



11/09/11

Technical Report for

KRW Consulting, Inc.

PCU 297-10B

1105-20A

Accutest Job Number: D29137

Sampling Date: 11/01/11

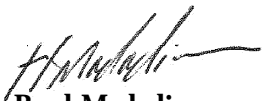
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Total number of pages in report: 135



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.


Brad Madadian
Laboratory Director

Client Service contact: 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW) UT (NELAP CO00049)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

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Sample Summary

KRW Consulting, Inc.

Job No: D29137

PCU 297-10B
Project No: 1105-20A

Sample Number	Collected		Matrix Code Type	Received	Soil	Client Sample ID
	Date	Time By				
D29137-1	11/01/11	10:30 CH	11/03/11	SO	Soil	CUT #2 SUBLINER
D29137-1A	11/01/11	10:30 CH	11/03/11	SO	Soil	CUT #2 SUBLINER

Soil samples reported on a dry weight basis unless otherwise indicated on result page.

CASE NARRATIVE / CONFORMANCE SUMMARY

Client: KRW Consulting, Inc.

Job No D29137

Site: PCU 297-10B

Report Dat 11/9/2011 11:59:25 AM

On 11/03/2011, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 2.2 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D29137 was assigned to the project. The lab sample ID, client sample ID, and date of sample collection are detailed in the report's Results Summary.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix SO	Batch ID: V3V829
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29137-1MS, D29137-1MSD were used as the QC samples indicated.

Extractables by GCMS By Method SW846 8270C BY SIM

Matrix SO	Batch ID: OP4789
------------------	-------------------------

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29137-1MS, D29137-1MSD were used as the QC samples indicated.
- The matrix spike (MS) and matrix spike duplicate (MSD) recovery(s) of Indeno(1,2,3-cd)pyrene are outside control limits.
- D29137-1, OP4789-MS, OP4789-MSD: Elevated RL due to matrix.

Volatiles by GC By Method SW846 8015B

Matrix SO	Batch ID: GGB777
------------------	-------------------------

- All samples were analyzed within the recommended method holding time.
- Sample(s) D29137-1MS, D29137-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846-8015B

Matrix SO	Batch ID: OP4792
------------------	-------------------------

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29137-1MS, D29137-1MSD were used as the QC samples indicated.

Metals By Method SW846 6010B

Matrix AQ

Batch ID: MP6197

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29124-1AMS, D29124-1AMSD were used as the QC samples for the metals analysis.
- The matrix spike (MS) recovery(s) of Sodium are outside control limits. Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

Matrix SO

Batch ID: MP6194

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29137-1MS, D29137-1MSD, D29137-1SDL were used as the QC samples for the metals analysis.
- The matrix spike (MS) and matrix spike duplicate (MSD) recovery(s) of Barium are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- The RPD(s) for the MS and MSD recoveries of Barium are outside control limits for sample MP6194-S2. High RPD due to possible sample matrix or nonhomogeneity.
- The serial dilution RPD(s) for Cadmium, Lead, Selenium, Silver are outside control limits for sample MP6194-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- The serial dilution RPD(s) for Barium, Chromium, Nickel, Zinc are outside control limits for sample MP6194-SD1. Serial dilution indicates possible matrix interference.

Metals By Method SW846 6020

Matrix SO

Batch ID: MP6195

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29137-1MS, D29137-1MSD, D29137-1SDL were used as the QC samples for the metals analysis.

Metals By Method SW846 7471A

Matrix SO

Batch ID: MP6196

- All samples were digested and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29124-1MSD, D29124-1MS were used as the QC samples for the metals analysis.
- The matrix spike (MS) and matrix spike duplicate (MSD) recovery(s) of Mercury are outside control limits. Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

Wet Chemistry By Method ASTM D1498-76M

Matrix SO

Batch ID: GN12350

- Sample(s) D29137-1DUP were used as the QC samples for the Redox Potential Vs H2 analysis.

Wet Chemistry By Method SM19 2540B M

Matrix SO

Batch ID: GN12328

- The data for SM19 2540B M meets quality control requirements.

Wet Chemistry By Method SW846 3060/7196A M

Matrix SO

Batch ID: R10651

- The data for SW846 3060/7196A M meets quality control requirements.
- D29137-1 for Chromium, Trivalent: Calculated as: (Chromium) - (Chromium, Hexavalent)

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO

Batch ID: M:GP13745

- The data for SW846 3060A/7196A meets quality control requirements.
- D29137-1 for Chromium, Hexavalent: Analysis performed at Accutest Laboratories, Marlborough, MA.

Wet Chemistry By Method SW846 9045C

Matrix SO

Batch ID: GN12348

- The following sample was run outside of holding time for method SW846 9045C: D29137-1.

Wet Chemistry By Method USDA HANDBOOK 60

Matrix SO

Batch ID: MP6197

- D29137-1A for Sodium Adsorption Ratio: Calculated as: $(\text{Na meq/L}) / \sqrt{[(\text{Ca meq/L}) + (\text{Mg meq/L})/2]}$

AMS certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting AMS's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

AMS is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. This report is authorized by AMS indicated via signature on the report cover.

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Accutest Mountain States

Job No D29137

Site: KRWCCOL: PCU 297-10B

Report Date 11/9/2011 8:48:59 AM

1 Sample was collected on 11/01/2011 and were received at Accutest on 11/03/2011 properly preserved, at 1.6 Deg. C and intact. These Samples received an Accutest job number of D29137. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Wet Chemistry By Method SW846 3060A/7196A

Matrix SO

Batch ID: GP13745

- All samples were distilled within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D29014-4DUP, D29014-4MS were used as the QC samples for Chromium, Hexavalent.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(D29137).

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	CUT #2 SUBLINER	
Lab Sample ID:	D29137-1	Date Sampled: 11/01/11
Matrix:	SO - Soil	Date Received: 11/03/11
Method:	SW846 8260B	Percent Solids: 88.4
Project:	PCU 297-10B	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	3V14429.D	1	11/03/11	DC	n/a	n/a	V3V829
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.02 g	5.0 ml	100 ul
Run #2			

Purgeable Aromatics

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	63	28	ug/kg	
108-88-3	Toluene	ND	130	63	ug/kg	
100-41-4	Ethylbenzene	ND	130	31	ug/kg	
1330-20-7	Xylene (total)	ND	250	130	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	102%		61-130%
460-00-4	4-Bromofluorobenzene	99%		53-131%
17060-07-0	1,2-Dichloroethane-D4	94%		62-130%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	CUT #2 SUBLINER	
Lab Sample ID:	D29137-1	Date Sampled: 11/01/11
Matrix:	SO - Soil	Date Received: 11/03/11
Method:	SW846 8270C BY SIM SW846 3546	Percent Solids: 88.4
Project:	PCU 297-10B	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	3G06786.D	5	11/04/11	TMB	11/04/11	OP4789	E3G250
Run #2							

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

COGCC Table 910-1 PAH List

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	38	30	ug/kg	
120-12-7	Anthracene	ND	38	34	ug/kg	
56-55-3	Benzo(a)anthracene	ND	94	49	ug/kg	
50-32-8	Benzo(a)pyrene	ND	94	68	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	94	70	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	94	41	ug/kg	
218-01-9	Chrysene	ND	94	41	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	94	70	ug/kg	
206-44-0	Fluoranthene	ND	38	38	ug/kg	
86-73-7	Fluorene	ND	38	32	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	110	100	ug/kg	
91-20-3	Naphthalene	ND	38	36	ug/kg	
129-00-0	Pyrene	ND	38	36	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		10-145%
321-60-8	2-Fluorobiphenyl	69%		10-130%
1718-51-0	Terphenyl-d14	79%		22-130%

(a) Elevated RL due to matrix.

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Page 1 of 1

Client Sample ID:	CUT #2 SUBLINER	
Lab Sample ID:	D29137-1	Date Sampled: 11/01/11
Matrix:	SO - Soil	Date Received: 11/03/11
Method:	SW846 8015B	Percent Solids: 88.4
Project:	PCU 297-10B	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB13713.D	1	11/04/11	SK	n/a	n/a	GGB777
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.0 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	13	6.3	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
120-82-1	1,2,4-Trichlorobenzene	72%		60-140%		

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

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Client Sample ID:	CUT #2 SUBLINER	Date Sampled:	11/01/11
Lab Sample ID:	D29137-1	Date Received:	11/03/11
Matrix:	SO - Soil	Percent Solids:	88.4
Method:	SW846-8015B SW846 3546		
Project:	PCU 297-10B		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD11332.D	1	11/07/11	CS	11/04/11	OP4792	GFD568
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	2.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	15	9.8	mg/kg	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits		
84-15-1	o-Terphenyl	87%		61-142%		

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: CUT #2 SUBLINER

Lab Sample ID: D29137-1

Matrix: SO - Soil

Project: PCU 297-10B

Date Sampled: 11/01/11

Date Received: 11/03/11

Percent Solids: 88.4

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	8.4	0.48	mg/kg	5	11/04/11	11/07/11 GJ	SW846 6020 ²	SW846 3050B ⁵
Barium	624	1.2	mg/kg	1	11/04/11	11/07/11 JB	SW846 6010B ³	SW846 3050B ⁴
Cadmium	< 1.2	1.2	mg/kg	1	11/04/11	11/07/11 JB	SW846 6010B ³	SW846 3050B ⁴
Chromium	69.6	1.2	mg/kg	1	11/04/11	11/07/11 JB	SW846 6010B ³	SW846 3050B ⁴
Copper	7.3	1.2	mg/kg	1	11/04/11	11/07/11 JB	SW846 6010B ³	SW846 3050B ⁴
Lead	8.2	6.0	mg/kg	1	11/04/11	11/07/11 JB	SW846 6010B ³	SW846 3050B ⁴
Mercury	< 0.11	0.11	mg/kg	1	11/04/11	11/04/11 JM	SW846 7471A ¹	SW846 7471A ⁶
Nickel	19.3	3.6	mg/kg	1	11/04/11	11/07/11 JB	SW846 6010B ³	SW846 3050B ⁴
Selenium	< 6.0	6.0	mg/kg	1	11/04/11	11/07/11 JB	SW846 6010B ³	SW846 3050B ⁴
Silver	< 3.6	3.6	mg/kg	1	11/04/11	11/07/11 JB	SW846 6010B ³	SW846 3050B ⁴
Zinc	48.6	3.6	mg/kg	1	11/04/11	11/07/11 JB	SW846 6010B ³	SW846 3050B ⁴

(1) Instrument QC Batch: MA1946

(2) Instrument QC Batch: MA1951

(3) Instrument QC Batch: MA1952

(4) Prep QC Batch: MP6194

(5) Prep QC Batch: MP6195

(6) Prep QC Batch: MP6196

RL = Reporting Limit

Report of Analysis

Client Sample ID: CUT #2 SUBLINER**Lab Sample ID:** D29137-1**Matrix:** SO - Soil**Project:** PCU 297-10B**Date Sampled:** 11/01/11**Date Received:** 11/03/11**Percent Solids:** 88.4**General Chemistry**

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Chromium, Hexavalent ^a	< 0.45	0.45	mg/kg	1	11/05/11 11:52	AMA	SW846 3060A/7196A
Chromium, Trivalent ^b	69.4	1.7	mg/kg	1	11/07/11 16:48	JB	SW846 3060/7196A M
Redox Potential Vs H2	400		mv	1	11/04/11	JD	ASTM D1498-76M
Solids, Percent	88.4		%	1	11/03/11	SWT	SM19 2540B M
Specific Conductivity	416	1.0	umhos/cm	1	11/08/11	JD	DEPT.OF AG, BOOK N9
pH	10.00		su	1	11/04/11 12:25	JD	SW846 9045C

(a) Analysis performed at Accutest Laboratories, Marlborough, MA.

(b) Calculated as: (Chromium) - (Chromium, Hexavalent)

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CUT #2 SUBLINER	Date Sampled:	11/01/11
Lab Sample ID:	D29137-1A	Date Received:	11/03/11
Matrix:	SO - Soil	Percent Solids:	88.4
Project:	PCU 297-10B		

SAR Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Calcium	5.90	2.0	mg/l	1	11/04/11	11/07/11 JB	SW846 6010B ¹	EPA 200.7 ²
Magnesium	2.38	1.0	mg/l	1	11/04/11	11/07/11 JB	SW846 6010B ¹	EPA 200.7 ²
Sodium	90.8	2.0	mg/l	1	11/04/11	11/07/11 JB	SW846 6010B ¹	EPA 200.7 ²

(1) Instrument QC Batch: MA1949
(2) Prep QC Batch: MP6197

RL = Reporting Limit

Report of Analysis

Client Sample ID:	CUT #2 SUBLINER	Date Sampled:	11/01/11
Lab Sample ID:	D29137-1A	Date Received:	11/03/11
Matrix:	SO - Soil	Percent Solids:	88.4
Project:	PCU 297-10B		

General Chemistry

Analyte	Result	RL	Units	DF	Analyzed	By	Method
Sodium Adsorption Ratio ^a	7.98		ratio	1	11/07/11 13:32	JB	USDA HANDBOOK 60

(a) Calculated as: (Na meq/L) / sqrt [(Ca meq/L)+ (Mg meq/L)/2]

RL = Reporting Limit

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Mountain States
4036 Youngfield Street Wheat Ridge, Co 80033
TEL. 303-425-6021 877-737-4521
FAX 303-425-6021

ACCUTEST LABORATORIES				Accutest Laboratories Mountain States 4036 Youngfield Street Wheat Ridge, Co 80033 TEL 303-425-6021 877-737-4521 FAX 303-425-6021				FED-EX Tracking # _____ Accutest Quote # _____		Bottle Order Control # _____ Accutest Job # D29137					
Client / Reporting Information				Project Information				Requested Analysis (see TEST CODE sheet)				Matrix Codes			
Company Name: KRW Consulting INC Sight Address: 8000 W 14th Ave Ste 200 City State Zip: Lakewood, CO 80214 Contact Contact E-mail: Dwayne Knudsen Phone # Fax #: 303-239-9011 Sampler(s) Name(s) Phone #: Colem Holtscher 303.565.9865				Project Name: PCU 297-10B Street: _____ Billing Information (If different from Report to): Company Name: _____ Street Address: _____ City State Zip: _____ Attention: _____ PO# _____								DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED-Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Waste FB-Field Blank EB-Equipment Blank RB-Rinse Blank TB-Trip Blank			
Sample ID / Point of Collection: Cut #2 Subliner MEDIA/DI Vial # _____				Date Time Collected by Matrix # of bottles IV/1/11 10:30 CH So 5				Number of preserved Bottles <input checked="" type="checkbox"/> HCl <input type="checkbox"/> NaOH <input type="checkbox"/> INO3 <input type="checkbox"/> I2SO4 <input checked="" type="checkbox"/> NONE <input type="checkbox"/> DI Water <input type="checkbox"/> MECH <input type="checkbox"/> ENCORE <small>Sealable</small>				LAB USE ONLY 			
Turnaround Time (Business days) <input type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> Std. 5 Business Days (By Contract only) <input type="checkbox"/> 5 Day FR SH <input checked="" type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY				Approved By (Accustest PM) / Date: <hr/> <hr/> <hr/> <hr/>				<input type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> State Forms <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> EDD Format <input type="checkbox"/> Commercial "B" + Narrative <input checked="" type="checkbox"/> PDF <input type="checkbox"/> FULLT1 (Level 3+4) Commercial "A" = Results Only Commercial "B" = Results + QC Summary				Comments / Special Instructions Please email results to KRW Piceance Creek TOM Team			
Emergency & Rush T/A data available VIA Lablink				Sample Custody must be documented below each time samples change possession, including courier delivery.											
Relinquished To Supplier: 1 C. L. Williams Date Time: 11-1-11 17:30				Received By: 1 Rime Service Center				Relinquished By: 2 CRK				Date Time: _____			
Relinquished by Sampler: 3				Date Time: _____				Received By: 2 David J.R				Date Time: _____			
Relinquished by: 5				Date Time: _____				Received By: 5				Date Time: _____			
Custody Seal # HDCO				<input checked="" type="checkbox"/> Effect Preserved where applicable <input type="checkbox"/> Not Intact				On Ice Cooler Temp. <input checked="" type="checkbox"/> On Ice 2.2							

D29137: Chain of Custody

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Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D29137

Client: KRW CONSULTING INC.

Immediate Client Services Action Required: No

Date / Time Received: 11/3/2011 10:35:00 AM

No. Coolers: 1

Client Service Action Required at Login: No

Project: PCU 297-10B

Airbill #'s: HD/CO

Cooler Security
Y or N
Y or N

- | | |
|--|--|
| 1. Custody Seals Present: <input checked="" type="checkbox"/> <input type="checkbox"/> | 3. COC Present: <input checked="" type="checkbox"/> <input type="checkbox"/> |
| 2. Custody Seals Intact: <input checked="" type="checkbox"/> <input type="checkbox"/> | 4. Smpl Dates/Time OK <input checked="" type="checkbox"/> <input type="checkbox"/> |

Cooler Temperature
Y or N

- | | |
|---|--------------|
| 1. Temp criteria achieved: <input checked="" type="checkbox"/> <input type="checkbox"/> | Infrared gun |
| 2. Cooler temp verification: | Ice (bag) |
| 3. Cooler media: | |

Quality Control Preservation
Y or N
N/A

- | | |
|---|-------------------------------------|
| 1. Trip Blank present / cooler: <input type="checkbox"/> <input type="checkbox"/> | |
| 2. Trip Blank listed on COC: <input type="checkbox"/> <input type="checkbox"/> | |
| 3. Samples preserved properly: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 4. VOCs headspace free: <input type="checkbox"/> <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation
Y or N

- | | |
|---|--|
| 1. Sample labels present on bottles: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 2. Container labeling complete: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 3. Sample container label / COC agree: <input checked="" type="checkbox"/> <input type="checkbox"/> | |

Sample Integrity - Condition
Y or N

- | | |
|---|--|
| 1. Sample recvd within HT: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 2. All containers accounted for: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 3. Condition of sample: Intact | |

Sample Integrity - Instructions
Y or N N/A

- | | |
|---|-------------------------------------|
| 1. Analysis requested is clear: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests: <input type="checkbox"/> <input checked="" type="checkbox"/> | |
| 3. Sufficient volume rec'd for analysis: <input checked="" type="checkbox"/> <input type="checkbox"/> | |
| 4. Compositing instructions clear: <input type="checkbox"/> <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: <input type="checkbox"/> <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

GC/MS Volatiles

5

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: D29137
Account: KRWCCOL KRW Consulting, Inc.
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V829-MB	3V14421.D	1	11/03/11	DC	n/a	n/a	V3V829

The QC reported here applies to the following samples:

Method: SW846 8260B

D29137-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	22	ug/kg	
100-41-4	Ethylbenzene	ND	100	25	ug/kg	
108-88-3	Toluene	ND	100	50	ug/kg	
1330-20-7	Xylene (total)	ND	200	100	ug/kg	

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	102% 61-130%
460-00-4	4-Bromofluorobenzene	99% 53-131%
17060-07-0	1,2-Dichloroethane-D4	96% 62-130%

Blank Spike Summary

Page 1 of 1

Job Number: D29137

Account: KRWCCOL KRW Consulting, Inc.

Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V3V829-BS	3V14422.D	1	11/03/11	DC	n/a	n/a	V3V829

The QC reported here applies to the following samples:

Method: SW846 8260B

D29137-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	52.5	105	70-130
100-41-4	Ethylbenzene	50	54.4	109	70-130
108-88-3	Toluene	50	51.1	102	70-130
1330-20-7	Xylene (total)	150	164	109	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	104%	61-130%
460-00-4	4-Bromofluorobenzene	104%	53-131%
17060-07-0	1,2-Dichloroethane-D4	94%	62-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D29137
Account: KRWCCOL KRW Consulting, Inc.
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D29137-1MS	3V14430.D	1	11/03/11	DC	n/a	n/a	V3V829
D29137-1MSD	3V14431.D	1	11/03/11	DC	n/a	n/a	V3V829
D29137-1	3V14429.D	1	11/03/11	DC	n/a	n/a	V3V829

The QC reported here applies to the following samples:

Method: SW846 8260B

D29137-1

CAS No.	Compound	D29137-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		3150	3260	104	3360	107	3	70-134/30
100-41-4	Ethylbenzene	ND		3150	3290	105	3380	107	3	70-137/30
108-88-3	Toluene	ND		3150	3050	97	3160	100	4	70-130/30
1330-20-7	Xylene (total)	ND		9440	9930	105	10100	107	2	61-131/30

CAS No.	Surrogate Recoveries	MS	MSD	D29137-1	Limits
2037-26-5	Toluene-D8	101%	102%	102%	61-130%
460-00-4	4-Bromofluorobenzene	102%	104%	99%	53-131%
17060-07-0	1,2-Dichloroethane-D4	102%	100%	94%	62-130%

GC/MS Volatiles

Raw Data



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V3110311.S\
Data File : 3V14429.D
Acq On : 3 Nov 2011 5:12 pm
Operator : DONC
Sample : D29137-1, 50x
Misc : MS2906,V3V829,5.019,,100,5,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 04 10:37:30 2011
Quant Method : C:\msdchem\1\METHODS\V3AP816TVH816.M
Quant Title : 8260
QLast Update : Tue Oct 25 11:42:01 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) Pentafluorobenzene	11.884	168	364505	50.00	ug/l	0.00
35) 1,4-Difluorobenzene	12.680	114	579654	50.00	ug/l	0.00
53) Chlorobenzene-d5	15.311	117	483903	50.00	ug/l	0.00
74) 1,4-Dichlorobenzene-d4	17.310	152	259675	50.00	ug/l	0.00

System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	12.282	102	47090	47.17	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	94.34%
61) Toluene-d8	14.073	98	774542	51.18	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	102.36%
69) 4-Bromofluorobenzene	16.264	95	240402	49.32	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	98.64%

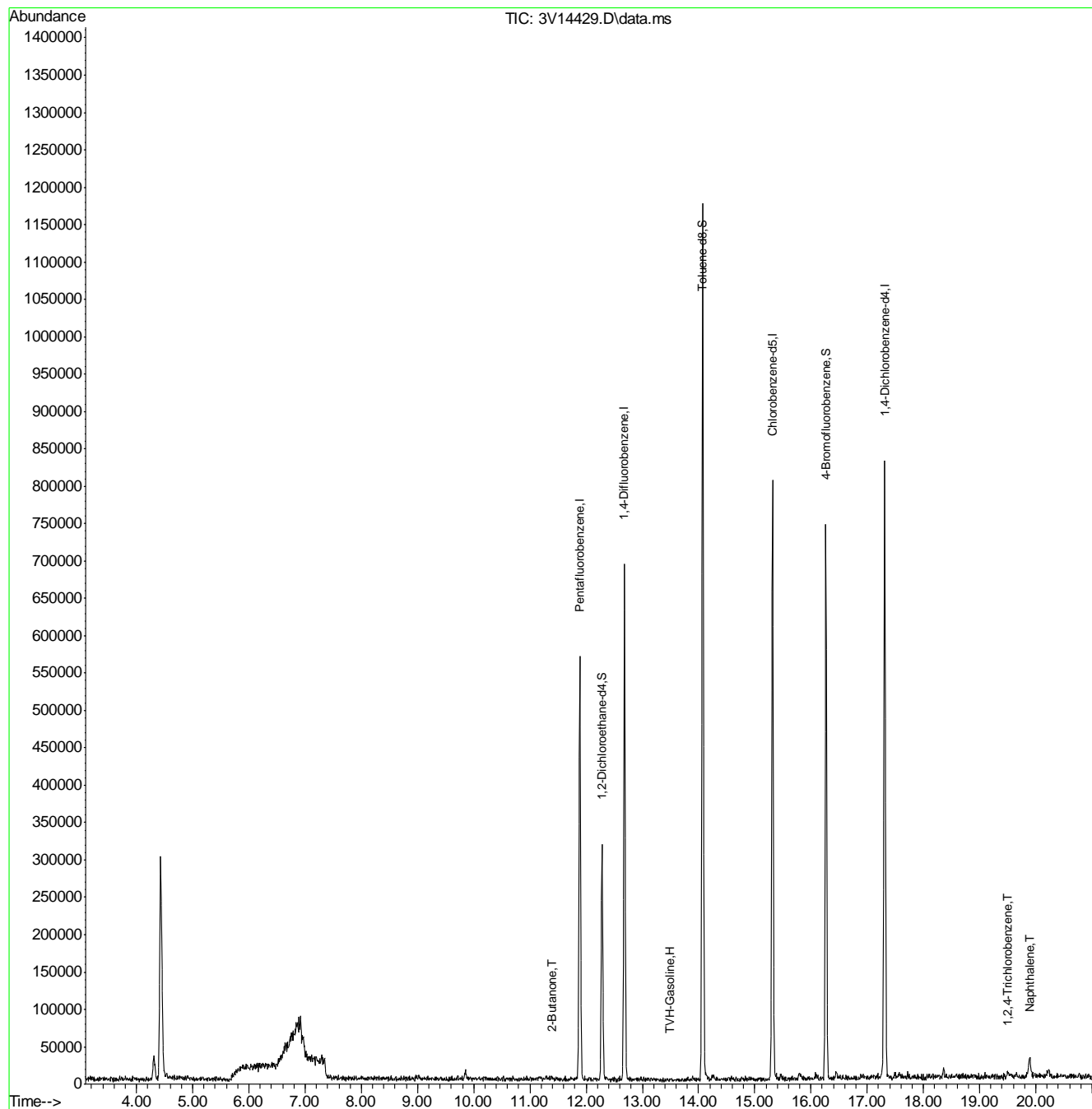
Target Compounds					Qvalue
1) TVH-Gasoline	13.491	TIC	156364m	21.65	ug/l
25) 2-Butanone	11.387	72	459	0.56	ug/l
90) 1,2,4-Trichlorobenzene	19.499	180	2497	0.41	ug/l
91) Naphthalene	19.890	128	30727	2.13	ug/l

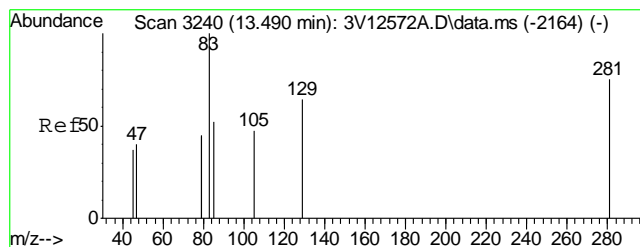
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V3110311.S\
Data File : 3V14429.D
Acq On : 3 Nov 2011 5:12 pm
Operator : DONC
Sample : D29137-1, 50x
Misc : MS2906,V3V829,5.019,,100,5,1
ALS Vial : 11 Sample Multiplier: 1

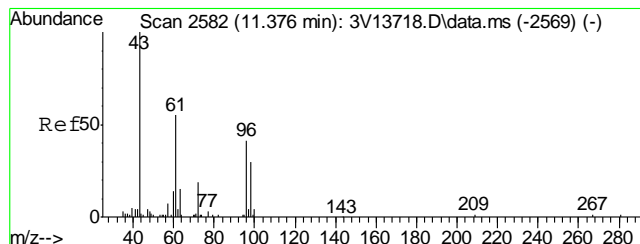
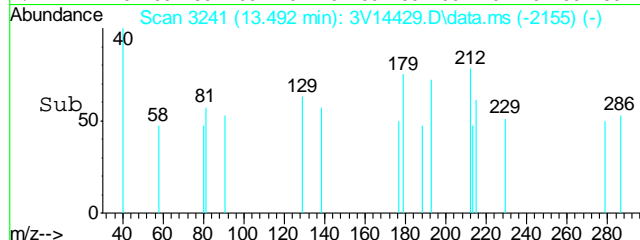
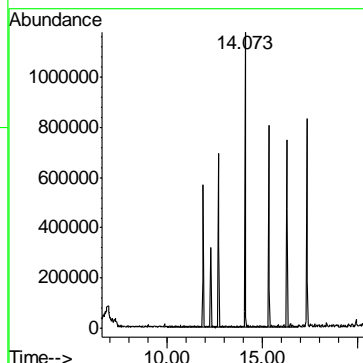
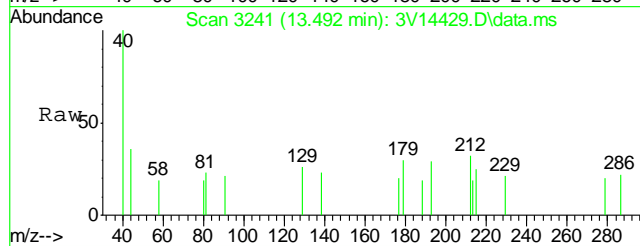
Quant Time: Nov 04 10:37:30 2011
Quant Method : C:\msdchem\1\METHODS\V3AP816TVH816.M
Quant Title : 8260
QLast Update : Tue Oct 25 11:42:01 2011
Response via : Initial Calibration





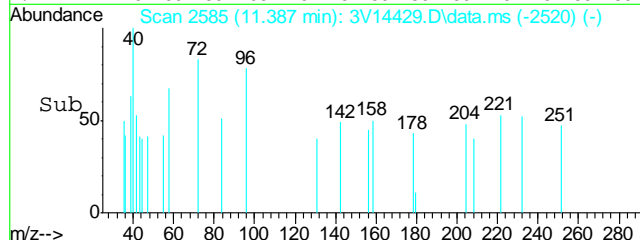
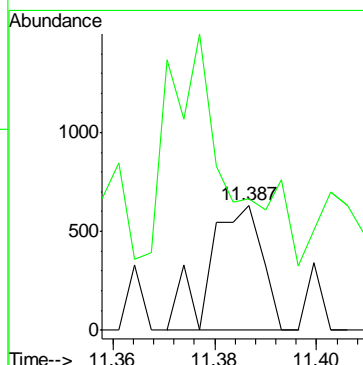
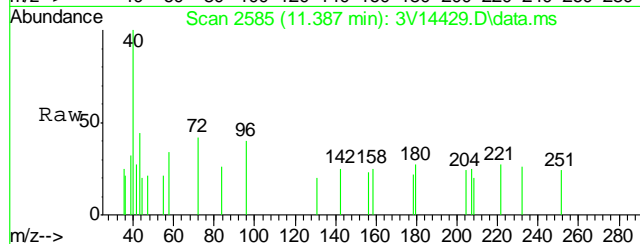
#1
TVH-Gasoline
Concen: 21.65 ug/l m
RT: 13.491 min Scan# 3241
Delta R.T. 0.000 min
Lab File: 3V14429.D
Acq: 3 Nov 2011 5:12 pm

