Mountain States ACCUTEST LABORATORIES

06/21/12

Technical Report for

XTO Energy

FRU 297-8B

1106-06

Accutest Job Number: D35485

Sampling Date: 06/12/12

Report to:

KRW Consulting, Inc.
8000 West 14th Avenue
Lakewood, CO 80214
cburger@krwconsulting.com; dknudson@krwconsulting.com;
jhess@krwconsulting.com; crachak@krwconsulting.com;
ATTN: Dwayne Knudson

Total number of pages in report: **66**

ACCREDITED IN ACCORDANCE WITH nelac

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: Renea Jackson 303-425-6021

Certifications: CO, ID, NE, NM, ND (R-027) (PW), UT (NELAP CO00049), TX (T104704511-12-1)

Test results relate only to samples analyzed.

Sections: 1 2 3 4 5 6 7 8 9 10

Table of Contents

Sample Summary

XTO Energy

Job No: D35485

FRU 297-8B
Project No: 1106-06

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
D35485-1	06/12/12	10:25	CB	06/14/12	SO	Soil	CUT #1 MB DAY 2 (6/11)

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

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	XTO Energy	**Job No**	D35485
Site:	FRU 297-8B	**Report Date**	6/21/2012 8:57:35 AM

On 06/14/2012, 1 sample(s), 0 Trip Blank(s), and 0 Field Blank(s) were received at Accutest Mountain States (AMS) at a temperature of 4.0 °C. The samples were intact and properly preserved, unless noted below. An AMS Job Number of D35485 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:** V5V1342

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35429-2MS, D35429-2MSD were used as the QC samples indicated.

Volatiles by GC By Method SW846 8015B

Matrix SO **Batch ID:** GGB907

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35344-1MS, D35344-1MSD were used as the QC samples indicated.

Extractables by GC By Method SW846-8015B

Matrix SO **Batch ID:** OP6067

- All samples were extracted and analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) D35488-1MS, D35488-1MSD were used as the QC samples indicated.

Wet Chemistry By Method SM19 2540B M

Matrix SO **Batch ID:** GN15434

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

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.

Mountain States ACCUTEST LABORATORIES

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	CUT #1 MB DAY 2 (6/11)		
Lab Sample ID:	D35485-1	**Date Sampled:**	06/12/12
Matrix:	SO - Soil	**Date Received:**	06/14/12
Method:	SW846 8260B	**Percent Solids:**	89.2
Project:	FRU 297-8B		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	5V21932.D	1	06/15/12	BD	n/a	n/a	V5V1342
Run #2							

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.01 g	5.0 ml	100 ul
Run #2			

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.062	0.024	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	85%		61-130%
460-00-4	4-Bromofluorobenzene	89%		53-131%
17060-07-0	1,2-Dichloroethane-D4	107%		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

Accutest Laboratories

Report of Analysis

Client Sample ID:	CUT #1 MB DAY 2 (6/11)		
Lab Sample ID:	D35485-1	**Date Sampled:**	06/12/12
Matrix:	SO - Soil	**Date Received:**	06/14/12
Method:	SW846 8015B	**Percent Solids:**	89.2
Project:	FRU 297-8B		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	GB16349.D	1	06/14/12	SK	n/a	n/a	GGB907
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)	8.61	12	6.2	mg/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
120-82-1	1,2,4-Trichlorobenzene	83%		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

Client Sample ID:	CUT #1 MB DAY 2 (6/11)		
Lab Sample ID:	D35485-1	**Date Sampled:**	06/12/12
Matrix:	SO - Soil	**Date Received:**	06/14/12
Method:	SW846-8015B SW846 3546	**Percent Solids:**	89.2
Project:	FRU 297-8B		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	FD14392.D	1	06/18/12	AV	06/15/12	OP6067	GFD753
Run #2							

	Initial Weight	Final Volume
Run #1	30.0 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	171	7.5	4.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		43-136%

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

Mountain States ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

CHAIN OF CUSTODY

ACCUTEST LABORATORIES
4036 Youngfield Street, Wheat Ridge, CO 80033
TEL: 303-425-6021 FAX: 303-425-6854
www.accutest.com

FED-EX Tracking #: | Bottle Order Control #:
Accutest Quote #: | Accutest Job #: D 35485

Client / Reporting Information

Company Name: KRW Consulting
Street Address: 8000 West 14th Street; Suite 200
City: Lakewood, CO 80214
Project Contact: Dwayne Knudson
Phone #: 970-488-1098
Sampler(s) Name(s): Craig Burger 970-488-1098

Project Information

Project Name: XTO FRU 297-813
Street:
City: State:
Project #: 1106-06
Client Purchase Order #:
Project Manager: Joe Hess

Billing Information (if different from Report to)

Company Name: XTO Energy
Street Address: 21459 CR 5
City: Rifle, CO 81650
Attention: Jessica Dooling

Requested Analysis (see TEST CODE sheet)

Accutest Sample #	Field ID / Point of Collection	MEOH/DI Vial #	Collection Date	Collection Time	Sampled by	Matrix	# of bottles	HCl	NaOH	HNO3	H2SO4	NONE	DI Water	MEOH	ENCORE	Bisulfate	TPH (DRO/GRO)	Benzene	LAB USE ONLY
	Cut #1/MB Day 2 (6/11)		6/12/12	10:25	CAB	SO	3					3					X	X	61

Matrix Codes: 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 - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

Turnaround Time (Business days)

- [ ] Std. 10 Business Days
- [x] Std. 5 Business Days (By contract only)
- [ ] 3 Day Emergency
- [ ] 2 Day Emergency
- [ ] 1 Day Emergency
- [ ] Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

Data Deliverable Information

- [ ] Commercial "A" (Level 1)
- [x] Commercial "B" (Level 2)
- [ ] COMMBN
- [ ] COMMBN+
- [ ] State Forms Required
- [ ] Send Forms to State
- [ ] Report by Fax
- [x] Report by PDF ONLY
- [ ] EDD Format

Commercial "A" = Results Only
Commercial "B" = Results + QC Summary
Commercial BN = Results/QC/Narrative (+ = chromatograms)

Comments / Special Instructions

Please email to: KRW Piceance Team

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1	6-13-12 1350	1	2		2 6-14-12
3		3	4		4 1230
5		5			

Custody Seal # CU [X] Intact [ ] Not Intact | Preserved where applicable: [ ] NA | On Ice: [x] | Cooler Temp. 4.0

D35485: Chain of Custody
Page 1 of 2

Accutest Laboratories Sample Receipt Summary

Accutest Job Number: D35485 **Client:** KRW **Immediate Client Services Action Required:** No

Date / Time Received: 6/14/2012 12:30:00 PM **No. Coolers:** 1 **Client Service Action Required at Login:** No

Project: XTO **Airbill #'s:** CO

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☑		☐
2. Cooler temp verification:	Infared gun		
3. Cooler media:	Ice (bag)		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	
2. Trip Blank listed on COC:	☐		☐	
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume rec'd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Comments

Accutest Laboratories
V:(303) 425-6021
4036 Youngfield Street
F: (303) 425-6854
Wheat Ridge, CO
www/accutest.com

D35485: Chain of Custody
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GC/MS 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: D35485
Account: XTOKRWR XTO Energy
Project: FRU 297-8B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1342-MB	5V21920.D	1	06/15/12	BD	n/a	n/a	V5V1342

The QC reported here applies to the following samples: **Method:** SW846 8260B

D35485-1

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	50	19	ug/kg	

CAS No.	Surrogate Recoveries		Limits
2037-26-5	Toluene-D8	90%	61-130%
460-00-4	4-Bromofluorobenzene	82%	53-131%
17060-07-0	1,2-Dichloroethane-D4	110%	62-130%

Blank Spike Summary

Job Number: D35485
Account: XTOKRWR XTO Energy
Project: FRU 297-8B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V5V1342-BS	5V21922.D	1	06/15/12	BD	n/a	n/a	V5V1342

The QC reported here applies to the following samples: **Method:** SW846 8260B

D35485-1

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
71-43-2	Benzene	50	44.5	89	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	87%	61-130%
460-00-4	4-Bromofluorobenzene	91%	53-131%
17060-07-0	1,2-Dichloroethane-D4	98%	62-130%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D35485
Account: XTOKRWR XTO Energy
Project: FRU 297-8B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D35429-2MS	5V21928.D	1	06/15/12	BD	n/a	n/a	V5V1342
D35429-2MSD	5V21929.D	1	06/15/12	BD	n/a	n/a	V5V1342
D35429-2	5V21927.D	1	06/15/12	BD	n/a	n/a	V5V1342

The QC reported here applies to the following samples: **Method:** SW846 8260B

D35485-1

CAS No.	Compound	D35429-2 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	ND		4220	3910	93	4090	97	5	70-134/30

CAS No.	Surrogate Recoveries	MS	MSD	D35429-2	Limits
2037-26-5	Toluene-D8	84%	89%	85%	61-130%
460-00-4	4-Bromofluorobenzene	98%	105%	86%	53-131%
17060-07-0	1,2-Dichloroethane-D4	94%	99%	102%	62-130%

Mountain States ACCUTEST LABORATORIES

GC/MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5061412.S\
Data File : 5V21932.D
Acq On : 15 Jun 2012 7:24 am
Operator : BRETD
Sample : D35485-1
Misc : MS4108,V5V1342,5.012,,100,5,1
ALS Vial : 39 Sample Multiplier: 1

Quant Time: Jun 15 12:02:19 2012
Quant Method : C:\msdchem\1\METHODS\V5AP1304TVH1304.M
Quant Title : 8260
QLast Update : Thu May 24 07:55:17 2012
Response via : Initial Calibration

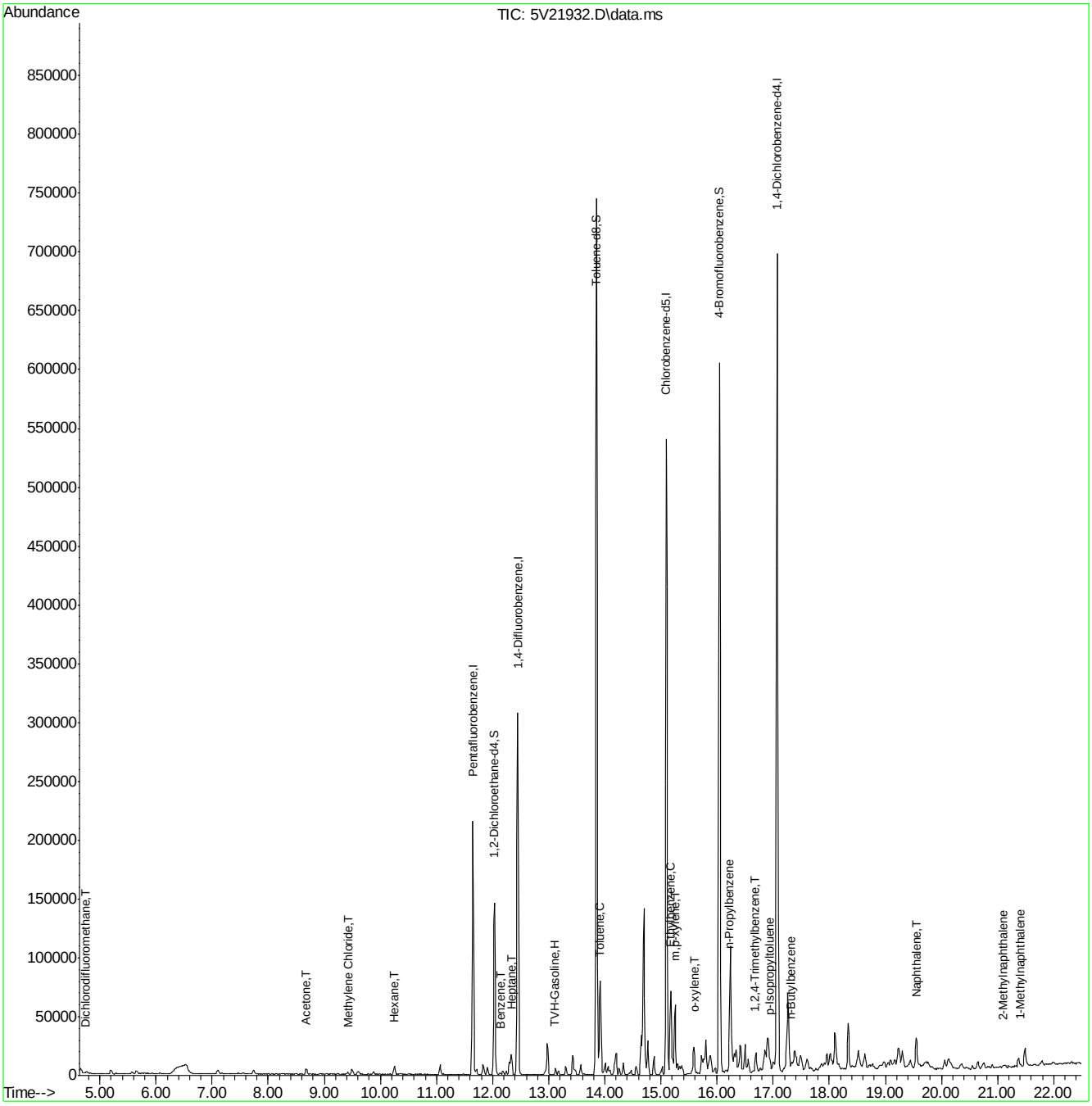
Internal Standards	R.T.	QIon	Response	Conc	Units		Dev(Min)
2) Pentafluorobenzene	11.647	168	158263	50.00	ug/l		0.00
35) 1,4-Difluorobenzene	12.446	114	259020	50.00	ug/l		0.00
53) Chlorobenzene-d5	15.095	117	335908	50.00	ug/l		0.00
74) 1,4-Dichlorobenzene-d4	17.070	152	233749	50.00	ug/l		0.00
System Monitoring Compounds							
33) 1,2-Dichloroethane-d4	12.035	102	25915	53.57	ug/l		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 107.14%				
61) Toluene-d8	13.850	98	483409	42.58	ug/l		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 85.16%				
69) 4-Bromofluorobenzene	16.042	95	207491	44.62	ug/l		0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 89.24%				
Target Compounds							Qvalue
1) TVH-Gasoline	13.102	TIC	1516407m	77.04	ug/l		
3) Dichlorodifluoromethane	4.751	85	1358	0.91	ug/l		66
15) Acetone	8.678	58	2423	8.03	ug/l	#	68
17) Methylene Chloride	9.421	84	901	0.34	ug/l		94
41) Hexane	10.243	57	3261	0.91	ug/l		100
43) Heptane	12.332	43	6368	1.66	ug/l		94
50) Benzene	12.138	78	1572	0.15	ug/l		100
62) Toluene	13.907	92	20592	2.36	ug/l		98
66) Ethylbenzene	15.175	91	13404	0.83	ug/l		96
72) m,p-xylene	15.255	106	19023	2.94	ug/l		93
73) o-xylene	15.597	106	1760	0.28	ug/l		76
77) n-Propylbenzene	16.225	91	6095	0.29	ug/l	#	84
82) 1,2,4-Trimethylbenzene	16.682	105	5844	0.39	ug/l		92
86) p-Isopropyltoluene	16.944	119	4653	0.27	ug/l		94
88) n-Butylbenzene	17.321	91	3456	0.22	ug/l	#	67
91) Naphthalene	19.559	128	5368	1.03	ug/l		100
94) 2-Methylnaphthalene	21.100	142	1495	1.65	ug/l	#	81
95) 1-Methylnaphthalene	21.397	142	1087	1.42	ug/l	#	86

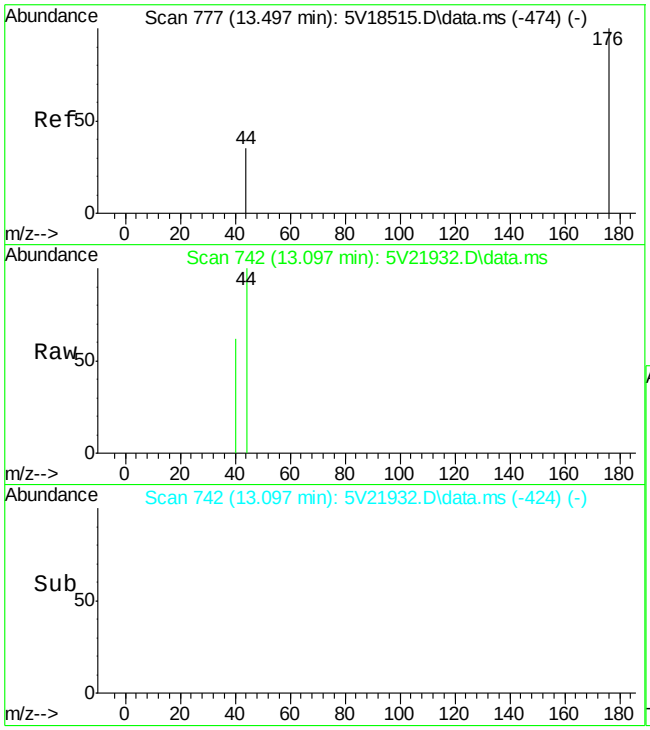
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5061412.S\
Data File : 5V21932.D
Acq On : 15 Jun 2012 7:24 am
Operator : BRETD
Sample : D35485-1
Misc : MS4108,V5V1342,5.012,,100,5,1
ALS Vial : 39 Sample Multiplier: 1

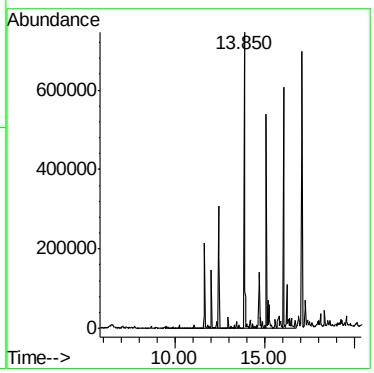
Quant Time: Jun 15 12:02:19 2012
Quant Method : C:\msdchem\1\METHODS\V5AP1304TVH1304.M
Quant Title : 8260
QLast Update : Thu May 24 07:55:17 2012
Response via : Initial Calibration

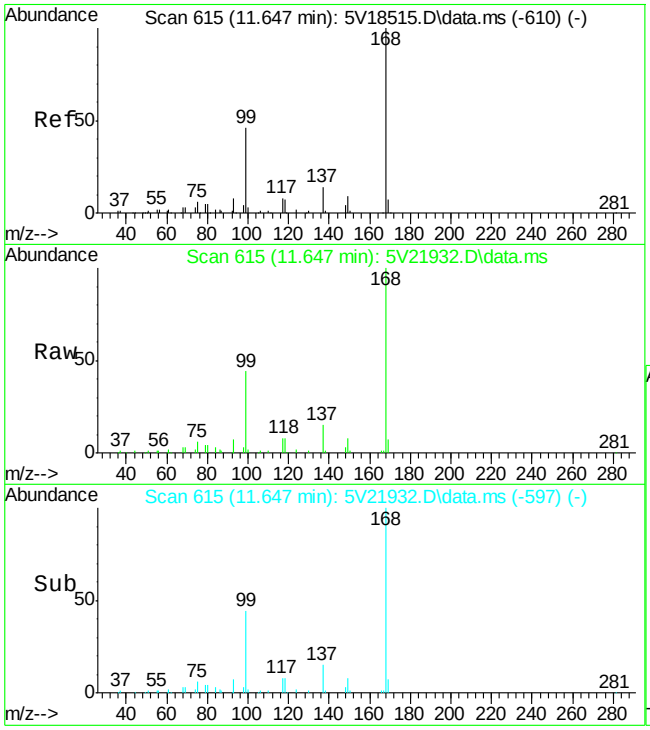




#1
TVH-Gasoline
Concen: 77.04 ug/l m
RT: 13.102 min Scan# 742
Delta R.T. 0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion:TIC Resp: 1516407

