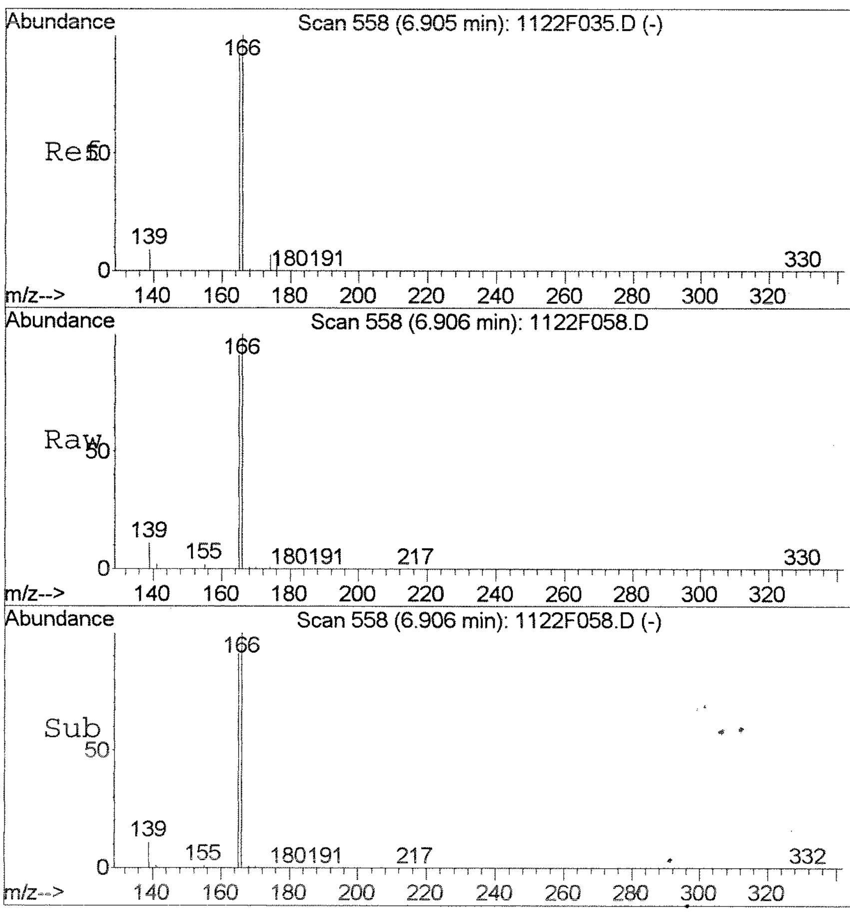




#14
2,3,5-Trimethylnaphthalene
Concen: 154.69 ng/ml
RT: 6.79 min Scan# 541
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

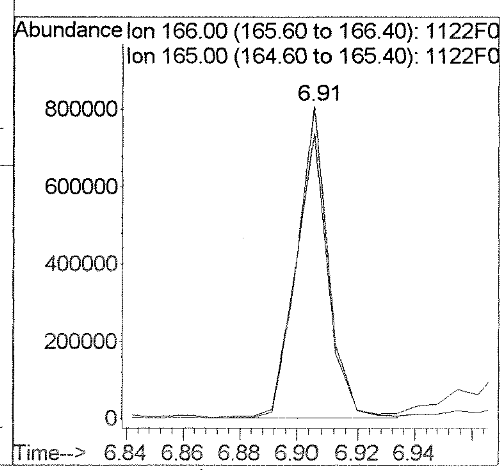
Tgt	Ion:170	Resp:	118908
Ion	Ratio	Lower	Upper
170	100		
155	93.2	42.9	102.9

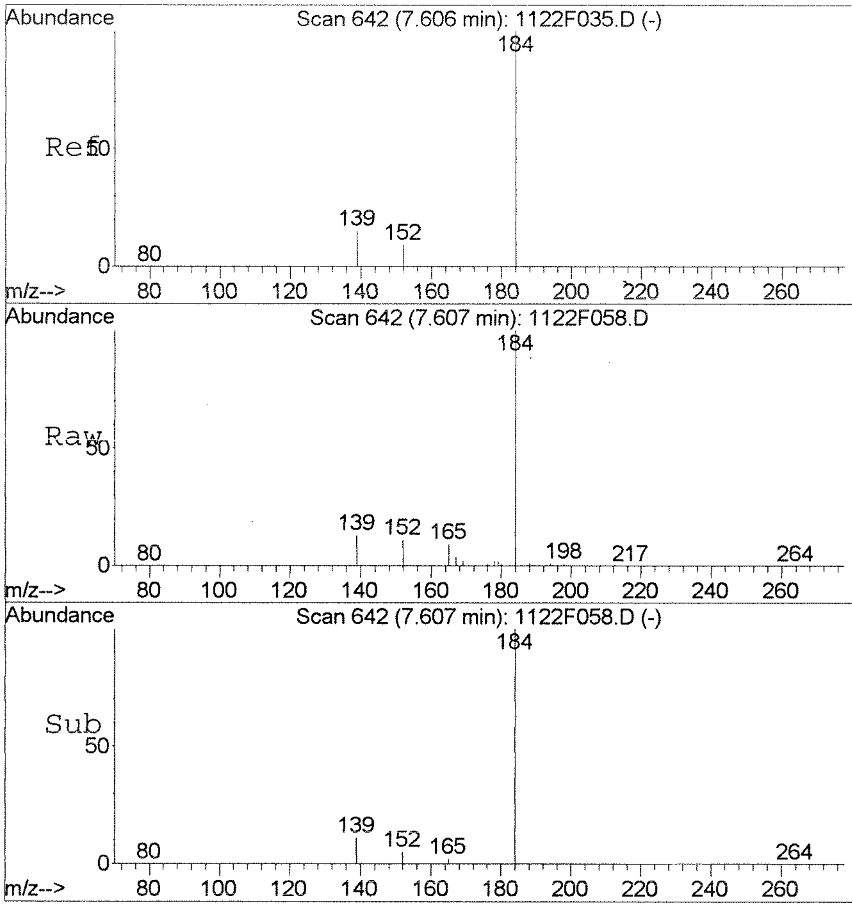




#16
Fluorene
Concen: 557.27 ng/ml
RT: 6.91 min Scan# 558
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt	Ion:166	Resp:	584713
Ion	Ratio	Lower	Upper
166	100		
165	90.9	59.8	119.8

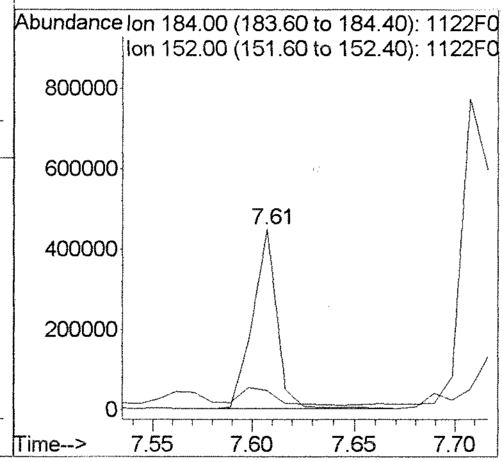


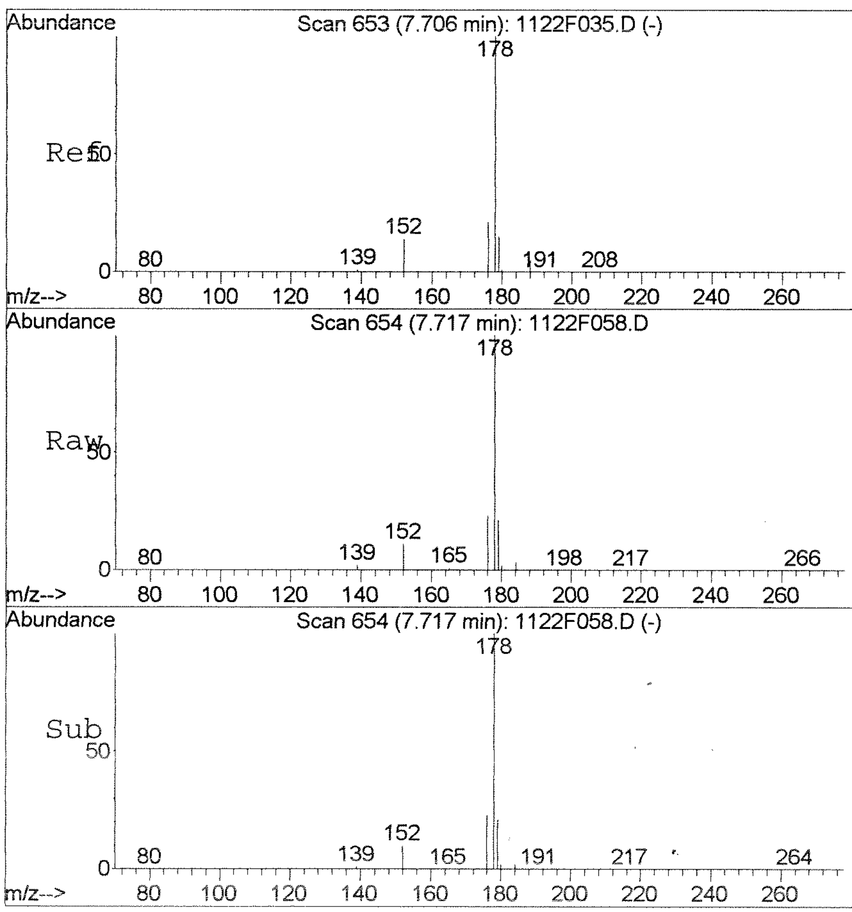


#23
Dibenzothiophene
Concen: 246.38 ng/ml
RT: 7.61 min Scan# 642
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:184 Resp: 377598

Ion	Ratio	Lower	Upper
184	100		
152	7.7	0.0	39.1

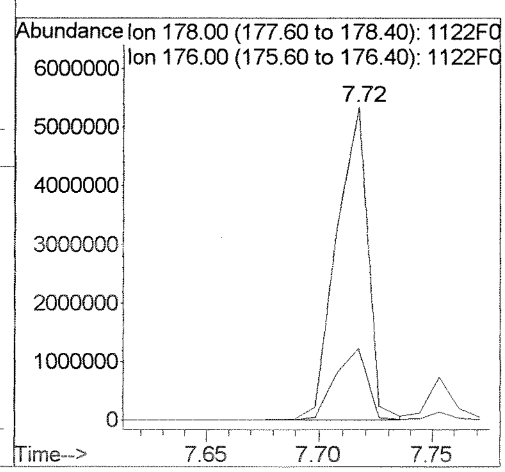


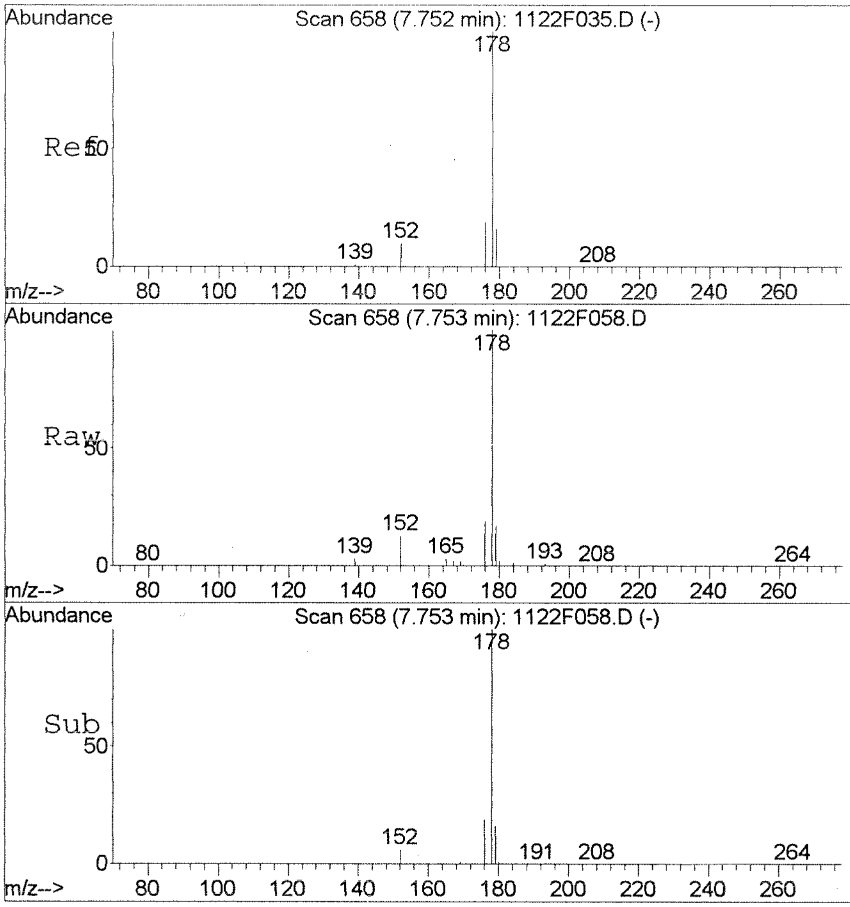


#27
Phenanthrene
Concen: 3205.35 ng/ml
RT: 7.72 min Scan# 654
Delta R.T. 0.00 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:178 Resp: 5024157

Ion	Ratio	Lower	Upper
178	100		
176	22.9	0.0	51.0

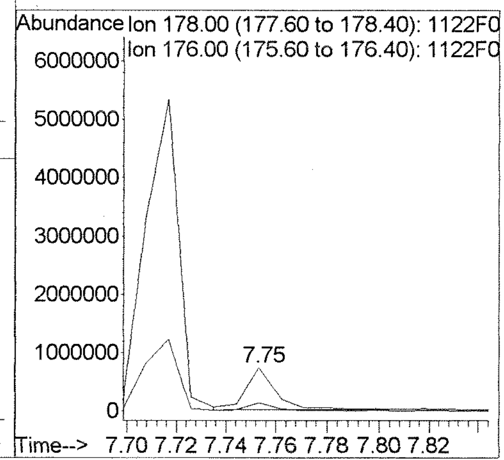


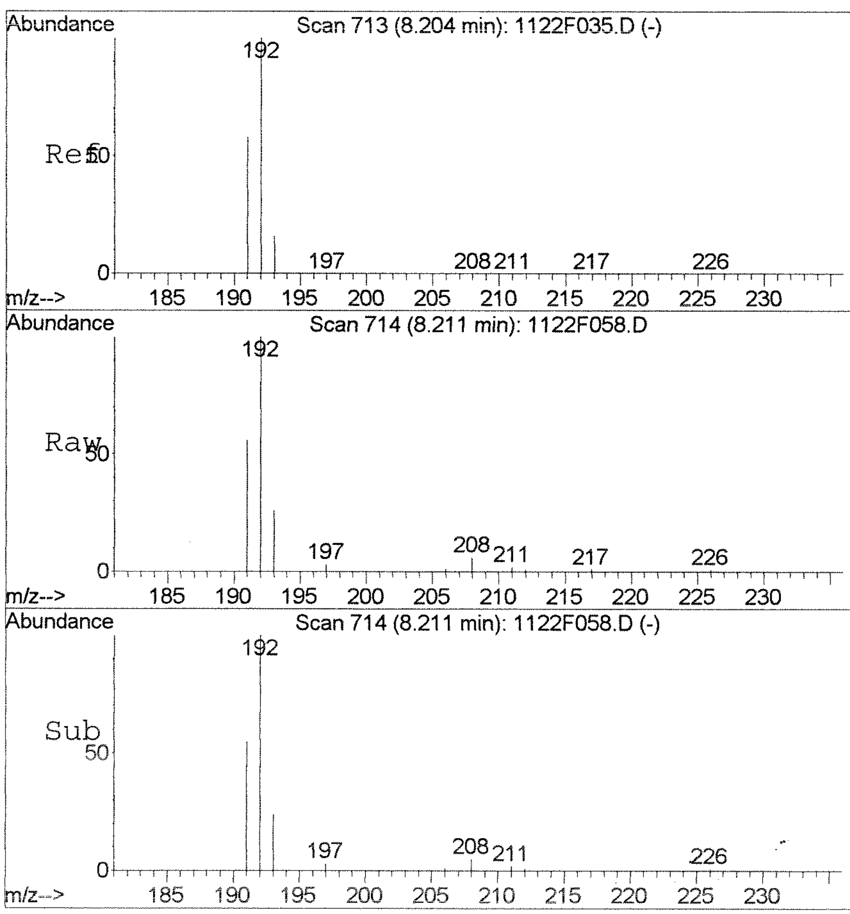


#28
Anthracene
Concen: 386.90 ng/ml
RT: 7.75 min Scan# 658
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:178 Resp: 590869

Ion	Ratio	Lower	Upper
178	100		
176	19.0	0.0	49.7

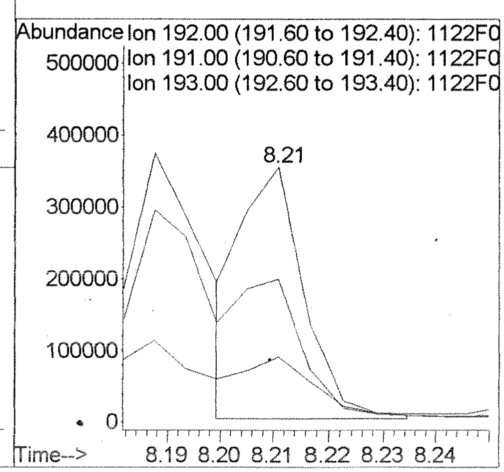


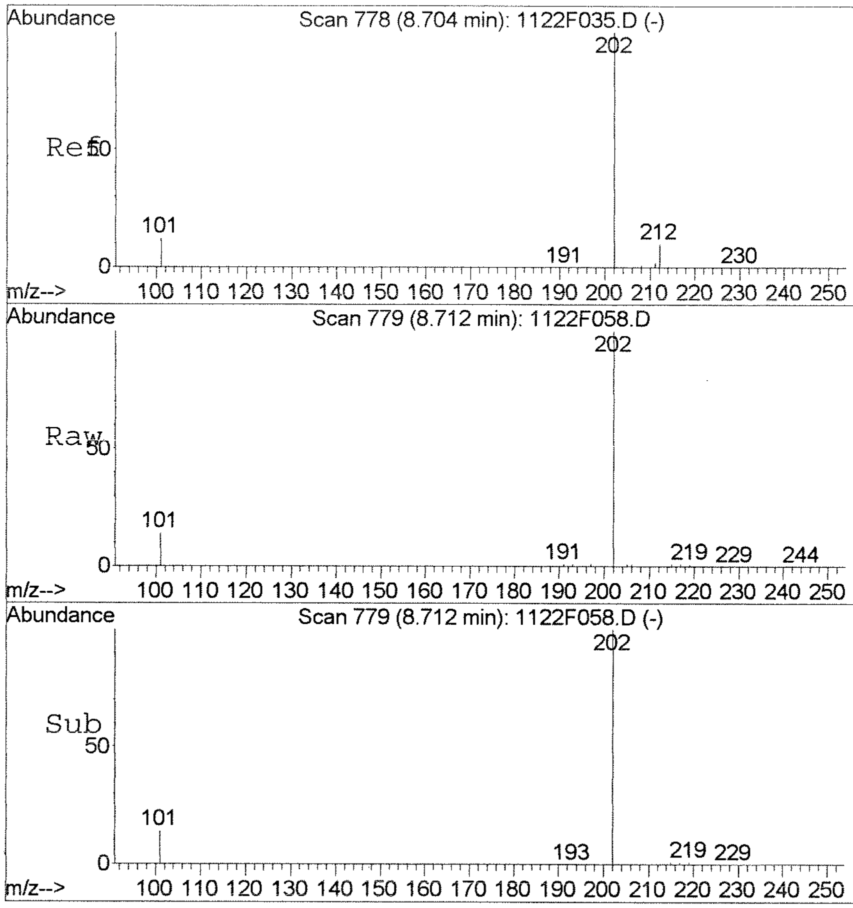


#30
1-Methylphenanthrene
Concen: 246.25 ng/ml m
RT: 8.21 min Scan# 714
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:192 Resp: 286464

Ion	Ratio	Lower	Upper
192	100		
191	56.2	29.0	89.0
193	25.7	0.0	45.4

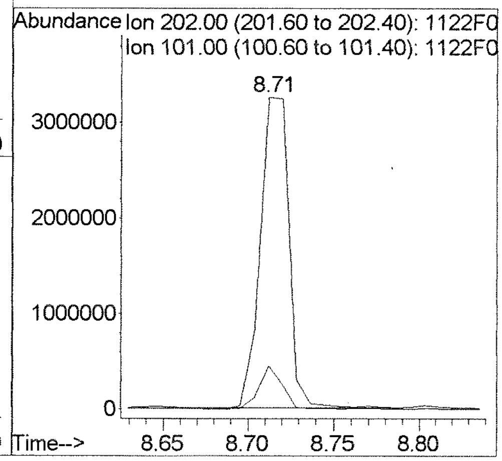


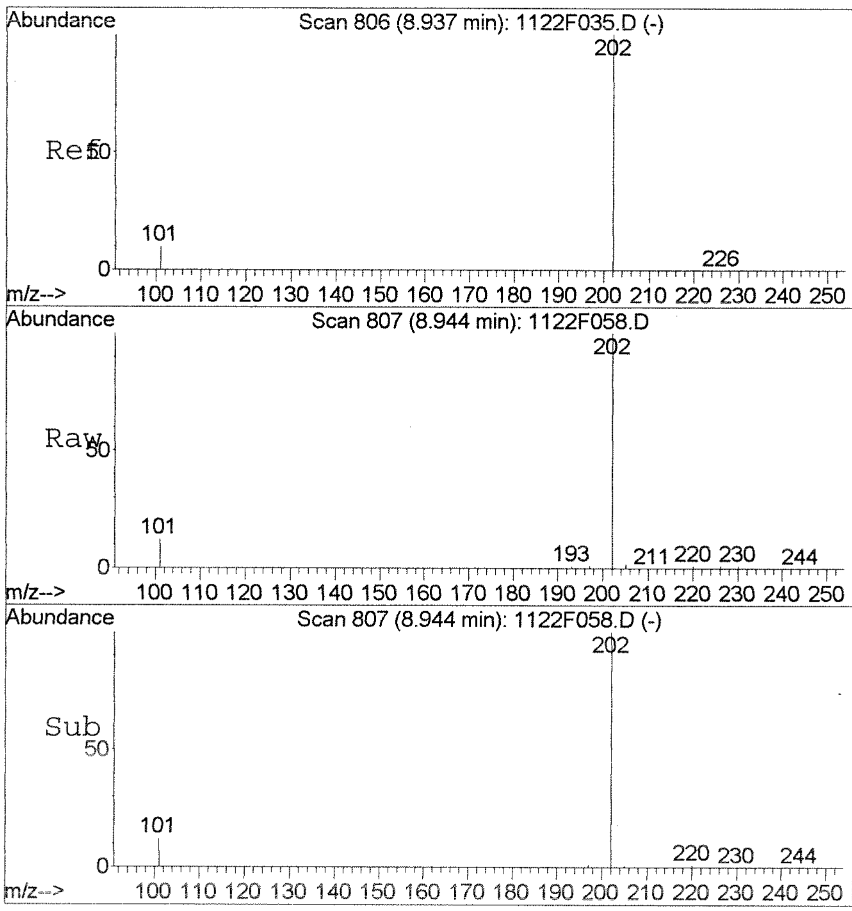


#35
Fluoranthene
Concen: 2163.68 ng/ml
RT: 8.71 min Scan# 779
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:202 Resp: 3852345

Ion	Ratio	Lower	Upper
202	100		
101	13.8	0.0	35.8

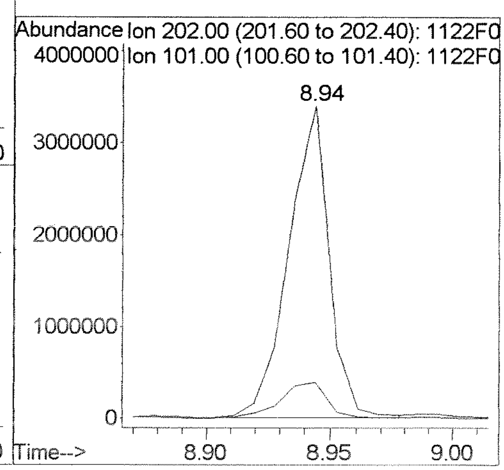


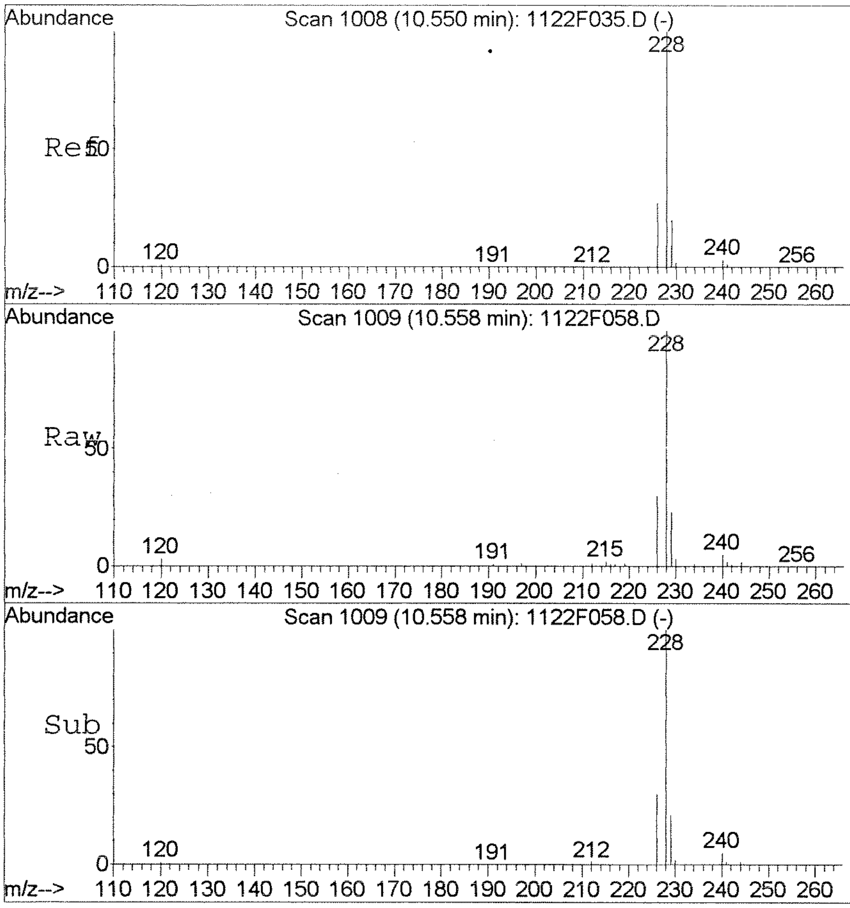


#38
Pyrene
Concen: 1826.11 ng/ml
RT: 8.94 min Scan# 807
Delta R.T. -0.00 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:202 Resp: 3787849

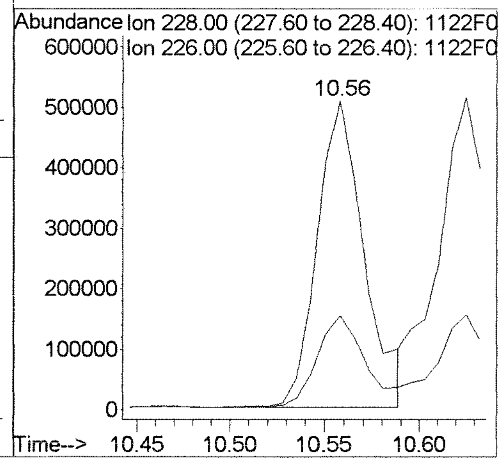
Ion	Ratio	Lower	Upper
202	100		
101	11.5	0.0	37.6

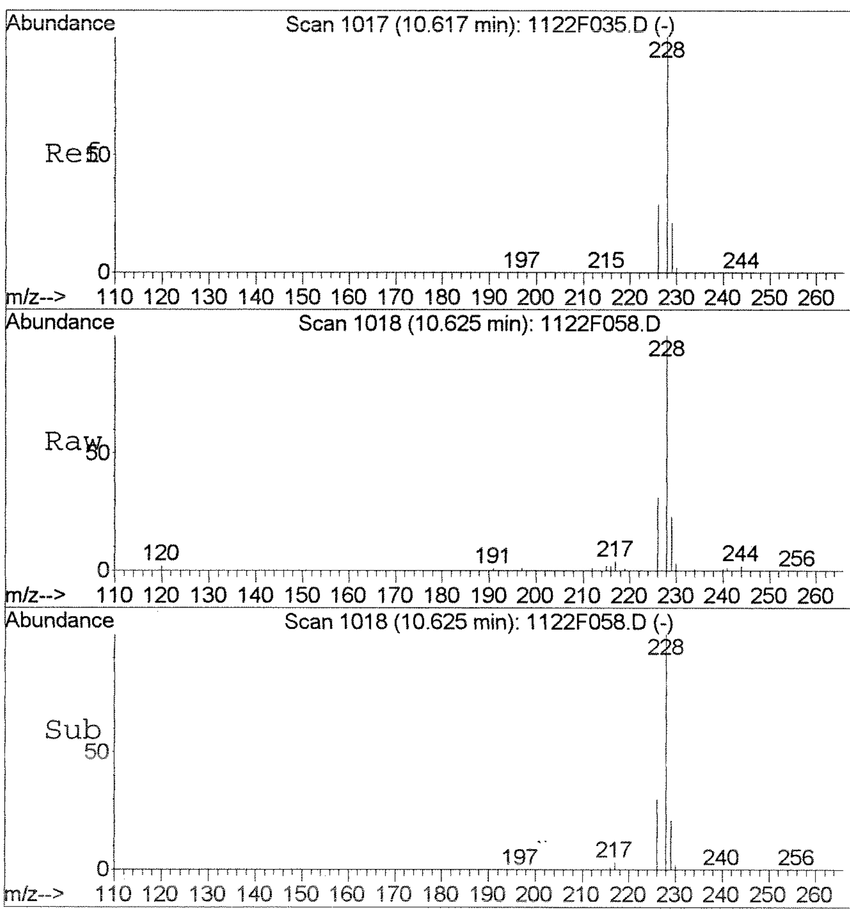




#43
Benz(a)anthracene
Concen: 454.01 ng/ml
RT: 10.56 min Scan# 1009
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

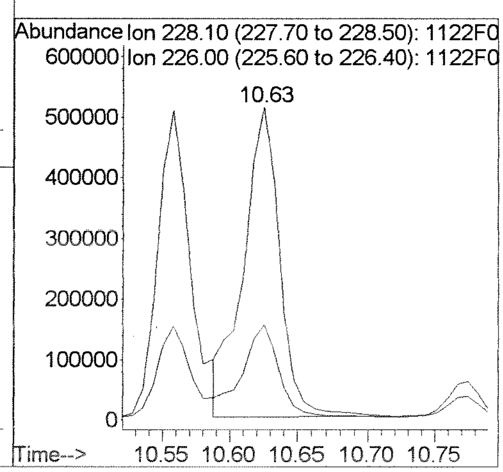
Tgt Ion:228		Resp:	854351
Ion	Ratio	Lower	Upper
228	100		
226	29.9	0.0	57.0

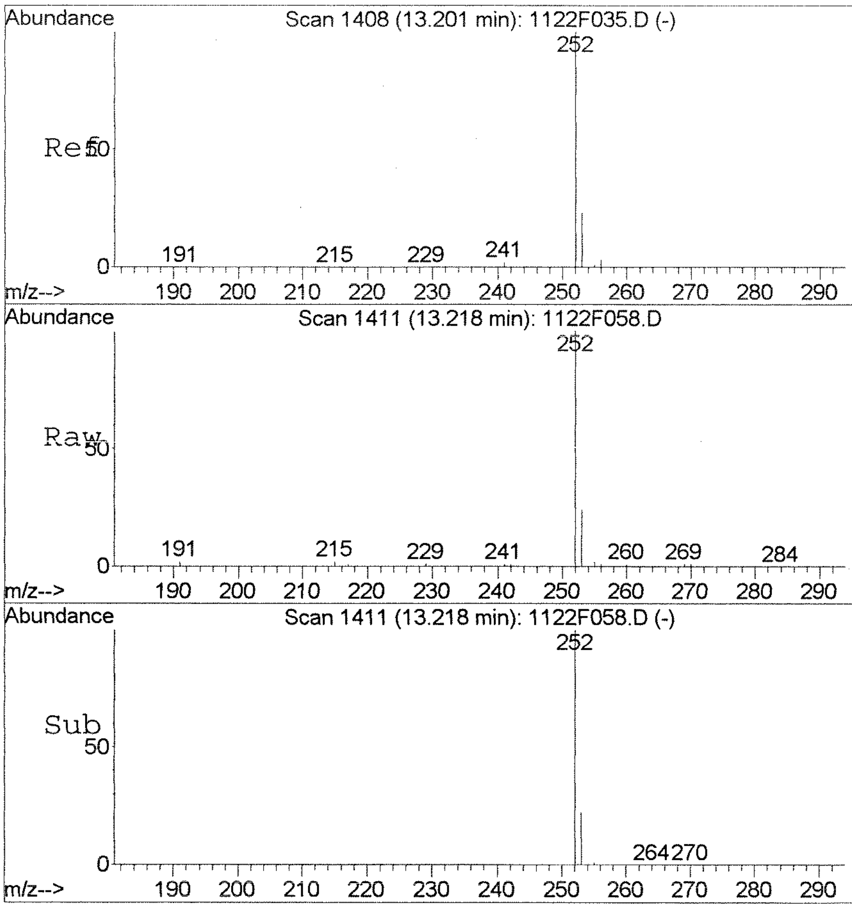




#44
Chrysene
Concen: 519.41 ng/ml
RT: 10.63 min Scan# 1018
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:228		Resp:	959977
Ion	Ratio	Lower	Upper
228	100		
226	30.0	0.0	58.9

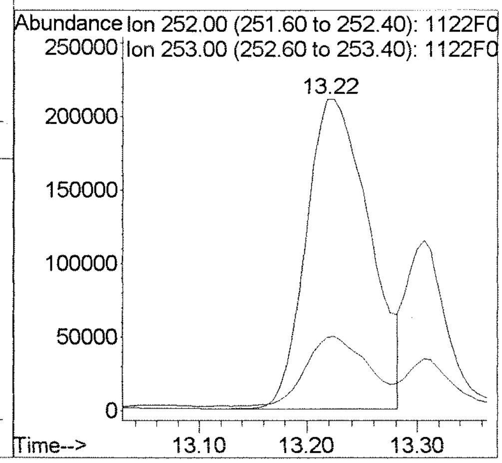


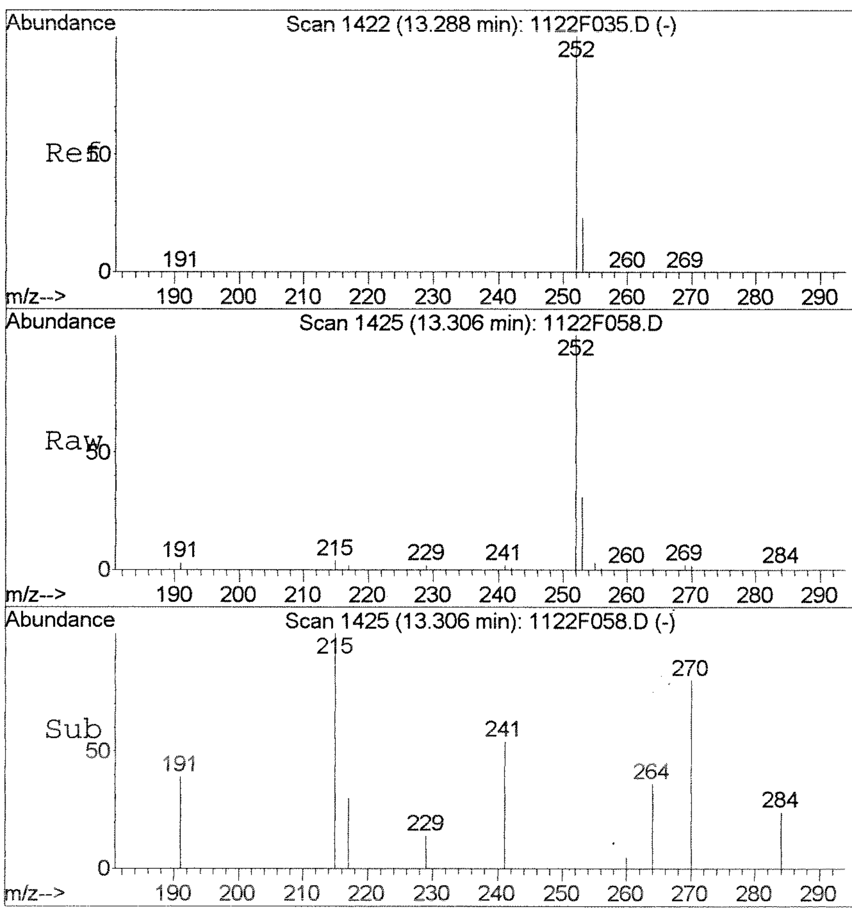


#50
Benzo(b)fluoranthene
Concen: 397.44 ng/ml
RT: 13.22 min Scan# 1411
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:252 Resp: 830896

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	52.6

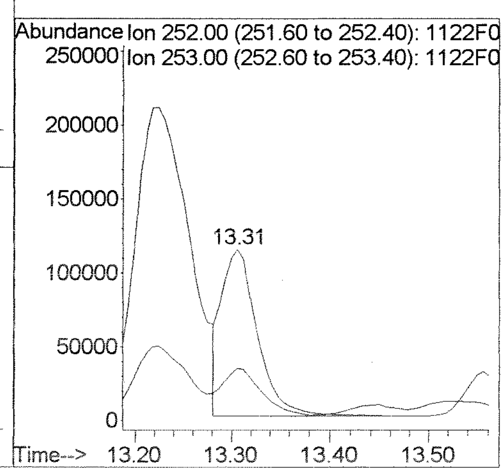


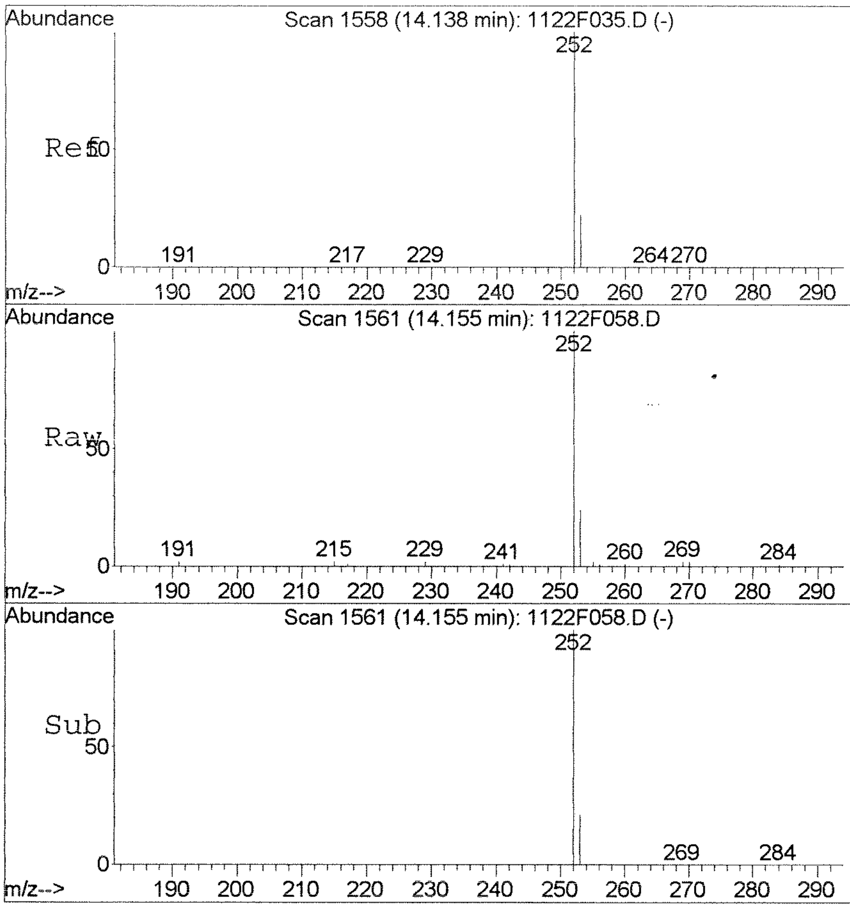


#51
Benzo(k)fluoranthene
Concen: 146.64 ng/ml
RT: 13.31 min Scan# 1425
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:252 Resp: 294496

Ion	Ratio	Lower	Upper
252	100		
253	24.1	0.0	52.0

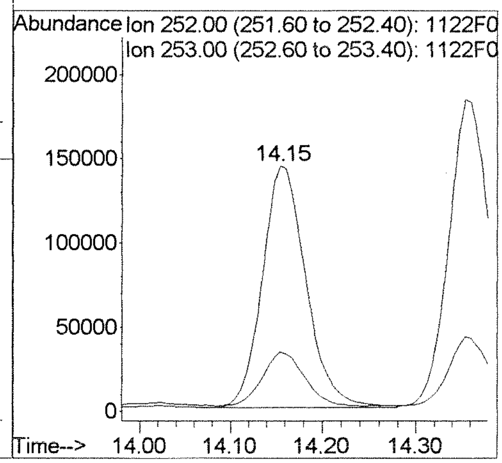


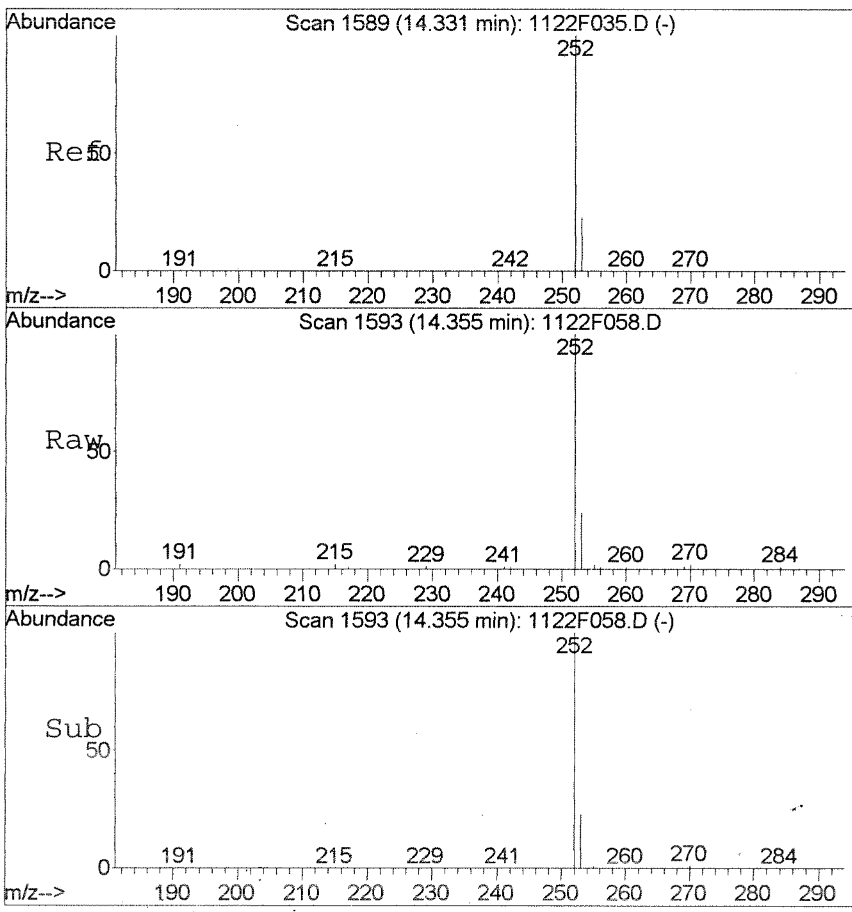


#52
Benzo(e)pyrene
Concen: 250.03 ng/ml
RT: 14.15 min Scan# 1561
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:252 Resp: 474819

Ion	Ratio	Lower	Upper
252	100		
253	22.2	0.0	52.2

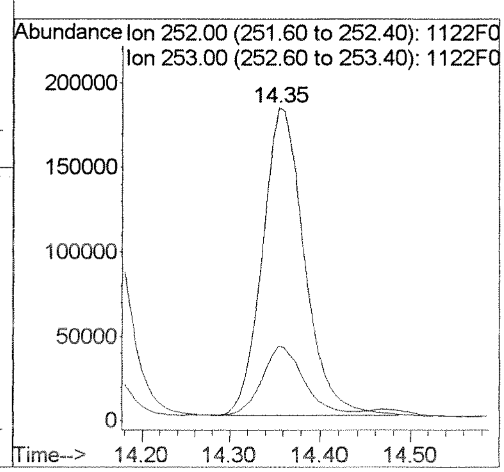


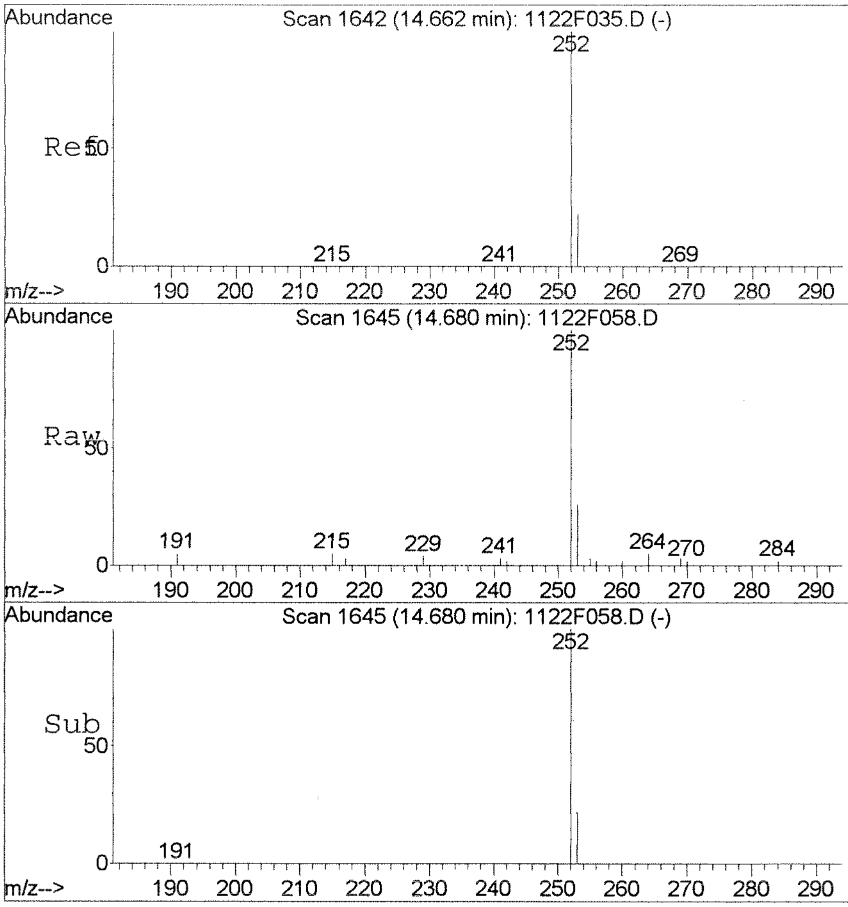


#53
Benzo(a)pyrene
Concen: 342.20 ng/ml
RT: 14.35 min Scan# 1593
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:252 Resp: 592319

Ion	Ratio	Lower	Upper
252	100		
253	22.4	0.0	52.2

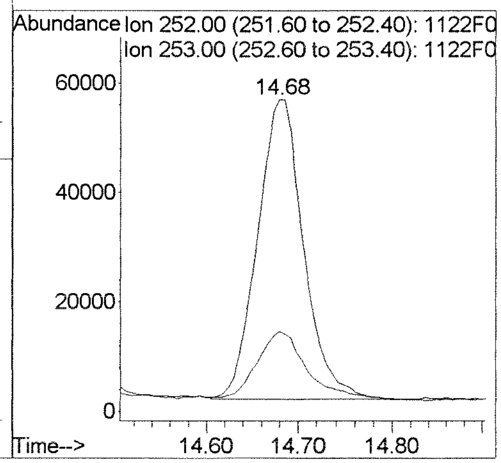


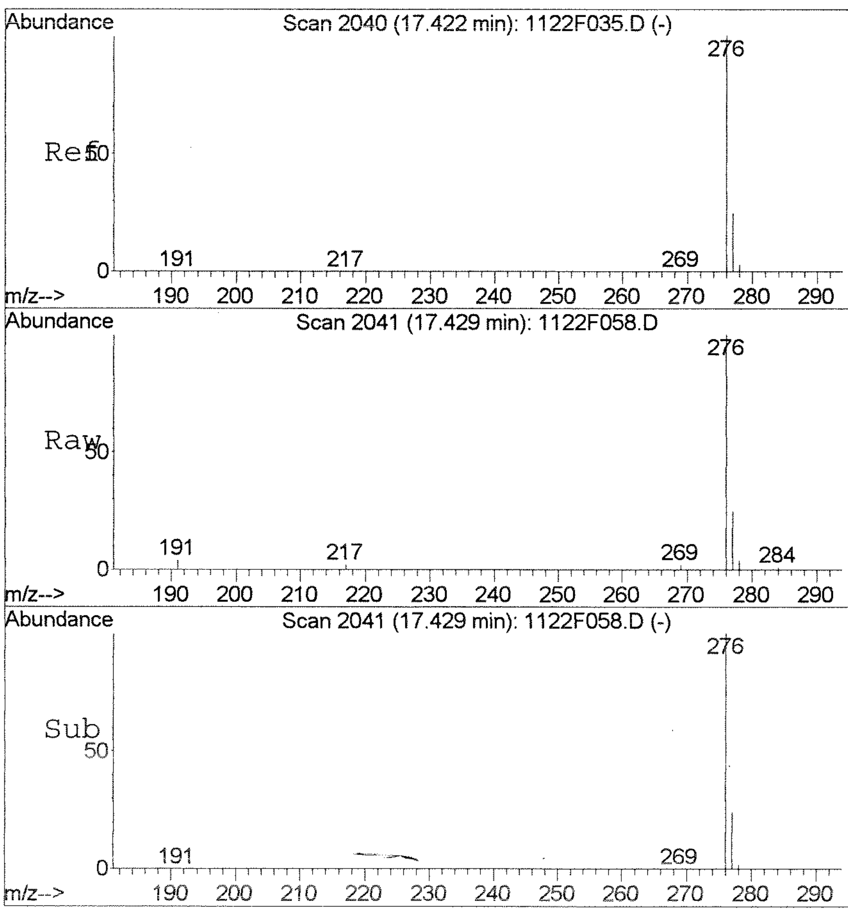


#54
Perylene
Concen: 112.08 ng/ml
RT: 14.68 min Scan# 1645
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:252 Resp: 190574

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	51.5

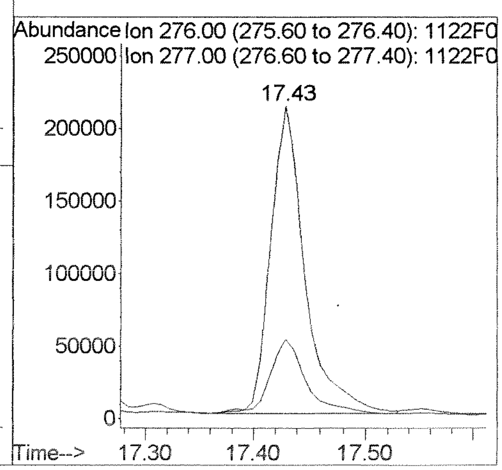


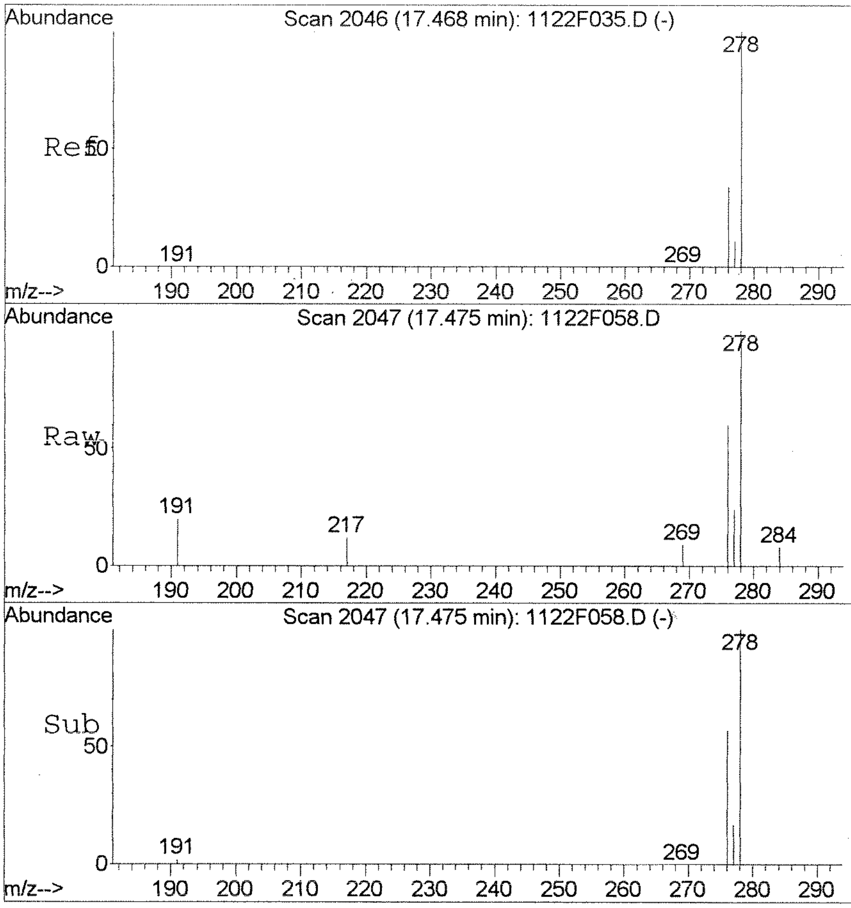


#55
Indeno(1,2,3-cd)pyrene
Concen: 287.62 ng/ml
RT: 17.43 min Scan# 2041
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:276 Resp: 461923

Ion	Ratio	Lower	Upper
276	100		
277	24.2	0.0	54.7

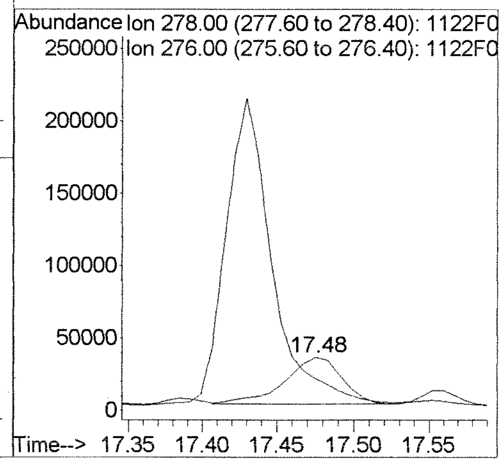


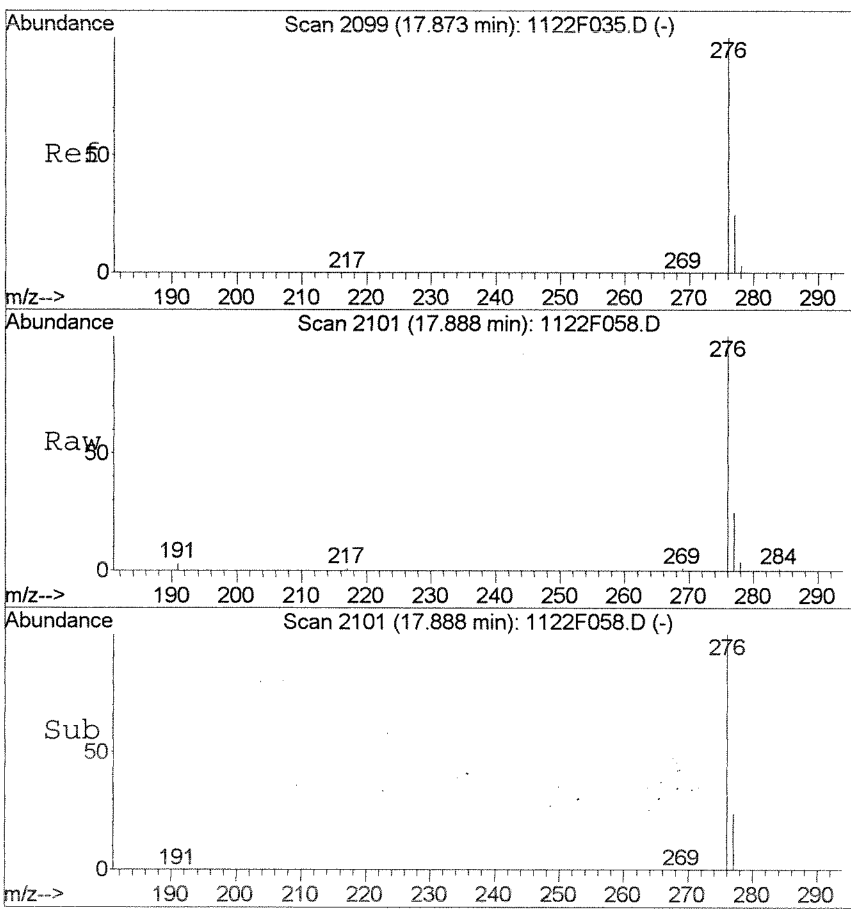


#56
Dibenz(a,h)anthracene
Concen: 49.39 ng/ml
RT: 17.48 min Scan# 2047
Delta R.T. -0.02 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:278 Resp: 83255

Ion	Ratio	Lower	Upper
278	100		
276	51.8	0.0	59.7

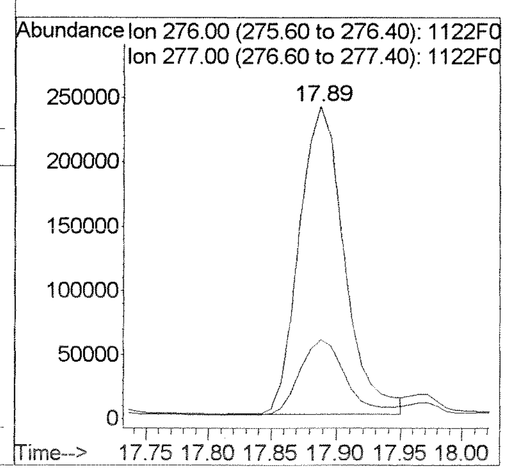




#57
Benzo(g,h,i)perylene
Concen: 311.64 ng/ml
RT: 17.89 min Scan# 2101
Delta R.T. -0.01 min
Lab File: 1122F058.D
Acq: 23 Nov 2008 9:15 am

Tgt Ion:276 Resp: 570205

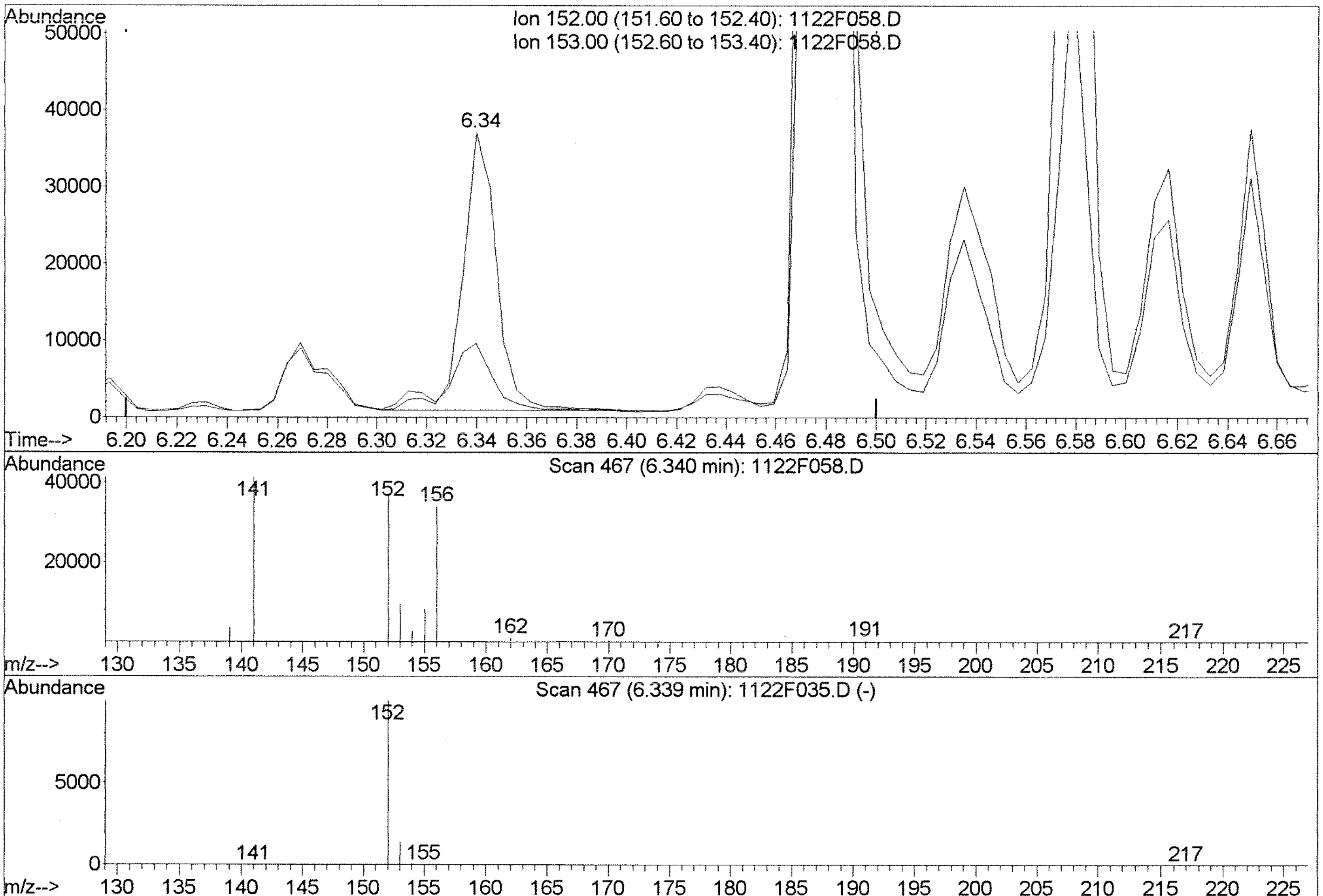
Ion	Ratio	Lower	Upper
276	100		
277	24.5	0.0	54.2



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112208\1122F058.D Vial: 1
Acq On : 23 Nov 2008 9:15 am Operator: LWeiskopf
Sample : K0810639-008DIL 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:11 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



TIC: 1122F058.D

(11) Acenaphthylene (T)

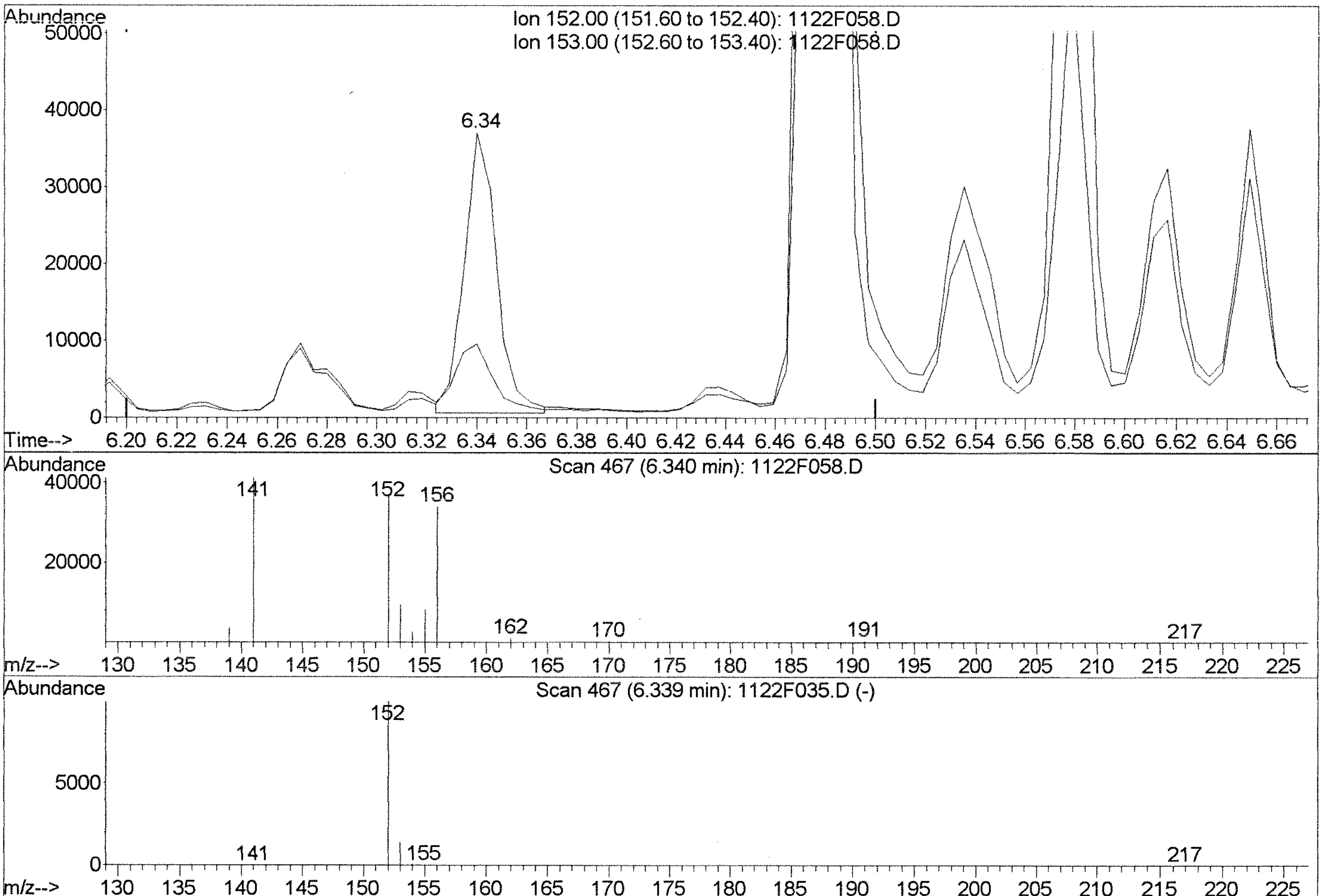
6.34min 23.63ng/ml

response 33985

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	24.34
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112208\1122F058.D Vial: 1
Acq On : 23 Nov 2008 9:15 am Operator: LWeiskopf
Sample : K0810639-008DIL 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:46 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



TIC: 1122F058.D

(11) Acenaphthylene (T)

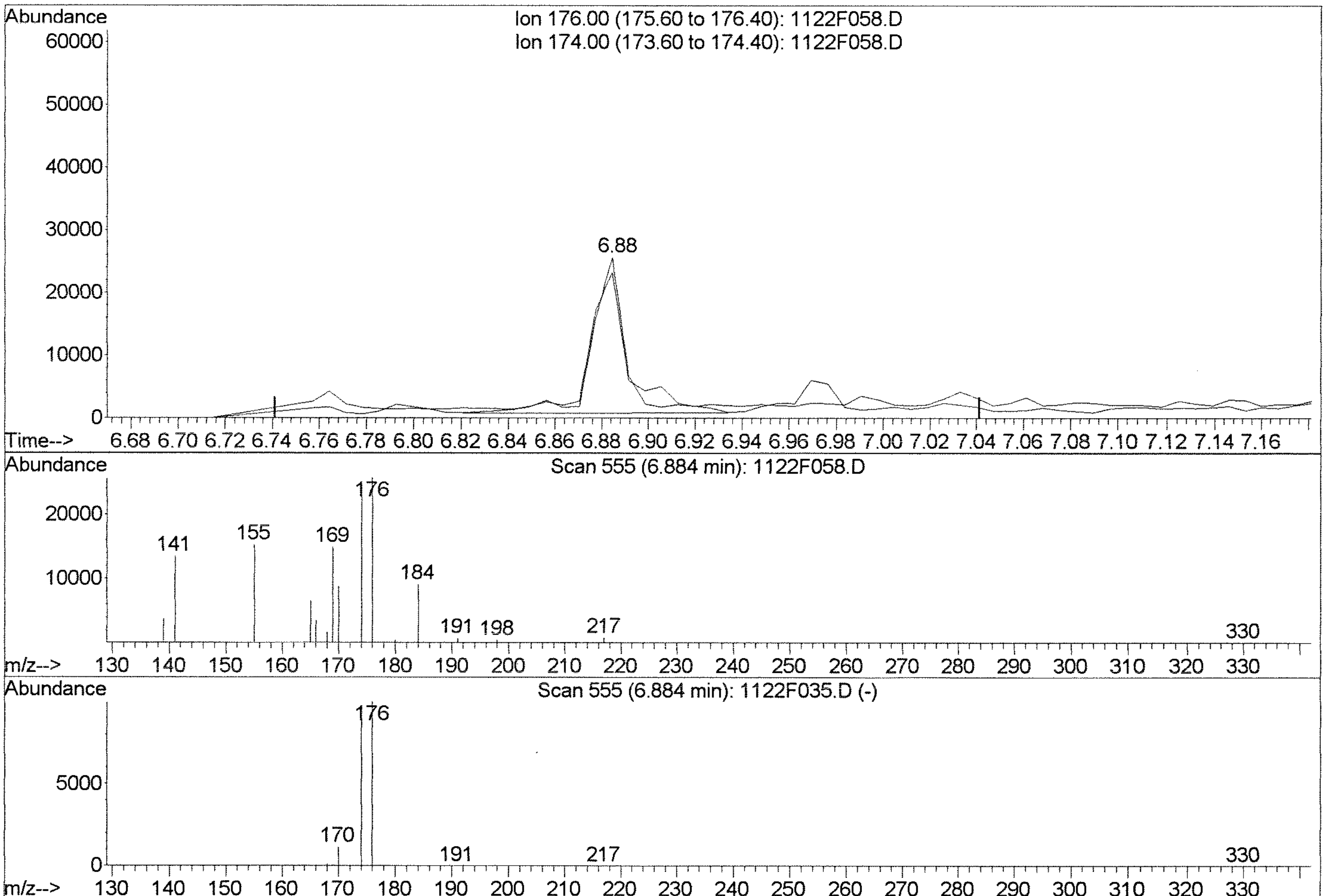
6.34min 22.92ng/ml m

response 32962

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	25.86
0.00	0.00	0.00
0.00	0.00	0.00

OT 11/24/08 11-30-08

```
Data File : J:\MS11\DATA\112208\1122F058.D                    Vial: 1
Acq On    : 23 Nov 2008   9:15 am                         Operator: LWeiskopf
Sample    : K0810639-008DIL  5X                           Inst    : MS11
Misc      :                                               Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:46 2008                  Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sun Nov 23 10:13:22 2008
Response via   : Multiple Level Calibration
```



TIC: 1122F058.D

(15) Fluorene-d10 (S)

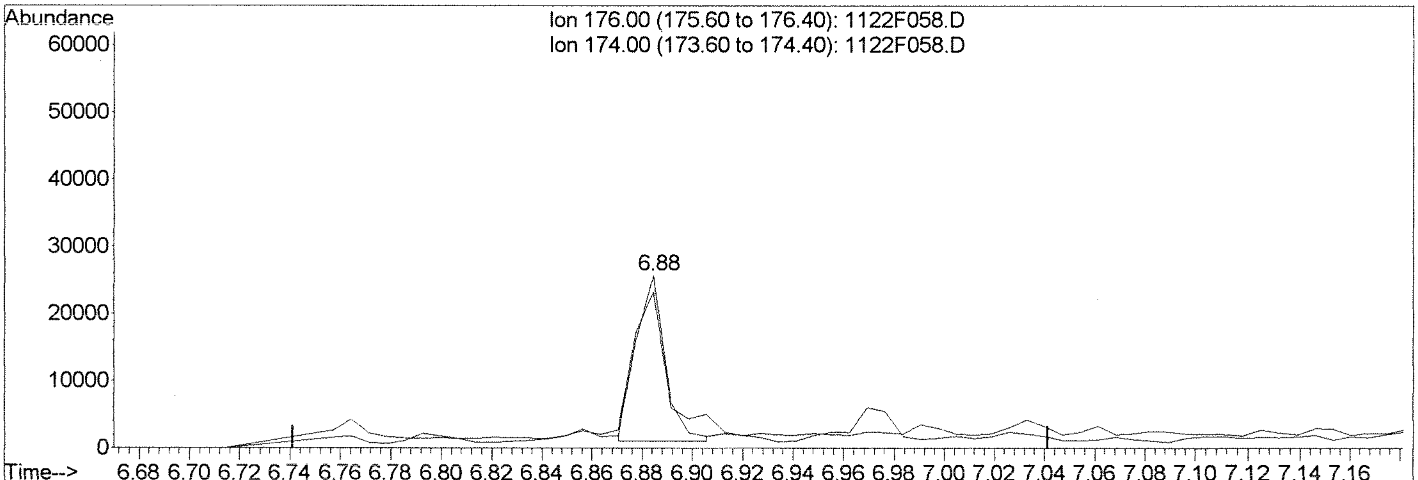
6.88min 28.36ng/ml

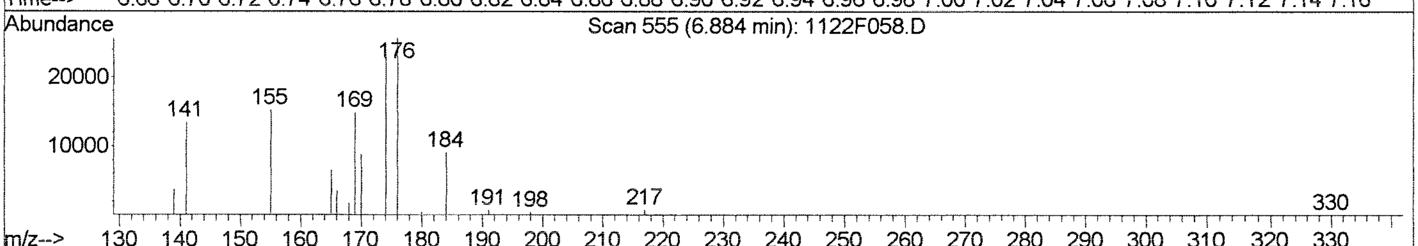
response 24586

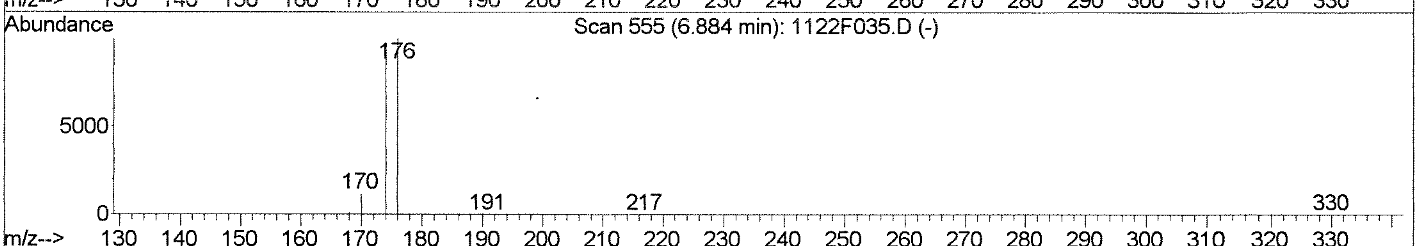
Ion	Exp%	Act%
176.00	100	100
174.00	96.70	87.12
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112208\1122F058.D Vial: 1
Acq On : 23 Nov 2008 9:15 am Operator: LWeiskopf
Sample : K0810639-008DIL 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:46 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration







TIC: 1122F058.D

(15) Fluorene-d10 (S)

6.88min 23.25ng/ml m

response 20159

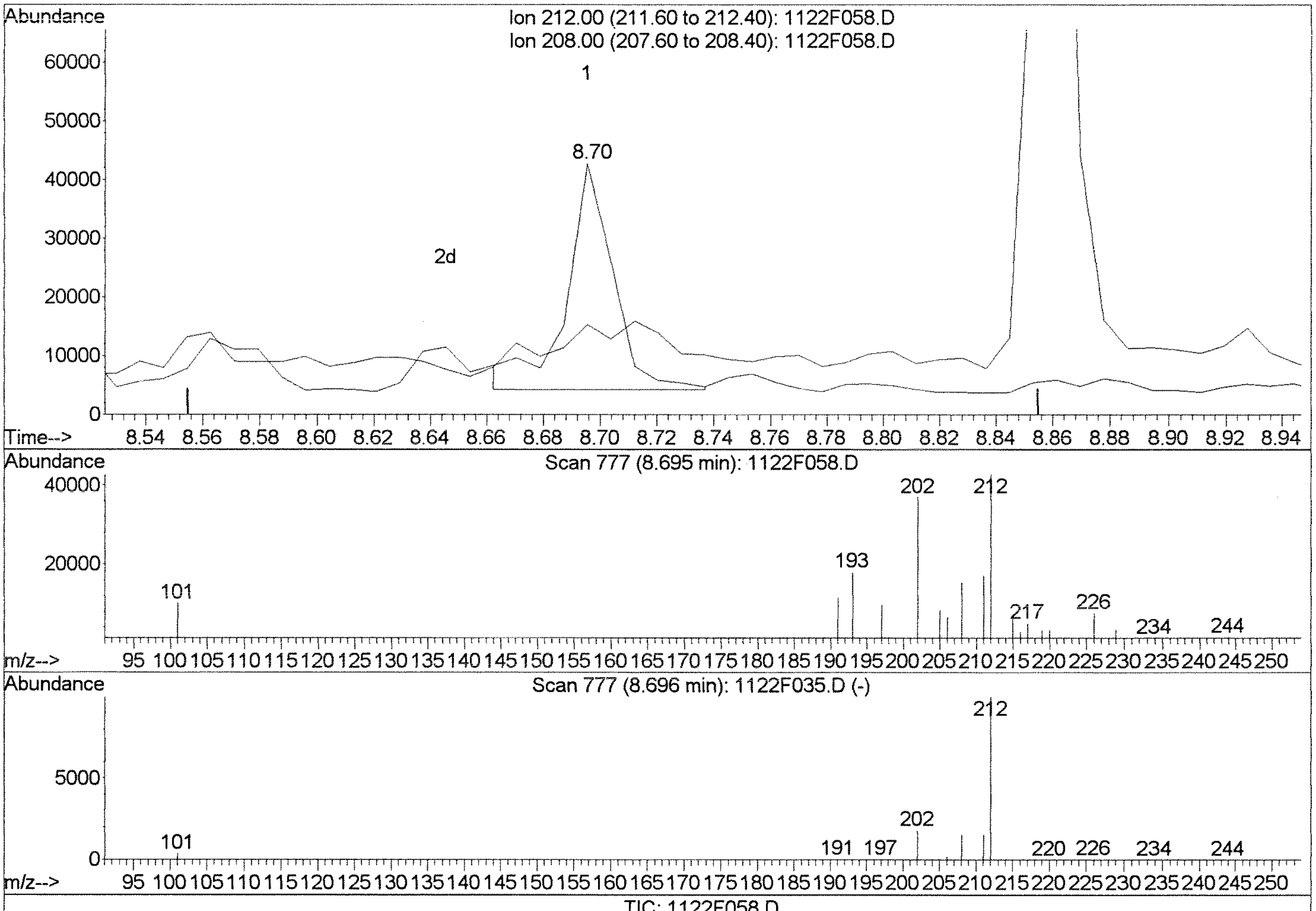
Ion	Exp%	Act%
176.00	100	100
174.00	96.70	90.53
0.00	0.00	0.00
0.00	0.00	0.00

OT [illegible] 11-30-08

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112208\1122F058.D Vial: 1
Acq On : 23 Nov 2008 9:15 am Operator: LWeiskopf
Sample : K0810639-008DIL 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:47 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



(36) Fluoranthene-d10 (S)

8.70min 28.47ng/ml

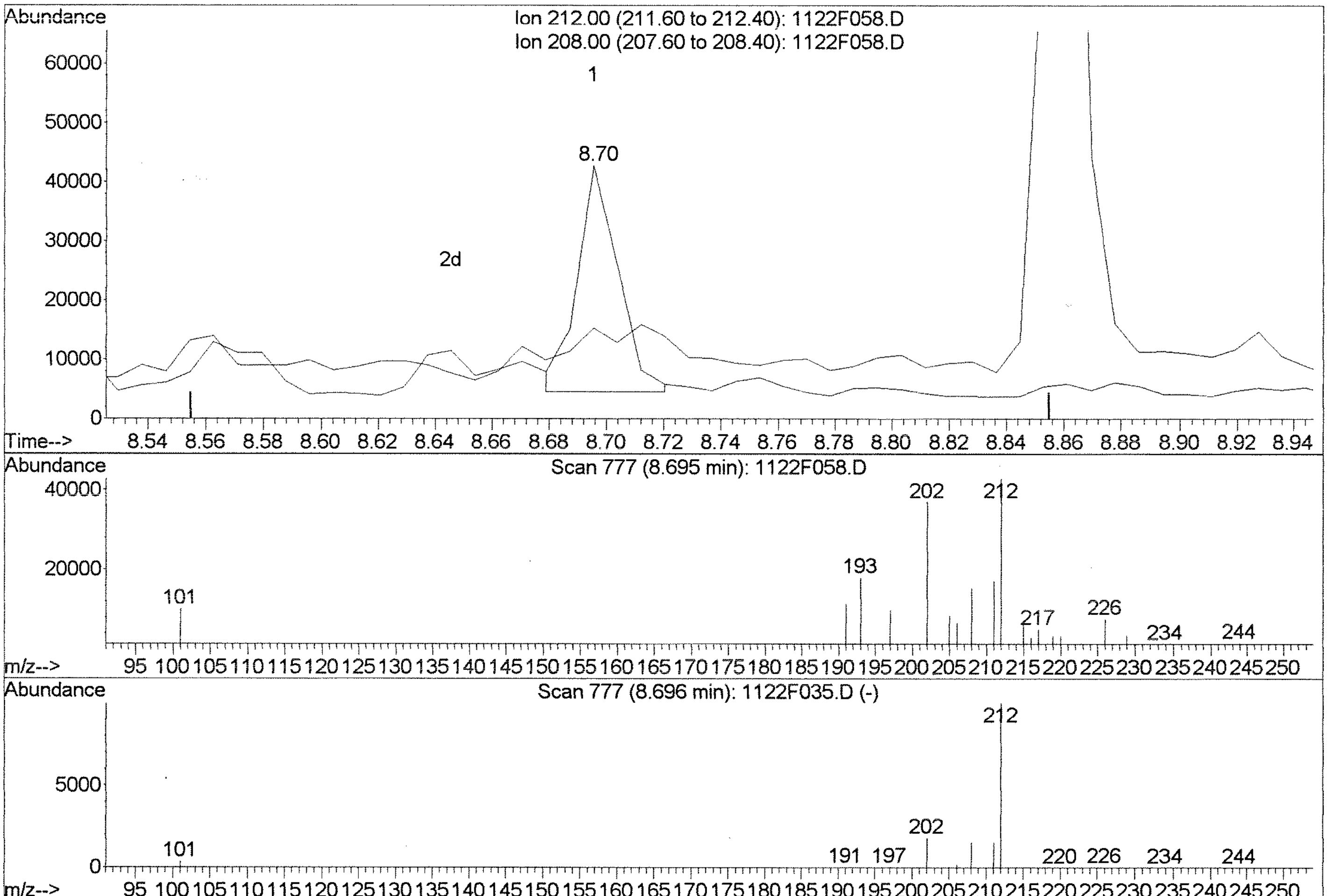
response 43283

Ion	Exp%	Act%
212.00	100	100
208.00	16.70	19.10
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112208\1122F058.D Vial: 1
Acq On : 23 Nov 2008 9:15 am Operator: LWeiskopf
Sample : K0810639-008DIL 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:47 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



TIC: 1122F058.D

(36) Fluoranthene-d10 (S)

8.70min 24.56ng/ml m

response 37336

Ion	Exp%	Act%
212.00	100	100
208.00	16.70	35.81
0.00	0.00	0.00
0.00	0.00	0.00

Exception Report

Data File: J:\MS11\DATA\112108\1121F047.D
Lab ID: K0810639-008
RunType: DL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 02:22
Date Quantitated: 11/22/2008 13:58
Batch ID: KWG0812613
Analysis Method: 8270C SIM
ListJoinID: LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: RW 11/22/08

Secondary Review: 11-22-8

Printed: 11/22/2008 14:50:29
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/24/2008	**Receive Date:**	07/29/2008

Analysis Lot:	KWG0812613	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776072	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112108\1121F030.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112108\1121F047.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 02:22	**Quant Date:**	11/22/2008 13:58	**Vial:**	44
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-008			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.06	0.01	136	228086	200.00	OK
2	Acenaphthene-d10	6.47	0.00	164	113668	200.00	OK
3	Phenanthrene-d10	7.71	0.00	188	215237	200.00	OK
4	Chrysene-d12	10.61	0.01	240	242153	200.00	OK
5	Perylene-d12	14.64	0.03	264	251850	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.90	0.00	0.00	176	4701m	6.09	61	10-128	OK	
3	Fluoranthene-d10	8.71	0.01	0.00	212	8465m	5.77	58	29-121	OK	
4	Terphenyl-d14	9.10	0.00	0.00	244	9532	7.60	76	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.07		0.00	128	10899m	7.84	140	D	
1	2-Methylnaphthalene	5.62		0.00	142	5499	5.68	100	D	
2	Acenaphthylene	6.36	0.01	0.00	152	8118m	6.33	120	D	
2	Acenaphthene	6.50	0.01	0.00	154	172995	222.11	4100	D	
2	Dibenzofuran	6.64		0.00	168	13065	11.15	210	D	
2	Fluorene	6.92		0.00	166	141756	151.60	2800	D	
3	Phenanthrene	7.72		0.00	178	1211855	801.01	15000	D	
3	Anthracene	7.77		0.00	178	215117	145.93	2700	D	
3	Fluoranthene	8.73	0.01	0.00	202	981169	570.93	11000	D	
4	Pyrene	8.95		0.00	202	947955	520.38	9600	D	
4	Benz(a)anthracene	10.59	0.01	0.00	228	183928	111.29	2100	D	
4	Chrysene	10.66	0.01	0.00	228	223313	137.58	2500	D	
5	Benzo(b)fluoranthene	13.28	0.03	0.00	252	170674	98.20	1800	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112108\1121F047.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 02:22	**Quant Date:**	11/22/2008 13:58	**Vial:**	44
Run Type:	DL			**Dilution:**	20.0
Lab ID:	K0810639-008			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.36	0.02	0.00	252	65350	39.14	720	D	
5	Benzo(a)pyrene	14.42	0.03	0.00	252	123534	85.84	1600	D	
5	Indeno(1,2,3-cd)pyrene	17.47	0.02	0.00	276	96815	72.51	1300	D	
5	Dibenz(a,h)anthracene	17.51		0.00	278	18444**m**	13.16	240	D	
5	Benzo(g,h,i)perylene	17.93	0.02	0.00	276	114472**m**	75.25	1400	D	

Prep Amount:	20.09 g	**Dilution:**	20.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	53.9 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

```
Data File : J:\MS11\DATA\112108\1121F047.D                Vial: 44
Acq On    : 22 Nov 2008   2:22 am                     Operator: LWeiskopf
Sample    : K0810639-008DIL  20X                      Inst    : MS11
Misc      :                                           Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14:33 2008           Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title        : PAHS and ALKYLATED HOMOLOGS
Last Update  : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT
```

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.06	136	228086	200.00 ng/ml	0.01
10) Acenaphthene-d10	6.47	164	113668	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.71	188	215237	200.00 ng/ml	0.00
37) Chrysene-d12	10.61	240	242153	200.00 ng/ml	0.02
49) Perylene-d12	14.64	264	251850	200.00 ng/ml	0.06
System Monitoring Compounds					
15) Fluorene-d10	6.90	176	4701m	6.09 ng/ml	0.00
Spiked Amount 200.000			Recovery	= 3.04%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00 ng/ml	
Spiked Amount 375.000			Recovery	= 0.00%	
36) Fluoranthene-d10	8.71	212	8465m	5.77 ng/ml	0.00
Spiked Amount 200.000			Recovery	= 2.88%	
42) Terphenyl-d14	9.10	244	9532	7.60 ng/ml	0.00
Spiked Amount 200.000			Recovery	= 3.80%	
Target Compounds					Qvalue
2) Naphthalene	5.07	128	10899m	7.84 ng/ml	
3) 2-Methylnaphthalene	5.62	142	5499	5.68 ng/ml	92
4) 1-Methylnaphthalene	5.70	142	3483	4.02 ng/ml	98
5) Biphenyl	5.99	154	1683	1.42 ng/ml	97
6) 2,6-Dimethylnaphthalene	6.12	156	17692	20.92 ng/ml	97
11) Acenaphthylene	6.36	152	8118m	6.33 ng/ml	
12) Acenaphthene	6.50	154	172995	222.11 ng/ml	93
13) Dibenzofuran	6.64	168	13065	11.15 ng/ml	81
16) Fluorene	6.92	166	141756	151.60 ng/ml	93
23) Dibenzothiophene	7.62	184	90808	61.39 ng/ml	98
27) Phenanthrene	7.72	178	1211855	801.01 ng/ml	100
28) Anthracene	7.77	178	215117	145.93 ng/ml	98
30) 1-Methylphenanthrene	8.22	192	63604m	56.65 ng/ml	
35) Fluoranthene	8.73	202	981169	570.93 ng/ml	89
38) Pyrene	8.95	202	947955	520.38 ng/ml	88
43) Benz(a)anthracene	10.59	228	183928	111.29 ng/ml	94
44) Chrysene	10.66	228	223313	137.58 ng/ml	99
50) Benzo(b)fluoranthene	13.28	252	170674	98.20 ng/ml	97
51) Benzo(k)fluoranthene	13.36	252	65350	39.14 ng/ml	96
52) Benzo(e)pyrene	14.21	252	102403	64.86 ng/ml	98
53) Benzo(a)pyrene	14.42	252	123534	85.84 ng/ml	100
54) Perylene	14.74	252	39284	27.79 ng/ml	94
55) Indeno(1,2,3-cd)pyrene	17.47	276	96815	72.51 ng/ml	98
56) Dibenz(a,h)anthracene	17.51	278	18444m	13.16 ng/ml	
57) Benzo(g,h,i)perylene	17.93	276	114472m	75.25 ng/ml	

(#) = qualifier out of range (m) = manual integration

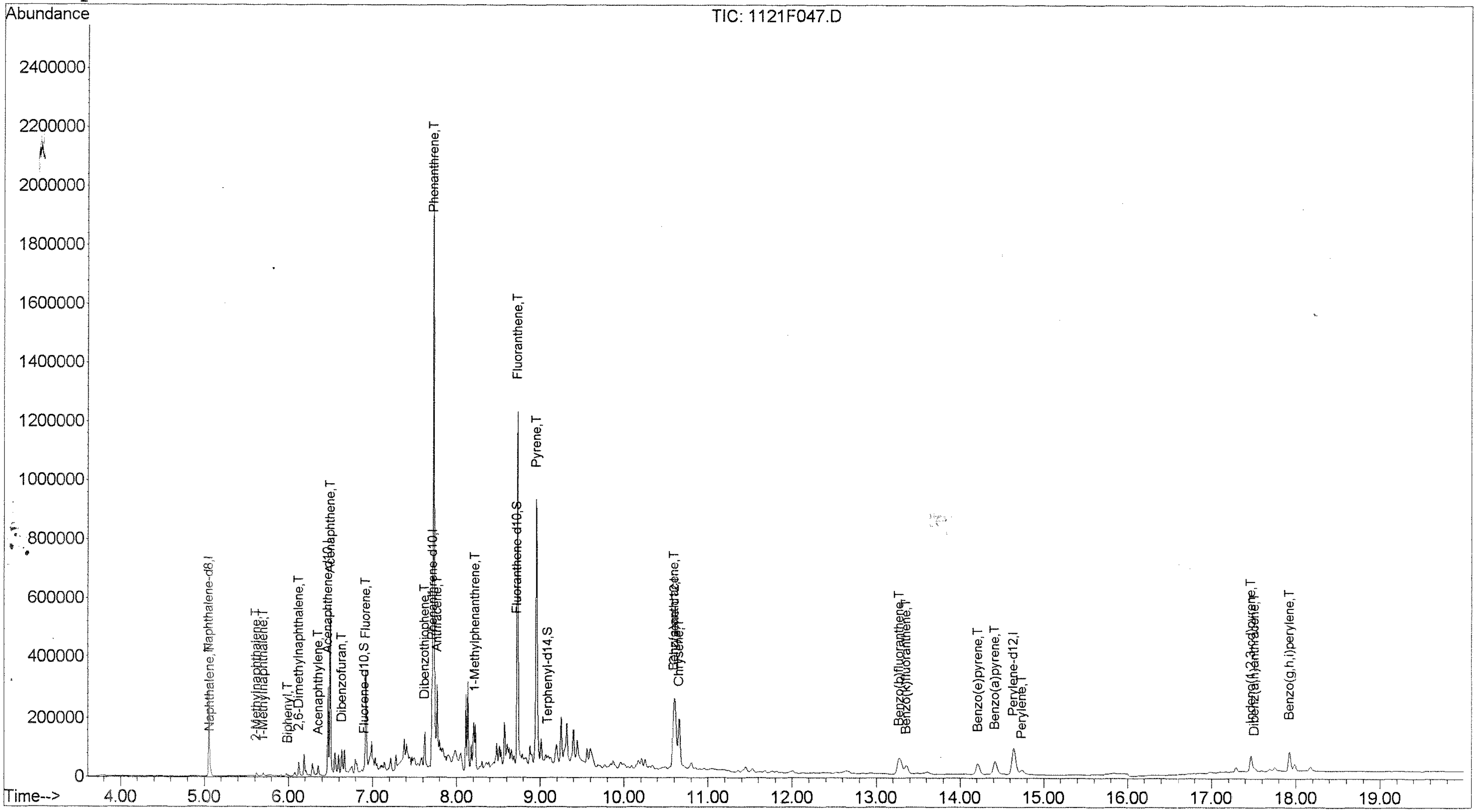
Quantitation Report (QT Reviewed)

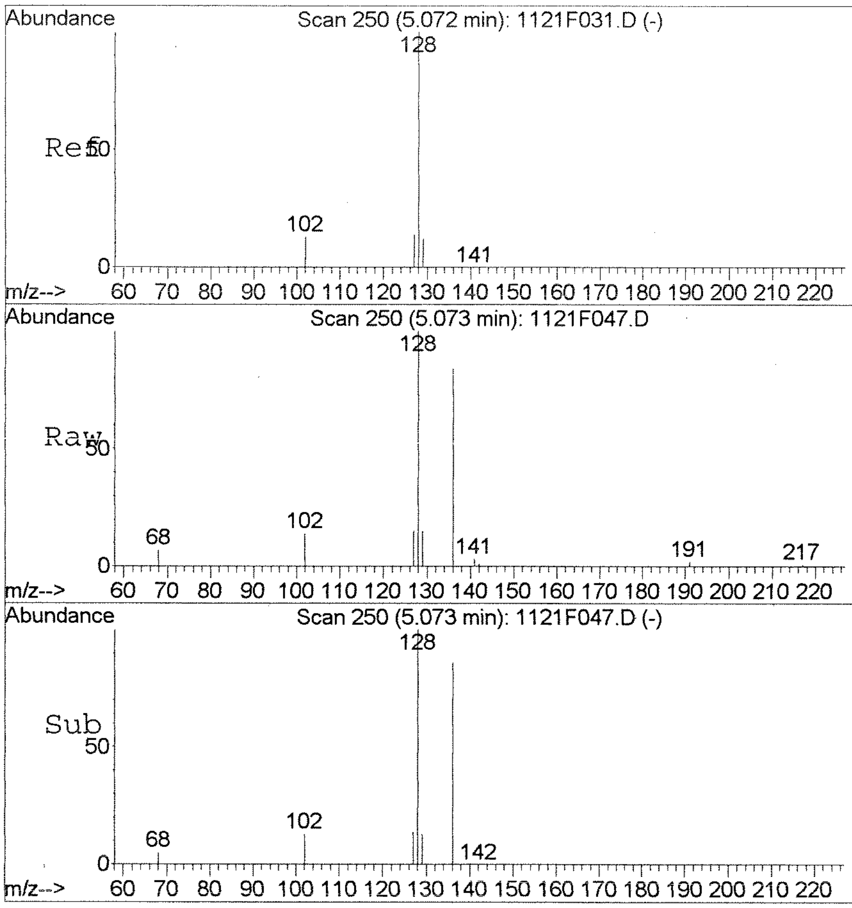
Data File : J:\MS11\DATA\112108\1121F047.D
Acq On : 22 Nov 2008 2:22 am
Sample : K0810639-008DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:58 2008

Vial: 44
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration

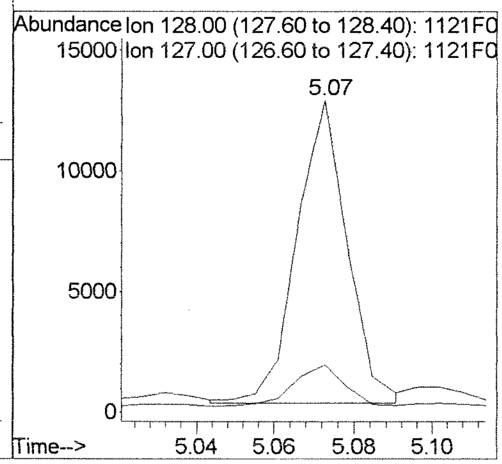


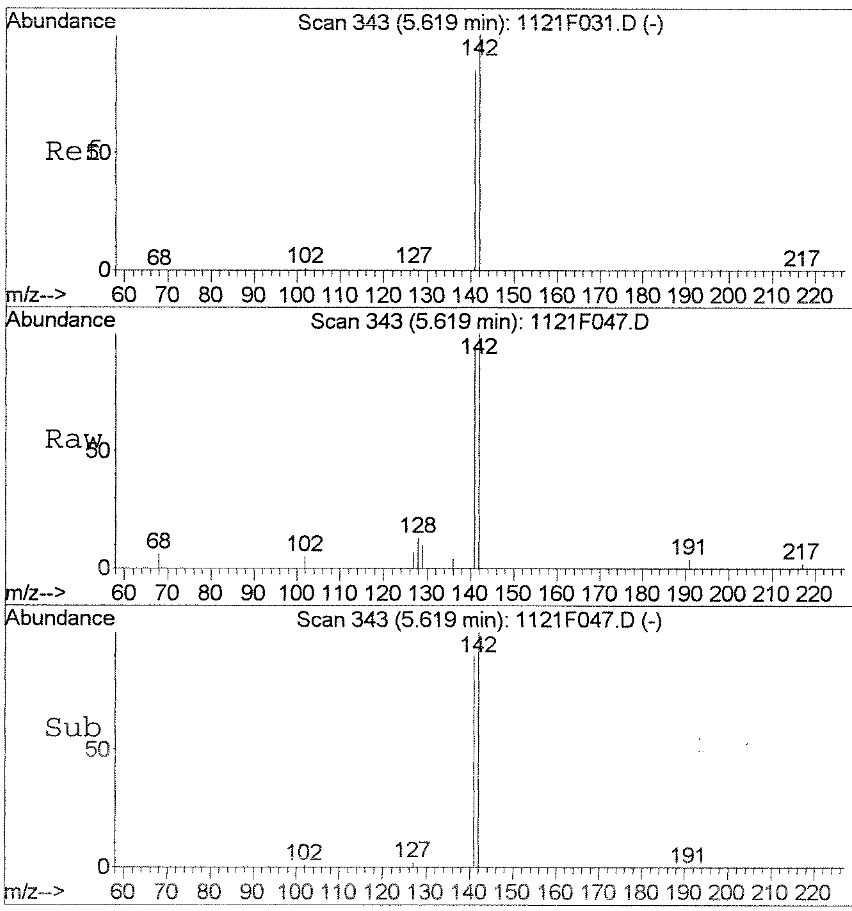


#2
Naphthalene
Concen: 7.84 ng/ml m
RT: 5.07 min Scan# 250
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:128 Resp: 10899

Ion	Ratio	Lower	Upper
128	100		
127	15.1	0.0	43.8

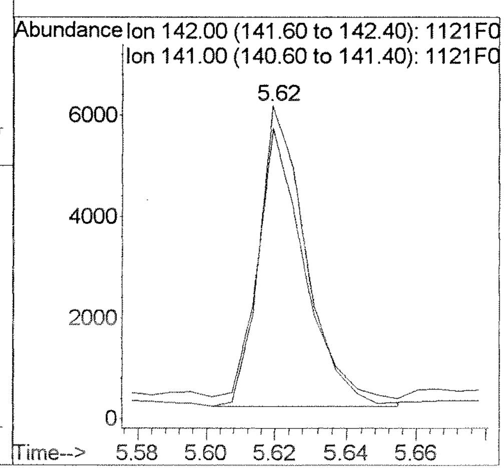


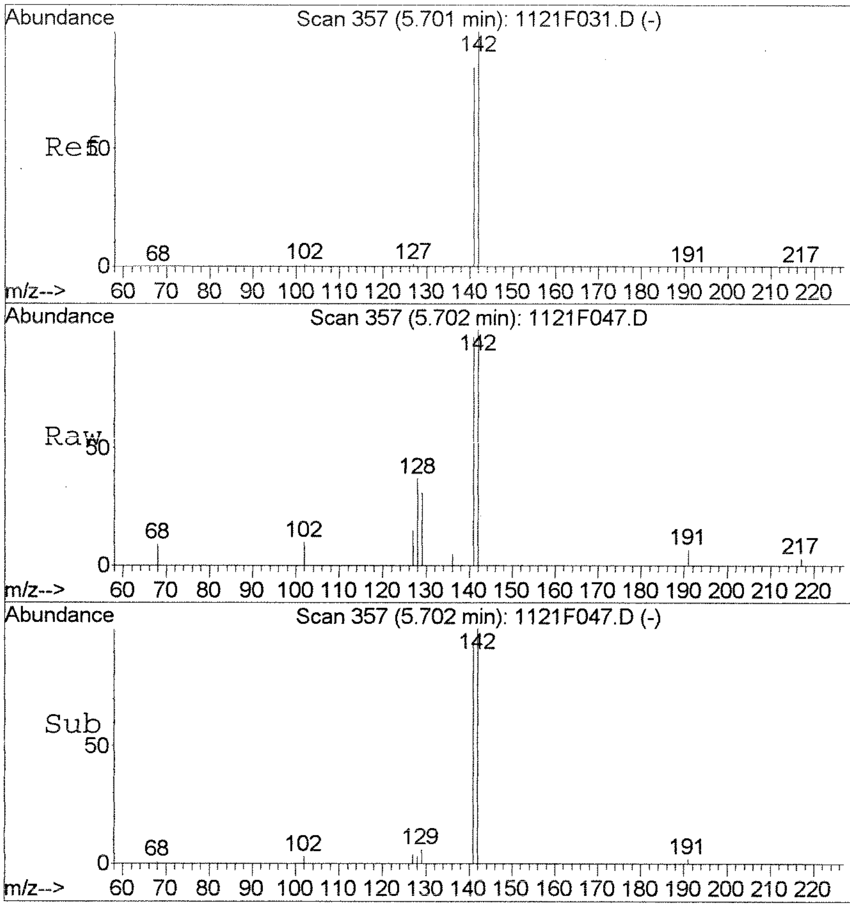


#3
2-Methylnaphthalene
Concen: 5.68 ng/ml
RT: 5.62 min Scan# 343
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:142 Resp: 5499

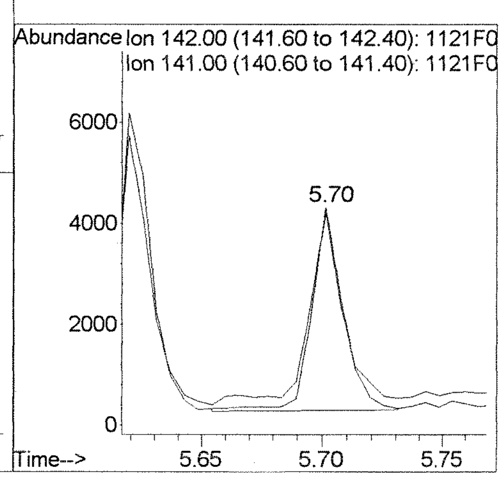
Ion	Ratio	Lower	Upper
142	100		
141	89.9	52.4	112.4

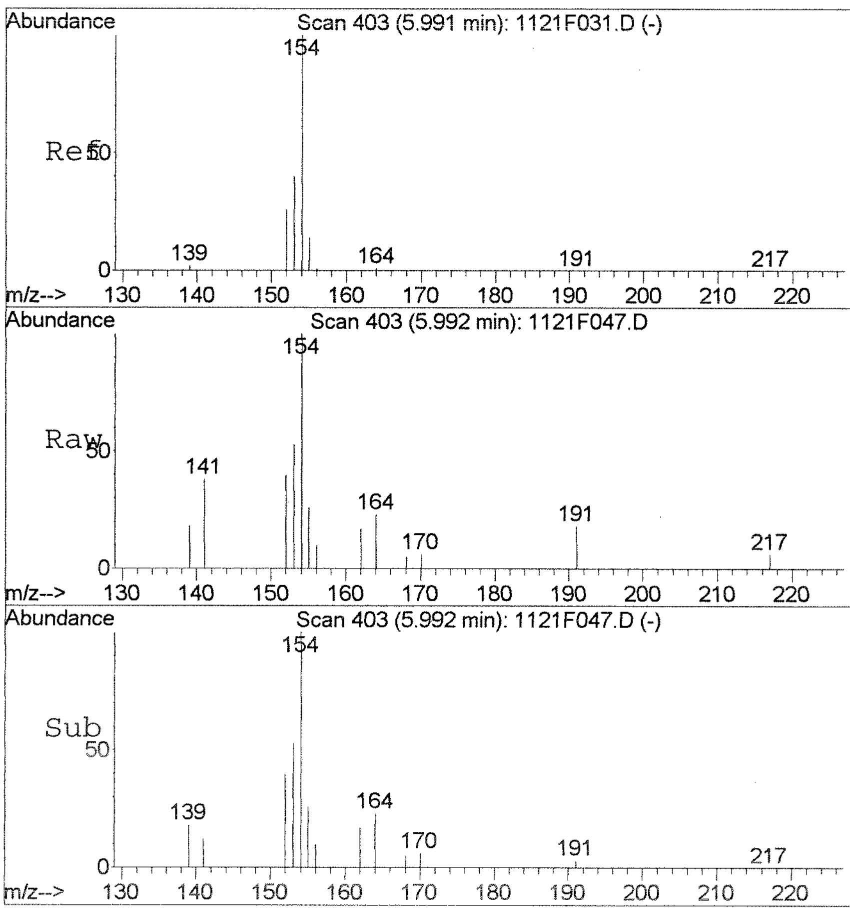




#4
1-Methylnaphthalene
Concen: 4.02 ng/ml
RT: 5.70 min Scan# 357
Delta R.T.   0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008   2:22 am

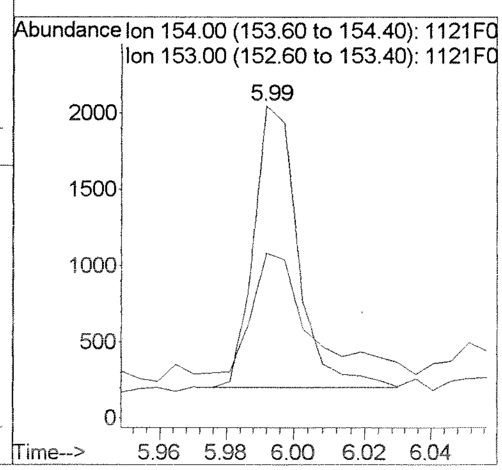
Tgt Ion:142	Resp:		3483
Ion	Ratio	Lower	Upper
142	100		
141	95.3	63.0	123.0

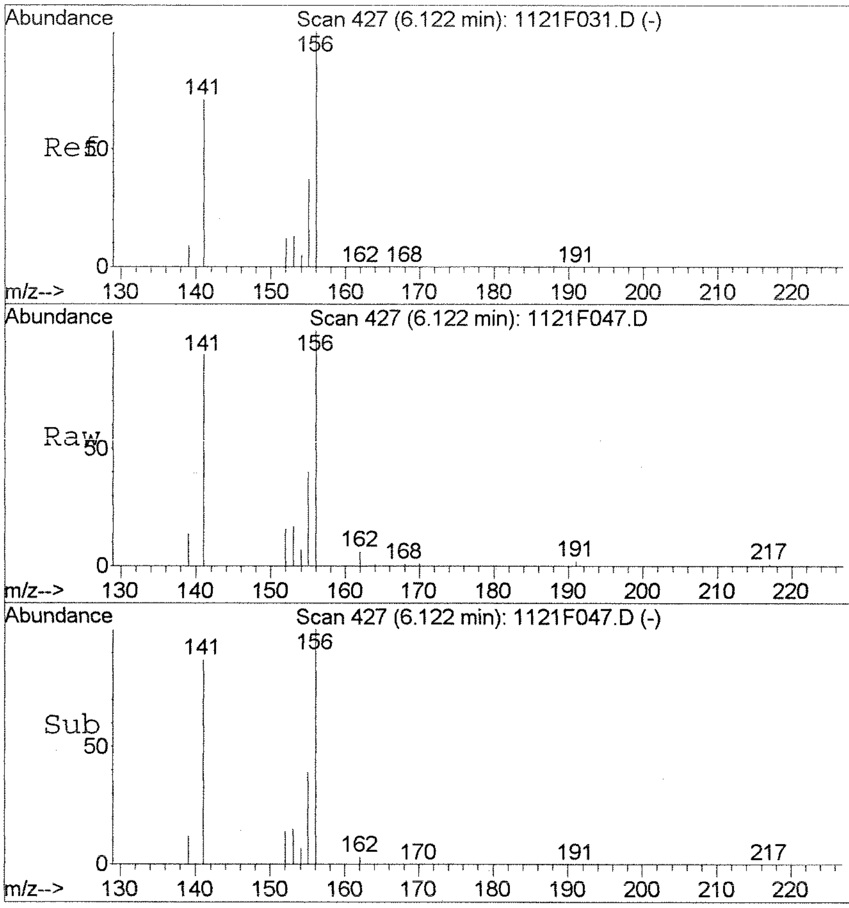




#5
Biphenyl
Concen: 1.42 ng/ml
RT: 5.99 min Scan# 403
Delta R.T.   0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008   2:22 am

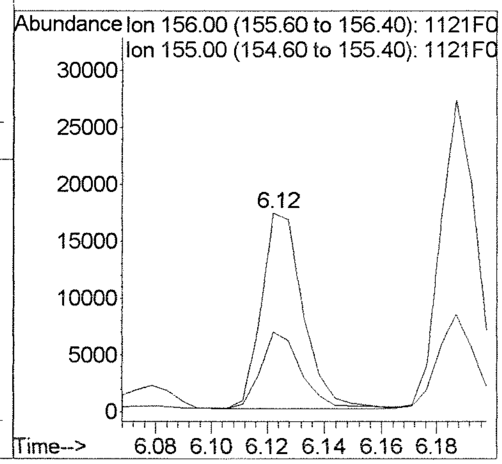
Tgt Ion:154	Resp:		1683
Ion	Ratio	Lower	Upper
154	100		
153	42.5	10.4	70.4

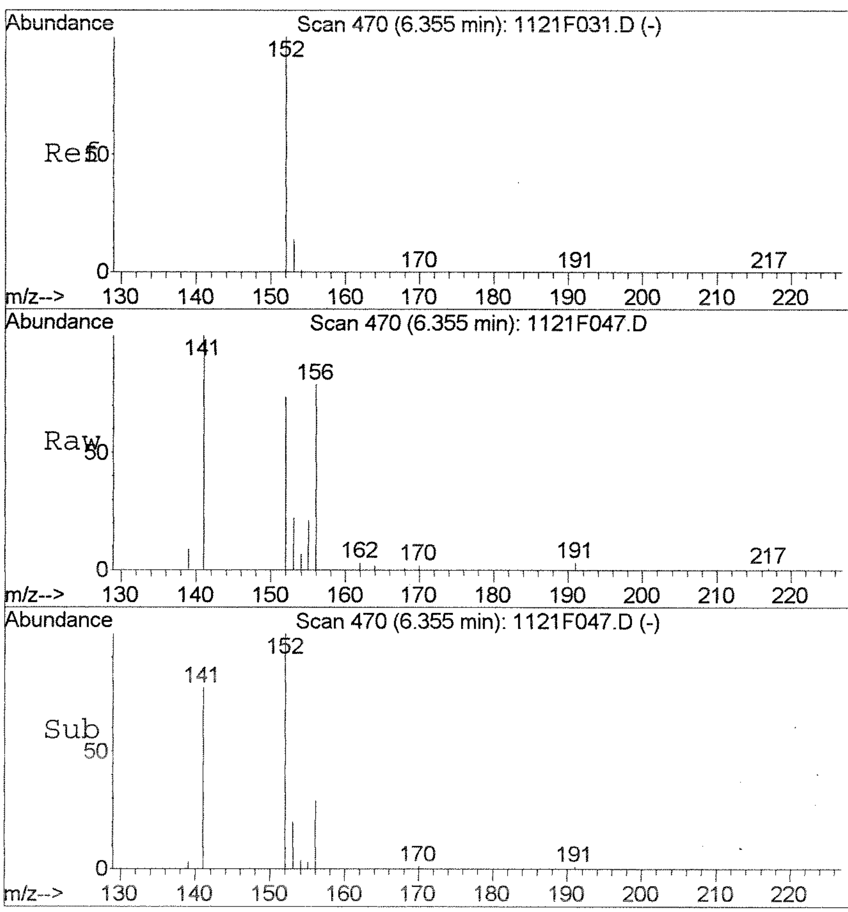




#6
2,6-Dimethylnaphthalene
Concen: 20.92 ng/ml
RT: 6.12 min Scan# 427
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

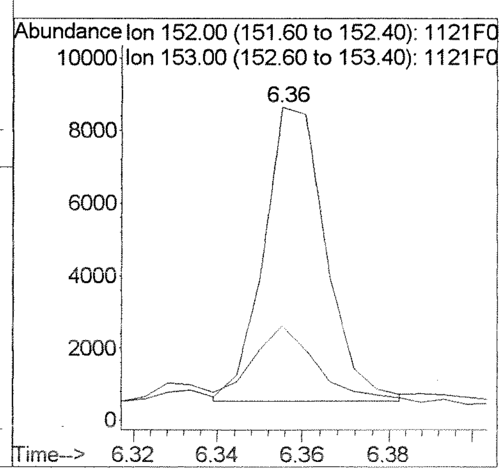
Tgt Ion:156	Resp:		17692
Ion	Ratio	Lower	Upper
156	100		
155	39.0	7.3	67.3

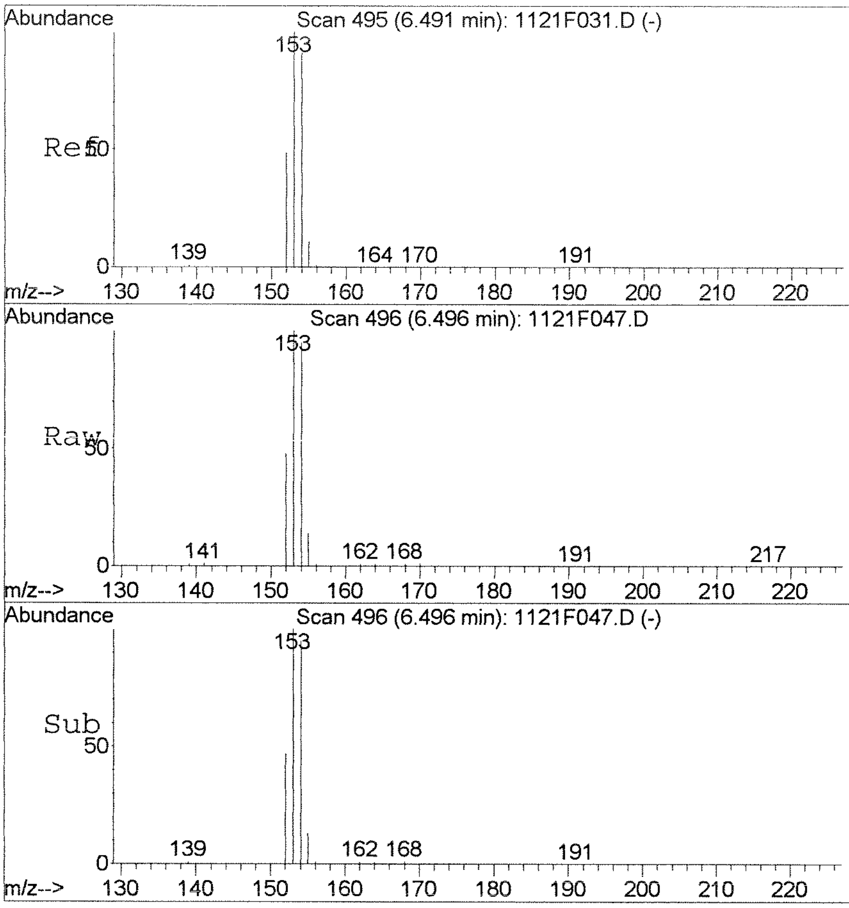




#11
Acenaphthylene
Concen: 6.33 ng/ml m
RT: 6.36 min Scan# 470
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:152	Resp:		8118
Ion	Ratio	Lower	Upper
152	100		
153	30.3	0.0	43.0

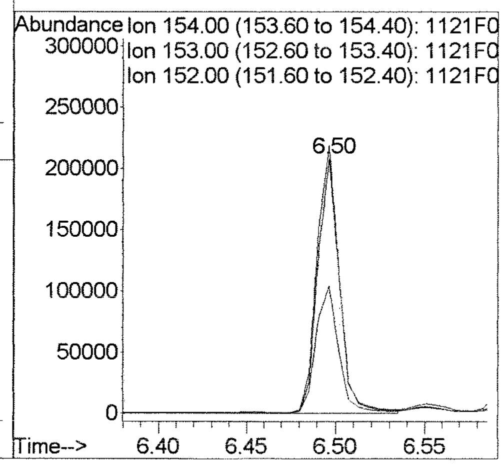


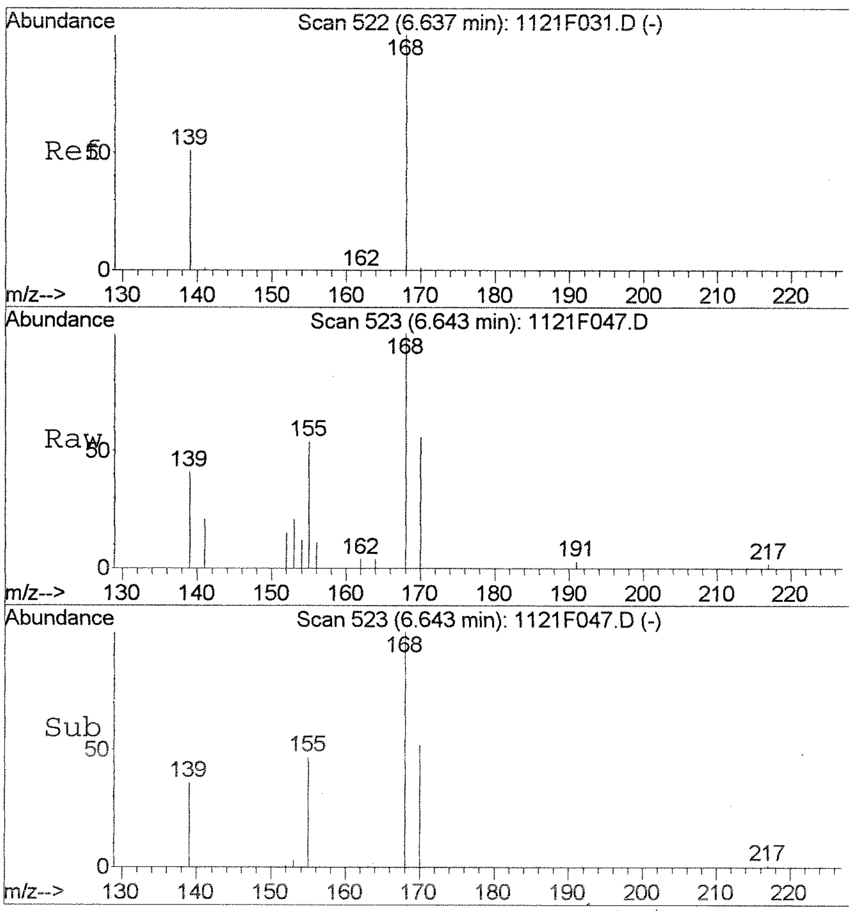


#12
Acenaphthene
Concen: 222.11 ng/ml
RT: 6.50 min Scan# 496
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:154 Resp: 172995

Ion	Ratio	Lower	Upper
154	100		
153	105.1	81.9	141.9
152	49.8	26.8	86.8

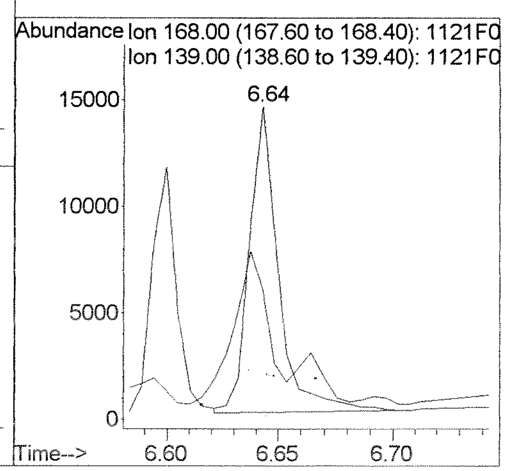


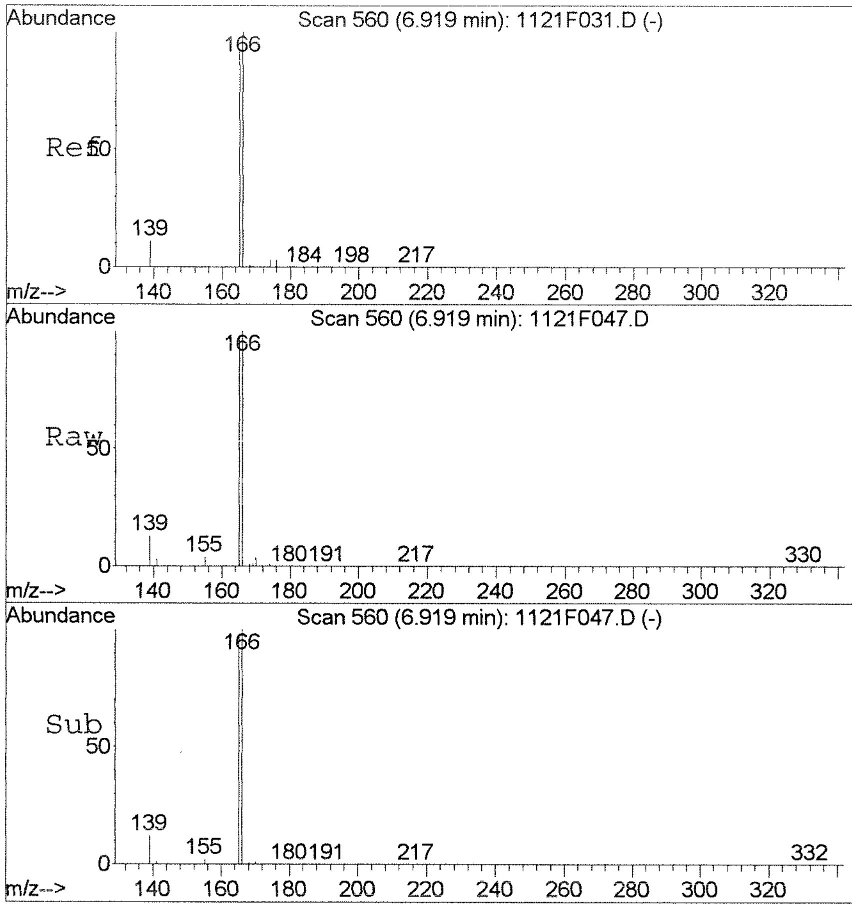


#13
Dibenzofuran
Concen: 11.15 ng/ml
RT: 6.64 min Scan# 523
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:168 Resp: 13065

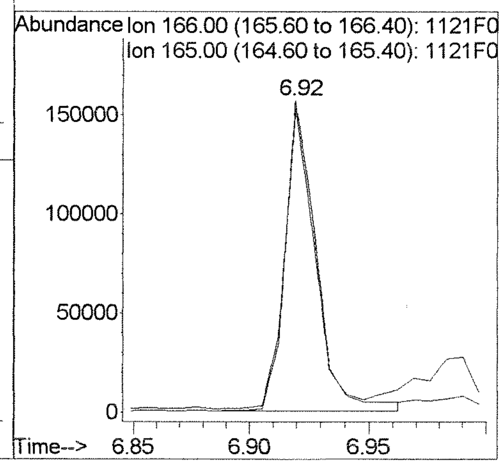
Ion	Ratio	Lower	Upper
168	100		
139	37.6	21.0	81.0

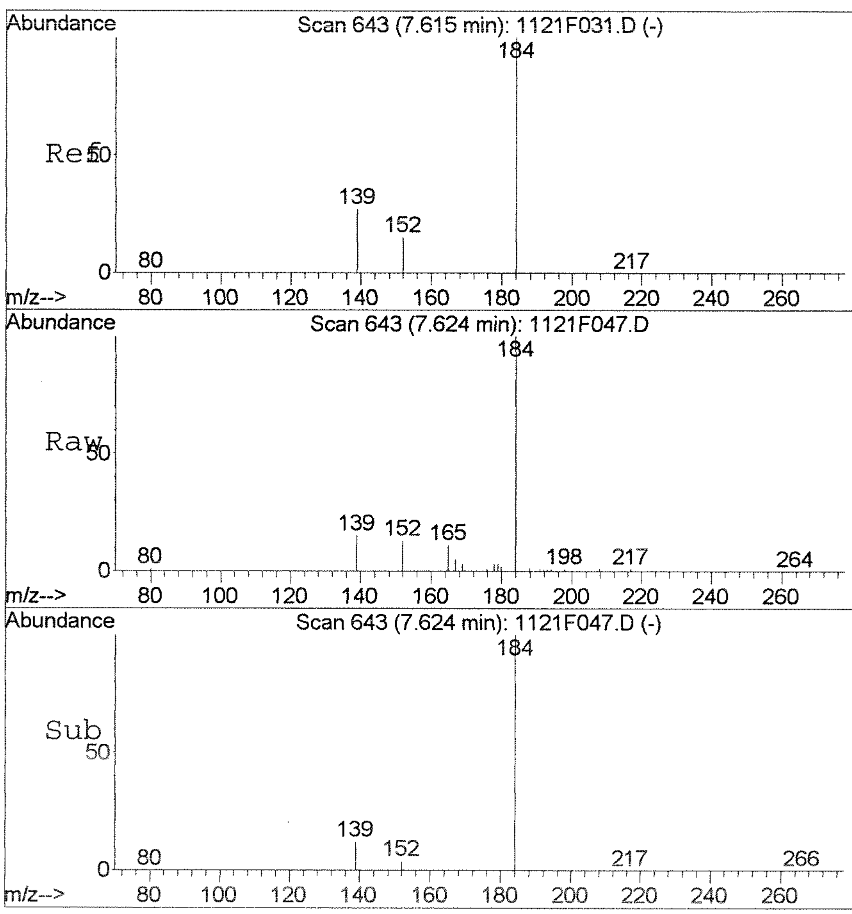




#16
Fluorene
Concen: 151.60 ng/ml
RT: 6.92 min Scan# 560
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

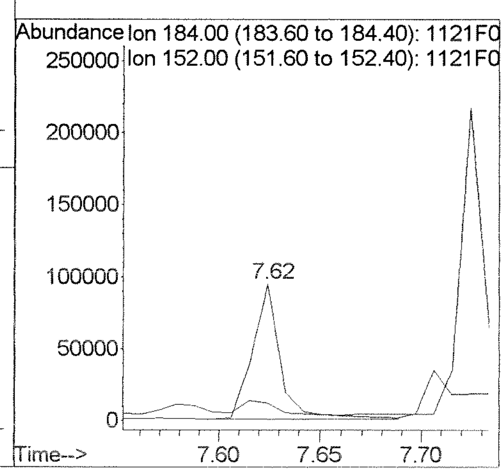
Tgt Ion:166	Resp:	141756	
Ion	Ratio	Lower	Upper
166	100		
165	96.7	59.8	119.8

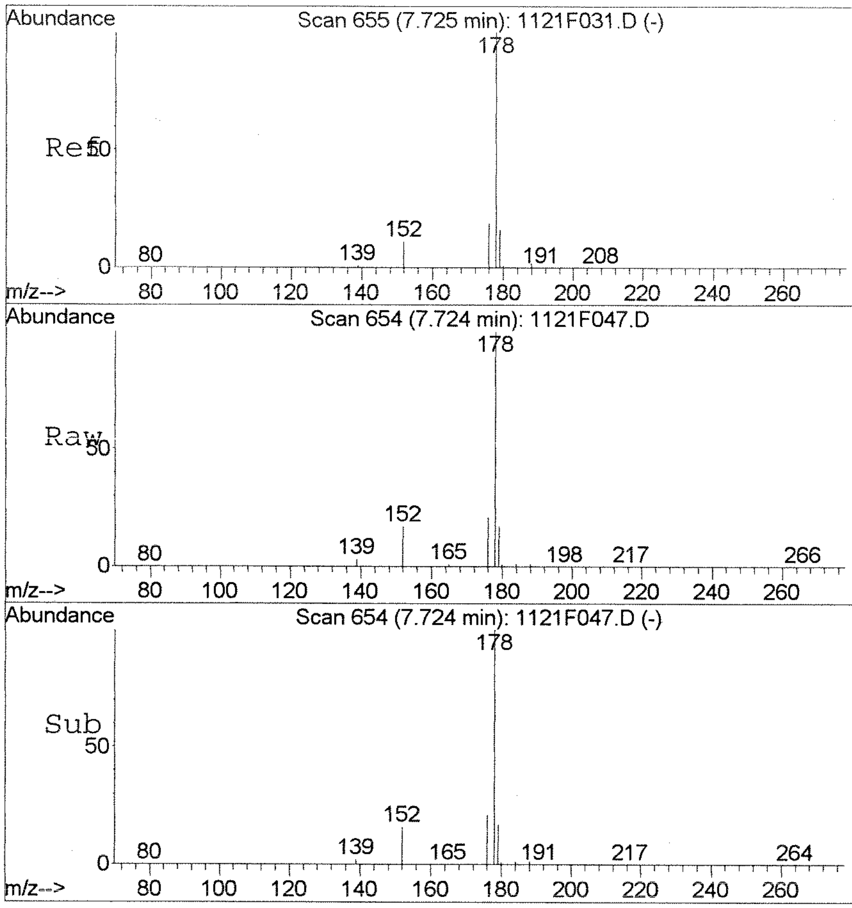




#23
Dibenzothiophene
Concen: 61.39 ng/ml
RT: 7.62 min Scan# 643
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:184	Resp:	90808	
Ion	Ratio	Lower	Upper
184	100		
152	8.5	0.0	39.1

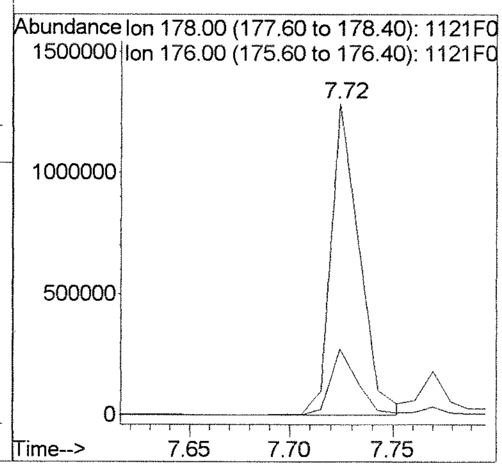


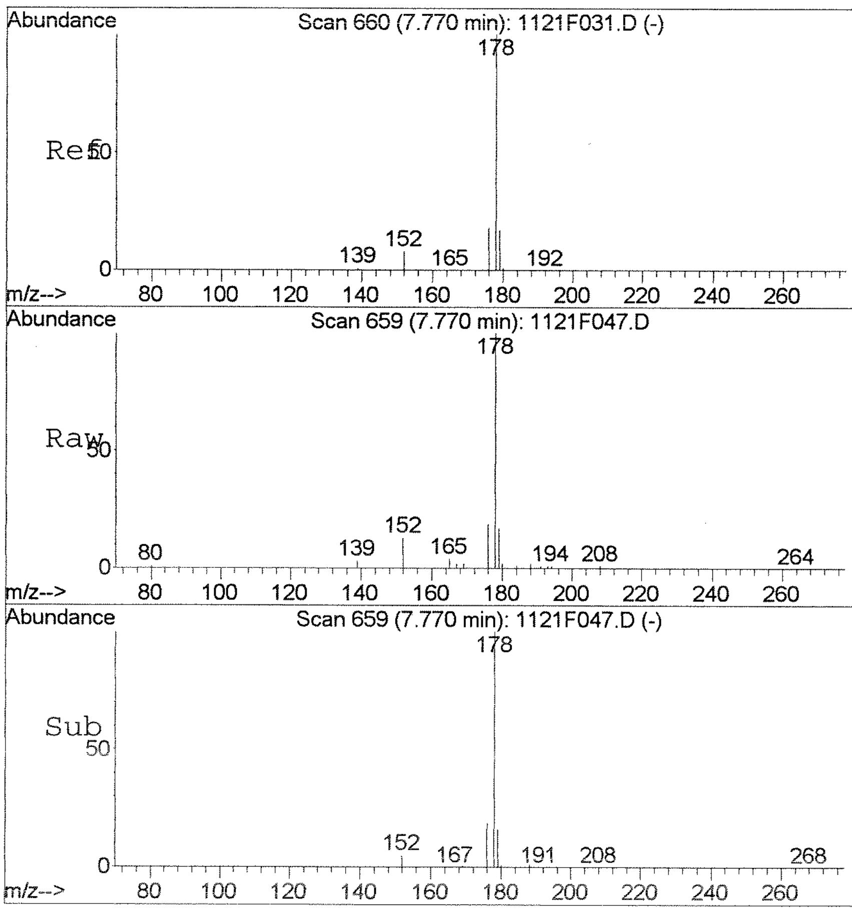


#27
Phenanthrene
Concen: 801.01 ng/ml
RT: 7.72 min Scan# 654
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:178 Resp: 1211855

Ion	Ratio	Lower	Upper
178	100		
176	21.2	0.0	51.0

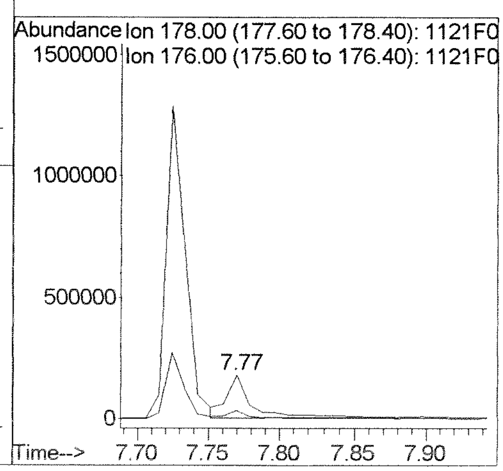


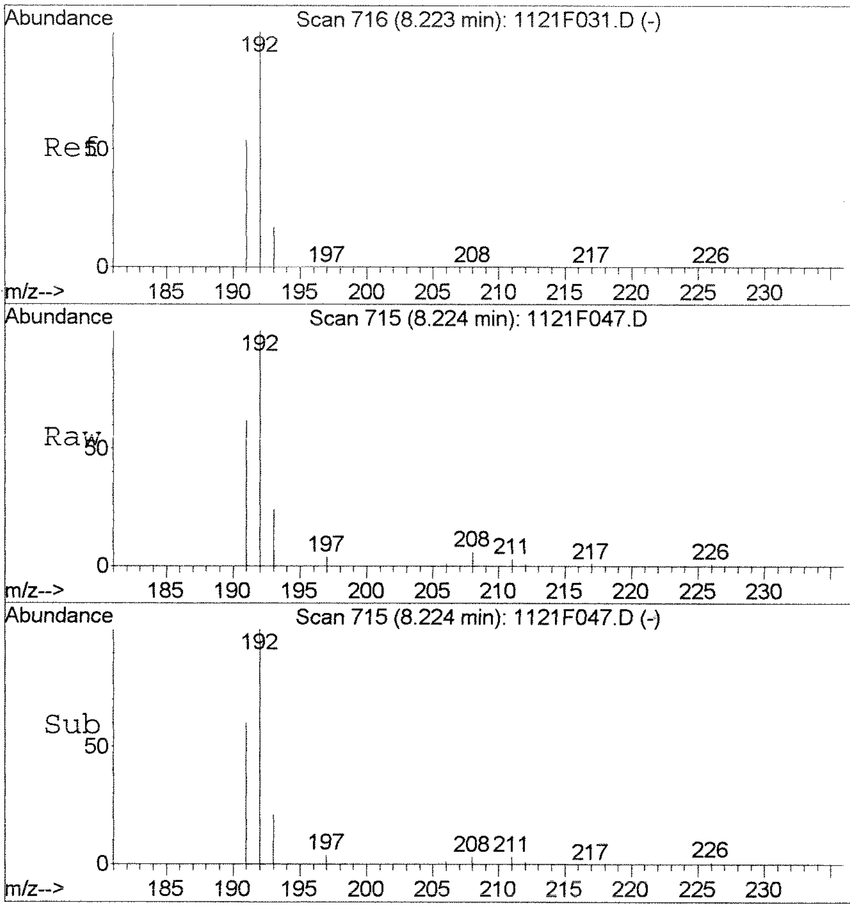


#28
Anthracene
Concen: 145.93 ng/ml
RT: 7.77 min Scan# 659
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:178 Resp: 215117

Ion	Ratio	Lower	Upper
178	100		
176	18.7	0.0	49.7

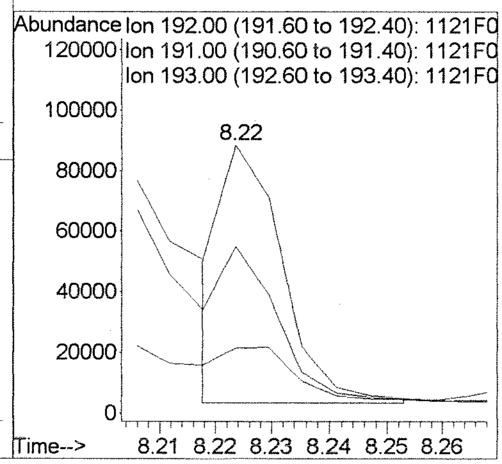


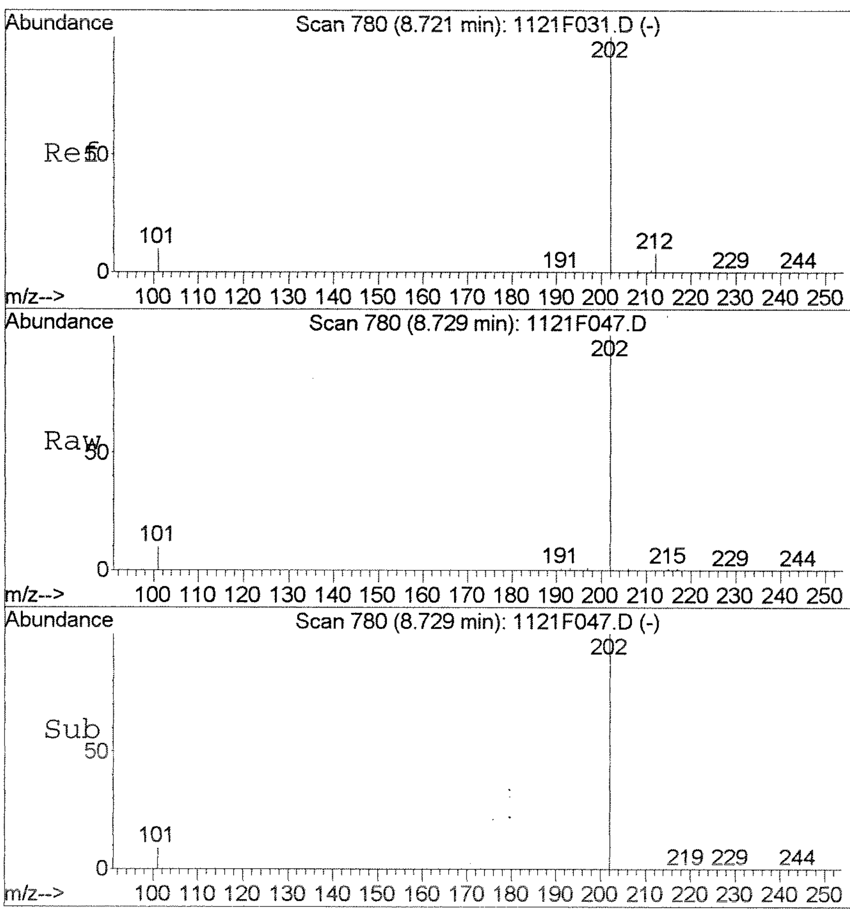


#30
1-Methylphenanthrene
Concen: 56.65 ng/ml m
RT: 8.22 min Scan# 715
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:192 Resp: 63604

Ion	Ratio	Lower	Upper
192	100		
191	62.2	29.0	89.0
193	24.3	0.0	45.4

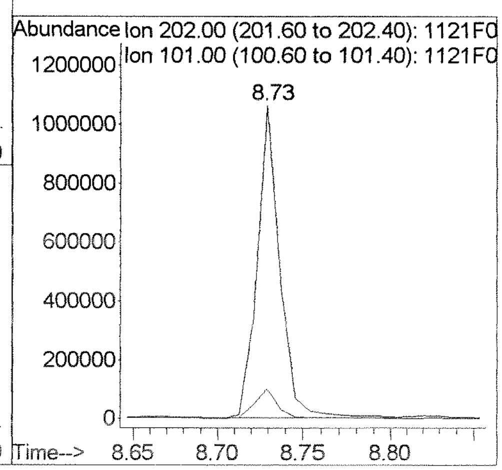


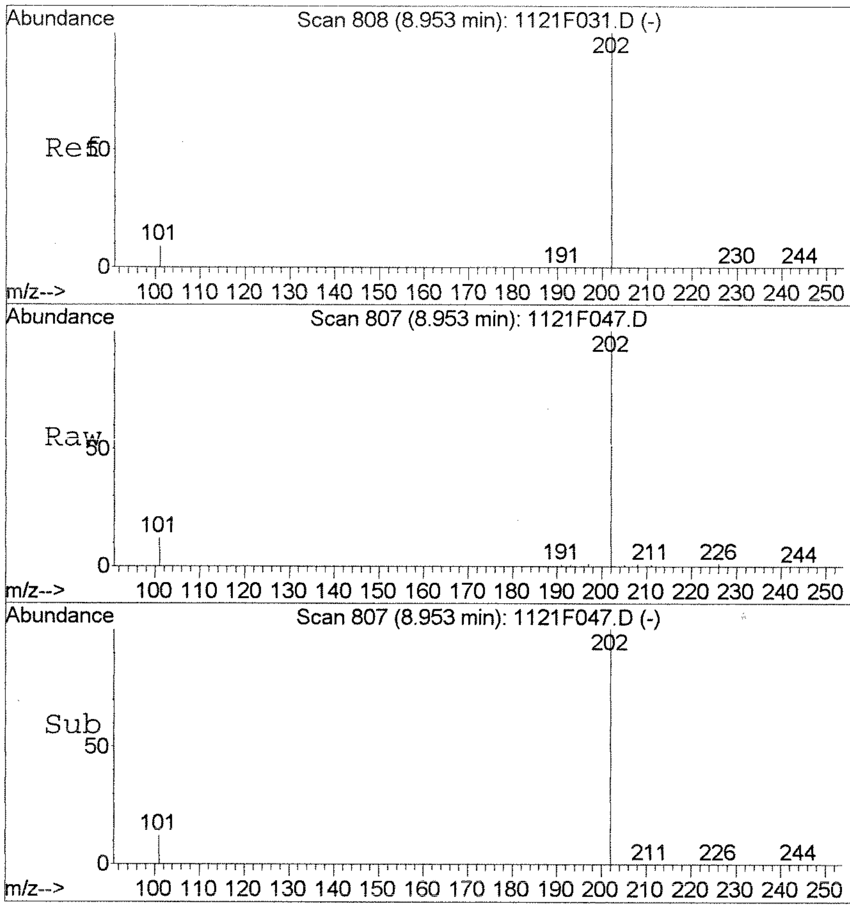


#35
Fluoranthene
Concen: 570.93 ng/ml
RT: 8.73 min Scan# 780
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:202 Resp: 981169

Ion	Ratio	Lower	Upper
202	100		
101	9.5	0.0	35.8

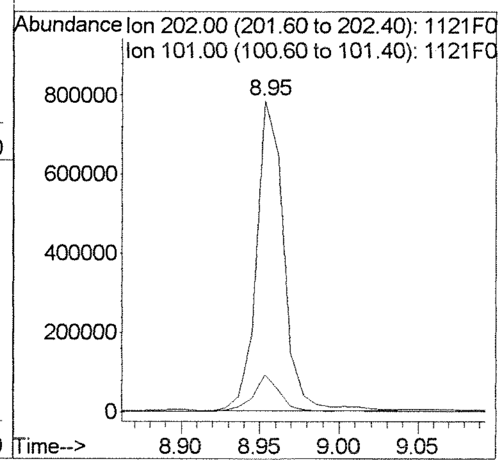


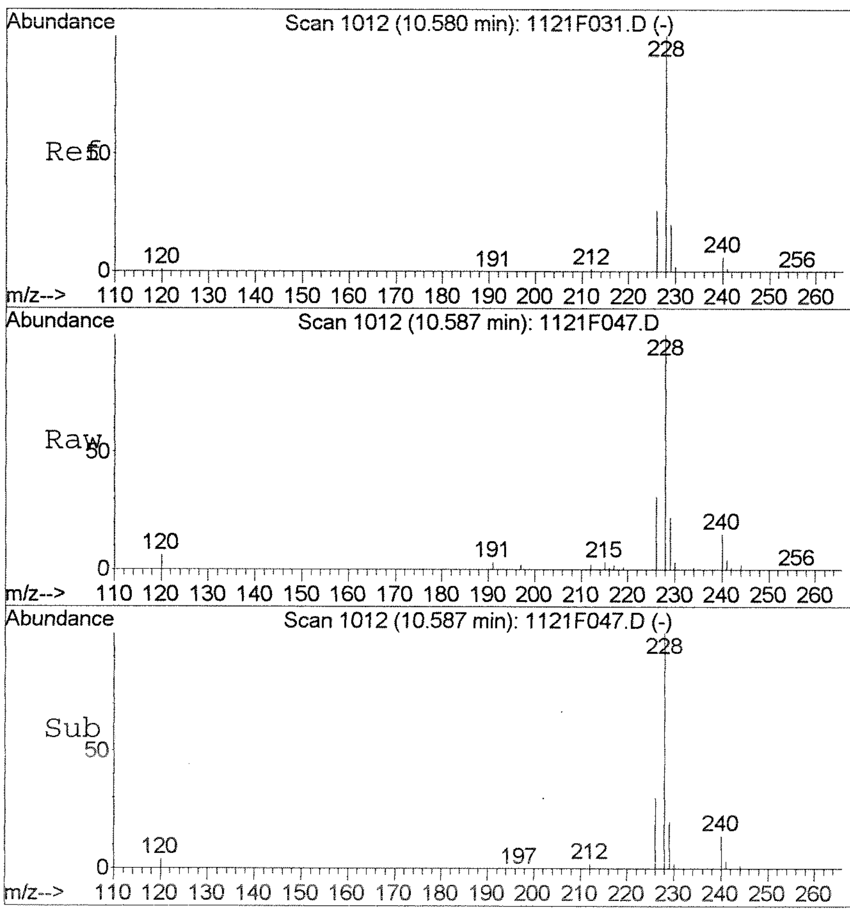


#38
Pyrene
Concen: 520.38 ng/ml
RT: 8.95 min Scan# 807
Delta R.T. 0.01 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:202 Resp: 947955

Ion	Ratio	Lower	Upper
202	100		
101	11.8	0.0	37.6

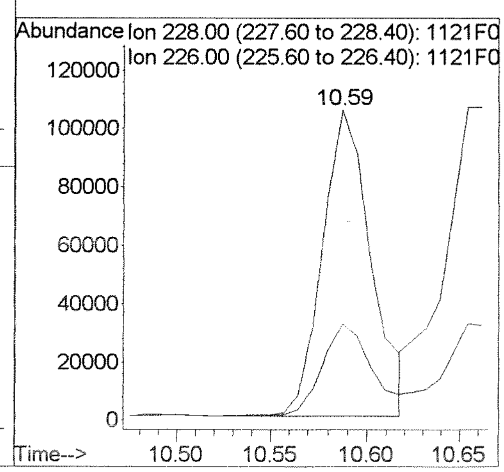


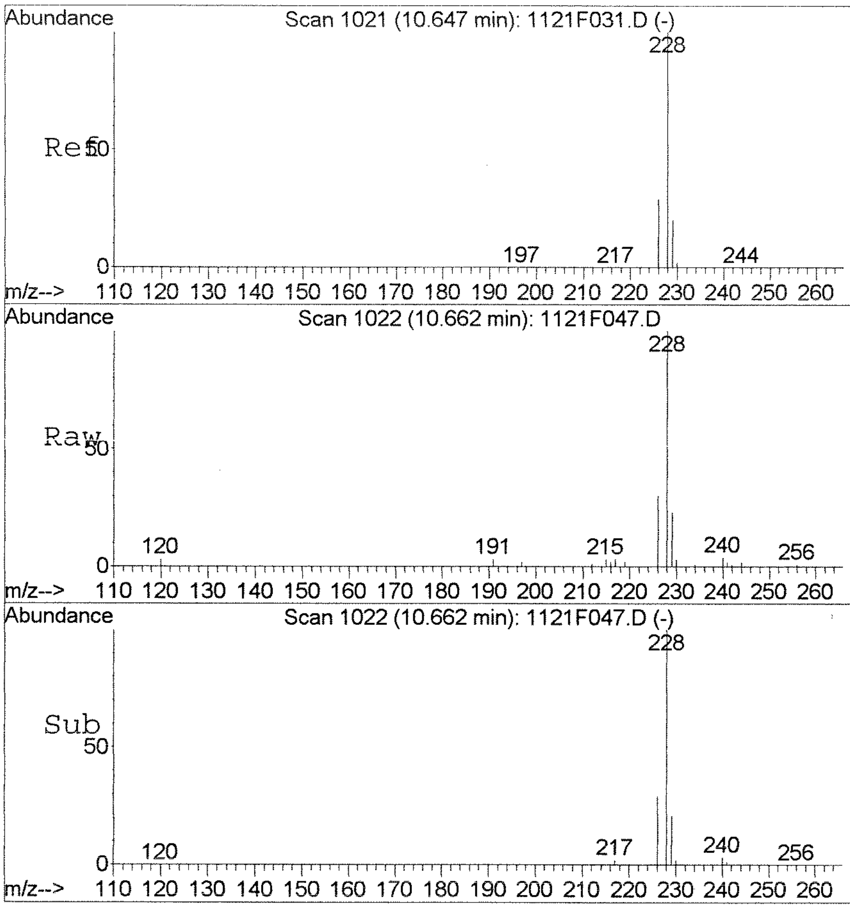


#43
Benz(a)anthracene
Concen: 111.29 ng/ml
RT: 10.59 min Scan# 1012
Delta R.T. 0.02 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:228 Resp: 183928

Ion	Ratio	Lower	Upper
228	100		
226	30.1	0.0	57.0

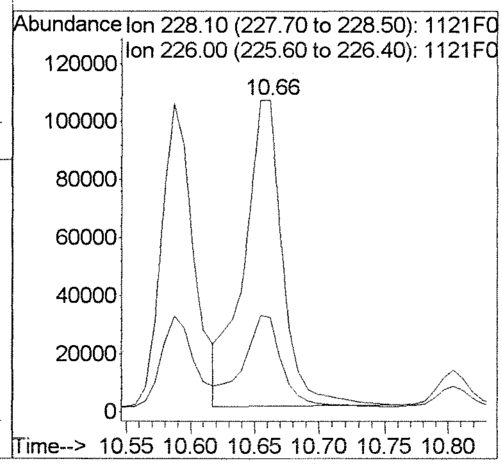


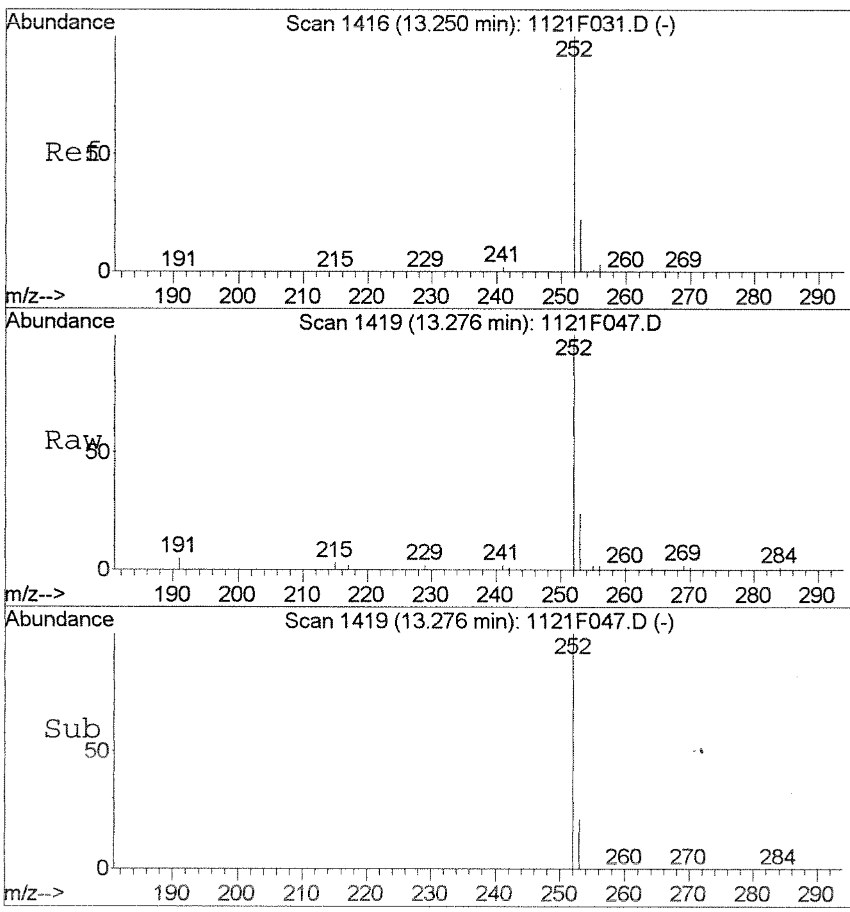


#44
Chrysene
Concen: 137.58 ng/ml
RT: 10.66 min Scan# 1022
Delta R.T. 0.03 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:228 Resp: 223313

Ion	Ratio	Lower	Upper
228	100		
226	29.3	0.0	58.9

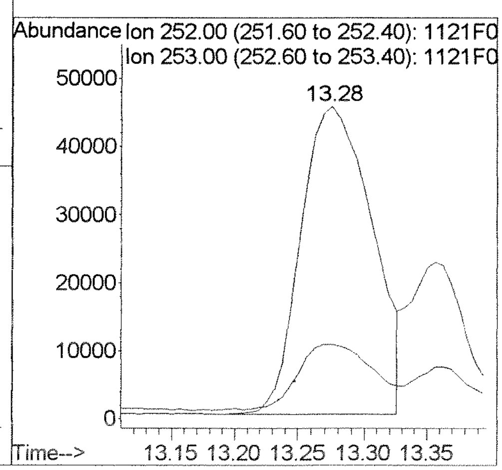


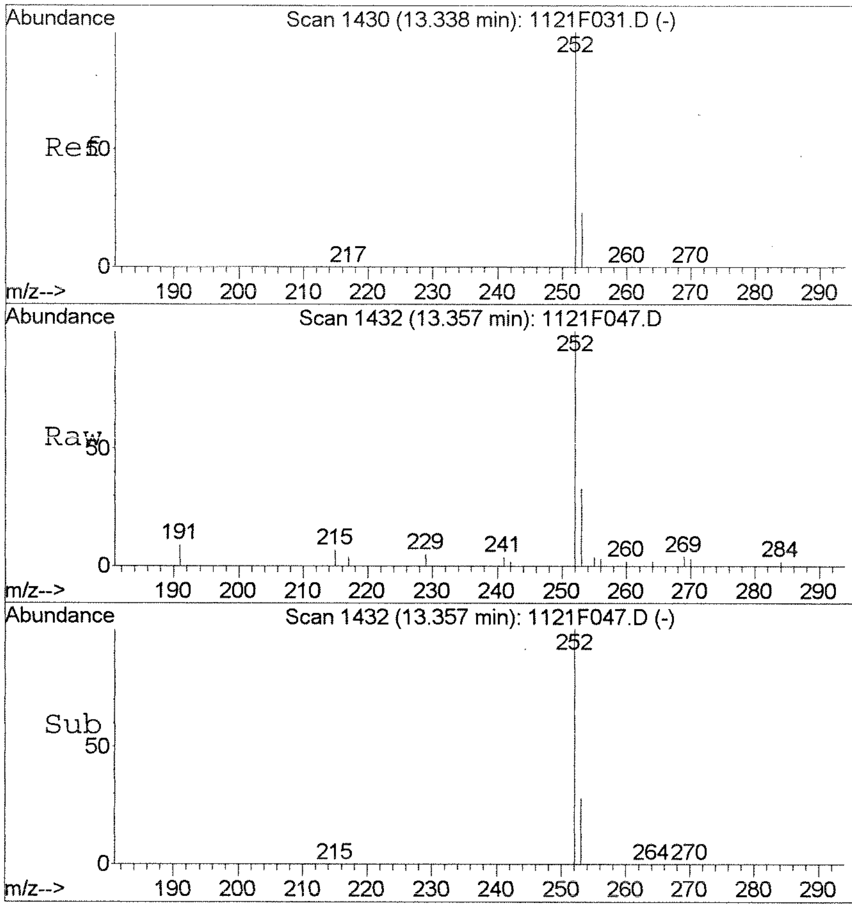


#50
Benzo(b)fluoranthene
Concen: 98.20 ng/ml
RT: 13.28 min Scan# 1419
Delta R.T. 0.05 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:252 Resp: 170674

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	52.6

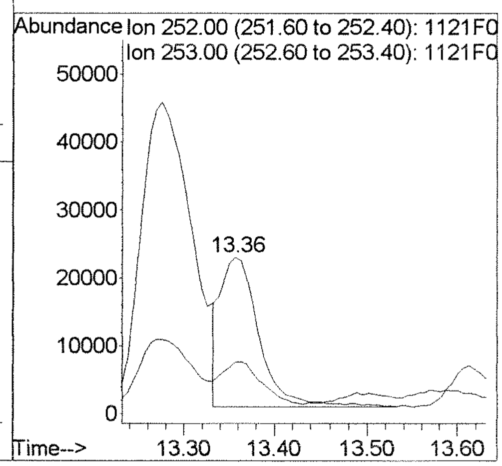


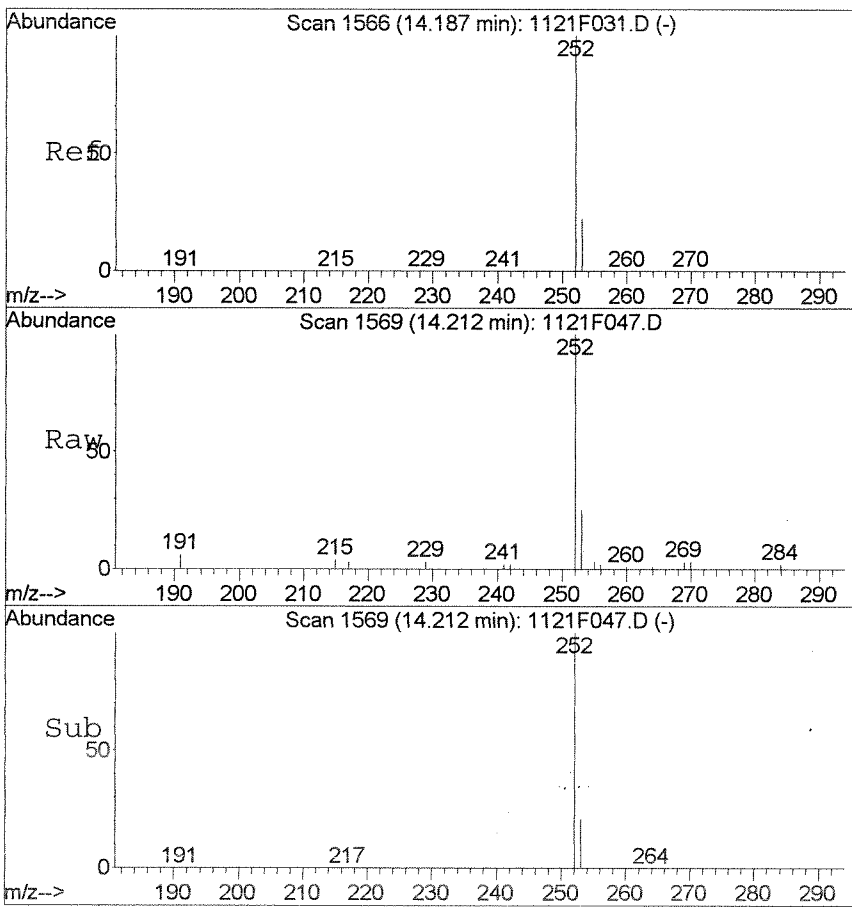


#51
Benzo(k)fluoranthene
Concen: 39.14 ng/ml
RT: 13.36 min Scan# 1432
Delta R.T. 0.04 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:252 Resp: 65350

Ion	Ratio	Lower	Upper
252	100		
253	24.1	0.0	52.0

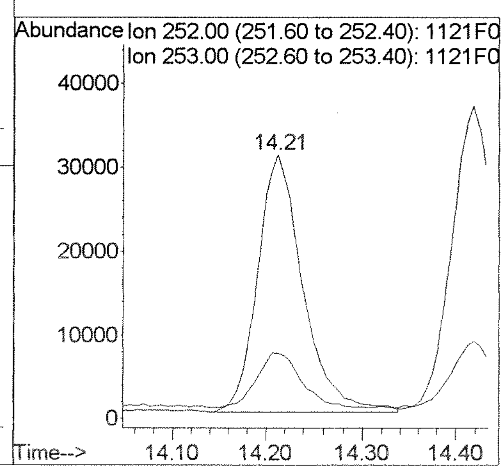


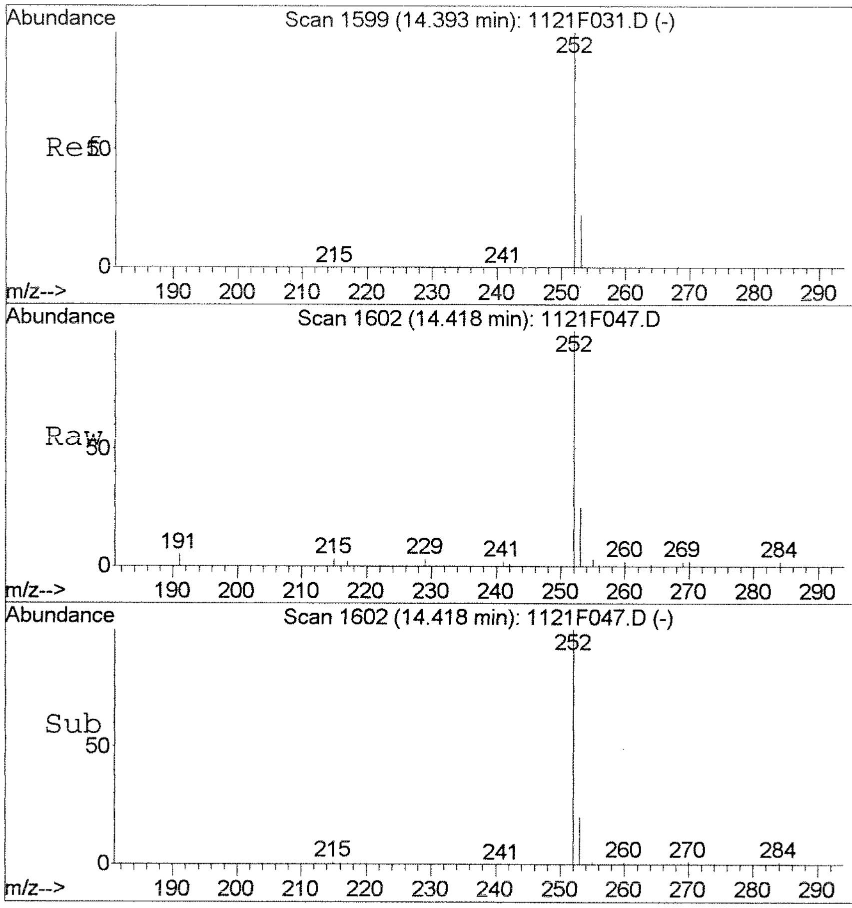


#52
Benzo(e)pyrene
Concen: 64.86 ng/ml
RT: 14.21 min Scan# 1569
Delta R.T. 0.04 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:252 Resp: 102403

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	52.2

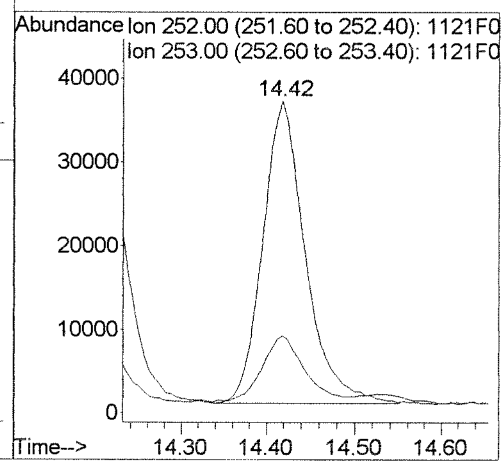


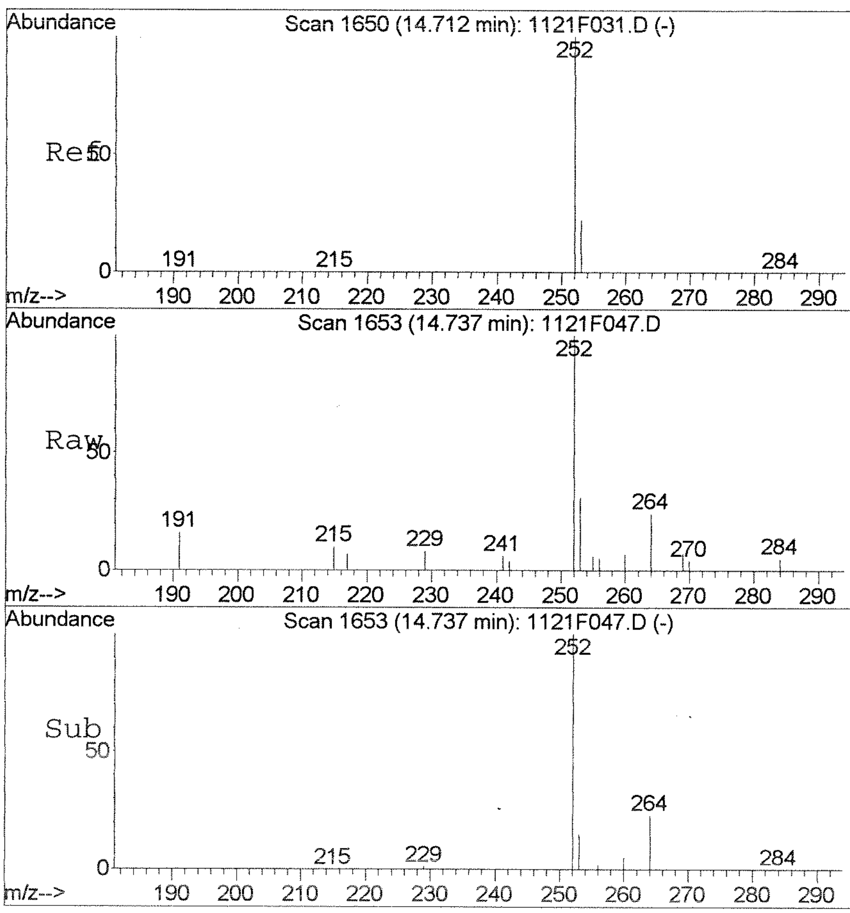


#53
Benzo(a)pyrene
Concen: 85.84 ng/ml
RT: 14.42 min Scan# 1602
Delta R.T. 0.05 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:252 Resp: 123534

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	52.2

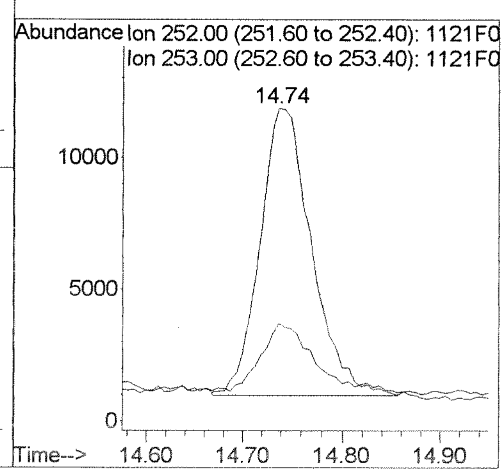


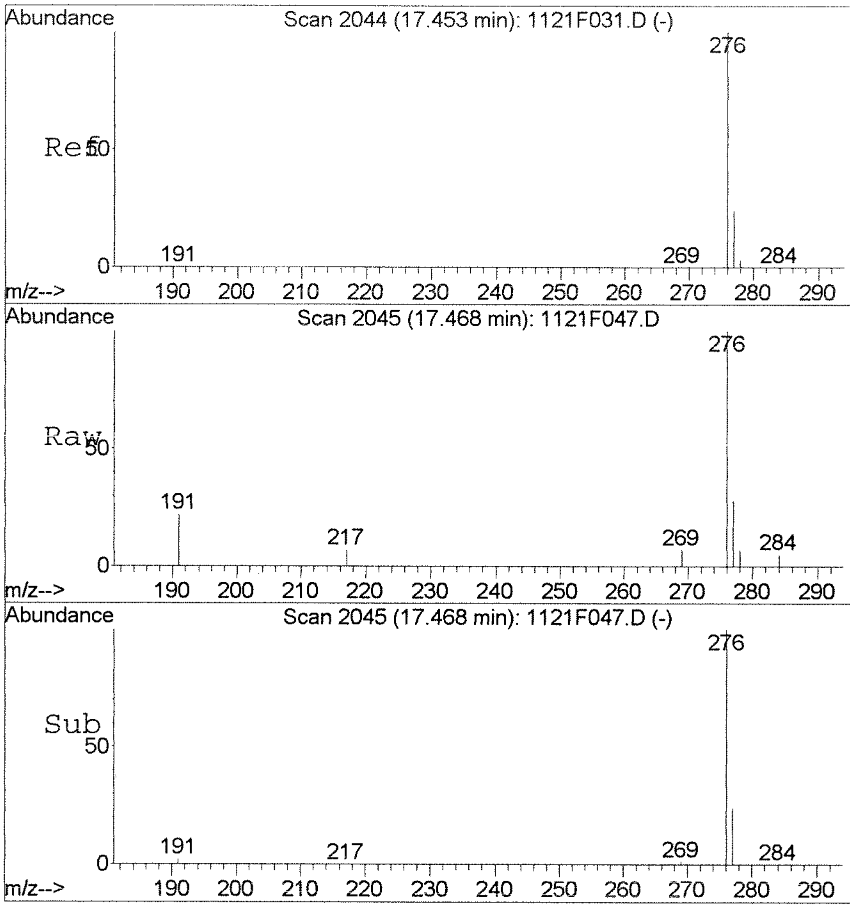


#54
Perylene
Concen: 27.79 ng/ml
RT: 14.74 min Scan# 1653
Delta R.T. 0.05 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:252 Resp: 39284

Ion	Ratio	Lower	Upper
252	100		
253	24.2	0.0	51.5

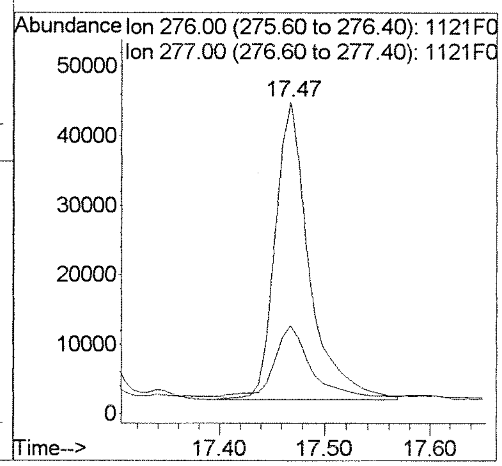


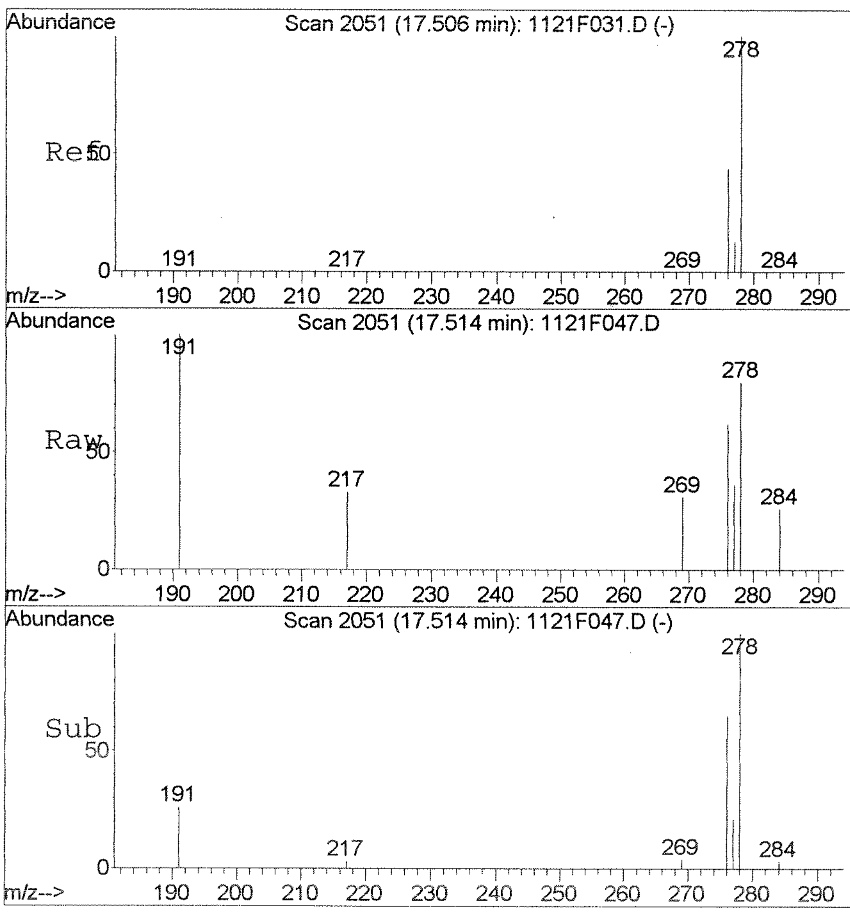


#55
Indeno(1,2,3-cd)pyrene
Concen: 72.51 ng/ml
RT: 17.47 min Scan# 2045
Delta R.T. 0.03 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:276 Resp: 96815