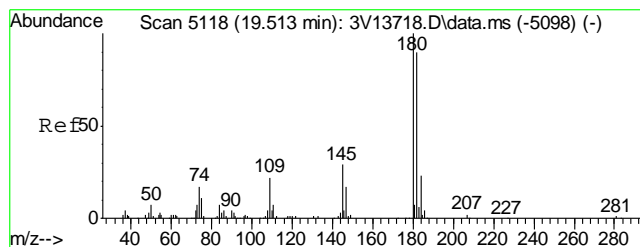
Tgt Ion:TIC Resp: 156364



#25
2-Butanone
Concen: 0.56 ug/l
RT: 11.387 min Scan# 2585
Delta R.T. 0.009 min
Lab File: 3V14429.D
Acq: 3 Nov 2011 5:12 pm

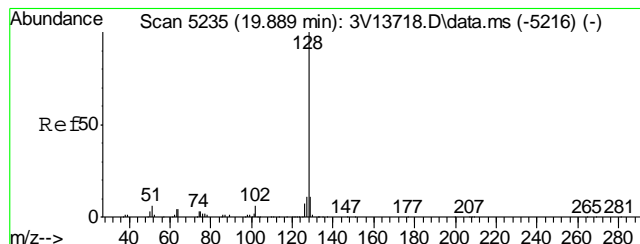
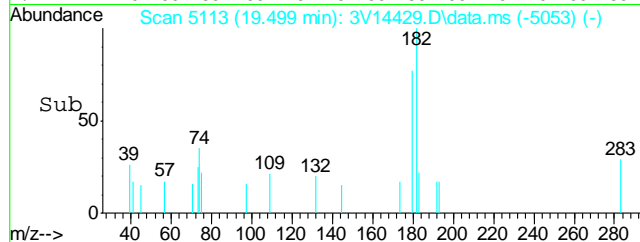
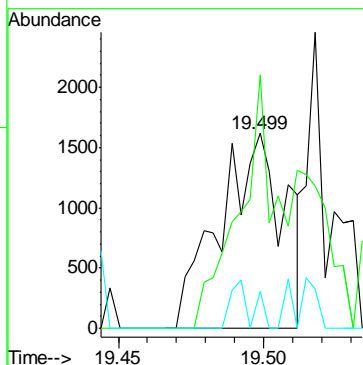
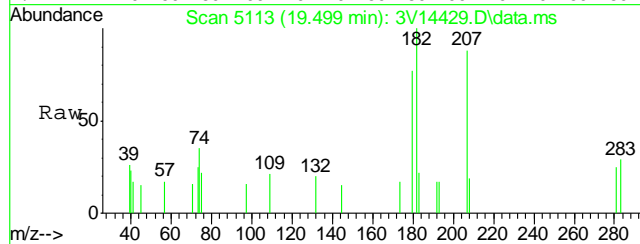
Tgt Ion: 72 Resp: 459
Ion Ratio Lower Upper
72 100
43 363.8 306.2 459.4





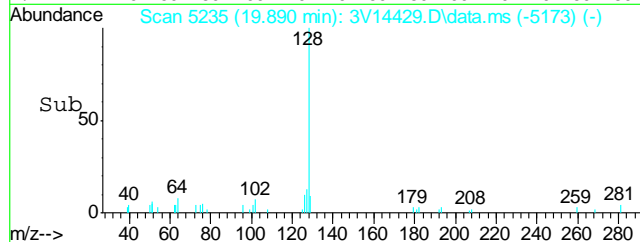
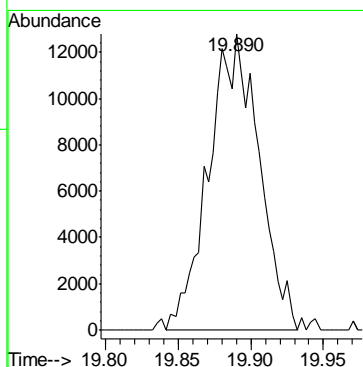
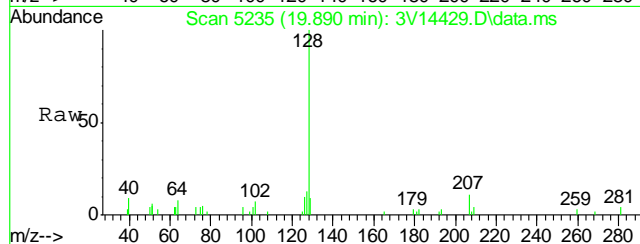
#90
1,2,4-Trichlorobenzene
Concen: 0.41 ug/l
RT: 19.499 min Scan# 5113
Delta R.T. -0.008 min
Lab File: 3V14429.D
Acq: 3 Nov 2011 5:12 pm

Tgt Ion	Ratio	Lower	Upper
180	100		
182	71.5	75.0	112.4#
145	7.9	24.9	37.3#



#91
Naphthalene
Concen: 2.13 ug/l
RT: 19.890 min Scan# 5235
Delta R.T. -0.001 min
Lab File: 3V14429.D
Acq: 3 Nov 2011 5:12 pm

Tgt Ion:128 Resp: 30727



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V3110311.S\
Data File : 3V14421.D
Acq On : 3 Nov 2011 1:04 pm
Operator : DONC
Sample : MB
Misc : MS2906,V3V829,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 04 10:27:39 2011
Quant Method : C:\msdchem\1\METHODS\V3AP816TVH816.M
Quant Title : 8260
QLast Update : Tue Oct 25 11:42:01 2011
Response via : Initial Calibration

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) Pentafluorobenzene	11.887	168	382895	50.00	ug/l	0.00
35) 1,4-Difluorobenzene	12.683	114	612806	50.00	ug/l	0.00
53) Chlorobenzene-d5	15.314	117	503964	50.00	ug/l	0.00
74) 1,4-Dichlorobenzene-d4	17.310	152	265318	50.00	ug/l	0.00

System Monitoring Compounds

33) 1,2-Dichloroethane-d4	12.282	102	50425	48.09	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	96.18%
61) Toluene-d8	14.069	98	803466	50.98	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	101.96%
69) 4-Bromofluorobenzene	16.267	95	250307	49.31	ug/l	0.00
Spiked Amount	50.000	Range	70 - 130	Recovery	=	98.62%

Target Compounds

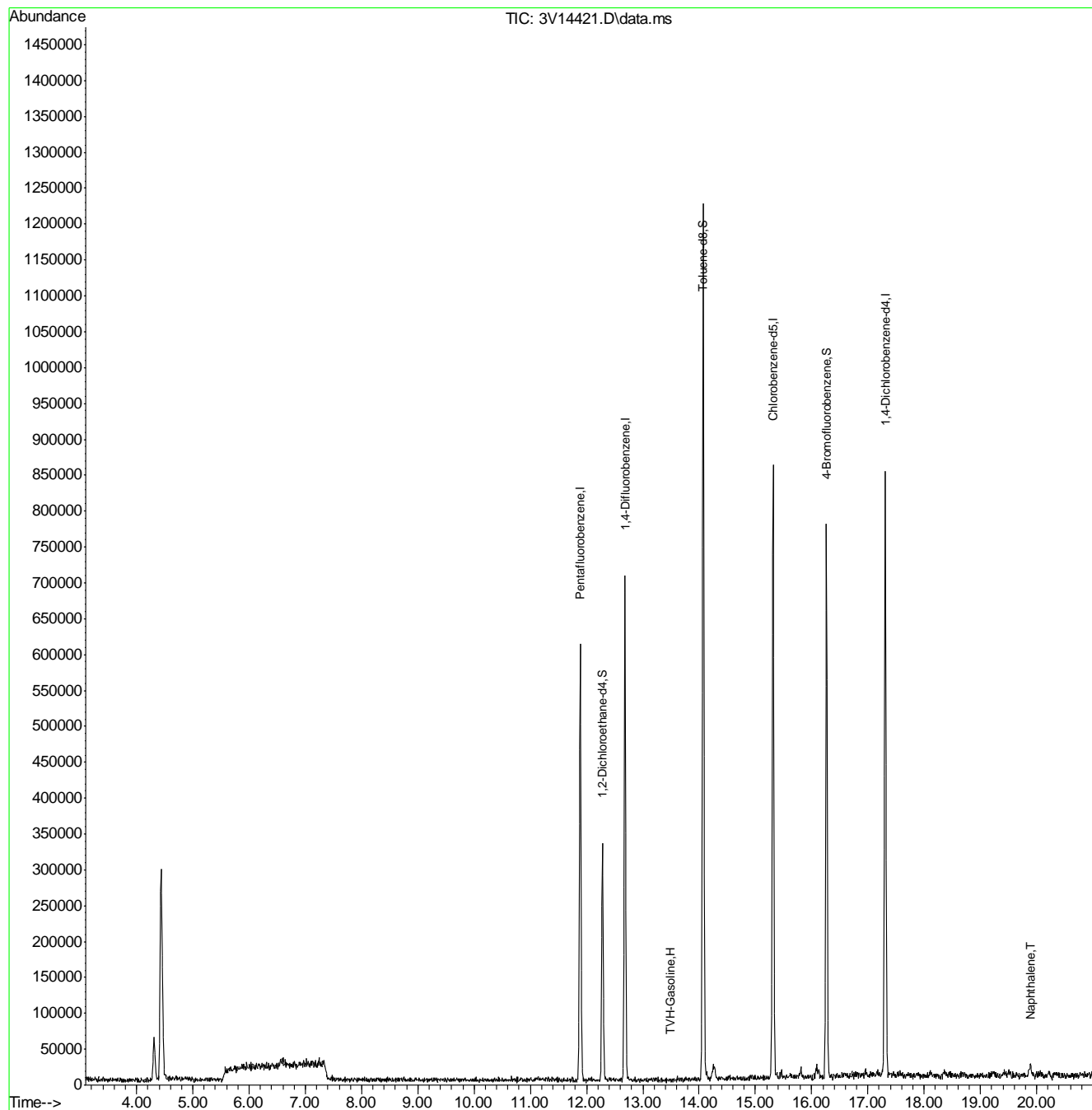
					Qvalue
1) TVH-Gasoline	13.491	TIC	404566m	30.98	ug/l
91) Naphthalene	19.899	128	20999	1.42	ug/l

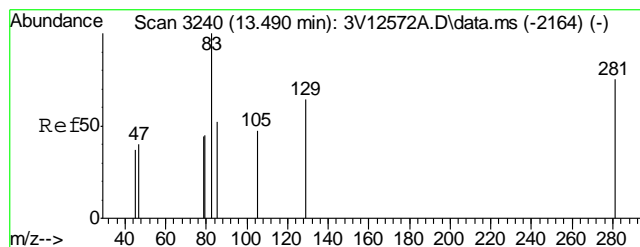
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V3110311.S\
Data File : 3V14421.D
Acq On : 3 Nov 2011 1:04 pm
Operator : DONC
Sample : MB
Misc : MS2906,V3V829,5,,100,5,1
ALS Vial : 3 Sample Multiplier: 1

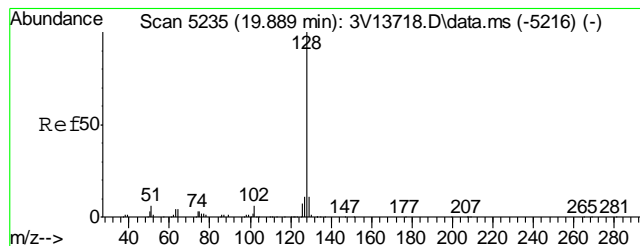
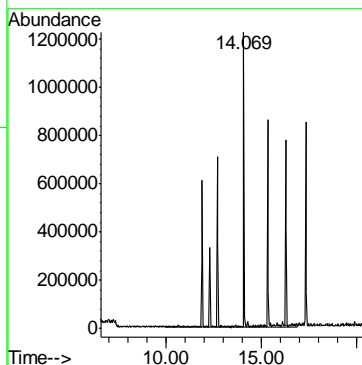
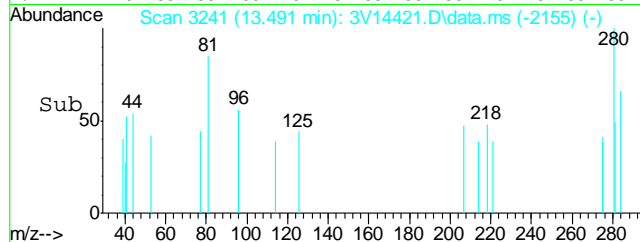
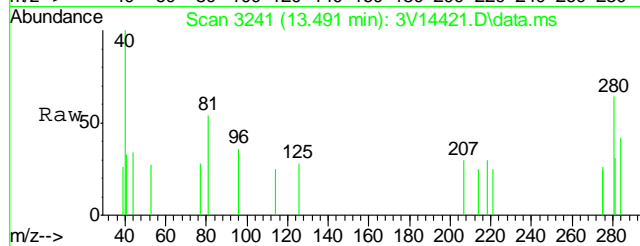
Quant Time: Nov 04 10:27:39 2011
Quant Method : C:\msdchem\1\METHODS\V3AP816TVH816.M
Quant Title : 8260
QLast Update : Tue Oct 25 11:42:01 2011
Response via : Initial Calibration





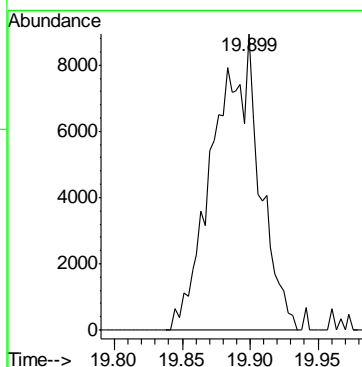
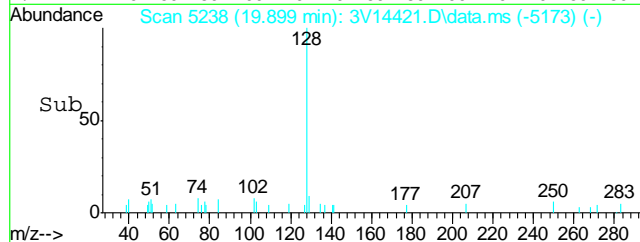
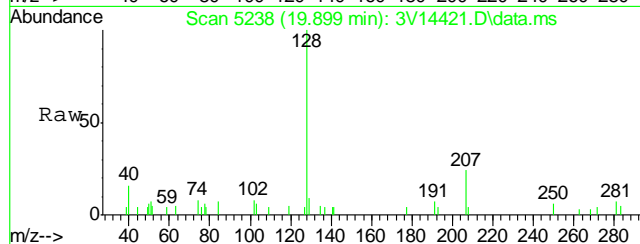
#1
TVH-Gasoline
Concen: 30.98 ug/l m
RT: 13.491 min Scan# 3241
Delta R.T. 0.000 min
Lab File: 3V14421.D
Acq: 3 Nov 2011 1:04 pm

Tgt Ion:TIC Resp: 404566



#91
Naphthalene
Concen: 1.42 ug/l
RT: 19.899 min Scan# 5238
Delta R.T. 0.008 min
Lab File: 3V14421.D
Acq: 3 Nov 2011 1:04 pm

Tgt Ion:128 Resp: 20999



GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: D29137
Account: KRWCCOL KRW Consulting, Inc.
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4789-MB	3G06784.D	1	11/04/11	TMB	11/04/11	OP4789	E3G250

The QC reported here applies to the following samples:**Method:** SW846 8270C BY SIM

D29137-1

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	6.7	5.3	ug/kg	
120-12-7	Anthracene	ND	6.7	6.0	ug/kg	
56-55-3	Benzo(a)anthracene	ND	17	8.7	ug/kg	
50-32-8	Benzo(a)pyrene	ND	17	12	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	17	12	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	17	7.3	ug/kg	
218-01-9	Chrysene	ND	17	7.3	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	17	12	ug/kg	
206-44-0	Fluoranthene	ND	6.7	6.7	ug/kg	
86-73-7	Fluorene	ND	6.7	5.7	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	20	18	ug/kg	
91-20-3	Naphthalene	ND	6.7	6.3	ug/kg	
129-00-0	Pyrene	ND	6.7	6.3	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	90% 10-145%
321-60-8	2-Fluorobiphenyl	82% 10-130%
1718-51-0	Terphenyl-d14	104% 22-130%

Blank Spike Summary

Page 1 of 1

Job Number: D29137
Account: KRWCCOL KRW Consulting, Inc.
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4789-BS	3G06785.D	1	11/04/11	TMB	11/04/11	OP4789	E3G250

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D29137-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	83.3	70.6	85	34-130
120-12-7	Anthracene	83.3	79.2	95	35-130
56-55-3	Benzo(a)anthracene	83.3	81.1	97	36-130
50-32-8	Benzo(a)pyrene	83.3	77.7	93	36-130
205-99-2	Benzo(b)fluoranthene	83.3	76.1	91	35-130
207-08-9	Benzo(k)fluoranthene	83.3	71.6	86	37-130
218-01-9	Chrysene	83.3	74.2	89	40-130
53-70-3	Dibenzo(a,h)anthracene	83.3	78.5	94	32-130
206-44-0	Fluoranthene	83.3	75.9	91	38-130
86-73-7	Fluorene	83.3	73.0	88	35-130
193-39-5	Indeno(1,2,3-cd)pyrene	83.3	76.2	91	28-130
91-20-3	Naphthalene	83.3	72.3	87	35-130
129-00-0	Pyrene	83.3	76.5	92	37-130

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	102%	10-145%
321-60-8	2-Fluorobiphenyl	84%	10-130%
1718-51-0	Terphenyl-d14	94%	22-130%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 1

Job Number: D29137
Account: KRWCCOL KRW Consulting, Inc.
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4789-MS ^a	3G06787.D	5	11/04/11	TMB	11/04/11	OP4789	E3G250
OP4789-MSD ^a	3G06788.D	5	11/05/11	TMB	11/04/11	OP4789	E3G250
D29137-1 ^a	3G06786.D	5	11/04/11	TMB	11/04/11	OP4789	E3G250

The QC reported here applies to the following samples:

Method: SW846 8270C BY SIM

D29137-1

CAS No.	Compound	D29137-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		94.2	71.6	76	70.0	74	2	10-155/30
120-12-7	Anthracene	ND		94.2	83.2	88	80.0	85	4	10-155/30
56-55-3	Benzo(a)anthracene	ND		94.2	104	110	101	107	3	10-175/30
50-32-8	Benzo(a)pyrene	ND		94.2	86.9	92	86.6	92	0	10-164/30
205-99-2	Benzo(b)fluoranthene	ND		94.2	81.1	86	82.2	87	1	10-165/30
207-08-9	Benzo(k)fluoranthene	ND		94.2	89.4	95	84.8	90	5	10-178/30
218-01-9	Chrysene	ND		94.2	74.2	79	70.6	75	5	10-147/30
53-70-3	Dibenzo(a,h)anthracene	ND		94.2	73.3	78	71.1	76	3	10-144/30
206-44-0	Fluoranthene	ND		94.2	94.1	100	88.8	94	6	10-207/30
86-73-7	Fluorene	ND		94.2	75.0	80	72.6	77	3	10-163/30
193-39-5	Indeno(1,2,3-cd)pyrene	ND		94.2	ND	0* ^b	ND	0* ^b	nc	10-180/30
91-20-3	Naphthalene	ND		94.2	75.1	80	75.7	80	1	10-198/30
129-00-0	Pyrene	ND		94.2	81.2	86	79.6	85	2	10-189/30

CAS No.	Surrogate Recoveries	MS	MSD	D29137-1	Limits
4165-60-0	Nitrobenzene-d5	92%	98%	81%	10-145%
321-60-8	2-Fluorobiphenyl	75%	72%	69%	10-130%
1718-51-0	Terphenyl-d14	81%	80%	79%	22-130%

(a) Elevated RL due to matrix.

(b) Outside control limits due to matrix interference. Refer to Blank Spike.

GC/MS Semi-volatiles

Raw Data

∞

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110411\
 Data File : 3g06786.D
 Acq On : 4 Nov 2011 11:19 pm
 Operator : TamiB
 Sample : D29137-1,5x
 Misc : OP4789,E3G250,30.05,,,1,5
 ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 07 12:22:20 2011
 Quant Method : C:\msdchem\1\METHODS\SIMPE3G250.M
 Quant Title : PAHSIM BASE
 QLast Update : Mon Nov 07 11:55:43 2011
 Response via : Initial Calibration

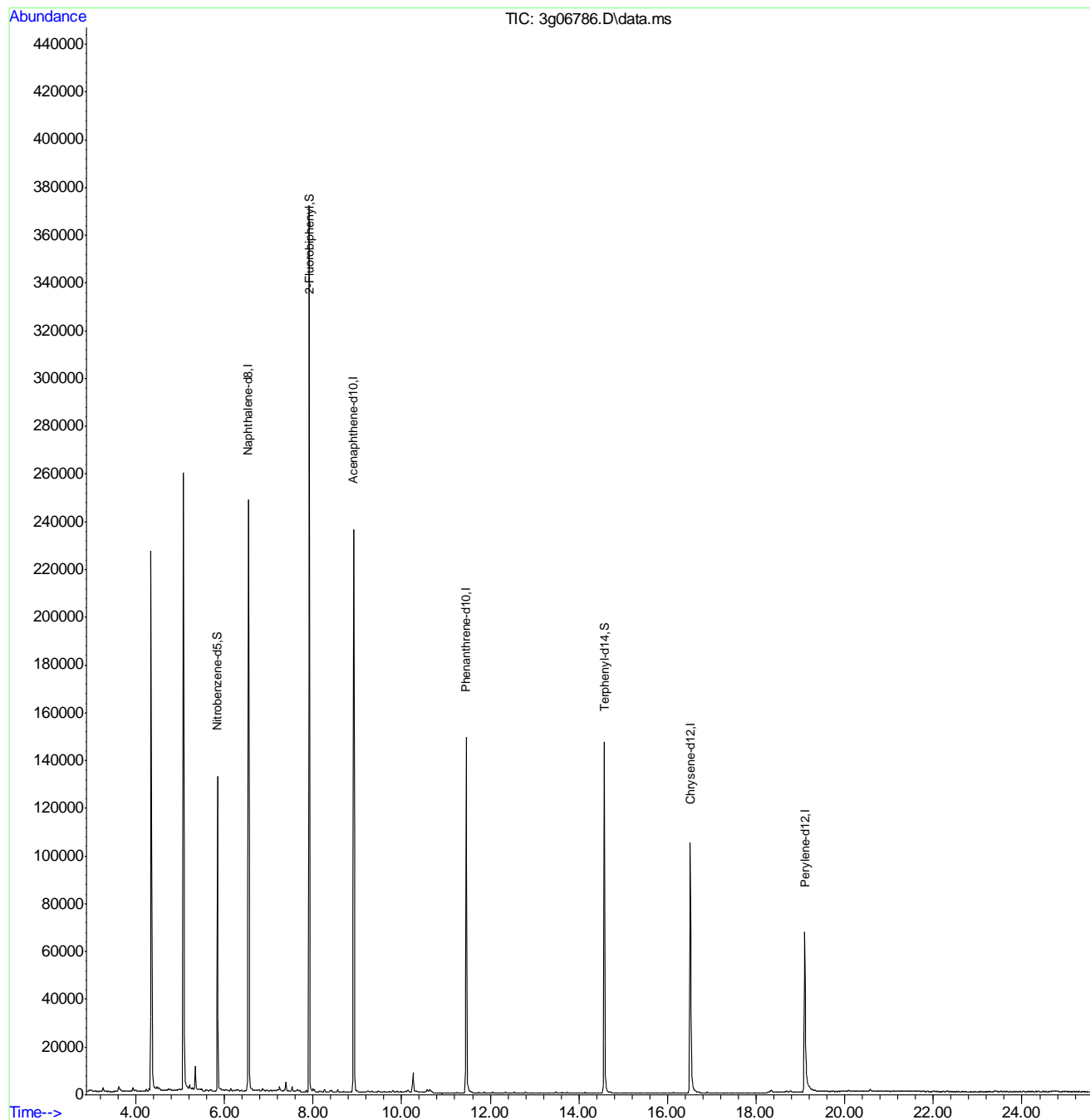
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	6.543	136	219590	4.00	ug/mL	0.00
6) Acenaphthene-d10	8.920	164	122891	4.00	ug/mL	0.00
14) Phenanthrene-d10	11.459	188	167291	4.00	ug/mL	0.00
18) Chrysene-d12	16.518	240	137981	4.00	ug/mL	0.00
23) Perylene-d12	19.098	264	110291	4.00	ug/mL	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	5.845	82	68693	8.07	ug/mL	0.00
7) 2-Fluorobiphenyl	7.916	172	305416	6.88	ug/mL	0.00
20) Terphenyl-d14	14.577	244	181349	7.95	ug/mL	0.00
Target Compounds						
					Qvalue	
3) N-Nitrosodimethylamine	0.000		0	N.D.	d	
4) N-Nitrosodi-propylamine	0.000		0	N.D.	d	
5) Naphthalene	0.000		0	N.D.	d	
8) 2-Methylnaphthalene	0.000		0	N.D.	d	
9) 1-Methylnaphthalene	0.000		0	N.D.	d	
10) Acenaphthylene	0.000		0	N.D.	d	
11) Acenaphthene	0.000		0	N.D.	d	
12) Fluorene	0.000		0	N.D.	d	
13) Diphenylamine	0.000		0	N.D.	d	
15) Phenanthrene	0.000		0	N.D.	d	
16) Anthracene	0.000		0	N.D.	d	
17) Fluoranthene	0.000		0	N.D.	d	
19) Pyrene	0.000		0	N.D.	d	
21) Benzo(a)anthracene	0.000		0	N.D.	d	
22) Chrysene	0.000		0	N.D.	d	
24) Benzo(b)fluoranthene	0.000		0	N.D.	d	
25) Benzo(k)fluoranthene	0.000		0	N.D.	d	
26) Benzo(a)pyrene	0.000		0	N.D.	d	
27) Indeno(1,2,3-cd)pyrene	0.000		0	N.D.	d	
28) Dibenz(a,h)anthracene	0.000		0	N.D.	d	
29) Benzo(g,h,i)perylene	0.000		0	N.D.	d	

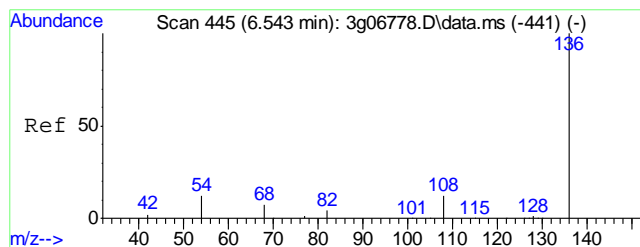
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110411\
Data File : 3g06786.D
Acq On : 4 Nov 2011 11:19 pm
Operator : TamiB
Sample : D29137-1,5x
Misc : OP4789,E3G250,30.05,,,1,5
ALS Vial : 17 Sample Multiplier: 1

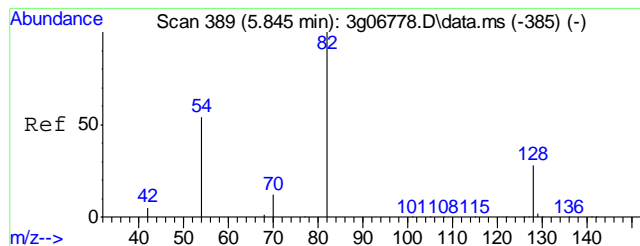
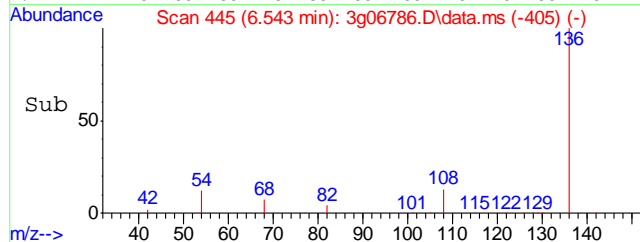
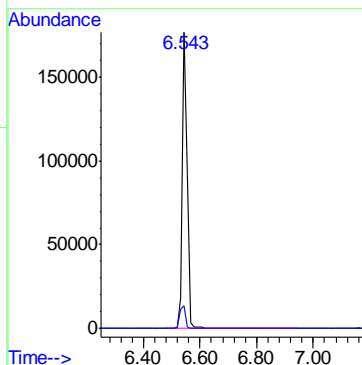
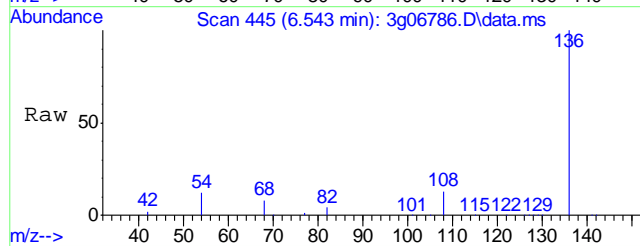
Quant Time: Nov 07 12:22:20 2011
Quant Method : C:\msdchem\1\METHODS\SIMPE3G250.M
Quant Title : PAHSIM BASE
QLast Update : Mon Nov 07 11:55:43 2011
Response via : Initial Calibration