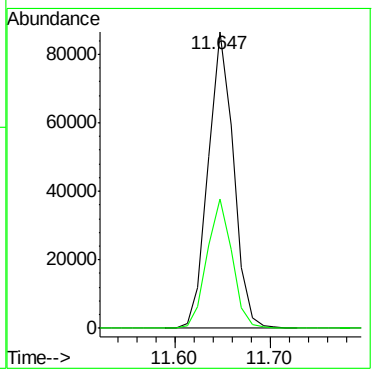


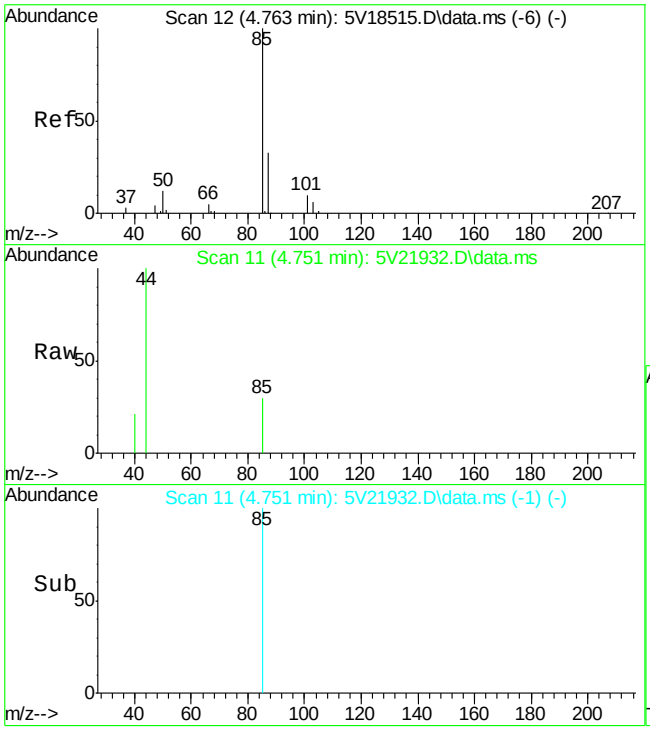


#2
Pentafluorobenzene
Concen: 50.00 ug/l
RT: 11.647 min Scan# 615
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion:168 Resp: 158263

Ion	Ratio	Lower	Upper
168	100		
99	43.0	37.4	56.2

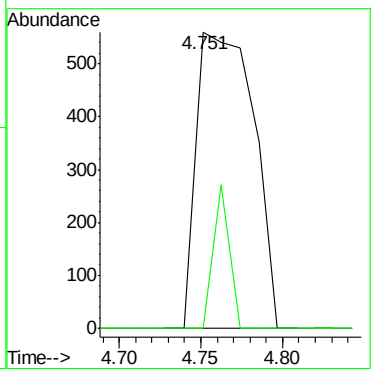


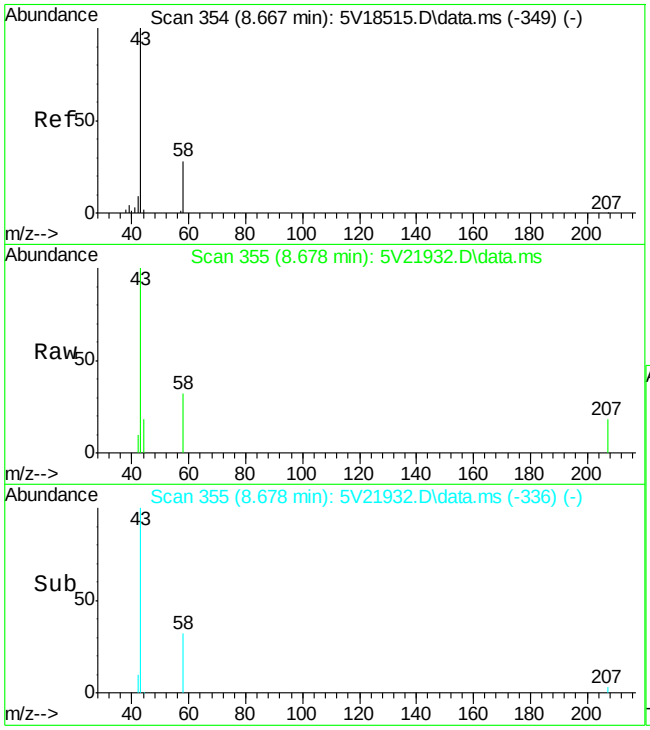


#3
Dichlorodifluoromethane
Concen: 0.91 ug/l
RT: 4.751 min Scan# 11
Delta R.T. -0.011 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion: 85 Resp: 1358

Ion	Ratio	Lower	Upper
85	100		
87	13.7	12.9	52.9

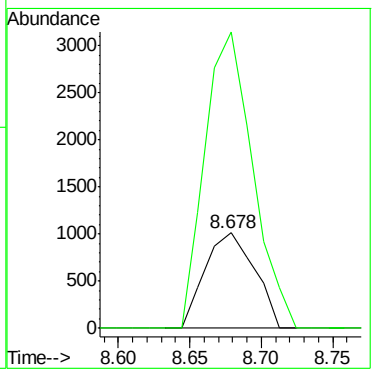


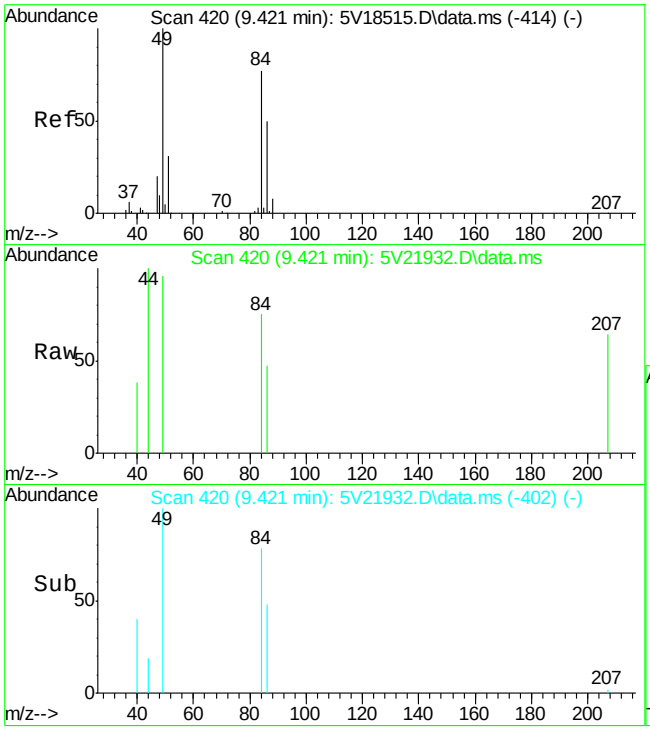


#15
Acetone
Concen: 8.03 ug/l
RT: 8.678 min Scan# 355
Delta R.T. 0.011 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion: 58 Resp: 2423

Ion	Ratio	Lower	Upper
58	100		
43	300.7	353.6	393.6#

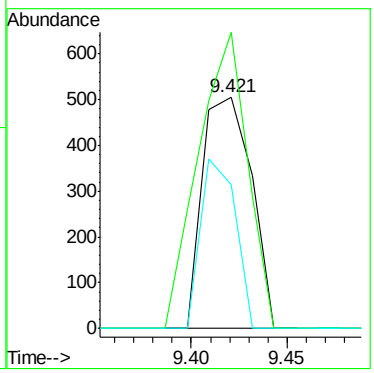


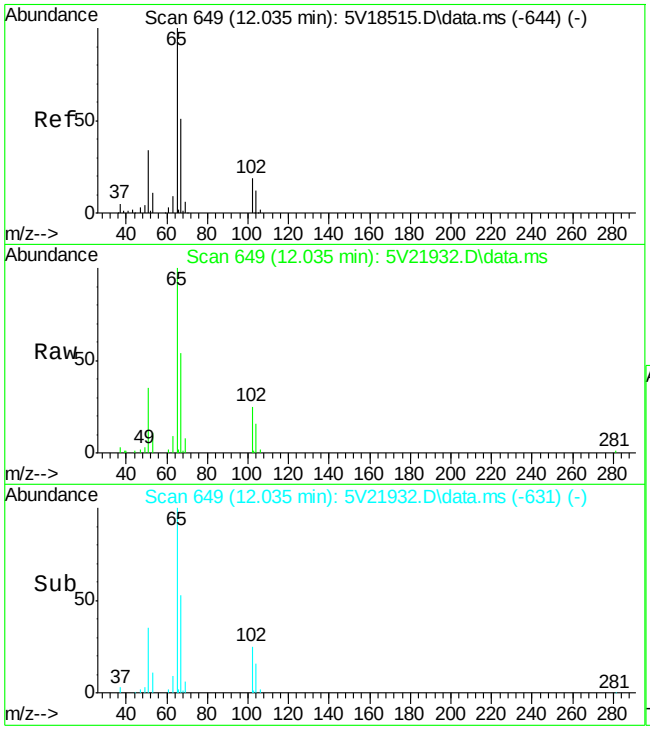


#17
Methylene Chloride
Concen: 0.34 ug/l
RT: 9.421 min Scan# 420
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion: 84 Resp: 901

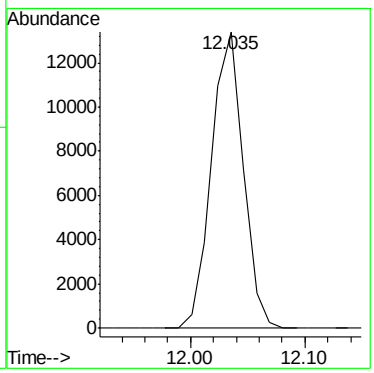
Ion	Ratio	Lower	Upper
84	100		
49	128.7	110.4	150.4
86	52.1	44.0	84.0

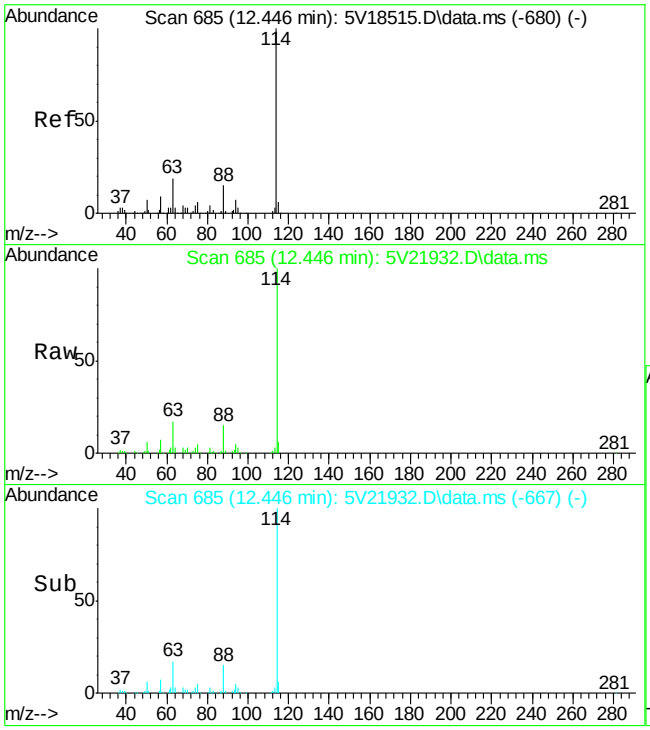




#33
1,2-Dichloroethane-d4
Concen: 53.57 ug/l
RT: 12.035 min Scan# 649
Delta R.T. 0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

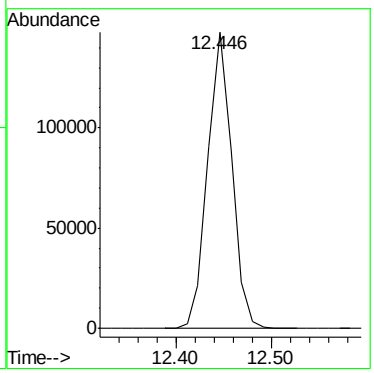
Tgt Ion:102 Resp: 25915

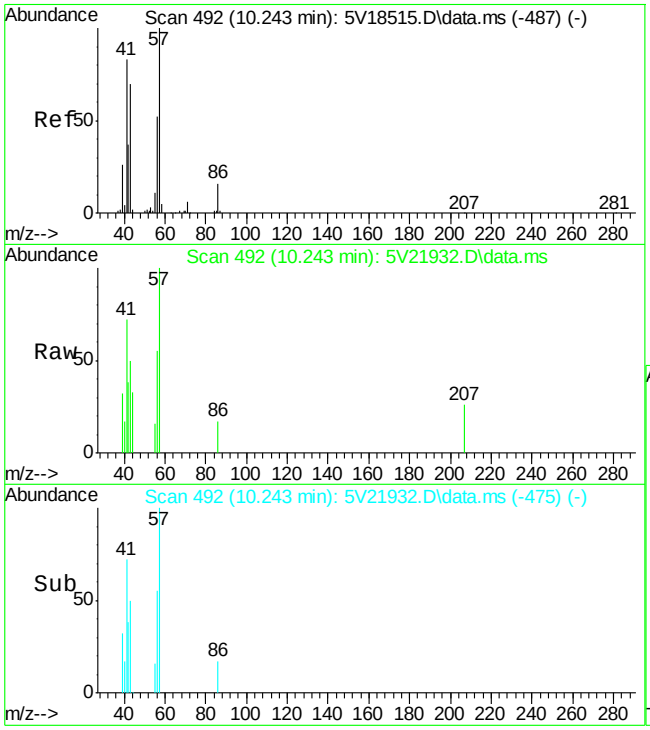




#35
1,4-Difluorobenzene
Concen: 50.00 ug/l
RT: 12.446 min Scan# 685
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

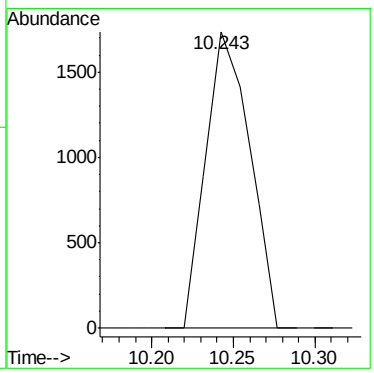
Tgt Ion:114 Resp: 259020

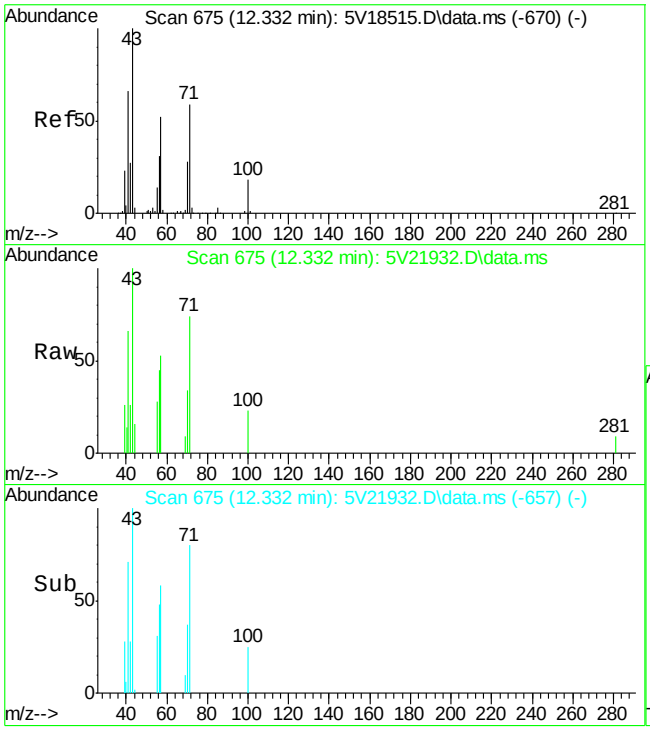




#41
Hexane
Concen: 0.91 ug/l
RT: 10.243 min Scan# 492
Delta R.T. -0.012 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion: 57 Resp: 3261

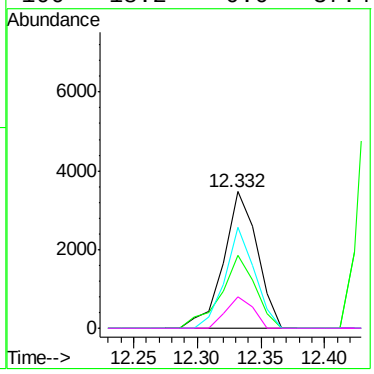


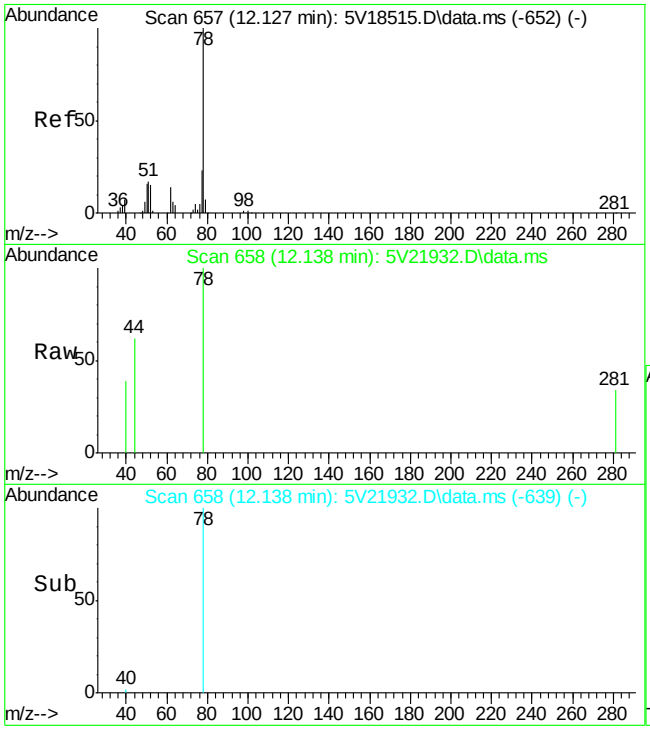


#43
Heptane
Concen: 1.66 ug/l
RT: 12.332 min Scan# 675
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion: 43 Resp: 6368

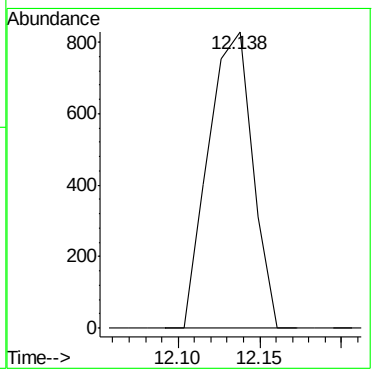
Ion	Ratio	Lower	Upper
43	100		
57	54.4	30.6	70.6
71	65.4	38.9	78.9
100	18.2	0.0	37.4

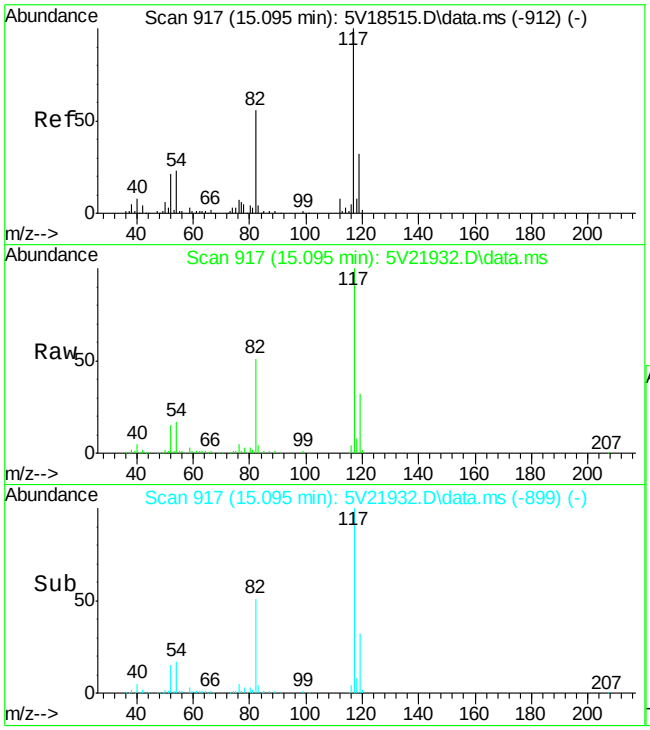




#50
Benzene
Concen: 0.15 ug/l
RT: 12.138 min Scan# 658
Delta R.T. 0.011 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