Ion	Ratio	Lower	Upper
276	100		
277	23.8	0.0	54.7

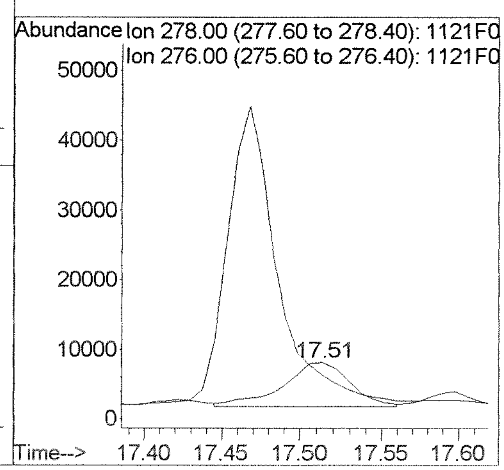


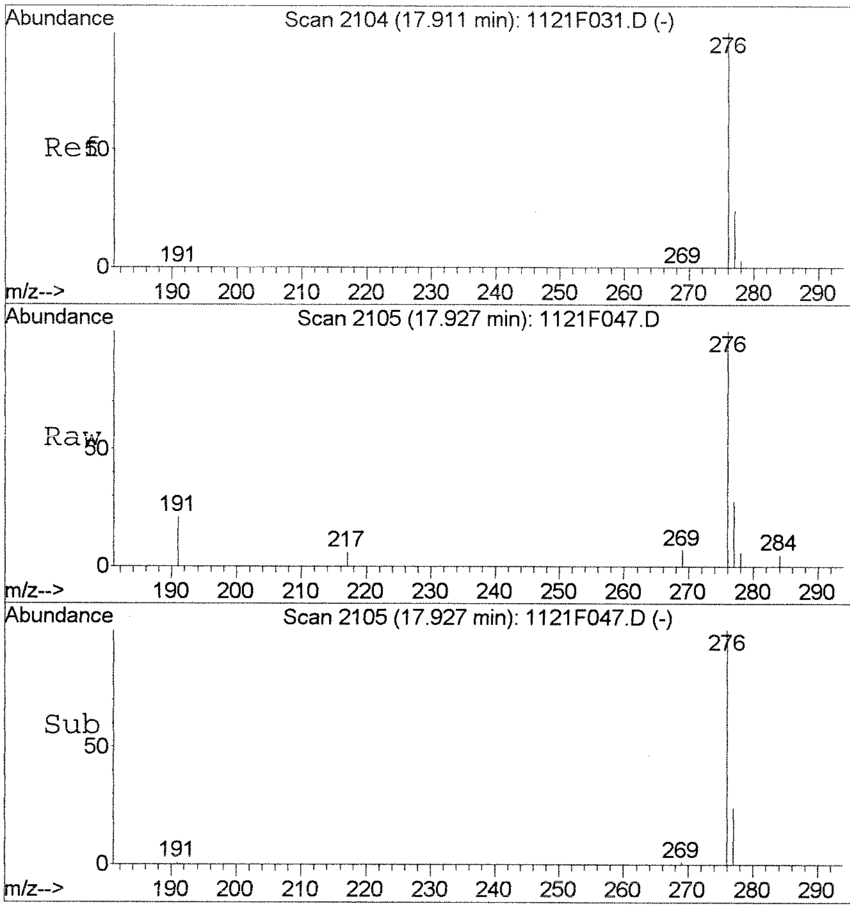


#56
Dibenz(a,h)anthracene
Concen: 13.16 ng/ml m
RT: 17.51 min Scan# 2051
Delta R.T. 0.02 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

Tgt Ion:278 Resp: 18444

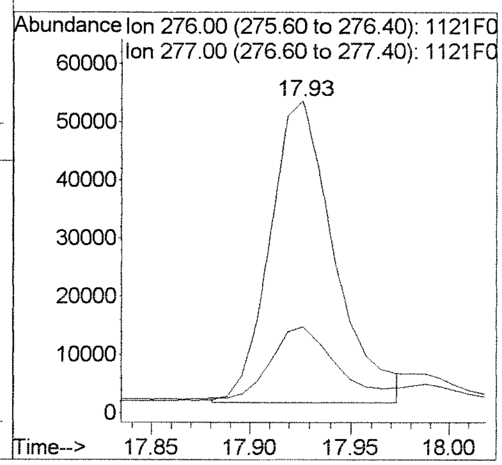
Ion	Ratio	Lower	Upper
278	100		
276	76.8	0.0	59.7#





#57
Benzo(g,h,i)perylene
Concen: 75.25 ng/ml m
RT: 17.93 min Scan# 2105
Delta R.T. 0.03 min
Lab File: 1121F047.D
Acq: 22 Nov 2008 2:22 am

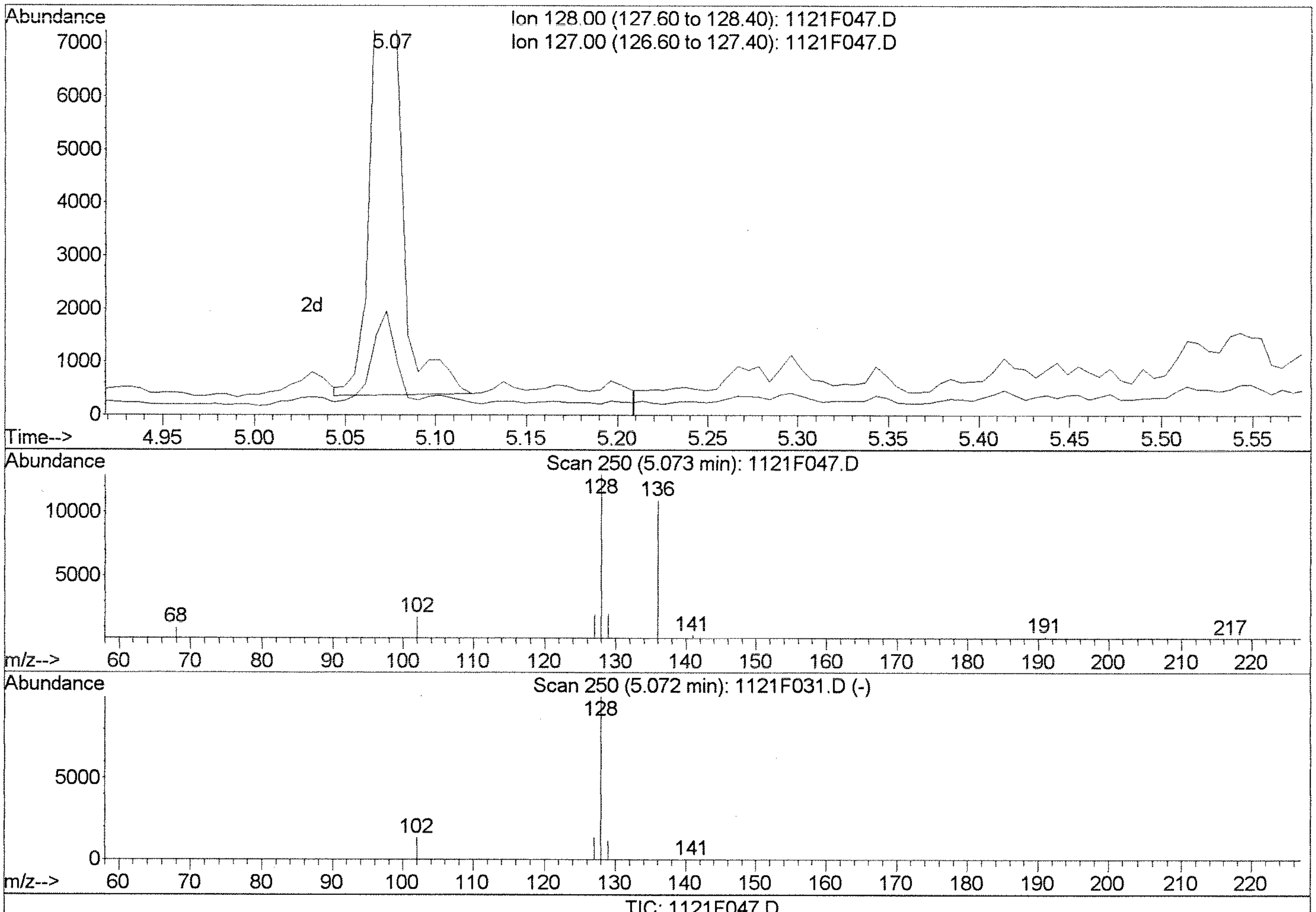
Tgt Ion:276	Resp:	114472	
Ion	Ratio	Lower	Upper
276	100		
277	27.6	0.0	54.2



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F047.D Vial: 44
Acq On : 22 Nov 2008 2:22 am Operator: LWeiskopf
Sample : K0810639-008DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(2) Naphthalene (T)

5.07min 8.33ng/ml

response 11575

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	13.73
0.00	0.00	0.00
0.00	0.00	0.00

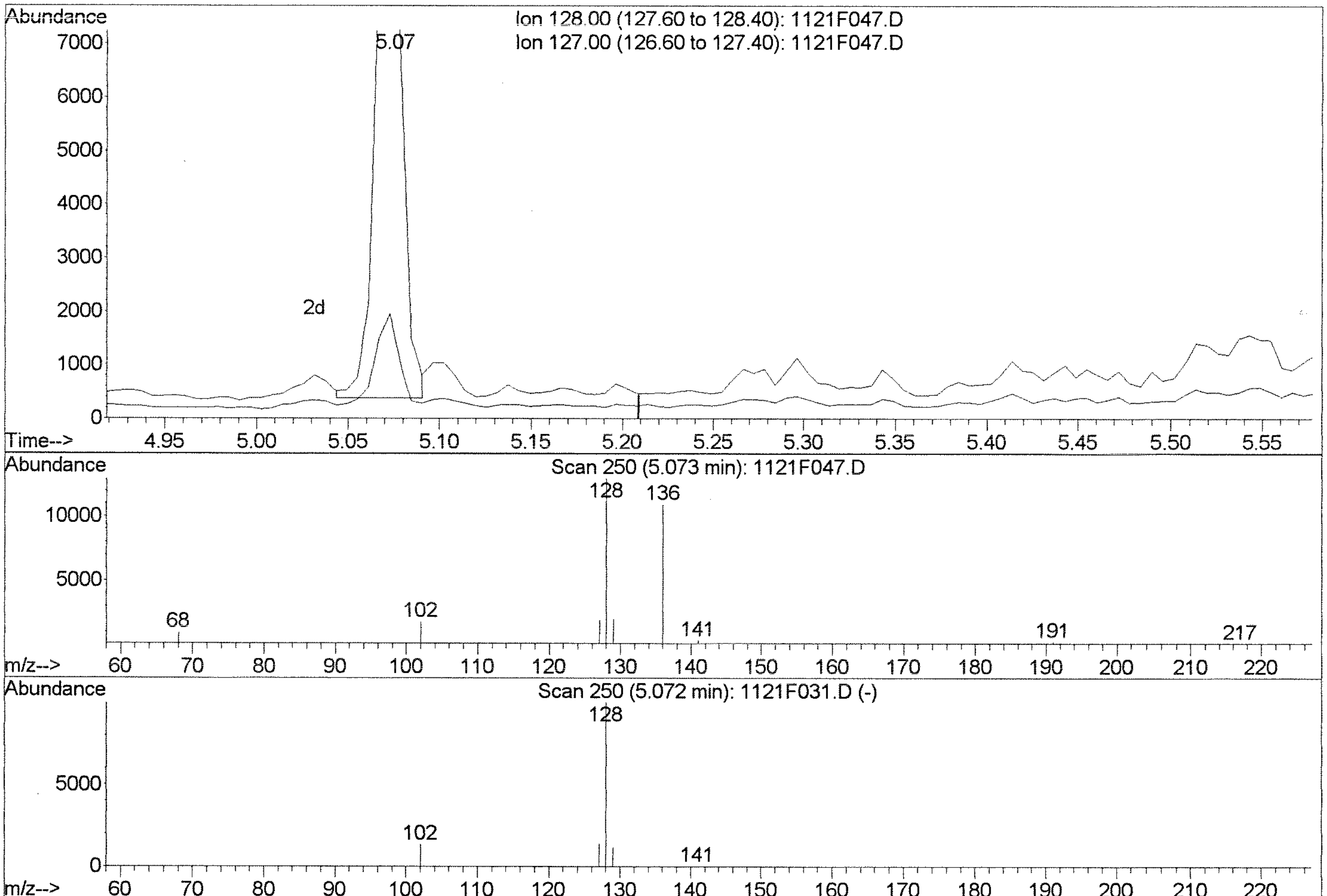
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F047.D
Acq On : 22 Nov 2008 2:22 am
Sample : K0810639-008DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:56 2008

Vial: 44
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(2) Naphthalene (T)

5.07min 7.84ng/ml m

response 10899

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	15.13
0.00	0.00	0.00
0.00	0.00	0.00

QT 11/24/08

1121F047.D 1110ALK.M Sat Nov 22 13:56:47 2008

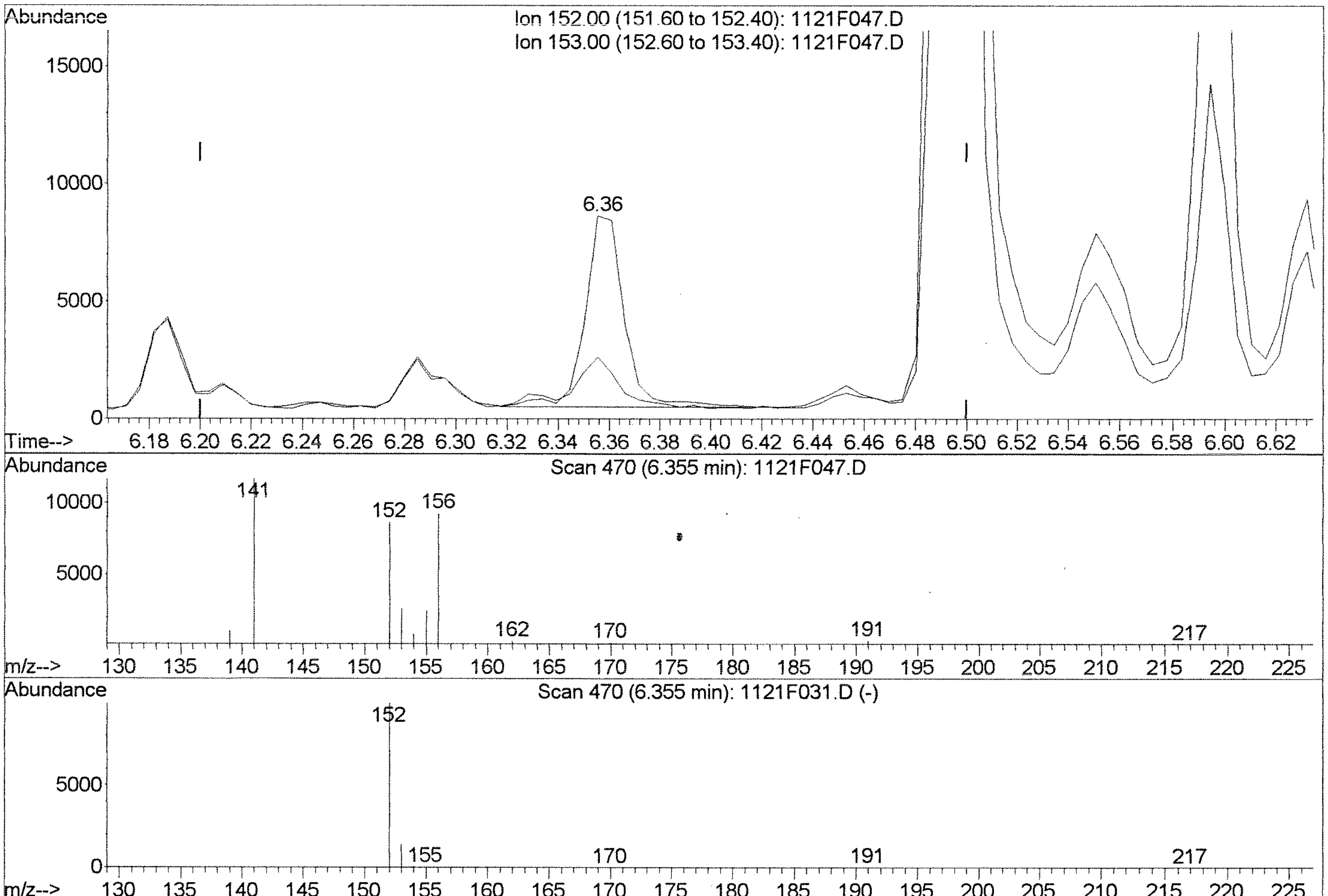
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F047.D
Acq On : 22 Nov 2008 2:22 am
Sample : K0810639-008DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:56 2008

Vial: 44
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F047.D

(11) Acenaphthylene (T)

6.36min 6.86ng/ml

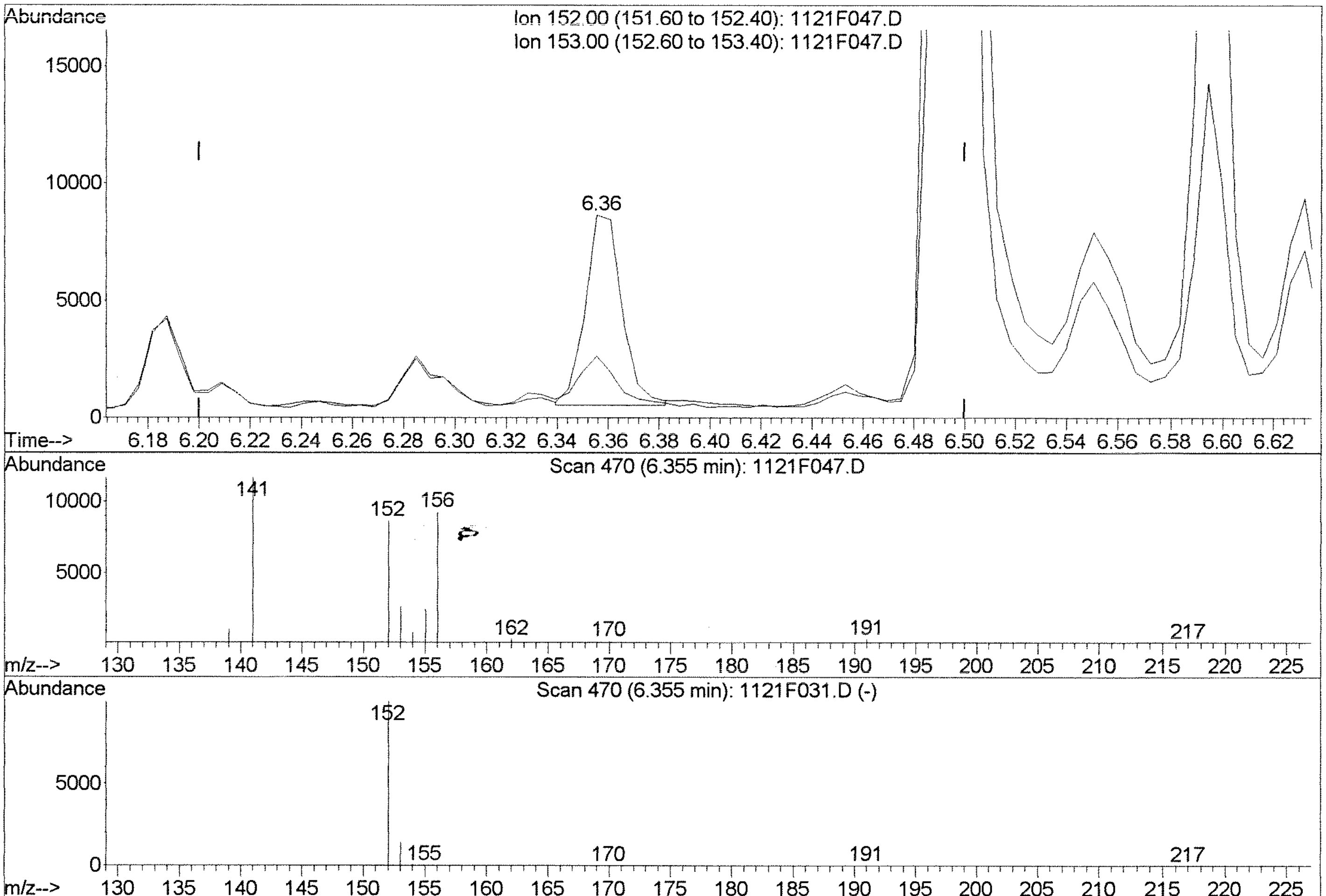
response 8788

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	25.57
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F047.D Vial: 44
Acq On : 22 Nov 2008 2:22 am Operator: LWeiskopf
Sample : K0810639-008DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:57 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F047.D

(11) Acenaphthylene (T)

6.36min 6.33ng/ml m

response 8118

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	30.31
0.00	0.00	0.00
0.00	0.00	0.00

OT

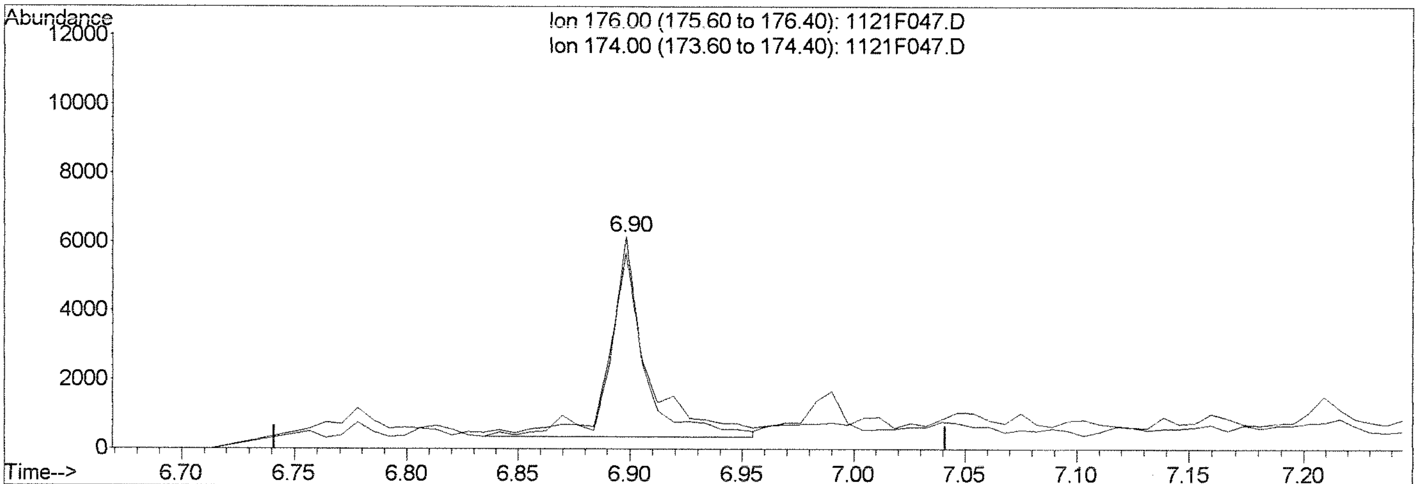
Quantitation Report (Qedit)

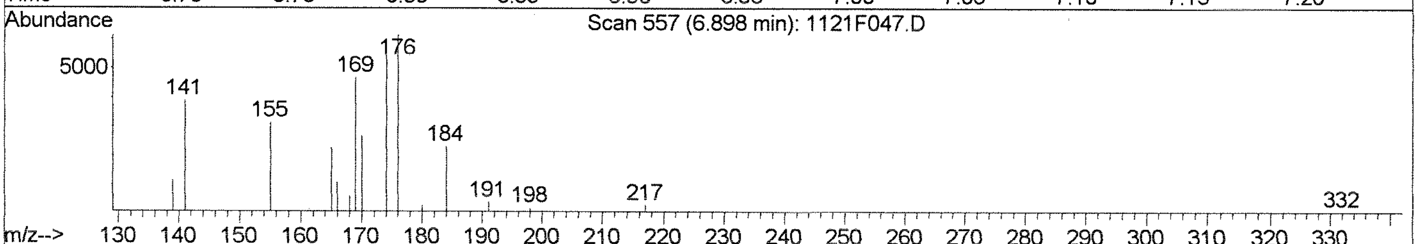
Data File : J:\MS11\DATA\112108\1121F047.D
Acq On : 22 Nov 2008 2:22 am
Sample : K0810639-008DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:57 2008

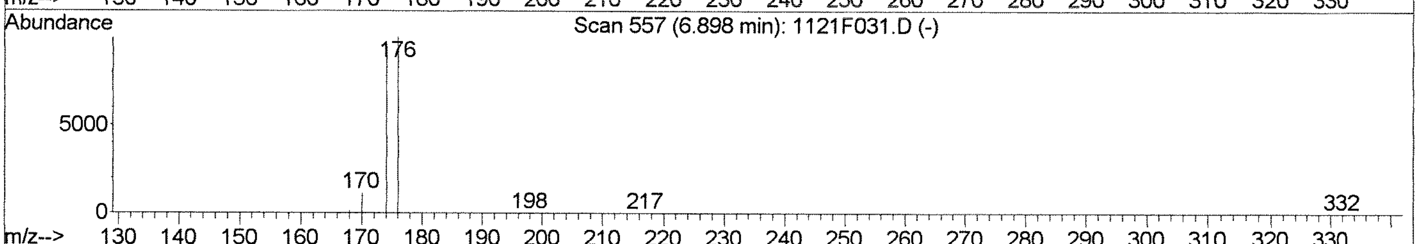
Vial: 44
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration







TIC: 1121F047.D

(15) Fluorene-d10 (S)

6.90min 7.87ng/ml

response 6079

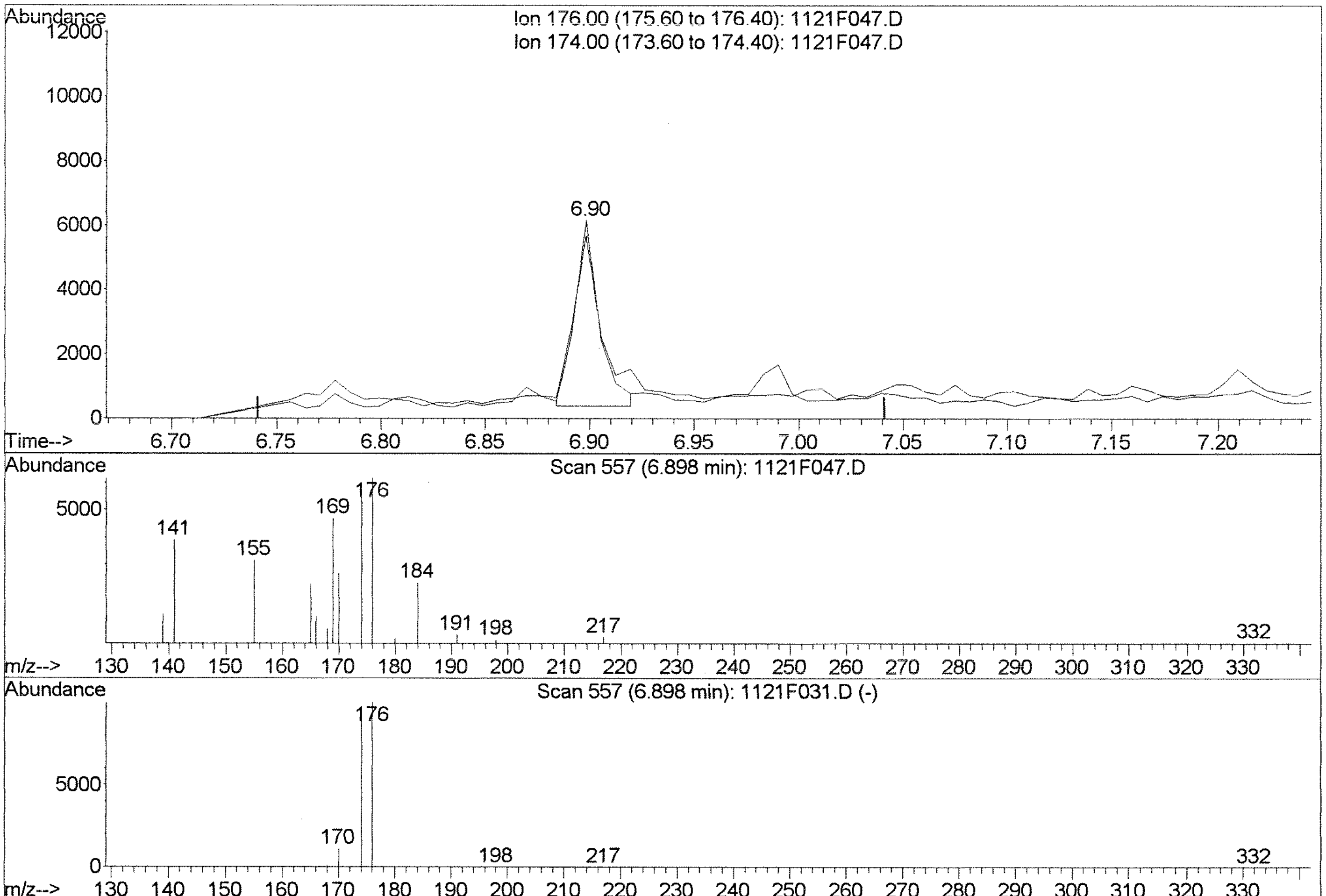
Ion	Exp%	Act%
176.00	100	100
174.00	96.70	89.87
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F047.D
Acq On : 22 Nov 2008 2:22 am
Sample : K0810639-008DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:57 2008

Vial: 44
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F047.D

(15) Fluorene-d10 (S)

6.90min 6.09ng/ml m

response 4701

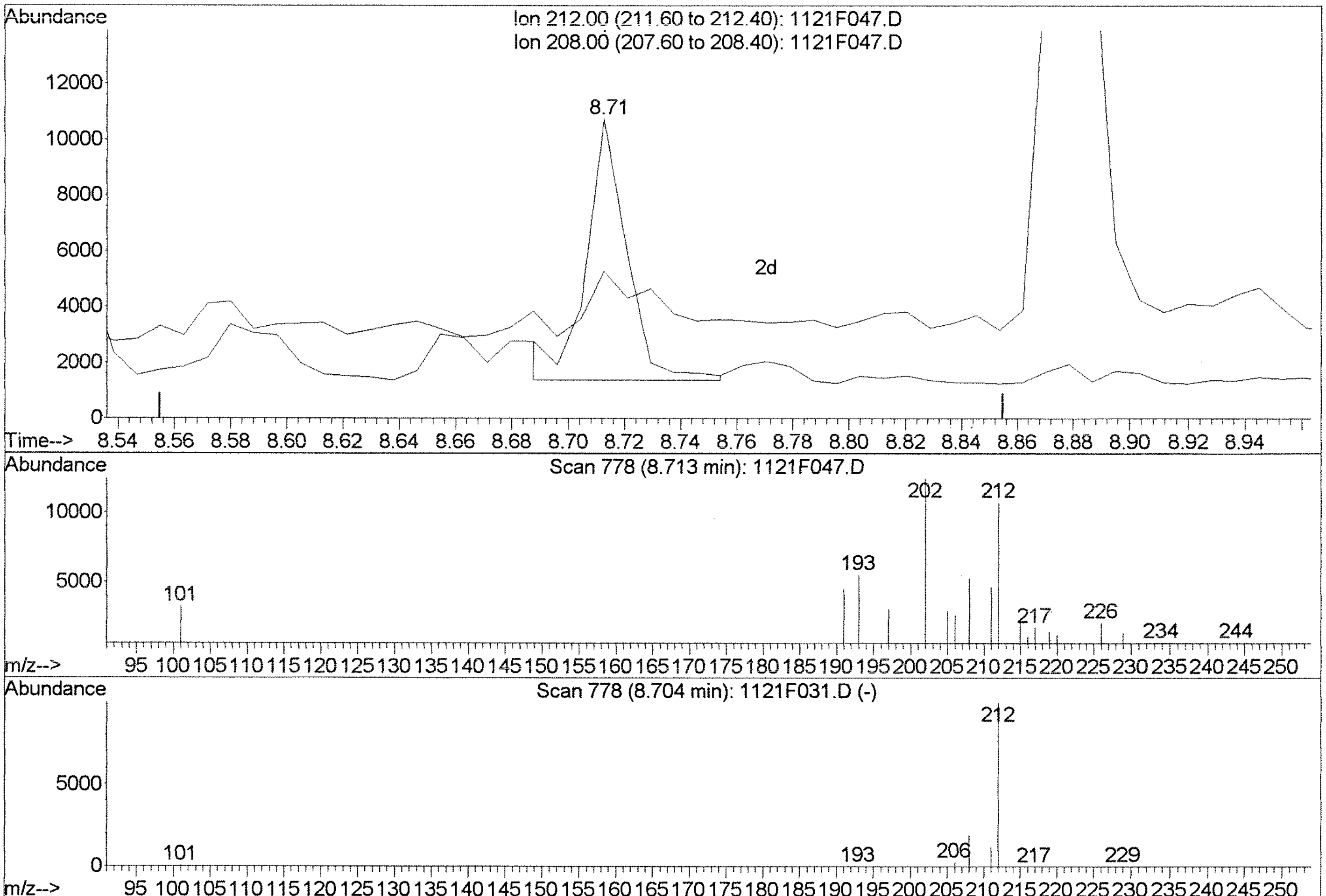
Ion	Exp%	Act%
176.00	100	100
174.00	96.70	92.36
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F047.D
Acq On : 22 Nov 2008 2:22 am
Sample : K0810639-008DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:57 2008

Vial: 44
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F047.D

(36) Fluoranthene-d10 (S)

8.71min 6.25ng/ml

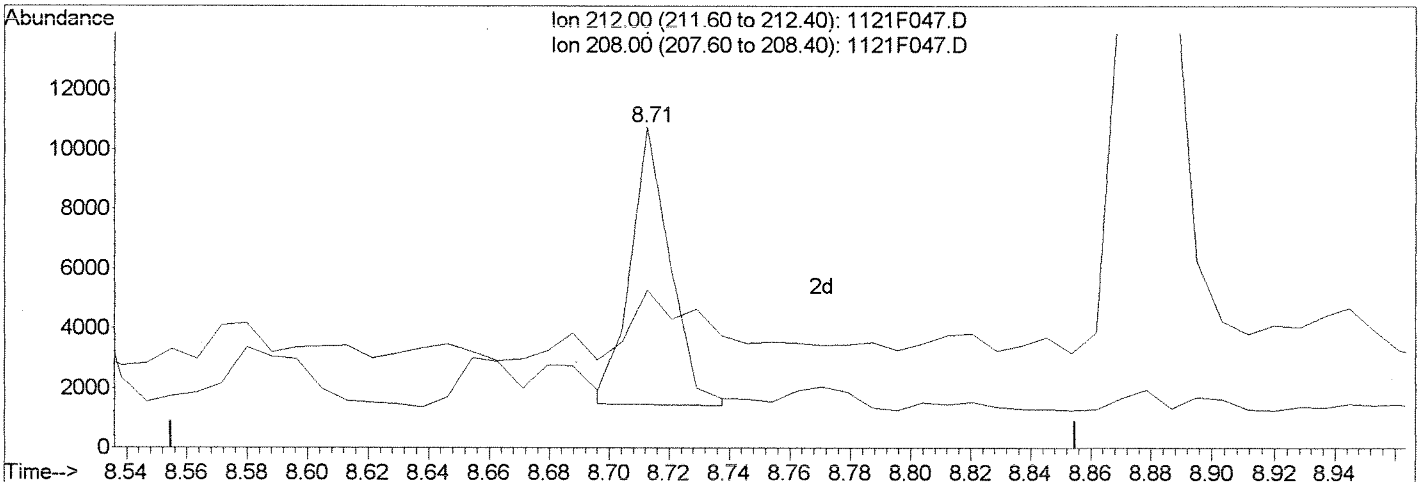
response 9166

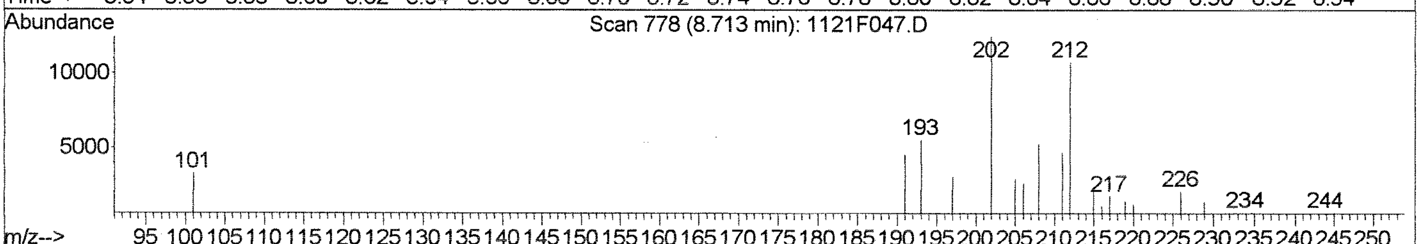
Ion	Exp%	Act%
212.00	100	100
208.00	16.70	18.83
0.00	0.00	0.00
0.00	0.00	0.00

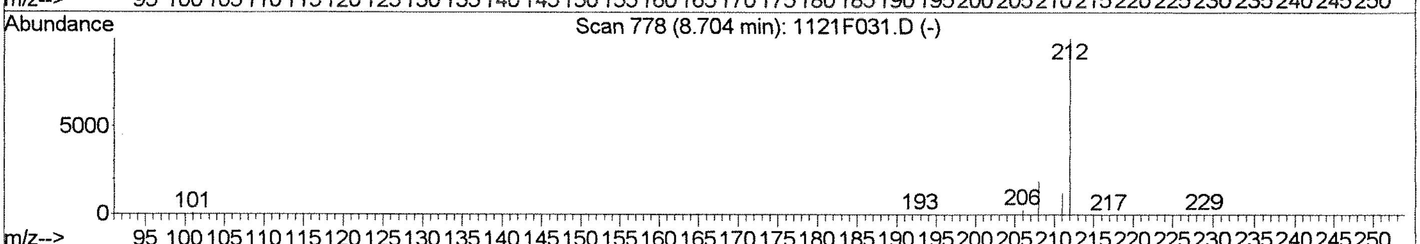
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F047.D   Vial: 44
Acq On : 22 Nov 2008 2:22 am   Operator: LWeiskopf
Sample : K0810639-008DIL 20X   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:57 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration







TIC: 1121F047.D

(36) Fluoranthene-d10 (S)

8.71min 5.77ng/ml m

response 8465

Ion	Exp%	Act%
212.00	100	100
208.00	16.70	49.13#
0.00	0.00	0.00
0.00	0.00	0.00

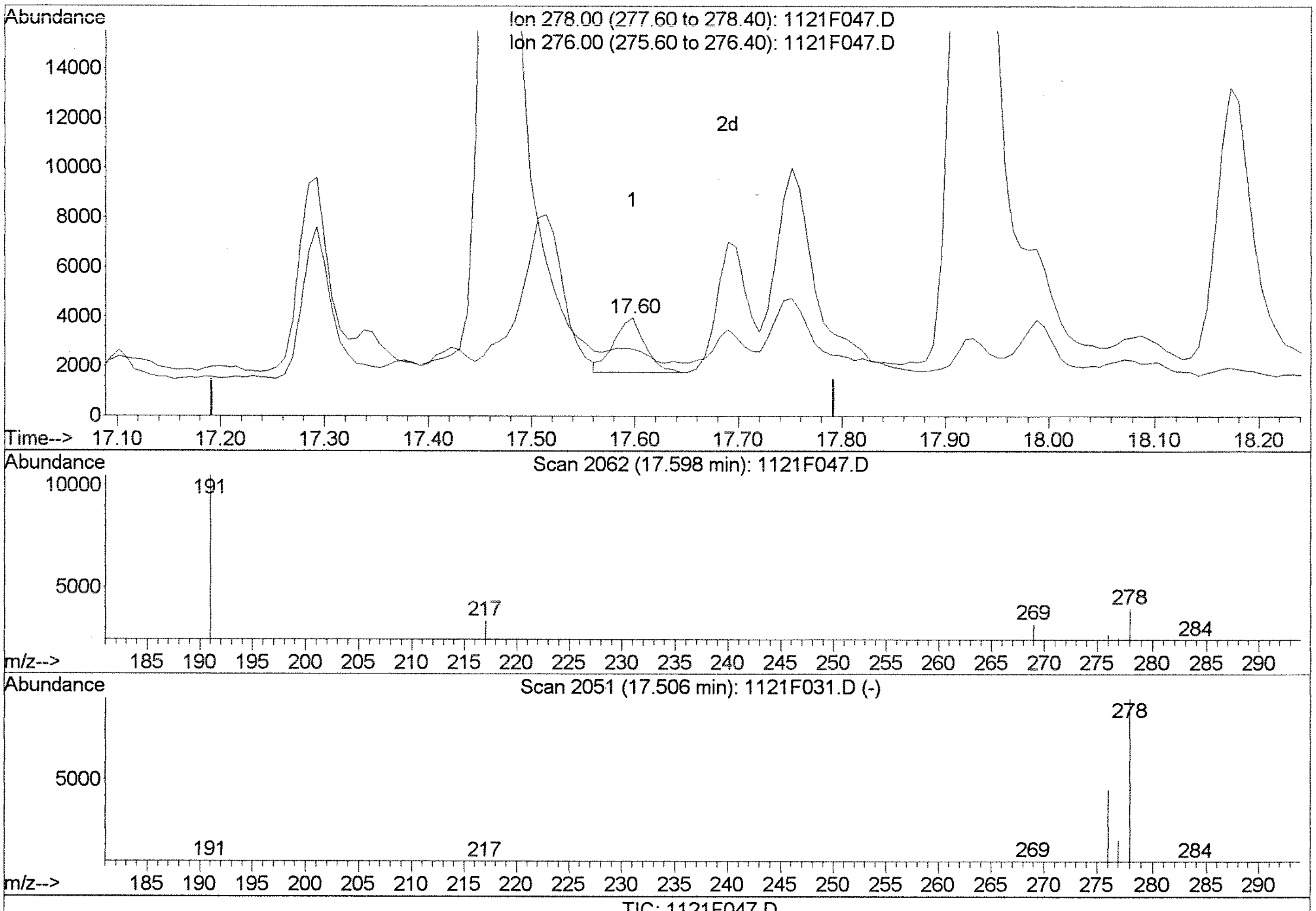
OI

11/22/08

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F047.D Vial: 44
Acq On : 22 Nov 2008 2:22 am Operator: LWeiskopf
Sample : K0810639-008DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:57 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(56) Dibenz(a,h)anthracene (T)

17.60min 3.22ng/ml

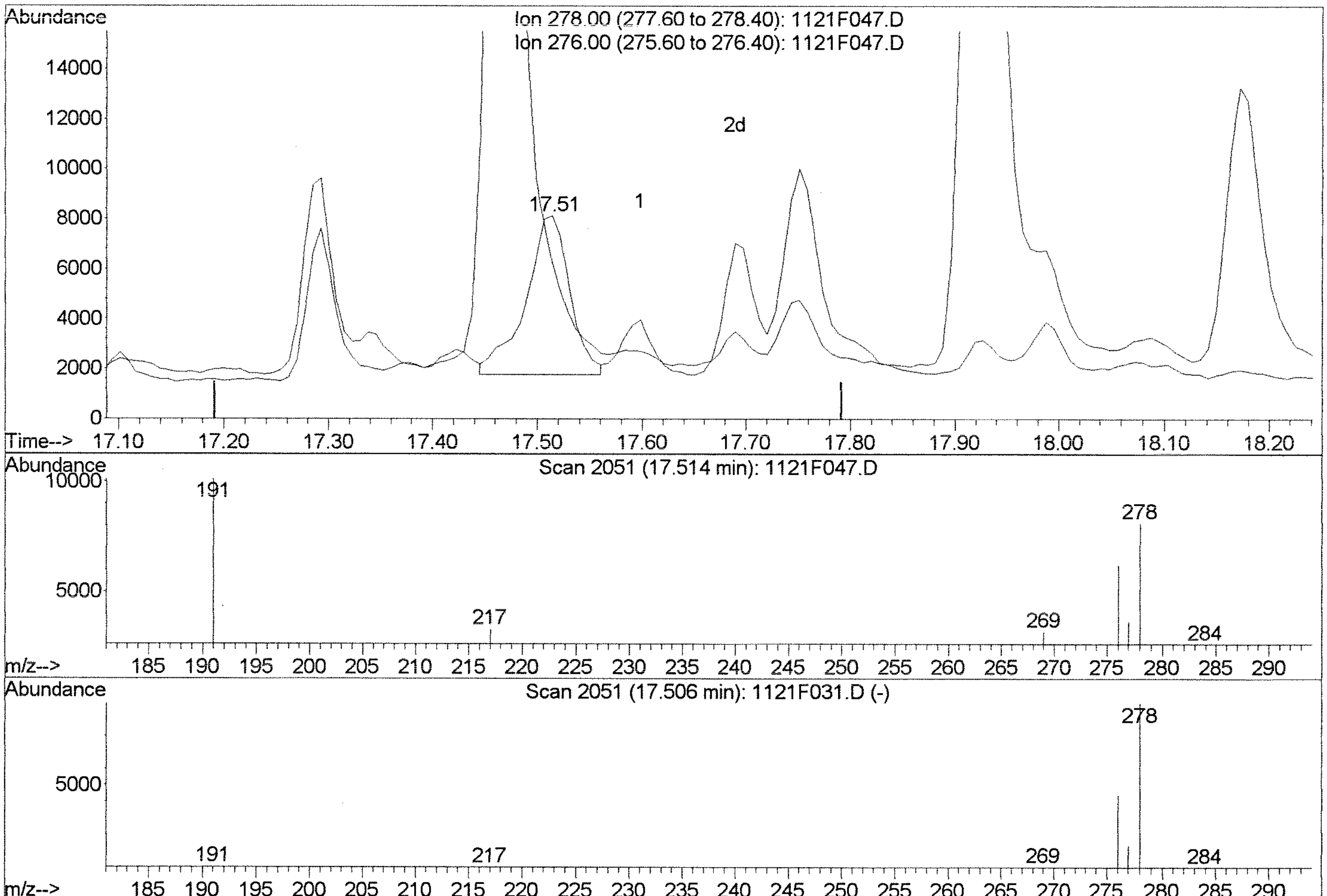
response 4513

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	25.43
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F047.D   Vial: 44
Acq On   : 22 Nov 2008   2:22 am   Operator: LWeiskopf
Sample   : K0810639-008DIL 20X   Inst   : MS11
Misc   :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:57 2008   Quant Results File: temp.res

Method   : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title   : PAHS and ALKYLATED HOMOLOGS
Last Update   : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F047.D

(56) Dibenz(a,h)anthracene (T)

17.51min 13.16ng/ml m

response 18444

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	76.83#
0.00	0.00	0.00
0.00	0.00	0.00

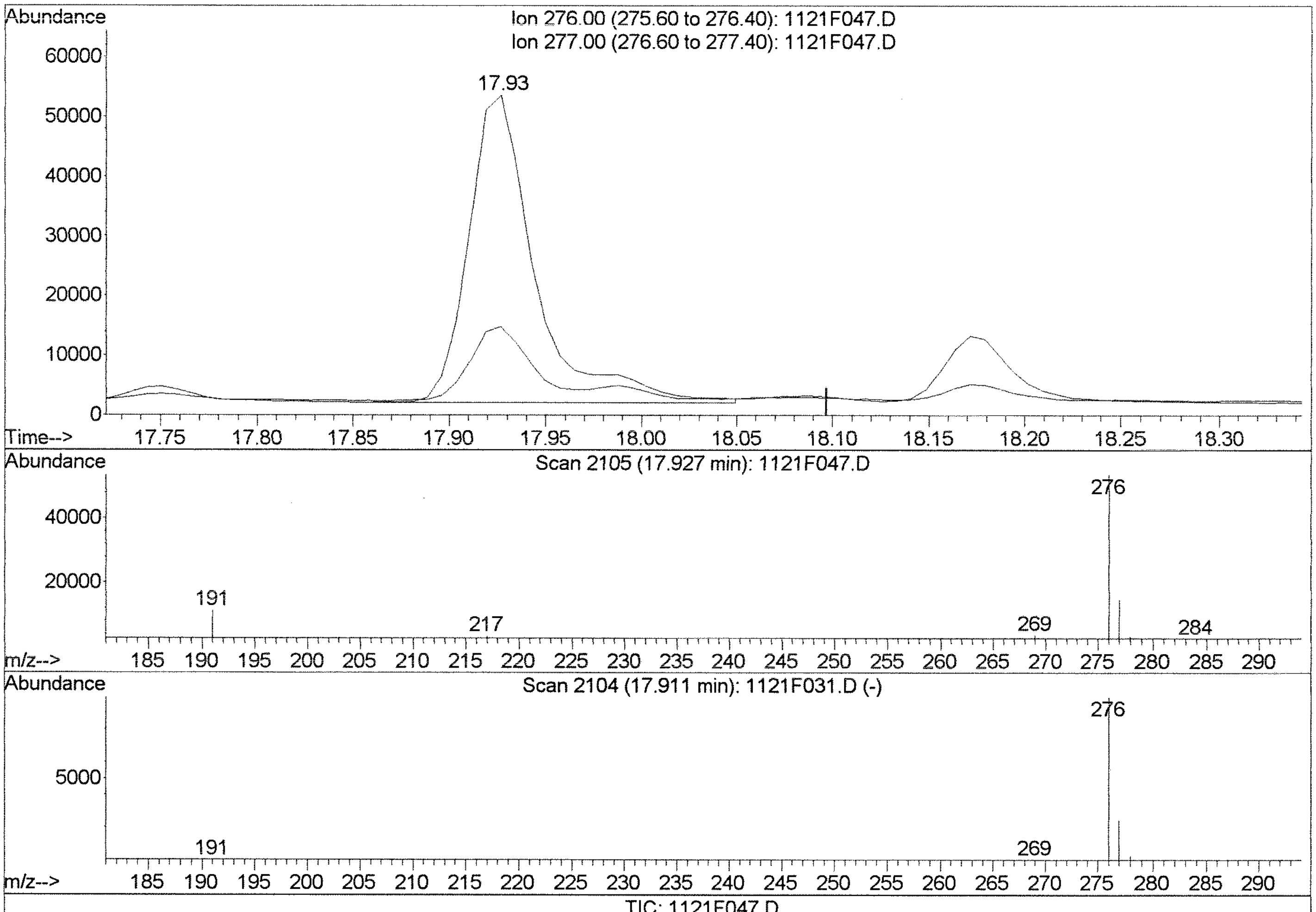
WP 11/22/08

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F047.D
Acq On : 22 Nov 2008 2:22 am
Sample : K0810639-008DIL 20X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:57 2008

Vial: 44
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(57) Benzo(g,h,i)perylene (T)

17.93min 80.95ng/ml

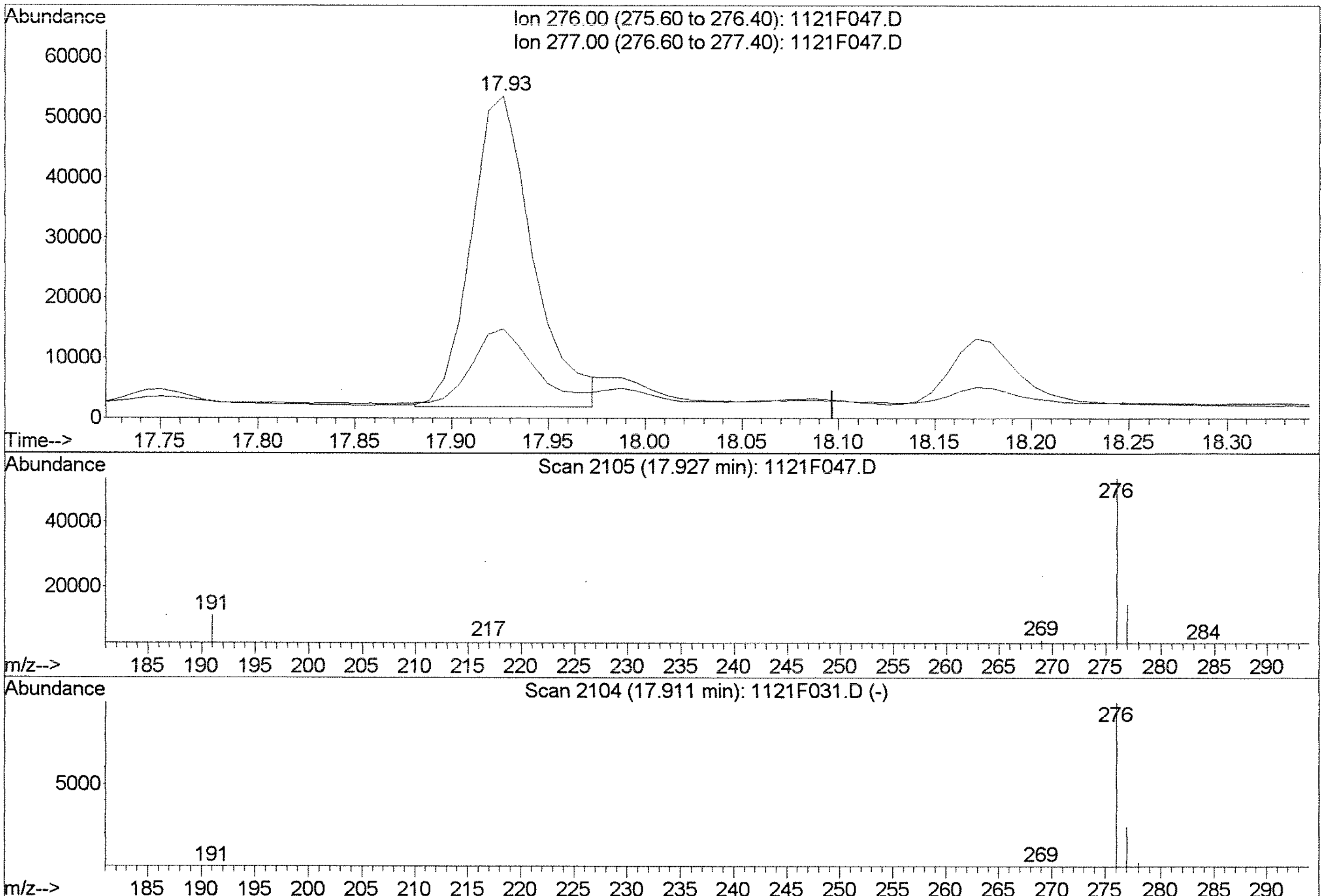
response 123144

Ion	Exp%	Act%
276.00	100	100
277.00	24.20	23.99
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F047.D Vial: 44
Acq On : 22 Nov 2008 2:22 am Operator: LWeiskopf
Sample : K0810639-008DIL 20X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:58 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F047.D

(57) Benzo(g,h,i)perylene (T)

17.93min 75.25ng/ml m

response 114472

Ion	Exp%	Act%
276.00	100	100
277.00	24.20	27.60
0.00	0.00	0.00
0.00	0.00	0.00

OT 11/22/08

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/25/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED14-0.5-2-A	**Units:**	ug/Kg
Lab Code:	K0810639-009	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	48		4.8	0.37	1	11/11/08	11/22/08	KWG0812042	
2-Methylnaphthalene	25		4.8	0.39	1	11/11/08	11/22/08	KWG0812042	
Acenaphthylene	27		4.8	0.24	1	11/11/08	11/22/08	KWG0812042	
Acenaphthene	260		4.8	0.23	1	11/11/08	11/22/08	KWG0812042	
Fluorene	270		4.8	0.50	1	11/11/08	11/22/08	KWG0812042	
Dibenzofuran	47		4.8	0.59	1	11/11/08	11/22/08	KWG0812042	
Phenanthrene	1600		4.8	0.75	1	11/11/08	11/22/08	KWG0812042	
Anthracene	270		4.8	0.47	1	11/11/08	11/22/08	KWG0812042	
Fluoranthene	2300	D	24	3.1	5	11/11/08	11/23/08	KWG0812042	
Pyrene	2300	D	24	1.9	5	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	1100		4.8	0.48	1	11/11/08	11/22/08	KWG0812042	
Chrysene	1400		4.8	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(b)fluoranthene	1500		4.8	0.25	1	11/11/08	11/22/08	KWG0812042	
Benzo(k)fluoranthene	570		4.8	0.15	1	11/11/08	11/22/08	KWG0812042	
Benzo(a)pyrene	1200		4.8	0.14	1	11/11/08	11/22/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	1100		4.8	0.16	1	11/11/08	11/22/08	KWG0812042	
Dibenz(a,h)anthracene	220		4.8	0.28	1	11/11/08	11/22/08	KWG0812042	
Benzo(g,h,i)perylene	1000		4.8	0.64	1	11/11/08	11/22/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	65	10-128	11/22/08	Acceptable
Fluoranthene-d10	80	29-121	11/22/08	Acceptable
Terphenyl-d14	71	24-141	11/22/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\112108\1121F051.D
Lab ID: K0810639-009
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/22/2008 04:07
Date Quantitated: 11/22/2008 14:04
Batch ID: KWG0812613
Analysis Method: 8270C SIM
ListJoinID: LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	2146.34	NA	2000	see Dil
	Fluoranthene	2404.63	NA	2000	

Primary Review: RW 11/22/8

Secondary Review: 11-22-8

Printed: 11/22/2008 14:50:43
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/25/2008	**Receive Date:**	07/29/2008

Analysis Lot:	KWG0812613	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776073	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112108\1121F030.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112108\1121F051.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 04:07	**Quant Date:**	11/22/2008 14:04	**Vial:**	48
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-009			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.05	0.00	136	269595	200.00	OK
2	Acenaphthene-d10	6.47	0.00	164	138146	200.00	OK
3	Phenanthrene-d10	7.71	0.00	188	230010	200.00	OK
4	Chrysene-d12	10.62	0.02	240	288363	200.00	OK
5	Perylene-d12	14.66	0.05	264	299055	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
2	Fluorene-d10	6.89	-0.01	0.00	176	122063	130.01	65	10-128 OK	
3	Fluoranthene-d10	8.71	0.01	0.00	212	249909	159.36	80	29-121 OK	
4	Terphenyl-d14	9.10	0.00	0.00	244	211313	141.55	71	24-141 OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantM ass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.06	-0.01	0.00	128	82037	49.95	48		
1	2-Methylnaphthalene	5.62		0.00	142	29480	25.74	25		
2	Acenaphthylene	6.35		0.00	152	43187	27.72	27		
2	Acenaphthene	6.49		0.00	154	261978	276.76	260		
2	Dibenzofuran	6.64		0.00	168	69774	49.00	47		
2	Fluorene	6.92		0.00	166	319231	280.91	270		
3	Phenanthrene	7.72		0.00	178	2669848	1,651	1600		
3	Anthracene	7.77		0.00	178	449305m	285.23	270		
3	Fluoranthene	8.74	0.02	0.00	202	4416081	2,405	2300	E	
4	Pyrene	8.96	0.01	0.00	202	4656070	2,146	2100	E	
4	Benz(a)anthracene	10.59	0.01	0.00	228	2225737	1,131	1100		
4	Chrysene	10.67	0.02	0.00	228	2762625	1,429	1400		
5	Benzo(b)fluoranthene	13.31	0.06	0.00	252	3211626	1,556	1500		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112108\1121F051.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 04:07	**Quant Date:**	11/22/2008 14:04	**Vial:**	48
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-009			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.38	0.04	0.00	252	1179553	594.95	570		
5	Benzo(a)pyrene	14.45	0.06	0.00	252	2141505	1,253	1200		
5	Indeno(1,2,3-cd)pyrene	17.48	0.03	0.00	276	1780102	1,123	1100		
5	Dibenz(a,h)anthracene	17.52	0.01	0.00	278	384694**m**	231.17	220		
5	Benzo(g,h,i)perylene	17.94	0.03	0.00	276	1933317	1,070	1000		

Prep Amount:	17.42 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	60.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

Rev

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F051.D Vial: 48
Acq On : 22 Nov 2008 4:07 am Operator: LWeiskopf
Sample : K0810639-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14:36 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.05	136	269595	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.47	164	138146	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.71	188	230010	200.00	ng/ml	0.00
37) Chrysene-d12	10.62	240	288363	200.00	ng/ml	0.03
49) Perylene-d12	14.66	264	299055	200.00	ng/ml	0.07
System Monitoring Compounds						
15) Fluorene-d10	6.89	176	122063	130.01	ng/ml	0.00
Spiked Amount 200.000			Recovery =	65.00%		
20) 2,4,6 Tribromophenol	0.00	330	0	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.71	212	249909	159.36	ng/ml	0.00
Spiked Amount 200.000			Recovery =	79.68%		
42) Terphenyl-d14	9.10	244	211313	141.55	ng/ml	0.00
Spiked Amount 200.000			Recovery =	70.78%		
Target Compounds						Qvalue
2) Naphthalene	5.06	128	82037	49.95	ng/ml	99
3) 2-Methylnaphthalene	5.62	142	29480	25.74	ng/ml	100
4) 1-Methylnaphthalene	5.69	142	13650	13.31	ng/ml	99
5) Biphenyl	5.99	154	16032	11.46	ng/ml	99
6) 2,6-Dimethylnaphthalene	6.12	156	30753	30.76	ng/ml	97
11) Acenaphthylene	6.35	152	43187	27.72	ng/ml	95
12) Acenaphthene	6.49	154	261978	276.76	ng/ml	95
13) Dibenzofuran	6.64	168	69774	49.00	ng/ml	86
14) 2,3,5-Trimethylnaphthalene	6.79	170	40017	48.07	ng/ml#	58
16) Fluorene	6.92	166	319231	280.91	ng/ml	99
23) Dibenzothiophene	7.62	184	178908	113.18	ng/ml	96
27) Phenanthrene	7.72	178	2669848	1651.36	ng/ml	96
28) Anthracene	7.77	178	449305m	285.23	ng/ml	
29) Carbazole	7.92	167	89170	61.70	ng/ml	90
30) 1-Methylphenanthrene	8.22	192	239135	199.30	ng/ml	96
35) Fluoranthene	8.74	202	4416081	2404.63	ng/ml	87
38) Pyrene	8.96	202	4656070	2146.34	ng/ml	78
43) Benz(a)anthracene	10.59	228	2225737	1130.96	ng/ml	91
44) Chrysene	10.67	228	2762625	1429.29	ng/ml	97
50) Benzo(b)fluoranthene	13.31	252	3211626	1556.13	ng/ml	98
51) Benzo(k)fluoranthene	13.38	252	1179553	594.95	ng/ml	98
52) Benzo(e)pyrene	14.24	252	1737622	926.86	ng/ml	99
53) Benzo(a)pyrene	14.45	252	2141505	1253.23	ng/ml	99
54) Perylene	14.76	252	667981	397.93	ng/ml	99
55) Indeno(1,2,3-cd)pyrene	17.48	276	1780102	1122.76	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112108\1121F051.D Vial: 48
Acq On : 22 Nov 2008 4:07 am Operator: LWeiskopf
Sample : K0810639-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:14:36 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
56) Dibenz(a,h)anthracene	17.52	278	384694m	231.17	ng/ml	
57) Benzo(g,h,i)perylene	17.94	276	1933317	1070.32	ng/ml	97

(#) = qualifier out of range (m) = manual integration

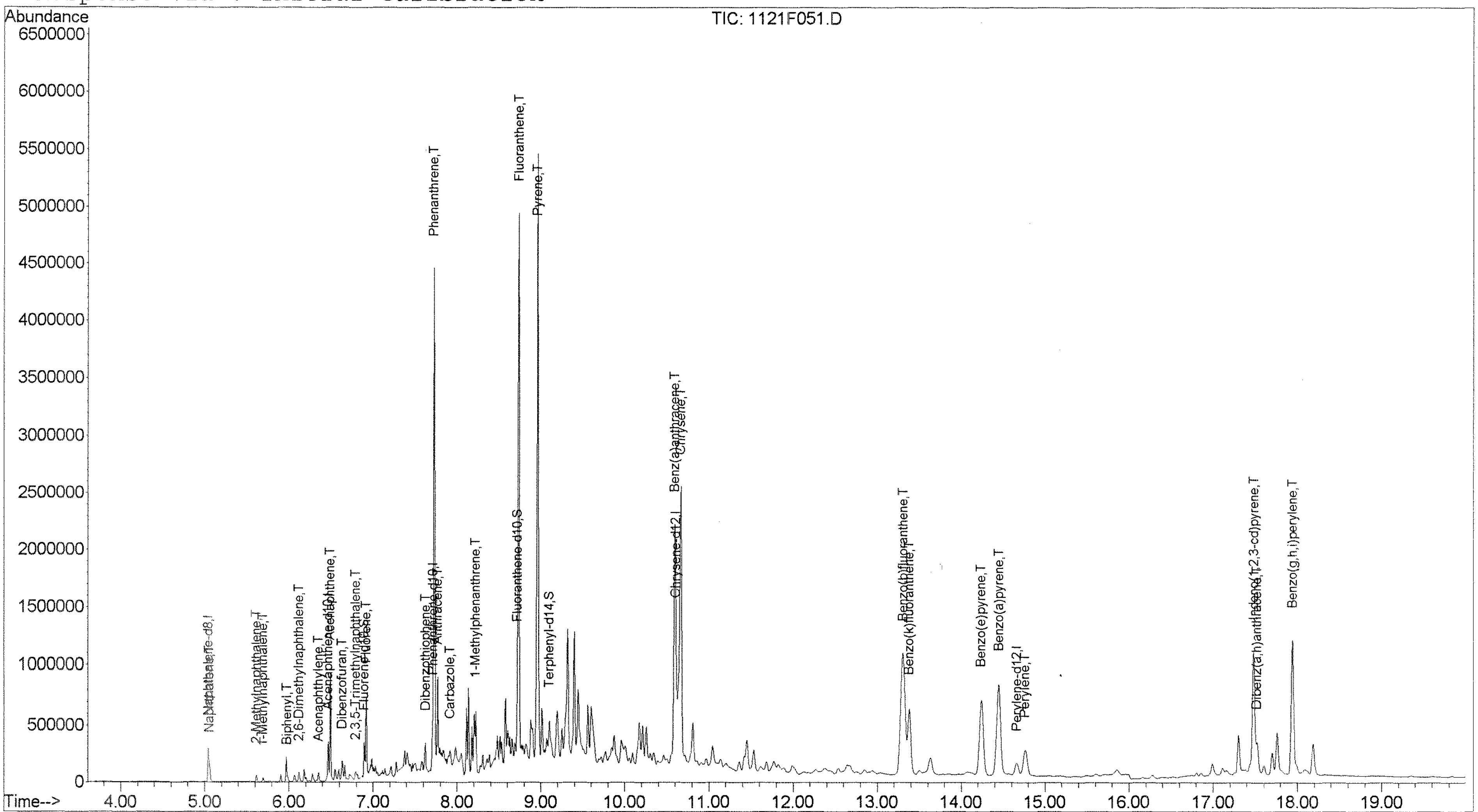
Quantitation Report (QT Reviewed)

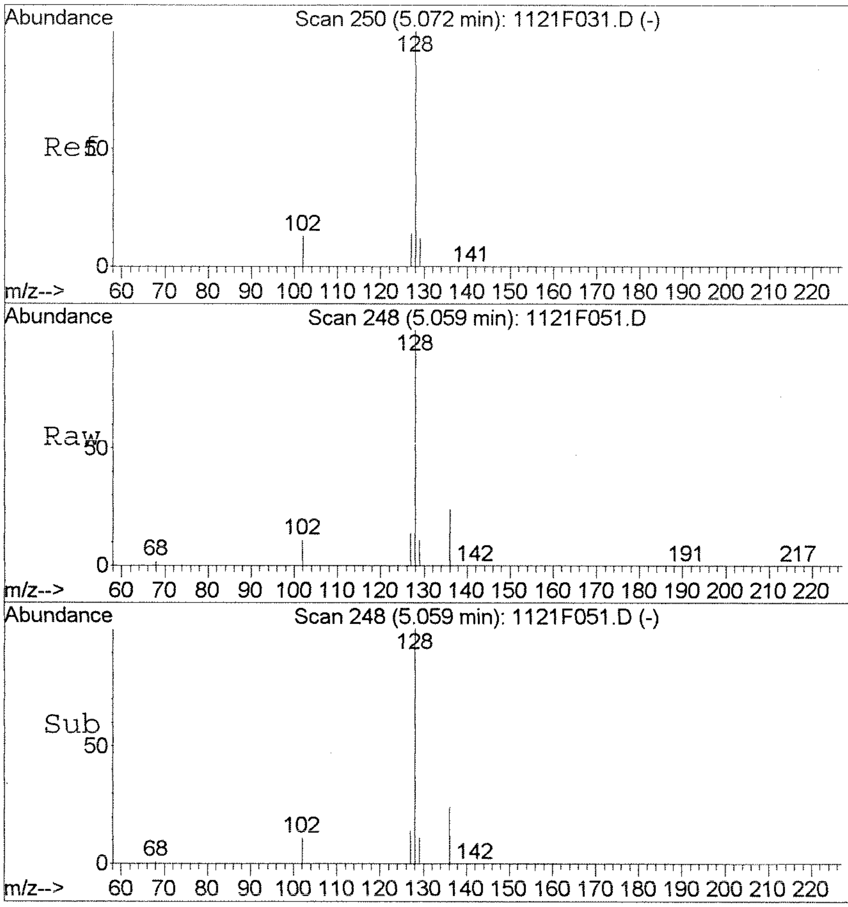
Data File : J:\MS11\DATA\112108\1121F051.D
Acq On : 22 Nov 2008 4:07 am
Sample : K0810639-009
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:04 2008

Vial: 48
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration

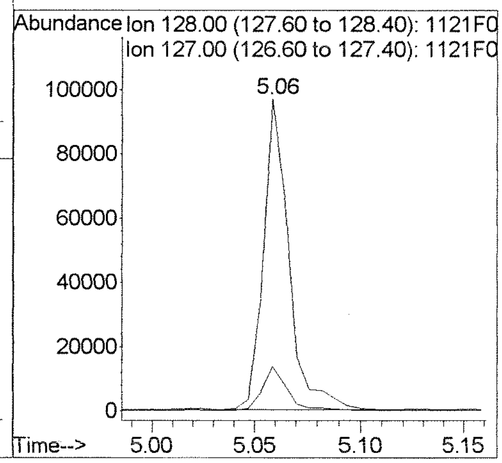


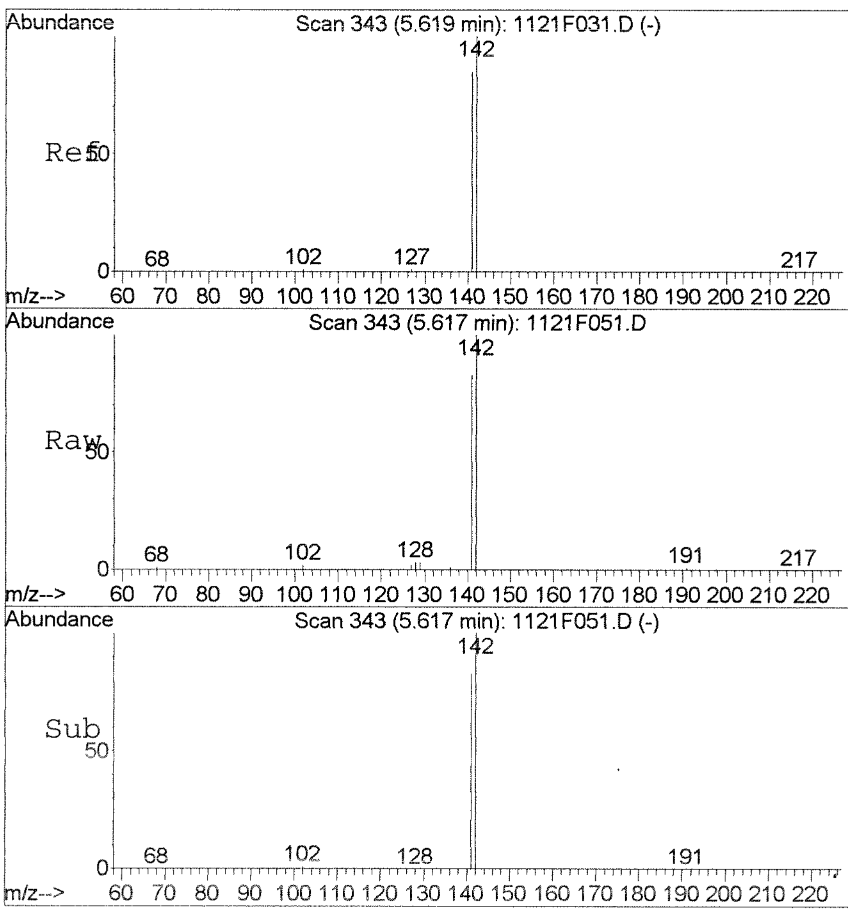


#2
Naphthalene
Concen: 49.95 ng/ml
RT: 5.06 min Scan# 248
Delta R.T. -0.00 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:128 Resp: 82037

Ion	Ratio	Lower	Upper
128	100		
127	14.2	0.0	43.8

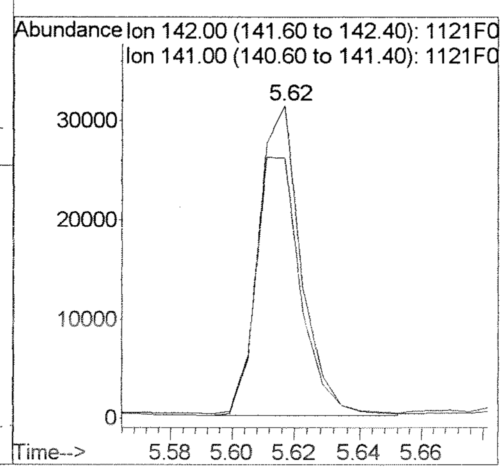




#3
2-Methylnaphthalene
Concen: 25.74 ng/ml
RT: 5.62 min Scan# 343
Delta R.T. 0.01 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:142 Resp: 29480

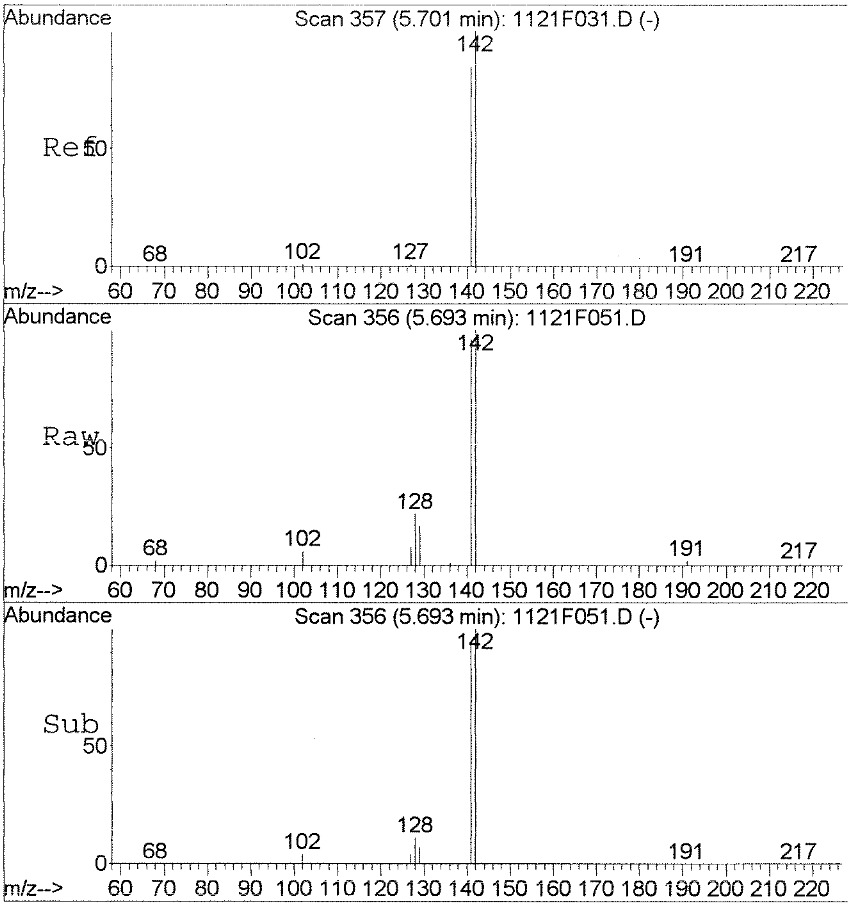
Ion	Ratio	Lower	Upper
142	100		
141	82.6	52.4	112.4

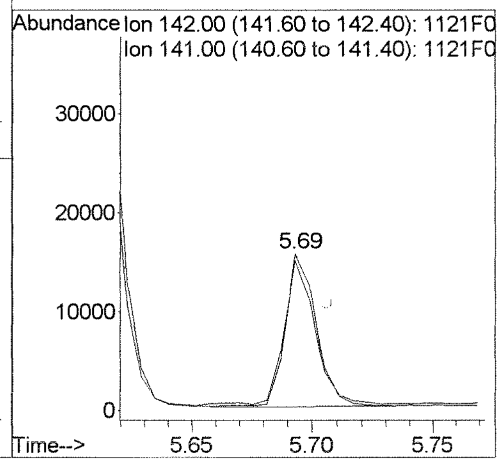


#4
1-Methylnaphthalene
Concen: 13.31 ng/ml
RT: 5.69 min Scan# 356
Delta R.T. 0.01 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:142 Resp: 13650

Ion	Ratio	Lower	Upper
142	100		
141	94.2	63.0	123.0

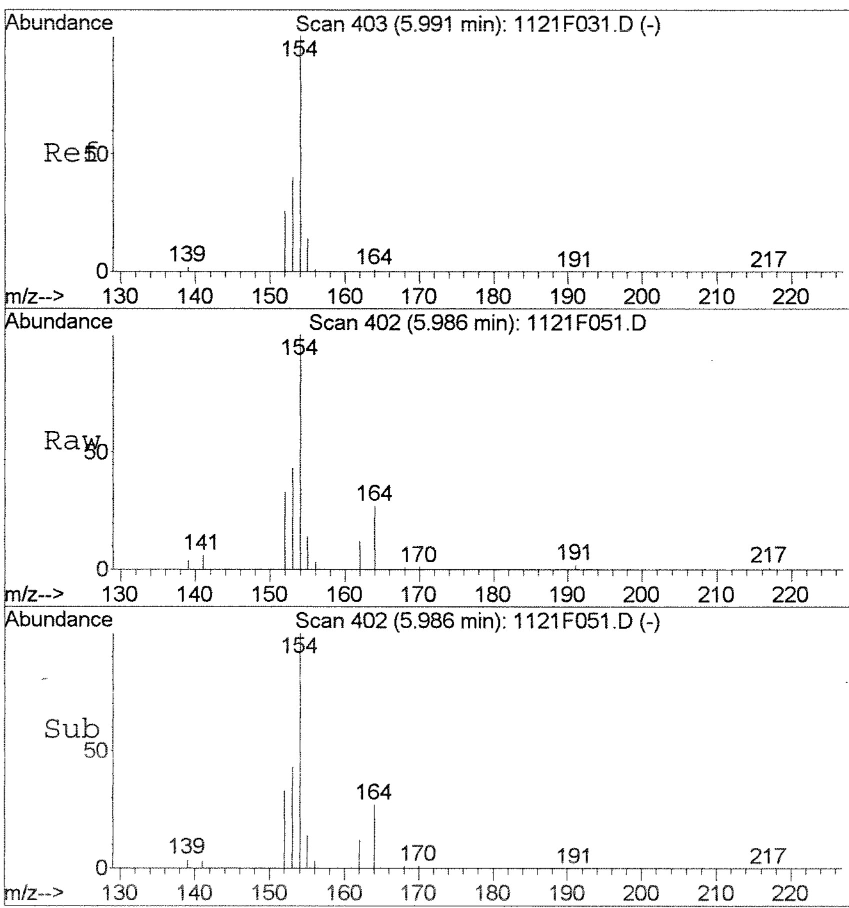


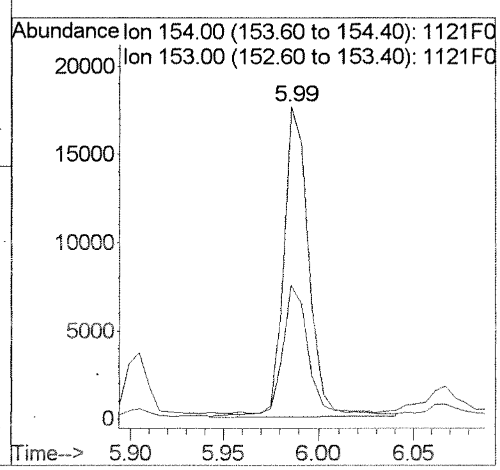


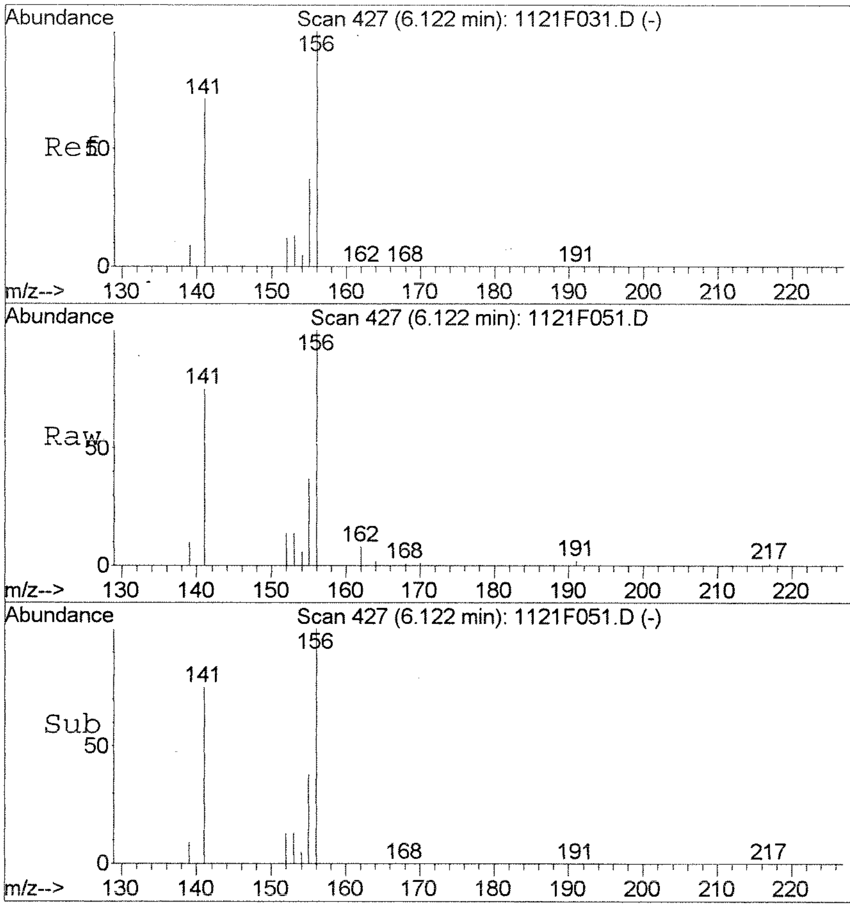
#5
Biphenyl
Concen: 11.46 ng/ml
RT: 5.99 min Scan# 402
Delta R.T. 0.00 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:154 Resp: 16032

Ion	Ratio	Lower	Upper
154	100		
153	41.2	10.4	70.4

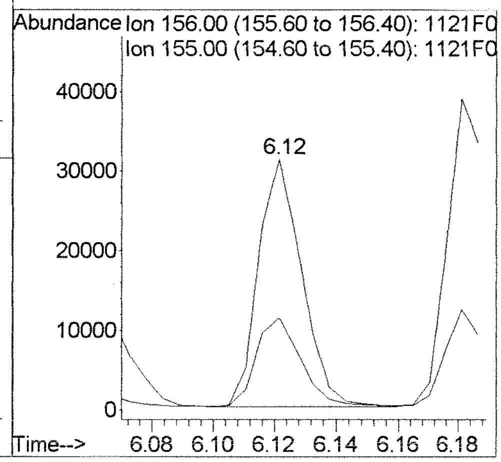


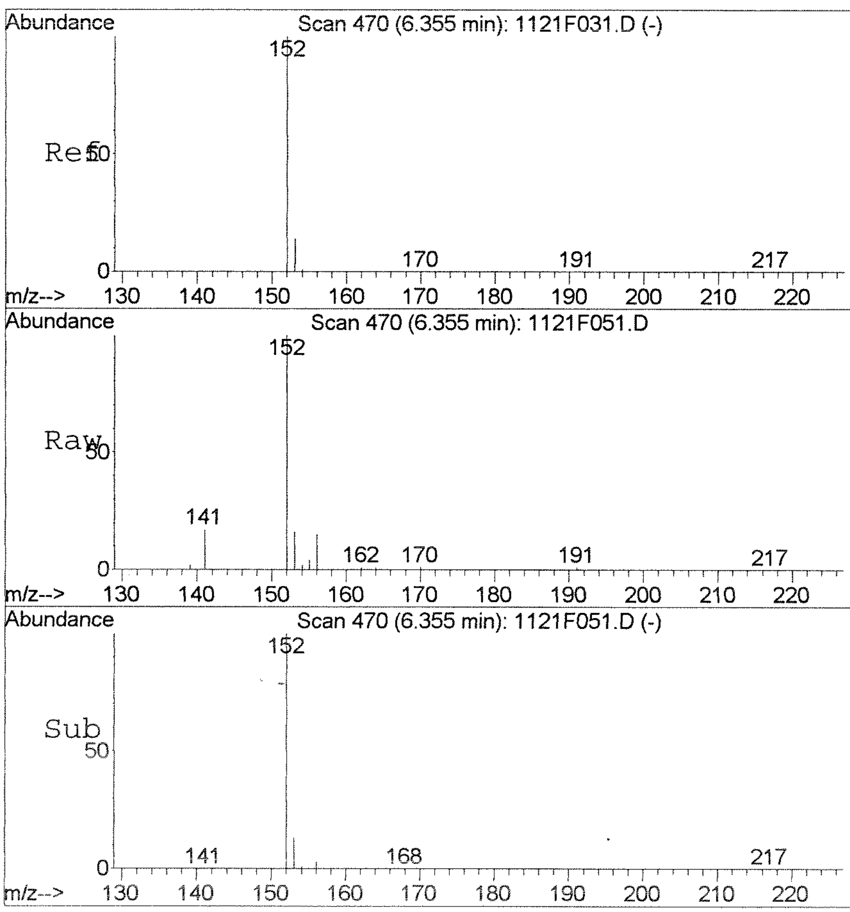




#6
2,6-Dimethylnaphthalene
Concen: 30.76 ng/ml
RT: 6.12 min Scan# 427
Delta R.T. 0.00 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

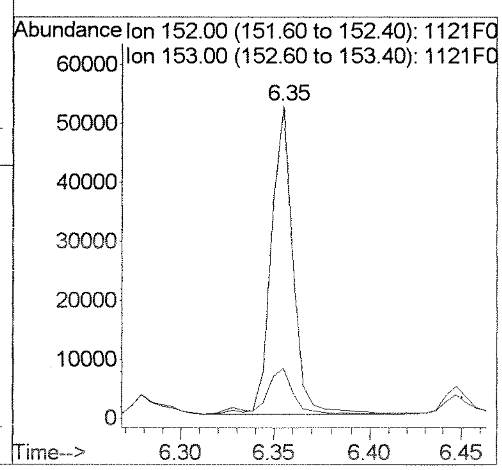
Tgt	Ion:156	Resp:	30753
Ion	Ratio	Lower	Upper
156	100		
155	35.8	7.3	67.3

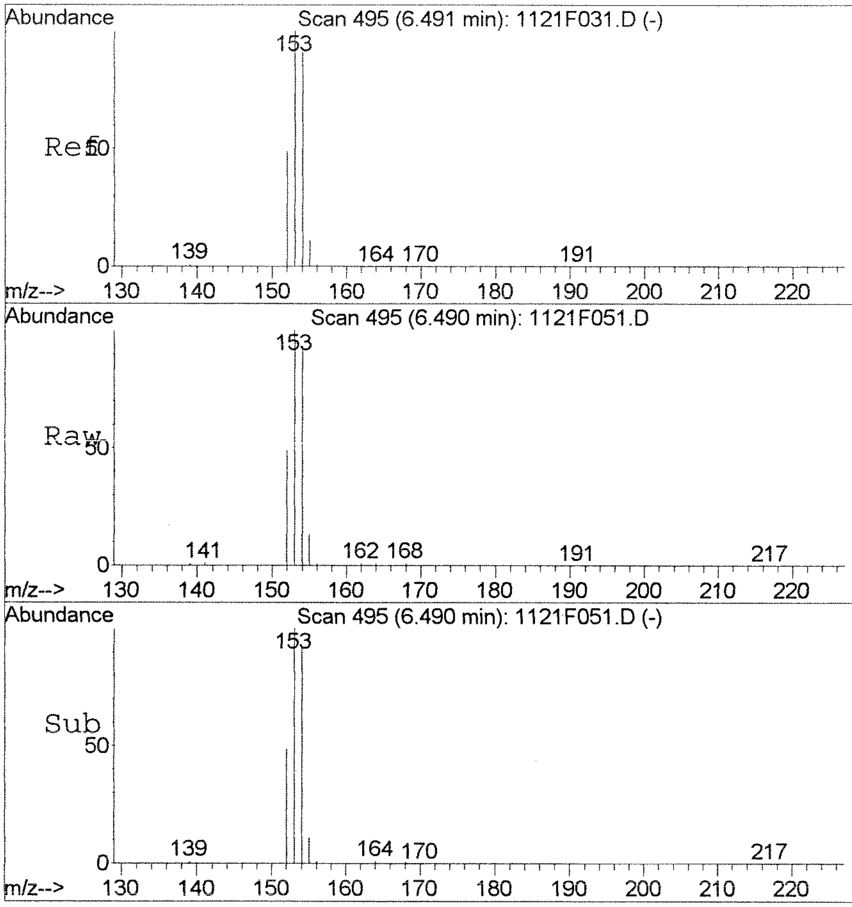




#11
Acenaphthylene
Concen: 27.72 ng/ml
RT: 6.35 min Scan# 470
Delta R.T. 0.00 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt	Ion:152	Resp:	43187
Ion	Ratio	Lower	Upper
152	100		
153	15.0	0.0	43.0

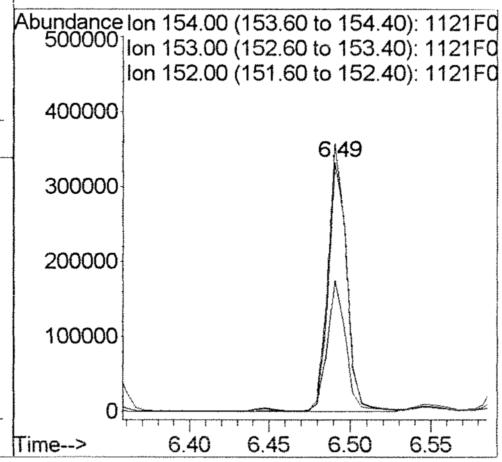


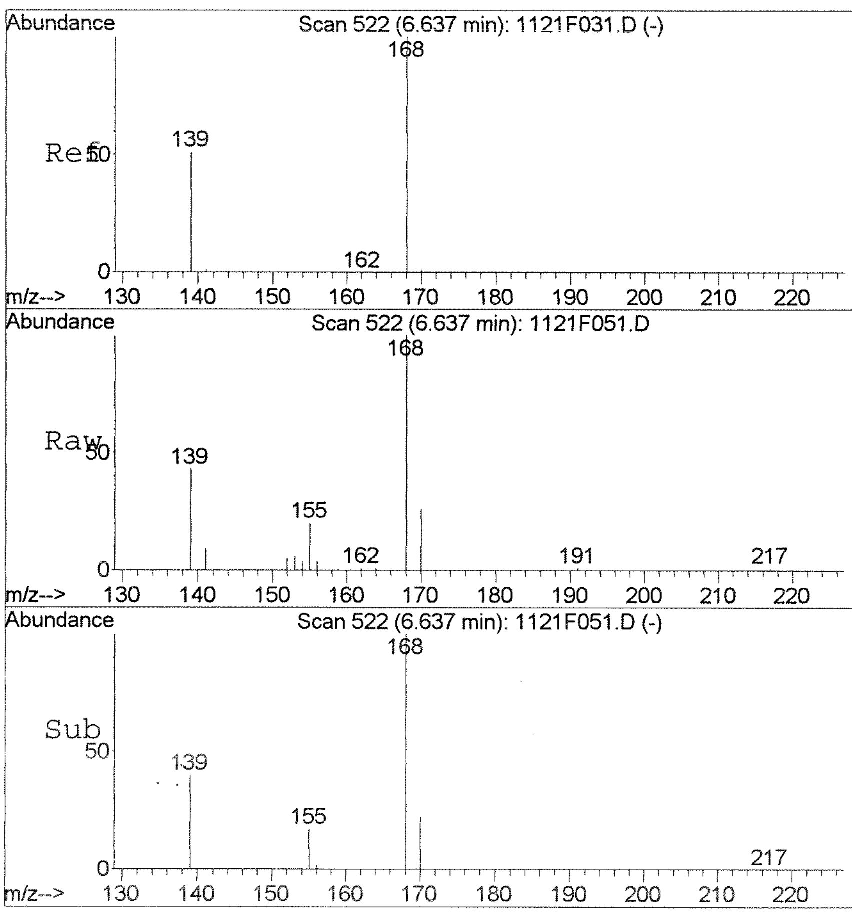


#12
Acenaphthene
Concen: 276.76 ng/ml
RT: 6.49 min Scan# 495
Delta R.T. 0.00 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:154 Resp: 261978

Ion	Ratio	Lower	Upper
154	100		
153	107.5	81.9	141.9
152	52.3	26.8	86.8

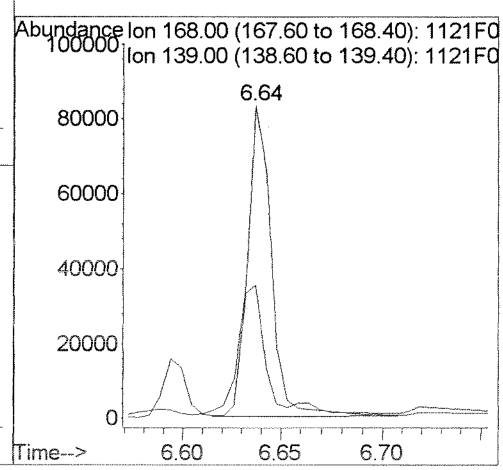


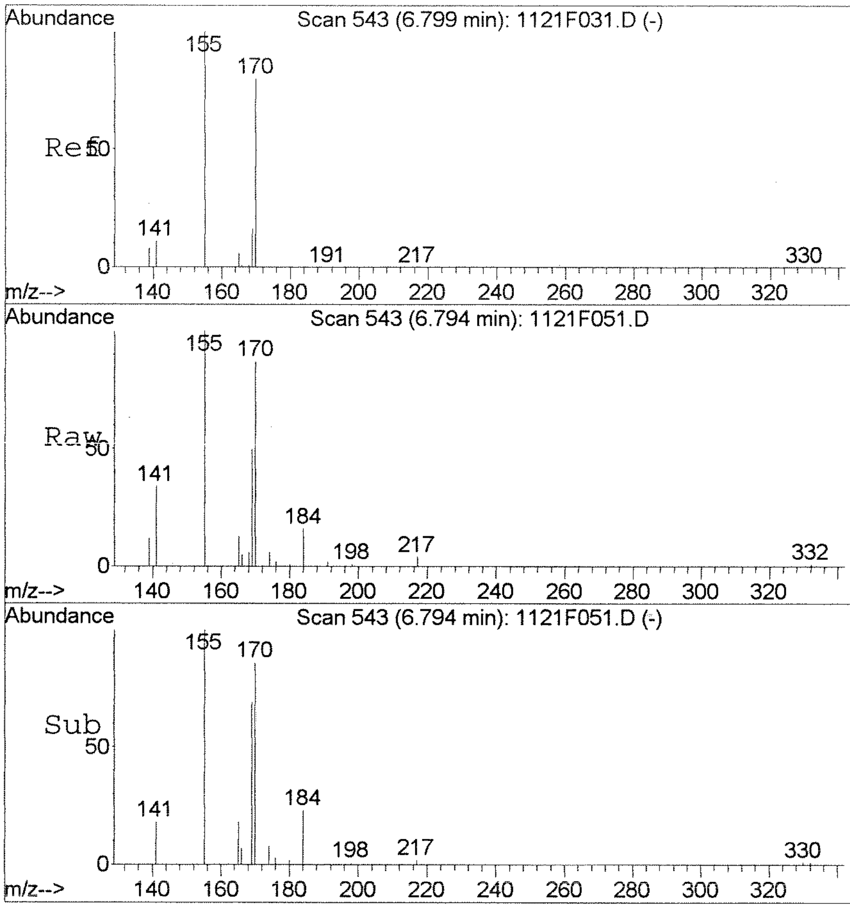


#13
Dibenzofuran
Concen: 49.00 ng/ml
RT: 6.64 min Scan# 522
Delta R.T. 0.00 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:168 Resp: 69774

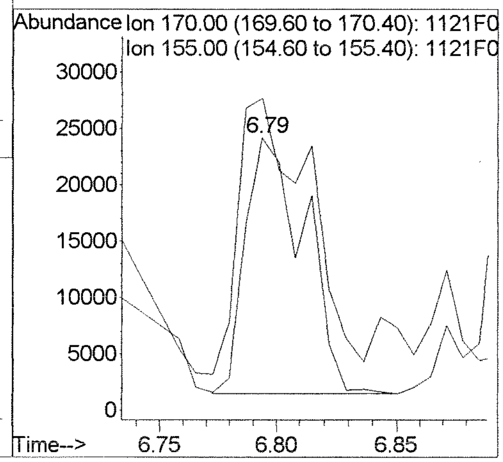
Ion	Ratio	Lower	Upper
168	100		
139	41.4	21.0	81.0

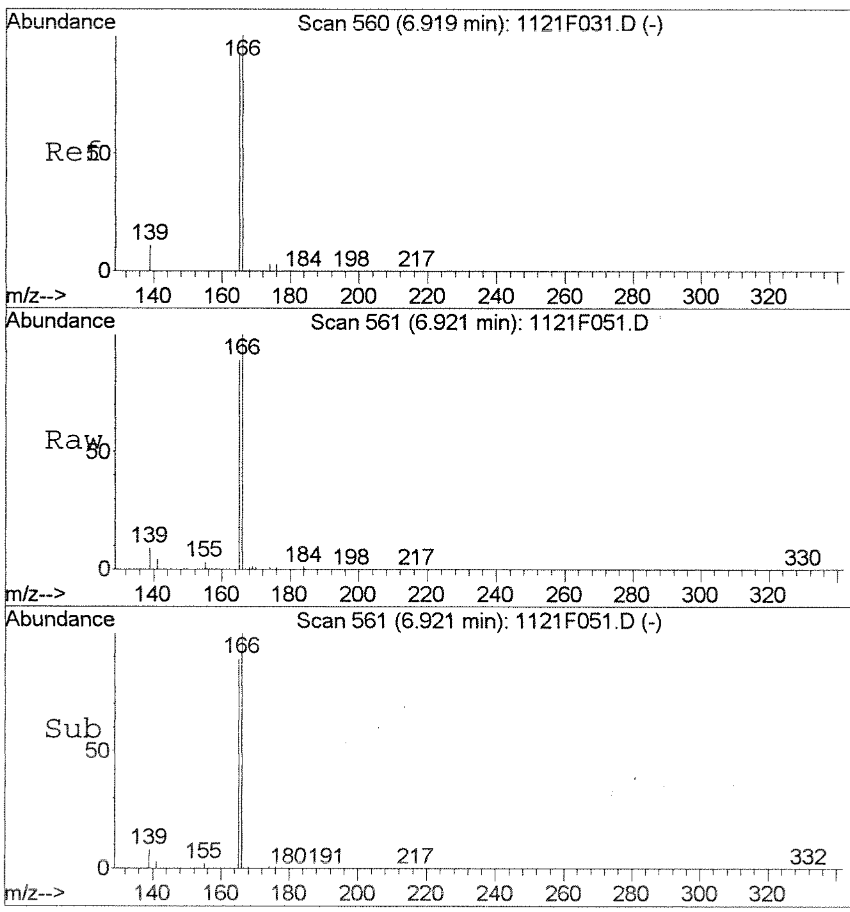




#14
2,3,5-Trimethylnaphthalene
Concen: 48.07 ng/ml
RT: 6.79 min Scan# 543
Delta R.T. 0.00 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

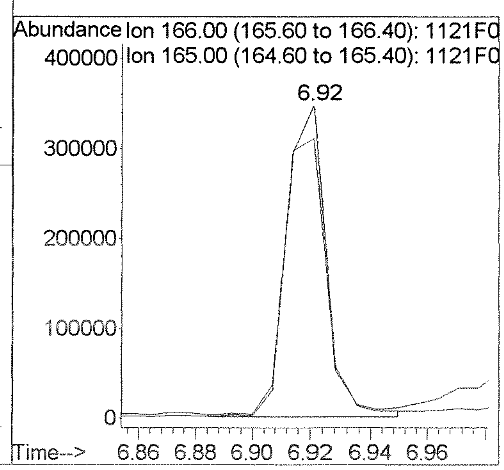
Tgt	Ion:170	Resp:	40017
Ion	Ratio	Lower	Upper
170	100		
155	107.8	42.9	102.9#

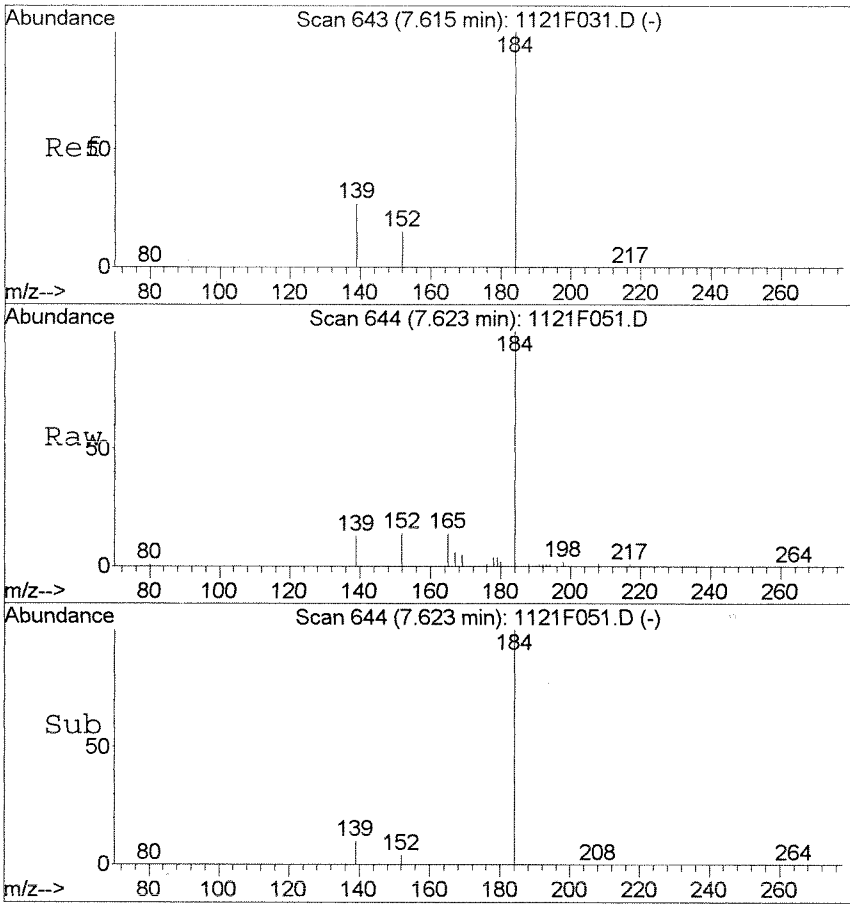




#16
Fluorene
Concen: 280.91 ng/ml
RT: 6.92 min Scan# 561
Delta R.T. 0.01 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

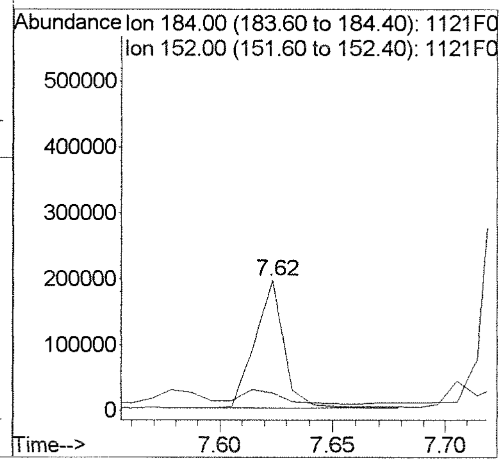
Tgt	Ion:166	Resp:	319231
Ion	Ratio	Lower	Upper
166	100		
165	88.9	59.8	119.8

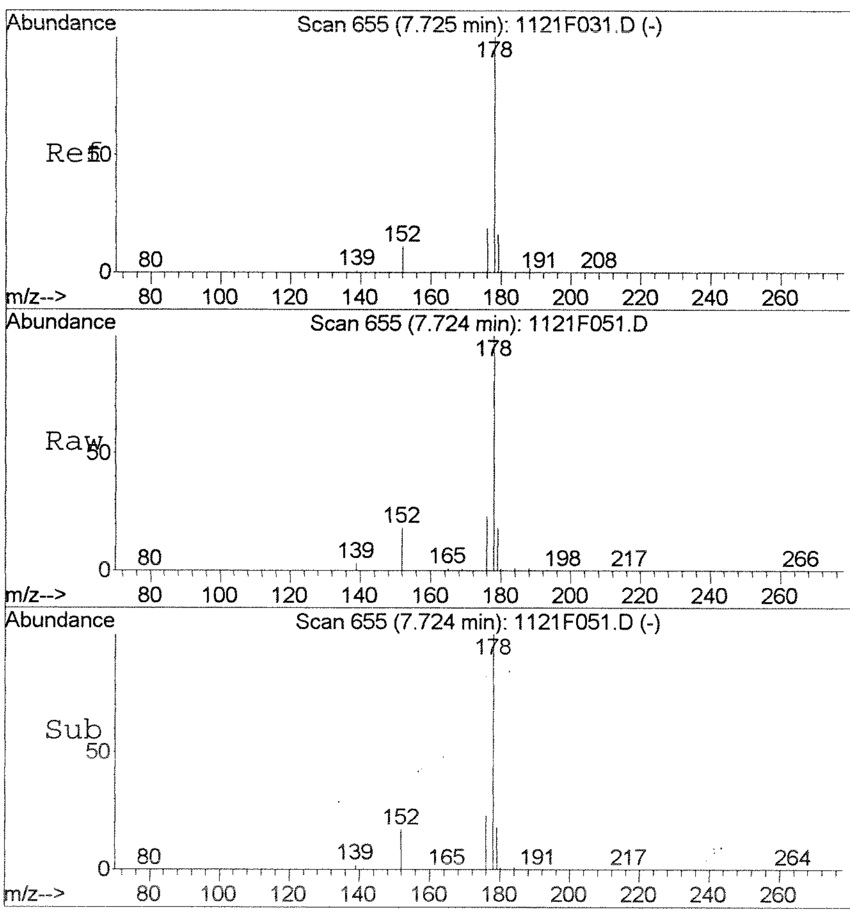




#23
Dibenzothiophene
Concen: 113.18 ng/ml
RT: 7.62 min Scan# 644
Delta R.T. 0.01 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

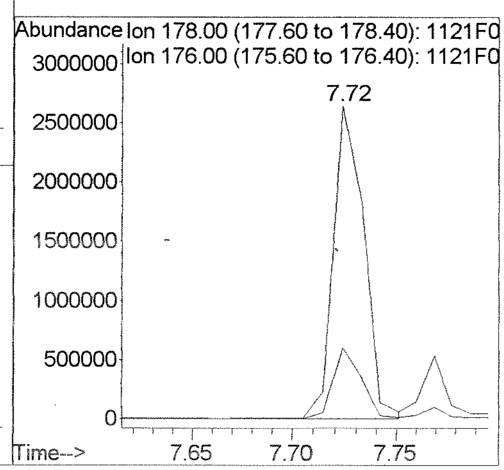
Tgt Ion:184	Resp:	178908	
Ion	Ratio	Lower	Upper
184	100		
152	7.8	0.0	39.1

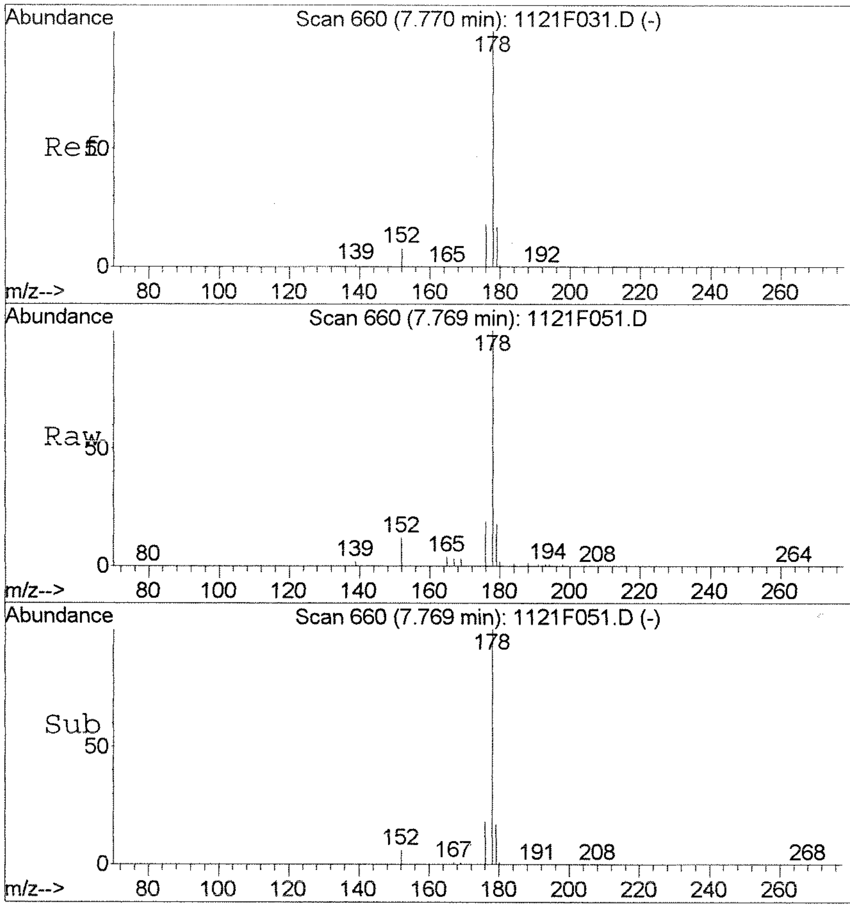




#27
Phenanthrene
Concen: 1651.36 ng/ml
RT: 7.72 min Scan# 655
Delta R.T. 0.01 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:178	Resp:	2669848	
Ion	Ratio	Lower	Upper
178	100		
176	22.7	0.0	51.0

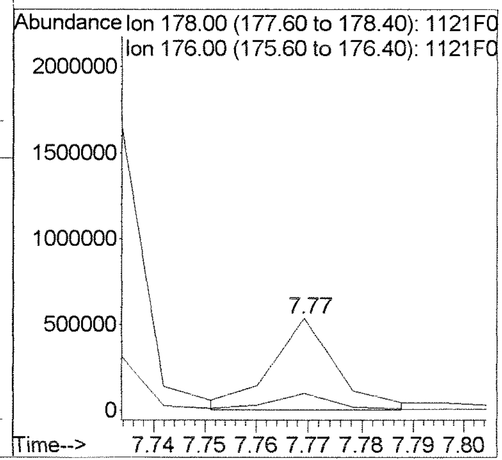


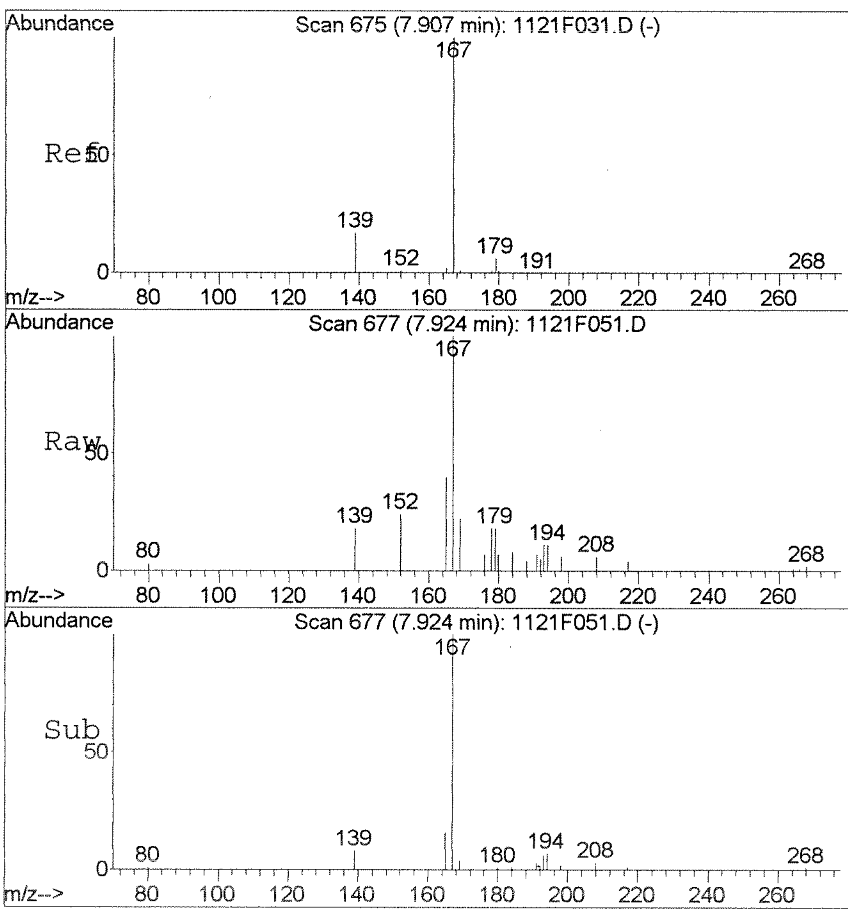


#28
Anthracene
Concen: 285.23 ng/ml m
RT: 7.77 min Scan# 660
Delta R.T. 0.01 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:178 Resp: 449305

Ion	Ratio	Lower	Upper
178	100		
176	18.7	0.0	49.7

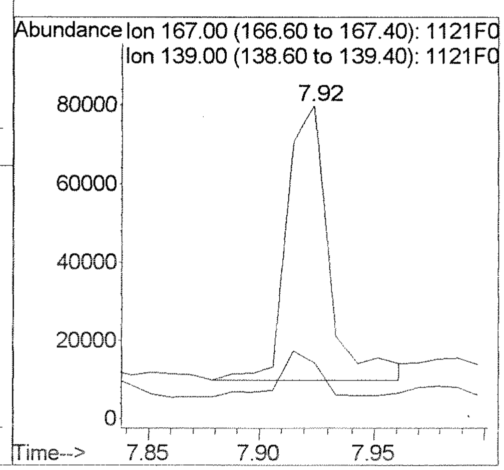


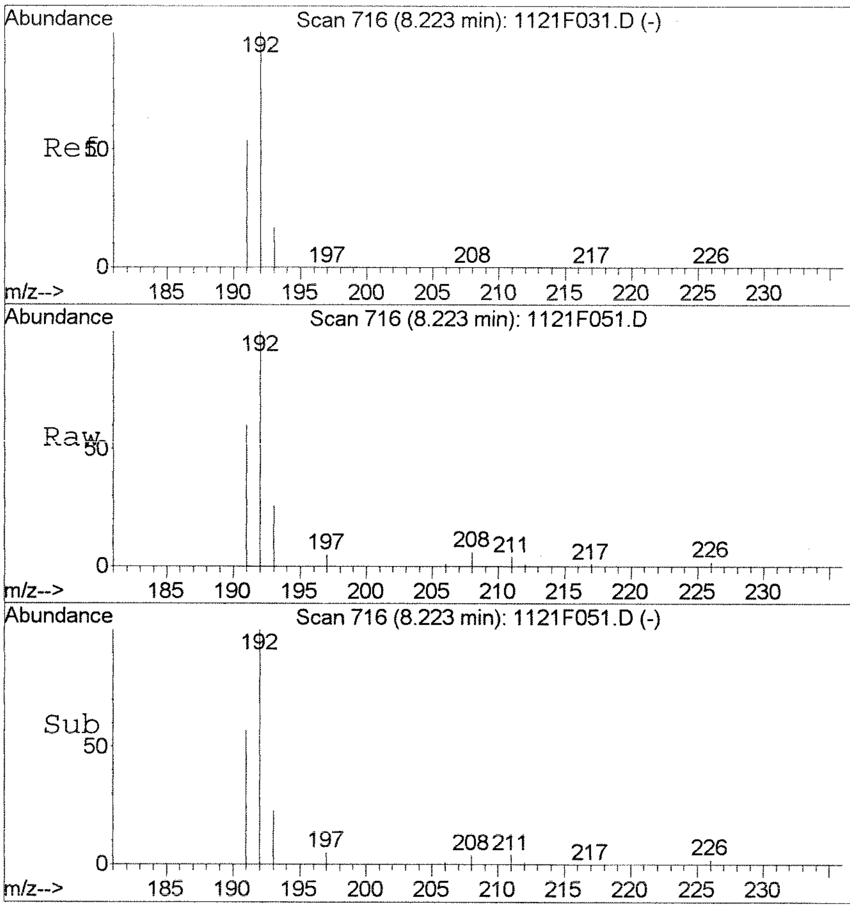


#29
Carbazole
Concen: 61.70 ng/ml
RT: 7.92 min Scan# 677
Delta R.T. 0.02 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:167 Resp: 89170

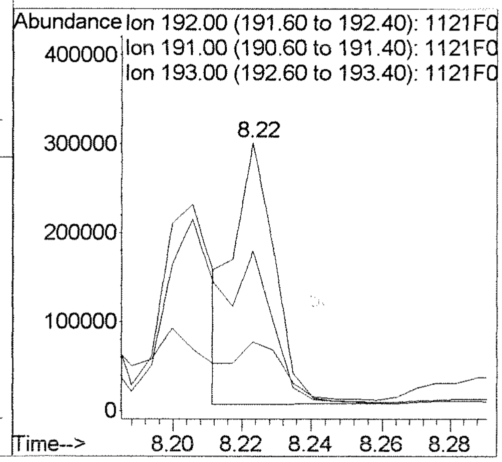
Ion	Ratio	Lower	Upper
167	100		
139	12.6	0.0	46.8

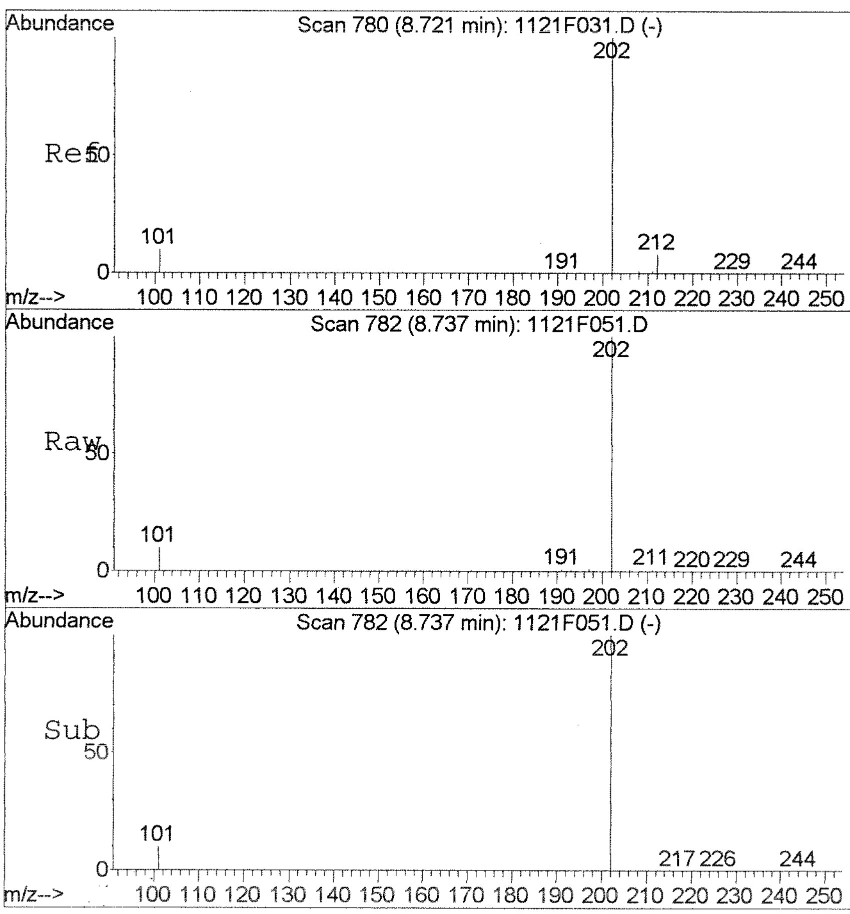




#30
1-Methylphenanthrene
Concen: 199.30 ng/ml
RT: 8.22 min Scan# 716
Delta R.T.   0.01 min
Lab File: 1121F051.D
Acq: 22 Nov 2008   4:07 am

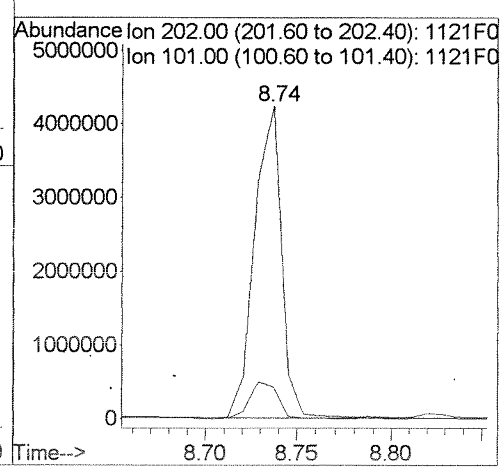
Tgt Ion:192	Resp:	239135	
Ion	Ratio	Lower	Upper
192	100		
191	57.9	29.0	89.0
193	21.0	0.0	45.4

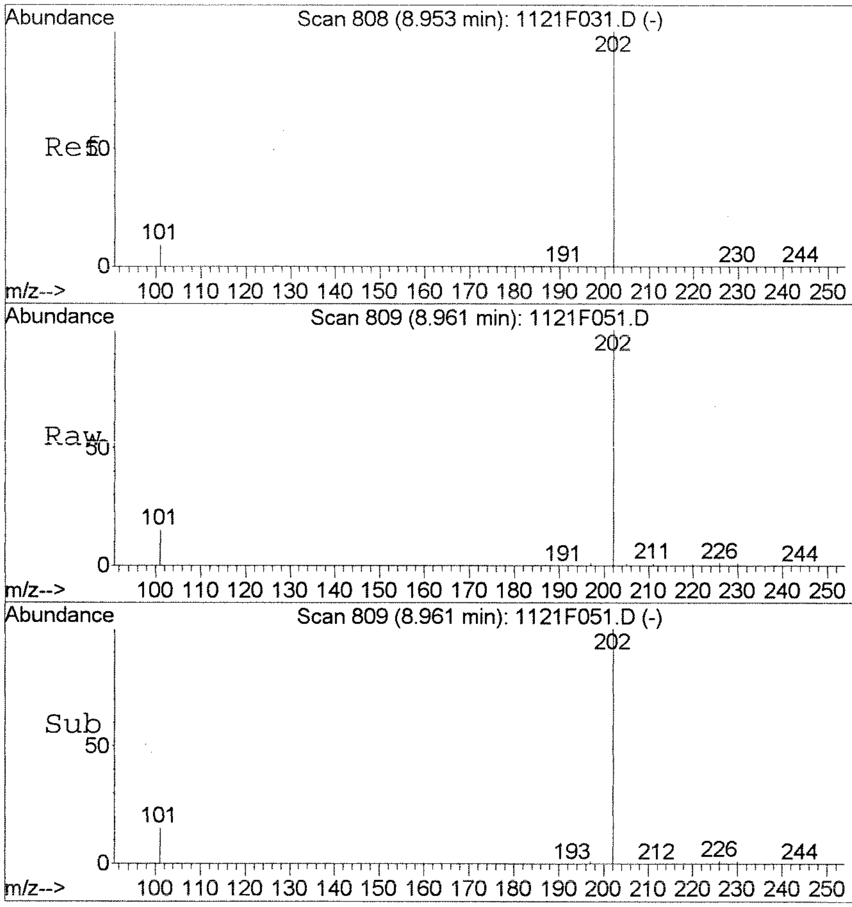




#35
Fluoranthene
Concen: 2404.63 ng/ml
RT: 8.74 min Scan# 782
Delta R.T.   0.02 min
Lab File: 1121F051.D
Acq: 22 Nov 2008   4:07 am

Tgt Ion:202	Resp:	4416081	
Ion	Ratio	Lower	Upper
202	100		
101	10.2	0.0	35.8

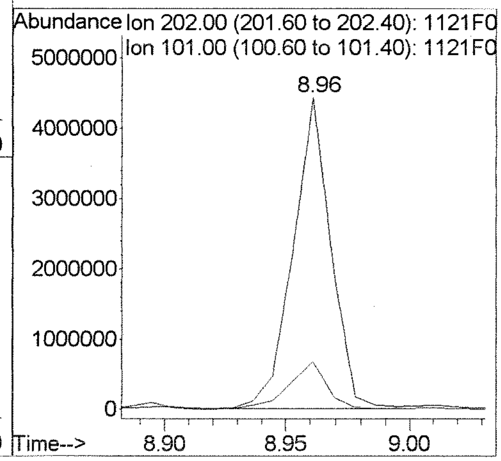


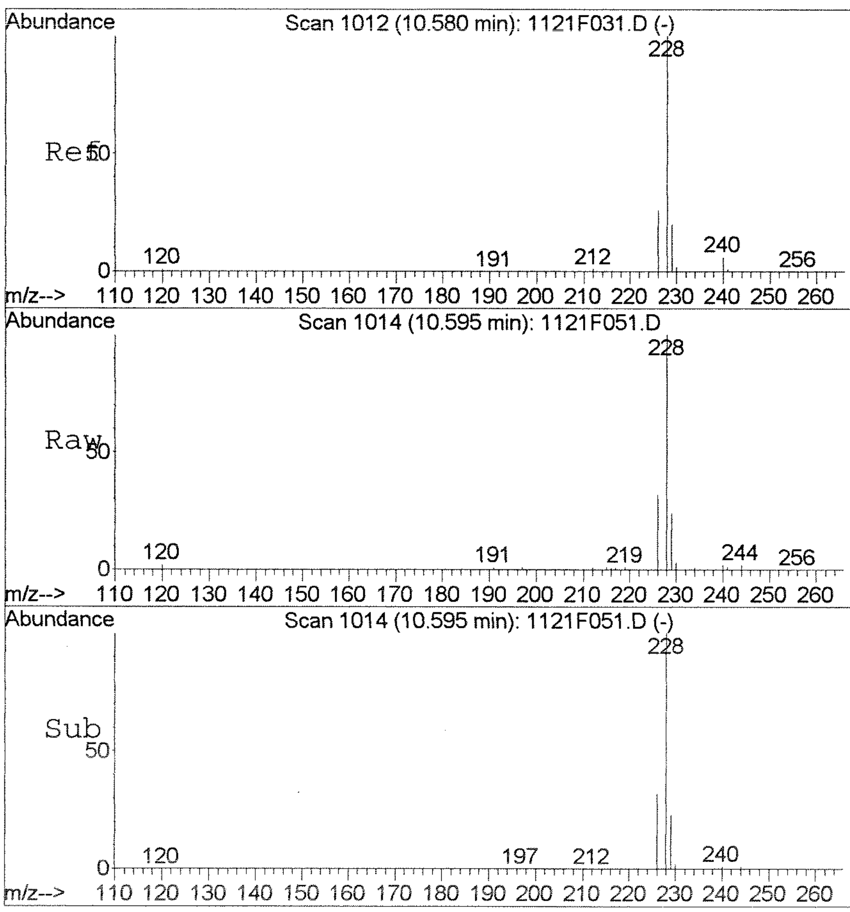


#38
Pyrene
Concen: 2146.34 ng/ml
RT: 8.96 min Scan# 809
Delta R.T. 0.02 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:202 Resp: 4656070

Ion	Ratio	Lower	Upper
202	100		
101	15.2	0.0	37.6

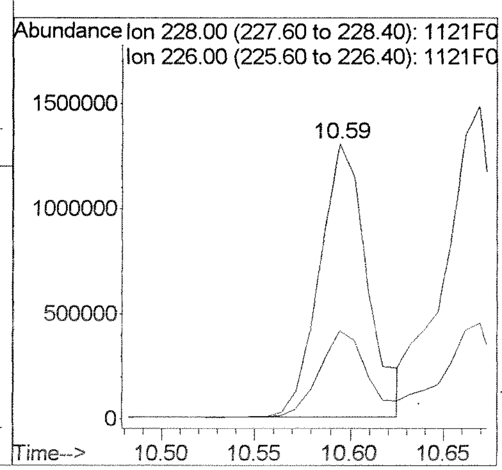


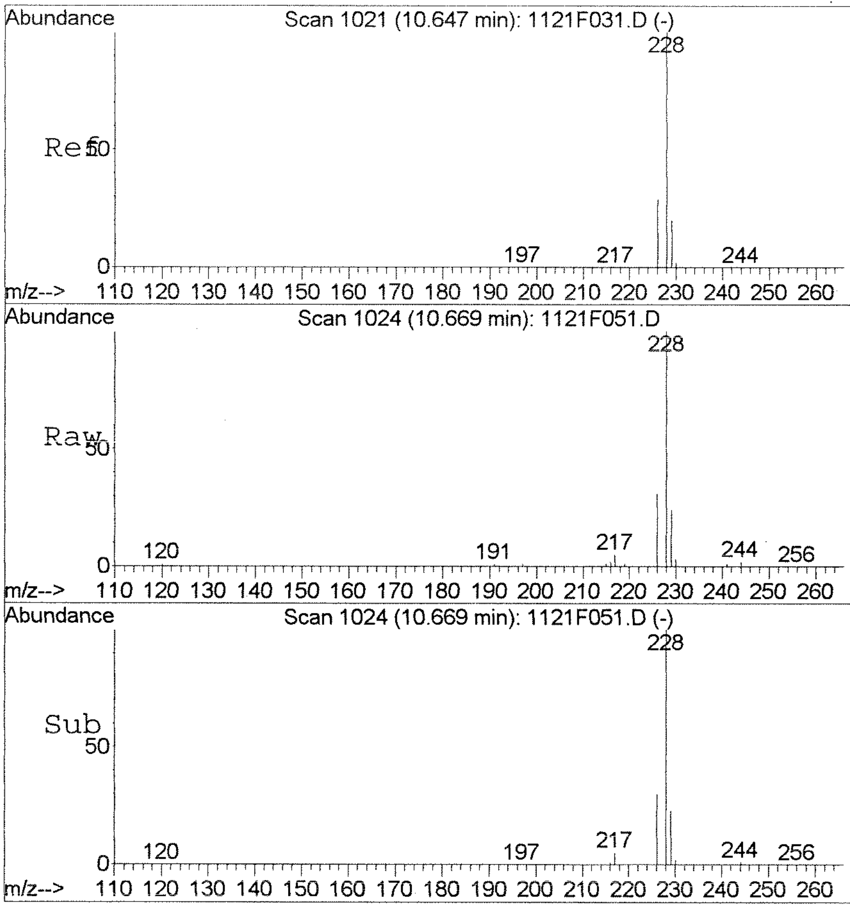


#43
Benz(a)anthracene
Concen: 1130.96 ng/ml
RT: 10.59 min Scan# 1014
Delta R.T. 0.03 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:228 Resp: 2225737

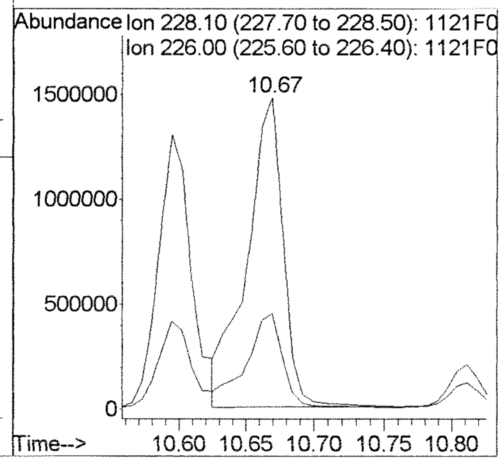
Ion	Ratio	Lower	Upper
228	100		
226	31.8	0.0	57.0

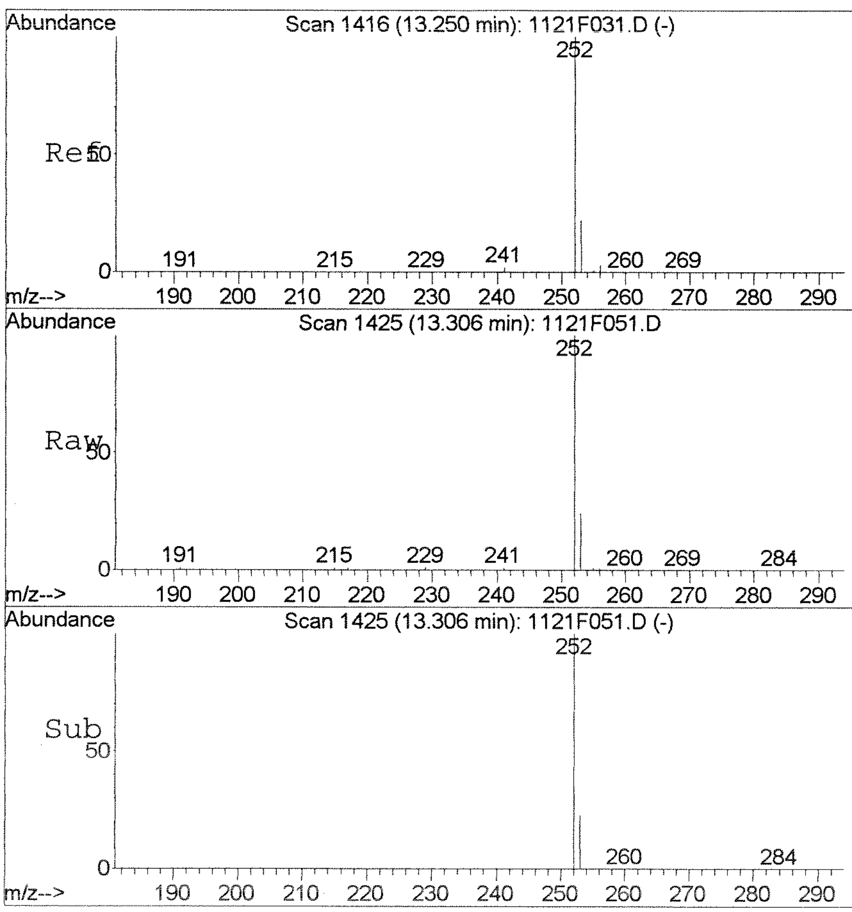




#44
Chrysene
Concen: 1429.29 ng/ml
RT: 10.67 min Scan# 1024
Delta R.T. 0.04 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

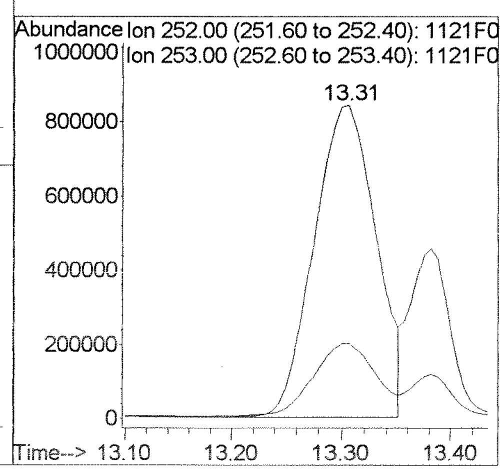
Tgt	Ion:228	Resp:	2762625
Ion	Ratio	Lower	Upper
228	100		
226	30.3	0.0	58.9

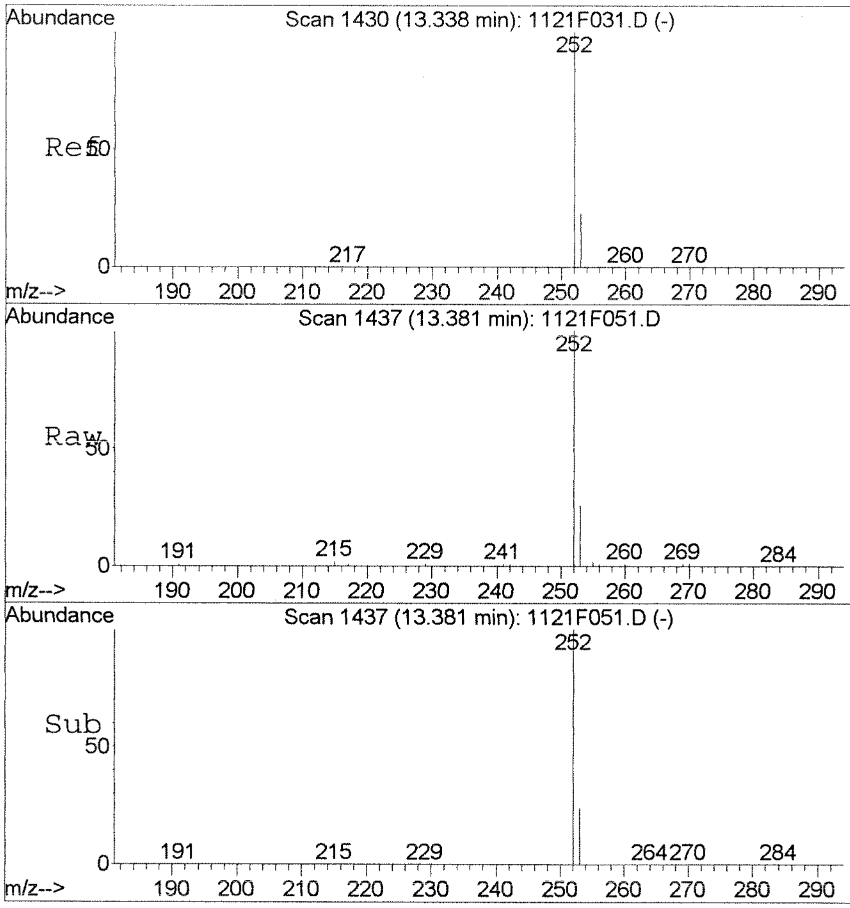




#50
Benzo(b)fluoranthene
Concen: 1556.13 ng/ml
RT: 13.31 min Scan# 1425
Delta R.T. 0.08 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt	Ion:252	Resp:	3211626
Ion	Ratio	Lower	Upper
252	100		
253	23.4	0.0	52.6

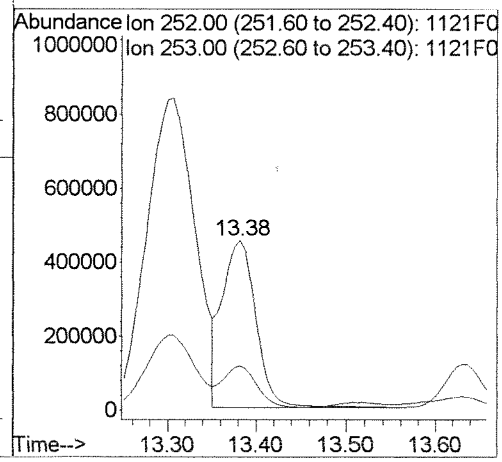


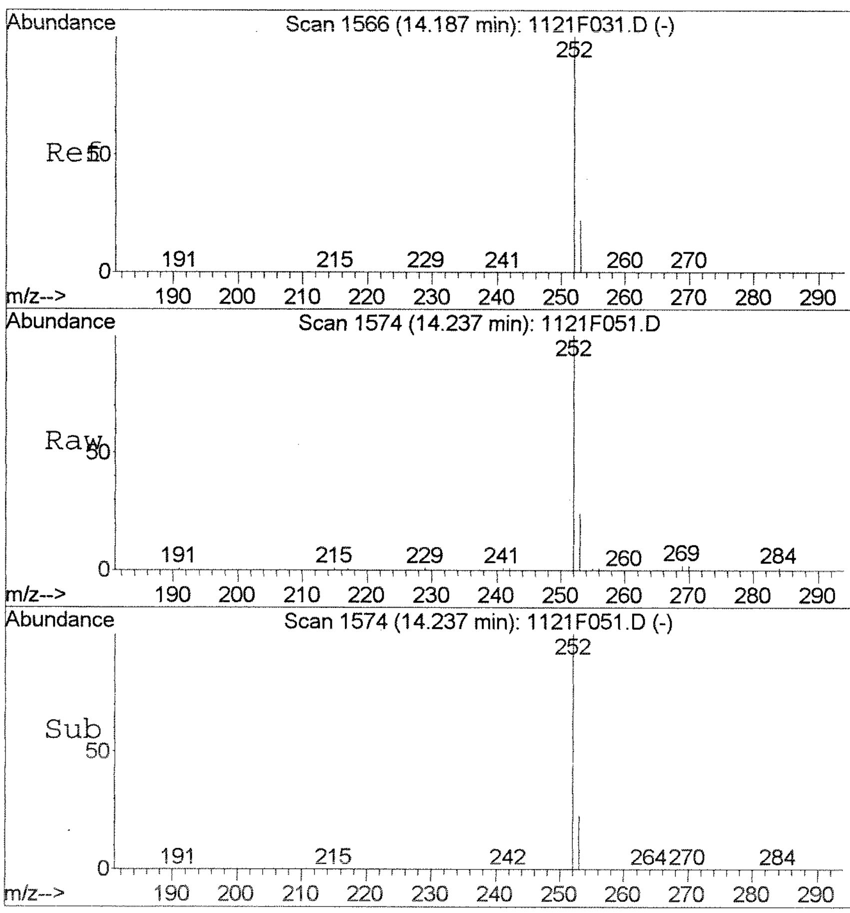


#51
Benzo(k)fluoranthene
Concen: 594.95 ng/ml
RT: 13.38 min Scan# 1437
Delta R.T. 0.07 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:252 Resp: 1179553

Ion	Ratio	Lower	Upper
252	100		
253	23.0	0.0	52.0

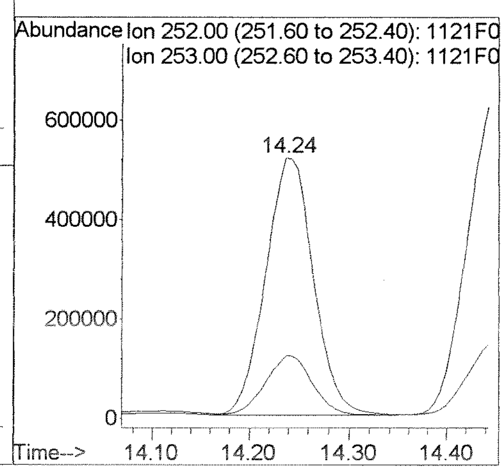


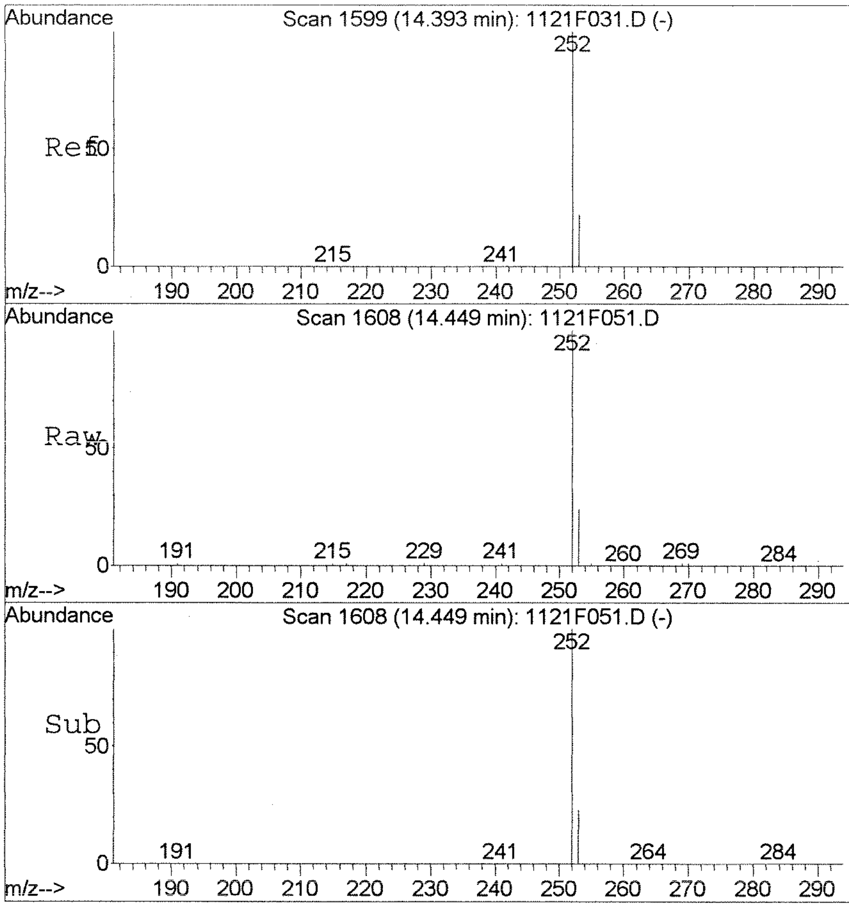


#52
Benzo(e)pyrene
Concen: 926.86 ng/ml
RT: 14.24 min Scan# 1574
Delta R.T. 0.07 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:252 Resp: 1737622

Ion	Ratio	Lower	Upper
252	100		
253	22.9	0.0	52.2

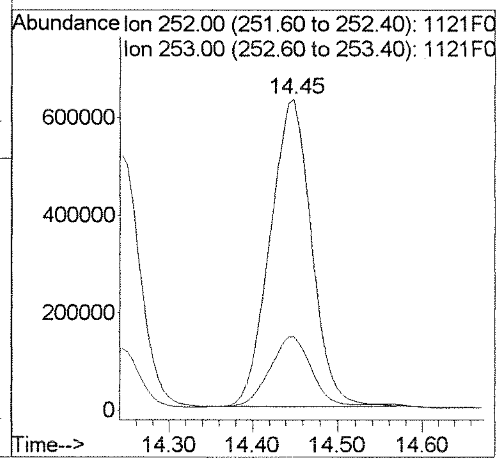


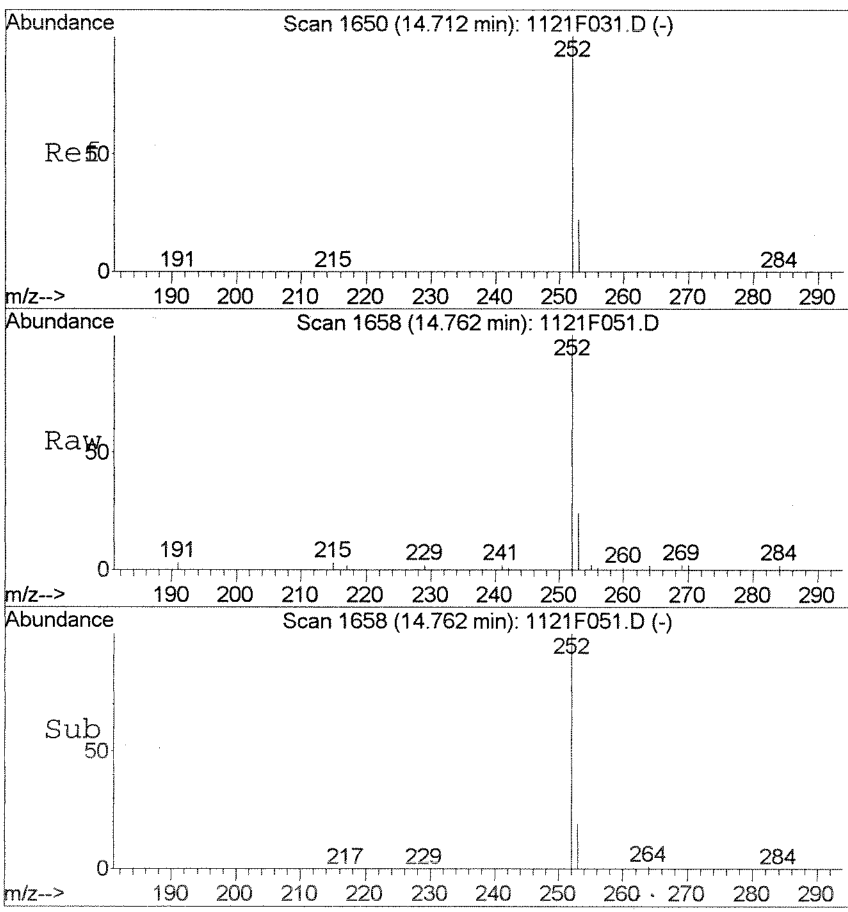


#53
Benzo(a)pyrene
Concen: 1253.23 ng/ml
RT: 14.45 min Scan# 1608
Delta R.T. 0.08 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:252 Resp: 2141505

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	52.2

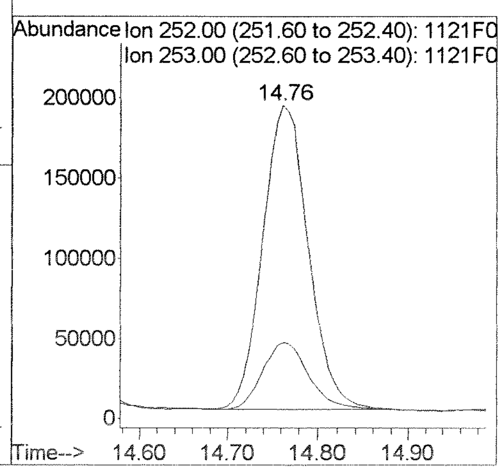


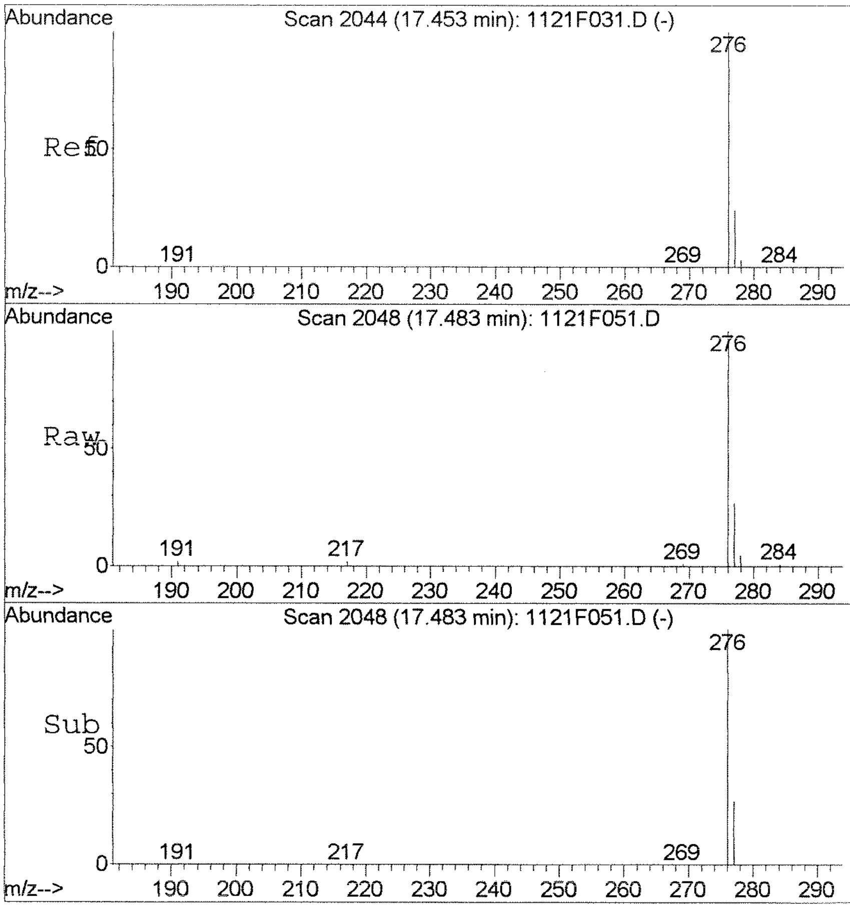


#54
Perylene
Concen: 397.93 ng/ml
RT: 14.76 min Scan# 1658
Delta R.T. 0.07 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:252 Resp: 667981

Ion	Ratio	Lower	Upper
252	100		
253	22.1	0.0	51.5

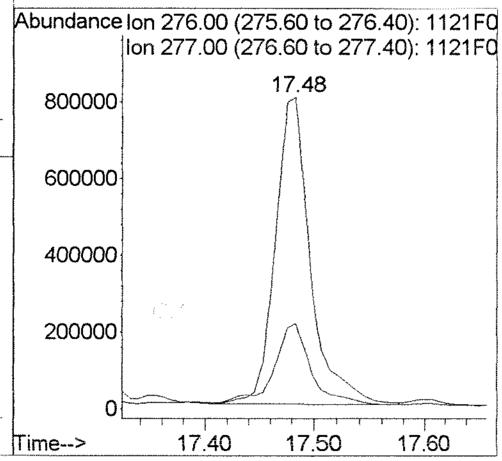


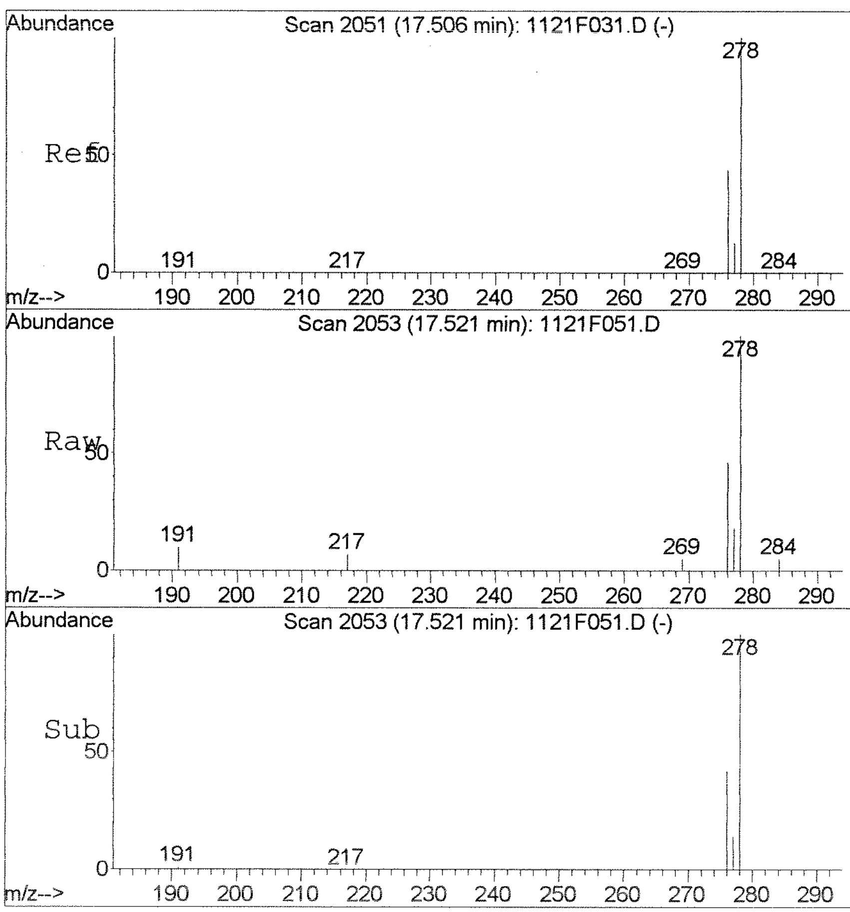


#55
Indeno(1,2,3-cd)pyrene
Concen: 1122.76 ng/ml
RT: 17.48 min Scan# 2048
Delta R.T. 0.04 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:276 Resp: 1780102

Ion	Ratio	Lower	Upper
276	100		
277	26.4	0.0	54.7

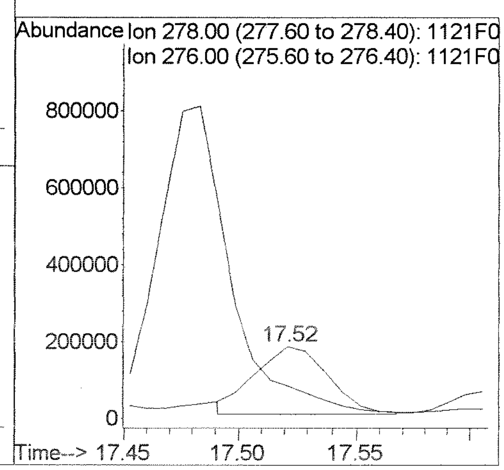


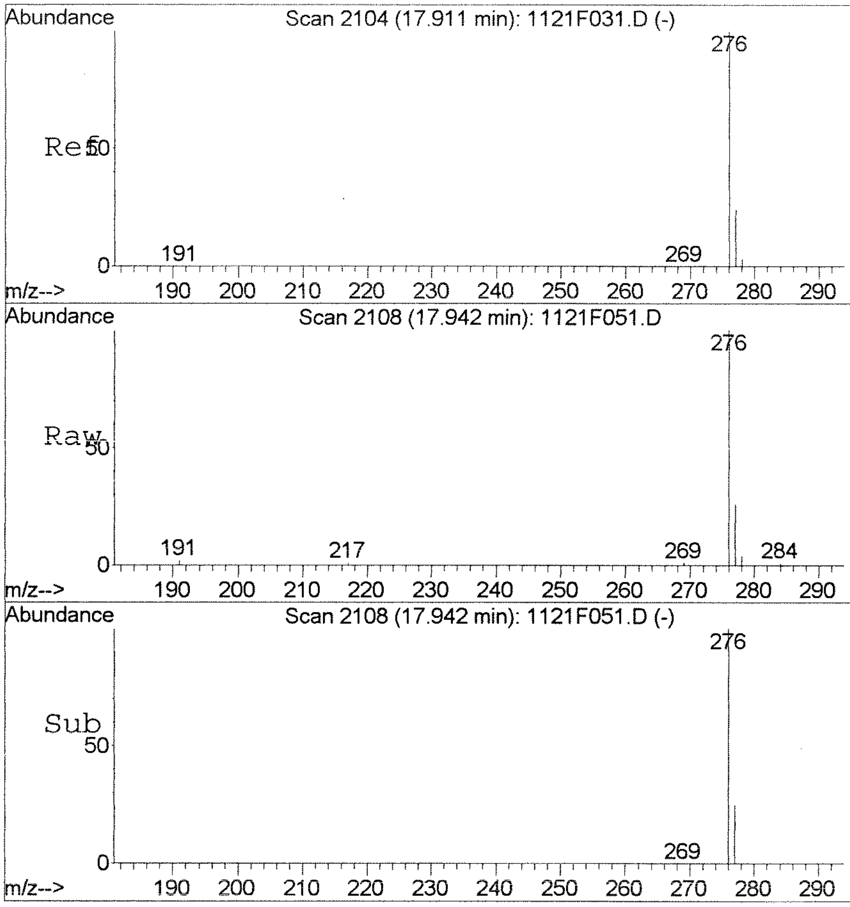


#56
Dibenz(a,h)anthracene
Concen: 231.17 ng/ml m
RT: 17.52 min Scan# 2053
Delta R.T. 0.03 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:278 Resp: 384694

Ion	Ratio	Lower	Upper
278	100		
276	45.8	0.0	59.7

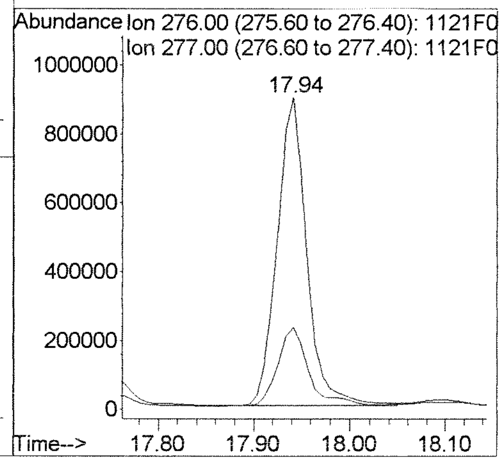




#57
Benzo(g,h,i)perylene
Concen: 1070.32 ng/ml
RT: 17.94 min Scan# 2108
Delta R.T. 0.04 min
Lab File: 1121F051.D
Acq: 22 Nov 2008 4:07 am

Tgt Ion:276 Resp: 1933317

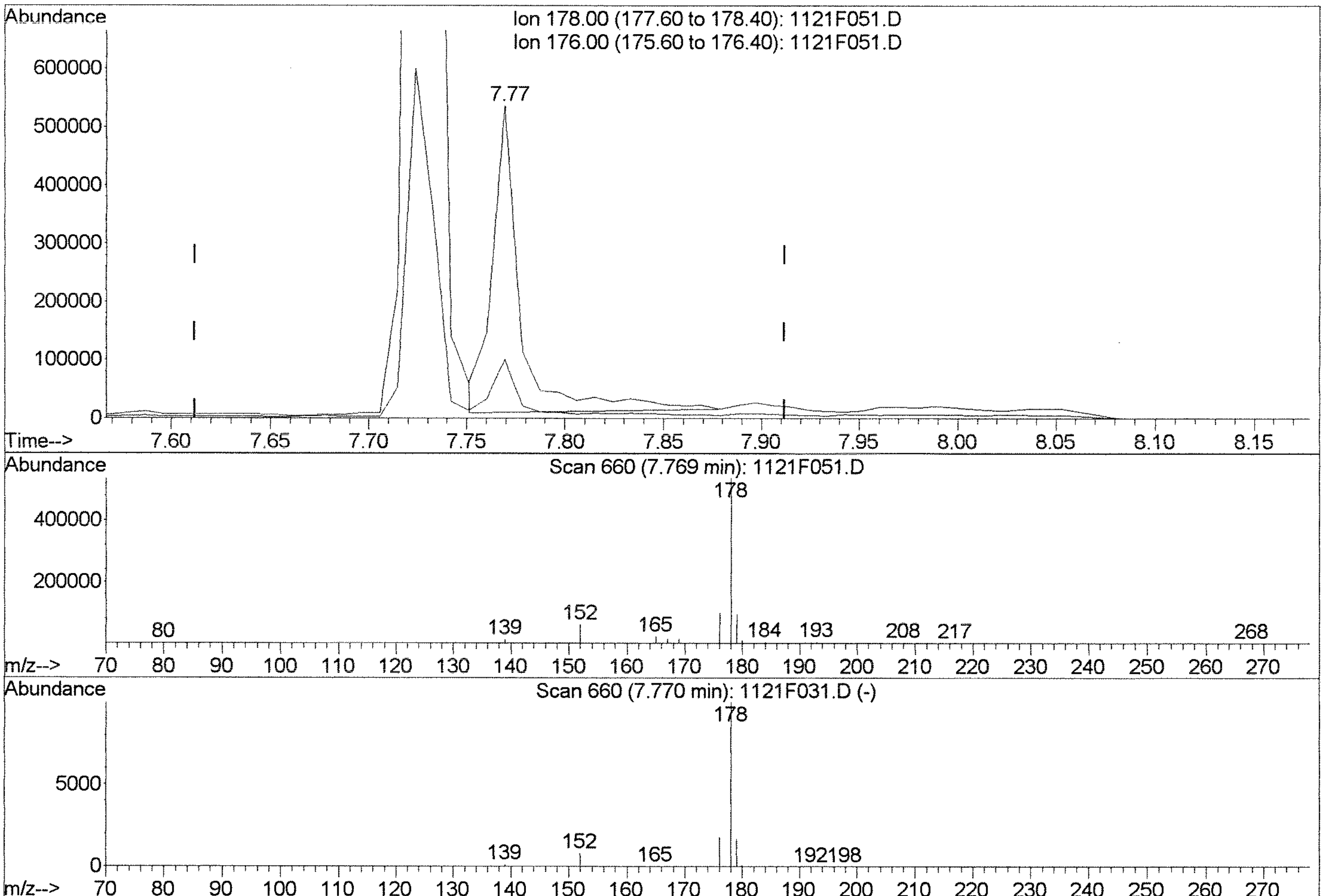
Ion	Ratio	Lower	Upper
276	100		
277	25.5	0.0	54.2



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F051.D Vial: 48
Acq On : 22 Nov 2008 4:07 am Operator: LWeiskopf
Sample : K0810639-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:03 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F051.D

(28) Anthracene (T)

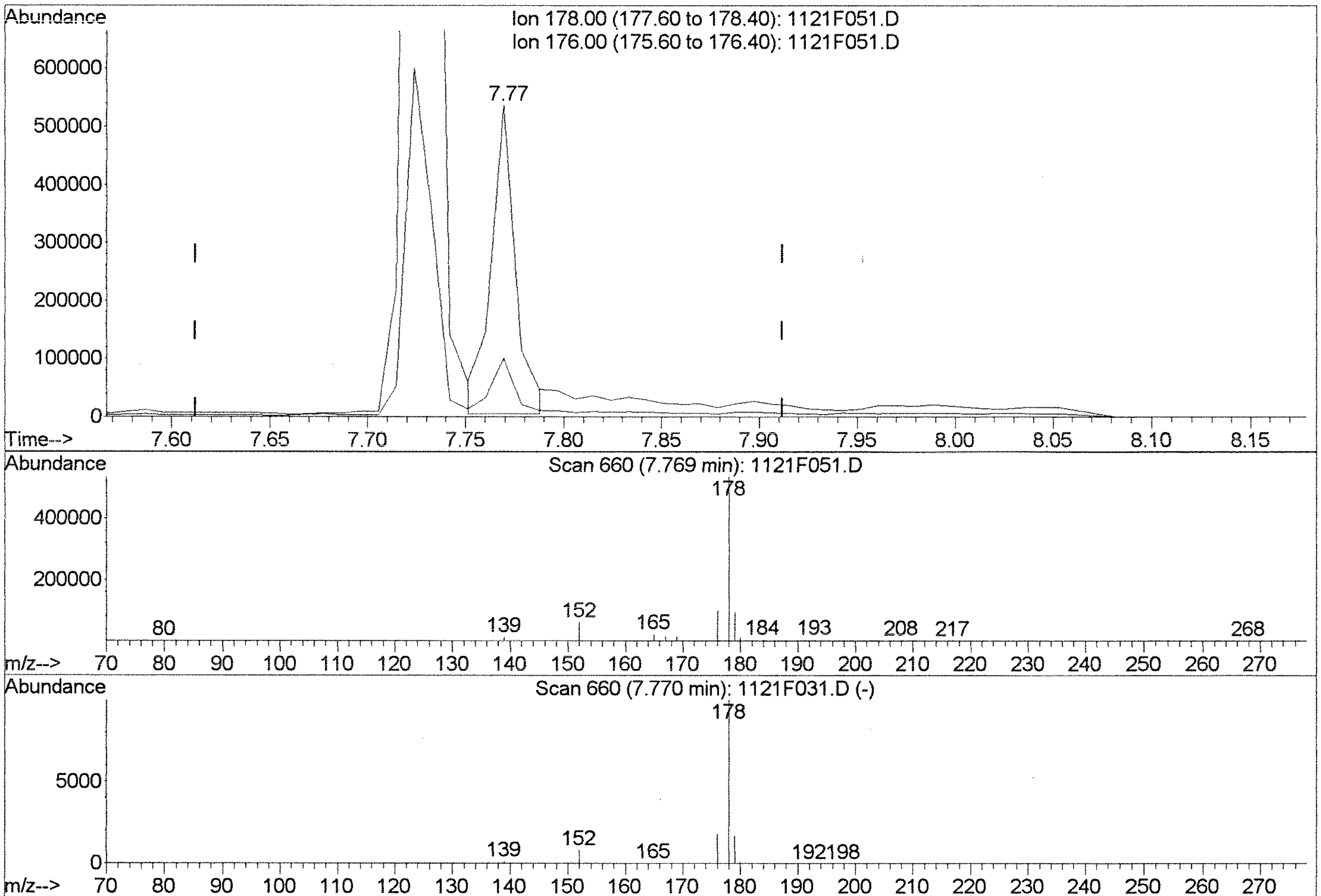
7.77min 331.17ng/ml

response 521678

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	18.33
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112108\1121F051.D   Vial: 48
Acq On : 22 Nov 2008 4:07 am   Operator: LWeiskopf
Sample : K0810639-009   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:03 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.77min 285.23ng/ml m

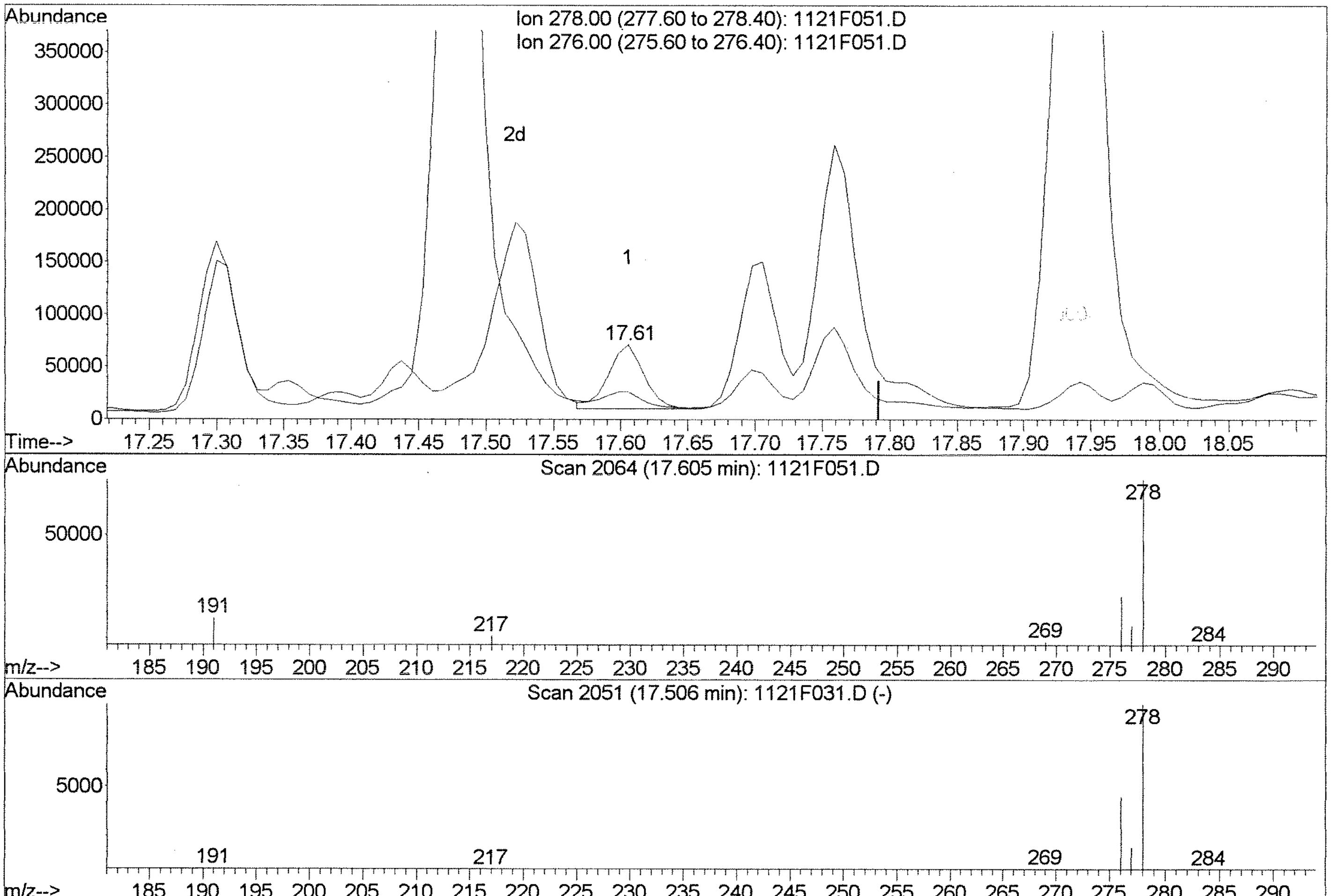
response 449305

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	18.74
0.00	0.00	0.00
0.00	0.00	0.00

OT 11/22/08

Data File : J:\MS11\DATA\112108\1121F051.D Vial: 48
Acq On : 22 Nov 2008 4:07 am Operator: LWeiskopf
Sample : K0810639-009 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:03 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F051.D

(56) Dibenz(a,h)anthracene (T)

17.61min 67.79ng/ml

response 112815

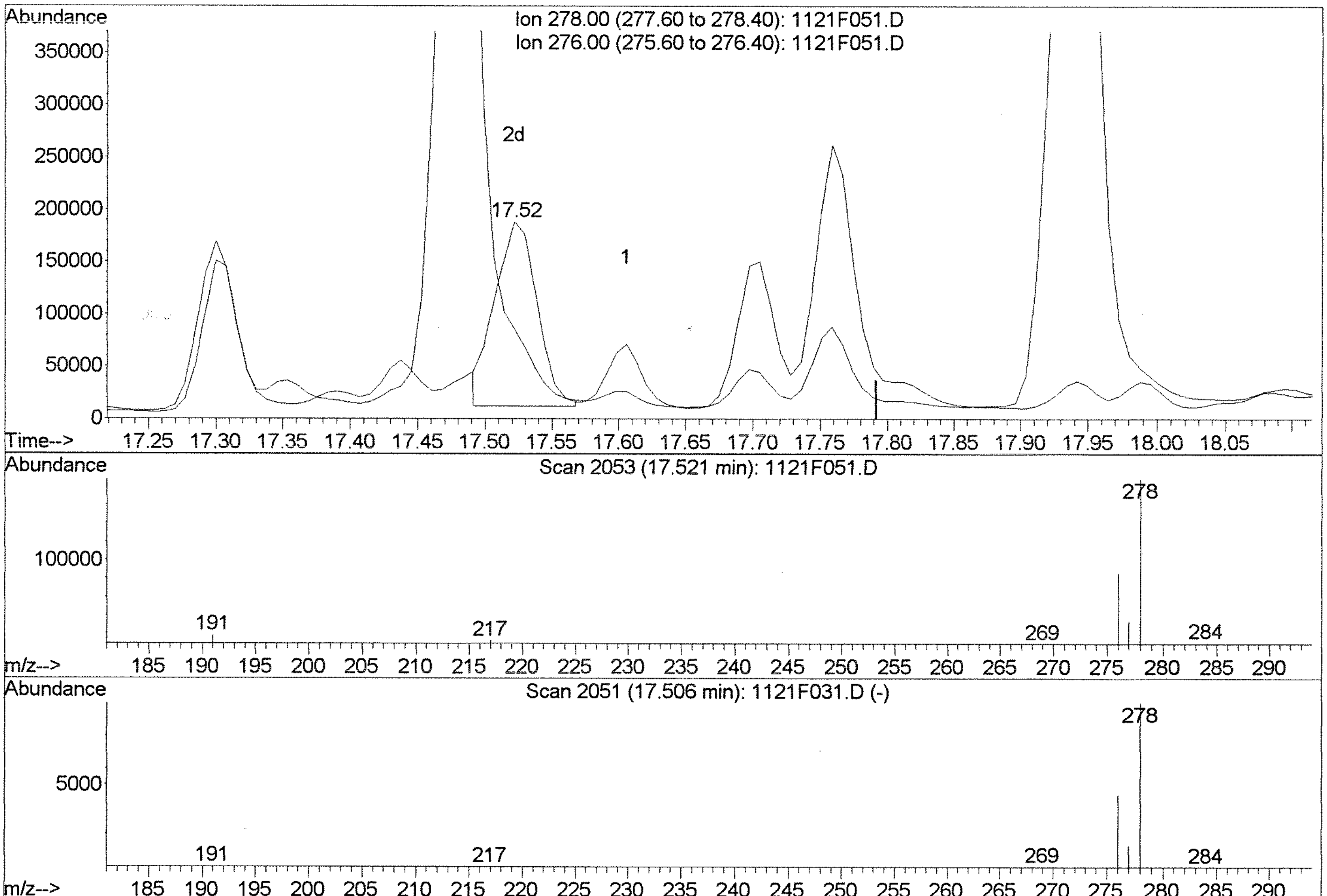
Ion	Exp%	Act%
278.00	100	100
276.00	29.70	24.28
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112108\1121F051.D
Acq On : 22 Nov 2008 4:07 am
Sample : K0810639-009
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 14:04 2008

Vial: 48
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Multiple Level Calibration



TIC: 1121F051.D

(56) Dibenz(a,h)anthracene (T)

17.52min 231.17ng/ml m

response 384694

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	45.77
0.00	0.00	0.00
0.00	0.00	0.00

WP RW 11/23/08

Exception Report

Data File:	J:\MS11\DATA\112208\1122F046.D	**Date Acquired:**	11/23/2008 03:58
Lab ID:	K0810639-009	**Date Quantitated:**	11/23/2008 11:26
RunType:	DL	**Batch ID:**	KWG0812625
Matrix:	SEDIMENT	**Analysis Method:**	8270C SIM
		ListJoinID:	LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: KW 11/24/08

Secondary Review: 11-30-8

Printed: 11/23/2008 13:28:33

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/25/2008	**Receive Date:**	07/29/2008

Analysis Lot:	KWG0812625	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
		Prep Date:	11/11/2008		
Prep Ref:	776073				