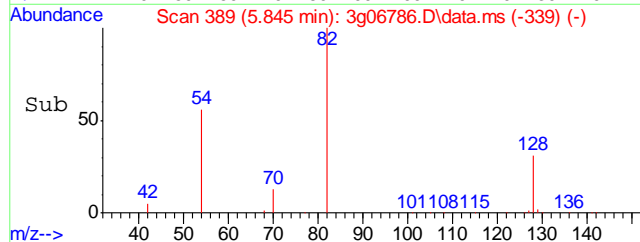
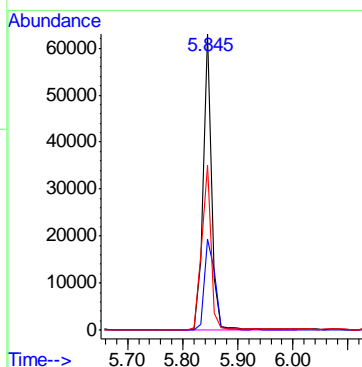
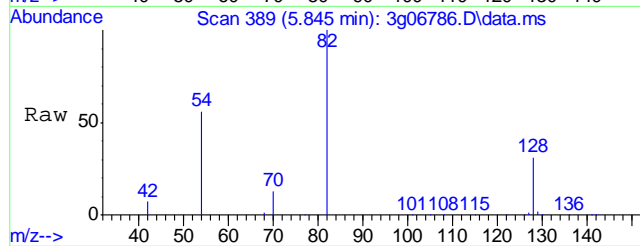
#1
Naphthalene-d8
Concen: 4.00 ug/mL
RT: 6.543 min Scan# 445
Delta R.T. 0.000 min
Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

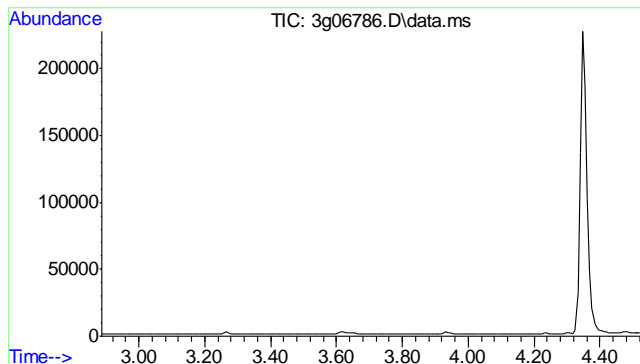
Tgt Ion: 136 Resp: 219590
Ion Ratio Lower Upper
136 100
68 9.2 0.0 29.1



#2
Nitrobenzene-d5
Concen: 8.07 ug/mL
RT: 5.845 min Scan# 389
Delta R.T. 0.000 min
Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

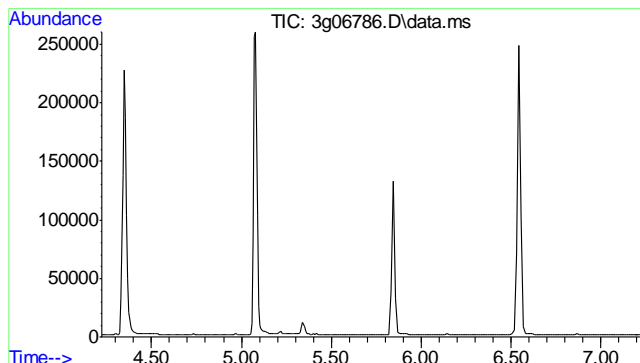
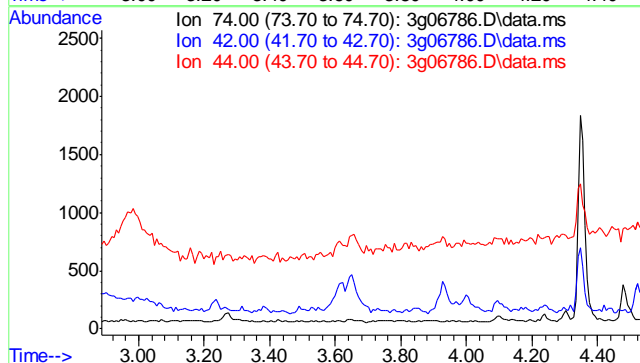
Tgt Ion: 82 Resp: 68693
Ion Ratio Lower Upper
82 100
128 37.7 17.0 57.0
54 61.5 37.7 77.7





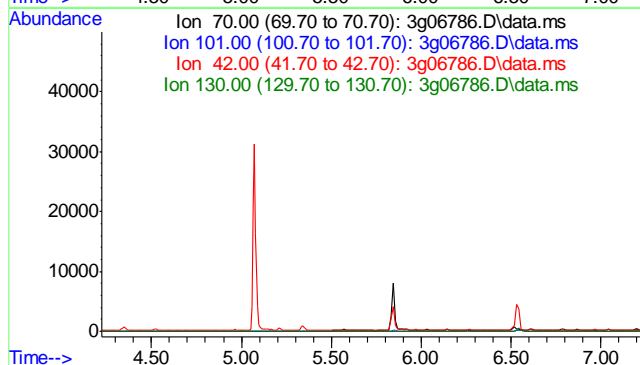
#3
 N-Nitrosodimethylamine
 Concen: N.D. ug/mL
 Expected RT: 3.03 min
 Lab File: 3g06786.D
 Acq: 4 Nov 11 11:19 pm

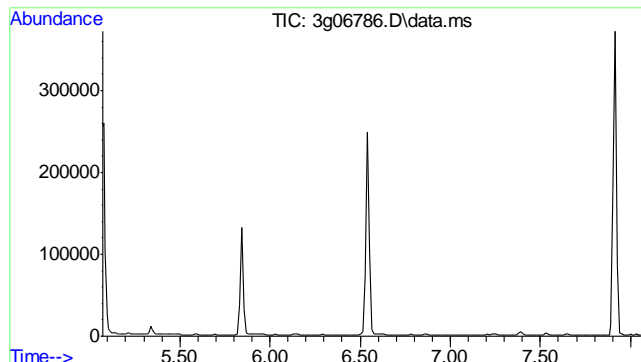
Tgt Ion	Exp Ratio
74	100
42	65.4
44	5.2



#4
 N-Nitrosodi-propylamine
 Concen: N.D. ug/mL
 Expected RT: 5.72 min
 Lab File: 3g06786.D
 Acq: 4 Nov 11 11:19 pm

Tgt Ion	Exp Ratio
70	100
101	11.6
42	54.9
130	20.8

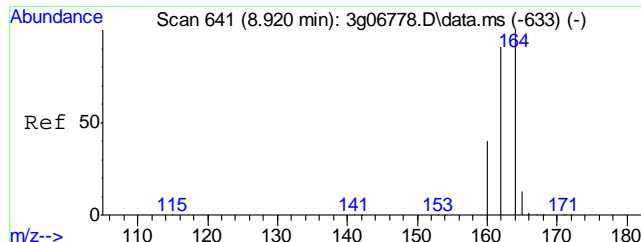
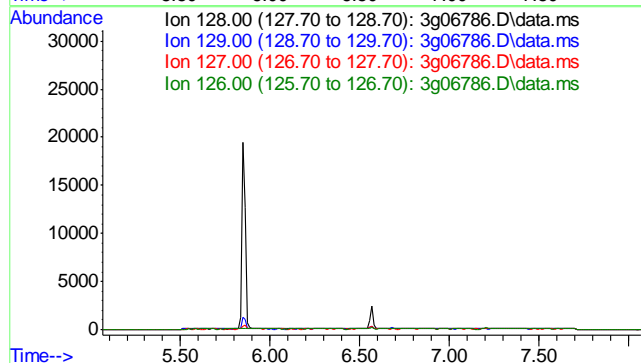




#5
Naphthalene
Concen: N.D. ug/mL
Expected RT: 6.57 min

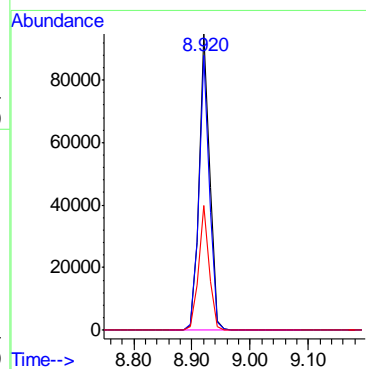
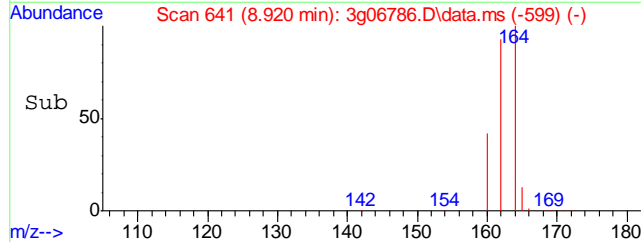
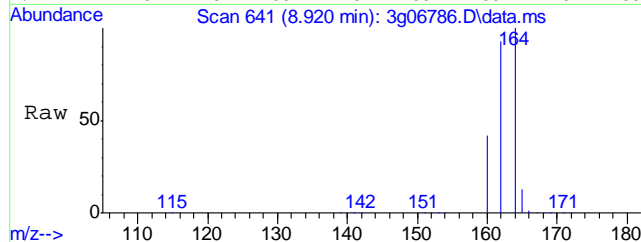
Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

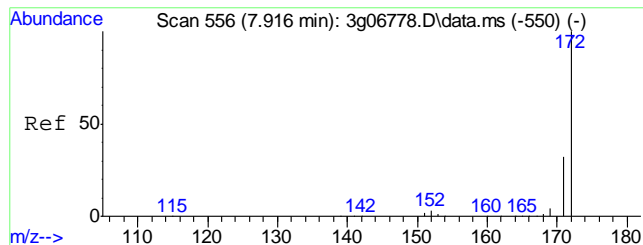
Tgt Ion: 128
Sig Exp Ratio
128 100
129 10.9
127 12.6
126 7.2



#6
Acenaphthene-d10
Concen: 4.00 ug/mL
RT: 8.920 min Scan# 641
Delta R.T. 0.000 min
Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

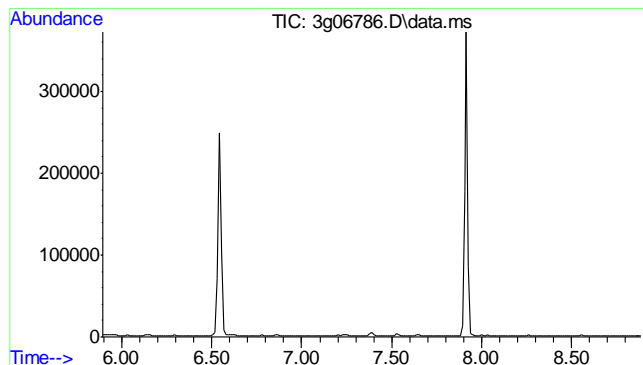
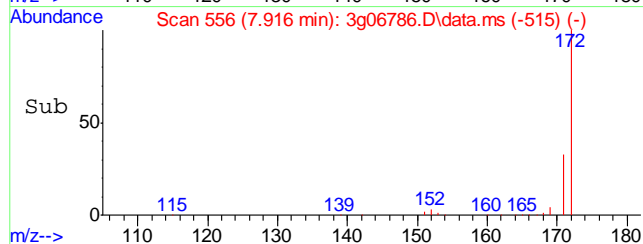
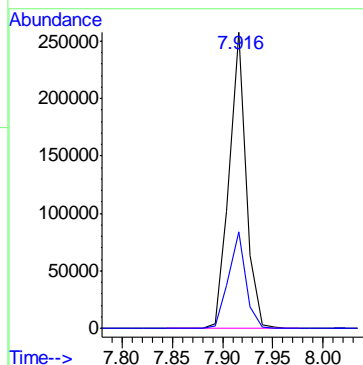
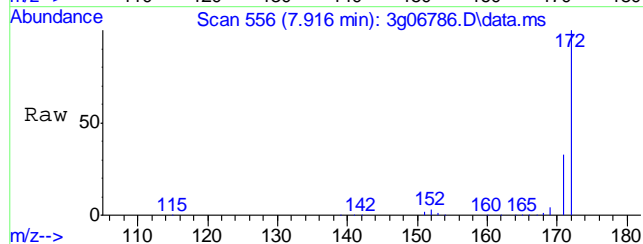
Tgt Ion: 164 Resp: 122891
Ion Ratio Lower Upper
164 100
162 91.6 71.6 111.6
160 41.5 21.1 61.1





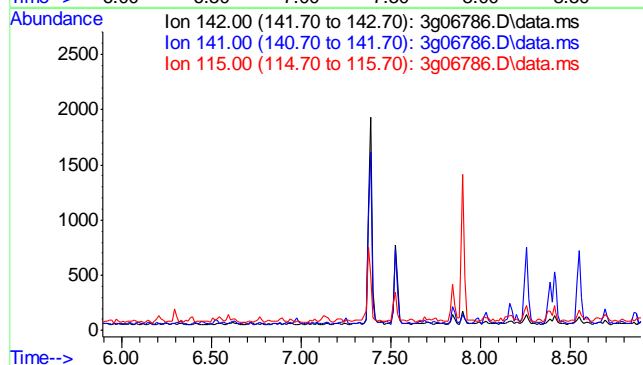
#7
2-Fluorobiphenyl
Concen: 6.88 ug/mL
RT: 7.916 min Scan# 556
Delta R.T. 0.000 min
Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

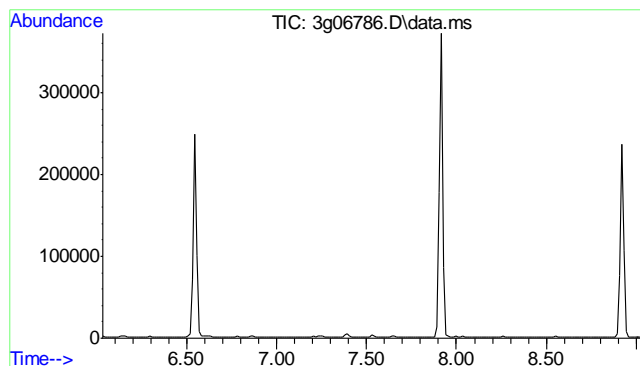
Tgt Ion	Ratio	Lower	Upper
172	100		
171	33.1	12.8	52.8



#8
2-Methylnaphthalene
Concen: N.D. ug/mL
Expected RT: 7.39 min
Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

Tgt Ion	Sig	Exp Ratio
142	100	
141	83.1	
115	35.6	

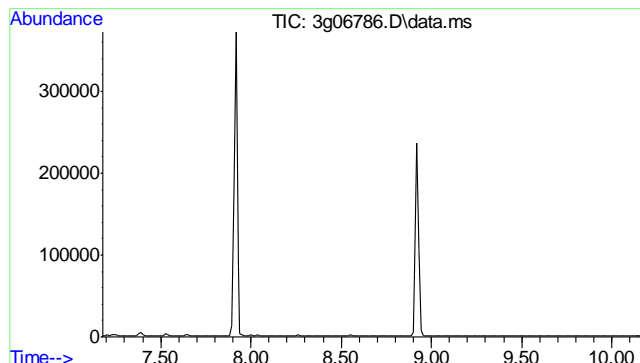
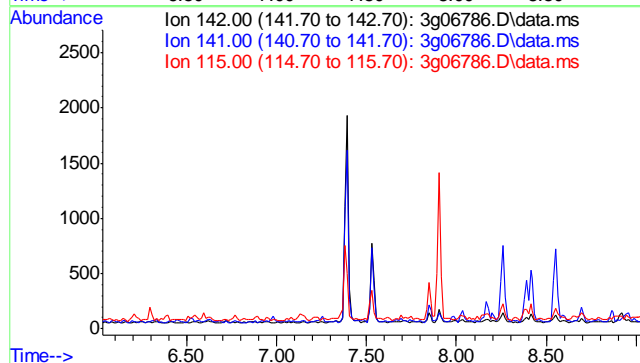




#9
1-Methylnaphthalene
Concen: N.D. ug/mL
Expected RT: 7.53 min

Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

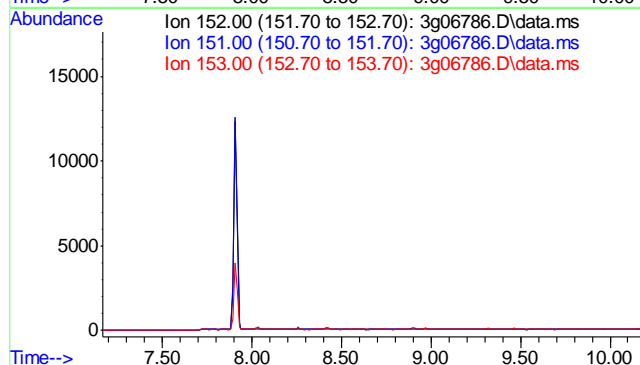
Tgt Ion: 142
Sig Exp Ratio
142 100
141 86.0
115 38.0

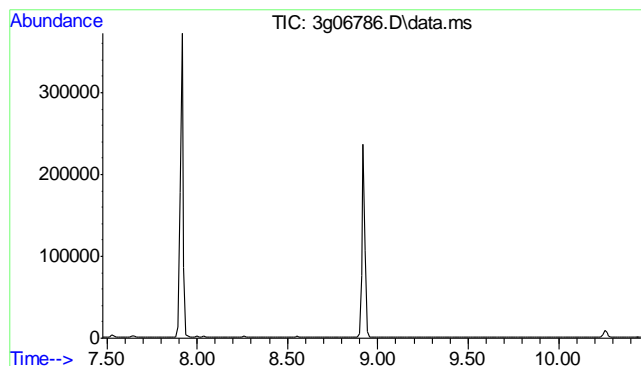


#10
Acenaphthylene
Concen: N.D. ug/mL
Expected RT: 8.67 min

Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

Tgt Ion: 152
Sig Exp Ratio
152 100
151 18.7
153 12.9



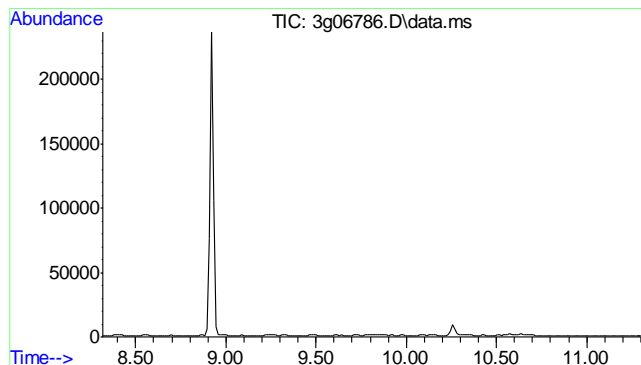
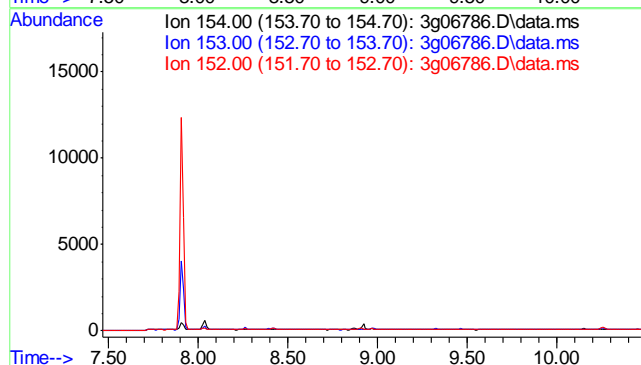


#11
Acenaphthene
Concen: N.D. ug/mL
Expected RT: 8.97 min

Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

Tgt Ion: 154

Sig	Exp Ratio
154	100
153	101.9
152	48.4

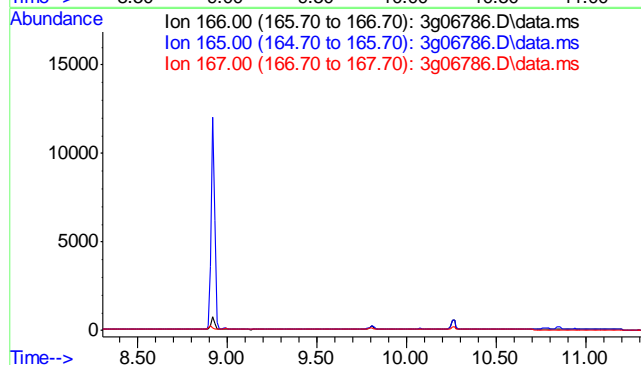


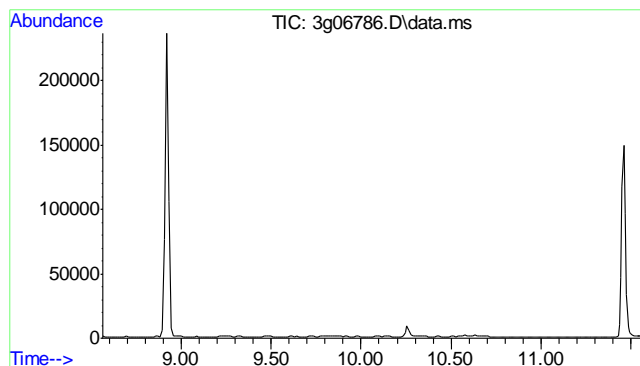
#12
Fluorene
Concen: N.D. ug/mL
Expected RT: 9.81 min

Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

Tgt Ion: 166

Sig	Exp Ratio
166	100
165	89.6
167	12.2

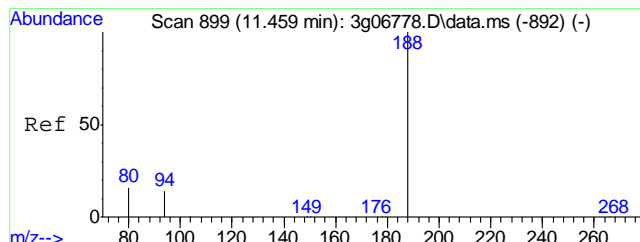
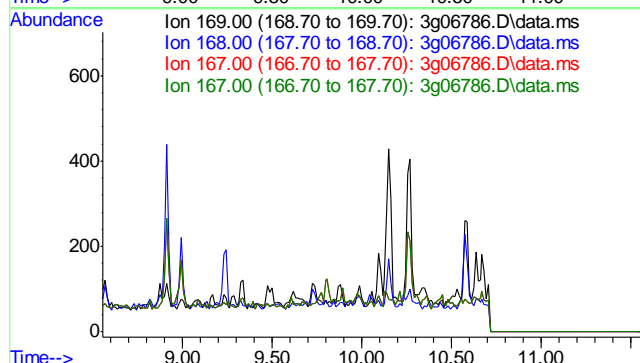




#13
Diphenylamine
Concen: N.D. ug/mL
Expected RT: 10.05 min

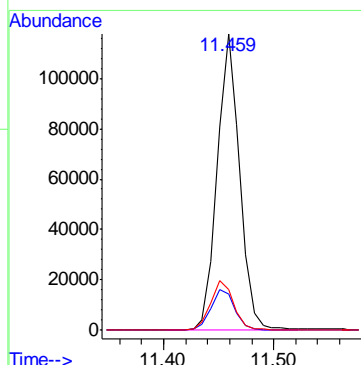
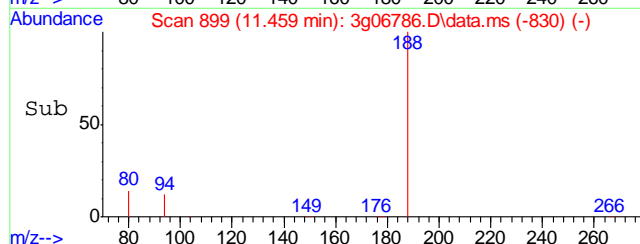
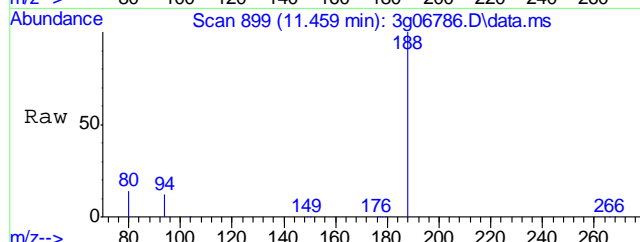
Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

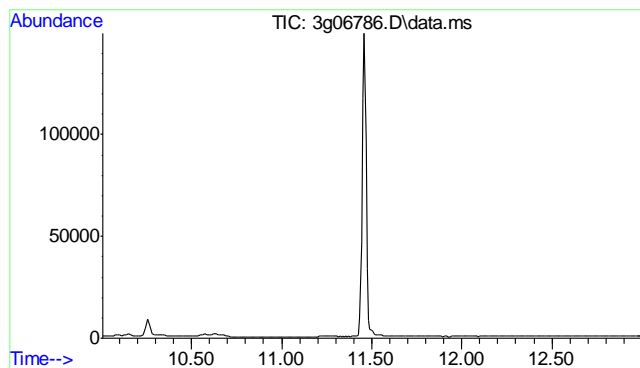
Tgt Ion: 169
Sig Exp Ratio
169 100
168 59.9
167 32.5
167 32.5



#14
Phenanthrene-d10
Concen: 4.00 ug/mL
RT: 11.459 min Scan# 899
Delta R.T. 0.000 min
Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

Tgt Ion: 188 Resp: 167291
Ion Ratio Lower Upper
188 100
94 14.4 0.0 35.1
80 17.1 0.0 37.7

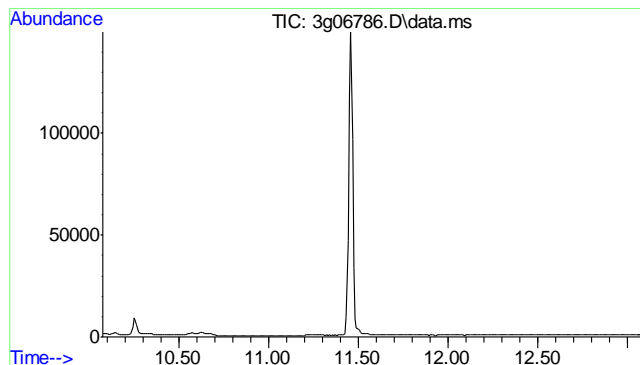
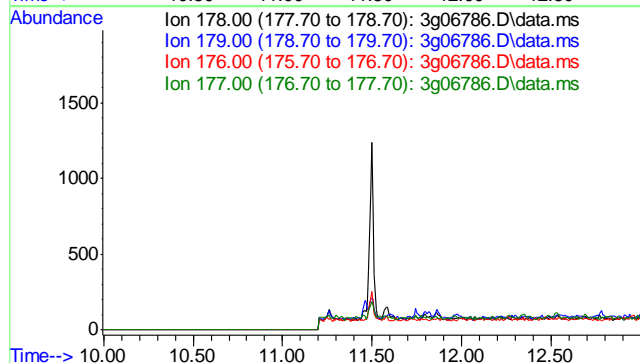




#15
 Phenanthrene
 Concen: N.D. ug/mL
 Expected RT: 11.50 min

 Lab File: 3g06786.D
 Acq: 4 Nov 11 11:19 pm

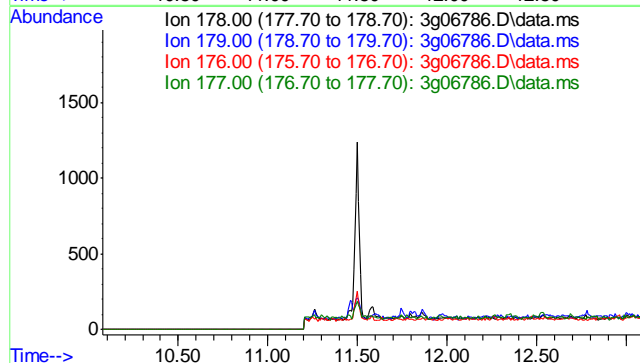
Tgt Ion	Exp Ratio
178	100
179	15.3
176	18.2
177	10.0

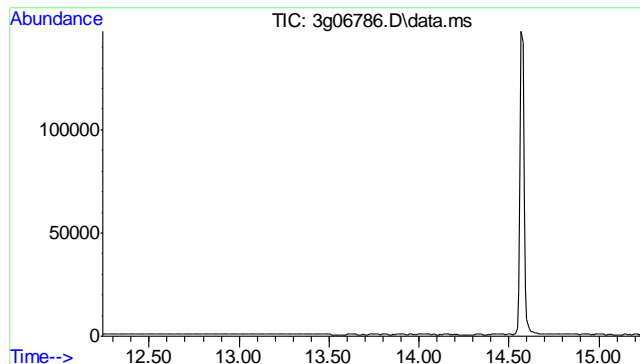


#16
 Anthracene
 Concen: N.D. ug/mL
 Expected RT: 11.58 min

 Lab File: 3g06786.D
 Acq: 4 Nov 11 11:19 pm

Tgt Ion	Exp Ratio
178	100
179	15.1
176	17.6
177	8.6

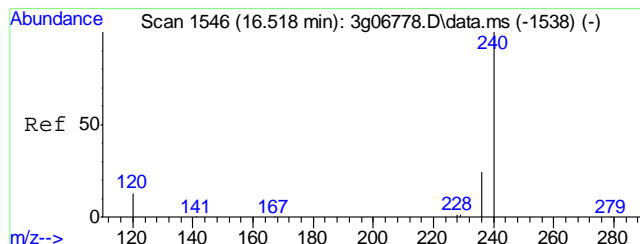
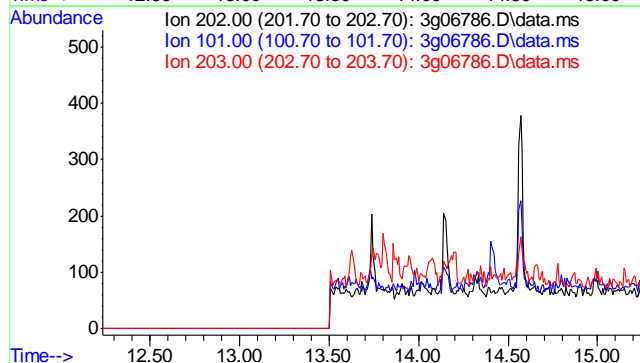




#17
 Fluoranthene
 Concen: N.D. ug/mL
 Expected RT: 13.74 min

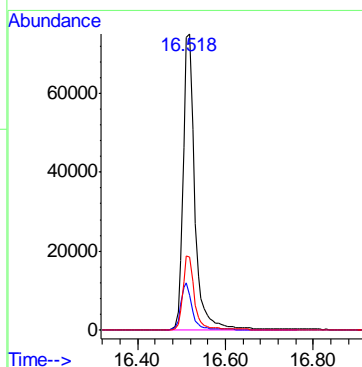
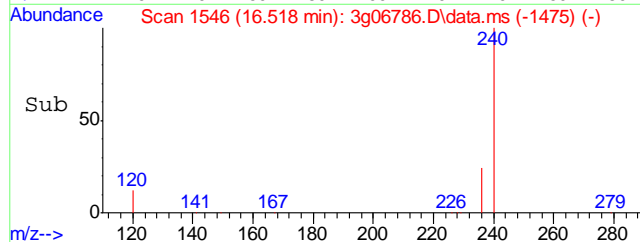
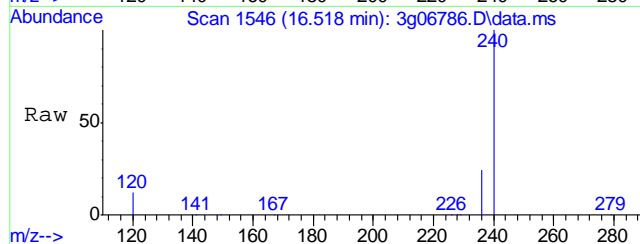
 Lab File: 3g06786.D
 Acq: 4 Nov 11 11:19 pm