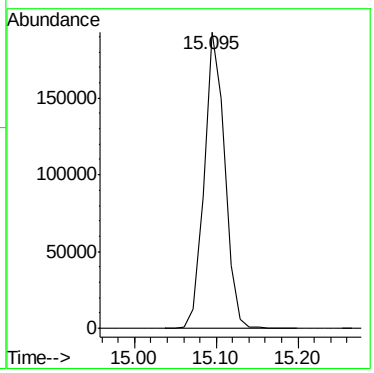
Tgt Ion: 78 Resp: 1572

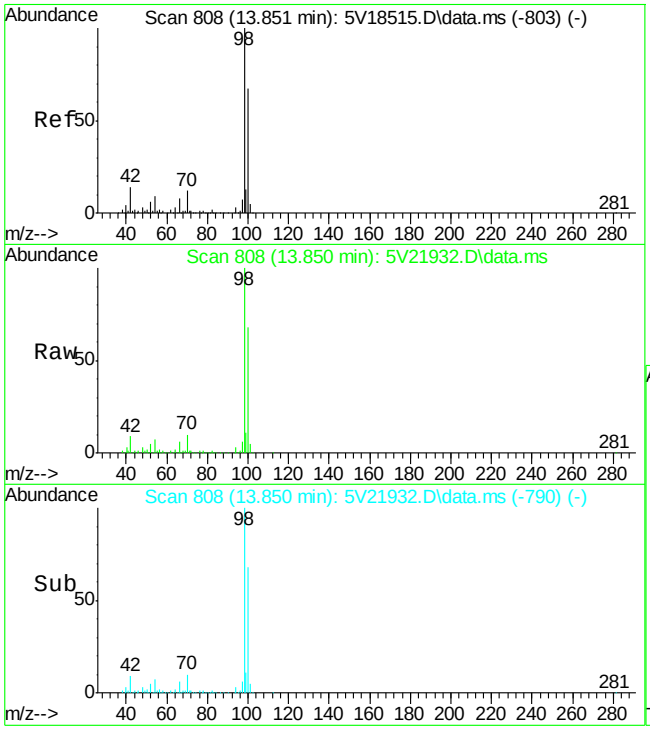




#53
Chlorobenzene-d5
Concen: 50.00 ug/l
RT: 15.095 min Scan# 917
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

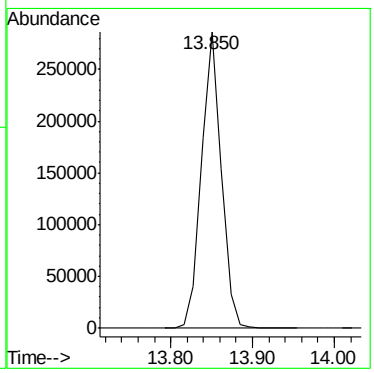
Tgt Ion:117 Resp: 335908

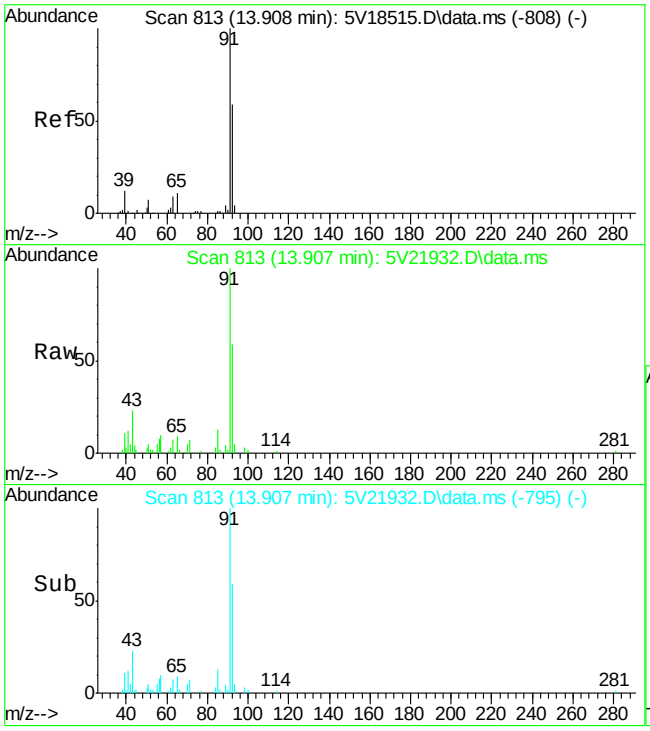




#61
Toluene-d8
Concen: 42.58 ug/l
RT: 13.850 min Scan# 808
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion: 98 Resp: 483409

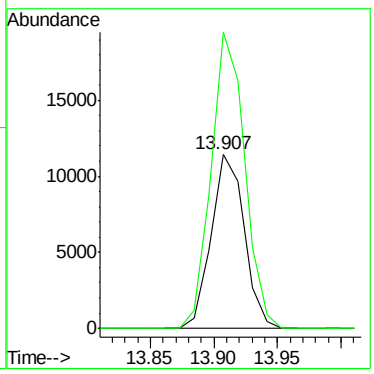


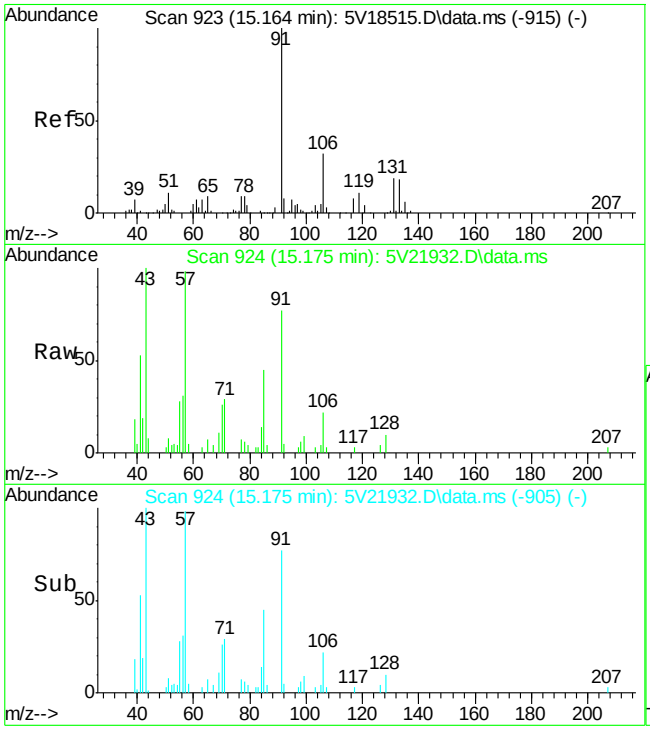


#62
Toluene
Concen: 2.36 ug/l
RT: 13.907 min Scan# 813
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion: 92 Resp: 20592

Ion	Ratio	Lower	Upper
92	100		
91	172.7	149.8	189.8

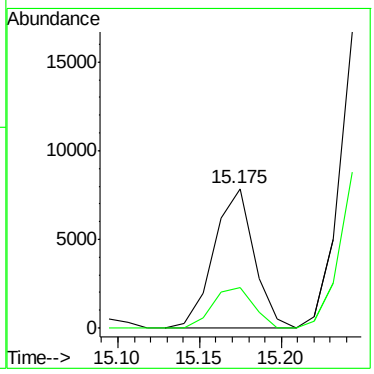


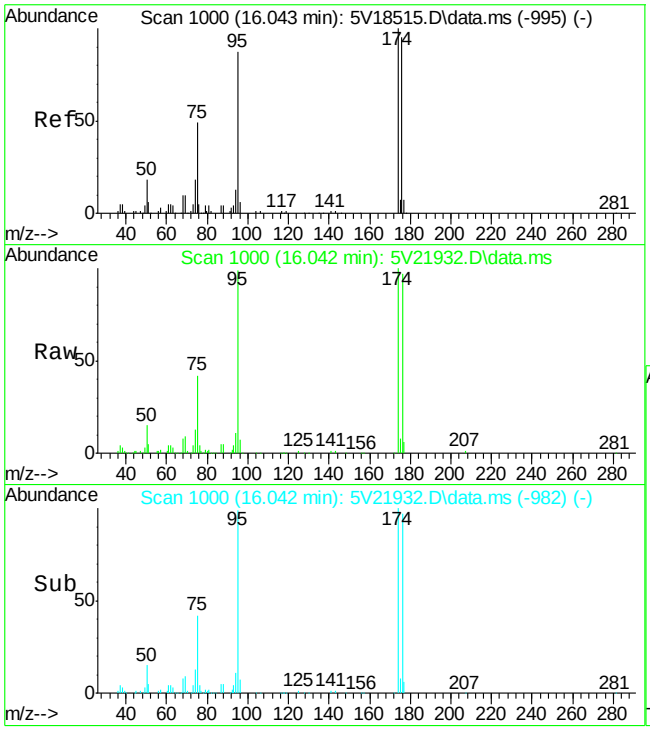


#66
Ethylbenzene
Concen: 0.83 ug/l
RT: 15.175 min Scan# 924
Delta R.T. 0.011 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion: 91 Resp: 13404

Ion	Ratio	Lower	Upper
91	100		
106	29.6	11.7	51.7

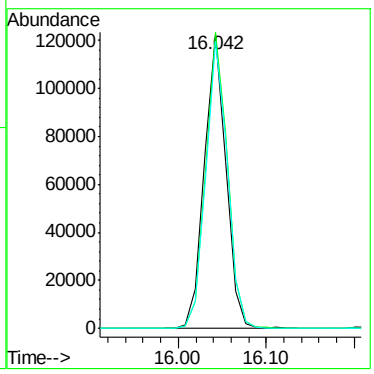


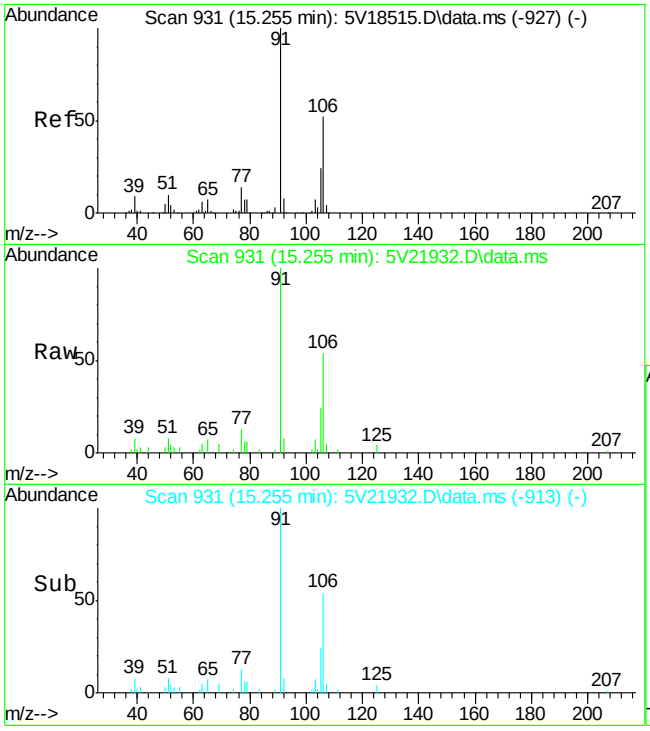


#69
4-Bromofluorobenzene
Concen: 44.62 ug/l
RT: 16.042 min Scan# 1000
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion: 95 Resp: 207491

Ion	Ratio	Lower	Upper
95	100		
174	101.0	77.1	117.1
176	98.3	73.4	113.4

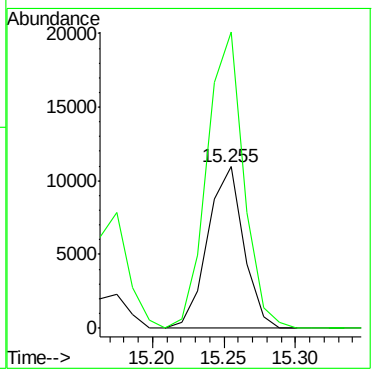


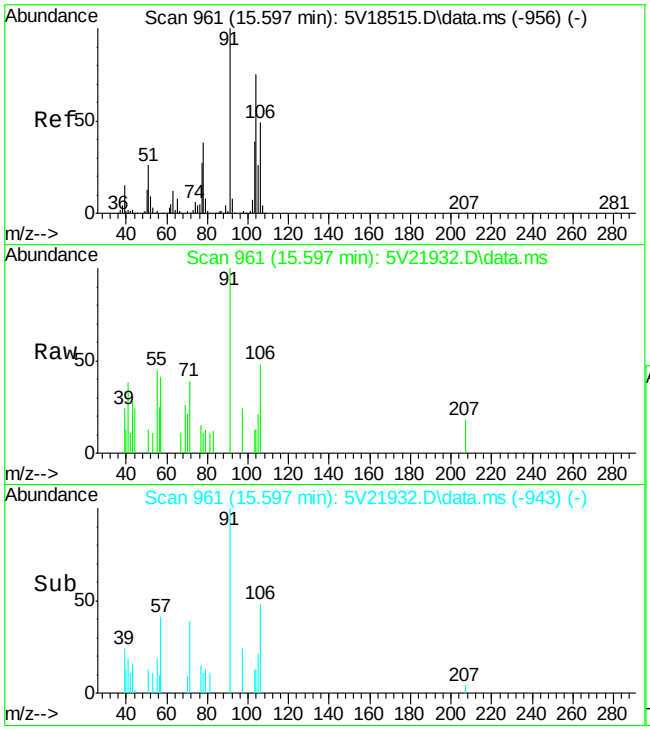


#72
m,p-xylene
Concen: 2.94 ug/l
RT: 15.255 min Scan# 931
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion:106 Resp: 19023

Ion	Ratio	Lower	Upper
106	100		
91	187.2	177.1	217.1

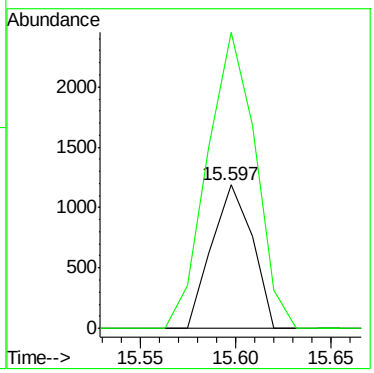


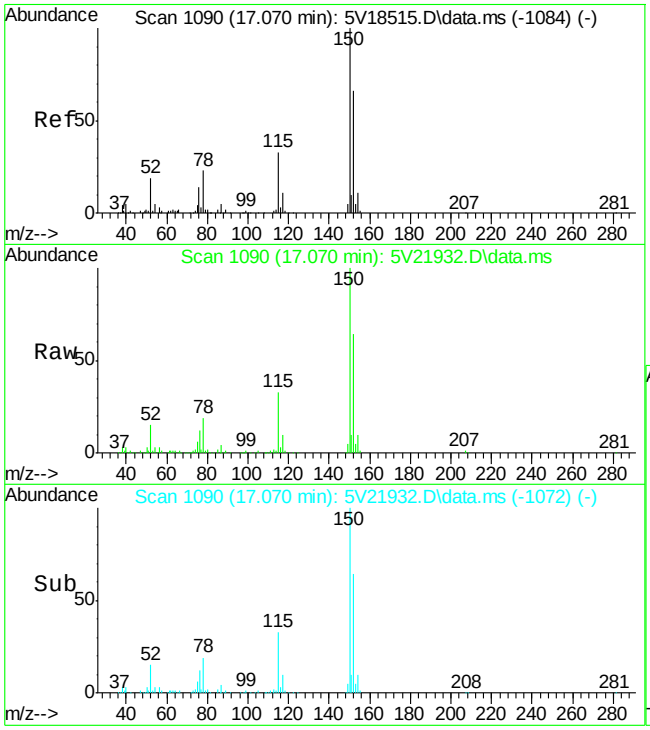


#73
o-xylene
Concen: 0.28 ug/l
RT: 15.597 min Scan# 961
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion:106 Resp: 1760

Ion	Ratio	Lower	Upper
106	100		
91	245.8	166.6	249.8

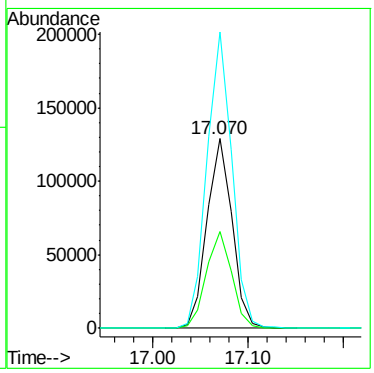


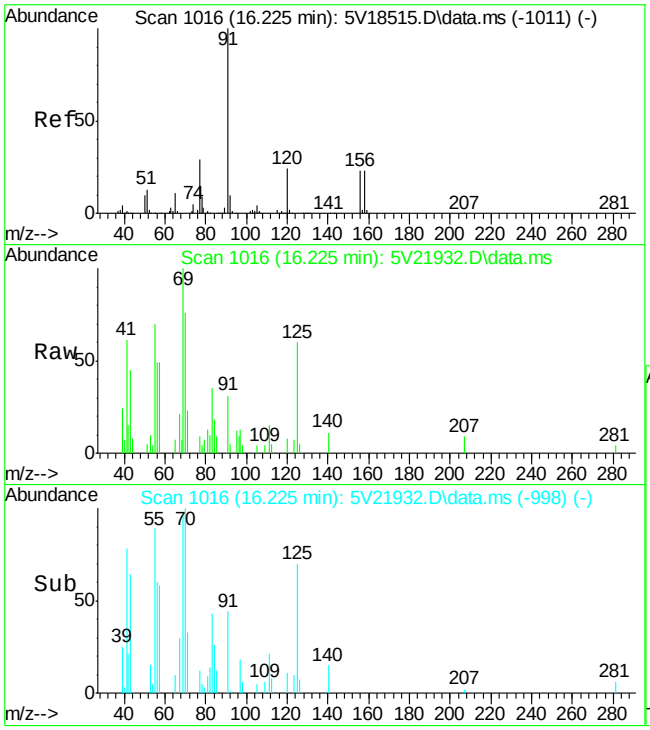


#74
1,4-Dichlorobenzene-d4
Concen: 50.00 ug/l
RT: 17.070 min Scan# 1090
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion:152 Resp: 233749

Ion	Ratio	Lower	Upper
152	100		
115	51.6	41.4	62.0
150	156.0	153.9	230.9

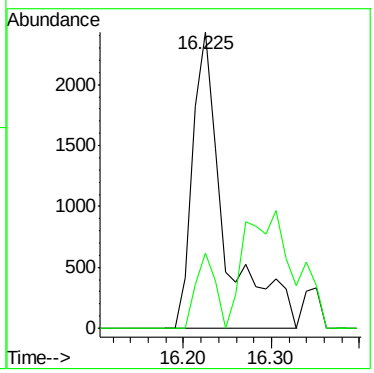


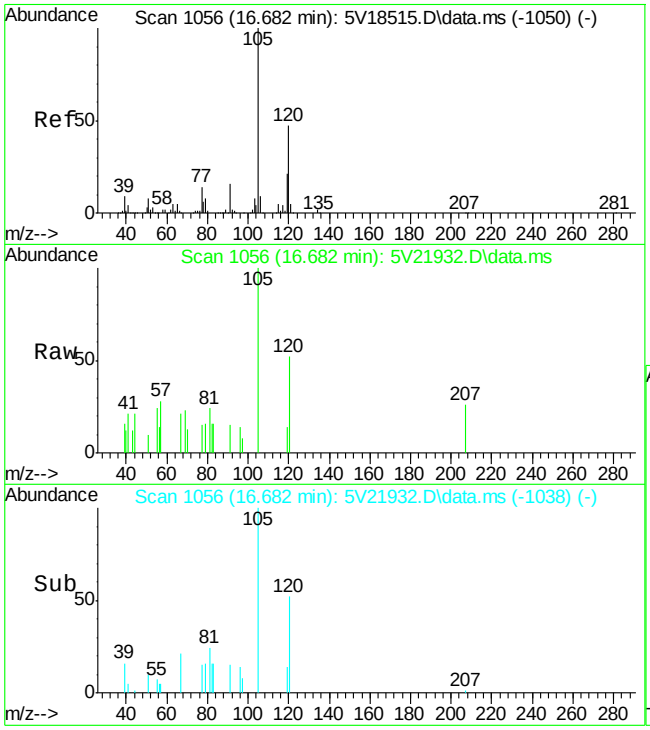


#77
n-Propylbenzene
Concen: 0.29 ug/l
RT: 16.225 min Scan# 1016
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion: 91 Resp: 6095