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112208\1122F034.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112208\1122F046.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 03:58	**Quant Date:**	11/23/2008 11:26	**Vial:**	39
Run Type:	DL			**Dilution:**	5.0
Lab ID:	K0810639-009			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	0.00	136	240074	200.00	OK
2	Acenaphthene-d10	6.46	0.01	164	123982	200.00	OK
3	Phenanthrene-d10	7.69	0.00	188	228079	200.00	OK
4	Chrysene-d12	10.57	0.00	240	263793	200.00	OK
5	Perylene-d12	14.55	0.00	264	315159	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	21670	25.72	64	10-128	OK	NR
3	Fluoranthene-d10	8.69	-0.01	0.00	212	39590m	25.46	64	29-121	OK	NR
4	Terphenyl-d14	9.08	0.00	0.00	244	46508	34.05	85	24-141	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.05	-0.01	0.00	128	14029	9.59	46	D	NR
1	2-Methylnaphthalene	5.61		0.00	142	5379	5.27	25	D	NR
2	Acenaphthylene	6.34		0.00	152	8567	6.13	29	D	NR
2	Acenaphthene	6.48		0.00	154	42155	49.62	240	D	NR
2	Dibenzofuran	6.63		0.00	168	12763	9.99	48	D	NR
2	Fluorene	6.91		0.00	166	58234	57.10	270	D	NR
3	Phenanthrene	7.71		0.00	178	494082	308.19	1500	D	NR
3	Anthracene	7.75		0.00	178	119946	76.79	370	D	NR
3	Fluoranthene	8.70		0.00	202	872314	479.01	2300	D	
4	Pyrene	8.93	-0.01	0.00	202	935508	471.41	2300	D	
4	Benz(a)anthracene	10.55		0.00	228	376558	209.16	1000	D	NR
4	Chrysene	10.62		0.00	228	510252	288.58	1400	D	NR
5	Benzo(b)fluoranthene	13.20		0.00	252	641590	294.99	1400	D	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112208\1122F046.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 03:58	**Quant Date:**	11/23/2008 11:26	**Vial:**	39
Run Type:	DL			**Dilution:**	5.0
Lab ID:	K0810639-009			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.29		0.00	252	235543	112.73	540	D	NR
5	Benzo(a)pyrene	14.34	0.01	0.00	252	419662	233.04	1100	D	NR
5	Indeno(1,2,3-cd)pyrene	17.42		0.00	276	345631	206.86	990	D	NR
5	Dibenz(a,h)anthracene	17.46	-0.01	0.00	278	68986	39.34	190	D	NR
5	Benzo(g,h,i)perylene	17.87		0.00	276	391818	205.83	980	D	NR

Prep Amount:	17.42 g	**Dilution:**	5.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	60.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112208\1122F046.D
Acq On : 23 Nov 2008 3:58 am
Sample : K0810639-009DIL 5X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:10:49 2008

Vial: 39
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.04	136	240074	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.46	164	123982	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.69	188	228079	200.00 ng/ml	0.00
37) Chrysene-d12	10.57	240	263793	200.00 ng/ml	-0.02
49) Perylene-d12	14.55	264	315159	200.00 ng/ml	-0.04
System Monitoring Compounds					
15) Fluorene-d10	6.88	176	21670	25.72 ng/ml	0.00
Spiked Amount 200.000			Recovery =	12.86%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00 ng/ml	
Spiked Amount 375.000			Recovery =	0.00%	
36) Fluoranthene-d10	8.69	212	39590m	25.46 ng/ml	-0.02
Spiked Amount 200.000			Recovery =	12.73%	
42) Terphenyl-d14	9.08	244	46508	34.05 ng/ml	-0.02
Spiked Amount 200.000			Recovery =	17.02%	
Target Compounds					Qvalue
2) Naphthalene	5.05	128	14029	9.59 ng/ml	99
3) 2-Methylnaphthalene	5.61	142	5379	5.27 ng/ml	95
4) 1-Methylnaphthalene	5.69	142	2350	2.57 ng/ml	88
5) Biphenyl	5.98	154	2757m	2.21 ng/ml	
6) 2,6-Dimethylnaphthalene	6.11	156	4782	5.37 ng/ml	99
11) Acenaphthylene	6.34	152	8567	6.13 ng/ml	99
12) Acenaphthene	6.48	154	42155	49.62 ng/ml	96
13) Dibenzofuran	6.63	168	12763	9.99 ng/ml	66
14) 2,3,5-Trimethylnaphthalene	6.78	170	5826	7.80 ng/ml	74
16) Fluorene	6.91	166	58234	57.10 ng/ml	92
23) Dibenzothiophene	7.61	184	31420	20.04 ng/ml	96
27) Phenanthrene	7.71	178	494082	308.19 ng/ml	100
28) Anthracene	7.75	178	119946	76.79 ng/ml	98
30) 1-Methylphenanthrene	8.21	192	42913	36.07 ng/ml	96
35) Fluoranthene	8.70	202	872314	479.01 ng/ml	85
38) Pyrene	8.93	202	935508	471.41 ng/ml	87
43) Benz(a)anthracene	10.55	228	376558	209.16 ng/ml	93
44) Chrysene	10.62	228	510252	288.58 ng/ml	100
50) Benzo(b)fluoranthene	13.20	252	641590	294.99 ng/ml	99
51) Benzo(k)fluoranthene	13.29	252	235543	112.73 ng/ml	99
52) Benzo(e)pyrene	14.13	252	357385	180.89 ng/ml	98
53) Benzo(a)pyrene	14.34	252	419662	233.04 ng/ml	99
54) Perylene	14.65	252	127320	71.97 ng/ml	99
55) Indeno(1,2,3-cd)pyrene	17.42	276	345631	206.86 ng/ml	99
56) Dibenz(a,h)anthracene	17.46	278	68986	39.34 ng/ml	54

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F046.D Vial: 39
Acq On : 23 Nov 2008 3:58 am Operator: LWeiskopf
Sample : K0810639-009DIL 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:10:49 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

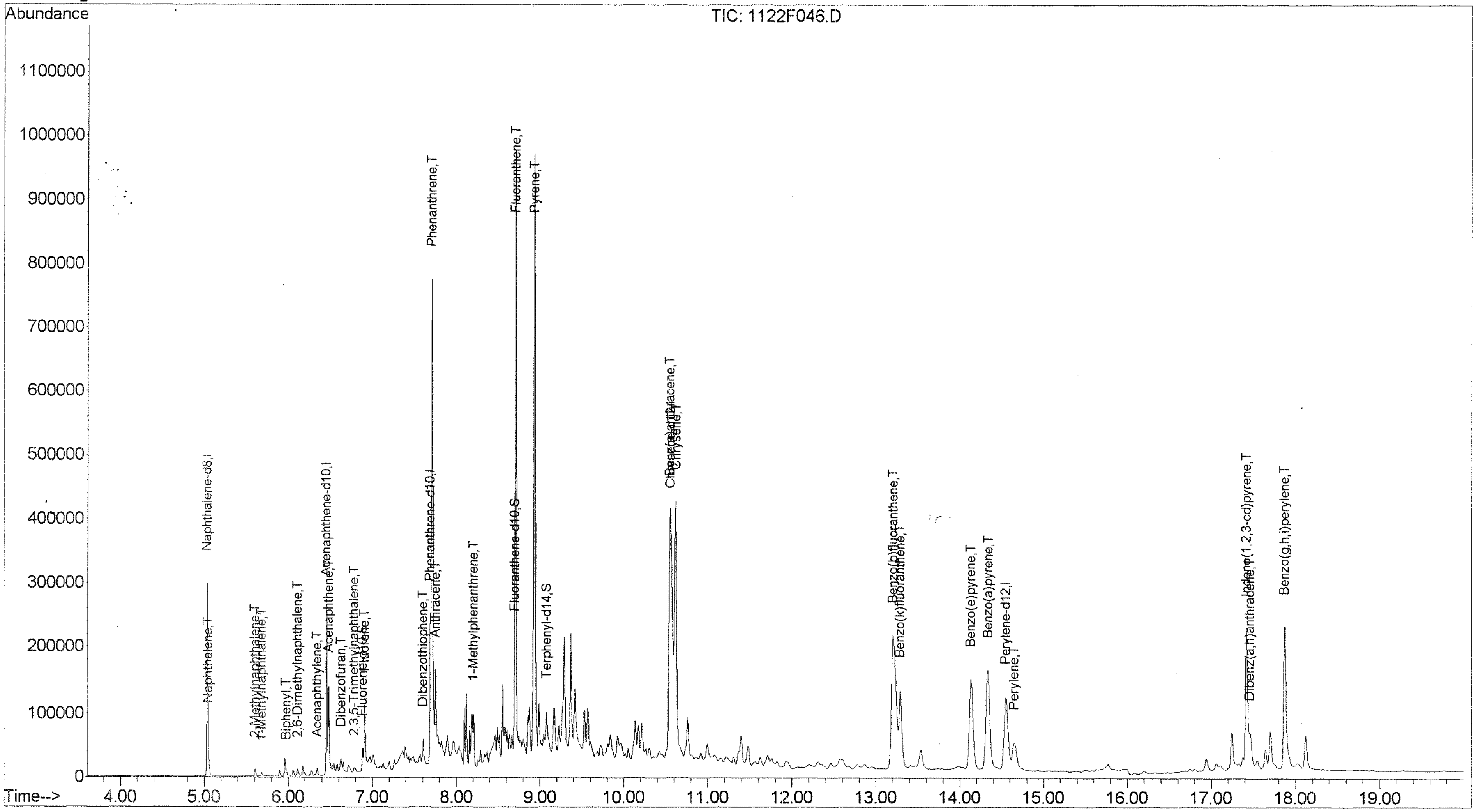
Compound	R.T.	QIon	Response	Conc Unit	Qvalue
57) Benzo(g,h,i)perylene	17.87	276	391818	205.83 ng/ml	98

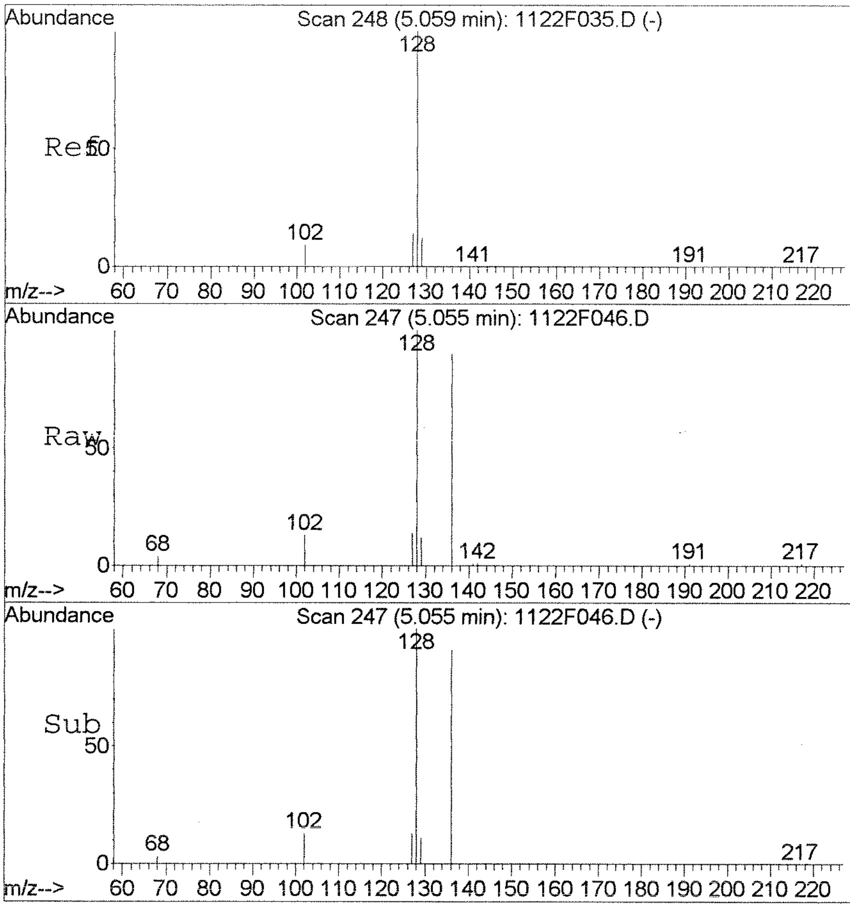
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F046.D Vial: 39
Acq On : 23 Nov 2008 3:58 am Operator: LWeiskopf
Sample : K0810639-009DIL 5X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:26 2008 Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 11:10:16 2008
Response via : Initial Calibration

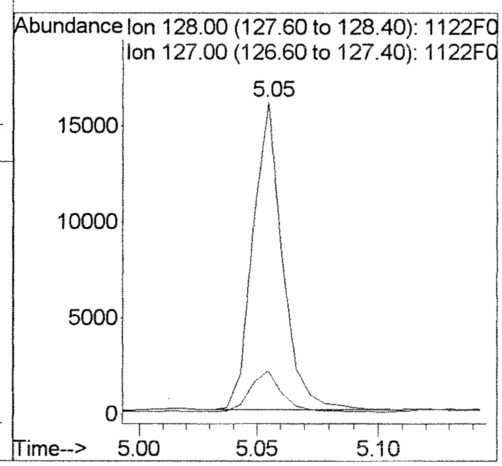


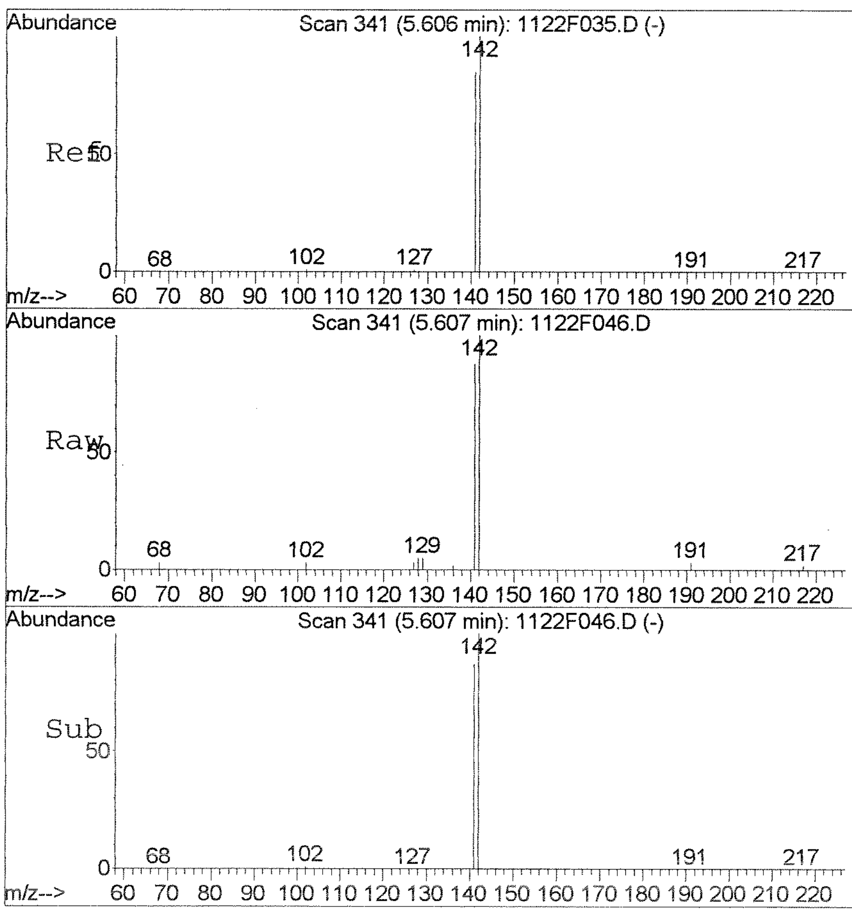


#2
Naphthalene
Concen: 9.59 ng/ml
RT: 5.05 min Scan# 247
Delta R.T. -0.00 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:128 Resp: 14029

Ion	Ratio	Lower	Upper
128	100		
127	13.3	0.0	43.8

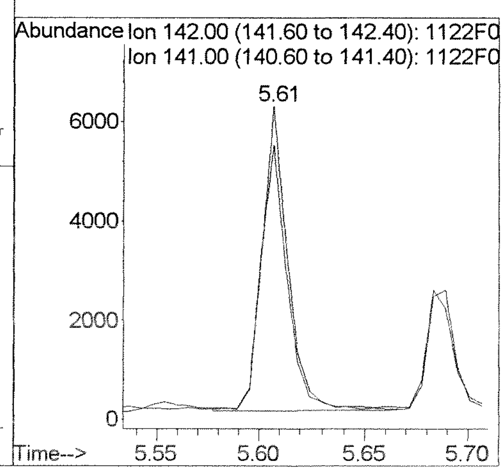


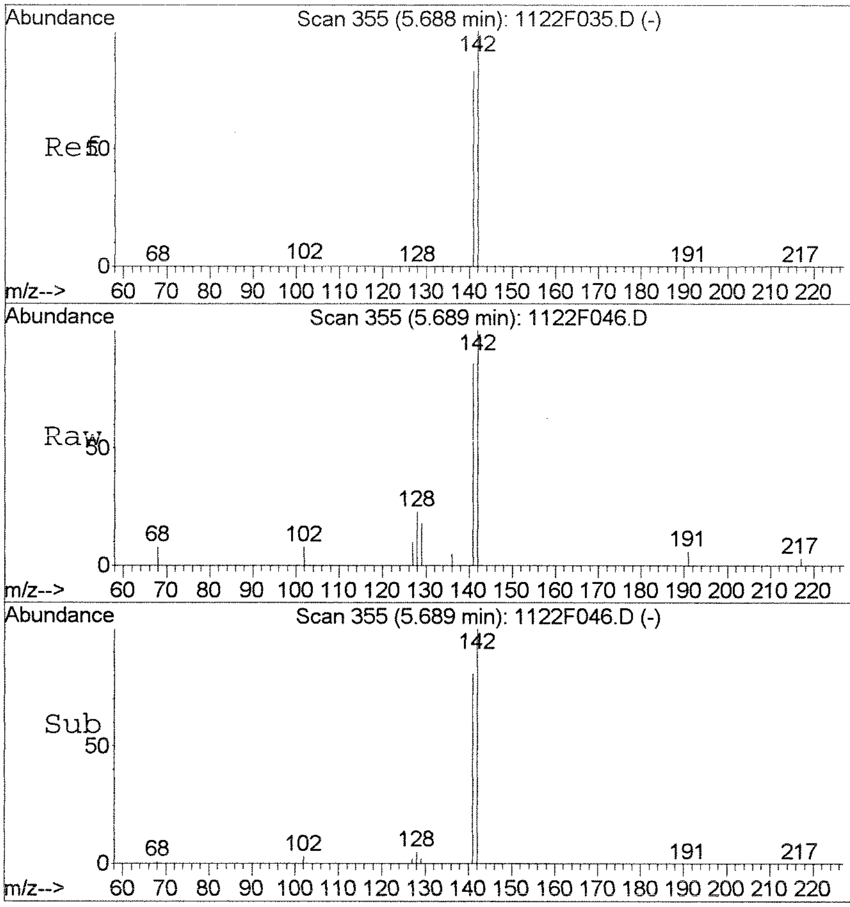


#3
2-Methylnaphthalene
Concen: 5.27 ng/ml
RT: 5.61 min Scan# 341
Delta R.T. -0.00 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:142 Resp: 5379

Ion	Ratio	Lower	Upper
142	100		
141	87.2	52.4	112.4

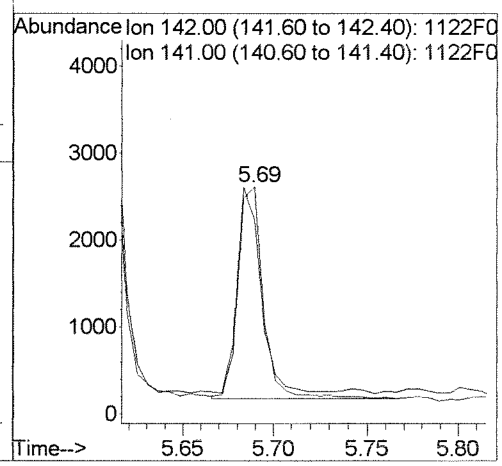


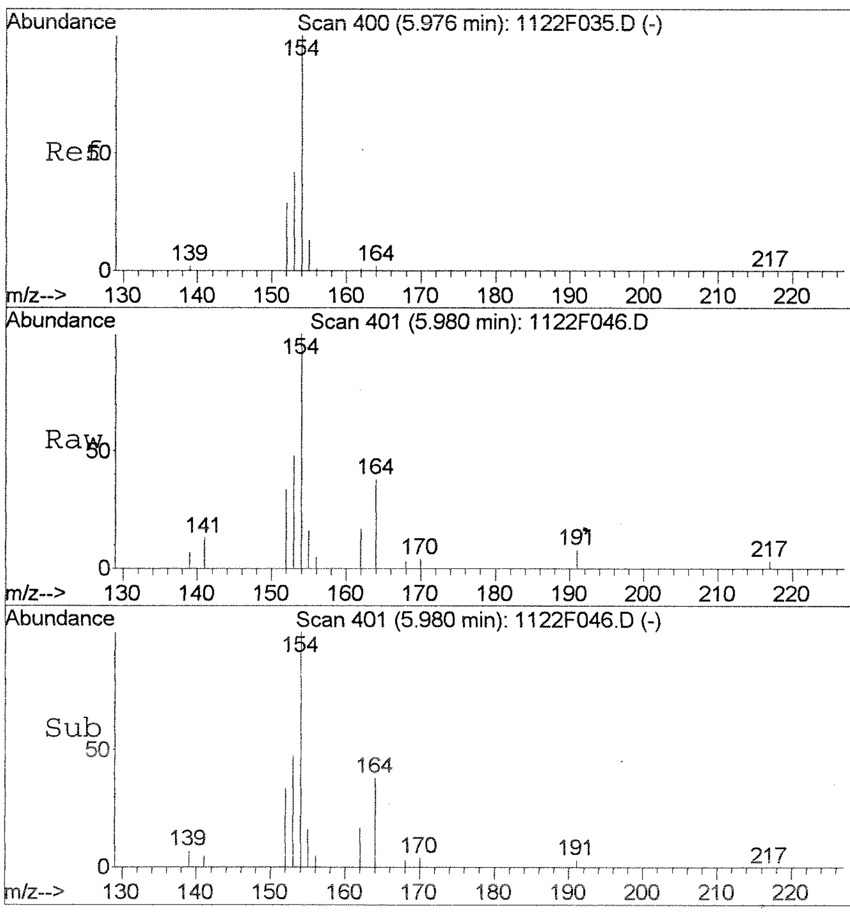


#4
1-Methylnaphthalene
Concen: 2.57 ng/ml
RT: 5.69 min Scan# 355
Delta R.T. 0.00 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:142 Resp: 2350

Ion	Ratio	Lower	Upper
142	100		
141	81.9	63.0	123.0

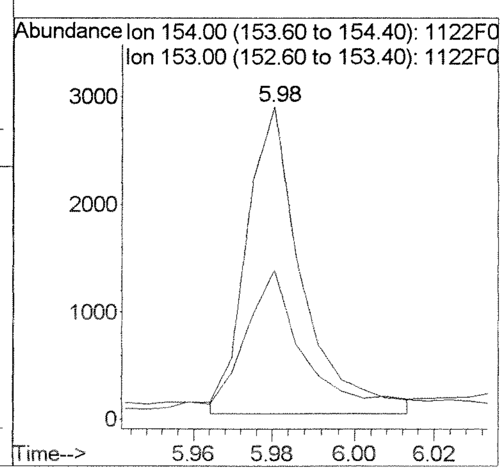


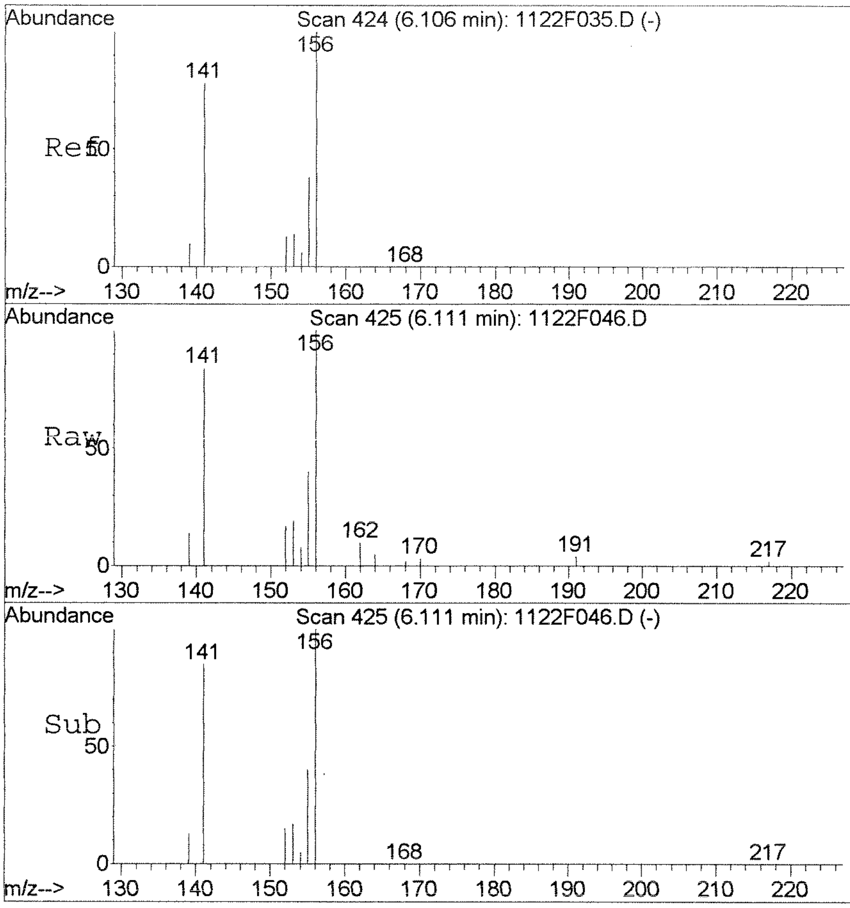


#5
Biphenyl
Concen: 2.21 ng/ml m
RT: 5.98 min Scan# 401
Delta R.T. -0.00 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:154 Resp: 2757

Ion	Ratio	Lower	Upper
154	100		
153	48.0	10.4	70.4

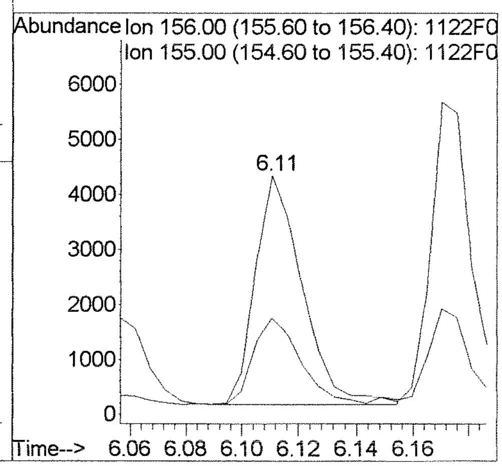


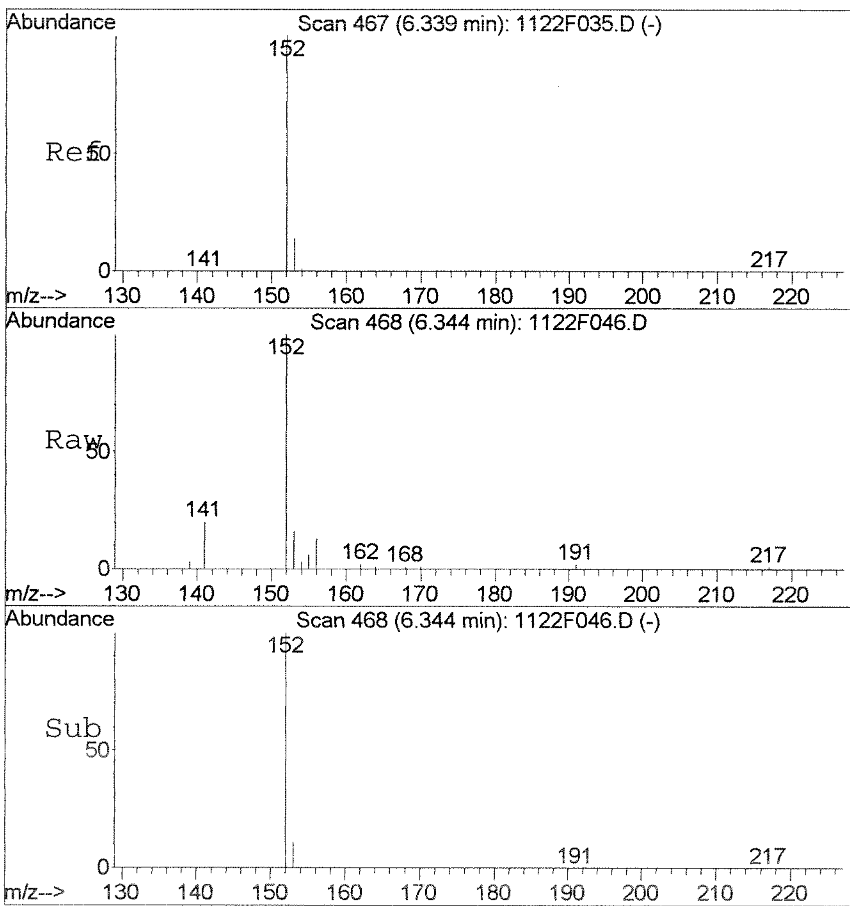


#6
2,6-Dimethylnaphthalene
Concen: 5.37 ng/ml
RT: 6.11 min Scan# 425
Delta R.T. -0.01 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:156 Resp: 4782

Ion	Ratio	Lower	Upper
156	100		
155	37.7	7.3	67.3

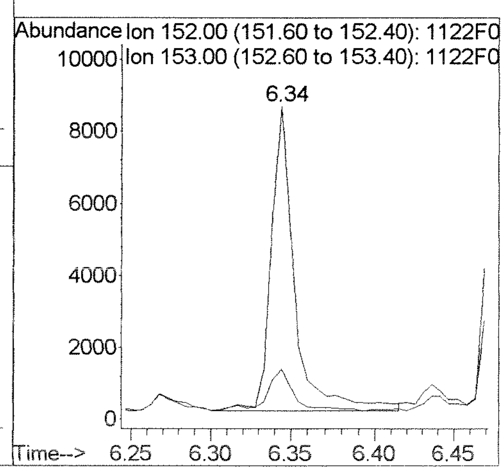


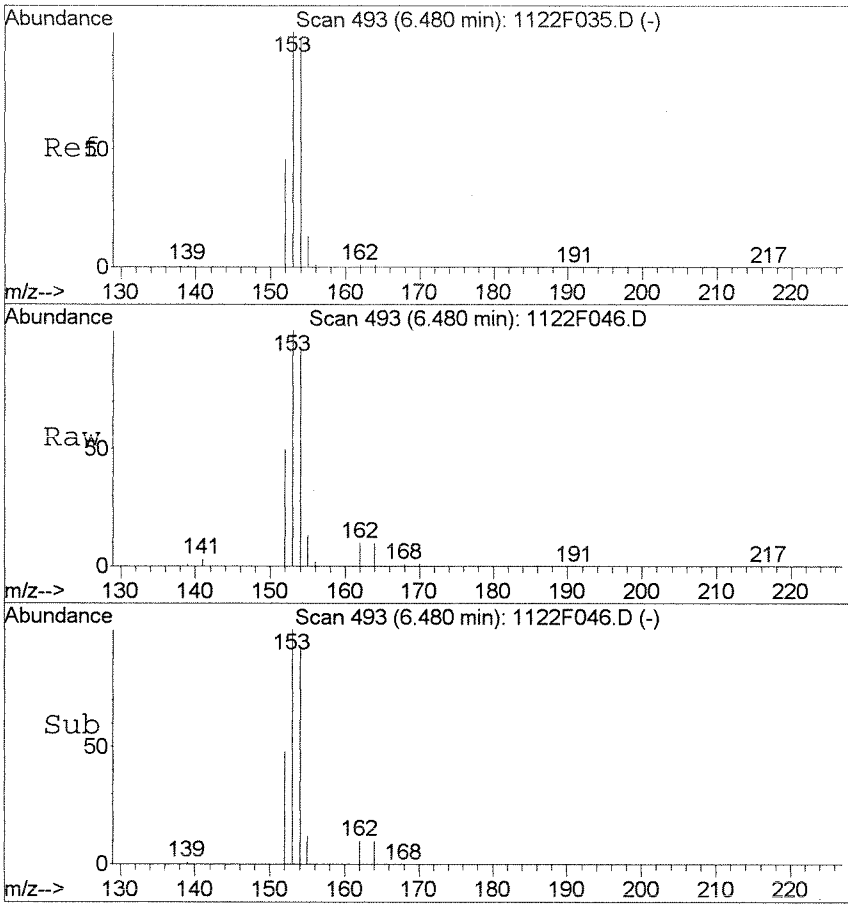


#11
Acenaphthylene
Concen: 6.13 ng/ml
RT: 6.34 min Scan# 468
Delta R.T. -0.01 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:152 Resp: 8567

Ion	Ratio	Lower	Upper
152	100		
153	13.6	0.0	43.0

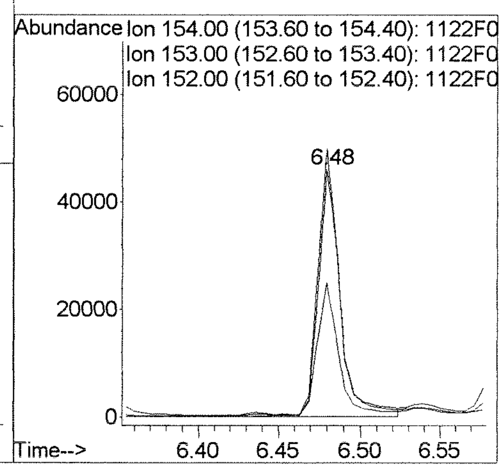


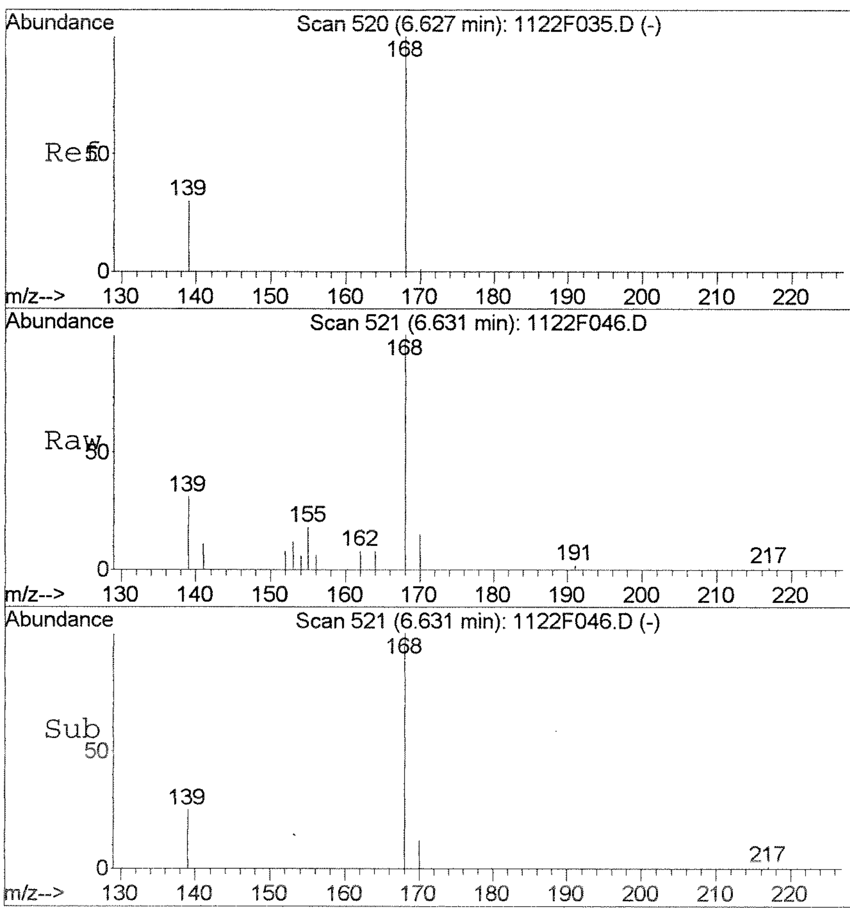


#12
Acenaphthene
Concen: 49.62 ng/ml
RT: 6.48 min Scan# 493
Delta R.T. -0.01 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:154 Resp: 42155

Ion	Ratio	Lower	Upper
154	100		
153	108.1	81.9	141.9
152	53.6	26.8	86.8

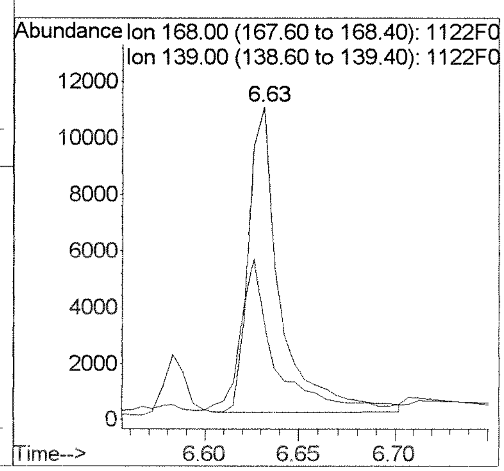


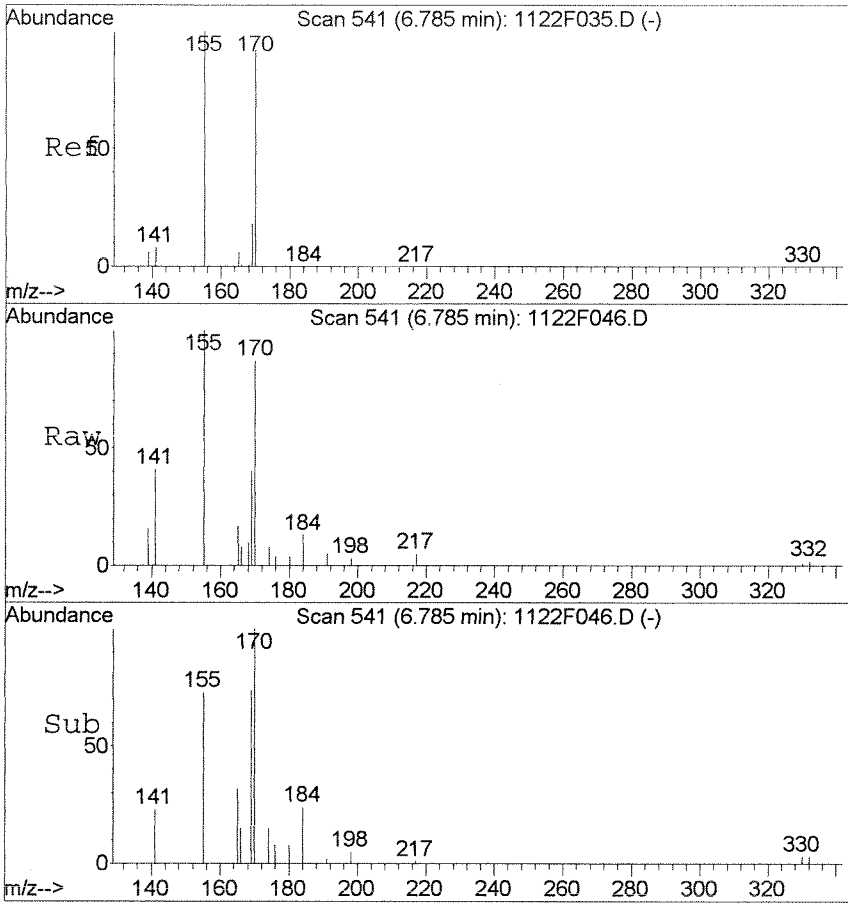


#13
Dibenzofuran
Concen: 9.99 ng/ml
RT: 6.63 min Scan# 521
Delta R.T. -0.00 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:168 Resp: 12763

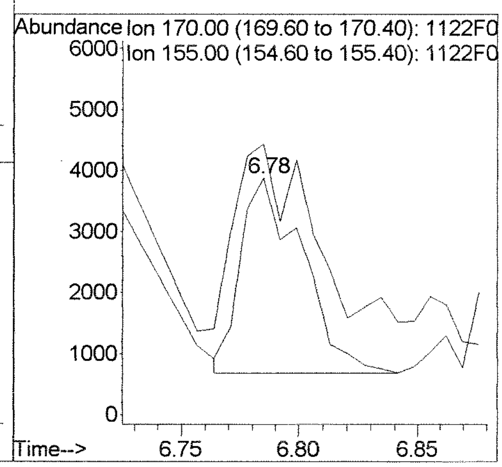
Ion	Ratio	Lower	Upper
168	100		
139	27.1	21.0	81.0

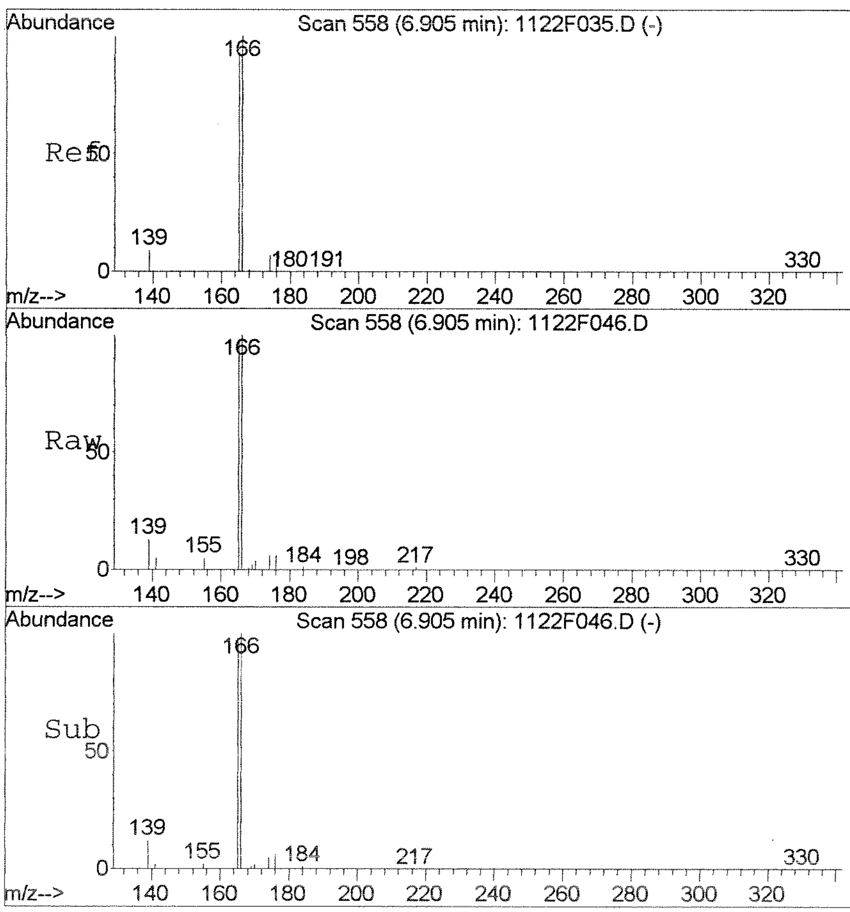




#14
2,3,5-Trimethylnaphthalene
Concen: 7.80 ng/ml
RT: 6.78 min Scan# 541
Delta R.T. -0.01 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

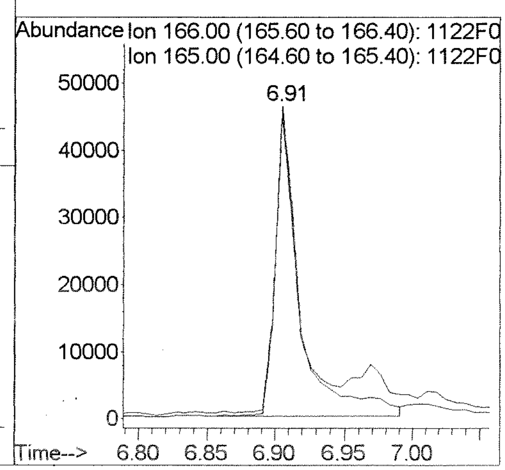
Tgt	Ion:170	Resp:	5826
Ion	Ratio	Lower	Upper
170	100		
155	94.9	42.9	102.9

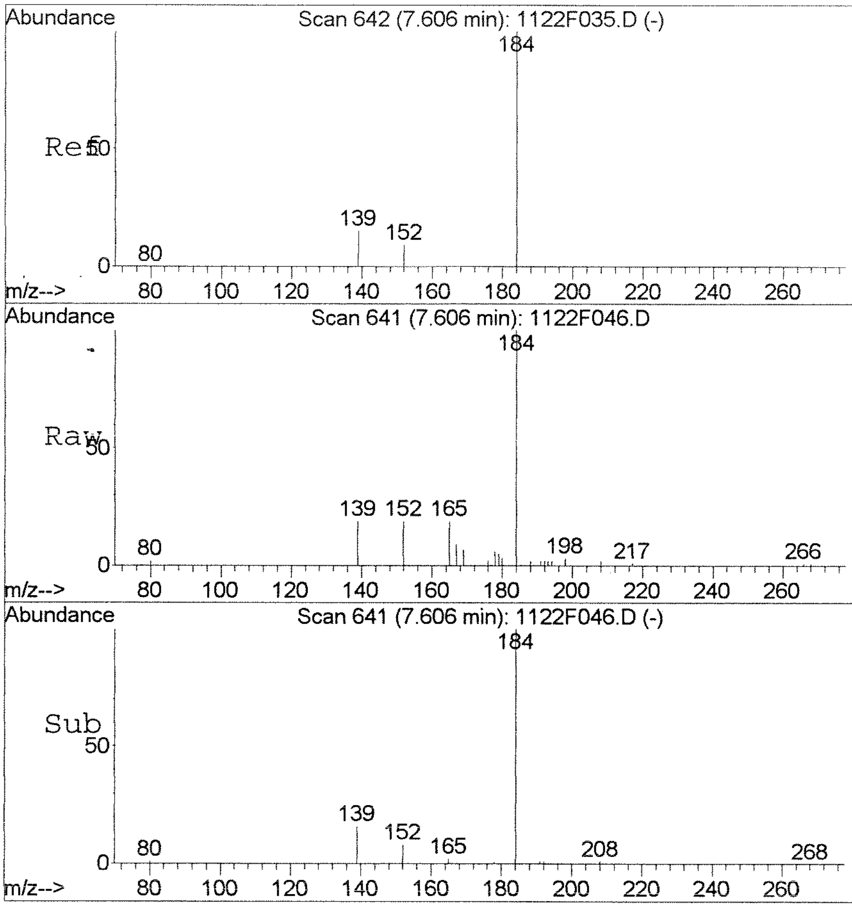




#16
Fluorene
Concen: 57.10 ng/ml
RT: 6.91 min Scan# 558
Delta R.T. -0.01 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

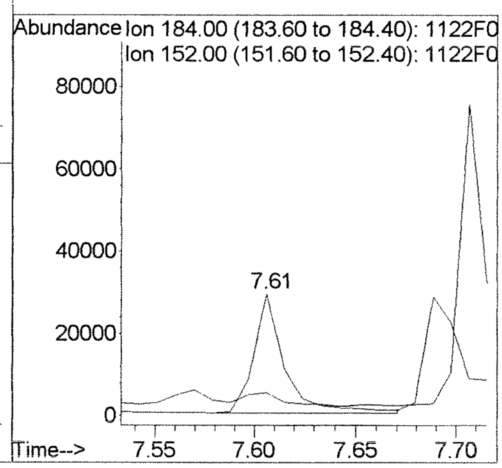
Tgt	Ion:166	Resp:	58234
Ion	Ratio	Lower	Upper
166	100		
165	97.0	59.8	119.8

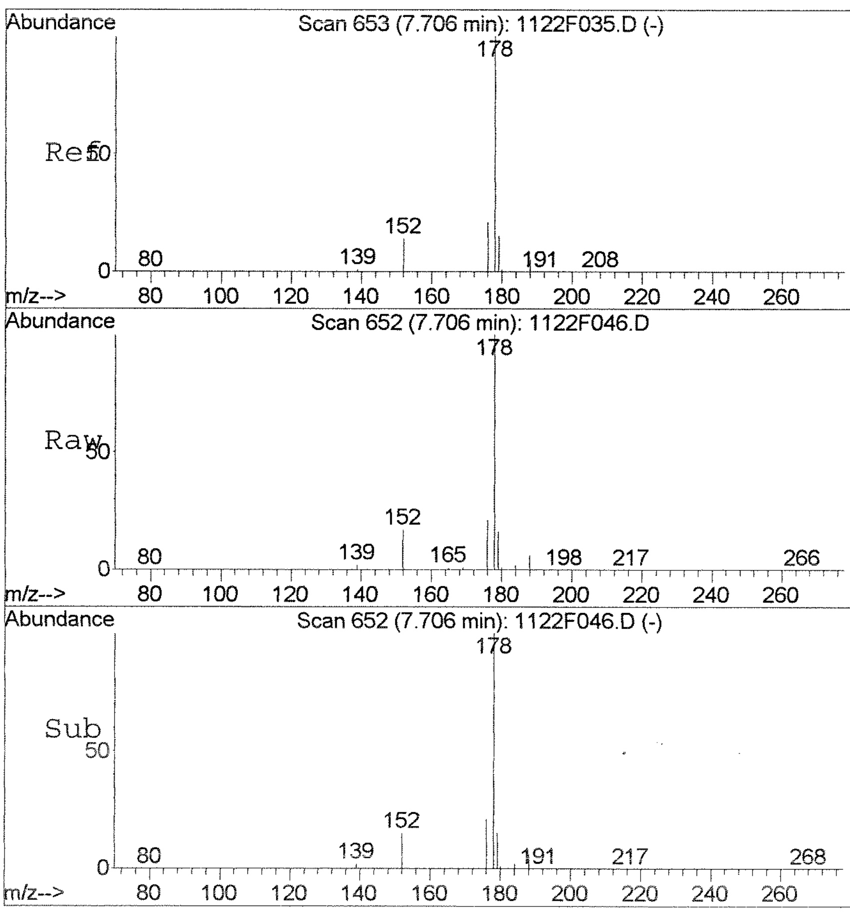




#23
Dibenzothiophene
Concen: 20.04 ng/ml
RT: 7.61 min   Scan# 641
Delta R.T.   -0.01 min
Lab File: 1122F046.D
Acq: 23 Nov 2008   3:58 am

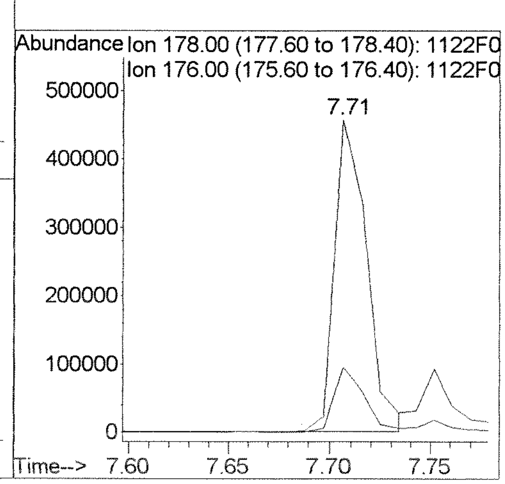
Tgt Ion:184	Resp:		31420
Ion	Ratio	Lower	Upper
184	100		
152	10.7	0.0	39.1

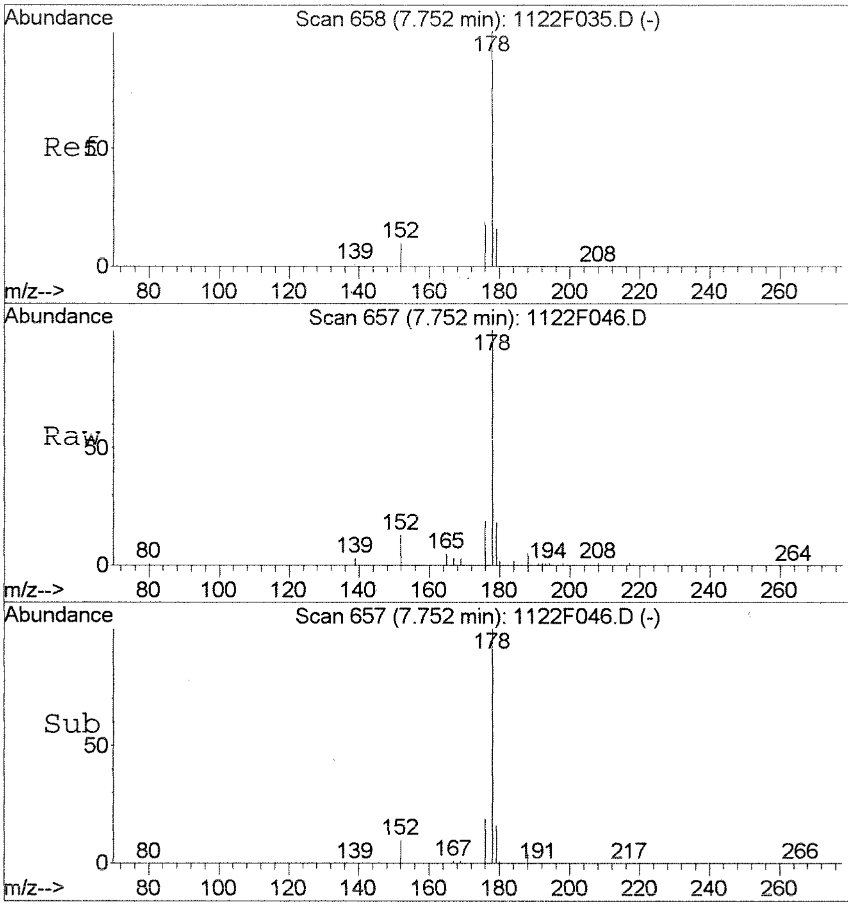




#27
Phenanthrene
Concen: 308.19 ng/ml
RT: 7.71 min   Scan# 652
Delta R.T.   -0.01 min
Lab File: 1122F046.D
Acq: 23 Nov 2008   3:58 am

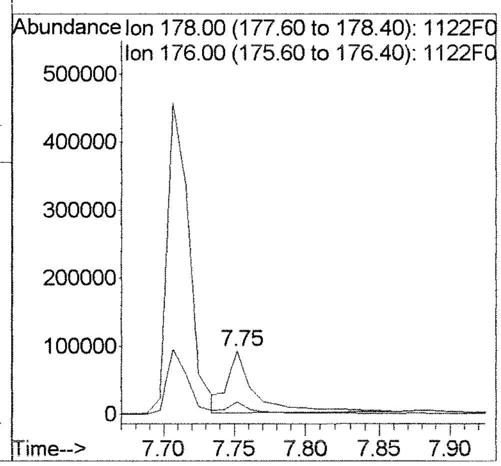
Tgt Ion:178	Resp:		494082
Ion	Ratio	Lower	Upper
178	100		
176	20.8	0.0	51.0

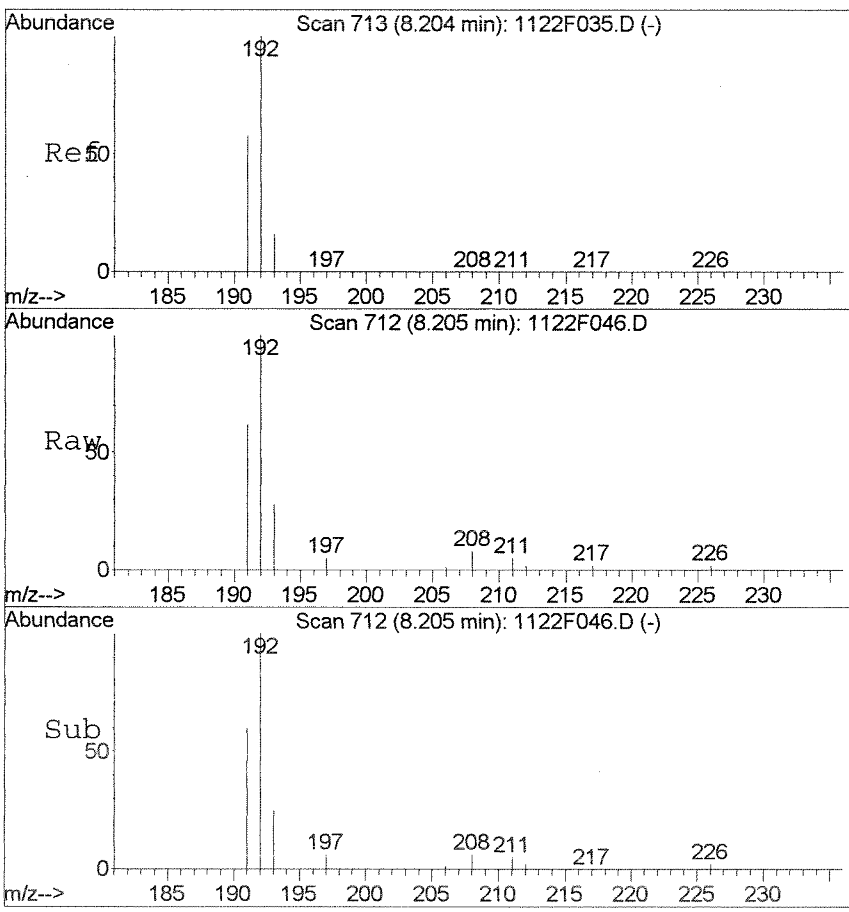




#28
Anthracene
Concen: 76.79 ng/ml
RT: 7.75 min Scan# 657
Delta R.T. -0.01 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

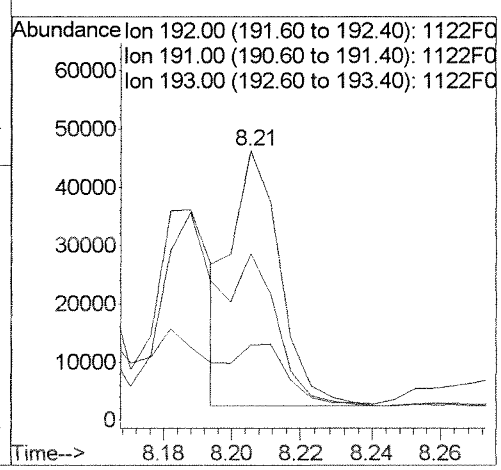
Tgt	Ion:178	Resp:	119946
Ion	Ratio	Lower	Upper
178	100		
176	19.0	0.0	49.7

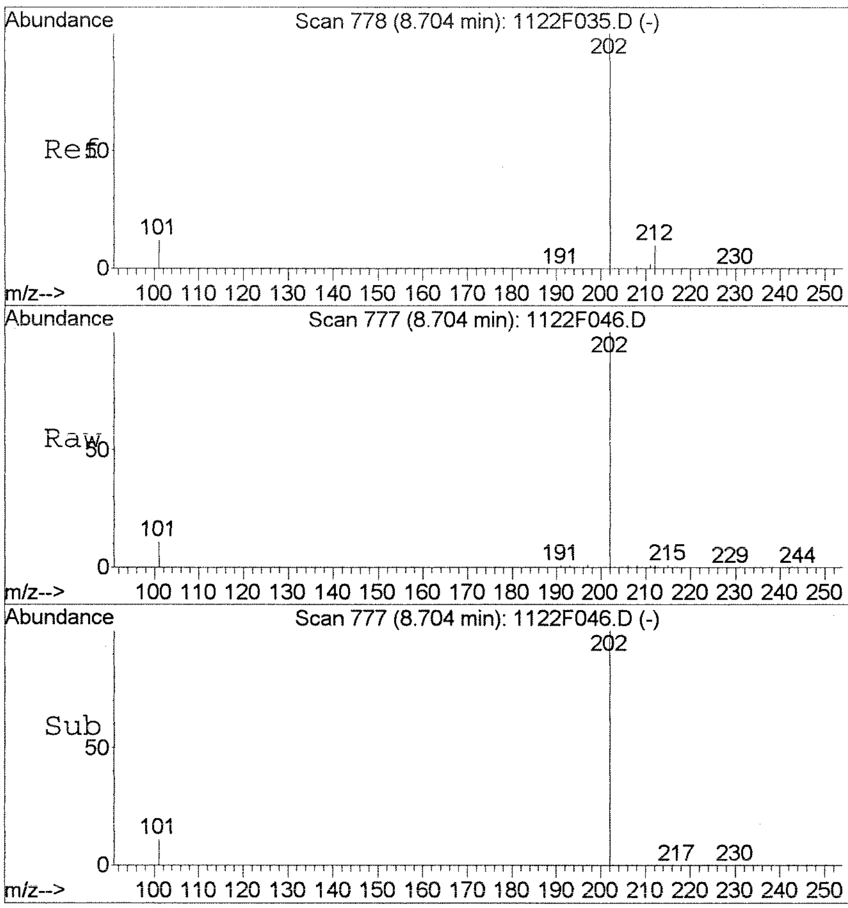




#30
1-Methylphenanthrene
Concen: 36.07 ng/ml
RT: 8.21 min Scan# 712
Delta R.T. -0.01 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

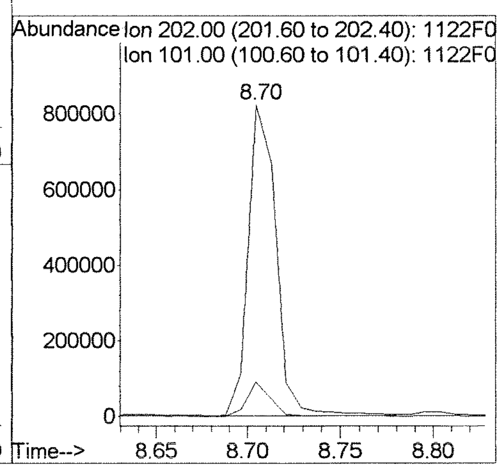
Tgt	Ion:192	Resp:	42913
Ion	Ratio	Lower	Upper
192	100		
191	59.6	29.0	89.0
193	21.4	0.0	45.4

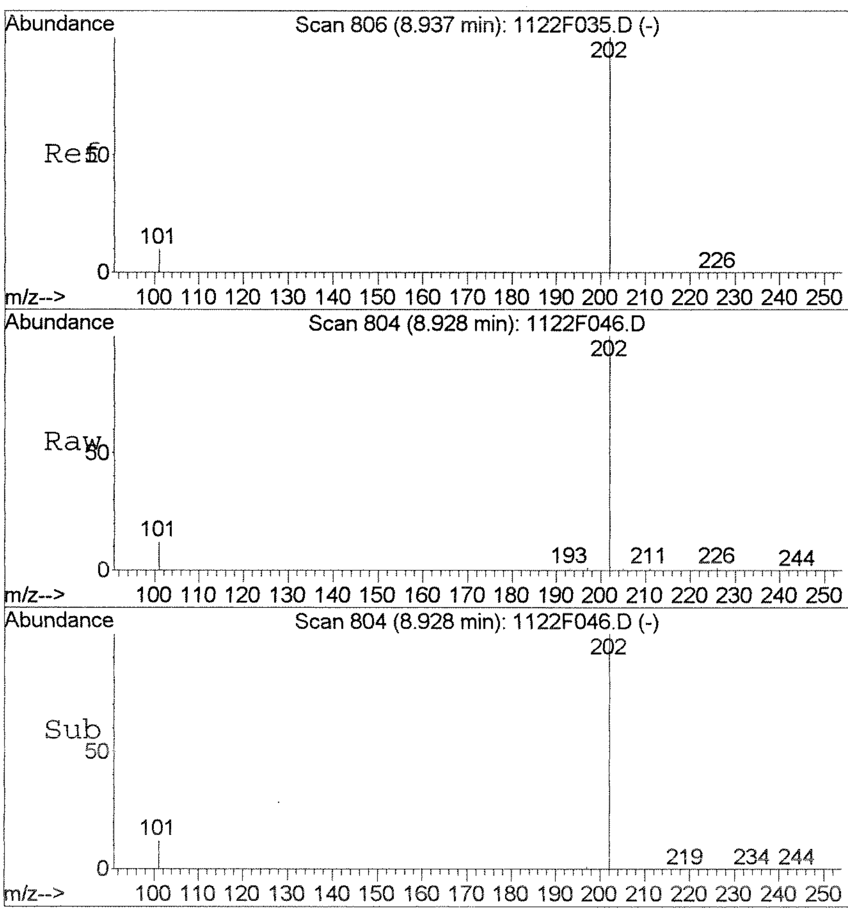




#35
Fluoranthene
Concen: 479.01 ng/ml
RT: 8.70 min Scan# 777
Delta R.T. -0.02 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

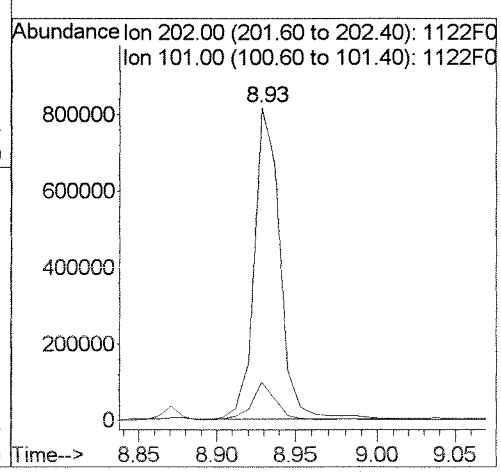
Tgt	Ion:202	Resp:	872314
Ion	Ratio	Lower	Upper
202	100		
101	11.0	0.0	35.8

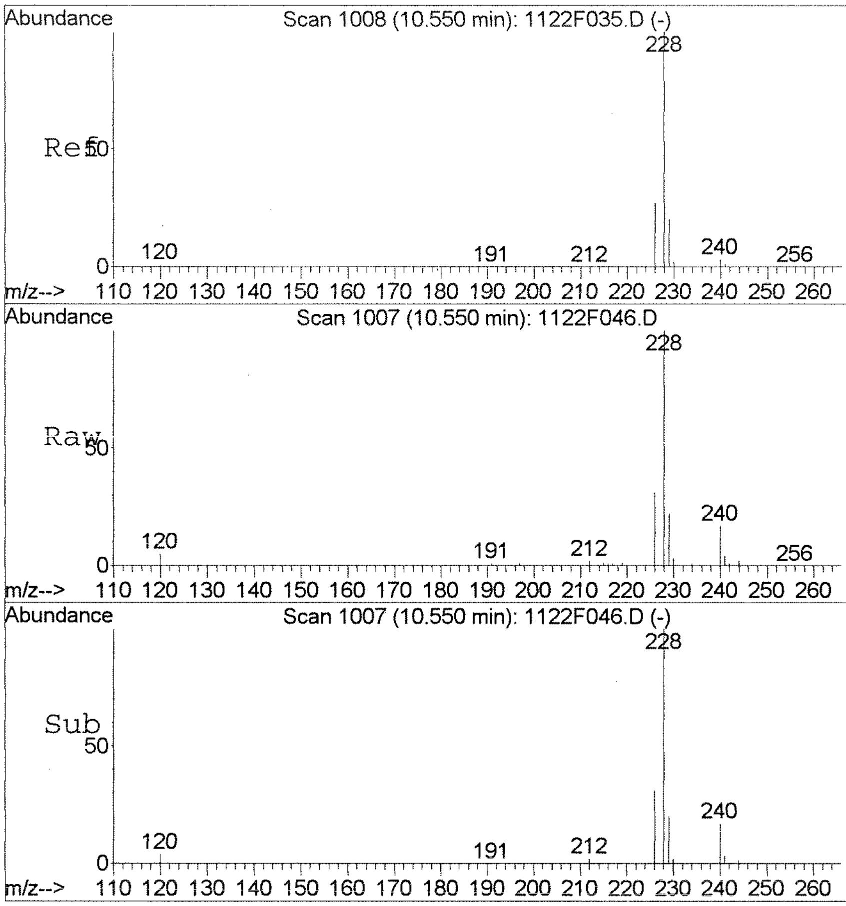




#38
Pyrene
Concen: 471.41 ng/ml
RT: 8.93 min Scan# 804
Delta R.T. -0.02 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt	Ion:202	Resp:	935508
Ion	Ratio	Lower	Upper
202	100		
101	12.3	0.0	37.6

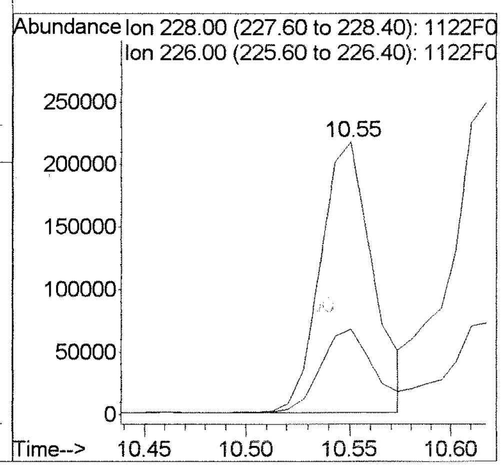


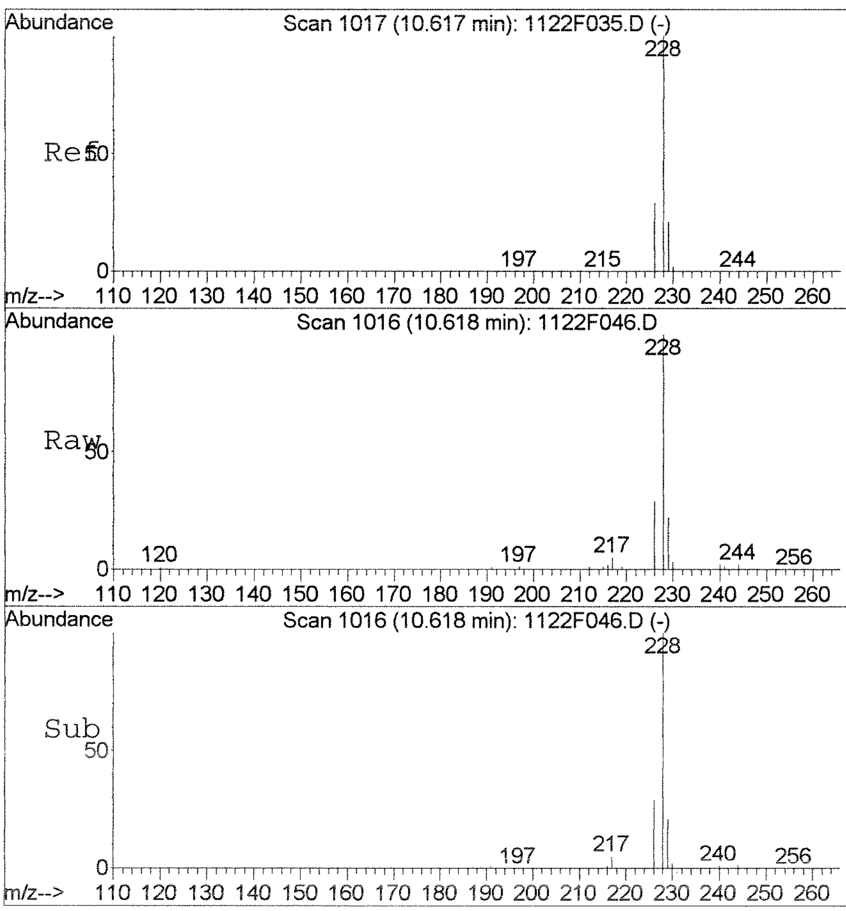


#43
Benz(a)anthracene
Concen: 209.16 ng/ml
RT: 10.55 min Scan# 1007
Delta R.T. -0.01 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:228 Resp: 376558

Ion	Ratio	Lower	Upper
228	100		
226	30.8	0.0	57.0

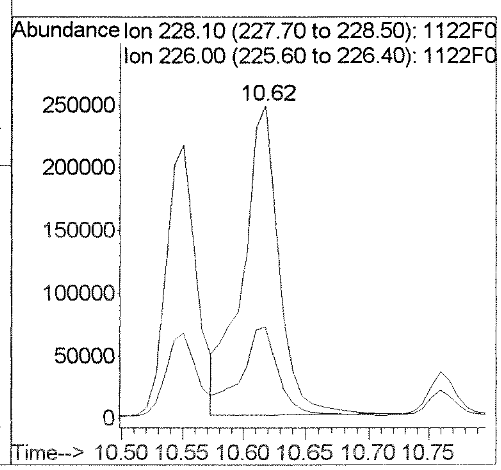


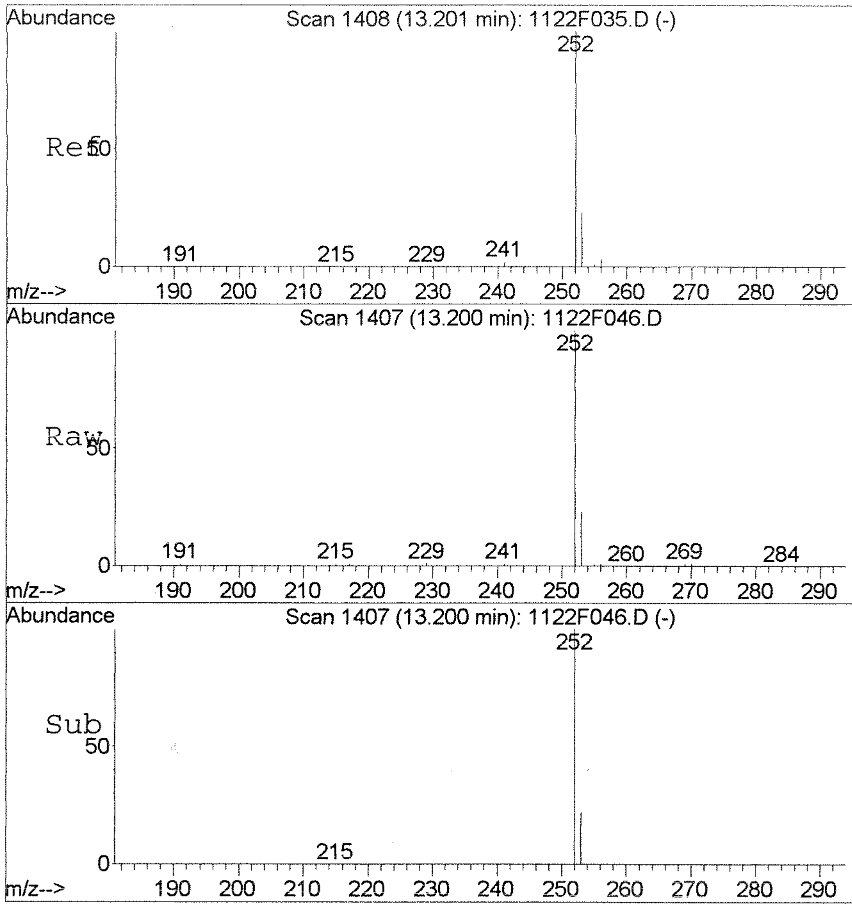


#44
Chrysene
Concen: 288.58 ng/ml
RT: 10.62 min Scan# 1016
Delta R.T. -0.01 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:228 Resp: 510252

Ion	Ratio	Lower	Upper
228	100		
226	28.7	0.0	58.9

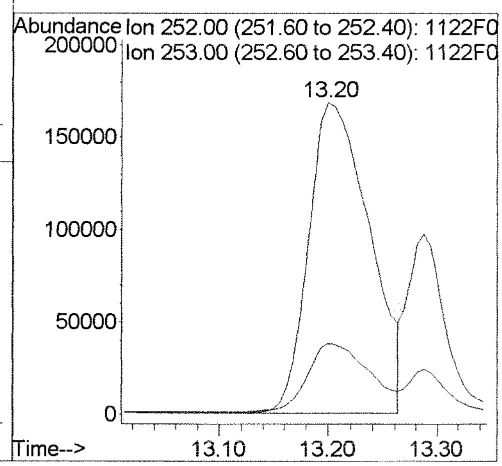


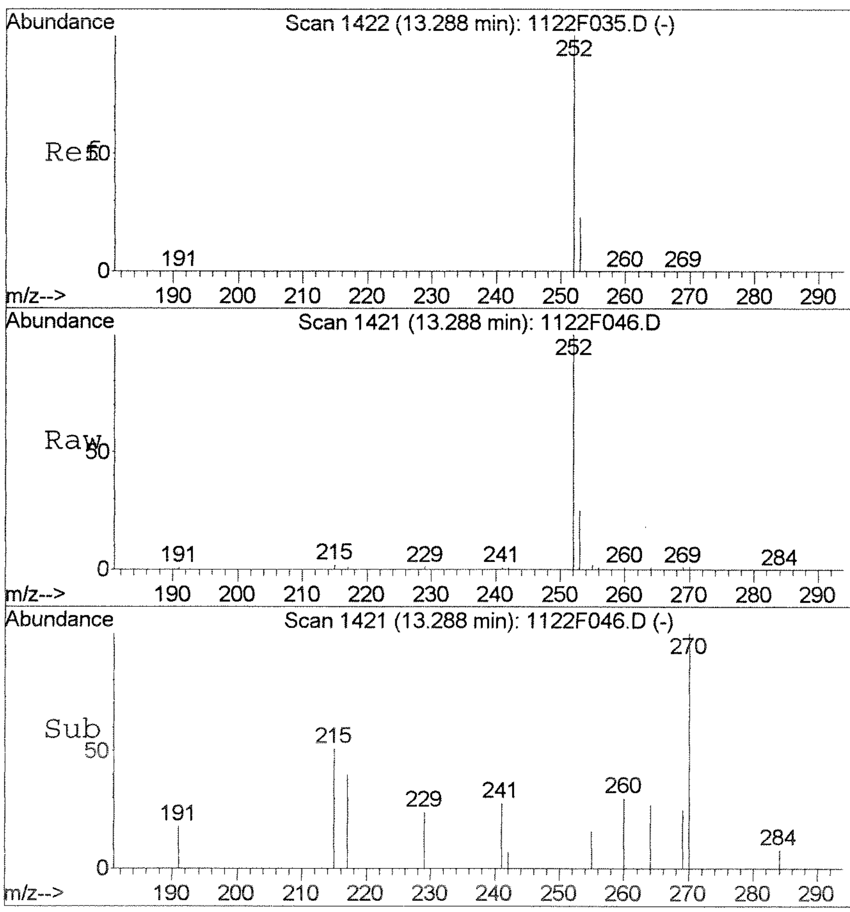


#50
Benzo(b)fluoranthene
Concen: 294.99 ng/ml
RT: 13.20 min Scan# 1407
Delta R.T. -0.03 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:252 Resp: 641590

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	52.6

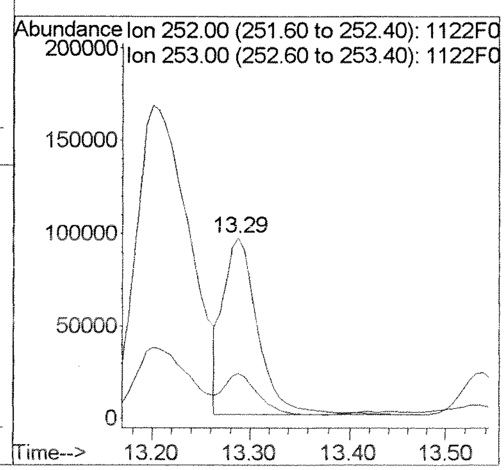


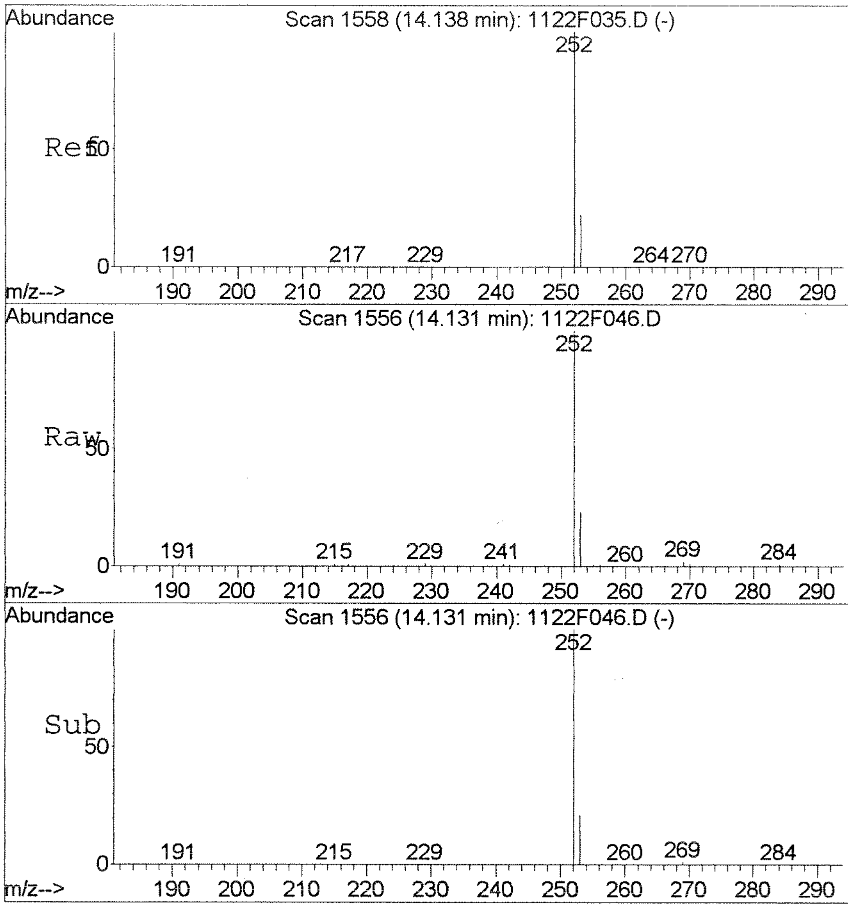


#51
Benzo(k)fluoranthene
Concen: 112.73 ng/ml
RT: 13.29 min Scan# 1421
Delta R.T. -0.03 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:252 Resp: 235543

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	52.0

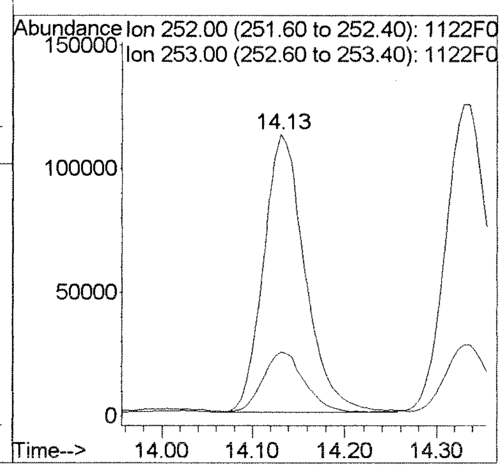


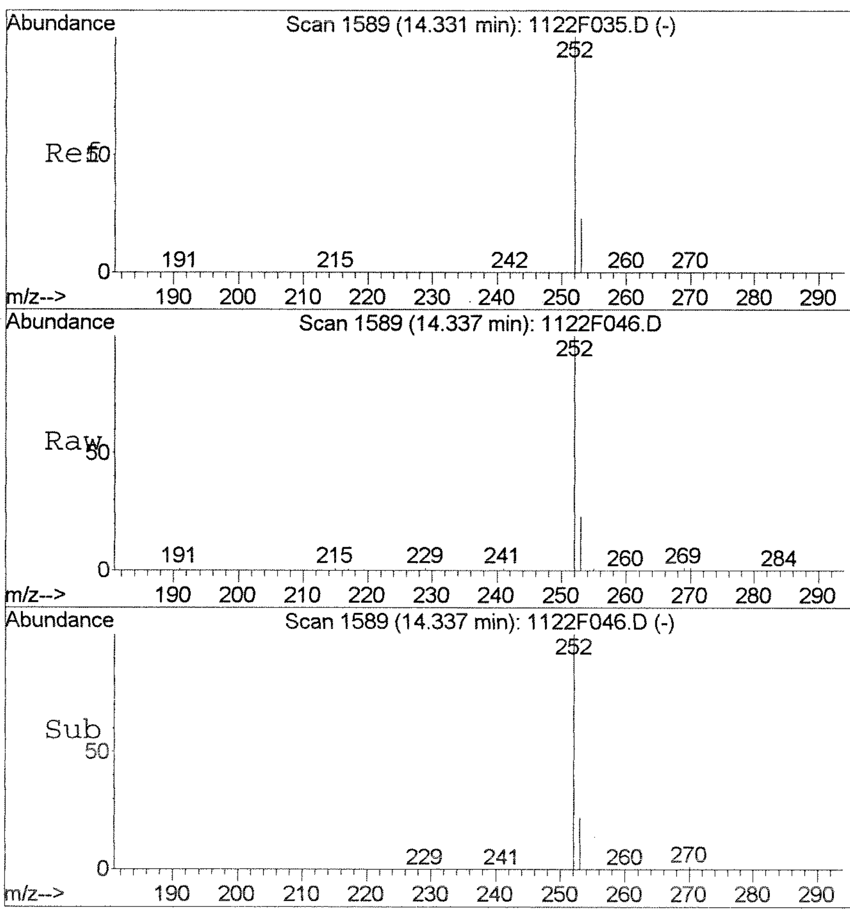


#52
Benzo(e)pyrene
Concen: 180.89 ng/ml
RT: 14.13 min Scan# 1556
Delta R.T. -0.04 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:252 Resp: 357385

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	52.2

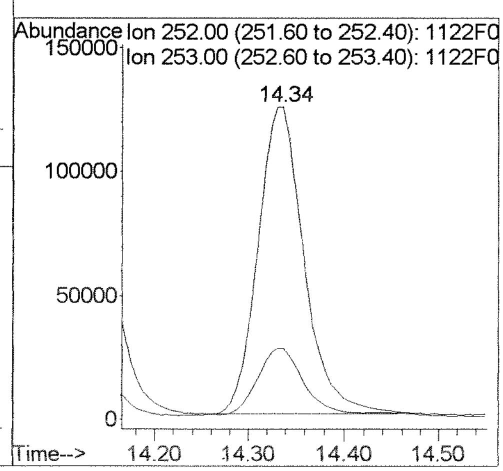


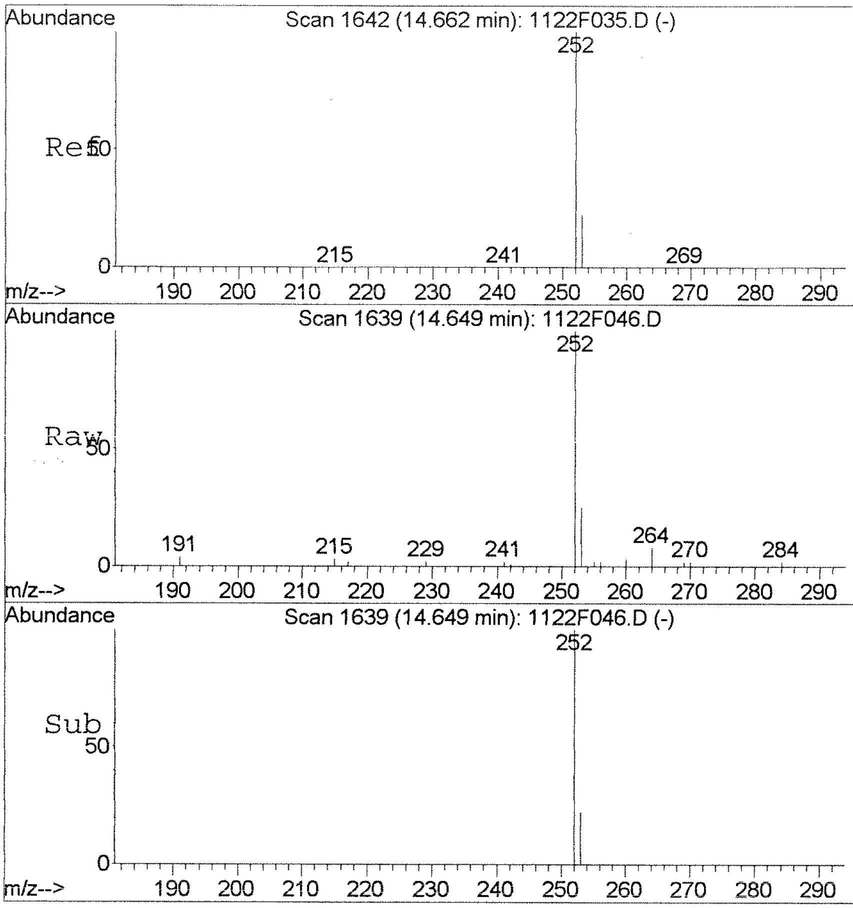


#53
Benzo(a)pyrene
Concen: 233.04 ng/ml
RT: 14.34 min Scan# 1589
Delta R.T. -0.03 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:252 Resp: 419662

Ion	Ratio	Lower	Upper
252	100		
253	21.7	0.0	52.2

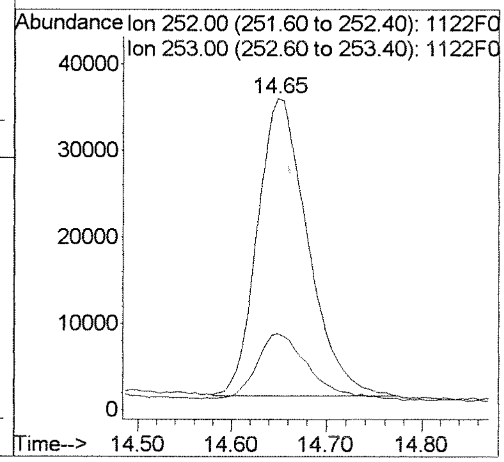


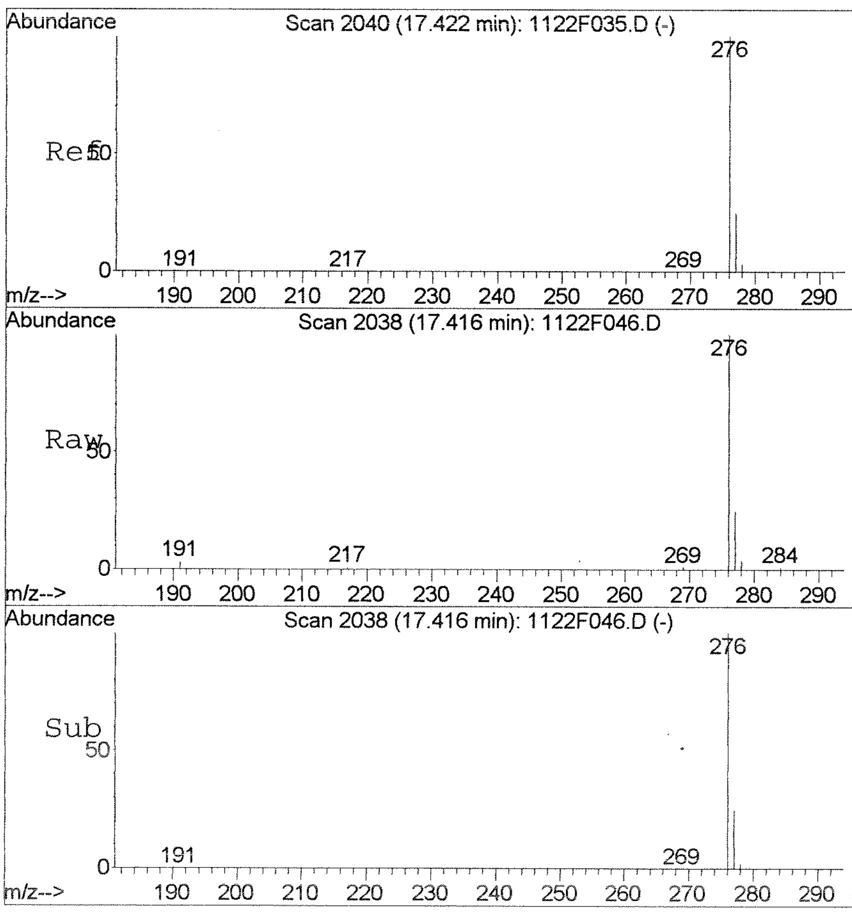


#54
Perylene
Concen: 71.97 ng/ml
RT: 14.65 min Scan# 1639
Delta R.T. -0.04 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:252 Resp: 127320

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	51.5

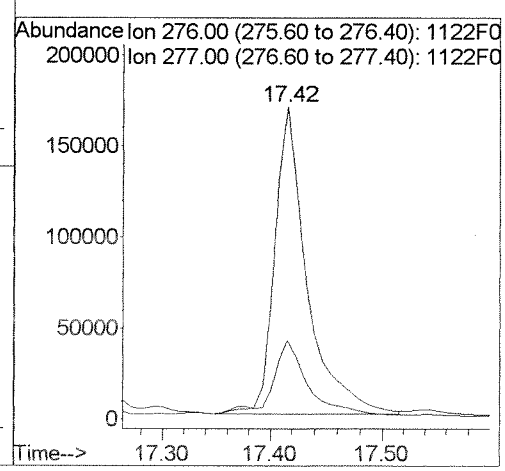


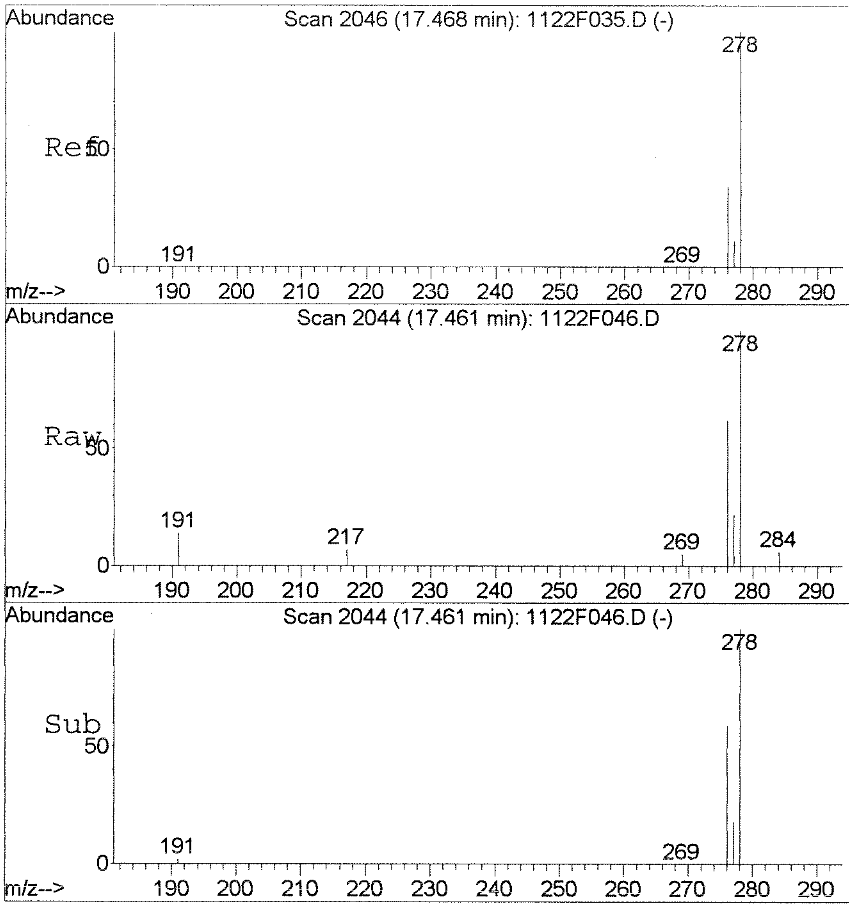


#55
Indeno(1,2,3-cd)pyrene
Concen: 206.86 ng/ml
RT: 17.42 min Scan# 2038
Delta R.T. -0.02 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:276 Resp: 345631

Ion	Ratio	Lower	Upper
276	100		
277	24.3	0.0	54.7

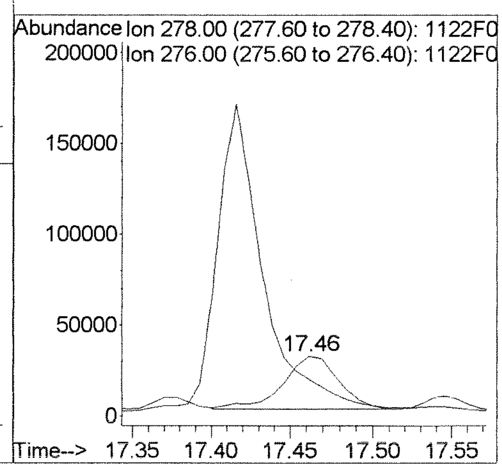


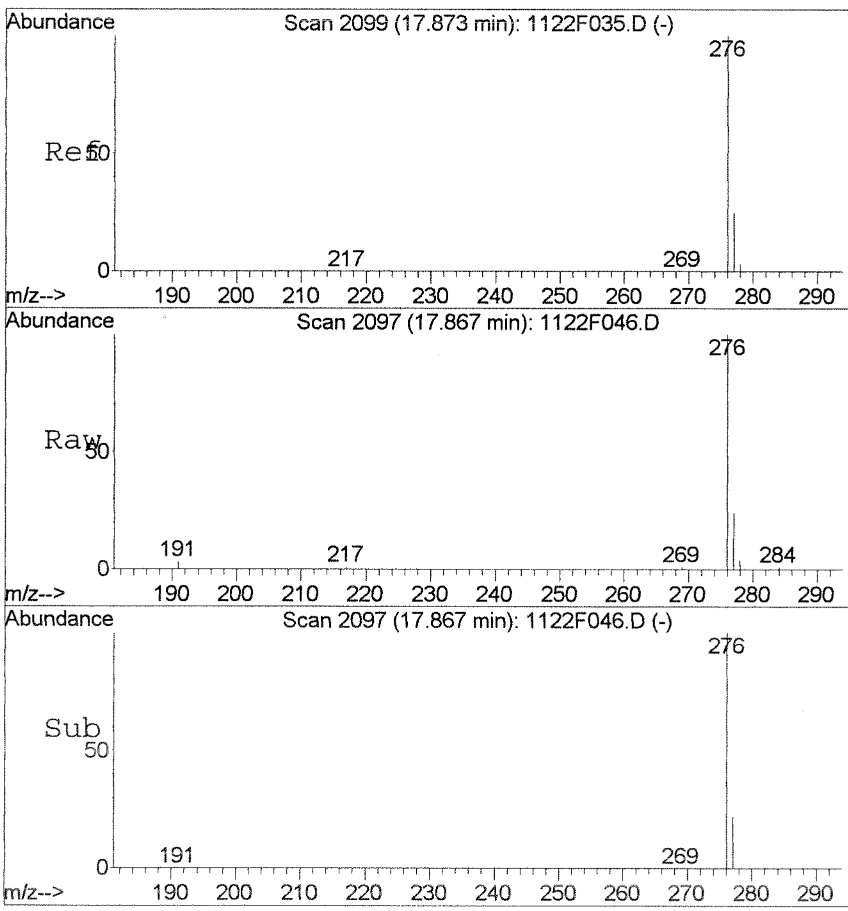


#56
Dibenz(a,h)anthracene
Concen: 39.34 ng/ml
RT: 17.46 min Scan# 2044
Delta R.T. -0.03 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:278 Resp: 68986

Ion	Ratio	Lower	Upper
278	100		
276	54.6	0.0	59.7

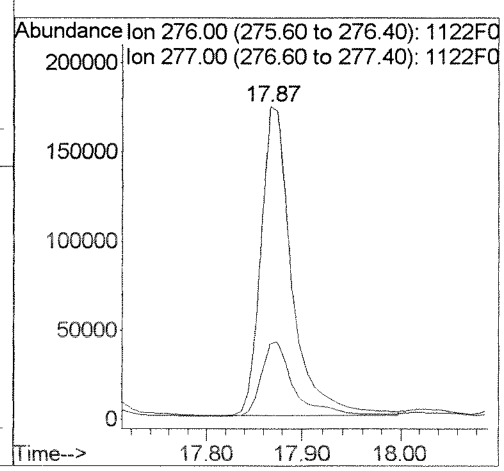




#57
Benzo(g,h,i)perylene
Concen: 205.83 ng/ml
RT: 17.87 min Scan# 2097
Delta R.T. -0.03 min
Lab File: 1122F046.D
Acq: 23 Nov 2008 3:58 am

Tgt Ion:276 Resp: 391818

Ion	Ratio	Lower	Upper
276	100		
277	23.4	0.0	54.2



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/25/2008
Sample Matrix:	Sediment	**Date Received:**	07/29/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED14-2-3.5-A	**Units:**	ug/Kg
Lab Code:	K0810639-010	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**120**		4.6	0.37	1	11/11/08	11/23/08	KWG0812042	
2-Methylnaphthalene	**57**		4.6	0.39	1	11/11/08	11/23/08	KWG0812042	
Acenaphthylene	**86**		4.6	0.24	1	11/11/08	11/23/08	KWG0812042	
Acenaphthene	**630**		4.6	0.23	1	11/11/08	11/23/08	KWG0812042	
Fluorene	**560**		4.6	0.50	1	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	**140**		4.6	0.59	1	11/11/08	11/23/08	KWG0812042	
Phenanthrene	**4200**	D	46	7.5	10	11/11/08	11/24/08	KWG0812042	
Anthracene	**600**		4.6	0.47	1	11/11/08	11/23/08	KWG0812042	
Fluoranthene	**4000**	D	46	6.1	10	11/11/08	11/24/08	KWG0812042	
Pyrene	**4000**	D	46	3.7	10	11/11/08	11/24/08	KWG0812042	
Benz(a)anthracene	**1100**		4.6	0.48	1	11/11/08	11/23/08	KWG0812042	
Chrysene	**1500**		4.6	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	**1600**		4.6	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(k)fluoranthene	**470**		4.6	0.15	1	11/11/08	11/23/08	KWG0812042	
Benzo(a)pyrene	**1400**		4.6	0.14	1	11/11/08	11/23/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**1400**		4.6	0.16	1	11/11/08	11/23/08	KWG0812042	
Dibenz(a,h)anthracene	**250**		4.6	0.28	1	11/11/08	11/23/08	KWG0812042	
Benzo(g,h,i)perylene	**1400**		4.6	0.64	1	11/11/08	11/23/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	64	10-128	11/23/08	Acceptable
Fluoranthene-d10	91	29-121	11/23/08	Acceptable
Terphenyl-d14	81	24-141	11/23/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\112308\1123F011.D
Lab ID: K0810639-010
RunType: SMPL
Matrix: SEDIMENT

Date Acquired: 11/23/2008 15:42
Date Quantitated: 11/24/2008 06:51
Batch ID: KWG0812642
Analysis Method: 8270C SIM
ListJoinID: LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Above Highest ICAL Level	Pyrene	4187.42	NA	2000	
	Fluoranthene	5088.23	NA	2000	See Dil
	Phenanthrene	4506.81	NA	2000	

Primary Review: RW 11/24/08

Secondary Review: 11-25-8

Printed: 11/24/2008 10:58:37
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/25/2008	**Receive Date:**	07/29/2008

Analysis Lot:	KWG0812642	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776063	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112308\1123F001.D	**Method ID:**	MJ253
MB Ref:	J:\MS11\DATA\112308\1123F003.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112308\1123F011.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 15:42	**Quant Date:**	11/24/2008 06:51	**Vial:**	9
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-010			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.02	-0.02	136	167508	200.00	OK
2	Acenaphthene-d10	6.45	0.00	164	98097	200.00	OK
3	Phenanthrene-d10	7.69	0.00	188	199834**m**	200.00	OK
4	Chrysene-d12	10.62	0.06	240	299462	200.00	OK
5	Perylene-d12	14.68	0.15	264	267913	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	85088**m**	127.63	64	10-128	OK	
3	Fluoranthene-d10	8.71	0.02	0.00	212	248519**m**	182.41	91	29-121	OK	
4	Terphenyl-d14	9.10	0.03	0.00	244	250377	161.50	81	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.04	-0.01	0.00	128	133958**m**	131.28	120		
1	2-Methylnaphthalene	5.59	-0.01	0.00	142	44485	62.52	57		
2	Acenaphthylene	6.33		0.00	152	103597	93.66	86		
2	Acenaphthene	6.47		0.00	154	464842	691.55	630		
2	Dibenzofuran	6.62		0.00	168	149845**m**	148.19	140		
2	Fluorene	6.90		0.00	166	496468**m**	615.24	560		
3	Phenanthrene	7.71		0.00	178	6330466	4,507	4100	E	NR
3	Anthracene	7.75	0.01	0.00	178	904082**m**	660.59	600		
3	Fluoranthene	8.73	0.02	0.00	202	8118527	5,088	4700	E	NR
4	Pyrene	8.96	0.03	0.00	202	9433435	4,187	3800	E	NR
4	Benz(a)anthracene	10.60	0.06	0.00	228	2482674	1,215	1100		
4	Chrysene	10.68	0.07	0.00	228	3389596	1,689	1500		
5	Benzo(b)fluoranthene	13.32	0.14	0.00	252	3154405	1,706	1600		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112308\1123F011.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 15:42	**Quant Date:**	11/24/2008 06:51	**Vial:**	9
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810639-010			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.39	0.12	0.00	252	921147**m**	518.62	470		
5	Benzo(a)pyrene	14.47	0.16	0.00	252	2419834	1,581	1400		
5	Indeno(1,2,3-cd)pyrene	17.48	0.07	-0.01	276	2152079	1,515	1400		
5	Dibenz(a,h)anthracene	17.51	0.06	-0.01	278	402064**m**	269.70	250		
5	Benzo(g,h,i)perylene	17.93	0.07	-0.01	276	2554006	1,578	1400		

Prep Amount:	16.02 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	68.2 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

```
Data File : J:\MS11\DATA\112308\1123F011.D                 Vial: 9
Acq On    : 23 Nov 2008   3:42 pm                      Operator: LWeiskopf
Sample    : K0810639-010                               Inst    : MS11
Misc      :                                            Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:44:25 2008             Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title        : PAHS and ALKYLATED HOMOLOGS
Last Update  : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT
```

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.02	136	167508	200.00 ng/ml	-0.02
10) Acenaphthene-d10	6.45	164	98097	200.00 ng/ml	-0.02
22) Phenanthrene-d10	7.69	188	199834m	200.00 ng/ml	-0.01
37) Chrysene-d12	10.62	240	299462	200.00 ng/ml	0.04
49) Perylene-d12	14.68	264	267913	200.00 ng/ml	0.09
System Monitoring Compounds					
15) Fluorene-d10	6.88	176	85088m	127.63 ng/ml	-0.01
Spiked Amount 200.000			Recovery =	63.81%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00 ng/ml	
Spiked Amount 375.000			Recovery =	0.00%	
36) Fluoranthene-d10	8.71	212	248519m	182.41 ng/ml	0.00
Spiked Amount 200.000			Recovery =	91.20%	
42) Terphenyl-d14	9.10	244	250377	161.50 ng/ml	0.00
Spiked Amount 200.000			Recovery =	80.75%	

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) Naphthalene	5.04	128	133958m	131.28 ng/ml	
3) 2-Methylnaphthalene	5.59	142	44485	62.52 ng/ml	99
4) 1-Methylnaphthalene	5.67	142	19029m	29.87 ng/ml	
5) Biphenyl	5.97	154	16582	19.07 ng/ml	100
6) 2,6-Dimethylnaphthalene	6.10	156	93910	151.18 ng/ml	99
11) Acenaphthylene	6.33	152	103597	93.66 ng/ml	91
12) Acenaphthene	6.47	154	464842	691.55 ng/ml	90
13) Dibenzofuran	6.62	168	149845m	148.19 ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.78	170	309452	523.45 ng/ml	78
16) Fluorene	6.90	166	496468m	615.24 ng/ml	
23) Dibenzothiophene	7.61	184	502181	365.65 ng/ml	95
27) Phenanthrene	7.71	178	6330466	4506.81 ng/ml	91
28) Anthracene	7.75	178	904082m	660.59 ng/ml	
30) 1-Methylphenanthrene	8.22	192	796660m	764.20 ng/ml	
35) Fluoranthene	8.73	202	8118527	5088.23 ng/ml	68
38) Pyrene	8.96	202	9433435	4187.42 ng/ml	64
43) Benz(a)anthracene	10.60	228	2482674	1214.76 ng/ml	89
44) Chrysene	10.68	228	3389596	1688.67 ng/ml	95
50) Benzo(b)fluoranthene	13.32	252	3154405	1706.07 ng/ml	98
51) Benzo(k)fluoranthene	13.39	252	921147m	518.62 ng/ml	
52) Benzo(e)pyrene	14.27	252	1880448	1119.63 ng/ml	100
53) Benzo(a)pyrene	14.47	252	2419834	1580.72 ng/ml	98
54) Perylene	14.79	252	745049	495.43 ng/ml	94
55) Indeno(1,2,3-cd)pyrene	17.48	276	2152079	1515.16 ng/ml	97
56) Dibenz(a,h)anthracene	17.51	278	402064m	269.70 ng/ml	

(#) = qualifier out of range (m) = manual integration

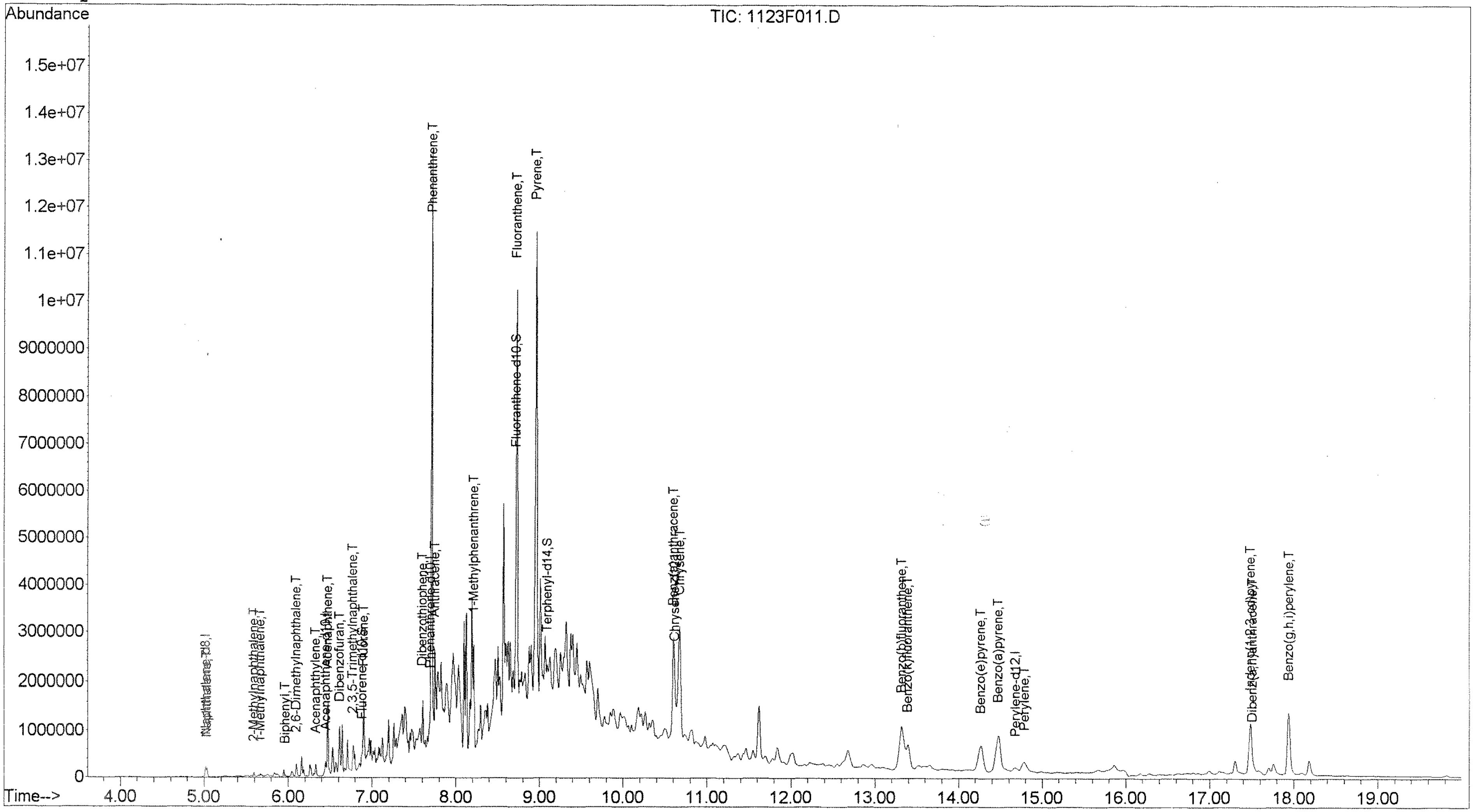
Data File : J:\MS11\DATA\112308\1123F011.D Vial: 9
Acq On : 23 Nov 2008 3:42 pm Operator: LWeiskopf
Sample : K0810639-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:44:25 2008 Quant Results File: 1110ALK.RES

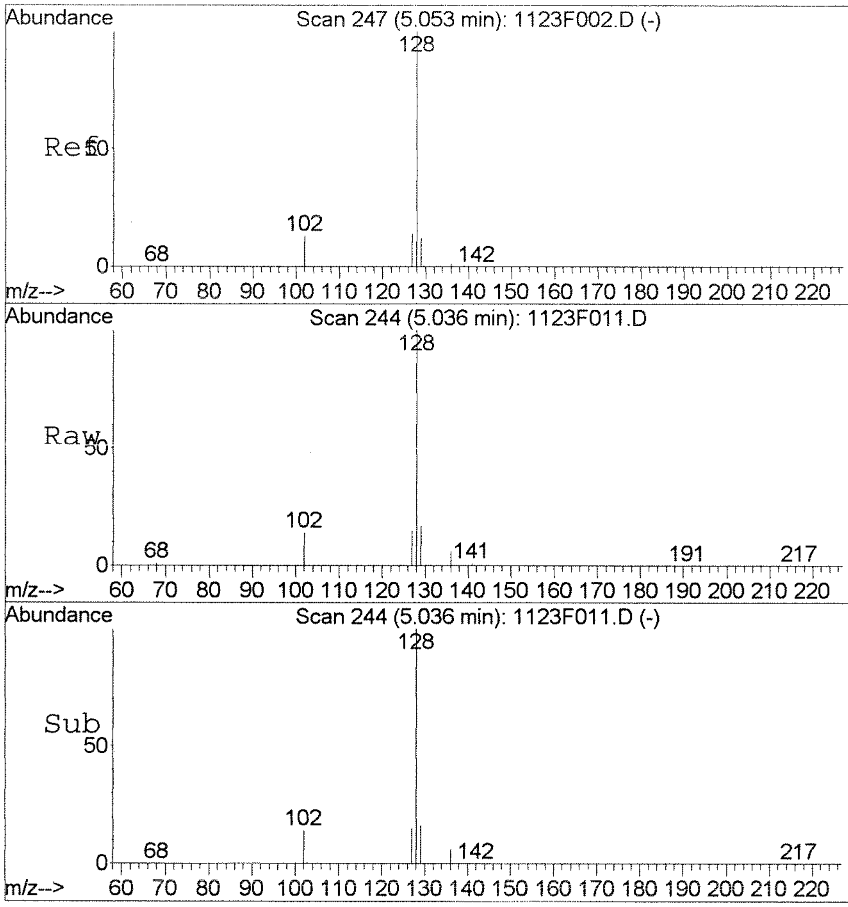
Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
57)	Benzo(g,h,i)perylene	17.93	276	2554006	1578.30 ng/ml	97

Quantitation Report (QT Reviewed)

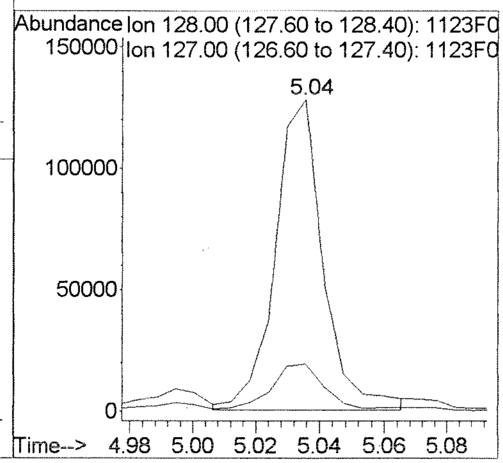
```
Data File : J:\MS11\DATA\112308\1123F011.D                 Vial: 9
Acq On    : 23 Nov 2008   3:42 pm                      Operator: LWeiskopf
Sample    : K0810639-010                               Inst    : MS11
Misc      :                                            Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24  6:51 2008                Quant Results File: 1110ALK.RES

Method        : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title         : PAHS and ALKYLATED HOMOLOGS
Last Update   : Mon Nov 24 06:43:58 2008
Response via  : Initial Calibration
```

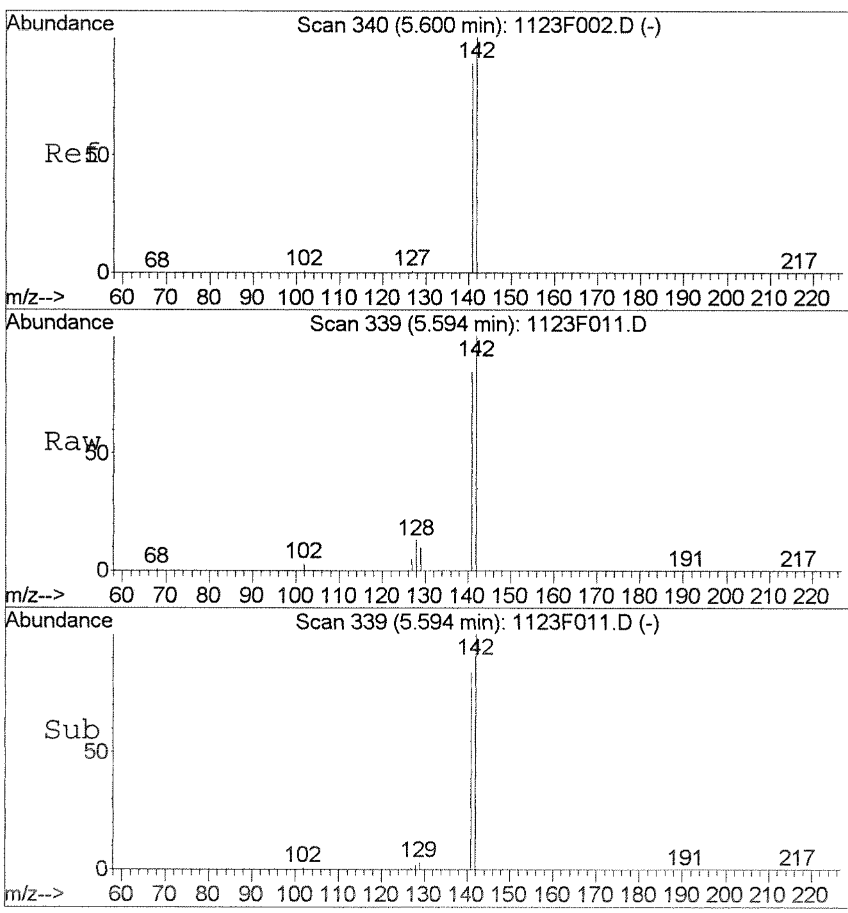




#2
Naphthalene
Concen: 131.28 ng/ml m
RT: 5.04 min Scan# 244
Delta R.T.   -0.02 min
Lab File: 1123F011.D
Acq: 23 Nov 2008   3:42 pm

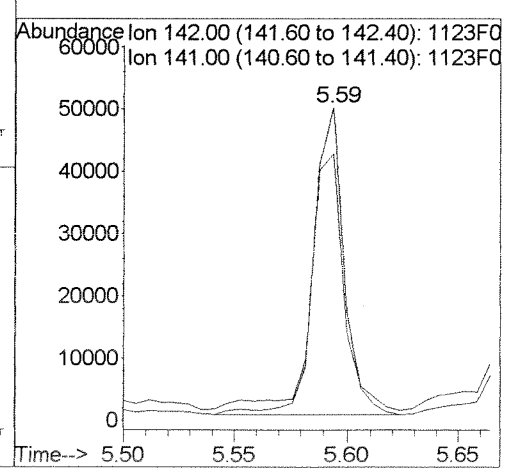
Tgt	Ion:128	Resp:	133958
Ion	Ratio	Lower	Upper
128	100		
127	15.2	0.0	43.8

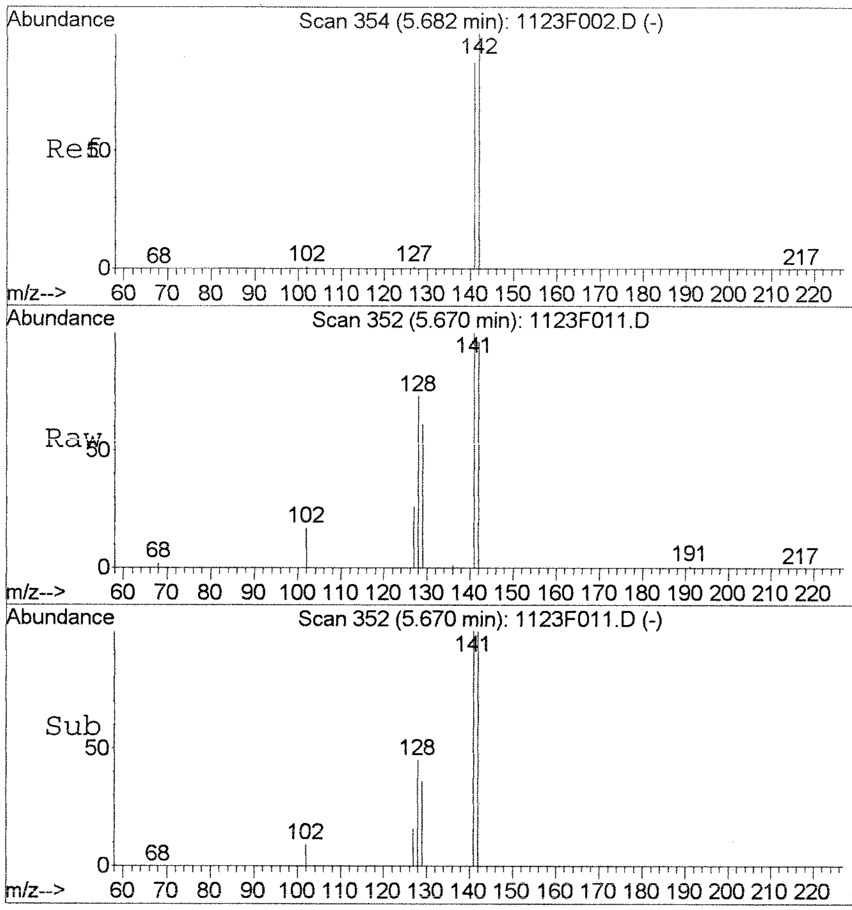




#3
2-Methylnaphthalene
Concen: 62.52 ng/ml
RT: 5.59 min Scan# 339
Delta R.T.   -0.02 min
Lab File: 1123F011.D
Acq: 23 Nov 2008   3:42 pm

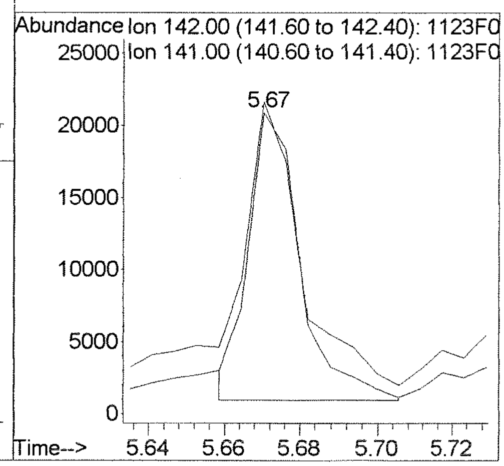
Tgt	Ion:142	Resp:	44485
Ion	Ratio	Lower	Upper
142	100		
141	83.5	52.4	112.4

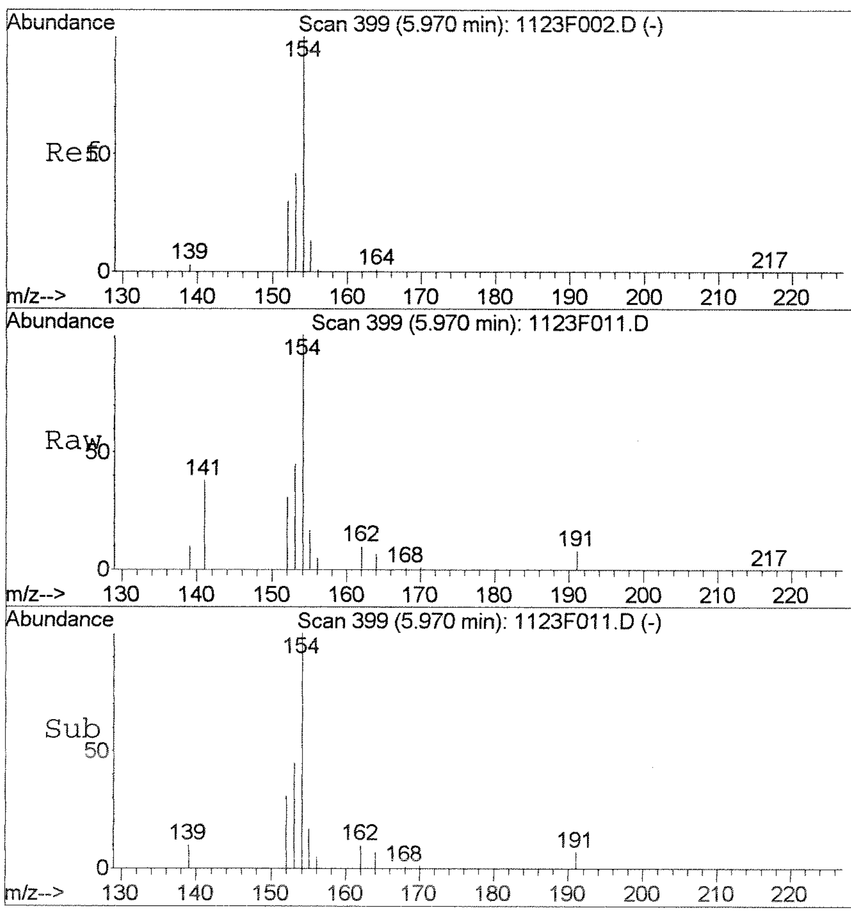




#4
1-Methylnaphthalene
Concen: 29.87 ng/ml m
RT: 5.67 min Scan# 352
Delta R.T. -0.02 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

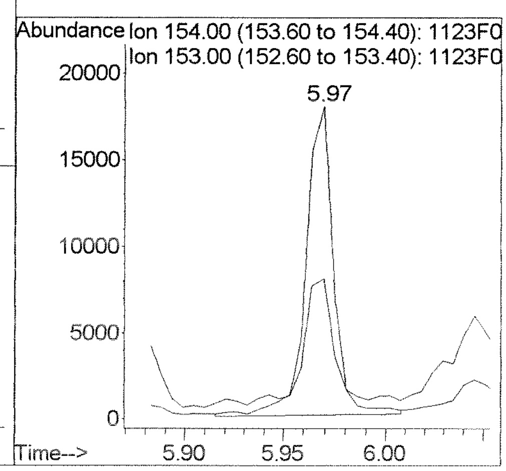
Tgt	Ion:142	Resp:	19029
Ion	Ratio	Lower	Upper
142	100		
141	103.7	63.0	123.0

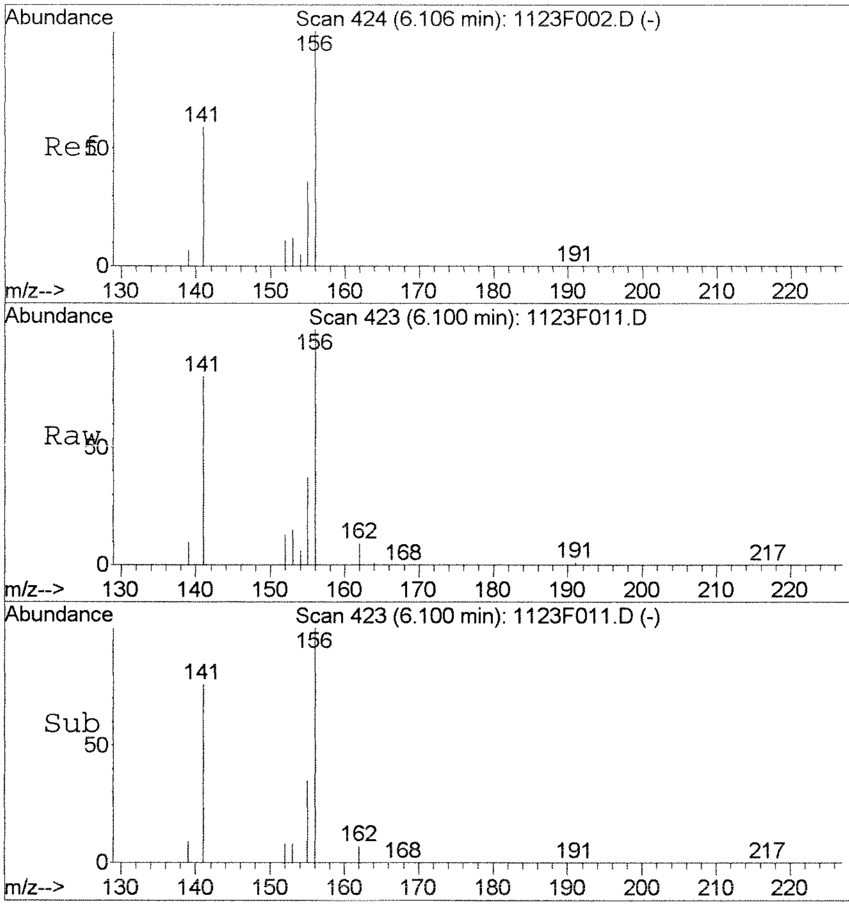




#5
Biphenyl
Concen: 19.07 ng/ml
RT: 5.97 min Scan# 399
Delta R.T. -0.01 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

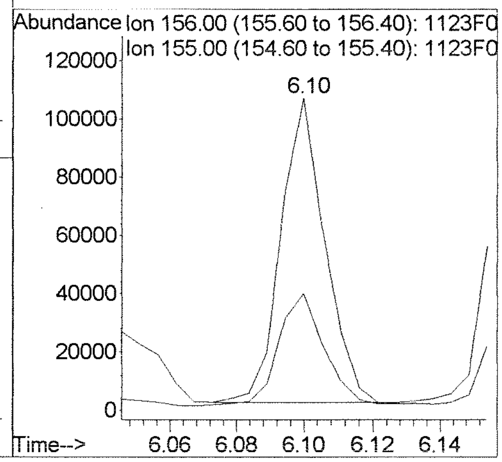
Tgt	Ion:154	Resp:	16582
Ion	Ratio	Lower	Upper
154	100		
153	40.6	10.4	70.4

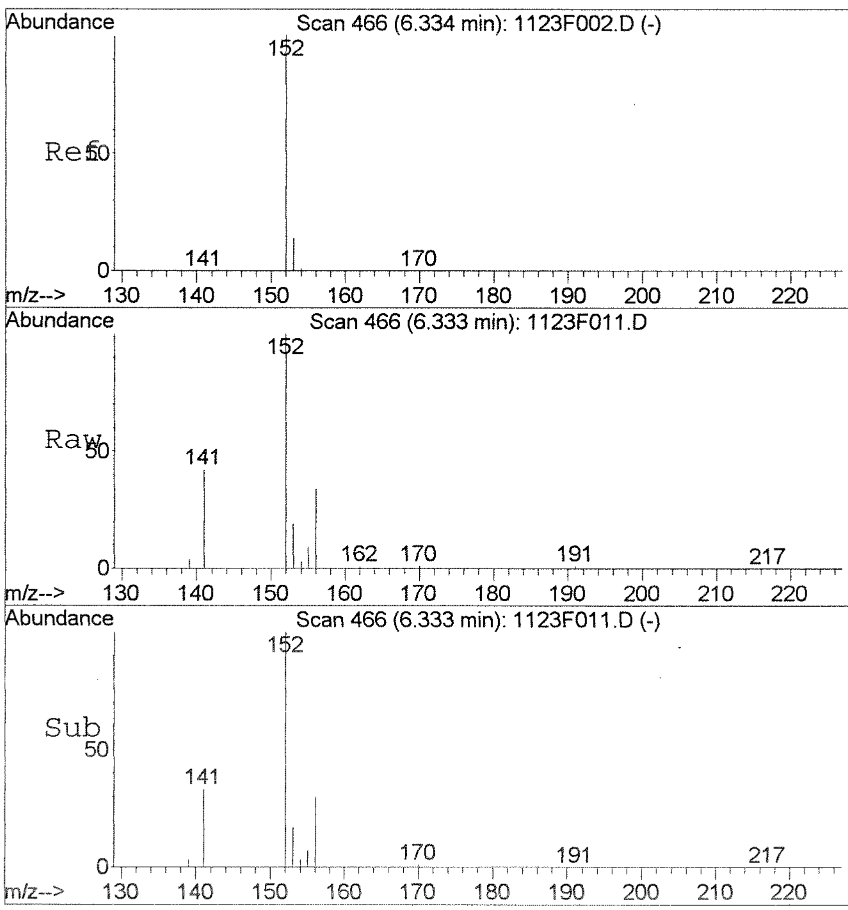




#6
2,6-Dimethylnaphthalene
Concen: 151.18 ng/ml
RT: 6.10 min Scan# 423
Delta R.T. -0.02 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

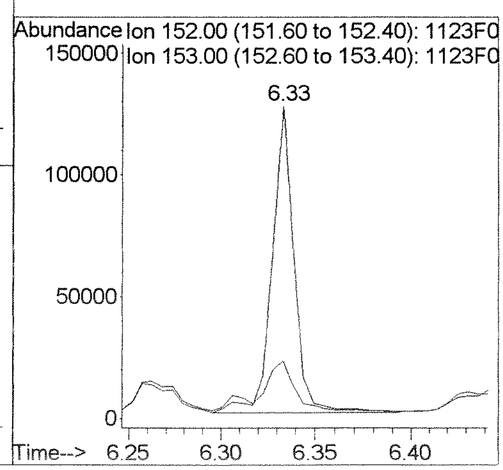
Tgt	Ion:156	Resp:	93910
Ion	Ratio	Lower	Upper
156	100		
155	36.5	7.3	67.3

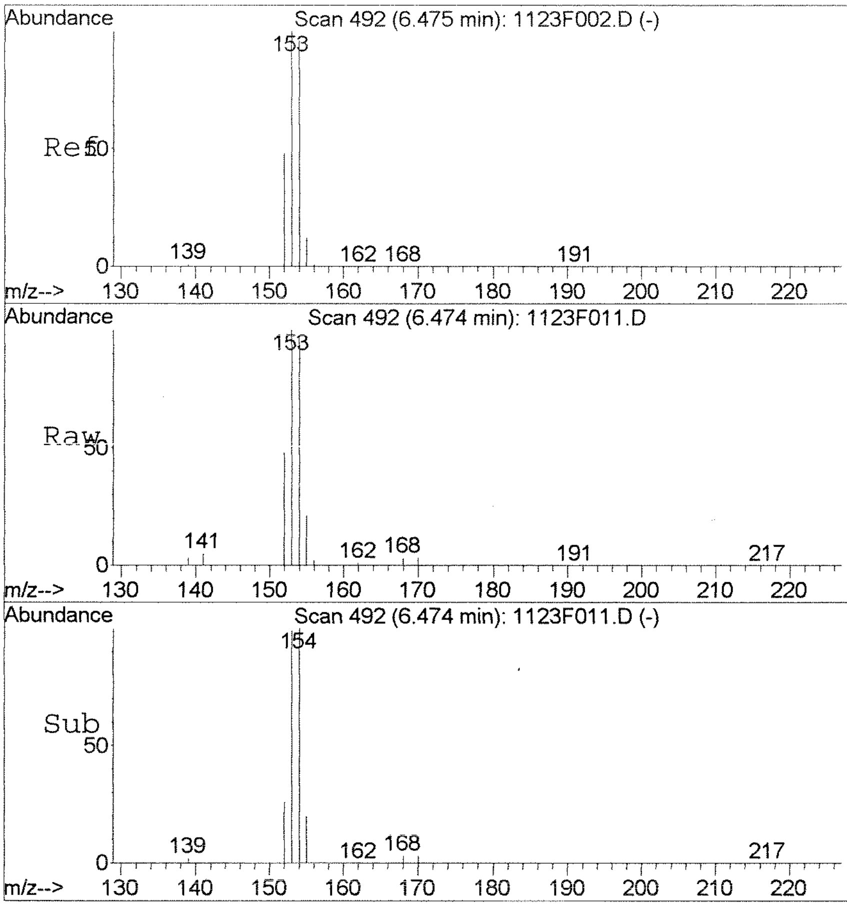




#11
Acenaphthylene
Concen: 93.66 ng/ml
RT: 6.33 min Scan# 466
Delta R.T. -0.02 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt	Ion:152	Resp:	103597
Ion	Ratio	Lower	Upper
152	100		
153	16.7	0.0	43.0

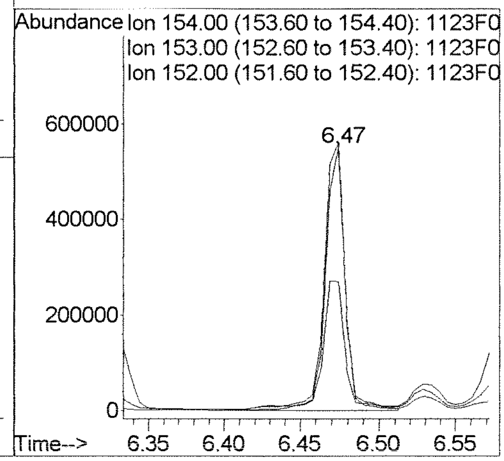


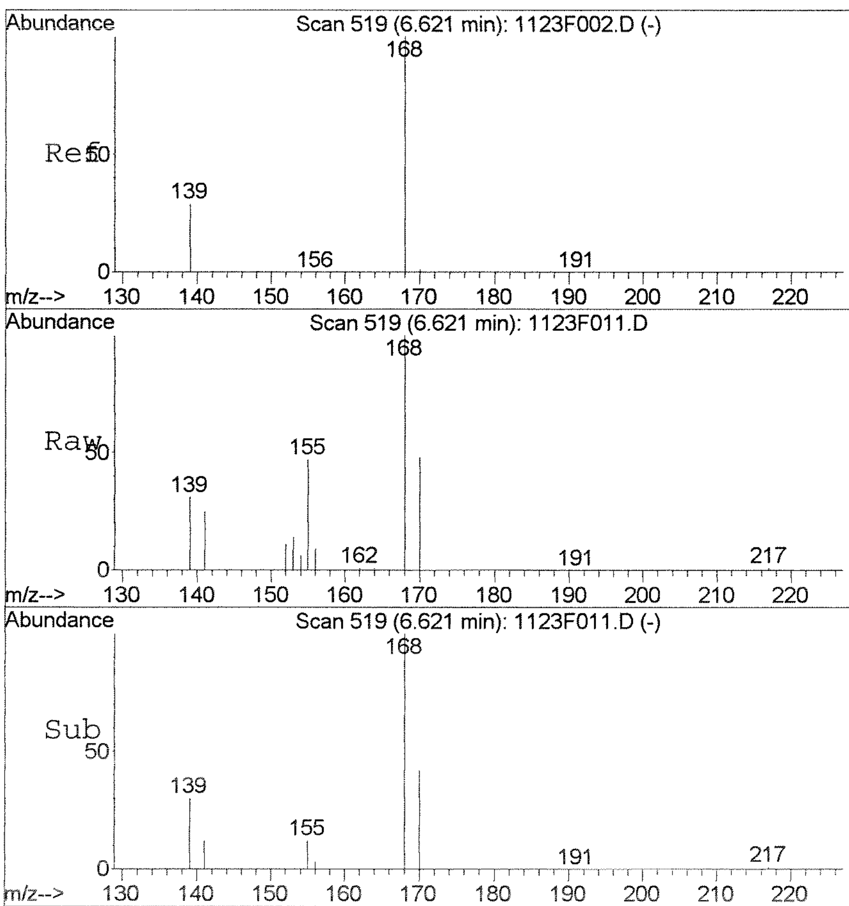


#12
Acenaphthene
Concen: 691.55 ng/ml
RT: 6.47 min Scan# 492
Delta R.T. -0.01 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt Ion:154 Resp: 464842

Ion	Ratio	Lower	Upper
154	100		
153	101.9	81.9	141.9
152	48.7	26.8	86.8

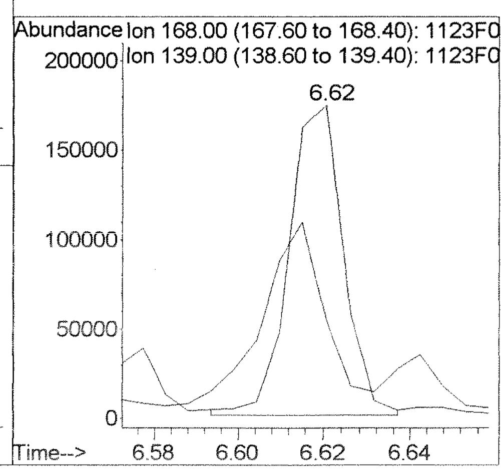


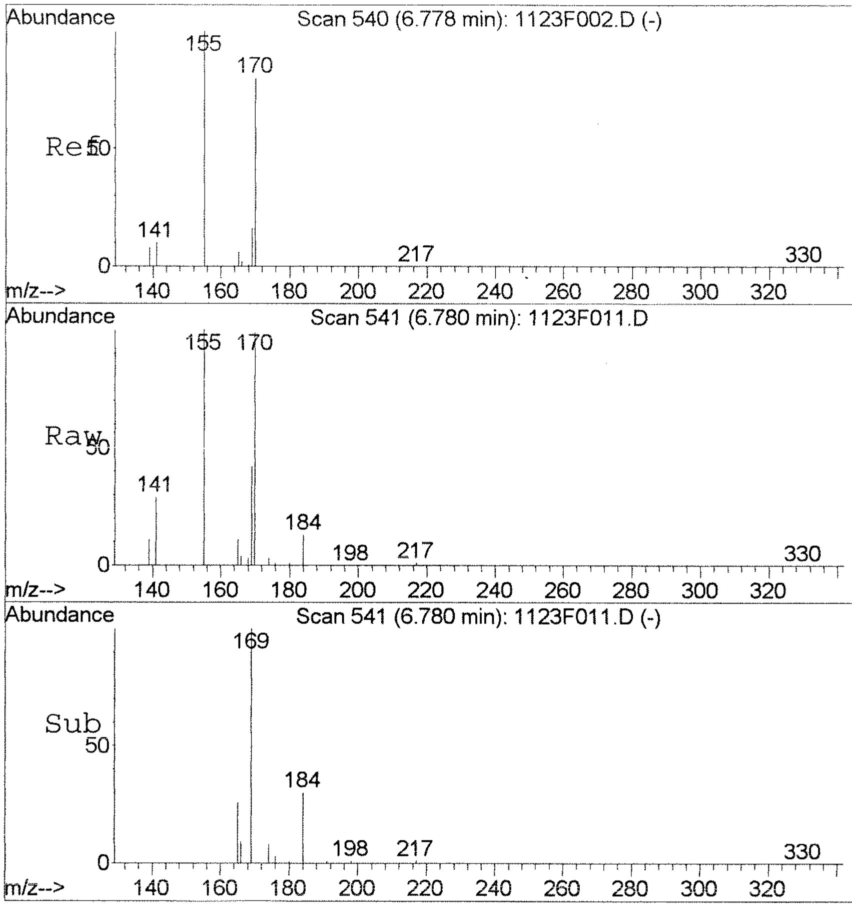


#13
Dibenzofuran
Concen: 148.19 ng/ml m
RT: 6.62 min Scan# 519
Delta R.T. -0.01 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt Ion:168 Resp: 149845

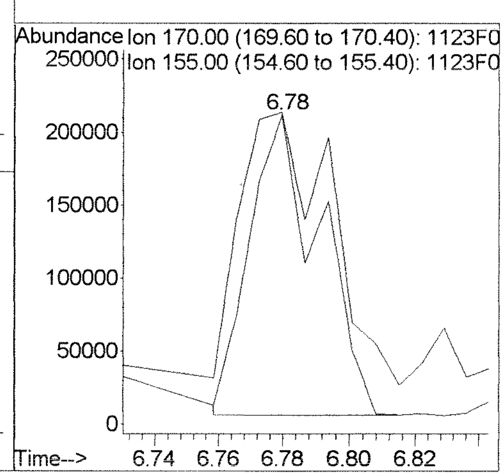
Ion	Ratio	Lower	Upper
168	100		
139	31.4	21.0	81.0

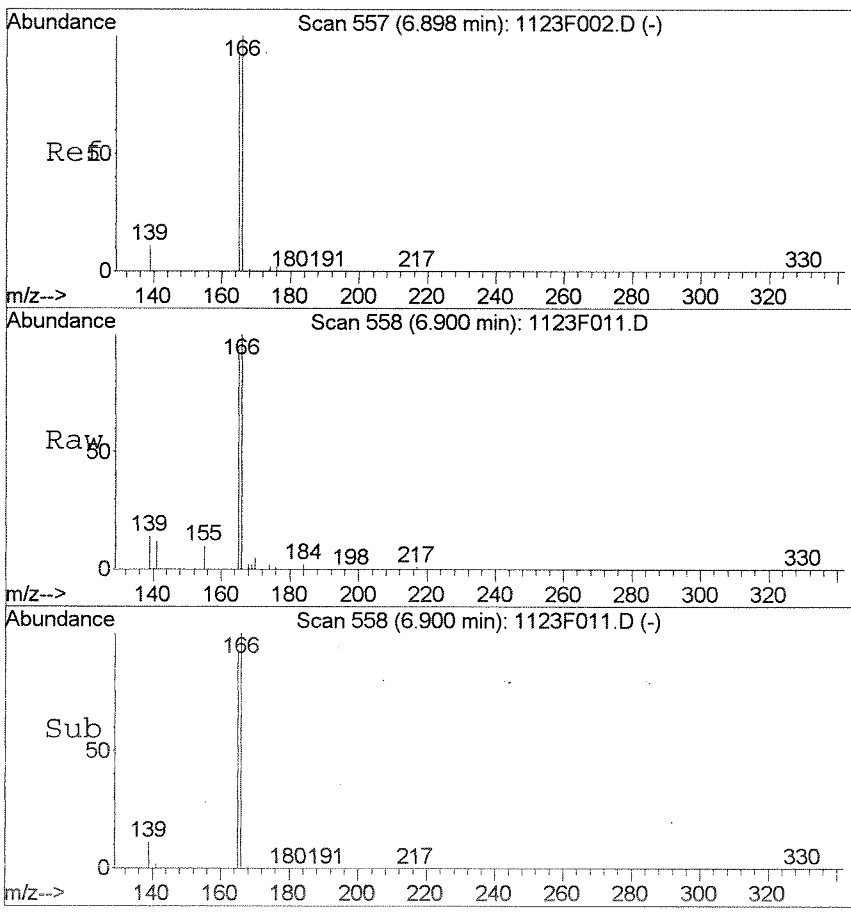




#14
2,3,5-Trimethylnaphthalene
Concen: 523.45 ng/ml
RT: 6.78 min Scan# 541
Delta R.T. -0.01 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

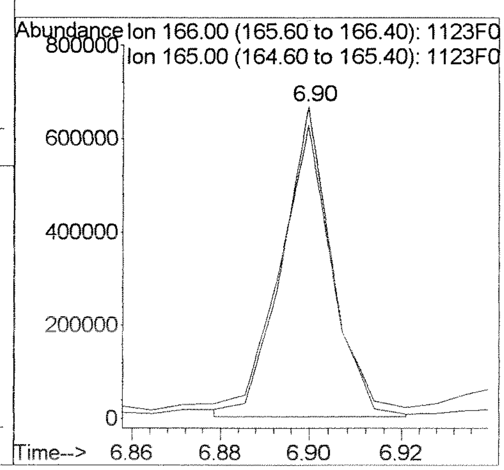
Tgt	Ion:170	Resp:	309452
Ion	Ratio	Lower	Upper
170	100		
155	91.0	42.9	102.9

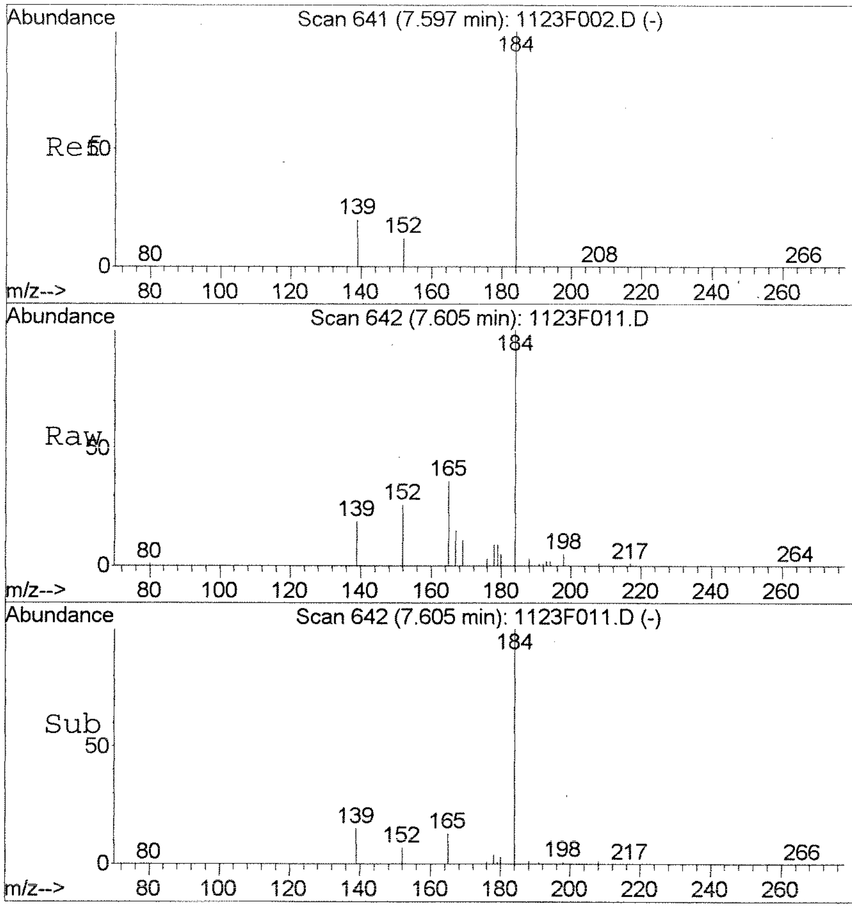




#16
Fluorene
Concen: 615.24 ng/ml m
RT: 6.90 min Scan# 558
Delta R.T. -0.01 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

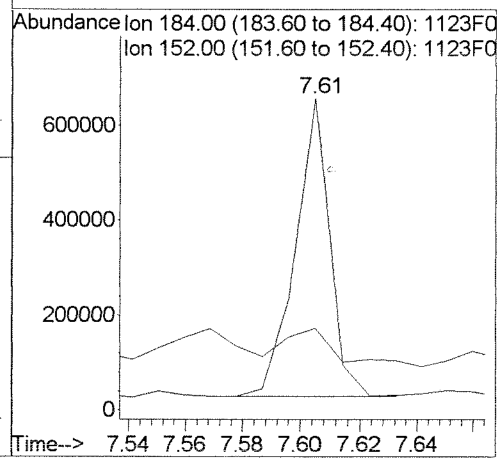
Tgt	Ion:166	Resp:	496468
Ion	Ratio	Lower	Upper
166	100		
165	93.9	59.8	119.8

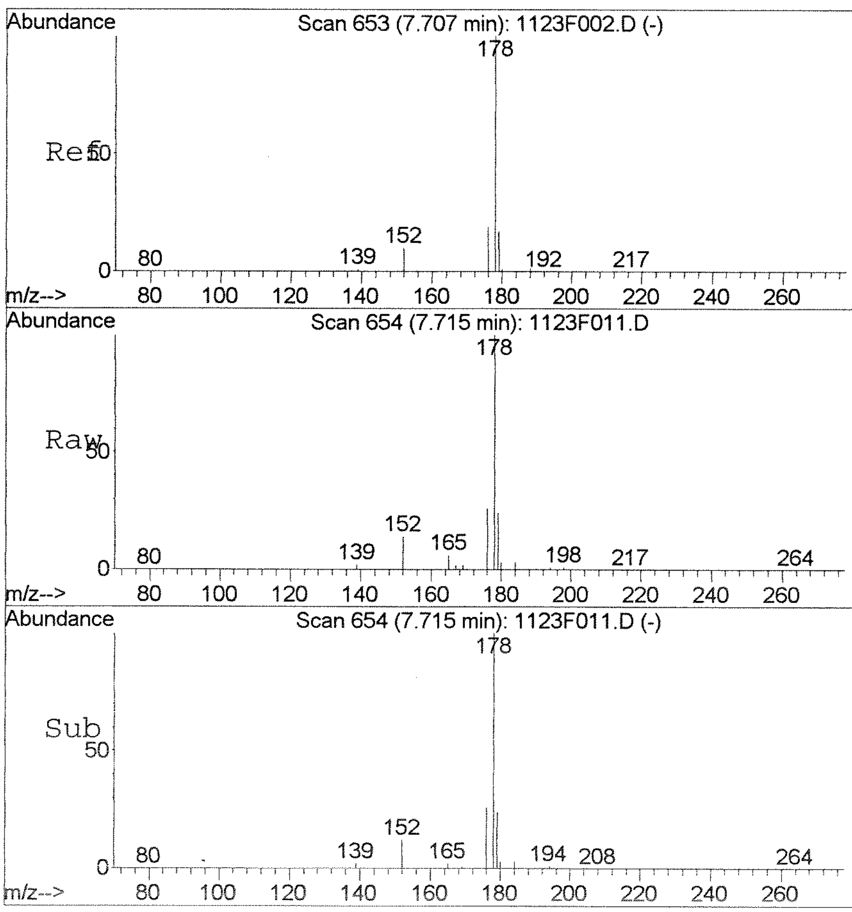




#23
Dibenzothiophene
Concen: 365.65 ng/ml
RT: 7.61 min Scan# 642
Delta R.T. -0.01 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

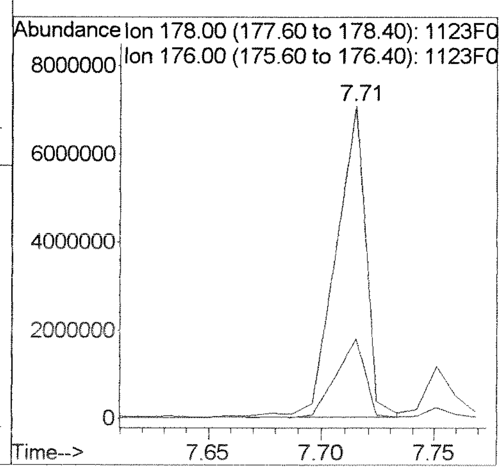
Tgt Ion:184	Resp:	502181	
Ion	Ratio	Lower	Upper
184	100		
152	10.9	0.0	39.1

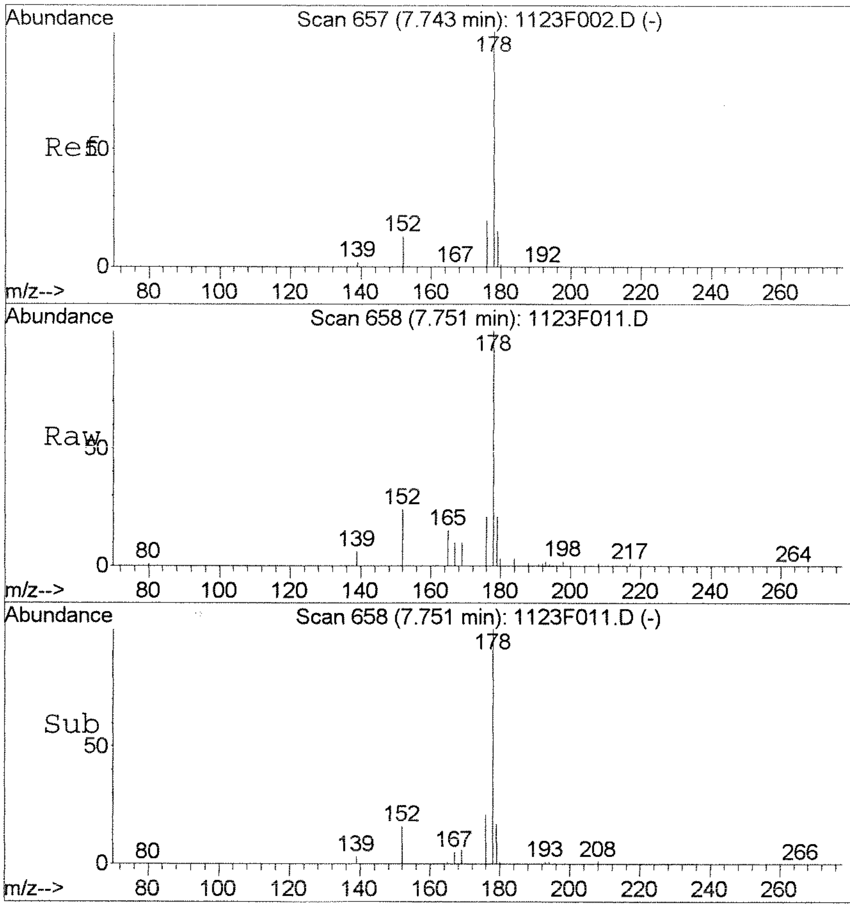




#27
Phenanthrene
Concen: 4506.81 ng/ml
RT: 7.71 min Scan# 654
Delta R.T. -0.00 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

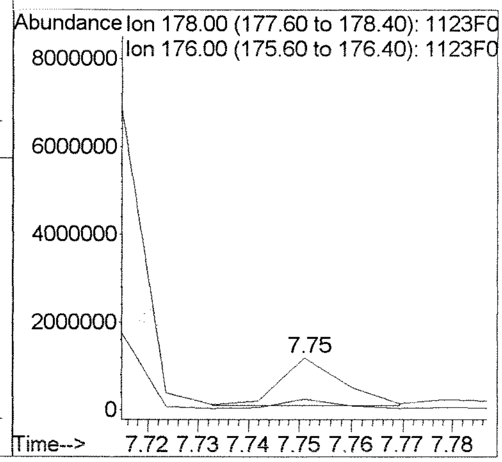
Tgt Ion:178	Resp:	6330466	
Ion	Ratio	Lower	Upper
178	100		
176	25.4	0.0	51.0

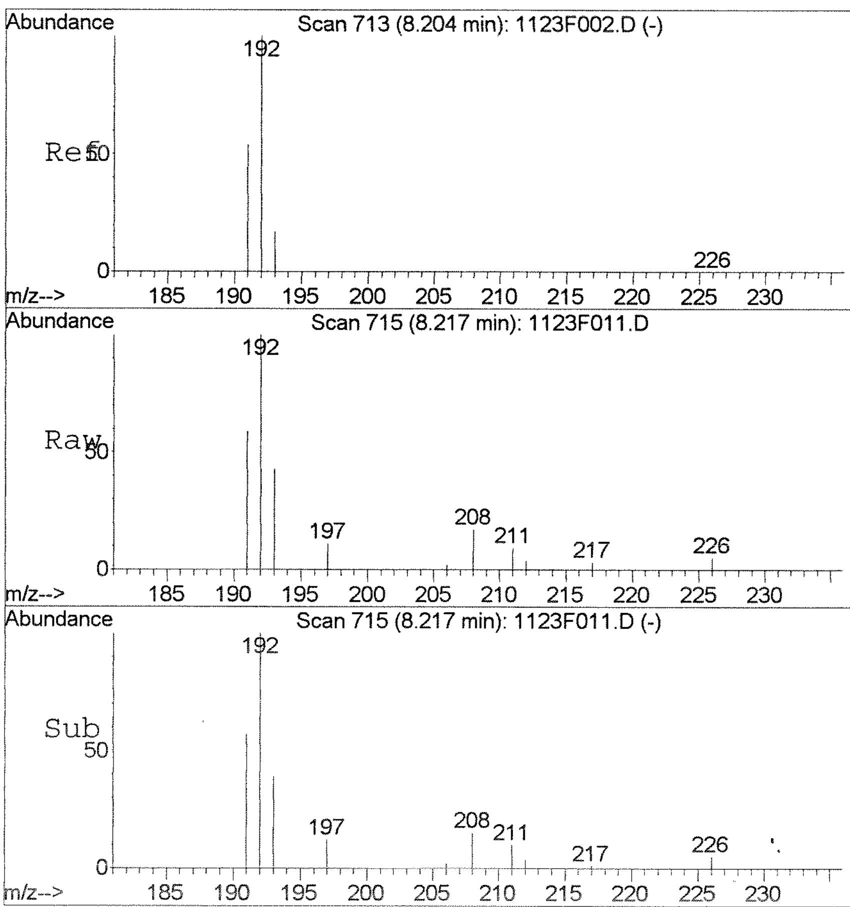




#28
Anthracene
Concen: 660.59 ng/ml m
RT: 7.75 min Scan# 658
Delta R.T. -0.01 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

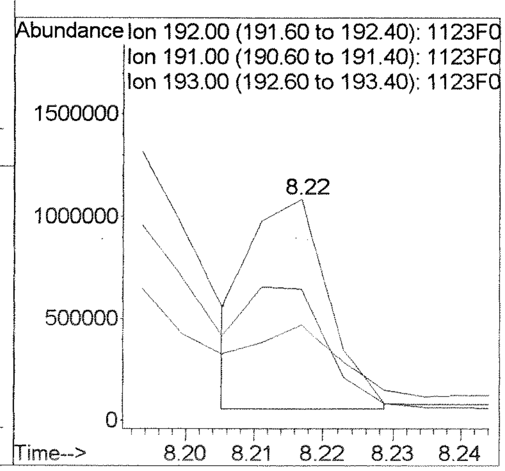
Tgt Ion:178		Resp:	904082
Ion	Ratio	Lower	Upper
178	100		
176	21.4	0.0	49.7

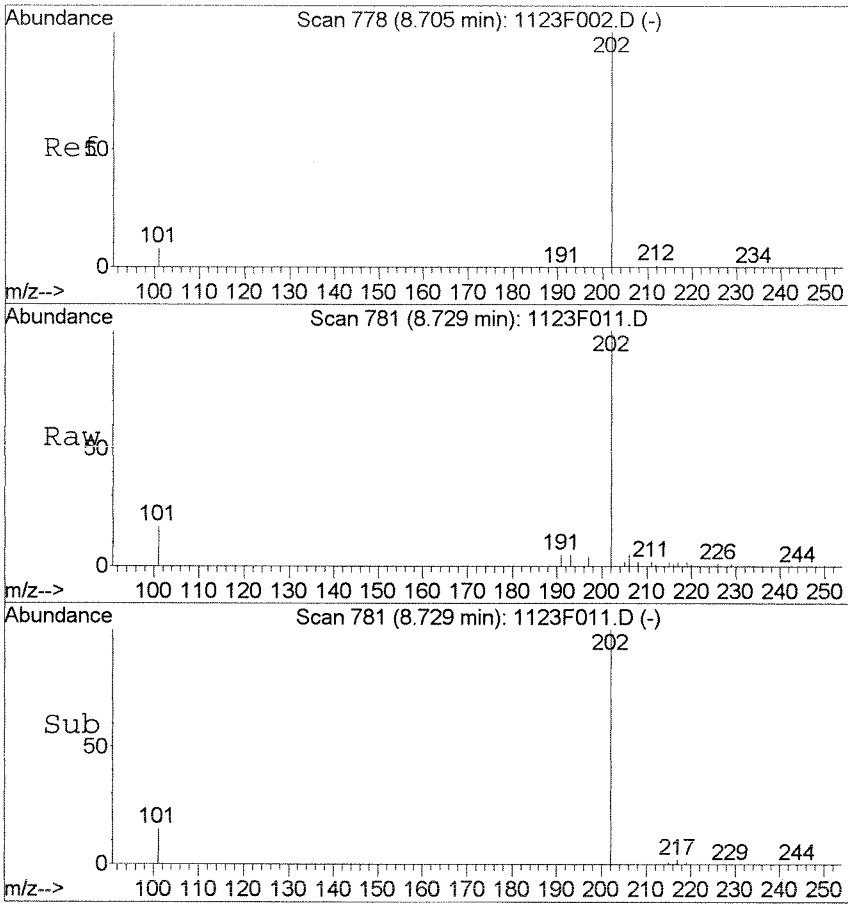




#30
1-Methylphenanthrene
Concen: 764.20 ng/ml m
RT: 8.22 min Scan# 715
Delta R.T. 0.00 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt Ion:192		Resp:	796660
Ion	Ratio	Lower	Upper
192	100		
191	59.5	29.0	89.0
193	43.3	0.0	45.4

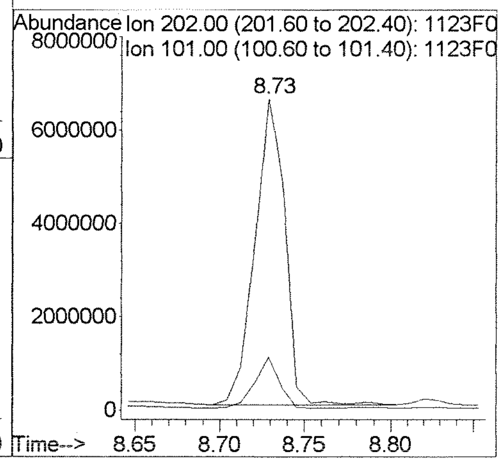


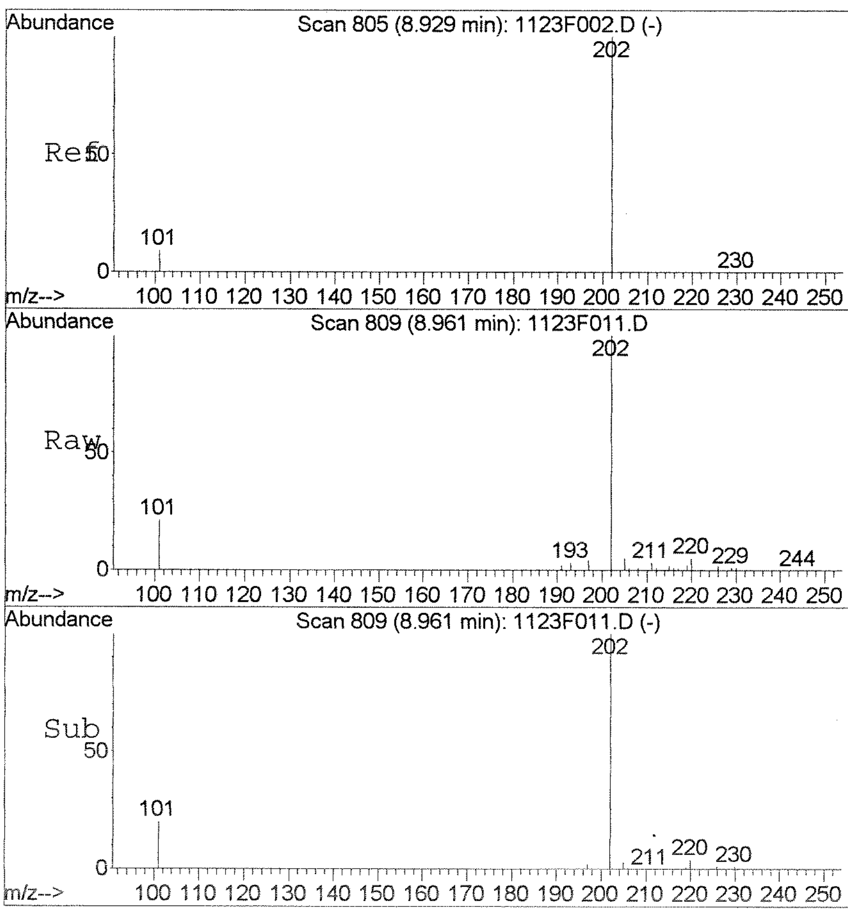


#35
Fluoranthene
Concen: 5088.23 ng/ml
RT: 8.73 min Scan# 781
Delta R.T. 0.01 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt Ion:202 Resp: 8118527

Ion	Ratio	Lower	Upper
202	100		
101	16.6	0.0	35.8

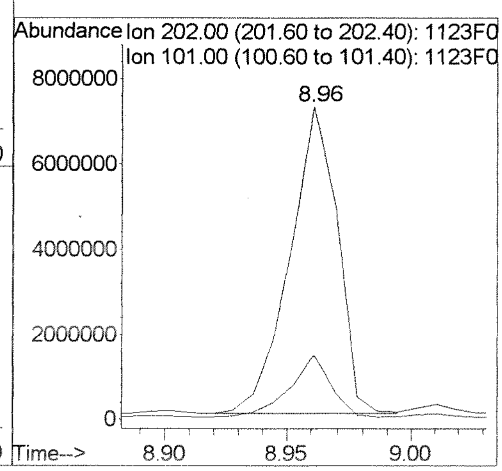


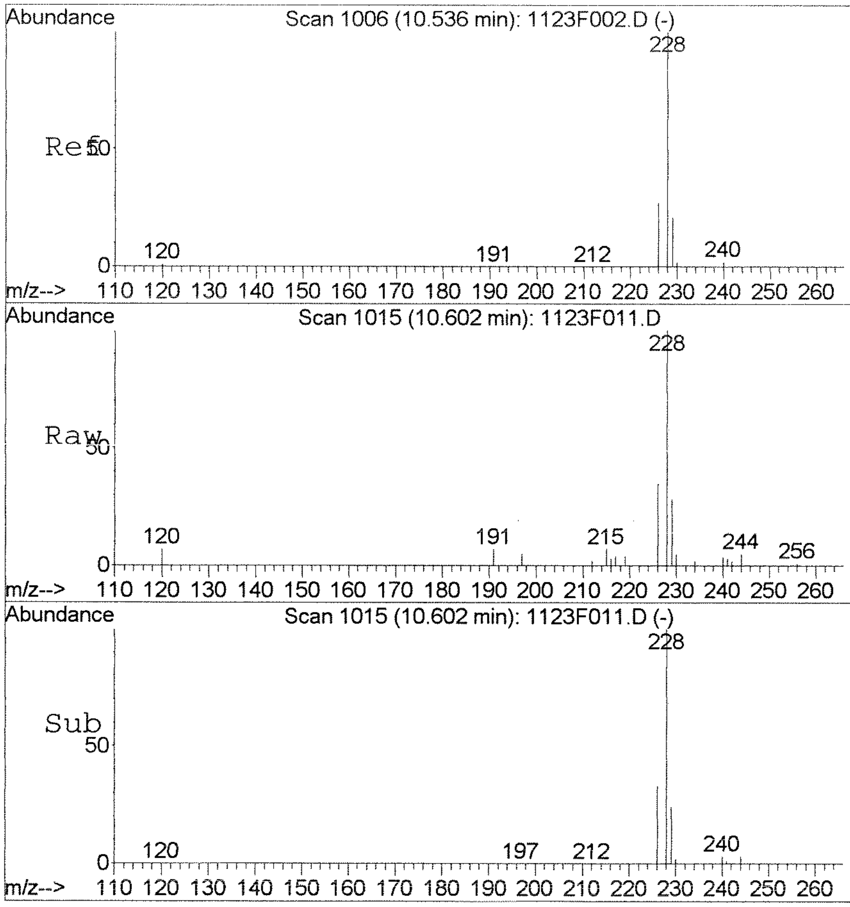


#38
Pyrene
Concen: 4187.42 ng/ml
RT: 8.96 min Scan# 809
Delta R.T. 0.02 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt Ion:202 Resp: 9433435

Ion	Ratio	Lower	Upper
202	100		
101	20.3	0.0	37.6

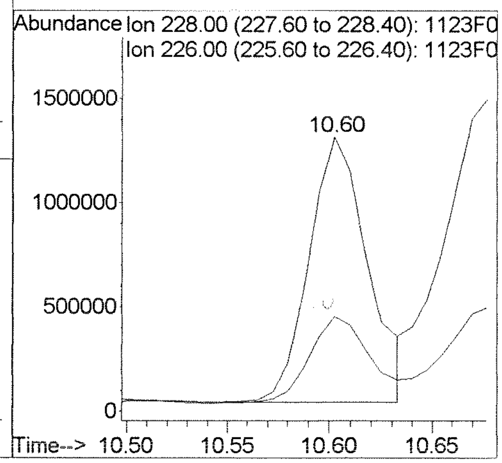


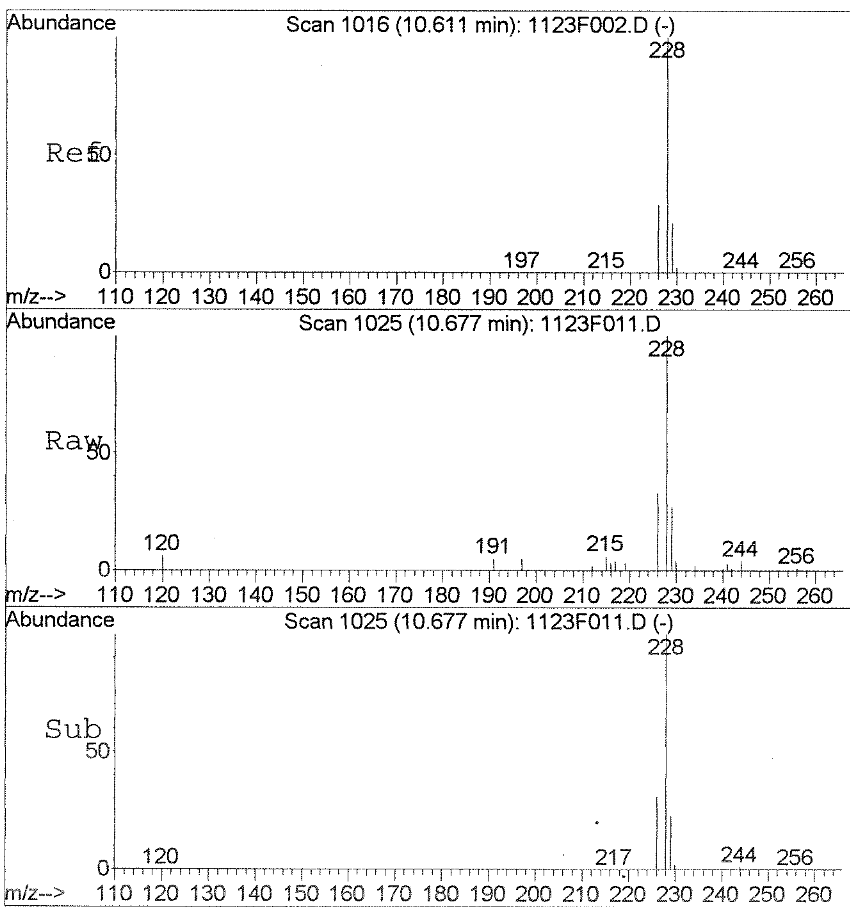


#43
Benz(a)anthracene
Concen: 1214.76 ng/ml
RT: 10.60 min Scan# 1015
Delta R.T. 0.04 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt Ion:228 Resp: 2482674

Ion	Ratio	Lower	Upper
228	100		
226	32.7	0.0	57.0

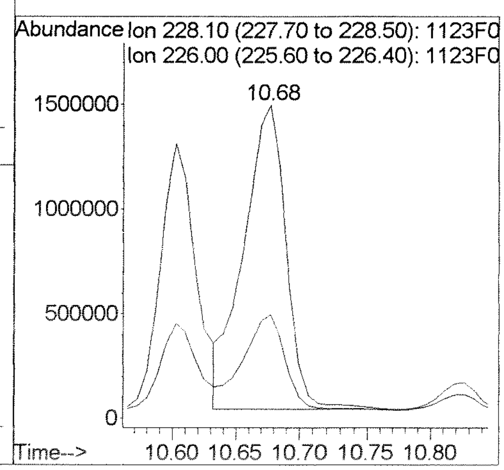


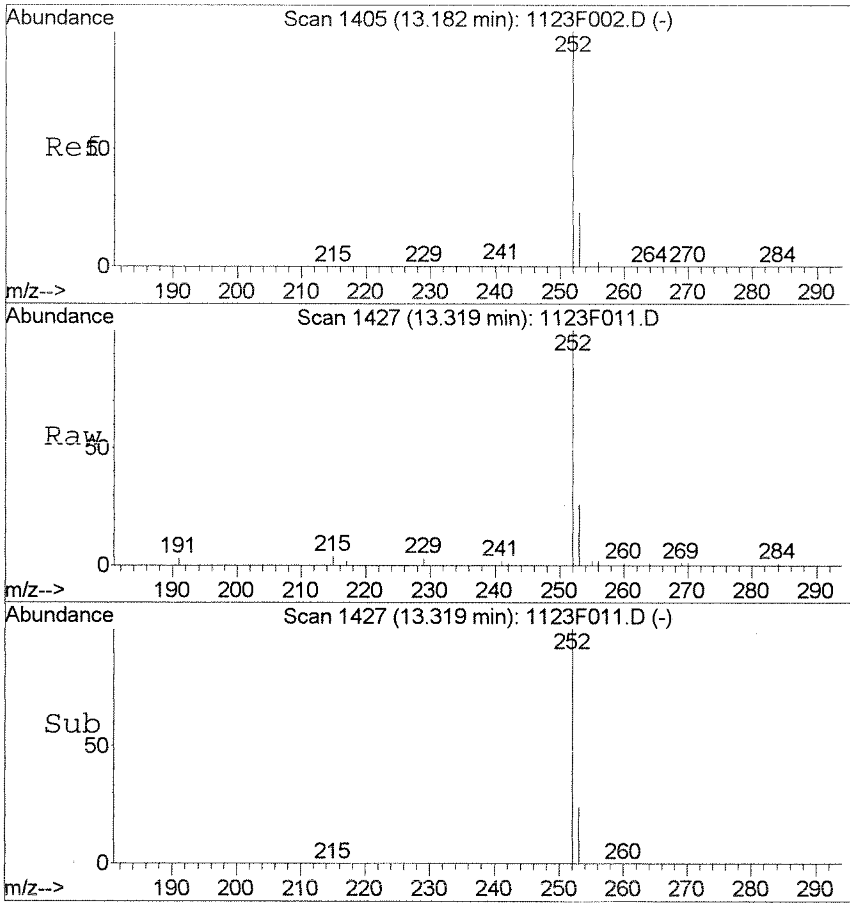


#44
Chrysene
Concen: 1688.67 ng/ml
RT: 10.68 min Scan# 1025
Delta R.T. 0.04 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt Ion:228 Resp: 3389596