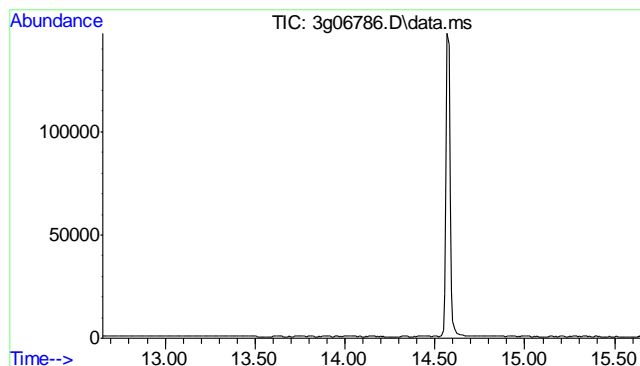
Tgt Ion: 202
 Sig Exp Ratio
 202 100
 101 17.9
 203 17.1



#18
 Chrysene-d12
 Concen: 4.00 ug/mL
 RT: 16.518 min Scan# 1546
 Delta R.T. -0.000 min
 Lab File: 3g06786.D
 Acq: 4 Nov 11 11:19 pm

Tgt Ion: 240 Resp: 137981
 Ion Ratio Lower Upper
 240 100
 120 15.2 0.0 36.3
 236 24.5 4.3 44.3



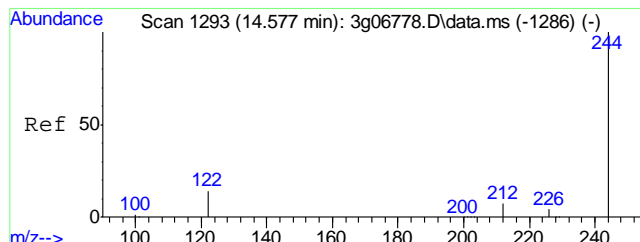
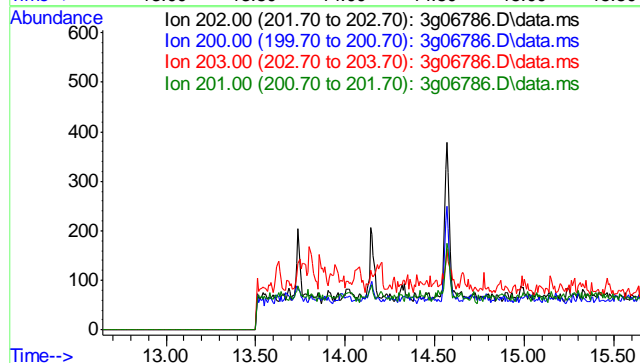


#19
 Pyrene
 Concen: N.D. ug/mL
 Expected RT: 14.15 min

 Lab File: 3g06786.D
 Acq: 4 Nov 11 11:19 pm

Tgt Ion: 202

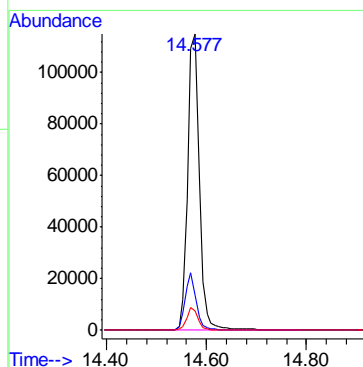
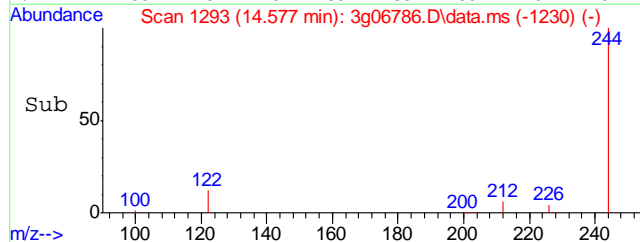
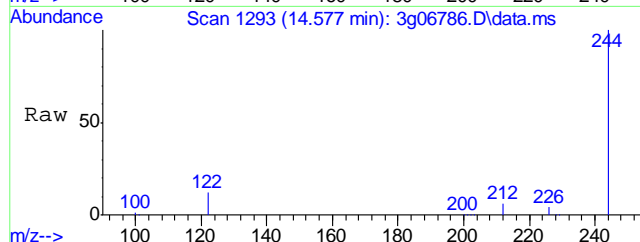
Sig	Exp Ratio
202	100
200	21.7
203	17.5
201	17.9

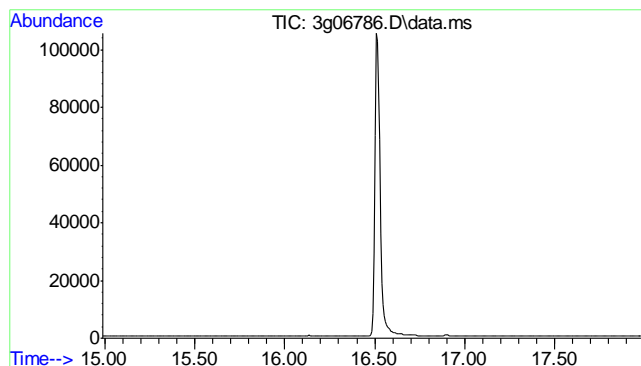


#20
 Terphenyl-d14
 Concen: 7.95 ug/mL
 RT: 14.577 min Scan# 1293
 Delta R.T. 0.000 min
 Lab File: 3g06786.D
 Acq: 4 Nov 11 11:19 pm

Tgt Ion: 244 Resp: 181349

Ion	Ratio	Lower	Upper
244	100		
122	17.9	0.0	38.8
212	7.1	0.0	27.3

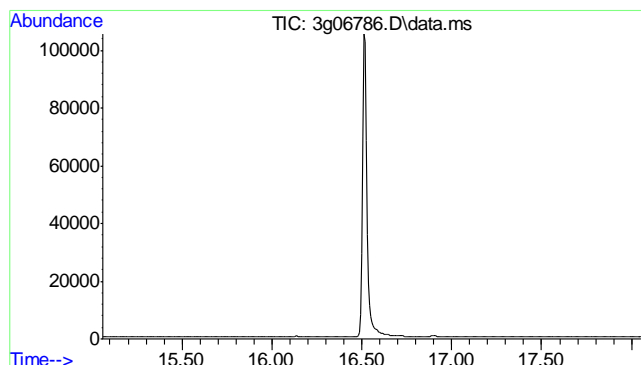
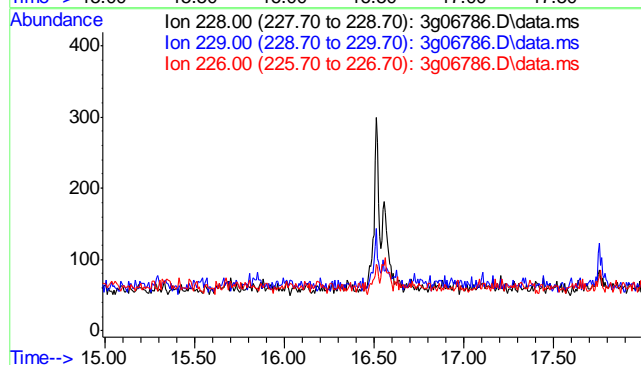




#21
Benzo(a)anthracene
Concen: N.D. ug/mL
Expected RT: 16.48 min

Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

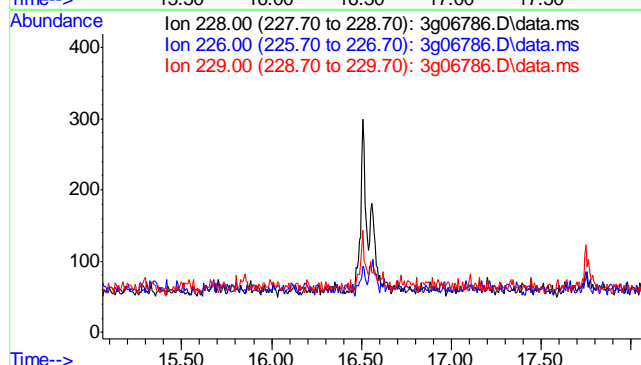
Tgt Ion	Exp Ratio
228	100
229	19.6
226	25.4

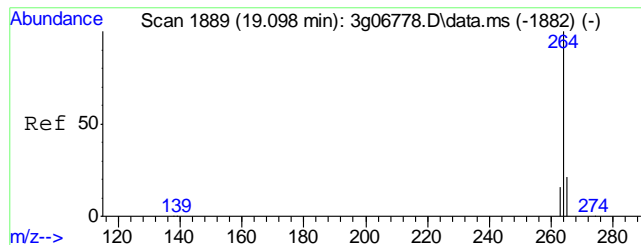


#22
Chrysene
Concen: N.D. ug/mL
Expected RT: 16.56 min

Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

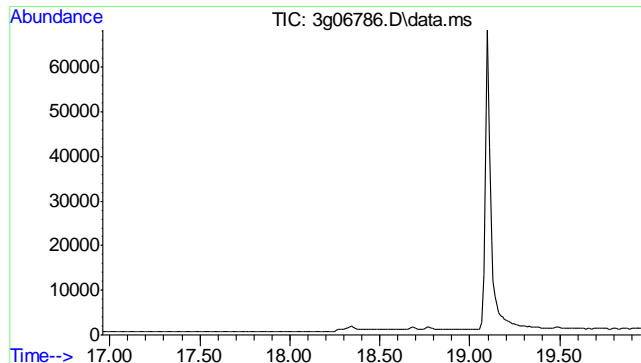
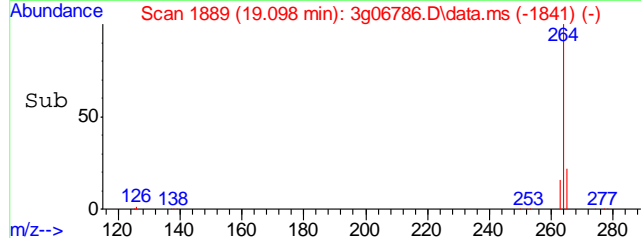
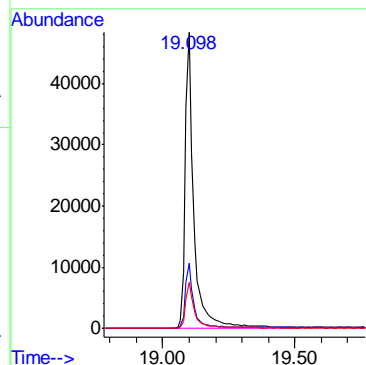
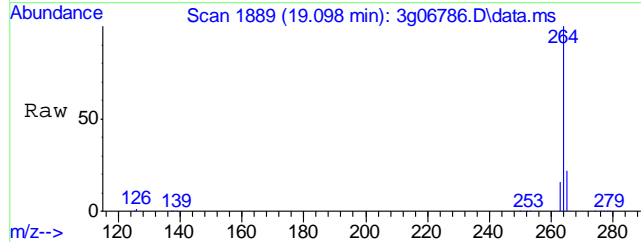
Tgt Ion	Exp Ratio
228	100
226	28.1
229	19.7





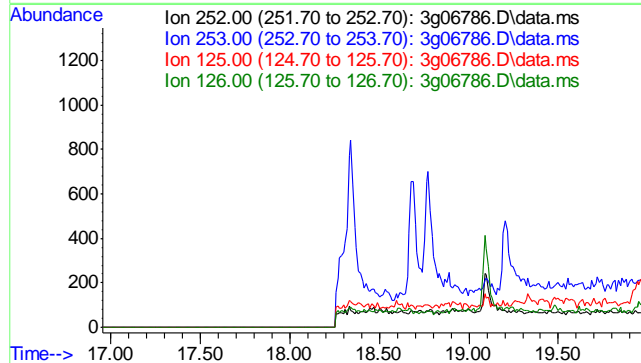
#23
Perylene-d12
Concen: 4.00 ug/mL
RT: 19.098 min Scan# 1889
Delta R.T. 0.000 min
Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

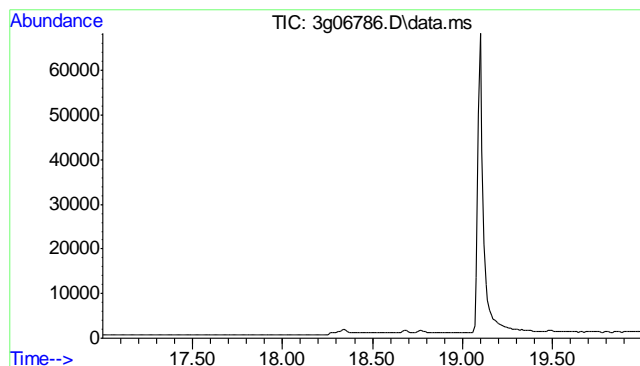
Tgt Ion:	264	Resp:	110291
Ion Ratio	Lower	Upper	
264	100		
265	20.3	1.0	41.0
263	15.8	0.0	35.9



#24
Benzo(b)fluoranthene
Concen: N.D. ug/mL
Expected RT: 18.46 min
Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

Tgt Ion:	252
Sig	Exp Ratio
252	100
253	21.6
125	10.8
126	18.4

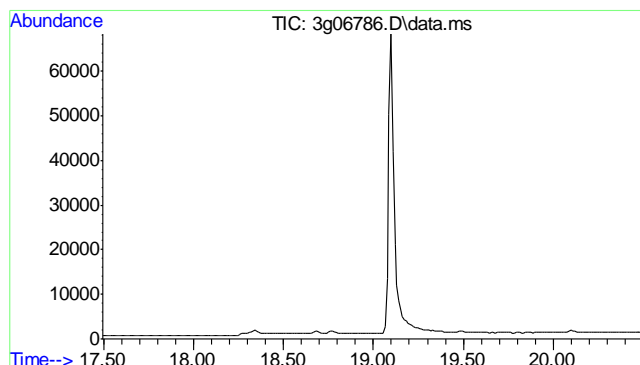
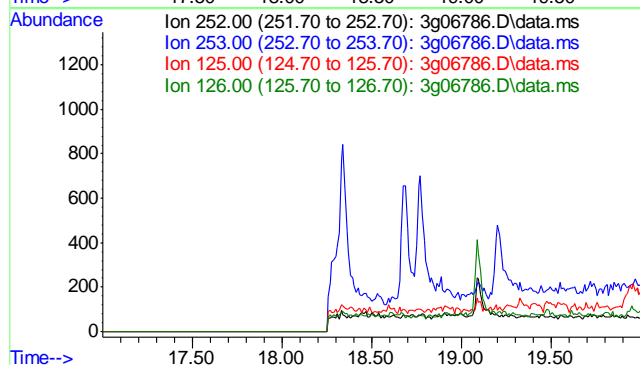




#25
Benzo(k)fluoranthene
Concen: N.D. ug/mL
Expected RT: 18.50 min

Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

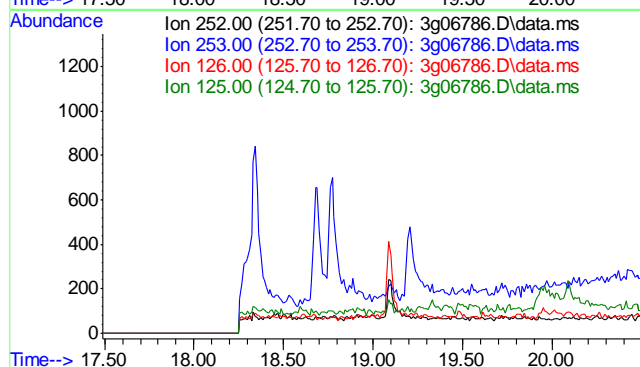
Tgt Ion	Sig	Exp Ratio
252	100	
253	21.7	
125	12.8	
126	17.0	

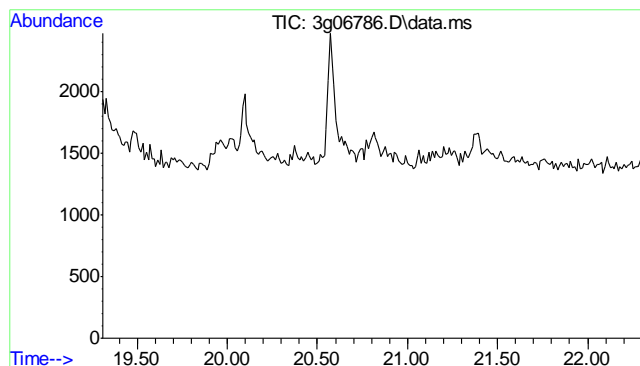


#26
Benzo(a)pyrene
Concen: N.D. ug/mL
Expected RT: 18.99 min

Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

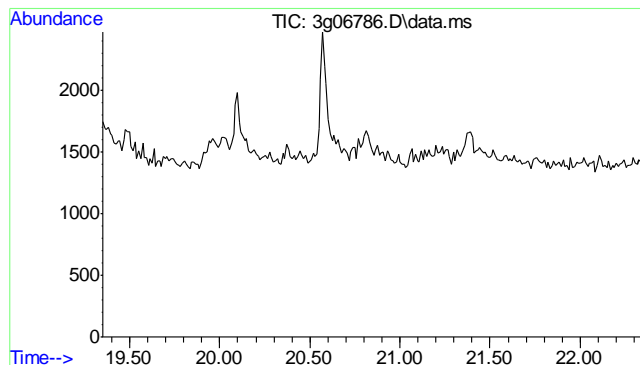
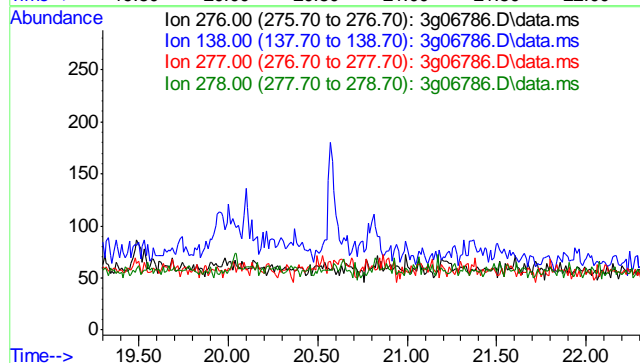
Tgt Ion	Sig	Exp Ratio
252	100	
253	21.7	
126	17.9	
125	15.4	





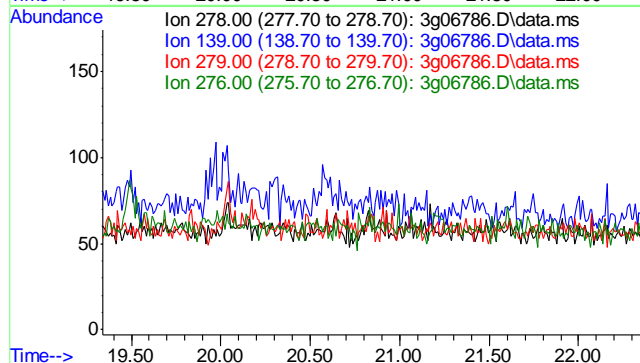
#27
 Indeno(1,2,3-cd)pyrene
 Concen: N.D. ug/mL
 Expected RT: 20.80 min
 Lab File: 3g06786.D
 Acq: 4 Nov 11 11:19 pm

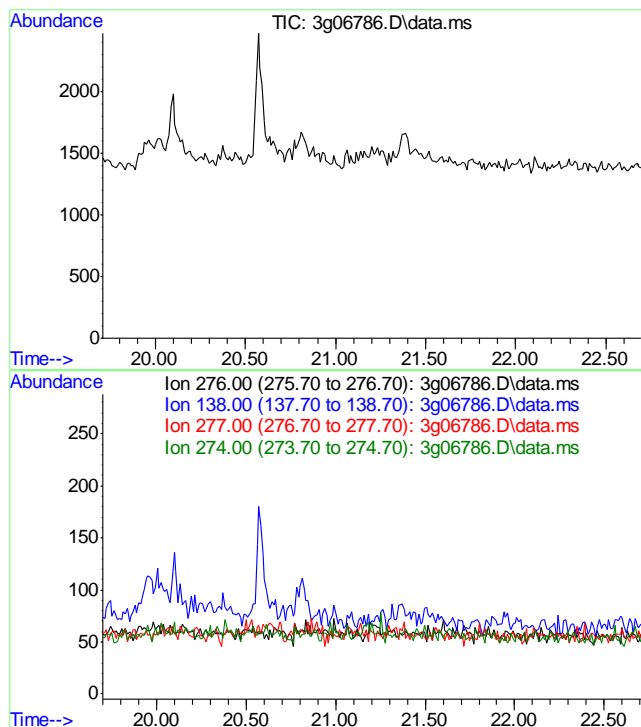
Tgt Ion	Exp Ratio
276	100
138	18.9
277	48.7
278	0.0



#28
 Dibenzo(a,h)anthracene
 Concen: N.D. ug/mL
 Expected RT: 20.84 min
 Lab File: 3g06786.D
 Acq: 4 Nov 11 11:19 pm

Tgt Ion	Exp Ratio
278	100
139	20.0
279	23.1
276	126.6





#29
Benzo(g,h,i)perylene
Concen: N.D. ug/mL
Expected RT: 21.20 min

Lab File: 3g06786.D
Acq: 4 Nov 11 11:19 pm

Tgt Ion:	276
Sig	Exp Ratio
276	100
138	23.5
277	22.1
274	19.0

8.1.1
8

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110411\
 Data File : 3g06784.D
 Acq On : 4 Nov 2011 10:03 pm
 Operator : TamiB
 Sample : OP4789-MB
 Misc : OP4789,E3G250,30,,,1,1
 ALS Vial : 15 Sample Multiplier: 1

Quant Time: Nov 07 12:21:28 2011
 Quant Method : C:\msdchem\1\METHODS\SIMPE3G250.M
 Quant Title : PAHSIM BASE
 QLast Update : Mon Nov 07 11:55:43 2011
 Response via : Initial Calibration

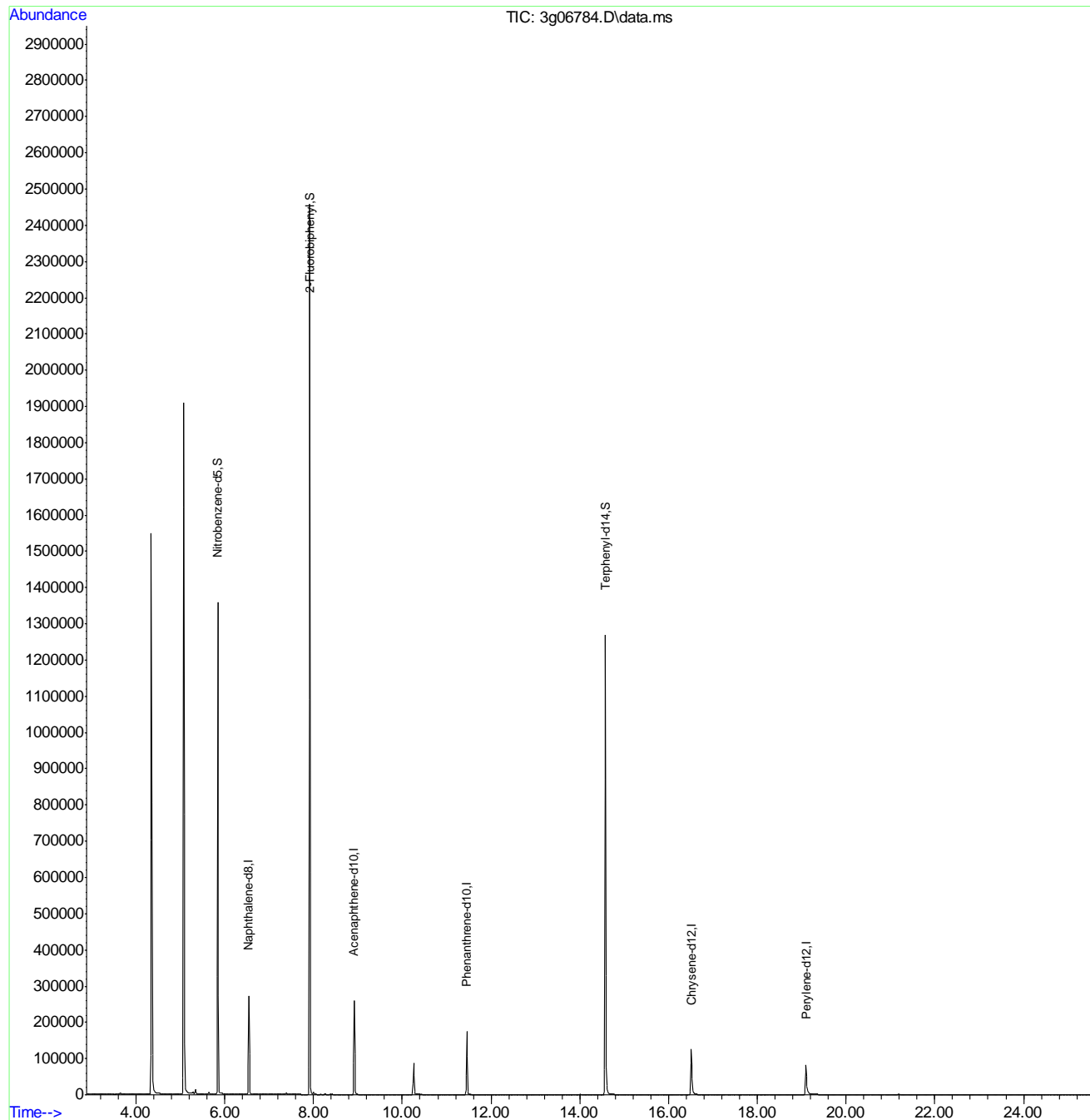
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	6.543	136	240409	4.00	ug/mL	0.00
6) Acenaphthene-d10	8.920	164	135324	4.00	ug/mL	0.00
14) Phenanthrene-d10	11.459	188	191373	4.00	ug/mL	0.00
18) Chrysene-d12	16.518	240	166820	4.00	ug/mL	0.00
23) Perylene-d12	19.098	264	130491	4.00	ug/mL	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	5.845	82	668168	44.80	ug/mL	0.00
7) 2-Fluorobiphenyl	7.916	172	1999244	40.89	ug/mL	0.00
20) Terphenyl-d14	14.577	244	1439742	52.18	ug/mL	0.00
Target Compounds						
					Qvalue	
3) N-Nitrosodimethylamine	0.000		0	N.D.	d	
4) N-Nitrosodi-propylamine	0.000		0	N.D.	d	
5) Naphthalene	0.000		0	N.D.	d	
8) 2-Methylnaphthalene	0.000		0	N.D.	d	
9) 1-Methylnaphthalene	0.000		0	N.D.	d	
10) Acenaphthylene	0.000		0	N.D.	d	
11) Acenaphthene	0.000		0	N.D.	d	
12) Fluorene	0.000		0	N.D.	d	
13) Diphenylamine	0.000		0	N.D.	d	
15) Phenanthrene	0.000		0	N.D.	d	
16) Anthracene	0.000		0	N.D.	d	
17) Fluoranthene	0.000		0	N.D.	d	
19) Pyrene	0.000		0	N.D.	d	
21) Benzo(a)anthracene	0.000		0	N.D.	d	
22) Chrysene	0.000		0	N.D.	d	
24) Benzo(b)fluoranthene	0.000		0	N.D.	d	
25) Benzo(k)fluoranthene	0.000		0	N.D.	d	
26) Benzo(a)pyrene	0.000		0	N.D.	d	
27) Indeno(1,2,3-cd)pyrene	0.000		0	N.D.	d	
28) Dibenz(a,h)anthracene	0.000		0	N.D.	d	
29) Benzo(g,h,i)perylene	0.000		0	N.D.	d	

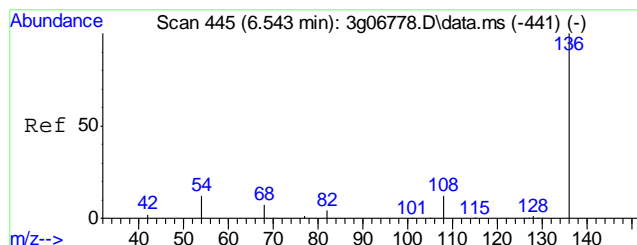
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110411\
Data File : 3g06784.D
Acq On : 4 Nov 2011 10:03 pm
Operator : TamiB
Sample : OP4789-MB
Misc : OP4789,E3G250,30,,,1,1
ALS Vial : 15 Sample Multiplier: 1

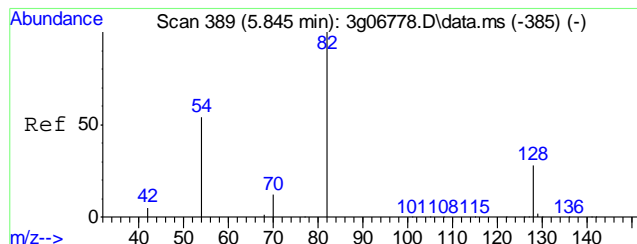
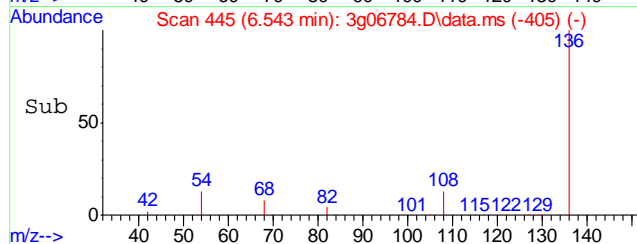
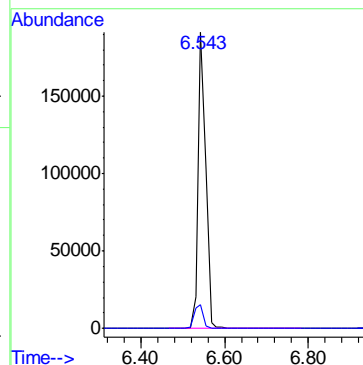
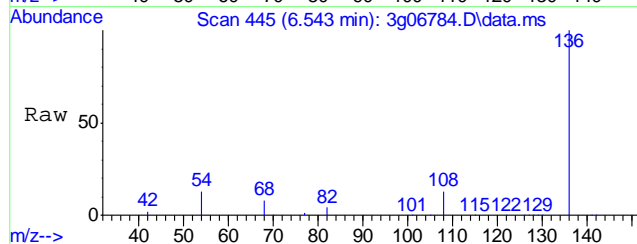
Quant Time: Nov 07 12:21:28 2011
Quant Method : C:\msdchem\1\METHODS\SIMPE3G250.M
Quant Title : PAHSIM BASE
QLast Update : Mon Nov 07 11:55:43 2011
Response via : Initial Calibration