Ion	Ratio	Lower	Upper
91	100		
120	15.3	18.6	27.8#

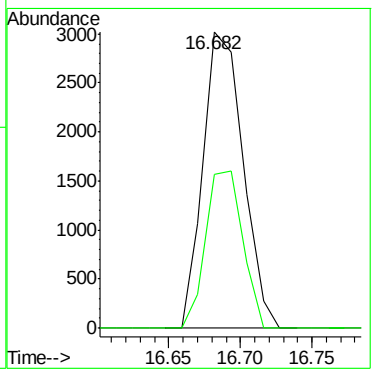


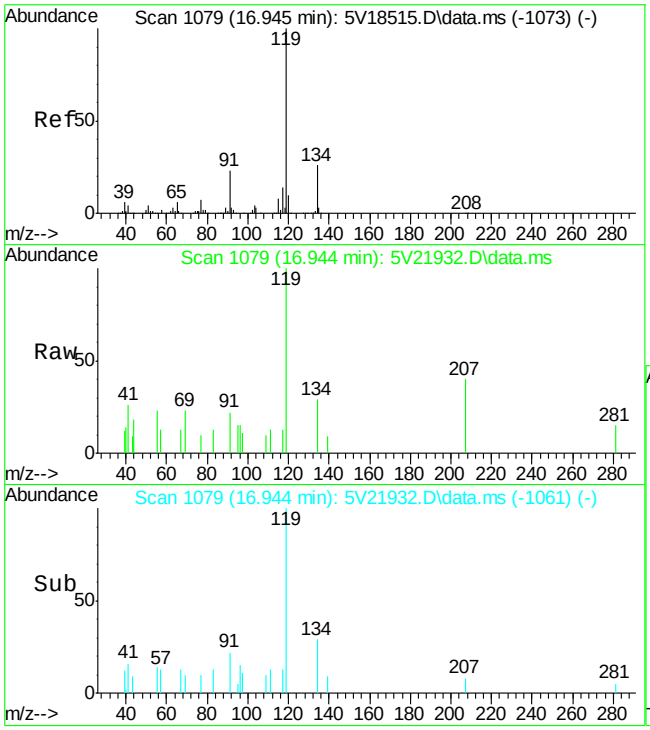


#82
1,2,4-Trimethylbenzene
Concen: 0.39 ug/l
RT: 16.682 min Scan# 1056
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion:105 Resp: 5844

Ion	Ratio	Lower	Upper
105	100		
120	49.0	43.8	65.8

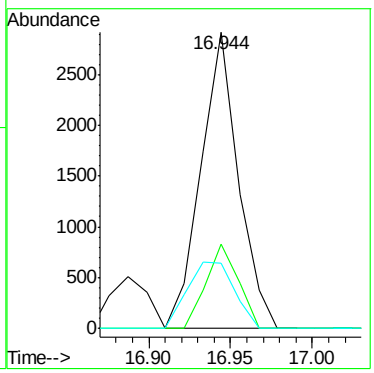


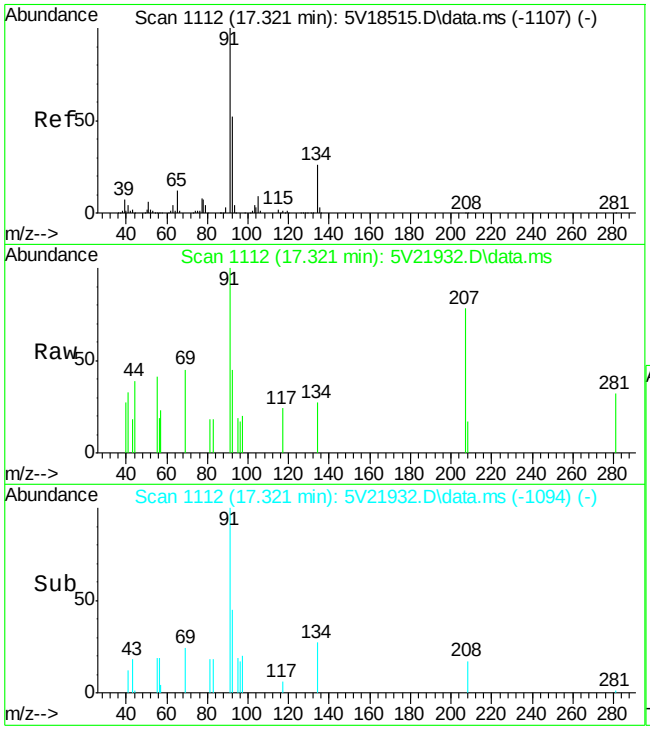


#86
p-Isopropyltoluene
Concen: 0.27 ug/l
RT: 16.944 min Scan# 1079
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion:119 Resp: 4653

Ion	Ratio	Lower	Upper
119	100		
134	24.3	21.3	31.9
91	27.9	19.0	28.6

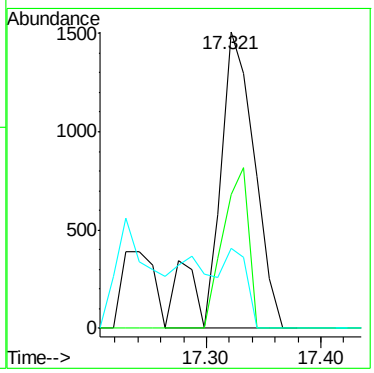


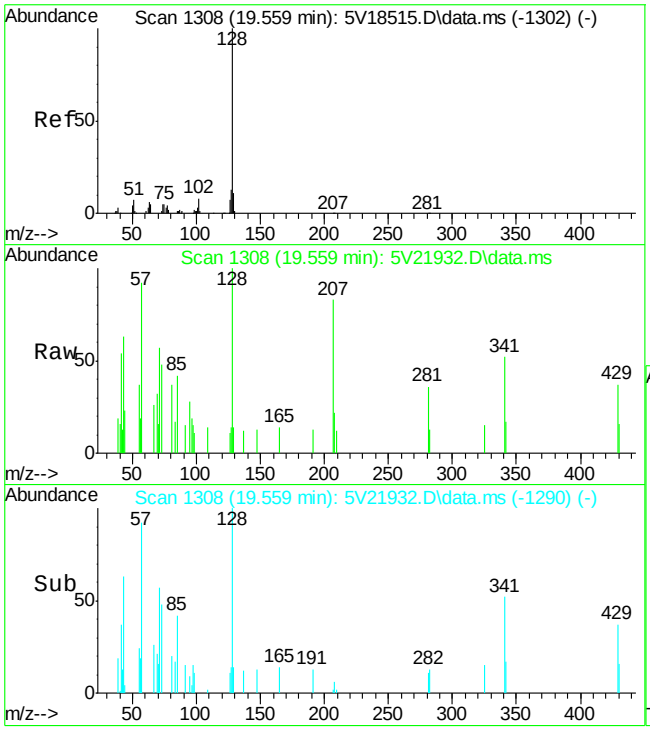


#88
n-Butylbenzene
Concen: 0.22 ug/l
RT: 17.321 min Scan# 1112
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion: 91 Resp: 3456

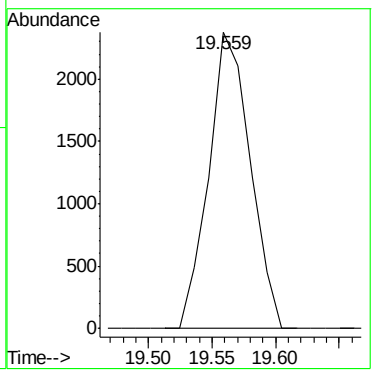
Ion	Ratio	Lower	Upper
91	100		
92	36.7	42.2	63.4#
134	0.0	21.4	32.2#

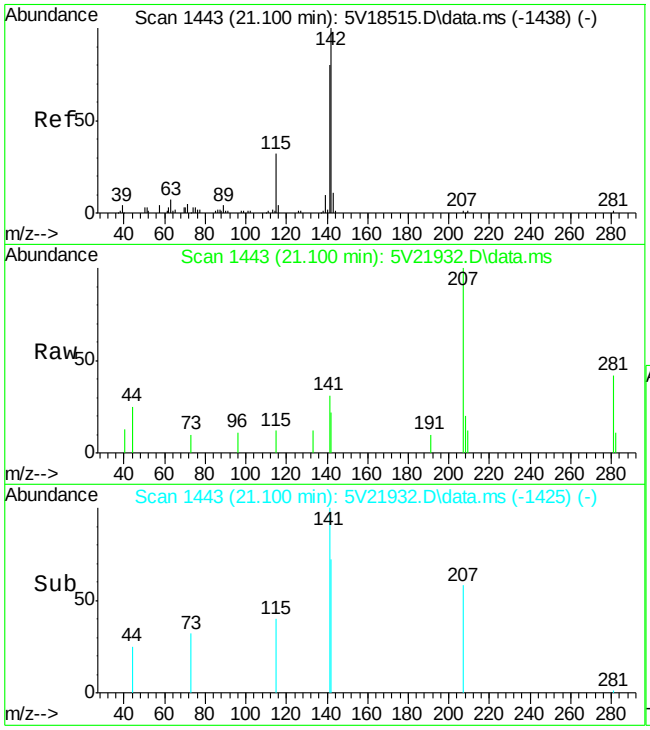




#91
Naphthalene
Concen: 1.03 ug/l
RT: 19.559 min Scan# 1308
Delta R.T. 0.001 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion:128 Resp: 5368

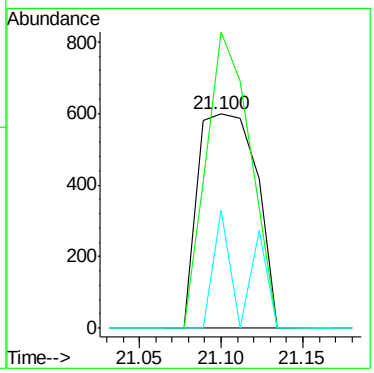


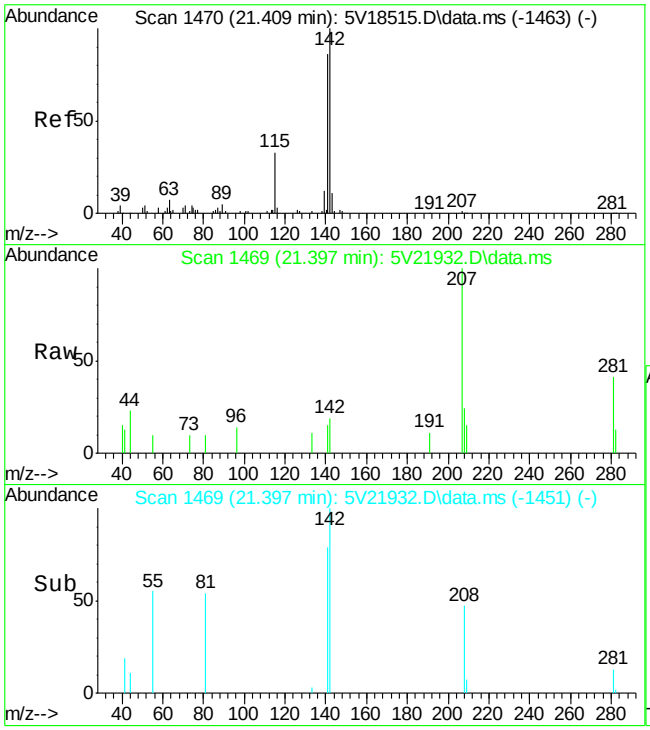


#94
2-Methylnaphthalene
Concen: 1.65 ug/l
RT: 21.100 min Scan# 1443
Delta R.T. 0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion:142 Resp: 1495

Ion	Ratio	Lower	Upper
142	100		
141	103.7	66.2	99.4#
115	27.7	25.9	38.9

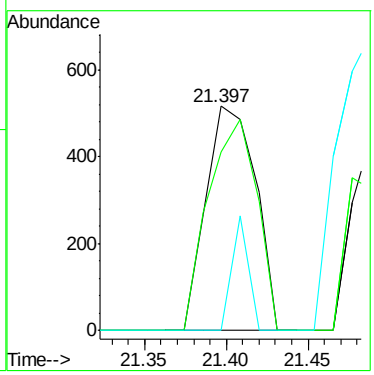




#95
1-Methylnaphthalene
Concen: 1.42 ug/l
RT: 21.397 min Scan# 1469
Delta R.T. -0.000 min
Lab File: 5V21932.D
Acq: 15 Jun 2012 7:24 am

Tgt Ion:142 Resp: 1087

Ion	Ratio	Lower	Upper
142	100		
141	92.4	68.9	103.3
115	16.7	27.3	40.9#



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5061412.S\
Data File : 5V21920.D
Acq On : 15 Jun 2012 1:06 am
Operator : BRETD
Sample : MB
Misc : MS4108,V5V1342,5.00,,100,5,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jun 15 11:36:08 2012
Quant Method : C:\msdchem\1\METHODS\V5AP1304TVH1304.M
Quant Title : 8260
QLast Update : Thu May 24 07:55:17 2012
Response via : Initial Calibration

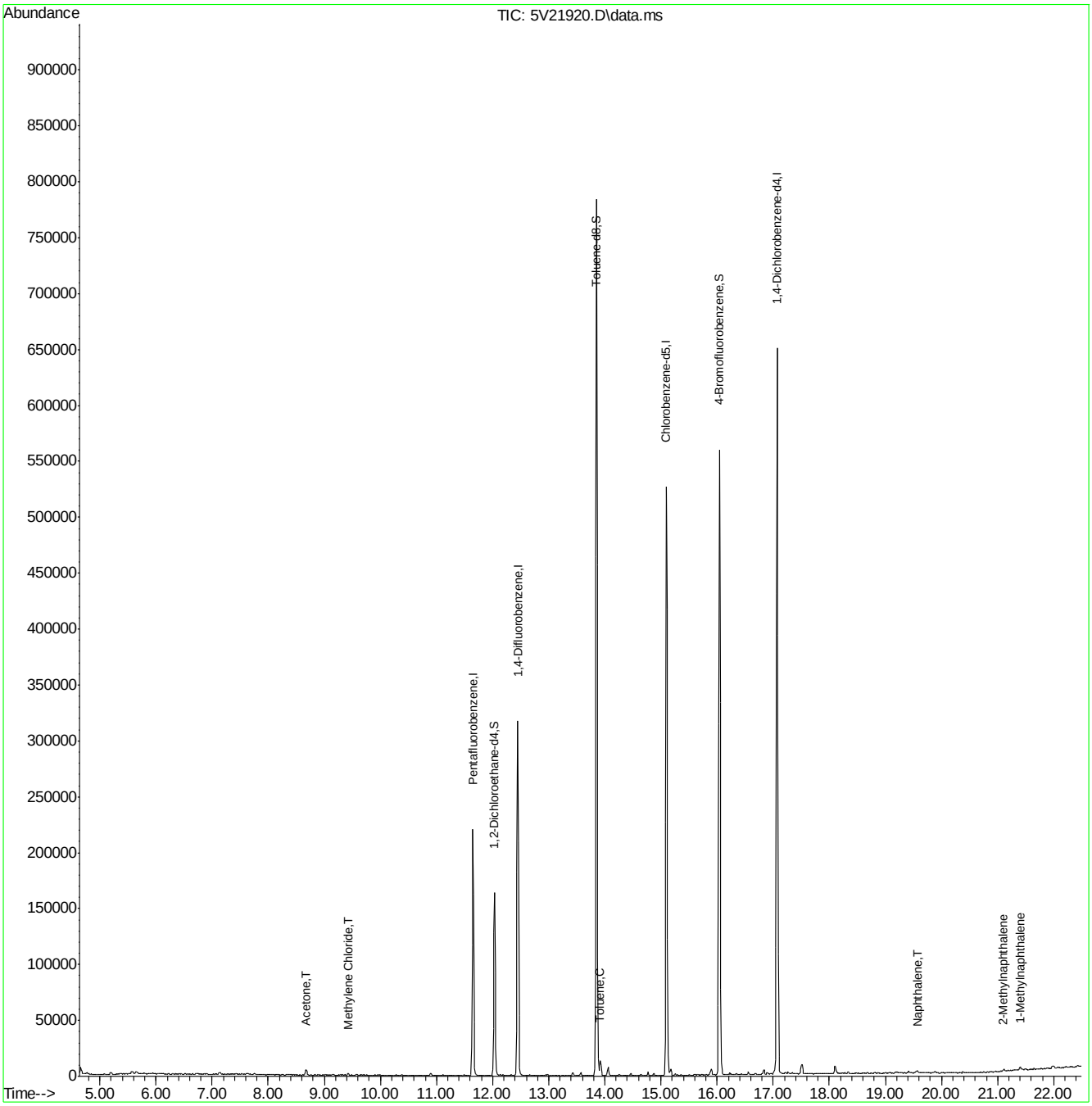
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
2) Pentafluorobenzene	11.647	168	163414	50.00	ug/l	0.00
35) 1,4-Difluorobenzene	12.446	114	265148	50.00	ug/l	0.00
53) Chlorobenzene-d5	15.095	117	334674	50.00	ug/l	0.00
74) 1,4-Dichlorobenzene-d4	17.070	152	213993	50.00	ug/l	0.00
System Monitoring Compounds						
33) 1,2-Dichloroethane-d4	12.035	102	27466	55.06	ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 110.12%			
61) Toluene-d8	13.851	98	510178	45.10	ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 90.20%			
69) 4-Bromofluorobenzene	16.043	95	190288	41.07	ug/l	0.00
Spiked Amount 50.000	Range 70 - 130		Recovery = 82.14%			
Target Compounds						Qvalue
1) TVH-Gasoline	13.102	TIC	-13469m	0.73	ug/l	
15) Acetone	8.679	58	2478	7.93	ug/l #	75
17) Methylene Chloride	9.421	84	1005	0.37	ug/l #	84
62) Toluene	13.908	92	2067	0.24	ug/l	91
91) Naphthalene	19.570	128	3802	0.93	ug/l	100
94) 2-Methylnaphthalene	21.100	142	1632	1.71	ug/l #	77
95) 1-Methylnaphthalene	21.409	142	2026	1.65	ug/l #	84

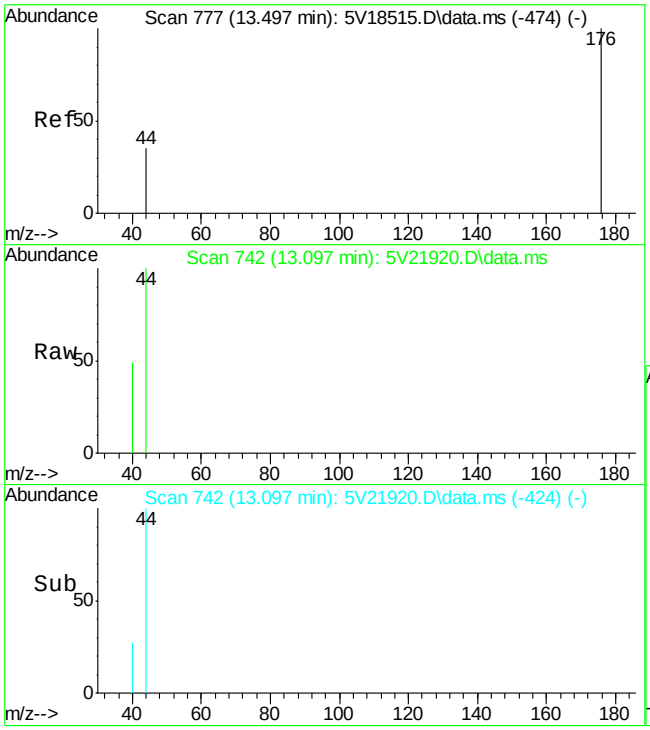
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\V5061412.S\
Data File : 5V21920.D
Acq On : 15 Jun 2012 1:06 am
Operator : BRETD
Sample : MB
Misc : MS4108,V5V1342,5.00,,100,5,1
ALS Vial : 27 Sample Multiplier: 1

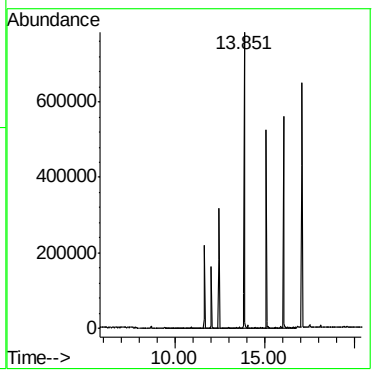
Quant Time: Jun 15 11:36:08 2012
Quant Method : C:\msdchem\1\METHODS\V5AP1304TVH1304.M
Quant Title : 8260
QLast Update : Thu May 24 07:55:17 2012
Response via : Initial Calibration