Ion	Ratio	Lower	Upper
228	100		
226	31.5	0.0	58.9

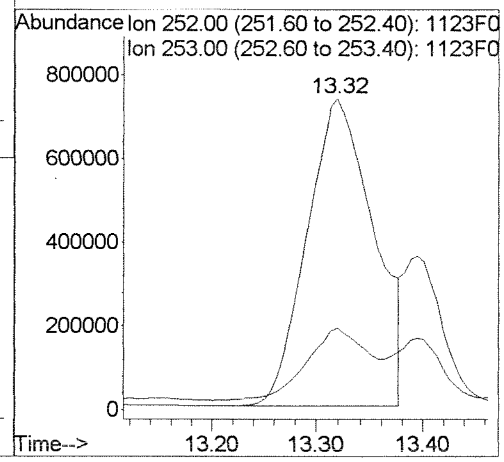


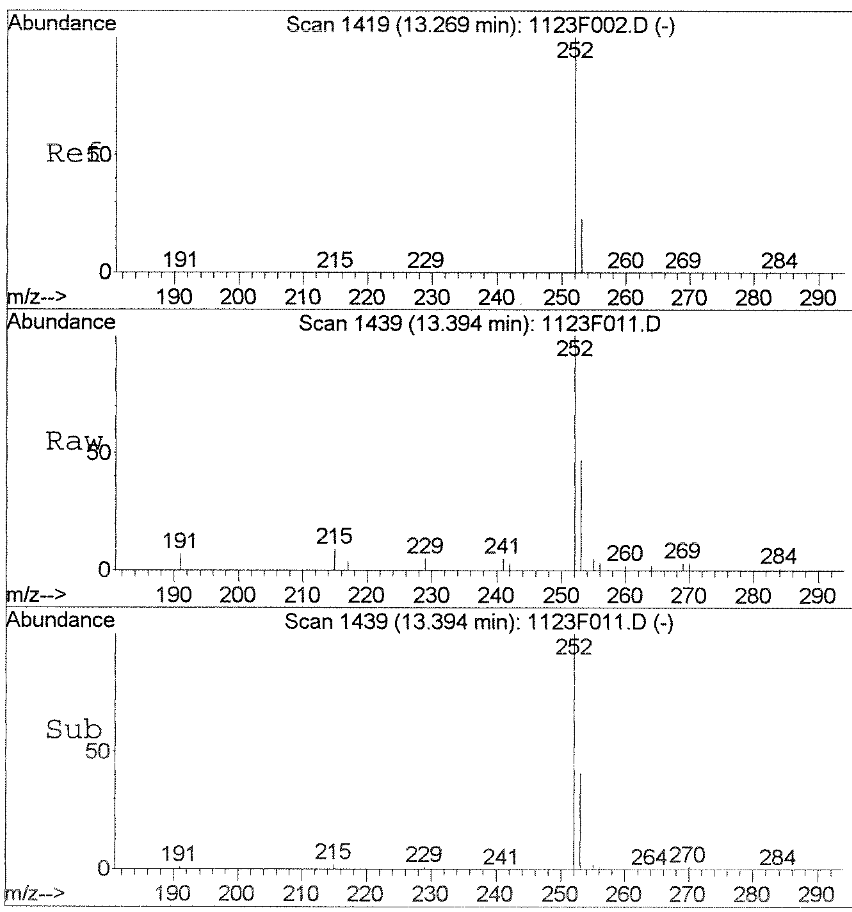


#50
Benzo(b)fluoranthene
Concen: 1706.07 ng/ml
RT: 13.32 min Scan# 1427
Delta R.T. 0.09 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt Ion:252 Resp: 3154405

Ion	Ratio	Lower	Upper
252	100		
253	23.5	0.0	52.6

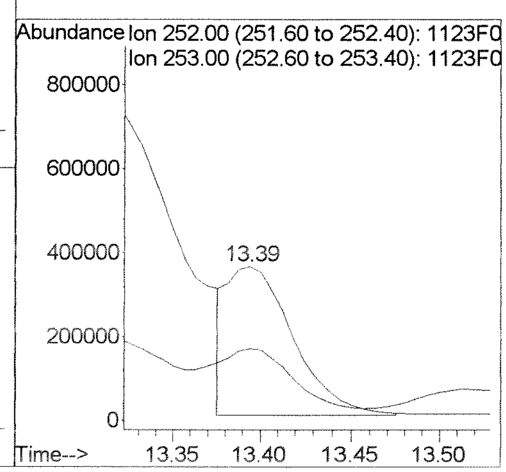


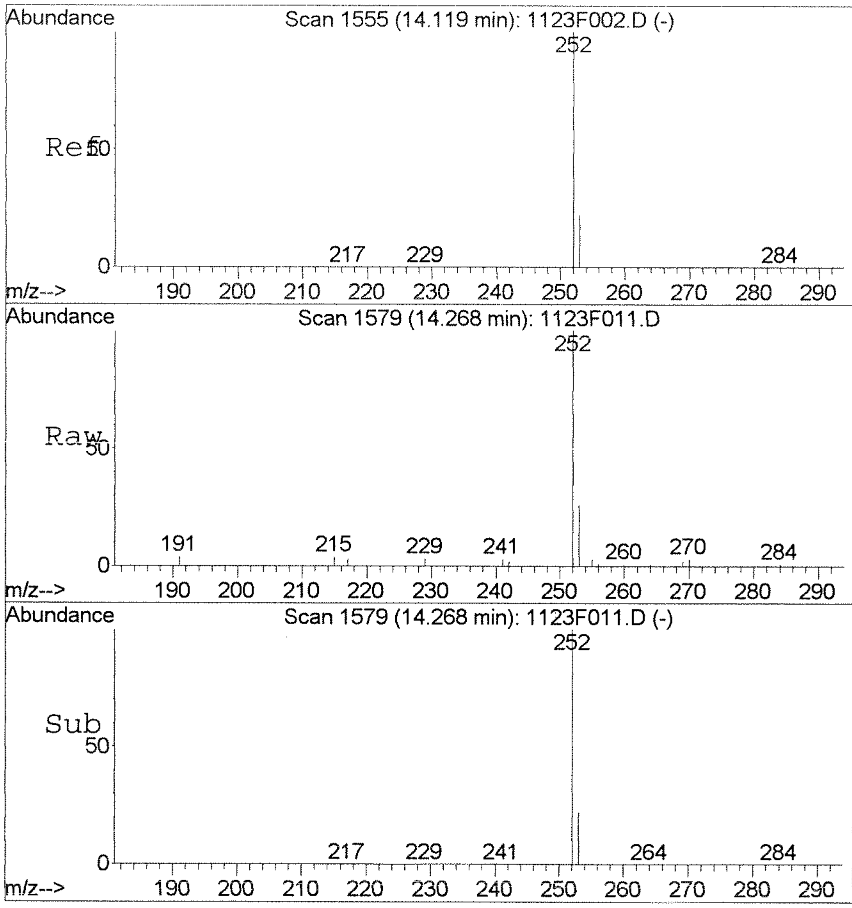


#51
Benzo(k)fluoranthene
Concen: 518.62 ng/ml m
RT: 13.39 min Scan# 1439
Delta R.T. 0.08 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt Ion:252 Resp: 921147

Ion	Ratio	Lower	Upper
252	100		
253	46.6	0.0	52.0

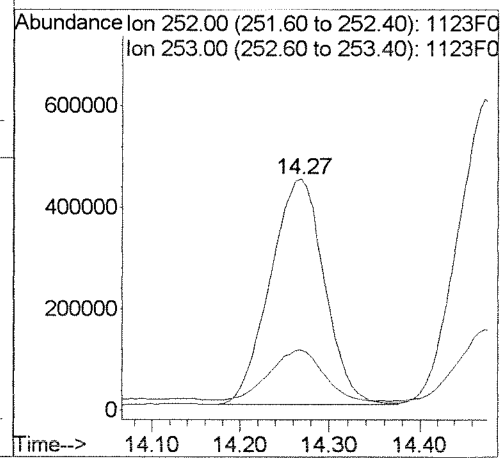


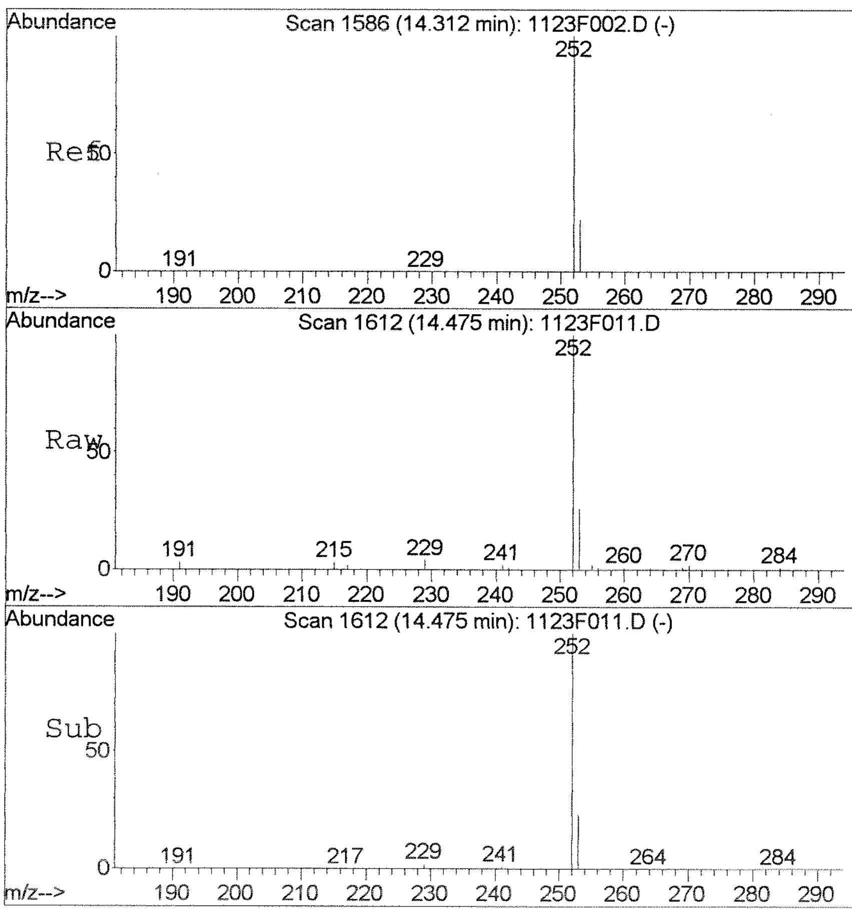


#52
Benzo(e)pyrene
Concen: 1119.63 ng/ml
RT: 14.27 min Scan# 1579
Delta R.T. 0.10 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt Ion:252 Resp: 1880448

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	52.2

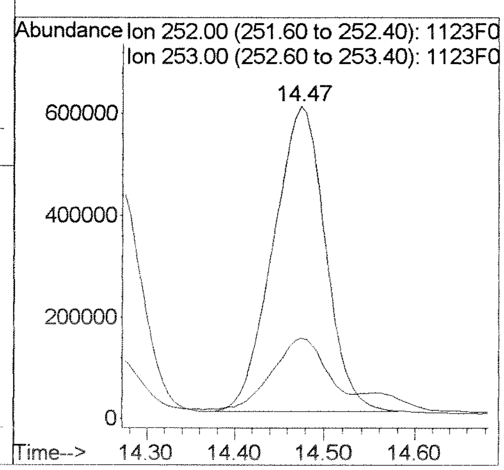


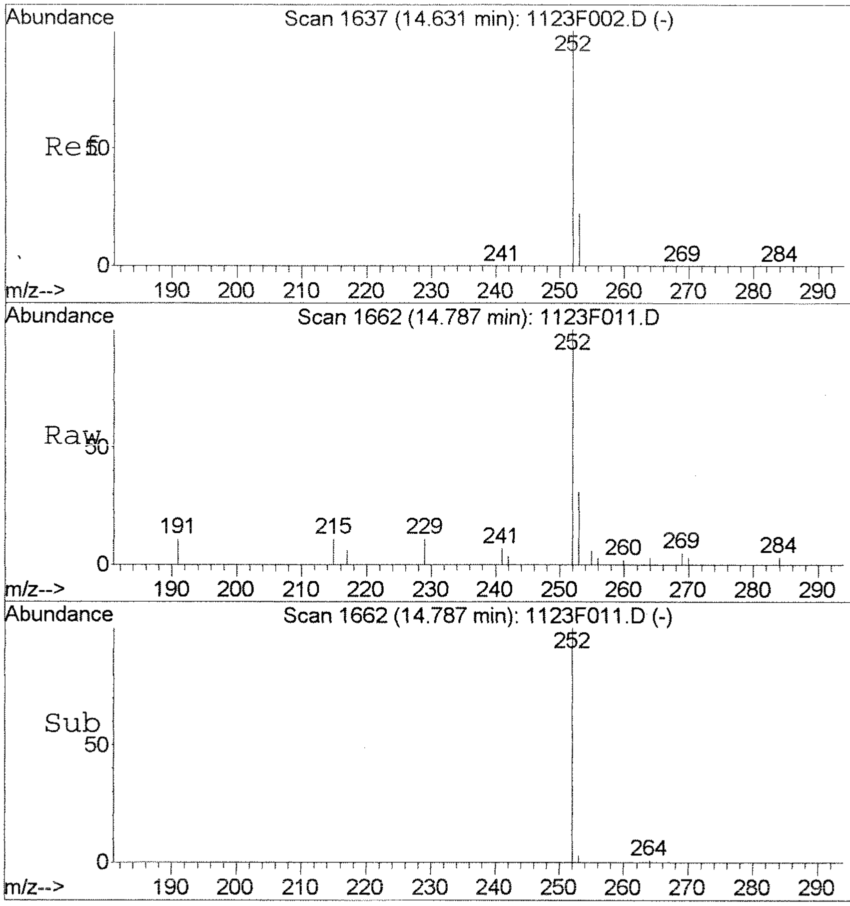


#53
Benzo(a)pyrene
Concen: 1580.72 ng/ml
RT: 14.47 min Scan# 1612
Delta R.T. 0.11 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

Tgt Ion:252 Resp: 2419834

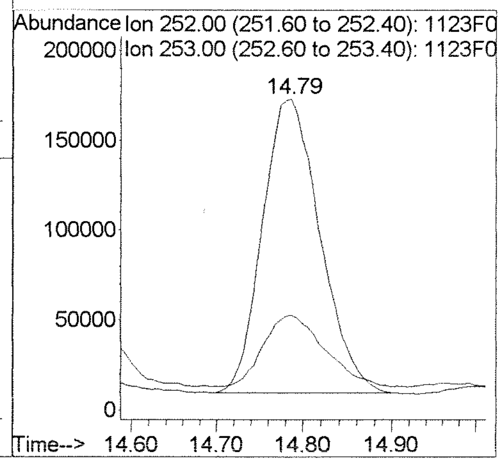
Ion	Ratio	Lower	Upper
252	100		
253	23.2	0.0	52.2

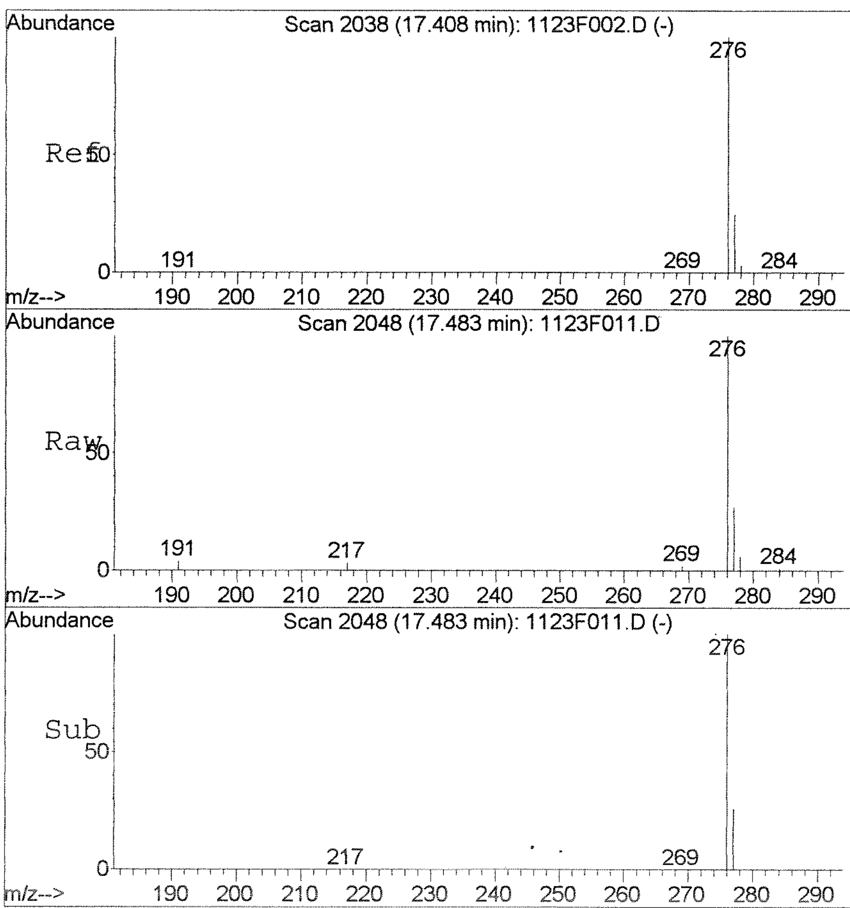




#54
Perylene
Concen: 495.43 ng/ml
RT: 14.79 min Scan# 1662
Delta R.T. 0.10 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

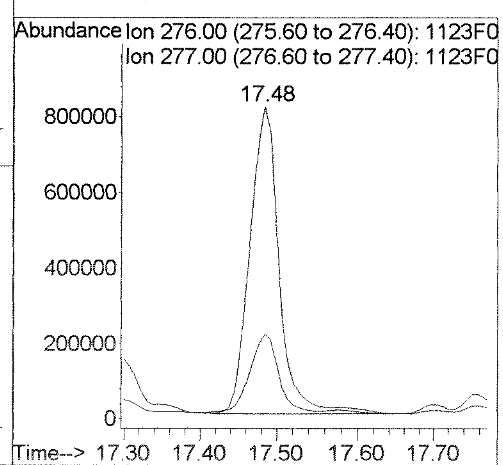
Tgt	Ion:252	Resp:	745049
Ion	Ratio	Lower	Upper
252	100		
253	24.2	0.0	51.5

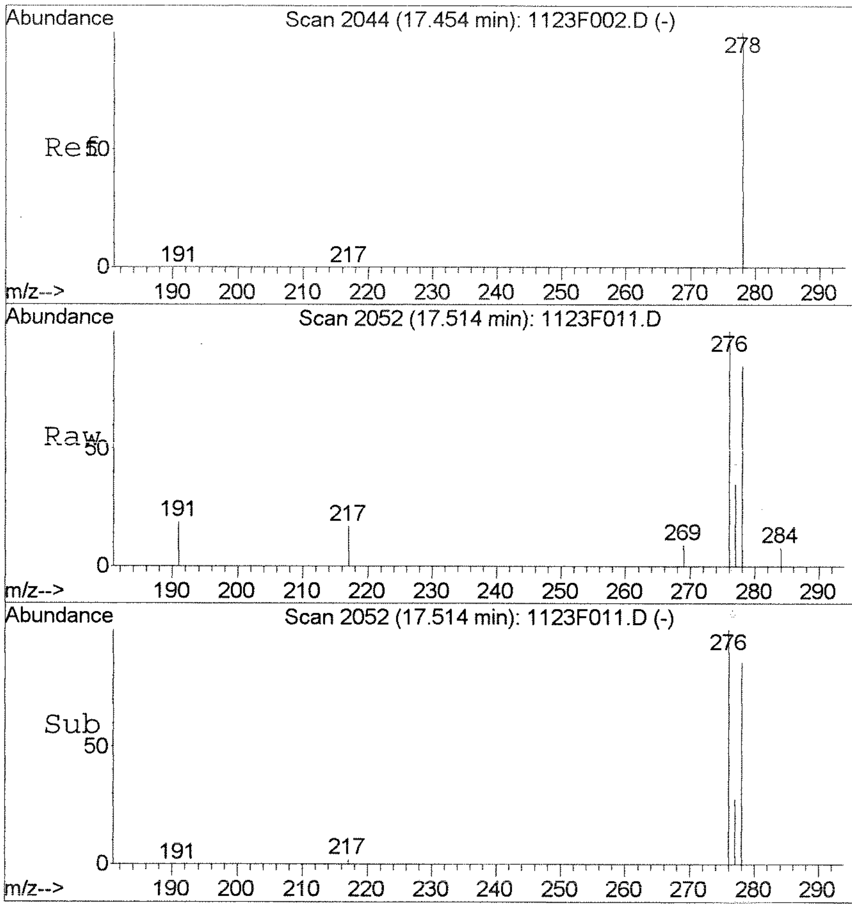




#55
Indeno(1,2,3-cd)pyrene
Concen: 1515.16 ng/ml
RT: 17.48 min Scan# 2048
Delta R.T. 0.05 min
Lab File: 1123F011.D
Acq: 23 Nov 2008 3:42 pm

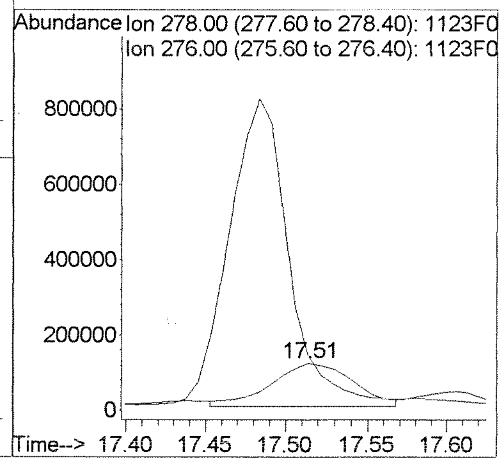
Tgt	Ion:276	Resp:	2152079
Ion	Ratio	Lower	Upper
276	100		
277	26.0	0.0	54.7

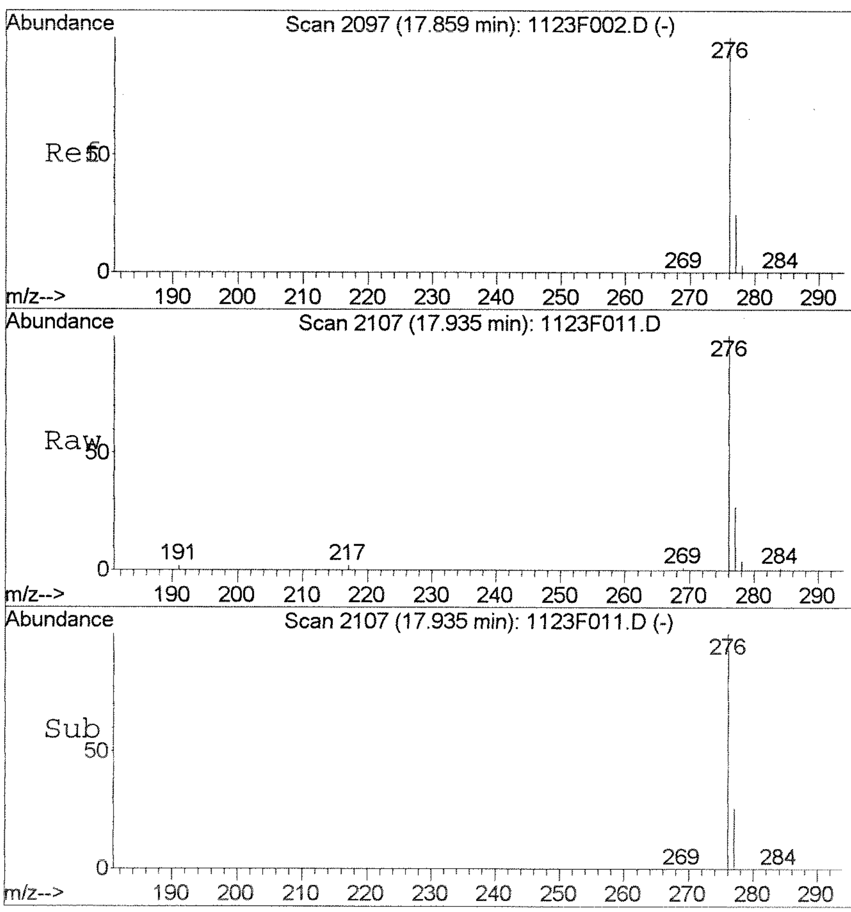




#56
Dibenz(a,h)anthracene
Concen: 269.70 ng/ml m
RT: 17.51 min   Scan# 2052
Delta R.T.   0.02 min
Lab File: 1123F011.D
Acq: 23 Nov 2008   3:42 pm

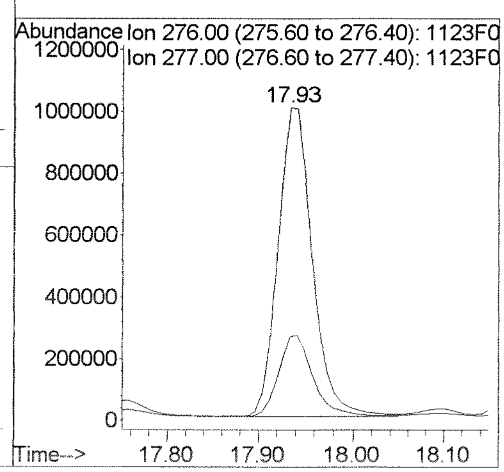
Tgt Ion:278	Resp:		402064
Ion	Ratio	Lower	Upper
278	100		
276	117.8	0.0	59.7#





#57
Benzo(g,h,i)perylene
Concen: 1578.30 ng/ml
RT: 17.93 min   Scan# 2107
Delta R.T.   0.04 min
Lab File: 1123F011.D
Acq: 23 Nov 2008   3:42 pm

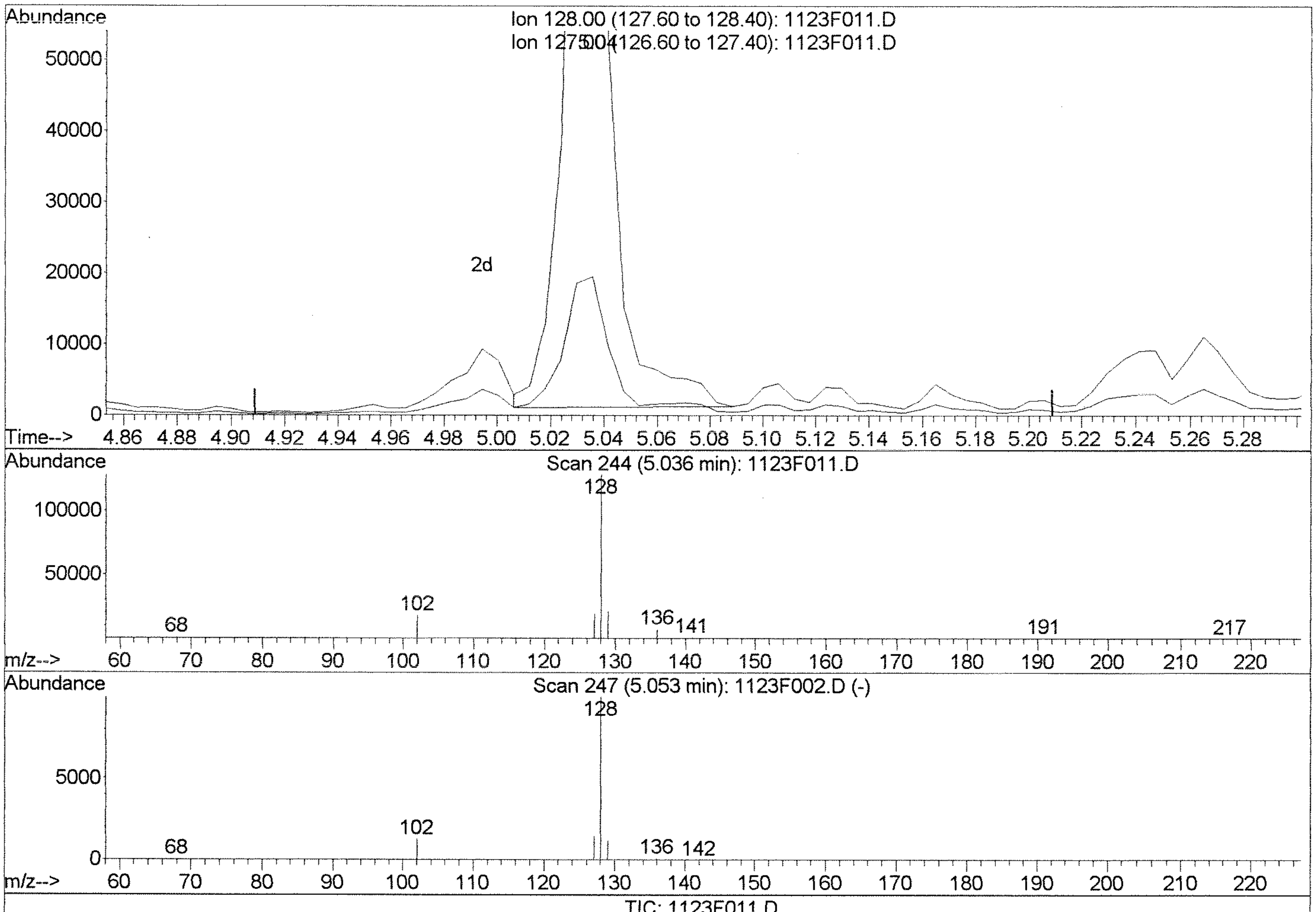
Tgt Ion:276	Resp:		2554006
Ion	Ratio	Lower	Upper
276	100		
277	25.9	0.0	54.2



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D
Vial: 9
Acq On : 23 Nov 2008 3:42 pm
Operator: LWeiskopf
Sample : K0810639-010
Inst : MS11
Misc :
Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:44 2008
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



(2) Naphthalene (T)

5.04min 132.30ng/ml

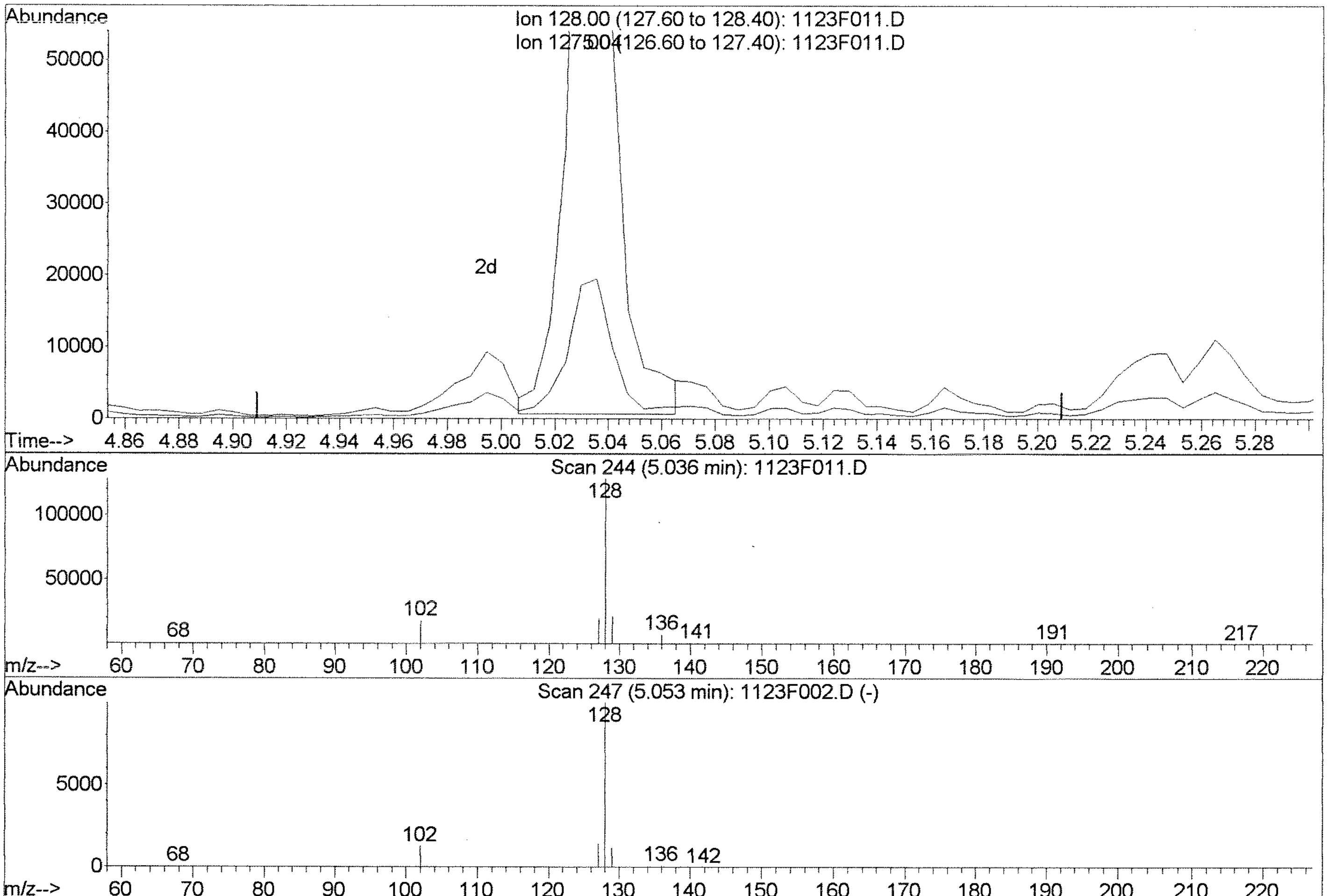
response 134996

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	14.98
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D Vial: 9
Acq On : 23 Nov 2008 3:42 pm Operator: LWeiskopf
Sample : K0810639-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:50 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F011.D

(2) Naphthalene (T)

5.04min 131.28ng/ml m

response 133958

Ion	Exp%	Act%
128.00	100	100
127.00	13.80	15.20
0.00	0.00	0.00
0.00	0.00	0.00

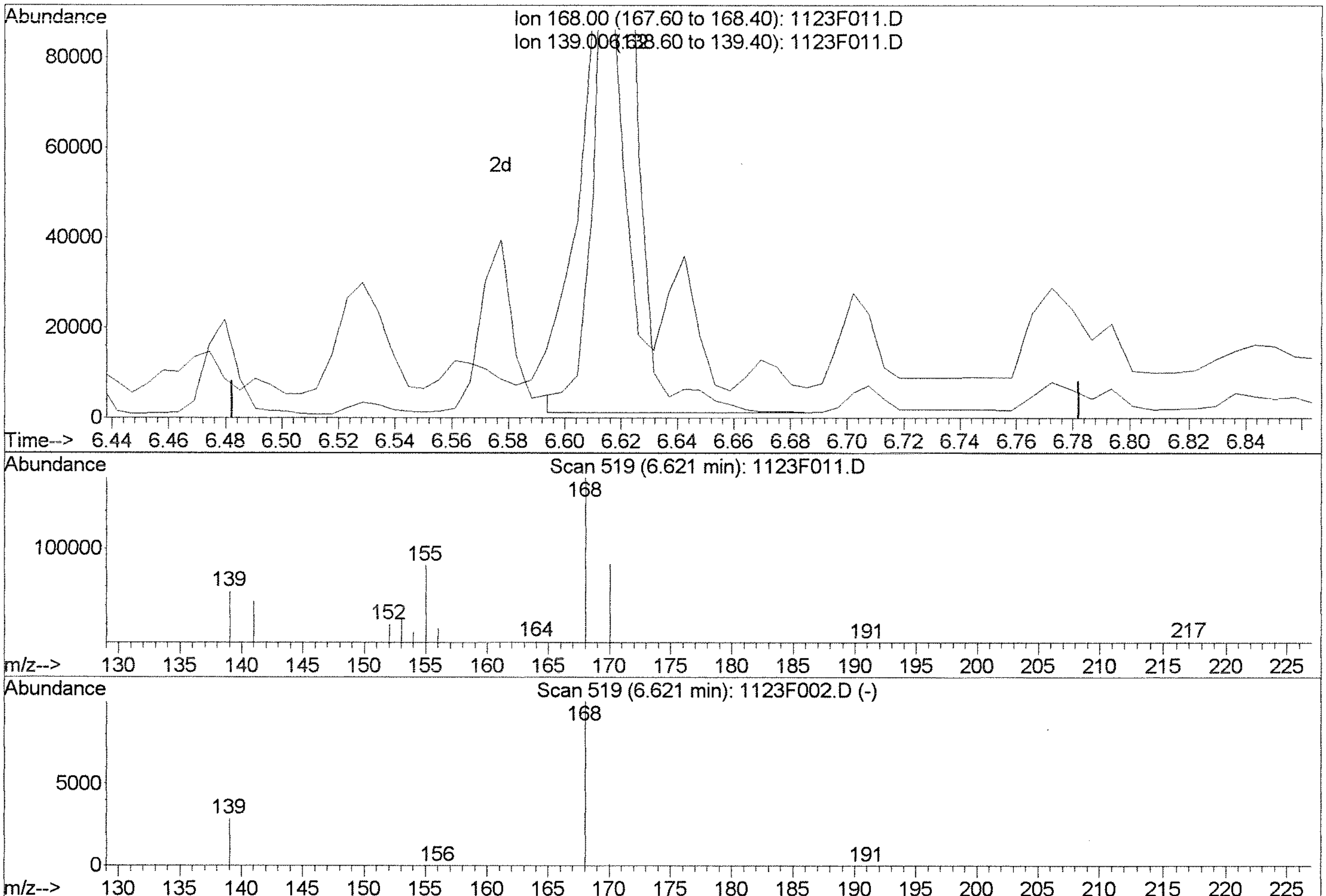
OT 11/24/08

11-25-08

1123F011.D 1110ALK.M Mon Nov 24 06:50:18 2008

Data File : J:\MS11\DATA\112308\1123F011.D Vial: 9
Acq On : 23 Nov 2008 3:42 pm Operator: LWeiskopf
Sample : K0810639-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:50 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F011.D

(13) Dibenzofuran (T)

6.62min 154.72ng/ml

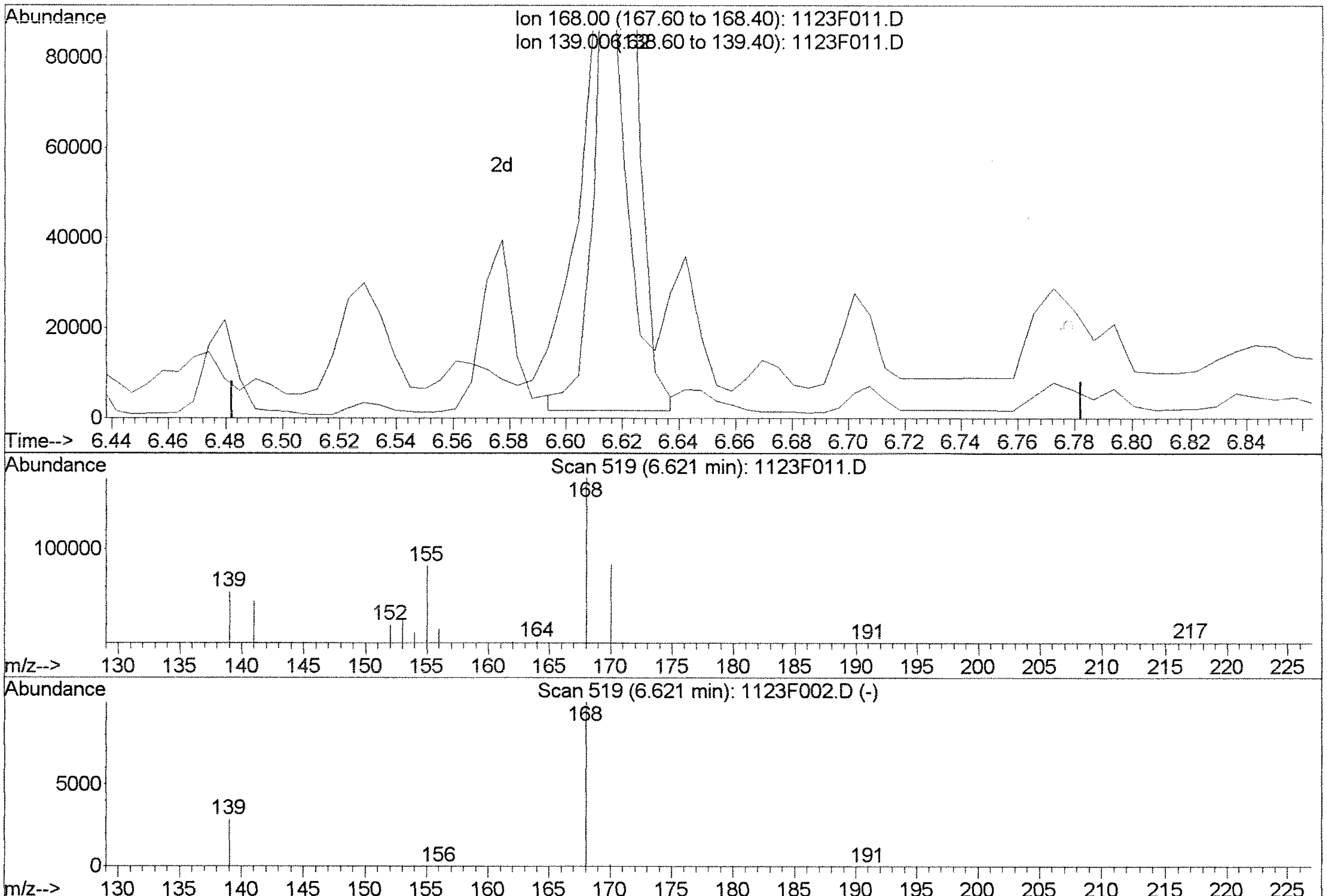
response 156445

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	27.73
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D   Vial: 9
Acq On : 23 Nov 2008 3:42 pm   Operator: LWeiskopf
Sample : K0810639-010   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:50 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F011.D

(13) Dibenzofuran (T)

6.62min 148.19ng/ml m

response 149845

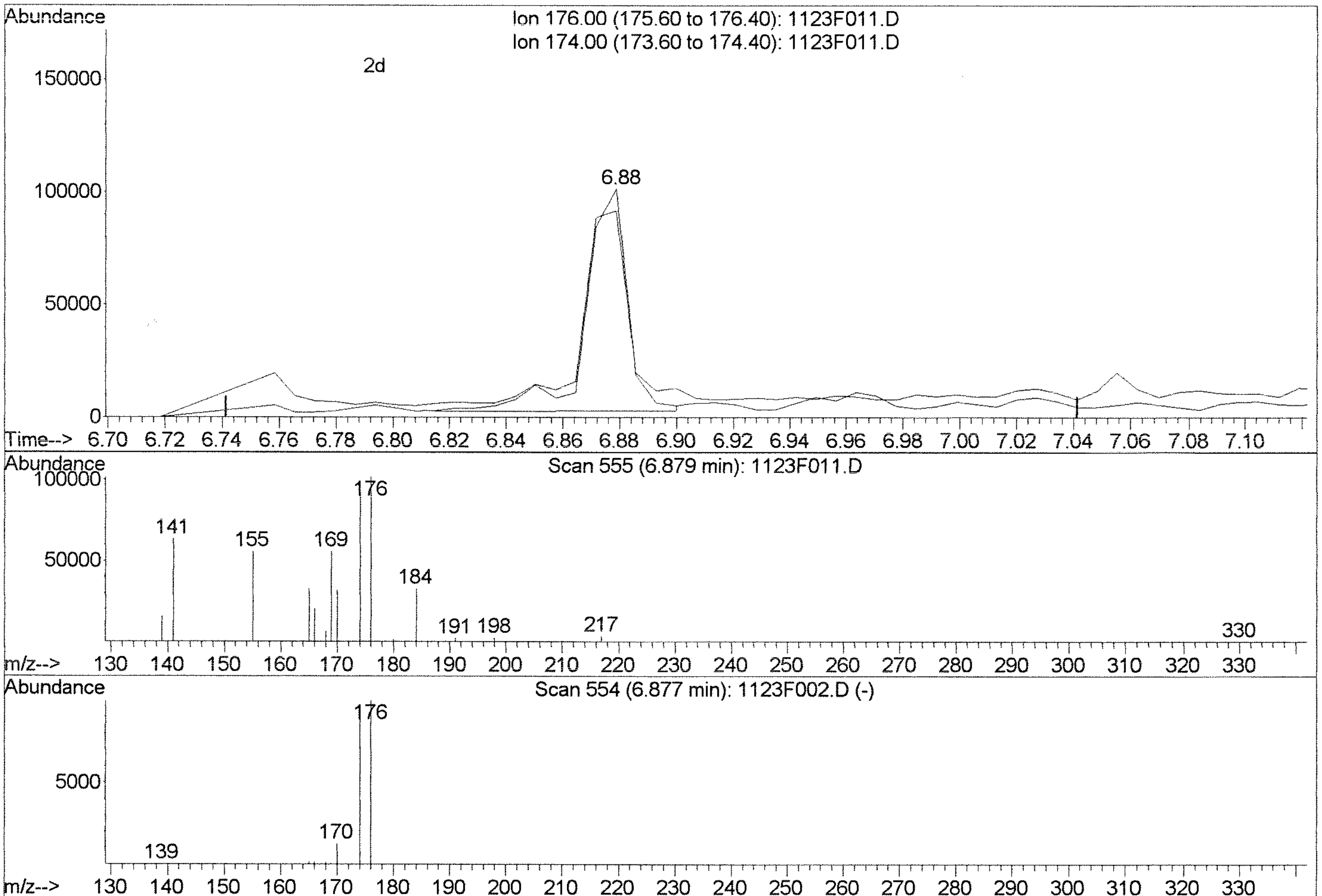
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	31.39
0.00	0.00	0.00
0.00	0.00	0.00

OI

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D Vial: 9
Acq On : 23 Nov 2008 3:42 pm Operator: LWeiskopf
Sample : K0810639-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:50 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F011.D

(15) Fluorene-d10 (S)

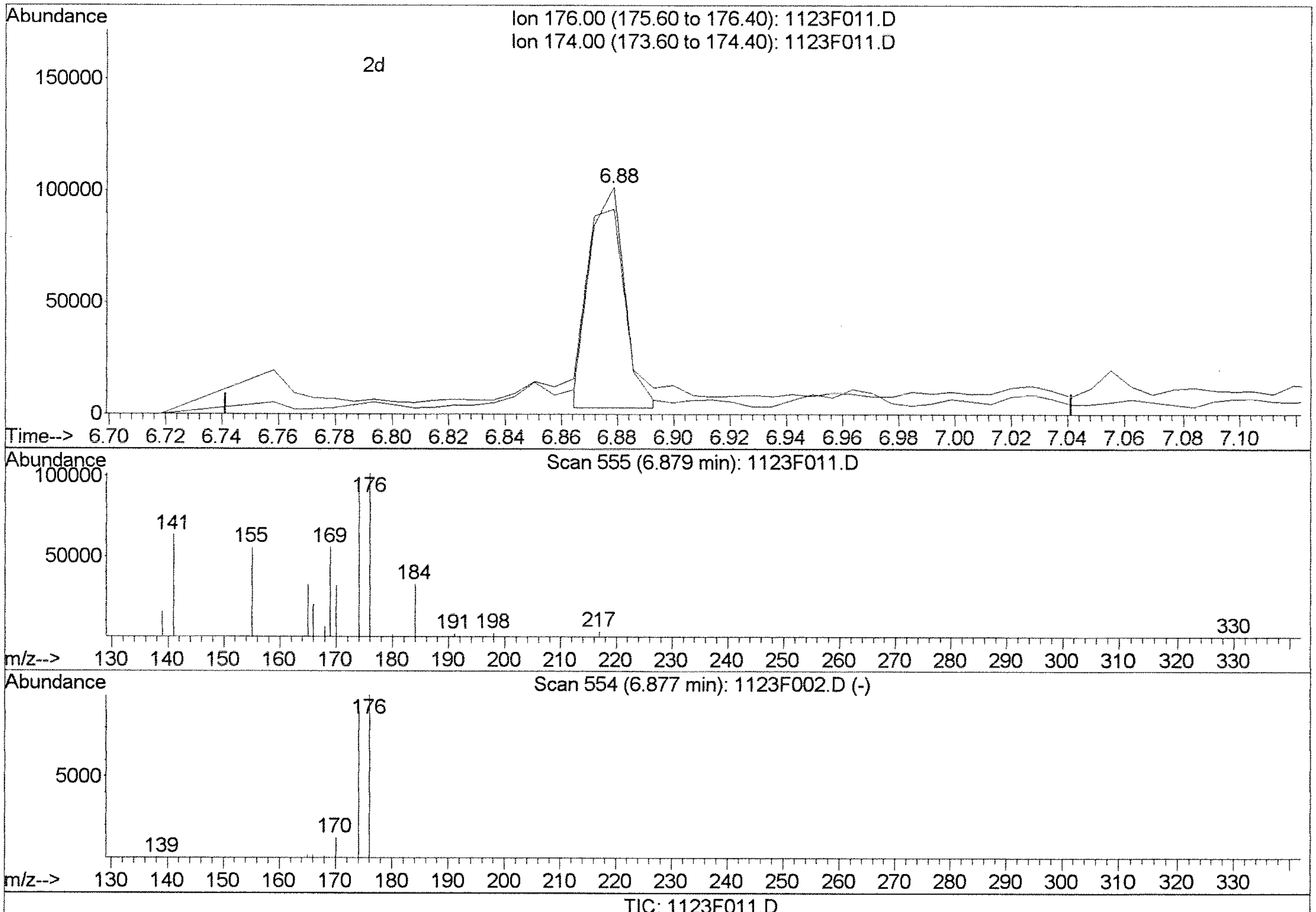
6.88min 151.75ng/ml

response 101168

Ion	Exp%	Act%
176.00	100	100
174.00	96.70	86.82
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112308\1123F011.D   Vial: 9
Acq On : 23 Nov 2008 3:42 pm   Operator: LWeiskopf
Sample : K0810639-010   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:50 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



(15) Fluorene-d10 (S)

6.88min 127.63ng/ml m

response 85088

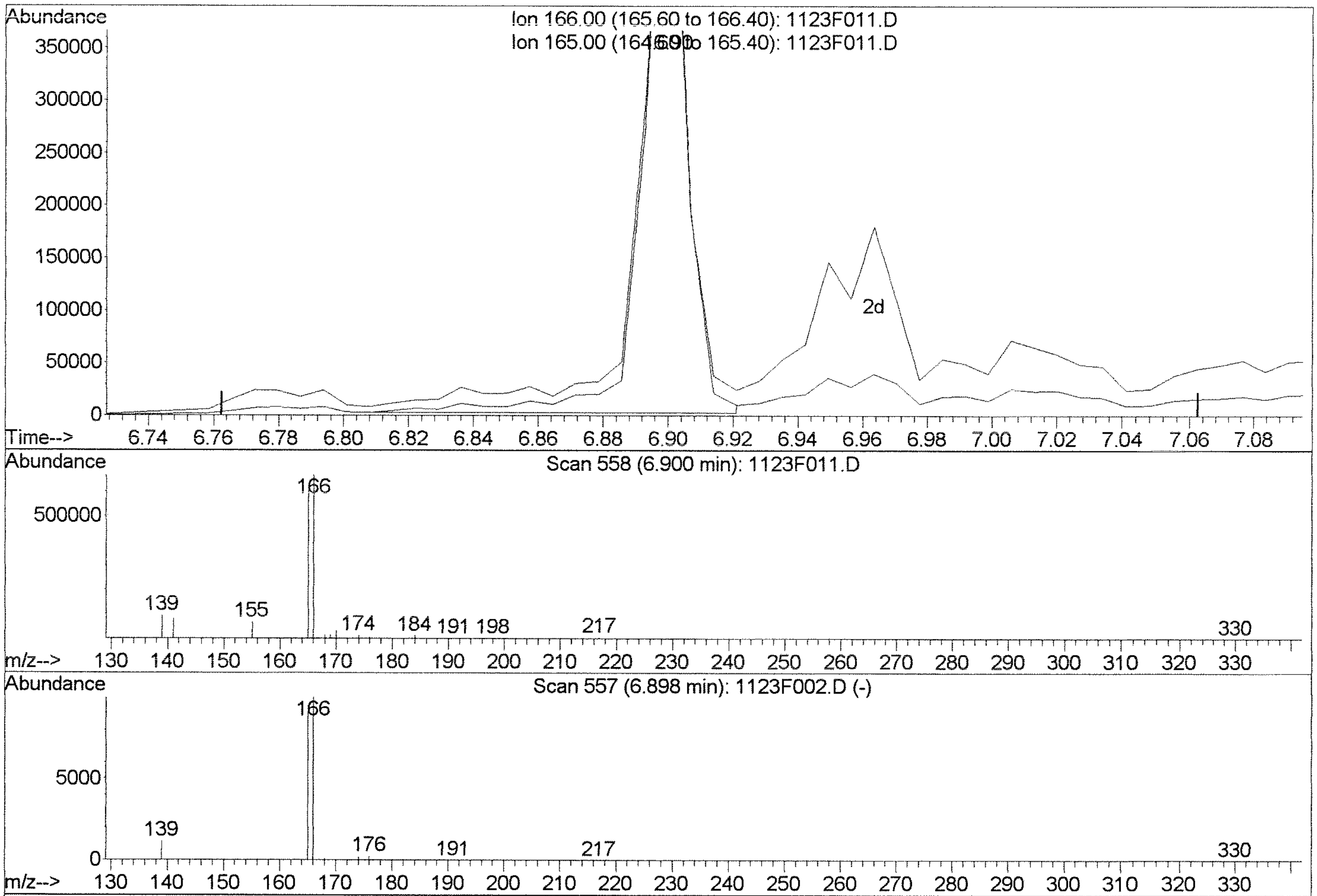
Ion	Exp%	Act%
176.00	100	100
174.00	96.70	90.31
0.00	0.00	0.00
0.00	0.00	0.00

OT
G 11/25/08
11-25-8

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D Vial: 9
Acq On : 23 Nov 2008 3:42 pm Operator: LWeiskopf
Sample : K0810639-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:50 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



(16) Fluorene (T)

6.90min 665.21ng/ml

response 536796

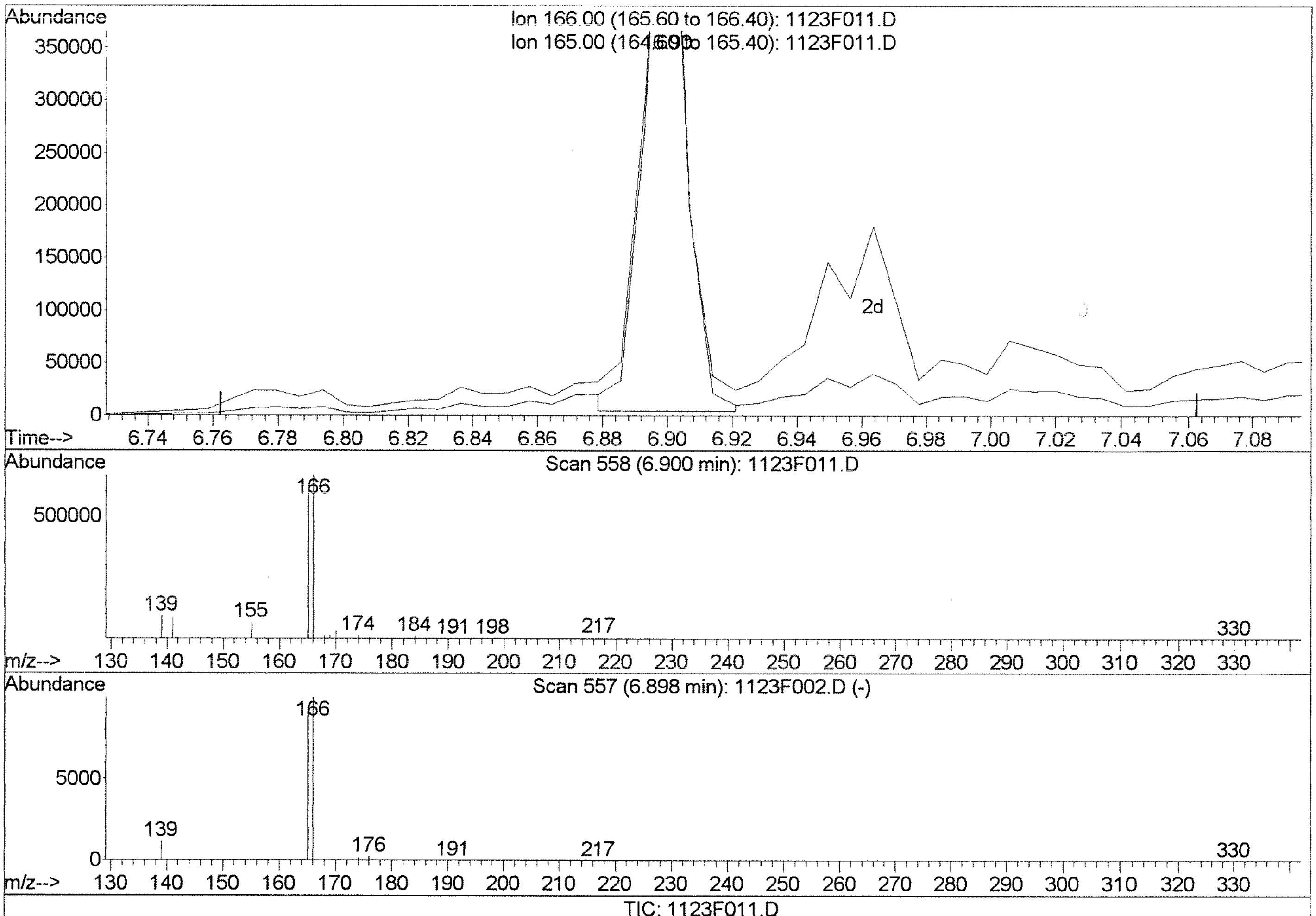
Ion	Exp%	Act%
166.00	100	100
165.00	89.80	93.04
0.00	0.00	0.00
0.00	0.00	0.00

1123F011.D 1110ALK.M Mon Nov 24 06:50:54 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D Vial: 9
Acq On : 23 Nov 2008 3:42 pm Operator: LWeiskopf
Sample : K0810639-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:50 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



(16) Fluorene (T)

6.90min 615.24ng/ml m

response 496468

Ion	Exp%	Act%
166.00	100	100
165.00	89.80	93.90
0.00	0.00	0.00
0.00	0.00	0.00

P 11-25-8

OI

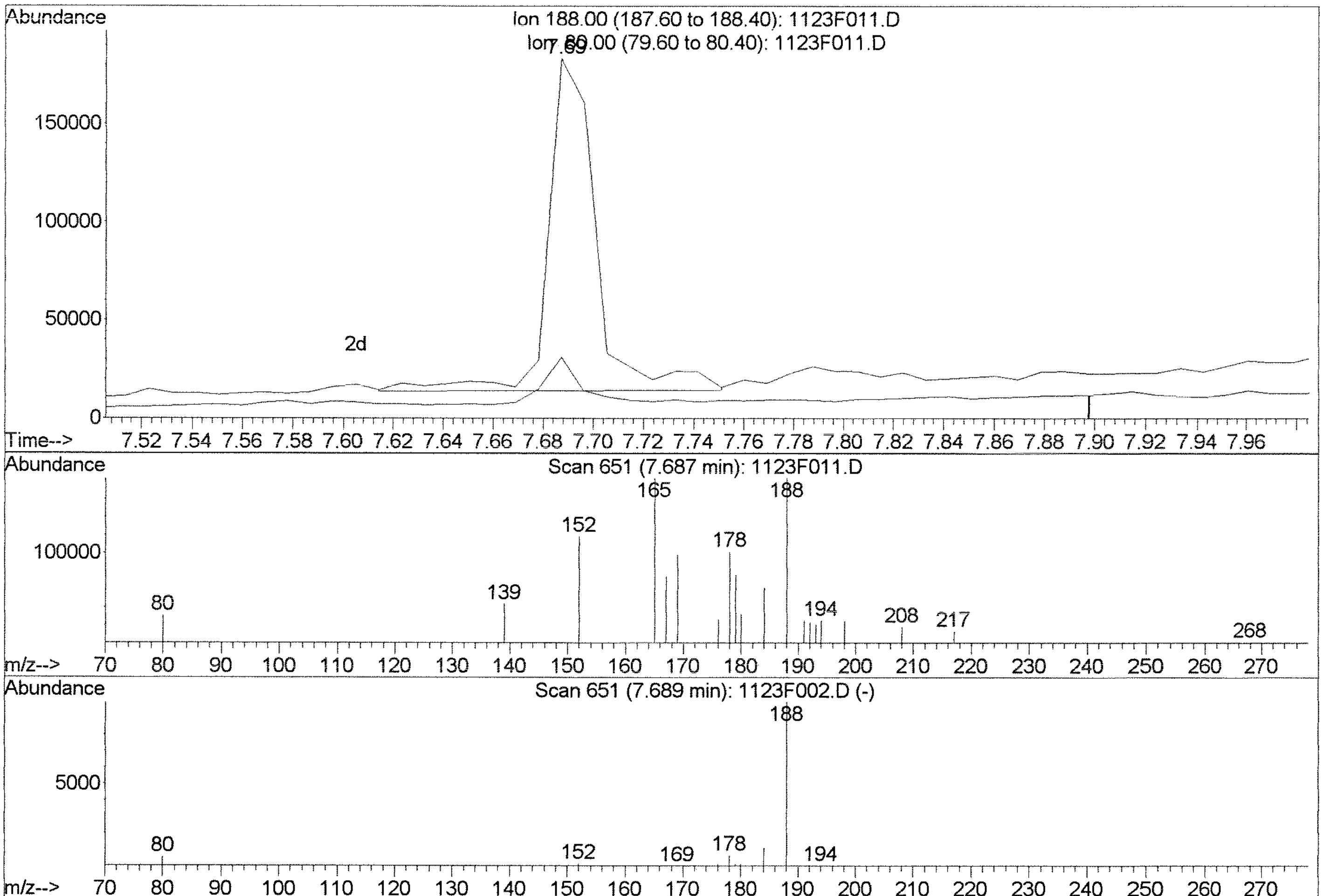
Q 11/24/18

1123F011.D 1110ALK.M Mon Nov 24 06:50:59 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D Vial: 9
Acq On : 23 Nov 2008 3:42 pm Operator: LWeiskopf
Sample : K0810639-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:51 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F011.D

(22) Phenanthrene-d10 (I)

7.69min 200.00ng/ml

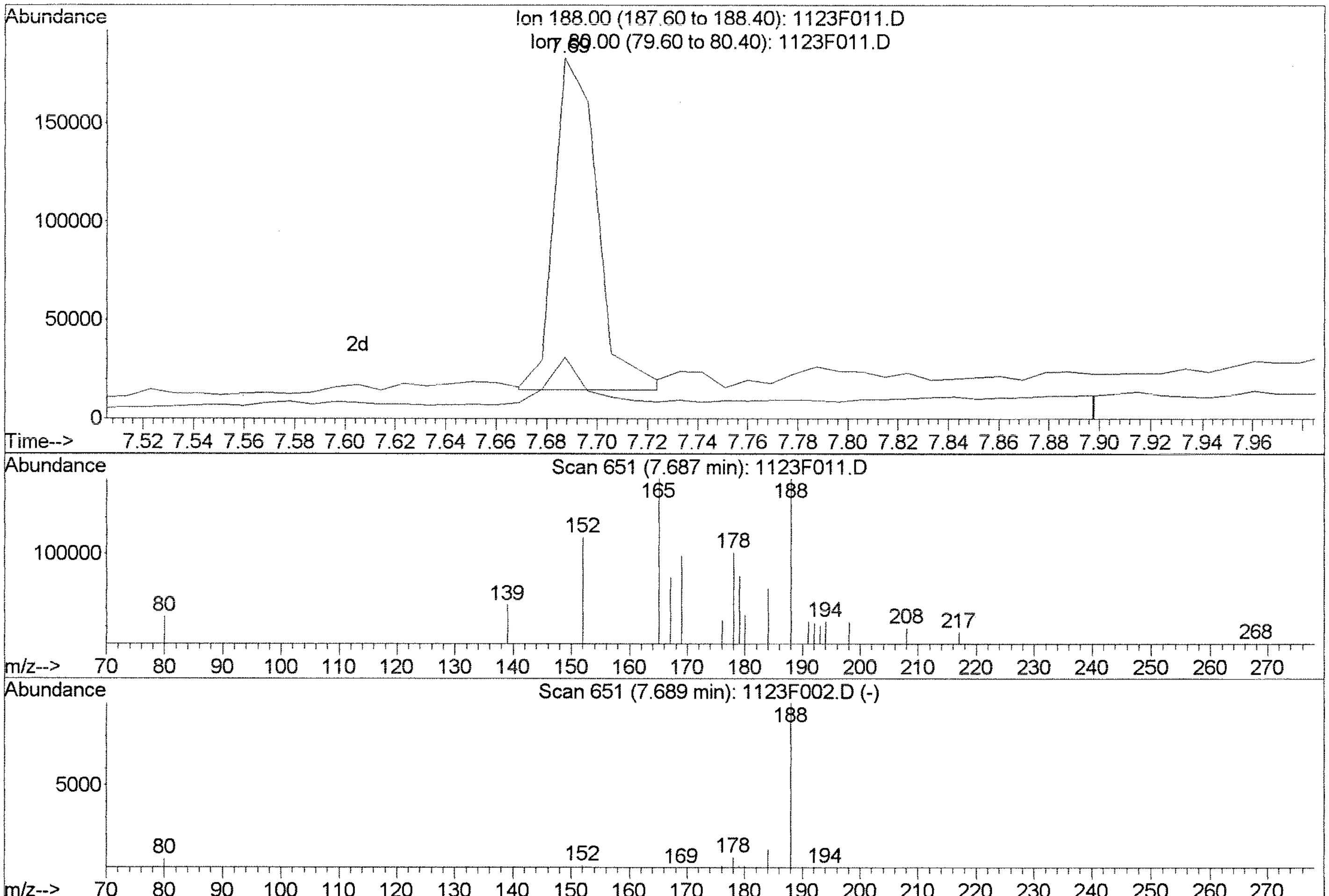
response 223998

Ion	Exp%	Act%
188.00	100	100
80.00	10.80	14.15
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D   Vial: 9
Acq On : 23 Nov 2008 3:42 pm   Operator: LWeiskopf
Sample : K0810639-010   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:51 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F011.D

(22) Phenanthrene-d10 (I)

7.69min 200.00ng/ml m

response 199834

Ion	Exp%	Act%
188.00	100	100
80.00	10.80	16.96
0.00	0.00	0.00
0.00	0.00	0.00

11-25-8

OI 11/24/18

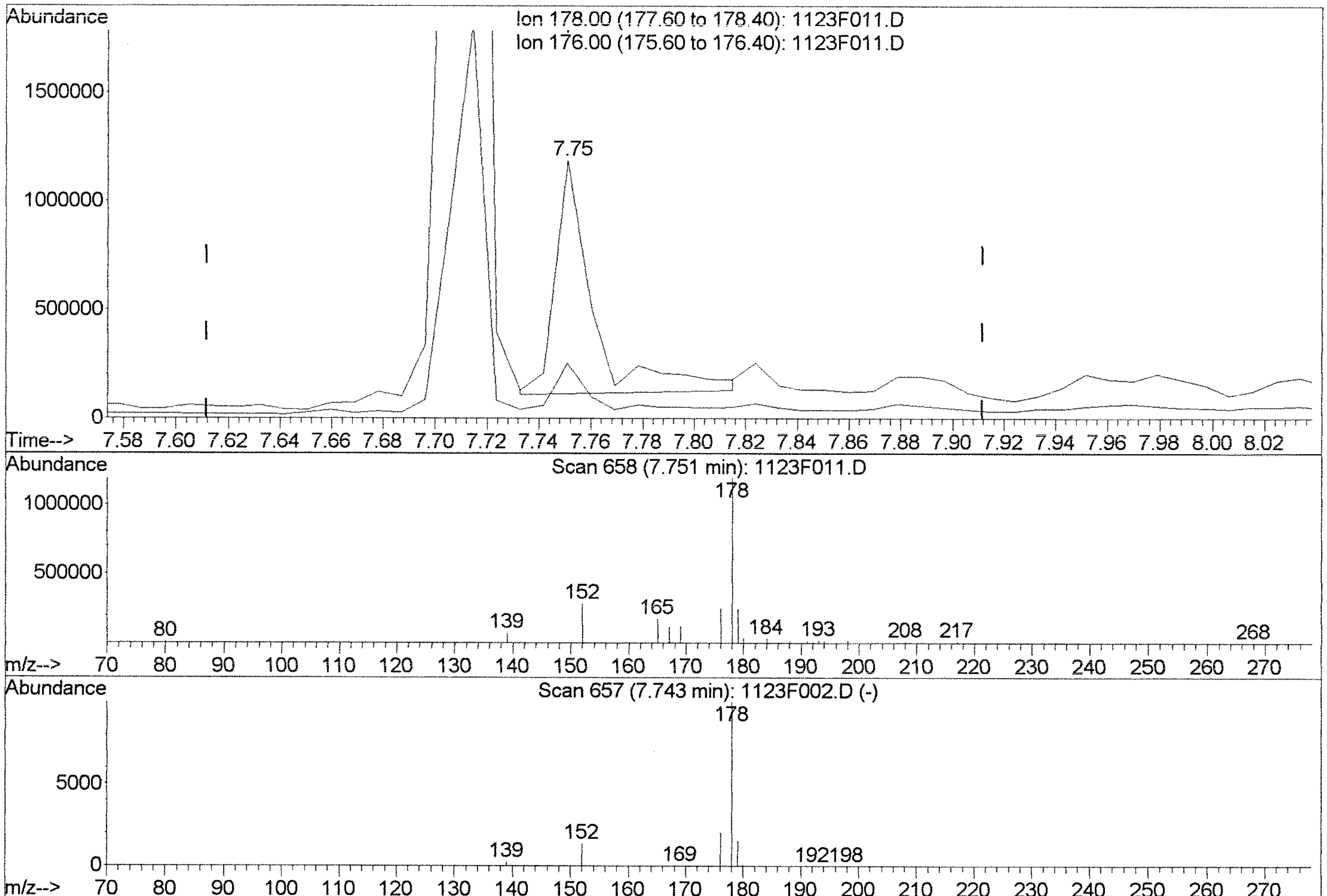
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D
Acq On : 23 Nov 2008 3:42 pm
Sample : K0810639-010
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:51 2008

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F011.D

(28) Anthracene (T)

7.75min 799.29ng/ml

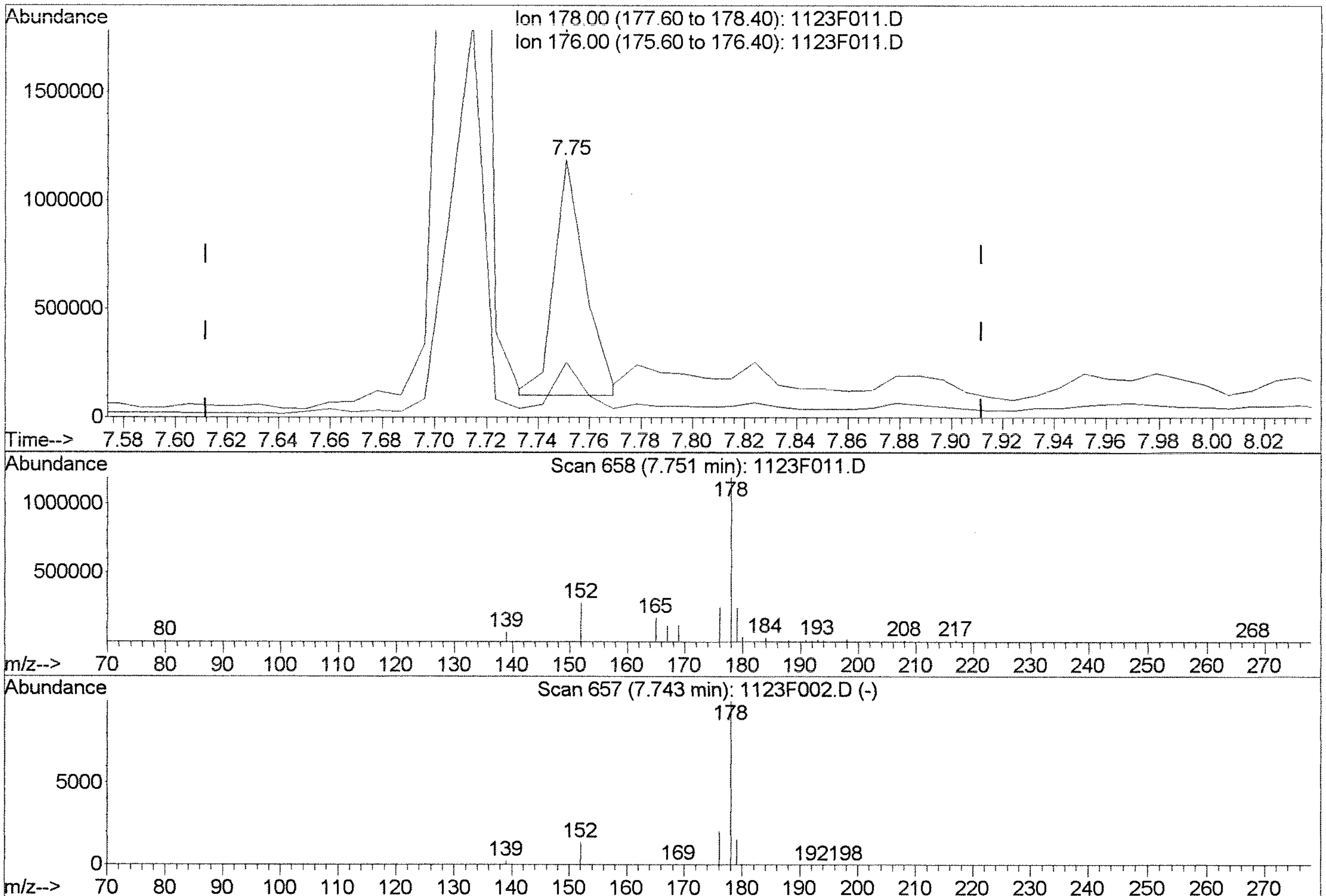
response 1093899

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	20.15
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D   Vial: 9
Acq On : 23 Nov 2008 3:42 pm   Operator: LWeiskopf
Sample : K0810639-010   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:51 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F011.D

(28) Anthracene (T)

7.75min 660.59ng/ml m

response 904082

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	21.39
0.00	0.00	0.00
0.00	0.00	0.00

11-25-08

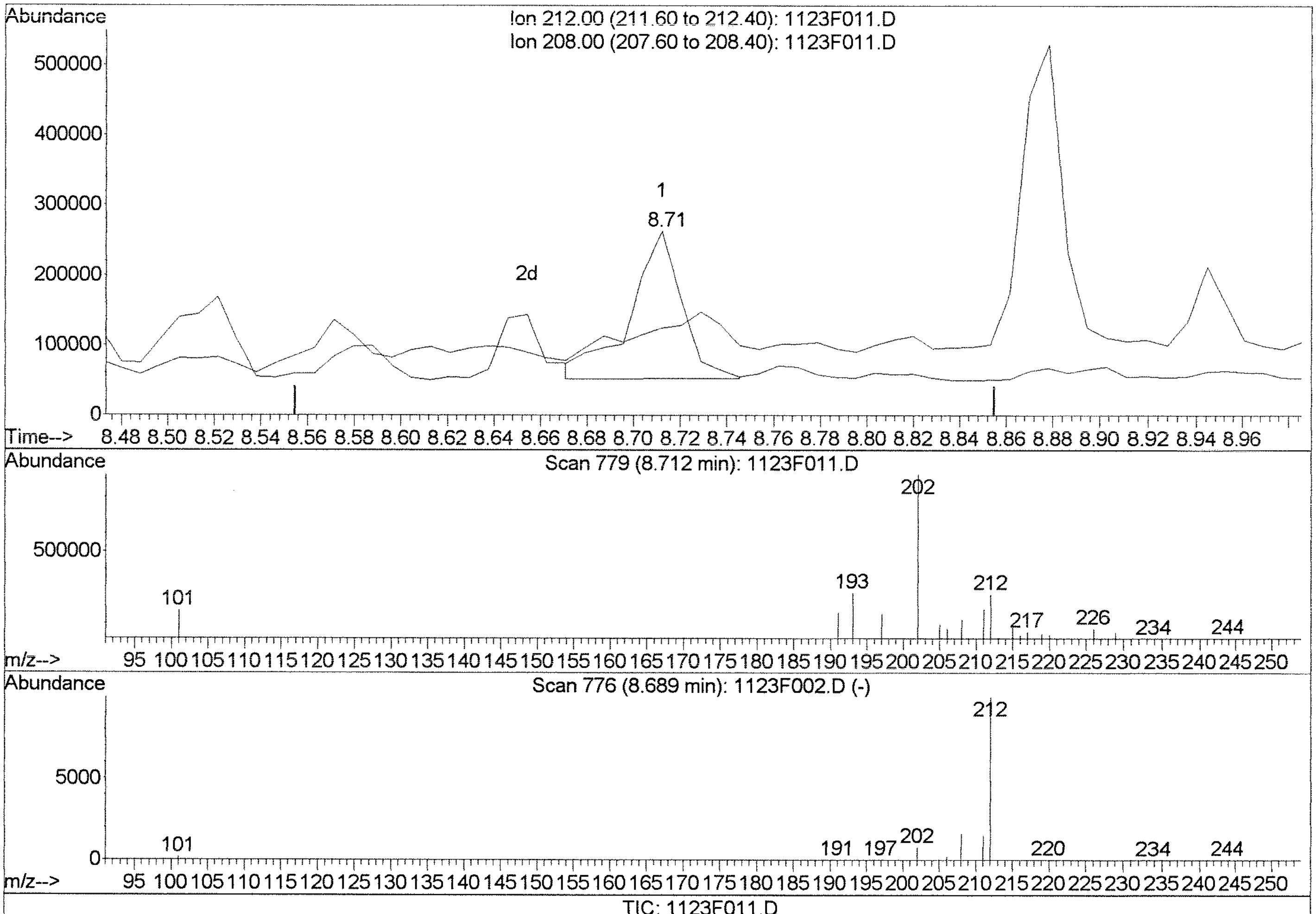
OI 11/24/08

1123F011.D 1110ALK.M Mon Nov 24 06:51:22 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D   Vial: 9
Acq On : 23 Nov 2008 3:42 pm   Operator: LWeiskopf
Sample : K0810639-010   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:51 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



(36) Fluoranthene-d10 (S)

8.71min 234.72ng/ml

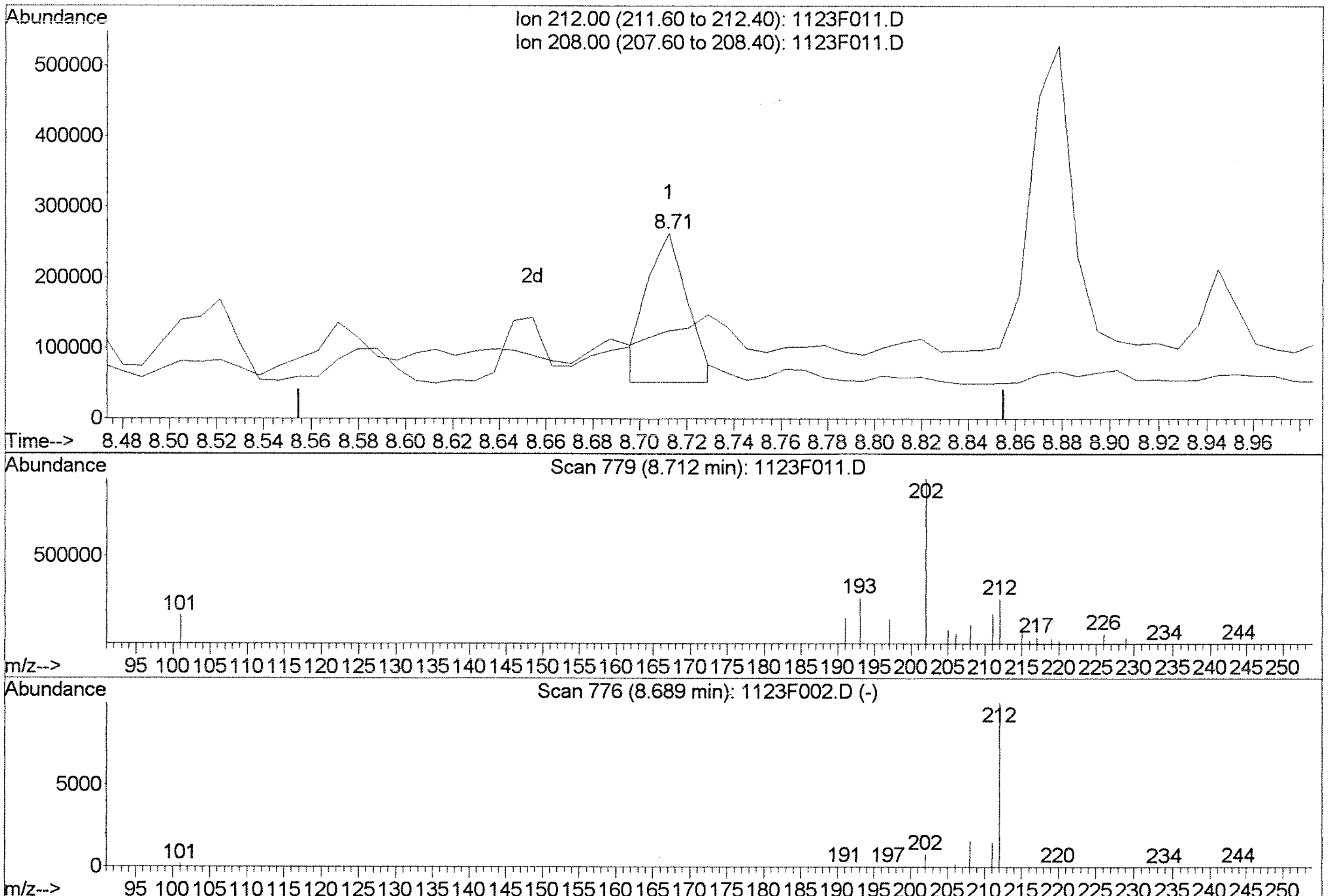
response 319795

Ion	Exp%	Act%
212.00	100	100
208.00	16.70	22.40
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D   Vial: 9
Acq On   : 23 Nov 2008   3:42 pm   Operator: LWeiskopf
Sample   : K0810639-010   Inst   : MS11
Misc   :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:51 2008   Quant Results File: temp.res

Method   : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title   : PAHS and ALKYLATED HOMOLOGS
Last Update   : Mon Nov 24 06:43:58 2008
Response via   : Multiple Level Calibration



TIC: 1123F011.D

(36) Fluoranthene-d10 (S)

8.71min 182.41ng/ml m

response 248519

Ion	Exp%	Act%
212.00	100	100
208.00	16.70	47.36#
0.00	0.00	0.00
0.00	0.00	0.00

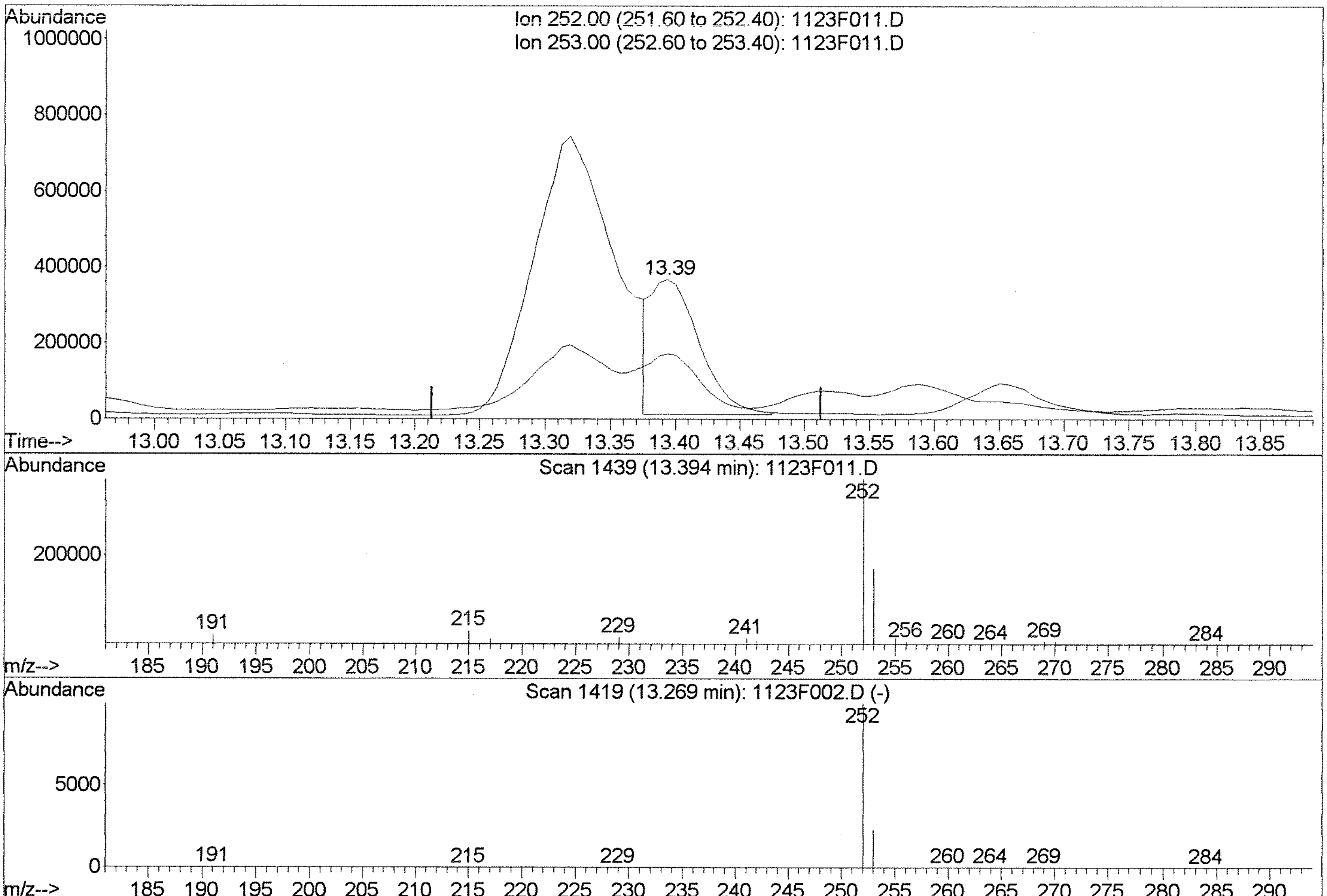
11-25-08

OI 11/25/08

1123F011.D 1110ALK.M   Mon Nov 24 06:51:38 2008

Data File : J:\MS11\DATA\112308\1123F011.D Vial: 9
Acq On : 23 Nov 2008 3:42 pm Operator: LWeiskopf
Sample : K0810639-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:51 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F011.D

(51) Benzo(k)fluoranthene (T)

13.39min 518.62ng/ml m

response 921147

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	46.64
0.00	0.00	0.00
0.00	0.00	0.00

JB 11-25-08

MP

RW 11/24/08

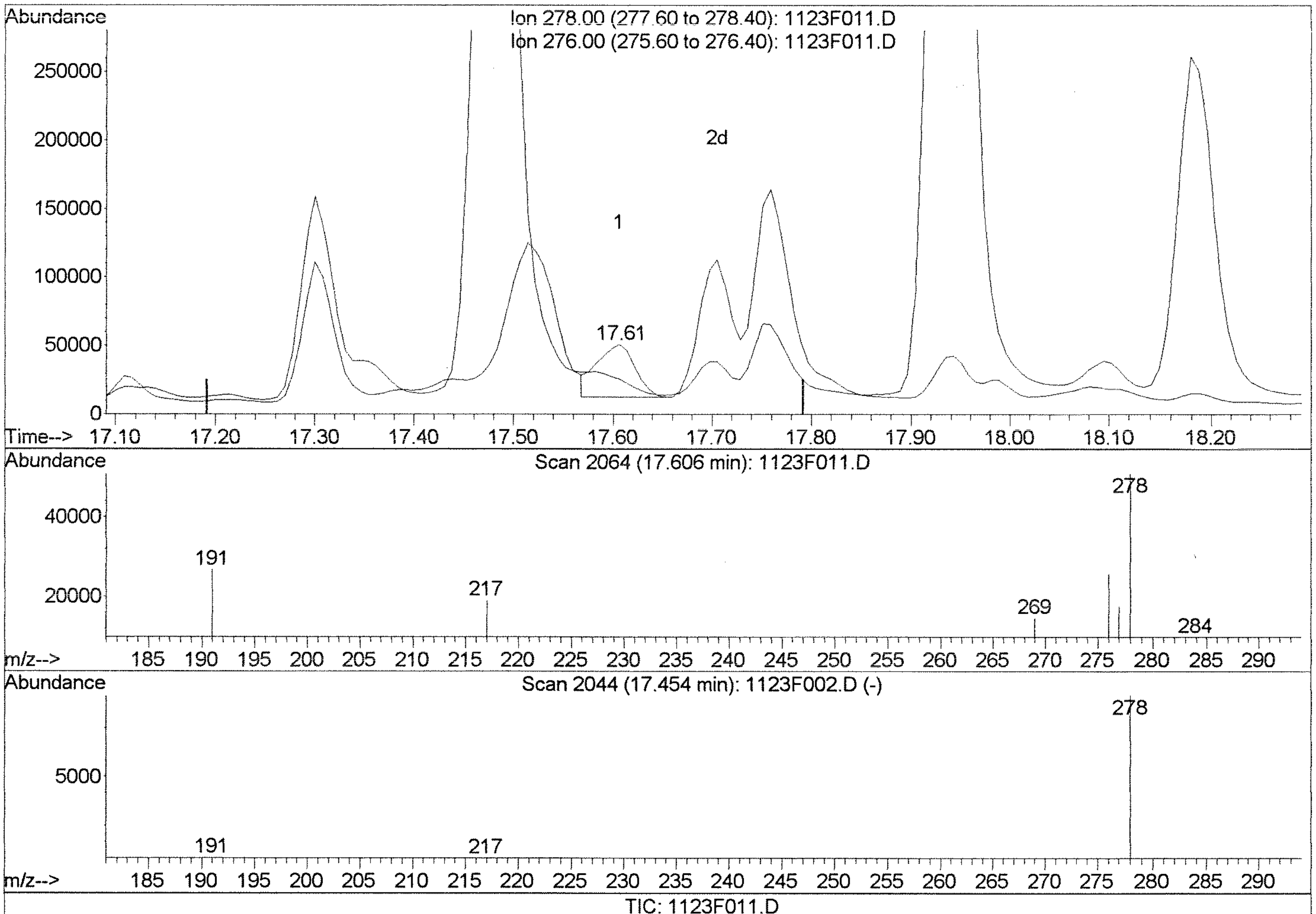
1123F011.D 1110ALK.M Mon Nov 24 06:51:51 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D		Vial: 9	
Acq On : 23 Nov 2008 3:42 pm		Operator: LWeiskopf	
Sample : K0810639-010		Inst : MS11	
Misc :		Multiplr: 1.00	

MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:51 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



(56) Dibenz(a,h)anthracene (T)

17.61min 68.75ng/ml

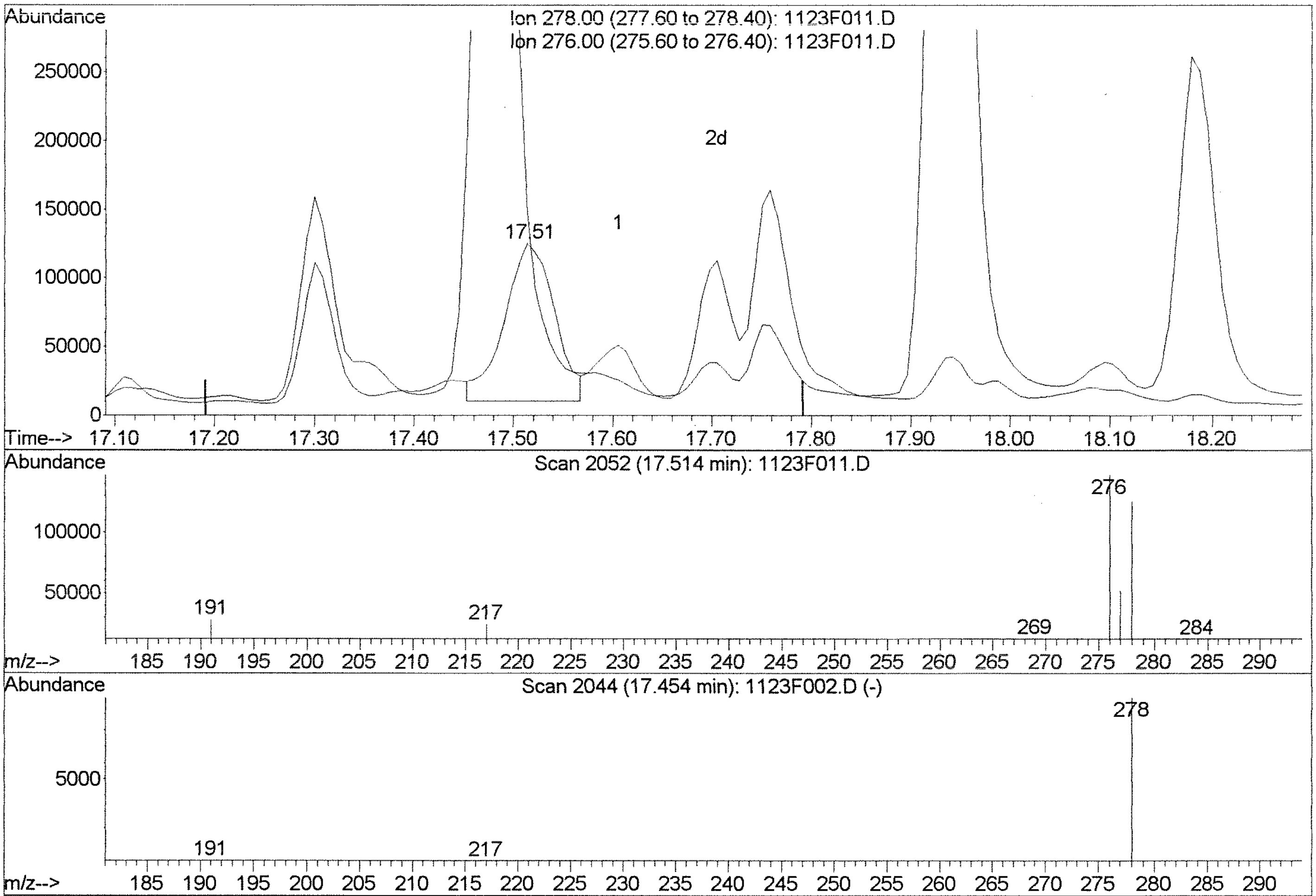
response 102490

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	30.62
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F011.D Vial: 9
Acq On : 23 Nov 2008 3:42 pm Operator: LWeiskopf
Sample : K0810639-010 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:51 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F011.D

(56) Dibenz(a,h)anthracene (T)

17.51min 269.70ng/ml m

response 402064

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	117.78#
0.00	0.00	0.00
0.00	0.00	0.00

WP 11-25-08

RW 11/24/08

Exception Report

Data File:	J:\MS11\DATA\112408\1124F004.D	**Date Acquired:**	11/24/2008 07:55
Lab ID:	K0810639-010	**Date Quantitated:**	11/24/2008 12:57
RunType:	DL	**Batch ID:**	KWG0812654
Matrix:	SEDIMENT	**Analysis Method:**	8270C SIM
		ListJoinID:	LJ5646

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: LW 11/24/08

Secondary Review: MJ 11-24-08

Quantitation Report

Bottle ID:		**Tier:**	III	**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**	07/25/2008	**Receive Date:**	07/29/2008

Analysis Lot:	KWG0812654	**Prep Lot:**	KWG0812042	**Report Group:**	K0810639
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776063	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5646
Tune Ref:	J:\MS11\DATA\112408\1124F001.D	**Method ID:**	MJ253
MB Ref:	J:\MS11\DATA\112308\1123F003.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\112408\1124F004.D			**Instrument:**	MS11
Acqu Date:	11/24/2008 07:55	**Quant Date:**	11/24/2008 12:57	**Vial:**	2
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K0810639-010			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.03	-0.01	136	283636	200.00	OK
2	Acenaphthene-d10	6.45	0.00	164	150435	200.00	OK
3	Phenanthrene-d10	7.69	-0.01	188	246483	200.00	OK
4	Chrysene-d12	10.59	0.01	240	301391	200.00	OK
5	Perylene-d12	14.61	0.02	264	329279	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	11754**m**	11.50	58	10-128	OK	NR
3	Fluoranthene-d10	8.70	0.00	0.00	212	22060**m**	13.13	66	29-121	OK	NR
4	Terphenyl-d14	9.09	0.00	0.00	244	21881	14.02	70	24-141	OK	NR

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.05		0.00	128	24135	13.97	130	D	NR
1	2-Methylnaphthalene	5.60		0.00	142	6571	5.45	50	D	NR
2	Acenaphthylene	6.34		0.00	152	14828**m**	8.74	80	D	NR
2	Acenaphthene	6.48		0.00	154	73525	71.33	650	D	NR
2	Dibenzofuran	6.63		0.00	168	22419	14.46	130	D	NR
2	Fluorene	6.91		0.00	166	74471**m**	60.18	550	D	NR
3	Phenanthrene	7.71	-0.01	0.00	178	798966	461.15	4200	D	
3	Anthracene	7.75		0.00	178	111444**m**	66.02	600	D	NR
3	Fluoranthene	8.71		0.00	202	858430	436.19	4000	D	
4	Pyrene	8.94		0.00	202	991827	437.45	4000	D	
4	Benz(a)anthracene	10.56		0.00	228	263082	127.90	1200	D	NR
4	Chrysene	10.63		0.00	228	375797	186.02	1700	D	NR
5	Benzo(b)fluoranthene	13.24	0.01	0.00	252	367510	161.73	1500	D	NR

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112408\1124F004.D			**Instrument:**	MS11
Acqu Date:	11/24/2008 07:55	**Quant Date:**	11/24/2008 12:57	**Vial:**	2
Run Type:	DL			**Dilution:**	10.0
Lab ID:	K0810639-010			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	13.33	0.01	0.00	252	114184	52.31	480	D	NR
5	Benzo(a)pyrene	14.38	0.02	0.00	252	291111	154.72	1400	D	NR
5	Indeno(1,2,3-cd)pyrene	17.44	0.01	0.00	276	256631	147.01	1300	D	NR
5	Dibenz(a,h)anthracene	17.48		0.00	278	40377	22.04	200	D	NR
5	Benzo(g,h,i)perylene	17.90	0.01	0.00	276	325419	163.62	1500	D	NR

Prep Amount:	16.02 g	**Dilution:**	10.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	68.2 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report   (QT Reviewed)

Data File : J:\MS11\DATA\112408\1124F004.D   Vial: 2
Acq On : 24 Nov 2008 7:55 am   Operator: LWeiskopf
Sample : K0810639-010DIL 10X   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 12:55:41 2008   Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 12:55:24 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.03	136	283636	200.00	ng/ml	-0.01
10) Acenaphthene-d10	6.45	164	150435	200.00	ng/ml	-0.01
22) Phenanthrene-d10	7.69	188	246483	200.00	ng/ml	0.00
37) Chrysene-d12	10.59	240	301391	200.00	ng/ml	0.00
49) Perylene-d12	14.61	264	329279	200.00	ng/ml	0.02
System Monitoring Compounds						
15) Fluorene-d10	6.88	176	11754m	11.50	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	5.75%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery	=	0.00%	
36) Fluoranthene-d10	8.70	212	22060m	13.13	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	6.57%	
42) Terphenyl-d14	9.09	244	21881	14.02	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	7.01%	
Target Compounds						Qvalue
2) Naphthalene	5.05	128	24135	13.97	ng/ml	97
3) 2-Methylnaphthalene	5.60	142	6571	5.45	ng/ml	93
4) 1-Methylnaphthalene	5.68	142	3010	2.79	ng/ml	100
5) Biphenyl	5.98	154	2064m	1.40	ng/ml	
6) 2,6-Dimethylnaphthalene	6.11	156	13393	12.73	ng/ml	96
11) Acenaphthylene	6.34	152	14828m	8.74	ng/ml	
12) Acenaphthene	6.48	154	73525	71.33	ng/ml	92
13) Dibenzofuran	6.63	168	22419	14.46	ng/ml	75
14) 2,3,5-Trimethylnaphthalene	6.78	170	43247	47.70	ng/ml	92
16) Fluorene	6.91	166	74471m	60.18	ng/ml	
23) Dibenzothiophene	7.61	184	70068	41.36	ng/ml	100
27) Phenanthrene	7.71	178	798966	461.15	ng/ml	99
28) Anthracene	7.75	178	111444m	66.02	ng/ml	
30) 1-Methylphenanthrene	8.21	192	94413	73.43	ng/ml	93
35) Fluoranthene	8.71	202	858430	436.19	ng/ml	83
38) Pyrene	8.94	202	991827	437.45	ng/ml	81
43) Benz(a)anthracene	10.56	228	263082	127.90	ng/ml	96
44) Chrysene	10.63	228	375797	186.02	ng/ml	99
50) Benzo(b)fluoranthene	13.24	252	367510	161.73	ng/ml	98
51) Benzo(k)fluoranthene	13.33	252	114184	52.31	ng/ml	75
52) Benzo(e)pyrene	14.18	252	236883	114.76	ng/ml	99
53) Benzo(a)pyrene	14.38	252	291111	154.72	ng/ml	99
54) Perylene	14.71	252	91290	49.39	ng/ml	97
55) Indeno(1,2,3-cd)pyrene	17.44	276	256631	147.01	ng/ml	98
56) Dibenz(a,h)anthracene	17.48	278	40377	22.04	ng/ml	68

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112408\1124F004.D Vial: 2
Acq On : 24 Nov 2008 7:55 am Operator: LWeiskopf
Sample : K0810639-010DIL 10X Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 12:55:41 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 12:55:24 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
57) Benzo(g,h,i)perylene	17.90	276	325419	163.62 ng/ml	99

(#) = qualifier out of range (m) = manual integration

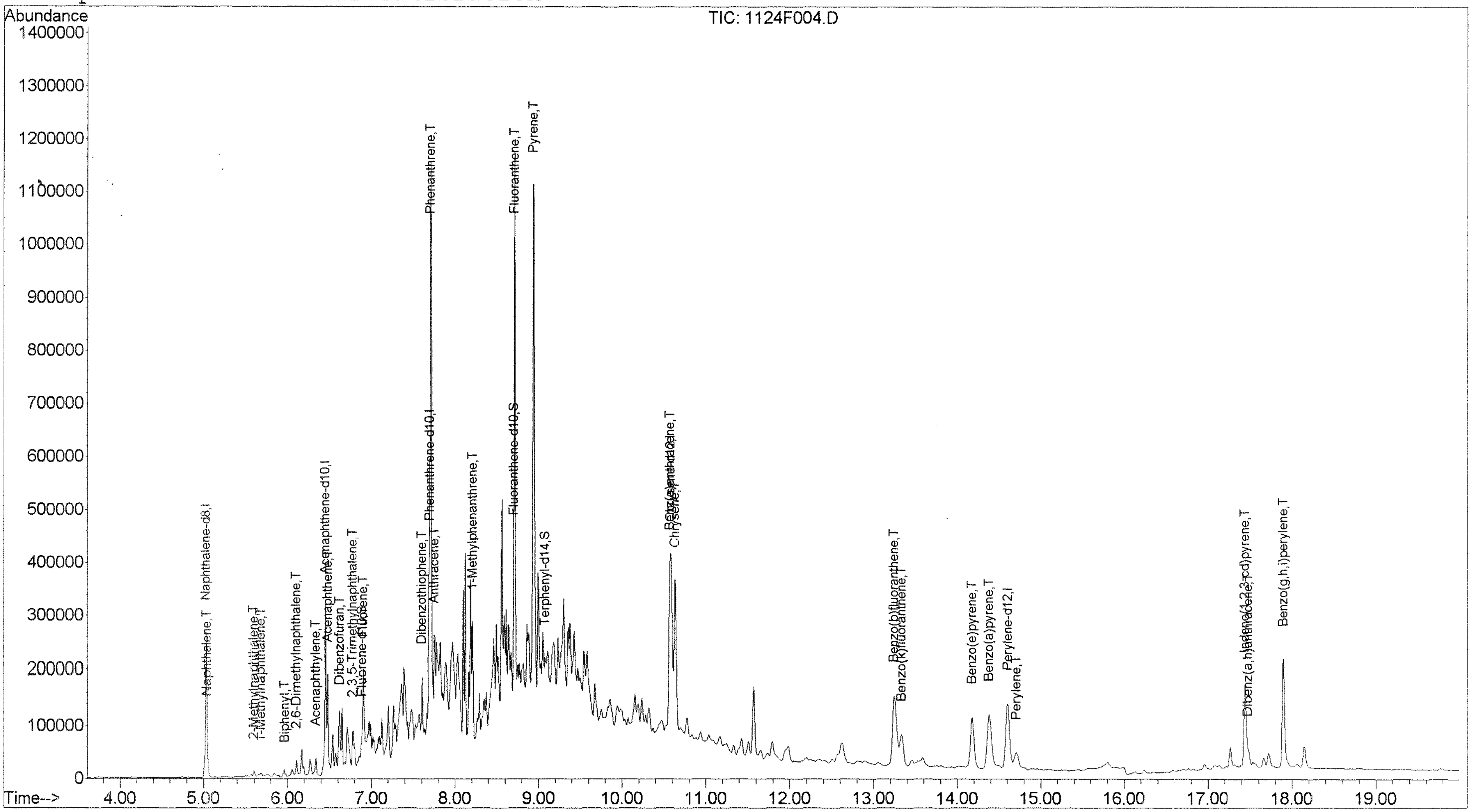
Quantitation Report (QT Reviewed)

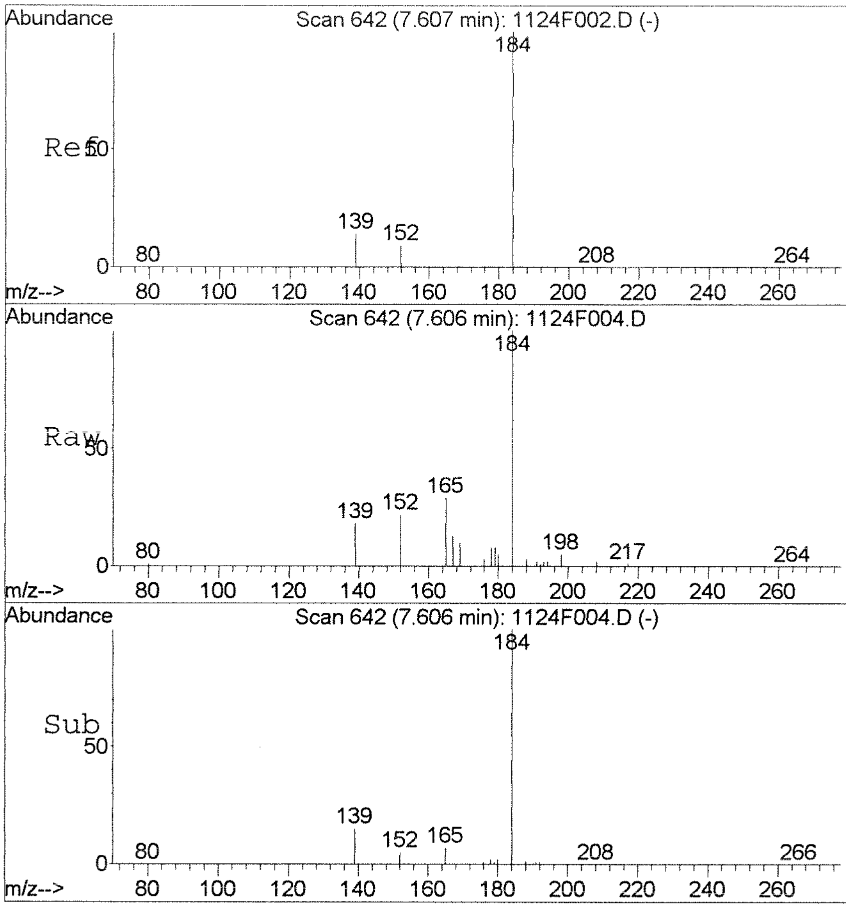
Data File : J:\MS11\DATA\112408\1124F004.D
Acq On : 24 Nov 2008 7:55 am
Sample : K0810639-010DIL 10X
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 12:57 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 12:55:24 2008
Response via : Initial Calibration

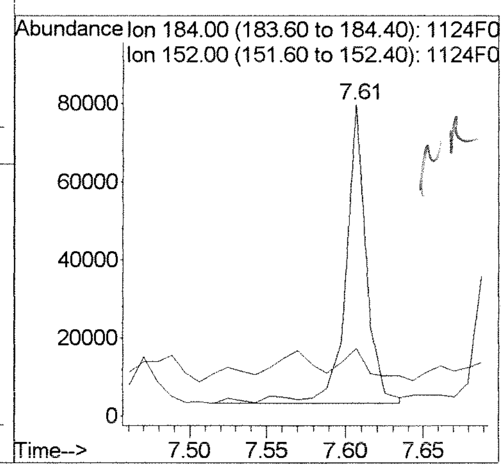


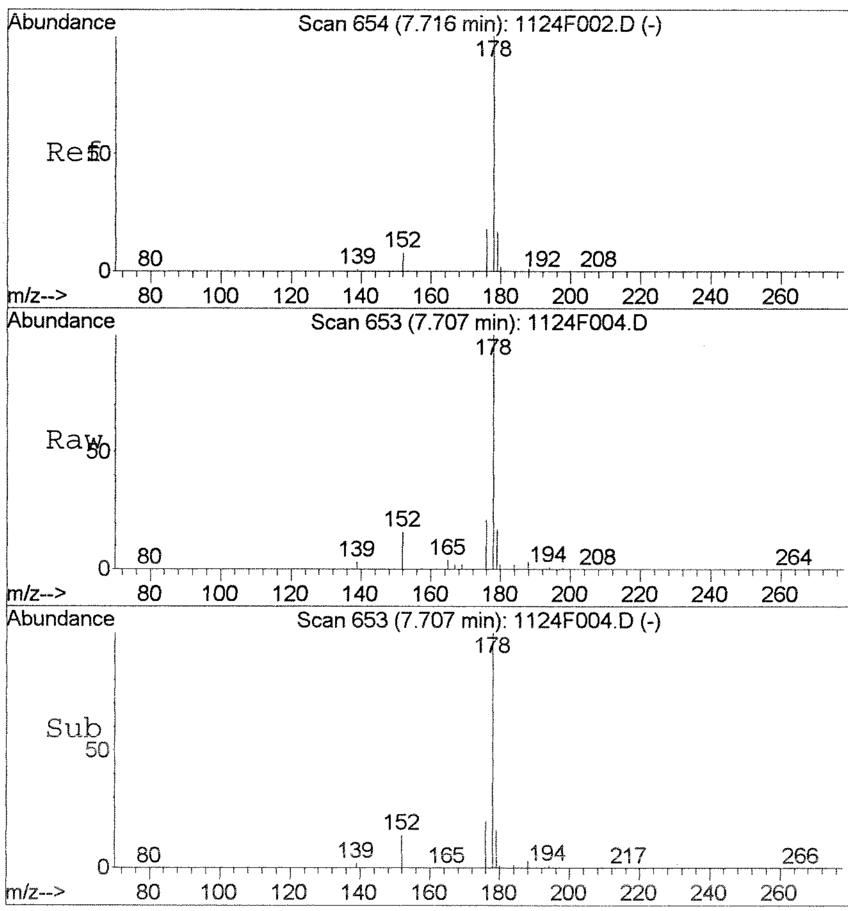


#23
Dibenzothiophene
Concen: 41.36 ng/ml
RT: 7.61 min Scan# 642
Delta R.T. -0.01 min
Lab File: 1124F004.D
Acq: 24 Nov 2008 7:55 am

Tgt Ion:184 Resp: 70068

Ion	Ratio	Lower	Upper
184	100		
152	9.1	0.0	39.1

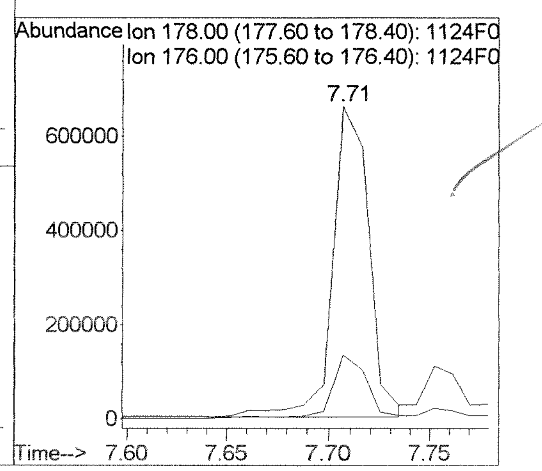


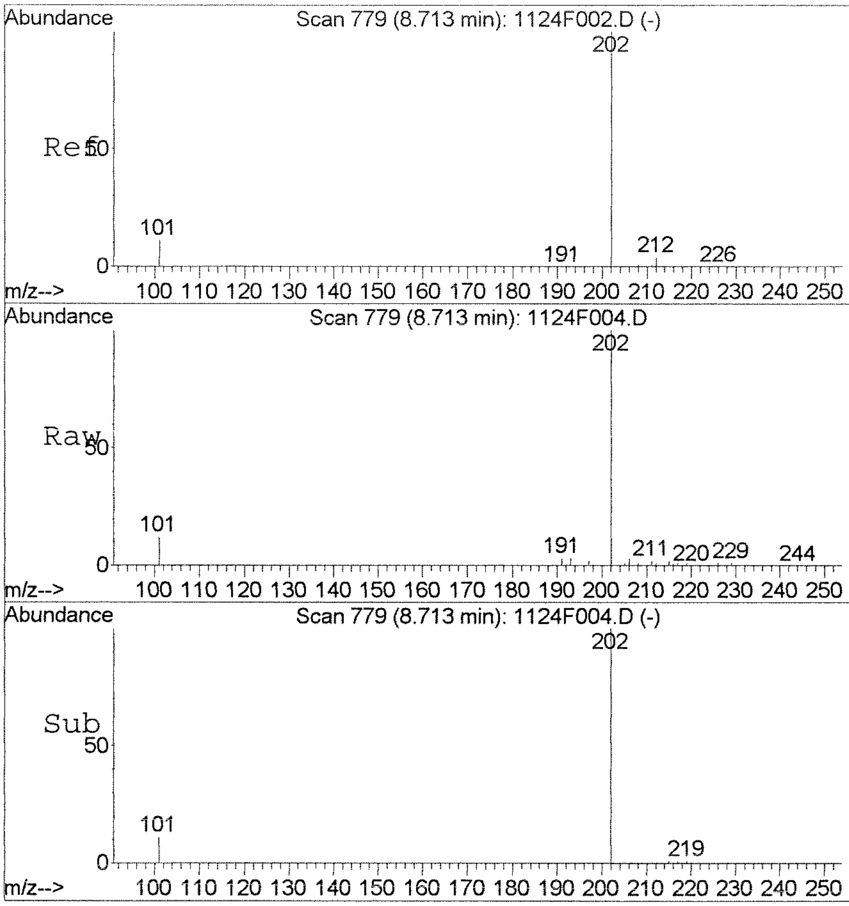


#27
Phenanthrene
Concen: 461.15 ng/ml
RT: 7.71 min Scan# 653
Delta R.T. -0.01 min
Lab File: 1124F004.D
Acq: 24 Nov 2008 7:55 am

Tgt Ion:178 Resp: 798966

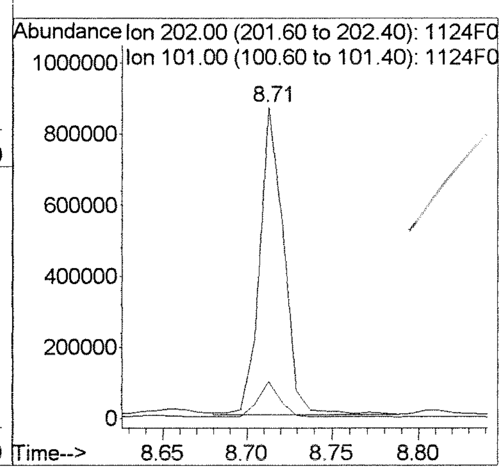
Ion	Ratio	Lower	Upper
178	100		
176	20.4	0.0	51.0

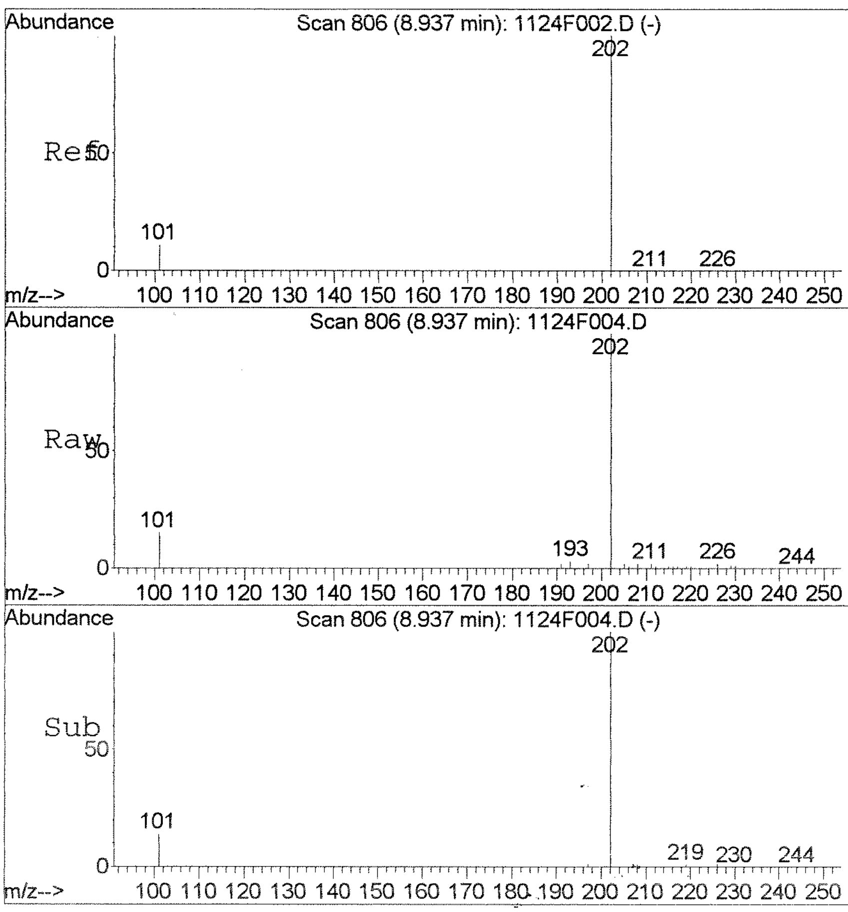




#35
Fluoranthene
Concen: 436.19 ng/ml
RT: 8.71 min Scan# 779
Delta R.T. -0.01 min
Lab File: 1124F004.D
Acq: 24 Nov 2008 7:55 am

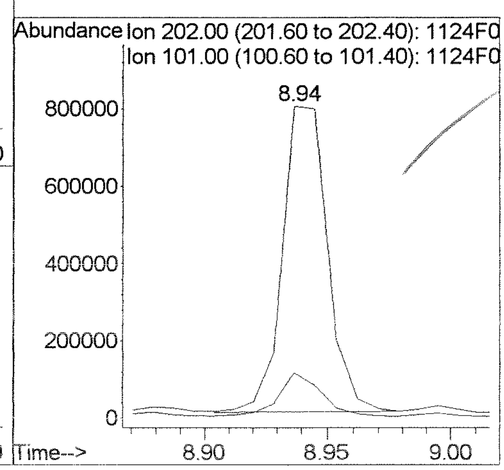
Tgt Ion:202	Resp:		858430
Ion	Ratio	Lower	Upper
202	100		
101	11.5	0.0	35.8





#38
Pyrene
Concen: 437.45 ng/ml
RT: 8.94 min Scan# 806
Delta R.T. -0.01 min
Lab File: 1124F004.D
Acq: 24 Nov 2008 7:55 am

Tgt Ion:202	Resp:		991827
Ion	Ratio	Lower	Upper
202	100		
101	14.3	0.0	37.6



Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0812042-5	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	1.7	0.37	1	11/11/08	11/23/08	KWG0812042	
2-Methylnaphthalene	ND	U	1.7	0.39	1	11/11/08	11/23/08	KWG0812042	
Acenaphthylene	ND	U	1.7	0.24	1	11/11/08	11/23/08	KWG0812042	
Acenaphthene	ND	U	1.7	0.23	1	11/11/08	11/23/08	KWG0812042	
Fluorene	ND	U	1.7	0.50	1	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	ND	U	1.7	0.59	1	11/11/08	11/23/08	KWG0812042	
Phenanthrene	**0.86**	J	1.7	0.75	1	11/11/08	11/23/08	KWG0812042	
Anthracene	ND	U	1.7	0.47	1	11/11/08	11/23/08	KWG0812042	
Fluoranthene	**0.67**	J	1.7	0.61	1	11/11/08	11/23/08	KWG0812042	
Pyrene	**0.61**	J	1.7	0.37	1	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	ND	U	1.7	0.48	1	11/11/08	11/23/08	KWG0812042	
Chrysene	**0.26**	J	1.7	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	ND	U	1.7	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(k)fluoranthene	ND	U	1.7	0.15	1	11/11/08	11/23/08	KWG0812042	
Benzo(a)pyrene	ND	U	1.7	0.14	1	11/11/08	11/23/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	ND	U	1.7	0.16	1	11/11/08	11/23/08	KWG0812042	
Dibenz(a,h)anthracene	ND	U	1.7	0.28	1	11/11/08	11/23/08	KWG0812042	
Benzo(g,h,i)perylene	ND	U	1.7	0.64	1	11/11/08	11/23/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	68	10-128	11/23/08	Acceptable
Fluoranthene-d10	68	29-121	11/23/08	Acceptable
Terphenyl-d14	67	24-141	11/23/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\112308\1123F003.D
Lab ID: KWG0812042-5
RunType: MB
Matrix: SEDIMENT

Date Acquired: 11/23/2008 12:10
Date Quantitated: 11/24/2008 06:45
Batch ID: KWG0812642
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K10457
K10639

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2,4,6-Tribromophenol	0	12	152	NT

Primary Review: KW 11/24/08

Secondary Review: [illegible] 11-25-08

Printed: 11/24/2008 10:58:10
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**		**Receive Date:**	11/13/2008

Analysis Lot:	KWG0812642	**Prep Lot:**	KWG0812042	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776078	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:			
Tune Ref:	J:\MS11\DATA\112308\1123F001.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\112308\1123F003.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 12:10	**Quant Date:**	11/24/2008 06:45	**Vial:**	1
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0812042-5			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.02	-0.02	136	193013	200.00	OK
2	Acenaphthene-d10	6.45	0.00	164	115774	200.00	OK
3	Phenanthrene-d10	7.69	0.00	188	209742	200.00	OK
4	Chrysene-d12	10.56	0.00	240	235530	200.00	OK
5	Perylene-d12	14.53	0.00	264	262098	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	107565	136.71	68	10-128	OK	
2	2,4,6-Tribromophenol			0.00	330	0d		0	12-152	*	
3	Fluoranthene-d10	8.69	0.00	0.00	212	194032	135.69	68	29-121	OK	
4	Terphenyl-d14	9.08	0.01	0.00	244	164177	134.64	67	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantM ass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.03	-0.02	0.00	128	752	0.6400	0.37	U	
1	2-Methylnaphthalene	5.60		0.00	142	217m	0.2600	0.39	U	
1	1-Methylnaphthalene				142	0d		0.31	U	
1	Biphenyl				154	0d		0.40	U	
1	2,6-Dimethylnaphthalene				156	0d		0.36	U	
1	C2-Naphthalenes				156	0		5.0	U	
1	C3-Naphthalenes				170	0		5.0	U	
1	C4-Naphthalenes				184	0		5.0	U	
2	Acenaphthylene				152	0d		0.24	U	
2	Acenaphthene				154	0d		0.23	U	
2	Dibenzofuran				168	0d		0.59	U	
2	2,3,5-Trimethylnaphthalene				170	0d		0.21	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112308\1123F003.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 12:10	**Quant Date:**	11/24/2008 06:45	**Vial:**	1
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0812042-5			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene				166	0**d**		0.50	U	
2	C1-Fluorenes				180	0		5.0	U	
2	C2-Fluorenes				194	0		5.0	U	
2	C3-Fluorenes				208	0		5.0	U	
2	Pentachlorophenol				266	0**d**		2.9	U	
3	Dibenzothiophene				184	0**d**		0.21	U	
3	C1-Dibenzothiophenes				198	0		5.0	U	
3	C2-Dibenzothiophenes				212	0		5.0	U	
3	C3-Dibenzothiophenes				226	0		5.0	U	
3	Phenanthrene	7.71		0.00	178	3784**m**	2.57	0.857	J	
3	Anthracene				178	0**d**		0.47	U	
3	Carbazole				167	0**d**		2.3	U	
3	1-Methylphenanthrene				192	0**d**		0.28	U	
3	C1-Phenanthrenes/Anthracenes				192	0		5.0	U	
3	C2-Phenanthrenes/Anthracenes				206	0		5.0	U	
3	C3-Phenanthrenes/Anthracenes				220	0		5.0	U	
3	C4-Phenanthrenes/Anthracenes				234	0		5.0	U	
3	Fluoranthene	8.70	-0.01	0.00	202	3376	2.02	0.673	J	
4	Pyrene	8.93		0.00	202	3246	1.83	0.610	J	
4	C1-Fluoranthenes/Pyrenes				216	0		5.0	U	
4	C2-Fluoranthenes/Pyrenes				230	0		5.0	U	
4	C3-Fluoranthenes/Pyrenes				244	0		5.0	U	
4	Benz(a)anthracene	10.55	0.01	0.00	228	1753	1.09	0.48	U	
4	Chrysene	10.61		0.00	228	1211	0.7700	0.257	J	
4	C1-Chrysenes				242	0		5.0	U	
4	C2-Chrysenes				256	0		5.0	U	
4	C3-Chrysenes				270	0		5.0	U	
4	C4-Chrysenes				284	0		5.0	U	
5	Benzo(b)fluoranthene	13.21	0.03	0.00	252	811	0.4500	0.25	U	
5	Benzo(k)fluoranthene	13.27		0.00	252	541	0.3100	0.15	U	
5	Benzo(e)pyrene				252	0**d**		0.18	U	
5	Benzo(a)pyrene	14.32	0.01	0.00	252	602	0.4000	0.14	U	
5	Perylene				252	0**d**		0.32	U	
5	Indeno(1,2,3-cd)pyrene	17.44	0.03	0.00	276	582	0.4200	0.16	U	
5	Dibenz(a,h)anthracene	17.48	0.03	0.00	278	281	0.1900	0.28	U	
5	Benzo(g,h,i)perylene	17.88	0.02	0.00	276	1182**m**	0.7500	0.64	U	

Prep Amount:	30.00 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112308\1123F003.D Vial: 1
Acq On : 23 Nov 2008 12:10 pm Operator: LWeiskopf
Sample : KWG0812042-5 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:44:19 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.02	136	193013	200.00	ng/ml	-0.02
10) Acenaphthene-d10	6.45	164	115774	200.00	ng/ml	-0.02
22) Phenanthrene-d10	7.69	188	209742	200.00	ng/ml	-0.01
37) Chrysene-d12	10.56	240	235530	200.00	ng/ml	-0.02
49) Perylene-d12	14.53	264	262098	200.00	ng/ml	-0.06
System Monitoring Compounds						
15) Fluorene-d10	6.88	176	107565	136.71	ng/ml	-0.01
Spiked Amount 200.000			Recovery	=	68.36%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery	=	0.00%	
36) Fluoranthene-d10	8.69	212	194032	135.69	ng/ml	-0.02
Spiked Amount 200.000			Recovery	=	67.84%	
42) Terphenyl-d14	9.08	244	164177	134.64	ng/ml	-0.02
Spiked Amount 200.000			Recovery	=	67.32%	
Target Compounds						Qvalue
2) Naphthalene	5.03	128	752	0.64	ng/ml	87
3) 2-Methylnaphthalene	5.60	142	217m	0.26	ng/ml	
27) Phenanthrene	7.71	178	3784m	2.57	ng/ml	
35) Fluoranthene	8.70	202	3376	2.02	ng/ml	76
38) Pyrene	8.93	202	3246	1.83	ng/ml	95
43) Benz(a)anthracene	10.55	228	1753	1.09	ng/ml	99
44) Chrysene	10.61	228	1211	0.77	ng/ml	88
50) Benzo(b)fluoranthene	13.21	252	811	0.45	ng/ml	89
51) Benzo(k)fluoranthene	13.27	252	541	0.31	ng/ml	84
53) Benzo(a)pyrene	14.32	252	602	0.40	ng/ml	58
55) Indeno(1,2,3-cd)pyrene	17.44	276	582	0.42	ng/ml	67
56) Dibenz(a,h)anthracene	17.48	278	281	0.19	ng/ml	58
57) Benzo(g,h,i)perylene	17.88	276	1182m	0.75	ng/ml	

(#) = qualifier out of range (m) = manual integration

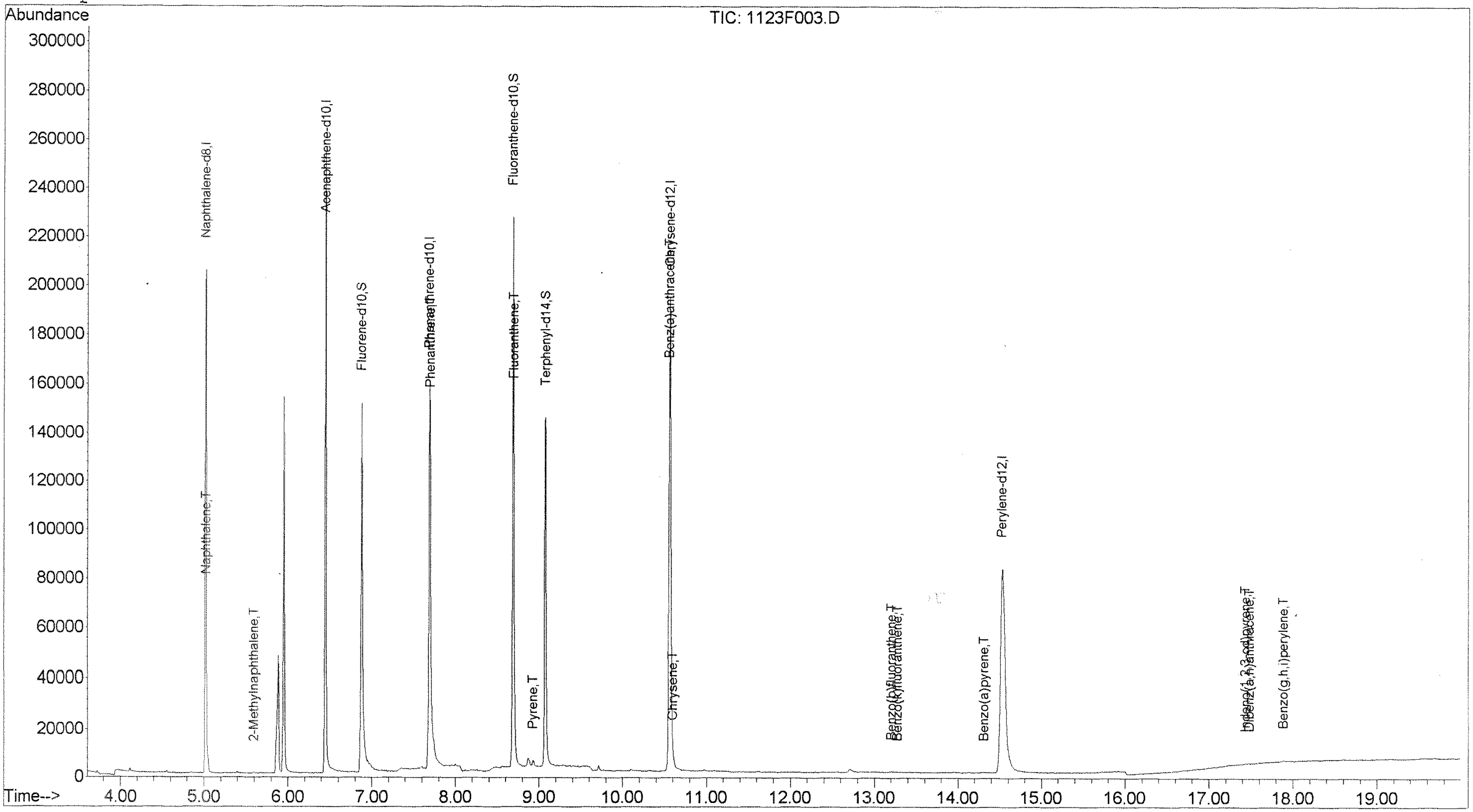
Quantitation Report (QT Reviewed)

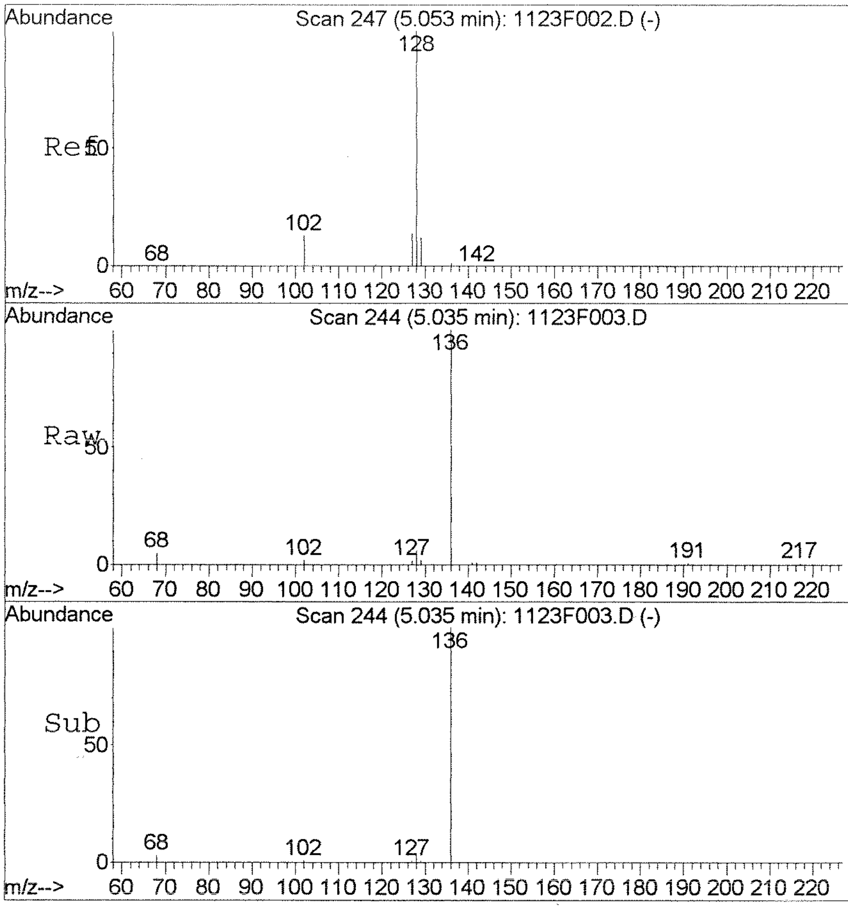
Data File : J:\MS11\DATA\112308\1123F003.D
Acq On : 23 Nov 2008 12:10 pm
Sample : KWG0812042-5 MB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:45 2008

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

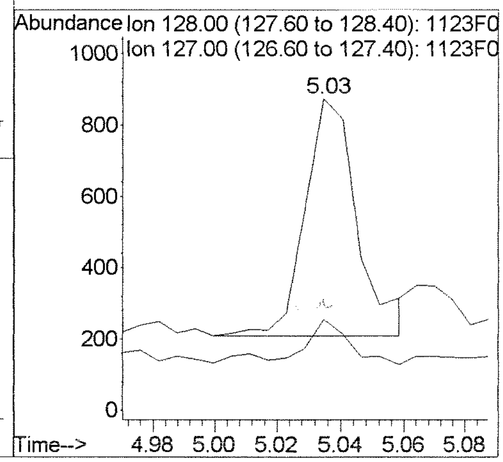
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration

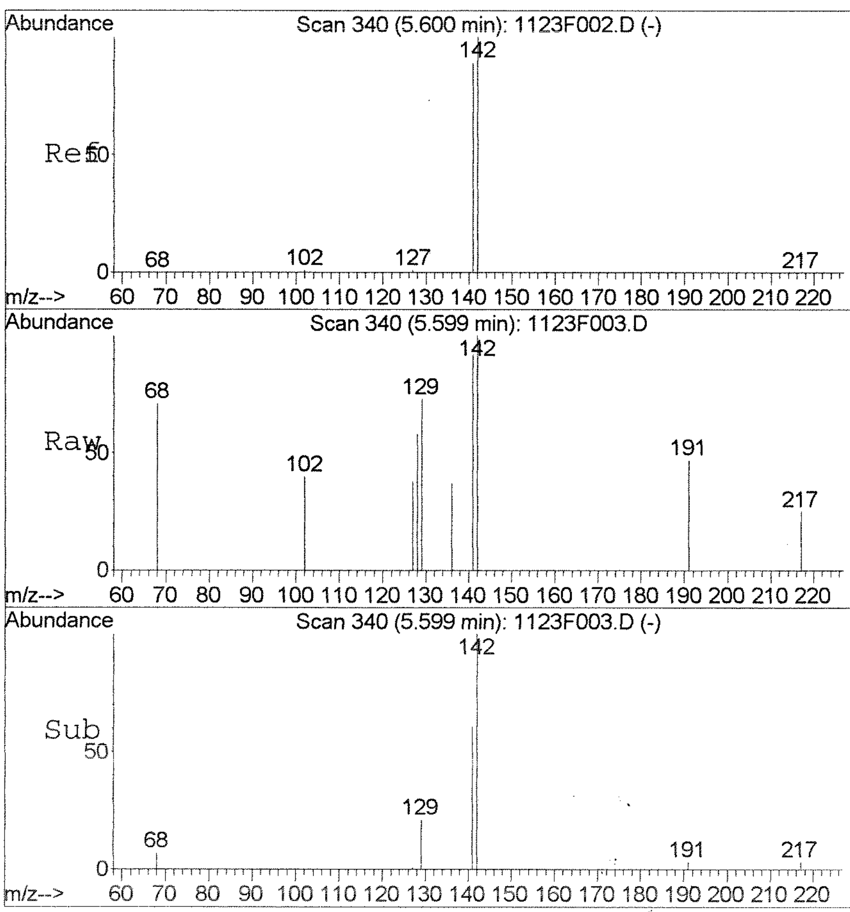




#2
Naphthalene
Concen: 0.64 ng/ml
RT: 5.03 min Scan# 244
Delta R.T. -0.02 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

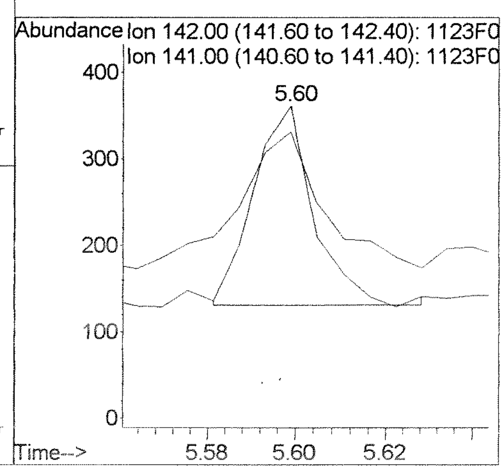
Tgt	Ion:128	Resp:	752
Ion	Ratio	Lower	Upper
128	100		
127	18.9	0.0	43.8

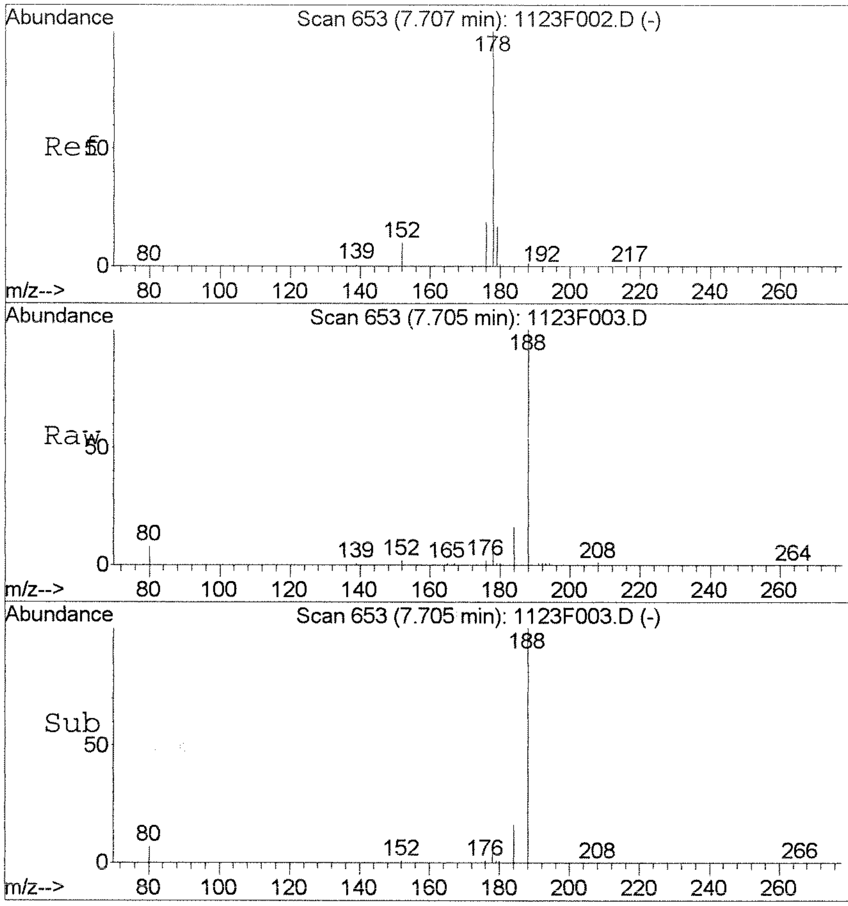




#3
2-Methylnaphthalene
Concen: 0.26 ng/ml m
RT: 5.60 min Scan# 340
Delta R.T. -0.01 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt	Ion:142	Resp:	217
Ion	Ratio	Lower	Upper
142	100		
141	91.7	52.4	112.4

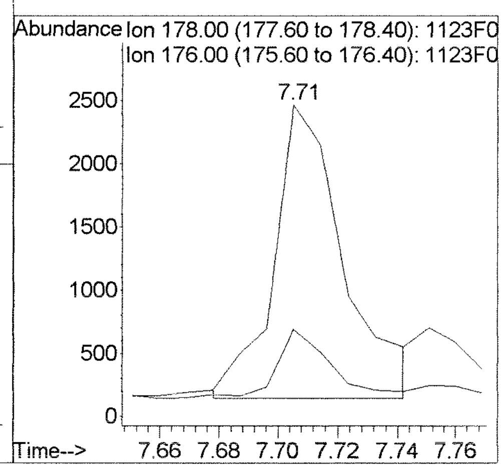


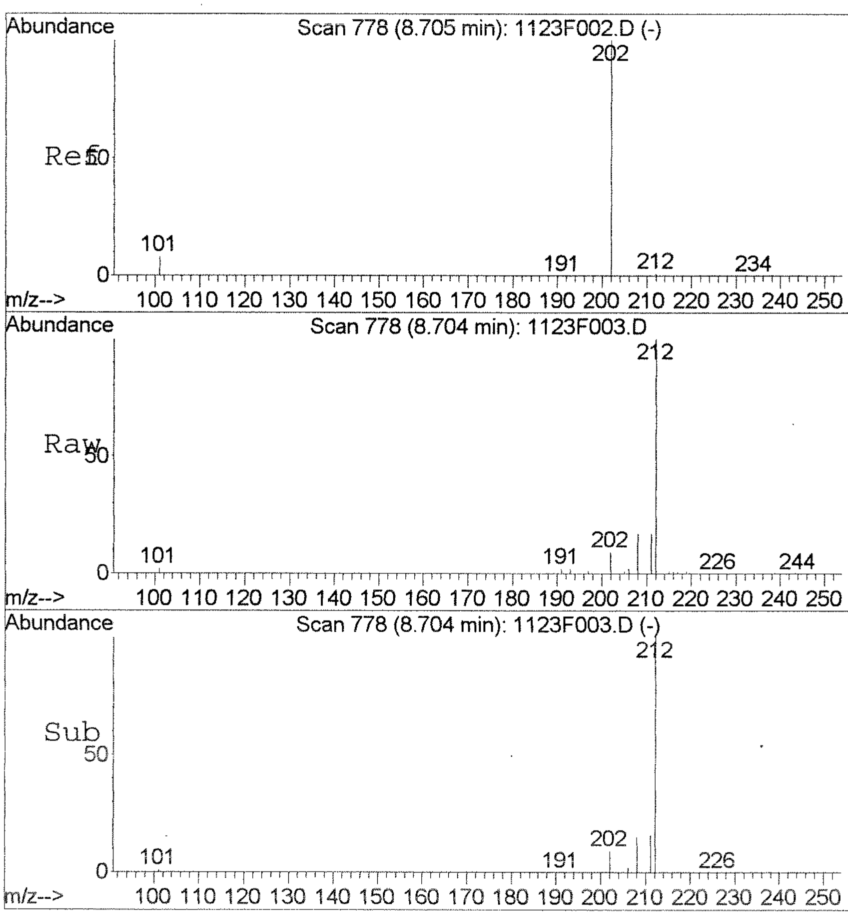


#27
Phenanthrene
Concen: 2.57 ng/ml m
RT: 7.71 min Scan# 653
Delta R.T. -0.01 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt Ion:178 Resp: 3784

Ion	Ratio	Lower	Upper
178	100		
176	27.9	0.0	51.0

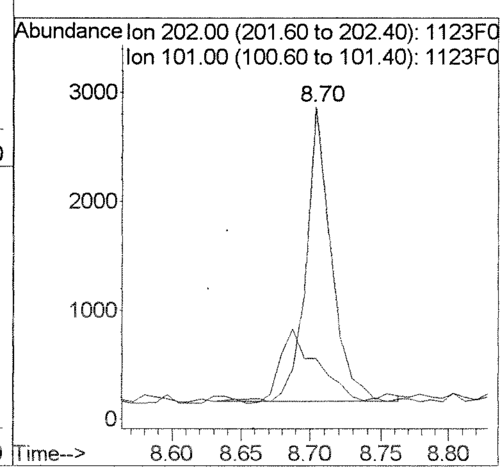


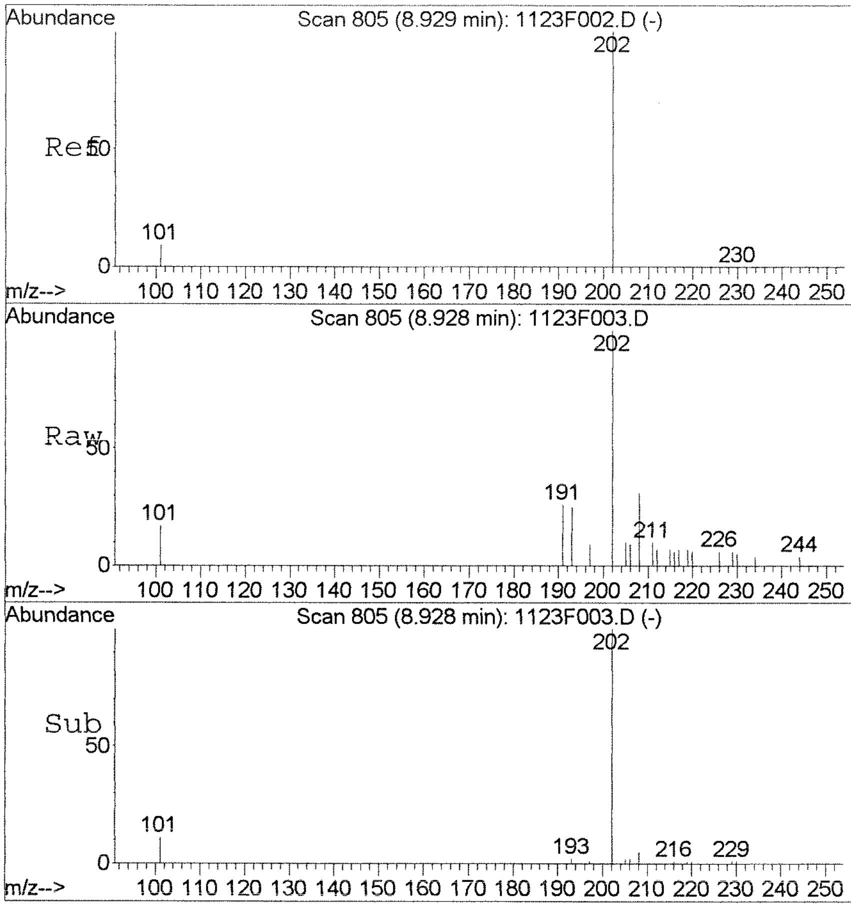


#35
Fluoranthene
Concen: 2.02 ng/ml
RT: 8.70 min Scan# 778
Delta R.T. -0.02 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt Ion:202 Resp: 3376

Ion	Ratio	Lower	Upper
202	100		
101	13.7	0.0	35.8

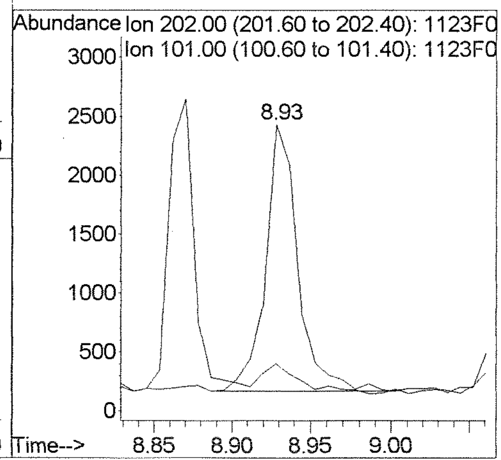


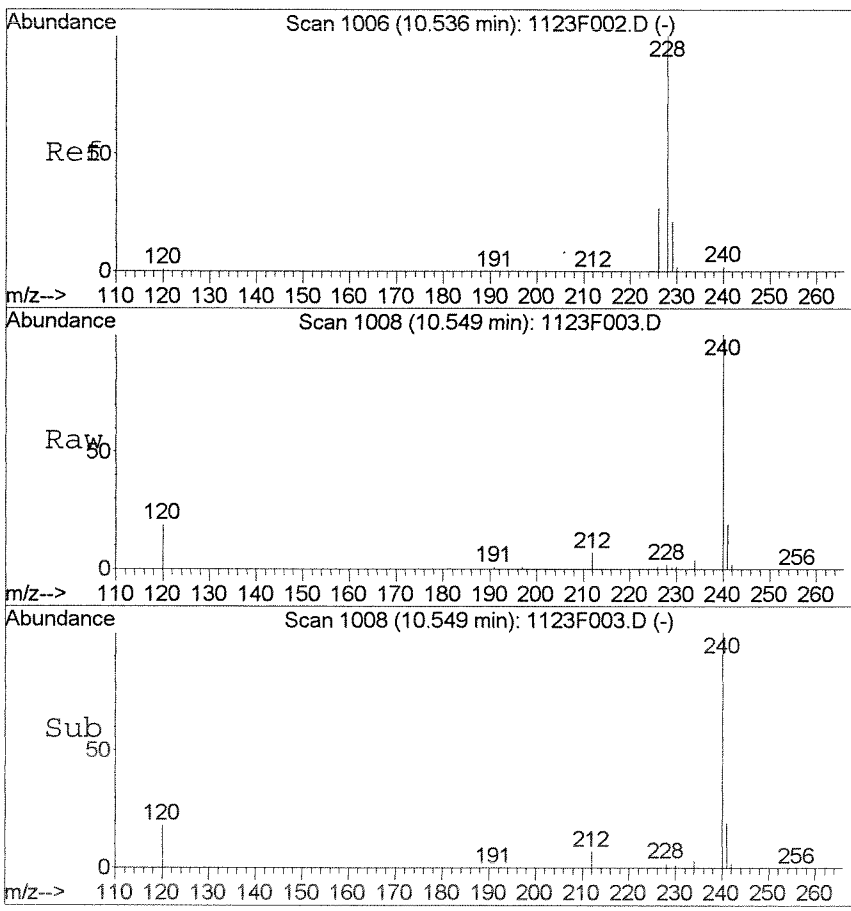


#38
Pyrene
Concen: 1.83 ng/ml
RT: 8.93 min Scan# 805
Delta R.T. -0.02 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt Ion:202 Resp: 3246

Ion	Ratio	Lower	Upper
202	100		
101	9.5	0.0	37.6

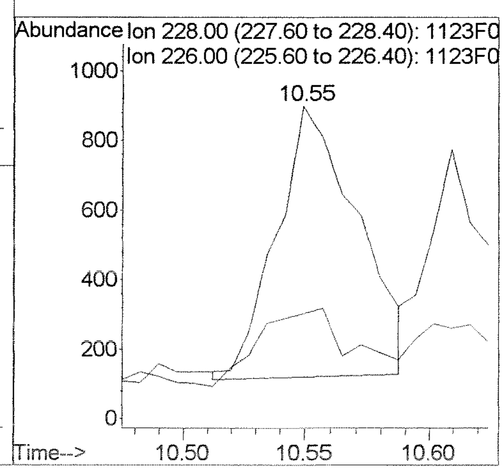


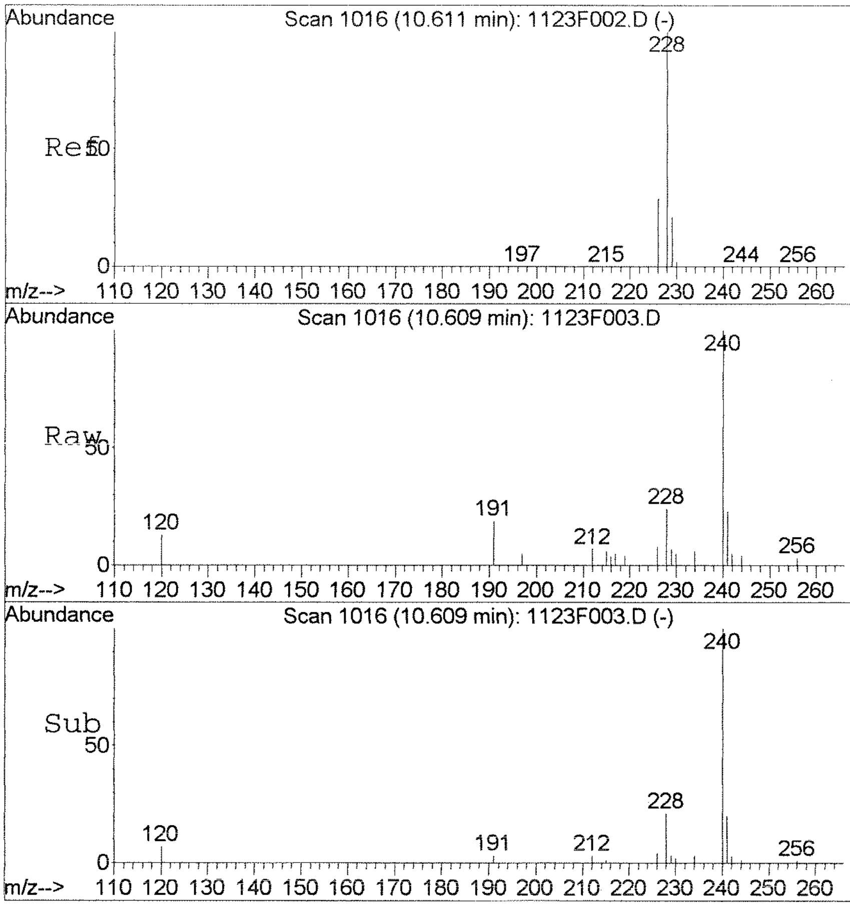


#43
Benz(a)anthracene
Concen: 1.09 ng/ml
RT: 10.55 min Scan# 1008
Delta R.T. -0.02 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt Ion:228 Resp: 1753

Ion	Ratio	Lower	Upper
228	100		
226	27.5	0.0	57.0

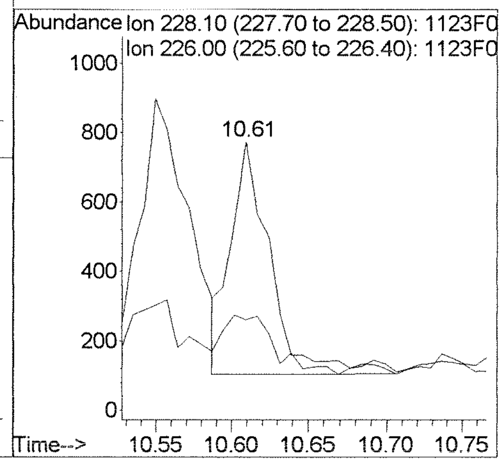


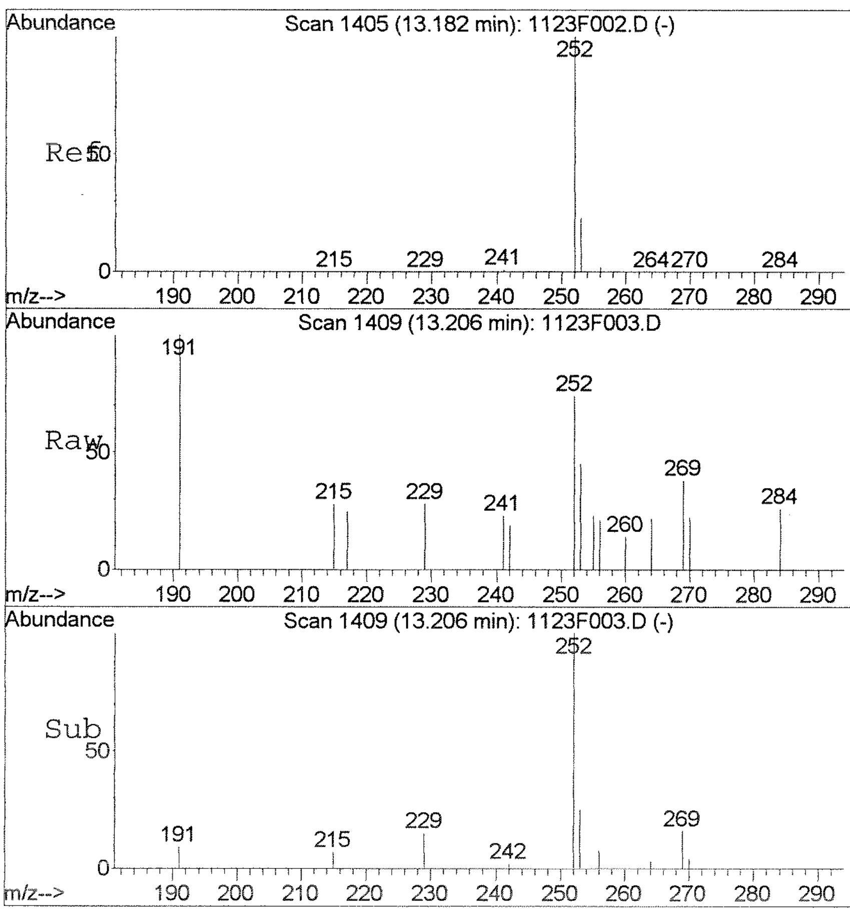


#44
Chrysene
Concen: 0.77 ng/ml
RT: 10.61 min Scan# 1016
Delta R.T. -0.02 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt Ion:228 Resp: 1211

Ion	Ratio	Lower	Upper
228	100		
226	22.4	0.0	58.9

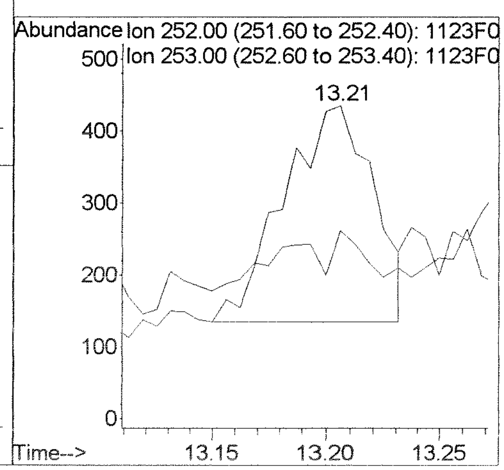


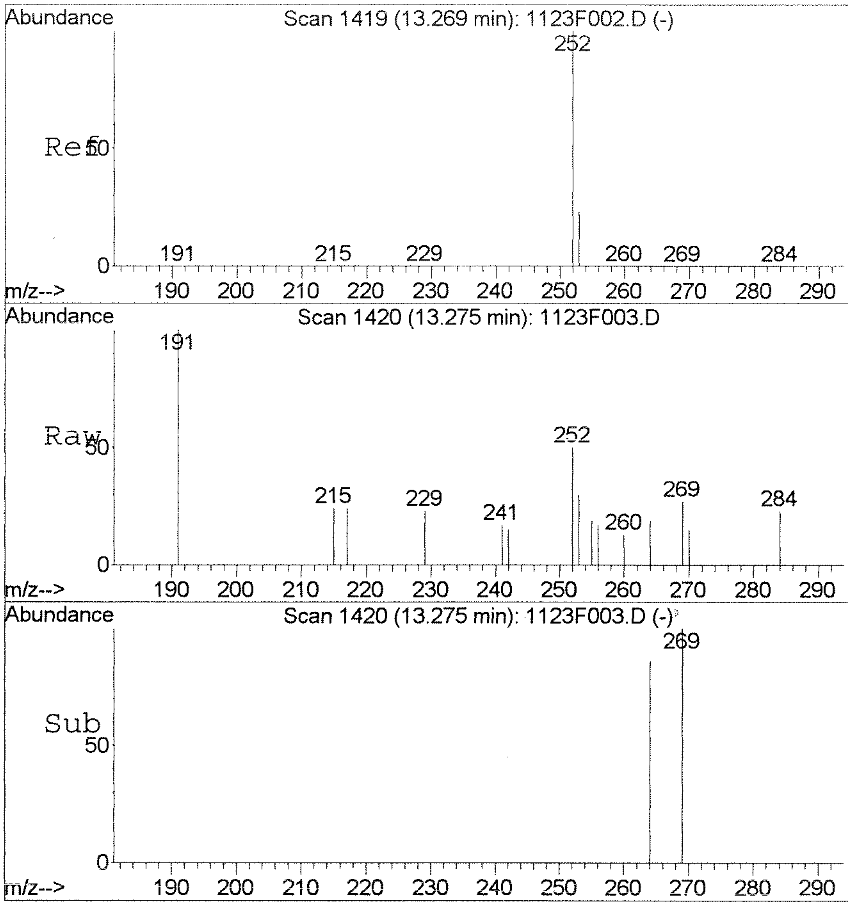


#50
Benzo(b)fluoranthene
Concen: 0.45 ng/ml
RT: 13.21 min Scan# 1409
Delta R.T. -0.02 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt Ion:252 Resp: 811

Ion	Ratio	Lower	Upper
252	100		
253	28.0	0.0	52.6

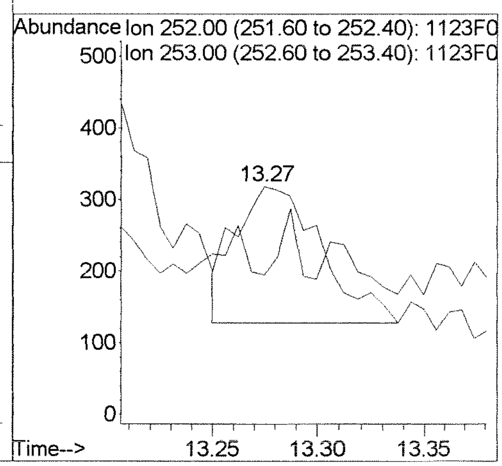


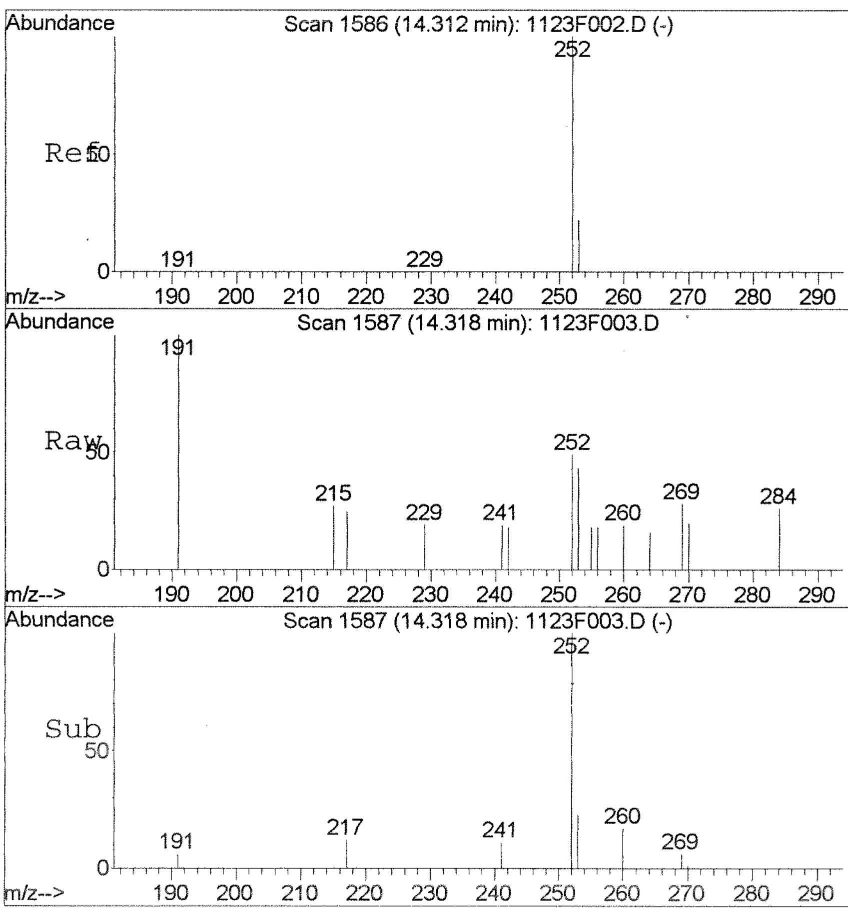


#51
Benzo(k)fluoranthene
Concen: 0.31 ng/ml
RT: 13.27 min Scan# 1420
Delta R.T. -0.04 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt Ion:252 Resp: 541

Ion	Ratio	Lower	Upper
252	100		
253	14.2	0.0	52.0

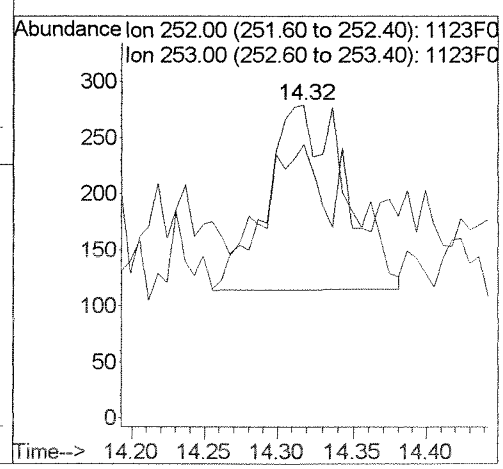


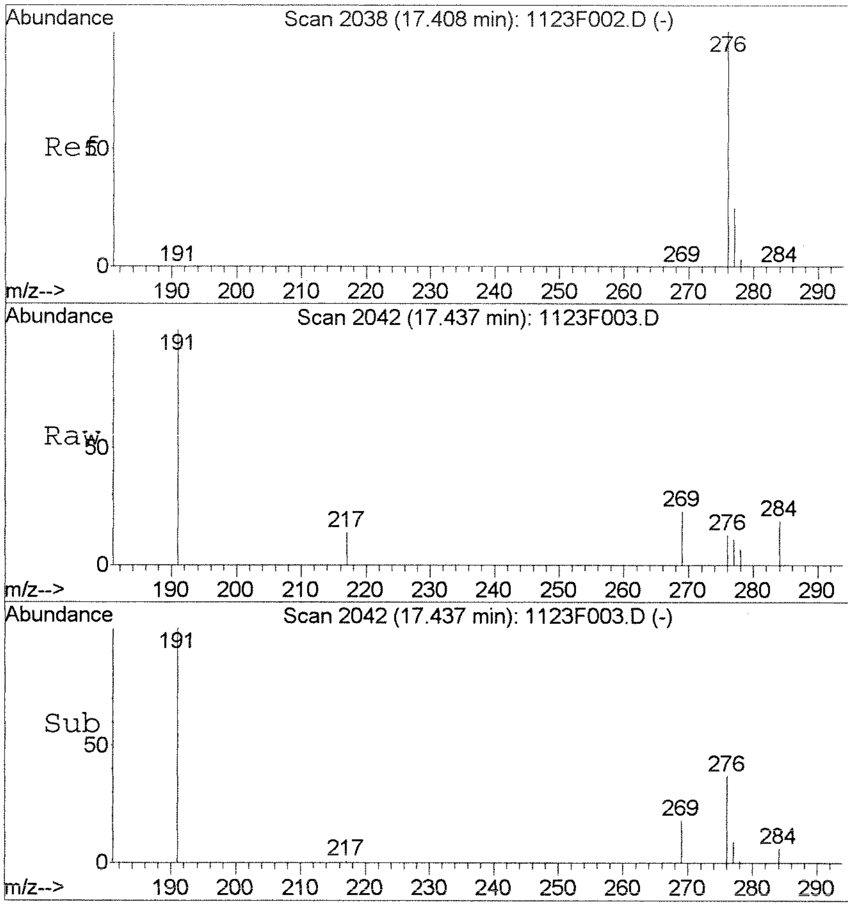


#53
Benzo(a)pyrene
Concen: 0.40 ng/ml
RT: 14.32 min Scan# 1587
Delta R.T. -0.05 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt Ion:252 Resp: 602

Ion	Ratio	Lower	Upper
252	100		
253	42.1	0.0	52.2

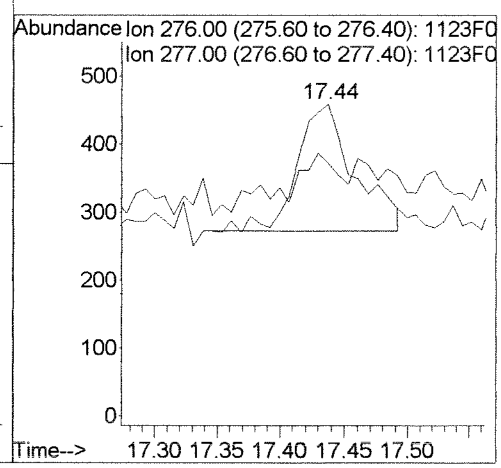


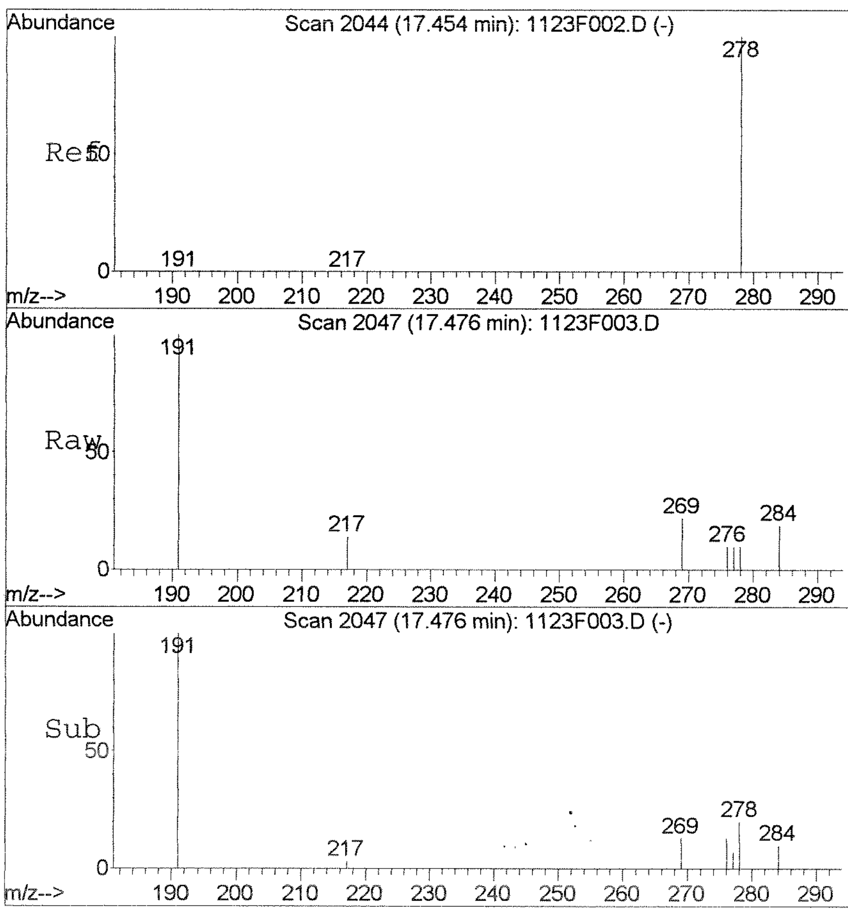


#55
Indeno(1,2,3-cd)pyrene
Concen: 0.42 ng/ml
RT: 17.44 min Scan# 2042
Delta R.T. -0.00 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt Ion:276 Resp: 582

Ion	Ratio	Lower	Upper
276	100		
277	41.2	0.0	54.7

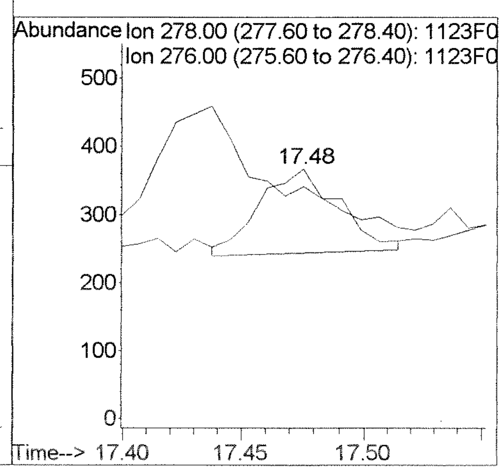


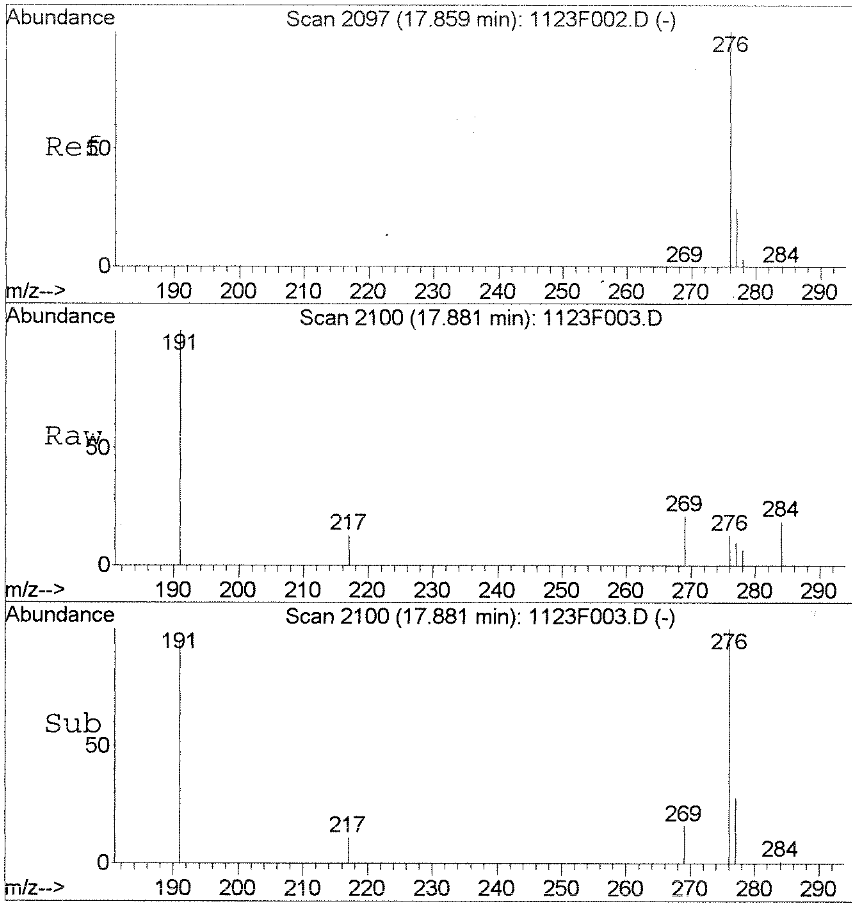


#56
Dibenz(a,h)anthracene
Concen: 0.19 ng/ml
RT: 17.48 min Scan# 2047
Delta R.T. -0.02 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt Ion:278 Resp: 281