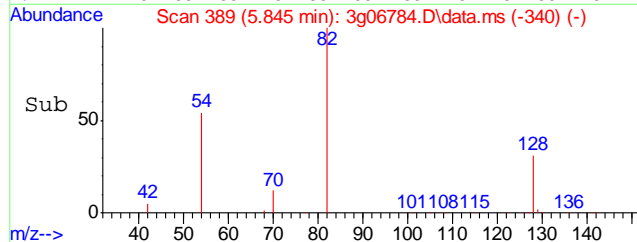
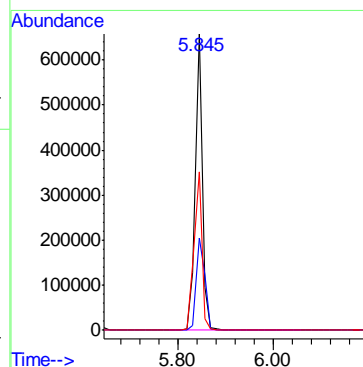
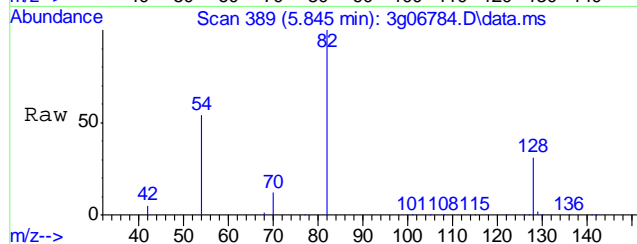
#1
Naphthalene-d8
Concen: 4.00 ug/mL
RT: 6.543 min Scan# 445
Delta R.T. -0.000 min
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

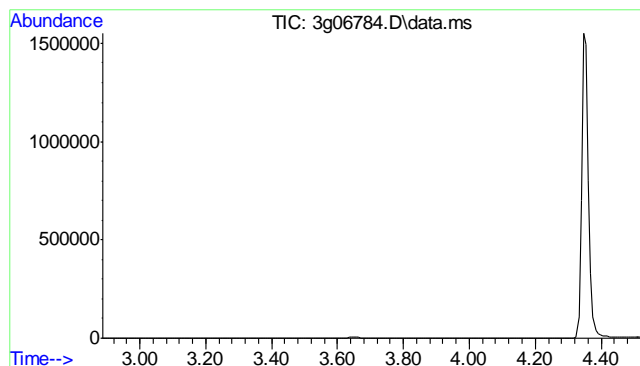
Tgt Ion: 136 Resp: 240409
Ion Ratio Lower Upper
136 100
68 9.3 0.0 29.1



#2
Nitrobenzene-d5
Concen: 44.80 ug/mL
RT: 5.845 min Scan# 389
Delta R.T. -0.000 min
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion: 82 Resp: 668168
Ion Ratio Lower Upper
82 100
128 38.7 17.0 57.0
54 59.8 37.7 77.7

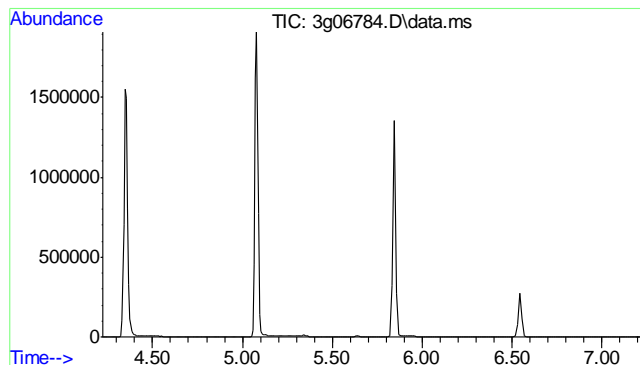
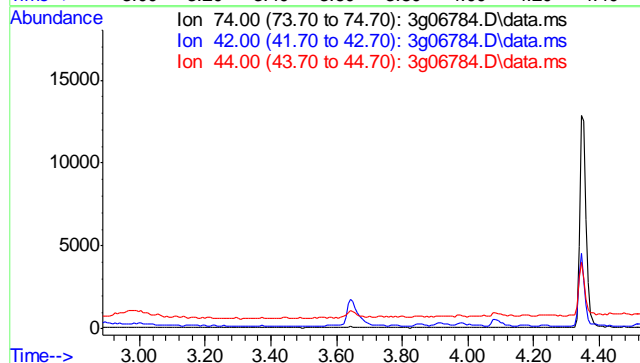




#3
N-Nitrosodimethylamine
Concen: N.D. ug/mL
Expected RT: 3.03 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

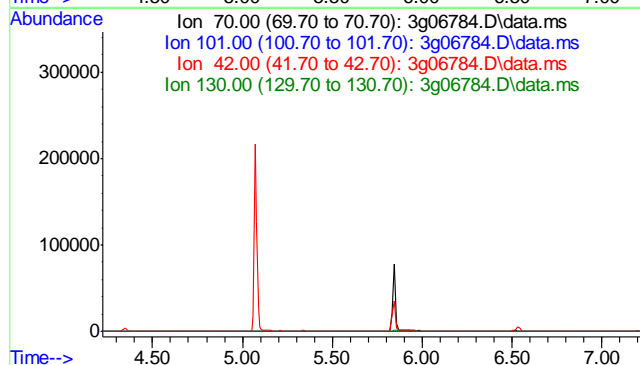
Tgt Ion:	74
Sig	Exp Ratio
74	100
42	65.4
44	5.2

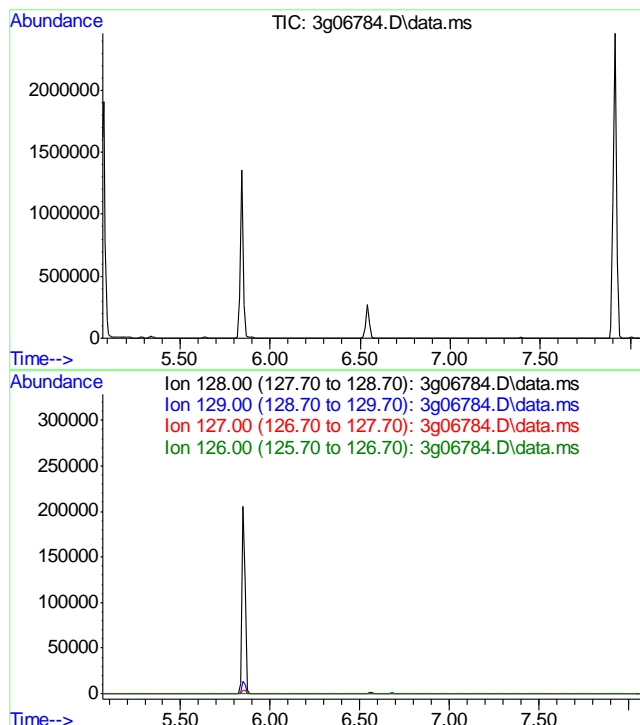


#4
N-Nitrosodi-propylamine
Concen: N.D. ug/mL
Expected RT: 5.72 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion:	70
Sig	Exp Ratio
70	100
101	11.6
42	54.9
130	20.8

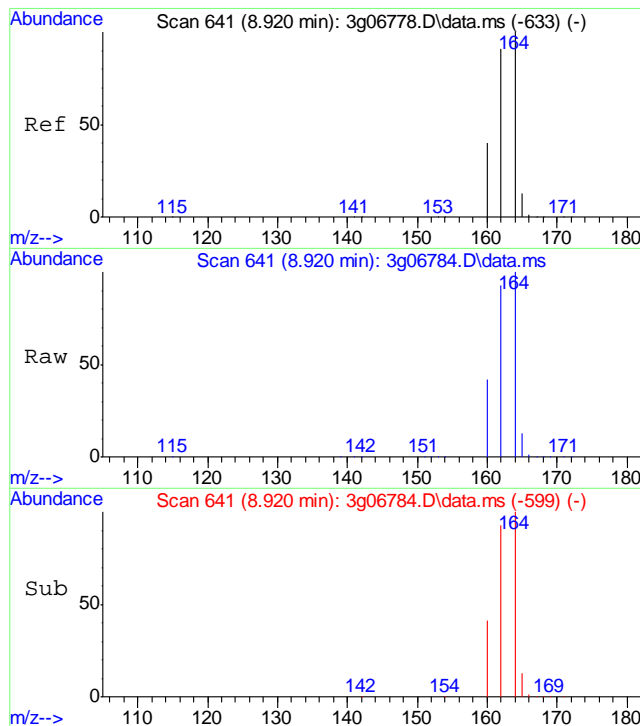




#5
Naphthalene
Concen: N.D. ug/mL
Expected RT: 6.57 min

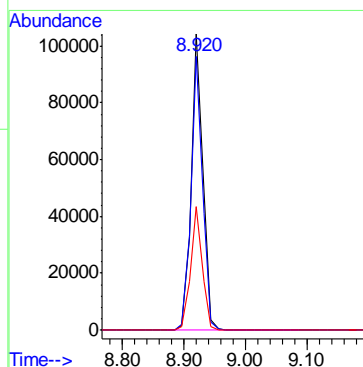
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

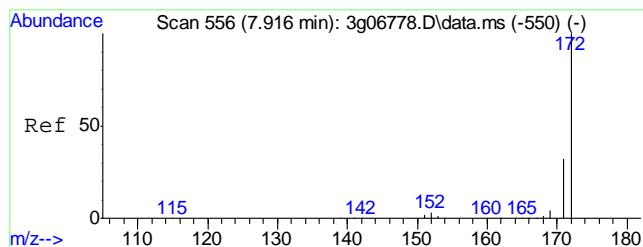
Tgt Ion: 128
Sig Exp Ratio
128 100
129 10.9
127 12.6
126 7.2



#6
Acenaphthene-d10
Concen: 4.00 ug/mL
RT: 8.920 min Scan# 641
Delta R.T. -0.000 min
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

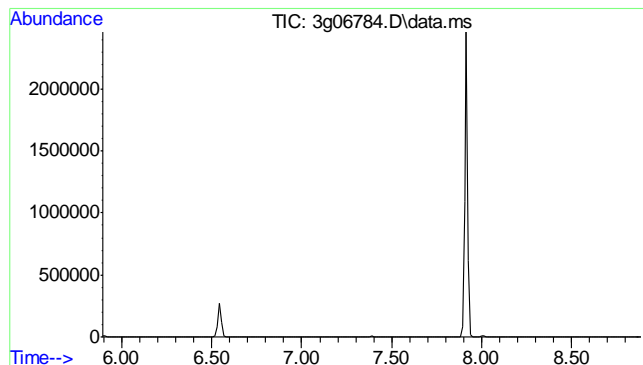
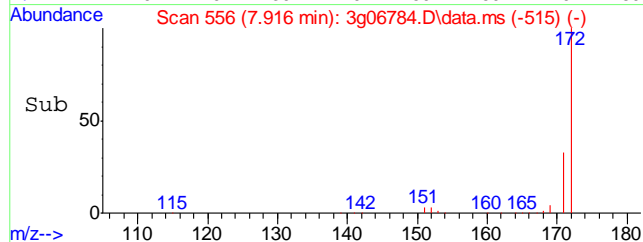
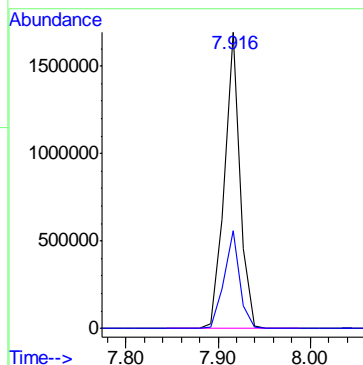
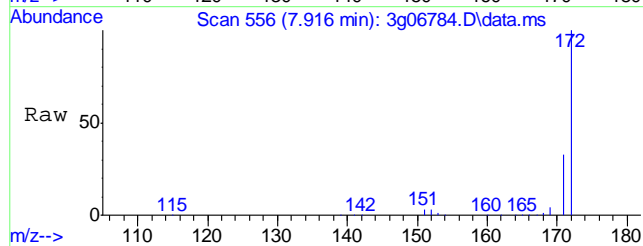
Tgt Ion: 164 Resp: 135324
Ion Ratio Lower Upper
164 100
162 92.2 71.6 111.6
160 41.8 21.1 61.1





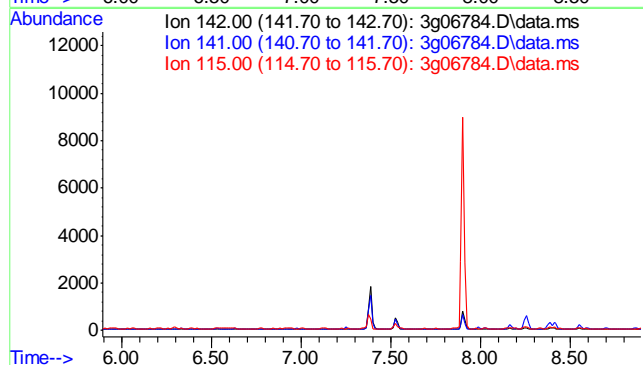
#7
2-Fluorobiphenyl
Concen: 40.89 ug/mL
RT: 7.916 min Scan# 556
Delta R.T. -0.000 min
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

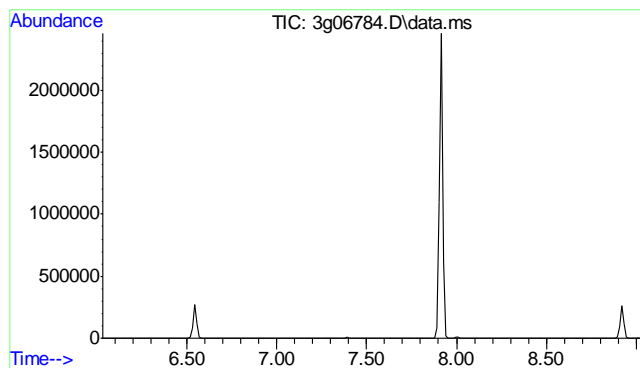
Tgt Ion: 172 Resp: 1999244
Ion Ratio Lower Upper
172 100
171 32.9 12.8 52.8



#8
2-Methylnaphthalene
Concen: N.D. ug/mL
Expected RT: 7.39 min
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion: 142
Sig Exp Ratio
142 100
141 83.1
115 35.6

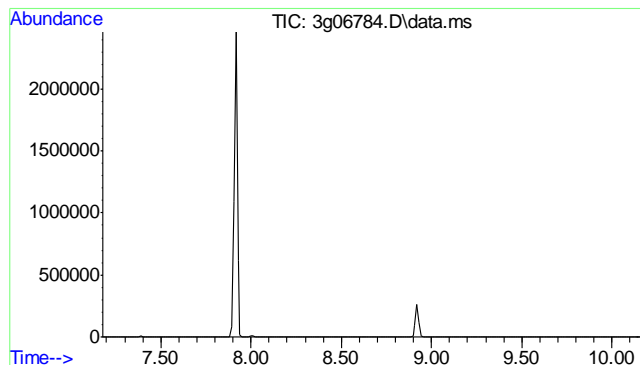
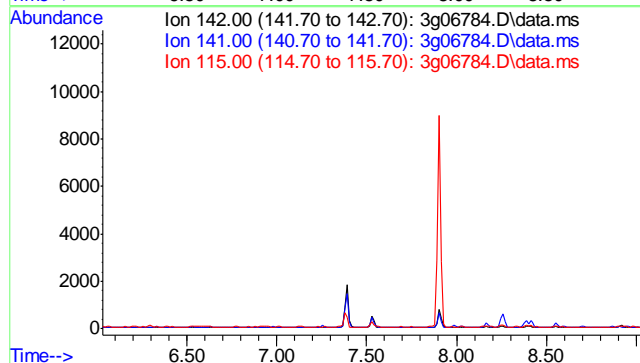




#9
1-Methylnaphthalene
Concen: N.D. ug/mL
Expected RT: 7.53 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

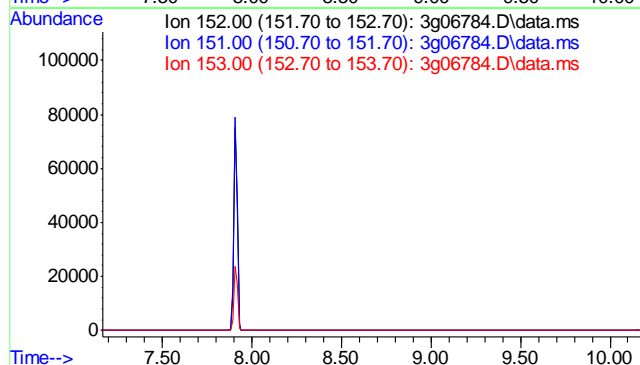
Tgt Ion:	142
Sig	Exp Ratio
142	100
141	86.0
115	38.0

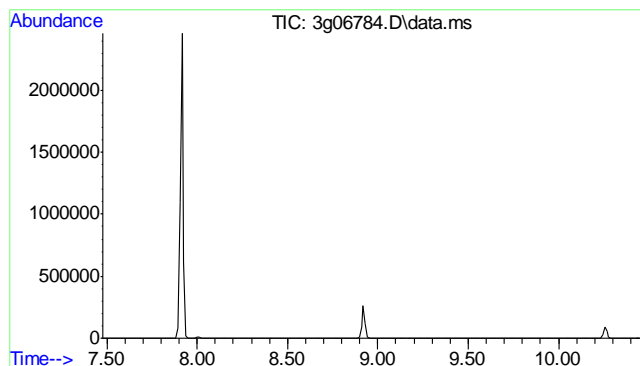


#10
Acenaphthylene
Concen: N.D. ug/mL
Expected RT: 8.67 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion:	152
Sig	Exp Ratio
152	100
151	18.7
153	12.9

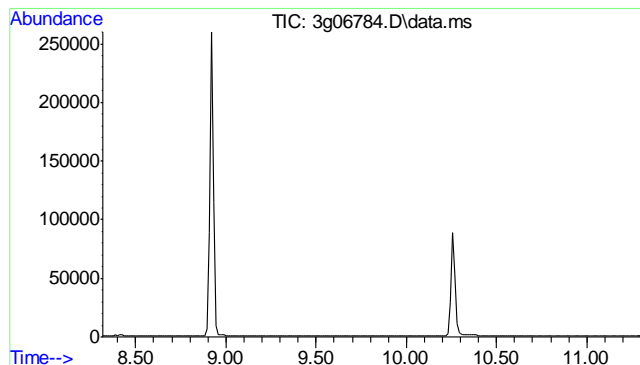
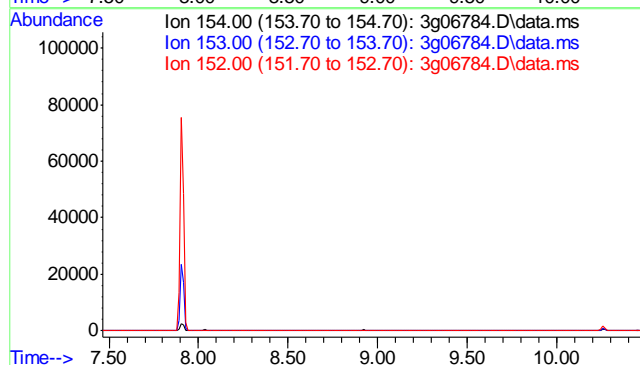




#11
Acenaphthene
Concen: N.D. ug/mL
Expected RT: 8.97 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

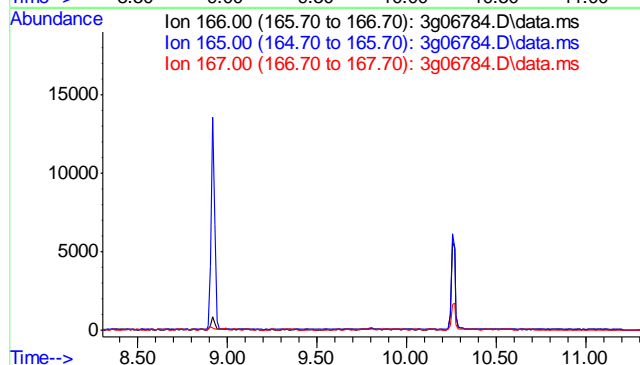
Tgt Ion	154
Sig	Exp Ratio
154	100
153	101.9
152	48.4

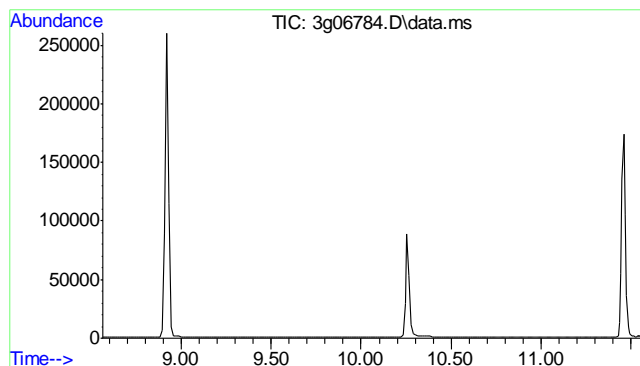


#12
Fluorene
Concen: N.D. ug/mL
Expected RT: 9.81 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion	166
Sig	Exp Ratio
166	100
165	89.6
167	12.2

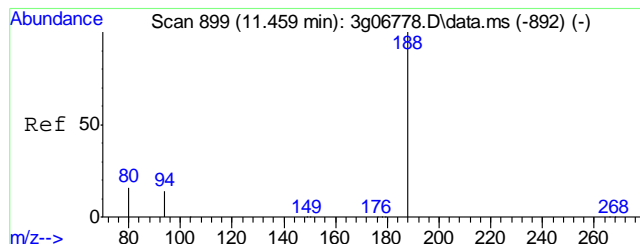
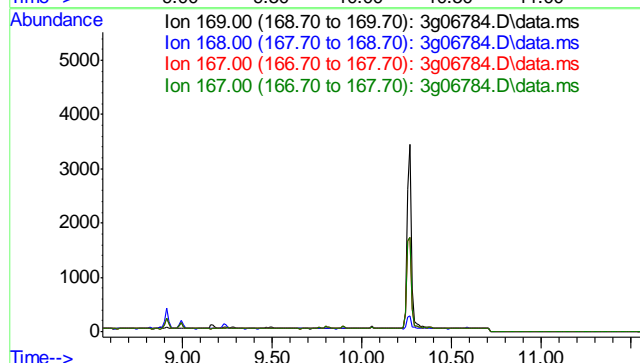




#13
Diphenylamine
Concen: N.D. ug/mL
Expected RT: 10.05 min

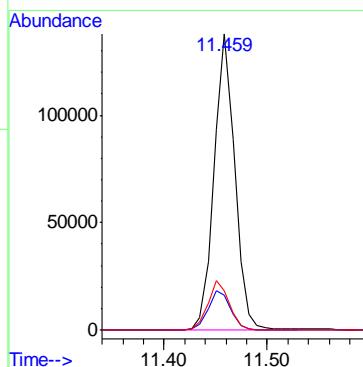
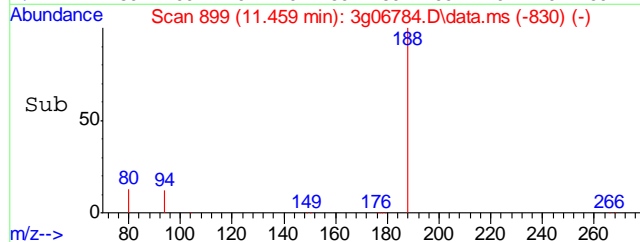
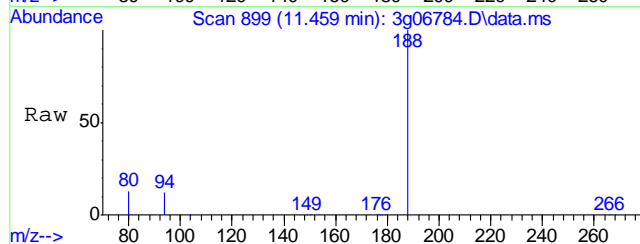
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

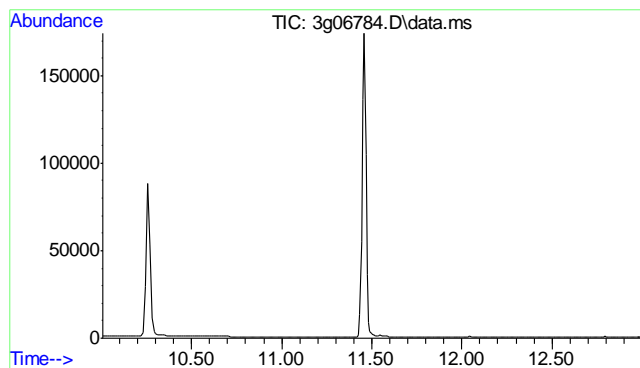
Tgt Ion: 169
Sig Exp Ratio
169 100
168 59.9
167 32.5
167 32.5



#14
Phenanthrene-d10
Concen: 4.00 ug/mL
RT: 11.459 min Scan# 899
Delta R.T. -0.000 min
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion: 188 Resp: 191373
Ion Ratio Lower Upper
188 100
94 14.5 0.0 35.1
80 17.1 0.0 37.7

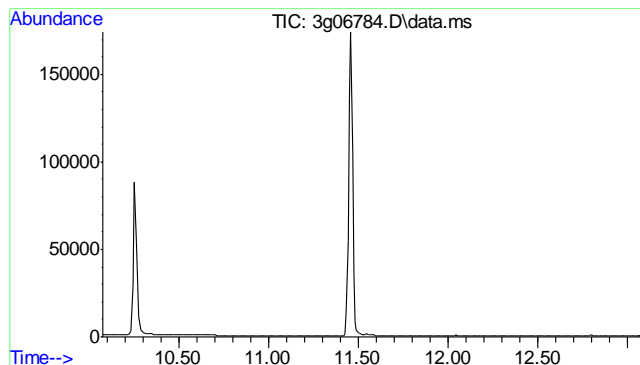
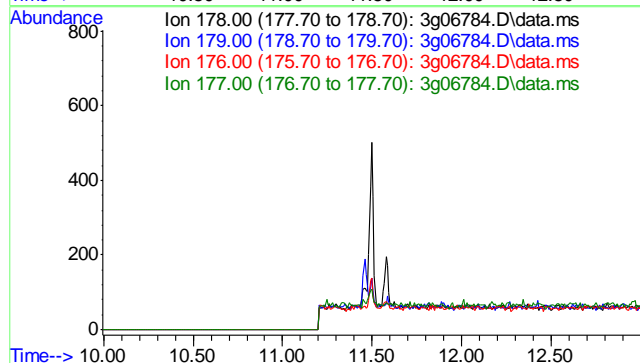




#15
Phenanthrene
Concen: N.D. ug/mL
Expected RT: 11.50 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

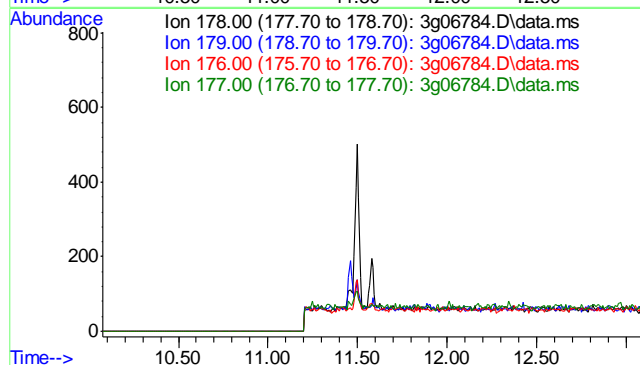
Tgt Ion: 178
Sig Exp Ratio
178 100
179 15.3
176 18.2
177 10.0

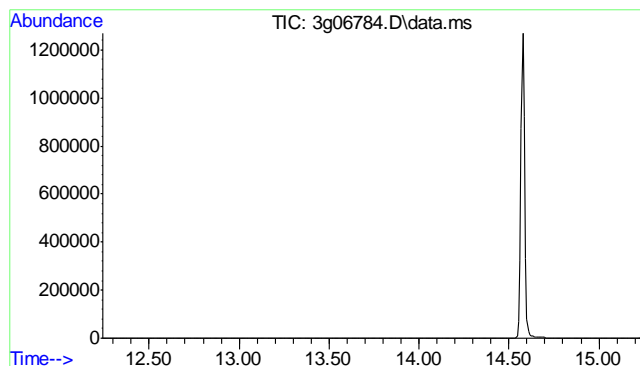


#16
Anthracene
Concen: N.D. ug/mL
Expected RT: 11.58 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion: 178
Sig Exp Ratio
178 100
179 15.1
176 17.6
177 8.6