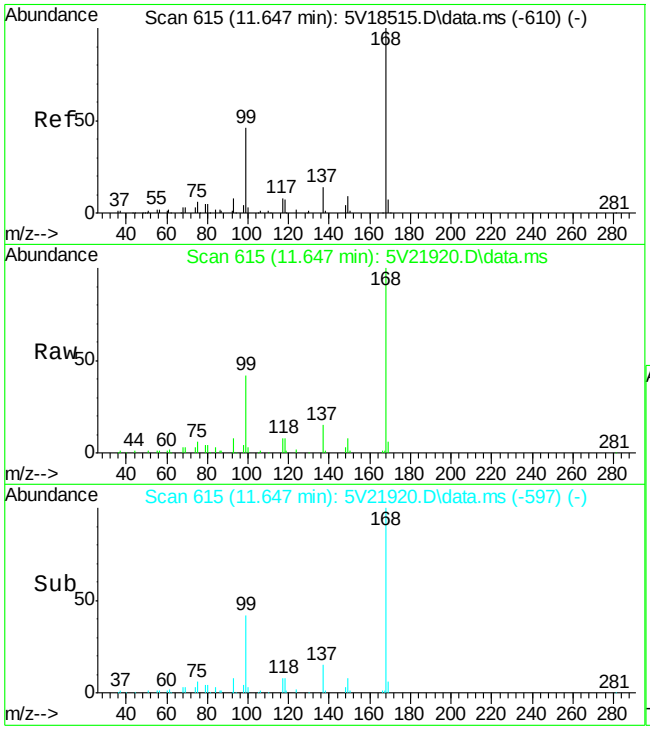




#1
TVH-Gasoline
Concen: 0.73 ug/l m
RT: 13.102 min Scan# 742
Delta R.T. 0.000 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

Tgt Ion:TIC Resp: -13469

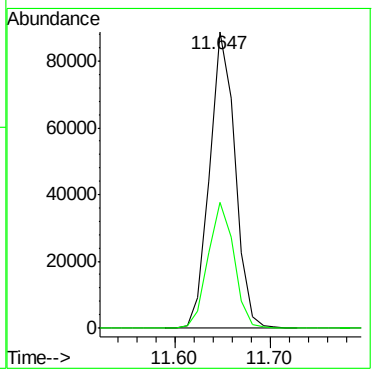


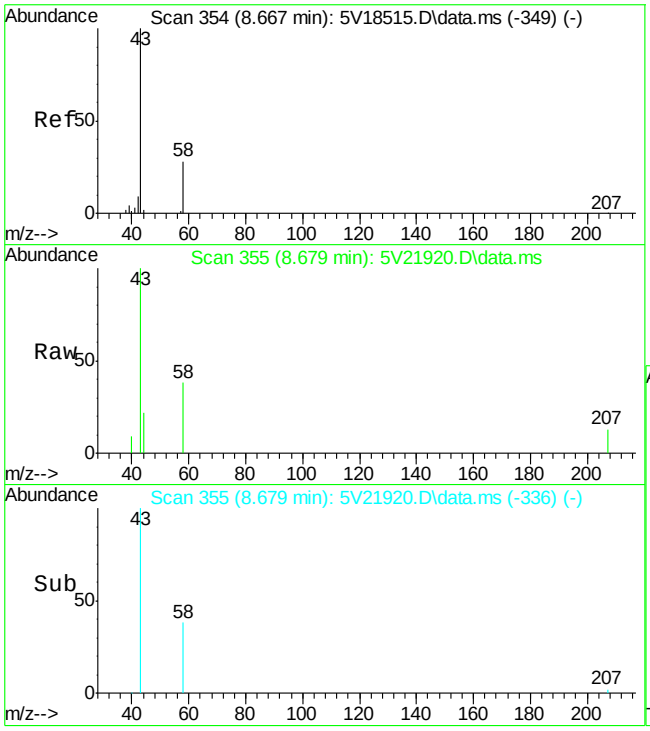


#2
Pentafluorobenzene
Concen: 50.00 ug/l
RT: 11.647 min Scan# 615
Delta R.T. -0.000 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

Tgt Ion:168 Resp: 163414

Ion	Ratio	Lower	Upper
168	100		
99	43.0	37.4	56.2

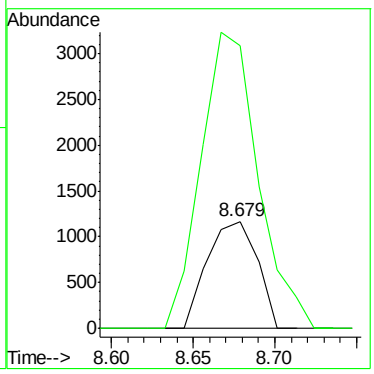


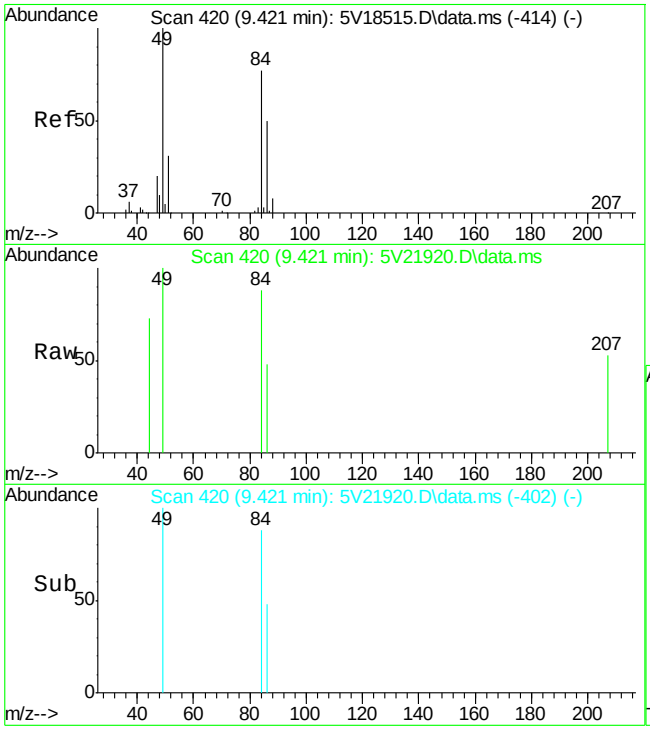


#15
Acetone
Concen: 7.93 ug/l
RT: 8.679 min Scan# 355
Delta R.T. 0.012 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

Tgt Ion: 58 Resp: 2478

Ion	Ratio	Lower	Upper
58	100		
43	317.8	353.6	393.6#

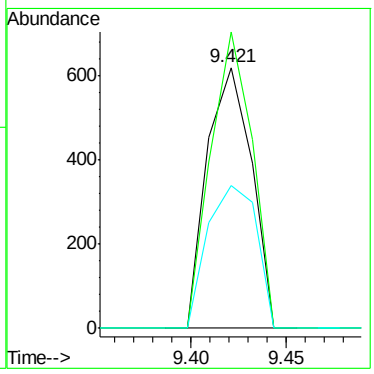


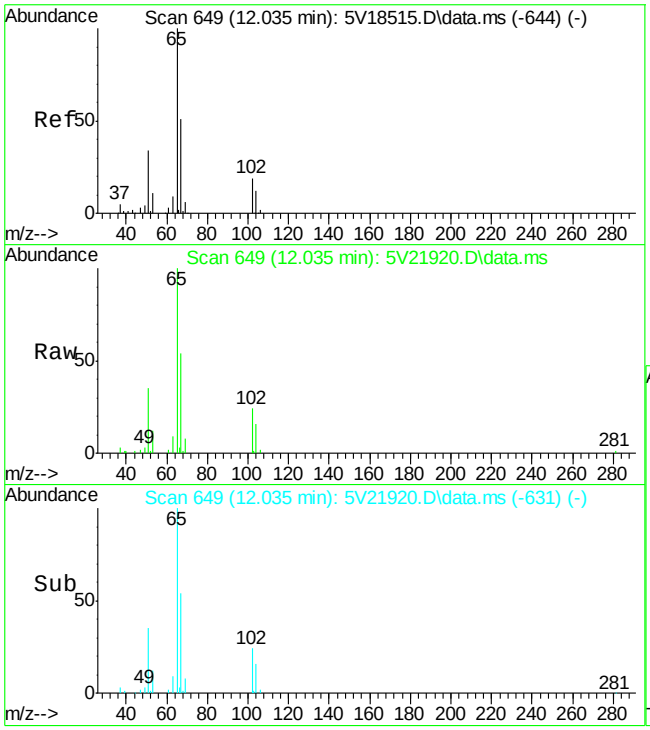


#17
Methylene Chloride
Concen: 0.37 ug/l
RT: 9.421 min Scan# 420
Delta R.T. -0.000 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

Tgt Ion: 84 Resp: 1005

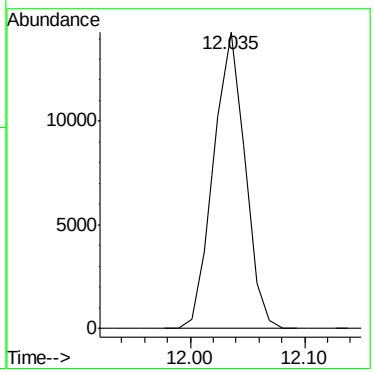
Ion	Ratio	Lower	Upper
84	100		
49	105.7	110.4	150.4#
86	60.7	44.0	84.0

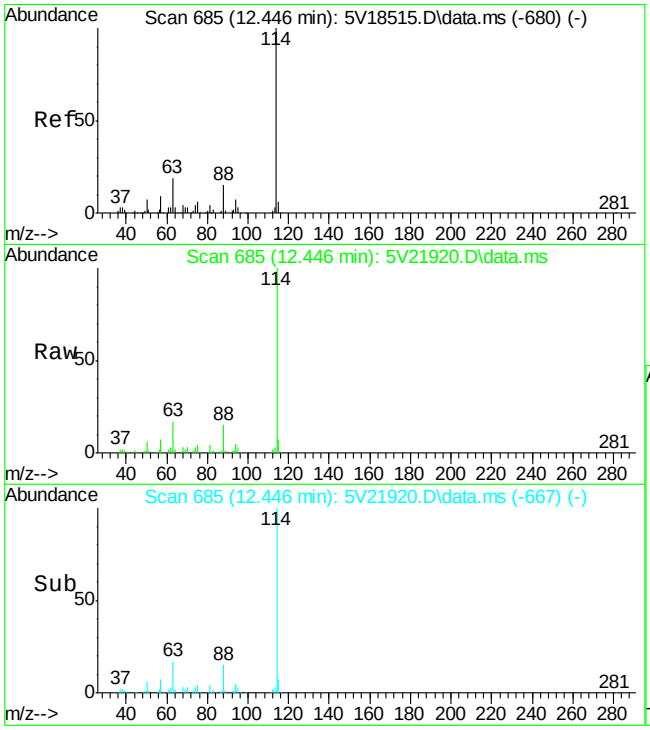




#33
1,2-Dichloroethane-d4
Concen: 55.06 ug/l
RT: 12.035 min Scan# 649
Delta R.T. 0.000 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

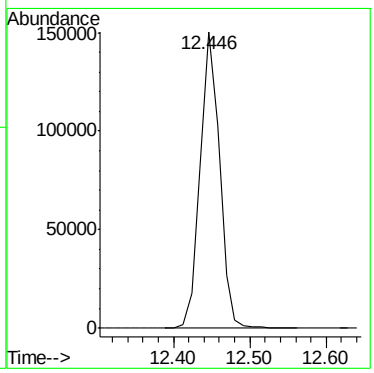
Tgt Ion:102 Resp: 27466

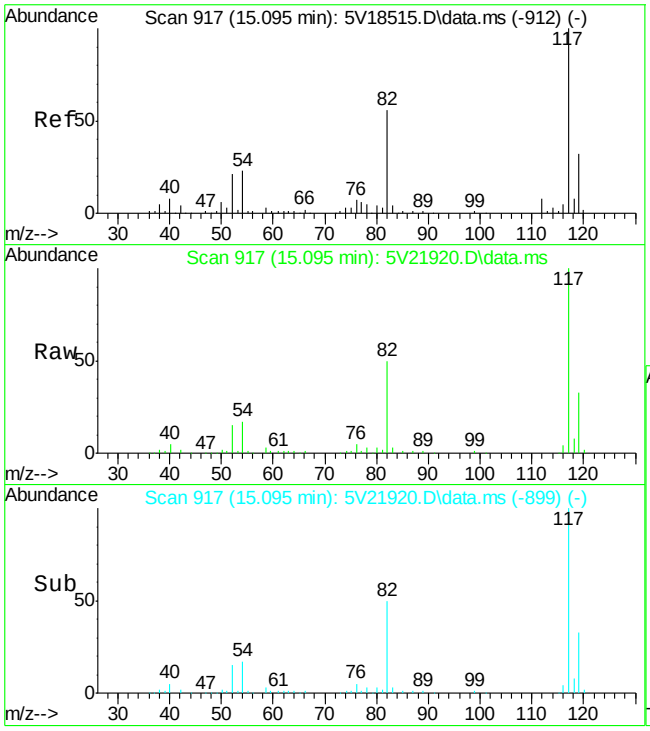




#35
1,4-Difluorobenzene
Concen: 50.00 ug/l
RT: 12.446 min Scan# 685
Delta R.T. -0.000 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

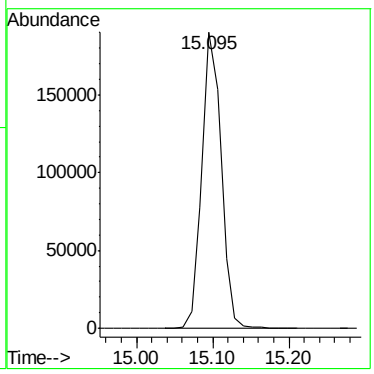
Tgt Ion:114 Resp: 265148

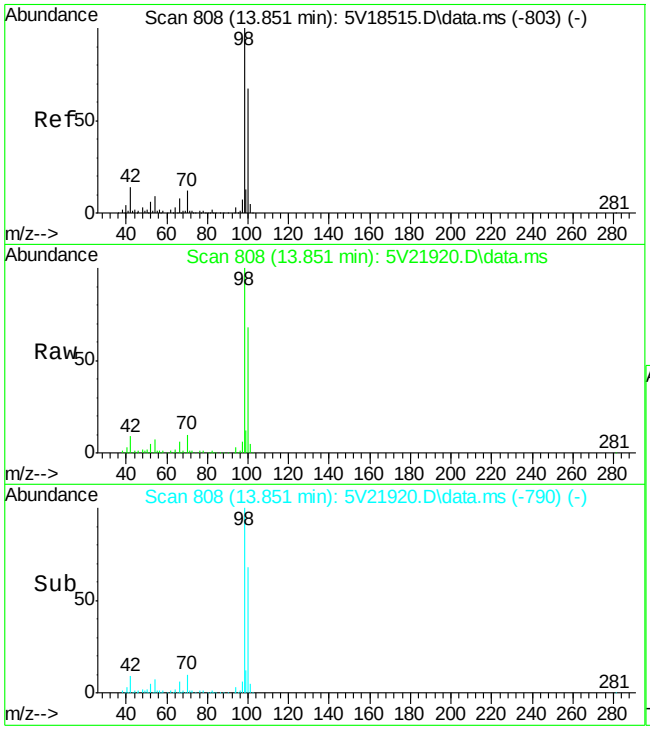




#53
Chlorobenzene-d5
Concen: 50.00 ug/l
RT: 15.095 min Scan# 917
Delta R.T. -0.000 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

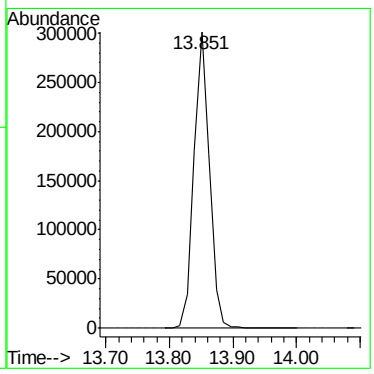
Tgt Ion:117 Resp: 334674

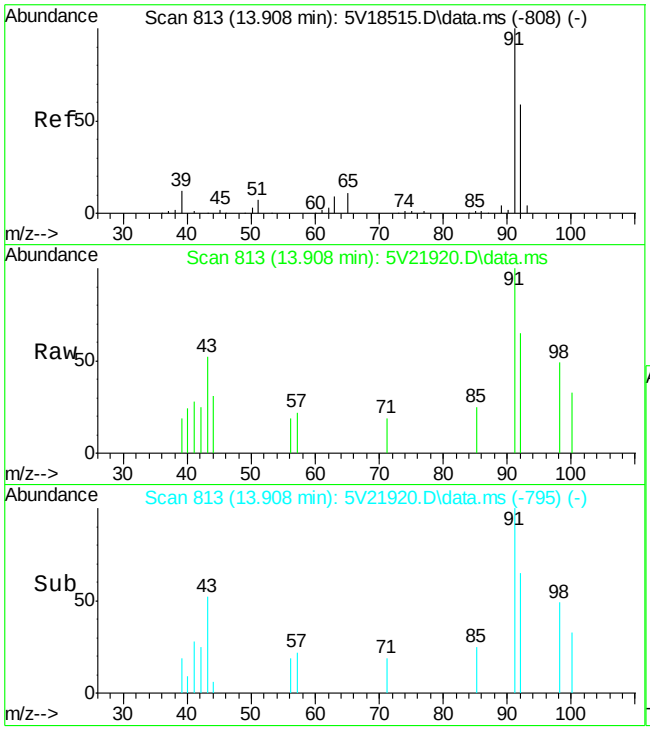




#61
Toluene-d8
Concen: 45.10 ug/l
RT: 13.851 min Scan# 808
Delta R.T. -0.000 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

Tgt Ion: 98 Resp: 510178

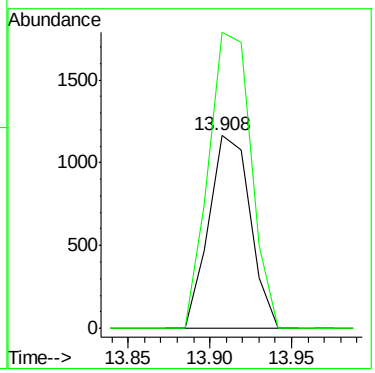


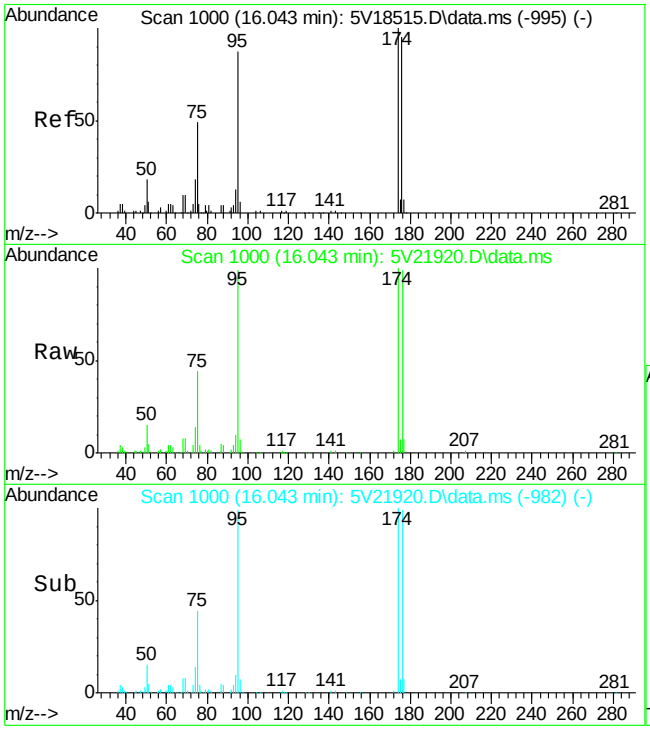


#62
Toluene
Concen: 0.24 ug/l
RT: 13.908 min Scan# 813
Delta R.T. -0.000 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