Ion	Ratio	Lower	Upper
278	100		
276	52.2	0.0	59.7

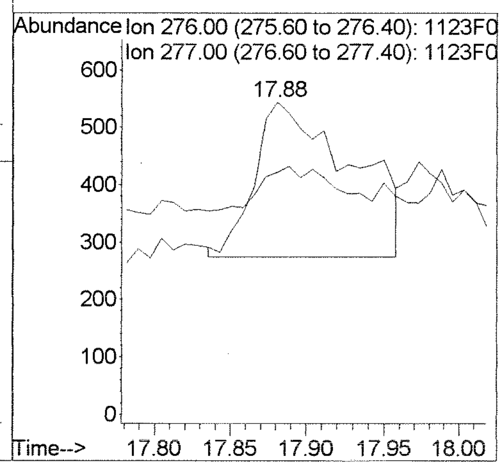




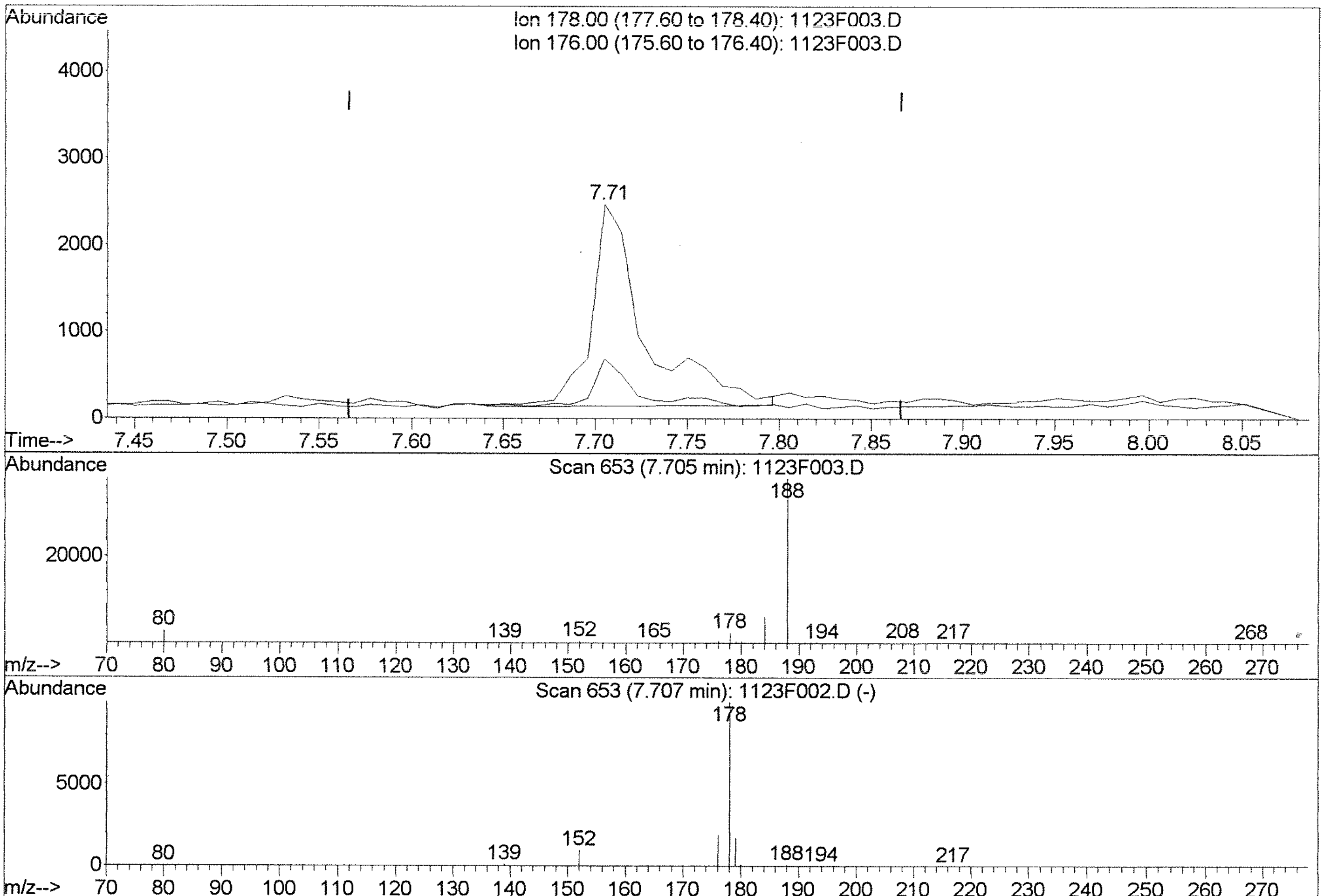
#57
Benzo(g,h,i)perylene
Concen: 0.75 ng/ml m
RT: 17.88 min Scan# 2100
Delta R.T. -0.02 min
Lab File: 1123F003.D
Acq: 23 Nov 2008 12:10 pm

Tgt Ion:276 Resp: 1182

Ion	Ratio	Lower	Upper
276	100		
277	77.6	0.0	54.2#



```
Data File : J:\MS11\DATA\112308\1123F003.D              Vial: 1
Acq On    : 23 Nov 2008   12:10 pm                  Operator: LWeiskopf
Sample    : KWG0812042-5   MB                        Inst    : MS11
Misc      :                                         Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24   6:45 2008             Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Mon Nov 24 06:43:58 2008
Response via   : Multiple Level Calibration
```



TIC: 1123F003.D

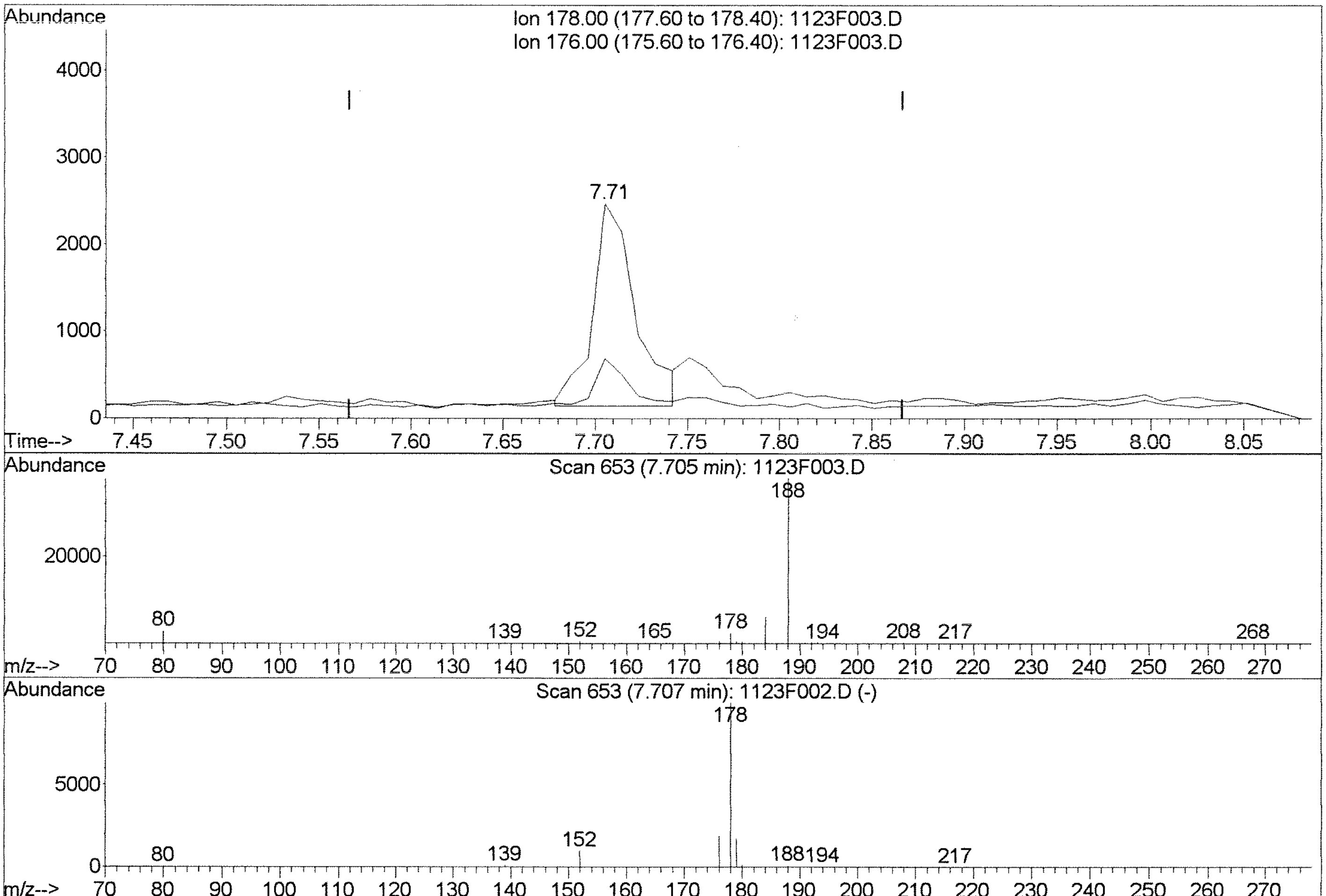
(27) Phenanthrene (T)

7.71min 3.23ng/ml

response 4755

Ion	Exp%	Act%
178.00	100	100
176.00	21.00	23.58
0.00	0.00	0.00
0.00	0.00	0.00

```
Data File : J:\MS11\DATA\112308\1123F003.D                 Vial: 1
Acq On    : 23 Nov 2008  12:10 pm                      Operator: LWeiskopf
Sample    : KWG0812042-5  MB                           Inst    : MS11
Misc      :                                            Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24  6:45 2008                  Quant Results File: temp.res

Method          : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title           : PAHS and ALKYLATED HOMOLOGS
Last Update     : Mon Nov 24 06:43:58 2008
Response via    : Multiple Level Calibration
```



TIC: 1123F003.D

(27) Phenanthrene (T)

7.71min 2.57ng/ml m

response 3784

Ion	Exp%	Act%
178.00	100	100
176.00	21.00	27.92
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/24/08 11-25

1123F003.D 1110ALK.M Mon Nov 24 06:45:32 2008

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED02-5-8.5-AMS	**Units:**	ug/Kg
Lab Code:	KWG0812042-1	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**593**		5.0	0.37	1	11/11/08	11/23/08	KWG0812042	
2-Methylnaphthalene	**717**		5.0	0.39	1	11/11/08	11/23/08	KWG0812042	
Acenaphthylene	**408**		5.0	0.24	1	11/11/08	11/23/08	KWG0812042	
Acenaphthene	**11500**	E	5.0	0.23	1	11/11/08	11/23/08	KWG0812042	
Fluorene	**8620**	E	5.0	0.50	1	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	**4500**	E	5.0	0.59	1	11/11/08	11/23/08	KWG0812042	
Phenanthrene	**9220**	E	5.0	0.75	1	11/11/08	11/23/08	KWG0812042	
Anthracene	**3120**	E	5.0	0.47	1	11/11/08	11/23/08	KWG0812042	
Fluoranthene	**7830**	E	5.0	0.61	1	11/11/08	11/23/08	KWG0812042	
Pyrene	**8880**	E	5.0	0.37	1	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	**3040**	E	5.0	0.48	1	11/11/08	11/23/08	KWG0812042	
Chrysene	**3010**	E	5.0	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	**2380**	E	5.0	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(k)fluoranthene	**1120**		5.0	0.15	1	11/11/08	11/23/08	KWG0812042	
Benzo(a)pyrene	**2300**	E	5.0	0.14	1	11/11/08	11/23/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**2120**	E	5.0	0.16	1	11/11/08	11/23/08	KWG0812042	
Dibenz(a,h)anthracene	**808**		5.0	0.28	1	11/11/08	11/23/08	KWG0812042	
Benzo(g,h,i)perylene	**2040**	E	5.0	0.64	1	11/11/08	11/23/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	83	10-128	11/23/08	Acceptable
Fluoranthene-d10	102	29-121	11/23/08	Acceptable
Terphenyl-d14	87	24-141	11/23/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\112308\1123F012.D
Lab ID: KWG0812042-1 -- K0810639-003MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 11/23/2008 16:09
Date Quantitated: 11/24/2008 06:53
Batch ID: KWG0812642
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2,4,6-Tribromophenol	0	12	152	NT
Above Highest ICAL Level	Anthracene	3138.53	NA	2000	
	Pyrene	8932.60	NA	2000	
	Dibenzofuran	4522.30	NA	2000	
	Dibenzothiophene	2088.35	NA	2000	E flag
	Benzo(g,h,i)perylene	2051.44	NA	2000	
	Indeno(1,2,3-cd)pyrene	2136.06	NA	2000	
	Benzo(b)fluoranthene	2392.59	NA	2000	
	Fluoranthene	7873.20	NA	2000	
	Chrysene	3024.52	NA	2000	
	Benzo(a)pyrene	2312.88	NA	2000	
	Benz(a)anthracene	3057.53	NA	2000	

Primary Review: RW 11/24/08

Secondary Review: [illegible] 11-25-8

Printed: 11/24/2008 10:58:41
u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\MS11\DATA\112308\1123F012.D
Lab ID: KWG0812042-1 -- K0810639-003MS
RunType: MS
Matrix: SEDIMENT

Date Acquired: 11/23/2008 16:09
Date Quantitated: 11/24/2008 06:53
Batch ID: KWG0812642
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	2,6-Dimethylnaphthalene	2182.07	NA	2000	
	Acenaphthene	11583.40	NA	2000	E flag
	Phenanthrene	9268.91	NA	2000	
	Fluorene	8664.74	NA	2000	

Primary Review: RW 11/24/08

Secondary Review: [illegible] 11-25-8

Printed: 11/24/2008 10:58:41

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**		**Receive Date:**	11/13/2008

Analysis Lot:	KWG0812642	**Prep Lot:**	KWG0812042	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776074	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:			
Tune Ref:	J:\MS11\DATA\112308\1123F001.D	**Method ID:**	MJ253
MB Ref:	J:\MS11\DATA\112308\1123F003.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\112308\1123F012.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 16:09	**Quant Date:**	11/24/2008 06:53	**Vial:**	10
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG0812042-1 -- K0810639-003MS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.02	-0.02	136	175386	200.00	OK
2	Acenaphthene-d10	6.45	0.00	164	121999	200.00	OK
3	Phenanthrene-d10	7.72	0.03	188	339720	200.00	OK
4	Chrysene-d12	10.63	0.07	240	341829	200.00	OK
5	Perylene-d12	14.69	0.16	264	299460	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	136870m	165.08	83	10-128	OK	
3	Fluoranthene-d10	8.73	0.04	0.00	212	470705	203.22	102	29-121	OK	
4	Terphenyl-d14	9.11	0.04	0.00	244	308001	174.04	87	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.04	-0.01	0.00	128	637473	596.69	593		
1	2-Methylnaphthalene	5.59	-0.01	0.00	142	537106	720.93	717		
1	1-Methylnaphthalene	5.67	-0.01	0.00	142	952532	1,428	1420		
1	Biphenyl	5.97		0.00	154	416732	457.75	455		
1	2,6-Dimethylnaphthalene	6.10	-0.01	0.00	156	1419204	2,182	2170	E	
1	C2-Naphthalenes				156	0		5.0	U	
1	C3-Naphthalenes				170	0		5.0	U	
1	C4-Naphthalenes				184	0		5.0	U	
2	Acenaphthylene	6.33		0.00	152	564094m	410.05	408		
2	Acenaphthene	6.49	0.02	0.00	154	9683231	11,583	11500	E	
2	Dibenzofuran	6.63	0.01	0.00	168	5686843	4,522	4500	E	
2	2,3,5-Trimethylnaphthalene	6.78		0.00	170	1420933	1,933	1920		
2	Fluorene	6.91	0.01	0.00	166	8695703	8,665	8620	E	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112308\1123F012.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 16:09	**Quant Date:**	11/24/2008 06:53	**Vial:**	10
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG0812042-1 -- K0810639-003MS			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C1-Fluorenes				180	0		5.0	U	
2	C2-Fluorenes				194	0		5.0	U	
2	C3-Fluorenes				208	0		5.0	U	
3	Dibenzothiophene	7.62	0.02	0.00	184	4875866	2,088	2080	E	
3	C1-Dibenzothiophenes				198	0		5.0	U	
3	C2-Dibenzothiophenes				212	0		5.0	U	
3	C3-Dibenzothiophenes				226	0		5.0	U	
3	Phenanthrene	7.72	0.01	0.00	178	22133337	9,269	9220	E	
3	Anthracene	7.77	0.03	0.00	178	7302143	3,139	3120	E	
3	Carbazole	7.91	0.02	0.00	167	1347318	631.23	628		
3	1-Methylphenanthrene	8.23	0.03	0.00	192	3292542**m**	1,858	1850		
3	C1-Phenanthrenes/Anthracenes				192	0		5.0	U	
3	C2-Phenanthrenes/Anthracenes				206	0		5.0	U	
3	C3-Phenanthrenes/Anthracenes				220	0		5.0	U	
3	C4-Phenanthrenes/Anthracenes				234	0		5.0	U	
3	Fluoranthene	8.74	0.03	0.00	202	21355693	7,873	7830	E	
4	Pyrene	8.97	0.04	0.00	202	22970378	8,933	8880	E	
4	C1-Fluoranthenes/Pyrenes				216	0		5.0	U	
4	Benz(a)anthracene	10.62	0.08	0.00	228	7132899	3,058	3040	E	
4	Chrysene	10.68	0.07	0.00	228	6929916	3,025	3010	E	
4	C1-Chrysenes				242	0		5.0	U	
4	C2-Chrysenes				256	0		5.0	U	
4	C3-Chrysenes				270	0		5.0	U	
4	C4-Chrysenes				284	0		5.0	U	
5	Benzo(b)fluoranthene	13.33	0.15	0.00	252	4944639	2,393	2380	E	
5	Benzo(k)fluoranthene	13.41	0.14	0.00	252	2233834**m**	1,125	1120		
5	Benzo(e)pyrene	14.28	0.16	0.00	252	3008972	1,603	1590		
5	Benzo(a)pyrene	14.50	0.19	0.00	252	3957569	2,313	2300	E	
5	Perylene	14.80	0.17	0.00	252	1614293	960.37	955		
5	Indeno(1,2,3-cd)pyrene	17.49	0.08	-0.01	276	3391235	2,136	2120	E	
5	Dibenz(a,h)anthracene	17.53	0.08	-0.01	278	1353240**m**	812.10	808		
5	Benzo(g,h,i)perylene	17.95	0.09	-0.01	276	3710536	2,051	2040	E	

Prep Amount:	15.19 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	66.2 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112308\1123F012.D Vial: 10
Acq On : 23 Nov 2008 4:09 pm Operator: LWeiskopf
Sample : K0810639-003MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:44:26 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.02	136	175386	200.00	ng/ml	-0.02
10) Acenaphthene-d10	6.45	164	121999	200.00	ng/ml	-0.01
22) Phenanthrene-d10	7.72	188	339720	200.00	ng/ml	0.02
37) Chrysene-d12	10.63	240	341829	200.00	ng/ml	0.04
49) Perylene-d12	14.69	264	299460	200.00	ng/ml	0.10
System Monitoring Compounds						
15) Fluorene-d10	6.88	176	136870m	165.08	ng/ml	0.00
Spiked Amount 200.000			Recovery =	82.54%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.73	212	470705	203.22	ng/ml	0.02
Spiked Amount 200.000			Recovery =	101.61%		
42) Terphenyl-d14	9.11	244	308001	174.04	ng/ml	0.02
Spiked Amount 200.000			Recovery =	87.02%		
Target Compounds						Qvalue
2) Naphthalene	5.04	128	637473	596.69	ng/ml	100
3) 2-Methylnaphthalene	5.59	142	537106	720.93	ng/ml	93
4) 1-Methylnaphthalene	5.67	142	952532	1428.23	ng/ml	99
5) Biphenyl	5.97	154	416732	457.75	ng/ml	98
6) 2,6-Dimethylnaphthalene	6.10	156	1419204	2182.07	ng/ml	97
11) Acenaphthylene	6.33	152	564094m	410.05	ng/ml	
12) Acenaphthene	6.49	154	9683231	11583.40	ng/ml	80
13) Dibenzofuran	6.63	168	5686843	4522.30	ng/ml	78
14) 2,3,5-Trimethylnaphthalene	6.78	170	1420933	1932.65	ng/ml	80
16) Fluorene	6.91	166	8695703	8664.74	ng/ml	89
23) Dibenzothiophene	7.62	184	4875866	2088.35	ng/ml	99
27) Phenanthrene	7.72	178	22133337	9268.91	ng/ml	50
28) Anthracene	7.77	178	7302143	3138.53	ng/ml	78
29) Carbazole	7.91	167	1347318	631.23	ng/ml	100
30) 1-Methylphenanthrene	8.23	192	3292542m	1857.87	ng/ml	
35) Fluoranthene	8.74	202	21355693	7873.20	ng/ml	25
38) Pyrene	8.97	202	22970378	8932.60	ng/ml	19
43) Benz(a)anthracene	10.62	228	7132899	3057.53	ng/ml	85
44) Chrysene	10.68	228	6929916	3024.52	ng/ml	90
50) Benzo(b)fluoranthene	13.33	252	4944639	2392.59	ng/ml	97
51) Benzo(k)fluoranthene	13.41	252	2233834m	1125.19	ng/ml	
52) Benzo(e)pyrene	14.28	252	3008972	1602.83	ng/ml	99
53) Benzo(a)pyrene	14.50	252	3957569	2312.88	ng/ml	96
54) Perylene	14.80	252	1614293	960.37	ng/ml	95
55) Indeno(1,2,3-cd)pyrene	17.49	276	3391235	2136.06	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112308\1123F012.D   Vial: 10
Acq On : 23 Nov 2008 4:09 pm   Operator: LWeiskopf
Sample : K0810639-003MS   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:44:26 2008   Quant Results File: 1110ALK.RES

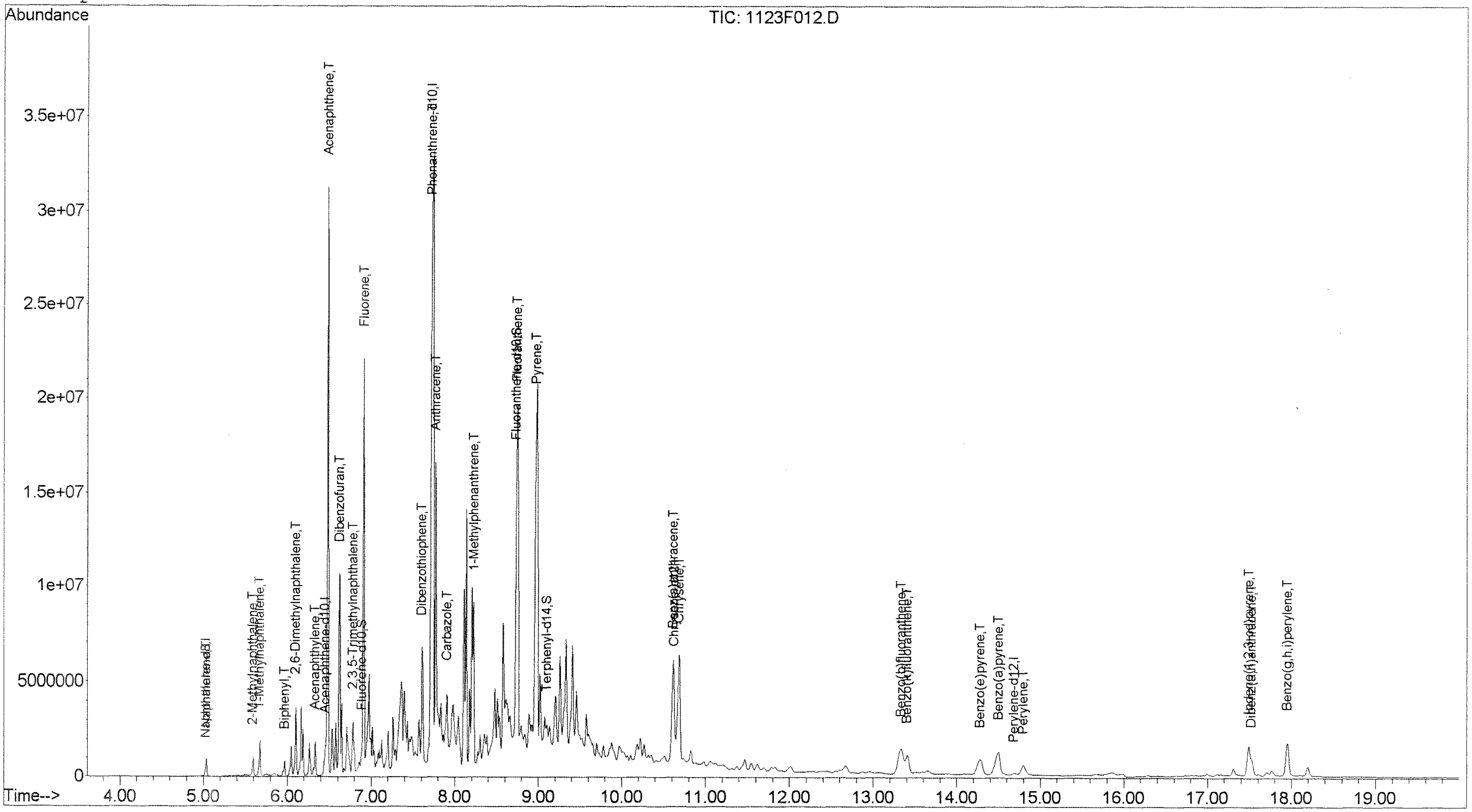
Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
56) Dibenz(a,h)anthracene	17.53	278	1353240m	812.10 ng/ml	
57) Benzo(g,h,i)perylene	17.95	276	3710536	2051.44 ng/ml	95

Quantitation Report (QT Reviewed)

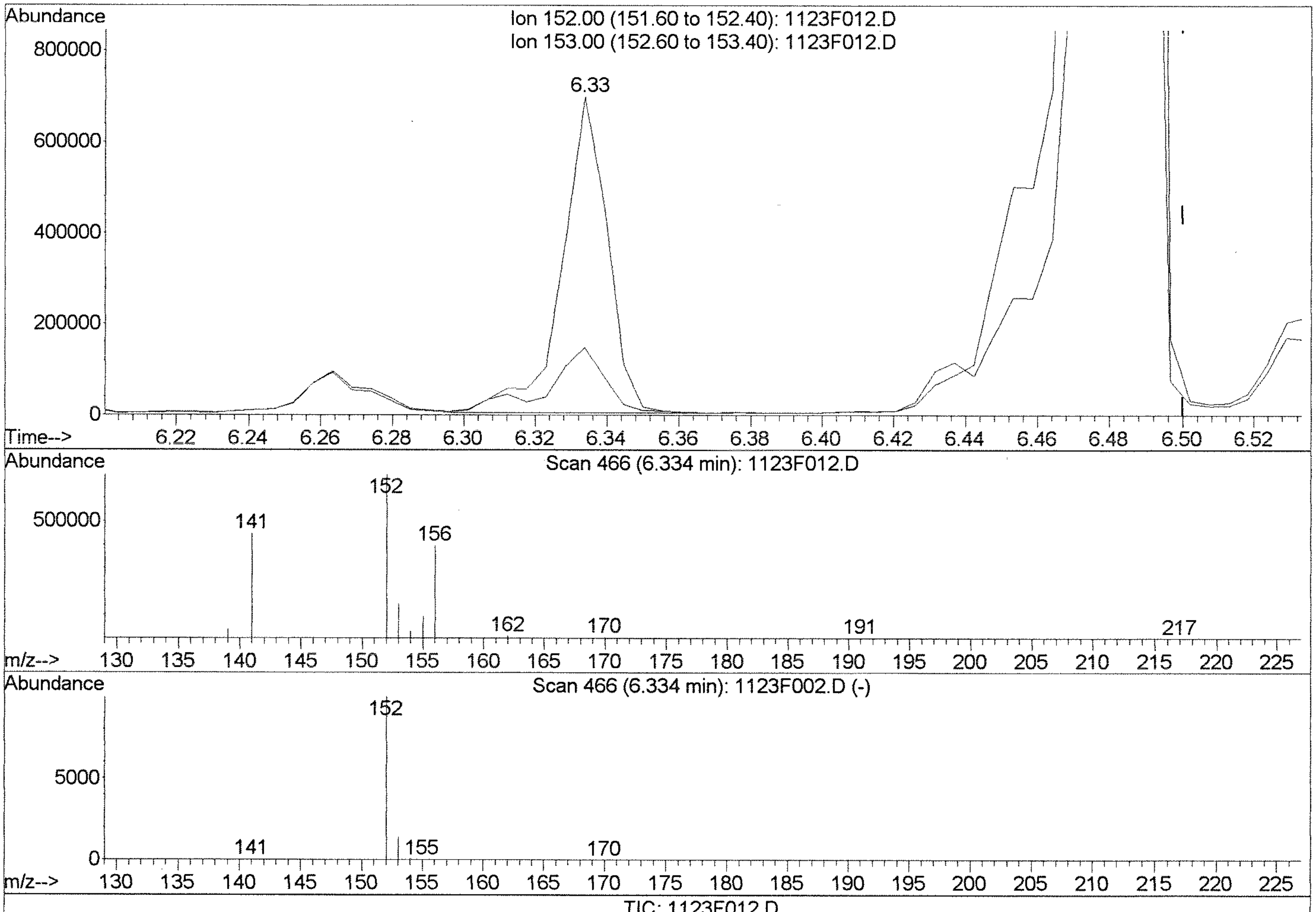
Data File : J:\MS11\DATA\112308\1123F012.D Vial: 10
Acq On : 23 Nov 2008 4:09 pm Operator: LWeiskopf
Sample : K0810639-003MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:53 2008 Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration



Data File : J:\MS11\DATA\112308\1123F012.D Vial: 10
Acq On : 23 Nov 2008 4:09 pm Operator: LWeiskopf
Sample : K0810639-003MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:44 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



(11) Acenaphthylene (T)

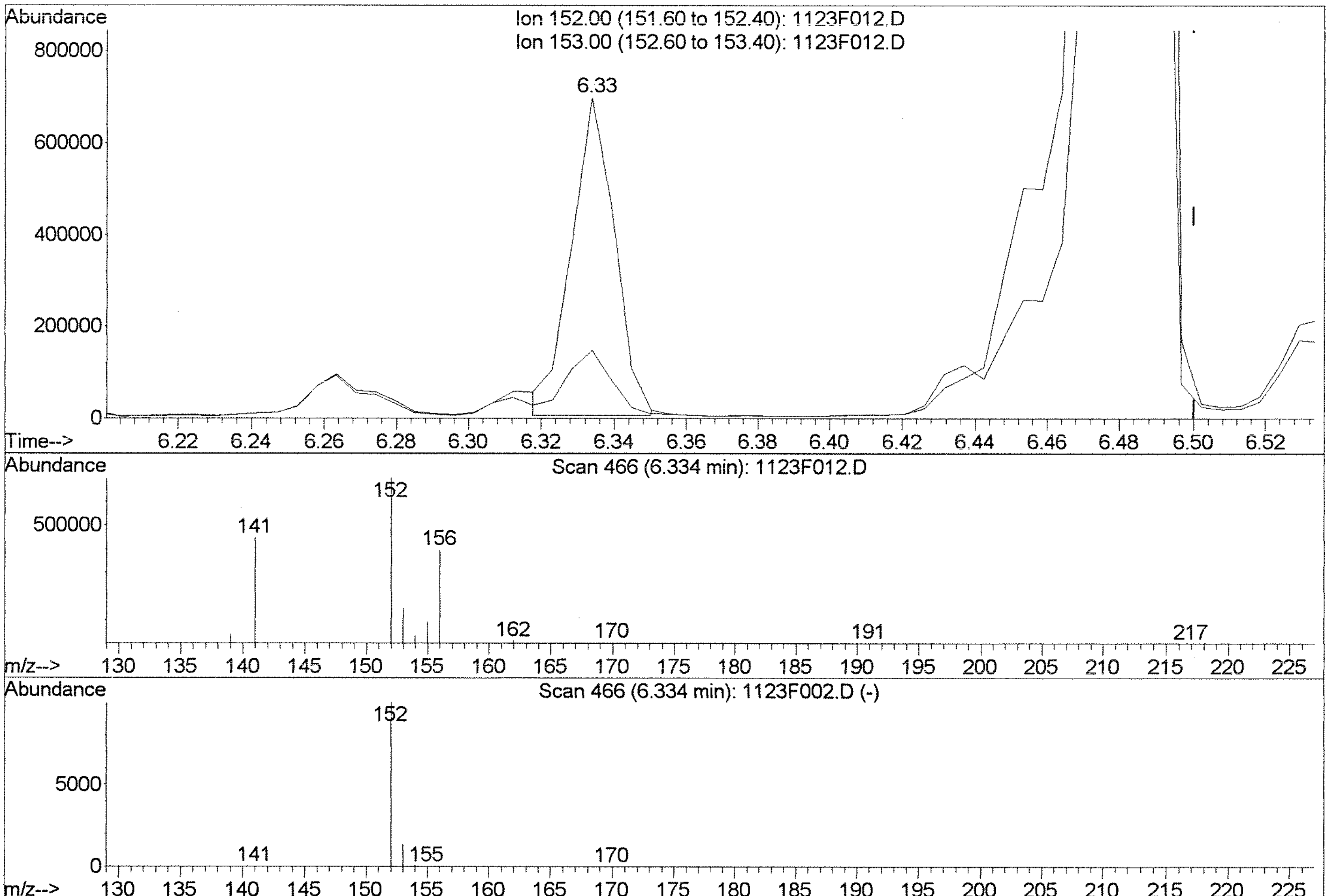
6.33min 445.99ng/ml

response 613544

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	20.50
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

```
Data File : J:\MS11\DATA\112308\1123F012.D                Vial: 10
Acq On    : 23 Nov 2008   4:09 pm                     Operator: LWeiskopf
Sample    : K0810639-003MS                            Inst    : MS11
Misc      :                                           Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24  6:52 2008              Quant Results File: temp.res

Method        : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title         : PAHS and ALKYLATED HOMOLOGS
Last Update   : Mon Nov 24 06:43:58 2008
Response via  : Multiple Level Calibration
```



TIC: 1123F012.D

(11) Acenaphthylene (T)

6.33min 410.05ng/ml m

response 564094

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	21.17
0.00	0.00	0.00
0.00	0.00	0.00

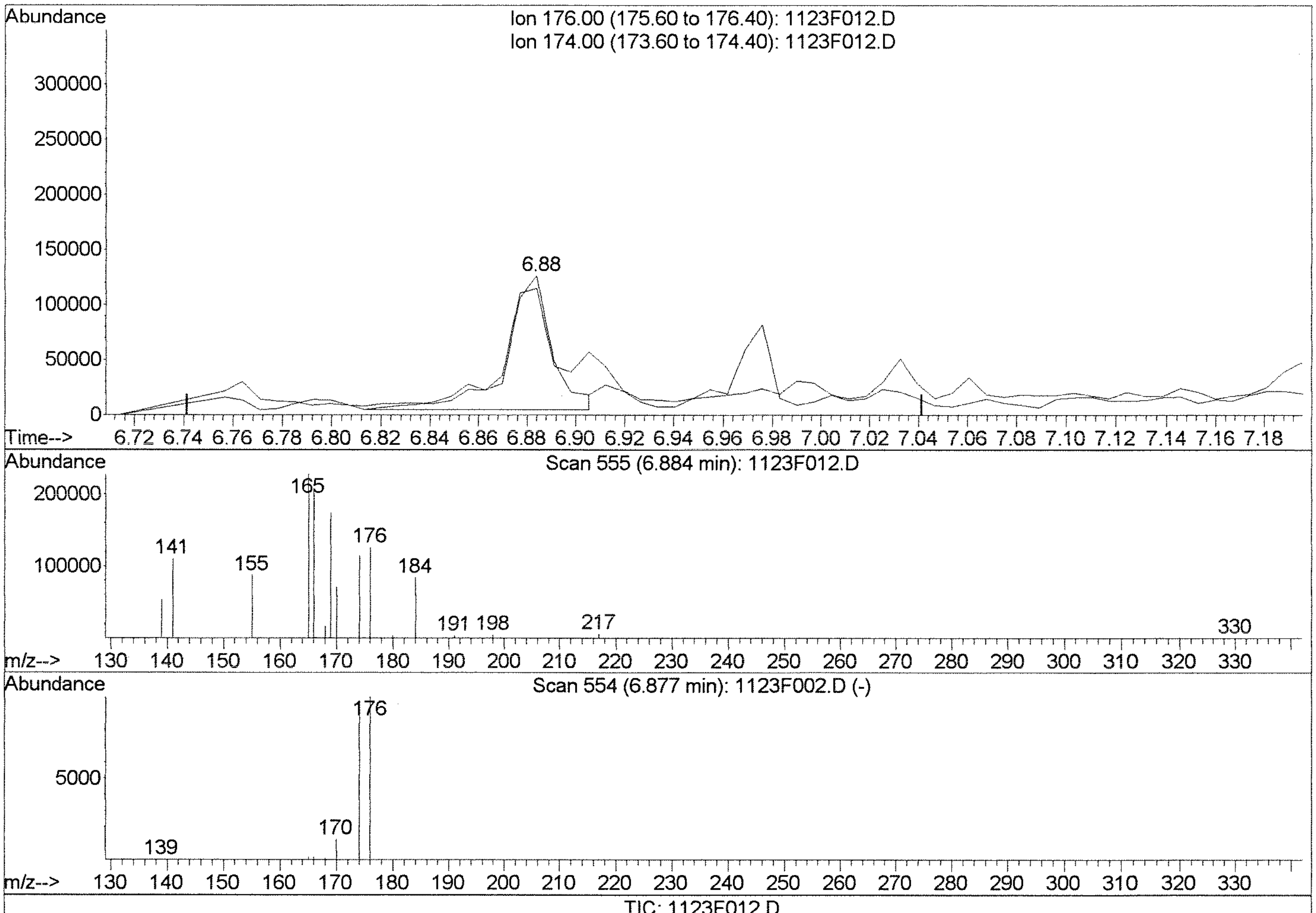
OI

11-25-8

1123F012.D 1110ALK.M Mon Nov 24 06:52:18 2008

Data File : J:\MS11\DATA\112308\1123F012.D Vial: 10
Acq On : 23 Nov 2008 4:09 pm Operator: LWeiskopf
Sample : K0810639-003MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:52 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



(15) Fluorene-d10 (S)

6.88min 198.93ng/ml

response 164936

Ion	Exp%	Act%
176.00	100	100
174.00	96.70	88.07
0.00	0.00	0.00
0.00	0.00	0.00

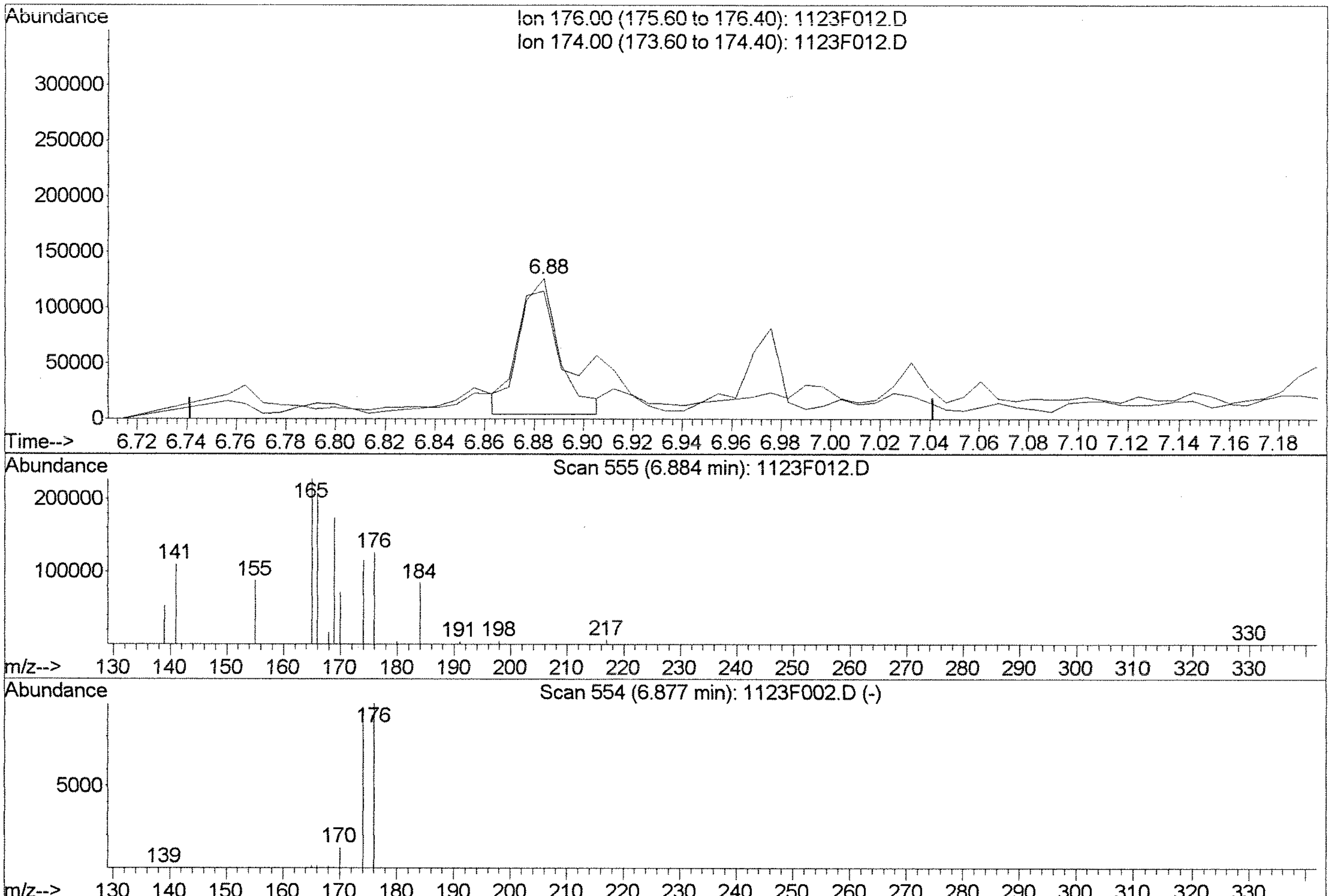
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F012.D
Acq On : 23 Nov 2008 4:09 pm
Sample : K0810639-003MS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:52 2008

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F012.D

(15) Fluorene-d10 (S)

6.88min 165.08ng/ml m

response 136870

Ion	Exp%	Act%
176.00	100	100
174.00	96.70	90.94
0.00	0.00	0.00
0.00	0.00	0.00

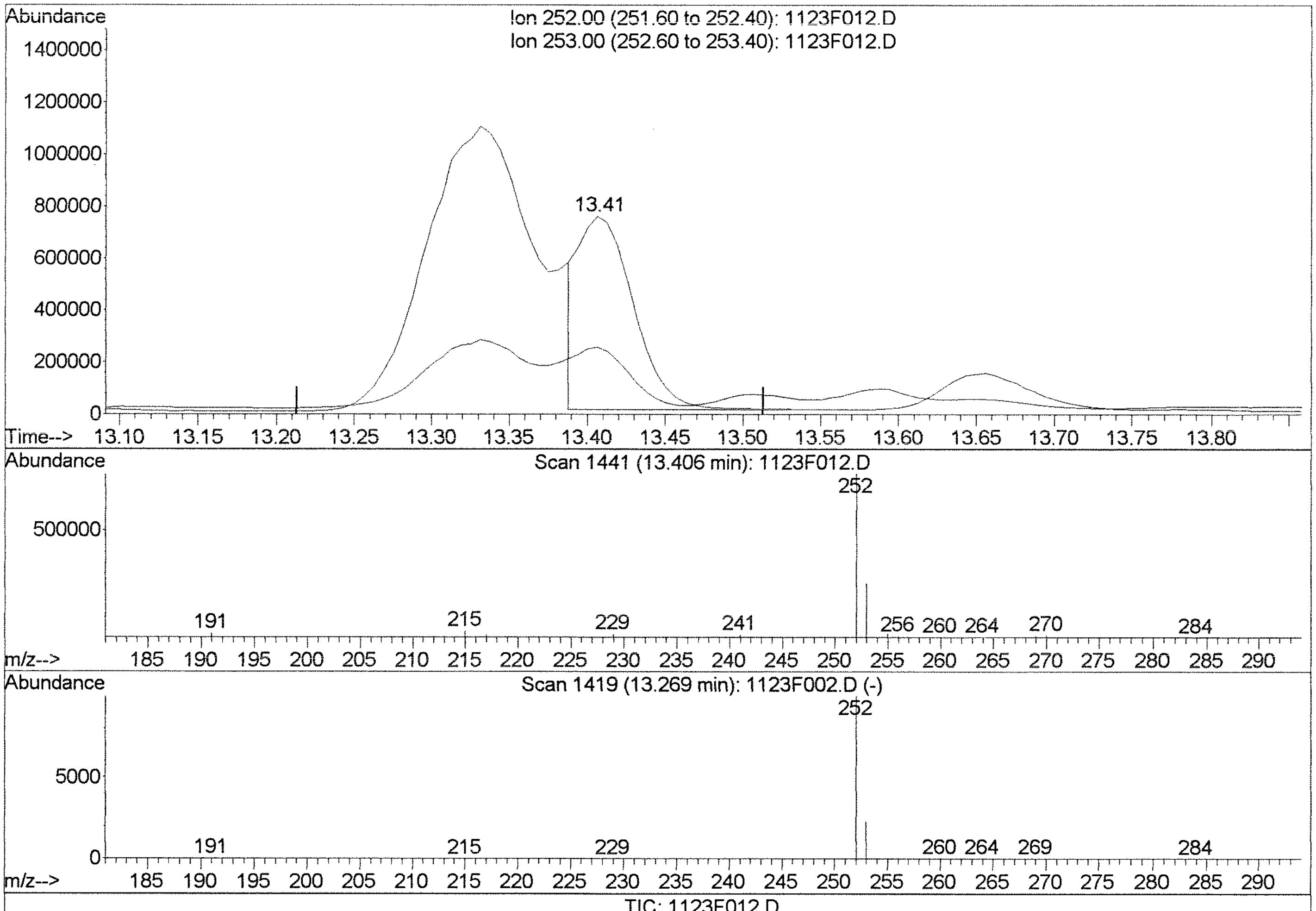
OT 11-25-08
11/24/08

1123F012.D 1110ALK.M Mon Nov 24 06:52:30 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F012.D Vial: 10
Acq On : 23 Nov 2008 4:09 pm Operator: LWeiskopf
Sample : K0810639-003MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:52 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



(51) Benzo(k)fluoranthene (T)

13.41min 926.21ng/ml

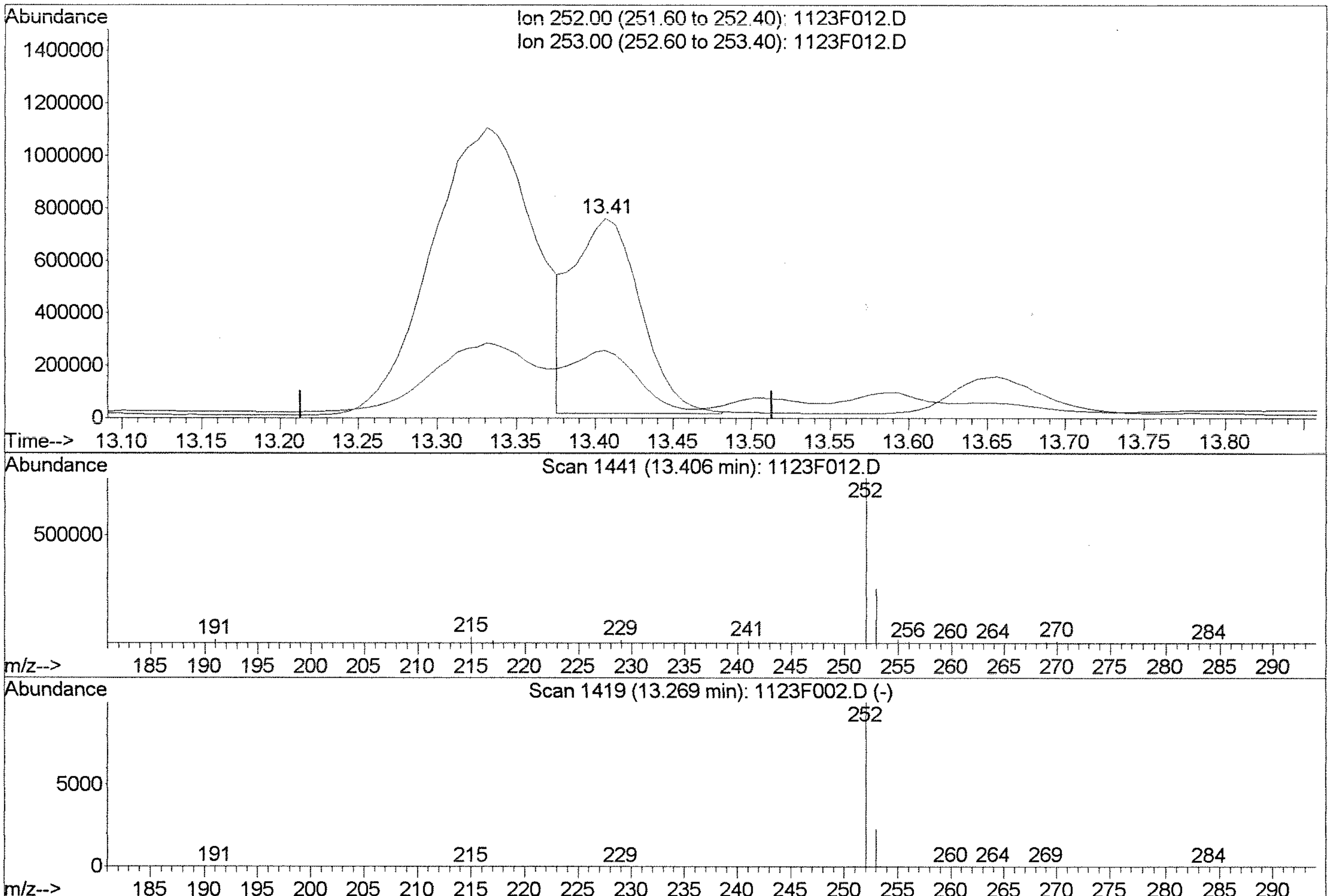
response 1838810

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	24.03
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F012.D Vial: 10
Acq On : 23 Nov 2008 4:09 pm Operator: LWeiskopf
Sample : K0810639-003MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:53 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F012.D

(51) Benzo(k)fluoranthene (T)

13.41min 1125.19ng/ml m

response 2233834

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	33.85
0.00	0.00	0.00
0.00	0.00	0.00

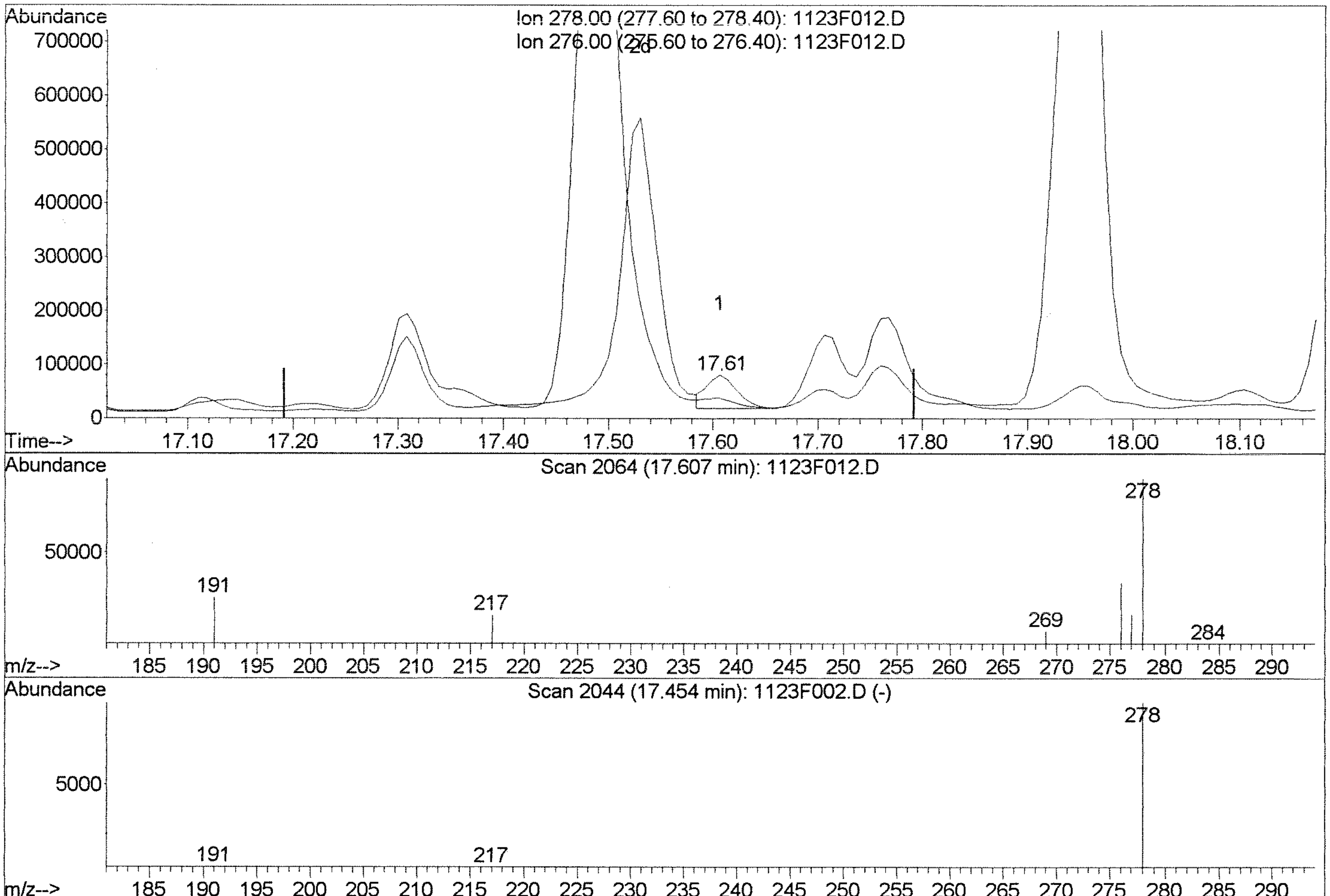
IC

DW 11/24/08

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F012.D   Vial: 10
Acq On : 23 Nov 2008 4:09 pm   Operator: LWeiskopf
Sample : K0810639-003MS   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:53 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F012.D

(56) Dibenz(a,h)anthracene (T)

17.61min 74.10ng/ml

response 123469

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	27.95
0.00	0.00	0.00
0.00	0.00	0.00

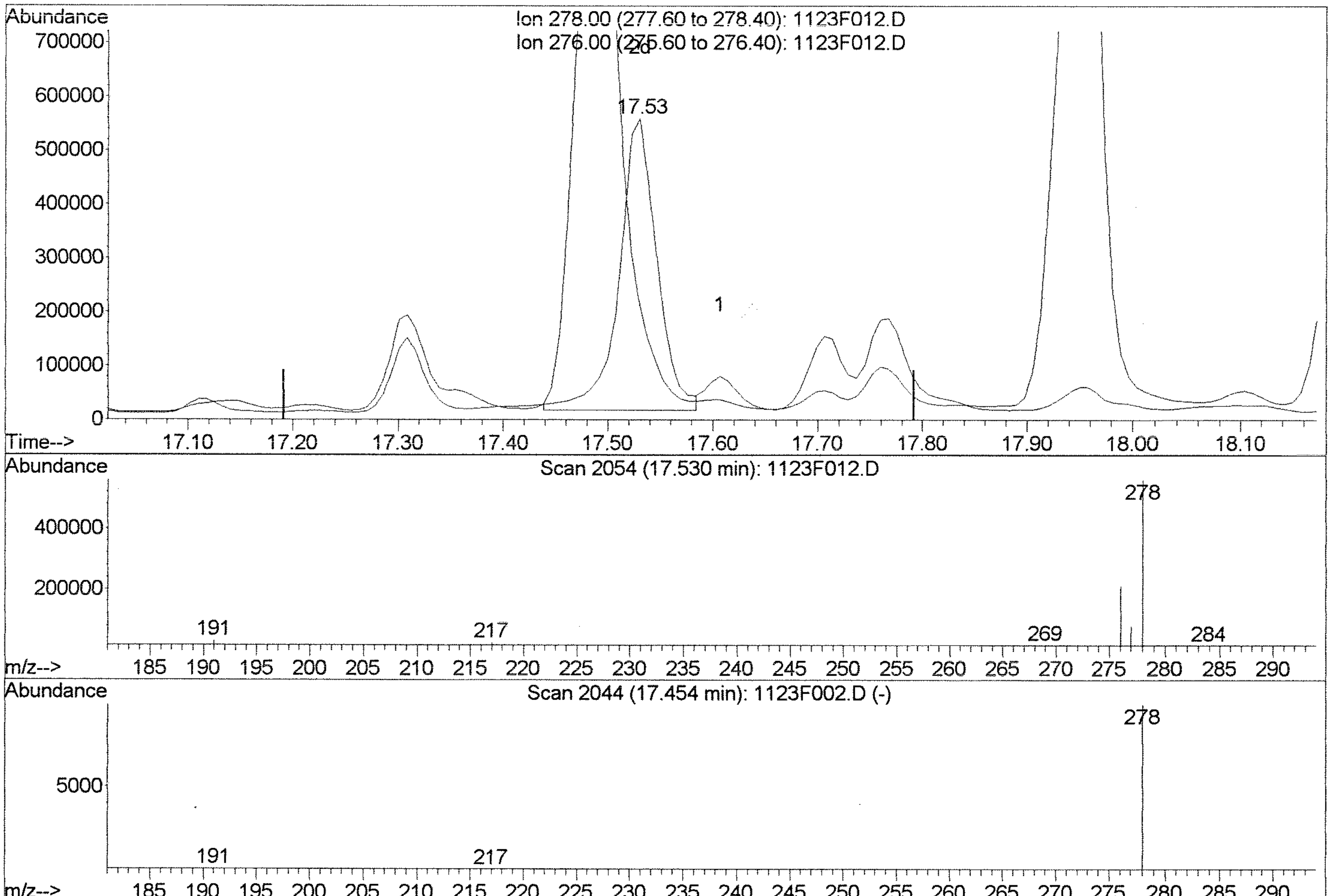
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F012.D
Acq On : 23 Nov 2008 4:09 pm
Sample : K0810639-003MS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:53 2008

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F012.D

(56) Dibenz(a,h)anthracene (T)

17.53min 812.10ng/ml m

response 1353240

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	37.84
0.00	0.00	0.00
0.00	0.00	0.00

WP LW 11/24/08 11-25-8

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	07/10/2008
Sample Matrix:	Sediment	**Date Received:**	07/15/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	SED02-5-8.5-ADMS	**Units:**	ug/Kg
Lab Code:	KWG0812042-2	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**562**		5.0	0.37	1	11/11/08	11/23/08	KWG0812042	
2-Methylnaphthalene	**720**		5.0	0.39	1	11/11/08	11/23/08	KWG0812042	
Acenaphthylene	**407**		5.0	0.24	1	11/11/08	11/23/08	KWG0812042	
Acenaphthene	**11600**	E	5.0	0.23	1	11/11/08	11/23/08	KWG0812042	
Fluorene	**8930**	E	5.0	0.50	1	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	**4720**	E	5.0	0.59	1	11/11/08	11/23/08	KWG0812042	
Phenanthrene	**11800**	E	5.0	0.75	1	11/11/08	11/23/08	KWG0812042	
Anthracene	**3800**	E	5.0	0.47	1	11/11/08	11/23/08	KWG0812042	
Fluoranthene	**8400**	E	5.0	0.61	1	11/11/08	11/23/08	KWG0812042	
Pyrene	**9160**	E	5.0	0.37	1	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	**3210**	E	5.0	0.48	1	11/11/08	11/23/08	KWG0812042	
Chrysene	**3230**	E	5.0	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	**2370**	E	5.0	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(k)fluoranthene	**1110**		5.0	0.15	1	11/11/08	11/23/08	KWG0812042	
Benzo(a)pyrene	**2230**	E	5.0	0.14	1	11/11/08	11/23/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**1970**	E	5.0	0.16	1	11/11/08	11/23/08	KWG0812042	
Dibenz(a,h)anthracene	**767**		5.0	0.28	1	11/11/08	11/23/08	KWG0812042	
Benzo(g,h,i)perylene	**1950**		5.0	0.64	1	11/11/08	11/23/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	10-128	11/23/08	Acceptable
Fluoranthene-d10	104	29-121	11/23/08	Acceptable
Terphenyl-d14	84	24-141	11/23/08	Acceptable

Comments:

Exception Report

Data File:	J:\MS11\DATA\112308\1123F013.D	**Date Acquired:**	11/23/2008 16:35
Lab ID:	KWG0812042-2 -- K0810639-003DMS	**Date Quantitated:**	11/24/2008 06:54
RunType:	DMS	**Batch ID:**	KWG0812642
Matrix:	SEDIMENT	**Analysis Method:**	8270C SIM
		MethodJoinID:	MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA		x
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2,4,6-Tribromophenol	0	12	152	NT
Above Highest ICAL Level	Anthracene	3854.29	NA	2000	
	Pyrene	9287.17	NA	2000	
	Dibenzofuran	4790.64	NA	2000	
	Dibenzothiophene	2451.85	NA	2000	E flag
	Indeno(1,2,3-cd)pyrene	2001.32	NA	2000	
	Benzo(b)fluoranthene	2406.51	NA	2000	
	Fluoranthene	8520.87	NA	2000	
	Chrysene	3270.88	NA	2000	
	Benzo(a)pyrene	2265.87	NA	2000	
	Benz(a)anthracene	3253.47	NA	2000	
	2,6-Dimethylnaphthalene	2313.47	NA	2000	

Primary Review: LW 11/24/08

Secondary Review: 11-25-8

Printed: 11/24/2008 10:58:45

u:\Stealth\Crystal.rpt\except2.rpt

Exception Report

Data File: J:\MS11\DATA\112308\1123F013.D
Lab ID: KWG0812042-2 -- K0810639-003DMS
RunType: DMS
Matrix: SEDIMENT

Date Acquired: 11/23/2008 16:35
Date Quantitated: 11/24/2008 06:54
Batch ID: KWG0812642
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	Acenaphthene	11766.89	NA	2000	
	Phenanthrene	11962.19	NA	2000	E flag
	Fluorene	9061.43	NA	2000	

Primary Review: RW 11/24/08

Secondary Review: 11-25-8

Printed: 11/24/2008 10:58:45
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**		**Receive Date:**	11/13/2008

Analysis Lot:	KWG0812642	**Prep Lot:**	KWG0812042	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776075	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:			
Tune Ref:	J:\MS11\DATA\112308\1123F001.D	**Method ID:**	MJ253
MB Ref:	J:\MS11\DATA\112308\1123F003.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\112308\1123F013.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 16:35	**Quant Date:**	11/24/2008 06:54	**Vial:**	11
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG0812042-2 -- K0810639-003DMS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.02	-0.02	136	174171	200.00	OK
2	Acenaphthene-d10	6.45	0.00	164	122372	200.00	OK
3	Phenanthrene-d10	7.72	0.03	188	310917m	200.00	OK
4	Chrysene-d12	10.63	0.07	240	336071	200.00	OK
5	Perylene-d12	14.70	0.17	264	295085	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	118555m	142.55	71	10-128	OK	
3	Fluoranthene-d10	8.74	0.05	0.00	212	441407	208.23	104	29-121	OK	
4	Terphenyl-d14	9.11	0.04	0.00	244	290646	167.05	84	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.04	-0.01	0.00	128	604277	569.56	562		
1	2-Methylnaphthalene	5.59	-0.01	0.00	142	540448	730.48	720		
1	1-Methylnaphthalene	5.68		0.00	142	985885	1,489	1470		
1	Biphenyl	5.97		0.00	154	404086	446.95	441		
1	2,6-Dimethylnaphthalene	6.11		0.00	156	1494237	2,313	2280	E	
1	C2-Naphthalenes				156	0		5.0	U	
1	C3-Naphthalenes				170	0		5.0	U	
1	C4-Naphthalenes				184	0		5.0	U	
2	Acenaphthylene	6.33		0.00	152	570211m	413.23	407		
2	Acenaphthene	6.49	0.02	0.00	154	9866693	11,767	11600	E	
2	Dibenzofuran	6.63	0.01	0.00	168	6042710	4,791	4720	E	
2	2,3,5-Trimethylnaphthalene	6.79	0.01	0.00	170	1458339	1,977	1950		
2	Fluorene	6.91	0.01	0.00	166	9121615	9,061	8930	E	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112308\1123F013.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 16:35	**Quant Date:**	11/24/2008 06:54	**Vial:**	11
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG0812042-2 -- K0810639-003DMS			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	C1-Fluorenes				180	0		5.0	U	
2	C2-Fluorenes				194	0		5.0	U	
2	C3-Fluorenes				208	0		5.0	U	
3	Dibenzothiophene	7.62	0.02	0.00	184	5239223	2,452	2420	E	
3	C1-Dibenzothiophenes				198	0		5.0	U	
3	C2-Dibenzothiophenes				212	0		5.0	U	
3	C3-Dibenzothiophenes				226	0		5.0	U	
3	Phenanthrene	7.72	0.01	0.00	178	26142823**m**	11,962	11800	E	
3	Anthracene	7.78	0.04	0.00	178	8207160	3,854	3800	E	
3	Carbazole	7.91	0.02	0.00	167	1551012	793.98	783		
3	1-Methylphenanthrene	8.23	0.03	0.00	192	3068743**m**	1,892	1870		
3	C1-Phenanthrenes/Anthracenes				192	0		5.0	U	
3	C2-Phenanthrenes/Anthracenes				206	0		5.0	U	
3	C3-Phenanthrenes/Anthracenes				220	0		5.0	U	
3	C4-Phenanthrenes/Anthracenes				234	0		5.0	U	
3	Fluoranthene	8.74	0.03	0.00	202	21152888	8,521	8400	E	
4	Pyrene	8.97	0.04	0.00	202	23479875	9,287	9160	E	
4	C1-Fluoranthenes/Pyrenes				216	0		5.0	U	
4	Benz(a)anthracene	10.62	0.08	0.00	228	7462152	3,253	3210	E	
4	Chrysene	10.69	0.08	0.00	228	7368150	3,271	3230	E	
4	C1-Chrysenes				242	0		5.0	U	
4	C2-Chrysenes				256	0		5.0	U	
4	C3-Chrysenes				270	0		5.0	U	
4	C4-Chrysenes				284	0		5.0	U	
5	Benzo(b)fluoranthene	13.32	0.14	0.00	252	4900751	2,407	2370	E	
5	Benzo(k)fluoranthene	13.41	0.14	0.00	252	2209008**m**	1,129	1110		
5	Benzo(e)pyrene	14.29	0.17	0.00	252	2869651	1,551	1530		
5	Benzo(a)pyrene	14.49	0.18	0.00	252	3820476	2,266	2230	E	
5	Perylene	14.80	0.17	0.00	252	1548308	934.77	922		
5	Indeno(1,2,3-cd)pyrene	17.49	0.08	-0.01	276	3130904	2,001	1970	E	
5	Dibenz(a,h)anthracene	17.54	0.09	-0.01	278	1277740**m**	778.16	767		
5	Benzo(g,h,i)perylene	17.95	0.09	-0.01	276	3531440	1,981	1950		

Prep Amount:	15.32 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	66.2 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112308\1123F013.D Vial: 11
Acq On : 23 Nov 2008 4:35 pm Operator: LWeiskopf
Sample : K0810639-003DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:44:27 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.02	136	174171	200.00 ng/ml	-0.02
10) Acenaphthene-d10	6.45	164	122372	200.00 ng/ml	-0.01
22) Phenanthrene-d10	7.72	188	310917m	200.00 ng/ml	0.02
37) Chrysene-d12	10.63	240	336071	200.00 ng/ml	0.04
49) Perylene-d12	14.70	264	295085	200.00 ng/ml	0.12
System Monitoring Compounds					
15) Fluorene-d10	6.88	176	118555m	142.55 ng/ml	0.00
Spiked Amount 200.000			Recovery =	71.28%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00 ng/ml	
Spiked Amount 375.000			Recovery =	0.00%	
36) Fluoranthene-d10	8.74	212	441407	208.23 ng/ml	0.03
Spiked Amount 200.000			Recovery =	104.12%	
42) Terphenyl-d14	9.11	244	290646	167.05 ng/ml	0.01
Spiked Amount 200.000			Recovery =	83.53%	
Target Compounds					Qvalue
2) Naphthalene	5.04	128	604277	569.56 ng/ml	99
3) 2-Methylnaphthalene	5.59	142	540448	730.48 ng/ml	97
4) 1-Methylnaphthalene	5.68	142	985885	1488.56 ng/ml	93
5) Biphenyl	5.97	154	404086	446.95 ng/ml	99
6) 2,6-Dimethylnaphthalene	6.11	156	1494237	2313.47 ng/ml	99
11) Acenaphthylene	6.33	152	570211m	413.23 ng/ml	
12) Acenaphthene	6.49	154	9866693	11766.89 ng/ml	82
13) Dibenzofuran	6.63	168	6042710	4790.64 ng/ml	97
14) 2,3,5-Trimethylnaphthalene	6.79	170	1458339	1977.48 ng/ml	80
16) Fluorene	6.91	166	9121615	9061.43 ng/ml	89
23) Dibenzothiophene	7.62	184	5239223	2451.85 ng/ml	92
27) Phenanthrene	7.72	178	26142823m	11962.19 ng/ml	
28) Anthracene	7.78	178	8207160	3854.29 ng/ml	82
29) Carbazole	7.91	167	1551012	793.98 ng/ml	94
30) 1-Methylphenanthrene	8.23	192	3068743m	1892.00 ng/ml	
35) Fluoranthene	8.74	202	21152888	8520.87 ng/ml	42
38) Pyrene	8.97	202	23479875	9287.17 ng/ml	40
43) Benz(a)anthracene	10.62	228	7462152	3253.47 ng/ml	85
44) Chrysene	10.69	228	7368150	3270.88 ng/ml	90
50) Benzo(b)fluoranthene	13.32	252	4900751	2406.51 ng/ml	98
51) Benzo(k)fluoranthene	13.41	252	2209008m	1129.18 ng/ml	
52) Benzo(e)pyrene	14.29	252	2869651	1551.28 ng/ml	100
53) Benzo(a)pyrene	14.49	252	3820476	2265.87 ng/ml	96
54) Perylene	14.80	252	1548308	934.77 ng/ml	96
55) Indeno(1,2,3-cd)pyrene	17.49	276	3130904	2001.32 ng/ml	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112308\1123F013.D Vial: 11
Acq On : 23 Nov 2008 4:35 pm Operator: LWeiskopf
Sample : K0810639-003DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:44:27 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
56) Dibenz(a,h)anthracene	17.54	278	1277740m	778.16 ng/ml	
57) Benzo(g,h,i)perylene	17.95	276	3531440	1981.37 ng/ml	95

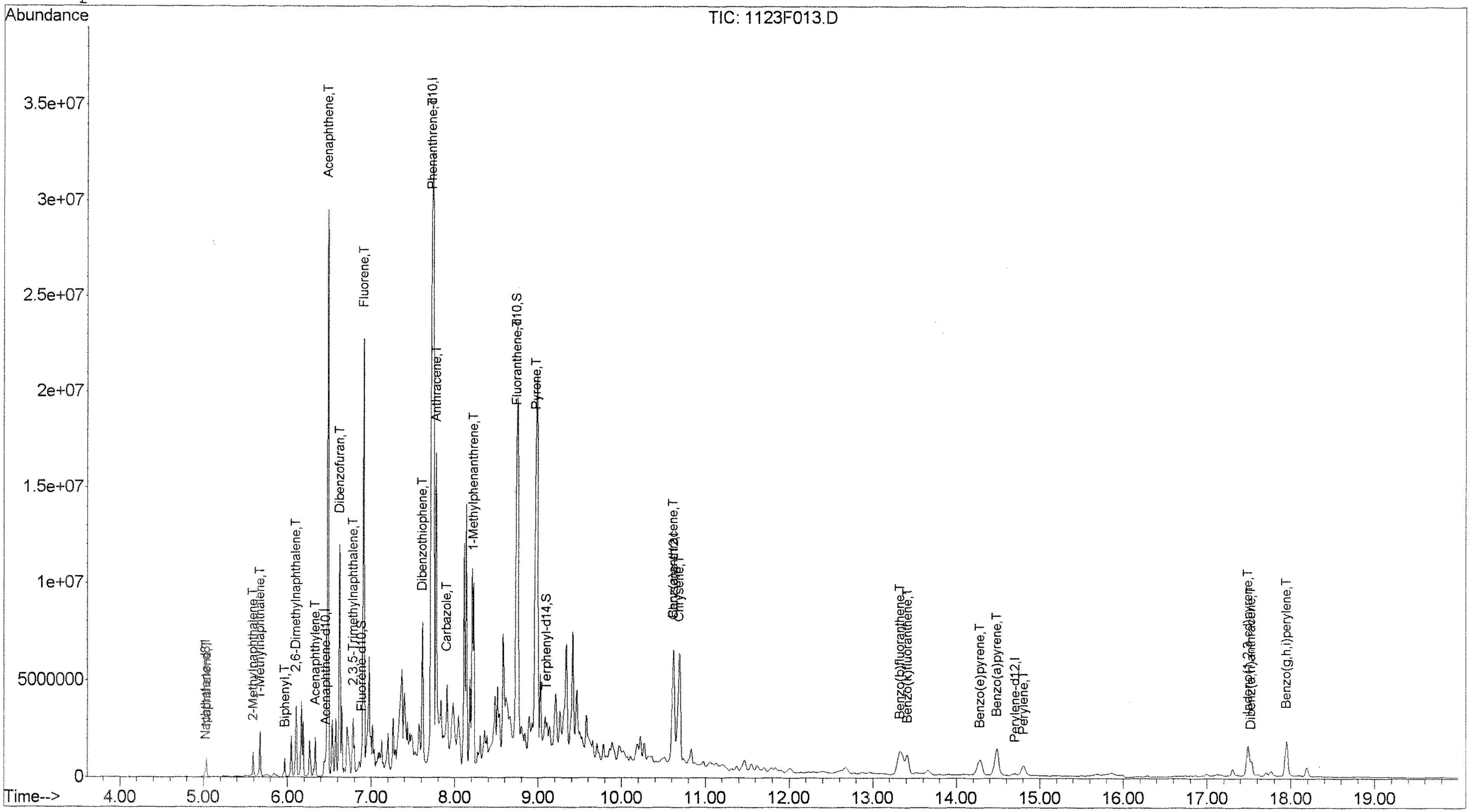
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112308\1123F013.D
Acq On : 23 Nov 2008 4:35 pm
Sample : K0810639-003DMS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:54 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1110ALK.RES

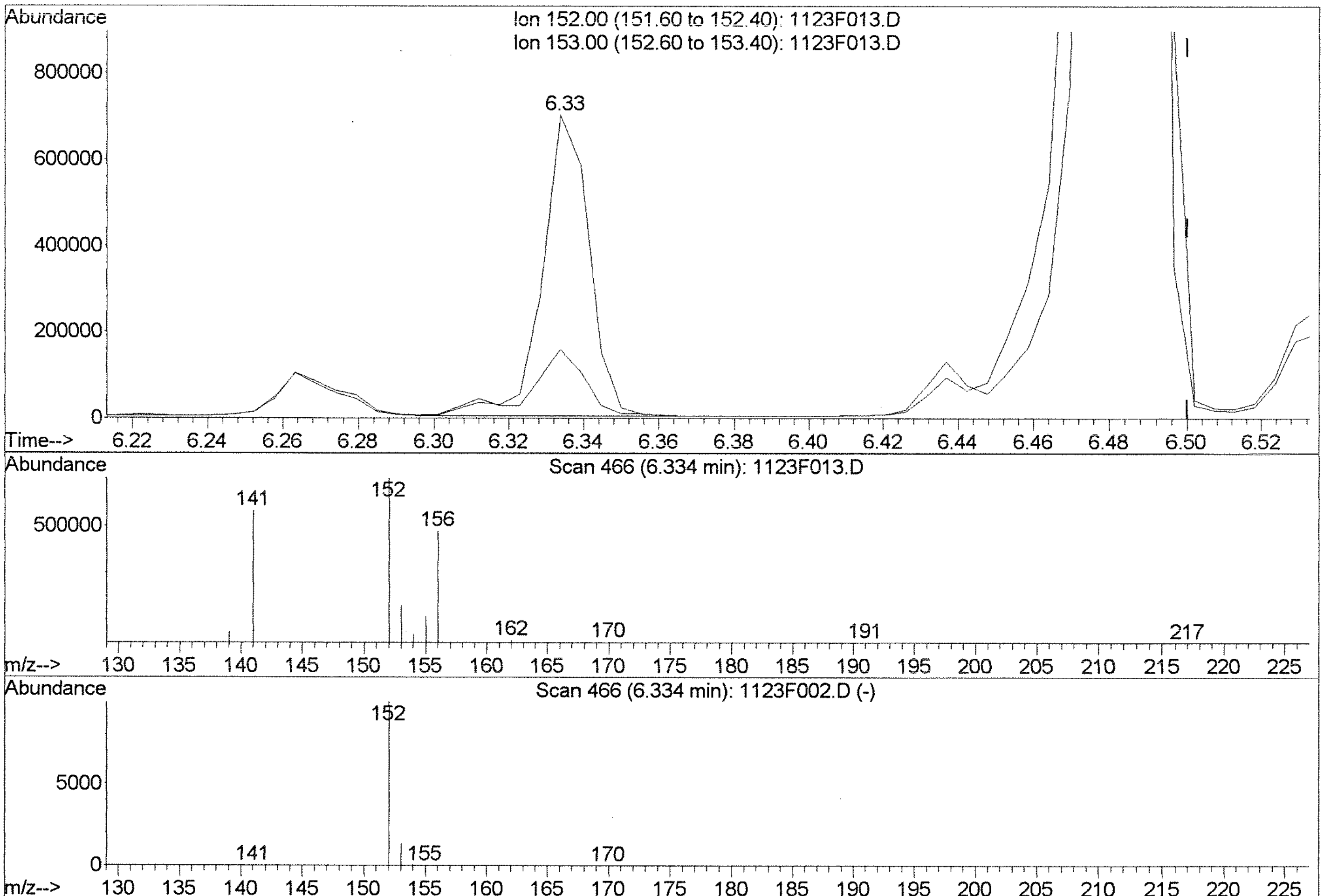
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration



Data File : J:\MS11\DATA\112308\1123F013.D
Acq On : 23 Nov 2008 4:35 pm
Sample : K0810639-003DMS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:44 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F013.D

(11) Acenaphthylene (T)

6.33min 438.54ng/ml

response 605133

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	22.10
0.00	0.00	0.00
0.00	0.00	0.00

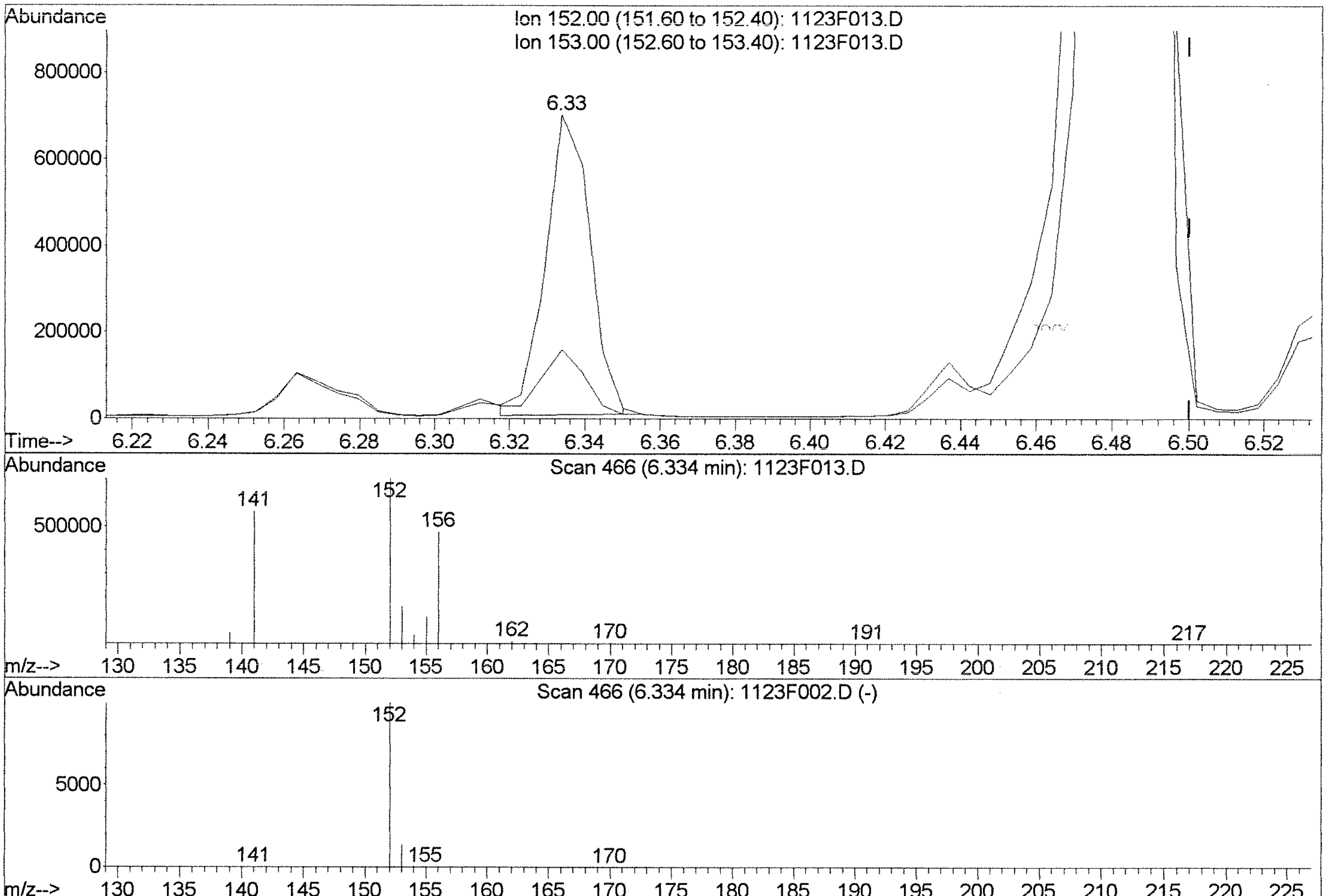
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F013.D
Acq On : 23 Nov 2008 4:35 pm
Sample : K0810639-003DMS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:53 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F013.D

(11) Acenaphthylene (T)

6.33min 413.23ng/ml m

response 570211

Ion	Exp%	Act%
152.00	100	100
153.00	13.00	22.67
0.00	0.00	0.00
0.00	0.00	0.00

1123F013.D 1110ALK.M Mon Nov 24 06:53:33 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F013.D
Vial: 11

Acq On : 23 Nov 2008 4:35 pm
Operator: LWeiskopf

Sample : K0810639-003DMS
Inst : MS11

Misc :
Multiplr: 1.00

MS Integration Params: RTEINT.P

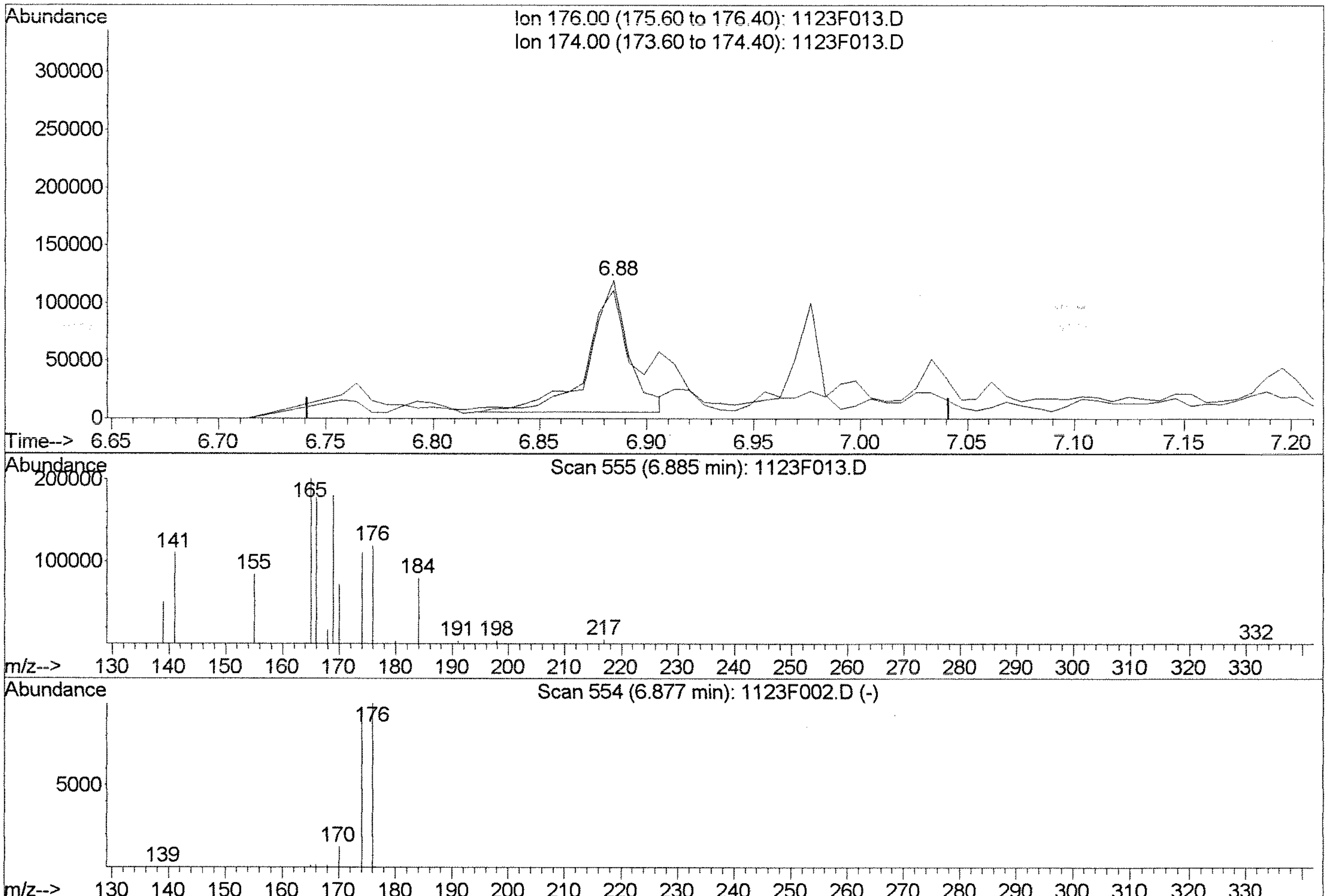
Quant Time: Nov 24 6:53 2008
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)

Title : PAHS and ALKYLATED HOMOLOGS

Last Update : Mon Nov 24 06:43:58 2008

Response via : Multiple Level Calibration



TIC: 1123F013.D

(15) Fluorene-d10 (S)

6.88min 178.51ng/ml

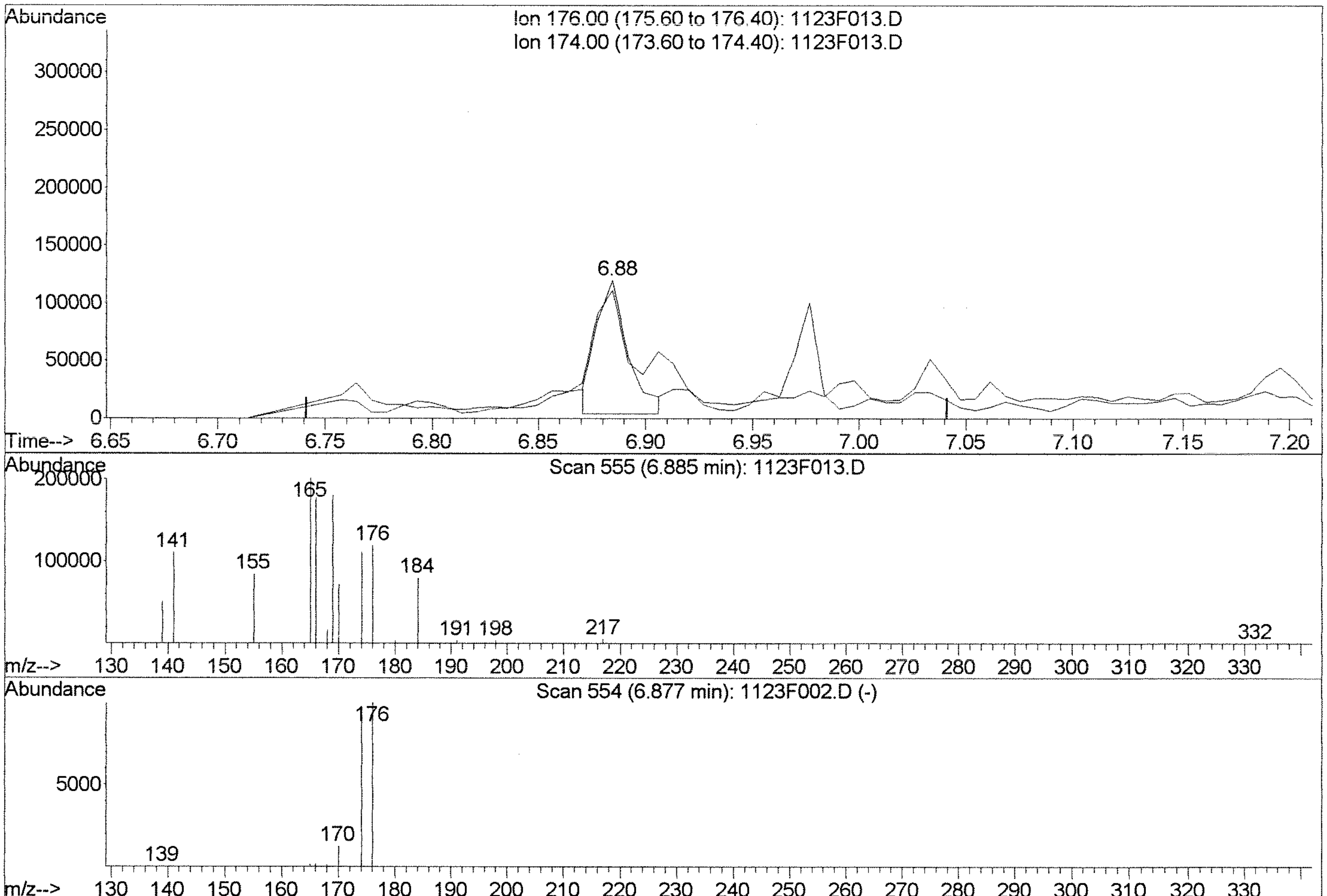
response 148463

Ion	Exp%	Act%
176.00	100	100
174.00	96.70	89.43
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F013.D Vial: 11
Acq On : 23 Nov 2008 4:35 pm Operator: LWeiskopf
Sample : K0810639-003DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:53 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F013.D

(15) Fluorene-d10 (S)

6.88min 142.55ng/ml m

response 118555

Ion	Exp%	Act%
176.00	100	100
174.00	96.70	92.79
0.00	0.00	0.00
0.00	0.00	0.00

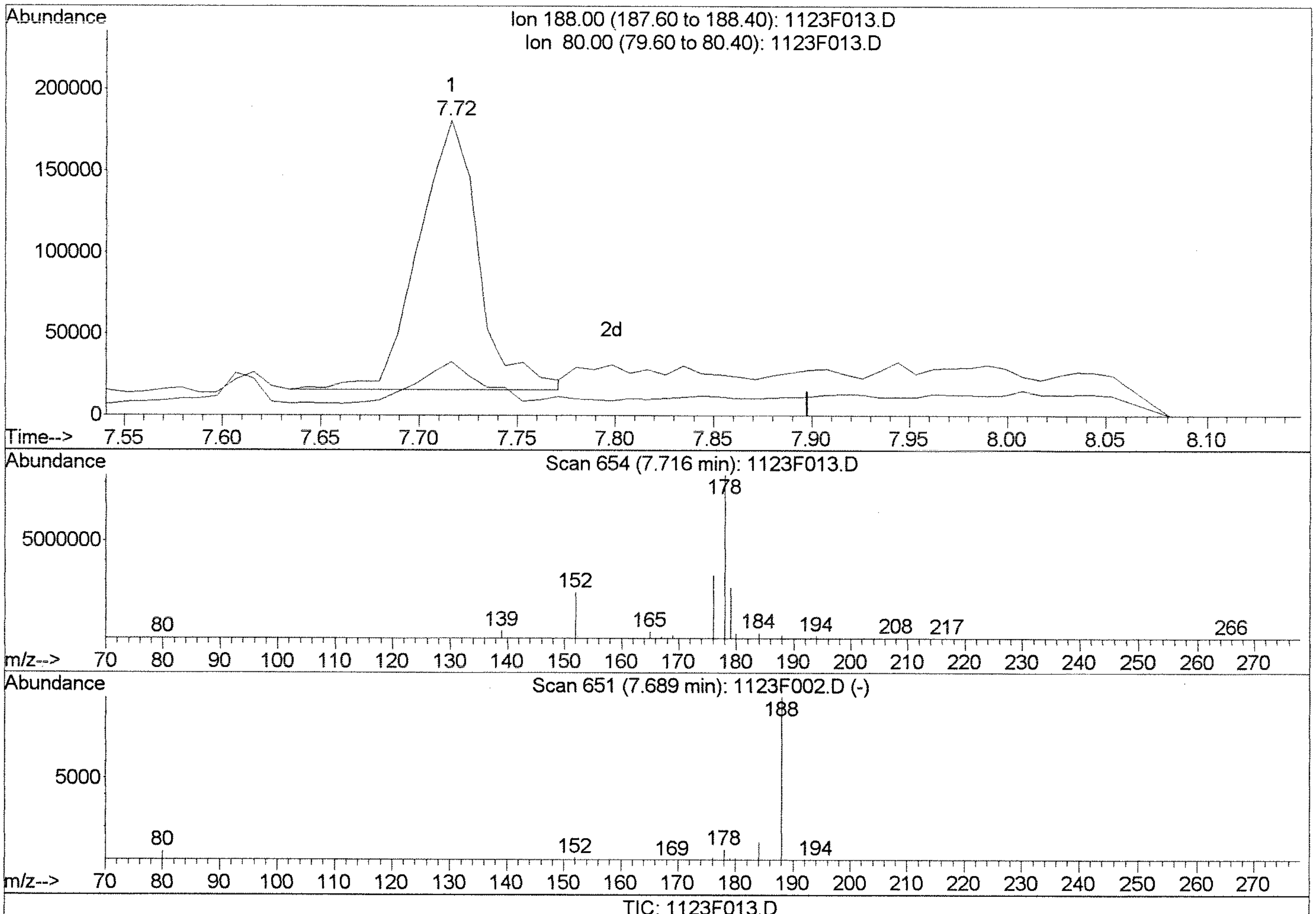
OI 11/24/08 11-25-8

1123F013.D 1110ALK.M Mon Nov 24 06:53:43 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F013.D Vial: 11
Acq On : 23 Nov 2008 4:35 pm Operator: LWeiskopf
Sample : K0810639-003DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:53 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



(22) Phenanthrene-d10 (I)

7.72min 200.00ng/ml

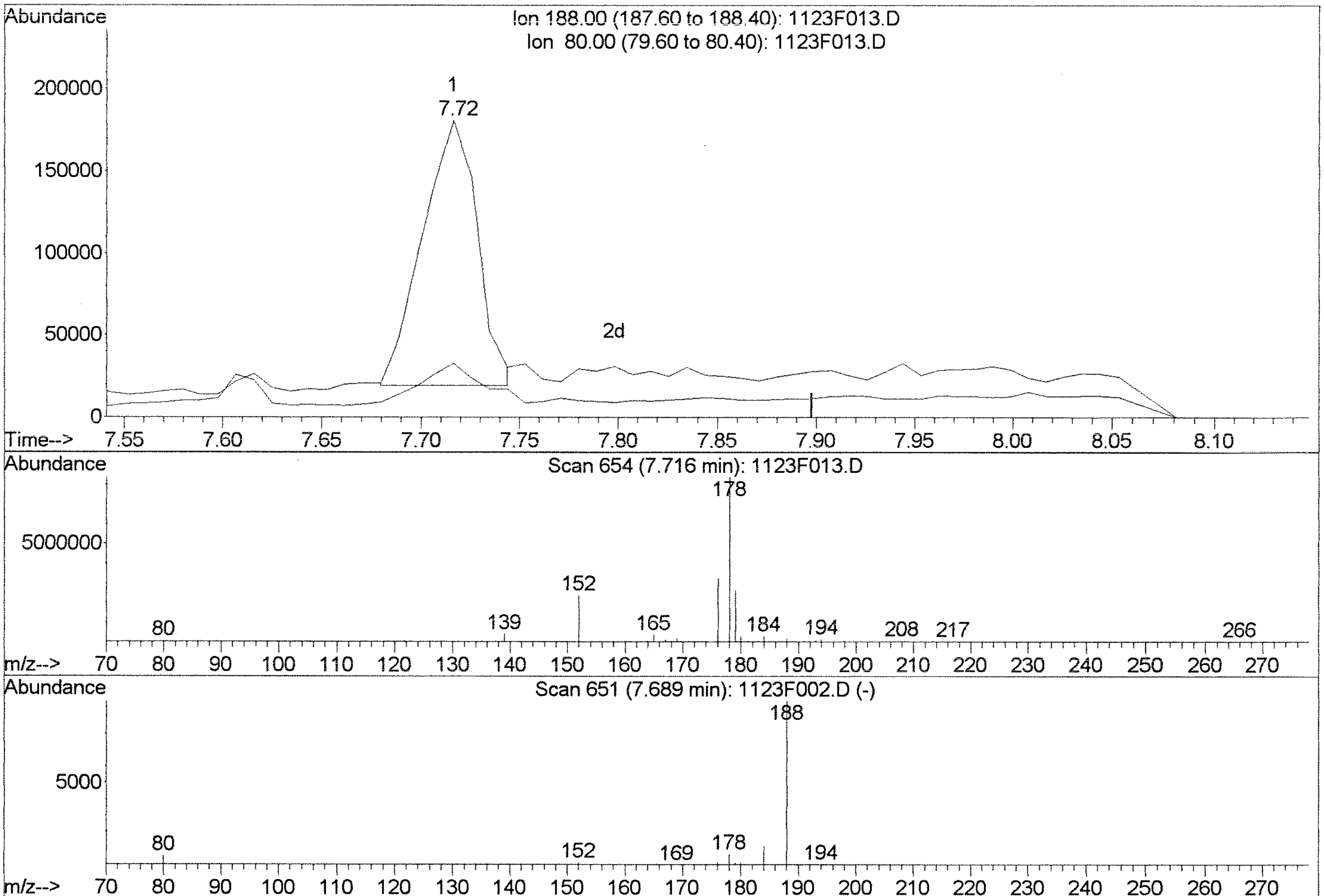
response 350149

Ion	Exp%	Act%
188.00	100	100
80.00	10.80	15.41
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F013.D   Vial: 11
Acq On : 23 Nov 2008 4:35 pm   Operator: LWeiskopf
Sample : K0810639-003DMS   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:53 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F013.D

(22) Phenanthrene-d10 (I)

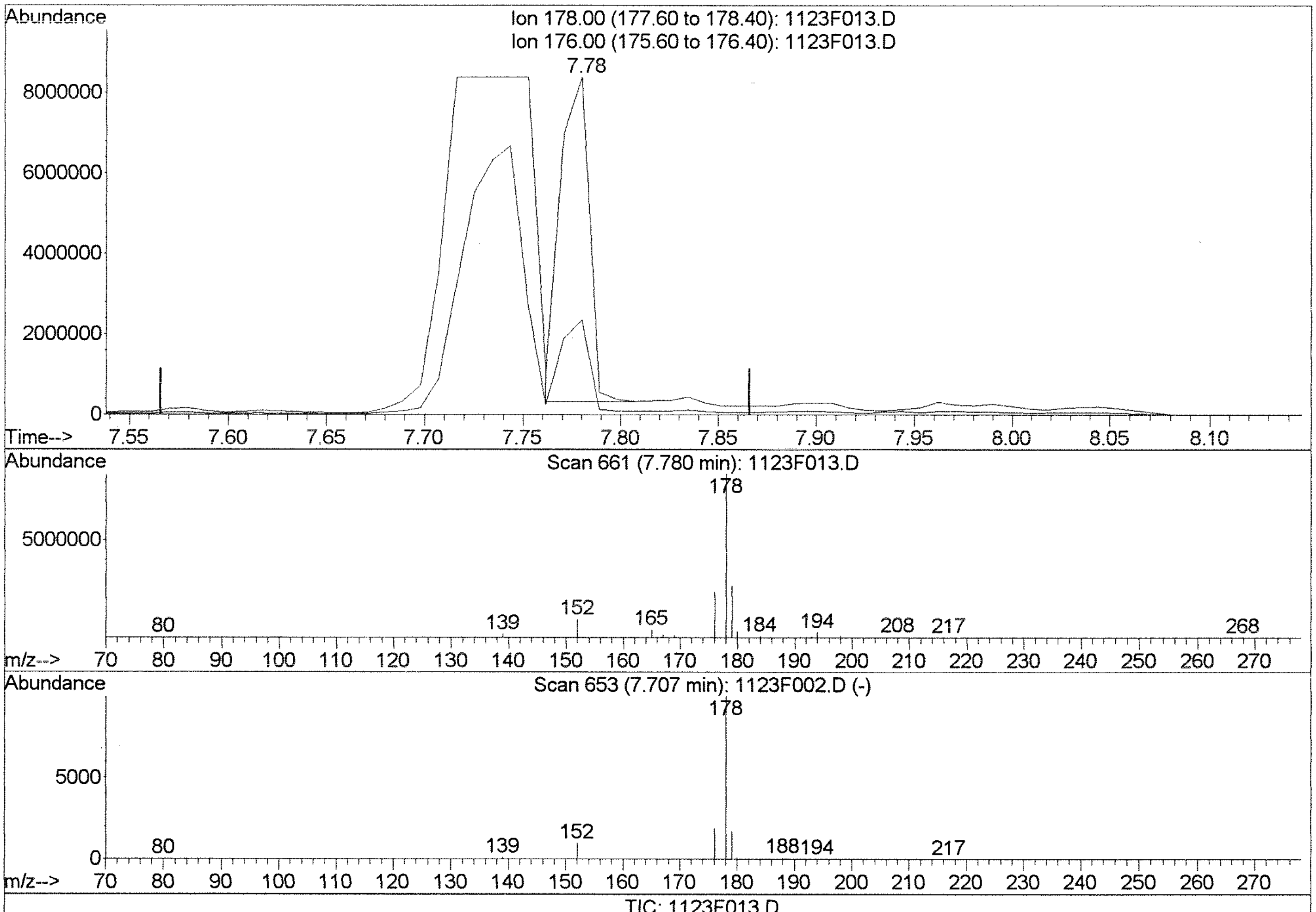
7.72min 200.00ng/ml m

response 310917

Ion	Exp%	Act%
188.00	100	100
80.00	10.80	18.10
0.00	0.00	0.00
0.00	0.00	0.00

OI Cu 11/24/08 [illegible] 11-25-08

```
Data File : J:\MS11\DATA\112308\1123F013.D                Vial: 11
Acq On    : 23 Nov 2008   4:35 pm                     Operator: LWeiskopf
Sample    : K0810639-003DMS                           Inst    : MS11
Misc      :                                           Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24  6:53 2008               Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Mon Nov 24 06:43:58 2008
Response via   : Multiple Level Calibration
```



(27) Phenanthrene (T)

7.78min 3755.36ng/ml

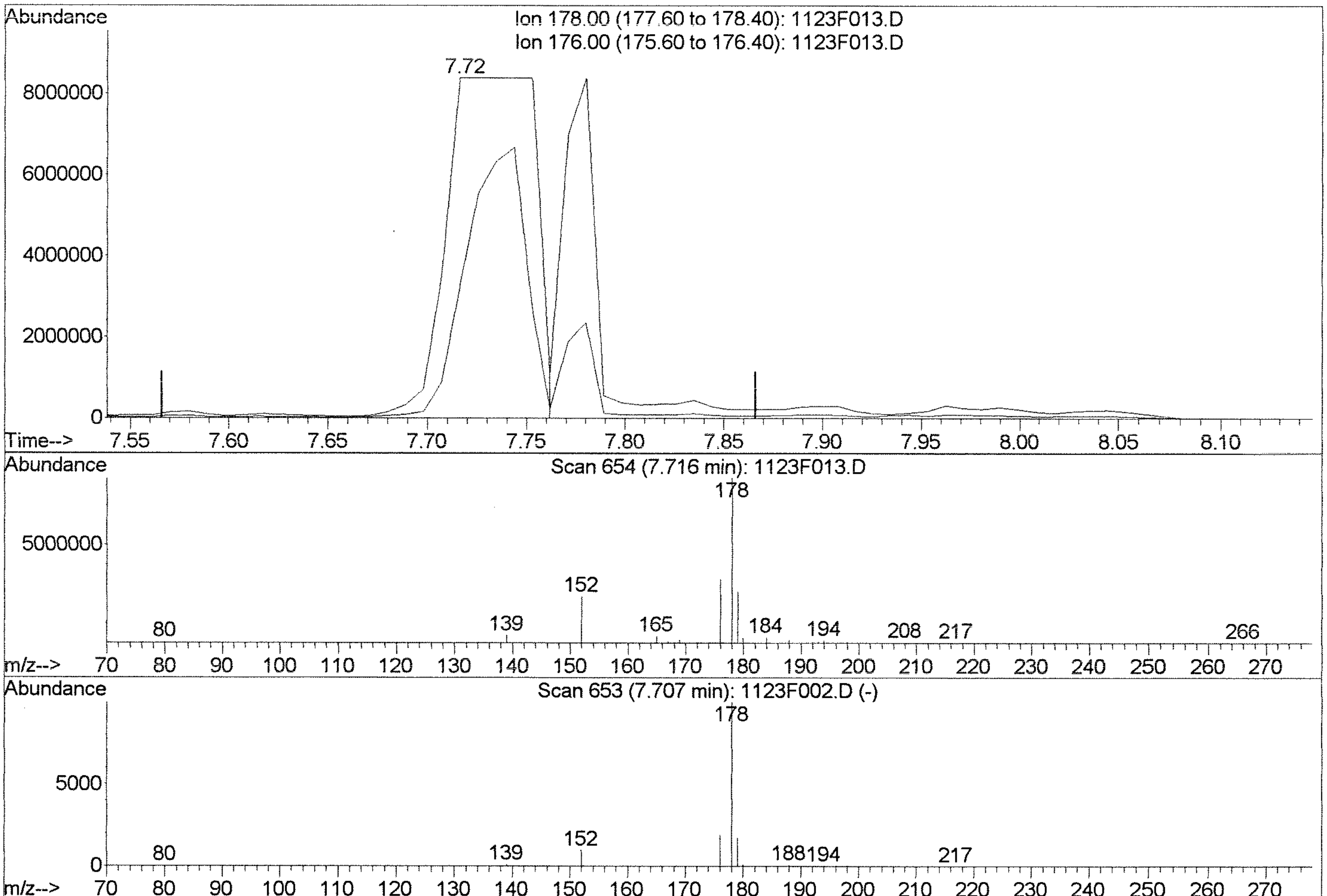
response 8207160

Ion	Exp%	Act%
178.00	100	100
176.00	21.00	28.12
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F013.D Vial: 11
Acq On : 23 Nov 2008 4:35 pm Operator: LWeiskopf
Sample : K0810639-003DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:54 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F013.D

(27) Phenanthrene (T)

7.72min 11962.19ng/ml m

response 26142823

Ion	Exp%	Act%
178.00	100	100
176.00	21.00	38.70
0.00	0.00	0.00
0.00	0.00	0.00

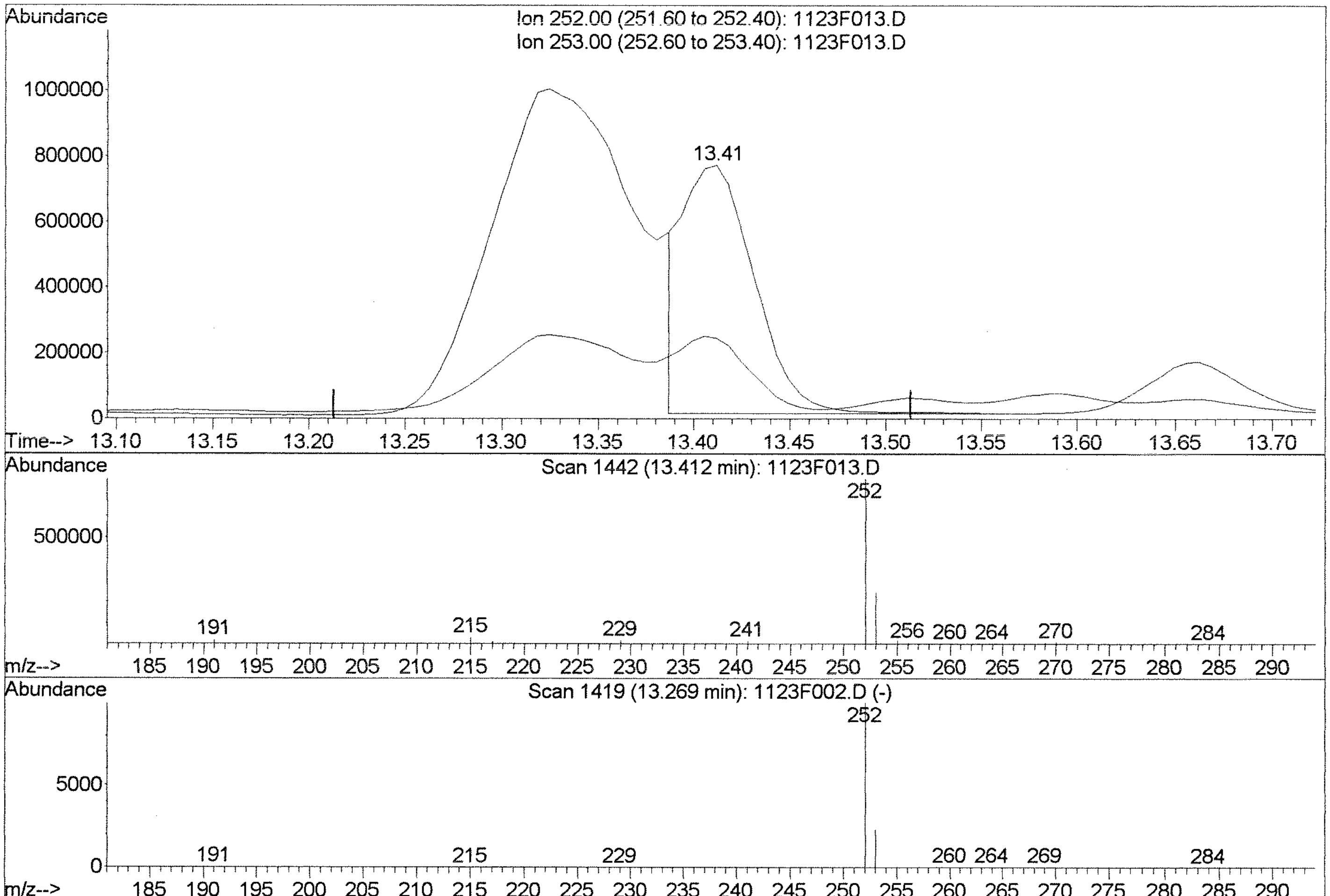
WP LW 11/24/08 11-25-08

1123F013.D 1110ALK.M Mon Nov 24 06:54:07 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F013.D Vial: 11
Acq On : 23 Nov 2008 4:35 pm Operator: LWeiskopf
Sample : K0810639-003DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:54 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F013.D

(51) Benzo(k)fluoranthene (T)

13.41min 1007.98ng/ml

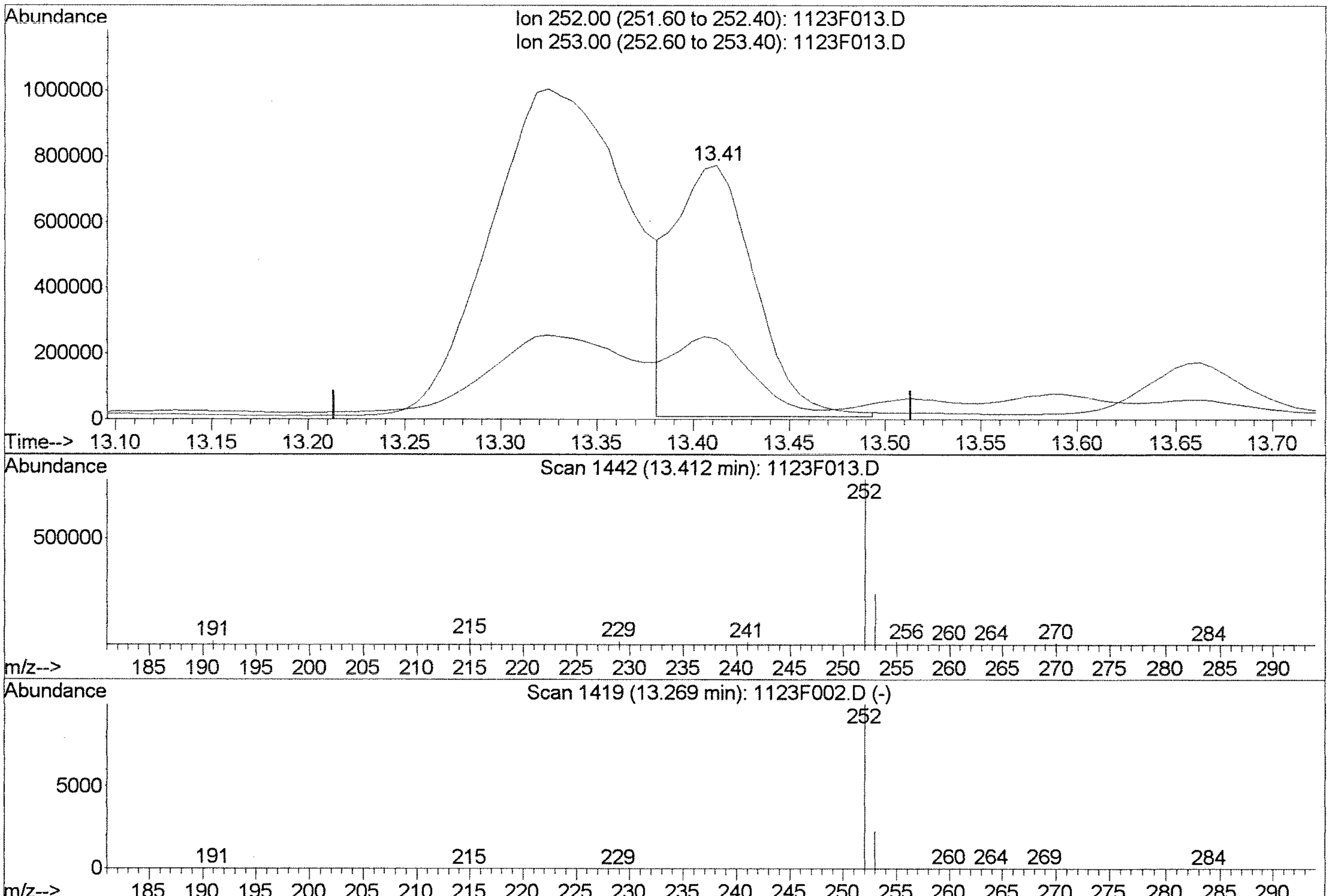
response 1971907

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	24.88
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F013.D   Vial: 11
Acq On : 23 Nov 2008 4:35 pm   Operator: LWeiskopf
Sample : K0810639-003DMS   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:54 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F013.D

(51) Benzo(k)fluoranthene (T)

13.41min 1129.18ng/ml m

response 2209008

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	31.70
0.00	0.00	0.00
0.00	0.00	0.00

IC 11/24/08

11-25-08

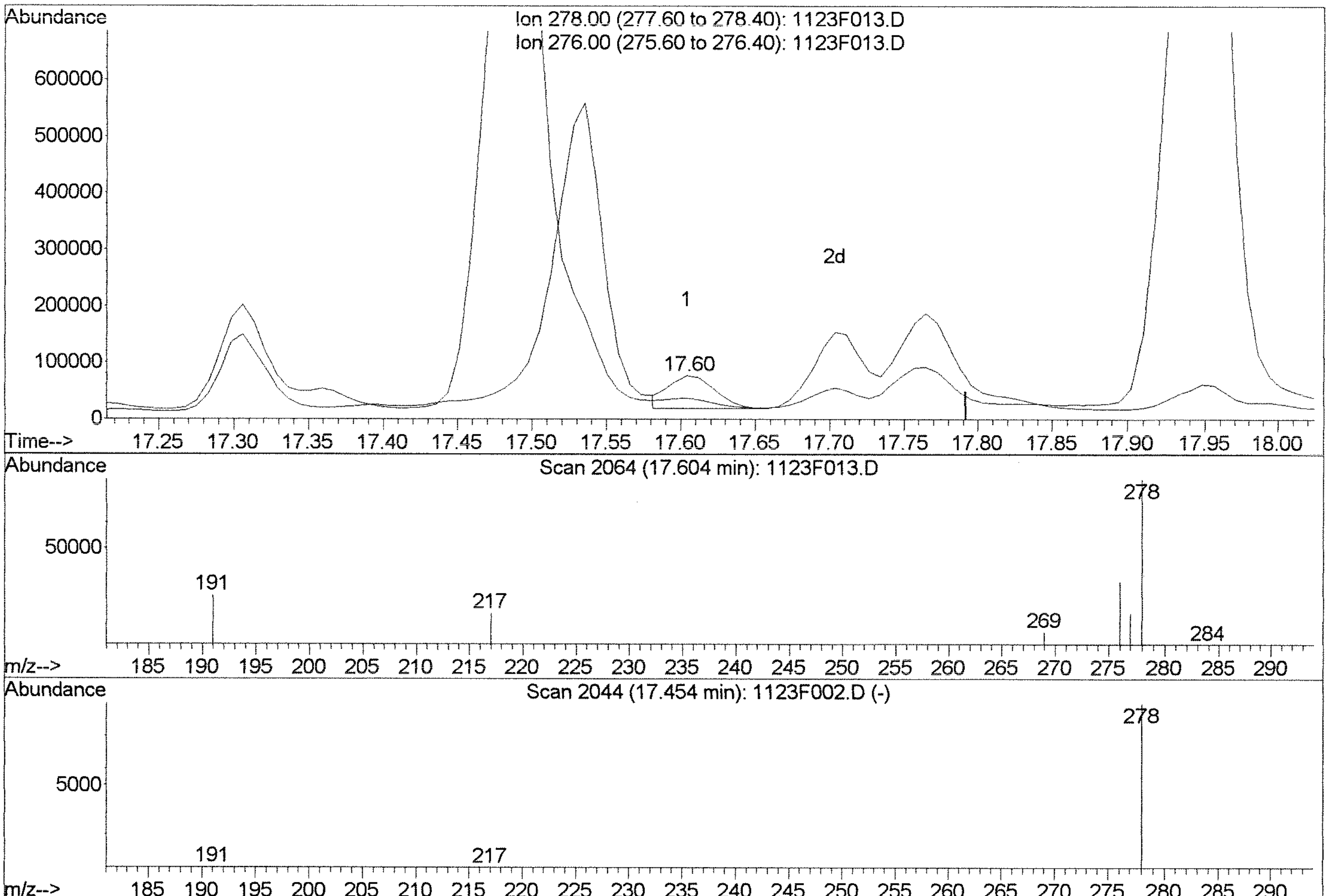
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F013.D
Acq On : 23 Nov 2008 4:35 pm
Sample : K0810639-003DMS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:54 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F013.D

(56) Dibenz(a,h)anthracene (T)

17.60min 75.86ng/ml

response 124561

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	29.12
0.00	0.00	0.00
0.00	0.00	0.00

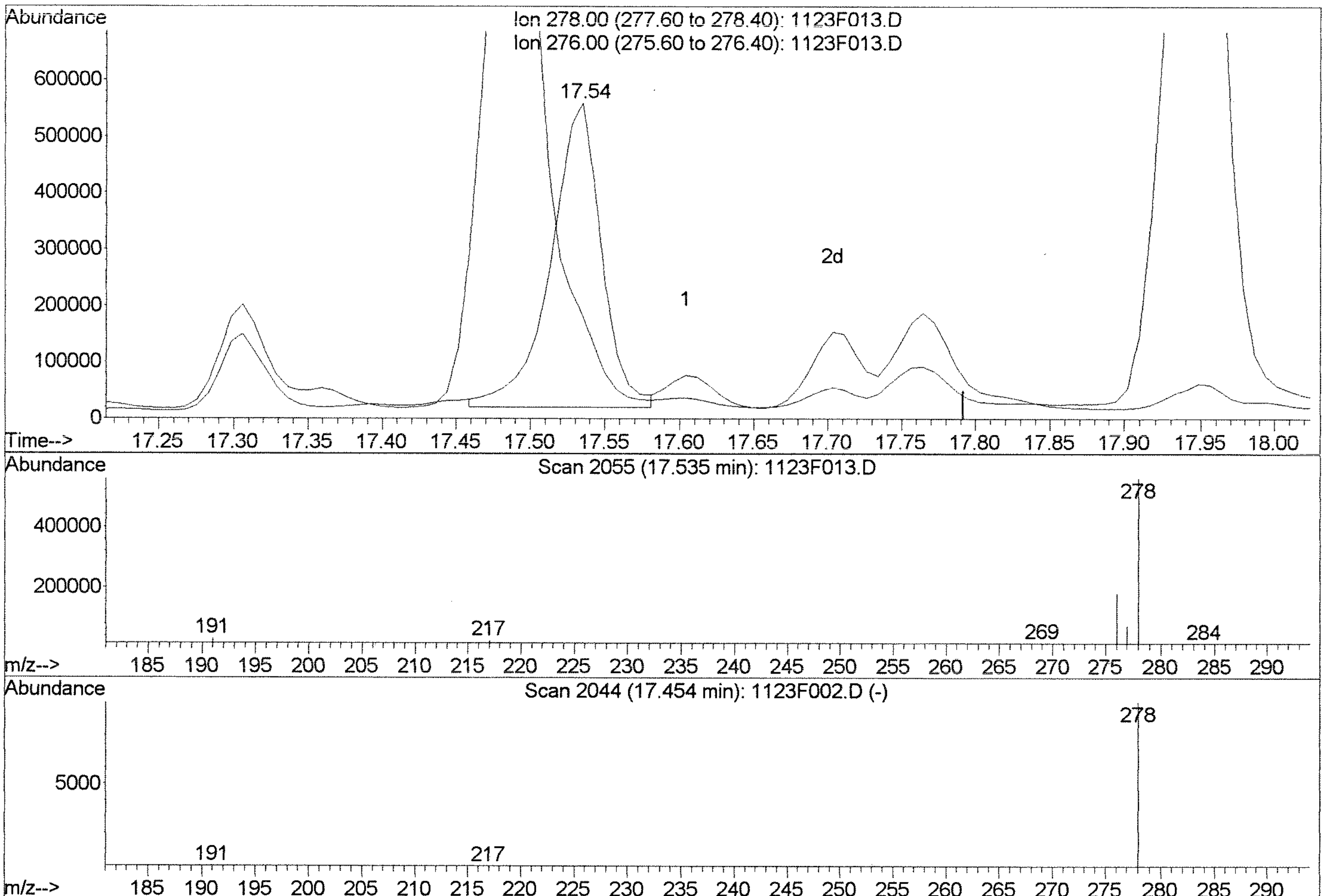
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112308\1123F013.D
Acq On : 23 Nov 2008 4:35 pm
Sample : K0810639-003DMS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:54 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Multiple Level Calibration



TIC: 1123F013.D

(56) Dibenz(a,h)anthracene (T)

17.54min 778.16ng/ml m

response 1277740

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	32.38
0.00	0.00	0.00
0.00	0.00	0.00

wt RW 11/24/08 11-25-8

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Units:**	ug/Kg
Lab Code:	KWG0812042-3	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	372		5.0	0.37	1	11/11/08	11/23/08	KWG0812042	
2-Methylnaphthalene	429		5.0	0.39	1	11/11/08	11/23/08	KWG0812042	
Acenaphthylene	412		5.0	0.24	1	11/11/08	11/23/08	KWG0812042	
Acenaphthene	398		5.0	0.23	1	11/11/08	11/23/08	KWG0812042	
Fluorene	417		5.0	0.50	1	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	416		5.0	0.59	1	11/11/08	11/23/08	KWG0812042	
Phenanthrene	400		5.0	0.75	1	11/11/08	11/23/08	KWG0812042	
Anthracene	429		5.0	0.47	1	11/11/08	11/23/08	KWG0812042	
Fluoranthene	417		5.0	0.61	1	11/11/08	11/23/08	KWG0812042	
Pyrene	396		5.0	0.37	1	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	428		5.0	0.48	1	11/11/08	11/23/08	KWG0812042	
Chrysene	428		5.0	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	411		5.0	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(k)fluoranthene	439		5.0	0.15	1	11/11/08	11/23/08	KWG0812042	
Benzo(a)pyrene	456		5.0	0.14	1	11/11/08	11/23/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	451		5.0	0.16	1	11/11/08	11/23/08	KWG0812042	
Dibenz(a,h)anthracene	471		5.0	0.28	1	11/11/08	11/23/08	KWG0812042	
Benzo(g,h,i)perylene	435		5.0	0.64	1	11/11/08	11/23/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	76	10-128	11/23/08	Acceptable
Fluoranthene-d10	76	29-121	11/23/08	Acceptable
Terphenyl-d14	73	24-141	11/23/08	Acceptable

Comments:

Exception Report

Data File:	J:\MS11\DATA\112308\1123F005.D		**Date Acquired:**	11/23/2008 13:03
Lab ID:	KWG0812042-3		**Date Quantitated:**	11/24/2008 06:47
RunType:	LCS		**Batch ID:**	KWG0812642
Matrix:	SEDIMENT		**Analysis Method:**	8270C SIM
			MethodJoinID:	MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K10457
K10639

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2,4,6-Tribromophenol	0	12	152	NT

Primary Review: RW 11/24/08

Secondary Review: [illegible]

Printed: 11/24/2008 10:58:17

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**		**Receive Date:**	11/13/2008

Analysis Lot:	KWG0812642	**Prep Lot:**	KWG0812042	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	776076	**Prep Date:**	11/11/2008		

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:			
Tune Ref:	J:\MS11\DATA\112308\1123F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\112308\1123F003.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\112308\1123F005.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 13:03	**Quant Date:**	11/24/2008 06:47	**Vial:**	3
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0812042-3			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.02	-0.02	136	176907	200.00	OK
2	Acenaphthene-d10	6.45	0.00	164	104948	200.00	OK
3	Phenanthrene-d10	7.69	0.00	188	185446	200.00	OK
4	Chrysene-d12	10.56	0.00	240	215124	200.00	OK
5	Perylene-d12	14.52	-0.01	264	238690	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	107748	151.07	76	10-128	OK	
2	2,4,6-Tribromophenol			0.00	330	0d		0	12-152	*	
3	Fluoranthene-d10	8.69	0.00	0.00	212	192237	152.04	76	29-121	OK	
4	Terphenyl-d14	9.08	0.01	0.00	244	163252	146.58	73	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantM ass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.04	-0.01	0.00	128	401268	372.37	372		
1	2-Methylnaphthalene	5.59	-0.01	0.00	142	322541	429.21	429		
1	1-Methylnaphthalene	5.67	-0.01	0.00	142	291582	433.44	433		
1	Biphenyl	5.96	-0.01	0.00	154	393546	428.56	429		
1	2,6-Dimethylnaphthalene	6.10	-0.01	0.00	156	283130	431.58	432		
1	C2-Naphthalenes				156	0		5.0	U	
1	C3-Naphthalenes				170	0		5.0	U	
1	C4-Naphthalenes				184	0		5.0	U	
2	Acenaphthylene	6.33		0.00	152	487152	411.65	412		
2	Acenaphthene	6.47		0.00	154	286218	398.01	398		
2	Dibenzofuran	6.62		0.00	168	450463	416.42	416		
2	2,3,5-Trimethylnaphthalene	6.78		0.00	170	274705m	434.34	434		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112308\1123F005.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 13:03	**Quant Date:**	11/24/2008 06:47	**Vial:**	3
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0812042-3			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	6.90		0.00	166	359733	416.69	417		
2	C1-Fluorenes				180	0		5.0	U	
2	C2-Fluorenes				194	0		5.0	U	
2	C3-Fluorenes				208	0		5.0	U	
2	Pentachlorophenol				266	0d		2.9	U	
3	Dibenzothiophene	7.60		0.00	184	327213	256.74	257		
3	C1-Dibenzothiophenes				198	0		5.0	U	
3	C2-Dibenzothiophenes				212	0		5.0	U	
3	C3-Dibenzothiophenes				226	0		5.0	U	
3	Phenanthrene	7.71		0.00	178	521711	400.24	400		
3	Anthracene	7.74		0.00	178	544219	428.50	429		
3	Carbazole	7.89		0.00	167	484898	416.17	416		
3	1-Methylphenanthrene	8.20		0.00	192	425174	439.49	439		
3	C1-Phenanthrenes/Anthracenes				192	0		5.0	U	
3	C2-Phenanthrenes/Anthracenes				206	0		5.0	U	
3	C3-Phenanthrenes/Anthracenes				220	0		5.0	U	
3	C4-Phenanthrenes/Anthracenes				234	0		5.0	U	
3	Fluoranthene	8.70	-0.01	0.00	202	618102	417.45	417		
4	Pyrene	8.93		0.00	202	641114	396.15	396		
4	C1-Fluoranthenes/Pyrenes				216	0		5.0	U	
4	C2-Fluoranthenes/Pyrenes				230	0		5.0	U	
4	C3-Fluoranthenes/Pyrenes				244	0		5.0	U	
4	Benz(a)anthracene	10.54		0.00	228	628108	427.82	428		
4	Chrysene	10.60	-0.01	0.00	228	617357	428.14	428		
4	C1-Chrysenes				242	0		5.0	U	
4	C2-Chrysenes				256	0		5.0	U	
4	C3-Chrysenes				270	0		5.0	U	
4	C4-Chrysenes				284	0		5.0	U	
5	Benzo(b)fluoranthene	13.18		0.00	252	677092	411.04	411		
5	Benzo(k)fluoranthene	13.27		0.00	252	695397	439.45	439		
5	Benzo(e)pyrene	14.11	-0.01	0.00	252	666019	445.10	445		
5	Benzo(a)pyrene	14.31		0.00	252	621290	455.54	456		
5	Perylene	14.63		0.00	252	579861	432.80	433		
5	Indeno(1,2,3-cd)pyrene	17.40	-0.01	0.00	276	570558	450.88	451		
5	Dibenz(a,h)anthracene	17.45		0.00	278	626041	471.35	471		
5	Benzo(g,h,i)perylene	17.85	-0.01	0.00	276	627191	435.04	435		

Prep Amount:	10.00 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112308\1123F005.D
Acq On : 23 Nov 2008 1:03 pm
Sample : KWG082042-3 LCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:44:21 2008

Vial: 3
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.02	136	176907	200.00	ng/ml	-0.02
10) Acenaphthene-d10	6.45	164	104948	200.00	ng/ml	-0.02
22) Phenanthrene-d10	7.69	188	185446	200.00	ng/ml	0.00
37) Chrysene-d12	10.56	240	215124	200.00	ng/ml	-0.03
49) Perylene-d12	14.52	264	238690	200.00	ng/ml	-0.06
System Monitoring Compounds						
15) Fluorene-d10	6.88	176	107748	151.07	ng/ml	-0.01
Spiked Amount 200.000			Recovery	=	75.53%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery	=	0.00%	
36) Fluoranthene-d10	8.69	212	192237	152.04	ng/ml	-0.02
Spiked Amount 200.000			Recovery	=	76.02%	
42) Terphenyl-d14	9.08	244	163252	146.58	ng/ml	-0.02
Spiked Amount 200.000			Recovery	=	73.29%	
Target Compounds						Qvalue
2) Naphthalene	5.04	128	401268	372.37	ng/ml	100
3) 2-Methylnaphthalene	5.59	142	322541	429.21	ng/ml	100
4) 1-Methylnaphthalene	5.67	142	291582	433.44	ng/ml	99
5) Biphenyl	5.96	154	393546	428.56	ng/ml	97
6) 2,6-Dimethylnaphthalene	6.10	156	283130	431.58	ng/ml	100
11) Acenaphthylene	6.33	152	487152	411.65	ng/ml	98
12) Acenaphthene	6.47	154	286218	398.01	ng/ml	98
13) Dibenzofuran	6.62	168	450463	416.42	ng/ml	99
14) 2,3,5-Trimethylnaphthalene	6.78	170	274705m	434.34	ng/ml	
16) Fluorene	6.90	166	359733	416.69	ng/ml	97
23) Dibenzothiophene	7.60	184	327213	256.74	ng/ml	99
27) Phenanthrene	7.71	178	521711	400.24	ng/ml	94
28) Anthracene	7.74	178	544219	428.50	ng/ml	99
29) Carbazole	7.89	167	484898	416.17	ng/ml	99
30) 1-Methylphenanthrene	8.20	192	425174	439.49	ng/ml	96
35) Fluoranthene	8.70	202	618102	417.45	ng/ml	95
38) Pyrene	8.93	202	641114	396.15	ng/ml	95
43) Benz(a)anthracene	10.54	228	628108	427.82	ng/ml	99
44) Chrysene	10.60	228	617357	428.14	ng/ml	100
50) Benzo(b)fluoranthene	13.18	252	677092	411.04	ng/ml	99
51) Benzo(k)fluoranthene	13.27	252	695397	439.45	ng/ml	99
52) Benzo(e)pyrene	14.11	252	666019	445.10	ng/ml	100
53) Benzo(a)pyrene	14.31	252	621290	455.54	ng/ml	100
54) Perylene	14.63	252	579861	432.80	ng/ml	99
55) Indeno(1,2,3-cd)pyrene	17.40	276	570558	450.88	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112308\1123F005.D Vial: 3
Acq On : 23 Nov 2008 1:03 pm Operator: LWeiskopf
Sample : KWG082042-3 LCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:44:21 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

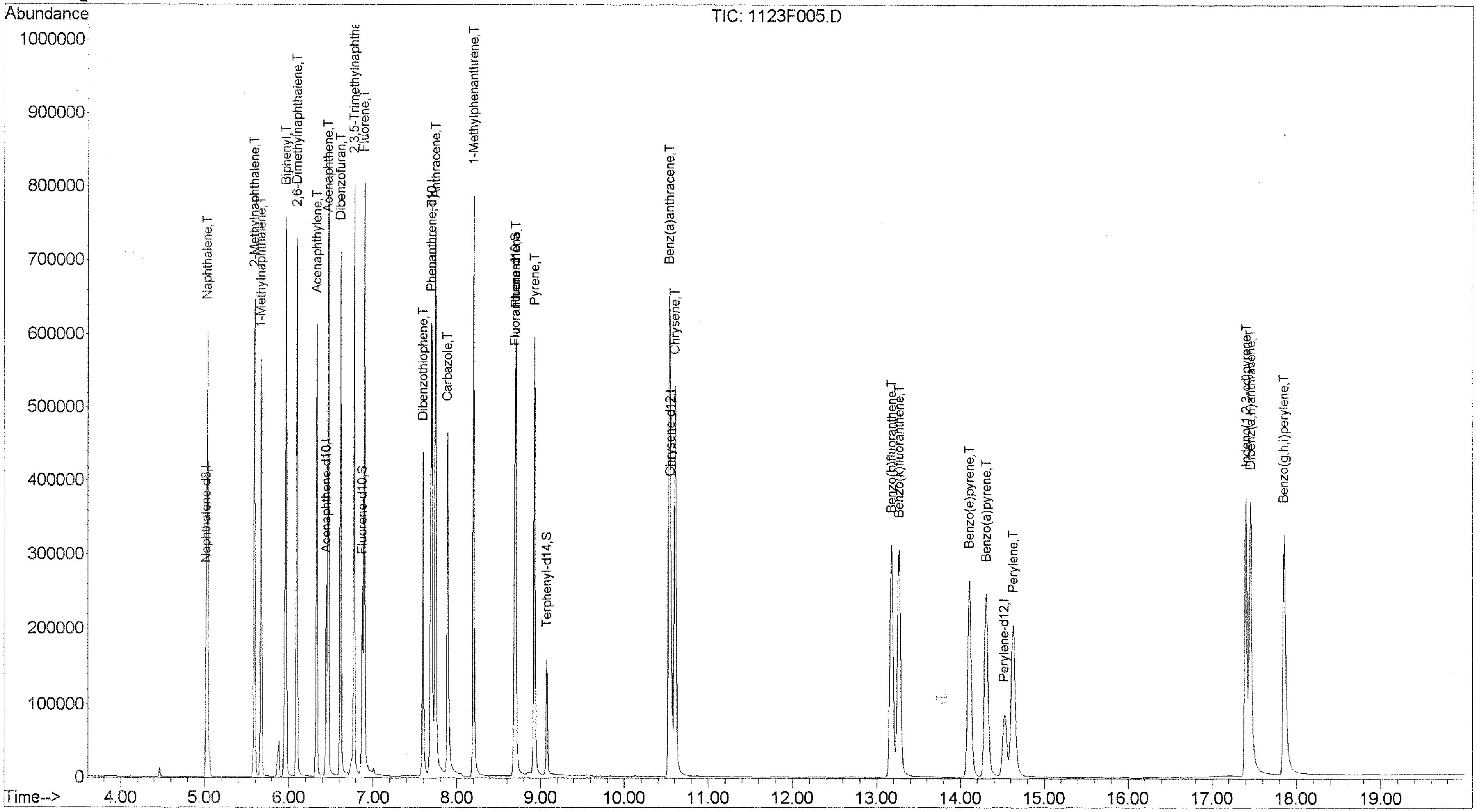
Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
56) Dibenz(a,h)anthracene	17.45	278	626041	471.35	ng/ml	95
57) Benzo(g,h,i)perylene	17.85	276	627191	435.04	ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112308\1123F005.D   Vial: 3
Acq On : 23 Nov 2008 1:03 pm   Operator: LWeiskopf
Sample : KWG082042-3 LCS   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:47 2008   Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Duplicate Lab Control Sample	**Units:**	ug/Kg
Lab Code:	KWG0812042-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**378**		5.0	0.37	1	11/11/08	11/23/08	KWG0812042	
2-Methylnaphthalene	**427**		5.0	0.39	1	11/11/08	11/23/08	KWG0812042	
Acenaphthylene	**417**		5.0	0.24	1	11/11/08	11/23/08	KWG0812042	
Acenaphthene	**403**		5.0	0.23	1	11/11/08	11/23/08	KWG0812042	
Fluorene	**425**		5.0	0.50	1	11/11/08	11/23/08	KWG0812042	
Dibenzofuran	**426**		5.0	0.59	1	11/11/08	11/23/08	KWG0812042	
Phenanthrene	**401**		5.0	0.75	1	11/11/08	11/23/08	KWG0812042	
Anthracene	**444**		5.0	0.47	1	11/11/08	11/23/08	KWG0812042	
Fluoranthene	**447**		5.0	0.61	1	11/11/08	11/23/08	KWG0812042	
Pyrene	**424**		5.0	0.37	1	11/11/08	11/23/08	KWG0812042	
Benz(a)anthracene	**464**		5.0	0.48	1	11/11/08	11/23/08	KWG0812042	
Chrysene	**465**		5.0	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(b)fluoranthene	**444**		5.0	0.25	1	11/11/08	11/23/08	KWG0812042	
Benzo(k)fluoranthene	**470**		5.0	0.15	1	11/11/08	11/23/08	KWG0812042	
Benzo(a)pyrene	**494**		5.0	0.14	1	11/11/08	11/23/08	KWG0812042	
Indeno(1,2,3-cd)pyrene	**492**		5.0	0.16	1	11/11/08	11/23/08	KWG0812042	
Dibenz(a,h)anthracene	**512**		5.0	0.28	1	11/11/08	11/23/08	KWG0812042	
Benzo(g,h,i)perylene	**469**		5.0	0.64	1	11/11/08	11/23/08	KWG0812042	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	78	10-128	11/23/08	Acceptable
Fluoranthene-d10	84	29-121	11/23/08	Acceptable
Terphenyl-d14	84	24-141	11/23/08	Acceptable

Comments:

Exception Report

Data File:	J:\MS11\DATA\112308\1123F006.D	**Date Acquired:**	11/23/2008 13:29
Lab ID:	KWG0812042-4	**Date Quantitated:**	11/24/2008 06:47
RunType:	DLCS	**Batch ID:**	KWG0812642
Matrix:	SEDIMENT	**Analysis Method:**	8270C SIM
		MethodJoinID:	MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K10457
K10639

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2,4,6-Tribromophenol	0	12	152	NT

Primary Review: KW 11/24/08

Secondary Review: 11-25-8

Printed: 11/24/2008 10:58:21
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270C SIM PAH_S	**Collect Date:**		**Receive Date:**	11/13/2008

Analysis Lot:	KWG0812642	**Prep Lot:**	KWG0812042	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
		Prep Date:	11/11/2008		
Prep Ref:	776077				

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:			
Tune Ref:	J:\MS11\DATA\112308\1123F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\112308\1123F003.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\112308\1123F006.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 13:29	**Quant Date:**	11/24/2008 06:47	**Vial:**	4
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0812042-4			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.02	-0.02	136	183383	200.00	OK
2	Acenaphthene-d10	6.45	0.00	164	105139	200.00	OK
3	Phenanthrene-d10	7.69	0.00	188	187364	200.00	OK
4	Chrysene-d12	10.56	0.00	240	215847	200.00	OK
5	Perylene-d12	14.52	-0.01	264	239351	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88	0.00	0.00	176	110905	155.21	78	10-128	OK	
2	2,4,6-Tribromophenol			0.00	330	0d		0	12-152	*	
3	Fluoranthene-d10	8.69	0.00	0.00	212	215633	168.80	84	29-121	OK	
4	Terphenyl-d14	9.08	0.01	0.00	244	188463	168.65	84	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantM ass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.04	-0.01	0.00	128	422163	377.92	378		
1	2-Methylnaphthalene	5.59	-0.01	0.00	142	332616	426.99	427		
1	1-Methylnaphthalene	5.68		0.00	142	299375	429.31	429		
1	Biphenyl	5.97		0.00	154	406208	426.73	427		
1	2,6-Dimethylnaphthalene	6.10	-0.01	0.00	156	291398	428.50	429		
1	C2-Naphthalenes				156	0		5.0	U	
1	C3-Naphthalenes				170	0		5.0	U	
1	C4-Naphthalenes				184	0		5.0	U	
2	Acenaphthylene	6.33		0.00	152	493850	416.55	417		
2	Acenaphthene	6.48	0.01	0.00	154	290654	403.45	403		
2	Dibenzofuran	6.62		0.00	168	461246	425.61	426		
2	2,3,5-Trimethylnaphthalene	6.78		0.00	170	278823m	440.05	440		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112308\1123F006.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 13:29	**Quant Date:**	11/24/2008 06:47	**Vial:**	4
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0812042-4			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	6.90		0.00	166	367850	425.32	425		
2	C1-Fluorenes				180	0		5.0	U	
2	C2-Fluorenes				194	0		5.0	U	
2	C3-Fluorenes				208	0		5.0	U	
2	Pentachlorophenol				266	0**d**		2.9	U	
3	Dibenzothiophene	7.60		0.00	184	361065	280.40	280		
3	C1-Dibenzothiophenes				198	0		5.0	U	
3	C2-Dibenzothiophenes				212	0		5.0	U	
3	C3-Dibenzothiophenes				226	0		5.0	U	
3	Phenanthrene	7.71		0.00	178	528561	401.34	401		
3	Anthracene	7.74		0.00	178	569327	443.68	444		
3	Carbazole	7.89		0.00	167	427555	363.20	363		
3	1-Methylphenanthrene	8.20		0.00	192	436537	446.62	447		
3	C1-Phenanthrenes/Anthracenes				192	0		5.0	U	
3	C2-Phenanthrenes/Anthracenes				206	0		5.0	U	
3	C3-Phenanthrenes/Anthracenes				220	0		5.0	U	
3	C4-Phenanthrenes/Anthracenes				234	0		5.0	U	
3	Fluoranthene	8.70	-0.01	0.00	202	668603	446.93	447		
4	Pyrene	8.93		0.00	202	687801	423.58	424		
4	C1-Fluoranthenes/Pyrenes				216	0		5.0	U	
4	C2-Fluoranthenes/Pyrenes				230	0		5.0	U	
4	C3-Fluoranthenes/Pyrenes				244	0		5.0	U	
4	Benz(a)anthracene	10.54		0.00	228	682891	463.57	464		
4	Chrysene	10.61		0.00	228	673445	465.47	465		
4	C1-Chrysenes				242	0		5.0	U	
4	C2-Chrysenes				256	0		5.0	U	
4	C3-Chrysenes				270	0		5.0	U	
4	C4-Chrysenes				284	0		5.0	U	
5	Benzo(b)fluoranthene	13.18		0.00	252	733566	444.10	444		
5	Benzo(k)fluoranthene	13.27		0.00	252	745304	469.69	470		
5	Benzo(e)pyrene	14.11	-0.01	0.00	252	702034	467.88	468		
5	Benzo(a)pyrene	14.30	-0.01	0.00	252	676039	494.31	494		
5	Perylene	14.63		0.00	252	640899	477.03	477		
5	Indeno(1,2,3-cd)pyrene	17.40	-0.01	0.00	276	624203	491.91	492		
5	Dibenz(a,h)anthracene	17.45		0.00	278	681357	511.58	512		
5	Benzo(g,h,i)perylene	17.85	-0.01	0.00	276	677497	468.63	469		

Prep Amount:	10.00 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112308\1123F006.D Vial: 4
Acq On : 23 Nov 2008 1:29 pm Operator: LWeiskopf
Sample : KWG082042-4 DLCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:44:21 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.02	136	183383	200.00 ng/ml	-0.02
10) Acenaphthene-d10	6.45	164	105139	200.00 ng/ml	-0.02
22) Phenanthrene-d10	7.69	188	187364	200.00 ng/ml	0.00
37) Chrysene-d12	10.56	240	215847	200.00 ng/ml	-0.03
49) Perylene-d12	14.52	264	239351	200.00 ng/ml	-0.06
System Monitoring Compounds					
15) Fluorene-d10	6.88	176	110905	155.21 ng/ml	-0.01
Spiked Amount 200.000			Recovery =	77.61%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00 ng/ml	
Spiked Amount 375.000			Recovery =	0.00%	
36) Fluoranthene-d10	8.69	212	215633	168.80 ng/ml	-0.02
Spiked Amount 200.000			Recovery =	84.40%	
42) Terphenyl-d14	9.08	244	188463	168.65 ng/ml	-0.02
Spiked Amount 200.000			Recovery =	84.33%	
Target Compounds					Qvalue
2) Naphthalene	5.04	128	422163	377.92 ng/ml	98
3) 2-Methylnaphthalene	5.59	142	332616	426.99 ng/ml	97
4) 1-Methylnaphthalene	5.68	142	299375	429.31 ng/ml	91
5) Biphenyl	5.97	154	406208	426.73 ng/ml	99
6) 2,6-Dimethylnaphthalene	6.10	156	291398	428.50 ng/ml	100
11) Acenaphthylene	6.33	152	493850	416.55 ng/ml	98
12) Acenaphthene	6.48	154	290654	403.45 ng/ml	89
13) Dibenzofuran	6.62	168	461246	425.61 ng/ml	99
14) 2,3,5-Trimethylnaphthalene	6.78	170	278823m	440.05 ng/ml	
16) Fluorene	6.90	166	367850	425.32 ng/ml	98
23) Dibenzothiophene	7.60	184	361065	280.40 ng/ml	95
27) Phenanthrene	7.71	178	528561	401.34 ng/ml	95
28) Anthracene	7.74	178	569327	443.68 ng/ml	100
29) Carbazole	7.89	167	427555	363.20 ng/ml	97
30) 1-Methylphenanthrene	8.20	192	436537	446.62 ng/ml	94
35) Fluoranthene	8.70	202	668603	446.93 ng/ml	92
38) Pyrene	8.93	202	687801	423.58 ng/ml	92
43) Benz(a)anthracene	10.54	228	682891	463.57 ng/ml	100
44) Chrysene	10.61	228	673445	465.47 ng/ml	99
50) Benzo(b)fluoranthene	13.18	252	733566	444.10 ng/ml	100
51) Benzo(k)fluoranthene	13.27	252	745304	469.69 ng/ml	99
52) Benzo(e)pyrene	14.11	252	702034	467.88 ng/ml	99
53) Benzo(a)pyrene	14.30	252	676039	494.31 ng/ml	100
54) Perylene	14.63	252	640899	477.03 ng/ml	98
55) Indeno(1,2,3-cd)pyrene	17.40	276	624203	491.91 ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112308\1123F006.D Vial: 4
Acq On : 23 Nov 2008 1:29 pm Operator: LWeiskopf
Sample : KWG082042-4 DLCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:44:21 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

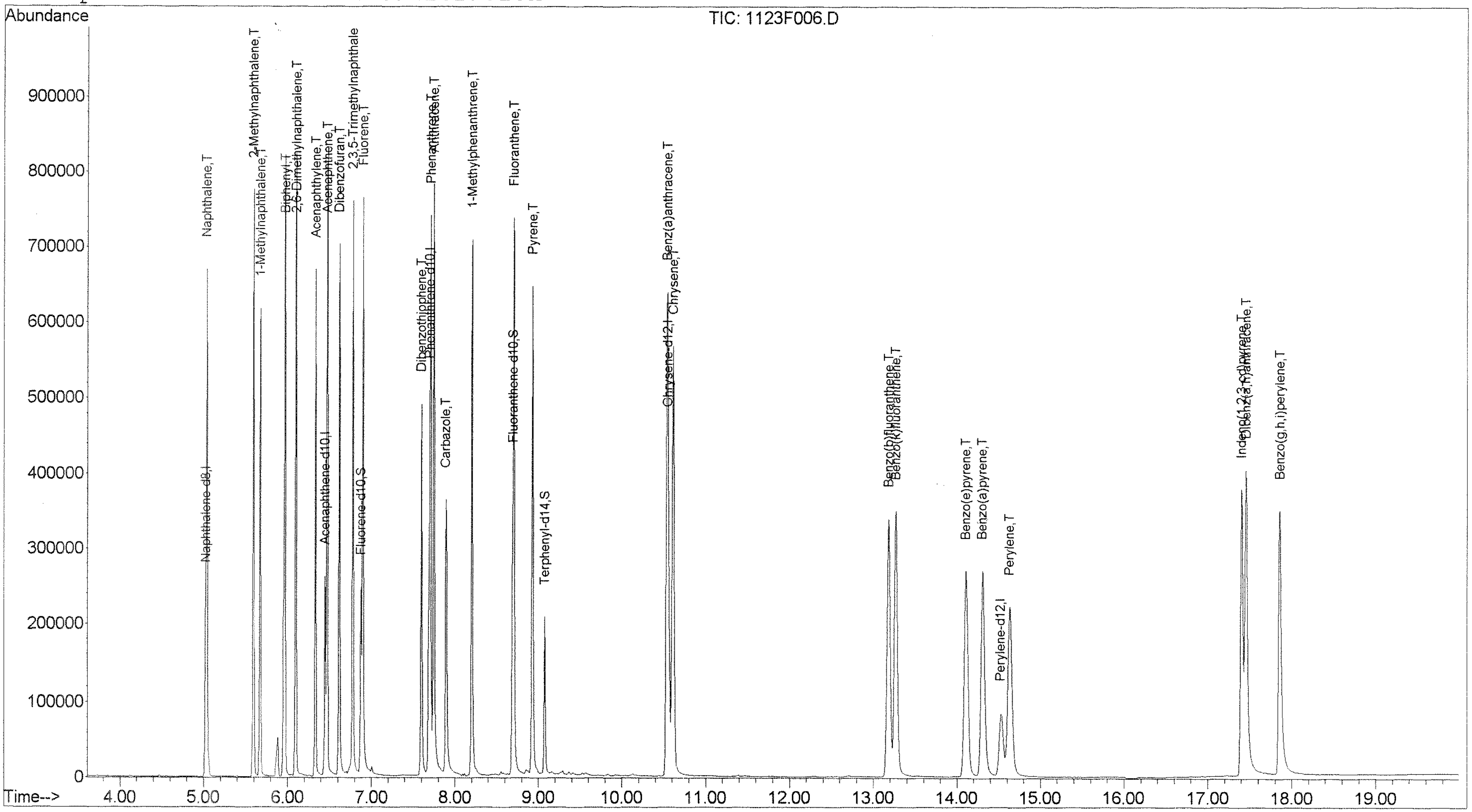
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
56)	Dibenz(a,h)anthracene	17.45	278	681357	511.58	ng/ml	97
57)	Benzo(g,h,i)perylene	17.85	276	677497	468.63	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112308\1123F006.D Vial: 4
Acq On : 23 Nov 2008 1:29 pm Operator: LWeiskopf
Sample : KWG082042-4 DLCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:47 2008 Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration



Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Standards Data

u:\Stealth\Crystal.rpt\DividerE.rpt

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/21/2008
Time Analyzed: 06:10

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112108\1121F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0812597

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	61.8	492217	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	54.3	433061	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	52.6	418944	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	60.4	796928	PASS
199	198	5	9	6.8	54368	PASS
275	198	10	60	35.4	282176	PASS
365	442	1	50	3.5	46568	PASS
441	443	0	100	74.8	201920	PASS
442	442	100	100	100.0	1320448	PASS
443	442	15	24	20.5	270080	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812597-2	J:\MS11\DATA\112108\1121F002.D	11/21/2008	06:37	
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112108\1121F025.D	11/21/2008	16:43	
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112108\1121F026.D	11/21/2008	17:10	
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112108\1121F027.D	11/21/2008	17:36	
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112108\1121F028.D	11/21/2008	18:02	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Data File: J:\MS11\DATA\112108\1121F001.D
Lab ID: KWG0812597-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/21/2008 06:10
Date Quantitated:
Batch ID: KWG0812597
Analysis Method: 8270C SIM
ListJoinID: LJ4769

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: 11/22/18
Secondary Review: LB 11/24/08

Printed: 11/22/2008 11:46:52
u:\Stealth\Crystal.rpt\except2.rpt

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/22/2008

Analysis Lot:	KWG0812597	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\DFTPPPAH.M	**Calibration ID:**	CAL7938
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112108\1121F001.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 06:10	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0812597-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	61.8	492217	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	54.3	433061	Pass
70	69	0	2	0.0	0	Pass
127	198	10	80	52.6	418944	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	60.4	796928	Pass
199	198	5	9	6.8	54368	Pass
275	198	10	60	35.4	282176	Pass
365	442	1	50	3.5	46568	Pass
441	443	0.01	100	74.8	201920	Pass
442	442	100	100	100.0	1320448	Pass
443	442	15	24	20.5	270080	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

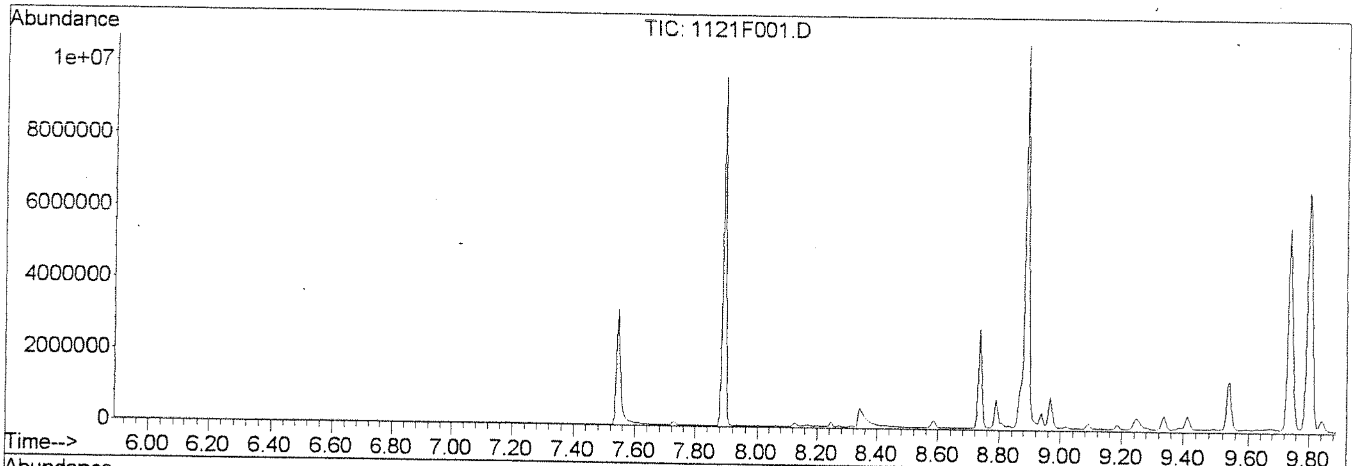
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

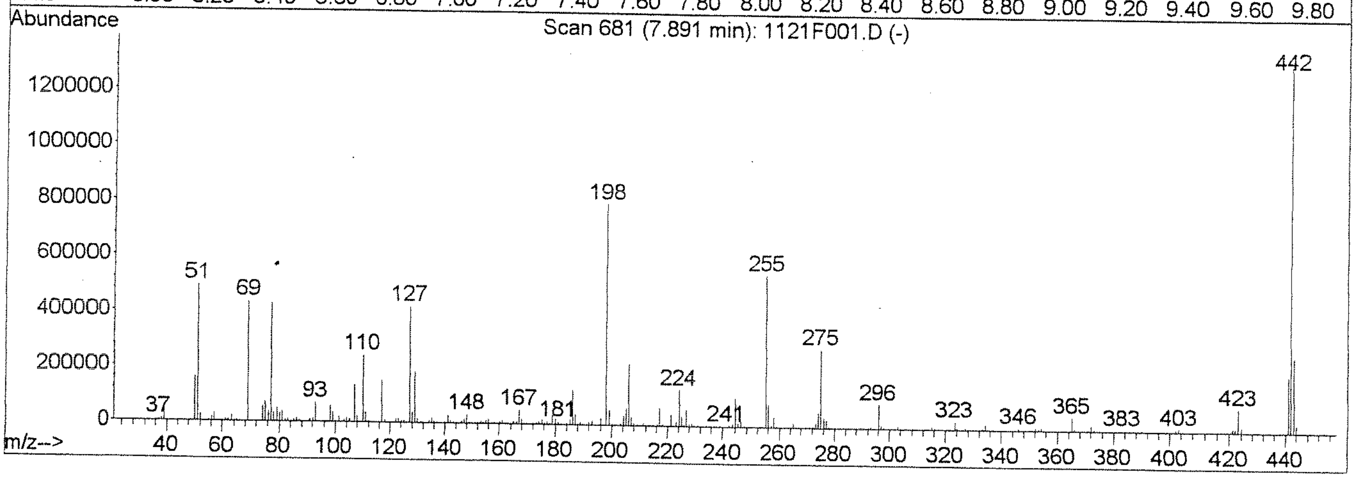
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS11\DATA\112108\1121F001.D
Acq On : 21 Nov 2008 6:10 am
Sample : DFTPP @ 3.0ug/mL | SVM27-37E
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00





Spectrum Information: Scan 681

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	61.8	492217	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	52.6	418944	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	60.4	796928	PASS
199	198	5	9	6.8	54368	PASS
275	198	10	60	35.4	282176	PASS
365	442	1	50	3.5	46568	PASS
441	443	0.01	100	74.8	201920	PASS
442	442	30	100	100.0	1320448	PASS
443	442	15	24	20.5	270080	PASS

1121F001.D DFTPPPAH.M Sat Nov 22 08:11:40 2008

DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	1022	46.90	580	60.05	280	76.20	36376
36.10	555	48.10	1267	61.10	8147	77.10	428577
37.10	4779	50.10	160064	62.10	7715	78.10	32432
38.10	9998	51.05	492217	63.10	21024	79.10	48818
39.10	40687	52.10	25392	64.10	3556	80.10	30216
40.10	1913	53.05	860	65.10	8115	81.10	37252
41.15	1504	55.10	4355	66.10	899	82.10	7350
42.00	1227	56.10	14739	69.00	433061	83.10	8088
43.10	292	57.10	30371	71.00	571	84.05	768
44.10	910	58.10	1746	74.10	56472	85.10	7684
45.00	1194	59.10	1341	75.10	72192	86.05	13081

Scan 681 (7.891 min): 1121F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.10	5397	100.10	3521	113.10	1253	124.10	7053
88.00	1563	101.10	18672	113.80	606	125.10	6868
89.10	972	102.00	1457	114.10	718	127.10	418944
91.10	9983	103.00	7901	115.00	1760	128.10	37328
92.10	11714	104.00	13925	117.00	150784	129.00	182003
93.00	67280	105.10	12551	118.10	10273	130.00	17448
94.10	4195	107.00	134842	119.00	1186	131.10	4199
95.10	656	108.00	21312	120.10	1804	132.10	1324
96.10	2635	110.00	240640	121.30	1686	133.00	278
98.10	58792	111.00	38576	122.10	11307	134.10	7377
99.10	35376	112.00	5298	123.10	15854	135.00	16346

Scan 681 (7.891 min): 1121F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
136.00	6989	147.10	13173	158.00	5278	169.10	3596
137.10	8042	148.10	32200	159.10	3589	169.90	2343
138.00	1756	149.10	6764	160.10	7777	171.00	2823
138.90	1526	150.10	1688	161.00	12069	172.00	4475
140.00	2965	151.00	3119	162.10	3623	173.10	4700
141.00	28160	152.00	2042	163.10	1616	174.10	9254
142.00	9229	153.10	7938	164.00	1369	175.10	16359
143.10	5449	154.10	5708	164.95	9605	176.10	5823
144.10	2258	155.10	12991	166.10	8121	177.00	9296
145.00	1113	156.00	17968	167.10	49224	178.00	5309
146.10	7078	157.00	4202	168.10	19368	179.00	33912

Scan 681 (7.891 min): 1121F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
180.00	21960	191.10	4305	205.10	60376	217.00	63368
181.00	10434	192.00	9799	206.10	222592	218.00	8643
182.10	2150	193.10	14040	207.05	30883	219.10	957
182.90	1277	194.00	3391	208.00	9229	221.10	41264
184.00	4743	196.00	25480	209.00	2775	223.00	14256
185.10	19608	198.00	796928	210.40	3535	224.10	131200
186.10	125120	199.00	54368	211.10	10370	225.10	35640
187.10	37408	200.00	5195	212.90	955	226.10	4634
188.10	3585	201.60	3153	214.00	524	227.00	62048
189.00	10266	203.00	7773	215.10	3694	228.00	8739
190.10	1933	204.10	34648	216.20	5916	229.00	11875

DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
230.00	2698	241.10	3377	252.10	1841	265.95	2928
231.10	6041	242.10	6729	253.10	3519	266.90	670
232.00	1247	243.10	9372	255.00	545664	269.90	666
233.10	1544	244.10	102288	256.00	81032	271.00	1561
234.10	4111	245.10	14882	257.00	7242	272.10	2098
235.00	3785	246.00	27648	258.00	36640	273.00	18128
236.00	3301	247.10	5319	259.00	5253	274.00	54032
237.10	4358	248.00	1851	259.90	1386	275.00	282176
238.00	740	249.00	3723	261.00	1044	276.00	37008
239.10	3094	250.10	732	263.95	1366	277.00	27928
240.00	2108	251.00	1186	265.00	15612	278.00	4497

Scan 681 (7.891 min): 1121F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
279.00	1160	293.00	6075	308.90	848	323.10	29240
281.00	1138	294.00	1527	310.00	910	324.00	4688
282.10	1112	296.00	87320	311.20	596	326.10	1184
283.10	2466	297.00	12888	313.10	930	327.00	6978
284.10	1609	297.90	1185	314.00	4602	328.10	3394
285.00	4385	299.10	509	315.00	10684	332.10	2790
286.00	834	301.10	1299	316.00	5273	333.00	3609
289.00	1739	302.10	1660	317.00	777	334.00	20064
290.10	1260	303.00	9036	320.10	820	335.10	6178
291.00	563	304.00	3376	321.00	2843	336.00	601
292.10	1198	308.10	1897	322.10	1584	339.10	500

Scan 681 (7.891 min): 1121F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
341.10	4022	365.00	46568	391.00	1816	424.00	16536
342.10	779	365.90	7184	392.00	1410	425.00	1490
346.00	8310	370.00	1034	401.10	1318	438.50	634
347.00	974	370.90	3459	402.00	7690	441.00	201920
350.90	576	372.00	18992	403.00	10819	442.00	1320448
352.00	9637	373.00	5215	404.10	3828	443.00	270080
353.00	6823	373.90	923	405.00	525	444.00	27848
354.10	10354	376.90	609	409.90	711	445.00	1435
354.90	2086	383.00	5597	421.00	11722		
356.00	581	384.00	2177	422.00	10773		
359.00	620	390.00	2660	423.00	83752		

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/21/2008
Time Analyzed: 18:55

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\112108\1121F030.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0812613

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	70.7	354240	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	59.4	297536	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	53.2	266368	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	70.7	500736	PASS
199	198	5	9	7.0	35072	PASS
275	198	10	60	33.1	165952	PASS
365	442	1	50	3.8	26600	PASS
441	443	0	100	74.2	105608	PASS
442	442	100	100	100.0	707840	PASS
443	442	15	24	20.1	142336	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812613-2	J:\MS11\DATA\112108\1121F031.D	11/21/2008	19:21	
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112108\1121F047.D	11/22/2008	02:22	
SED10-0.5-2.5-B	K0810639-007	J:\MS11\DATA\112108\1121F048.D	11/22/2008	02:48	
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112108\1121F049.D	11/22/2008	03:14	
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112108\1121F050.D	11/22/2008	03:40	
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112108\1121F051.D	11/22/2008	04:07	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS11\DATA\112108\1121F030.D
Lab ID: KWG0812613-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/21/2008 18:55
Date Quantitated:
Batch ID: KWG0812613
Analysis Method: 8270C SIM
ListJoinID: LJ8774

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: [signature] 11/22/08

Secondary Review: [signature] 11.22-8

Printed: 11/22/2008 14:49:33
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/22/2008

Analysis Lot:	KWG0812613	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\DFTPPPAH.M	**Calibration ID:**	CAL7938
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112108\1121F030.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 18:55	**Quant Date:**		**Vial:**	27
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0812613-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	70.7	354240	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	59.4	297536	Pass
70	69	0	2	0.0	0	Pass
127	198	10	80	53.2	266368	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	70.7	500736	Pass
199	198	5	9	7.0	35072	Pass
275	198	10	60	33.1	165952	Pass
365	442	1	50	3.8	26600	Pass
441	443	0.01	100	74.2	105608	Pass
442	442	100	100	100.0	707840	Pass
443	442	15	24	20.1	142336	Pass

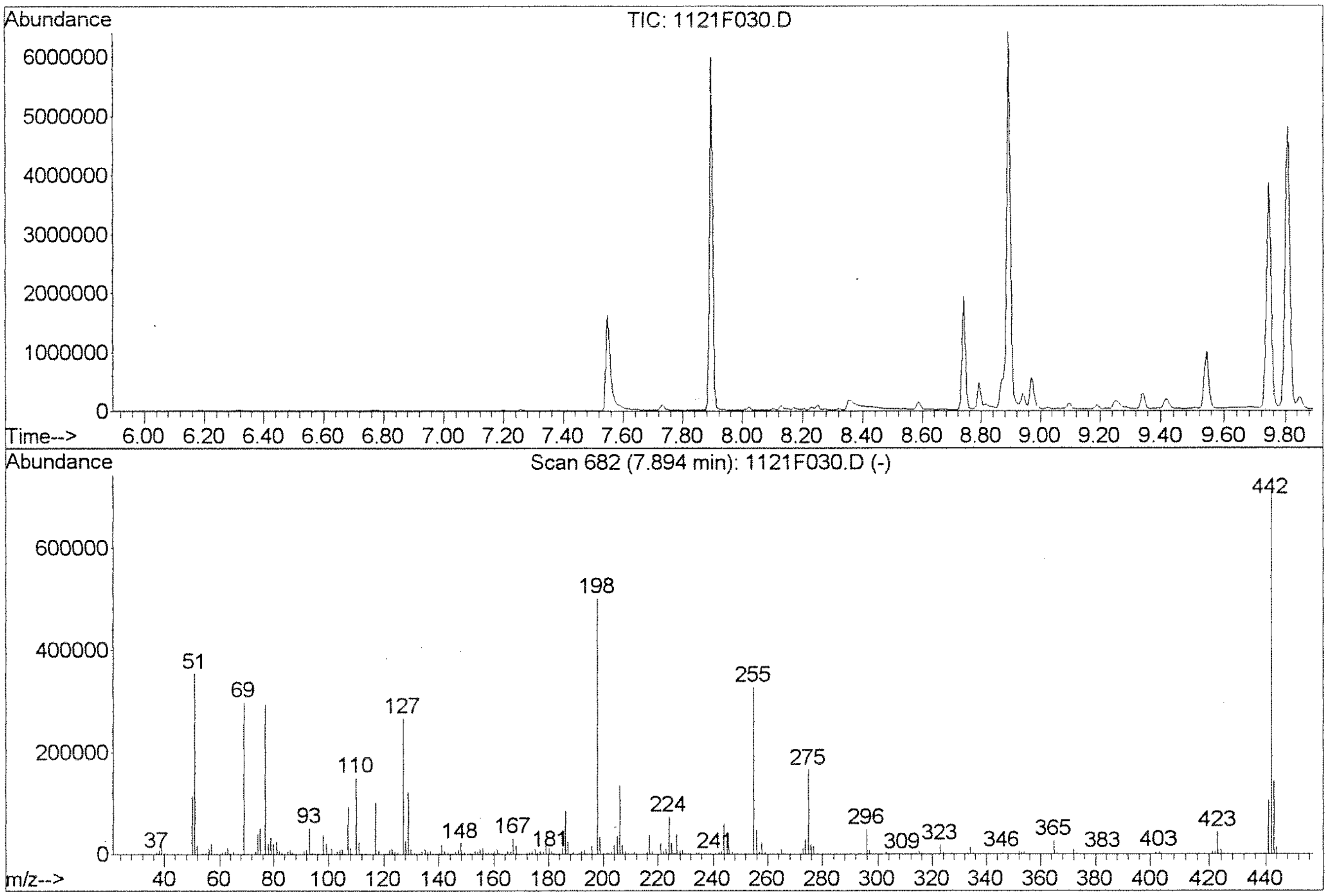
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

```
Data File : J:\MS11\DATA\112108\1121F030.D                Vial: 27
Acq On    : 21 Nov 2008   6:55 pm                    Operator: LWeiskopf
Sample    : DFTPP @ 3.0ug/mL | SVM27-37E             Inst    : MS11
Misc      :                                          Multiplr: 1.00
MS Integration Params: RTEINT.P
Method    : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title     : PAHS and ALKYLATED HOMOLOGS
```



Spectrum Information: Scan 682

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	70.7	354240	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	53.2	266368	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	70.7	500736	PASS
199	198	5	9	7.0	35072	PASS
275	198	10	60	33.1	165952	PASS
365	442	1	50	3.8	26600	PASS
441	443	0.01	100	74.2	105608	PASS
442	442	30	100	100.0	707840	PASS
443	442	15	24	20.1	142336	PASS

Scan 682 (7.894 min): 1121F030.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	614	51.10	354240	65.10	5712	81.10	25304
36.10	589	52.10	17912	66.00	950	82.10	5946
37.20	3508	53.05	519	69.10	297536	83.05	4207
38.20	7992	55.10	3511	71.30	729	84.10	287
39.10	28767	56.10	10259	73.20	5343	85.10	4732
40.20	2190	57.10	21400	74.10	40120	86.00	8754
42.20	718	57.90	865	75.10	50040	87.00	3850
43.15	679	61.10	4192	77.05	293909	88.00	1227
45.10	584	62.10	5994	78.10	21400	89.10	580
47.10	571	63.10	12156	79.10	32046	91.05	6046
50.10	114640	64.00	1500	80.10	20648	92.10	7658

Scan 682 (7.894 min): 1121F030.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.10	51078	105.10	8780	121.00	1161	133.00	1054
94.00	3140	107.10	93271	122.00	8877	134.00	5073
95.05	412	108.00	12767	123.00	11144	135.00	9986
96.10	2074	110.00	150720	124.00	4834	136.10	4112
98.10	37984	111.10	23928	125.00	4513	137.00	6060
99.10	21720	112.00	3312	127.10	266368	138.10	1022
100.00	2166	113.10	1234	128.10	24392	139.00	814
101.10	11935	117.00	102040	129.00	121159	140.10	2283
102.10	970	118.10	7498	130.00	9936	141.00	18416
103.10	4832	119.05	434	131.10	2207	142.00	6014
104.00	9077	120.10	1525	132.10	1810	143.10	3516

Scan 682 (7.894 min): 1121F030.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
143.90	640	154.00	4170	166.00	4724	177.00	7012
144.30	739	155.00	9871	167.00	31600	178.10	3219
145.00	1043	156.10	12815	168.10	16880	179.00	20912
146.00	3627	157.10	2869	169.00	2215	180.10	12864
147.10	8749	158.00	3895	170.30	1320	181.00	5658
148.00	22272	159.10	2339	171.00	1360	182.00	1236
149.10	4209	160.10	5705	172.00	3293	184.00	2082
150.00	815	161.10	8672	173.10	3853	185.10	11002
151.30	2252	162.00	2531	174.00	6793	186.10	84296
151.90	2050	164.10	845	175.10	10530	187.10	24440
153.00	6819	165.00	6813	176.00	2271	188.00	2024

Scan 682 (7.894 min): 1121F030.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
189.00	5417	201.50	2451	215.00	1844	227.00	38552
190.00	906	202.20	956	216.10	4162	228.10	6585
191.00	3170	203.00	4815	217.00	37504	229.00	7673
192.00	6439	204.10	18104	218.00	5509	230.10	1114
193.10	7217	205.10	35280	219.20	894	231.10	3095
194.00	1714	206.10	134528	221.10	21824	232.00	746
195.00	995	207.10	18116	222.00	5617	233.00	633
196.00	17128	208.10	6477	223.00	9604	234.00	2406
198.00	500736	209.00	1995	224.10	73840	235.00	3371
199.00	35072	211.10	5771	225.10	21616	236.00	1814
200.00	2614	212.10	934	226.10	3000	237.00	3628

Scan 682 (7.894 min): 1121F030.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
238.00	576	248.90	2606	265.00	9128	279.10	674
239.10	2238	250.90	807	265.85	1353	282.00	644
240.00	1101	252.10	943	267.80	761	283.10	2054
241.10	2385	253.10	1882	271.00	630	284.00	793
242.10	4362	255.00	327616	272.00	1344	285.00	2507
243.10	4744	256.00	47800	273.00	11325	289.10	713
244.10	59592	257.10	4105	274.00	29536	290.10	815
245.10	10155	258.00	23104	275.00	165952	293.10	2923
246.00	14696	259.00	3856	276.00	19384	294.00	1260
247.00	4008	260.00	529	277.00	17248	296.00	48904
248.10	602	263.80	1054	278.10	2608	297.00	7866

Scan 682 (7.894 min): 1121F030.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
302.00	1025	321.00	1586	338.90	662	365.00	26600
303.00	4943	322.10	1475	341.00	2212	366.00	4395
304.00	1772	323.00	17696	342.00	606	371.00	1515
307.90	983	324.10	2607	346.00	3944	372.00	9319
309.10	561	327.00	3534	347.00	849	373.10	2503
310.00	773	328.00	1594	352.10	5177	383.00	2889
313.10	792	332.00	1669	353.00	3339	384.00	1147
314.00	2659	333.10	1999	354.00	5474	384.90	677
315.00	6113	334.10	12619	355.10	1611	390.00	1224
316.10	3070	335.10	2601	359.10	559	390.90	772
317.10	1008	335.90	567	363.50	515	392.00	636