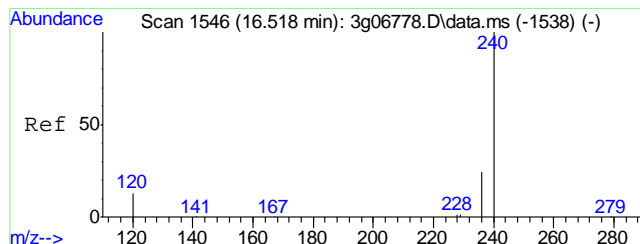
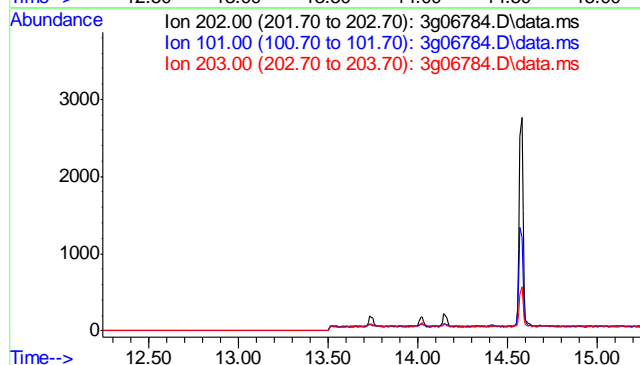




#17
Fluoranthene
Concen: N.D. ug/mL
Expected RT: 13.74 min

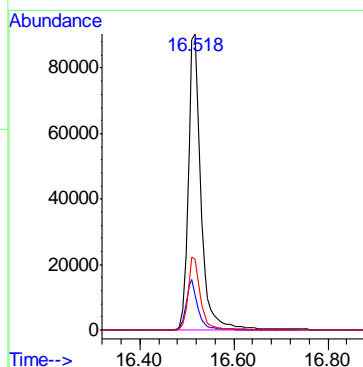
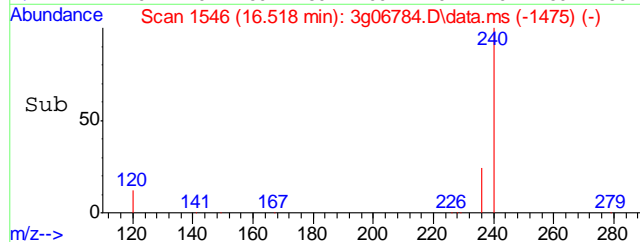
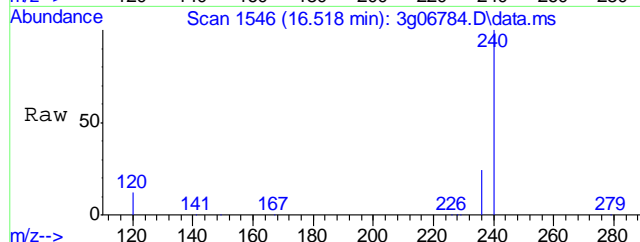
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

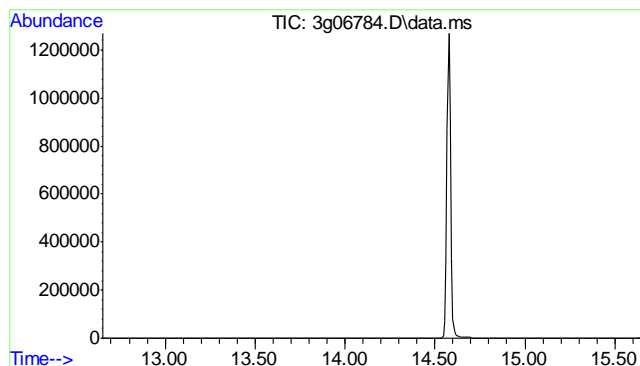
Tgt Ion: 202
Sig Exp Ratio
202 100
101 17.9
203 17.1



#18
Chrysene-d12
Concen: 4.00 ug/mL
RT: 16.518 min Scan# 1546
Delta R.T. -0.000 min
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion: 240 Resp: 166820
Ion Ratio Lower Upper
240 100
120 15.9 0.0 36.3
236 24.4 4.3 44.3

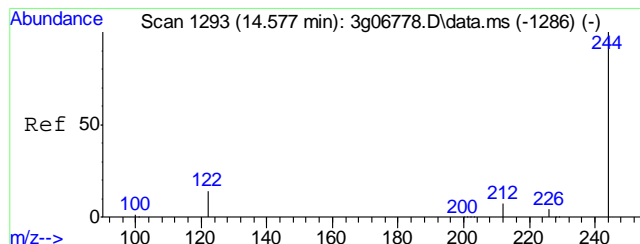
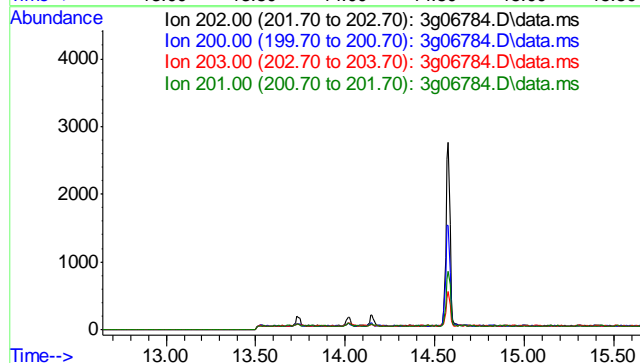




#19
Pyrene
Concen: N.D. ug/mL
Expected RT: 14.15 min

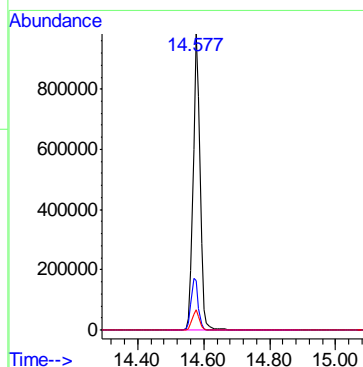
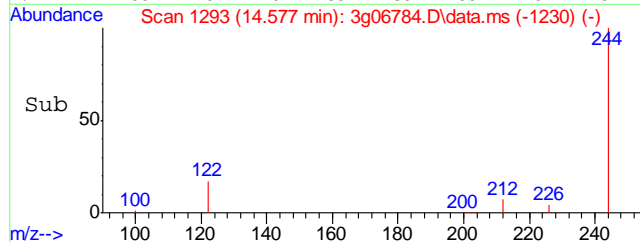
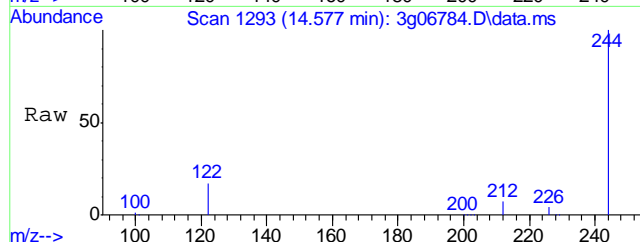
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

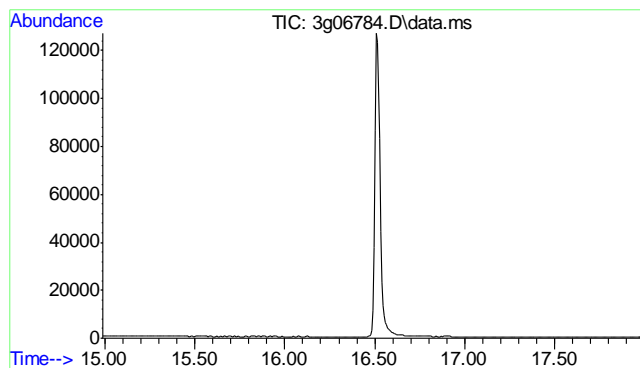
Tgt Ion:	202
Sig	Exp Ratio
202	100
200	21.7
203	17.5
201	17.9



#20
Terphenyl-d14
Concen: 52.18 ug/mL
RT: 14.577 min Scan# 1293
Delta R.T. -0.000 min
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion:	244	Resp:	1439742
Ion	Ratio	Lower	Upper
244	100		
122	18.2	0.0	38.8
212	7.1	0.0	27.3

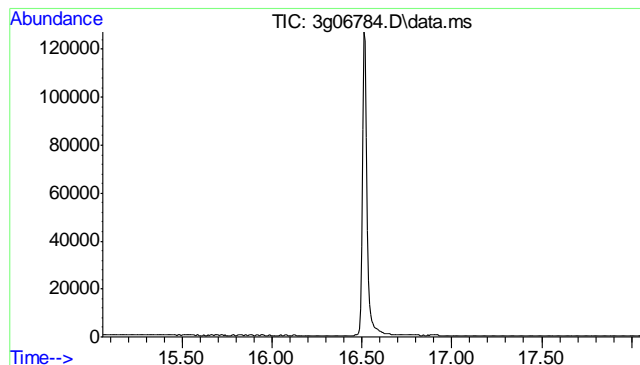
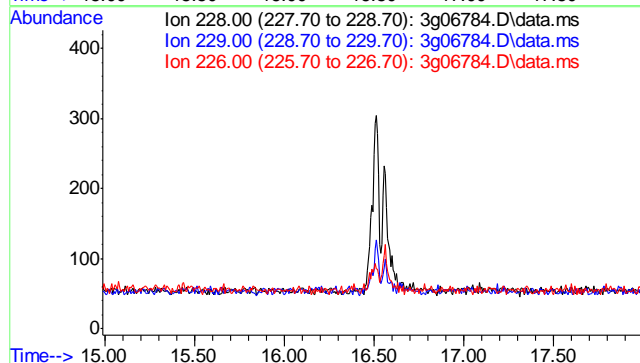




#21
Benzo(a)anthracene
Concen: N.D. ug/mL
Expected RT: 16.48 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

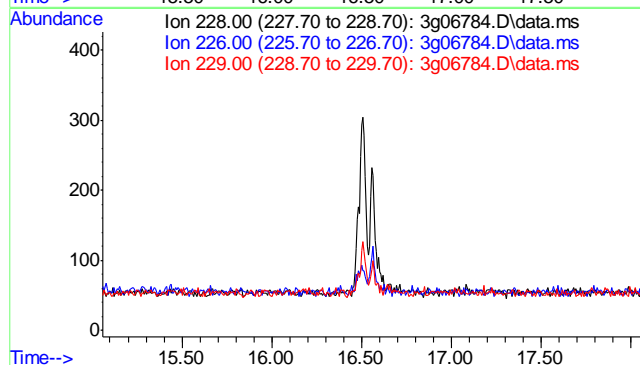
Tgt Ion:	228
Sig	Exp Ratio
228	100
229	19.6
226	25.4

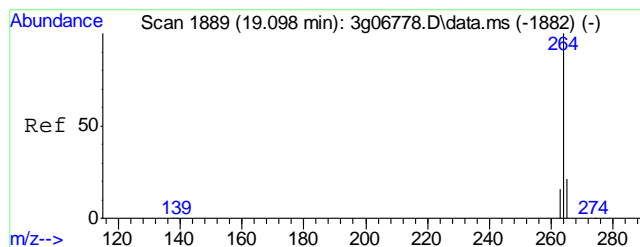


#22
Chrysene
Concen: N.D. ug/mL
Expected RT: 16.56 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

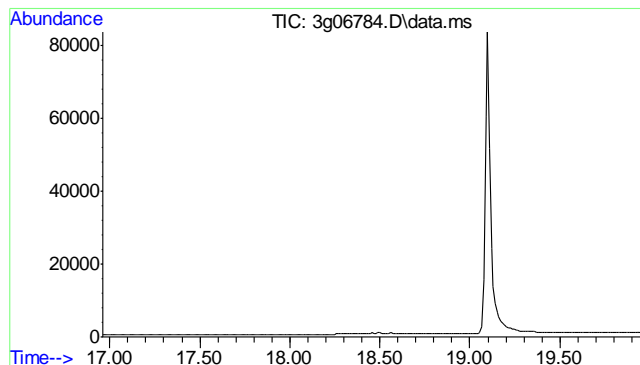
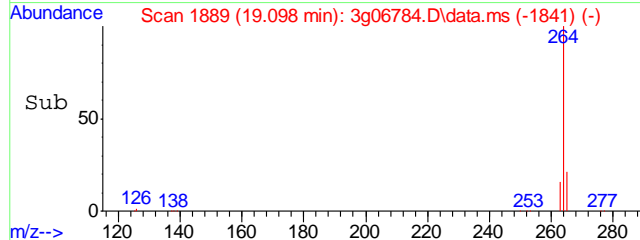
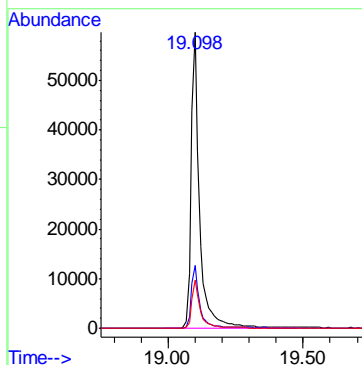
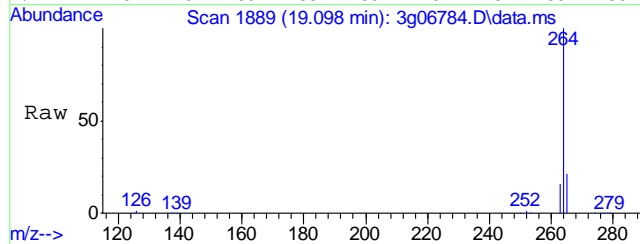
Tgt Ion:	228
Sig	Exp Ratio
228	100
226	28.1
229	19.7





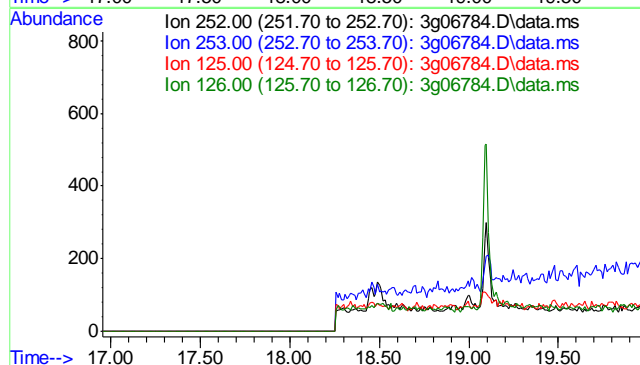
#23
Perylene-d12
Concen: 4.00 ug/mL
RT: 19.098 min Scan# 1889
Delta R.T. -0.000 min
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

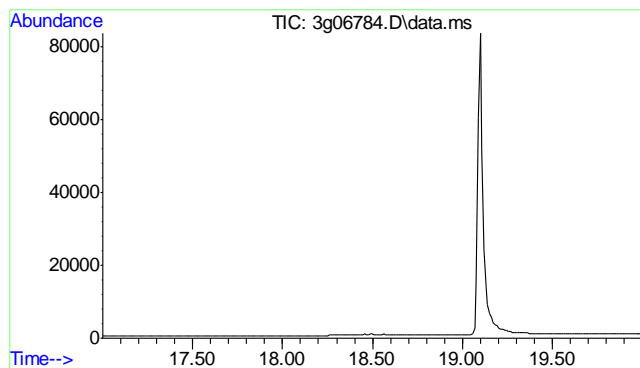
Tgt Ion:	264	Resp:	130491
Ion Ratio	Lower	Upper	
264	100		
265	20.8	1.0	41.0
263	16.3	0.0	35.9



#24
Benzo(b)fluoranthene
Concen: N.D. ug/mL
Expected RT: 18.46 min
Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion:	252
Sig	Exp Ratio
252	100
253	21.6
125	10.8
126	18.4

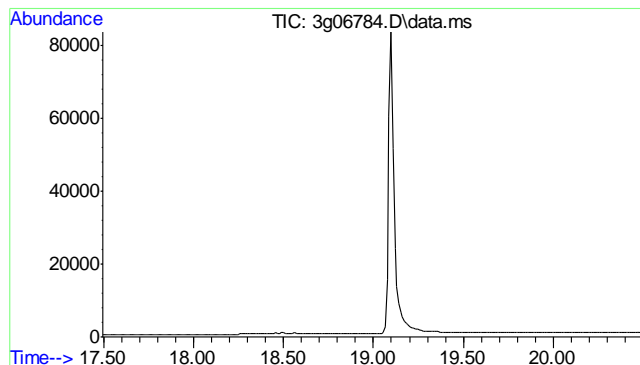
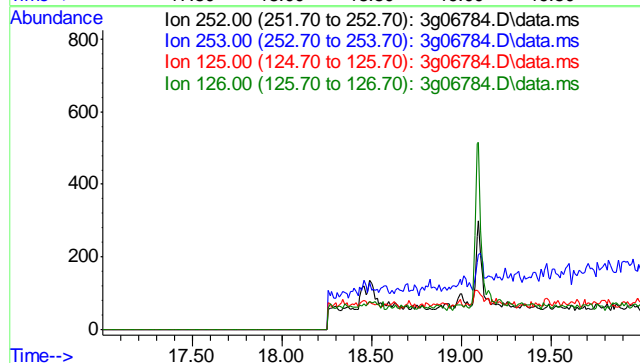




#25
Benzo(k)fluoranthene
Concen: N.D. ug/mL
Expected RT: 18.50 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

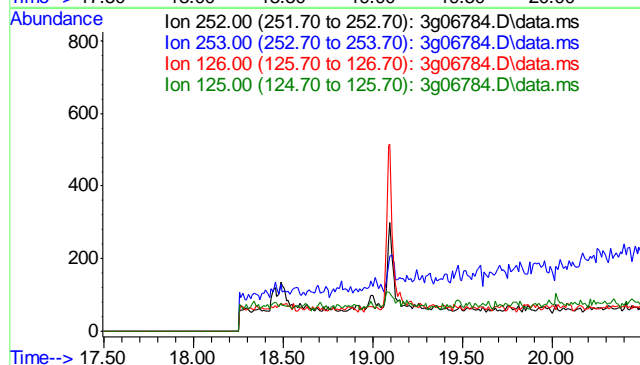
Tgt Ion:	252
Sig	Exp Ratio
252	100
253	21.7
125	12.8
126	17.0

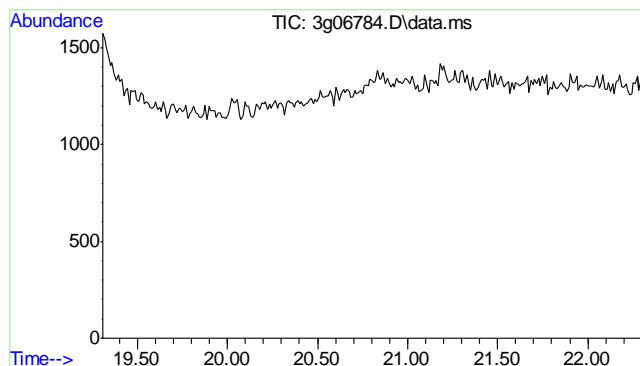


#26
Benzo(a)pyrene
Concen: N.D. ug/mL
Expected RT: 18.99 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion:	252
Sig	Exp Ratio
252	100
253	21.7
126	17.9
125	15.4

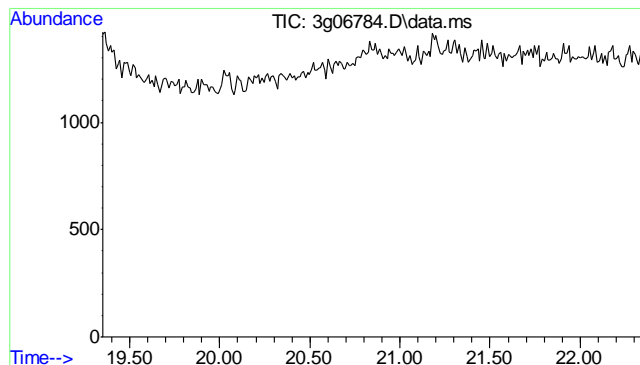
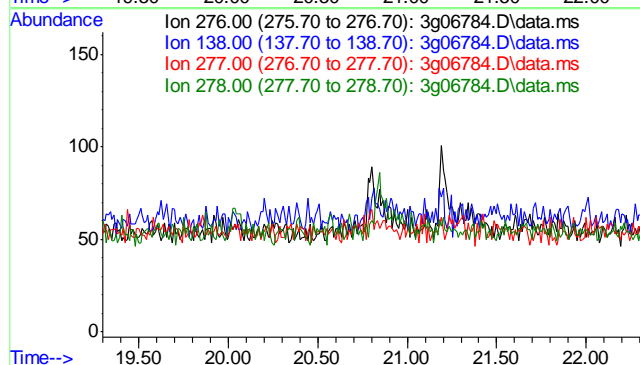




#27
Indeno(1,2,3-cd)pyrene
Concen: N.D. ug/mL
Expected RT: 20.80 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

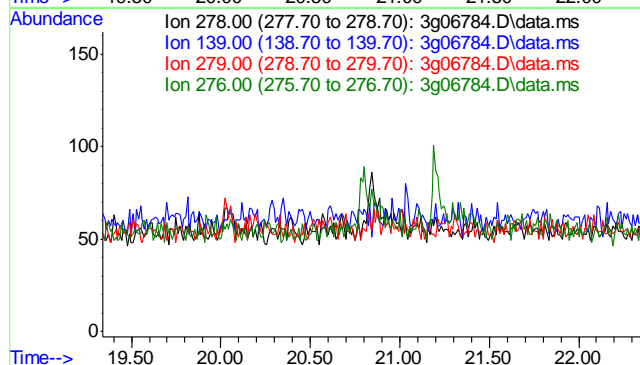
Tgt Ion:	276
Sig	Exp Ratio
276	100
138	18.9
277	48.7
278	0.0

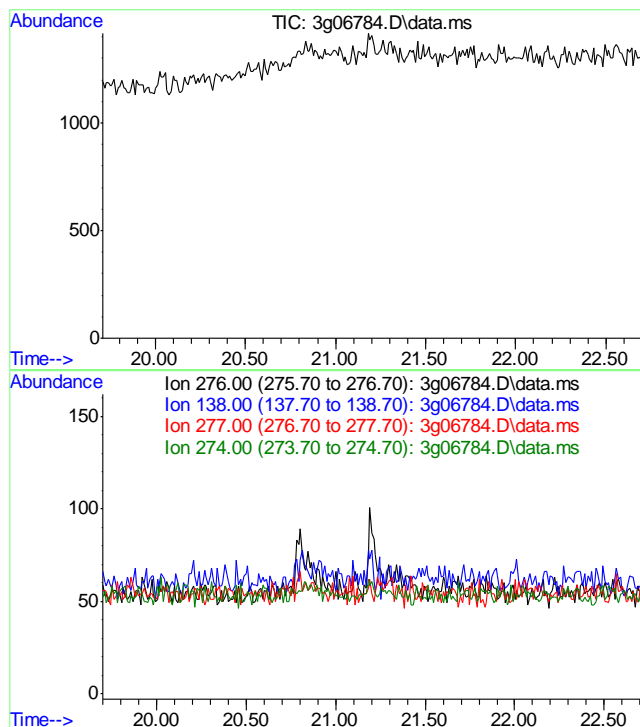


#28
Dibenz(a,h)anthracene
Concen: N.D. ug/mL
Expected RT: 20.84 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion:	278
Sig	Exp Ratio
278	100
139	20.0
279	23.1
276	126.6





#29
Benzo(g,h,i)perylene
Concen: N.D. ug/mL
Expected RT: 21.20 min

Lab File: 3g06784.D
Acq: 4 Nov 11 10:03 pm

Tgt Ion:	276
Sig	Exp Ratio
276	100
138	23.5
277	22.1
274	19.0

GC Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 1

Job Number: D29137
Account: KRWCCOL KRW Consulting, Inc.
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB777-MB	GB13711.D	1	11/04/11	SK	n/a	n/a	GGB777

The QC reported here applies to the following samples:

Method: SW846 8015B

D29137-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-GRO (C6-C10)	ND	10	5.0	mg/kg	

CAS No.	Surrogate Recoveries	Limits
120-82-1	1,2,4-Trichlorobenzene	75% 60-140%

9.1.1

9

Blank Spike Summary

Job Number: D29137
Account: KRWCCOL KRW Consulting, Inc.
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB777-BS	GB13712.D	1	11/04/11	SK	n/a	n/a	GGB777

The QC reported here applies to the following samples: Method: SW846 8015B

D29137-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	122	111	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	88%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D29137
Account: KRWCCOL KRW Consulting, Inc.
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D29137-1MS	GB13714.D	1	11/04/11	SK	n/a	n/a	GGB777
D29137-1MSD	GB13715.D	1	11/04/11	SK	n/a	n/a	GGB777
D29137-1	GB13713.D	1	11/04/11	SK	n/a	n/a	GGB777

The QC reported here applies to the following samples: Method: SW846 8015B

D29137-1

CAS No.	Compound	D29137-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	ND		138	152	110	154	111	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D29137-1	Limits
120-82-1	1,2,4-Trichlorobenzene	89%	88%	72%	60-140%

GC Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\110411\GB13713.D\FID1A.CH Vial: 4
Signal #2 : Y:\1\DATA\110411\GB13713.D\FID2B.CH
Acq On : 4 Nov 2011 1:25 pm Operator: StephK
Sample : D29137-1, 50X Inst : GC/MS Ins
Misc : GC2379,GGB777,5.019,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Nov 04 13:57:44 2011 Quant Results File: TB740GB740SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB740GB740SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Fri Nov 04 13:10:03 2011
Response via : Initial Calibration
DataAcq Meth : TVB4.M

Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

	Compound	R.T.	Response	Conc	Units	

System Monitoring Compounds						
2) S	1,2,4-Trichlorobenzene	14.47f	2494143	71.882 %	m	
10) S	1,2,4-Trichlorobenzene (P)	14.47	18001375	89.512 %		
Target Compounds						
1) H	TVH-Gasoline	7.33	6200090	<MDL	mg/L	
4) T	Methyl-t-butyl-ether	0.00	0	N.D.	ug/L	d
5) T	Benzene	4.26	181799	0.376	ug/L	
6) T	Toluene	7.79f	468975	1.010	ug/L	
7) T	Ethylbenzene	10.41f	85246	0.212	ug/L	
8) T	m,p-Xylene	10.58f	452641	0.424	ug/L	
9) T	o-Xylene	11.07	202154	0.266	ug/L	
11) T	Naphthalene	14.65	776727	3.573	ug/L	

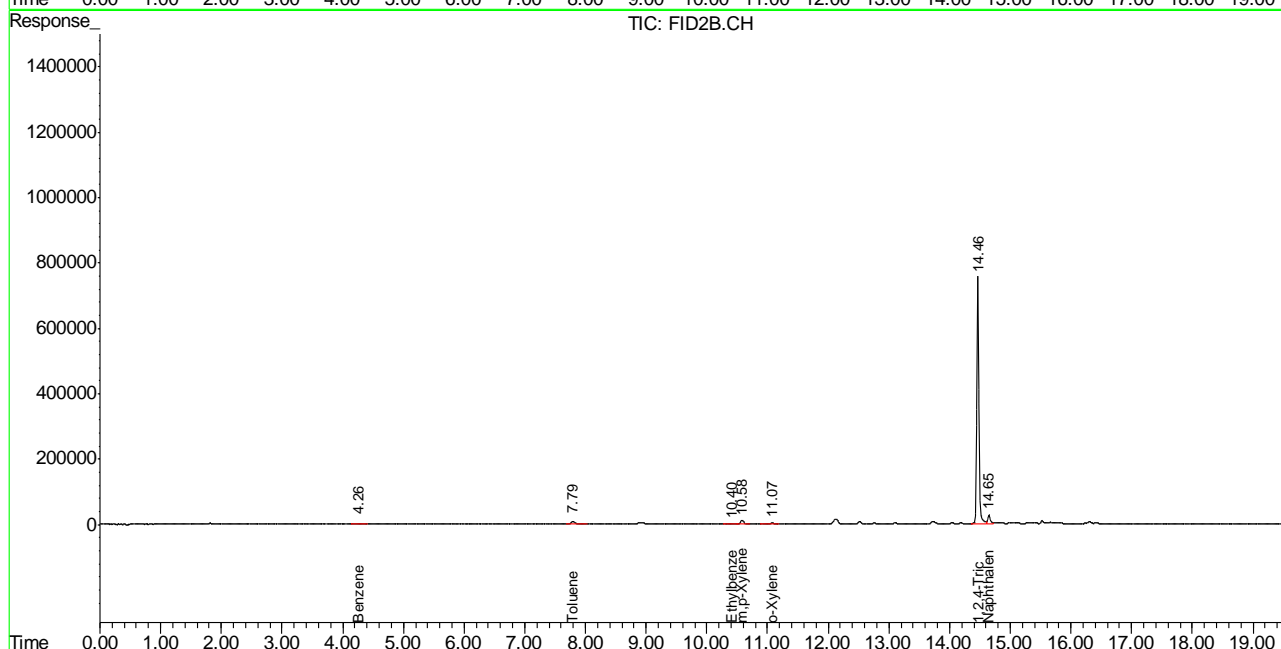
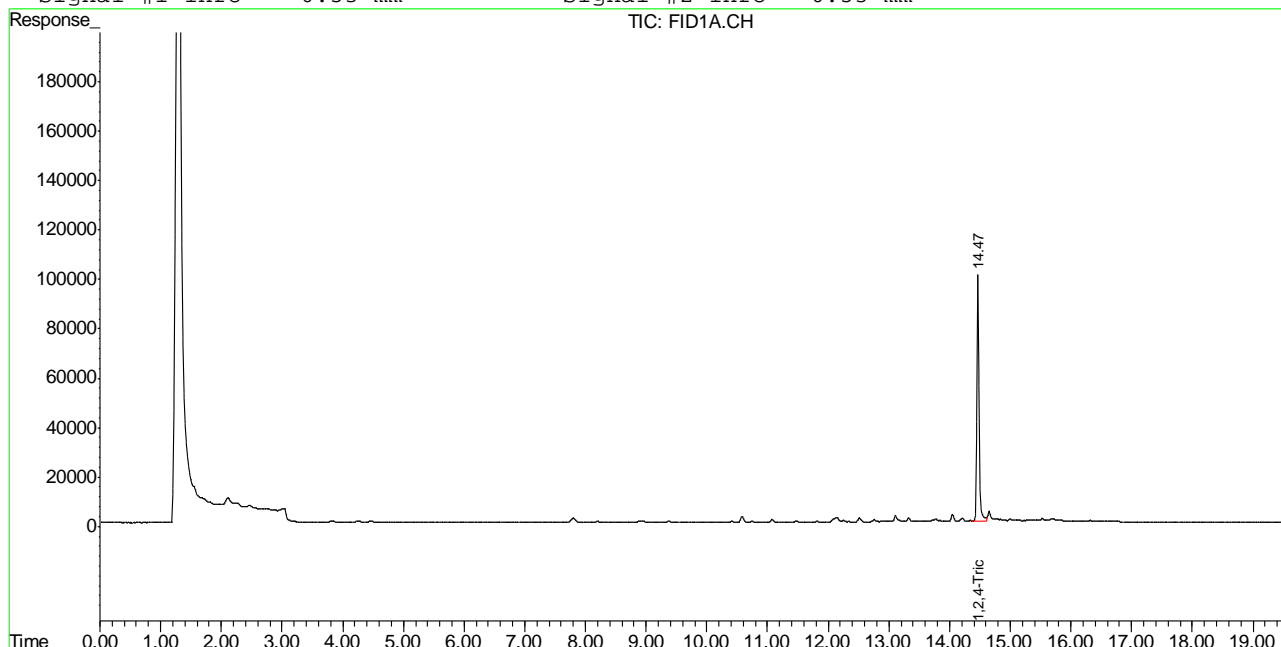
10.1.1
10

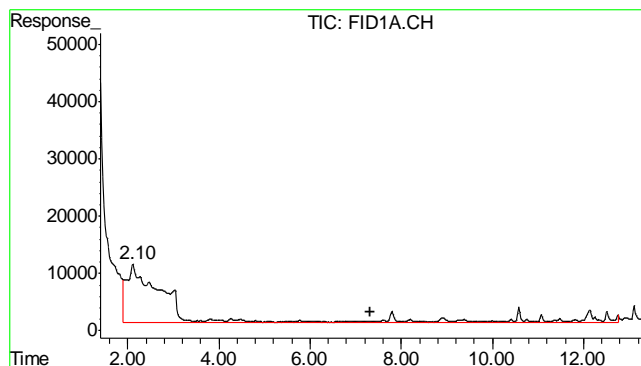
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\110411\GB13713.D\FID1A.CH Vial: 4
 Signal #2 : Y:\1\DATA\110411\GB13713.D\FID2B.CH
 Acq On : 4 Nov 2011 1:25 pm Operator: StephK
 Sample : D29137-1, 50X Inst : GC/MS Ins
 Misc : GC2379,GGB777,5.019,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Nov 4 12:57 2011 Quant Results File: TB740GB740SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB740GB740SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Fri Nov 04 13:10:03 2011
 Response via : Multiple Level Calibration
 DataAcq Meth : TVB4.M

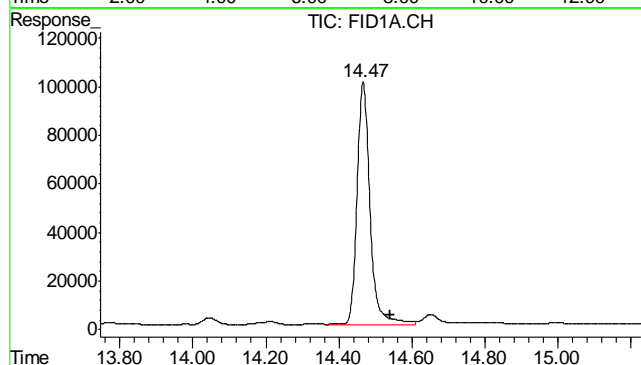
Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





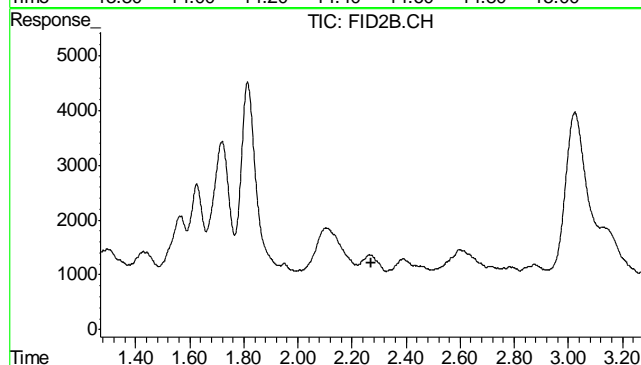
#1 TVH-Gasoline

R.T.: 7.330 min
Delta R.T.: 0.000 min
Response: 6200090
Conc: N.D.