Tgt Ion: 92 Resp: 2067

Ion	Ratio	Lower	Upper
92	100		
91	157.9	149.8	189.8

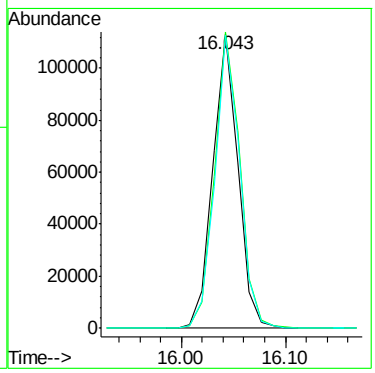


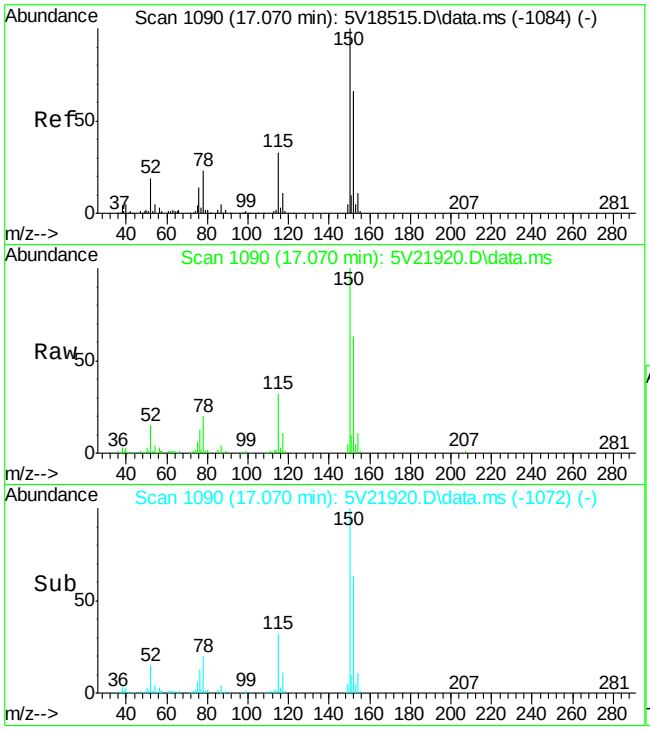


#69
4-Bromofluorobenzene
Concen: 41.07 ug/l
RT: 16.043 min Scan# 1000
Delta R.T. -0.000 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

Tgt Ion: 95 Resp: 190288

Ion	Ratio	Lower	Upper
95	100		
174	101.6	77.1	117.1
176	98.9	73.4	113.4

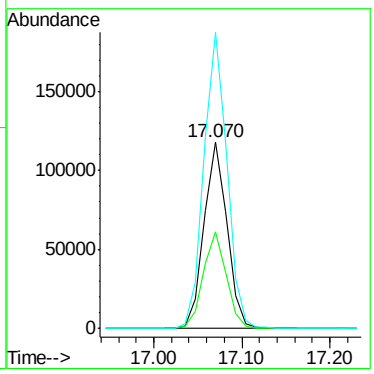


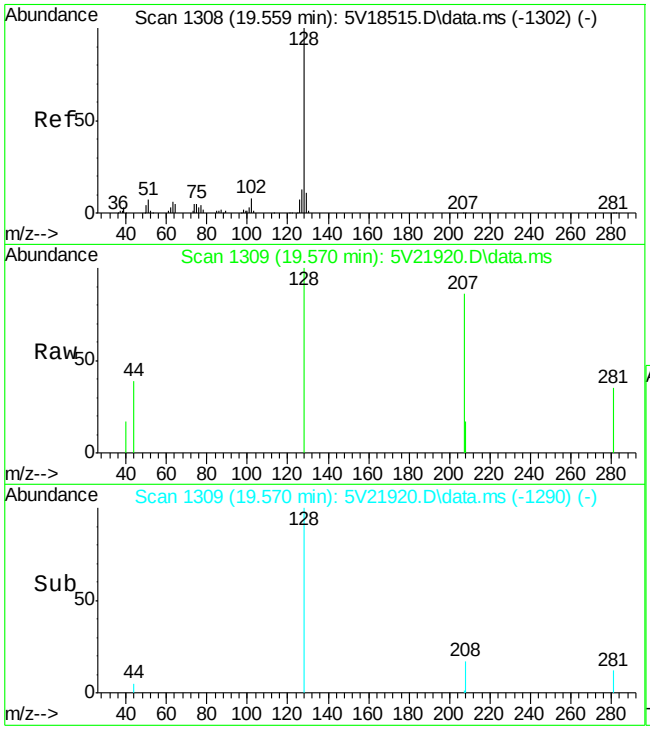


#74
1,4-Dichlorobenzene-d4
Concen: 50.00 ug/l
RT: 17.070 min Scan# 1090
Delta R.T. -0.000 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

Tgt Ion:152 Resp: 213993

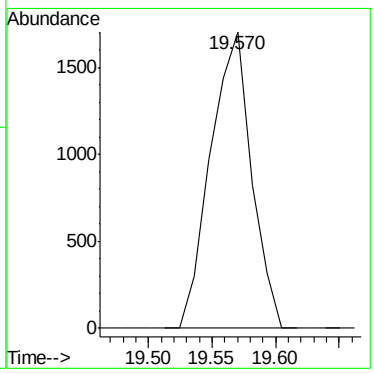
Ion	Ratio	Lower	Upper
152	100		
115	51.4	41.4	62.0
150	159.3	153.9	230.9

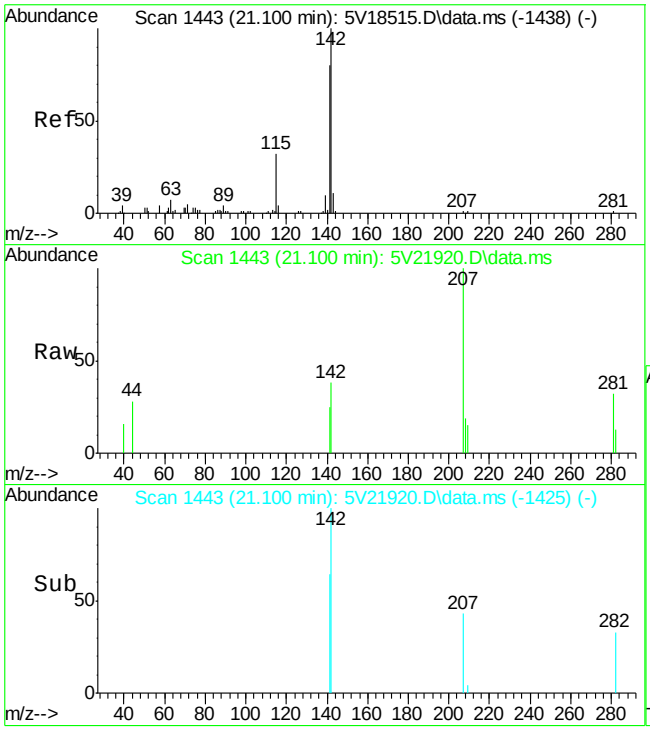




#91
Naphthalene
Concen: 0.93 ug/l
RT: 19.570 min Scan# 1309
Delta R.T. 0.012 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

Tgt Ion:128 Resp: 3802

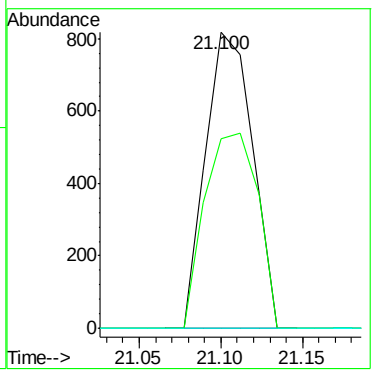


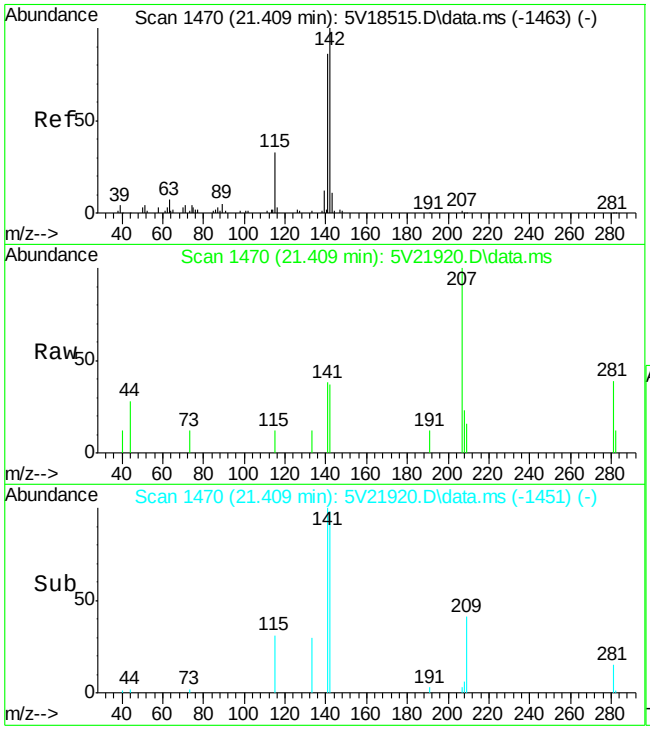


#94
2-Methylnaphthalene
Concen: 1.71 ug/l
RT: 21.100 min Scan# 1443
Delta R.T. 0.000 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

Tgt Ion:142 Resp: 1632

Ion	Ratio	Lower	Upper
142	100		
141	74.7	66.2	99.4
115	0.0	25.9	38.9#

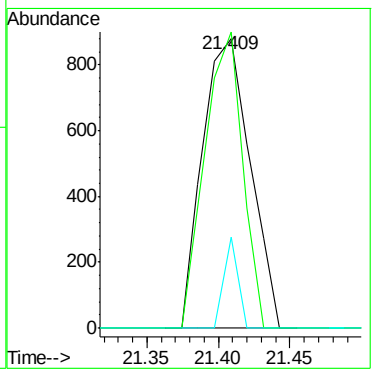




#95
1-Methylnaphthalene
Concen: 1.65 ug/l
RT: 21.409 min Scan# 1470
Delta R.T. 0.012 min
Lab File: 5V21920.D
Acq: 15 Jun 2012 1:06 am

Tgt Ion:142 Resp: 2026

Ion	Ratio	Lower	Upper
142	100		
141	80.9	68.9	103.3
115	9.4	27.3	40.9#



Mountain States ACCUTEST LABORATORIES

GC 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: D35485
Account: XTOKRWR XTO Energy
Project: FRU 297-8B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB907-MB	GB16328.D	1	06/14/12	SK	n/a	n/a	GGB907

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

D35485-1

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	90%	60-140%

Blank Spike Summary

Job Number: D35485
Account: XTOKRWR XTO Energy
Project: FRU 297-8B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
GGB907-BS	GB16329.D	1	06/14/12	SK	n/a	n/a	GGB907

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

D35485-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-GRO (C6-C10)	110	128	116	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
120-82-1	1,2,4-Trichlorobenzene	100%	60-140%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D35485
Account: XTOKRWR XTO Energy
Project: FRU 297-8B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
D35344-1MS	GB16331.D	1	06/14/12	SK	n/a	n/a	GGB907
D35344-1MSD	GB16332.D	1	06/14/12	SK	n/a	n/a	GGB907
D35344-1	GB16330.D	1	06/14/12	SK	n/a	n/a	GGB907

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

D35485-1

CAS No.	Compound	D35344-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-GRO (C6-C10)	63.2		140	219	111	215	108	2	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	D35344-1	Limits
120-82-1	1,2,4-Trichlorobenzene	90%	91%	86%	60-140%

Mountain States ACCUTEST LABORATORIES

GC Volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson 06/15/12 15:56

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\061412\GB16349.D\FID1A.CH Vial: 25
Signal #2 : Y:\1\DATA\061412\GB16349.D\FID2B.CH
Acq On : 14 Jun 2012 11:28 pm Operator: StephK
Sample : D35485-1, 50X Inst : GC/MS Ins
Misc : GC2911,GGB907,5.012,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 15 08:54:48 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Fri Jun 15 08:54:07 2012
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	14.33	2614769	83.448	%	m
10) S	1,2,4-Trichlorobenzene (P)	14.33	15673344	96.435	%	
	Target Compounds					
1) H	TVH-Gasoline	7.23	10833459	0.139	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	7.60	928810	2.344	ug/L	
7) T	Ethylbenzene	10.24	326598	0.966	ug/L	
8) T	m,p-Xylene	10.42	1348856	3.322	ug/L	
9) T	o-Xylene	10.92	133221	0.406	ug/L	
11) T	Naphthalene	14.52	917486	4.650	ug/L	

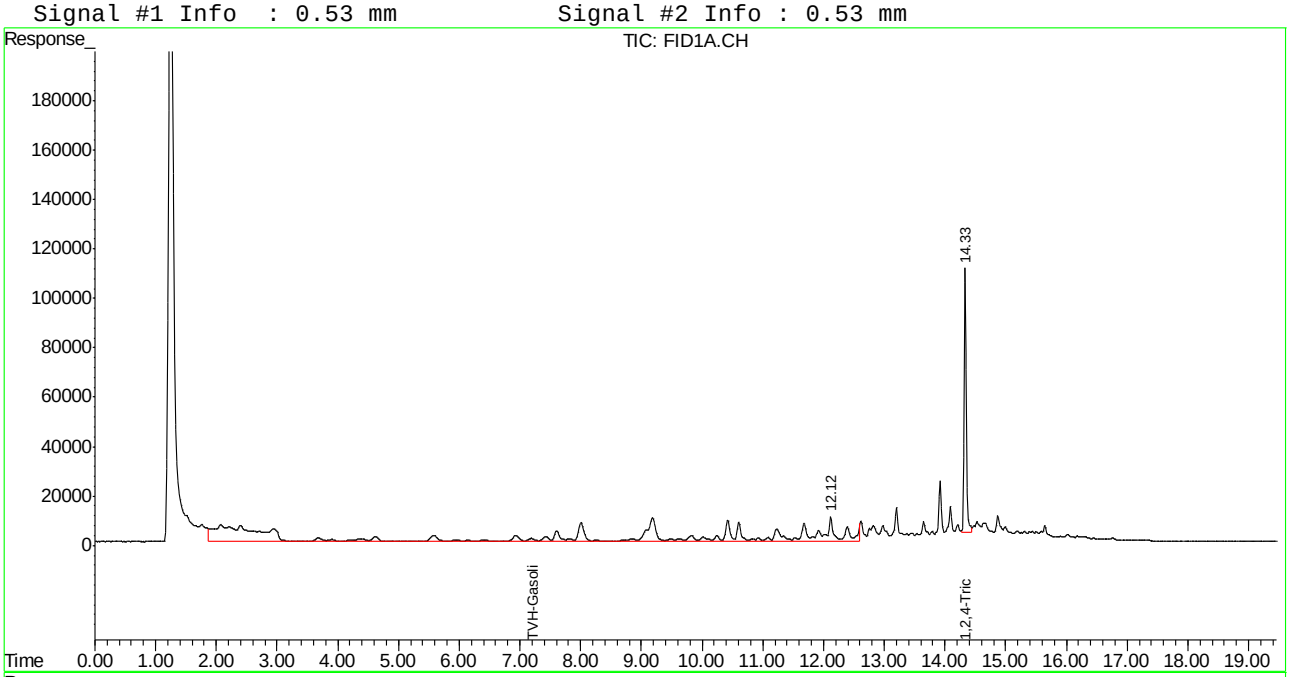
(f)=RT Delta > 1/2 Window (m)=manual int.

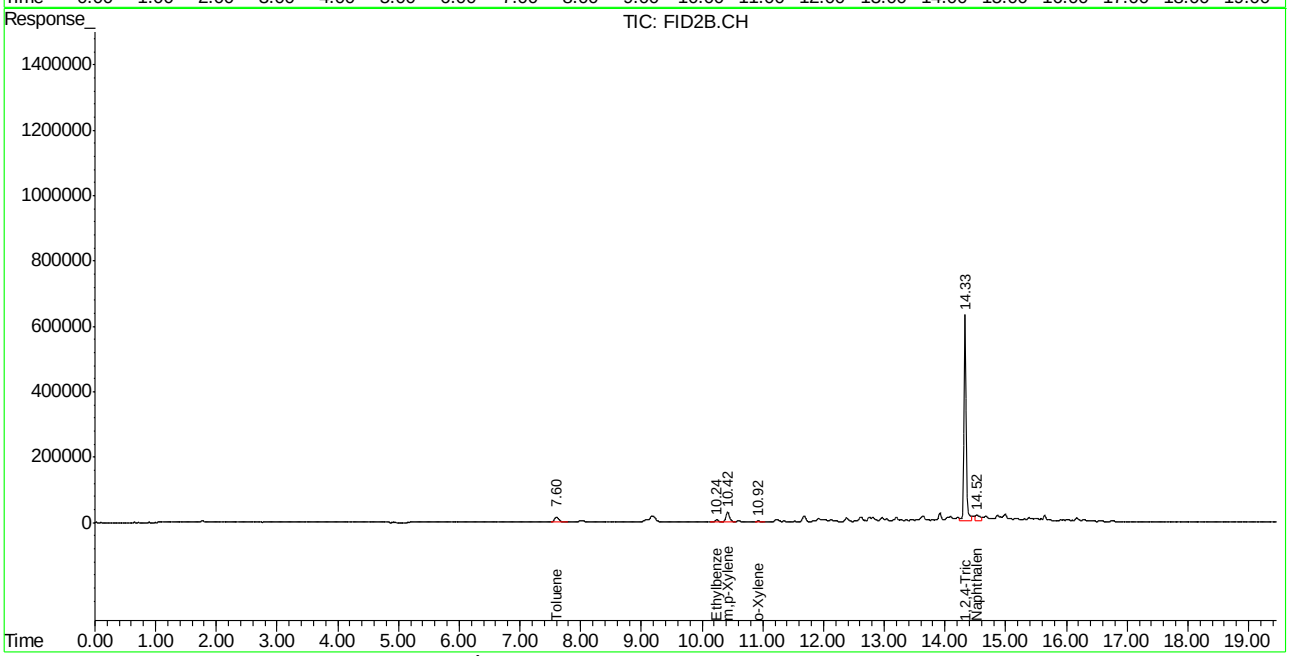
Quantitation Report (QT Reviewed)

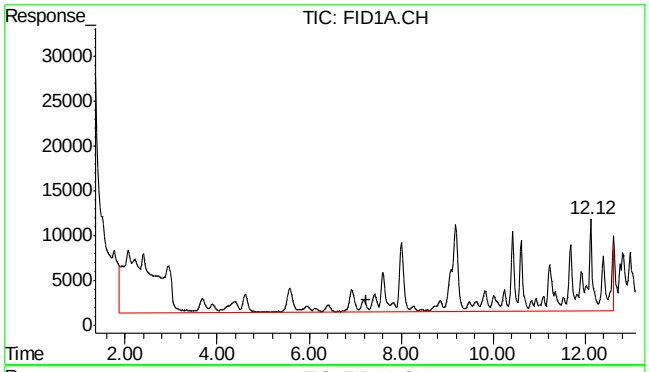
Signal #1 : Y:\1\DATA\061412\GB16349.D\FID1A.CH Vial: 25
Signal #2 : Y:\1\DATA\061412\GB16349.D\FID2B.CH
Acq On : 14 Jun 2012 11:28 pm Operator: StephK
Sample : D35485-1, 50X Inst : GC/MS Ins
Misc : GC2911,GGB907,5.012,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 15 8:01 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Fri Jun 15 08:54:07 2012
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

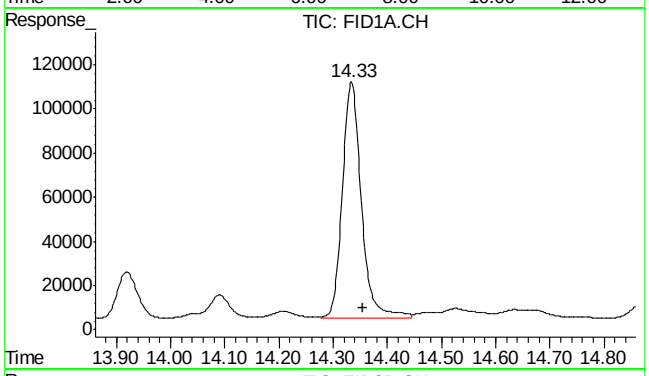






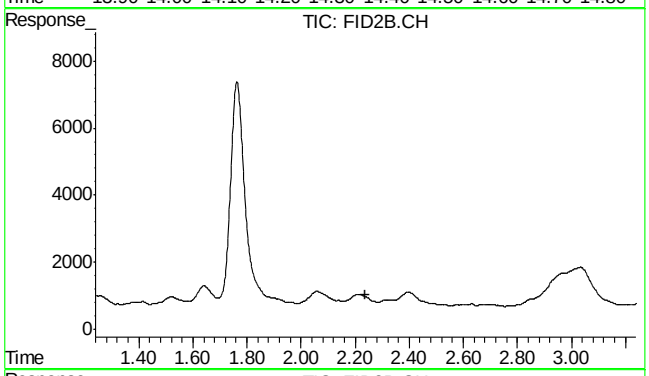
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 10833459
Conc: 0.14 mg/L m



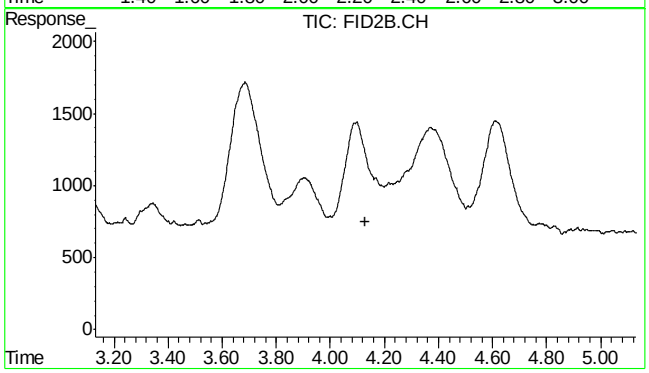
#2 1,2,4-Trichlorobenzene

R.T.: 14.333 min
Delta R.T.: -0.022 min
Response: 2614769
Conc: 83.45 % m



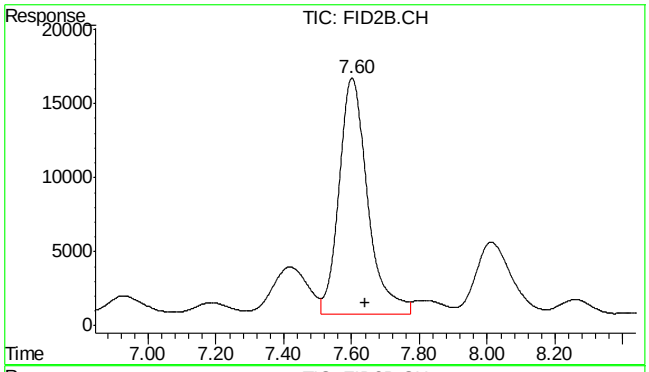
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.239 min
Response: 0
Conc: N.D.