Scan 682 (7.894 min): 1121F030.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
401.10	725	442.00	707840				
401.90	4365	443.00	142336				
403.00	5284	444.00	14461				
404.00	2415						
421.00	4982						
422.00	5779						
423.00	44096						
424.10	8896						
425.00	1049						
439.50	1115						
441.00	105608						

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/22/2008
		Time Analyzed:	09:49

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112208\1122F005.D	**Analysis Method:**	8270C SIM
Instrument ID:	MS11	**Analysis Lot:**	KWG0812624
Column:			

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	38.7	230400	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	40.3	239744	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	46.3	275392	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	43.4	595328	PASS
199	198	5	9	6.6	39352	PASS
275	198	10	60	36.1	214656	PASS
365	442	1	50	2.2	30040	PASS
441	443	0	100	72.1	205056	PASS
442	442	100	100	100.0	1373184	PASS
443	442	15	24	20.7	284480	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812624-2	J:\MS11\DATA\112208\1122F006.D	11/22/2008	10:15	
SED01-0.5-2.5A	K0810639-001	J:\MS11\DATA\112208\1122F028.D	11/22/2008	20:04	
SED02-0.5-2.5A	K0810639-004	J:\MS11\DATA\112208\1122F029.D	11/22/2008	20:30	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS11\DATA\112208\1122F005.D
Lab ID: KWG0812624-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/22/2008 09:49
Date Quantitated:
Batch ID: KWG0812624
Analysis Method: 8270C SIM
ListJoinID: LJ9517

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: KW 11/24/8
Secondary Review: KB 11/24/08

Printed: 11/23/2008 12:51:47
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/23/2008

Analysis Lot:	KWG0812624	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\DFTPPPAH.M	**Calibration ID:**	CAL7938
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112208\1122F005.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 09:49	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0812624-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	38.7	230400	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	40.3	239744	Pass
70	69	0	2	0.0	0	Pass
127	198	10	80	46.3	275392	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	43.4	595328	Pass
199	198	5	9	6.6	39352	Pass
275	198	10	60	36.1	214656	Pass
365	442	1	50	2.2	30040	Pass
441	443	0.01	100	72.1	205056	Pass
442	442	100	100	100.0	1373184	Pass
443	442	15	24	20.7	284480	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

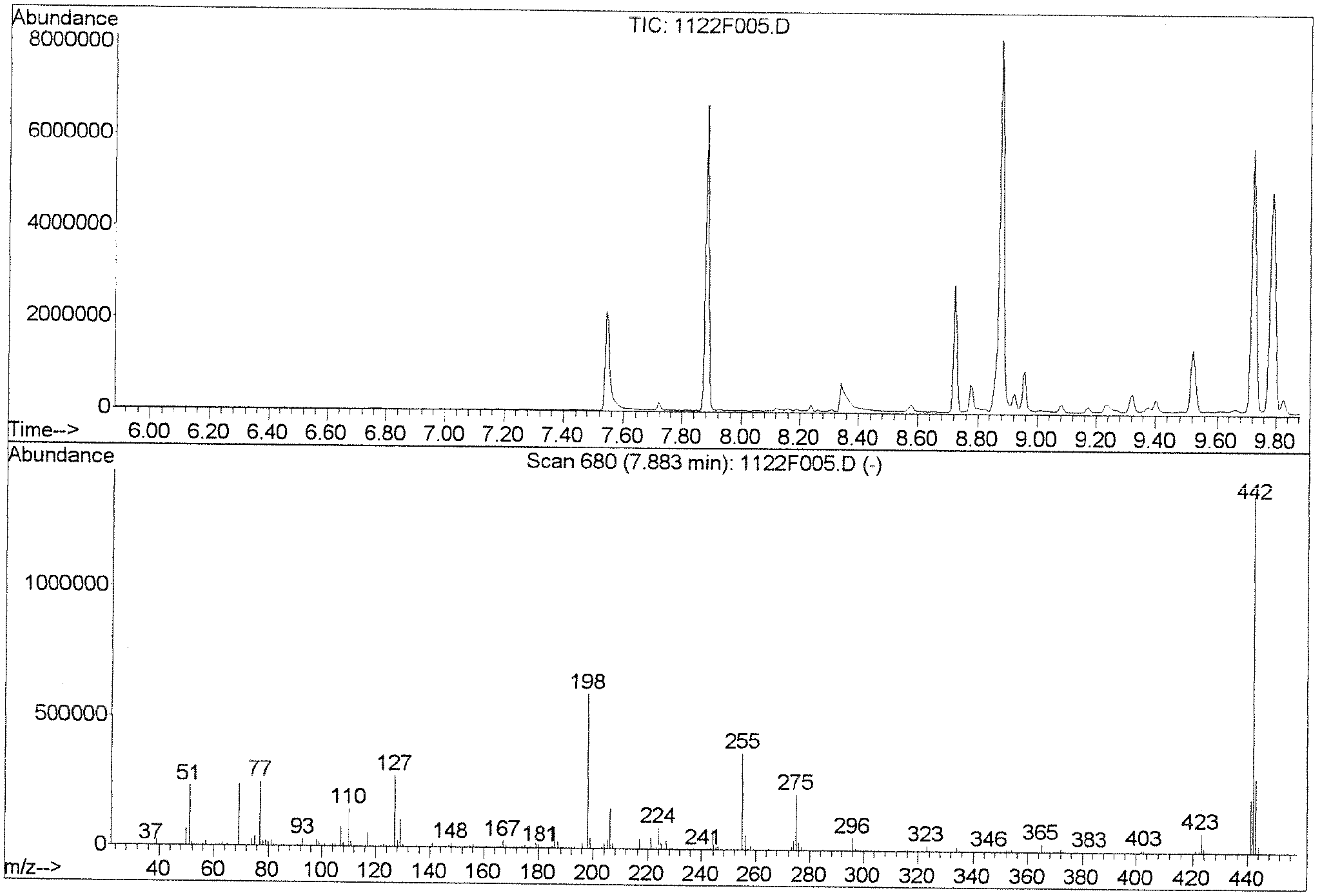
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS11\DATA\112208\1122F005.D
Acq On : 22 Nov 2008 9:49 am
Sample : DFTPP @ 3.0ug/mL | SVM27-37E
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00



Spectrum Information: Scan 680

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.7	230400	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	46.3	275392	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	43.4	595328	PASS
199	198	5	9	6.6	39352	PASS
275	198	10	60	36.1	214656	PASS
365	442	1	50	2.2	30040	PASS
441	443	0.01	100	72.1	205056	PASS
442	442	30	100	100.0	1373184	PASS
443	442	15	24	20.7	284480	PASS

1122F005.D DFTPPPAH.M Sun Nov 23 10:12:54 2008

DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	201	52.10	12478	66.05	335	81.10	19928
37.10	1774	53.10	1428	69.10	239744	82.10	4992
38.10	3751	55.10	879	71.20	695	83.10	3564
39.05	20052	56.10	6295	72.10	636	83.95	300
40.10	1626	57.05	17339	73.15	2627	85.10	3507
41.10	1046	58.00	973	74.10	24992	86.00	5649
45.10	544	61.10	3359	75.10	39824	87.10	2555
47.00	36	62.10	2880	77.10	248433	88.00	952
49.10	3842	63.10	9593	78.10	17520	89.10	576
50.10	65072	64.00	1806	79.10	19275	91.05	5863
51.10	230400	65.05	4340	80.10	15156	92.10	5805

Scan 680 (7.883 min): 1122F005.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.05	27491	105.10	7153	118.90	1058	131.10	2225
94.20	1935	107.10	74640	120.10	1536	132.00	1411
95.00	214	108.10	13581	121.00	206	133.05	524
96.15	1036	110.10	144768	122.00	5851	134.00	4013
98.10	23608	111.10	20808	123.00	8539	135.05	8051
99.10	16720	112.10	2236	124.10	3764	136.00	3464
100.10	1761	113.10	1321	125.10	4358	137.10	3438
101.00	9419	115.10	951	127.10	275392	139.00	941
102.20	1218	116.20	5634	128.10	22824	140.00	1960
103.10	2548	117.00	53928	129.00	107570	141.00	14414
104.00	7205	118.10	3996	130.05	10382	142.10	4260

Scan 680 (7.883 min): 1122F005.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
143.10	3401	153.00	5608	164.10	1363	175.10	8973
144.10	1272	154.00	2796	165.05	3904	176.10	2724
144.90	1096	155.10	8837	166.10	4633	177.00	5643
146.00	2953	156.10	10863	167.10	26176	178.20	1734
147.10	7954	157.00	3185	168.10	9690	179.00	18768
148.00	15179	158.10	2358	169.20	1844	180.10	13071
149.00	3122	159.10	2300	170.00	1045	181.00	5789
150.10	802	160.00	4418	171.10	2259	182.10	1176
150.40	688	161.10	6351	172.00	2486	183.00	952
151.10	2783	162.10	2387	173.10	2961	183.40	724
151.90	1150	163.00	779	174.00	4536	184.10	2018

Scan 680 (7.883 min): 1122F005.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
185.10	11017	196.10	21168	209.00	1100	224.10	84048
186.10	83032	198.00	595328	210.00	2357	225.10	23608
187.10	24256	199.00	39352	211.10	6733	227.00	34896
188.10	3187	200.10	3823	212.10	979	228.10	5376
189.00	4387	201.50	3406	215.10	1596	229.10	6524
190.10	1398	203.10	4112	216.00	3815	229.90	1085
191.20	2346	204.10	19952	217.00	35088	231.10	3526
192.10	5295	205.10	34152	218.00	5119	232.10	770
193.10	6470	206.10	153216	219.10	611	233.00	786
194.00	1090	207.10	18874	221.10	41352	234.00	2056
195.10	1548	208.10	4429	223.00	8484	235.10	2774

DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
236.00	1718	248.00	753	263.90	1115	277.00	13961
237.10	3924	249.00	3104	265.00	7511	278.00	2445
239.10	1539	251.10	516	265.90	1761	279.10	670
240.10	1109	252.20	735	267.85	56	282.20	623
241.00	2066	253.10	2014	269.90	644	283.10	1692
242.10	5262	255.00	371520	270.90	758	284.00	1469
243.10	6497	256.00	55280	272.00	1366	285.00	2810
244.10	75904	257.00	4171	273.10	12452	288.90	617
245.10	10671	258.00	17064	274.00	37520	292.00	641
246.00	13092	259.00	3520	275.00	214656	293.00	4020
247.00	2748	259.90	537	276.00	28480	294.10	842

Scan 680 (7.883 min): 1122F005.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
296.00	50008	314.00	2482	328.00	1857	351.20	875
297.00	8505	315.00	6481	332.10	1962	352.00	7509
298.10	518	316.00	5105	333.10	1724	353.10	5451
300.90	827	317.00	1098	334.10	14824	354.00	7315
302.00	922	321.00	2571	335.00	5329	355.00	1749
303.10	5959	322.00	1162	336.00	725	365.00	30040
304.10	1518	323.10	20072	339.90	520	366.00	4288
307.90	974	324.00	4267	341.00	2877	370.10	862
308.90	845	325.20	533	342.10	984	371.00	2112
310.10	1056	326.10	500	346.00	4445	372.00	14583
313.00	784	327.00	4912	347.00	920	373.00	4054

Scan 680 (7.883 min): 1122F005.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
383.00	3840	421.00	9974				
383.90	936	422.10	8527				
385.00	512	423.00	76568				
390.00	2536	424.00	16432				
391.10	1538	425.00	1230				
392.00	868	439.10	896				
401.00	1371	441.10	205056				
402.00	7095	442.10	1373184				
403.00	10347	443.00	284480				
404.10	2882	444.10	28200				
414.90	635	444.90	1378				

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/22/2008
		Time Analyzed:	22:42

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112208\1122F034.D	**Analysis Method:**	8270C SIM
Instrument ID:	MS11	**Analysis Lot:**	KWG0812625
Column:			

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	44.1	269992	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	43.2	264438	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	46.2	282944	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	48.2	612288	PASS
199	198	5	9	7.2	43944	PASS
275	198	10	60	36.6	224064	PASS
365	442	1	50	2.5	31888	PASS
441	443	0	100	74.4	195712	PASS
442	442	100	100	100.0	1269248	PASS
443	442	15	24	20.7	263104	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812625-2	J:\MS11\DATA\112208\1122F035.D	11/22/2008	23:08	
SED01-2.5-5-A	K0810639-002	J:\MS11\DATA\112208\1122F042.D	11/23/2008	02:13	
SED02-2.5-5-A	K0810639-005	J:\MS11\DATA\112208\1122F043.D	11/23/2008	02:39	
SED02-5-8.5-A	K0810639-003	J:\MS11\DATA\112208\1122F044.D	11/23/2008	03:05	
SED01-5-6.5-A	K0810639-006	J:\MS11\DATA\112208\1122F045.D	11/23/2008	03:32	
SED14-0.5-2-A	K0810639-009	J:\MS11\DATA\112208\1122F046.D	11/23/2008	03:58	
SED11-0.5-2.5-A	K0810639-008	J:\MS11\DATA\112208\1122F058.D	11/23/2008	09:15	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File:	J:\MS11\DATA\112208\1122F034.D	**Date Acquired:**	11/22/2008 22:42
Lab ID:	KWG0812625-1	**Date Quantitated:**	
RunType:	DFTPP	**Batch ID:**	KWG0812625
Matrix:	WATER	**Analysis Method:**	8270C SIM
		ListJoinID:	LJ4490

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: [illegible] 11/24/08

Secondary Review: [illegible] 11-30-08

Printed: 11/23/2008 13:27:55

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/23/2008

Analysis Lot:	KWG0812625	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\DFTPPPAH.M	**Calibration ID:**	CAL7938
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112208\1122F034.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 22:42	**Quant Date:**		**Vial:**	27
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0812625-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	44.1	269992	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	43.2	264438	Pass
70	69	0	2	0.0	0	Pass
127	198	10	80	46.2	282944	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	48.2	612288	Pass
199	198	5	9	7.2	43944	Pass
275	198	10	60	36.6	224064	Pass
365	442	1	50	2.5	31888	Pass
441	443	0.01	100	74.4	195712	Pass
442	442	100	100	100.0	1269248	Pass
443	442	15	24	20.7	263104	Pass

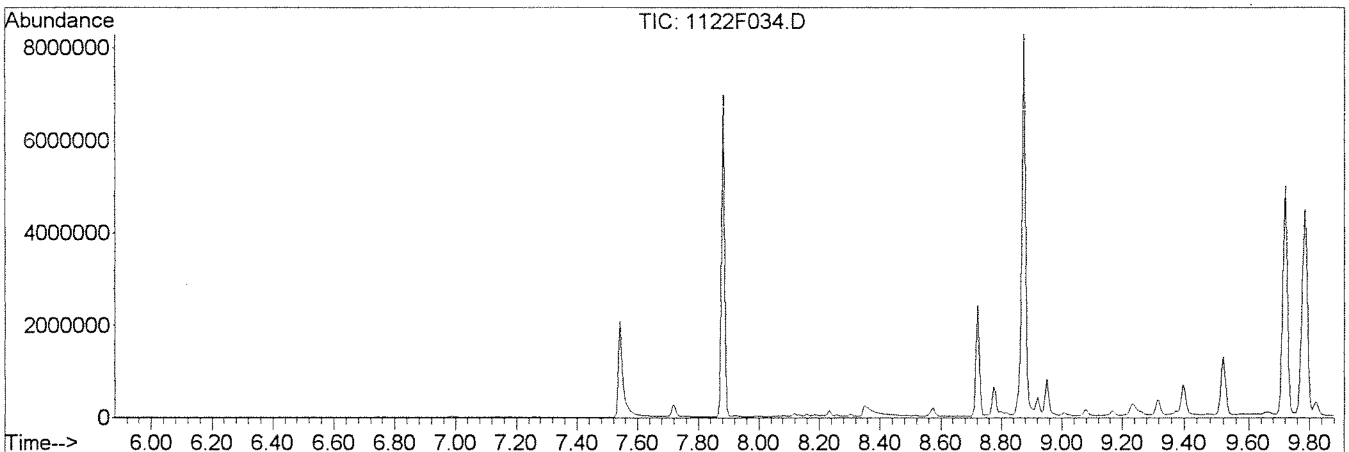
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

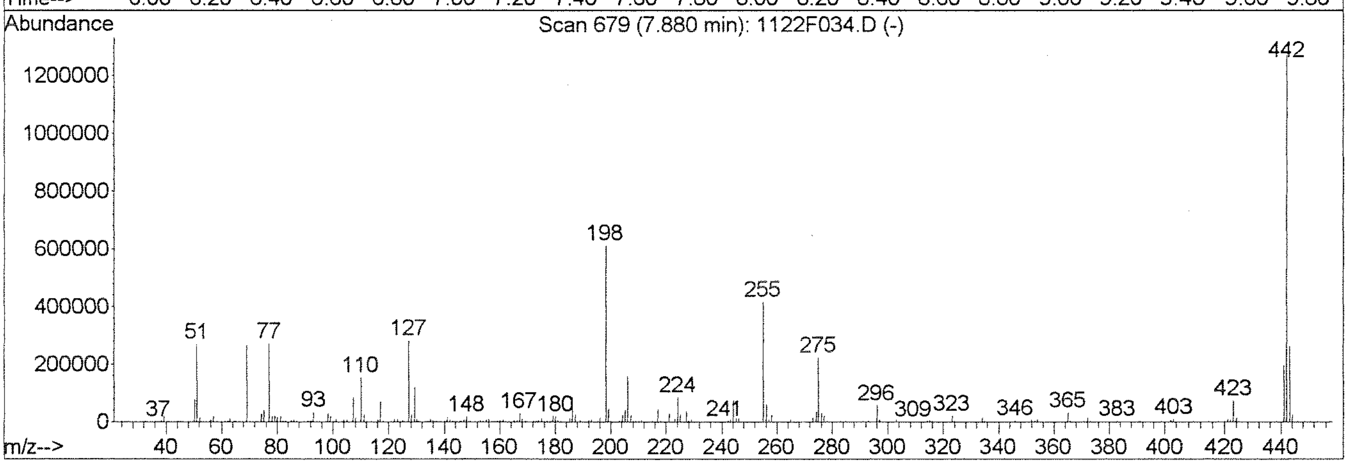
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS11\DATA\112208\1122F034.D Vial: 27
Acq On : 22 Nov 2008 10:42 pm Operator: LWeiskopf
Sample : DFTPP @ 3.0ug/mL | SVM27-37E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS





Spectrum Information: Scan 679

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	44.1	269992	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	46.2	282944	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	48.2	612288	PASS
199	198	5	9	7.2	43944	PASS
275	198	10	60	36.6	224064	PASS
365	442	1	50	2.5	31888	PASS
441	443	0.01	100	74.4	195712	PASS
442	442	30	100	100.0	1269248	PASS
443	442	15	24	20.7	263104	PASS

Scan 679 (7.880 min): 1122F034.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.00	653	53.00	578	69.10	264438	82.10	4494
36.05	96	55.10	1638	71.00	286	83.10	4055
37.20	2042	56.10	9132	72.20	769	84.00	833
38.20	5180	57.10	17648	73.15	2186	85.10	3846
39.10	21125	58.10	1037	74.10	29440	86.10	7098
41.15	31	61.10	3969	75.10	41192	87.10	3531
42.00	604	62.10	4288	77.10	273045	88.00	1048
45.10	840	63.10	10595	78.10	19592	89.00	787
50.10	78920	64.10	1923	79.05	20113	91.10	6046
51.05	269992	65.10	4340	80.10	16872	92.10	5713
52.10	16137	66.00	477	81.10	21128	93.10	34191

Scan 679 (7.880 min): 1122F034.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
94.00	1341	107.10	84664	119.10	835	131.00	1863
95.15	96	108.10	13213	120.00	1098	132.00	703
96.10	1760	110.00	153664	121.00	1108	133.10	505
98.10	29000	111.10	24656	122.10	8884	134.10	3446
99.00	19684	112.10	3399	123.10	10043	135.00	10509
100.10	2498	113.00	1198	124.00	4068	136.00	5131
101.10	9307	114.20	509	125.10	4894	137.10	4504
102.10	706	115.00	1166	127.10	282944	138.00	913
103.10	3932	116.10	8093	128.10	24432	139.00	870
104.00	8000	117.00	70072	129.10	120112	140.10	1915
105.05	7004	118.10	5032	130.05	9705	141.00	16107

Scan 679 (7.880 min): 1122F034.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
142.00	6348	153.00	5292	163.90	1243	175.10	13129
143.00	4094	154.10	3649	165.00	5742	176.10	3333
144.10	1123	155.10	7023	166.00	6018	177.10	5940
145.10	813	156.00	12889	167.00	29032	178.10	2683
146.10	3407	157.10	3831	168.00	11142	179.00	20960
147.05	7272	158.00	2816	169.10	3699	180.10	17832
148.00	18056	159.10	2516	170.00	1152	181.00	7557
149.10	3546	160.10	4764	171.00	1473	182.10	1777
150.00	1308	161.10	8056	172.10	2667	183.10	670
151.10	1817	162.00	2001	173.10	3741	184.10	1900
152.00	1683	163.00	207	174.00	6357	185.10	12678

Scan 679 (7.880 min): 1122F034.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
186.10	86888	198.00	612288	210.10	2703	225.10	24984
187.10	25264	199.00	43944	211.00	6702	226.10	3014
188.10	2708	199.90	2702	213.10	505	227.00	38208
189.00	6634	201.50	3332	215.00	2214	228.00	5778
190.00	611	203.00	5866	216.10	4101	229.00	8599
191.10	2512	204.10	23824	217.00	43944	230.10	1673
192.00	6248	205.10	39688	218.00	4842	231.10	3747
193.10	8169	206.10	159680	219.20	644	232.00	1308
194.10	2213	207.05	22987	221.00	30592	233.20	867
195.10	1392	208.00	5236	223.10	10876	234.10	2967
196.10	17480	209.00	1857	224.10	84656	235.00	2792

Scan 679 (7.880 min): 1122F034.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
236.10	1770	247.00	3016	259.00	3528	274.10	36928
237.00	2614	247.90	705	259.90	1107	275.00	224064
238.10	621	249.00	2933	261.10	779	276.00	30904
239.10	1542	250.00	595	263.10	621	277.00	20000
240.00	1239	251.00	837	263.95	712	278.10	3279
241.10	2581	252.10	954	265.00	9479	278.90	938
242.10	5429	253.20	2610	265.90	1488	282.10	513
243.10	6416	255.00	416832	267.85	122	283.10	2709
244.10	75512	256.00	61496	269.90	941	284.00	1213
245.10	11410	257.00	6649	271.00	632	285.10	3148
246.10	14643	258.00	25016	273.00	15346	286.20	663

Scan 679 (7.880 min): 1122F034.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
289.00	763	304.00	2186	324.00	3698	342.00	601
289.90	955	308.10	610	327.00	4349	346.00	5551
291.00	683	309.10	702	328.00	1934	347.20	1077
292.00	1434	313.00	954	329.00	620	350.00	617
293.00	4793	314.00	3299	332.10	1993	352.00	8920
294.10	941	315.00	7035	333.10	2568	353.00	5874
296.00	57352	316.00	4049	334.10	15724	354.00	9597
297.00	8645	316.90	748	335.00	5635	355.10	2144
301.10	757	321.10	2352	336.10	718	359.00	708
302.10	1506	322.10	1626	339.20	514	363.50	514
303.00	7210	323.10	21464	341.00	3146	365.00	31888

Scan 679 (7.880 min): 1122F034.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
365.90	5056	391.00	2506	423.00	73928		
370.00	974	392.10	1405	424.00	13161		
371.00	2618	400.90	1327	425.00	1495		
372.00	14498	402.00	6606	439.30	1235		
373.00	3455	403.00	9657	441.00	195712		
374.00	689	404.00	3107	442.00	1269248		
377.20	596	405.00	519	443.00	263104		
383.00	3560	410.00	535	444.00	23680		
383.90	912	415.10	540	445.00	1121		
385.00	541	421.00	8968				
390.00	1337	422.10	8335				

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/23/2008
		Time Analyzed:	11:17

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112308\1123F001.D	**Analysis Method:**	8270C SIM
Instrument ID:	MS11	**Analysis Lot:**	KWG0812642
Column:			

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	69.4	399808	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	61.6	354804	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	55.8	321408	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	75.3	576448	PASS
199	198	5	9	7.2	41376	PASS
275	198	10	60	33.2	191232	PASS
365	442	1	50	3.4	26160	PASS
441	443	0	100	72.0	113536	PASS
442	442	100	100	100.0	765568	PASS
443	442	15	24	20.6	157760	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812642-2	J:\MS11\DATA\112308\1123F002.D	11/23/2008	11:43	
Method Blank	KWG0812042-5	J:\MS11\DATA\112308\1123F003.D	11/23/2008	12:10	
Lab Control Sample	KWG0812042-3	J:\MS11\DATA\112308\1123F005.D	11/23/2008	13:03	
Duplicate Lab Control Sample	KWG0812042-4	J:\MS11\DATA\112308\1123F006.D	11/23/2008	13:29	
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112308\1123F011.D	11/23/2008	15:42	
SED02-5-8.5-AMS	KWG0812042-1	J:\MS11\DATA\112308\1123F012.D	11/23/2008	16:09	
SED02-5-8.5-ADMS	KWG0812042-2	J:\MS11\DATA\112308\1123F013.D	11/23/2008	16:35	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File:	J:\MS11\DATA\112308\1123F001.D		**Date Acquired:**	11/23/2008 11:17
Lab ID:	KWG0812642-1		**Date Quantitated:**	
RunType:	DFTPP		**Batch ID:**	KWG0812642
Matrix:	WATER		**Analysis Method:**	8270C SIM
			ListJoinID:	LJ8774

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: KW 11/24/08

Secondary Review: 11-25-08

Printed: 11/24/2008 10:58:04

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/24/2008

Analysis Lot:	KWG0812642	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\DFTPPPAH.M	**Calibration ID:**	CAL7938
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112308\1123F001.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 11:17	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0812642-1			**Soln Conc. Units:**	

Tune Results

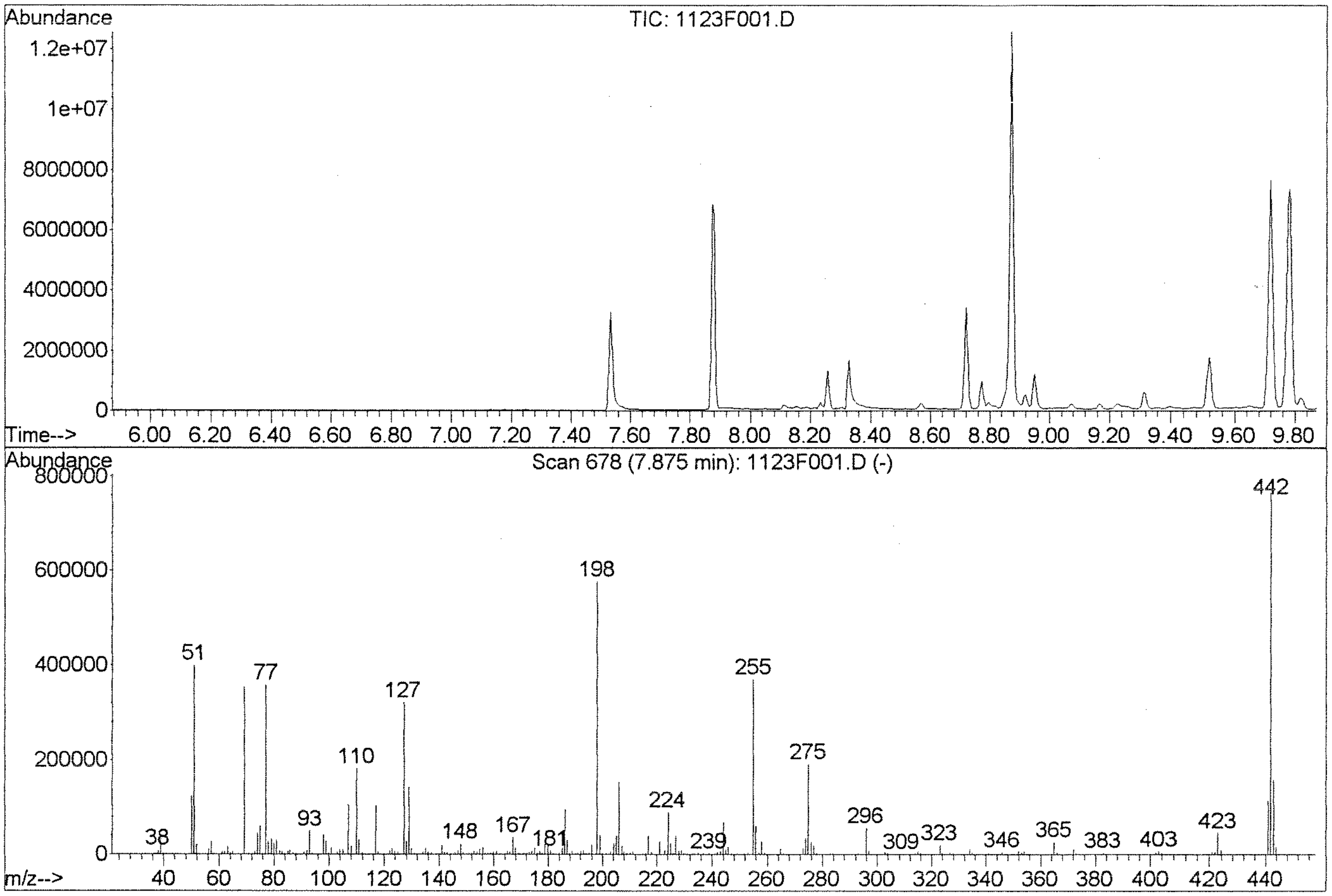
Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	69.4	399808	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	61.6	354804	Pass
70	69	0	2	0.0	0	Pass
127	198	10	80	55.8	321408	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	75.3	576448	Pass
199	198	5	9	7.2	41376	Pass
275	198	10	60	33.2	191232	Pass
365	442	1	50	3.4	26160	Pass
441	443	0.01	100	72.0	113536	Pass
442	442	100	100	100.0	765568	Pass
443	442	15	24	20.6	157760	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112308\1123F001.D Vial: 1
Acq On : 23 Nov 2008 11:17 am Operator: LWeiskopf
Sample : DFTPP @ 3.0ug/mL | SVM27-37E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS



Spectrum Information: Scan 678

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	69.4	399808	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	55.8	321408	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	75.3	576448	PASS
199	198	5	9	7.2	41376	PASS
275	198	10	60	33.2	191232	PASS
365	442	1	50	3.4	26160	PASS
441	443	0.01	100	72.0	113536	PASS
442	442	30	100	100.0	765568	PASS
443	442	15	24	20.6	157760	PASS

Scan 678 (7.875 min): 1123F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.10	21	47.05	2	61.10	5596	75.10	60600
36.10	298	50.10	123248	62.10	5665	77.10	358055
37.10	2998	51.10	399808	63.10	16059	78.10	27496
38.10	8418	52.10	21144	64.10	2186	79.10	32361
39.10	32404	53.10	584	65.10	6284	80.10	22520
40.00	1530	54.00	600	66.10	1019	81.10	30451
41.20	2011	55.15	2612	69.10	354804	82.10	7862
42.10	512	56.10	11577	71.15	1406	83.10	5007
43.10	1548	57.10	26605	72.10	1549	84.00	1608
44.10	174	58.00	1535	73.15	5293	85.10	7237
45.10	437	59.00	509	74.10	44880	86.00	9857

Scan 678 (7.875 min): 1123F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.10	4556	99.10	28168	112.10	3939	124.00	5832
88.10	1565	100.10	3108	113.10	1557	125.10	4945
89.00	682	101.00	13359	114.20	1082	127.10	321408
91.10	6344	102.10	1090	115.10	1692	128.10	28736
92.10	8471	103.00	6262	117.00	104048	129.00	141632
93.10	49455	104.00	10322	118.00	6478	130.00	13017
94.00	2877	105.10	9200	119.05	545	131.10	2995
95.10	1007	107.10	107064	120.10	1740	132.10	1536
96.15	1521	108.10	17232	121.10	878	133.20	1073
97.15	2413	110.10	182144	122.10	8575	134.10	5609
98.10	42560	111.00	31224	123.00	12191	135.10	12342

Scan 678 (7.875 min): 1123F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
136.00	5106	147.05	8715	158.00	3987	169.10	2818
137.05	5128	148.00	21768	159.00	3043	169.90	1065
138.00	1119	149.10	4006	160.00	5209	171.00	2219
139.00	820	150.20	1157	161.00	7553	172.10	2894
140.00	2282	151.10	2422	162.10	2361	173.00	4357
141.00	18720	152.00	2086	163.00	956	174.10	7777
142.10	6159	153.00	7290	164.10	899	175.10	14290
143.00	4145	154.10	5226	165.00	6635	176.10	3204
144.30	1250	155.00	10961	166.00	6330	177.00	7376
145.10	932	156.10	14988	167.10	35752	178.00	2514
146.00	4397	157.10	2151	168.00	13587	179.00	22336

Scan 678 (7.875 min): 1123F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
180.10	17192	191.00	3539	204.10	23272	218.00	5586
181.00	7952	192.10	7020	205.10	38832	219.10	729
182.10	1694	193.05	7897	206.10	153344	221.10	27048
183.20	951	194.20	1694	207.10	18664	223.00	9977
184.00	2845	195.10	2677	208.00	5890	224.10	88744
185.10	14056	196.00	20752	209.00	2546	225.10	22680
186.10	95768	198.00	576448	210.20	3329	226.10	3139
187.10	30560	199.00	41376	211.10	6360	227.00	39080
188.10	2477	200.10	2771	214.90	1877	228.00	6701
189.00	6873	201.50	2407	216.10	3589	229.00	8582
190.00	1171	203.00	6170	217.00	39536	229.90	1126

Scan 678 (7.875 min): 1123F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
231.10	3214	243.10	6705	255.00	370176	267.85	563
231.90	708	244.10	69144	256.00	60768	269.90	621
233.00	1312	245.10	10295	257.00	4415	271.10	1286
234.00	2641	246.00	16327	258.00	26976	272.00	1061
235.00	3704	247.00	2622	259.10	4335	273.00	12684
236.00	1702	247.90	731	260.00	886	274.00	33712
237.00	3529	249.10	2539	260.90	1062	275.00	191232
239.00	2437	250.00	588	263.85	407	276.00	25440
240.00	926	251.10	583	265.00	11721	277.00	17024
241.00	2367	252.00	980	265.85	1288	278.00	2767
242.10	5257	253.10	2295	267.00	643	279.10	522

Scan 678 (7.875 min): 1123F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
281.00	591	298.00	585	317.10	949	335.90	660
283.10	1546	301.00	834	321.00	1886	341.00	2444
284.00	1821	302.05	1093	323.10	19160	342.00	1101
285.00	2347	303.10	6474	324.00	3067	346.00	4388
289.00	863	304.00	2651	326.10	619	347.00	1098
289.90	520	307.90	648	326.90	4292	352.00	6713
291.10	675	309.10	768	328.10	2523	353.10	4393
293.00	3300	310.10	909	332.00	1872	354.00	6792
294.10	765	314.00	2211	333.00	1929	355.10	1524
296.00	55448	315.00	6662	334.00	11781	365.00	26160
297.00	7868	316.10	3530	335.00	3921	366.00	4107

Scan 678 (7.875 min): 1123F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
367.00	926	402.00	5043	443.00	157760		
370.00	732	403.00	6620	444.00	15509		
371.10	1767	403.90	2297	445.00	723		
372.10	11316	415.00	637				
373.00	3223	421.00	5822				
383.00	3071	422.10	6248				
384.00	1285	423.00	45512				
390.00	1359	424.10	9902				
391.00	891	425.10	1137				
392.00	1256	441.00	113536				
401.00	713	442.00	765568				

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/24/2008
		Time Analyzed:	06:34

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\112408\1124F001.D	**Analysis Method:**	8270C SIM
Instrument ID:	MS11	**Analysis Lot:**	KWG0812654
Column:			

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	38.7	202379	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	41.2	215300	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	48.9	255872	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	52.3	523072	PASS
199	198	5	9	7.0	36648	PASS
275	198	10	60	33.8	176640	PASS
365	442	1	50	2.0	19688	PASS
441	443	0	100	72.6	151936	PASS
442	442	100	100	100.0	1001024	PASS
443	442	15	24	20.9	209152	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0812654-2	J:\MS11\DATA\112408\1124F002.D	11/24/2008	07:00	
SED14-2-3.5-A	K0810639-010	J:\MS11\DATA\112408\1124F004.D	11/24/2008	07:55	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS11\DATA\112408\1124F001.D
Lab ID: KWG0812654-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/24/2008 06:34
Date Quantitated:
Batch ID: KWG0812654
Analysis Method: 8270C SIM
ListJoinID: LJ8774

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: [illegible] 11/24/08

Secondary Review: [illegible] 11-24-08

Printed: 11/24/2008 13:41:29
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/24/2008

Analysis Lot:	KWG0812654	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
		Prep Date:			
Prep Ref:					

Quant Method:	J:\MS11\METHODS\SIM\DFTPPPAH.M	**Calibration ID:**	CAL7938
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\112408\1124F001.D			**Instrument:**	MS11
Acqu Date:	11/24/2008 06:34	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0812654-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	38.7	202379	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	41.2	215300	Pass
70	69	0	2	0.0	0	Pass
127	198	10	80	48.9	255872	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	52.3	523072	Pass
199	198	5	9	7.0	36648	Pass
275	198	10	60	33.8	176640	Pass
365	442	1	50	2.0	19688	Pass
441	443	0.01	100	72.6	151936	Pass
442	442	100	100	100.0	1001024	Pass
443	442	15	24	20.9	209152	Pass

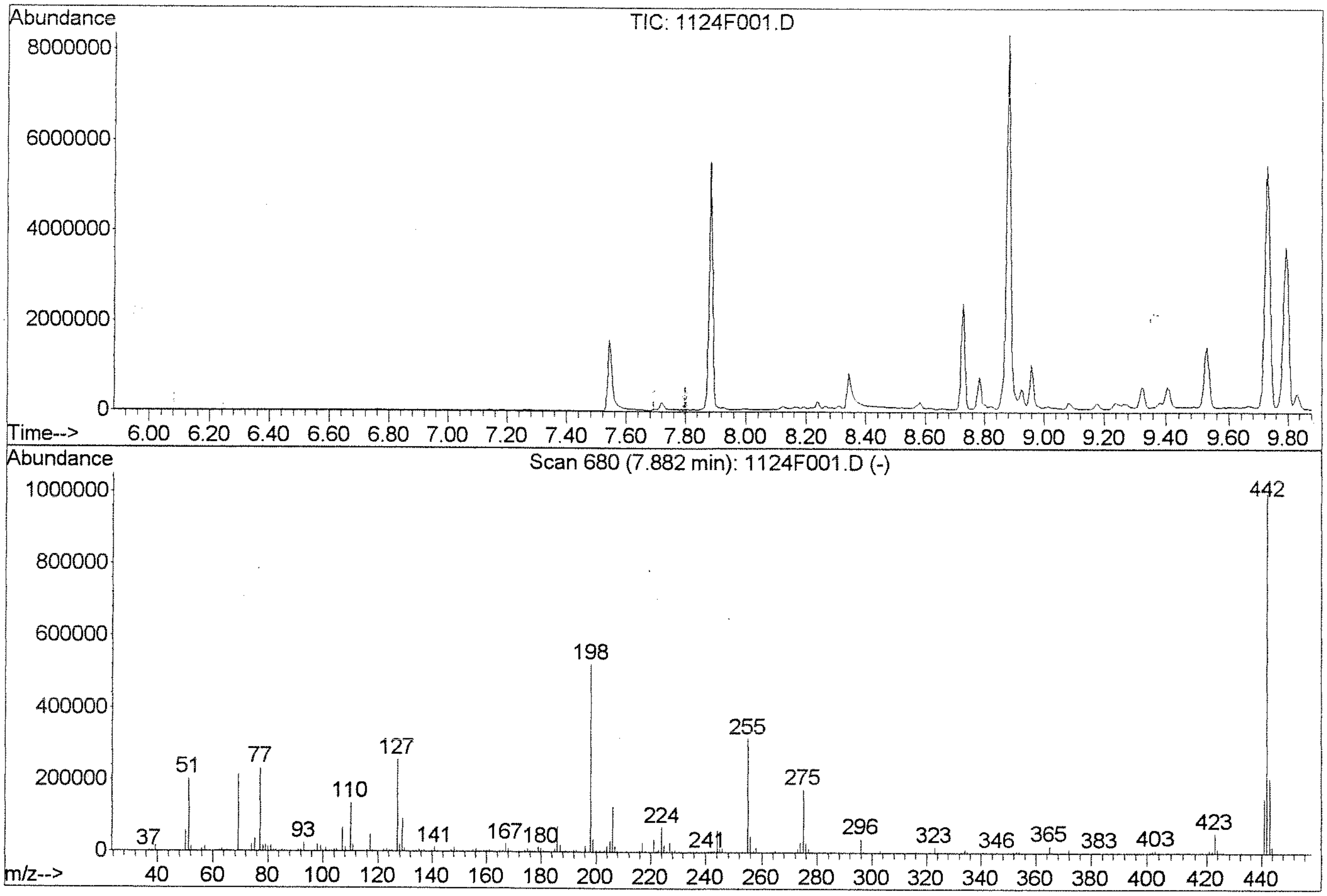
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS11\DATA\112408\1124F001.D Vial: 1
Acq On : 24 Nov 2008 6:34 am Operator: LWeiskopf
Sample : DFTPP @ 3.0ug/mL | SVM27-37E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS



Spectrum Information: Scan 680

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.7	202379	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	48.9	255872	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	52.3	523072	PASS
199	198	5	9	7.0	36648	PASS
275	198	10	60	33.8	176640	PASS
365	442	1	50	2.0	19688	PASS
441	443	0.01	100	72.6	151936	PASS
442	442	30	100	100.0	1001024	PASS
443	442	15	24	20.9	209152	PASS

Scan 680 (7.882 min): 1124F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.10	1516	53.20	951	66.20	964	81.10	15781
38.15	2647	55.10	533	67.25	1546	82.10	3589
39.10	16438	56.10	7703	69.10	215300	83.10	5180
40.10	1179	57.10	15613	71.10	68	84.00	357
41.10	1383	58.00	890	73.15	2933	85.10	3263
43.10	434	60.00	812	74.10	19720	86.05	4070
44.10	705	61.00	2923	75.10	35536	87.00	1624
45.10	1046	62.20	3280	77.10	231734	88.10	1098
50.10	56496	63.10	7663	78.10	16241	89.00	636
51.10	202379	64.10	1200	79.05	17531	91.10	3565
52.10	11585	65.10	4274	80.10	12835	92.10	4827

Scan 680 (7.882 min): 1124F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
93.10	24456	105.00	5138	120.10	1351	132.00	790
94.00	1116	107.10	65959	121.00	1042	132.90	709
96.00	706	108.10	11172	122.00	5557	134.10	2630
97.15	1555	110.00	135488	123.10	7494	135.10	6493
98.10	19376	111.00	18736	124.10	4158	136.10	3065
99.10	14231	112.00	2362	125.05	2742	137.10	4099
100.10	2163	113.10	818	127.10	255872	138.00	1043
101.10	9578	115.30	948	128.10	20696	139.00	781
102.20	687	116.10	4533	129.00	91184	140.00	1898
103.10	4162	117.10	48328	130.00	9157	141.00	12158
104.10	6629	118.00	3630	131.10	1040	142.10	4259

Scan 680 (7.882 min): 1124F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
143.10	2587	153.10	3338	165.00	4649	176.10	3303
144.00	970	154.00	2744	166.10	4014	177.00	4014
145.20	1245	155.00	5974	167.05	22426	178.00	1850
146.10	2855	156.10	10408	168.00	8620	179.10	14757
147.00	6352	157.10	2148	169.00	2289	180.10	10709
148.10	10806	158.00	3080	170.10	981	181.00	4503
149.00	3259	159.00	3136	171.10	1304	181.90	853
150.20	935	160.10	4042	172.00	2427	183.05	477
151.05	1211	161.00	6009	173.10	2183	184.00	1133
151.40	1580	161.90	2470	174.10	3981	185.10	8829
152.20	1143	164.00	972	175.10	9420	186.10	70368

Scan 680 (7.882 min): 1124F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
187.10	18944	200.00	3417	215.00	1458	228.00	3853
188.00	1947	201.50	3374	216.00	3141	229.00	5703
189.00	3672	203.10	3254	217.00	26936	229.95	351
190.10	855	204.10	16019	218.00	4289	231.10	3072
191.10	2332	205.10	30208	219.10	856	232.00	692
192.00	4853	206.10	128016	221.00	35592	233.20	567
193.00	6777	207.10	16885	223.00	8434	234.00	1524
194.10	1028	208.00	4119	224.10	70016	235.00	2486
196.10	17928	209.10	1665	225.10	19936	236.00	1176
198.00	523072	211.10	4591	226.10	2676	237.10	1933
199.00	36648	213.10	946	227.00	26792	238.00	504

Scan 680 (7.882 min): 1124F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
239.00	1140	251.00	847	265.00	6301	278.10	2284
239.90	1080	252.10	1023	265.90	1380	279.10	597
241.10	1694	253.10	1760	267.90	95	282.20	1119
242.10	3786	255.00	316928	270.10	969	283.00	1931
243.10	4479	256.00	46680	271.20	648	284.00	774
244.10	61304	257.10	3755	272.10	1336	285.00	2145
245.10	8474	258.00	14843	273.10	8994	289.00	870
246.10	10566	259.10	2522	274.00	28344	290.00	653
247.10	1767	260.00	505	275.00	176640	292.00	526
249.10	2451	261.00	933	276.00	25288	293.00	3234
250.10	559	264.20	1138	277.00	11772	294.00	709

Scan 680 (7.882 min): 1124F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
296.00	39712	314.00	2170	329.00	682	354.10	6729
297.10	5053	315.00	4282	332.00	1449	355.00	1803
298.00	509	316.10	3835	333.10	1741	359.30	567
301.10	684	317.00	658	334.10	10031	363.70	536
301.95	361	321.00	1635	335.10	3152	365.00	19688
303.10	6016	322.10	1016	335.90	536	366.00	3065
304.00	2035	323.00	16134	341.00	1944	370.10	622
308.00	741	324.10	3115	342.00	946	371.00	1219
308.90	1017	324.80	605	346.00	2527	372.00	10357
310.10	882	326.90	2471	352.00	4868	373.10	2857
313.00	880	328.00	2133	353.00	4290	374.10	725

Scan 680 (7.882 min): 1124F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
383.10	2739	421.00	6899				
384.10	599	422.00	6251				
390.00	1602	423.00	54656				
391.00	920	424.00	11223				
392.00	919	425.00	1568				
401.10	1143	441.10	151936				
402.00	4612	442.00	1001024				
403.00	7265	443.00	209152				
404.00	2875	444.10	18216				
410.10	871	445.00	1471				
414.90	689						

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 11/10/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL7938
Instrument ID: MS11

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS11\DATA\111008\1110F005.D	F	J:\MS11\DATA\111008\1110F010.D
B	J:\MS11\DATA\111008\1110F006.D	G	J:\MS11\DATA\111008\1110F011.D
C	J:\MS11\DATA\111008\1110F007.D	H	J:\MS11\DATA\111008\1110F012.D
D	J:\MS11\DATA\111008\1110F008.D	I	J:\MS11\DATA\111008\1110F013.D
E	J:\MS11\DATA\111008\1110F009.D	J	J:\MS11\DATA\111008\1110F014.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	2.0	1.37	B	4.0	1.30	C	8.0	1.28	D	20	1.21	E	100	1.20
	F	200	1.23	G	400	1.21	H	1000	1.14	I	1600	1.11	J	2000	1.13
2-Methylnaphthalene	A	2.0	0.941	B	4.0	0.854	C	8.0	0.870	D	20	0.836	E	100	0.831
	F	200	0.852	G	400	0.853	H	1000	0.816	I	1600	0.811	J	2000	0.833
Acenaphthylene	A	2.0	2.44	B	4.0	2.18	C	8.0	2.25	D	20	2.14	E	100	2.22
	F	200	2.33	G	400	2.35	H	1000	2.26	I	1600	2.18	J	2000	2.22
Acenaphthene	A	2.0	1.48	B	4.0	1.39	C	8.0	1.38	D	20	1.31	E	100	1.34
	F	200	1.39	G	400	1.38	H	1000	1.35	I	1600	1.33	J	2000	1.37
Fluorene	A	2.0	1.74	B	4.0	1.57	C	8.0	1.61	D	20	1.54	E	100	1.64
	F	200	1.72	G	400	1.70	H	1000	1.66	I	1600	1.61	J	2000	1.66
Dibenzofuran	A	2.0	2.29	B	4.0	2.06	C	8.0	2.10	D	20	2.00	E	100	2.06
	F	200	2.13	G	400	2.10	H	1000	1.99	I	1600	1.93	J	2000	1.96
Phenanthrene	A	2.0	1.58	B	4.0	1.43	C	8.0	1.42	D	20	1.31	E	100	1.40
	F	200	1.43	G	400	1.44	H	1000	1.37	I	1600	1.32	J	2000	1.36
Anthracene	A	2.0	1.40	B	4.0	1.23	C	8.0	1.26	D	20	1.28	E	100	1.36
	F	200	1.45	G	400	1.50	H	1000	1.41	I	1600	1.36	J	2000	1.44
Fluoranthene	A	2.0	1.87	B	4.0	1.63	C	8.0	1.57	D	20	1.54	E	100	1.62
	F	200	1.64	G	400	1.64	H	1000	1.50	I	1600	1.47	J	2000	1.51
Pyrene	A	2.0	1.66	B	4.0	1.61	C	8.0	1.60	D	20	1.56	E	100	1.49
	F	200	1.54	G	400	1.50	H	1000	1.40	I	1600	1.34	J	2000	1.35
Benz(a)anthracene	A	2.0	1.83	B	4.0	1.43	C	8.0	1.33	D	20	1.26	E	100	1.26
	F	200	1.32	G	400	1.33	H	1000	1.31	I	1600	1.28	J	2000	1.30
Chrysene	A	2.0	1.54	B	4.0	1.42	C	8.0	1.37	D	20	1.31	E	100	1.30
	F	200	1.34	G	400	1.34	H	1000	1.28	I	1600	1.25	J	2000	1.26
Benzo(b)fluoranthene	A	2.0	1.43	B	4.0	1.31	C	8.0	1.29	D	20	1.26	E	100	1.37
	F	200	1.45	G	400	1.51	H	1000	1.39	I	1600	1.37	J	2000	1.40
Benzo(k)fluoranthene	A	2.0	1.42	B	4.0	1.18	C	8.0	1.22	D	20	1.23	E	100	1.32
	F	200	1.39	G	400	1.45	H	1000	1.35	I	1600	1.34	J	2000	1.35

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 11/10/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL7938
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzo(a)pyrene	A	2.0	1.16	B	4.0	1.08	C	8.0	1.01	D	20	1.01	E	100	1.07
	F	200	1.17	G	400	1.24	H	1000	1.23	I	1600	1.22	J	2000	1.24
Indeno(1,2,3-cd)pyrene	A	2.0	1.26	B	4.0	1.03	C	8.0	0.999	D	20	0.954	E	100	0.982
	F	200	1.06	G	400	1.11	H	1000	1.07	I	1600	1.06	J	2000	1.07
Dibenz(a,h)anthracene	A	2.0	1.13	B	4.0	1.18	C	8.0	1.07	D	20	1.02	E	100	1.08
	F	200	1.14	G	400	1.16	H	1000	1.13	I	1600	1.10	J	2000	1.13
Benzo(g,h,i)perylene	A	2.0	1.33	B	4.0	1.25	C	8.0	1.22	D	20	1.18	E	100	1.18
	F	200	1.22	G	400	1.23	H	1000	1.18	I	1600	1.14	J	2000	1.15
Fluorene-d10	A	2.0	1.49	B	4.0	1.29	C	8.0	1.30	D	20	1.30	E	100	1.32
	F	200	1.38	G	400	1.40	H	1000	1.38	I	1600	1.35	J	2000	1.39
Fluoranthene-d10	A	2.0	1.50	B	4.0	1.34	C	8.0	1.32	D	20	1.30	E	100	1.37
	F	200	1.37	G	400	1.43	H	1000	1.34	I	1600	1.32	J	2000	1.34
Terphenyl-d14	A	2.0	1.24	B	4.0	1.06	C	8.0	1.07	D	20	1.03	E	100	0.986
	F	200	1.02	G	400	1.02	H	1000	0.985	I	1600	0.965	J	2000	0.974

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 11/10/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL7938
Instrument ID: MS11

Column: MS

		Calibration Evaluation					RRF Evaluation		
Analyte Name	Compound Type	Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Naphthalene	MS	AverageRF	% RSD	6.5		≤ 15	1.22		0.01
2-Methylnaphthalene	MS	AverageRF	% RSD	4.3		≤ 15	0.850		0.01
Acenaphthylene	MS	AverageRF	% RSD	4.0		≤ 15	2.26		0.01
Acenaphthene	MS	AverageRF	% RSD	3.3		≤ 15	1.37		0.01
Fluorene	MS	AverageRF	% RSD	3.9		≤ 15	1.65		0.01
Dibenzofuran	MS	AverageRF	% RSD	5.0		≤ 15	2.06		0.01
Phenanthrene	MS	AverageRF	% RSD	5.4		≤ 15	1.41		0.01
Anthracene	MS	AverageRF	% RSD	6.5		≤ 15	1.37		0.01
Fluoranthene	MS	AverageRF	% RSD	7.1		≤ 15	1.60		0.01
Pyrene	MS	AverageRF	% RSD	7.2		≤ 15	1.50		0.01
Benz(a)anthracene	MS	AverageRF	% RSD	12.5		≤ 15	1.36		0.01
Chrysene	MS	AverageRF	% RSD	6.6		≤ 15	1.34		0.01
Benzo(b)fluoranthene	MS	AverageRF	% RSD	5.5		≤ 15	1.38		0.01
Benzo(k)fluoranthene	MS	AverageRF	% RSD	6.7		≤ 15	1.33		0.01
Benzo(a)pyrene	MS	AverageRF	% RSD	8.2		≤ 15	1.14		0.01
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	8.0		≤ 15	1.06		0.01
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	4.3		≤ 15	1.11		0.01
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	4.7		≤ 15	1.21		0.01
Fluorene-d10	SURR	AverageRF	% RSD	4.6		≤ 15	1.36		0.01
Fluoranthene-d10	SURR	AverageRF	% RSD	4.4		≤ 15	1.36		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	7.7		≤ 15	1.04		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Calibration Date: 11/10/2008
Date Analyzed: 11/11/2008

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration ID: CAL7938
Units: ng/ml

File ID: J:\MS11\DATA\111108\1111F003.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	400	1.22	1.21	0	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	400	0.850	0.850	0	NA	± 20 %	AverageRF
Acenaphthylene	400	420	2.26	2.38	6	NA	± 20 %	AverageRF
Acenaphthene	400	410	1.37	1.39	2	NA	± 20 %	AverageRF
Fluorene	400	420	1.65	1.74	6	NA	± 20 %	AverageRF
Dibenzofuran	400	410	2.06	2.12	3	NA	± 20 %	AverageRF
Phenanthrene	400	400	1.41	1.42	1	NA	± 20 %	AverageRF
Anthracene	400	420	1.37	1.45	6	NA	± 20 %	AverageRF
Fluoranthene	400	410	1.60	1.64	3	NA	± 20 %	AverageRF
Pyrene	400	400	1.50	1.52	1	NA	± 20 %	AverageRF
Benz(a)anthracene	400	390	1.36	1.34	-2	NA	± 20 %	AverageRF
Chrysene	400	410	1.34	1.36	1	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	450	1.38	1.54	11	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	450	1.33	1.49	12	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	440	1.14	1.26	10	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	400	1.06	1.05	-1	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	420	1.11	1.16	4	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	420	1.21	1.26	4	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Directory: J:\MS11\DATA\111008

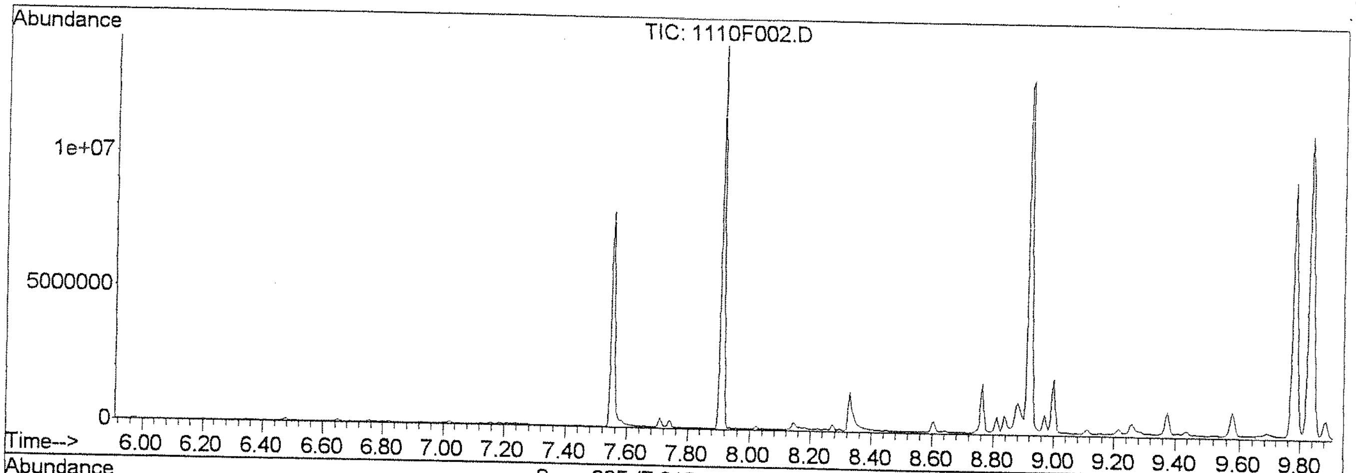
Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1110F001.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E NR		
2	1	1110F002.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		10 Nov 2008 14:1
3	2	1110F003.D	1.	IB NR		10 Nov 2008 14:4
4	2	1110F004.D	1.	IB		10 Nov 2008 15:0
5	5	1110F005.D	1.	SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D		10 Nov 2008 15:3
6	6	1110F006.D	1.	SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E		10 Nov 2008 16:5
7	7	1110F007.D	1.	SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F		10 Nov 2008 17:2
8	8	1110F008.D	1.	SIM-PAH ICAL @0.02/0.4ug/mL | SVM27-3G		10 Nov 2008 17:4
9	9	1110F009.D	1.	SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H		10 Nov 2008 18:1
10	10	1110F010.D	1.	SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I		10 Nov 2008 18:4
11	11	1110F011.D	1.	SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J		10 Nov 2008 19:0
12	12	1110F012.D	1.	SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K		10 Nov 2008 19:3
13	13	1110F013.D	1.	SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L		10 Nov 2008 20:0
14	14	1110F014.D	1.	SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M		10 Nov 2008 20:2
15	15	1110F015.D	1.	SIM-PAH ICV @ 0.4ug/mL | SVM27-49L	NR - rerun	10 Nov 2008 20:5
16	16	1110F113.D	1.	Baked NR		10 Nov 2008 21:1
17	17	1110F114.D	1.	Baked		10 Nov 2008 21:4
18	18	1110F115.D	1.	Unbaked		10 Nov 2008 22:1
19	19	1110F116.D	1.	Unbaked		10 Nov 2008 22:3
						10 Nov 2008 23:0

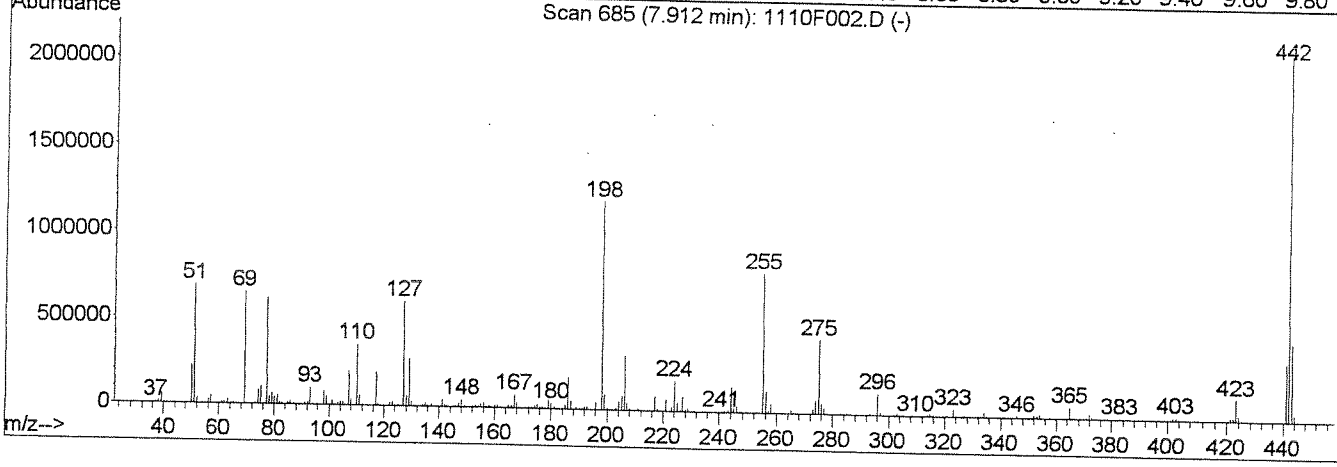
CAL 7938
SIM-PAH-PCP ICAL
11/12/08

DFTPP

Data File : J:\MS11\DATA\111008\1110F002.D
Acq On : 10 Nov 2008 2:43 pm
Sample : DFTPP @ 3.0ug/mL | SVM27-37E
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00





Spectrum Information: Scan 685

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	57.1	686200	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	50.1	602112	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	57.0	1202688	PASS
199	198	5	9	7.1	85728	PASS
275	198	10	60	35.6	428288	PASS
365	442	1	50	3.1	64632	PASS
441	443	0.01	100	74.0	331776	PASS
442	442	30	100	100.0	2109952	PASS
443	442	15	24	21.3	448640	PASS

1110F002.D DFTPPPAH.M Wed Nov 12 10:51:49 2008

ll 11/12/08

DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.95	1321	47.10	379	62.00	11383	78.10	44672
37.05	5054	50.10	218816	63.10	27696	79.00	62592
38.10	14361	51.05	686200	64.10	3738	80.00	41248
39.10	57944	52.00	35320	65.05	10136	81.00	54380
40.10	2899	53.00	1752	66.10	1411	82.00	13113
41.10	1312	55.05	6419	69.00	649189	83.05	10441
42.05	647	56.10	21964	71.00	1290	84.00	1729
43.20	2137	57.00	43563	72.10	1432	85.00	11116
44.05	3845	58.00	2001	74.10	81440	85.95	16564
45.10	1961	58.90	1153	75.00	105760	87.00	8212
46.40	526	61.10	10248	77.05	616122	88.00	3491

Scan 685 (7.912 min): 1110F002.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
89.10	1304	102.10	2425	117.00	193152	130.00	25496
91.00	12660	103.00	11490	118.00	14648	131.10	4590
92.10	15465	104.00	19768	118.90	1705	132.00	3047
93.00	96218	105.00	18018	120.10	2438	133.00	1815
94.00	7254	107.00	195776	122.00	19552	134.00	9613
95.10	1129	108.00	31440	123.00	22392	134.95	21569
96.00	4236	110.00	351040	124.00	10598	136.00	8326
98.00	77896	111.00	54784	125.10	9004	137.10	10443
99.00	48352	112.00	7304	127.00	602112	137.90	2660
100.00	4691	113.00	2353	128.10	57048	139.00	2881
101.00	24936	114.10	826	129.00	271680	141.00	40120

Scan 685 (7.912 min): 1110F002.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
142.00	11585	153.00	13028	164.10	2070	175.00	24296
143.00	7538	154.00	8285	165.00	15345	176.00	8578
144.00	2097	155.00	20072	166.10	14444	177.00	14212
145.10	1768	156.00	26720	166.95	75522	178.10	5590
146.00	8581	157.00	6253	168.00	30440	179.00	50720
147.10	19632	157.90	6818	169.00	5245	180.00	30208
148.00	40752	159.00	4883	170.00	2400	181.00	14154
149.10	8470	160.00	11827	171.00	3321	182.00	2810
150.00	2130	161.00	14263	172.00	6853	183.10	1503
151.00	4613	161.90	3319	173.00	7878	184.10	4075
151.90	2844	162.90	1356	174.10	14375	185.00	24312

Scan 685 (7.912 min): 1110F002.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
186.00	181056	199.00	85728	210.10	5678	225.00	48976
187.00	51232	200.00	6845	211.00	14059	226.20	8255
188.00	6088	201.50	6121	213.10	833	227.00	86560
189.00	12367	202.30	1986	214.00	517	228.00	11376
190.10	2425	203.00	11918	215.10	3772	229.00	16768
191.10	6219	204.00	47168	217.00	86192	229.90	2953
192.00	14055	205.10	78936	218.00	12170	231.10	7060
193.00	16248	206.00	315648	219.00	1754	232.00	1127
194.00	2991	207.00	40236	221.00	66840	233.00	1950
196.00	41344	208.00	12103	223.00	21992	234.00	5224
198.00	1202688	209.00	4104	224.00	176256	235.00	6231

11/12/18

DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
236.00	3618	247.00	7943	259.00	7622	273.00	28168
237.00	6115	248.10	1365	260.00	1436	274.00	79576
238.00	1295	249.00	5813	261.00	1443	275.00	428288
239.00	4379	249.90	1581	263.95	1501	276.00	59976
239.90	2124	251.00	1632	265.00	20568	277.00	35520
241.00	5534	252.00	2206	266.00	2996	278.00	6204
242.00	9725	253.00	5318	267.00	558	279.00	1532
243.10	11975	255.00	804608	267.85	1057	281.00	556
244.00	148224	256.00	121928	270.10	1142	281.90	1337
245.00	22248	257.00	11012	271.00	2213	283.00	3829
246.00	33848	258.00	51808	272.20	3453	284.10	3810

Scan 685 (7.912 min): 1110F002.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
285.00	5634	298.00	1241	314.90	13931	329.00	572
286.20	1106	301.00	2304	316.00	8298	332.00	3584
288.00	657	301.90	2673	317.10	1582	333.00	5000
289.10	1375	303.10	14995	320.00	770	334.00	28936
290.00	1326	304.00	3289	321.00	4633	335.10	7800
291.00	1124	308.00	1837	323.00	41352	335.90	742
292.00	2605	309.10	734	324.10	8600	338.90	808
293.00	7700	310.00	1445	325.00	707	340.00	836
294.10	2539	311.00	524	326.00	1651	341.00	4712
296.00	122976	313.00	1442	327.00	9751	342.00	1644
297.00	16400	314.00	7106	328.00	4008	345.90	10058

Scan 685 (7.912 min): 1110F002.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

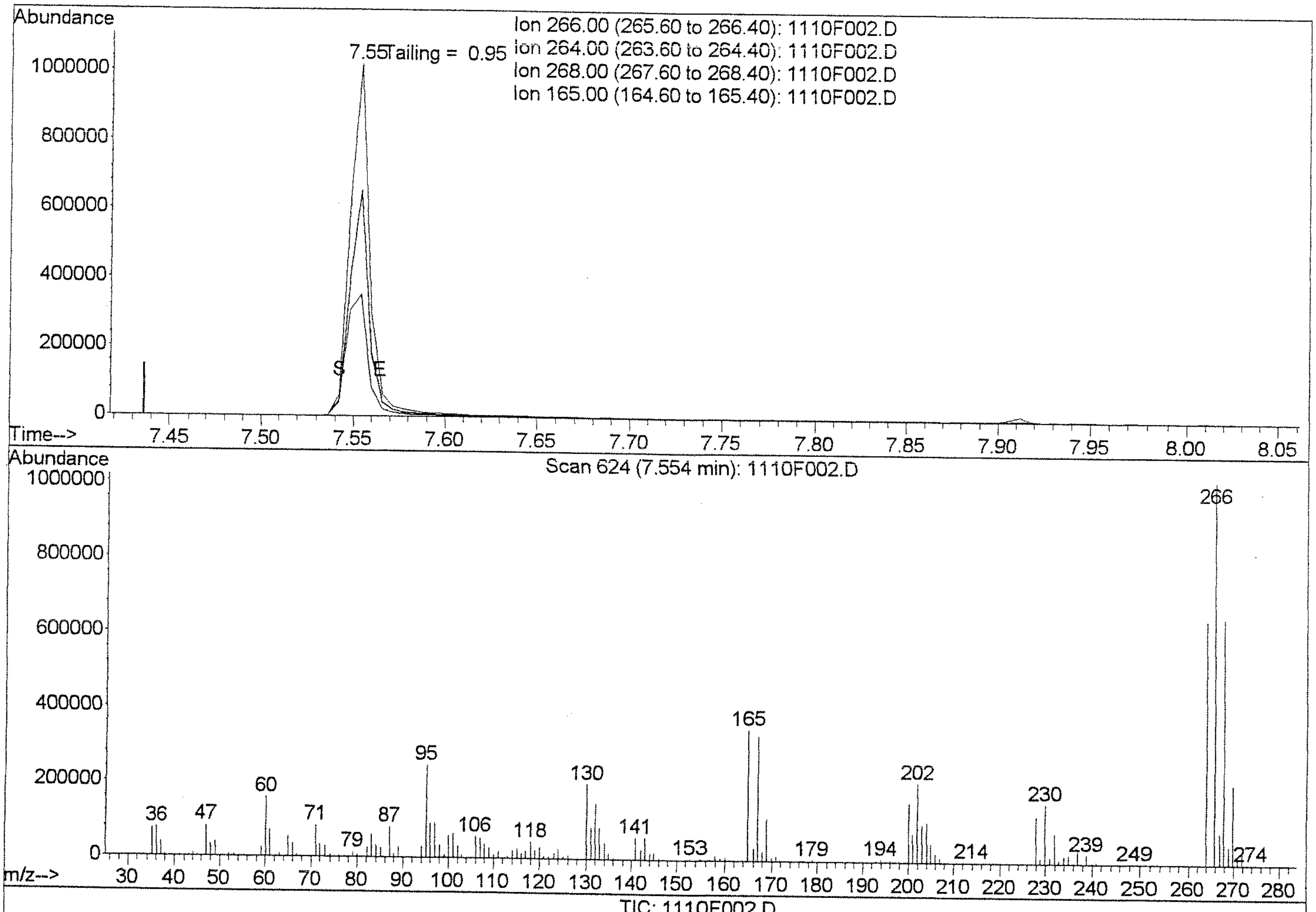
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
347.00	2230	370.00	1503	392.00	1921	424.00	26584
351.00	1644	371.00	4405	396.80	634	425.00	2873
352.00	15707	372.00	25840	400.90	1712	438.00	538
353.00	11527	373.00	6869	402.00	11899	439.10	1484
354.00	18344	374.10	1067	403.00	16177	441.00	331776
355.00	2666	377.10	649	404.00	6435	442.00	2109952
359.10	1436	383.00	6630	405.00	1217	443.00	448640
359.90	513	384.00	2159	415.00	798	444.00	38984
364.90	64632	385.00	742	421.00	14856	445.00	1919
365.90	9272	390.00	3376	422.00	16074		
366.80	578	391.00	3128	423.00	125240		

Data File : J:\MS11\DATA\111008\1110F002.D
Acq On : 10 Nov 2008 2:43 pm
Sample : DFTPP @ 3.0ug/mL | SVM27-37E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 10 15:03 2008

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Oct 12 13:33:42 2004
Response via : Single Level Calibration



(1) Pentachlorophenol

6.94min 0.00ng/ml

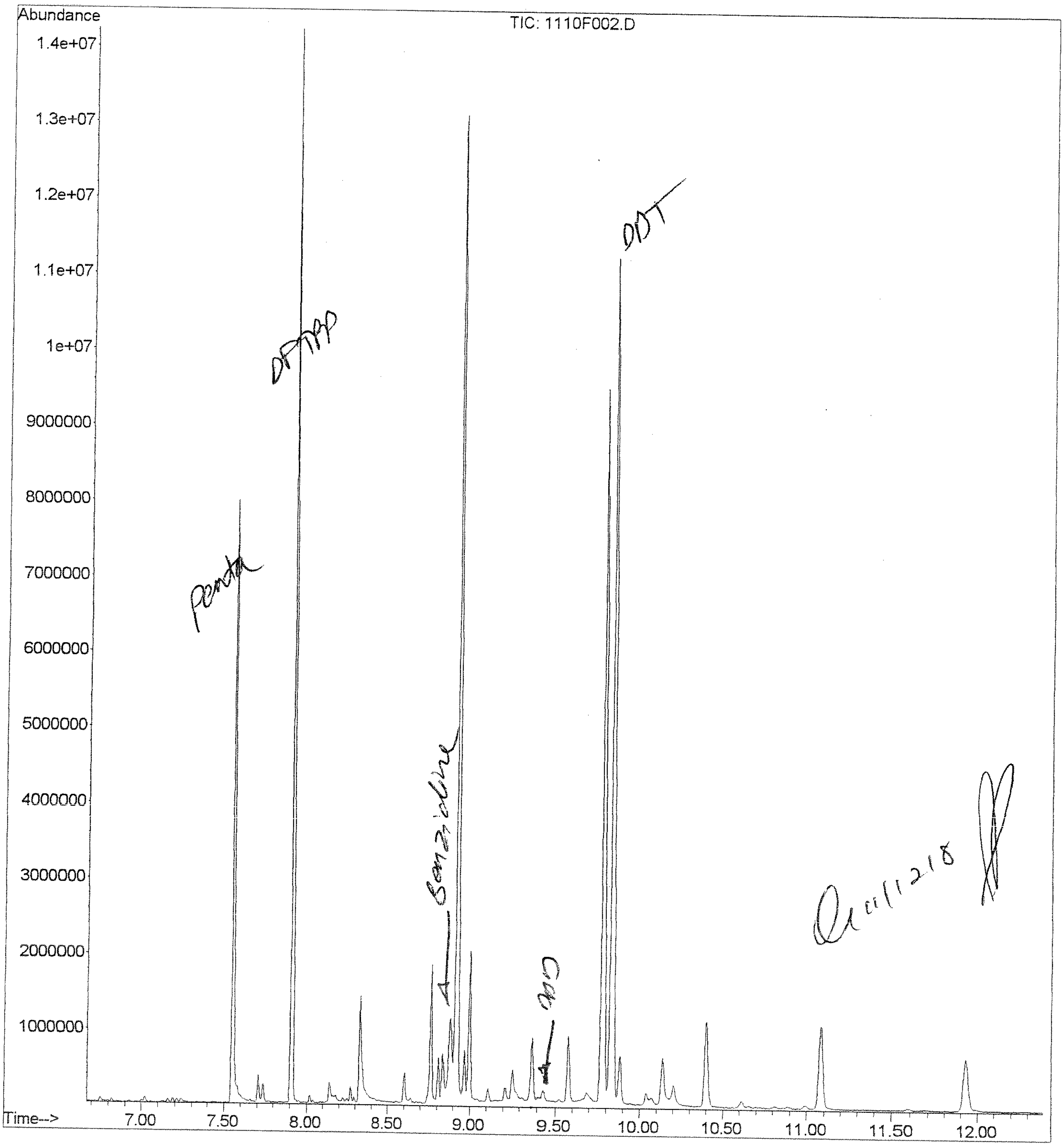
response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	64.50	0.00#
268.00	63.70	0.00#
165.00	28.70	0.00

Qu 11/12/08

1110F002.D DFTPPPAH.M Wed Nov 12 10:52:08 2008

File : J:\MS11\DATA\111008\1110F002.D
Operator : LWeiskopf
Acquired : 10 Nov 2008 2:43 pm using AcqMethod SIMLOC
Instrument : MS11
Sample Name : DFTPP @ 3.0ug/mL | SVM27-37E
Misc Info :
Vial Number: 1



1	4.070	rBV	0.029	25405	4.052	4.081
2	4.211	rBV	0.065	367276	4.169	4.234
3	4.328	rVB	0.024	21281	4.322	4.346
4	4.399	rBV	0.041	21636	4.381	4.422
5	4.510	rVB	0.059	29424	4.493	4.551
6	4.610	rVB	0.047	20263	4.598	4.645
7	4.710	rBV	0.065	35708	4.669	4.734
8	4.839	rBV	0.094	176153	4.810	4.904
9	5.068	rVB	0.047	38434	5.057	5.104
10	5.174	rVB	0.076	60282	5.162	5.239
11	5.292	rBV	0.100	233248	5.245	5.345
12	5.632	rVB	0.035	15775	5.621	5.656
13	5.709	rVV	0.076	18392	5.685	5.762
14	5.826	rVB	0.059	31330	5.791	5.850
15	5.909	rBV	0.041	21453	5.885	5.926
16	5.973	rVV	0.041	18462	5.950	5.991
17	6.032	rVB	0.035	18286	6.014	6.050
18	6.202	rVV	0.041	16101	6.179	6.220
19	6.349	rVV	0.071	42124	6.320	6.390
20	6.408	rVB	0.047	21174	6.390	6.437
21	6.479	rBV	0.053	84206	6.443	6.496
22	6.649	rBV	0.047	81011	6.631	6.678
23	6.755	rBV	0.047	58744	6.737	6.784
24	6.819	rVB	0.029	22964	6.808	6.837
25	6.855	rVB	0.053	18870	6.837	6.890
26	6.925	rBV	0.059	27099	6.890	6.949
27	7.019	rVB	0.059	87406	6.984	7.043
28	7.154	rVB	0.029	32086	7.142	7.172
29	7.189	rBV	0.029	44872	7.172	7.201
30	7.213	rBV	0.024	31997	7.201	7.225
31	7.236	rVB	0.076	70962	7.225	7.301
32	7.448	rBV	0.071	23739	7.401	7.471
33	7.554	rBV	0.129	6943531	7.518	7.648
34	7.660	rVV	0.041	31937	7.648	7.689
35	7.707	rVV	0.035	276891	7.689	7.724
36	7.742	rVB	0.035	210650	7.724	7.759
37	7.836	rBV	0.041	19003	7.824	7.865
38	7.912	rBV	0.082	9637729	7.865	7.947
39	8.024	rBV	0.035	76451	8.000	8.036
40	8.141	rVV	0.100	492500	8.112	8.212
41	8.224	rVV	0.024	47527	8.212	8.235
42	8.247	rVV	0.024	37113	8.235	8.259
43	8.271	rVV	0.029	150479	8.259	8.288
44	8.329	rBV	0.123	1881855	8.312	8.435
45	8.605	rVV	0.053	380791	8.576	8.629
46	8.641	rVB	0.035	57936	8.629	8.664
47	8.764	rBV	0.076	1670755	8.717	8.793
48	8.811	rVV	0.029	497968	8.793	8.823
49	8.835	rVV	0.029	670936	8.823	8.852
50	8.882	rVV	0.047	1852046	8.852	8.899
51	8.923	rVV	0.053	12564723	8.899	8.952
52	8.970	rVV	0.029	600569	8.952	8.981
53	8.999	rVB	0.053	1668482	8.981	9.034
54	9.111	rBV	0.053	161182	9.087	9.140
55	9.211	rBV	0.047	195654	9.187	9.234
56	9.258	rVV	0.071	578916	9.234	9.305
57	9.375	rBV	0.059	866835	9.340	9.399
58	9.434	rVB	0.100	ODD 257261	9.399	9.499
59	9.522	rBV	0.041	29927	9.504	9.546
60	9.575	rBV	0.065	940898	9.551	9.616
61	9.687	rVB	0.076	219989	9.663	9.739

62	9.781	rVV	0.065	10681866	9.739	9.804
63	9.833	rVV	0.059	DDT 13317032	9.804	9.863
64	9.886	rVB	0.065	799634	9.863	9.927
65	10.039	rBV	0.041	203310	10.016	10.057
66	10.139	rBV	0.071	940457	10.104	10.174
67	10.204	rVB	0.082	445909	10.180	10.262
68	10.403	rBV	0.082	1647366	10.362	10.444
69	10.615	rBV	0.071	146553	10.574	10.644
70	10.650	rVV	0.041	29563	10.644	10.685
71	10.697	rVB	0.053	20026	10.685	10.738
72	10.809	rBV	0.053	48524	10.785	10.838
73	10.885	rVB	0.065	42758	10.873	10.938
74	10.991	rBV	0.071	82909	10.962	11.032
75	11.079	rVB	0.141	1916731	11.038	11.179
76	11.578	rVB	0.071	56804	11.561	11.631
77	11.696	rBV	0.071	34492	11.649	11.719
78	11.866	rBV	0.041	16948	11.837	11.878
79	11.931	rVV	0.159	1515765	11.878	12.037
80	12.560	rVB	0.076	58218	12.530	12.607
81	12.683	rBV	0.065	37467	12.630	12.695
82	12.818	rVV	0.094	78489	12.777	12.871
83	12.994	rBV	0.129	1463997	12.930	13.059
84	13.171	rVB	0.082	54144	13.147	13.229
85	13.359	rBV	0.094	55503	13.312	13.406
86	14.046	rVB	0.165	169423	13.993	14.158
87	14.328	rBV	0.182	976141	14.240	14.422
88	14.616	rBV	0.094	72591	14.569	14.663
89	14.998	rVB	0.065	15717	14.957	15.021
90	15.351	rBV	0.053	21212	15.309	15.362
91	15.521	rBV	0.053	22625	15.480	15.533
92	15.633	rVB	0.059	31738	15.609	15.668
93	15.873	rBV	0.147	1027362	15.815	15.962
94	16.232	rBV	0.035	27004	16.202	16.238
95	16.766	rBV	0.123	909691	16.696	16.819
96	17.219	rVB	0.076	154535	17.195	17.272
97	17.401	rBV	0.106	1001786	17.366	17.472
98	18.041	rBV	0.112	699394	18.012	18.124
99	18.253	rBV	0.123	1243057	18.218	18.341
100	18.729	rVB	0.106	565141	18.700	18.805

DDT Breakdown
= 1.92

6/11/218

```
Data File : J:\MS11\DATA\111008\1110F004.D                Vial: 2
Acq On    : 10 Nov 2008   3:35 pm                     Operator: LWeiskopf
Sample    : IB                                         Inst    : MS11
Misc      :                                            Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 12 10:54:50 2008               Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title        : PAHS and ALKYLATED HOMOLOGS
Last Update  : Tue Nov 11 06:03:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

 Internal Standards                R.T. QIon  Response  Conc Units Dev(Min)
-------------------------------------------------------------------------------
  1) Naphthalene-d8                5.06  136   289222   200.00 ng/ml    0.00
 10) Acenaphthene-d10              6.48  164   165358   200.00 ng/ml    0.00
 22) Phenanthrene-d10              7.72  188   277645   200.00 ng/ml    0.00
 37) Chrysene-d12                 10.61  240   290548   200.00 ng/ml    0.00
 49) Perylene-d12                 14.61  264   292840   200.00 ng/ml   -0.01

 System Monitoring Compounds
 15) Fluorene-d10                  0.00  176       0d     0.00 ng/ml
  Spiked Amount     200.000                    Recovery   =     0.00%
 20) 2,4,6 Tribromophenol          0.00  330       0d     0.00 ng/ml
  Spiked Amount     375.000                    Recovery   =     0.00%
 36) Fluoranthene-d10              0.00  212       0d     0.00 ng/ml
  Spiked Amount     200.000                    Recovery   =     0.00%
 42) Terphenyl-d14                 9.11  244    2258      1.50 ng/ml    0.00
  Spiked Amount     200.000                    Recovery   =     0.75%

 Target Compounds                                                   Qvalue
```

Qa 11/12/08

```
-------------------------------------------------------------------------------
(#) = qualifier out of range (m) = manual integration
1110F004.D  1110ALK.M      Wed Nov 12 10:56:00 2008                   Page 1
```

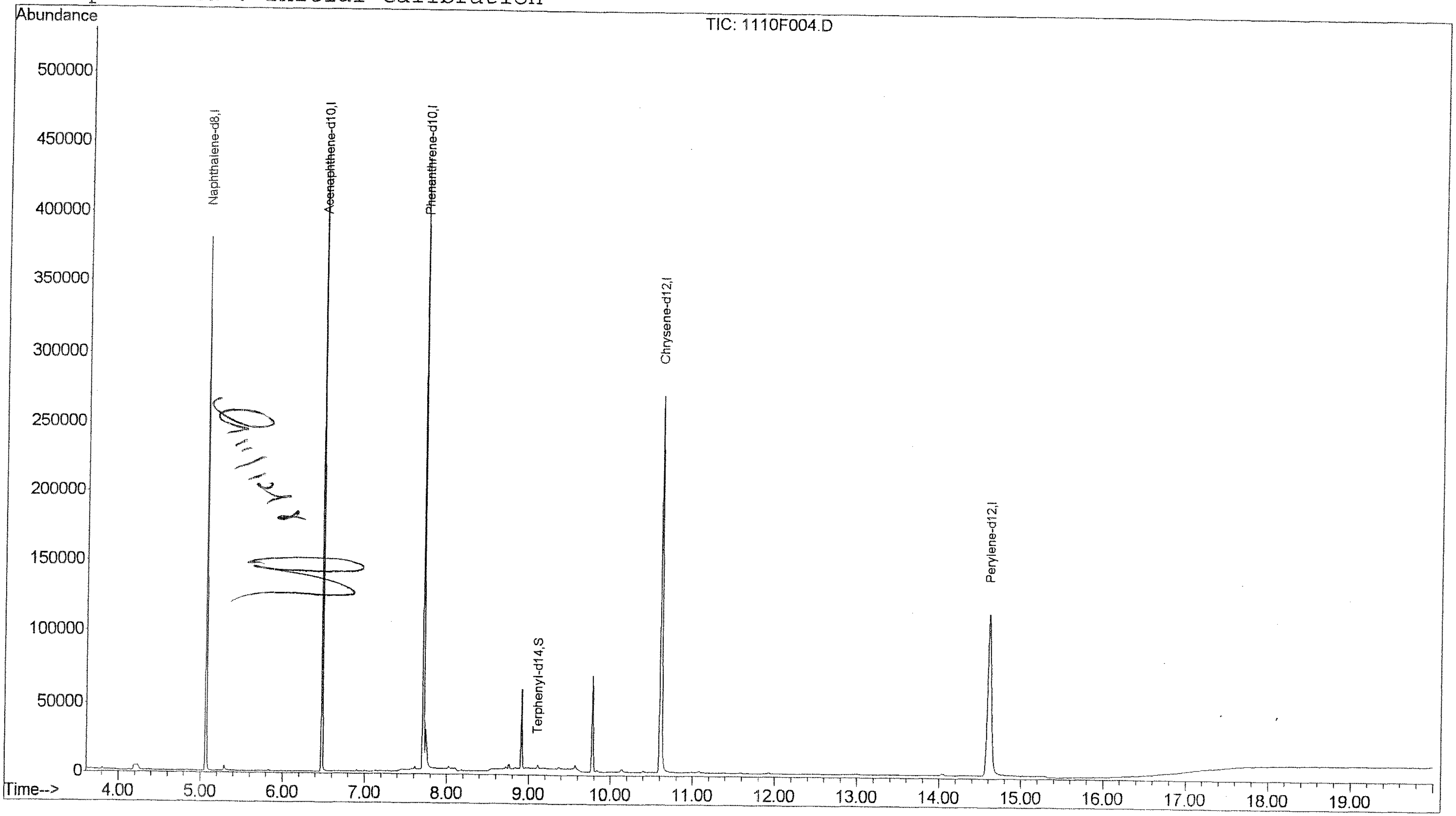
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111008\1110F004.D
Acq On : 10 Nov 2008 3:35 pm
Sample : IB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 12 10:55 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 11 06:03:21 2008
Response via : Initial Calibration



11/12/08

Data File : J:\MS11\DATA\111008\1110F005.D
Vial: 5
Acq On : 10 Nov 2008 4:55 pm
Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Inst : MS11
Misc :
Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:00 2008
Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

LW 11/12/08

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.07	136	242960	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.48	164	141246	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.71	188	227554	200.00 ng/ml	0.00
37) Chrysene-d12	10.61	240	253997	200.00 ng/ml	0.00
49) Perylene-d12	14.61	264	257403	200.00 ng/ml	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc Units	Dev(Min)
15) Fluorene-d10	6.91	176	2106	2.11 ng/ml	0.00
Spiked Amount 200.000			Recovery =	1.05%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00 ng/ml	
Spiked Amount 375.000			Recovery =	0.00%	
36) Fluoranthene-d10	8.72	212	3418	2.11 ng/ml	0.00
Spiked Amount 200.000			Recovery =	1.05%	
42) Terphenyl-d14	9.11	244	3151	2.39 ng/ml	0.00
Spiked Amount 200.000			Recovery =	1.20%	

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) Naphthalene	5.08	128	3325	2.43 ng/ml	96
3) 2-Methylnaphthalene	5.63	142	2286	2.44 ng/ml	91
4) 1-Methylnaphthalene	5.71	142	2049m	2.47 ng/ml	
5) Biphenyl	6.00	154	2884	2.56 ng/ml	100
6) 2,6-Dimethylnaphthalene	6.13	156	1959	2.35 ng/ml	97
11) Acenaphthylene	6.37	152	3444	2.41 ng/ml	98
12) Acenaphthene	6.51	154	2084	2.38 ng/ml	91
13) Dibenzofuran	6.65	168	3231m	2.59 ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.82	170	1750	2.10 ng/ml	94
16) Fluorene	6.93	166	2456	2.34 ng/ml	94
21) Pentachlorophenol	7.57	266	7441	48.38 ng/ml	100
23) Dibenzothiophene	7.63	184	3534	2.60 ng/ml	91
27) Phenanthrene	7.73	178	3585m	2.45 ng/ml	
28) Anthracene	7.78	178	3188	2.19 ng/ml	91
29) Carbazole	7.92	167	3429	2.89 ng/ml	96
30) 1-Methylphenanthrene	8.23	192	2739	2.50 ng/ml	95
35) Fluoranthene	8.74	202	4246	2.54 ng/ml	98
38) Pyrene	8.96	202	4209	2.53 ng/ml	88
43) Benz(a)anthracene	10.59	228	4644	2.95 ng/ml	96
44) Chrysene	10.65	228	3913	2.57 ng/ml	96
50) Benzo(b)fluoranthene	13.25	252	3691	2.23 ng/ml	100
51) Benzo(k)fluoranthene	13.35	252	3667	2.30 ng/ml	84
52) Benzo(e)pyrene	14.19	252	3529m	2.35 ng/ml	
53) Benzo(a)pyrene	14.39	252	2987	2.20 ng/ml	93
54) Perylene	14.71	252	2982	2.18 ng/ml	95

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111008\1110F005.D
Acq On : 10 Nov 2008 4:55 pm
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:00 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.45	276	3245	2.72 ng/ml	99
56)	Dibenz(a,h)anthracene	17.50	278	2908m	2.34 ng/ml	
57)	Benzo(g,h,i)perylene	17.90	276	3436	2.51 ng/ml	99

(#) = qualifier out of range (m) = manual integration

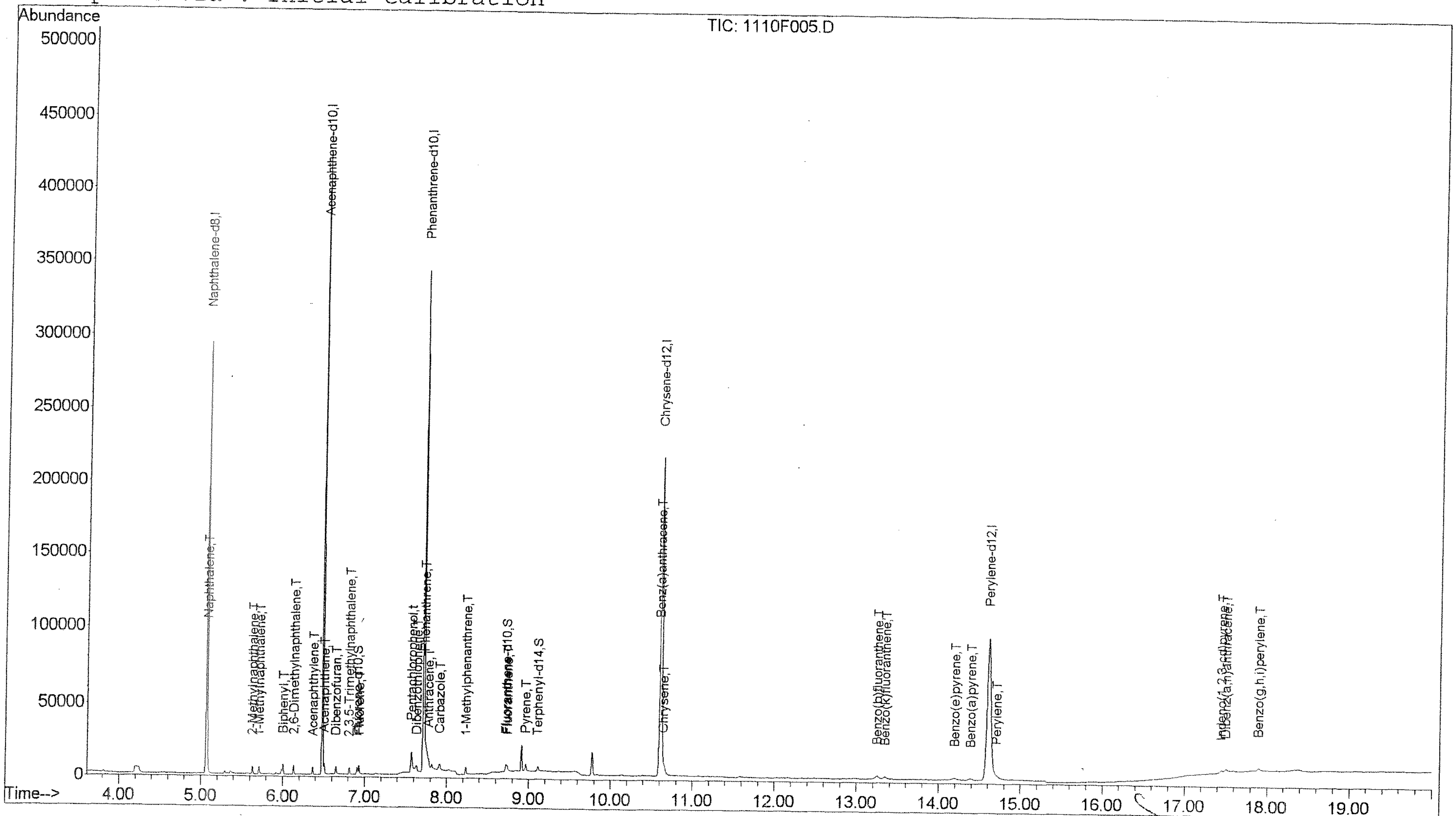
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111008\1110F005.D
Acq On : 10 Nov 2008 4:55 pm
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:51 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration



1110F005.D 1110ALK.M Tue Nov 11 05:54:55 2008

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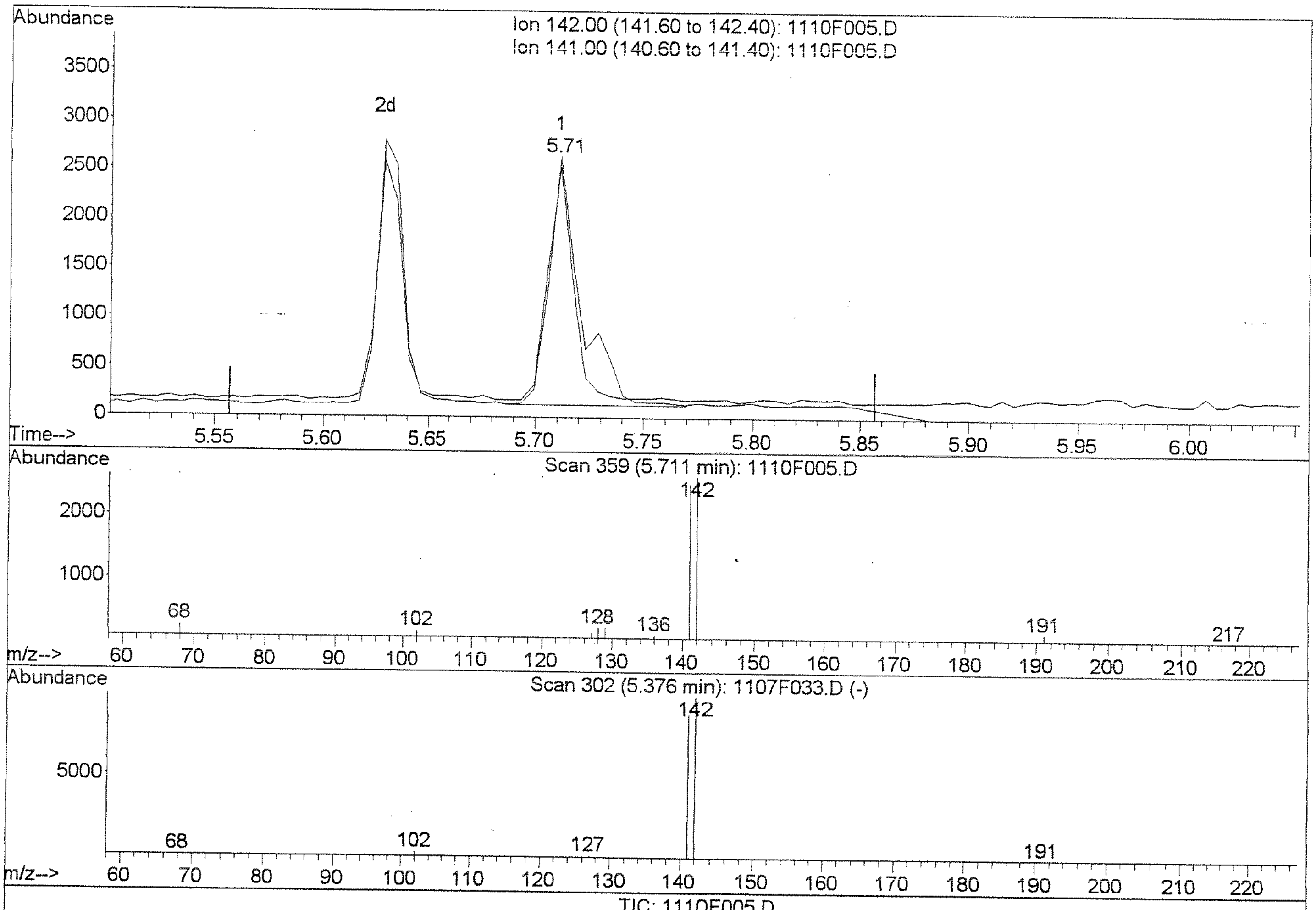
Data File : J:\MS11\DATA\111008\1110F005.D
Acq On : 10 Nov 2008 4:55 pm
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:32 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(4) 1-Methylnaphthalene (T)

5.71min 3.07ng/ml

response 2547

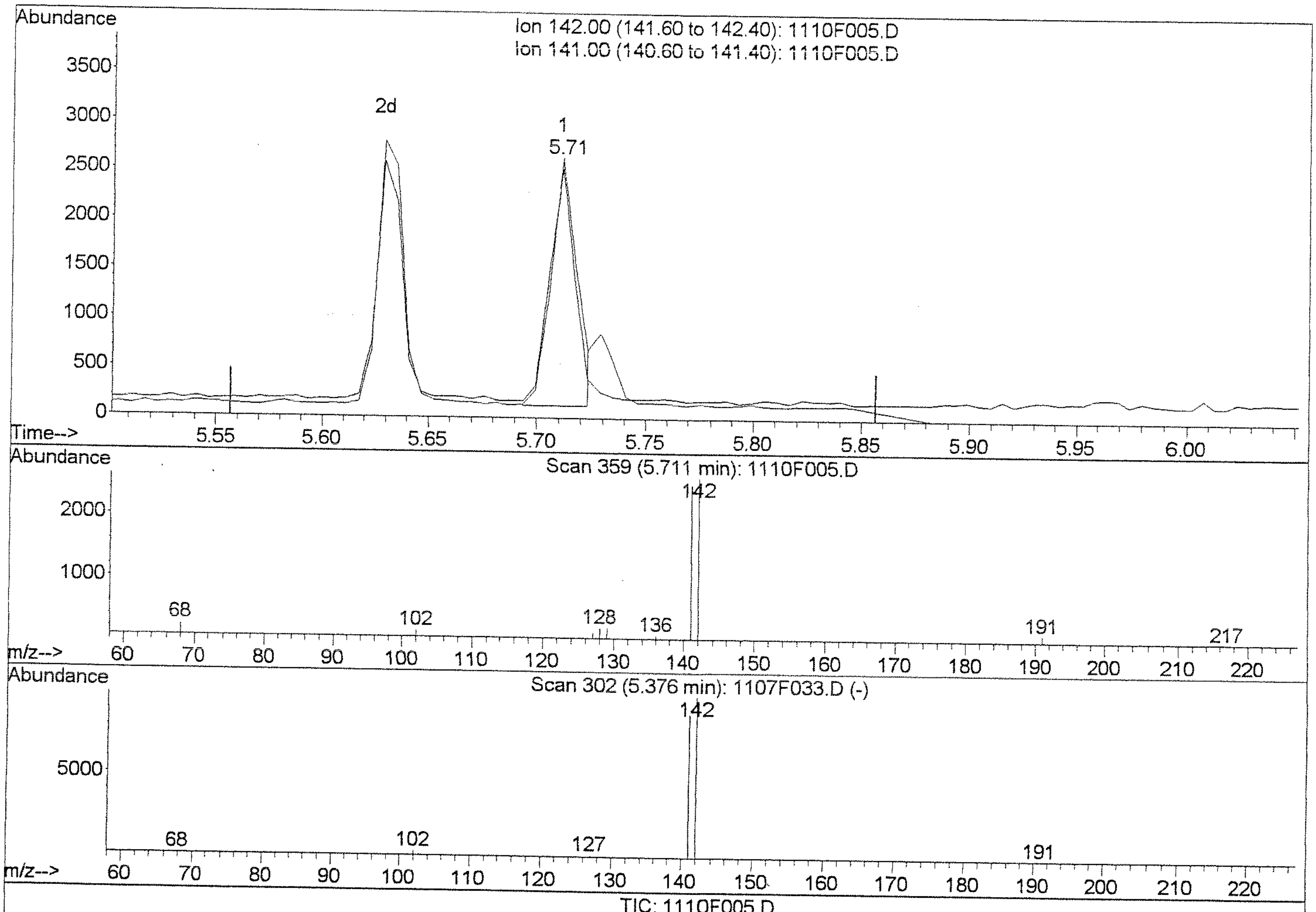
Ion	Exp%	Act%
142.00	100	100
141.00	93.00	94.13
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F005.D
Acq On : 10 Nov 2008 4:55 pm
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:49 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(4) 1-Methylnaphthalene (T)

5.71min 2.47ng/ml m

response 2049

Ion	Exp%	Act%
142.00	100	100
141.00	93.00	96.01
0.00	0.00	0.00
0.00	0.00	0.00

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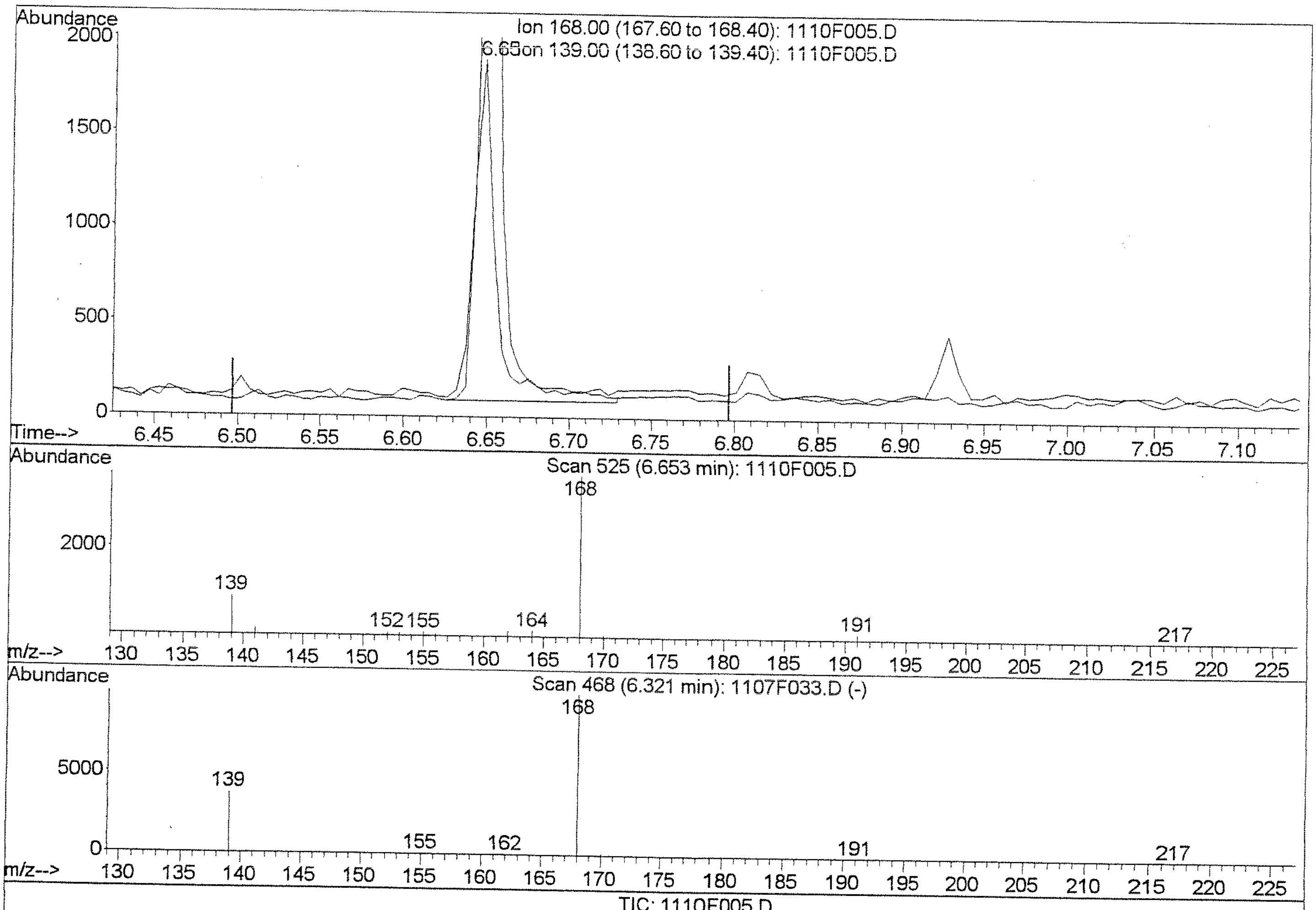
Data File : J:\MS11\DATA\111008\1110F005.D
Acq On : 10 Nov 2008 4:55 pm
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:49 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.65min 2.66ng/ml

response 3312

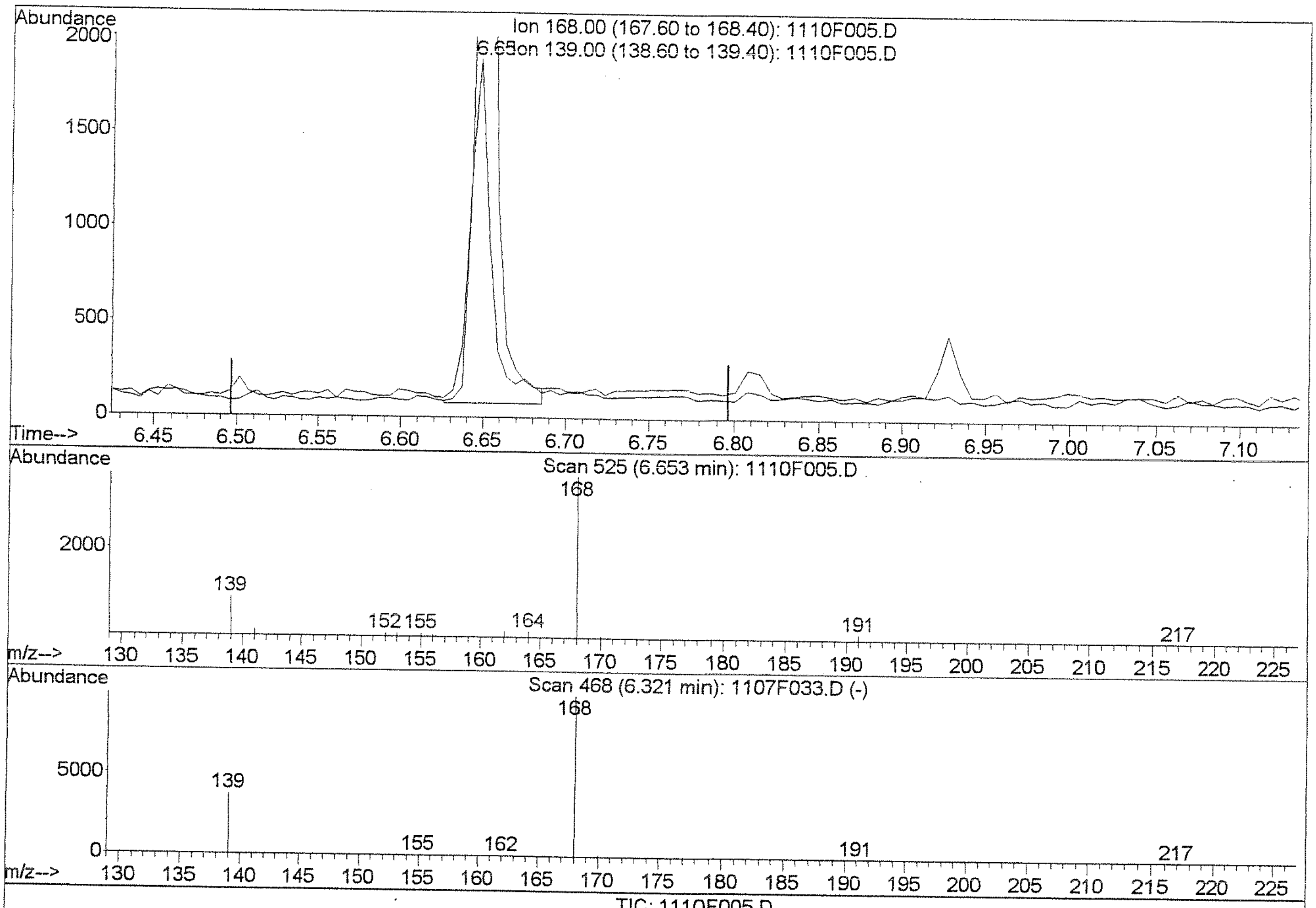
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	23.18
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F005.D
Acq On : 10 Nov 2008 4:55 pm
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:49 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.65min 2.59ng/ml m

response 3231

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	25.47
0.00	0.00	0.00
0.00	0.00	0.00

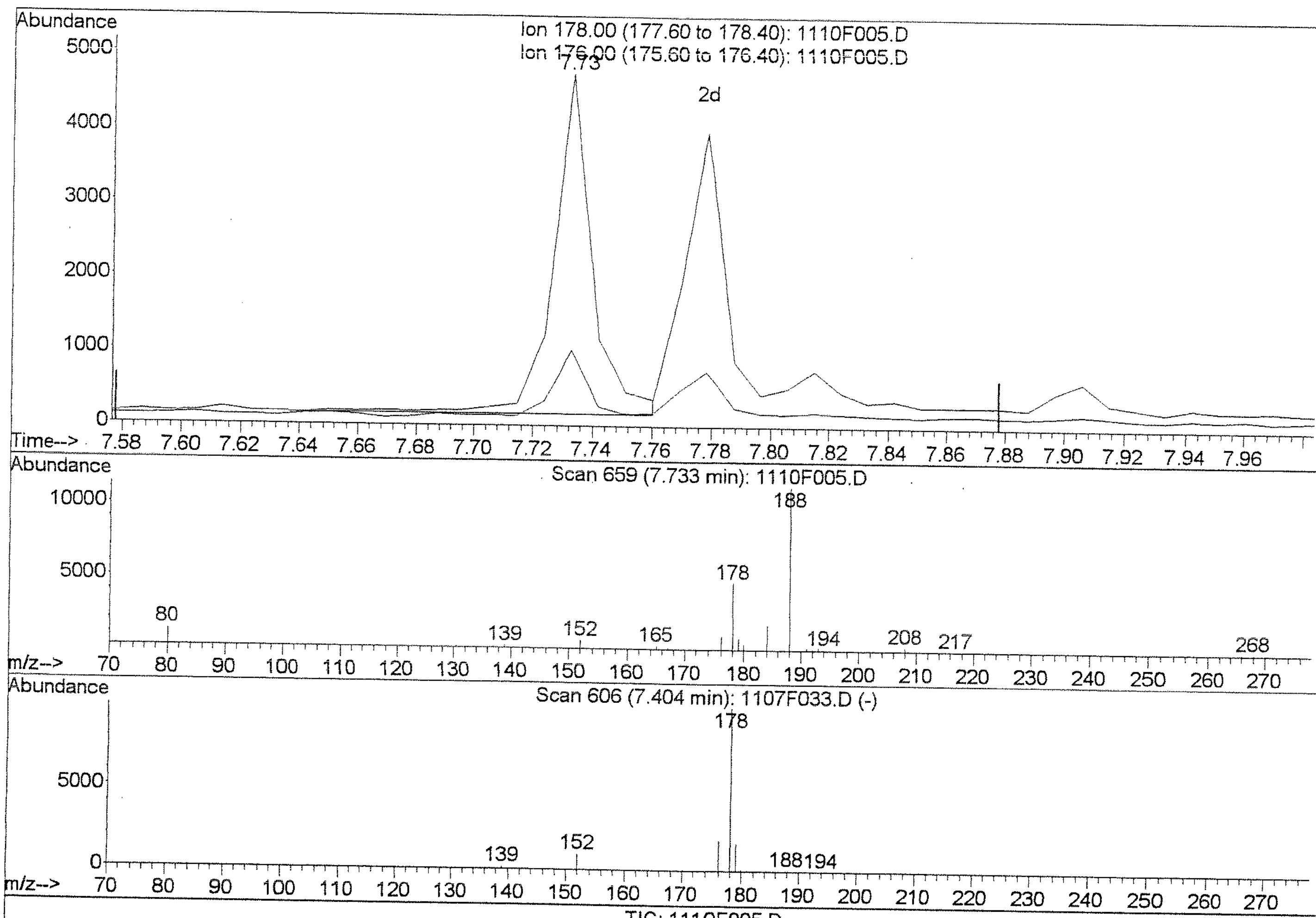
OI 11/11/08

Data File : J:\MS11\DATA\111008\1110F005.D
Acq On : 10 Nov 2008 4:55 pm
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:50 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(27) Phenanthrene (T)

7.73min 2.82ng/ml

response 4134

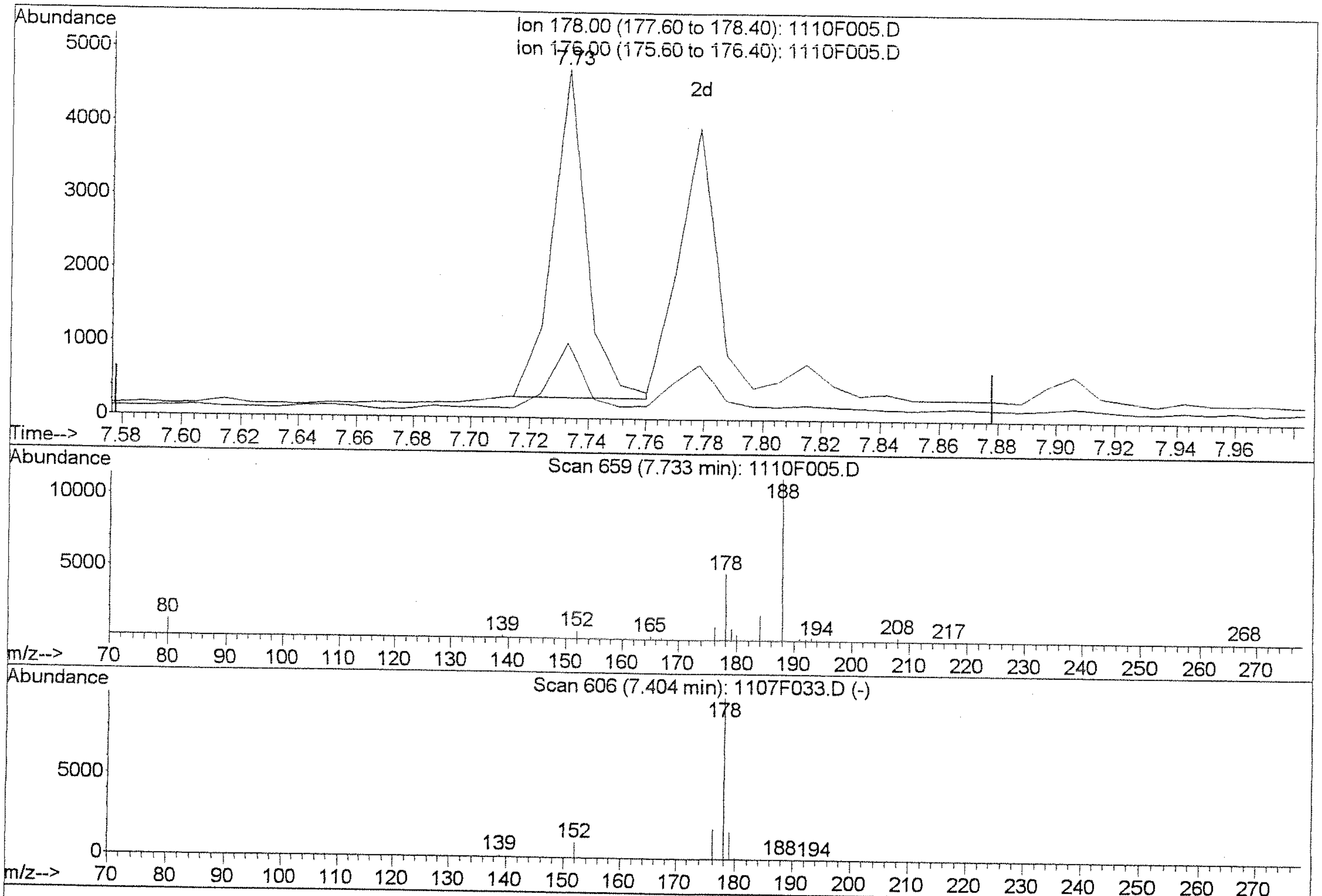
Ion	Exp%	Act%
178.00	100	100
176.00	21.00	19.15
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F005.D
Acq On : 10 Nov 2008 4:55 pm
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:50 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(27) Phenanthrene (T)

7.73min 2.45ng/ml m

response 3585

Ion	Exp%	Act%
178.00	100	100
176.00	21.00	21.47
0.00	0.00	0.00
0.00	0.00	0.00

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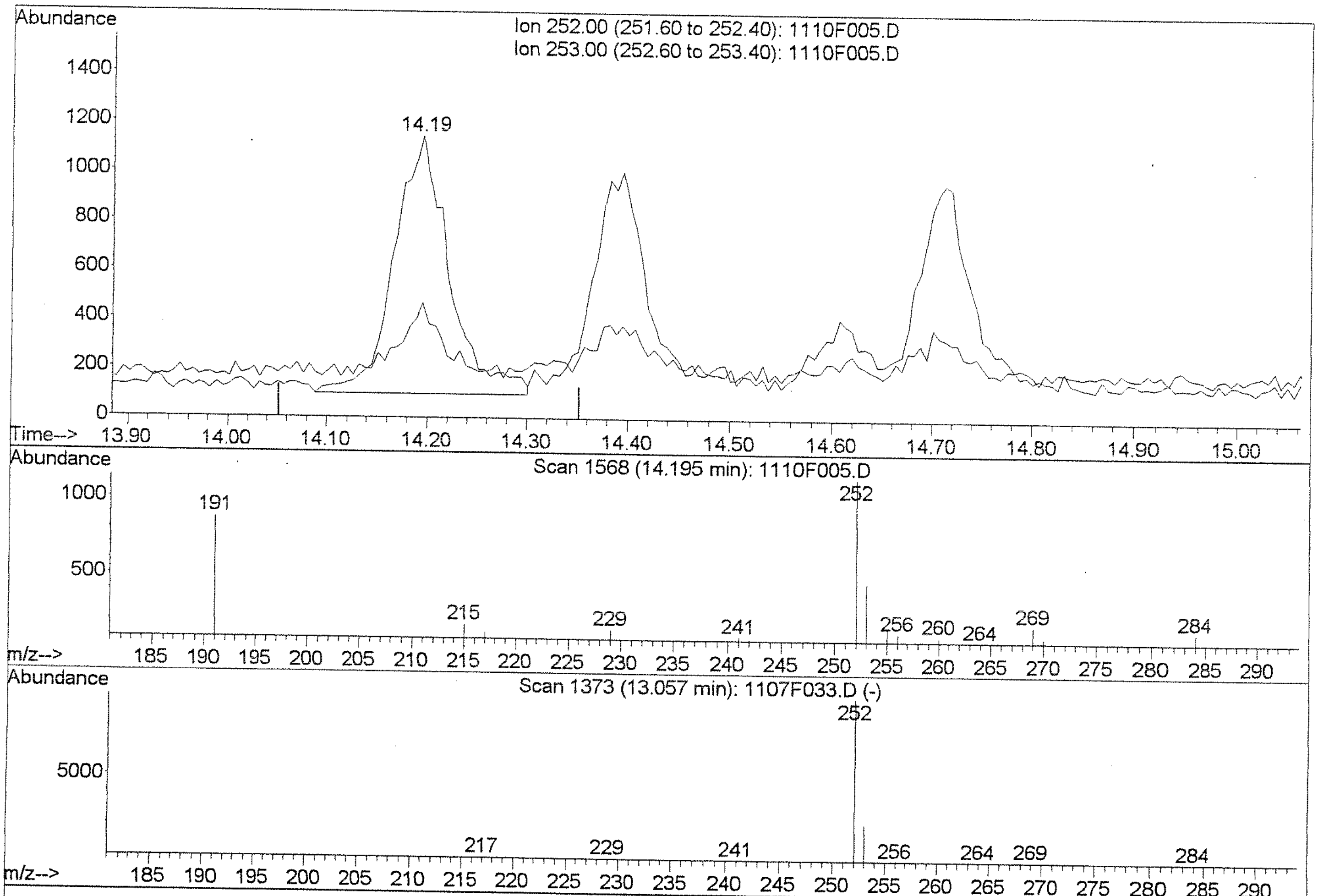
1110F005.D 1110ALK.M Tue Nov 11 05:50:22 2008

Data File : J:\MS11\DATA\111008\1110F005.D
Acq On : 10 Nov 2008 4:55 pm
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:50 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



TIC: 1110F005.D

(52) Benzo(e)pyrene (T)

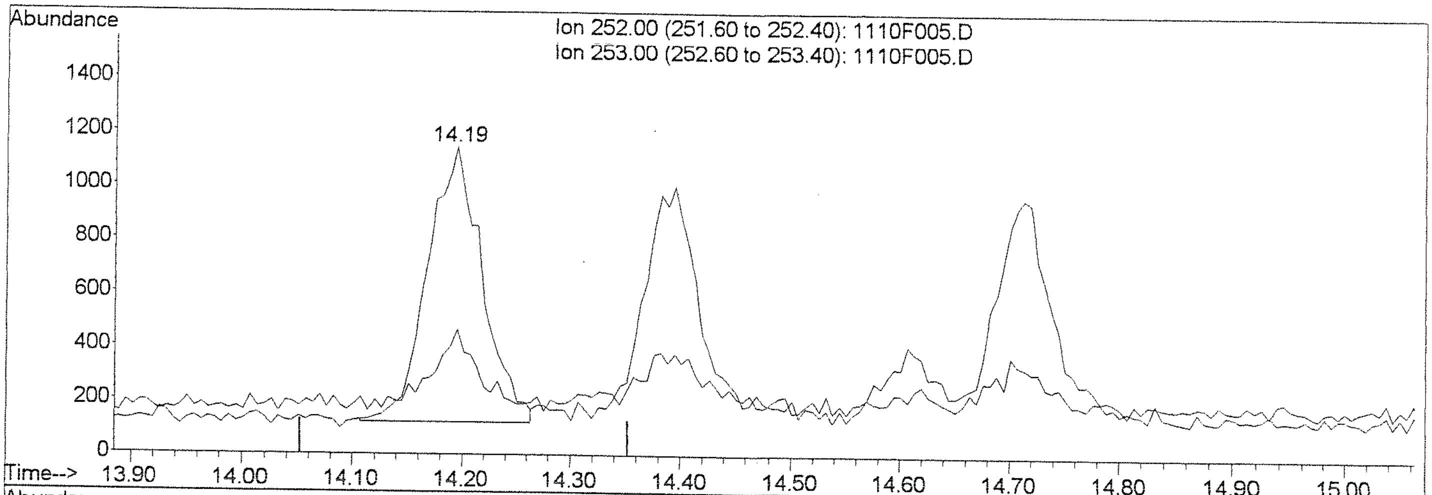
14.19min 2.64ng/ml

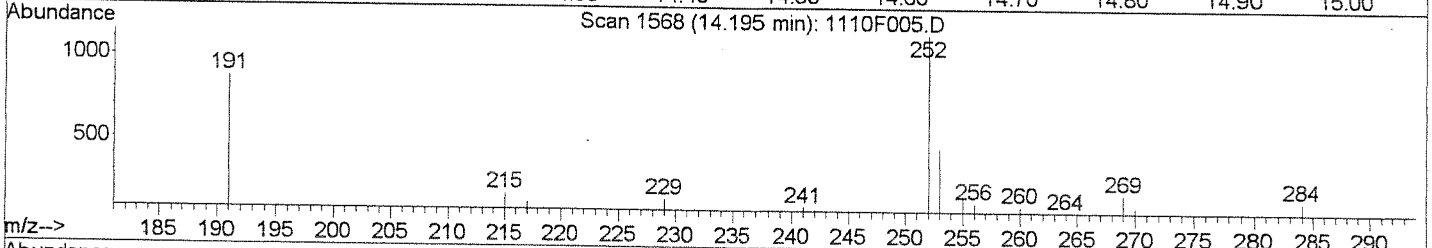
response 3954

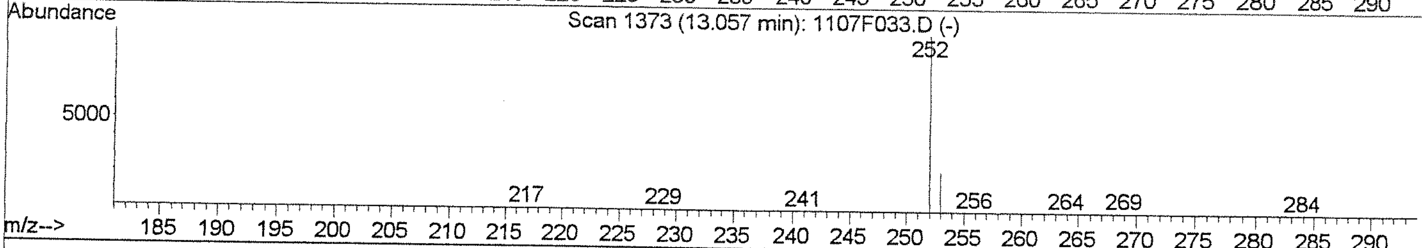
Ion	Exp%	Act%
252.00	100	100
253.00	22.20	27.22
0.00	0.00	0.00
0.00	0.00	0.00

```
Data File : J:\MS11\DATA\111008\1110F005.D                Vial: 5
Acq On    : 10 Nov 2008   4:55 pm                     Operator: LWeiskopf
Sample    : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D     Inst     : MS11
Misc      :                                            Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11  5:50 2008                 Quant Results File: temp.res

Method          : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title           : PAHS and ALKYLATED HOMOLOGS
Last Update     : Mon Nov 10 13:53:21 2008
Response via    : Multiple Level Calibration
```







TIC: 1110F005.D

(52) Benzo(e)pyrene (T)

14.19min 2.35ng/ml m

response 3529

Ion	Exp%	Act%
252.00	100	100
253.00	22.20	40.54
0.00	0.00	0.00
0.00	0.00	0.00

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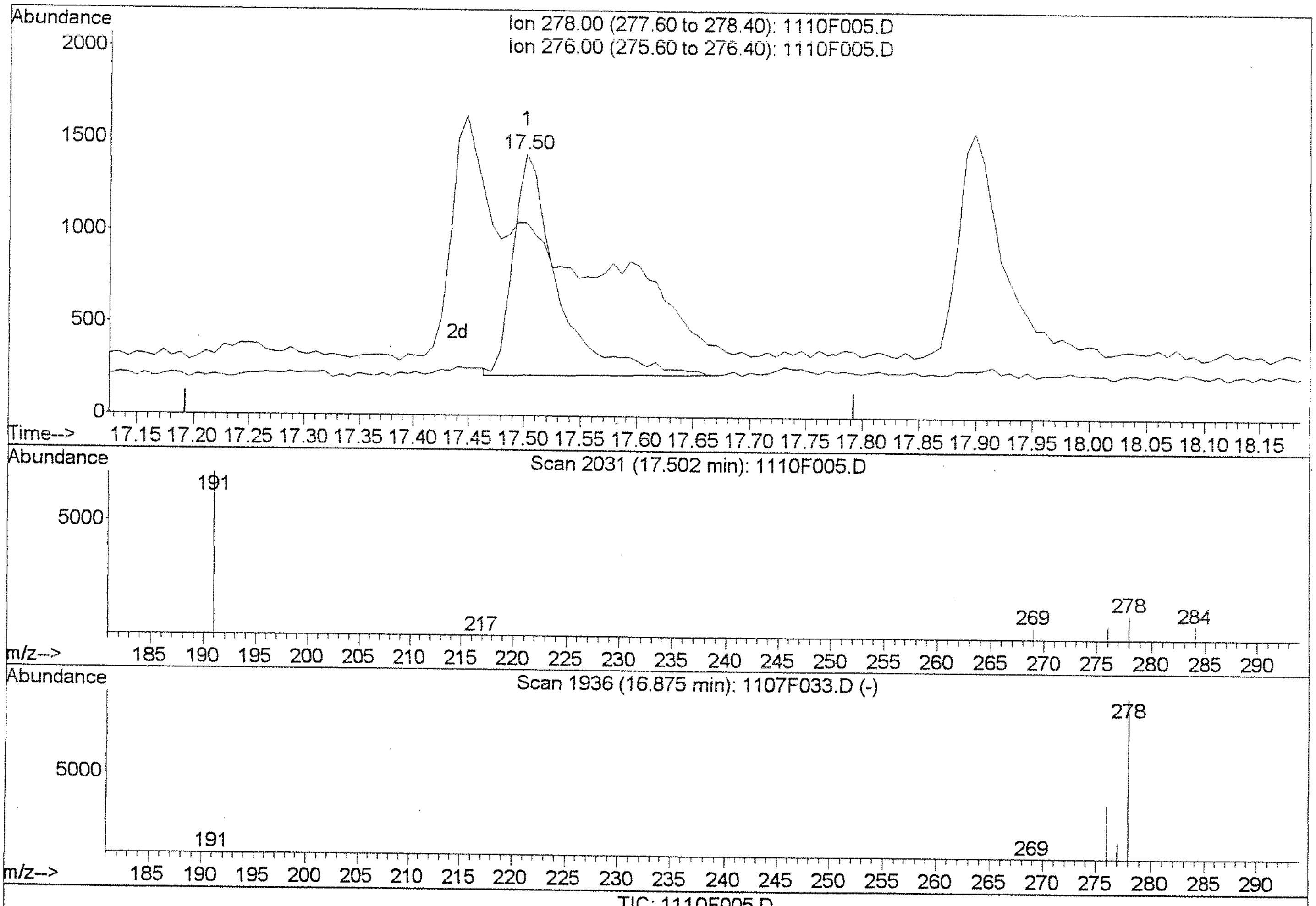
Data File : J:\MS11\DATA\111008\1110F005.D
Acq On : 10 Nov 2008 4:55 pm
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:50 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(56) Dibenz(a,h)anthracene (T)

17.50min 2.62ng/ml

response 3257

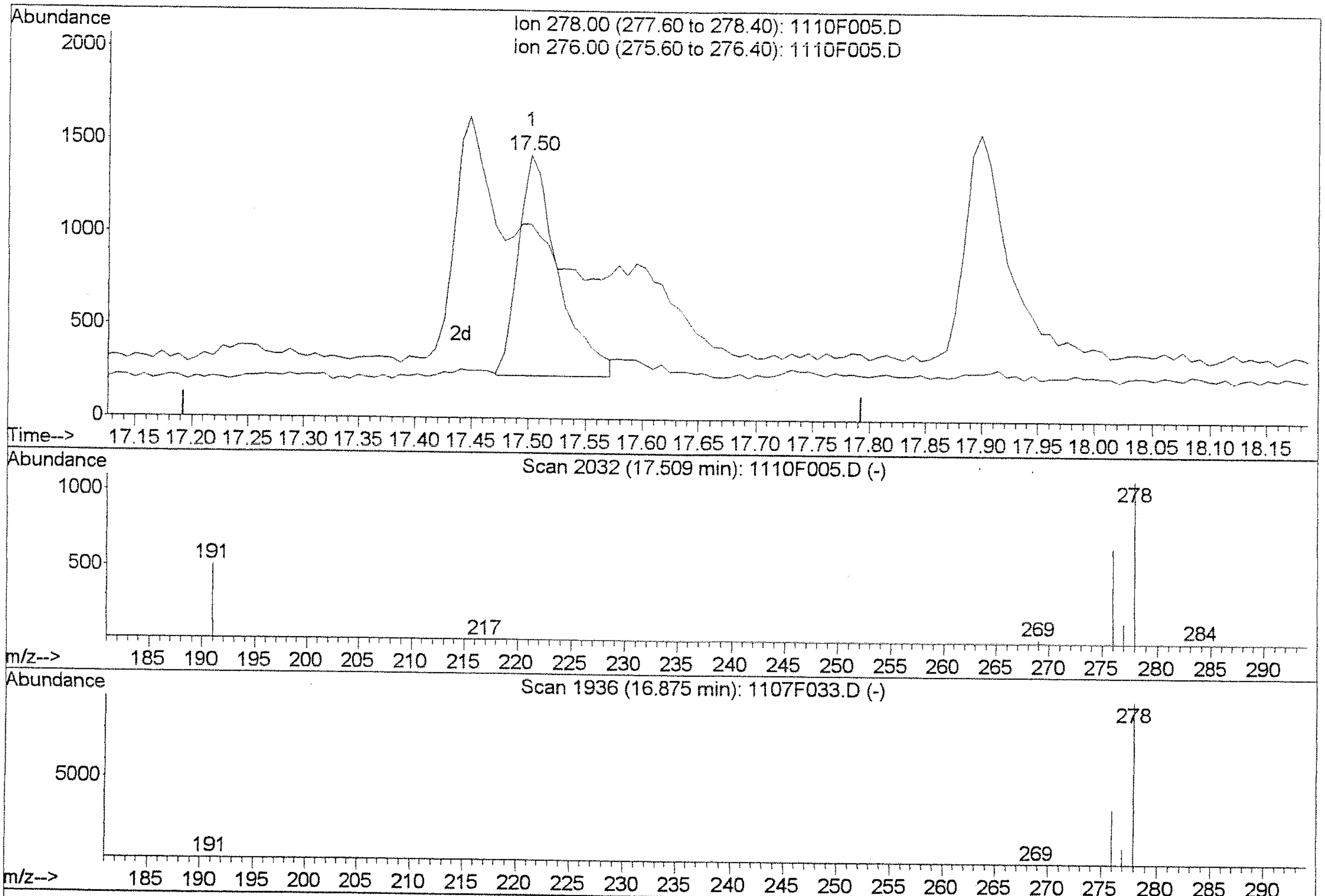
Ion	Exp%	Act%
278.00	100	100
276.00	29.70	55.07
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F005.D
Acq On : 10 Nov 2008 4:55 pm
Sample : SIM-PAH ICAL @.002/.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:51 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



TIC: 1110F005.D

(56) Dibenz(a,h)anthracene (T)

17.50min 2.34ng/ml m

response 2908

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	73.63#
0.00	0.00	0.00
0.00	0.00	0.00

OI

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1110F005.D 1110ALK.M Tue Nov 11 05:51:16 2008

Data File : J:\MS11\DATA\111008\1110F006.D
Acq On : 10 Nov 2008 5:21 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:01 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.07	136	250911	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.48	164	144317	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.72	188	244996	200.00	ng/ml	0.00
37) Chrysene-d12	10.61	240	258538	200.00	ng/ml	0.00
49) Perylene-d12	14.61	264	256624	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.91	176	3709	3.64	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	1.82%	
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery	=	0.00%	
36) Fluoranthene-d10	8.72	212	6549	3.76	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	1.88%	
42) Terphenyl-d14	9.11	244	5483	4.08	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	2.04%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Naphthalene	5.09	128	6516	4.62	ng/ml	100
3) 2-Methylnaphthalene	5.63	142	4285	4.43	ng/ml	96
4) 1-Methylnaphthalene	5.71	142	3946	4.61	ng/ml	98
5) Biphenyl	6.00	154	5291	4.54	ng/ml	97
6) 2,6-Dimethylnaphthalene	6.13	156	3716	4.32	ng/ml	98
11) Acenaphthylene	6.37	152	6298	4.31	ng/ml	97
12) Acenaphthene	6.50	154	3999	4.46	ng/ml	97
13) Dibenzofuran	6.65	168	5937m	4.66	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.81	170	3320	3.89	ng/ml#	39
16) Fluorene	6.93	166	4545	4.24	ng/ml	94
21) Pentachlorophenol	7.57	266	14755	93.90	ng/ml	100
23) Dibenzothiophene	7.63	184	6639	4.54	ng/ml	91
27) Phenanthrene	7.73	178	7010	4.44	ng/ml	96
28) Anthracene	7.78	178	6004m	3.84	ng/ml	
29) Carbazole	7.92	167	5977	4.68	ng/ml	99
30) 1-Methylphenanthrene	8.23	192	4860m	4.12	ng/ml	
35) Fluoranthene	8.74	202	7980	4.43	ng/ml	90
38) Pyrene	8.96	202	8332	4.93	ng/ml	87
43) Benz(a)anthracene	10.60	228	7394	4.62	ng/ml	93
44) Chrysene	10.65	228	7334	4.73	ng/ml	100
50) Benzo(b)fluoranthene	13.26	252	6745	4.08	ng/ml	99
51) Benzo(k)fluoranthene	13.35	252	6071	3.82	ng/ml	97
52) Benzo(e)pyrene	14.19	252	6267	4.19	ng/ml	97
53) Benzo(a)pyrene	14.40	252	5520	4.07	ng/ml	93
54) Perylene	14.71	252	5248	3.84	ng/ml	94

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111008\1110F006.D Vial: 6
Acq On : 10 Nov 2008 5:21 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:01 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.45	276	5295	4.45 ng/ml	96
56)	Dibenz(a,h)anthracene	17.51	278	6051	4.89 ng/ml	76
57)	Benzo(g,h,i)perylene	17.91	276	6417	4.70 ng/ml	98

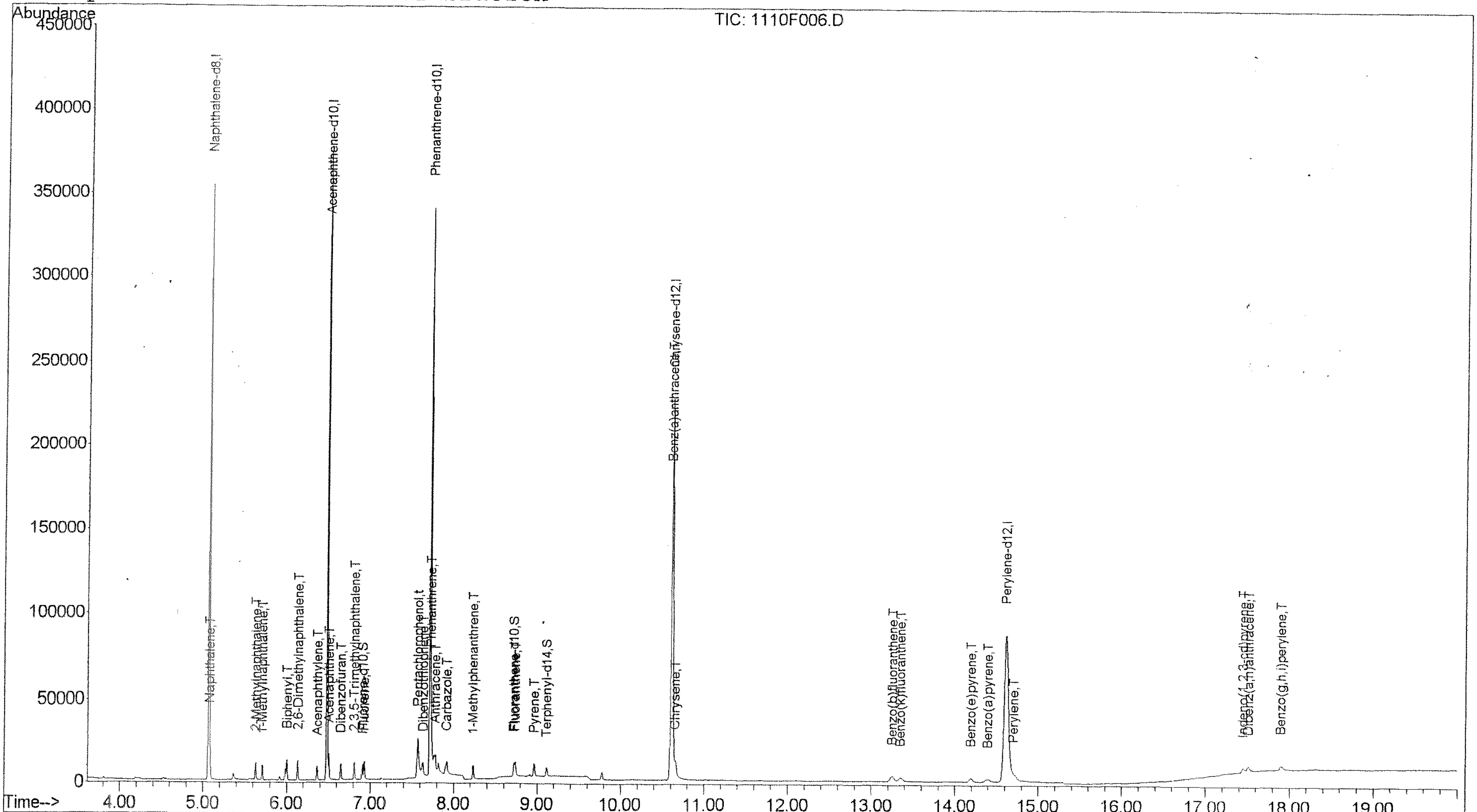
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111008\1110F006.D
Acq On : 10 Nov 2008 5:21 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:52 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration



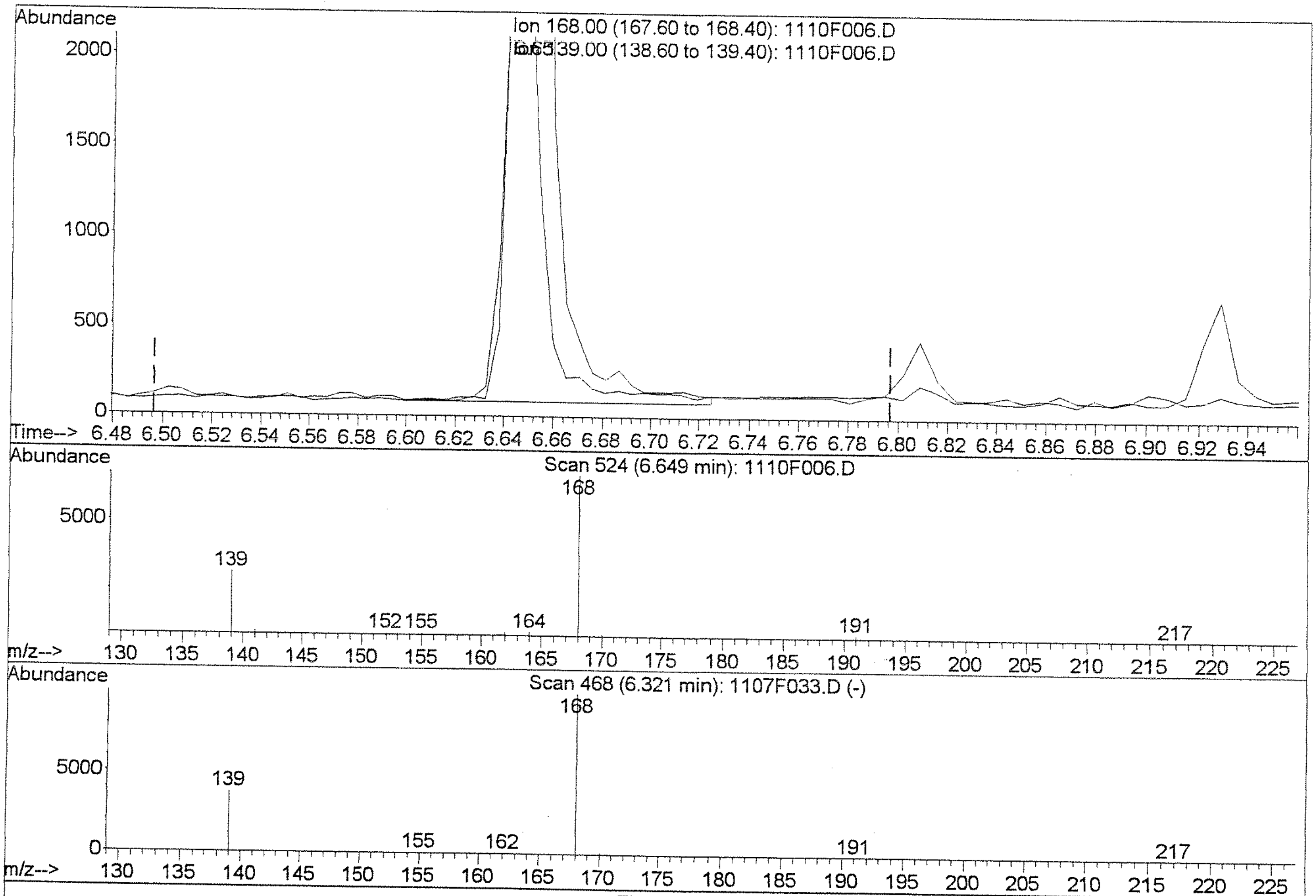
1110F006.D 1110ALK.M Tue Nov 11 05:54:57 2008

Data File : J:\MS11\DATA\111008\1110F006.D
Acq On : 10 Nov 2008 5:21 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:32 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



TIC: 1110F006.D

(13) Dibenzofuran (T)

6.65min 4.84ng/ml

response 6171

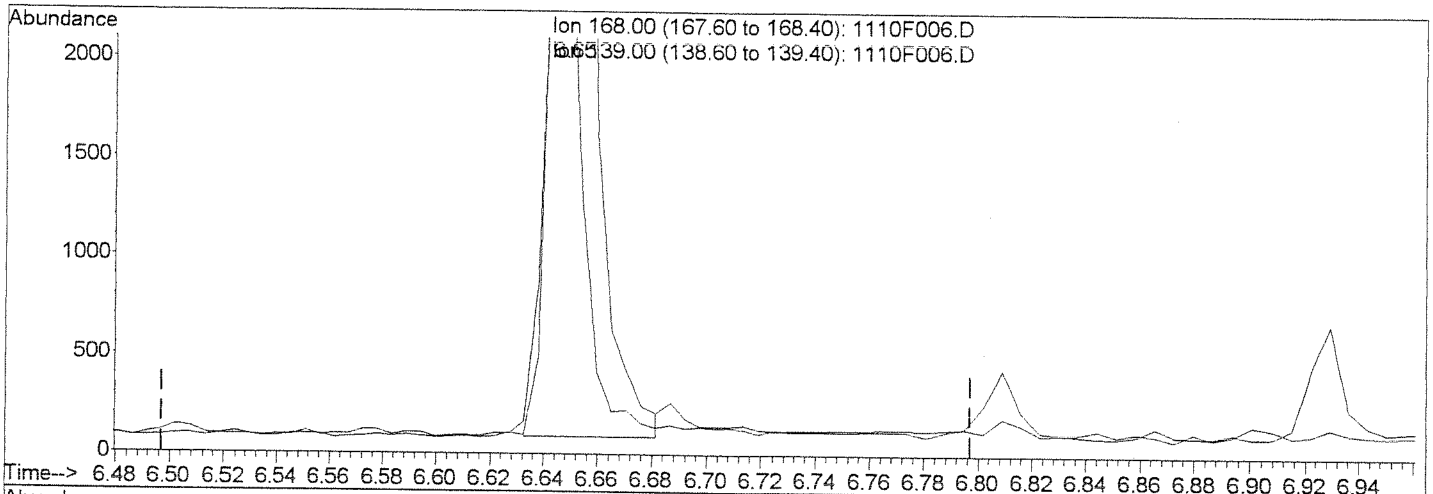
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	38.38
0.00	0.00	0.00
0.00	0.00	0.00

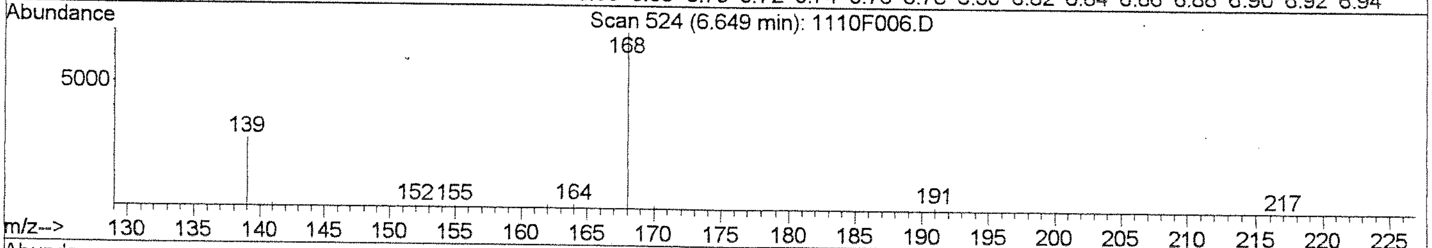
Data File : J:\MS11\DATA\111008\1110F006.D
Acq On : 10 Nov 2008 5:21 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:51 2008

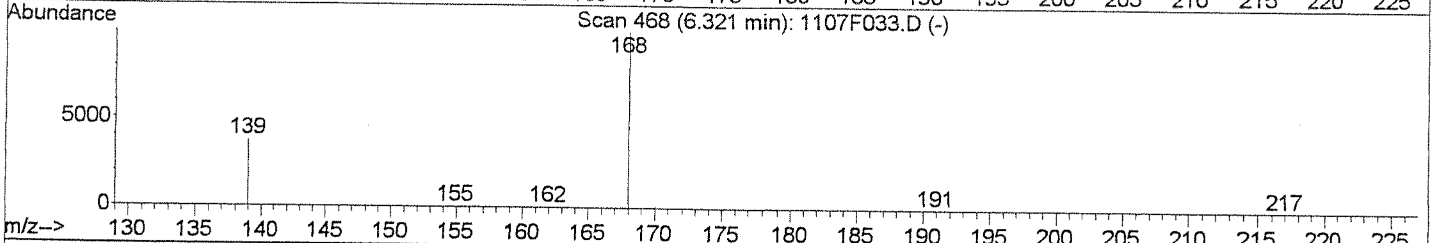
Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration







TIC: 1110F006.D

(13) Dibenzofuran (T)

6.65min 4.66ng/ml m

response 5937

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	39.15
0.00	0.00	0.00
0.00	0.00	0.00

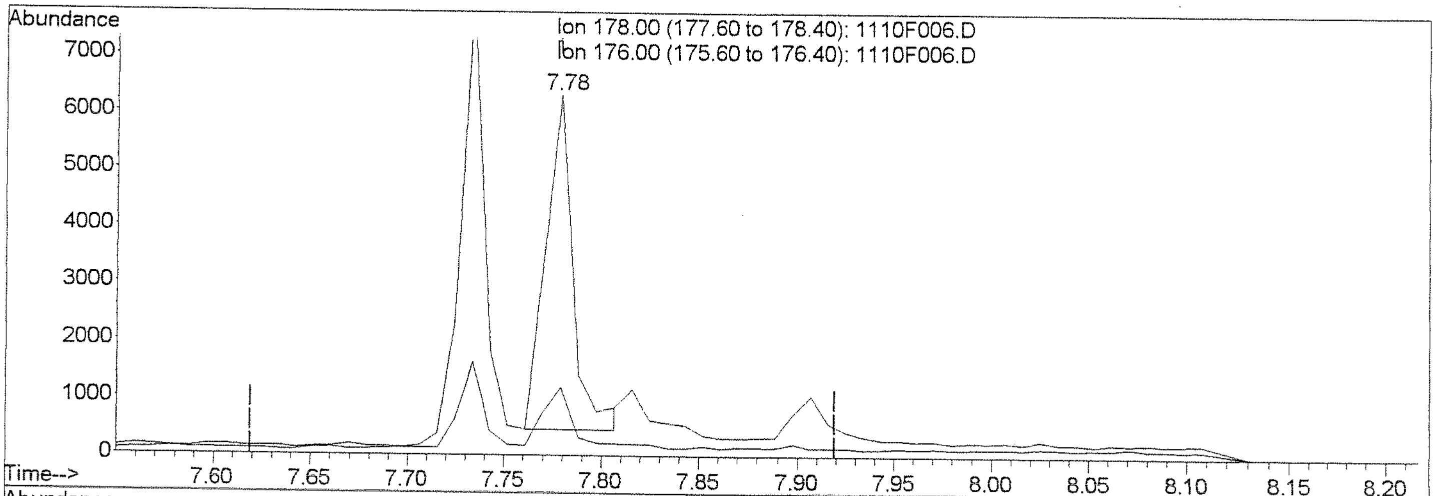
OI 11/12/8

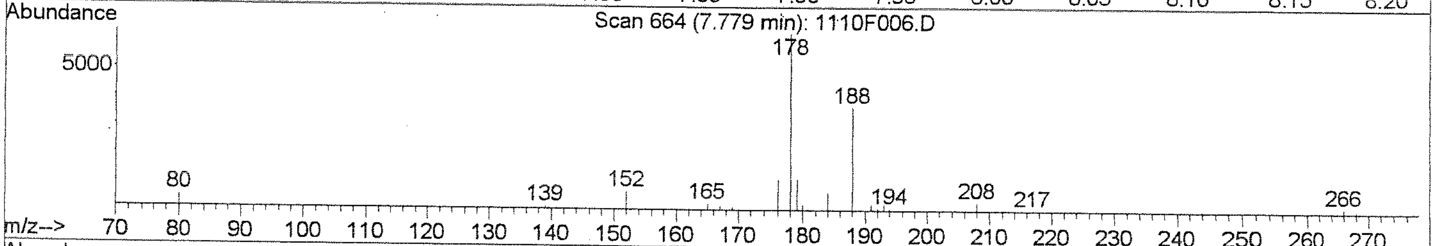
Data File : J:\MS11\DATA\111008\1110F006.D
Acq On : 10 Nov 2008 5:21 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:51 2008

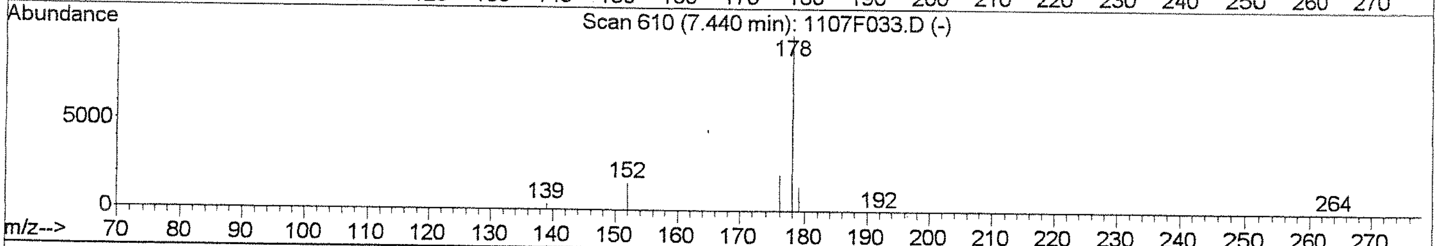
Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration







TIC: 1110F006.D

(28) Anthracene (T)

7.78min 3.63ng/ml

response 5682

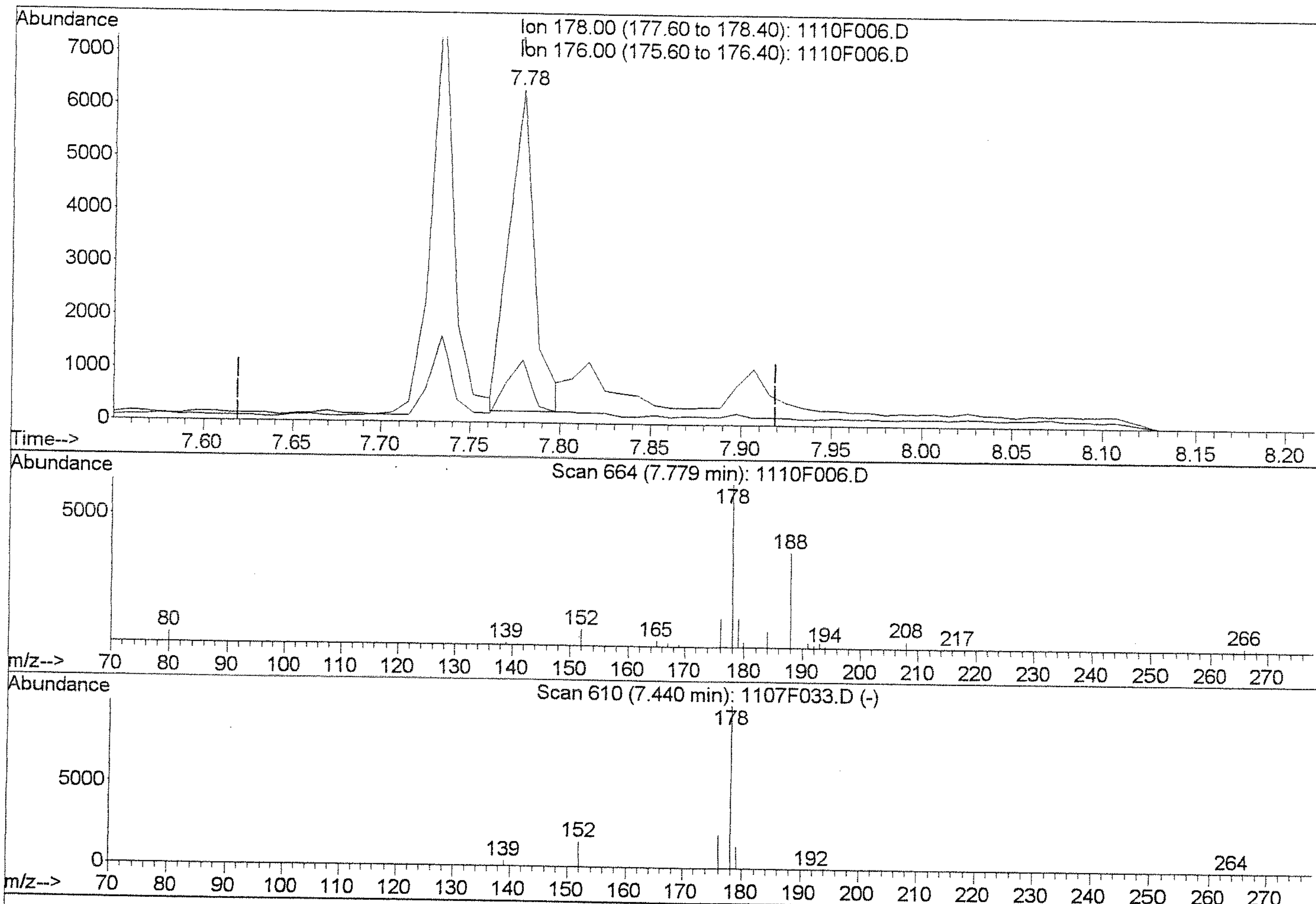
Ion	Exp%	Act%
178.00	100	100
176.00	19.70	17.32
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F006.D
Acq On : 10 Nov 2008 5:21 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:51 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



TIC: 1110F006.D

(28) Anthracene (T)

7.78min 3.84ng/ml m

response 6004

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	18.76
0.00	0.00	0.00
0.00	0.00	0.00

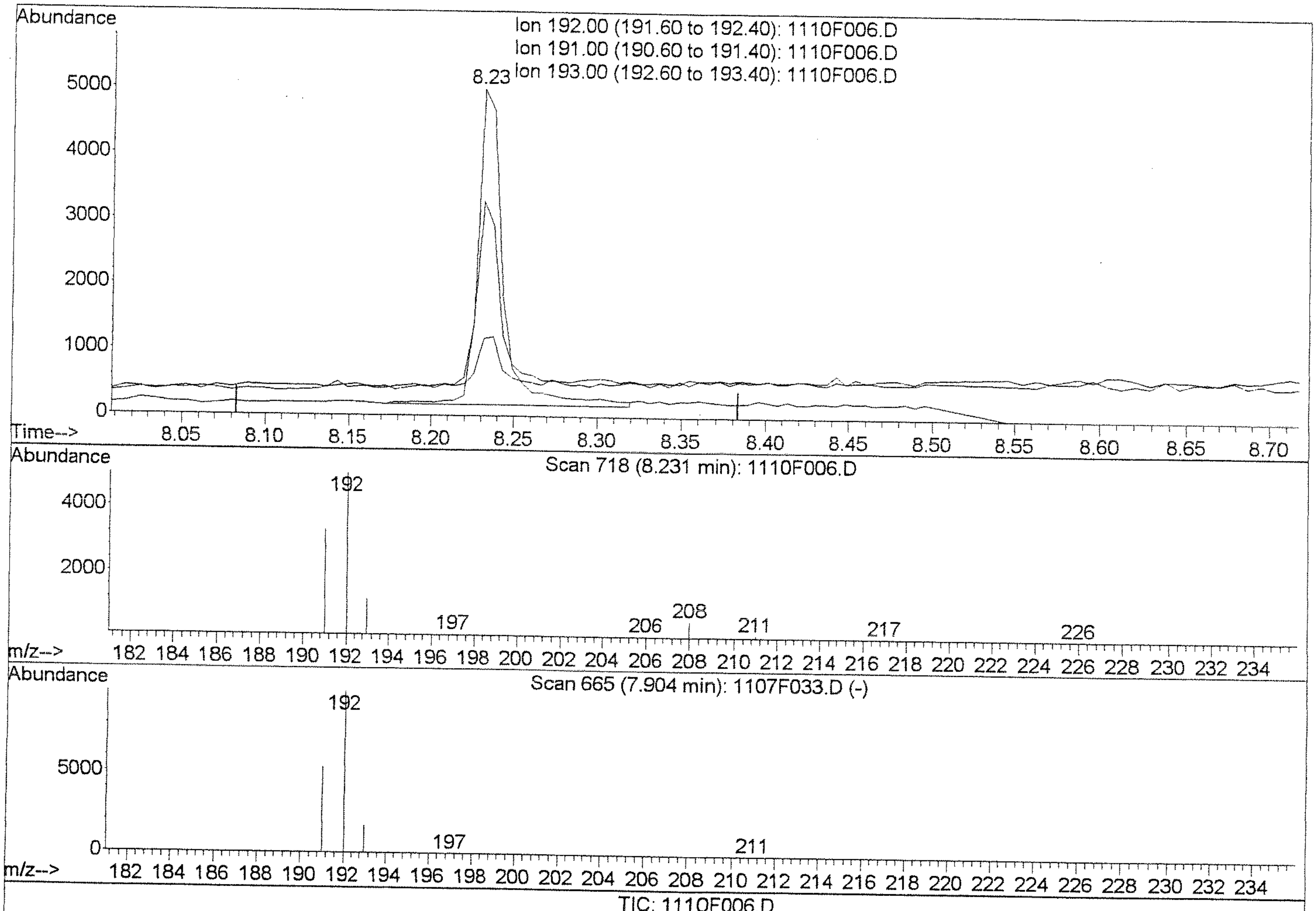
IC 11/11/08

Data File : J:\MS11\DATA\111008\1110F006.D
Acq On : 10 Nov 2008 5:21 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:51 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(30) 1-Methylphenanthrene (T)

8.23min 4.46ng/ml

response 5263

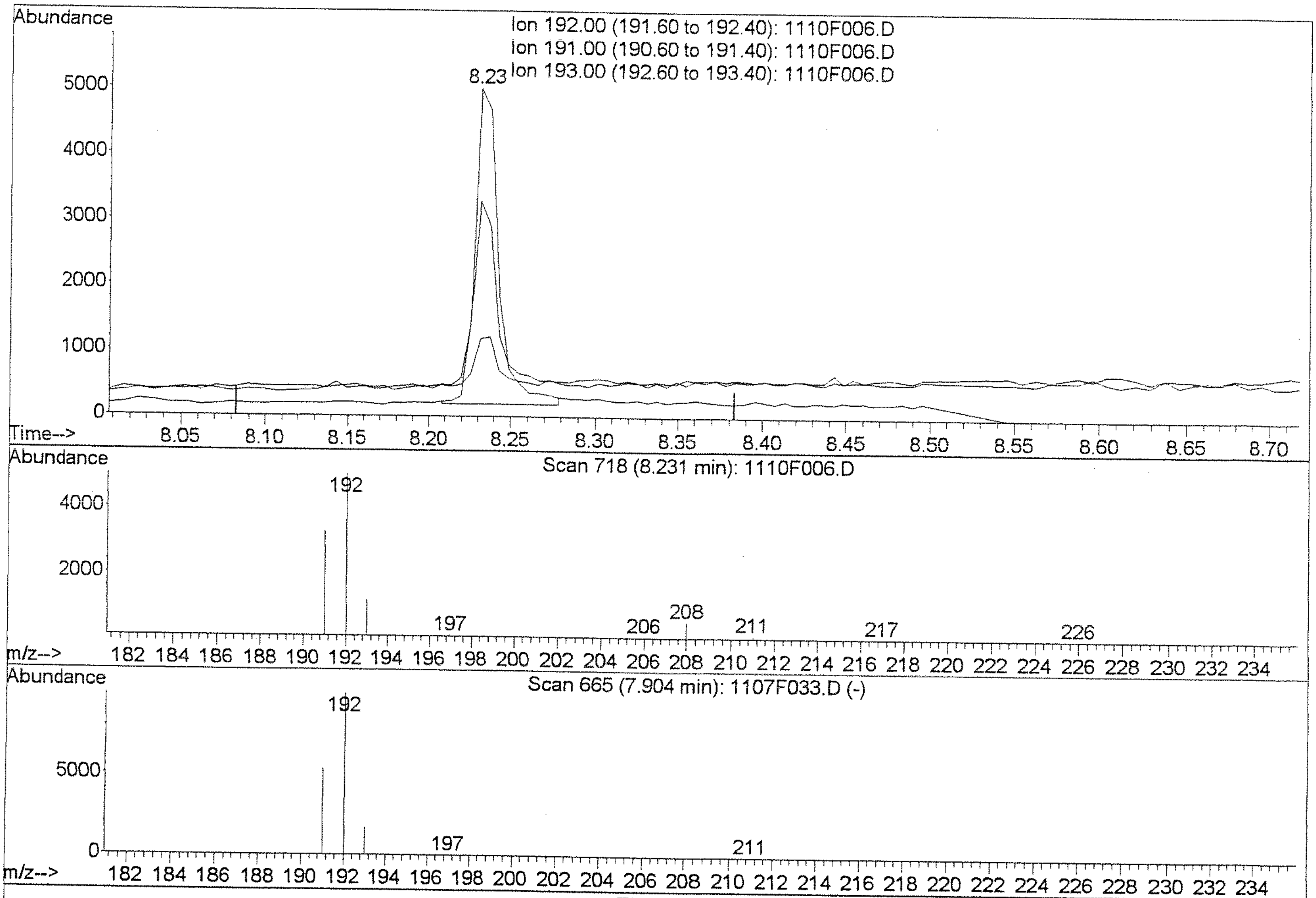
Ion	Exp%	Act%
192.00	100	100
191.00	59.00	59.23
193.00	15.40	15.14
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F006.D
Acq On : 10 Nov 2008 5:21 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:52 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



TIC: 1110F006.D

(30) 1-Methylphenanthrene (T)

8.23min 4.12ng/ml m

response 4860

Ion	Exp%	Act%
192.00	100	100
191.00	59.00	65.60
193.00	15.40	23.59
0.00	0.00	0.00

OI
C 11/12/18

Data File : J:\MS11\DATA\111008\1110F007.D
Acq On : 10 Nov 2008 5:48 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:02 2008

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.07	136	240695	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.48	164	136361	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.72	188	235962	200.00	ng/ml	0.00
37) Chrysene-d12	10.61	240	249451	200.00	ng/ml	0.00
49) Perylene-d12	14.61	264	239163	200.00	ng/ml	-0.01

System Monitoring Compounds

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
15) Fluorene-d10	6.91	176	7082	7.35	ng/ml	0.00
Spiked Amount 200.000			Recovery =	3.67%		
20) 2,4,6 Tribromophenol	7.13	330	1091	7.18	ng/ml	0.00
Spiked Amount 375.000			Recovery =	1.91%		
36) Fluoranthene-d10	8.72	212	12499	7.45	ng/ml	0.00
Spiked Amount 200.000			Recovery =	3.72%		
42) Terphenyl-d14	9.11	244	10647	8.21	ng/ml	0.00
Spiked Amount 200.000			Recovery =	4.11%		

Target Compounds

Compound	R.T.	QIon	Response	Conc	Units	Qvalue
2) Naphthalene	5.08	128	12303	9.09	ng/ml	98
3) 2-Methylnaphthalene	5.63	142	8378	9.03	ng/ml	91
4) 1-Methylnaphthalene	5.71	142	7494	9.12	ng/ml	96
5) Biphenyl	6.00	154	10589	9.48	ng/ml	99
6) 2,6-Dimethylnaphthalene	6.13	156	7222	8.76	ng/ml	99
11) Acenaphthylene	6.37	152	12253	8.88	ng/ml	97
12) Acenaphthene	6.50	154	7511	8.87	ng/ml	98
13) Dibenzofuran	6.65	168	11463m	9.52	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.81	170	6413	7.96	ng/ml#	52
16) Fluorene	6.93	166	8774	8.66	ng/ml	94
21) Pentachlorophenol	7.57	266	32365	217.98	ng/ml	98
23) Dibenzothiophene	7.62	184	12526	8.90	ng/ml	88
27) Phenanthrene	7.73	178	13368	8.80	ng/ml	94
28) Anthracene	7.78	178	11884m	7.89	ng/ml	
29) Carbazole	7.92	167	11289	9.19	ng/ml	93
30) 1-Methylphenanthrene	8.23	192	9327	8.20	ng/ml	97
35) Fluoranthene	8.74	202	14801	8.52	ng/ml	91
38) Pyrene	8.96	202	15938	9.77	ng/ml	90
43) Benz(a)anthracene	10.59	228	13280	8.59	ng/ml	100
44) Chrysene	10.66	228	13702	9.16	ng/ml	99
50) Benzo(b)fluoranthene	13.25	252	12335	8.01	ng/ml	100
51) Benzo(k)fluoranthene	13.34	252	11667	7.88	ng/ml	96
52) Benzo(e)pyrene	14.19	252	11678	8.38	ng/ml	98
53) Benzo(a)pyrene	14.39	252	9636	7.63	ng/ml	100
54) Perylene	14.71	252	9233	7.25	ng/ml	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111008\1110F007.D
Acq On : 10 Nov 2008 5:48 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:02 2008

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Q11/12/08

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.45	276	9559	8.62 ng/ml	99
56)	Dibenz(a,h)anthracene	17.51	278	10195	8.83 ng/ml	91
57)	Benzo(g,h,i)perylene	17.90	276	11661	9.16 ng/ml	98

(#) = qualifier out of range (m) = manual integration

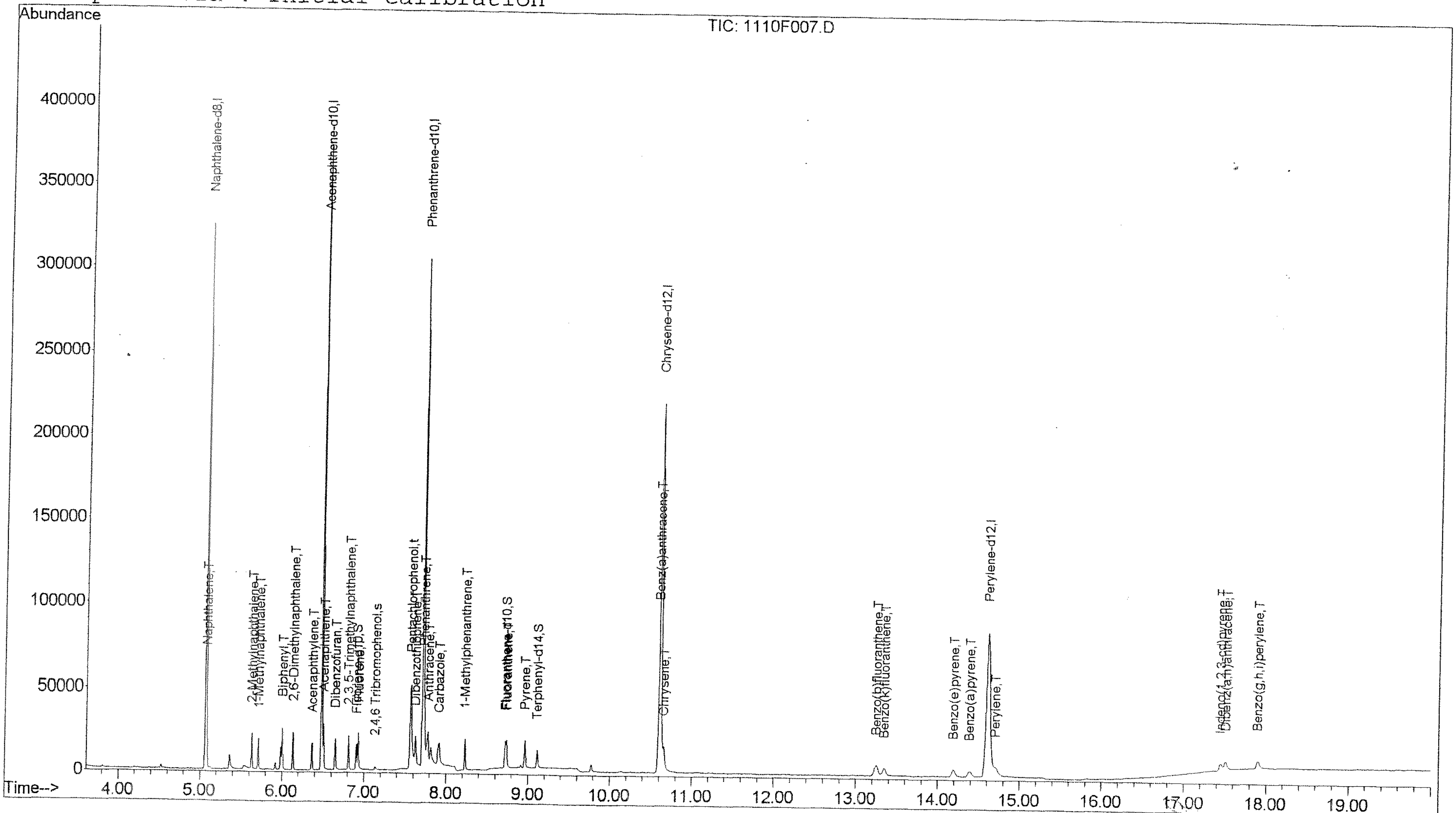
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111008\1110F007.D
Acq On : 10 Nov 2008 5:48 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:53 2008