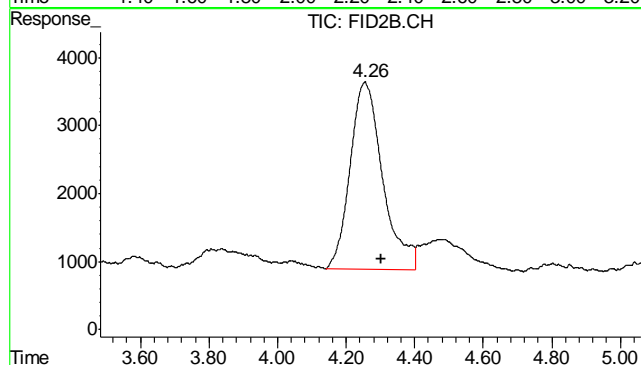
#2 1,2,4-Trichlorobenzene

R.T.: 14.466 min
Delta R.T.: -0.076 min
Response: 2494143
Conc: 71.88 % m



#4 Methyl-t-butyl-ether

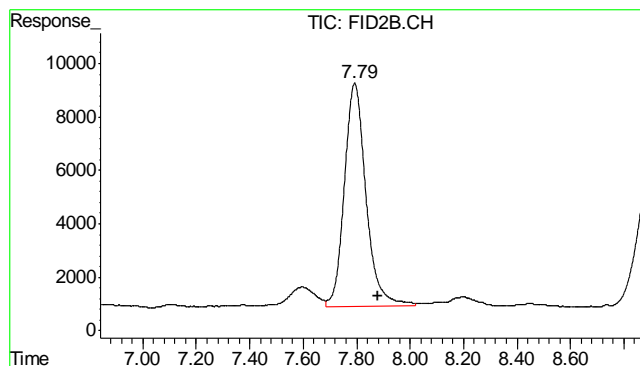
R.T.: 0.000 min
Exp R.T.: 2.269 min
Response: 0
Conc: N.D.



#5 Benzene

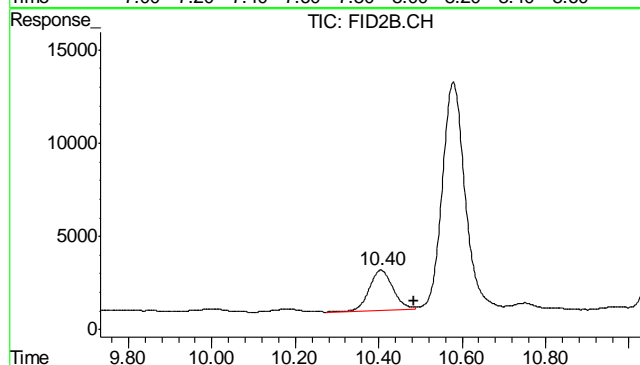
R.T.: 4.255 min
Delta R.T.: -0.048 min
Response: 181799
Conc: 0.38 ug/L

10.1.1
10



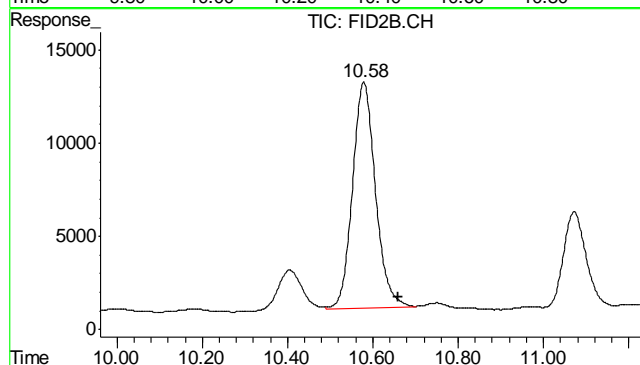
#6 Toluene

R.T.: 7.792 min
Delta R.T.: -0.087 min
Response: 468975
Conc: 1.01 ug/L



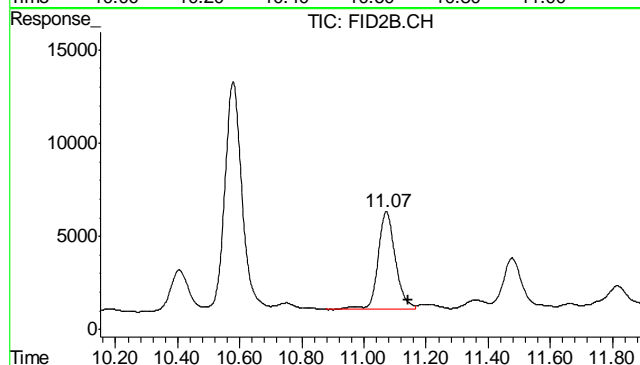
#7 Ethylbenzene

R.T.: 10.405 min
Delta R.T.: -0.080 min
Response: 85246
Conc: 0.21 ug/L



#8 m,p-Xylene

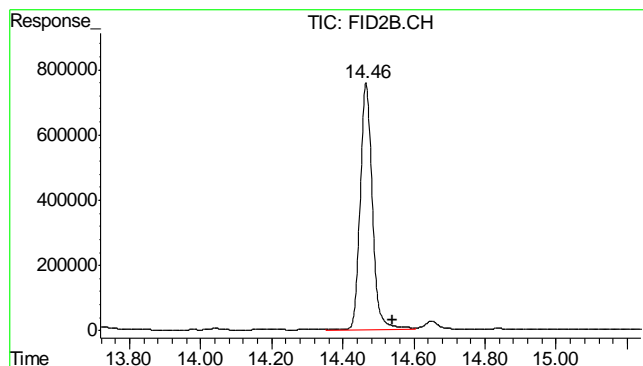
R.T.: 10.579 min
Delta R.T.: -0.079 min
Response: 452641
Conc: 0.42 ug/L



#9 o-Xylene

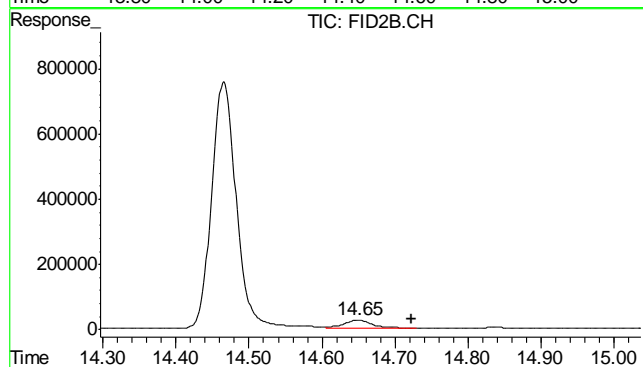
R.T.: 11.072 min
Delta R.T.: -0.070 min
Response: 202154
Conc: 0.27 ug/L

10.1.1 10



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.466 min
Delta R.T.: -0.073 min
Response: 18001375
Conc: 89.51 %



#11 Naphthalene

R.T.: 14.649 min
Delta R.T.: -0.073 min
Response: 776727
Conc: 3.57 ug/L

10.1.1
10

Judy Melson
11/07/11 10:25

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\110411\GB13711.D\FID1A.CH Vial: 2
 Signal #2 : Y:\1\DATA\110411\GB13711.D\FID2B.CH
 Acq On : 4 Nov 2011 12:13 pm Operator: StephK
 Sample : MB, W Inst : GC/MS Ins
 Misc : GC2379,GGB777,5.000,,100,5,1 Multiplr: 1.00
 IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
 Quant Time: Nov 04 12:34:00 2011 Quant Results File: TB740GB740SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB740GB740SOIL.M (Chemstation Integrator)
 Title : 8015B/8021B TVH/BTEX
 Last Update : Fri Nov 04 12:32:04 2011
 Response via : Initial Calibration
 DataAcq Meth : TVB4.M

Volume Inj. :
 Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
 Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm

Compound	R.T.	Response	Conc	Units

System Monitoring Compounds				
2) S 1,2,4-Trichlorobenzene	14.55	2612360	75.290 %	m
10) S 1,2,4-Trichlorobenzene (P)	14.54	19844525	98.677 %	
Target Compounds				
1) H TVH-Gasoline	7.33	5878350	<MDL	mg/L
4) T Methyl-t-butyl-ether	0.00	0	N.D.	ug/L d
5) T Benzene	0.00	0	N.D.	ug/L d
6) T Toluene	7.88	202103	0.435	ug/L
7) T Ethylbenzene	0.00	0	N.D.	ug/L d
8) T m,p-Xylene	10.66	324383	0.151	ug/L
9) T o-Xylene	11.15	159924	0.158	ug/L
11) T Naphthalene	14.73	348689	1.747	ug/L

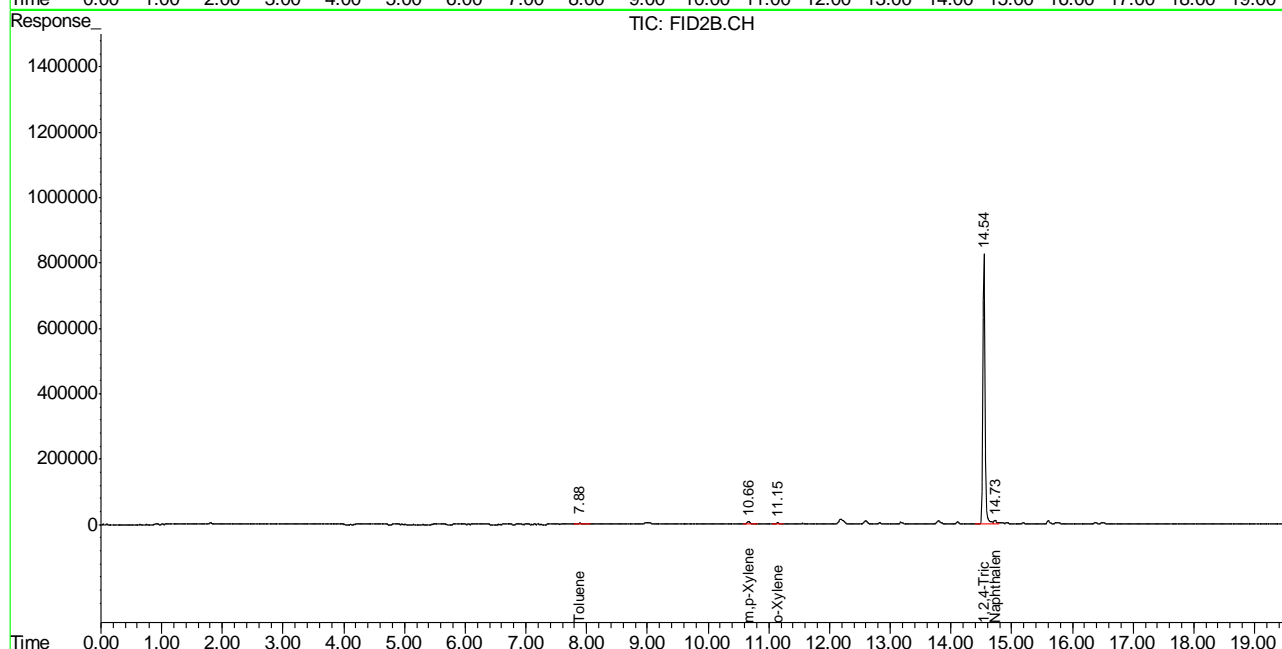
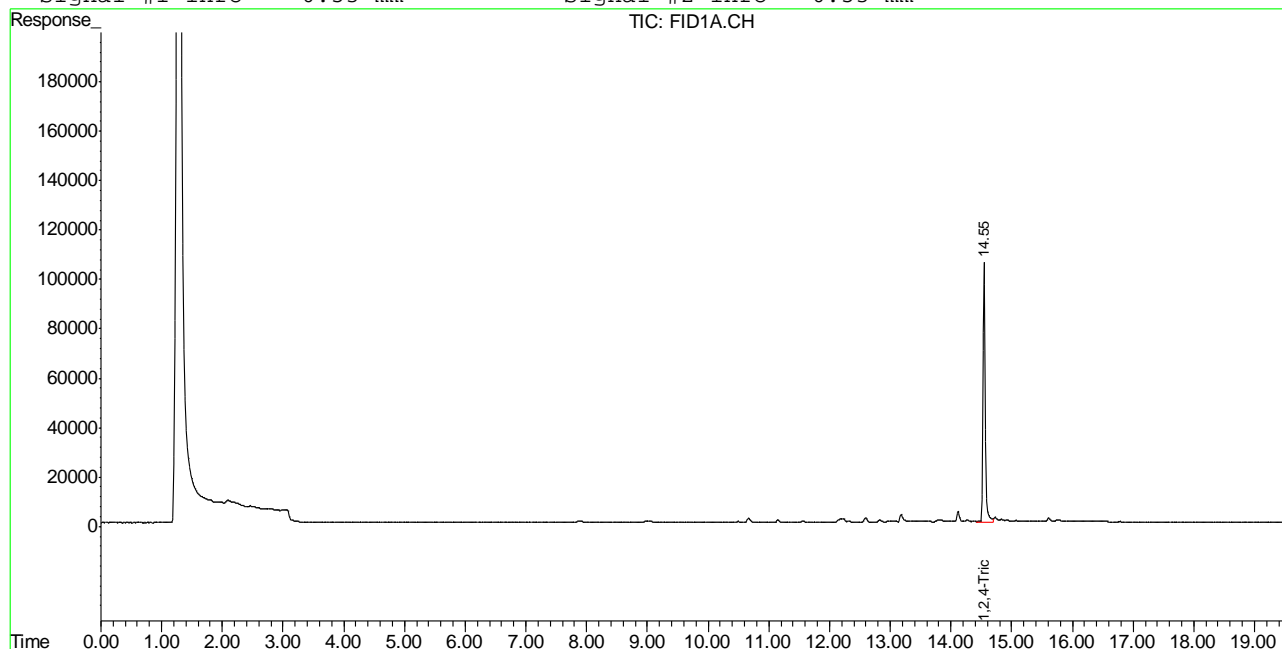
(f)=RT Delta > 1/2 Window (m)=manual int.
 GB13711.D TB740GB740SOIL.M Mon Nov 07 08:46:01 2011 GC

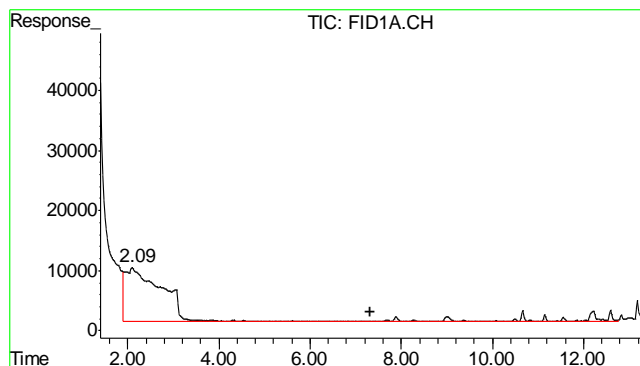
Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\110411\GB13711.D\FID1A.CH Vial: 2
Signal #2 : Y:\1\DATA\110411\GB13711.D\FID2B.CH
Acq On : 4 Nov 2011 12:13 pm Operator: StephK
Sample : MB, W Inst : GC/MS Ins
Misc : GC2379,GGB777,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Nov 4 11:33 2011 Quant Results File: TB740GB740SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB740GB740SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Fri Nov 04 12:32:04 2011
Response via : Multiple Level Calibration
DataAcq Meth : TVB4.M

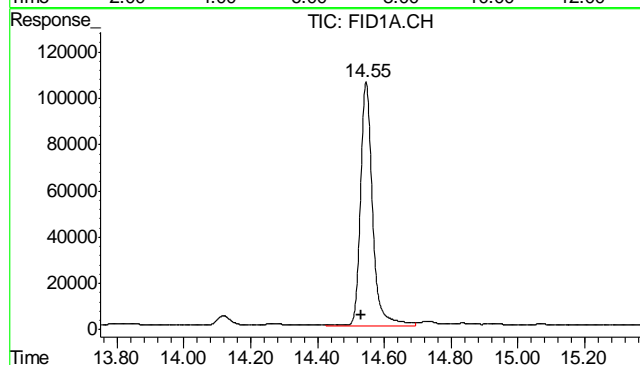
Volume Inj. :
Signal #1 Phase : DB-624 Signal #2 Phase: DB-624
Signal #1 Info : 0.53 mm Signal #2 Info : 0.53 mm





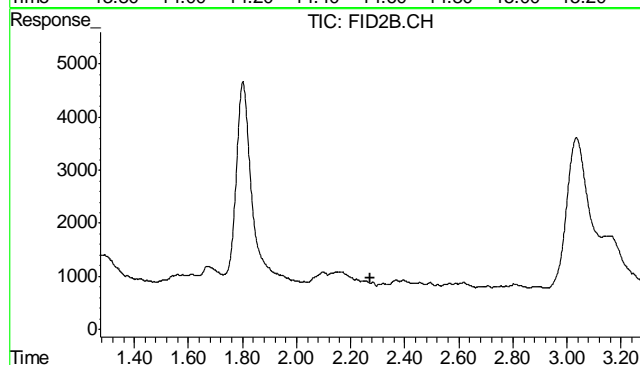
#1 TVH-Gasoline

R.T.: 7.330 min
Delta R.T.: 0.000 min
Response: 5878350
Conc: N.D.



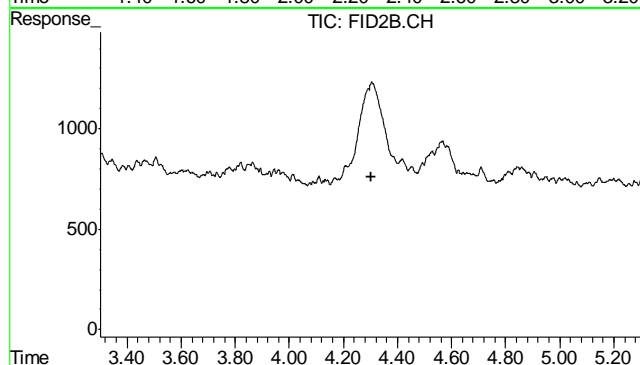
#2 1,2,4-Trichlorobenzene

R.T.: 14.545 min
Delta R.T.: 0.015 min
Response: 2612360
Conc: 75.29 % m



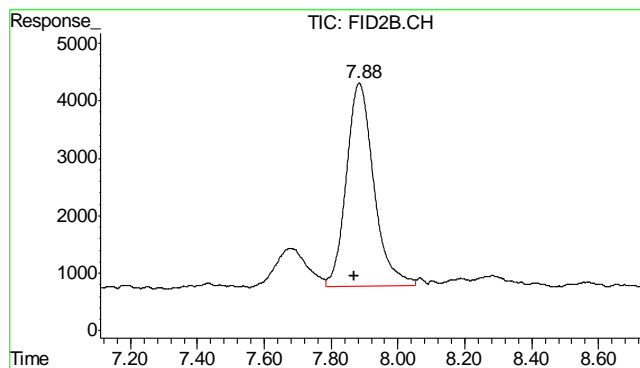
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T.: 2.274 min
Response: 0
Conc: N.D.



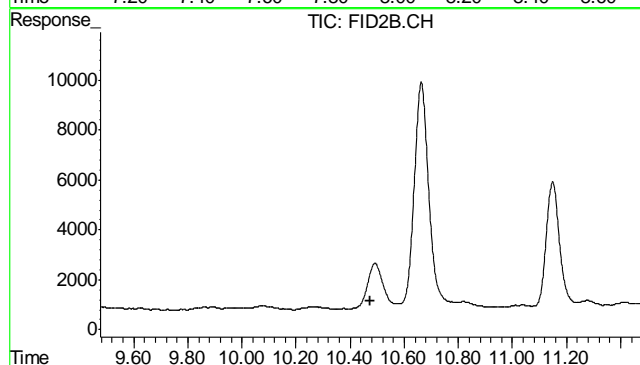
#5 Benzene

R.T.: 0.000 min
Exp R.T.: 4.301 min
Response: 0
Conc: N.D.



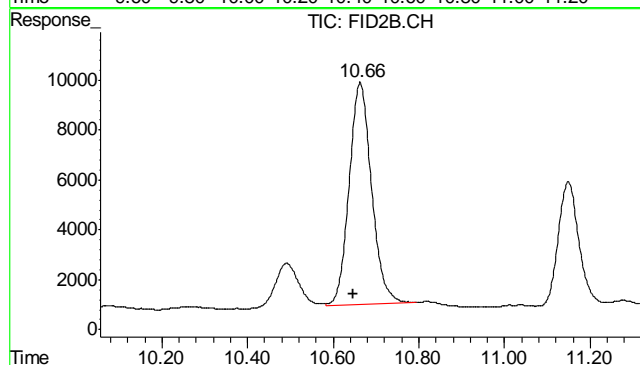
#6 Toluene

R.T.: 7.884 min
Delta R.T.: 0.014 min
Response: 202103
Conc: 0.44 ug/L



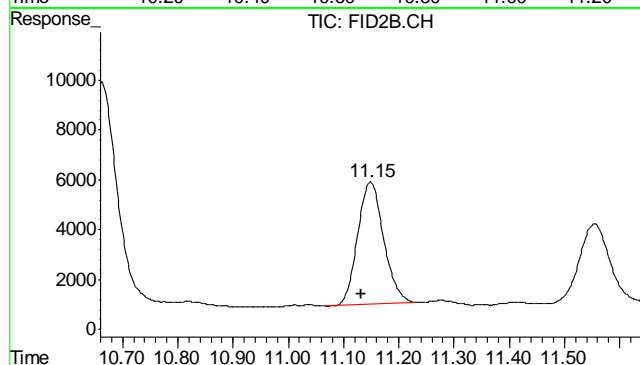
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T.: 10.475 min
Response: 0
Conc: N.D.



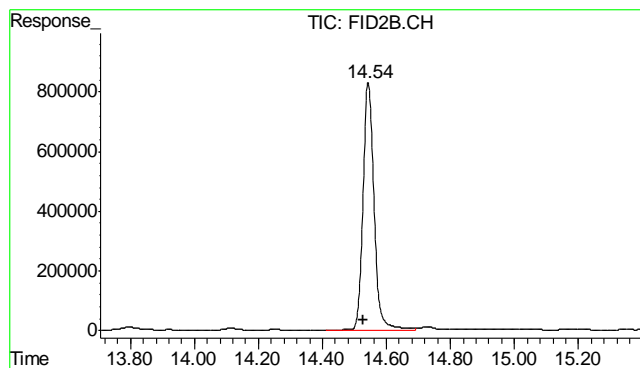
#8 m,p-Xylene

R.T.: 10.663 min
Delta R.T.: 0.015 min
Response: 324383
Conc: 0.15 ug/L



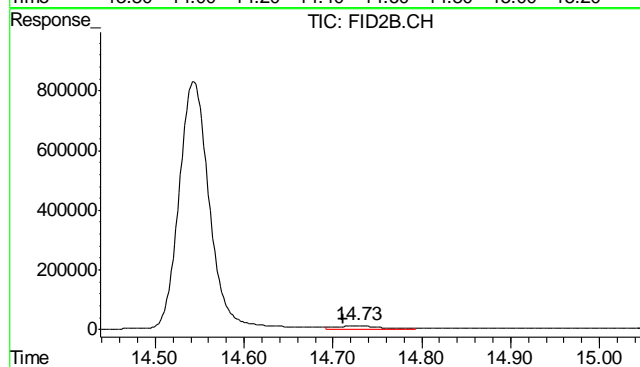
#9 o-Xylene

R.T.: 11.149 min
Delta R.T.: 0.016 min
Response: 159924
Conc: 0.16 ug/L



#10 1,2,4-Trichlorobenzene (P)

R.T.: 14.544 min
Delta R.T.: 0.016 min
Response: 19844525
Conc: 98.68 %



#11 Naphthalene

R.T.: 14.728 min
Delta R.T.: 0.017 min
Response: 348689
Conc: 1.75 ug/L

10.2.1
10

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Job Number: D29137
Account: KRWCCOL KRW Consulting, Inc.
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4792-MB	FD11328.D	1	11/07/11	CS	11/04/11	OP4792	GFD568

The QC reported here applies to the following samples: Method: SW846-8015B

D29137-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	13	8.7	mg/kg	

CAS No.	Surrogate Recoveries	Limits
84-15-1	o-Terphenyl	121% 61-142%

11.1.1
11

Blank Spike Summary

Job Number: D29137
Account: KRWCCOL KRW Consulting, Inc.
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4792-BS	FD11329.D	1	11/07/11	CS	11/04/11	OP4792	GFD568

The QC reported here applies to the following samples: Method: SW846-8015B

D29137-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	724	109	60-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	113%	61-142%

11.2.1
11

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D29137
Account: KRWCCOL KRW Consulting, Inc.
Project: PCU 297-10B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP4792-MS	FD11330.D	1	11/07/11	CS	11/04/11	OP4792	GFD568
OP4792-MSD	FD11331.D	1	11/07/11	CS	11/04/11	OP4792	GFD568
D29137-1	FD11332.D	1	11/07/11	CS	11/04/11	OP4792	GFD568

The QC reported here applies to the following samples: Method: SW846-8015B

D29137-1

CAS No.	Compound	D29137-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	ND		754	741	98	616	82	18	24-157/35

CAS No.	Surrogate Recoveries	MS	MSD	D29137-1	Limits
84-15-1	o-Terphenyl	101%	81%	87%	61-142%

11.3.1
11

GC Semi-volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2011\NOV\FD110711\FD11332.D Vial: 7
Acq On : 07 Nov 2011 10:45 am Operator: CHAVALIT
Sample : D29137-1 Inst : FID5
Misc : OP4792,GFD568,30.02,,,2,1 Multiplr: 1.00
IntFile : DF-GFC101.E
Quant Time: Nov 07 11:09:31 2011 Quant Results File: GFD530.RES

Quant Method : C:\MSDCHEM\2\METHODS\GFD530.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Nov 04 08:29:32 2011
Response via : Initial Calibration
DataAcq Meth : JH080911.M

Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	9.69	35054900	873.380 mg/L m