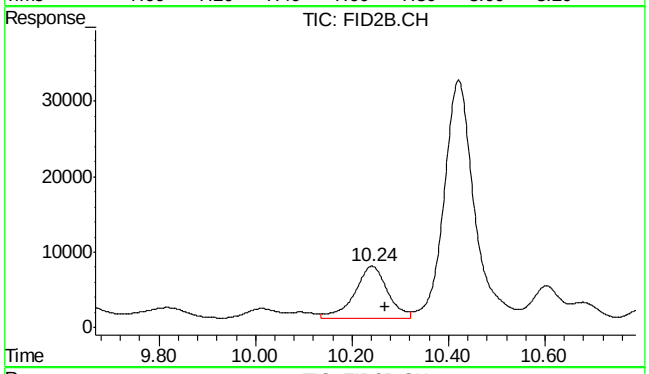
#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.131 min
Response: 0
Conc: N.D.



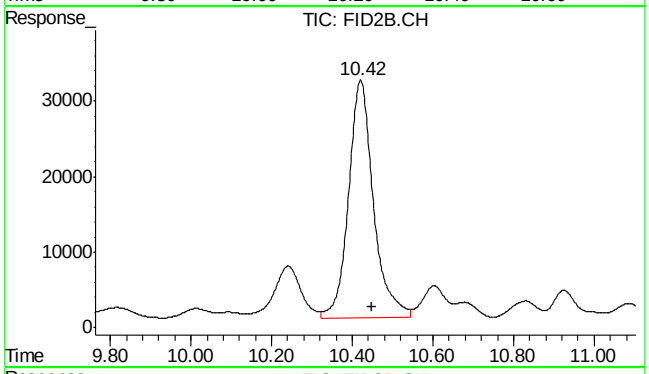
#6 Toluene

R.T.: 7.602 min
Delta R.T.: -0.036 min
Response: 928810
Conc: 2.34 ug/L



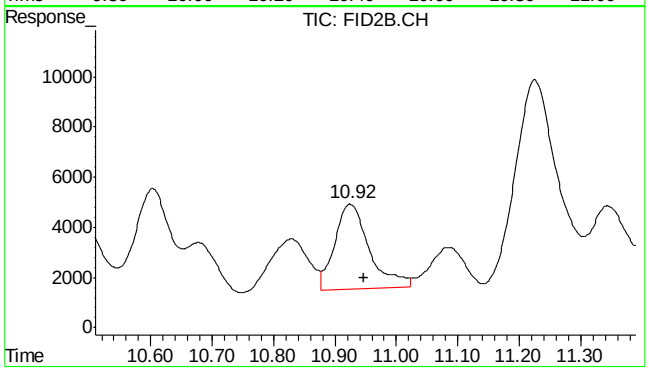
#7 Ethylbenzene

R.T.: 10.242 min
Delta R.T.: -0.026 min
Response: 326598
Conc: 0.97 ug/L



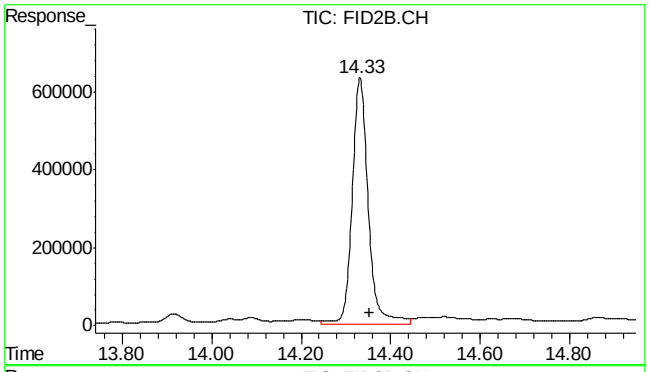
#8 m,p-Xylene

R.T.: 10.421 min
Delta R.T.: -0.029 min
Response: 1348856
Conc: 3.32 ug/L



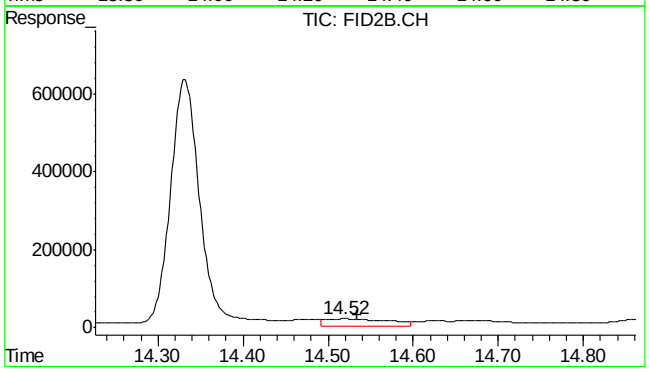
#9 o-Xylene

R.T.: 10.925 min
Delta R.T.: -0.023 min
Response: 133221
Conc: 0.41 ug/L



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

R.T.: 14.332 min
Delta R.T.: -0.021 min
Response: 15673344
Conc: 96.44 %



#11 Naphthalene

R.T.: 14.519 min
Delta R.T.: -0.015 min
Response: 917486
Conc: 4.65 ug/L

Quantitation Report (QT Reviewed)

Signal #1 : Y:\1\DATA\061412\GB16328.D\FID1A.CH Vial: 4
Signal #2 : Y:\1\DATA\061412\GB16328.D\FID2B.CH
Acq On : 14 Jun 2012 11:06 am Operator: StephK
Sample : MB Inst : GC/MS Ins
Misc : GC2911,GGB907,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 14 11:38:19 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Jun 13 13:43:02 2012
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	14.33	2809092	89.650	%
10) S	1,2,4-Trichlorobenzene (P)	14.33	15959745	98.197	%
	Target Compounds				
1) H	TVH-Gasoline	7.23	5311946	<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	7.60	168268	0.425	ug/L
7) T	Ethylbenzene	0.00	0	N.D.	ug/L d
8) T	m,p-Xylene	0.00	0	N.D.	ug/L d
9) T	o-Xylene	0.00	0	N.D.	ug/L d
11) T	Naphthalene	14.51	224643	1.139	ug/L

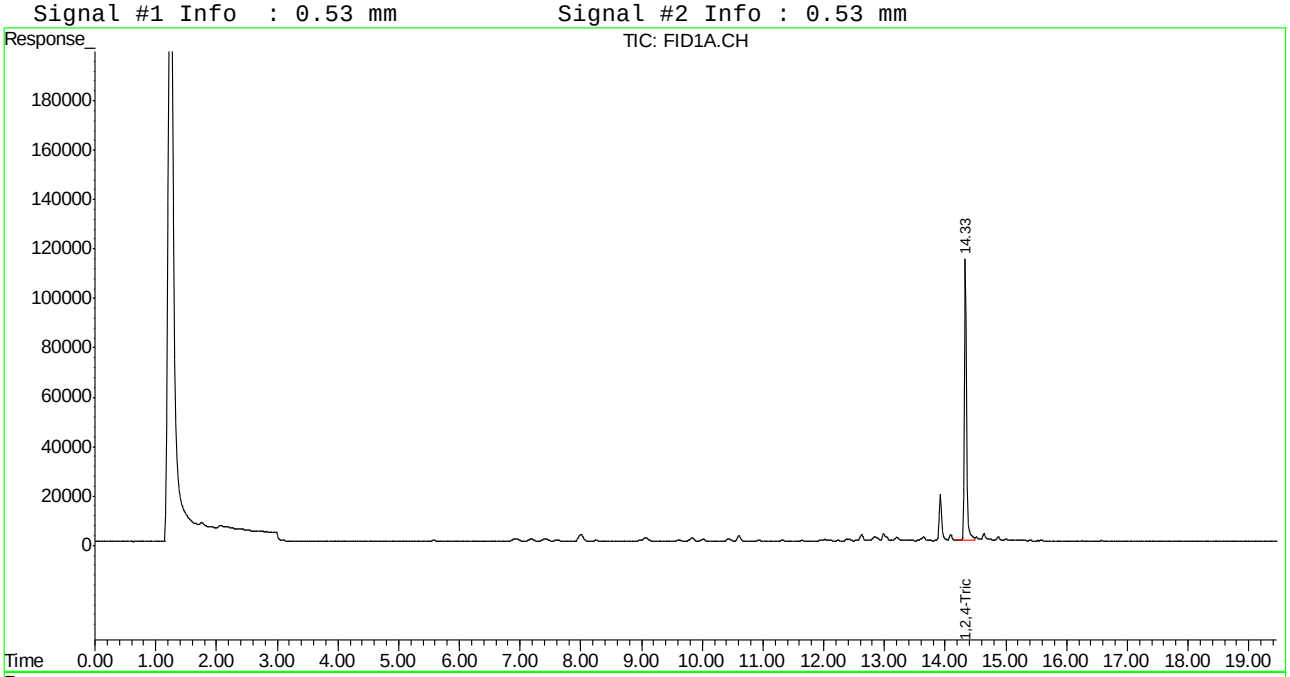
(f)=RT Delta > 1/2 Window (m)=manual int.

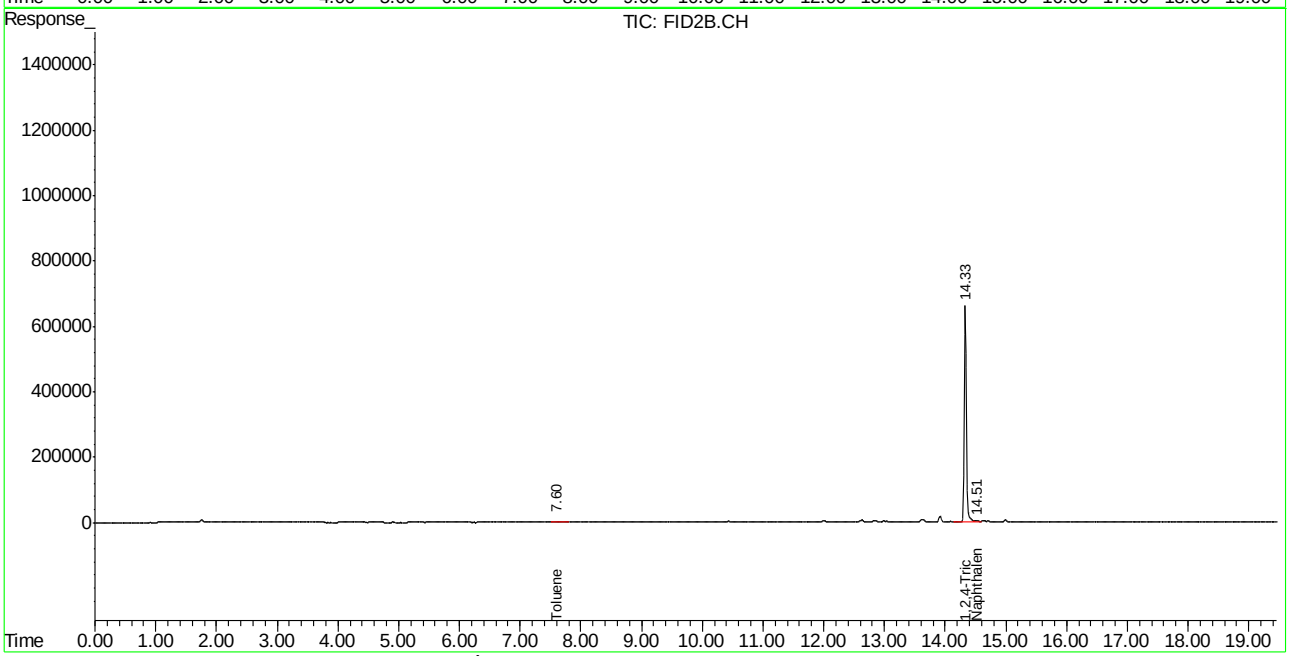
Quantitation Report (QT Reviewed)

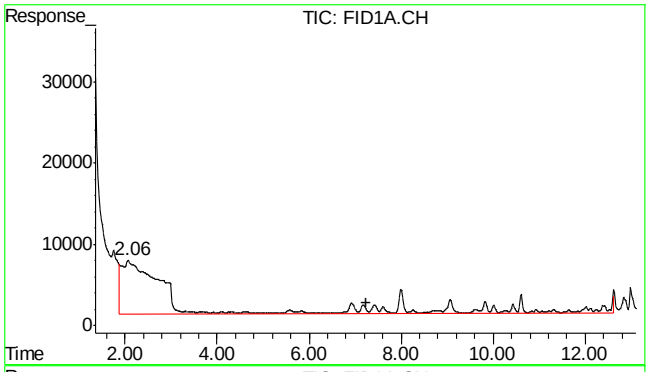
Signal #1 : Y:\1\DATA\061412\GB16328.D\FID1A.CH Vial: 4
Signal #2 : Y:\1\DATA\061412\GB16328.D\FID2B.CH
Acq On : 14 Jun 2012 11:06 am Operator: StephK
Sample : MB Inst : GC/MS Ins
Misc : GC2911,GGB907,5.000,,100,5,1 Multiplr: 1.00
IntFile Signal #1: TVH1.E IntFile Signal #2: FB2.E
Quant Time: Jun 14 10:41 2012 Quant Results File: TB868GB868SOIL.RES

Quant Method : C:\MSDCHEM\1...\TB868GB868SOIL.M (Chemstation Integrator)
Title : 8015B/8021B TVH/BTEX
Last Update : Wed Jun 13 13:43:02 2012
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

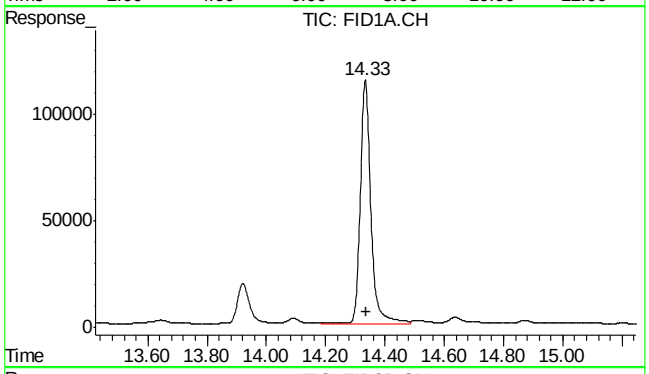






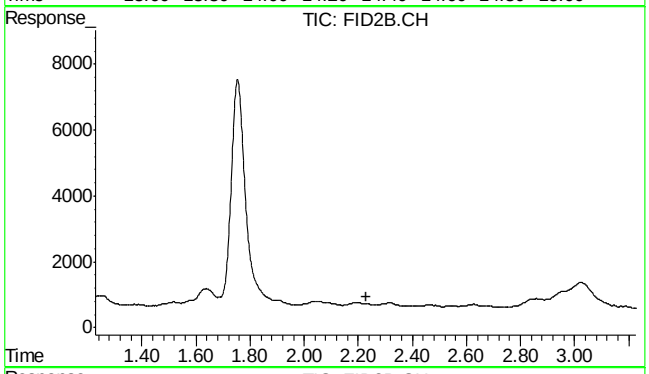
#1 TVH-Gasoline

R.T.: 7.230 min
Delta R.T.: 0.000 min
Response: 5311946
Conc: N.D.



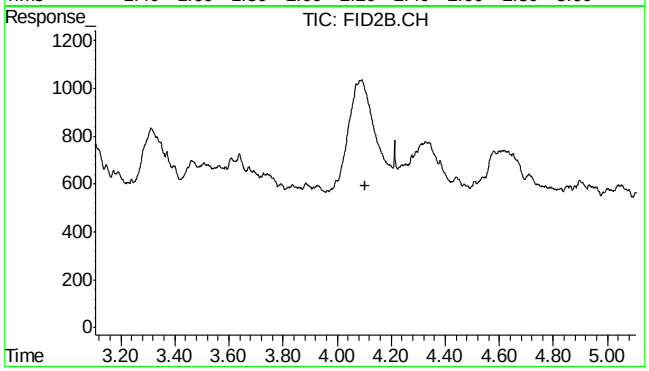
#2 1,2,4-Trichlorobenzene

R.T.: 14.334 min
Delta R.T.: -0.003 min
Response: 2809092
Conc: 89.65 %



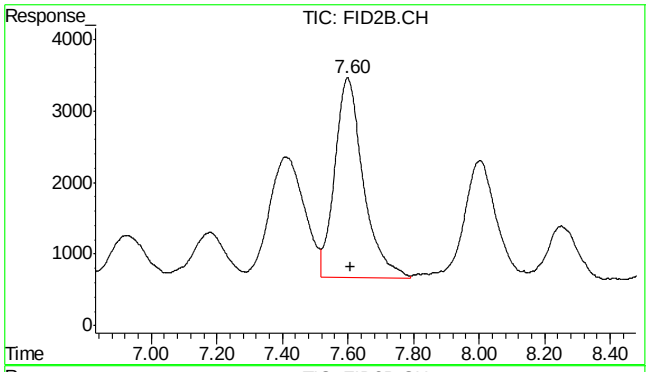
#4 Methyl-t-butyl-ether

R.T.: 0.000 min
Exp R.T. : 2.228 min
Response: 0
Conc: N.D.



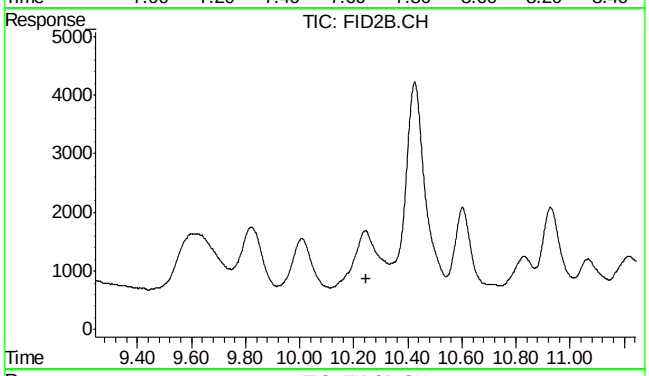
#5 Benzene

R.T.: 0.000 min
Exp R.T. : 4.105 min
Response: 0
Conc: N.D.



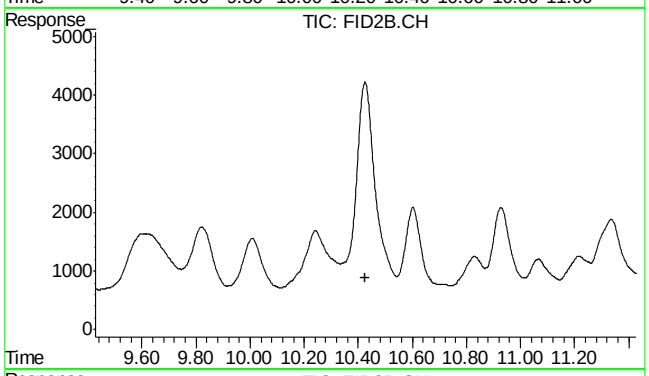
#6 Toluene

R.T.: 7.599 min
Delta R.T.: -0.011 min
Response: 168268
Conc: 0.42 ug/L



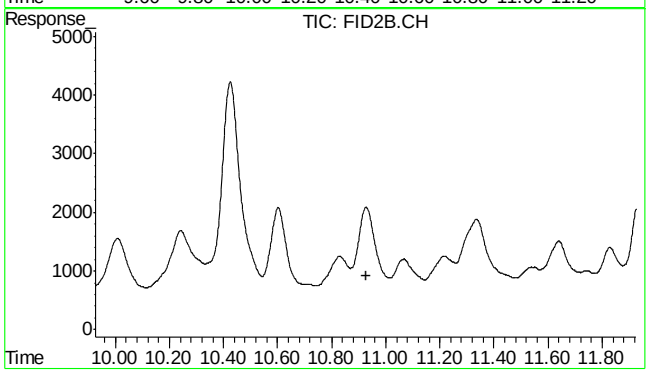
#7 Ethylbenzene

R.T.: 0.000 min
Exp R.T. : 10.245 min
Response: 0
Conc: N.D.



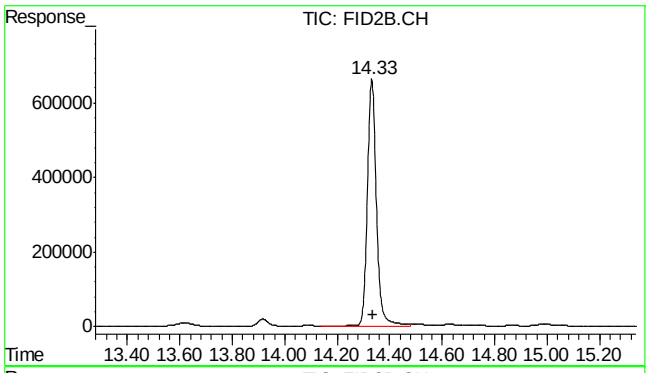
#8 m,p-Xylene

R.T.: 0.000 min
Exp R.T. : 10.427 min
Response: 0
Conc: N.D.



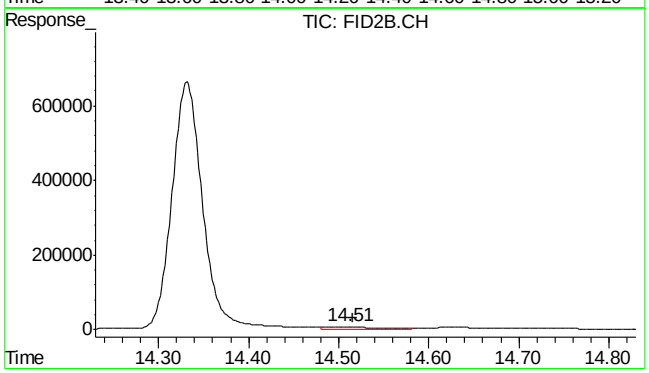
#9 o-Xylene

R.T.: 0.000 min
Exp R.T. : 10.926 min
Response: 0
Conc: N.D.



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

R.T.:	14.332 min
Delta R.T.:	-0.003 min
Response:	15959745
Conc:	98.20 %



#11 Naphthalene

R.T.:	14.510 min
Delta R.T.:	-0.006 min
Response:	224643
Conc:	1.14 ug/L

Mountain States ACCUTEST LABORATORIES

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: D35485
Account: XTOKRWR XTO Energy
Project: FRU 297-8B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6067-MB	FD14354.D	1	06/18/12	AV	06/15/12	OP6067	GFD753

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

D35485-1

CAS No.	Compound	Result	RL	MDL	Units	Q
	TPH-DRO (C10-C28)	ND	6.7	4.3	mg/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	82%	43-136%

Blank Spike Summary

Job Number: D35485
Account: XTOKRWR XTO Energy
Project: FRU 297-8B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6067-BS	FD14356.D	1	06/18/12	AV	06/15/12	OP6067	GFD753

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

D35485-1

CAS No.	Compound	Spike mg/kg	BSP mg/kg	BSP %	Limits
	TPH-DRO (C10-C28)	667	504	76	58-130

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	97%	43-136%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: D35485
Account: XTOKRWR XTO Energy
Project: FRU 297-8B

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP6067-MS	FD14358.D	1	06/18/12	AV	06/15/12	OP6067	GFD753
OP6067-MSD	FD14360.D	1	06/18/12	AV	06/15/12	OP6067	GFD753
D35488-1	FD14362.D	1	06/18/12	AV	06/15/12	OP6067	GFD753

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

D35485-1

CAS No.	Compound	D35488-1 mg/kg	Q	Spike mg/kg	MS mg/kg	MS %	MSD mg/kg	MSD %	RPD	Limits Rec/RPD
	TPH-DRO (C10-C28)	56.4		761	525	61	552	65	5	20-183/43

CAS No.	Surrogate Recoveries	MS	MSD	D35488-1	Limits
84-15-1	o-Terphenyl	78%	78%	81%	43-136%

Mountain States ACCUTEST LABORATORIES

GC Semi-volatiles

Raw Data

Manual Integrations APPROVED (compounds with "m" flag)
Judy Melson 06/19/12 10:12

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\JUNE\FD061812.SEC\FD14392.D Vial: 7
Acq On : 6-18-2012 07:41:16 PM Operator: ashleyv
Sample : D35485-1 Inst : FID5
Misc : OP6067,GFD753,30.04,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 19 08:57:59 2012 Quant Results File: DRO-GFD743R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD743R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Tue Jun 12 11:16:41 2012
Response via : Initial Calibration
DataAcq Meth : DRODUAL.M

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

	Compound	R.T.	Response	Conc	Units	
	System Monitoring Compounds					
1) S	O-Terphenyl	9.60	76273589	1756.795	mg/L	m
	Target Compounds					
2) H	TPH-DRO (c10-c28)	7.40	189877280	4572.547	mg/L	

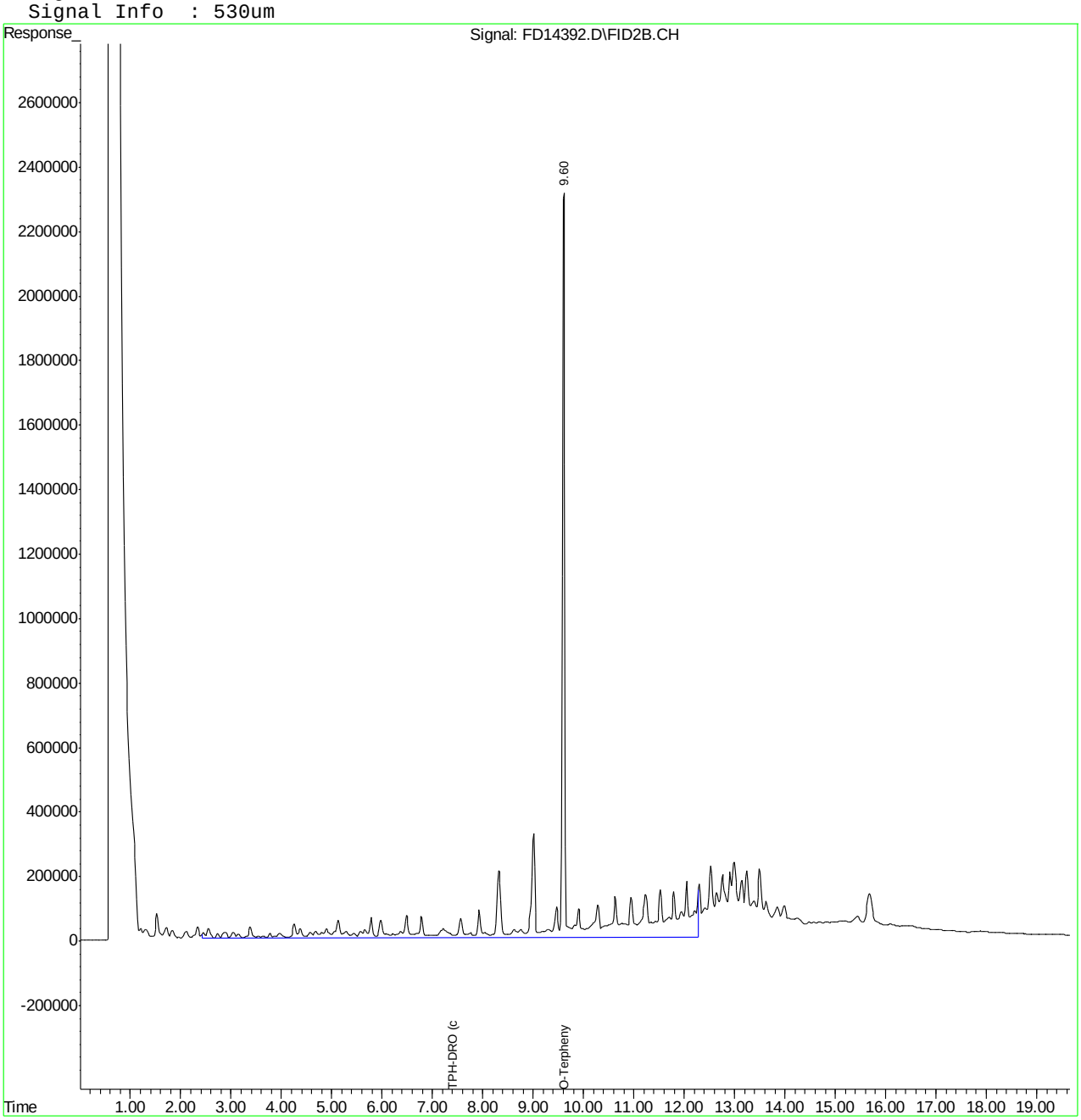
(f)=RT Delta > 1/2 Window (m)=manual int.
FD14392.D DRO-GFD743R.M Tue Jun 19 09:04:59 2012 GC Page 1

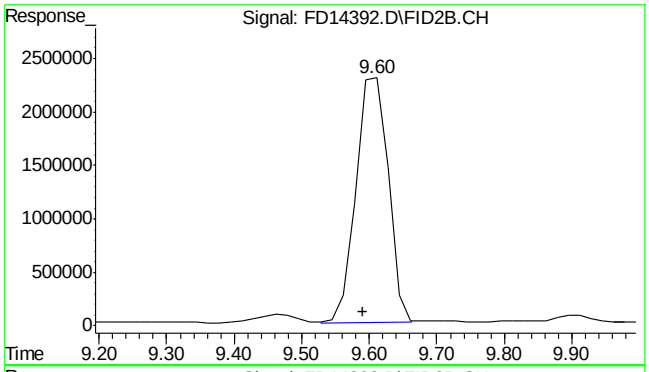
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\JUNE\FD061812.SEC\FD14392.D Vial: 72
Acq On : 6-18-2012 07:41:16 PM Operator: ashleyv
Sample : D35485-1 Inst : FID5
Misc : OP6067,GFD753,30.04,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 19 8:58 2012 Quant Results File: DRO-GFD743R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD743R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Tue Jun 12 11:16:41 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRODUAL.M

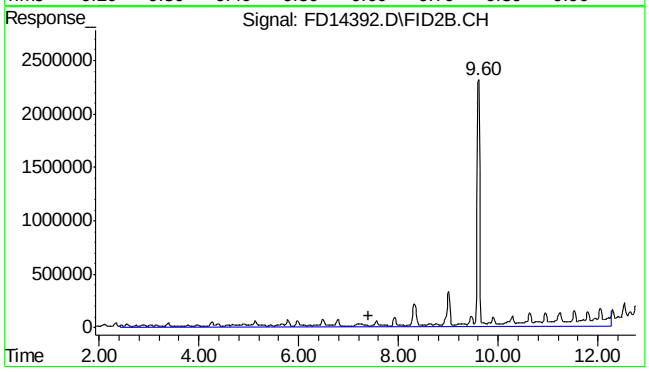
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





#1 O-Terphenyl

R.T.: 9.603 min
Delta R.T.: 0.013 min
Response: 76273589
Conc: 1756.80 mg/L m



#2 TPH-DRO (c10-c28)

R.T.: 7.400 min
Delta R.T.: 0.000 min
Response: 189877280
Conc: 4572.55 mg/L m

Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\JUNE\FD061812.SEC\FD14354.D Vial: 53
Acq On : 18 Jun 2012 11:19 am Operator: ashleyv
Sample : OP6067-MB Inst : FID5
Misc : OP6067,GFD753,30.00,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 18 14:36:24 2012 Quant Results File: DRO-GFD743R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD743R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Tue Jun 12 11:16:41 2012
Response via : Initial Calibration
DataAcq Meth : DRODUAL.M

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

	Compound	R.T.	Response	Conc	Units
	System Monitoring Compounds				
1) S	O-Terphenyl	9.61	71200352	1639.944	mg/L
	Target Compounds				
2) H	TPH-DRO (c10-c28)	7.40	3174106	76.438	mg/L

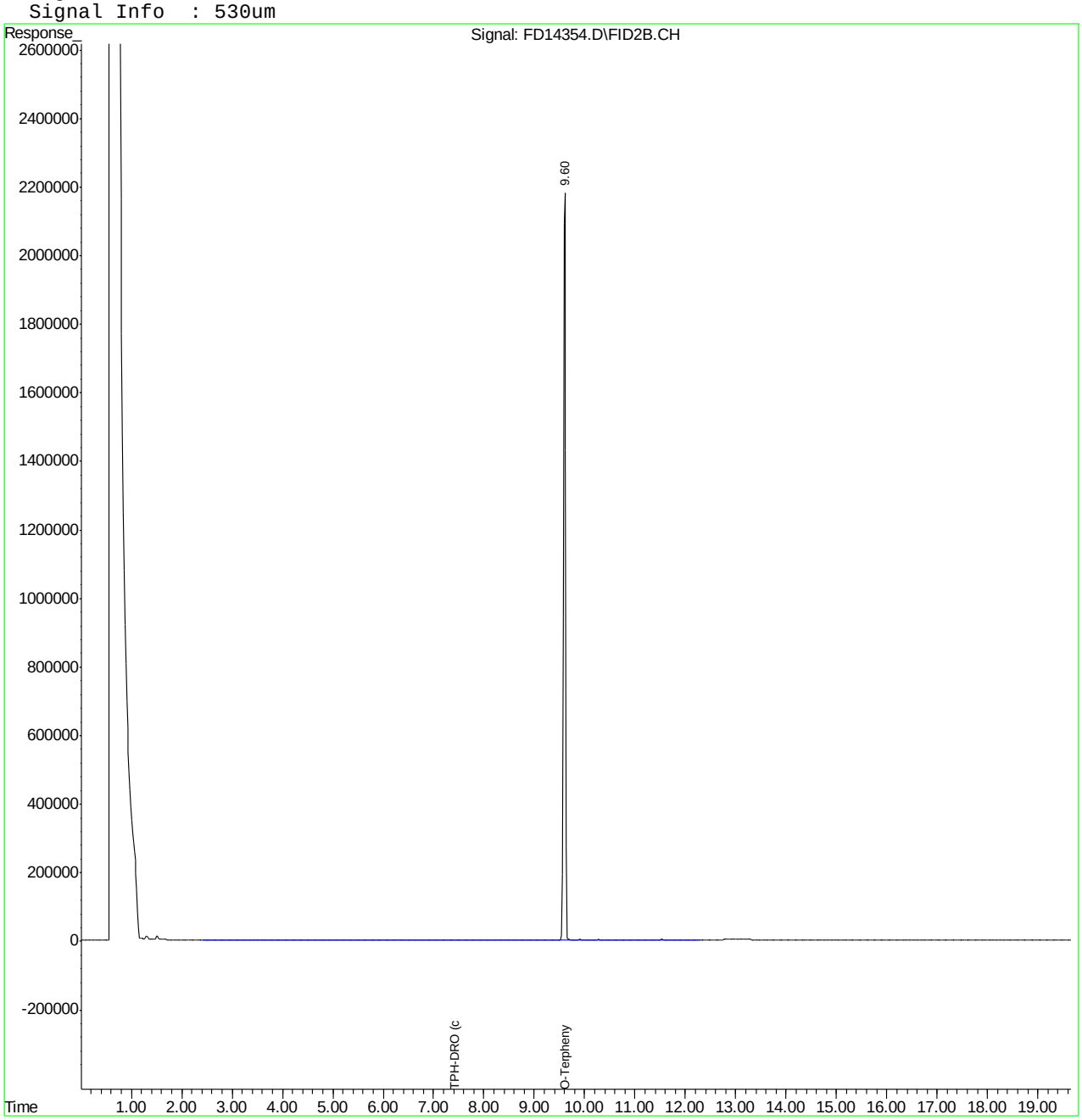
(f)=RT Delta > 1/2 Window (m)=manual int.
FD14354.D DRO-GFD743R.M Tue Jun 19 09:04:40 2012 GC Page 1

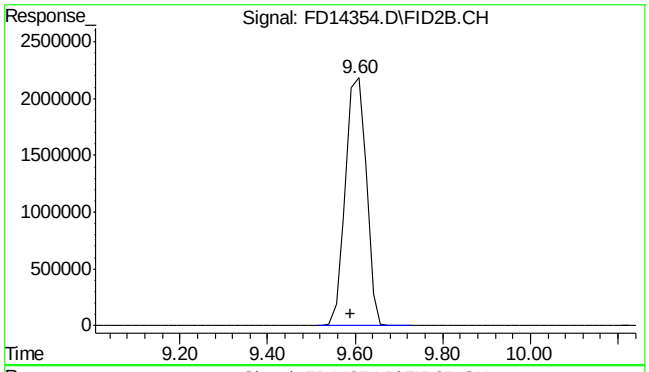
Quantitation Report (QT Reviewed)

Data File : C:\MSDCHEM\2\DATA\2012\JUNE\FD061812.SEC\FD14354.D Vial: 53
Acq On : 18 Jun 2012 11:19 am Operator: ashleyv
Sample : OP6067-MB Inst : FID5
Misc : OP6067,GFD753,30.00,,,1,1 Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Jun 19 8:31 2012 Quant Results File: DRO-GFD743R.RES

Quant Method : C:\MSDCHEM\2...\DRO-GFD743R.M (Chemstation Integrator)
Title : 8015B TEH
Last Update : Tue Jun 12 11:16:41 2012
Response via : Multiple Level Calibration
DataAcq Meth : DRODUAL.M

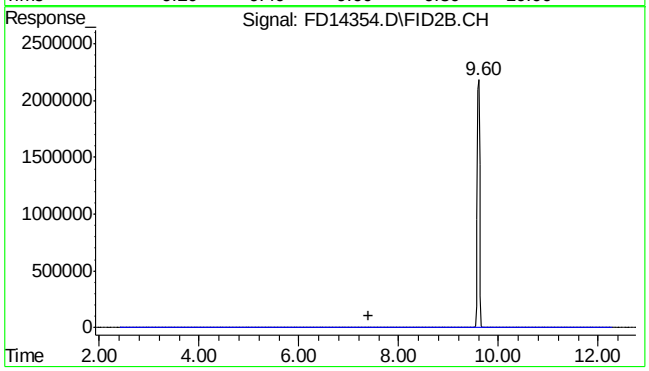
Volume Inj. : 1ul
Signal Phase : RTX-5
Signal Info : 530um





#1 O-Terphenyl

R.T.: 9.608 min
Delta R.T.: 0.018 min
Response: 71200352
Conc: 1639.94 mg/L



#2 TPH-DRO (c10-c28)

R.T.: 7.400 min
Delta R.T.: 0.000 min
Response: 3174106
Conc: 76.44 mg/L m