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration



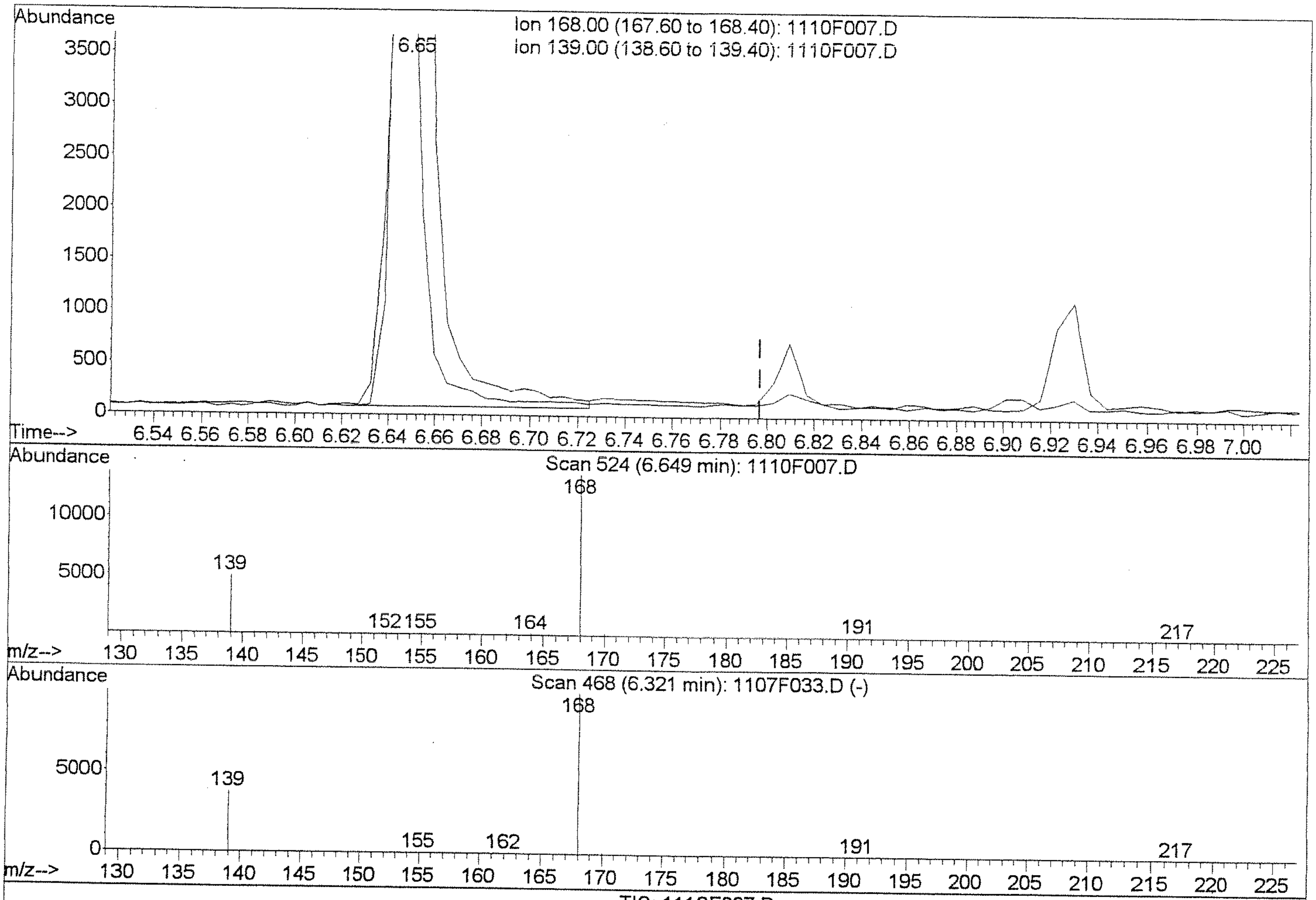
1110F007.D 1110ALK.M Tue Nov 11 05:54:59 2008

Data File : J:\MS11\DATA\111008\1110F007.D
Acq On : 10 Nov 2008 5:48 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:32 2008

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.65min 9.70ng/ml

response 11678

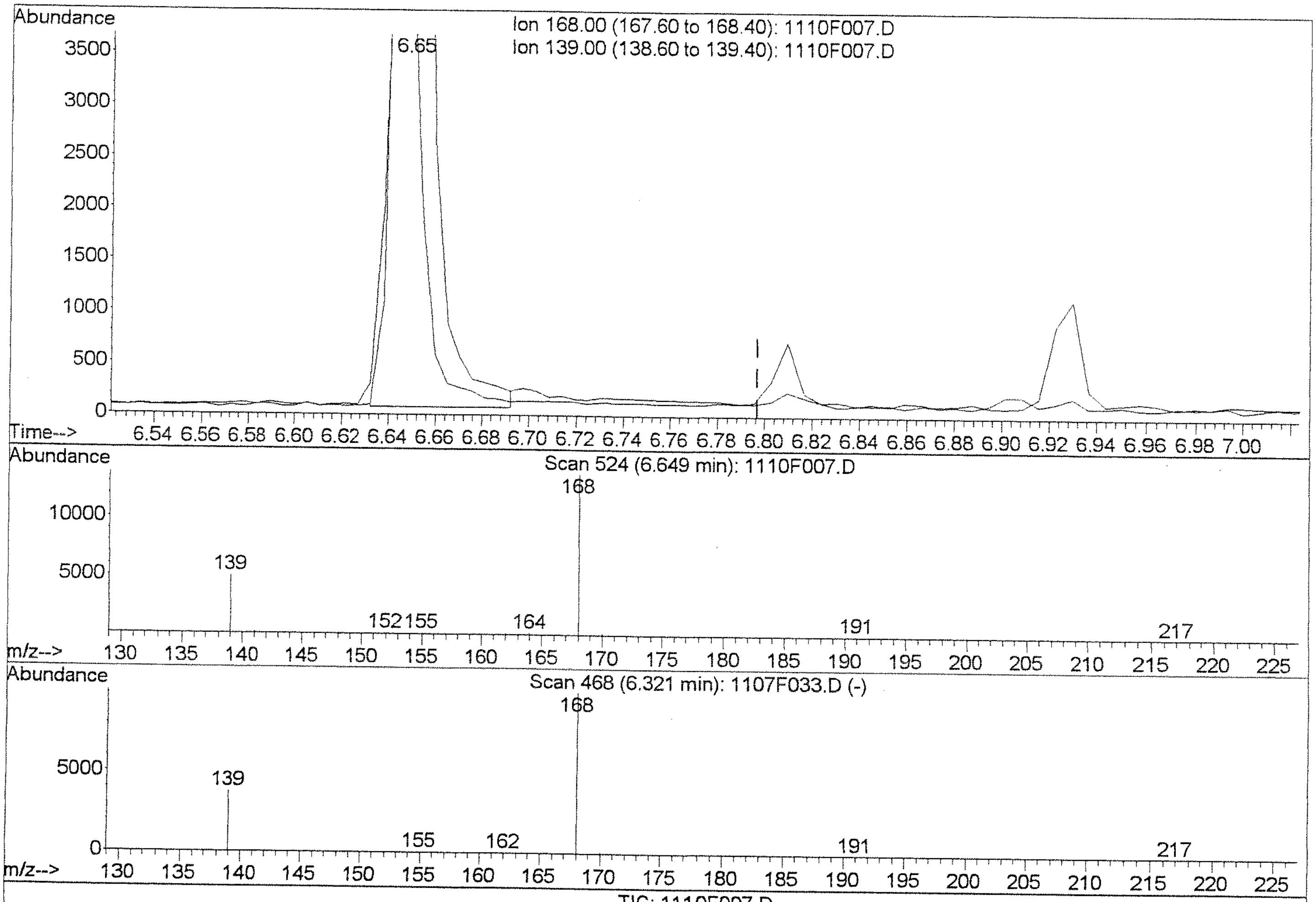
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	35.55
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F007.D
Acq On : 10 Nov 2008 5:48 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:53 2008

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.65min 9.52ng/ml m

response 11463

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	36.07
0.00	0.00	0.00
0.00	0.00	0.00

OI
11/12/08

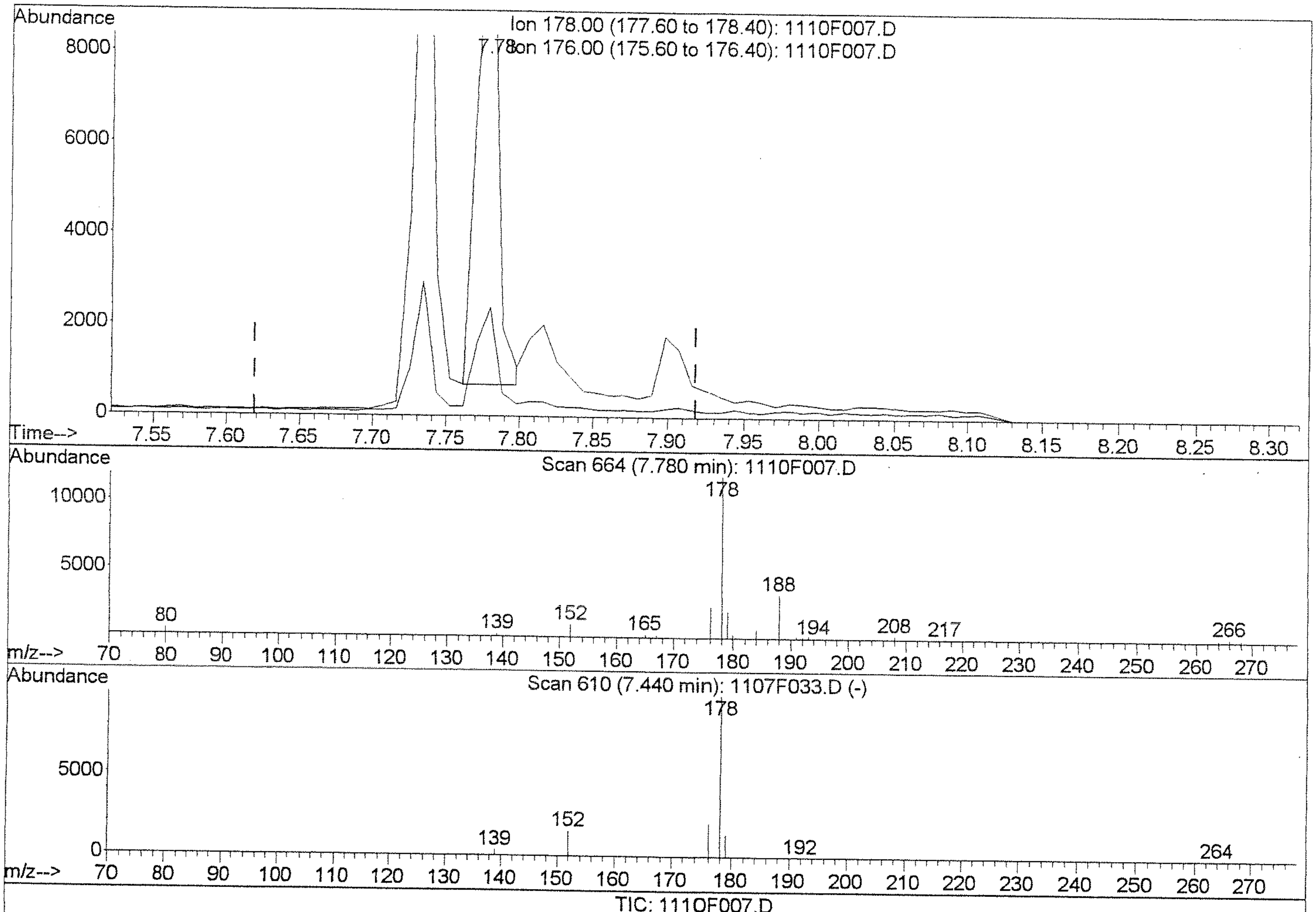
1110F007.D 1110ALK.M Tue Nov 11 05:53:19 2008

Data File : J:\MS11\DATA\111008\1110F007.D
Acq On : 10 Nov 2008 5:48 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:53 2008

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.78min 7.09ng/ml

response 10683

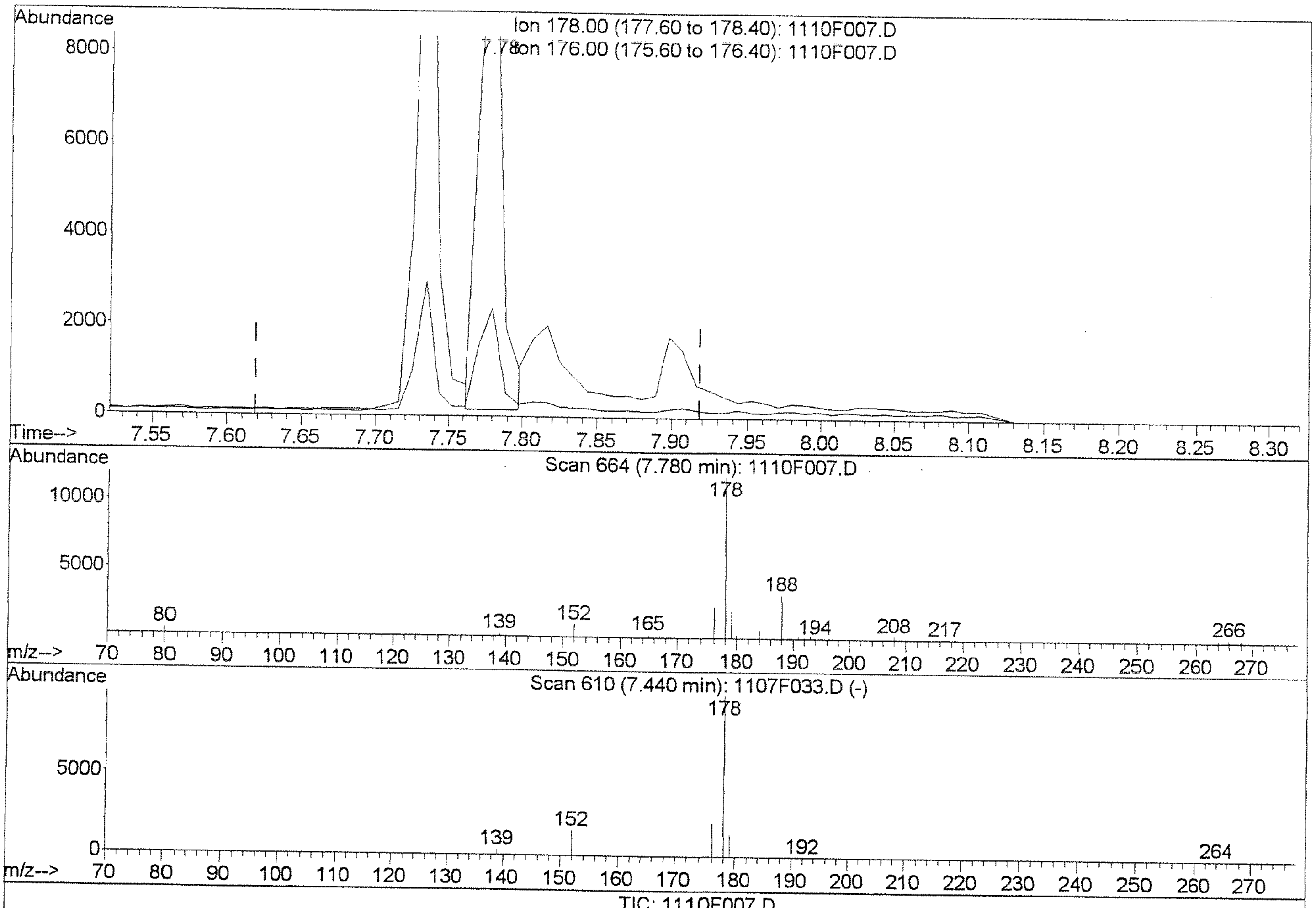
Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.30
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F007.D
Acq On : 10 Nov 2008 5:48 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:53 2008

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.78min 7.89ng/ml m

response 11884

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.95
0.00	0.00	0.00
0.00	0.00	0.00

IC 11/11/08

Data File : J:\MS11\DATA\111008\1110F008.D
Acq On : 10 Nov 2008 6:14 pm
Sample : SIM-PAH ICAL @0.02/0.4ug/mL | SVM27-3G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:03 2008

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.06	136	251288	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.48	164	143455	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.72	188	246817	200.00	ng/ml	0.00
37) Chrysene-d12	10.61	240	256576	200.00	ng/ml	0.00
49) Perylene-d12	14.61	264	254734	200.00	ng/ml	-0.01

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
15) Fluorene-d10	6.91	176	18600	18.35	ng/ml	0.00
Spiked Amount 200.000			Recovery =	9.18%		
20) 2,4,6 Tribromophenol	7.13	330	2909	18.20	ng/ml	0.00
Spiked Amount 375.000			Recovery =	4.85%		
36) Fluoranthene-d10	8.72	212	32189	18.35	ng/ml	0.00
Spiked Amount 200.000			Recovery =	9.18%		
42) Terphenyl-d14	9.11	244	26447	19.83	ng/ml	0.00
Spiked Amount 200.000			Recovery =	9.91%		

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Naphthalene	5.08	128	30324	21.46	ng/ml	98
3) 2-Methylnaphthalene	5.63	142	21000	21.67	ng/ml	94
4) 1-Methylnaphthalene	5.71	142	18737	21.84	ng/ml	96
5) Biphenyl	6.00	154	25812	22.13	ng/ml	100
6) 2,6-Dimethylnaphthalene	6.13	156	17849	20.74	ng/ml	99
11) Acenaphthylene	6.36	152	30677	21.14	ng/ml	100
12) Acenaphthene	6.50	154	18774	21.08	ng/ml	98
13) Dibenzofuran	6.65	168	28672m	22.65	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.81	170	15755	18.59	ng/ml#	35
16) Fluorene	6.93	166	22053	20.69	ng/ml	96
21) Pentachlorophenol	7.56	266	75103	480.81	ng/ml	95
23) Dibenzothiophene	7.62	184	32031	21.76	ng/ml	83
27) Phenanthrene	7.73	178	32285	20.31	ng/ml	94
28) Anthracene	7.78	178	31638	20.08	ng/ml	96
29) Carbazole	7.92	167	28960	22.53	ng/ml	90
30) 1-Methylphenanthrene	8.23	192	24295	20.43	ng/ml	97
35) Fluoranthene	8.74	202	38034	20.94	ng/ml	94
38) Pyrene	8.96	202	39960	23.81	ng/ml	91
43) Benz(a)anthracene	10.59	228	32260	20.29	ng/ml	100
44) Chrysene	10.65	228	33521	21.80	ng/ml	98
50) Benzo(b)fluoranthene	13.25	252	32166	19.61	ng/ml	99
51) Benzo(k)fluoranthene	13.34	252	31305	19.85	ng/ml	99
52) Benzo(e)pyrene	14.19	252	29201	19.67	ng/ml	100
53) Benzo(a)pyrene	14.39	252	25784	19.17	ng/ml	97
54) Perylene	14.71	252	25432	18.76	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111008\1110F008.D Vial: 8
Acq On : 10 Nov 2008 6:14 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.02/0.4ug/mL | SVM27-3G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:03 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

11/11/08

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55) Indeno(1,2,3-cd)pyrene	17.44	276	24296	20.57 ng/ml	99
56) Dibenz(a,h)anthracene	17.50	278	25986	21.14 ng/ml	98
57) Benzo(g,h,i)perylene	17.89	276	30150	22.24 ng/ml	98

(#) = qualifier out of range (m) = manual integration

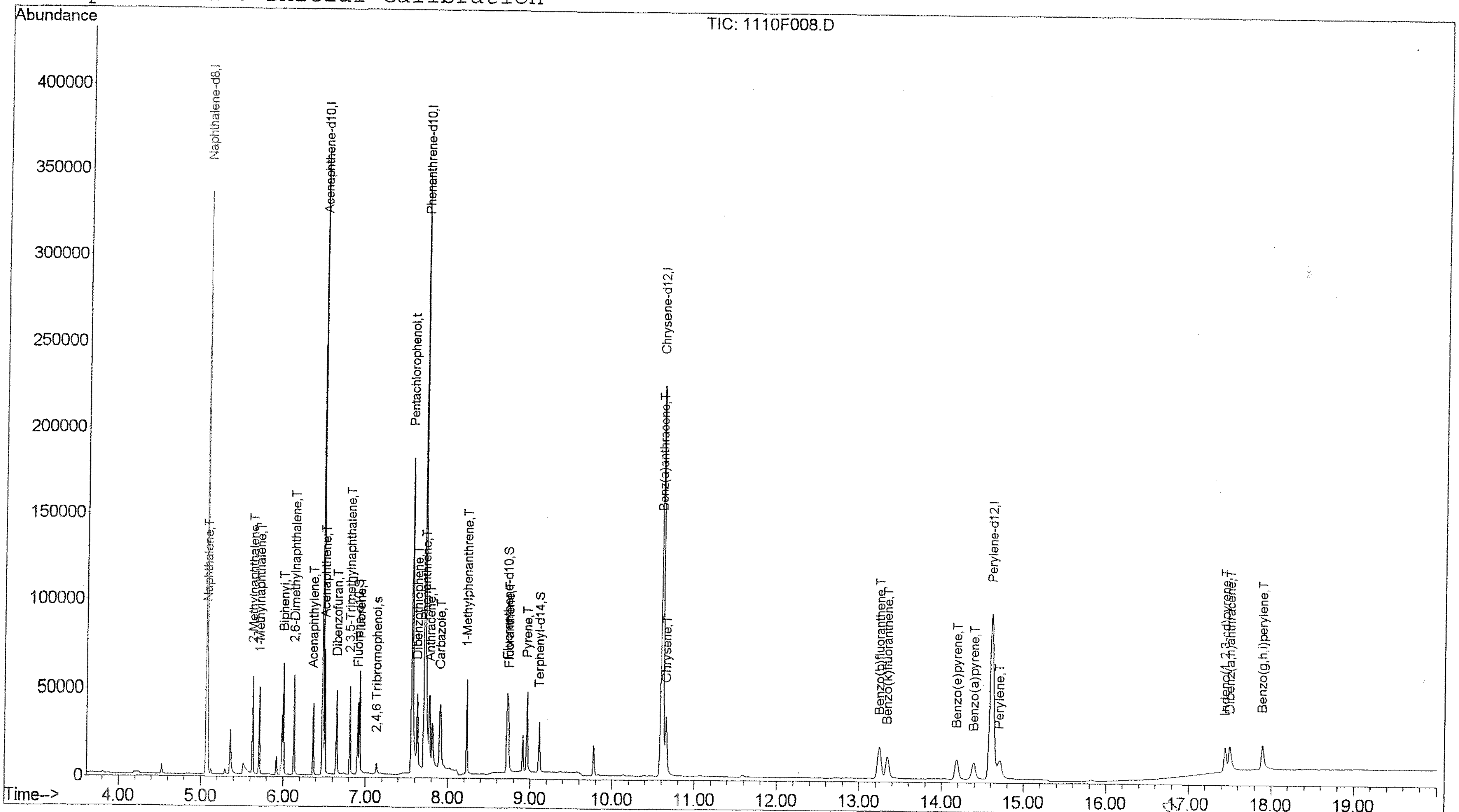
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111008\1110F008.D
Acq On : 10 Nov 2008 6:14 pm
Sample : SIM-PAH ICAL @0.02/0.4ug/mL | SVM27-3G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:53 2008

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

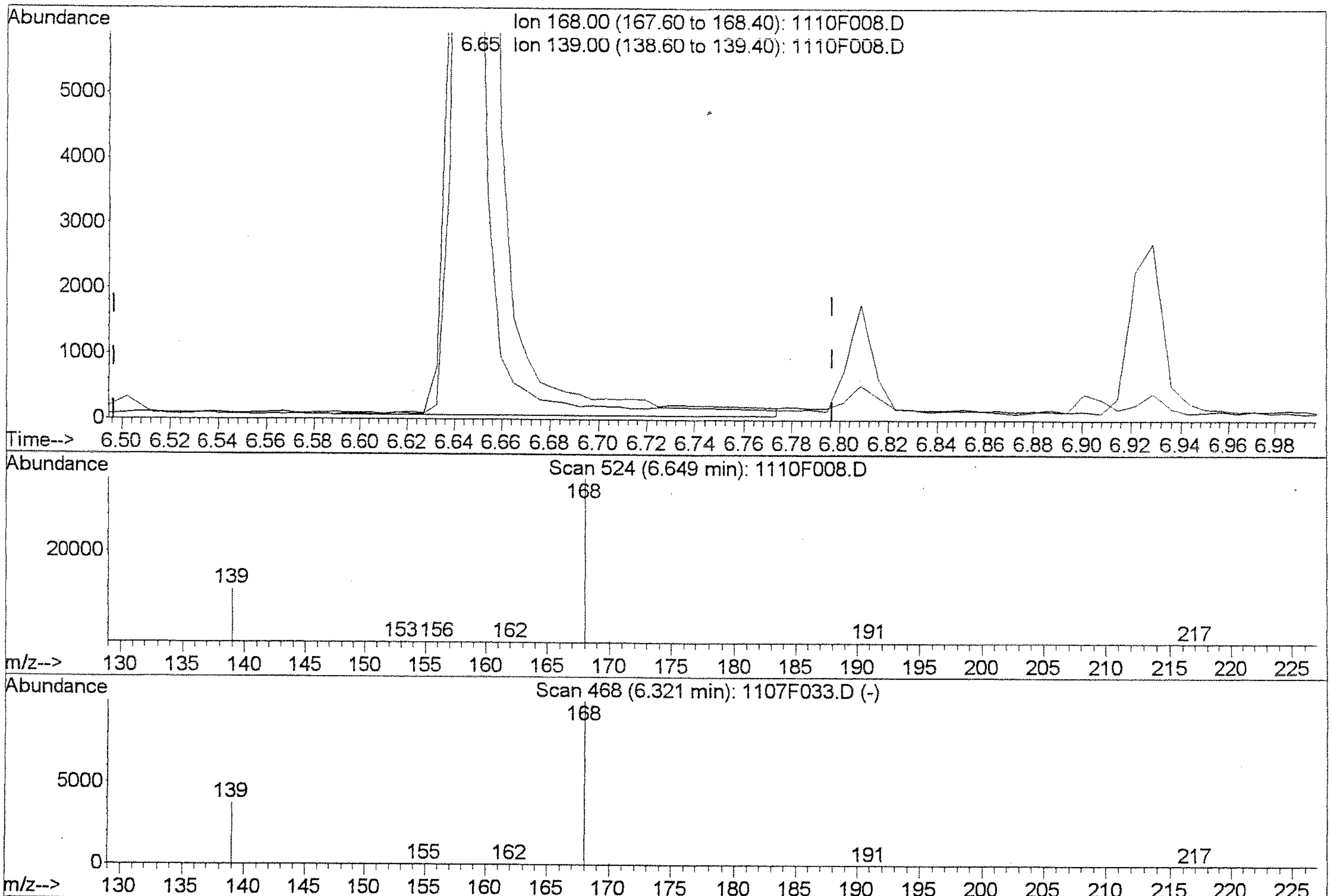
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration



1110F008.D 1110ALK.M Tue Nov 11 05:55:02 2008

Data File : J:\MS11\DATA\111008\1110F008.D Vial: 8
Acq On : 10 Nov 2008 6:14 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.02/0.4ug/mL | SVM27-3G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:32 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



TIC: 1110F008.D

(13) Dibenzofuran (T)

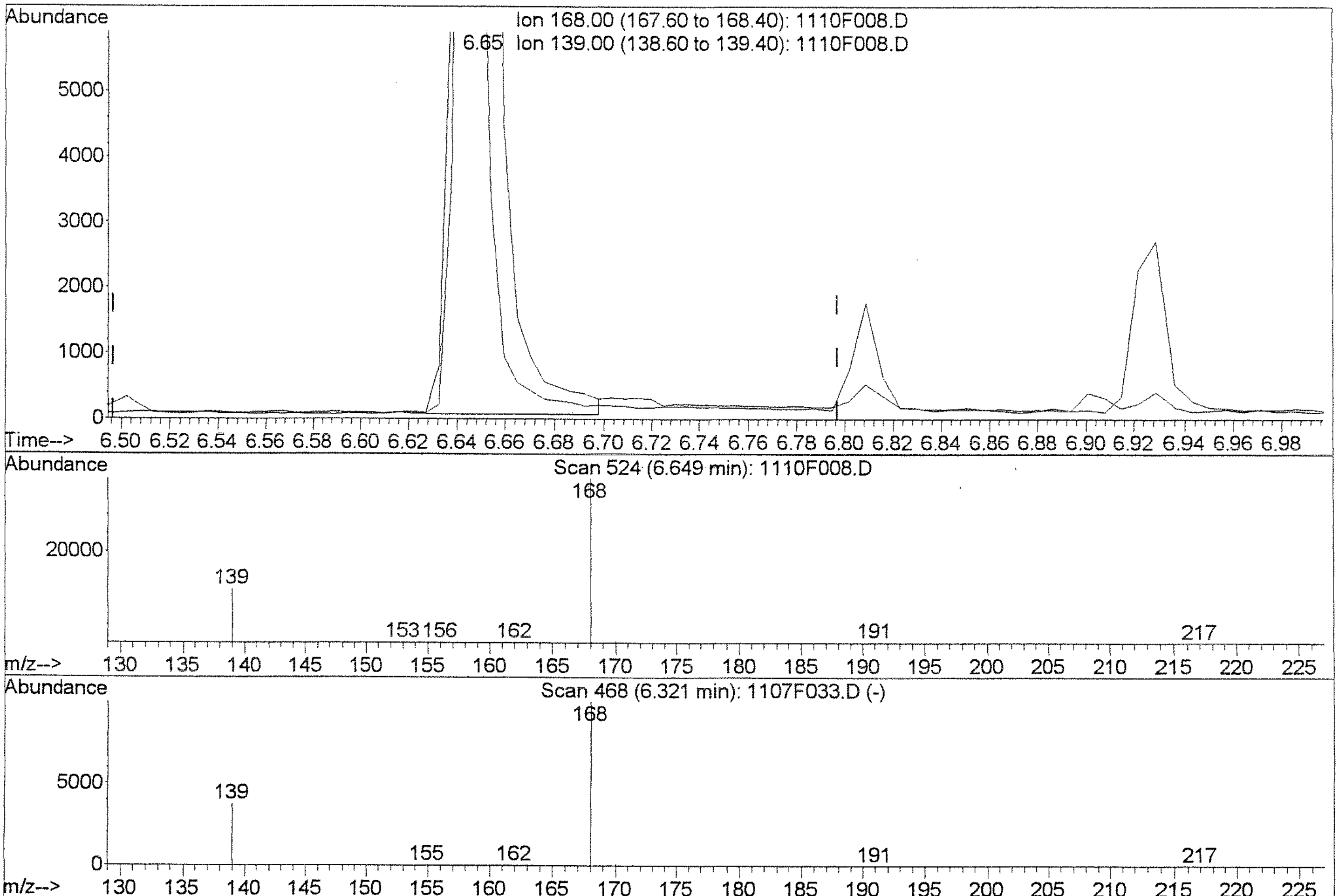
6.65min 29.05ng/ml

response 36782

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	32.33
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F008.D Vial: 8
Acq On : 10 Nov 2008 6:14 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.02/0.4ug/mL | SVM27-3G Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:53 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.65min 22.65ng/ml m

response 28672

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	32.56
0.00	0.00	0.00
0.00	0.00	0.00

QI 11/11/08

Data File : J:\MS11\DATA\111008\1110F009.D Vial: 9
Acq On : 10 Nov 2008 6:40 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:03 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.07	136	250933	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.48	164	142057	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.71	188	233449	200.00 ng/ml	0.00
37) Chrysene-d12	10.60	240	262747	200.00 ng/ml	0.00
49) Perylene-d12	14.61	264	251921	200.00 ng/ml	-0.01
System Monitoring Compounds					
15) Fluorene-d10	6.90	176	93935	93.61 ng/ml	0.00
Spiked Amount 200.000			Recovery =	46.81%	
20) 2,4,6 Tribromophenol	7.14	330	14847	93.82 ng/ml	0.00
Spiked Amount 375.000			Recovery =	25.02%	
36) Fluoranthene-d10	8.72	212	159763	96.29 ng/ml	0.00
Spiked Amount 200.000			Recovery =	48.15%	
42) Terphenyl-d14	9.11	244	129555	94.87 ng/ml	0.00
Spiked Amount 200.000			Recovery =	47.44%	

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) Naphthalene	5.08	128	150817	106.86 ng/ml	100
3) 2-Methylnaphthalene	5.63	142	104268	107.77 ng/ml	96
4) 1-Methylnaphthalene	5.71	142	93341	108.96 ng/ml	92
5) Biphenyl	6.00	154	129336	111.06 ng/ml	100
6) 2,6-Dimethylnaphthalene	6.13	156	89828	104.54 ng/ml	98
11) Acenaphthylene	6.37	152	157329	109.49 ng/ml	99
12) Acenaphthene	6.50	154	95105	107.86 ng/ml	98
13) Dibenzofuran	6.65	168	146074m	116.51 ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.81	170	82178	97.90 ng/ml#	62
16) Fluorene	6.93	166	116330	110.23 ng/ml	98
21) Pentachlorophenol	7.56	266	115296	745.39 ng/ml	93
23) Dibenzothiophene	7.63	184	159809	114.76 ng/ml	89
27) Phenanthrene	7.73	178	163977	109.05 ng/ml	96
28) Anthracene	7.78	178	159237	106.85 ng/ml	95
29) Carbazole	7.91	167	146811	120.74 ng/ml	97
30) 1-Methylphenanthrene	8.23	192	122784	109.14 ng/ml	96
35) Fluoranthene	8.74	202	188575	109.75 ng/ml	96
38) Pyrene	8.96	202	195505	113.73 ng/ml	94
43) Benz(a)anthracene	10.59	228	165310	101.54 ng/ml	97
44) Chrysene	10.66	228	170581	108.31 ng/ml	99
50) Benzo(b)fluoranthene	13.24	252	173148	106.74 ng/ml	100
51) Benzo(k)fluoranthene	13.34	252	165982	106.42 ng/ml	99
52) Benzo(e)pyrene	14.18	252	153368	104.44 ng/ml	99
53) Benzo(a)pyrene	14.37	252	134939	101.43 ng/ml	98
54) Perylene	14.71	252	136837	102.06 ng/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111008\1110F009.D Vial: 9
Acq On : 10 Nov 2008 6:40 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:03 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.43	276	123722	105.93 ng/ml	98
56)	Dibenz(a,h)anthracene	17.50	278	135566	111.52 ng/ml	98
57)	Benzo(g,h,i)perylene	17.89	276	148894	111.07 ng/ml	99

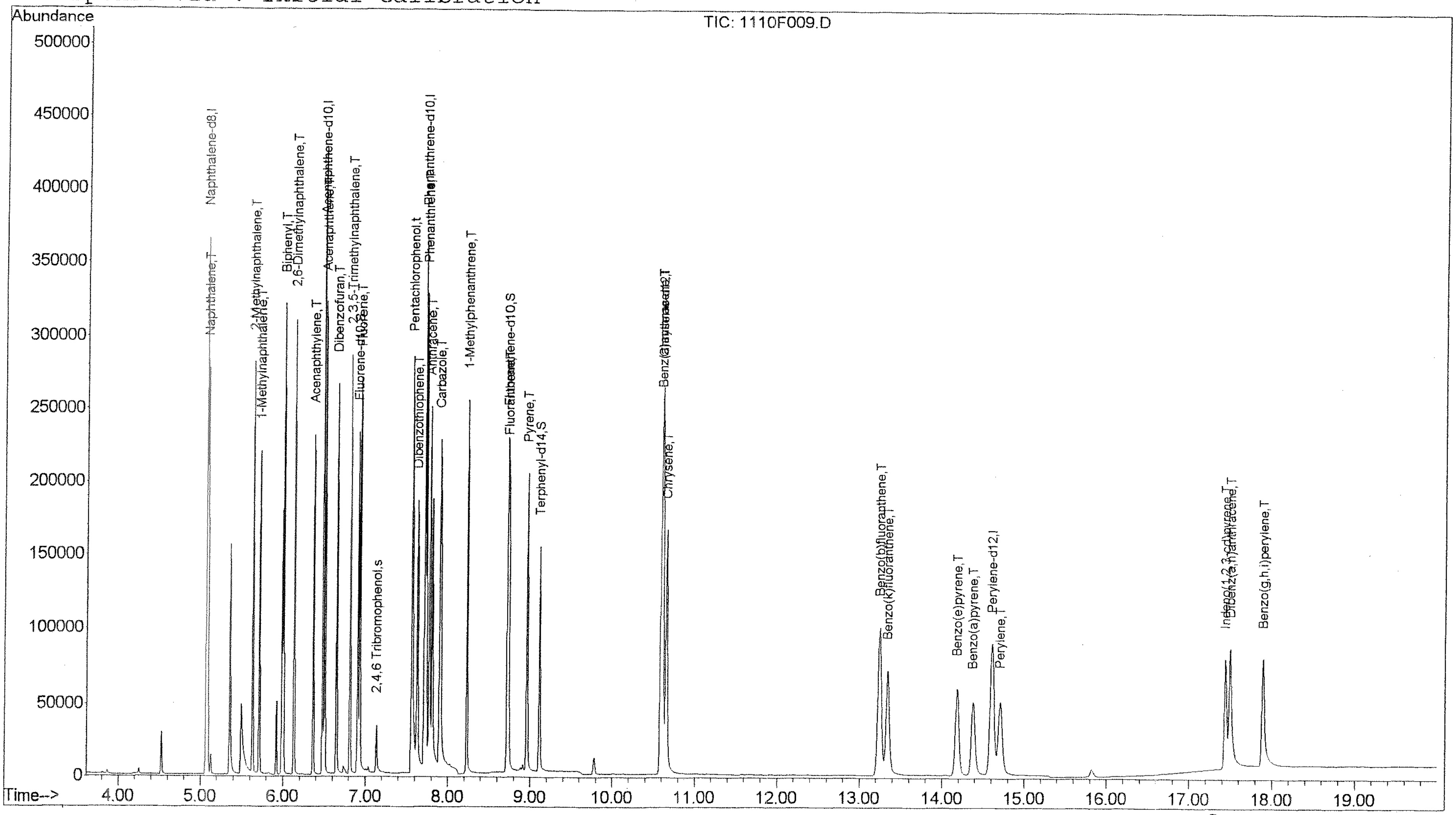
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111008\1110F009.D
Acq On : 10 Nov 2008 6:40 pm
Sample : SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:54 2008

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

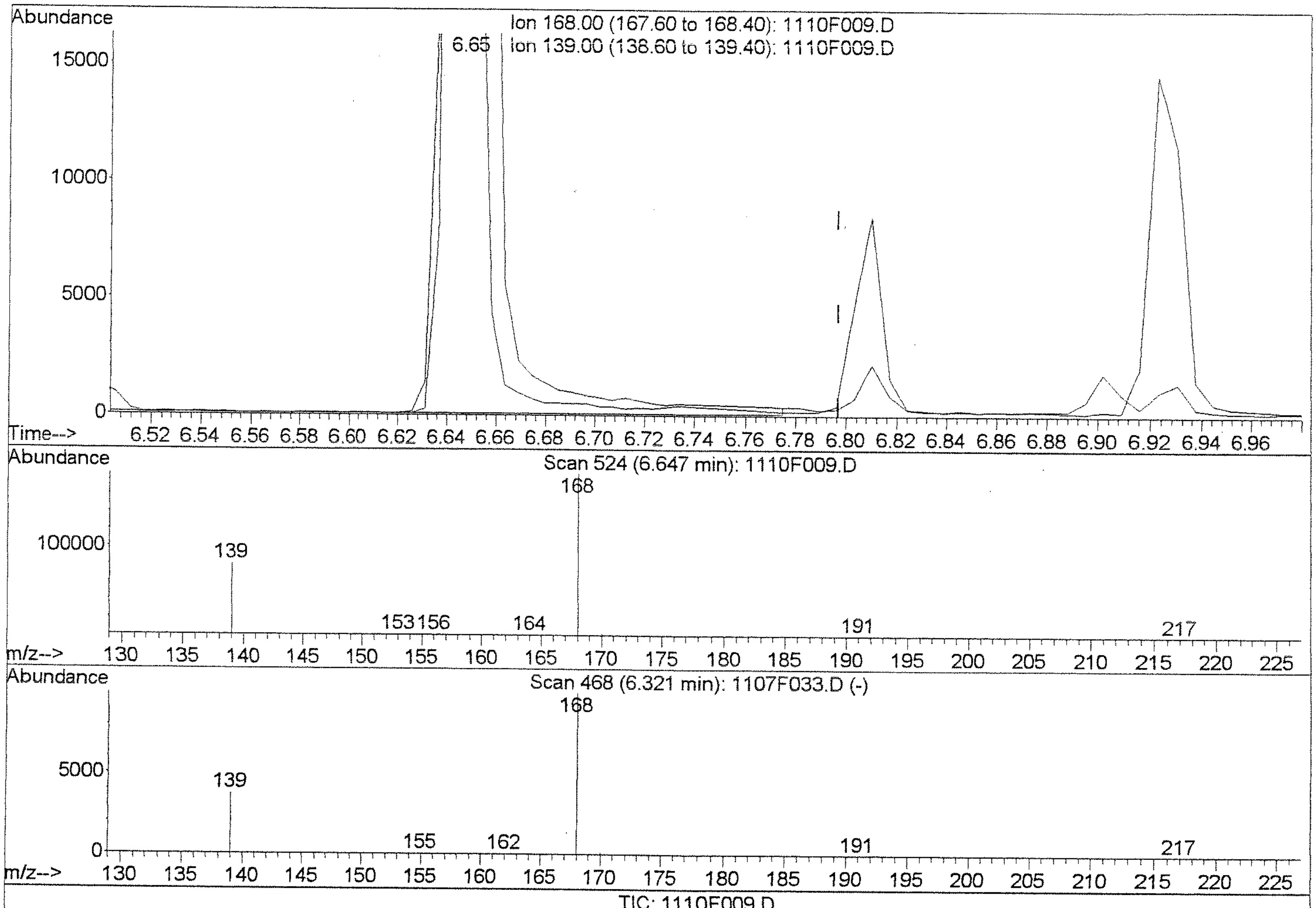
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration



1110F009.D 1110ALK.M Tue Nov 11 05:55:04 2008

Data File : J:\MS11\DATA\111008\1110F009.D Vial: 9
Acq On : 10 Nov 2008 6:40 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:32 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.65min 148.98ng/ml

response 186788

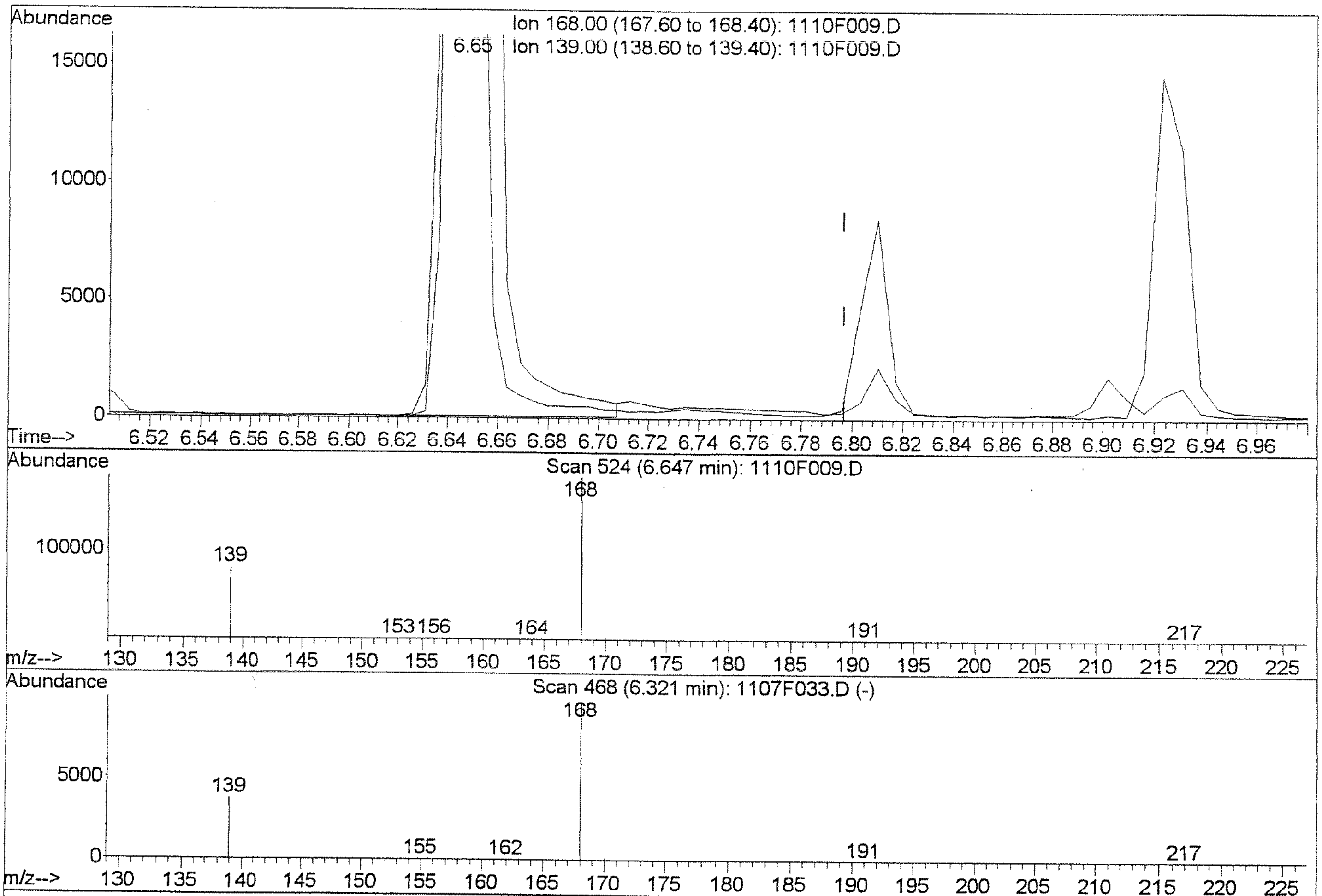
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	43.64
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F009.D
Acq On : 10 Nov 2008 6:40 pm
Sample : SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:54 2008

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



TIC: 1110F009.D

(13) Dibenzofuran (T)

6.65min 116.51ng/ml m

response 146074

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	43.68
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/11/08

Data File : J:\MS11\DATA\111008\1110F010.D Vial: 10
Acq On : 10 Nov 2008 7:07 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:04 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

JW 11/11/08

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.07	136	247500	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.48	164	141296	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.71	188	243632	200.00 ng/ml	0.00
37) Chrysene-d12	10.61	240	266471	200.00 ng/ml	0.00
49) Perylene-d12	14.61	264	258441	200.00 ng/ml	-0.01
System Monitoring Compounds					
15) Fluorene-d10	6.90	176	194304	194.67 ng/ml	0.00
Spiked Amount 200.000			Recovery =	97.33%	
20) 2,4,6 Tribromophenol	7.14	330	34651	220.15 ng/ml	0.00
Spiked Amount 375.000			Recovery =	58.71%	
36) Fluoranthene-d10	8.72	212	334078	192.93 ng/ml	0.00
Spiked Amount 200.000			Recovery =	96.47%	
42) Terphenyl-d14	9.11	244	272805	196.97 ng/ml	0.00
Spiked Amount 200.000			Recovery =	98.48%	

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) Naphthalene	5.08	128	303659	218.14 ng/ml	100
3) 2-Methylnaphthalene	5.63	142	210806	220.90 ng/ml	98
4) 1-Methylnaphthalene	5.71	142	186844	221.14 ng/ml	95
5) Biphenyl	6.00	154	258199	224.79 ng/ml	99
6) 2,6-Dimethylnaphthalene	6.13	156	183999	217.10 ng/ml	99
11) Acenaphthylene	6.36	152	329082	230.25 ng/ml	99
12) Acenaphthene	6.50	154	196339	223.87 ng/ml	100
13) Dibenzofuran	6.65	168	300503m	240.98 ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.81	170	173488	207.79 ng/ml#	56
16) Fluorene	6.93	166	242679	231.19 ng/ml	99
21) Pentachlorophenol	7.56	266	165175	1073.61 ng/ml	95
23) Dibenzothiophene	7.63	184	338916	233.20 ng/ml	88
27) Phenanthrene	7.73	178	348991	222.39 ng/ml	95
28) Anthracene	7.78	178	352416	226.60 ng/ml	95
29) Carbazole	7.91	167	317485	250.18 ng/ml	99
30) 1-Methylphenanthrene	8.23	192	256414	218.40 ng/ml	95
35) Fluoranthene	8.73	202	399187	222.62 ng/ml	84
38) Pyrene	8.96	202	409583	234.94 ng/ml	95
43) Benz(a)anthracene	10.59	228	351296	212.76 ng/ml	99
44) Chrysene	10.65	228	357655	223.92 ng/ml	99
50) Benzo(b)fluoranthene	13.24	252	374709	225.16 ng/ml	100
51) Benzo(k)fluoranthene	13.34	252	360465	225.29 ng/ml	100
52) Benzo(e)pyrene	14.18	252	329589	218.78 ng/ml	100
53) Benzo(a)pyrene	14.37	252	303359	222.28 ng/ml	99
54) Perylene	14.71	252	299663	217.88 ng/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111008\1110F010.D
Acq On : 10 Nov 2008 7:07 pm
Sample : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:04 2008

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.43	276	273199	228.01 ng/ml	99
56)	Dibenz(a,h)anthracene	17.49	278	294813	236.40 ng/ml	98
57)	Benzo(g,h,i)perylene	17.88	276	315435	229.37 ng/ml	99

(#) = qualifier out of range (m) = manual integration

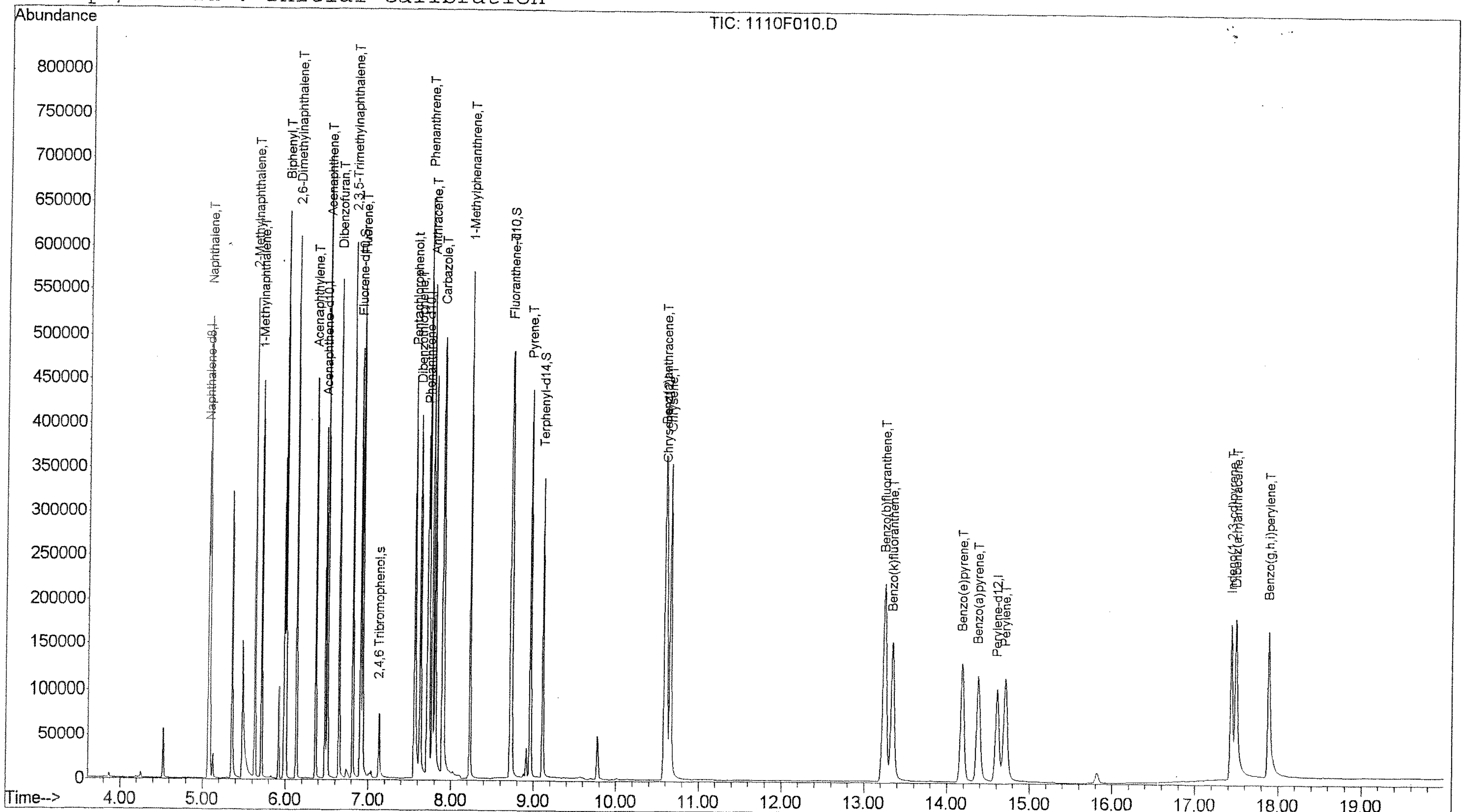
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111008\1110F010.D
Acq On : 10 Nov 2008 7:07 pm
Sample : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:56 2008

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

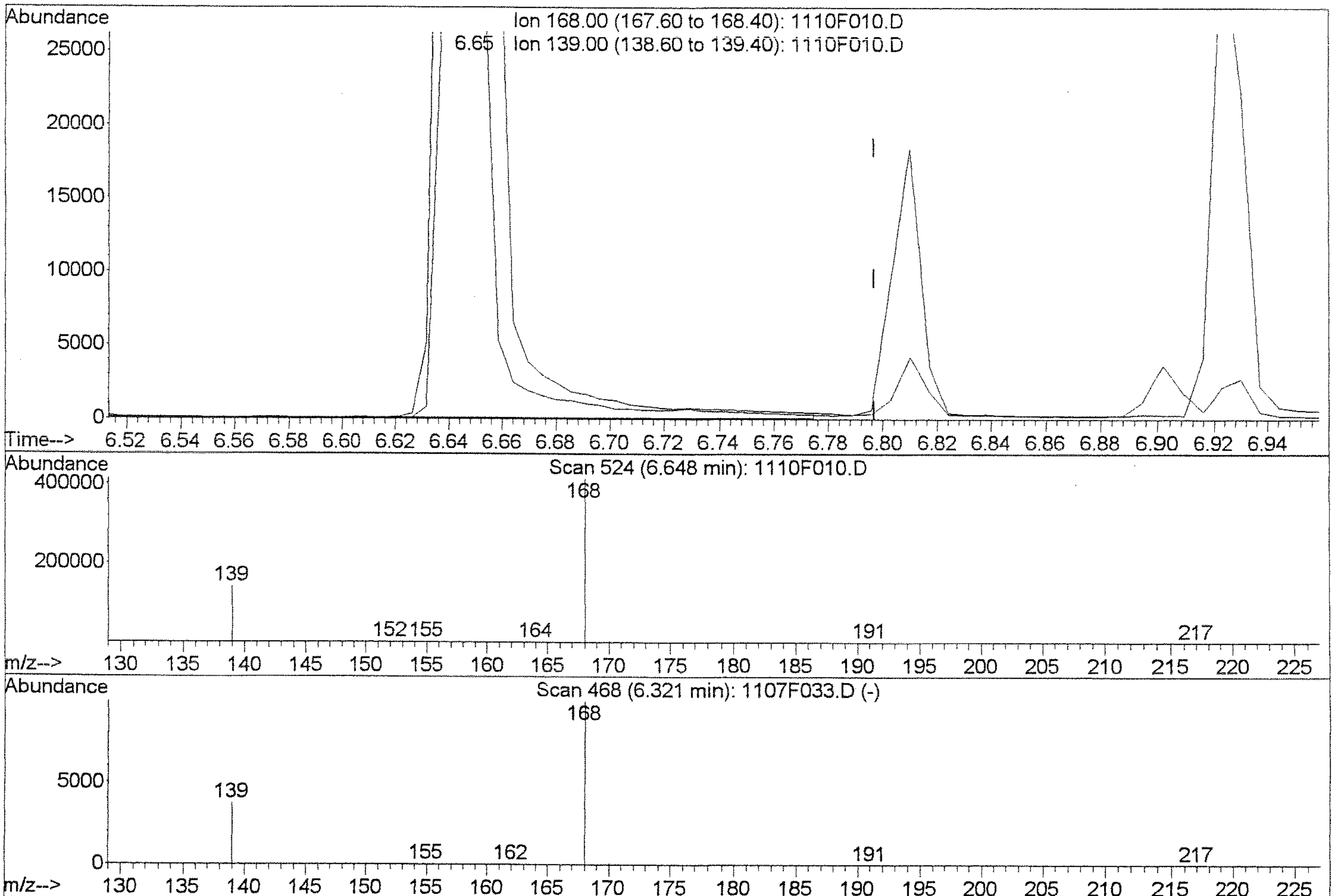
Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration



```
Data File : J:\MS11\DATA\111008\1110F010.D              Vial: 10
Acq On    : 10 Nov 2008   7:07 pm                  Operator: LWeiskopf
Sample    : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I  Inst     : MS11
Misc      :                                        Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11  5:32 2008               Quant Results File: temp.res

Method          : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title           : PAHS and ALKYLATED HOMOLOGS
Last Update     : Mon Nov 10 13:53:21 2008
Response via    : Multiple Level Calibration
```



TIC: 1110F010.D

(13) Dibenzofuran (T)

6.65min 311.23ng/ml

response 388115

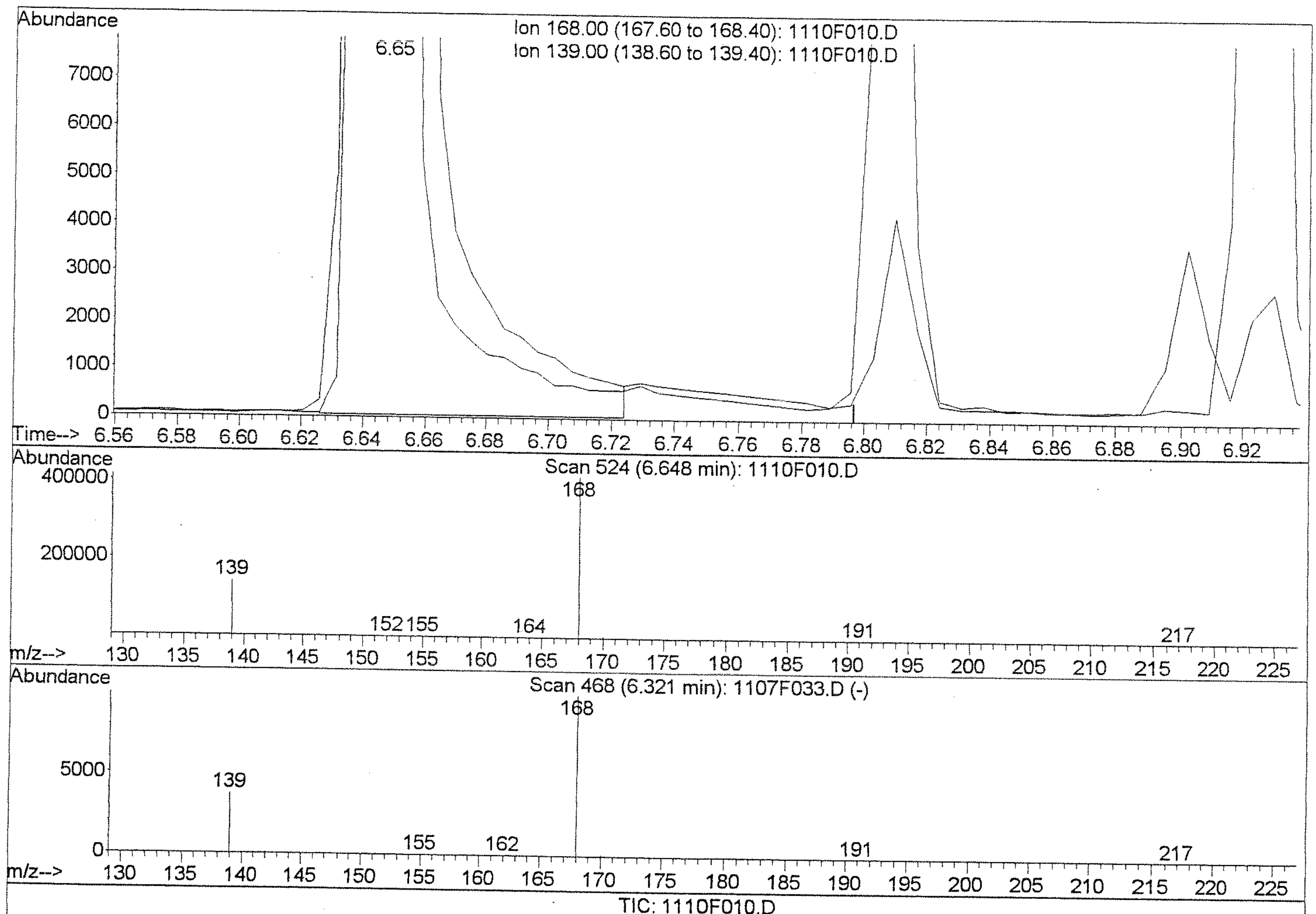
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	33.98
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F010.D
Acq On : 10 Nov 2008 7:07 pm
Sample : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:56 2008

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibratión



(13) Dibenzofuran (T)

6.65min 240.98ng/ml m

response 300503

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	34.00
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/11/08

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111008\1110F011.D
Acq On : 10 Nov 2008 7:33 pm
Sample : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:05 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.06	136	244249	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.48	164	138359	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.72	188	234142	200.00	ng/ml	0.00
37) Chrysene-d12	10.61	240	268348	200.00	ng/ml	0.00
49) Perylene-d12	14.61	264	256596	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.91	176	387926	396.91	ng/ml	0.00
Spiked Amount 200.000			Recovery =	198.46%		
20) 2,4,6 Tribromophenol	7.13	330	68970	447.49	ng/ml	0.00
Spiked Amount 375.000			Recovery =	119.33%		
36) Fluoranthene-d10	8.72	212	669556	402.33	ng/ml	0.00
Spiked Amount 200.000			Recovery =	201.16%		
42) Terphenyl-d14	9.11	244	548239	393.07	ng/ml	0.00
Spiked Amount 200.000			Recovery =	196.54%		

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Naphthalene	5.08	128	591764	430.77	ng/ml	97
3) 2-Methylnaphthalene	5.63	142	416534	442.29	ng/ml	93
4) 1-Methylnaphthalene	5.71	142	368931	442.46	ng/ml	95
5) Biphenyl	6.00	154	501373	442.30	ng/ml	99
6) 2,6-Dimethylnaphthalene	6.13	156	364862	436.22	ng/ml	99
11) Acenaphthylene	6.37	152	649565	464.13	ng/ml	97
12) Acenaphthene	6.51	154	382317	445.17	ng/ml	89
13) Dibenzofuran	6.65	168	581747m	476.41	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.81	170	348303	426.03	ng/ml#	46
16) Fluorene	6.93	166	471718	458.93	ng/ml	98
21) Pentachlorophenol	7.56	266	197761	1312.70	ng/ml	94
23) Dibenzothiophene	7.63	184	675083	483.34	ng/ml	88
27) Phenanthrene	7.73	178	676076	448.27	ng/ml	96
28) Anthracene	7.78	178	702818	470.22	ng/ml	96
29) Carbazole	7.91	167	594726	487.65	ng/ml	96
30) 1-Methylphenanthrene	8.23	192	508017	450.23	ng/ml	98
35) Fluoranthene	8.73	202	767440	445.33	ng/ml	82
38) Pyrene	8.96	202	803615	457.74	ng/ml	95
43) Benz(a)anthracene	10.59	228	716118	430.68	ng/ml	99
44) Chrysene	10.65	228	720803	448.12	ng/ml	99
50) Benzo(b)fluoranthene	13.25	252	775509	469.35	ng/ml	99
51) Benzo(k)fluoranthene	13.34	252	741777	466.95	ng/ml	99
52) Benzo(e)pyrene	14.18	252	679869	454.55	ng/ml	99
53) Benzo(a)pyrene	14.38	252	638206	471.00	ng/ml	99
54) Perylene	14.71	252	632735	463.35	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111008\1110F011.D Vial: 11
Acq On : 10 Nov 2008 7:33 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:05 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

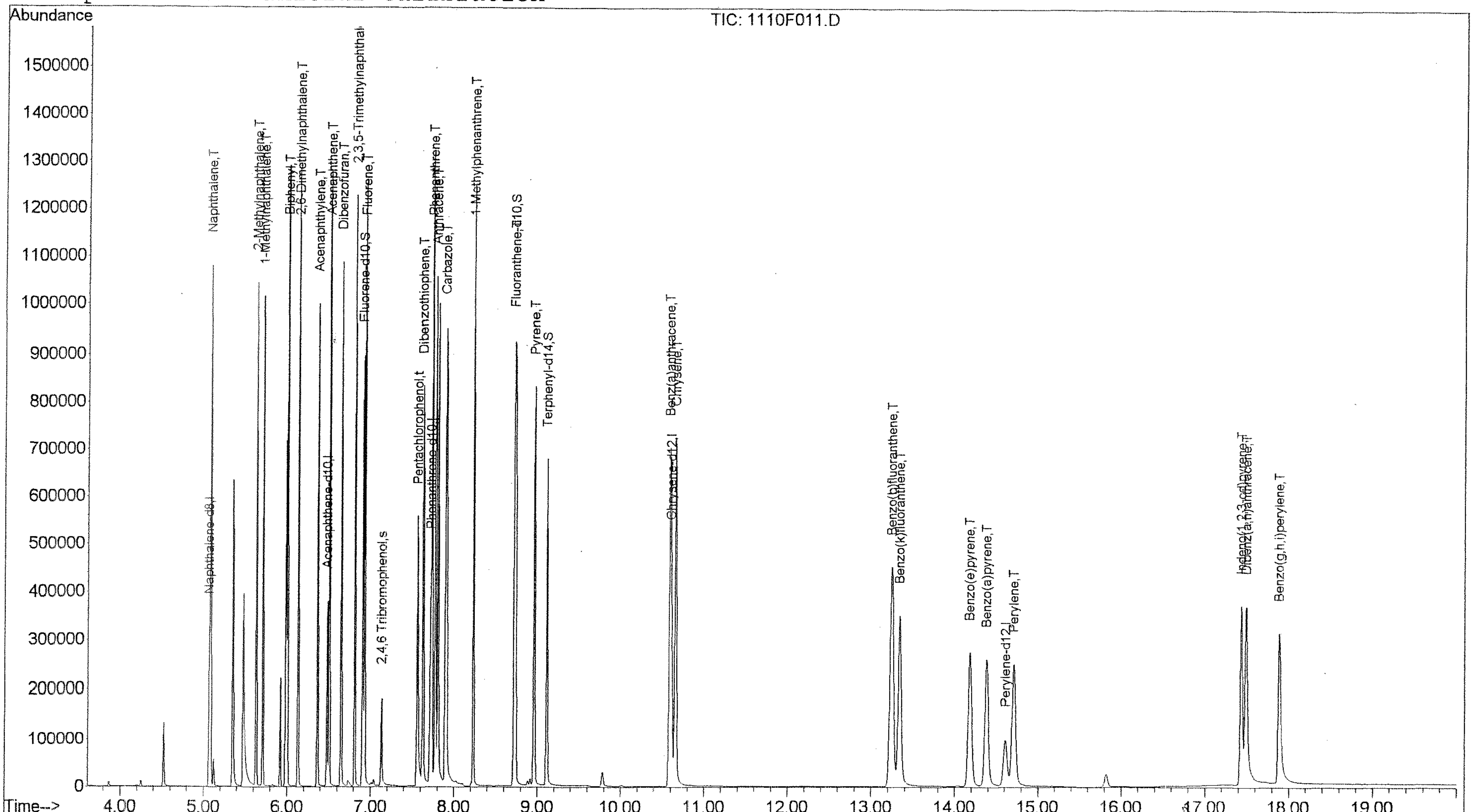
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.43	276	569537	478.75 ng/ml	100
56)	Dibenz(a,h)anthracene	17.49	278	595912	481.28 ng/ml	96
57)	Benzo(g,h,i)perylene	17.88	276	629741	461.21 ng/ml	100

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

```
Data File : J:\MS11\DATA\111008\1110F011.D                 Vial: 11
Acq On    : 10 Nov 2008   7:33 pm                      Operator: LWeiskopf
Sample    : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J      Inst    : MS11
Misc      :                                            Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11  5:56 2008                Quant Results File: 1110ALK.RES

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Mon Nov 10 13:53:21 2008
Response via   : Initial Calibration
```



11/11/08

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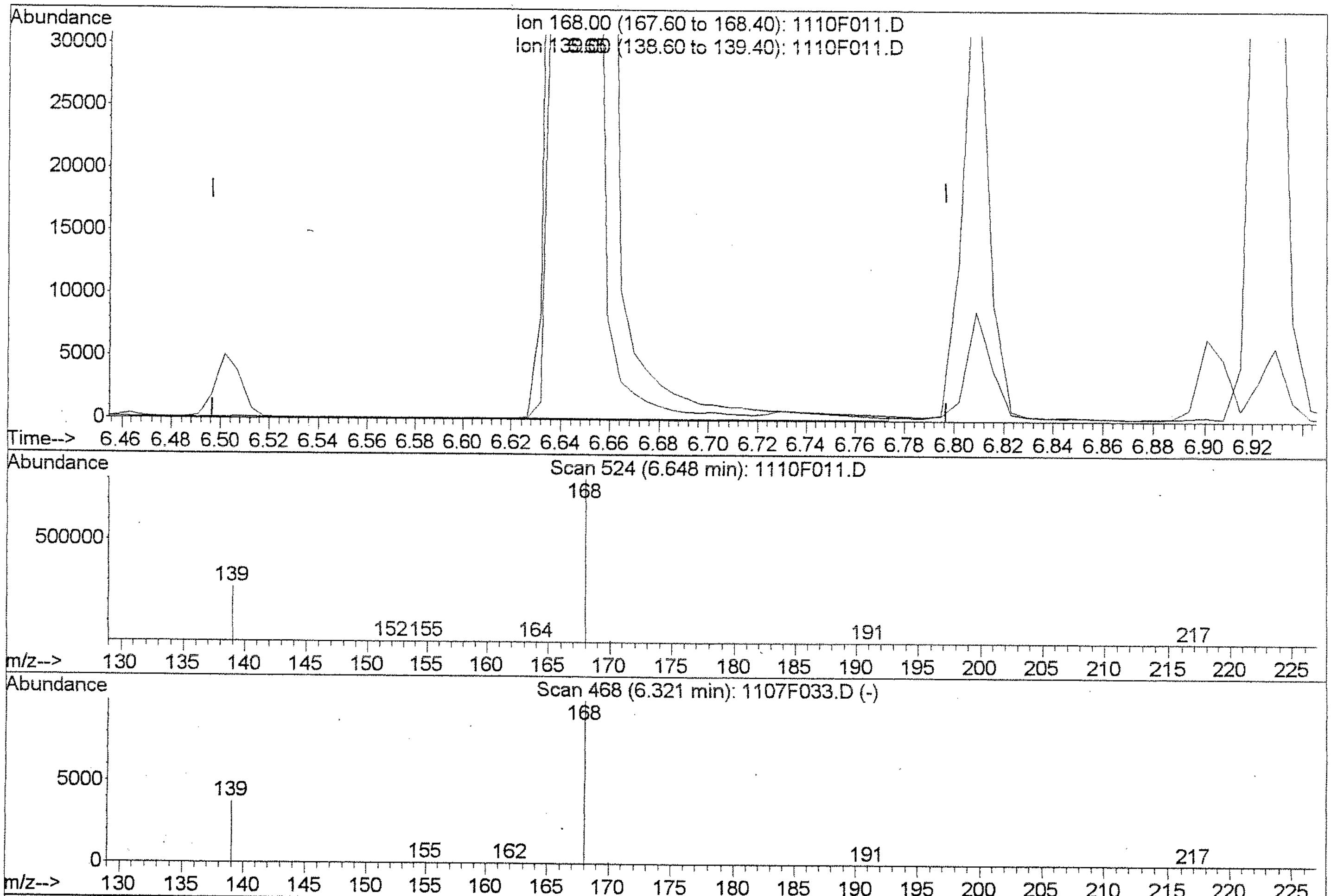
Data File : J:\MS11\DATA\111008\1110F011.D                    Vial: 11
Acq On    : 10 Nov 2008   7:33 pm                        Operator: LWeiskopf
Sample    : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J        Inst     : MS11
Misc      :                                              Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11  5:32 2008                   Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Mon Nov 10 13:53:21 2008
Response via   : Multiple Level Calibration
```



TIC: 1110F011.D

(13) Dibenzofuran (T)

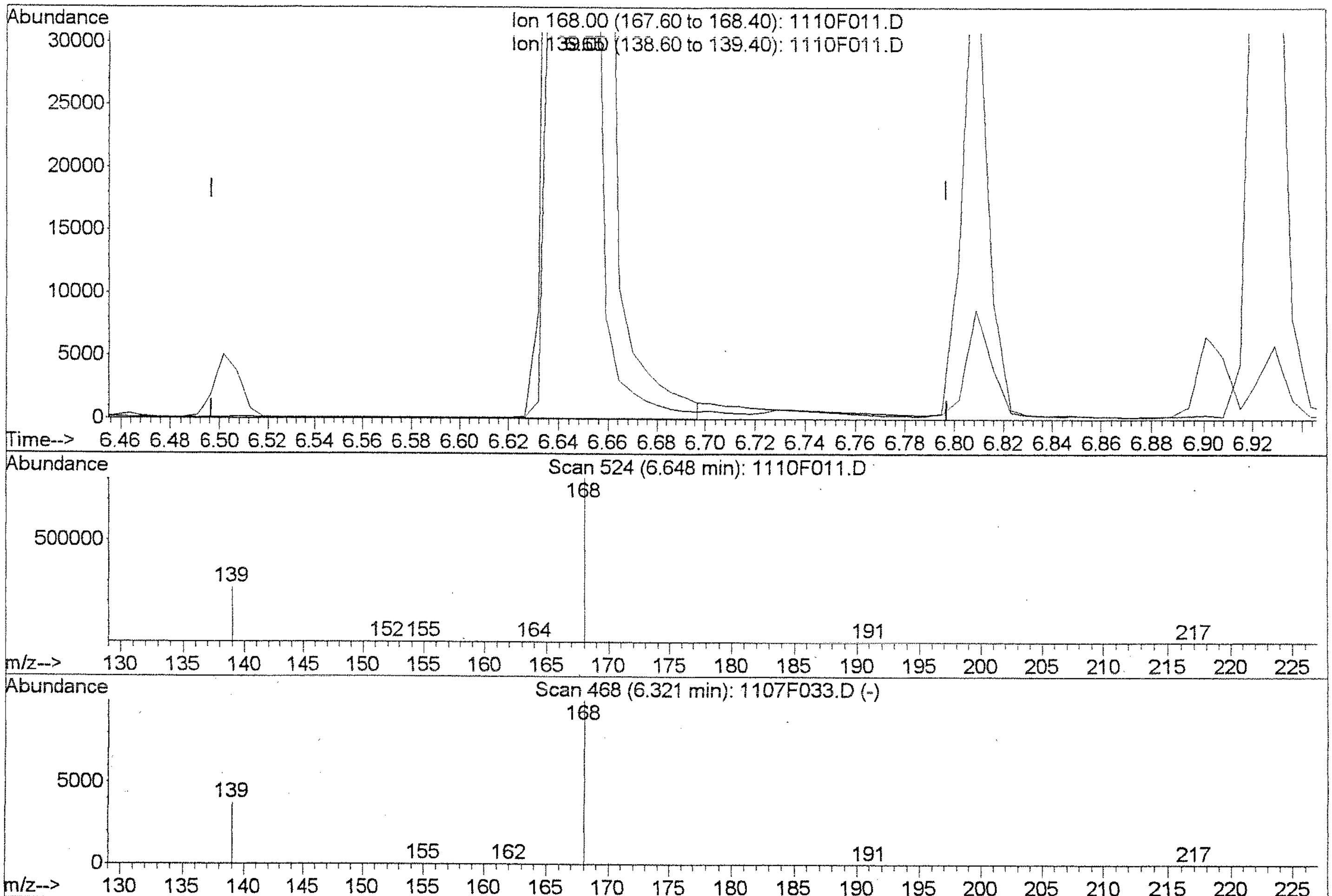
6.65min 632.42ng/ml

response 772248

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	33.40
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F011.D Vial: 11
Acq On : 10 Nov 2008 7:33 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:56 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.65min 476.41ng/ml m

response 581747

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	33.41
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/12/08

Data File : J:\MS11\DATA\111008\1110F012.D Vial: 12
Acq On : 10 Nov 2008 8:00 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:06 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.07	136	247777	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.48	164	138437	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.72	188	243106	200.00 ng/ml	0.00
37) Chrysene-d12	10.62	240	269507	200.00 ng/ml	0.00
49) Perylene-d12	14.61	264	277810	200.00 ng/ml	0.00
System Monitoring Compounds					
15) Fluorene-d10	6.91	176	956307	977.91 ng/ml	0.00
Spiked Amount 200.000				Recovery = 488.95%	
20) 2,4,6 Tribromophenol	7.13	330	192060	1245.42 ng/ml	0.00
Spiked Amount 375.000				Recovery = 332.11%	
36) Fluoranthene-d10	8.72	212	1624838	940.35 ng/ml	0.00
Spiked Amount 200.000				Recovery = 470.18%	
42) Terphenyl-d14	9.11	244	1327353	947.57 ng/ml	0.00
Spiked Amount 200.000				Recovery = 473.78%	

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) Naphthalene	5.08	128	1416244	1016.26 ng/ml	96
3) 2-Methylnaphthalene	5.63	142	1010912	1058.14 ng/ml	95
4) 1-Methylnaphthalene	5.71	142	897480	1061.03 ng/ml	93
5) Biphenyl	6.00	154	1198673	1042.39 ng/ml	94
6) 2,6-Dimethylnaphthalene	6.13	156	893885	1053.49 ng/ml	96
11) Acenaphthylene	6.37	152	1562066	1115.51 ng/ml	94
12) Acenaphthene	6.51	154	936500	1089.85 ng/ml	90
13) Dibenzofuran	6.65	168	1376775m	1126.85 ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.82	170	860415	1051.84 ng/ml	91
16) Fluorene	6.93	166	1149167	1117.38 ng/ml	95
21) Pentachlorophenol	7.57	266	447482	2968.62 ng/ml	96
23) Dibenzothiophene	7.63	184	1619844	1116.99 ng/ml	87
27) Phenanthrene	7.73	178	1661231	1060.87 ng/ml	99
28) Anthracene	7.78	178	1714355	1104.70 ng/ml	98
29) Carbazole	7.91	167	1462204	1154.73 ng/ml	95
30) 1-Methylphenanthrene	8.23	192	1246373	1063.88 ng/ml	98
35) Fluoranthene	8.74	202	1819051	1016.65 ng/ml	87
38) Pyrene	8.96	202	1890032	1071.93 ng/ml	87
43) Benz(a)anthracene	10.60	228	1769346	1059.53 ng/ml	100
44) Chrysene	10.66	228	1721448	1065.61 ng/ml	98
50) Benzo(b)fluoranthene	13.26	252	1936940	1082.74 ng/ml	98
51) Benzo(k)fluoranthene	13.36	252	1880636	1093.45 ng/ml	98
52) Benzo(e)pyrene	14.20	252	1760534	1087.18 ng/ml	99
53) Benzo(a)pyrene	14.40	252	1710595	1166.03 ng/ml	98
54) Perylene	14.72	252	1673667	1132.03 ng/ml	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111008\1110F012.D   Vial: 12
Acq On   : 10 Nov 2008   8:00 pm   Operator: LWeiskopf
Sample   : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K   Inst   : MS11
Misc   :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:06 2008   Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title   : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55) Indeno(1,2,3-cd)pyrene	17.44	276	1492093	1158.47 ng/ml	98
56) Dibenz(a,h)anthracene	17.49	278	1563867	1166.58 ng/ml	98
57) Benzo(g,h,i)perylene	17.89	276	1632737	1104.47 ng/ml	98

Quantitation Report (QT Reviewed)

```
Data File : J:\MS11\DATA\111008\1110F012.D              Vial: 12
Acq On    : 10 Nov 2008   8:00 pm                   Operator: LWeiskopf
Sample    : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K   Inst    : MS11
Misc      :                                         Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11  5:57 2008               Quant Results File: 1110ALK.RES

Method          : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title           : PAHS and ALKYLATED HOMOLOGS
Last Update     : Mon Nov 10 13:53:21 2008
Response via    : Initial Calibration
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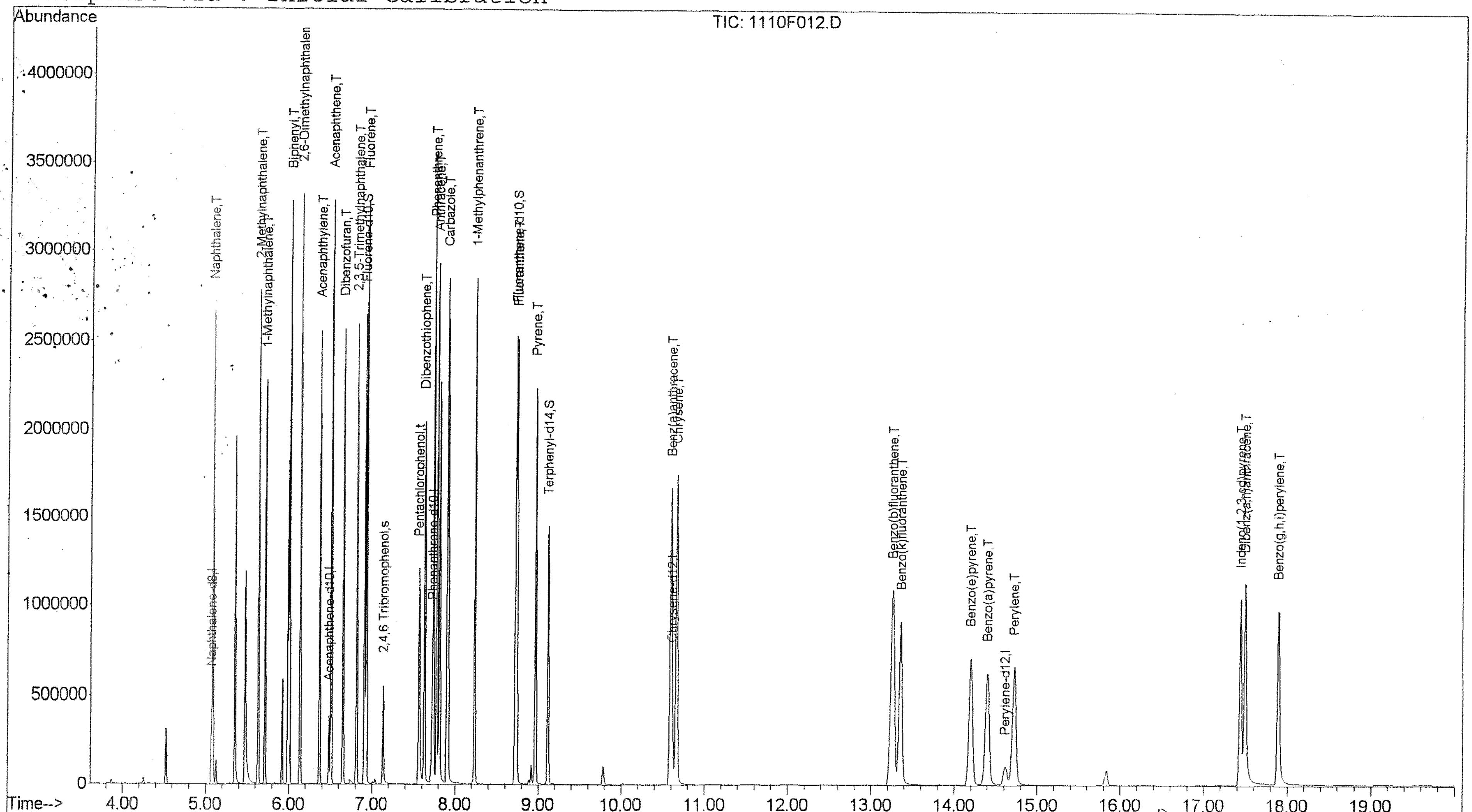
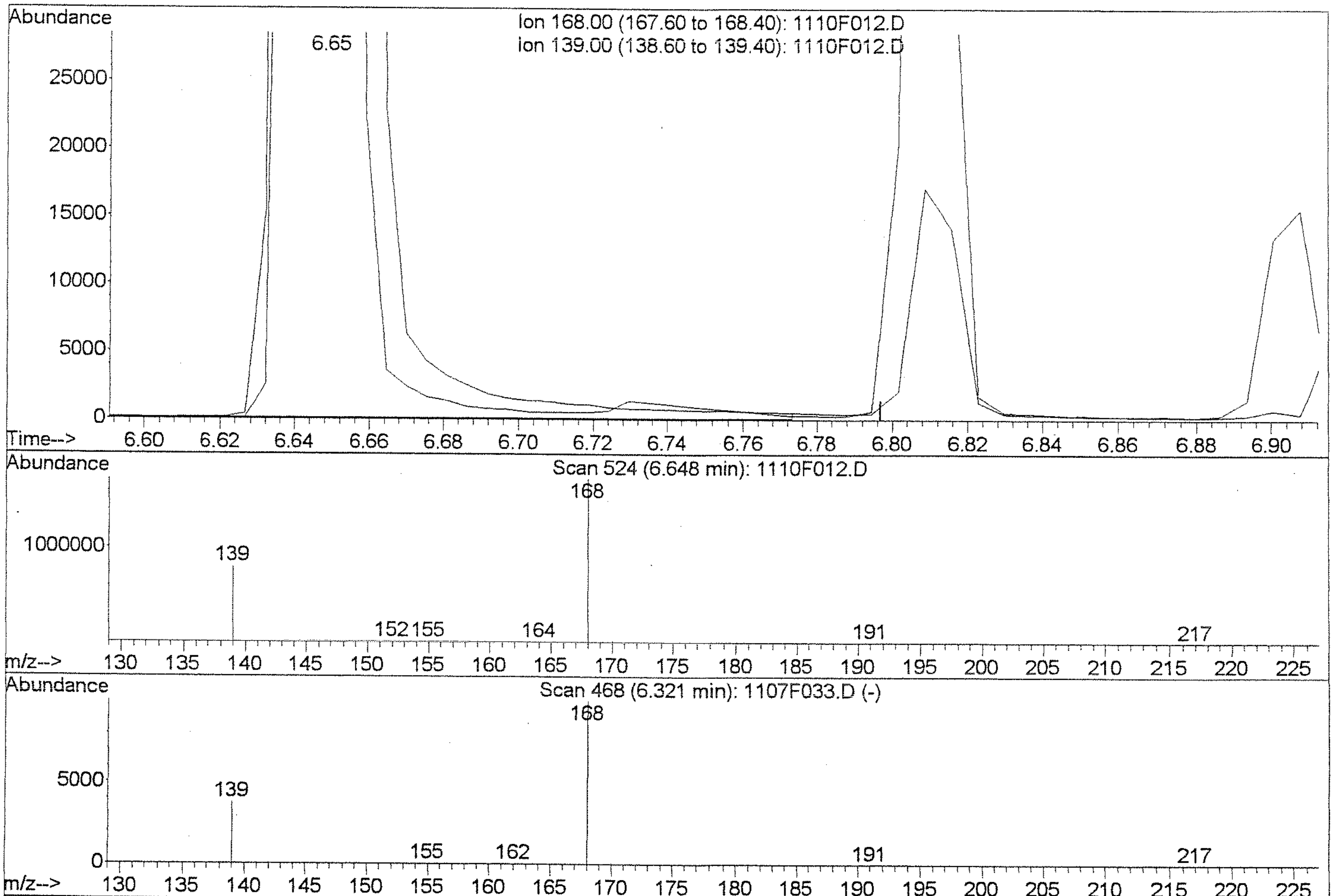


Data File : J:\MS11\DATA\111008\1110F012.D Vial: 12
Acq On : 10 Nov 2008 8:00 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:32 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



TIC: 1110F012.D

(13) Dibenzofuran (T)

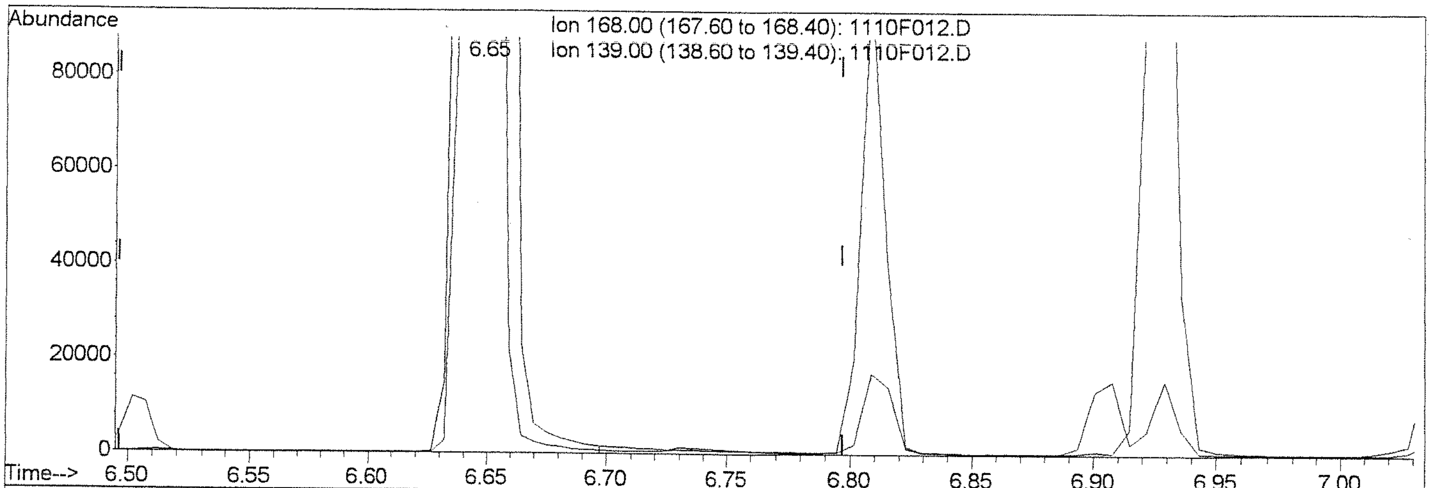
6.65min 1507.47ng/ml

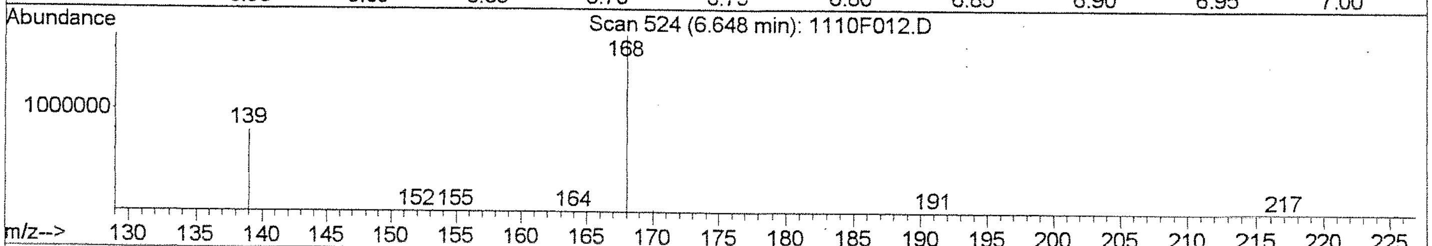
response 1841819

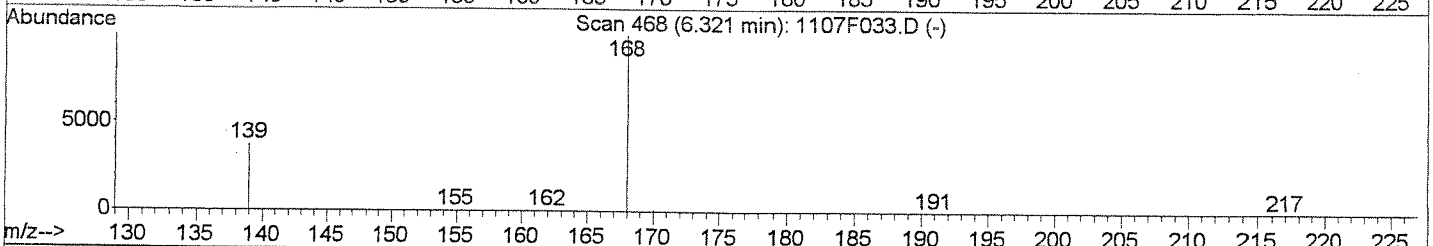
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	46.17
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111008\1110F012.D Vial: 12
Acq On : 10 Nov 2008 8:00 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:57 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration







TIC: 1110F012.D

(13) Dibenzofuran (T)

6.65min 1126.85ng/ml m

response 1376775

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	46.17
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/11/08

Data File : J:\MS11\DATA\111008\1110F013.D   Vial: 13
Acq On : 10 Nov 2008 8:26 pm   Operator: LWeiskopf
Sample : SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:07 2008   Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.07	136	247629	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.48	164	141300	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.71	188	246800	200.00 ng/ml	0.00
37) Chrysene-d12	10.62	240	279824	200.00 ng/ml	0.00
49) Perylene-d12	14.62	264	288116	200.00 ng/ml	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc Units	Dev(Min)
15) Fluorene-d10	6.91	176	1526558	1529.41 ng/ml	0.00
Spiked Amount 200.000			Recovery	= 764.71%	
20) 2,4,6 Tribromophenol	7.13	330	319513	2029.91 ng/ml	0.00
Spiked Amount 375.000			Recovery	= 541.31%	
36) Fluoranthene-d10	8.72	212	2607731	1486.60 ng/ml	0.00
Spiked Amount 200.000			Recovery	= 743.30%	
42) Terphenyl-d14	9.12	244	2159464	1484.75 ng/ml	0.00
Spiked Amount 200.000			Recovery	= 742.38%	

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) Naphthalene	5.09	128	2206271	1584.11 ng/ml	94
3) 2-Methylnaphthalene	5.63	142	1605870	1681.89 ng/ml	93
4) 1-Methylnaphthalene	5.71	142	1446004	1710.54 ng/ml	95
5) Biphenyl	6.00	154	1904359	1657.06 ng/ml	93
6) 2,6-Dimethylnaphthalene	6.13	156	1445720	1704.88 ng/ml	94
11) Acenaphthylene	6.37	152	2466343	1725.59 ng/ml	92
12) Acenaphthene	6.51	154	1502088	1712.64 ng/ml	90
13) Dibenzofuran	6.65	168	2185968	1752.89 ng/ml	90
14) 2,3,5-Trimethylnaphthalene	6.82	170	1397692	1674.03 ng/ml	93
16) Fluorene	6.93	166	1823204	1736.85 ng/ml	93
21) Pentachlorophenol	7.57	266	569376	3700.74 ng/ml	100
23) Dibenzothiophene	7.63	184	2626214	1783.84 ng/ml	95
27) Phenanthrene	7.73	178	2597444	1633.91 ng/ml	96
28) Anthracene	7.78	178	2692090	1708.77 ng/ml	97
29) Carbazole	7.91	167	2369439	1843.18 ng/ml	97
30) 1-Methylphenanthrene	8.23	192	1994760	1677.20 ng/ml	95
35) Fluoranthene	8.74	202	2899818	1596.42 ng/ml	79
38) Pyrene	8.96	202	3007127	1642.61 ng/ml	80
43) Benz(a)anthracene	10.60	228	2861746	1650.50 ng/ml	97
44) Chrysene	10.66	228	2793121	1665.25 ng/ml	96
50) Benzo(b)fluoranthene	13.28	252	3158201	1702.28 ng/ml	97
51) Benzo(k)fluoranthene	13.37	252	3080625	1727.09 ng/ml	96
52) Benzo(e)pyrene	14.22	252	2861458	1703.83 ng/ml	98
53) Benzo(a)pyrene	14.42	252	2804991	1843.64 ng/ml	98
54) Perylene	14.74	252	2737816	1785.56 ng/ml	97

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111008\1110F013.D Vial: 13
Acq On : 10 Nov 2008 8:26 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:07 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

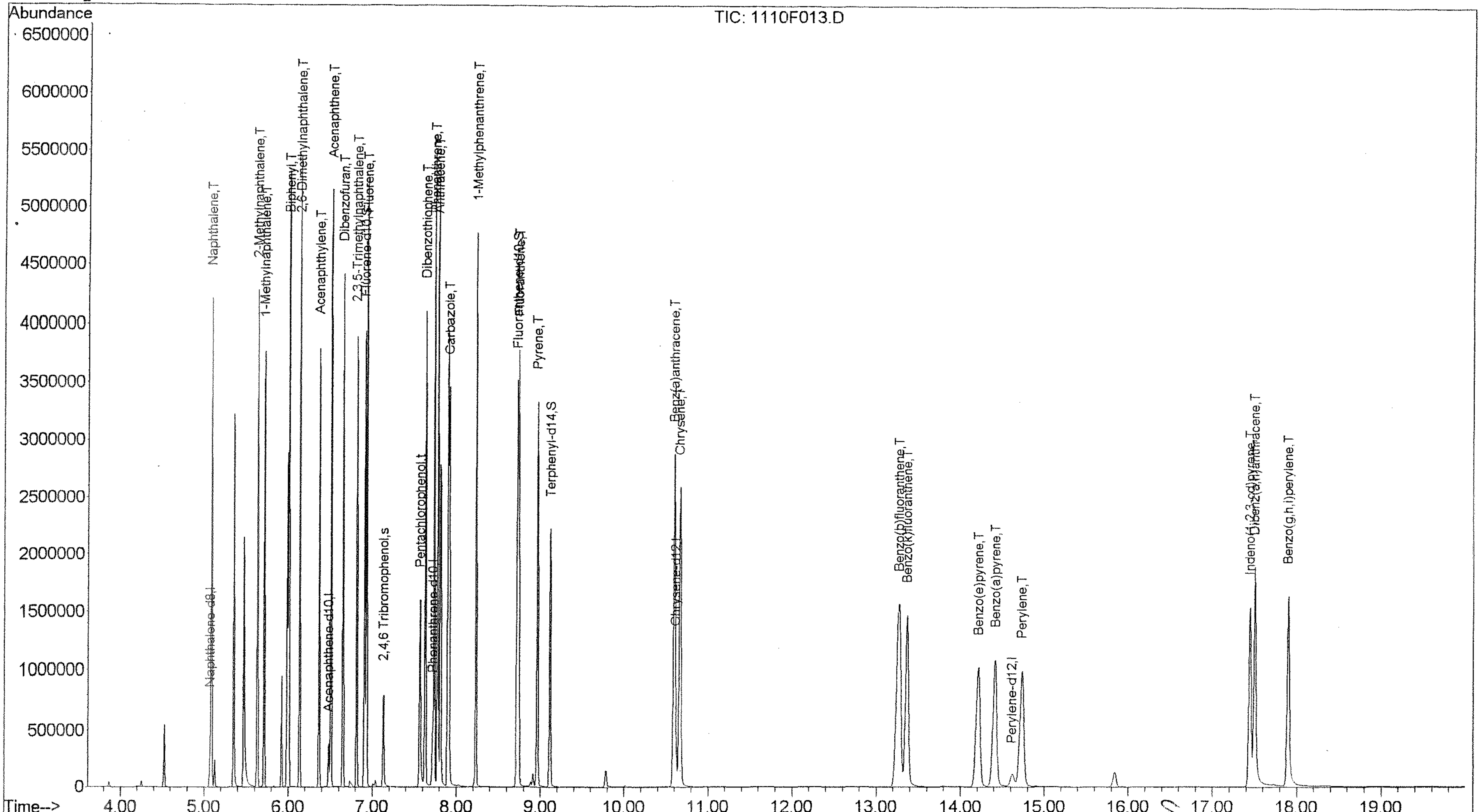
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.45	276	2448345	1832.91 ng/ml	97
56)	Dibenz(a,h)anthracene	17.50	278	2535576	1823.78 ng/ml	96
57)	Benzo(g,h,i)perylene	17.90	276	2616129	1706.38 ng/ml	96

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111008\1110F013.D Vial: 13
Acq On : 10 Nov 2008 8:26 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:32 2008 Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration



Data File : J:\MS11\DATA\111008\1110F014.D Vial: 14
Acq On : 10 Nov 2008 8:53 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:08 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

11/11/08

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.07	136	234821	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.48	164	134563	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.72	188	235301	200.00 ng/ml	0.00
37) Chrysene-d12	10.62	240	274423	200.00 ng/ml	0.00
49) Perylene-d12	14.62	264	278795	200.00 ng/ml	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc Units	Dev(Min)
15) Fluorene-d10	6.91	176	1870205	1967.51 ng/ml	0.00
Spiked Amount 200.000			Recovery =	983.76%	
20) 2,4,6 Tribromophenol	7.13	330	399447	2664.80 ng/ml	0.00
Spiked Amount 375.000			Recovery =	710.61%	
36) Fluoranthene-d10	8.72	212	3156668	1887.48 ng/ml	0.00
Spiked Amount 200.000			Recovery =	943.74%	
42) Terphenyl-d14	9.12	244	2674061	1874.75 ng/ml	0.00
Spiked Amount 200.000			Recovery =	937.37%	

Target Compounds	R.T.	QIon	Response	Conc Units	Qvalue
2) Naphthalene	5.08	128	2663044	2016.36 ng/ml	91
3) 2-Methylnaphthalene	5.64	142	1956051	2160.39 ng/ml	99
4) 1-Methylnaphthalene	5.71	142	1745024	2176.85 ng/ml	99
5) Biphenyl	6.00	154	2310612	2120.22 ng/ml	91
6) 2,6-Dimethylnaphthalene	6.13	156	1765559	2195.61 ng/ml	92
11) Acenaphthylene	6.37	152	2983414	2191.87 ng/ml	91
12) Acenaphthene	6.51	154	1837786	2200.30 ng/ml	93
13) Dibenzofuran	6.65	168	2640086m	2223.04 ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.82	170	1704619	2143.85 ng/ml	98
16) Fluorene	6.93	166	2233380	2234.12 ng/ml	93
21) Pentachlorophenol	7.57	266	711928	4858.95 ng/ml	98
23) Dibenzothiophene	7.63	184	3171835	2259.74 ng/ml	92
27) Phenanthrene	7.73	178	3210474	2118.22 ng/ml	96
28) Anthracene	7.78	178	3399083	2262.96 ng/ml	95
29) Carbazole	7.92	167	2907885	2372.58 ng/ml	96
30) 1-Methylphenanthrene	8.24	192	2448164	2159.02 ng/ml	94
35) Fluoranthene	8.74	202	3546021	2047.57 ng/ml	74
38) Pyrene	8.96	202	3715649	2069.57 ng/ml	79
43) Benz(a)anthracene	10.59	228	3569053	2098.95 ng/ml	97
44) Chrysene	10.67	228	3453065	2099.22 ng/ml	95
50) Benzo(b)fluoranthene	13.28	252	3908661	2177.21 ng/ml	97
51) Benzo(k)fluoranthene	13.37	252	3777344	2188.49 ng/ml	95
52) Benzo(e)pyrene	14.22	252	3490995	2148.17 ng/ml	97
53) Benzo(a)pyrene	14.42	252	3444134	2339.41 ng/ml	97
54) Perylene	14.75	252	3374193	2274.16 ng/ml	96

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111008\1110F014.D Vial: 14
Acq On : 10 Nov 2008 8:53 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 05:32:08 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55) Indeno(1,2,3-cd)pyrene	17.45	276	2989594	2312.93 ng/ml	97
56) Dibenz(a,h)anthracene	17.51	278	3151519	2342.61 ng/ml	92
57) Benzo(g,h,i)perylene	17.91	276	3212327	2165.31 ng/ml	95

(#) = qualifier out of range (m) = manual integration

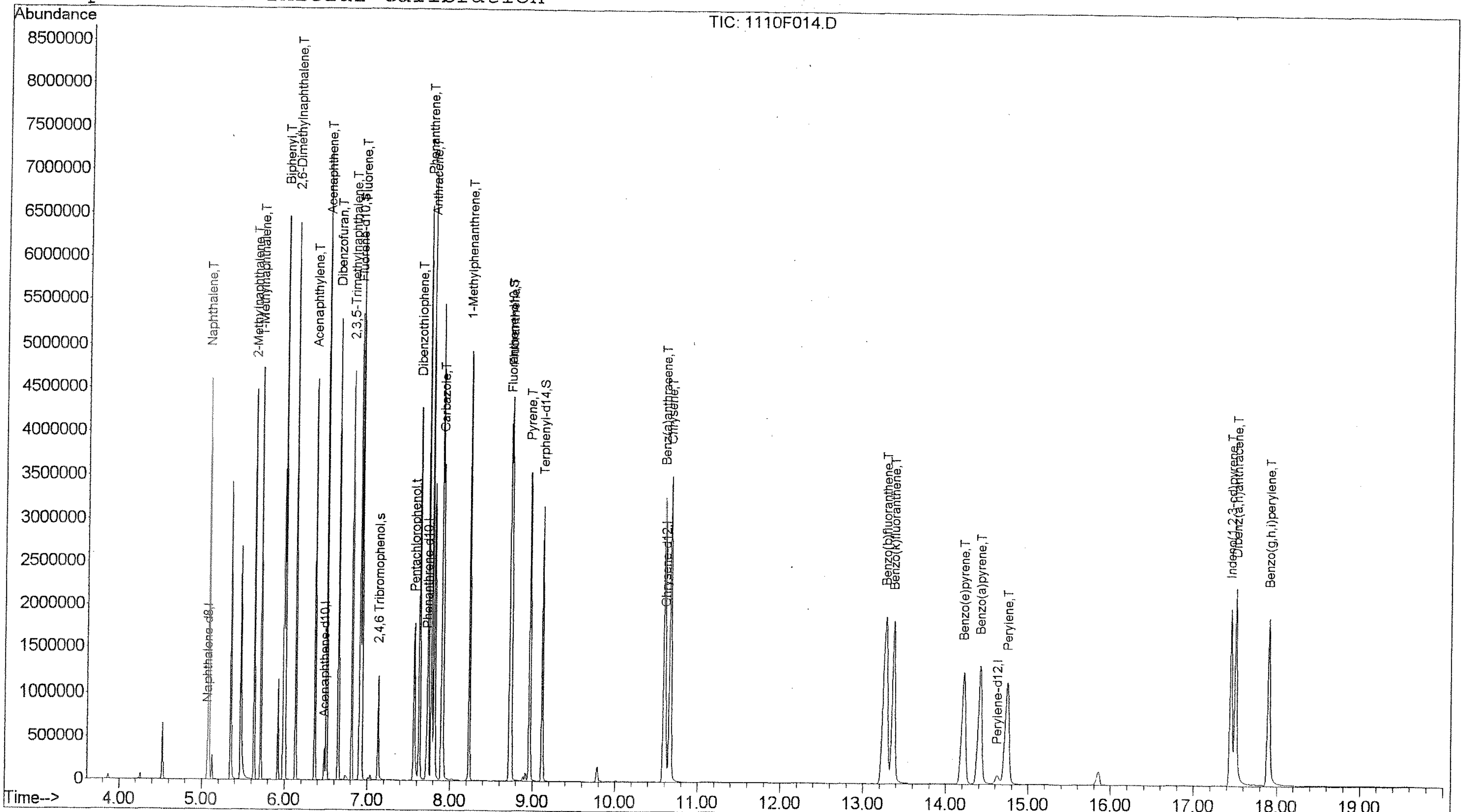
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111008\1110F014.D
Acq On : 10 Nov 2008 8:53 pm
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:58 2008

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

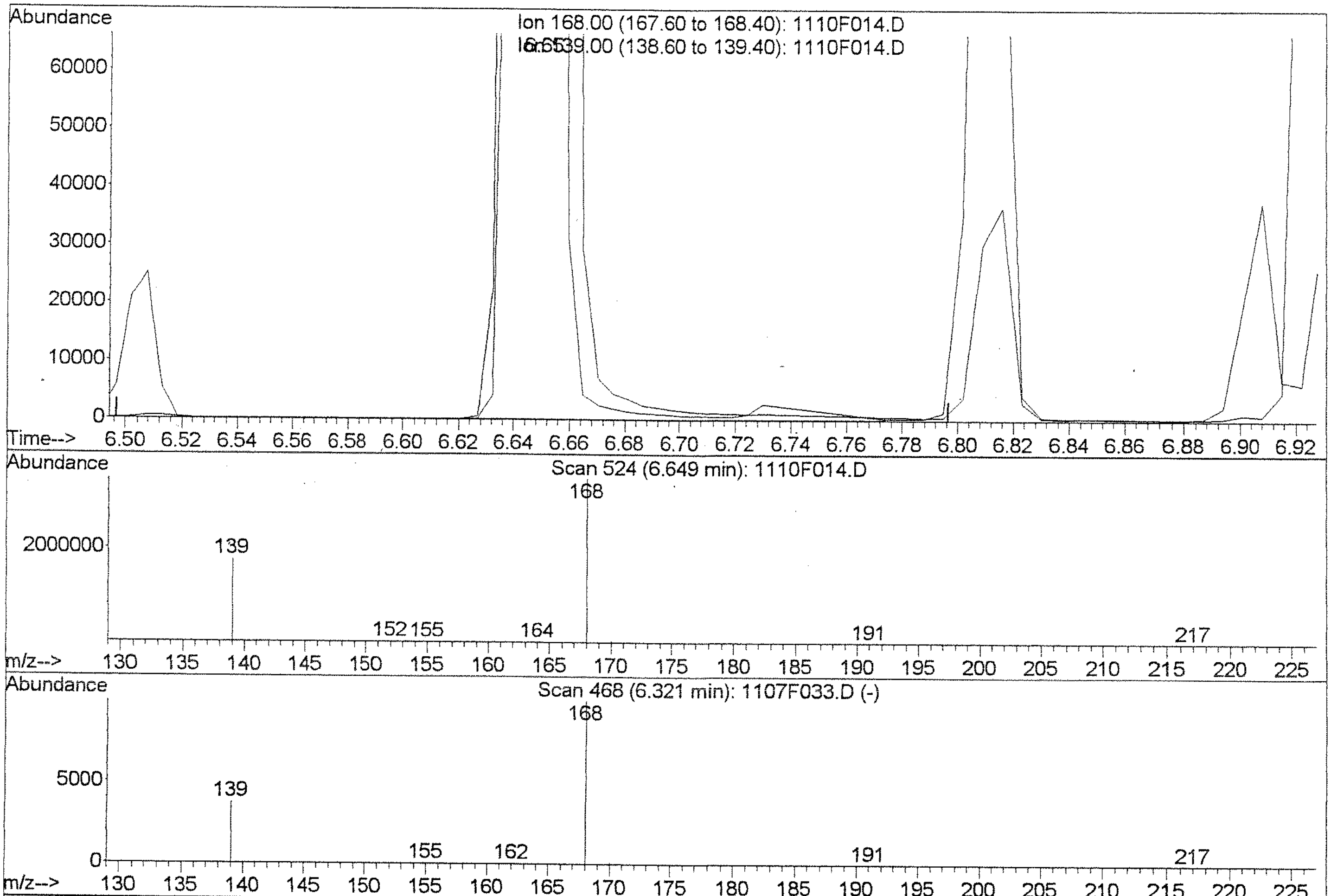
Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Initial Calibration



Data File : J:\MS11\DATA\111008\1110F014.D Vial: 14
Acq On : 10 Nov 2008 8:53 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:32 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



TIC: 1110F014.D

(13) Dibenzofuran (T)

6.65min 2971.69ng/ml

response 3529187

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	50.21
0.00	0.00	0.00
0.00	0.00	0.00

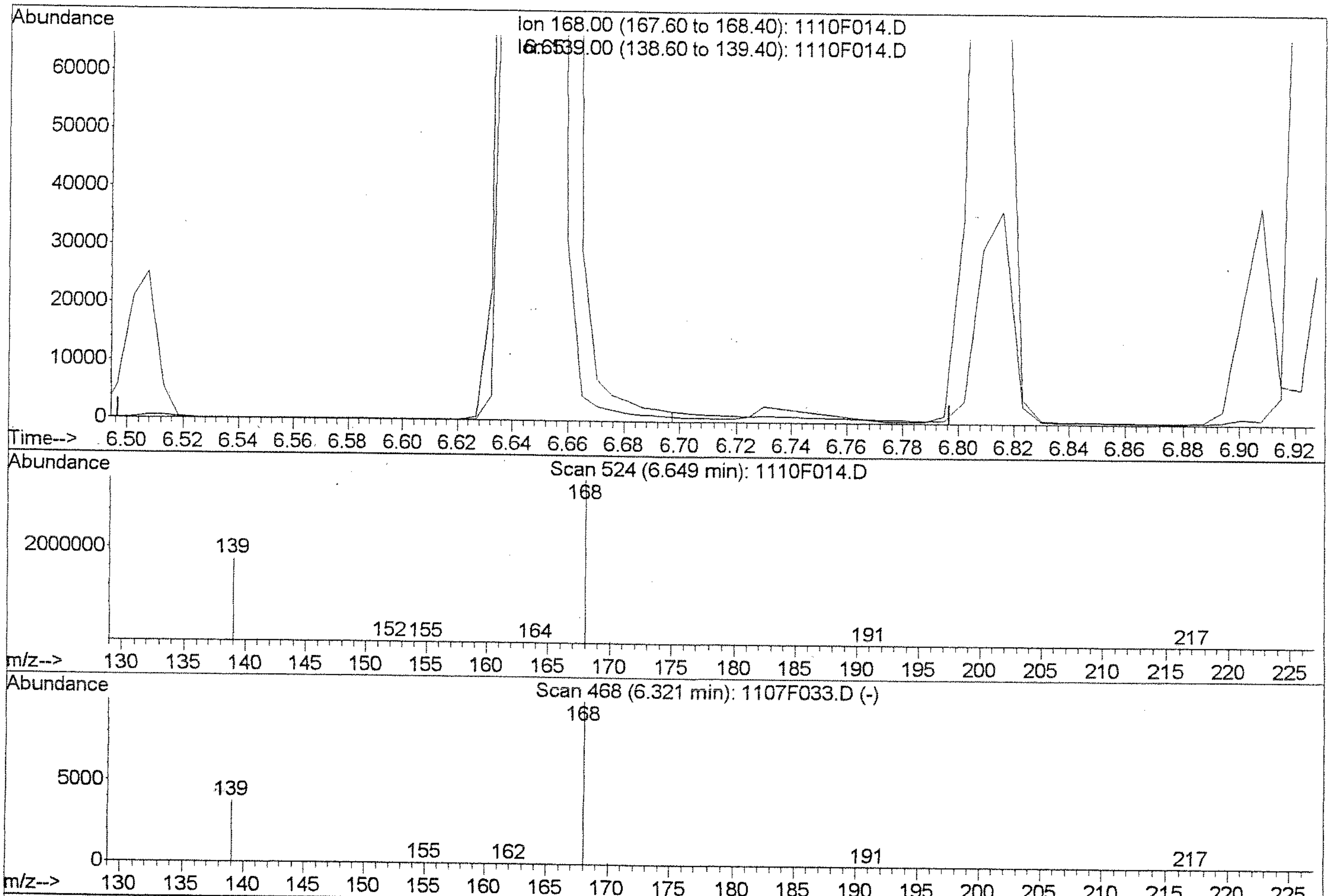
1110F014.D 1110ALK.M Tue Nov 11 05:58:40 2008

Data File : J:\MS11\DATA\111008\1110F014.D
Acq On : 10 Nov 2008 8:53 pm
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 11 5:58 2008

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 10 13:53:21 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.65min 2223.04ng/ml m

response 2640086

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	50.21
0.00	0.00	0.00
0.00	0.00	0.00

OF 11/11/08

Injection Log

Directory: J:\MS11\DATA\111108

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1111F001.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		11 Nov 2008 05:3
2	2	1111F003.D	1.	SIM-PAH ~~CCV~~ ICV @ 0.4ug/mL | SVM27-49L		11 Nov 2008 06:3

RW 11/12/08

CAZ 7938

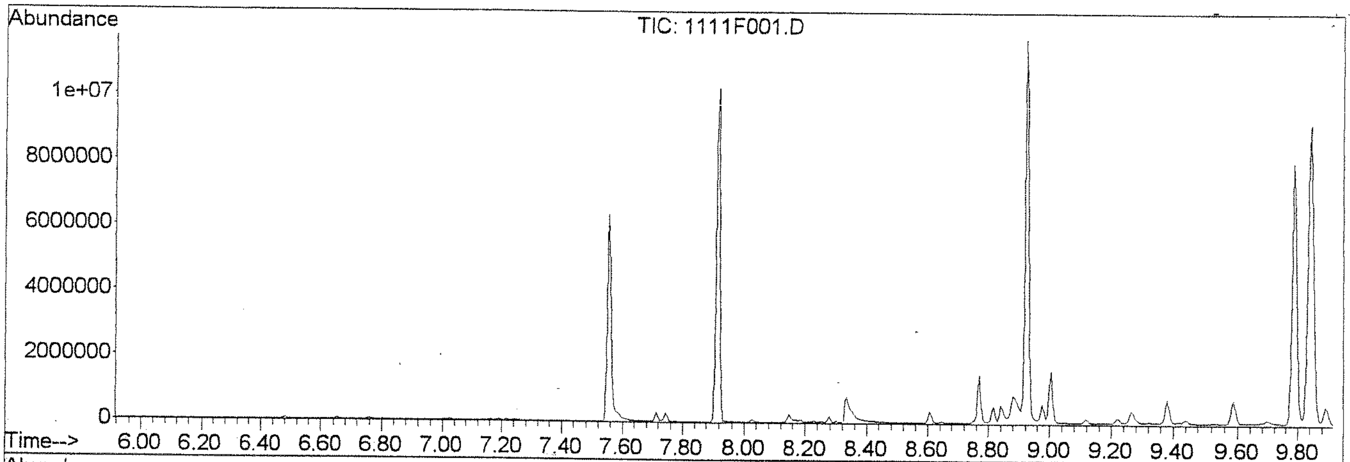
RW 11/12/08

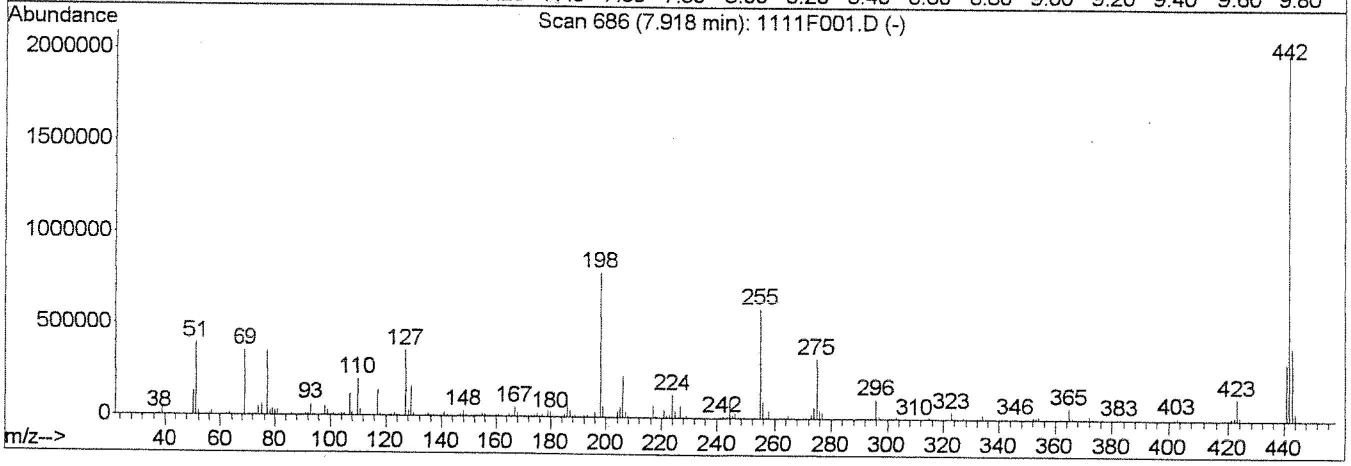
11 Nov 2008 07:39

DFTPP

Data File : J:\MS11\DATA\111108\1111F001.D
Acq On : 11 Nov 2008 5:31 am
Sample : DFTPP @ 3.0ug/mL | SVM27-37E
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00





Spectrum Information: Scan 686

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	49.9	393143	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	45.3	356800	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	39.6	787328	PASS
199	198	5	9	7.4	58520	PASS
275	198	10	60	41.3	325440	PASS
365	442	1	50	3.0	60336	PASS
441	443	0.01	100	78.7	311040	PASS
442	442	30	100	100.0	1989632	PASS
443	442	15	24	19.9	395200	PASS

1111F001.D DFTPPPAH.M Wed Nov 12 11:39:11 2008

lla 11/12/08 ff

Scan 686 (7.918 min): 1111F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.05	465	50.10	131048	63.10	15211	78.10	26232
37.30	3045	51.10	393143	64.10	2930	79.00	35050
38.10	8796	52.00	21544	65.10	5216	80.00	23136
39.05	33818	53.05	577	66.20	596	81.00	30205
40.20	1576	55.05	3848	69.00	352483	82.00	6352
41.10	345	56.10	12518	71.00	810	83.10	5409
42.00	601	57.00	22866	72.30	1361	83.90	895
44.00	2118	58.00	2132	73.10	5605	84.20	1478
45.00	952	59.10	519	74.10	47592	85.00	5479
47.05	355	61.10	5998	75.10	61840	86.00	11915
48.00	1098	62.10	7724	77.10	348844	87.10	4684

Scan 686 (7.918 min): 1111F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.10	1591	100.10	3164	113.00	1603	125.00	5222
89.10	810	101.00	12817	114.20	616	127.00	356800
90.00	555	102.00	1359	115.00	813	128.10	30128
91.05	7751	103.00	5719	117.00	139200	129.00	159808
92.10	9905	104.00	11381	118.00	9500	130.00	15139
93.00	59398	105.00	12056	119.00	1786	130.90	3548
94.00	3720	107.00	115674	120.10	1374	132.00	2059
95.10	630	108.10	17848	121.10	928	134.10	6020
96.00	1675	110.00	199744	122.00	10086	135.00	14058
98.00	49864	111.00	34728	123.00	14362	136.00	6608
99.00	29336	112.00	4230	124.00	6239	137.00	6688

Scan 686 (7.918 min): 1111F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
138.10	935	149.00	6049	160.00	7463	171.00	2659
139.00	2070	150.20	1327	161.10	10783	172.00	4647
140.00	2789	151.10	2589	162.10	3121	173.00	6335
141.00	23320	152.00	2566	163.10	714	174.10	10195
142.00	8345	153.00	6542	164.20	1708	175.10	17856
143.10	5406	154.00	6012	165.00	13199	176.10	5989
144.10	1515	155.00	12748	166.00	8198	177.00	9107
145.00	1446	156.00	16736	167.00	51552	179.00	36256
146.10	6079	157.00	3203	168.00	21400	180.00	23384
147.00	13480	158.00	5250	169.00	3985	181.00	9279
148.10	28768	159.00	3614	170.00	1897	182.10	1637

Scan 686 (7.918 min): 1111F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

11/12/18

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
182.80	614	194.00	2186	207.10	27248	221.00	41896
184.00	3482	195.10	2066	208.00	10852	221.90	10485
185.00	16440	196.00	24952	209.00	3052	223.10	16480
186.00	120208	198.00	787328	210.00	3500	224.00	127232
187.10	37368	199.00	58520	211.00	8150	225.10	34208
188.10	3516	200.00	5173	211.90	2368	226.20	5528
189.00	10500	201.50	3707	213.10	949	227.00	65160
190.00	2106	203.00	6162	215.00	3410	228.00	9826
191.00	4078	204.10	32112	217.00	66640	229.00	13079
192.00	9729	205.10	55992	218.00	8154	230.10	1538
193.10	10298	206.00	226304	219.10	1050	231.00	4956

DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
232.00	853	243.10	8171	255.00	597824	267.80	1019
233.00	1138	244.10	106024	256.00	88264	270.00	1186
234.00	4721	245.00	14848	257.00	7591	270.90	1282
235.00	4758	246.00	26040	258.00	41960	272.20	2805
236.00	2559	247.00	5039	259.00	6571	273.00	20536
237.00	6021	248.00	1629	260.10	1057	274.00	61144
238.10	864	249.00	3750	261.10	859	275.00	325440
239.00	2933	250.00	766	263.10	601	276.00	42592
240.00	2169	251.00	1203	264.10	2004	277.00	33128
241.00	3748	252.10	1456	265.00	17288	278.00	5913
242.00	7729	252.90	3246	266.00	3207	279.00	1047

Scan 686 (7.918 min): 1111F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
282.00	877	296.00	106088	314.00	5814	326.90	8111
283.00	3543	297.00	13940	315.00	12303	328.00	3554
284.00	2714	297.90	1643	316.00	5456	329.10	740
285.00	5778	301.00	1267	317.10	1043	332.00	2470
286.00	810	302.00	2101	320.00	671	333.10	3942
289.00	875	303.00	13152	321.00	3546	334.00	26432
290.10	974	304.00	3532	322.00	1918	335.00	6272
290.90	576	308.00	1785	323.00	36528	336.10	1102
292.10	1402	308.90	1176	324.00	6277	339.00	722
292.90	5496	309.90	1015	324.90	584	339.90	586
294.10	1579	313.10	821	326.00	1026	341.00	4856

Scan 686 (7.918 min): 1111F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
341.90	1673	366.00	8566	391.10	2588	422.00	17776
346.00	8993	366.90	617	392.00	1709	423.00	117504
347.00	2269	369.90	1359	396.90	586	424.00	23928
350.90	730	371.00	3489	400.90	1535	425.10	2433
352.10	12655	372.00	23560	402.00	10274	437.30	523
353.00	9169	373.00	5562	403.00	16381	438.20	701
354.00	14558	376.90	804	404.00	4589	441.00	311040
355.00	2828	382.90	5582	404.90	988	442.00	1989632
359.10	977	384.00	2072	410.00	765	443.00	395200
363.20	741	384.90	624	415.20	563	444.00	41400
365.00	60336	390.00	2894	421.00	13635	445.00	2013

Data File : J:\MS11\DATA\111108\1111F003.D Vial: 2
Acq On : 11 Nov 2008 6:30 am Operator: LWeiskopf
Sample : SIM-PAH ~~CCV~~ @ 0.4ug/mL | SVM27-49L Inst : MS11
Misc : ICV 11-12-18 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 12 11:39:41 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 11 06:03:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

11-12-18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.07	136	218110	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.48	164	121650	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.72	188	210880	200.00	ng/ml	0.01
37) Chrysene-d12	10.62	240	240021	200.00	ng/ml	0.00
49) Perylene-d12	14.62	264	224371	200.00	ng/ml	0.00

System Monitoring Compounds	R.T.	QIon	Response	Conc	Units	Dev(Min)
15) Fluorene-d10	6.91	176	339347	410.46	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	205.23%	
20) 2,4,6 Tribromophenol	7.13	330	61019	398.26	ng/ml	0.00
Spiked Amount 375.000			Recovery	=	106.20%	
36) Fluoranthene-d10	8.72	212	587519	408.63	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	204.31%	
42) Terphenyl-d14	9.12	244	505903	407.12	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	203.56%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Naphthalene	5.09	128	528929	398.11	ng/ml	99
3) 2-Methylnaphthalene	5.64	142	370913	400.34	ng/ml	99
4) 1-Methylnaphthalene	5.71	142	328316	395.85	ng/ml	98
5) Biphenyl	6.00	154	444345	392.47	ng/ml	95
6) 2,6-Dimethylnaphthalene	6.13	156	322760	399.05	ng/ml	94
11) Acenaphthylene	6.37	152	579144	422.20	ng/ml	99
12) Acenaphthene	6.51	154	338517	406.11	ng/ml	95
13) Dibenzofuran	6.65	168	515660m	411.24	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.82	170	310713	423.82	ng/ml	87
16) Fluorene	6.93	166	422789	422.49	ng/ml	92
21) Pentachlorophenol	7.57	266	178501	1057.64	ng/ml	99
23) Dibenzothiophene	7.63	184	612084	422.33	ng/ml	99
27) Phenanthrene	7.73	178	599545	404.47	ng/ml	100
28) Anthracene	7.78	178	610277m	422.56	ng/ml	
29) Carbazole	7.91	167	537581	405.74	ng/ml	94
30) 1-Methylphenanthrene	8.24	192	456664	415.11	ng/ml	93
35) Fluoranthene	8.74	202	692548	411.31	ng/ml	87
38) Pyrene	8.97	202	727607	402.96	ng/ml	96
43) Benz(a)anthracene	10.60	228	641267	391.47	ng/ml	100
44) Chrysene	10.67	228	652219	405.40	ng/ml	99
50) Benzo(b)fluoranthene	13.27	252	690523	445.95	ng/ml	99
51) Benzo(k)fluoranthene	13.36	252	667728	448.90	ng/ml	99
52) Benzo(e)pyrene	14.21	252	609008	432.98	ng/ml	100
53) Benzo(a)pyrene	14.41	252	565085	440.77	ng/ml	100
54) Perylene	14.73	252	558156	443.18	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\111108\1111F003.D
Acq On : 11 Nov 2008 6:30 am
Sample : SIM-PAH ~~CCV~~ ICV @ 0.4ug/mL | SVM27-49L
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 12 11:39:41 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 11 06:03:21 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

	Compound	R.T.	QIon	Response	Conc Unit		Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.45	276	472894	397.55	ng/ml	100
56)	Dibenz(a,h)anthracene	17.50	278	520661	417.02	ng/ml	97
57)	Benzo(g,h,i)perylene	17.90	276	564650	416.65	ng/ml	100

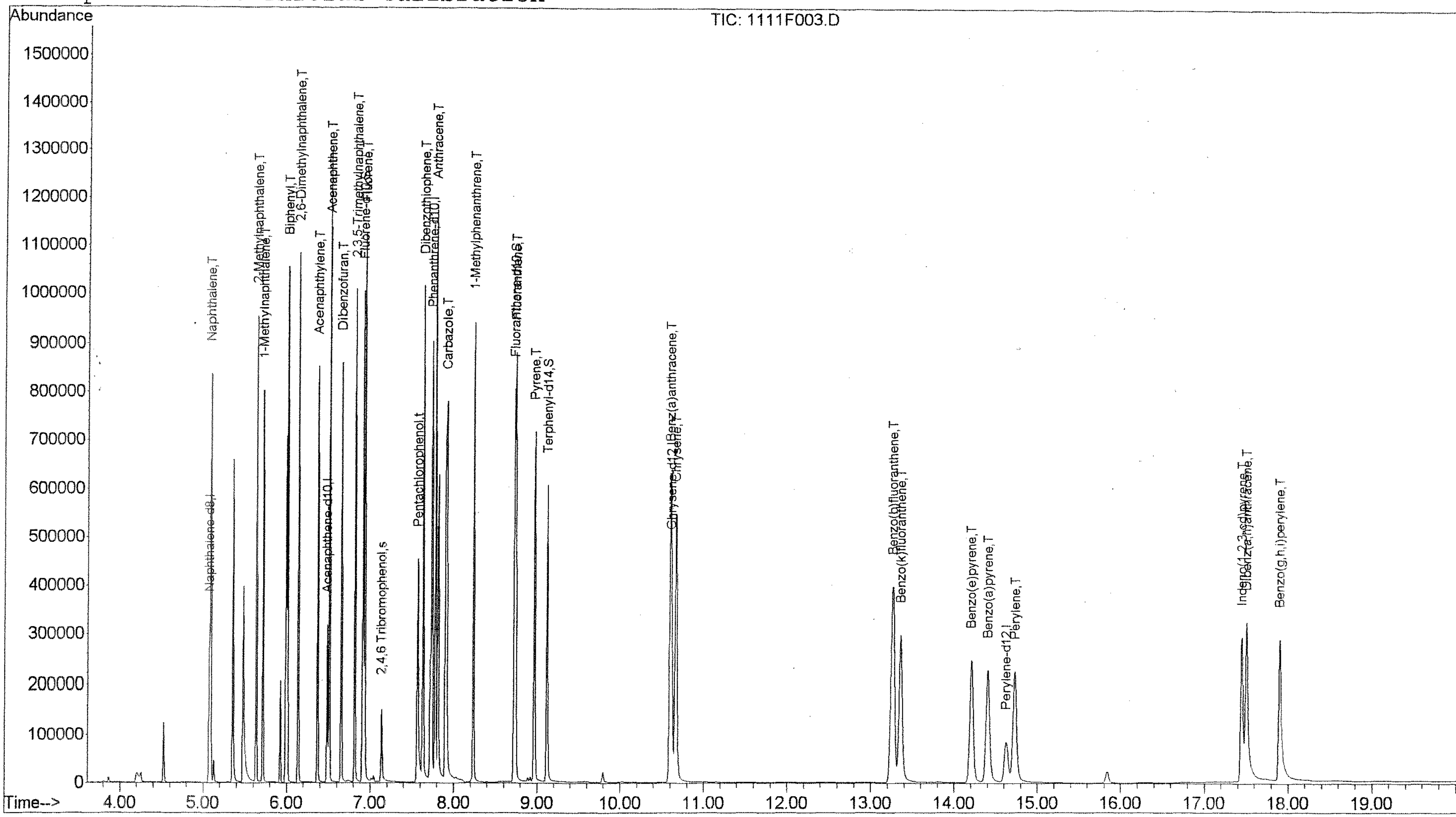
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\111108\1111F003.D
Acq On : 11 Nov 2008 6:30 am
Sample : SIM-PAH ~~CCV~~ @ 0.4ug/mL | SVM27-49L
Misc : ICV [handwritten initials] 11/12/08
MS Integration Params: RTEINT.P
Quant Time: Nov 12 11:40 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 11 06:03:21 2008
Response via : Initial Calibration

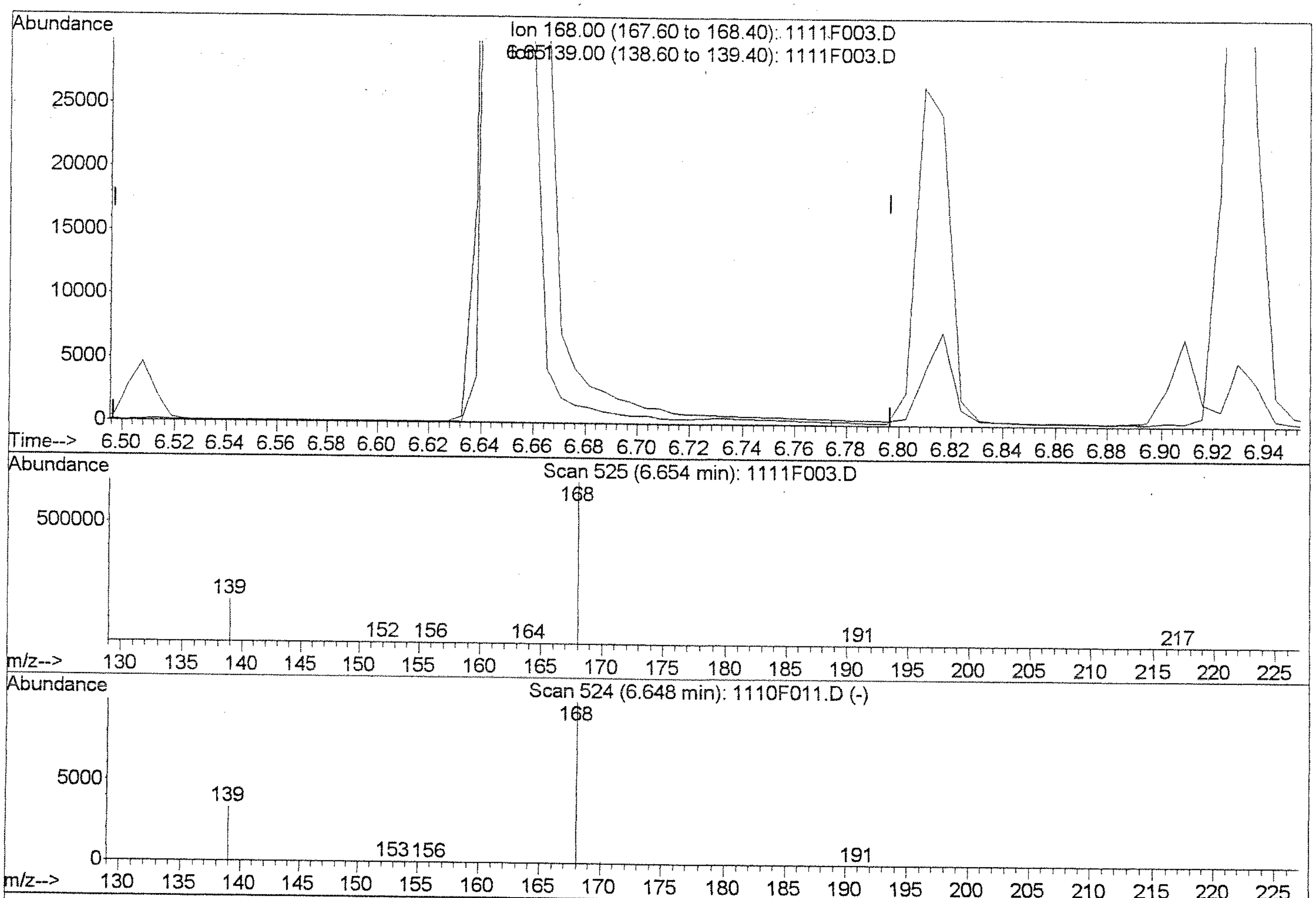


1111F003.D 1110ALK.M Wed Nov 12 11:40:42 2008

[handwritten initials] 11/12/08

Data File : J:\MS11\DATA\111108\1111F003.D Vial: 2
Acq On : 11 Nov 2008 6:30 am Operator: LWeiskopf
Sample : SIM-PAH ~~CCV~~ ICV @ 0.4ug/mL | SVM27-49L Inst : MS11
Misc : 11/12/08 Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 12 11:39 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 11 06:03:21 2008
Response via : Multiple Level Calibration



TIC: 1111F003.D

(13) Dibenzofuran (T)

6.65min 551.22ng/ml

response 691187

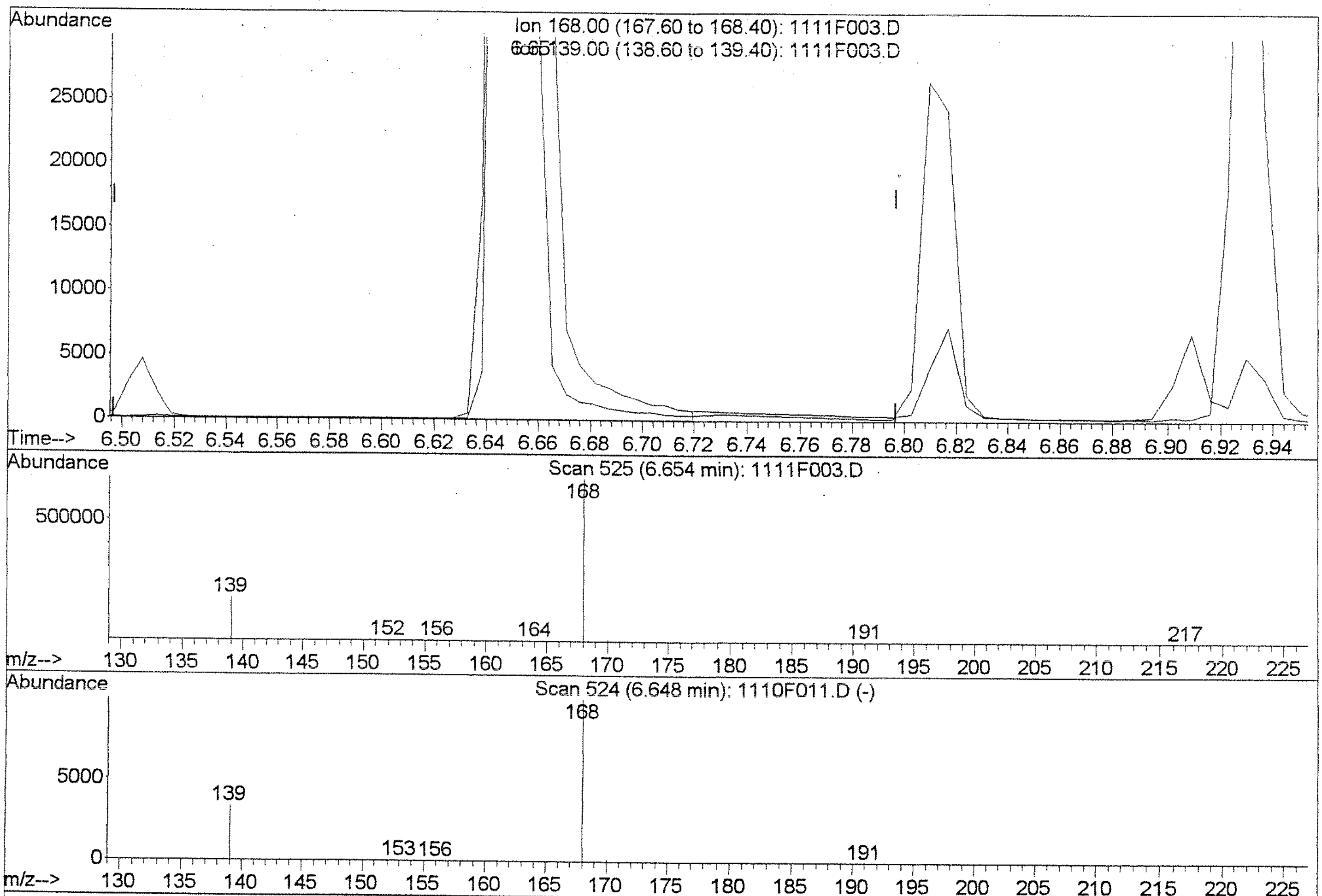
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	26.15
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111108\1111F003.D
Acq On : 11 Nov 2008 6:30 am
Sample : SIM-PAH ~~CCV~~ ICV @ 0.4ug/mL | SVM27-49L
Misc : Ch 11/12/08
MS Integration Params: RTEINT.P
Quant Time: Nov 12 11:40 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 11 06:03:21 2008
Response via : Multiple Level Calibration



TIC: 1111F003.D

(13) Dibenzofuran (T)

6.65min 411.24ng/ml m

response 515660

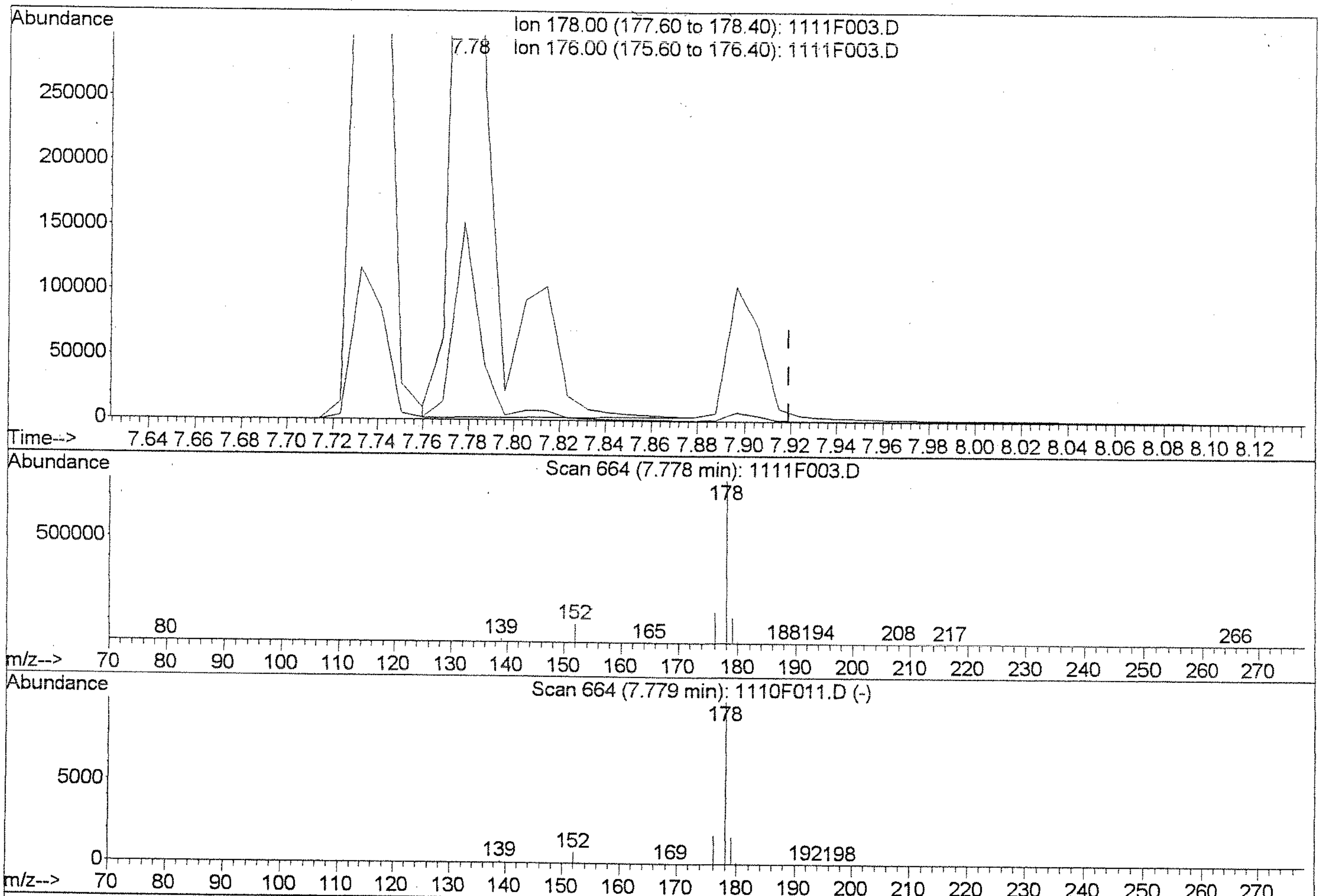
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	26.17
0.00	0.00	0.00
0.00	0.00	0.00

OI Ch 11/12/08

```
Data File : J:\MS11\DATA\111108\1111F003.D                 Vial: 2
Acq On    : 11 Nov 2008   6:30 am                      Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-49L         Inst    : MS11
Misc      :                                            Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 12 11:40 2008                 Quant Results File: temp.res

Method          : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title           : PAHS and ALKYLATED HOMOLOGS
Last Update     : Tue Nov 11 06:03:21 2008
Response via    : Multiple Level Calibration
```

JN 11/12/08



TIC: 1111F003.D

(28) Anthracene (T)

7.78min 504.37ng/ml

response 728426

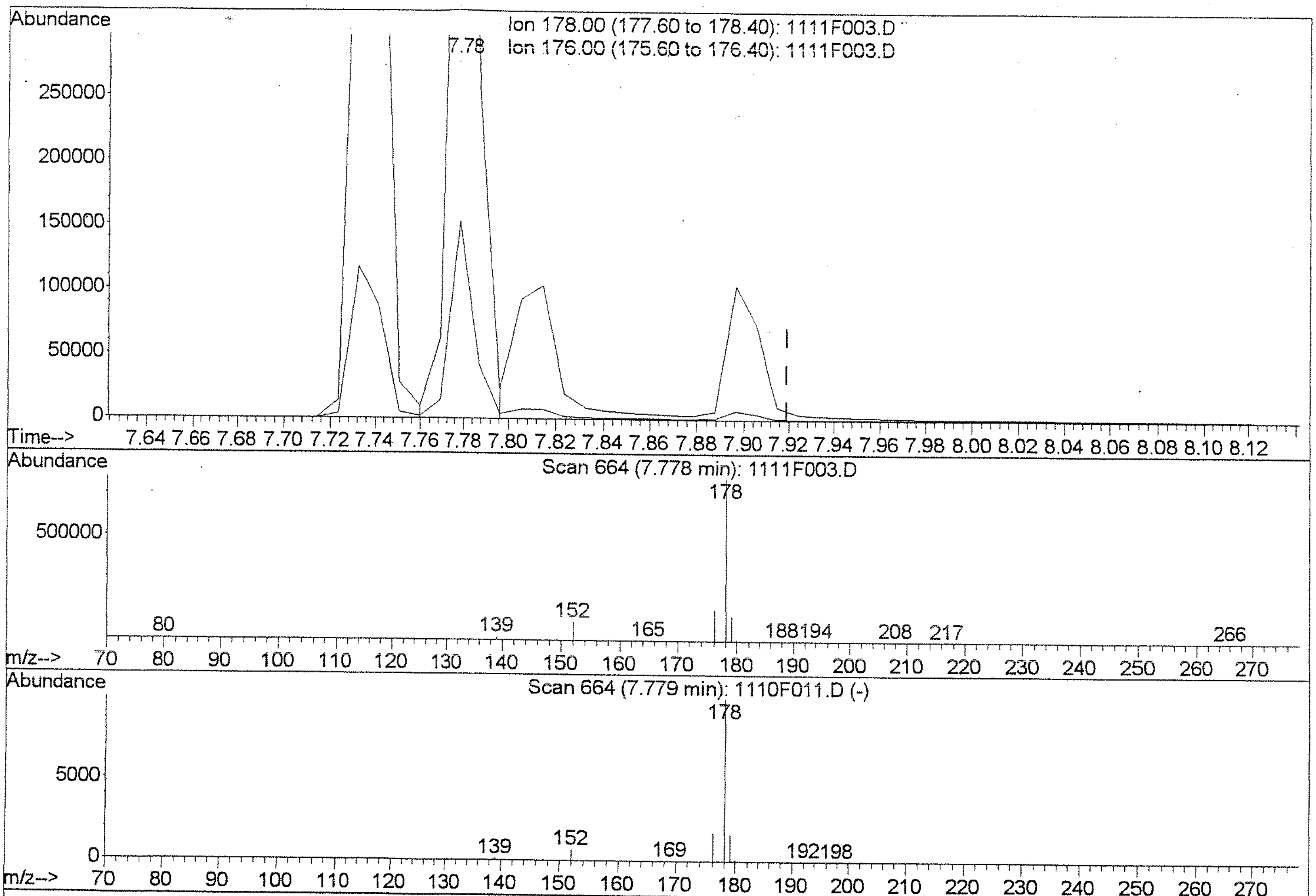
Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.53
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\111108\1111F003.D
Acq On : 11 Nov 2008 6:30 am
Sample : SIM-PAH ~~CCV~~ @ 0.4ug/mL | SVM27-49L
Misc : ICV 11/12/08
MS Integration Params: RTEINT.P
Quant Time: Nov 12 11:40 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 11 06:03:21 2008
Response via : Multiple Level Calibration



TIC: 1111F003.D

(28) Anthracene (T)

7.78min 422.56ng/ml m

response 610277

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.53
0.00	0.00	0.00
0.00	0.00	0.00

OT 11/12/08

1111F003.D 1110ALK.M Wed Nov 12 11:40:23 2008

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/21/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/10/2008
Calibration ID: CAL7938
Analysis Lot: KWG0812597
Units: ng/ml

File ID: J:\MS11\DATA\112108\1121F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	390	0.01	1.22	1.17	-4	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	410	0.01	0.850	0.877	3	NA	± 20 %	AverageRF
Acenaphthylene	400	410	0.01	2.26	2.32	3	NA	± 20 %	AverageRF
Acenaphthene	400	390	0.01	1.37	1.35	-2	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.65	1.69	3	NA	± 20 %	AverageRF
Dibenzofuran	400	400	0.01	2.06	2.04	-1	NA	± 20 %	AverageRF
Phenanthrene	400	400	0.01	1.41	1.39	-1	NA	± 20 %	AverageRF
Anthracene	400	410	0.01	1.37	1.42	4	NA	± 20 %	AverageRF
Fluoranthene	400	400	0.01	1.60	1.58	-1	NA	± 20 %	AverageRF
Pyrene	400	380	0.01	1.50	1.44	-4	NA	± 20 %	AverageRF
Benz(a)anthracene	400	390	0.01	1.36	1.34	-2	NA	± 20 %	AverageRF
Chrysene	400	400	0.01	1.34	1.33	-1	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	380	0.01	1.38	1.32	-4	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	390	0.01	1.33	1.30	-2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	410	0.01	1.14	1.17	2	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	390	0.01	1.06	1.03	-3	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	440	0.01	1.11	1.22	9	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	410	0.01	1.21	1.24	3	NA	± 20 %	AverageRF
Fluorene-d10	400	400	0.01	1.36	1.36	0	NA	± 20 %	AverageRF
Fluoranthene-d10	400	400	0.01	1.36	1.36	-1	NA	± 20 %	AverageRF
Terphenyl-d14	400	400	0.01	1.04	1.03	0	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Data File: J:\MS11\DATA\112108\1121F002.D
Lab ID: KWG0812597-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/21/2008 06:37
Date Quantitated: 11/22/2008 08:12
Batch ID: KWG0812597
Analysis Method: 8270C SIM
MethodJoinID: MJ138

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/22/08
Secondary Review: KB 11/24/08

Printed: 11/22/2008 11:46:55
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/22/2008

Analysis Lot:	KWG0812597	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:			
Tune Ref:	J:\MS11\DATA\112108\1121F001.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\112108\1121F002.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 06:37	**Quant Date:**	11/22/2008 08:12	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0812597-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	-0.02	136	198044	200.00	OK
2	Acenaphthene-d10	6.46	-0.02	164	121056	200.00	OK
3	Phenanthrene-d10	7.70	-0.02	188	211707	200.00	OK
4	Chrysene-d12	10.59	-0.02	240	237498	200.00	OK
5	Perylene-d12	14.59	-0.02	264	260933	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
2	Fluorene-d10	6.89			176	330296	401.47		10-128 NA	
2	2,4,6-Tribromophenol	7.12			330	65550	429.93		12-152 NA	
3	Fluoranthene-d10	8.70			212	574260	397.85		29-121 NA	
4	Terphenyl-d14	9.09			244	489371	398.00		24-141 NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.06			128	464936	385.40			
1	2-Methylnaphthalene	5.61			142	347265	412.79			
1	1-Methylnaphthalene	5.69			142	310203	411.91			
1	Biphenyl	5.98			154	426152	414.54			
1	2,6-Dimethylnaphthalene	6.12			156	320977	437.05			
2	Acenaphthylene	6.35			152	560880	410.89			
2	Acenaphthene	6.49			154	326817	393.99			
2	Dibenzofuran	6.63			168	493436m	395.45			
2	2,3,5-Trimethylnaphthalene	6.79			170	301672	413.51			
2	Fluorene	6.91			166	408818	410.54			
2	Pentachlorophenol	7.56			266	161393	960.97			
3	Dibenzothiophene	7.62			184	577852	397.15			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112108\1121F002.D	**Instrument:**	MS11
Acqu Date:	11/21/2008 06:37	**Quant Date:** 11/22/2008 08:12	**Vial:** 2
Run Type:	CCV	**Dilution:**	1.0
Lab ID:	KWG0812597-2	**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Phenanthrene	7.72			178	590059	396.52			
3	Anthracene	7.76			178	601643**m**	414.95			
3	Carbazole	7.91			167	527311	396.43			
3	1-Methylphenanthrene	8.22			192	447042	404.78			
3	Fluoranthene	8.72			202	668230	395.32			
4	Pyrene	8.95			202	685342	383.59			
4	Benz(a)anthracene	10.57			228	638135	393.70			
4	Chrysene	10.63			228	633229	397.78			
5	Benzo(b)fluoranthene	13.23			252	690363	383.37			
5	Benzo(k)fluoranthene	13.31			252	679464	392.78			
5	Benzo(e)pyrene	14.17			252	640961	391.84			
5	Benzo(a)pyrene	14.37			252	609611	408.87			
5	Perylene	14.69			252	603954	412.35			
5	Indeno(1,2,3-cd)pyrene	17.44			276	538329**m**	389.15			
5	Dibenz(a,h)anthracene	17.49			278	634801	437.20			
5	Benzo(g,h,i)perylene	17.90			276	646419	410.15			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112108\1121F002.D
Acq On : 21 Nov 2008 6:37 am
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 06:57:39 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:45:59 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.04	136	198044	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.46	164	121056	200.00	ng/ml	0.01
22) Phenanthrene-d10	7.70	188	211707	200.00	ng/ml	0.00
37) Chrysene-d12	10.59	240	237498	200.00	ng/ml	0.03
49) Perylene-d12	14.59	264	260933	200.00	ng/ml	0.08
System Monitoring Compounds						
15) Fluorene-d10	6.89	176	330296	401.47	ng/ml	0.01
Spiked Amount 200.000			Recovery	=	200.74%	
20) 2,4,6 Tribromophenol	7.12	330	65550	429.93	ng/ml	0.01
Spiked Amount 375.000			Recovery	=	114.65%	
36) Fluoranthene-d10	8.70	212	574260	397.85	ng/ml	0.02
Spiked Amount 200.000			Recovery	=	198.93%	
42) Terphenyl-d14	9.09	244	489371	398.00	ng/ml	0.02
Spiked Amount 200.000			Recovery	=	199.00%	

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Naphthalene	5.06	128	464936	385.40	ng/ml	99
3) 2-Methylnaphthalene	5.61	142	347265	412.79	ng/ml	99
4) 1-Methylnaphthalene	5.69	142	310203	411.91	ng/ml	100
5) Biphenyl	5.98	154	426152	414.54	ng/ml	97
6) 2,6-Dimethylnaphthalene	6.12	156	320977	437.05	ng/ml	98
11) Acenaphthylene	6.35	152	560880	410.89	ng/ml	98
12) Acenaphthene	6.49	154	326817	393.99	ng/ml	95
13) Dibenzofuran	6.63	168	493436m	395.45	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.79	170	301672	413.51	ng/ml#	50
16) Fluorene	6.91	166	408818	410.54	ng/ml	98
21) Pentachlorophenol	7.56	266	161393	960.97	ng/ml	98
23) Dibenzothiophene	7.62	184	577852	397.15	ng/ml	94
27) Phenanthrene	7.72	178	590059	396.52	ng/ml	98
28) Anthracene	7.76	178	601643m	414.95	ng/ml	
29) Carbazole	7.91	167	527311	396.43	ng/ml	93
30) 1-Methylphenanthrene	8.22	192	447042	404.78	ng/ml	96
35) Fluoranthene	8.72	202	668230	395.32	ng/ml	94
38) Pyrene	8.95	202	685342	383.59	ng/ml	96
43) Benz(a)anthracene	10.57	228	638135	393.70	ng/ml	100
44) Chrysene	10.63	228	633229	397.78	ng/ml	99
50) Benzo(b)fluoranthene	13.23	252	690363	383.37	ng/ml	100
51) Benzo(k)fluoranthene	13.31	252	679464	392.78	ng/ml	98
52) Benzo(e)pyrene	14.17	252	640961	391.84	ng/ml	100
53) Benzo(a)pyrene	14.37	252	609611	408.87	ng/ml	99
54) Perylene	14.69	252	603954	412.35	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112108\1121F002.D
Acq On : 21 Nov 2008 6:37 am
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 06:57:39 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 20 13:45:59 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55) Indeno(1,2,3-cd)pyrene	17.44	276	538329m	389.15 ng/ml	
56) Dibenz(a,h)anthracene	17.49	278	634801	437.20 ng/ml	95
57) Benzo(g,h,i)perylene	17.90	276	646419	410.15 ng/ml	99

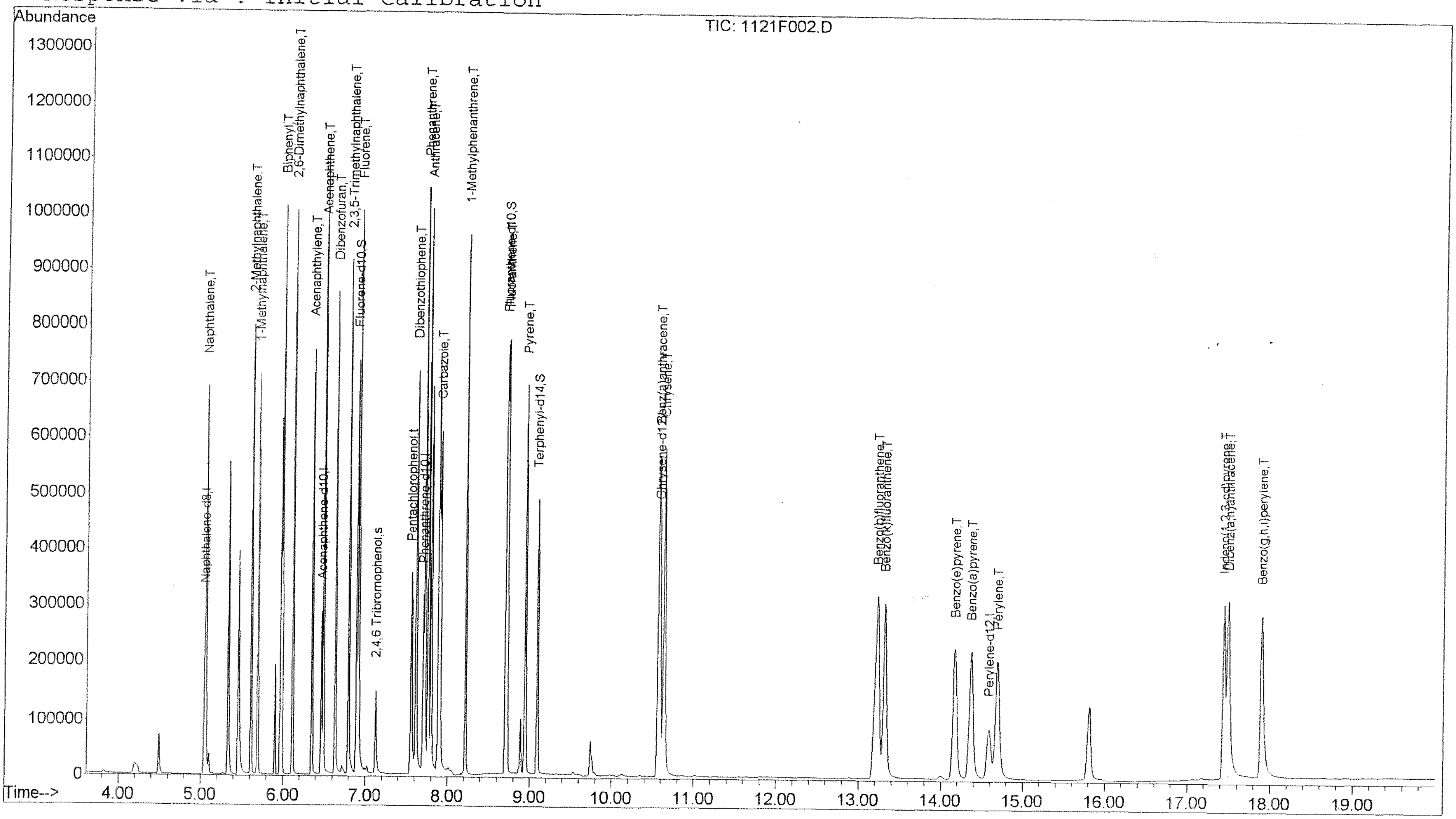
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112108\1121F002.D
Acq On : 21 Nov 2008 6:37 am
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 8:12 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Initial Calibration

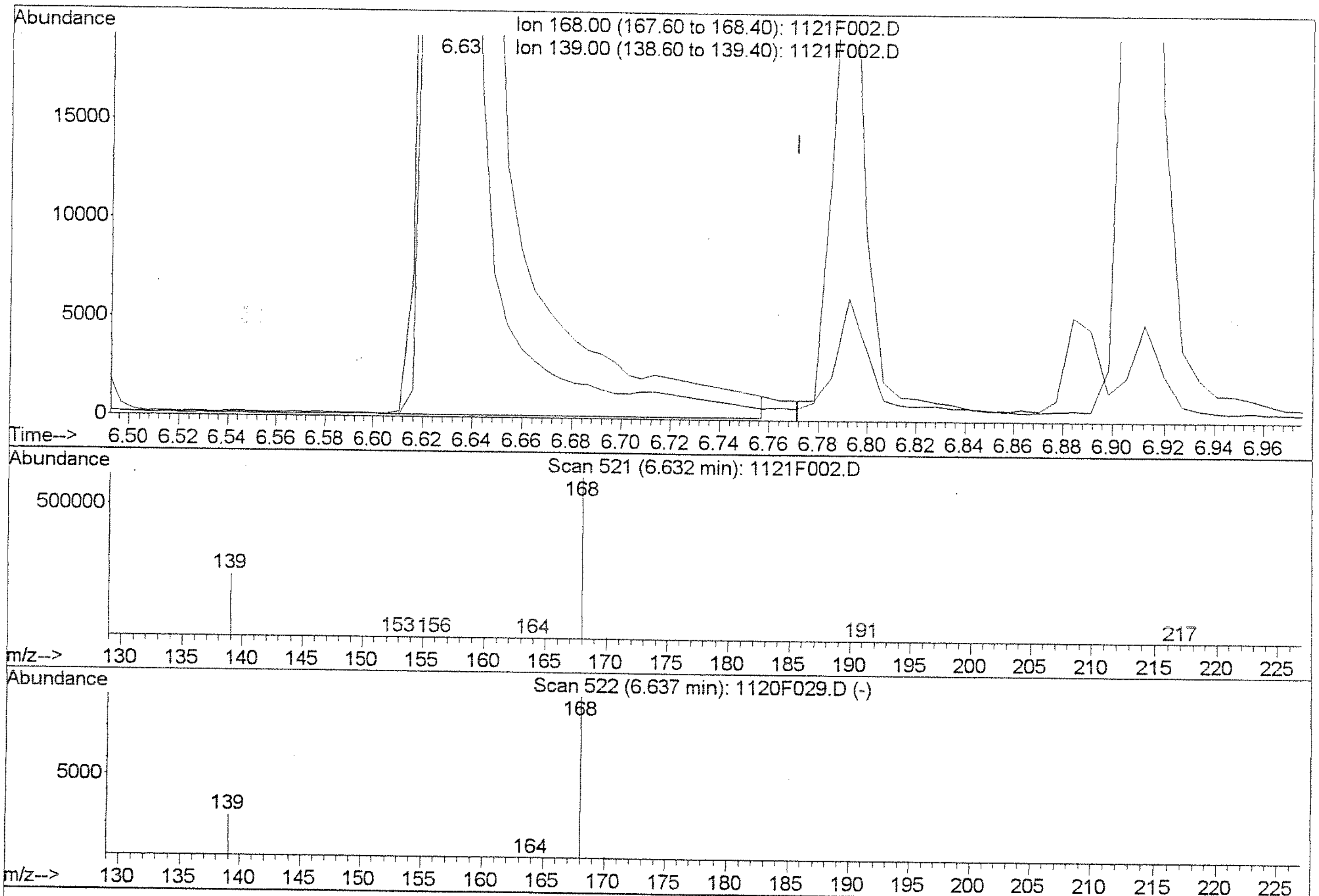


Data File : J:\MS11\DATA\112108\1121F002.D
Acq On : 21 Nov 2008 6:37 am
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 21 6:57 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 21 08:32:29 2008
Response via : Multiple Level Calibration



TIC: 1121F002.D

(13) Dibenzofuran (T)

6.63min 528.07ng/ml

response 658918

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	38.48
0.00	0.00	0.00
0.00	0.00	0.00

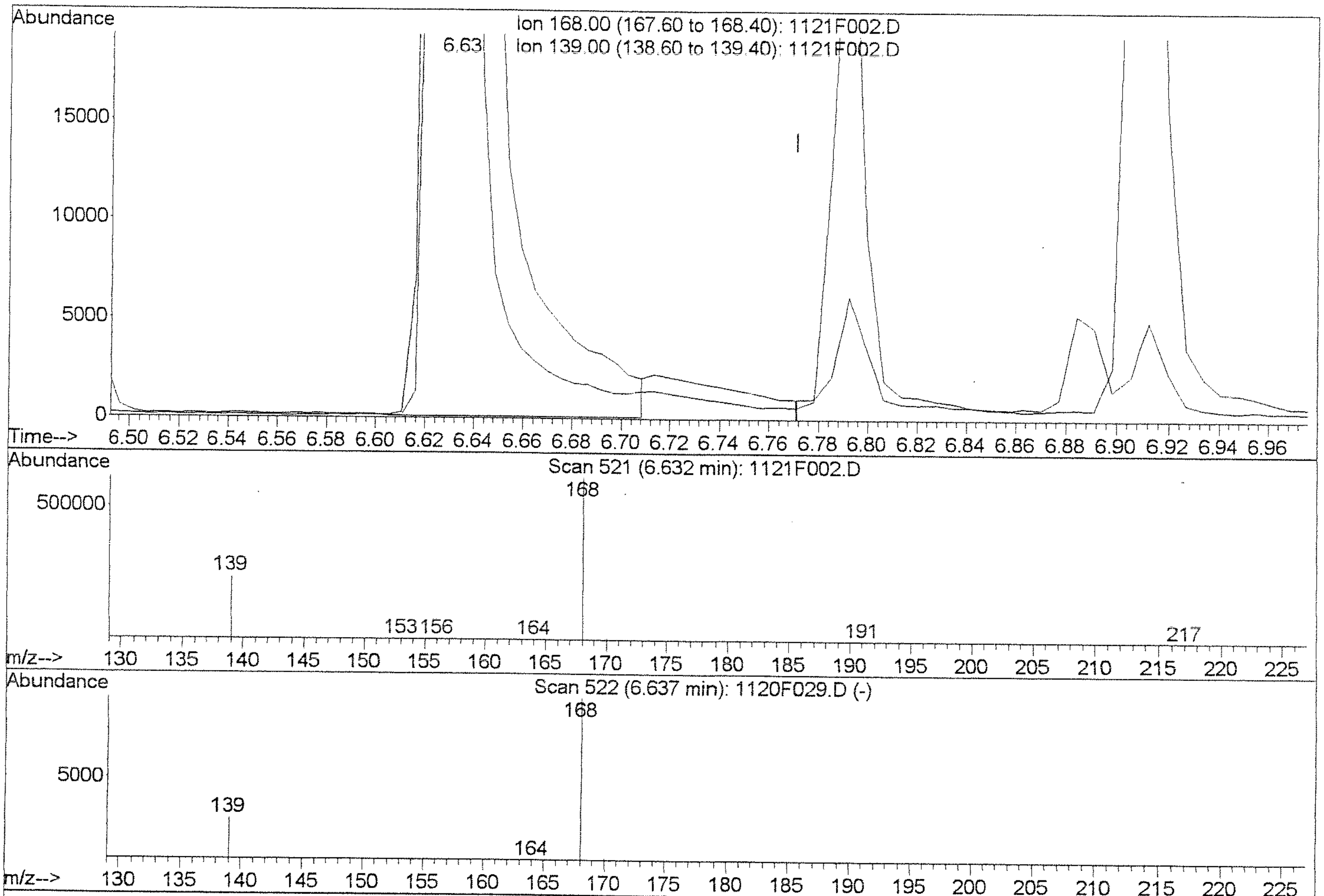
1121F002.D 1110ALK.M Sat Nov 22 08:11:57 2008

Data File : J:\MS11\DATA\112108\1121F002.D
Acq On : 21 Nov 2008 6:37 am
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 8:12 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 21 08:32:29 2008
Response via : Multiple Level Calibration



TIC: 1121F002.D

(13) Dibenzofuran (T)

6.63min 395.45ng/ml m

response 493436

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	38.50
0.00	0.00	0.00
0.00	0.00	0.00

OI

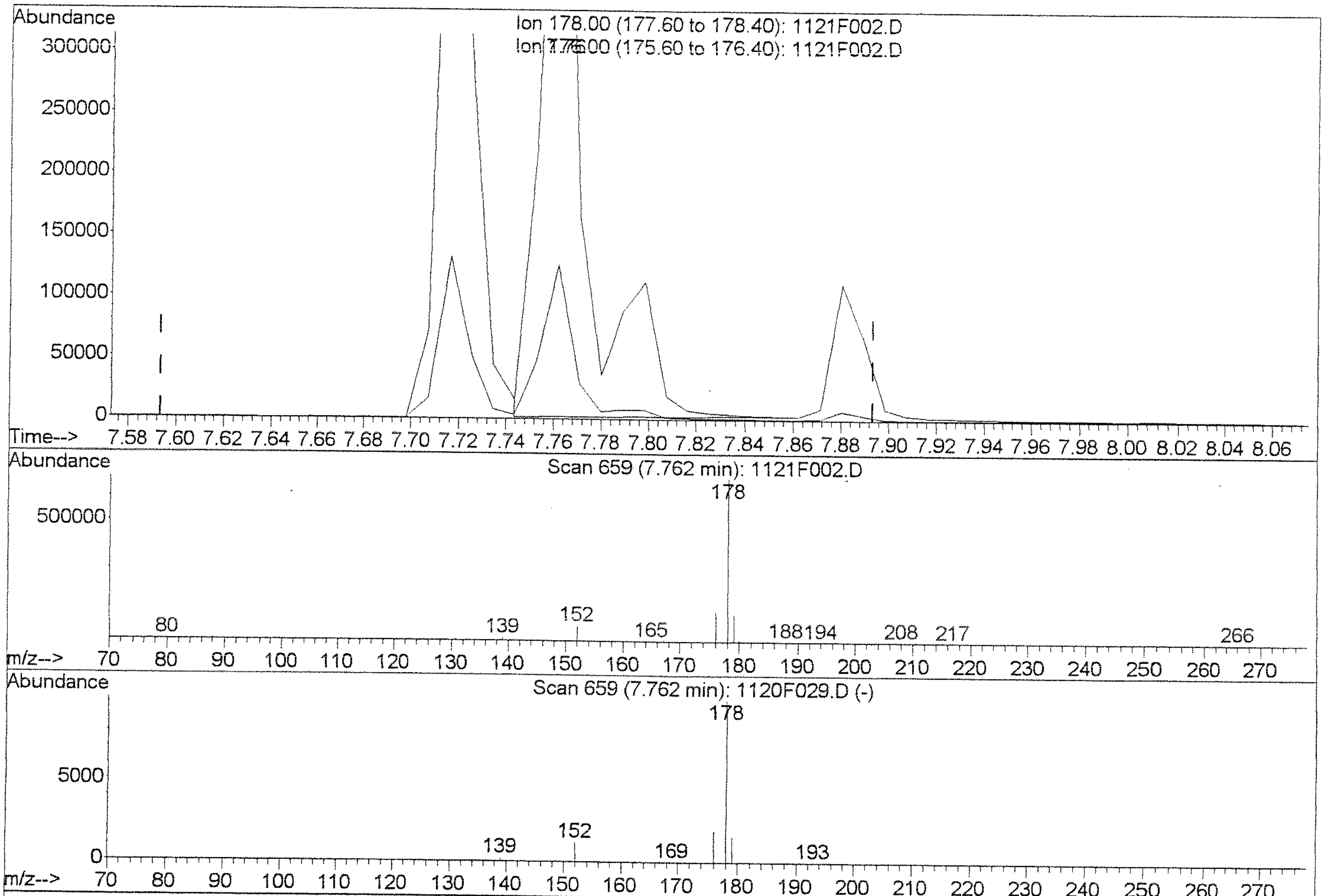
11/22/08

1121F002.D 1110ALK.M Sat Nov 22 08:12:07 2008

LB
11/24/08

```
Data File : J:\MS11\DATA\112108\1121F002.D                    Vial: 2
Acq On    : 21 Nov 2008   6:37 am                         Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C            Inst    : MS11
Misc      :                                               Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22  8:12 2008                  Quant Results File: temp.res

Method          : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title           : PAHS and ALKYLATED HOMOLOGS
Last Update     : Fri Nov 21 08:32:29 2008
Response via    : Multiple Level Calibration
```



TIC: 1121F002.D

(28) Anthracene (T)

7.76min 496.52ng/ml

response 719900

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	18.43
0.00	0.00	0.00
0.00	0.00	0.00

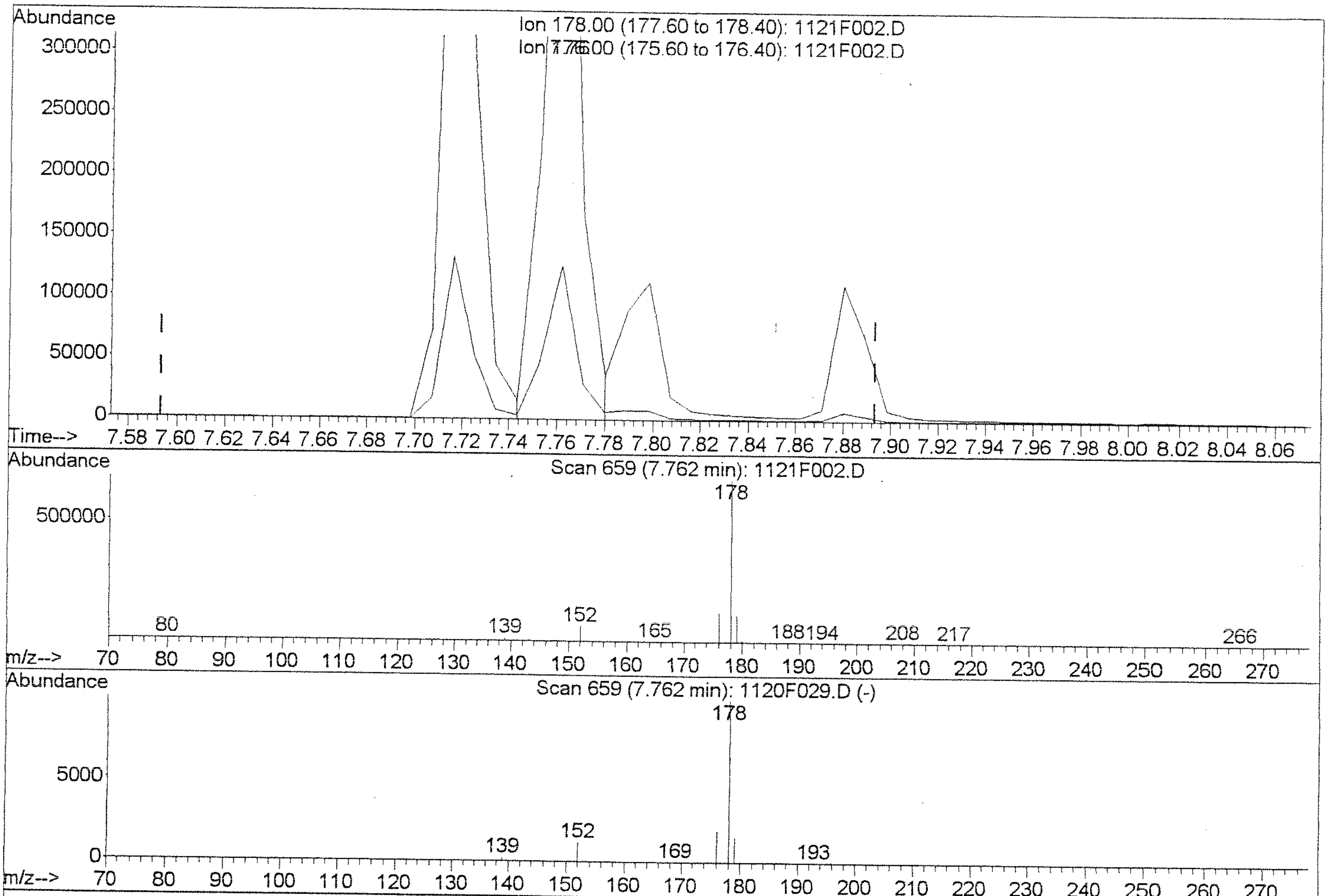
1121F002.D   1110ALK.M   Sat Nov 22 08:12:17 2008

Data File : J:\MS11\DATA\112108\1121F002.D
Acq On : 21 Nov 2008 6:37 am
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 8:12 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 21 08:32:29 2008
Response via : Multiple Level Calibration



TIC: 1121F002.D

(28) Anthracene (T)

7.76min 414.95ng/ml m

response 601643

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	18.44
0.00	0.00	0.00
0.00	0.00	0.00

OT

LB
11/24/08

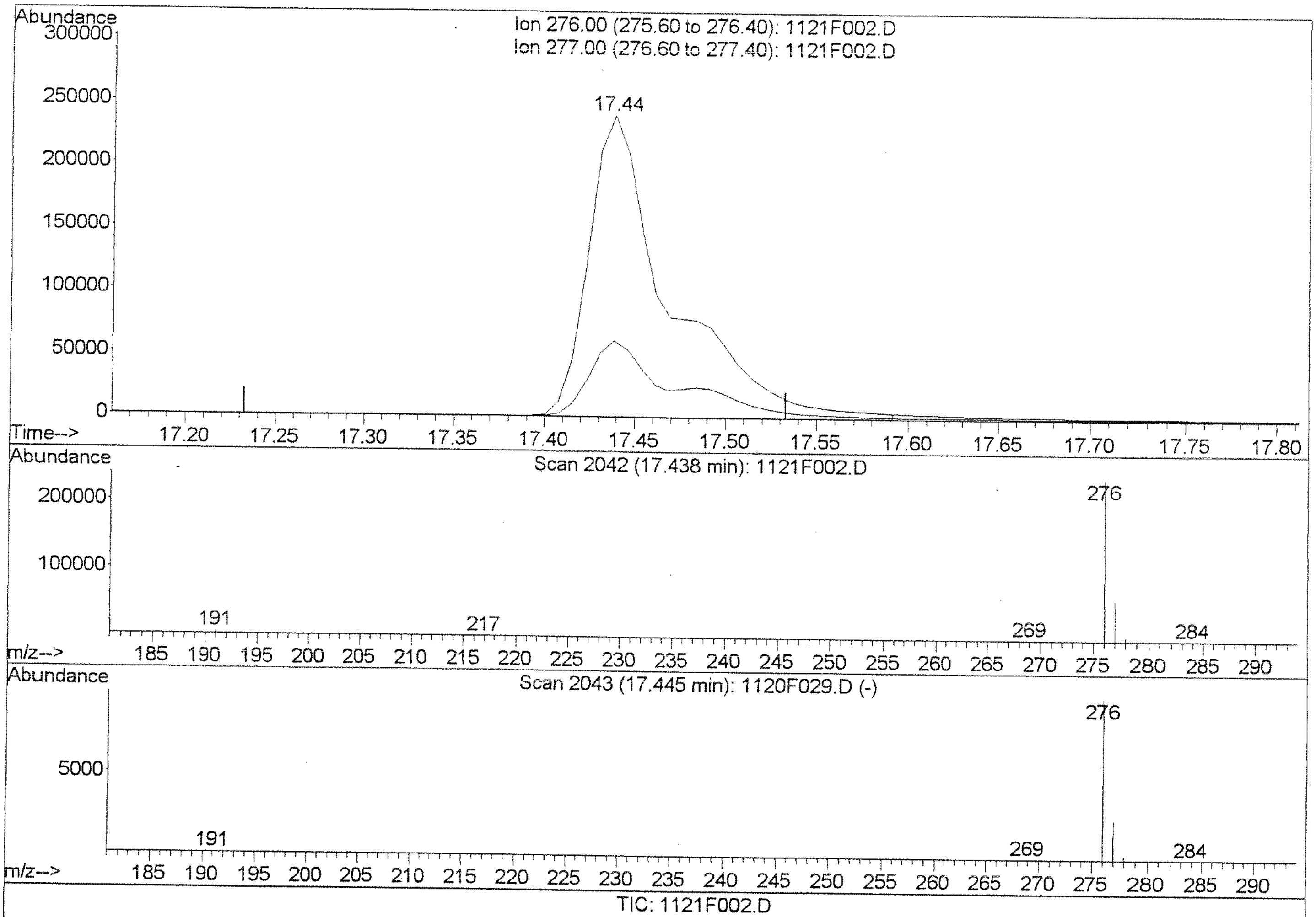
1121F002.D 1110ALK.M Sat Nov 22 08:12:21 2008

Data File : J:\MS11\DATA\112108\1121F002.D
Acq On : 21 Nov 2008 6:37 am
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 8:12 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 21 08:32:29 2008
Response via : Multiple Level Calibration



(55) Indeno(1,2,3-cd)pyrene (T)

17.44min 537.82ng/ml

response 743994

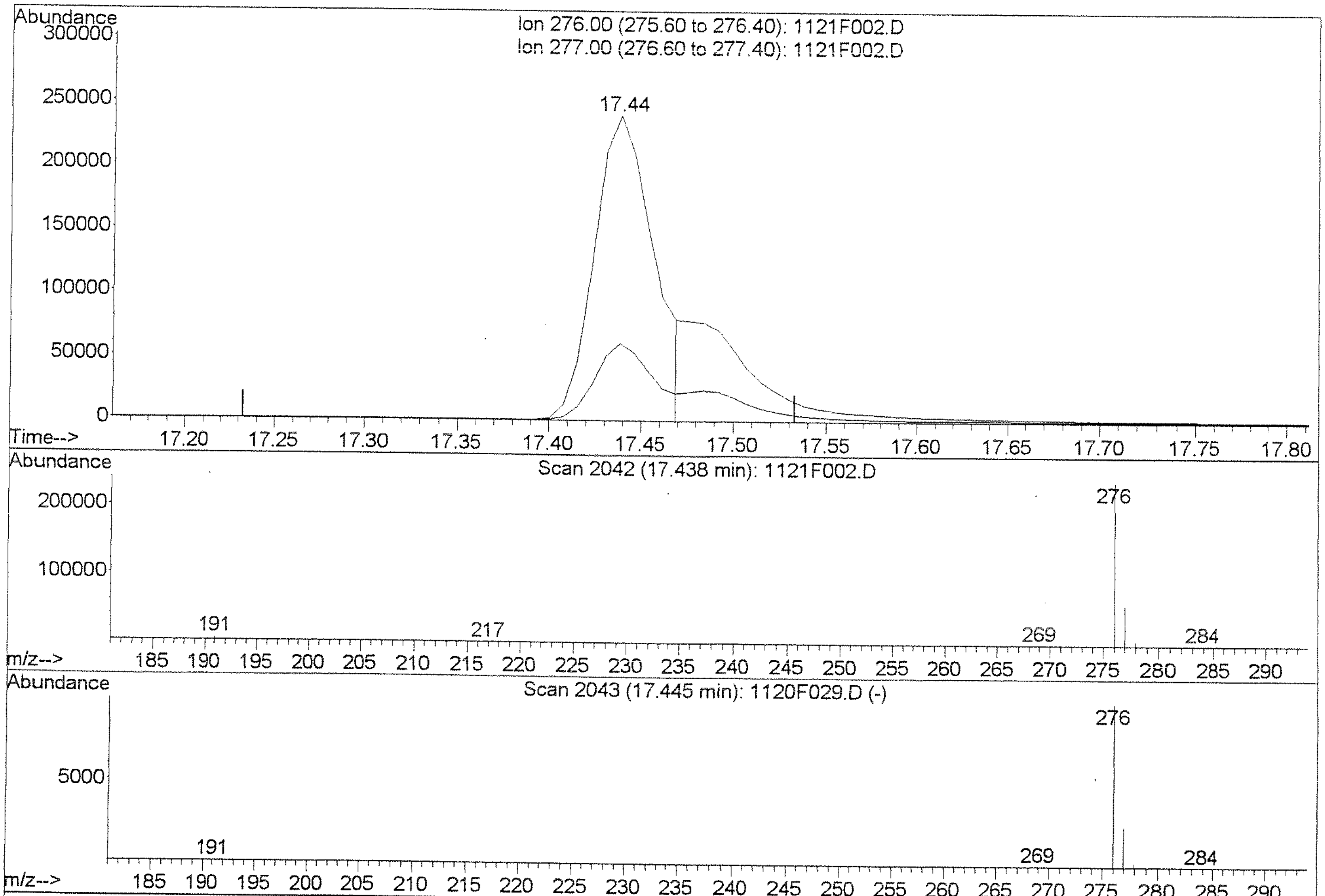
Ion	Exp%	Act%
276.00	100	100
277.00	24.70	25.04
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112108\1121F002.D
Acq On : 21 Nov 2008 6:37 am
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 8:12 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 21 08:32:29 2008
Response via : Multiple Level Calibration



TIC: 1121F002.D

(55) Indeno(1,2,3-cd)pyrene (T)

17.44min 389.15ng/ml m

response 538329

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	25.21
0.00	0.00	0.00
0.00	0.00	0.00

lu 11/22/08
OI

LB
11/24/08

1121F002.D 1110ALK.M Sat Nov 22 08:12:33 2008

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/21/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/10/2008
Calibration ID: CAL7938
Analysis Lot: KWG0812613
Units: ng/ml

File ID: J:\MS11\DATA\112108\1121F031.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	380	0.01	1.22	1.17	-4	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	390	0.01	0.850	0.834	-2	NA	± 20 %	AverageRF
Acenaphthylene	400	410	0.01	2.26	2.33	3	NA	± 20 %	AverageRF
Acenaphthene	400	400	0.01	1.37	1.35	-1	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.65	1.69	3	NA	± 20 %	AverageRF
Dibenzofuran	400	390	0.01	2.06	2.02	-2	NA	± 20 %	AverageRF
Phenanthrene	400	400	0.01	1.41	1.42	1	NA	± 20 %	AverageRF
Anthracene	400	420	0.01	1.37	1.44	5	NA	± 20 %	AverageRF
Fluoranthene	400	410	0.01	1.60	1.64	2	NA	± 20 %	AverageRF
Pyrene	400	400	0.01	1.50	1.50	0	NA	± 20 %	AverageRF
Benz(a)anthracene	400	400	0.01	1.36	1.35	-1	NA	± 20 %	AverageRF
Chrysene	400	400	0.01	1.34	1.35	0	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	390	0.01	1.38	1.34	-3	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	410	0.01	1.33	1.36	2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	410	0.01	1.14	1.16	2	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	380	0.01	1.06	1.01	-5	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	410	0.01	1.11	1.15	3	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	380	0.01	1.21	1.15	-5	NA	± 20 %	AverageRF
Fluorene-d10	400	400	0.01	1.36	1.35	-1	NA	± 20 %	AverageRF
Fluoranthene-d10	400	400	0.01	1.36	1.37	1	NA	± 20 %	AverageRF
Terphenyl-d14	400	410	0.01	1.04	1.05	2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Exception Report

Data File: J:\MS11\DATA\112108\1121F031.D
Lab ID: KWG0812613-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/21/2008 19:21
Date Quantitated: 11/22/2008 13:13
Batch ID: KWG0812613
Analysis Method: 8270C SIM
MethodJoinID: MJ138

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: RW 11/22/08

Secondary Review: 11-22-8

Printed: 11/22/2008 14:49:36
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/22/2008

Analysis Lot:	KWG0812613	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
		Prep Date:			
Prep Ref:					

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:			
Tune Ref:	J:\MS11\DATA\112108\1121F030.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\112108\1121F031.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 19:21	**Quant Date:**	11/22/2008 13:13	**Vial:**	28
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0812613-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.05	-0.01	136	209677	200.00	OK
2	Acenaphthene-d10	6.47	-0.01	164	114663	200.00	OK
3	Phenanthrene-d10	7.71	-0.01	188	194060	200.00	OK
4	Chrysene-d12	10.60	-0.01	240	214914	200.00	OK
5	Perylene-d12	14.61	0.00	264	222377	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.90			176	310001	397.81		10-128	NA	
2	2,4,6-Tribromophenol	7.13			330	59721	413.54		12-152	NA	
3	Fluoranthene-d10	8.70			212	533541	403.25		29-121	NA	
4	Terphenyl-d14	9.10			244	452718	406.89		24-141	NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.07			128	490950	384.38			
1	2-Methylnaphthalene	5.62			142	349804	392.74			
1	1-Methylnaphthalene	5.70			142	308226	386.57			
1	Biphenyl	5.99			154	417379	383.48			
1	2,6-Dimethylnaphthalene	6.12			156	307532	395.51			
2	Acenaphthylene	6.35			152	533674	412.76			
2	Acenaphthene	6.49			154	310406	395.07			
2	Dibenzofuran	6.64			168	463081m	391.81			
2	2,3,5-Trimethylnaphthalene	6.80			170	284597	411.85			
2	Fluorene	6.92			166	387088	410.39			
2	Pentachlorophenol	7.56			266	141694	890.72			
3	Dibenzothiophene	7.62			184	532105	398.96			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112108\1121F031.D			**Instrument:**	MS11
Acqu Date:	11/21/2008 19:21	**Quant Date:**	11/22/2008 13:13	**Vial:**	28
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0812613-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Phenanthrene	7.72			178	551310	404.17			
3	Anthracene	7.77			178	559870**m**	421.26			
3	Carbazole	7.91			167	485169	397.92			
3	1-Methylphenanthrene	8.22			192	420820	415.69			
3	Fluoranthene	8.72			202	634758	409.67			
4	Pyrene	8.95			202	646245	399.72			
4	Benz(a)anthracene	10.58			228	580938	396.08			
4	Chrysene	10.65			228	578203	401.38			
5	Benzo(b)fluoranthene	13.25			252	594583	387.43			
5	Benzo(k)fluoranthene	13.34			252	604380	409.95			
5	Benzo(e)pyrene	14.19			252	553038	396.71			
5	Benzo(a)pyrene	14.39			252	516368	406.38			
5	Perylene	14.71			252	513996	411.78			
5	Indeno(1,2,3-cd)pyrene	17.45			276	450190**m**	381.86			
5	Dibenz(a,h)anthracene	17.51			278	509654	411.87			
5	Benzo(g,h,i)perylene	17.91			276	510375	379.98			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112108\1121F031.D Vial: 28
Acq On : 21 Nov 2008 7:21 pm Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 05:48:42 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 21 08:32:29 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Naphthalene-d8	5.05	136	209677	200.00 ng/ml	0.00
10) Acenaphthene-d10	6.47	164	114663	200.00 ng/ml	0.00
22) Phenanthrene-d10	7.71	188	194060	200.00 ng/ml	0.00
37) Chrysene-d12	10.60	240	214914	200.00 ng/ml	0.00
49) Perylene-d12	14.61	264	222377	200.00 ng/ml	0.01
System Monitoring Compounds					
15) Fluorene-d10	6.90	176	310001	397.81 ng/ml	0.00
Spiked Amount 200.000			Recovery =	198.91%	
20) 2,4,6 Tribromophenol	7.13	330	59721	413.54 ng/ml	0.00
Spiked Amount 375.000			Recovery =	110.28%	
36) Fluoranthene-d10	8.70	212	533541	403.25 ng/ml	0.00
Spiked Amount 200.000			Recovery =	201.63%	
42) Terphenyl-d14	9.10	244	452718	406.89 ng/ml	0.00
Spiked Amount 200.000			Recovery =	203.45%	
Target Compounds					Qvalue
2) Naphthalene	5.07	128	490950	384.38 ng/ml	100
3) 2-Methylnaphthalene	5.62	142	349804	392.74 ng/ml	97
4) 1-Methylnaphthalene	5.70	142	308226	386.57 ng/ml	92
5) Biphenyl	5.99	154	417379	383.48 ng/ml	99
6) 2,6-Dimethylnaphthalene	6.12	156	307532	395.51 ng/ml	100
11) Acenaphthylene	6.35	152	533674	412.76 ng/ml	98
12) Acenaphthene	6.49	154	310406	395.07 ng/ml	98
13) Dibenzofuran	6.64	168	463081m	391.81 ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.80	170	284597	411.85 ng/ml#	38
16) Fluorene	6.92	166	387088	410.39 ng/ml	98
21) Pentachlorophenol	7.56	266	141694	890.72 ng/ml	97
23) Dibenzothiophene	7.62	184	532105	398.96 ng/ml	83
27) Phenanthrene	7.72	178	551310	404.17 ng/ml	96
28) Anthracene	7.77	178	559870m	421.26 ng/ml	
29) Carbazole	7.91	167	485169	397.92 ng/ml	99
30) 1-Methylphenanthrene	8.22	192	420820	415.69 ng/ml	94
35) Fluoranthene	8.72	202	634758	409.67 ng/ml	88
38) Pyrene	8.95	202	646245	399.72 ng/ml	97
43) Benz(a)anthracene	10.58	228	580938	396.08 ng/ml	98
44) Chrysene	10.65	228	578203	401.38 ng/ml	100
50) Benzo(b)fluoranthene	13.25	252	594583	387.43 ng/ml	99
51) Benzo(k)fluoranthene	13.34	252	604380	409.95 ng/ml	99
52) Benzo(e)pyrene	14.19	252	553038	396.71 ng/ml	100
53) Benzo(a)pyrene	14.39	252	516368	406.38 ng/ml	100
54) Perylene	14.71	252	513996	411.78 ng/ml	100

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112108\1121F031.D Vial: 28
Acq On : 21 Nov 2008 7:21 pm Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 05:48:42 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 21 08:32:29 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

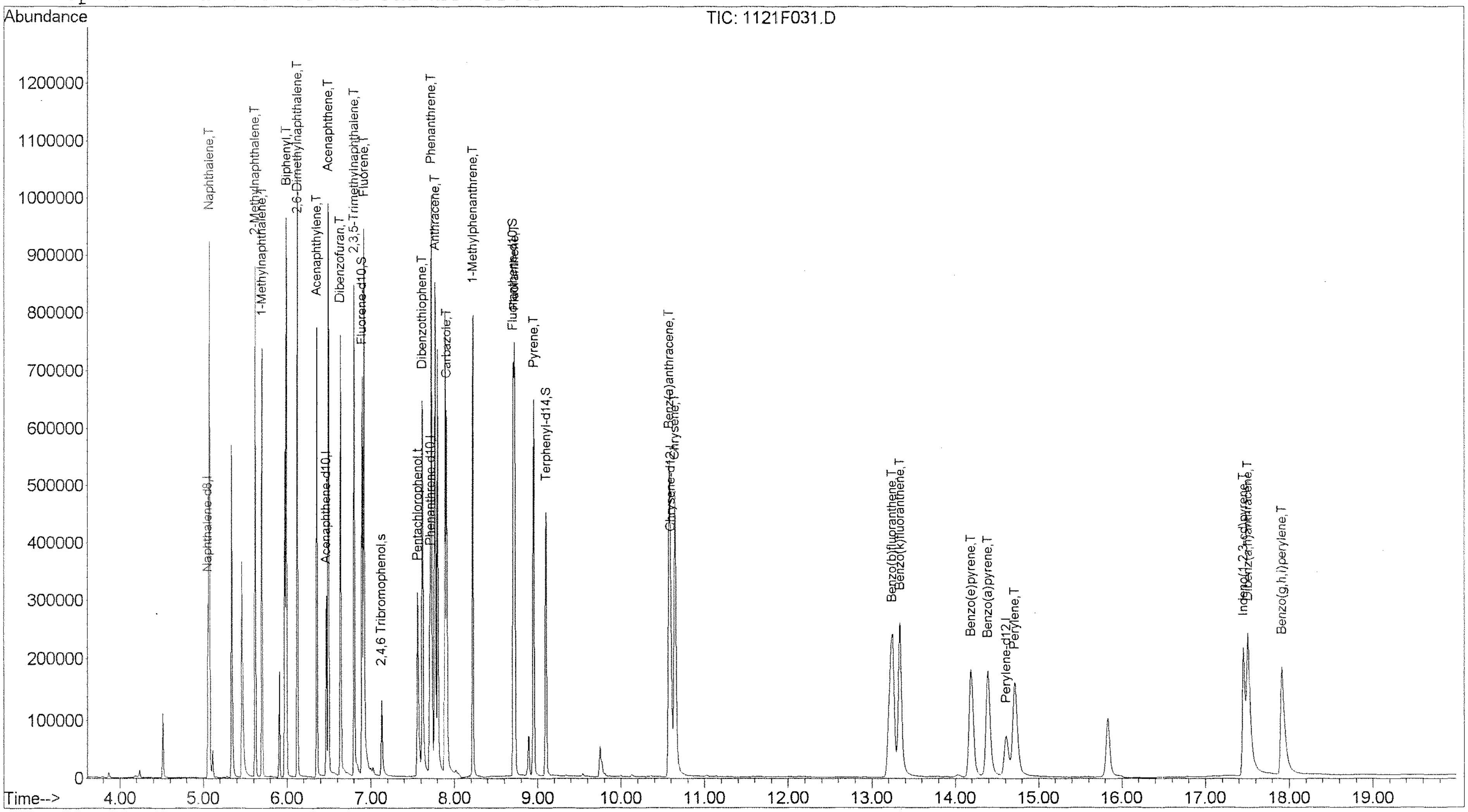
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.45	276	450190m	381.86 ng/ml	
56)	Dibenz(a,h)anthracene	17.51	278	509654	411.87 ng/ml	73
57)	Benzo(g,h,i)perylene	17.91	276	510375	379.98 ng/ml	99

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

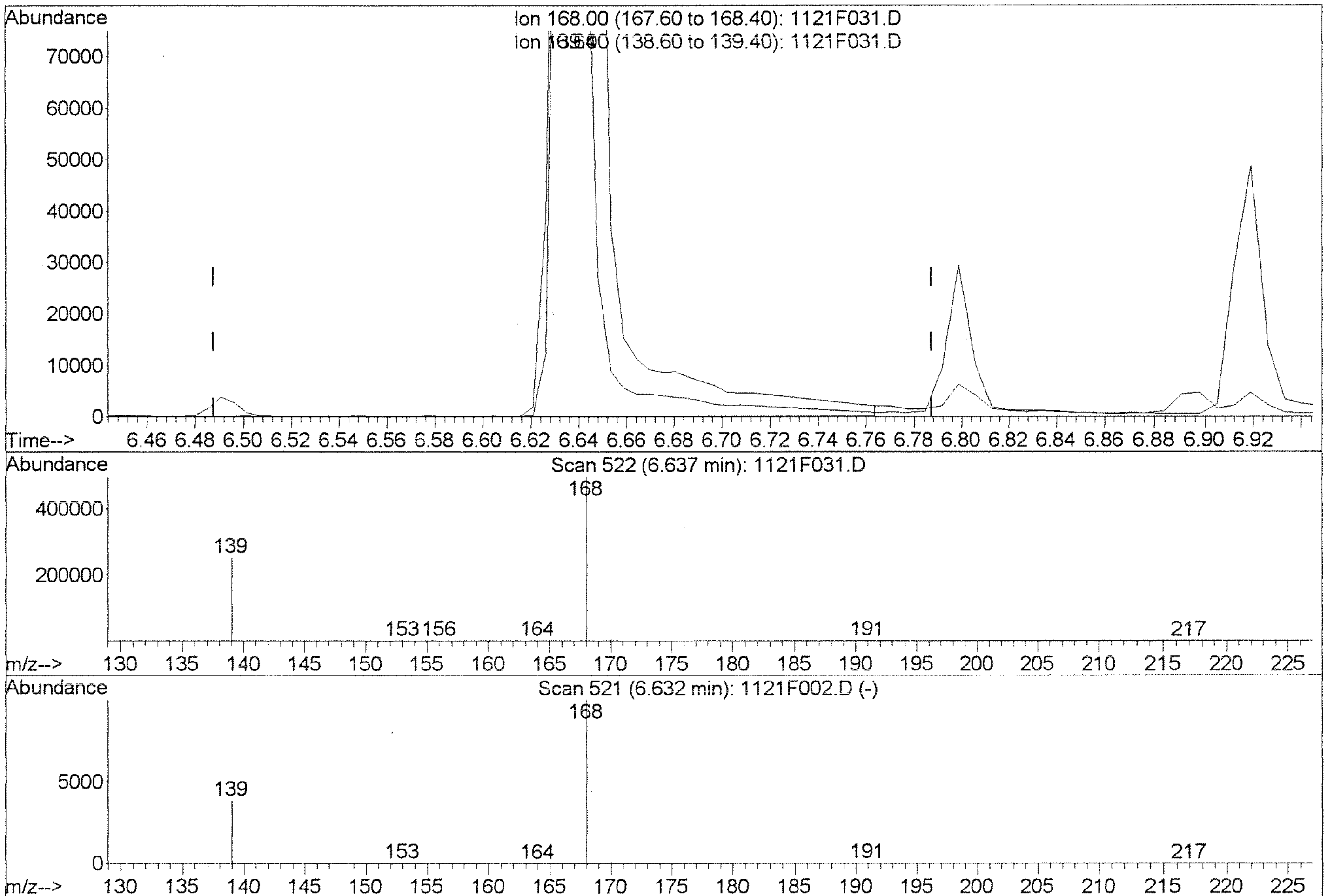
Data File : J:\MS11\DATA\112108\1121F031.D Vial: 28
Acq On : 21 Nov 2008 7:21 pm Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:13 2008 Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration



```
Data File : J:\MS11\DATA\112108\1121F031.D              Vial: 28
Acq On    : 21 Nov 2008   7:21 pm                   Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C      Inst     : MS11
Misc      :                                         Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22  5:48 2008               Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sat Nov 22 08:12:47 2008
Response via   : Multiple Level Calibration
```



TIC: 1121F031.D

(13) Dibenzofuran (T)

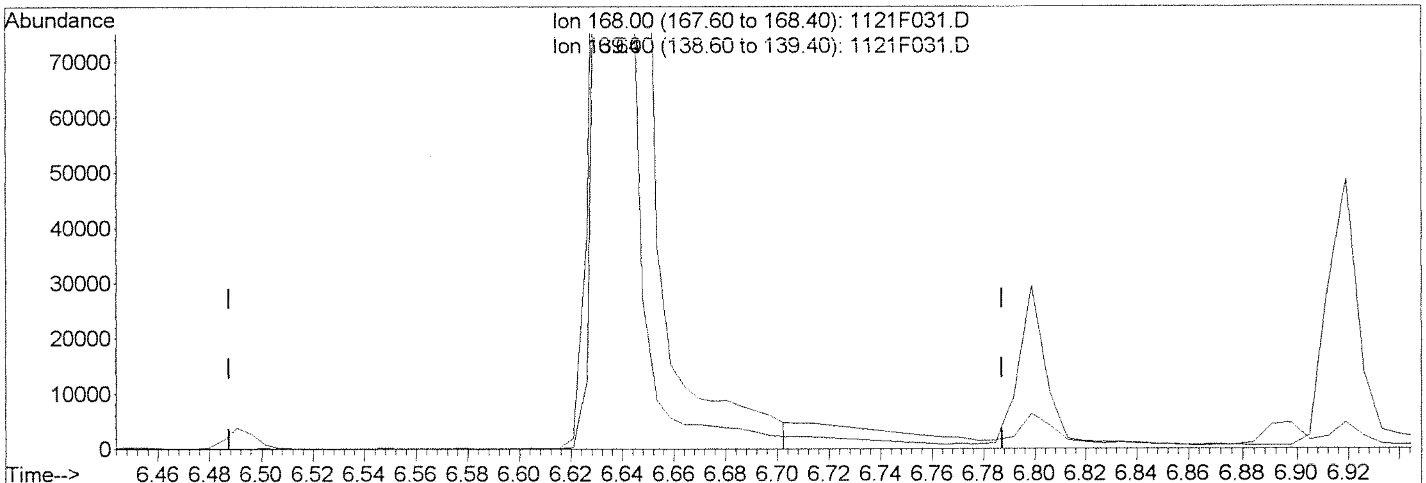
6.64min 510.48ng/ml

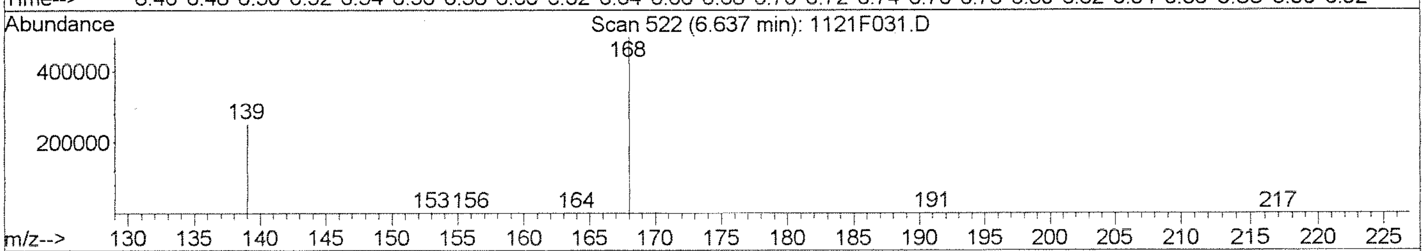
response 603335

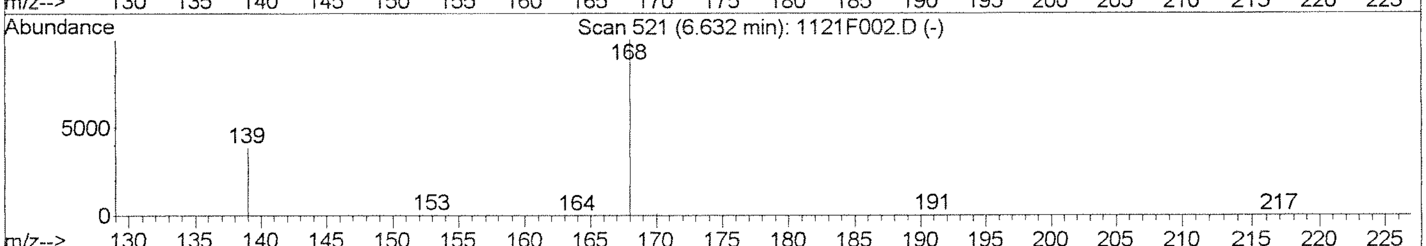
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	50.85
0.00	0.00	0.00
0.00	0.00	0.00

```
Data File : J:\MS11\DATA\112108\1121F031.D                Vial: 28
Acq On    : 21 Nov 2008   7:21 pm                     Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C         Inst   : MS11
Misc      :                                           Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:13 2008               Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sat Nov 22 08:12:47 2008
Response via   : Multiple Level Calibration
```







TIC: 1121F031.D

(13) Dibenzofuran (T)

6.64min 391.81ng/ml m

response 463081

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	50.87
0.00	0.00	0.00
0.00	0.00	0.00

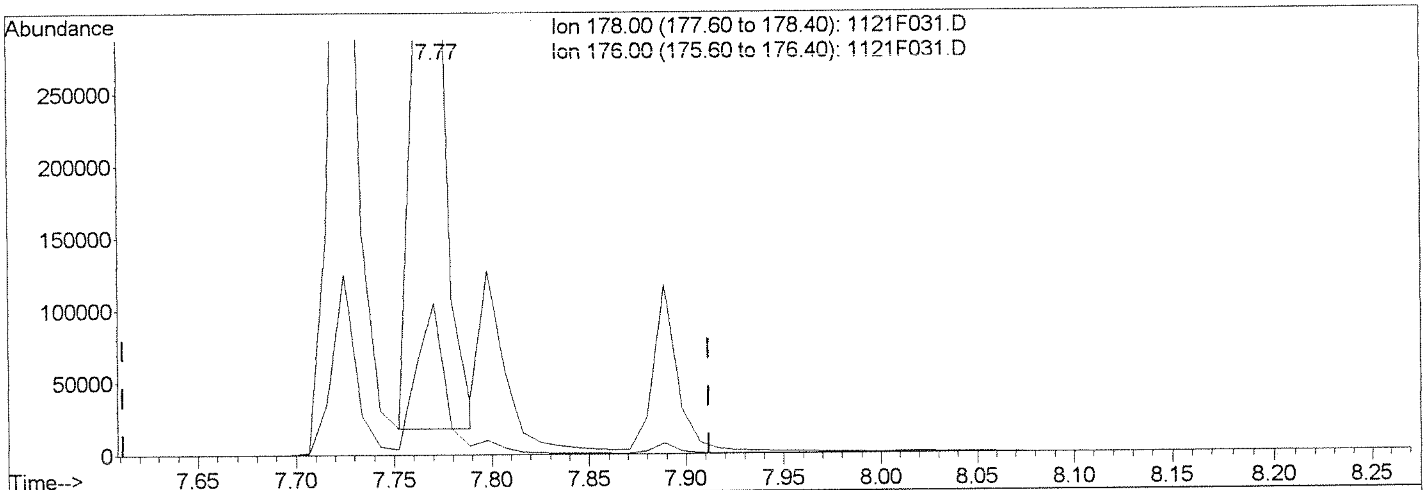
OI

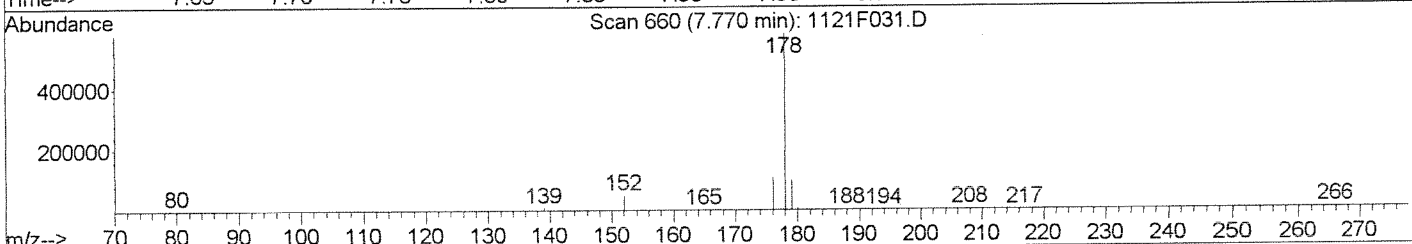
Data File : J:\MS11\DATA\112108\1121F031.D
Acq On : 21 Nov 2008 7:21 pm
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:13 2008

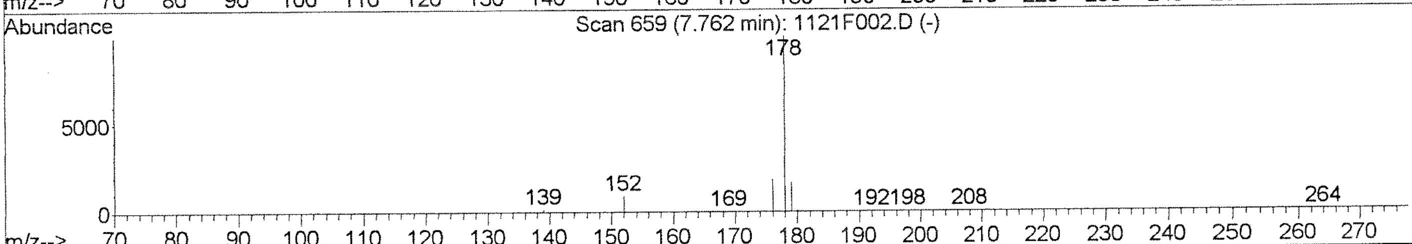
Vial: 28
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration







TIC: 1121F031.D

(28) Anthracene (T)

7.77min 391.45ng/ml

response 520258

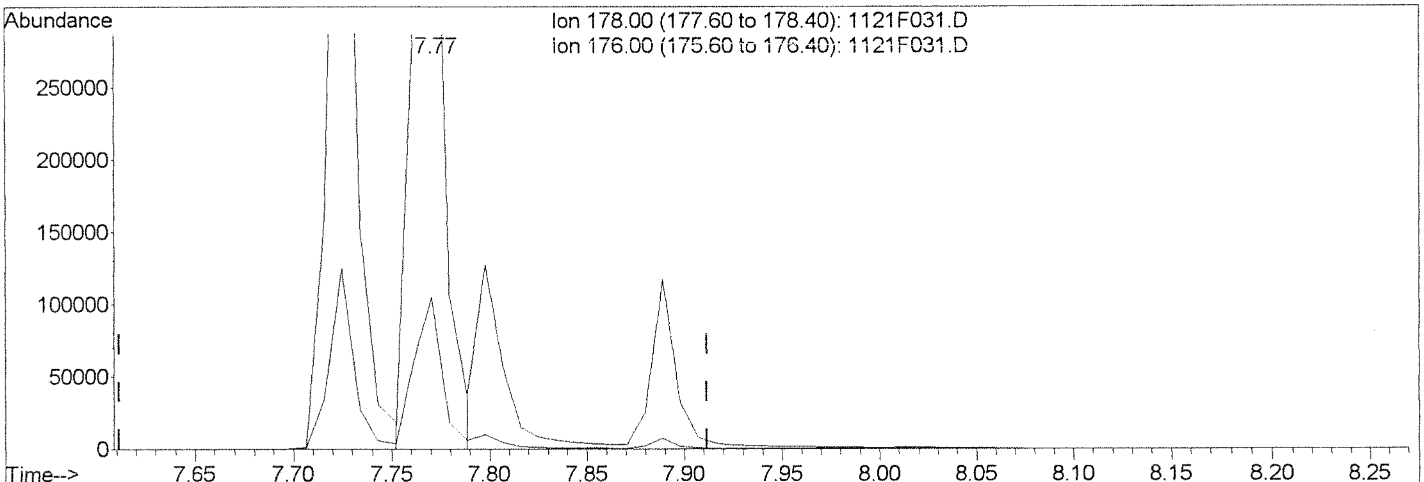
Ion	Exp%	Act%
178.00	100	100
176.00	19.70	18.05
0.00	0.00	0.00
0.00	0.00	0.00

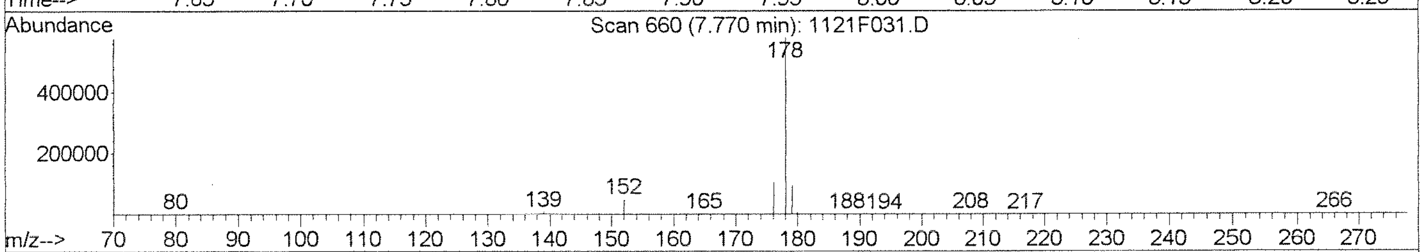
Data File : J:\MS11\DATA\112108\1121F031.D
Acq On : 21 Nov 2008 7:21 pm
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:13 2008

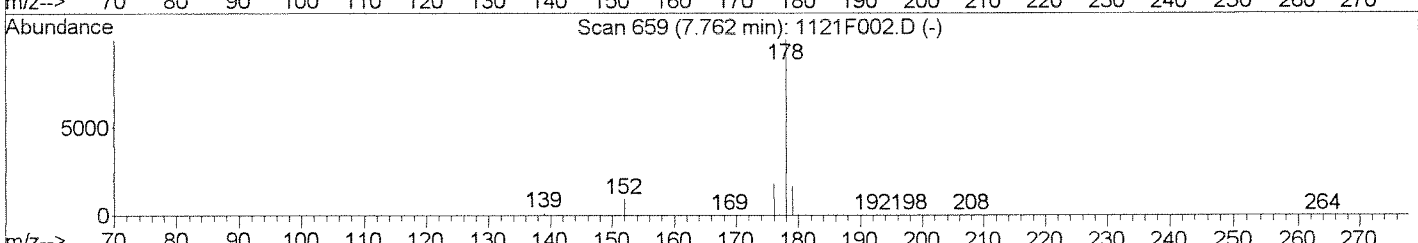
Vial: 28
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration







TIC: 1121F031.D

(28) Anthracene (T)

7.77min 421.26ng/ml m

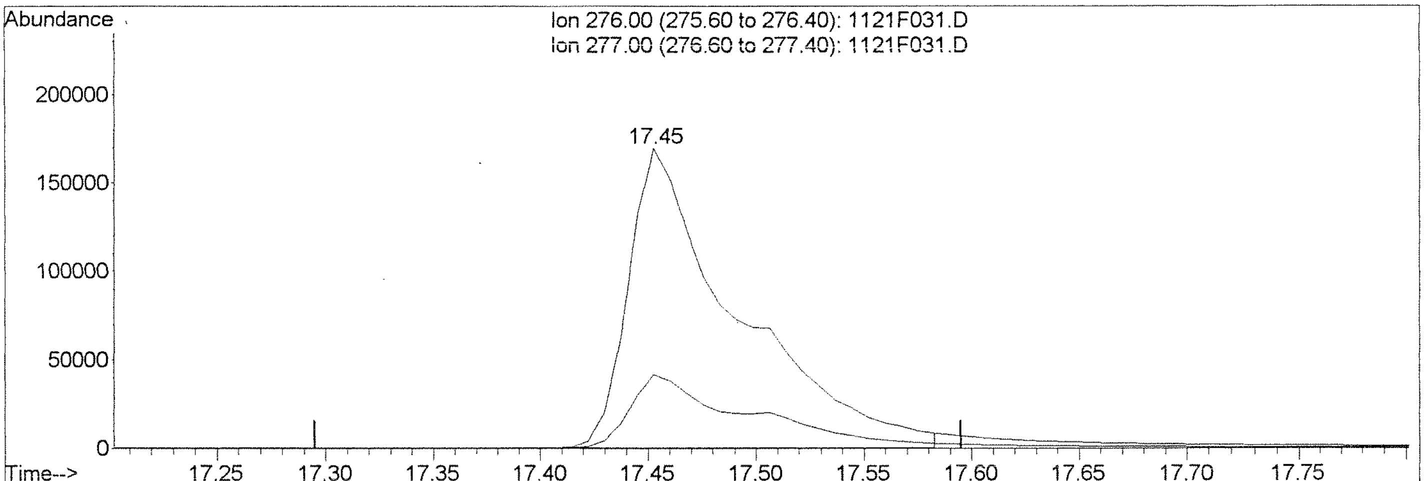
response 559870

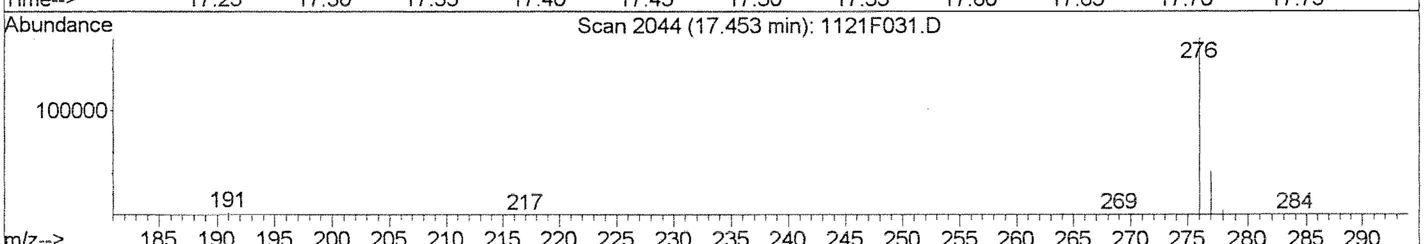
Ion	Exp%	Act%
178.00	100	100
176.00	19.70	18.13
0.00	0.00	0.00
0.00	0.00	0.00

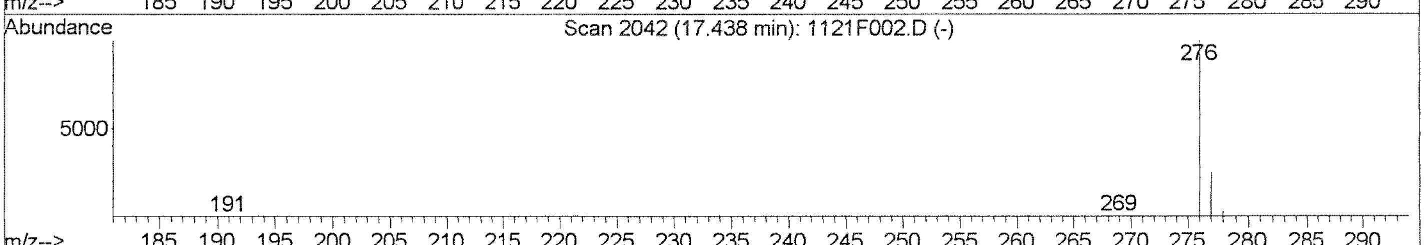
OI 11/22/08

```
Data File : J:\MS11\DATA\112108\1121F031.D              Vial: 28
Acq On    : 21 Nov 2008   7:21 pm                   Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C      Inst     : MS11
Misc      :                                         Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:13 2008               Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sat Nov 22 08:12:47 2008
Response via   : Multiple Level Calibration
```







TIC: 1121F031.D

(55) Indeno(1,2,3-cd)pyrene (T)

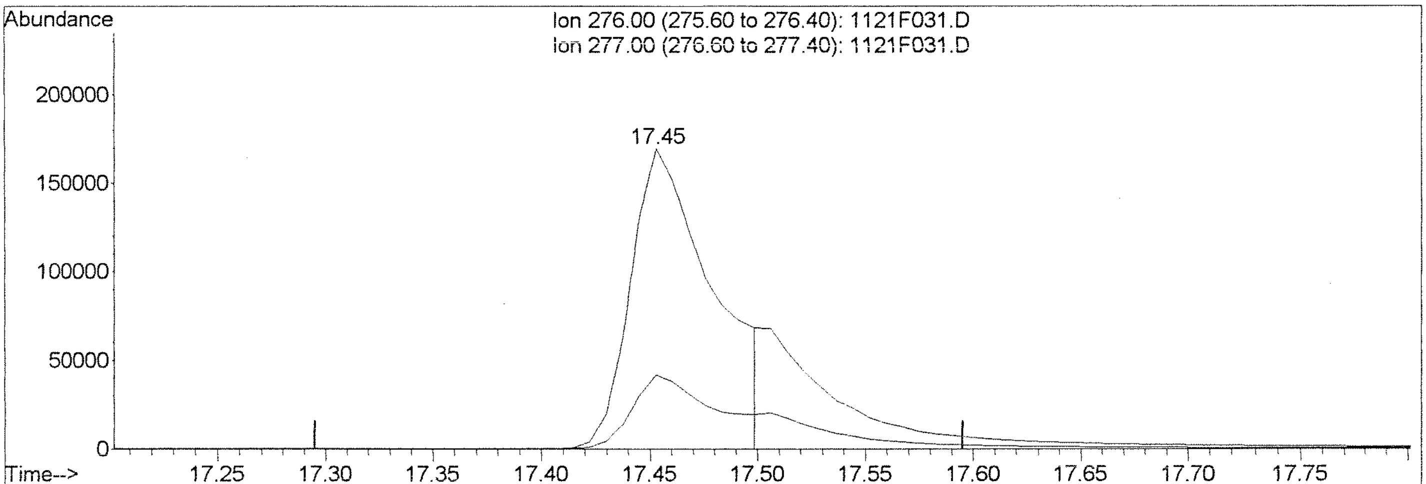
17.45min 501.55ng/ml

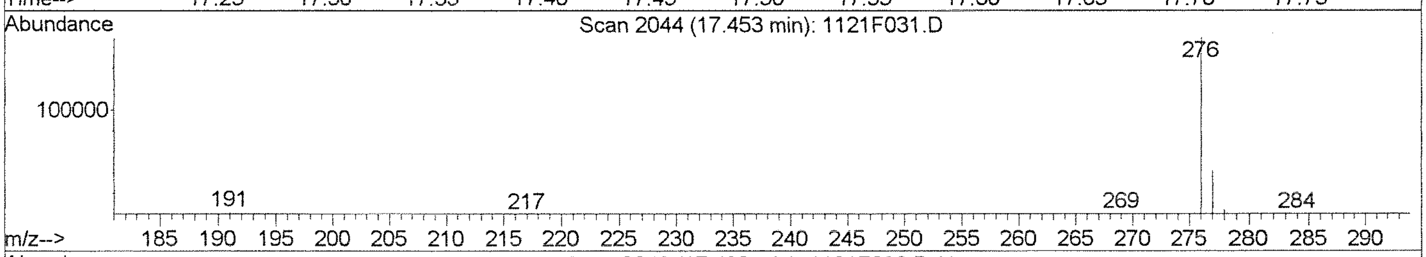
response 591304

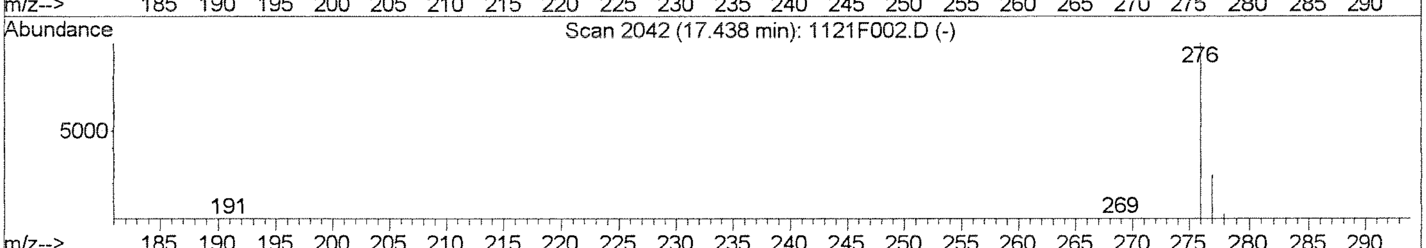
Ion	Exp%	Act%
276.00	100	100
277.00	24.70	24.44
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112108\1121F031.D Vial: 28
Acq On : 21 Nov 2008 7:21 pm Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 22 13:13 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 08:12:47 2008
Response via : Multiple Level Calibration







TIC: 1121F031.D

(55) Indeno(1,2,3-cd)pyrene (T)

17.45min 381.86ng/ml m

response 450190

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	24.62
0.00	0.00	0.00
0.00	0.00	0.00

OI
11/22/08

1121F031.D 1110ALK.M Sat Nov 22 13:13:49 2008

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/10/2008
Calibration ID: CAL7938
Analysis Lot: KWG0812624
Units: ng/ml

File ID: J:\MS11\DATA\112208\1122F006.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	390	0.01	1.22	1.17	-4	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	380	0.01	0.850	0.814	-4	NA	± 20 %	AverageRF
Acenaphthylene	400	410	0.01	2.26	2.31	3	NA	± 20 %	AverageRF
Acenaphthene	400	400	0.01	1.37	1.36	-1	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.65	1.69	2	NA	± 20 %	AverageRF
Dibenzofuran	400	390	0.01	2.06	2.03	-1	NA	± 20 %	AverageRF
Phenanthrene	400	390	0.01	1.41	1.37	-3	NA	± 20 %	AverageRF
Anthracene	400	430	0.01	1.37	1.47	8	NA	± 20 %	AverageRF
Fluoranthene	400	390	0.01	1.60	1.56	-2	NA	± 20 %	AverageRF
Pyrene	400	390	0.01	1.50	1.48	-2	NA	± 20 %	AverageRF
Benz(a)anthracene	400	400	0.01	1.36	1.37	1	NA	± 20 %	AverageRF
Chrysene	400	410	0.01	1.34	1.37	2	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	370	0.01	1.38	1.29	-7	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	400	0.01	1.33	1.32	0	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	420	0.01	1.14	1.19	4	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	440	0.01	1.06	1.17	11	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	470	0.01	1.11	1.30	17	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	450	0.01	1.21	1.37	14	NA	± 20 %	AverageRF
Fluorene-d10	400	390	0.01	1.36	1.33	-2	NA	± 20 %	AverageRF
Fluoranthene-d10	400	390	0.01	1.36	1.33	-2	NA	± 20 %	AverageRF
Terphenyl-d14	400	390	0.01	1.04	1.01	-2	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Exception Report

Data File: J:\MS11\DATA\112208\1122F006.D
Lab ID: KWG0812624-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/22/2008 10:15
Date Quantitated: 11/23/2008 08:55
Batch ID: KWG0812624
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: KW 11/24/08

Secondary Review: KB 11/24/08

Printed: 11/23/2008 12:51:50
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/23/2008

Analysis Lot:	KWG0812624	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:			
Tune Ref:	J:\MS11\DATA\112208\1122F005.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\112208\1122F006.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 10:15	**Quant Date:**	11/23/2008 08:55	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0812624-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	-0.02	136	331128	200.00	OK
2	Acenaphthene-d10	6.46	-0.02	164	178067	200.00	OK
3	Phenanthrene-d10	7.70	-0.02	188	298606	200.00	OK
4	Chrysene-d12	10.57	-0.04	240	334575	200.00	OK
5	Perylene-d12	14.56	-0.05	264	384082	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
2	Fluorene-d10	6.88			176	473529	391.29		10-128 NA	
2	2,4,6-Tribromophenol	7.12			330	90148	401.96		12-152 NA	
3	Fluoranthene-d10	8.70			212	795119	390.55		29-121 NA	
4	Terphenyl-d14	9.09			244	677280	391.01		24-141 NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.06			128	776807	385.12			
1	2-Methylnaphthalene	5.61			142	538935	383.15			
1	1-Methylnaphthalene	5.69			142	477343	379.10			
1	Biphenyl	5.98			154	631400	367.34			
1	2,6-Dimethylnaphthalene	6.11			156	464731	378.46			
2	Acenaphthylene	6.34			152	823402	410.08			
2	Acenaphthene	6.49			154	483207	396.02			
2	Dibenzofuran	6.63			168	724188	394.56			
2	2,3,5-Trimethylnaphthalene	6.79			170	431566	402.16			
2	Fluorene	6.91			166	600202	409.75			
2	Pentachlorophenol	7.56			266	198022	801.57			
3	Dibenzothiophene	7.61			184	814301	396.79			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112208\1122F006.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 10:15	**Quant Date:**	11/23/2008 08:55	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0812624-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Phenanthrene	7.72			178	818115	389.78			
3	Anthracene	7.75			178	880854	430.73			
3	Carbazole	7.91			167	764810	407.66			
3	1-Methylphenanthrene	8.21			192	627041	402.53			
3	Fluoranthene	8.71			202	932381	391.07			
4	Pyrene	8.94			202	987490	392.34			
4	Benz(a)anthracene	10.56			228	919765	402.81			
4	Chrysene	10.63			228	917418	409.08			
5	Benzo(b)fluoranthene	13.21			252	990492	373.68			
5	Benzo(k)fluoranthene	13.29			252	1014195	398.30			
5	Benzo(e)pyrene	14.14			252	927974	385.41			
5	Benzo(a)pyrene	14.34			252	910854	415.04			
5	Perylene	14.67			252	904662	419.62			
5	Indeno(1,2,3-cd)pyrene	17.42			276	901191	442.57			
5	Dibenz(a,h)anthracene	17.47			278	999143	467.49			
5	Benzo(g,h,i)perylene	17.87			276	1054438	454.53			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

```
Data File : J:\MS11\DATA\112208\1122F006.D                Vial: 2
Acq On    : 22 Nov 2008  10:15 am                     Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C         Inst    : MS11
Misc      :                                          Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 08:55:48 2008             Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title        : PAHS and ALKYLATED HOMOLOGS
Last Update  : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT
```

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.04	136	331128	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.46	164	178067	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.70	188	298606	200.00	ng/ml	0.00
37) Chrysene-d12	10.57	240	334575	200.00	ng/ml	-0.01
49) Perylene-d12	14.56	264	384082	200.00	ng/ml	-0.03
System Monitoring Compounds						
15) Fluorene-d10	6.88	176	473529	391.29	ng/ml	0.00
Spiked Amount 200.000			Recovery =	195.65%		
20) 2,4,6 Tribromophenol	7.12	330	90148	401.96	ng/ml	0.00
Spiked Amount 375.000			Recovery =	107.19%		
36) Fluoranthene-d10	8.70	212	795119	390.55	ng/ml	0.00
Spiked Amount 200.000			Recovery =	195.28%		
42) Terphenyl-d14	9.09	244	677280	391.01	ng/ml	0.00
Spiked Amount 200.000			Recovery =	195.51%		

Target Compounds	R.T.	QIon	Response	Conc	Units	Qvalue
2) Naphthalene	5.06	128	776807	385.12	ng/ml	97
3) 2-Methylnaphthalene	5.61	142	538935	383.15	ng/ml	91
4) 1-Methylnaphthalene	5.69	142	477343	379.10	ng/ml	96
5) Biphenyl	5.98	154	631400	367.34	ng/ml	99
6) 2,6-Dimethylnaphthalene	6.11	156	464731	378.46	ng/ml	99
11) Acenaphthylene	6.34	152	823402	410.08	ng/ml	97
12) Acenaphthene	6.49	154	483207	396.02	ng/ml	88
13) Dibenzofuran	6.63	168	724188	394.56	ng/ml	90
14) 2,3,5-Trimethylnaphthalene	6.79	170	431566	402.16	ng/ml	98
16) Fluorene	6.91	166	600202	409.75	ng/ml	94
21) Pentachlorophenol	7.56	266	198022	801.57	ng/ml	98
23) Dibenzothiophene	7.61	184	814301	396.79	ng/ml	94
27) Phenanthrene	7.72	178	818115	389.78	ng/ml	95
28) Anthracene	7.75	178	880854	430.73	ng/ml	100
29) Carbazole	7.91	167	764810	407.66	ng/ml	91
30) 1-Methylphenanthrene	8.21	192	627041	402.53	ng/ml	96
35) Fluoranthene	8.71	202	932381	391.07	ng/ml	88
38) Pyrene	8.94	202	987490	392.34	ng/ml	89
43) Benz(a)anthracene	10.56	228	919765	402.81	ng/ml	99
44) Chrysene	10.63	228	917418	409.08	ng/ml	100
50) Benzo(b)fluoranthene	13.21	252	990492	373.68	ng/ml	100
51) Benzo(k)fluoranthene	13.29	252	1014195	398.30	ng/ml	99
52) Benzo(e)pyrene	14.14	252	927974	385.41	ng/ml	100
53) Benzo(a)pyrene	14.34	252	910854	415.04	ng/ml	99
54) Perylene	14.67	252	904662	419.62	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112208\1122F006.D
Acq On : 22 Nov 2008 10:15 am
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 23 08:55:48 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.42	276	901191	442.57 ng/ml	99
56)	Dibenz(a,h)anthracene	17.47	278	999143	467.49 ng/ml	97
57)	Benzo(g,h,i)perylene	17.87	276	1054438	454.53 ng/ml	98

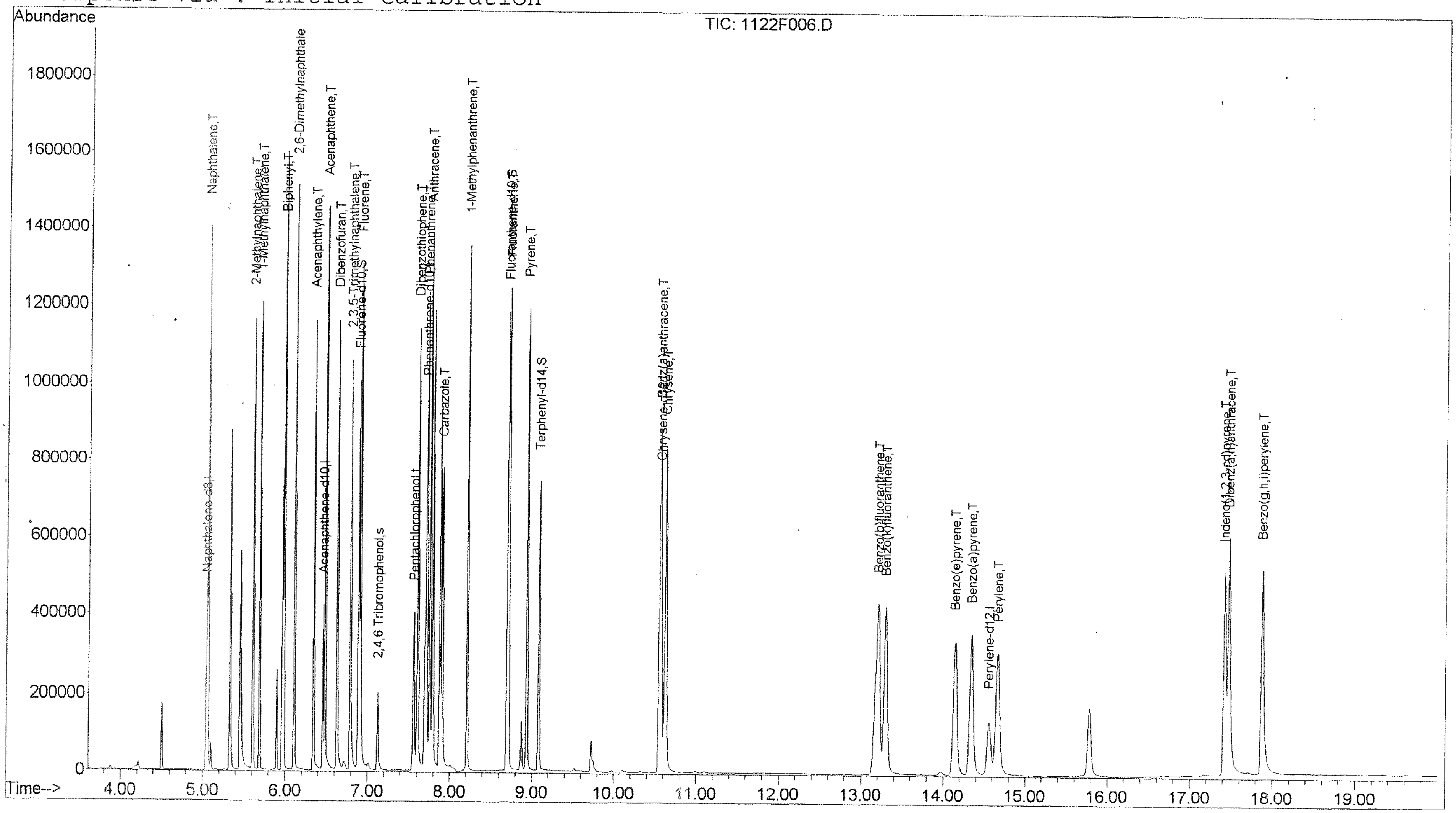
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112208\1122F006.D
Acq On : 22 Nov 2008 10:15 am
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 23 8:55 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Initial Calibration



Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/22/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/10/2008
Calibration ID: CAL7938
Analysis Lot: KWG0812625
Units: ng/ml

File ID: J:\MS11\DATA\112208\1122F035.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	380	0.01	1.22	1.15	-5	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	400	0.01	0.850	0.841	-1	NA	± 20 %	AverageRF
Acenaphthylene	400	420	0.01	2.26	2.36	5	NA	± 20 %	AverageRF
Acenaphthene	400	400	0.01	1.37	1.38	1	NA	± 20 %	AverageRF
Fluorene	400	420	0.01	1.65	1.73	5	NA	± 20 %	AverageRF
Dibenzofuran	400	400	0.01	2.06	2.06	0	NA	± 20 %	AverageRF
Phenanthrene	400	390	0.01	1.41	1.39	-1	NA	± 20 %	AverageRF
Anthracene	400	410	0.01	1.37	1.40	2	NA	± 20 %	AverageRF
Fluoranthene	400	400	0.01	1.60	1.60	0	NA	± 20 %	AverageRF
Pyrene	400	410	0.01	1.50	1.53	2	NA	± 20 %	AverageRF
Benz(a)anthracene	400	410	0.01	1.36	1.40	2	NA	± 20 %	AverageRF
Chrysene	400	420	0.01	1.34	1.39	4	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	380	0.01	1.38	1.31	-5	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	410	0.01	1.33	1.35	2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	410	0.01	1.14	1.18	3	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	410	0.01	1.06	1.10	3	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	440	0.01	1.11	1.23	10	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	430	0.01	1.21	1.29	7	NA	± 20 %	AverageRF
Fluorene-d10	400	400	0.01	1.36	1.34	-1	NA	± 20 %	AverageRF
Fluoranthene-d10	400	390	0.01	1.36	1.34	-2	NA	± 20 %	AverageRF
Terphenyl-d14	400	380	0.01	1.04	0.989	-4	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Exception Report

Data File: J:\MS11\DATA\112208\1122F035.D
Lab ID: KWG0812625-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/22/2008 23:08
Date Quantitated: 11/23/2008 11:09
Batch ID: KWG0812625
Analysis Method: 8270C SIM
MethodJoinID: MJ138

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: RW 11/24/08

Secondary Review: 11-30-08

Printed: 11/23/2008 13:27:58
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/23/2008

Analysis Lot:	KWG0812625	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:			
Tune Ref:	J:\MS11\DATA\112208\1122F034.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\112208\1122F035.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 23:08	**Quant Date:**	11/23/2008 11:09	**Vial:**	28
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0812625-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	-0.02	136	313405	200.00	OK
2	Acenaphthene-d10	6.45	-0.03	164	166936	200.00	OK
3	Phenanthrene-d10	7.69	-0.03	188	281904	200.00	OK
4	Chrysene-d12	10.57	-0.04	240	312237	200.00	OK
5	Perylene-d12	14.55	-0.06	264	354334	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
2	Fluorene-d10	6.88			176	448765	395.55		10-128 NA	
2	2,4,6-Tribromophenol	7.12			330	81604	388.13		12-152 NA	
3	Fluoranthene-d10	8.70			212	756130	393.41		29-121 NA	
4	Terphenyl-d14	9.08			244	617575	382.04		24-141 NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.06			128	722868	378.65			
1	2-Methylnaphthalene	5.61			142	527134	395.95			
1	1-Methylnaphthalene	5.69			142	448662	376.47			
1	Biphenyl	5.98			154	597114	367.04			
1	2,6-Dimethylnaphthalene	6.11			156	450148	387.32			
2	Acenaphthylene	6.34			152	788466	418.86			
2	Acenaphthene	6.48			154	460832	402.87			
2	Dibenzofuran	6.63			168	688068	399.88			
2	2,3,5-Trimethylnaphthalene	6.79			170	413720	411.24			
2	Fluorene	6.91			166	576006	419.45			
2	Pentachlorophenol	7.55			266	168775	728.73			
3	Dibenzothiophene	7.61			184	773496	399.24			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112208\1122F035.D			**Instrument:**	MS11
Acqu Date:	11/22/2008 23:08	**Quant Date:**	11/23/2008 11:09	**Vial:**	28
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0812625-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Phenanthrene	7.71			178	780929	394.11			
3	Anthracene	7.75			178	791168m	409.79			
3	Carbazole	7.90			167	678002	382.80			
3	1-Methylphenanthrene	8.20			192	601580	409.07			
3	Fluoranthene	8.70			202	901865	400.68			
4	Pyrene	8.94			202	958218	407.94			
4	Benz(a)anthracene	10.55			228	872096	409.25			
4	Chrysene	10.62			228	869640	415.52			
5	Benzo(b)fluoranthene	13.20			252	931050	380.74			
5	Benzo(k)fluoranthene	13.29			252	957873	407.76			
5	Benzo(e)pyrene	14.14			252	871301	392.25			
5	Benzo(a)pyrene	14.33			252	833745	411.80			
5	Perylene	14.66			252	843400	424.05			
5	Indeno(1,2,3-cd)pyrene	17.42			276	777328	413.79			
5	Dibenz(a,h)anthracene	17.47			278	870449	441.47			
5	Benzo(g,h,i)perylene	17.87			276	912620	426.42			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112208\1122F035.D Vial: 28
Acq On : 22 Nov 2008 11:08 pm Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 08:57:07 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.04	136	313405	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.45	164	166936	200.00	ng/ml	-0.01
22) Phenanthrene-d10	7.69	188	281904	200.00	ng/ml	0.00
37) Chrysene-d12	10.57	240	312237	200.00	ng/ml	-0.02
49) Perylene-d12	14.55	264	354334	200.00	ng/ml	-0.04
System Monitoring Compounds						
15) Fluorene-d10	6.88	176	448765	395.55	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	197.78%	
20) 2,4,6 Tribromophenol	7.12	330	81604	388.13	ng/ml	0.00
Spiked Amount 375.000			Recovery	=	103.50%	
36) Fluoranthene-d10	8.70	212	756130	393.41	ng/ml	0.00
Spiked Amount 200.000			Recovery	=	196.71%	
42) Terphenyl-d14	9.08	244	617575	382.04	ng/ml	-0.02
Spiked Amount 200.000			Recovery	=	191.02%	
Target Compounds						Qvalue
2) Naphthalene	5.06	128	722868	378.65	ng/ml	100
3) 2-Methylnaphthalene	5.61	142	527134	395.95	ng/ml	97
4) 1-Methylnaphthalene	5.69	142	448662	376.47	ng/ml	89
5) Biphenyl	5.98	154	597114	367.04	ng/ml	97
6) 2,6-Dimethylnaphthalene	6.11	156	450148	387.32	ng/ml	98
11) Acenaphthylene	6.34	152	788466	418.86	ng/ml	98
12) Acenaphthene	6.48	154	460832	402.87	ng/ml	91
13) Dibenzofuran	6.63	168	688068	399.88	ng/ml	70
14) 2,3,5-Trimethylnaphthalene	6.79	170	413720	411.24	ng/ml#	57
16) Fluorene	6.91	166	576006	419.45	ng/ml	97
21) Pentachlorophenol	7.55	266	168775	728.73	ng/ml	93
23) Dibenzothiophene	7.61	184	773496	399.24	ng/ml	100
27) Phenanthrene	7.71	178	780929	394.11	ng/ml	99
28) Anthracene	7.75	178	791168m	409.79	ng/ml	
29) Carbazole	7.90	167	678002	382.80	ng/ml	96
30) 1-Methylphenanthrene	8.20	192	601580	409.07	ng/ml	99
35) Fluoranthene	8.70	202	901865	400.68	ng/ml	82
38) Pyrene	8.94	202	958218	407.94	ng/ml	93
43) Benz(a)anthracene	10.55	228	872096	409.25	ng/ml	99
44) Chrysene	10.62	228	869640	415.52	ng/ml	100
50) Benzo(b)fluoranthene	13.20	252	931050	380.74	ng/ml	100
51) Benzo(k)fluoranthene	13.29	252	957873	407.76	ng/ml	99
52) Benzo(e)pyrene	14.14	252	871301	392.25	ng/ml	100
53) Benzo(a)pyrene	14.33	252	833745	411.80	ng/ml	99
54) Perylene	14.66	252	843400	424.05	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112208\1122F035.D Vial: 28
Acq On : 22 Nov 2008 11:08 pm Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 08:57:07 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sat Nov 22 13:13:56 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

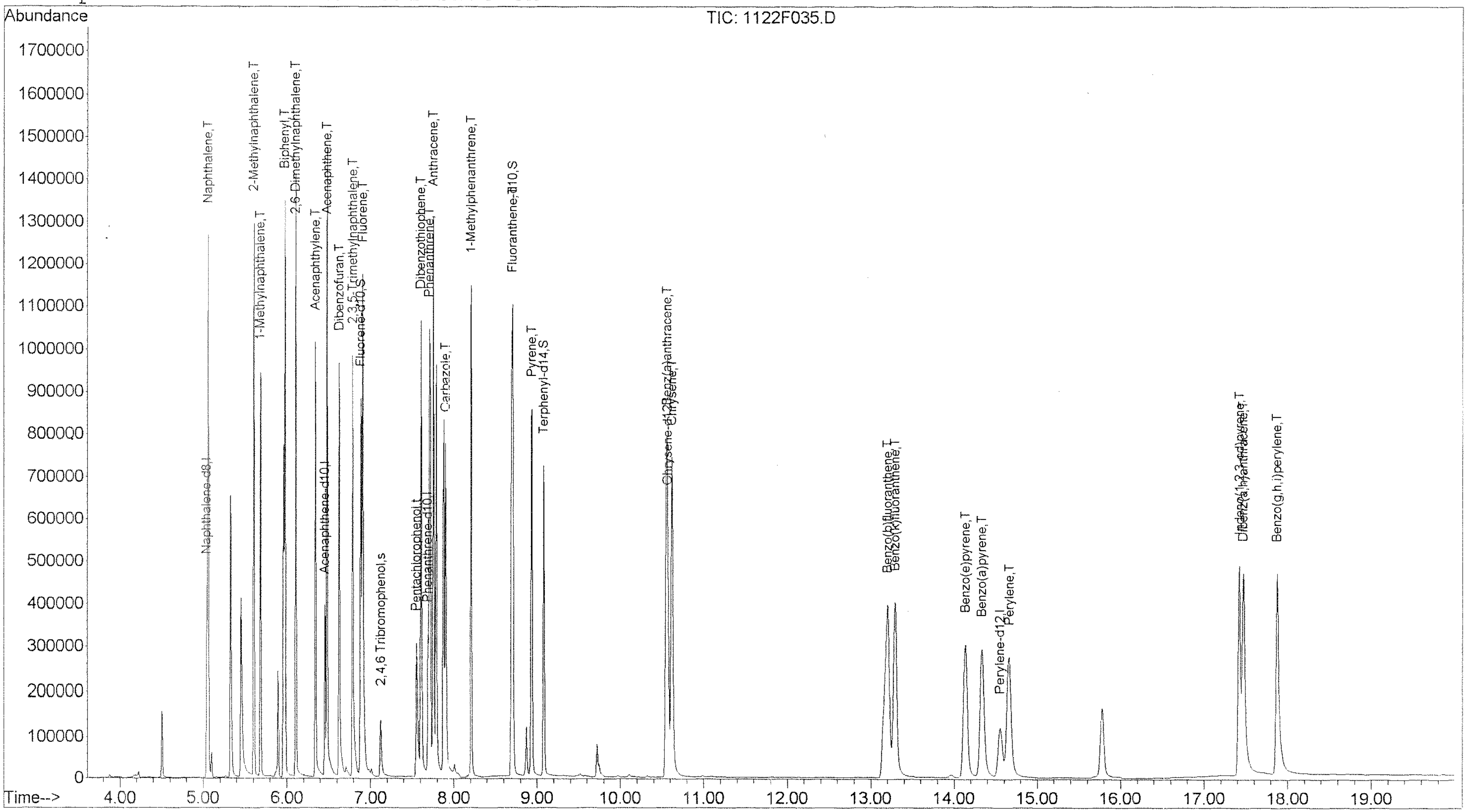
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.42	276	777328	413.79	ng/ml	99
56)	Dibenz(a,h)anthracene	17.47	278	870449	441.47	ng/ml	92
57)	Benzo(g,h,i)perylene	17.87	276	912620	426.42	ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

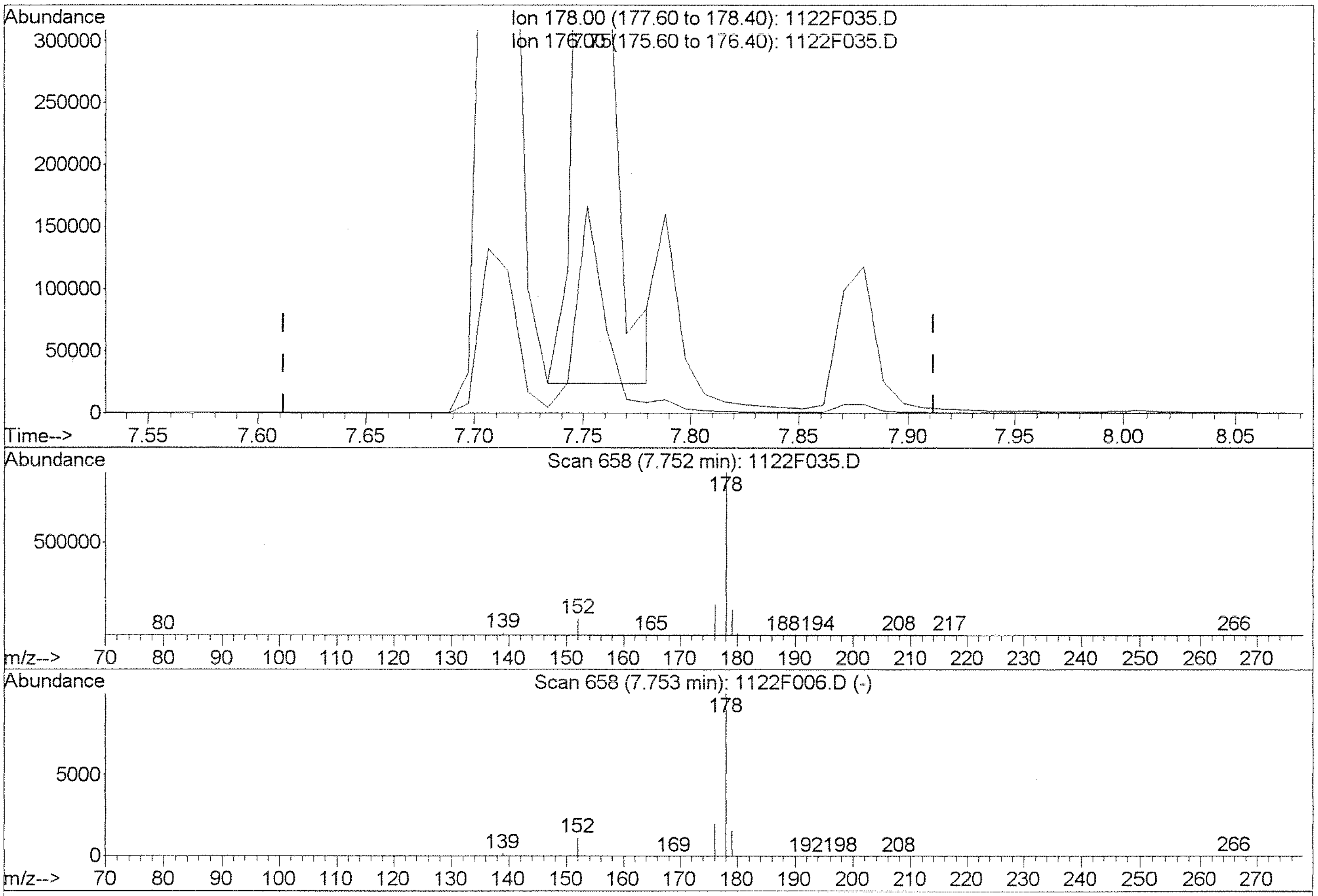
```
Data File : J:\MS11\DATA\112208\1122F035.D                 Vial: 28
Acq On    : 22 Nov 2008  11:08 pm                      Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C         Inst    : MS11
Misc      :                                            Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:09 2008                  Quant Results File: 1110ALK.RES

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sun Nov 23 11:10:16 2008
Response via   : Initial Calibration
```



```
Data File : J:\MS11\DATA\112208\1122F035.D                    Vial: 28
Acq On    : 22 Nov 2008   11:08 pm                        Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C            Inst     : MS11
Misc      :                                               Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 23  8:57 2008                   Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sun Nov 23 10:13:22 2008
Response via   : Multiple Level Calibration
```



TIC: 1122F035.D

(28) Anthracene (T)

7.75min 399.67ng/ml

response 771624

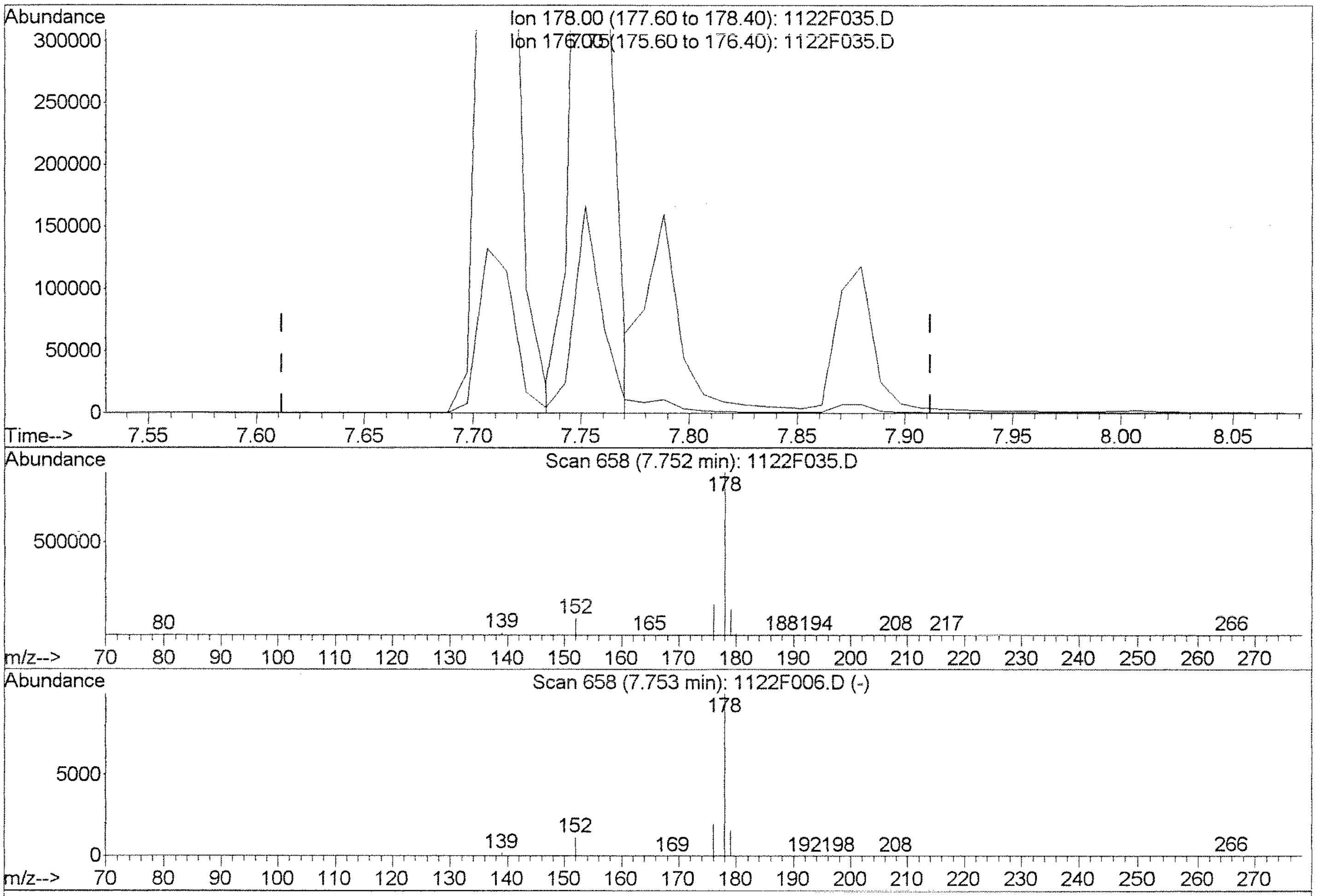
Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.06
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112208\1122F035.D
Acq On : 22 Nov 2008 11:08 pm
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 23 11:09 2008

Vial: 28
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



TIC: 1122F035.D

(28) Anthracene (T)

7.75min 409.79ng/ml m

response 791168

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.05
0.00	0.00	0.00
0.00	0.00	0.00

IC
[illegible] 11/24/08 11:30

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	CH2M Hill	**Service Request:**	K0810639
Project:	Northwest Pipe Co Sediment/358932.PH.OF	**Date Analyzed:**	11/23/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type:	Internal Standard	**Calibration Date:**	11/10/2008
Analysis Method:	8270C SIM	**Calibration ID:**	CAL7938
		Analysis Lot:	KWG0812642
		Units:	ng/ml

File ID: J:\MS11\DATA\112308\1123F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	390	0.01	1.22	1.18	-3	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	390	0.01	0.850	0.829	-2	NA	± 20 %	AverageRF
Acenaphthylene	400	420	0.01	2.26	2.36	4	NA	± 20 %	AverageRF
Acenaphthene	400	400	0.01	1.37	1.37	0	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.65	1.70	3	NA	± 20 %	AverageRF
Dibenzofuran	400	400	0.01	2.06	2.05	-1	NA	± 20 %	AverageRF
Phenanthrene	400	400	0.01	1.41	1.41	0	NA	± 20 %	AverageRF
Anthracene	400	430	0.01	1.37	1.49	9	NA	± 20 %	AverageRF
Fluoranthene	400	410	0.01	1.60	1.63	2	NA	± 20 %	AverageRF
Pyrene	400	380	0.01	1.50	1.42	-6	NA	± 20 %	AverageRF
Benz(a)anthracene	400	400	0.01	1.36	1.37	0	NA	± 20 %	AverageRF
Chrysene	400	400	0.01	1.34	1.34	0	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	380	0.01	1.38	1.31	-5	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	390	0.01	1.33	1.30	-2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	420	0.01	1.14	1.19	4	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	470	0.01	1.06	1.24	17	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	480	0.01	1.11	1.33	20	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	470	0.01	1.21	1.42	17	NA	± 20 %	AverageRF
Fluorene-d10	400	400	0.01	1.36	1.36	0	NA	± 20 %	AverageRF
Fluoranthene-d10	400	410	0.01	1.36	1.38	1	NA	± 20 %	AverageRF
Terphenyl-d14	400	390	0.01	1.04	1.01	-3	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Exception Report

Data File:	J:\MS11\DATA\112308\1123F002.D	**Date Acquired:**	11/23/2008 11:43
Lab ID:	KWG0812642-2	**Date Quantitated:**	11/24/2008 06:43
RunType:	CCV	**Batch ID:**	KWG0812642
Matrix:	WATER	**Analysis Method:**	8270C SIM
		MethodJoinID:	MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: RW 11/24/08

Secondary Review: 11-25-8

Printed: 11/24/2008 10:58:07

u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/24/2008

Analysis Lot:	KWG0812642	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:			
Tune Ref:	J:\MS11\DATA\112308\1123F001.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\112308\1123F002.D			**Instrument:**	MS11
Acqu Date:	11/23/2008 11:43	**Quant Date:**	11/24/2008 06:43	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0812642-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	-0.02	136	288327	200.00	OK
2	Acenaphthene-d10	6.45	-0.03	164	154376	200.00	OK
3	Phenanthrene-d10	7.69	-0.03	188	260362	200.00	OK
4	Chrysene-d12	10.56	-0.05	240	318561	200.00	OK
5	Perylene-d12	14.53	-0.08	264	360959	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.88			176	420233	400.54		10-128	NA	
2	2,4,6-Tribromophenol	7.11			330	87241	448.70		12-152	NA	
3	Fluoranthene-d10	8.69			212	720101	405.66		29-121	NA	
4	Terphenyl-d14	9.07			244	642744	389.72		24-141	NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.05			128	678972	386.59			
1	2-Methylnaphthalene	5.60			142	478113	390.37			
1	1-Methylnaphthalene	5.68			142	427133	389.58			
1	Biphenyl	5.97			154	563675	376.62			
1	2,6-Dimethylnaphthalene	6.11			156	412810	386.09			
2	Acenaphthylene	6.33			152	727237	417.77			
2	Acenaphthene	6.47			154	424084	400.91			
2	Dibenzofuran	6.62			168	632814	397.69			
2	2,3,5-Trimethylnaphthalene	6.78			170	372873m	400.79			
2	Fluorene	6.90			166	524243	412.82			
2	Pentachlorophenol	7.54			266	216328	1,010			
3	Dibenzothiophene	7.60			184	735879	411.25			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112308\1123F002.D
Acqu Date:	11/23/2008 11:43
Quant Date:	11/24/2008 06:43
Run Type:	CCV
Lab ID:	KWG0812642-2
Instrument:	MS11
Vial:	2
Dilution:	1.0
Soln Conc. Units:	ng/ml

Target Compounds **Final Conc. Units:**

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Phenanthrene	7.71			178	735018	401.63			
3	Anthracene	7.74			178	774723	434.48			
3	Carbazole	7.89			167	684515	418.45			
3	1-Methylphenanthrene	8.20			192	563509	414.88			
3	Fluoranthene	8.71			202	846585	407.24			
4	Pyrene	8.93			202	902204	376.47			
4	Benz(a)anthracene	10.54			228	870888	400.57			
4	Chrysene	10.61			228	852010	399.02			
5	Benzo(b)fluoranthene	13.18			252	947196	380.24			
5	Benzo(k)fluoranthene	13.27			252	941157	393.29			
5	Benzo(e)pyrene	14.12			252	867248	383.26			
5	Benzo(a)pyrene	14.31			252	859444	416.70			
5	Perylene	14.63			252	847597	418.34			
5	Indeno(1,2,3-cd)pyrene	17.41			276	892083**m**	466.17			
5	Dibenz(a,h)anthracene	17.45			278	960383**m**	478.14			
5	Benzo(g,h,i)perylene	17.86			276	1023150	469.29			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112308\1123F002.D Vial: 2
Acq On : 23 Nov 2008 11:43 am Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:42:33 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.04	136	288327	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.45	164	154376	200.00	ng/ml	-0.02
22) Phenanthrene-d10	7.69	188	260362	200.00	ng/ml	0.00
37) Chrysene-d12	10.56	240	318561	200.00	ng/ml	-0.03
49) Perylene-d12	14.53	264	360959	200.00	ng/ml	-0.06
System Monitoring Compounds						
15) Fluorene-d10	6.88	176	420233	400.54	ng/ml	-0.01
Spiked Amount 200.000			Recovery =	200.27%		
20) 2,4,6 Tribromophenol	7.11	330	87241	448.70	ng/ml	-0.01
Spiked Amount 375.000			Recovery =	119.65%		
36) Fluoranthene-d10	8.69	212	720101	405.66	ng/ml	-0.02
Spiked Amount 200.000			Recovery =	202.83%		
42) Terphenyl-d14	9.07	244	642744	389.72	ng/ml	-0.02
Spiked Amount 200.000			Recovery =	194.86%		
Target Compounds						Qvalue
2) Naphthalene	5.05	128	678972	386.59	ng/ml	99
3) 2-Methylnaphthalene	5.60	142	478113	390.37	ng/ml	93
4) 1-Methylnaphthalene	5.68	142	427133	389.58	ng/ml	95
5) Biphenyl	5.97	154	563675	376.62	ng/ml	97
6) 2,6-Dimethylnaphthalene	6.11	156	412810	386.09	ng/ml	98
11) Acenaphthylene	6.33	152	727237	417.77	ng/ml	99
12) Acenaphthene	6.47	154	424084	400.91	ng/ml	92
13) Dibenzofuran	6.62	168	632814	397.69	ng/ml	68
14) 2,3,5-Trimethylnaphthalene	6.78	170	372873m	400.79	ng/ml	
16) Fluorene	6.90	166	524243	412.82	ng/ml	96
21) Pentachlorophenol	7.54	266	216328	1010.05	ng/ml	93
23) Dibenzothiophene	7.60	184	735879	411.25	ng/ml	93
27) Phenanthrene	7.71	178	735018	401.63	ng/ml	96
28) Anthracene	7.74	178	774723	434.48	ng/ml	98
29) Carbazole	7.89	167	684515	418.45	ng/ml	97
30) 1-Methylphenanthrene	8.20	192	563509	414.88	ng/ml	94
35) Fluoranthene	8.71	202	846585	407.24	ng/ml	93
38) Pyrene	8.93	202	902204	376.47	ng/ml	95
43) Benz(a)anthracene	10.54	228	870888	400.57	ng/ml	100
44) Chrysene	10.61	228	852010	399.02	ng/ml	100
50) Benzo(b)fluoranthene	13.18	252	947196	380.24	ng/ml	100
51) Benzo(k)fluoranthene	13.27	252	941157	393.29	ng/ml	98
52) Benzo(e)pyrene	14.12	252	867248	383.26	ng/ml	100
53) Benzo(a)pyrene	14.31	252	859444	416.70	ng/ml	99
54) Perylene	14.63	252	847597	418.34	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112308\1123F002.D Vial: 2
Acq On : 23 Nov 2008 11:43 am Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 06:42:33 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

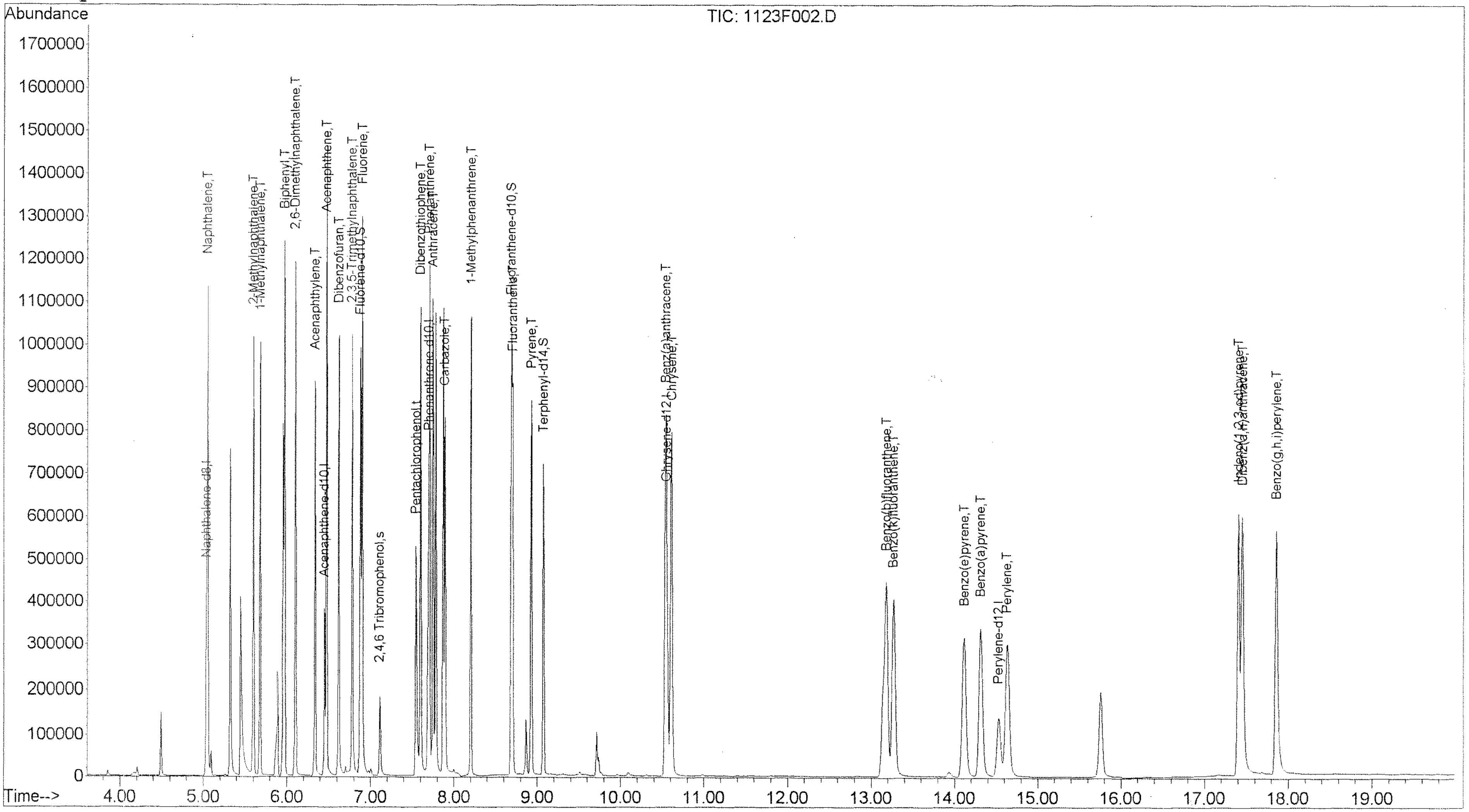
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.41	276	892083m	466.17 ng/ml	
56)	Dibenz(a,h)anthracene	17.45	278	960383m	478.14 ng/ml	
57)	Benzo(g,h,i)perylene	17.86	276	1023150	469.29 ng/ml	98

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

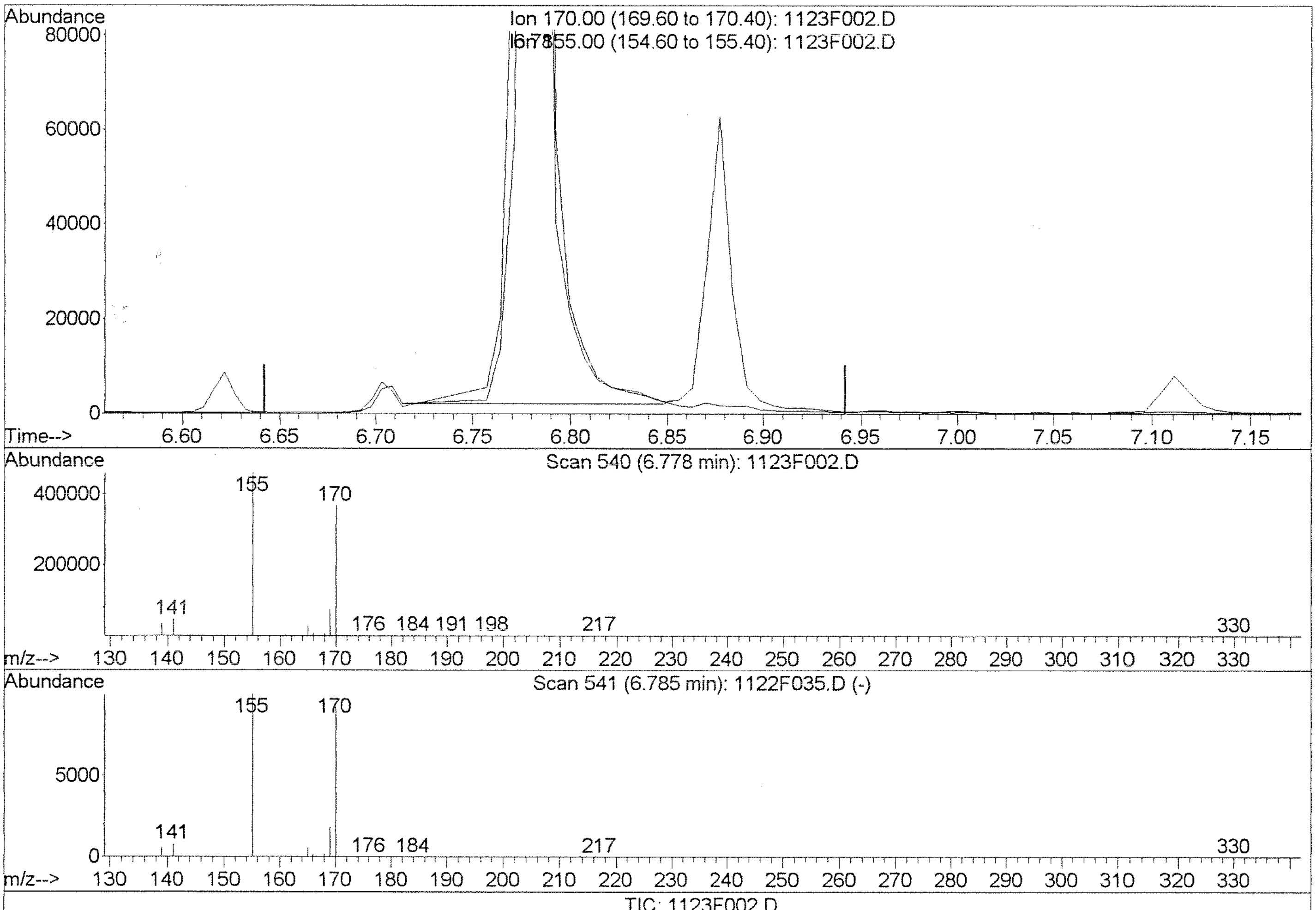
```
Data File : J:\MS11\DATA\112308\1123F002.D          Vial: 2
Acq On    : 23 Nov 2008  11:43 am               Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C  Inst     : MS11
Misc      :                                     Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24  6:43 2008          Quant Results File: 1110ALK.RES

Method       : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title        : PAHS and ALKYLATED HOMOLOGS
Last Update  : Mon Nov 24 06:43:58 2008
Response via : Initial Calibration
```



```
Data File : J:\MS11\DATA\112308\1123F002.D                  Vial: 2
Acq On    : 23 Nov 2008  11:43 am                       Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C          Inst    : MS11
Misc      :                                             Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24  6:42 2008                 Quant Results File: temp.res

Method       : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title        : PAHS and ALKYLATED HOMOLOGS
Last Update  : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration
```



(14) 2,3,5-Trimethylnaphthalene (T)

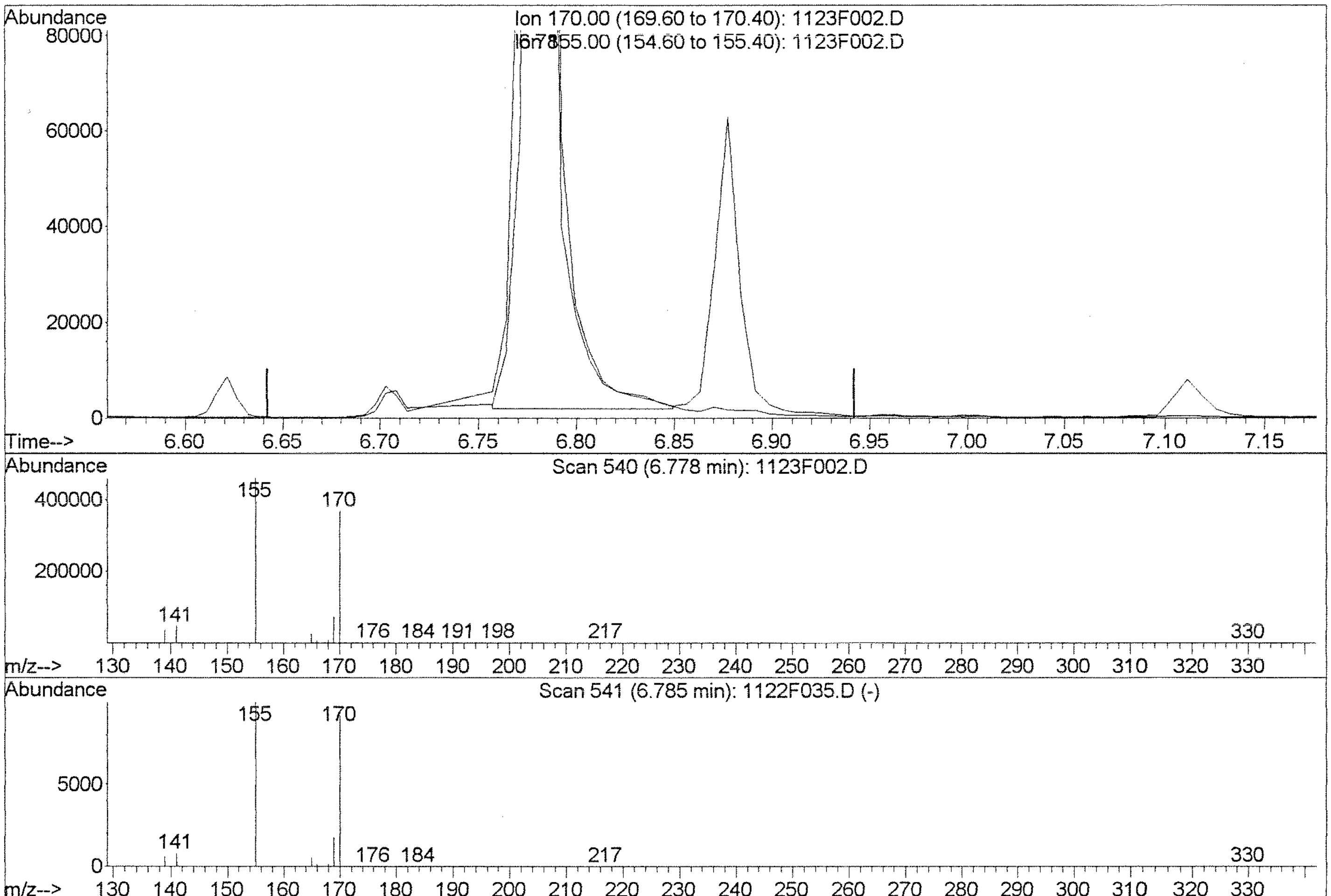
6.78min 546.83ng/ml

response 508740

Ion	Exp%	Act%
170.00	100	100
155.00	72.90	125.49#
0.00	0.00	0.00
0.00	0.00	0.00

```
Data File : J:\MS11\DATA\112308\1123F002.D                Vial: 2
Acq On    : 23 Nov 2008  11:43 am                     Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C        Inst    : MS11
Misc      :                                           Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24  6:42 2008                  Quant Results File: temp.res

Method         : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title          : PAHS and ALKYLATED HOMOLOGS
Last Update    : Sun Nov 23 10:13:22 2008
Response via   : Multiple Level Calibration
```



TIC: 1123F002.D

(14) 2,3,5-Trimethylnaphthalene (T)

6.78min 400.79ng/ml m

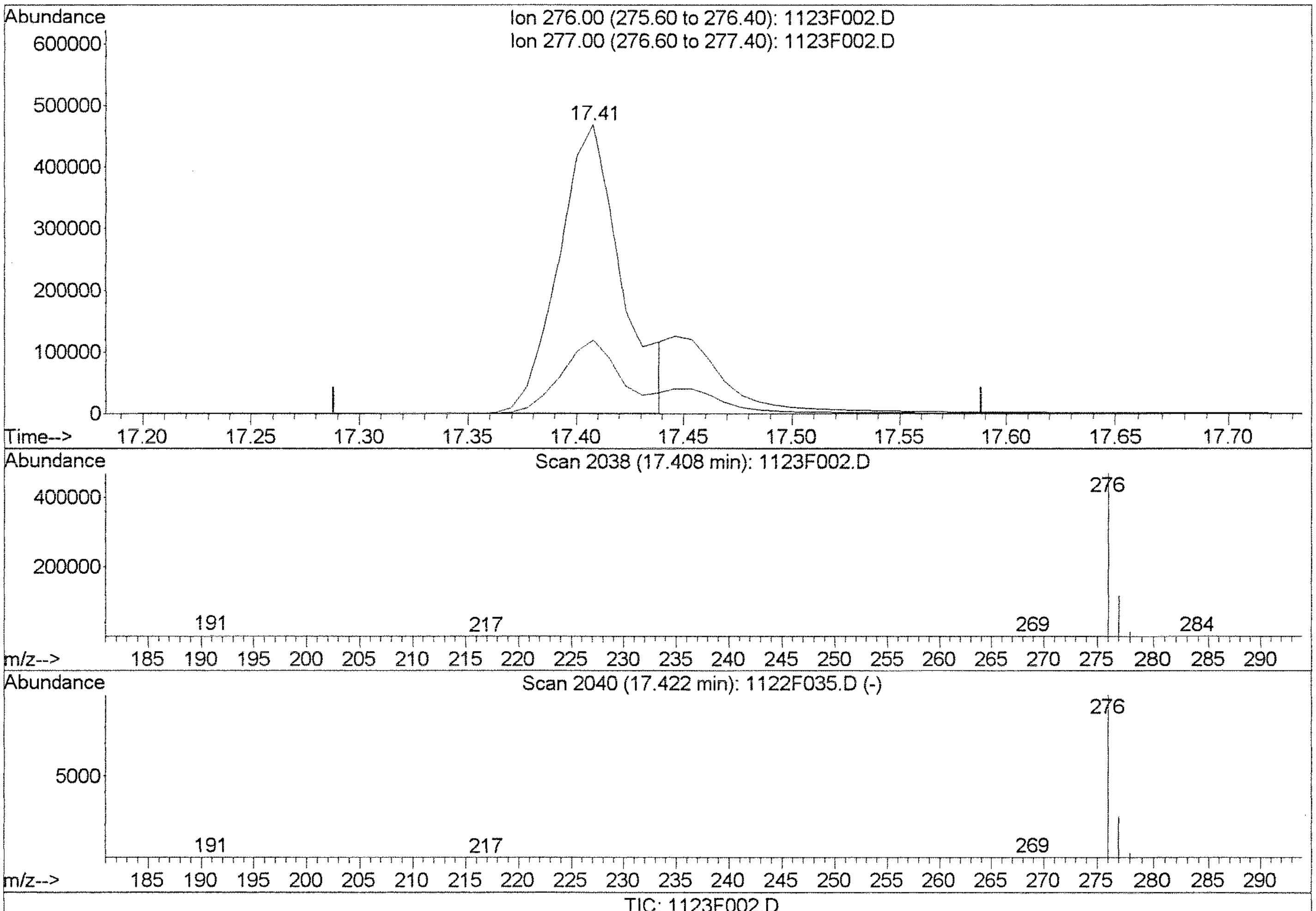
response 372873

Ion	Exp%	Act%
170.00	100	100
155.00	72.90	125.15#
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/24/08

```
Data File : J:\MS11\DATA\112308\1123F002.D                  Vial: 2
Acq On    : 23 Nov 2008   11:43 am                       Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C           Inst     : MS11
Misc      :                                              Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24   6:42 2008              Quant Results File: temp.res

Method       : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title        : PAHS and ALKYLATED HOMOLOGS
Last Update  : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration
```



(55) Indeno(1,2,3-cd)pyrene (T)

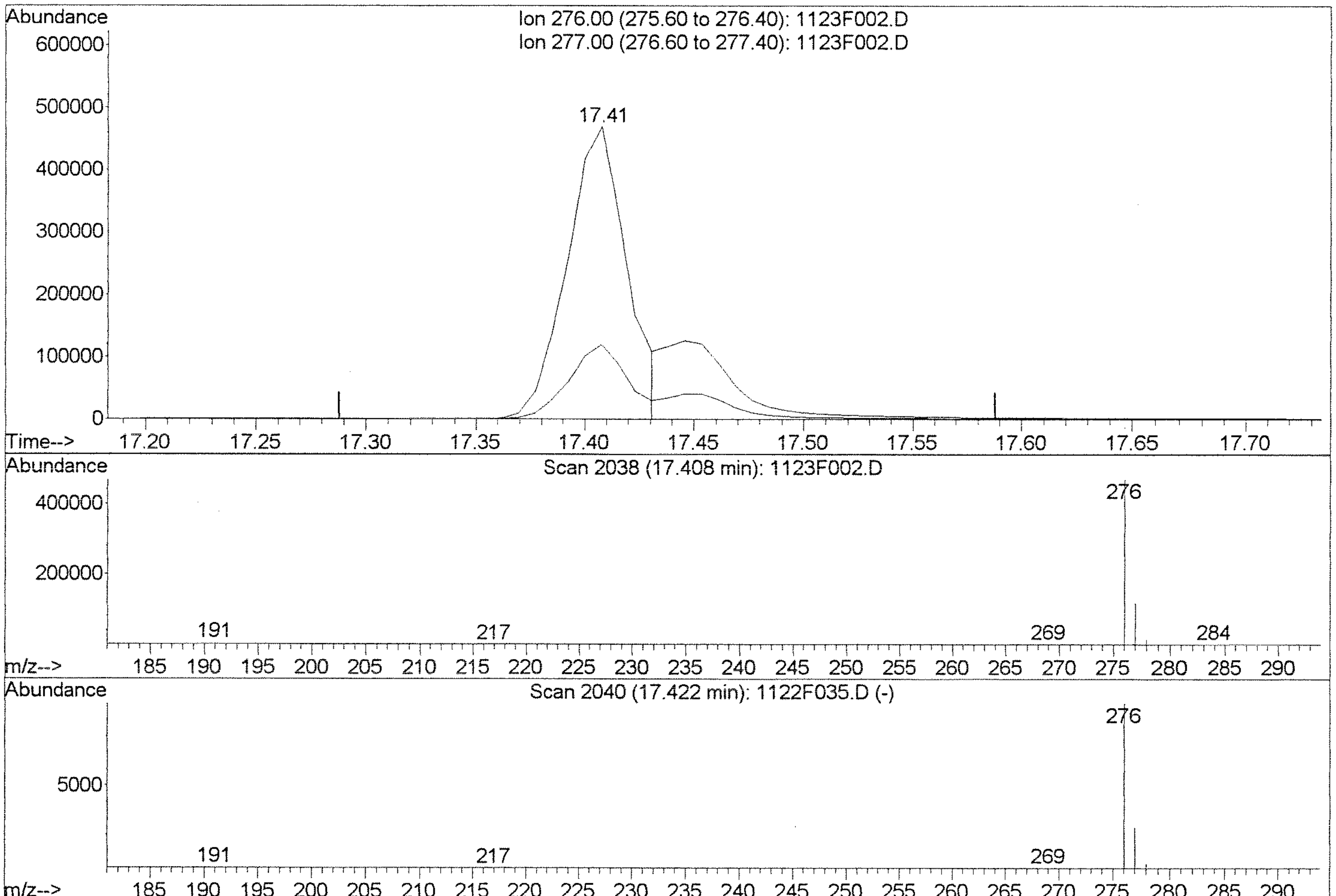
17.41min 492.79ng/ml

response 943031

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	25.39
0.00	0.00	0.00
0.00	0.00	0.00

```
Data File : J:\MS11\DATA\112308\1123F002.D                  Vial: 2
Acq On    : 23 Nov 2008  11:43 am                       Operator: LWeiskopf
Sample    : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C          Inst    : MS11
Misc      :                                             Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24  6:43 2008              Quant Results File: temp.res

Method          : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title           : PAHS and ALKYLATED HOMOLOGS
Last Update     : Sun Nov 23 10:13:22 2008
Response via    : Multiple Level Calibration
```



TIC: 1123F002.D

(55) Indeno(1,2,3-cd)pyrene (T)

17.41min 466.17ng/ml m

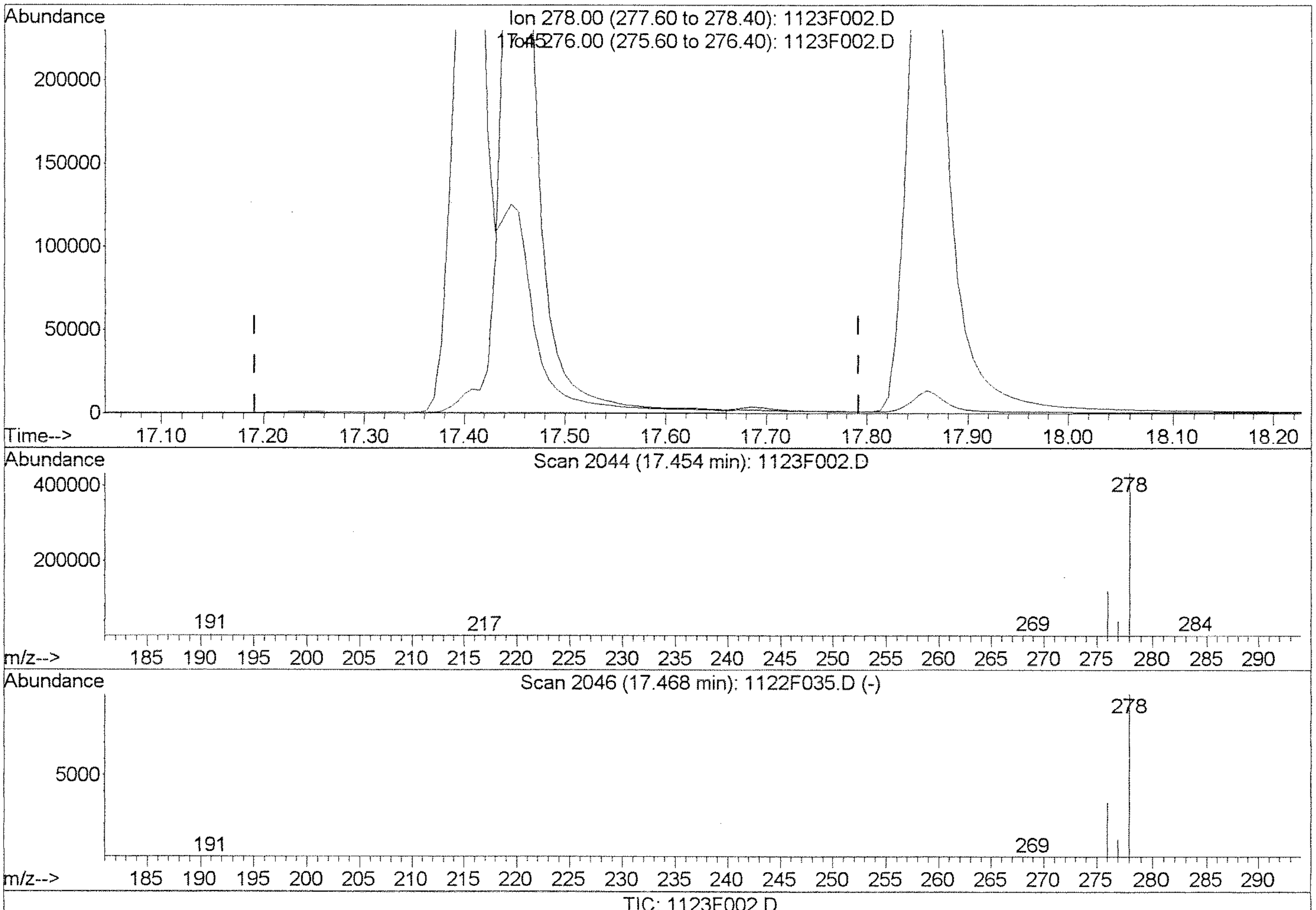
response 892083

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	25.47
0.00	0.00	0.00
0.00	0.00	0.00

OI RW 11/24/08

Data File : J:\MS11\DATA\112308\1123F002.D Vial: 2
Acq On : 23 Nov 2008 11:43 am Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:43 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration



(56) Dibenz(a,h)anthracene (T)

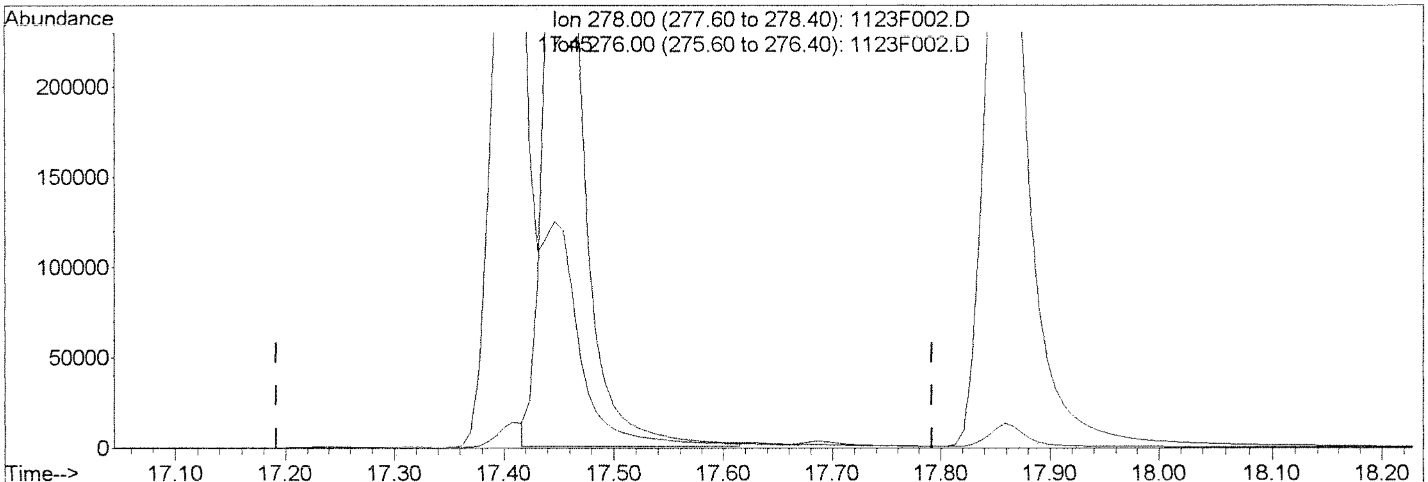
17.45min 496.15ng/ml

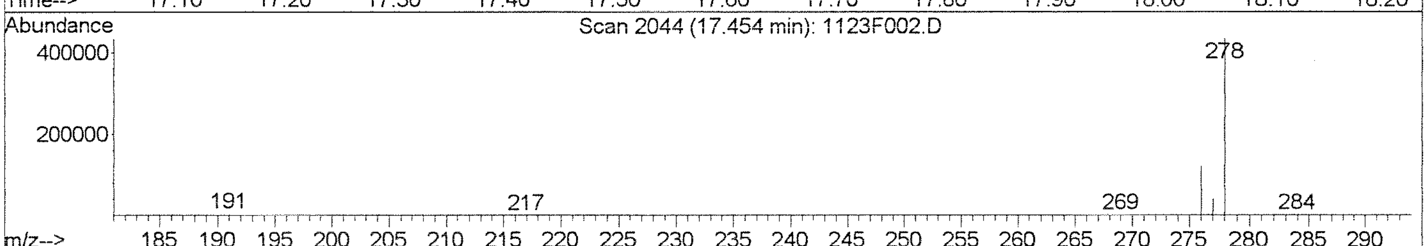
response 996548

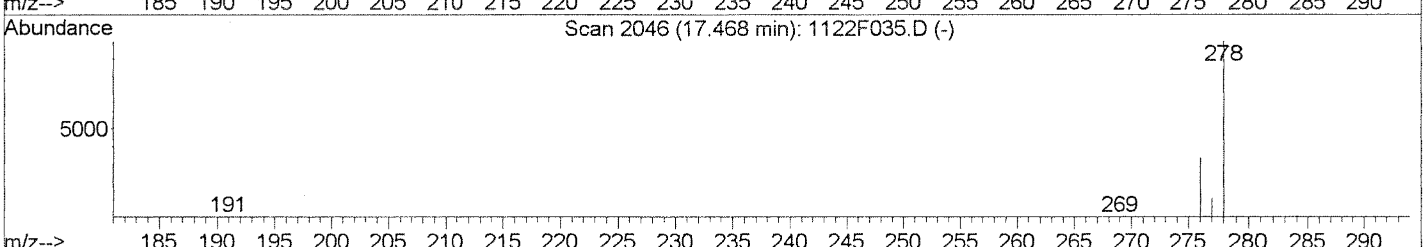
Ion	Exp%	Act%
278.00	100	100
276.00	29.70	27.68
0.00	0.00	0.00
0.00	0.00	0.00

Data File : J:\MS11\DATA\112308\1123F002.D Vial: 2
Acq On : 23 Nov 2008 11:43 am Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-55C Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 6:43 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Sun Nov 23 10:13:22 2008
Response via : Multiple Level Calibration







TIC: 1123F002.D

(56) Dibenz(a,h)anthracene (T)

17.45min 478.14ng/ml m

response 960383

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	27.78
0.00	0.00	0.00
0.00	0.00	0.00

OI
Cl 11/24/18

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: CH2M Hill
Project: Northwest Pipe Co Sediment/358932.PH.OF

Service Request: K0810639
Date Analyzed: 11/24/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 11/10/2008
Calibration ID: CAL7938
Analysis Lot: KWG0812654
Units: ng/ml

File ID: J:\MS11\DATA\112408\1124F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	390	0.01	1.22	1.19	-3	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	390	0.01	0.850	0.831	-2	NA	± 20 %	AverageRF
Acenaphthylene	400	410	0.01	2.26	2.32	3	NA	± 20 %	AverageRF
Acenaphthene	400	390	0.01	1.37	1.35	-1	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.65	1.69	3	NA	± 20 %	AverageRF
Dibenzofuran	400	400	0.01	2.06	2.05	-1	NA	± 20 %	AverageRF
Phenanthrene	400	410	0.01	1.41	1.46	4	NA	± 20 %	AverageRF
Anthracene	400	420	0.01	1.37	1.45	6	NA	± 20 %	AverageRF
Fluoranthene	400	410	0.01	1.60	1.66	4	NA	± 20 %	AverageRF
Pyrene	400	390	0.01	1.50	1.45	-3	NA	± 20 %	AverageRF
Benz(a)anthracene	400	400	0.01	1.36	1.37	0	NA	± 20 %	AverageRF
Chrysene	400	410	0.01	1.34	1.36	1	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	390	0.01	1.38	1.34	-3	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	390	0.01	1.33	1.31	-1	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	420	0.01	1.14	1.21	6	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	450	0.01	1.06	1.19	12	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	450	0.01	1.11	1.26	13	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	450	0.01	1.21	1.35	12	NA	± 20 %	AverageRF
Fluorene-d10	400	390	0.01	1.36	1.33	-2	NA	± 20 %	AverageRF
Fluoranthene-d10	400	410	0.01	1.36	1.40	3	NA	± 20 %	AverageRF
Terphenyl-d14	400	390	0.01	1.04	1.01	-3	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Exception Report

Data File:	J:\MS11\DATA\112408\1124F002.D	**Date Acquired:**	11/24/2008 07:00
Lab ID:	KWG0812654-2	**Date Quantitated:**	11/24/2008 12:55
RunType:	CCV	**Batch ID:**	KWG0812654
Matrix:	WATER	**Analysis Method:**	8270C SIM
		MethodJoinID:	MJ253

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: RW 11/24/08

Secondary Review: MB 11-24-08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/24/2008

Analysis Lot:	KWG0812654	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\1110ALK.M	**Calibration ID:**	CAL7938
Title:			
Tune Ref:	J:\MS11\DATA\112408\1124F001.D	**Method ID:**	MJ253
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\112408\1124F002.D			**Instrument:**	MS11
Acqu Date:	11/24/2008 07:00	**Quant Date:**	11/24/2008 12:55	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0812654-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	5.04	-0.02	136	299506	200.00	OK
2	Acenaphthene-d10	6.45	-0.03	164	166804	200.00	OK
3	Phenanthrene-d10	7.70	-0.02	188	276041	200.00	OK
4	Chrysene-d12	10.58	-0.03	240	330482	200.00	OK
5	Perylene-d12	14.59	-0.02	264	369666	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
2	Fluorene-d10	6.88			176	442401	390.25		10-128 NA	
3	Fluoranthene-d10	8.70			212	772314	410.36		29-121 NA	
4	Terphenyl-d14	9.09			244	667055	389.87		24-141 NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	5.05			128	710596	389.49			
1	2-Methylnaphthalene	5.60			142	497921	391.37			
1	1-Methylnaphthalene	5.68			142	443108	389.06			
1	Biphenyl	5.98			154	592440	381.07			
1	2,6-Dimethylnaphthalene	6.11			156	432867	389.73			
2	Acenaphthylene	6.34			152	772312	410.61			
2	Acenaphthene	6.48			154	450703	394.33			
2	Dibenzofuran	6.63			168	683702	397.65			
2	2,3,5-Trimethylnaphthalene	6.79			170	410931m	408.79			
2	Fluorene	6.91			166	564575	411.45			
3	Dibenzothiophene	7.61			184	782618	412.52			
3	Phenanthrene	7.72			178	804564	414.66			
3	Anthracene	7.75			178	799001	422.64			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\112408\1124F002.D			**Instrument:**	MS11
Acqu Date:	11/24/2008 07:00	**Quant Date:**	11/24/2008 12:55	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0812654-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Carbazole	7.91			167	731482	421.76			
3	1-Methylphenanthrene	8.21			192	599719	416.47			
3	Fluoranthene	8.71			202	914650	414.99			
4	Pyrene	8.94			202	960059	386.16			
4	Benz(a)anthracene	10.56			228	904819	401.17			
4	Chrysene	10.63			228	899188	405.92			
5	Benzo(b)fluoranthene	13.23			252	991784	388.76			
5	Benzo(k)fluoranthene	13.32			252	967372	394.73			
5	Benzo(e)pyrene	14.16			252	907880	391.77			
5	Benzo(a)pyrene	14.36			252	892504	422.54			
5	Perylene	14.69			252	882169	425.14			
5	Indeno(1,2,3-cd)pyrene	17.43			276	880329	449.19			
5	Dibenz(a,h)anthracene	17.48			278	928158**m**	451.22			
5	Benzo(g,h,i)perylene	17.89			276	998953	447.40			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS11\DATA\112408\1124F002.D Vial: 2
Acq On : 24 Nov 2008 7:00 am Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-58E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 12:54:46 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 09:25:18 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	5.04	136	299506	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.45	164	166804	200.00	ng/ml	-0.01
22) Phenanthrene-d10	7.70	188	276041	200.00	ng/ml	0.00
37) Chrysene-d12	10.58	240	330482	200.00	ng/ml	0.00
49) Perylene-d12	14.59	264	369666	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.88	176	442401	390.25	ng/ml	0.00
Spiked Amount 200.000			Recovery =	195.13%		
20) 2,4,6 Tribromophenol	7.12	330	87986	418.81	ng/ml	0.00
Spiked Amount 375.000			Recovery =	111.68%		
36) Fluoranthene-d10	8.70	212	772314	410.36	ng/ml	0.00
Spiked Amount 200.000			Recovery =	205.18%		
42) Terphenyl-d14	9.09	244	667055	389.87	ng/ml	0.00
Spiked Amount 200.000			Recovery =	194.94%		
Target Compounds						Qvalue
2) Naphthalene	5.05	128	710596	389.49	ng/ml	99
3) 2-Methylnaphthalene	5.60	142	497921	391.37	ng/ml	96
4) 1-Methylnaphthalene	5.68	142	443108	389.06	ng/ml	93
5) Biphenyl	5.98	154	592440	381.07	ng/ml	97
6) 2,6-Dimethylnaphthalene	6.11	156	432867	389.73	ng/ml	97
11) Acenaphthylene	6.34	152	772312	410.61	ng/ml	97
12) Acenaphthene	6.48	154	450703	394.33	ng/ml	92
13) Dibenzofuran	6.63	168	683702	397.65	ng/ml	78
14) 2,3,5-Trimethylnaphthalene	6.79	170	410931m	408.79	ng/ml	
16) Fluorene	6.91	166	564575	411.45	ng/ml	98
21) Pentachlorophenol	7.56	266	174513	754.11	ng/ml	99
23) Dibenzothiophene	7.61	184	782618	412.52	ng/ml	99
27) Phenanthrene	7.72	178	804564	414.66	ng/ml	94
28) Anthracene	7.75	178	799001	422.64	ng/ml	99
29) Carbazole	7.91	167	731482	421.76	ng/ml	89
30) 1-Methylphenanthrene	8.21	192	599719	416.47	ng/ml	96
35) Fluoranthene	8.71	202	914650	414.99	ng/ml	86
38) Pyrene	8.94	202	960059	386.16	ng/ml	87
43) Benz(a)anthracene	10.56	228	904819	401.17	ng/ml	100
44) Chrysene	10.63	228	899188	405.92	ng/ml	99
50) Benzo(b)fluoranthene	13.23	252	991784	388.76	ng/ml	100
51) Benzo(k)fluoranthene	13.32	252	967372	394.73	ng/ml	99
52) Benzo(e)pyrene	14.16	252	907880	391.77	ng/ml	99
53) Benzo(a)pyrene	14.36	252	892504	422.54	ng/ml	100
54) Perylene	14.69	252	882169	425.14	ng/ml	99

(#) = qualifier out of range (m) = manual integration

Data File : J:\MS11\DATA\112408\1124F002.D Vial: 2
Acq On : 24 Nov 2008 7:00 am Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-58E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 12:54:46 2008 Quant Results File: 1110ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 09:25:18 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.43	276	880329	449.19 ng/ml	99
56)	Dibenz(a,h)anthracene	17.48	278	928158m	451.22 ng/ml	
57)	Benzo(g,h,i)perylene	17.89	276	998953	447.40 ng/ml	98

(#) = qualifier out of range (m) = manual integration

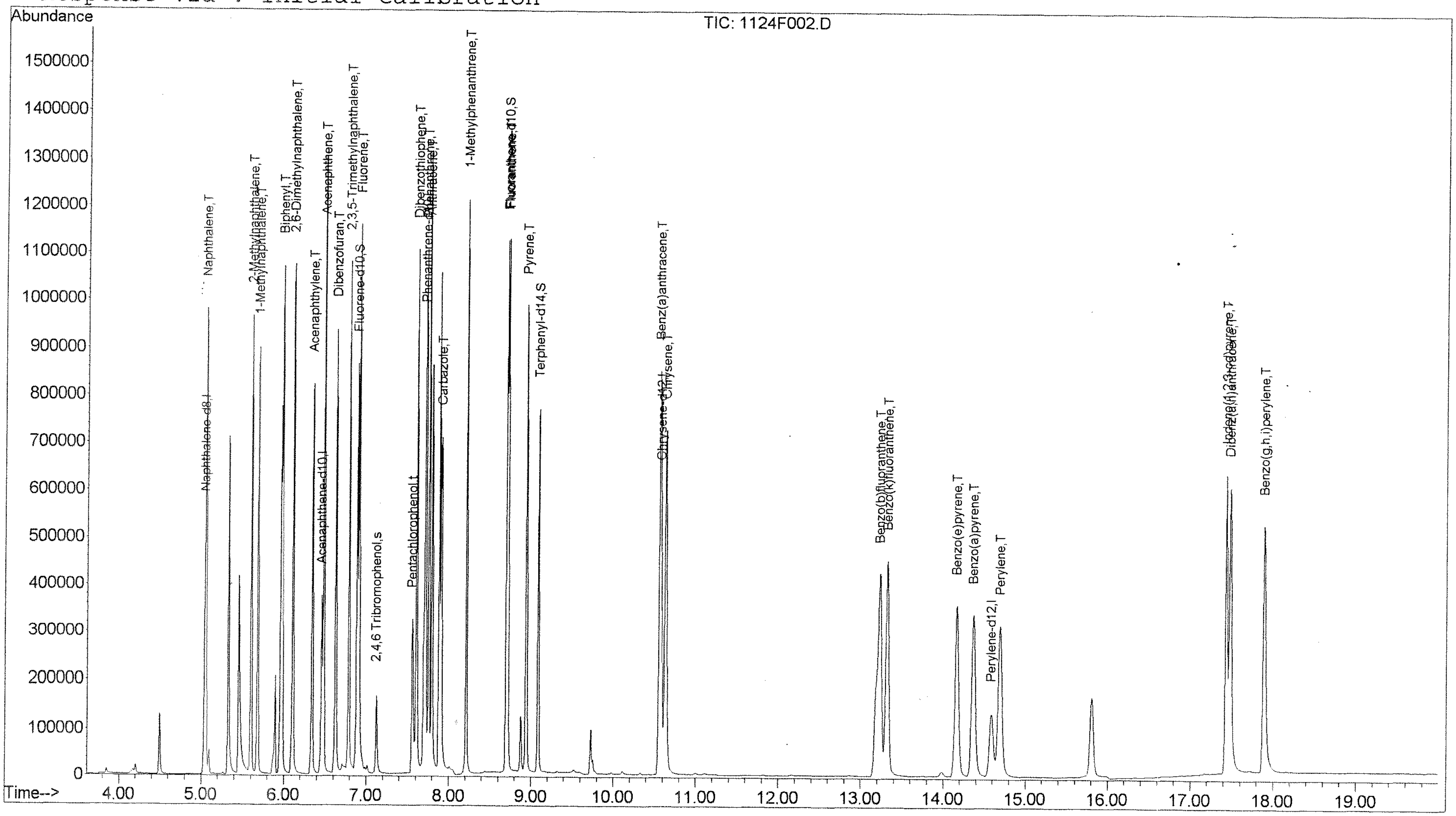
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\112408\1124F002.D
Acq On : 24 Nov 2008 7:00 am
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-58E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 24 12:55 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1110ALK.RES

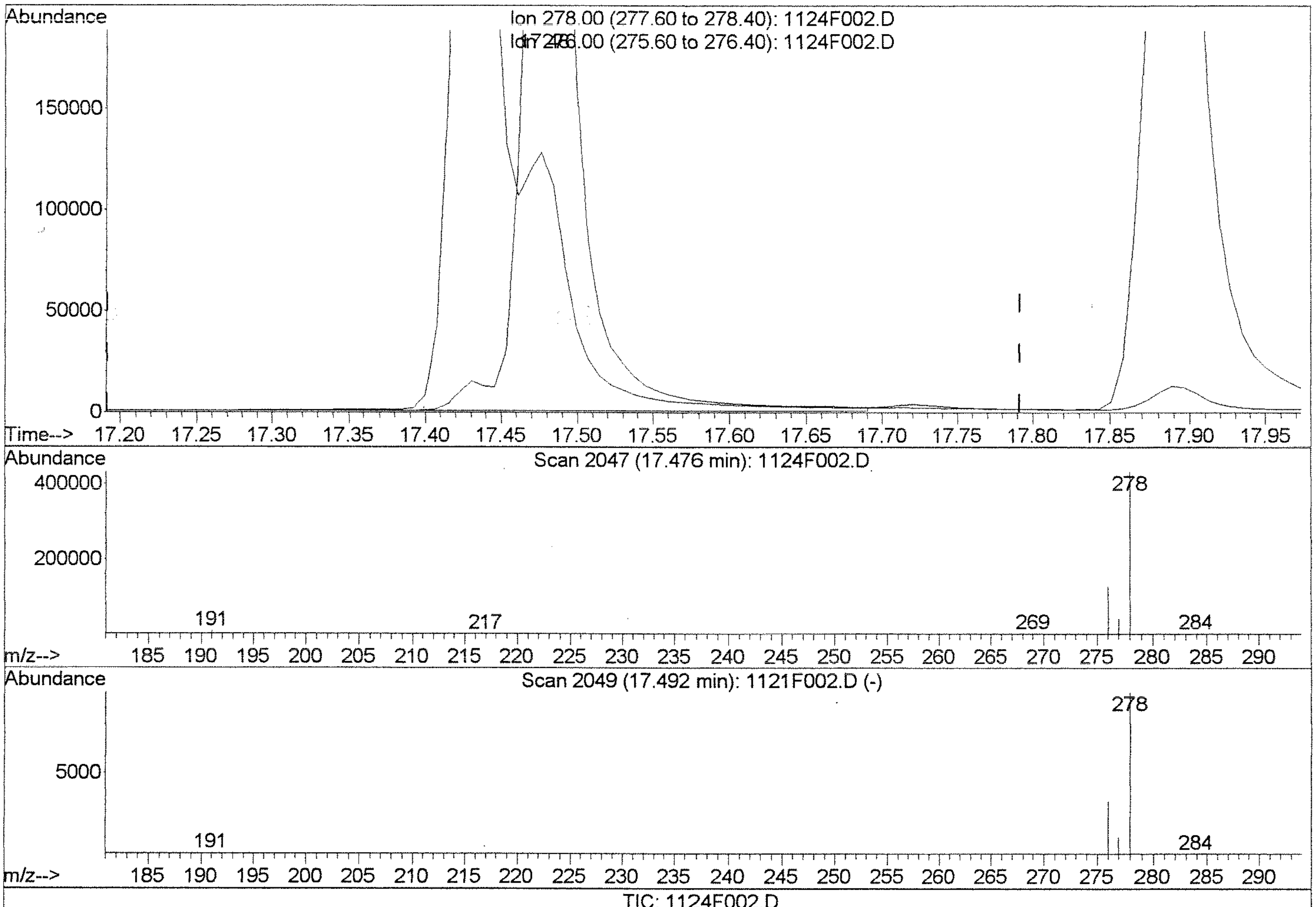
Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 12:55:24 2008
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112408\1124F002.D Vial: 2
Acq On : 24 Nov 2008 7:00 am Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-58E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 12:54 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 09:25:18 2008
Response via : Multiple Level Calibration



(56) Dibenz(a,h)anthracene (T)

17.48min 470.15ng/ml

response 967105

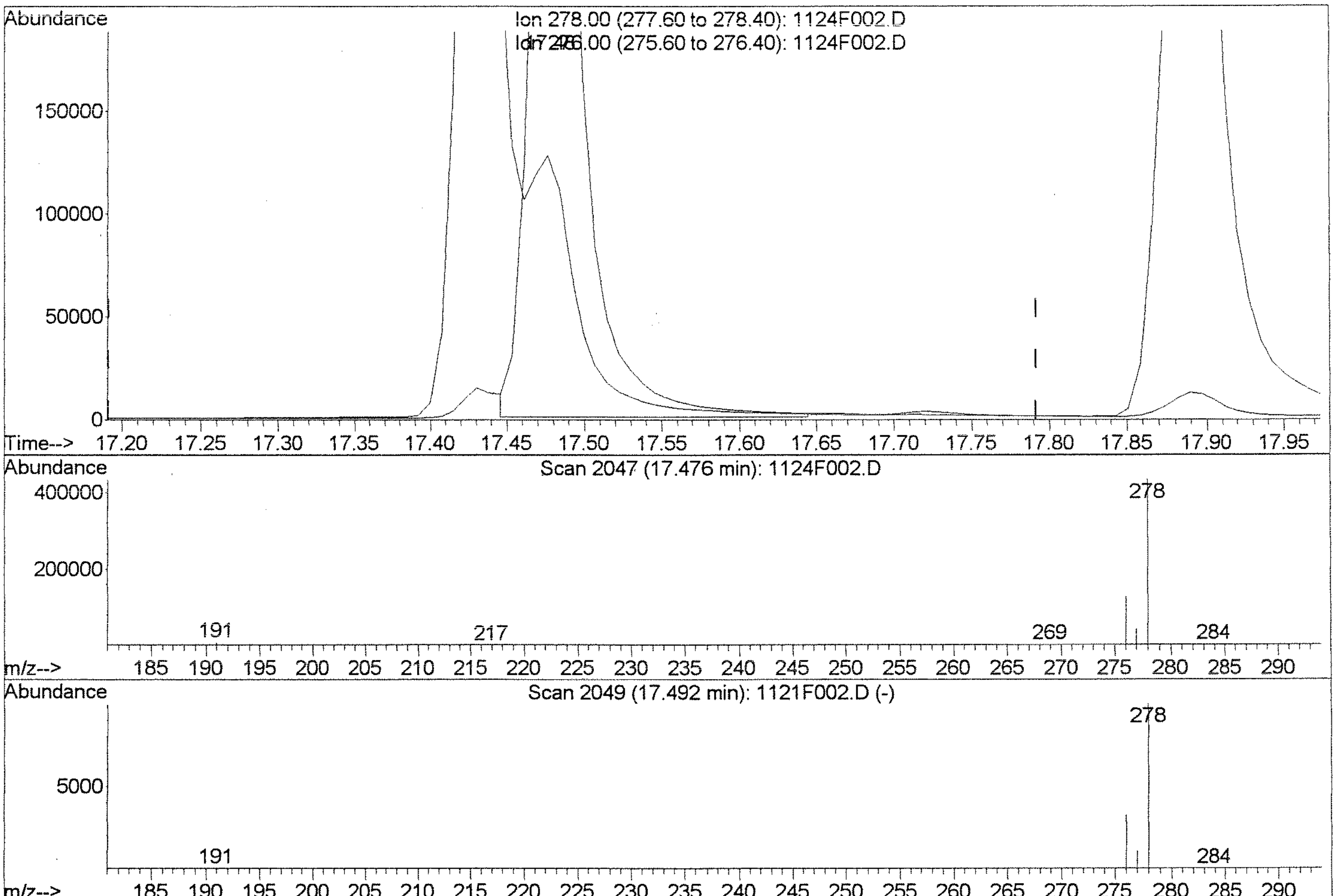
Ion	Exp%	Act%
278.00	100	100
276.00	29.70	29.41
0.00	0.00	0.00
0.00	0.00	0.00

1124F002.D 1110ALK.M Mon Nov 24 12:55:09 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\112408\1124F002.D   Vial: 2
Acq On : 24 Nov 2008 7:00 am   Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-58E   Inst : MS11
Misc :   Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 24 12:55 2008   Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1110ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 24 09:25:18 2008
Response via : Multiple Level Calibration



TIC: 1124F002.D

(56) Dibenz(a,h)anthracene (T)

17.48min 451.22ng/ml m

response 928158

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	29.69
0.00	0.00	0.00
0.00	0.00	0.00

OI Cm 11/24/08

M 11-24-08

1124F002.D 1110ALK.M Mon Nov 24 12:55:16 2008

Organic Analysis:

Polynuclear Aromatic Hydrocarbons

Validation Package

Sample Prep and Screen Data

u:\Stealth\Crystal.rpt\DividerF.rpt

Preparation Information

Group ID:	KWG0812042	**Prep Method:**	EPA 3541	**Prep Date:**	11/11/08 00:00
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K0810457-018	PAHs	8270C SIM PAH_	SOIL	30.00g	10ml	
K0810639-001	SED01-0.5-2.5A	8270C SIM PAH_	SEDIMENT	20.05g	10ml	
K0810639-002	SED01-2.5-5-A	8270C SIM PAH_	SEDIMENT	19.16g	10ml	
K0810639-003	SED02-5-8.5-A	8270C SIM PAH_	SEDIMENT	15.38g	10ml	
K0810639-004	SED02-0.5-2.5A	8270C SIM PAH_	SEDIMENT	20.02g	10ml	
K0810639-005	SED02-2.5-5-A	8270C SIM PAH_	SEDIMENT	20.01g	10ml	
K0810639-006	SED01-5-6.5-A	8270C SIM PAH_	SEDIMENT	20.08g	10ml	
K0810639-007	SED10-0.5-2.5-B	8270C SIM PAH_	SEDIMENT	15.04g	10ml	
K0810639-008	SED11-0.5-2.5-A	8270C SIM PAH_	SEDIMENT	20.09g	10ml	
K0810639-009	SED14-0.5-2-A	8270C SIM PAH_	SEDIMENT	17.42g	10ml	
K0810639-010	SED14-2-3.5-A	8270C SIM PAH_	SEDIMENT	16.02g	10ml	
KWG0812042-1	Matrix Spike	8270C SIM PAH_	SEDIMENT	15.19g	10ml	
KWG0812042-2	Duplicate Matrix Spike	8270C SIM PAH_	SEDIMENT	15.32g	10ml	
KWG0812042-3	Lab Control Sample	8270C SIM PAH_	SEDIMENT	10.00g	10ml	
KWG0812042-4	Duplicate Lab Control Sampl	8270C SIM PAH_	SEDIMENT	10.00g	10ml	
KWG0812042-5	Method Blank	8270C SIM PAH_	SEDIMENT	30.00g	10ml	

Lab Code	Parent Lab Code	Comments
KWG0812042-1	K0810639-003	
KWG0812042-2	K0810639-003	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K0810457-018	776064	SVM26-67D	20uL			KYip
K0810639-001	776065	SVM26-67D	20uL			KYip
K0810639-002	776066	SVM26-67D	20uL			KYip
K0810639-003	776067	SVM26-67D	20uL			KYip
K0810639-004	776068	SVM26-67D	20uL			KYip
K0810639-005	776069	SVM26-67D	20uL			KYip
K0810639-006	776070	SVM26-67D	20uL			KYip
K0810639-007	776071	SVM26-67D	20uL			KYip
K0810639-008	776072	SVM26-67D	20uL			KYip
K0810639-009	776073	SVM26-67D	20uL			KYip
K0810639-010	776063	SVM26-67D	20uL			KYip
KWG0812042-1	776074	SVM26-67D	20uL	SVM27-15H	200uL	KYip
KWG0812042-2	776075	SVM26-67D	20uL	SVM27-15H	200uL	KYip

Comments: IS = SVM27-1D

Started By: DWood Assisted By: Training: Yes No

Completed By: KSherrel Assisted By: Training: Yes No

Reviewed By: AB Date: 11-13-08 Storage: A-M11

Chain of Custody

Relinquished By:	Kimberly D Sherrell	Date:	11-13-08	Extracts Examined
Received By:	[signature]	Date:	11/13/08	Yes No

Group ID:	KWG0812042	**Prep Method:**	EPA 3541	**Prep Date:**	11/11/08 00:00
Department:	Semivoa GCMS				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
KWG0812042-3	776076	SVM26-67D	20uL	SVM27-15H	200uL	KYip
KWG0812042-4	776077	SVM26-67D	20uL	SVM27-15H	200uL	KYip
KWG0812042-5	776078	SVM26-67D	20uL			KYip

Comments:

Started By: DWood Assisted By:

Completed By: KSherrel Assisted By:

Training: Yes No

Yes No

Reviewed By: AB Date: 11-13-08 Storage:

Chain of Custody

Relinquished By:	Kimberly D Sherrell	Date:	~~11-13-08~~ KD 11-13-08 11-13-08
Received By:	[illegible]	Date:	11/15/18

Extracts Examined: Yes No

Preparation Information

Group ID:	KWG0812042	**Prep Method:**	EPA 3541	**Prep Date:**	11/~~10~~11/08 00:00
Department:	Semivoa GCMS				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext.	pH	Int. Vol.	Final Vol.	Surr. Added	Spike Added
1	K0810457-018	PAHs	NA	✓	8270C SIM PAH_SIM	SOIL	30.00	NA	10mL	10 mL	20ul	NA
2	K0810639-001	SED01-0.5-2.5A		✓	8270C SIM PAH_SIM	SEDIMENT	20.05					
3	K0810639-002	SED01-2.5-5-A		✓	8270C SIM PAH_SIM	SEDIMENT	19.16					
4	K0810639-003	SED02-5-8.5-A		✓	8270C SIM PAH_SIM	SEDIMENT	15.38					
5	K0810639-004	SED02-0.5-2.5A		✓	8270C SIM PAH_SIM	SEDIMENT	20.02					
6	K0810639-005	SED02-2.5-5-A		✓	8270C SIM PAH_SIM	SEDIMENT	20.01					
7	K0810639-006	SED01-5-6.5-A		✓	8270C SIM PAH_SIM	SEDIMENT	20.08					
8	K0810639-007	SED10-0.5-2.5-B		✓	8270C SIM PAH_SIM	SEDIMENT	15.04					
9	K0810639-008	SED11-0.5-2.5-A		✓	8270C SIM PAH_SIM	SEDIMENT	20.09					
10	K0810639-009	SED14-0.5-2-A		✓	8270C SIM PAH_SIM	SEDIMENT	17.42					
11	K0810639-010	SED14-2-3.5-A		✓	8270C SIM PAH_SIM	SEDIMENT	16.02					
12	KWG0812042-1	Matrix Spike 10639-3		✓	8270C SIM PAH_SIM	SEDIMENT	15.19					200ul
13	KWG0812042-2	Duplicate Matrix Spike 10639-3		✓	8270C SIM PAH_SIM	SEDIMENT	15.32					
14	KWG0812042-3	Lab Control Sample		—	8270C SIM PAH_SIM	SEDIMENT	10.00					
15	KWG0812042-4	Duplicate Lab Control Sample		—	8270C SIM PAH_SIM	SEDIMENT	10.00					
16	KWG0812042-5	Method Blank		—	8270C SIM PAH_SIM	SEDIMENT	30.00					NA

76892

KS 11-12-08

Comments:

Surrogate ID: SVM26-67D 100/150ppm 20ul exp 1-23-09

Spike ID: SVM27-15H 25ppm 200ul exp 4-6-09

Witness: Lindsay Berg 11/11/08

Started By: DWood

Assisted By:

Completed By: Kimberly D Sherrell

Assisted By:

Additional Prep Information For EPA 3541

Service Request K0810457/10639 **Workgroup** KWG0812042

DCM Lot CK565 Hexane Lot 48142

Start (Time/Date/Initial): 1655/11-11-08/DW KY

Stop (Time/Date/Initial): 0830/11-12-08/DW KY

Sulfate Lot # 48004818

S-Evap Temp: —— N-evap Temp: 30° Silica gel Lot #: 47165727

Solvent Exchange: 11-12-08

Clean-up #1: 3630 Initial/Date: KJ 11-13-08

Clean-up #2: —— Initial/Date: ——

Extract Storage: Archived

Date Completed: 11-13-08

Comments/Observations:

Bench Sheet Review Check List

- ☑ Hold Times Met (if no, Reason: 10639 - Frozen)
- ☑ Prep date, dept, method, product code correct in stealth
- ☑ Spike Information correct
- ☑ Weights/Volumes and units correct on raw and final bench sheets
- ☑ Sample IDs have been checked—Bottle numbers appended if required
- ☑ Names present for: Started by, Completed by, relinquished by, and witnessed by.
- ☑ Training has been circled
- ☑ Extract Storage recorded
- ☑ Additional Prep Sheet completely filled out (NA or line out Blanks)
- ☑ All clean-ups have been noted on additional prep sheet
- ☑ ~~Signed service request with Form V, if applicable, has been attached~~

Directory: J:\MSTT\DATA\112108

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1121F001.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		21 Nov 2008 06:1
2	2	1121F002.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-55C		21 Nov 2008 06:3
3	1	1121F003.D	1.	KWG0811626-3 MB		21 Nov 2008 07:0
4	2	1121F004.D	1.	KWG0811626-1 LCS		21 Nov 2008 07:3
5	3	1121F005.D	1.	KWG0811626-2 DLCS		21 Nov 2008 07:5
6	4	1121F006.D	1. Jn 11/22/08	K0810491-~~010DIL~~ 10X -001 DIL		21 Nov 2008 08:2
7	5	1121F007.D	1.	K0810465-001DIL 10X		21 Nov 2008 08:4
8	6	1121F008.D	1.	K0810465-002DIL 10X		21 Nov 2008 09:1
9	7	1121F009.D	1.	K0810465-003DIL 10X		21 Nov 2008 09:4
10	8	1121F010.D	1.	K0810465-004DIL 10X		21 Nov 2008 10:0
11	9	1121F011.D	1.	K0810465-005DIL 10X		21 Nov 2008 10:3
12	10	1121F012.D	1.	K0810465-007DIL 10X		21 Nov 2008 11:0
13	11	1121F013.D	1.	K0810465-008DIL 10X		21 Nov 2008 11:2
14	12	1121F014.D	1.	K0810413-007MS 20X		21 Nov 2008 11:5
15	13	1121F015.D	1.	K0810413-007DMS 20X		21 Nov 2008 12:2
16	14	1121F016.D	1.	K0810413-007DIL 20X		21 Nov 2008 12:4
17	15	1121F017.D	1.	K0810413-001DIL 20X		21 Nov 2008 13:1
18	16	1121F018.D	1.	K0810413-002DIL 20X		21 Nov 2008 13:3
19	17	1121F019.D	1.	K0810413-003DIL 20X		21 Nov 2008 14:0
20	18	1121F020.D	1.	K0810413-004DIL 20X	CAL 7938	21 Nov 2008 14:3
21	19	1121F021.D	1.	K0810413-005DIL 20X	* lims # 134919	21 Nov 2008 14:5
22	20	1121F022.D	1.	K0810413-006DIL 50X		21 Nov 2008 15:2
23	21	1121F023.D	1.	K0810413-008DIL 20X		21 Nov 2008 15:5
24	22	1121F024.D	1.	K0810413-010DIL 20X	Q 11/22/08	21 Nov 2008 16:1
25	23	1121F025.D	1.	K0810639-001DIL 20X		21 Nov 2008 16:4
26	24	1121F026.D	1.	K0810639-002DIL 20X		21 Nov 2008 17:1
27	25	1121F027.D	1.	K0810639-004DIL 20X		21 Nov 2008 17:3
28	26	1121F028.D	1.	K0810639-005DIL 20X	LB 11/24/08	21 Nov 2008 18:0
~~29~~	~~27~~	~~1121F029.D~~	~~1.~~	~~DFTPP @ 3.0ug/mL | SVM27-37E~~		21 Nov 2008 18:2
30	27	1121F030.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		21 Nov 2008 18:5
31	28	1121F031.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-55C		21 Nov 2008 19:2
32	29	1121F032.D	1.	KWG0811834-5 MB		21 Nov 2008 19:4
33	30	1121F033.D	1.	KWG0811834-3 LCS		21 Nov 2008 20:1
34	31	1121F034.D	1.	KWG0811834-4 DLCS		21 Nov 2008 20:4
35	32	1121F035.D	1.	K0810343-016DIL 50X		21 Nov 2008 21:0
36	33	1121F036.D	1.	K0810343-017DIL 50X		21 Nov 2008 21:3
37	34	1121F037.D	1.	K0810442-008DIL 100X		21 Nov 2008 21:5
38	35	1121F038.D	1.	K0810491-002		21 Nov 2008 22:2
39	36	1121F039.D	1.	K0810491-003		21 Nov 2008 22:5
40	37	1121F040.D	1.	K0810491-004		21 Nov 2008 23:1
41	38	1121F041.D	1.	K0810491-005		21 Nov 2008 23:4
42	39	1121F042.D	1.	K0810491-006		22 Nov 2008 00:1
43	40	1121F043.D	1.	K0810491-007		22 Nov 2008 00:3
44	41	1121F044.D	1.	K0810491-008		22 Nov 2008 01:0
45	42	1121F045.D	1.	K0810491-010		22 Nov 2008 01:2
46	43	1121F046.D	1.	K0810413-009		22 Nov 2008 01:5
47	44	1121F047.D	1.	K0810639-008DIL 20X		22 Nov 2008 02:2
48	45	1121F048.D	1.	K0810639-007		22 Nov 2008 02:4
49	46	1121F049.D	1.	K0810639-003		22 Nov 2008 03:1
50	47	1121F050.D	1.	K0810639-006		22 Nov 2008 03:4
51	48	1121F051.D	1.	K0810639-009		22 Nov 2008 04:0
~~52~~	~~49~~	~~1121F052.D~~	~~1.~~	~~K0810104-004DIL 50X~~		22 Nov 2008 04:3

22 Nov 2008 05:41

Directory: J:\MS11\DATA\112108

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1121F001.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		21 Nov 2008 06:1
2	2	1121F002.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-55C		21 Nov 2008 06:3
3	1	1121F003.D	1.	KWG0811626-3 MB		21 Nov 2008 07:0
4	2	1121F004.D	1.	KWG0811626-1 LCS		21 Nov 2008 07:3
5	3	1121F005.D	1.	KWG0811626-2 DLCS		21 Nov 2008 07:5
6	4	1121F006.D	1.	lh 11/22/08 K0810491-~~010DIL~~ 10X -001 DIL		21 Nov 2008 08:2
7	5	1121F007.D	1.	K0810465-001DIL 10X		21 Nov 2008 08:4
8	6	1121F008.D	1.	K0810465-002DIL 10X		21 Nov 2008 09:1
9	7	1121F009.D	1.	K0810465-003DIL 10X		21 Nov 2008 09:4
10	8	1121F010.D	1.	K0810465-004DIL 10X		21 Nov 2008 10:0
11	9	1121F011.D	1.	K0810465-005DIL 10X		21 Nov 2008 10:3
12	10	1121F012.D	1.	K0810465-007DIL 10X		21 Nov 2008 11:0
13	11	1121F013.D	1.	K0810465-008DIL 10X		21 Nov 2008 11:2
14	12	1121F014.D	1.	K0810413-007MS 20X		21 Nov 2008 11:5
15	13	1121F015.D	1.	K0810413-007DMS 20X		21 Nov 2008 12:2
16	14	1121F016.D	1.	K0810413-007DIL 20X		21 Nov 2008 12:4
17	15	1121F017.D	1.	K0810413-001DIL 20X		21 Nov 2008 13:1
18	16	1121F018.D	1.	K0810413-002DIL 20X		21 Nov 2008 13:3
19	17	1121F019.D	1.	K0810413-003DIL 20X		21 Nov 2008 14:0
20	18	1121F020.D	1.	K0810413-004DIL 20X		21 Nov 2008 14:3
21	19	1121F021.D	1.	K0810413-005DIL 20X		21 Nov 2008 14:5
22	20	1121F022.D	1.	K0810413-006DIL 50X		21 Nov 2008 15:2
23	21	1121F023.D	1.	K0810413-008DIL 20X		21 Nov 2008 15:5
24	22	1121F024.D	1.	K0810413-010DIL 20X		21 Nov 2008 16:1
25	23	1121F025.D	1.	K0810639-001DIL 20X		21 Nov 2008 16:4
26	24	1121F026.D	1.	K0810639-002DIL 20X		21 Nov 2008 17:1
27	25	1121F027.D	1.	K0810639-004DIL 20X		21 Nov 2008 17:3
28	26	1121F028.D	1.	K0810639-005DIL 20X		21 Nov 2008 18:0
29	27	1121F029.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		21 Nov 2008 18:2
30	27	1121F030.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		21 Nov 2008 18:5
31	28	1121F031.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-55C		21 Nov 2008 19:2
32	29	1121F032.D	1.	KWG0811834-5 MB		21 Nov 2008 19:4
33	30	1121F033.D	1.	KWG0811834-3 LCS		21 Nov 2008 20:1
34	31	1121F034.D	1.	KWG0811834-4 DLCS		21 Nov 2008 20:4
35	32	1121F035.D	1.	K0810343-016DIL 50X		21 Nov 2008 21:0
36	33	1121F036.D	1.	K0810343-017DIL 50X		21 Nov 2008 21:3
37	34	1121F037.D	1.	K0810442-008DIL 100X NR		21 Nov 2008 21:5
38	35	1121F038.D	1.	K0810491-002		21 Nov 2008 22:2
39	36	1121F039.D	1.	K0810491-003		21 Nov 2008 22:5
40	37	1121F040.D	1.	K0810491-004		21 Nov 2008 23:1
41	38	1121F041.D	1.	K0810491-005		21 Nov 2008 23:4
42	39	1121F042.D	1.	K0810491-006		22 Nov 2008 00:1
43	40	1121F043.D	1.	K0810491-007		22 Nov 2008 00:3
44	41	1121F044.D	1.	K0810491-008		22 Nov 2008 01:0
45	42	1121F045.D	1.	lh 11/22/08 K0810491-~~010~~ -001		22 Nov 2008 01:2
46	43	1121F046.D	1.	K0810413-009		22 Nov 2008 01:5
47	44	1121F047.D	1.	K0810639-008DIL 20X		22 Nov 2008 02:2
48	45	1121F048.D	1.	K0810639-007		22 Nov 2008 02:4
49	46	1121F049.D	1.	K0810639-003		22 Nov 2008 03:1
50	47	1121F050.D	1.	K0810639-006		22 Nov 2008 03:4
51	48	1121F051.D	1.	K0810639-009		22 Nov 2008 04:0
52	49	1121F052.D	1.	lh 11/22/08 K0810104-004DIL 50X		22 Nov 2008 04:3
53	50	1121F053.D	1.	K0810104-004DIL ~~50X~~ 5X (RX)		22 Nov 2008 05:4
54	51	1121F054.D	1.	K0810248-001		22 Nov 2008 06:1
55	52	1121F055.D	1.	K0810104-003		22 Nov 2008 06:3

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Alims # 134920
lh 11/22/08

Directory: J:\ms11\data\112208

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1122F005.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		22 Nov 2008 09:4
2	2	1122F006.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-55C		22 Nov 2008 10:1
3	1	1122F007.D	1.	KWG0812210-3 MB		22 Nov 2008 10:4
4	2	1122F008.D	1.	KWG0812210-1 LCS		22 Nov 2008 11:0
5	3	1122F009.D	1.	KWG0812210-2 DLCS		22 Nov 2008 11:3
6	4	1122F010.D	1.	K0810457-018		22 Nov 2008 12:0
7	5	1122F011.D	1.	K0810104-001REX		22 Nov 2008 12:2
8	6	1122F012.D	1.	K0810104-002REX		22 Nov 2008 12:5
9	7	1122F013.D	1.	K0810104-005REX		22 Nov 2008 13:2
10	8	1122F014.D	1.	K0810248-002REX		22 Nov 2008 13:4
11	9	1122F015.D	1.	K0810248-003REX		22 Nov 2008 14:1
12	10	1122F016.D	1.	K0810198-012REX		22 Nov 2008 14:3
13	11	1122F017.D	1.	K0810198-013REX		22 Nov 2008 15:0
14	12	1122F018.D	1.	K0810198-001REX 100X		22 Nov 2008 15:3
15	13	1122F019.D	1.	K0810198-002REX 500X		22 Nov 2008 15:5
16	14	1122F020.D	1.	K0810198-003REX	CAL 7938	22 Nov 2008 16:2
17	15	1122F021.D	1.	K0810198-004REX 500X		22 Nov 2008 16:5
18	16	1122F022.D	1.	K0810198-005REX 100X	* Lims# 134962	22 Nov 2008 17:1
19	17	1122F023.D	1.	K0810198-007REX 2000X		22 Nov 2008 17:4
20	18	1122F024.D	1.	K0810198-008REX 100X	RW 11/24/08	22 Nov 2008 18:1
21	19	1122F025.D	1.	K0810198-009REX 2000X		22 Nov 2008 18:3
22	20	1122F026.D	1.	K0810198-010REX 1000X		22 Nov 2008 19:1
23	21	1122F027.D	1.	K0810413-008	LB	22 Nov 2008 19:3
24	22	1122F028.D	1.	K0810639-001		22 Nov 2008 20:0
25	23	1122F029.D	1.	K0810639-004	11/24/08	22 Nov 2008 20:3
26	24	1122F030.D	1.	K0810465-005DIL 50X		22 Nov 2008 20:5
27	25	1122F031.D	1.	K0810465-007DIL 50X		22 Nov 2008 21:2
28	26	1122F032.D	1.	K0810639-008DIL 5X NR outside tune window		22 Nov 2008 21:4
29	27	1122F033.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		22 Nov 2008 22:1
30	27	1122F034.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		22 Nov 2008 22:4
31	28	1122F035.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-55C		22 Nov 2008 23:0
32	29	1122F036.D	1.	KWG0811921-5 IPR MB		22 Nov 2008 23:3
33	30	1122F037.D	1.	KWG0812029-5 IPR MB		23 Nov 2008 00:0
34	31	1122F038.D	1.	KWG0812029-1 IPR		23 Nov 2008 00:2
35	32	1122F039.D	1.	KWG0812029-2 IPR		23 Nov 2008 00:5
36	33	1122F040.D	1.	KWG0812029-3 IPR		23 Nov 2008 01:2
37	34	1122F041.D	1.	KWG0812029-4 IPR		23 Nov 2008 01:4
38	35	1122F042.D	1.	K0810639-002DIL 200X		23 Nov 2008 02:1
39	36	1122F043.D	1.	K0810639-005DIL 200X		23 Nov 2008 02:3
40	37	1122F044.D	1.	K0810639-003DIL 20X		23 Nov 2008 03:0
41	38	1122F045.D	1.	K0810639-006DIL 5X		23 Nov 2008 03:3
42	39	1122F046.D	1.	K0810639-009DIL 5X		23 Nov 2008 03:5
43	40	1122F047.D	1.	K0810442-010		23 Nov 2008 04:2
44	41	1122F048.D	1.	K0810470-001DIL 2X		23 Nov 2008 04:5
45	42	1122F049.D	1.	K0810470-010DIL 2X		23 Nov 2008 05:1
46	43	1122F050.D	1.	K0810949-001		23 Nov 2008 05:4
47	44	1122F051.D	1.	K0810949-002		23 Nov 2008 06:1
48	45	1122F052.D	1.	K0810949-003		23 Nov 2008 06:3
49	46	1122F053.D	1.	K0810949-004		23 Nov 2008 07:0
50	47	1122F054.D	1.	K0810949-005		23 Nov 2008 07:2
51	48	1122F055.D	1.	K0810949-006		23 Nov 2008 07:5
52	49	1122F056.D	1.	K0810949-007		23 Nov 2008 08:2

Injection Log

Directory: J:\ms11\data\112208

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1122F005.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		22 Nov 2008 09:4
2	2	1122F006.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-55C		22 Nov 2008 10:1
3	1	1122F007.D	1.	KWG0812210-3 MB		22 Nov 2008 10:4
4	2	1122F008.D	1.	KWG0812210-1 LCS		22 Nov 2008 11:0
5	3	1122F009.D	1.	KWG0812210-2 DLCS		22 Nov 2008 11:3
6	4	1122F010.D	1.	K0810457-018		22 Nov 2008 12:0
7	5	1122F011.D	1.	K0810104-001REX		22 Nov 2008 12:2
8	6	1122F012.D	1.	K0810104-002REX		22 Nov 2008 12:5
9	7	1122F013.D	1.	K0810104-005REX		22 Nov 2008 13:2
10	8	1122F014.D	1.	K0810248-002REX		22 Nov 2008 13:4
11	9	1122F015.D	1.	K0810248-003REX		22 Nov 2008 14:1
12	10	1122F016.D	1.	K0810198-012REX		22 Nov 2008 14:3
13	11	1122F017.D	1.	K0810198-013REX		22 Nov 2008 15:0
14	12	1122F018.D	1.	K0810198-001REX 100X		22 Nov 2008 15:3
15	13	1122F019.D	1.	K0810198-002REX 500X		22 Nov 2008 15:5
16	14	1122F020.D	1.	K0810198-003REX		22 Nov 2008 16:2
17	15	1122F021.D	1.	K0810198-004REX 500X		22 Nov 2008 16:5
18	16	1122F022.D	1.	K0810198-005REX 100X		22 Nov 2008 17:1
19	17	1122F023.D	1.	K0810198-007REX 2000X		22 Nov 2008 17:4
20	18	1122F024.D	1.	K0810198-008REX 100X		22 Nov 2008 18:1
21	19	1122F025.D	1.	K0810198-009REX 2000X		22 Nov 2008 18:3
22	20	1122F026.D	1.	K0810198-010REX 1000X		22 Nov 2008 19:1
23	21	1122F027.D	1.	K0810413-008		22 Nov 2008 19:3
24	22	1122F028.D	1.	K0810639-001		22 Nov 2008 20:0
25	23	1122F029.D	1.	K0810639-004		22 Nov 2008 20:3
26	24	1122F030.D	1.	K0810465-005DIL 50X		22 Nov 2008 20:5
27	25	1122F031.D	1.	K0810465-007DIL 50X		22 Nov 2008 21:2
28	26	1122F032.D	1.	K0810639-008DIL 5X NR - outside time window		22 Nov 2008 21:4
29	27	1122F033.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		22 Nov 2008 22:1
30	27	1122F034.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		22 Nov 2008 22:4
31	28	1122F035.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-55C		22 Nov 2008 23:0
32	29	1122F036.D	1.	KWG0811921-5 IPR MB		22 Nov 2008 23:3
33	30	1122F037.D	1.	KWG0812029-5 IPR MB		23 Nov 2008 00:0
34	31	1122F038.D	1.	KWG0812029-1 IPR		23 Nov 2008 00:2
35	32	1122F039.D	1.	KWG0812029-2 IPR		23 Nov 2008 00:5
36	33	1122F040.D	1.	KWG0812029-3 IPR		23 Nov 2008 01:2
37	34	1122F041.D	1.	KWG0812029-4 IPR		23 Nov 2008 01:4
38	35	1122F042.D	1.	K0810639-002DIL 200X		23 Nov 2008 02:1
39	36	1122F043.D	1.	K0810639-005DIL 200X		23 Nov 2008 02:3
40	37	1122F044.D	1.	K0810639-003DIL 20X		23 Nov 2008 03:0
41	38	1122F045.D	1.	K0810639-006DIL 5X		23 Nov 2008 03:3
42	39	1122F046.D	1.	K0810639-009DIL 5X		23 Nov 2008 03:5
43	40	1122F047.D	1.	K0810442-010		23 Nov 2008 04:2
44	41	1122F048.D	1.	K0810470-001DIL 2X		23 Nov 2008 04:5
45	42	1122F049.D	1.	K0810470-010DIL 2X		23 Nov 2008 05:1
46	43	1122F050.D	1.	K0810949-001		23 Nov 2008 05:4
47	44	1122F051.D	1.	K0810949-002		23 Nov 2008 06:1
48	45	1122F052.D	1.	K0810949-003		23 Nov 2008 06:3
49	46	1122F053.D	1.	K0810949-004		23 Nov 2008 07:0
50	47	1122F054.D	1.	K0810949-005		23 Nov 2008 07:2
51	48	1122F055.D	1.	K0810949-006		23 Nov 2008 07:5
52	49	1122F056.D	1.	K0810949-007		23 Nov 2008 08:2
53	50	1122F057.D	1.	K0810949-008		23 Nov 2008 08:4
54	1	1122F058.D	1.	K0810639-008DIL 5X		23 Nov 2008 09:1
55	2	1122F059.D	1.	K0810457-018DIL 5X		23 Nov 2008 09:4

CAL 7938

* Lims# 134999

RW 11/24/08

11-20-8

Directory: J:\ms11\data\112308

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1123F001.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		23 Nov 2008 11:1
2	2	1123F002.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-55C		23 Nov 2008 11:4
3	1	1123F003.D	1.	KWG0812042-5 MB		23 Nov 2008 12:1
4	2	1123F004.D	1.	KWG081576-5 MB		23 Nov 2008 12:3
5	3	1123F005.D	1.	KWG082042-3 LCS		23 Nov 2008 13:0
6	4	1123F006.D	1.	KWG082042-4 DLCS		23 Nov 2008 13:2
7	5	1123F007.D	1.	KWG0812576-1 IPR		23 Nov 2008 13:5
8	6	1123F008.D	1.	KWG0812576-2 IPR		23 Nov 2008 14:2
9	7	1123F009.D	1.	KWG0812576-3 IPR		23 Nov 2008 14:4
10	8	1123F010.D	1.	KWG0812576-4 IPR		23 Nov 2008 15:1
11	9	1123F011.D	1.	K0810639-010		23 Nov 2008 15:4
12	10	1123F012.D	1.	K0810639-003MS		23 Nov 2008 16:0
13	11	1123F013.D	1.	K0810639-003DMS		23 Nov 2008 16:3
14	12	1123F014.D	1.	K0810949-009		23 Nov 2008 17:0
15	13	1123F015.D	1.	K0810949-010		23 Nov 2008 17:2
16	14	1123F016.D	1.	K0810949-012		23 Nov 2008 17:5
17	15	1123F017.D	1.	K0810949-013		23 Nov 2008 18:2
18	16	1123F018.D	1.	K0810198-004DIL 5X		23 Nov 2008 18:4
19	17	1123F019.D	1.	K0810198-005DIL 2X		23 Nov 2008 19:1
20	18	1123F020.D	1.	K0810198-006DIL 10X		23 Nov 2008 19:4
21	19	1123F021.D	1.	K0810198-007DIL 10X		23 Nov 2008 20:0
22	20	1123F022.D	1.	K0810198-008DIL 2X		23 Nov 2008 20:3
23	21	1123F023.D	1.	K0810198-009DIL 10X		23 Nov 2008 21:0
24	22	1123F024.D	1.	K0810198-010DIL 5X		23 Nov 2008 21:2
25	23	1123F025.D	1.	K0810198-001REX		23 Nov 2008 21:5
26	24	1123F026.D	1.	K0810198-002REX		23 Nov 2008 22:2
27	25	1123F027.D	1.	K0810198-005DIL 10X		23 Nov 2008 22:4
28	26	1123F028.D	1.	K0810198-006DIL 100X		23 Nov 2008 23:1
29	27	1123F029.D	1.	PR		23 Nov 2008 23:3
30	28	1123F030.D	1.	PR		24 Nov 2008 00:0

NR

CAL 7938
* Lims # 135036
AW 11/24/08
11.25-8

Injection Log

Directory: J:\MS11\DATA\112408

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1124F001.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		24 Nov 2008 06:3
2	2	1124F002.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-58E		24 Nov 2008 07:0
3	1	1124F003.D	1.	IB		24 Nov 2008 07:2
4	2	1124F004.D	1.	K0810639-010DIL 10X		24 Nov 2008 07:5
5	3	1124F005.D	1.	K0810198-001REX 10X		24 Nov 2008 08:2
6	4	1124F006.D	1.	K0810198-002REX 10X		24 Nov 2008 08:4
7	5	1124F007.D	1.	K0810198-003REX 20X NR		24 Nov 2008 09:1
8	6	1124F008.D	1.	K0810198-004REX 50X		24 Nov 2008 09:4
9	7	1124F009.D	1.	K0810198-006REX 1000X		24 Nov 2008 10:0
10	8	1124F010.D	1.	K0810198-007REX 100X		24 Nov 2008 10:3
11	9	1124F011.D	1.	K0810198-008REX 10X		24 Nov 2008 11:0
12	10	1124F012.D	1.	K0810198-009REX 100X		24 Nov 2008 11:2
13	11	1124F013.D	1.	K0810198-010REX 50X		24 Nov 2008 11:5

CAL 7938
Lims # 135049
dw 11/24/08

M 11-24-08