Target Compounds

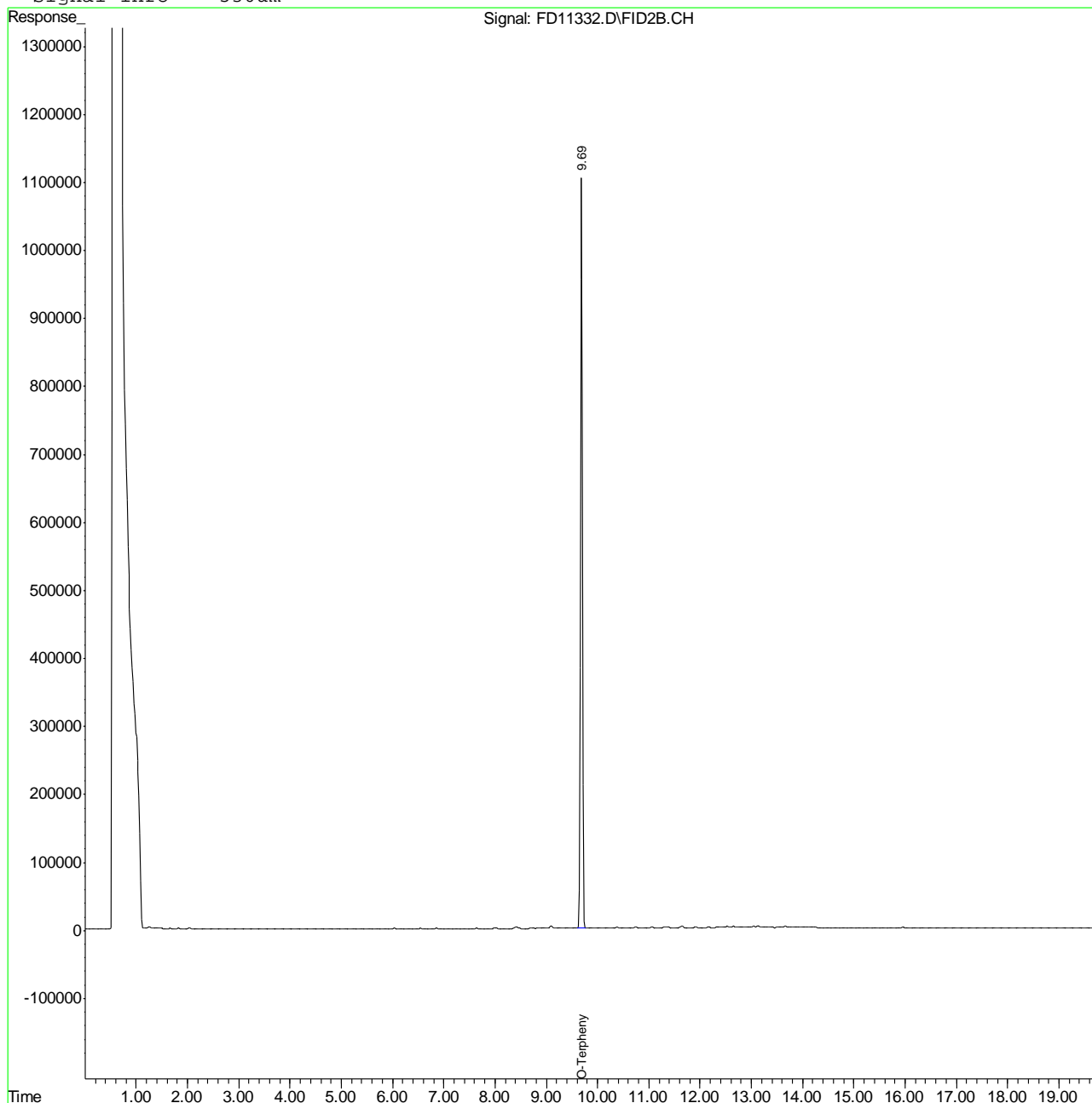
12.1.1
12

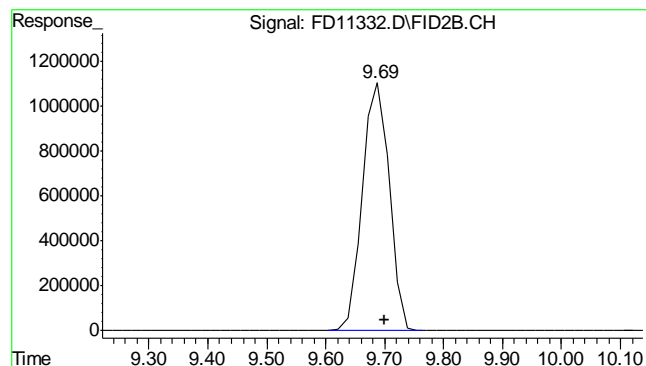
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2011\NOV\FD110711\FD11332.D Vial: 7
Acq On : 07 Nov 2011 10:45 am Operator: CHAVALIT
Sample : D29137-1 Inst : FID5
Misc : OP4792,GFD568,30.02,,,2,1 Multiplr: 1.00
IntFile : DF-GFC101.E
Quant Time: Nov 7 11:09 2011 Quant Results File: GFD530.RES

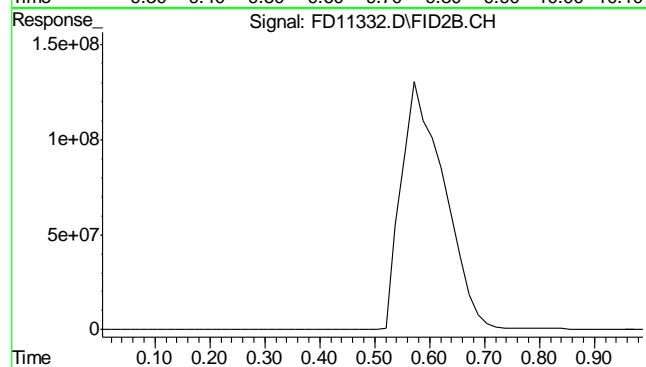
Quant Method : C:\MSDCHEM\2\METHODS\GFD530.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Nov 04 08:29:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : JH080911.M

Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





#1 O-Terphenyl
R.T.: 9.685 min
Delta R.T.: -0.015 min
Response: 35054900
Conc: 873.38 mg/L m



#9 5a-Androstane
R.T.: 0.000 min
Exp R.T. : 0.000 min
Response: 0
Conc: N.D.

12.1.1
12

Judy Melson
11/07/11 15:58

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2011\NOV\FD110711\FD11328.D Vial: 3
Acq On : 11-7-2011 09:02:21 AM Operator: CHAVALIT
Sample : OP4792-MB Inst : FID5
Misc : OP4792,GFD568,30.00,,,2,1 Multiplr: 1.00
IntFile : DF-GFC101.E
Quant Time: Nov 07 10:21:08 2011 Quant Results File: GFD530.RES

Quant Method : C:\MSDCHEM\2\METHODS\GFD530.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Nov 04 08:29:32 2011
Response via : Initial Calibration
DataAcq Meth : JH080911.M

Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um

Compound	R.T.	Response	Conc Units

System Monitoring Compounds			
1) S O-Terphenyl	9.69	52558511	1208.849 mg/L m
Target Compounds			

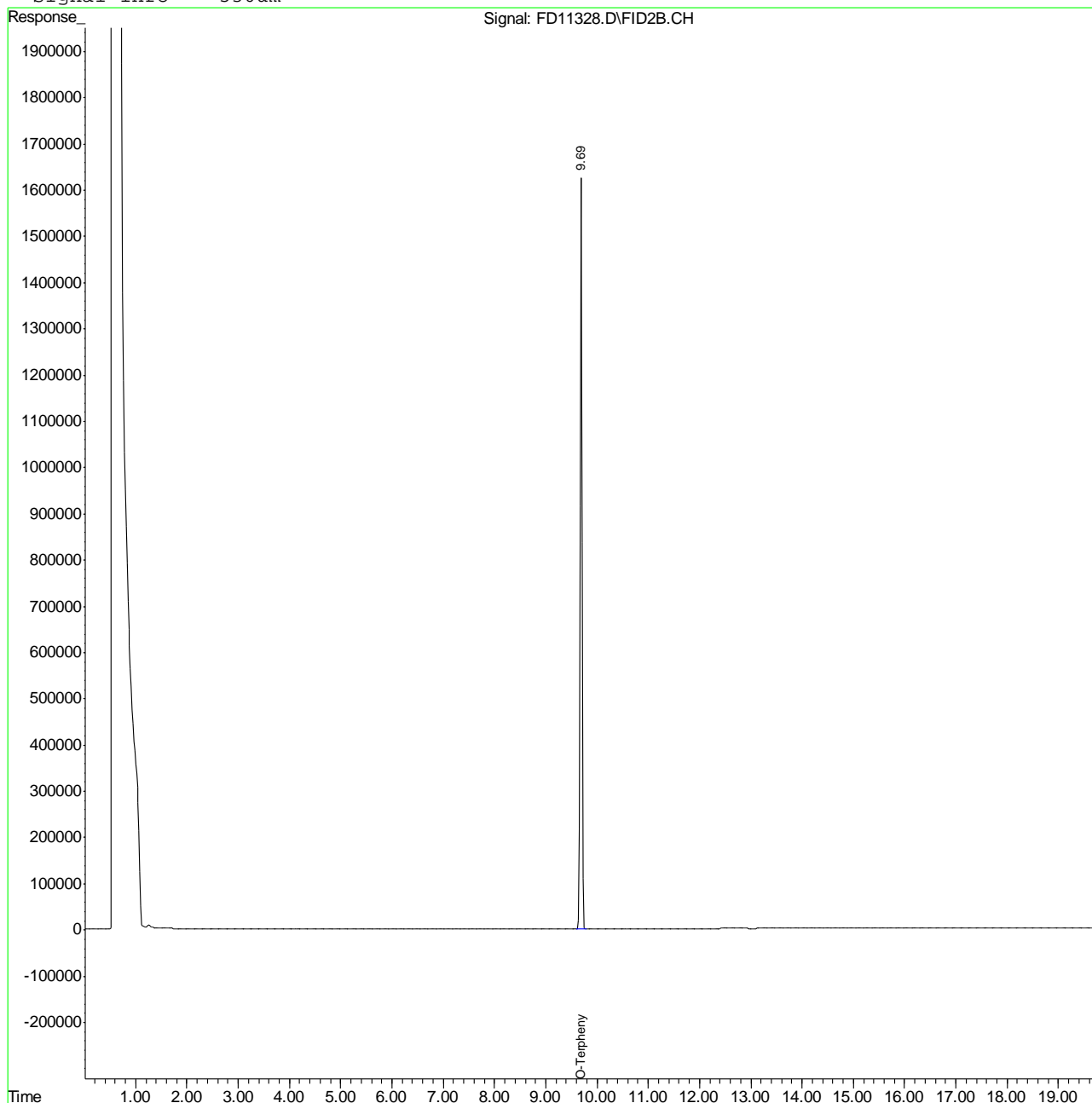
(f)=RT Delta > 1/2 Window (m)=manual int.
FD11328.D GFD530.M Mon Nov 07 15:25:16 2011 GC

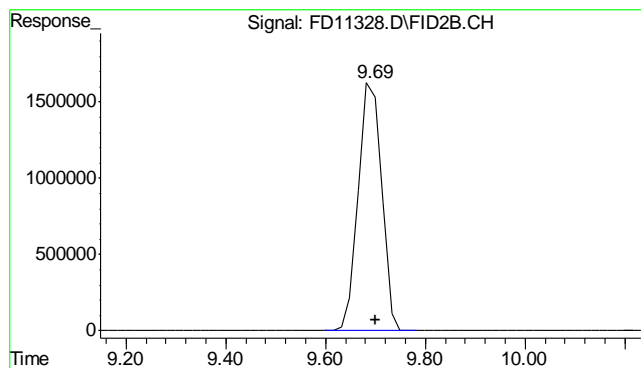
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2011\NOV\FD110711\FD11328.D Vial: 3
Acq On : 11-7-2011 09:02:21 AM Operator: CHAVALIT
Sample : OP4792-MB Inst : FID5
Misc : OP4792,GFD568,30.00,,,2,1 Multiplr: 1.00
IntFile : DF-GFC101.E
Quant Time: Nov 7 10:21 2011 Quant Results File: GFD530.RES

Quant Method : C:\MSDCHEM\2\METHODS\GFD530.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Fri Nov 04 08:29:32 2011
Response via : Multiple Level Calibration
DataAcq Meth : JH080911.M

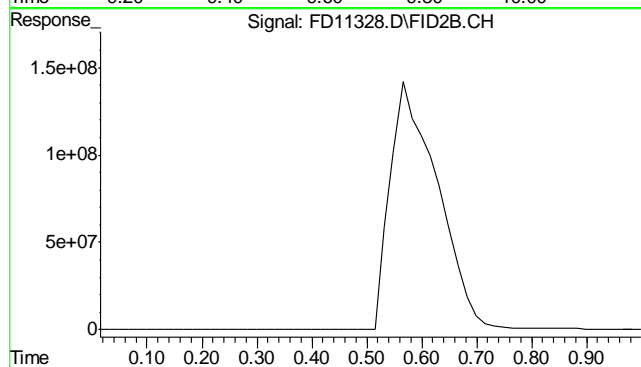
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





#1 O-Terphenyl

R.T.: 9.688 min
Delta R.T.: -0.011 min
Response: 52558511
Conc: 1208.85 mg/L m



#9 5a-Androstane

R.T.: 0.000 min
Exp R.T.: 0.000 min
Response: 0
Conc: N.D.

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6194
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 11/04/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.59	.59		
Antimony	3.0	.31	.31		
Arsenic	2.5	.59	.59		
Barium	1.0	.11	.11	0.32	<1.0
Beryllium	1.0	.044	.1		
Boron	5.0	.48	.48		
Cadmium	1.0	.027	.27	0.010	<1.0
Calcium	40	.96	1.1		
Chromium	1.0	.018	.031	0.040	<1.0
Cobalt	0.50	.035	.035		
Copper	1.0	.085	.16	0.090	<1.0
Iron	7.0	.34	2		
Lead	5.0	.16	.21	0.0	<5.0
Lithium	0.20	.028	.031		
Magnesium	20	.58	1.4		
Manganese	0.50	.0053	.012		
Molybdenum	1.0	.045	.054		
Nickel	3.0	.043	.099	0.0	<3.0
Phosphorus	10	1.1	1.2		
Potassium	200	5.5	9.2		
Selenium	5.0	.38	.5	-0.060	<5.0
Silicon	5.0	.38	.51		
Silver	3.0	.018	.051	0.0	<3.0
Sodium	40	11	11		
Strontium	5.0		.017		
Thallium	1.0	.29	.34		
Tin	5.0	.55	1.3		
Titanium	1.0	.011	.1		
Uranium	5.0	.15	.2		
Vanadium	1.0	.016	.025		
Zinc	3.0	.028	.06	0.27	<3.0

Associated samples MP6194: D29137-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6194
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

13.1.1

13

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6194
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 11/04/11

Metal	D29137-1 Original MS		SpikeLot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic	anr				
Barium	624	723	222	44.6N(a)	75-125
Beryllium					
Boron					
Cadmium	0.12	48.1	55.5	86.5	75-125
Calcium					
Chromium	69.6	113	55.5	78.3	75-125
Cobalt					
Copper	7.3	59.0	55.5	93.2	75-125
Iron					
Lead	8.2	101	111	83.7	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum	anr				
Nickel	19.3	63.0	55.5	78.8	75-125
Phosphorus	anr				
Potassium	anr				
Selenium	2.1	96.9	111	85.5	75-125
Silicon					
Silver	0.19	20.6	22.2	92.0	75-125
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc	48.6	91.7	55.5	77.7	75-125

Associated samples MP6194: D29137-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6194
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

- (N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested
(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6194
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 11/04/11

Metal	D29137-1 Original	MSD	Spikelot MPICPALL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	anr					
Barium	624	1020	226	175.0N(a)	34.1 (b)	20
Beryllium						
Boron						
Cadmium	0.12	49.4	56.6	87.1	2.7	20
Calcium						
Chromium	69.6	114	56.6	78.5	0.9	20
Cobalt						
Copper	7.3	60.0	56.6	93.2	1.7	20
Iron						
Lead	8.2	104	113	84.7	2.9	20
Lithium						
Magnesium						
Manganese						
Molybdenum	anr					
Nickel	19.3	63.5	56.6	78.1	0.8	20
Phosphorus	anr					
Potassium	anr					
Selenium	2.1	99.4	113	86.0	2.5	20
Silicon						
Silver	0.19	20.9	22.6	91.5	1.4	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc	48.6	93.8	56.6	79.9	2.3	20

Associated samples MP6194: D29137-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6194
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.
- (b) High RPD due to possible sample matrix or nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D29137

Account: KRWCCOL - KRW Consulting, Inc.

Project: PCU 297-10B

QC Batch ID: MP6194

Methods: SW846 6010B

Matrix Type: SOLID

Units: mg/kg

Prep Date:

11/04/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	179	200	89.5	80-120
Beryllium				
Boron				
Cadmium	48.6	50	97.2	80-120
Calcium				
Chromium	49.8	50	99.6	80-120
Cobalt				
Copper	50.0	50	100.0	80-120
Iron				
Lead	101	100	101.0	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	48.1	50	96.2	80-120
Phosphorus	anr			
Potassium	anr			
Selenium	101	100	101.0	80-120
Silicon				
Silver	20.5	20	102.5	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	49.3	50	98.6	80-120

Associated samples MP6194: D29137-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6194
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

Metal

(anr) Analyte not requested

13.1.3

13

SERIAL DILUTION RESULTS SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6194
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 11/04/11

Metal	D29137-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	anr			
Barium	5240	5840	11.5*(a)	0-10
Beryllium				
Boron				
Cadmium	1.00	0.00	100.0(b)	0-10
Calcium				
Chromium	584	649	11.0*(a)	0-10
Cobalt				
Copper	61.3	58.0	5.4	0-10
Iron				
Lead	68.7	61.5	10.5 (b)	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum	anr			
Nickel	162	188	15.6*(a)	0-10
Phosphorus	anr			
Potassium	anr			
Selenium	17.3	0.00	100.0(b)	0-10
Silicon				
Silver	1.60	5.00	212.5(b)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc	408	479	17.4*(a)	0-10

Associated samples MP6194: D29137-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

13.1.4
13

SERIAL DILUTION RESULTS SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6194
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference.

(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

13.1.4
13

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6195
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 11/04/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	25	.14	1.2		
Antimony	0.20	.001	.0095		
Arsenic	0.40	.049	.22	0.048	<0.40
Barium	1.0	.0035	.1		
Beryllium	0.10	.0075	.014		
Boron	20	.97	1		
Cadmium	0.050	.023	.048		
Calcium	200	1.8	8.2		
Chromium	1.0	.021	.24		
Cobalt	0.10	.0033	.003		
Copper	1.0	.011	.063		
Iron	20	.81	3.7		
Lead	0.25	.0012	.015		
Magnesium	50	.067	2.6		
Manganese	0.50	.007	.029		
Molybdenum	0.50	.0044	.023		
Nickel	1.0	.0029	.031		
Phosphorus	30	1.8	3.5		
Potassium	100	2	3.2		
Selenium	0.20	.075	.19		
Silver	0.050	.0008	.002		
Sodium	250	.8	4.4		
Strontium	10	.004	.04		
Thallium	0.10	.015	.02		
Tin	5.0	.006	.028		
Titanium	1.0	.035	.062		
Uranium	0.25	.00038	.0009		
Vanadium	2.0	.052	.29		
Zinc	5.0	.039	.12		

Associated samples MP6195: D29137-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
 Account: KRWCCOL - KRW Consulting, Inc.
 Project: PCU 297-10B

QC Batch ID: MP6195
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 11/04/11

Metal	D29137-1 Original MS		Spikelot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic	8.4	122	111	102.4	75-125
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP6195: D29137-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6195
Matrix Type: SOLID

Methods: SW846 6020
Units: mg/kg

Prep Date: 11/04/11

Metal	D29137-1 Original	MSD	Spikelot MPICPAL	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	8.4	121	113	99.5	0.8	20
Barium						
Beryllium						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Iron						
Lead						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Phosphorus						
Potassium						
Selenium						
Silver						
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Uranium						
Vanadium						
Zinc						

Associated samples MP6195: D29137-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D29137
 Account: KRWCCOL - KRW Consulting, Inc.
 Project: PCU 297-10B

QC Batch ID: MP6195
 Matrix Type: SOLID

Methods: SW846 6020
 Units: mg/kg

Prep Date: 11/04/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	101	100	101.0	80-120
Barium				
Beryllium				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silver				
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP6195: D29137-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: D29137
 Account: KRWCCOL - KRW Consulting, Inc.
 Project: PCU 297-10B

QC Batch ID: MP6195
 Matrix Type: SOLID

Methods: SW846 6020
 Units: ug/l

Prep Date: 11/04/11

Metal	D29137-1			QC	
	Original	SDL 5:25	%DIF	Limits	
Aluminum					
Antimony					
Arsenic	70.2	76.6	9.2	0-10	
Barium					
Beryllium					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silver					
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP6195: D29137-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

13.2.4
13

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6196
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 11/04/11

Metal	RL	IDL	MDL	MB	
				raw	final
Mercury	0.10	.0011	.013	0.0020	<0.10

Associated samples MP6196: D29137-1

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
 Account: KRWCCOL - KRW Consulting, Inc.
 Project: PCU 297-10B

QC Batch ID: MP6196
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 11/04/11

Metal	D29124-1 Original MS	Spikelot HGWSR1	% Rec	QC Limits
Mercury	0.068	0.53	0.546	84.6N(a) 85-115

Associated samples MP6196: D29137-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
 Account: KRWCCOL - KRW Consulting, Inc.
 Project: PCU 297-10B

QC Batch ID: MP6196
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 11/04/11

Metal	D29124-1 Original	MSD	Spikelot HGWSR1	% Rec	MSD RPD	QC Limit
Mercury	0.068	0.54	0.568	83.0N(a)	1.9	20

Associated samples MP6196: D29137-1

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike recovery indicates possible matrix interference and/or sample nonhomogeneity.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D29137
 Account: KRWCCOL - KRW Consulting, Inc.
 Project: PCU 297-10B

QC Batch ID: MP6196
 Matrix Type: SOLID

Methods: SW846 7471A
 Units: mg/kg

Prep Date: 11/04/11

Metal	BSP Result	Spikelot HGWSR1	% Rec	QC Limits
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Mercury	0.36	0.4	90.0	80-120
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Associated samples MP6196: D29137-1

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6197
Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
Units: ug/l

Prep Date: 11/04/11

Metal	RL	IDL	MDL	MB raw	final
Aluminum	500	30	30		
Antimony	150	16	16		
Arsenic	130	30	30		
Barium	50	5.5	5.5		
Beryllium	50	2.2	2.5		
Boron	250	24	24		
Cadmium	50	1.4	1.4		
Calcium	2000	48	75	-2.0	<2000
Chromium	50	.9	4		
Cobalt	25	1.8	1.8		
Copper	50	4.3	14		
Iron	350	17	65		
Lead	250	8	11		
Lithium	10	1.4	6		
Magnesium	1000	29	50	11.0	<1000
Manganese	25	.27	1.6		
Molybdenum	50	2.3	4.4		
Nickel	150	2.2	5		
Phosphorus	500	55	100		
Potassium	5000	280	280		
Selenium	250	19	19		
Silicon	250	19	19		
Silver	150	.9	1.6		
Sodium	2000	570	570	188	<2000
Strontium	25		1.3		
Thallium	50	15	15		
Tin	250	28	50		
Titanium	50	.55	1.6		
Uranium	250	7.5	18		
Vanadium	50	.8	1.1		
Zinc	150	1.4	9		

Associated samples MP6197: D29137-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6197
Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6197
Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
Units: ug/l

Prep Date: 11/04/11

Metal	D29124-1A Original MS		Spikelot MPICPALL % Rec		QC Limits
Aluminum					
Antimony					
Arsenic					
Barium					
Beryllium					
Boron					
Cadmium					
Calcium	37700	176000	125000	110.6	75-125
Chromium					
Cobalt					
Copper					
Iron					
Lead					
Lithium					
Magnesium	3620	133000	125000	103.5	75-125
Manganese					
Molybdenum					
Nickel					
Phosphorus					
Potassium					
Selenium					
Silicon					
Silver					
Sodium	597000	668000	125000	56.8 (a)	75-125
Strontium					
Thallium					
Tin					
Titanium					
Uranium					
Vanadium					
Zinc					

Associated samples MP6197: D29137-1A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits

13.4.2
13

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6197
Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

13.4.2
13

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
 Account: KRWCCOL - KRW Consulting, Inc.
 Project: PCU 297-10B

QC Batch ID: MP6197
 Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
 Units: ug/l

Prep Date: 11/04/11

Metal	D29124-1A Original MSD	Spikelot MPICPAL % Rec	MSD RPD	QC Limit
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	37700	180000	125000	113.8
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	3620	134000	125000	104.3
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	597000	712000	125000	92.0
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP6197: D29137-1A

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits

13.4.2
13

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6197
Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

13.4.2
13

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D29137

Account: KRWCCOL - KRW Consulting, Inc.

Project: PCU 297-10B

QC Batch ID: MP6197

Methods: SW846 6010B, USDA HANDBOOK 60

Matrix Type: AQUEOUS

Units: ug/l

Prep Date:

11/04/11

Metal	BSP Result	Spikelot MPICPALL	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic				
Barium				
Beryllium				
Boron				
Cadmium				
Calcium	143000	125000	114.4	80-120
Chromium				
Cobalt				
Copper				
Iron				
Lead				
Lithium				
Magnesium	130000	125000	104.0	80-120
Manganese				
Molybdenum				
Nickel				
Phosphorus				
Potassium				
Selenium				
Silicon				
Silver				
Sodium	125000	125000	100.0	80-120
Strontium				
Thallium				
Tin				
Titanium				
Uranium				
Vanadium				
Zinc				

Associated samples MP6197: D29137-1A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

13.4.3
13

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

QC Batch ID: MP6197
Matrix Type: AQUEOUS

Methods: SW846 6010B, USDA HANDBOOK 60
Units: ug/l

Prep Date:

Metal

(anr) Analyte not requested

General Chemistry

QC Data Summaries

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Specific Conductivity	GP5881/GN12392			umhos/cm	9980	9970	99.9	90-110%
pH	GN12348			su	8.00	7.95	99.4	99.3-100.7%

Associated Samples:
Batch GN12348: D29137-1
Batch GP5881: D29137-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29137
Account: KRWCCOL - KRW Consulting, Inc.
Project: PCU 297-10B

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Redox Potential Vs H2	GN12350	D29137-1	mv	400	408	2.0	0-20%

Associated Samples:
Batch GN12350: D29137-1
(*) Outside of QC limits

14.2
14

Misc. Forms

Custody Documents and Other Forms

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Chain of Custody

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D29137

Client: AMS

Immediate Client Services Action Required: No

Date / Time Received: 11/4/2011

Delivery Method:

Client Service Action Required at Login: No

Project:

No. Coolers: 1

Airbill #'s:

Cooler Security

Y or N

Y or N

- | | | | | | |
|---------------------------|-------------------------------------|--------------------------|-----------------------|-------------------------------------|--------------------------|
| 1. Custody Seals Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 3. COC Present: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Custody Seals Intact: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | 4. Smpl Dates/Time OK | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Cooler Temperature

Y or N

- | | | |
|------------------------------|-------------------------------------|--------------------------|
| 1. Temp criteria achieved: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Cooler temp verification: | Infrared gun | |
| 3. Cooler media: | Ice (bag) | |

Quality Control Preservation

Y or N

N/A

- | | | | |
|---------------------------------|-------------------------------------|--------------------------|-------------------------------------|
| 1. Trip Blank present / cooler: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 2. Trip Blank listed on COC: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Samples preserved properly: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. VOCs headspace free: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Sample Integrity - Documentation

Y or N

- | | | |
|--|-------------------------------------|--------------------------|
| 1. Sample labels present on bottles: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Container labeling complete: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Sample container label / COC agree: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Sample Integrity - Condition

Y or N

- | | | |
|----------------------------------|-------------------------------------|--------------------------|
| 1. Sample recvd within HT: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. All containers accounted for: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 3. Condition of sample: | Intact | |

Sample Integrity - Instructions

Y or N N/A

- | | | | |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1. Analysis requested is clear: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 2. Bottles received for unspecified tests | <input type="checkbox"/> | <input checked="" type="checkbox"/> | |
| 3. Sufficient volume recvd for analysis: | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| 4. Compositing instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 5. Filtering instructions clear: | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Comments

General Chemistry

QC Data Summaries

(Accutest Labs of New England, Inc.)

Includes the following where applicable:

- Method Blank and Blank Spike Summaries
- Duplicate Summaries
- Matrix Spike Summaries

METHOD BLANK AND SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29137
Account: ALMS - Accutest Mountain States
Project: KRWCCOL: PCU 297-10B

Analyte	Batch ID	RL	MB Result	Units	Spike Amount	BSP Result	BSP %Recov	QC Limits
Chromium, Hexavalent	GP13745/GN36770	0.40	0.0	mg/kg	40	41.3	103.3	80-120%
Chromium, Hexavalent	GP13745/GN36770			mg/kg	979	1000	102.1	80-120%

Associated Samples:
Batch GP13745: D29137-1
(*) Outside of QC limits

DUPLICATE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29137
Account: ALMS - Accutest Mountain States
Project: KRWCCOL: PCU 297-10B

Analyte	Batch ID	QC Sample	Units	Original Result	DUP Result	RPD	QC Limits
Chromium, Hexavalent	GP13745/GN36770	D29014-4	mg/kg	0.0	0.0	0.0	0-20%

Associated Samples:
Batch GP13745: D29137-1
(*) Outside of QC limits

MATRIX SPIKE RESULTS SUMMARY
GENERAL CHEMISTRY

Login Number: D29137
Account: ALMS - Accutest Mountain States
Project: KRWCCOL: PCU 297-10B

Analyte	Batch ID	QC Sample	Units	Original Result	Spike Amount	MS Result	%Rec	QC Limits
Chromium, Hexavalent	GP13745/GN36770	D29014-4	mg/kg	0.0	41.9	45.2	107.9	75-125%
Chromium, Hexavalent	GP13745/GN36770	D29014-4	mg/kg	0.0	771	854	110.8	75-125%

Associated Samples:
Batch GP13745: D29137-1
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits